TRAFFIC IMPACT ASSESSMENT

PROPOSED MULTI-USE DEVELOPMENT

Exeter, New Hampshire

November 2019
Updated August 2020

Prepared for

Gateway at Exeter, LLC

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& Company, Inc.

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PROPOSED MULTI-USE DEVELOPMENT
EXETER, NEW HAMPSHIRE
November 15, 2019 (Updated August 10, 2020)

INTRODUCTION

This study has been prepared for Gateway at Exeter, LLC and it addresses the traffic impacts associated with the proposed residential/commercial building project on NH Route 27 (NH27) in Exeter, New Hampshire. The subject site is located on the west side of the highway and south of NH101 Exit 9 (across from the Mobil gasoline station/convenience store).

The scope of this updated traffic study was established at a virtual "scope" meeting with the New Hampshire Department of Transportation (NHDOT), and representatives from the Town of Exeter, the Town's consultant VHB, Inc., and the Rockingham Planning Commission on July 30, 2020. More specifically, this study includes 11-hour (7:00 AM to 6:00 PM) weekday traffic counts at the following intersections:

- NH 27 at NH 101 WB ramp junction
- NH 27 at NH 101 EB ramp junction
- NH 27 at Cronin Road (a.k.a. Mobil Driveway north)
- NH 27 at Mobil Driveway (south) / Proposed North Site Driveway
- NH 27 at Continental Drive

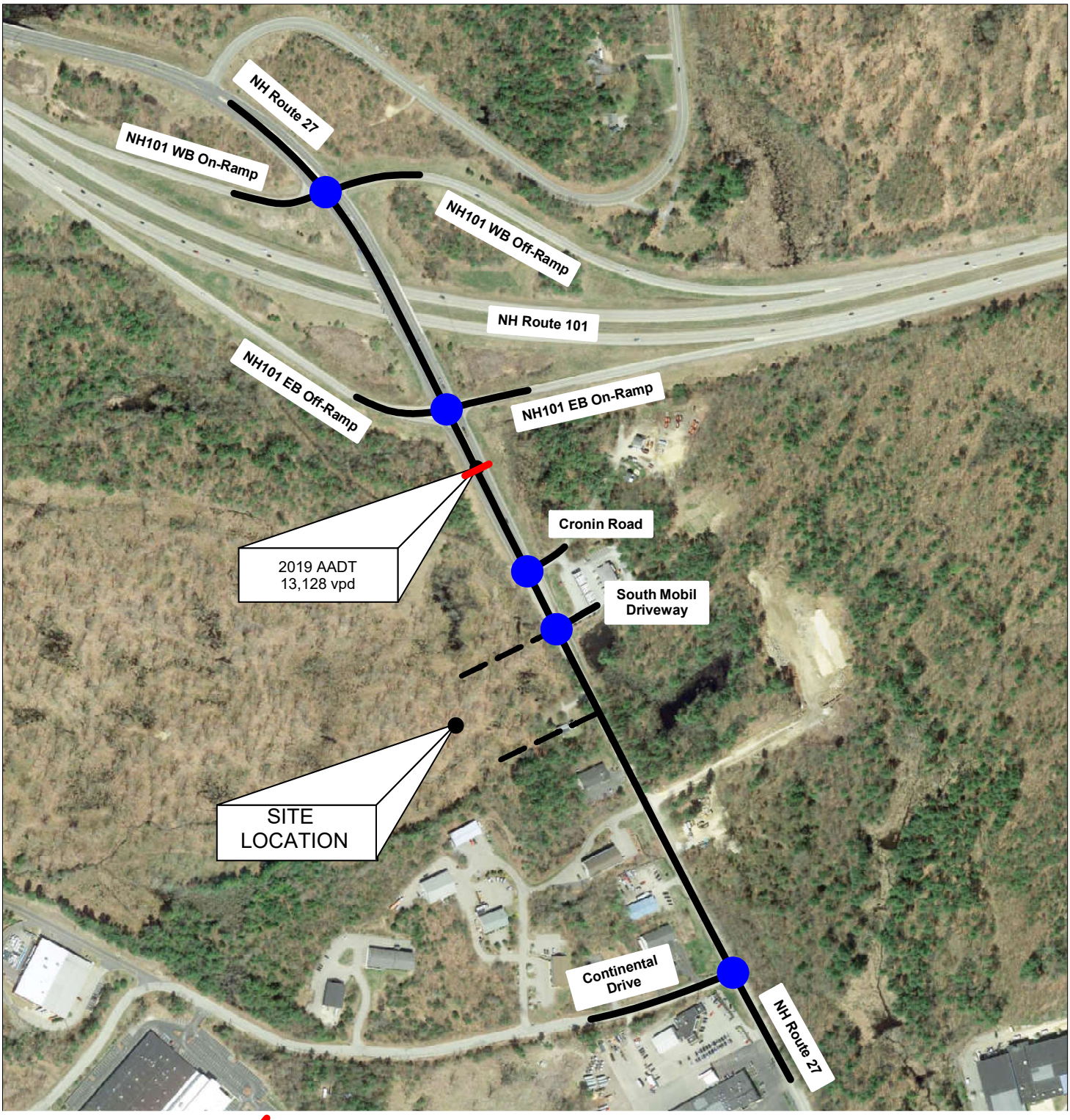
This data was collected in October 2019, prior to the ongoing pandemic situation. VHB, Inc., the town's traffic consultant, provided October 2019 count data for the Continental Drive intersection. This study includes future traffic projections for 2021 (Opening Year) and 2031 (Horizon Year), both with and without the proposed development. Several technical analyses are included herein: intersection/roadway impact summary, intersection capacity, Level of Service, auxiliary turn lane and traffic signal warrants analyses. This report is intended to summarize our findings and recommendations relative to traffic operations, capacity, and safety.

PROPOSAL

The development proposal calls for the construction of one two-story commercial building with a gross floor area of approximately 48,590 sf and three four-story residential buildings that will contain a total of 224 dwelling units. The commercial building is expected to be occupied by a retail tenant (11,225 sf), office space (17,295 sf), and a daycare facility (20,070 sf). Appendix A contains a plan entitled "Master Site Plan," prepared by Hayner/Swanson, Inc., dated November 6, 2019 (revised 8/11/20).

Vehicular access to the site is proposed via one full-access site driveway and one "right-out" exit-only driveway on the west side of NH27. The northerly site driveway will be located directly across from the southerly Mobil gas station driveway and the southerly site driveway will be located approximately 300-feet further to the south. Figure 1 shows the general location of the site with respect to the area highway system, as well as the location of the closest NHDOT short-term traffic recorder station on NH27.

Pernaw & Company, Inc.



= AUTOMATIC TRAFFIC RECORDER LOCATION (NHDOT)

= INTERSECTION TURNING MOVEMENT COUNT LOCATION

NORTH

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Figure 1

Site Location

Traffic Impact Assessment, Proposed Mixed-Use Development, Exeter, New Hampshire

EXISTING CONDITIONS

ROADWAYS

NH Route 27 (Epping Road) functions as an arterial highway that carries through traffic in a general north-south direction between NH111-A to the south and Brentwood to the north. NH27 crosses over NH101 at Interchange 9 just north of the subject site. Along the site frontage NH27 is a two-lane highway with one travel lane in each direction. The pavement is delineated with a four-inch double-yellow centerline and four-inch white edge lines. Paved shoulders of variable width are present along both sides of the highway.

The horizontal alignment of the highway follows a straight tangent section along the site frontage and the vertical alignment is generally flat. The speed limit is posted at 30 mph on this section of NH27 in both directions. The section of highway south of Cronin Road is under the jurisdiction of the Town of Exeter. The site frontage includes both Controlled Access Right-Of-Way (ROW) and ordinary ROW. NHDOT plans indicate that two points of access on the west side of the highway have been granted to this site.

INTERSECTIONS

The **NH27/Mobil Driveway** intersection currently functions as a standard three-leg T-intersection, and the minor approach is uncontrolled (no STOP sign). The existing travel lane configuration at this intersection is as follows:

NB: One shared through-right lane
WB: One shared left-right lane
SB: One shared left-through lane

The speed limit is posted at 30 mph in both directions on this section of NH27.

The **NH27/Cronin Road** intersection also functions as a standard three-leg T-intersection that operates under STOP sign control on the minor approach. Cronin Road has no outlet and it provides access to the Mobil gas station and other properties beyond. The existing travel lane configuration at this intersection is as follows:

NB: One shared through-right lane
WB: One shared left-right lane
SB: One shared left-through lane

The speed limit is posted at 30 mph in both directions on this section of NH27, and changes to 40 mph in the interchange area.

The **NH27/NH101 Eastbound Ramp Junction** has a one-way off-ramp (EB) that operates under STOP sign control (three signs) and a one-way on-ramp. The existing lane configuration at this intersection is as follows:

EB: One shared left-through lane and one channelized right-turn lane
NB: One shared through-right lane
SB: One exclusive left-turn lane and one exclusive through lane

Raised median islands are present on this section of NH27 and they separate opposing traffic flows. The speed limit is posted at 40 mph in both directions.

The **NH27/NH101 Westbound Ramp Junction** has a one-way off-ramp (WB) that operates under STOP sign control (two signs) and a one-way on-ramp. The existing lane configuration at this intersection is as follows:

WB: One shared left-through-right lane
NB: One exclusive left-turn lane and one exclusive through lane
SB: One through-right lane

Although the westbound off-ramp is not delineated with formal turn lanes, there is ample width at the "throat" of the intersection for exiting vehicles to queue side by side. Raised median islands are also present on this section of NH27 and they separate opposing traffic flows. The speed limit is posted at 40 mph in both directions.

The **NH27/Continental Drive** intersection currently functions as a standard three-leg T-intersection that operates under traffic signal control. This intersection operates with a fully-actuated demand-responsive traffic control system. The existing lane configuration is as follows:

- NH27 NB Approach: One exclusive left-turn lane, one exclusive through lane
- NH27 SB Approach: One exclusive through lane, one exclusive right-turn lane
- Continental Drive EB Approach: One exclusive left-turn lane, one exclusive right-turn lane

The traffic signal controller operates as an isolated system with three basic signal phases: 1) northbound left-turns and through movements (lead phase), 2) northbound and southbound through movements, and 3) the eastbound departure movements. The speed limit is posted at 30 mph in both directions on this section of NH27.

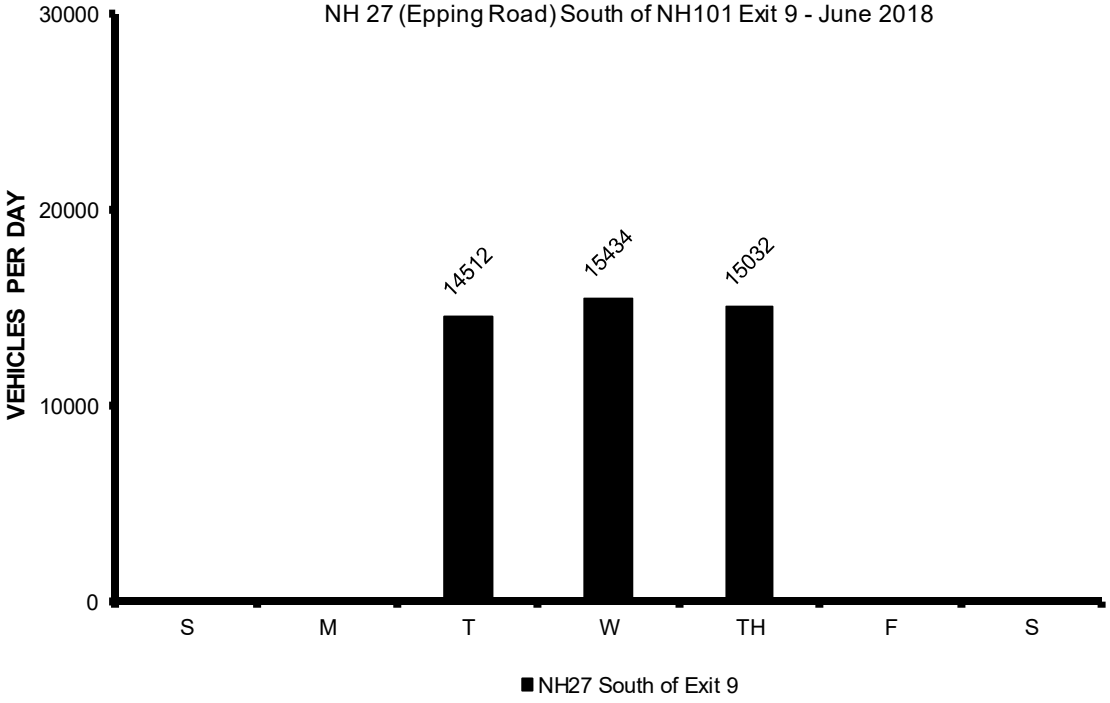
TRAFFIC VOLUMES

The New Hampshire Department of Transportation conducted short-term automatic traffic recorder counts on NH27 (south of NH101 Exit 9) in June 2018. Based on this count data the NHDOT estimates that this section of NH27 carried an Annual Average Daily Traffic (AADT) volume of 13,128 vehicles per day (vpd) in 2019.

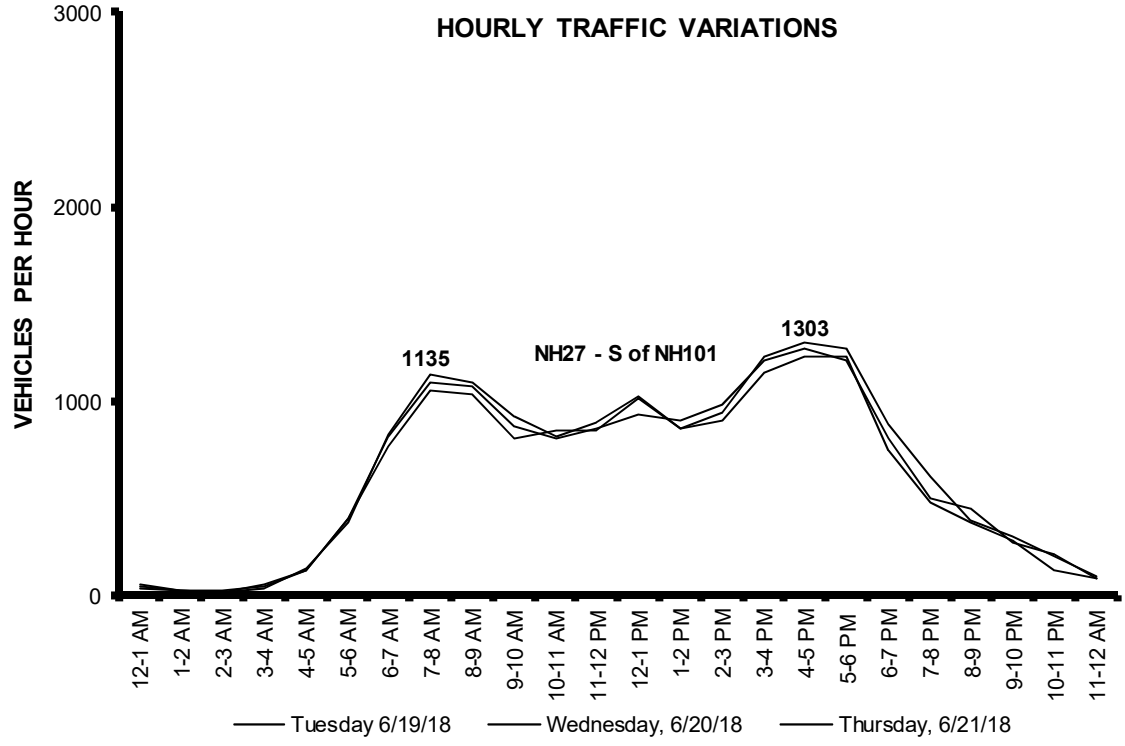
This data also demonstrates that traffic demand on NH27 reached peak levels during the typical AM and PM commuter periods on weekdays. The daily and hourly variations in traffic demand at this count station are illustrated graphically on Page 5. Appendix B contains the detail sheet pertaining to these counts.

DAILY TRAFFIC VARIATIONS

NH 27 (Epping Road) South of NH101 Exit 9 - June 2018



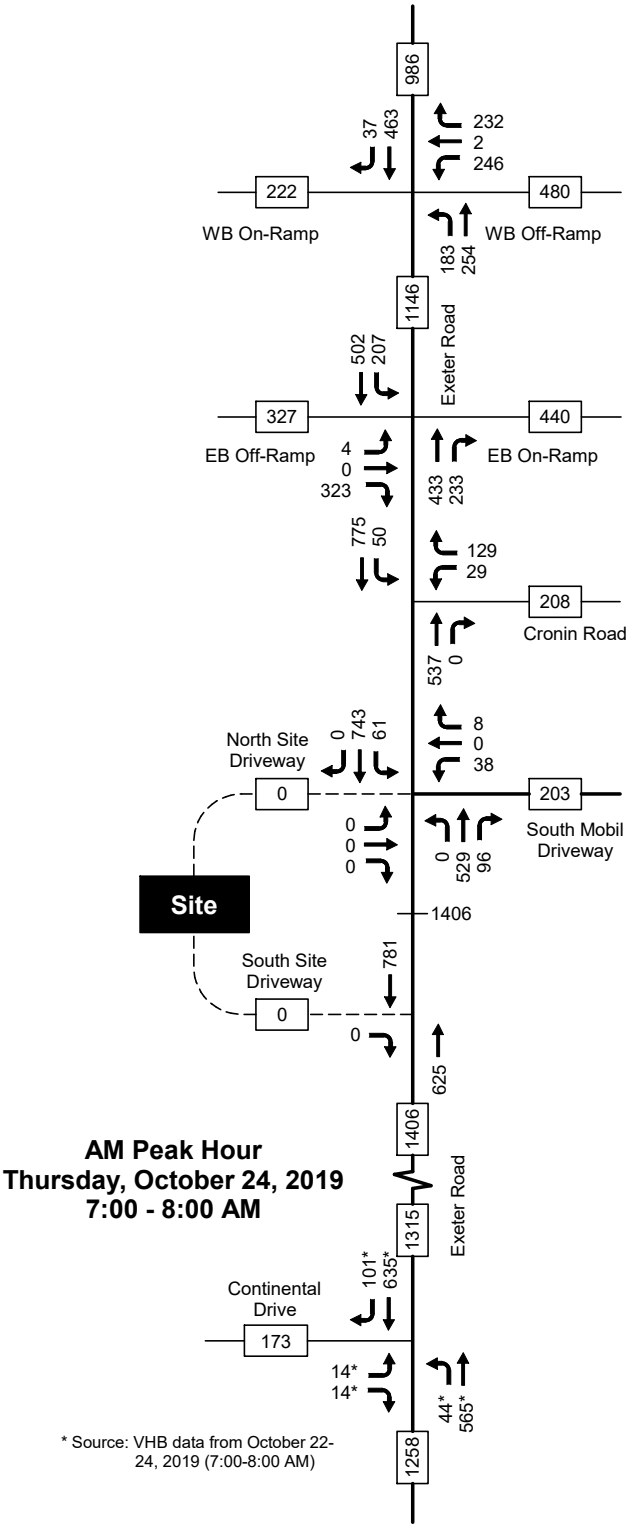
HOURLY TRAFFIC VARIATIONS



To establish the current traffic demand levels in the study area, Pernaw & Company, Inc. conducted turning movement and vehicle classification counts simultaneously at the 1) NH27/NH101 WB Ramp junction, 2) the NH27/NH101 EB Ramp junction, 3) Cronin Road, and 4) the NH27/Southerly Mobil Gas Station Driveway intersection on Thursday, October 24, 2019 from 7:00 AM to 6:00 PM (11 hours). VHB, Inc. provided the count data for Continental Drive from October 2019. Several facts and conclusions are evident from this count data:

- Peak traffic periods on NH27 occurred from 7:00 to 8:00 AM in the morning and from 4:15 to 5:15 PM in the evening. The traffic flow on NH27 (South of the Mobil station) totaled 1,406 (AM) and 1,612 vehicles (PM) during the peak hour periods. The predominant traffic flow was southbound (56%) during the AM peak hour and northbound (60%) during the PM peak hour. The two-way traffic flow on NH27 (south of Continental Drive) was somewhat lower and totaled 1,258 (AM) and 1,466 vehicles (PM) during the peak hour periods.
- The southerly Mobil Driveway accommodated 203 (AM) and 155 (PM) vehicles during the peak hour periods.
- Cronin Road accommodated 208 (AM) and 164 vehicles (PM) during the peak hour periods, with most traveling to/from the Mobil gasoline station site.
- The eastbound off-ramp carried 327 (AM) and 234 (PM) vehicles during the peak hour periods, with most exiting right (to NH27 southbound).
- The westbound off-ramp carried 480 (AM) and 465 (PM) vehicles during the peak hour periods. The left-turn and right-turn departure volumes were fairly balanced during the two peak hour periods.
- During the high school peak hour (2:00 to 3:00 PM) the westbound ramp junction accommodated 1,214 vehicles; somewhat less than during the weekday PM peak hour (4:15 to 5:15 PM) when 1,478 vehicles were observed entering this intersection. It is interesting to note that traffic levels during the highest 15-minute count interval were comparable: 375 vehicles from 2:30 to 2:45 PM, vs. 383 vehicles from 4:15 to 4:30 PM. As an aside, this ramp junction accommodated 461 vehicles during the peak 15-minute period in the morning (7:00 to 7:15 AM) on a typical school day.
- Continental Drive accommodated 173 (AM) and 226 vehicles (PM) during the peak hour periods.
- Truck traffic on NH27 accounted for approximately 3-8% (AM) and 3-4% (PM) of the total traffic flow depending upon location during the peak hour periods.

The peak hour traffic count data for the study area intersection is summarized on Figure 2. Appendix C contains the detail sheets from the turning movement counts.



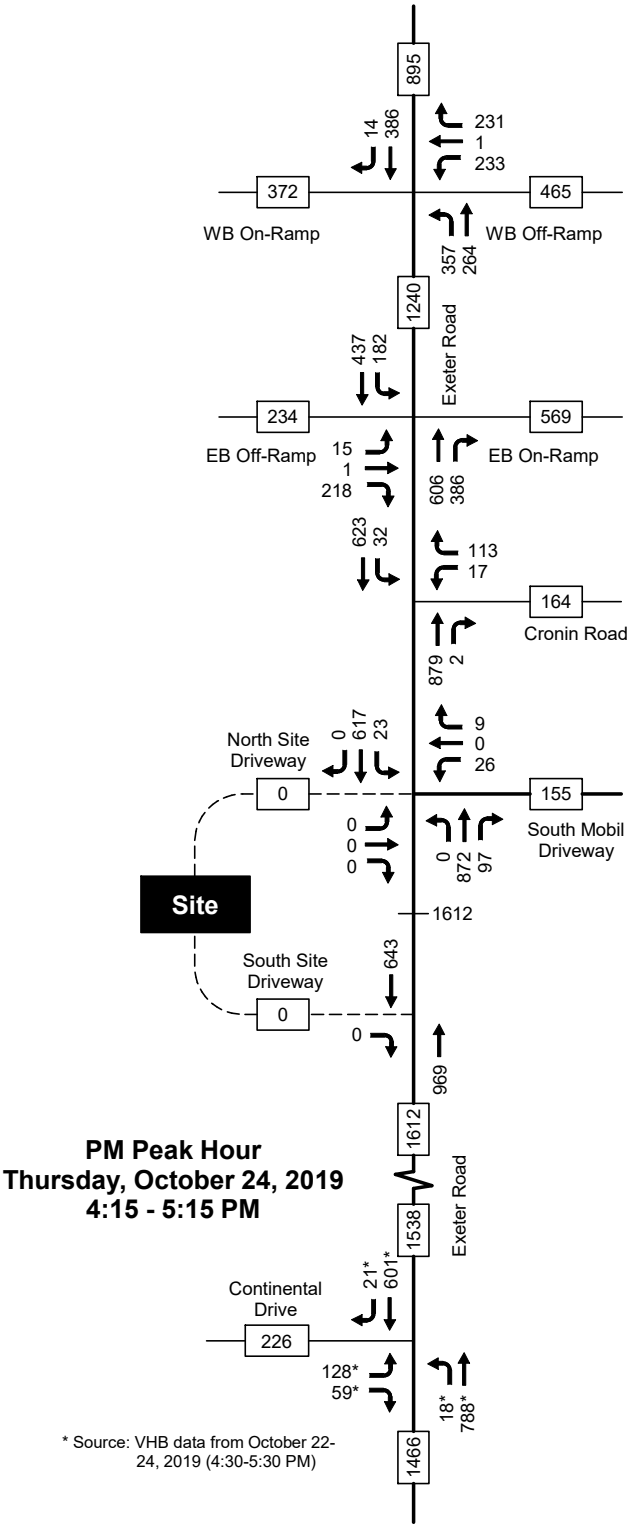


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Figure 2

2019 Existing Traffic Volumes (Balanced)

Traffic Impact Assessment, Proposed Mixed-Use Development, Exeter, New Hampshire

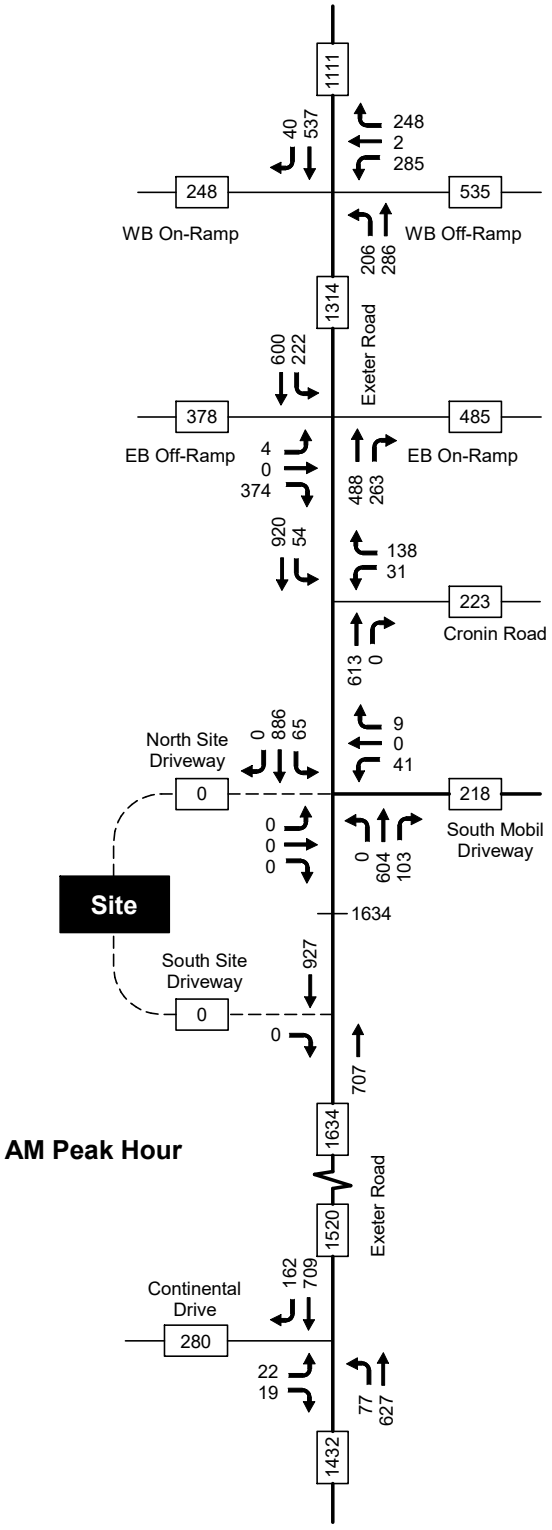
NO-BUILD TRAFFIC VOLUMES

In order to identify the net impact that site traffic will have in the study area, future traffic projections with and without the proposed multi-use site are necessary. The future traffic projections without the proposed development are referred to as the "No-Build" traffic projections and these are summarized on Figure 3 (2021) and Figure 4 (2031). These projections are based on the existing 2019 October traffic volumes, a 1.0 percent annual background traffic growth rate (compounded annually) to account for normal growth in the area, and a peak-month seasonal adjustment factor of 1.05.

The No-Build traffic projections for 2021 and 2031 also reflect full occupancy of three previously approved development projects along the corridor:

- Active adult community - 116 units on Ray Farmstead Drive
- Garrison Glen – 116,288 sf of light industrial space on Continental Drive
- Primrose School – 13,000 sf on McKay Drive

The No-Build traffic projections therefore reflect worst-case, peak-month, peak-hour conditions. Calculations pertaining to the derivation of the background traffic growth rate and the seasonal adjustment factor are contained in Appendix D. The trips associated with the other development projects are documented in Appendix E.



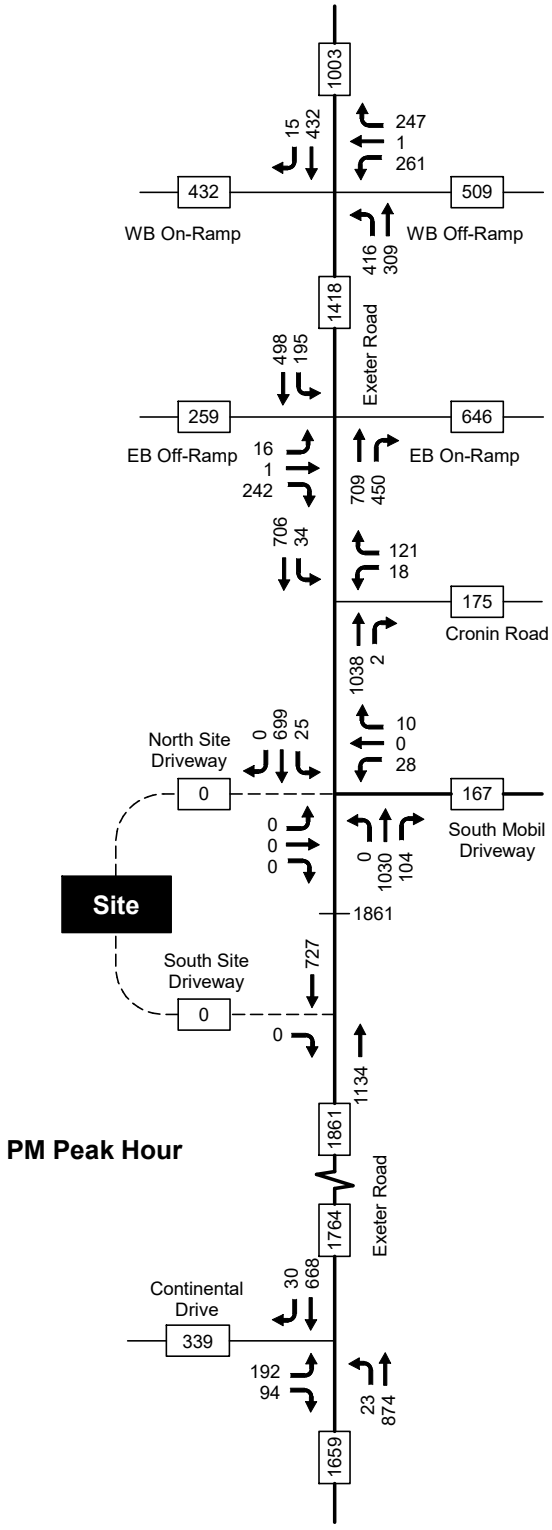


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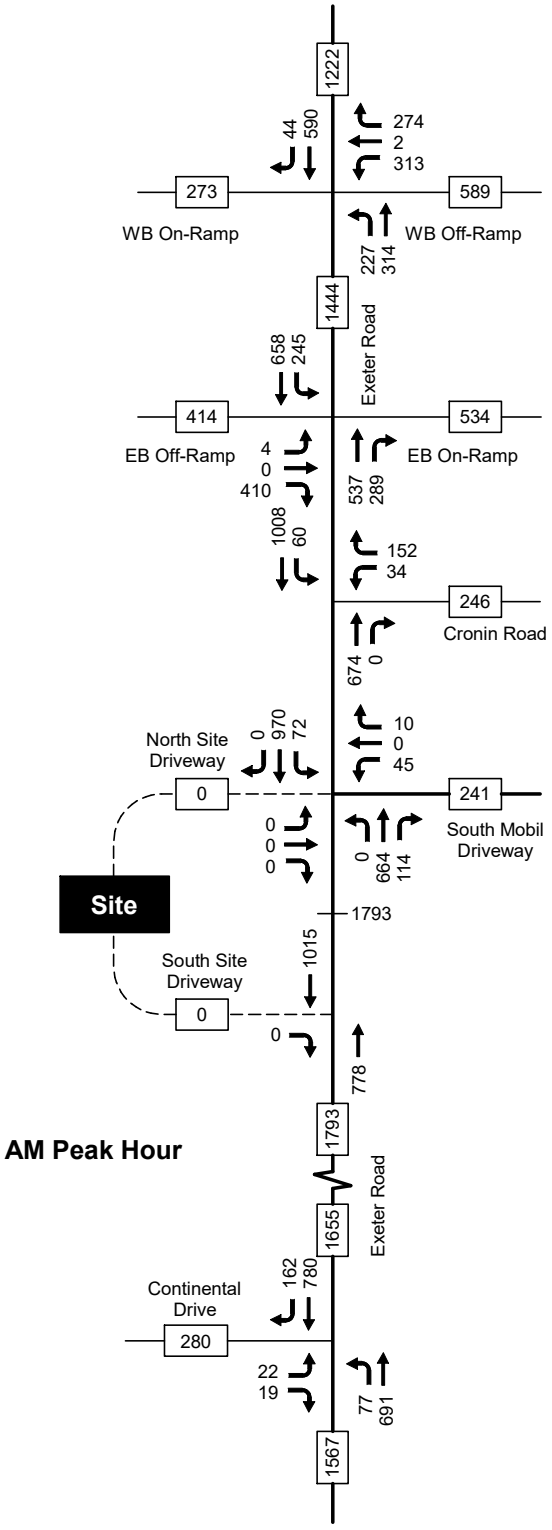
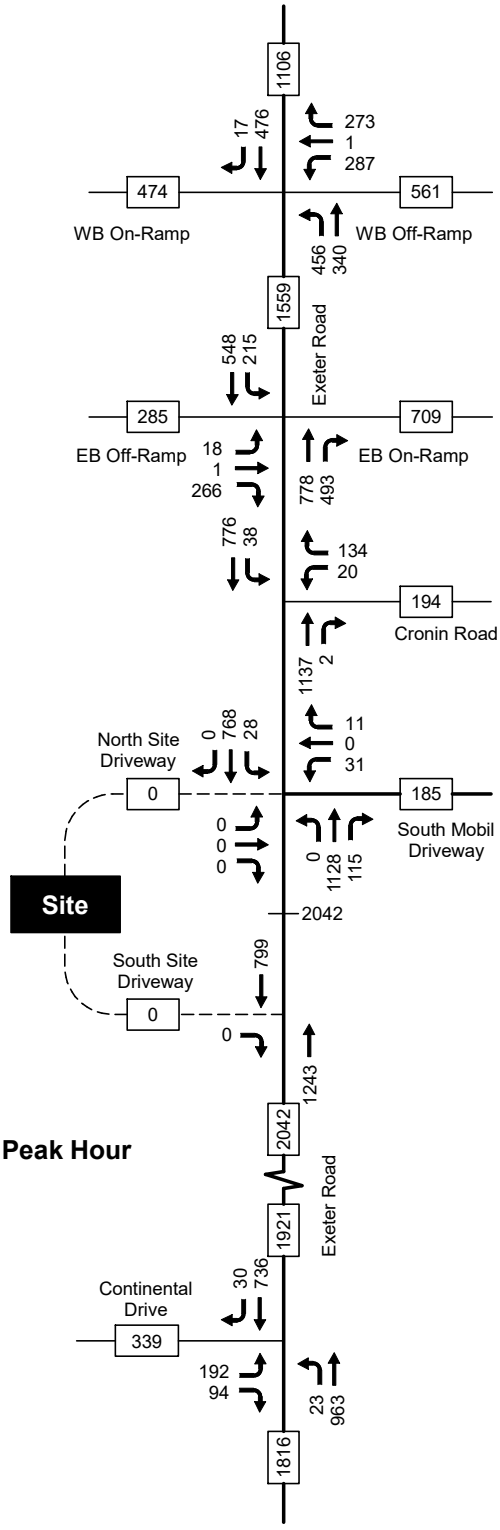
Figure 3

2021 No-Build Traffic Volumes

Traffic Impact Assessment, Proposed Mixed-Use Development, Exeter, New Hampshire



AM Peak Hour



PM Peak Hour

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Figure 4

2031 No-Build Traffic Volumes

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SITE GENERATED TRAFFIC

To estimate the quantity of vehicle trips that will be produced by the proposed commercial and residential buildings, Pernaw & Company, Inc. utilized the standard trip generation rates published by the Institute of Transportation Engineers (ITE)[1]: Land Use Code (LUC) 221 (Multifamily Housing /Mid-Rise) for the dwelling units, LUC 820 (Shopping Center) for the retail space, LUC 710 (General Office Building) and LUC 565 (Day Care Center). The overall site is expected to generate approximately 326 (AM) and 384 (PM) vehicle-trips during the peak hour periods.

Although retail uses may generate a small amount of "pass-by" traffic, the traffic projections contained herein reflect all "primary" trips, or new trips to the area. Further, the estimates below do not reflect any reduction for "internal" trips that may occur between the various uses. Table 1 summarizes the results of the trip generation analysis for this development.

Table 1 — Trip Generation Summary

		224 Dwelling Units [1]	Retail [2] (11,225 sf)	Office [3] (17,295 sf)	Day Care [4] (20,040 sf)	Total
AM Peak Hour						
	Entering	20 veh	7 veh	17 veh	117 veh	161 veh
	Exiting	55 veh	4 veh	3 veh	103 veh	165 veh
	Total	75 trips	11 trips	20 trips	220 trips	326 trips
PM Peak Hour						
	Entering	59 veh	21 veh	4 veh	105 veh	189 veh
	Exiting	37 veh	22 veh	18 veh	118 veh	195 veh
	Total	96 trips	43 trips	22 trips	223 trips	384 trips
Weekday						
	Entering	610 veh	212 veh	97 veh	477 veh	1,396 veh
	Exiting	610 veh	212 veh	97 veh	477 veh	1,396 veh
	Total	1,220 trips	424 trips	194 trips	954 trips	2,792 trips

[1] ITE Land Use Code 221- Mid-Rise (Equation Method)
[2] ITE Land Use Code 820 - Shopping Center (Rate Method)
[3] ITE Land Use Code 710 - General Office Building (Rate and Equation Method)
[4] ITE Land Use Code 565 - Day Care Center (Rate Method)

Appendix F contains the trip generation calculations for this project, along with a diagram that shows the travel patterns and traffic volumes attributable to the proposed development.

[1] Institute of Transportation Engineers, *Trip Generation*, 10th edition (Washington, D.C., 2017).

BUILD TRAFFIC VOLUMES

The future traffic projections with the proposed multi-use site in full operation are referred to as the "Build" traffic projections and these are summarized schematically on Figure 5 (2021) and Figure 6 (2031). These projections are based on the No-Build projections (Figures 3 & 4), the site generated traffic levels depicted in Table 1, and the expectation that the majority of the new trips (65%) will travel to/from points north on NH27. This percentage was based on two previous traffic studies conducted by our office in the area, which reflect an analysis of regional commuting patterns and actual travel patterns observed on the corridor.

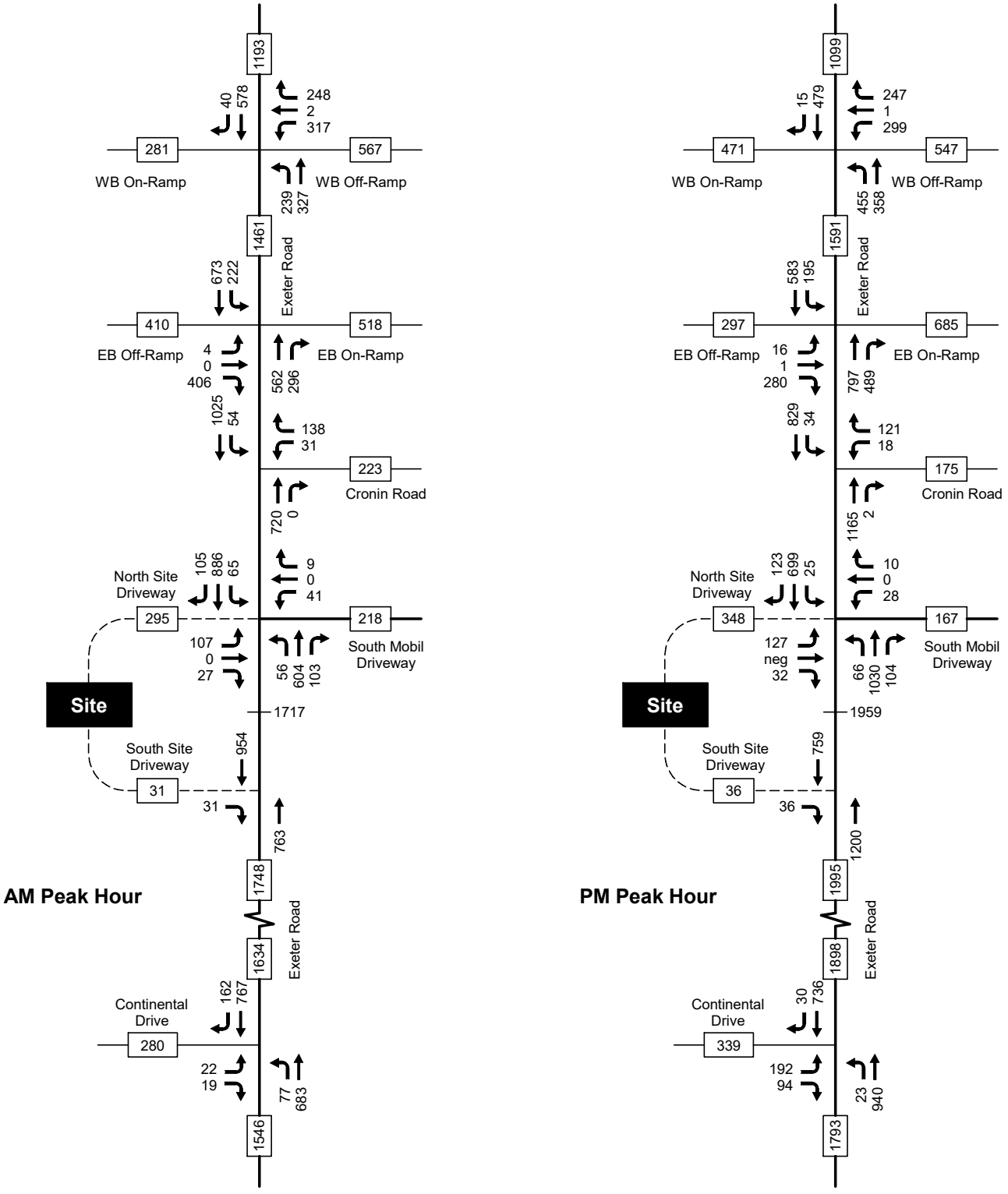

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Figure 5

2021 Build Traffic Volumes

Traffic Impact Assessment, Proposed Mixed-Use Development, Exeter, New Hampshire

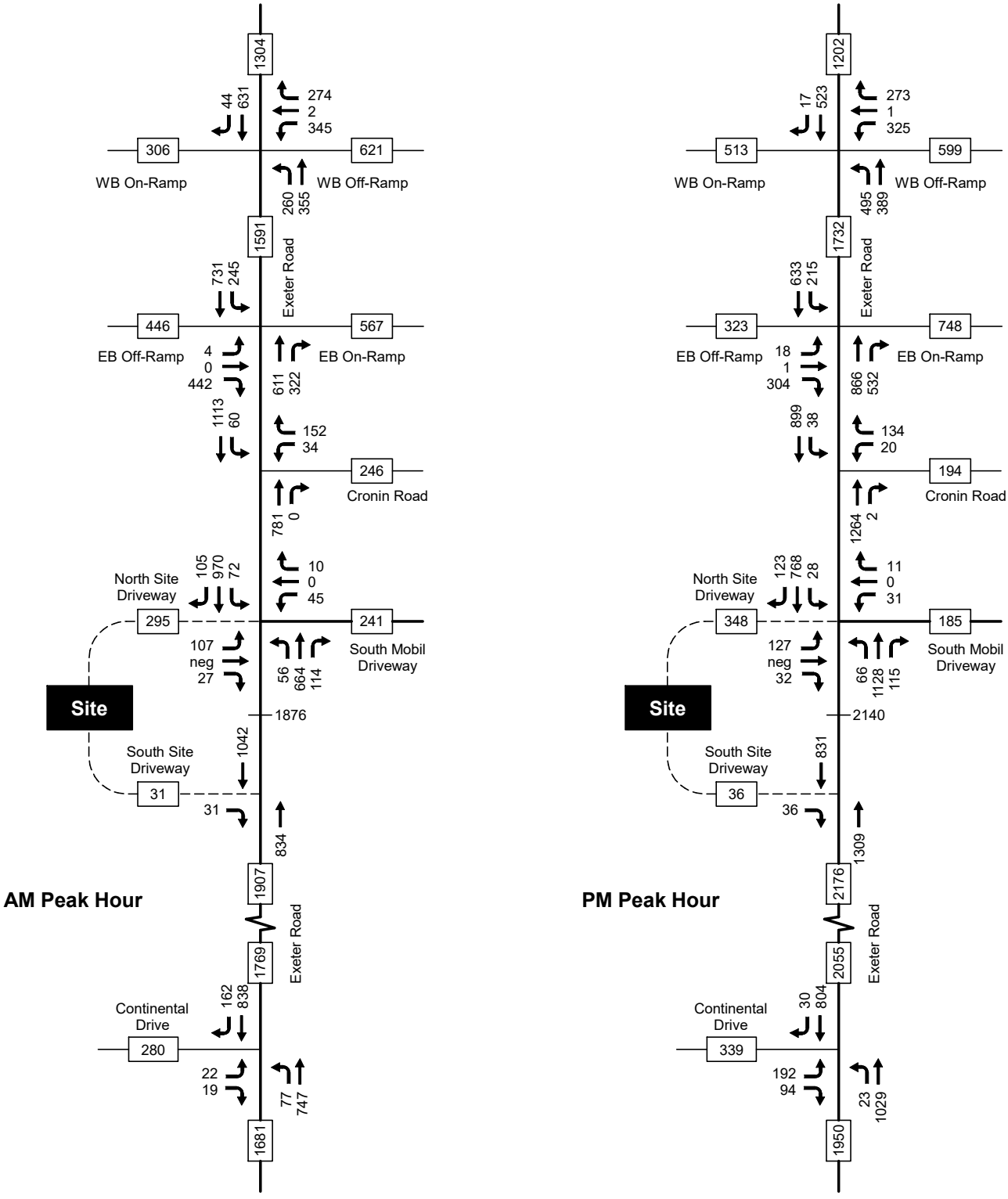

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Figure 6

2031 Build Traffic Volumes

Traffic Impact Assessment, Proposed Mixed-Use Development, Exeter, New Hampshire

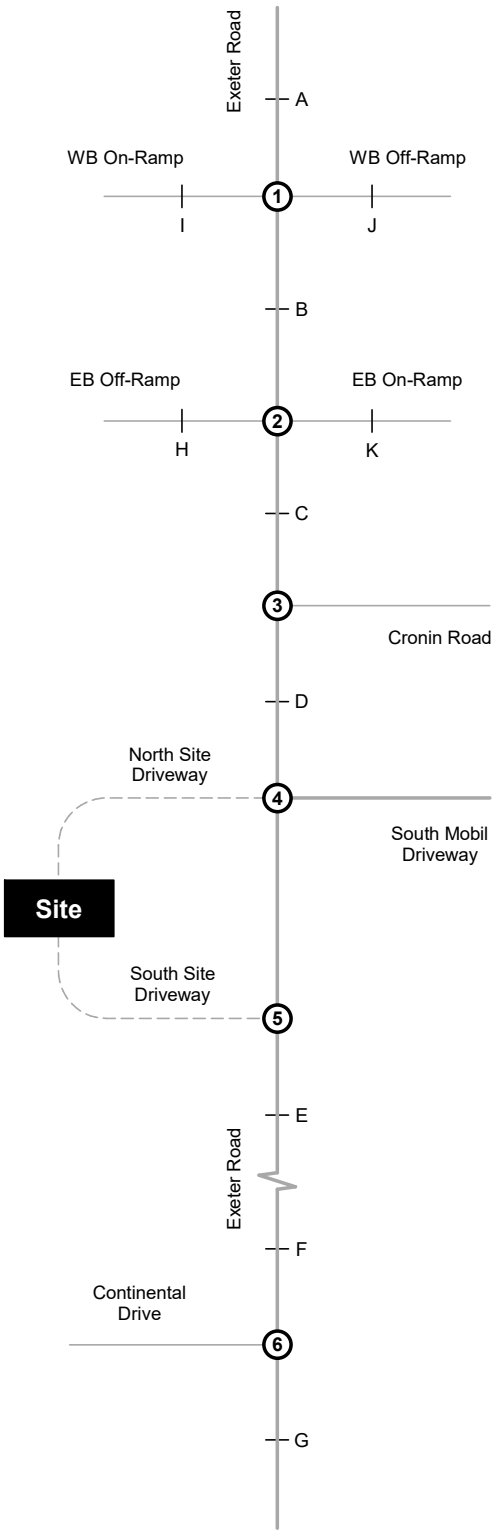
IMPACT SUMMARY

TRAFFIC VOLUME INCREASES

The net impact that the proposed development project will have on traffic levels on NH27 can be estimated by comparing the No-Build traffic projections with the Build traffic projections. This comparison demonstrates the greatest impact to roadway volumes (+250 vehicles; +14%) will occur during the weekday PM peak hour period on the short section of NH27 that lies between the site and the eastbound ramp junction. The impact on NH27 north of this ramp junction is projected to be considerably less (+173 vehicles). The impact on NH27 immediately south of the site is projected at +134 vehicles (+7%) during the worst-case PM peak hour period.

To put these percentage increases into perspective, the short-term historical NHDOT traffic count data from 2018 (see Page 5, Appendix B) revealed that PM peak hour traffic volumes varied by as much as +6% from one day to the next due to random traffic flow.

Figure 7 quantifies and summarizes the impact of site traffic on an intersection basis (total vehicles entering) and roadway segment basis (total both directions) for the weekday AM and weekday PM peak hour periods.



AM Peak Hour

Location	2021 No-Build	2021 Build	Change	% Change
Intersection 1	1604	1751	+147 veh	9%
Intersection 2	1951	2163	+212 veh	11%
Intersection 3	1756	1968	+212 veh	12%
Intersection 4	1708	2003	+295 veh	17%
Intersection 5	1634	1748	+114 veh	7%
Intersection 6	1616	1730	+114 veh	7%
Checkpoint A	1111	1193	+82 veh	7%
Checkpoint B	1314	1461	+147 veh	11%
Checkpoint C	1725	1937	+212 veh	12%
Checkpoint D	1564	1776	+212 veh	14%
Checkpoint E	1634	1748	+114 veh	7%
Checkpoint F	1520	1634	+114 veh	8%
Checkpoint G	1432	1546	+114 veh	8%
Checkpoint H	378	410	+32 veh	8%
Checkpoint I	248	281	+33 veh	13%
Checkpoint J	535	567	+32 veh	6%
Checkpoint K	485	518	+33 veh	7%

PM Peak Hour

Location	2021 No-Build	2021 Build	Change	% Change
Intersection 1	1681	1854	+173 veh	10%
Intersection 2	2111	2361	+250 veh	12%
Intersection 3	1919	2169	+250 veh	13%
Intersection 4	1896	2244	+348 veh	18%
Intersection 5	1861	1995	+134 veh	7%
Intersection 6	1881	2015	+134 veh	7%
Checkpoint A	1003	1099	+96 veh	10%
Checkpoint B	1418	1591	+173 veh	12%
Checkpoint C	1899	2149	+250 veh	13%
Checkpoint D	1764	2014	+250 veh	14%
Checkpoint E	1861	1995	+134 veh	7%
Checkpoint F	1764	1898	+134 veh	8%
Checkpoint G	1659	1793	+134 veh	8%
Checkpoint H	259	297	+38 veh	15%
Checkpoint I	432	471	+39 veh	9%
Checkpoint J	509	547	+38 veh	7%
Checkpoint K	646	685	+39 veh	6%

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Figure 7

2021 Impact Summary

Traffic Impact Assessment, Proposed Mixed-Use Development, Exeter, New Hampshire

TRAFFIC OPERATIONS AND SAFETY

INTERSECTION CAPACITY – UNSIGNALIZED INTERSECTIONS

The short-range (2021) and long-range (2031) traffic projections form the basis for assessing traffic operations at the study area intersections on NH27 from a capacity and delay standpoint. These intersections were analyzed according to the methodologies of the *Highway Capacity Manual*[2] as replicated by the latest edition of the *Synchro Traffic Signal Coordination Software (Version 10)*, which also performs unsignalized intersection capacity analyses.

Capacity and Level of Service (LOS) calculations pertaining to unsignalized intersections address the quality of service for those vehicles turning into and out of intersecting side streets. The availability of adequate gaps in the traffic stream on the major street (NH27) actually controls the potential capacity for vehicle movements to and from the minor approaches (proposed site driveways, ramps). Levels of Service are simply letter grades (A-F) that categorize the vehicle delays associated with specific turning maneuvers. Table 2 describes the criteria used in this analysis.

Table 2 — Level-of-Service Criteria for Unsignalized Intersections

Control Delay (seconds/vehicle)	Level of Service by Volume-to-Capacity Ratio	
	v/c ≤ 1.0	v/c > 1.0
0 - 10	A	F
> 10 - 15	B	F
> 15 - 25	C	F
> 25 - 35	D	F
> 35 - 50	E	F
> 50	F	F

Source: Transportation Research Board, Highway Capacity Manual 2010.

The results of the analysis for the **NH27/Proposed South Site Driveway** intersection are summarized on Table 3. The right-turn departure movement from this site driveway is expected to operate well below capacity and with minimal queuing during the peak hour periods with the subject site fully occupied. Drivers can expect short to moderate delays (LOS C or LOS D) when exiting from the site during the morning and evening peak hour periods.

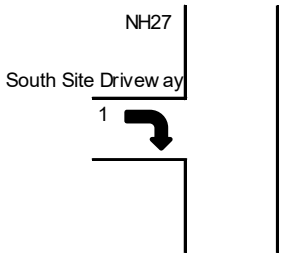
[2] Transportation Research Board, *Highway Capacity Manual* (Washington, D.C., 2000).

Table 3

STOP-Controlled Intersection Capacity Analysis
NH27 / South Site Driveway

	Weekday AM Peak Hour				Weekday PM Peak Hour			
	Delay [1]	V/C [2]	LOS [3]	Queue [4]	Delay [1]	V/C [2]	LOS [3]	Queue [4]
1. South Site Driveway - EB Right Turn Departures								
2021 Build	23.9	0.15	C	1	15.9	0.11	C	<1
2031 Build	27.5	0.18	D	1	17.2	0.12	C	<1

[1] HCM Control Delay (seconds per vehicle), [2] HCM Volume to Capacity Ratio, [3] HCM Level of Service, [4] HCM 95th Percentile Queue (vehicles)



The results of the analysis for the **NH27/Proposed North Site Driveway/Gas Station Driveway** intersection are summarized on Table 4. The results show that departures from the southerly gas station driveway currently involve long vehicle delays (LOS F) during the peak hour periods, similar to the proposed site driveway and other driveways along this corridor. This is the result of the heavy volume of through traffic on the corridor and the number of vehicles exiting left from the minor approach. Given these results, the need for traffic signal control at this intersection has been evaluated later in this study.

The proposed site driveway is appropriately designed with two exit lanes: one for left-turn departures (and any through movements) and the other for right-turn departures. Providing two departure lanes is advantageous in that it will maximize the egress capacity of the driveway and minimize delays and queuing to the extent possible.

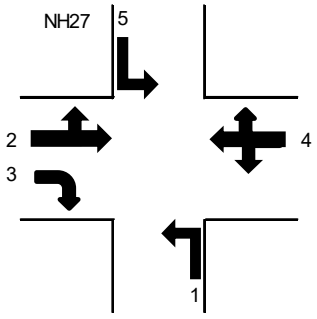
Those exiting right from this driveway will operate at LOS C (2021) and LOS D (2031) during the peak hour periods. Left-turn arrivals from NH27 entering the subject site will operate at LOS B or higher during all hours of the day through the horizon year and beyond.

Table 4

STOP-Controlled Intersection Capacity Analysis
NH27 / North Site Driveway / Gas Station Driveway

	Weekday AM Peak Hour				Weekday PM Peak Hour			
	Delay [1]	V/C [2]	LOS [3]	Queue [4]	Delay [1]	V/C [2]	LOS [3]	Queue [4]
1. NH27 - NB Left-Turn Arrivals								
2019 Existing	-	-	-	-	-	-	-	-
2021 No Build	-	-	-	-	-	-	-	-
2021 Build	12.3	0.14	B	1	10.1	0.10	B	<1
2031 No Build	-	-	-	-	-	-	-	-
2031 Build	13.1	0.16	B	1	10.4	0.11	B	<1
2. North Site Driveway - EB Left-Through Departures								
2019 Existing	-	-	-	-	-	-	-	-
2021 No Build	-	-	-	-	-	-	-	-
2021 Build	>300	11.89	F	16	>300	8.82	F	19
2031 No Build	-	-	-	-	-	-	-	-
2031 Build	>300	23.78	F	17	>300	17.64	F	19
3. North Site Driveway - EB Right-Turn Departures								
2019 Existing	-	-	-	-	-	-	-	-
2021 No Build	-	-	-	-	-	-	-	-
2021 Build	22.1	0.12	C	<1	15.2	0.09	C	<1
2031 No Build	-	-	-	-	-	-	-	-
2031 Build	25.1	0.14	D	1	16.4	0.10	C	<1
4. Gas Station Driveway - WB Departures								
2019 Existing	194.6	0.94	F	5	77.5	0.55	F	3
2021 No Build	>300	1.78	F	7	185.5	0.90	F	4
2021 Build	>300	6.31	F	10	>300	2.87	F	8
2031 No Build	>300	3.32	F	10	>300	1.36	F	6
2031 Build	>300	15.28	F	11	>300	6.10	F	10
5. NH27 SB Left-Turn Arrivals								
2019 Existing	10.6	0.10	B	<1	11.2	0.04	B	<1
2021 No Build	11.3	0.12	B	<1	12.4	0.05	B	<1
2021 Build	11.3	0.12	B	<1	12.4	0.05	B	<1
2031 No Build	12.1	0.15	B	1	13.4	0.07	B	<1
2031 Build	12.1	0.15	B	1	13.4	0.07	B	<1

[1] HCM Control Delay (seconds per vehicle), [2] HCM Volume to Capacity Ratio, [3] HCM Level of Service, [4] HCM 95th Percentile Queue (vehicles)



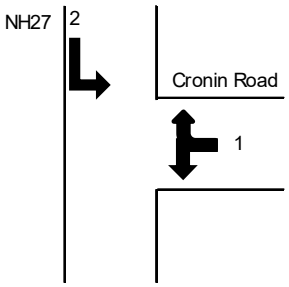
The results of the analysis for the **NH27/Cronin Road** intersection are summarized on Table 5. The results show that departures from Cronin Road currently involve long vehicle delays (LOS F) during the peak hour periods. This is the result of the heavy volume of through traffic on the corridor and the number of vehicles exiting from Cronin Road. Favorably, the majority of vehicles exit to the right from this single-lane approach. Left-turn arrivals from NH27 onto Cronin Road (and into the gas station site) will operate at LOS B or higher during all hours of the day through the horizon year and beyond.

Table 5

STOP-Controlled Intersection Capacity Analysis
NH27 / Cronin Road

	Weekday AM Peak Hour				Weekday PM Peak Hour			
	Delay [1]	V/C [2]	LOS [3]	Queue [4]	Delay [1]	V/C [2]	LOS [3]	Queue [4]
1. Cronin Road - WB Departures								
2019 Existing	105.6	0.96	F	8	50.2	0.68	F	4
2021 No Build	>300	1.58	F	14	125.6	0.99	F	8
2021 Build	>300	2.55	F	19	263.0	1.33	F	11
2031 No Build	>300	2.54	F	21	277.2	1.38	F	12
2031 Build	>300	5.21	F	25	>300	1.90	F	15
2. NH27 SB Left-Turns								
2019 Existing	9.7	0.08	A	<1	10.5	0.05	B	<1
2021 No Build	10.3	0.09	B	<1	11.6	0.06	B	<1
2021 Build	11.2	0.11	B	<1	12.6	0.07	B	<1
2031 No Build	10.9	0.11	B	<1	12.4	0.08	B	<1
2031 Build	11.9	0.13	B	<1	13.5	0.09	B	<1

[1] HCM Control Delay (seconds per vehicle), [2] HCM Volume to Capacity Ratio, [3] HCM Level of Service, [4] HCM 95th Percentile Queue (vehicles)



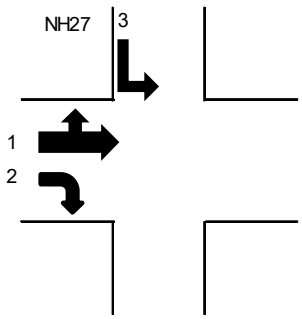
The results of the analysis for the **NH27/NH101 Eastbound Ramp Junction** are summarized on Table 6. The results show that departures from the eastbound off-ramp (primarily right-turn movements) currently involve long vehicle delays (LOS F) during the peak hour periods. Favorably, the volume of left turning traffic is low (AM = 4 vehicles, PM = 16 vehicles) and there are two separate approach lanes. The southbound left-turn movement from NH27 onto the eastbound on-ramp are projected to operate at LOS C or higher during all hours of the day through the horizon year and beyond.

Table 6

STOP-Controlled Intersection Capacity Analysis
NH27 / NH101 EB Ramps

	Weekday AM Peak Hour				Weekday PM Peak Hour			
	Delay [1]	V/C [2]	LOS [3]	Queue [4]	Delay [1]	V/C [2]	LOS [3]	Queue [4]
1. NH101 Off-Ramps - EB Left-Through Departures								
2019 Existing	72.4	0.08	F	<1	85.2	0.30	F	1
2021 No Build	115.8	0.13	F	<1	171.5	0.52	F	2
2021 Build	188.0	0.19	F	1	>300	0.78	F	2
2031 No Build	197.6	0.20	F	1	>300	0.91	F	3
2031 Build	>300	0.31	F	1	>300	1.41**	F	3
2. NH101 Off-Ramps - EB Right-Turn Departures								
2019 Existing	26.6	0.71	D	6	15.7	0.44	C	2
2021 No Build	59.5	0.95	F	11	18.8	0.53	C	3
2021 Build	120.2	1.14	F	18	27.3	0.69	D	5
2031 No Build	113.7	1.13	F	17	23.1	0.62	C	4
2031 Build	203.6	1.35	F	25	38.0	0.80	E	7
3. NH27 SB Left-Turns								
2019 Existing	12.9	0.33	B	2	13.6	0.32	B	1
2021 No Build	14.8	0.40	B	2	16.5	0.40	C	2
2021 Build	14.4	0.46	C	2	19.3	0.46	C	2
2031 No Build	17.5	0.49	C	3	20.2	0.50	C	3
2031 Build	21.6	0.56	C	3	24.6	0.56	C	3

[1] HCM Control Delay (seconds per vehicle), [2] HCM Volume to Capacity Ratio, [3] HCM Level of Service, [4] HCM 95th Percentile Queue (vehicles)
** Applies to 19 vehicles exiting left/through



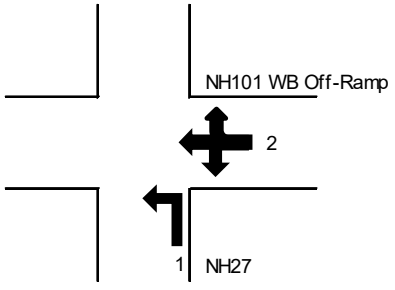
The results of the analysis for the **NH27/NH101 Westbound Ramp Junction** are summarized on Table 7. The results show that departures from the off-ramp currently involve long vehicle delays (LOS F) during the peak hour periods; particularly during the morning peak hour period when high school traffic is prevalent. Regardless of the proposed development, consideration should be given to re-striping the off-ramp to provide separate left-turn and right-turn approach lanes. The northbound left-turn movement from NH27 to the on-ramp is projected to operate at LOS C or higher during all hours of the day through the horizon year and beyond with the site in full operation.

Table 7

STOP-Controlled Intersection Capacity Analysis
NH27 / NH101 WB Ramps

	Weekday AM Peak Hour				Weekday PM Peak Hour			
	Delay [1]	V/C [2]	LOS [3]	Queue [4]	Delay [1]	V/C [2]	LOS [3]	Queue [4]
1. NH27 NB Left-Turns								
2019 Existing	10.7	0.35	B	2	10.0	0.36	B	2
2021 No Build	12.0	0.42	B	2	11.0	0.44	B	2
2021 Build	13.6	0.51	B	3	12.0	0.50	B	3
2031 No Build	13.5	0.49	B	3	12.0	0.50	B	3
2031 Build	15.8	0.59	C	4	13.4	0.57	B	4
2. NH101 Off-Ramp - WB Left-Turn Departures								
2019 Existing	>300	5.69 **	F	70	>300	3.79	F	55
2021 No Build	>300	10.04 **	F	85	>300	6.52	F	68
2021 Build	>300	18.69 **	F	94	>300	10.68	F	77
2031 No Build	>300	16.58 **	F	97	>300	10.28	F	79
2031 Build	>300	29.97 **	F	104	>300	17.39	F	87

[1] HCM Control Delay (seconds per vehicle), [2] HCM Volume to Capacity Ratio, [3] HCM Level of Service, [4] HCM 95th Percentile Queue (vehicles)
** Results reflect Exeter High School volumes from 7:00 - 7:15 AM (PHF = 0.55)



The calculations pertaining to these analyses are included in Appendix G.

INTERSECTION CAPACITY – SIGNALIZED INTERSECTIONS

The existing NH27/Continental Drive intersection was analyzed with traffic signal control utilizing the methods of the Highway Capacity Manual, as replicated by the *Synchro Traffic Signal Timing Software* (Version 10). A traffic flow rate, capacity, Level of Service (LOS), and delay estimate was determined for each critical traffic movement, lane group, and for the overall intersection. Levels of Service are simply letter grades (A-F), which categorize the vehicle delays associated with specific turning maneuvers. The following table describes the criteria used in this analysis.

Table 8 — Level-of-Service Criteria for Signalized Intersections

Control Delay (seconds/vehicle)	Level of Service by Volume-to-Capacity Ratio	
	v/c ≤ 1.0	v/c > 1.0
≤ 10	A	F
> 10 - 20	B	F
> 20 - 35	C	F
> 35 - 55	D	F
> 55 - 80	E	F
> 80	F	F

Source: Transportation Research Board, Highway Capacity Manual 2010.

Table 9 summarizes the results of the analysis for the **NH27/Continental Drive** intersection and it shows that all "lane groups" within the intersection are currently operating below capacity during the peak periods, and will continue to do so through 2031 with the proposed development fully occupied. The overall intersection is expected to operate at LOS B (AM) and LOS C (PM) by 2031. This analysis confirms that physical modifications are not necessary at this intersection as a result of the proposed development.

Stephen G. Pernaw & Company, Inc.

Table 9

Signal-Controlled Intersection Capacity Analysis Summary
NH27 / Continental Drive

	2019 Existing				2021 No-Build				2021 Build				2031 No-Build				20312 Build			
	V/C [1]	Delay [2]	LOS [3]	Queue Avg/95th [4]	V/C [1]	Delay [2]	LOS [3]	Queue Avg/95th [4]	V/C [1]	Delay [2]	LOS [3]	Queue Avg/95th [4]	V/C [1]	Delay [2]	LOS [3]	Queue Avg/95th [4]	V/C [1]	Delay [2]	LOS [3]	Queue Avg/95th [4]
Weekday AM Peak Hour																				
Continental Dr - EB LT	0.16	32.3	C	7 (21)	0.19	30.1	C	9 (28)	0.23	35.5	D	11 (32)	0.23	35.5	D	11 (32)	0.26	40.8	D	13 (35)
Continental Dr - EB RT	0.01	24.3	C	0 (12)	0.02	21.2	C	0 (14)	0.02	25.4	C	0 (16)	0.02	25.4	C	0 (16)	0.02	29.6	C	0 (18)
NH27 - NB LT	0.75	66.4	E	27 (43)	0.94	97.1	F	40 (79)	0.91	92.9	F	46 (85)	0.91	92.9	F	46 (85)	0.89	92.9	F	53 (91)
NH27 - NB TH	0.50	3.1	A	66 (80)	0.58	4.2	A	81 (96)	0.61	4.2	A	94 (107)	0.61	4.3	A	96 (108)	0.65	4.5	A	114 (122)
NH27 - SB TH	0.65	6.8	A	185 (235)	0.78	11.2	B	229 (288)	0.80	11.9	B	287 (340)	0.81	12.5	B	298 (353)	0.84	13.9	B	374 (417)
NH27 - SB RT	0.08	1.2	A	0 (5)	0.13	1.6	A	0 (6)	0.13	1.6	A	0 (6)	0.13	1.6	A	0 (6)	0.13	1.5	A	0 (6)
Overall	**0.63**	**7.2**	**A**		**0.74**	**12.0**	**B**		**0.76**	**11.9**	**B**		**0.78**	**12.2**	**B**		**0.81**	**12.7**	**B**	
Cycle Length (Lost T)	**60 (13)**				**60 (13)**				**70 (13)**				**70 (13)**				**80 (13)**			
Weekday PM Peak Hour																				
Continental Dr - EB LT	0.65	30.1	C	60 (87)	0.78	34.1	C	91 (121)	0.83	42.8	D	103 (132)	0.80	46.4	D	145 (172)	0.85	53.9	D	149 (178)
Continental Dr - EB RT	0.05	16.0	B	0 (14)	0.08	14.3	B	0 (15)	0.08	16.5	B	0 (17)	0.08	22.5	C	0 (19)	0.08	23.6	C	0 (20)
NH27 - NB LT	0.18	28.4	C	7 (24)	0.23	28.5	C	9 (28)	0.25	31.2	C	10 (30)	0.27	41.3	D	15 (39)	0.27	41.9	D	15 (39)
NH27 - NB TH	0.69	8.2	A	161 (260)	0.81	13.4	B	232 (415)	0.85	14.6	B	273 (497)	0.84	15.5	B	405 (587)	0.88	17.8	B	436 (666)
NH27 - SB TH	0.65	10.5	B	167 (274)	0.77	15.5	B	218 (414)	0.80	16.2	B	258 (478)	0.75	15.2	B	320 (471)	0.80	16.6	B	354 (526)
NH27 - SB RT	0.01	1.4	A	0 (3)	0.02	1.4	A	0 (3)	0.02	1.3	A	0 (3)	0.02	1.1	A	0 (3)	0.02	1.1	A	0 (3)
Overall	**0.74**	**11.6**	**B**		**0.88**	**16.7**	**B**		**0.91**	**18.5**	**B**		**0.88**	**19.3**	**B**		**0.93**	**21.5**	**C**	
Cycle Length	**60 (13)**				**60 (13)**				**65 (13)**				**90 (13)**				**90 (13)**			

1) Volume-to-capacity ratio, 2) Delay in vehicles per seconds, 3) Level of Service, 4) Queue length in feet

TRAFFIC SIGNAL WARRANTS

Given the results of the intersection capacity and Level of Service analyses for the North Site Driveway intersection and the Westbound Off-Ramp Junction, consideration was given to the need for traffic signal control at these locations. Traffic signals should not be installed unless one or more of the signal warrants in the "*Manual on Uniform Traffic Control Devices"* (MUTCD) is met. The MUTCD[3] sets forth the minimum criteria under which signals may be considered, and further states, *"the satisfaction of a warrant or warrants is not in itself a justification for a signal."*

Generally, these warrants consider 1) traffic volumes on the major street (total both directions), 2) the higher-volume side street approach, 3) the travel speeds approaching the intersection, and 4) the travel lane configuration at the intersection. The traffic levels used in the analysis should represent "average day" conditions and be normally and repeatedly found at the location under consideration.

The following tabulation summarizes the results for the **NH27/Proposed North Site Driveway/Gas Station Driveway** intersection (using 70% columns, left-turn departures only) and indicates that traffic signal control will not be warranted at this intersection. The left-turn departure volumes do not satisfy the minimum criteria. For this reason, this driveway should operate under STOP sign control (MUTCD #R1-1).

Traffic signal control is currently warranted at the **NH27/NH101 Westbound Ramp Junction** based on existing traffic levels (and the existing travel lane configuration).

	2031 Build Volumes (Average Month Conditions)		**2019 Existing Volumes** (Average Month Conditions)	
	WARRANT 1 (8 hours required)	**WARRANT 2** (4 hours required)	**WARRANT 1** (8 hours required)	**WARRANT 2** (4 hours required)
NH27 / WB Ramps	**Warrant Met** (9 hours met)	**Warrant Met** (9 hours met)	Not Met (only 5 hours met)	**Warrant Met** (only 6 hours met)
NH27 / EB Ramps	Not Met (0 hours met)	Not Met (0 hours met)	Not Met (0 hours met)	Not Met (0 hours met)
NH27 / North Site Driveway	Not Met (only 3 hours met)	Not Met (only 2 hours met)	- -	- -

Appendix H contains the computations pertaining to the traffic signal warrants analyses.

[3] U.S. Department of Transportation – Federal Highway Administration, *Manual on Uniform Traffic Control Devices,* 2009 edition (Washington, D.C., 2009)

AUXILIARY TURN LANES

Determining the appropriate design of the site driveway intersection should take into account the hourly traffic volumes and turning movement patterns, vehicle types and speeds, and the projected Level of Service and capacity analysis results. The proposed North Site Driveway intersection was analyzed to determine the ideal approach lane configuration for providing efficient traffic operations.

Left-Turn Treatment – The type of treatment needed to accommodate left-turning vehicles from any street or highway to an intersecting side street (or driveway) can range from no treatment where turning volumes are low; to the provision of a formal center turn lane used exclusively by left-turning vehicles for deceleration and storage while waiting to complete their maneuvers.

Analysis of the 2021 Build traffic volume projections using NCHRP 457 guidelines is summarized in Table 10 on Page 27 and confirms that left-turn treatment is advisable to accommodate the anticipated number of northbound vehicles turning left into the site from NH27. This finding also applies to the current number of southbound vehicles turning left into Cronin Road and the Mobil Driveway.

Providing left-turn treatment at the North Site Driveway intersection can be provided in stages. For the short-term, this study recommends that the existing northbound shoulder on NH27 be widened to 10-12 feet to function as a "bypass" lane for through traffic to travel around any vehicle that may be turning left into the subject site (see "Interim Traffic Mitigation Plan," Page 29), until such time corridor-wide improvements are completed by the TIF project. It is our understanding that this future project will involve widening to provide a two-way continuous left-turn lane that extends from the Exit 9 Interchange to the existing three-lane section at Continental Drive (with signalization). The number of through lanes on NH27 has yet to be determined.

Right-Turn Treatment – The type of treatment needed to accommodate right-turning vehicles from any street or highway to any intersecting side street (or driveway) can range from a corner radius only, where turning volumes are low; to the provision of a short 10:1 right-turn taper; to the addition of an exclusive right-turn lane, where turning volumes and through traffic volumes are significant. Analysis of the North Site Driveway intersection on NH27 is also summarized in Table 10 and confirms that right-turn treatment is appropriate in the opening year. This study recommends that the existing southbound shoulder on NH27 be re-striped as an exclusive right-turn lane (see "Interim Traffic Mitigation Plan").

Minor-Road Approach Analysis – The type of treatment needed to accommodate exiting vehicles from the minor-road approach at a stop-controlled intersection can range from a single lane (shared left-right lane) in low-volume conditions, to two exit lanes (exclusive left-turn lane and exclusive right-turn lane) where turning volumes and through traffic volumes are significant, to multiple exit lanes in extreme cases.

Analysis of the North Site Driveway intersection on NH27 is summarized on Table 10 and confirms that providing two approach lanes on the proposed site driveway approaches to NH27 is advisable based on the anticipated 2021 traffic volumes.

Table 10

Auxiliary Turn Lane Warrants Analysis - 2021
Exeter Road / North Site Driveway

	2021 AM Build Volumes	2021 PM Build Volumes
I. LEFT-TURN LANE WARRANTS ANALYSIS		
Peak Hour Inputs:		
Left-Turn Volume (NB)	56	66
Advancing Volume (NB)	763	1200
Opposing Volume (SB)	1056	847
Percent Lefts	7.3%	5.5%
Speed (mph)	30	30
Limiting Advancing Volume (veh/h)	246	344
Left-Turn Treatment Warranted?	**YES**	**YES**
II.RIGHT-TURN LANE WARRANTS ANALYSIS		
Peak Hour Inputs:		
Right-Turn Volume (SB)	105	123
Approach Volume (SB)	1056	847
Speed (mph)	30	30
Limiting Right-Turn Volume (veh/h)	15	43
Add Right-Turn Bay?	**YES**	**YES**
III. MINOR-ROAD APPROACH GEOMETRY ANALYSIS		
Peak Hour Inputs:		
Major-Road Volume (NB-SB)	1819	2047
% Right-Turns on Minor (EB)	20	20
Minor-Road Approach Volume	134	159
Limiting Minor-Road Volume (veh/h)	53	38
Consider TWO Approach Lanes?	**YES**	**YES**

The calculations pertaining to the auxiliary turn lane warrants analyses are included in Appendix I.

TRAFFIC CONTROL DEVICES

The appropriate form of traffic control at the two proposed site driveway intersections on NH27 is STOP sign control (MUTCD #R1-1) on the minor approaches. This should be supplemented with a 24-inch (minimum) stop line. At the North Site Driveway intersection, a short section of double-yellow centerline marking is recommended to separate inbound and outbound vehicles and a four-inch white lane line should be provided to separate left and right-turn departures.

SIGHT DISTANCE

Sight distance at any intersection is an important safety consideration. The operator of a vehicle approaching an intersection should have an unobstructed view of the intersection and sufficient length of roadway to enable a full stop, should it be required to avoid a collision. Similarly, exiting vehicles from the site driveway approaches to NH27 should have sufficient visibility of approaching traffic in order to safely enter the traffic flow on to the major street.

Field observations confirm that ample stopping sight distances (SSD) will exist looking left and looking right from the minor approaches. Given that there is >500-feet of sight distance available means that drivers will have sufficient sight distance to anticipate and avoid collisions. Intersection Sight Distances (ISD) reflect the distances needed for a vehicle exiting left or right under STOP control such that approaching vehicles on the major street need not reduce their travel speed to less than 70 percent of their initial speed. There is ample SSD and ISD for these intersections to operate in a safe manner.

Photographs depicting the available sight distances looking left and looking right from the site driveway approaches to NH27 are included in Appendix J.

TRAFFIC MITIGATION PLAN

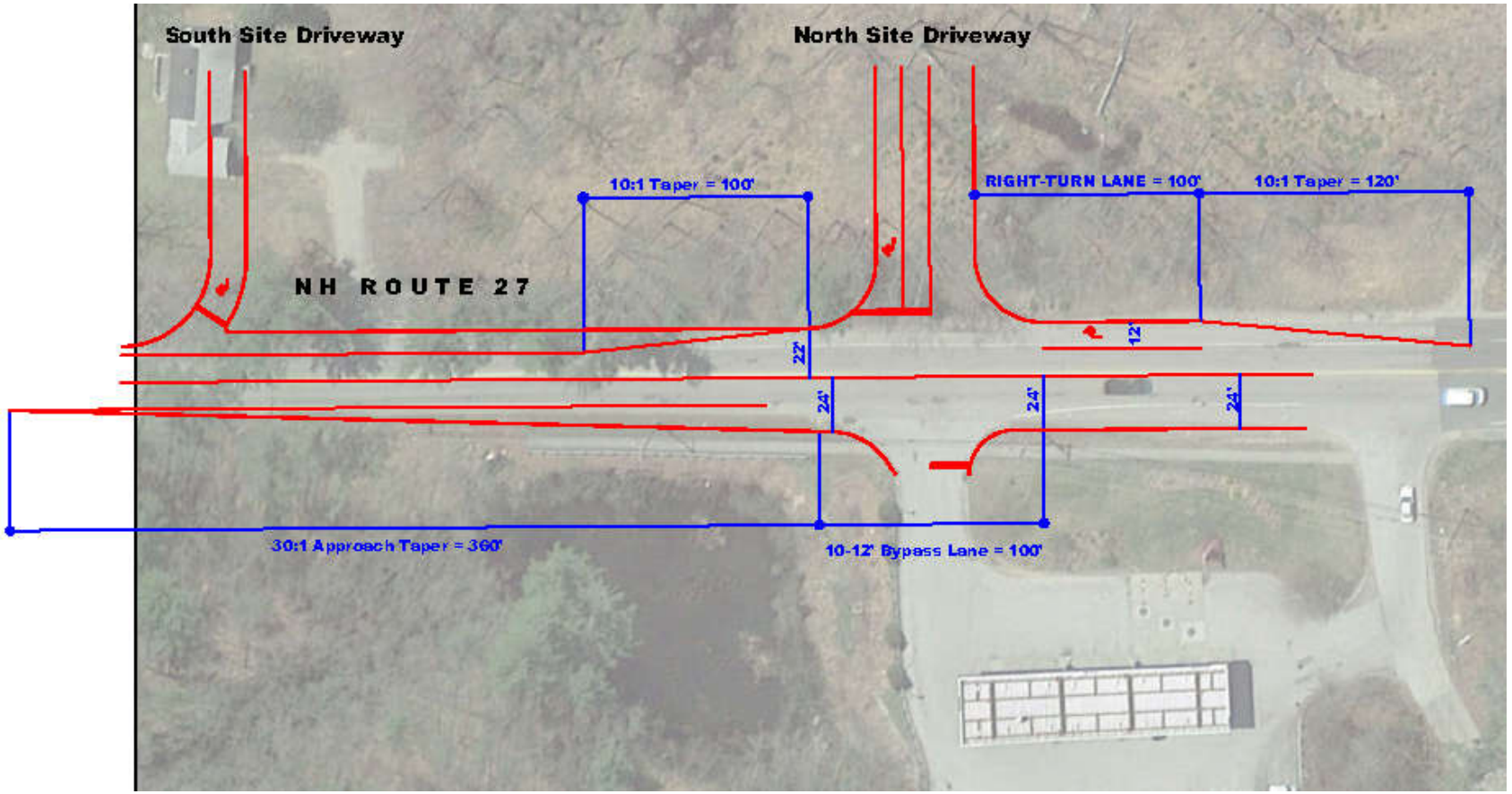
In the event that site development occurs prior to completion of the TIF corridor improvement project, this study recommends implementation of the *"Interim Traffic Mitigation Plan"* measures shown conceptually on Page 29. There is ample roadway right-of-way along the site frontage to accommodate future roadway widening by the TIF project.

SITE PLAN ITEMS

Section 7.14.4 of the Exeter Site Plan Review and Subdivision Regulations requires the traffic analysis to consider a number of site related items. On-site sidewalks, vehicular circulation, loading and off-street parking spaces are items that are included within the Hayner/Swanson, Inc. site plan set and have been discussed on several occasions with the Exeter Planning Board. An updated "shared parking" analysis, using the widely accepted Urban Land Institute methodology, has been updated to reflect the latest site conditions. Emergency vehicle access and circulation was provided to and accepted by the Exeter Fire Department early on in the site plan review process.

INTERIM TRAFFIC MITIGATION PLAN

1. Locate North Site Driveway directly across from the existing gas station driveway, provide two departure lanes (one exclusive right-turn lane, one shared through-left lane), with STOP sign control (MUTCD R1-1) facing outbound drivers.
2. Re-stripe existing southbound shoulder on NH27 as an exclusive right-turn lane for inbound vehicles.
3. Widen existing northbound shoulder on NH27 across from the North Site Driveway to provide an interim “bypass lane” for through traffic until the TIF corridor improvements are completed.
4. Install a 24” single white stop line on the gas station driveway approach to NH27, and on both site driveway approaches to NH27.
5. Locate South Site Driveway at south end of site, restrict traffic movements to right-turn departures only. Install STOP sign control on the minor approach and two DO NOT ENTER signs (MUTCD R5-1) facing northbound drivers on NH27.



STUDY FINDINGS AND RECOMMENDATIONS

Based on the existing conditions data collected on NH27 in the vicinity of the subject site and the Exit 9 Interchange, the anticipated traffic increases resulting from the proposed multi-use site, and the analysis of future traffic levels in the study area, Pernaw & Company, Inc. concludes:

1. Traffic on NH27 in the study area reached peak levels from 7:00 to 8:00 AM in the morning, and from 4:15 to 5:15 PM in the evening with 1,406 vehicles (AM) and 1,612 vehicles (PM) observed on NH27 (south of the Mobil site) during the peak hour periods.

2. The results of the trip generation analysis indicate that the proposed multi-use site will generate approximately 326 vehicle-trips (161 arrivals, 165 departures) during the AM peak hour, and 384 vehicle-trips (189 arrivals, 195 departures) during the PM peak period.

3. The majority of site traffic (65%) is expected to travel to/from points north on NH27 to reach NH101 and beyond.

4. Site traffic will increase the volume of traffic on the short section of NH27 between the subject site and the eastbound ramp junction by approximately +14% during the worst-case PM peak hour period. The net impact immediately south of the site is projected at +7%.

5. Analysis of the traffic operations at the NH27/Proposed North Site Driveway/Mobil South Driveway intersection confirmed that left-turn departures from the minor approach currently encounter long delays (LOS F) during the peak hour periods, similar to all other streets and driveways along this corridor. Departures from the proposed site driveway approach will encounter the same delays, and long vehicle queues will form within the site. Left-turn arrivals at this site driveway will operate with much less delay during all hours of the day (LOS A or B) and minimal queuing. Right-turn departures from the South Site Driveway are expected to operate at LOS D (AM) and LOS C (PM) in 2031 with the site fully occupied.

6. The traffic signal warrants analysis of the Northerly Site Driveway intersection on NH27 indicates that neither Warrant 1 (Eight-Hour Vehicular) nor Warrant 2 (Four-Hour Vehicular Volume) in the MUTCD is satisfied for the requisite hours. This finding means that both site driveways should operate under stop sign control. Analysis of the NH27/Westbound Ramp Junction using the 2019 traffic volumes indicates that traffic signal control is currently warranted at this intersection.

7. The auxiliary turn lane warrants analysis indicates that “left-turn treatment” and “right-turn treatment” is advisable for vehicles entering the site at the north site driveway. While these findings will be taken into consideration as part of the Town’s corridor study and TIF project, implementation of the “Interim Traffic Mitigation Plan” on Page 29 is recommended if site development precedes the corridor improvement project.

8. Both site driveways should operate under stop sign control and be designed with appropriate corner radii to accommodate a reasonable design vehicle.

