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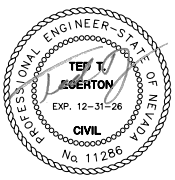
(1960 – 2007)

TRAFFIC STUDY
FOR
HILTON H2S
2021 CHARLESTON BOULEVARD

JANUARY 2026



Digitally signed by Ted T. Egerton
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Date: 2026.01.30 06:58:06-08'00'

CIVIL AND STRUCTURAL ENGINEERING
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APPENDICES

EXECUTIVE SUMMARY

The proposed hotel is to be located on the southwest corner of Charleston Boulevard and Pahor Drive within Las Vegas, Nevada. The project is anticipated to generate 818 daily trips. Of these 818 daily trips, it is anticipated that 51 trips shall occur during the AM peak hour and 64 trips shall occur during the PM peak hour.

To offset traffic impacts that are anticipated with the completion of the project, the following recommendations have been made:

- *For the City of Las Vegas to require all mandatory signage and striping to be shown on the project's civil engineering drawings and that they conform to City of Las Vegas and MUTCD standards.*

- *For the Developer to post "No Parking" signs on both Pahor Drive and Charleston Boulevard adjacent to the project if not already posted.*

- *For the Developer to remove all driveways on Charleston Boulevard.*

A. SITE AND STUDY AREA BOUNDARIES

The proposed hotel will be located on the southwest corner of Charleston Boulevard and Pahor Drive within the City of Las Vegas. Refer to Figure 1 for a vicinity map.

In discussions with representatives from City of Las Vegas, it was decided that this report would analyze the following intersections.

Pahor Drive at Charleston Boulevard
Westwood Drive at Charleston Boulevard

The analysis shall include left-turn storage analyses for each intersection.

B. EXISTING AND PROPOSED USES OF THE SITE

The site is a part of two parcels that are described at assessor's parcel numbers (A.P.N.) 162-04-110-001 and 002. The parcels housed the Dibella's Flowers Shops. The business has moved to a different location. The existing structures will be demolished as a part of this project.

The proposed improvements to the site include the construction of a 140 room hotel.

C. EXISTING AND PROPOSED USES NEAR THE SITE

South of the site are existing single family homes.

West of the site is the existing St Joseph Rehabilitation Center.

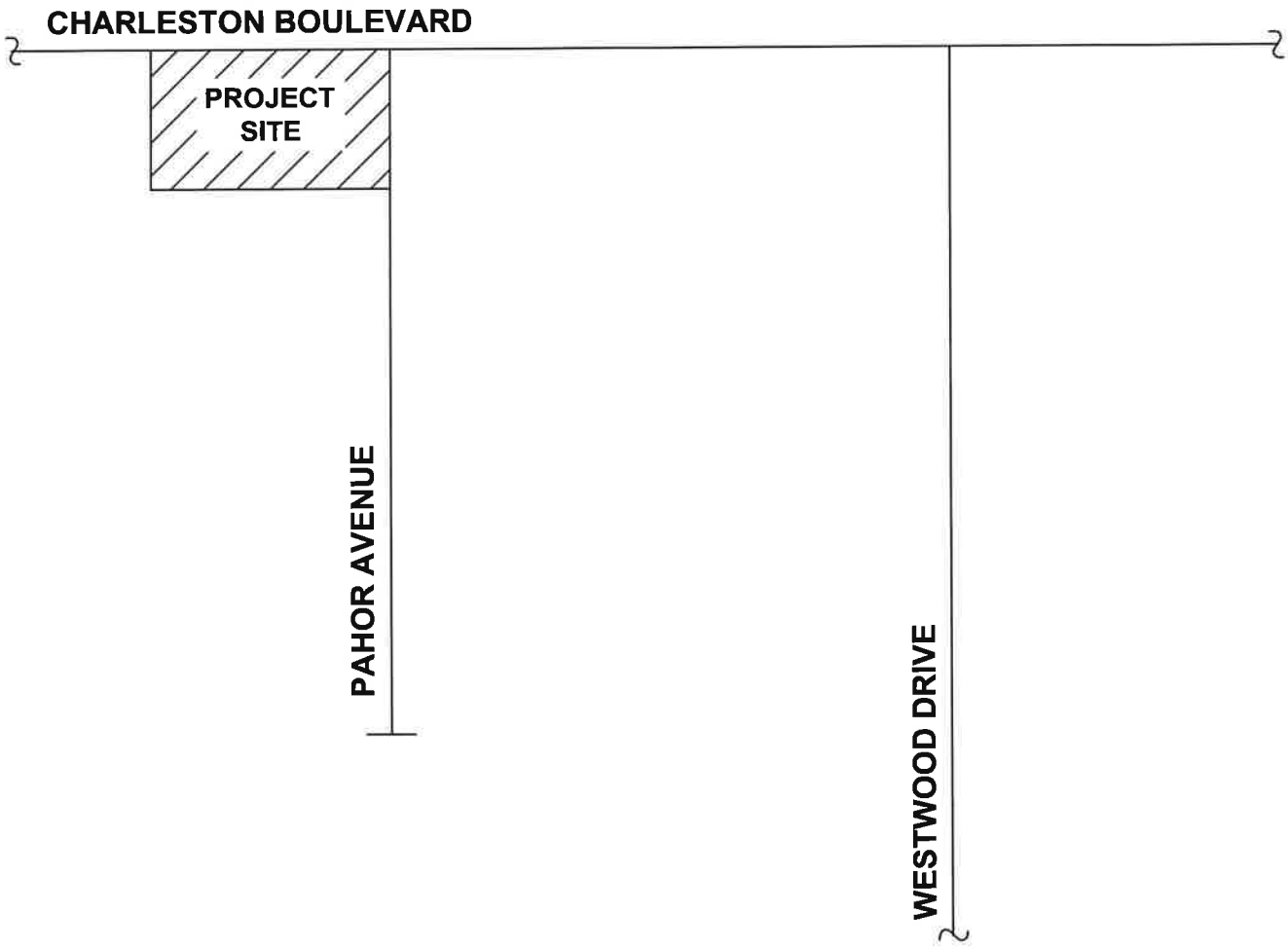
East of the site are surface parking under the ownership of the City of Las Vegas.

North of the site is the University Medical Center (UMC).

D. EXISTING ROADWAYS AND INTERSECTIONS

Charleston Boulevard

This east-west roadway consists of three lanes of travel in each direction separated by a median. The speed limit is 35 miles per hour and on-street parking is prohibited.



	VICINITY MAP **FIGURE 1**	**HILTON H25**

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Pahor Drive

This north-south roadway consists of one lane of travel in each direction. The speed limit is 25 miles per hour and on-street parking is allowed.

Westwood Drive

This north-south roadway consists of one lane of travel in each direction. The speed limit is 25 miles per hour and on-street parking is allowed.

Charleston Boulevard at Pahor Drive

This three-leg intersection is stop controlled on the south leg. The south leg consists of one lane for left and right turn movements. The west leg of Charleston Boulevard consists of two through lanes and a through / right turn lane. The east leg consists of an exclusive left turn lane and three through lanes.

