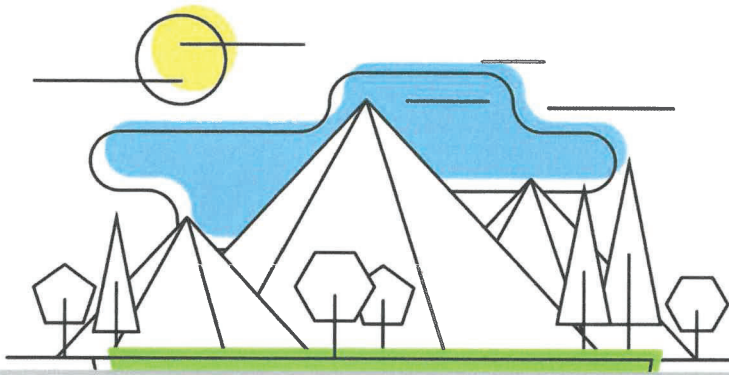




## **10 APPENDICES**

- A. ACOUSTICALREPORTS
- B. CIVIL ENGINEERING REPORTS
- C. EXISTING LIGHTING PHOTOMETRIC STUDY
- D. PARKING ANALYSIS & MEMORANDUM
- E. TRAFFIC IMPACT ANALYSIS



# SUMMIT

LAND MANAGEMENT

## RENOVATED SCOTTSDALE PLAZA RESORT Paradise Valley, Arizona

### Traffic Impact Analysis REVISED

February 2023

**Prepared for:** Highgate Hotels

**For Submittal to:**  
TOWN OF PARADISE VALLEY  
CITY OF SCOTTSDALE

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**Table of Contents**

Executive Summary ..... 1

*Introduction* ..... 1

*Results* ..... 1

*Recommendations without Renovated Scottsdale Plaza Resort* ..... 4

*Recommendations with Renovated Scottsdale Plaza Resort* ..... 5

Introduction ..... 6

Scope of Study ..... 8

Adjacent Intersections ..... 8

Collision Analysis ..... 9

Existing Traffic Volumes ..... 14

Future Ambient 2025 Volumes ..... 16

Proposed Artesia Estimated Trip Generation ..... 37

Proposed Renovated Scottsdale Plaza Resort Estimated Trip Generation ..... 60

Proposed Renovated Scottsdale Plaza Resort Estimated Traffic Assignment ..... 60

Traffic Signal Warrants ..... 72

Left-Turn Arrow Analysis ..... 118

Weekday Level-of-Service Analysis ..... 83

Existing Saturday Traffic Volumes ..... 87

Future Ambient 2025 Saturday Volumes ..... 94

Proposed Artesia Estimated Saturday Trip Generation ..... 101

Saturday Level-of-Service Analysis ..... 114

Weekday and Saturday Queuing Analysis ..... 114

Results ..... 118

Recommendations without Renovated Scottsdale Plaza Resort ..... 124

Recommendations with Renovated Scottsdale Plaza Resort ..... 124

**List of Figures**

Figure 1: Vicinity Street Map ..... 6

Figure 2: Renovated Scottsdale Plaza Resort Site Plan ..... 7

Figure 3: Existing Adjacent Intersection Lane Configurations ..... 9

Figure 4: 2022 Day Approach and Departure Volumes ..... 17

Figure 5: 2022 AM Peak Hour Approach and Departure Volumes ..... 18

Figure 6: 2022 AM Peak Hour Turning Volumes ..... 19

Figure 7: 2022 PM Peak Hour Approach and Departure Volumes ..... 20

Figure 8: 2022 PM Peak Hour Turning Volumes ..... 21

Figure 9: Adjusted 2022 Day Approach and Departure Volumes ..... 22

Figure 10: Adjusted 2022 AM Peak Hour Approach and Departure Volumes ..... 23

Figure 11: Adjusted 2022 AM Peak Hour Turning Volumes ..... 24

Figure 12: Adjusted 2022 PM Peak Hour Approach and Departure Volumes ..... 25

Figure 13: Adjusted 2022 PM Peak Hour Turning Volumes ..... 26

Figure 14: Ambient 2025 Day Approach and Departure Volumes ..... 27

Figure 15: Ambient 2025 AM Peak Hour Approach and Departure Volumes ..... 28

Figure 16: Ambient 2025 AM Peak Hour Turning Movement Volumes ..... 29

Figure 17: Ambient 2025 PM Peak Hour Approach and Departure Volumes ..... 30

Figure 18: Ambient 2025 PM Peak Hour Turning Movement Volumes ..... 31

Figure 19: Ritz-Carlton and Palmeraie Day Approach and Departure Volumes ..... 32

Figure 20: Ritz-Carlton and Palmeraie AM Peak Hour Approach and Departure Volumes ..... 33

Figure 21: Ritz-Carlton and Palmeraie AM Peak Hour Turning Movement Volumes ..... 34

Figure 22: Ritz-Carlton and Palmeraie PM Peak Hour Approach and Departure Volumes ..... 35

Figure 23: Ritz-Carlton and Palmeraie PM Peak Hour Turning Movement Volumes ..... 36

Figure 24: Single-Family Daily Trip Generation Rates versus Number of Houses ..... 37

Figure 25: Single-Family Day Trip Rates for fewer than 200 Houses Data with Outliers Identified ..... 39

Figure 26: Single-Family Morning Peak Hour Trip Generation Rates versus Number of Houses ..... 40

Figure 27: Single-Family AM Peak Trip Rates for fewer than 200 Houses with Outliers Identified ..... 41

Figure 28: Single-Family PM Peak Hour Trip Generation Rates versus Number of Houses ..... 42

Figure 29: Single-Family PM Peak Trip Rates for fewer than 200 Houses with Outliers Identified ..... 43

Figure 30: Mid-Rise Multi-family Day Trip Rates for all Proxy Data ..... 44

Figure 31: Multi-family Morning Peak Hour Trip Generation Rates versus Number of Homes ..... 45

Figure 32: Multi-family AM Peak Trip Rates for greater than 150 Homes ..... 46

Figure 33: Multi-family PM Peak Hour Trip Generation Rates versus Number of Homes ..... 47

Figure 34: Multi-Family PM Peak Trip Rates for fewer than 200 Homes with Outliers Identified ..... 48

Figure 35: Artesia Day Approach and Departure Volumes ..... 50

Figure 36: Artesia AM Peak Hour Approach and Departure Volumes ..... 51

Figure 37: Artesia AM Peak Hour Turning Movement Volumes ..... 52

Figure 38: Artesia PM Peak Hour Approach and Departure Volumes ..... 53

Figure 39: Artesia PM Peak Hour Turning Movement Volumes ..... 54

Figure 40: 2025 Plus Vicinity Developments Day Approach and Departure Volumes ..... 55

Figure 41: 2025 Plus Vicinity Developments AM Peak Hour Approach and Departure Volumes ..... 56

Figure 42: 2025 Plus Vicinity Developments AM Peak Hour Turning Movement Volumes ..... 57

Figure 43: 2025 Plus Vicinity Developments PM Peak Hour Approach and Departure Volumes ..... 58

Figure 44: 2025 Plus Vicinity Developments PM Peak Hour Turning Movement Volumes ..... 59

Figure 45: Resort Renovation Approach and Departure Volumes Day ..... 62

Figure 46: Resort Renovation Approach and Departure Volumes Morning Peak Hour ..... 63

Figure 47: Resort Renovation Turning Volumes Morning Peak Hour ..... 64

Figure 48: Resort Renovation Approach and Departure Volumes Evening Peak Hour ..... 65

Figure 49: Resort Renovation Turning Volumes Evening Peak Hour ..... 66

Figure 50: 2025 with Resort Renovation Approach and Departure Volumes Day ..... 67

Figure 51: 2025 with Resort Renovation Approach and Departure Volumes Morning Peak Hour ..... 68

Figure 52: 2025 with Resort Renovation Turning Volumes Morning Peak Hour ..... 69

Figure 53: 2025 with Resort Renovation Approach and Departure Evening Peak Hour ..... 70

Figure 54: 2025 with Resort Renovation Turning Volumes Evening Peak Hour ..... 71

Figure 55: Planned Adjacent Intersection Lane Configurations ..... 84

Figure 56: 2022 Saturday Day Approach and Departure Volumes ..... 88

Figure 57: 2022 Saturday PM Peak Hour Approach and Departure Volumes ..... 89

Figure 58: 2022 Saturday PM Peak Hour Turning Volumes ..... 90

Figure 59: Adjusted 2022 Saturday Day Approach and Departure Volumes ..... 91

Figure 60: Adjusted 2022 Saturday PM Peak Hour Approach and Departure Volumes ..... 92

Figure 61: Adjusted 2022 Saturday PM Peak Hour Turning Volumes ..... 93

Figure 62: 2025 Saturday Day Approach and Departure Volumes ..... 95

Figure 63: 2025 Saturday PM Peak Hour Approach and Departure Volumes ..... 96

Figure 64: 2025 Saturday PM Peak Hour Turning Volumes ..... 97



Figure 65: Ritz-Carlton Saturday Day Approach and Departure Volumes ..... 98  
 Figure 66: Ritz-Carlton Saturday PM Peak Hour Approach and Departure Volumes ..... 99  
 Figure 67: Ritz-Carlton Saturday PM Peak Hour Turning Volumes ..... 100  
 Figure 68: Artesia Saturday Day Approach and Departure Volumes ..... 102  
 Figure 69: Artesia Saturday PM Peak Hour Approach and Departure Volumes ..... 103  
 Figure 70: Artesia Saturday PM Peak Hour Turning Volumes ..... 104  
 Figure 71: 2025 plus Vicinity Developments Saturday Day Approach and Departure Volumes ..... 105  
 Figure 72: 2025 plus Vicinity Developments Saturday PM Peak Approach and Departure Volumes ..... 106  
 Figure 73: 2025 plus Vicinity Developments Saturday PM Peak Hour Turning Volumes ..... 107  
 Figure 74: Saturday Resort Renovation Day Approach and Departure Volumes ..... 108  
 Figure 75: Saturday Resort Renovation PM Peak Hour Approach and Departure Volumes ..... 109  
 Figure 76: Saturday Resort Renovation PM Peak Hour Turning Volumes ..... 110  
 Figure 77: Saturday 2025 with Resort Renovation Day Approach and Departure Volumes ..... 111  
 Figure 78: Saturday 2025 with Resort Renovation PM Peak Approach and Departure Volumes ..... 112  
 Figure 79: Saturday 2025 with Resort Renovation PM Peak Hour Turning Volumes ..... 113  
 Figure 80: Existing Turn Lane Lengths at Scottsdale / Indian Bend ..... 117  
 Figure 81: Existing Turn Lane Lengths at Plaza Resort Access ..... 118

**List of Tables**

Table 1: Existing, New, and Finished Resort ..... 1  
 Table 2: Trip Generation Comparison of Plaza Resort to Two Adjacent Developments ..... 1  
 Table 3: LOS Summary – Signalized Intersections – Weekday AM Peak Hour ..... 2  
 Table 4: LOS Summary – Signalized Intersections – Weekday PM Peak Hour ..... 2  
 Table 5: LOS Summary – Unsignalized Intersections – Weekday AM Peak Hour ..... 3  
 Table 6: LOS Summary – Unsignalized Intersections – Weekday PM Peak Hour ..... 3  
 Table 7: LOS Summary — Saturday Peak Hour ..... 4  
 Table 8: Collision Manner History Summary: 2015 ..... 9  
 Table 9: Collision Manner History Summary: 2016 ..... 10  
 Table 10: Collision Manner History Summary: 2017 ..... 10  
 Table 11: Collision Manner History Summary: 2018 ..... 10  
 Table 12: Collision Manner History Summary: 2019 ..... 10  
 Table 13: Collision Manner History Summary: 2020 ..... 10  
 Table 14: Collision Manner History Summary: All 3 Intersections for 2015 through 2020 ..... 11  
 Table 15: Collision Travel Direction: By Intersection for 2015 through 2020 ..... 11  
 Table 16: Collision Injury Severity: By Intersection for 2015 through 2020 ..... 12  
 Table 17: Collision Travel Direction: All 3 Intersections for 2015 through 2020 ..... 13  
 Table 18: Collision Injury Severity Summary: All 3 Intersections for 2015 through 2020 ..... 13  
 Table 19: Peak 60-minute Volume Periods ..... 14  
 Table 20: Total Intersection Approach Traffic Volumes by Count Day ..... 15  
 Table 21: Intersection Approach Morning Peak Hour Traffic Volumes by Count Day ..... 15  
 Table 22: Intersection Approach Evening Peak Hour Traffic Volumes by Count Day ..... 15  
 Table 23: Scottsdale / Hummingbird Existing Turning Percentages for Ritz-Carlton Distribution ..... 16  
 Table 24: Single-Family Proxy Data Statistical Consistency for Day ..... 39  
 Table 25: Single-Family Proxy Data Statistical Consistency for AM Peak Hour ..... 40  
 Table 26: Single-Family Proxy Data Statistical Consistency for PM Peak Hour ..... 42  
 Table 27: Multi Family Proxy Data Statistical Consistency for Day ..... 44  
 Table 28: Multi Family Proxy Data Statistical Consistency for AM Peak Hour ..... 45  
 Table 29: Multi Family Proxy Data Statistical Consistency for PM Peak Hour ..... 47  
 Table 30: Artesia Estimated Trip Generation Volumes ..... 48  
 Table 31: Scottsdale / Hummingbird Existing Turning Percentages for Artesia Trip Distribution ..... 49  
 Table 32: Scottsdale / Indian Bend Turning Percentages for Artesia Trip Distribution ..... 49  
 Table 33: Trip Generation for Renovated Scottsdale Plaza Resort ..... 60

Table 34: Scottsdale / Plaza Resort Existing Turning Percentages for Resort Trip Distribution ..... 61

Table 35: Scottsdale / Indian Bend Existing Turning Percentages for Resort Trip Distribution ..... 61

Table 36: Signal Warrant Results for Scottsdale / Scottsdale Plaza Resort ..... 72

Table 37: 7025 N. Scottsdale Road, Friday 8-5-2022 Plaza Resort Only Traffic Hourly Counts ..... 73

Table 38: 7025 N. Scottsdale Road, Friday 8-5-2022 Portion of Total Site Hourly Counts ..... 74

Table 39: 7025 N. Scottsdale Road, Additional 74 Hotel Rooms Hourly Traffic ..... 75

Table 40: 7025 N. Scottsdale Road, New Restaurants Hourly Traffic ..... 76

Table 41: Total 7025 North Scottsdale Road Traffic with Resort Renovations ..... 77

Table 42: Warrant Results for Scottsdale / Scottsdale Plaza Resort with Resort Renovations ..... 78

Table 43: Trip Generation for 24 Hours as a Percent of Day for Two Housing Land Uses ..... 79

Table 44: Artesia Single-Family Hourly Volumes at Scottsdale / Hummingbird..... 80

Table 45: Artesia Multi-Family Hourly Volumes at Scottsdale / Hummingbird ..... 81

Table 46: Ritz-Carlton Hourly Volumes at Scottsdale / Hummingbird..... 82

Table 47: Signal Warrant Results for Scottsdale / Hummingbird ..... 83

Table 53: City of Scottsdale Left-Turn Arrow Criteria..... 119

Table 54: Left-Turn Arrow Peak Hour Criteria Analysis ..... 120

Table 48: Intersection Level-of-Service Criteria ..... 85

Table 49: LOS Summary – Signalized Intersections – Weekday AM Peak Hour ..... 86

Table 50: LOS Summary – Signalized Intersections – Weekday PM Peak Hour ..... 86

Table 51: LOS Summary – Unsignalized Intersections – Weekday AM Peak Hour ..... 86

Table 52: LOS Summary – Unsignalized Intersections – Weekday PM Peak Hour ..... 87

Table 55: LOS Summary — Saturday Peak Hour ..... 114

Table 56: Queue Lengths – Signalized Intersections – 2025 with Artesia and Ritz-Carlton ..... 115

Table 57: Queue Lengths – Signalized Intersections – 2025 with Three Developments..... 115

Table 58: Queue Lengths Increase with Plaza Resort..... 116

Table 59: Trip Generation Comparison of Plaza Resort to Two Adjacent Developments ..... 120

Table 60: LOS Summary – Signalized Intersections – Weekday AM Peak Hour ..... 121

Table 61: LOS Summary – Signalized Intersections – Weekday PM Peak Hour ..... 122

Table 62: LOS Summary – Unsignalized Intersections – Weekday AM Peak Hour ..... 122

Table 63: LOS Summary – Unsignalized Intersections – Weekday PM Peak Hour ..... 122

Table 64: LOS Summary — Saturday Peak Hour ..... 123

**List of Appendices**

Collision Analysis ..... A

    Scottsdale Road and Indian Bend Road .....A.1

    Scottsdale Road and Scottsdale Plaza Resort Access .....A.2

    Scottsdale Road and Hummingbird Lane .....A.3

2022 Traffic Counts..... B

    Thursday Traffic Counts .....B.1

    Friday Traffic Counts .....B.2

    Saturday Traffic Counts .....B.3

Excerpts of Ritz-Carlton and Palmeraie Traffic Study ..... C

Artesia Site Plan and Trip Generation..... D

Renovated Scottsdale Plaza Resort Trip Generation ..... E

Signal Warrant Analyses.....F

    Scottsdale and Scottsdale Plaza Resort Access ..... F.1

    Scottsdale and Hummingbird ..... F.2

Level-of-Service without and with Renovated Scottsdale Plaza Resort..... G

    City of Scottsdale Signal Timing Plans ..... G.1

    Existing 2022 Traffic Volumes..... G.2

    Adjusted Existing 2022 Traffic Volumes..... G.3

    Ambient 2025 Traffic Volumes ..... G.4

    2025 with Artesia..... G.5

    2025 with Artesia and Ritz-Carlton..... G.6

    2025 with Artesia, Ritz-Carlton, and Renovated Scottsdale Plaza Resort..... G.7

    Complete Level-of-Service Results Summary ..... G.8

## Executive Summary

### Introduction

The Town of Paradise Valley does not have specific criteria for traffic impact analyses. There, the City of Scottsdale traffic impact and mitigation analysis format was generally utilized.

The Scottsdale Plaza Resort Hotel is planning a renovation of the existing hotel. The renovation will include demolition of the former restaurant building in the southeast corner of the site (the immediate northeast corner of the Scottsdale Road and Indian Bend Road intersection). The renovation will also include demolition and repurposing of certain areas of the existing main building. **Table 1** provides a summary of the existing, new, and finished resort; though because of the demolition and repurposing; the finished resort non-hotel-guest-room area is not the sum of the existing and new areas.

**Table 1: Existing, New, and Finished Resort**

	EXISTING	NEW	FINISHED
Hotel Guests Rooms (keys)	404	64	468
Conference and Ancillary (square feet)	29,736	2,600	32,336
Restaurant (including Kitchens and Ancillary) (square feet)	25,312	41,390	57,436
Fitness and Spa (square feet)	7,121	30,979	38,100
Retail	1,560	0	1,560
Reception, Lobby, Internal Office (square feet)	51,070	1,933	53,003
TOTAL (non-hotel-guest-room area square feet)	114,799	76,902	182,435

### Results

The renovated hotel is anticipated to generate 4,989 additional weekday daily vehicles; 50 additional weekday morning peak hour of adjacent street vehicles; 462 additional weekday evening peak hour of adjacent street vehicles; 5,472 additional Saturday daily vehicles; and 627 additional Saturday peak hour of generator vehicles. **Table 2** provides a comparison of the proposed renovated Scottsdale Plaza Resort to the adjacent proposed developments of Ritz-Carlton and Artesia.

**Table 2: Trip Generation Comparison of Plaza Resort to Two Adjacent Developments**

TIME PERIOD	RENOVATED PLAZA RESORT			RITZ-CARLTON			ARTESIA		
	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
WEEKDAY	3,159	3,165	6,324	7,720	7,720	15,440	1,668	1,668	3,336
AM PEAK HOUR STREET	173	151	324	567	369	936	66	190	256
PM PEAK HOUR STREET	502	299	801	701	682	1,383	158	100	258



Level-of-service is a ranking system for intersections, with “A” representing the lowest delay and “F” representing the highest delay. Typically, levels-of-service “A” and “B” indicate more traffic lanes are provided than necessary for the traffic volumes, “E” and “F” indicate too much traffic for the existing lane configuration and number, with “C” and “D” indicating a proper balance between the traffic volumes, and the traffic control, lane configuration, and lane number.

Complete level-of-service results; summarized by individual movement, approach, and intersection; for both existing and adjusted 2022; 2025; 2025 with only Artesia; 2025 with both Artesia and Ritz-Carlton; and 2025 with Artesia, Ritz-Carlton, and Scottsdale Plaza Resort; are provided in tabular form as **Appendix G.8**. Detailed delay and level-of-service analyses results are provided in **Appendices G.2** through **G.7**.

**Table 3** through **Table 6** respectively summarize, for the signalized and unsignalized intersections for the weekday morning and evening peak hours, for the intersection, approach, and movement level-of-service results for the analyzed conditions. The numbers are the total number of intersections, approaches, and movements for the study intersections at the indicated level-of-service. This information is provided as a concise synopsis of the differences in intersection operation between different scenarios. Complete detailed information is provided in the appendices.

**Table 3: LOS Summary – Signalized Intersections – Weekday AM Peak Hour**

	2022		AMBIENT	2025		
	EXISTING	ADJUSTED		WITH ARTESIA	WITH RITZ & ARTESIA	WITH PLAZA & OTHERS
A	9	9	9	9	9	9
B	13	13	13	13	7	7
C	8	6	8	8	11	12
D	2	4	2	2	5	4
E	0	0	0	0	0	0
F	0	0	0	0	0	0
	32	32	32	32	32	32

**Table 4: LOS Summary – Signalized Intersections – Weekday PM Peak Hour**

	2022		AMBIENT	2025		
	EXISTING	ADJUSTED		WITH ARTESIA	WITH RITZ & ARTESIA	WITH PLAZA & OTHERS
A	9	9	9	9	9	8
B	10	5	6	5	1	2
C	5	9	8	9	10	4
D	8	9	9	9	7	9
E	0	0	0	0	5	9
F	0	0	0	0	0	0
	32	32	32	32	32	32

**Table 5: LOS Summary – Unsignalized Intersections – Weekday AM Peak Hour**

	2022		AMBIENT	2025		
	EXISTING	ADJUSTED		WITH ARTESIA	WITH RITZ & ARTESIA	WITH PLAZA & OTHERS
A	18	18	18	17	24	24
B	2	1	2	0	0	0
C	2	3	2	5	1	1
D	1	1	0	0	2	2
E	0	0	0	0	1	1
F	2	2	3	3	4	4
	25	25	25	25	32	32

**Table 6: LOS Summary – Unsignalized Intersections – Weekday PM Peak Hour**

	2022		AMBIENT	2025		
	EXISTING	ADJUSTED		WITH ARTESIA	WITH RITZ & ARTESIA	WITH PLAZA & OTHERS
A	19	20	18	17	24	24
B	0	0	0	0	0	0
C	2	1	1	1	0	0
D	1	1	2	1	2	1
E	0	0	0	0	0	1
F	3	3	4	6	6	6
	25	25	25	25	32	32

**Table 7: LOS Summary — Saturday Peak Hour**

**Unsignalized Intersections**

	2025	
	WITH RITZ & ARTESIA	WITH PLAZA & OTHERS
A	25	25
B	0	0
C	3	1
D	1	2
E	0	1
F	3	3
	32	32

**Signalized Intersections**

	2025	
	WITH RITZ & ARTESIA	WITH PLAZA & OTHERS
A	9	8
B	2	3
C	11	5
D	10	16
E	0	0
F	0	0
	32	32

The Scottsdale / Hummingbird intersection is predicted to have several levels-of-service “F” caused by left-turns from a stop-controlled access onto an uncontrolled arterial. This circumstance is typical of similar intersections and accesses.

The primary access to the Scottsdale Plaza Resort is on Scottsdale Road, approximately 600 feet north of Indian Bend Road. This intersection is identified by the City of Scottsdale as 7025 North Scottsdale Road. The Town of Paradise Valley requested that this signalized intersection be analyzed to determine need for northbound exclusive or northbound permissive and exclusive left-turn arrows. City of Scottsdale Left-turn Arrow Warrant consists of three (3) criteria: volume, delay, and collisions; of which two (2) of the three (3) criteria typically must be satisfied to justify left-turn arrow installation. Only the volume criterion is satisfied with the renovated Scottsdale Plaza Resort.

At the intersection of Scottsdale Road and the Scottsdale Plaza Resort access, the existing northbound left-turn lane is double the northbound left-turn maximum predicted 50<sup>th</sup> percentile queue length. However, at this intersection, during the Saturday peak hour of restaurant-generated traffic, the northbound left-turn predicted 95<sup>th</sup> percentile queue is 120 feet longer than the existing left-turn lane, approximately 5 to 6 vehicles longer. Recognizing the dramatic difference between the predicted 50<sup>th</sup> and 95<sup>th</sup> percentile queue length, the inherent unpredictability of future queue lengths, and that this predicted circumstance only occurs one hour of the week; lengthening the left-turn lane is not justified or definitively necessary.

***Recommendations without Renovated Scottsdale Plaza Resort***

The Scottsdale Plaza Resort access with Scottsdale Road should not be modified to include northbound left-turn arrows.

No traffic improvements are justified or necessary.

### ***Recommendations with Renovated Scottsdale Plaza Resort***

The existing traffic signal at the intersection of Scottsdale Road and the primary Scottsdale Plaza Resort (7025 North Scottsdale Road) should remain – particularly with the renovated Scottsdale Plaza Resort. At the Scottsdale Road access to the Scottsdale Plaza Resort, a northbound permissive and exclusive left-turn arrow is not warranted per the City of Scottsdale criteria. However, the intersection traffic operation should be monitored and the traffic should be counted after the renovated Scottsdale Plaza Resort is complete to determine if a northbound left-turn arrow is justified.

At the intersection of Scottsdale Road and Indian Bend Road, the eastbound Indian Bend Road approach to Scottsdale Road is currently in design for the proposed Ritz-Carlton and Palmeraie development. This design should consider the maximum 50<sup>th</sup> percentile queue length of 146 feet and the maximum 95<sup>th</sup> percentile queue length of 247 feet for the eastbound left-turn lane prior to construction.

At the intersection of Scottsdale Road and the Scottsdale Plaza Resort access, subsequent to the operation of the three restaurants, the Scottsdale Road northbound left-turn at the Scottsdale Resort Plaza access should be monitored on Saturday evening to determine if the left-turn lane should be lengthened.

No improvements are justified or necessary.



### Introduction

The Town of Paradise Valley does not have specific criteria for traffic impact analyses. There, the City of Scottsdale traffic impact and mitigation analysis format was generally utilized.

The Scottsdale Plaza Resort location is depicted in **Figure 1**.

The Scottsdale Plaza Resort Hotel is planning a renovation consisting of additional hotel guest rooms; new restaurant area; and additional fitness and spa area.

The expanded hotel will consist of 468 hotel guest rooms; and 32,366 square feet of conference rooms and ancillary area; 57,436 square feet of restaurant area; 38,100 square feet of spa and fitness area; 1,560 square feet of retail; and 53,003 square feet of reception, lobby, and internal office area.

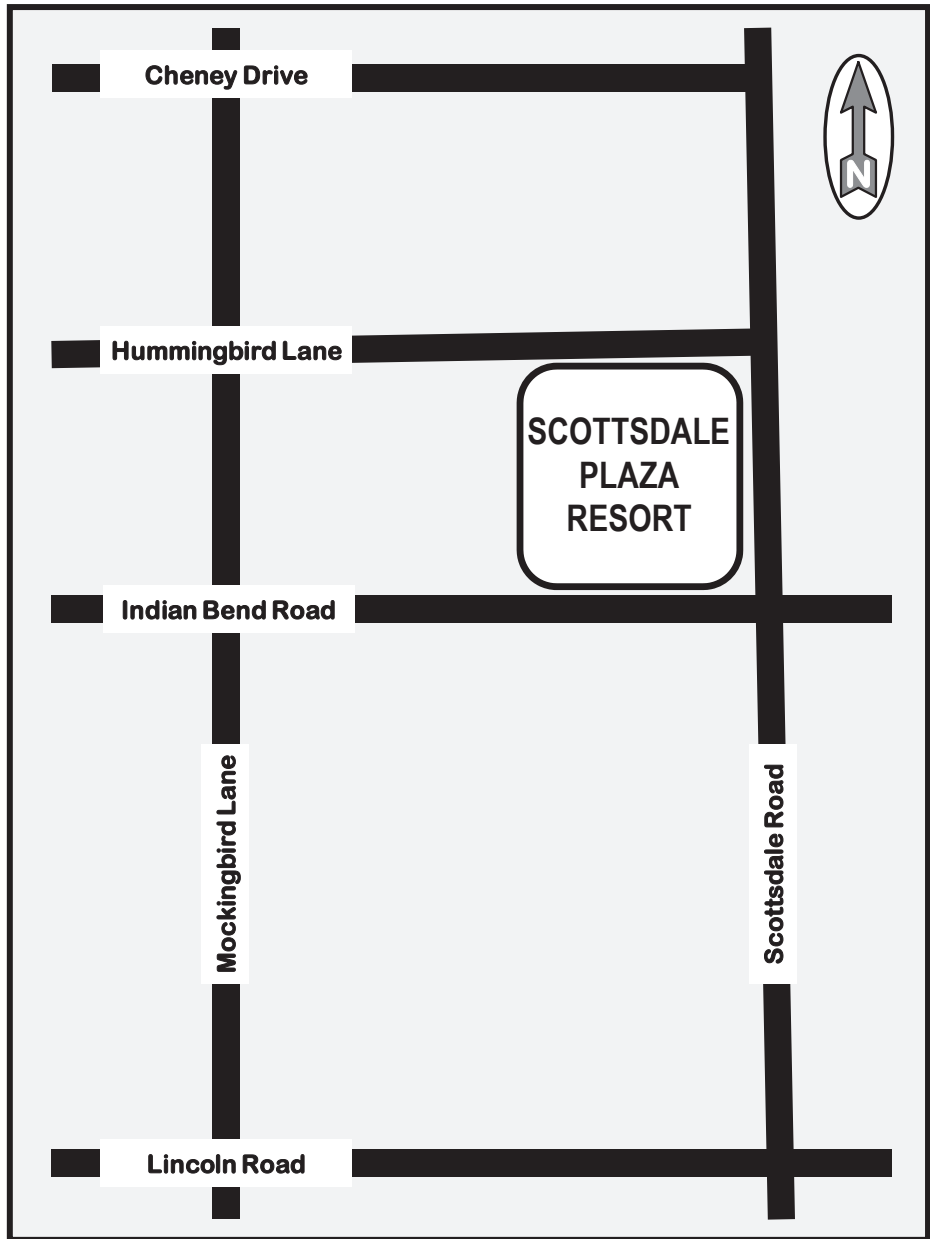


Figure 1: Vicinity Street Map

Figure 2 depicts a site plan of the Renovated Scottsdale Plaza Resort.

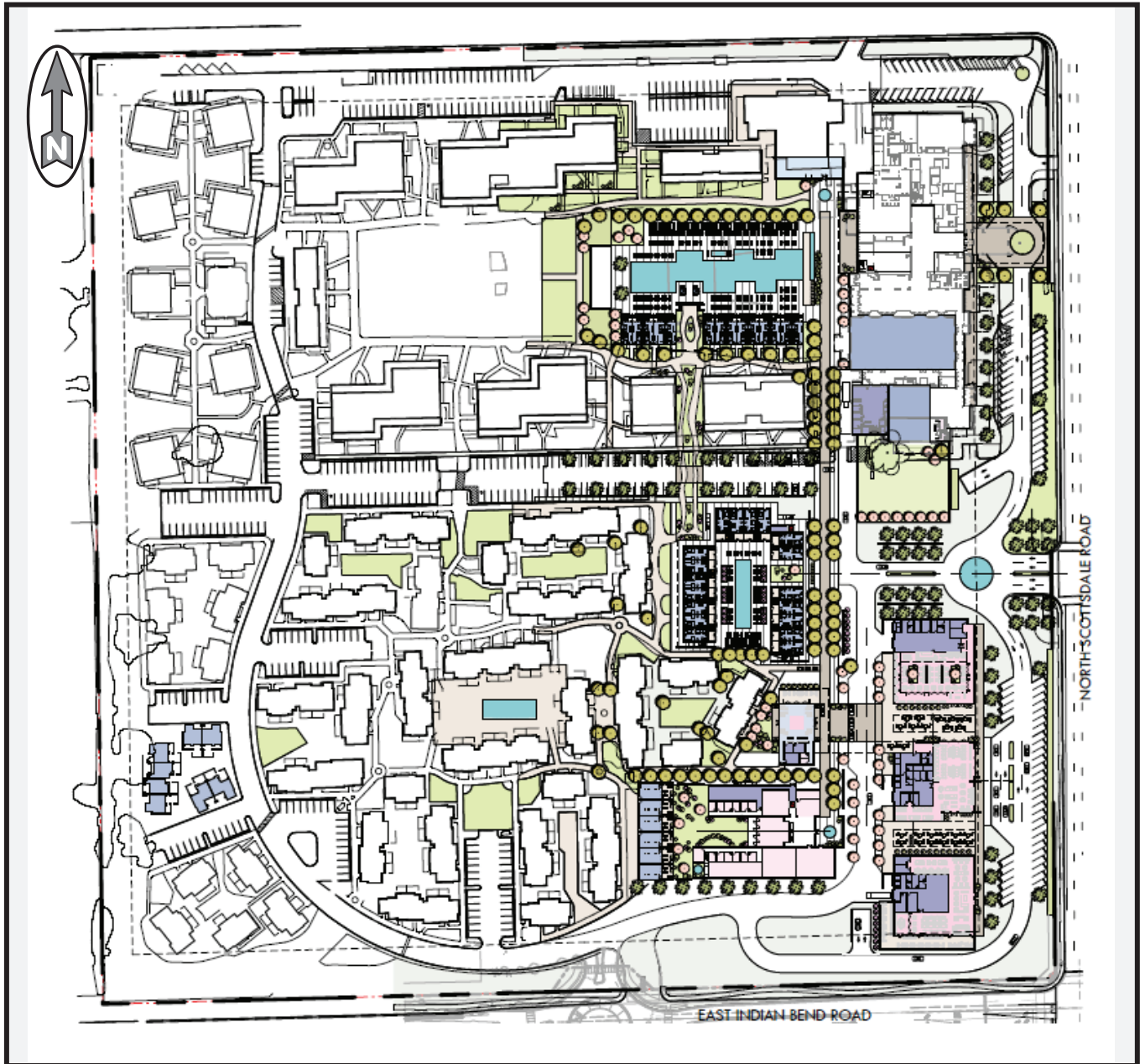


Figure 2: Renovated Scottsdale Plaza Resort Site Plan

## ***Scope of Study***

Seven (7) purposes exist for this analysis:

- ❖ Evaluate historic collision experience at adjacent intersections.
- ❖ Evaluate existing traffic operation at adjacent intersections.
- ❖ Estimate and evaluate future 2025 traffic volumes, including two vicinity proposed developments.
- ❖ Estimate new traffic generated by the proposed Renovated Scottsdale Plaza Resort.
- ❖ Distribute and assign new traffic to adjacent intersections.
- ❖ Evaluate 2025 with all three (3) proposed developments traffic conditions at adjacent intersections.
- ❖ Determine need for modified traffic control at adjacent intersections.

The five (5) study intersections, with their traffic control are:

1. Scottsdale Road and Indian Bend Road (Signal-controlled)
2. Scottsdale Road and Scottsdale Plaza Resort Access (Signal-controlled)
3. Scottsdale Road and Hummingbird Lane (Stop-controlled)
4. Scottsdale Plaza Resort Access and Indian Bend Road (Stop-controlled)
5. Scottsdale Plaza Resort Access and Hummingbird Lane (Stop-controlled)

The existing site has four (4) accesses, all of which will remain with the renovation. The primary access is the Scottsdale Plaza Resort signalized intersection with Scottsdale Road, identified by the City of Scottsdale as 7025 North Scottsdale Road.

One of the four (4) accesses is a right-turn-in-right-turn-out access exists with Scottsdale Road approximately 200 feet south of Hummingbird Lane. This access is almost exclusively utilized by charter buses and valet drivers. Therefore, this intersection was not counted or analyzed.

## ***Adjacent Intersections***

**Figure 3** depicts the existing the lane configurations at the adjacent intersections. At the Scottsdale Road / Indian Bend Road intersection, a southbound exclusive right-turn lane is planned to be constructed by the developer of the property in the greater southwest corner of the intersection in the future. This southbound right-turn lane was included in the analyses.

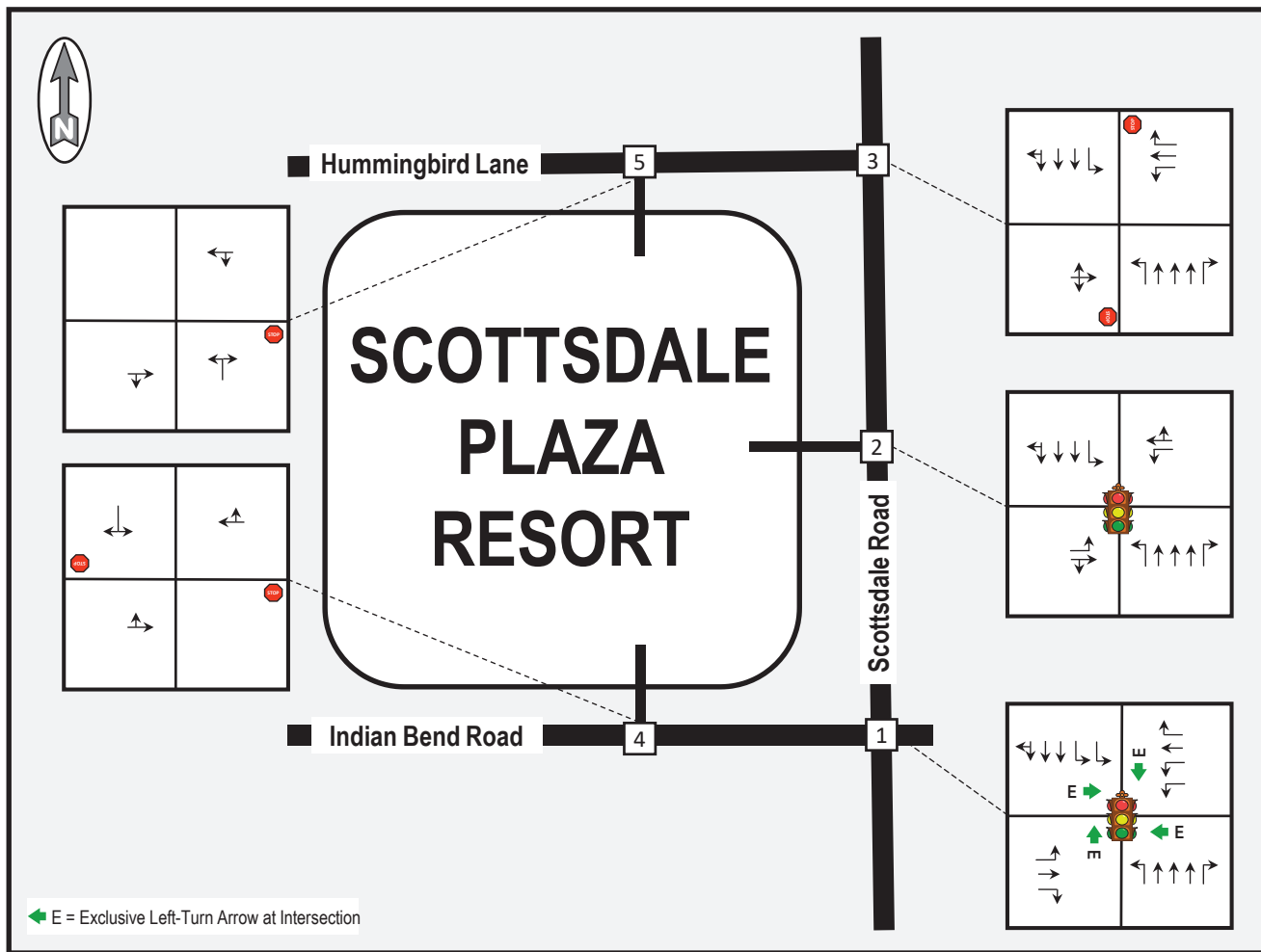


Figure 3: Existing Adjacent Intersection Lane Configurations

### Collision Analysis

Arizona Department of Transportation collision data for the three (3) vicinity study intersections of Scottsdale Road / Indian Bend Road, Scottsdale Road / Scottsdale Plaza Resort Access, and Scottsdale Road / Hummingbird Lane were analyzed for calendar years 2015 through 2020. The Arizona Department of Transportation had not released the 2021 collision data at the time of this initial study. For the Scottsdale Road / Scottsdale Plaza Resort intersection, several possible names for the intersection were examined. In addition, collisions identified as occurring at Scottsdale / Indian Bend, with location one-eighth mile north of that intersection were considered at the Scottsdale Road / Scottsdale Plaza Resort intersection. **Appendix A** provides the complete collision data. **Table 8** through **Table 13** summarize the collision data for each year by intersection separately.

Table 8: Collision Manner History Summary: 2015

	REAR-END	ANGLE	LEFT-TURN ANGLE	LEFT-TURN HEAD-ON	SIDE-SWIPE SAME	SIDE-SWIPE OPPOSITE	HEAD-ON	SINGLE VEHICLE	OTHER	TOTAL
Scottsdale Road & Indian Bend Road	5	0	1	2	4	0	0	1	1	14
Scottsdale Road & Scottsdale Plaza Resort	1	0	0	0	0	0	0	0	0	1
Scottsdale Road & Hummingbird Lane	0	0	0	1	0	0	0	0	0	1
TOTAL	6	0	1	3	4	0	0	1	1	16



**Table 9: Collision Manner History Summary: 2016**

	REAR-END	ANGLE	LEFT-TURN ANGLE	LEFT-TURN HEAD-ON	SIDE-SWIPE SAME	SIDE-SWIPE OPPOSITE	HEAD-ON	SINGLE VEHICLE	OTHER	TOTAL
Scottsdale Road & Indian Bend Road	12	2	1	0	1	0	1	2	0	19
Scottsdale Road & Scottsdale Plaza Resort	3	1	0	0	0	0	0	0	0	4
Scottsdale Road & Hummingbird Lane	1	0	1	0	1	0	0	0	0	3
<b>TOTAL</b>	<b>16</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>26</b>

**Table 10: Collision Manner History Summary: 2017**

	REAR-END	ANGLE	LEFT-TURN ANGLE	LEFT-TURN HEAD-ON	SIDE-SWIPE SAME	SIDE-SWIPE OPPOSITE	HEAD-ON	SINGLE VEHICLE	OTHER	TOTAL
Scottsdale Road & Indian Bend Road	6	2	1	0	3	0	0	0	0	12
Scottsdale Road & Scottsdale Plaza Resort	0	0	0	0	1	0	0	0	0	1
Scottsdale Road & Hummingbird Lane	0	0	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>6</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13</b>

**Table 11: Collision Manner History Summary: 2018**

	REAR-END	ANGLE	LEFT-TURN ANGLE	LEFT-TURN HEAD-ON	SIDE-SWIPE SAME	SIDE-SWIPE OPPOSITE	HEAD-ON	SINGLE VEHICLE	OTHER	TOTAL
Scottsdale Road & Indian Bend Road	12	4	0	2	3	0	0	0	0	21
Scottsdale Road & Scottsdale Plaza Resort	1	0	0	0	0	0	0	0	0	1
Scottsdale Road & Hummingbird Lane	2	0	1	0	0	0	0	1	0	4
<b>TOTAL</b>	<b>15</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>26</b>

**Table 12: Collision Manner History Summary: 2019**

	REAR-END	ANGLE	LEFT-TURN ANGLE	LEFT-TURN HEAD-ON	SIDE-SWIPE SAME	SIDE-SWIPE OPPOSITE	HEAD-ON	SINGLE VEHICLE	OTHER	TOTAL
Scottsdale Road & Indian Bend Road	6	2	1	2	3	0	0	1	0	15
Scottsdale Road & Scottsdale Plaza Resort	0	0	0	0	0	0	0	0	0	0
Scottsdale Road & Hummingbird Lane	0	0	1	0	0	0	0	1	0	2
<b>TOTAL</b>	<b>6</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>17</b>

**Table 13: Collision Manner History Summary: 2020**

	REAR-END	ANGLE	LEFT-TURN ANGLE	LEFT-TURN HEAD-ON	SIDE-SWIPE SAME	SIDE-SWIPE OPPOSITE	HEAD-ON	SINGLE VEHICLE	OTHER	TOTAL
Scottsdale Road & Indian Bend Road	10	1	1	3	3	0	0	1	0	19
Scottsdale Road & Scottsdale Plaza Resort	2	1	0	0	0	0	0	1	0	4
Scottsdale Road & Hummingbird Lane	1	1	0	0	0	0	0	1	0	3
<b>TOTAL</b>	<b>13</b>	<b>3</b>	<b>1</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>26</b>

The Scottsdale / Indian Bend intersection experienced 100 of the 124 collisions (81%) at the three (3) study intersections. The dominant collision manner is rear-end which is typical for urban intersections. The number of rear-end collisions also fluctuates from year-to-year, which is also common in urban environments.

**Table 14** summarizes the manner of collision for all three intersections for each of the six (6) years.

**Table 14: Collision Manner History Summary: All 3 Intersections for 2015 through 2020**

	REAR-END	ANGLE	LEFT-TURN ANGLE	LEFT-TURN HEAD-ON	SIDE-SWIPE SAME	SIDE-SWIPE OPPOSITE	HEAD-ON	SINGLE VEHICLE	OTHER	TOTAL
2015	6	0	1	3	4	0	0	1	1	16
2016	16	3	2	0	2	0	1	2	0	26
2017	6	2	1	0	4	0	0	0	0	13
2018	15	4	1	2	3	0	0	1	0	26
2019	6	2	2	2	3	0	0	2	0	17
2020	13	3	1	3	3	0	0	3	0	26
<b>TOTAL</b>	<b>62</b>	<b>14</b>	<b>8</b>	<b>10</b>	<b>19</b>	<b>0</b>	<b>1</b>	<b>9</b>	<b>1</b>	<b>124</b>
<b>PORTION</b>	<b>50%</b>	<b>11%</b>	<b>6%</b>	<b>8%</b>	<b>15%</b>	<b>0%</b>	<b>1%</b>	<b>7%</b>	<b>1%</b>	<b>100%</b>

**Table 15** summarizes the travel directions of the vehicles involved in each collision for all six (6) years. Collision travel direction is not reported for every collision in the Arizona Department of Transportation data. The largest number of collisions is both northbound vehicles, followed by both southbound vehicles, then northbound and southbound vehicles. The Scottsdale / Indian Bend intersection is abbreviated as S & IB, the Scottsdale / Scottsdale Plaza Resort intersection is abbreviated as S & PR, and the Scottsdale / Hummingbird intersection is abbreviated as S & H.

**Table 15: Collision Travel Direction: By Intersection for 2015 through 2020**

	S & IB	S & PR	S & H	TOTAL
Northbound Only	2	2	1	5
Southbound Only	1	1	2	4
Eastbound Only	0	1	0	1
Westbound Only	1	0	0	1
<b>Northbound and Northbound</b>	<b>35</b>	<b>1</b>	<b>2</b>	<b>38</b>
<b>Southbound and Southbound</b>	<b>13</b>	<b>4</b>	<b>3</b>	<b>20</b>
Eastbound and Eastbound	8	0	0	8
<b>Westbound and Westbound</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>13</b>
Northbound and Eastbound	2	0	1	3
Northbound and Westbound	3	0	1	4
Southbound and Eastbound	5	1	2	8
Southbound and Westbound	5	0	0	5
Northbound and Southbound	10	0	1	11
Eastbound and Westbound	1	1	0	2
<b>TOTAL</b>	<b>99</b>	<b>11</b>	<b>13</b>	<b>123</b>

The Town of Paradise Valley has requested a specific analysis to determine if north / south left-turn arrows should be installed at the intersection of Scottsdale Road and the Scottsdale Plaza Resort access. Left-turn arrows are intended to reduce Left-Turn-Head-On collisions. Therefore, the Left-Turn-Head-On collisions were specifically examined.

The two (2) Left-Turn-Head-On collisions in 2015 each occurred at the Scottsdale / Indian Bend intersection involving a southbound left-turning car and a northbound straight car. In one of the collisions, the driver of the southbound left-turning vehicle was cited for “Failed to Stop for a Red Signal”.

The two (2) Left-Turn-Head-On collisions in 2018 each occurred at the Scottsdale / Indian Bend intersection. One involved a southbound left-turning car and a northbound straight car, and the driver of the northbound straight car was cited for “Disregarded Traffic Signal”. The other involved an eastbound left-turning car and a westbound straight car, and the driver of the eastbound left-turning car was cited for “Failed to Stop for a Red Signal”.

The two (2) Left-Turn-Head-On collisions in 2019 each occurred at the Scottsdale / Indian Bend intersection involving a southbound left-turning car and a northbound straight car. In one of the collisions, the driver of the northbound straight car was cited for “Disregarded Traffic Signal”, and in the other collision, the driver of the southbound left-turning car was cited for “Failed to Stop for a Red Signal”.

The three (3) Left-Turn-Head-On collisions in 2020 each occurred at the Scottsdale / Indian Bend intersection involving a southbound left-turning vehicle and a northbound straight car. In one of the collisions, the driver of the northbound straight car was cited for “Disregarded Traffic Signal”, and in the other two (2) collisions, neither driver was cited.

In summary, nine (9) of the Left-Turn-Head-On collisions, from 2015 through 2020, occurred at the Scottsdale / Indian Bend intersection. No Left-Turn-Head-On collisions occurred, from 2015 through 2020, at the Scottsdale / Scottsdale Plaza Resort. One (1) Left-Turn-Head-On collision occurred, from 2015 through 2020, at the Scottsdale / Hummingbird intersection.

**Table 16** summarizes the worst injury severities in each collision for all six (6) years. Collision injury severity is not reported for every collision in the Arizona Department of Transportation data. The severity of no injury dominates the data.

**Table 16: Collision Injury Severity: By Intersection for 2015 through 2020**

SEVERITY	S & IB	S & PR	S & H	TOTAL
No Injury	73	7	9	89
Possible Injury	14	3	1	18
Suspected Minor Injury	11	1	2	14
Suspected Serious Injury	2	0	0	2
Fatal Injury	0	0	1	1
Unknown	0	0	0	0
Not Reported	0	0	0	0
<b>TOTAL</b>	<b>100</b>	<b>11</b>	<b>13</b>	<b>124</b>

The fatal injury collision that occurred at the Scottsdale / Hummingbird intersection occurred on 14 November 2020 at 6:20 PM. It was a single vehicle collision involving a car traveling at an estimated 125 miles-per-hour.

One of the suspected serious injury collisions at the Scottsdale / Indian Bend intersection occurred on 1 February 2018 at 9:26 AM. This was an Angle collision involving a southbound straight motorcycle and an eastbound straight car. The driver of the southbound straight motorcycle was cited for “Disregarded Traffic Signal.”

The other suspected serious injury collision also occurred at the Scottsdale / Indian Bend intersection on 1 November 2020 at 9:26 AM. This was a Left-Turn-Head-On collision involving a northbound straight car and a southbound left-turning pick-up truck. The driver of the northbound straight car was cited for "Disregarded Traffic Signal."

**Table 17** summarizes collisions by travel direction as a total of all three (3) intersections, with the three (3) highest percentage of collisions highlighted.

**Table 17: Collision Travel Direction: All 3 Intersections for 2015 through 2020**

	2015	2016	2018	2019	2020	TOTAL	PORTION
Northbound Only	0	1	0	0	1	2	2%
Southbound Only	0	0	0	1	0	1	1%
Eastbound Only	0	0	0	0	0	0	0%
Westbound Only	1	0	0	0	0	1	1%
<b>Northbound and Northbound</b>	<b>6</b>	<b>4</b>	<b>9</b>	<b>4</b>	<b>7</b>	<b>30</b>	<b>34%</b>
<b>Southbound and Southbound</b>	<b>2</b>	<b>5</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>13</b>	<b>15%</b>
Eastbound and Eastbound	2	2	1	1	2	8	9%
Westbound and Westbound	0	2	3	1	3	9	10%
Northbound and Eastbound	0	0	1	0	1	2	2%
Northbound and Westbound	1	1	0	0	1	3	3%
Southbound and Eastbound	0	1	1	2	0	4	5%
Southbound and Westbound	0	1	1	1	0	3	3%
<b>Northbound and Southbound</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>4</b>	<b>10</b>	<b>11%</b>
Eastbound and Westbound	0	0	1	0	0	1	1%
TOTAL	14	18	21	15	19	87	100%

**Table 18** summarizes the collision injury severities for all three (3) intersections for all years 2015 through 2020.

**Table 18: Collision Injury Severity Summary: All 3 Intersections for 2015 through 2020**

SEVERITY	NUMBER	PORTION
No Injury	89	72%
Possible Injury	18	15%
Suspected Minor Injury	14	11%
Suspected Serious Injury	2	2%
Fatal Injury	1	1%
Unknown	0	0%
Not Reported	0	0%
TOTAL	124	100%



## Existing Traffic Volumes

Traffic counts for the study intersections were obtained on 4, 5, and 6 August 2022. **Appendix B** provides the turning movement counts in 15-minute increments for the five (5) existing study intersections, consisting of two (2) signalized intersections and three (3) unsignalized intersections. **Table 19**, provides the Thursday, Friday, and Saturday morning, mid-day and evening peak traffic volume 60-minute periods for the five (5) intersections. The sum of all twelve (12) turning movements by intersection, was utilized to determine the peak 60-minute periods.

**Table 19: Peak 60-minute Volume Periods**

Thursday 4 August 2022

Intersection	Morning Peak 60-minute	Mid-Day Peak 60-minute	Evening Peak 60-minute
Scottsdale / Indian Bend	7:45 AM to 8:45 AM	1:45 PM to 2:45 PM	4:45 PM to 5:45 PM
Scottsdale / Resort Access	7:45 AM to 8:45 AM	1:45 PM to 2:45 PM	4:30 PM to 5:30 PM
Scottsdale / Hummingbird	8:00 AM to 9:00 AM	1:45 PM to 2:45 PM	4:30 PM to 5:30 PM
Resort Access / Indian Bend	8:45 AM to 9:45 AM	1:45 PM to 2:45 PM	4:15 PM to 5:15 PM
Resort Access / Hummingbird	8:00 AM to 9:00 AM	2:30 PM to 3:30 PM	4:30 PM to 5:30 PM

Friday 5 August 2022

Intersection	Morning Peak 60-minute	Mid-Day Peak 60-minute	Evening Peak 60-minute
Scottsdale / Indian Bend	9:45 AM to 10:45 AM	2:15 PM to 3:15 PM	3:30 PM to 4:30 PM
Scottsdale / Resort Access	9:45 AM to 10:45 AM	2:15 PM to 3:15 PM	4:30 PM to 5:30 PM
Scottsdale / Hummingbird	9:30 AM to 10:30 AM	1:45 PM to 2:45 PM	4:30 PM to 5:30 PM
Resort Access / Indian Bend	9:30 AM to 10:30 AM	11:30 AM to 12:30 PM	3:30 PM to 4:30 PM
Resort Access / Hummingbird	7:00 AM to 8:00 AM	2:15 PM to 3:15 PM	7:00 PM to 8:00 PM

Saturday 6 August 2022

Intersection	Morning Peak 60-minute	Mid-Day Peak 60-minute	Evening Peak 60-minute
Scottsdale / Indian Bend	9:45 AM to 10:45 AM	11:15 AM to 12:15 PM	3:00 PM to 4:00 PM
Scottsdale / Resort Access	9:45 AM to 10:45 AM	11:15 AM to 12:15 PM	3:00 PM to 4:00 PM
Scottsdale / Hummingbird	9:45 AM to 10:45 AM	12:15 PM to 1:15 PM	3:00 PM to 4:00 PM
Resort Access / Indian Bend	9:30 AM to 10:30 AM	10:45 AM to 11:45 AM	3:15 PM to 4:15 PM
Resort Access / Hummingbird	9:45 AM to 10:45 AM	10:15 AM to 11:15 AM	3:30 PM to 4:30 PM

**Table 20** provides the total intersection approach traffic by count day for the day, and three peak hours.

**Table 20: Total Intersection Approach Traffic Volumes by Count Day**

	Thursday (8-4-2022)	Friday (8-5-2022)	Saturday (8-6-2022)
Day	34,631	37,403	32,804
AM Peak Hour	2,262	2,122	1,817
MD Peak Hour	2,643	2,810	2,473
PM Peak Hour	2,887	2,729	2,300

To ensure the most conservative peak hour analysis, the Thursday morning and evening peak hours were selected for delay and level-of-service analyses; as these were the highest traffic volumes of the three (3) count days.

**Table 21** provides the morning peak hour traffic volumes by count day and approach direction.

**Table 21: Intersection Approach Morning Peak Hour Traffic Volumes by Count Day**

	Thursday (8-4-2022)	Friday (8-5-2022)	Saturday (8-6-2022)
Northbound	1,081	973	834
Southbound	1,118	1,077	916
Eastbound	14	21	23
Westbound	49	51	44

**Table 22** provides the morning peak hour traffic volumes by count day and approach direction.

**Table 22: Intersection Approach Evening Peak Hour Traffic Volumes by Count Day**

	Thursday (8-4-2022)	Friday (8-5-2022)	Saturday (8-6-2022)
Northbound	1,436	1,283	1,110
Southbound	1,351	1,344	1,102
Eastbound	21	23	29
Westbound	79	79	59

**Figure 4** provides the existing approach and departure volumes for the day. **Figure 5** and **Figure 6** respectively provide the existing approach and departure volumes, and the turning volumes for the morning peak hour. **Figure 7** and **Figure 8** respectively provide the existing approach and departure volumes, and the turning volumes for the evening peak hour.

The City of Scottsdale 2020 Traffic Volume and Collision Report suggests that July traffic counts in Scottsdale are an estimated 93.0% of the annual average, and August traffic counts are an estimated 97.5% of the annual average. Because the traffic counts were obtained during the first weekend in August, to be conservative, the July monthly factor was utilized for the non-resort traffic. Therefore, the 2022 non-resort traffic counts for individual movements were divided by 0.93.

The Scottsdale Plaza Resort traffic was not adjusted for the July data, as resort traffic is unlikely to be proportional to general citywide traffic monthly fluctuation.

**Figure 9** provides the adjusted existing approach and departure volumes for the day. **Figure 10** and **Figure 11** respectively provide the adjusted existing approach and departure volumes, and the turning volumes for the morning peak hour. **Figure 12** and **Figure 13** respectively provide the adjusted existing approach and departure volumes, and the turning volumes for the evening peak hour.

### Future Ambient 2025 Volumes

Referring to the City of Scottsdale 2018 Traffic Volume and Collision Report, traffic volumes on Scottsdale streets in the Scottsdale Plaza Resort vicinity increased by approximately 5% from 2016 to 2018 (pre-pandemic). Consequently, the City of Scottsdale recommended utilizing a 5% exponential annual increase. Therefore, the existing 2022 Scottsdale / Indian Bend intersection individual turning movement traffic counts were increased by 5% exponentially annually through 2025. All approach and departure volumes were approximated to the nearest or greater ten (10) vehicles-per-hour during the three (3) peak hours, and 100 vehicles-per-day. The approach and departure volumes at adjacent intersections were balanced to be equal to the Scottsdale / Indian Bend, then using the turning movement percentages at the adjacent intersections.

**Figure 14** provides the 2025 approach and departure volumes for the day. **Figure 15** and **Figure 16** respectively provide the 2025 approach and departure volumes, and the turning volumes for the morning peak hour. **Figure 17** and **Figure 18** respectively provide the 2025 approach and departure volumes, and the turning volumes for the evening peak hour.

The Ritz-Carlton and Palmeraie traffic volumes were obtained from the Ritz-Carlton and Palmeraie Traffic Impact and Mitigation Study dated May 2020. Pertinent excerpts from this study are provided in **Appendix C**. These volumes are provided in **Figure 19** through **Figure 23**.

The Ritz-Carlton and Palmeraie Traffic Impact and Mitigation Study did not include intersections north of Indian Bend Road. Therefore, the existing turning movement percentages at the Scottsdale / Hummingbird intersection were utilized for the Ritz-Carlton and Palmeraie trip distribution. The Ritz-Carlton and Palmeraie traffic volumes at the Scottsdale / Plaza Resort intersection were assumed to be exclusively through northbound and southbound, and at the Plaza Resort / Hummingbird intersection were assumed to be exclusively through eastbound and westbound.

**Table 23** provides the existing turning movement percentages at the Scottsdale / Hummingbird intersection that were utilized to distribute the Ritz-Carlton entering and exiting traffic.

**Table 23: Scottsdale / Hummingbird Existing Turning Percentages for Ritz-Carlton Distribution**

	EXISTING TRIP DISTRIBUTION AT SCOTTSDALE / HUMMINGBIRD					
	NB, SOUTH OF HUMMINGBIRD			SB, SOUTH OF HUMMINGBIRD		
	NB LEFT	NB THRU	NB RIGHT	EB RIGHT	WB LEFT	SB THRU
WEEKDAY AM PEAK HOUR	1.5%	98.5%	0.0%	1.8%	0.3%	97.9%
WEEKDAY MD PEAK HOUR	1.3%	98.3%	0.3%	1.6%	0.9%	97.4%
WEEKDAY PM PEAK HOUR	1.9%	97.1%	1.0%	1.8%	0.5%	97.7%
WEEKDAY DAY	1.5%	97.8%	0.7%	1.6%	0.8%	97.7%