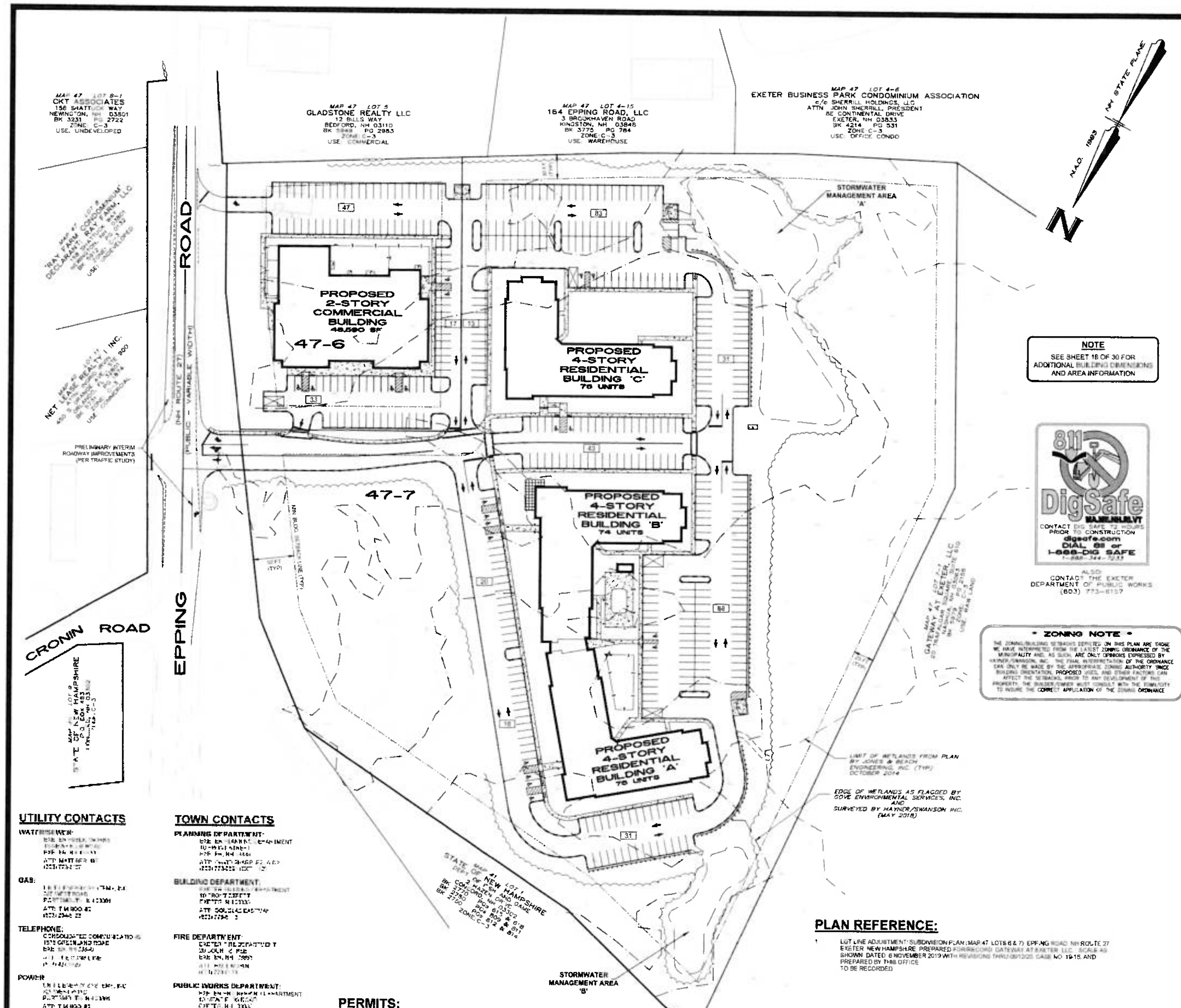
9. Sight distances looking left and right from both site driveways exceed 500-feet and provide more than adequate safe stopping sight distances.

This section of NH27 is under the jurisdiction of the Town of Exeter. This report should be submitted to the Exeter Planning Board for their consideration in conjunction with the site plan review process. This report should also be shared with the NHDOT given that this site involves Controlled Access Right-of Way along NH27.

APPENDIX

Appendix A	Master Site Plan
Appendix B	Automatic Traffic Recorder Counts
Appendix C	Intersection Turning Movement Counts
Appendix D	Seasonal Adjustment Factors / Historical Growth Rates
Appendix E	Other Development Traffic Volumes
Appendix F	Site Generated Traffic Volumes
Appendix G	Capacity and Level of Service Calculations
Appendix H	Traffic Signal Warrants Analysis
Appendix I	Auxiliary Turn Lane Warrants Analysis
Appendix J	Sight Distance Photographs
Appendix K	Miscellaneous

Appendix A **Master Site Plan**



NOTE

SEE SHEET 18 OF 30 FOR ADDITIONAL BUILDING DIMENSIONS AND AREA INFORMATION

811 DigSafe

CONTACT DIG SAFE 72 HOURS PRIOR TO CONSTRUCTION
digsafe.com
DIAL 811 or 1-888-DIG SAFE
1-888-344-7233

ALSO CONTACT THE EXETER DEPARTMENT OF PUBLIC WORKS (603) 773-6157

*** ZONING NOTE ***

THE ZONING/BUILDING SETBACKS DEPICTED ON THIS PLAN ARE THOSE WE HAVE INTERPRETED FROM THE LATEST ZONING ORDINANCE OF THE MUNICIPALITY AND, AS SUCH, ARE ONLY OPINIONS EXPRESSED BY HAYNER/SWANSON, INC. THE FINAL INTERPRETATION OF THE ORDINANCE CAN ONLY BE MADE BY THE APPROPRIATE ZONING AUTHORITY SINCE BUILDING ORIENTATION, PROPOSED USES, AND OTHER FACTORS CAN AFFECT THE SETBACKS. PRIOR TO ANY DEVELOPMENT OF THIS PROPERTY, THE BUILDER/OWNER MUST CONSULT WITH THE COMMUNITY TO INSURE THE CORRECT APPLICATION OF THE ZONING ORDINANCE.

VICINITY MAP

NOTES:

1. SITE AREA
   MAP 47 LOT 6 — 2.243 ACRES
   MAP 47 LOT 7 — 14.485 ACRES
2. PRESENT ZONING — C-3: EPPING ROAD HIGHWAY COMMERCIAL

MINIMUM LOT REQUIREMENTS	C-3	LOT 47-6	LOT 47-7
- LOT AREA	40,000 SF	[illegible]	[illegible]
- LOT WIDTH	175 FT	[illegible]	[illegible]
- LOT DEPTH	225 FT	[illegible]	[illegible]
BUILDING HEIGHT	50 FT	50 FT	50 FT
MINIMUM YARD SETBACKS			
- FRONT YARD	50 FT	[illegible]	104 FT
- SIDE YARD, ONE	30 FT	60 FT	[illegible]
- REAR YARD	25 FT	[illegible]	[illegible]

   ON MAY 21, 2019 THE EXETER ZONING BOARD OF ADJUSTMENT GRANTED A VARIANCE TO PERMIT A MULTI-FAMILY RESIDENTIAL COMPLEX AS PART OF A MIXED-USE DEVELOPMENT PLAN WITH THE FOLLOWING CONDITIONS:
   - THE REMAINING APPROXIMATE 45± ACRES TO THE REAR OF THE SITE REMAIN UNDEVELOPED
   - THAT 20% OF THE RESIDENTIAL RENTAL UNITS QUALIFY AS WORKFORCE HOUSING RENTAL UNITS AS DEFINED UNDER THE NH WORKFORCE HOUSING STATUTE
   - THAT THE RESTRICTIONS FOR WORKFORCE RENTAL SHALL BE FOR NOT LESS THAN 30 YEARS
   - THAT THE RESIDENTIAL PORTION SHALL REMAIN AS RENTAL UNITS FOR NOT LESS THAN 30 YEARS
   - THE MULTI-FAMILY PORTION OF THE COMPLEX SHALL INCLUDE NOT MORE THE 224 RESIDENTIAL RENTAL UNITS
3. LOT NUMBERS REFER TO THE CITY OF EXETER ASSESSORS MAPS 40, 41, AND 47
4. SITES ARE TO BE SERVICED BY MUNICIPAL SEWER AND WATER BY EXETER PUBLIC WORKS UNDERGROUND POWER, TELECOMMUNICATIONS AND GAS UTILITIES
5. PURPOSE OF PLAN
   TO SHOW PROPOSED MULTI-FAMILY RESIDENTIAL AND COMMERCIAL DEVELOPMENTS WITH ACCOMPANYING SITE IMPROVEMENTS UPON LOTS 6 & 7 MAP 47
6. PARKING

LOT 47-6 REQUIRED		
CHILD DAY CARE	1 SP/EMPLOYEES x 40 EMPLOYEES	= 40 SPACES
	1 SP/3 STUDENTS x 163 STUDENTS	= 55 SPACES
RETAIL	1 SP/300 SF x 11,225 SF	= 37 SPACES
OFFICES	1 SP/300 SF x 17,295 SF	= 58 SPACES
TOTAL REQUIRED		190 SPACES
PROVIDED (INCLUDING 6 HANDICAP SPACES)		= 97 SPACES

LOT 47-7 REQUIRED		
DWELLING UNITS	2 SP/2 BED UNIT x 68 UNITS	= 136 SPACES
	1 SP/1 BED UNIT x 156 UNITS	= 156 SPACES
	1 SP/4 FOR GUESTS/4 UNITS x 224 UNITS	= 56 SPACES
TOTAL REQUIRED		348 SPACES
PROVIDED (INCLUDING 14 HANDICAP SPACES)		= 327 SPACES

7. OPEN SPACE

	LOT 47-6	LOT 47-7
REQUIRED	20.0%	20.0%
PROVIDED	33.2%	64.4%

8. BUILDING COVERAGE

	LOT 47-6	LOT 47-7
MAX. ALLOWED	40.0%	40.0%
PROVIDED	19.8%	10.8%

9. THIS PARCEL CONTAINS AREA IDENTIFIED AS ZONE X AS DETERMINED FROM THE FLOOD INSURANCE RATE MAP (FIRM), ROCKINGHAM, TOWN OF EXETER, NEW HAMPSHIRE, COMMUNITY No. 330130, PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, MAP NUMBER 33015C0401E, DATED: MAY 17, 2005
10. WAIVERS REQUESTED FROM THE FOLLOWING SITE PLAN REGULATION
    - 7.5.4 HIGH INTENSITY SOILS SURVEY
    - 9.7.5.5 PLANTING ISLANDS REQUIRED BETWEEN EVERY TEN TO FIFTEEN PARKING SPACES
    - 9.7.5.6 GRANITE CURBING
    - 9.9.2 NO PARKING OR BUILDING WITHIN 75' OF A WETLAND WITH POORLY DRAINED SOILS
    - 9.12.1 LOADING SPACES
    - [illegible]
    - [illegible]
    - [illegible]
11. [illegible]
12. [illegible]
13. [illegible]
14. [illegible]
15. [illegible]
16. [illegible]
17. [illegible]
18. [illegible]
19. [illegible]
20. [illegible]
21. OWNER OF RECORD:
    MAP 47, LOTS 6 & 7
    GATEWAY AT EXETER, LLC
    [illegible]
    NASHUA, NH 03063
    [illegible]

APPROVED
EXETER PLANNING BOARD

CHAIRMAN — DATE

PLAN REFERENCE:

1. LOT LINE ADJUSTMENT/SUBDIVISION PLAN (MAP 47, LOTS 6 & 7) EPPING ROAD, NH ROUTE 27, EXETER, NEW HAMPSHIRE PREPARED FOR/RECORD GATEWAY AT EXETER, LLC, SCALE AS SHOWN DATED 8 NOVEMBER 2019 WITH REVISIONS THRU [illegible] CASE NO. 19-15, AND PREPARED BY THIS OFFICE TO BE RECORDED.

FOR GATEWAY AT EXETER, LLC (THOMAS F. MONAHAN) — 11/8/2019 DATE

UTILITY CONTACTS

WATER/SEWER: [illegible]

GAS: [illegible]

TELEPHONE: CONSOLIDATED COMMUNICATIONS [illegible]

POWER: [illegible]

CABLE: COMCAST [illegible]

TOWN CONTACTS

PLANNING DEPARTMENT: [illegible]

BUILDING DEPARTMENT: [illegible]

FIRE DEPARTMENT: EXETER FIRE DEPARTMENT [illegible]

PUBLIC WORKS DEPARTMENT: [illegible]

PERMITS:

A. NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES ALTERATION OF TERRAIN PERMIT No. [illegible] DATE ISSUED: MAY 26, 2020
B. NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES WETLANDS BUREAU APPROVAL No. 2019-03800 DATE ISSUED: JUNE 1, 2020
C. NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES SEWER CONNECTION PERMIT APPROVAL No. ______ DATE ISSUED ______

NOTE: THE CONTRACTOR SHALL COMPLY WITH ALL STIPULATIONS AND CONDITIONS OF PERMITS AND APPROVALS

MASTER SITE PLAN (MAP 47, LOTS 6 & 7)

GATEWAY AT EXETER

170 EPPING ROAD
EXETER, NEW HAMPSHIRE

PREPARED FOR/RECORD OWNER:
GATEWAY AT EXETER, LLC
20 TRAFALGAR SQUARE, STE 610 NASHUA, NH 03063 (603) 880-0502

CASE No. 19-16

HSI Hayner/Swanson, Inc.

NOVEMBER 2019

Appendix B **Automatic Traffic Recorder Counts**

New Hampshire DOT Department of Transportation

MS2

Transportation Data Management System

Excel Version

Weekly Volume Report			
Location ID:	82153064	**Type:**	SPOT
Located On:	Epping Rd	:	
Direction:	2-WAY		
Community:	EXETER	**Period:**	Mon 6/18/2018 - Sun 6/24/2018
AADT:	12972		

Start Time	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Avg	Graph
12:00 AM		39	46	58				48	0.3%
1:00 AM		29	28	22				26	0.2%
2:00 AM		24	16	20				20	0.1%
3:00 AM		49	35	57				47	0.3%
4:00 AM		133	139	131				134	0.9%
5:00 AM		400	379	392				390	2.6%
6:00 AM		763	827	817				802	5.4%
7:00 AM		1056	1135	1097				1,096	7.3%
8:00 AM		1034	1093	1077				1,068	7.1%
9:00 AM		808	919	867				865	5.8%
10:00 AM		851	817	804				824	5.5%
11:00 AM		854	893	856				868	5.8%
12:00 PM		1010	1026	934				990	6.6%
1:00 PM		855	859	905				873	5.8%
2:00 PM		900	942	979				940	6.3%
3:00 PM		1152	1227	1205				1,195	8.0%
4:00 PM		1229	1303	1270				1,267	8.5%
5:00 PM		1228	1275	1205				1,236	8.2%
6:00 PM		741	884	808				811	5.4%
7:00 PM		476	617	503				532	3.5%
8:00 PM		374	382	451				402	2.7%
9:00 PM		285	300	271				285	1.9%
10:00 PM		132	199	211				181	1.2%
11:00 PM		90	93	92				92	0.6%
Total	**0**	**14,512**	**15,434**	**15,032**	**0**	**0**	**0**		
24hr Total		14512	15434	15032				14,993	
AM Pk Hr		7:00	7:00	7:00					
AM Peak		1056	1135	1097				1,096	
PM Pk Hr		4:00	4:00	4:00					
PM Peak		1229	1303	1270				1,267	
% Pk Hr		8.47%	8.44%	8.45%				8.45%	

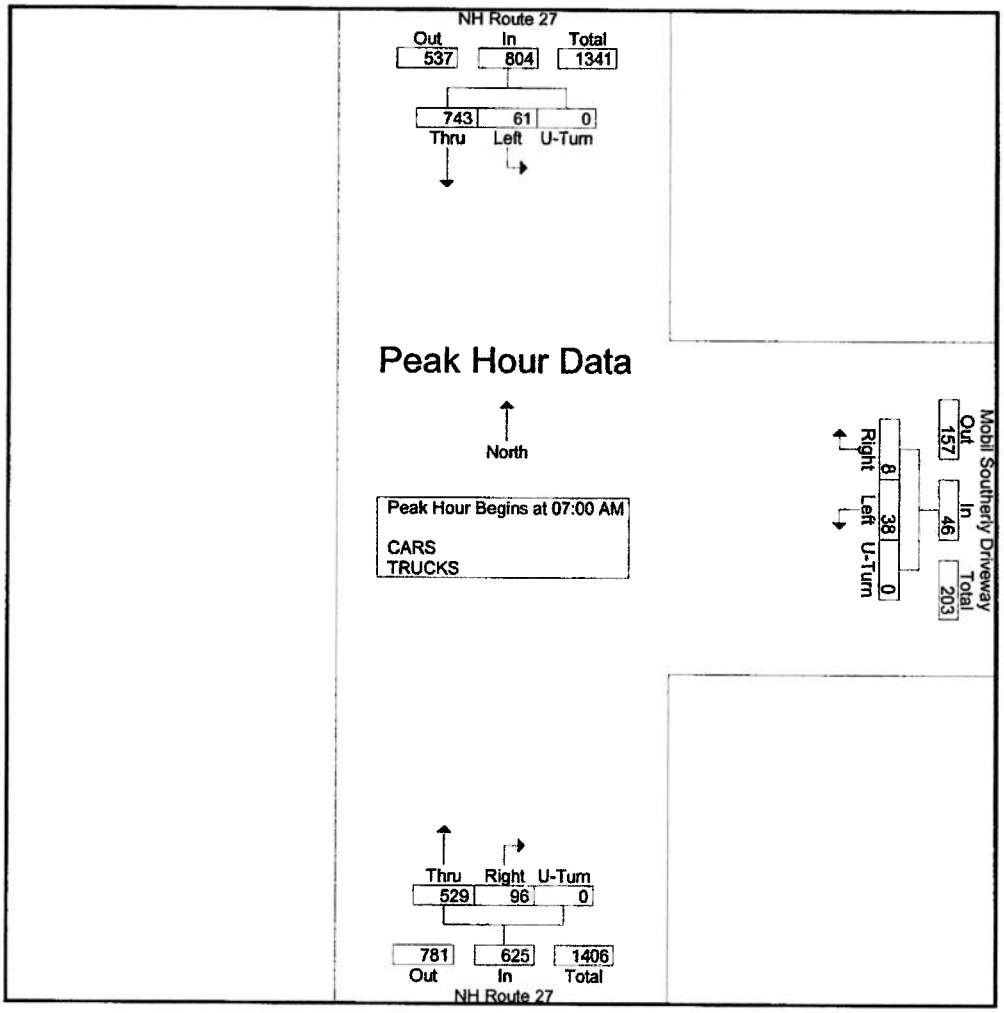
Appendix C **Intersection Turning Movement Counts**

Stephen G. Pernaw & Co., Inc.
P.O. Box 1721
Concord, New Hampshire 03302

Weather: Clear
Collected By: MV
Job Number: 1941A
Town/State: Exeter, NH

File Name : 1941A_INT_A_AM_713853_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 2

	NH Route 27 From North				Mobil Southerly Driveway From East				NH Route 27 From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	131	14	0	145	4	7	0	11	32	199	0	231	387
07:15 AM	190	13	0	203	1	8	0	9	21	116	0	137	349
07:30 AM	188	19	0	207	1	9	0	10	22	121	0	143	360
07:45 AM	234	15	0	249	2	14	0	16	21	93	0	114	379
Total Volume	743	61	0	804	8	38	0	46	96	529	0	625	1475
% App. Total	92.4	7.6	0		17.4	82.6	0		15.4	84.6	0		
PHF	.794	.803	.000	.807	.500	.679	.000	.719	.750	.665	.000	.676	.953

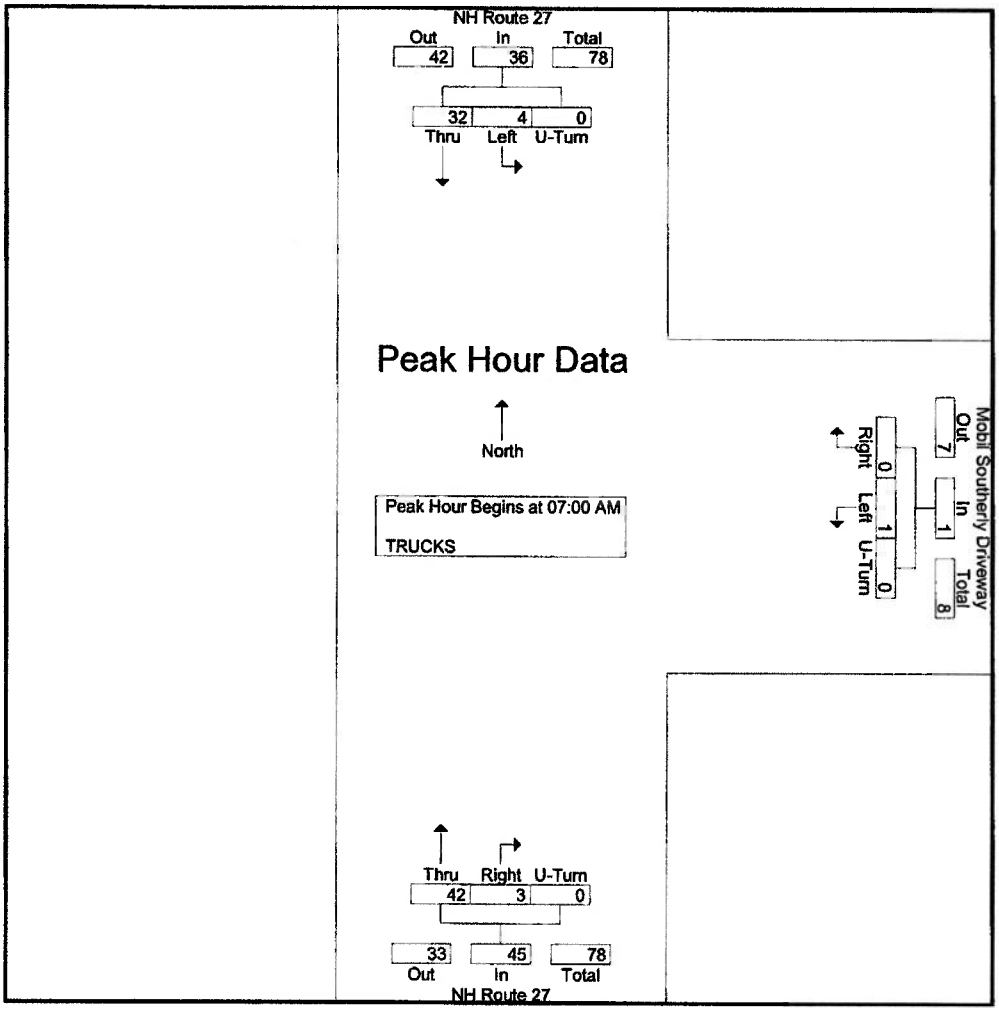


Stephen G. Pernaw & Co., Inc.
P.O. Box 1721
Concord, New Hampshire 03302

Weather: Clear
Collected By: MV
Job Number: 1941A
Town/State: Exeter, NH

File Name : 1941A_INT_A_AM_713853_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 2

	NH Route 27 From North				Mobil Southerly Driveway From East				NH Route 27 From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	4	1	0	5	0	0	0	0	1	**16**	0	**17**	22
07:15 AM	**18**	1	0	**19**	0	0	0	0	**2**	8	0	10	**29**
07:30 AM	5	0	0	5	0	0	0	0	0	11	0	11	16
07:45 AM	5	**2**	0	7	0	**1**	0	**1**	0	7	0	7	15
Total Volume	32	4	0	36	0	1	0	1	3	42	0	45	82
% App. Total	88.9	11.1	0		0	100	0		6.7	93.3	0		
PHF	.444	.500	.000	.474	.000	.250	.000	.250	.375	.656	.000	.662	.707

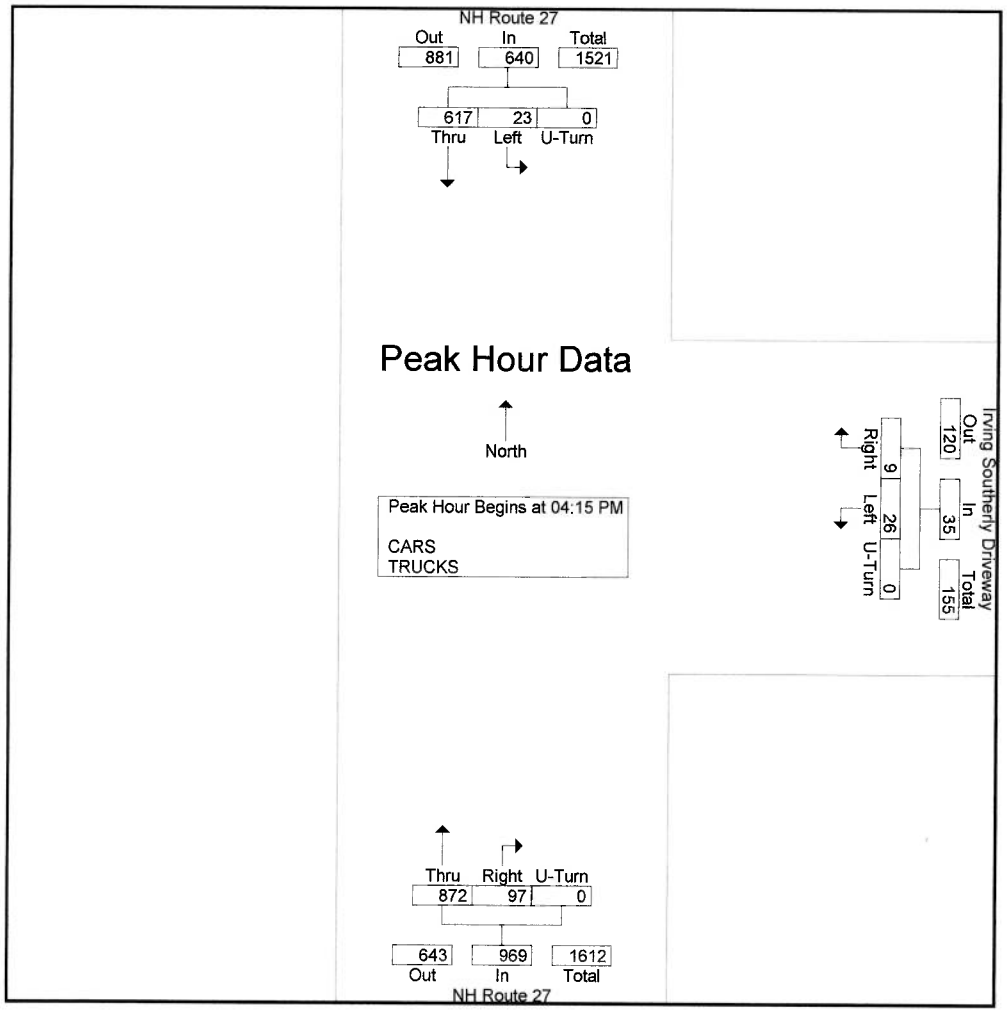


Stephen G. Pernaw & Company, Inc.
P.O. Box 1721
Concord, New Hampshire 03302

Weaer: Clear
Collected By: MV
Job Number: 1941A
Town/State: Exeter, NH

File Name : 1941A INT C 12 hr
Site Code : 1941A
Start Date : 10/24/2019
Page No : 3

	NH Route 27 From North				Irving Southerly Driveway From East				NH Route 27 From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:15 PM													
04:15 PM	153	6	0	159	**5**	4	0	9	13	196	0	209	377
04:30 PM	**164**	4	0	**168**	2	**12**	0	**14**	**30**	**254**	0	**284**	**466**
04:45 PM	158	**7**	0	165	0	4	0	4	25	175	0	200	369
05:00 PM	142	6	0	148	2	6	0	8	29	247	0	276	432
Total Volume	617	23	0	640	9	26	0	35	97	872	0	969	1644
% App. Total	96.4	3.6	0		25.7	74.3	0		10	90	0		
PHF	.941	.821	.000	.952	.450	.542	.000	.625	.808	.858	.000	.853	.882



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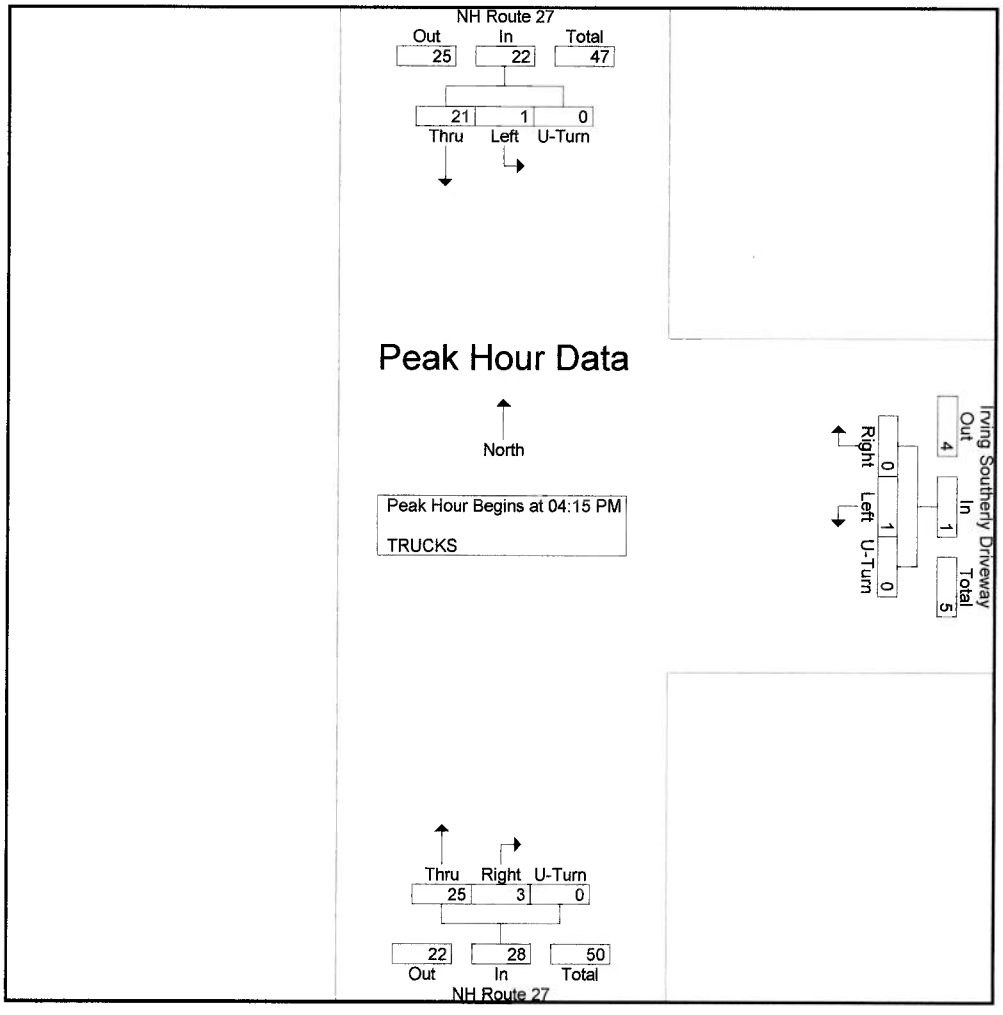
	NH Route 27 From North				Irving Southerly Driveway From East				NH Route 27 From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:15 PM													
04:15 PM	6	0	0	6	0	0	0	0	0	**11**	0	**11**	**17**
04:30 PM	3	**1**	0	4	0	0	0	0	0	7	0	7	11
04:45 PM	**7**	0	0	**7**	0	**1**	0	**1**	1	3	0	4	12
05:00 PM	5	0	0	5	0	0	0	0	**2**	4	0	6	11
Total Volume	21	1	0	22	0	1	0	1	3	25	0	28	51
% App. Total	95.5	4.5	0		0	100	0		10.7	89.3	0		
PHF	.750	.250	.000	.786	.000	.250	.000	.250	.375	.568	.000	.636	.750



Stephen G. Pernaw & Company, Inc.
P.O. Box 1721
Concord, New Hampshire 03302

Weaer: Clear
Collected By: MV
Job Number: 1941A
Town/State: Exeter, NH

File Name : 1941A INT C 12 hr
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- CARS - TRUCKS

	NH Route 27 From North				Irving Southerly Driveway From East				NH Route 27 From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
07:00 AM	131	14	0	145	4	7	0	11	32	199	0	231	387
07:15 AM	190	13	0	203	1	8	0	9	21	116	0	137	349
07:30 AM	188	19	0	207	1	9	0	10	22	121	0	143	360
07:45 AM	234	15	0	249	2	14	0	16	21	93	0	114	379
Total	743	61	0	804	8	38	0	46	96	529	0	625	1475
08:00 AM	186	13	0	199	2	11	0	13	20	100	0	120	332
08:15 AM	166	8	0	174	1	10	0	11	25	115	0	140	325
08:30 AM	130	6	0	136	1	10	0	11	26	105	0	131	278
08:45 AM	134	11	0	145	2	11	0	13	15	95	0	110	268
Total	616	38	0	654	6	42	0	48	86	415	0	501	1203
09:00 AM	108	7	0	115	1	9	0	10	21	74	0	95	220
09:15 AM	97	12	0	109	4	10	0	14	22	97	0	119	242
09:30 AM	111	13	0	124	1	8	0	9	13	86	0	99	232
09:45 AM	90	2	0	92	7	5	0	12	13	78	0	91	195
Total	406	34	0	440	13	32	0	45	69	335	0	404	889
10:00 AM	87	8	0	95	1	5	0	6	12	71	0	83	184
10:15 AM	90	6	0	96	3	2	0	5	17	66	0	83	184
10:30 AM	99	7	0	106	2	3	0	5	16	87	0	103	214
10:45 AM	80	3	0	83	1	9	0	10	14	82	0	96	189
Total	356	24	0	380	7	19	0	26	59	306	0	365	771
11:00 AM	81	7	0	88	1	3	0	4	13	76	0	89	181
11:15 AM	122	8	0	130	0	7	0	7	11	90	0	101	238
11:30 AM	103	1	0	104	1	2	0	3	19	88	0	107	214
11:45 AM	122	1	0	123	0	4	0	4	16	88	0	104	231
Total	428	17	0	445	2	16	0	18	59	342	0	401	864
12:00 PM	117	3	0	120	1	8	0	9	20	114	0	134	263
12:15 PM	105	9	0	114	3	13	0	16	16	94	0	110	240
12:30 PM	118	7	0	125	1	7	0	8	21	112	0	133	266
12:45 PM	135	3	0	138	1	6	0	7	16	90	0	106	251
Total	475	22	0	497	6	34	0	40	73	410	0	483	1020
01:00 PM	106	7	0	113	0	4	0	4	22	101	0	123	240
01:15 PM	98	1	0	99	0	5	0	5	14	69	0	83	187
01:30 PM	107	0	0	107	0	0	0	0	11	89	0	100	207
01:45 PM	105	7	0	112	1	5	0	6	13	128	0	141	259
Total	416	15	0	431	1	14	0	15	60	387	0	447	893
02:00 PM	105	7	0	112	0	3	0	3	17	130	0	147	262
02:15 PM	100	6	0	106	1	3	0	4	19	161	0	180	290
02:30 PM	170	7	0	177	1	8	0	9	8	119	0	127	313
02:45 PM	126	16	0	142	4	5	0	9	19	110	0	129	280
Total	501	36	0	537	6	19	0	25	63	520	0	583	1145
03:00 PM	108	5	0	113	0	7	0	7	22	173	0	195	315
03:15 PM	126	5	0	131	1	4	0	5	23	132	0	155	291
03:30 PM	148	1	0	149	1	5	0	6	23	232	0	255	410
03:45 PM	172	5	0	177	1	6	0	7	12	154	0	166	350
Total	554	16	0	570	3	22	0	25	80	691	0	771	1366
04:00 PM	129	3	0	132	0	5	0	5	27	252	0	279	416
04:15 PM	153	6	0	159	5	4	0	9	13	196	0	209	377
04:30 PM	164	4	0	168	2	12	0	14	30	254	0	284	466
04:45 PM	158	7	0	165	0	4	0	4	25	175	0	200	369
Total	604	20	0	624	7	25	0	32	95	877	0	972	1628

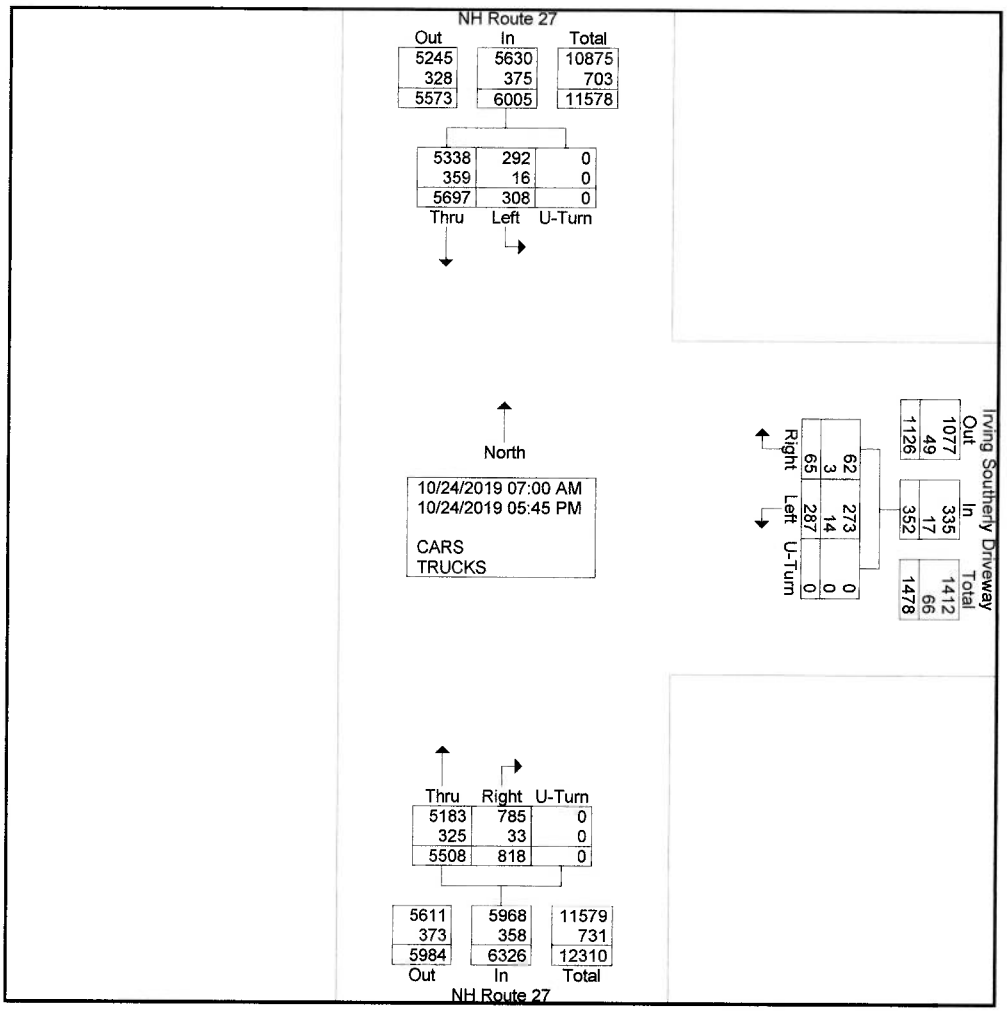
Stephen G. Pernaw & Company, Inc.
P.O. Box 1721
Concord, New Hampshire 03302

Weaer: Clear
Collected By: MV
Job Number: 1941A
Town/State: Exeter, NH

File Name : 1941A INT C 12 hr
Site Code : 1941A
Start Date : 10/24/2019
Page No : 2

Groups Printed- CARS - TRUCKS

	NH Route 27 From North				Irving Southerly Driveway From East				NH Route 27 From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
05:00 PM	142	6	0	148	2	6	0	8	29	247	0	276	432
05:15 PM	161	3	0	164	1	4	0	5	21	176	0	197	366
05:30 PM	142	6	0	148	2	11	0	13	19	132	0	151	312
05:45 PM	153	10	0	163	1	5	0	6	9	141	0	150	319
Total	598	25	0	623	6	26	0	32	78	696	0	774	1429
Grand Total	5697	308	0	6005	65	287	0	352	818	5508	0	6326	12683
Apprch %	94.9	5.1	0		18.5	81.5	0		12.9	87.1	0		
Total %	44.9	2.4	0	47.3	0.5	2.3	0	2.8	6.4	43.4	0	49.9	
CARS	5338	292	0	5630	62	273	0	335	785	5183	0	5968	11933
% CARS	93.7	94.8	0	93.8	95.4	95.1	0	95.2	96	94.1	0	94.3	94.1
TRUCKS	359	16	0	375	3	14	0	17	33	325	0	358	750
% TRUCKS	6.3	5.2	0	6.2	4.6	4.9	0	4.8	4	5.9	0	5.7	5.9



Stephen G. Pernaw & Company, Inc.
P.O. Box 1721
Concord, New Hampshire 03302

Weaer: Clear
Collected By: MV
Job Number: 1941A
Town/State: Exeter, NH

File Name : 1941A INT C 12 hr
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- TRUCKS

	NH Route 27 From North				Irving Southerly Driveway From East				NH Route 27 From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
07:00 AM	4	1	0	5	0	0	0	0	1	16	0	17	22
07:15 AM	18	1	0	19	0	0	0	0	2	8	0	10	29
07:30 AM	5	0	0	5	0	0	0	0	0	11	0	11	16
07:45 AM	5	2	0	7	0	1	0	1	0	7	0	7	15
Total	32	4	0	36	0	1	0	1	3	42	0	45	82
08:00 AM	9	1	0	10	1	1	0	2	0	3	0	3	15
08:15 AM	6	0	0	6	1	1	0	2	0	1	0	1	9
08:30 AM	8	0	0	8	0	0	0	0	0	9	0	9	17
08:45 AM	13	1	0	14	0	0	0	0	0	10	0	10	24
Total	36	2	0	38	2	2	0	4	0	23	0	23	65
09:00 AM	14	0	0	14	0	0	0	0	1	5	0	6	20
09:15 AM	8	4	0	12	0	0	0	0	3	17	0	20	32
09:30 AM	11	1	0	12	0	0	0	0	0	4	0	4	16
09:45 AM	7	0	0	7	0	0	0	0	0	8	0	8	15
Total	40	5	0	45	0	0	0	0	4	34	0	38	83
10:00 AM	4	1	0	5	0	0	0	0	1	3	0	4	9
10:15 AM	7	0	0	7	0	0	0	0	1	2	0	3	10
10:30 AM	11	0	0	11	0	0	0	0	2	8	0	10	21
10:45 AM	7	0	0	7	0	0	0	0	1	16	0	17	24
Total	29	1	0	30	0	0	0	0	5	29	0	34	64
11:00 AM	13	1	0	14	0	0	0	0	1	7	0	8	22
11:15 AM	10	1	0	11	0	1	0	1	3	8	0	11	23
11:30 AM	6	0	0	6	0	0	0	0	2	5	0	7	13
11:45 AM	8	0	0	8	0	0	0	0	0	5	0	5	13
Total	37	2	0	39	0	1	0	1	6	25	0	31	71
12:00 PM	12	0	0	12	0	1	0	1	1	2	0	3	16
12:15 PM	13	0	0	13	1	1	0	2	0	8	0	8	23
12:30 PM	10	0	0	10	0	0	0	0	0	8	0	8	18
12:45 PM	12	0	0	12	0	0	0	0	1	5	0	6	18
Total	47	0	0	47	1	2	0	3	2	23	0	25	75
01:00 PM	8	0	0	8	0	0	0	0	2	3	0	5	13
01:15 PM	4	0	0	4	0	1	0	1	2	11	0	13	18
01:30 PM	5	0	0	5	0	0	0	0	1	5	0	6	11
01:45 PM	6	0	0	6	0	1	0	1	1	27	0	28	35
Total	23	0	0	23	0	2	0	2	6	46	0	52	77
02:00 PM	9	0	0	9	0	0	0	0	0	21	0	21	30
02:15 PM	7	0	0	7	0	0	0	0	1	8	0	9	16
02:30 PM	13	0	0	13	0	0	0	0	0	2	0	2	15
02:45 PM	7	0	0	7	0	1	0	1	0	8	0	8	16
Total	36	0	0	36	0	1	0	1	1	39	0	40	77
03:00 PM	10	1	0	11	0	0	0	0	0	5	0	5	16
03:15 PM	8	0	0	8	0	0	0	0	2	3	0	5	13
03:30 PM	11	0	0	11	0	0	0	0	0	11	0	11	22
03:45 PM	12	0	0	12	0	3	0	3	0	6	0	6	21
Total	41	1	0	42	0	3	0	3	2	25	0	27	72
04:00 PM	8	0	0	8	0	0	0	0	1	6	0	7	15
04:15 PM	6	0	0	6	0	0	0	0	0	11	0	11	17
04:30 PM	3	1	0	4	0	0	0	0	0	7	0	7	11
04:45 PM	7	0	0	7	0	1	0	1	1	3	0	4	12
Total	24	1	0	25	0	1	0	1	2	27	0	29	55

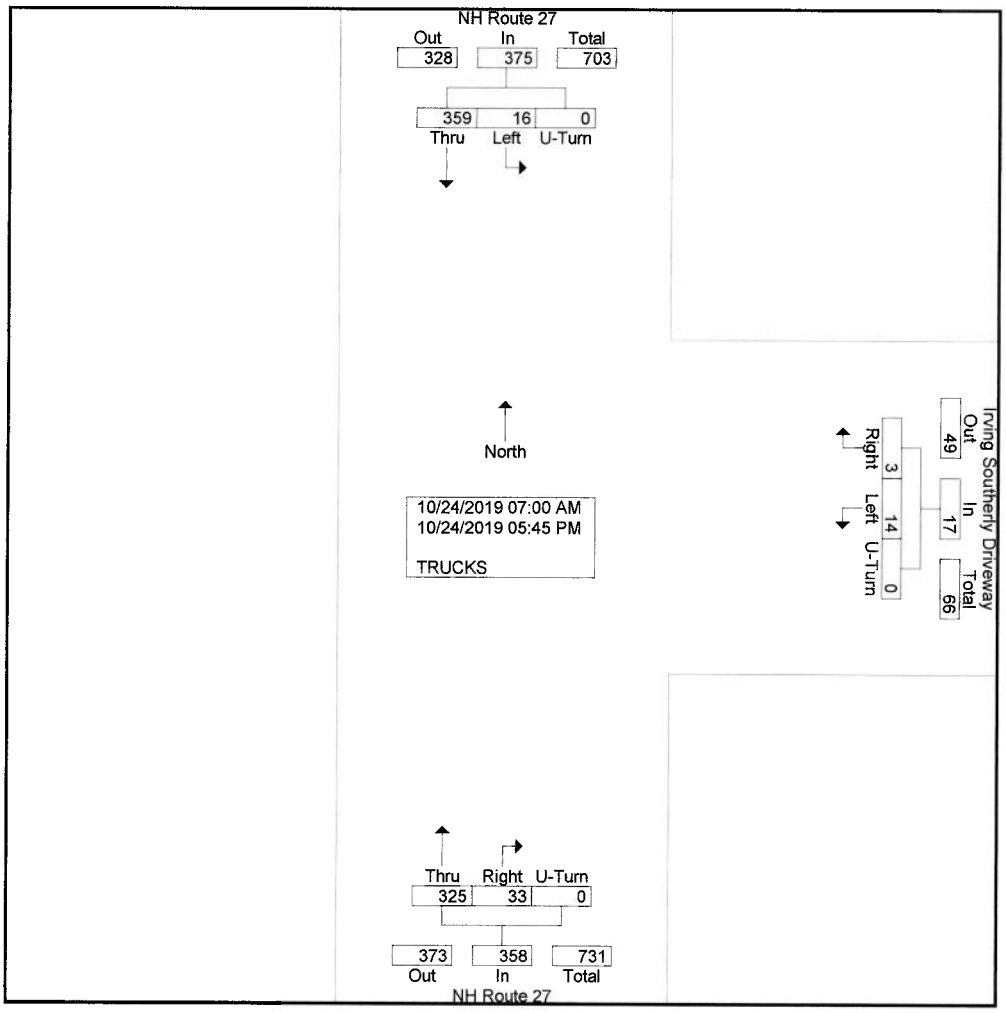
Stephen G. Pernaw & Company, Inc.
P.O. Box 1721
Concord, New Hampshire 03302

Weaer: Clear
Collected By: MV
Job Number: 1941A
Town/State: Exeter, NH

File Name : 1941A INT C 12 hr
Site Code : 1941A
Start Date : 10/24/2019
Page No : 2

Groups Printed- TRUCKS

	NH Route 27 From North				Irving Southerly Driveway From East				NH Route 27 From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
05:00 PM	5	0	0	5	0	0	0	0	2	4	0	6	11
05:15 PM	5	0	0	5	0	0	0	0	0	2	0	2	7
05:30 PM	1	0	0	1	0	1	0	1	0	3	0	3	5
05:45 PM	3	0	0	3	0	0	0	0	0	3	0	3	6
Total	14	0	0	14	0	1	0	1	2	12	0	14	29
Grand Total	359	16	0	375	3	14	0	17	33	325	0	358	750
Apprch %	95.7	4.3	0		17.6	82.4	0		9.2	90.8	0		
Total %	47.9	2.1	0	50	0.4	1.9	0	2.3	4.4	43.3	0	47.7	

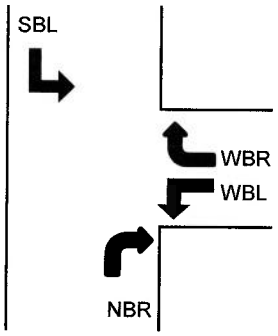


Stephen G. Pernaw & Company, Inc.

INTERSECTION TURNING MOVEMENT COUNT DATA

Intersection: NH Route 27 / Cronin Road
Location: Exeter, NH
Count Date: Thursday, October 24, 2019

		CARS				TRUCKS				TOTAL			
		SBL	WBR	WBL	NBR	SBL	WBR	WBL	NBR	SBL	WBR	WBL	NBR
7:00	7:15	9	41	6	0	0	1	0	0	9	42	6	0
7:15	7:30	8	23	6	0	0	0	1	0	8	23	7	0
7:30	7:45	15	26	7	0	0	2	0	0	15	28	7	0
7:45	8:00	14	26	9	0	0	0	0	0	14	26	9	0
8:00	8:15	10	25	6	0	0	1	0	0	10	26	6	0
8:15	8:30	8	23	8	0	1	2	1	0	9	25	9	0
8:30	8:45	6	25	8	2	0	0	0	0	6	25	8	2
8:45	9:00	8	16	6	0	0	0	0	0	8	16	6	0
7:00	9:00	78	205	56	2	1	6	2	0	79	211	58	2
7:00	**8:00**	**46**	**116**	**28**	**0**	**0**	**3**	**1**	**0**	**46**	**119**	**29**	**0**
3:00	3:15	5	20	4	0	0	0	1	0	5	20	5	0
3:15	3:30	2	25	4	0	0	1	0	0	2	26	4	0
3:30	3:45	7	20	4	0	1	1	0	0	8	21	4	0
3:45	4:00	5	19	3	0	0	0	0	0	5	19	3	0
4:00	4:15	9	18	1	0	1	2	0	0	10	20	1	0
4:15	4:30	12	23	4	0	0	0	0	0	12	23	4	0
4:30	4:45	11	28	3	2	0	0	0	0	11	28	3	2
4:45	5:00	4	28	5	0	0	1	0	0	4	29	5	0
5:00	5:15	5	24	5	0	0	1	0	0	5	25	5	0
5:15	5:30	10	23	2	0	1	1	0	0	11	24	2	0
5:30	5:45	9	26	2	1	0	1	0	0	9	27	2	1
5:45	6:00	10	15	7	0	0	0	0	0	10	15	7	0
3:00	6:00	89	269	44	3	3	8	1	0	92	277	45	3
4:15	**5:15**	**32**	**103**	**17**	**2**	**0**	**2**	**0**	**0**	**32**	**105**	**17**	**2**

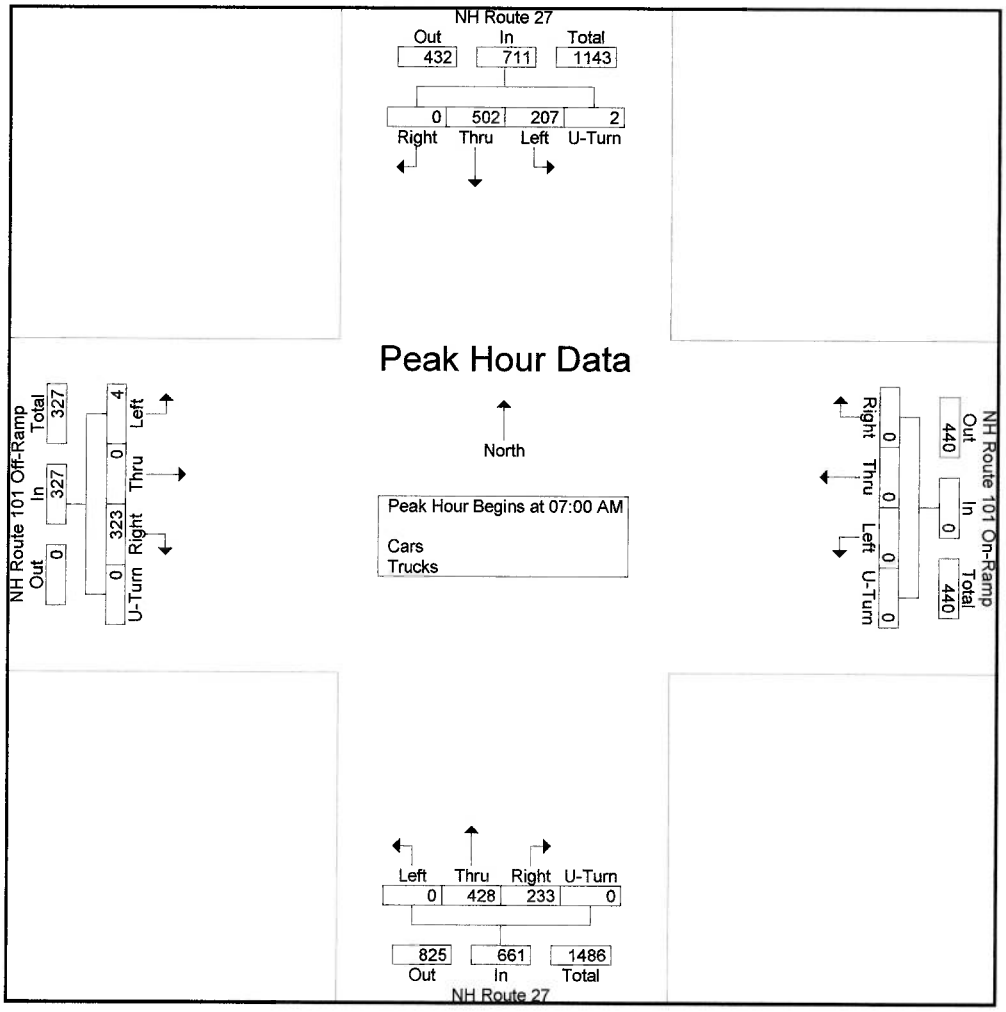


Stephen G. Pernaw & Company, Inc.

P.O. Box 1721
Concord, New Hampshire 03302

File Name : 1941A_INT_B_12_hr_764829_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 3

	NH Route 27 From North					NH Route 101 On-Ramp From East					NH Route 27 From South					NH Route 101 Off-Ramp From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	94	48	**2**	144	0	0	0	0	0	47	**196**	0	0	**243**	55	0	**3**	0	58	**445**
07:15 AM	0	121	59	0	180	0	0	0	0	0	56	94	0	0	150	81	0	0	0	81	411
07:30 AM	0	125	**66**	0	191	0	0	0	0	0	64	85	0	0	149	**95**	0	0	0	**95**	435
07:45 AM	0	**162**	34	0	**196**	0	0	0	0	0	**66**	53	0	0	119	92	0	1	0	93	408
Total Volume	0	502	207	2	711	0	0	0	0	0	233	428	0	0	661	323	0	4	0	327	1699
% App. Total	0	70.6	29.1	0.3		0	0	0	0		35.2	64.8	0	0		98.8	0	1.2	0		
PHF	.000	.775	.784	.250	.907	.000	.000	.000	.000	.000	.883	.546	.000	.000	.680	.850	.000	.333	.000	.861	.954

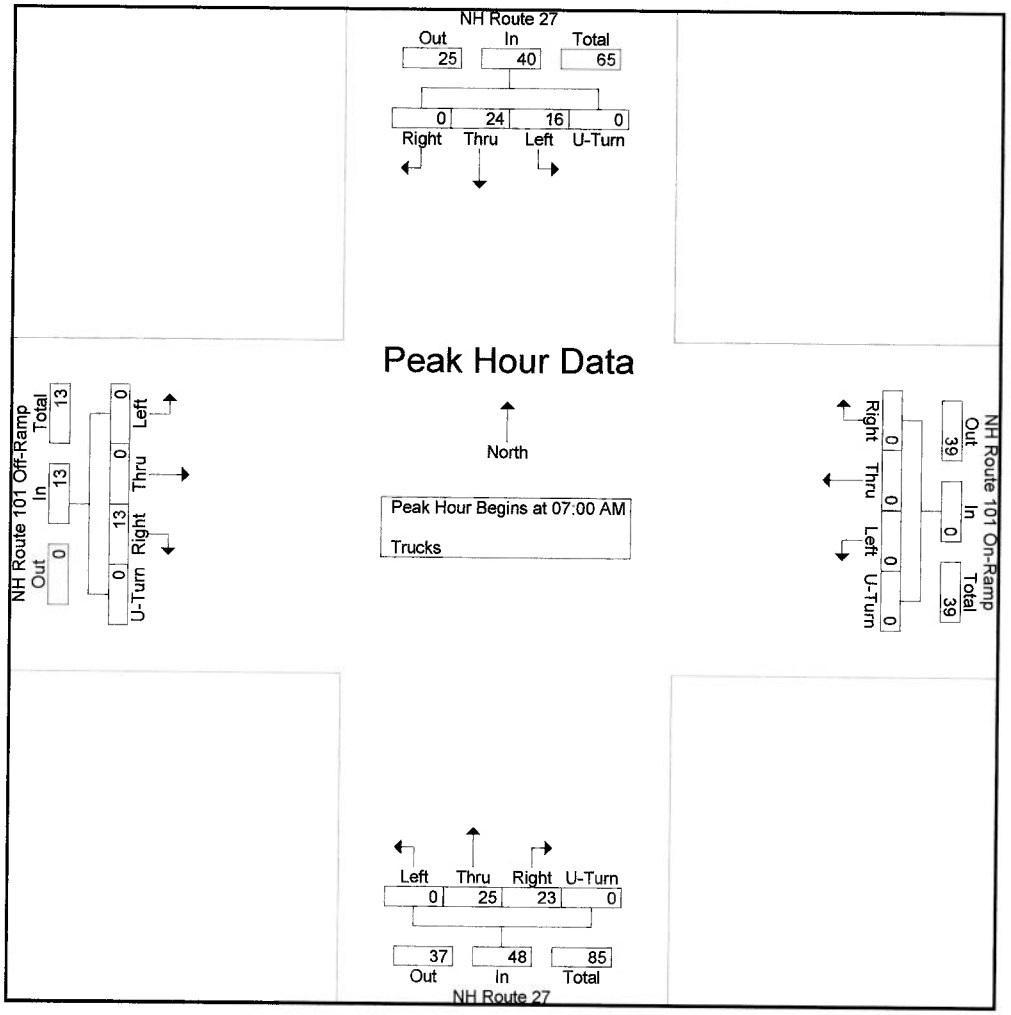


Stephen G. Pernaw & Company, Inc.

P.O. Box 1721
Concord, New Hampshire 03302

File Name : 1941A_INT_B_12_hr_764829_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 2

	NH Route 27 From North					NH Route 101 On-Ramp From East					NH Route 27 From South					NH Route 101 Off-Ramp From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	3	**5**	0	8	0	0	0	0	0	6	**11**	0	0	**17**	2	0	0	0	2	27
07:15 AM	0	**12**	5	0	**17**	0	0	0	0	0	4	5	0	0	9	**5**	0	0	0	**5**	**31**
07:30 AM	0	5	4	0	9	0	0	0	0	0	**7**	8	0	0	15	3	0	0	0	3	27
07:45 AM	0	4	2	0	6	0	0	0	0	0	6	1	0	0	7	3	0	0	0	3	16
Total Volume	0	24	16	0	40	0	0	0	0	0	23	25	0	0	48	13	0	0	0	13	101
% App. Total	0	60	40	0		0	0	0	0		47.9	52.1	0	0		100	0	0	0		
PHF	.000	.500	.800	.000	.588	.000	.000	.000	.000	.000	.821	.568	.000	.000	.706	.650	.000	.000	.000	.650	.815

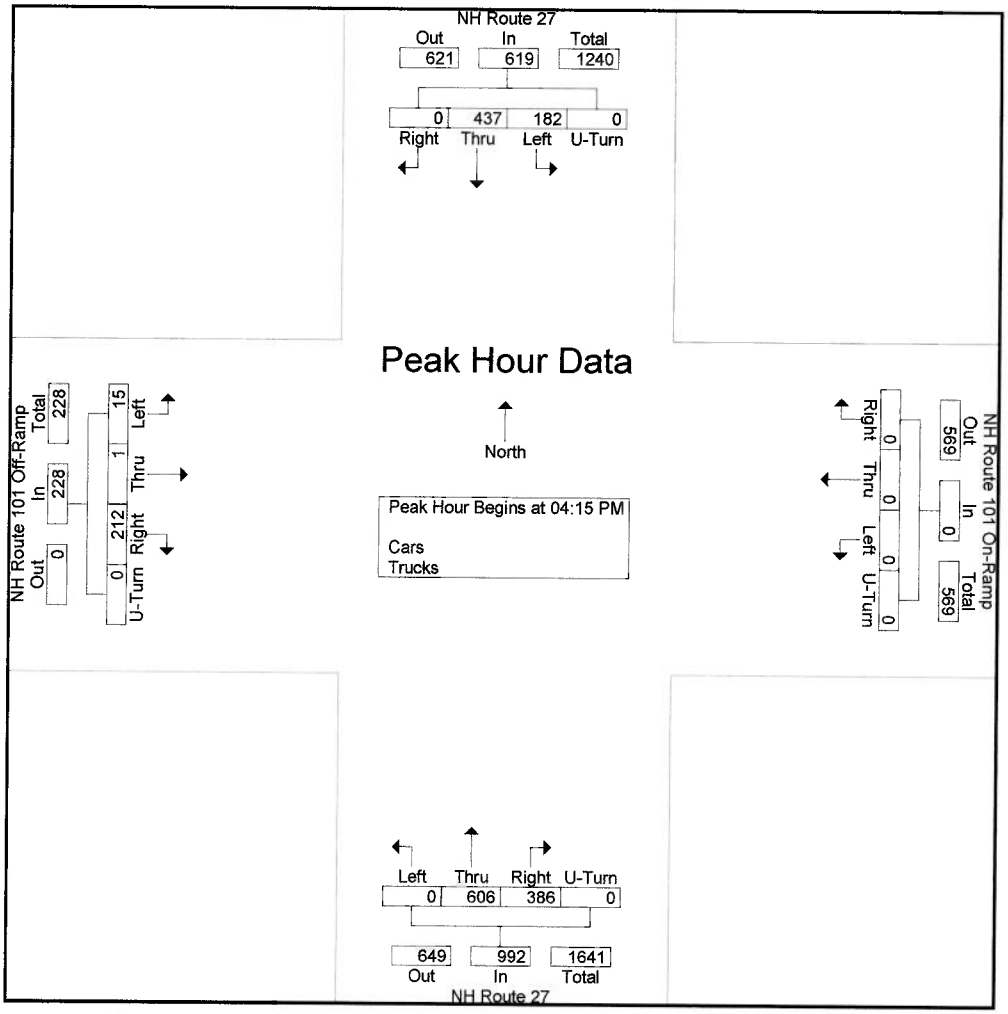


Stephen G. Pernaw & Company, Inc.

P.O. Box 1721
Concord, New Hampshire 03302

File Name : 1941A_INT_B_12_hr_764829_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 3

	NH Route 27 From North					NH Route 101 On-Ramp From East					NH Route 27 From South					NH Route 101 Off-Ramp From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 06:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	0	112	46	0	158	0	0	0	0	0	74	155	0	0	229	49	0	0	0	49	436
04:30 PM	0	**116**	**49**	0	**165**	0	0	0	0	0	**118**	166	0	0	**284**	**61**	0	**7**	0	**68**	**517**
04:45 PM	0	114	41	0	155	0	0	0	0	0	86	117	0	0	203	48	0	5	0	53	411
05:00 PM	0	95	46	0	141	0	0	0	0	0	108	**168**	0	0	276	54	**1**	3	0	58	475
Total Volume	0	437	182	0	619	0	0	0	0	0	386	606	0	0	992	212	1	15	0	228	1839
% App. Total	0	70.6	29.4	0		0	0	0	0		38.9	61.1	0	0		93	0.4	6.6	0		
PHF	.000	.942	.929	.000	.938	.000	.000	.000	.000	.000	.818	.902	.000	.000	.873	.869	.250	.536	.000	.838	.889



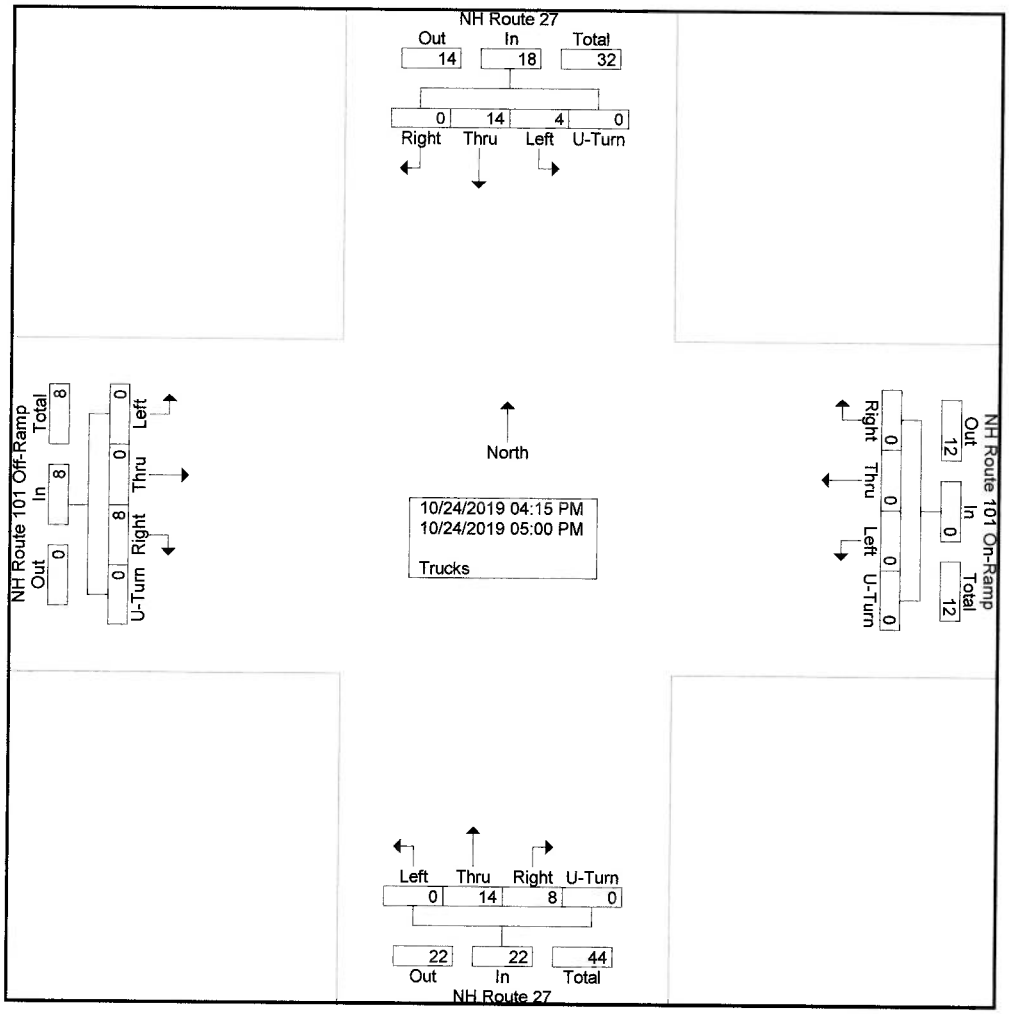
Stephen G. Pernaw & Company, Inc.

P.O. Box 1721
Concord, New Hampshire 03302

File Name : 1941A_INT_B_12_hr_764829_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- Trucks

	NH Route 27 From North				NH Route 101 On-Ramp From East				NH Route 27 From South				NH Route 101 Off-Ramp From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:15 PM	0	2	1	0	0	0	0	0	3	6	0	0	4	0	0	0	16
04:30 PM	0	3	3	0	0	0	0	0	2	4	0	0	1	0	0	0	13
04:45 PM	0	5	0	0	0	0	0	0	1	2	0	0	2	0	0	0	10
Total	0	10	4	0	0	0	0	0	6	12	0	0	7	0	0	0	39
05:00 PM	0	4	0	0	0	0	0	0	2	2	0	0	1	0	0	0	9
Grand Total	0	14	4	0	0	0	0	0	8	14	0	0	8	0	0	0	48
Apprch %	0	77.8	22.2	0	0	0	0	0	36.4	63.6	0	0	100	0	0	0	
Total %	0	29.2	8.3	0	0	0	0	0	16.7	29.2	0	0	16.7	0	0	0	



Stephen G. Pernaw & Company, Inc.

P.O. Box 1721
Concord, New Hampshire 03302

Weather: Fair
Collected By: MV
Job Number: 1941A
Town/State: Exeter, NH

File Name : 1941A_INT_B_12_hr_764829_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- Cars - Trucks

	NH Route 27 From North					NH Route 101 On-Ramp From East					NH Route 27 From South					NH Route 101 Off-Ramp From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
07:00 AM	0	94	48	2	144	0	0	0	0	0	47	196	0	0	243	55	0	3	0	58	445
07:15 AM	0	121	59	0	180	0	0	0	0	0	56	94	0	0	150	81	0	0	0	81	411
07:30 AM	0	125	66	0	191	0	0	0	0	0	64	85	0	0	149	95	0	0	0	95	435
07:45 AM	0	162	34	0	196	0	0	0	0	0	66	53	0	0	119	92	0	1	0	93	408
Total	0	502	207	2	711	0	0	0	0	0	233	428	0	0	661	323	0	4	0	327	1699
08:00 AM	0	130	38	0	168	0	0	0	0	0	65	65	0	0	130	71	0	1	0	72	370
08:15 AM	0	116	38	0	154	0	0	0	0	0	67	70	0	0	137	58	0	1	0	59	350
08:30 AM	0	73	33	0	106	0	0	0	0	0	61	66	0	0	127	61	0	4	0	65	298
08:45 AM	0	97	36	0	133	0	0	0	0	0	54	60	0	0	114	50	0	3	0	53	300
Total	0	416	145	0	561	0	0	0	0	0	247	261	0	0	508	240	0	9	0	249	1318
09:00 AM	0	72	23	0	95	0	0	0	0	0	39	51	0	0	90	44	0	3	0	47	232
09:15 AM	0	70	32	0	102	0	0	0	0	0	53	73	0	0	126	44	0	1	0	45	273
09:30 AM	0	86	27	0	113	0	0	0	0	0	49	57	0	0	106	38	0	2	0	40	259
09:45 AM	0	63	29	0	92	0	0	0	0	0	45	55	0	0	100	33	0	1	0	34	226
Total	0	291	111	0	402	0	0	0	0	0	186	236	0	0	422	159	0	7	0	166	990
10:00 AM	0	68	30	0	98	0	0	0	0	0	36	45	0	0	81	29	0	2	0	31	210
10:15 AM	0	54	17	0	71	0	0	0	0	0	43	46	0	0	89	44	0	1	0	45	205
10:30 AM	0	70	25	0	95	0	0	0	0	0	45	58	0	1	104	36	0	1	0	37	236
10:45 AM	0	57	16	0	73	0	0	0	0	0	40	57	0	0	97	27	0	0	0	27	197
Total	0	249	88	0	337	0	0	0	0	0	164	206	0	1	371	136	0	4	0	140	848
11:00 AM	0	65	24	0	89	0	0	0	0	0	32	60	0	0	92	27	0	5	0	32	213
11:15 AM	0	108	54	0	162	0	0	0	0	0	45	66	0	0	111	30	0	0	0	30	303
11:30 AM	0	73	36	0	109	0	0	0	0	0	47	53	0	0	100	28	0	1	0	29	238
11:45 AM	0	87	16	0	103	0	0	0	0	0	47	55	0	0	102	33	0	6	0	39	244
Total	0	333	130	0	463	0	0	0	0	0	171	234	0	0	405	118	0	12	0	130	998
12:00 PM	0	80	29	0	109	0	1	0	0	1	68	57	0	0	125	44	0	4	0	48	283
12:15 PM	0	85	40	0	125	0	0	0	0	0	48	61	0	0	109	28	0	1	0	29	263
12:30 PM	0	84	24	0	108	0	0	0	0	0	62	71	0	0	133	40	0	1	0	41	282
12:45 PM	0	86	28	1	115	0	0	0	0	0	43	58	0	0	101	58	0	1	0	59	275
Total	0	335	121	1	457	0	1	0	0	1	221	247	0	0	468	170	0	7	0	177	1103
01:00 PM	0	69	22	0	91	0	0	0	0	0	50	70	0	0	120	38	1	2	0	41	252
01:15 PM	0	78	17	0	95	0	0	0	0	0	43	37	0	0	80	28	0	0	0	28	203
01:30 PM	0	72	15	1	88	0	0	0	0	0	51	61	0	0	112	43	0	7	0	50	250
01:45 PM	0	78	28	0	106	0	0	0	0	0	65	78	0	0	143	41	0	1	0	42	291
Total	0	297	82	1	380	0	0	0	0	0	209	246	0	0	455	150	1	10	0	161	996
02:00 PM	0	85	31	0	116	0	0	0	0	0	46	102	0	0	148	27	1	1	0	29	293
02:15 PM	0	73	30	0	103	0	0	0	0	0	54	129	0	0	183	33	2	2	0	37	323
02:30 PM	0	132	99	0	231	0	0	0	0	0	53	83	0	0	136	48	0	3	0	51	418
02:45 PM	0	113	97	0	210	0	0	0	0	0	60	76	0	0	136	35	0	4	0	39	385
Total	0	403	257	0	660	0	0	0	0	0	213	390	0	0	603	143	3	10	0	156	1419
03:00 PM	0	76	43	0	119	0	0	0	0	0	73	117	0	0	190	40	0	3	0	43	352
03:15 PM	0	85	34	0	119	0	0	0	0	0	67	94	0	1	162	43	0	2	0	45	326
03:30 PM	0	90	42	0	132	0	0	0	0	0	82	163	0	1	246	62	0	2	0	64	442
03:45 PM	0	124	38	0	162	0	0	0	0	0	67	111	0	0	178	58	0	6	0	64	404
Total	0	375	157	0	532	0	0	0	0	0	289	485	0	2	776	203	0	13	0	216	1524
04:00 PM	0	101	30	2	133	0	0	0	0	0	92	176	0	0	268	44	0	3	0	47	448
04:15 PM	0	112	46	0	158	0	0	0	0	0	74	155	0	0	229	49	0	0	0	49	436
04:30 PM	0	116	49	0	165	0	0	0	0	0	118	166	0	0	284	61	0	7	0	68	517
04:45 PM	0	114	41	0	155	0	0	0	0	0	86	117	0	0	203	48	0	5	0	53	411
Total	0	443	166	2	611	0	0	0	0	0	370	614	0	0	984	202	0	15	0	217	1812
05:00 PM	0	95	46	0	141	0	0	0	0	0	108	168	0	0	276	54	1	3	0	58	475

Stephen G. Pernaw & Company, Inc.