Charleston Boulevard at Westwood Drive

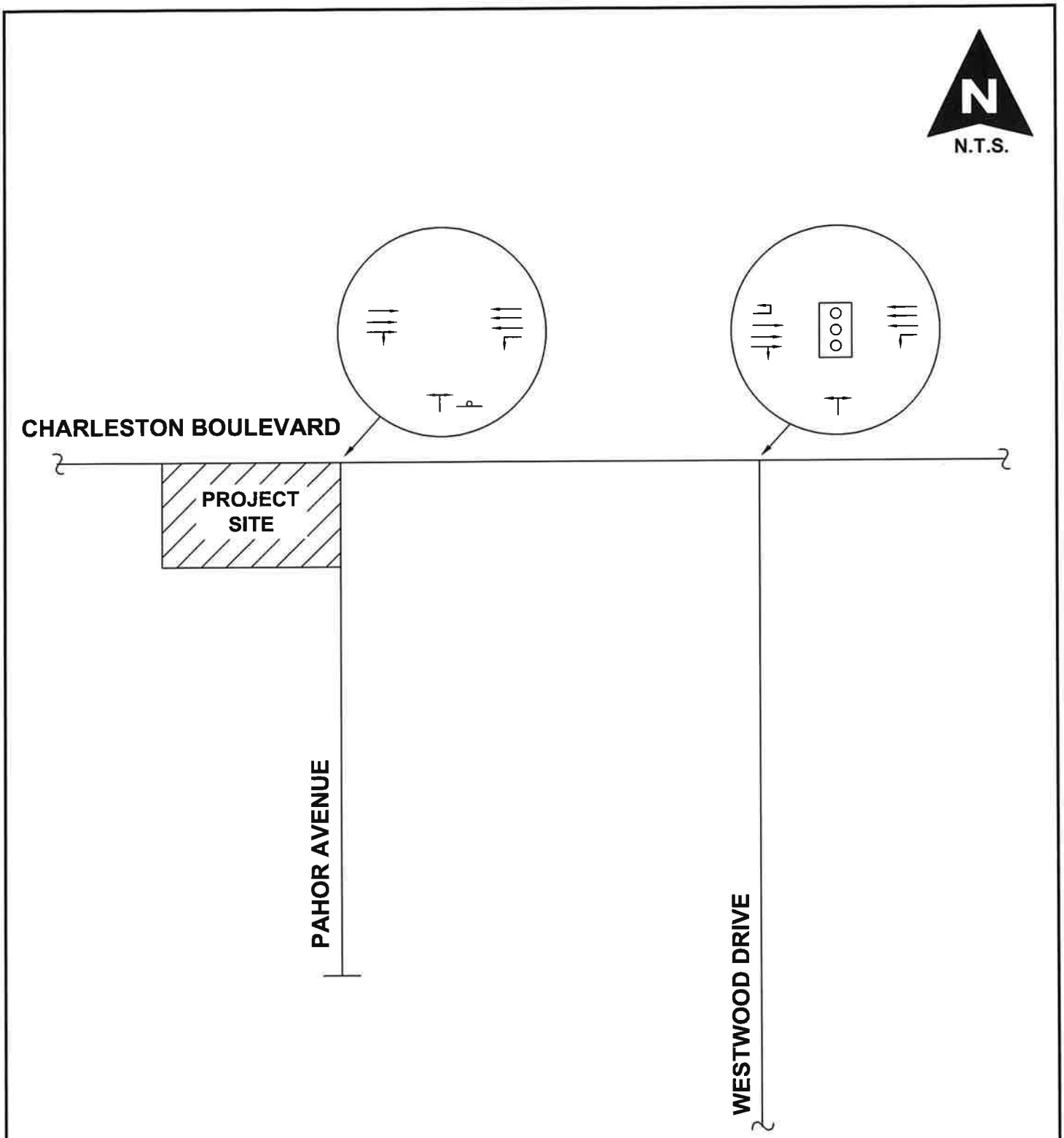
This three-leg intersection is signalized. The intention of the signal is for pedestrians crossing to and from UMC. The south leg of Westwood Drive consists of one travel lane for all movements. The east leg of Charleston Boulevard

Refer to Figure 2 for Lane Configurations.

E. TRIP GENERATION RATES

Trip generation rates were based upon the ITE publication entitled *Trip Generation* (12th Edition). The independent variable utilized was the number of rooms in the hotel.

The trip generation calculations are as follows:



	EXISTING LANE CONFIGURATION FIGURE 2	HILTON H25

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TRIP GENERATION HOTEL ITE CODE 310 140 ROOMS	
AM PEAK HOUR	
T = 0.49 (X) – 18.48 T = 0.49 (140) – 18.48 Trips = 50.2 or **51 Trips**	
52% Entering 27 Trips	48% Exiting 24 Trips
PM PEAK HOUR	
T = 0.85 (X) – 55.22 T = 0.85 (140) – 55.22 Trips = 63.8 or **64 Trips**	
51% Entering 33 Trips	49% Exiting 31 Trips
WEEKDAY	
Average Rate = 5.84 trips per room T = 140 (5.84) Trips = 817.6 or **818 Trips**	

F. TRIP DISTRIBUTION AND TRIP ASSIGNMENTS

The trip distribution was based on the location of major arterials, employments centers, and residential development. Refer to Figure 3 for the trip distribution.

Trip assignments were calculated using the trip distribution and trip generation information. Refer to Figure 4 for the trip assignments.

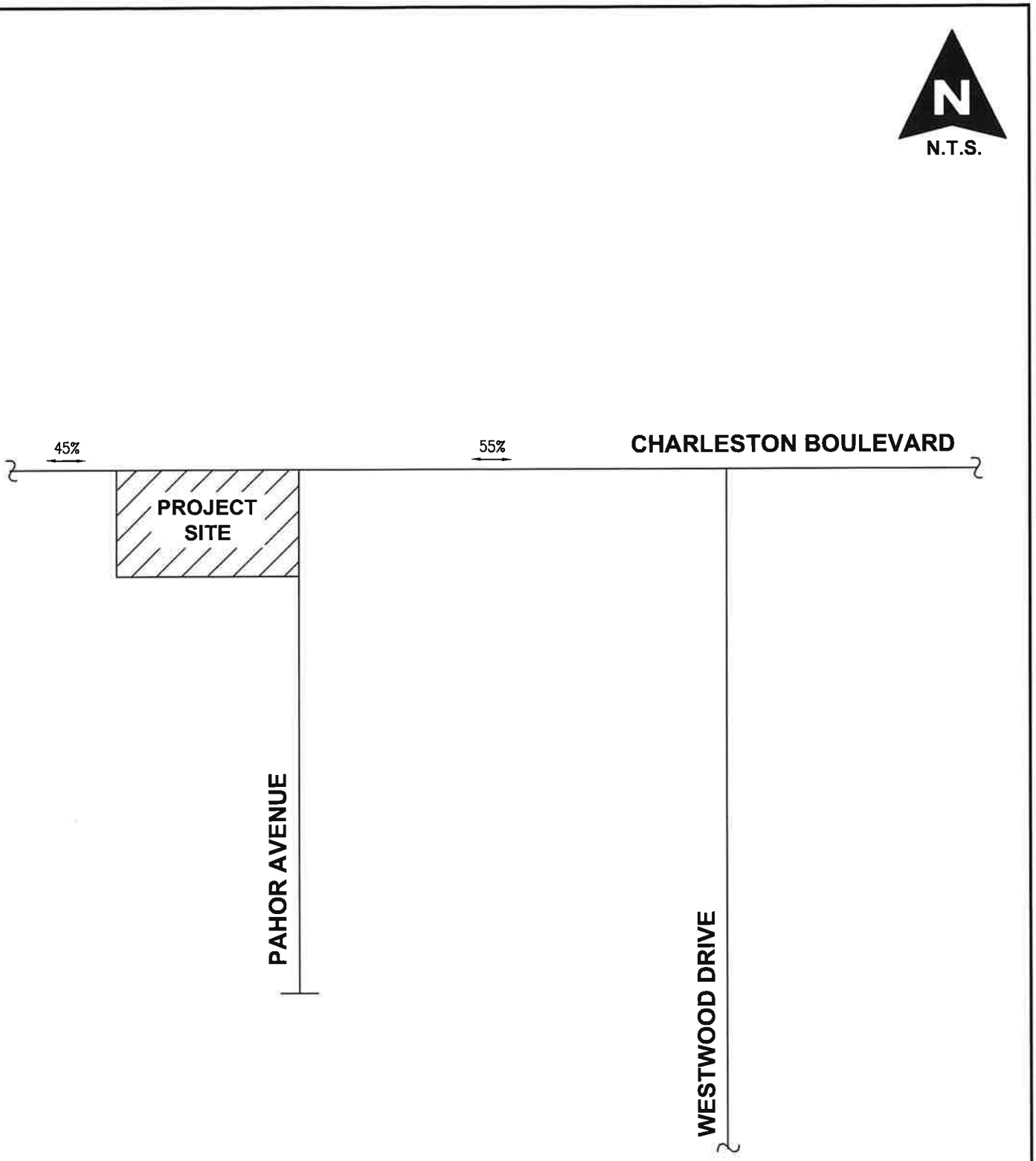
G. EXISTING AND PROJECTED TRAFFIC VOLUMES

Traffic volumes at each subject intersection were recorded on the following dates:

Pahor Drive at Charleston Boulevard	1/14/26
Westwood Drive at Charleston Boulevard	1/15/26

The volumes were recorded in 15-minute intervals between the hours of 7:00am to 9:00am and 4:00pm to 6:00pm. The 15-minute volume counts are contained in Appendix B. Refer to Figure 5 for the existing volumes.