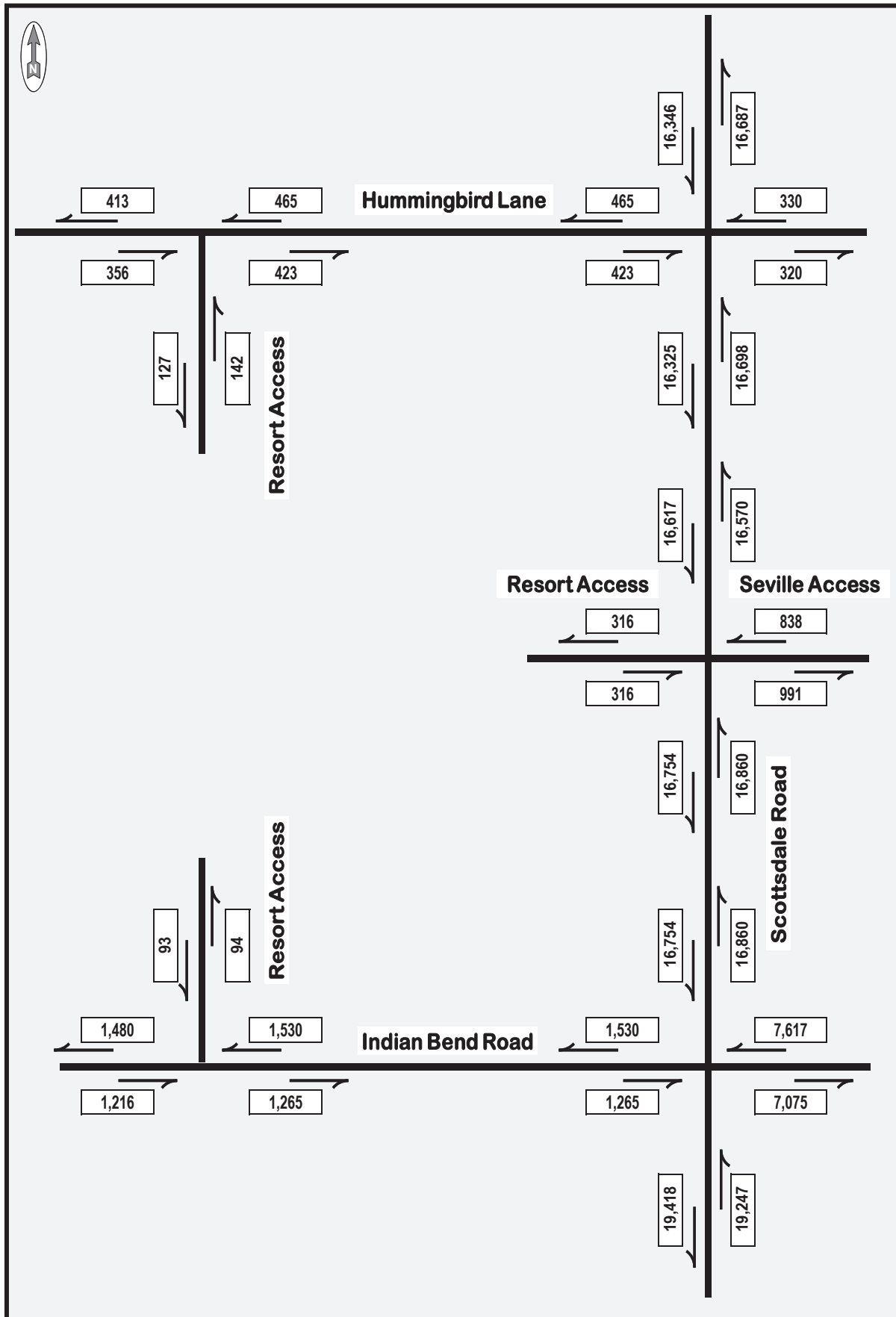


Figure 4: 2022 Day Approach and Departure Volumes

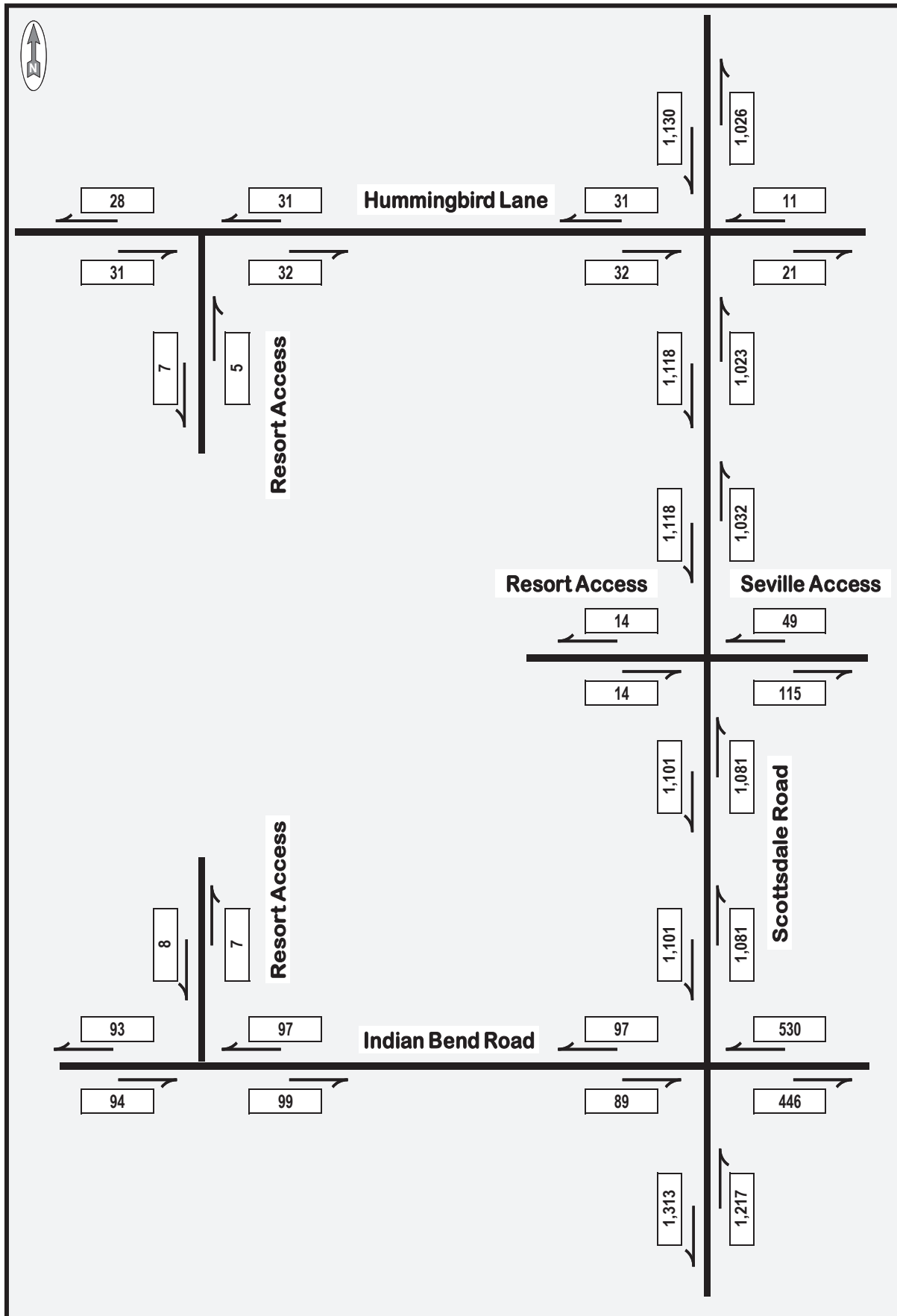


Figure 5: 2022 AM Peak Hour Approach and Departure Volumes

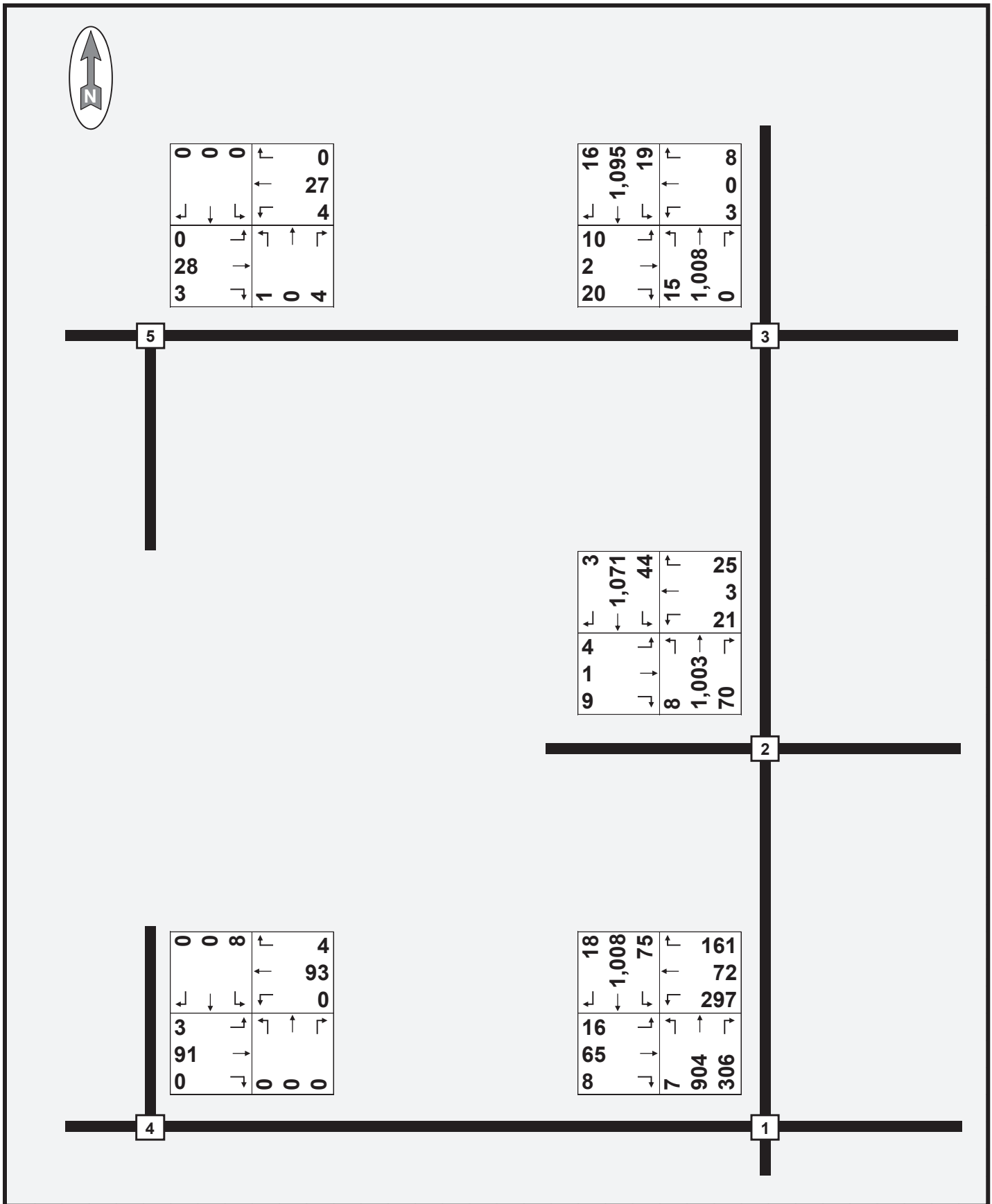


Figure 6: 2022 AM Peak Hour Turning Volumes



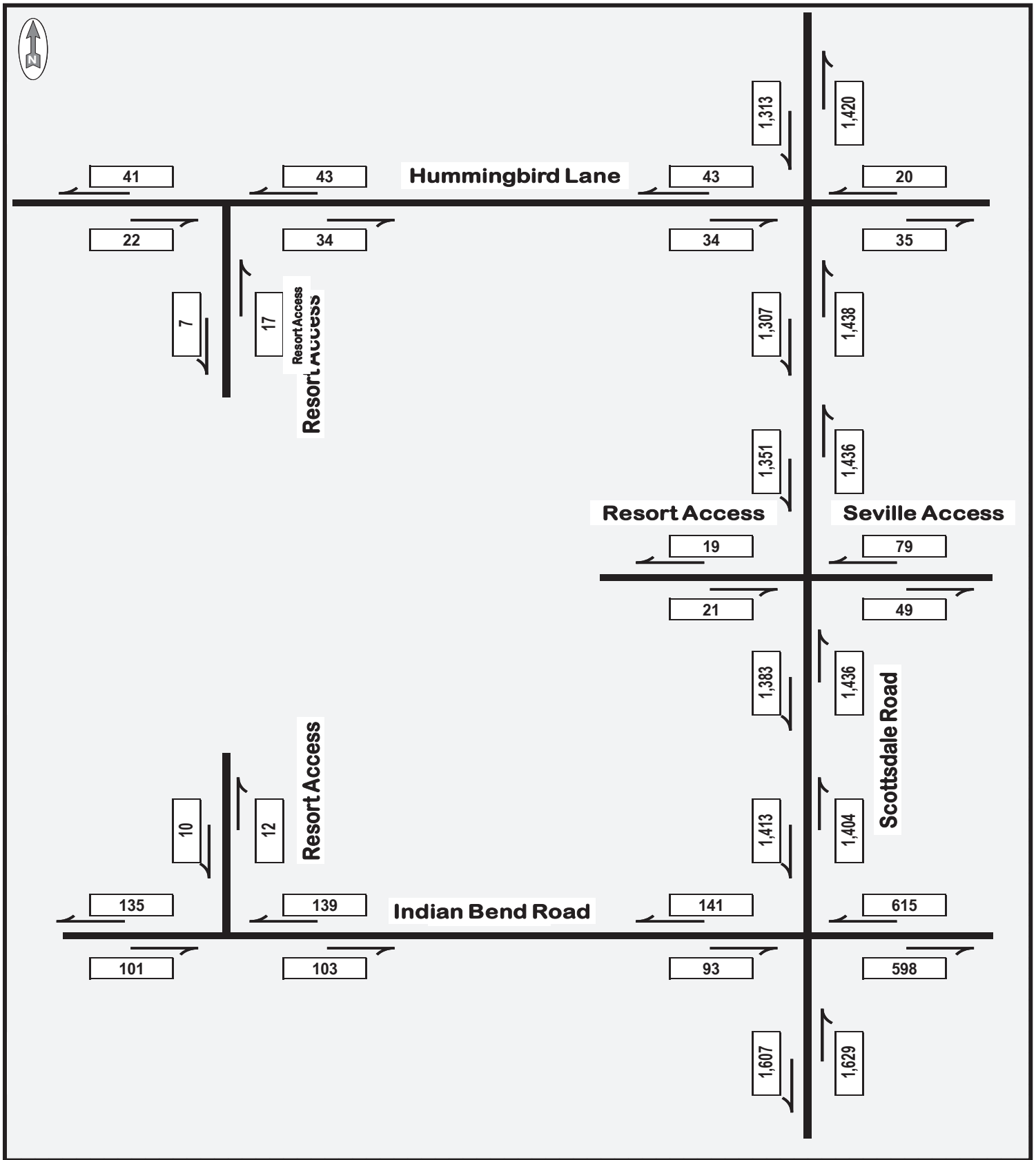


Figure 7: 2022 PM Peak Hour Approach and Departure Volumes

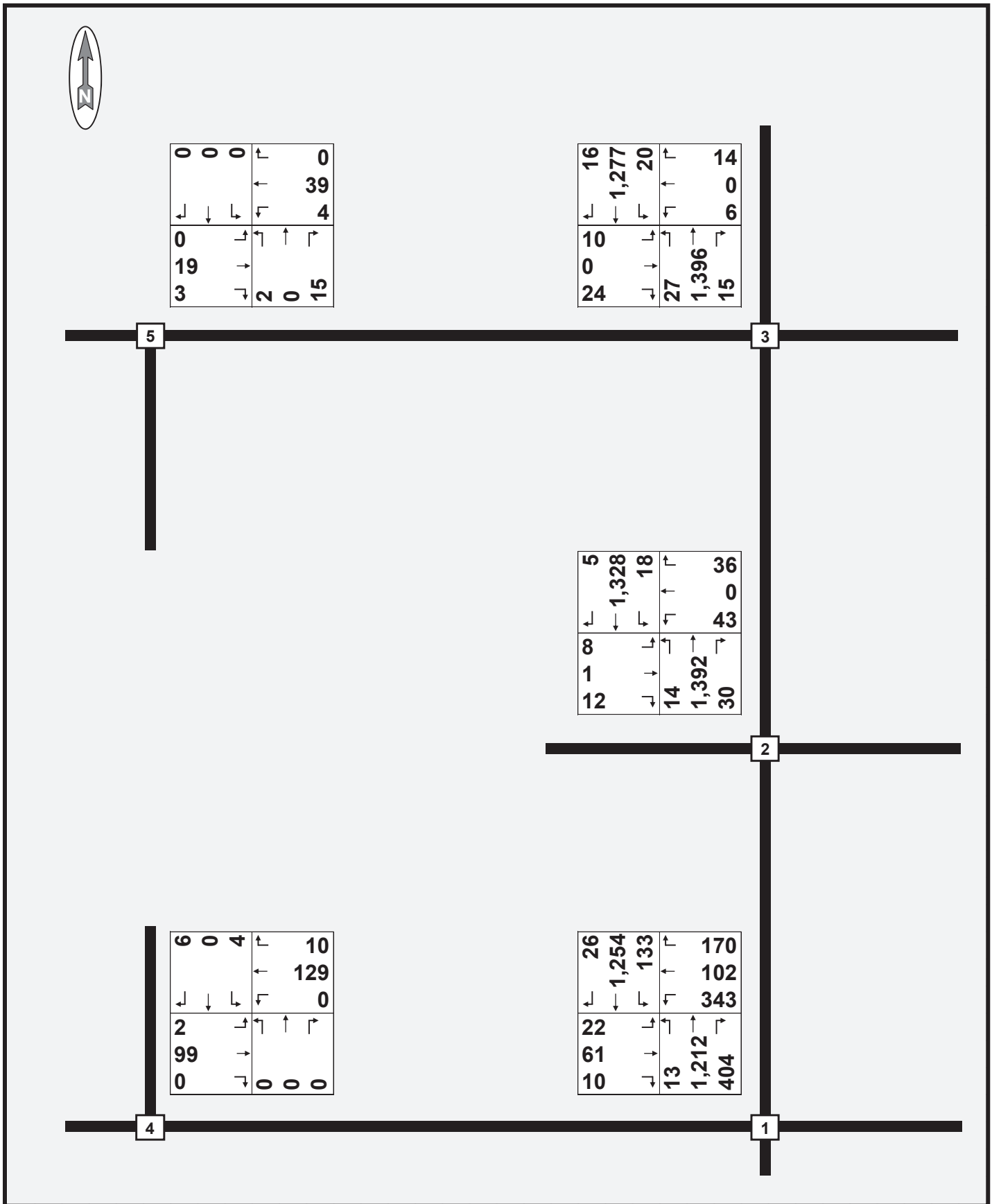


Figure 8: 2022 PM Peak Hour Turning Volumes

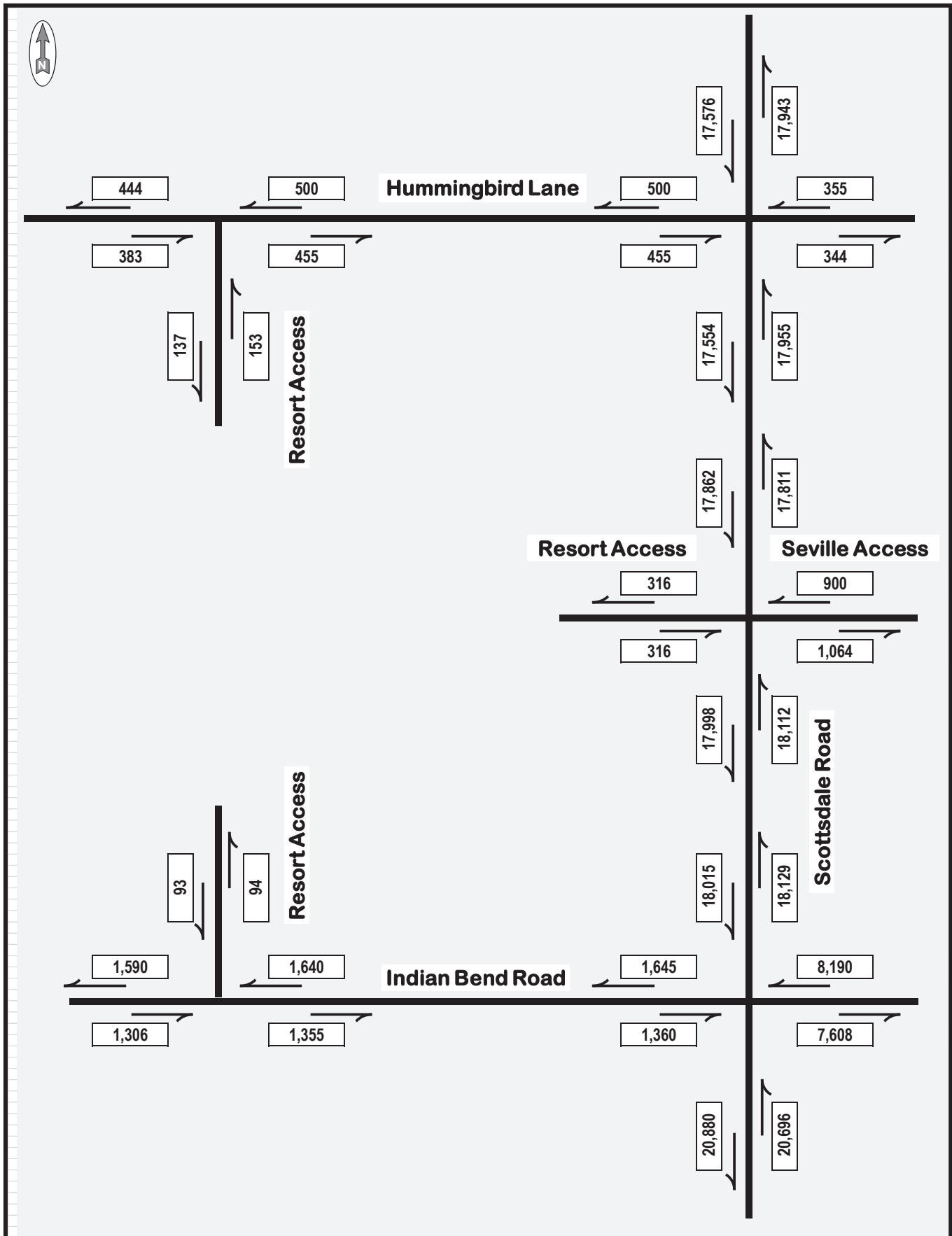


Figure 9: Adjusted 2022 Day Approach and Departure Volumes

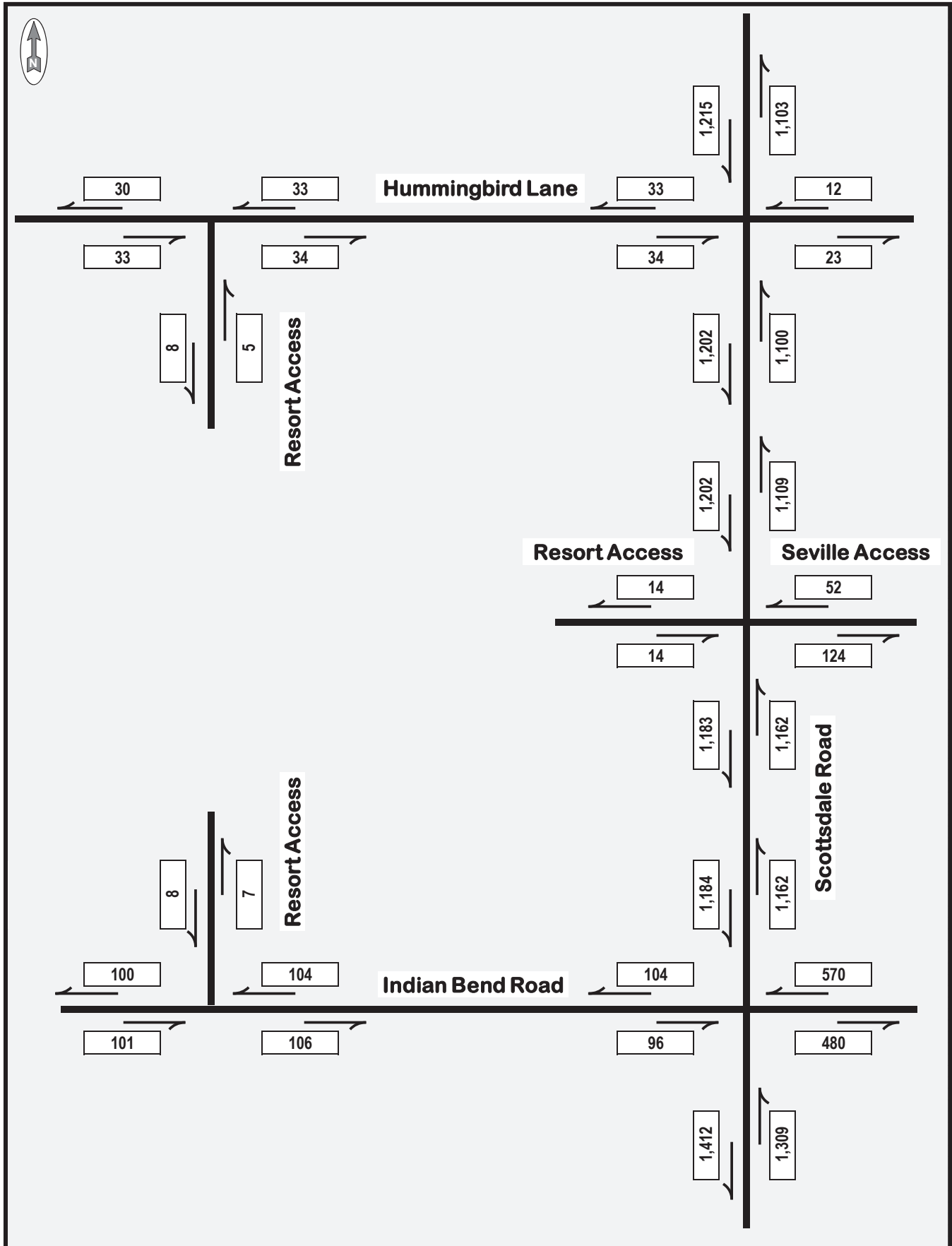


Figure 10: Adjusted 2022 AM Peak Hour Approach and Departure Volumes

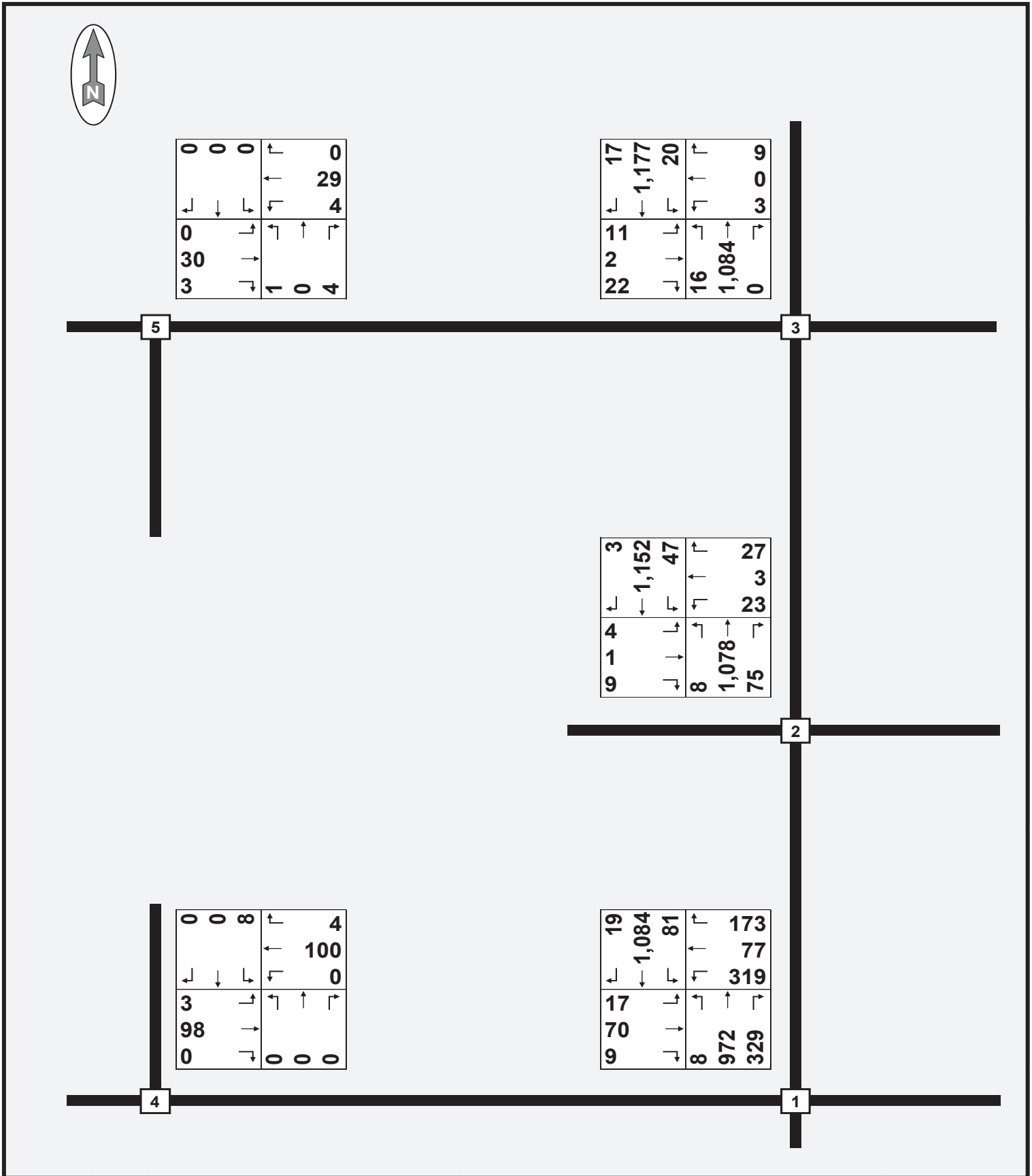


Figure 11: Adjusted 2022 AM Peak Hour Turning Volumes

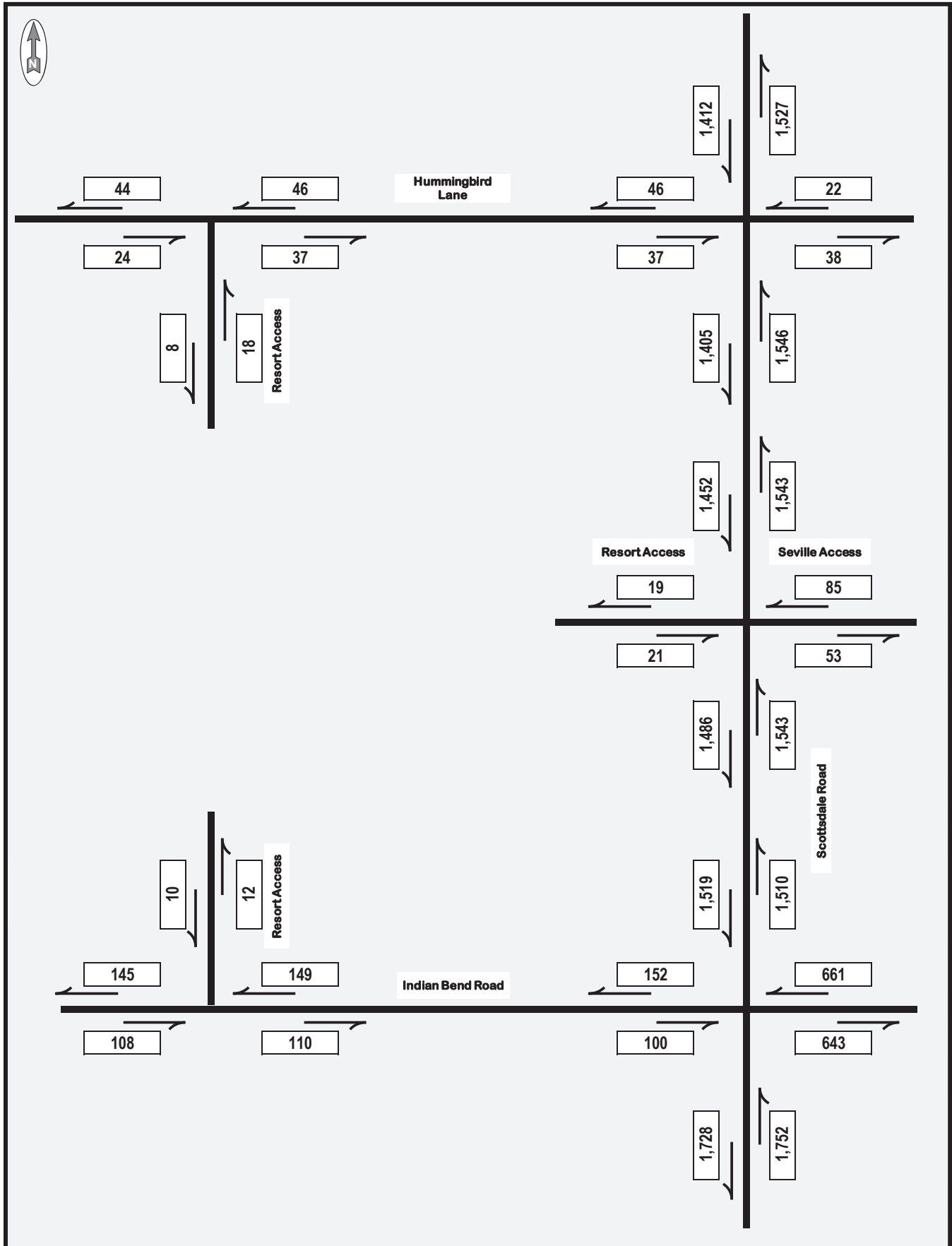


Figure 12: Adjusted 2022 PM Peak Hour Approach and Departure Volumes



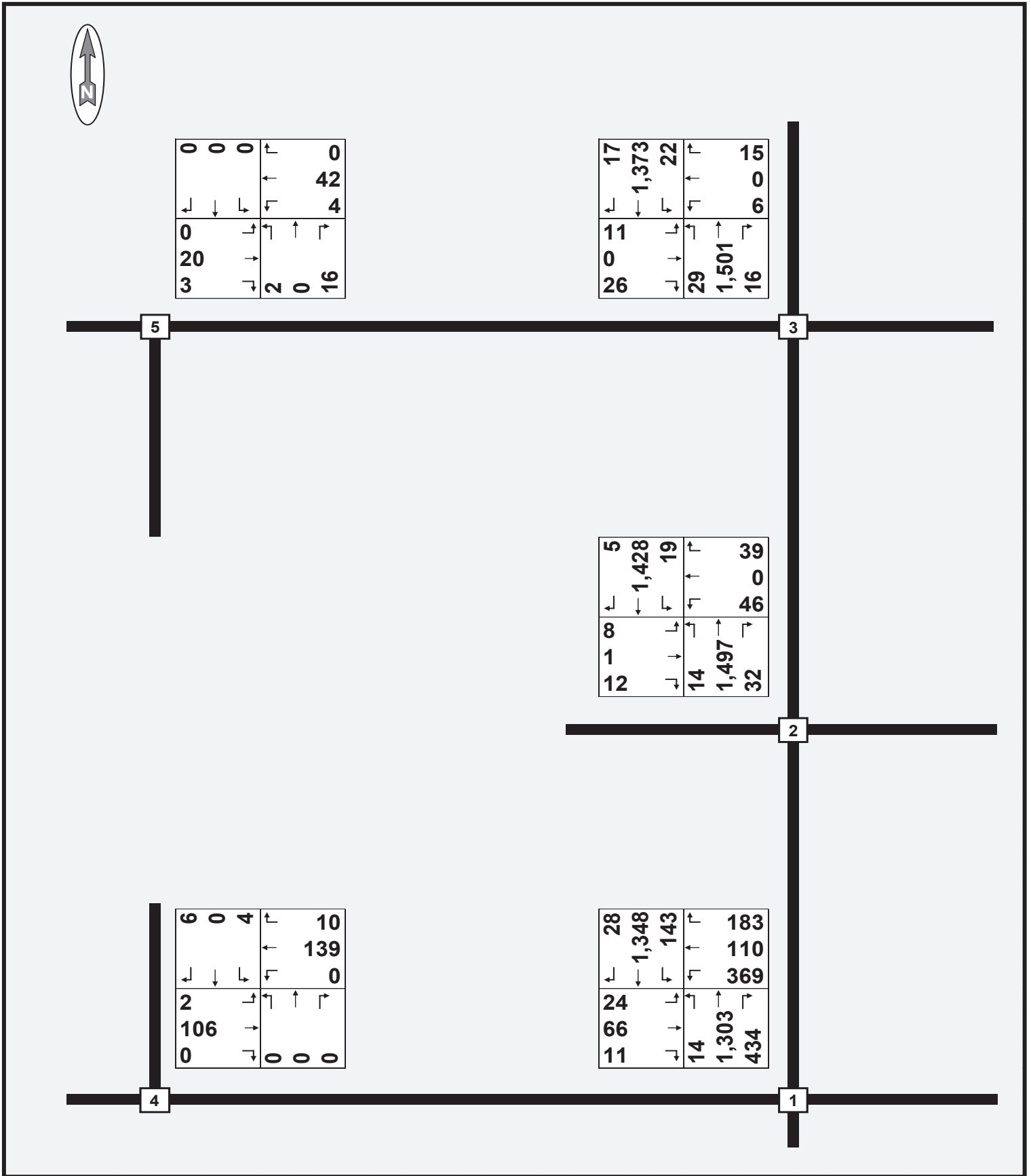


Figure 13: Adjusted 2022 PM Peak Hour Turning Volumes

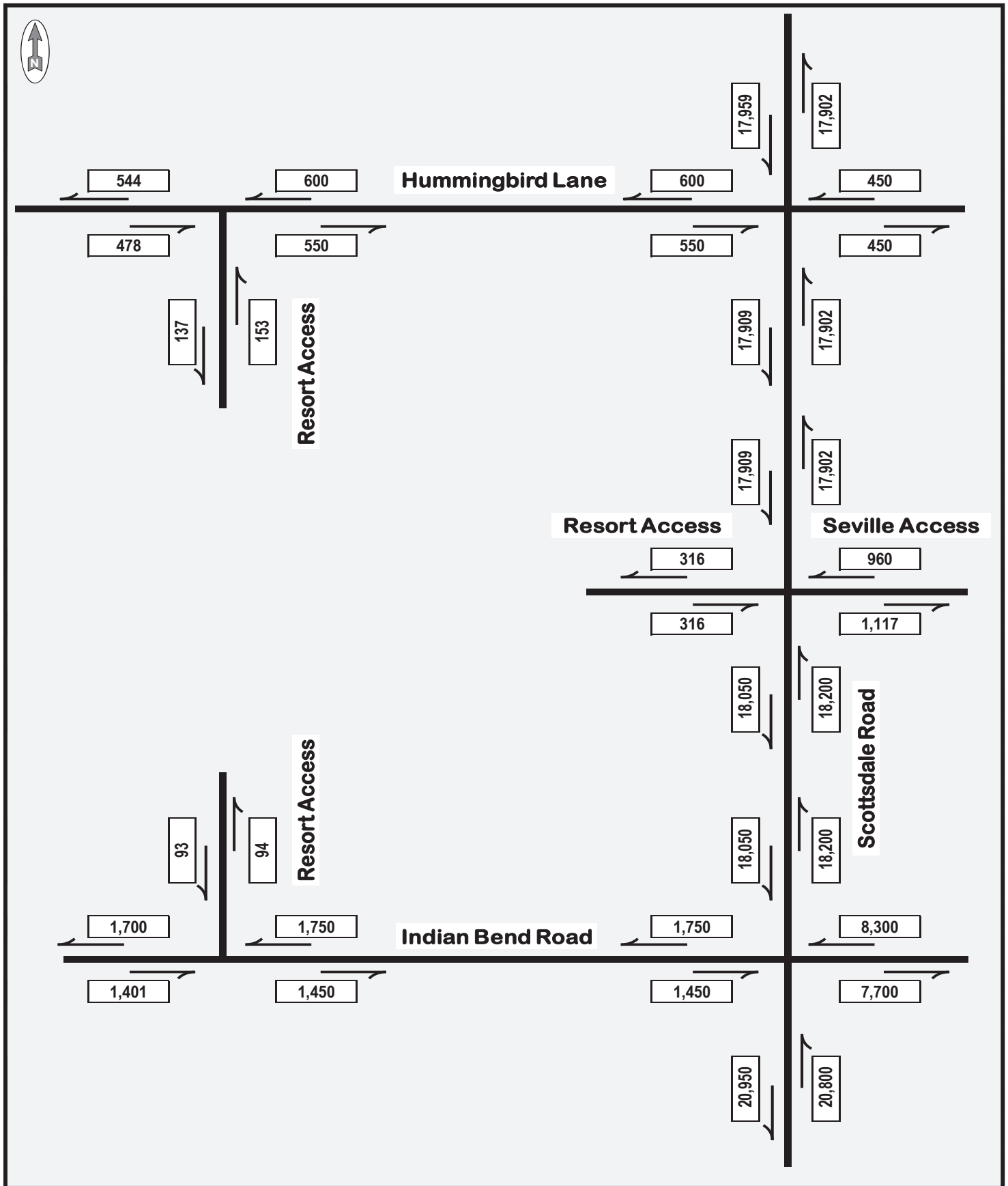


Figure 14: Ambient 2025 Day Approach and Departure Volumes

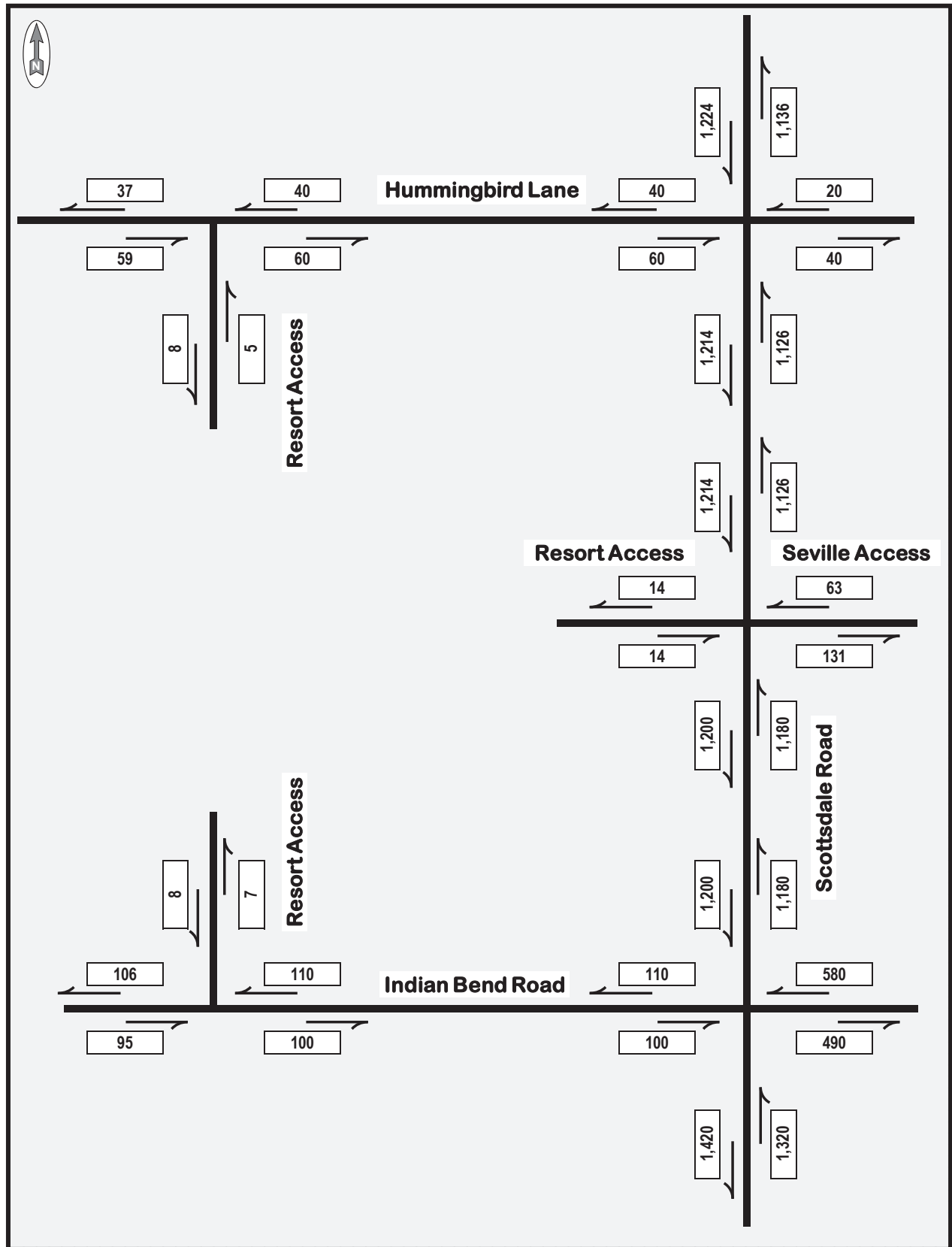


Figure 15: Ambient 2025 AM Peak Hour Approach and Departure Volumes

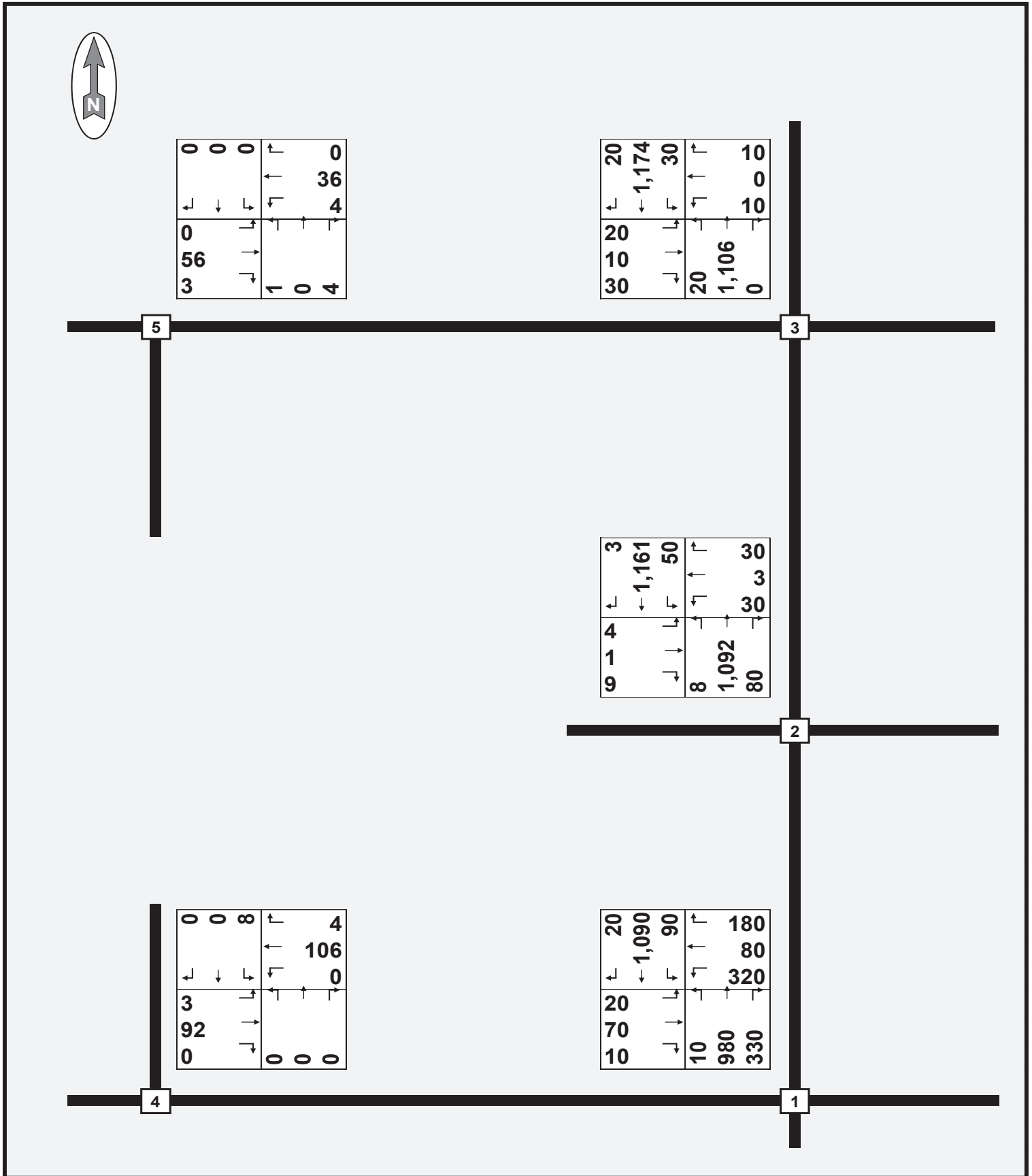


Figure 16: Ambient 2025 AM Peak Hour Turning Movement Volumes

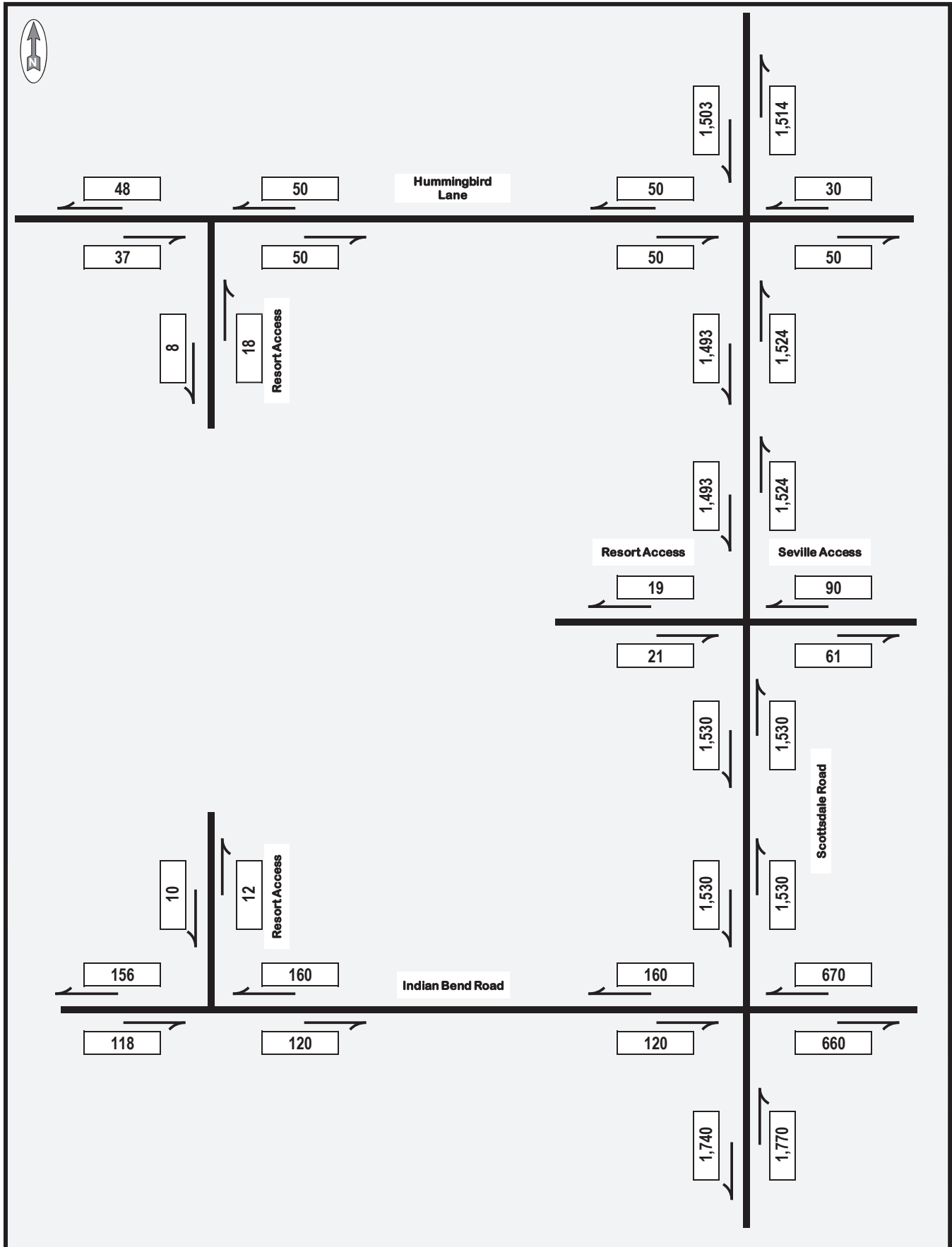


Figure 17: Ambient 2025 PM Peak Hour Approach and Departure Volumes

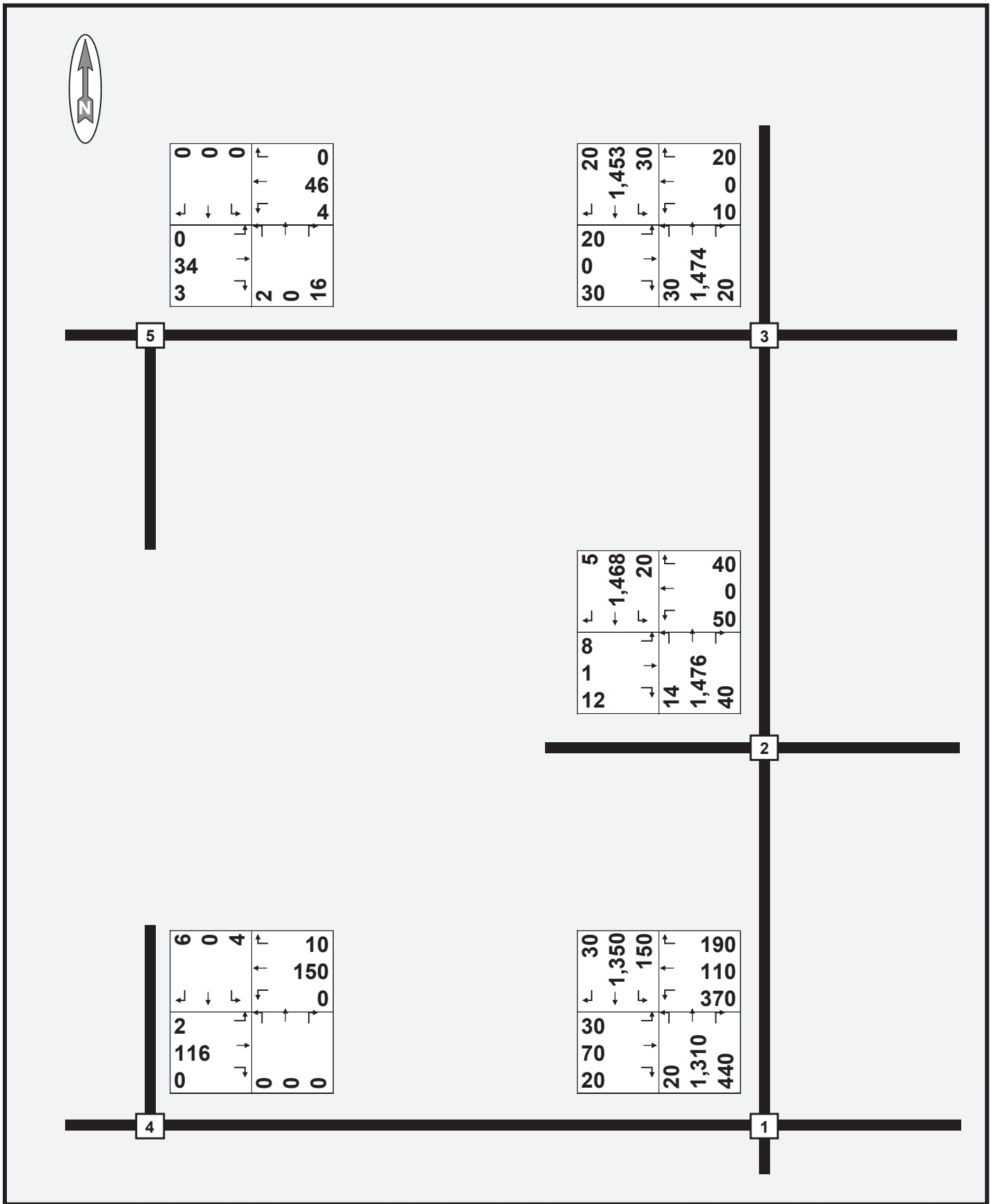


Figure 18: Ambient 2025 PM Peak Hour Turning Movement Volumes



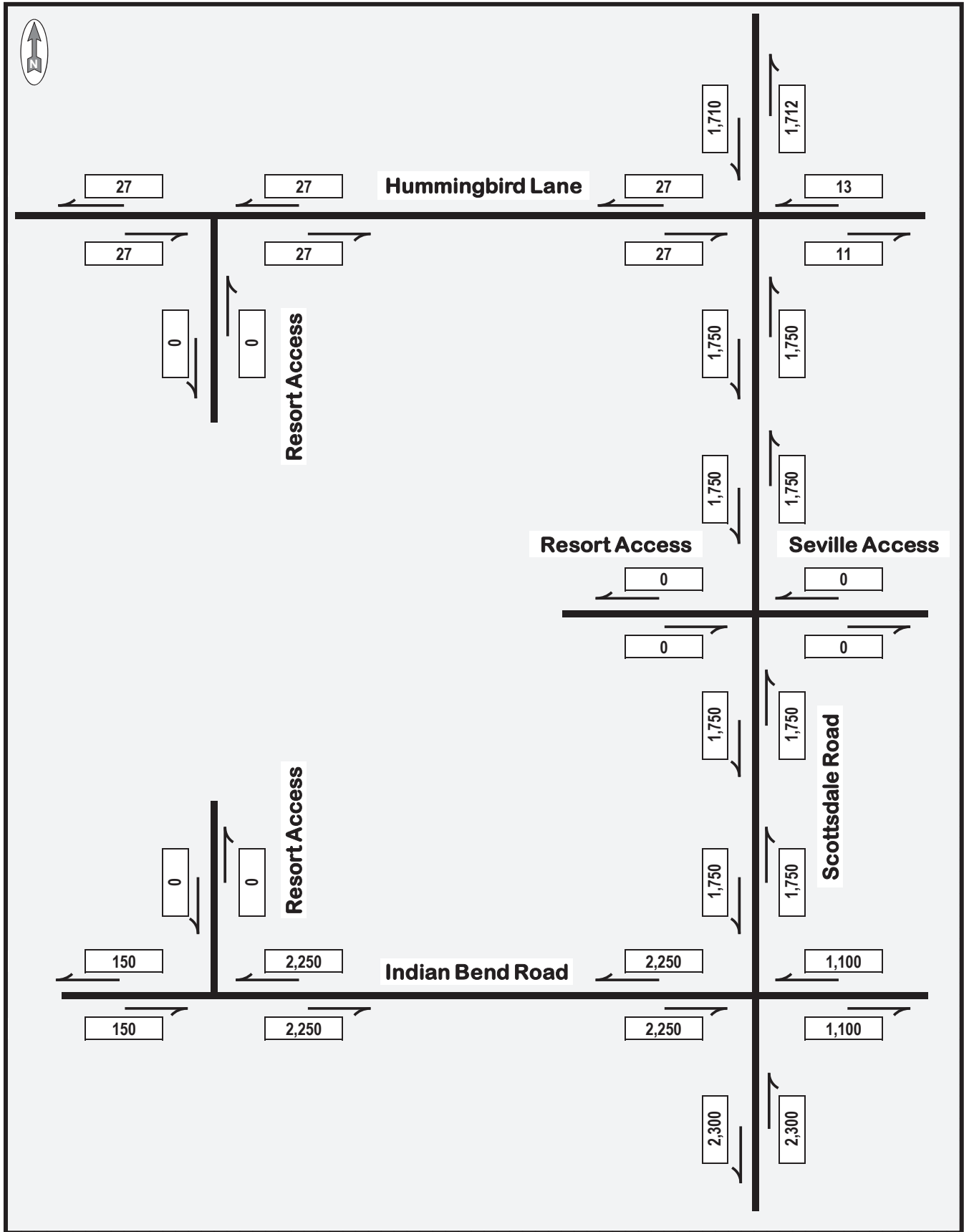


Figure 19: Ritz-Carlton and Palmeraie Day Approach and Departure Volumes

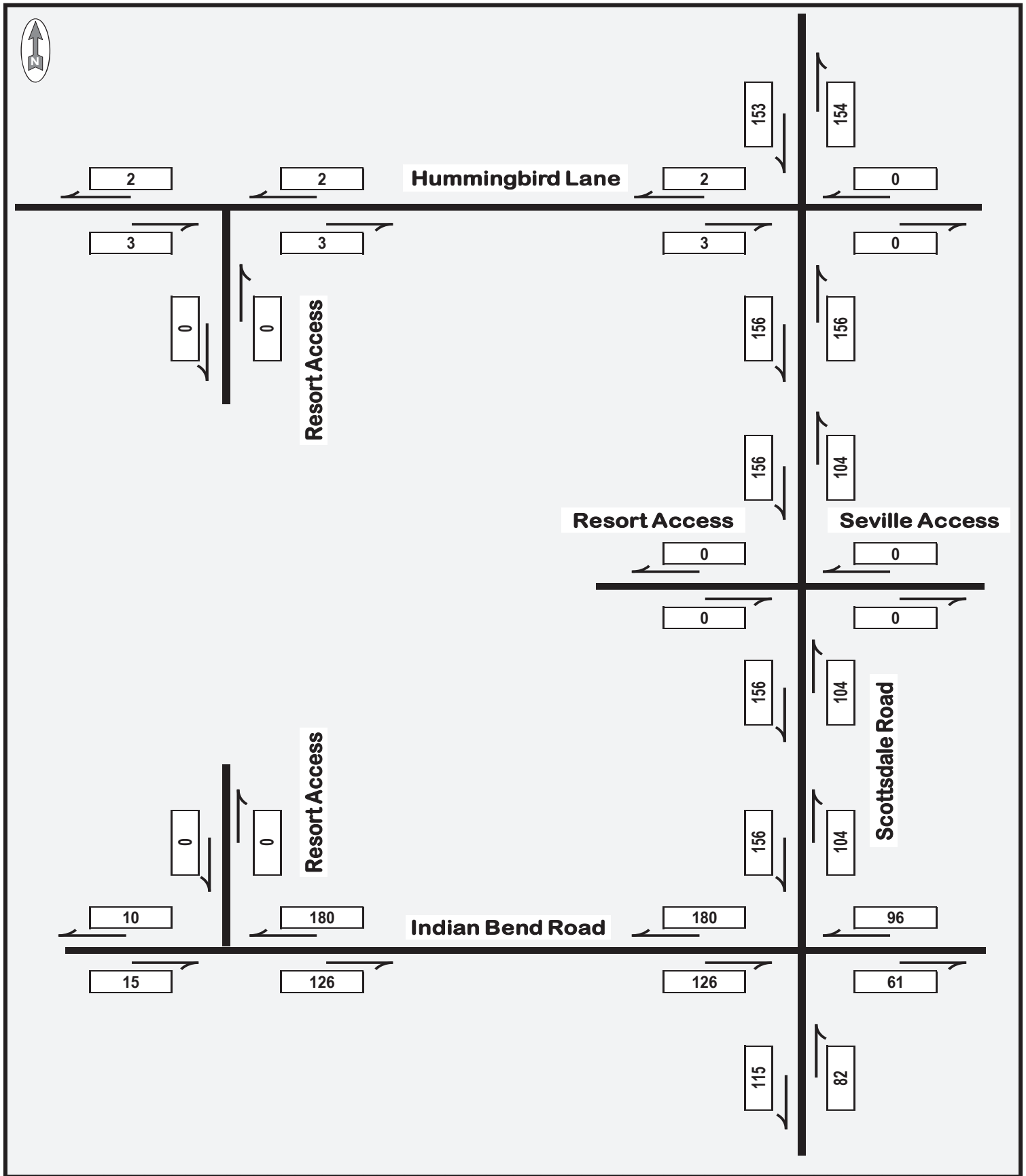


Figure 20: Ritz-Carlton and Palmeraie AM Peak Hour Approach and Departure Volumes

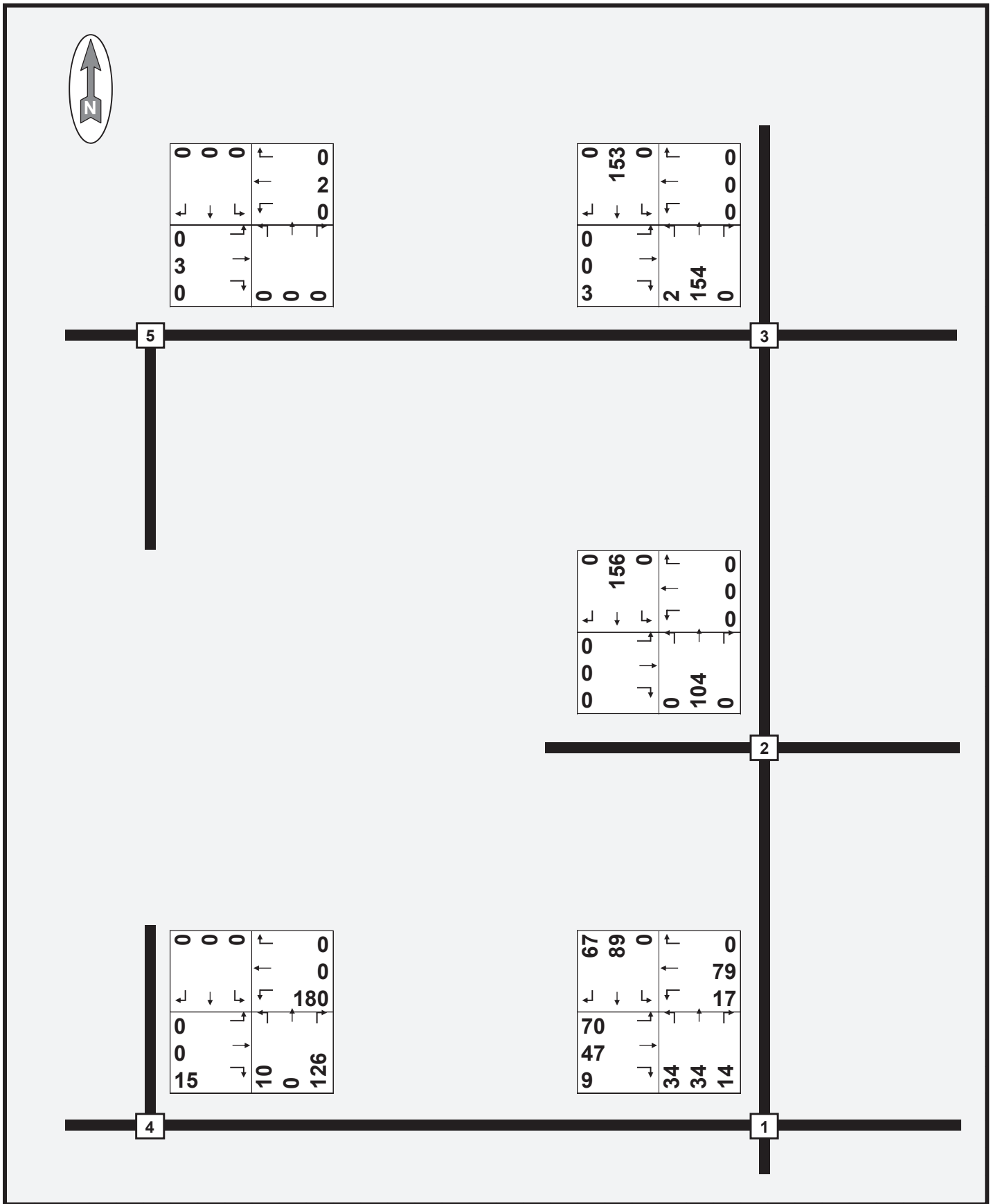


Figure 21: Ritz-Carlton and Palmeraie AM Peak Hour Turning Movement Volumes

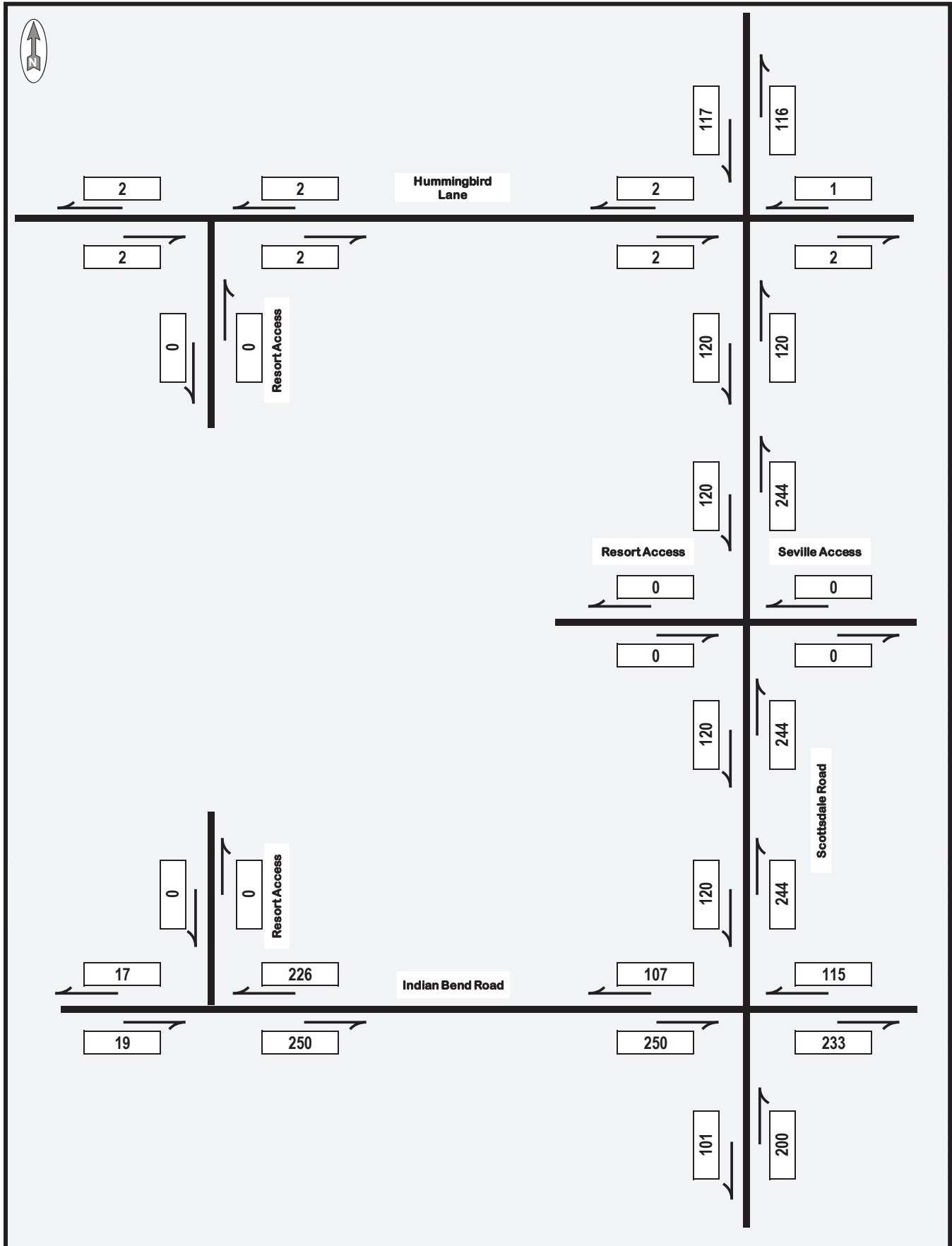


Figure 22: Ritz-Carlton and Palmeraie PM Peak Hour Approach and Departure Volumes

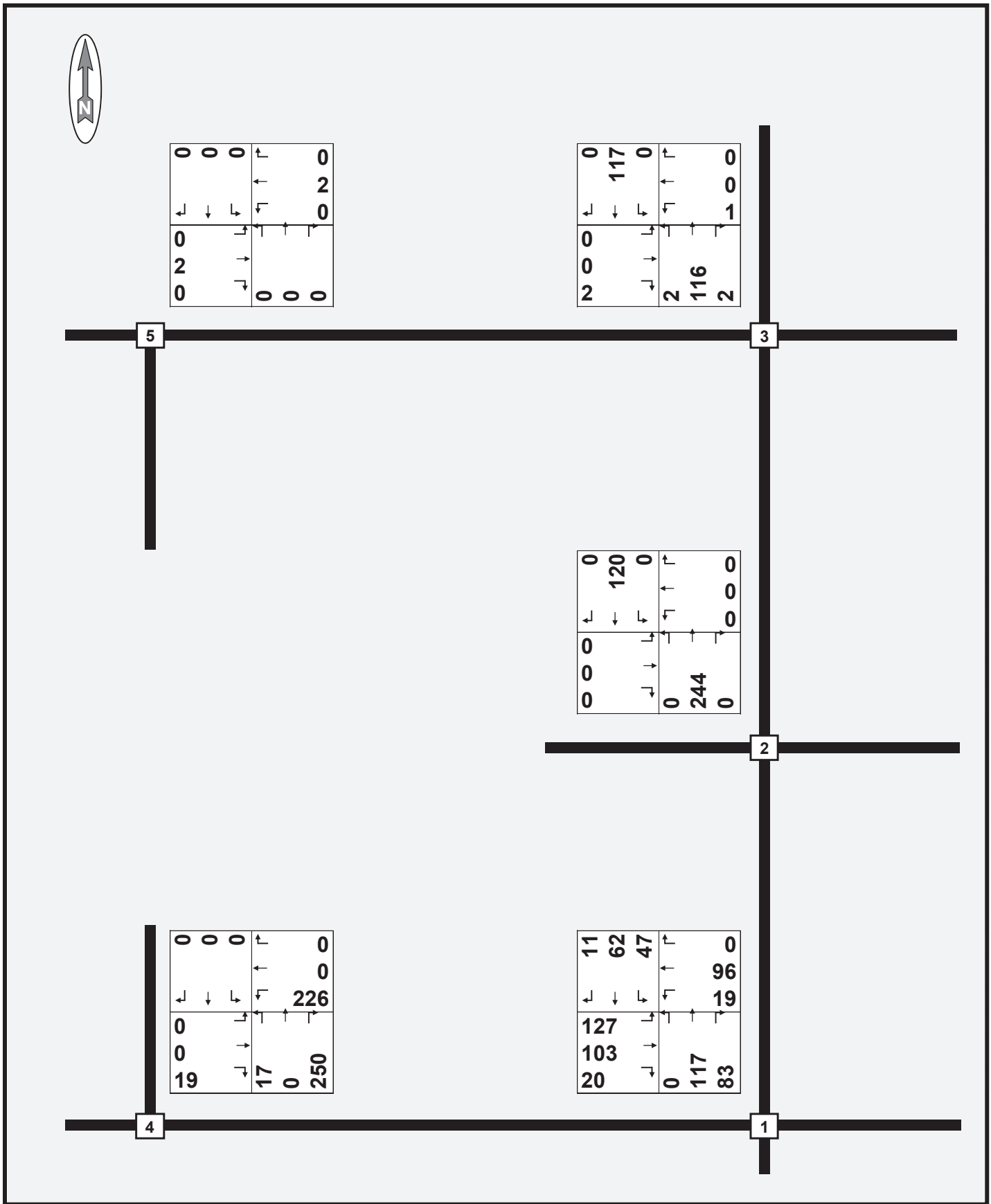


Figure 23: Ritz-Carlton and Palmeraie PM Peak Hour Turning Movement Volumes

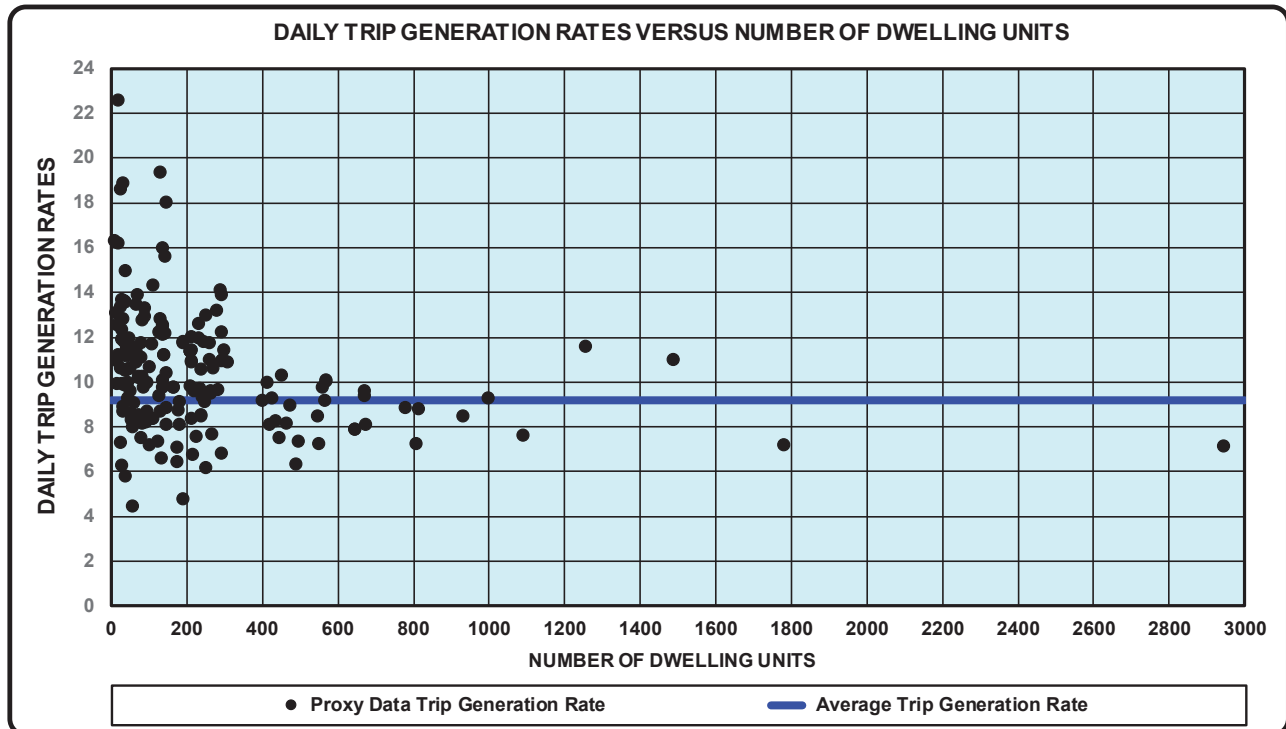
### Proposed Artesia Estimated Trip Generation

The City of Scottsdale has requested that traffic generated by the proposed residential development, Artesia, northeast of the Scottsdale Plaza Resort, be included in this traffic analysis. This property has some development currently, and the vacant portion of the property is currently being evaluated by the City of Scottsdale Development Review Board process as case 15-DR-2022. **Appendix D** provides the proposed site plan and project narrative for Artesia, indicating 74 single-family homes and 476 four-story apartments or condominiums.

The estimated trip generation for the proposed Artesia was determined through the procedures and data contained within the Institute of Transportation Engineers *Trip Generation Manual, 11<sup>th</sup> Edition*, published in 2021. This document provides traffic volume data from existing developments throughout the United States and Canada, from 1980 through 2021, that can be utilized to estimate trips from proposed developments. The traffic data are provided for 179 land use categories separated into 10 major land use categories. The estimated traffic volume is dependent upon independent variables defined by the characteristics and size of each land use category. Data are typically provided for five (5) weekday time periods and four (4) weekend time periods.

The land use code of Single Family Detached (210) is the most pertinent land use category and code for the 74 single-family homes within Artesia. The single-family detached housing land use weekday entire proxy data varies in size from 10 houses to 2,945 houses. Small housing developments have different trip generation characteristics than large housing developments. The 11<sup>th</sup> Edition of the *Trip Generation Manual* encourages filtering of the proxy data to ensure that the proxy data values correspond to the proposed development.

**Figure 24** was created from *Trip Generation Manual* single-family house data and provides the proxy data coordinates of housing development sizes and daily trip generation rates. The trip generation rates vary from a low of 4.45 trips-per-house to a high of 22.61 trips-per-house, with an average of 9.43 trips-per-house. This graph reveals the disparity in the proxy data trip generation rates – particularly between those housing developments with fewer than versus more than 200 houses.



**Figure 24: Single-Family Daily Trip Generation Rates versus Number of Houses**



The *Trip Generation Manual* proxy data were filtered for developments with similar size to the proposed Artesia development. The filtered data are for fewer than 200 houses, approximately twice the size of the 74 houses proposed for Artesia.

**Appendix B.2** provides the complete trip generation calculations. Two (2) separate calculations are provided: full proxy data and only filtered proxy data.

A critical aspect of trip generation data is statistical consistency. For the entire proxy data for the single-family housing land use code, statistical discrepancies exist with the proxy data. The *Trip Generation Manual* data includes lowest, highest, and (weighted) average trip generation rates, and also (weighted) standard deviation. Average rates for mathematical data often are skewed by disproportionately small or large rates. Utilizing an average rate to represent an entire data set assumes a normal distribution.

In a statistically normal data distribution, the average rate plus or minus one (1) standard deviation includes 68.27% of the data. The average rate plus or minus two (2) standard deviations includes 95.45% of the data. The average rate plus or minus three (3) standard deviations includes 99.73% of the data. If a data set has a large percentage of data that is more than the average rate plus or minus one (1), two (2), or three (3) standard deviations; the data set cannot be identified as a normal distribution. If a data set is not a normal distribution, then the average rate does not validly represent the data set.

The *Trip Generation Manual* proxy data for the single-family housing category was examined for statistical consistency. A comparison of the maximum or minimum rates to the average rate plus or minus two (2) or three (3) standard deviations indicates the potential excessive influence of specific rates much greater or lower than the remainder of the data. If the maximum trip generation rate exceeds the average rate plus two (2) or three (3) standard deviations, then the average rate may be skewed high. If the minimum trip generation rate is less than the average rate minus two (2) or three (3) standard deviations, then the average rate may be skewed low. An outlier is a data point that is either more than the average rate plus two or three standard deviations, or less than the average rate minus two (2) or three (3) standard deviations are termed "outliers". This process was described in an article in the October 2021 issue of the *Institute of Transportation Engineering Journal* entitled "Trip Generation Estimation Methodology".

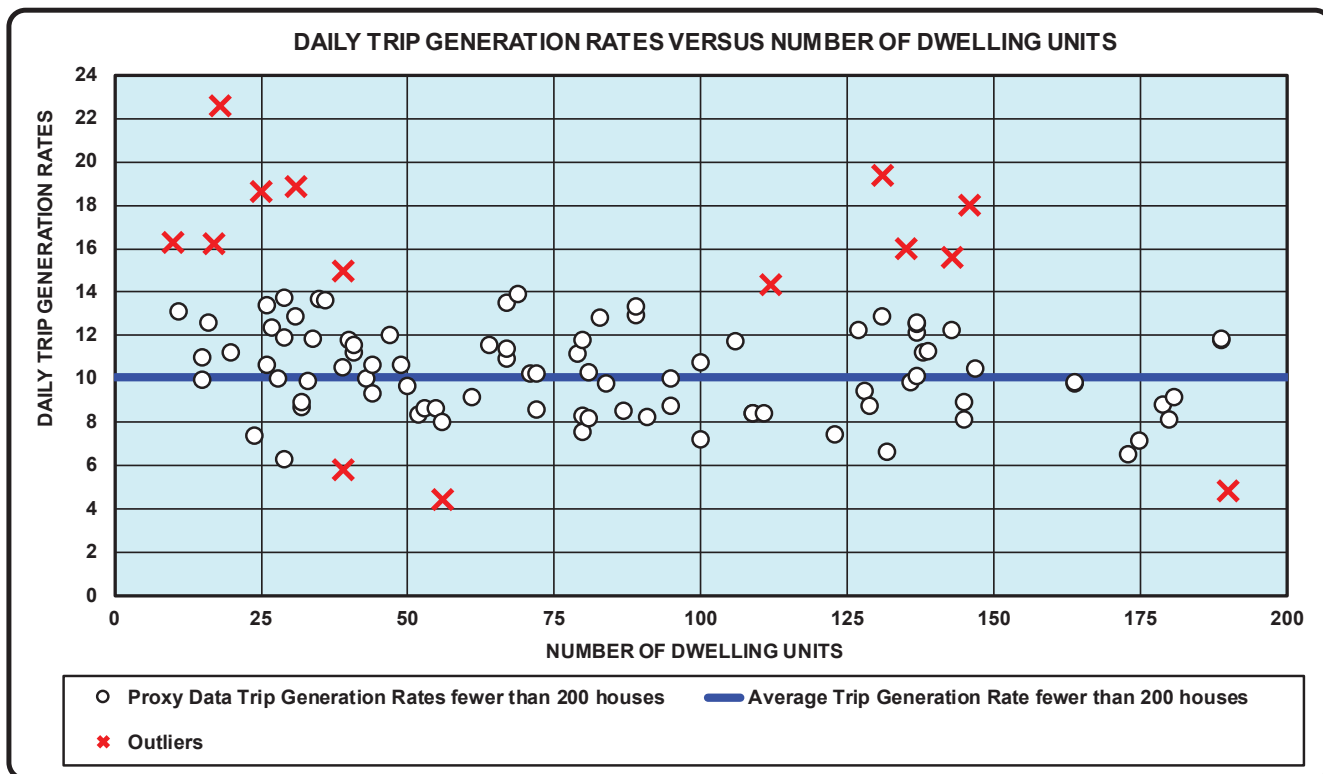
This analysis was accomplished for the *Trip Generation Manual* proxy data for Single Family Detached Homes for the day. Proxy datum with trip rates below the weighted average rate less two (2) weighted standard deviations were considered outliers and removed from the calculations. Proxy datum with trip rates above the weighted average rate plus two (2) weighted standard deviations were considered outliers and removed from the calculations. Fourteen (14) outlier data were removed, representing 14% of the proxy data for locations with fewer than 200 houses.

The day trip generation statistics for the Artesia single-family homes with both full proxy data and filtered proxy data including and excluding outliers, for data fewer than 200 houses, are provided in **Table 24**.

**Table 24: Single-Family Proxy Data Statistical Consistency for Day**

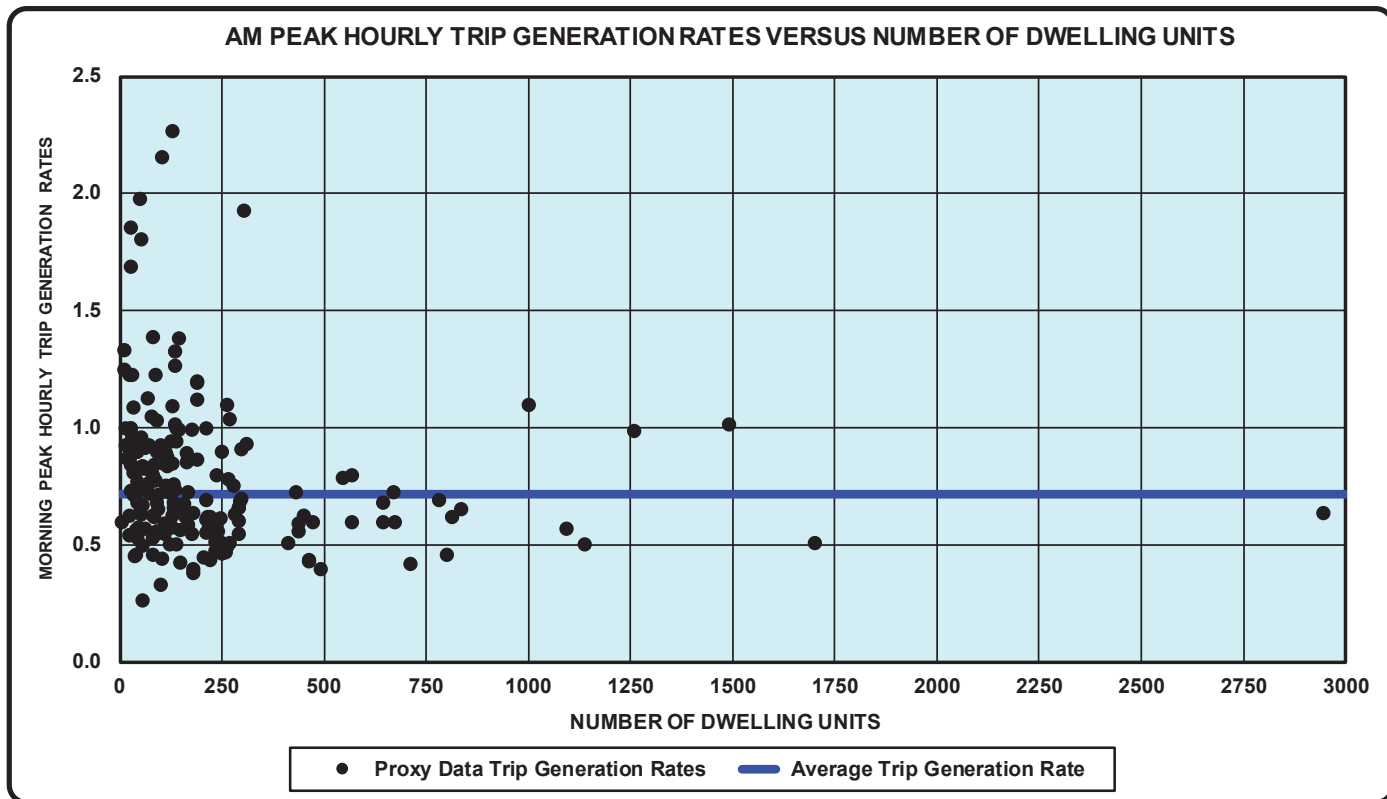
STATISTIC	FULL ITE DATA	FILTERED PROXY DATA OF FEWER THAN 200 HOMES	
		COMPLETE	WITHOUT OUTLIERS
Number of Data Points	174	103	89
Minimum Size	10	10	11
Average Size	245.96	83.67	84.56
Maximum Size	436	190	189
Average less Standard Deviations	5.13	4.62	6.09
Minimum Trip Generation Rate	4.45	4.45	<b>6.28</b>
Average Trip Generation Rate	9.43	10.52	10.05
Maximum Trip Generation Rate	22.61	22.61	<b>13.90</b>
Average plus Standard Deviations	13.73	16.42	14.01
Standard Deviation	2.15	2.95	1.98

Figure 25 provides the proxy data housing development sizes and the daily trip generation rates. The proxy data rates that are included in the weighted average rate and weighted standard deviation calculations are indicated by a white circle. The outlier proxy data rates are indicated by a red X. The weighted average rate is indicated by a blue line.



**Figure 25: Single-Family Day Trip Rates for fewer than 200 Houses Data with Outliers Identified**

This statistical process was repeated for the morning peak hour data. Figure 26 provides the proxy data coordinates of housing development sizes and morning peak trip generation rates. A large percentage of the data are from developments with fewer than 200 houses. The trip generation rates vary from a low of 0.27 trips-per-house to a high of 2.27 trips-per-house, with an average of 0.71 trips-per-house. This graph reveals the disparity in trip generation rates – particularly high rates for with fewer than 200 houses.



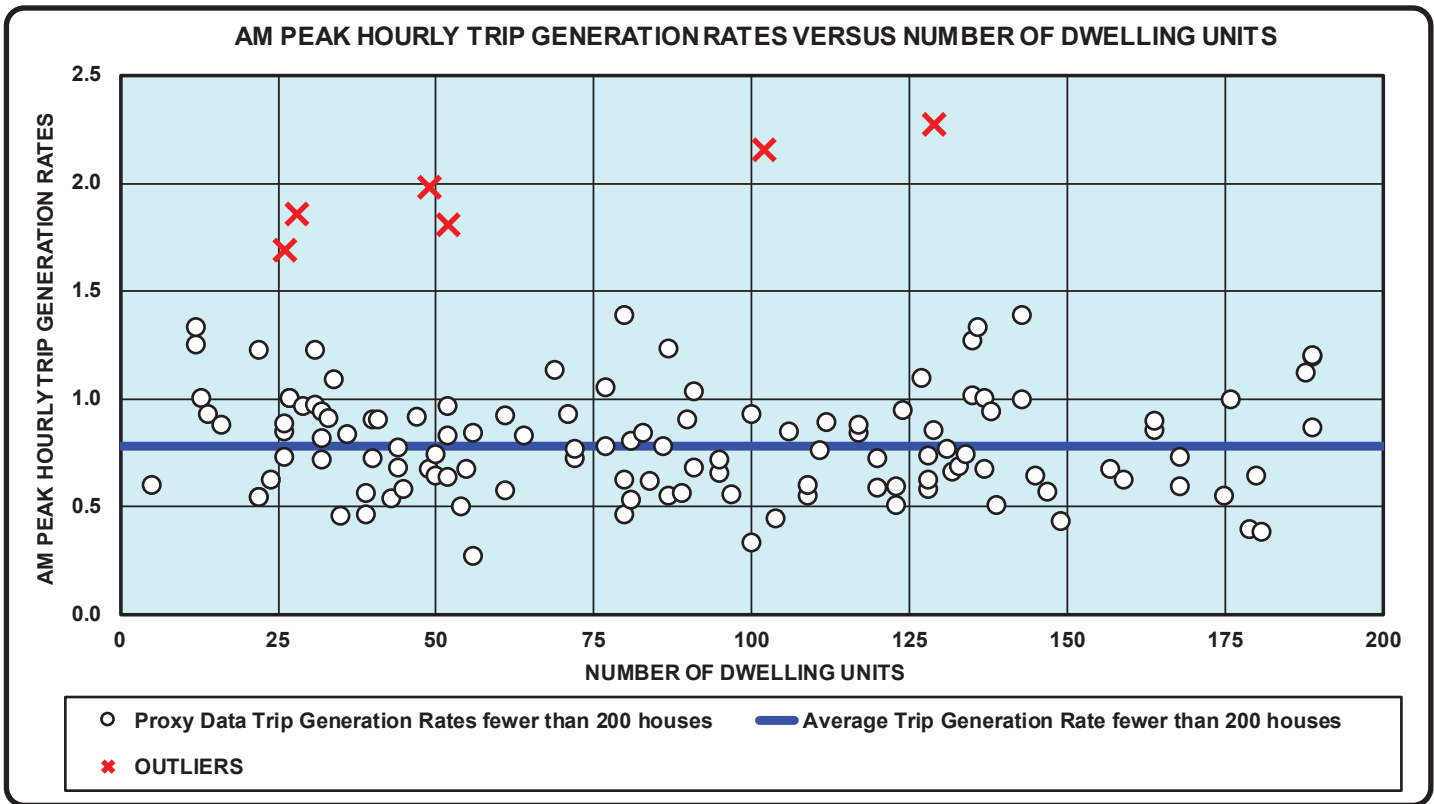
**Figure 26: Single-Family Morning Peak Hour Trip Generation Rates versus Number of Houses**

The morning peak hour trip generation statistics for the Artesia single-family houses with both full proxy data and filtered proxy data with and without outliers, for data for fewer than 200 houses, are provided in **Table 25**. Proxy datum with trip rates above the weighted average rate plus three (3) weighted standard deviations were considered outliers and removed from the calculations. Six (6) outlier data were removed, representing 5% of those data points for fewer than 200 houses.

**Table 25: Single-Family Proxy Data Statistical Consistency for AM Peak Hour**

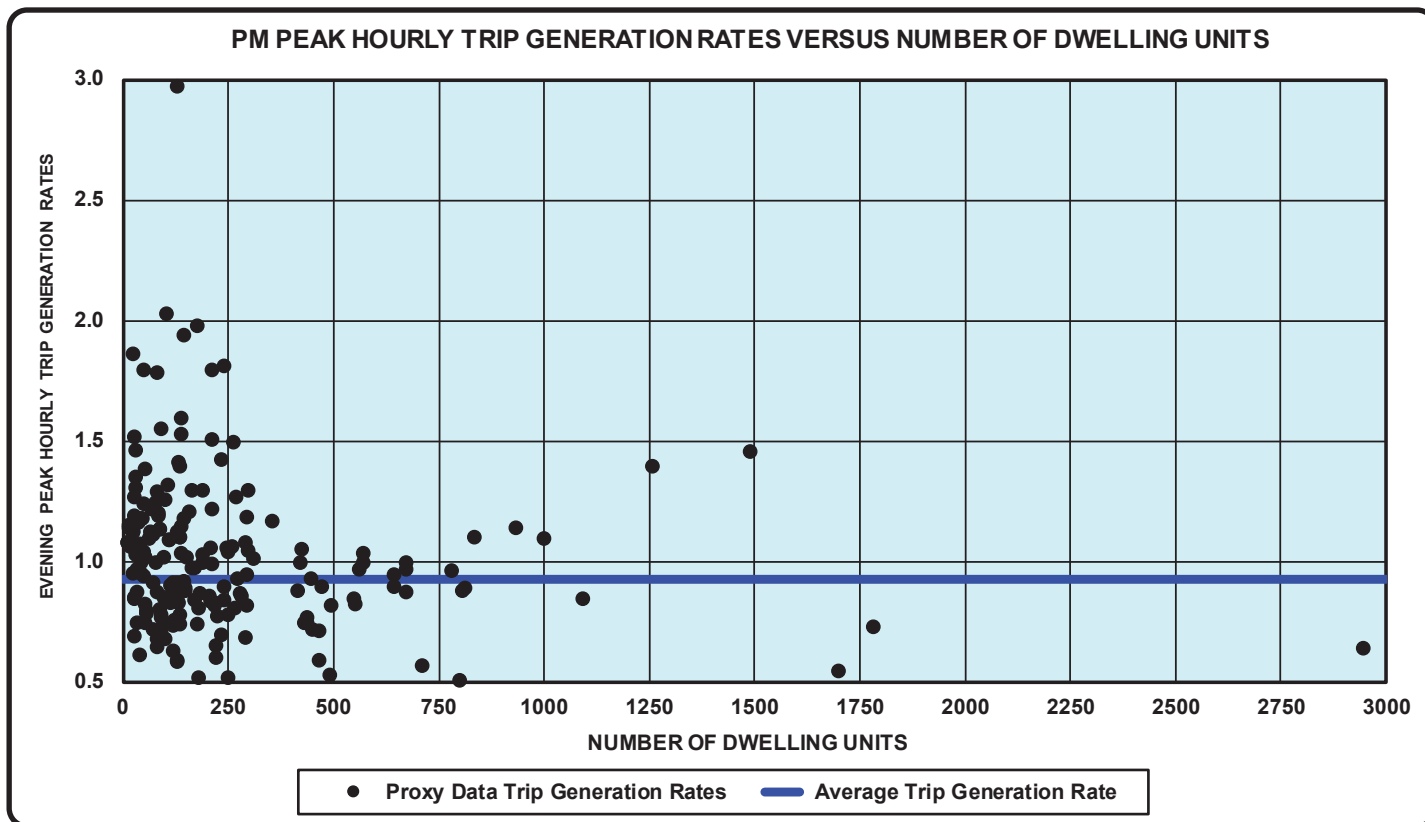
STATISTIC	FULL ITE DATA	FILTERED PROXY DATA OF FEWER THAN 200 HOMES	
		COMPLETE	WITHOUT OUTLIERS
Number of Data Points	192	128	122
Minimum Size	5	5	0
Average Size	225.52	87.73	88.88
Maximum Size	2945	5	1
Average less 2 Standard Deviations	0.42	-0.22	0.05
Minimum Trip Generation Rate	0.27	<b>0.27</b>	<b>0.27</b>
Average Trip Generation Rate	0.71	0.83	0.78
Maximum Trip Generation Rate	2.27	2.27	<b>1.39</b>
Average plus 2 Standard Deviations	1.01	1.87	1.52
Standard Deviation	0.15	0.35	0.25

**Figure 27** provides the proxy data housing development sizes and the morning peak hourly trip generation rates. The proxy data rates that are included in the weighted average rate and weighted standard deviation calculations are indicated by a white circle. The outlier proxy data rates are indicated by a red X. The weighted average rate is indicated by a blue line.