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File Name : 1941A_INT_B_12_hr_764829_10-24-2019
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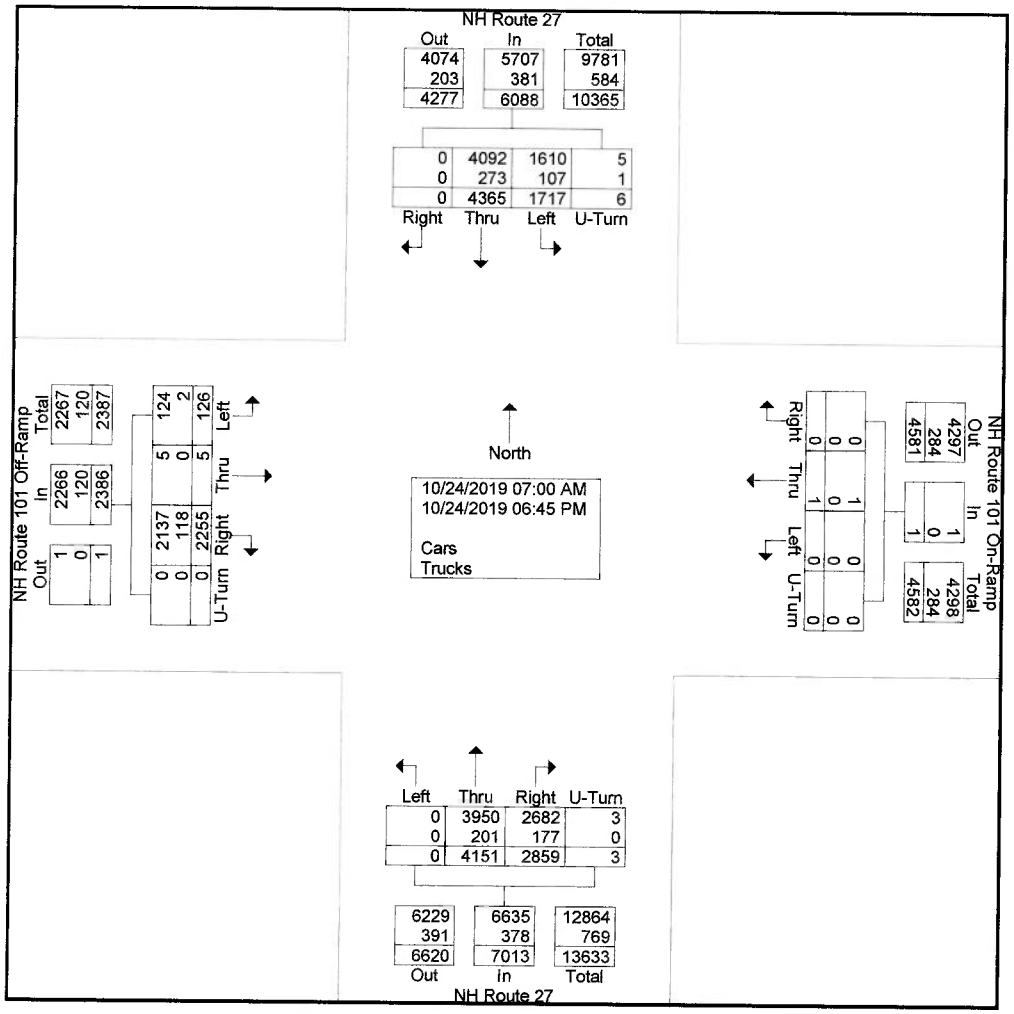
Groups Printed- Cars - Trucks

	NH Route 27 From North					NH Route 101 On-Ramp From East					NH Route 27 From South					NH Route 101 Off-Ramp From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
05:15 PM	0	121	44	0	165	0	0	0	0	0	96	101	0	0	197	51	0	7	0	58	420
05:30 PM	0	91	30	0	121	0	0	0	0	0	68	97	0	0	165	58	0	7	0	65	351
05:45 PM	0	95	38	0	133	0	0	0	0	0	60	94	0	0	154	71	0	6	0	77	364
Total	0	402	158	0	560	0	0	0	0	0	332	460	0	0	792	234	1	23	0	258	1610
06:00 PM	0	101	36	0	137	0	0	0	0	0	63	80	0	0	143	49	0	3	0	52	332
06:15 PM	0	80	26	0	106	0	0	0	0	0	58	82	0	0	140	52	0	5	0	57	303
06:30 PM	0	79	18	0	97	0	0	0	0	0	51	99	0	0	150	31	0	0	0	31	278
06:45 PM	0	59	15	0	74	0	0	0	0	0	52	83	0	0	135	45	0	4	0	49	258
Total	0	319	95	0	414	0	0	0	0	0	224	344	0	0	568	177	0	12	0	189	1171
Grand Total	0	4365	1717	6	6088	0	1	0	0	1	2859	4151	0	3	7013	2255	5	126	0	2386	15488
Apprch %	0	71.7	28.2	0.1		0	100	0	0		40.8	59.2	0	0		94.5	0.2	5.3	0		
Total %	0	28.2	11.1	0	39.3	0	0	0	0	0	18.5	26.8	0	0	45.3	14.6	0	0.8	0	15.4	
Cars	0	4092	1610	5	5707	0	1	0	0	1	2682	3950	0	3	6635	2137	5	124	0	2266	14609
% Cars	0	93.7	93.8	83.3	93.7	0	100	0	0	100	93.8	95.2	0	100	94.6	94.8	100	98.4	0	95	94.3
Trucks	0	273	107	1	381	0	0	0	0	0	177	201	0	0	378	118	0	2	0	120	879
% Trucks	0	6.3	6.2	16.7	6.3	0	0	0	0	0	6.2	4.8	0	0	5.4	5.2	0	1.6	0	5	5.7



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P.O. Box 1721
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File Name : 1941A_INT_B_12_hr_764829_10-24-2019
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Groups Printed- Trucks

	NH Route 27 From North				NH Route 101 On-Ramp From East				NH Route 27 From South				NH Route 101 Off-Ramp From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	0	3	5	0	0	0	0	0	6	11	0	0	2	0	0	0	27
07:15 AM	0	12	5	0	0	0	0	0	4	5	0	0	5	0	0	0	31
07:30 AM	0	5	4	0	0	0	0	0	7	8	0	0	3	0	0	0	27
07:45 AM	0	4	2	0	0	0	0	0	6	1	0	0	3	0	0	0	16
Total	0	24	16	0	0	0	0	0	23	25	0	0	13	0	0	0	101
08:00 AM	0	4	3	0	0	0	0	0	2	4	0	0	3	0	0	0	16
08:15 AM	0	3	1	0	0	0	0	0	2	3	0	0	2	0	0	0	11
08:30 AM	0	3	2	0	0	0	0	0	4	5	0	0	3	0	1	0	18
08:45 AM	0	12	2	0	0	0	0	0	7	2	0	0	3	0	1	0	27
Total	0	22	8	0	0	0	0	0	15	14	0	0	11	0	2	0	72
09:00 AM	0	9	3	0	0	0	0	0	2	2	0	0	4	0	0	0	20
09:15 AM	0	7	1	0	0	0	0	0	7	9	0	0	6	0	0	0	30
09:30 AM	0	9	1	0	0	0	0	0	5	4	0	0	3	0	0	0	22
09:45 AM	0	5	3	0	0	0	0	0	3	1	0	0	1	0	0	0	13
Total	0	30	8	0	0	0	0	0	17	16	0	0	14	0	0	0	85
10:00 AM	0	4	4	0	0	0	0	0	3	2	0	0	2	0	0	0	15
10:15 AM	0	6	3	0	0	0	0	0	1	3	0	0	2	0	0	0	15
10:30 AM	0	6	1	0	0	0	0	0	7	1	0	0	2	0	0	0	17
10:45 AM	0	6	2	0	0	0	0	0	6	8	0	0	2	0	0	0	24
Total	0	22	10	0	0	0	0	0	17	14	0	0	8	0	0	0	71
11:00 AM	0	9	2	0	0	0	0	0	1	8	0	0	5	0	0	0	25
11:15 AM	0	8	5	0	0	0	0	0	7	8	0	0	4	0	0	0	32
11:30 AM	0	7	4	0	0	0	0	0	4	4	0	0	1	0	0	0	20
11:45 AM	0	7	2	0	0	0	0	0	2	7	0	0	1	0	0	0	19
Total	0	31	13	0	0	0	0	0	14	27	0	0	11	0	0	0	96
12:00 PM	0	7	4	0	0	0	0	0	1	1	0	0	4	0	0	0	17
12:15 PM	0	10	5	0	0	0	0	0	7	5	0	0	3	0	0	0	30
12:30 PM	0	5	2	0	0	0	0	0	4	6	0	0	3	0	0	0	20
12:45 PM	0	6	3	1	0	0	0	0	3	3	0	0	6	0	0	0	22
Total	0	28	14	1	0	0	0	0	15	15	0	0	16	0	0	0	89
01:00 PM	0	7	0	0	0	0	0	0	0	3	0	0	2	0	0	0	12
01:15 PM	0	6	5	0	0	0	0	0	5	4	0	0	2	0	0	0	22
01:30 PM	0	5	4	0	0	0	0	0	6	2	0	0	3	0	0	0	20
01:45 PM	0	3	2	0	0	0	0	0	21	9	0	0	3	0	0	0	38
Total	0	21	11	0	0	0	0	0	32	18	0	0	10	0	0	0	92
02:00 PM	0	5	2	0	0	0	0	0	3	18	0	0	2	0	0	0	30
02:15 PM	0	6	4	0	0	0	0	0	2	6	0	0	1	0	0	0	19
02:30 PM	0	11	6	0	0	0	0	0	0	1	0	0	2	0	0	0	20
02:45 PM	0	8	2	0	0	0	0	0	4	5	0	0	2	0	0	0	21
Total	0	30	14	0	0	0	0	0	9	30	0	0	7	0	0	0	90
03:00 PM	0	6	3	0	0	0	0	0	3	2	0	0	3	0	0	0	17
03:15 PM	0	4	0	0	0	0	0	0	4	1	0	0	2	0	0	0	11
03:30 PM	0	4	1	0	0	0	0	0	4	5	0	0	5	0	0	0	19
03:45 PM	0	14	0	0	0	0	0	0	5	4	0	0	1	0	0	0	24
Total	0	28	4	0	0	0	0	0	16	12	0	0	11	0	0	0	71
04:00 PM	0	8	4	0	0	0	0	0	3	4	0	0	1	0	0	0	20
04:15 PM	0	2	1	0	0	0	0	0	3	6	0	0	4	0	0	0	16
04:30 PM	0	3	3	0	0	0	0	0	2	4	0	0	1	0	0	0	13
04:45 PM	0	5	0	0	0	0	0	0	1	2	0	0	2	0	0	0	10
Total	0	18	8	0	0	0	0	0	9	16	0	0	8	0	0	0	59
05:00 PM	0	4	0	0	0	0	0	0	2	2	0	0	1	0	0	0	9
05:15 PM	0	3	0	0	0	0	0	0	1	1	0	0	1	0	0	0	6
05:30 PM	0	1	0	0	0	0	0	0	1	3	0	0	0	0	0	0	5

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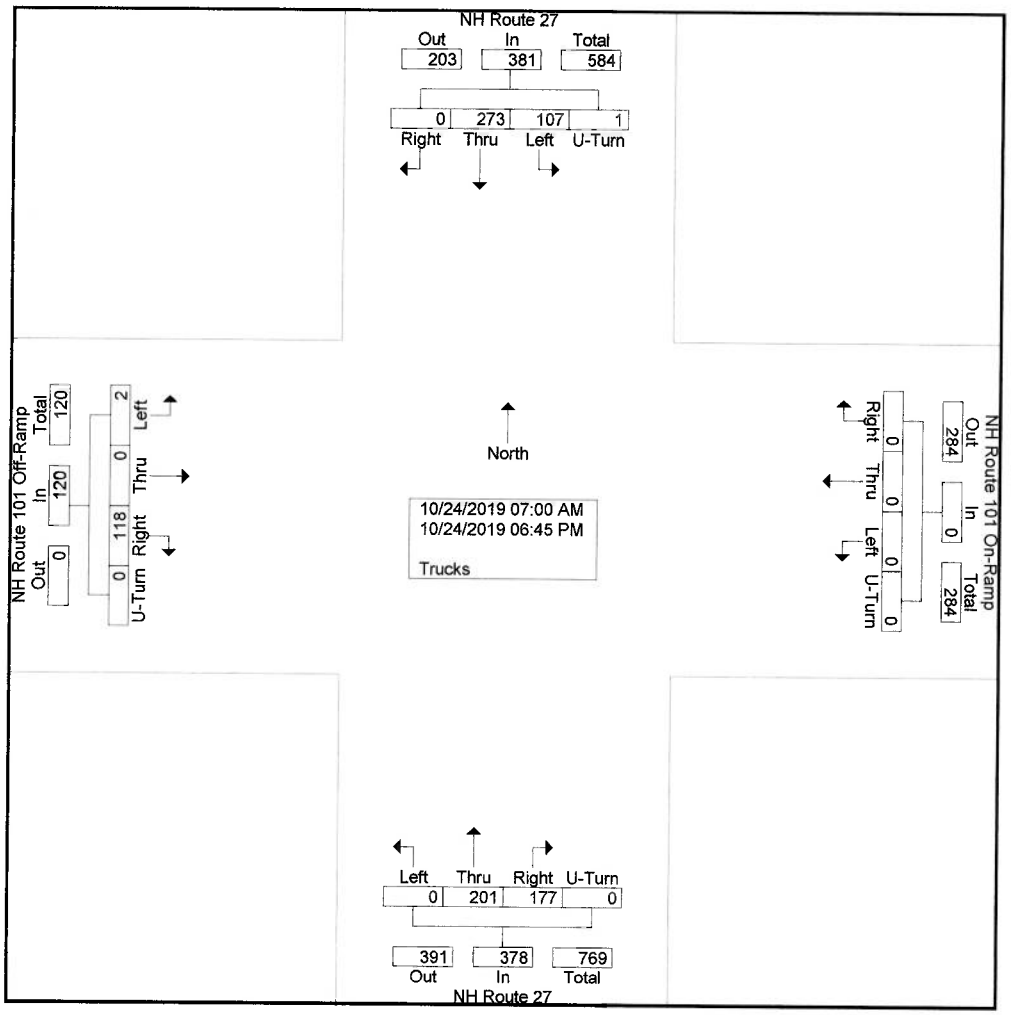
Groups Printed- Trucks

	NH Route 27 From North				NH Route 101 On-Ramp From East				NH Route 27 From South				NH Route 101 Off-Ramp From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
05:45 PM	0	1	0	0	0	0	0	0	1	2	0	0	2	0	0	0	6
Total	0	9	0	0	0	0	0	0	5	8	0	0	4	0	0	0	26
06:00 PM	0	2	1	0	0	0	0	0	0	0	0	0	3	0	0	0	6
06:15 PM	0	3	0	0	0	0	0	0	2	1	0	0	1	0	0	0	7
06:30 PM	0	5	0	0	0	0	0	0	1	3	0	0	1	0	0	0	10
06:45 PM	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	4
Total	0	10	1	0	0	0	0	0	5	6	0	0	5	0	0	0	27
Grand Total	0	273	107	1	0	0	0	0	177	201	0	0	118	0	2	0	879
Apprch %	0	71.7	28.1	0.3	0	0	0	0	46.8	53.2	0	0	98.3	0	1.7	0	
Total %	0	31.1	12.2	0.1	0	0	0	0	20.1	22.9	0	0	13.4	0	0.2	0	



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File Name : 1941A_INT_A__12_hr_764825_10-24-2019
Site Code : 1941A
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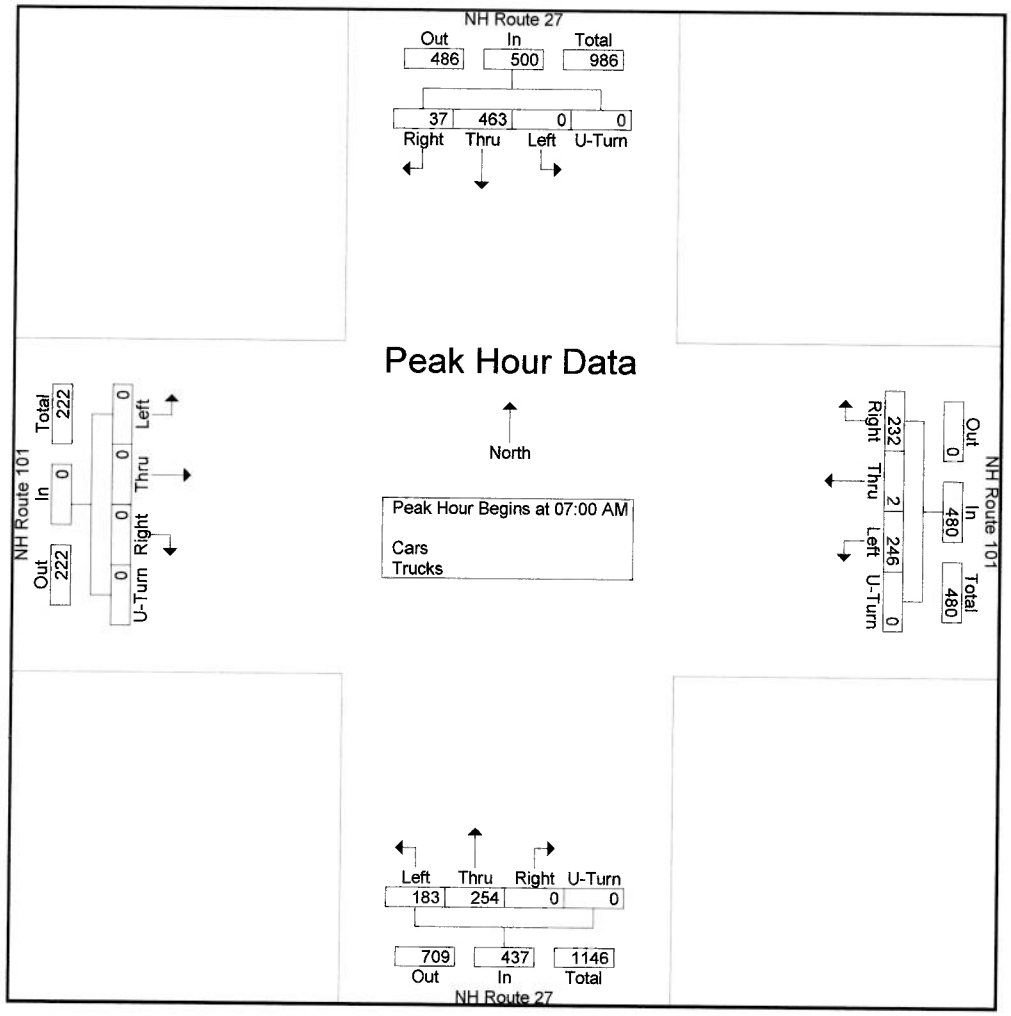
	NH Route 27 From North					NH Route 101 From East					NH Route 27 From South					NH Route 101 From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	9	90	0	0	99	**110**	**1**	52	0	**163**	0	**151**	48	0	**199**	0	0	0	0	0	**461**
07:15 AM	7	119	0	0	126	77	1	59	0	137	0	54	47	0	101	0	0	0	0	0	364
07:30 AM	7	**143**	0	0	**150**	18	0	50	0	68	0	33	**50**	0	83	0	0	0	0	0	301
07:45 AM	**14**	111	0	0	125	27	0	**85**	0	112	0	16	38	0	54	0	0	0	0	0	291
Total Volume	37	463	0	0	500	232	2	246	0	480	0	254	183	0	437	0	0	0	0	0	1417
% App. Total	7.4	92.6	0	0		48.3	0.4	51.2	0		0	58.1	41.9	0		0	0	0	0		
PHF	.661	.809	.000	.000	.833	.527	.500	.724	.000	.736	.000	.421	.915	.000	.549	.000	.000	.000	.000	.000	.768



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File Name : 1941A_INT_A__12_hr_764825_10-24-2019
Site Code : 1941A
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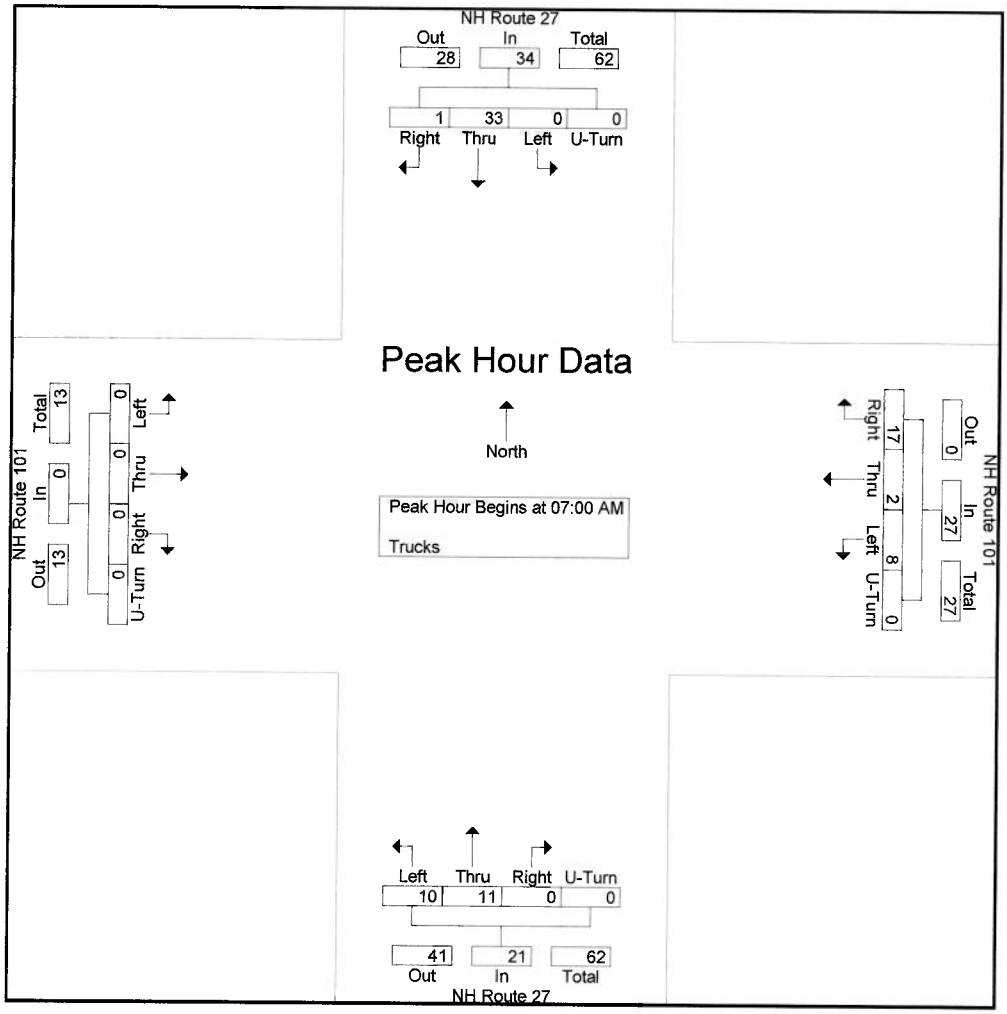
	NH Route 27 From North					NH Route 101 From East					NH Route 27 From South					NH Route 101 From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	8	0	0	8	3	**1**	0	0	**4**	0	**8**	1	0	**9**	0	0	0	0	0	21
07:15 AM	**1**	**13**	0	0	**14**	5	1	**4**	0	**10**	0	1	**4**	0	5	0	0	0	0	0	**29**
07:30 AM	0	9	0	0	9	2	0	1	0	3	0	2	3	0	5	0	0	0	0	0	17
07:45 AM	0	3	0	0	3	**7**	0	3	0	10	0	0	2	0	2	0	0	0	0	0	15
Total Volume	1	33	0	0	34	17	2	8	0	27	0	11	10	0	21	0	0	0	0	0	82
% App. Total	2.9	97.1	0	0		63	7.4	29.6	0		0	52.4	47.6	0		0	0	0	0		
PHF	.250	.635	.000	.000	.607	.607	.500	.500	.000	.675	.000	.344	.625	.000	.583	.000	.000	.000	.000	.000	.707



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File Name : 1941A_INT_A__12_hr_764825_10-24-2019
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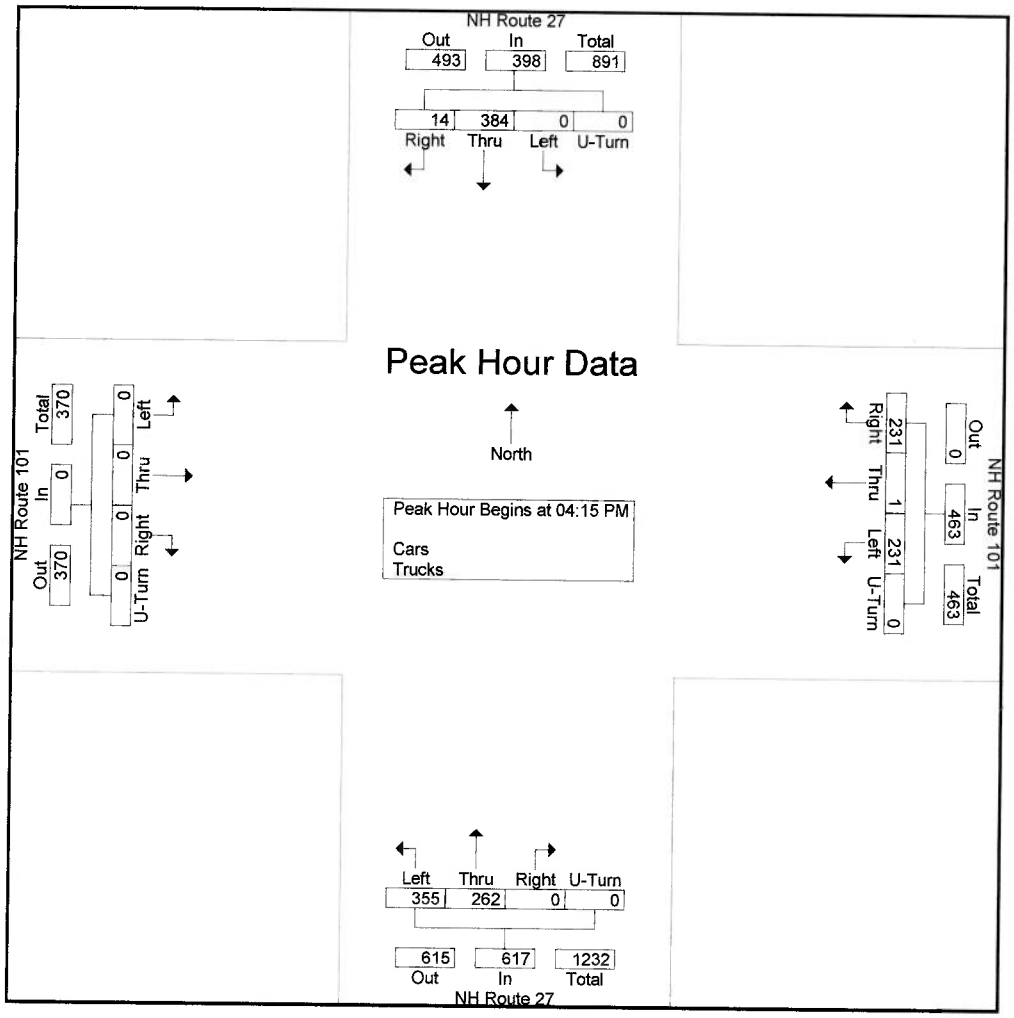
	NH Route 27 From North					NH Route 101 From East					NH Route 27 From South					NH Route 101 From West					
Start Time	Right	Thru	Left	U-Turn	App Total	Right	Thru	Left	U-Turn	App Total	Right	Thru	Left	U-Turn	App Total	Right	Thru	Left	U-Turn	App Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	2	**107**	0	0	**109**	**68**	0	49	0	117	0	63	**94**	0	157	0	0	0	0	0	**383**
04:30 PM	4	101	0	0	105	44	0	61	0	105	0	**80**	93	0	**173**	0	0	0	0	0	383
04:45 PM	2	83	0	0	85	65	0	**73**	0	**138**	0	50	74	0	124	0	0	0	0	0	347
05:00 PM	**6**	93	0	0	99	54	**1**	48	0	103	0	69	94	0	163	0	0	0	0	0	365
Total Volume	14	384	0	0	398	231	1	231	0	463	0	262	355	0	617	0	0	0	0	0	1478
% App. Total	3.5	96.5	0	0		49.9	0.2	49.9	0		0	42.5	57.5	0		0	0	0	0		
PHF	.583	.897	.000	.000	.913	.849	.250	.791	.000	.839	.000	.819	.944	.000	.892	.000	.000	.000	.000	.000	.965



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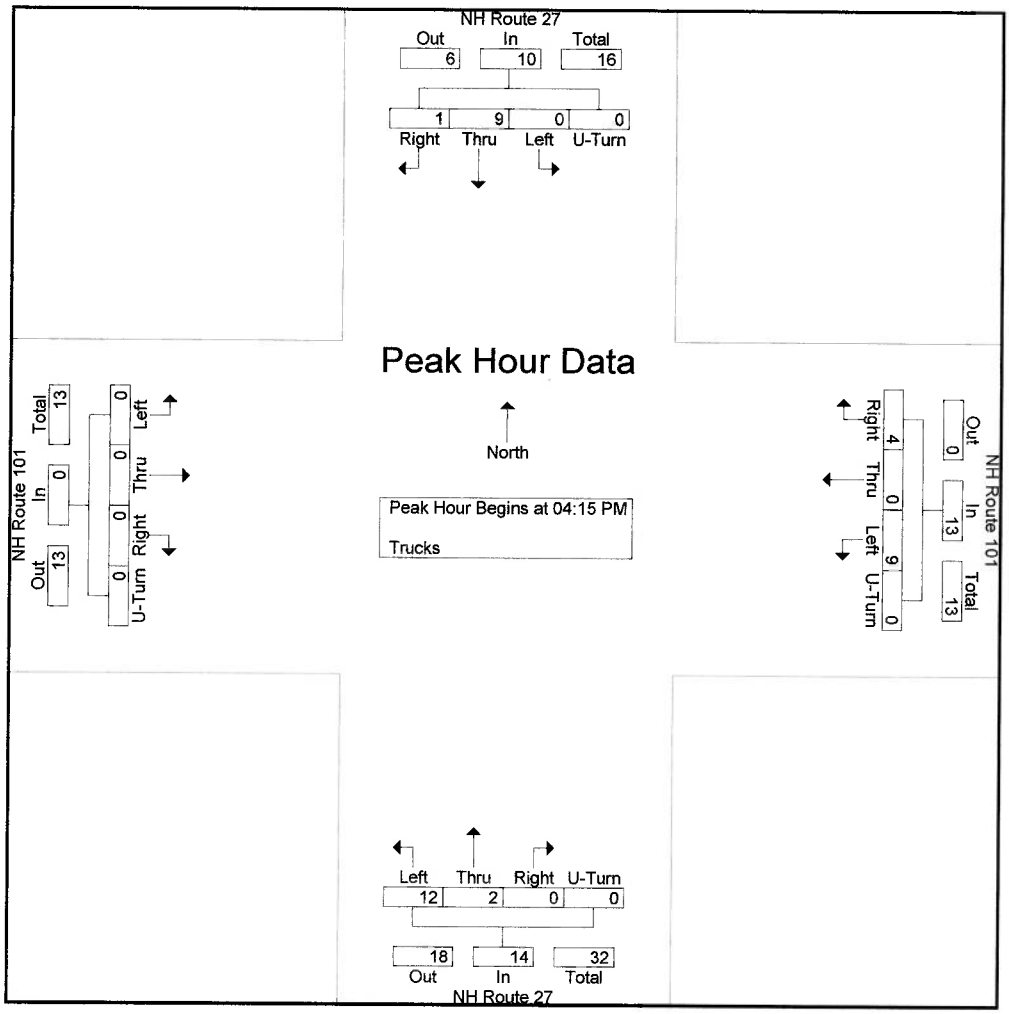
	NH Route 27 From North					NH Route 101 From East					NH Route 27 From South					NH Route 101 From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	0	2	0	0	2	**2**	0	0	0	2	0	**1**	**5**	0	**6**	0	0	0	0	0	10
04:30 PM	0	**5**	0	0	**5**	1	0	2	0	3	0	1	4	0	5	0	0	0	0	0	**13**
04:45 PM	0	1	0	0	1	1	0	3	0	**4**	0	0	2	0	2	0	0	0	0	0	7
05:00 PM	**1**	1	0	0	2	0	0	**4**	0	4	0	0	1	0	1	0	0	0	0	0	7
Total Volume	1	9	0	0	10	4	0	9	0	13	0	2	12	0	14	0	0	0	0	0	37
% App. Total	10	90	0	0		30.8	0	69.2	0		0	14.3	85.7	0		0	0	0	0		
PHF	.250	.450	.000	.000	.500	.500	.000	.563	.000	.813	.000	.500	.600	.000	.583	.000	.000	.000	.000	.000	.712



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Weather: Fair
Collected By: MV
Job Number: 1941A
Town/State: Exeter, NH

File Name : 1941A_INT_A__12_hr_764825_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- Cars - Trucks

	NH Route 27 From North					NH Route 101 From East					NH Route 27 From South					NH Route 101 From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
07:00 AM	9	90	0	0	99	110	1	52	0	163	0	151	48	0	199	0	0	0	0	0	461
07:15 AM	7	119	0	0	126	77	1	59	0	137	0	54	47	0	101	0	0	0	0	0	364
07:30 AM	7	143	0	0	150	18	0	50	0	68	0	33	50	0	83	0	0	0	0	0	301
07:45 AM	14	111	0	0	125	27	0	85	0	112	0	16	38	0	54	0	0	0	0	0	291
Total	37	463	0	0	500	232	2	246	0	480	0	254	183	0	437	0	0	0	0	0	1417
08:00 AM	4	93	0	0	97	23	1	71	0	95	0	25	38	0	63	0	0	0	0	0	255
08:15 AM	5	86	0	0	91	21	0	68	0	89	0	27	44	0	71	0	0	0	0	0	251
08:30 AM	4	57	0	0	61	28	0	47	0	75	0	30	39	0	69	0	0	0	0	0	205
08:45 AM	6	72	0	0	78	24	0	60	0	84	0	26	41	0	67	0	0	0	0	0	229
Total	19	308	0	0	327	96	1	246	0	343	0	108	162	0	270	0	0	0	0	0	940
09:00 AM	5	57	0	0	62	23	0	41	0	64	0	25	29	0	54	0	0	0	0	0	180
09:15 AM	3	60	0	0	63	15	0	39	0	54	0	40	34	0	74	0	0	0	0	0	191
09:30 AM	4	76	0	0	80	19	0	37	0	56	0	25	34	0	59	0	0	0	0	0	195
09:45 AM	2	53	0	0	55	18	0	40	0	58	0	23	31	0	54	0	0	0	0	0	167
Total	14	246	0	0	260	75	0	157	0	232	0	113	128	0	241	0	0	0	0	0	733
10:00 AM	4	49	0	0	53	18	0	42	0	60	0	23	26	0	49	0	0	0	0	0	162
10:15 AM	5	41	0	0	46	14	0	30	0	44	0	25	23	0	48	0	0	0	0	0	138
10:30 AM	2	47	0	0	49	18	0	48	0	66	0	21	38	0	59	0	0	0	0	0	174
10:45 AM	4	35	0	0	39	11	0	39	0	50	0	20	33	0	53	0	0	0	0	0	142
Total	15	172	0	0	187	61	0	159	0	220	0	89	120	0	209	0	0	0	0	0	616
11:00 AM	1	43	0	0	44	15	0	42	0	57	0	33	30	0	63	0	0	0	0	0	164
11:15 AM	2	121	0	0	123	21	0	35	0	56	0	30	39	0	69	0	0	0	0	0	248
11:30 AM	0	69	0	1	70	21	0	41	0	62	0	23	25	0	48	0	0	0	0	0	180
11:45 AM	4	64	0	0	68	22	0	43	1	66	0	28	33	0	61	0	0	0	0	0	195
Total	7	297	0	1	305	79	0	161	1	241	0	114	127	0	241	0	0	0	0	0	787
12:00 PM	3	51	0	0	54	30	0	53	0	83	0	31	34	0	65	0	0	0	0	0	202
12:15 PM	2	73	0	0	75	18	0	48	0	66	0	26	39	1	66	0	0	0	0	0	207
12:30 PM	3	50	0	0	53	39	0	52	0	91	0	33	35	0	68	0	0	0	0	0	212
12:45 PM	2	58	0	0	60	20	0	54	0	74	0	24	32	0	56	0	0	0	0	0	190
Total	10	232	0	0	242	107	0	207	0	314	0	114	140	1	255	0	0	0	0	0	811
01:00 PM	2	46	0	0	48	16	0	43	0	59	0	26	49	0	75	0	0	0	0	0	182
01:15 PM	3	55	0	0	58	19	0	39	0	58	0	15	19	0	34	0	0	0	0	0	150
01:30 PM	4	38	0	0	42	30	0	49	0	79	0	30	42	0	72	0	0	0	0	0	193
01:45 PM	2	63	0	0	65	31	2	46	0	79	0	36	38	0	74	0	0	0	0	0	218
Total	11	202	0	0	213	96	2	177	0	275	0	107	148	0	255	0	0	0	0	0	743
02:00 PM	3	64	0	0	67	33	1	49	0	83	0	62	44	0	106	0	0	0	0	0	256
02:15 PM	1	65	1	0	67	32	0	37	0	69	0	51	73	0	124	0	0	0	0	0	260
02:30 PM	4	199	0	0	203	39	1	40	0	80	0	40	52	0	92	0	0	0	0	0	375
02:45 PM	1	163	0	0	164	37	0	37	0	74	0	40	45	0	85	0	0	0	0	0	323
Total	9	491	1	0	501	141	2	163	0	306	0	193	214	0	407	0	0	0	0	0	1214
03:00 PM	5	76	0	0	81	57	3	44	0	104	0	49	63	0	112	0	0	0	0	0	297
03:15 PM	4	64	0	0	68	59	0	54	0	113	0	46	55	0	101	0	0	0	0	0	282
03:30 PM	3	83	0	0	86	51	0	51	0	102	0	54	111	0	165	0	0	0	0	0	353
03:45 PM	3	91	0	0	94	45	0	70	0	115	0	57	61	0	118	0	0	0	0	0	327
Total	15	314	0	0	329	212	3	219	0	434	0	206	290	0	496	0	0	0	0	0	1259
04:00 PM	6	68	0	0	74	57	1	62	0	120	0	73	102	0	175	0	0	0	0	0	369
04:15 PM	2	107	0	0	109	68	0	49	0	117	0	63	94	0	157	0	0	0	0	0	383
04:30 PM	4	101	0	0	105	44	0	61	0	105	0	80	93	0	173	0	0	0	0	0	383
04:45 PM	2	83	0	0	85	65	0	73	0	138	0	50	74	0	124	0	0	0	0	0	347
Total	14	359	0	0	373	234	1	245	0	480	0	266	363	0	629	0	0	0	0	0	1482
05:00 PM	6	93	0	0	99	54	1	48	0	103	0	69	94	0	163	0	0	0	0	0	365

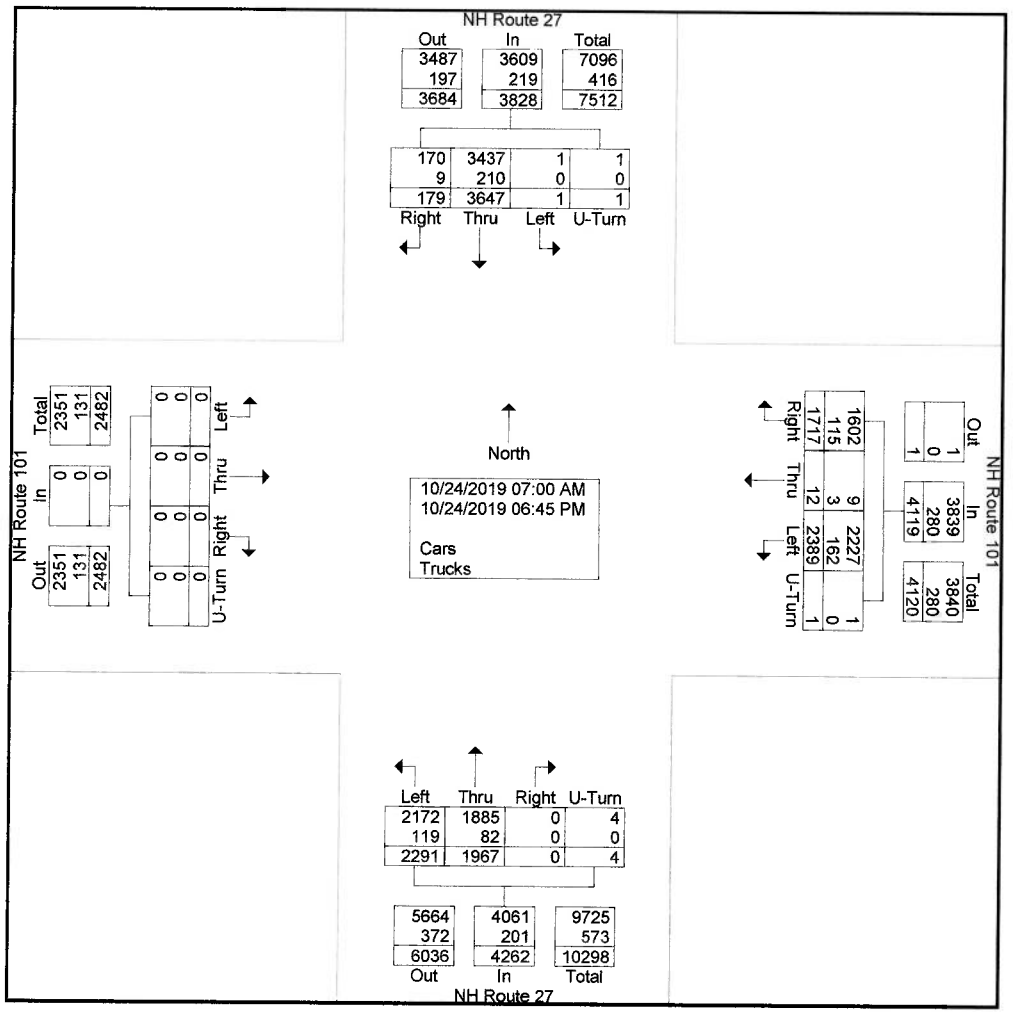
Stephen G. Pernaw & Company, Inc.

P.O. Box 1721
Concord, New Hampshire 03302

File Name : 1941A_INT_A__12_hr_764825_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 2

Groups Printed- Cars - Trucks

	NH Route 27 From North					NH Route 101 From East					NH Route 27 From South					NH Route 101 From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
05:15 PM	4	99	0	0	103	72	0	65	0	137	0	56	52	0	108	0	0	0	0	0	348
05:30 PM	3	71	0	0	74	51	0	56	0	107	0	46	48	1	95	0	0	0	0	0	276
05:45 PM	7	74	0	0	81	64	0	56	0	120	0	53	43	0	96	0	0	0	0	0	297
Total	20	337	0	0	357	241	1	225	0	467	0	224	237	1	462	0	0	0	0	0	1286
06:00 PM	4	85	0	0	89	39	0	53	0	92	0	44	45	1	90	0	0	0	0	0	271
06:15 PM	1	53	0	0	54	40	0	47	0	87	0	40	48	0	88	0	0	0	0	0	229
06:30 PM	1	48	0	0	49	40	0	49	0	89	0	52	45	1	98	0	0	0	0	0	236
06:45 PM	2	40	0	0	42	24	0	35	0	59	0	43	41	0	84	0	0	0	0	0	185
Total	8	226	0	0	234	143	0	184	0	327	0	179	179	2	360	0	0	0	0	0	921
Grand Total	179	3647	1	1	3828	1717	12	2389	1	4119	0	1967	2291	4	4262	0	0	0	0	0	12209
Apprch %	4.7	95.3	0	0		41.7	0.3	58	0		0	46.2	53.8	0.1		0	0	0	0		
Total %	1.5	29.9	0	0	31.4	14.1	0.1	19.6	0	33.7	0	16.1	18.8	0	34.9	0	0	0	0	0	
Cars	170	3437	1	1	3609	1602	9	2227	1	3839	0	1885	2172	4	4061	0	0	0	0	0	11509
% Cars	95	94.2	100	100	94.3	93.3	75	93.2	100	93.2	0	95.8	94.8	100	95.3	0	0	0	0	0	94.3
Trucks	9	210	0	0	219	115	3	162	0	280	0	82	119	0	201	0	0	0	0	0	700
% Trucks	5	5.8	0	0	5.7	6.7	25	6.8	0	6.8	0	4.2	5.2	0	4.7	0	0	0	0	0	5.7



Stephen G. Pernaw & Company, Inc.

P.O. Box 1721
Concord, New Hampshire 03302

Weather: Fair
Collected By: MV
Job Number: 1941A
Town/State: Exeter, NH

File Name : 1941A_INT_A__12_hr_764825_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- Trucks

	NH Route 27 From North					NH Route 101 From East					NH Route 27 From South					NH Route 101 From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
07:00 AM	0	8	0	0	8	3	1	0	0	4	0	8	1	0	9	0	0	0	0	0	21
07:15 AM	1	13	0	0	14	5	1	4	0	10	0	1	4	0	5	0	0	0	0	0	29
07:30 AM	0	9	0	0	9	2	0	1	0	3	0	2	3	0	5	0	0	0	0	0	17
07:45 AM	0	3	0	0	3	7	0	3	0	10	0	0	2	0	2	0	0	0	0	0	15
Total	1	33	0	0	34	17	2	8	0	27	0	11	10	0	21	0	0	0	0	0	82
08:00 AM	0	5	0	0	5	1	0	0	0	1	0	3	1	0	4	0	0	0	0	0	10
08:15 AM	0	1	0	0	1	0	0	4	0	4	0	1	2	0	3	0	0	0	0	0	8
08:30 AM	0	3	0	0	3	3	0	2	0	5	0	4	3	0	7	0	0	0	0	0	15
08:45 AM	0	4	0	0	4	2	0	11	0	13	0	2	1	0	3	0	0	0	0	0	20
Total	0	13	0	0	13	6	0	17	0	23	0	10	7	0	17	0	0	0	0	0	53
09:00 AM	0	10	0	0	10	3	0	1	0	4	0	2	1	0	3	0	0	0	0	0	17
09:15 AM	0	5	0	0	5	5	0	2	0	7	0	4	3	0	7	0	0	0	0	0	19
09:30 AM	1	6	0	0	7	3	0	3	0	6	0	2	3	0	5	0	0	0	0	0	18
09:45 AM	0	2	0	0	2	1	0	3	0	4	0	0	1	0	1	0	0	0	0	0	7
Total	1	23	0	0	24	12	0	9	0	21	0	8	8	0	16	0	0	0	0	0	61
10:00 AM	0	5	0	0	5	3	0	3	0	6	0	0	2	0	2	0	0	0	0	0	13
10:15 AM	0	6	0	0	6	2	0	3	0	5	0	2	2	0	4	0	0	0	0	0	15
10:30 AM	0	1	0	0	1	7	0	6	0	13	0	0	1	0	1	0	0	0	0	0	15
10:45 AM	0	5	0	0	5	2	0	1	0	3	0	1	5	0	6	0	0	0	0	0	14
Total	0	17	0	0	17	14	0	13	0	27	0	3	10	0	13	0	0	0	0	0	57
11:00 AM	0	3	0	0	3	2	0	6	0	8	0	3	4	0	7	0	0	0	0	0	18
11:15 AM	0	7	0	0	7	0	0	4	0	4	0	2	7	0	9	0	0	0	0	0	20
11:30 AM	0	7	0	0	7	3	0	1	0	4	0	2	2	0	4	0	0	0	0	0	15
11:45 AM	0	2	0	0	2	3	0	6	0	9	0	2	2	0	4	0	0	0	0	0	15
Total	0	19	0	0	19	8	0	17	0	25	0	9	15	0	24	0	0	0	0	0	68
12:00 PM	0	6	0	0	6	4	0	4	0	8	0	0	0	0	0	0	0	0	0	0	14
12:15 PM	0	9	0	0	9	3	0	7	0	10	0	1	5	0	6	0	0	0	0	0	25
12:30 PM	0	3	0	0	3	3	0	3	0	6	0	2	4	0	6	0	0	0	0	0	15
12:45 PM	1	3	0	0	4	3	0	5	0	8	0	2	2	0	4	0	0	0	0	0	16
Total	1	21	0	0	22	13	0	19	0	32	0	5	11	0	16	0	0	0	0	0	70
01:00 PM	1	1	0	0	2	4	0	5	0	9	0	1	4	0	5	0	0	0	0	0	16
01:15 PM	0	10	0	0	10	1	0	2	0	3	0	2	2	0	4	0	0	0	0	0	17
01:30 PM	0	6	0	0	6	2	0	5	0	7	0	1	1	0	2	0	0	0	0	0	15
01:45 PM	0	2	0	0	2	6	1	2	0	9	0	2	5	0	7	0	0	0	0	0	18
Total	1	19	0	0	20	13	1	14	0	28	0	6	12	0	18	0	0	0	0	0	66
02:00 PM	1	3	0	0	4	4	0	5	0	9	0	14	5	0	19	0	0	0	0	0	32
02:15 PM	0	8	0	0	8	1	0	2	0	3	0	3	3	0	6	0	0	0	0	0	17
02:30 PM	0	15	0	0	15	7	0	3	0	10	0	1	0	0	1	0	0	0	0	0	26
02:45 PM	0	7	0	0	7	4	0	5	0	9	0	2	4	0	6	0	0	0	0	0	22
Total	1	33	0	0	34	16	0	15	0	31	0	20	12	0	32	0	0	0	0	0	97
03:00 PM	0	6	0	0	6	2	0	3	0	5	0	2	0	0	2	0	0	0	0	0	13
03:15 PM	0	0	0	0	0	0	0	5	0	5	0	0	1	0	1	0	0	0	0	0	6
03:30 PM	0	1	0	0	1	5	0	7	0	12	0	2	3	0	5	0	0	0	0	0	18
03:45 PM	0	5	0	0	5	1	0	10	0	11	0	0	4	0	4	0	0	0	0	0	20
Total	0	12	0	0	12	8	0	25	0	33	0	4	8	0	12	0	0	0	0	0	57
04:00 PM	0	6	0	0	6	3	0	5	0	8	0	2	2	0	4	0	0	0	0	0	18
04:15 PM	0	2	0	0	2	2	0	0	0	2	0	1	5	0	6	0	0	0	0	0	10
04:30 PM	0	5	0	0	5	1	0	2	0	3	0	1	4	0	5	0	0	0	0	0	13
04:45 PM	0	1	0	0	1	1	0	3	0	4	0	0	2	0	2	0	0	0	0	0	7
Total	0	14	0	0	14	7	0	10	0	17	0	4	13	0	17	0	0	0	0	0	48
05:00 PM	1	1	0	0	2	0	0	4	0	4	0	0	1	0	1	0	0	0	0	0	7

Stephen G. Pernaw & Company, Inc.

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File Name : 1941A_INT_A__12_hr_764825_10-24-2019
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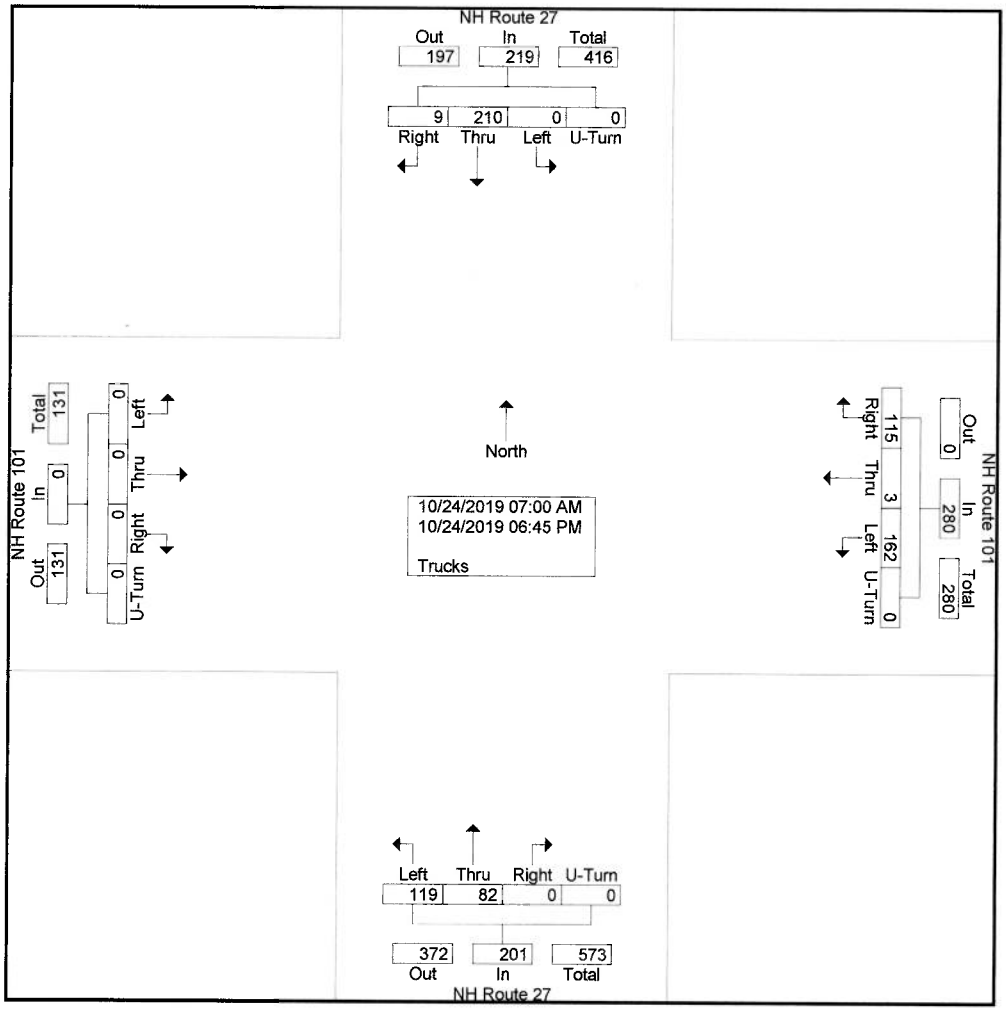
Start Date : 10/24/2019
Page No : 2

Groups Printed- Trucks

	NH Route 27 From North					NH Route 101 From East					NH Route 27 From South					NH Route 101 From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
05:15 PM	2	0	0	0	2	0	0	3	0	3	0	0	1	0	1	0	0	0	0	0	6
05:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	3	0	3	0	0	0	0	0	4
05:45 PM	0	0	0	0	0	0	0	1	0	1	0	1	2	0	3	0	0	0	0	0	4
Total	3	1	0	0	4	0	0	9	0	9	0	1	7	0	8	0	0	0	0	0	21
06:00 PM	0	2	0	0	2	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	3
06:15 PM	0	1	0	0	1	1	0	2	0	3	0	0	1	0	1	0	0	0	0	0	5
06:30 PM	0	2	0	0	2	0	0	3	0	3	0	1	3	0	4	0	0	0	0	0	9
06:45 PM	1	0	0	0	1	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	3
Total	1	5	0	0	6	1	0	6	0	7	0	1	6	0	7	0	0	0	0	0	20
Grand Total	9	210	0	0	219	115	3	162	0	280	0	82	119	0	201	0	0	0	0	0	700
Apprch %	4.1	95.9	0	0		41.1	1.1	57.9	0		0	40.8	59.2	0		0	0	0	0		
Total %	1.3	30	0	0	31.3	16.4	0.4	23.1	0	40	0	11.7	17	0	28.7	0	0	0	0	0	



Stephen G. Pernaw & Company, Inc.

GRIDSMART®

Turning Movement Counts - Average

Intersection Route 27 & Continental
Date 10/22/2019-10/24/2019

	Right	Through	Left	Total
Northbound		6037	329	6366
Eastbound	370	9	587	967
Southbound	547	6222	0	6770
Total	**917**	**12268**	**917**	**14103**

	Northbound		Eastbound			Southbound				
	T	L	R	T	L	R	T	L		
06:00	21	10	1		0	23	58		113	
06:15	47	7	1	0	1	18	83		157	
06:30	41	7	1			20	100		169	
06:45	92	4	3	1	1	25	127		253	692
07:00	188	12	3		3	23	111		340	919
07:15	143	11	5		2	23	156		340	1102
07:30	127	10	2	0	5	26	161		331	1264
07:45	107	11	4	0	4	29	207		362	1373
08:00	118	10	4		3	12	182		329	1362
08:15	129	8	3		6	19	160		325	1347
08:30	123	7	6		6	11	136		289	1305
08:45	103	9	3		4	13	137		269	1212
09:00	95	5	2		5	12	105		224	1107
09:15	105	5	4		5	15	101		235	1017
09:30	91	4	2		3	11	103		214	942
09:45	82	3	4		6	7	92		194	867
10:00	80	5	8		5	6	89		193	836
10:15	82	5	4		6	6	78		181	782
10:30	92	5	8	0	9	7	78		199	767
10:45	85	3	6		5	7	79		185	758
11:00	91	4	7		8	3	83		196	761
11:15	96	4	8	0	6	8	121		243	823
11:30	110	7	4		10	4	96		231	855
11:45	100	9	10		8	5	115		247	917
12:00	120	10	11	0	19	11	110		281	1002
12:15	107	9	9	0	13	12	117		267	1026
12:30	110	11	10	0	7	8	104		250	1045
12:45	97	8	7	0	7	12	127		258	1056
13:00	103	5	7	0	8	7	105		235	1010
13:15	91	4	7	0	6	8	105		221	964
13:30	99	8	4		6	5	110		232	946
13:45	134	8	6	0	7	6	107		268	956
14:00	138	7	5		10	5	97		262	983
14:15	152	6	7		11	7	100		283	1045

14:30	123	4	6	0	10	10	145		298	1111
14:45	126	8	7		10	6	148		305	1148
15:00	146	4	7	0	20	6	102		285	1171
15:15	133	5	9		18	8	105		278	1166
15:30	205	7	17	0	37	7	120		393	1261
15:45	155	5	12	0	21	10	155		358	1314
16:00	195	5	14		32	8	115		369	1398
16:15	169	5	11		21	6	132		344	1464
16:30	225	6	12	0	35	4	143		425	1496
16:45	179	7	12		24	8	166	0	396	1534
17:00	224	3	23		43	5	140		438	1603
17:15	160	2	12		26	4	152		356	1615
17:30	134	2	11		14	3	145		309	1499
17:45	115	1	9		16	8	151		300	1403
18:00	78	3	6	0	14	7	126		234	1199
18:15	61	2	4	0	11	5	108		191	1034
18:30	47	0	4		8	4	114		177	902
18:45	42	3	2		5	5	99		156	758
Total	**6037**	**329**	**370**	**9**	**587**	**547**	**6222**	**0**	14101	
AM Total	**565**	**44**	**14**	**0**	**14**	**101**	**635**			**1373**
PM Total	**788**	**18**	**59**	**0**	**128**	**21**	**601**			**1615**

Source: VHB, Inc.

Appendix D **Seasonal Adjustment Factors / Historical Growth Rates**

Seasonal Adjustment Factors
NHDOT Group 4 (Urban Highways)

Stephen G. Pernaw & Company, Inc.

Year 2019 Monthly Data - Urban

Month	ADT	Adjustment to Average	Adjustment to Peak
Jan	11,431	1.12	1.23
Feb	11,848	1.08	1.18
Mar	12,141	1.06	1.15
Apr	12,860	1.00	1.09
May	13,551	0.95	1.03
Jun	13,785	0.93	1.02
Jul	13,942	0.92	1.01
Aug	14,016	0.92	1.00
Sep	13,379	0.96	1.05
Oct	13,339	0.96	1.05
Nov	12,265	1.05	1.14
Dec	11,496	1.12	1.22

Year 2018 Monthly Data - Urban

Month	ADT	Adjustment to Average	Adjustment to Peak
Jan	11,282	1.13	1.24
Feb	11,848	1.08	1.18
Mar	11,828	1.08	1.18
Apr	12,491	1.02	1.12
May	13,587	0.94	1.03
Jun	13,911	0.92	1.00
Jul	13,765	0.93	1.01
Aug	13,945	0.92	1.00
Sep	13,168	0.97	1.06
Oct	13,367	0.96	1.04
Nov	12,215	1.05	1.14
Dec	11,963	1.07	1.17

Average Peak-Month Factor 1.05

Stephen G. Pernaw & Company, Inc.

STEPHEN G. PERNAW & COMPANY, INC.
PROJECT: Proposed Mixed-Use Development, Exeter, New Hampshire
NUMBER: 1941A
COUNT STATION: 82 153064

HISTORICAL GROWTH CALCULATIONS

LOCATION : NH 27 (Epping Rd) South of NH 101 Exit 9 - Exeter, NH
CASE : AADT

ARITHMETIC PROJECTIONS

YEAR	AADT
2009	12000
2012	12000
2015	12000
2016	12240
2018	12972
2019	13128

Regression Output:

Constant	-216817.44000
Std Err of Y Est	333.7251564
R Squared	0.67295523
No. of Observations	6
Degrees of Freedom	4
X Coefficient	113.76
Std Err of Coef.	39.65245723

PROJECTIONS

2022	13205
2023	13319
2024	13433
2025	13547
2026	13660
2027	13774
2028	13888
2029	14002
2030	14115
2031	14229
2032	14343

RATE = 114 VPD/YEAR

GEOMETRIC PROJECTIONS

YEAR	AADT	Ln AADT
2009	12000	9.39266
2012	12000	9.39266
2015	12000	9.39266
2016	12240	9.41246
2018	12972	9.47055
2019	13128	9.48250

Regression Output:

Constant	-8.89675
Std Err of Y Est	0.026514218
R Squared	0.67560785
No. of Observations	6
Degrees of Freedom	4
X Coefficient	0.009092895
Std Err of Coef.	0.003150359

PROJECTIONS

2022	13215
2023	13335
2024	13457
2025	13580
2026	13704
2027	13829
2028	13956
2029	14083
2030	14212
2031	14342
2032	14473

CONCLUSION: USE 1% PER NHDOT SCOPE MEETING

RATE = 0.9 % / YEAR

New Hampshire DOT Department of Transportation

MS2

Transportation Data Management System

List View | All DIRs

Record 2592 of 5744 Goto Record go

Location ID	82153064	**MPO ID**	
Type	SPOT	**HPMS ID**	
On NHS	No	**On HPMS**	Yes
LRS ID	Y1530001__	**LRS Loc Pt.**	
SF Group	04	**Route Type**	
AF Group	04	**Route**	
GF Group	E	**Active**	Yes
Class Dist Grp	Default	**Category**	3
Seas Clss Grp	Default		
WIM Group	Default		
QC Group	Default		
Fnct'l Class	Other Principal Arterial	**Milepost**	
Located On	Epping Rd		
Loc On Alias	NH 27 (EPPING RD) SOUTH OF NH 101 EXIT 9		

More Detail

STATION DATA

Directions: 2-WAY | EB | WB

AADT

Year	AADT	DHV-30	K %	D %	PA	BC	Src
2019	13,128[3]		10	60	12,025 (92%)	1,103 (8%)	Grown from 2018
2018	12,972	1,303	10	60	11,959 (92%)	1,013 (8%)	
2016	12,240[3]				11,163 (91%)	1,077 (9%)	Grown from 2015
2015	12,000						
2012	12,000						

|<< < > >>| 1-5 of 11

Travel Demand Model

	Model Year	Model AADT	AM PHV	AM PPV	MD PHV	MD PPV	PM PHV	PM PPV	NT PHV	NT PPV

VOLUME COUNT

	Date	Int	Total
	Thu 6/21/2018	60	15,032
	Wed 6/20/2018	60	15,434
	Tue 6/19/2018	60	14,512
	Fri 7/17/2015	60	13,695
	Thu 7/16/2015	60	14,647
	Wed 7/15/2015	60	14,934
	Tue 7/14/2015	60	14,465
	Mon 7/13/2015	60	13,991
	Sun 7/22/2012	60	7,691

VOLUME TREND

Year	Annual Growth
2019	1%
2018	3%
2016	2%
2015	0%
2012	0%
2009	3%
2006	3%
2003	9%

New Hampshire DOT Department of Transportation

MS2

Transportation Data Management System

List View | All DIRs

Record 2592 of 5744 Goto Record go

Location ID	82153064	**MPO ID**	
Type	SPOT	**HPMS ID**	
On NHS	No	**On HPMS**	Yes
LRS ID	Y1530001__	**LRS Loc Pt.**	
SF Group	04	**Route Type**	
AF Group	04	**Route**	
GF Group	E	**Active**	Yes
Class Dist Grp	Default	**Category**	3
Seas Clss Grp	Default		
WIM Group	Default		
QC Group	Default		
Fnct'l Class	Other Principal Arterial	**Milepost**	
Located On	Epping Rd		
Loc On Alias	NH 27 (EPPING RD) SOUTH OF NH 101 EXIT 9		

More Detail

STATION DATA

Directions: 2-WAY | EB | WB

AADT

Year	AADT	DHV-30	K %	D %	PA	BC	Src
2009	12,000						
2006	11,000						
2003	10,000						
2000	7,700						
1998	6,400[2]						

|<< | < | > | >>| 6-10 of 11

Travel Demand Model

	Model Year	Model AADT	AM PHV	AM PPV	MD PHV	MD PPV	PM PHV	PM PPV	NT PHV	NT PPV

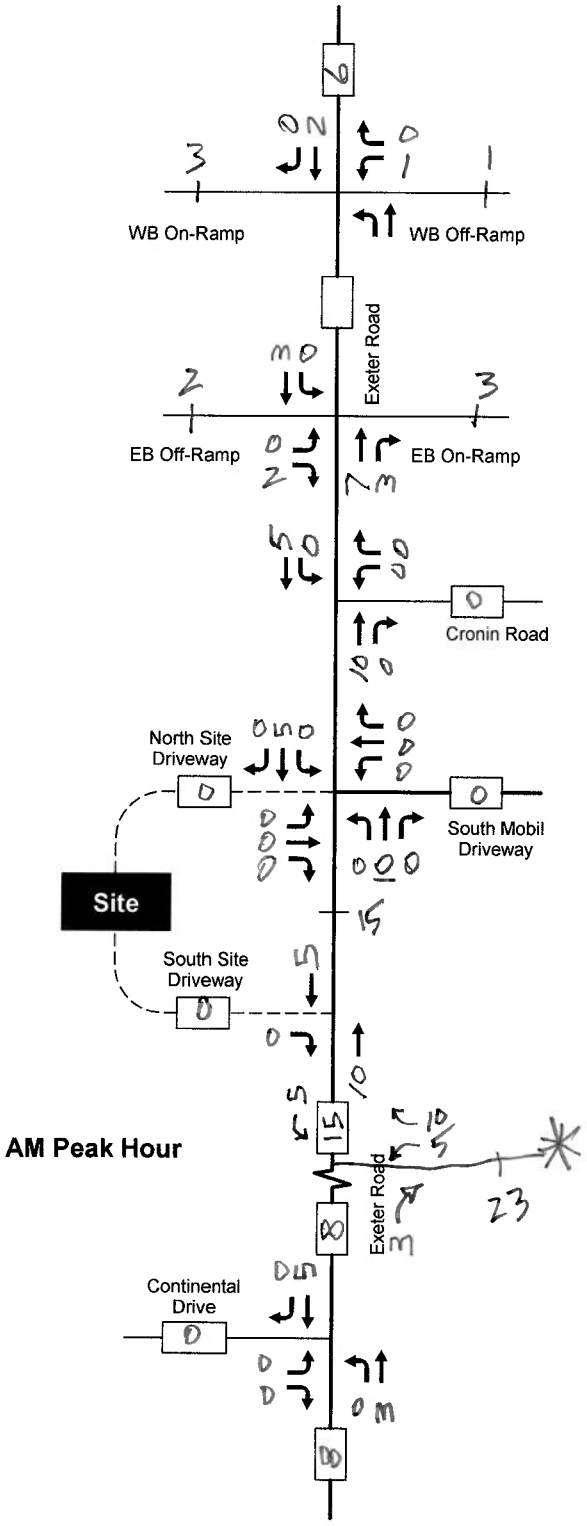
VOLUME COUNT

	Date	Int	Total
	Thu 6/21/2018	60	15,032
	Wed 6/20/2018	60	15,434
	Tue 6/19/2018	60	14,512
	Fri 7/17/2015	60	13,695
	Thu 7/16/2015	60	14,647
	Wed 7/15/2015	60	14,934
	Tue 7/14/2015	60	14,465
	Mon 7/13/2015	60	13,991
	Sun 7/22/2012	60	7,691
	Sat 7/21/2012	60	10,769

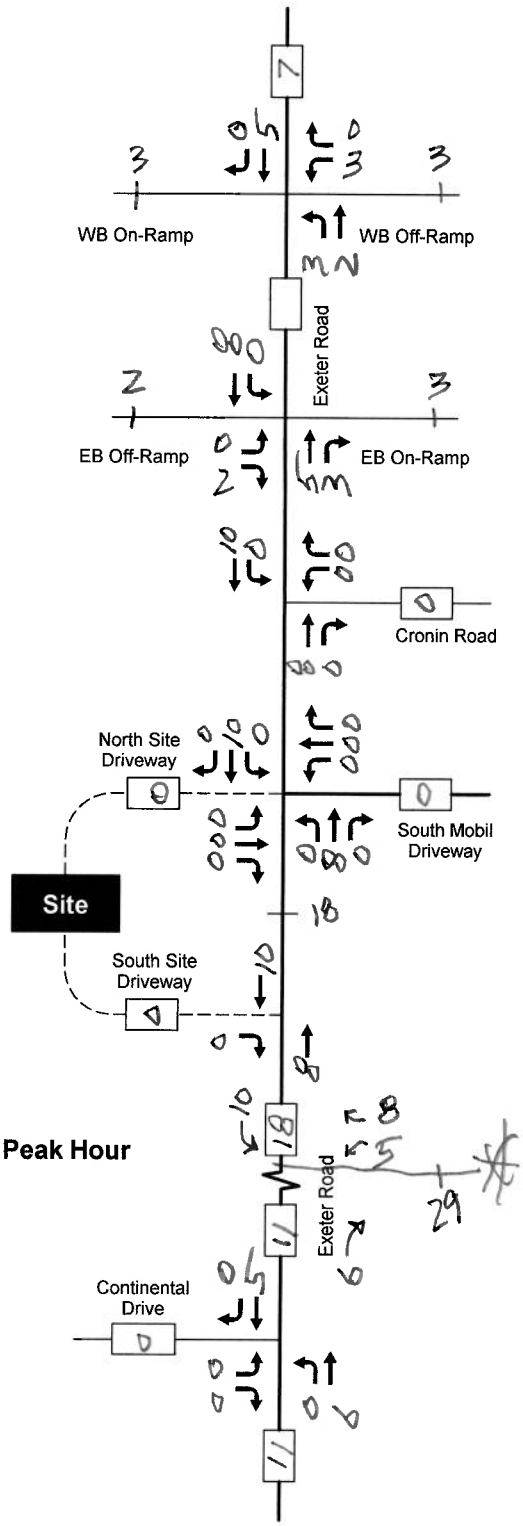
VOLUME TREND

Year	Annual Growth
2019	1%
2018	3%
2016	2%
2015	0%
2012	0%
2009	3%
2006	3%
2003	9%
2000	10%
1998	1%

Appendix E **Other Development Traffic Volumes**



AM Peak Hour



PM Peak Hour

Source: "Traffic Impact Assessment - Proposed Active Adult Community" prepared for Willey Creek Co., LLC dated 4/28/17 by Pernaw & Co., Inc.

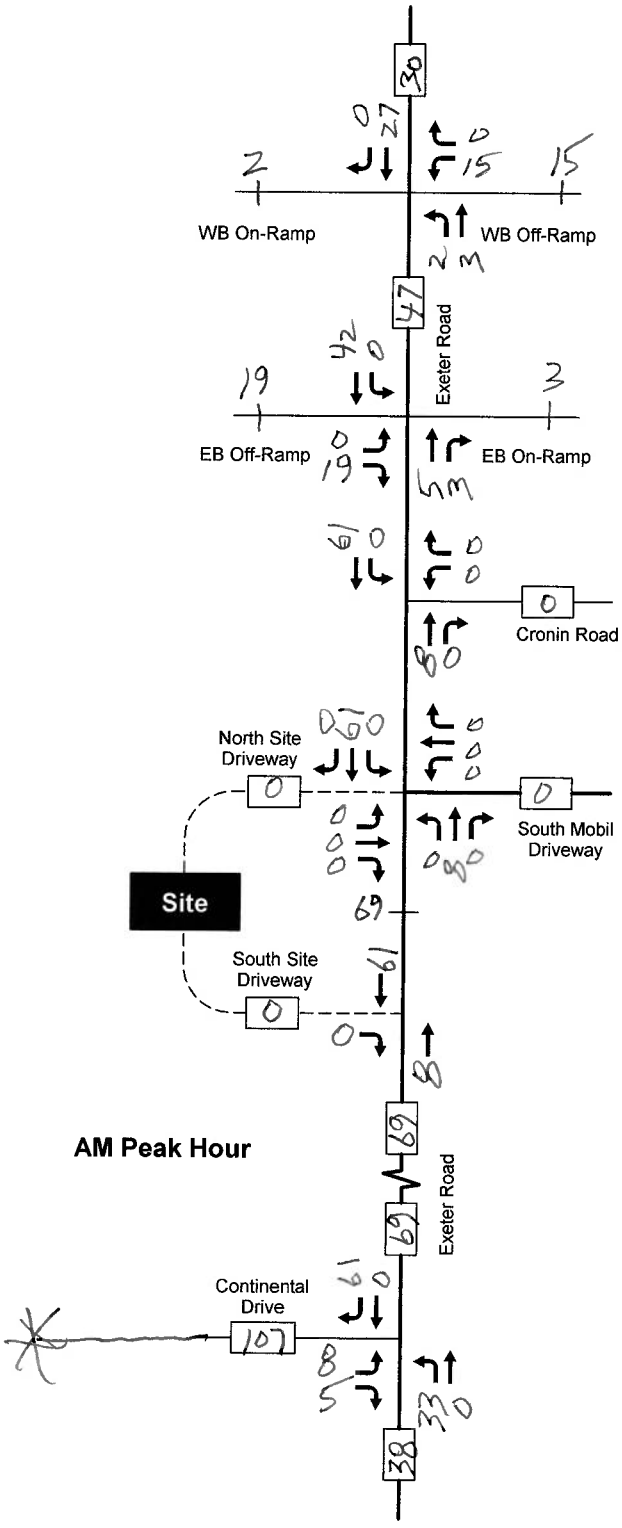
NORTH

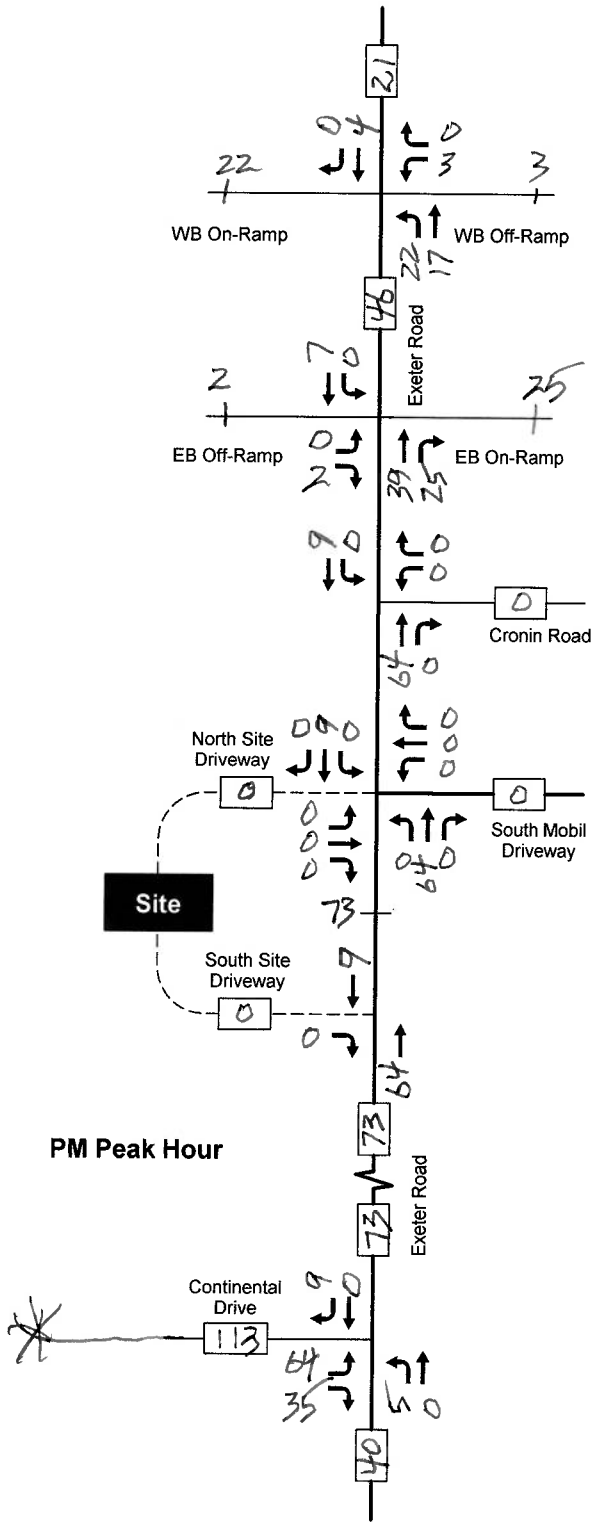
1941A

Appendix

Other Development Traffic Volumes - Proposed Active Adult Community (55+)

Traffic Impact Assessment, Proposed Mixed-Use Development, Exeter, New Hampshire





Source: "Traffic Impact Assessment - Proposed Light Industrial/Distribution Facility" prepared for Garrison Glen, LLC dated 8/4/17 by Pernaw & Co., Inc.

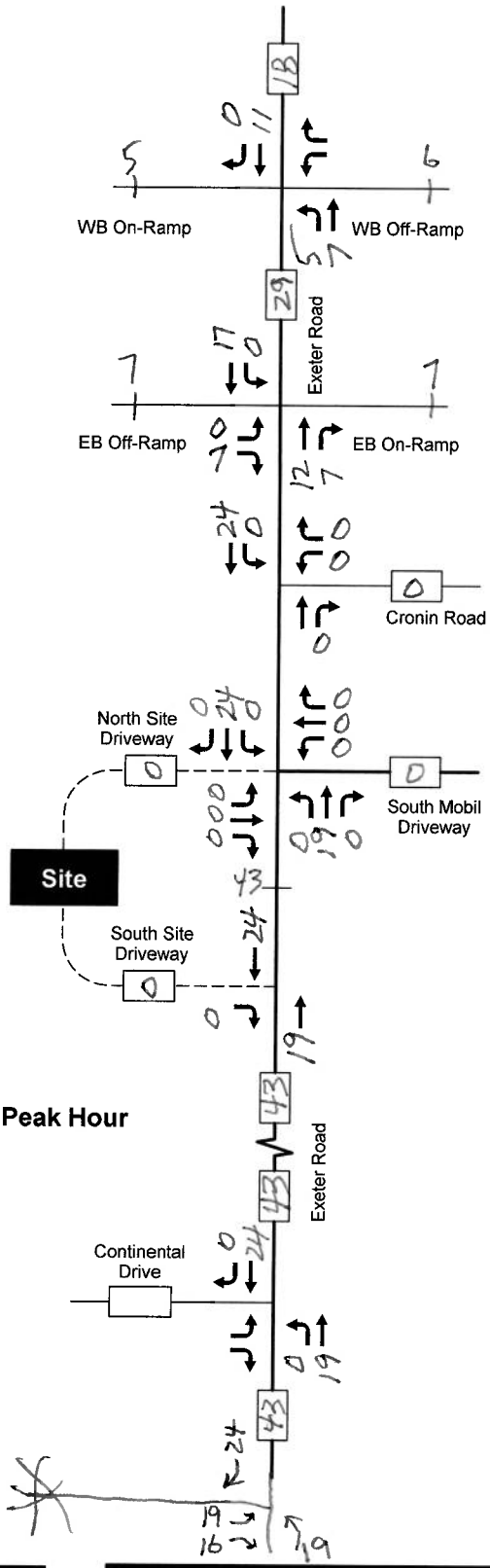
NORTH

1941A

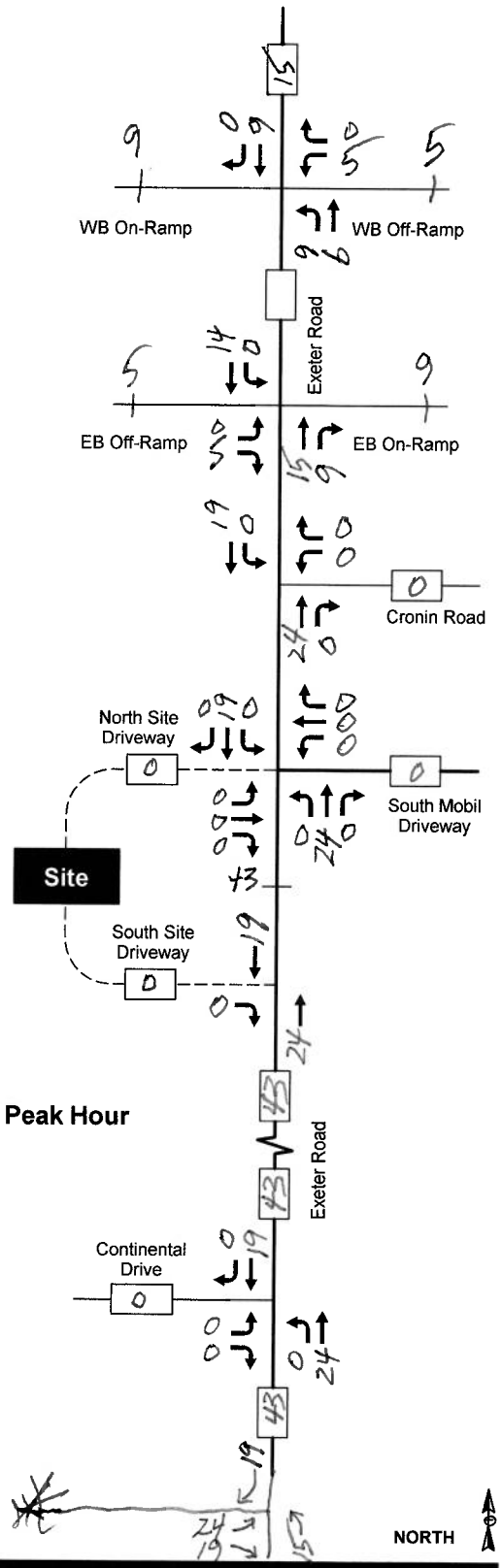
Appendix

Other Development Traffic Volumes - Garrison Glen

Traffic Impact Assessment, Proposed Mixed-Use Development, Exeter, New Hampshire



AM Peak Hour



PM Peak Hour

1941A

Appendix

Other Development Traffic Volumes - Primrose School

Traffic Impact Assessment, Proposed Mixed-Use Development, Exeter, New Hampshire

Appendix F **Site Generated Traffic Volumes**

Trip Generation Summary

Alternative: Gateway at Exeter
Phase:
Project: 1941A

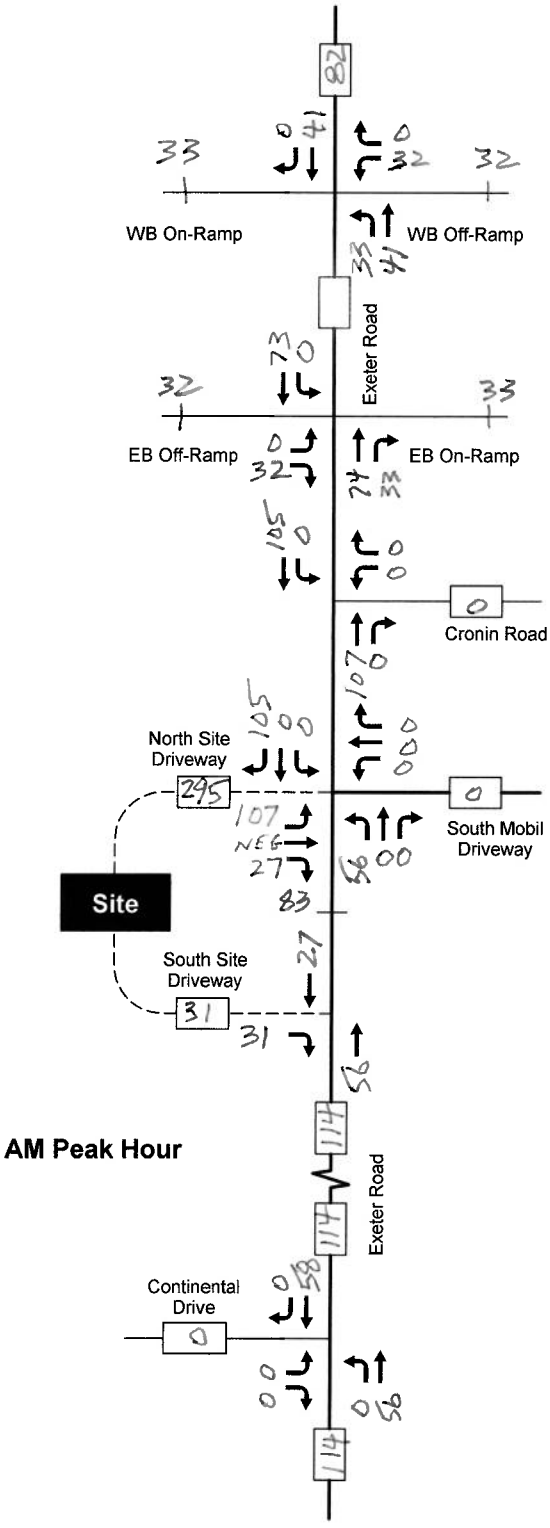
Open Date: 11/8/2019
Analysis Date: 11/8/2019

ITE	Land Use		Weekday Average Daily Trips *	Enter	Exit	Total	Weekday AM Peak Hour of Adjacent Street Traffic *	Enter	Exit	Total	Weekday PM Peak Hour of Adjacent Street Traffic *	Enter	Exit	Total
221	MID-RISE 1			610	609	1219		20	55	75		59	37	96
	224	Dwelling Units												
565	DAYCARE 1			477	477	954		117	103	220		105	118	223
	20.04	1000 Sq. Ft. GFA												
710	OFFICEGENERAL 1			97	96	193		17	3	20		4	18	22
	17.3	1000 Sq. Ft. GFA												
820	CENTERSHOPPING 1			212	212	424		7	4	11		21	22	43
	11.23	1000 Sq. Ft. GLA												
Unadjusted Volume				1396	1394	2790		161	165	326		189	195	384
Internal Capture Trips				0	0	0		4	4	8		11	11	22
Pass-By Trips				0	0	0		0	0	0		6	6	12
Volume Added to Adjacent Streets				1396	1394	2790		157	161	318		172	178	350

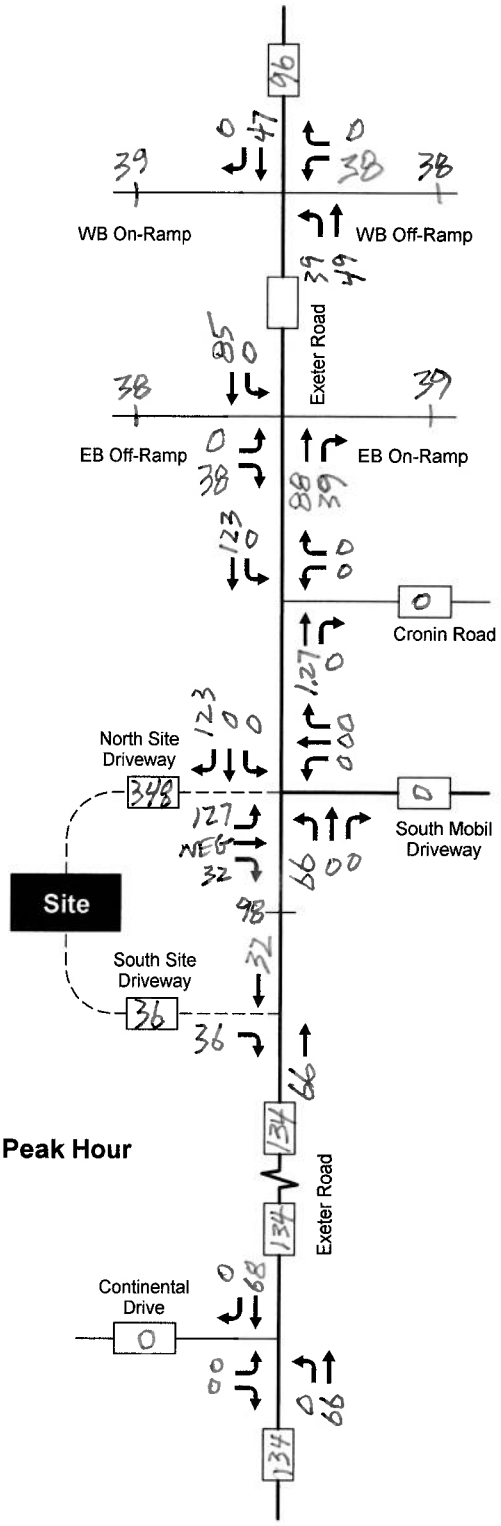
Total Weekday Average Daily Trips Internal Capture = 0 Percent
Total Weekday AM Peak Hour of Adjacent Street Traffic Internal Capture = 2 Percent
Total Weekday PM Peak Hour of Adjacent Street Traffic Internal Capture = 6 Percent

* - Custom rate used for selected time period.