The anticipated project completion date is 2027. Based upon area counting stations within the study area, traffic volumes have been flat. Therefore a growth rate was not applied. Refer to Figure 6 for the 2027 Background and Figure 8 for 2027 Background and Project Volumes.



	TRIP DISTRIBUTION FIGURE 3	**HILTON H25**

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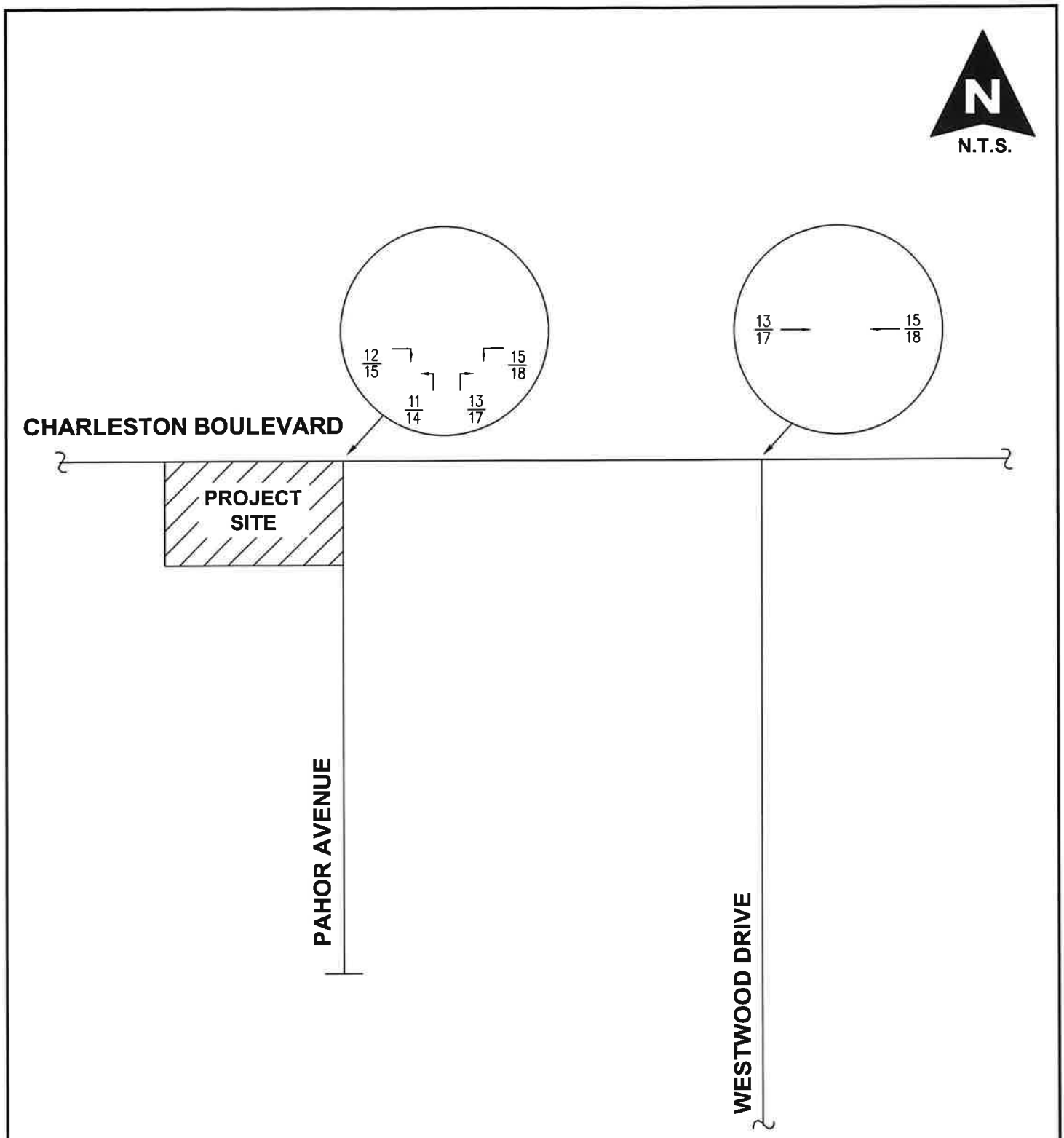

LEGEND

XX AM PEAK HOUR VOLUMES
YY PM PEAK HOUR VOLUMES

	TRIP ASSIGNMENT FIGURE 4	**HILTON H25**

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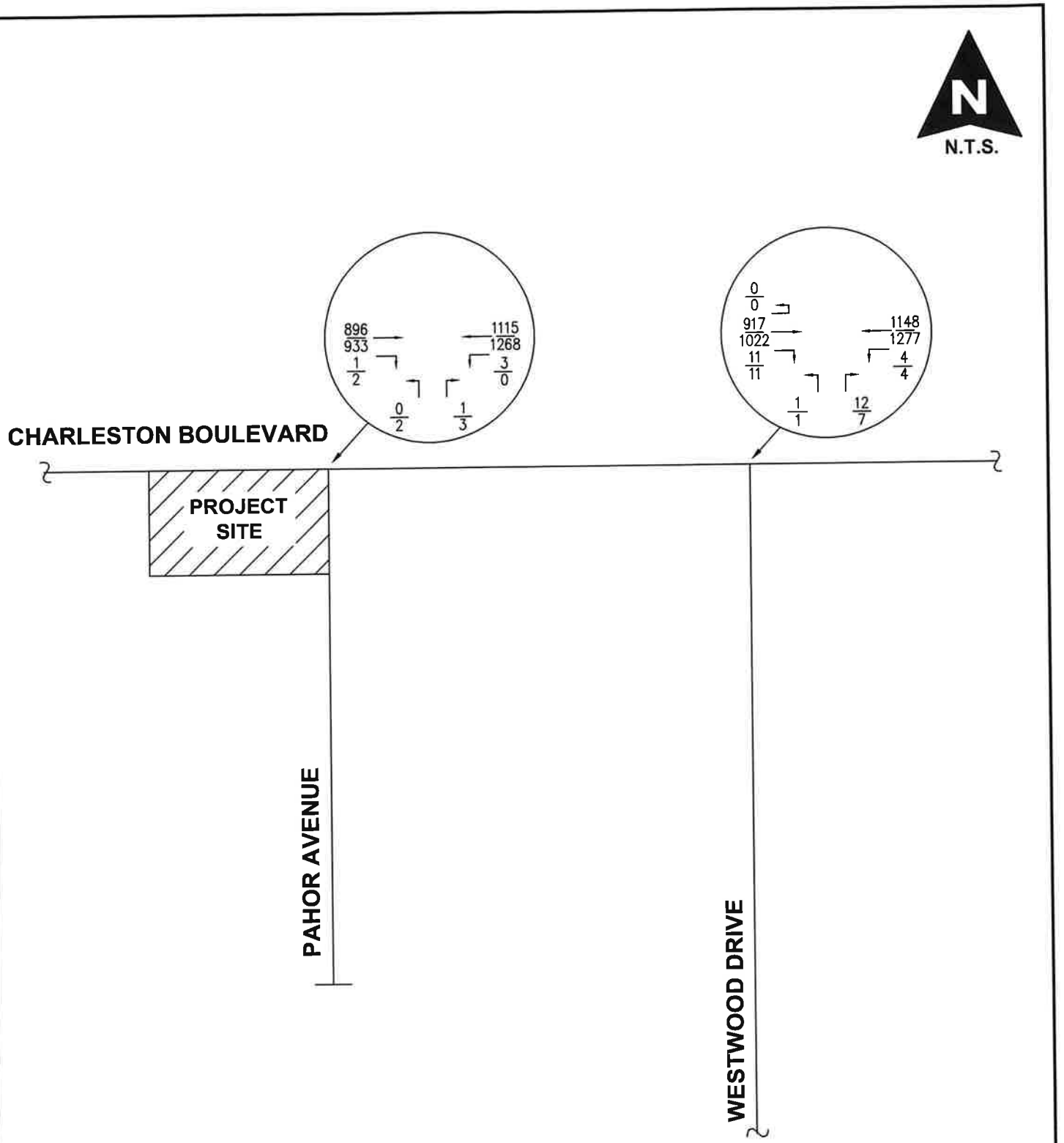