**Figure 27: Single-Family AM Peak Trip Rates for fewer than 200 Houses with Outliers Identified**

This statistical process was repeated for the evening peak hour data. **Figure 28** provides the proxy data coordinates of housing development sizes and evening peak trip generation rates. A large percentage of the data are from developments with fewer than 200 houses. The trip generation rates vary from a low of 0.35 trips-per-house to a high of 2.98 trips-per-house, with an average of 0.92 trips-per-house. This graph reveals the disparity in the trip generation rates – particularly the high trip rates for housing developments with fewer than 200 houses.



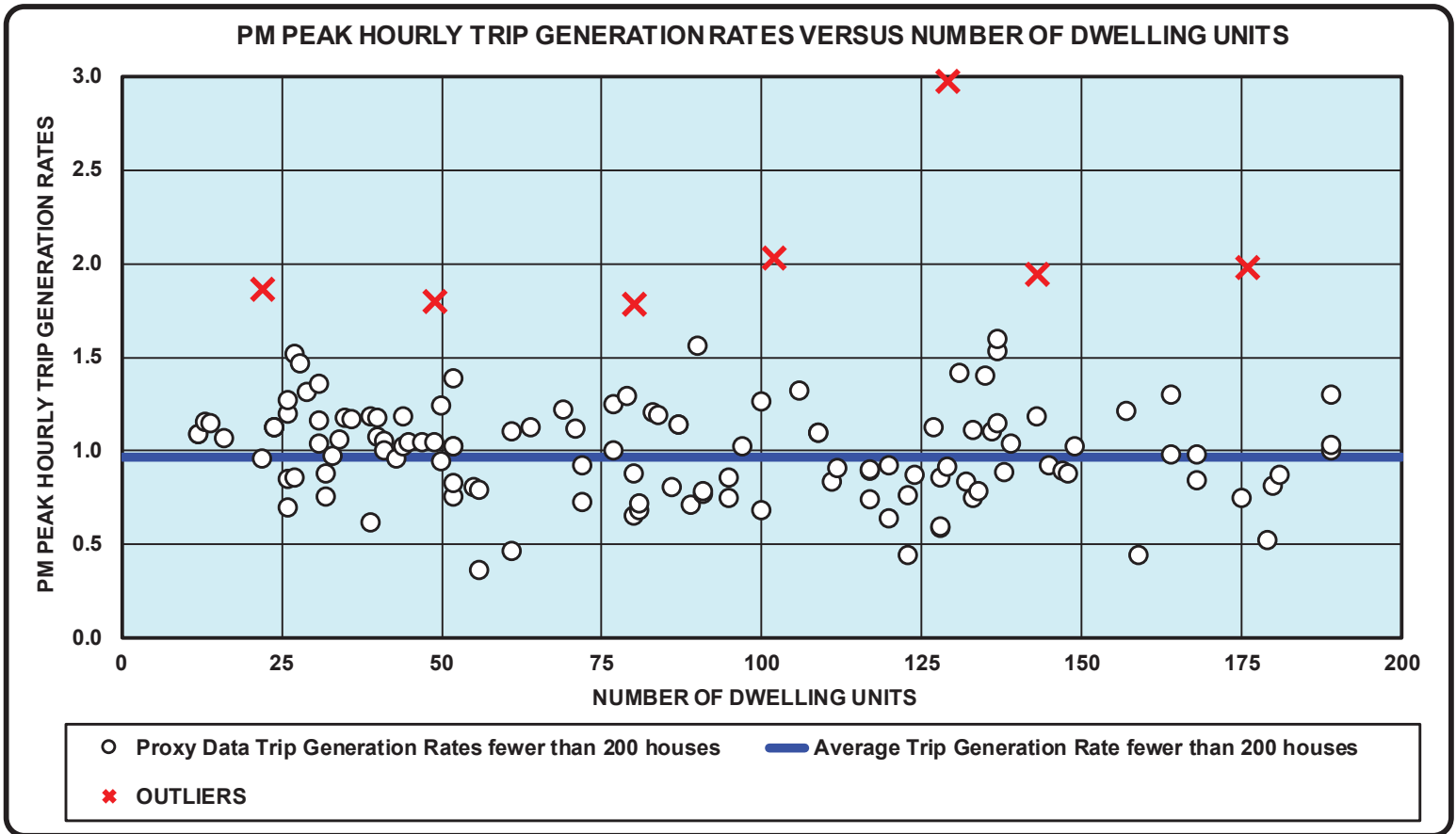
**Figure 28: Single-Family PM Peak Hour Trip Generation Rates versus Number of Houses**

The evening peak hour trip generation statistics for Single-Family Housing, with both full proxy data, and filtered proxy data with and without outliers, for data for fewer than 200 houses, are provided in **Table 26**. Proxy datum with trip rates above the weighted average rate plus three (3) weighted standard deviations were considered outliers and removed from the calculations. Seven (7) outlier data were removed, representing 5% of data points of fewer than 200 houses.

**Table 26: Single-Family Proxy Data Statistical Consistency for PM Peak Hour**

STATISTIC	FULL ITE DATA	FILTERED PROXY DATA OF FEWER THAN 200 HOMES	
		COMPLETE	WITHOUT OUTLIERS
Number of Data Points	208	131	124
Minimum Size	12	12	12
Average Size	247.52	87.60	86.89
Maximum Size	2945	189	189
Average less 3 Standard Deviations	-1.06	-0.17	0.20
Minimum Trip Generation Rate	<b>0.35</b>	<b>0.36</b>	<b>0.36</b>
Average Trip Generation Rate	0.92	1.04	0.97
Maximum Trip Generation Rate	2.98	2.98	<b>1.60</b>
Average plus 3 Standard Deviations	2.90	2.25	1.73
Standard Deviation	0.99	0.40	0.25

**Figure 29** provides the proxy data housing development sizes and the evening peak hourly trip generation rates. The proxy data rates that are included in the weighted average rate and standard deviation calculations are indicated by a black circle. The outlier proxy data rates are indicated by a red X. The weighted average rate is indicated by a blue line.

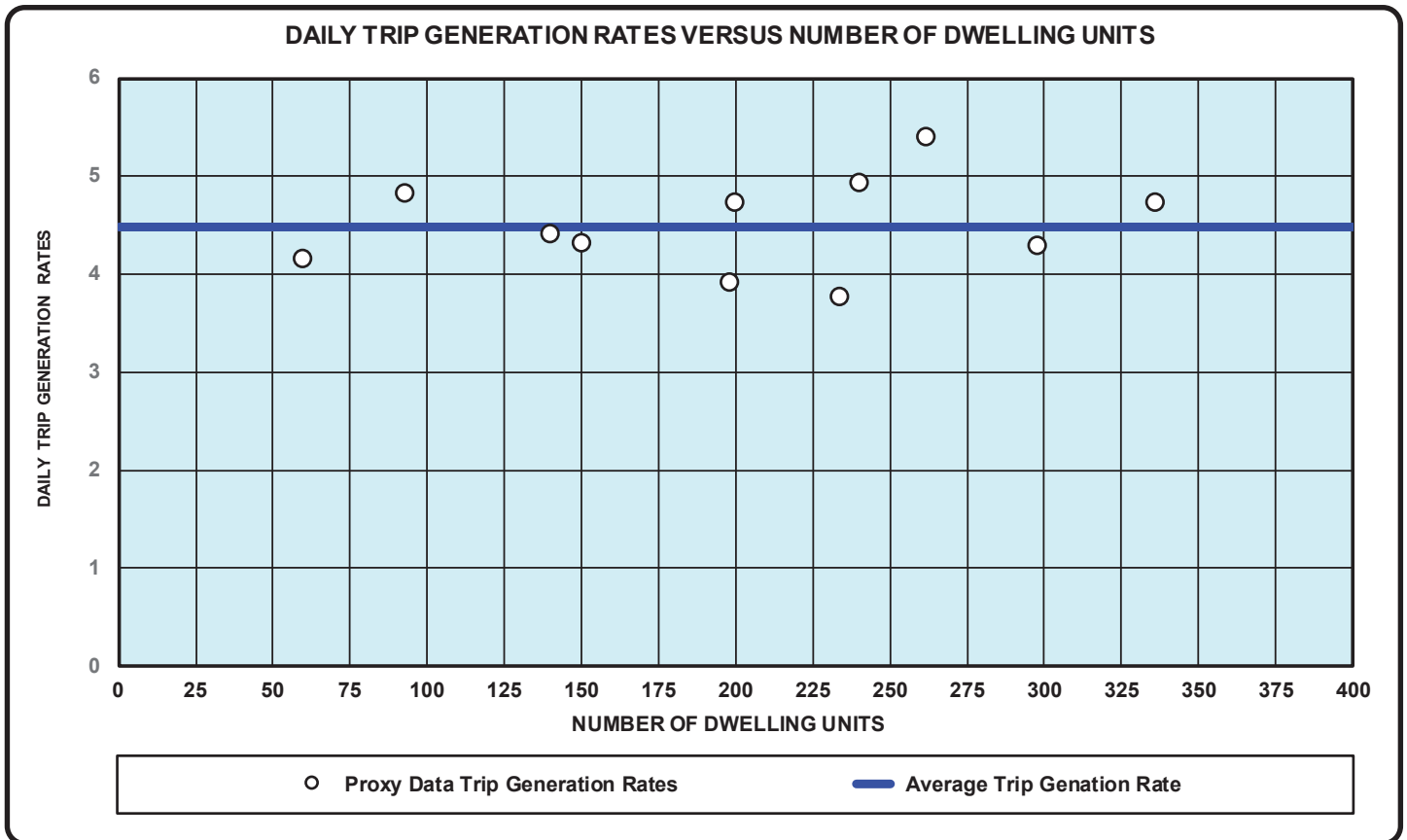


**Figure 29: Single-Family PM Peak Trip Rates for fewer than 200 Houses with Outliers Identified**

This analysis was also accomplished for the *Trip Generation Manual* proxy data for Mid-rise Multi-Family Homes for the day. However, for the weekday, only eleven (11) proxy data points are provided. Additionally, the proxy data exhibited the statistical consistency of all proxy data within two (2) standard deviations plus and minus the average rate, as indicated in **Table 27**. Therefore, no additional statistical consistency analysis was accomplished. **Figure 30** provides the Mid-rise Multi-Family Homes proxy data and daily trip generation rates.

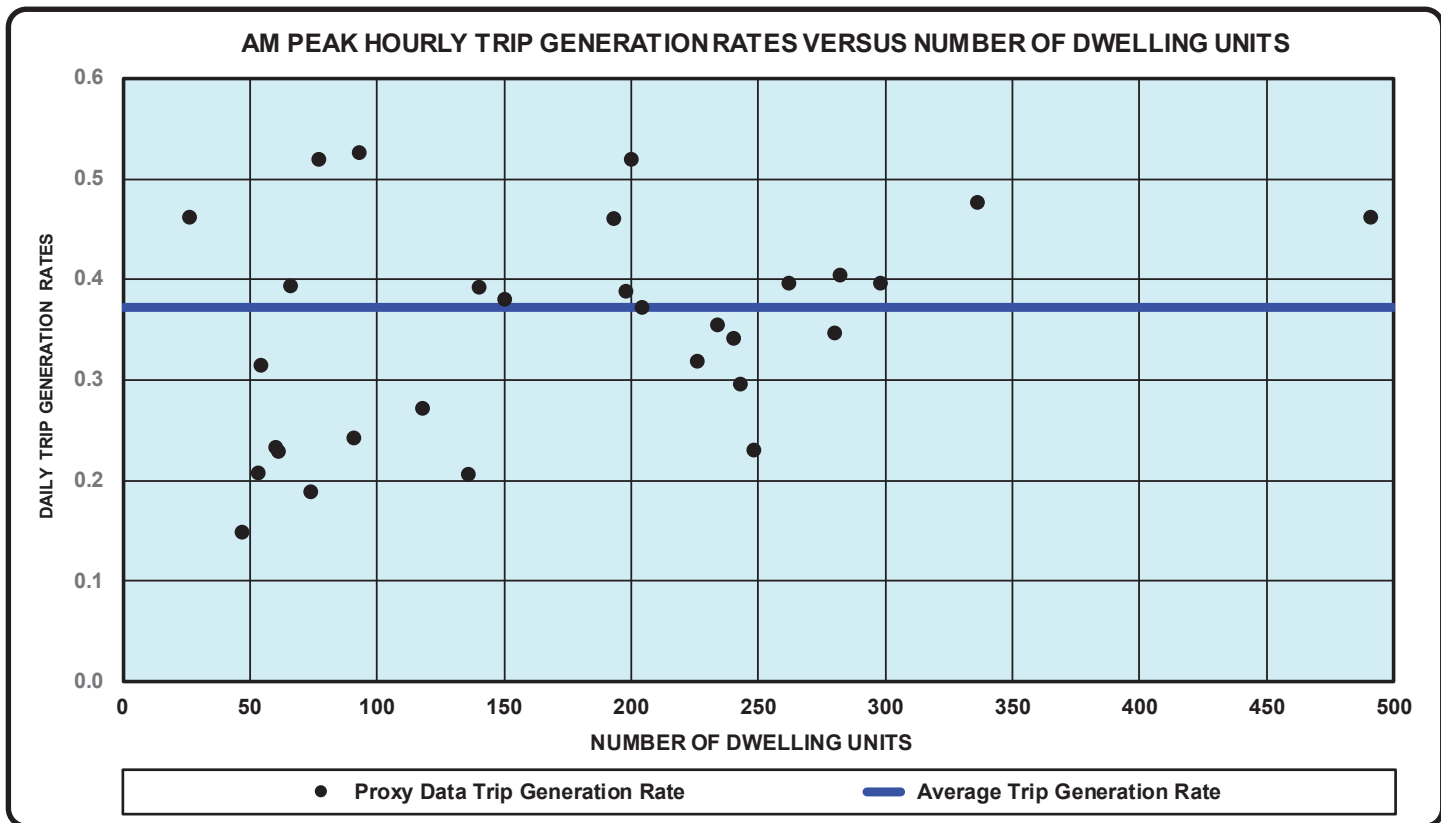
**Table 27: Multi Family Proxy Data Statistical Consistency for Day**

STATISTIC	FULL ITE DATA	
Number of Data Points	11	Additional analyses unnecessary as full ITE data has statistical consistency.
Minimum Size	60	
Average Size	201.00	
Maximum Size	336	
Average less Standard Deviations	3.22	
Minimum Trip Generation Rate	<b>3.76</b>	
Average Trip Generation Rate	4.54	
Maximum Trip Generation Rate	<b>5.40</b>	
Average plus Standard Deviations	5.85	
Standard Deviation	0.66	



**Figure 30: Mid-Rise Multi-family Day Trip Rates for all Proxy Data**

This statistical process was repeated for the morning peak hour data. **Figure 31** provides the proxy data coordinates of housing development sizes and morning peak trip generation rates. A large percentage of the data are from developments with greater than 150 homes. The trip generation rates vary from a low of 0.15 trips-per-home to a high of 0.53 trips-per-home, with an average of 0.37 trips-per-home. This graph reveals the disparity in trip generation rates – particularly for greater than 150 homes.



**Figure 31: Multi-family Morning Peak Hour Trip Generation Rates versus Number of Homes**

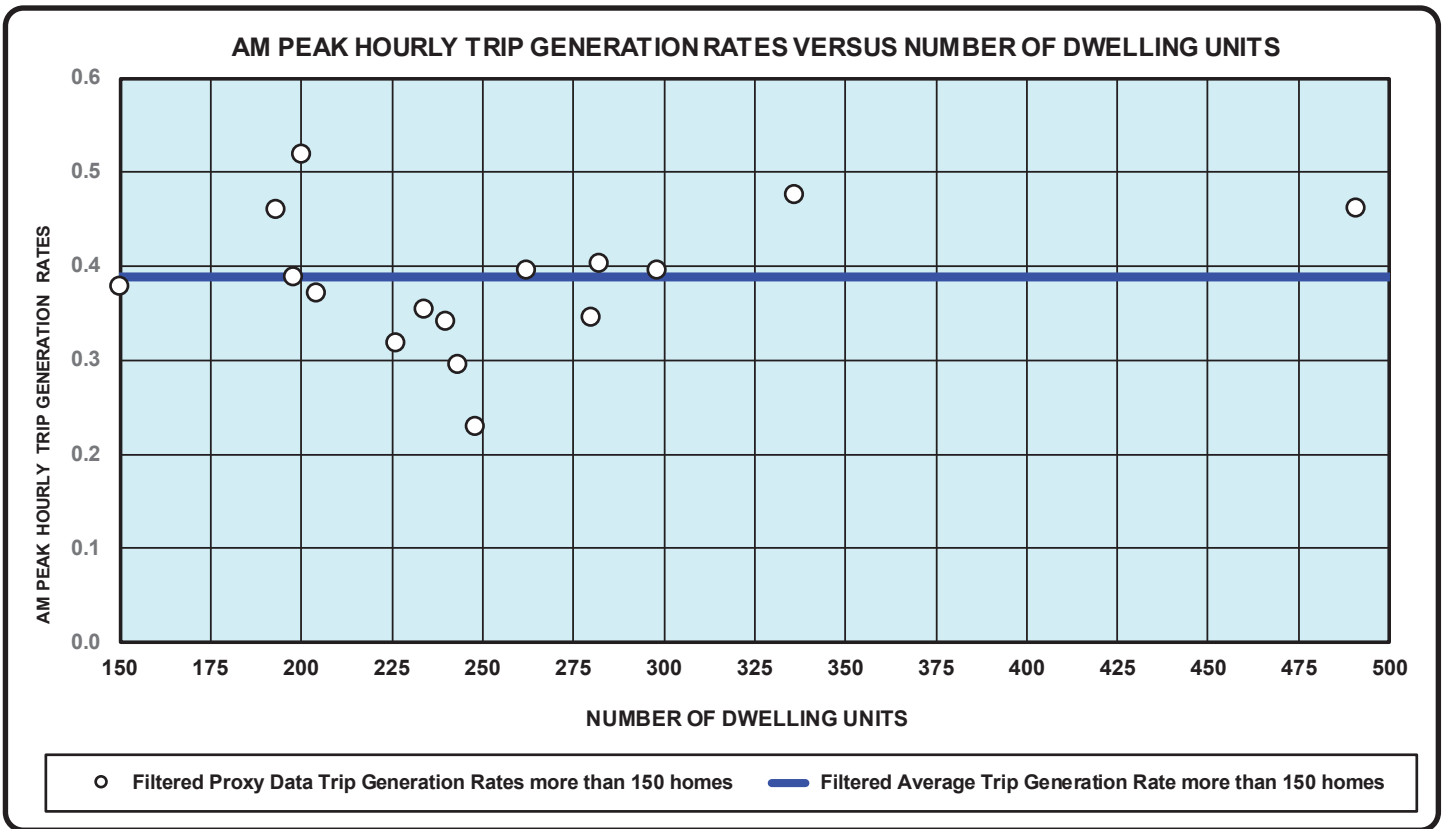
The morning peak hour trip generation statistics for the Artesia mid-rise multi-family homes with both full proxy data and filtered proxy data, for data for greater than 150 homes, are provided in **Table 28**. For the morning peak hour, the proxy data exhibited the statistical consistency of all proxy data within two (2) standard deviations plus and minus the average rate.

**Table 28: Multi Family Proxy Data Statistical Consistency for AM Peak Hour**

STATISTIC	FULL ITE DATA	FILTERED PROXY DATA	
		> 150 HOMES	
Number of Data Points	30	16	Additional analyses unnecessary as complete data with greater than 150 homes, without discovering and removing outliers, has statsical consistency.
Minimum Size	26	150	
Average Size	172.70	201.43	
Maximum Size	491	491	
Average less 2 Standard Deviations	0.19	0.23	
Minimum Trip Generation Rate	0.15	<b>0.23</b>	
Average Trip Generation Rate	0.37	0.38	
Maximum Trip Generation Rate	<b>0.53</b>	<b>0.53</b>	
Average plus 2 Standard Deviations	0.55	1.87	
Standard Deviation	0.09	0.07	

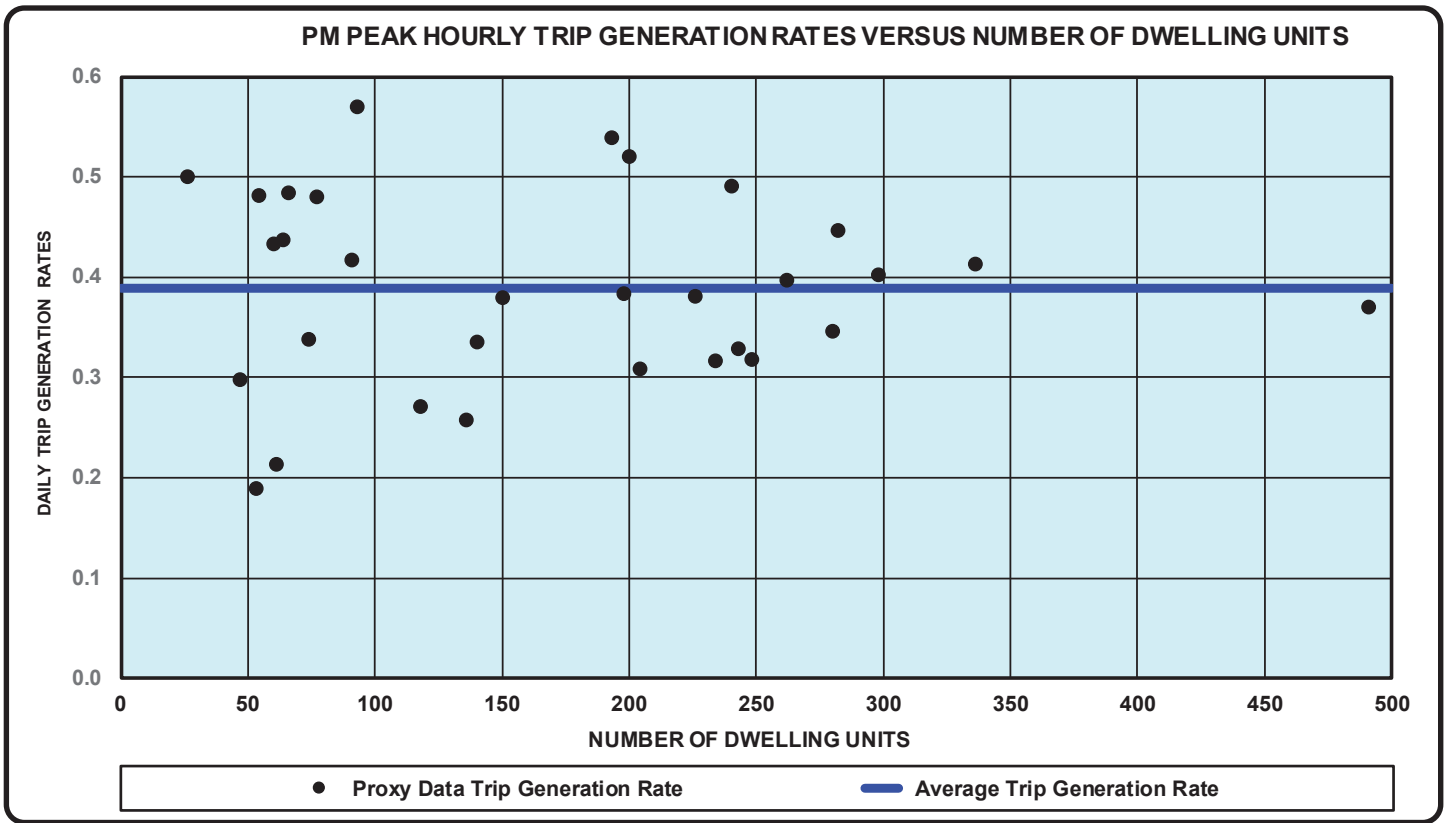
Therefore, no additional statistical consistency analysis was accomplished. **Figure 32** provides the Mid-rise Multi- Family Homes proxy data and morning peak hour trip generation rates. The proxy data rates that are included in the weighted average rate and weighted standard deviation calculations are indicated by a white circle. The weighted average rate is indicated by a blue line.





**Figure 32: Multi-family AM Peak Trip Rates for greater than 150 Homes**

This statistical process was repeated for the evening peak hour data. **Figure 33** provides the proxy data coordinates of housing development sizes and evening peak trip generation rates. The trip generation rates vary from a low of 0.19 trips-per-home to a high of 0.57 trips-per-home, with an average of 0.39 trips-per-home. This graph reveals the disparity in the trip generation rates.



**Figure 33: Multi-family PM Peak Hour Trip Generation Rates versus Number of Homes**

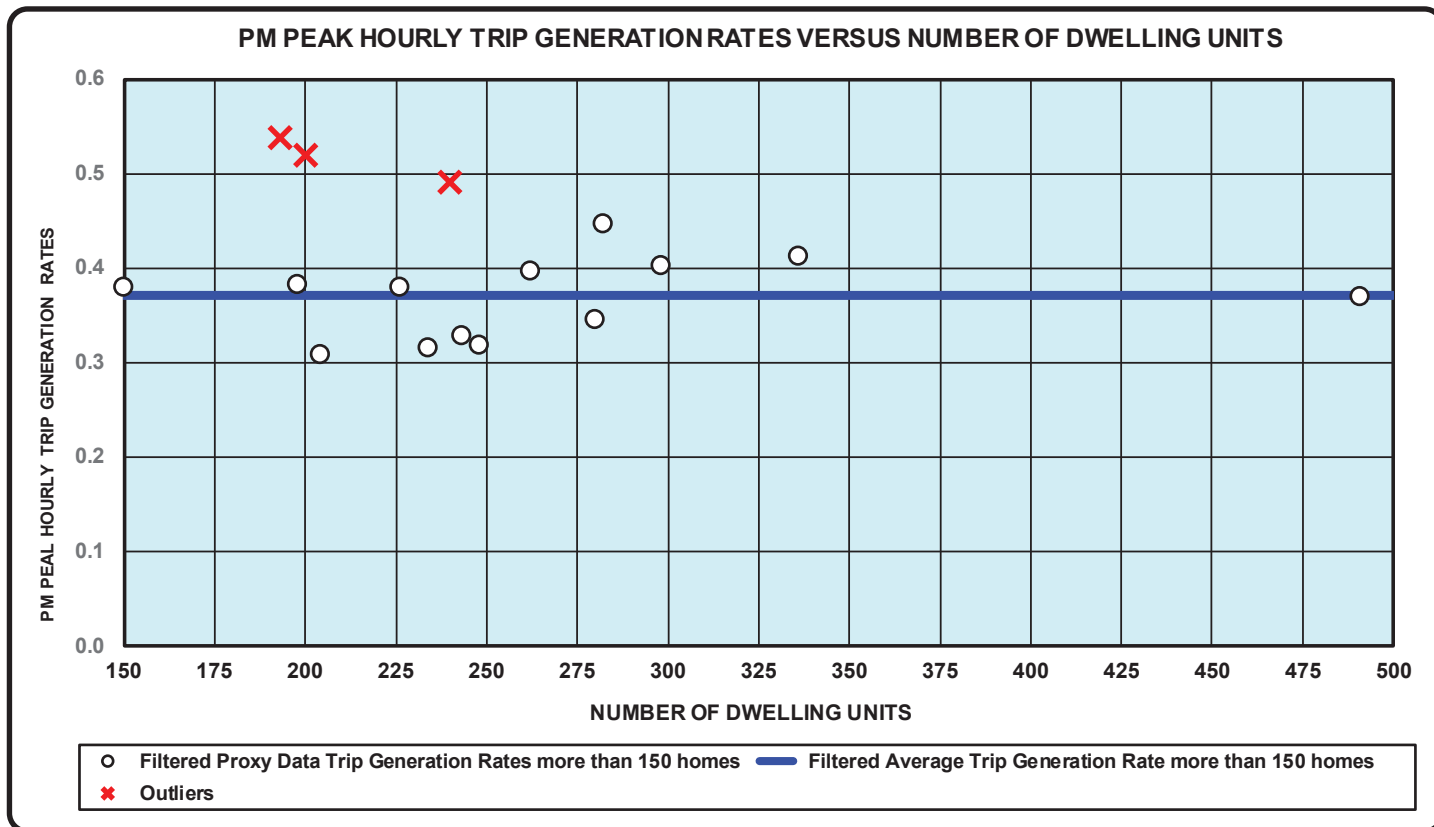
The evening peak hour trip generation statistics for Mid-rise multi-family Housing, with both full proxy data, and filtered proxy data with and without outliers, for data for greater than 150 homes, are provided in **Table 29**.

**Table 29: Multi Family Proxy Data Statistical Consistency for PM Peak Hour**

STATISTIC	FULL ITE DATA	FILTERED PROXY DATA	
		> 150 HOMES	WITHOUT OUTLIERS
Number of Data Points	31	16	13
Minimum Size	26	150	12
Average Size	169.19	255.31	265.54
Maximum Size	491	491	189
Average less 3 Standard Deviations	0.23	0.29	0.29
Minimum Trip Generation Rate	0.19	<b>0.31</b>	<b>0.31</b>
Average Trip Generation Rate	0.39	0.39	0.37
Maximum Trip Generation Rate	0.57	0.54	<b>0.45</b>
Average plus 3 Standard Deviations	0.55	0.50	0.46
Standard Deviation	0.08	0.05	0.04

Proxy datum with trip rates above the weighted average rate plus two (2) weighted standard deviations were considered outliers and removed from the calculations. Three (3) outlier data were removed, representing 19% of data points greater than 150 houses.

**Figure 34** provides the proxy data housing development sizes and the evening peak hourly trip generation rates. The proxy data rates that are included in the weighted average rate and standard deviation calculations are indicated by a black circle. The outlier proxy data rates are indicated by a red X. The weighted average rate is indicated by a blue line.



**Figure 34: Multi-Family PM Peak Trip Rates for fewer than 200 Homes with Outliers Identified**

The estimated trip generation for Artesia is provided in **Table 30**.

**Table 30: Artesia Estimated Trip Generation Volumes**

TIME PERIOD	SINGLE FAMILY			MULTI-FAMILY			TOTAL		
	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
WEEKDAY	372	372	744	1,296	1,296	2,592	1,668	1,668	3,336
AM PEAK HOUR STREET	15	43	58	51	147	198	66	190	256
PM PEAK HOUR STREET	45	27	72	113	73	186	158	100	258
SATURDAY	359	358	717	1,169	1,168	2,337	1,528	1,526	3,054
PEAK HOUR GENERATOR	39	34	73	98	94	192	137	128	265

**Table 31** provides the existing turning movement percentages at the Scottsdale / Hummingbird intersection that were utilized to distribute the Artesia entering and exiting traffic.

The Artesia traffic on Scottsdale Road, south of Hummingbird Lane, was assumed to travel straight through the Scottsdale / Scottsdale Plaza Resort intersection, with exiting traffic southbound and entering traffic northbound.

**Table 31: Scottsdale / Hummingbird Existing Turning Percentages for Artesia Trip Distribution**

EXISTING TRIP DISTRIBUTION AT SCOTTSDALE / HUMMINGBIRD						
	WB, EAST OF SCOTTSDALE			EB, EAST OF SCOTTSDALE		
	WB LEFT	WB THRU	WB RIGHT	EB THRU	NB RIGHT	SB LEFT
WEEKDAY AM PEAK HOUR	27.3%	0.0%	72.7%	9.5%	0.0%	90.5%
WEEKDAY MD PEAK HOUR	50.0%	0.0%	50.0%	0.0%	20.0%	80.0%
WEEKDAY PM PEAK HOUR	30.0%	0.0%	70.0%	0.0%	42.9%	57.1%
WEEKDAY DAY	37.6%	2.7%	59.7%	2.2%	34.1%	63.8%

**Table 32** provides the existing turning movement percentages at the Scottsdale / Indian Bend intersection that were utilized to distribute the Artesia traffic. The exiting traffic will be southbound and the entering traffic will be northbound.

**Table 32: Scottsdale / Indian Bend Turning Percentages for Artesia Trip Distribution**

EXISTING TRIP DISTRIBUTION AT SCOTTSDALE / INDIAN BEND						
	SB, NORTH OF INDIAN BEND			NB, NORTH OF INDIAN BEND		
	SB LEFT	SB THRU	SB RIGHT	EB LEFT	WB RIGHT	NB THRU
WEEKDAY AM PEAK HOUR	6.8%	91.6%	1.6%	1.5%	14.9%	83.6%
WEEKDAY MD PEAK HOUR	10.9%	87.2%	1.9%	2.8%	11.0%	86.2%
WEEKDAY PM PEAK HOUR	9.4%	88.7%	1.8%	1.6%	12.1%	86.3%
WEEKDAY DAY	9.1%	89.1%	1.8%	1.5%	13.1%	85.4%

**Figure 35** through **Figure 39** provide the Artesia traffic volumes. **Figure 40** through **Figure 44** provide the sum of the 2025, Ritz-Carlton and Palmeraie, and Artesia traffic volumes.

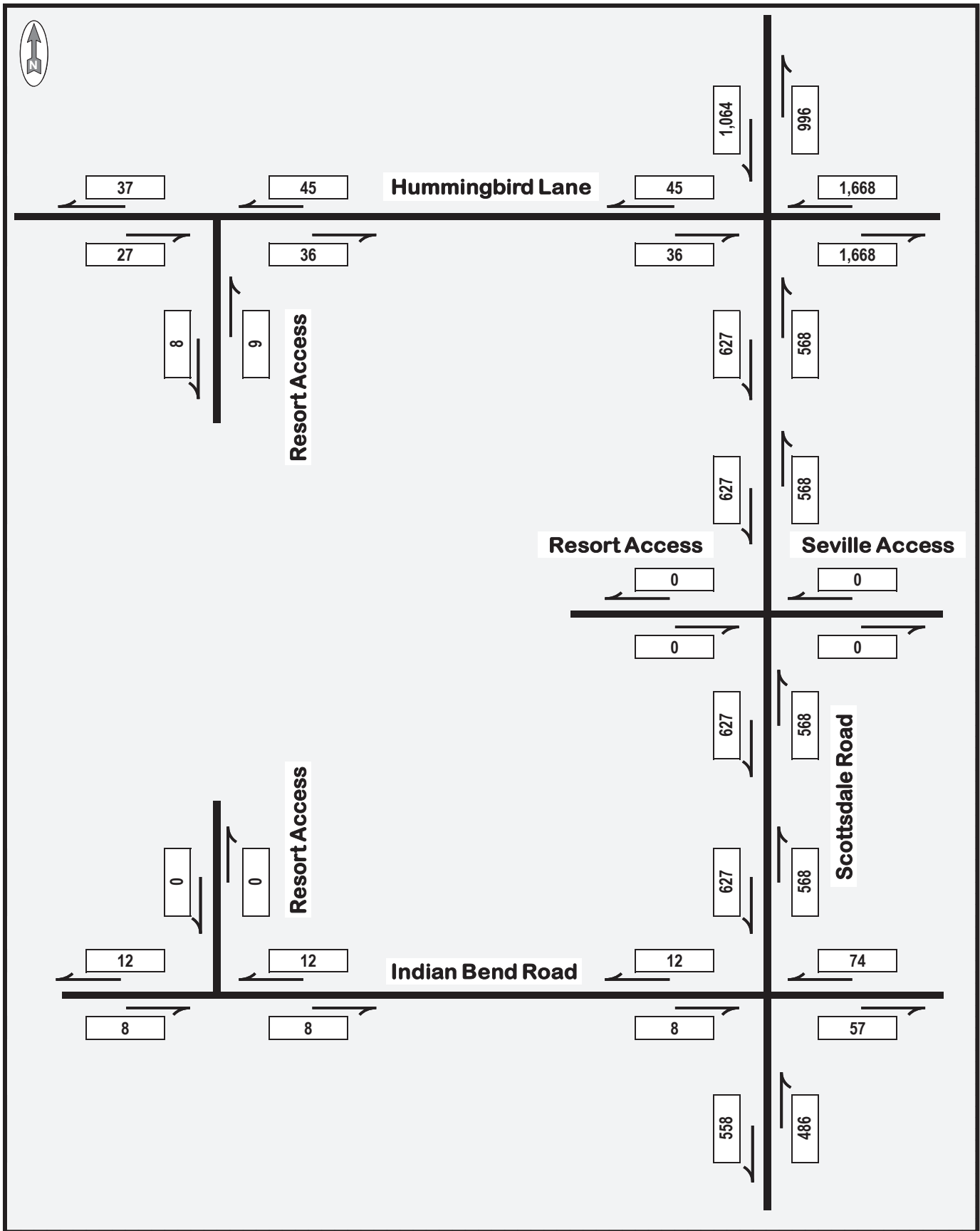


Figure 35: Artesia Day Approach and Departure Volumes

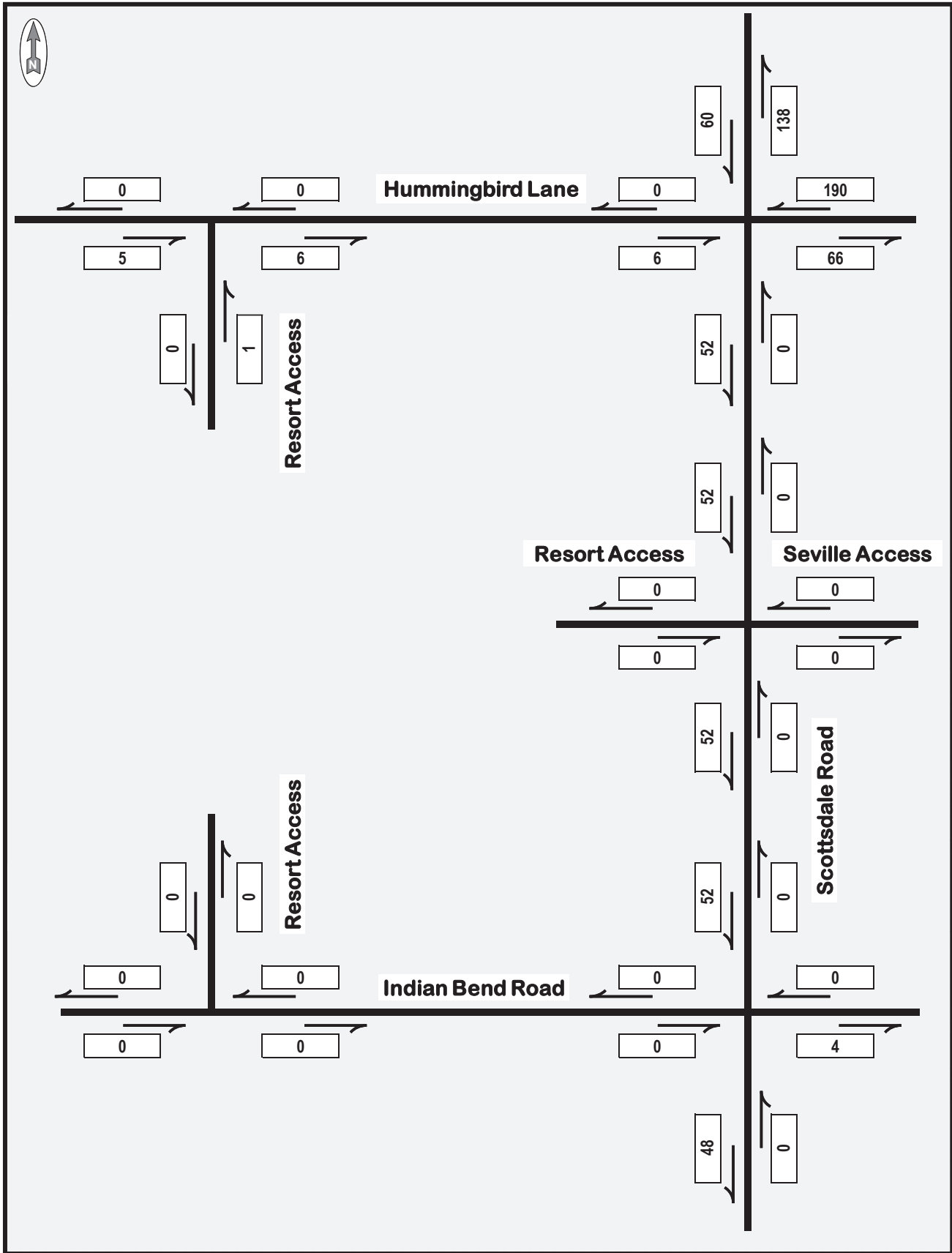


Figure 36: Artesia AM Peak Hour Approach and Departure Volumes

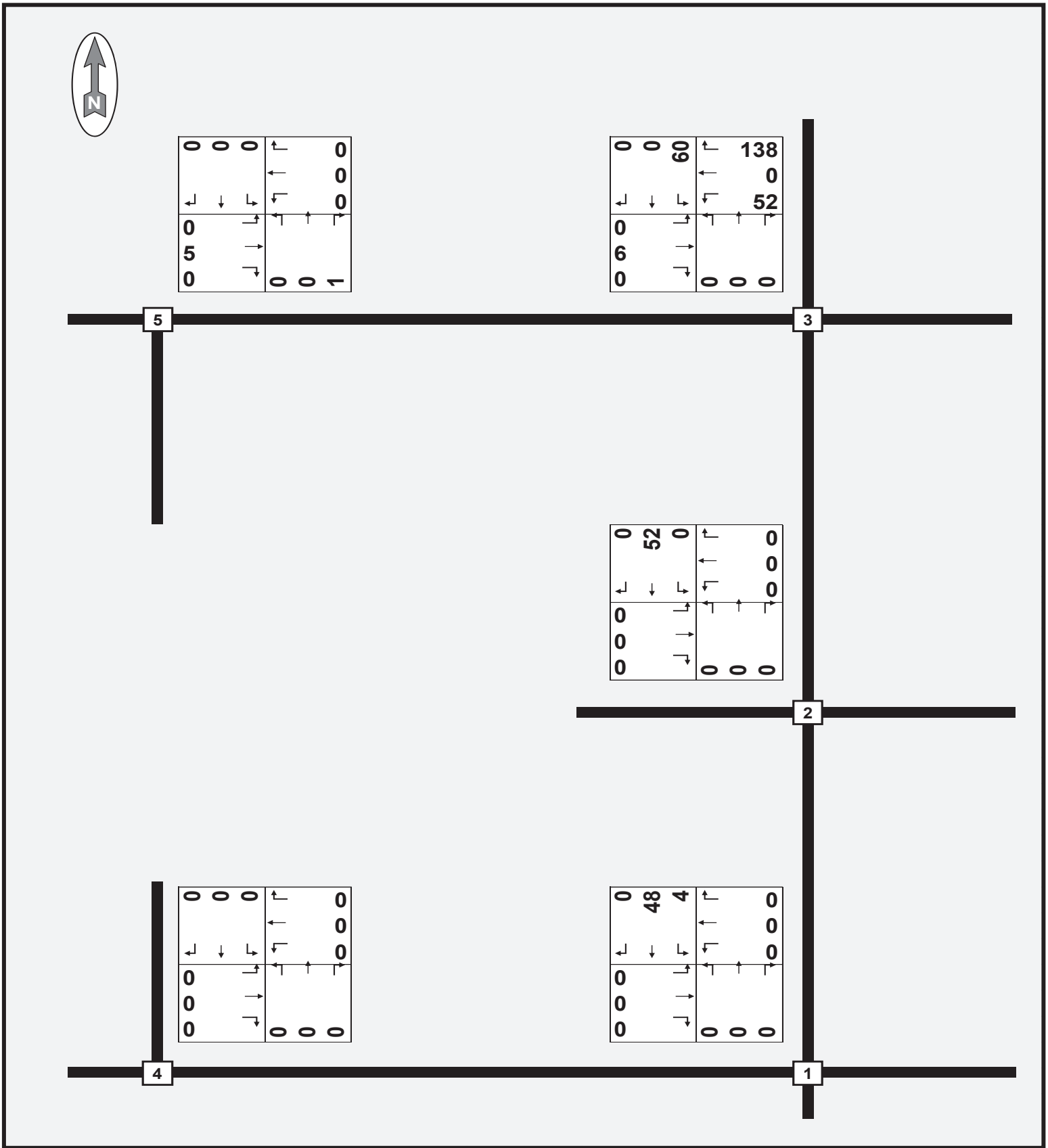


Figure 37: Artesia AM Peak Hour Turning Movement Volumes

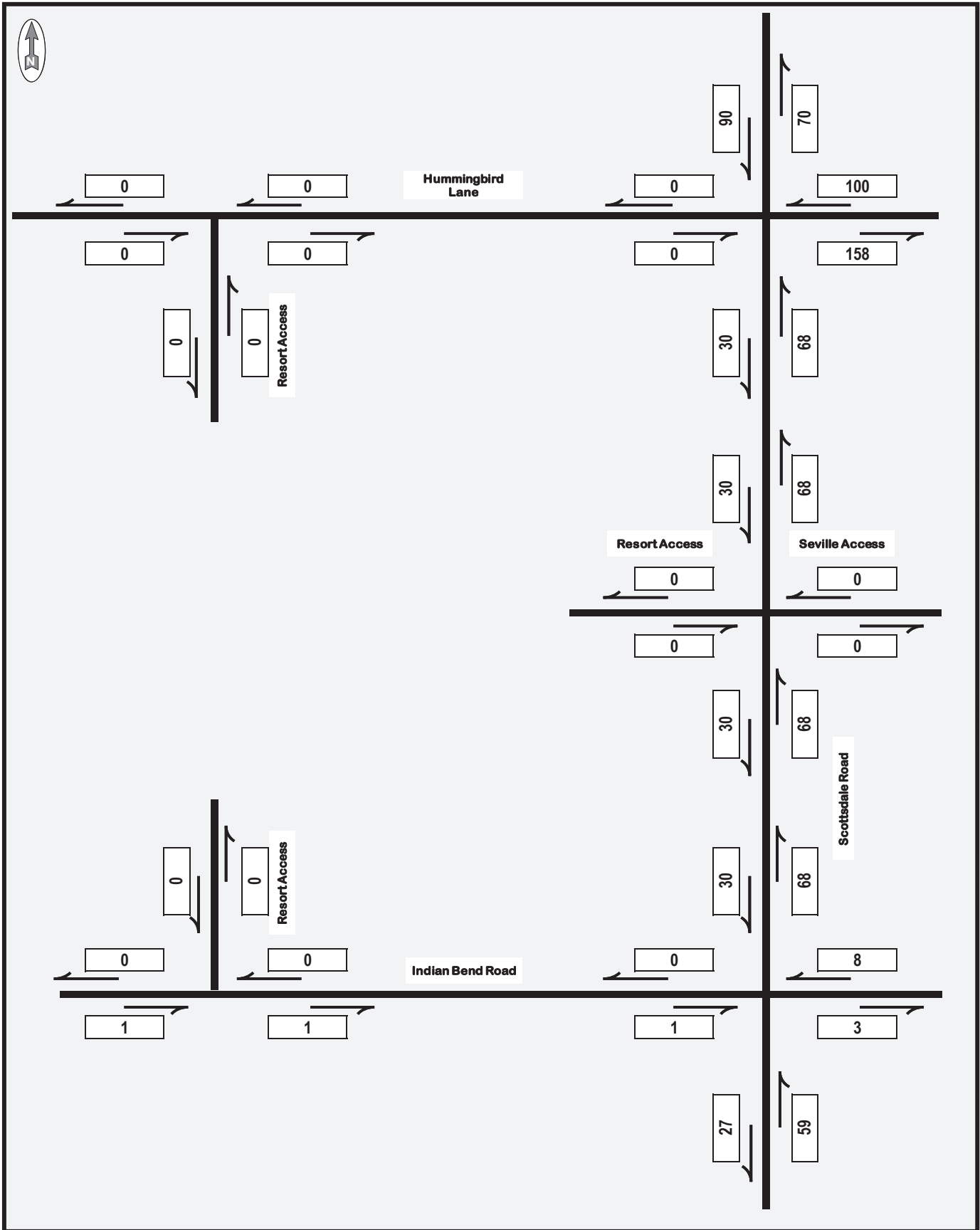


Figure 38: Artesia PM Peak Hour Approach and Departure Volumes





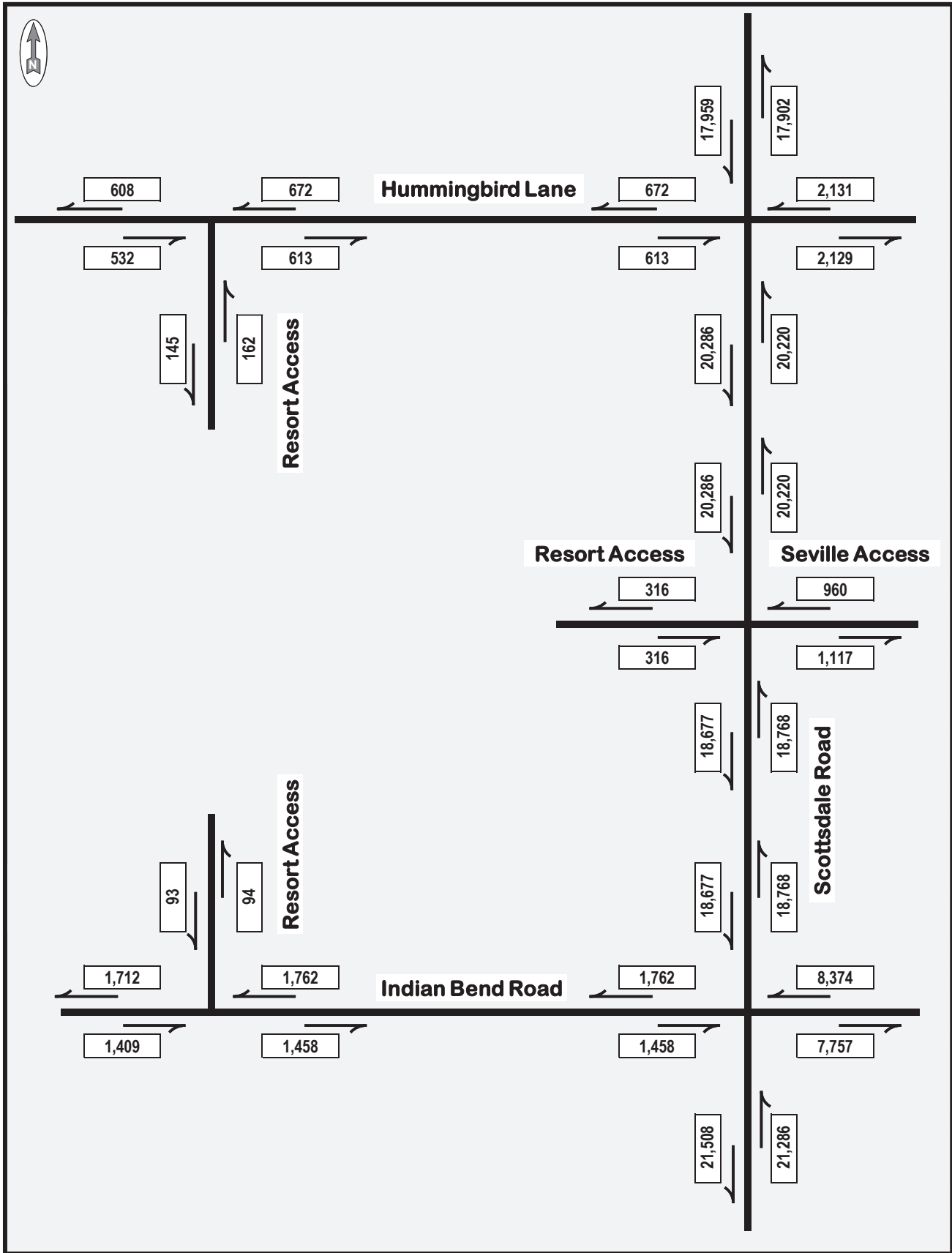


Figure 40: 2025 Plus Vicinity Developments Day Approach and Departure Volumes

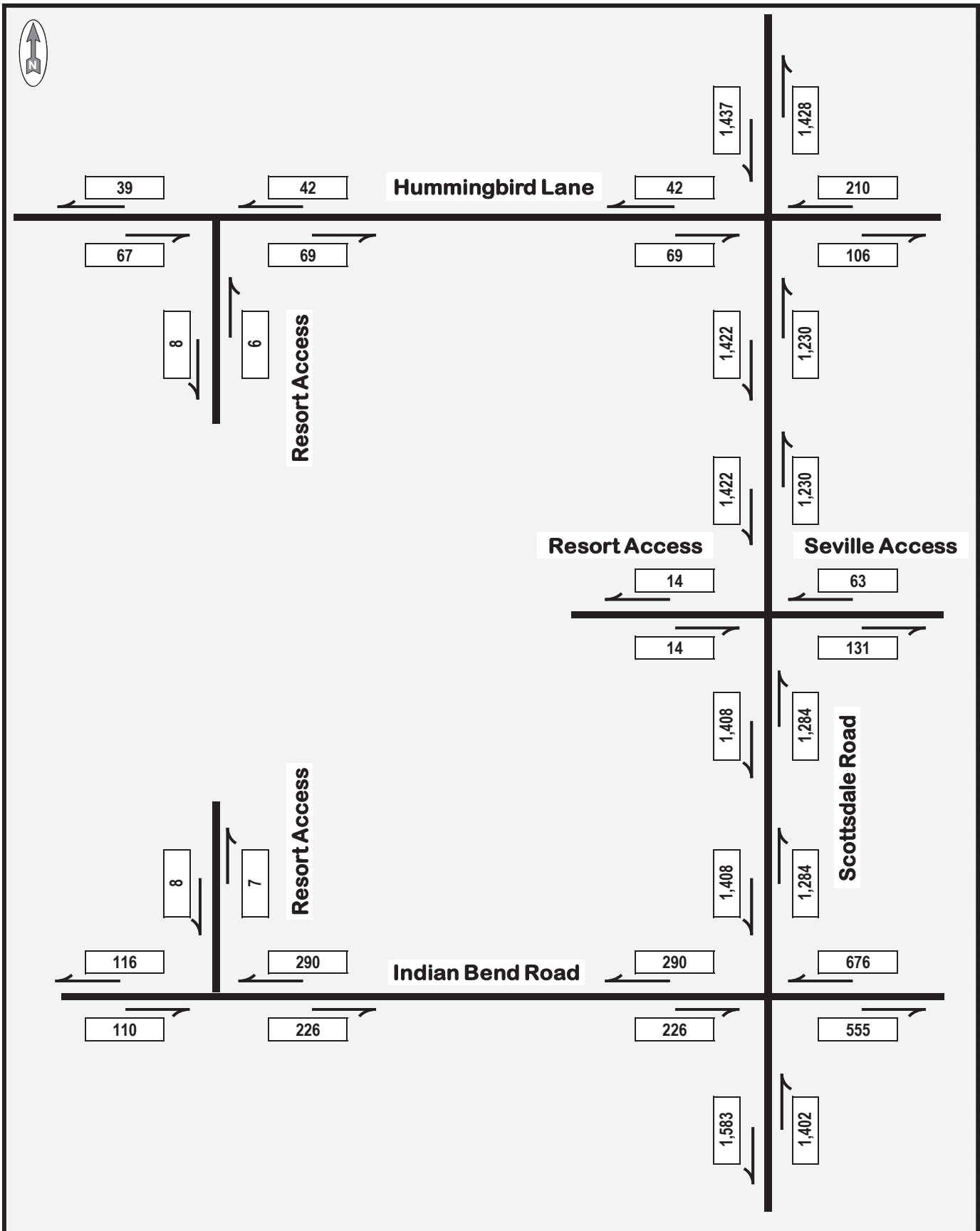


Figure 41: 2025 Plus Vicinity Developments AM Peak Hour Approach and Departure Volumes

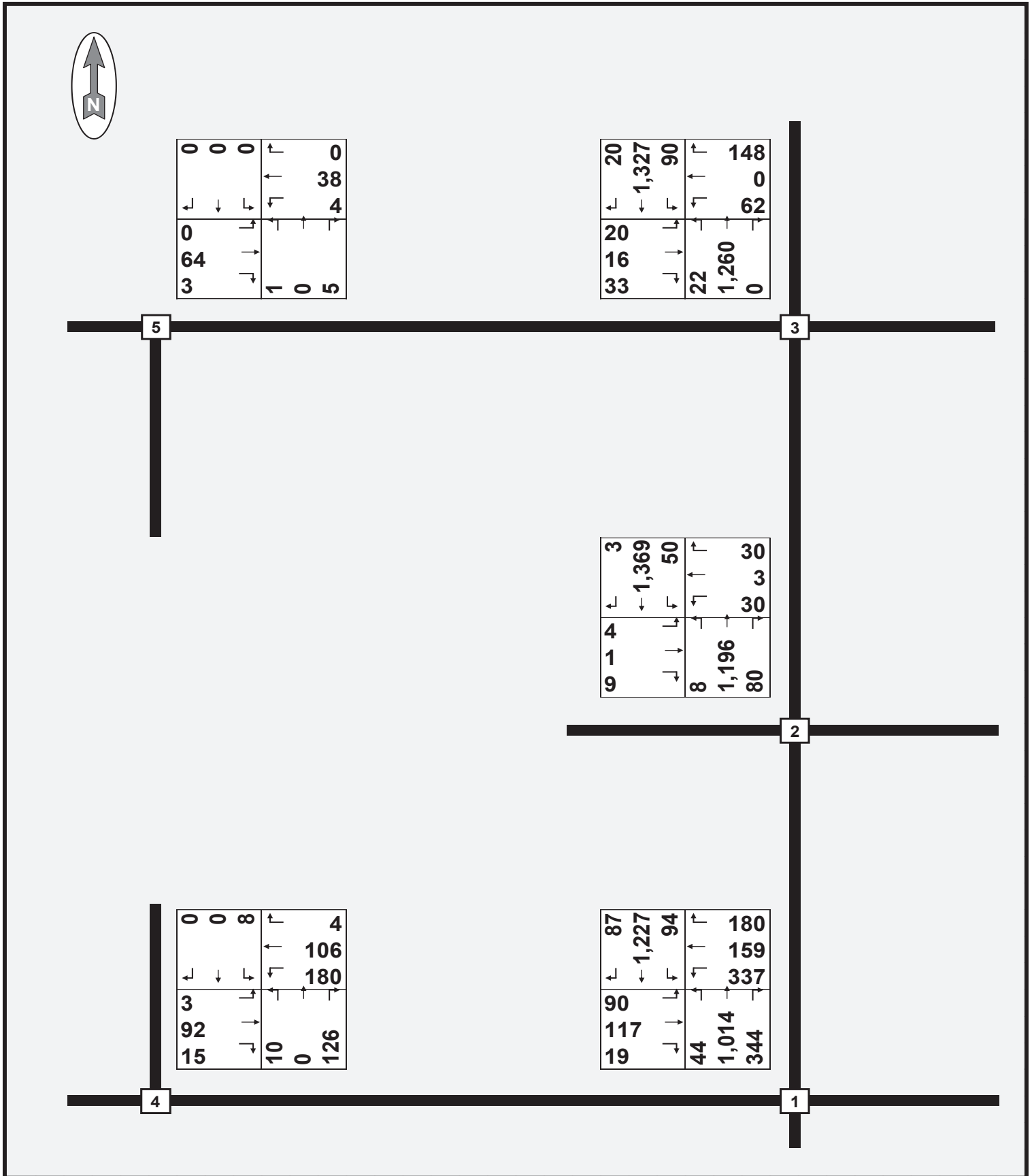


Figure 42: 2025 Plus Vicinity Developments AM Peak Hour Turning Movement Volumes

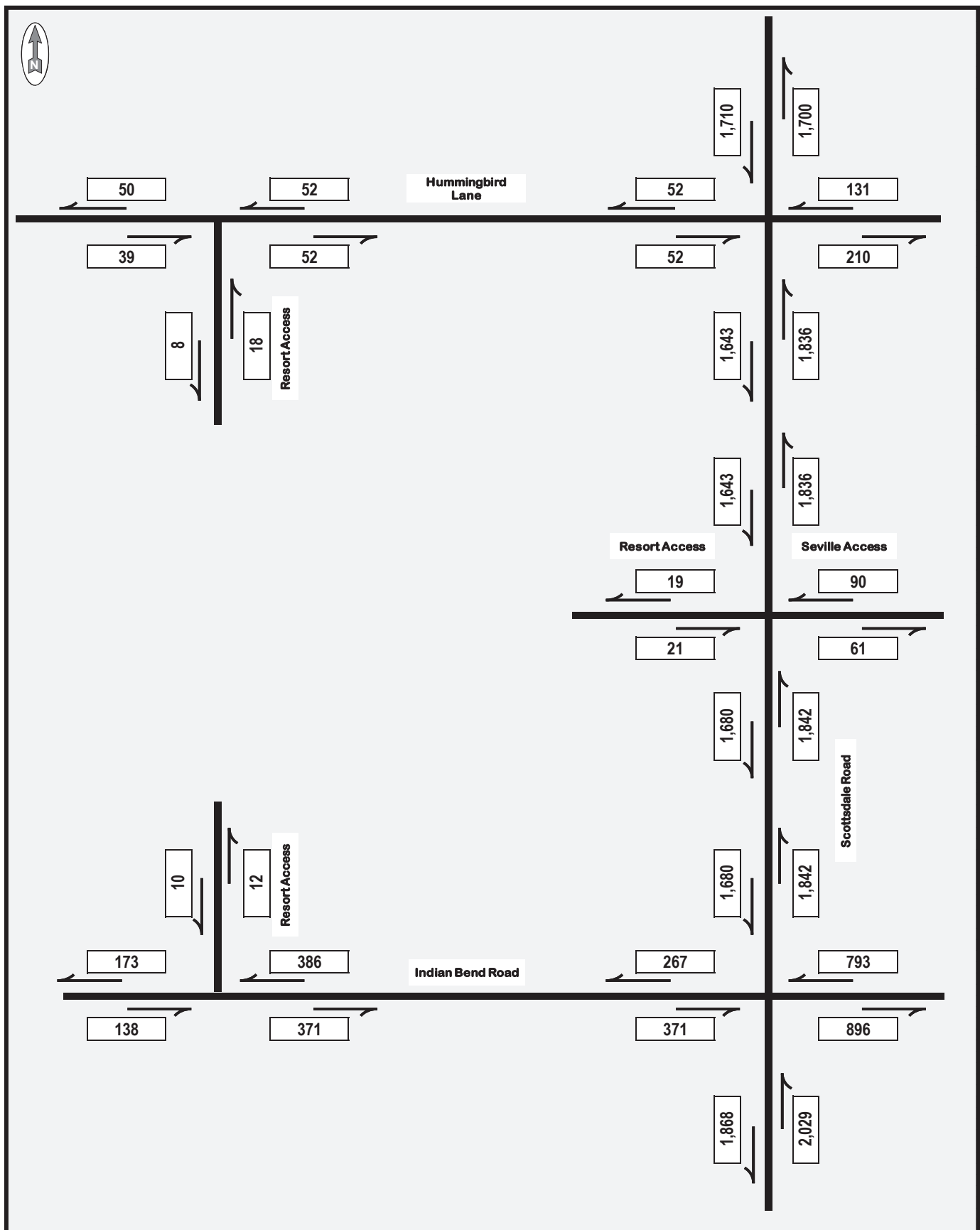


Figure 43: 2025 Plus Vicinity Developments PM Peak Hour Approach and Departure Volumes



### ***Proposed Renovated Scottsdale Plaza Resort Estimated Trip Generation***

The estimated trip generation for the proposed renovated Scottsdale Plaza Resort was determined through the procedures and data contained within the Institute of Transportation Engineers *Trip Generation Manual, 11<sup>th</sup> Edition*, published in 2021. This document provides traffic volume data from existing developments throughout the United States and Canada, from 1980 through 2021, that can be utilized to estimate trips from proposed developments. The traffic data are provided for 179 land use categories separated into 10 major land use categories. The estimated traffic volume is dependent upon independent variables defined by the characteristics and size of each land use category. Data are typically provided for five (5) weekday time periods and four (4) weekend time periods.

The hotel land use category, code 310, was utilized for this analysis. Three (3) additional categories were considered: All Suites Hotel, code 311; Business Hotel, code 312; and Resort Hotel, code 330. The Scottsdale Plaza Resort serves multiple functions including leisure, conferences, and events. Its reputation is as a resort hotel. However, the *Trip Generation Manual* description of Resort Hotel specifically excludes conference and meeting rooms. The Scottsdale Plaza Resort has conference and meeting rooms. Recognizing that one of the primary purposes of the expansion is to provide additional conference and meeting room area to support both the existing hotel room number and the expanded room number, Hotel code 310 is appropriate. Additionally, of the four (4) categories, Hotel code 310, has the highest trip generation rates.

Previously, the Scottsdale Plaza Resort included a separate restaurant. However, the current property does not include a separate restaurant. Therefore, the trip generation for the renovated Scottsdale Plaza Resort includes three (3) restaurants of total area of 57,436 square feet. The most appropriate category in the *Trip Generation Manual* for these restaurants is Fine Dining, code 931.

**Appendix C** provides the complete hotel trip generation calculations and are summarized in **Table 33**.

**Table 33: Trip Generation for Renovated Scottsdale Plaza Resort**

TIME PERIOD	HOTEL			RESTAURANTS			TOTAL		
	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
WEEKDAY	87	87	174	2,408	2,407	4,815	2,495	2,494	4,989
AM PEAK HOUR STREET	4	4	8	34	8	42	38	12	50
PM PEAK HOUR STREET	7	7	14	300	148	448	307	155	462
SATURDAY	150	150	300	2,586	2,586	5,172	2,736	2,736	5,472
PEAK HOUR GENERATOR	6	8	14	362	251	613	368	259	627

### ***Proposed Renovated Scottsdale Plaza Resort Estimated Traffic Assignment***

The renovated Scottsdale Plaza Resort turning movements at each of the three (3) study intersections during the three (3) peak hours was assumed to be equal to the existing turning movement percentages at each of the study intersections.

**Table 34** provides the existing turning movement percentages at the Scottsdale Road / Scottsdale Plaza Resort intersection that were utilized to distribute the renovated Scottsdale Resort Plaza additional traffic.

**Table 34: Scottsdale / Plaza Resort Existing Turning Percentages for Resort Trip Distribution**

EXISTING TRIP DISTRIBUTION AT SCOTTSDALE / PLAZA RESORT						
	EB, WEST OF SCOTTSDALE			WB, EAST OF SCOTTSDALE		
	EB LEFT	EB THRU	EB RIGHT	WB THRU	NB LEFT	SB RIGHT
WEEKDAY AM PEAK HOUR	28.6%	7.1%	64.3%	57.1%	21.4%	21.4%
WEEKDAY MD PEAK HOUR	22.2%	0.0%	77.8%	70.6%	29.4%	0.0%
WEEKDAY PM PEAK HOUR	38.1%	4.8%	57.1%	73.7%	26.3%	0.0%
WEEKDAY DAY	24.7%	5.4%	69.9%	71.5%	25.3%	3.2%

At the Scottsdale / Hummingbird intersection all entering traffic was assigned to southbound straight and all exiting traffic was assigned to northbound straight.

**Table 35** provides the existing turning movement percentages at the Scottsdale / Indian Bend intersection that were utilized to distribute the renovated Scottsdale Resort Plaza additional traffic. The exiting traffic will be southbound, and the entering traffic will be northbound.

**Table 35: Scottsdale / Indian Bend Existing Turning Percentages for Resort Trip Distribution**

EXISTING TRIP DISTRIBUTION AT SCOTTSDALE / INDIAN BEND						
	SB, NORTH OF INDIAN BEND			NB, NORTH OF INDIAN BEND		
	SB LEFT	SB THRU	SB RIGHT	EB LEFT	WB RIGHT	NB THRU
WEEKDAY AM PEAK HOUR	6.8%	91.6%	1.6%	1.5%	14.9%	83.6%
WEEKDAY MD PEAK HOUR	10.9%	87.2%	1.9%	2.8%	11.0%	86.2%
WEEKDAY PM PEAK HOUR	9.4%	88.7%	1.8%	1.6%	12.1%	86.3%
WEEKDAY DAY	9.1%	89.1%	1.8%	1.5%	13.1%	85.4%

**Figure 45** through **Figure 49** provide the renovated Scottsdale Plaza Resort weekday traffic volumes respectively for the day approach and departure, morning peak hour approach and departure, morning peak hour turning movements, mid-day peak hour approach and departure, evening peak hour approach and departure, and evening peak hour turning movements.



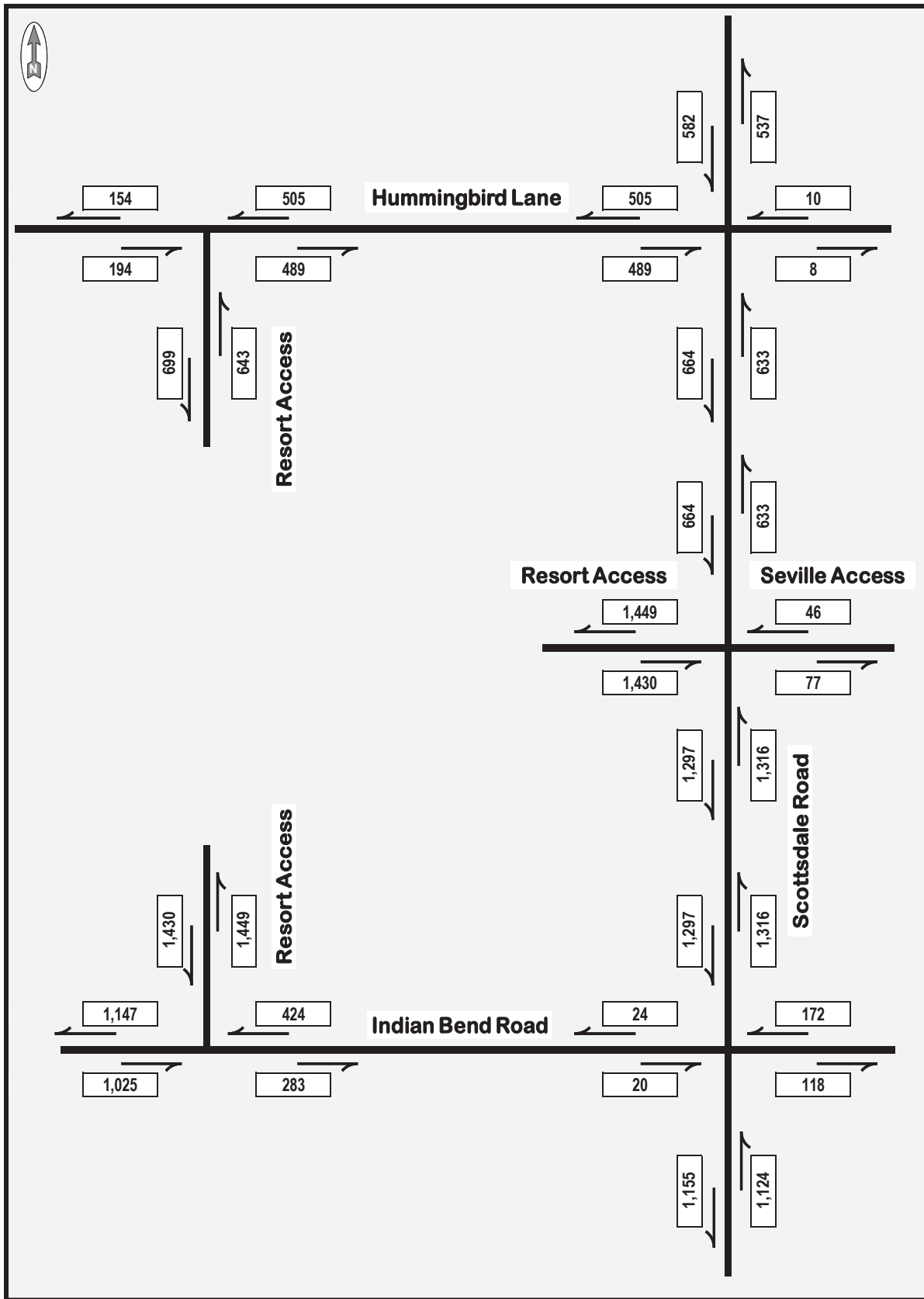


Figure 45: Resort Renovation Approach and Departure Volumes Day

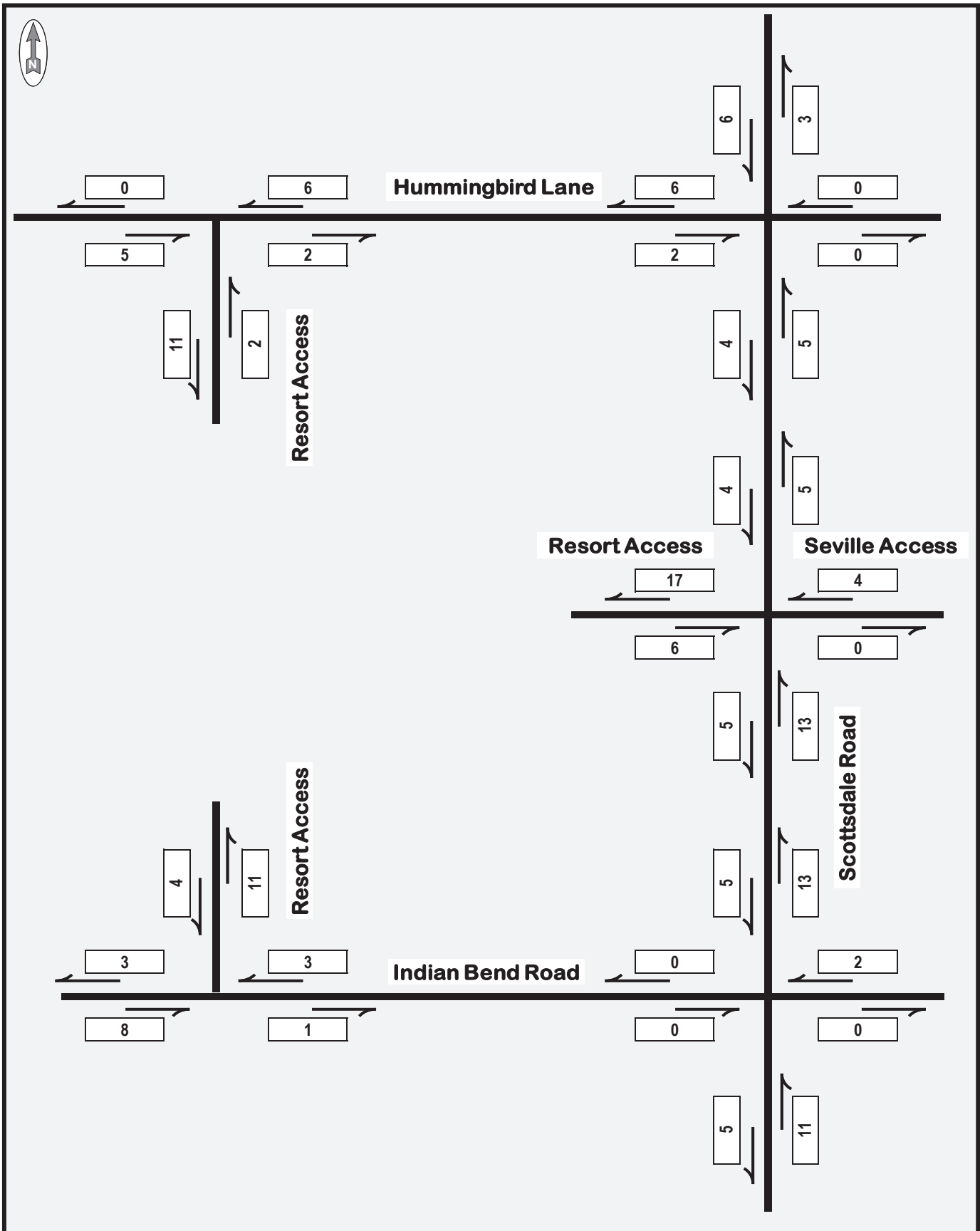


Figure 46: Resort Renovation Approach and Departure Volumes Morning Peak Hour

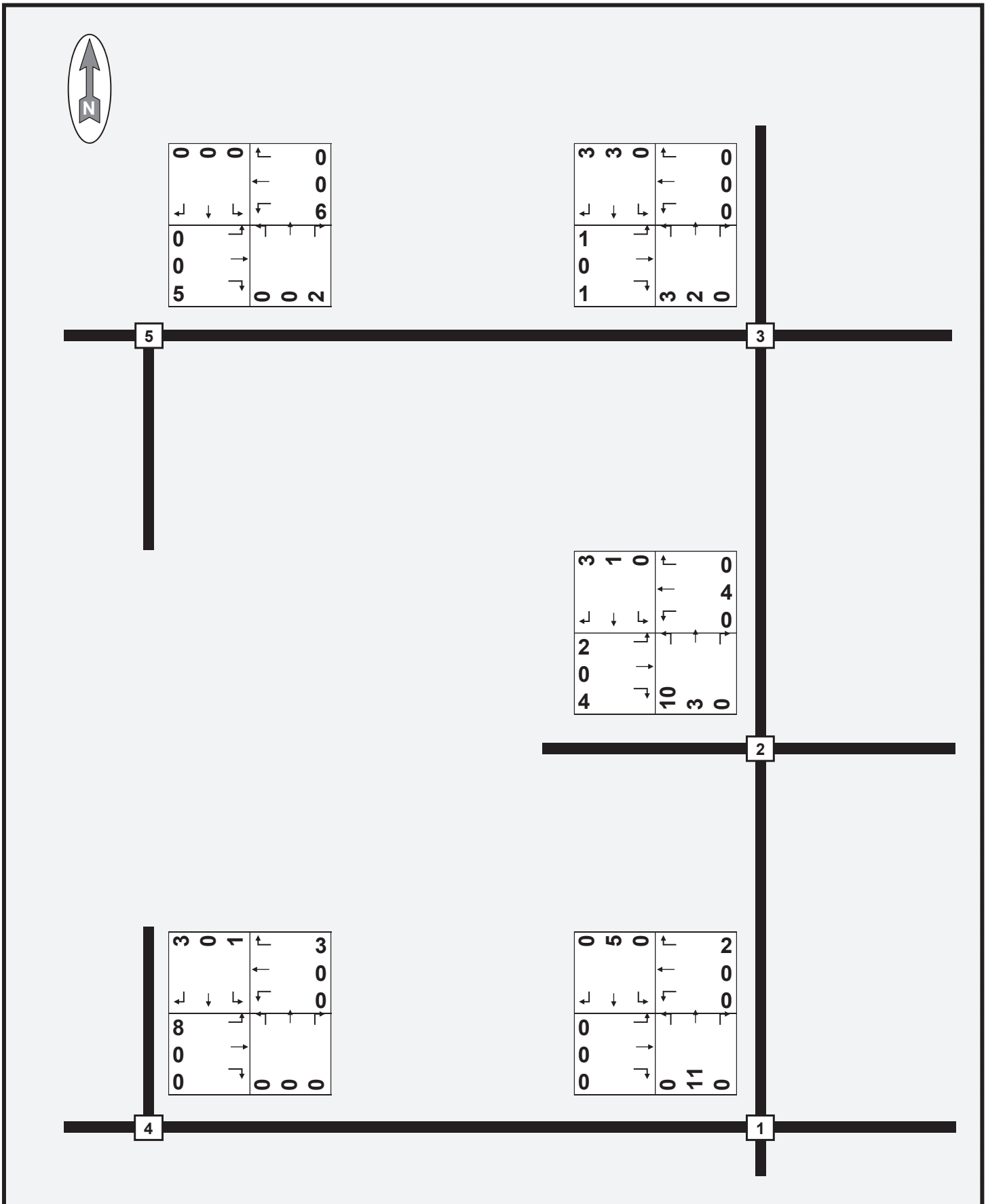


Figure 47: Resort Renovation Turning Volumes Morning Peak Hour

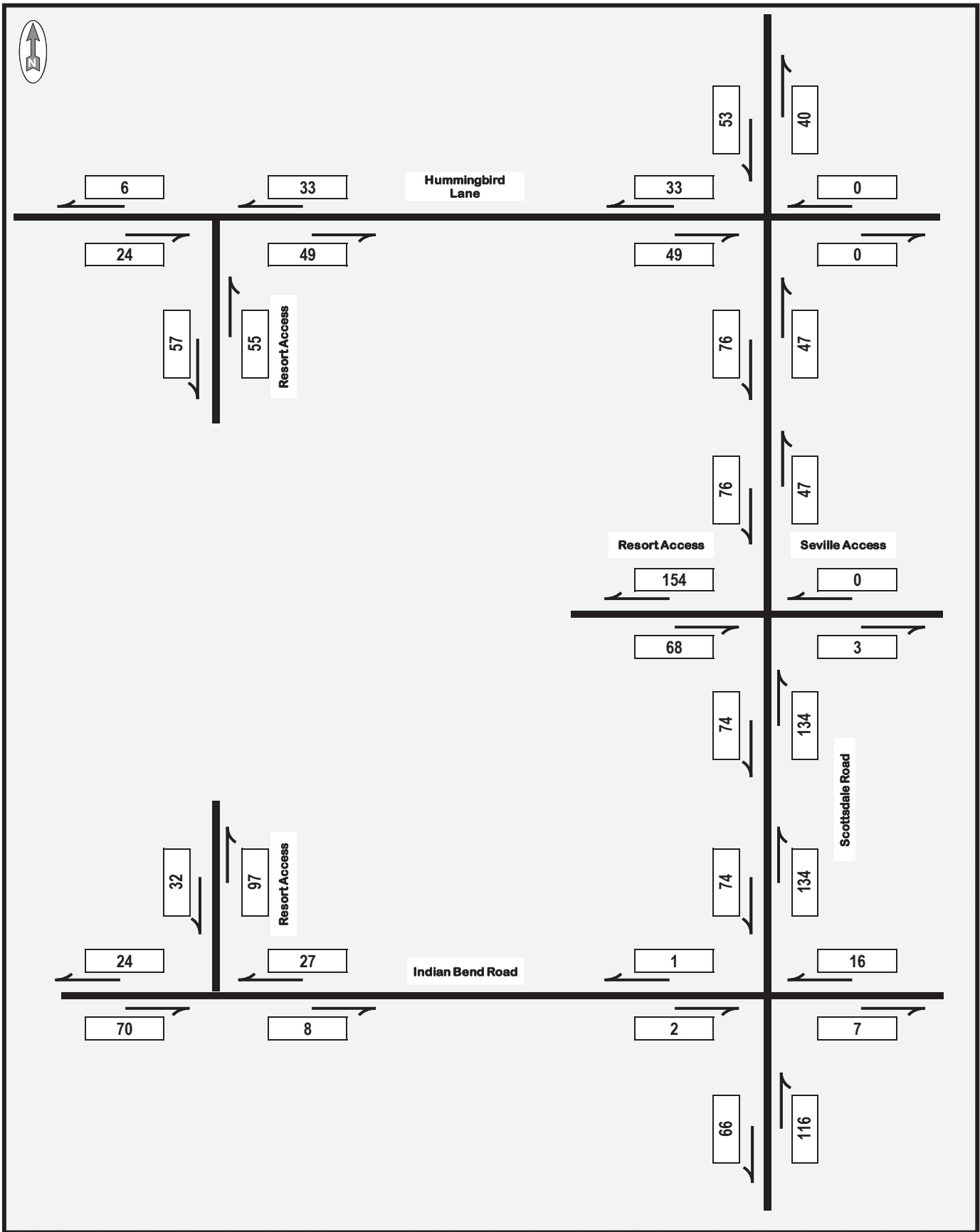


Figure 48: Resort Renovation Approach and Departure Volumes Evening Peak Hour

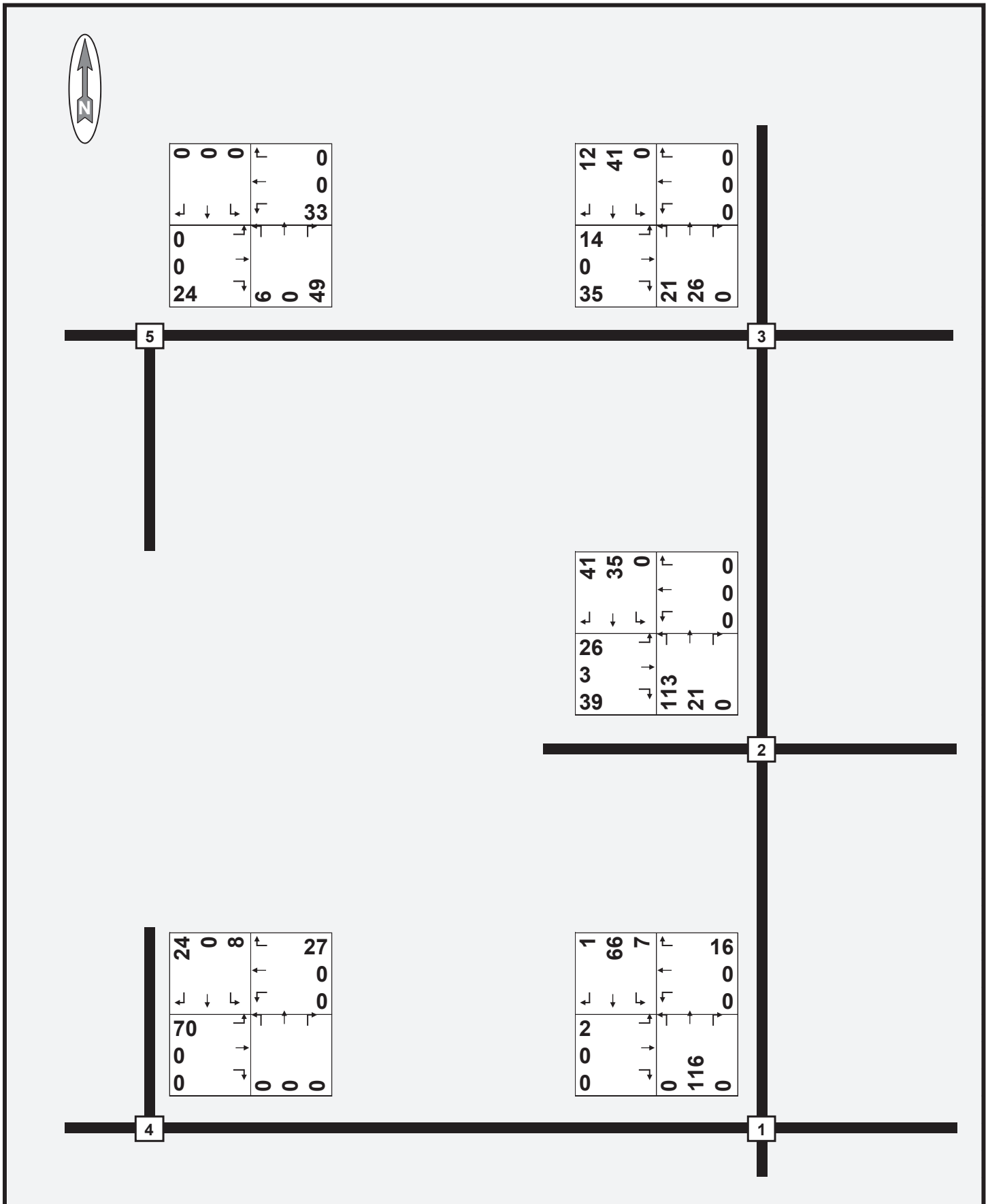


Figure 49: Resort Renovation Turning Volumes Evening Peak Hour

The ambient 2025 weekday traffic volumes plus the vicinity two (2) proposed developments plus the renovated Scottsdale Plaza Resort traffic volumes are provided in **Figure 50** through **Figure 54** for the day approach and departure, morning peak hour approach and departure, morning peak hour turning movements, mid-day peak hour approach and departure, mid-day peak hour turning movements, evening peak hour approach and departure, and evening peak hour turning movements.