Source: Institute of Transportation Engineers, Trip Generation Manual 10th Edition



AM Peak Hour



PM Peak Hour

NORTH

1941A

Appendix

Site Generated Traffic Volumes

Traffic Impact Assessment, Proposed Mixed-Use Development, Exeter, New Hampshire

Appendix G **Capacity and Level of Service Calculations**

Intersection												
Int Delay, s/veh	694.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	246	2	232	183	254	0	0	463	37
Future Vol, veh/h	0	0	0	246	2	232	183	254	0	0	463	37
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	74	74	74	55	55	55	83	83	83
Heavy Vehicles, %	2	2	2	3	0	7	5	4	2	2	7	3
Mvmt Flow	0	0	0	332	3	314	333	462	0	0	558	45

Major/Minor	Minor1		Major1			Major2			
Conflicting Flow All	1709	1731	462	603	0	-	-	-	0
Stage 1	1128	1128	-	-	-	-	-	-	-
Stage 2	581	603	-	-	-	-	-	-	-
Critical Hdwy	6.43	6.5	6.27	4.15	-	-	-	-	-
Critical Hdwy Stg 1	5.43	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.43	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4	3.363	2.245	-	-	-	-	-
Pot Cap-1 Maneuver	~ 99	89	589	960	-	0	0	-	-
Stage 1	~ 308	282	-	-	-	0	0	-	-
Stage 2	557	492	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	~ 65	0	589	960	-	-	-	-	-
Mov Cap-2 Maneuver	~ 65	0	-	-	-	-	-	-	-
Stage 1	~ 201	0	-	-	-	-	-	-	-
Stage 2	557	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 2184.7	4.5	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	SBT	SBR
Capacity (veh/h)	960	-	114	-	-
HCM Lane V/C Ratio	0.347	-	5.69	-	-
HCM Control Delay (s)	10.7	-	$ 2184.7	-	-
HCM Lane LOS	B	-	F	-	-
HCM 95th %tile Q(veh)	1.6	-	70.3	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	1308.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	285	2	248	206	286	0	0	537	40
Future Vol, veh/h	0	0	0	285	2	248	206	286	0	0	537	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	74	74	74	55	55	55	83	83	83
Heavy Vehicles, %	2	2	2	3	0	7	5	4	2	2	7	3
Mvmt Flow	0	0	0	385	3	335	375	520	0	0	647	48

Major/Minor	Minor1		Major1			Major2			
Conflicting Flow All	1941	1965	520	695	0	-	-	-	0
Stage 1	1270	1270	-	-	-	-	-	-	-
Stage 2	671	695	-	-	-	-	-	-	-
Critical Hdwy	6.43	6.5	6.27	4.15	-	-	-	-	-
Critical Hdwy Stg 1	5.43	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.43	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4	3.363	2.245	-	-	-	-	-
Pot Cap-1 Maneuver	~ 71	64	546	887	-	0	0	-	-
Stage 1	~ 263	241	-	-	-	0	0	-	-
Stage 2	506	447	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	~ 41	0	546	887	-	-	-	-	-
Mov Cap-2 Maneuver	~ 41	0	-	-	-	-	-	-	-
Stage 1	~ 152	0	-	-	-	-	-	-	-
Stage 2	506	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 4178.4	5	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	SBT	SBR
Capacity (veh/h)	887	-	72	-	-
HCM Lane V/C Ratio	0.422	-	10.041	-	-
HCM Control Delay (s)	12	-	$ 4178.4	-	-
HCM Lane LOS	B	-	F	-	-
HCM 95th %tile Q(veh)	2.1	-	84.6	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	2459.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	317	2	248	239	327	0	0	578	40
Future Vol, veh/h	0	0	0	317	2	248	239	327	0	0	578	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	74	74	74	55	55	55	83	83	83
Heavy Vehicles, %	2	2	2	3	0	7	5	4	2	2	7	3
Mvmt Flow	0	0	0	428	3	335	435	595	0	0	696	48

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	2185	2209	595	744	0	-	-	-	0
Stage 1	1465	1465	-	-	-	-	-	-	-
Stage 2	720	744	-	-	-	-	-	-	-
Critical Hdwy	6.43	6.5	6.27	4.15	-	-	-	-	-
Critical Hdwy Stg 1	5.43	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.43	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4	3.363	2.245	-	-	-	-	-
Pot Cap-1 Maneuver	~ 50	45	495	850	-	0	0	-	-
Stage 1	~ 211	194	-	-	-	0	0	-	-
Stage 2	480	424	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	~ 24	0	495	850	-	-	-	-	-
Mov Cap-2 Maneuver	~ 24	0	-	-	-	-	-	-	-
Stage 1	~ 103	0	-	-	-	-	-	-	-
Stage 2	480	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 8144.2	5.7	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBTWBLn1	SBT	SBR
Capacity (veh/h)	850	- 41	-	-
HCM Lane V/C Ratio	0.511	- 18.688	-	-
HCM Control Delay (s)	13.6	$ 8144.2	-	-
HCM Lane LOS	B	- F	-	-
HCM 95th %tile Q(veh)	3	- 93.7	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	2246.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	313	2	274	227	314	0	0	590	44
Future Vol, veh/h	0	0	0	313	2	274	227	314	0	0	590	44
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	74	74	74	55	55	55	83	83	83
Heavy Vehicles, %	2	2	2	3	0	7	5	4	2	2	7	3
Mvmt Flow	0	0	0	423	3	370	413	571	0	0	711	53

Major/Minor	Minor1		Major1		Major2				
Conflicting Flow All	2135	2161	571	764	0	-	-	-	0
Stage 1	1397	1397	-	-	-	-	-	-	-
Stage 2	738	764	-	-	-	-	-	-	-
Critical Hdwy	6.43	6.5	6.27	4.15	-	-	-	-	-
Critical Hdwy Stg 1	5.43	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.43	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4	3.363	2.245	-	-	-	-	-
Pot Cap-1 Maneuver	~ 54	48	511	836	-	0	0	-	-
Stage 1	~ 228	210	-	-	-	0	0	-	-
Stage 2	471	416	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	~ 27	0	511	836	-	-	-	-	-
Mov Cap-2 Maneuver	~ 27	0	-	-	-	-	-	-	-
Stage 1	~ 115	0	-	-	-	-	-	-	-
Stage 2	471	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 7170.9	5.6	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBTWBLn1	SBT	SBR
Capacity (veh/h)	836	- 48	-	-
HCM Lane V/C Ratio	0.494	- 16.582	-	-
HCM Control Delay (s)	13.4	$ 7170.9	-	-
HCM Lane LOS	B	- F	-	-
HCM 95th %tile Q(veh)	2.8	- 96.6	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	4031.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	345	2	274	260	355	0	0	631	44
Future Vol, veh/h	0	0	0	345	2	274	260	355	0	0	631	44
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	74	74	74	55	55	55	83	83	83
Heavy Vehicles, %	2	2	2	3	0	7	5	4	2	2	7	3
Mvmt Flow	0	0	0	466	3	370	473	645	0	0	760	53

Major/Minor	Minor1			Major1			Major2			
Conflicting Flow All	2378	2404	645	813	0	-	-	-	0
Stage 1	1591	1591	-	-	-	-	-	-	-
Stage 2	787	813	-	-	-	-	-	-	-
Critical Hdwy	6.43	6.5	6.27	4.15	-	-	-	-	-
Critical Hdwy Stg 1	5.43	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.43	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4	3.363	2.245	-	-	-	-	-
Pot Cap-1 Maneuver	~ 38	34	463	801	-	0	0	-	-
Stage 1	~ 183	169	-	-	-	0	0	-	-
Stage 2	~ 447	395	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	~ 16	0	463	801	-	-	-	-	-
Mov Cap-2 Maneuver	~ 16	0	-	-	-	-	-	-	-
Stage 1	~ 75	0	-	-	-	-	-	-	-
Stage 2	~ 447	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 13302.2	6.7	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBTWBLn1	SBT	SBR
Capacity (veh/h)	801	- 28	-	-
HCM Lane V/C Ratio	0.59	-29.971	-	-
HCM Control Delay (s)	15.8	$ 13302.2	-	-
HCM Lane LOS	C	- F	-	-
HCM 95th %tile Q(veh)	3.9	- 104.4	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	434.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	233	1	231	357	264	0	0	386	14
Future Vol, veh/h	0	0	0	233	1	231	357	264	0	0	386	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	84	84	84	89	89	89	91	91	91
Heavy Vehicles, %	2	2	2	4	0	2	3	1	2	2	2	7
Mvmt Flow	0	0	0	277	1	275	401	297	0	0	424	15

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	1531	1538	297	439	0	-	-	-	0
Stage 1	1099	1099	-	-	-	-	-	-	-
Stage 2	432	439	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.5	6.22	4.13	-	-	-	-	-
Critical Hdwy Stg 1	5.44	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.44	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.536	4	3.318	2.227	-	-	-	-	-
Pot Cap-1 Maneuver	~ 127	117	742	1116	-	0	0	-	-
Stage 1	316	291	-	-	-	0	0	-	-
Stage 2	650	582	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	~ 81	0	742	1116	-	-	-	-	-
Mov Cap-2 Maneuver	~ 81	0	-	-	-	-	-	-	-
Stage 1	~ 203	0	-	-	-	-	-	-	-
Stage 2	650	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 1318.5	5.8	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBTWBLn1	SBT	SBR
Capacity (veh/h)	1116	- 146	-	-
HCM Lane V/C Ratio	0.359	- 3.792	-	-
HCM Control Delay (s)	10	$ 1318.5	-	-
HCM Lane LOS	B	- F	-	-
HCM 95th %tile Q(veh)	1.7	- 54.7	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	817.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	261	1	247	416	309	0	0	432	15
Future Vol, veh/h	0	0	0	261	1	247	416	309	0	0	432	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	84	84	84	89	89	89	91	91	91
Heavy Vehicles, %	2	2	2	4	0	2	3	1	2	2	2	7
Mvmt Flow	0	0	0	311	1	294	467	347	0	0	475	16

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	1764	1772	347	491	0	-	-	-	0
Stage 1	1281	1281	-	-	-	-	-	-	-
Stage 2	483	491	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.5	6.22	4.13	-	-	-	-	-
Critical Hdwy Stg 1	5.44	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.44	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.536	4	3.318	2.227	-	-	-	-	-
Pot Cap-1 Maneuver	~ 91	84	696	1067	-	0	0	-	-
Stage 1	~ 258	238	-	-	-	0	0	-	-
Stage 2	616	552	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	~ 51	0	696	1067	-	-	-	-	-
Mov Cap-2 Maneuver	~ 51	0	-	-	-	-	-	-	-
Stage 1	~ 145	0	-	-	-	-	-	-	-
Stage 2	616	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 2570.7	6.3	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBTWBLn1	SBT	SBR
Capacity (veh/h)	1067	- 93	-	-
HCM Lane V/C Ratio	0.438	- 6.516	-	-
HCM Control Delay (s)	11	$ 2570.7	-	-
HCM Lane LOS	B	- F	-	-
HCM 95th %tile Q(veh)	2.3	- 67.5	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	1387.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	299	1	247	455	358	0	0	479	15
Future Vol, veh/h	0	0	0	299	1	247	455	358	0	0	479	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	84	84	84	89	89	89	91	91	91
Heavy Vehicles, %	2	2	2	4	0	2	3	1	2	2	2	7
Mvmt Flow	0	0	0	356	1	294	511	402	0	0	526	16

Major/Minor	Minor1		Major1			Major2			
Conflicting Flow All	1958	1966	402	542	0	-	-	-	0
Stage 1	1424	1424	-	-	-	-	-	-	-
Stage 2	534	542	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.5	6.22	4.13	-	-	-	-	-
Critical Hdwy Stg 1	5.44	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.44	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.536	4	3.318	2.227	-	-	-	-	-
Pot Cap-1 Maneuver	~ 69	64	648	1022	-	0	0	-	-
Stage 1	~ 220	204	-	-	-	0	0	-	-
Stage 2	584	523	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	~ 35	0	648	1022	-	-	-	-	-
Mov Cap-2 Maneuver	~ 35	0	-	-	-	-	-	-	-
Stage 1	~ 110	0	-	-	-	-	-	-	-
Stage 2	584	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 4482.1	6.7	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBTWBLn1	SBT	SBR
Capacity (veh/h)	1022	- 61	-	-
HCM Lane V/C Ratio	0.5	- 10.675	-	-
HCM Control Delay (s)	12	$ 4482.1	-	-
HCM Lane LOS	B	- F	-	-
HCM 95th %tile Q(veh)	2.9	- 76.9	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	1366.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	287	1	273	456	340	0	0	476	17
Future Vol, veh/h	0	0	0	287	1	273	456	340	0	0	476	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	84	84	84	89	89	89	91	91	91
Heavy Vehicles, %	2	2	2	4	0	2	3	1	2	2	2	7
Mvmt Flow	0	0	0	342	1	325	512	382	0	0	523	19

Major/Minor	Minor1		Major1			Major2			
Conflicting Flow All	1939	1948	382	542	0	-	-	-	0
Stage 1	1406	1406	-	-	-	-	-	-	-
Stage 2	533	542	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.5	6.22	4.13	-	-	-	-	-
Critical Hdwy Stg 1	5.44	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.44	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.536	4	3.318	2.227	-	-	-	-	-
Pot Cap-1 Maneuver	~ 71	65	665	1022	-	0	0	-	-
Stage 1	~ 224	208	-	-	-	0	0	-	-
Stage 2	584	523	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	~ 35	0	665	1022	-	-	-	-	-
Mov Cap-2 Maneuver	~ 35	0	-	-	-	-	-	-	-
Stage 1	~ 112	0	-	-	-	-	-	-	-
Stage 2	584	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 4294.5	6.9	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBTWBLn1	SBT	SBR
Capacity (veh/h)	1022	- 65	-	-
HCM Lane V/C Ratio	0.501	- 10.275	-	-
HCM Control Delay (s)	12	$ 4294.5	-	-
HCM Lane LOS	B	- F	-	-
HCM 95th %tile Q(veh)	2.9	- 78.5	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	2347.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	325	1	273	495	389	0	0	523	17
Future Vol, veh/h	0	0	0	325	1	273	495	389	0	0	523	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	84	84	84	89	89	89	91	91	91
Heavy Vehicles, %	2	2	2	4	0	2	3	1	2	2	2	7
Mvmt Flow	0	0	0	387	1	325	556	437	0	0	575	19

Major/Minor	Minor1		Major1			Major2			
Conflicting Flow All	2134	2143	437	594	0	-	-	-	0
Stage 1	1549	1549	-	-	-	-	-	-	-
Stage 2	585	594	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.5	6.22	4.13	-	-	-	-	-
Critical Hdwy Stg 1	5.44	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.44	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.536	4	3.318	2.227	-	-	-	-	-
Pot Cap-1 Maneuver	~ 53	49	620	977	-	0	0	-	-
Stage 1	~ 191	177	-	-	-	0	0	-	-
Stage 2	553	496	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	~ 23	0	620	977	-	-	-	-	-
Mov Cap-2 Maneuver	~ 23	0	-	-	-	-	-	-	-
Stage 1	~ 82	0	-	-	-	-	-	-	-
Stage 2	553	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 7561.5	7.5	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	SBT	SBR
Capacity (veh/h)	977	-	41	-	-
HCM Lane V/C Ratio	0.569	-	17.393	-	-
HCM Control Delay (s)	13.4	-	$ 7561.5	-	-
HCM Lane LOS	B	-	F	-	-
HCM 95th %tile Q(veh)	3.7	-	87.1	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	6.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	0	323	0	0	0	0	433	233	207	502	0
Future Vol, veh/h	4	0	323	0	0	0	0	433	233	207	502	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	-	-	215	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	92	92	92	68	68	68	91	91	91
Heavy Vehicles, %	0	0	4	2	2	2	0	6	10	8	5	0
Mvmt Flow	5	0	376	0	0	0	0	637	343	227	552	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	1815	1986	552	-	0	0	980	0	0
Stage 1	1006	1006	-	-	-	-	-	-	-
Stage 2	809	980	-	-	-	-	-	-	-
Critical Hdwy	6.4	6.5	6.24	-	-	-	4.18	-	-
Critical Hdwy Stg 1	5.4	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.4	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.336	-	-	-	2.272	-	-
Pot Cap-1 Maneuver	87	62	530	0	-	-	681	-	0
Stage 1	357	321	-	0	-	-	-	-	0
Stage 2	441	331	-	0	-	-	-	-	0
Platoon blocked, %					-	-		-	
Mov Cap-1 Maneuver	58	0	530	-	-	-	681	-	-
Mov Cap-2 Maneuver	58	0	-	-	-	-	-	-	-
Stage 1	357	0	-	-	-	-	-	-	-
Stage 2	294	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	27.2	0	3.8
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	EBLn2	SBL	SBT
Capacity (veh/h)	-	-	58	530	681	-
HCM Lane V/C Ratio	-	-	0.08	0.709	0.334	-
HCM Control Delay (s)	-	-	72.4	26.6	12.9	-
HCM Lane LOS	-	-	F	D	B	-
HCM 95th %tile Q(veh)	-	-	0.3	5.6	1.5	-

Intersection												
Int Delay, s/veh	12.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	0	374	0	0	0	0	488	263	222	600	0
Future Vol, veh/h	4	0	374	0	0	0	0	488	263	222	600	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	-	-	215	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	92	92	92	68	68	68	91	91	91
Heavy Vehicles, %	0	0	4	2	2	2	0	6	10	8	5	0
Mvmt Flow	5	0	435	0	0	0	0	718	387	244	659	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	2059	2252	659	-	0	0	1105	0	0
Stage 1	1147	1147	-	-	-	-	-	-	-
Stage 2	912	1105	-	-	-	-	-	-	-
Critical Hdwy	6.4	6.5	6.24	-	-	-	4.18	-	-
Critical Hdwy Stg 1	5.4	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.4	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.336	-	-	-	2.272	-	-
Pot Cap-1 Maneuver	61	42	460	0	-	-	610	-	0
Stage 1	305	276	-	0	-	-	-	-	0
Stage 2	395	289	-	0	-	-	-	-	0
Platoon blocked, %					-	-		-	
Mov Cap-1 Maneuver	37	0	460	-	-	-	610	-	-
Mov Cap-2 Maneuver	37	0	-	-	-	-	-	-	-
Stage 1	305	0	-	-	-	-	-	-	-
Stage 2	237	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	60.1	0	4
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	EBLn2	SBL	SBT
Capacity (veh/h)	-	-	37	460	610	-
HCM Lane V/C Ratio	-	-	0.126	0.945	0.4	-
HCM Control Delay (s)	-	-	115.8	59.5	14.8	-
HCM Lane LOS	-	-	F	F	B	-
HCM 95th %tile Q(veh)	-	-	0.4	11.3	1.9	-

Intersection												
Int Delay, s/veh	22.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	0	406	0	0	0	0	562	296	222	673	0
Future Vol, veh/h	4	0	406	0	0	0	0	562	296	222	673	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	-	-	215	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	92	92	92	68	68	68	91	91	91
Heavy Vehicles, %	0	0	4	2	2	2	0	6	10	8	5	0
Mvmt Flow	5	0	472	0	0	0	0	826	435	244	740	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	2272	2489	740	-	0	0	1261	0	0
Stage 1	1228	1228	-	-	-	-	-	-	-
Stage 2	1044	1261	-	-	-	-	-	-	-
Critical Hdwy	6.4	6.5	6.24	-	-	-	4.18	-	-
Critical Hdwy Stg 1	5.4	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.4	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.336	-	-	-	2.272	-	-
Pot Cap-1 Maneuver	45	30	~ 413	0	-	-	531	-	0
Stage 1	279	253	-	0	-	-	-	-	0
Stage 2	342	244	-	0	-	-	-	-	0
Platoon blocked, %					-	-		-	
Mov Cap-1 Maneuver	24	0	~ 413	-	-	-	531	-	-
Mov Cap-2 Maneuver	24	0	-	-	-	-	-	-	-
Stage 1	279	0	-	-	-	-	-	-	-
Stage 2	185	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	120.9	0	4.3
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	EBLn2	SBL	SBT
Capacity (veh/h)	-	-	24	413	531	-
HCM Lane V/C Ratio	-	-	0.194	1.143	0.459	-
HCM Control Delay (s)	-	-	188	120.2	17.4	-
HCM Lane LOS	-	-	F	F	C	-
HCM 95th %tile Q(veh)	-	-	0.6	17.5	2.4	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	22.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	0	410	0	0	0	0	537	289	245	658	0
Future Vol, veh/h	4	0	410	0	0	0	0	537	289	245	658	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	-	-	215	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	92	92	92	68	68	68	91	91	91
Heavy Vehicles, %	0	0	4	2	2	2	0	6	10	8	5	0
Mvmt Flow	5	0	477	0	0	0	0	790	425	269	723	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	2264	2476	723	-	0	0	1215	0	0
Stage 1	1261	1261	-	-	-	-	-	-	-
Stage 2	1003	1215	-	-	-	-	-	-	-
Critical Hdwy	6.4	6.5	6.24	-	-	-	4.18	-	-
Critical Hdwy Stg 1	5.4	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.4	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.336	-	-	-	2.272	-	-
Pot Cap-1 Maneuver	45	30	~ 423	0	-	-	554	-	0
Stage 1	269	244	-	0	-	-	-	-	0
Stage 2	358	256	-	0	-	-	-	-	0
Platoon blocked, %					-	-		-	
Mov Cap-1 Maneuver	23	0	~ 423	-	-	-	554	-	-
Mov Cap-2 Maneuver	23	0	-	-	-	-	-	-	-
Stage 1	269	0	-	-	-	-	-	-	-
Stage 2	184	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	114.5	0	4.7
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	EBLn2	SBL	SBT
Capacity (veh/h)	-	-	23	423	554	-
HCM Lane V/C Ratio	-	-	0.202	1.127	0.486	-
HCM Control Delay (s)	-	-	197.6	113.7	17.5	-
HCM Lane LOS	-	-	F	F	C	-
HCM 95th %tile Q(veh)	-	-	0.6	17.1	2.6	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	37.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	0	442	0	0	0	0	611	322	245	731	0
Future Vol, veh/h	4	0	442	0	0	0	0	611	322	245	731	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	-	-	215	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	92	92	92	68	68	68	91	91	91
Heavy Vehicles, %	0	0	4	2	2	2	0	6	10	8	5	0
Mvmt Flow	5	0	514	0	0	0	0	899	474	269	803	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	2477	2714	803	-	0	0	1373	0	0
Stage 1	1341	1341	-	-	-	-	-	-	-
Stage 2	1136	1373	-	-	-	-	-	-	-
Critical Hdwy	6.4	6.5	6.24	-	-	-	4.18	-	-
Critical Hdwy Stg 1	5.4	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.4	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.336	-	-	-	2.272	-	-
Pot Cap-1 Maneuver	33	21	~ 380	0	-	-	481	-	0
Stage 1	246	223	-	0	-	-	-	-	0
Stage 2	309	215	-	0	-	-	-	-	0
Platoon blocked, %					-	-		-	
Mov Cap-1 Maneuver	15	0	~ 380	-	-	-	481	-	-
Mov Cap-2 Maneuver	15	0	-	-	-	-	-	-	-
Stage 1	246	0	-	-	-	-	-	-	-
Stage 2	136	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	204.7	0	5.4
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	EBLn2	SBL	SBT
Capacity (veh/h)	-	-	15	380	481	-
HCM Lane V/C Ratio	-	-	0.31	1.353	0.56	-
HCM Control Delay (s)	-	-	$ 329.7	203.6	21.6	-
HCM Lane LOS	-	-	F	F	C	-
HCM 95th %tile Q(veh)	-	-	0.8	24.6	3.4	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	1	218	0	0	0	0	606	386	182	437	0
Future Vol, veh/h	15	1	218	0	0	0	0	606	386	182	437	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	-	-	215	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	92	92	92	87	87	87	94	94	94
Heavy Vehicles, %	0	0	4	2	2	2	0	2	2	2	3	0
Mvmt Flow	18	1	260	0	0	0	0	697	444	194	465	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	1772	1994	465	-	0	0	1141	0	0
Stage 1	853	853	-	-	-	-	-	-	-
Stage 2	919	1141	-	-	-	-	-	-	-
Critical Hdwy	6.4	6.5	6.24	-	-	-	4.12	-	-
Critical Hdwy Stg 1	5.4	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.4	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.336	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	92	61	593	0	-	-	612	-	0
Stage 1	421	378	-	0	-	-	-	-	0
Stage 2	392	278	-	0	-	-	-	-	0
Platoon blocked, %					-	-		-	
Mov Cap-1 Maneuver	63	0	593	-	-	-	612	-	-
Mov Cap-2 Maneuver	63	0	-	-	-	-	-	-	-
Stage 1	421	0	-	-	-	-	-	-	-
Stage 2	268	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20.5	0	4
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	EBLn2	SBL	SBT
Capacity (veh/h)	-	-	63	593	612	-
HCM Lane V/C Ratio	-	-	0.302	0.438	0.316	-
HCM Control Delay (s)	-	-	85.2	15.7	13.6	-
HCM Lane LOS	-	-	F	C	B	-
HCM 95th %tile Q(veh)	-	-	1.1	2.2	1.4	-

Intersection												
Int Delay, s/veh	5.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	1	242	0	0	0	0	709	450	195	498	0
Future Vol, veh/h	16	1	242	0	0	0	0	709	450	195	498	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	-	-	215	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	92	92	92	87	87	87	94	94	94
Heavy Vehicles, %	0	0	4	2	2	2	0	2	2	2	3	0
Mvmt Flow	19	1	288	0	0	0	0	815	517	207	530	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	2018	2276	530	-	0	0	1332	0	0
Stage 1	944	944	-	-	-	-	-	-	-
Stage 2	1074	1332	-	-	-	-	-	-	-
Critical Hdwy	6.4	6.5	6.24	-	-	-	4.12	-	-
Critical Hdwy Stg 1	5.4	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.4	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.336	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	65	41	545	0	-	-	518	-	0
Stage 1	381	344	-	0	-	-	-	-	0
Stage 2	331	225	-	0	-	-	-	-	0
Platoon blocked, %					-	-		-	
Mov Cap-1 Maneuver	39	0	545	-	-	-	518	-	-
Mov Cap-2 Maneuver	39	0	-	-	-	-	-	-	-
Stage 1	381	0	-	-	-	-	-	-	-
Stage 2	199	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	28.8	0	4.6
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	EBLn2	SBL	SBT
Capacity (veh/h)	-	-	39	545	518	-
HCM Lane V/C Ratio	-	-	0.519	0.529	0.4	-
HCM Control Delay (s)	-	-	171.5	18.8	16.5	-
HCM Lane LOS	-	-	F	C	C	-
HCM 95th %tile Q(veh)	-	-	1.8	3.1	1.9	-

Intersection												
Int Delay, s/veh	7.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	1	280	0	0	0	0	797	489	195	583	0
Future Vol, veh/h	16	1	280	0	0	0	0	797	489	195	583	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	-	-	215	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	92	92	92	87	87	87	94	94	94
Heavy Vehicles, %	0	0	4	2	2	2	0	2	2	2	3	0
Mvmt Flow	19	1	333	0	0	0	0	916	562	207	620	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	2231	2512	620	-	0	0	1478	0	0
Stage 1	1034	1034	-	-	-	-	-	-	-
Stage 2	1197	1478	-	-	-	-	-	-	-
Critical Hdwy	6.4	6.5	6.24	-	-	-	4.12	-	-
Critical Hdwy Stg 1	5.4	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.4	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.336	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	48	29	484	0	-	-	456	-	0
Stage 1	346	312	-	0	-	-	-	-	0
Stage 2	289	192	-	0	-	-	-	-	0
Platoon blocked, %					-	-		-	
Mov Cap-1 Maneuver	26	0	484	-	-	-	456	-	-
Mov Cap-2 Maneuver	26	0	-	-	-	-	-	-	-
Stage 1	346	0	-	-	-	-	-	-	-
Stage 2	158	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	44	0	4.8
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	EBLn2	SBL	SBT
Capacity (veh/h)	-	-	26	484	456	-
HCM Lane V/C Ratio	-	-	0.778	0.689	0.455	-
HCM Control Delay (s)	-	-	$ 319.4	27.3	19.3	-
HCM Lane LOS	-	-	F	D	C	-
HCM 95th %tile Q(veh)	-	-	2.4	5.2	2.3	-

Intersection												
Int Delay, s/veh	7.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	1	266	0	0	0	0	778	493	215	548	0
Future Vol, veh/h	18	1	266	0	0	0	0	778	493	215	548	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	-	-	215	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	92	92	92	87	87	87	94	94	94
Heavy Vehicles, %	0	0	4	2	2	2	0	2	2	2	3	0
Mvmt Flow	21	1	317	0	0	0	0	894	567	229	583	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	2219	2502	583	-	0	0	1461	0	0
Stage 1	1041	1041	-	-	-	-	-	-	-
Stage 2	1178	1461	-	-	-	-	-	-	-
Critical Hdwy	6.4	6.5	6.24	-	-	-	4.12	-	-
Critical Hdwy Stg 1	5.4	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.4	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.336	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	49	29	508	0	-	-	462	-	0
Stage 1	343	310	-	0	-	-	-	-	0
Stage 2	295	195	-	0	-	-	-	-	0
Platoon blocked, %					-	-		-	
Mov Cap-1 Maneuver	25	0	508	-	-	-	462	-	-
Mov Cap-2 Maneuver	25	0	-	-	-	-	-	-	-
Stage 1	343	0	-	-	-	-	-	-	-
Stage 2	149	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	46.3	0	5.7
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	EBLn2	SBL	SBT
Capacity (veh/h)	-	-	25	508	462	-
HCM Lane V/C Ratio	-	-	0.905	0.623	0.495	-
HCM Control Delay (s)	-	-	$ 370.7	23.1	20.2	-
HCM Lane LOS	-	-	F	C	C	-
HCM 95th %tile Q(veh)	-	-	2.8	4.2	2.7	-

Intersection												
Int Delay, s/veh	12.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	1	304	0	0	0	0	866	532	215	633	0
Future Vol, veh/h	18	1	304	0	0	0	0	866	532	215	633	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	-	-	215	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	92	92	92	87	87	87	94	94	94
Heavy Vehicles, %	0	0	4	2	2	2	0	2	2	2	3	0
Mvmt Flow	21	1	362	0	0	0	0	995	611	229	673	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	2432	2737	673	-	0	0	1606	0	0
Stage 1	1131	1131	-	-	-	-	-	-	-
Stage 2	1301	1606	-	-	-	-	-	-	-
Critical Hdwy	6.4	6.5	6.24	-	-	-	4.12	-	-
Critical Hdwy Stg 1	5.4	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.4	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.336	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	36	21	452	0	-	-	407	-	0
Stage 1	311	281	-	0	-	-	-	-	0
Stage 2	258	166	-	0	-	-	-	-	0
Platoon blocked, %					-	-		-	
Mov Cap-1 Maneuver	~ 16	0	452	-	-	-	407	-	-
Mov Cap-2 Maneuver	~ 16	0	-	-	-	-	-	-	-
Stage 1	311	0	-	-	-	-	-	-	-
Stage 2	113	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	77.7	0	6.2
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	EBLn2	SBL	SBT
Capacity (veh/h)	-	-	16	452	407	-
HCM Lane V/C Ratio	-	-	1.414	0.801	0.562	-
HCM Control Delay (s)	-	-	$ 712.7	38	24.6	-
HCM Lane LOS	-	-	F	E	C	-
HCM 95th %tile Q(veh)	-	-	3.4	7.3	3.3	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	9.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	29	129	537	0	50	775
Future Vol, veh/h	29	129	537	0	50	775
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	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	66	66	79	79
Heavy Vehicles, %	4	3	8	0	0	3
Mvmt Flow	34	152	814	0	63	981

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1921	814	0	0	814	0
Stage 1	814	-	-	-	-	-
Stage 2	1107	-	-	-	-	-
Critical Hdwy	6.44	6.23	-	-	4.1	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.327	-	-	2.2	-
Pot Cap-1 Maneuver	73	376	-	-	822	-
Stage 1	432	-	-	-	-	-
Stage 2	313	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	61	376	-	-	822	-
Mov Cap-2 Maneuver	61	-	-	-	-	-
Stage 1	432	-	-	-	-	-
Stage 2	260	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	105.6	0	0.6
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	193	822	-
HCM Lane V/C Ratio	-	-	0.963	0.077	-
HCM Control Delay (s)	-	-	105.6	9.7	0
HCM Lane LOS	-	-	F	A	A
HCM 95th %tile Q(veh)	-	-	7.9	0.2	-

Intersection	
Int Delay, s/veh	30.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	31	138	613	0	54	920
Future Vol, veh/h	31	138	613	0	54	920
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	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	66	66	79	79
Heavy Vehicles, %	4	3	8	0	0	3
Mvmt Flow	36	162	929	0	68	1165

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2230	929	0	0	929	0
Stage 1	929	-	-	-	-	-
Stage 2	1301	-	-	-	-	-
Critical Hdwy	6.44	6.23	-	-	4.1	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.327	-	-	2.2	-
Pot Cap-1 Maneuver	46	323	-	-	744	-
Stage 1	381	-	-	-	-	-
Stage 2	253	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 34	323	-	-	744	-
Mov Cap-2 Maneuver	~ 34	-	-	-	-	-
Stage 1	381	-	-	-	-	-
Stage 2	187	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 356.5	0	0.6
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	126	744	-
HCM Lane V/C Ratio	-	-	1.578	0.092	-
HCM Control Delay (s)	-	-	$ 356.5	10.3	0
HCM Lane LOS	-	-	F	B	A
HCM 95th %tile Q(veh)	-	-	14.3	0.3	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection						
Int Delay, s/veh	61.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	31	138	720	0	54	1025
Future Vol, veh/h	31	138	720	0	54	1025
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	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	66	66	79	79
Heavy Vehicles, %	4	3	8	0	0	3
Mvmt Flow	36	162	1091	0	68	1297

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2524	1091	0	0	1091	0
Stage 1	1091	-	-	-	-	-
Stage 2	1433	-	-	-	-	-
Critical Hdwy	6.44	6.23	-	-	4.1	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.327	-	-	2.2	-
Pot Cap-1 Maneuver	~ 30	260	-	-	647	-
Stage 1	319	-	-	-	-	-
Stage 2	218	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 19	260	-	-	647	-
Mov Cap-2 Maneuver	~ 19	-	-	-	-	-
Stage 1	319	-	-	-	-	-
Stage 2	136	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s$	817.3	0	0.6
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	78	647	-
HCM Lane V/C Ratio	-	-	2.549	0.106	-
HCM Control Delay (s)	-	-	$ 817.3	11.2	0
HCM Lane LOS	-	-	F	B	A
HCM 95th %tile Q(veh)	-	-	19	0.4	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection						
Int Delay, s/veh	68.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	34	152	674	0	60	1008
Future Vol, veh/h	34	152	674	0	60	1008
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	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	66	66	79	79
Heavy Vehicles, %	4	3	8	0	0	3
Mvmt Flow	40	179	1021	0	76	1276

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2449	1021	0	0	1021	0
Stage 1	1021	-	-	-	-	-
Stage 2	1428	-	-	-	-	-
Critical Hdwy	6.44	6.23	-	-	4.1	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.327	-	-	2.2	-
Pot Cap-1 Maneuver	~ 34	286	-	-	688	-
Stage 1	345	-	-	-	-	-
Stage 2	219	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 21	286	-	-	688	-
Mov Cap-2 Maneuver	~ 21	-	-	-	-	-
Stage 1	345	-	-	-	-	-
Stage 2	136	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s$	805.1	0	0.6
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	86	688	-
HCM Lane V/C Ratio	-	-	2.544	0.11	-
HCM Control Delay (s)	-	-	$ 805.1	10.9	0
HCM Lane LOS	-	-	F	B	A
HCM 95th %tile Q(veh)	-	-	20.6	0.4	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection						
Int Delay, s/veh	158.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	34	152	781	0	60	1113
Future Vol, veh/h	34	152	781	0	60	1113
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	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	66	66	79	79
Heavy Vehicles, %	4	3	8	0	0	3
Mvmt Flow	40	179	1183	0	76	1409

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2744	1183	0	0	1183	0
Stage 1	1183	-	-	-	-	-
Stage 2	1561	-	-	-	-	-
Critical Hdwy	6.44	6.23	-	-	4.1	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.327	-	-	2.2	-
Pot Cap-1 Maneuver	~ 22	230	-	-	597	-
Stage 1	288	-	-	-	-	-
Stage 2	188	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 9	230	-	-	597	-
Mov Cap-2 Maneuver	~ 9	-	-	-	-	-
Stage 1	288	-	-	-	-	-
Stage 2	78	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 2086	0	0.6
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	42	597	-
HCM Lane V/C Ratio	-	-	5.21	0.127	-
HCM Control Delay (s)	-	-	$ 2086	11.9	0
HCM Lane LOS	-	-	F	B	A
HCM 95th %tile Q(veh)	-	-	25.3	0.4	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection						
Int Delay, s/veh	4.2					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	17	113	879	2	32	623
Future Vol, veh/h	17	113	879	2	32	623
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	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	86	86	93	93
Heavy Vehicles, %	0	2	3	0	0	4
Mvmt Flow	20	130	1022	2	34	670

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1761	1023	0	0	1024	0
Stage 1	1023	-	-	-	-	-
Stage 2	738	-	-	-	-	-
Critical Hdwy	6.4	6.22	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.318	-	-	2.2	-
Pot Cap-1 Maneuver	94	286	-	-	686	-
Stage 1	350	-	-	-	-	-
Stage 2	476	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	87	286	-	-	686	-
Mov Cap-2 Maneuver	87	-	-	-	-	-
Stage 1	350	-	-	-	-	-
Stage 2	438	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	50.2	0	0.5
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	220	686	-
HCM Lane V/C Ratio	-	-	0.679	0.05	-
HCM Control Delay (s)	-	-	50.2	10.5	0
HCM Lane LOS	-	-	F	B	A
HCM 95th %tile Q(veh)	-	-	4.3	0.2	-

Intersection	
Int Delay, s/veh	9.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	18	121	1038	2	34	706
Future Vol, veh/h	18	121	1038	2	34	706
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	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	86	86	93	93
Heavy Vehicles, %	0	2	3	0	0	4
Mvmt Flow	21	139	1207	2	37	759

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2041	1208	0	0	1209	0
Stage 1	1208	-	-	-	-	-
Stage 2	833	-	-	-	-	-
Critical Hdwy	6.4	6.22	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.318	-	-	2.2	-
Pot Cap-1 Maneuver	63	223	-	-	584	-
Stage 1	286	-	-	-	-	-
Stage 2	430	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	56	223	-	-	584	-
Mov Cap-2 Maneuver	56	-	-	-	-	-
Stage 1	286	-	-	-	-	-
Stage 2	383	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	125.6	0	0.5
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	161	584	-
HCM Lane V/C Ratio	-	-	0.992	0.063	-
HCM Control Delay (s)	-	-	125.6	11.6	0
HCM Lane LOS	-	-	F	B	A
HCM 95th %tile Q(veh)	-	-	7.7	0.2	-

Intersection	
Int Delay, s/veh	17.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	18	121	1165	2	34	829
Future Vol, veh/h	18	121	1165	2	34	829
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	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	86	86	93	93
Heavy Vehicles, %	0	2	3	0	0	4
Mvmt Flow	21	139	1355	2	37	891

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2321	1356	0	0	1357	0
Stage 1	1356	-	-	-	-	-
Stage 2	965	-	-	-	-	-
Critical Hdwy	6.4	6.22	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.318	-	-	2.2	-
Pot Cap-1 Maneuver	42	183	-	-	513	-
Stage 1	242	-	-	-	-	-
Stage 2	373	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	36	183	-	-	513	-
Mov Cap-2 Maneuver	36	-	-	-	-	-
Stage 1	242	-	-	-	-	-
Stage 2	320	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	263	0	0.5
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	120	513	-
HCM Lane V/C Ratio	-	-	1.331	0.071	-
HCM Control Delay (s)	-	-	263	12.6	0
HCM Lane LOS	-	-	F	B	A
HCM 95th %tile Q(veh)	-	-	10.6	0.2	-

Intersection	
Int Delay, s/veh	20.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	134	1137	2	38	776
Future Vol, veh/h	20	134	1137	2	38	776
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	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	86	86	93	93
Heavy Vehicles, %	0	2	3	0	0	4
Mvmt Flow	23	154	1322	2	41	834

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2239	1323	0	0	1324	0
Stage 1	1323	-	-	-	-	-
Stage 2	916	-	-	-	-	-
Critical Hdwy	6.4	6.22	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.318	-	-	2.2	-
Pot Cap-1 Maneuver	47	191	-	-	528	-
Stage 1	251	-	-	-	-	-
Stage 2	393	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	40	191	-	-	528	-
Mov Cap-2 Maneuver	40	-	-	-	-	-
Stage 1	251	-	-	-	-	-
Stage 2	336	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	277.2	0	0.6
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	128	528	-
HCM Lane V/C Ratio	-	-	1.383	0.077	-
HCM Control Delay (s)	-	-	277.2	12.4	0
HCM Lane LOS	-	-	F	B	A
HCM 95th %tile Q(veh)	-	-	11.8	0.3	-

Intersection						
Int Delay, s/veh	34.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	134	1264	2	38	899
Future Vol, veh/h	20	134	1264	2	38	899
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	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	86	86	93	93
Heavy Vehicles, %	0	2	3	0	0	4
Mvmt Flow	23	154	1470	2	41	967

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2520	1471	0	0	1472	0
Stage 1	1471	-	-	-	-	-
Stage 2	1049	-	-	-	-	-
Critical Hdwy	6.4	6.22	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.318	-	-	2.2	-
Pot Cap-1 Maneuver	31	156	-	-	464	-
Stage 1	213	-	-	-	-	-
Stage 2	340	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	25	156	-	-	464	-
Mov Cap-2 Maneuver	25	-	-	-	-	-
Stage 1	213	-	-	-	-	-
Stage 2	275	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s$	519.9	0	0.5
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	93	464	-
HCM Lane V/C Ratio	-	-	1.903	0.088	-
HCM Control Delay (s)	-	-	$ 519.9	13.5	0
HCM Lane LOS	-	-	F	B	A
HCM 95th %tile Q(veh)	-	-	14.9	0.3	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	6.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	38	8	529	96	61	743
Future Vol, veh/h	38	8	529	96	61	743
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	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	72	72	68	68	81	81
Heavy Vehicles, %	3	0	8	3	7	4
Mvmt Flow	53	11	778	141	75	917

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1916	849	0	0	919	0
Stage 1	849	-	-	-	-	-
Stage 2	1067	-	-	-	-	-
Critical Hdwy	6.43	6.2	-	-	4.17	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.3	-	-	2.263	-
Pot Cap-1 Maneuver	74	364	-	-	722	-
Stage 1	418	-	-	-	-	-
Stage 2	329	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	58	364	-	-	722	-
Mov Cap-2 Maneuver	58	-	-	-	-	-
Stage 1	418	-	-	-	-	-
Stage 2	259	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	194.6	0	0.8
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	68	722	-
HCM Lane V/C Ratio	-	-	0.94	0.104	-
HCM Control Delay (s)	-	-	194.6	10.6	0
HCM Lane LOS	-	-	F	B	A
HCM 95th %tile Q(veh)	-	-	4.6	0.3	-

Intersection						
Int Delay, s/veh	18.6					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	41	9	604	103	65	886
Future Vol, veh/h	41	9	604	103	65	886
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	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	72	72	68	68	81	81
Heavy Vehicles, %	3	0	8	3	7	4
Mvmt Flow	57	13	888	151	80	1094

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2218	964	0	0	1039	0
Stage 1	964	-	-	-	-	-
Stage 2	1254	-	-	-	-	-
Critical Hdwy	6.43	6.2	-	-	4.17	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.3	-	-	2.263	-
Pot Cap-1 Maneuver	~ 48	312	-	-	650	-
Stage 1	369	-	-	-	-	-
Stage 2	267	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 33	312	-	-	650	-
Mov Cap-2 Maneuver	~ 33	-	-	-	-	-
Stage 1	369	-	-	-	-	-
Stage 2	183	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 596.7	0	0.8
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	39	650	-
HCM Lane V/C Ratio	-	-	1.781	0.123	-
HCM Control Delay (s)	-	-	$ 596.7	11.3	0
HCM Lane LOS	-	-	F	B	A
HCM 95th %tile Q(veh)	-	-	7.3	0.4	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	334.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	107	0	27	41	0	9	56	604	103	65	886	105
Future Vol, veh/h	107	0	27	41	0	9	56	604	103	65	886	105
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	215	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	72	72	72	68	68	68	81	81	81
Heavy Vehicles, %	0	0	0	3	0	0	0	8	3	7	4	0
Mvmt Flow	119	0	30	57	0	13	82	888	151	80	1094	130

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2453	2522	1159	2462	2512	964	1224	0	0	1039	0	0
Stage 1	1319	1319	-	1128	1128	-	-	-	-	-	-	-
Stage 2	1134	1203	-	1334	1384	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.13	6.5	6.2	4.1	-	-	4.17	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.13	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.13	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.527	4	3.3	2.2	-	-	2.263	-	-
Pot Cap-1 Maneuver	~ 21	28	241	~ 21	29	312	577	-	-	650	-	-
Stage 1	195	229	-	247	282	-	-	-	-	-	-	-
Stage 2	249	260	-	189	213	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 10	11	241	~ 9	11	312	577	-	-	650	-	-
Mov Cap-2 Maneuver	~ 10	11	-	~ 9	11	-	-	-	-	-	-	-
Stage 1	127	137	-	161	183	-	-	-	-	-	-	-
Stage 2	155	169	-	99	127	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, $	4500.7	$ 3063.6	0.9	0.7
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	577	-	-	10	241	11	650	-	-
HCM Lane V/C Ratio	0.143	-	-	11.889	0.124	6.313	0.123	-	-
HCM Control Delay (s)	12.3	0	$	5630.8	22.3	$ 3063.6	11.3	0	-
HCM Lane LOS	B	A	-	F	C	F	B	A	-
HCM 95th %tile Q(veh)	0.5	-	-	16.3	0.4	9.9	0.4	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	42.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	45	10	664	114	72	970
Future Vol, veh/h	45	10	664	114	72	970
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	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	72	72	68	68	81	81
Heavy Vehicles, %	3	0	8	3	7	4
Mvmt Flow	63	14	976	168	89	1198

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2436	1060	0	0	1144	0
Stage 1	1060	-	-	-	-	-
Stage 2	1376	-	-	-	-	-
Critical Hdwy	6.43	6.2	-	-	4.17	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.3	-	-	2.263	-
Pot Cap-1 Maneuver	~ 35	275	-	-	593	-
Stage 1	332	-	-	-	-	-
Stage 2	233	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 19	275	-	-	593	-
Mov Cap-2 Maneuver	~ 19	-	-	-	-	-
Stage 1	332	-	-	-	-	-
Stage 2	129	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, $	1395.6	0	0.8
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	23	593	-
HCM Lane V/C Ratio	-	-	3.321	0.15	-
HCM Control Delay (s)	-	-	$ 1395.6	12.1	0
HCM Lane LOS	-	-	F	B	A
HCM 95th %tile Q(veh)	-	-	9.6	0.5	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	694.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	107	0	27	45	0	10	56	664	114	72	970	105
Future Vol, veh/h	107	0	27	45	0	10	56	664	114	72	970	105
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	215	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	72	72	72	68	68	68	81	81	81
Heavy Vehicles, %	0	0	0	3	0	0	0	8	3	7	4	0
Mvmt Flow	119	0	30	63	0	14	82	976	168	89	1198	130

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2672	2749	1263	2680	2730	1060	1328	0	0	1144	0	0
Stage 1	1441	1441	-	1224	1224	-	-	-	-	-	-	-
Stage 2	1231	1308	-	1456	1506	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.13	6.5	6.2	4.1	-	-	4.17	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.13	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.13	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.527	4	3.3	2.2	-	-	2.263	-	-
Pot Cap-1 Maneuver	~ 15	20	209	~ 14	21	275	527	-	-	593	-	-
Stage 1	166	200	-	218	254	-	-	-	-	-	-	-
Stage 2	219	231	-	161	186	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 5	4	209	~ 4	5	275	527	-	-	593	-	-
Mov Cap-2 Maneuver	~ 5	4	-	~ 4	5	-	-	-	-	-	-	-
Stage 1	~ 91	79	-	120	140	-	-	-	-	-	-	-
Stage 2	~ 114	127	-	~ 55	74	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, $	9330.3	$ 7845.2	0.9	0.8
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	527	-	-	5	209	5	593	-	-
HCM Lane V/C Ratio	0.156	-	-	23.778	0.144	15.278	0.15	-	-
HCM Control Delay (s)	13.1	0	-	$ 11678.3	25.3	$ 7845.2	12.1	0	-
HCM Lane LOS	B	A	-	F	D	F	B	A	-
HCM 95th %tile Q(veh)	0.6	-	-	16.9	0.5	11.4	0.5	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	2.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	26	9	872	97	23	617
Future Vol, veh/h	26	9	872	97	23	617
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	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	63	63	85	85	95	95
Heavy Vehicles, %	4	0	3	3	4	3
Mvmt Flow	41	14	1026	114	24	649

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1780	1083	0	0	1140	0
Stage 1	1083	-	-	-	-	-
Stage 2	697	-	-	-	-	-
Critical Hdwy	6.44	6.2	-	-	4.14	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.3	-	-	2.236	-
Pot Cap-1 Maneuver	89	266	-	-	606	-
Stage 1	322	-	-	-	-	-
Stage 2	490	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	83	266	-	-	606	-
Mov Cap-2 Maneuver	83	-	-	-	-	-
Stage 1	322	-	-	-	-	-
Stage 2	460	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	77.5	0	0.4
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	101	606	-
HCM Lane V/C Ratio	-	-	0.55	0.04	-
HCM Control Delay (s)	-	-	77.5	11.2	0
HCM Lane LOS	-	-	F	B	A
HCM 95th %tile Q(veh)	-	-	2.5	0.1	-

Intersection	
Int Delay, s/veh	5.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	28	10	1030	104	25	699
Future Vol, veh/h	28	10	1030	104	25	699
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	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	63	63	85	85	95	95
Heavy Vehicles, %	4	0	3	3	4	3
Mvmt Flow	44	16	1212	122	26	736

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2061	1273	0	0	1334	0
Stage 1	1273	-	-	-	-	-
Stage 2	788	-	-	-	-	-
Critical Hdwy	6.44	6.2	-	-	4.14	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.3	-	-	2.236	-
Pot Cap-1 Maneuver	59	206	-	-	511	-
Stage 1	261	-	-	-	-	-
Stage 2	445	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	54	206	-	-	511	-
Mov Cap-2 Maneuver	54	-	-	-	-	-
Stage 1	261	-	-	-	-	-
Stage 2	407	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	185.5	0	0.4
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	67	511	-
HCM Lane V/C Ratio	-	-	0.9	0.051	-
HCM Control Delay (s)	-	-	185.5	12.4	0
HCM Lane LOS	-	-	F	B	A
HCM 95th %tile Q(veh)	-	-	4.4	0.2	-

Intersection												
Int Delay, s/veh	251.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	127	0	32	28	0	10	66	1030	104	25	699	123
Future Vol, veh/h	127	0	32	28	0	10	66	1030	104	25	699	123
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	215	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	63	63	63	85	85	85	95	95	95
Heavy Vehicles, %	0	0	0	4	0	0	0	3	3	4	3	0
Mvmt Flow	141	0	36	44	0	16	78	1212	122	26	736	129

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2290	2343	801	2300	2346	1273	865	0	0	1334	0	0
Stage 1	853	853	-	1429	1429	-	-	-	-	-	-	-
Stage 2	1437	1490	-	871	917	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.14	6.5	6.2	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.14	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.14	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.536	4	3.3	2.2	-	-	2.236	-	-
Pot Cap-1 Maneuver	~ 28	37	388	~ 27	37	206	787	-	-	511	-	-
Stage 1	357	378	-	166	202	-	-	-	-	-	-	-
Stage 2	167	189	-	343	354	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 16	20	388	~ 16	20	206	787	-	-	511	-	-
Mov Cap-2 Maneuver	~ 16	20	-	~ 16	20	-	-	-	-	-	-	-
Stage 1	213	340	-	99	120	-	-	-	-	-	-	-
Stage 2	~ 92	113	-	280	318	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, $	3187.2	$ 1229.4	0.6	0.4
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	787	-	-	16	388	21	511	-	-
HCM Lane V/C Ratio	0.099	-	-	8.819	0.092	2.872	0.051	-	-
HCM Control Delay (s)	10.1	0	-	$ 3986.5	15.2	$ 1229.4	12.4	0	-
HCM Lane LOS	B	A	-	F	C	F	B	A	-
HCM 95th %tile Q(veh)	0.3	-	-	18.5	0.3	7.8	0.2	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	11.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	31	11	1128	115	28	768
Future Vol, veh/h	31	11	1128	115	28	768
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	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	63	63	85	85	95	95
Heavy Vehicles, %	4	0	3	3	4	3
Mvmt Flow	49	17	1327	135	29	808

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2261	1395	0	0	1462	0
Stage 1	1395	-	-	-	-	-
Stage 2	866	-	-	-	-	-
Critical Hdwy	6.44	6.2	-	-	4.14	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.3	-	-	2.236	-
Pot Cap-1 Maneuver	~ 44	175	-	-	456	-
Stage 1	227	-	-	-	-	-
Stage 2	408	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 39	175	-	-	456	-
Mov Cap-2 Maneuver	~ 39	-	-	-	-	-
Stage 1	227	-	-	-	-	-
Stage 2	361	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 386.7	0	0.5
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	49	456	-
HCM Lane V/C Ratio	-	-	1.361	0.065	-
HCM Control Delay (s)	-	-	$ 386.7	13.4	0
HCM Lane LOS	-	-	F	B	A
HCM 95th %tile Q(veh)	-	-	6.2	0.2	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	502.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↱		↕			↕			↕	
Traffic Vol, veh/h	127	0	32	31	0	11	66	1128	115	28	768	123
Future Vol, veh/h	127	0	32	31	0	11	66	1128	115	28	768	123
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	215	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	63	63	63	85	85	85	95	95	95
Heavy Vehicles, %	0	0	0	4	0	0	0	3	3	4	3	0
Mvmt Flow	141	0	36	49	0	17	78	1327	135	29	808	129

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2490	2549	873	2500	2546	1395	937	0	0	1462	0	0
Stage 1	931	931	-	1551	1551	-	-	-	-	-	-	-
Stage 2	1559	1618	-	949	995	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.14	6.5	6.2	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.14	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.14	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.536	4	3.3	2.2	-	-	2.236	-	-
Pot Cap-1 Maneuver	~ 20	27	352	~ 19	27	175	739	-	-	456	-	-
Stage 1	323	348	-	141	177	-	-	-	-	-	-	-
Stage 2	142	164	-	310	325	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 8	9	352	~ 8	9	175	739	-	-	456	-	-
Mov Cap-2 Maneuver	~ 8	9	-	~ 8	9	-	-	-	-	-	-	-
Stage 1	~ 125	300	-	55	69	-	-	-	-	-	-	-
Stage 2	~ 50	64	-	241	280	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, $	6706.7	$ 2950.5	0.5	0.4
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	739	-	-	8	352	11	456	-	-
HCM Lane V/C Ratio	0.105	-	-	17.639	0.101	6.061	0.065	-	-
HCM Control Delay (s)	10.4	0	$	8392.5	16.8	$ 2950.5	13.4	0	-
HCM Lane LOS	B	A	-	F	C	F	B	A	-
HCM 95th %tile Q(veh)	0.4	-	-	19.4	0.3	9.6	0.2	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↱		↑	↑	
Traffic Vol, veh/h	0	31	0	763	954	0
Future Vol, veh/h	0	31	0	763	954	0
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	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	68	68	79	79
Heavy Vehicles, %	0	0	0	7	4	0
Mvmt Flow	0	34	0	1122	1208	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1208	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.2	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	225	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	-	225	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	23.9	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	225	-
HCM Lane V/C Ratio	-	0.153	-
HCM Control Delay (s)	-	23.9	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	0.5	-

Intersection						
Int Delay, s/veh	0.4					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↱		↑	↑	
Traffic Vol, veh/h	0	31	0	834	1042	0
Future Vol, veh/h	0	31	0	834	1042	0
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	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	68	68	79	79
Heavy Vehicles, %	0	0	0	7	4	0
Mvmt Flow	0	34	0	1226	1319	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1319	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.2	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	194	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	-	194	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	27.5	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	194	-
HCM Lane V/C Ratio	-	0.178	-
HCM Control Delay (s)	-	27.5	-
HCM Lane LOS	-	D	-
HCM 95th %tile Q(veh)	-	0.6	-

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↱		↑	↑	
Traffic Vol, veh/h	0	36	0	1200	759	0
Future Vol, veh/h	0	36	0	1200	759	0
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	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	85	85	91	91
Heavy Vehicles, %	0	0	0	3	3	0
Mvmt Flow	0	40	0	1412	834	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	834	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.2	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	371	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	-	371	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.9	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	371	-
HCM Lane V/C Ratio	-	0.108	-
HCM Control Delay (s)	-	15.9	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	0.4	-

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	36	0	1309	831	0
Future Vol, veh/h	0	36	0	1309	831	0
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	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	85	85	91	91
Heavy Vehicles, %	0	0	0	3	3	0
Mvmt Flow	0	40	0	1540	913	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	913	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.2	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	334	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	-	334	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.2	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	334	-
HCM Lane V/C Ratio	-	0.12	-
HCM Control Delay (s)	-	17.2	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	0.4	-

HCM Signalized Intersection Capacity Analysis
6: NH27 & Continental Drive

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	14	14	44	565	635	101
Future Volume (vph)	14	14	44	565	635	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1719	1214	1597	1792	1759	1553
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1719	1214	1597	1792	1759	1553
Peak-hour factor, PHF	0.88	0.88	0.76	0.76	0.78	0.78
Adj. Flow (vph)	16	16	58	743	814	129
RTOR Reduction (vph)	0	13	0	0	0	23
Lane Group Flow (vph)	16	3	58	743	814	106
Heavy Vehicles (%)	5%	33%	13%	6%	8%	4%
Turn Type	Prot	pt+ov	Prot	NA	NA	pt+ov
Protected Phases	4	4 5	5	2	6	6 4
Permitted Phases						
Actuated Green, G (s)	4.0	11.9	3.4	57.7	49.8	57.8
Effective Green, g (s)	4.0	11.9	3.4	57.7	49.8	57.8
Actuated g/C Ratio	0.06	0.17	0.05	0.82	0.71	0.82
Clearance Time (s)	4.5		4.5	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	97	205	77	1472	1247	1278
v/s Ratio Prot	c0.01	0.00	0.04	c0.41	c0.46	0.07
v/s Ratio Perm						
v/c Ratio	0.16	0.01	0.75	0.50	0.65	0.08
Uniform Delay, d1	31.5	24.3	33.0	1.9	5.5	1.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.8	0.0	33.5	1.2	1.2	0.0
Delay (s)	32.3	24.3	66.4	3.1	6.8	1.2
Level of Service	C	C	E	A	A	A
Approach Delay (s)	28.3			7.7	6.0	
Approach LOS	C			A	A	

Intersection Summary			
HCM 2000 Control Delay	7.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	70.2	Sum of lost time (s)	13.0
Intersection Capacity Utilization	47.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Timings
6: NH27 & Continental Drive

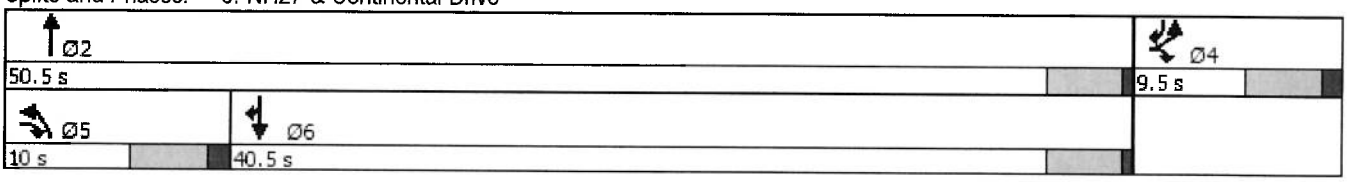
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	14	14	44	565	635	101
Future Volume (vph)	14	14	44	565	635	101
Turn Type	Prot	pt+ov	Prot	NA	NA	pt+ov
Protected Phases	4	4 5	5	2	6	6 4
Permitted Phases						
Detector Phase	4	4 5	5	2	6	6 4
Switch Phase						
Minimum Initial (s)	5.0		5.0	4.0	4.0	
Minimum Split (s)	9.5		9.5	20.0	20.0	
Total Split (s)	9.5		10.0	50.5	40.5	
Total Split (%)	15.8%		16.7%	84.2%	67.5%	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0	0.5	0.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	4.5		4.5	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None		None	Max	None	
Act Effct Green (s)	5.0	13.2	5.5	56.9	50.7	59.0
Actuated g/C Ratio	0.07	0.19	0.08	0.84	0.75	0.87
v/c Ratio	0.12	0.06	0.44	0.49	0.62	0.09
Control Delay	29.5	10.0	39.5	3.5	9.5	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.5	10.0	39.5	3.5	9.5	0.6
LOS	C	A	D	A	A	A
Approach Delay	19.8			6.1	8.2	
Approach LOS	B			A	A	

Intersection Summary

Cycle Length: 60
Actuated Cycle Length: 67.7
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.62
Intersection Signal Delay: 7.5
Intersection Capacity Utilization 47.8%
Analysis Period (min) 15

Intersection LOS: A
ICU Level of Service A

Splits and Phases: 6: NH27 & Continental Drive



Queues
6: NH27 & Continental Drive

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	16	16	58	743	814	129
v/c Ratio	0.12	0.06	0.44	0.49	0.62	0.09
Control Delay	29.5	10.0	39.5	3.5	9.5	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.5	10.0	39.5	3.5	9.5	0.6
Queue Length 50th (ft)	7	0	27	66	185	0
Queue Length 95th (ft)	21	12	43	80	235	5
Internal Link Dist (ft)	217			330	1245	
Turn Bay Length (ft)		120	250			215
Base Capacity (vph)	128	248	131	1505	1316	1370
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.06	0.44	0.49	0.62	0.09

Intersection Summary

HCM Signalized Intersection Capacity Analysis
6: NH27 & Continental Drive

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	22	19	77	627	709	162
Future Volume (vph)	22	19	77	627	709	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1719	1214	1597	1792	1759	1553
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1719	1214	1597	1792	1759	1553
Peak-hour factor, PHF	0.88	0.88	0.76	0.76	0.78	0.78
Adj. Flow (vph)	25	22	101	825	909	208
RTOR Reduction (vph)	0	17	0	0	0	42
Lane Group Flow (vph)	25	5	101	825	909	166
Heavy Vehicles (%)	5%	33%	13%	6%	8%	4%
Turn Type	Prot	pt+ov	Prot	NA	NA	pt+ov
Protected Phases	4	4 5	5	2	6	6 4
Permitted Phases						
Actuated Green, G (s)	5.1	14.2	4.6	54.1	45.0	54.1
Effective Green, g (s)	5.1	14.2	4.6	54.1	45.0	54.1
Actuated g/C Ratio	0.08	0.21	0.07	0.80	0.66	0.80
Clearance Time (s)	4.5		4.5	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	129	254	108	1432	1169	1241
v/s Ratio Prot	0.01	0.00	c0.06	0.46	c0.52	c0.11
v/s Ratio Perm						
v/c Ratio	0.19	0.02	0.94	0.58	0.78	0.13
Uniform Delay, d1	29.4	21.2	31.4	2.5	7.9	1.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	0.0	65.7	1.7	3.3	0.0
Delay (s)	30.1	21.2	97.1	4.2	11.2	1.6
Level of Service	C	C	F	A	B	A
Approach Delay (s)	26.0			14.4	9.4	
Approach LOS	C			B	A	

Intersection Summary			
HCM 2000 Control Delay	12.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	67.7	Sum of lost time (s)	13.0
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

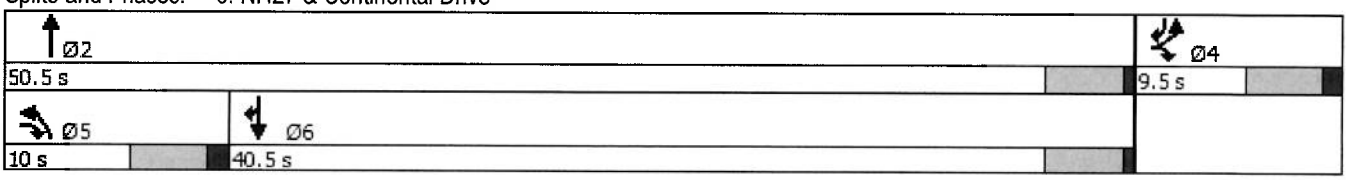
Timings
6: NH27 & Continental Drive

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	22	19	77	627	709	162
Future Volume (vph)	22	19	77	627	709	162
Turn Type	Prot	pt+ov	Prot	NA	NA	pt+ov
Protected Phases	4	4 5	5	2	6	6 4
Permitted Phases						
Detector Phase	4	4 5	5	2	6	6 4
Switch Phase						
Minimum Initial (s)	5.0		5.0	4.0	4.0	
Minimum Split (s)	9.5		9.5	20.0	20.0	
Total Split (s)	9.5		10.0	50.5	40.5	
Total Split (%)	15.8%		16.7%	84.2%	67.5%	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0	0.5	0.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	4.5		4.5	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None		None	Max	None	
Act Effct Green (s)	5.0	15.1	5.6	53.3	45.0	55.3
Actuated g/C Ratio	0.07	0.23	0.08	0.80	0.67	0.83
v/c Ratio	0.19	0.08	0.77	0.58	0.77	0.16
Control Delay	30.0	8.9	65.4	4.6	15.1	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.0	8.9	65.4	4.6	15.1	0.6
LOS	C	A	E	A	B	A
Approach Delay	20.1			11.2	12.4	
Approach LOS	C			B	B	

Intersection Summary

Cycle Length: 60
Actuated Cycle Length: 66.9
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 12.1 — Intersection LOS: B
Intersection Capacity Utilization 56.6% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 6: NH27 & Continental Drive



Queues
6: NH27 & Continental Drive

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	25	22	101	825	909	208
v/c Ratio	0.19	0.08	0.77	0.58	0.77	0.16
Control Delay	30.0	8.9	65.4	4.6	15.1	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.0	8.9	65.4	4.6	15.1	0.6
Queue Length 50th (ft)	9	0	40	81	229	0
Queue Length 95th (ft)	28	14	#79	96	288	6
Internal Link Dist (ft)	217			330	1245	
Turn Bay Length (ft)		120	250			215
Base Capacity (vph)	129	292	132	1426	1182	1319
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.08	0.77	0.58	0.77	0.16

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis
6: NH27 & Continental Drive

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	22	19	77	683	767	162
Future Volume (vph)	22	19	77	683	767	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1719	1214	1597	1792	1759	1553
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1719	1214	1597	1792	1759	1553
Peak-hour factor, PHF	0.88	0.88	0.76	0.76	0.78	0.78
Adj. Flow (vph)	25	22	101	899	983	208
RTOR Reduction (vph)	0	18	0	0	0	39
Lane Group Flow (vph)	25	4	101	899	983	169
Heavy Vehicles (%)	5%	33%	13%	6%	8%	4%
Turn Type	Prot	pt+ov	Prot	NA	NA	pt+ov
Protected Phases	4	4 5	5	2	6	6 4
Permitted Phases						
Actuated Green, G (s)	5.0	14.9	5.4	64.0	54.1	63.1
Effective Green, g (s)	5.0	14.9	5.4	64.0	54.1	63.1
Actuated g/C Ratio	0.06	0.19	0.07	0.83	0.70	0.81
Clearance Time (s)	4.5		4.5	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	110	233	111	1479	1227	1264
v/s Ratio Prot	c0.01	0.00	c0.06	0.50	c0.56	0.11
v/s Ratio Perm						
v/c Ratio	0.23	0.02	0.91	0.61	0.80	0.13
Uniform Delay, d1	34.4	25.4	35.8	2.4	8.0	1.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.1	0.0	57.1	1.9	3.9	0.0
Delay (s)	35.5	25.4	92.9	4.2	11.9	1.6
Level of Service	D	C	F	A	B	A
Approach Delay (s)	30.8			13.2	10.1	
Approach LOS	C			B	B	

Intersection Summary			
HCM 2000 Control Delay	11.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	77.5	Sum of lost time (s)	13.0
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

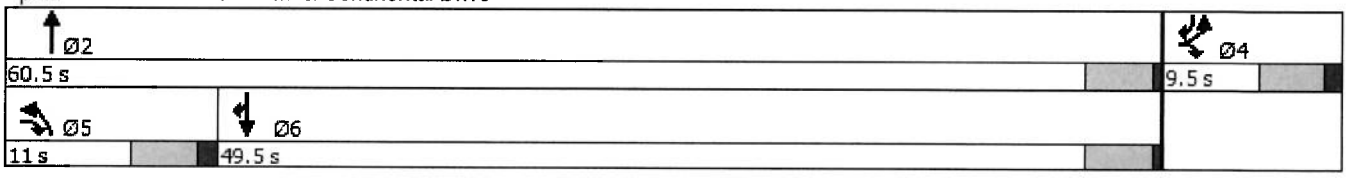
Timings
6: NH27 & Continental Drive

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	22	19	77	683	767	162
Future Volume (vph)	22	19	77	683	767	162
Turn Type	Prot	pt+ov	Prot	NA	NA	pt+ov
Protected Phases	4	4 5	5	2	6	6 4
Permitted Phases						
Detector Phase	4	4 5	5	2	6	6 4
Switch Phase						
Minimum Initial (s)	5.0		5.0	4.0	4.0	
Minimum Split (s)	9.5		9.5	20.0	20.0	
Total Split (s)	9.5		11.0	60.5	49.5	
Total Split (%)	13.6%		15.7%	86.4%	70.7%	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0	0.5	0.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	4.5		4.5	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None		None	Max	None	
Act Effct Green (s)	5.0	16.1	6.5	63.2	54.1	64.4
Actuated g/C Ratio	0.07	0.21	0.08	0.82	0.70	0.84
v/c Ratio	0.22	0.08	0.75	0.61	0.79	0.16
Control Delay	36.4	10.4	66.1	4.6	15.5	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.4	10.4	66.1	4.6	15.5	0.6
LOS	D	B	E	A	B	A
Approach Delay	24.2			10.8	12.9	
Approach LOS	C			B	B	

Intersection Summary

Cycle Length: 70
Actuated Cycle Length: 76.8
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 12.2
Intersection LOS: B
Intersection Capacity Utilization 59.6%
ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 6: NH27 & Continental Drive



Queues
6: NH27 & Continental Drive

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	25	22	101	899	983	208
v/c Ratio	0.22	0.08	0.75	0.61	0.79	0.16
Control Delay	36.4	10.4	66.1	4.6	15.5	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.4	10.4	66.1	4.6	15.5	0.6
Queue Length 50th (ft)	11	0	46	94	287	0
Queue Length 95th (ft)	32	16	#85	107	340	6
Internal Link Dist (ft)	217			330	1245	
Turn Bay Length (ft)		120	250			215
Base Capacity (vph)	112	272	136	1474	1239	1335
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.08	0.74	0.61	0.79	0.16

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis
6: NH27 & Continental Drive

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	22	19	77	691	780	162
Future Volume (vph)	22	19	77	691	780	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1719	1214	1597	1792	1759	1553
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1719	1214	1597	1792	1759	1553
Peak-hour factor, PHF	0.88	0.88	0.76	0.76	0.78	0.78
Adj. Flow (vph)	25	22	101	909	1000	208
RTOR Reduction (vph)	0	18	0	0	0	39
Lane Group Flow (vph)	25	4	101	909	1000	169
Heavy Vehicles (%)	5%	33%	13%	6%	8%	4%
Turn Type	Prot	pt+ov	Prot	NA	NA	pt+ov
Protected Phases	4	4 5	5	2	6	6 4
Permitted Phases						
Actuated Green, G (s)	5.0	14.9	5.4	64.0	54.1	63.1
Effective Green, g (s)	5.0	14.9	5.4	64.0	54.1	63.1
Actuated g/C Ratio	0.06	0.19	0.07	0.83	0.70	0.81
Clearance Time (s)	4.5		4.5	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	110	233	111	1479	1227	1264
v/s Ratio Prot	c0.01	0.00	c0.06	0.51	c0.57	0.11
v/s Ratio Perm						
v/c Ratio	0.23	0.02	0.91	0.61	0.81	0.13
Uniform Delay, d1	34.4	25.4	35.8	2.4	8.2	1.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.1	0.0	57.1	1.9	4.3	0.0
Delay (s)	35.5	25.4	92.9	4.3	12.5	1.6
Level of Service	D	C	F	A	B	A
Approach Delay (s)	30.8			13.2	10.6	
Approach LOS	C			B	B	

Intersection Summary			
HCM 2000 Control Delay	12.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	77.5	Sum of lost time (s)	13.0
Intersection Capacity Utilization	60.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Timings
6: NH27 & Continental Drive

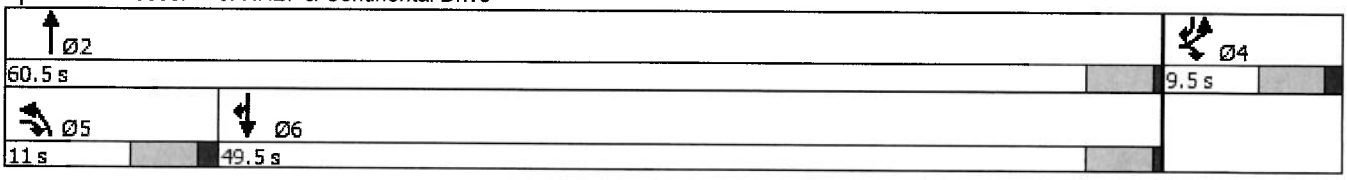
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	22	19	77	691	780	162
Future Volume (vph)	22	19	77	691	780	162
Turn Type	Prot	pt+ov	Prot	NA	NA	pt+ov
Protected Phases	4	4 5	5	2	6	6 4
Permitted Phases						
Detector Phase	4	4 5	5	2	6	6 4
Switch Phase						
Minimum Initial (s)	5.0		5.0	4.0	4.0	
Minimum Split (s)	9.5		9.5	20.0	20.0	
Total Split (s)	9.5		11.0	60.5	49.5	
Total Split (%)	13.6%		15.7%	86.4%	70.7%	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0	0.5	0.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	4.5		4.5	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None		None	Max	None	
Act Effct Green (s)	5.0	16.1	6.5	63.2	54.1	64.4
Actuated g/C Ratio	0.07	0.21	0.08	0.82	0.70	0.84
v/c Ratio	0.22	0.08	0.75	0.62	0.81	0.16
Control Delay	36.4	10.4	66.1	4.7	16.3	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.4	10.4	66.1	4.7	16.3	0.6
LOS	D	B	E	A	B	A
Approach Delay	24.2			10.8	13.6	
Approach LOS	C			B	B	

Intersection Summary

Cycle Length: 70
Actuated Cycle Length: 76.8
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 12.6
Intersection Capacity Utilization 60.3%
Analysis Period (min) 15

Intersection LOS: B
ICU Level of Service B

Splits and Phases: 6: NH27 & Continental Drive



Queues
6: NH27 & Continental Drive

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	25	22	101	909	1000	208
v/c Ratio	0.22	0.08	0.75	0.62	0.81	0.16
Control Delay	36.4	10.4	66.1	4.7	16.3	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.4	10.4	66.1	4.7	16.3	0.6
Queue Length 50th (ft)	11	0	46	96	298	0
Queue Length 95th (ft)	32	16	#85	108	353	6
Internal Link Dist (ft)	217			330	1245	
Turn Bay Length (ft)		120	250			215
Base Capacity (vph)	112	272	136	1474	1239	1335
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.08	0.74	0.62	0.81	0.16

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	22	19	77	747	838	162
Future Volume (vph)	22	19	77	747	838	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1719	1214	1597	1792	1759	1553
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1719	1214	1597	1792	1759	1553
Peak-hour factor, PHF	0.88	0.88	0.76	0.76	0.78	0.78
Adj. Flow (vph)	25	22	101	983	1074	208
RTOR Reduction (vph)	0	18	0	0	0	36
Lane Group Flow (vph)	25	4	101	983	1074	172
Heavy Vehicles (%)	5%	33%	13%	6%	8%	4%
Turn Type	Prot	pt+ov	Prot	NA	NA	pt+ov
Protected Phases	4	4 5	5	2	6	6 4
Permitted Phases						
Actuated Green, G (s)	5.0	15.7	6.2	74.0	63.3	72.3
Effective Green, g (s)	5.0	15.7	6.2	74.0	63.3	72.3
Actuated g/C Ratio	0.06	0.18	0.07	0.85	0.72	0.83
Clearance Time (s)	4.5		4.5	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	98	217	113	1515	1272	1283
v/s Ratio Prot	c0.01	0.00	c0.06	0.55	c0.61	0.11
v/s Ratio Perm						
v/c Ratio	0.26	0.02	0.89	0.65	0.84	0.13
Uniform Delay, d1	39.5	29.6	40.3	2.3	8.6	1.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.4	0.0	52.6	2.2	5.3	0.0
Delay (s)	40.8	29.6	92.9	4.5	13.9	1.5
Level of Service	D	C	F	A	B	A
Approach Delay (s)	35.6			12.7	11.9	
Approach LOS	D			B	B	

Intersection Summary

HCM 2000 Control Delay	12.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	87.5	Sum of lost time (s)	13.0
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

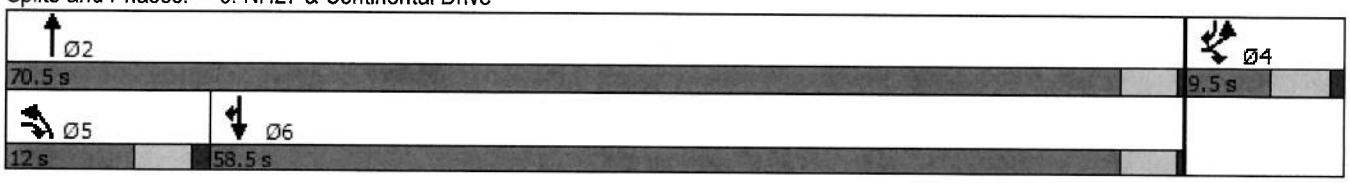
Timings
6: NH27 & Continental Drive

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	22	19	77	747	838	162
Future Volume (vph)	22	19	77	747	838	162
Turn Type	Prot	pt+ov	Prot	NA	NA	pt+ov
Protected Phases	4	4 5	5	2	6	6 4
Permitted Phases						
Detector Phase	4	4 5	5	2	6	6 4
Switch Phase						
Minimum Initial (s)	5.0		5.0	4.0	4.0	
Minimum Split (s)	9.5		9.5	20.0	20.0	
Total Split (s)	9.5		12.0	70.5	58.5	
Total Split (%)	11.9%		15.0%	88.1%	73.1%	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0	0.5	0.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	4.5		4.5	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None		None	Max	None	
Act Effct Green (s)	5.0	17.0	7.4	73.2	63.3	73.6
Actuated g/C Ratio	0.06	0.20	0.09	0.84	0.73	0.85
v/c Ratio	0.25	0.09	0.74	0.65	0.84	0.15
Control Delay	43.0	11.8	69.4	4.8	17.6	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.0	11.8	69.4	4.8	17.6	0.5
LOS	D	B	E	A	B	A
Approach Delay	28.4			10.9	14.8	
Approach LOS	C			B	B	

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 86.8
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 13.3
Intersection LOS: B
Intersection Capacity Utilization 63.4%
ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 6: NH27 & Continental Drive



Queues
6: NH27 & Continental Drive

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	25	22	101	983	1074	208
v/c Ratio	0.25	0.09	0.74	0.65	0.84	0.15
Control Delay	43.0	11.8	69.4	4.8	17.6	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.0	11.8	69.4	4.8	17.6	0.5
Queue Length 50th (ft)	13	0	53	114	374	0
Queue Length 95th (ft)	35	18	#91	122	417	6
Internal Link Dist (ft)	217			330	1245	
Turn Bay Length (ft)		120	250			215
Base Capacity (vph)	99	257	138	1511	1283	1349
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.09	0.73	0.65	0.84	0.15

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis
6: NH27 & Continental Drive

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	128	59	18	788	601	21
Future Volume (vph)	128	59	18	788	601	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1805	1568	1736	1845	1827	1615
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1805	1568	1736	1845	1827	1615
Peak-hour factor, PHF	0.71	0.71	0.87	0.87	0.89	0.89
Adj. Flow (vph)	180	83	21	906	675	24
RTOR Reduction (vph)	0	59	0	0	0	5
Lane Group Flow (vph)	180	24	21	906	675	19
Heavy Vehicles (%)	0%	3%	4%	3%	4%	0%
Turn Type	Prot	pt+ov	Prot	NA	NA	pt+ov
Protected Phases	4	4 5	5	2	6	6 4
Permitted Phases						
Actuated Green, G (s)	9.7	18.4	4.2	44.6	35.9	49.6
Effective Green, g (s)	9.7	18.4	4.2	44.6	35.9	49.6
Actuated g/C Ratio	0.15	0.29	0.07	0.71	0.57	0.79
Clearance Time (s)	4.5		4.5	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	278	459	116	1310	1044	1275
v/s Ratio Prot	c0.10	0.02	0.01	c0.49	0.37	0.01
v/s Ratio Perm						
v/c Ratio	0.65	0.05	0.18	0.69	0.65	0.01
Uniform Delay, d1	24.9	15.9	27.7	5.2	9.1	1.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.1	0.0	0.8	3.0	1.4	0.0
Delay (s)	30.1	16.0	28.4	8.2	10.5	1.4
Level of Service	C	B	C	A	B	A
Approach Delay (s)	25.6			8.7	10.2	
Approach LOS	C			A	B	

Intersection Summary			
HCM 2000 Control Delay	11.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	62.8	Sum of lost time (s)	13.0
Intersection Capacity Utilization	55.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

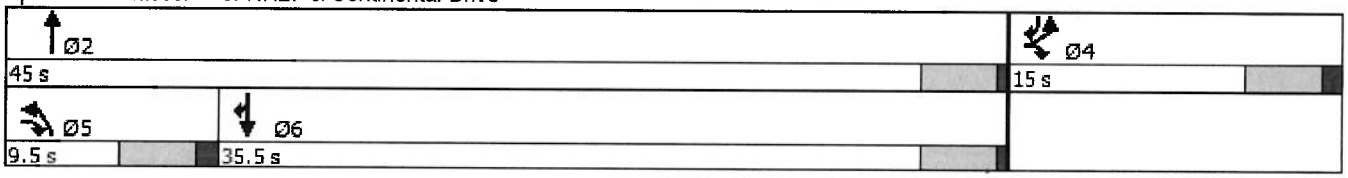
Timings
6: NH27 & Continental Drive

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	128	59	18	788	601	21
Future Volume (vph)	128	59	18	788	601	21
Turn Type	Prot	pt+ov	Prot	NA	NA	pt+ov
Protected Phases	4	4 5	5	2	6	6 4
Permitted Phases						
Detector Phase	4	4 5	5	2	6	6 4
Switch Phase						
Minimum Initial (s)	5.0		5.0	4.0	4.0	
Minimum Split (s)	9.5		9.5	20.0	20.0	
Total Split (s)	15.0		9.5	45.0	35.5	
Total Split (%)	25.0%		15.8%	75.0%	59.2%	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0	0.5	0.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	4.5		4.5	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None		None	Max	None	
Act Effct Green (s)	9.7	19.2	5.0	43.8	35.9	50.8
Actuated g/C Ratio	0.16	0.31	0.08	0.71	0.58	0.82
v/c Ratio	0.64	0.15	0.15	0.70	0.64	0.02
Control Delay	34.7	4.8	28.2	9.2	13.4	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.7	4.8	28.2	9.2	13.4	0.8
LOS	C	A	C	A	B	A
Approach Delay	25.3			9.7	13.0	
Approach LOS	C			A	B	

Intersection Summary

Cycle Length: 60
Actuated Cycle Length: 62
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 13.1
Intersection LOS: B
Intersection Capacity Utilization 55.6%
ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 6: NH27 & Continental Drive



Queues
6: NH27 & Continental Drive

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	180	83	21	906	675	24
v/c Ratio	0.64	0.15	0.15	0.70	0.64	0.02
Control Delay	34.7	4.8	28.2	9.2	13.4	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.7	4.8	28.2	9.2	13.4	0.8
Queue Length 50th (ft)	60	0	7	161	167	0
Queue Length 95th (ft)	87	14	24	260	274	3
Internal Link Dist (ft)	217			330	1245	
Turn Bay Length (ft)		120	250			215
Base Capacity (vph)	306	523	140	1303	1057	1332
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.16	0.15	0.70	0.64	0.02

Intersection Summary

HCM Signalized Intersection Capacity Analysis
6: NH27 & Continental Drive

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	192	94	23	874	668	30
Future Volume (vph)	192	94	23	874	668	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1805	1568	1736	1845	1827	1615
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1805	1568	1736	1845	1827	1615
Peak-hour factor, PHF	0.71	0.71	0.87	0.87	0.89	0.89
Adj. Flow (vph)	270	132	26	1005	751	34
RTOR Reduction (vph)	0	88	0	0	0	7
Lane Group Flow (vph)	270	44	26	1005	751	27
Heavy Vehicles (%)	0%	3%	4%	3%	4%	0%
Turn Type	Prot	pt+ov	Prot	NA	NA	pt+ov
Protected Phases	4	4 5	5	2	6	6 4
Permitted Phases						
Actuated Green, G (s)	12.0	20.6	4.1	41.6	33.0	49.0
Effective Green, g (s)	12.0	20.6	4.1	41.6	33.0	49.0
Actuated g/C Ratio	0.19	0.33	0.07	0.67	0.53	0.79
Clearance Time (s)	4.5		4.5	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	348	520	114	1235	970	1274
v/s Ratio Prot	c0.15	0.03	0.01	c0.54	0.41	0.02
v/s Ratio Perm						
v/c Ratio	0.78	0.08	0.23	0.81	0.77	0.02
Uniform Delay, d1	23.8	14.3	27.5	7.4	11.6	1.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.4	0.1	1.0	5.9	3.9	0.0
Delay (s)	34.1	14.3	28.5	13.4	15.5	1.4
Level of Service	C	B	C	B	B	A
Approach Delay (s)	27.6			13.8	14.9	
Approach LOS	C			B	B	

Intersection Summary			
HCM 2000 Control Delay	16.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	62.1	Sum of lost time (s)	13.0
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

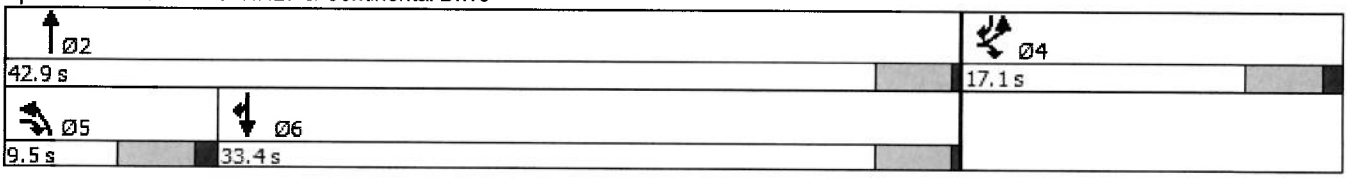
Timings
6: NH27 & Continental Drive

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	192	94	23	874	668	30
Future Volume (vph)	192	94	23	874	668	30
Turn Type	Prot	pt+ov	Prot	NA	NA	pt+ov
Protected Phases	4	4 5	5	2	6	6 4
Permitted Phases						
Detector Phase	4	4 5	5	2	6	6 4
Switch Phase						
Minimum Initial (s)	5.0		5.0	4.0	4.0	
Minimum Split (s)	9.5		9.5	20.0	20.0	
Total Split (s)	17.1		9.5	42.9	33.4	
Total Split (%)	28.5%		15.8%	71.5%	55.7%	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0	0.5	0.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	4.5		4.5	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None		None	Max	None	
Act Effct Green (s)	12.0	21.5	5.0	40.8	33.0	50.3
Actuated g/C Ratio	0.20	0.35	0.08	0.67	0.54	0.82
v/c Ratio	0.76	0.21	0.18	0.82	0.76	0.03
Control Delay	38.9	3.8	28.9	15.7	19.8	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.9	3.8	28.9	15.7	19.8	0.7
LOS	D	A	C	B	B	A
Approach Delay	27.4			16.0	18.9	
Approach LOS	C			B	B	

Intersection Summary

Cycle Length: 60
Actuated Cycle Length: 61.3
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 19.1
Intersection LOS: B
Intersection Capacity Utilization 63.7%
ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 6: NH27 & Continental Drive



Queues
6: NH27 & Continental Drive

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	270	132	26	1005	751	34
v/c Ratio	0.76	0.21	0.18	0.82	0.76	0.03
Control Delay	38.9	3.8	28.9	15.7	19.8	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.9	3.8	28.9	15.7	19.8	0.7
Queue Length 50th (ft)	91	0	9	232	218	0
Queue Length 95th (ft)	121	15	28	#415	#414	3
Internal Link Dist (ft)	217			330	1245	
Turn Bay Length (ft)		120	250			215
Base Capacity (vph)	371	609	141	1227	983	1326
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.22	0.18	0.82	0.76	0.03

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis
6: NH27 & Continental Drive

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	192	94	23	940	736	30
Future Volume (vph)	192	94	23	940	736	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1805	1568	1736	1845	1827	1615
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1805	1568	1736	1845	1827	1615
Peak-hour factor, PHF	0.71	0.71	0.87	0.87	0.89	0.89
Adj. Flow (vph)	270	132	26	1080	827	34
RTOR Reduction (vph)	0	91	0	0	0	7
Lane Group Flow (vph)	270	41	26	1080	827	27
Heavy Vehicles (%)	0%	3%	4%	3%	4%	0%
Turn Type	Prot	pt+ov	Prot	NA	NA	pt+ov
Protected Phases	4	4 5	5	2	6	6 4
Permitted Phases						
Actuated Green, G (s)	12.1	20.7	4.1	46.5	37.9	54.0
Effective Green, g (s)	12.1	20.7	4.1	46.5	37.9	54.0
Actuated g/C Ratio	0.18	0.31	0.06	0.69	0.56	0.80
Clearance Time (s)	4.5		4.5	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	325	483	106	1278	1031	1299
v/s Ratio Prot	c0.15	0.03	0.01	c0.59	0.45	0.02
v/s Ratio Perm						
v/c Ratio	0.83	0.08	0.25	0.85	0.80	0.02
Uniform Delay, d1	26.5	16.5	30.0	7.6	11.6	1.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	16.3	0.1	1.2	7.0	4.6	0.0
Delay (s)	42.8	16.5	31.2	14.6	16.2	1.3
Level of Service	D	B	C	B	B	A
Approach Delay (s)	34.2			15.0	15.6	
Approach LOS	C			B	B	

Intersection Summary			
HCM 2000 Control Delay	18.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	67.1	Sum of lost time (s)	13.0
Intersection Capacity Utilization	67.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

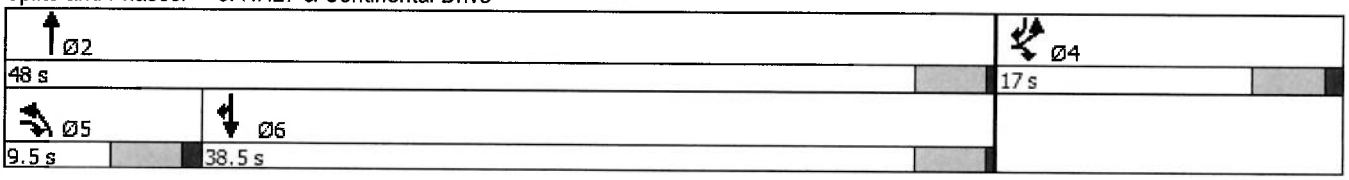
Timings
6: NH27 & Continental Drive

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	192	94	23	940	736	30
Future Volume (vph)	192	94	23	940	736	30
Turn Type	Prot	pt+ov	Prot	NA	NA	pt+ov
Protected Phases	4	4 5	5	2	6	6 4
Permitted Phases						
Detector Phase	4	4 5	5	2	6	6 4
Switch Phase						
Minimum Initial (s)	5.0		5.0	4.0	4.0	
Minimum Split (s)	9.5		9.5	20.0	20.0	
Total Split (s)	17.0		9.5	48.0	38.5	
Total Split (%)	26.2%		14.6%	73.8%	59.2%	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0	0.5	0.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	4.5		4.5	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None		None	Max	None	
Act Effct Green (s)	12.1	21.7	5.0	45.6	37.9	55.3
Actuated g/C Ratio	0.18	0.33	0.08	0.69	0.57	0.83
v/c Ratio	0.82	0.22	0.20	0.85	0.79	0.03
Control Delay	47.3	4.4	32.0	17.0	20.1	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.3	4.4	32.0	17.0	20.1	0.6
LOS	D	A	C	B	C	A
Approach Delay	33.2			17.4	19.4	
Approach LOS	C			B	B	

Intersection Summary

Cycle Length: 65
Actuated Cycle Length: 66.3
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 20.8
Intersection LOS: C
Intersection Capacity Utilization 67.2%
ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 6: NH27 & Continental Drive



Queues
6: NH27 & Continental Drive

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	270	132	26	1080	827	34
v/c Ratio	0.82	0.22	0.20	0.85	0.79	0.03
Control Delay	47.3	4.4	32.0	17.0	20.1	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.3	4.4	32.0	17.0	20.1	0.6
Queue Length 50th (ft)	103	0	10	273	258	0
Queue Length 95th (ft)	132	17	30	#497	#478	3
Internal Link Dist (ft)	217			330	1245	
Turn Bay Length (ft)		120	250			215
Base Capacity (vph)	341	591	131	1269	1043	1343
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.22	0.20	0.85	0.79	0.03

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis
6: NH27 & Continental Drive

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	192	94	23	963	736	30
Future Volume (vph)	192	94	23	963	736	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1805	1568	1736	1845	1827	1615
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1805	1568	1736	1845	1827	1615
Peak-hour factor, PHF	0.71	0.71	0.87	0.87	0.89	0.89
Adj. Flow (vph)	270	132	26	1107	827	34
RTOR Reduction (vph)	0	93	0	0	0	5
Lane Group Flow (vph)	270	39	26	1107	827	29
Heavy Vehicles (%)	0%	3%	4%	3%	4%	0%
Turn Type	Prot	pt+ov	Prot	NA	NA	pt+ov
Protected Phases	4	4 5	5	2	6	6 4
Permitted Phases						
Actuated Green, G (s)	16.6	26.1	5.0	63.1	53.6	74.2
Effective Green, g (s)	16.6	26.1	5.0	63.1	53.6	74.2
Actuated g/C Ratio	0.19	0.30	0.06	0.72	0.61	0.84
Clearance Time (s)	4.5		4.5	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	339	464	98	1319	1110	1358
v/s Ratio Prot	c0.15	0.02	0.01	c0.60	0.45	0.02
v/s Ratio Perm						
v/c Ratio	0.80	0.08	0.27	0.84	0.75	0.02
Uniform Delay, d1	34.2	22.4	39.8	8.9	12.4	1.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	12.2	0.1	1.5	6.5	2.8	0.0
Delay (s)	46.4	22.5	41.3	15.5	15.2	1.1
Level of Service	D	C	D	B	B	A
Approach Delay (s)	38.5			16.1	14.6	
Approach LOS	D			B	B	

Intersection Summary			
HCM 2000 Control Delay	19.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	88.2	Sum of lost time (s)	13.0
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Timings
6: NH27 & Continental Drive

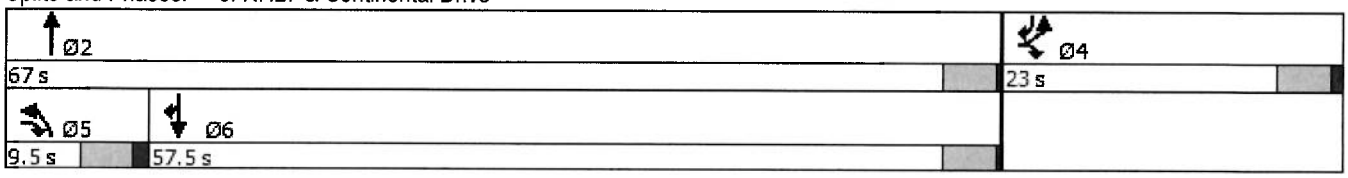
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	192	94	23	963	736	30
Future Volume (vph)	192	94	23	963	736	30
Turn Type	Prot	pt+ov	Prot	NA	NA	pt+ov
Protected Phases	4	4 5	5	2	6	6 4
Permitted Phases						
Detector Phase	4	4 5	5	2	6	6 4
Switch Phase						
Minimum Initial (s)	5.0		5.0	4.0	4.0	
Minimum Split (s)	9.5		9.5	20.0	20.0	
Total Split (s)	23.0		9.5	67.0	57.5	
Total Split (%)	25.6%		10.6%	74.4%	63.9%	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0	0.5	0.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	4.5		4.5	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None		None	Max	None	
Act Effct Green (s)	16.6	26.1	5.0	63.1	53.6	74.7
Actuated g/C Ratio	0.19	0.30	0.06	0.72	0.61	0.85
v/c Ratio	0.79	0.24	0.27	0.84	0.75	0.02
Control Delay	52.1	5.5	47.7	17.3	18.2	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.1	5.5	47.7	17.3	18.2	0.4
LOS	D	A	D	B	B	A
Approach Delay	36.8			18.0	17.5	
Approach LOS	D			B	B	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 88.2
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 21.0
Intersection Capacity Utilization 68.4%
Analysis Period (min) 15

Intersection LOS: C
ICU Level of Service C

Splits and Phases: 6: NH27 & Continental Drive



Queues
6: NH27 & Continental Drive

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	270	132	26	1107	827	34
v/c Ratio	0.79	0.24	0.27	0.84	0.75	0.02
Control Delay	52.1	5.5	47.7	17.3	18.2	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.1	5.5	47.7	17.3	18.2	0.4
Queue Length 50th (ft)	145	0	15	405	320	0
Queue Length 95th (ft)	172	19	39	587	471	3
Internal Link Dist (ft)	217			330	1245	
Turn Bay Length (ft)		120	250			215
Base Capacity (vph)	379	551	98	1319	1109	1406
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.24	0.27	0.84	0.75	0.02

Intersection Summary

HCM Signalized Intersection Capacity Analysis
6: NH27 & Continental Drive

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	192	94	23	1029	804	30
Future Volume (vph)	192	94	23	1029	804	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1805	1568	1736	1845	1827	1615
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1805	1568	1736	1845	1827	1615
Peak-hour factor, PHF	0.71	0.71	0.87	0.87	0.89	0.89
Adj. Flow (vph)	270	132	26	1183	903	34
RTOR Reduction (vph)	0	95	0	0	0	5
Lane Group Flow (vph)	270	37	26	1183	903	29
Heavy Vehicles (%)	0%	3%	4%	3%	4%	0%
Turn Type	Prot	pt+ov	Prot	NA	NA	pt+ov
Protected Phases	4	4 5	5	2	6	6 4
Permitted Phases						
Actuated Green, G (s)	15.8	25.3	5.0	65.0	55.5	75.3
Effective Green, g (s)	15.8	25.3	5.0	65.0	55.5	75.3
Actuated g/C Ratio	0.18	0.28	0.06	0.73	0.62	0.84
Clearance Time (s)	4.5		4.5	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	319	444	97	1342	1135	1361
v/s Ratio Prot	c0.15	0.02	0.01	c0.64	0.49	0.02
v/s Ratio Perm						
v/c Ratio	0.85	0.08	0.27	0.88	0.80	0.02
Uniform Delay, d1	35.6	23.5	40.4	9.2	12.7	1.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	18.3	0.1	1.5	8.6	3.9	0.0
Delay (s)	53.9	23.6	41.9	17.8	16.6	1.1
Level of Service	D	C	D	B	B	A
Approach Delay (s)	43.9			18.3	16.0	
Approach LOS	D			B	B	

Intersection Summary			
HCM 2000 Control Delay	21.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	89.3	Sum of lost time (s)	13.0
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

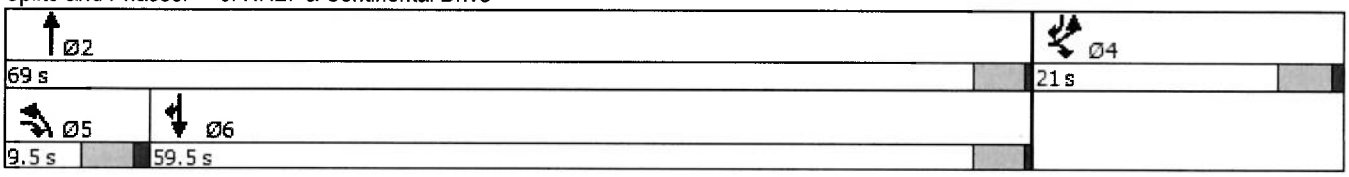
Timings
6: NH27 & Continental Drive

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	192	94	23	1029	804	30
Future Volume (vph)	192	94	23	1029	804	30
Turn Type	Prot	pt+ov	Prot	NA	NA	pt+ov
Protected Phases	4	4 5	5	2	6	6 4
Permitted Phases						
Detector Phase	4	4 5	5	2	6	6 4
Switch Phase						
Minimum Initial (s)	5.0		5.0	4.0	4.0	
Minimum Split (s)	9.5		9.5	20.0	20.0	
Total Split (s)	21.0		9.5	69.0	59.5	
Total Split (%)	23.3%		10.6%	76.7%	66.1%	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0	0.5	0.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	4.5		4.5	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None		None	Max	None	
Act Effct Green (s)	15.8	25.3	5.0	65.0	55.5	75.8
Actuated g/C Ratio	0.18	0.28	0.06	0.73	0.62	0.85
v/c Ratio	0.85	0.25	0.27	0.88	0.80	0.02
Control Delay	60.6	5.9	48.0	19.4	19.6	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.6	5.9	48.0	19.4	19.6	0.4
LOS	E	A	D	B	B	A
Approach Delay	42.7			20.1	18.9	
Approach LOS	D			C	B	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 89.3
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 23.2
Intersection LOS: C
Intersection Capacity Utilization 71.9%
ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 6: NH27 & Continental Drive



Queues
6: NH27 & Continental Drive

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	270	132	26	1183	903	34
v/c Ratio	0.85	0.25	0.27	0.88	0.80	0.02
Control Delay	60.6	5.9	48.0	19.4	19.6	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.6	5.9	48.0	19.4	19.6	0.4
Queue Length 50th (ft)	149	0	15	436	354	0
Queue Length 95th (ft)	178	20	39	#666	526	3
Internal Link Dist (ft)	217			330	1245	
Turn Bay Length (ft)		120	250			215
Base Capacity (vph)	333	535	97	1343	1135	1388
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.25	0.27	0.88	0.80	0.02

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Appendix H **Traffic Signal Warrants Analysis**

Seasonal Adjustment Factors
NHDOT Group 4 (Urban Highways)

Stephen G. Pernaw & Company, Inc.