LEGEND

XX AM PEAK HOUR VOLUMES
YY PM PEAK HOUR VOLUMES

	EXISTING VOLUMES FIGURE 5	**HILTON H25**

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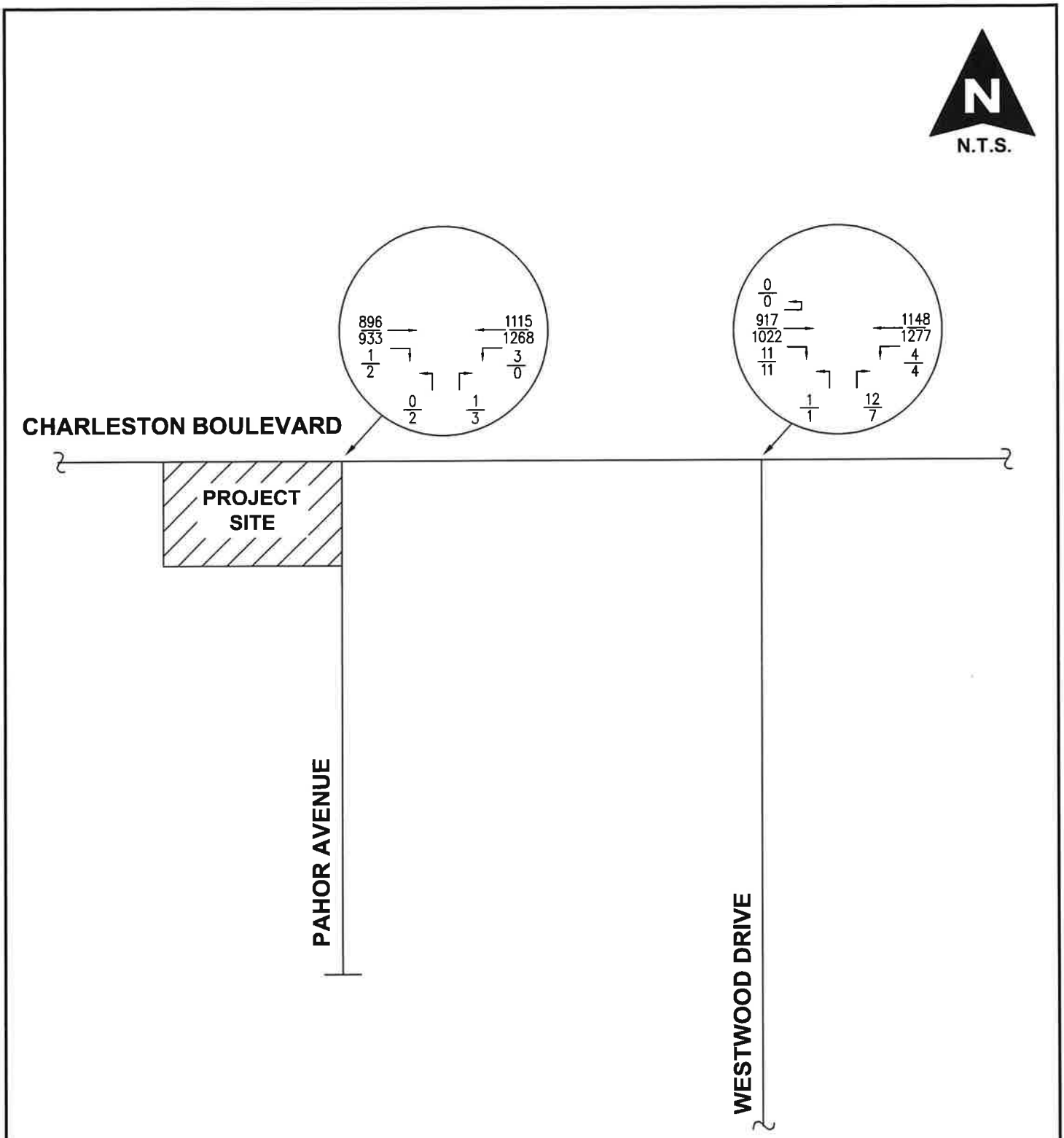

LEGEND

XX AM PEAK HOUR VOLUMES
YY PM PEAK HOUR VOLUMES

	2027 BACKGROUND VOLUMES FIGURE 6	**HILTON H25**

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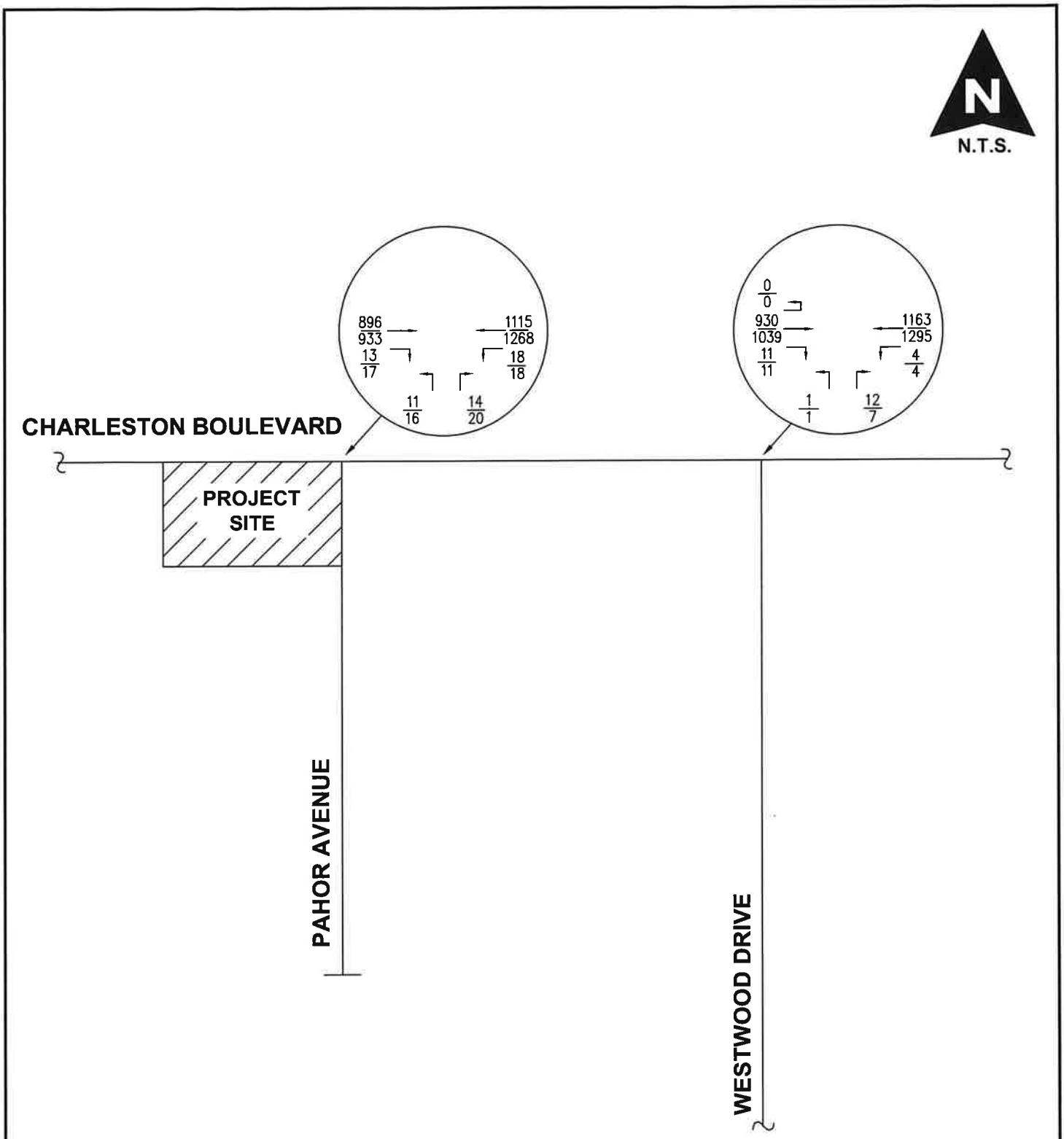