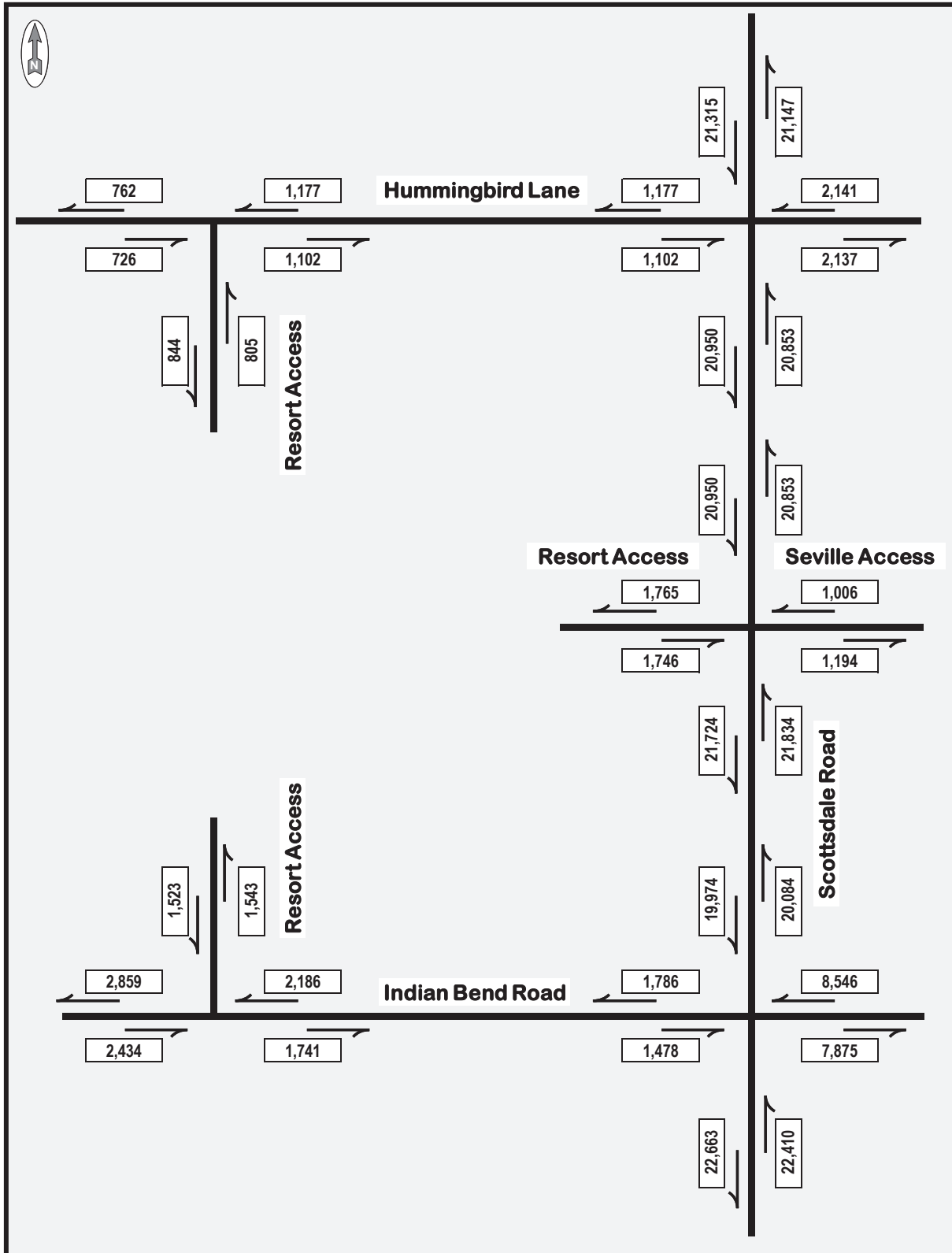


Figure 50: 2025 with Resort Renovation Approach and Departure Volumes Day

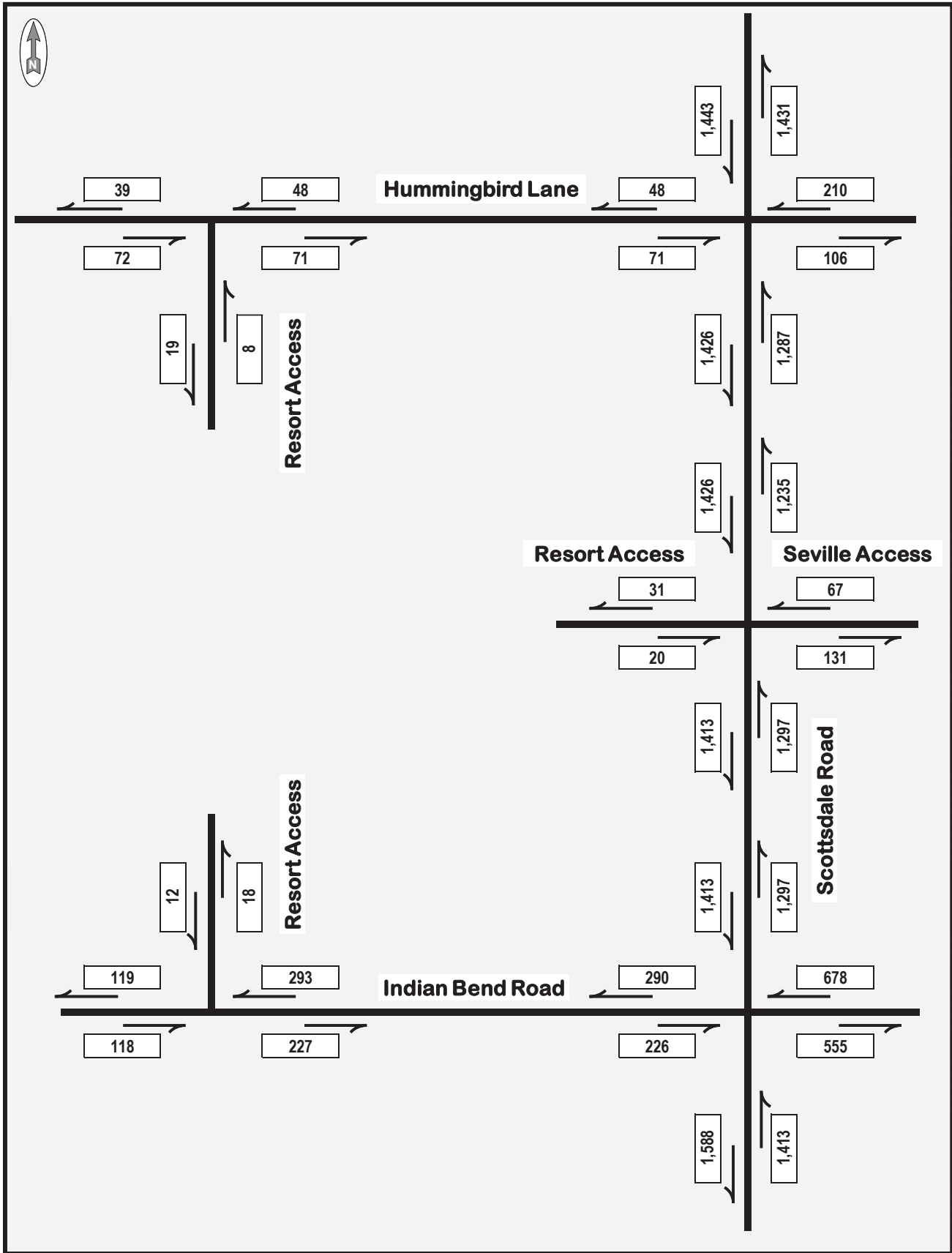


Figure 51: 2025 with Resort Renovation Approach and Departure Volumes Morning Peak Hour

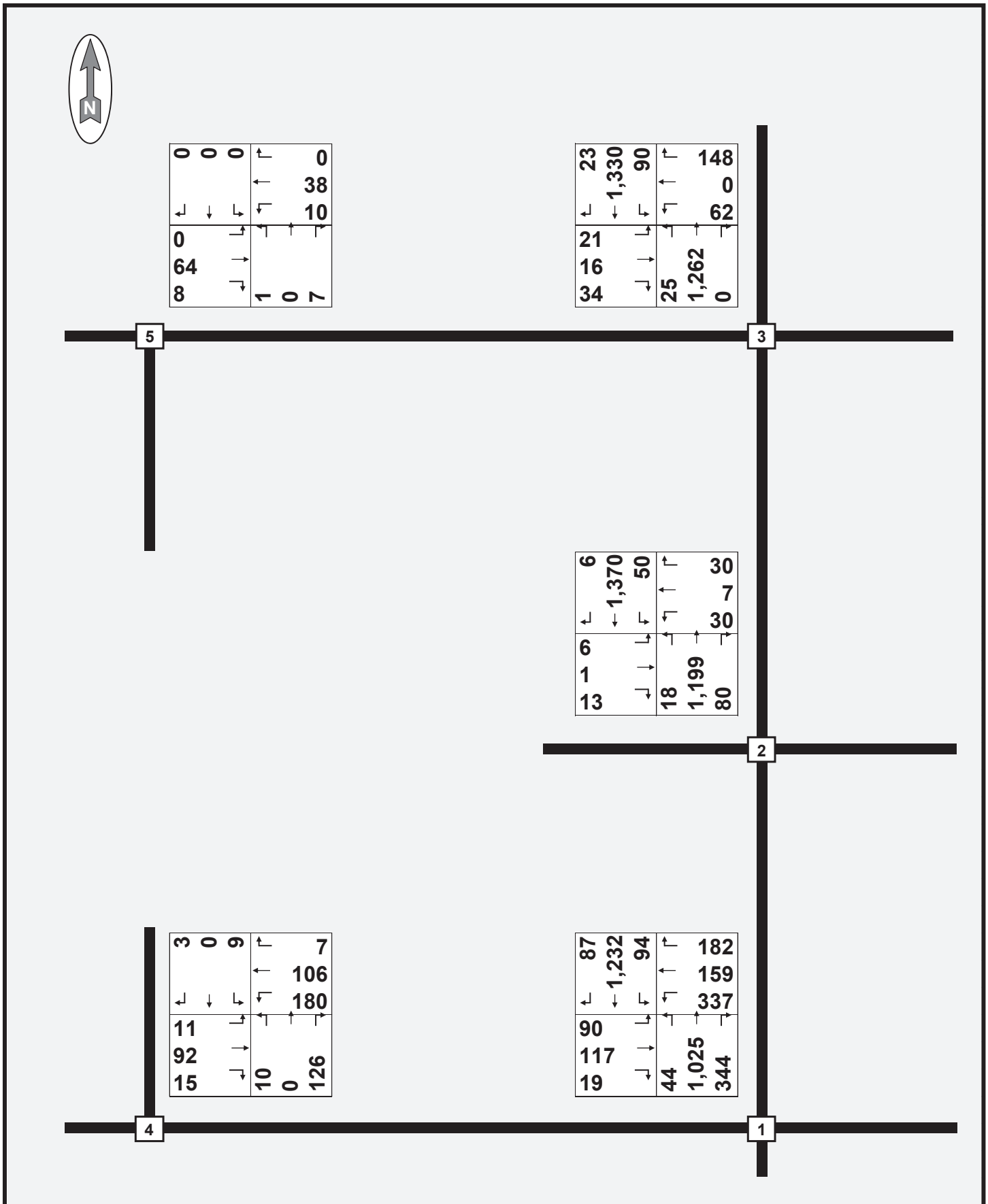


Figure 52: 2025 with Resort Renovation Turning Volumes Morning Peak Hour



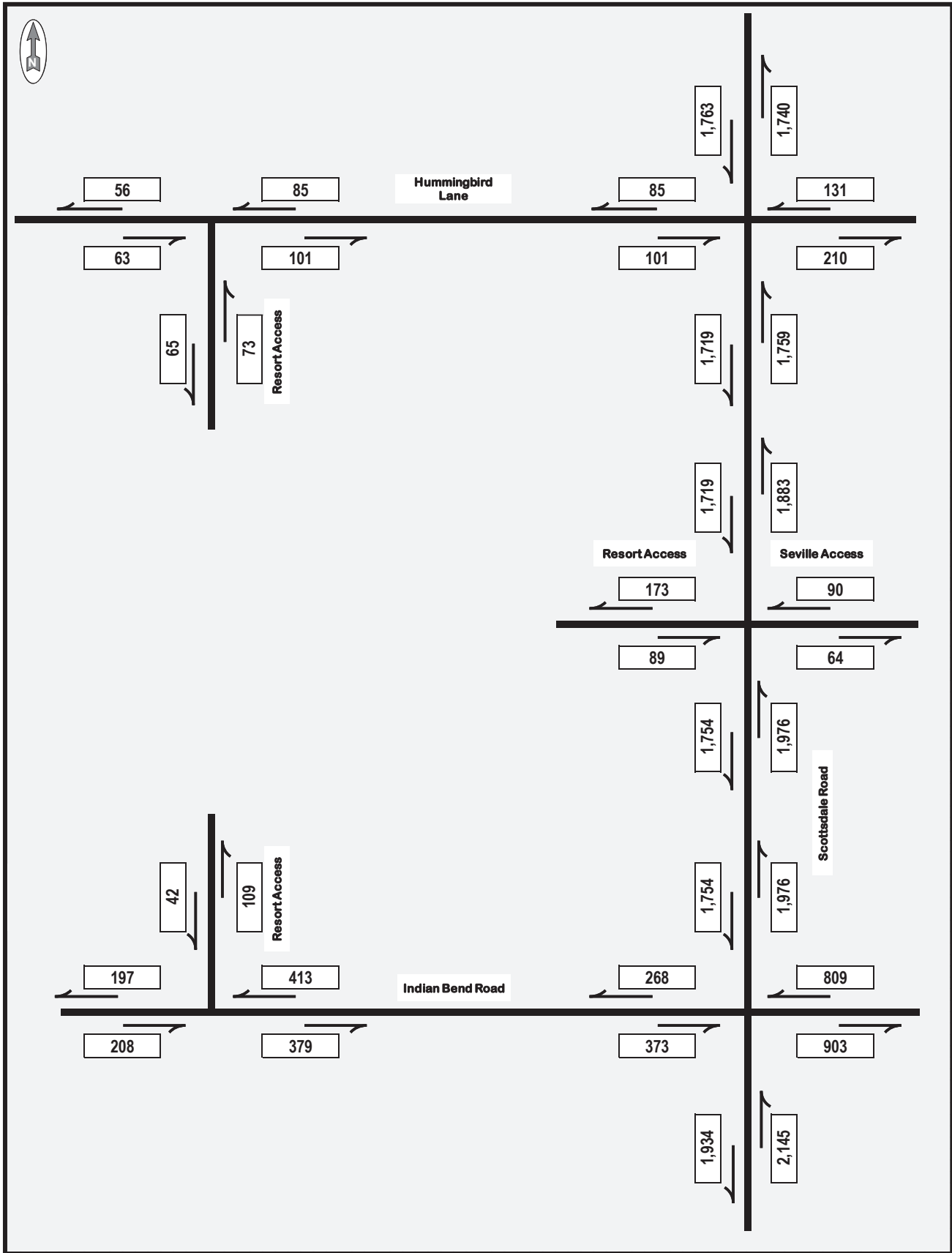


Figure 53: 2025 with Resort Renovation Approach and Departure Evening Peak Hour

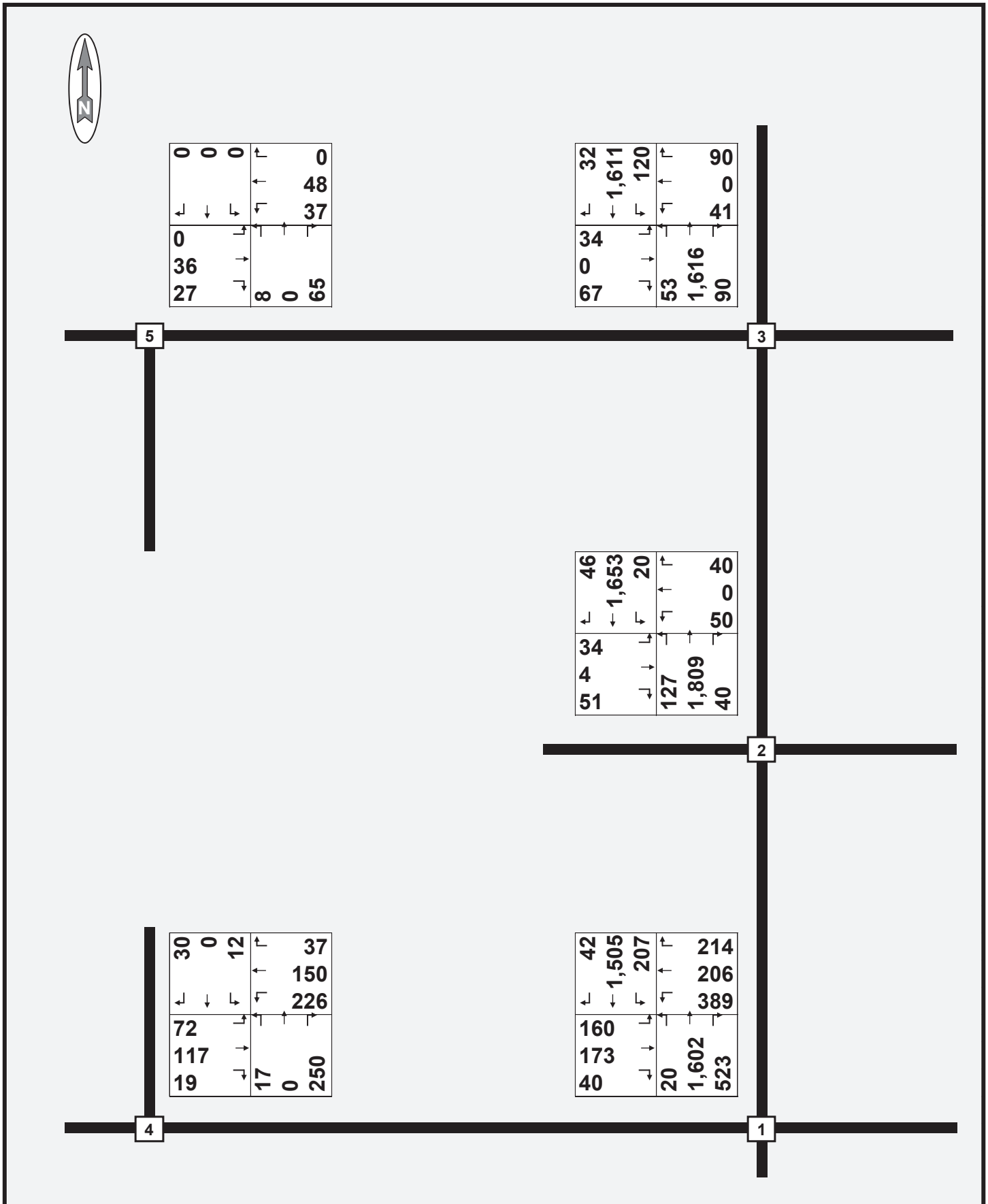


Figure 54: 2025 with Resort Renovation Turning Volumes Evening Peak Hour

## Traffic Signal Warrants

At the request of the City of Scottsdale, two (2) intersections were analyzed to determine if traffic signal warrants are satisfied. The intersection of Scottsdale Road with the primary access for the Scottsdale Plaza Resort was analyzed for the three (3) traffic counts days. The intersection of Scottsdale Road and Hummingbird Lane is planned to be the primary entrance for the Artesia. This intersection was analyzed for the existing conditions and several possible future conditions.

The *Manual on Uniform Traffic Control Devices* (MUTCD) as published by the United States Department of Transportation is the reference for determining the need for traffic signal installation throughout the United States. This document establishes nine (9) separate, related sets of criteria termed “warrants”. If none of the nine (9) warrants are satisfied, then a traffic signal should not be installed. If one or more of the warrants are satisfied, then a traffic signal might be appropriate. The warrants most frequently utilized for typical intersections are Warrant 1A, Minimum Vehicular Volume; 1B, Interruption of Continuous Traffic; Combination of 1A and 1B; 2, Four-Hour Vehicular Volumes.

**Appendix F.1** provides the complete analyses for the three (3) dates – Thursday 8-4-2022, Friday 8-5-2022, and Saturday 8-6-2022 – for the Scottsdale / Scottsdale Plaza Resort intersection. **Table 36** summarizes the signal warrant results for the warrants that consist of hourly volume and number of hours criteria.

**Table 36: Signal Warrant Results for Scottsdale / Scottsdale Plaza Resort**

ANALYSIS DATE	WARRANT	1A	1B	1A and 1B	2	WARRANTS
	REQUIRED HOURS	8	8	8	4	SATISFIED?
8-4 Thursday Existing	Actual Hours Met	0	2	0	0	NO
8-5 Friday Existing	Actual Hours Met	0	5	0	0	NO
8-6 Saturday Existing	Actual Hours Met	0	0	0	0	NO

The Scottsdale / Scottsdale Plaza Resort intersection is currently signalized, and has been for approximately 40 years. Warrant 7, the Crash Experience was also analyzed. This warrant consists of three (3) parts, all of which must be satisfied. One of the criteria is that five (5) or more collisions of a type susceptible to prevention by a traffic signal must occur in a twelve-consecutive-month period. At the Scottsdale / Scottsdale Plaza intersection, four (4) collisions occurred in each of calendar years 2016 and 2020, only one (1) of which in each year was potentially preventable by a traffic signal. Therefore, this criterion is not satisfied, nor is it anticipated to be satisfied because of the signal presence.

The intersection of Scottsdale Road and the Scottsdale Plaza Resort Access was analyzed with the planned renovations to determine if the existing signal would be warranted. The Manual on Uniform Traffic Control Devices requires a minimum of 16 hours of traffic data, and preferably with 24 hours of data. Therefore, the additional trip generation from the hotel room increase and the proposed restaurants must be expanded from only the day and two (2) peak hours to 24 hours of data. The existing traffic counts and previously determined day trip generation were utilized.

The existing 24-hour traffic counts at the Scottsdale / Scottsdale Plaza Resort (7025 North Scottsdale) intersection were determined from the data contained in **Appendix F.2**, for Friday, 5 August 2022. **Table 37** provides the 5 August 2022 traffic count data for the four (4) Scottsdale Plaza Resort movements.

**Table 37: 7025 N. Scottsdale Road, Friday 8-5-2022 Plaza Resort Only Traffic Hourly Counts**

EXISTING SCOTTSDALE ROAD AND PLAZA RESORT ACCESS				
BEGIN TIME	EB LEFT	EB RIGHT	NB LEFT	SB RIGHT
12:00 AM	1	3	1	2
1:00 AM	0	1	0	1
2:00 AM	1	0	0	0
3:00 AM	0	1	2	0
4:00 AM	1	3	2	0
5:00 AM	1	2	5	0
6:00 AM	5	7	8	2
7:00 AM	2	7	7	2
8:00 AM	7	8	11	2
9:00 AM	8	15	15	5
10:00 AM	6	17	18	4
11:00 AM	4	17	20	3
12:00 PM	3	28	30	10
1:00 PM	7	26	20	5
2:00 PM	7	13	19	8
3:00 PM	23	16	18	8
4:00 PM	2	13	24	7
5:00 PM	9	23	25	16
6:00 PM	5	18	22	7
7:00 PM	6	12	17	5
8:00 PM	8	20	24	4
9:00 PM	4	18	12	4
10:00 PM	3	11	20	7
11:00 PM	3	4	7	0
TOTAL	116	283	327	102

Also necessary is to determine the percentage of the total Scottsdale Plaza Resort traffic that utilized the 7025 North Scottsdale Road access. **Table 38** provides these percentages.

The existing percentages of total site traffic entering and exiting at the Scottsdale Road Plaza Resort access provided in **Table 38** were applied to the new 74 hotel guest room entering daily traffic of 256 vehicles and 256 exiting daily vehicles as provided in **Appendix E**. These new hourly vehicles are provided in **Table 39**.

**Table 38: 7025 N. Scottsdale Road, Friday 8-5-2022 Portion of Total Site Hourly Counts**

PORTION OF TOTAL SITE TRAFFIC SCOTTSDALE ROAD AND PLAZA RESORT ACCESS						
BEGIN TIME	EB LEFT	EB RIGHT	EXITING ALL	NB LEFT	SB RIGHT	ENTERING ALL
12:00 AM	20.0%	60.0%	80.0%	33.3%	66.7%	100.0%
1:00 AM	0.0%	100.0%	100.0%	0.0%	100.0%	100.0%
2:00 AM	100.0%	0.0%	100.0%	0.0%	0.0%	0.0%
3:00 AM	0.0%	50.0%	50.0%	100.0%	0.0%	100.0%
4:00 AM	25.0%	75.0%	100.0%	100.0%	0.0%	100.0%
5:00 AM	25.0%	50.0%	75.0%	41.7%	0.0%	41.7%
6:00 AM	26.3%	36.8%	63.2%	47.1%	11.8%	58.8%
7:00 AM	10.5%	36.8%	47.4%	21.2%	6.1%	27.3%
8:00 AM	30.4%	34.8%	65.2%	42.3%	7.7%	50.0%
9:00 AM	19.5%	36.6%	56.1%	41.7%	13.9%	55.6%
10:00 AM	14.3%	40.5%	54.8%	46.2%	10.3%	56.4%
11:00 AM	8.5%	36.2%	44.7%	55.6%	8.3%	63.9%
12:00 PM	5.6%	51.9%	57.4%	57.7%	19.2%	76.9%
1:00 PM	13.2%	49.1%	62.3%	50.0%	12.5%	62.5%
2:00 PM	18.4%	34.2%	52.6%	44.2%	18.6%	62.8%
3:00 PM	39.0%	27.1%	66.1%	40.0%	17.8%	57.8%
4:00 PM	4.4%	28.9%	33.3%	52.2%	15.2%	67.4%
5:00 PM	16.1%	41.1%	57.1%	47.2%	30.2%	77.4%
6:00 PM	12.8%	46.2%	59.0%	53.7%	17.1%	70.7%
7:00 PM	25.0%	50.0%	75.0%	60.7%	17.9%	78.6%
8:00 PM	24.2%	60.6%	84.8%	61.5%	10.3%	71.8%
9:00 PM	14.3%	64.3%	78.6%	40.0%	13.3%	53.3%
10:00 PM	20.0%	73.3%	93.3%	69.0%	24.1%	93.1%
11:00 PM	15.8%	21.1%	36.8%	63.6%	0.0%	63.6%

**Table 39: 7025 N. Scottsdale Road, Additional 74 Hotel Rooms Hourly Traffic**

BEGIN TIME	HOTEL SCOTTSDALE ROAD AND PLAZA RESORT ACCESS					
	TOTAL		EB LEFT	EB RIGHT	NB LEFT	SB RIGHT
	EXITING	ENTERING				
12:00 AM	0.7%	0.5%	0	1	0	1
1:00 AM	0.1%	0.2%	0	0	0	0
2:00 AM	0.1%	0.0%	0	0	0	0
3:00 AM	0.3%	0.3%	0	0	1	0
4:00 AM	0.6%	0.3%	0	1	1	0
5:00 AM	0.6%	1.8%	0	1	2	0
6:00 AM	2.8%	2.6%	2	3	3	1
7:00 AM	2.8%	5.0%	1	3	3	1
8:00 AM	3.4%	3.9%	3	3	4	1
9:00 AM	6.1%	5.4%	3	6	6	2
10:00 AM	6.3%	5.9%	2	6	7	2
11:00 AM	7.0%	5.4%	2	6	8	1
12:00 PM	8.0%	7.8%	1	11	12	4
1:00 PM	7.9%	6.0%	3	10	8	2
2:00 PM	5.7%	6.5%	3	5	7	3
3:00 PM	8.8%	6.8%	9	6	7	3
4:00 PM	6.7%	6.9%	1	5	9	3
5:00 PM	8.3%	8.0%	3	9	10	6
6:00 PM	5.8%	6.2%	2	7	8	3
7:00 PM	3.6%	4.2%	2	5	7	2
8:00 PM	4.9%	5.9%	3	8	9	2
9:00 PM	4.2%	4.5%	2	7	5	2
10:00 PM	2.2%	4.4%	1	4	8	3
11:00 PM	2.8%	1.7%	1	2	3	0
TOTAL	100.0%	100.0%	44	109	128	42

The existing percentages of total site traffic entering and exiting at the Scottsdale Road Plaza Resort access provided in **Table 38** were applied to the new restaurants entering daily traffic of 2,088 vehicles and 2,087 exiting daily vehicles as provided in **Appendix E**. The restaurants are currently planned to not serve breakfast except potentially for special events. The restaurants are currently planned to be dinner only, with the potential of providing lunch service at one of the restaurants. To ensure a conservatively low traffic volume estimate on the Scottsdale Plaza Resort approach, the restaurants were assumed to generate traffic from 10:00 AM to 2:00 AM. These new hourly vehicles are provided in **Table 40**.

**Table 40: 7025 N. Scottsdale Road, New Restaurants Hourly Traffic**

BEGIN TIME	RESTAURANT SCOTTSDALE ROAD AND PLAZA RESORT ACCESS					
	TOTAL		EB LEFT	EB RIGHT	NB LEFT	SB RIGHT
	EXITING	ENTERING				
12:00 AM	0.9%	0.6%	4	13	3	8
1:00 AM	0.2%	0.2%	0	5	0	6
2:00 AM	0.0%	0.0%	0	0	0	0
3:00 AM	0.0%	0.0%	0	0	0	0
4:00 AM	0.0%	0.0%	0	0	0	0
5:00 AM	0.0%	0.0%	0	0	0	0
6:00 AM	0.0%	0.0%	0	0	0	0
7:00 AM	0.0%	0.0%	0	0	0	0
8:00 AM	0.0%	0.0%	0	0	0	0
9:00 AM	0.0%	0.0%	0	0	0	0
10:00 AM	7.5%	7.3%	26	73	25	71
11:00 AM	8.4%	6.7%	17	73	14	58
12:00 PM	9.7%	9.7%	13	121	13	121
1:00 PM	9.5%	7.5%	30	112	24	88
2:00 PM	6.8%	8.0%	30	56	36	66
3:00 PM	10.6%	8.4%	99	69	79	55
4:00 PM	8.1%	8.6%	9	56	9	60
5:00 PM	10.0%	9.9%	39	99	38	98
6:00 PM	7.0%	7.6%	22	78	24	85
7:00 PM	4.3%	5.2%	26	52	31	63
8:00 PM	5.9%	7.3%	35	86	42	106
9:00 PM	5.0%	5.6%	17	78	19	87
10:00 PM	2.7%	5.4%	13	47	26	96
11:00 PM	3.4%	2.1%	13	17	8	10
TOTAL	100.0%	100.0%	393	1,035	391	1,078

The new hotel guest room and restaurant traffic was added to the existing traffic at the Scottsdale Road / Scottsdale Plaza Resort intersection. To remain conservatively low, the non-Scottsdale Plaza Resort traffic at the intersection was not increased. Furthermore, the existing northbound and southbound through traffic on Scottsdale Road already satisfies the major street warranting criteria, so additional traffic would be irrelevant. These results are provided in **Table 41**.

**Table 41: Total 7025 North Scottsdale Road Traffic with Resort Renovations**

EXISTING PLUS HOTEL PLUS RESTAURANT SCOTTSDALE ROAD AND PLAZA RESORT ACCESS				
BEGIN TIME	EB LEFT	EB RIGHT	NB LEFT	SB RIGHT
12:00 AM	5	17	4	11
1:00 AM	0	6	0	7
2:00 AM	1	0	0	0
3:00 AM	0	1	3	0
4:00 AM	1	4	3	0
5:00 AM	1	3	7	0
6:00 AM	7	10	11	3
7:00 AM	3	10	10	3
8:00 AM	10	11	15	3
9:00 AM	11	21	21	7
10:00 AM	34	96	50	77
11:00 AM	23	96	42	62
12:00 PM	17	160	55	135
1:00 PM	40	148	52	95
2:00 PM	40	74	62	77
3:00 PM	131	91	104	66
4:00 PM	12	74	42	70
5:00 PM	51	131	73	120
6:00 PM	29	103	54	95
7:00 PM	34	69	55	70
8:00 PM	46	114	75	112
9:00 PM	23	103	36	93
10:00 PM	17	62	54	106
11:00 PM	17	23	18	10
TOTAL	553	1,427	846	1,222

These hourly volumes were then compared to the traffic signal warrant criteria contained with the Manual on Uniform Traffic Control. The Manual suggest that right-turn volume be examined as many right-turning vehicles do not need a traffic signal to accomplish a right-turn. There for the analyses was first considered with 100% of the right-turning traffic, and then with 0% right-turning traffic. With 100% of right-turns included, warrants 1B, combination of 1A and 1B warrant, and warrant 2 were satisfied. With 0% of right-turning traffic included, only warrant 1B was satisfied, and then with only 8 hours satisfying the criteria – the minimum necessary.

Then the analysis was completed a third time determining the percentage of right-turning vehicles that would result in satisfying an additional warrant. If 15% of the right-turning traffic were included in the analysis, then warrant 2 would also be satisfied.

**Table 42** summarizes the results of the analysis. The complete analyses are provided in **Appendix F.1**.



**Table 42: Warrant Results for Scottsdale / Scottsdale Plaza Resort with Resort Renovations**

EB RIGHT-TURN PERCENTAGE	WARRANT	1A	1B	1A and 1B	2	WARRANTS
	REQUIRED HOURS	8	8	8	4	SATISFIED?
100%	Actual Hours Met	9	13	11	13	YES
0%	Actual Hours Met	1	8	1	2	YES
15%	Actual Hours Met	1	9	1	4	YES

The signal warrant analyses for the intersection of Scottsdale Road and the Scottsdale Plaza Resort access suggestions that the existing signal should remain with the renovated Scottsdale Plaza Resort.

The Scottsdale / Hummingbird intersection was analyzed for three (3) conditions for each of two (2) dates – Thursday 8-4-2022 and Friday 8-5-2022. The Manual on Uniform Traffic Control Devices requires a minimum of 16 hours of traffic data, and preferably with 24 hours of data. The Artesia trip generation must be expanded from the day and peak hours to 24 separate hours. The *Trip Generation Manual* provides percentage of daily trip generation arriving in each of the 24 hours. **Table 43** provides these data for both single-family and multi-family land uses.

**Table 43: Trip Generation for 24 Hours as a Percent of Day for Two Housing Land Uses**

<b>Hourly Distribution of Entering and Exiting Vehicle Trips</b> Source: ITE <i>Trip Generation Manual</i> , 11 <sup>th</sup> Edition				
Land Use Code	210		221	
Land Use	Single-Family Detached Housing		Multifamily Housing (Mid-Rise)	
Subcategory			Not Close to Rail transit	
Setting	General Urban/Suburban		General Urban/Suburban	
Time Period	Weekday		Weekday	
# Data Sites	7		6	
Time	Entering	Exiting	Entering	Exiting
12:00 - 1:00 AM	0.5%	0.2%	1.2%	0.4%
1:00 - 2:00 AM	0.2%	0.1%	0.6%	0.3%
2:00 - 3:00 AM	0.3%	0.1%	0.3%	0.1%
3:00 - 4:00 AM	0.2%	0.2%	0.2%	0.2%
4:00 - 5:00 AM	0.3%	0.8%	0.1%	0.5%
5:00 - 6:00 AM	0.5%	2.0%	0.4%	2.0%
6:00 - 7:00 AM	1.6%	5.8%	1.0%	7.8%
7:00 - 8:00 AM	3.1%	10.0%	2.5%	14.7%
8:00 - 9:00 AM	3.8%	8.5%	3.0%	12.5%
9:00 - 10:00 AM	3.3%	5.8%	2.2%	6.9%
10:00 - 11:00 AM	4.2%	5.6%	2.7%	4.6%
11:00 - 12:00 PM	5.4%	5.1%	3.4%	4.0%
12:00 - 1:00 PM	5.7%	5.7%	4.3%	4.8%
1:00 - 2:00 PM	6.1%	6.0%	4.4%	4.4%
2:00 - 3:00 PM	7.1%	6.1%	4.1%	3.7%
3:00 - 4:00 PM	8.7%	6.2%	5.9%	3.8%
4:00 - 5:00 PM	10.5%	7.4%	9.2%	5.1%
5:00 - 6:00 PM	10.0%	7.3%	13.1%	5.8%
6:00 - 7:00 PM	8.5%	5.9%	12.1%	6.0%
7:00 - 8:00 PM	6.1%	4.2%	9.4%	5.4%
8:00 - 9:00 PM	6.1%	3.1%	7.7%	3.1%
9:00 - 10:00 PM	4.4%	2.3%	6.5%	1.5%
10:00 - 11:00 PM	2.1%	1.0%	3.7%	1.6%
11:00 - 12:00 AM	1.3%	0.6%	2.1%	0.8%

**Table 44** provides the single-family hourly volumes resulting from the percentages in **Table 43**. The entering traffic was separated into northbound left-turns and southbound right-turns based upon the existing volume ratios. Similarly, the exiting westbound left-turns and westbound right-turns were separated. Because these ratios are different for the Thursday counts and the Friday counts, separate columns are provided.

**Table 44: Artesia Single-Family Hourly Volumes at Scottsdale / Hummingbird**

Time	THURSDAY				FRIDAY			
	ENTERING		EXITING		ENTERING		EXITING	
	NB RT	SB LT	WB LT	WB RT	NB RT	SB LT	WB LT	WB RT
12:00 - 1:00 AM	1	1	0	1	0	2	1	0
1:00 - 2:00 AM	0	1	1	0	1	0	0	1
2:00 - 3:00 AM	0	1	0	0	0	1	0	0
3:00 - 4:00 AM	0	1	0	1	0	1	1	0
4:00 - 5:00 AM	0	1	0	3	0	1	3	0
5:00 - 6:00 AM	0	2	0	7	0	2	7	0
6:00 - 7:00 AM	0	6	22	0	0	6	0	22
7:00 - 8:00 AM	4	7	37	0	3	8	37	0
8:00 - 9:00 AM	0	14	32	0	1	13	32	0
9:00 - 10:00 AM	4	8	21	0	5	7	0	21
10:00 - 11:00 AM	5	11	21	0	4	12	21	0
11:00 - 12:00 PM	7	13	19	0	9	11	15	4
12:00 - 1:00 PM	7	14	21	0	10	11	16	5
1:00 - 2:00 PM	7	16	22	0	8	15	18	4
2:00 - 3:00 PM	8	18	23	0	13	13	23	0
3:00 - 4:00 PM	12	20	15	8	1	31	20	3
4:00 - 5:00 PM	14	25	24	3	15	24	27	0
5:00 - 6:00 PM	22	15	27	0	16	21	24	3
6:00 - 7:00 PM	10	22	20	2	20	12	19	3
7:00 - 8:00 PM	12	11	16	0	11	12	16	0
8:00 - 9:00 PM	11	12	7	4	11	12	11	0
9:00 - 10:00 PM	16	0	9	0	12	4	8	1
10:00 - 11:00 PM	8	0	4	0	4	4	4	0
11:00 - 12:00 AM	2	3	2	0	5	0	2	0

Similarly, **Table 45** provides the multi-family hourly volumes resulting from the percentages in **Table 43**. The entering and exiting traffic volumes were separated similar to the single-family volumes.

**Table 45: Artesia Multi-Family Hourly Volumes at Scottsdale / Hummingbird**

Time	THURSDAY				FRIDAY			
	ENTERING		EXITING		ENTERING		EXITING	
	NB RT	SB LT	WB LT	WB RT	NB RT	SB LT	WB LT	WB RT
12:00 - 1:00 AM	0	2	1	0	2	0	0	1
1:00 - 2:00 AM	0	1	0	0	0	1	0	0
2:00 - 3:00 AM	0	1	0	1	0	1	1	0
3:00 - 4:00 AM	0	0	0	2	0	0	2	0
4:00 - 5:00 AM	0	2	0	8	0	2	8	0
5:00 - 6:00 AM	0	4	29	0	0	4	0	29
6:00 - 7:00 AM	3	6	55	0	2	7	55	0
7:00 - 8:00 AM	0	11	47	0	1	10	47	0
8:00 - 9:00 AM	2	6	26	0	3	5	0	26
9:00 - 10:00 AM	4	6	17	0	3	7	17	0
10:00 - 11:00 AM	5	8	15	0	6	7	12	3
11:00 - 12:00 PM	5	11	18	0	8	8	13	5
12:00 - 1:00 PM	5	11	16	0	5	11	13	3
1:00 - 2:00 PM	4	11	14	0	8	7	14	0
2:00 - 3:00 PM	8	14	9	5	1	21	12	2
3:00 - 4:00 PM	13	21	17	2	13	21	19	0
4:00 - 5:00 PM	28	21	22	0	21	28	19	3
5:00 - 6:00 PM	15	30	21	1	28	17	20	2
6:00 - 7:00 PM	18	17	20	0	18	17	20	0
7:00 - 8:00 PM	14	15	7	5	14	15	12	0
8:00 - 9:00 PM	24	0	6	0	17	7	5	1
9:00 - 10:00 PM	14	0	6	0	7	7	6	0
10:00 - 11:00 PM	4	4	2	1	8	0	3	0

The Artesia hourly traffic volumes were then added to the Scottsdale / Hummingbird intersection volumes for each appropriate analysis.

Similarly, the Ritz-Carlton and Palmeraie hourly traffic volumes were obtained from pertinent excerpts the Ritz-Carlton and Palmeraie Traffic Impact and Mitigation Study dated May 2020 provided in **Appendix C** and summarized in **Figure 19**. The daily volumes from the Ritz-Carlton and Palmeraie on Scottsdale Road, north of Indian Bend Road were 1,750 vehicles-per-day northbound and 1,750 vehicles-per-day southbound. The percent of this daily volume arriving in each hour was assumed to be equal to the existing percent of the daily volume.

**Table 46** provides these hourly volumes both north of Indian Bend Road and approaching Hummingbird Lane.

**Table 46: Ritz-Carlton Hourly Volumes at Scottsdale / Hummingbird**

Time	At Plaza Resort Access	
	Northbound	Southbound
12:00 - 1:00 AM	8	7
1:00 - 2:00 AM	7	4
2:00 - 3:00 AM	4	2
3:00 - 4:00 AM	4	3
4:00 - 5:00 AM	10	8
5:00 - 6:00 AM	24	23
6:00 - 7:00 AM	49	51
7:00 - 8:00 AM	92	103
8:00 - 9:00 AM	107	121
9:00 - 10:00 AM	98	114
10:00 - 11:00 AM	105	109
11:00 - 12:00 PM	115	117
12:00 - 1:00 PM	117	126
1:00 - 2:00 PM	121	131
2:00 - 3:00 PM	133	134
3:00 - 4:00 PM	136	124
4:00 - 5:00 PM	138	130
5:00 - 6:00 PM	141	138
6:00 - 7:00 PM	102	94
7:00 - 8:00 PM	78	71
8:00 - 9:00 PM	64	55
9:00 - 10:00 PM	43	41
10:00 - 11:00 PM	31	28
11:00 - 12:00 AM	21	15

The Ritz-Carlton and Palmeraie hourly traffic volumes were then added to the Scottsdale / Hummingbird intersection volumes for each appropriate analysis.

**Appendix F.2** provides the complete analyses for the Scottsdale / Hummingbird intersection and is summarized in **Table 47**.

**Table 47: Signal Warrant Results for Scottsdale / Hummingbird**

CONDITION	WARRANT	1A	1B	1A and 1B	2	WARRANTS
	REQUIRED HOURS	8	8	8	4	SATISFIED?
8-4 Existing	Actual Hours Met	0	0	0	0	NO
8-5 Existing	Actual Hours Met	0	0	0	0	NO
8-4 Existing with Artesia	Actual Hours Met	0	3	0	2	NO
8-5 Existing with Artesia	Actual Hours Met	0	3	0	2	NO
8-4 2025 with Artesia	Actual Hours Met	0	3	0	2	NO
8-5 2025 with Artesia	Actual Hours Met	0	0	0	0	NO
8-4 2025 with Artesia and Ritz-Carlton	Actual Hours Met	0	3	0	2	NO
8-5 2025 with Artesia and Ritz-Carlton	Actual Hours Met	0	5	0	2	NO
8-4 2025 with Resort	Actual Hours Met	0	0	0	0	NO
8-5 2025 with Resort	Actual Hours Met	0	0	0	0	NO

The Scottsdale / Hummingbird intersection was also analyzed for satisfaction of Warrant 7, the Crash Experience. At the Scottsdale / Hummingbird intersection, four (4) collisions occurred in calendar year 2018, only one (1) of which was potentially preventable by a traffic signal. Therefore, this criterion is not satisfied.

The Scottsdale / Hummingbird intersection signal warrant analyses reveals that with the Artesia development no signal warrants are satisfied for each of the analyzed conditions and two (2) analysis dates.

***Weekday Level-of-Service Analysis***

To accomplish the level-of-service analyses for the conditions with the Ritz-Carlton and Palmeraie development, the lane configuration for the Indian Bend Road intersections proposed in the traffic study were utilized for all 2025 analyses. These lane configurations are depicted in **Figure 55**.

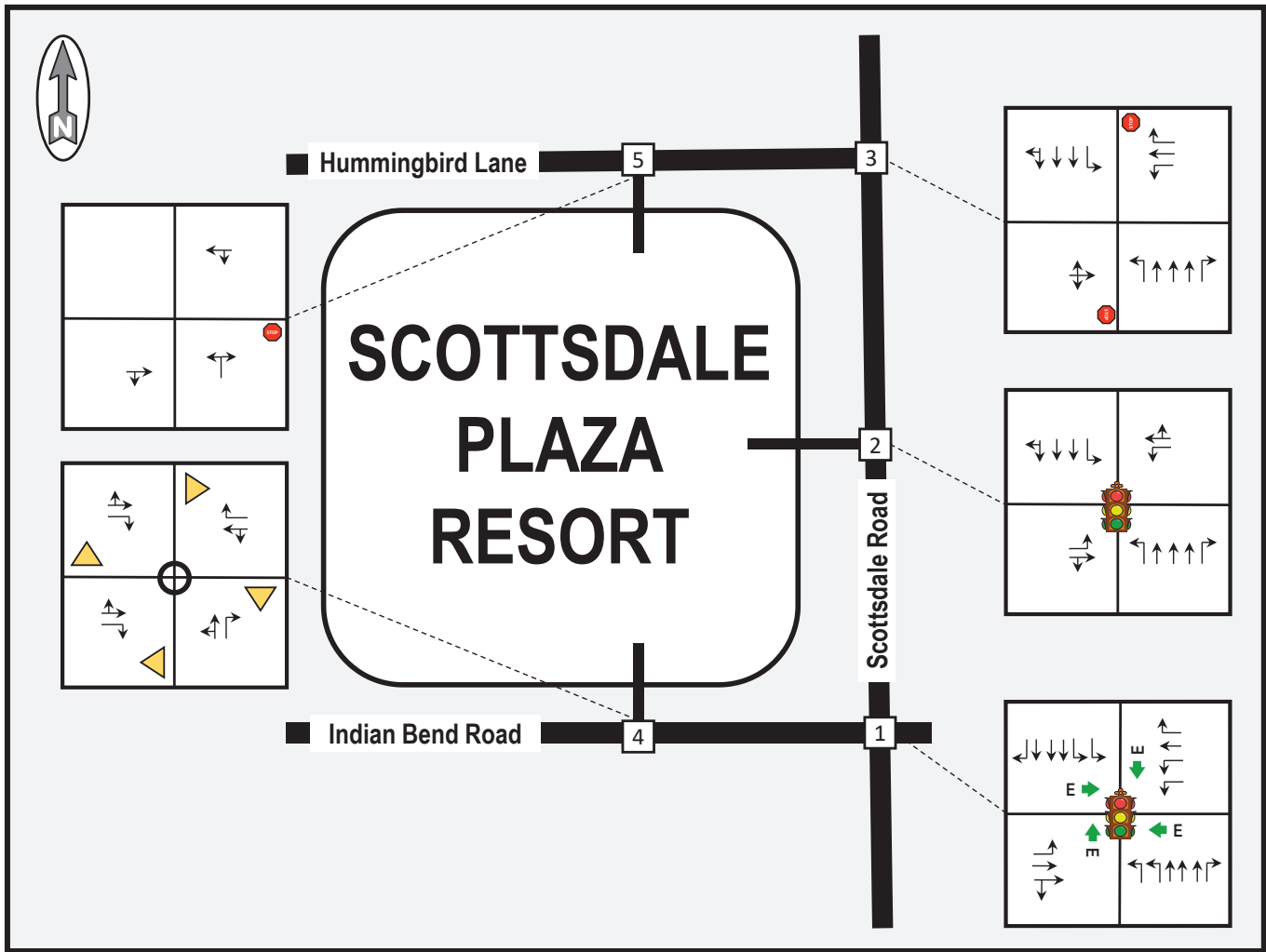


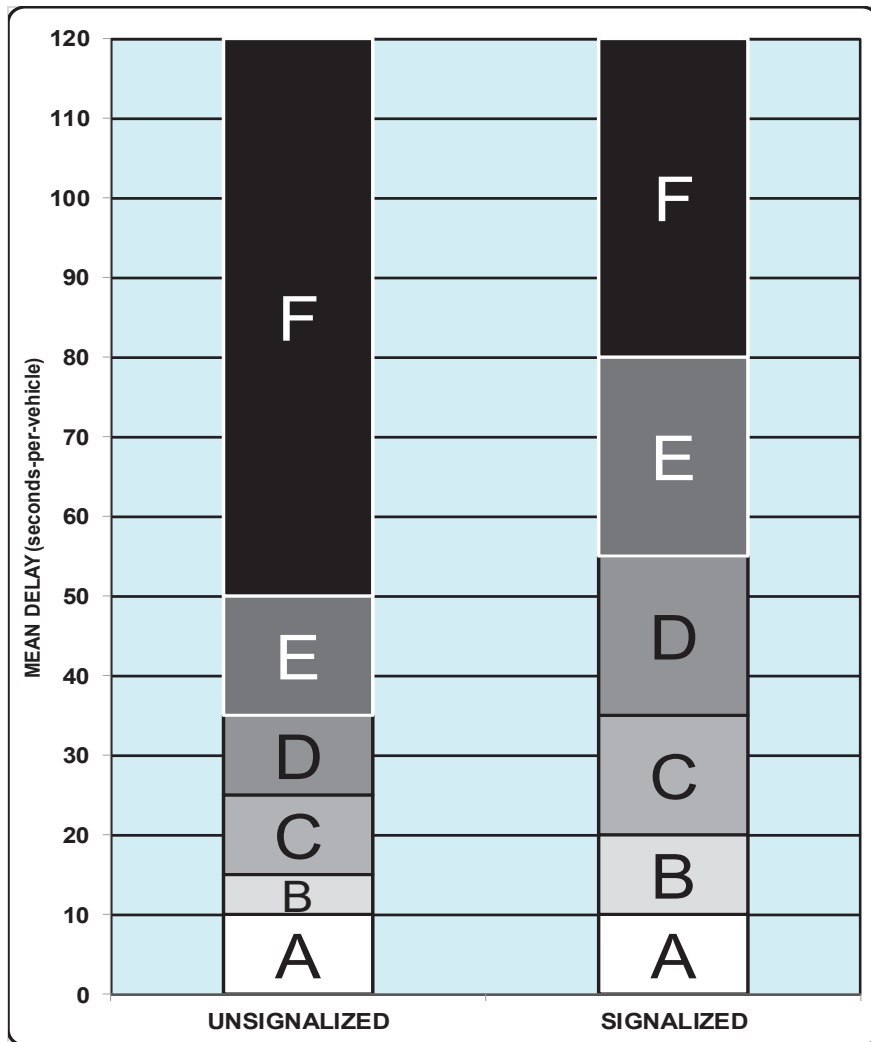
Figure 55: Planned Adjacent Intersection Lane Configurations

**Table 48: Intersection Level-of-Service Criteria**

The ability of a transportation system to transmit the transportation demand is characterized as its level-of-service (LOS). Level-of-service is a rating system from “A” representing the least delay to “F” representing the most delay. Typically, levels-of-service “C” and “D” provide an optimal balance between traffic operation and street system expenditures.

The appropriate reference for level-of-service analysis and calculation is the *Highway Capacity Manual*, published by the Transportation Research Board. This manual considers average delay as the measure to determine level-of-service at intersections. Delay and level-of-service are calculated for the entire intersection, each approach, and each turning movement. **Table 48** provides a diagram depicting level-of-service and delay criteria for intersections.

Synchro was utilized for these level-of-service analyses. The signal cycle length and phase lengths were provided by the City of Scottsdale, and are provided as **Appendix G.1**. For 2025 conditions, the phase lengths were optimized while retaining the 120-second cycle length.



The complete results are provided in **Appendix G**. The existing 2022 level-of-service analyses results are provided in **Appendix G.2**, and the seasonally adjusted existing 2022 level-of-service analyses results are provided in **Appendix G.3**. and the ambient 2025 level-of-service analyses results are provided in **Appendix G.4**. The 2025 with the Artesia development level-of-service analyses results are provided in **Appendix G.5**. The 2025 with the Artesia and Ritz-Carlton developments level-of-service analyses results are provided in **Appendix G.6**. The 2025 with the two (2) vicinity developments and the renovated Scottsdale Plaza Resort level-of-service analyses results are provided in **Appendix G.7**. A complete summary of the level-of-service results by intersection, approach, and movement is provided as **Appendix G.8**.

The following tables summarize the levels-of-service for the six (6) analyzed conditions. The numbers in each table are the total number of intersections, approaches, and movements for the study intersections at the indicated level-of-service. **Table 49** totals the level-of-service results for the two (2) signalized intersections for the morning peak hour. **Table 50** totals the level-of-service results for the two (2) signalized intersections for the evening peak hour. **Table 51** and **Table 52** provide the summaries for the three (3) unsignalized intersections.



**Table 49: LOS Summary – Signalized Intersections – Weekday AM Peak Hour**

	2022		AMBIENT	2025		
	EXISTING	ADJUSTED		WITH ARTESIA	WITH RITZ & ARTESIA	WITH PLAZA & OTHERS
A	9	9	9	9	9	9
B	13	13	13	13	7	7
C	8	6	8	8	11	12
D	2	4	2	2	5	4
E	0	0	0	0	0	0
F	0	0	0	0	0	0
	32	32	32	32	32	32

**Table 50: LOS Summary – Signalized Intersections – Weekday PM Peak Hour**

	2022		AMBIENT	2025		
	EXISTING	ADJUSTED		WITH ARTESIA	WITH RITZ & ARTESIA	WITH PLAZA & OTHERS
A	9	9	9	8	9	9
B	10	5	6	5	1	1
C	5	9	8	9	10	4
D	8	9	9	9	7	11
E	0	0	0	0	5	7
F	0	0	0	1	0	0
	32	32	32	32	32	32

**Table 51: LOS Summary – Unsignalized Intersections – Weekday AM Peak Hour**

	2022		AMBIENT	2025		
	EXISTING	ADJUSTED		WITH ARTESIA	WITH RITZ & ARTESIA	WITH PLAZA & OTHERS
A	18	18	18	17	24	24
B	2	1	2	0	0	0
C	2	3	2	5	1	1
D	1	1	0	0	2	2
E	0	0	0	0	1	1
F	2	2	3	3	4	4
	25	25	25	25	32	32

**Table 52: LOS Summary – Unsignalized Intersections – Weekday PM Peak Hour**

	2022		AMBIENT	2025		
	EXISTING	ADJUSTED		WITH ARTESIA	WITH RITZ & ARTESIA	WITH PLAZA & OTHERS
A	19	20	18	17	24	24
B	0	0	0	0	0	0
C	2	1	1	1	0	0
D	1	1	2	1	2	1
E	0	0	0	0	0	1
F	3	3	4	6	6	6
	25	25	25	25	32	32

The weekday levels-of-service analyses reveal that no additional turn lanes are necessary at any of the five (5) intersections.

**Existing Saturday Traffic Volumes**

The Saturday evening peak hour of the restaurant generator was also analyzed. The existing Saturday peak hour from 6:00 to 7:00 PM was utilized as this was the highest hourly volume at the intersection of Scottsdale Road and the Scottsdale Resort Plaza access.

**Figure 56** provides the existing Saturday approach and departure volumes for the day. **Figure 57** and **Figure 58** respectively provide the existing approach and departure volumes, and the turning volumes for the Saturday evening peak hour.

The existing Saturday traffic volumes were also adjusted by dividing by 0.93, similar to the adjustment for the existing weekday traffic counts. **Figure 59** provides the adjusted Saturday existing approach and departure volumes for the day. **Figure 60** and **Figure 61** respectively provide the adjusted existing approach and departure volumes, and the turning volumes for the adjusted existing Saturday evening peak hour.

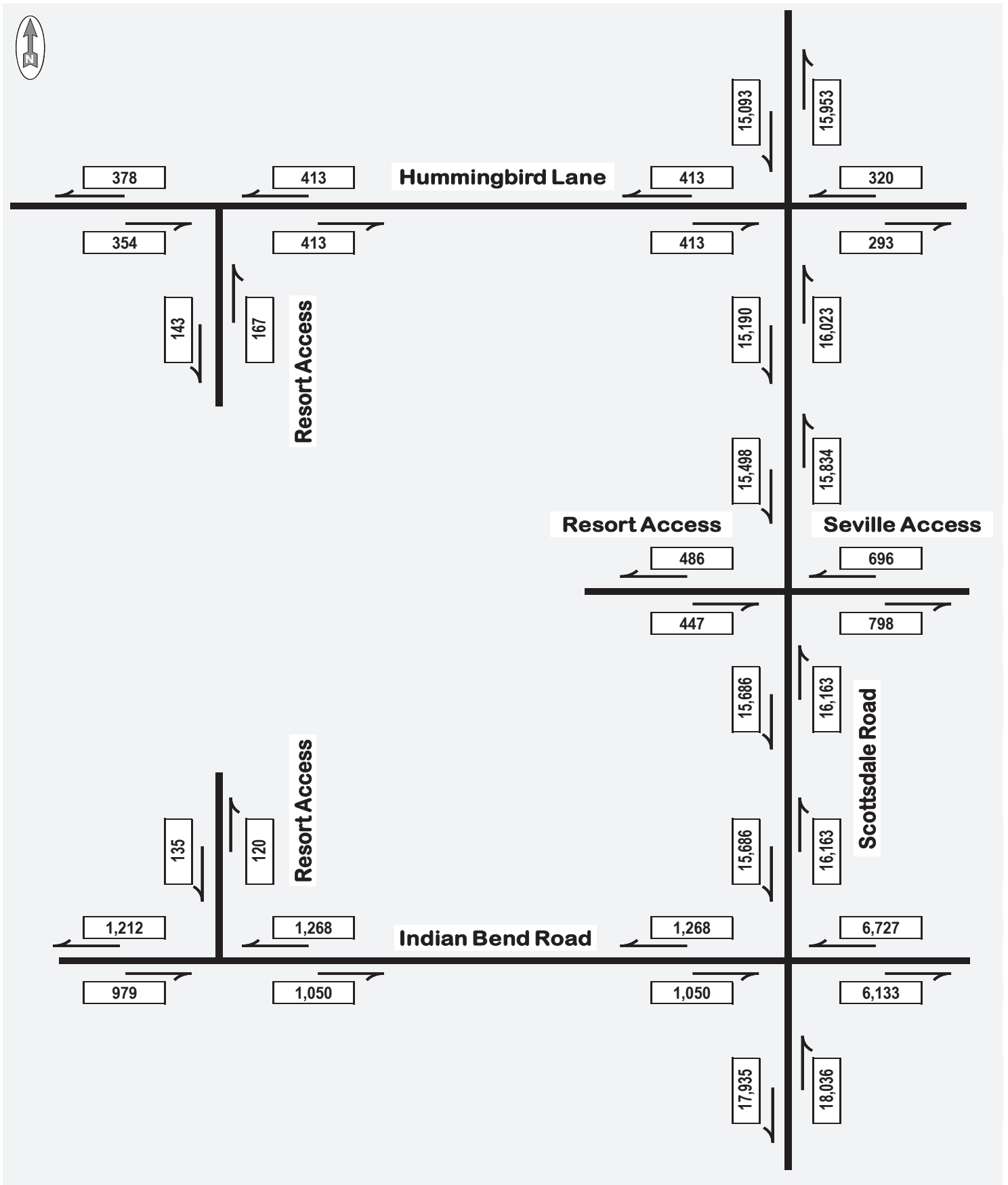


Figure 56: 2022 Saturday Day Approach and Departure Volumes

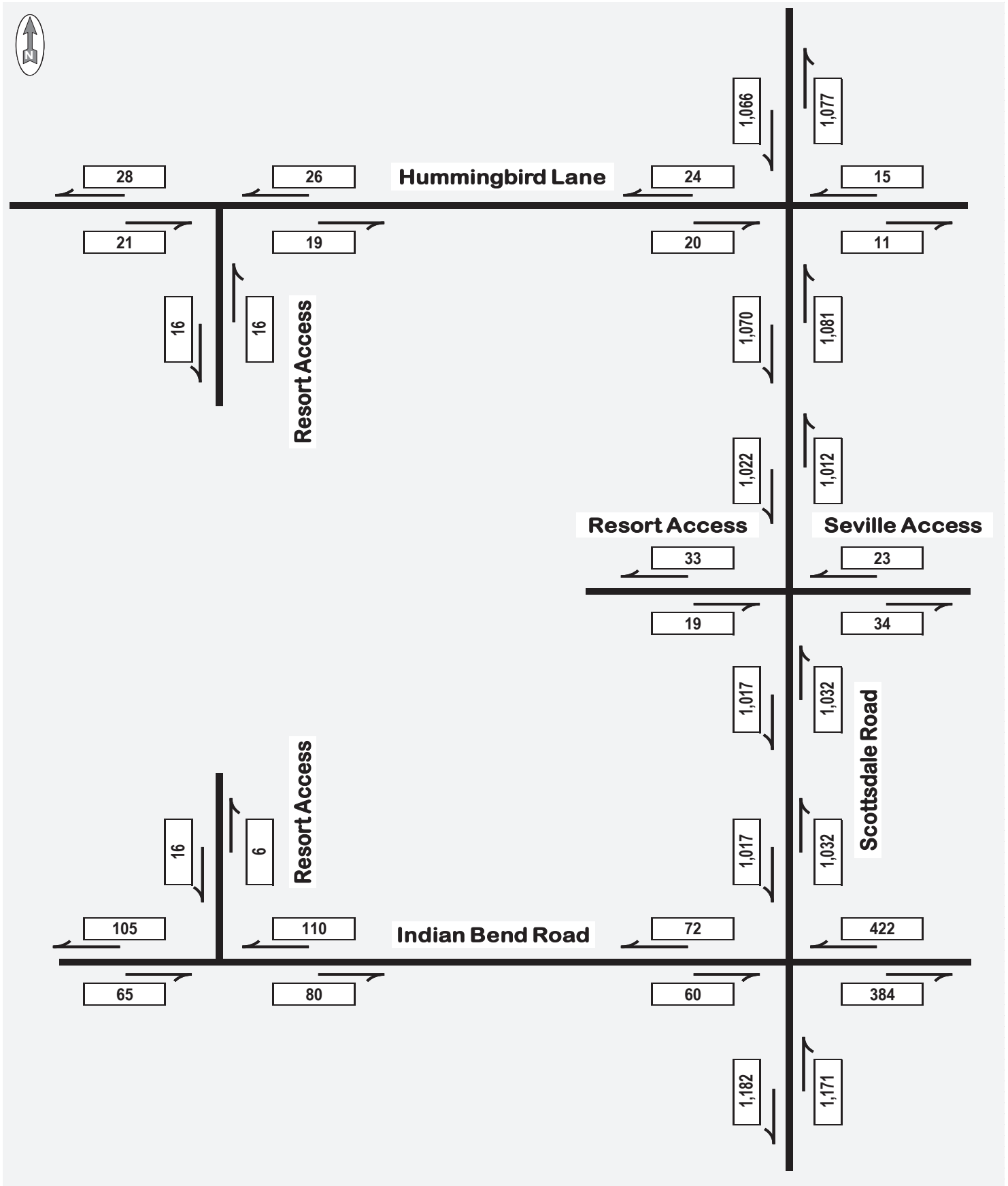


Figure 57: 2022 Saturday PM Peak Hour Approach and Departure Volumes



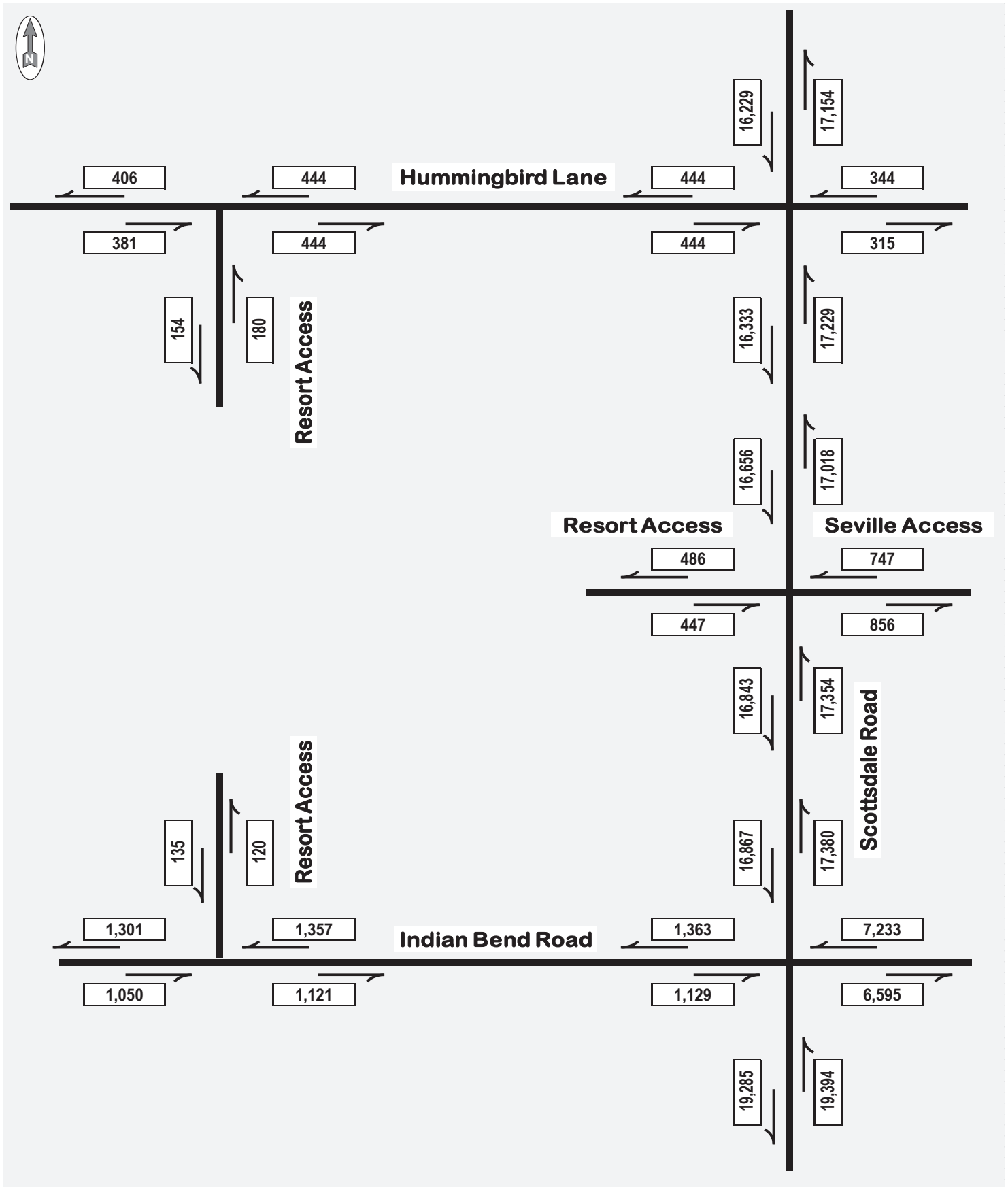


Figure 59: Adjusted 2022 Saturday Day Approach and Departure Volumes

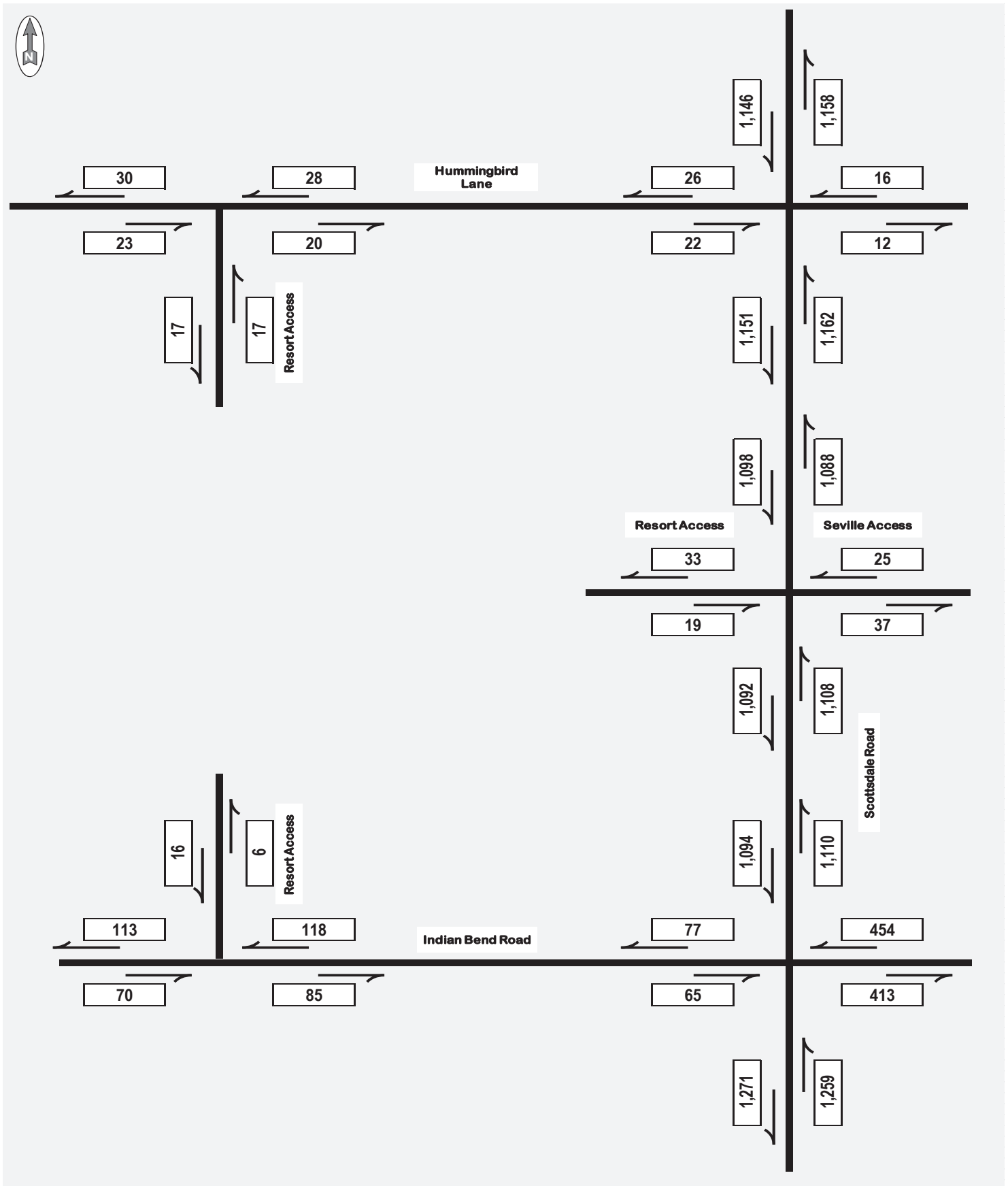


Figure 60: Adjusted 2022 Saturday PM Peak Hour Approach and Departure Volumes

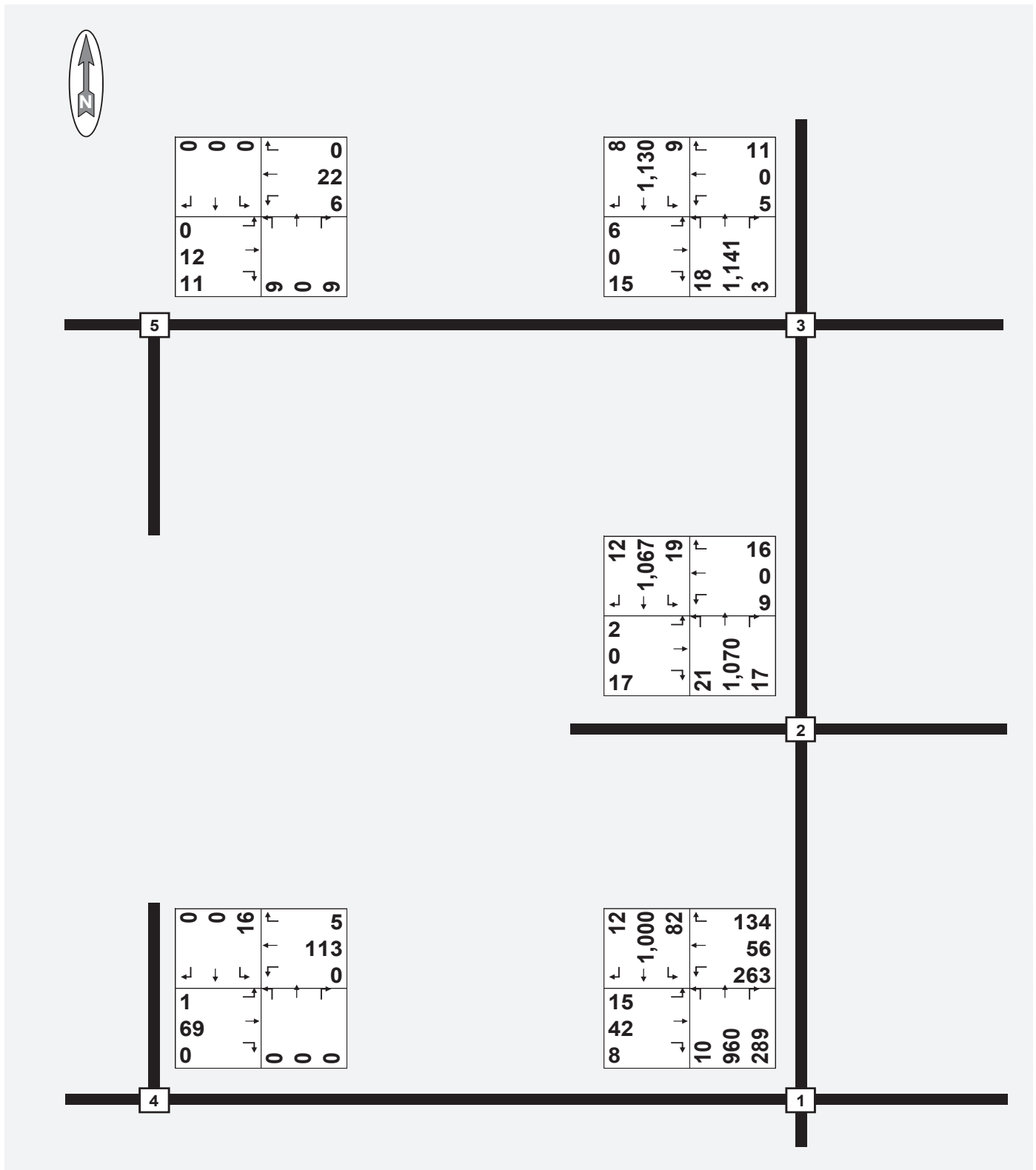


Figure 61: Adjusted 2022 Saturday PM Peak Hour Turning Volumes



### ***Future Ambient 2025 Saturday Volumes***

Similar to the ambient 2025 weekday traffic volumes, the Saturday volumes were also increased by 5% exponentially annually through 2025. All approach and departure volumes were approximated to the nearest or greater ten (10) vehicles-per-hour during the three (3) peak hours, and 100 vehicles-per-day. The approach and departure volumes at adjacent intersections were balanced to be equal to the Scottsdale / Indian Bend, then using the turning movement percentages at the adjacent intersections.