Year 2019 Monthly Data - Urban

		Adjustment to	
Month	ADT	Average	Peak
Jan	11,431	1.12	1.23
Feb	11,848	1.08	1.18
Mar	12,141	1.06	1.15
Apr	12,860	1.00	1.09
May	13,551	0.95	1.03
Jun	13,785	0.93	1.02
Jul	13,942	0.92	1.01
Aug	14,016	0.92	1.00
Sep	13,379	0.96	1.05
Oct	13,339	0.96	1.05
Nov	12,265	1.05	1.14
Dec	11,496	1.12	1.22

Year 2018 Monthly Data - Urban

		Adjustment to	
Month	ADT	Average	Peak
Jan	11,282	1.13	1.24
Feb	11,848	1.08	1.18
Mar	11,828	1.08	1.18
Apr	12,491	1.02	1.12
May	13,587	0.94	1.03
Jun	13,911	0.92	1.00
Jul	13,765	0.93	1.01
Aug	13,945	0.92	1.00
Sep	13,168	0.97	1.06
Oct	13,367	0.96	1.04
Nov	12,215	1.05	1.14
Dec	11,963	1.07	1.17

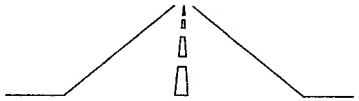
Average Peak-Month Factor 1.05

AUG MONTH FACTOR = 0.96

Traffic Signal Warrants Analysis

NH27 / North Site Driveway / Gas Station Driveway

2031 Average-Month Build Volumes



Stephen G. Pernaw & Company, Inc.

Traffic Signal Warrants Inputs (Exiting Vehicles) - NH27 / North Site Driveway

	Day Care Exits						Office Exits						Retail Exits						Residential Exits							North Driveway	
	ITE %	Trips	% Out	Outs	Adj.	Outs	ITE %	Trips	% Out	Outs	Adj.	Outs	ITE %	Trips	% Out	Outs	Adj.	Outs	ITE %	Trips	% Out	Outs	Adj.	Outs	Tot.	65% L-Out	16% R-Out
12-1 AM	0.0	0	0.50	0		0	0.1	0	0.50	0		0	0.2	1	0.50	1		1	0.5	6	0.50	3		3	4	3	1
1-2 AM	0.0	0	0.50	0		0	0.0	0	0.50	0		0	0.1	0	0.50	0		0	0.3	4	0.50	2		2	2	1	0
2-3 AM	0.0	0	0.50	0		0	0.0	0	0.50	0		0	0.0	0	0.50	0		0	0.2	2	0.50	1		1	1	1	0
3-4 AM	0.0	0	0.50	0		0	0.1	0	0.50	0		0	0.0	0	0.50	0		0	0.3	4	0.50	2		2	2	1	0
4-5 AM	0.0	0	0.50	0		0	0.2	0	0.50	0		0	0.0	0	0.50	0		0	0.5	6	0.50	3		3	3	2	0
5-6 AM	0.4	4	0.50	2	-1	1	0.2	0	0.50	0		0	0.1	0	0.50	0		0	1.7	21	0.50	11		11	12	8	2
6-7 AM	3.6	34	0.50	17		17	2.2	4	0.50	2	-1	1	0.2	1	0.50	1		1	4.0	49	0.50	25		25	44	29	7
7-8 AM	25.2	240	0.47	113	-10	103	7.0	14	0.14	2		2	1.1	5	0.38	2		2	7.5	92	0.74	68	-13	55	162	105	26
8-9 AM	9.3	89	0.47	42	-5	37	8.8	17	0.14	2	1	3	2.0	8	0.38	3	1	4	6.2	76	0.74	56	-1	55	99	64	16
9-10 AM	4.1	39	0.50	20	-5	15	5.4	10	0.50	5		5	3.6	15	0.50	8		8	4.3	52	0.60	31		31	59	38	9
10-11 AM	5.5	52	0.50	26	-5	21	5.9	11	0.50	6		6	5.6	24	0.50	12		12	3.7	45	0.50	23		23	62	40	10
11-12 PM	3.8	36	0.50	18	-5	13	8.4	16	0.50	8		8	8.3	35	0.50	18		18	4.5	55	0.50	28		28	67	44	11
12-1 PM	2.3	22	0.50	11	-5	6	10.4	20	0.50	10		10	10.0	42	0.50	21		21	4.7	57	0.50	29		29	66	43	11
1-2 PM	2.5	24	0.50	12	-5	7	8.2	16	0.50	8		8	9.3	39	0.50	20		20	4.4	54	0.50	27		27	62	40	10
2-3 PM	9.7	93	0.50	47	-5	42	7.5	15	0.50	8		8	9.0	38	0.50	19		19	5.4	66	0.50	33		33	102	66	16
3-4 PM	9.1	87	0.50	44	-5	39	7.4	14	0.50	7		7	8.8	37	0.50	19		19	5.8	71	0.50	36		36	101	66	16
4-5 PM	9.8	93	0.53	49	-5	44	10.1	20	0.84	17	1	18	9.2	39	0.52	20	2	22	8.3	101	0.39	39	-2	37	121	79	19
5-6 PM	11.7	112	0.53	59	59	118	10.4	20	0.84	17	1	18	9.3	39	0.52	20	2	22	10.1	123	0.39	48	-11	37	195	127	31
6-7 PM	2.9	28	0.50	14		14	2.4	5	0.50	3	-1	2	8.0	34	0.50	17		17	7.9	96	0.39	37		37	70	46	11
7-8 PM	0.0	0	0.50	0		0	1.7	3	0.50	2	-1	1	6.1	26	0.50	13	-2	11	6.3	77	0.50	39		39	51	33	8
8-9 PM	0.0	0	0.50	0		0	1.0	2	0.50	1	-1	0	4.4	19	0.50	10	-2	8	5.1	62	0.50	31	4	35	43	28	7
9-10 PM	0.0	0	0.50	0		0	1.0	2	0.50	1	-1	0	2.9	12	0.50	6	-2	4	3.9	48	0.50	24	4	28	32	21	5
10-11 PM	0.0	0	0.50	0		0	1.0	2	0.50	1	-1	0	1.1	5	0.50	3	-1	2	2.7	33	0.50	17	4	21	23	15	4
11-12 AM	0.0	0	0.50	0		0	0.4	1	0.50	1	-1	0	0.5	2	0.50	1		1	1.5	18	0.50	9	3	12	13	8	2
	99.9	953		474		**477**	99.8	192		101		**97**	99.8	421		214		**212**	99.8	1218		622		**610**	1396	908	222
		954						194						424						1220							

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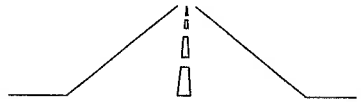

Stephen G. Pernaw & Company, Inc.

Traffic Signal Warrants Inputs (Entering Vehicles) - NH27 / North Site Driveway

	Day Care Exits						Office Exits						Retail Exits						Residential Exits							North Driveway	
	ITE %	Trips	% In	Ins	Adj.	Ins	ITE %	Trips	% In	Ins	Adj.	Ins	ITE %	Trips	% In	Ins	Adj.	Ins	ITE %	Trips	% In	Ins	Adj.	Ins	Tot.	65% R-In	35% L-In
12-1 AM	0.0	0	0.50	0		0	0.1	0	0.50	0		0	0.2	1	0.50	1		1	0.5	6	0.50	3		3	4	3	1
1-2 AM	0.0	0	0.50	0		0	0.0	0	0.50	0		0	0.1	0	0.50	0		0	0.3	4	0.50	2		2	2	1	1
2-3 AM	0.0	0	0.50	0		0	0.0	0	0.50	0		0	0.0	0	0.50	0		0	0.2	2	0.50	1		1	1	1	0
3-4 AM	0.0	0	0.50	0		0	0.1	0	0.50	0		0	0.0	0	0.50	0		0	0.3	4	0.50	2		2	2	1	1
4-5 AM	0.0	0	0.50	0		0	0.2	0	0.50	0		0	0.0	0	0.50	0		0	0.5	6	0.50	3	1	4	4	3	1
5-6 AM	0.4	4	0.50	2		2	0.2	0	0.50	0		0	0.1	0	0.50	0		0	1.7	21	0.50	11	1	12	14	9	5
6-7 AM	3.6	34	0.50	17		17	2.2	4	0.50	2		2	0.2	1	0.50	1		1	4.0	49	0.50	25		25	45	29	16
7-8 AM	25.2	240	0.53	127	-10	117	7.0	14	0.86	12	5	17	1.1	5	0.62	3	4	7	7.5	92	0.26	24	-4	20	161	105	56
8-9 AM	9.3	89	0.53	47		47	8.8	17	0.86	15		15	2.0	8	0.62	5	0	5	6.2	76	0.26	20		20	87	57	30
9-10 AM	4.1	39	0.50	20	-6	14	5.4	10	0.50	5		5	3.6	15	0.50	8	-1	7	4.3	52	0.60	31	2	33	59	38	21
10-11 AM	5.5	52	0.50	26	-6	20	5.9	11	0.50	6	-1	5	5.6	24	0.50	12	-1	11	3.7	45	0.50	23	2	25	61	40	21
11-12 PM	3.8	36	0.50	18	-6	12	8.4	16	0.50	8	-1	7	8.3	35	0.50	18	-1	17	4.5	55	0.50	28	3	31	67	44	23
12-1 PM	2.3	22	0.50	11	-6	5	10.4	20	0.50	10	-1	9	10.0	42	0.50	21	-1	20	4.7	57	0.50	29	3	32	66	43	23
1-2 PM	2.5	24	0.50	12	-6	6	8.2	16	0.50	8	-1	7	9.3	39	0.50	20	-1	19	4.4	54	0.50	27	3	30	62	40	22
2-3 PM	9.7	93	0.50	47	-6	41	7.5	15	0.50	8	-1	7	9.0	38	0.50	19	-1	18	5.4	66	0.50	33	2	35	101	66	35
3-4 PM	9.1	87	0.50	44	-6	38	7.4	14	0.50	7		7	8.8	37	0.50	19	-1	18	5.8	71	0.50	36	2	38	101	66	35
4-5 PM	9.8	93	0.47	44		44	10.1	20	0.16	3		3	9.2	39	0.48	19	2	21	8.3	101	0.61	62	-3	59	127	83	44
5-6 PM	11.7	112	0.47	53	52	105	10.4	20	0.16	3	1	4	9.3	39	0.48	19	2	21	10.1	123	0.61	75	-16	59	189	123	66
6-7 PM	2.9	28	0.50	14	-5	9	2.4	5	0.50	3		3	8.0	34	0.50	17	-1	16	7.9	96	0.50	48	2	50	78	51	27
7-8 PM	0.0	0	0.50	0		0	1.7	3	0.50	2		2	6.1	26	0.50	13	-1	12	6.3	77	0.50	39	2	41	55	36	19
8-9 PM	0.0	0	0.50	0		0	1.0	2	0.50	1		1	4.4	19	0.50	10	-1	9	5.1	62	0.50	31	2	33	43	28	15
9-10 PM	0.0	0	0.50	0		0	1.0	2	0.50	1		1	2.9	12	0.50	6	-1	5	3.9	48	0.50	24	2	26	32	21	11
10-11 PM	0.0	0	0.50	0		0	1.0	2	0.50	1		1	1.1	5	0.50	3		3	2.7	33	0.50	17	2	19	23	15	8
11-12 AM	0.0	0	0.50	0		0	0.4	1	0.50	1		1	0.5	2	0.50	1		1	1.5	18	0.50	9	1	10	12	8	4
	99.9	953		482		**477**	99.8	192		96		**97**	99.8	421		215		**212**	99.8	1218		603		**610**	1396	911	485
		954						194						424						1220							

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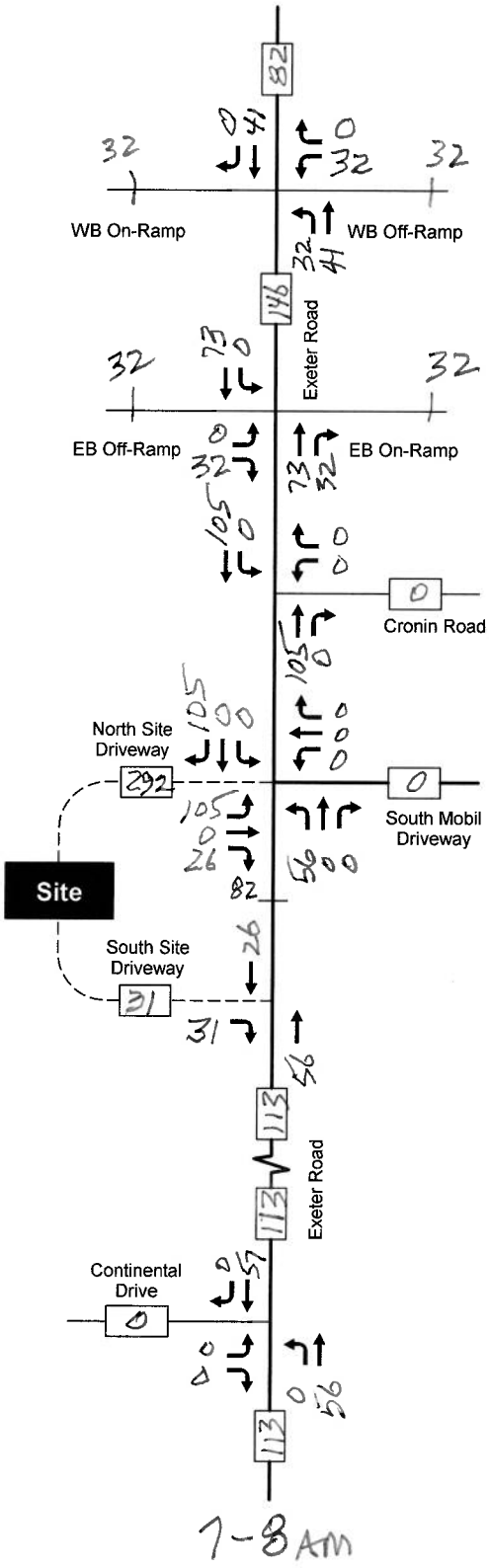
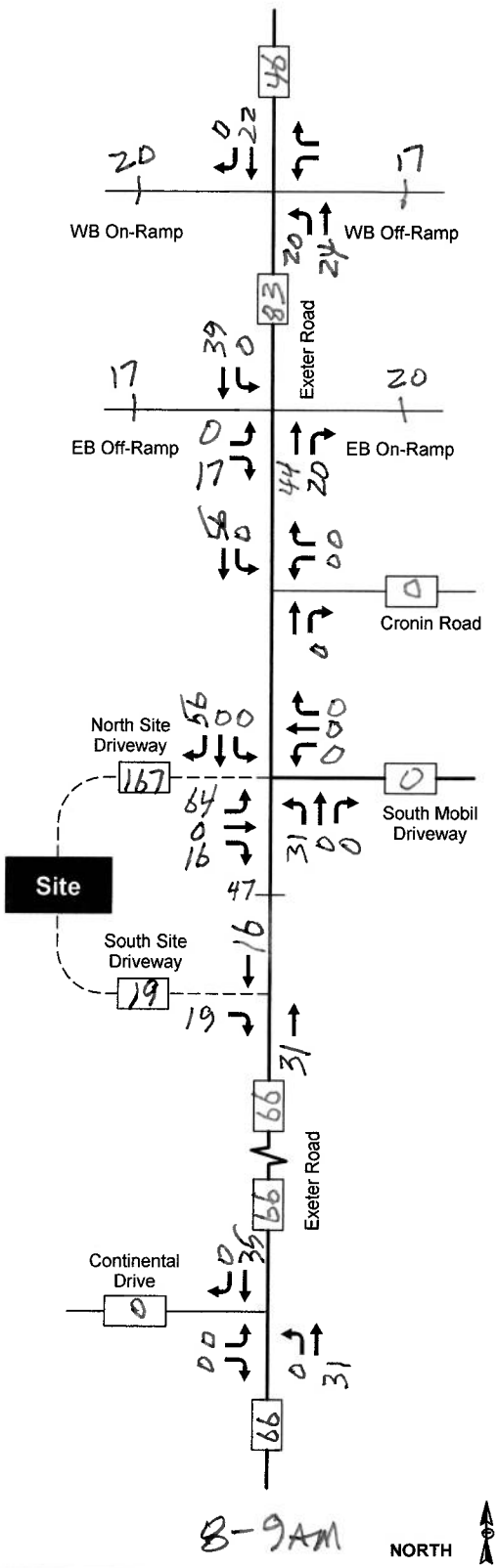


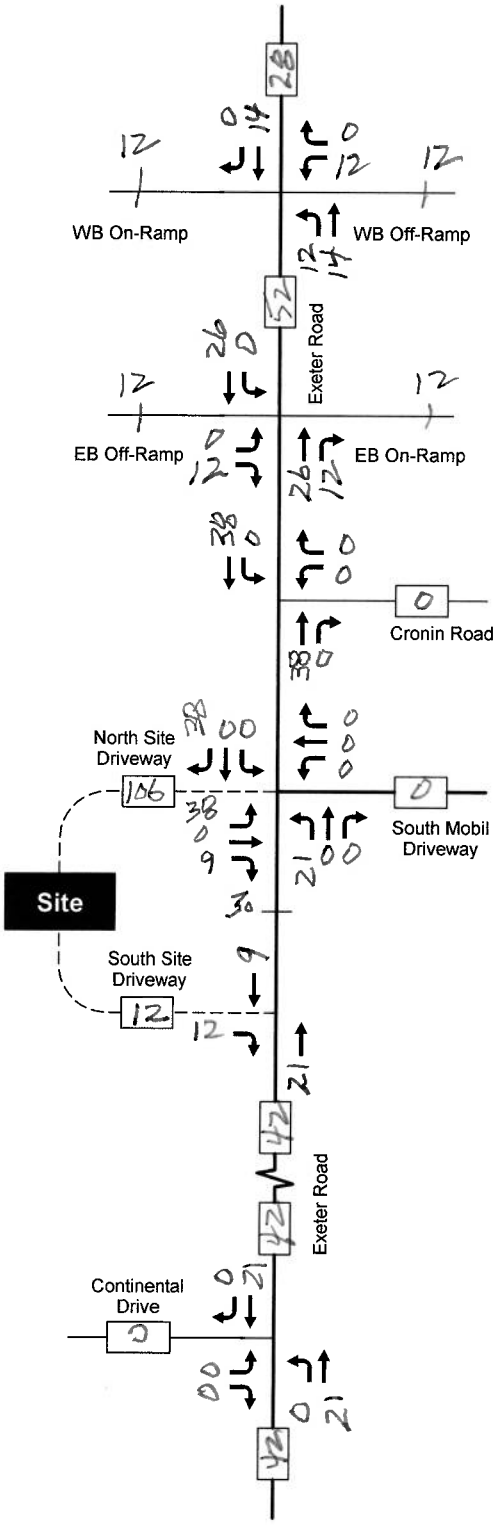


1941A

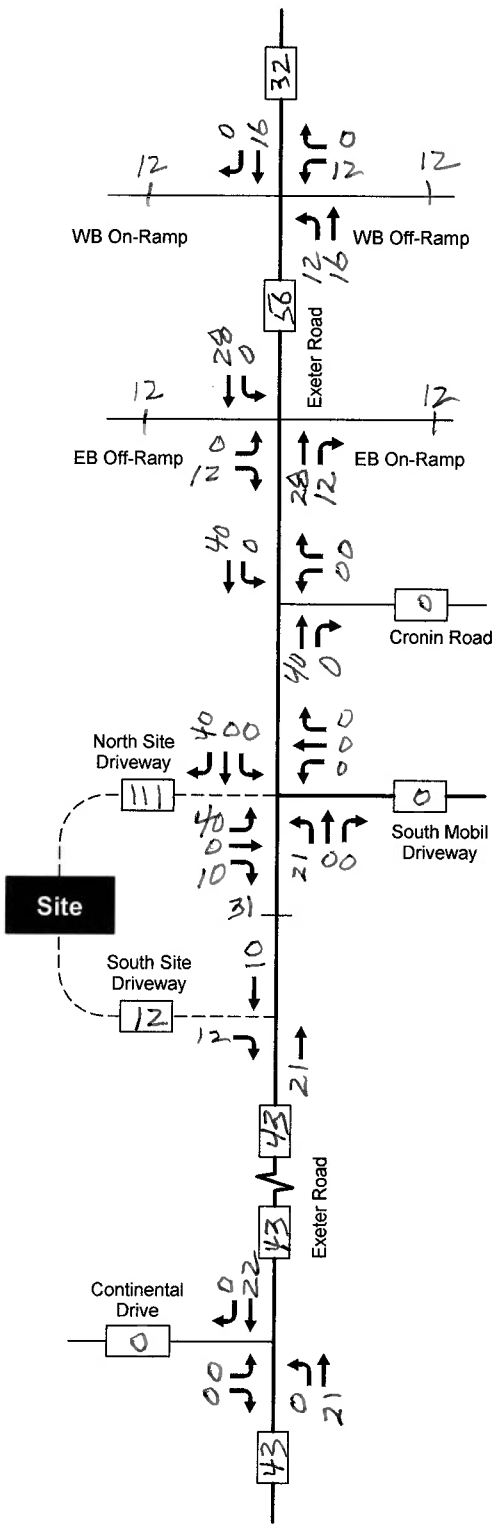
Appendix

Site Generated Traffic Volumes

Traffic Impact Assessment, Proposed Mixed-Use Development, Exeter, New Hampshire



9-10 AM



10-11 AM

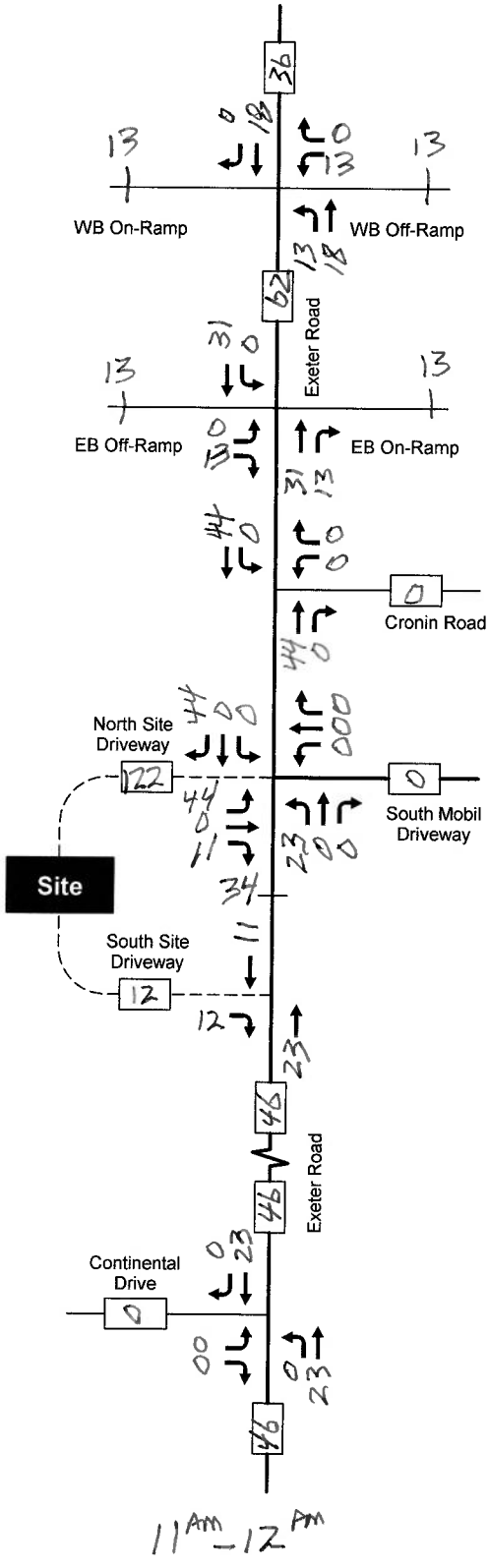
NORTH

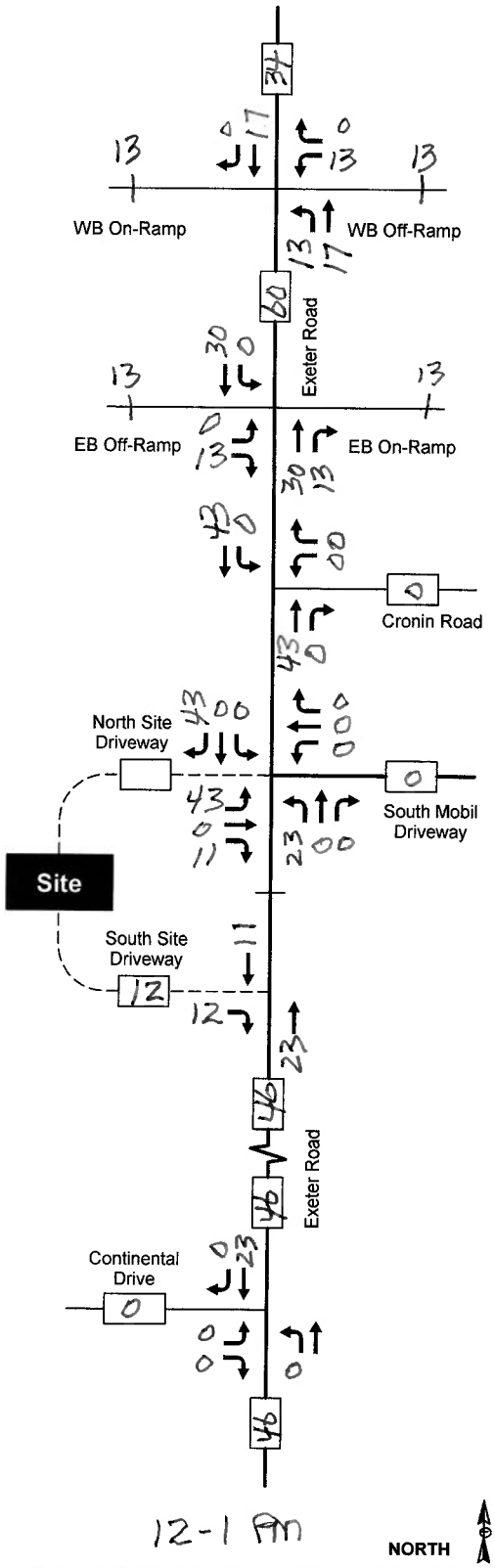
1941A

Appendix

Site Generated Traffic Volumes

Traffic Impact Assessment, Proposed Mixed-Use Development, Exeter, New Hampshire



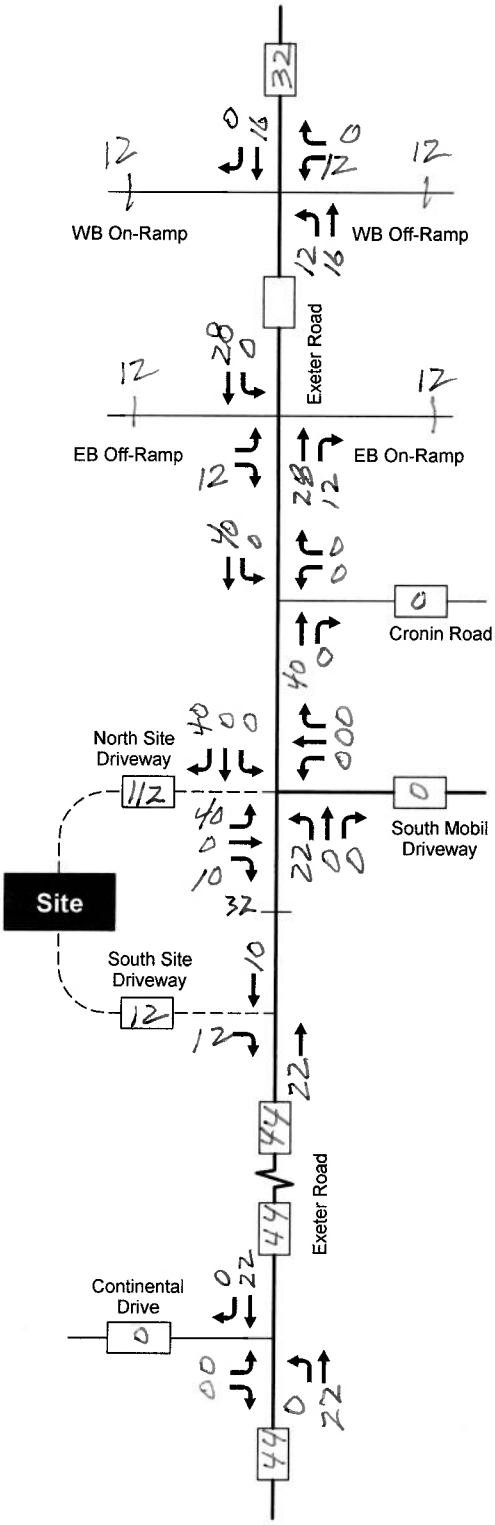


1941A

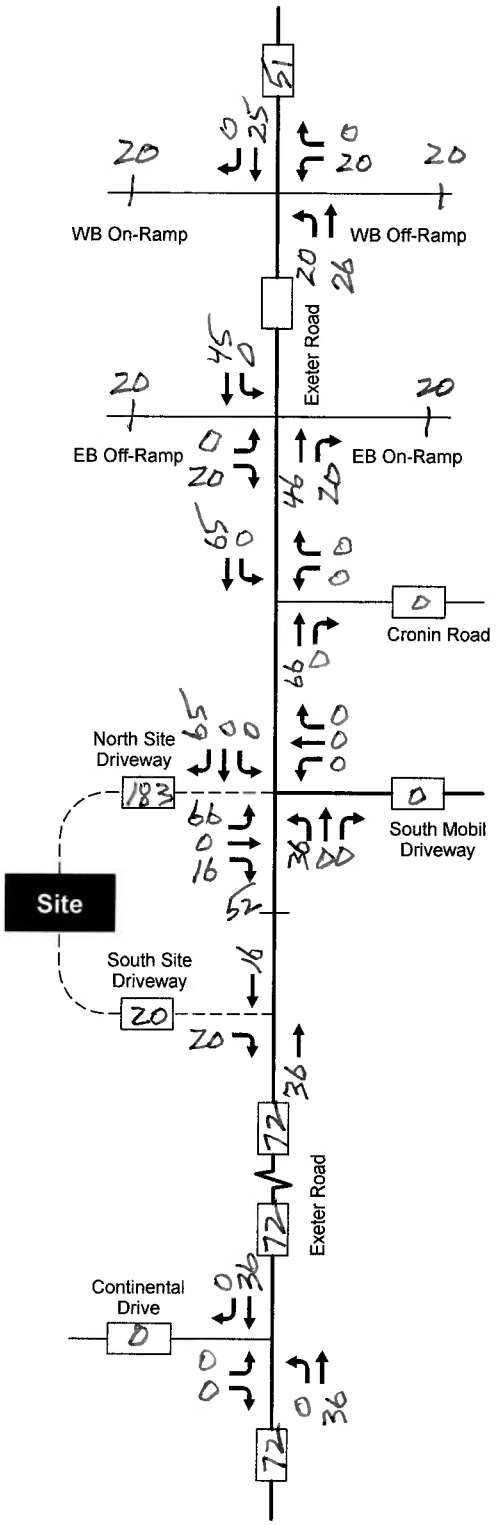
Appendix

Site Generated Traffic Volumes

Traffic Impact Assessment, Proposed Mixed-Use Development, Exeter, New Hampshire



1-2 PM



2-3 PM

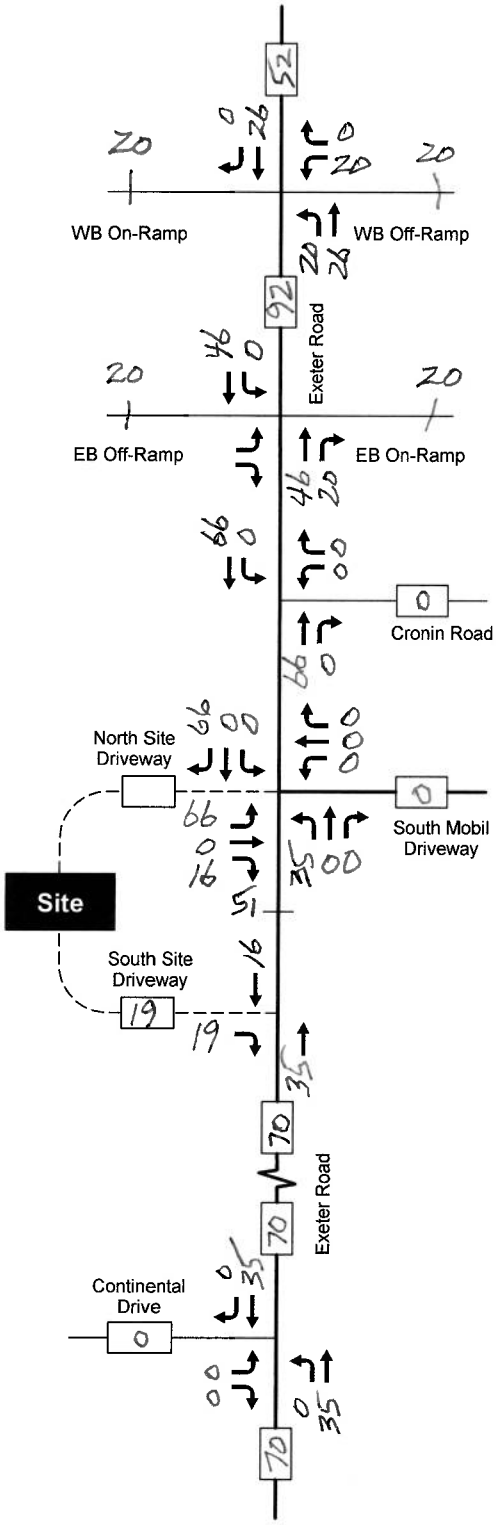
NORTH

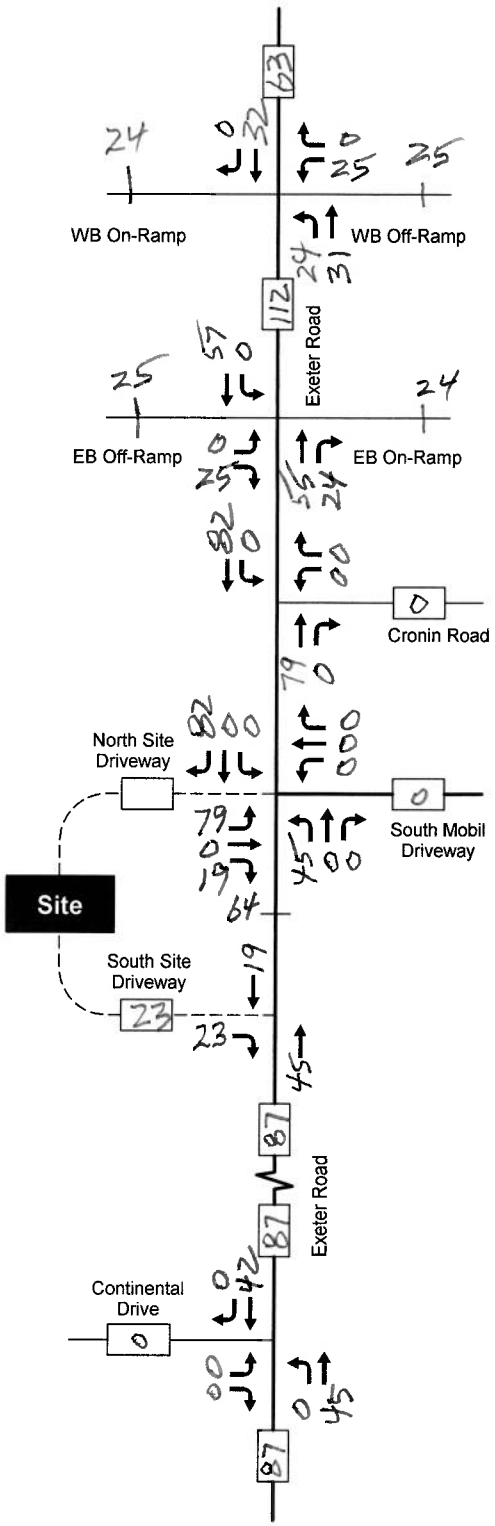
1941A

Appendix

Site Generated Traffic Volumes

Traffic Impact Assessment, Proposed Mixed-Use Development, Exeter, New Hampshire



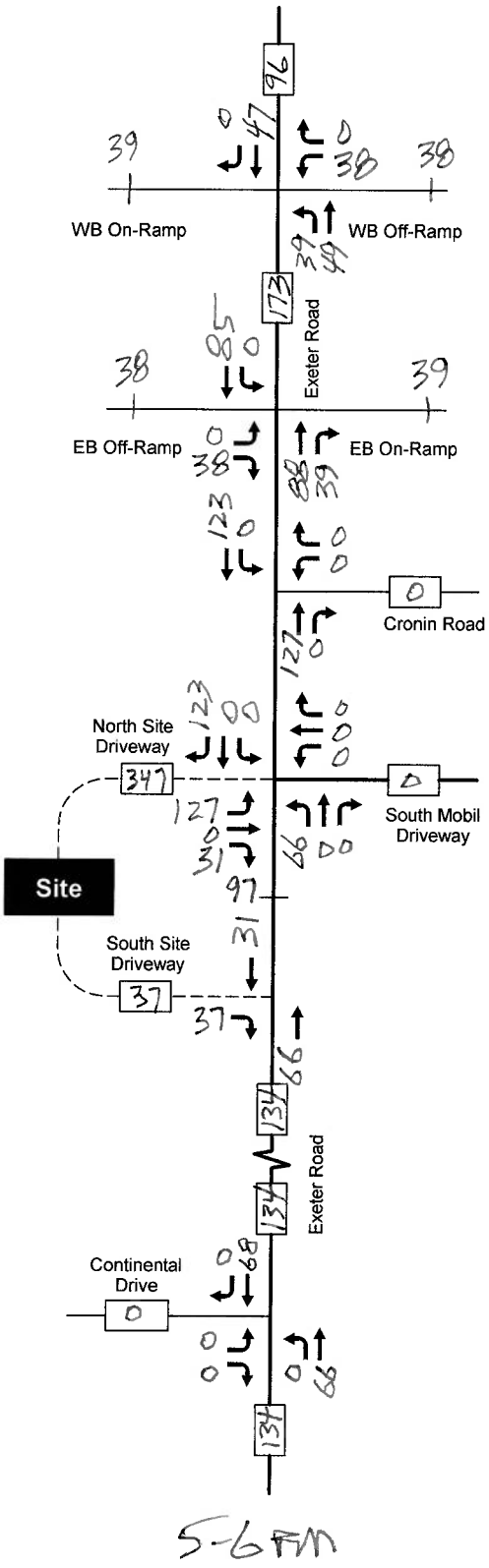


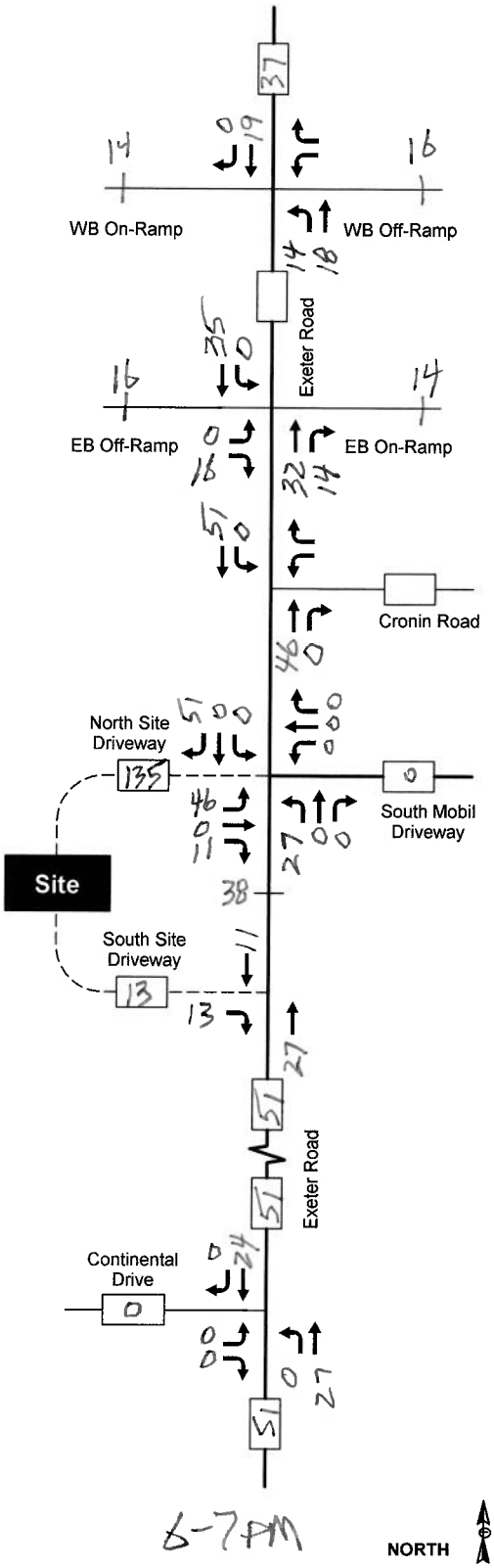
1941A

Appendix

Site Generated Traffic Volumes

Traffic Impact Assessment, Proposed Mixed-Use Development, Exeter, New Hampshire





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Appendix

Site Generated Traffic Volumes

Traffic Impact Assessment, Proposed Mixed-Use Development, Exeter, New Hampshire

Warrants Summary Report

3: NH27 / North Driveway 2031 Build

Intersection Information

	Major Street	Minor Street
Street Name	NH27	Gas Station Driveway
Direction	NB/SB	EB/WB
Number of Lane:	1	1
Approach Speed	30	20

Warrant	Met?	Notes
Warrant 1, Eight-Hour Vehicular Volume		
	No	
Condition A or B Met	No	3 Hours met (8 required)
Condition A and B M	No	1 Hours met (8 required)
Warrant 2, Four-Hour Vehicular Volume		
	No	2 Hours met (4 required)

Warrant 1: Eight-hour Vehicular Volume

3: NH27 / North Driveway

Intersection Information

Major Street Name:	NH27
Major Street Direction:	NB/SB
Minor Street Direction:	EB/WB

WARRANT 1 MET? No

Details:

Condition A Met?	No	3 Hours met (8 required)
Condition B Met?	No	1 Hours met (8 required)

Hour	Major Street Vehicles (Total of Both Approaches)		High Volume Minor Approach Vehicles		100% Standard Met? Cond. A OR Cond. B		80% Standard Met? Cond. A AND Cond. B	
					Condition A 100% Column	Condition B 100% Column	Condition A 80% Column	Condition B 80% Column
07:00 to 08:00	**1,846**		**105**		No	Yes*	No	Yes
Condition A	Volume >= 100% column (500)?	Yes	Volume >= 100% column (750)?	No				
	Volume >= 80% column (400)?	Yes	Volume >= 80% column (600)?	No				
Condition B	**Volume >= 100% column (750)?**	Yes	**Volume >= 100% column (75)?**	Yes				
	Volume >= 80% column (600)?	Yes	**Volume >= 80% column (60)?**	Yes				
08:00 to 09:00	**1,448**		**64**		No	No	No	Yes
Condition A	Volume >= 100% column (500)?	Yes	Volume >= 100% column (750)?	No				
	Volume >= 80% column (400)?	Yes	Volume >= 80% column (600)?	No				
Condition B	**Volume >= 100% column (750)?**	Yes	**Volume >= 100% column (75)?**	No				
	Volume >= 80% column (600)?	Yes	**Volume >= 80% column (60)?**	Yes				
09:00 to 10:00	**1,055**		**49**		No	No	No	No
Condition A	Volume >= 100% column (500)?	Yes	Volume >= 100% column (750)?	No				
	Volume >= 80% column (400)?	Yes	Volume >= 80% column (600)?	No				
Condition B	**Volume >= 100% column (750)?**	Yes	**Volume >= 100% column (75)?**	No				
	Volume >= 80% column (600)?	Yes	**Volume >= 80% column (60)?**	No				

Warrant 1: Eight-hour Vehicular Volume

3: NH27 / North Driveway

10:00 to 11:00	**939**		**40**		No	No	No	No
Condition A	Volume >= 100% column (500)?	Yes	Volume >= 100% column (750)?	No				
	Volume >= 80% column (400)?	Yes	Volume >= 80% column (600)?	No				
Condition B	**Volume >= 100% column (750)?**	Yes	**Volume >= 100% column (75)?**	No				
	Volume >= 80% column (600)?	Yes	**Volume >= 80% column (60)?**	No				
11:00 to 12:00	**1,065**		**44**		No	No	No	No
Condition A	Volume >= 100% column (500)?	Yes	Volume >= 100% column (750)?	No				
	Volume >= 80% column (400)?	Yes	Volume >= 80% column (600)?	No				
Condition B	**Volume >= 100% column (750)?**	Yes	**Volume >= 100% column (75)?**	No				
	Volume >= 80% column (600)?	Yes	**Volume >= 80% column (60)?**	No				
12:00 to 13:00	**1,219**		**44**		No	No	No	No
Condition A	Volume >= 100% column (500)?	Yes	Volume >= 100% column (750)?	No				
	Volume >= 80% column (400)?	Yes	Volume >= 80% column (600)?	No				
Condition B	**Volume >= 100% column (750)?**	Yes	**Volume >= 100% column (75)?**	No				
	Volume >= 80% column (600)?	Yes	**Volume >= 80% column (60)?**	No				
13:00 to 14:00	**1,092**		**40**		No	No	No	No
Condition A	Volume >= 100% column (500)?	Yes	Volume >= 100% column (750)?	No				
	Volume >= 80% column (400)?	Yes	Volume >= 80% column (600)?	No				
Condition B	**Volume >= 100% column (750)?**	Yes	**Volume >= 100% column (75)?**	No				
	Volume >= 80% column (600)?	Yes	**Volume >= 80% column (60)?**	No				
14:00 to 15:00	**1,417**		**66**		No	No	No	Yes
Condition A	Volume >= 100% column (500)?	Yes	Volume >= 100% column (750)?	No				
	Volume >= 80% column (400)?	Yes	Volume >= 80% column (600)?	No				
Condition B	**Volume >= 100% column (750)?**	Yes	**Volume >= 100% column (75)?**	No				
	Volume >= 80% column (600)?	Yes	**Volume >= 80% column (60)?**	Yes				
15:00 to 16:00	**1,674**		**66**		No	No	No	Yes
Condition A	Volume >= 100% column (500)?	Yes	Volume >= 100% column (750)?	No				
	Volume >= 80% column (400)?	Yes	Volume >= 80% column (600)?	No				
Condition B	**Volume >= 100% column (750)?**	Yes	**Volume >= 100% column (75)?**	No				
	Volume >= 80% column (600)?	Yes	**Volume >= 80% column (60)?**	Yes				

Warrant 1: Eight-hour Vehicular Volume

3: NH27 / North Driveway

16:00 to 17:00	**2,001**		**79**		No	Yes*	No	Yes
Condition A	Volume >= 100% column (500)?	Yes	Volume >= 100% column (750)?	No				
	Volume >= 80% column (400)?	Yes	Volume >= 80% column (600)?	No				
Condition B	**Volume >= 100% column (750)?**	Yes	**Volume >= 100% column (75)?**	Yes				
	Volume >= 80% column (600)?	Yes	**Volume >= 80% column (60)?**	Yes				

17:00 to 18:00	**1,829**		**127**		No	Yes*	Yes*	Yes*
Condition A	Volume >= 100% column (500)?	Yes	Volume >= 100% column (750)?	No				
	Volume >= 80% column (400)?	Yes	Volume >= 80% column (600)?	Yes				
Condition B	**Volume >= 100% column (750)?**	Yes	**Volume >= 100% column (75)?**	Yes				
	Volume >= 80% column (600)?	Yes	**Volume >= 80% column (60)?**	Yes				

Warrant 2: Four-hour Vehicular Volume

3: NH27 / North Driveway

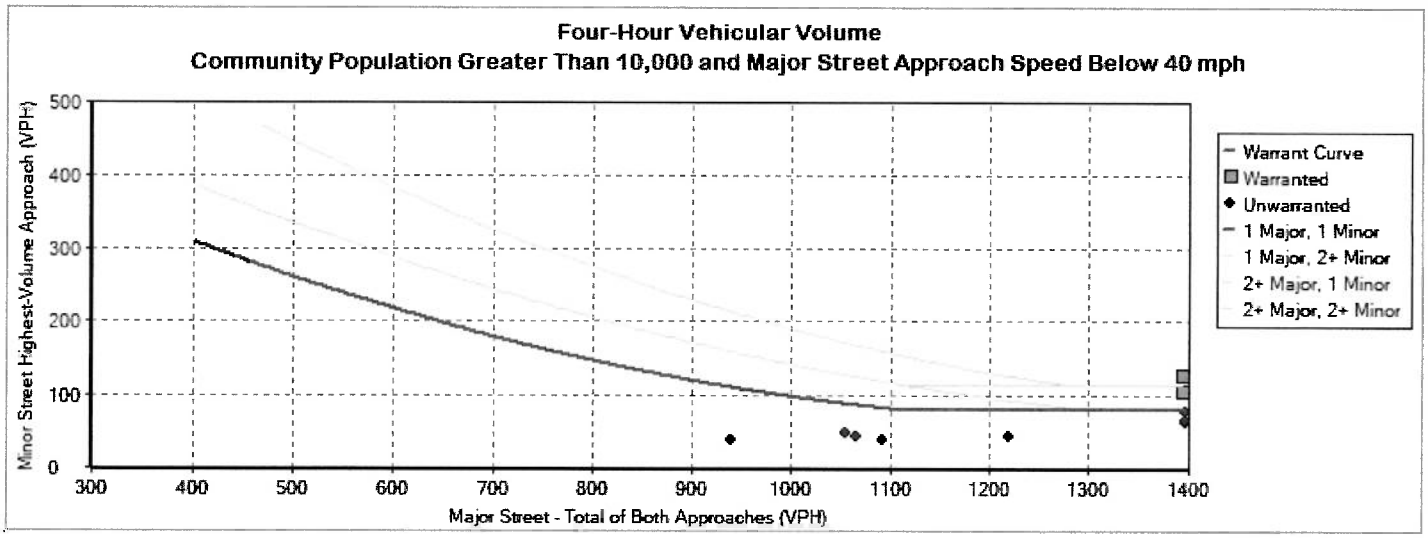
Intersection Information

	Major Street	Minor Street
Street Name	NH27	Gas Station Driveway
Direction	NB/SB	EB/WB
Number of Lane:	1	1
Approch Speed	30	20

Warrant 2 Met? No

Details:

Notes	2 Hours met (4 required)
Low population	No



Warrant 2: Four-hour Vehicular Volume

3: NH27 / North Driveway

Hourly Volumes

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
00:00:00 - 01:00:00	0	0
01:00:00 - 02:00:00	0	0
02:00:00 - 03:00:00	0	0
03:00:00 - 04:00:00	0	0
04:00:00 - 05:00:00	0	0
05:00:00 - 06:00:00	0	0
06:00:00 - 07:00:00	0	0
07:00:00 - 08:00:00	1,846 ✓	105 ✓
08:00:00 - 09:00:00	1,448 ✓	64 ✓
09:00:00 - 10:00:00	1,055 ✓	49 ✓
10:00:00 - 11:00:00	939 ✓	40 ✓
11:00:00 - 12:00:00	1,065 ✓	44 ✓
12:00:00 - 13:00:00	1,219 ✓	44 ✓
13:00:00 - 14:00:00	1,092 ✓	40 ✓
14:00:00 - 15:00:00	1,417 ✓	66 ✓
15:00:00 - 16:00:00	1,674 ✓	66 ✓
16:00:00 - 17:00:00	2,001 ✓	79 ✓
17:00:00 - 18:00:00	1,829 ✓	127 ✓
18:00:00 - 19:00:00	0	0
19:00:00 - 20:00:00	0	0
20:00:00 - 21:00:00	0	0
21:00:00 - 22:00:00	0	0
22:00:00 - 23:00:00	0	0
23:00:00 - 00:00:00	0	0

Warrant 2: Four-hour Vehicular Volume

3: NH27 / North Driveway

Warranted Hours

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
07:00:00 - 08:00:00	1,846.00	105.00
17:00:00 - 18:00:00	1,829.00	127.00

Note: Only data of hours warranted is represented in the above table.

Stephen G. Pernaw & Company, Inc.

TRAFFIC SIGNAL WARRANTS - INPUT VOLUMES

NH27 / North Site Driveway / Gas Station Driveway

October 2019 TMC

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	SUM
7-8 AM	0	743	61	8	0	38	96	529	0	0	0	0	1475
8-9 AM	0	616	38	6	0	42	86	415	0	0	0	0	1203
9-10 AM	0	406	34	13	0	32	69	335	0	0	0	0	889
10-11 AM	0	356	24	7	0	19	59	306	0	0	0	0	771
11-12 PM	0	428	17	2	0	16	59	342	0	0	0	0	864
12-1 PM	0	475	22	6	0	34	73	410	0	0	0	0	1020
1-2 PM	0	416	15	1	0	14	60	387	0	0	0	0	893
2-3 PM	0	501	36	6	0	19	63	520	0	0	0	0	1145
3-4 PM	0	554	16	3	0	22	80	691	0	0	0	0	1366
4-5 PM	0	604	20	7	0	25	95	877	0	0	0	0	1628
5-6 PM	0	598	25	6	0	26	78	696	0	0	0	0	1429
	0	5697	308	65	0	287	818	5508	0	0	0	0	12683

2031 Average Month No Build (0.96 X 1.13) 1.09

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	
7-8 AM	0	810	66	9	0	41	105	577	0	0	0	0	1608
8-9 AM	0	671	41	7	0	46	94	452	0	0	0	0	1311
9-10 AM	0	443	37	14	0	35	75	365	0	0	0	0	969
10-11 AM	0	388	26	8	0	21	64	334	0	0	0	0	841
11-12 PM	0	467	19	2	0	17	64	373	0	0	0	0	942
12-1 PM	0	518	24	7	0	37	80	447	0	0	0	0	1113
1-2 PM	0	453	16	1	0	15	65	422	0	0	0	0	972
2-3 PM	0	546	39	7	0	21	69	567	0	0	0	0	1249
3-4 PM	0	604	17	3	0	24	87	753	0	0	0	0	1488
4-5 PM	0	658	22	8	0	27	104	956	0	0	0	0	1775
5-6 PM	0	652	27	7	0	28	85	759	0	0	0	0	1558
	0	6210	334	73	0	312	892	6005	0	0	0	0	13826

Other Development Projects

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	
7-8 AM		90						37					127
8-9 AM		73						30					103
9-10 AM		54						22					76
10-11 AM		47						19					66
11-12 PM		53						22					75
12-1 PM		24						60					84
1-2 PM		21						53					74
2-3 PM		27						68					95
3-4 PM		32						80					112
4-5 PM		38						96					134
5-6 PM		33						84					117
		492						571					1063

Stephen G. Pernaw & Company, Inc.

TRAFFIC SIGNAL WARRANTS - INPUT VOLUMES

NH27 / North Site Driveway / Gas Station Driveway

Site Generated Volumes

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	
7-8 AM	105								56	26		105	292
8-9 AM	56								31	16		64	167
9-10 AM	38								21	9		38	106
10-11 AM	40								21	10		40	111
11-12 PM	44								23	11		44	122
12-1 PM	43								23	11		43	120
1-2 PM	40								22	10		40	112
2-3 PM	65								36	16		66	183
3-4 PM	66								35	16		66	183
4-5 PM	82								45	19		79	225
5-6 PM	123								66	31		127	347
	702								379	175		712	1968

2031 Average Month Build

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL		Mainline	EB	WB
7-8 AM	105	900	66	9	0	41	105	614	56	26	0	105	2027	1846	131	50
8-9 AM	56	744	41	7	0	46	94	482	31	16	0	64	1581	1448	80	53
9-10 AM	38	497	37	14	0	35	75	387	21	9	0	38	1151	1055	47	49
10-11 AM	40	435	26	8	0	21	64	353	21	10	0	40	1018	939	50	29
11-12 PM	44	520	19	2	0	17	64	395	23	11	0	44	1139	1065	55	19
12-1 PM	43	542	24	7	0	37	80	507	23	11	0	43	1317	1219	54	44
1-2 PM	40	474	16	1	0	15	65	475	22	10	0	40	1158	1092	50	16
2-3 PM	65	573	39	7	0	21	69	635	36	16	0	66	1527	1417	82	28
3-4 PM	66	636	17	3	0	24	87	833	35	16	0	66	1783	1674	82	27
4-5 PM	82	696	22	8	0	27	104	1052	45	19	0	79	2134	2001	98	35
5-6 PM	123	685	27	7	0	28	85	843	66	31	0	127	2022	1829	158	35
	702	6702	334	73	0	312	892	6576	379	175	0	712	16857	15585	887	385

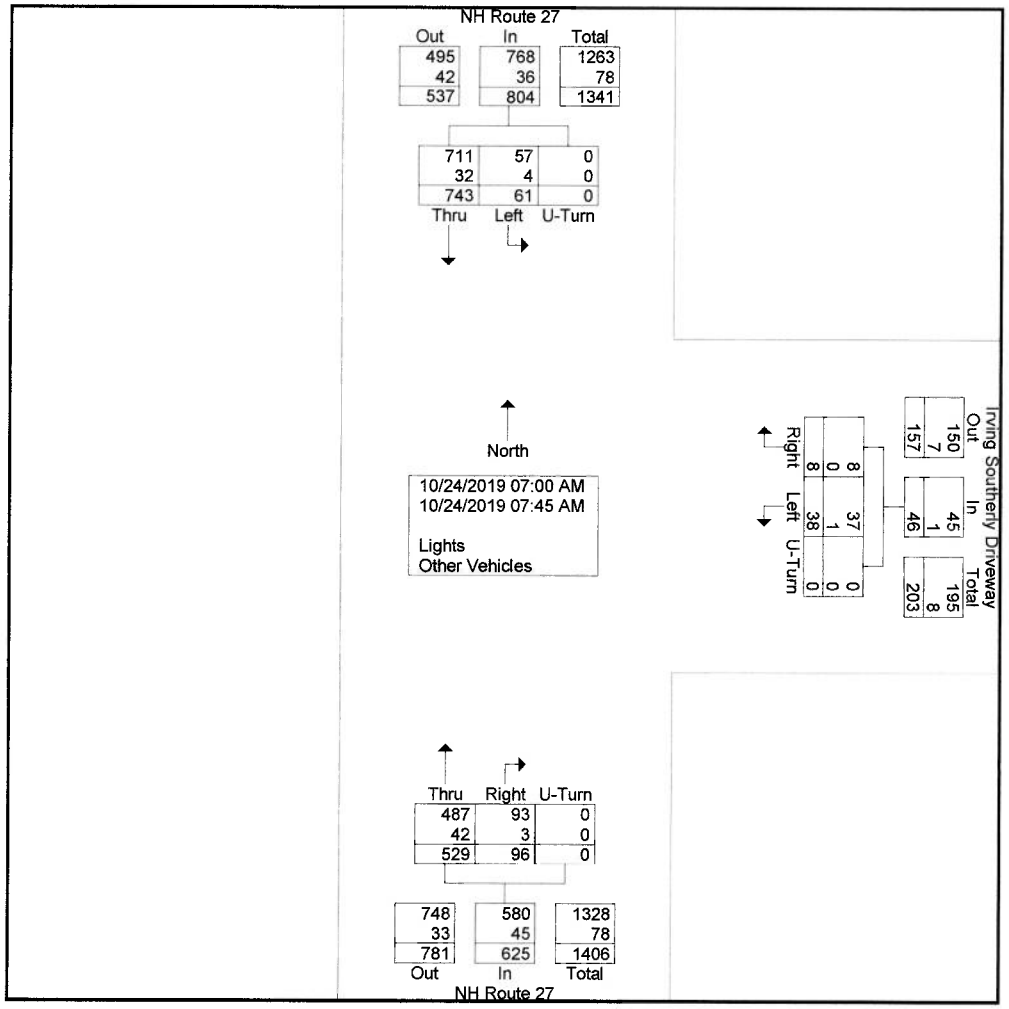
Stephen G. Pernaw & Company, Inc.

P.O. Box 1721
Concord, New Hampshire 03302

File Name : 1941A_INT_A_AM
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- Lights - Other Vehicles

	NH Route 27 From North				Irving Southerly Driveway From East				NH Route 27 From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
07:00 AM	131	14	0	145	4	7	0	11	32	199	0	231	387
07:15 AM	190	13	0	203	1	8	0	9	21	116	0	137	349
07:30 AM	188	19	0	207	1	9	0	10	22	121	0	143	360
07:45 AM	234	15	0	249	2	14	0	16	21	93	0	114	379
Total	743	61	0	804	8	38	0	46	96	529	0	625	1475
Grand Total	743	61	0	804	8	38	0	46	96	529	0	625	1475
Apprch %	92.4	7.6	0		17.4	82.6	0		15.4	84.6	0		
Total %	50.4	4.1	0	54.5	0.5	2.6	0	3.1	6.5	35.9	0	42.4	
Lights	711	57	0	768	8	37	0	45	93	487	0	580	1393
% Lights	95.7	93.4	0	95.5	100	97.4	0	97.8	96.9	92.1	0	92.8	94.4
Other Vehicles	32	4	0	36	0	1	0	1	3	42	0	45	82
% Other Vehicles	4.3	6.6	0	4.5	0	2.6	0	2.2	3.1	7.9	0	7.2	5.6



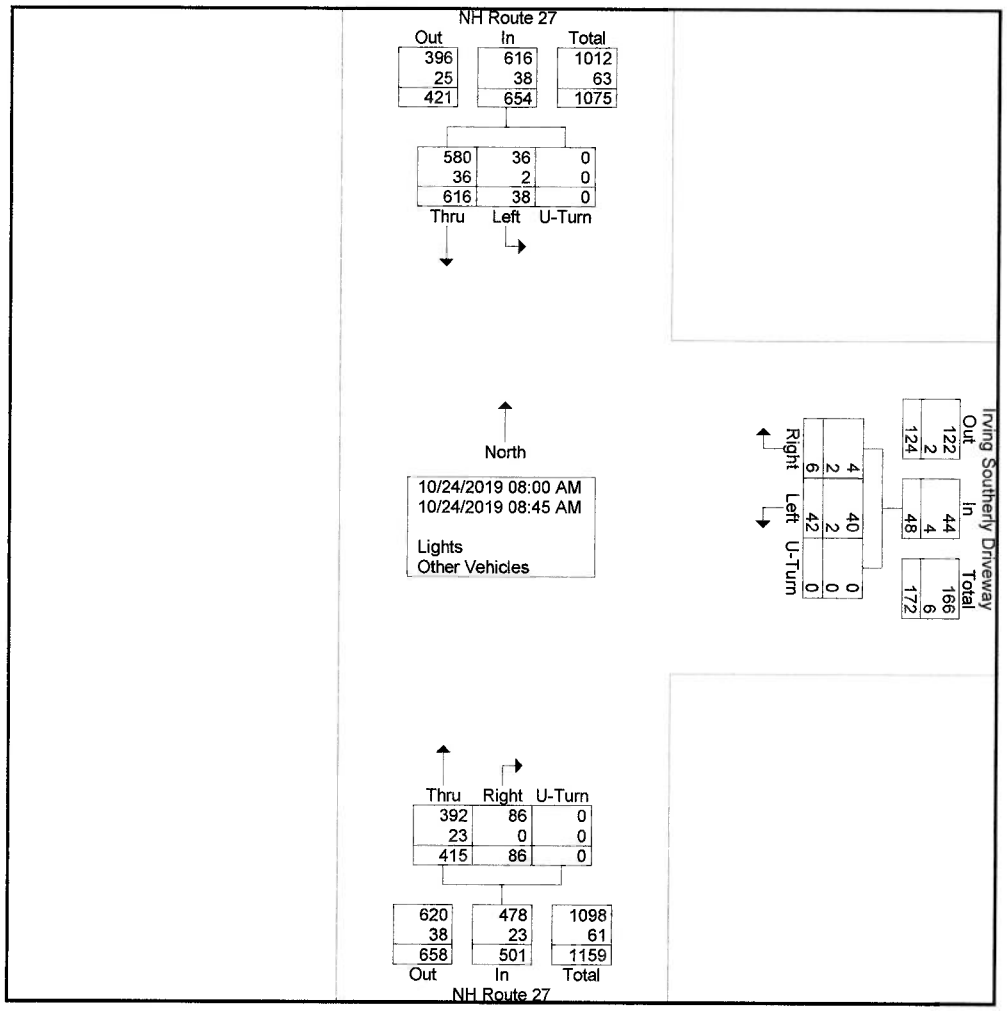
Stephen G. Pernaw & Company, Inc.

P.O. Box 1721
Concord, New Hampshire 03302

File Name : 1941A_INT_A_AM
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- Lights - Other Vehicles

	NH Route 27 From North				Irving Southerly Driveway From East				NH Route 27 From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
08:00 AM	186	13	0	199	2	11	0	13	20	100	0	120	332
08:15 AM	166	8	0	174	1	10	0	11	25	115	0	140	325
08:30 AM	130	6	0	136	1	10	0	11	26	105	0	131	278
08:45 AM	134	11	0	145	2	11	0	13	15	95	0	110	268
Total	616	38	0	654	6	42	0	48	86	415	0	501	1203
Grand Total	616	38	0	654	6	42	0	48	86	415	0	501	1203
Apprch %	94.2	5.8	0		12.5	87.5	0		17.2	82.8	0		
Total %	51.2	3.2	0	54.4	0.5	3.5	0	4	7.1	34.5	0	41.6	
Lights	580	36	0	616	4	40	0	44	86	392	0	478	1138
% Lights	94.2	94.7	0	94.2	66.7	95.2	0	91.7	100	94.5	0	95.4	94.6
Other Vehicles	36	2	0	38	2	2	0	4	0	23	0	23	65
% Other Vehicles	5.8	5.3	0	5.8	33.3	4.8	0	8.3	0	5.5	0	4.6	5.4



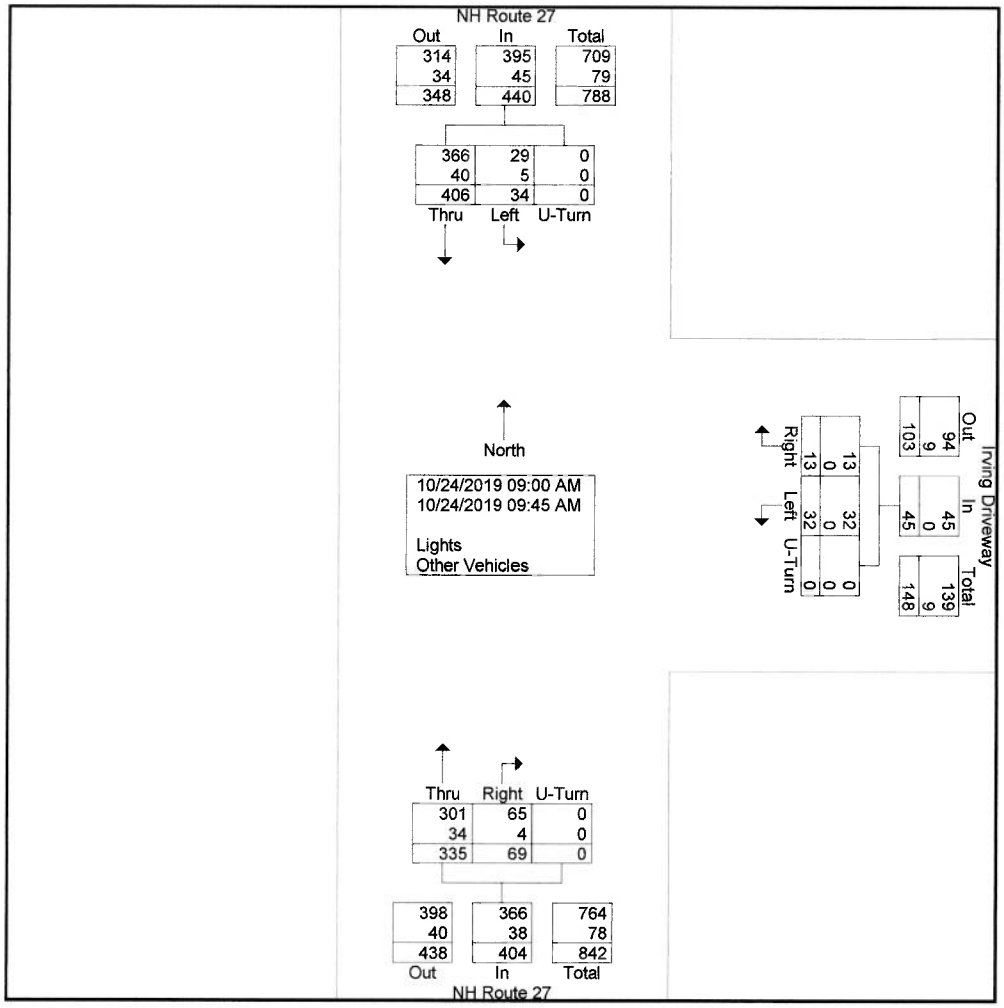
Stephen G. Pernaw & Company, Inc.

P.O. Box 1721
Concord, New Hampshire 03302

File Name : 1941A_INT_C_6_hr_764833_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- Lights - Other Vehicles

	NH Route 27 From North				Irving Driveway From East				NH Route 27 From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
09:00 AM	108	7	0	115	1	9	0	10	21	74	0	95	220
09:15 AM	97	12	0	109	4	10	0	14	22	97	0	119	242
09:30 AM	111	13	0	124	1	8	0	9	13	86	0	99	232
09:45 AM	90	2	0	92	7	5	0	12	13	78	0	91	195
Total	406	34	0	440	13	32	0	45	69	335	0	404	889
Grand Total	406	34	0	440	13	32	0	45	69	335	0	404	889
Apprch %	92.3	7.7	0		28.9	71.1	0		17.1	82.9	0		
Total %	45.7	3.8	0	49.5	1.5	3.6	0	5.1	7.8	37.7	0	45.4	
Lights	366	29	0	395	13	32	0	45	65	301	0	366	806
% Lights	90.1	85.3	0	89.8	100	100	0	100	94.2	89.9	0	90.6	90.7
Other Vehicles	40	5	0	45	0	0	0	0	4	34	0	38	83
% Other Vehicles	9.9	14.7	0	10.2	0	0	0	0	5.8	10.1	0	9.4	9.3



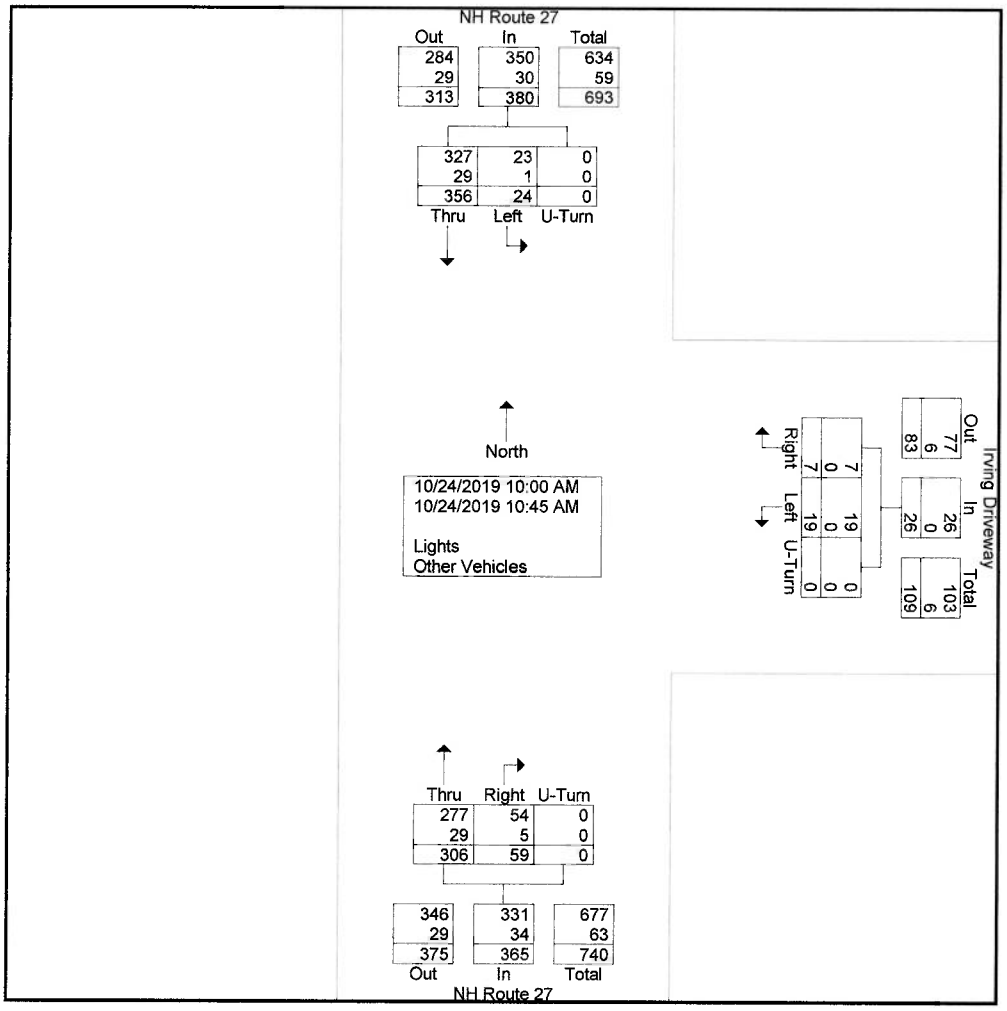
Stephen G. Pernaw & Company, Inc.

P.O. Box 1721
Concord, New Hampshire 03302

File Name : 1941A_INT_C_6_hr_764833_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- Lights - Other Vehicles

	NH Route 27 From North				Irving Driveway From East				NH Route 27 From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
10:00 AM	87	8	0	95	1	5	0	6	12	71	0	83	184
10:15 AM	90	6	0	96	3	2	0	5	17	66	0	83	184
10:30 AM	99	7	0	106	2	3	0	5	16	87	0	103	214
10:45 AM	80	3	0	83	1	9	0	10	14	82	0	96	189
Total	356	24	0	380	7	19	0	26	59	306	0	365	771
Grand Total	356	24	0	380	7	19	0	26	59	306	0	365	771
Apprch %	93.7	6.3	0		26.9	73.1	0		16.2	83.8	0		
Total %	46.2	3.1	0	49.3	0.9	2.5	0	3.4	7.7	39.7	0	47.3	
Lights	327	23	0	350	7	19	0	26	54	277	0	331	707
% Lights	91.9	95.8	0	92.1	100	100	0	100	91.5	90.5	0	90.7	91.7
Other Vehicles	29	1	0	30	0	0	0	0	5	29	0	34	64
% Other Vehicles	8.1	4.2	0	7.9	0	0	0	0	8.5	9.5	0	9.3	8.3



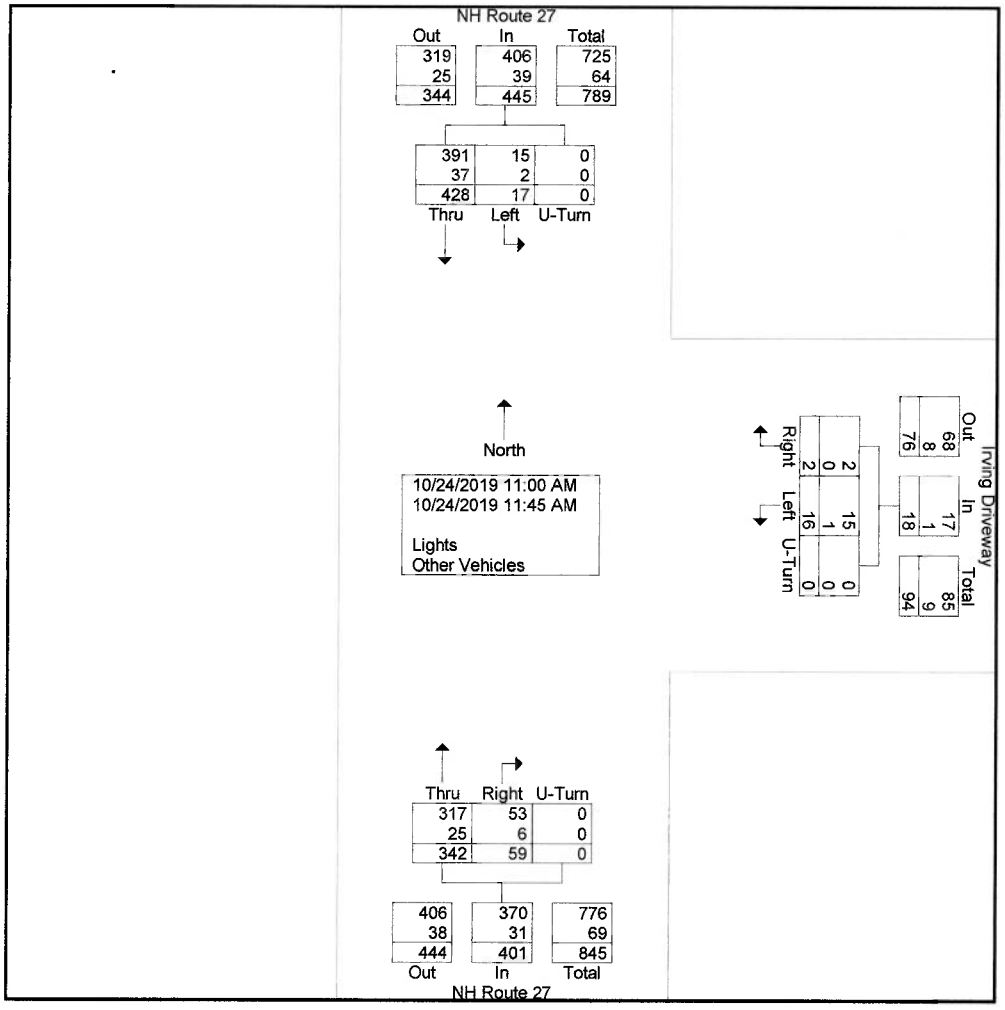
Stephen G. Pernaw & Company, Inc.