LEGEND

XX AM PEAK HOUR VOLUMES
YY PM PEAK HOUR VOLUMES

	2027 BACKGROUND & PROJECT VOLUMES FIGURE 7	**HILTON H25**

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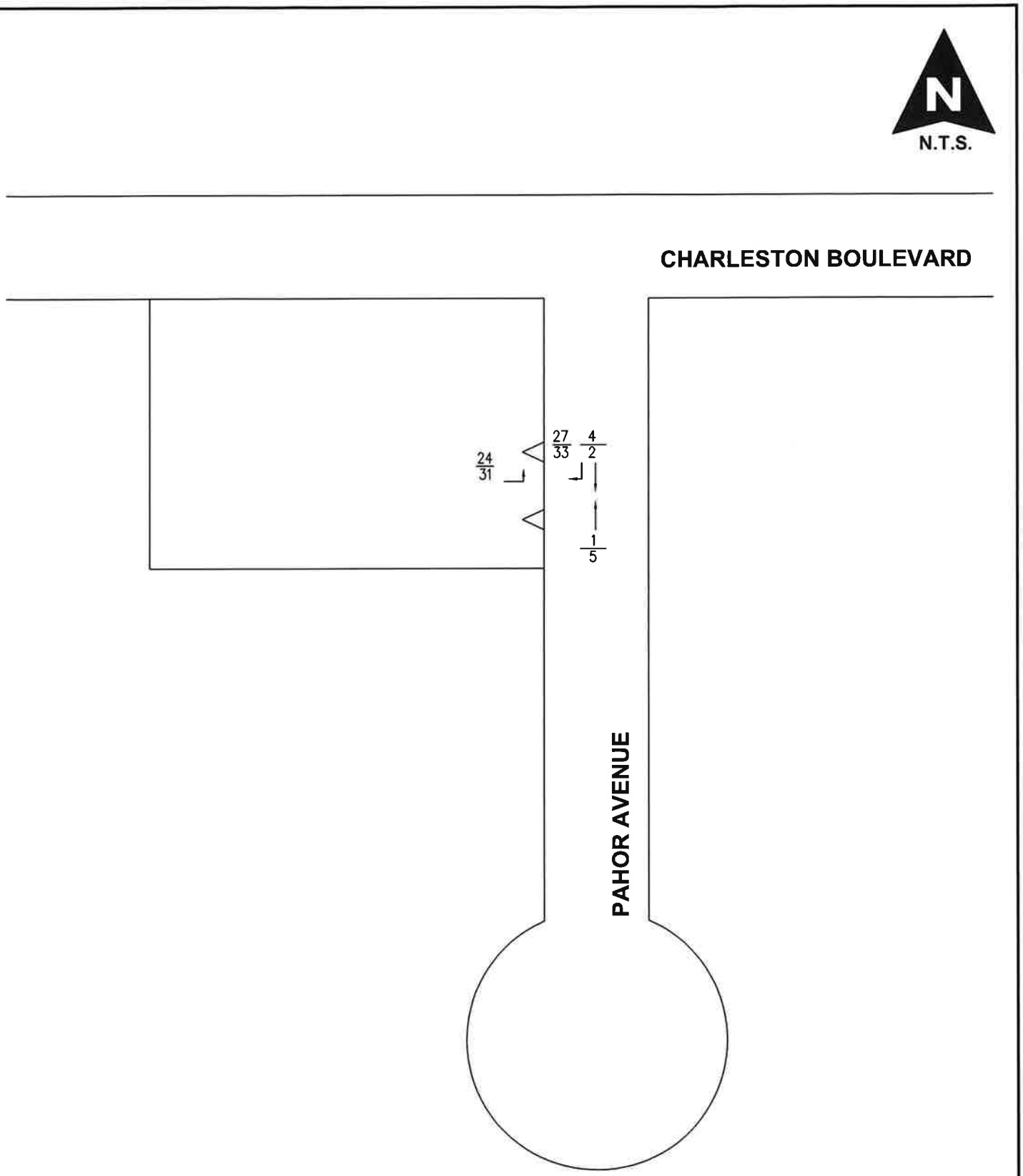

LEGEND

XX AM PEAK HOUR VOLUMES
YY PM PEAK HOUR VOLUMES

	EXISTING & PROJECT DRIVEWAY VOLUMES FIGURE 8	**HILTON H25**

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H. LEFT-TURN STORAGE ANALYSIS

As required by the City of Las Vegas, left-turn storage bays that are affected by this project were reviewed. A Poisson distribution with a 95 percent confidence level was utilized for the analyses for the signalized intersection. A three-minute storage period was used for the unsignalized intersections. Refer to Appendix C for analysis worksheets. The results of the left turn storage analysis are as follows:

LEFT TURN STORAGE ANALYSIS			
	REQUIRED MINIMUM STORAGE LENGTH		
	AM PEAK HOUR	PM PEAK HOUR	EXISTING STORAGE LENGTH
Pahor Avenue at Charleston Boulevard – East Leg	125 feet	150 feet	50 feet
Westwood Drive at Charleston Boulevard – West Leg	0 feet	0 feet	150 feet

The west leg of Charleston Boulevard at Westwind Drive currently has a left turn lane which sole use is for "U" turns on Charleston Boulevard. The peak hour observation did not record a "U" turn in either the AM or PM peak hour. The observation revealed that in the two hour period in the AM observed 4 total "U" turns. During the PM peak hour 13 vehicle performed a "U" turn. Based upon these volumes 50 feet of storage is required for the west leg of Charleston Boulevard at Westwood Drive.

I. AVERAGE DAILY TRAFFIC

As required by the City of Las Vegas, the increase in Average Daily Traffic (ADT) adjacent street to the project was calculated. The analysis was based upon a counting station located on Charleston Boulevard. The calculations are as follows:

SOURCE: NEVADA DEPARTMENT OF TRANSPORTATION TRAFFIC RECORDS INFORMATION ACCESS STATION 030553 SR 159, Charleston Blvd, 385 feet west of Mohawk Street			
2021	**2022**	**2023**	**2024**
33500	28300	29000	29600
Growth Rate = $\{29600\}^{1/3}$ $\{33500\} = 0.96$			

2024 Background & Project ADT on Charleston Boulevard = 29600 + 818 = 30,418

Based upon the preceding calculations, it is anticipated that 30,418 vehicles per day shall utilize Charleston Boulevard upon completion of the project.

J. RECOMMENDATIONS

To offset traffic impacts that are anticipated with the completion of the project, the following recommendations have been made:

- *For the City of Las Vegas to require all mandatory signage and striping to be shown on the project's civil engineering drawings and that they conform to City of Las Vegas and MUTCD standards.*

- *For the Developer to post "No Parking" signs on both Pahor Drive and Charleston Boulevard adjacent to the project if not already posted.*

- *For the Developer to remove all driveways on Charleston Boulevard.*

APPENDIX A

CITY OF LAS VEGAS TIA SCOPE

Traffic Impact Analysis Scoping Checklist

Department of Public Works – Transportation Division

Date: January 8, 2026

To: Ted Egerton, PE (Lochsca)

Project Name: Hilton H2S

Description: 140 room hotel, 1200 sq ft restaurant, 300 sq ft restaurant

Project Location: SWC Charleston Boulevard & Pahor Drive

Required Analysis:

- ☐ ***Master Traffic Impact Analysis***
- ☒ ***Traffic Impact Analysis***
- ☐ ***Addendum*** *to*
- ☐ ***Pedestrian Connectivity Study***
- ☐ ***Update Master Traffic Impact Analysis*** *to*
- ☐ ***Update Traffic Impact Analysis*** *to*
- ☐ ***Conceptual/Courtesy Review***
- ☐ ***Queueing Analysis***

Intersections	LOS	Crash History	Left / Right Turn Lane Storage Analysis
Charleston Boulevard & Pahor Drive			X – WB left storage
Charleston Boulevard & Westwood Drive			X – EB left storage

Remarks:
-Only left-turn storage lengths need be analyzed for this TIA (no LOS, etc.)
-The medians in Charleston Boulevard may need modifications to accommodate the desired left turn storage lengths above, and/or the intersection of Charleston/Pahor could be limited to right-in/right-out only. Provide an exhibit of proposed Charleston median changes (if any) as part of the TIA.