**Figure 62** provides the 2025 approach and departure volumes for the Saturday day. **Figure 63** and **Figure 64** respectively provide the 2025 approach and departure volumes, and the turning volumes for the Saturday evening peak hour.

The Ritz-Carlton and Palmeraie weekday traffic volumes were obtained from the Ritz-Carlton and Palmeraie Traffic Impact and Mitigation Study dated May 2020. Pertinent excerpts from this study are provided in **Appendix C**. Saturday volumes were not provided for the Ritz-Carlton and Palmeraie Traffic Impact and Mitigation Study. Therefore, the Saturday volumes were estimated with a ratio of the existing Saturday traffic counts to the existing Thursday traffic counts, by individual turning movement. These volumes are provided in **Figure 65** through **Figure 67**.

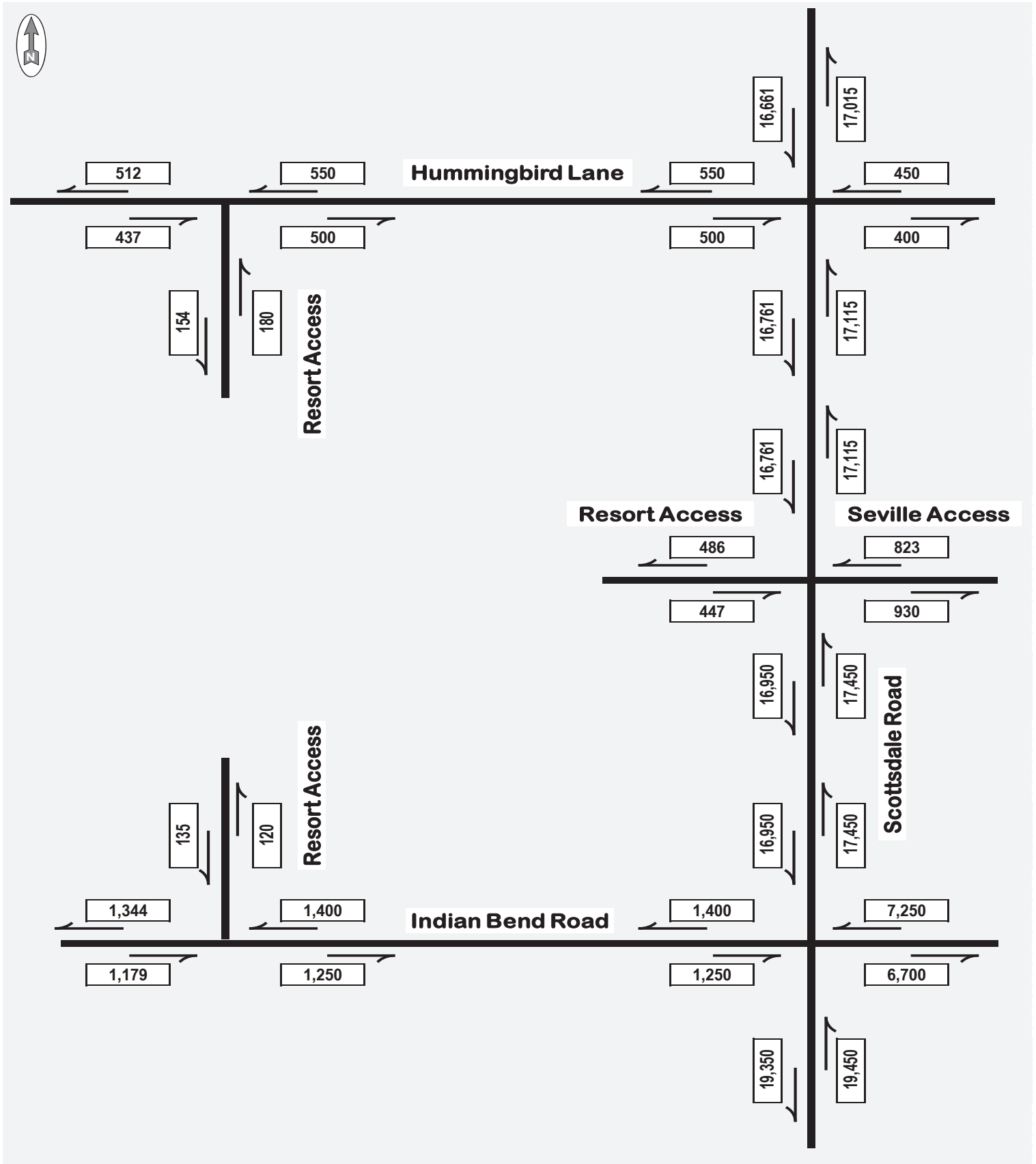


Figure 62: 2025 Saturday Day Approach and Departure Volumes

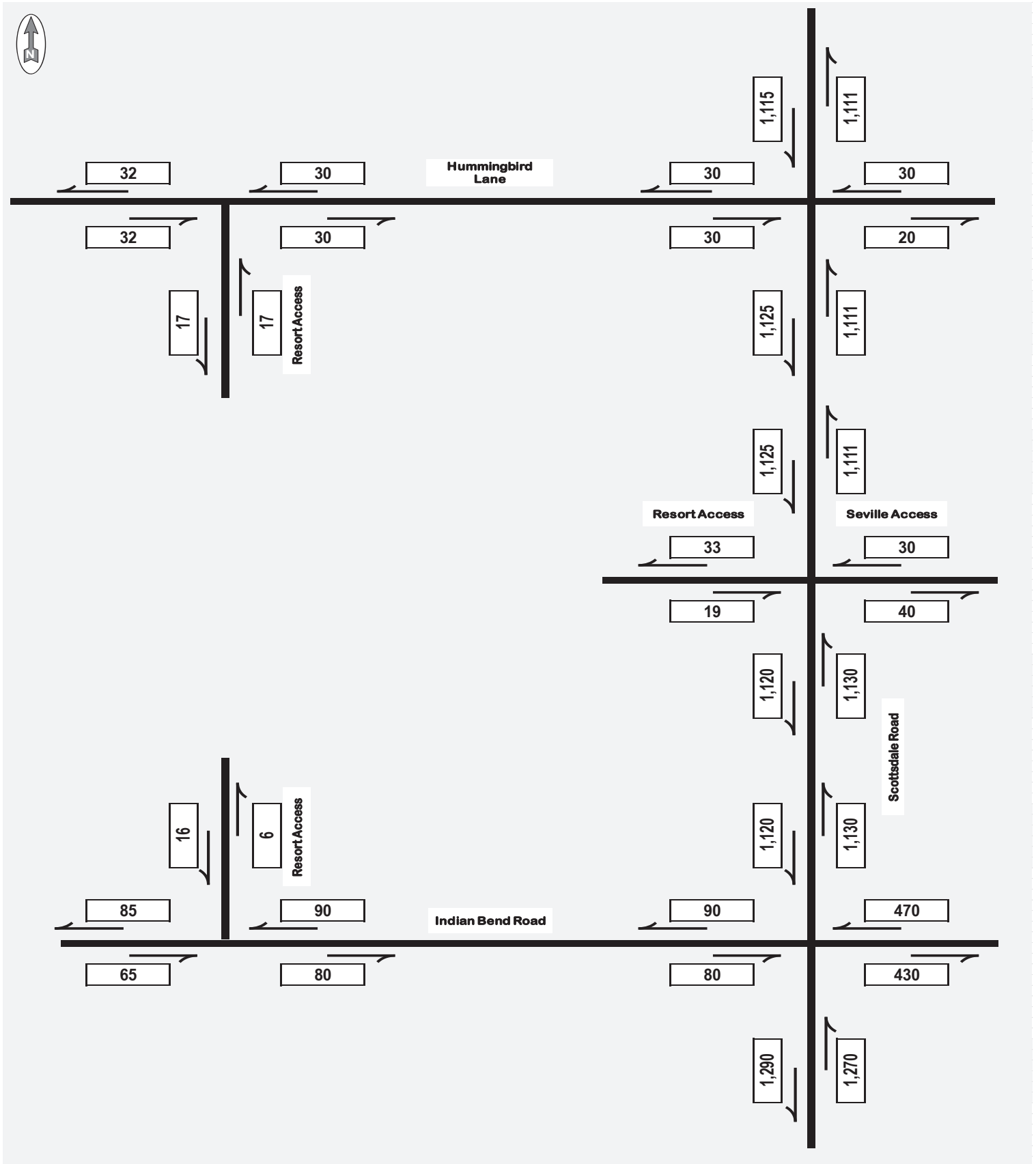


Figure 63: 2025 Saturday PM Peak Hour Approach and Departure Volumes

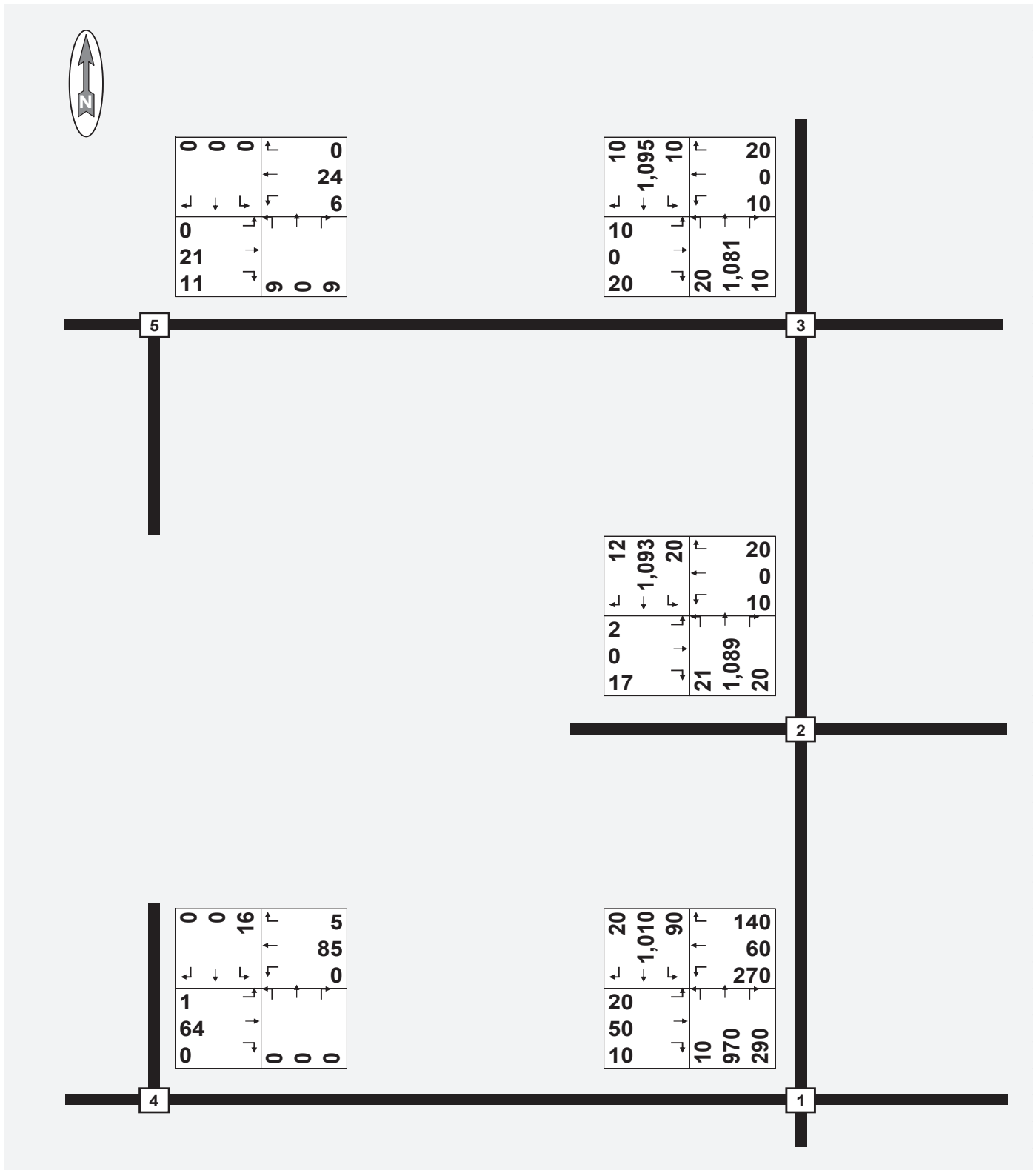


Figure 64: 2025 Saturday PM Peak Hour Turning Volumes

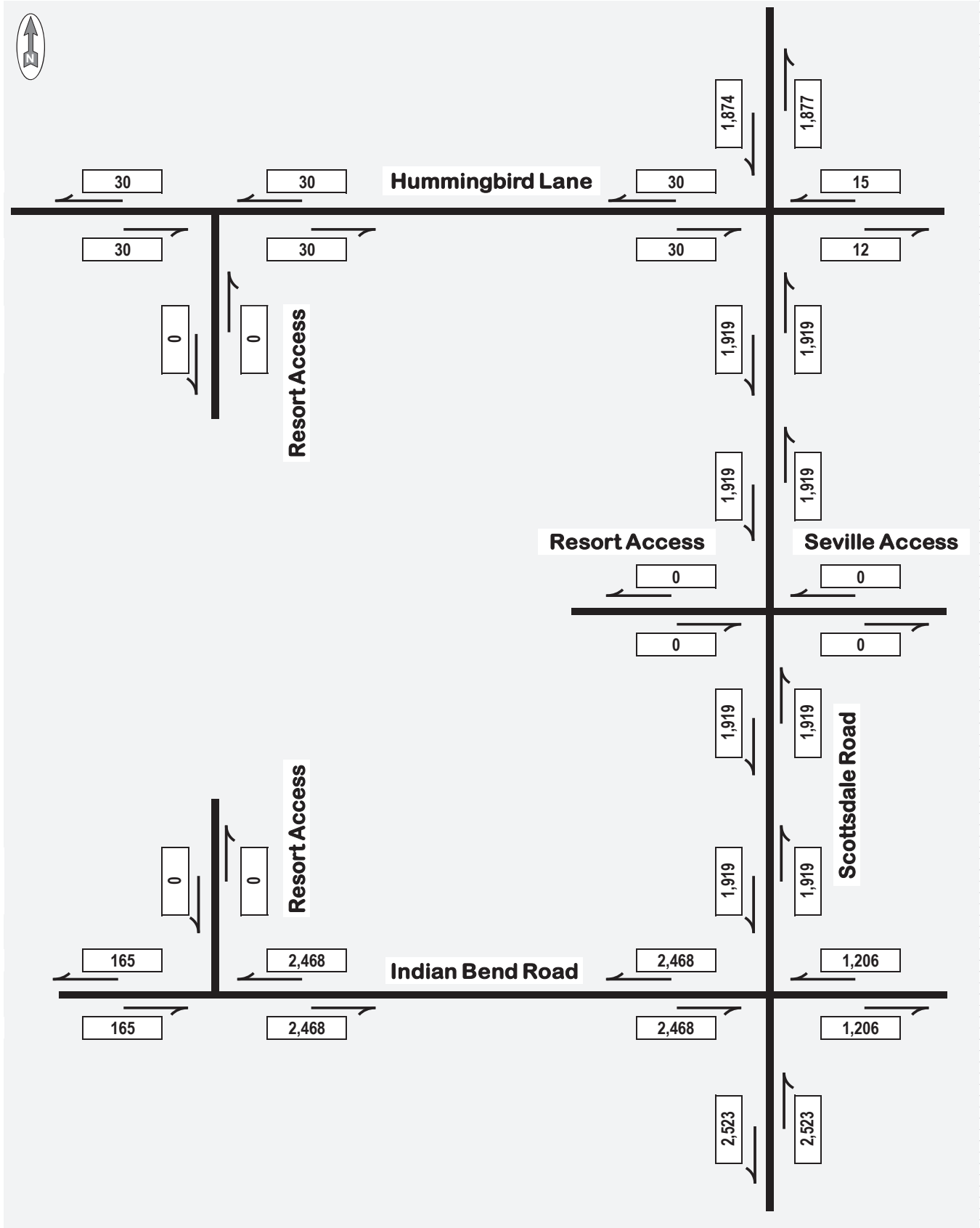


Figure 65: Ritz-Carlton Saturday Day Approach and Departure Volumes

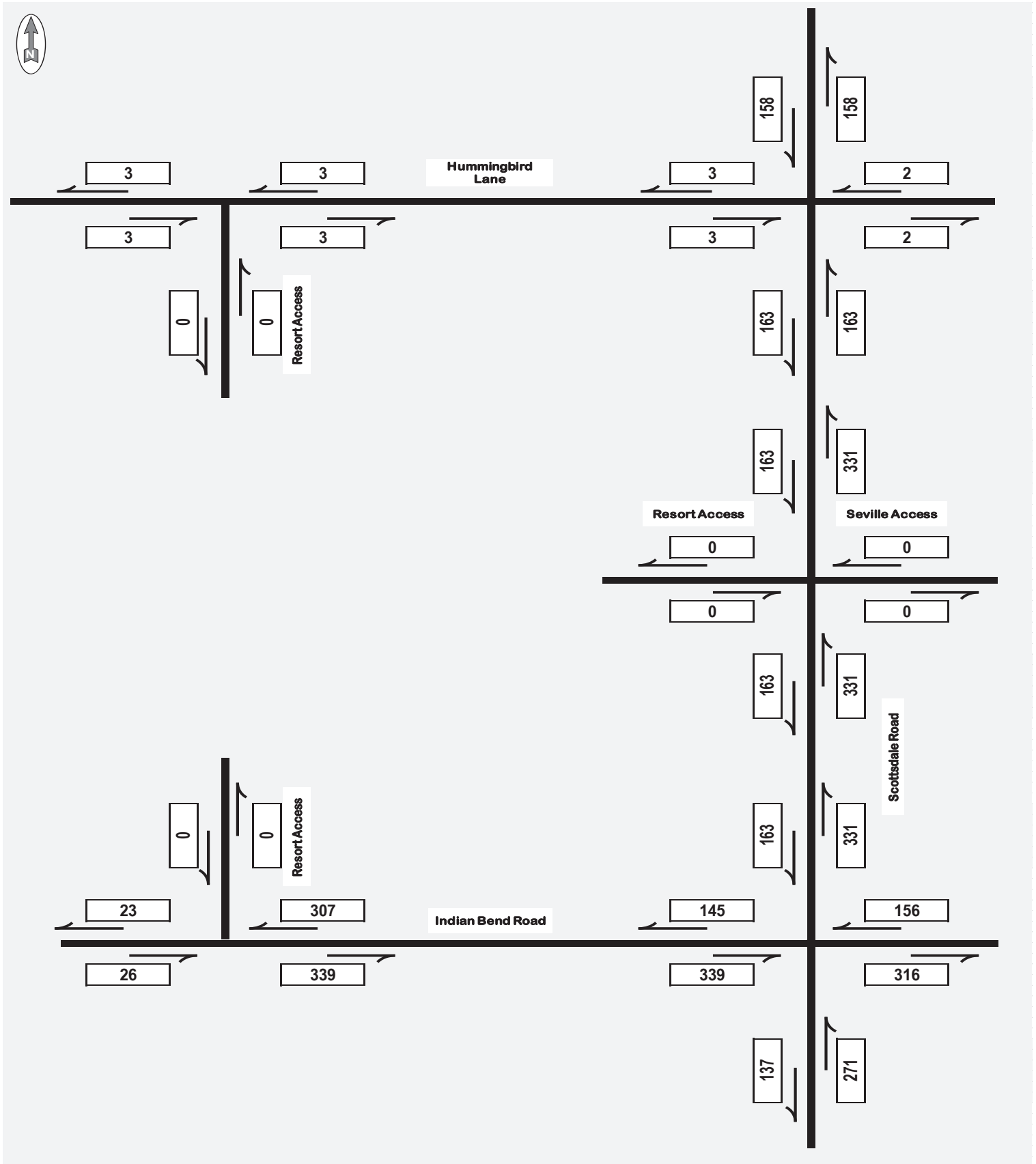


Figure 66: Ritz-Carlton Saturday PM Peak Hour Approach and Departure Volumes

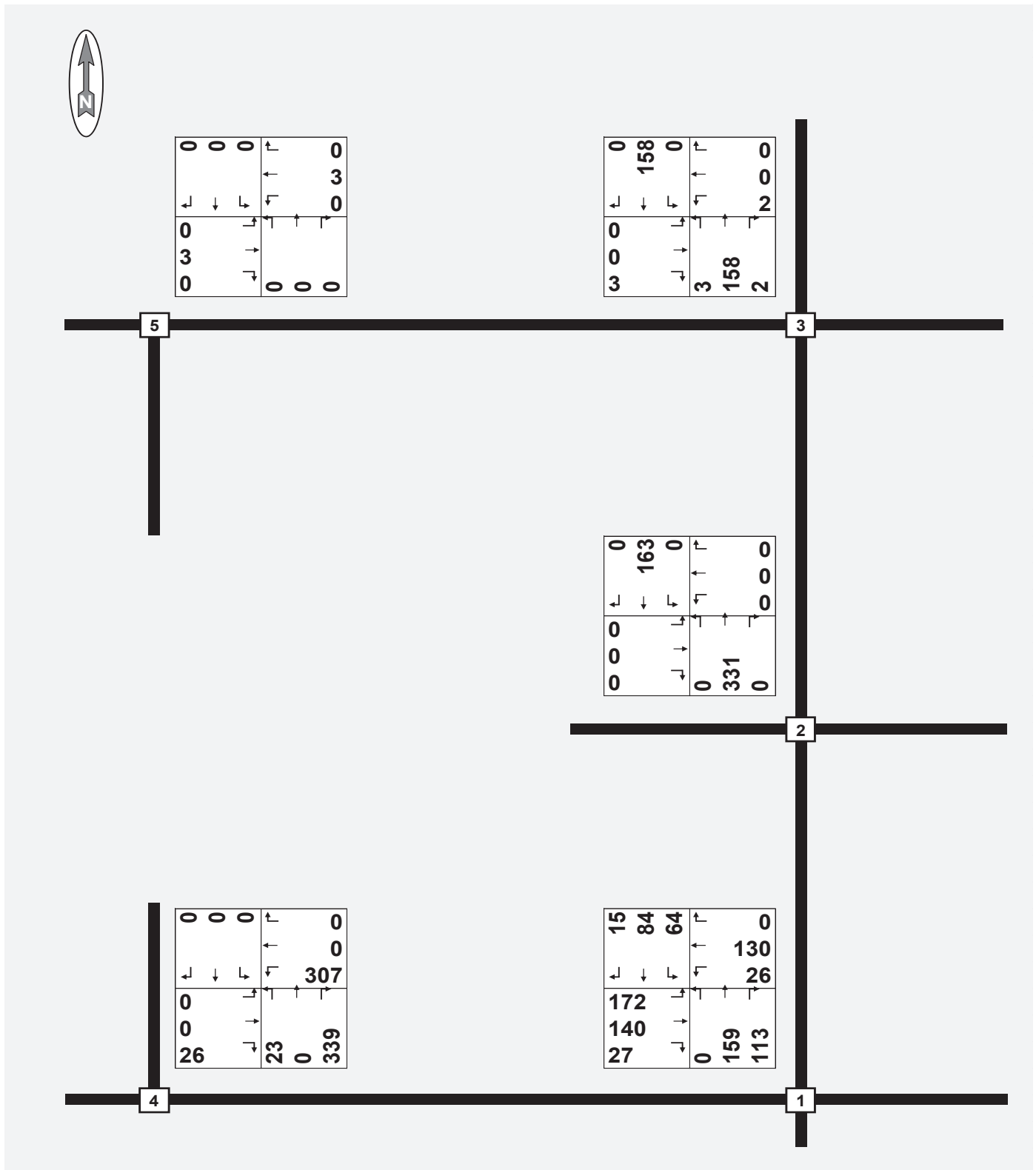


Figure 67: Ritz-Carlton Saturday PM Peak Hour Turning Volumes

### ***Proposed Artesia Estimated Saturday Trip Generation***

The estimated Saturday trip generation for the proposed Artesia was determined through the same procedures and data utilized for the weekday. **Figure 68** through

**Figure 70** provide the Artesia Saturday traffic volumes. **Figure 71** through **Figure 73** provide the sum of the 2025, Ritz-Carlton and Palmeraie, and Artesia Saturday traffic volumes.

**Figure 74** through **Figure 76** provide the renovated Scottsdale Plaza Resort traffic volumes respectively for the day approach and departure, evening peak hour approach and departure, and evening peak hour turning movements. The ambient Saturday 2025 traffic volumes plus the vicinity two (2) proposed developments plus the renovated Scottsdale Plaza Resort traffic volumes are provided in **Figure 77** through **Figure 79** for the day approach and departure, evening peak hour approach and departure, and evening peak hour turning movements.



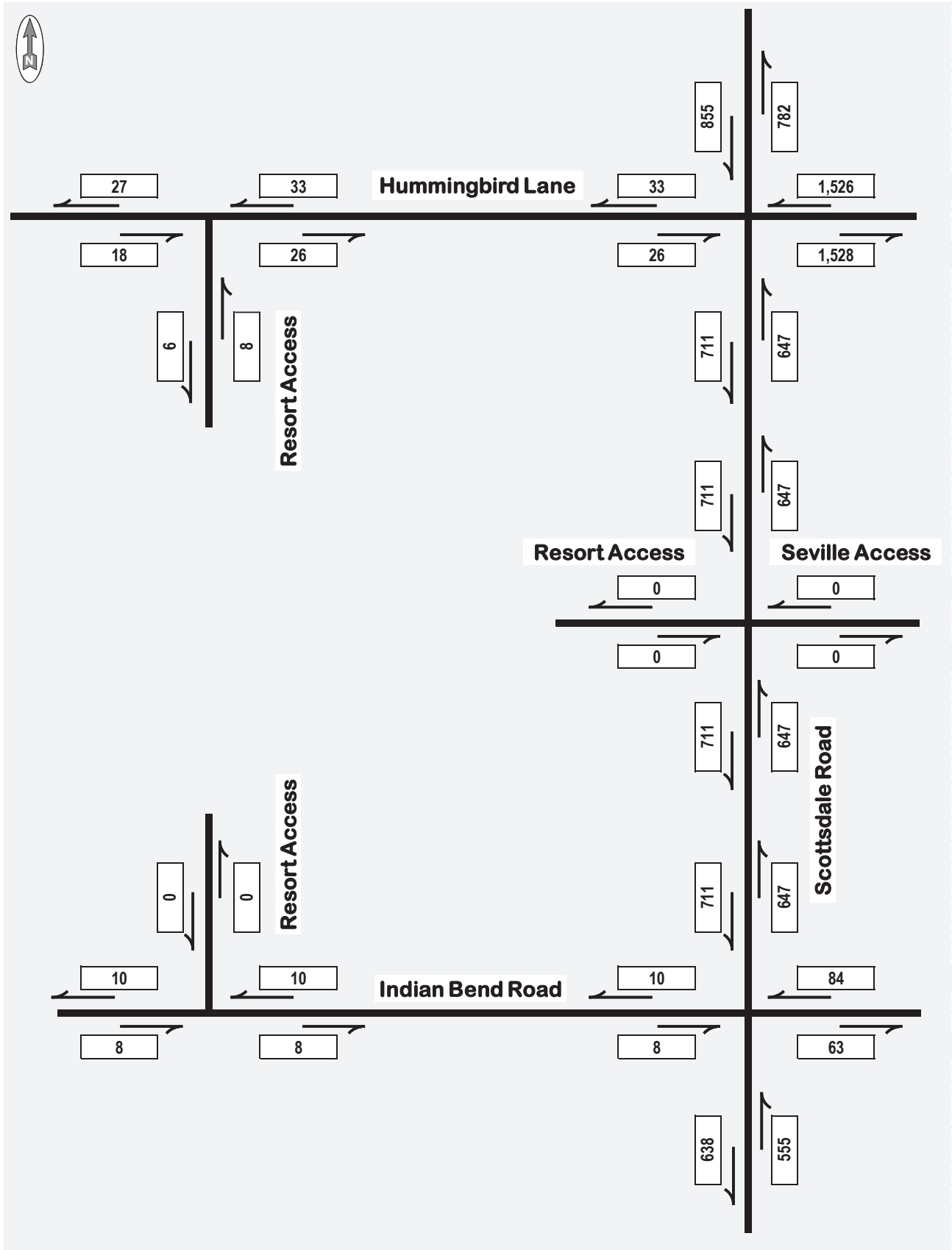


Figure 68: Artesia Saturday Day Approach and Departure Volumes

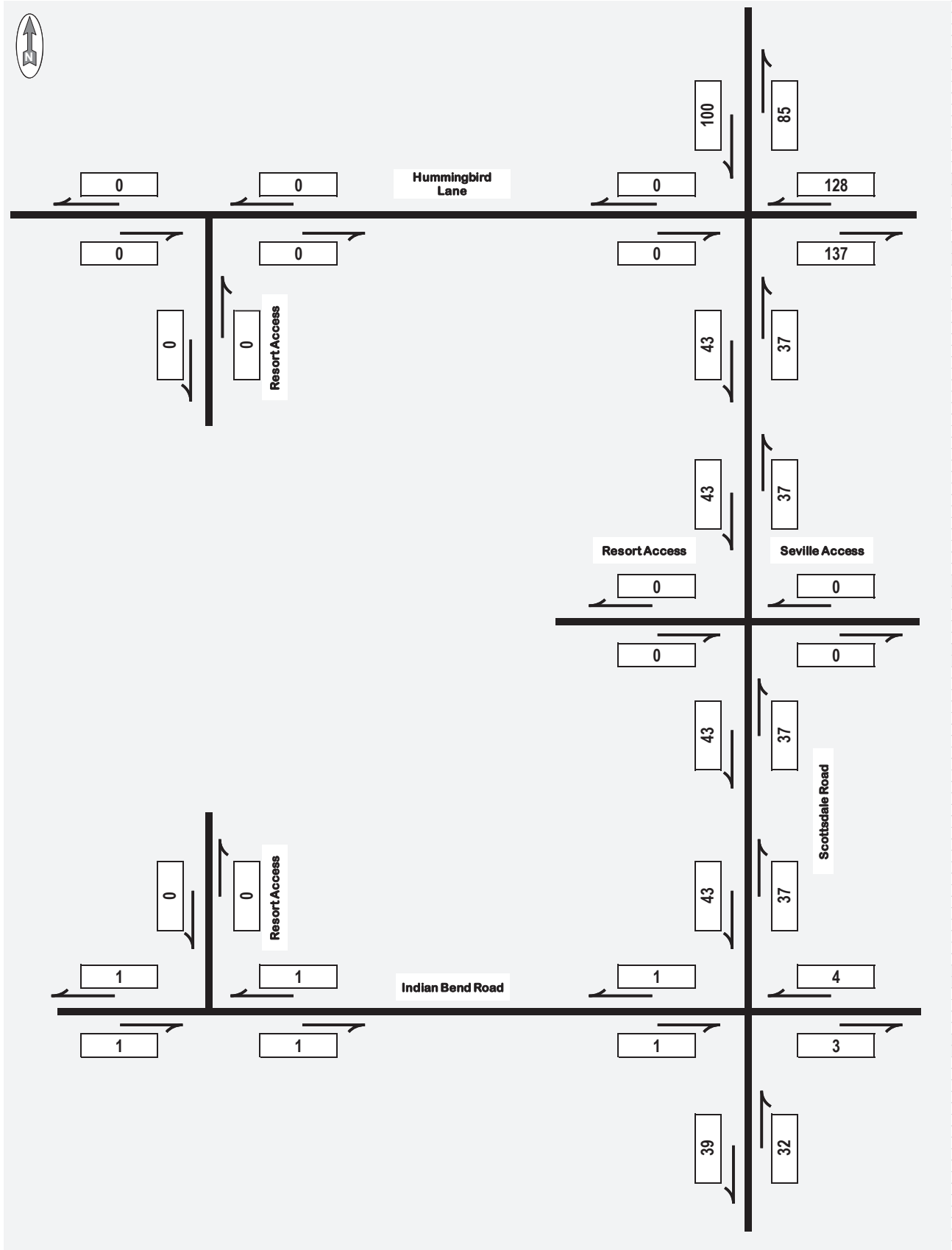


Figure 69: Artesia Saturday PM Peak Hour Approach and Departure Volumes

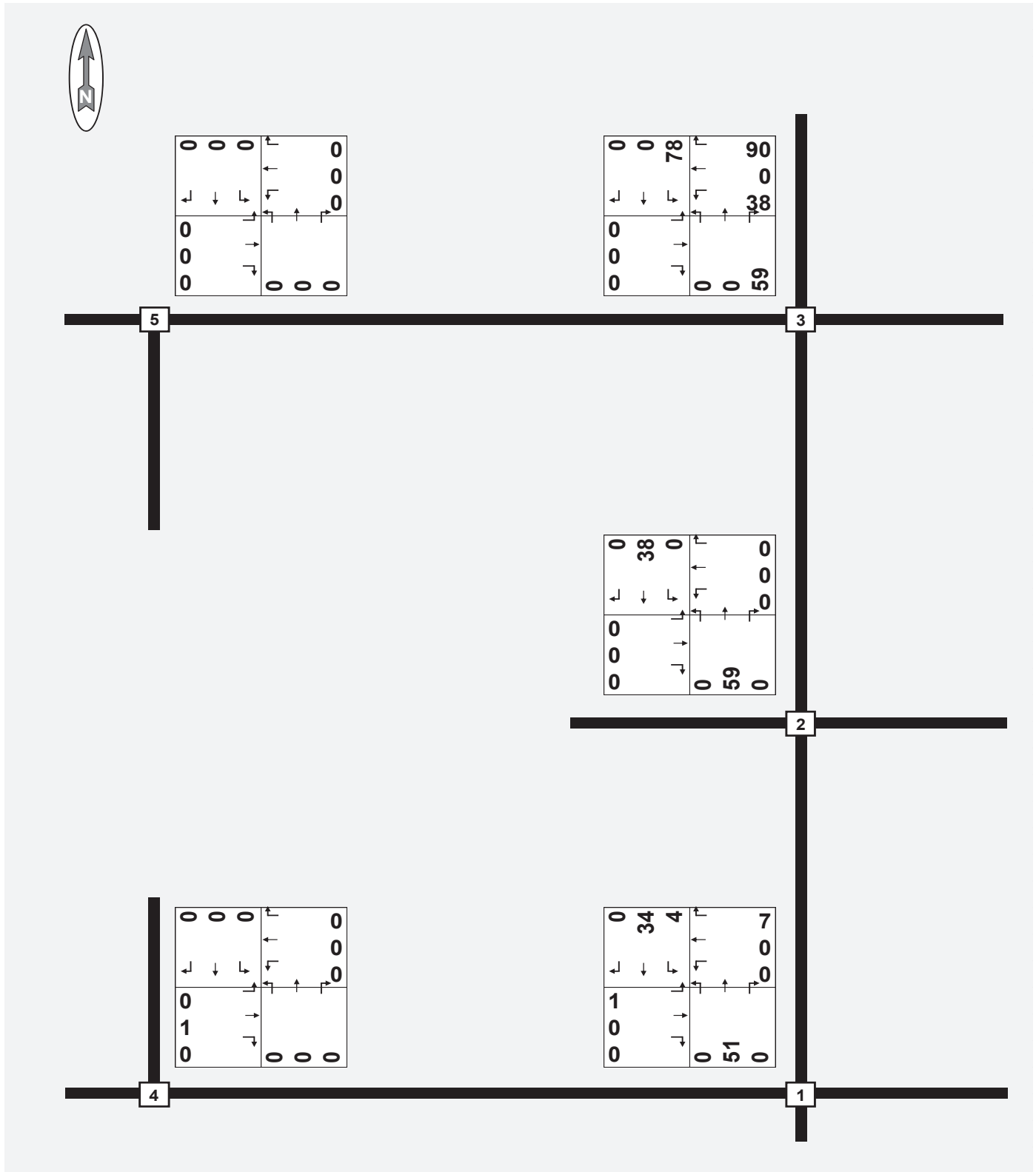


Figure 70: Artesia Saturday PM Peak Hour Turning Volumes

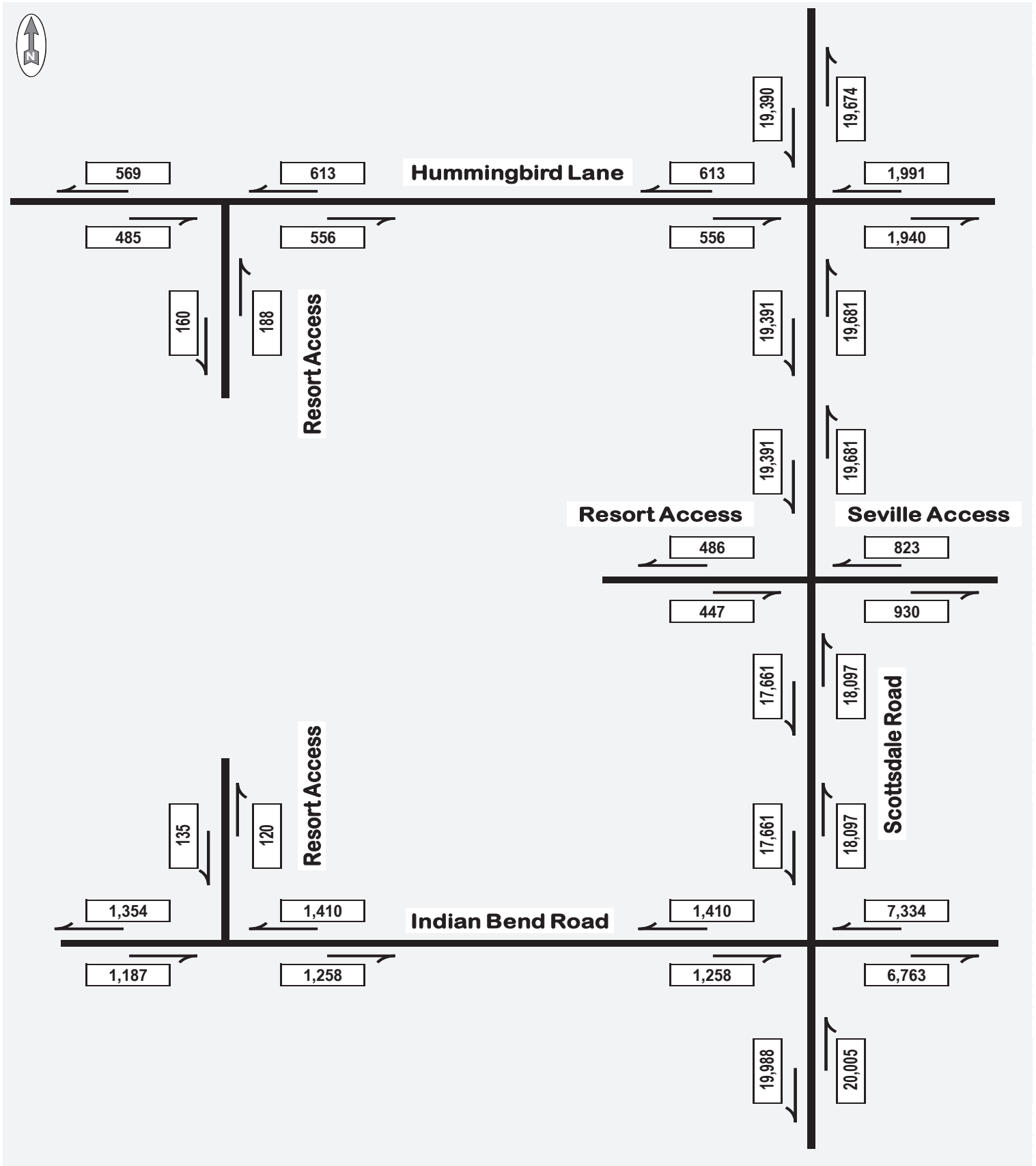


Figure 71: 2025 plus Vicinity Developments Saturday Day Approach and Departure Volumes

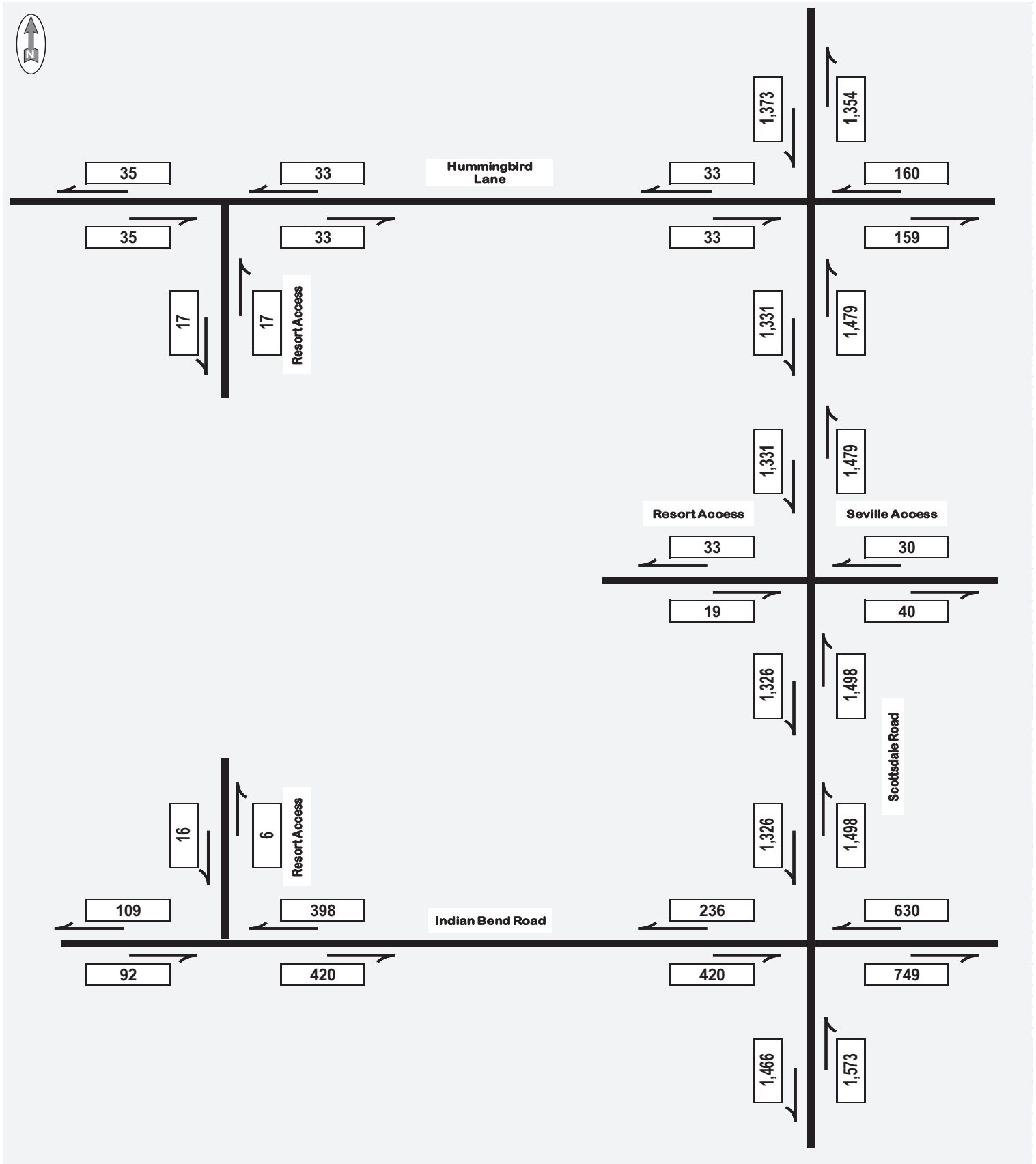


Figure 72: 2025 plus Vicinity Developments Saturday PM Peak Approach and Departure Volumes

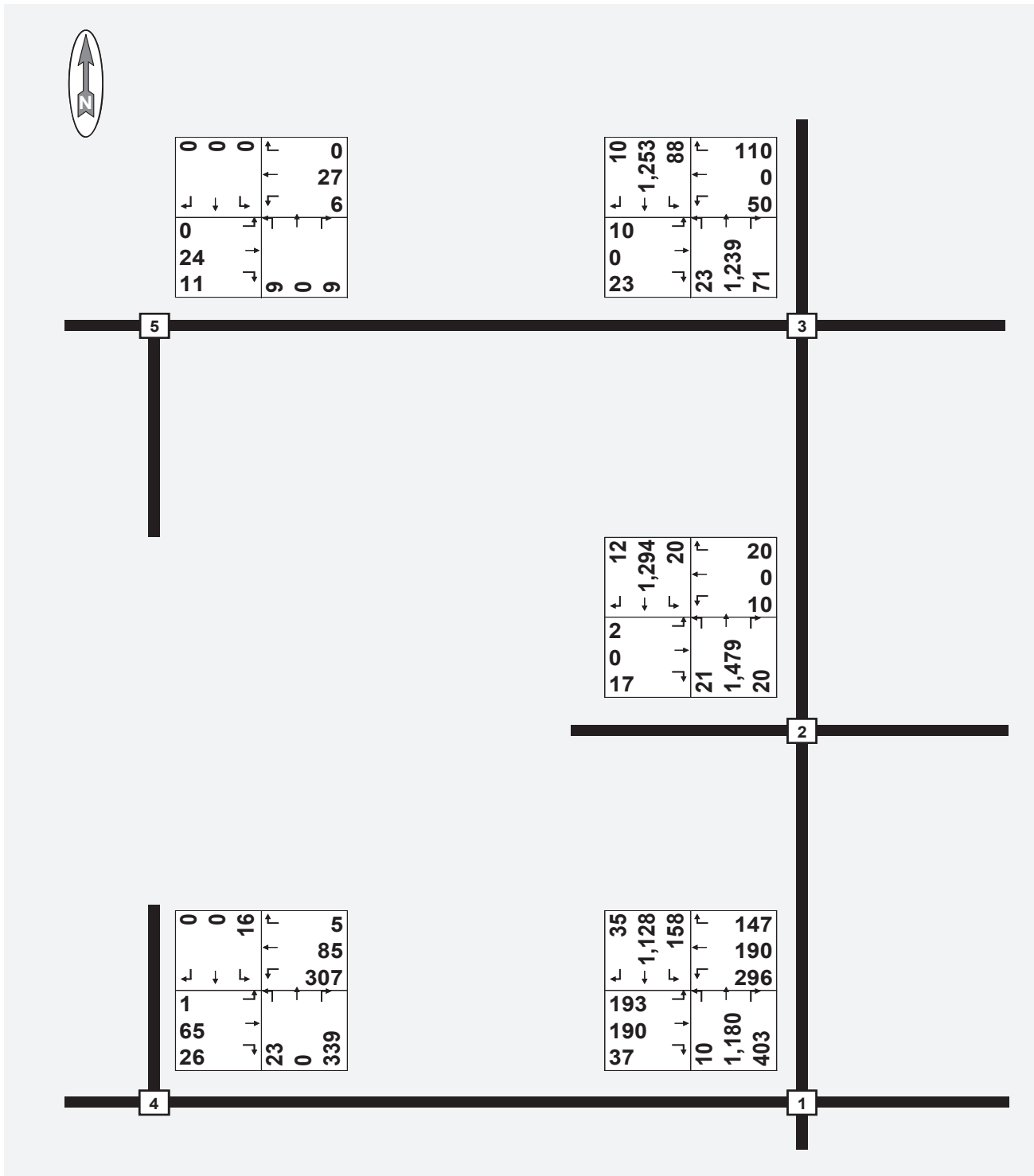


Figure 73: 2025 plus Vicinity Developments Saturday PM Peak Hour Turning Volumes

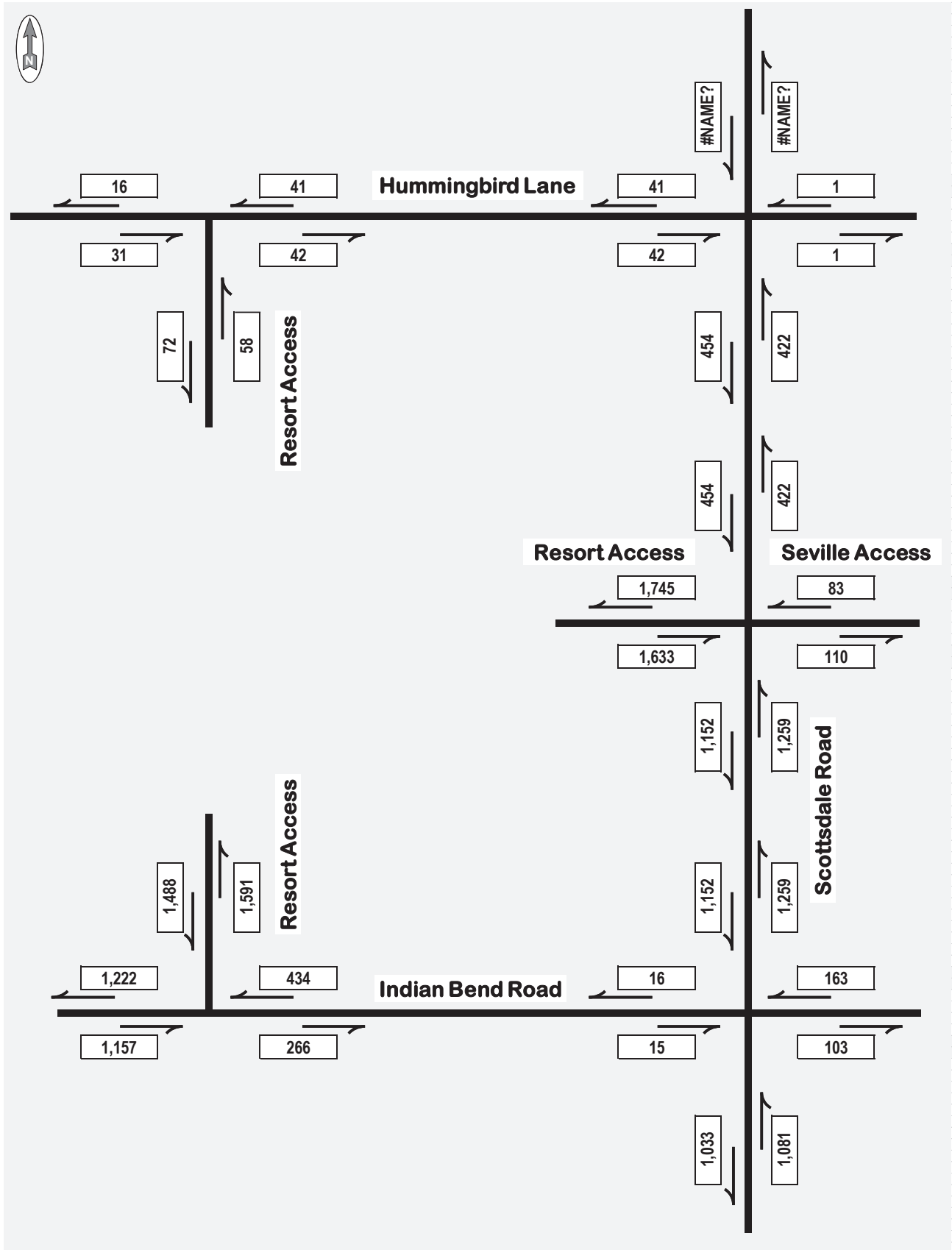


Figure 74: Saturday Resort Renovation Day Approach and Departure Volumes

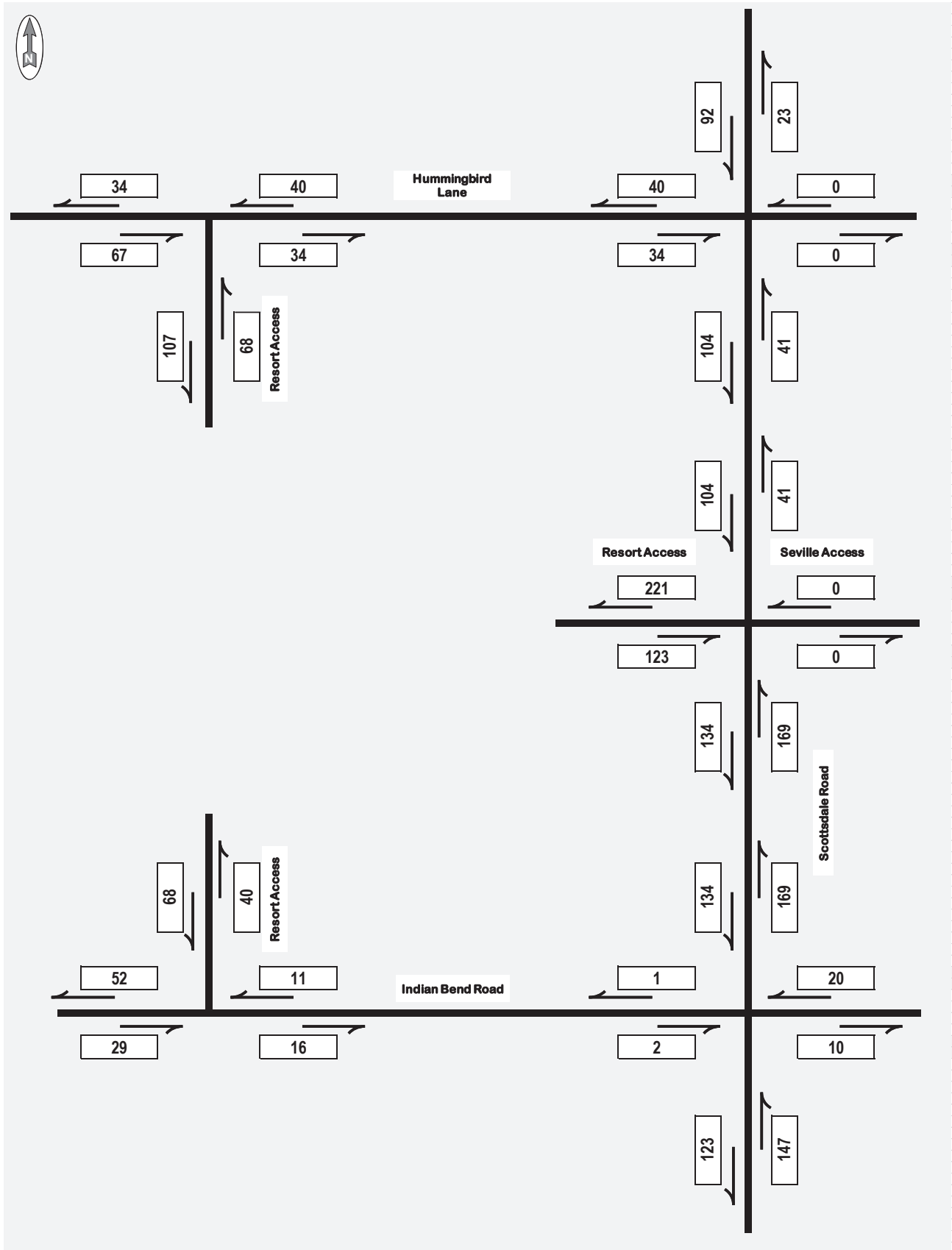


Figure 75: Saturday Resort Renovation PM Peak Hour Approach and Departure Volumes



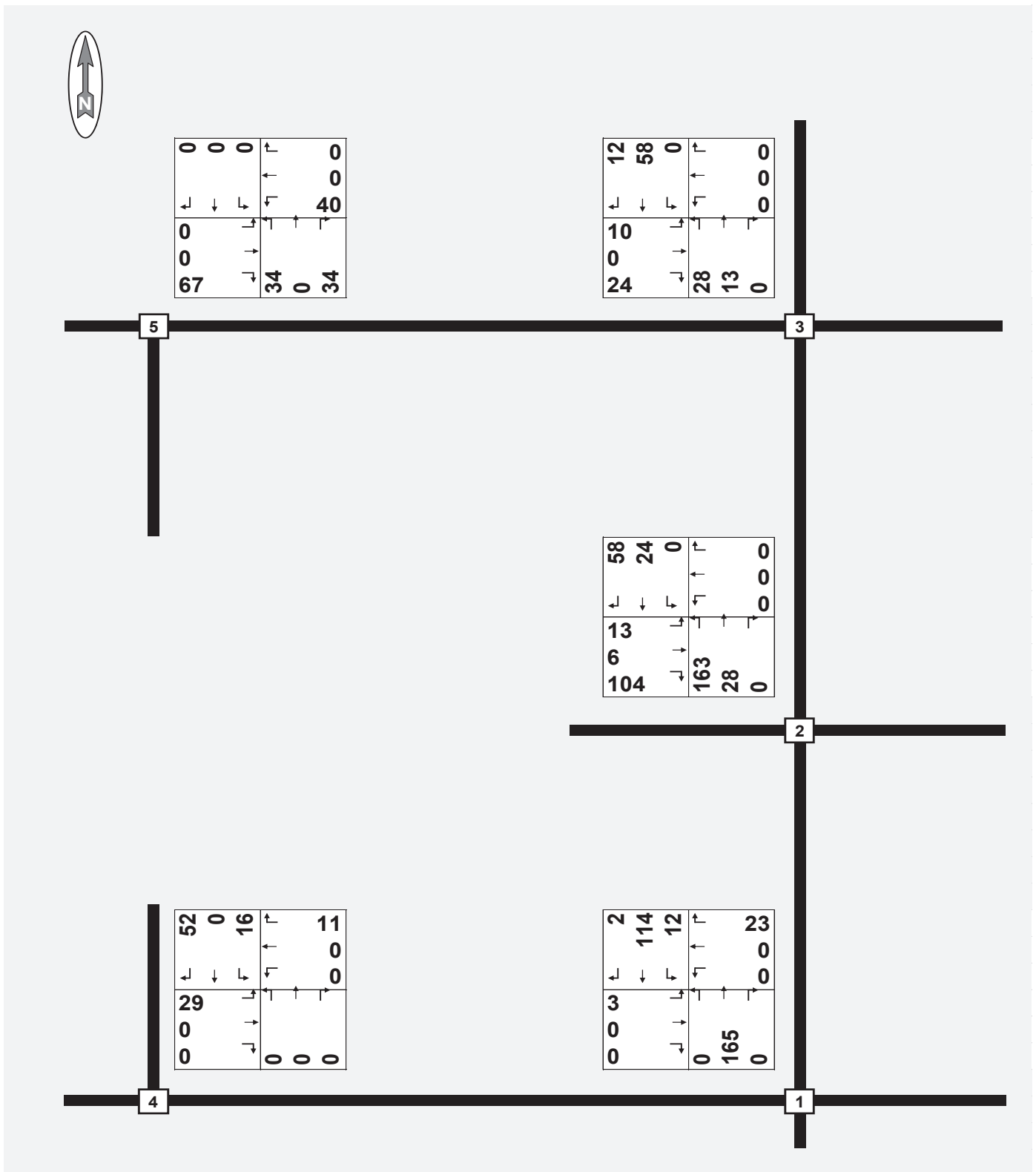


Figure 76: Saturday Resort Renovation PM Peak Hour Turning Volumes

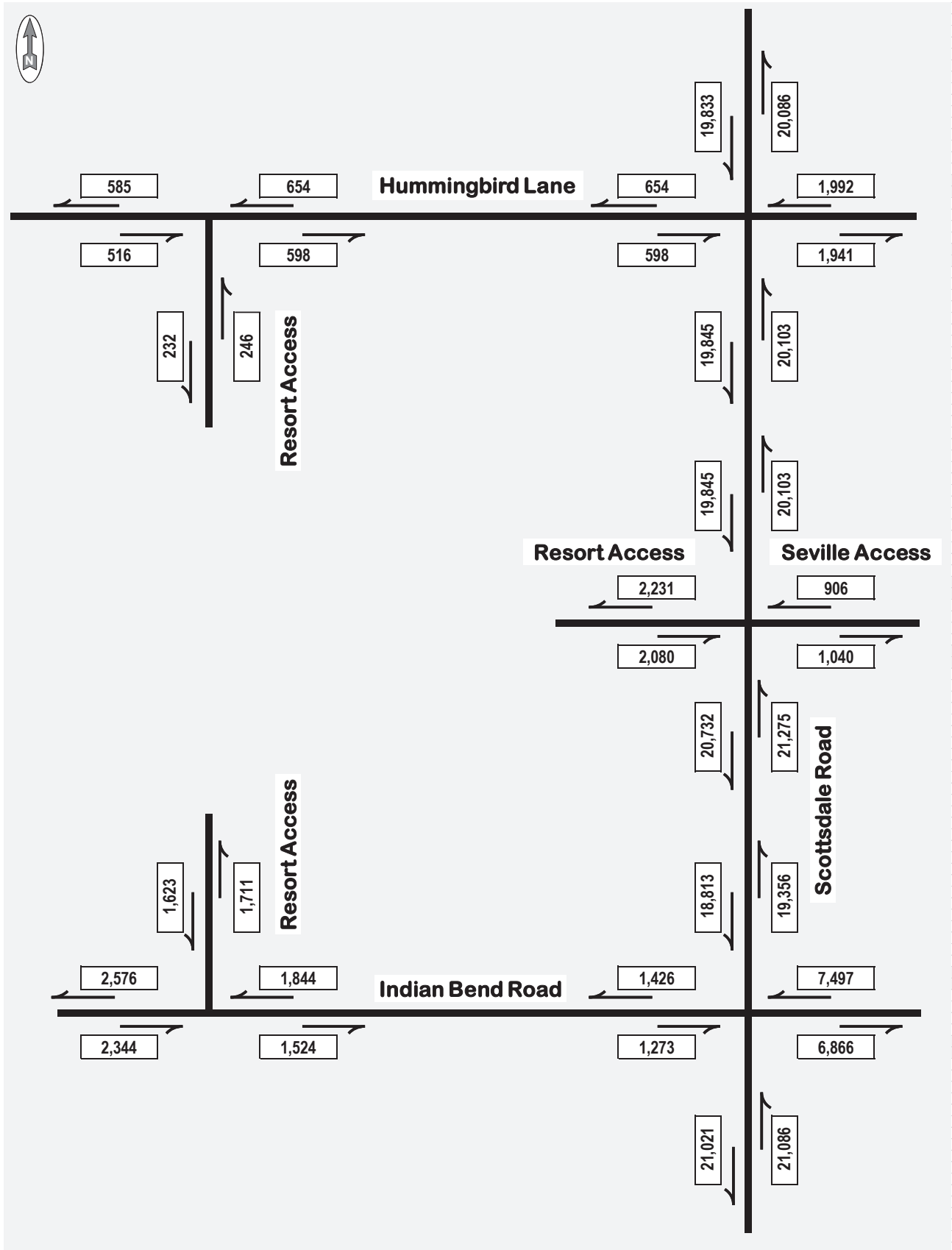


Figure 77: Saturday 2025 with Resort Renovation Day Approach and Departure Volumes

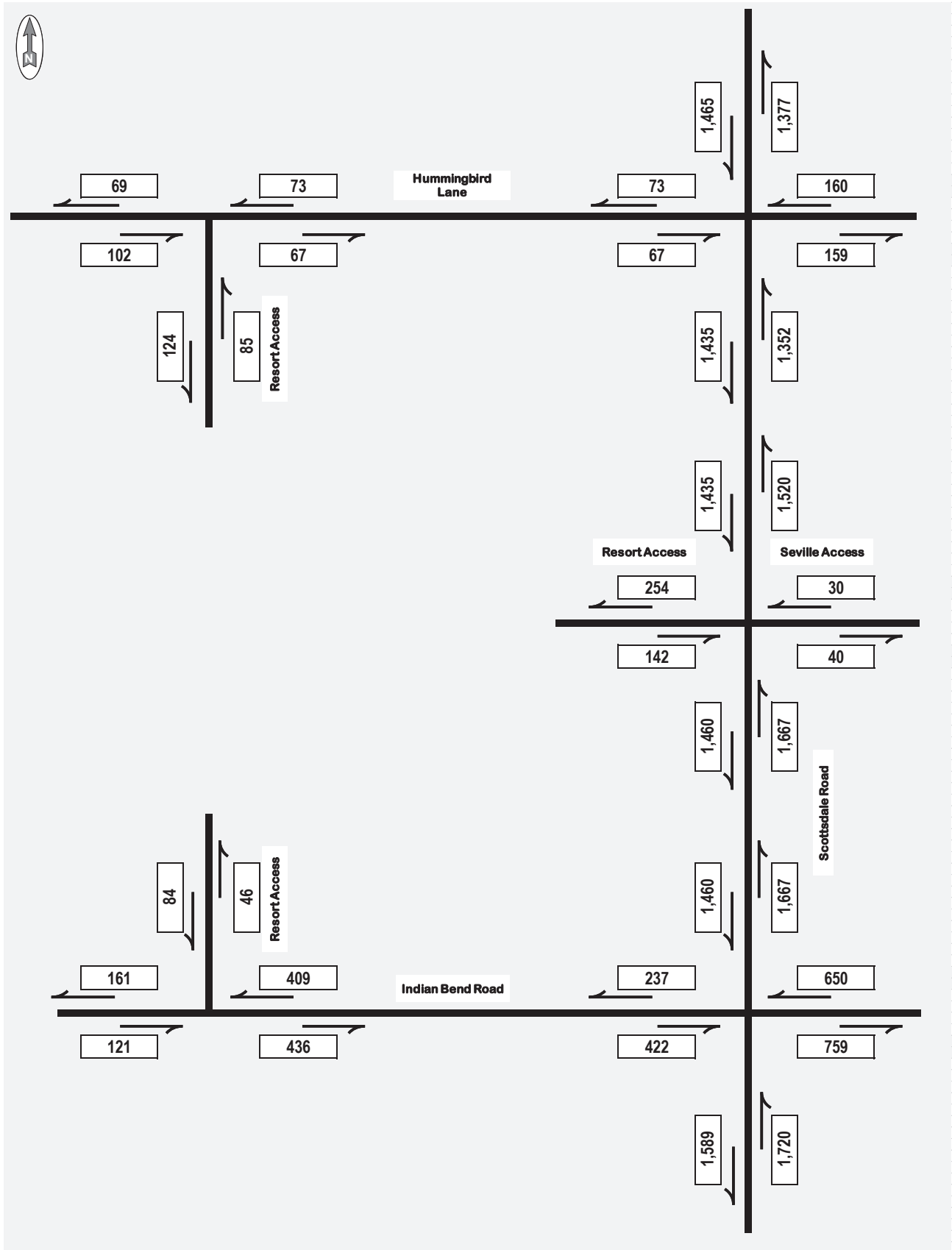


Figure 78: Saturday 2025 with Resort Renovation PM Peak Approach and Departure Volumes

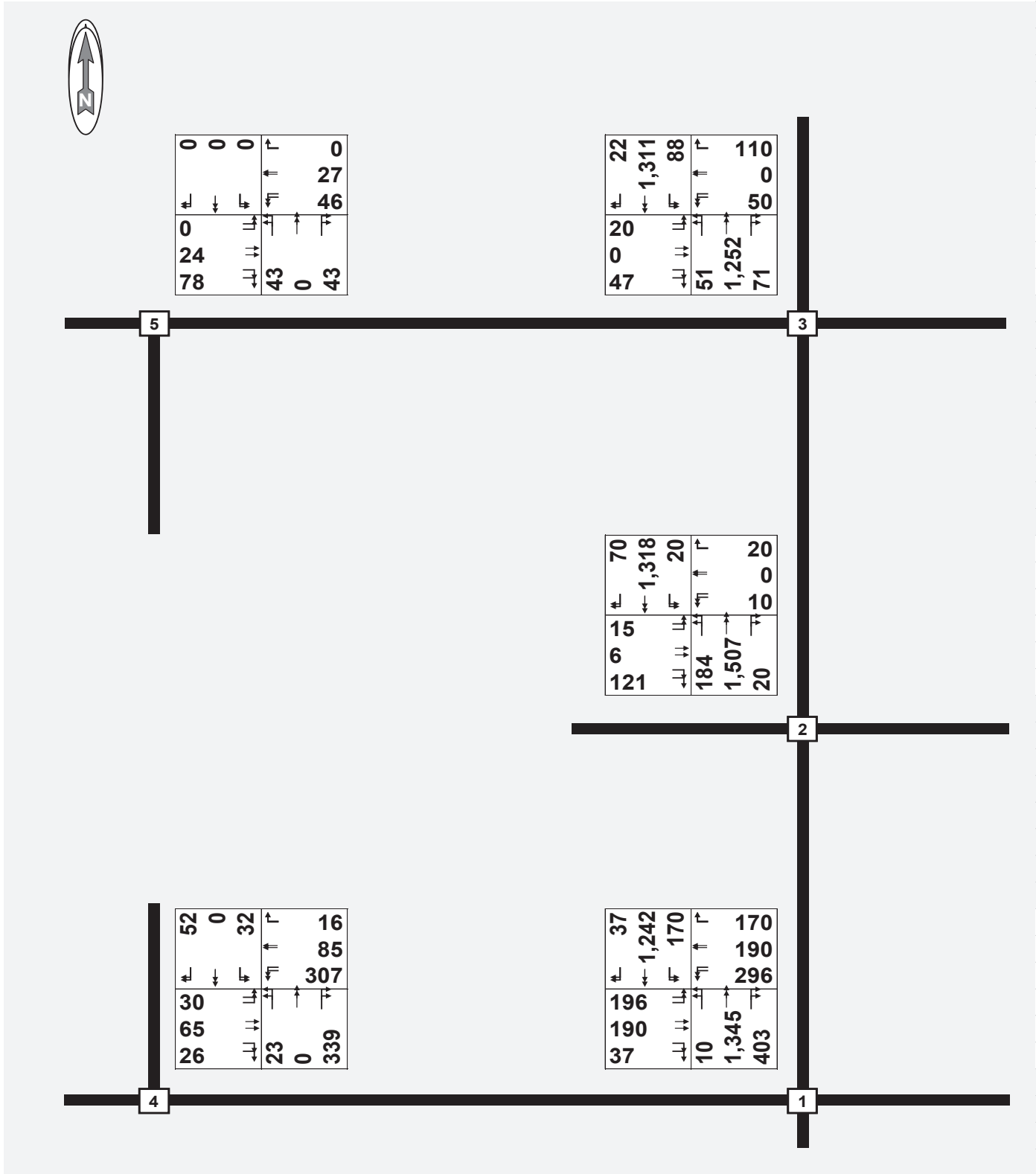


Figure 79: Saturday 2025 with Resort Renovation PM Peak Hour Turning Volumes

### Saturday Level-of-Service Analysis

The level-of-service for the Saturday peak hour was accomplished similar to the weekday peak hour level-of-service analyses. These analyses were only accomplished for 2025 with Artesia and Ritz-Carlton and, for 2025 with Artesia, Ritz-Carlton, and the Renovated Scottsdale Plaza Resort.

**Table 53: LOS Summary — Saturday Peak Hour**

**Unsignalized Intersections**

	2025	
	WITH RITZ & ARTESIA	WITH PLAZA & OTHERS
A	25	25
B	0	0
C	3	1
D	1	2
E	0	1
F	3	3
	32	32

**Signalized Intersections**

	2025	
	WITH RITZ & ARTESIA	WITH PLAZA & OTHERS
A	9	8
B	2	3
C	11	5
D	10	16
E	0	0
F	0	0
	32	32

The Saturday levels-of-service analyses reveal that no additional turn lanes are necessary at any of the five (5) intersections.

### Weekday and Saturday Queuing Analysis

Synchro was utilized to predict the future queue lengths in 2025 without and with the Renovated Scottsdale Plaza Resort. **Table 54** provides the predicted queue lengths in 2025 with the Artesia and the Ritz-Carlton, and without the renovated Scottsdale Plaza Resort. **Table 55** provides the predicted queue lengths in 2025 with the two developments and the renovated Scottsdale Plaza Resort. **Table 56** provides only the increased queue lengths with the renovated Scottsdale Plaza Resort compared to without the renovated Scottsdale Plaza Resort.

**Table 54: Queue Lengths – Signalized Intersections – 2025 with Artesia and Ritz-Carlton**

QUEUE (feet)	2025 WITH ARTESIA AND RITZ-CARLTON											
	EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT
Scottsdale Road and Indian Bend Road												
Weekday AM 50th Percentile	52	37		100	91	4	13	173	0	28	213	0
Weekday AM 95th Percentile	122	80		176	185	68	38	259	57	67	318	0
Weekday PM 50th Percentile	130	166		163	159	56	8	401	22	86	354	0
Weekday PM 95th Percentile	231	276		220	244	135	23	464	113	142	410	0
Saturday 50th Percentile	142	163		112	140	0	4	269	0	60	191	0
Saturday 95th Percentile	235	256		172	230	58	14	366	71	103	326	0
Scottsdale Road and Resort Access												
Weekday AM 50th Percentile	1	0		12	1		1	58	0	6	71	
Weekday AM 95th Percentile	9	13		33	23		5	87	11	21	105	
Weekday PM 50th Percentile	4	0		24	7		2	119	0	3	102	
Weekday PM 95th Percentile	20	19		72	43		9	185	8	13	159	
Saturday 50th Percentile	1	0		3	0		0	0	0	0	0	
Saturday 95th Percentile	6	0		18	6		9	100	4	9	86	

**Table 55: Queue Lengths – Signalized Intersections – 2025 with Three Developments**

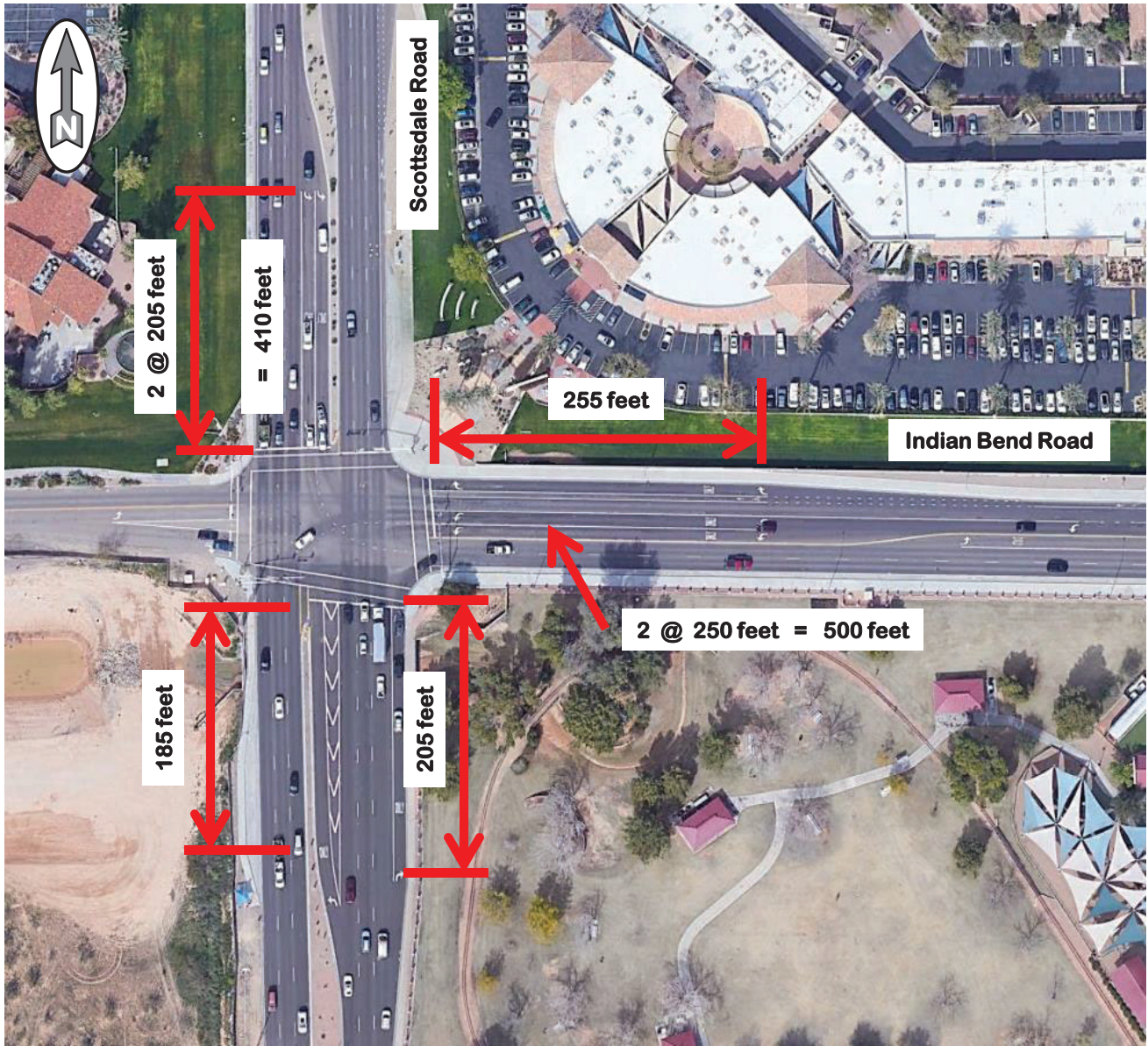
QUEUE (feet)	2025 WITH ARTESIA AND RITZ-CARLTON AND PLAZA RESORT RENOVATIONS											
	EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT
Scottsdale Road and Indian Bend Road												
Weekday AM 50th Percentile	53	38		100	91	6	13	175	0	28	214	0
Weekday AM 95th Percentile	122	80		176	185	70	38	263	57	67	319	0
Weekday PM 50th Percentile	133	168		164	160	74	8	435	33	89	366	0
Weekday PM 95th Percentile	247	289		235	246	160	23	501	129	150	423	0
Saturday 50th Percentile	146	166		114	143	17	4	315	2	65	221	0
Saturday 95th Percentile	239	260		172	230	83	14	414	71	110	365	0
Scottsdale Road and Resort Access												
Weekday AM 50th Percentile	2	0		11	3		2	59	0	6	71	
Weekday AM 95th Percentile	12	15		33	26		9	88	11	21	105	
Weekday PM 50th Percentile	25	11		38	8		53	130	0	3	117	
Weekday PM 95th Percentile	60	51		79	43		115	193	7	13	175	
Saturday 50th Percentile	11	32		7	0		51	90	0	3	82	
Saturday 95th Percentile	32	95		26	0		254	149	4	12	137	

**Table 56: Queue Lengths Increase with Plaza Resort**

QUEUE (feet)	INCREASE 2025 WITH PLAZA RESORT RENOVATIONS											
	EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT
Scottsdale Road and Indian Bend Road												
Weekday AM 50th Percentile	1	1		0	0	2	0	2	0	0	1	0
Weekday AM 95th Percentile	0	0		0	0	2	0	4	0	0	1	0
Weekday PM 50th Percentile	3	2		1	1	18	0	34	11	3	12	0
Weekday PM 95th Percentile	16	13		15	2	25	0	37	16	8	13	0
Saturday 50th Percentile	4	3		2	3	17	0	46	2	5	30	0
Saturday 95th Percentile	4	4		0	0	25	0	48	0	7	39	0
Scottsdale Road and Resort Access												
Weekday AM 50th Percentile	1	0		0	2		1	1	0	0	0	
Weekday AM 95th Percentile	3	2		0	3		4	1	0	0	0	
Weekday PM 50th Percentile	21	11		14	1		51	11	0	0	15	
Weekday PM 95th Percentile	40	32		7	0		106	8	0	0	16	
Saturday 50th Percentile	10	32		4	0		51	90	0	3	82	
Saturday 95th Percentile	26	95		8	0		245	49	0	3	51	

Figure 80 and Figure 81 respectively provide the existing turn lane lengths at the Scottsdale / Indian Bend and the Scottsdale / Plaza Resort access intersections.