P.O. Box 1721
Concord, New Hampshire 03302

File Name : 1941A_INT_C_6_hr_764833_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- Lights - Other Vehicles

	NH Route 27 From North				Irving Driveway From East				NH Route 27 From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
11:00 AM	81	7	0	88	1	3	0	4	13	76	0	89	181
11:15 AM	122	8	0	130	0	7	0	7	11	90	0	101	238
11:30 AM	103	1	0	104	1	2	0	3	19	88	0	107	214
11:45 AM	122	1	0	123	0	4	0	4	16	88	0	104	231
Total	428	17	0	445	2	16	0	18	59	342	0	401	864
Grand Total	428	17	0	445	2	16	0	18	59	342	0	401	864
Apprch %	96.2	3.8	0		11.1	88.9	0		14.7	85.3	0		
Total %	49.5	2	0	51.5	0.2	1.9	0	2.1	6.8	39.6	0	46.4	
Lights	391	15	0	406	2	15	0	17	53	317	0	370	793
% Lights	91.4	88.2	0	91.2	100	93.8	0	94.4	89.8	92.7	0	92.3	91.8
Other Vehicles	37	2	0	39	0	1	0	1	6	25	0	31	71
% Other Vehicles	8.6	11.8	0	8.8	0	6.2	0	5.6	10.2	7.3	0	7.7	8.2



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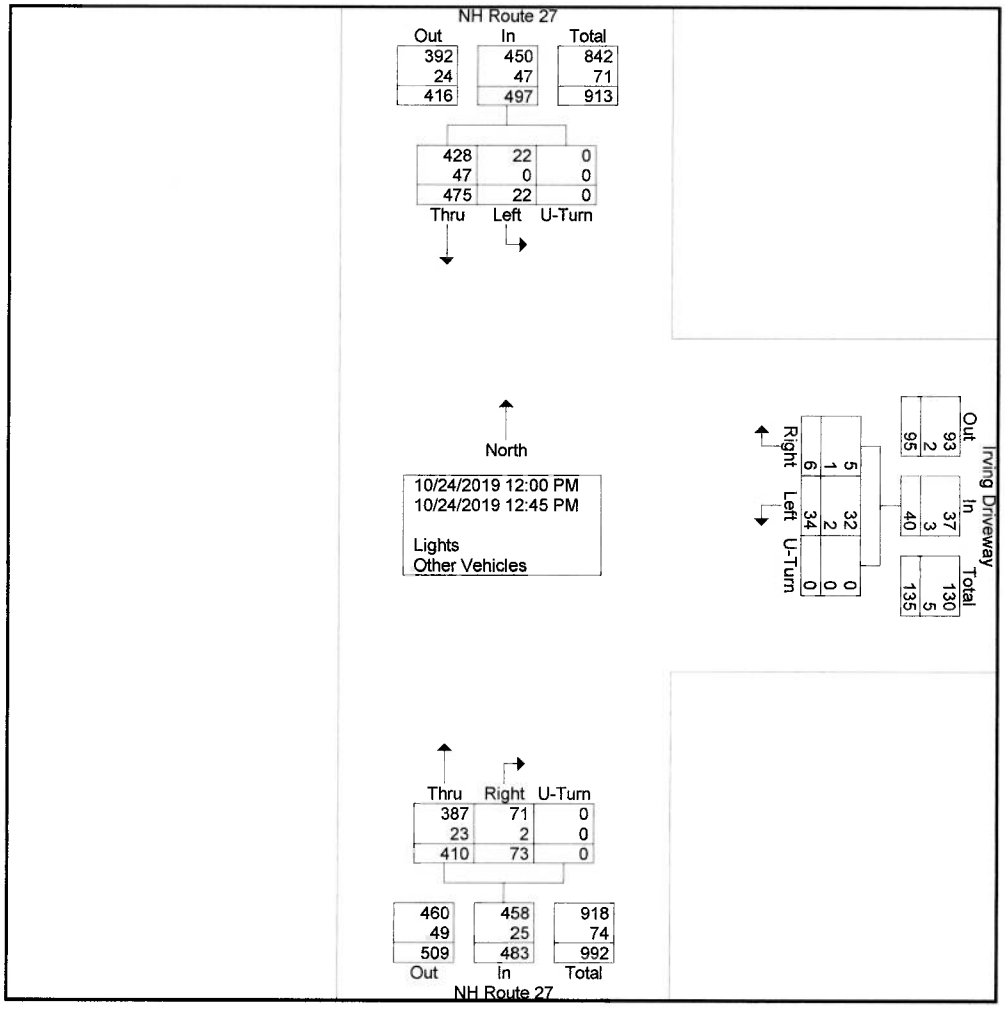
P.O. Box 1721
Concord, New Hampshire 03302

File Name : 1941A_INT_C_6_hr_764833_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- Lights - Other Vehicles

	NH Route 27 From North				Irving Driveway From East				NH Route 27 From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
12:00 PM	117	3	0	120	1	8	0	9	20	114	0	134	263
12:15 PM	105	9	0	114	3	13	0	16	16	94	0	110	240
12:30 PM	118	7	0	125	1	7	0	8	21	112	0	133	266
12:45 PM	135	3	0	138	1	6	0	7	16	90	0	106	251
Total	475	22	0	497	6	34	0	40	73	410	0	483	1020
Grand Total	475	22	0	497	6	34	0	40	73	410	0	483	1020
Apprch %	95.6	4.4	0		15	85	0		15.1	84.9	0		
Total %	46.6	2.2	0	48.7	0.6	3.3	0	3.9	7.2	40.2	0	47.4	
Lights	428	22	0	450	5	32	0	37	71	387	0	458	945
% Lights	90.1	100	0	90.5	83.3	94.1	0	92.5	97.3	94.4	0	94.8	92.6
Other Vehicles	47	0	0	47	1	2	0	3	2	23	0	25	75
% Other Vehicles	9.9	0	0	9.5	16.7	5.9	0	7.5	2.7	5.6	0	5.2	7.4



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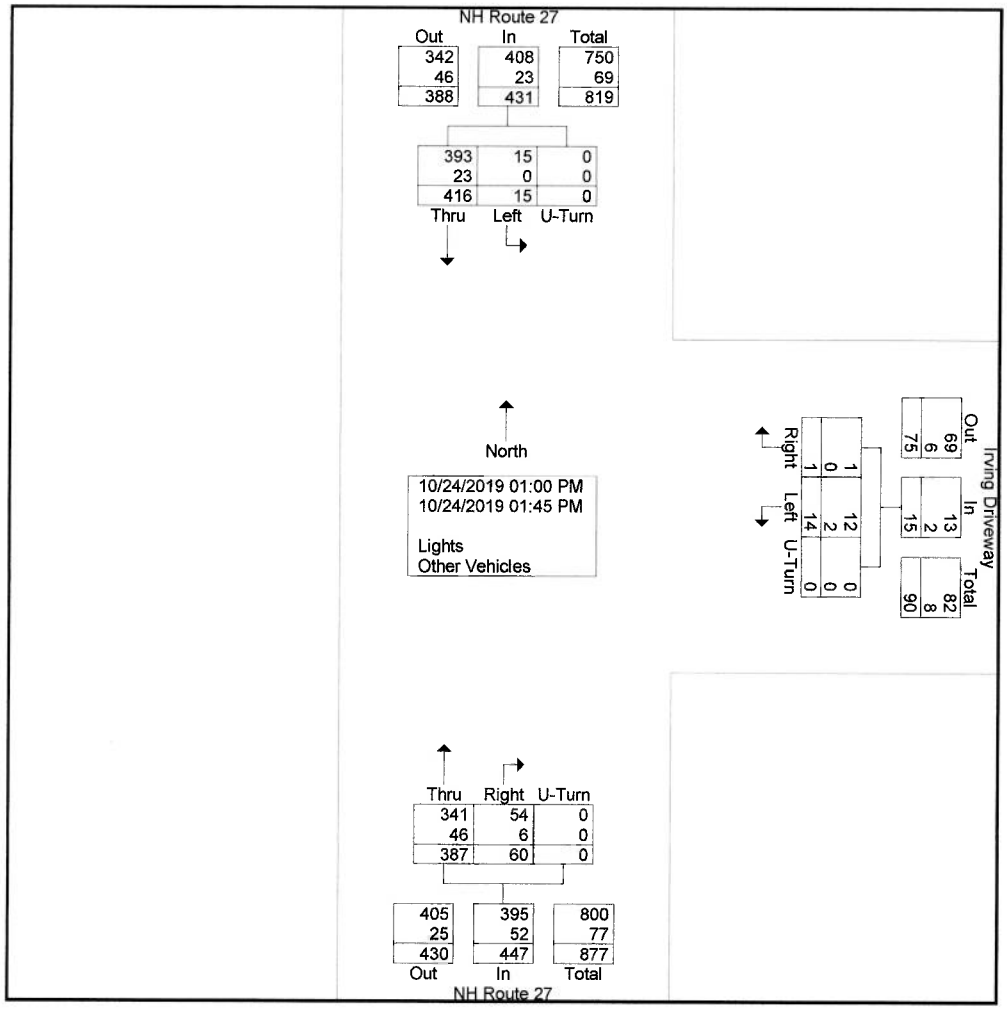
File Name : 1941A_INT_C_6_hr_764833_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- Lights - Other Vehicles

	NH Route 27 From North				Irving Driveway From East				NH Route 27 From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
01:00 PM	106	7	0	113	0	4	0	4	22	101	0	123	240
01:15 PM	98	1	0	99	0	5	0	5	14	69	0	83	187
01:30 PM	107	0	0	107	0	0	0	0	11	89	0	100	207
01:45 PM	105	7	0	112	1	5	0	6	13	128	0	141	259
Total	416	15	0	431	1	14	0	15	60	387	0	447	893
Grand Total	416	15	0	431	1	14	0	15	60	387	0	447	893
Apprch %	96.5	3.5	0		6.7	93.3	0		13.4	86.6	0		
Total %	46.6	1.7	0	48.3	0.1	1.6	0	1.7	6.7	43.3	0	50.1	
Lights	393	15	0	408	1	12	0	13	54	341	0	395	816
% Lights	94.5	100	0	94.7	100	85.7	0	86.7	90	88.1	0	88.4	91.4
Other Vehicles	23	0	0	23	0	2	0	2	6	46	0	52	77
% Other Vehicles	5.5	0	0	5.3	0	14.3	0	13.3	10	11.9	0	11.6	8.6



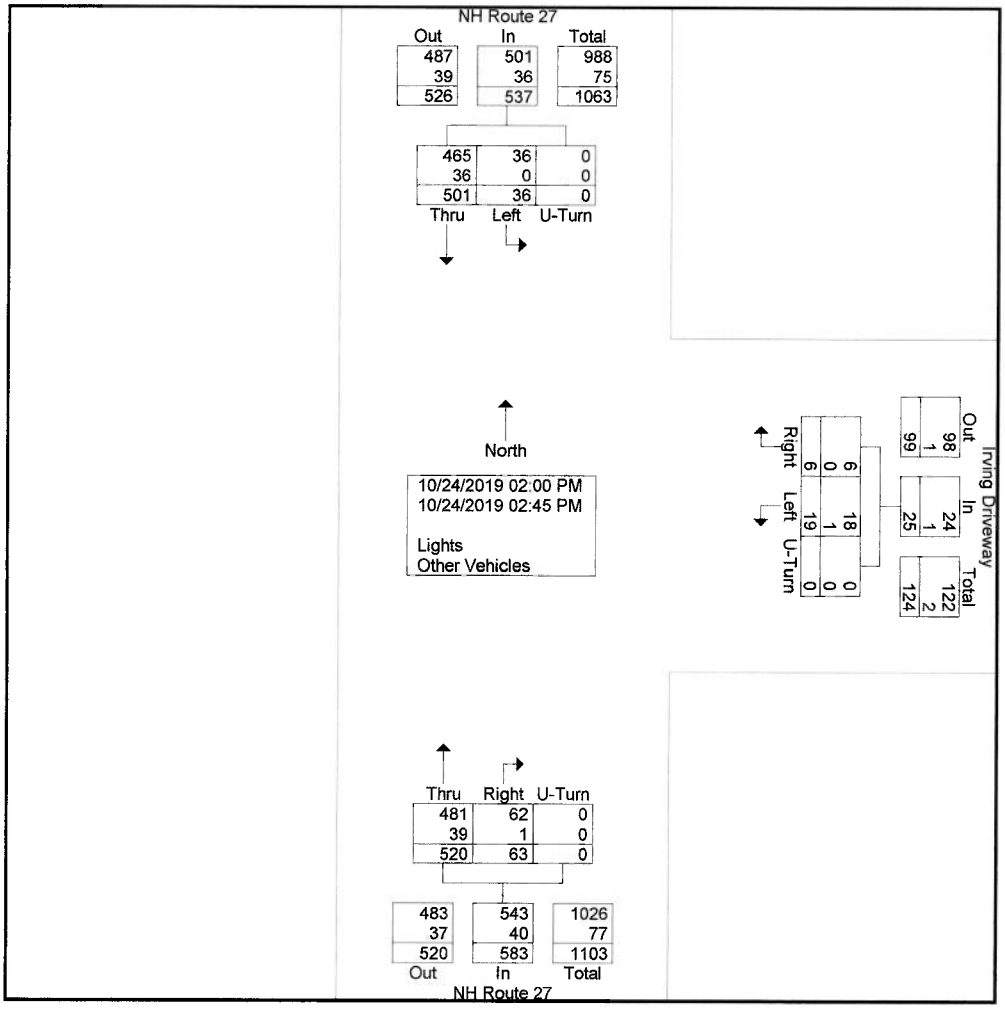
Stephen G. Pernaw & Company, Inc.

P.O. Box 1721
Concord, New Hampshire 03302

File Name : 1941A_INT_C_6_hr_764833_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- Lights - Other Vehicles

	NH Route 27 From North				Irving Driveway From East				NH Route 27 From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
02:00 PM	105	7	0	112	0	3	0	3	17	130	0	147	262
02:15 PM	100	6	0	106	1	3	0	4	19	161	0	180	290
02:30 PM	170	7	0	177	1	8	0	9	8	119	0	127	313
02:45 PM	126	16	0	142	4	5	0	9	19	110	0	129	280
Total	501	36	0	537	6	19	0	25	63	520	0	583	1145
Grand Total	501	36	0	537	6	19	0	25	63	520	0	583	1145
Apprch %	93.3	6.7	0		24	76	0		10.8	89.2	0		
Total %	43.8	3.1	0	46.9	0.5	1.7	0	2.2	5.5	45.4	0	50.9	
Lights	465	36	0	501	6	18	0	24	62	481	0	543	1068
% Lights	92.8	100	0	93.3	100	94.7	0	96	98.4	92.5	0	93.1	93.3
Other Vehicles	36	0	0	36	0	1	0	1	1	39	0	40	77
% Other Vehicles	7.2	0	0	6.7	0	5.3	0	4	1.6	7.5	0	6.9	6.7



Stephen G. Pernaw & Company, Inc.

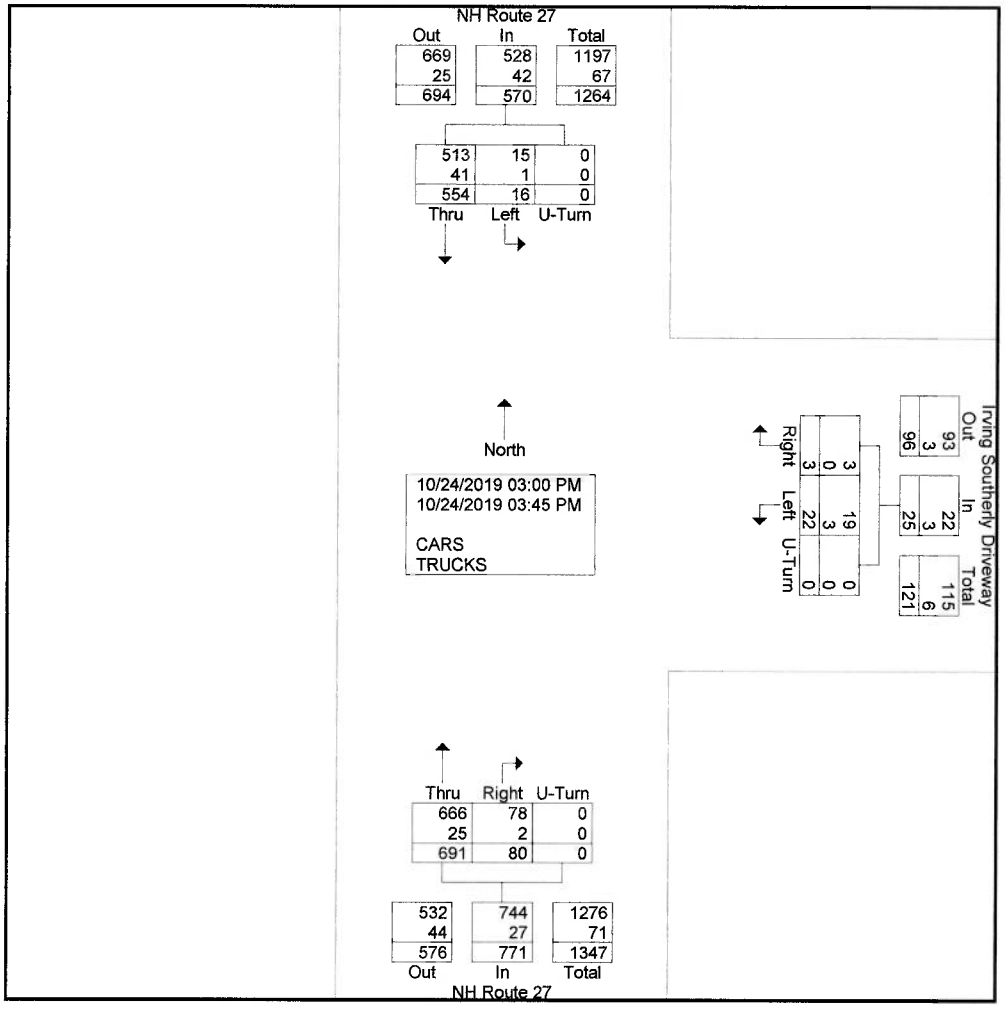
P.O. Box 1721
Concord, New Hampshire 03302

Weaer: Clear
Collected By: MV
Job Number: 1941A
Town/State: Exeter, NH

File Name : 1941A_INT_A_PM
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- CARS - TRUCKS

	NH Route 27 From North				Irving Southerly Driveway From East				NH Route 27 From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
03:00 PM	108	5	0	113	0	7	0	7	22	173	0	195	315
03:15 PM	126	5	0	131	1	4	0	5	23	132	0	155	291
03:30 PM	148	1	0	149	1	5	0	6	23	232	0	255	410
03:45 PM	172	5	0	177	1	6	0	7	12	154	0	166	350
Total	554	16	0	570	3	22	0	25	80	691	0	771	1366
Grand Total	554	16	0	570	3	22	0	25	80	691	0	771	1366
Apprch %	97.2	2.8	0		12	88	0		10.4	89.6	0		
Total %	40.6	1.2	0	41.7	0.2	1.6	0	1.8	5.9	50.6	0	56.4	
CARS	513	15	0	528	3	19	0	22	78	666	0	744	1294
% CARS	92.6	93.8	0	92.6	100	86.4	0	88	97.5	96.4	0	96.5	94.7
TRUCKS	41	1	0	42	0	3	0	3	2	25	0	27	72
% TRUCKS	7.4	6.2	0	7.4	0	13.6	0	12	2.5	3.6	0	3.5	5.3



Stephen G. Pernaw & Company, Inc.

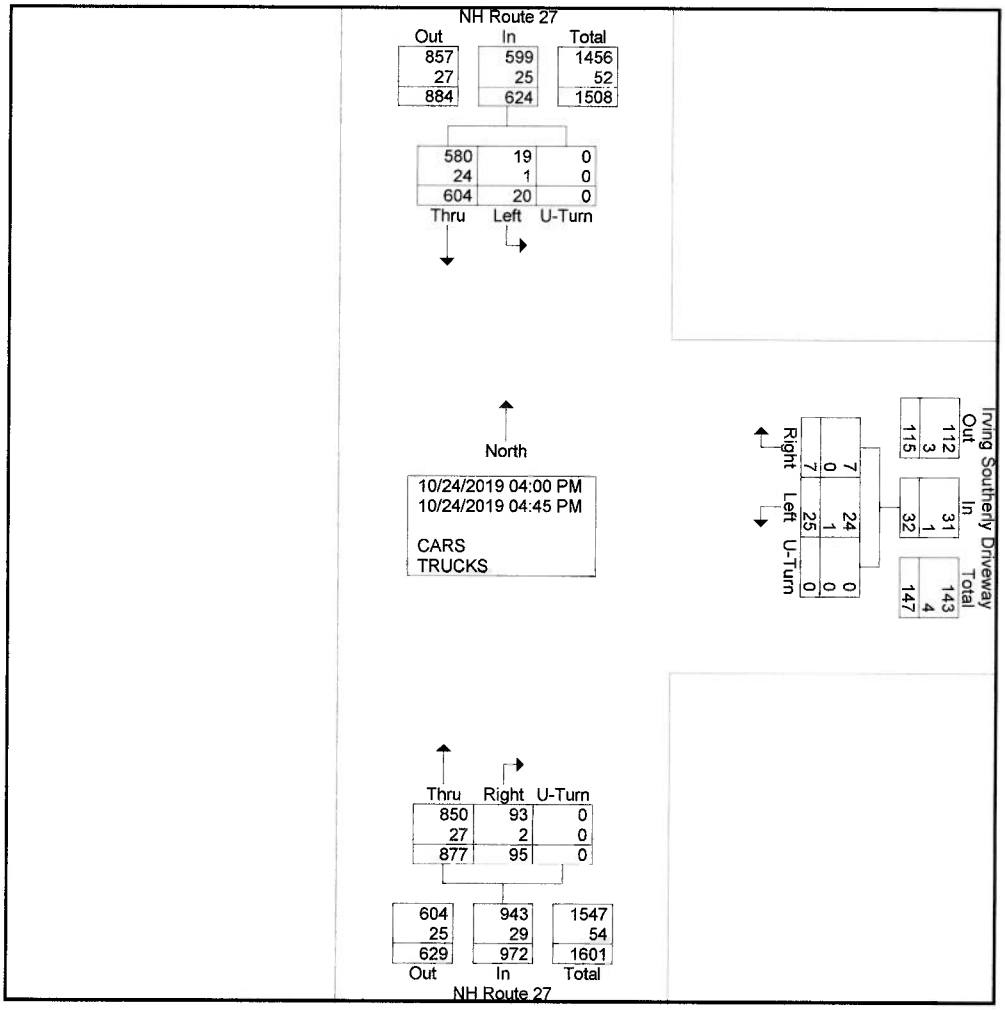
P.O. Box 1721
Concord, New Hampshire 03302

Weaer: Clear
Collected By: MV
Job Number: 1941A
Town/State: Exeter, NH

File Name : 1941A_INT_A_PM
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- CARS - TRUCKS

	NH Route 27 From North				Irving Southerly Driveway From East				NH Route 27 From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
04:00 PM	129	3	0	132	0	5	0	5	27	252	0	279	416
04:15 PM	153	6	0	159	5	4	0	9	13	196	0	209	377
04:30 PM	164	4	0	168	2	12	0	14	30	254	0	284	466
04:45 PM	158	7	0	165	0	4	0	4	25	175	0	200	369
Total	604	20	0	624	7	25	0	32	95	877	0	972	1628
Grand Total	604	20	0	624	7	25	0	32	95	877	0	972	1628
Apprch %	96.8	3.2	0		21.9	78.1	0		9.8	90.2	0		
Total %	37.1	1.2	0	38.3	0.4	1.5	0	2	5.8	53.9	0	59.7	
CARS	580	19	0	599	7	24	0	31	93	850	0	943	1573
% CARS	96	95	0	96	100	96	0	96.9	97.9	96.9	0	97	96.6
TRUCKS	24	1	0	25	0	1	0	1	2	27	0	29	55
% TRUCKS	4	5	0	4	0	4	0	3.1	2.1	3.1	0	3	3.4



Stephen G. Pernaw & Company, Inc.

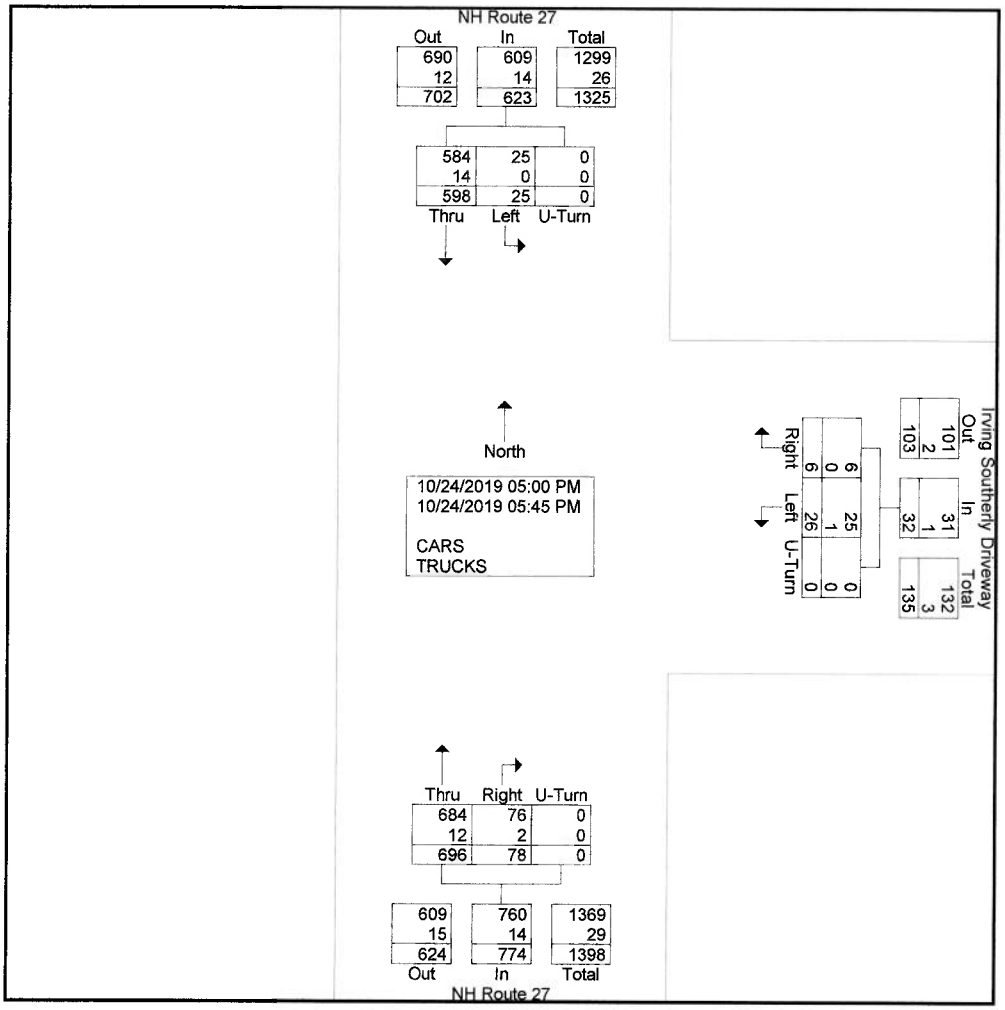
P.O. Box 1721
Concord, New Hampshire 03302

Weaer: Clear
Collected By: MV
Job Number: 1941A
Town/State: Exeter, NH

File Name : 1941A_INT_A_PM
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- CARS - TRUCKS

	NH Route 27 From North				Irving Southerly Driveway From East				NH Route 27 From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
05:00 PM	142	6	0	148	2	6	0	8	29	247	0	276	432
05:15 PM	161	3	0	164	1	4	0	5	21	176	0	197	366
05:30 PM	142	6	0	148	2	11	0	13	19	132	0	151	312
05:45 PM	153	10	0	163	1	5	0	6	9	141	0	150	319
Total	598	25	0	623	6	26	0	32	78	696	0	774	1429
Grand Total	598	25	0	623	6	26	0	32	78	696	0	774	1429
Apprch %	96	4	0		18.8	81.2	0		10.1	89.9	0		
Total %	41.8	1.7	0	43.6	0.4	1.8	0	2.2	5.5	48.7	0	54.2	
CARS	584	25	0	609	6	25	0	31	76	684	0	760	1400
% CARS	97.7	100	0	97.8	100	96.2	0	96.9	97.4	98.3	0	98.2	98
TRUCKS	14	0	0	14	0	1	0	1	2	12	0	14	29
% TRUCKS	2.3	0	0	2.2	0	3.8	0	3.1	2.6	1.7	0	1.8	2



Traffic Signal Warrants Analysis

NH27 / NH101 EB Ramps

Analysis not needed; left-turn departures from off-ramp range from 4 – 23 vehicles per hour; well below threshold values

Stephen G. Pernaw & Company, Inc.

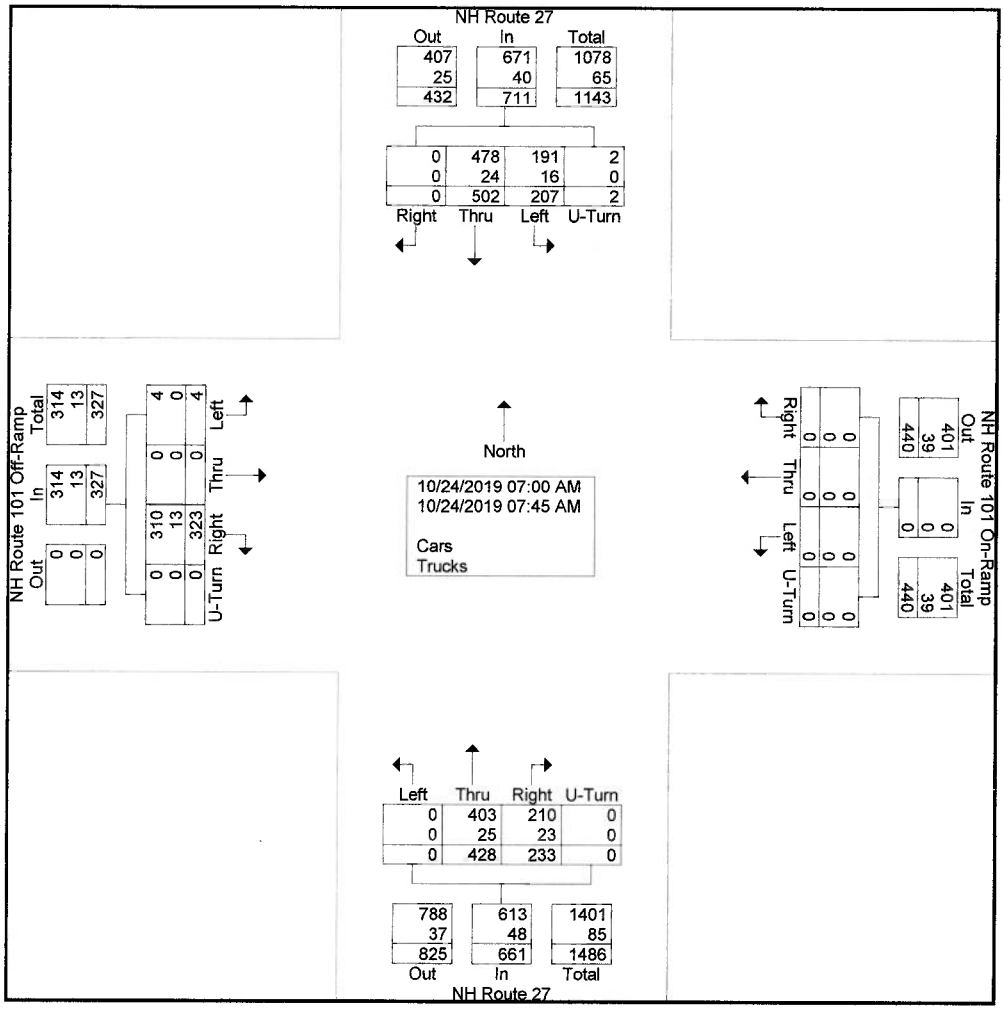
P.O. Box 1721
Concord, New Hampshire 03302

Weather: Fair
Collected By: MV
Job Number: 1941A
Town/State: Exeter, NH

File Name : 1941A_INT_B_12_hr_764829_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- Cars - Trucks

	NH Route 27 From North					NH Route 101 On-Ramp From East					NH Route 27 From South					NH Route 101 Off-Ramp From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
07:00 AM	0	94	48	2	144	0	0	0	0	0	47	196	0	0	243	55	0	3	0	58	445
07:15 AM	0	121	59	0	180	0	0	0	0	0	56	94	0	0	150	81	0	0	0	81	411
07:30 AM	0	125	66	0	191	0	0	0	0	0	64	85	0	0	149	95	0	0	0	95	435
07:45 AM	0	162	34	0	196	0	0	0	0	0	66	53	0	0	119	92	0	1	0	93	408
Total	0	502	207	2	711	0	0	0	0	0	233	428	0	0	661	323	0	4	0	327	1699
Grand Total	0	502	207	2	711	0	0	0	0	0	233	428	0	0	661	323	0	4	0	327	1699
Apprch %	0	70.6	29.1	0.3		0	0	0	0		35.2	64.8	0	0		98.8	0	1.2	0		
Total %	0	29.5	12.2	0.1	41.8	0	0	0	0	0	13.7	25.2	0	0	38.9	19	0	0.2	0	19.2	
Cars	0	478	191	2	671	0	0	0	0	0	210	403	0	0	613	310	0	4	0	314	1598
% Cars	0	95.2	92.3	100	94.4	0	0	0	0	0	90.1	94.2	0	0	92.7	96	0	100	0	96	94.1
Trucks	0	24	16	0	40	0	0	0	0	0	23	25	0	0	48	13	0	0	0	13	101
% Trucks	0	4.8	7.7	0	5.6	0	0	0	0	0	9.9	5.8	0	0	7.3	4	0	0	0	4	5.9



Stephen G. Pernaw & Company, Inc.

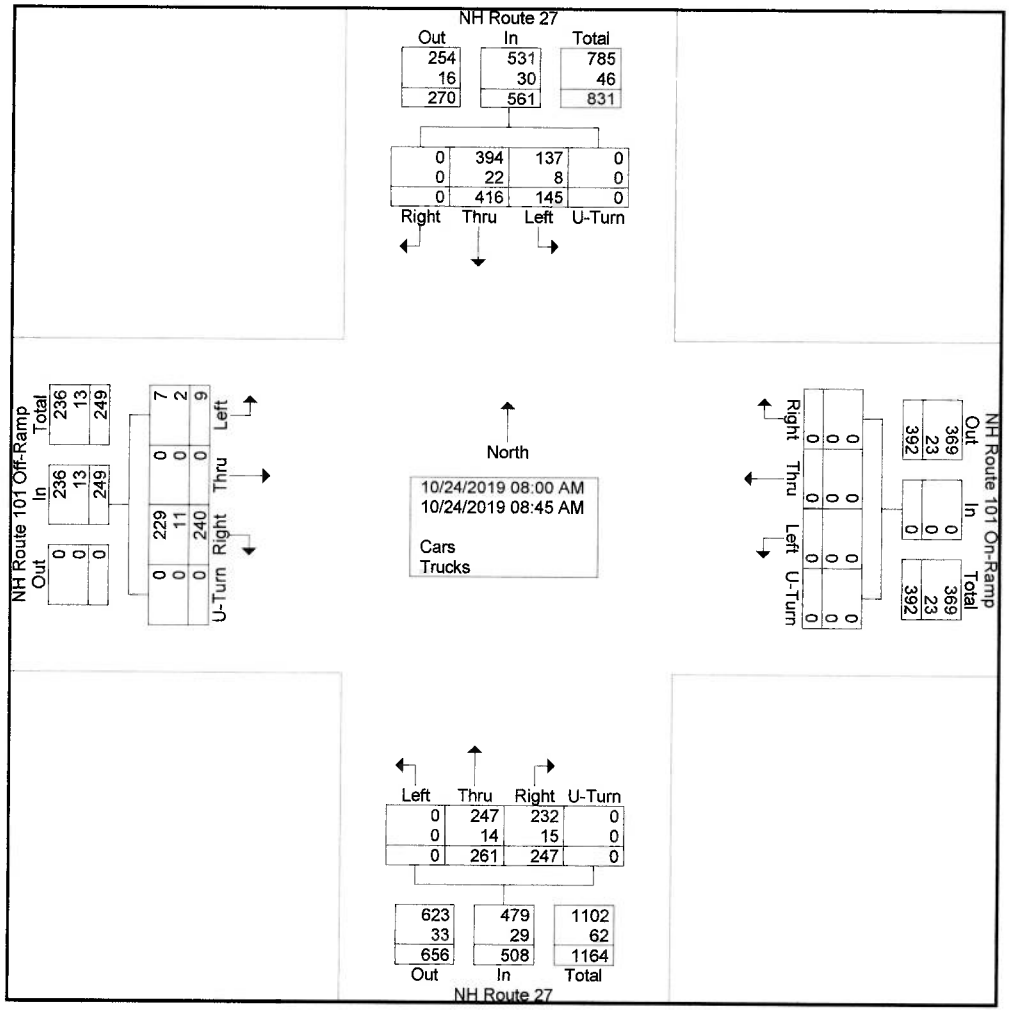
P.O. Box 1721
Concord, New Hampshire 03302

Weather: Fair
Collected By: MV
Job Number: 1941A
Town/State: Exeter, NH

File Name : 1941A_INT_B_12_hr_764829_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- Cars - Trucks

	NH Route 27 From North					NH Route 101 On-Ramp From East					NH Route 27 From South					NH Route 101 Off-Ramp From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
08:00 AM	0	130	38	0	168	0	0	0	0	0	65	65	0	0	130	71	0	1	0	72	370
08:15 AM	0	116	38	0	154	0	0	0	0	0	67	70	0	0	137	58	0	1	0	59	350
08:30 AM	0	73	33	0	106	0	0	0	0	0	61	66	0	0	127	61	0	4	0	65	298
08:45 AM	0	97	36	0	133	0	0	0	0	0	54	60	0	0	114	50	0	3	0	53	300
Total	0	416	145	0	561	0	0	0	0	0	247	261	0	0	508	240	0	9	0	249	1318
Grand Total	0	416	145	0	561	0	0	0	0	0	247	261	0	0	508	240	0	9	0	249	1318
Apprch %	0	74.2	25.8	0		0	0	0	0		48.6	51.4	0	0		96.4	0	3.6	0		
Total %	0	31.6	11	0	42.6	0	0	0	0	0	18.7	19.8	0	0	38.5	18.2	0	0.7	0	18.9	
Cars	0	394	137	0	531	0	0	0	0	0	232	247	0	0	479	229	0	7	0	236	1246
% Cars	0	94.7	94.5	0	94.7	0	0	0	0	0	93.9	94.6	0	0	94.3	95.4	0	77.8	0	94.8	94.5
Trucks	0	22	8	0	30	0	0	0	0	0	15	14	0	0	29	11	0	2	0	13	72
% Trucks	0	5.3	5.5	0	5.3	0	0	0	0	0	6.1	5.4	0	0	5.7	4.6	0	22.2	0	5.2	5.5



Stephen G. Pernaw & Company, Inc.

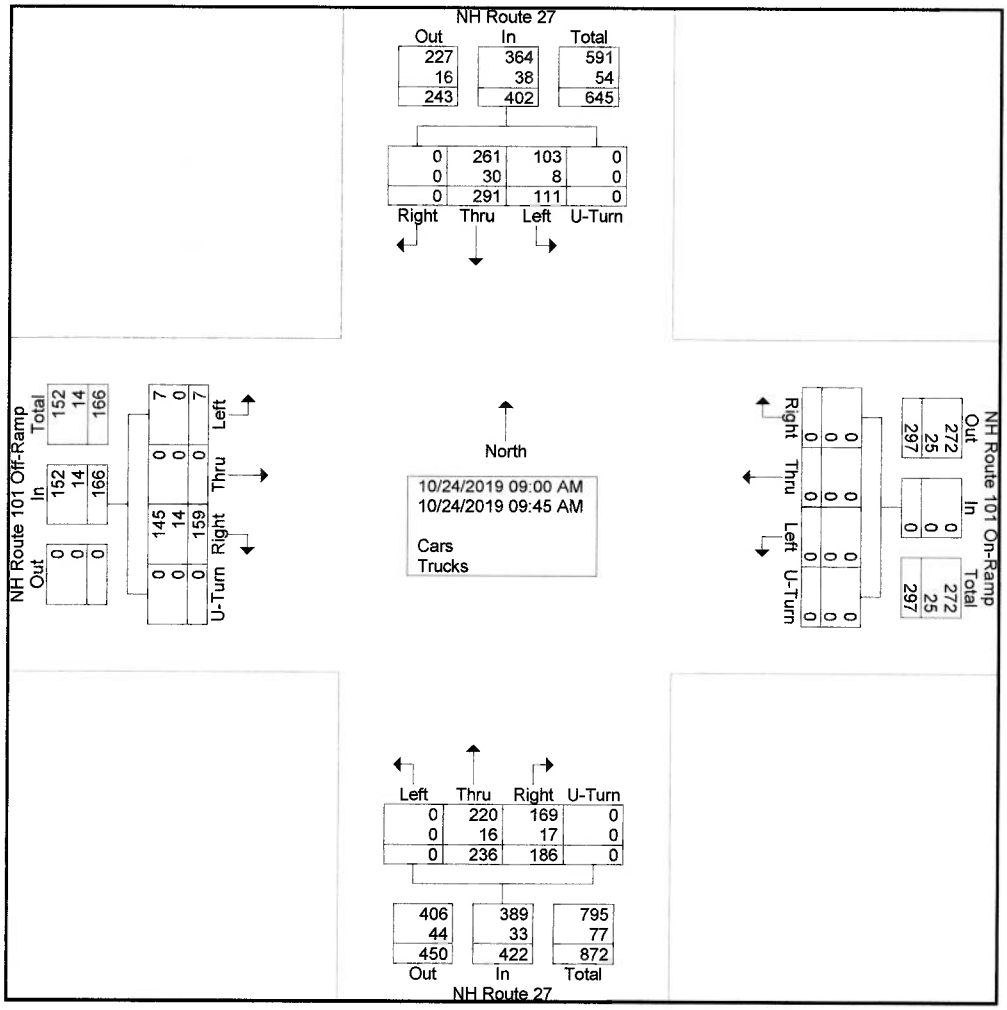
P.O. Box 1721
Concord, New Hampshire 03302

Weather: Fair
Collected By: MV
Job Number: 1941A
Town/State: Exeter, NH

File Name : 1941A_INT_B_12_hr_764829_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- Cars - Trucks

	NH Route 27 From North					NH Route 101 On-Ramp From East					NH Route 27 From South					NH Route 101 Off-Ramp From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
09:00 AM	0	72	23	0	95	0	0	0	0	0	39	51	0	0	90	44	0	3	0	47	232
09:15 AM	0	70	32	0	102	0	0	0	0	0	53	73	0	0	126	44	0	1	0	45	273
09:30 AM	0	86	27	0	113	0	0	0	0	0	49	57	0	0	106	38	0	2	0	40	259
09:45 AM	0	63	29	0	92	0	0	0	0	0	45	55	0	0	100	33	0	1	0	34	226
Total	0	291	111	0	402	0	0	0	0	0	186	236	0	0	422	159	0	7	0	166	990
Grand Total	0	291	111	0	402	0	0	0	0	0	186	236	0	0	422	159	0	7	0	166	990
Apprch %	0	72.4	27.6	0		0	0	0	0		44.1	55.9	0	0		95.8	0	4.2	0		
Total %	0	29.4	11.2	0	40.6	0	0	0	0	0	18.8	23.8	0	0	42.6	16.1	0	0.7	0	16.8	
Cars	0	261	103	0	364	0	0	0	0	0	169	220	0	0	389	145	0	7	0	152	905
% Cars	0	89.7	92.8	0	90.5	0	0	0	0	0	90.9	93.2	0	0	92.2	91.2	0	100	0	91.6	91.4
Trucks	0	30	8	0	38	0	0	0	0	0	17	16	0	0	33	14	0	0	0	14	85
% Trucks	0	10.3	7.2	0	9.5	0	0	0	0	0	9.1	6.8	0	0	7.8	8.8	0	0	0	8.4	8.6



Stephen G. Pernaw & Company, Inc.

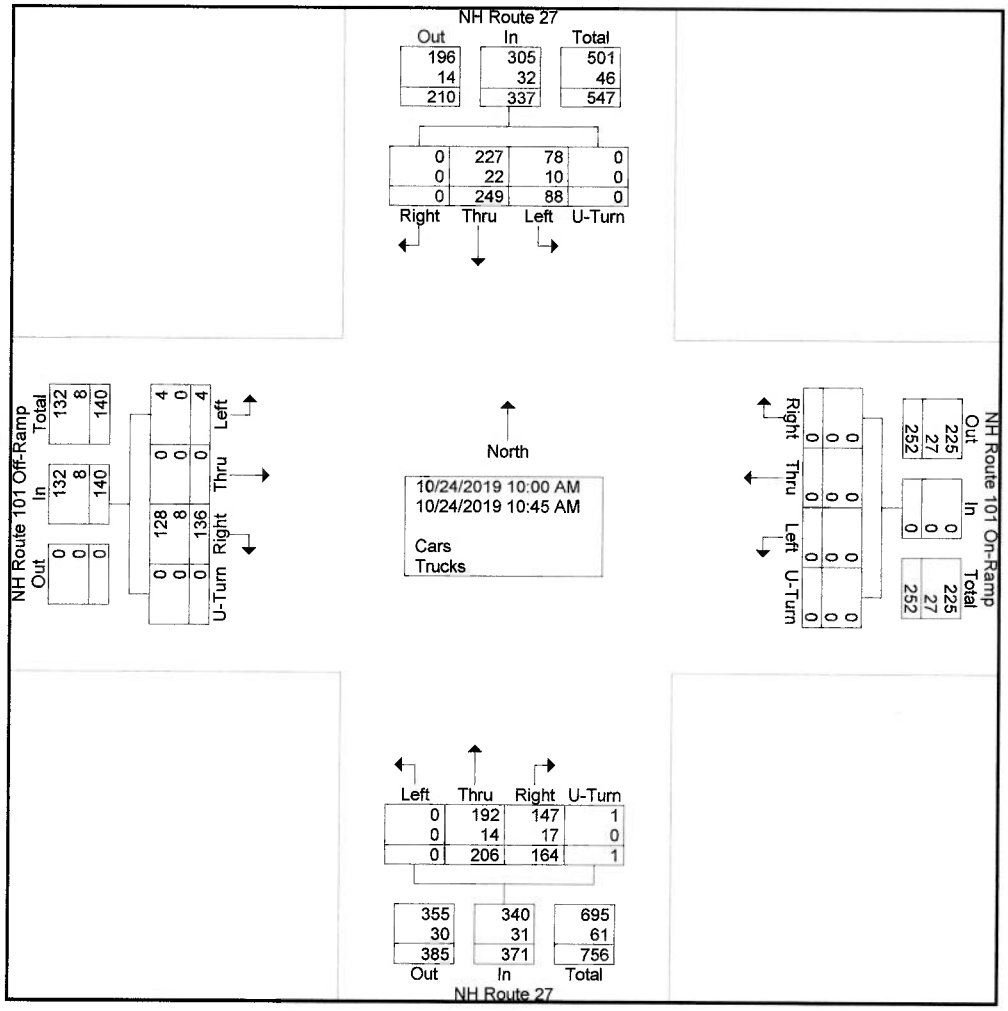
P.O. Box 1721
Concord, New Hampshire 03302

Weather: Fair
Collected By: MV
Job Number: 1941A
Town/State: Exeter, NH

File Name : 1941A_INT_B_12_hr_764829_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- Cars - Trucks

	NH Route 27 From North					NH Route 101 On-Ramp From East					NH Route 27 From South					NH Route 101 Off-Ramp From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
10:00 AM	0	68	30	0	98	0	0	0	0	0	36	45	0	0	81	29	0	2	0	31	210
10:15 AM	0	54	17	0	71	0	0	0	0	0	43	46	0	0	89	44	0	1	0	45	205
10:30 AM	0	70	25	0	95	0	0	0	0	0	45	58	0	1	104	36	0	1	0	37	236
10:45 AM	0	57	16	0	73	0	0	0	0	0	40	57	0	0	97	27	0	0	0	27	197
Total	0	249	88	0	337	0	0	0	0	0	164	206	0	1	371	136	0	4	0	140	848
Grand Total	0	249	88	0	337	0	0	0	0	0	164	206	0	1	371	136	0	4	0	140	848
Apprch %	0	73.9	26.1	0		0	0	0	0		44.2	55.5	0	0.3		97.1	0	2.9	0		
Total %	0	29.4	10.4	0	39.7	0	0	0	0	0	19.3	24.3	0	0.1	43.8	16	0	0.5	0	16.5	
Cars	0	227	78	0	305	0	0	0	0	0	147	192	0	1	340	128	0	4	0	132	777
% Cars	0	91.2	88.6	0	90.5	0	0	0	0	0	89.6	93.2	0	100	91.6	94.1	0	100	0	94.3	91.6
Trucks	0	22	10	0	32	0	0	0	0	0	17	14	0	0	31	8	0	0	0	8	71
% Trucks	0	8.8	11.4	0	9.5	0	0	0	0	0	10.4	6.8	0	0	8.4	5.9	0	0	0	5.7	8.4



Stephen G. Pernaw & Company, Inc.

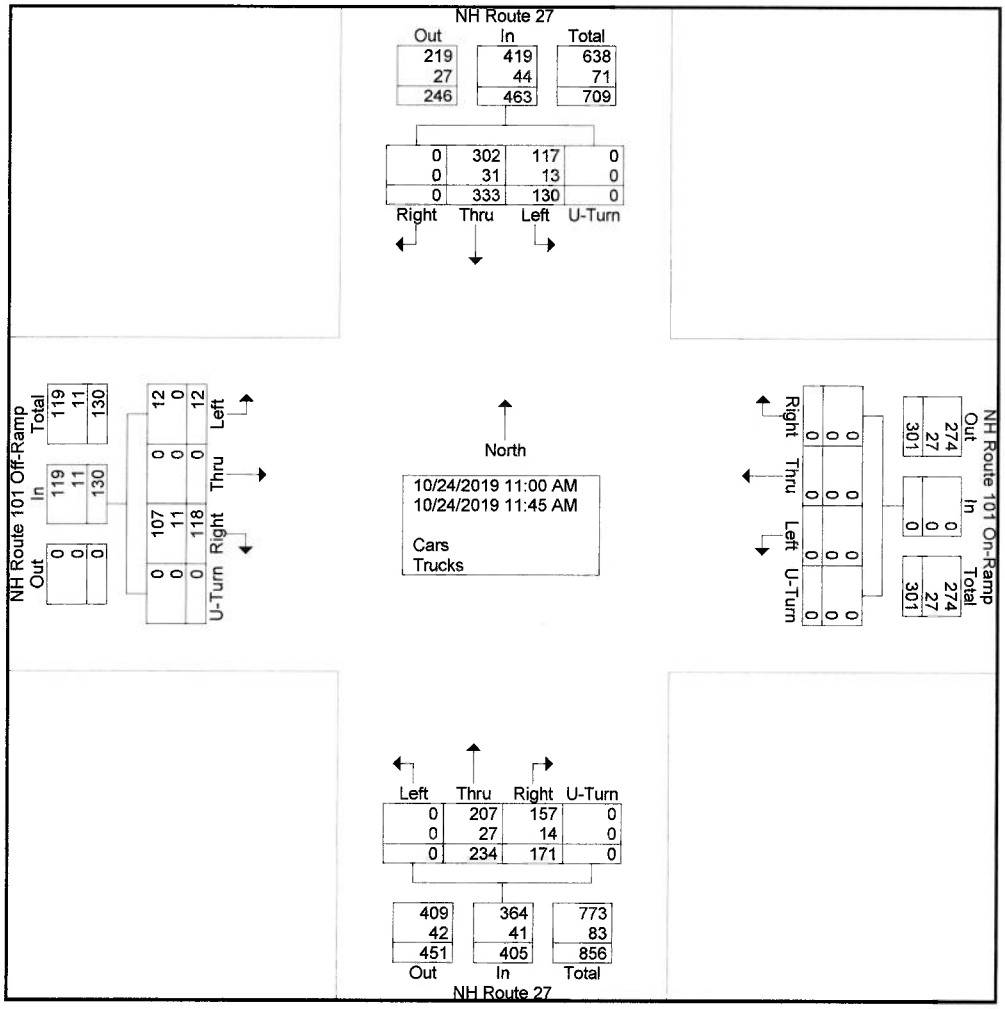
P.O. Box 1721
Concord, New Hampshire 03302

Weather: Fair
Collected By: MV
Job Number: 1941A
Town/State: Exeter, NH

File Name : 1941A_INT_B_12_hr_764829_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- Cars - Trucks

	NH Route 27 From North					NH Route 101 On-Ramp From East					NH Route 27 From South					NH Route 101 Off-Ramp From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
11:00 AM	0	65	24	0	89	0	0	0	0	0	32	60	0	0	92	27	0	5	0	32	213
11:15 AM	0	108	54	0	162	0	0	0	0	0	45	66	0	0	111	30	0	0	0	30	303
11:30 AM	0	73	36	0	109	0	0	0	0	0	47	53	0	0	100	28	0	1	0	29	238
11:45 AM	0	87	16	0	103	0	0	0	0	0	47	55	0	0	102	33	0	6	0	39	244
Total	0	333	130	0	463	0	0	0	0	0	171	234	0	0	405	118	0	12	0	130	998
Grand Total	0	333	130	0	463	0	0	0	0	0	171	234	0	0	405	118	0	12	0	130	998
Apprch %	0	71.9	28.1	0		0	0	0	0		42.2	57.8	0	0		90.8	0	9.2	0		
Total %	0	33.4	13	0	46.4	0	0	0	0	0	17.1	23.4	0	0	40.6	11.8	0	1.2	0	13	
Cars	0	302	117	0	419	0	0	0	0	0	157	207	0	0	364	107	0	12	0	119	902
% Cars	0	90.7	90	0	90.5	0	0	0	0	0	91.8	88.5	0	0	89.9	90.7	0	100	0	91.5	90.4
Trucks	0	31	13	0	44	0	0	0	0	0	14	27	0	0	41	11	0	0	0	11	96
% Trucks	0	9.3	10	0	9.5	0	0	0	0	0	8.2	11.5	0	0	10.1	9.3	0	0	0	8.5	9.6



Stephen G. Pernaw & Company, Inc.

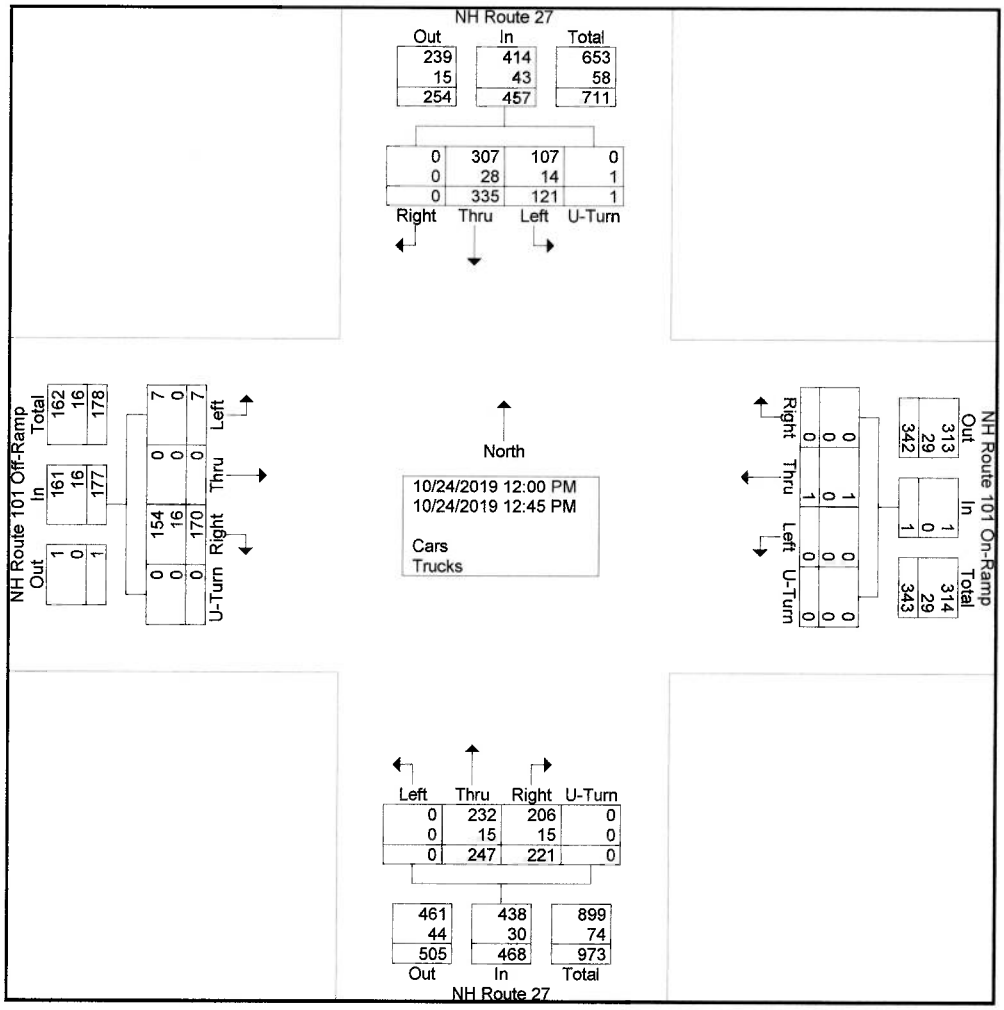
P.O. Box 1721
Concord, New Hampshire 03302

Weather: Fair
Collected By: MV
Job Number: 1941A
Town/State: Exeter, NH

File Name : 1941A_INT_B_12_hr_764829_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- Cars - Trucks

	NH Route 27 From North					NH Route 101 On-Ramp From East					NH Route 27 From South					NH Route 101 Off-Ramp From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
12:00 PM	0	80	29	0	109	0	1	0	0	1	68	57	0	0	125	44	0	4	0	48	283
12:15 PM	0	85	40	0	125	0	0	0	0	0	48	61	0	0	109	28	0	1	0	29	263
12:30 PM	0	84	24	0	108	0	0	0	0	0	62	71	0	0	133	40	0	1	0	41	282
12:45 PM	0	86	28	1	115	0	0	0	0	0	43	58	0	0	101	58	0	1	0	59	275
Total	0	335	121	1	457	0	1	0	0	1	221	247	0	0	468	170	0	7	0	177	1103
Grand Total	0	335	121	1	457	0	1	0	0	1	221	247	0	0	468	170	0	7	0	177	1103
Apprch %	0	73.3	26.5	0.2		0	100	0	0		47.2	52.8	0	0		96	0	4	0		
Total %	0	30.4	11	0.1	41.4	0	0.1	0	0	0.1	20	22.4	0	0	42.4	15.4	0	0.6	0	16	
Cars	0	307	107	0	414	0	1	0	0	1	206	232	0	0	438	154	0	7	0	161	1014
% Cars	0	91.6	88.4	0	90.6	0	100	0	0	100	93.2	93.9	0	0	93.6	90.6	0	100	0	91	91.9
Trucks	0	28	14	1	43	0	0	0	0	0	15	15	0	0	30	16	0	0	0	16	89
% Trucks	0	8.4	11.6	100	9.4	0	0	0	0	0	6.8	6.1	0	0	6.4	9.4	0	0	0	9	8.1



Stephen G. Pernaw & Company, Inc.

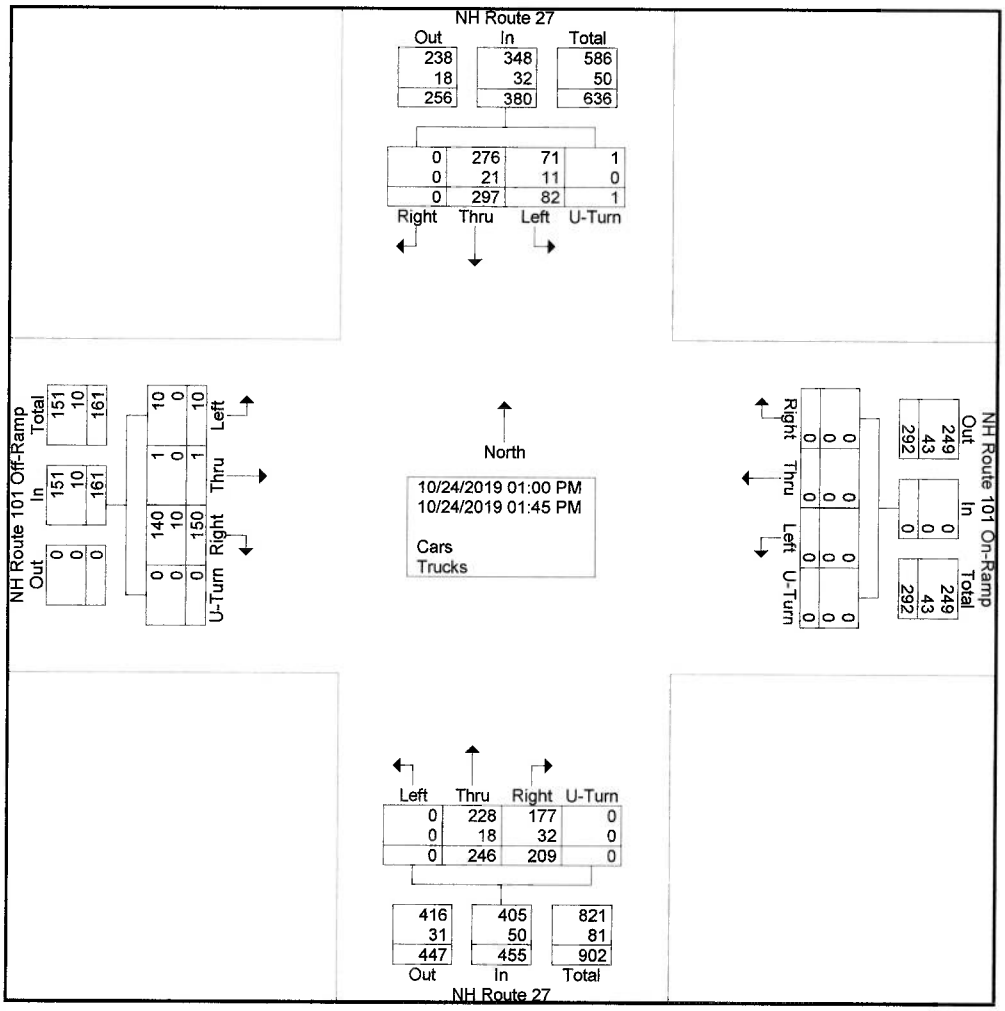
P.O. Box 1721
Concord, New Hampshire 03302

Weather: Fair
Collected By: MV
Job Number: 1941A
Town/State: Exeter, NH

File Name : 1941A_INT_B_12_hr_764829_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- Cars - Trucks

	NH Route 27 From North					NH Route 101 On-Ramp From East					NH Route 27 From South					NH Route 101 Off-Ramp From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
01:00 PM	0	69	22	0	91	0	0	0	0	0	50	70	0	0	120	38	1	2	0	41	252
01:15 PM	0	78	17	0	95	0	0	0	0	0	43	37	0	0	80	28	0	0	0	28	203
01:30 PM	0	72	15	1	88	0	0	0	0	0	51	61	0	0	112	43	0	7	0	50	250
01:45 PM	0	78	28	0	106	0	0	0	0	0	65	78	0	0	143	41	0	1	0	42	291
Total	0	297	82	1	380	0	0	0	0	0	209	246	0	0	455	150	1	10	0	161	996
Grand Total	0	297	82	1	380	0	0	0	0	0	209	246	0	0	455	150	1	10	0	161	996
Apprch %	0	78.2	21.6	0.3		0	0	0	0		45.9	54.1	0	0		93.2	0.6	6.2	0		
Total %	0	29.8	8.2	0.1	38.2	0	0	0	0	0	21	24.7	0	0	45.7	15.1	0.1	1	0	16.2	
Cars	0	276	71	1	348	0	0	0	0	0	177	228	0	0	405	140	1	10	0	151	904
% Cars	0	92.9	86.6	100	91.6	0	0	0	0	0	84.7	92.7	0	0	89	93.3	100	100	0	93.8	90.8
Trucks	0	21	11	0	32	0	0	0	0	0	32	18	0	0	50	10	0	0	0	10	92
% Trucks	0	7.1	13.4	0	8.4	0	0	0	0	0	15.3	7.3	0	0	11	6.7	0	0	0	6.2	9.2



Stephen G. Pernaw & Company, Inc.

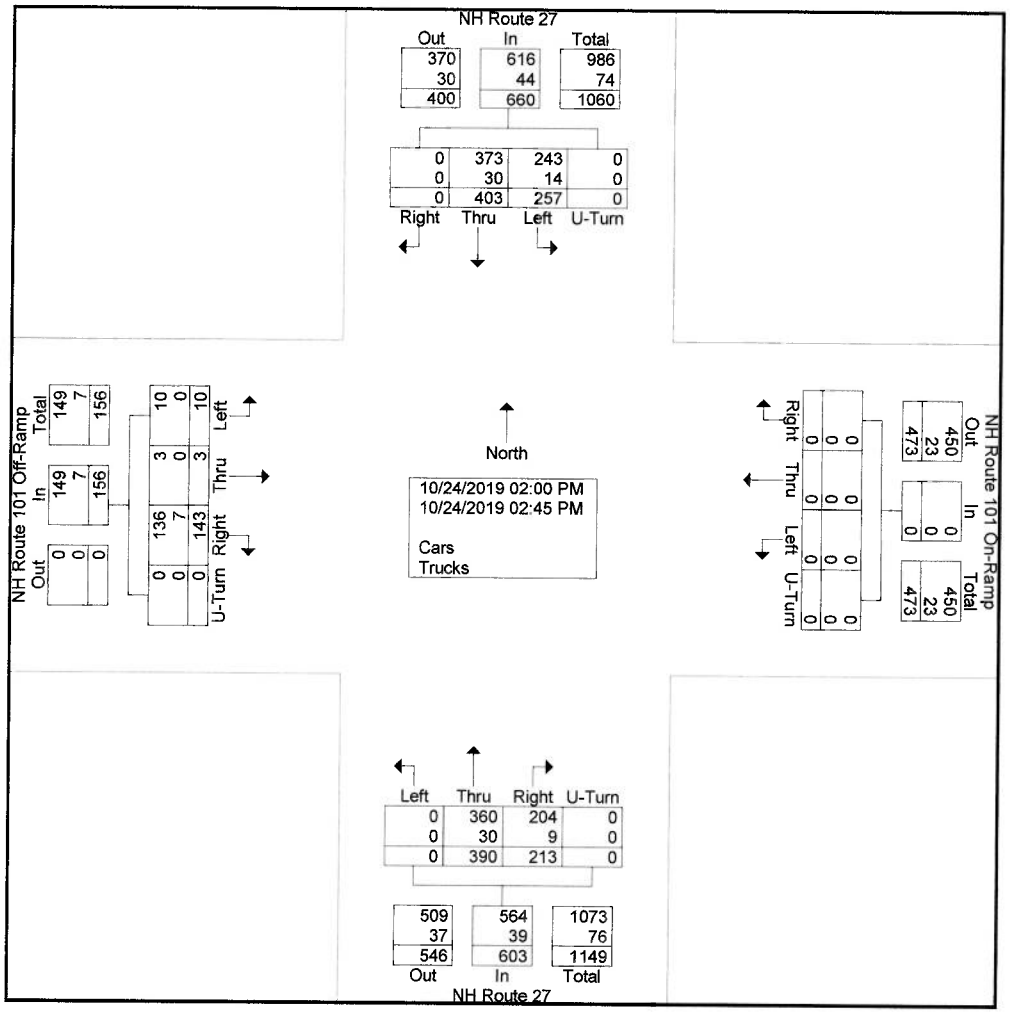
P.O. Box 1721
Concord, New Hampshire 03302

Weather: Fair
Collected By: MV
Job Number: 1941A
Town/State: Exeter, NH

File Name : 1941A_INT_B_12_hr_764829_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- Cars - Trucks

	NH Route 27 From North					NH Route 101 On-Ramp From East					NH Route 27 From South					NH Route 101 Off-Ramp From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
02:00 PM	0	85	31	0	116	0	0	0	0	0	46	102	0	0	148	27	1	1	0	29	293
02:15 PM	0	73	30	0	103	0	0	0	0	0	54	129	0	0	183	33	2	2	0	37	323
02:30 PM	0	132	99	0	231	0	0	0	0	0	53	83	0	0	136	48	0	3	0	51	418
02:45 PM	0	113	97	0	210	0	0	0	0	0	60	76	0	0	136	35	0	4	0	39	385
Total	0	403	257	0	660	0	0	0	0	0	213	390	0	0	603	143	3	10	0	156	1419
Grand Total	0	403	257	0	660	0	0	0	0	0	213	390	0	0	603	143	3	10	0	156	1419
Apprch %	0	61.1	38.9	0		0	0	0	0		35.3	64.7	0	0		91.7	1.9	6.4	0		
Total %	0	28.4	18.1	0	46.5	0	0	0	0	0	15	27.5	0	0	42.5	10.1	0.2	0.7	0	11	
Cars	0	373	243	0	616	0	0	0	0	0	204	360	0	0	564	136	3	10	0	149	1329
% Cars	0	92.6	94.6	0	93.3	0	0	0	0	0	95.8	92.3	0	0	93.5	95.1	100	100	0	95.5	93.7
Trucks	0	30	14	0	44	0	0	0	0	0	9	30	0	0	39	7	0	0	0	7	90
% Trucks	0	7.4	5.4	0	6.7	0	0	0	0	0	4.2	7.7	0	0	6.5	4.9	0	0	0	4.5	6.3



Stephen G. Pernaw & Company, Inc.

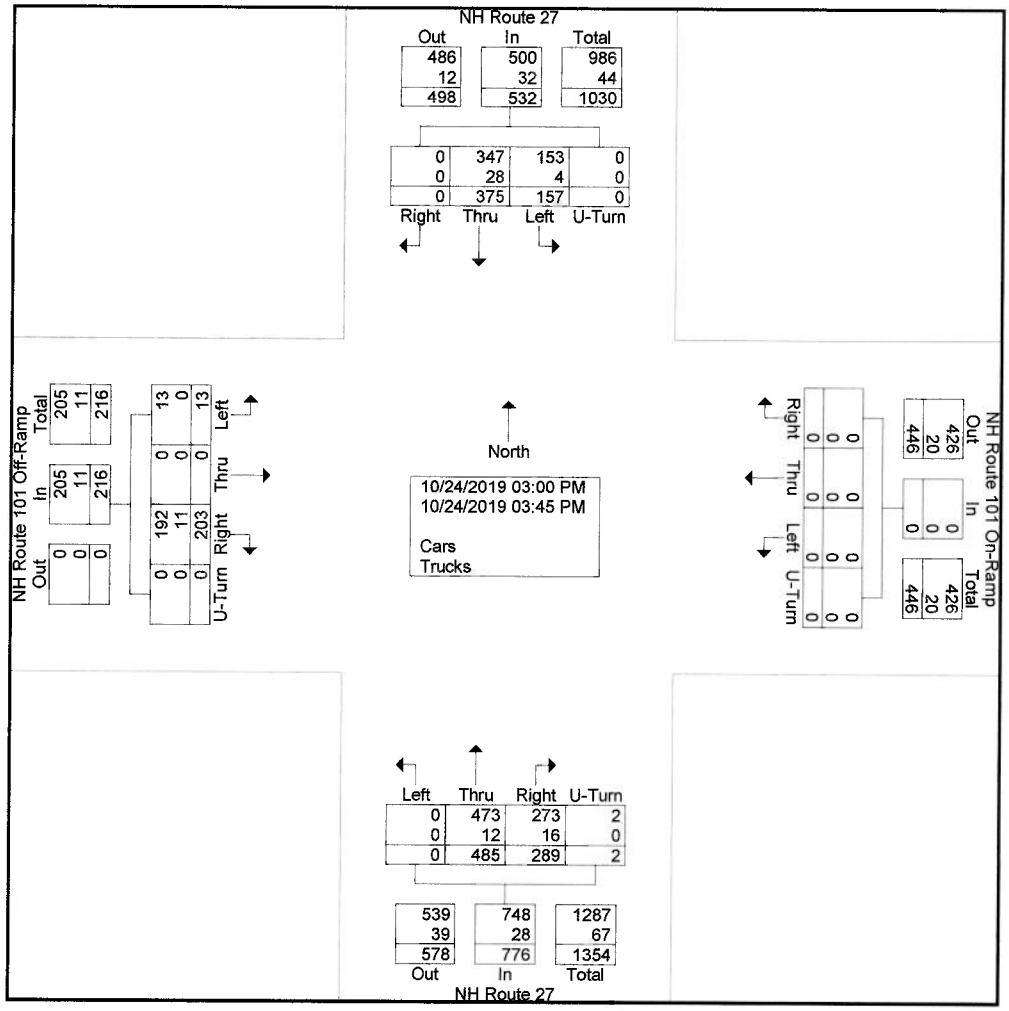
P.O. Box 1721
Concord, New Hampshire 03302

Weather: Fair
Collected By: MV
Job Number: 1941A
Town/State: Exeter, NH

File Name : 1941A_INT_B_12_hr_764829_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- Cars - Trucks

	NH Route 27 From North					NH Route 101 On-Ramp From East					NH Route 27 From South					NH Route 101 Off-Ramp From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
03:00 PM	0	76	43	0	119	0	0	0	0	0	73	117	0	0	190	40	0	3	0	43	352
03:15 PM	0	85	34	0	119	0	0	0	0	0	67	94	0	1	162	43	0	2	0	45	326
03:30 PM	0	90	42	0	132	0	0	0	0	0	82	163	0	1	246	62	0	2	0	64	442
03:45 PM	0	124	38	0	162	0	0	0	0	0	67	111	0	0	178	58	0	6	0	64	404
Total	0	375	157	0	532	0	0	0	0	0	289	485	0	2	776	203	0	13	0	216	1524
Grand Total	0	375	157	0	532	0	0	0	0	0	289	485	0	2	776	203	0	13	0	216	1524
Apprch %	0	70.5	29.5	0		0	0	0	0		37.2	62.5	0	0.3		94	0	6	0		
Total %	0	24.6	10.3	0	34.9	0	0	0	0	0	19	31.8	0	0.1	50.9	13.3	0	0.9	0	14.2	
Cars	0	347	153	0	500	0	0	0	0	0	273	473	0	2	748	192	0	13	0	205	1453
% Cars	0	92.5	97.5	0	94	0	0	0	0	0	94.5	97.5	0	100	96.4	94.6	0	100	0	94.9	95.3
Trucks	0	28	4	0	32	0	0	0	0	0	16	12	0	0	28	11	0	0	0	11	71
% Trucks	0	7.5	2.5	0	6	0	0	0	0	0	5.5	2.5	0	0	3.6	5.4	0	0	0	5.1	4.7



Stephen G. Pernaw & Company, Inc.

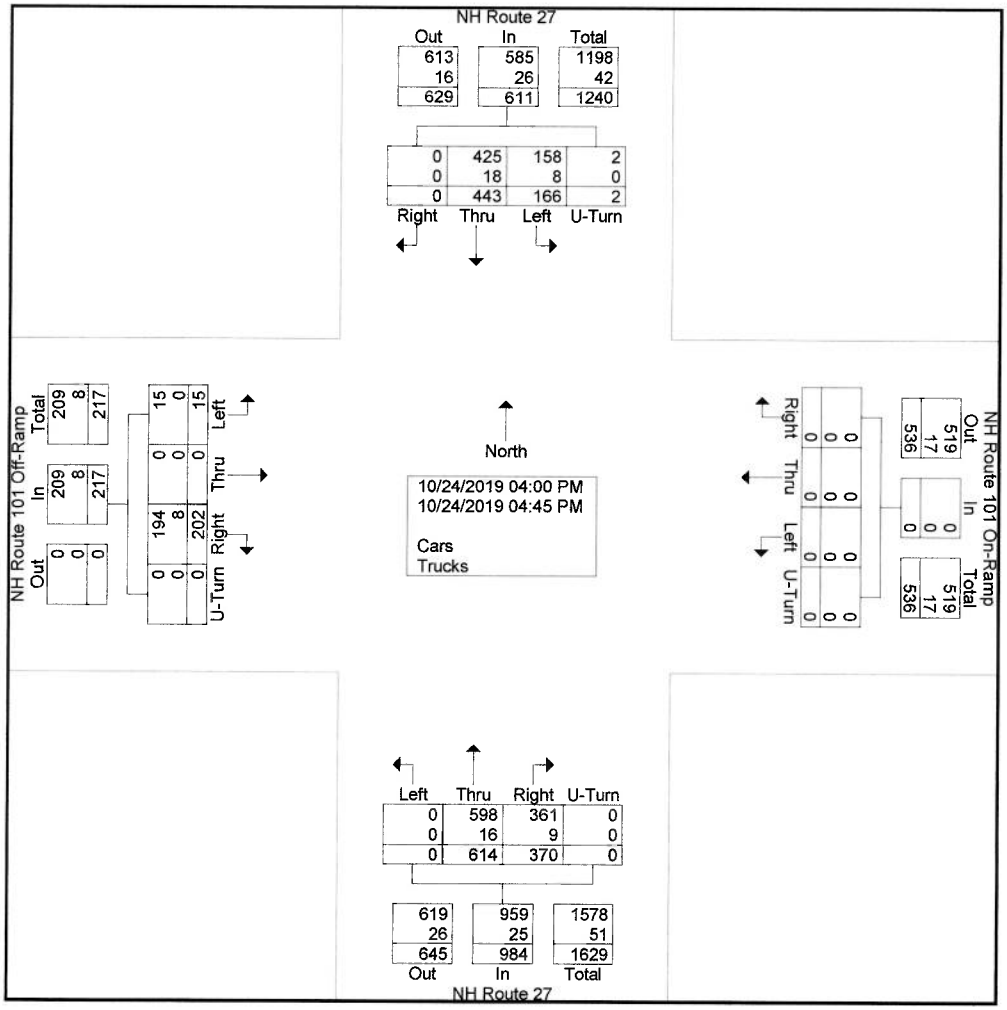
P.O. Box 1721
Concord, New Hampshire 03302

Weather: Fair
Collected By: MV
Job Number: 1941A
Town/State: Exeter, NH

File Name : 1941A_INT_B_12_hr_764829_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- Cars - Trucks

	NH Route 27 From North					NH Route 101 On-Ramp From East					NH Route 27 From South					NH Route 101 Off-Ramp From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
04:00 PM	0	101	30	2	133	0	0	0	0	0	92	176	0	0	268	44	0	3	0	47	448
04:15 PM	0	112	46	0	158	0	0	0	0	0	74	155	0	0	229	49	0	0	0	49	436
04:30 PM	0	116	49	0	165	0	0	0	0	0	118	166	0	0	284	61	0	7	0	68	517
04:45 PM	0	114	41	0	155	0	0	0	0	0	86	117	0	0	203	48	0	5	0	53	411
Total	0	443	166	2	611	0	0	0	0	0	370	614	0	0	984	202	0	15	0	217	1812
Grand Total	0	443	166	2	611	0	0	0	0	0	370	614	0	0	984	202	0	15	0	217	1812
Apprch %	0	72.5	27.2	0.3		0	0	0	0		37.6	62.4	0	0		93.1	0	6.9	0		
Total %	0	24.4	9.2	0.1	33.7	0	0	0	0	0	20.4	33.9	0	0	54.3	11.1	0	0.8	0	12	
Cars	0	425	158	2	585	0	0	0	0	0	361	598	0	0	959	194	0	15	0	209	1753
% Cars	0	95.9	95.2	100	95.7	0	0	0	0	0	97.6	97.4	0	0	97.5	96	0	100	0	96.3	96.7
Trucks	0	18	8	0	26	0	0	0	0	0	9	16	0	0	25	8	0	0	0	8	59
% Trucks	0	4.1	4.8	0	4.3	0	0	0	0	0	2.4	2.6	0	0	2.5	4	0	0	0	3.7	3.3



Stephen G. Pernaw & Company, Inc.

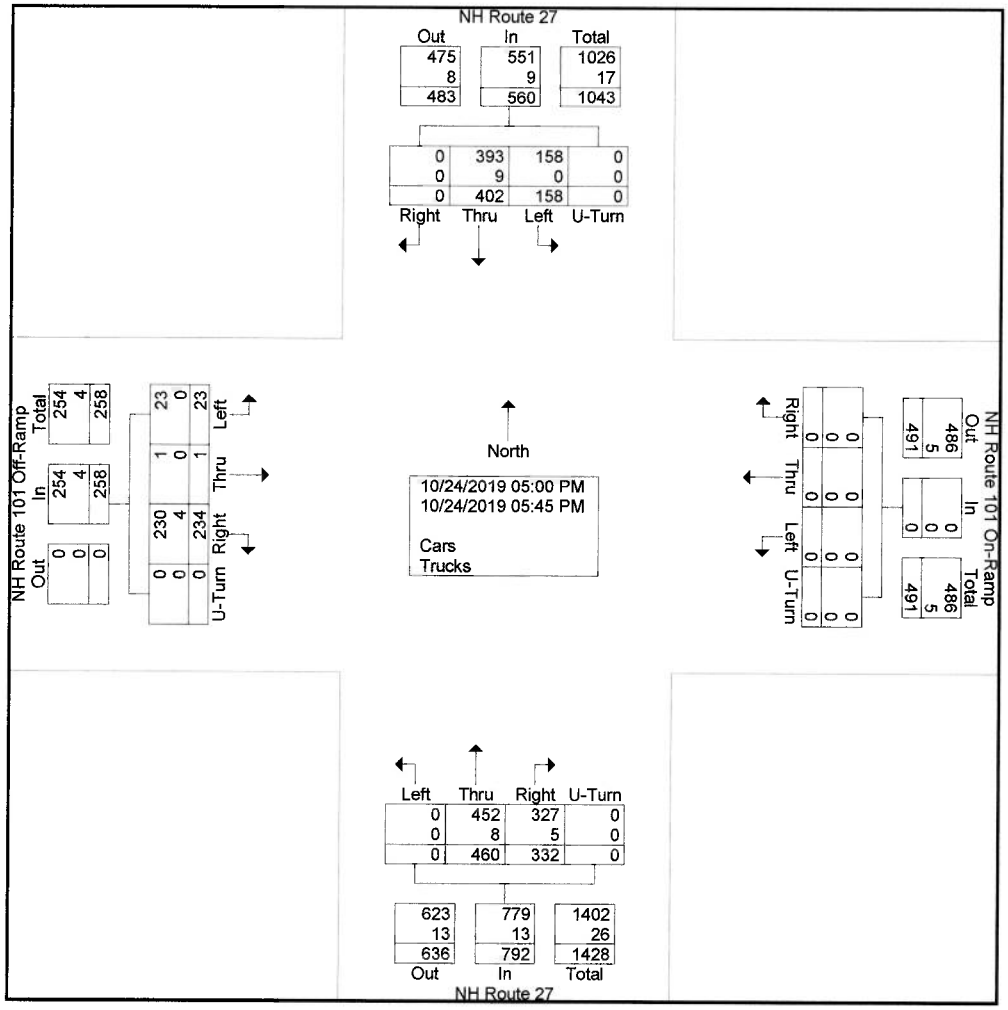
P.O. Box 1721
Concord, New Hampshire 03302

Weather: Fair
Collected By: MV
Job Number: 1941A
Town/State: Exeter, NH

File Name : 1941A_INT_B_12_hr_764829_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- Cars - Trucks

	NH Route 27 From North					NH Route 101 On-Ramp From East					NH Route 27 From South					NH Route 101 Off-Ramp From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
05:00 PM	0	95	46	0	141	0	0	0	0	0	108	168	0	0	276	54	1	3	0	58	475
05:15 PM	0	121	44	0	165	0	0	0	0	0	96	101	0	0	197	51	0	7	0	58	420
05:30 PM	0	91	30	0	121	0	0	0	0	0	68	97	0	0	165	58	0	7	0	65	351
05:45 PM	0	95	38	0	133	0	0	0	0	0	60	94	0	0	154	71	0	6	0	77	364
Total	0	402	158	0	560	0	0	0	0	0	332	460	0	0	792	234	1	23	0	258	1610
Grand Total	0	402	158	0	560	0	0	0	0	0	332	460	0	0	792	234	1	23	0	258	1610
Apprch %	0	71.8	28.2	0		0	0	0	0		41.9	58.1	0	0		90.7	0.4	8.9	0		
Total %	0	25	9.8	0	34.8	0	0	0	0	0	20.6	28.6	0	0	49.2	14.5	0.1	1.4	0	16	
Cars	0	393	158	0	551	0	0	0	0	0	327	452	0	0	779	230	1	23	0	254	1584
% Cars	0	97.8	100	0	98.4	0	0	0	0	0	98.5	98.3	0	0	98.4	98.3	100	100	0	98.4	98.4
Trucks	0	9	0	0	9	0	0	0	0	0	5	8	0	0	13	4	0	0	0	4	26
% Trucks	0	2.2	0	0	1.6	0	0	0	0	0	1.5	1.7	0	0	1.6	1.7	0	0	0	1.6	1.6



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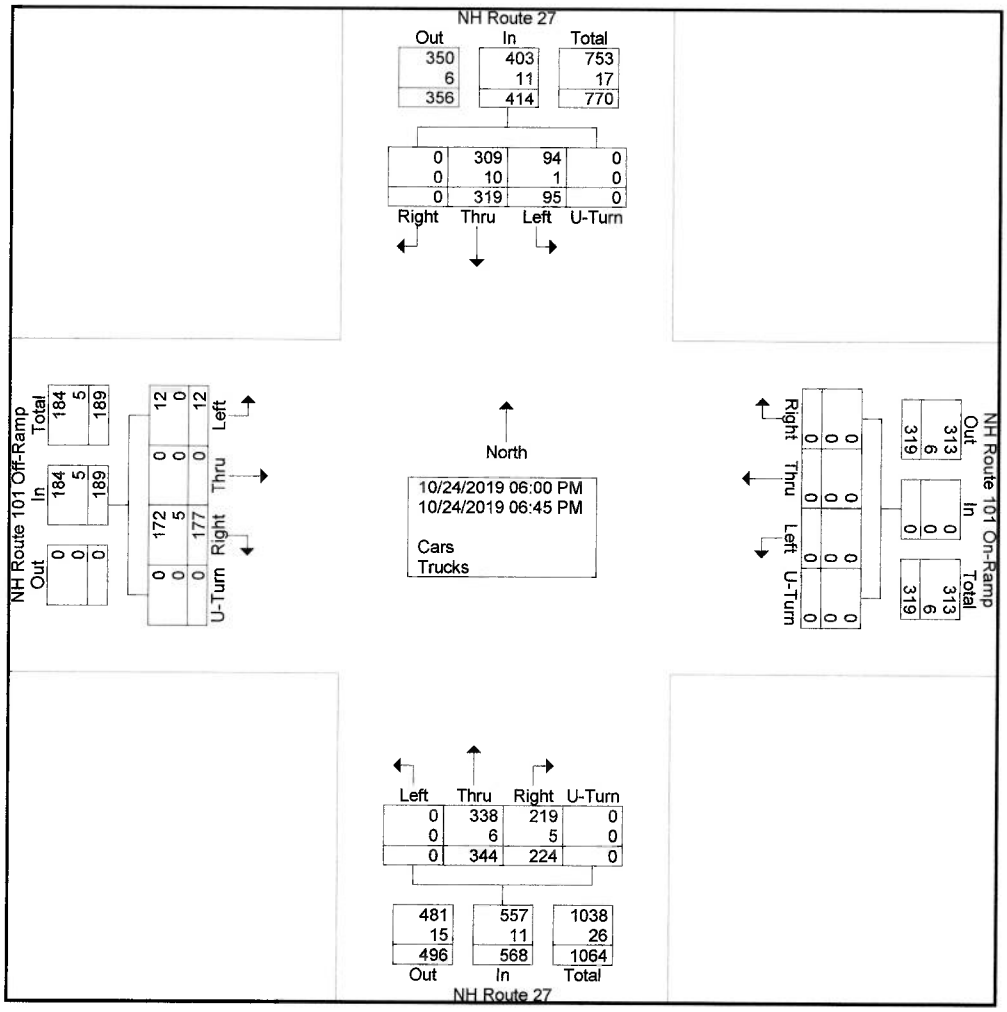
	NH Route 27 From North					NH Route 101 On-Ramp From East					NH Route 27 From South					NH Route 101 Off-Ramp From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
06:00 PM	0	101	36	0	137	0	0	0	0	0	63	80	0	0	143	49	0	3	0	52	332
06:15 PM	0	80	26	0	106	0	0	0	0	0	58	82	0	0	140	52	0	5	0	57	303
06:30 PM	0	79	18	0	97	0	0	0	0	0	51	99	0	0	150	31	0	0	0	31	278
06:45 PM	0	59	15	0	74	0	0	0	0	0	52	83	0	0	135	45	0	4	0	49	258
Total	0	319	95	0	414	0	0	0	0	0	224	344	0	0	568	177	0	12	0	189	1171
Grand Total	0	319	95	0	414	0	0	0	0	0	224	344	0	0	568	177	0	12	0	189	1171
Apprch %	0	77.1	22.9	0		0	0	0	0		39.4	60.6	0	0		93.7	0	6.3	0		
Total %	0	27.2	8.1	0	35.4	0	0	0	0	0	19.1	29.4	0	0	48.5	15.1	0	1	0	16.1	
Cars	0	309	94	0	403	0	0	0	0	0	219	338	0	0	557	172	0	12	0	184	1144
% Cars	0	96.9	98.9	0	97.3	0	0	0	0	0	97.8	98.3	0	0	98.1	97.2	0	100	0	97.4	97.7
Trucks	0	10	1	0	11	0	0	0	0	0	5	6	0	0	11	5	0	0	0	5	27
% Trucks	0	3.1	1.1	0	2.7	0	0	0	0	0	2.2	1.7	0	0	1.9	2.8	0	0	0	2.6	2.3



Traffic Signal Warrants Analysis

NH27 / NH101 WB Ramps

2031 Average-Month Build Volumes

Stephen G. Pernaw & Company, Inc.