☒	***Include scaled site plan that dimension adjacent driveways, medians, and driveway throat depths.***
☒	***TIAs may be submitted either electronically or in hard copy. For hard copies, submit 1 hard copy, 1 PDF copy and completed TIA submittal form to 495 S. Main Street, 1st Floor. Include this form with submittal, either electronic or hard copy. Electronic submittals may be emailed to me if they are not larger than 10GB and can meet NAC 625.610 for sealing electronic submittals. Contact me if email is not feasible.***
☐	

Please contact Keith Letus (kletus@LasVegasNevada.gov) and Cesar A. Lopez (calopez@LasVegasNevada.gov) if you have any questions.

APPENDIX B

15-MINUTE VOLUME COUNTS

Lochsa Engineering
6345 S. Jones Boulevard, Suite 100
Las Vegas, NV 89118

File Name : CharlestonPahor
Site Code : 00000000
Start Date : 1/14/2026
Page No : 1

Groups Printed- Unshifted

	Charleston Blvd From East				Pahor Drive From South				Charleston Blvd From West				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
07:00 AM	0	223	0	0	0	0	1	0	0	153	0	0	377
07:15 AM	0	265	0	0	0	0	0	0	2	211	0	0	478
07:30 AM	0	290	2	0	1	0	0	0	0	242	0	0	535
07:45 AM	0	294	0	0	0	0	0	0	0	220	0	0	514
Total	0	1072	2	0	1	0	1	0	2	826	0	0	1904
08:00 AM	0	231	0	0	0	0	0	0	1	256	0	0	488
08:15 AM	0	300	1	0	0	0	0	0	0	178	0	0	479
08:30 AM	0	290	0	0	2	0	1	0	0	195	0	0	488
08:45 AM	0	216	0	0	1	0	1	0	2	160	0	0	380
Total	0	1037	1	0	3	0	2	0	3	789	0	0	1835
*** BREAK ***													
04:00 PM	0	247	0	0	0	0	1	0	1	197	0	0	446
04:15 PM	0	288	0	0	0	0	0	0	0	256	0	0	544
04:30 PM	0	321	0	0	2	0	0	0	0	229	0	0	552
04:45 PM	0	291	0	0	0	0	1	0	1	236	0	0	529
Total	0	1147	0	0	2	0	2	0	2	918	0	0	2071
05:00 PM	0	300	0	0	1	0	0	0	0	185	0	0	486
05:15 PM	0	339	0	0	0	0	1	0	1	271	0	0	612
05:30 PM	0	338	0	0	2	0	0	0	0	241	0	0	581
05:45 PM	0	283	0	0	0	0	0	0	1	235	0	0	519
Total	0	1260	0	0	3	0	1	0	2	932	0	0	2198
Grand Total	0	4516	3	0	9	0	6	0	9	3465	0	0	8008
Apprch %	0	99.9	0.1	0	60	0	40	0	0.3	99.7	0	0	
Total %	0	56.4	0	0	0.1	0	0.1	0	0.1	43.3	0	0	

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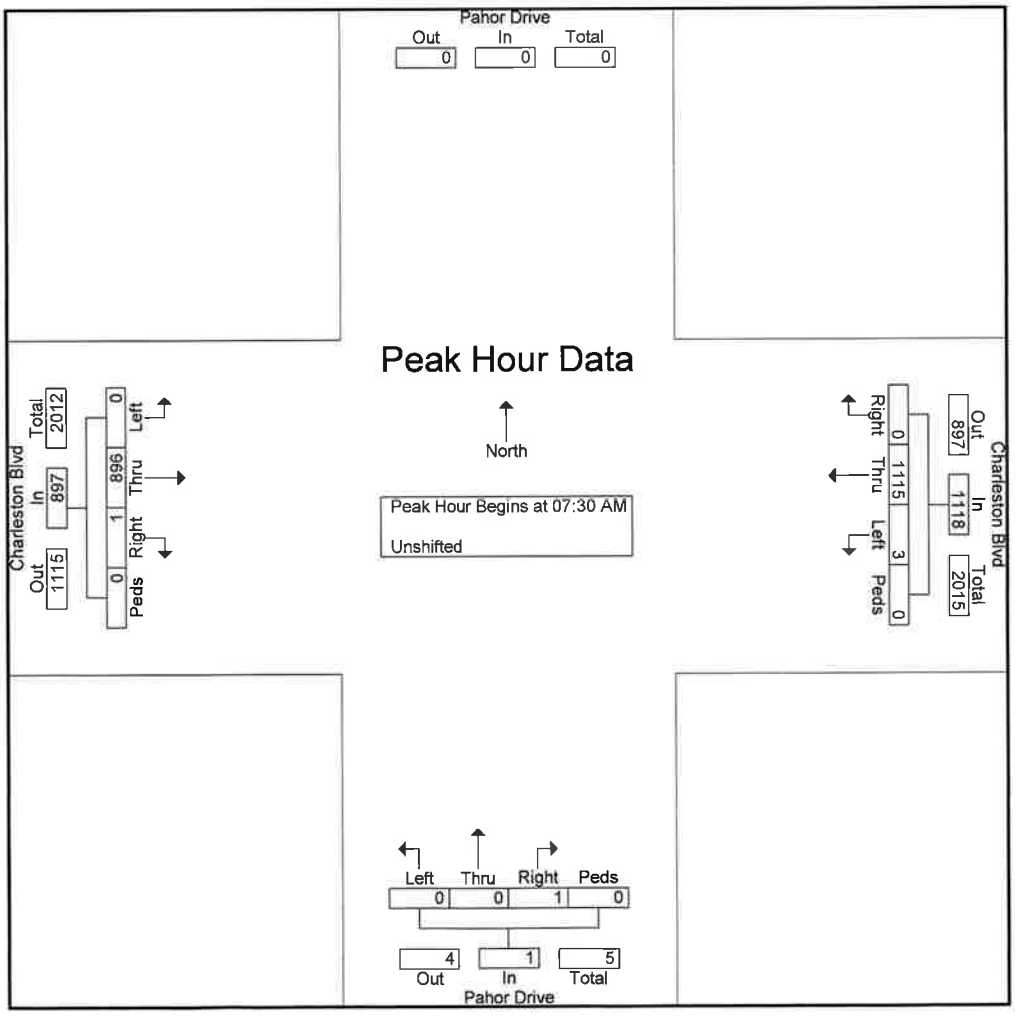
Las Vegas, NV 89118

File Name : CharlestonPahor
Site Code : 00000000
Start Date : 1/14/2026
Page No : 2

	From North	Charleston Blvd From East					Pahor Drive From South					Charleston Blvd From West					
Start Time	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 12:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	290	**2**	0	292	**1**	0	0	0	**1**	0	242	0	0	242	**535**
07:45 AM	0	0	294	0	0	294	0	0	0	0	0	0	220	0	0	220	514
08:00 AM	0	0	231	0	0	231	0	0	0	0	0	**1**	**256**	0	0	**257**	488
08:15 AM	0	0	**300**	1	0	**301**	0	0	0	0	0	0	178	0	0	178	479
Total Volume	0	0	1115	3	0	1118	1	0	0	0	1	1	896	0	0	897	2016
% App. Total		0	99.7	0.3	0		100	0	0	0		0.1	99.9	0	0		
PHF	.000	.000	.929	.375	.000	.929	.250	.000	.000	.000	.250	.250	.875	.000	.000	.873	.942