**Figure 80: Existing Turn Lane Lengths at Scottsdale / Indian Bend**

At the intersection of Scottsdale Road and Indian Bend Road, all predicted 95<sup>th</sup> percentile queue lengths at the Scottsdale / Plaza Resort intersection in 2025 with all three (3) developments are shorter than the existing turn-lane lengths. The eastbound Indian Bend Road approach to Scottsdale Road is currently in design for the proposed Ritz-Carlton and Palmeraie development. This design should consider the 50<sup>th</sup> and 95<sup>th</sup> predicted queue lengths for the eastbound left-turn and the eastbound right-turn prior to construction.



At the intersection of Scottsdale Road and the Scottsdale Plaza Resort access, the existing northbound left-turn lane is double the northbound left-turn predicted 50<sup>th</sup> percentile queue length. However, at this intersection the northbound left-turn predicted 95<sup>th</sup> percentile queue is 120 feet longer than the existing left-turn lane, approximately 5 to 6 vehicles longer. Recognizing the dramatic difference between the predicted 50<sup>th</sup> and 95<sup>th</sup> percentile queue length, and the inherent unpredictability of future queue lengths, lengthening the left-turn lane is not recommended. However, subsequent to the operation of the three restaurants, the Scottsdale Road northbound left-turn at the Scottsdale Resort Plaza access should be monitored to determine if the left-turn lane should be lengthened.

All other predicted 95<sup>th</sup> percentile queue lengths at the Scottsdale / Plaza Resort intersection in 2025 with all three (3) developments are less than the existing turn-lane lengths.

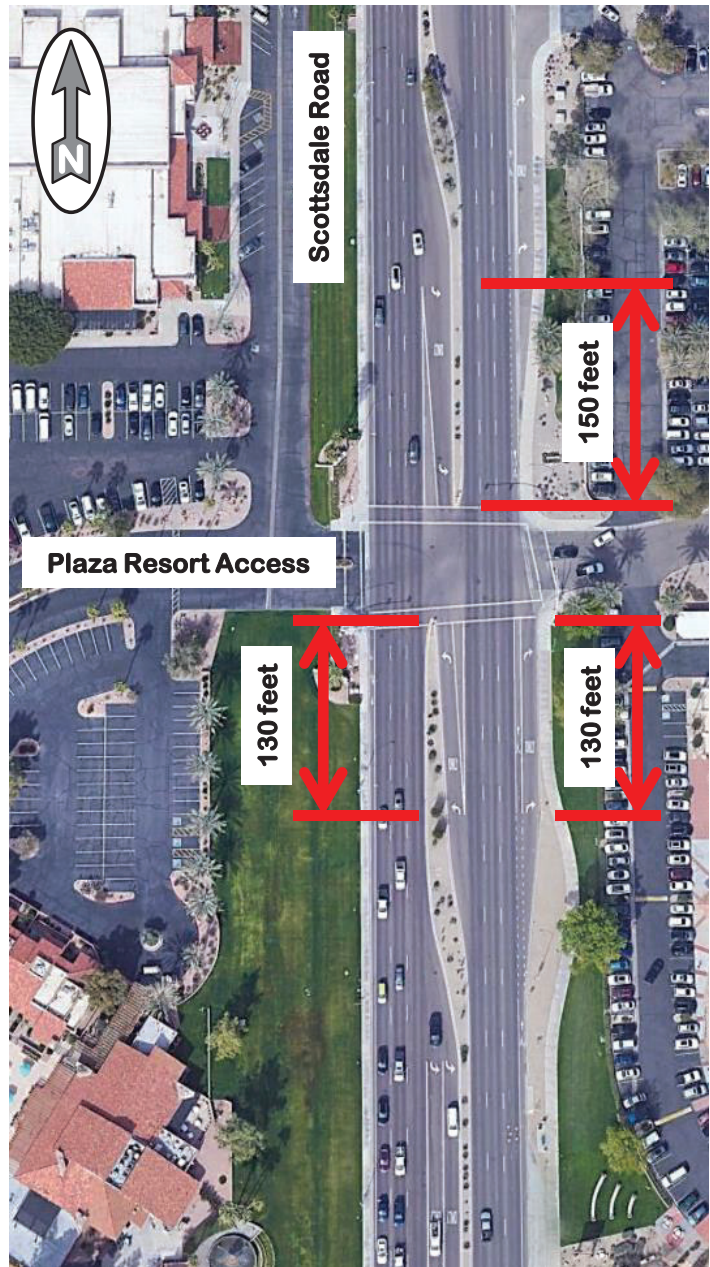


Figure 81: Existing Turn Lane Lengths at Plaza Resort Access

### Left-Turn Arrow Analysis

The Town of Paradise Valley has requested that the need for exclusive or permissive and exclusive left-turn-arrows at the intersection of Scottsdale Road and the Scottsdale Resort Plaza access be analyzed. The City of Scottsdale has criteria for determining conditions that warrant left-turn arrows. These criteria are provided in **Table 57**. Typically, the City of Scottsdale requires that two (2) of the three (3) criteria be satisfied to justify a left-turn arrow.

**Table 57: City of Scottsdale Left-Turn Arrow Criteria**

- Peak hour traffic volume: One (1) hour of left turn and opposing through volumes surpass respective threshold volumes listed in **Table 3** below.

**Table 3 – Peak Hour Volume Thresholds for Left Turn Phasing**

Peak Left Turn Volume Exceeds	Peak Hour Opposing Volume Exceeds	
	1 lane	2 or more lanes
75	800	1000
100	750	900
150	600	800
200	500	650
300	400	550
400	200	350

- Peak hour delay: An intersection capacity analysis determines that left turn phasing is needed to provide a minimal level of service (LOS) of "D" for a specific movement or the entire intersection.
  - Note: Judgement should be exercised in this decision process. Although protected and permitted phasing may greatly enhance the level of service for a left turn movement, it may greatly diminish the level of service for the entire intersection and installation may not be desirable based on this warrant.
- Collision experience: there are five (5) or more accidents in a given approach during a 12-month period that may have been prevented by left turn phasing.

Local conditions may be an overriding factor as to whether or not left turn phasing is appropriate.

These criteria were utilized to determine if left-turn arrows are warranted at the Scottsdale / Scottsdale Access intersection. The evening peak hour had the largest left-turn volume. The criteria were analyzed for only the adjusted existing 2022 traffic volumes and for the 2025 traffic volumes with Artesia, Ritz-Carlton, and Scottsdale Plaza Resort Conversion. The traffic volumes are provided respectively in **Table 58**.

**Table 58: Left-Turn Arrow Peak Hour Criteria Analysis**

ADJUSTED EXISTING 2022				
APPROACH	MORNING PEAK HOUR		EVENING PEAK HOUR	
	LEFT-TURN	OPPOSING	LEFT-TURN	OPPOSING
Northbound	8	1,155	14	1,433
Southbound	47	1,154	19	1,529
Eastbound	4	30	8	39
Westbound	23	10	46	13

2025 WITH THREE DEVELOPMENTS						
APPROACH	MORNING PEAK HOUR		EVENING PEAK HOUR		SATURDAY PEAK HOUR	
	LEFT-TURN	OPPOSING	LEFT-TURN	OPPOSING	LEFT-TURN	OPPOSING
Northbound	18	1,376	127	1,699	162	1,415
Southbound	50	1,279	20	1,849	20	1,505
Eastbound	6	37	34	40	15	20
Westbound	30	14	50	55	10	127

These analyses indicate that with the renovated Scottsdale Plaza Resort, the estimated northbound left-turn volume satisfies only the City of Scottsdale left-turn arrow volume criteria.

As indicated in **Appendix G.8**, both the northbound and southbound left-turn movements at the Scottsdale / Scottsdale Plaza Resort intersection are anticipated to operate at level-of-service “A” without left-turn arrows. Therefore, the City of Scottsdale left-turn arrow delay criteria are not satisfied.

Also, as indicated in **Appendix A.2**, no left-turn-head-on collisions have occurred in the northbound and southbound directions at the Scottsdale / Scottsdale Plaza Resort intersection from 2015 through 2020. Therefore, the City of Scottsdale left-turn arrow collision experience criteria are not satisfied.

**Results**

The renovated hotel is anticipated to generate 4,989 additional weekday daily vehicles; 50 additional weekday morning peak hour vehicles; 462 additional weekday evening peak hour vehicles; 5,472 additional Saturday daily vehicles; and 627 additional Saturday peak hour vehicles. **Table 59** provides a comparison of the proposed renovated Scottsdale Plaza Resort to the adjacent proposed developments of Ritz-Carlton and Artesia.

**Table 59: Trip Generation Comparison of Plaza Resort to Two Adjacent Developments**

TIME PERIOD	RENOVATED PLAZA RESORT			RITZ-CARLTON			ARTESIA		
	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
WEEKDAY	3,159	3,165	6,324	7,720	7,720	15,440	1,668	1,668	3,336
AM PEAK HOUR STREET	173	151	324	567	369	936	66	190	256
PM PEAK HOUR STREET	502	299	801	701	682	1,383	158	100	258

**Table 60** through **Table 63** respectively summarize, for the signalized and unsignalized intersections for the morning and evening peak hours, for the intersection, approach, and movement level-of-service results for the analyzed conditions. The numbers are the total number of intersections, approaches, and movements for the study intersections at the indicated level-of-service. This information is provided as a concise synopsis of the differences in intersection operation between different scenarios. Complete detailed information is provided in the appendices.

Level-of-service is a ranking system for intersections, with “A” representing the lowest delay and “F” representing the highest delay. Typically, levels-of-service “A” and “B” indicate more traffic lanes are provided than necessary for the traffic volumes, “E” and “F” indicate too much traffic for the existing lane configuration and number, with “C” and “D” indicating a proper balance between the traffic volumes, and the traffic control, lane configuration, and lane number.

Complete level-of-service results; summarized by individual movement, approach, and intersection; for both existing and adjusted 2022; 2025; 2025 with only Artesia; 2025 with both Artesia and Ritz; and 2025 with Artesia, Ritz, and Plaza; are provided in tabular form as **Appendix G.8**. Detailed delay and level-of-service analyses results are provided in **Appendices G.2** through **G.7**.

**Table 60: LOS Summary – Signalized Intersections – Weekday AM Peak Hour**

	2022		AMBIENT	2025		
	EXISTING	ADJUSTED		WITH ARTESIA	WITH RITZ & ARTESIA	WITH PLAZA & OTHERS
A	9	9	9	9	9	9
B	13	13	13	13	7	7
C	8	6	8	8	11	12
D	2	4	2	2	5	4
E	0	0	0	0	0	0
F	0	0	0	0	0	0
	32	32	32	32	32	32

**Table 61: LOS Summary – Signalized Intersections – Weekday PM Peak Hour**

	2022		AMBIENT	2025		
	EXISTING	ADJUSTED		WITH ARTESIA	WITH RITZ & ARTESIA	WITH PLAZA & OTHERS
A	9	9	9	9	9	8
B	10	5	6	5	1	2
C	5	9	8	9	10	4
D	8	9	9	9	7	9
E	0	0	0	0	5	9
F	0	0	0	0	0	0
	32	32	32	32	32	32

**Table 62: LOS Summary – Unsignalized Intersections – Weekday AM Peak Hour**

	2022		AMBIENT	2025		
	EXISTING	ADJUSTED		WITH ARTESIA	WITH RITZ & ARTESIA	WITH PLAZA & OTHERS
A	18	18	18	17	24	24
B	2	1	2	0	0	0
C	2	3	2	5	1	1
D	1	1	0	0	2	2
E	0	0	0	0	1	1
F	2	2	3	3	4	4
	25	25	25	25	32	32

**Table 63: LOS Summary – Unsignalized Intersections – Weekday PM Peak Hour**

	2022		AMBIENT	2025		
	EXISTING	ADJUSTED		WITH ARTESIA	WITH RITZ & ARTESIA	WITH PLAZA & OTHERS
A	19	20	18	17	24	24
B	0	0	0	0	0	0
C	2	1	1	1	0	0
D	1	1	2	1	2	1
E	0	0	0	0	0	1
F	3	3	4	6	6	6
	25	25	25	25	32	32



**Table 64: LOS Summary — Saturday Peak Hour**

**Unsignalized Intersections**

	2025	
	WITH RITZ & ARTESIA	WITH PLAZA & OTHERS
A	25	25
B	0	0
C	3	1
D	1	2
E	0	1
F	3	3
	32	32

**Signalized Intersections**

	2025	
	WITH RITZ & ARTESIA	WITH PLAZA & OTHERS
A	9	8
B	2	3
C	11	5
D	10	16
E	0	0
F	0	0
	32	32

The Scottsdale / Hummingbird intersection is predicted to have several levels-of-service “F” caused by left-turns from a stop-controlled access onto an uncontrolled arterial. This circumstance is typical of similar intersections and accesses. While a traffic signal would decrease the delay for the westbound left-turn movement, such a signal is not warranted by predicted traffic volumes.

Such a signal would also increase congestion for northbound and southbound traffic on Scottsdale Road. Three (3) signals in one-half mile would be very difficult to provide consecutive green indications for both travel directions at the posted speed limit of 45 miles-per-hour. A direct connection exists between the Artesia access and the Scottsdale Plaza Resort currently signalized access. Drivers who become impatient at waiting to turn left at the Artesia access can easily utilize the Scottsdale Plaza Resort signalized access. Furthermore, the Artesia is a residential community, and therefore a very large percentage of drivers will be very familiar with the traffic operation. These drivers can thereby plan their left-turn movements accordingly.

At the Scottsdale / Indian Bend intersection, several turning movements are predicted to experience level-of-service “E” during the weekday evening peak hour, though not during the weekday morning peak hour or Saturday peak hour. Evening peak hour levels-of-service at intersections of arterial streets in urbanized areas are frequently level-of-service “E” or “F”. Adding a fourth lane per direction on Scottsdale Road, or a third lane per direction on Indian Bend Road are unrealistic solutions.

At the intersection of Scottsdale Road and the Scottsdale Plaza Resort access, the existing northbound left-turn lane is double the northbound left-turn maximum predicted 50<sup>th</sup> percentile queue length. However, at this intersection, during the Saturday peak hour of restaurant-generated traffic, the northbound left-turn predicted 95<sup>th</sup> percentile queue is 120 feet longer than the existing left-turn lane, approximately 5 to 6 vehicles longer. Recognizing the dramatic difference between the predicted 50<sup>th</sup> and 95<sup>th</sup> percentile queue length, the inherent unpredictability of future queue lengths, and that this predicted circumstance only occurs one hour of the week; lengthening the left-turn lane is not justified or definitively necessary.

The primary access to the Scottsdale Plaza Resort is on Scottsdale Road, approximately 600 feet north of Indian Bend Road. This intersection is identified by the City of Scottsdale as 7025 North Scottsdale Road. The Town of Paradise Valley requested that this signalized intersection be analyzed to determine need for northbound exclusive or northbound permissive and exclusive left-turn arrows. City of Scottsdale Left-turn Arrow Warrant consists of three (3) criteria: volume, delay, and collisions; of which two (2) of the three (3) criteria typically must be satisfied to justify left-turn arrow installation. Only the volume criterion is satisfied with the renovated Scottsdale Plaza Resort.

### ***Recommendations without Renovated Scottsdale Plaza Resort***

The Scottsdale Plaza Resort access with Scottsdale Road should not be modified to include northbound left-turn arrows.

No traffic improvements are justified or necessary.

### ***Recommendations with Renovated Scottsdale Plaza Resort***

The existing traffic signal at the intersection of Scottsdale Road and the primary Scottsdale Plaza Resort (7025 North Scottsdale Road) should remain – particularly with the renovated Scottsdale Plaza Resort. At the Scottsdale Road access to the Scottsdale Plaza Resort, a northbound permissive and exclusive left-turn arrow is not warranted per the City of Scottsdale criteria. However, the intersection traffic operation should be monitored and the traffic should be counted after the renovated Scottsdale Plaza Resort is complete to determine if a northbound left-turn arrow is justified.

At the intersection of Scottsdale Road and Indian Bend Road, the eastbound Indian Bend Road approach to Scottsdale Road is currently in design for the proposed Ritz-Carlton and Palmeraie development. This design should consider the maximum predicted 50<sup>th</sup> percentile queue length of 146 feet and the maximum predicted 95<sup>th</sup> percentile queue length of 247 feet for the eastbound left-turn lane prior to construction.

At the intersection of Scottsdale Road and the Scottsdale Plaza Resort access, subsequent to the operation of the three restaurants, the Scottsdale Road northbound left-turn at the Scottsdale Resort Plaza access should be monitored on Saturday evening to determine if the left-turn lane should be lengthened.

No traffic improvements are justified or necessary.

**Appendix A**  
Collision Analysis





# Appendix A.1

## Collision Analysis

### Scottsdale Road and Indian Bend Road



SCOTTSDALE ROAD AND INDIAN BEND ROAD: 2015

INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
2934076 2934076 2934076	33.5386	-111.9258	02 / 28	12:41 PM	Sideswipe Same Direction	No Injury	Northbound Northbound Northbound	Straight Slowing Stopped	Pick-up Truck Car Car	No Controls No Controls No Controls	Passenger Not Distracted Unknown	Speed Too Fast For Conditions No Improper Action	
2937878 2937878	33.5388	-111.9258	01 / 14	12:20 PM	Rear End	Possible Injury	Southbound Southbound	Stopped Stopped	Pick-up Truck Car	Signal Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
2945086 2945086	33.5386	-111.9214	03 / 17	9:58 AM	U-Turn	Suspected Minor Injury	Eastbound Eastbound	Making U Turn Straight	Car Car	No Controls No Controls	Unknown Not Distracted	Made Improper Turn	
2945931 2945931	33.5386	-111.9258	03 / 12	9:48 AM	Rear End	No Injury	Northbound Northbound	Straight Stopped	Car Car	Signal Signal	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	
2951917 2951917	33.5384	-111.9258	04 / 21	6:44 PM	Sideswipe Same Direction	No Injury	Northbound Northbound	Straight Straight	Car Car	Signal Signal	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	
2955156 2955156	33.5387	-111.9258	04 / 26	5:13 PM	Left-Turn-Head-On	Possible Injury	Southbound Northbound	Turning Left Straight	Car Car	Signal Signal	Not Distracted Not Distracted		
2964441 2964441	33.5387	-111.9241	05 / 24	10:38 AM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Car Car	No Controls No Controls	Unknown Unknown	No Improper Action	
2965375 2965375	33.5390	-111.9258	05 / 27	7:02 PM	Sideswipe Same Direction	No Injury	Northbound Northbound	Straight Straight	Car Car	No Controls No Controls	Not Distracted Not Distracted		
2986878 2986878	33.5386	-111.9258	08 / 17	8:50 PM	Sideswipe Same Direction	No Injury	Southbound Southbound	Turning Right Turning Left	Car Car	Signal No Controls	Unknown Not Distracted	Made Improper Turn No Improper Action	
3000437 3000437	33.5391	-111.9258	09 / 29	1:38 PM	Rear End	No Injury	Northbound Northbound	Straight Slowing	Car Car	Signal Signal	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	
3006793	33.5386	-111.9258	10 / 06	1:22 PM	Single Vehicle	No Injury	Westbound	Turning Left	Car	Signal	Not Distracted	Speed Too Fast For Conditions	
3028339 3028339	33.5385	-111.9258	12 / 10	8:12 AM	Rear End	No Injury	Northbound Northbound	Straight Stopped	Truck Car	Signal Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions	
3033208 3033208	33.5387	-111.9258	12 / 19	11:06 AM	Left-Turn-Head-On	No Injury	Southbound Northbound	Turning Left Straight	Car Car	Signal Signal	Unknown Not Distracted	Failed to Stop for Red Signal	
3035732 3035732	33.5387	-111.9278	12 / 23	10:07 PM	Left-Turn-Angle	No Injury	Northbound Westbound	Turning Left Straight	Car Car	No Controls No Controls	Unknown Not Distracted	Made Improper Turn No Improper Action	

SCOTTSDALE ROAD AND INDIAN BEND ROAD: 2016

INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3048504 3048504	33.5387	-111.9267	01 / 20	7:44 AM	Rear End	Suspected Minor Injury	Eastbound Eastbound	Straight Turning Left	Not Reported Not Reported	No Controls No Controls	Unknown Unknown	Speed Too Fast For Conditions No Improper Action	Followed Too Closely
3051250 3051250 3051250	33.5401	-111.9258	01 / 15	2:38 PM	Rear End	Possible Injury	Southbound Southbound Southbound	Straight Stopped Stopped	Car Car Car	No Controls No Controls No Controls	Other Device Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action No Improper Action	
3054167 3054167	33.5408	-111.9258	01 / 17	11:35 AM	Rear End	Possible Injury	Southbound Southbound	Straight Stopped	Car Car	Signal Signal	Outside Vehicle Not Distracted	Speed Too Fast For Conditions No Improper Action	
3058475 3058475	33.5388	-111.9258	02 / 21	12:20 PM	Rear End	No Injury	Southbound Southbound	Straight Straight	Car Car	Signal Signal	Inside Vehicle Not Distracted	Speed Too Fast For Conditions No Improper Action	
3059072 3059072	33.5425	-111.9258	02 / 19	6:15 PM	Rear End	No Injury	Southbound Southbound	Straight Stopped	Car Car	Signal Signal	Unknown Unknown	Speed Too Fast For Conditions	
3087808 3087808	33.5416	-111.9258	04 / 22	4:45 PM	Angle	No Injury	Southbound Eastbound	Straight Straight	Car Car	Signal Signal	Unknown Not Distracted	Disregarded Traffic Signal No Improper Action	
3099941	33.5390	-111.9258	06 / 04	12:12 AM	Single Vehicle	No Injury	Northbound	Making U Turn	Car	Signal	Not Distracted	Speed Too Fast For Conditions	
3102042	33.5387	-111.9257	06 / 17	2:34 AM	Single Vehicle	No Injury	Unknown	Unknown	Not Reported	Signal	Unknown		
3105680 3105680	33.5387	-111.9257	05 / 18	9:59 PM	Rear End	No Injury	Westbound Westbound	Unknown Turning Right	Not Reported Car	Signal Signal	Unknown Not Distracted	No Improper Action	
3108683 3108683 3108683	33.5386	-111.9258	07 / 05	3:02 PM	Rear End	No Injury	Northbound Northbound Northbound	Straight Stopped Stopped	Car Car Car	Signal Signal Signal	Unknown Not Distracted Not Distracted	Exceeded Lawful Speed No Improper Action No Improper Action	
3110393 3110393	33.5382	-111.9257	07 / 15	1:10 PM	Rear End	Possible Injury	Southbound Southbound	Straight Straight	Car Car	No Controls No Controls	Unknown Unknown	Speed Too Fast For Conditions	
3145337 3145337	33.5387	-111.9255	10 / 04	12:14 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Pick-up Truck Car	Signal Signal	Unknown Unknown	Speed Too Fast For Conditions	
3152636 3152636	33.5387	-111.9258	11 / 07	4:27 PM	Rear End	No Injury	Northbound Northbound	Straight Stopped	Car Car	Signal Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3152686 3152686	33.5387	-111.9258	11 / 02	12:31 PM	Left-Turn-Angle	No Injury	Westbound Northbound	Turning Left Straight	Car Car	Signal Signal	Not Distracted Not Distracted	Disregarded Traffic Signal No Improper Action	
3155261 3155261	33.5390	-111.9258	11 / 12	5:33 PM	Rear End	No Injury	Northbound Northbound	Straight Stopped	Car Car	Signal Signal	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	
3171895 3171895	33.5387	-111.9277	12 / 01	2:43 PM	Angle	Possible Injury	Southbound Westbound	Turning Right Straight	Car Car	No Controls No Controls	Unknown Unknown	Failed to Stop for Red Signal No Improper Action	
3175095 3175095	33.5387	-111.9256	12 / 19	11:53 AM	Sideswipe Same Direction	No Injury	Eastbound Eastbound	Turning Right Straight	Car Truck	Signal Signal	Not Distracted Not Distracted	Made Improper Turn	

SCOTTSDALE ROAD AND INDIAN BEND ROAD: 2017

INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL		VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
							DIRECTION	ACTION					
3188724 3188724	33.5387	-111.9258	01 / 20	12:00 PM	Rear End	No Injury	Northbound Northbound	Slowing Stopped	Car Car	Signal Signal	Electronic Device Not Distracted	Speed Too Fast For Conditions No Improper Action	
3197982 3197982	33.5387	-111.9259	02 / 15	6:01 PM	Sideswipe Same Direction	No Injury	Westbound Westbound	Changing Lanes Straight	Car Car	Signal Signal	Unknown Not Distracted	Unsafe Lane Change No Improper Action	
3207122 3207122	33.5386	-111.9258	03 / 09	3:05 PM	Rear End	No Injury	Northbound Northbound	Straight Slowing	Unreported Car	Signal Signal	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	
3208335 3208335 3208335	33.5385	-111.9258	03 / 20	12:58 PM	Rear End	Possible Injury	Northbound Northbound Northbound	Straight Stopped Straight	Car Car Car	Signal Signal Signal	Electronic Device Not Distracted Not Distracted	No Improper Action No Improper Action	
3216681 3216681	33.5385	-111.9258	04 / 11	9:57 AM	Rear End	No Injury	Northbound Northbound	Straight Stopped	Car Car	Signal Signal	Not Distracted Unknown	Speed Too Fast For Conditions No Improper Action	
3216690 3216690 3216690	33.5387	-111.9258	03 / 28	8:34 AM	Left-Turn-Angle	Possible Injury	Westbound Southbound Eastbound	Turning Left Straight Straight	Car Car Car	Signal Signal Signal	Not Distracted Not Distracted Not Distracted	Failed to Stop for Red Signal No Improper Action No Improper Action	
3238423 3238423	33.5387	-111.9256	04 / 17	7:46 AM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	Signal Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3243086 3243086	33.5385	-111.9258	05 / 30	8:40 AM	Rear End	No Injury	Northbound Northbound	Straight Straight	Car Car	Signal Signal	Not Distracted Not Distracted	No Improper Action	
3252136 3252136	33.5387	-111.9241	07 / 12	6:45 AM	Sideswipe Same Direction	No Injury	Westbound Westbound	Changing Lanes Straight	Truck Car	No Controls No Controls	Unknown Unknown	Unsafe Lane Change No Improper Action	
3272557 3272557	33.5387	-111.9258	08 / 24	10:49 AM	Sideswipe Same Direction	No Injury	Westbound Westbound	Turning Left Turning Left	Car Car	Signal Signal	Not Distracted Not Distracted	Made Improper Turn No Improper Action	
3289081 3289081	33.5387	-111.9258	10 / 17	2:11 PM	Angle	Suspected Minor Injury	Southbound Westbound	Straight Straight	Car Car	Signal Signal	Not Distracted Not Distracted	Disregarded Traffic Signal No Improper Action	
3296755 3296755	33.5387	-111.9258	11 / 03	3:20 PM	Angle	Possible Injury	Southbound Eastbound	Straight Straight	Car Car	Signal Signal	Unknown Unknown	Disregarded Traffic Signal No Improper Action	

## SCOTTSDALE ROAD AND INDIAN BEND ROAD: 2018

INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3334032 3334032	33.5387	-111.9258	01 / 04	1:45 PM	Rear End	Suspected Minor Injury	Northbound Northbound	Straight Slowing	Car Car	Signal Signal	Unknown Not Distracted	No Improper Action	
3335455 3335455 3335455	33.5372	-111.9257	01 / 11	2:05 PM	Rear End	Possible Injury	Northbound Northbound Northbound	Straight Stopped Stopped	Car Truck Car	Signal Signal Signal	Electronic Device Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3335654 3335654 3335654	33.5395	-111.9258	01 / 16	11:23 AM	Rear End	No Injury	Northbound Northbound Northbound	Straight Slowing Slowing	Car Car Car	Signal Signal Signal	Unknown Not Distracted Not Distracted	No Improper Action No Improper Action	
3342516 3342516	33.5387	-111.9258	02 / 01	9:30 AM	Angle	Suspected Serious Injury	Southbound Eastbound	Straight Straight	Motorcycle Car	Signal Signal	Unknown Unknown	Disregarded Traffic Signal No Improper Action	
3344241 3344241	33.5387	-111.9257	02 / 08	6:32 PM	Sideswipe Same Direction	No Injury	Westbound Westbound	Turning Right Straight	Car Car	Signal Signal	Unknown Not Distracted	Unsafe Lane Change No Improper Action	
3344250 3344250	33.5388	-111.9258	02 / 07	1:34 PM	Sideswipe Same Direction	No Injury	Southbound Southbound	Changing Lanes Straight	Car Car	Signal Signal	Unknown Not Distracted	Unsafe Lane Change No Improper Action	
3347983 3347983	33.5387	-111.9237	02 / 15	4:15 PM	Left-Turn-Head-On	No Injury	Eastbound Westbound	Turning Left Straight	Car Car	No Controls No Controls	Unknown Not Distracted	Failed to Stop for Red Signal No Improper Action	
3349500 3349500 3349500	33.5387	-111.9259	03 / 01	1:20 PM	Rear End	No Injury	Eastbound Eastbound Eastbound	Straight Stopped Stopped	Unknown Car Car	Signal Signal Signal	Unknown Unknown Not Distracted	No Improper Action No Improper Action	
3355780 3355780 3355780	33.5384	-111.9258	03 / 10	1:41 PM	Rear End	No Injury	Southbound Southbound Southbound	Straight Slowing Slowing	Car Car Car	No Controls No Controls No Controls	Other Device Not Distracted Not Distracted	No Improper Action No Improper Action	
3358288 3358288	33.5387	-111.9258	03 / 30	5:08 PM	Left-Turn-Head-On	No Injury	Northbound Southbound	Straight Turning Left	Car Car	Signal Signal	Unknown Not Distracted	Disregarded Traffic Signal No Improper Action	
3382181 3382181	33.5386	-111.9258	05 / 25	5:29 PM	Rear End	Suspected Minor Injury	Northbound Northbound	Straight Slowing	Car Car	Signal Signal	Not Distracted Not Distracted	Followed Too Closely No Improper Action	
3382184 3382184	33.5387	-111.9258	05 / 26	12:47 PM	Angle	No Injury	Southbound Westbound	Straight Straight	Car Truck	Signal Signal	Unknown Not Distracted	Disregarded Traffic Signal No Improper Action	
3382197 3382197	33.5387	-111.9257	05 / 27	3:20 PM	Angle	No Injury	Westbound Westbound	Changing Lanes Slowing	Car Car	Signal Signal	Unknown Unknown	Unsafe Lane Change	
3382464 3382464	33.5387	-111.9258	05 / 20	3:53 PM	Angle	No Injury	Northbound Eastbound	Straight Straight	Car Car	Signal Signal	Unknown Not Distracted	Disregarded Traffic Signal No Improper Action	
3382501 3382501	33.5370	-111.9257	05 / 23	11:50 AM	Rear End	Suspected Minor Injury	Northbound Northbound	Straight Stopped	Car Car	Signal Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3382923 3382923 3382923	33.5387	-111.9258	06 / 04	5:19 PM	Rear End	No Injury	Northbound Northbound Northbound	Straight Stopped Stopped	Car Car Car	Signal Signal Signal	Not Distracted Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action No Improper Action	
3390864 3390864	33.5395	-111.9258	06 / 23	10:53 AM	Rear End	No Injury	Southbound Southbound	Straight Stopped	Car Car	Signal Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3436656 3436656	33.5382	-111.9257	10 / 19	11:21 AM	Rear End	No Injury	Northbound Northbound	Straight Stopped	Car Car	Signal Signal	Unknown Unknown	No Improper Action	
3459837 3459837	33.5387	-111.9253	11 / 21	9:17 AM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	Signal Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3460814 3460814	33.5380	-111.9257	11 / 16	5:38 PM	Rear End	No Injury	Northbound Northbound	Straight Straight	Car Car	Signal Signal	Manually Operatic Not Distracted	Followed Too Closely No Improper Action	
3462150 3462150	33.5391	-111.9258	11 / 29	4:37 PM	Sideswipe Same Direction	No Injury	Northbound Northbound	Changing Lanes Unknown	Car Car	Signal Signal	Unknown Unknown		

SCOTTSDALE ROAD AND INDIAN BEND ROAD: 2019

INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3511596	33.5368	-111.9257	03 / 03	1:01 AM	Single Vehicle	Possible Injury	Southbound	Straight	Car	No Controls	Outside Vehicle	Exceeded Lawful Speed	Unknown
3520516 3520516	33.5387	-111.9258	04 / 15	2:30 PM	Left-Turn-Head-On	Suspected Minor Injury	Northbound Southbound	Straight Turning Left	Car Car	Signal Signal	Other Device Not Distracted	Disregarded Traffic Signal No Improper Action	
3521536 3521536	33.5387	-111.9258	04 / 17	2:17 PM	Left-Turn-Head-On	No Injury	Southbound Northbound	Turning Left Straight	Car Car	Signal Signal	Unknown Unknown	Failed to Stop for Red Signal No Improper Action	
3525228 3525228	33.5387	-111.9258	04 / 26	4:19 PM	Sideswipe Same Direction	No Injury	Westbound Westbound	Changing Lanes Straight	Car Car	Signal Signal	Not Distracted Not Distracted	Unsafe Lane Change No Improper Action	
3531252 3531252	33.5387	-111.9258	05 / 05	7:03 AM	Rear End	Suspected Minor Injury	Northbound Northbound	Straight Stopped	Pick-up Truck Car	Signal Signal	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	
3537544 3537544	33.5384	-111.9258	05 / 16	6:55 PM	Rear End	No Injury	Northbound Northbound	Slowing Stopped	Car Car	Signal Signal	Unknown Unknown	Followed Too Closely No Improper Action	
3537547 3537547	33.5388	-111.9258	05 / 17	8:36 AM	Rear End	Suspected Minor Injury	Southbound Southbound	Straight Slowing	Car Car	Signal Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3557905 3557905	33.5388	-111.9258	06 / 13	11:40 AM	Sideswipe Same Direction	No Injury	Southbound Southbound	Slowing Slowing	Car Car	Signal Signal	Not Distracted Not Distracted	Faulty or Missing Equipment No Improper Action	Speed Too Fast For Conditions
3581365 3581365	33.5387	-111.9258	09 / 04	2:30 PM	Left-Turn-Angle	Suspected Minor Injury	Southbound Eastbound	Straight Turning Left	Car Car	Signal Signal	Unknown Unknown		
3596898 3596898	33.5387	-111.9258	10 / 08	5:34 AM	Angle	No Injury	Southbound Westbound	Straight Straight	Car Car	Signal Signal	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	
3605639 3605639	33.5387	-111.9250	10 / 12	6:23 PM	Sideswipe Same Direction	No Injury	Eastbound Eastbound	Straight Straight	Unknown Car	No Controls No Controls	Unknown Not Distracted	Failed to Keep in Proper Lane No Improper Action	
3608693 3608693	33.5392	-111.9258	11 / 06	5:54 PM	Rear End	No Injury	Northbound Northbound	Straight Slowing	Car Car	No Controls No Controls	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3618095 3618095	33.5392	-111.9258	11 / 23	4:31 PM	Rear End	No Injury	Northbound Northbound	Straight Slowing	Car Car	No Controls No Controls	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3625202 3625202	33.5387	-111.9258	12 / 11	3:40 PM	Rear End	Possible Injury	Southbound Southbound	Straight Stopped	Car Car	Signal Signal	Unknown Not Distracted	No Improper Action	
3625768 3625768	33.5387	-111.9258	12 / 19	5:40 AM	Angle	No Injury	Southbound Eastbound	Straight Straight	Car Car	Signal Signal	Inside Vehicle Not Distracted	Disregarded Traffic Signal No Improper Action	

## SCOTTSDALE ROAD AND INDIAN BEND ROAD: 2020

INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL		ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
							DIRECTION	DIRECTION						
3653195 3653195	33.5387	-111.9259	02 / 10	8:10 AM	Rear End	No Injury	Eastbound	Eastbound	Slowing Stopped	Truck Car	Signal Signal	Unknown Not Distracted	Followed Too Closely No Improper Action	
3669187	33.5381	-111.9257	02 / 22	10:46 AM	Single Vehicle	Suspected Minor Injury	Northbound		Straight	Car	No Controls	Not Distracted	No Improper Action	
3669225 3669225 3669225	33.5388	-111.9258	02 / 25	2:57 PM	Rear End	Possible Injury	Northbound	Northbound	Straight Stopped Stopped	Car Car Pick-up Truck	No Controls No Controls No Controls	Unknown Unknown Unknown	Speed Too Fast For Conditions No Improper Action No Improper Action	
3669632 3669632	33.5389	-111.9258	02 / 26	8:56 AM	Sideswipe Same Direction	No Injury	Northbound	Northbound	Changing Lanes Straight	Unknown Pick-up Truck	No Controls No Controls	Unknown Unknown	Failed to Keep in Proper Lane	
3671181 3671181	33.5387	-111.9258	02 / 28	8:29 PM	Sideswipe Same Direction	No Injury	Northbound	Southbound	Turning Right Turning Left	Car Car	Signal Signal	Unknown Not Distracted	Made Improper Turn Failed to Stop for Red Signal	
3676782 3676782	33.5381	-111.9257	03 / 08	5:43 PM	Rear End	No Injury	Northbound	Northbound	Straight Stopped	Car Car	Signal Signal	Electronic Device Not Distracted	No Improper Action	
3676811 3676811	33.5387	-111.9257	03 / 13	8:19 AM	Rear End	No Injury	Northbound	Northbound	Slowing Stopped	Car Car	Signal Signal	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	
3676831 3676831	33.5387	-111.9253	03 / 14	9:57 AM	Rear End	No Injury	Westbound	Westbound	Straight Stopped	Car Car	Signal Signal	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	
3676845 3676845	33.5381	-111.9257	03 / 15	7:48 PM	Rear End	No Injury	Northbound	Northbound	Straight Stopped	Car Car	Signal Signal	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	
3679755 3679755	33.5386	-111.9258	06 / 12	4:20 PM	Rear End	No Injury	Northbound	Northbound	Slowing Stopped	Car Car	Signal Signal	Not Distracted Not Distracted	Followed Too Closely	
3681676 3681676	33.5387	-111.9258	08 / 01	1:32 PM	Left-Turn-Head-On	No Injury	Northbound	Southbound	Straight Turning Left	Car Car	Signal Signal	Not Distracted Not Distracted	No Improper Action No Improper Action	
3681725 3681725	33.5387	-111.9258	06 / 24	4:28 PM	Left-Turn-Head-On	No Injury	Northbound	Southbound	Straight Turning Left	Car Car	Signal Signal	Unknown Not Distracted		
3703620 3703620	33.5387	-111.9258	10 / 12	12:01 PM	Rear End	No Injury	Eastbound	Eastbound	Turning Right Turning Left	Pick-up Truck Car	Signal Signal	Not Distracted Not Distracted	Failed to Stop for Red Signal No Improper Action	
3706436 3706436	33.5387	-111.9258	10 / 14	9:50 AM	Angle	No Injury	Northbound	Westbound	Straight Slowing	Car Car	Signal Signal	Unknown Not Distracted	Disregarded Traffic Signal No Improper Action	
3718771 3718771	33.5387	-111.9256	10 / 24	8:57 AM	Rear End	No Injury	Westbound	Westbound	Straight Stopped	Car Truck	Signal Signal	Other Inside Vehicle Not Distracted	Followed Too Closely No Improper Action	
3718865 3718865	33.5387	-111.9258	11 / 01	9:26 AM	Left-Turn-Head-On	Suspected Serious Injury	Northbound	Southbound	Straight Turning Left	Car Pick-up Truck	Signal Signal	Unknown Unknown	Disregarded Traffic Signal No Improper Action	

## Appendix A.2

### Collision Analysis

#### Scottsdale Road and Scottsdale Plaza Resort Access







SCOTTSDALE ROAD AND SCOTTSDALE PLAZA RESORT ACCESS - 2015

INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL		VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
							DIRECTION	ACTION					
3013015 3013015	33.5396	-111.9258	10 / 23	3:39 PM	Rear End	No Injury	Southbound Southbound	Straight Stopped	Car Car	Signal Signal	Outside Vehicle Not Distracted	No Improper Action	

SCOTTSDALE ROAD AND SCOTTSDALE PLAZA RESORT ACCESS - 2016

INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL		VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
							DIRECTION	ACTION					
3051250 3051250 3051250	33.5401	-111.9258	01 / 15	2:38 PM	Rear End	Possible Injury	Southbound Southbound Southbound	Straight Stopped Stopped	Car Car Car	No Controls No Controls No Controls	Other Device Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action No Improper Action	
3054167 3054167	33.5408	-111.9258	01 / 17	11:35 AM	Rear End	Possible Injury	Southbound Southbound	Straight Stopped	Car Car	Signal Signal	Outside Vehicle Not Distracted	Speed Too Fast For Conditions No Improper Action	
3059072 3059072	33.5425	-111.9258	02 / 19	6:15 PM	Rear End	No Injury	Southbound Southbound	Straight Stopped	Car Car	Signal Signal	Unknown Unknown	Speed Too Fast For Conditions	
3087808 3087808	33.5416	-111.9257793	04 / 22	4:45 PM	Angle	No Injury	Southbound Eastbound	Straight Straight	Car Car	Signal Signal	Unknown Not Distracted	Disregarded Traffic Signal No Improper Action	

SCOTTSDALE ROAD AND SCOTTSDALE PLAZA RESORT ACCESS: 2017

INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL		VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
							DIRECTION	ACTION					
3183171 3183171	33.540148	-111.9257678	01 / 14	4:58 PM	Angle	No Injury	Eastbound Southbound	Turning Right Straight	Car Car	Signal Signal	Not Distracted Not Distracted	No Improper Action No Improper Action	

SCOTTSDALE ROAD AND SCOTTSDALE PLAZA RESORT ACCESS: 2018

INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL		VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
							DIRECTION	ACTION					
3343871 3343871	33.5403	-111.9258	02 / 03	10:53 AM	Rear End	No Injury	Eastbound Westbound	Backing Straight	Car Car	Signal Signal	Unknown Not Distracted		

SCOTTSDALE ROAD AND SCOTTSDALE PLAZA RESORT ACCESS: 2020

INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL		VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
							DIRECTION	ACTION					
3689965 3689965	33.5402	-111.9258	09 / 10	10:03 AM	Rear End	Possible Injury	Northbound Northbound	Straight Stopped	Car Car	Signal Signal	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	
3671170	33.5406	-111.9258	02 / 01	2:37 PM	Single Vehicle	No Injury	Southbound	Straight	Car	No Controls	Unknown	Speed Too Fast For Conditions	Unknown
3679701 3679701	33.5403	-111.9258	06 / 09	3:18 PM	Left-Turn-Angle	No Injury	Northbound Westbound	Straight Turning Left	Pick-up Truck Car	Signal Signal	Not Distracted Not Distracted	Disregarded Traffic Signal	
3679956 3679956	33.5400	-111.9258	04 / 05	11:15 AM	Rear End	Suspected Minor Injury	Northbound Northbound	Straight Slowing	Car Pick-up Truck	Signal Signal	Passenger Unknown	Speed Too Fast For Conditions	



## Appendix A.3

### Collision Analysis

#### Scottsdale Road and Hummingbird Lane





## SCOTTSDALE ROAD AND HUMMINGBIRD LANE: 2016

INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
2940349 2940349	33.5423	-111.9258	01 / 30	2:42 AM	Left-Turn-Head-On	Suspected Minor Injury	Northbound Southbound	Turning Left Straight	Car Car	Signal Signal	Unknown Not Distracted	Unknown	

## SCOTTSDALE ROAD AND HUMMINGBIRD LANE: 2017

INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3140373 3140373	33.5429	-111.9258	09 / 26	5:32 PM	Rear End	No Injury	Northbound Northbound	Straight Stopped	Car Pick-up Truck	Signal Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3175298 3175298	33.5409	-111.9258	12 / 01	8:31 AM	Left-Turn-Angle	No Injury	Southbound Eastbound	Avoiding Object Turning Left	Car Truck	Signal Signal	Unknown Unknown		
3175462 3175462	33.5423	-111.9263	12 / 24	7:17 PM	Sideswipe Same Direction	No Injury	Southbound Southbound	Overtaking Pass Straight	Truck Car	No Controls No Controls	Not Distracted Not Distracted	Unsafe Lane Change No Improper Action	

## SCOTTSDALE ROAD AND HUMMINGBIRD LANE: 2018

INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3343870 3343870	33.5423	-111.9258	02 / 03	8:42 PM	Rear End	No Injury	Northbound Northbound	Changing Lane Straight	Car Truck	No Controls No Controls	Unknown Not Distracted	Made Improper Turn	Unsafe Lane Change
3378315	33.5423	-111.9258	05 / 05	11:11 PM	Single Vehicle	Possible Injury	Northbound	Turning Right	Car	No Controls	Unknown	Made Improper Turn	
3394972 3394972	33.5417	-111.9258	07 / 09	5:28 PM	Rear End	No Injury	Southbound Southbound	Straight Stopped	Car Car	No Controls No Controls	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3458268 3458268	33.5423	-111.9258	11 / 01	8:44 AM	Left-Turn-Angle	No Injury	Eastbound Northbound	Turning Left Straight	Car Car	Stop Signs No Controls	Unknown Not Distracted	Failed to Stop for Red Signal No Improper Action	

## SCOTTSDALE ROAD AND HUMMINGBIRD LANE: 2019

INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3497383	33.5429	-111.9258	01 / 20	6:56 AM	Single Vehicle	No Injury	Southbound	Making U Turn	Car	Signal	Unknown	Made Improper Turn	Speed Too Fast For Conditions
3626262 3626262	33.5423	-111.9258	12 / 31	3:44 PM	Left-Turn-Angle	Suspected Minor Injury	Northbound Westbound	Straight Turning Left	Motorcycle Car	No Controls Stop Signs	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	

## SCOTTSDALE ROAD AND HUMMINGBIRD LANE: 2020

INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3635655 3635655	33.5423	-111.9258	01 / 11	12:13 PM	Angle	No Injury	Southbound Eastbound	Parking Properly Parked	Car Car	No Controls No Controls	Not Distracted Unknown	No Improper Action	
3653262 3653262 3653262	33.5429	-111.9258	01 / 30	5:26 PM	Rear End	No Injury	Southbound Southbound Southbound	Slowing Stopped Stopped	Car Car Car	No Controls No Controls No Controls	Unknown Not Distracted Not Distracted	No Improper Action No Improper Action	
3740629	33.5421	-111.9258	11 / 14	6:20 PM	Single Vehicle	Fatal Injury	Southbound	Avoiding Object	Car	No Controls	Unknown	Speed Too Fast For Conditions	



# Appendix B

## 2022 Traffic Counts





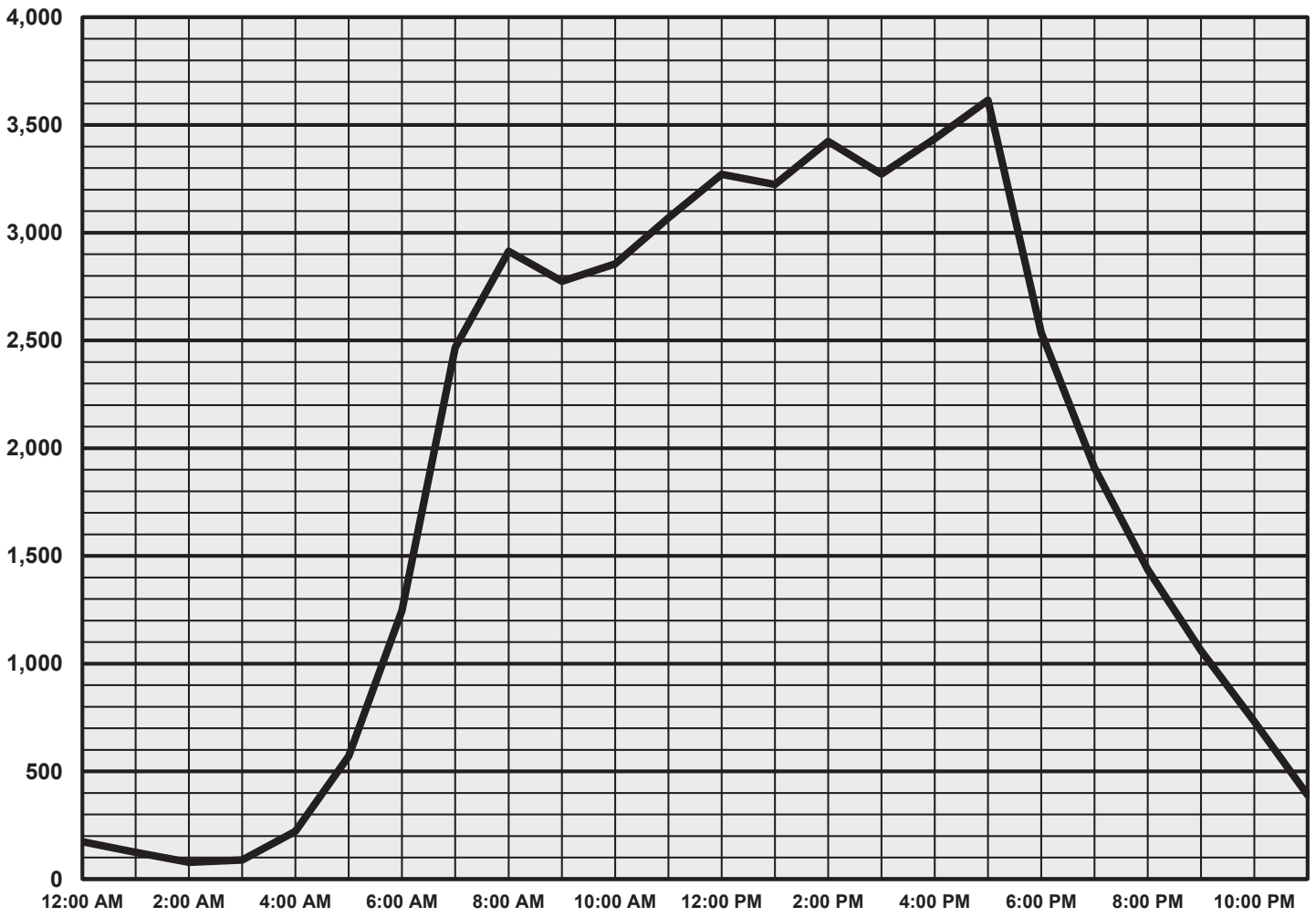


**Appendix B.1**  
2022 Traffic Counts  
Thursday Traffic Counts





SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and INDIAN BEND ROAD - THURSDAY - 8/4/2022



**SCOTTSDALE PLAZA RESORT RENOVATIONS**  
**SCOTTSDALE ROAD and INDIAN BEND ROAD - THURSDAY - 8/4/2022**  
**EXISTING 5:00 AM to 10:00 AM**



BEGIN TIME	INDIAN BEND ROAD EASTBOUND				INDIAN BEND ROAD WESTBOUND				SCOTTSDALE ROAD NORTHBOUND				SCOTTSDALE ROAD SOUTHBOUND				ALL TOTAL	60 MINUTE TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
5:00 AM	1	0	1	2	1	3	13	17	6	46	2	54	33	94	0	127	200	1,257
5:15 AM	0	1	0	1	0	6	13	19	10	52	6	68	40	106	0	146	234	1,514
5:30 AM	0	1	1	2	1	13	21	35	21	72	2	95	56	151	0	207	339	1,829
5:45 AM	1	2	0	3	4	16	38	58	20	97	6	123	81	219	0	300	484	2,262
6:00 AM	2	4	1	7	8	12	41	61	16	94	5	115	66	208	0	274	457	2,744
6:15 AM	2	4	1	7	6	20	43	69	26	106	7	139	89	245	0	334	549	3,254
6:30 AM	0	10	0	10	6	22	53	81	29	144	9	182	146	353	0	499	772	3,973
6:45 AM	3	7	0	10	9	25	73	107	46	183	6	235	174	440	0	614	966	4,723
7:00 AM	6	14	2	22	9	33	82	124	39	160	10	209	174	438	0	612	967	5,450
7:15 AM	3	17	0	20	20	32	98	150	57	232	13	302	223	573	0	796	1,268	5,989
7:30 AM	3	11	1	15	14	35	124	173	56	273	33	362	280	692	0	972	1,522	6,303
<b>7:45 AM</b>	<b>3</b>	<b>18</b>	<b>5</b>	<b>26</b>	<b>19</b>	<b>44</b>	<b>138</b>	<b>201</b>	<b>84</b>	<b>317</b>	<b>18</b>	<b>419</b>	<b>283</b>	<b>764</b>	<b>0</b>	<b>1,047</b>	<b>1,693</b>	<b>6,488</b>
8:00 AM	4	18	1	23	19	34	119	172	60	289	15	364	258	689	0	947	1,506	6,434
8:15 AM	3	13	1	17	18	48	135	201	70	278	20	368	283	713	0	996	1,582	6,342
<b>8:30 AM</b>	6	16	1	23	16	35	138	189	92	333	22	447	277	771	0	1,048	<b>1,707</b>	6,348
8:45 AM	8	19	2	29	13	42	128	183	83	295	19	397	289	741	0	1,030	1,639	6,268
9:00 AM	6	12	3	21	15	25	104	144	74	280	20	374	235	640	0	875	1,414	6,192
9:15 AM	5	11	2	18	10	51	121	182	87	282	26	395	286	707	0	993	1,588	707
9:30 AM	5	21	5	31	19	44	134	197	85	300	25	410	262	727	0	989	1,627	727
9:45 AM	2	9	3	14	16	37	121	174	87	293	23	403	272	700	0	972	1,563	700
<b>AM PEAK</b>	<b>16</b>	<b>65</b>	<b>8</b>	<b>89</b>	<b>72</b>	<b>161</b>	<b>530</b>	<b>763</b>	<b>306</b>	<b>1,217</b>	<b>75</b>	<b>1,598</b>	<b>1,101</b>	<b>2,937</b>	<b>0</b>	<b>4,038</b>	<b>6,488</b>	<b>6,488</b>
PHF	0.67	0.90	0.40	0.86	0.95	0.84	0.96	0.95	0.83	0.91	0.85	0.89	0.97	0.95	0.00	0.96		

**SCOTTSDALE PLAZA RESORT RENOVATIONS**  
**SCOTTSDALE ROAD and INDIAN BEND ROAD - THURSDAY - 8/4/2022**



**EXISTING 10:00 AM to 3:00 PM**

BEGIN TIME	INDIAN BEND ROAD EASTBOUND				INDIAN BEND ROAD WESTBOUND				SCOTTSDALE ROAD NORTHBOUND				SCOTTSDALE ROAD SOUTHBOUND				ALL TOTAL	60 MIN. TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
10:00 AM	5	20	2	27	58	8	32	98	1	208	80	289	28	226	5	259	673	2,855
10:15 AM	2	18	2	22	59	17	29	105	2	229	85	316	23	220	4	247	690	2,908
10:30 AM	3	12	5	20	77	25	42	144	1	226	87	314	29	266	6	301	779	2,983
10:45 AM	4	18	2	24	83	13	36	132	5	217	89	311	21	217	8	246	713	3,015
11:00 AM	2	23	7	32	59	21	40	120	2	233	73	308	32	229	5	266	726	3,069
11:15 AM	3	13	3	19	78	26	43	147	4	246	83	333	27	234	5	266	765	3,161
11:30 AM	4	17	7	28	88	23	38	149	1	240	98	339	26	267	2	295	811	3,150
11:45 AM	8	18	5	31	68	22	43	133	3	220	87	310	26	259	8	293	767	3,151
12:00 PM	11	14	3	28	89	16	44	149	4	225	111	340	33	262	6	301	818	3,271
12:15 PM	2	20	1	23	78	15	31	124	4	236	78	318	32	250	7	289	754	3,266
12:30 PM	2	17	4	23	110	23	47	180	1	223	81	305	32	270	2	304	812	3,262
12:45 PM	2	14	0	16	98	23	44	165	1	277	79	357	36	304	9	349	887	3,273
1:00 PM	6	21	4	31	84	25	38	147	3	258	82	343	31	255	6	292	813	3,224
1:15 PM	6	15	2	23	74	24	32	130	1	227	80	308	23	259	7	289	750	3,255
1:30 PM	3	14	5	22	85	16	51	152	1	238	96	335	37	272	5	314	823	3,374
<b>1:45 PM</b>	<b>5</b>	<b>13</b>	<b>6</b>	<b>24</b>	<b>78</b>	<b>17</b>	<b>33</b>	<b>128</b>	<b>3</b>	<b>245</b>	<b>99</b>	<b>347</b>	<b>32</b>	<b>306</b>	<b>1</b>	<b>339</b>	<b>838</b>	<b>3,438</b>
2:00 PM	12	19	8	39	80	17	36	133	4	281	88	373	35	254	10	299	844	3,424
2:15 PM	8	15	2	25	68	19	38	125	8	279	104	391	38	288	2	328	869	707
2:30 PM	10	22	1	33	75	20	32	127	3	280	90	373	39	303	12	354	<b>887</b>	727
2:45 PM	5	14	2	21	75	14	38	127	1	277	99	377	36	257	6	299	824	700
<b>MD PEAK</b>	<b>35</b>	<b>69</b>	<b>17</b>	<b>121</b>	<b>301</b>	<b>73</b>	<b>139</b>	<b>513</b>	<b>18</b>	<b>1,085</b>	<b>381</b>	<b>1,484</b>	<b>144</b>	<b>1,151</b>	<b>25</b>	<b>1,320</b>	<b>3,438</b>	<b>3,438</b>
PHF	0.73	0.78	0.53	0.78	0.94	0.91	0.91	0.96	0.56	0.97	0.92	0.95	0.92	0.94	0.52	0.93	0.97	

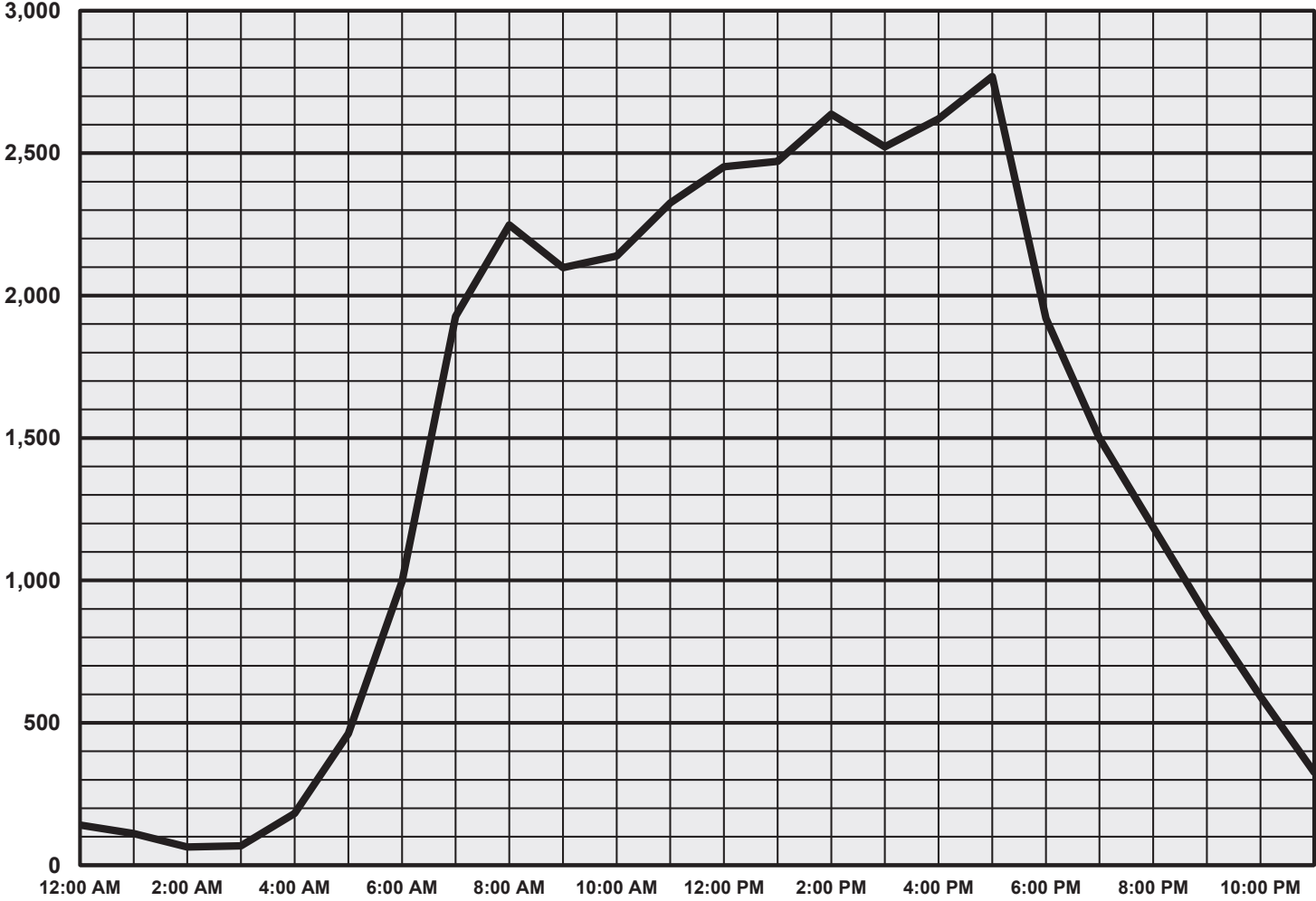
**SCOTTSDALE PLAZA RESORT RENOVATIONS**  
**SCOTTSDALE ROAD and INDIAN BEND ROAD - THURSDAY - 8/4/2022**



**EXISTING 3:00 PM to 8:00 PM**

BEGIN TIME	INDIAN BEND ROAD EASTBOUND				INDIAN BEND ROAD WESTBOUND				SCOTTSDALE ROAD NORTHBOUND				SCOTTSDALE ROAD SOUTHBOUND				ALL TOTAL	60 MIN. TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
3:00 PM	0	19	3	22	85	24	47	156	1	240	71	312	24	275	9	308	798	3,272
3:15 PM	7	10	4	21	86	24	34	144	0	278	72	350	30	226	7	263	778	3,308
3:30 PM	9	16	2	27	99	30	46	175	4	282	82	368	23	302	6	331	901	3,355
3:45 PM	4	18	4	26	60	21	38	119	5	284	82	371	24	248	7	279	795	3,355
4:00 PM	3	12	4	19	73	24	22	119	4	289	91	384	41	263	8	312	834	3,436
4:15 PM	6	20	5	31	93	23	29	145	1	268	94	363	29	250	7	286	825	3,622
4:30 PM	4	13	2	19	72	30	43	145	0	308	88	396	20	318	3	341	901	3,724
<b>4:45 PM</b>	<b>2</b>	<b>19</b>	<b>2</b>	<b>23</b>	<b>85</b>	<b>28</b>	<b>32</b>	<b>145</b>	<b>2</b>	<b>306</b>	<b>94</b>	<b>402</b>	<b>32</b>	<b>268</b>	<b>6</b>	<b>306</b>	<b>876</b>	3,750
<b>5:00 PM</b>	10	17	3	30	108	29	56	193	3	306	110	419	43	328	7	378	<b>1,020</b>	3,615
5:15 PM	3	11	3	17	74	13	35	122	3	331	96	430	25	327	6	358	927	3,298
5:30 PM	7	14	2	23	76	32	47	155	5	269	104	378	33	331	7	371	927	3,033
5:45 PM	2	21	2	25	79	23	42	144	3	229	87	319	21	227	5	253	741	2,737
6:00 PM	2	11	4	17	88	25	37	150	2	214	80	296	27	207	6	240	703	2,536
6:15 PM	2	14	2	18	69	13	26	108	2	214	82	298	28	205	5	238	662	2,397
6:30 PM	0	11	2	13	64	8	26	98	3	204	66	273	24	219	4	247	631	2,217
6:45 PM	1	13	3	17	53	13	26	92	1	195	53	249	15	165	2	182	540	2,039
7:00 PM	0	4	1	5	46	18	16	80	3	189	63	255	18	205	1	224	564	1,908
7:15 PM	3	3	2	8	35	14	22	71	1	178	45	224	16	162	1	179	482	707
7:30 PM	4	8	0	12	49	9	17	75	0	164	40	204	19	143	0	162	453	727
7:45 PM	1	6	4	11	51	5	19	75	0	130	52	182	16	124	1	141	409	700
<b>PM PEAK</b>	<b>22</b>	<b>61</b>	<b>10</b>	<b>93</b>	<b>343</b>	<b>102</b>	<b>170</b>	<b>615</b>	<b>13</b>	<b>1,212</b>	<b>404</b>	<b>1,629</b>	<b>133</b>	<b>1,254</b>	<b>26</b>	<b>1,413</b>	<b>3,750</b>	<b>3,750</b>
PHF	0.55	0.80	0.83	0.78	0.79	0.80	0.76	0.80	0.65	0.92	0.92	0.95	0.77	0.95	0.93	0.93	0.92	

**SCOTTSDALE PLAZA RESORT RENOVATIONS**  
**SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS - THURSDAY - 8/4/2022**





**SCOTTSDALE PLAZA RESORT RENOVATIONS**  
**SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS - THURSDAY - 8/4/2022**  
**EXISTING 5:00 AM to 10:00 AM**



BEGIN TIME	PLAZA RESORT ACCESS EASTBOUND				PLAZA RESORT ACCESS WESTBOUND				SCOTTSDALE ROAD NORTHBOUND				SCOTTSDALE ROAD SOUTHBOUND				ALL TOTAL	60 MINUTE TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
5:00 AM	0	0	0	0	0	2	3	5	2	44	1	47	33	80	0	113	165	939
5:15 AM	0	0	0	0	0	1	2	3	0	45	1	46	40	87	0	127	176	1,107
5:30 AM	0	0	0	0	0	0	0	0	1	63	2	66	58	121	0	179	245	1,334
5:45 AM	1	0	0	1	0	1	1	2	4	91	0	95	81	174	0	255	353	1,687
6:00 AM	0	1	0	1	0	2	3	5	2	91	3	96	68	163	0	231	333	2,034
6:15 AM	0	0	1	1	0	0	1	1	3	102	6	111	93	197	0	290	403	2,402
6:30 AM	2	0	2	4	0	3	3	6	6	136	5	147	149	292	0	441	598	2,926
6:45 AM	0	0	1	1	0	3	4	7	6	164	3	173	175	344	0	519	700	3,464
7:00 AM	1	0	1	2	0	5	8	13	8	159	2	169	174	343	0	517	701	3,975
7:15 AM	0	1	0	1	1	8	9	18	11	210	7	228	230	450	0	680	927	4,379
7:30 AM	1	0	3	4	0	6	9	15	18	254	10	282	284	551	0	835	1,136	4,608
<b>7:45 AM</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>7</b>	<b>11</b>	<b>19</b>	<b>25</b>	<b>278</b>	<b>12</b>	<b>315</b>	<b>293</b>	<b>583</b>	<b>0</b>	<b>876</b>	<b>1,211</b>	<b>4,666</b>
8:00 AM	2	1	1	4	0	4	10	14	11	265	10	286	261	540	0	801	1,105	4,633
8:15 AM	1	0	3	4	2	7	14	23	21	257	8	286	284	559	0	843	1,156	4,517
8:30 AM	1	0	4	5	0	7	14	21	13	281	14	308	280	580	0	860	1,194	4,489
8:45 AM	0	0	4	4	1	11	18	30	20	260	8	288	287	569	0	856	1,178	4,404
9:00 AM	1	1	2	4	0	6	9	15	17	234	4	255	234	481	0	715	989	4,304
9:15 AM	2	0	6	8	0	7	11	18	10	247	9	266	285	551	0	836	1,128	551
9:30 AM	1	1	7	9	0	4	9	13	18	262	9	289	259	539	0	798	1,109	539
9:45 AM	0	0	4	4	1	5	10	16	10	241	8	259	272	527	0	799	1,078	527
AM PEAK	4	1	9	14	3	25	49	77	70	1,081	44	1,195	1,118	2,262	0	3,380	4,666	4,666
PHF	0.50	0.25	0.56	0.70	0.38	0.89	0.88	0.84	0.70	0.96	0.79	0.95	0.95	0.97	0.00	0.96		

**SCOTTSDALE PLAZA RESORT RENOVATIONS**

**SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS - THURSDAY - 8/4/2022**



**EXISTING 10:00 AM to 3:00 PM**

BEGIN TIME	PLAZA RESORT ACCESS EASTBOUND				PLAZA RESORT ACCESS WESTBOUND				SCOTTSDALE ROAD NORTHBOUND				SCOTTSDALE ROAD SOUTHBOUND				ALL TOTAL	60 MIN. TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
10:00 AM	2	0	4	6	4	0	6	10	5	230	10	245	5	251	2	258	519	2,139
10:15 AM	0	0	3	3	5	0	4	9	1	250	9	260	5	239	0	244	516	2,184
10:30 AM	2	0	3	5	5	1	10	16	3	256	12	271	2	293	1	296	588	2,250
10:45 AM	2	1	3	6	3	0	2	5	5	239	13	257	6	240	2	248	516	2,257
11:00 AM	3	0	3	6	11	0	8	19	7	260	8	275	11	252	1	264	564	2,325
11:15 AM	0	1	4	5	9	0	10	19	1	277	14	292	10	253	3	266	582	2,359
11:30 AM	1	0	3	4	5	1	9	15	4	267	11	282	6	287	1	294	595	2,354
11:45 AM	1	0	6	7	5	0	6	11	4	253	14	271	12	282	1	295	584	2,349
12:00 PM	2	0	3	5	11	1	5	17	4	267	9	280	9	287	0	296	598	2,452
12:15 PM	1	0	3	4	4	0	12	16	5	250	14	269	5	282	1	288	577	2,476
12:30 PM	0	0	6	6	10	0	9	19	4	259	9	272	5	288	0	293	590	2,484
12:45 PM	1	1	6	8	12	0	4	16	5	299	19	323	8	331	1	340	687	2,514
1:00 PM	1	0	8	9	6	0	12	18	4	281	17	302	14	278	1	293	622	2,471
1:15 PM	3	1	1	5	6	0	19	25	4	250	11	265	6	282	2	290	585	2,493
1:30 PM	0	0	2	2	10	0	8	18	1	282	9	292	3	302	3	308	620	2,568
<b>1:45 PM</b>	<b>2</b>	<b>0</b>	<b>5</b>	<b>7</b>	<b>7</b>	<b>0</b>	<b>10</b>	<b>17</b>	<b>3</b>	<b>269</b>	<b>11</b>	<b>283</b>	<b>8</b>	<b>327</b>	<b>2</b>	<b>337</b>	<b>644</b>	<b>2,643</b>
2:00 PM	2	0	4	6	11	0	7	18	1	320	8	329	6	284	1	291	644	2,637
2:15 PM	0	0	3	3	6	0	3	9	3	310	12	325	3	319	1	323	660	551
2:30 PM	0	0	2	2	3	0	11	14	5	310	7	322	7	349	1	357	<b>695</b>	539
2:45 PM	1	0	6	7	8	0	9	17	4	300	16	320	8	285	1	294	638	527
<b>MD PEAK</b>	<b>4</b>	<b>0</b>	<b>14</b>	<b>18</b>	<b>27</b>	<b>0</b>	<b>31</b>	<b>58</b>	<b>12</b>	<b>1,209</b>	<b>38</b>	<b>1,259</b>	<b>24</b>	<b>1,279</b>	<b>5</b>	<b>1,308</b>	<b>2,643</b>	<b>2,643</b>
PHF	0.50	0.00	0.70	0.64	0.61	0.00	0.70	0.81	0.60	0.94	0.79	0.96	0.75	0.92	0.63	0.92	0.95	

**SCOTTSDALE PLAZA RESORT RENOVATIONS**

**SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS - THURSDAY - 8/4/2022**

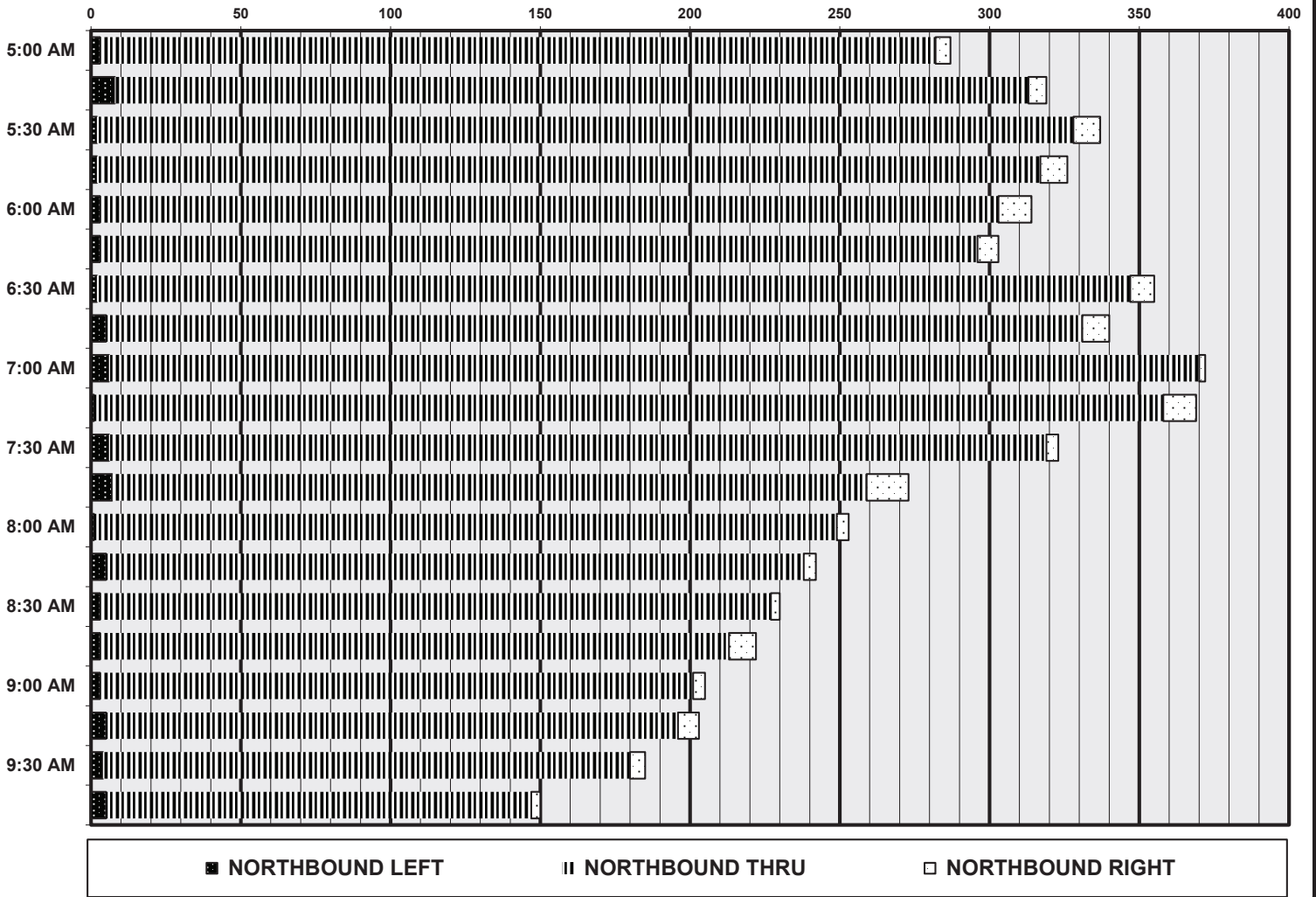


**EXISTING 3:00 PM to 8:00 PM**

BEGIN TIME	PLAZA RESORT ACCESS EASTBOUND				PLAZA RESORT ACCESS WESTBOUND				SCOTTSDALE ROAD NORTHBOUND				SCOTTSDALE ROAD SOUTHBOUND				ALL TOTAL	60 MIN. TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
3:00 PM	0	0	3	3	9	0	4	13	3	279	5	287	6	296	1	303	606	2,522
3:15 PM	3	0	0	3	6	0	11	17	8	305	6	319	7	257	1	265	604	2,563
3:30 PM	0	1	1	2	6	0	8	14	2	326	9	337	7	324	1	332	685	2,560
3:45 PM	2	2	3	7	8	0	11	19	2	315	9	326	3	268	4	275	627	2,586
4:00 PM	1	0	6	7	16	0	12	28	3	300	11	314	7	290	1	298	647	2,620
4:15 PM	1	0	2	3	3	1	6	10	3	293	7	303	3	281	1	285	601	2,744
<b>4:30 PM</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>3</b>	<b>17</b>	<b>0</b>	<b>9</b>	<b>26</b>	<b>2</b>	<b>345</b>	<b>8</b>	<b>355</b>	<b>4</b>	<b>322</b>	<b>1</b>	<b>327</b>	<b>711</b>	<b>2,887</b>
4:45 PM	1	0	2	3	6	0	8	14	5	326	9	340	5	298	1	304	661	2,886
<b>5:00 PM</b>	<b>3</b>	<b>1</b>	<b>4</b>	<b>8</b>	<b>13</b>	<b>0</b>	<b>11</b>	<b>24</b>	<b>6</b>	<b>364</b>	<b>2</b>	<b>372</b>	<b>5</b>	<b>361</b>	<b>1</b>	<b>367</b>	<b>771</b>	<b>2,769</b>
5:15 PM	3	0	4	7	7	0	8	15	1	357	11	369	4	347	2	353	744	2,507
5:30 PM	2	0	5	7	8	0	9	17	6	313	4	323	2	358	3	363	710	2,257
5:45 PM	1	1	8	10	4	0	8	12	7	252	14	273	8	241	0	249	544	2,041
6:00 PM	2	0	1	3	5	0	6	11	1	248	4	253	6	234	2	242	509	1,920
6:15 PM	0	0	7	7	8	0	5	13	5	233	4	242	6	223	3	232	494	1,857
6:30 PM	1	1	3	5	7	0	10	17	3	224	3	230	3	237	2	242	494	1,759
6:45 PM	1	0	3	4	0	0	11	11	3	210	9	222	5	179	2	186	423	1,622
7:00 PM	1	0	3	4	8	0	9	17	3	198	4	205	5	213	2	220	446	1,499
7:15 PM	1	0	7	8	5	0	5	10	5	191	7	203	5	167	3	175	396	551
7:30 PM	2	0	3	5	3	0	5	8	4	176	5	185	2	156	1	159	357	539
7:45 PM	2	1	5	8	4	0	4	8	5	142	3	150	1	132	1	134	300	527
<b>PM PEAK</b>	<b>8</b>	<b>1</b>	<b>12</b>	<b>21</b>	<b>43</b>	<b>0</b>	<b>36</b>	<b>79</b>	<b>14</b>	<b>1,392</b>	<b>30</b>	<b>1,436</b>	<b>18</b>	<b>1,328</b>	<b>5</b>	<b>1,351</b>	<b>2,887</b>	<b>2,887</b>
PHF	0.67	0.25	0.75	0.66	0.63	0.00	0.82	0.76	0.58	0.96	0.68	0.97	0.90	0.92	0.63	0.92	0.94	