TRAFFIC SIGNAL WARRANTS - INPUT VOLUMES

NH27 / North Site Driveway / NH101 WB Ramps

October 2019 TMC

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	SUM
7-8 AM	37	463		232	2	246		254	183				1417
8-9 AM	19	308		96	1	246		108	162				940
9-10 AM	14	246		75	0	157		113	128				733
10-11 AM	15	172		61	0	159		89	120				616
11-12 PM	7	297		79	0	161		114	127				785
12-1 PM	10	232		107	0	207		114	140				810
1-2 PM	11	202		96	2	177		107	148				743
2-3 PM	9	491		141	2	163		193	214				1213
3-4 PM	15	314		212	3	219		206	290				1259
4-5 PM	14	359		234	1	245		266	363				1482
5-6 PM	20	337		241	1	225		224	237				1285

2031 Average Month No Build (0.96 X 1.13) 1.09

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	
7-8 AM	40	505	0	253	2	268	0	277	199	0	0	0	1544
8-9 AM	21	336	0	105	1	268	0	118	177	0	0	0	1026
9-10 AM	15	268	0	82	0	171	0	123	140	0	0	0	799
10-11 AM	16	187	0	66	0	173	0	97	131	0	0	0	670
11-12 PM	8	324	0	86	0	175	0	124	138	0	0	0	855
12-1 PM	11	253	0	117	0	226	0	124	153	0	0	0	884
1-2 PM	12	220	0	105	2	193	0	117	161	0	0	0	810
2-3 PM	10	535	0	154	2	178	0	210	233	0	0	0	1322
3-4 PM	16	342	0	231	3	239	0	225	316	0	0	0	1372
4-5 PM	15	391	0	255	1	267	0	290	396	0	0	0	1615
5-6 PM	22	367	0	263	1	245	0	244	258	0	0	0	1400
	186	3728	0	1717	12	2403	0	1949	2302	0	0	0	12297

Other Development Projects

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	
7-8 AM		40						14	10				64
8-9 AM		27						9	7				43
9-10 AM		21						7	5				33
10-11 AM		17						6	4				27
11-12 PM		22						8	6				36
12-1 PM		10						14	19				43
1-2 PM		9						13	17				39
2-3 PM		15						20	28				63
3-4 PM		15						21	29				65
4-5 PM		18						25	34				77
5-6 PM		16						22	29				67
		210						159	188				557

Stephen G. Pernaw & Company, Inc.

TRAFFIC SIGNAL WARRANTS - INPUT VOLUMES

NH27 / North Site Driveway / NH101 WB Ramps

Site Generated Volumes

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	
7-8 AM		41				32		41	32				146
8-9 AM		22				17		24	20				83
9-10 AM		14				12		14	12				52
10-11 AM		16				12		16	12				56
11-12 PM		18				13		18	13				62
12-1 PM		17				13		17	13				60
1-2 PM		16				12		16	12				56
2-3 PM		25				20		26	20				91
3-4 PM		26				20		26	20				92
4-5 PM		32				25		31	24				112
5-6 PM		47				38		49	39				173
													0

2031 Average Month Build

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL		Mainline	EB	WB
7-8 AM	40	586	0	253	2	300	0	332	241	0	0	0	1754	1199	0	555
8-9 AM	21	385	0	105	1	285	0	151	204	0	0	0	1152	761	0	391
9-10 AM	15	303	0	82	0	183	0	144	157	0	0	0	884	619	0	265
10-11 AM	16	220	0	66	0	185	0	119	147	0	0	0	753	502	0	251
11-12 PM	8	364	0	86	0	188	0	150	157	0	0	0	953	679	0	274
12-1 PM	11	280	0	117	0	239	0	155	185	0	0	0	987	631	0	356
1-2 PM	12	245	0	105	2	205	0	146	190	0	0	0	905	593	0	312
2-3 PM	10	575	0	154	2	198	0	256	281	0	0	0	1476	1122	0	354
3-4 PM	16	383	0	231	3	259	0	272	365	0	0	0	1529	1036	0	493
4-5 PM	15	441	0	255	1	292	0	346	454	0	0	0	1804	1256	0	548
5-6 PM	22	430	0	263	1	283	0	315	326	0	0	0	1640	1093	0	547
	186	4212	0	1717	12	2617	0	2386	2707	0	0	0	13837	9491	0	4346

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Groups Printed- Cars - Trucks

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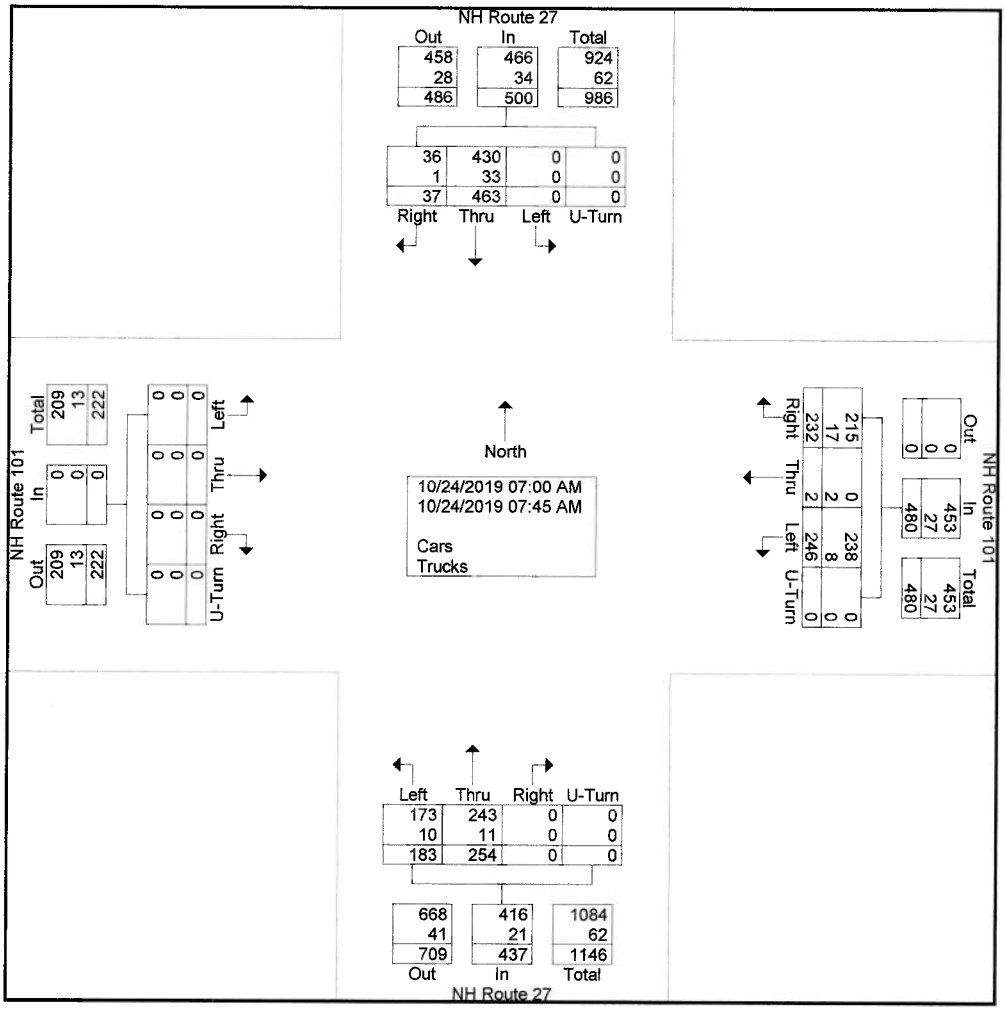
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
07:00 AM	9	90	0	0	99	110	1	52	0	163	0	151	48	0	199	0	0	0	0	0	461
07:15 AM	7	119	0	0	126	77	1	59	0	137	0	54	47	0	101	0	0	0	0	0	364
07:30 AM	7	143	0	0	150	18	0	50	0	68	0	33	50	0	83	0	0	0	0	0	301
07:45 AM	14	111	0	0	125	27	0	85	0	112	0	16	38	0	54	0	0	0	0	0	291
Total	37	463	0	0	500	232	2	246	0	480	0	254	183	0	437	0	0	0	0	0	1417
Grand Total	37	463	0	0	500	232	2	246	0	480	0	254	183	0	437	0	0	0	0	0	1417
Apprch %	7.4	92.6	0	0		48.3	0.4	51.2	0		0	58.1	41.9	0		0	0	0	0		
Total %	2.6	32.7	0	0	35.3	16.4	0.1	17.4	0	33.9	0	17.9	12.9	0	30.8	0	0	0	0	0	
Cars	36	430	0	0	466	215	0	238	0	453	0	243	173	0	416	0	0	0	0	0	1335
% Cars	97.3	92.9	0	0	93.2	92.7	0	96.7	0	94.4	0	95.7	94.5	0	95.2	0	0	0	0	0	94.2
Trucks	1	33	0	0	34	17	2	8	0	27	0	11	10	0	21	0	0	0	0	0	82
% Trucks	2.7	7.1	0	0	6.8	7.3	100	3.3	0	5.6	0	4.3	5.5	0	4.8	0	0	0	0	0	5.8



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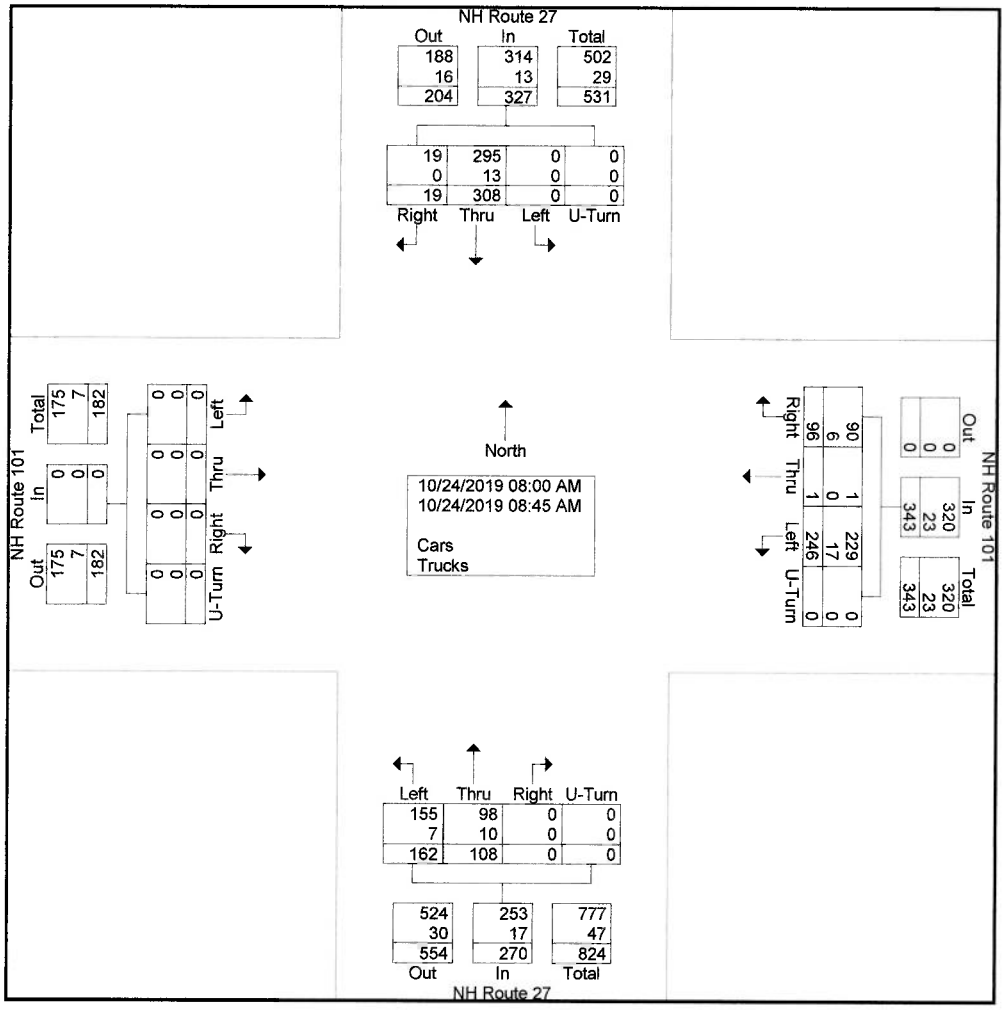
08:00 AM	4	93	0	0	97	23	1	71	0	95	0	25	38	0	63	0	0	0	0	0	255
08:15 AM	5	86	0	0	91	21	0	68	0	89	0	27	44	0	71	0	0	0	0	0	251
08:30 AM	4	57	0	0	61	28	0	47	0	75	0	30	39	0	69	0	0	0	0	0	205
08:45 AM	6	72	0	0	78	24	0	60	0	84	0	26	41	0	67	0	0	0	0	0	229
Total	19	308	0	0	327	96	1	246	0	343	0	108	162	0	270	0	0	0	0	0	940
Grand Total	19	308	0	0	327	96	1	246	0	343	0	108	162	0	270	0	0	0	0	0	940
Apprch %	5.8	94.2	0	0		28	0.3	71.7	0		0	40	60	0		0	0	0	0		
Total %	2	32.8	0	0	34.8	10.2	0.1	26.2	0	36.5	0	11.5	17.2	0	28.7	0	0	0	0	0	
Cars	19	295	0	0	314	90	1	229	0	320	0	98	155	0	253	0	0	0	0	0	887
% Cars	100	95.8	0	0	96	93.8	100	93.1	0	93.3	0	90.7	95.7	0	93.7	0	0	0	0	0	94.4
Trucks	0	13	0	0	13	6	0	17	0	23	0	10	7	0	17	0	0	0	0	0	53
% Trucks	0	4.2	0	0	4	6.2	0	6.9	0	6.7	0	9.3	4.3	0	6.3	0	0	0	0	0	5.6



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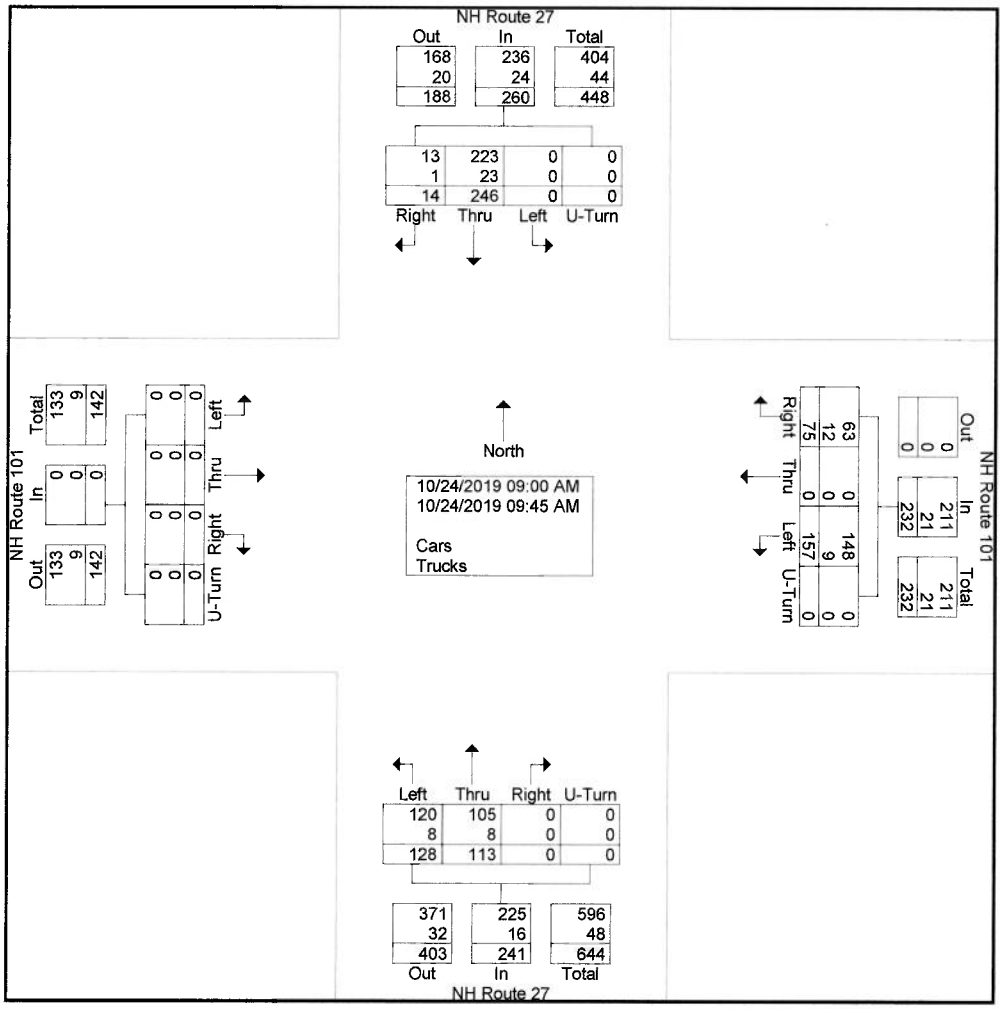
09:00 AM	5	57	0	0	62	23	0	41	0	64	0	25	29	0	54	0	0	0	0	0	180
09:15 AM	3	60	0	0	63	15	0	39	0	54	0	40	34	0	74	0	0	0	0	0	191
09:30 AM	4	76	0	0	80	19	0	37	0	56	0	25	34	0	59	0	0	0	0	0	195
09:45 AM	2	53	0	0	55	18	0	40	0	58	0	23	31	0	54	0	0	0	0	0	167
Total	14	246	0	0	260	75	0	157	0	232	0	113	128	0	241	0	0	0	0	0	733
Grand Total	14	246	0	0	260	75	0	157	0	232	0	113	128	0	241	0	0	0	0	0	733
Apprch %	5.4	94.6	0	0		32.3	0	67.7	0		0	46.9	53.1	0		0	0	0	0		
Total %	1.9	33.6	0	0	35.5	10.2	0	21.4	0	31.7	0	15.4	17.5	0	32.9	0	0	0	0	0	
Cars	13	223	0	0	236	63	0	148	0	211	0	105	120	0	225	0	0	0	0	0	672
% Cars	92.9	90.7	0	0	90.8	84	0	94.3	0	90.9	0	92.9	93.8	0	93.4	0	0	0	0	0	91.7
Trucks	1	23	0	0	24	12	0	9	0	21	0	8	8	0	16	0	0	0	0	0	61
% Trucks	7.1	9.3	0	0	9.2	16	0	5.7	0	9.1	0	7.1	6.2	0	6.6	0	0	0	0	0	8.3



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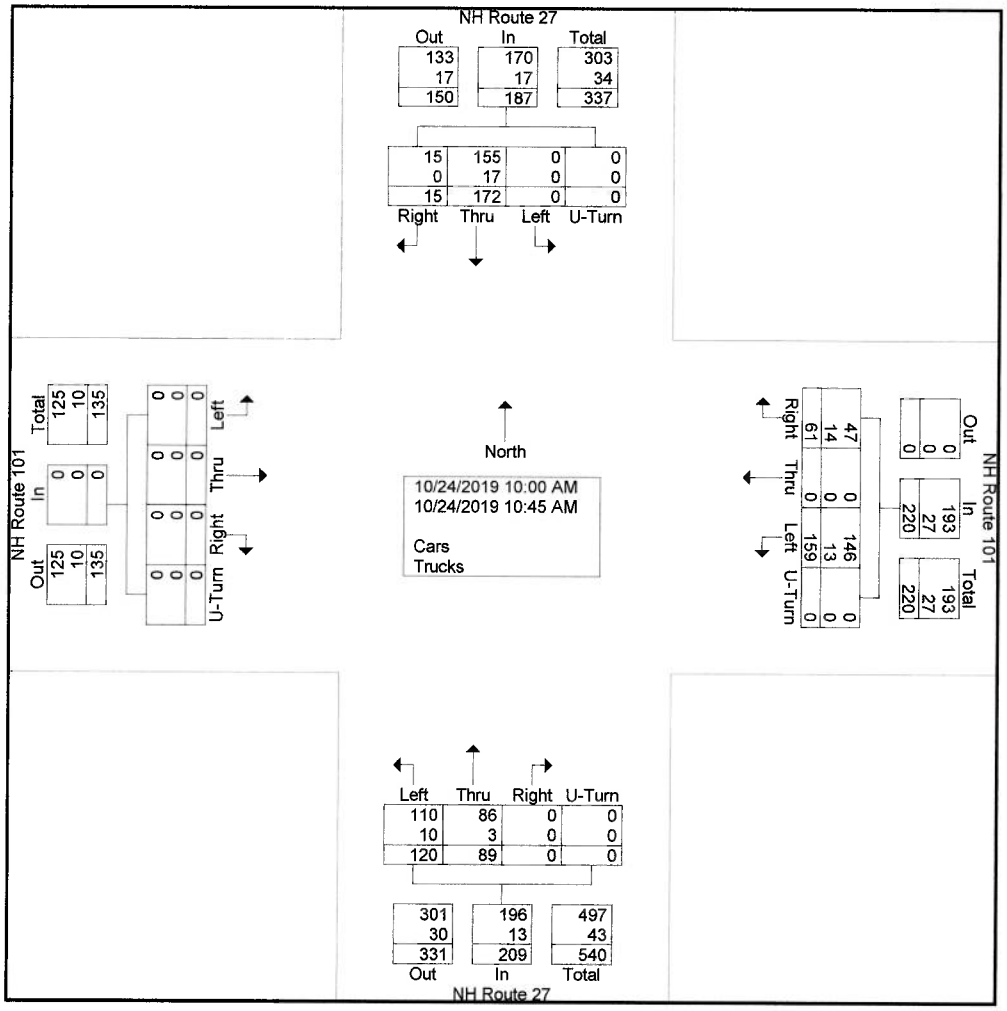
10:00 AM	4	49	0	0	53	18	0	42	0	60	0	23	26	0	49	0	0	0	0	0	162
10:15 AM	5	41	0	0	46	14	0	30	0	44	0	25	23	0	48	0	0	0	0	0	138
10:30 AM	2	47	0	0	49	18	0	48	0	66	0	21	38	0	59	0	0	0	0	0	174
10:45 AM	4	35	0	0	39	11	0	39	0	50	0	20	33	0	53	0	0	0	0	0	142
Total	15	172	0	0	187	61	0	159	0	220	0	89	120	0	209	0	0	0	0	0	616
Grand Total	15	172	0	0	187	61	0	159	0	220	0	89	120	0	209	0	0	0	0	0	616
Apprch %	8	92	0	0		27.7	0	72.3	0		0	42.6	57.4	0		0	0	0	0		
Total %	2.4	27.9	0	0	30.4	9.9	0	25.8	0	35.7	0	14.4	19.5	0	33.9	0	0	0	0	0	
Cars	15	155	0	0	170	47	0	146	0	193	0	86	110	0	196	0	0	0	0	0	559
% Cars	100	90.1	0	0	90.9	77	0	91.8	0	87.7	0	96.6	91.7	0	93.8	0	0	0	0	0	90.7
Trucks	0	17	0	0	17	14	0	13	0	27	0	3	10	0	13	0	0	0	0	0	57
% Trucks	0	9.9	0	0	9.1	23	0	8.2	0	12.3	0	3.4	8.3	0	6.2	0	0	0	0	0	9.3



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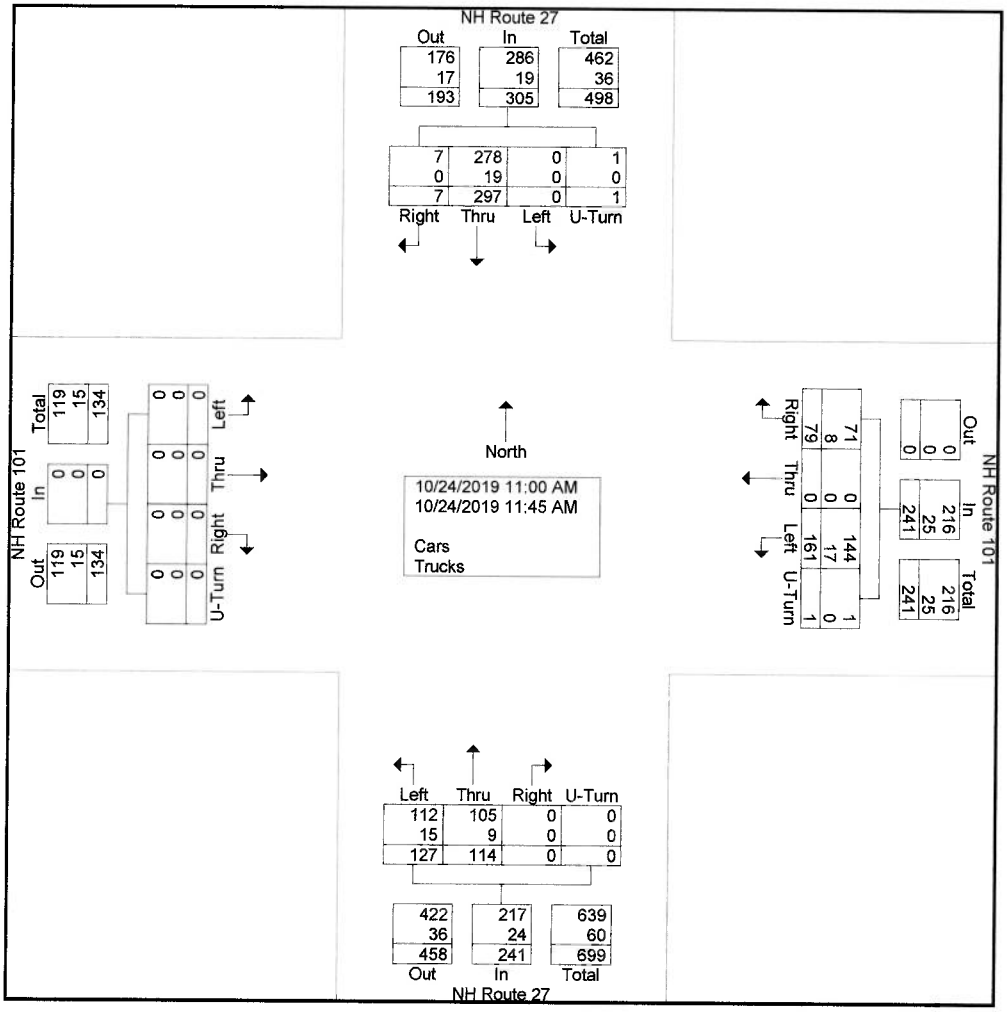
11:00 AM	1	43	0	0	44	15	0	42	0	57	0	33	30	0	63	0	0	0	0	0	164
11:15 AM	2	121	0	0	123	21	0	35	0	56	0	30	39	0	69	0	0	0	0	0	248
11:30 AM	0	69	0	1	70	21	0	41	0	62	0	23	25	0	48	0	0	0	0	0	180
11:45 AM	4	64	0	0	68	22	0	43	1	66	0	28	33	0	61	0	0	0	0	0	195
Total	7	297	0	1	305	79	0	161	1	241	0	114	127	0	241	0	0	0	0	0	787
Grand Total	7	297	0	1	305	79	0	161	1	241	0	114	127	0	241	0	0	0	0	0	787
Apprch %	2.3	97.4	0	0.3		32.8	0	66.8	0.4		0	47.3	52.7	0		0	0	0	0		
Total %	0.9	37.7	0	0.1	38.8	10	0	20.5	0.1	30.6	0	14.5	16.1	0	30.6	0	0	0	0	0	
Cars	7	278	0	1	286	71	0	144	1	216	0	105	112	0	217	0	0	0	0	0	719
% Cars	100	93.6	0	100	93.8	89.9	0	89.4	100	89.6	0	92.1	88.2	0	90	0	0	0	0	0	91.4
Trucks	0	19	0	0	19	8	0	17	0	25	0	9	15	0	24	0	0	0	0	0	68
% Trucks	0	6.4	0	0	6.2	10.1	0	10.6	0	10.4	0	7.9	11.8	0	10	0	0	0	0	0	8.6



Stephen G. Pernaw & Company, Inc.

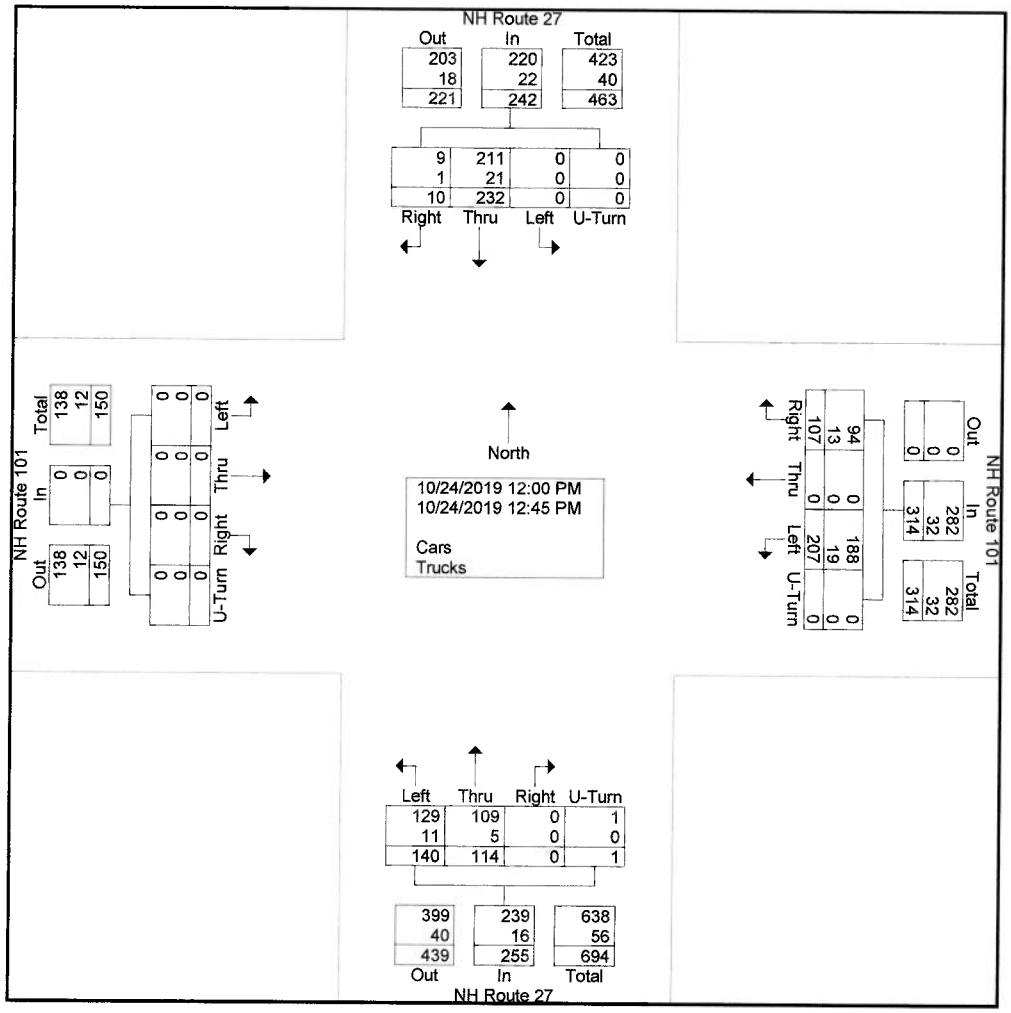
P.O. Box 1721
Concord, New Hampshire 03302

Weather: Fair
Collected By: MV
Job Number: 1941A
Town/State: Exeter, NH

File Name : 1941A_INT_A__12_hr_764825_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- Cars - Trucks

	NH Route 27 From North					NH Route 101 From East					NH Route 27 From South					NH Route 101 From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
12:00 PM	3	51	0	0	54	30	0	53	0	83	0	31	34	0	65	0	0	0	0	0	202
12:15 PM	2	73	0	0	75	18	0	48	0	66	0	26	39	1	66	0	0	0	0	0	207
12:30 PM	3	50	0	0	53	39	0	52	0	91	0	33	35	0	68	0	0	0	0	0	212
12:45 PM	2	58	0	0	60	20	0	54	0	74	0	24	32	0	56	0	0	0	0	0	190
Total	10	232	0	0	242	107	0	207	0	314	0	114	140	1	255	0	0	0	0	0	811
Grand Total	10	232	0	0	242	107	0	207	0	314	0	114	140	1	255	0	0	0	0	0	811
Apprch %	4.1	95.9	0	0		34.1	0	65.9	0		0	44.7	54.9	0.4		0	0	0	0		
Total %	1.2	28.6	0	0	29.8	13.2	0	25.5	0	38.7	0	14.1	17.3	0.1	31.4	0	0	0	0	0	
Cars	9	211	0	0	220	94	0	188	0	282	0	109	129	1	239	0	0	0	0	0	741
% Cars	90	90.9	0	0	90.9	87.9	0	90.8	0	89.8	0	95.6	92.1	100	93.7	0	0	0	0	0	91.4
Trucks	1	21	0	0	22	13	0	19	0	32	0	5	11	0	16	0	0	0	0	0	70
% Trucks	10	9.1	0	0	9.1	12.1	0	9.2	0	10.2	0	4.4	7.9	0	6.3	0	0	0	0	0	8.6



Stephen G. Pernaw & Company, Inc.

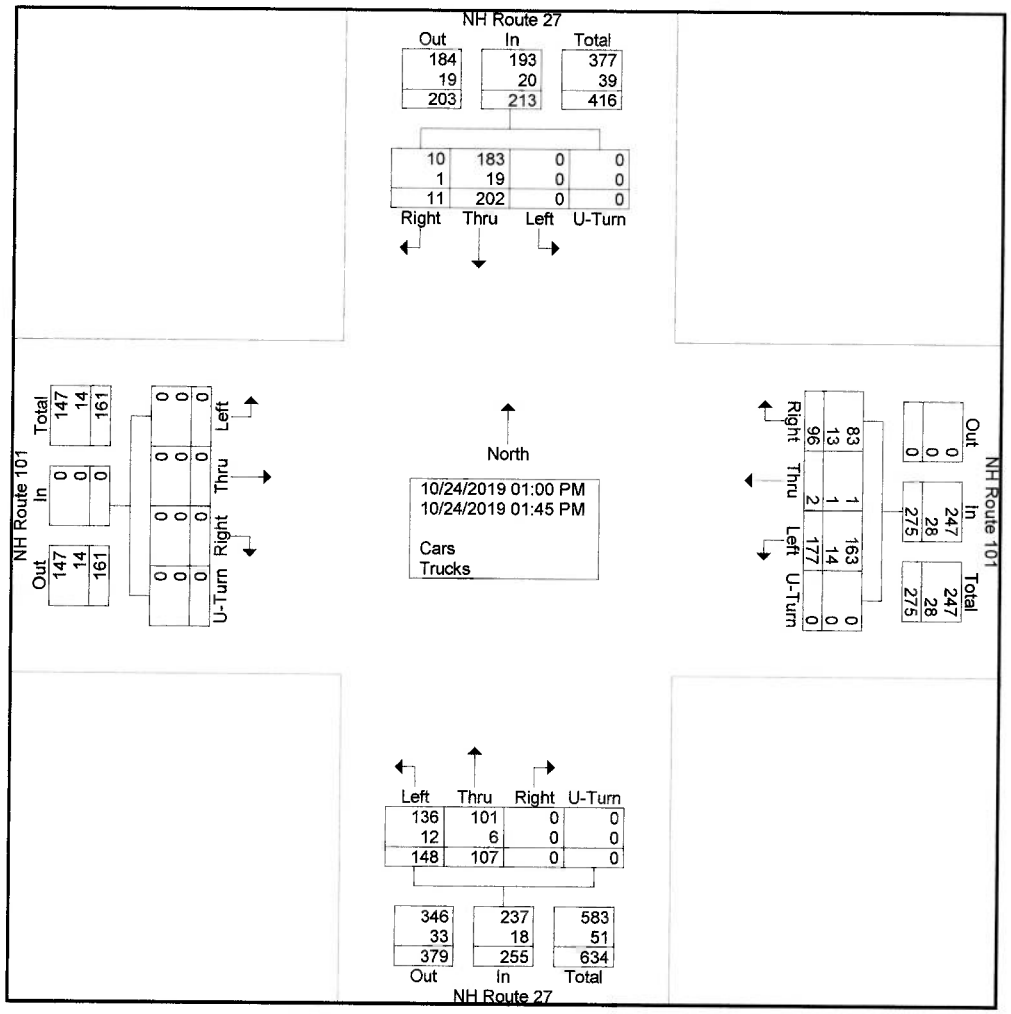
P.O. Box 1721
Concord, New Hampshire 03302

Weather: Fair
Collected By: MV
Job Number: 1941A
Town/State: Exeter, NH

File Name : 1941A_INT_A__12_hr_764825_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- Cars - Trucks

	NH Route 27 From North					NH Route 101 From East					NH Route 27 From South					NH Route 101 From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
01:00 PM	2	46	0	0	48	16	0	43	0	59	0	26	49	0	75	0	0	0	0	0	182
01:15 PM	3	55	0	0	58	19	0	39	0	58	0	15	19	0	34	0	0	0	0	0	150
01:30 PM	4	38	0	0	42	30	0	49	0	79	0	30	42	0	72	0	0	0	0	0	193
01:45 PM	2	63	0	0	65	31	2	46	0	79	0	36	38	0	74	0	0	0	0	0	218
Total	11	202	0	0	213	96	2	177	0	275	0	107	148	0	255	0	0	0	0	0	743
Grand Total	11	202	0	0	213	96	2	177	0	275	0	107	148	0	255	0	0	0	0	0	743
Apprch %	5.2	94.8	0	0		34.9	0.7	64.4	0		0	42	58	0		0	0	0	0		
Total %	1.5	27.2	0	0	28.7	12.9	0.3	23.8	0	37	0	14.4	19.9	0	34.3	0	0	0	0	0	
Cars	10	183	0	0	193	83	1	163	0	247	0	101	136	0	237	0	0	0	0	0	677
% Cars	90.9	90.6	0	0	90.6	86.5	50	92.1	0	89.8	0	94.4	91.9	0	92.9	0	0	0	0	0	91.1
Trucks	1	19	0	0	20	13	1	14	0	28	0	6	12	0	18	0	0	0	0	0	66
% Trucks	9.1	9.4	0	0	9.4	13.5	50	7.9	0	10.2	0	5.6	8.1	0	7.1	0	0	0	0	0	8.9



Stephen G. Pernaw & Company, Inc.

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Concord, New Hampshire 03302

Weather: Fair
Collected By: MV
Job Number: 1941A
Town/State: Exeter, NH

File Name : 1941A_INT_A__12_hr_764825_10-24-2019
Site Code : 1941A
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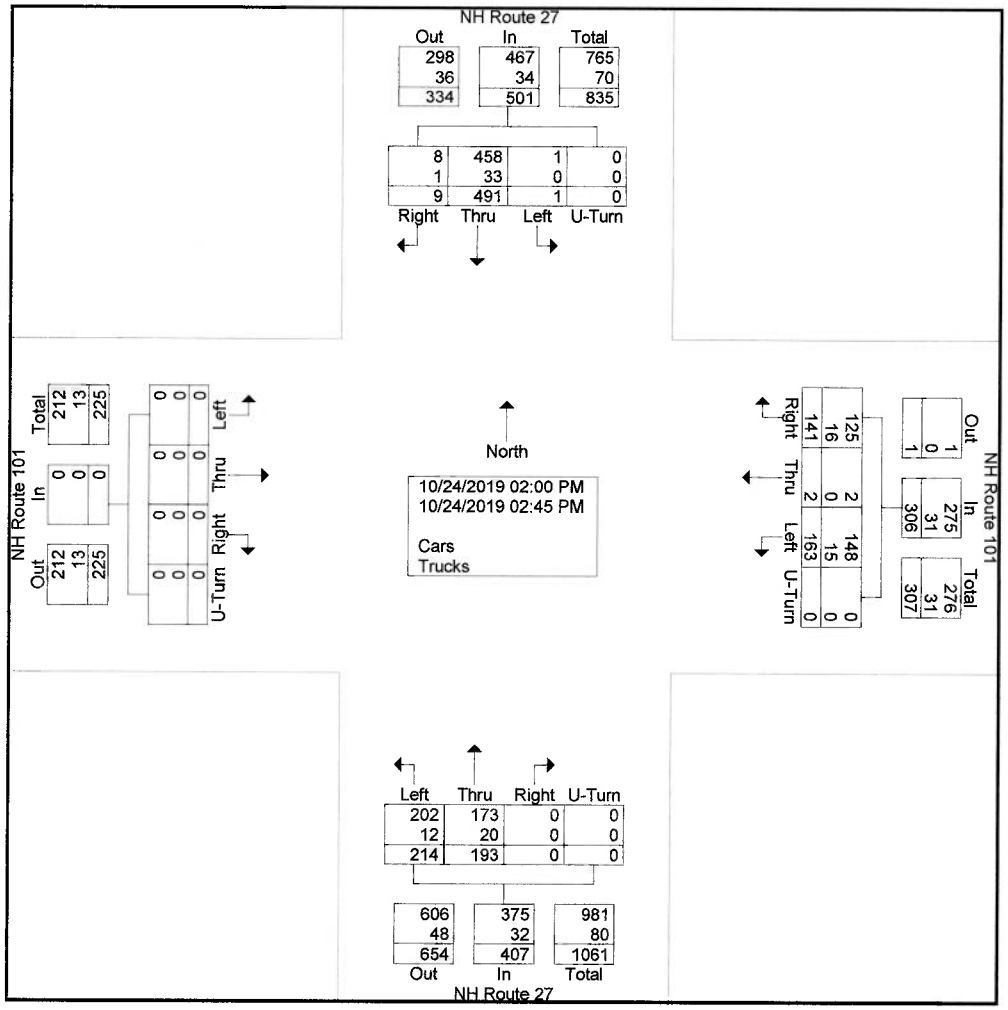
Page No : 1

Groups Printed- Cars - Trucks

	NH Route 27 From North					NH Route 101 From East					NH Route 27 From South					NH Route 101 From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
02:00 PM	3	64	0	0	67	33	1	49	0	83	0	62	44	0	106	0	0	0	0	0	256
02:15 PM	1	65	1	0	67	32	0	37	0	69	0	51	73	0	124	0	0	0	0	0	260
02:30 PM	4	199	0	0	203	39	1	40	0	80	0	40	52	0	92	0	0	0	0	0	375
02:45 PM	1	163	0	0	164	37	0	37	0	74	0	40	45	0	85	0	0	0	0	0	323
Total	9	491	1	0	501	141	2	163	0	306	0	193	214	0	407	0	0	0	0	0	1214
Grand Total	9	491	1	0	501	141	2	163	0	306	0	193	214	0	407	0	0	0	0	0	1214
Apprch %	1.8	98	0.2	0		46.1	0.7	53.3	0		0	47.4	52.6	0		0	0	0	0		
Total %	0.7	40.4	0.1	0	41.3	11.6	0.2	13.4	0	25.2	0	15.9	17.6	0	33.5	0	0	0	0	0	
Cars	8	458	1	0	467	125	2	148	0	275	0	173	202	0	375	0	0	0	0	0	1117
% Cars	88.9	93.3	100	0	93.2	88.7	100	90.8	0	89.9	0	89.6	94.4	0	92.1	0	0	0	0	0	92
Trucks	1	33	0	0	34	16	0	15	0	31	0	20	12	0	32	0	0	0	0	0	97
% Trucks	11.1	6.7	0	0	6.8	11.3	0	9.2	0	10.1	0	10.4	5.6	0	7.9	0	0	0	0	0	8



Stephen G. Pernaw & Company, Inc.

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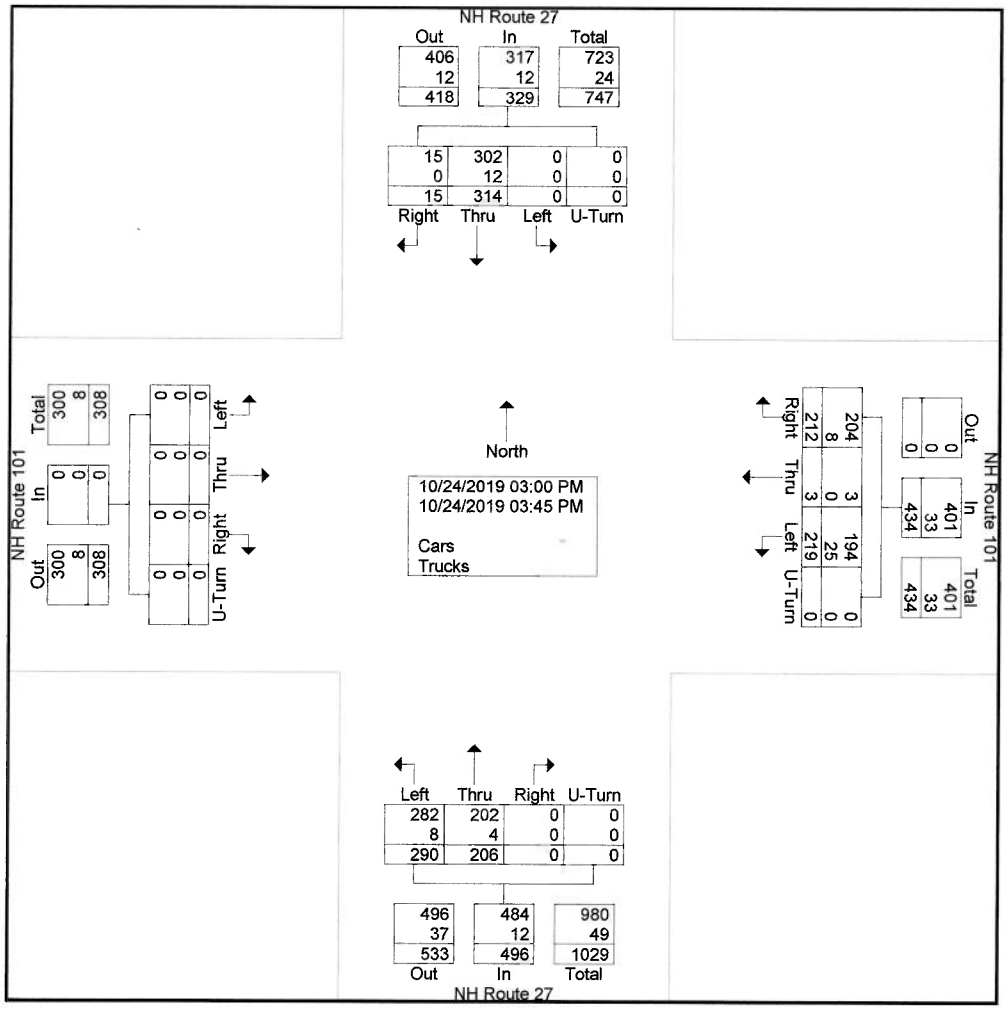
Concord, New Hampshire 03302

Weather: Fair
Collected By: MV
Job Number: 1941A
Town/State: Exeter, NH

File Name : 1941A_INT_A__12_hr_764825_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- Cars - Trucks

	NH Route 27 From North					NH Route 101 From East					NH Route 27 From South					NH Route 101 From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
03:00 PM	5	76	0	0	81	57	3	44	0	104	0	49	63	0	112	0	0	0	0	0	297
03:15 PM	4	64	0	0	68	59	0	54	0	113	0	46	55	0	101	0	0	0	0	0	282
03:30 PM	3	83	0	0	86	51	0	51	0	102	0	54	111	0	165	0	0	0	0	0	353
03:45 PM	3	91	0	0	94	45	0	70	0	115	0	57	61	0	118	0	0	0	0	0	327
Total	15	314	0	0	329	212	3	219	0	434	0	206	290	0	496	0	0	0	0	0	1259
Grand Total	15	314	0	0	329	212	3	219	0	434	0	206	290	0	496	0	0	0	0	0	1259
Apprch %	4.6	95.4	0	0		48.8	0.7	50.5	0		0	41.5	58.5	0		0	0	0	0		
Total %	1.2	24.9	0	0	26.1	16.8	0.2	17.4	0	34.5	0	16.4	23	0	39.4	0	0	0	0	0	
Cars	15	302	0	0	317	204	3	194	0	401	0	202	282	0	484	0	0	0	0	0	1202
% Cars	100	96.2	0	0	96.4	96.2	100	88.6	0	92.4	0	98.1	97.2	0	97.6	0	0	0	0	0	95.5
Trucks	0	12	0	0	12	8	0	25	0	33	0	4	8	0	12	0	0	0	0	0	57
% Trucks	0	3.8	0	0	3.6	3.8	0	11.4	0	7.6	0	1.9	2.8	0	2.4	0	0	0	0	0	4.5



Stephen G. Pernaw & Company, Inc.

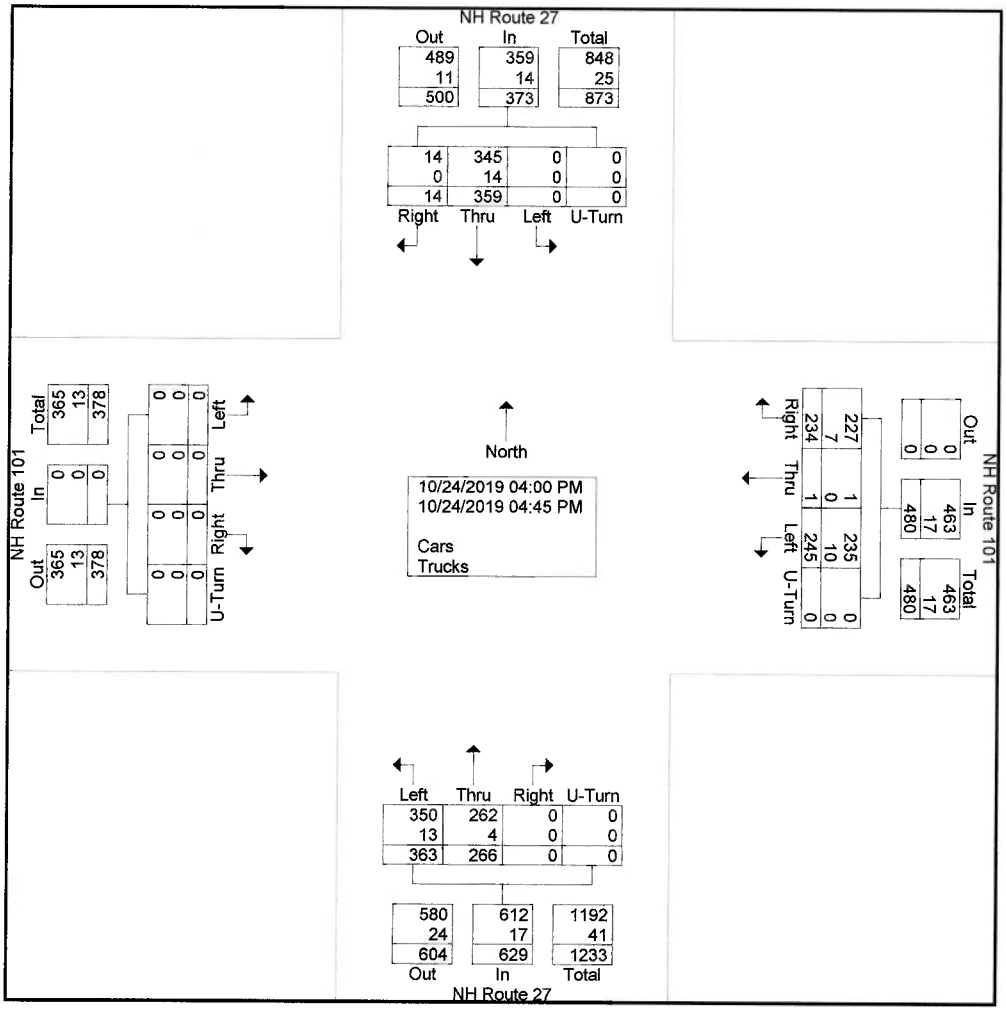
P.O. Box 1721
Concord, New Hampshire 03302

Weather: Fair
Collected By: MV
Job Number: 1941A
Town/State: Exeter, NH

File Name : 1941A_INT_A__12_hr_764825_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- Cars - Trucks

	NH Route 27 From North					NH Route 101 From East					NH Route 27 From South					NH Route 101 From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
04:00 PM	6	68	0	0	74	57	1	62	0	120	0	73	102	0	175	0	0	0	0	0	369
04:15 PM	2	107	0	0	109	68	0	49	0	117	0	63	94	0	157	0	0	0	0	0	383
04:30 PM	4	101	0	0	105	44	0	61	0	105	0	80	93	0	173	0	0	0	0	0	383
04:45 PM	2	83	0	0	85	65	0	73	0	138	0	50	74	0	124	0	0	0	0	0	347
Total	14	359	0	0	373	234	1	245	0	480	0	266	363	0	629	0	0	0	0	0	1482
Grand Total	14	359	0	0	373	234	1	245	0	480	0	266	363	0	629	0	0	0	0	0	1482
Apprch %	3.8	96.2	0	0		48.8	0.2	51	0		0	42.3	57.7	0		0	0	0	0		
Total %	0.9	24.2	0	0	25.2	15.8	0.1	16.5	0	32.4	0	17.9	24.5	0	42.4	0	0	0	0	0	
Cars	14	345	0	0	359	227	1	235	0	463	0	262	350	0	612	0	0	0	0	0	1434
% Cars	100	96.1	0	0	96.2	97	100	95.9	0	96.5	0	98.5	96.4	0	97.3	0	0	0	0	0	96.8
Trucks	0	14	0	0	14	7	0	10	0	17	0	4	13	0	17	0	0	0	0	0	48
% Trucks	0	3.9	0	0	3.8	3	0	4.1	0	3.5	0	1.5	3.6	0	2.7	0	0	0	0	0	3.2



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Concord, New Hampshire 03302

Weather: Fair
Collected By: MV
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File Name : 1941A_INT_A__12_hr_764825_10-24-2019
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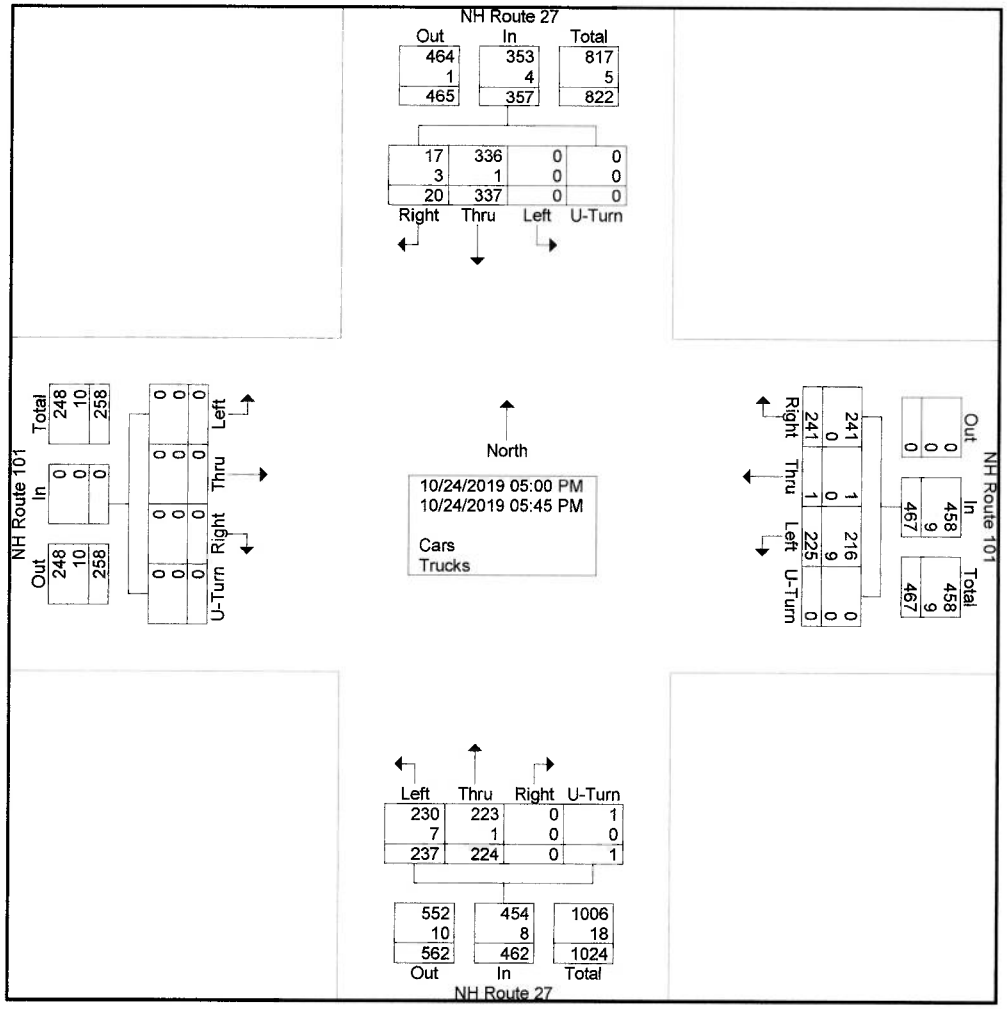
Groups Printed- Cars - Trucks

	NH Route 27 From North					NH Route 101 From East					NH Route 27 From South					NH Route 101 From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
05:00 PM	6	93	0	0	99	54	1	48	0	103	0	69	94	0	163	0	0	0	0	0	365
05:15 PM	4	99	0	0	103	72	0	65	0	137	0	56	52	0	108	0	0	0	0	0	348
05:30 PM	3	71	0	0	74	51	0	56	0	107	0	46	48	1	95	0	0	0	0	0	276
05:45 PM	7	74	0	0	81	64	0	56	0	120	0	53	43	0	96	0	0	0	0	0	297
Total	20	337	0	0	357	241	1	225	0	467	0	224	237	1	462	0	0	0	0	0	1286
Grand Total	20	337	0	0	357	241	1	225	0	467	0	224	237	1	462	0	0	0	0	0	1286
Apprch %	5.6	94.4	0	0		51.6	0.2	48.2	0		0	48.5	51.3	0.2		0	0	0	0		
Total %	1.6	26.2	0	0	27.8	18.7	0.1	17.5	0	36.3	0	17.4	18.4	0.1	35.9	0	0	0	0	0	
Cars	17	336	0	0	353	241	1	216	0	458	0	223	230	1	454	0	0	0	0	0	1265
% Cars	85	99.7	0	0	98.9	100	100	96	0	98.1	0	99.6	97	100	98.3	0	0	0	0	0	98.4
Trucks	3	1	0	0	4	0	0	9	0	9	0	1	7	0	8	0	0	0	0	0	21
% Trucks	15	0.3	0	0	1.1	0	0	4	0	1.9	0	0.4	3	0	1.7	0	0	0	0	0	1.6



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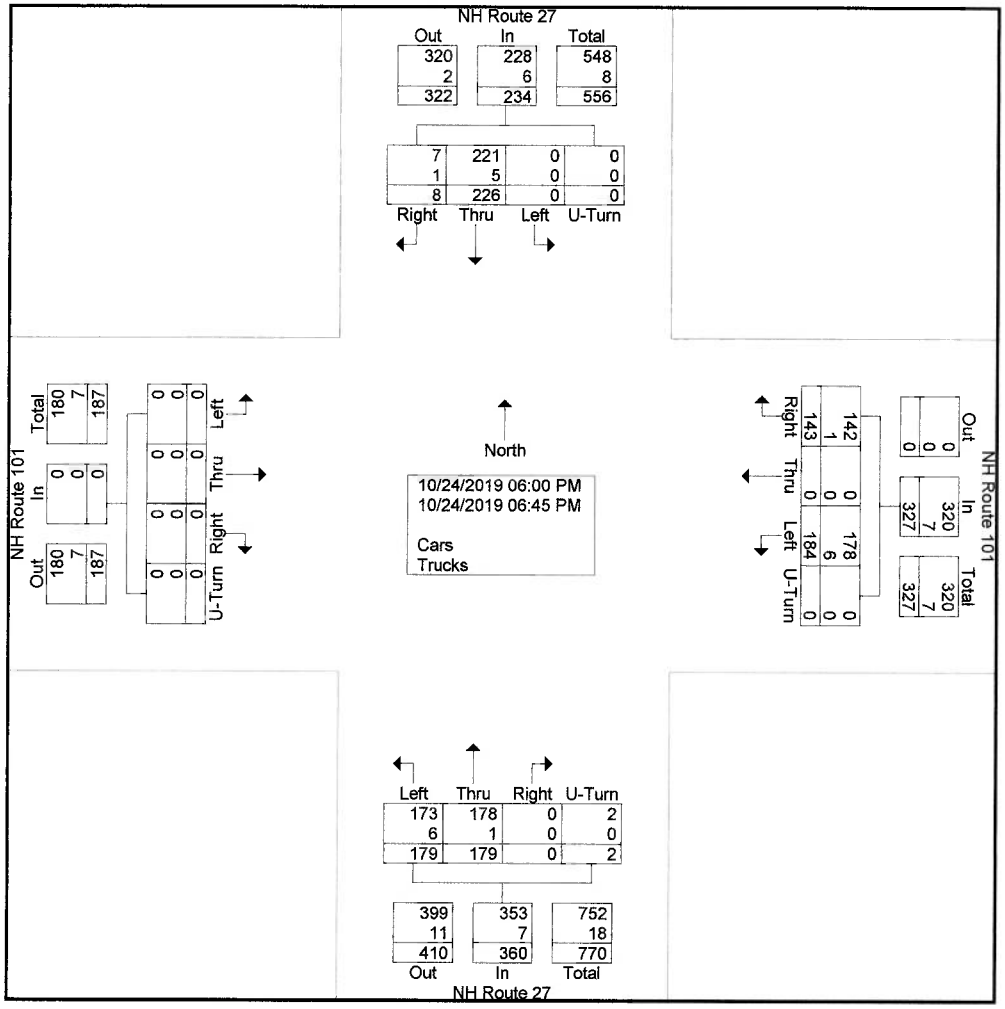
Groups Printed- Cars - Trucks

	NH Route 27 From North					NH Route 101 From East					NH Route 27 From South					NH Route 101 From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
06:00 PM	4	85	0	0	89	39	0	53	0	92	0	44	45	1	90	0	0	0	0	0	271
06:15 PM	1	53	0	0	54	40	0	47	0	87	0	40	48	0	88	0	0	0	0	0	229
06:30 PM	1	48	0	0	49	40	0	49	0	89	0	52	45	1	98	0	0	0	0	0	236
06:45 PM	2	40	0	0	42	24	0	35	0	59	0	43	41	0	84	0	0	0	0	0	185
Total	8	226	0	0	234	143	0	184	0	327	0	179	179	2	360	0	0	0	0	0	921
Grand Total	8	226	0	0	234	143	0	184	0	327	0	179	179	2	360	0	0	0	0	0	921
Apprch %	3.4	96.6	0	0		43.7	0	56.3	0		0	49.7	49.7	0.6		0	0	0	0		
Total %	0.9	24.5	0	0	25.4	15.5	0	20	0	35.5	0	19.4	19.4	0.2	39.1	0	0	0	0	0	
Cars	7	221	0	0	228	142	0	178	0	320	0	178	173	2	353	0	0	0	0	0	901
% Cars	87.5	97.8	0	0	97.4	99.3	0	96.7	0	97.9	0	99.4	96.6	100	98.1	0	0	0	0	0	97.8
Trucks	1	5	0	0	6	1	0	6	0	7	0	1	6	0	7	0	0	0	0	0	20
% Trucks	12.5	2.2	0	0	2.6	0.7	0	3.3	0	2.1	0	0.6	3.4	0	1.9	0	0	0	0	0	2.2



Warrants Summary Report

1: NH27 / NH101 WB Ramps - 2031 Build

Intersection Informatior

	Major Street	Minor Street
Street Name	NH27	NH101 WB Off Ramp
Direction	NB/SB	WB
Number of Lane:	2	1
Approach Speed	40	30

Warrant	Met?	Notes
Warrant 1, Eight-Hour Vehicular Volume		
	Yes	
Condition A or B Met	Yes	9 Hours met (8 required)
Condition A and B M	No	6 Hours met (8 required)
Warrant 2, Four-Hour Vehicular Volume		
	Yes	9 Hours met (4 required)

Warrant 1: Eight-hour Vehicular Volume

1: NH27 / NH101 WB Ramps

Intersection Information

Major Street Name:	NH27
Major Street Direction:	NB/SB
Minor Street Direction:	WB

WARRANT 1 MET? Yes

Details:

Condition A Met?	Yes	9 Hours met (8 required)
Condition B Met?	No	6 Hours met (8 required)

Hour	Major Street Vehicles (Total of Both Approaches)		High Volume Minor Approach Vehicles		100% Standard Met? Cond. A OR Cond. B		80% Standard Met? Cond. A AND Cond. B	
					Condition A 100% Column	Condition B 100% Column	Condition A 80% Column	Condition B 80% Column
07:00 to 08:00	**1,199**		**555**		Yes*	Yes*	Yes*	Yes*
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	Yes				
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	Yes				
Condition B	**Volume >= 100% column (900)?**	Yes	**Volume >= 100% column (75)?**	Yes				
	Volume >= 80% column (720)?	Yes	**Volume >= 80% column (60)?**	Yes				
08:00 to 09:00	**761**		**391**		Yes*	No	Yes*	Yes*
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	Yes				
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	Yes				
Condition B	**Volume >= 100% column (900)?**	No	**Volume >= 100% column (75)?**	Yes				
	Volume >= 80% column (720)?	Yes	**Volume >= 80% column (60)?**	Yes				
09:00 to 10:00	**619**		**265**		Yes*	No	Yes	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	Yes				
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	Yes				
Condition B	**Volume >= 100% column (900)?**	No	**Volume >= 100% column (75)?**	Yes				
	Volume >= 80% column (720)?	No	**Volume >= 80% column (60)?**	Yes				

Warrant 1: Eight-hour Vehicular Volume

1: NH27 / NH101 WB Ramps

10:00 to 11:00	**502**		**251**		No	No	Yes	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	Yes				
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	Yes				
Condition B	**Volume >= 100% column (900)?**	No	**Volume >= 100% column (75)?**	Yes				
	Volume >= 80% column (720)?	No	**Volume >= 80% column (60)?**	Yes				
11:00 to 12:00	**679**		**274**		Yes*	No	Yes	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	Yes				
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	Yes				
Condition B	**Volume >= 100% column (900)?**	No	**Volume >= 100% column (75)?**	Yes				
	Volume >= 80% column (720)?	No	**Volume >= 80% column (60)?**	Yes				
12:00 to 13:00	**631**		**356**		Yes*	No	Yes	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	Yes				
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	Yes				
Condition B	**Volume >= 100% column (900)?**	No	**Volume >= 100% column (75)?**	Yes				
	Volume >= 80% column (720)?	No	**Volume >= 80% column (60)?**	Yes				
13:00 to 14:00	**593**		**312**		No	No	Yes	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	Yes				
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	Yes				
Condition B	**Volume >= 100% column (900)?**	No	**Volume >= 100% column (75)?**	Yes				
	Volume >= 80% column (720)?	No	**Volume >= 80% column (60)?**	Yes				
14:00 to 15:00	**1,122**		**354**		Yes*	Yes*	Yes*	Yes*
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	Yes				
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	Yes				
Condition B	**Volume >= 100% column (900)?**	Yes	**Volume >= 100% column (75)?**	Yes				
	Volume >= 80% column (720)?	Yes	**Volume >= 80% column (60)?**	Yes				
15:00 to 16:00	**1,036**		**493**		Yes*	Yes*	Yes*	Yes*
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	Yes				
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	Yes				
Condition B	**Volume >= 100% column (900)?**	Yes	**Volume >= 100% column (75)?**	Yes				
	Volume >= 80% column (720)?	Yes	**Volume >= 80% column (60)?**	Yes				

Warrant 1: Eight-hour Vehicular Volume

1: NH27 / NH101 WB Ramps

16:00 to 17:00	**1,256**		**548**		Yes*	Yes*	Yes*	Yes*
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	Yes				
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	Yes				
Condition B	**Volume >= 100% column (900)?**	Yes	**Volume >= 100% column (75)?**	Yes				
	Volume >= 80% column (720)?	Yes	**Volume >= 80% column (60)?**	Yes				

17:00 to 18:00	**1,093**		**547**		Yes*	Yes*	Yes*	Yes*
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	Yes				
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	Yes				
Condition B	**Volume >= 100% column (900)?**	Yes	**Volume >= 100% column (75)?**	Yes				
	Volume >= 80% column (720)?	Yes	**Volume >= 80% column (60)?**	Yes				

Warrant 2: Four-hour Vehicular Volume

1: NH27 / NH101 WB Ramps

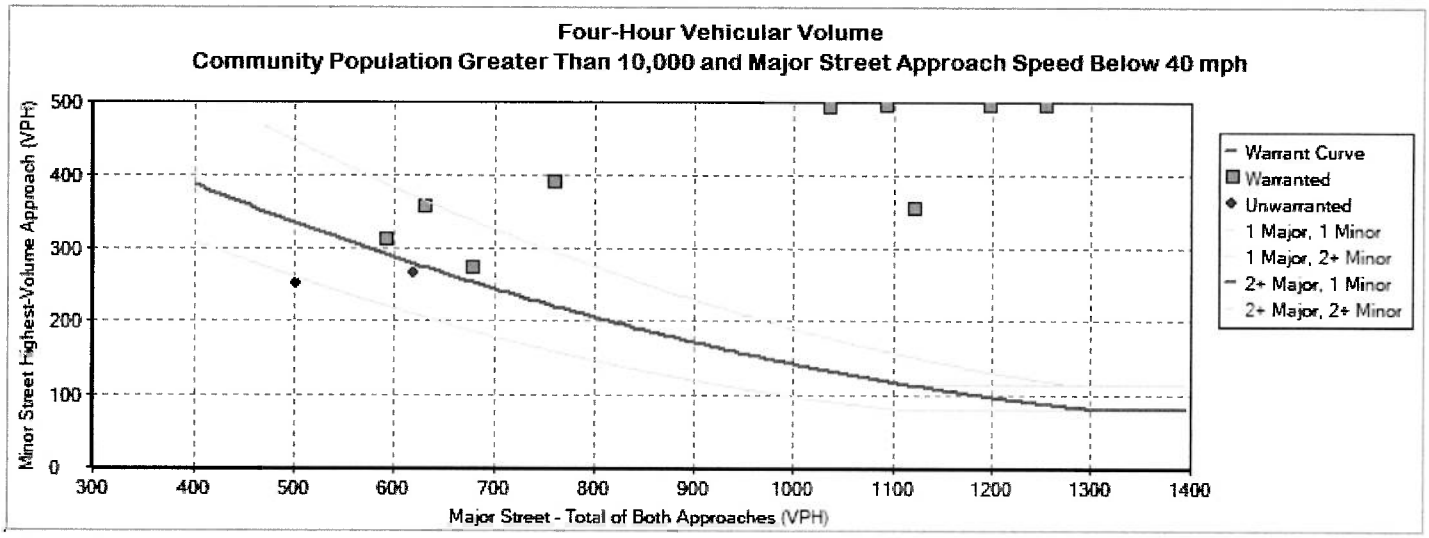
Intersection Information

	Major Street	Minor Street
Street Name	NH27	NH101 WB Off Ramp
Direction	NB/SB	WB
Number of Lanes	2	1
Approch Speed	40	30

Warrant 2 Met? **Yes**

Details:

Notes	9 Hours met (4 required)
Low population	No



Warrant 2: Four-hour Vehicular Volume

1: NH27 / NH101 WB Ramps

Hourly Volumes

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
00:00:00 - 01:00:00	0	0
01:00:00 - 02:00:00	0	0
02:00:00 - 03:00:00	0	0
03:00:00 - 04:00:00	0	0
04:00:00 - 05:00:00	0	0
05:00:00 - 06:00:00	0	0
06:00:00 - 07:00:00	0	0
07:00:00 - 08:00:00	1,199	555
08:00:00 - 09:00:00	761	391
09:00:00 - 10:00:00	619	265
10:00:00 - 11:00:00	502	251
11:00:00 - 12:00:00	679	274
12:00:00 - 13:00:00	631	356
13:00:00 - 14:00:00	593	312
14:00:00 - 15:00:00	1,122	354
15:00:00 - 16:00:00	1,036	493
16:00:00 - 17:00:00	1,256	548
17:00:00 - 18:00:00	1,093	547
18:00:00 - 19:00:00	0	0
19:00:00 - 20:00:00	0	0
20:00:00 - 21:00:00	0	0
21:00:00 - 22:00:00	0	0
22:00:00 - 23:00:00	0	0
23:00:00 - 00:00:00	0	0

Warrant 2: Four-hour Vehicular Volume

1: NH27 / NH101 WB Ramps

Warranted Hours

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
07:00:00 - 08:00:00	1,199.00	555.00
08:00:00 - 09:00:00	761.00	391.00
11:00:00 - 12:00:00	679.00	274.00
12:00:00 - 13:00:00	631.00	356.00
13:00:00 - 14:00:00	593.00	312.00
14:00:00 - 15:00:00	1,122.00	354.00
15:00:00 - 16:00:00	1,036.00	493.00
16:00:00 - 17:00:00	1,256.00	548.00
17:00:00 - 18:00:00	1,093.00	547.00

Note: Only data of hours warranted is represented in the above table.

Traffic Signal Warrants Analysis

NH27 / NH101 WB Ramps

2019 Average-Month Build Volumes

Stephen G. Pernaw & Company, Inc.

TRAFFIC SIGNAL WARRANTS - INPUT VOLUMES

NH27 / North Site Driveway / NH101 WB Ramps

October 2019 TMC

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	SUM
7-8 AM	37	463		232	2	246		254	183				1417
8-9 AM	19	308		96	1	246		108	162				940
9-10 AM	14	246		75	0	157		113	128				733
10-11 AM	15	172		61	0	159		89	120				616
11-12 PM	7	297		79	0	161		114	127				785
12-1 PM	10	232		107	0	207		114	140				810
1-2 PM	11	202		96	2	177		107	148				743
2-3 PM	9	491		141	2	163		193	214				1213
3-4 PM	15	314		212	3	219		206	290				1259
4-5 PM	14	359		234	1	245		266	363				1482
5-6 PM	20	337		241	1	225		224	237				1285

2019 Average Month No Build (0.96) 0.96

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL		Mainline	EB	WB
7-8 AM	36	444	0	223	2	236	0	244	176	0	0	0	1361	900	0	461
8-9 AM	18	296	0	92	1	236	0	104	156	0	0	0	903	574	0	329
9-10 AM	13	236	0	72	0	151	0	108	123	0	0	0	703	480	0	223
10-11 AM	14	165	0	59	0	153	0	85	115	0	0	0	591	379	0	212
11-12 PM	7	285	0	76	0	155	0	109	122	0	0	0	754	523	0	231
12-1 PM	10	223	0	103	0	199	0	109	134	0	0	0	778	476	0	302
1-2 PM	11	194	0	92	2	170	0	103	142	0	0	0	714	450	0	264
2-3 PM	9	471	0	135	2	156	0	185	205	0	0	0	1163	870	0	293
3-4 PM	14	301	0	204	3	210	0	198	278	0	0	0	1208	791	0	417
4-5 PM	13	345	0	225	1	235	0	255	348	0	0	0	1422	961	0	461
5-6 PM	19	324	0	231	1	216	0	215	228	0	0	0	1234	786	0	448
	164	3284	0	1512	12	2117	0	1715	2027	0	0	0	10831	7190	0	3641

Stephen G. Pernaw & Company, Inc.

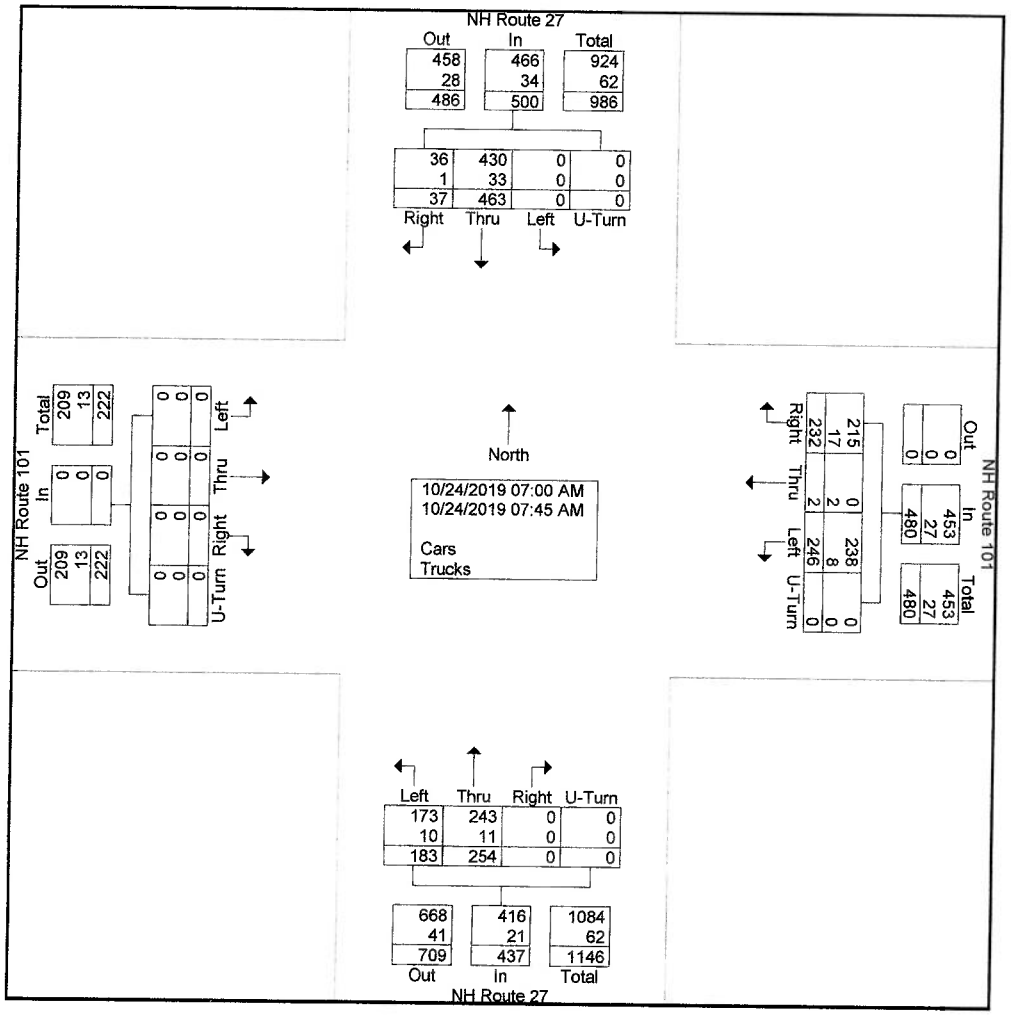
P.O. Box 1721
Concord, New Hampshire 03302

Weather: Fair
Collected By: MV
Job Number: 1941A
Town/State: Exeter, NH

File Name : 1941A_INT_A__12_hr_764825_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- Cars - Trucks

	NH Route 27 From North					NH Route 101 From East					NH Route 27 From South					NH Route 101 From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
07:00 AM	9	90	0	0	99	110	1	52	0	163	0	151	48	0	199	0	0	0	0	0	461
07:15 AM	7	119	0	0	126	77	1	59	0	137	0	54	47	0	101	0	0	0	0	0	364
07:30 AM	7	143	0	0	150	18	0	50	0	68	0	33	50	0	83	0	0	0	0	0	301
07:45 AM	14	111	0	0	125	27	0	85	0	112	0	16	38	0	54	0	0	0	0	0	291
Total	37	463	0	0	500	232	2	246	0	480	0	254	183	0	437	0	0	0	0	0	1417
Grand Total	37	463	0	0	500	232	2	246	0	480	0	254	183	0	437	0	0	0	0	0	1417
Apprch %	7.4	92.6	0	0		48.3	0.4	51.2	0		0	58.1	41.9	0		0	0	0	0		
Total %	2.6	32.7	0	0	35.3	16.4	0.1	17.4	0	33.9	0	17.9	12.9	0	30.8	0	0	0	0	0	
Cars	36	430	0	0	466	215	0	238	0	453	0	243	173	0	416	0	0	0	0	0	1335
% Cars	97.3	92.9	0	0	93.2	92.7	0	96.7	0	94.4	0	95.7	94.5	0	95.2	0	0	0	0	0	94.2
Trucks	1	33	0	0	34	17	2	8	0	27	0	11	10	0	21	0	0	0	0	0	82
% Trucks	2.7	7.1	0	0	6.8	7.3	100	3.3	0	5.6	0	4.3	5.5	0	4.8	0	0	0	0	0	5.8



Stephen G. Pernaw & Company, Inc.

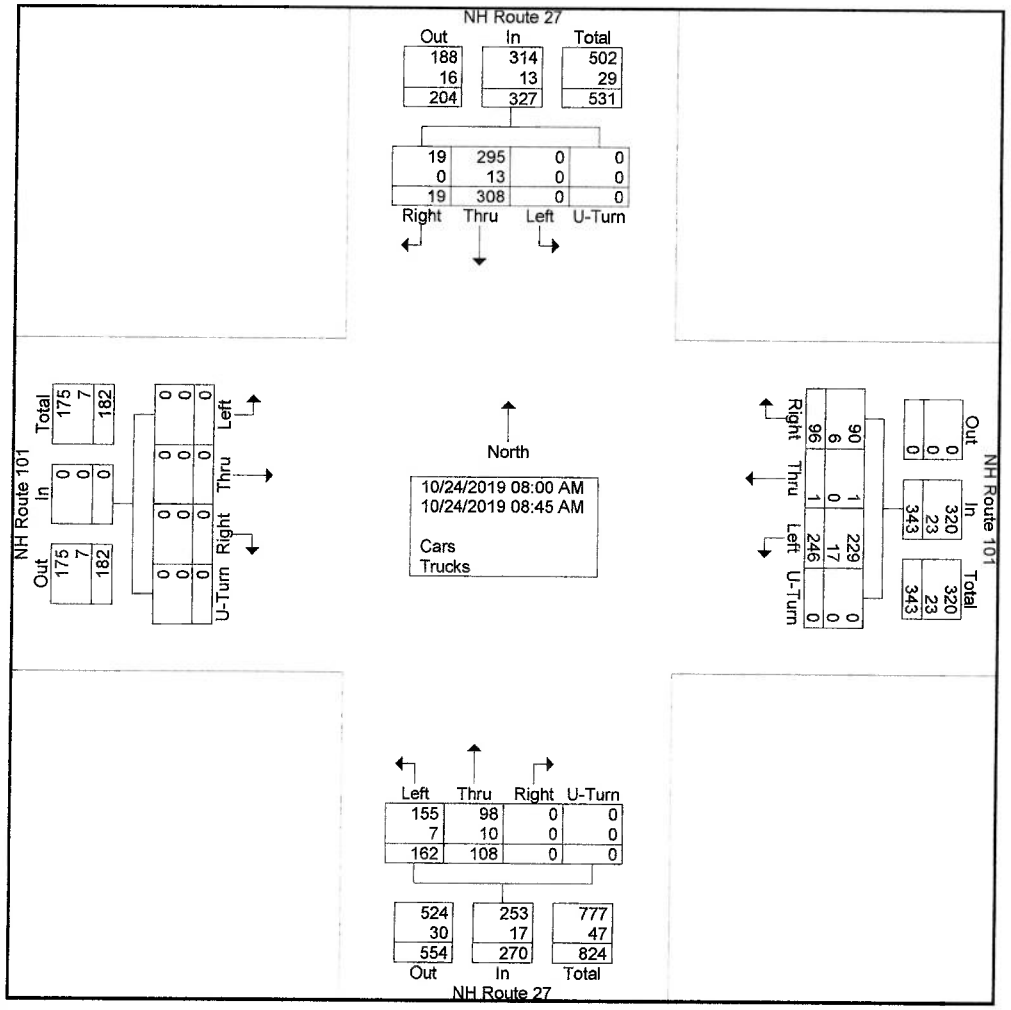
P.O. Box 1721
Concord, New Hampshire 03302

Weather: Fair
Collected By: MV
Job Number: 1941A
Town/State: Exeter, NH

File Name : 1941A_INT_A__12_hr_764825_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- Cars - Trucks

	NH Route 27 From North					NH Route 101 From East					NH Route 27 From South					NH Route 101 From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
08:00 AM	4	93	0	0	97	23	1	71	0	95	0	25	38	0	63	0	0	0	0	0	255
08:15 AM	5	86	0	0	91	21	0	68	0	89	0	27	44	0	71	0	0	0	0	0	251
08:30 AM	4	57	0	0	61	28	0	47	0	75	0	30	39	0	69	0	0	0	0	0	205
08:45 AM	6	72	0	0	78	24	0	60	0	84	0	26	41	0	67	0	0	0	0	0	229
Total	19	308	0	0	327	96	1	246	0	343	0	108	162	0	270	0	0	0	0	0	940
Grand Total	19	308	0	0	327	96	1	246	0	343	0	108	162	0	270	0	0	0	0	0	940
Apprch %	5.8	94.2	0	0		28	0.3	71.7	0		0	40	60	0		0	0	0	0		
Total %	2	32.8	0	0	34.8	10.2	0.1	26.2	0	36.5	0	11.5	17.2	0	28.7	0	0	0	0	0	
Cars	19	295	0	0	314	90	1	229	0	320	0	98	155	0	253	0	0	0	0	0	887
% Cars	100	95.8	0	0	96	93.8	100	93.1	0	93.3	0	90.7	95.7	0	93.7	0	0	0	0	0	94.4
Trucks	0	13	0	0	13	6	0	17	0	23	0	10	7	0	17	0	0	0	0	0	53
% Trucks	0	4.2	0	0	4	6.2	0	6.9	0	6.7	0	9.3	4.3	0	6.3	0	0	0	0	0	5.6



Stephen G. Pernaw & Company, Inc.