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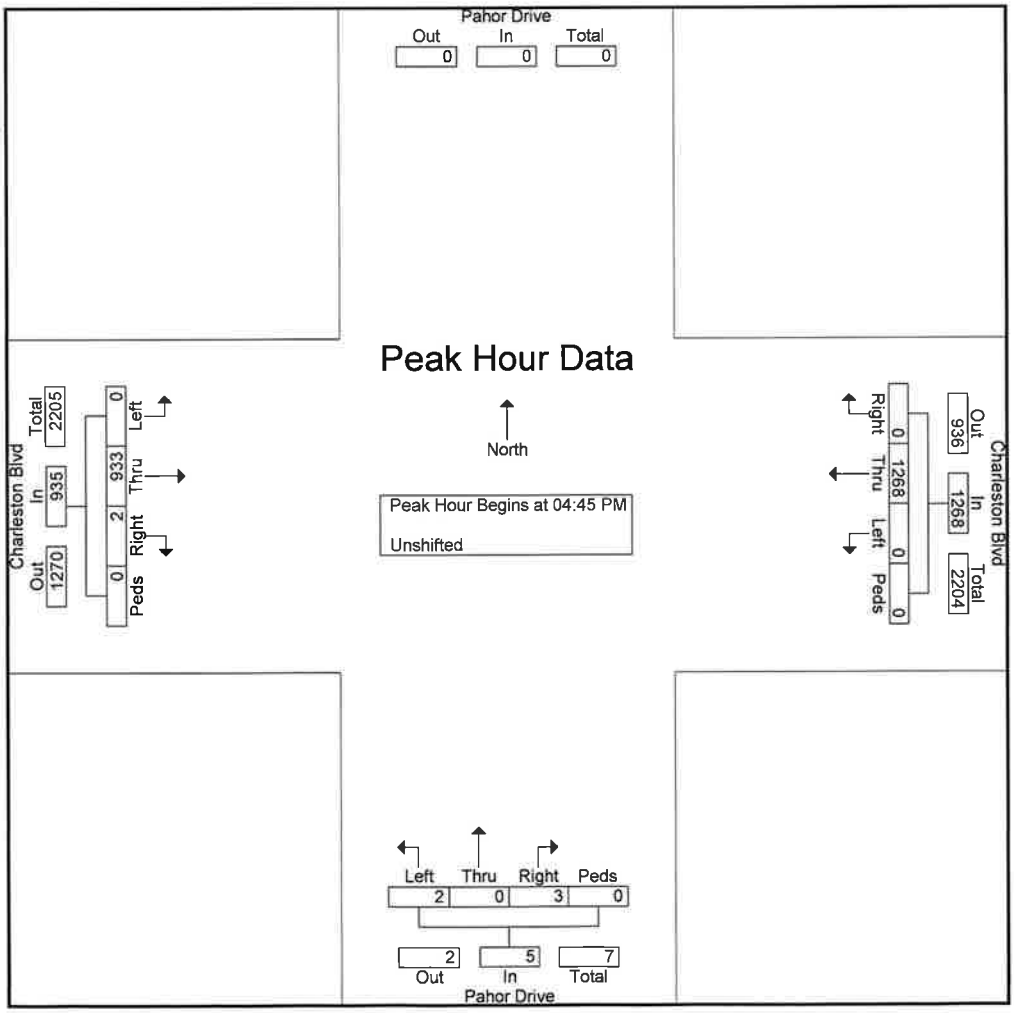
Las Vegas, NV 89118

File Name : CharlestonPahor
Site Code : 00000000
Start Date : 1/14/2026
Page No : 3

	From North	Charleston Blvd From East					Pahor Drive From South					Charleston Blvd From West					
Start Time	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:45 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	291	0	0	291	0	0	**1**	0	1	**1**	236	0	0	237	529
05:00 PM	0	0	300	0	0	300	1	0	0	0	1	0	185	0	0	185	486
05:15 PM	0	0	**339**	0	0	**339**	0	0	1	0	1	1	**271**	0	0	**272**	**612**
05:30 PM	0	0	338	0	0	338	**2**	0	0	0	**2**	0	241	0	0	241	581
Total Volume	0	0	1268	0	0	1268	3	0	2	0	5	2	933	0	0	935	2208
% App. Total		0	100	0	0		60	0	40	0		0.2	99.8	0	0		
PHF	.000	.000	.935	.000	.000	.935	.375	.000	.500	.000	.625	.500	.861	.000	.000	.859	.902



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Las Vegas, NV 89118

File Name : CharlestonWestwood
Site Code : 00000000
Start Date : 1/15/2026
Page No : 1

Groups Printed- Unshifted

	Charleston Blvd From East				Westwood Drive From South				Charleston Blvd From West				
Start Time	Right	Thru	Left	U-Turns	Right	Thru	Left	Peds	Right	Thru	Left	U-Turns	Int. Total
07:00 AM	0	254	1	4	2	0	0	0	2	171	0	1	435
07:15 AM	0	270	1	4	0	0	2	0	1	214	0	0	492
07:30 AM	0	284	1	6	2	0	0	0	2	233	0	0	528
07:45 AM	0	273	0	3	1	0	0	0	3	228	0	1	509
Total	0	1081	3	17	5	0	2	0	8	846	0	2	1964
08:00 AM	0	273	2	8	5	0	0	0	3	270	0	0	561
08:15 AM	0	318	1	5	4	0	1	0	3	186	0	0	518
08:30 AM	0	277	0	3	0	0	1	0	3	169	0	1	454
08:45 AM	0	225	2	6	2	0	0	0	1	195	0	1	432
Total	0	1093	5	22	11	0	2	0	10	820	0	2	1965
*** BREAK ***													
04:00 PM	0	274	1	5	2	0	1	0	2	175	0	1	461
04:15 PM	0	296	2	5	0	0	1	0	1	244	0	3	552
04:30 PM	0	311	1	4	2	0	0	0	1	232	0	0	551
04:45 PM	0	308	1	2	1	0	0	0	3	219	0	1	535
Total	0	1189	5	16	5	0	2	0	7	870	0	5	2099
05:00 PM	0	287	0	6	3	0	0	0	4	228	0	2	530
05:15 PM	0	348	1	5	1	0	1	0	2	255	0	1	614
05:30 PM	0	335	1	7	2	0	0	0	1	276	0	3	625
05:45 PM	0	307	2	5	1	0	0	0	4	263	0	2	584
Total	0	1277	4	23	7	0	1	0	11	1022	0	8	2353
Grand Total	0	4640	17	78	28	0	7	0	36	3558	0	17	8381
Apprch %	0	98	0.4	1.6	80	0	20	0	1	98.5	0	0.5	
Total %	0	55.4	0.2	0.9	0.3	0	0.1	0	0.4	42.5	0	0.2	

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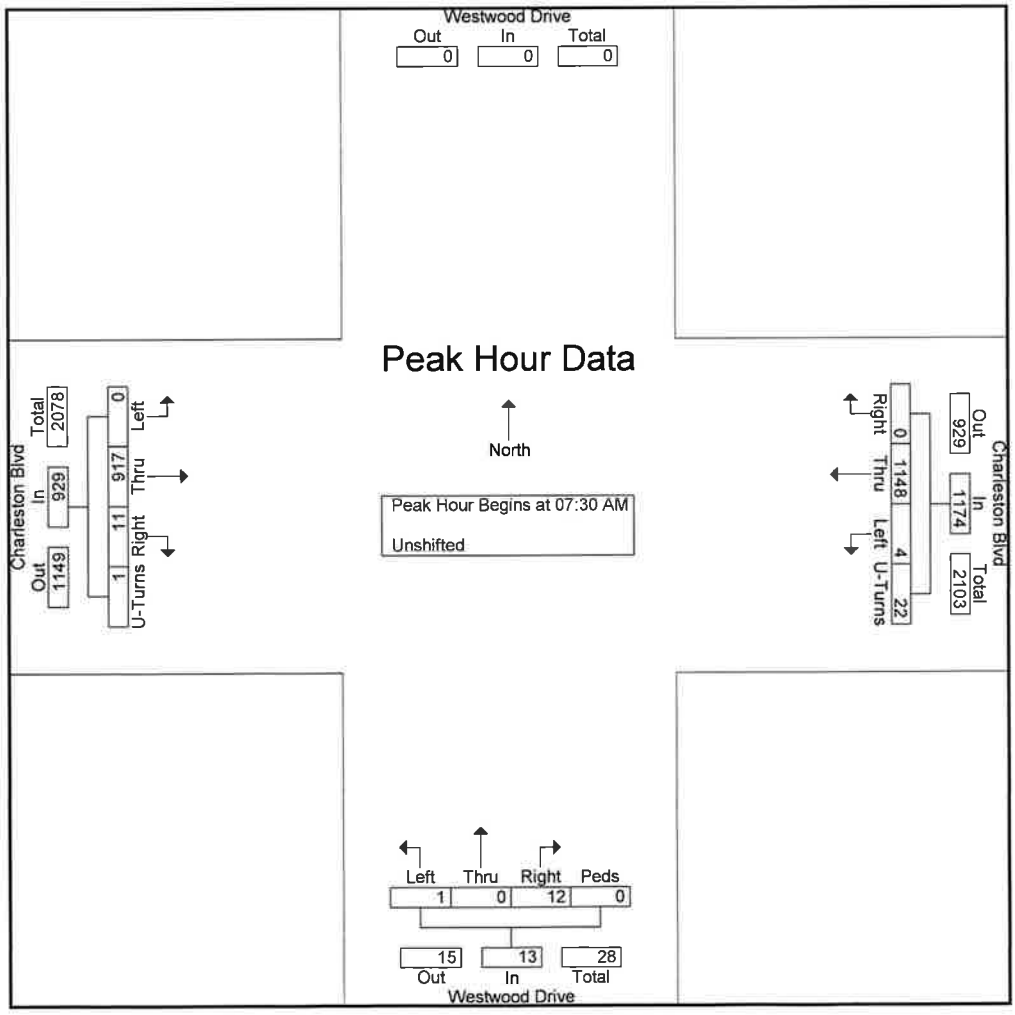
Las Vegas, NV 89118