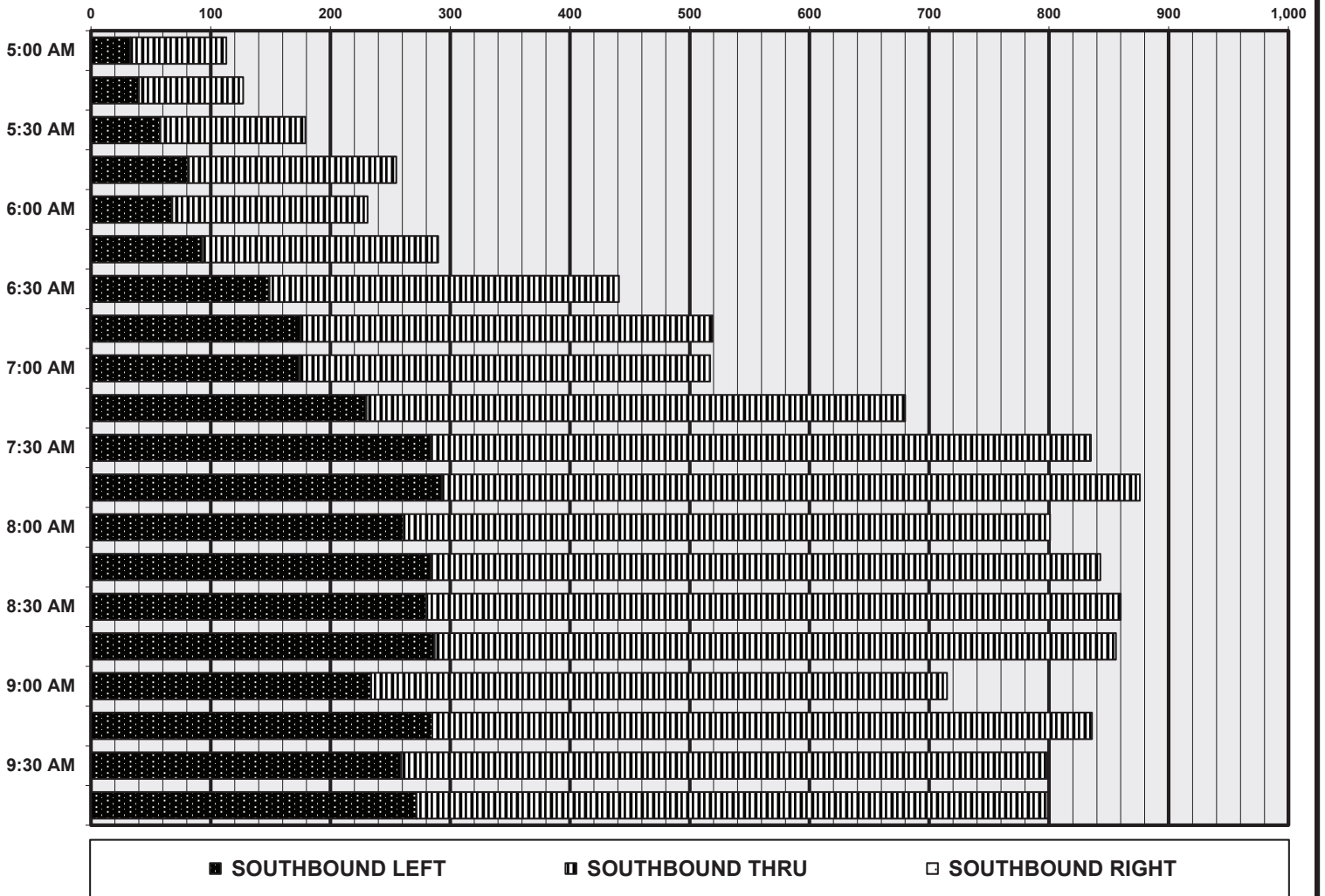


SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS - THURSDAY - 8/4/2022  
EXISTING 5:00 AM to 10:00 AM



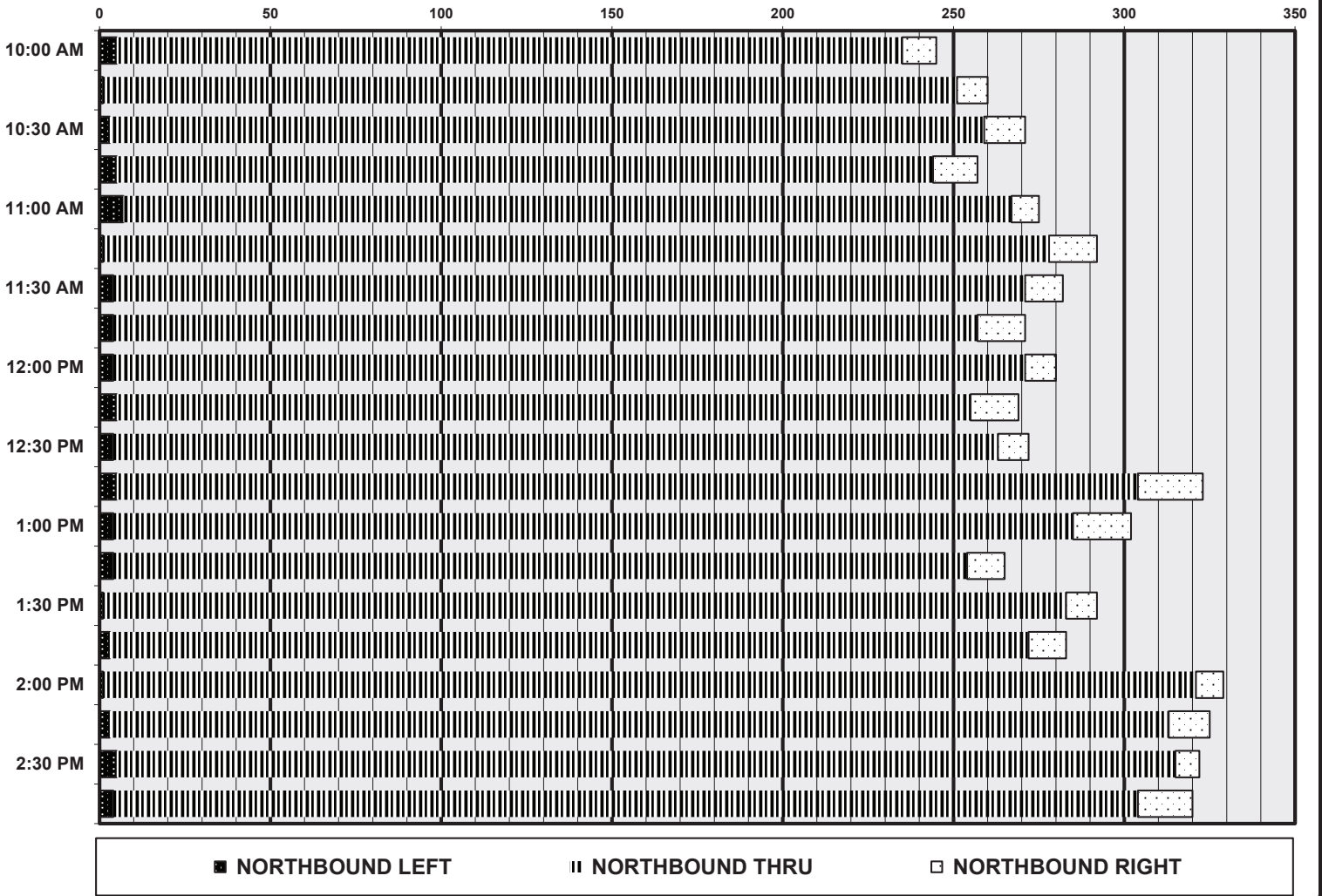


SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS - THURSDAY - 8/4/2022  
EXISTING 5:00 AM to 10:00 AM



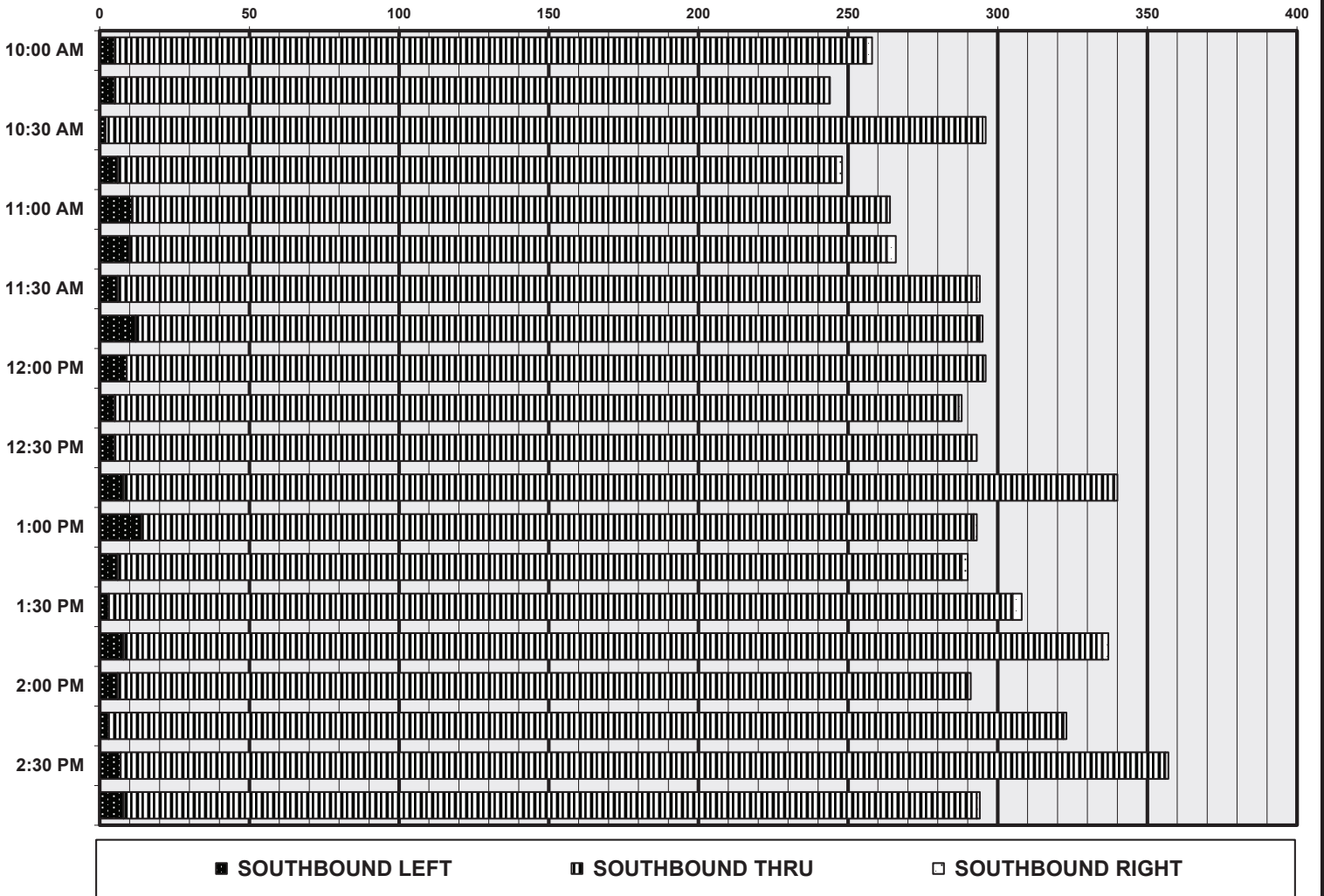


SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS - THURSDAY - 8/4/2022  
EXISTING 10:00 AM to 3:00 PM



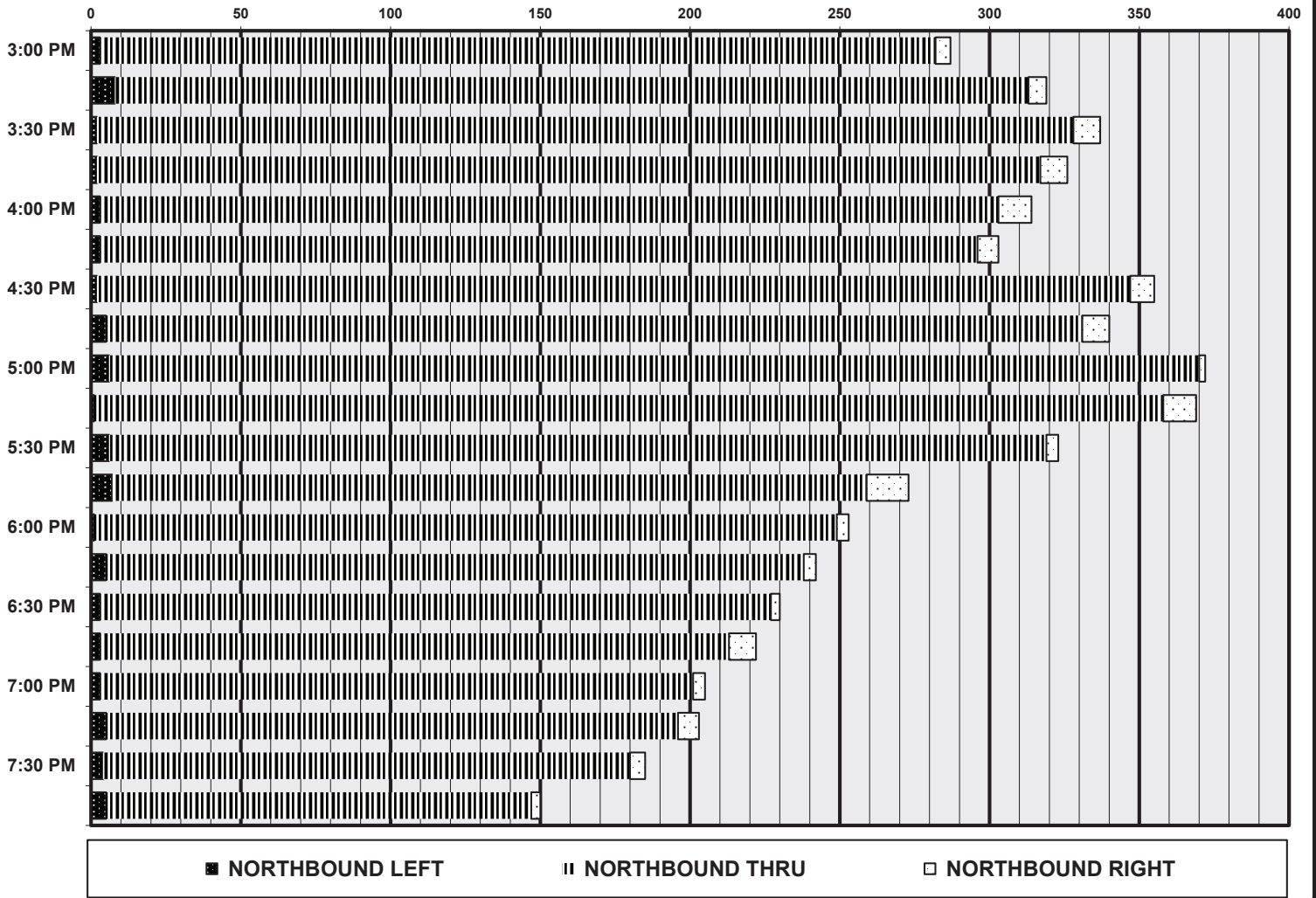


SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS - THURSDAY - 8/4/2022  
EXISTING 10:00 AM to 3:00 PM





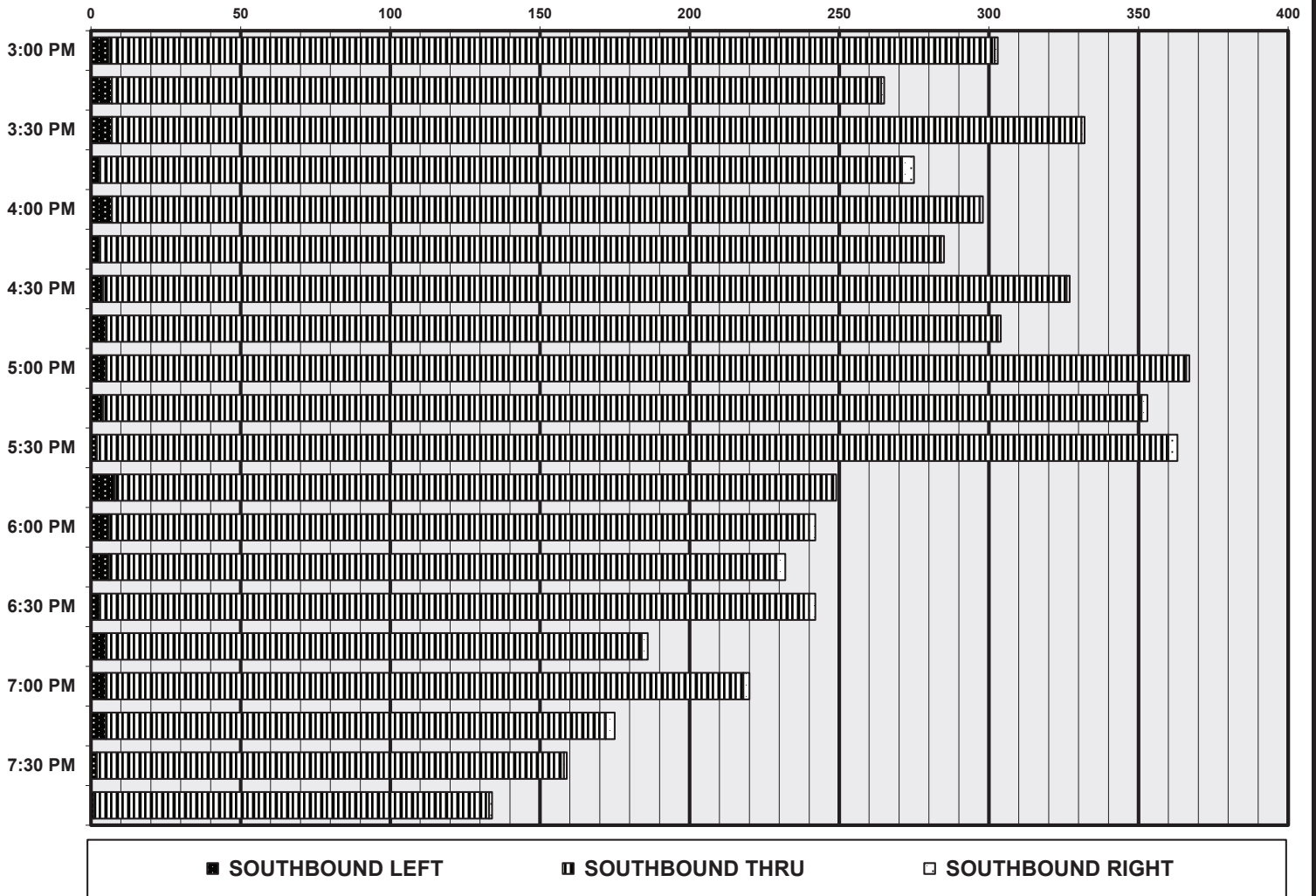
SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS - THURSDAY - 8/4/2022  
EXISTING 3:00 PM to 8:00 PM



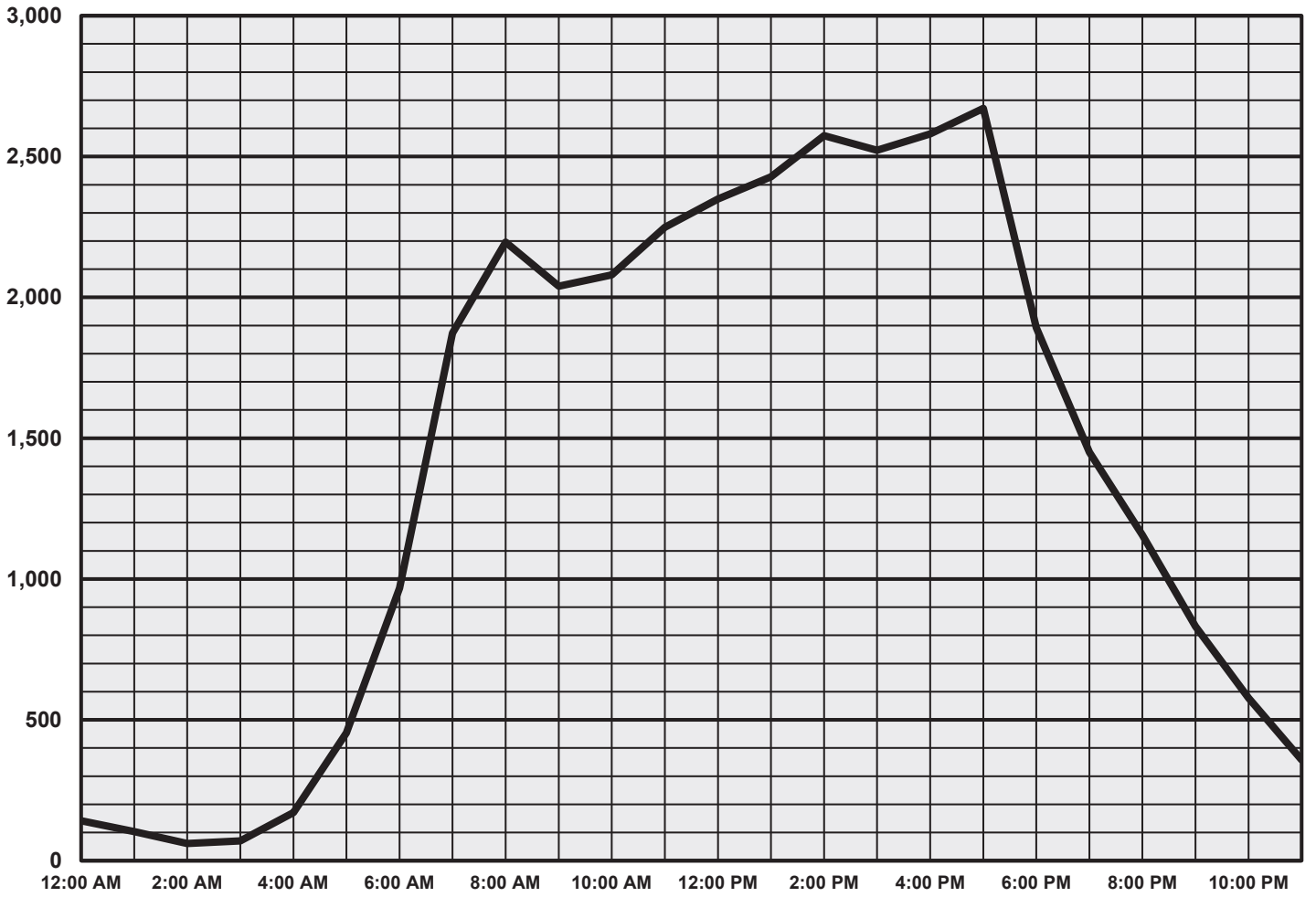




SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS - THURSDAY - 8/4/2022  
EXISTING 3:00 PM to 8:00 PM



SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE - THURSDAY - 8/4/2022



**SCOTTSDALE PLAZA RESORT RENOVATIONS**  
**SCOTTSDALE ROAD and HUMMINGBIRD LANE - THURSDAY - 8/4/2022**  
**EXISTING 5:00 AM to 10:00 AM**



BEGIN TIME	HUMMINGBIRD LANE EASTBOUND				HUMMINGBIRD LANE WESTBOUND				SCOTTSDALE ROAD NORTHBOUND				SCOTTSDALE ROAD SOUTHBOUND				ALL TOTAL	60 MINUTE TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
5:00 AM	0	0	0	0	0	0	0	0	0	43	0	43	35	78	0	113	156	909
5:15 AM	1	0	0	1	0	1	1	2	0	41	0	41	38	81	0	119	163	1,067
5:30 AM	2	0	1	3	0	0	0	0	0	64	0	64	59	126	0	185	252	1,295
5:45 AM	1	0	0	1	0	0	0	0	0	84	0	84	84	169	0	253	338	1,618
6:00 AM	0	0	1	1	0	0	0	0	0	86	0	86	70	157	0	227	314	1,941
6:15 AM	1	0	2	3	0	1	2	3	0	99	2	101	90	194	0	284	391	2,291
6:30 AM	0	0	2	2	0	0	1	1	0	130	1	131	154	287	0	441	575	2,793
6:45 AM	3	0	4	7	0	1	2	3	0	154	0	154	167	330	0	497	661	3,291
7:00 AM	1	0	1	2	0	1	1	2	3	160	0	163	167	330	0	497	664	3,764
7:15 AM	1	0	6	7	0	2	3	5	0	209	3	212	225	444	0	669	893	4,146
7:30 AM	1	0	5	6	0	2	4	6	0	241	5	246	282	533	0	815	1,073	4,362
7:45 AM	0	0	4	4	0	0	3	3	1	269	1	271	290	566	0	856	1,134	4,375
<b>8:00 AM</b>	<b>1</b>	<b>0</b>	<b>6</b>	<b>7</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>0</b>	<b>244</b>	<b>4</b>	<b>248</b>	<b>267</b>	<b>520</b>	<b>0</b>	<b>787</b>	<b>1,046</b>	<b>4,419</b>
8:15 AM	2	1	5	8	0	4	4	8	0	257	7	264	280	549	0	829	1,109	4,290
8:30 AM	3	0	4	7	0	2	3	5	0	240	4	244	290	540	0	830	1,086	4,289
<b>8:45 AM</b>	<b>4</b>	<b>1</b>	<b>5</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>282</b>	<b>4</b>	<b>286</b>	<b>293</b>	<b>587</b>	<b>0</b>	<b>880</b>	<b>1,178</b>	<b>4,173</b>
9:00 AM	4	0	1	5	0	2	3	5	3	212	6	221	233	453	0	686	917	4,124
9:15 AM	3	0	3	6	0	3	6	9	2	249	3	254	289	550	0	839	1,108	550
9:30 AM	4	0	4	8	0	3	4	7	1	213	2	216	257	482	0	739	970	482
9:45 AM	2	0	1	3	0	6	7	13	3	261	10	274	284	555	0	839	1,129	555
<b>AM PEAK</b>	<b>10</b>	<b>2</b>	<b>20</b>	<b>32</b>	<b>0</b>	<b>8</b>	<b>11</b>	<b>19</b>	<b>0</b>	<b>1,023</b>	<b>19</b>	<b>1,042</b>	<b>1,130</b>	<b>2,196</b>	<b>0</b>	<b>3,326</b>	<b>4,419</b>	<b>4,419</b>
PHF	0.63	0.50	0.83	0.80	0.00	0.50	0.69	0.59	0.00	0.91	0.68	0.91	0.96	0.94	0.00	0.94		

**SCOTTSDALE PLAZA RESORT RENOVATIONS**  
**SCOTTSDALE ROAD and HUMMINGBIRD LANE - THURSDAY - 8/4/2022**



**EXISTING 10:00 AM to 3:00 PM**

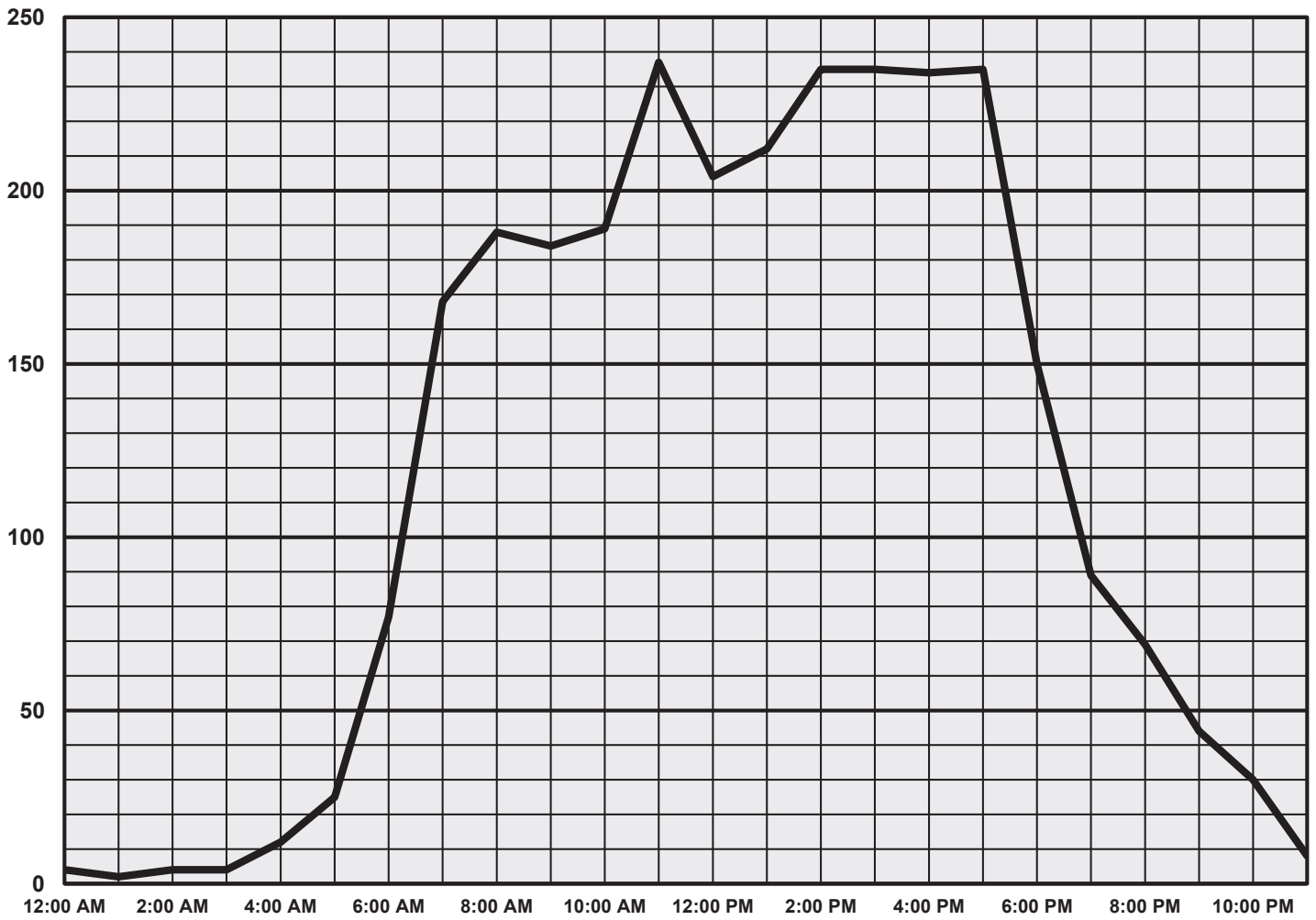
BEGIN TIME	HUMMINGBIRD LANE EASTBOUND				HUMMINGBIRD LANE WESTBOUND				SCOTTSDALE ROAD NORTHBOUND				SCOTTSDALE ROAD SOUTHBOUND				ALL TOTAL	60 MIN. TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
10:00 AM	2	0	5	7	4	0	3	7	4	219	0	223	4	246	0	250	487	2,080
10:15 AM	1	0	6	7	1	0	4	5	3	266	0	269	3	234	2	239	520	2,157
10:30 AM	6	0	5	11	1	0	7	8	4	251	3	258	5	270	2	277	554	2,188
10:45 AM	5	0	1	6	1	0	2	3	3	248	4	255	1	252	2	255	519	2,191
11:00 AM	4	0	7	11	1	0	4	5	5	275	0	280	6	261	1	268	564	2,249
11:15 AM	3	0	3	6	1	0	7	8	3	288	1	292	3	240	2	245	551	2,230
11:30 AM	1	0	6	7	1	0	3	4	3	255	3	261	3	278	4	285	557	2,272
11:45 AM	6	0	3	9	3	0	2	5	5	260	3	268	0	290	5	295	577	2,298
12:00 PM	0	0	6	6	0	0	4	4	7	263	1	271	2	258	4	264	545	2,349
12:15 PM	4	0	8	12	1	0	3	4	7	265	1	273	5	294	5	304	593	2,417
12:30 PM	1	0	4	5	1	0	6	7	3	274	1	278	5	281	7	293	583	2,395
12:45 PM	2	0	7	9	0	0	4	4	0	292	5	297	6	309	3	318	628	2,402
1:00 PM	1	1	5	7	3	0	4	7	7	282	1	290	3	302	4	309	613	2,428
1:15 PM	2	0	0	2	2	0	3	5	2	265	1	268	1	293	2	296	571	2,432
1:30 PM	3	0	6	9	0	0	4	4	6	279	3	288	2	283	4	289	590	2,493
<b>1:45 PM</b>	<b>4</b>	<b>0</b>	<b>6</b>	<b>10</b>	<b>5</b>	<b>0</b>	<b>3</b>	<b>8</b>	<b>4</b>	<b>300</b>	<b>1</b>	<b>305</b>	<b>7</b>	<b>323</b>	<b>1</b>	<b>331</b>	<b>654</b>	<b>2,594</b>
2:00 PM	2	0	6	8	0	0	2	2	5	316	0	321	1	278	7	286	617	2,574
2:15 PM	2	0	3	5	5	0	2	7	1	318	2	321	3	296	0	299	632	550
2:30 PM	2	0	6	8	2	0	5	7	7	310	1	318	5	349	4	358	<b>691</b>	482
2:45 PM	2	0	6	8	0	0	3	3	7	301	3	311	6	304	2	312	634	555
<b>MD PEAK</b>	<b>10</b>	<b>0</b>	<b>21</b>	<b>31</b>	<b>12</b>	<b>0</b>	<b>12</b>	<b>24</b>	<b>17</b>	<b>1,244</b>	<b>4</b>	<b>1,265</b>	<b>16</b>	<b>1,246</b>	<b>12</b>	<b>1,274</b>	<b>2,594</b>	<b>2,594</b>
PHF	0.63	0.00	0.88	0.78	0.60	0.00	0.60	0.75	0.61	0.98	0.50	0.99	0.57	0.89	0.43	0.89	0.94	

**SCOTTSDALE PLAZA RESORT RENOVATIONS**  
**SCOTTSDALE ROAD and HUMMINGBIRD LANE - THURSDAY - 8/4/2022**  
**EXISTING 3:00 PM to 8:00 PM**



BEGIN TIME	HUMMINGBIRD LANE EASTBOUND				HUMMINGBIRD LANE WESTBOUND				SCOTTSDALE ROAD NORTHBOUND				SCOTTSDALE ROAD SOUTHBOUND				ALL TOTAL	60 MIN. TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
3:00 PM	6	0	8	14	1	1	4	6	2	287	0	289	2	274	2	278	587	2,522
3:15 PM	3	0	4	7	2	2	2	6	6	316	2	324	1	275	5	281	618	2,537
3:30 PM	3	0	9	12	0	0	6	6	4	349	1	354	1	318	1	320	692	2,549
3:45 PM	8	0	0	8	2	0	4	6	3	327	3	333	6	271	1	278	625	2,523
4:00 PM	2	0	3	5	3	1	7	11	4	299	3	306	3	273	4	280	602	2,580
4:15 PM	1	0	1	2	3	0	4	7	3	312	2	317	4	296	4	304	630	2,731
<b>4:30 PM</b>	<b>3</b>	<b>0</b>	<b>6</b>	<b>9</b>	<b>2</b>	<b>0</b>	<b>4</b>	<b>6</b>	<b>11</b>	<b>327</b>	<b>5</b>	<b>343</b>	<b>5</b>	<b>298</b>	<b>5</b>	<b>308</b>	<b>666</b>	2,805
4:45 PM	3	0	8	11	0	0	4	4	2	343	4	349	12	304	2	318	682	2,799
<b>5:00 PM</b>	3	0	6	9	1	0	3	4	7	382	4	393	2	341	4	347	<b>753</b>	2,671
5:15 PM	1	0	4	5	3	0	3	6	7	344	2	353	1	334	5	340	704	2,416
5:30 PM	2	0	2	4	1	0	4	5	5	303	4	312	5	331	3	339	660	2,213
5:45 PM	2	0	3	5	0	0	2	2	2	279	5	286	3	254	4	261	554	2,008
6:00 PM	2	0	5	7	1	1	2	4	4	250	2	256	3	223	5	231	498	1,893
6:15 PM	3	1	4	8	2	0	1	3	3	257	4	264	7	218	1	226	501	1,812
6:30 PM	2	0	2	4	6	0	3	9	1	211	2	214	8	216	4	228	455	1,705
6:45 PM	1	0	1	2	3	0	1	4	2	236	2	240	3	184	6	193	439	1,582
7:00 PM	1	1	2	4	2	0	0	2	0	203	1	204	4	201	2	207	417	1,450
7:15 PM	0	0	4	4	1	0	2	3	4	208	3	215	0	170	2	172	394	550
7:30 PM	3	0	5	8	2	0	4	6	4	162	5	171	2	141	4	147	332	482
7:45 PM	1	0	3	4	5	0	1	6	3	154	1	158	3	133	3	139	307	555
<b>PM PEAK</b>	<b>10</b>	<b>0</b>	<b>24</b>	<b>34</b>	<b>6</b>	<b>0</b>	<b>14</b>	<b>20</b>	<b>27</b>	<b>1,396</b>	<b>15</b>	<b>1,438</b>	<b>20</b>	<b>1,277</b>	<b>16</b>	<b>1,313</b>	<b>2,805</b>	<b>2,805</b>
PHF	0.83	0.00	0.75	0.77	0.50	0.00	0.88	0.83	0.61	0.91	0.75	0.91	0.42	0.94	0.80	0.95	0.93	

SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE PLAZA RESORT ACCESS and INDIAN BEND ROAD - THURSDAY - 8/4/2022



**SCOTTSDALE PLAZA RESORT RENOVATIONS**  
**SCOTTSDALE PLAZA RESORT ACCESS and INDIAN BEND ROAD - THURSDAY - 8/4/2022**  
**EXISTING 5:00 AM to 10:00 AM**



BEGIN TIME	INDIAN BEND ROAD EASTBOUND				INDIAN BEND ROAD WESTBOUND				PLAZA RESORT ACCESS NORTHBOUND				PLAZA RESORT ACCESS SOUTHBOUND				ALL TOTAL	60 MINUTE TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
5:00 AM	0	2	0	2	2	0	2	4	0	0	0	0	0	4	0	4	10	67
5:15 AM	0	1	0	1	4	0	4	8	0	0	0	0	0	5	0	5	14	106
5:30 AM	0	2	0	2	2	0	2	4	0	0	0	0	0	4	0	4	10	134
5:45 AM	0	3	0	3	9	0	9	18	0	0	0	0	0	12	0	12	33	176
6:00 AM	1	7	0	8	11	0	11	22	0	0	0	0	0	19	0	19	49	199
6:15 AM	0	5	0	5	8	0	8	16	0	0	2	2	3	16	0	19	42	234
6:30 AM	0	8	0	8	10	0	10	20	0	0	2	2	2	20	0	22	52	300
6:45 AM	0	10	0	10	11	1	12	24	0	0	0	0	0	22	0	22	56	338
7:00 AM	2	22	0	24	12	0	12	24	0	0	0	0	0	36	0	36	84	417
7:15 AM	0	20	0	20	21	1	22	44	0	0	0	0	1	43	0	44	108	454
7:30 AM	0	15	0	15	20	0	20	40	0	0	0	0	0	35	0	35	90	452
7:45 AM	1	26	0	27	26	1	27	54	0	0	0	0	0	54	0	54	135	477
8:00 AM	0	22	0	22	24	0	24	48	0	0	1	1	2	48	0	50	121	470
8:15 AM	0	17	0	17	24	0	24	48	0	0	0	0	0	41	0	41	106	462
8:30 AM	1	22	0	23	21	1	22	44	0	0	1	1	1	46	0	47	115	465
<b>8:45 AM</b>	<b>2</b>	<b>29</b>	<b>0</b>	<b>31</b>	<b>21</b>	<b>1</b>	<b>22</b>	<b>44</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>53</b>	<b>0</b>	<b>53</b>	<b>128</b>	<b>503</b>
9:00 AM	0	19	0	19	23	0	23	46	0	0	2	2	2	44	0	46	113	475
9:15 AM	1	16	0	17	21	2	23	46	0	0	2	2	2	42	0	44	109	42
<b>9:30 AM</b>	0	27	0	27	28	1	29	58	0	0	4	4	4	60	0	64	<b>153</b>	60
9:45 AM	1	13	0	14	22	1	23	46	0	0	1	1	1	38	0	39	100	38
AM PEAK	3	91	0	94	93	4	97	194	0	0	8	8	8	199	0	207	503	503
PHF	0.38	0.78	0.00	0.76	0.83	0.50	0.84	0.84	0.00	0.00	0.50	0.50	0.50	0.83	0.00	0.81		

**SCOTTSDALE PLAZA RESORT RENOVATIONS**

**SCOTTSDALE PLAZA RESORT ACCESS and INDIAN BEND ROAD - THURSDAY - 8/4/2022**



**EXISTING 10:00 AM to 3:00 PM**

BEGIN TIME	INDIAN BEND ROAD EASTBOUND				INDIAN BEND ROAD WESTBOUND				PLAZA RESORT ACCESS NORTHBOUND				PLAZA RESORT ACCESS SOUTHBOUND				ALL TOTAL	60 MIN. TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
10:00 AM	0	25	0	25	0	13	1	14	0	0	0	0	2	0	1	3	42	189
10:15 AM	0	22	0	22	0	21	2	23	0	0	0	0	0	0	0	0	45	207
10:30 AM	0	20	0	20	0	30	2	32	0	0	0	0	0	0	0	0	52	217
10:45 AM	0	21	0	21	0	24	2	26	0	0	0	0	3	0	0	3	50	221
11:00 AM	0	29	0	29	0	27	1	28	0	0	0	0	3	0	0	3	60	237
11:15 AM	1	17	0	18	0	32	3	35	0	0	0	0	2	0	0	2	55	231
11:30 AM	0	27	0	27	0	23	3	26	0	0	0	0	1	0	2	3	56	226
11:45 AM	0	31	0	31	0	32	1	33	0	0	0	0	0	0	2	2	66	219
12:00 PM	0	26	0	26	0	25	1	26	0	0	0	0	2	0	0	2	54	204
12:15 PM	0	21	0	21	0	26	0	26	0	0	0	0	2	0	1	3	50	216
12:30 PM	0	23	0	23	0	24	2	26	0	0	0	0	0	0	0	0	49	222
12:45 PM	0	14	0	14	0	32	1	33	0	0	0	0	2	0	2	4	51	217
1:00 PM	0	31	0	31	0	32	2	34	0	0	0	0	0	0	1	1	66	212
1:15 PM	1	22	0	23	0	31	1	32	0	0	0	0	1	0	0	1	56	216
1:30 PM	0	20	0	20	0	21	1	22	0	0	0	0	2	0	0	2	44	214
<b>1:45 PM</b>	<b>0</b>	<b>23</b>	<b>0</b>	<b>23</b>	<b>0</b>	<b>20</b>	<b>1</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>46</b>	<b>238</b>
2:00 PM	0	39	0	39	0	29	2	31	0	0	0	0	0	0	0	0	70	235
2:15 PM	0	23	0	23	0	28	1	29	0	0	0	0	2	0	0	2	54	42
2:30 PM	0	32	0	32	0	33	2	35	0	0	0	0	1	0	0	1	68	60
2:45 PM	0	21	0	21	0	21	0	21	0	0	0	0	0	0	1	1	43	38
<b>MD PEAK</b>	<b>0</b>	<b>117</b>	<b>0</b>	<b>117</b>	<b>0</b>	<b>110</b>	<b>6</b>	<b>116</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>5</b>	<b>238</b>	<b>238</b>
PHF	0.00	0.75	0.00	0.75	0.00	0.83	0.75	0.83	0.00	0.00	0.00	0.00	0.50	0.00	0.25	0.63	0.85	



**SCOTTSDALE PLAZA RESORT RENOVATIONS**

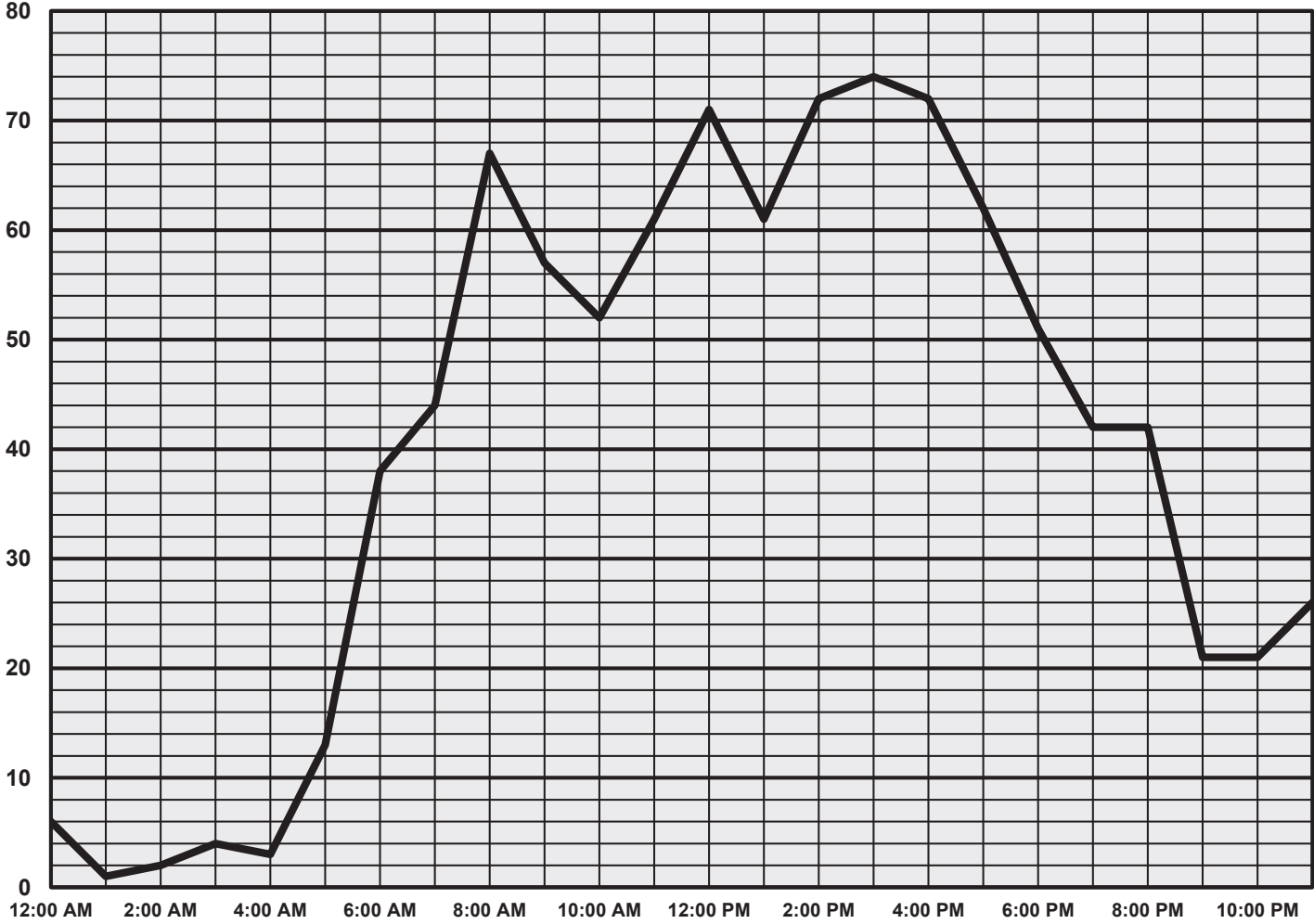
**SCOTTSDALE PLAZA RESORT ACCESS and INDIAN BEND ROAD - THURSDAY - 8/4/2022**



**EXISTING 3:00 PM to 8:00 PM**

BEGIN TIME	INDIAN BEND ROAD EASTBOUND				INDIAN BEND ROAD WESTBOUND				PLAZA RESORT ACCESS NORTHBOUND				PLAZA RESORT ACCESS SOUTHBOUND				ALL TOTAL	60 MIN. TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
3:00 PM	0	21	0	21	0	34	0	34	0	0	0	0	1	0	0	1	56	235
3:15 PM	0	20	0	20	0	30	1	31	0	0	0	0	1	0	0	1	52	234
3:30 PM	0	27	0	27	0	37	3	40	0	0	0	0	0	0	1	1	68	244
3:45 PM	0	25	0	25	0	32	1	33	0	0	0	0	1	0	0	1	59	228
4:00 PM	0	18	0	18	0	35	1	36	0	0	0	0	1	0	0	1	55	234
<b>4:15 PM</b>	<b>0</b>	<b>29</b>	<b>0</b>	<b>29</b>	<b>0</b>	<b>30</b>	<b>1</b>	<b>31</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>62</b>	250
4:30 PM	0	18	0	18	0	29	4	33	0	0	0	0	1	0	0	1	52	227
4:45 PM	1	23	0	24	0	32	4	36	0	0	0	0	0	0	5	5	65	242
<b>5:00 PM</b>	1	29	0	30	0	38	1	39	0	0	0	0	1	0	1	2	<b>71</b>	235
5:15 PM	0	17	0	17	0	22	0	22	0	0	0	0	0	0	0	0	39	214
5:30 PM	0	22	0	22	0	43	1	44	0	0	0	0	1	0	0	1	67	213
5:45 PM	2	21	0	23	0	31	0	31	0	0	0	0	4	0	0	4	58	174
6:00 PM	0	16	0	16	0	32	1	33	0	0	0	0	1	0	0	1	50	150
6:15 PM	0	17	0	17	0	18	2	20	0	0	0	0	1	0	0	1	38	127
6:30 PM	0	13	0	13	0	14	1	15	0	0	0	0	0	0	0	0	28	113
6:45 PM	0	16	0	16	0	16	0	16	0	0	0	0	1	0	1	2	34	106
7:00 PM	0	3	0	3	0	22	0	22	0	0	0	0	2	0	0	2	27	89
7:15 PM	0	7	0	7	0	15	1	16	0	0	0	0	1	0	0	1	24	42
7:30 PM	0	12	0	12	0	9	0	9	0	0	0	0	0	0	0	0	21	60
7:45 PM	0	7	0	7	0	1	5	6	0	0	0	0	4	0	0	4	17	38
<b>PM PEAK</b>	<b>2</b>	<b>99</b>	<b>0</b>	<b>101</b>	<b>0</b>	<b>129</b>	<b>10</b>	<b>139</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>6</b>	<b>10</b>	<b>250</b>	<b>250</b>
PHF	0.50	0.85	0.00	0.84	0.00	0.85	0.63	0.89	0.00	0.00	0.00	0.00	0.50	0.00	0.30	0.50	0.88	

SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE PLAZA RESORT ACCESS and HUMMINGBIRD LANE - THURSDAY - 8/4/2022



**SCOTTSDALE PLAZA RESORT RENOVATIONS**  
**SCOTTSDALE PLAZA RESORT ACCESS and HUMMINGBIRD LANE - THURSDAY - 8/4/2022**  
**EXISTING 5:00 AM to 10:00 AM**



BEGIN TIME	HUMMINGBIRD LANE EASTBOUND				HUMMINGBIRD LANE WESTBOUND				PLAZA RESORT ACCESS NORTHBOUND				PLAZA RESORT ACCESS SOUTHBOUND				ALL TOTAL	60 MINUTE TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
5:00 AM	0	0	1	1	1	0	1	2	0	0	0	0	0	2	0	2	5	30
5:15 AM	0	1	1	2	1	0	1	2	0	1	0	1	0	4	0	4	9	39
5:30 AM	0	3	0	3	1	0	1	2	0	0	0	0	0	4	0	4	9	50
5:45 AM	0	1	1	2	1	0	1	2	0	0	0	0	0	3	0	3	7	59
6:00 AM	0	0	3	3	1	0	2	3	1	1	0	2	0	6	0	6	14	91
6:15 AM	0	3	1	4	4	0	4	8	0	0	0	0	0	8	0	8	20	90
6:30 AM	0	2	2	4	2	0	4	6	0	0	0	0	0	8	0	8	18	98
6:45 AM	0	4	3	7	4	0	6	10	3	3	0	6	0	16	0	16	39	114
7:00 AM	0	2	2	4	1	0	1	2	0	1	0	1	0	6	0	6	13	102
7:15 AM	0	7	1	8	4	0	4	8	0	0	0	0	0	12	0	12	28	139
7:30 AM	0	6	1	7	6	0	7	13	0	0	0	0	0	14	0	14	34	150
7:45 AM	0	4	1	5	3	0	6	9	0	1	0	1	0	12	0	12	27	142
<b>8:00 AM</b>	<b>0</b>	<b>5</b>	<b>2</b>	<b>7</b>	<b>8</b>	<b>0</b>	<b>10</b>	<b>18</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>20</b>	<b>50</b>	<b>165</b>
8:15 AM	0	8	0	8	7	0	8	15	0	0	0	0	0	16	0	16	39	145
8:30 AM	0	7	0	7	4	0	4	8	0	0	0	0	0	11	0	11	26	145
8:45 AM	0	8	1	9	8	0	9	17	2	2	0	4	0	20	0	20	50	159
9:00 AM	0	4	0	4	5	0	7	12	1	1	0	2	0	12	0	12	30	142
9:15 AM	0	3	2	5	4	0	8	12	3	3	0	6	0	16	0	16	39	16
9:30 AM	0	7	0	7	7	0	7	14	1	2	0	3	0	16	0	16	40	16
9:45 AM	0	2	1	3	6	0	9	15	1	1	0	2	0	13	0	13	33	13
<b>AM PEAK</b>	<b>0</b>	<b>28</b>	<b>3</b>	<b>31</b>	<b>27</b>	<b>0</b>	<b>31</b>	<b>58</b>	<b>4</b>	<b>5</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>67</b>	<b>0</b>	<b>67</b>	<b>165</b>	<b>165</b>
PHF	0.00	0.88	0.38	0.86	0.84	0.00	0.78	0.81	0.50	0.42	0.00	0.45	0.00	0.84	0.00	0.84		

**SCOTTSDALE PLAZA RESORT RENOVATIONS**

**SCOTTSDALE PLAZA RESORT ACCESS and HUMMINGBIRD LANE - THURSDAY - 8/4/2022**



**EXISTING 10:00 AM to 3:00 PM**

BEGIN TIME	HUMMINGBIRD LANE EASTBOUND				HUMMINGBIRD LANE WESTBOUND				PLAZA RESORT ACCESS NORTHBOUND				PLAZA RESORT ACCESS SOUTHBOUND				ALL TOTAL	60 MIN. TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
10:00 AM	0	6	0	6	0	4	0	4	0	0	1	1	0	0	0	0	11	52
10:15 AM	0	4	0	4	2	3	0	5	0	0	3	3	0	0	0	0	12	58
10:30 AM	0	9	0	9	1	5	0	6	0	0	2	2	0	0	0	0	17	57
10:45 AM	0	3	0	3	2	3	0	5	1	0	3	4	0	0	0	0	12	54
11:00 AM	0	6	0	6	0	6	0	6	0	0	5	5	0	0	0	0	17	61
11:15 AM	0	5	0	5	0	5	0	5	0	0	1	1	0	0	0	0	11	62
11:30 AM	0	7	0	7	2	5	0	7	0	0	0	0	0	0	0	0	14	76
<b>11:45 AM</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>6</b>	<b>1</b>	<b>9</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>19</b>	<b>77</b>
12:00 PM	0	6	1	7	1	10	0	11	0	0	0	0	0	0	0	0	18	71
12:15 PM	0	7	1	8	2	10	0	12	0	0	5	5	0	0	0	0	<b>25</b>	73
12:30 PM	0	4	0	4	0	10	0	10	0	0	1	1	0	0	0	0	15	55
12:45 PM	0	6	0	6	1	2	0	3	1	0	3	4	0	0	0	0	13	59
1:00 PM	0	4	1	5	3	8	0	11	1	0	3	4	0	0	0	0	20	61
1:15 PM	0	2	1	3	0	4	0	4	0	0	0	0	0	0	0	0	7	62
1:30 PM	0	7	0	7	2	8	0	10	0	0	2	2	0	0	0	0	19	62
1:45 PM	0	8	0	8	0	5	0	5	0	0	2	2	0	0	0	0	15	67
2:00 PM	0	6	1	7	2	10	0	12	0	0	2	2	0	0	0	0	21	72
2:15 PM	0	5	0	5	0	1	0	1	1	0	0	1	0	0	0	0	7	16
2:30 PM	0	7	0	7	0	11	0	11	5	0	1	6	0	0	0	0	24	16
2:45 PM	0	8	3	11	2	7	0	9	0	0	0	0	0	0	0	0	20	13
<b>MD PEAK</b>	<b>0</b>	<b>23</b>	<b>2</b>	<b>25</b>	<b>4</b>	<b>39</b>	<b>0</b>	<b>43</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>77</b>	<b>77</b>
PHF	0.00	0.82	0.50	0.78	0.50	0.98	0.00	0.90	0.00	0.00	0.45	0.45	0.00	0.00	0.00	0.00	0.77	

**SCOTTSDALE PLAZA RESORT RENOVATIONS**

**SCOTTSDALE PLAZA RESORT ACCESS and HUMMINGBIRD LANE - THURSDAY - 8/4/2022**



**EXISTING 3:00 PM to 8:00 PM**

BEGIN TIME	HUMMINGBIRD LANE EASTBOUND				HUMMINGBIRD LANE WESTBOUND				PLAZA RESORT ACCESS NORTHBOUND				PLAZA RESORT ACCESS SOUTHBOUND				ALL TOTAL	60 MIN. TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
3:00 PM	0	9	0	9	1	4	0	5	2	0	5	7	0	0	0	0	21	74
3:15 PM	0	5	1	6	1	12	0	13	3	0	2	5	0	0	0	0	24	68
3:30 PM	0	11	0	11	0	5	0	5	0	0	1	1	0	0	0	0	17	58
3:45 PM	0	8	0	8	0	4	0	4	0	0	0	0	0	0	0	0	12	68
4:00 PM	0	2	0	2	0	9	0	9	1	0	3	4	0	0	0	0	15	72
4:15 PM	0	2	0	2	0	7	0	7	5	0	0	5	0	0	0	0	14	78
<b>4:30 PM</b>	<b>0</b>	<b>5</b>	<b>1</b>	<b>6</b>	<b>1</b>	<b>15</b>	<b>0</b>	<b>16</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>27</b>	<b>82</b>
4:45 PM	0	7	1	8	0	4	0	4	0	0	4	4	0	0	0	0	16	67
5:00 PM	0	4	0	4	2	9	0	11	1	0	5	6	0	0	0	0	21	62
5:15 PM	0	3	1	4	1	11	0	12	0	0	2	2	0	0	0	0	18	59
5:30 PM	0	3	0	3	2	6	0	8	0	0	1	1	0	0	0	0	12	55
5:45 PM	0	3	0	3	0	6	0	6	0	0	2	2	0	0	0	0	11	52
6:00 PM	0	4	1	5	3	7	0	10	0	0	3	3	0	0	0	0	18	51
6:15 PM	0	7	2	9	0	4	0	4	0	0	1	1	0	0	0	0	14	39
6:30 PM	0	4	0	4	1	4	0	5	0	0	0	0	0	0	0	0	9	35
6:45 PM	0	2	0	2	1	7	0	8	0	0	0	0	0	0	0	0	10	42
7:00 PM	0	4	0	4	0	2	0	2	0	0	0	0	0	0	0	0	6	42
7:15 PM	0	3	0	3	1	5	0	6	0	0	1	1	0	0	0	0	10	16
7:30 PM	0	6	0	6	6	2	0	8	0	0	2	2	0	0	0	0	16	16
7:45 PM	0	3	0	3	1	5	0	6	0	0	1	1	0	0	0	0	10	13
<b>PM PEAK</b>	<b>0</b>	<b>19</b>	<b>3</b>	<b>22</b>	<b>4</b>	<b>39</b>	<b>0</b>	<b>43</b>	<b>2</b>	<b>0</b>	<b>15</b>	<b>17</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>82</b>	<b>82</b>
PHF	0.00	0.68	0.75	0.69	0.50	0.65	0.00	0.67	0.50	0.00	0.75	0.71	0.00	0.00	0.00	0.00	0.76	

## **Appendix B.2**

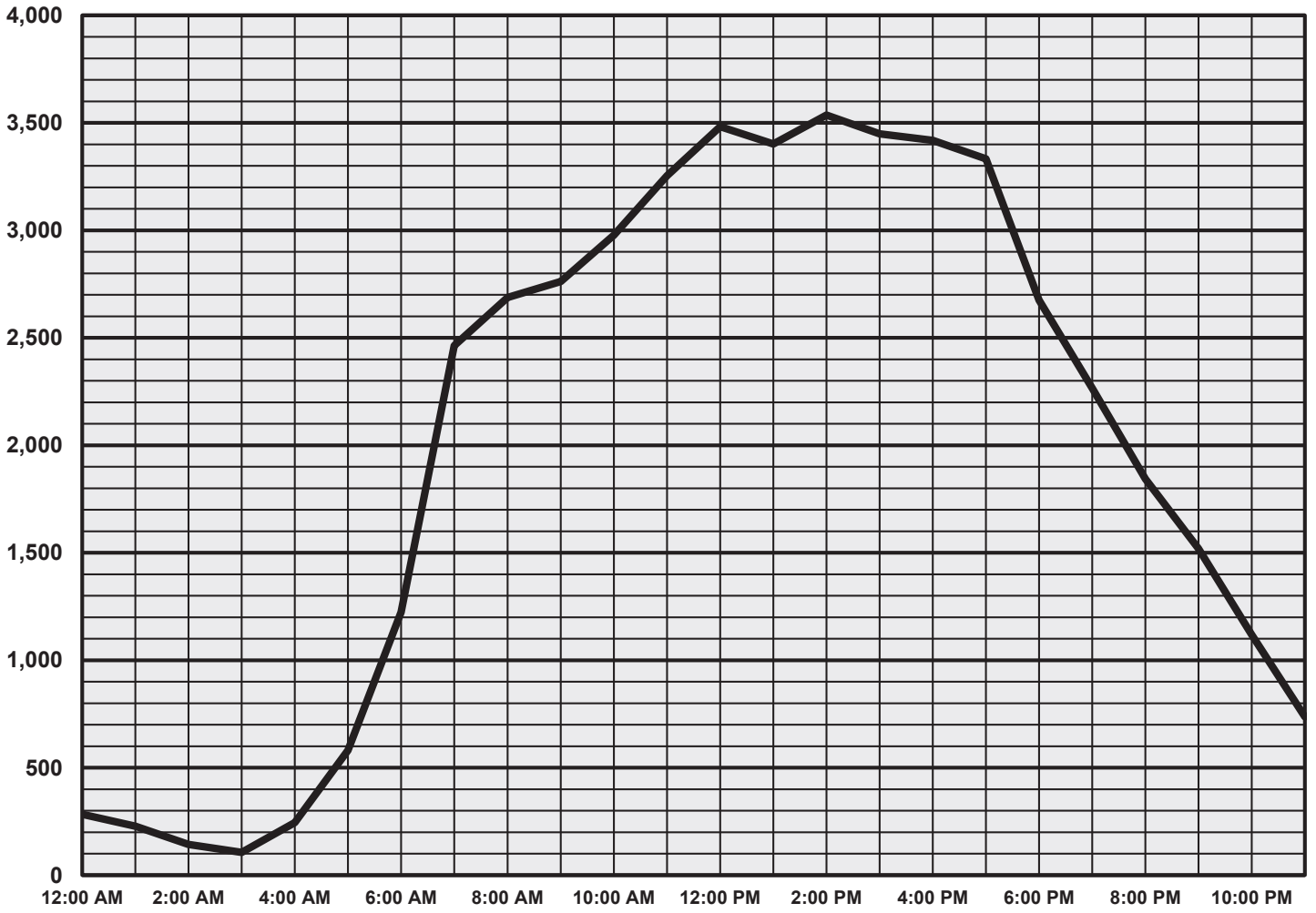
2022 Traffic Counts

Friday Traffic Counts





SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and INDIAN BEND ROAD - FRIDAY - 8/5/2022





**SCOTTSDALE PLAZA RESORT RENOVATIONS**  
**SCOTTSDALE ROAD and INDIAN BEND ROAD - FRIDAY - 8/5/2022**  
**EXISTING 5:00 AM to 10:00 AM**



BEGIN TIME	INDIAN BEND ROAD EASTBOUND				INDIAN BEND ROAD WESTBOUND				SCOTTSDALE ROAD NORTHBOUND				SCOTTSDALE ROAD SOUTHBOUND				ALL TOTAL	60 MINUTE TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
5:00 AM	0	0	0	0	2	3	12	17	13	47	5	65	31	90	0	121	203	1,294
5:15 AM	0	2	0	2	3	13	29	45	4	41	2	47	46	118	0	164	258	1,557
5:30 AM	0	1	1	2	3	7	19	29	16	69	4	89	62	152	0	214	334	1,883
5:45 AM	0	2	0	2	8	14	35	57	30	110	5	145	74	221	0	295	499	2,307
6:00 AM	0	2	1	3	7	19	43	69	20	84	6	110	77	207	0	284	466	2,705
6:15 AM	0	4	2	6	8	15	60	83	14	109	7	130	95	270	0	365	584	3,221
6:30 AM	4	4	0	8	7	21	53	81	32	154	12	198	128	343	0	471	758	3,904
6:45 AM	2	5	1	8	5	28	66	99	47	170	9	226	160	404	0	564	897	4,782
7:00 AM	4	11	1	16	13	21	72	106	46	191	18	255	163	442	0	605	982	5,485
7:15 AM	4	9	4	17	9	43	93	145	66	233	25	324	219	562	0	781	1,267	5,918
7:30 AM	4	18	2	24	22	59	154	235	53	281	24	358	280	739	0	1,019	1,636	6,097
7:45 AM	5	26	2	33	16	38	121	175	90	289	16	395	277	720	0	997	1,600	6,047
8:00 AM	1	6	3	10	15	40	126	181	76	269	20	365	227	632	0	859	1,415	6,011
8:15 AM	3	14	3	20	19	60	138	217	73	252	16	341	229	639	0	868	1,446	6,077
<b>8:30 AM</b>	<b>4</b>	<b>16</b>	<b>1</b>	<b>21</b>	<b>21</b>	<b>33</b>	<b>121</b>	<b>175</b>	<b>89</b>	<b>323</b>	<b>21</b>	<b>433</b>	<b>246</b>	<b>711</b>	<b>0</b>	<b>957</b>	<b>1,586</b>	<b>6,164</b>
8:45 AM	4	15	1	20	21	47	133	201	70	265	14	349	288	706	0	994	1,564	6,102
9:00 AM	11	14	3	28	14	49	127	190	74	254	24	352	251	660	0	911	1,481	6,149
9:15 AM	1	21	8	30	15	50	132	197	66	261	22	349	267	690	0	957	1,533	690
9:30 AM	12	22	6	40	13	43	129	185	64	257	28	349	262	688	0	950	1,524	688
9:45 AM	4	18	2	24	24	41	132	197	76	280	22	378	288	724	0	1,012	1,611	724
<b>AM PEAK</b>	<b>20</b>	<b>66</b>	<b>13</b>	<b>99</b>	<b>71</b>	<b>179</b>	<b>513</b>	<b>763</b>	<b>299</b>	<b>1,103</b>	<b>81</b>	<b>1,483</b>	<b>1,052</b>	<b>2,767</b>	<b>0</b>	<b>3,819</b>	<b>6,164</b>	<b>6,164</b>
PHF	0.45	0.79	0.41	0.83	0.85	0.90	0.96	0.95	0.84	0.85	0.84	0.86	0.91	0.97	0.00	0.96		

**SCOTTSDALE PLAZA RESORT RENOVATIONS**

**SCOTTSDALE ROAD and INDIAN BEND ROAD - FRIDAY - 8/5/2022**

**EXISTING 10:00 AM to 3:00 PM**



BEGIN TIME	INDIAN BEND ROAD EASTBOUND				INDIAN BEND ROAD WESTBOUND				SCOTTSDALE ROAD NORTHBOUND				SCOTTSDALE ROAD SOUTHBOUND				ALL TOTAL	60 MIN. TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
10:00 AM	2	26	4	32	71	14	37	122	4	199	72	275	22	234	6	262	691	2,978
10:15 AM	5	16	5	26	75	26	29	130	5	214	100	319	31	247	5	283	758	3,034
10:30 AM	3	32	6	41	95	13	34	142	4	223	65	292	27	242	6	275	750	3,062
10:45 AM	4	17	9	30	78	17	54	149	4	213	74	291	28	272	9	309	779	3,204
11:00 AM	5	25	4	34	84	17	48	149	2	216	73	291	29	241	3	273	747	3,254
11:15 AM	5	11	2	18	80	19	44	143	2	256	84	342	33	243	7	283	786	3,397
11:30 AM	7	18	6	31	98	34	47	179	3	286	76	365	39	270	8	317	892	3,455
11:45 AM	4	9	4	17	88	19	48	155	2	265	80	347	36	268	6	310	829	3,458
12:00 PM	8	20	3	31	110	40	55	205	3	238	105	346	36	265	7	308	890	3,482
12:15 PM	4	15	5	24	61	21	45	127	5	262	94	361	32	298	2	332	844	3,479
12:30 PM	5	23	3	31	100	15	45	160	1	260	108	369	42	290	3	335	895	3,494
12:45 PM	7	15	4	26	74	18	51	143	4	255	86	345	31	301	7	339	853	3,415
1:00 PM	4	26	1	31	99	20	38	157	5	289	88	382	25	284	8	317	887	3,402
1:15 PM	5	18	4	27	67	11	50	128	2	285	116	403	37	260	4	301	859	3,360
1:30 PM	5	9	3	17	90	15	39	144	0	273	70	343	38	268	6	312	816	3,388
1:45 PM	8	12	5	25	71	13	41	125	3	279	89	371	35	279	5	319	840	3,525
<b>2:00 PM</b>	<b>4</b>	<b>25</b>	<b>4</b>	<b>33</b>	<b>83</b>	<b>10</b>	<b>45</b>	<b>138</b>	<b>2</b>	<b>270</b>	<b>93</b>	<b>365</b>	<b>23</b>	<b>283</b>	<b>3</b>	<b>309</b>	<b>845</b>	<b>3,536</b>
2:15 PM	6	22	4	32	78	16	42	136	3	297	93	393	33	286	7	326	887	690
2:30 PM	10	14	2	26	80	18	52	150	5	309	81	395	32	343	7	382	<b>953</b>	688
2:45 PM	2	18	1	21	80	20	65	165	3	248	86	337	36	283	9	328	851	724
<b>MD PEAK</b>	<b>22</b>	<b>79</b>	<b>11</b>	<b>112</b>	<b>321</b>	<b>64</b>	<b>204</b>	<b>589</b>	<b>13</b>	<b>1,124</b>	<b>353</b>	<b>1,490</b>	<b>124</b>	<b>1,195</b>	<b>26</b>	<b>1,345</b>	<b>3,536</b>	<b>3,536</b>
PHF	0.55	0.79	0.69	0.85	0.97	0.80	0.78	0.89	0.65	0.91	0.95	0.94	0.86	0.87	0.72	0.88	0.93	

**SCOTTSDALE PLAZA RESORT RENOVATIONS**

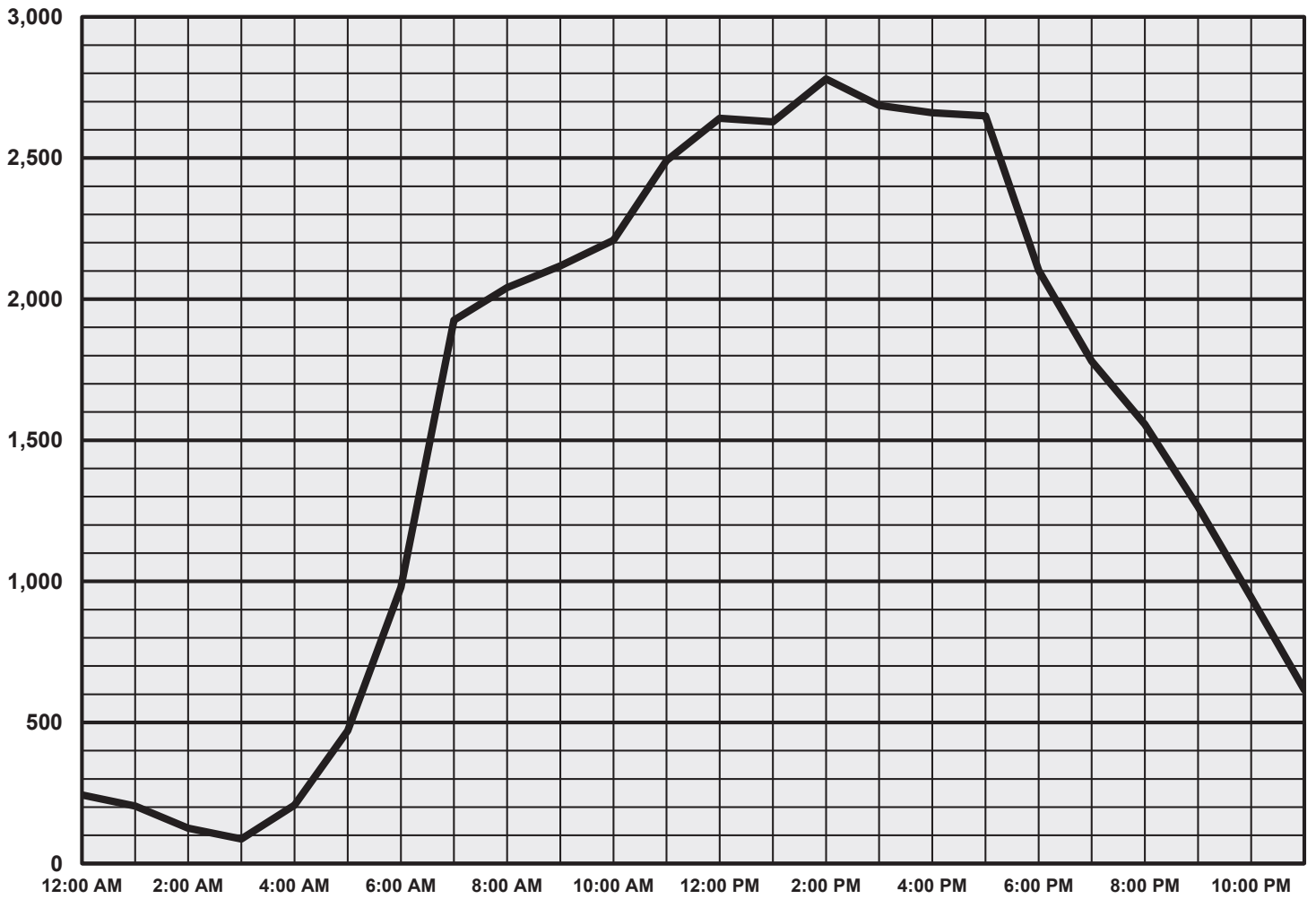
**SCOTTSDALE ROAD and INDIAN BEND ROAD - FRIDAY - 8/5/2022**

**EXISTING 3:00 PM to 8:00 PM**



BEGIN TIME	INDIAN BEND ROAD EASTBOUND				INDIAN BEND ROAD WESTBOUND				SCOTTSDALE ROAD NORTHBOUND				SCOTTSDALE ROAD SOUTHBOUND				ALL TOTAL	60 MIN. TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
3:00 PM	2	17	6	25	90	23	36	149	2	287	74	363	34	299	4	337	874	3,449
3:15 PM	7	15	1	23	64	31	38	133	2	278	82	362	32	248	6	286	804	3,443
<b>3:30 PM</b>	<b>6</b>	<b>16</b>	<b>2</b>	<b>24</b>	<b>93</b>	<b>36</b>	<b>52</b>	<b>181</b>	<b>1</b>	<b>299</b>	<b>93</b>	<b>393</b>	<b>21</b>	<b>311</b>	<b>7</b>	<b>339</b>	<b>937</b>	<b>3,494</b>
3:45 PM	3	17	2	22	68	25	32	125	1	294	80	375	34	263	15	312	834	3,446
4:00 PM	2	15	4	21	81	23	44	148	2	270	85	357	33	300	9	342	868	3,418
4:15 PM	9	17	1	27	72	26	40	138	3	299	95	397	30	254	9	293	855	3,480
4:30 PM	6	13	3	22	84	24	41	149	2	268	83	353	27	333	5	365	889	3,441
4:45 PM	5	16	2	23	71	15	39	125	1	257	82	340	24	288	6	318	806	3,391
5:00 PM	4	16	2	22	101	18	40	159	1	304	99	404	29	315	1	345	930	3,333
5:15 PM	5	9	0	14	78	9	41	128	2	273	80	355	32	279	8	319	816	3,144
5:30 PM	8	12	0	20	72	14	40	126	1	265	92	358	28	301	6	335	839	2,984
5:45 PM	2	16	2	20	65	17	33	115	1	225	76	302	26	282	3	311	748	2,840
6:00 PM	3	11	2	16	80	15	49	144	1	232	78	311	25	240	5	270	741	2,675
6:15 PM	3	7	0	10	56	22	32	110	3	212	72	287	19	228	2	249	656	2,557
6:30 PM	3	10	3	16	55	11	46	112	2	213	65	280	22	256	9	287	695	2,485
6:45 PM	4	13	2	19	51	11	34	96	4	185	59	248	16	199	5	220	583	2,359
7:00 PM	3	8	5	16	54	22	38	114	3	203	59	265	20	206	2	228	623	2,265
7:15 PM	1	8	1	10	59	12	27	98	1	187	58	246	6	220	4	230	584	690
7:30 PM	3	5	2	10	59	16	22	97	2	200	59	261	11	186	4	201	569	688
7:45 PM	0	4	4	8	34	12	15	61	0	184	49	233	20	164	3	187	489	724
<b>PM PEAK</b>	<b>20</b>	<b>65</b>	<b>9</b>	<b>94</b>	<b>314</b>	<b>110</b>	<b>168</b>	<b>592</b>	<b>7</b>	<b>1,162</b>	<b>353</b>	<b>1,522</b>	<b>118</b>	<b>1,128</b>	<b>40</b>	<b>1,286</b>	<b>3,494</b>	<b>3,494</b>
PHF	0.56	0.96	0.56	0.87	0.84	0.76	0.81	0.82	0.58	0.97	0.93	0.96	0.87	0.91	0.67	0.94	0.93	

SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS - FRIDAY - 8/5/2022



**SCOTTSDALE PLAZA RESORT RENOVATIONS**  
**SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS - FRIDAY - 8/5/2022**  
**EXISTING 5:00 AM to 10:00 AM**