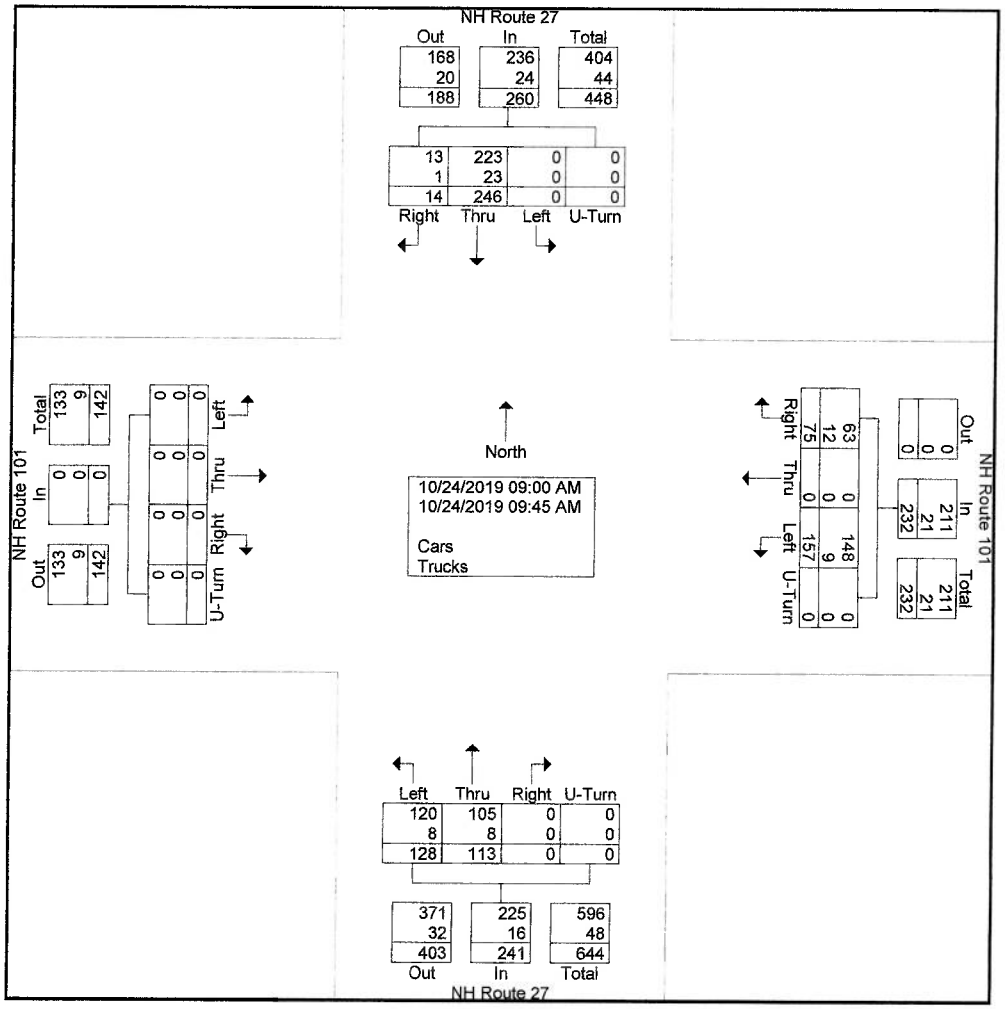
P.O. Box 1721
Concord, New Hampshire 03302

Weather: Fair
Collected By: MV
Job Number: 1941A
Town/State: Exeter, NH

File Name : 1941A_INT_A__12_hr_764825_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- Cars - Trucks

	NH Route 27 From North					NH Route 101 From East					NH Route 27 From South					NH Route 101 From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
09:00 AM	5	57	0	0	62	23	0	41	0	64	0	25	29	0	54	0	0	0	0	0	180
09:15 AM	3	60	0	0	63	15	0	39	0	54	0	40	34	0	74	0	0	0	0	0	191
09:30 AM	4	76	0	0	80	19	0	37	0	56	0	25	34	0	59	0	0	0	0	0	195
09:45 AM	2	53	0	0	55	18	0	40	0	58	0	23	31	0	54	0	0	0	0	0	167
Total	14	246	0	0	260	75	0	157	0	232	0	113	128	0	241	0	0	0	0	0	733
Grand Total	14	246	0	0	260	75	0	157	0	232	0	113	128	0	241	0	0	0	0	0	733
Apprch %	5.4	94.6	0	0		32.3	0	67.7	0		0	46.9	53.1	0		0	0	0	0		
Total %	1.9	33.6	0	0	35.5	10.2	0	21.4	0	31.7	0	15.4	17.5	0	32.9	0	0	0	0	0	
Cars	13	223	0	0	236	63	0	148	0	211	0	105	120	0	225	0	0	0	0	0	672
% Cars	92.9	90.7	0	0	90.8	84	0	94.3	0	90.9	0	92.9	93.8	0	93.4	0	0	0	0	0	91.7
Trucks	1	23	0	0	24	12	0	9	0	21	0	8	8	0	16	0	0	0	0	0	61
% Trucks	7.1	9.3	0	0	9.2	16	0	5.7	0	9.1	0	7.1	6.2	0	6.6	0	0	0	0	0	8.3



Stephen G. Pernaw & Company, Inc.

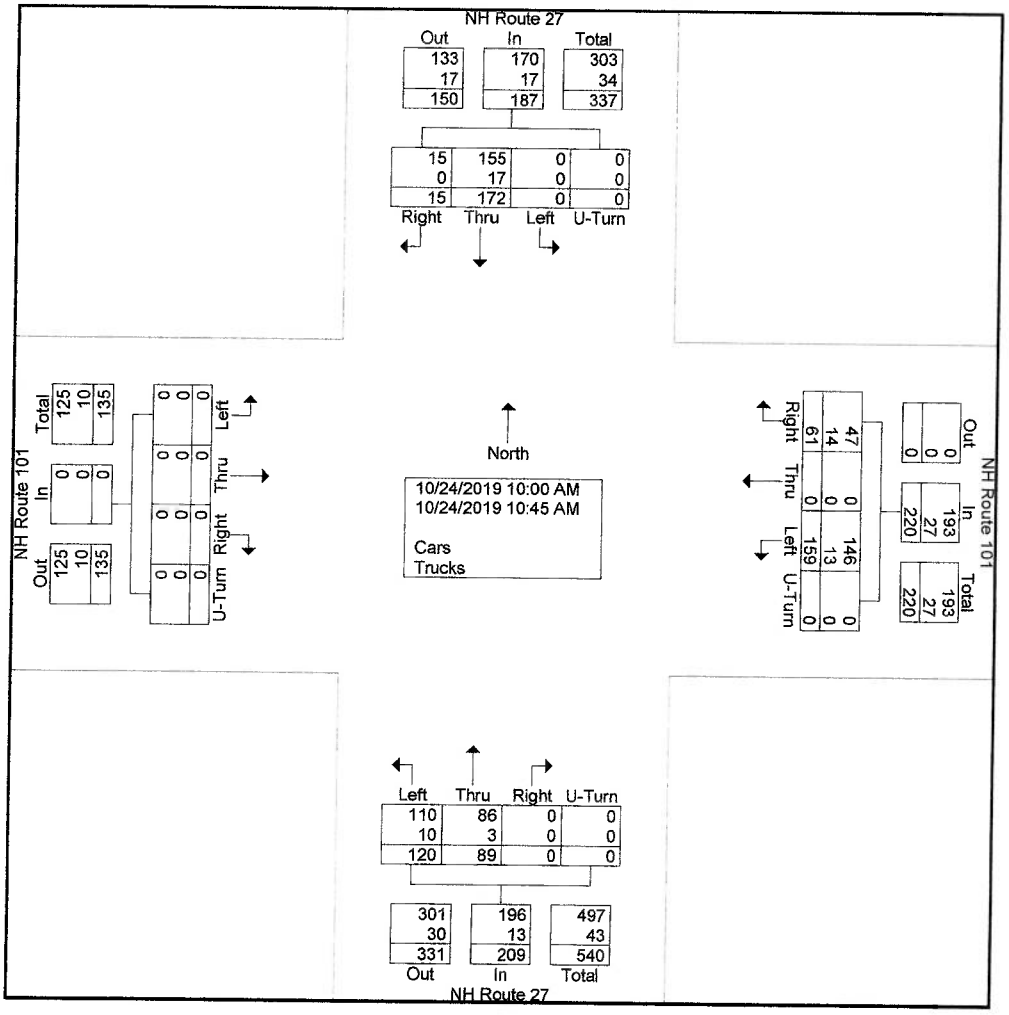
P.O. Box 1721
Concord, New Hampshire 03302

Weather: Fair
Collected By: MV
Job Number: 1941A
Town/State: Exeter, NH

File Name : 1941A_INT_A__12_hr_764825_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- Cars - Trucks

	NH Route 27 From North					NH Route 101 From East					NH Route 27 From South					NH Route 101 From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
10:00 AM	4	49	0	0	53	18	0	42	0	60	0	23	26	0	49	0	0	0	0	0	162
10:15 AM	5	41	0	0	46	14	0	30	0	44	0	25	23	0	48	0	0	0	0	0	138
10:30 AM	2	47	0	0	49	18	0	48	0	66	0	21	38	0	59	0	0	0	0	0	174
10:45 AM	4	35	0	0	39	11	0	39	0	50	0	20	33	0	53	0	0	0	0	0	142
Total	15	172	0	0	187	61	0	159	0	220	0	89	120	0	209	0	0	0	0	0	616
Grand Total	15	172	0	0	187	61	0	159	0	220	0	89	120	0	209	0	0	0	0	0	616
Apprch %	8	92	0	0		27.7	0	72.3	0		0	42.6	57.4	0		0	0	0	0		
Total %	2.4	27.9	0	0	30.4	9.9	0	25.8	0	35.7	0	14.4	19.5	0	33.9	0	0	0	0	0	
Cars	15	155	0	0	170	47	0	146	0	193	0	86	110	0	196	0	0	0	0	0	559
% Cars	100	90.1	0	0	90.9	77	0	91.8	0	87.7	0	96.6	91.7	0	93.8	0	0	0	0	0	90.7
Trucks	0	17	0	0	17	14	0	13	0	27	0	3	10	0	13	0	0	0	0	0	57
% Trucks	0	9.9	0	0	9.1	23	0	8.2	0	12.3	0	3.4	8.3	0	6.2	0	0	0	0	0	9.3



Stephen G. Pernaw & Company, Inc.

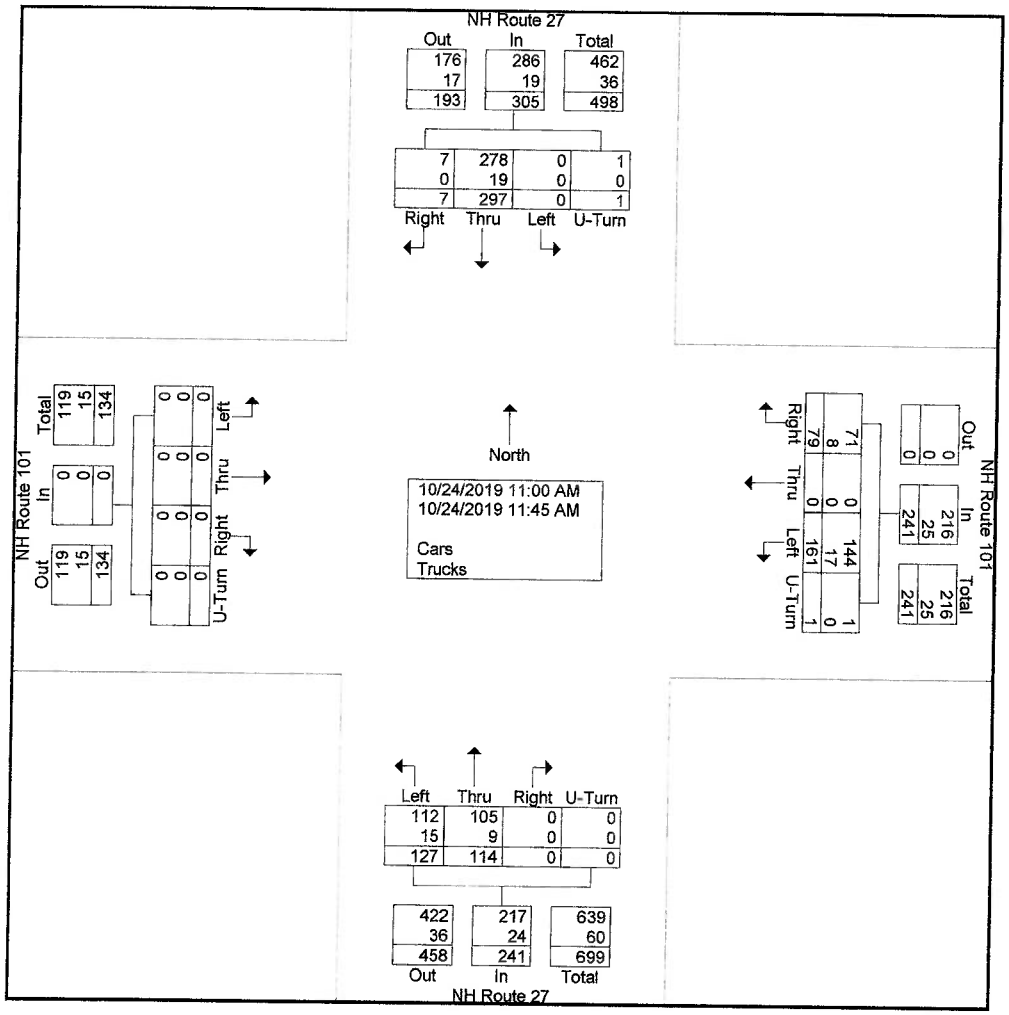
P.O. Box 1721
Concord, New Hampshire 03302

Weather: Fair
Collected By: MV
Job Number: 1941A
Town/State: Exeter, NH

File Name : 1941A_INT_A__12_hr_764825_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- Cars - Trucks

	NH Route 27 From North					NH Route 101 From East					NH Route 27 From South					NH Route 101 From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
11:00 AM	1	43	0	0	44	15	0	42	0	57	0	33	30	0	63	0	0	0	0	0	164
11:15 AM	2	121	0	0	123	21	0	35	0	56	0	30	39	0	69	0	0	0	0	0	248
11:30 AM	0	69	0	1	70	21	0	41	0	62	0	23	25	0	48	0	0	0	0	0	180
11:45 AM	4	64	0	0	68	22	0	43	1	66	0	28	33	0	61	0	0	0	0	0	195
Total	7	297	0	1	305	79	0	161	1	241	0	114	127	0	241	0	0	0	0	0	787
Grand Total	7	297	0	1	305	79	0	161	1	241	0	114	127	0	241	0	0	0	0	0	787
Apprch %	2.3	97.4	0	0.3		32.8	0	66.8	0.4		0	47.3	52.7	0		0	0	0	0		
Total %	0.9	37.7	0	0.1	38.8	10	0	20.5	0.1	30.6	0	14.5	16.1	0	30.6	0	0	0	0	0	
Cars	7	278	0	1	286	71	0	144	1	216	0	105	112	0	217	0	0	0	0	0	719
% Cars	100	93.6	0	100	93.8	89.9	0	89.4	100	89.6	0	92.1	88.2	0	90	0	0	0	0	0	91.4
Trucks	0	19	0	0	19	8	0	17	0	25	0	9	15	0	24	0	0	0	0	0	68
% Trucks	0	6.4	0	0	6.2	10.1	0	10.6	0	10.4	0	7.9	11.8	0	10	0	0	0	0	0	8.6



Stephen G. Pernaw & Company, Inc.

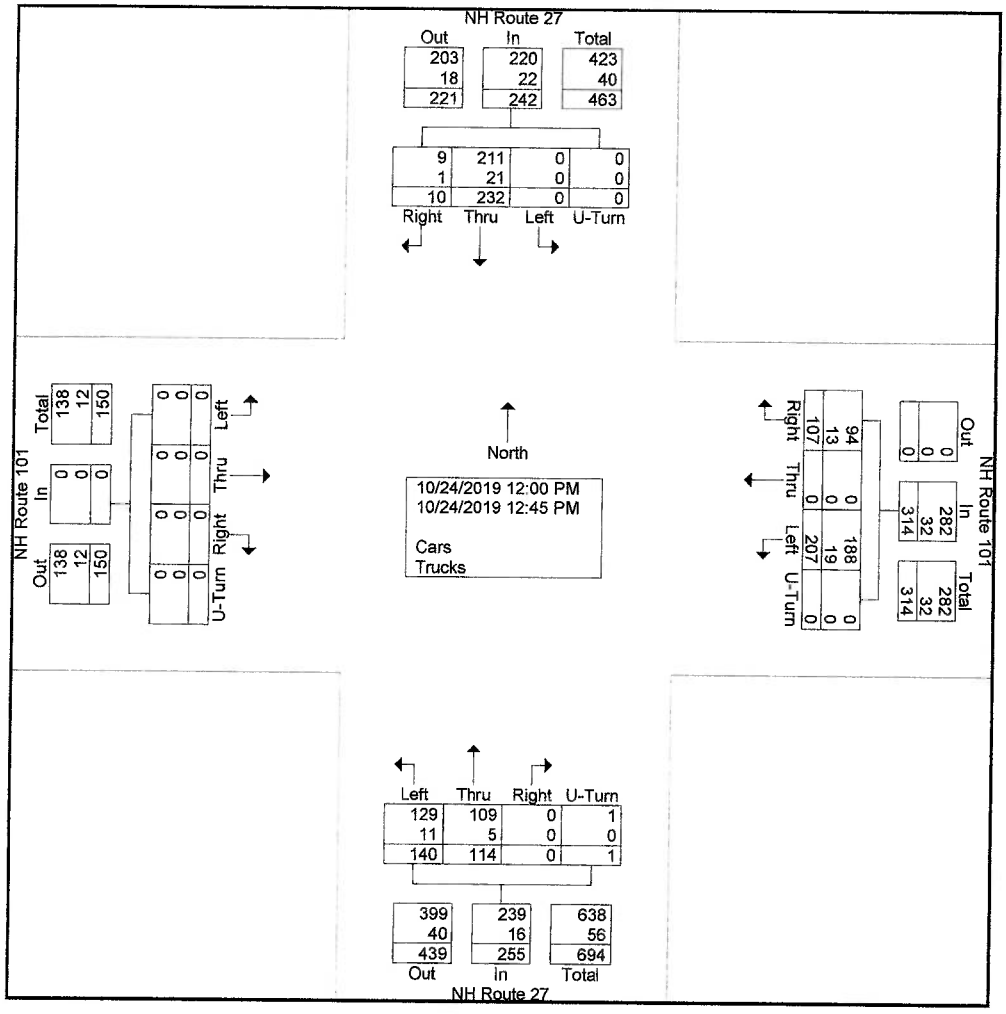
P.O. Box 1721
Concord, New Hampshire 03302

Weather: Fair
Collected By: MV
Job Number: 1941A
Town/State: Exeter, NH

File Name : 1941A_INT_A__12_hr_764825_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- Cars - Trucks

	NH Route 27 From North					NH Route 101 From East					NH Route 27 From South					NH Route 101 From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
12:00 PM	3	51	0	0	54	30	0	53	0	83	0	31	34	0	65	0	0	0	0	0	202
12:15 PM	2	73	0	0	75	18	0	48	0	66	0	26	39	1	66	0	0	0	0	0	207
12:30 PM	3	50	0	0	53	39	0	52	0	91	0	33	35	0	68	0	0	0	0	0	212
12:45 PM	2	58	0	0	60	20	0	54	0	74	0	24	32	0	56	0	0	0	0	0	190
Total	10	232	0	0	242	107	0	207	0	314	0	114	140	1	255	0	0	0	0	0	811
Grand Total	10	232	0	0	242	107	0	207	0	314	0	114	140	1	255	0	0	0	0	0	811
Apprch %	4.1	95.9	0	0		34.1	0	65.9	0		0	44.7	54.9	0.4		0	0	0	0		
Total %	1.2	28.6	0	0	29.8	13.2	0	25.5	0	38.7	0	14.1	17.3	0.1	31.4	0	0	0	0	0	
Cars	9	211	0	0	220	94	0	188	0	282	0	109	129	1	239	0	0	0	0	0	741
% Cars	90	90.9	0	0	90.9	87.9	0	90.8	0	89.8	0	95.6	92.1	100	93.7	0	0	0	0	0	91.4
Trucks	1	21	0	0	22	13	0	19	0	32	0	5	11	0	16	0	0	0	0	0	70
% Trucks	10	9.1	0	0	9.1	12.1	0	9.2	0	10.2	0	4.4	7.9	0	6.3	0	0	0	0	0	8.6



Stephen G. Pernaw & Company, Inc.

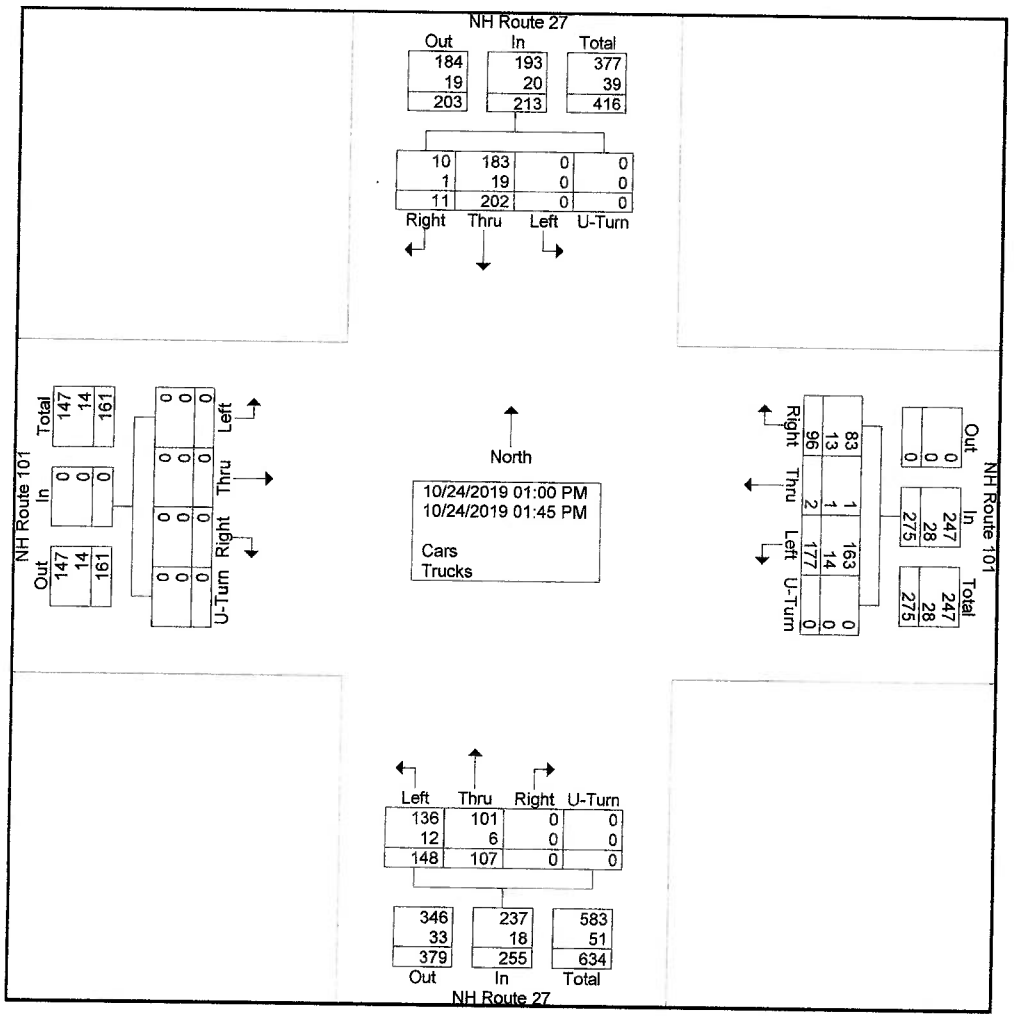
P.O. Box 1721
Concord, New Hampshire 03302

Weather: Fair
Collected By: MV
Job Number: 1941A
Town/State: Exeter, NH

File Name : 1941A_INT_A__12_hr_764825_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- Cars - Trucks

	NH Route 27 From North					NH Route 101 From East					NH Route 27 From South					NH Route 101 From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
01:00 PM	2	46	0	0	48	16	0	43	0	59	0	26	49	0	75	0	0	0	0	0	182
01:15 PM	3	55	0	0	58	19	0	39	0	58	0	15	19	0	34	0	0	0	0	0	150
01:30 PM	4	38	0	0	42	30	0	49	0	79	0	30	42	0	72	0	0	0	0	0	193
01:45 PM	2	63	0	0	65	31	2	46	0	79	0	36	38	0	74	0	0	0	0	0	218
Total	11	202	0	0	213	96	2	177	0	275	0	107	148	0	255	0	0	0	0	0	743
Grand Total	11	202	0	0	213	96	2	177	0	275	0	107	148	0	255	0	0	0	0	0	743
Apprch %	5.2	94.8	0	0		34.9	0.7	64.4	0		0	42	58	0		0	0	0	0		
Total %	1.5	27.2	0	0	28.7	12.9	0.3	23.8	0	37	0	14.4	19.9	0	34.3	0	0	0	0	0	
Cars	10	183	0	0	193	83	1	163	0	247	0	101	136	0	237	0	0	0	0	0	677
% Cars	90.9	90.6	0	0	90.6	86.5	50	92.1	0	89.8	0	94.4	91.9	0	92.9	0	0	0	0	0	91.1
Trucks	1	19	0	0	20	13	1	14	0	28	0	6	12	0	18	0	0	0	0	0	66
% Trucks	9.1	9.4	0	0	9.4	13.5	50	7.9	0	10.2	0	5.6	8.1	0	7.1	0	0	0	0	0	8.9



Stephen G. Pernaw & Company, Inc.

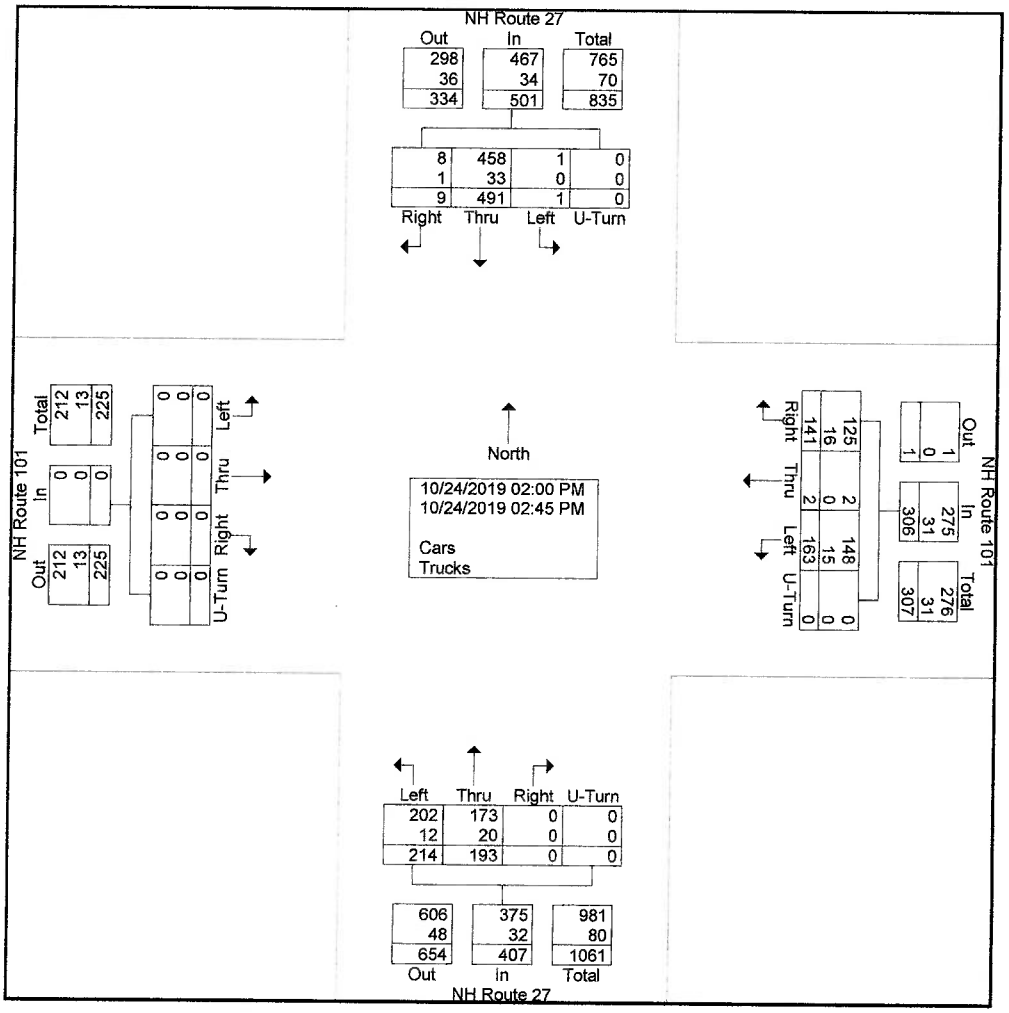
P.O. Box 1721
Concord, New Hampshire 03302

Weather: Fair
Collected By: MV
Job Number: 1941A
Town/State: Exeter, NH

File Name : 1941A_INT_A__12_hr_764825_10-24-2019
Site Code : 1941A
Start Date : 10/24/2019
Page No : 1

Groups Printed- Cars - Trucks

	NH Route 27 From North					NH Route 101 From East					NH Route 27 From South					NH Route 101 From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
02:00 PM	3	64	0	0	67	33	1	49	0	83	0	62	44	0	106	0	0	0	0	0	256
02:15 PM	1	65	1	0	67	32	0	37	0	69	0	51	73	0	124	0	0	0	0	0	260
02:30 PM	4	199	0	0	203	39	1	40	0	80	0	40	52	0	92	0	0	0	0	0	375
02:45 PM	1	163	0	0	164	37	0	37	0	74	0	40	45	0	85	0	0	0	0	0	323
Total	9	491	1	0	501	141	2	163	0	306	0	193	214	0	407	0	0	0	0	0	1214
Grand Total	9	491	1	0	501	141	2	163	0	306	0	193	214	0	407	0	0	0	0	0	1214
Apprch %	1.8	98	0.2	0		46.1	0.7	53.3	0		0	47.4	52.6	0		0	0	0	0		
Total %	0.7	40.4	0.1	0	41.3	11.6	0.2	13.4	0	25.2	0	15.9	17.6	0	33.5	0	0	0	0	0	
Cars	8	458	1	0	467	125	2	148	0	275	0	173	202	0	375	0	0	0	0	0	1117
% Cars	88.9	93.3	100	0	93.2	88.7	100	90.8	0	89.9	0	89.6	94.4	0	92.1	0	0	0	0	0	92
Trucks	1	33	0	0	34	16	0	15	0	31	0	20	12	0	32	0	0	0	0	0	97
% Trucks	11.1	6.7	0	0	6.8	11.3	0	9.2	0	10.1	0	10.4	5.6	0	7.9	0	0	0	0	0	8



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Concord, New Hampshire 03302

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Groups Printed- Cars - Trucks

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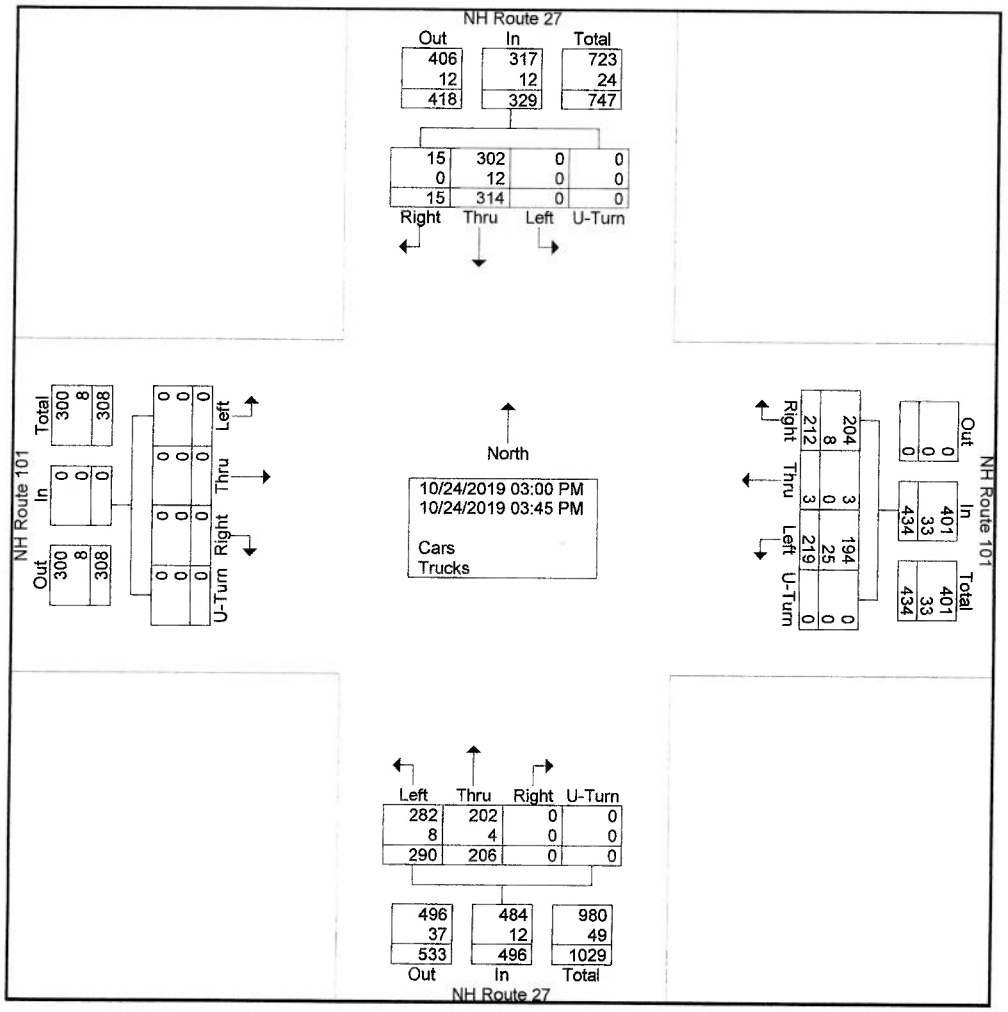
03:00 PM	5	76	0	0	81	57	3	44	0	104	0	49	63	0	112	0	0	0	0	0	297
03:15 PM	4	64	0	0	68	59	0	54	0	113	0	46	55	0	101	0	0	0	0	0	282
03:30 PM	3	83	0	0	86	51	0	51	0	102	0	54	111	0	165	0	0	0	0	0	353
03:45 PM	3	91	0	0	94	45	0	70	0	115	0	57	61	0	118	0	0	0	0	0	327
Total	15	314	0	0	329	212	3	219	0	434	0	206	290	0	496	0	0	0	0	0	1259
Grand Total	15	314	0	0	329	212	3	219	0	434	0	206	290	0	496	0	0	0	0	0	1259
Apprch %	4.6	95.4	0	0		48.8	0.7	50.5	0		0	41.5	58.5	0		0	0	0	0		
Total %	1.2	24.9	0	0	26.1	16.8	0.2	17.4	0	34.5	0	16.4	23	0	39.4	0	0	0	0	0	
Cars	15	302	0	0	317	204	3	194	0	401	0	202	282	0	484	0	0	0	0	0	1202
% Cars	100	96.2	0	0	96.4	96.2	100	88.6	0	92.4	0	98.1	97.2	0	97.6	0	0	0	0	0	95.5
Trucks	0	12	0	0	12	8	0	25	0	33	0	4	8	0	12	0	0	0	0	0	57
% Trucks	0	3.8	0	0	3.6	3.8	0	11.4	0	7.6	0	1.9	2.8	0	2.4	0	0	0	0	0	4.5



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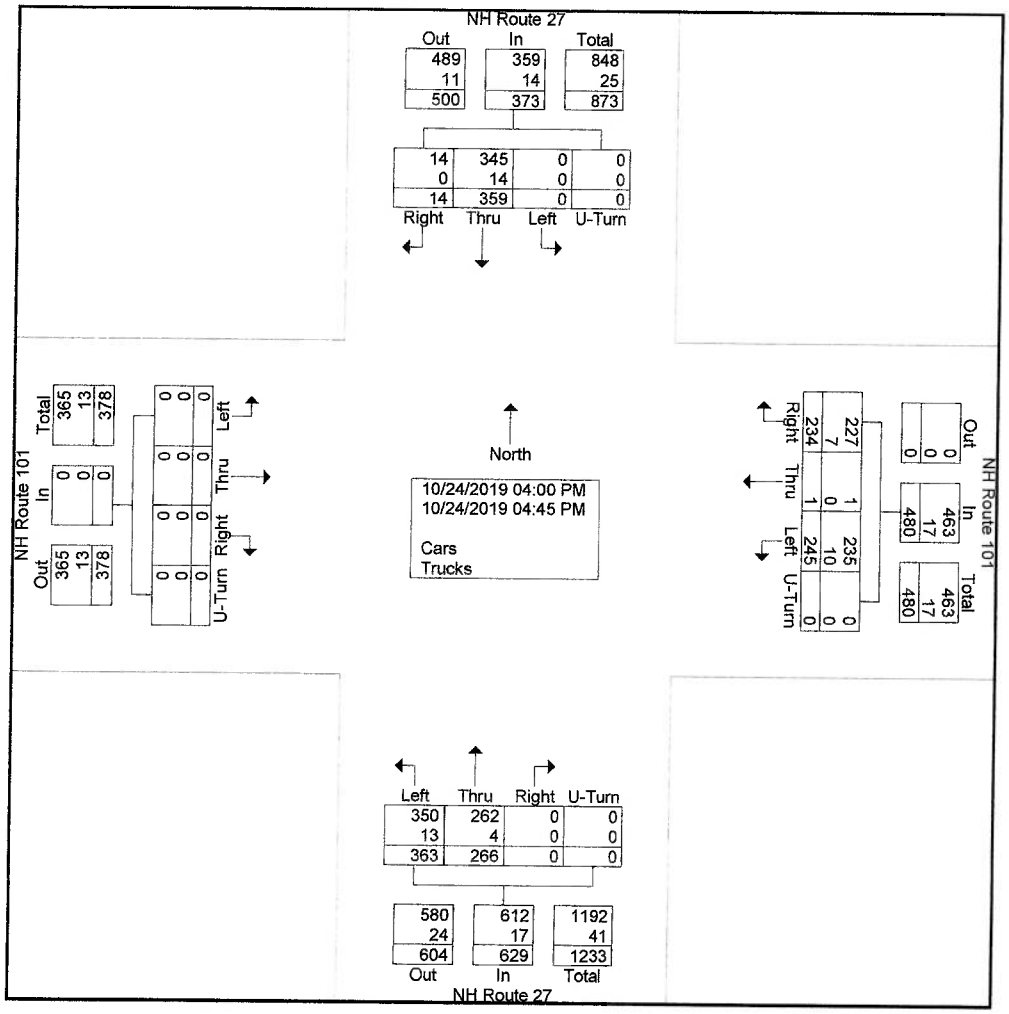
04:00 PM	6	68	0	0	74	57	1	62	0	120	0	73	102	0	175	0	0	0	0	0	369
04:15 PM	2	107	0	0	109	68	0	49	0	117	0	63	94	0	157	0	0	0	0	0	383
04:30 PM	4	101	0	0	105	44	0	61	0	105	0	80	93	0	173	0	0	0	0	0	383
04:45 PM	2	83	0	0	85	65	0	73	0	138	0	50	74	0	124	0	0	0	0	0	347
Total	14	359	0	0	373	234	1	245	0	480	0	266	363	0	629	0	0	0	0	0	1482
Grand Total	14	359	0	0	373	234	1	245	0	480	0	266	363	0	629	0	0	0	0	0	1482
Apprch %	3.8	96.2	0	0		48.8	0.2	51	0		0	42.3	57.7	0		0	0	0	0		
Total %	0.9	24.2	0	0	25.2	15.8	0.1	16.5	0	32.4	0	17.9	24.5	0	42.4	0	0	0	0	0	
Cars	14	345	0	0	359	227	1	235	0	463	0	262	350	0	612	0	0	0	0	0	1434
% Cars	100	96.1	0	0	96.2	97	100	95.9	0	96.5	0	98.5	96.4	0	97.3	0	0	0	0	0	96.8
Trucks	0	14	0	0	14	7	0	10	0	17	0	4	13	0	17	0	0	0	0	0	48
% Trucks	0	3.9	0	0	3.8	3	0	4.1	0	3.5	0	1.5	3.6	0	2.7	0	0	0	0	0	3.2



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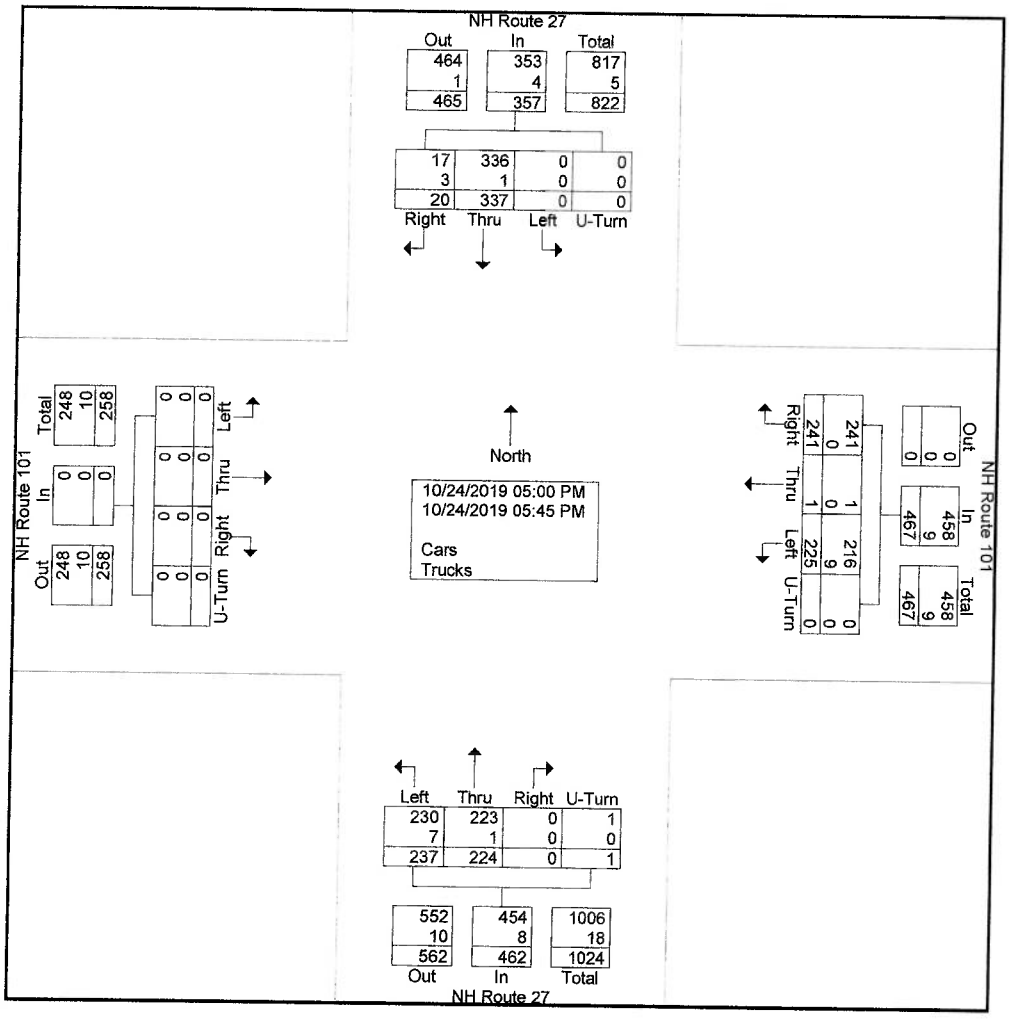
05:00 PM	6	93	0	0	99	54	1	48	0	103	0	69	94	0	163	0	0	0	0	0	365
05:15 PM	4	99	0	0	103	72	0	65	0	137	0	56	52	0	108	0	0	0	0	0	348
05:30 PM	3	71	0	0	74	51	0	56	0	107	0	46	48	1	95	0	0	0	0	0	276
05:45 PM	7	74	0	0	81	64	0	56	0	120	0	53	43	0	96	0	0	0	0	0	297
Total	20	337	0	0	357	241	1	225	0	467	0	224	237	1	462	0	0	0	0	0	1286
Grand Total	20	337	0	0	357	241	1	225	0	467	0	224	237	1	462	0	0	0	0	0	1286
Apprch %	5.6	94.4	0	0		51.6	0.2	48.2	0		0	48.5	51.3	0.2		0	0	0	0		
Total %	1.6	26.2	0	0	27.8	18.7	0.1	17.5	0	36.3	0	17.4	18.4	0.1	35.9	0	0	0	0	0	
Cars	17	336	0	0	353	241	1	216	0	458	0	223	230	1	454	0	0	0	0	0	1265
% Cars	85	99.7	0	0	98.9	100	100	96	0	98.1	0	99.6	97	100	98.3	0	0	0	0	0	98.4
Trucks	3	1	0	0	4	0	0	9	0	9	0	1	7	0	8	0	0	0	0	0	21
% Trucks	15	0.3	0	0	1.1	0	0	4	0	1.9	0	0.4	3	0	1.7	0	0	0	0	0	1.6



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Weather: Fair
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Groups Printed- Cars - Trucks

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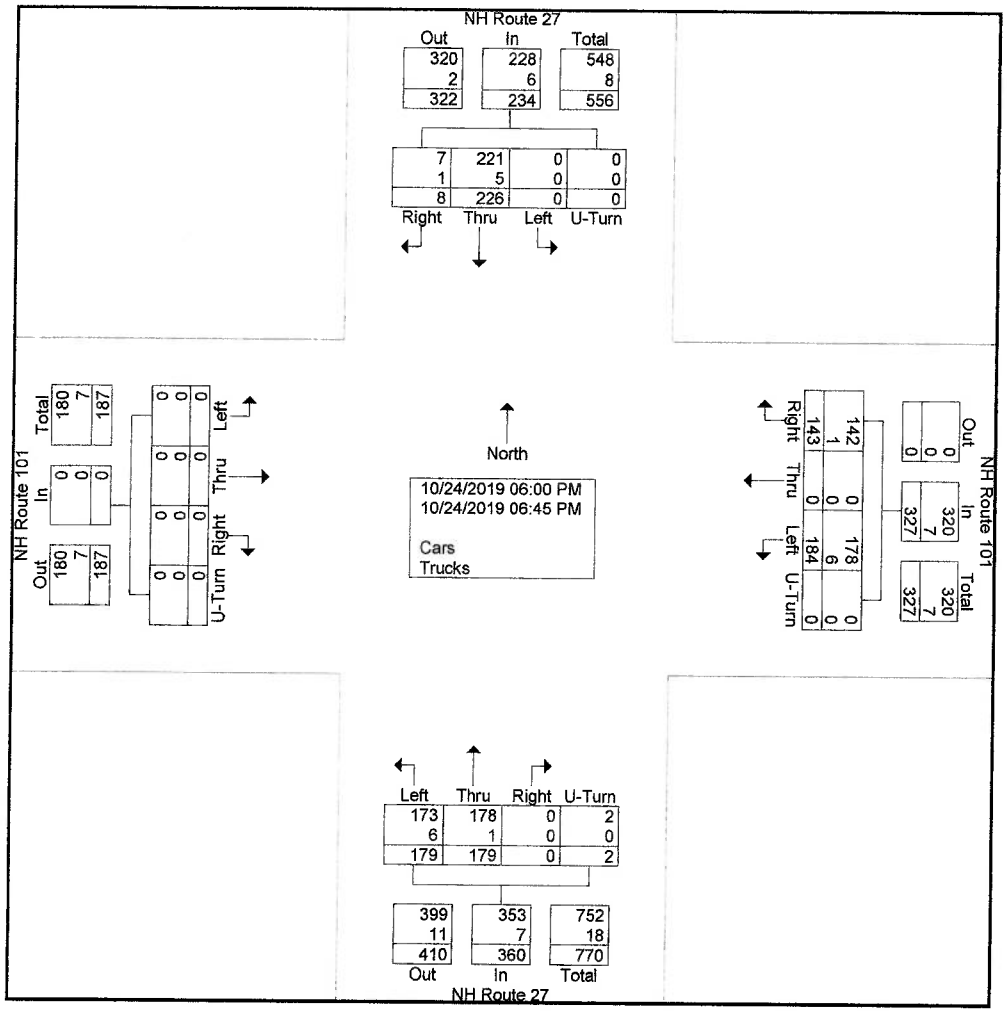
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
06:00 PM	4	85	0	0	89	39	0	53	0	92	0	44	45	1	90	0	0	0	0	0	271
06:15 PM	1	53	0	0	54	40	0	47	0	87	0	40	48	0	88	0	0	0	0	0	229
06:30 PM	1	48	0	0	49	40	0	49	0	89	0	52	45	1	98	0	0	0	0	0	236
06:45 PM	2	40	0	0	42	24	0	35	0	59	0	43	41	0	84	0	0	0	0	0	185
Total	8	226	0	0	234	143	0	184	0	327	0	179	179	2	360	0	0	0	0	0	921
Grand Total	8	226	0	0	234	143	0	184	0	327	0	179	179	2	360	0	0	0	0	0	921
Apprch %	3.4	96.6	0	0		43.7	0	56.3	0		0	49.7	49.7	0.6		0	0	0	0		
Total %	0.9	24.5	0	0	25.4	15.5	0	20	0	35.5	0	19.4	19.4	0.2	39.1	0	0	0	0	0	
Cars	7	221	0	0	228	142	0	178	0	320	0	178	173	2	353	0	0	0	0	0	901
% Cars	87.5	97.8	0	0	97.4	99.3	0	96.7	0	97.9	0	99.4	96.6	100	98.1	0	0	0	0	0	97.8
Trucks	1	5	0	0	6	1	0	6	0	7	0	1	6	0	7	0	0	0	0	0	20
% Trucks	12.5	2.2	0	0	2.6	0.7	0	3.3	0	2.1	0	0.6	3.4	0	1.9	0	0	0	0	0	2.2



2019 EXISTING WB RAMPS

Warrants Summary Report

1: NH27 / NH101 WB Ramps

Intersection Information

	Major Street	Minor Street
Street Name	NH27	NH101 WB Off Ramp
Direction	NB/SB	WB
Number of Lanes	2	1
Approach Speed	40	30

Warrant	Met?	Notes
Warrant 1, Eight-Hour Vehicular Volume		
	No	
Condition A or B Met	No	5 Hours met (8 required)
Condition A and B Me	No	5 Hours met (8 required)
Warrant 2, Four-Hour Vehicular Volume		
	Yes	6 Hours met (4 required)

Warrant 1: Eight-hour Vehicular Volume

1: NH27 / NH101 WB Ramps

Intersection Information

Major Street Name:	NH27
Major Street Direction:	NB/SB
Minor Street Direction:	WB

WARRANT 1 MET? No

Details:

Condition A Met?	No	5 Hours met (8 required)
Condition B Met?	No	5 Hours met (8 required)

Hour	Major Street Vehicles (Total of Both Approaches)		High Volume Minor Approach Vehicles		100% Standard Met? Cond. A OR Cond. B		80% Standard Met? Cond. A AND Cond. B	
					Condition A 100% Column	Condition B 100% Column	Condition A 80% Column	Condition B 80% Column
07:00 to 08:00	**900**		**461**		Yes*	Yes*	Yes*	Yes*
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	Yes				
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	Yes				
Condition B	**Volume >= 100% column (900)?**	Yes	**Volume >= 100% column (75)?**	Yes				
	Volume >= 80% column (720)?	Yes	**Volume >= 80% column (60)?**	Yes				
08:00 to 09:00	**574**		**329**		No	No	Yes	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	Yes				
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	Yes				
Condition B	**Volume >= 100% column (900)?**	No	**Volume >= 100% column (75)?**	Yes				
	Volume >= 80% column (720)?	No	**Volume >= 80% column (60)?**	Yes				
09:00 to 10:00	**480**		**223**		No	No	Yes	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	Yes				
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	Yes				
Condition B	**Volume >= 100% column (900)?**	No	**Volume >= 100% column (75)?**	Yes				
	Volume >= 80% column (720)?	No	**Volume >= 80% column (60)?**	Yes				

Warrant 1: Eight-hour Vehicular Volume

1: NH27 / NH101 WB Ramps

10:00 to 11:00	**379**		**212**		No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	Yes				
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	Yes				
Condition B	**Volume >= 100% column (900)?**	No	**Volume >= 100% column (75)?**	Yes				
	Volume >= 80% column (720)?	No	**Volume >= 80% column (60)?**	Yes				
11:00 to 12:00	**523**		**231**		No	No	Yes	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	Yes				
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	Yes				
Condition B	**Volume >= 100% column (900)?**	No	**Volume >= 100% column (75)?**	Yes				
	Volume >= 80% column (720)?	No	**Volume >= 80% column (60)?**	Yes				
12:00 to 13:00	**476**		**302**		No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	Yes				
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	Yes				
Condition B	**Volume >= 100% column (900)?**	No	**Volume >= 100% column (75)?**	Yes				
	Volume >= 80% column (720)?	No	**Volume >= 80% column (60)?**	Yes				
13:00 to 14:00	**450**		**264**		No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	Yes				
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	Yes				
Condition B	**Volume >= 100% column (900)?**	No	**Volume >= 100% column (75)?**	Yes				
	Volume >= 80% column (720)?	No	**Volume >= 80% column (60)?**	Yes				
14:00 to 15:00	**870**		**293**		Yes*	No	Yes*	Yes*
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	Yes				
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	Yes				
Condition B	**Volume >= 100% column (900)?**	No	**Volume >= 100% column (75)?**	Yes				
	Volume >= 80% column (720)?	Yes	**Volume >= 80% column (60)?**	Yes				
15:00 to 16:00	**791**		**417**		Yes*	No	Yes*	Yes*
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	Yes				
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	Yes				
Condition B	**Volume >= 100% column (900)?**	No	**Volume >= 100% column (75)?**	Yes				
	Volume >= 80% column (720)?	Yes	**Volume >= 80% column (60)?**	Yes				

Warrant 1: Eight-hour Vehicular Volume

1: NH27 / NH101 WB Ramps

16:00 to 17:00	**961**		**461**		Yes*	Yes*	Yes*	Yes*
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	Yes				
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	Yes				
Condition B	**Volume >= 100% column (900)?**	Yes	**Volume >= 100% column (75)?**	Yes				
	Volume >= 80% column (720)?	Yes	**Volume >= 80% column (60)?**	Yes				

17:00 to 18:00	**786**		**448**		Yes*	No	Yes*	Yes*
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	Yes				
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	Yes				
Condition B	**Volume >= 100% column (900)?**	No	**Volume >= 100% column (75)?**	Yes				
	Volume >= 80% column (720)?	Yes	**Volume >= 80% column (60)?**	Yes				

Warrant 2: Four-hour Vehicular Volume

1: NH27 / NH101 WB Ramps

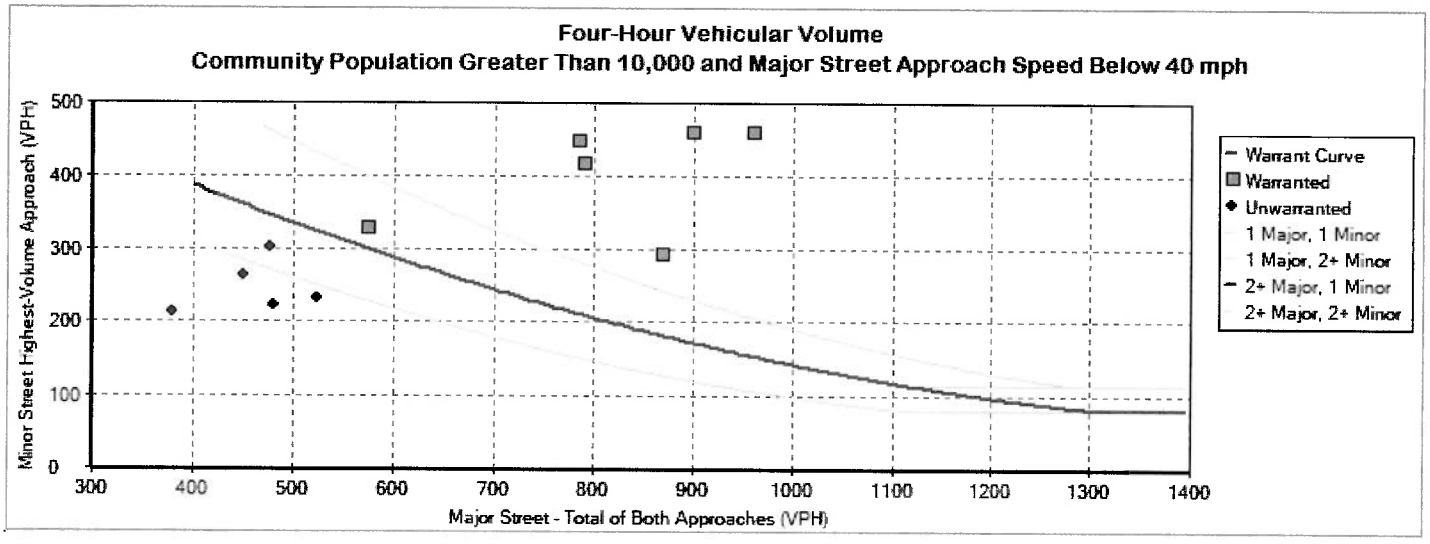
Intersection Information

	Major Street	Minor Street
Street Name	NH27	NH101 WB Off Ramp
Direction	NB/SB	WB
Number of Lanes	2	1
Approch Speed	40	30

Warrant 2 Met? **Yes**

Details:

Notes	6 Hours met (4 required)
Low population	No



Warrant 2: Four-hour Vehicular Volume

1: NH27 / NH101 WB Ramps

Hourly Volumes

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
00:00:00 - 01:00:00	0	0
01:00:00 - 02:00:00	0	0
02:00:00 - 03:00:00	0	0
03:00:00 - 04:00:00	0	0
04:00:00 - 05:00:00	0	0
05:00:00 - 06:00:00	0	0
06:00:00 - 07:00:00	0	0
07:00:00 - 08:00:00	900	461
08:00:00 - 09:00:00	574	329
09:00:00 - 10:00:00	480	223
10:00:00 - 11:00:00	379	212
11:00:00 - 12:00:00	523	231
12:00:00 - 13:00:00	476	302
13:00:00 - 14:00:00	450	264
14:00:00 - 15:00:00	870	293
15:00:00 - 16:00:00	791	417
16:00:00 - 17:00:00	961	461
17:00:00 - 18:00:00	786	448
18:00:00 - 19:00:00	0	0
19:00:00 - 20:00:00	0	0
20:00:00 - 21:00:00	0	0
21:00:00 - 22:00:00	0	0
22:00:00 - 23:00:00	0	0
23:00:00 - 00:00:00	0	0

Warrant 2: Four-hour Vehicular Volume

1: NH27 / NH101 WB Ramps

Warranted Hours

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
07:00:00 - 08:00:00	900.00	461.00
08:00:00 - 09:00:00	574.00	329.00
14:00:00 - 15:00:00	870.00	293.00
15:00:00 - 16:00:00	791.00	417.00
16:00:00 - 17:00:00	961.00	461.00
17:00:00 - 18:00:00	786.00	448.00

Note: Only data of hours warranted is represented in the above table.

Appendix I **Auxiliary Turn Lane Warrants Analysis**

Stephen G. Pernaw & Company, Inc.

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

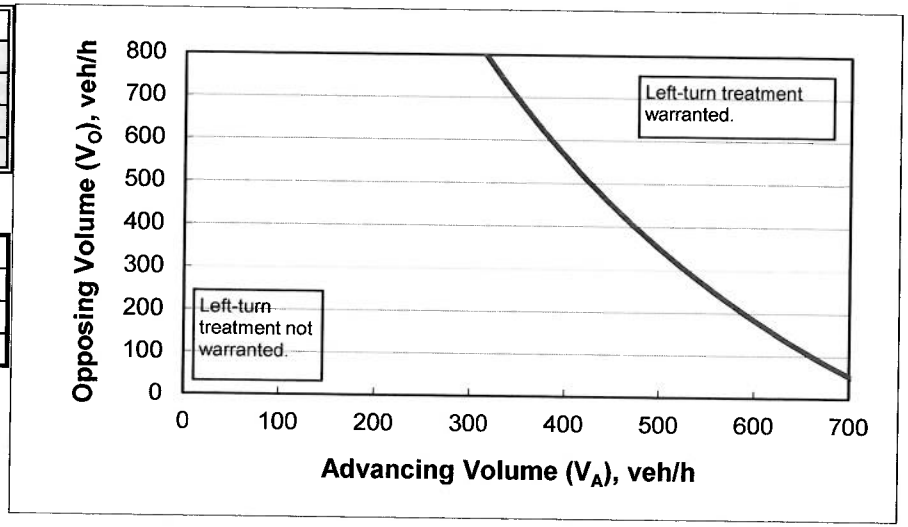
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	30
Percent of left-turns in advancing volume (V_A), %:	7%
Advancing volume (V_A), veh/h:	763
Opposing volume (V_O), veh/h:	1056

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	246
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Stephen G. Pernaw & Company, Inc.

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

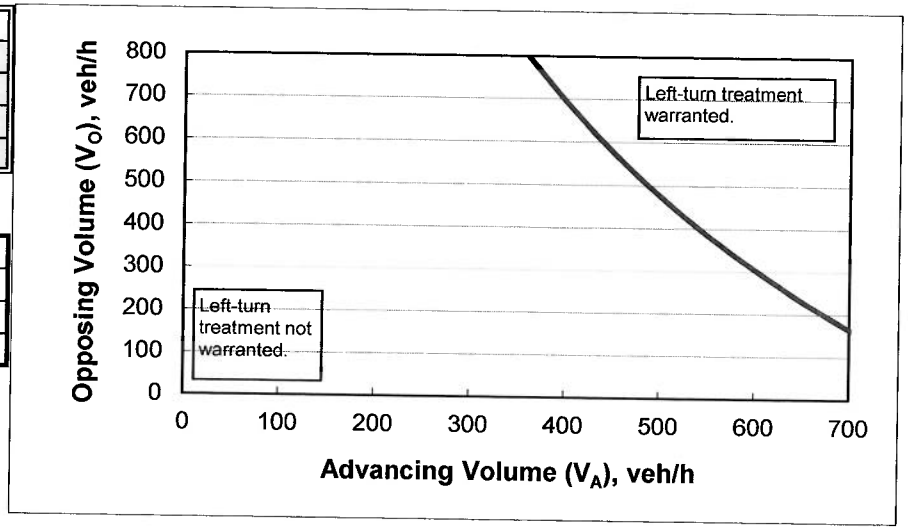
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	30
Percent of left-turns in advancing volume (V_A), %:	6%
Advancing volume (V_A), veh/h:	1200
Opposing volume (V_O), veh/h:	847

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	344
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Stephen G. Pernaw & Company, Inc.

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

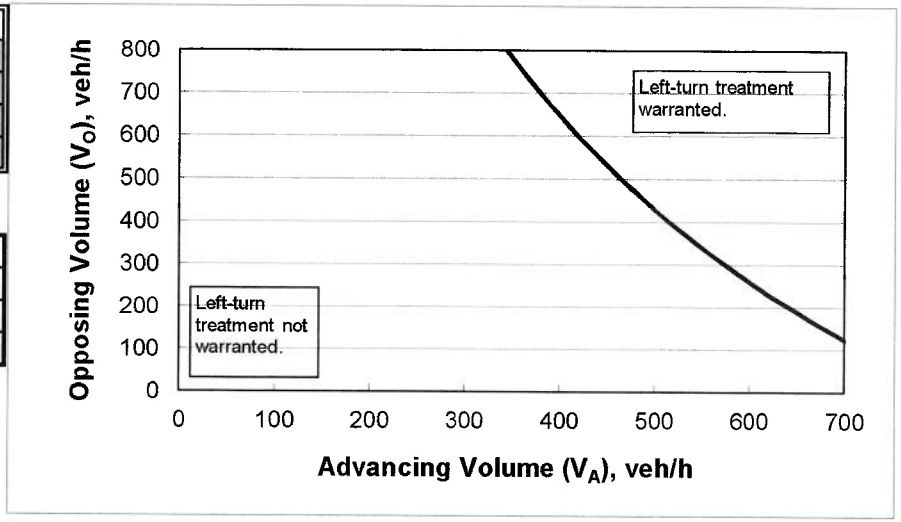
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	30
Percent of left-turns in advancing volume (V_A), %:	6%
Advancing volume (V_A), veh/h:	825
Opposing volume (V_O), veh/h:	537

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	447
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Stephen G. Pernaw & Company, Inc.

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

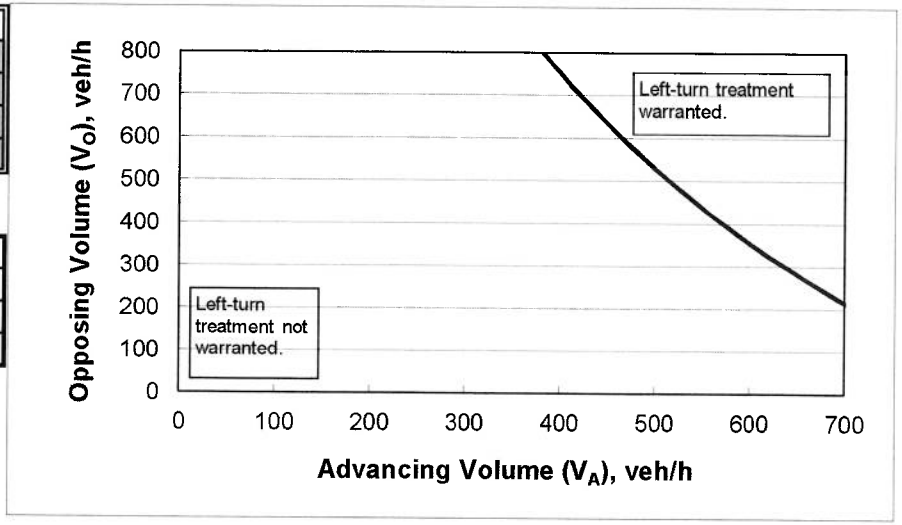
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	30
Percent of left-turns in advancing volume (V_A), %:	5%
Advancing volume (V_A), veh/h:	655
Opposing volume (V_O), veh/h:	881

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	352
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Stephen G. Pernaw & Company, Inc.

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

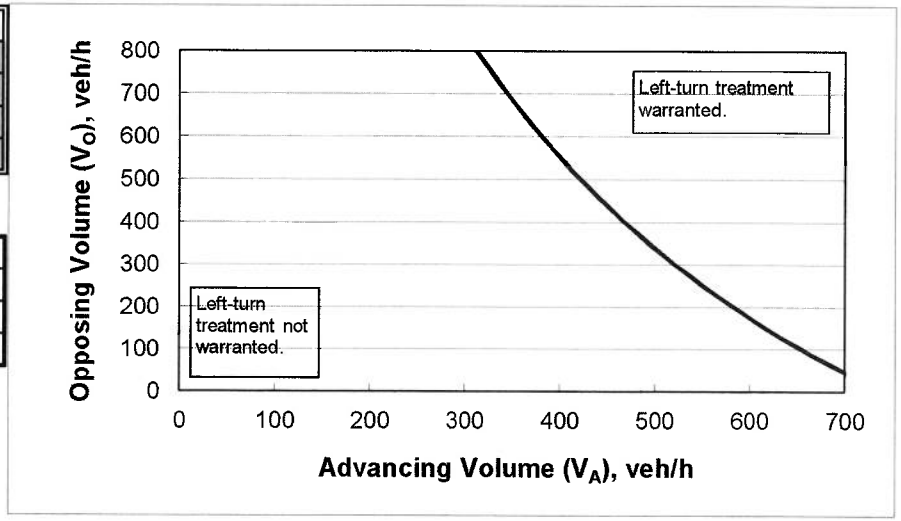
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	30
Percent of left-turns in advancing volume (V_A), %:	8%
Advancing volume (V_A), veh/h:	804
Opposing volume (V_O), veh/h:	625

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	371
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Stephen G. Pernaw & Company, Inc.

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

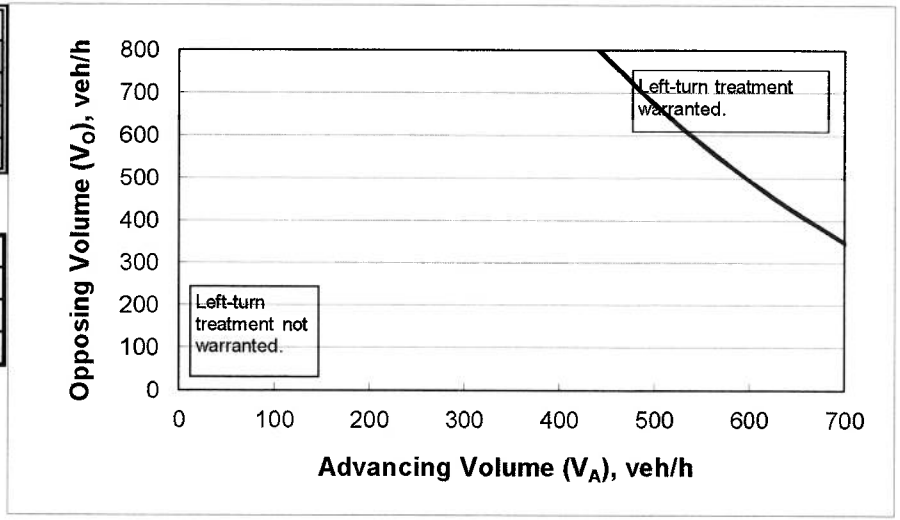
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	30
Percent of left-turns in advancing volume (V_A), %:	4%
Advancing volume (V_A), veh/h:	640
Opposing volume (V_O), veh/h:	969

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	374
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Stephen G. Pernaw & Company, Inc.

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

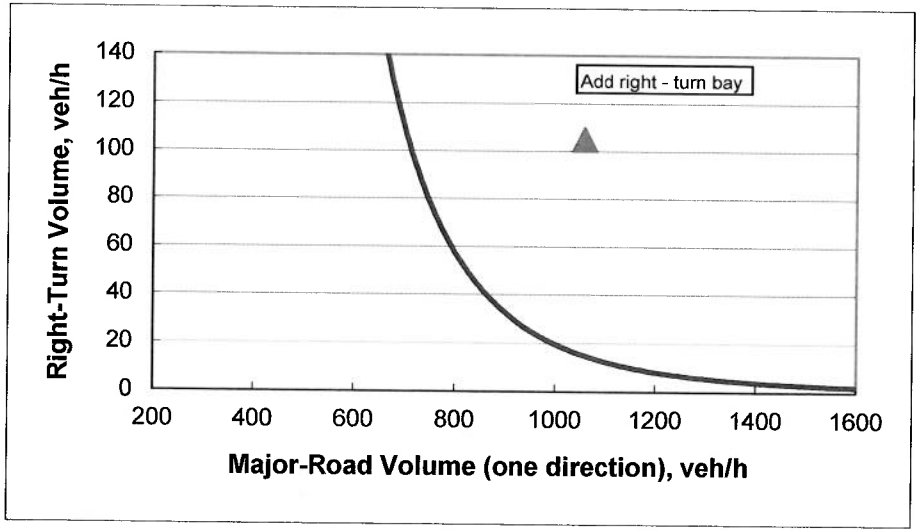
INPUT

2-lane roadway

Variable	Value
Major-road speed, mph:	30
Major-road volume (one direction), veh/h:	1056
Right-turn volume, veh/h:	105

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	15
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Add right-turn bay.	



Stephen G. Pernaw & Company, Inc.

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

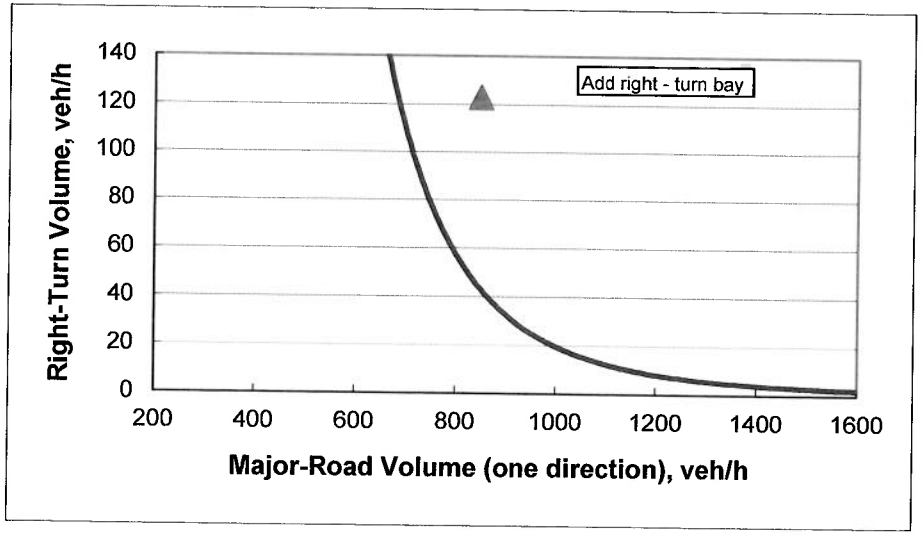
INPUT

2-lane roadway

Variable	Value
Major-road speed, mph:	30
Major-road volume (one direction), veh/h:	847
Right-turn volume, veh/h:	123

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	43
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Add right-turn bay.	



Stephen G. Pernaw & Company, Inc.

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

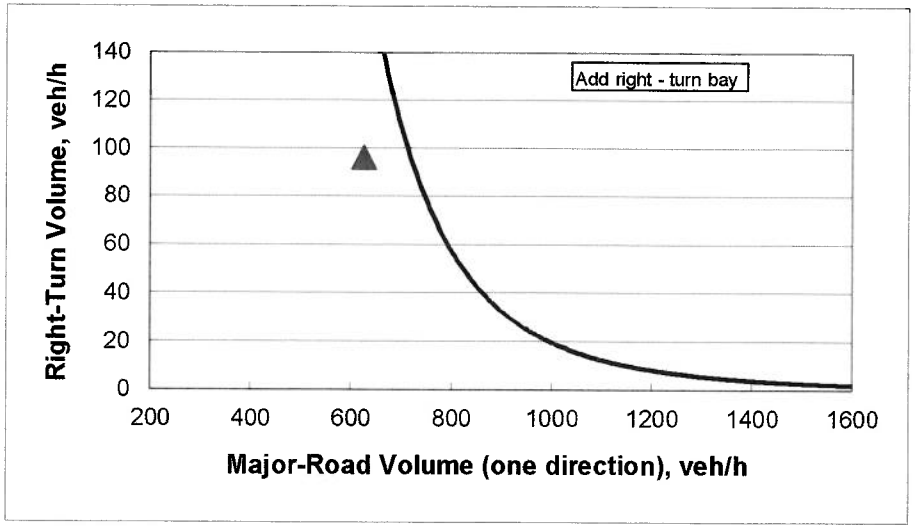
INPUT

2-lane roadway

Variable	Value
Major-road speed, mph:	30
Major-road volume (one direction), veh/h:	625
Right-turn volume, veh/h:	96

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	188
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	



Stephen G. Pernaw & Company, Inc.

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

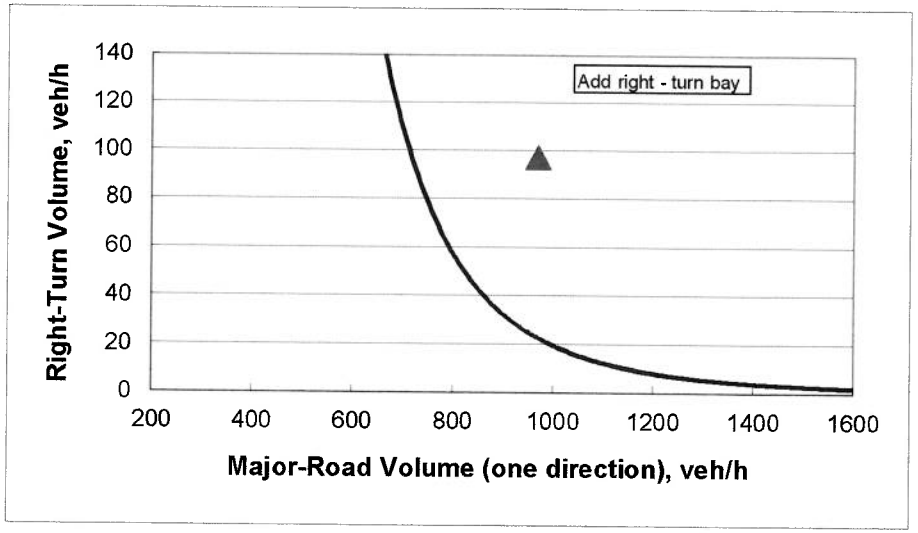
INPUT

2-lane roadway

Variable	Value
Major-road speed, mph:	30
Major-road volume (one direction), veh/h:	969
Right-turn volume, veh/h:	97

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	23
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Add right-turn bay.	



Stephen G. Pernaw & Company, Inc.

Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

Variable	Value
Major-road volume (total of both directions), veh/h:	1819
Percentage of right-turns on minor road, %:	20%
Minor-road volume (one direction), veh/h:	134

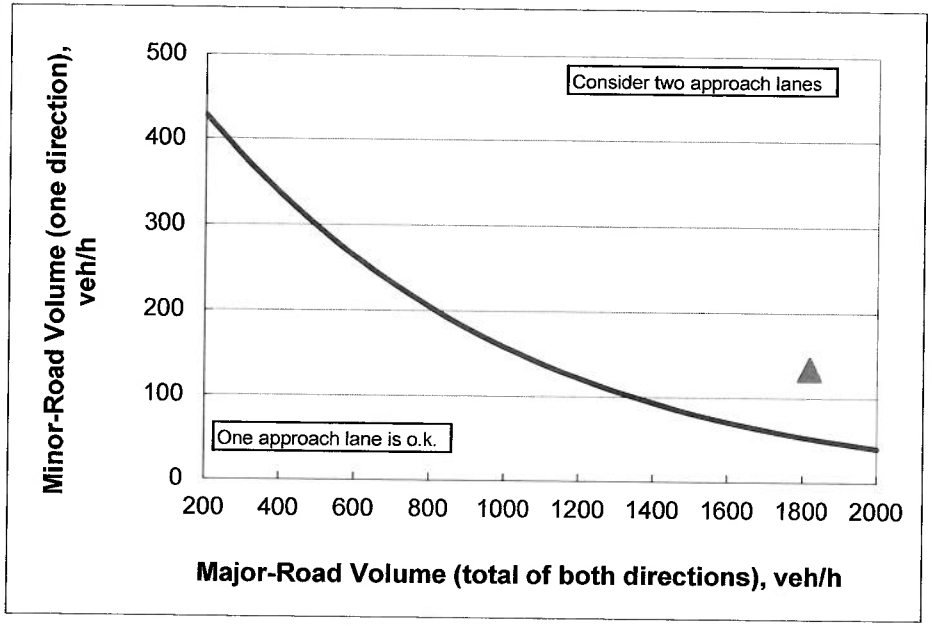
OUTPUT

Variable	Value
Limiting minor-road volume (one direction), veh/h:	53
Guidance for determining minor-road approach geometry:	
Consider TWO approach lanes	

CALIBRATION CONSTANTS

Minor Road	Critical gap, s:	Follow-up gap, s:
Right-turn capacity, veh/h:	6.2	3.3
Left-turn and through capacity, veh/h:	6.5	4.0

* according to Table 17 - 5 of the HCM



Stephen G. Pernaw & Company, Inc.

Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

Variable	Value
Major-road volume (total of both directions), veh/h:	2047
Percentage of right-turns on minor road, %:	20%
Minor-road volume (one direction), veh/h:	159

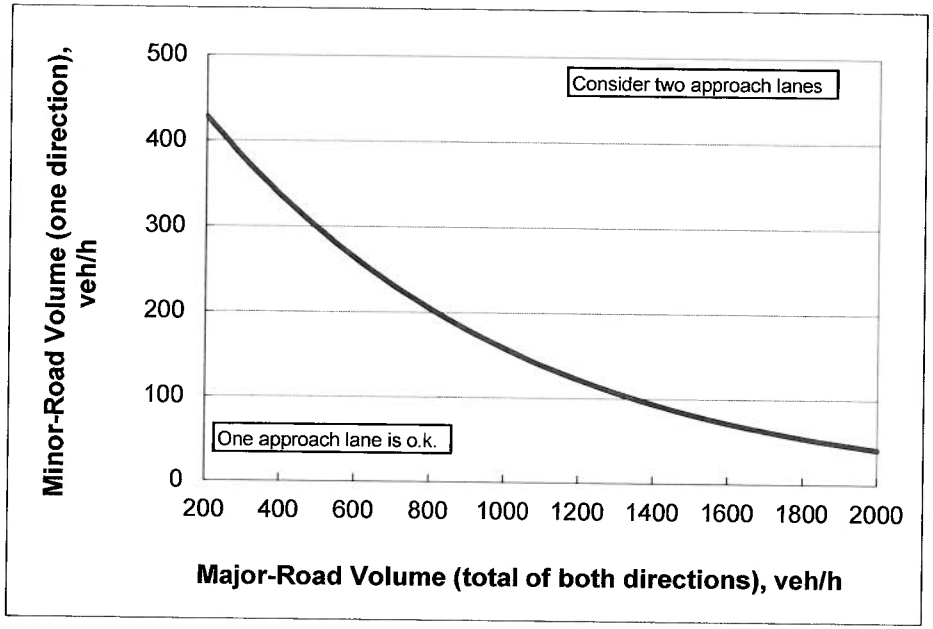
OUTPUT

Variable	Value
Limiting minor-road volume (one direction), veh/h:	38
Guidance for determining minor-road approach geometry:	
Consider TWO approach lanes	

CALIBRATION CONSTANTS

Minor Road	Critical gap, s:	Follow-up gap, s:
Right-turn capacity, veh/h:	6.2	3.3
Left-turn and through capacity, veh/h:	6.5	4.0

* according to Table 17 - 5 of the HCM



Appendix J **Sight Distance Photographs**

Looking Left

Looking Right

Looking Left

Looking Right

Appendix K **Miscellaneous**

SCOPING MEETING FOR TRAFFIC IMPACTS OF DEVELOPMENT

Date: July 30, 2020 Town/City: Exeter

Location / District: NH 27 / District 6

Consultants: Stephen G. Pernaw & Company, Inc., Hayner/Swanson, Inc.

Size & Type of Development: "Gateway at Exeter", Mixed use: multi-family housing (224 units) and a 48,560 sf commercial building consisting of office space (17,295 sf), retail space (11,225 sf), and a day care facility (20,040 sf). The commercial building will not house any restaurants.

The proposed development is on a 60-acre parcel. The back 45 acres will be used as environmental/wetland mitigation and protection. No additional build-out on these parcels is anticipated.

The proposed development is within the controlled-access right-of-way (CAROW) and the urban compact (Exeter). As noted by District 6, a previous controlled-access agreement granted 2 driveways for the proposed development's location, one for each of the two lots. NHDOT Planning explained the controlled-access rules are not eliminated even though it is within the urban compact. It is Exeter's decision to grant a permit, but with NHDOT's concurrence. After reviewing the traffic study, NHDOT Planning and Community Assistance Bureau will send a letter of concurrence or recommendation to Exeter, but will not be issuing or denying a driveway permit.

The proposed development is also within Exeter's TIF district. VHB is currently conducting a corridor study for Exeter along NH 27/Epping Road, extending from north of Exit 9 southerly to NH 111A. VHB is assessing two future conditions, including a full build-out of all the vacant parcels along the Exeter corridor and an interim condition with a three lane section. It will be important for VHB, the Town, NHDOT, and the developer to continually communicate to ensure consistent mitigation strategies are being evaluated along the corridor for the proposed development.

Site Access: Primary access to the site is proposed directly across from the southerly Mobil gas station driveway on NH 27/Epping Road. Secondary access is proposed 300± feet south at an exit-only driveway. The developer noted they are open to changing the access configuration at the southerly driveway.

The Town stated they would prefer one access point for the proposed development, as the lot configuration has changed since the initial grant of access for the lots.

Phasing: Assume an appropriate level of the overall build-out for the opening year (2022) and full-build out for the future year condition (2032).

Study Area: The study area will include:

- NH 27 @ NH 101 WB & EB ramps
- NH 27 @ Northerly Site Drive/existing gas station driveway (south)
- NH 27 @ Southerly Site Drive/Exit only
- NH 27 @ Continental Dr.

Analysis Periods: The weekday morning and weekday evening periods will be analyzed.

Opening Year / Future Year: 2022/2032

Additional data: NHDOT Traffic noted current traffic volumes are lower than normal due to COVID-19. The development team should use their count data collected at the end of 2019 to assess the corridor. SGP should also coordinate as needed with VHB on acquiring "pre-COVID" count data for NH 27 at Continental Drive. Any traffic data collected during Covid-19 should be adjusted to account for pre-pandemic levels.

NHDOT Traffic noted the use of the Group 4 Urban Highways to estimate a seasonal adjustment factor would be reasonable.

Background growth/ other development: An average annual growth rate of 1% should be used.

Three other development projects were identified during the scoping meeting:

1) 55+ Community – 116 units across from the Exeter Decorating Center
2) Garrison Glen – 116,288 sf light industrial on Continental Drive
3) Primrose School – 13,000 sf on McKay Drive

Site Trip Generation/Distribution/Pass-by: NHDOT Traffic noted the previous trip generation using ITE is reasonable. A pass-by rate of 0% is also acceptable.

Design Considerations: NHDOT Highway Design requested signal warrant analyses be conducted at the NH 101 eastbound and westbound ramp intersections, and both left and right-turn lane warrants (NCHRP) be conducted at the site driveways.

Other Issues: District 6 noted concerns of Exeter High School traffic influencing the evening peak hour periods at the NH 101 ramps. SGP should review the weekday afternoon/evening school peak period at the NH 101 ramps to determine what the critical peak hour is to be used in the analyses.

Submitted by: Nick Sanders NHDOT BOT NBS Date: 8/5/2020

cc: All Attendees (Attached)

NHDOT Meeting Attendance Sheet

Purpose: Exeter NH 27 Gateway Mixed-Use

Date: 7/30/2020 **Location: Zoom**

Name	Representing	Telephone #	Email Address
Nick Sanders	NHDOT Traffic	603 271 0390	Nicholas.Sanders@dot.nh.gov
Nathan Peck	NHDOT Traffic	603 271 0391	Nathan.Peck@dot.nh.gov
Emma Bell	NHDOT Traffic	603 271 80101	Emma.Bell@dot.nh.gov
John Butler	NHDOT Highway Design	603 271 7420	John.Butler@dot.nh.gov
Jim Hewitt	NHDOT District 6	603 868 1133	James.Hewitt@dot.nh.gov
Roger Appleton	NHDOT District 6	603 868 1133	Roger.Appleton@dot.nh.gov
Kevin Russell	NHDOT Planning	603 271 3344	Kevin.Russell@dot.nh.gov
Jim Petropulos	Hayner/Swanson, Inc.		jpetropulos@hayner-swanson.com
Stephen Pernaw	Pernaw & Company, Inc.	603 731 8500	sgp@pernaw.com
Jason Plourde	VHB	603 391 3914	jplourde@vhb.com
Dave Sharples	Exeter	603 773 6114	dsharples@exeternh.gov
Dave Walker	RPC	603 778 0885	dwalker@rpc-nh.org
Tom Monahan	Owner		