File Name : CharlestonWestwood
Site Code : 00000000
Start Date : 1/15/2026
Page No : 2

	From North	Charleston Blvd From East					Westwood Drive From South					Charleston Blvd From West					
Start Time	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	U-Turns	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 12:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	284	1	6	291	2	0	0	0	2	2	233	0	0	235	528
07:45 AM	0	0	273	0	3	276	1	0	0	0	1	**3**	228	0	**1**	232	509
08:00 AM	0	0	273	**2**	**8**	283	**5**	0	0	0	**5**	3	**270**	0	0	**273**	**561**
08:15 AM	0	0	**318**	1	5	**324**	4	0	**1**	0	5	3	186	0	0	189	518
Total Volume	0	0	1148	4	22	1174	12	0	1	0	13	11	917	0	1	929	2116
% App. Total		0	97.8	0.3	1.9		92.3	0	7.7	0		1.2	98.7	0	0.1		
PHF	.000	.000	.903	.500	.688	.906	.600	.000	.250	.000	.650	.917	.849	.000	.250	.851	.943



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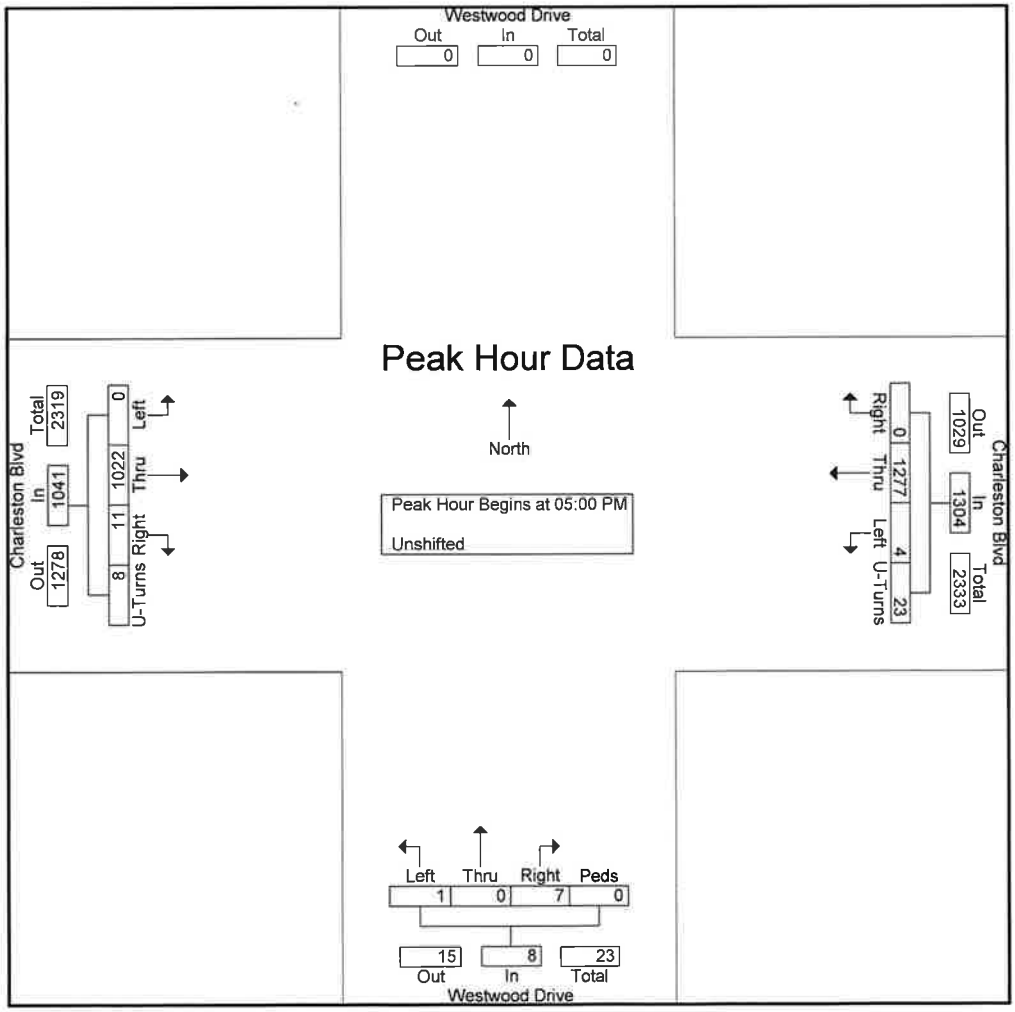
Las Vegas, NV 89118

File Name : CharlestonWestwood
Site Code : 00000000
Start Date : 1/15/2026
Page No : 3

	From North	Charleston Blvd From East					Westwood Drive From South					Charleston Blvd From West					
Start Time	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	U-Turns	App. Total	Int. Total
Peak Hour Analysis From 12:45 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	287	0	6	293	**3**	0	0	0	**3**	**4**	228	0	2	234	530
05:15 PM	0	0	**348**	1	5	**354**	1	0	**1**	0	2	2	255	0	1	258	614
05:30 PM	0	0	335	1	**7**	343	2	0	0	0	2	1	**276**	0	**3**	**280**	**625**
05:45 PM	0	0	307	**2**	5	314	1	0	0	0	1	4	263	0	2	269	584
Total Volume	0	0	1277	4	23	1304	7	0	1	0	8	11	1022	0	8	1041	2353
% App. Total		0	97.9	0.3	1.8		87.5	0	12.5	0		1.1	98.2	0	0.8		
PHF	.000	.000	.917	.500	.821	.921	.583	.000	.250	.000	.667	.688	.926	.000	.667	.929	.941



APPENDIX C

LEFT-TURN STORAGE ANALYSIS

THREE MINUTE STORAGE REQUIREMENTS ANALYSIS

PAHOR AVENUE AT CHARLESTON BOULEVARD - EAST LEG
AM

EXISTING VOLUME (VPH) = 0

PROJECT VOLUME (VPH) = 18

TOTAL VOLUME (VPH) = 18

REQUIRED STORAGE = (TOTAL VPH) * (3 MIN) * (25 FT/VEH) / (60 MIN/HR)

REQUIRED STORAGE LENGTH = 22.5 FEET

THREE MINUTE STORAGE REQUIREMENTS ANALYSIS

PAHOR AVENUE AT CHARLESTON BOULEVARD - EAST LEG
PM

EXISTING VOLUME (VPH) = 0

PROJECT VOLUME (VPH) = 18

TOTAL VOLUME (VPH) = 18

REQUIRED STORAGE = (TOTAL VPH) * (3 MIN) * (25 FT/VEH) / (60 MIN/HR)

REQUIRED STORAGE LENGTH = 22.5 FEET