BEGIN TIME	PLAZA RESORT ACCESS EASTBOUND				PLAZA RESORT ACCESS WESTBOUND				SCOTTSDALE ROAD NORTHBOUND				SCOTTSDALE ROAD SOUTHBOUND				ALL TOTAL	60 MINUTE TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
5:00 AM	0	0	0	0	0	1	1	2	1	37	1	39	32	70	0	102	143	972
5:15 AM	0	0	1	1	0	0	0	0	5	50	5	60	50	101	0	151	212	1,159
5:30 AM	0	0	1	1	0	4	4	8	2	60	1	63	62	127	0	189	261	1,378
5:45 AM	1	0	0	1	0	2	3	5	5	93	3	101	76	173	0	249	356	1,694
6:00 AM	0	0	0	0	0	0	2	2	1	83	3	87	78	163	0	241	330	2,000
6:15 AM	0	0	3	3	0	1	2	3	2	109	6	117	97	211	0	308	431	2,386
6:30 AM	1	0	0	1	0	4	7	11	7	147	2	156	127	282	0	409	577	2,870
6:45 AM	4	0	4	8	0	2	6	8	11	152	3	166	157	323	0	480	662	3,490
7:00 AM	0	0	2	2	0	8	11	19	3	170	7	180	166	349	0	515	716	3,966
7:15 AM	1	0	1	2	1	7	10	18	8	214	5	227	221	447	0	668	915	4,212
7:30 AM	0	1	2	3	0	2	3	5	20	291	9	320	286	583	0	869	1,197	4,308
7:45 AM	1	0	2	3	0	13	15	28	21	242	12	275	286	546	0	832	1,138	4,199
8:00 AM	4	0	2	6	1	4	6	11	20	231	1	252	225	468	0	693	962	4,216
8:15 AM	0	0	1	1	0	12	14	26	21	239	6	266	232	486	0	718	1,011	4,271
8:30 AM	2	1	4	7	0	5	9	14	16	268	7	291	246	530	0	776	1,088	4,355
<b>8:45 AM</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>6</b>	<b>13</b>	<b>20</b>	<b>19</b>	<b>245</b>	<b>15</b>	<b>279</b>	<b>297</b>	<b>557</b>	<b>0</b>	<b>854</b>	<b>1,155</b>	<b>4,376</b>
9:00 AM	1	0	4	5	0	4	8	12	19	237	2	258	246	496	0	742	1,017	4,356
9:15 AM	3	0	4	7	0	8	12	20	14	244	9	267	269	532	0	801	1,095	532
9:30 AM	3	0	4	7	1	14	18	33	12	247	8	267	265	537	0	802	1,109	537
9:45 AM	1	2	3	6	0	4	14	18	12	244	13	269	289	553	0	842	1,135	553
AM PEAK	8	0	13	21	2	32	51	85	64	973	34	1,071	1,077	2,122	0	3,199	4,376	4,376
PHF	0.67	0.00	0.81	0.75	0.50	0.57	0.71	0.64	0.84	0.98	0.57	0.96	0.91	0.95	0.00	0.94		

**SCOTTSDALE PLAZA RESORT RENOVATIONS**  
**SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS - FRIDAY - 8/5/2022**



**EXISTING 10:00 AM to 3:00 PM**

BEGIN TIME	PLAZA RESORT ACCESS EASTBOUND				PLAZA RESORT ACCESS WESTBOUND				SCOTTSDALE ROAD NORTHBOUND				SCOTTSDALE ROAD SOUTHBOUND				ALL TOTAL	60 MIN. TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
10:00 AM	2	1	3	6	8	1	5	14	4	224	10	238	4	251	0	255	513	2,209
10:15 AM	1	0	2	3	10	2	4	16	1	234	13	248	5	271	1	277	544	2,253
10:30 AM	1	1	6	8	11	0	8	19	8	239	13	260	9	258	2	269	556	2,310
10:45 AM	2	0	6	8	10	0	6	16	5	245	21	271	7	293	1	301	596	2,434
11:00 AM	1	1	6	8	9	0	7	16	6	252	11	269	5	258	1	264	557	2,491
11:15 AM	0	1	8	9	7	0	4	11	5	290	10	305	7	268	1	276	601	2,561
11:30 AM	0	1	1	2	10	1	8	19	5	320	15	340	12	306	1	319	680	2,630
11:45 AM	3	1	2	6	14	1	9	24	4	301	12	317	12	294	0	306	653	2,620
12:00 PM	0	0	6	6	4	0	12	16	8	279	14	301	5	298	1	304	627	2,641
12:15 PM	1	0	9	10	8	1	13	22	7	296	8	311	7	315	5	327	670	2,675
12:30 PM	2	0	4	6	9	0	14	23	10	286	14	310	8	322	1	331	670	2,666
12:45 PM	0	0	9	9	7	2	9	18	5	291	17	313	8	323	3	334	674	2,641
1:00 PM	1	2	9	12	8	0	7	15	3	315	13	331	3	300	0	303	661	2,628
1:15 PM	4	0	6	10	7	0	7	14	7	328	5	340	8	288	1	297	661	2,617
1:30 PM	0	0	4	4	8	0	6	14	2	306	9	317	8	300	2	310	645	2,642
1:45 PM	2	0	7	9	4	0	6	10	8	311	9	328	4	308	2	314	661	2,775
<b>2:00 PM</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>4</b>	<b>6</b>	<b>1</b>	<b>12</b>	<b>19</b>	<b>5</b>	<b>308</b>	<b>6</b>	<b>319</b>	<b>8</b>	<b>299</b>	<b>1</b>	<b>308</b>	<b>650</b>	<b>2,780</b>
2:15 PM	1	0	1	2	10	0	5	15	4	331	10	345	7	315	2	324	686	532
2:30 PM	2	1	5	8	7	0	8	15	6	357	8	371	11	370	3	384	<b>778</b>	537
2:45 PM	4	1	3	8	14	0	11	25	4	301	10	315	5	311	2	318	666	553
<b>MD PEAK</b>	<b>7</b>	<b>2</b>	<b>13</b>	<b>22</b>	<b>37</b>	<b>1</b>	<b>36</b>	<b>74</b>	<b>19</b>	<b>1,297</b>	<b>34</b>	<b>1,350</b>	<b>31</b>	<b>1,295</b>	<b>8</b>	<b>1,334</b>	<b>2,780</b>	<b>2,780</b>
PHF	0.44	0.50	0.65	0.69	0.66	0.25	0.75	0.74	0.79	0.91	0.85	0.91	0.70	0.88	0.67	0.87	0.89	

**SCOTTSDALE PLAZA RESORT RENOVATIONS**

**SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS - FRIDAY - 8/5/2022**

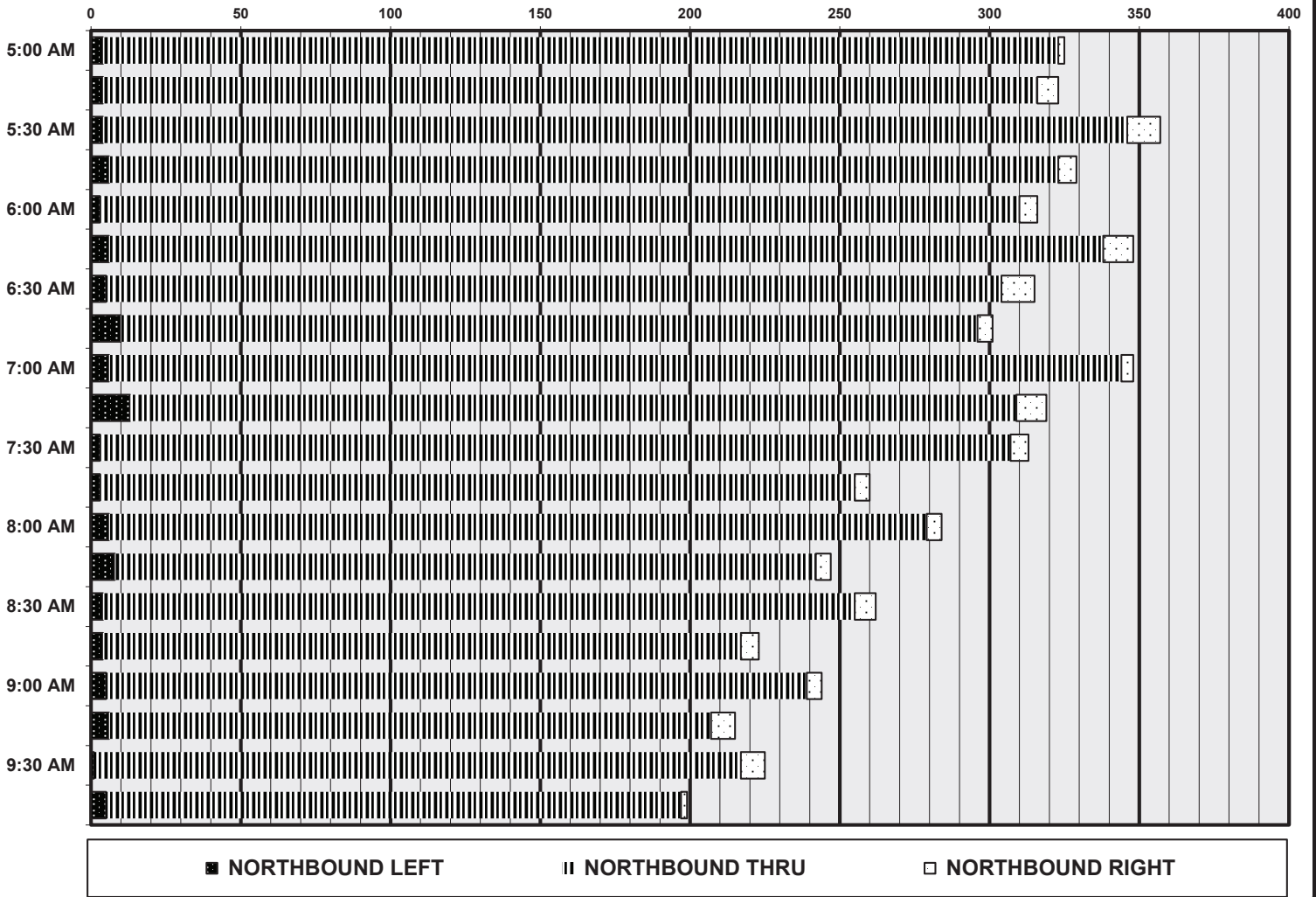


**EXISTING 3:00 PM to 8:00 PM**

BEGIN TIME	PLAZA RESORT ACCESS EASTBOUND				PLAZA RESORT ACCESS WESTBOUND				SCOTTSDALE ROAD NORTHBOUND				SCOTTSDALE ROAD SOUTHBOUND				ALL TOTAL	60 MIN. TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
3:00 PM	3	0	5	8	10	0	7	17	4	319	2	325	7	322	1	330	680	2,686
3:15 PM	6	0	2	8	8	0	10	18	4	312	7	323	1	276	0	277	626	2,673
3:30 PM	5	1	5	11	4	0	4	8	4	342	11	357	4	330	2	336	712	2,706
3:45 PM	9	0	4	13	8	0	11	19	6	317	6	329	2	300	5	307	668	2,688
4:00 PM	0	0	1	1	17	0	6	23	3	307	6	316	3	324	0	327	667	2,660
4:15 PM	1	0	7	8	12	0	9	21	6	332	10	348	6	274	2	282	659	2,719
<b>4:30 PM</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>0</b>	<b>7</b>	<b>12</b>	<b>5</b>	<b>299</b>	<b>11</b>	<b>315</b>	<b>4</b>	<b>356</b>	<b>3</b>	<b>363</b>	<b>694</b>	<b>2,729</b>
4:45 PM	1	0	1	2	9	0	13	22	10	286	5	301	5	308	2	315	640	2,699
<b>5:00 PM</b>	1	2	5	8	11	1	14	26	6	338	4	348	9	329	6	344	<b>726</b>	2,649
5:15 PM	5	0	4	9	7	1	11	19	13	296	10	319	10	308	4	322	669	2,499
5:30 PM	2	0	10	12	9	0	8	17	3	304	6	313	1	316	5	322	664	2,341
5:45 PM	1	0	4	5	5	1	5	11	3	252	5	260	11	302	1	314	590	2,239
6:00 PM	2	0	3	5	9	0	10	19	6	273	5	284	7	258	3	268	576	2,102
6:15 PM	0	0	5	5	1	1	2	4	8	234	5	247	9	243	3	255	511	2,011
6:30 PM	1	0	10	11	2	0	9	11	4	251	7	262	3	275	0	278	562	1,959
6:45 PM	2	0	0	2	5	0	2	7	4	213	6	223	5	215	1	221	453	1,840
7:00 PM	2	0	3	5	4	0	5	9	5	234	5	244	6	221	0	227	485	1,780
7:15 PM	1	0	1	2	5	0	8	13	6	201	8	215	4	224	1	229	459	532
7:30 PM	2	0	4	6	6	1	8	15	1	216	8	225	3	191	3	197	443	537
7:45 PM	1	0	4	5	3	0	0	3	5	192	2	199	5	180	1	186	393	553
<b>PM PEAK</b>	<b>7</b>	<b>2</b>	<b>14</b>	<b>23</b>	<b>32</b>	<b>2</b>	<b>45</b>	<b>79</b>	<b>34</b>	<b>1,219</b>	<b>30</b>	<b>1,283</b>	<b>28</b>	<b>1,301</b>	<b>15</b>	<b>1,344</b>	<b>2,729</b>	<b>2,729</b>
PHF	0.35	0.25	0.70	0.64	0.73	0.50	0.80	0.76	0.65	0.90	0.68	0.92	0.70	0.91	0.63	0.93	0.94	



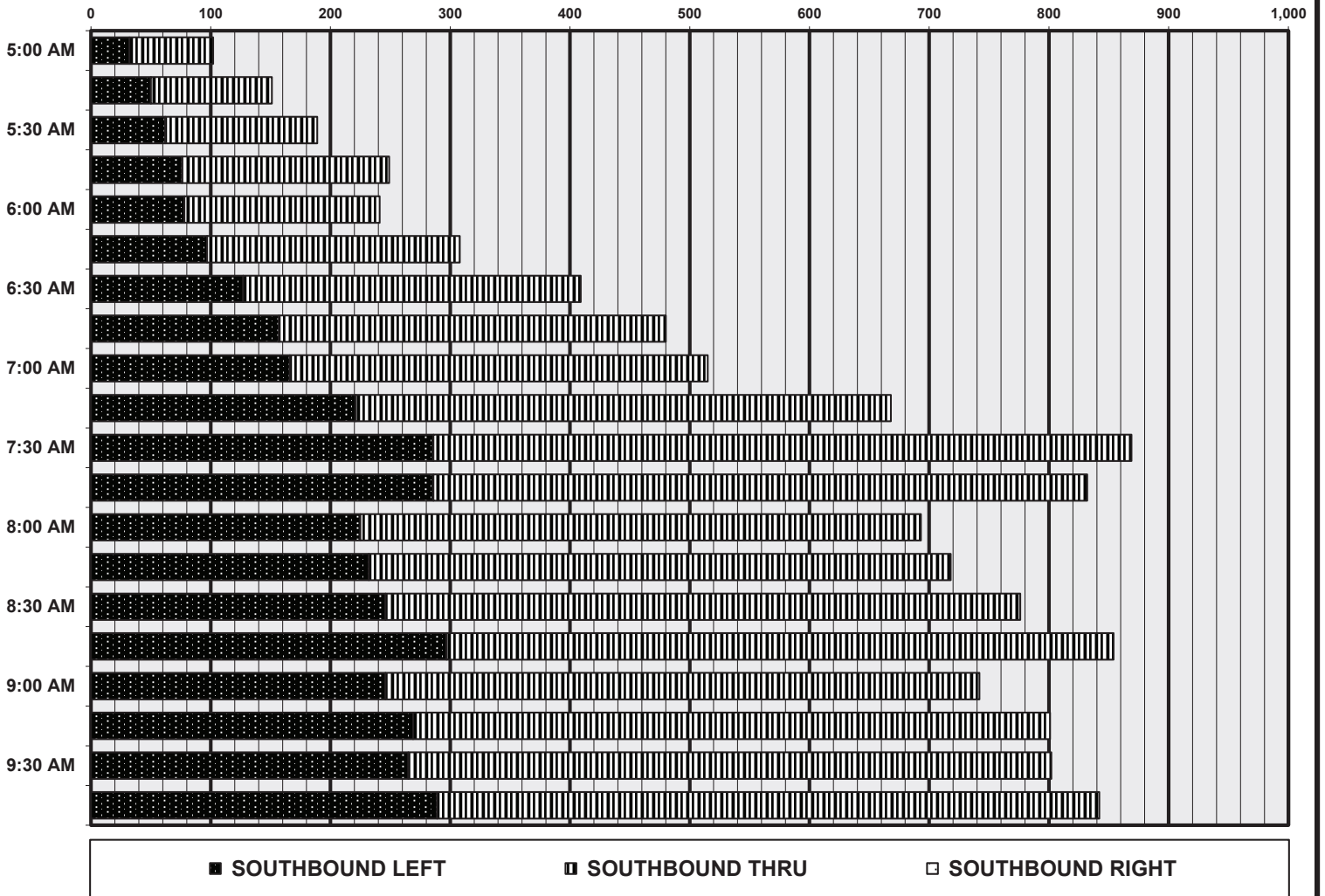
SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS - FRIDAY - 8/5/2022  
EXISTING 5:00 AM to 10:00 AM





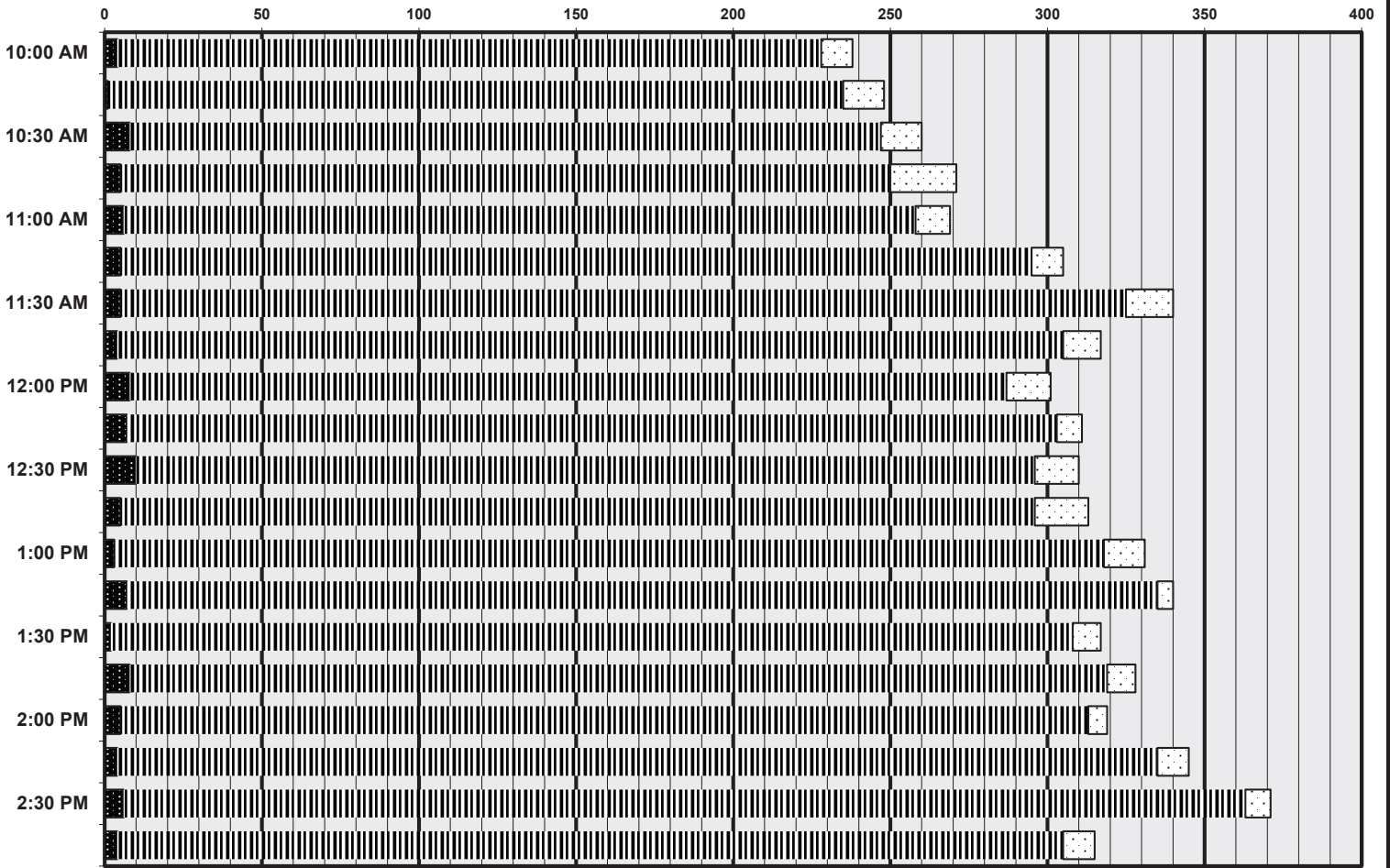


SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS - FRIDAY - 8/5/2022  
EXISTING 5:00 AM to 10:00 AM





SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS - FRIDAY - 8/5/2022  
EXISTING 10:00 AM to 3:00 PM



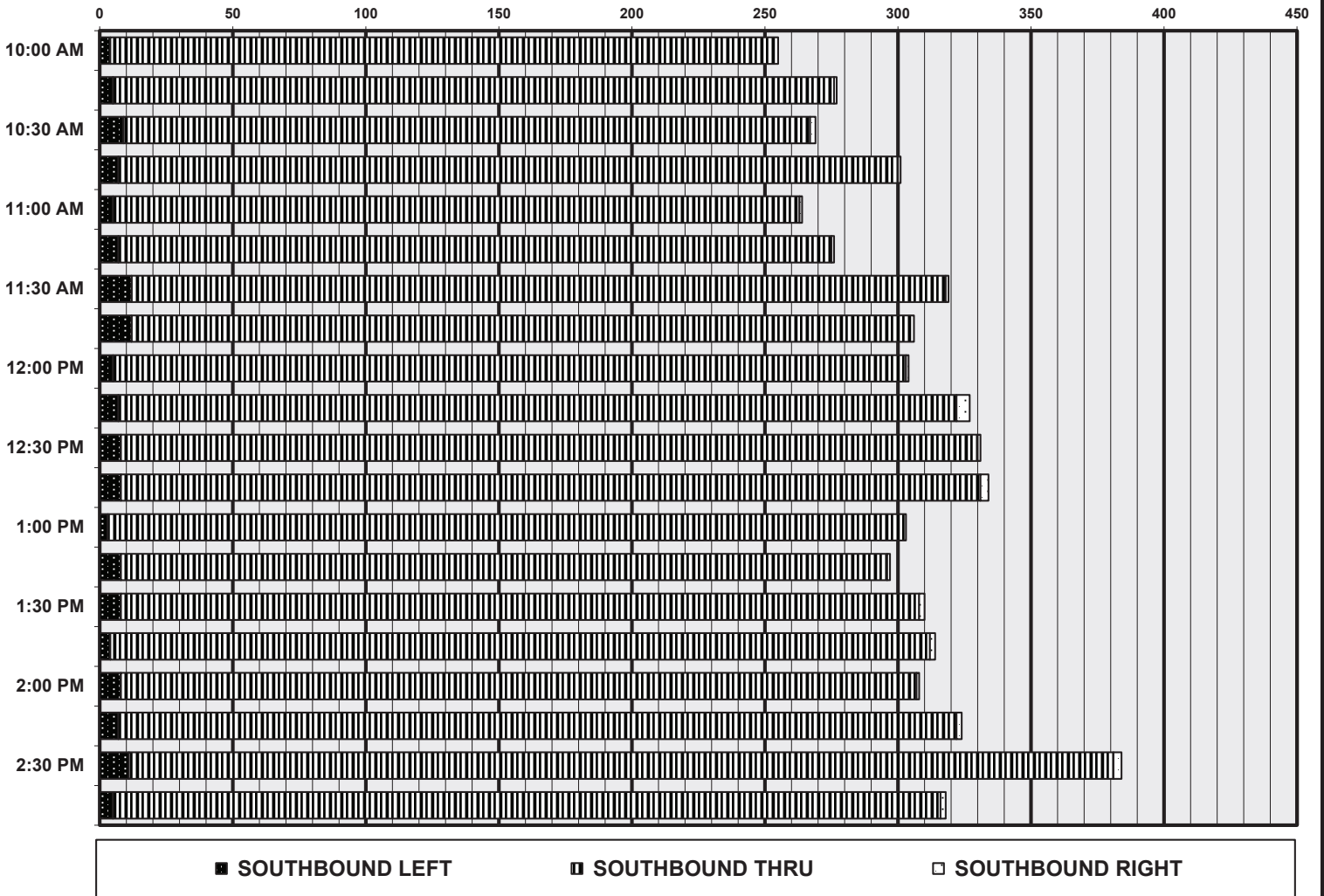
■ NORTHBOUND LEFT

|| NORTHBOUND THRU

□ NORTHBOUND RIGHT

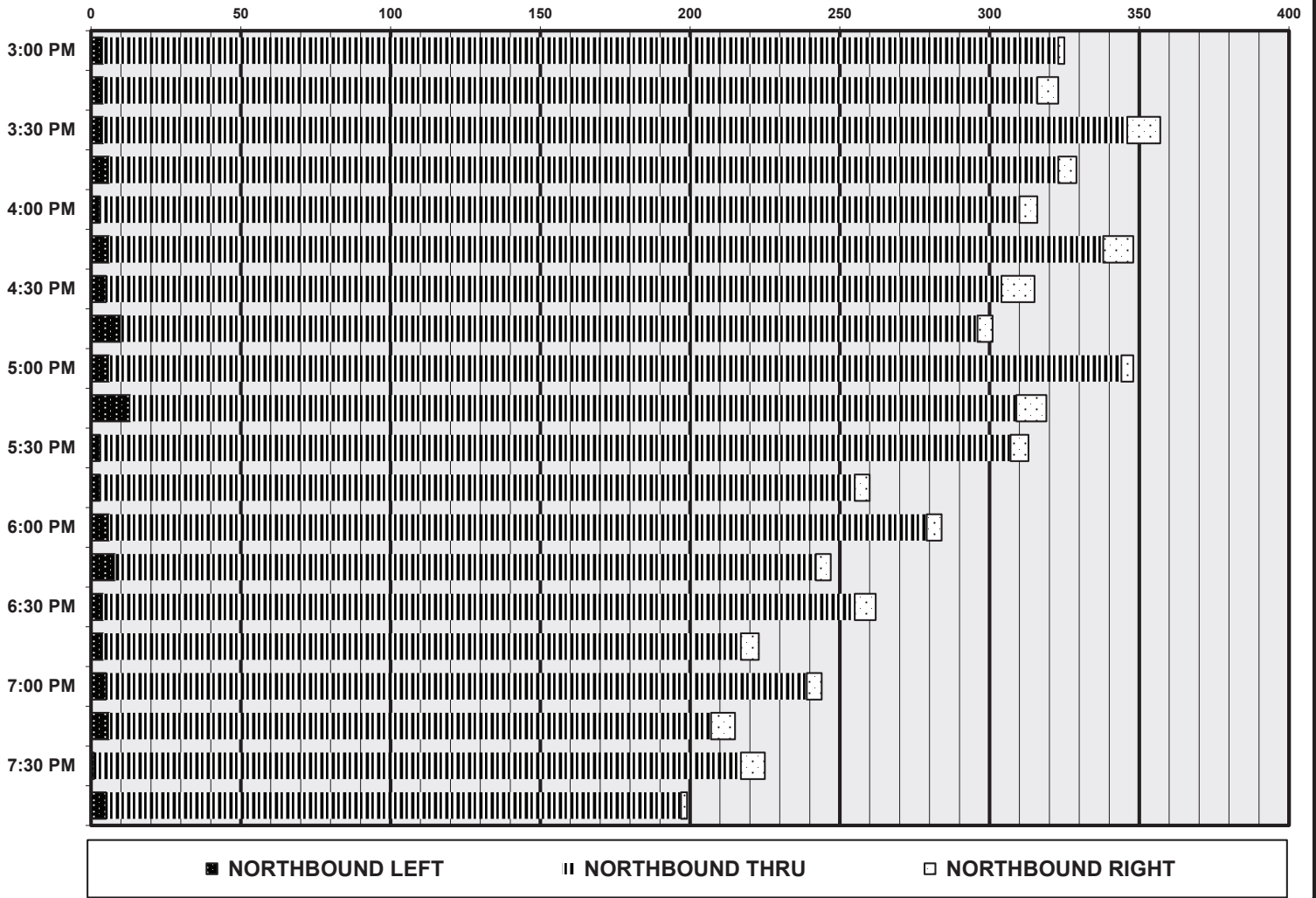


SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS - FRIDAY - 8/5/2022  
EXISTING 10:00 AM to 3:00 PM



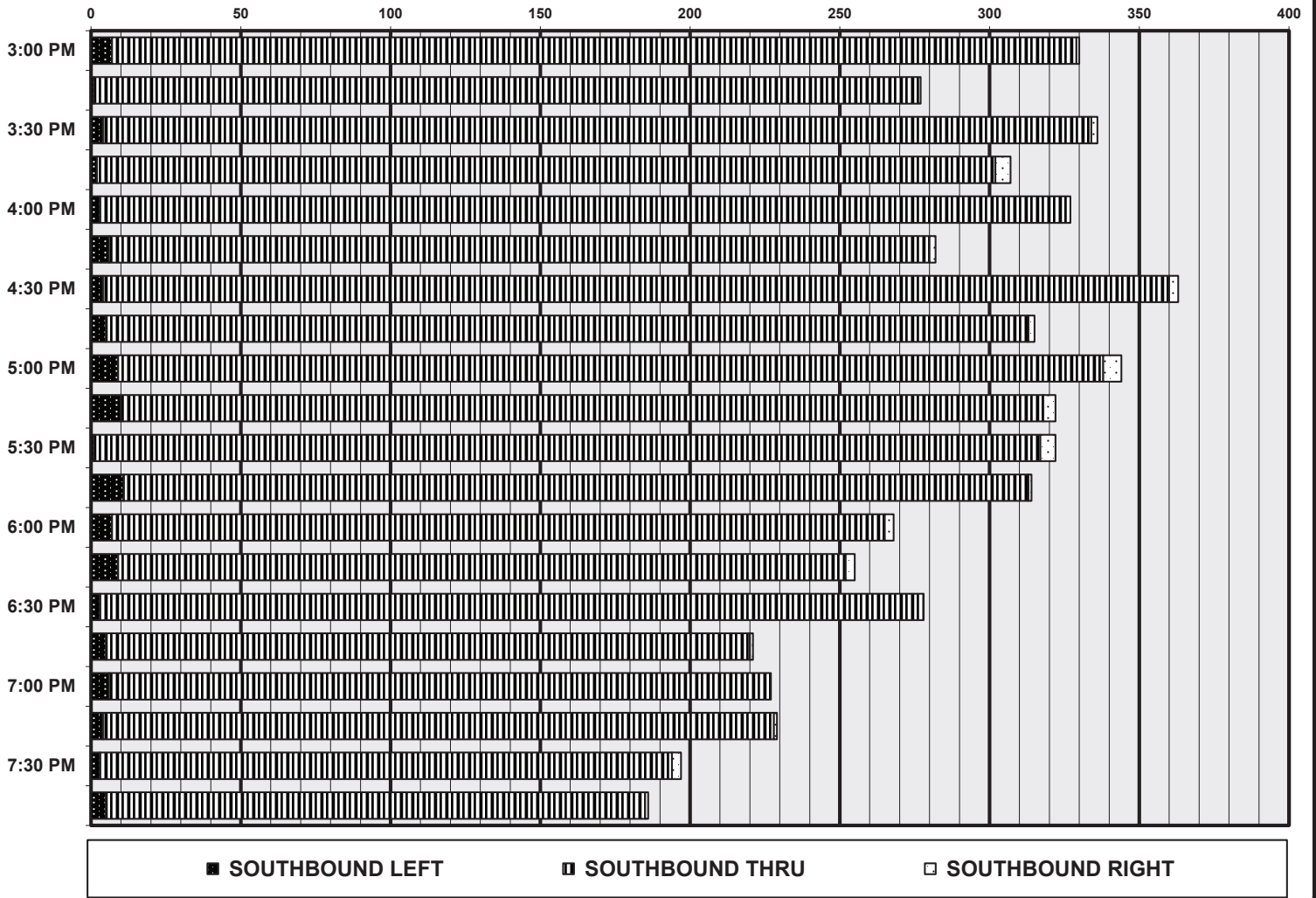


SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS - FRIDAY - 8/5/2022  
EXISTING 3:00 PM to 8:00 PM

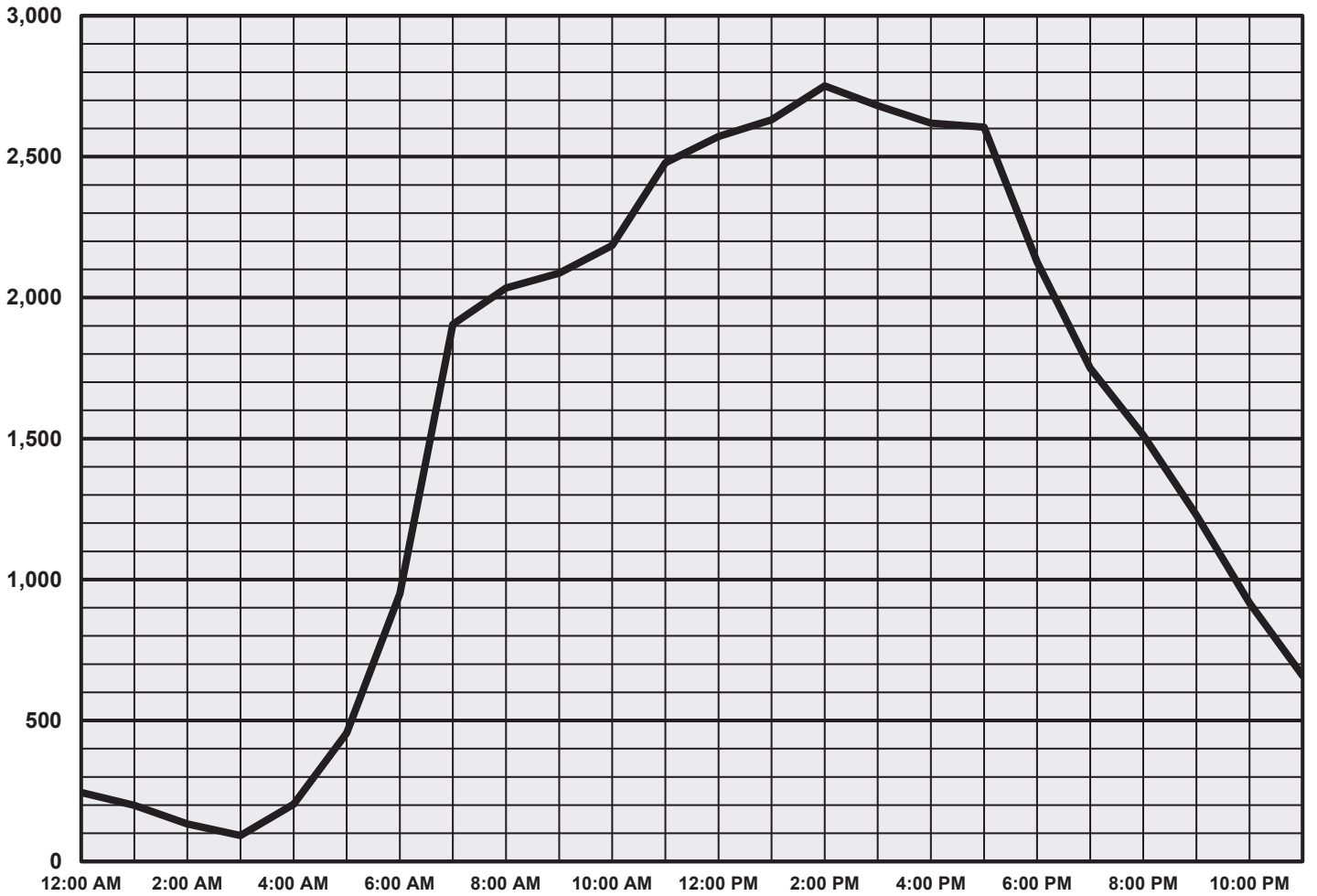




SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS - FRIDAY - 8/5/2022  
EXISTING 3:00 PM to 8:00 PM



SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE - FRIDAY - 8/5/2022



**SCOTTSDALE PLAZA RESORT RENOVATIONS**  
**SCOTTSDALE ROAD and HUMMINGBIRD LANE - FRIDAY - 8/5/2022**  
**EXISTING 5:00 AM to 10:00 AM**



BEGIN TIME	HUMMINGBIRD LANE EASTBOUND				HUMMINGBIRD LANE WESTBOUND				SCOTTSDALE ROAD NORTHBOUND				SCOTTSDALE ROAD SOUTHBOUND				ALL TOTAL	60 MINUTE TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
5:00 AM	0	0	0	0	0	0	2	2	0	33	0	33	29	64	0	93	128	913
5:15 AM	0	0	0	0	0	1	1	2	0	47	0	47	50	98	0	148	197	1,094
5:30 AM	2	0	1	3	0	2	2	4	0	51	0	51	61	117	0	178	236	1,322
5:45 AM	2	0	3	5	0	0	0	0	0	93	0	93	78	176	0	254	352	1,650
6:00 AM	1	0	2	3	0	0	0	0	0	74	1	75	77	154	0	231	309	1,907
6:15 AM	2	0	0	2	0	2	2	4	0	107	1	108	100	211	0	311	425	2,306
6:30 AM	3	0	2	5	0	1	1	2	0	143	1	144	132	281	0	413	564	2,785
6:45 AM	3	0	5	8	0	1	1	2	0	145	0	145	150	304	0	454	609	3,324
7:00 AM	6	0	5	11	0	0	1	1	1	175	1	177	166	353	0	519	708	3,828
7:15 AM	2	0	4	6	0	0	1	1	0	238	4	242	205	450	0	655	904	4,096
7:30 AM	2	0	9	11	0	1	1	2	0	253	2	255	285	550	0	835	1,103	4,171
7:45 AM	2	0	7	9	0	2	3	5	3	265	4	272	275	552	0	827	1,113	4,073
8:00 AM	2	2	4	8	0	1	2	3	1	227	6	234	247	484	0	731	976	4,102
8:15 AM	3	0	7	10	0	4	4	8	0	242	5	247	229	485	0	714	979	4,049
8:30 AM	3	0	4	7	0	0	2	2	0	251	5	256	240	500	0	740	1,005	4,158
<b>8:45 AM</b>	<b>3</b>	<b>0</b>	<b>8</b>	<b>11</b>	<b>0</b>	<b>4</b>	<b>4</b>	<b>8</b>	<b>1</b>	<b>253</b>	<b>7</b>	<b>261</b>	<b>297</b>	<b>565</b>	<b>0</b>	<b>862</b>	<b>1,142</b>	<b>4,229</b>
9:00 AM	1	0	1	2	0	2	2	4	2	218	3	223	236	458	0	694	923	4,207
9:15 AM	0	0	2	2	0	2	2	4	2	251	2	255	286	541	0	827	1,088	541
9:30 AM	3	0	5	8	0	1	1	2	4	251	5	260	273	533	0	806	1,076	533
9:45 AM	2	0	4	6	0	7	7	14	0	261	3	264	281	555	0	836	1,120	555
<b>AM PEAK</b>	<b>7</b>	<b>0</b>	<b>16</b>	<b>23</b>	<b>0</b>	<b>9</b>	<b>9</b>	<b>18</b>	<b>9</b>	<b>973</b>	<b>17</b>	<b>999</b>	<b>1,092</b>	<b>2,097</b>	<b>0</b>	<b>3,189</b>	<b>4,229</b>	<b>4,229</b>
PHF	0.58	0.00	0.50	0.52	0.00	0.56	0.56	0.56	0.56	0.96	0.61	0.96	0.92	0.93	0.00	0.92		

**SCOTTSDALE PLAZA RESORT RENOVATIONS**  
**SCOTTSDALE ROAD and HUMMINGBIRD LANE - FRIDAY - 8/5/2022**



**EXISTING 10:00 AM to 3:00 PM**

BEGIN TIME	HUMMINGBIRD LANE EASTBOUND				HUMMINGBIRD LANE WESTBOUND				SCOTTSDALE ROAD NORTHBOUND				SCOTTSDALE ROAD SOUTHBOUND				ALL TOTAL	60 MIN. TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
10:00 AM	3	0	3	6	1	0	6	7	5	226	1	232	6	262	7	275	520	2,185
10:15 AM	2	0	8	10	0	0	3	3	3	255	0	258	2	270	4	276	547	2,233
10:30 AM	4	0	5	9	4	0	3	7	2	253	0	255	1	250	0	251	522	2,269
10:45 AM	7	0	3	10	1	0	4	5	3	257	5	265	8	302	6	316	596	2,417
11:00 AM	8	0	6	14	2	0	4	6	6	269	3	278	0	265	5	270	568	2,478
11:15 AM	3	1	6	10	1	1	1	3	6	296	1	303	4	260	3	267	583	2,518
11:30 AM	1	0	10	11	0	0	4	4	6	330	3	339	4	310	2	316	670	2,601
11:45 AM	2	0	7	9	1	0	5	6	7	316	3	326	4	308	4	316	657	2,581
12:00 PM	3	0	3	6	2	1	5	8	7	286	4	297	3	291	3	297	608	2,572
12:15 PM	3	0	7	10	1	0	7	8	4	309	4	317	2	324	5	331	666	2,628
12:30 PM	3	0	5	8	1	1	6	8	9	293	5	307	8	316	3	327	650	2,629
12:45 PM	0	0	7	7	2	0	6	8	5	316	2	323	4	305	1	310	648	2,597
1:00 PM	0	0	9	9	1	0	5	6	5	327	2	334	2	308	5	315	664	2,631
1:15 PM	5	0	5	10	4	0	3	7	2	337	1	340	3	300	7	310	667	2,637
1:30 PM	1	1	3	5	3	1	4	8	4	308	0	312	3	285	5	293	618	2,623
<b>1:45 PM</b>	<b>4</b>	<b>0</b>	<b>6</b>	<b>10</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>335</b>	<b>3</b>	<b>341</b>	<b>4</b>	<b>325</b>	<b>1</b>	<b>330</b>	<b>682</b>	<b>2,776</b>
2:00 PM	4	0	4	8	1	0	5	6	3	328	5	336	3	314	3	320	670	2,751
2:15 PM	1	0	6	7	2	0	6	8	4	333	1	338	3	291	6	300	653	541
2:30 PM	4	0	5	9	3	0	5	8	8	351	2	361	1	389	3	393	771	533
2:45 PM	4	0	2	6	2	0	4	6	7	311	4	322	5	315	3	323	657	555
<b>MD PEAK</b>	<b>13</b>	<b>0</b>	<b>21</b>	<b>34</b>	<b>6</b>	<b>1</b>	<b>16</b>	<b>23</b>	<b>18</b>	<b>1,347</b>	<b>11</b>	<b>1,376</b>	<b>11</b>	<b>1,319</b>	<b>13</b>	<b>1,343</b>	<b>2,776</b>	<b>2,776</b>
PHF	0.81	0.00	0.88	0.85	0.50	0.25	0.67	0.72	0.56	0.96	0.55	0.95	0.69	0.85	0.54	0.85	0.90	

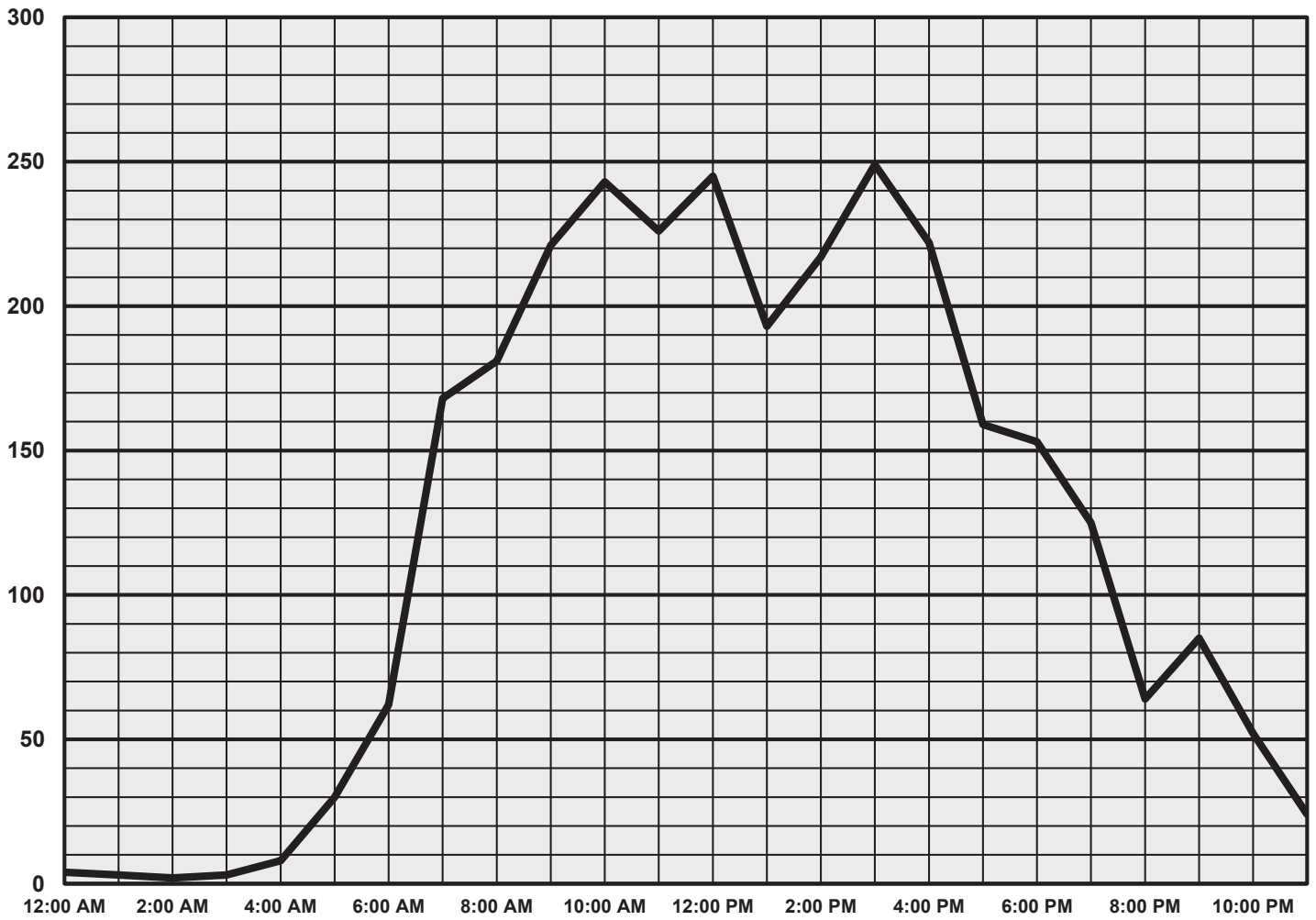


**SCOTTSDALE PLAZA RESORT RENOVATIONS**  
**SCOTTSDALE ROAD and HUMMINGBIRD LANE - FRIDAY - 8/5/2022**  
**EXISTING 3:00 PM to 8:00 PM**



BEGIN TIME	HUMMINGBIRD LANE EASTBOUND				HUMMINGBIRD LANE WESTBOUND				SCOTTSDALE ROAD NORTHBOUND				SCOTTSDALE ROAD SOUTHBOUND				ALL TOTAL	60 MIN. TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
3:00 PM	4	0	9	13	2	0	1	3	3	327	0	330	10	307	4	321	667	2,681
3:15 PM	2	0	4	6	3	0	2	5	4	331	1	336	2	280	3	285	632	2,650
3:30 PM	0	0	7	7	1	0	4	5	5	360	0	365	7	311	1	319	696	2,669
3:45 PM	3	0	4	7	1	1	3	5	2	353	0	355	2	315	2	319	686	2,637
4:00 PM	0	0	5	5	1	0	7	8	0	303	5	308	7	300	8	315	636	2,619
4:15 PM	0	0	3	3	2	0	3	5	6	336	3	345	5	292	1	298	651	2,652
<b>4:30 PM</b>	<b>2</b>	<b>0</b>	<b>5</b>	<b>7</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>8</b>	<b>293</b>	<b>2</b>	<b>303</b>	<b>7</b>	<b>343</b>	<b>1</b>	<b>351</b>	<b>664</b>	2,691
4:45 PM	1	1	8	10	0	0	4	4	2	336	4	342	4	306	2	312	668	2,665
5:00 PM	3	0	4	7	0	0	2	2	5	326	2	333	4	320	3	327	669	2,605
<b>5:15 PM</b>	<b>6</b>	<b>0</b>	<b>7</b>	<b>13</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>5</b>	<b>3</b>	<b>332</b>	<b>5</b>	<b>340</b>	<b>5</b>	<b>326</b>	<b>1</b>	<b>332</b>	<b>690</b>	2,498
5:30 PM	4	0	7	11	3	0	2	5	3	299	4	306	6	306	4	316	638	2,333
5:45 PM	1	0	4	5	3	0	4	7	8	267	2	277	2	313	4	319	608	2,236
6:00 PM	2	0	5	7	0	0	3	3	5	279	5	289	4	255	4	263	562	2,127
6:15 PM	1	0	6	7	3	0	3	6	2	243	4	249	1	258	4	263	525	2,029
6:30 PM	3	0	5	8	3	1	3	7	4	234	7	245	4	273	4	281	541	1,986
6:45 PM	1	0	12	13	2	0	6	8	11	246	4	261	3	211	3	217	499	1,847
7:00 PM	3	0	3	6	7	0	2	9	3	230	2	235	2	207	5	214	464	1,750
7:15 PM	0	1	1	2	5	0	3	8	7	226	3	236	3	232	1	236	482	541
7:30 PM	2	0	5	7	1	0	4	5	5	203	4	212	4	174	0	178	402	533
7:45 PM	2	0	3	5	4	0	3	7	4	193	2	199	2	188	1	191	402	555
<b>PM PEAK</b>	<b>12</b>	<b>1</b>	<b>24</b>	<b>37</b>	<b>3</b>	<b>1</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>1,287</b>	<b>13</b>	<b>1,318</b>	<b>20</b>	<b>1,295</b>	<b>7</b>	<b>1,322</b>	<b>2,691</b>	<b>2,691</b>
PHF	0.50	0.25	0.75	0.71	0.38	0.25	0.63	0.70	0.56	0.96	0.65	0.96	0.71	0.94	0.58	0.94	0.98	

SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE PLAZA RESORT ACCESS and INDIAN BEND ROAD - FRIDAY - 8/5/2022



**SCOTTSDALE PLAZA RESORT RENOVATIONS**  
**SCOTTSDALE PLAZA RESORT ACCESS and INDIAN BEND ROAD - FRIDAY - 8/5/2022**  
**EXISTING 5:00 AM to 10:00 AM**



BEGIN TIME	INDIAN BEND ROAD EASTBOUND				INDIAN BEND ROAD WESTBOUND				PLAZA RESORT ACCESS NORTHBOUND				PLAZA RESORT ACCESS SOUTHBOUND				ALL TOTAL	60 MINUTE TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
5:00 AM	0	0	0	0	2	0	2	4	0	0	0	0	0	2	0	2	6	83
5:15 AM	1	2	0	3	4	1	5	10	0	0	0	0	0	8	0	8	21	107
5:30 AM	0	2	0	2	4	0	4	8	0	0	0	0	0	6	0	6	16	128
5:45 AM	0	2	0	2	12	0	12	24	0	0	0	0	0	14	0	14	40	161
6:00 AM	0	3	0	3	8	0	8	16	0	0	0	0	0	11	0	11	30	161
6:15 AM	0	6	0	6	10	0	10	20	0	0	0	0	0	16	0	16	42	205
6:30 AM	0	8	0	8	11	0	11	22	0	0	0	0	0	19	0	19	49	244
6:45 AM	0	7	0	7	7	0	7	14	0	0	1	1	2	16	0	18	40	337
7:00 AM	0	16	0	16	14	0	14	28	0	0	0	0	0	30	0	30	74	414
7:15 AM	1	17	0	18	15	0	15	30	0	0	0	0	0	33	0	33	81	429
7:30 AM	0	23	0	23	30	1	31	62	0	0	1	1	1	55	0	56	142	468
7:45 AM	0	33	0	33	17	0	17	34	0	0	0	0	0	50	0	50	117	452
8:00 AM	0	10	0	10	23	0	23	46	0	0	0	0	0	33	0	33	89	471
8:15 AM	1	20	0	21	26	0	26	52	0	0	0	0	0	47	0	47	120	493
8:30 AM	0	20	0	20	26	1	27	54	0	0	1	1	2	49	0	51	126	491
8:45 AM	0	20	0	20	30	2	32	64	0	0	0	0	0	52	0	52	136	520
<b>9:00 AM</b>	<b>0</b>	<b>27</b>	<b>0</b>	<b>27</b>	<b>17</b>	<b>1</b>	<b>18</b>	<b>36</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>46</b>	<b>0</b>	<b>47</b>	<b>111</b>	<b>543</b>
9:15 AM	0	28	0	28	18	0	18	36	0	0	2	2	3	49	0	52	118	49
9:30 AM	1	39	0	40	23	1	24	48	0	0	1	1	1	65	0	66	155	65
<b>9:45 AM</b>	<b>0</b>	<b>24</b>	<b>0</b>	<b>24</b>	<b>35</b>	<b>2</b>	<b>37</b>	<b>74</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>61</b>	<b>0</b>	<b>61</b>	<b>159</b>	<b>61</b>
AM PEAK	1	118	0	119	93	4	97	194	0	0	4	4	5	221	0	226	543	543
PHF	0.25	0.76	0.00	0.74	0.66	0.50	0.66	0.66	0.00	0.00	0.50	0.50	0.42	0.85	0.00	0.86		

**SCOTTSDALE PLAZA RESORT RENOVATIONS**  
**SCOTTSDALE PLAZA RESORT ACCESS and INDIAN BEND ROAD - FRIDAY - 8/5/2022**  
**EXISTING 10:00 AM to 3:00 PM**



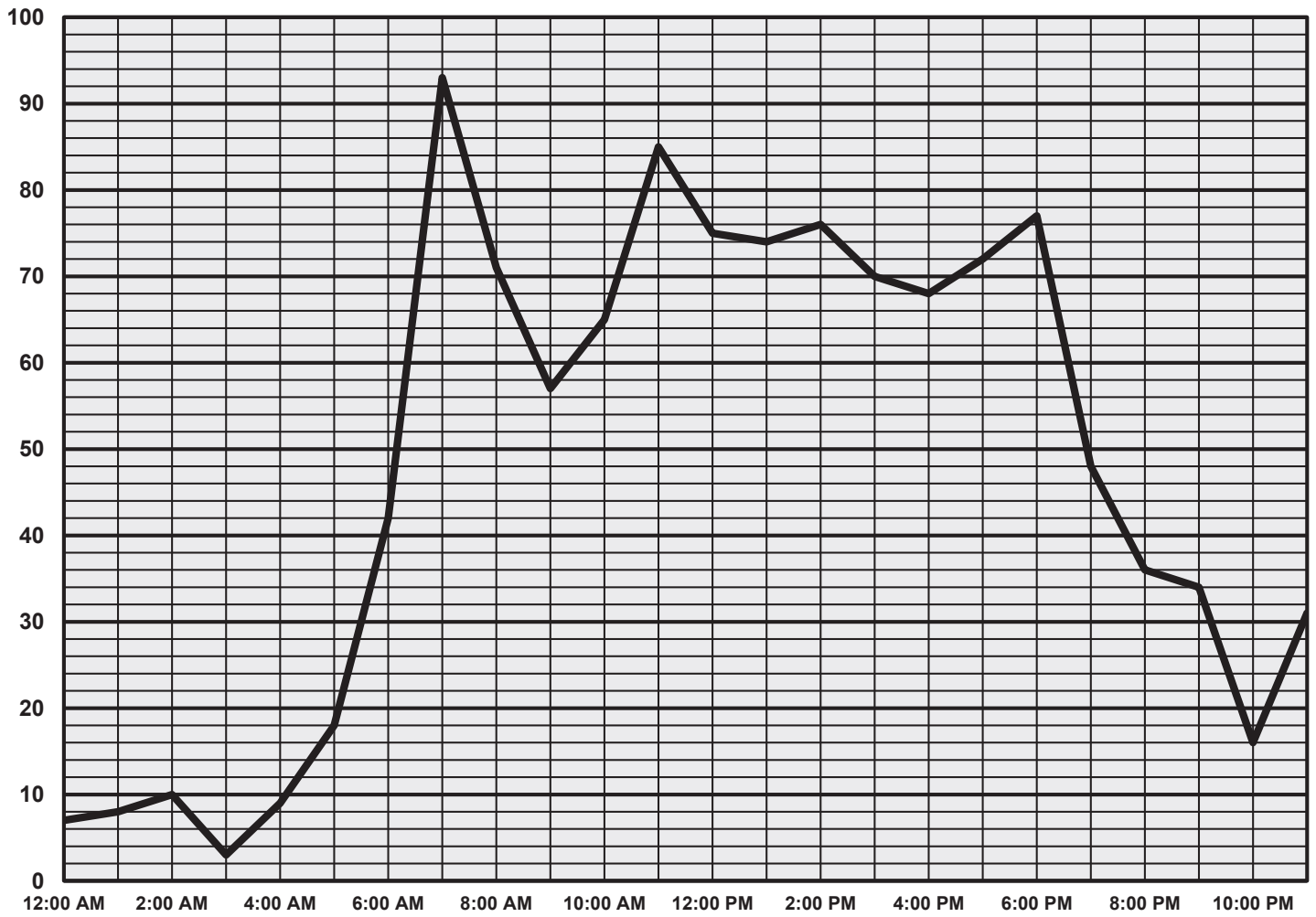
BEGIN TIME	INDIAN BEND ROAD EASTBOUND				INDIAN BEND ROAD WESTBOUND				PLAZA RESORT ACCESS NORTHBOUND				PLAZA RESORT ACCESS SOUTHBOUND				ALL TOTAL	60 MIN. TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
10:00 AM	0	31	0	31	0	23	1	24	0	0	0	0	1	0	0	1	56	243
10:15 AM	0	23	0	23	0	34	2	36	0	0	0	0	3	0	0	3	62	244
10:30 AM	1	39	0	40	0	22	1	23	0	0	0	0	2	0	0	2	65	230
10:45 AM	0	29	0	29	0	27	3	30	0	0	0	0	1	0	0	1	60	242
11:00 AM	0	30	0	30	0	20	2	22	0	0	0	0	4	0	1	5	57	226
11:15 AM	0	16	0	16	0	27	1	28	0	0	0	0	2	0	2	4	48	252
<b>11:30 AM</b>	<b>0</b>	<b>30</b>	<b>0</b>	<b>30</b>	<b>0</b>	<b>44</b>	<b>1</b>	<b>45</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>77</b>	<b>259</b>
11:45 AM	0	16	0	16	0	25	2	27	0	0	0	0	1	0	0	1	44	234
12:00 PM	1	31	0	32	0	49	1	50	0	0	0	0	0	0	1	1	<b>83</b>	245
12:15 PM	0	23	0	23	0	28	0	28	0	0	0	0	1	0	3	4	55	226
12:30 PM	0	29	0	29	0	18	1	19	0	0	0	0	2	0	2	4	52	215
12:45 PM	0	25	0	25	0	27	2	29	0	0	0	0	1	0	0	1	55	202
1:00 PM	0	31	0	31	0	32	1	33	0	0	0	0	0	0	0	0	64	193
1:15 PM	0	26	0	26	0	17	0	17	0	0	0	0	1	0	0	1	44	178
1:30 PM	0	15	0	15	0	20	1	21	0	0	0	0	2	0	1	3	39	192
1:45 PM	0	24	0	24	0	19	2	21	0	0	0	0	1	0	0	1	46	210
2:00 PM	1	32	0	33	0	14	1	15	0	0	0	0	1	0	0	1	49	217
2:15 PM	0	31	0	31	0	26	0	26	0	0	0	0	1	0	0	1	58	49
2:30 PM	0	26	0	26	0	29	1	30	0	0	0	0	0	0	1	1	57	65
2:45 PM	0	20	0	20	0	30	2	32	0	0	0	0	1	0	0	1	53	61
<b>MD PEAK</b>	<b>1</b>	<b>100</b>	<b>0</b>	<b>101</b>	<b>0</b>	<b>146</b>	<b>4</b>	<b>150</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>5</b>	<b>8</b>	<b>259</b>	<b>259</b>
PHF	0.25	0.81	0.00	0.79	0.00	0.74	0.50	0.75	0.00	0.00	0.00	0.00	0.75	0.00	0.42	0.50	0.78	

**SCOTTSDALE PLAZA RESORT RENOVATIONS**  
**SCOTTSDALE PLAZA RESORT ACCESS and INDIAN BEND ROAD - FRIDAY - 8/5/2022**  
**EXISTING 3:00 PM to 8:00 PM**



BEGIN TIME	INDIAN BEND ROAD EASTBOUND				INDIAN BEND ROAD WESTBOUND				PLAZA RESORT ACCESS NORTHBOUND				PLAZA RESORT ACCESS SOUTHBOUND				ALL TOTAL	60 MIN. TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
3:00 PM	0	23	0	23	0	28	1	29	0	0	0	0	2	0	1	3	55	249
3:15 PM	0	22	0	22	0	39	0	39	0	0	0	0	1	0	0	1	62	249
<b>3:30 PM</b>	<b>1</b>	<b>24</b>	<b>0</b>	<b>25</b>	<b>0</b>	<b>43</b>	<b>1</b>	<b>44</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>69</b>	<b>253</b>
3:45 PM	0	21	0	21	0	38	3	41	0	0	0	0	1	0	0	1	63	239
4:00 PM	0	19	0	19	0	32	2	34	0	0	0	0	2	0	0	2	55	222
4:15 PM	0	26	0	26	0	37	1	38	0	0	0	0	1	0	1	2	66	209
4:30 PM	0	22	0	22	0	27	4	31	0	0	0	0	0	0	2	2	55	177
4:45 PM	0	22	0	22	0	21	1	22	0	0	0	0	1	0	1	2	46	164
5:00 PM	0	21	0	21	0	18	2	20	0	0	0	0	1	0	0	1	42	159
5:15 PM	1	14	0	15	0	19	0	19	0	0	0	0	0	0	0	0	34	154
5:30 PM	0	19	0	19	0	20	1	21	0	0	0	0	1	0	1	2	42	158
5:45 PM	0	17	0	17	0	19	2	21	0	0	0	0	3	0	0	3	41	155
6:00 PM	0	14	0	14	0	20	1	21	0	0	0	0	2	0	0	2	37	153
6:15 PM	0	10	0	10	0	27	0	27	0	0	0	0	0	0	1	1	38	159
6:30 PM	1	15	0	16	0	21	1	22	0	0	0	0	1	0	0	1	39	148
6:45 PM	0	17	0	17	0	20	0	20	0	0	0	0	2	0	0	2	39	141
7:00 PM	0	15	0	15	0	27	0	27	0	0	0	0	1	0	0	1	43	125
7:15 PM	0	9	0	9	0	17	0	17	0	0	0	0	1	0	0	1	27	49
7:30 PM	0	9	0	9	0	21	1	22	0	0	0	0	1	0	0	1	32	65
7:45 PM	0	8	0	8	0	12	3	15	0	0	0	0	0	0	0	0	23	61
<b>PM PEAK</b>	<b>1</b>	<b>90</b>	<b>0</b>	<b>91</b>	<b>0</b>	<b>150</b>	<b>7</b>	<b>157</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>5</b>	<b>253</b>	<b>253</b>
PHF	0.25	0.87	0.00	0.88	0.00	0.87	0.58	0.89	0.00	0.00	0.00	0.00	0.50	0.00	0.25	0.63	0.92	

SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE PLAZA RESORT ACCESS and HUMMINGBIRD LANE - FRIDAY - 8/5/2022



**SCOTTSDALE PLAZA RESORT RENOVATIONS**  
**SCOTTSDALE PLAZA RESORT ACCESS and HUMMINGBIRD LANE - FRIDAY - 8/5/2022**  
**EXISTING 5:00 AM to 10:00 AM**



BEGIN TIME	HUMMINGBIRD LANE EASTBOUND				HUMMINGBIRD LANE WESTBOUND				PLAZA RESORT ACCESS NORTHBOUND				PLAZA RESORT ACCESS SOUTHBOUND				ALL TOTAL	60 MINUTE TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
5:00 AM	0	0	0	0	1	0	1	2	0	1	0	1	0	2	0	2	5	40
5:15 AM	0	0	1	1	1	0	1	2	0	0	0	0	0	2	0	2	5	57
5:30 AM	0	3	2	5	0	0	0	0	0	0	0	0	0	5	0	5	10	70
5:45 AM	0	5	2	7	2	0	2	4	0	0	0	0	0	9	0	9	20	91
6:00 AM	0	2	3	5	3	0	3	6	1	1	0	2	0	9	0	9	22	106
6:15 AM	0	2	0	2	4	0	5	9	0	0	0	0	0	7	0	7	18	142
6:30 AM	0	4	1	5	6	0	6	12	1	1	0	2	0	12	0	12	31	163
6:45 AM	0	5	2	7	4	0	4	8	3	3	0	6	0	14	0	14	35	190
<b>7:00 AM</b>	<b>0</b>	<b>10</b>	<b>5</b>	<b>15</b>	<b>5</b>	<b>0</b>	<b>10</b>	<b>15</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>26</b>	<b>0</b>	<b>26</b>	<b>58</b>	<b>225</b>
7:15 AM	0	3	2	5	6	0	7	13	3	3	0	6	0	15	0	15	39	212
7:30 AM	0	11	0	11	10	0	13	23	0	0	0	0	0	24	0	24	58	219
<b>7:45 AM</b>	<b>0</b>	<b>6</b>	<b>2</b>	<b>8</b>	<b>11</b>	<b>0</b>	<b>15</b>	<b>26</b>	<b>3</b>	<b>5</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>28</b>	<b>0</b>	<b>28</b>	<b>70</b>	194
8:00 AM	0	7	0	7	8	0	10	18	1	1	0	2	0	18	0	18	45	172
8:15 AM	0	9	2	11	7	0	7	14	1	1	0	2	0	19	0	19	46	153
8:30 AM	0	5	0	5	5	0	6	11	2	2	0	4	0	13	0	13	33	132
8:45 AM	0	10	1	11	5	0	8	13	1	2	0	3	0	21	0	21	48	156
9:00 AM	0	1	1	2	3	0	5	8	1	4	0	5	0	11	0	11	26	145
9:15 AM	0	1	1	2	4	0	6	10	1	2	0	3	0	10	0	10	25	10
9:30 AM	0	5	0	5	10	0	13	23	3	4	0	7	0	22	0	22	57	22
9:45 AM	0	3	1	4	6	0	7	13	3	3	0	6	0	14	0	14	37	14
<b>AM PEAK</b>	<b>0</b>	<b>30</b>	<b>9</b>	<b>39</b>	<b>32</b>	<b>0</b>	<b>45</b>	<b>77</b>	<b>7</b>	<b>9</b>	<b>0</b>	<b>16</b>	<b>0</b>	<b>93</b>	<b>0</b>	<b>93</b>	<b>225</b>	<b>225</b>
PHF	0.00	0.68	0.45	0.65	0.73	0.00	0.75	0.74	0.58	0.45	0.00	0.50	0.00	0.83	0.00	0.83		

**SCOTTSDALE PLAZA RESORT RENOVATIONS**

**SCOTTSDALE PLAZA RESORT ACCESS and HUMMINGBIRD LANE - FRIDAY - 8/5/2022**



**EXISTING 10:00 AM to 3:00 PM**

BEGIN TIME	HUMMINGBIRD LANE EASTBOUND				HUMMINGBIRD LANE WESTBOUND				PLAZA RESORT ACCESS NORTHBOUND				PLAZA RESORT ACCESS SOUTHBOUND				ALL TOTAL	60 MIN. TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
10:00 AM	0	4	0	4	4	8	0	12	0	0	2	2	0	0	0	0	18	65
10:15 AM	0	5	0	5	1	6	0	7	0	0	5	5	0	0	0	0	17	72
10:30 AM	0	6	0	6	0	2	0	2	0	0	3	3	0	0	0	0	11	75
10:45 AM	0	8	0	8	4	5	0	9	0	0	2	2	0	0	0	0	19	83
<b>11:00 AM</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>10</b>	<b>1</b>	<b>10</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>25</b>	<b>85</b>
11:15 AM	0	7	0	7	3	7	0	10	0	0	3	3	0	0	0	0	20	78
11:30 AM	0	5	0	5	0	8	0	8	0	0	6	6	0	0	0	0	19	78
11:45 AM	0	8	1	9	2	9	0	11	0	0	1	1	0	0	0	0	21	82
12:00 PM	0	5	0	5	2	9	0	11	1	0	1	2	0	0	0	0	18	75
12:15 PM	0	6	0	6	0	9	0	9	1	0	4	5	0	0	0	0	20	76
12:30 PM	0	6	1	7	4	9	0	13	1	0	2	3	0	0	0	0	23	75
12:45 PM	0	5	0	5	0	6	0	6	1	0	2	3	0	0	0	0	14	71
1:00 PM	0	4	0	4	3	7	0	10	0	0	5	5	0	0	0	0	19	74
1:15 PM	0	8	0	8	4	5	0	9	0	0	2	2	0	0	0	0	19	70
1:30 PM	0	4	1	5	1	9	0	10	3	0	1	4	0	0	0	0	19	72
1:45 PM	0	7	1	8	1	4	0	5	1	0	3	4	0	0	0	0	17	75
2:00 PM	0	7	1	8	1	5	0	6	0	0	1	1	0	0	0	0	15	76
2:15 PM	0	2	1	3	1	9	0	10	3	0	5	8	0	0	0	0	21	10
2:30 PM	0	6	0	6	3	8	0	11	2	0	3	5	0	0	0	0	22	22
2:45 PM	0	6	2	8	2	8	0	10	0	0	0	0	0	0	0	0	18	14
<b>MD PEAK</b>	<b>0</b>	<b>30</b>	<b>1</b>	<b>31</b>	<b>6</b>	<b>34</b>	<b>0</b>	<b>40</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>85</b>	<b>85</b>
PHF	0.00	0.75	0.25	0.78	0.50	0.85	0.00	0.91	0.00	0.00	0.58	0.58	0.00	0.00	0.00	0.00	0.85	



**SCOTTSDALE PLAZA RESORT RENOVATIONS**

**SCOTTSDALE PLAZA RESORT ACCESS and HUMMINGBIRD LANE - FRIDAY - 8/5/2022**



**EXISTING 3:00 PM to 8:00 PM**

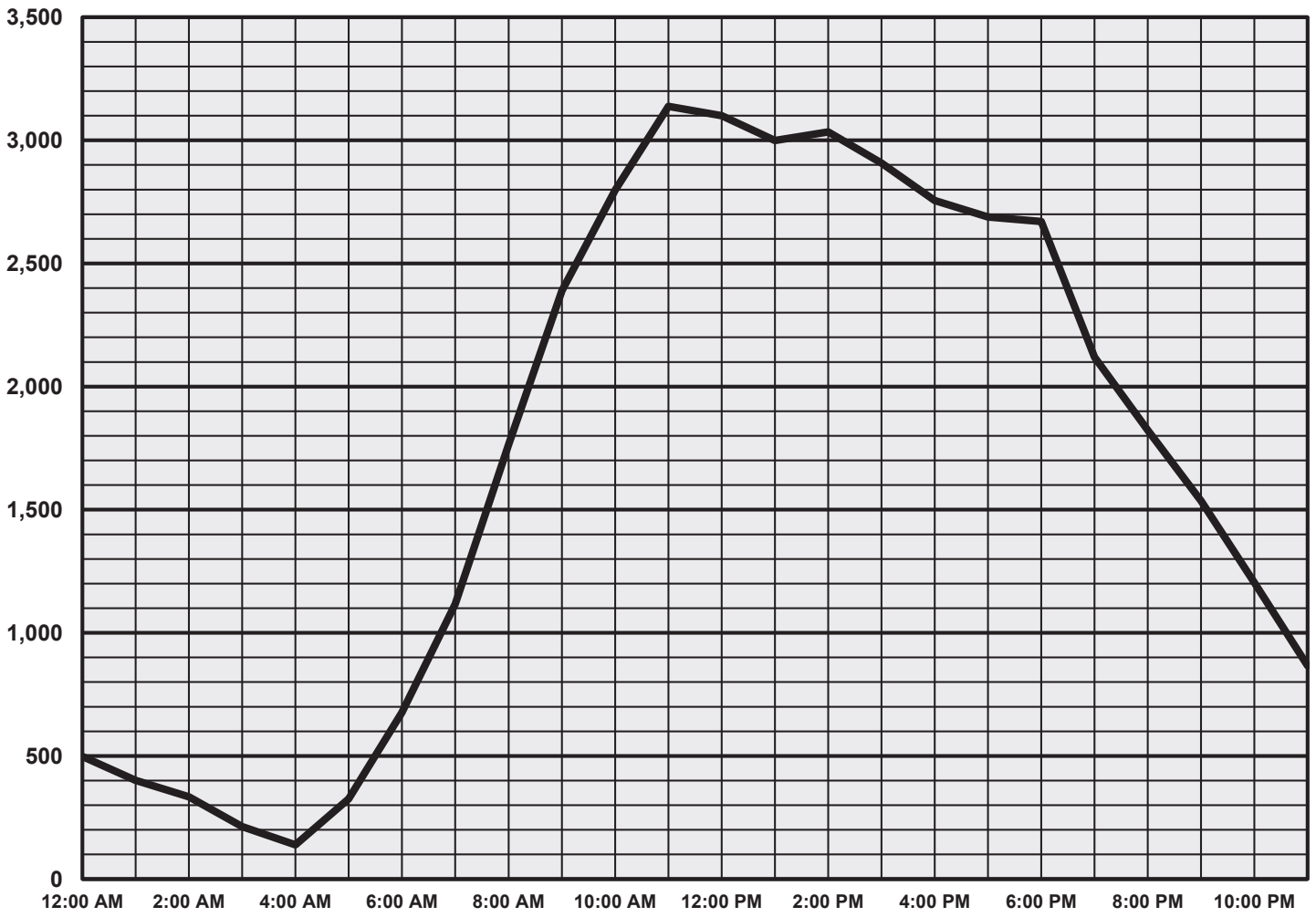
BEGIN TIME	HUMMINGBIRD LANE EASTBOUND				HUMMINGBIRD LANE WESTBOUND				PLAZA RESORT ACCESS NORTHBOUND				PLAZA RESORT ACCESS SOUTHBOUND				ALL TOTAL	60 MIN. TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
3:00 PM	0	9	2	11	2	5	0	7	3	0	4	7	0	0	0	0	25	70
3:15 PM	0	3	1	4	2	5	0	7	2	0	3	5	0	0	0	0	16	59
3:30 PM	0	6	1	7	1	5	0	6	0	0	1	1	0	0	0	0	14	59
3:45 PM	0	5	3	8	1	4	0	5	0	0	2	2	0	0	0	0	15	65
4:00 PM	0	4	0	4	3	5	0	8	1	0	1	2	0	0	0	0	14	68
4:15 PM	0	3	0	3	0	7	0	7	6	0	0	6	0	0	0	0	16	69
4:30 PM	0	4	1	5	1	8	0	9	3	0	3	6	0	0	0	0	20	71
4:45 PM	0	5	1	6	1	3	0	4	3	0	5	8	0	0	0	0	18	70
5:00 PM	0	3	0	3	0	8	0	8	0	0	4	4	0	0	0	0	15	72
5:15 PM	0	7	0	7	0	5	0	5	0	0	6	6	0	0	0	0	18	75
5:30 PM	0	7	0	7	1	6	0	7	1	0	4	5	0	0	0	0	19	70
5:45 PM	0	3	2	5	3	9	0	12	1	0	2	3	0	0	0	0	20	69
<b>6:00 PM</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>4</b>	<b>1</b>	<b>8</b>	<b>0</b>	<b>9</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>18</b>	77
6:15 PM	0	5	0	5	3	3	0	6	0	0	2	2	0	0	0	0	13	73
6:30 PM	0	7	1	8	1	8	0	9	0	0	1	1	0	0	0	0	18	70
<b>6:45 PM</b>	0	11	1	12	2	12	0	14	0	0	2	2	0	0	0	0	<b>28</b>	64
7:00 PM	0	5	0	5	0	8	0	8	0	0	1	1	0	0	0	0	14	48
7:15 PM	0	2	0	2	0	8	0	8	0	0	0	0	0	0	0	0	10	10
7:30 PM	0	6	0	6	1	4	0	5	0	0	1	1	0	0	0	0	12	22
7:45 PM	0	5	1	6	0	5	0	5	1	0	0	1	0	0	0	0	12	14
<b>PM PEAK</b>	<b>0</b>	<b>27</b>	<b>2</b>	<b>29</b>	<b>7</b>	<b>31</b>	<b>0</b>	<b>38</b>	<b>2</b>	<b>0</b>	<b>8</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>77</b>	<b>77</b>
PHF	0.00	0.61	0.50	0.60	0.58	0.65	0.00	0.68	0.25	0.00	0.67	0.50	0.00	0.00	0.00	0.00	0.69	

**Appendix B.3**  
2022 Traffic Counts  
Saturday Traffic Counts





SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and INDIAN BEND ROAD - SATURDAY - 8/6/2022



**SCOTTSDALE PLAZA RESORT RENOVATIONS**  
**SCOTTSDALE ROAD and INDIAN BEND ROAD - SATURDAY - 8/6/2022**  
**EXISTING 5:00 AM to 10:00 AM**



BEGIN TIME	INDIAN BEND ROAD EASTBOUND				INDIAN BEND ROAD WESTBOUND				SCOTTSDALE ROAD NORTHBOUND				SCOTTSDALE ROAD SOUTHBOUND				ALL TOTAL	60 MINUTE TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
5:00 AM	0	1	0	1	3	7	16	26	6	29	0	35	14	60	0	74	136	738
5:15 AM	1	0	0	1	1	4	10	15	4	38	5	47	21	70	0	91	154	876
5:30 AM	1	1	0	2	2	7	17	26	11	49	6	66	25	93	0	118	212	1,022
5:45 AM	1	3	0	4	2	9	17	28	14	43	5	62	39	103	0	142	236	1,167
6:00 AM	0	1	1	2	1	12	18	31	12	63	1	76	41	124	0	165	274	1,498
6:15 AM	0	5	0	5	1	11	23	35	13	69	3	85	39	136	0	175	300	1,693
6:30 AM	1	1	1	3	7	11	30	48	14	78	1	93	51	162	0	213	357	1,929
6:45 AM	1	3	0	4	4	16	48	68	27	110	10	147	93	255	0	348	567	2,336
7:00 AM	3	3	0	6	2	13	33	48	16	105	20	141	65	209	0	274	469	2,520
7:15 AM	0	4	1	5	4	13	31	48	28	109	13	150	94	239	0	333	536	2,888
7:30 AM	3	7	1	11	10	34	69	113	37	151	15	203	103	334	0	437	764	3,181
7:45 AM	2	6	1	9	9	22	60	91	39	132	13	184	133	334	0	467	751	3,534
8:00 AM	3	14	3	20	5	21	53	79	48	170	15	233	131	374	0	505	837	3,983
8:15 AM	0	6	1	7	9	23	68	100	53	158	26	237	126	359	0	485	829	4,360
8:30 AM	4	11	0	15	11	24	76	111	54	237	22	313	175	503	0	678	1,117	4,723
8:45 AM	2	17	1	20	14	30	93	137	79	242	19	340	174	529	0	703	1,200	5,030
<b>9:00 AM</b>	<b>2</b>	<b>19</b>	<b>5</b>	<b>26</b>	<b>13</b>	<b>21</b>	<b>75</b>	<b>109</b>	<b>84</b>	<b>249</b>	<b>30</b>	<b>363</b>	<b>183</b>	<b>533</b>	<b>0</b>	<b>716</b>	<b>1,214</b>	<b>5,382</b>
9:15 AM	1	8	4	13	14	34	96	144	67	209	19	295	211	529	0	740	1,192	529
9:30 AM	10	15	3	28	11	30	113	154	83	268	24	375	229	638	0	867	1,424	638
<b>9:45 AM</b>	<b>4</b>	<b>13</b>	<b>3</b>	<b>20</b>	<b>10</b>	<b>37</b>	<b>94</b>	<b>141</b>	<b>85</b>	<b>297</b>	<b>42</b>	<b>424</b>	<b>278</b>	<b>689</b>	<b>0</b>	<b>967</b>	<b>1,552</b>	<b>689</b>
AM PEAK	17	55	15	87	48	122	378	548	319	1,023	115	1,457	901	2,389	0	3,290	5,382	5,382
PHF	0.43	0.72	0.75	0.78	0.86	0.82	0.84	0.89	0.94	0.86	0.68	0.86	0.81	0.87	0.00	0.85		

**SCOTTSDALE PLAZA RESORT RENOVATIONS**  
**SCOTTSDALE ROAD and INDIAN BEND ROAD - SATURDAY - 8/6/2022**



**EXISTING 10:00 AM to 3:00 PM**

BEGIN TIME	INDIAN BEND ROAD EASTBOUND				INDIAN BEND ROAD WESTBOUND				SCOTTSDALE ROAD NORTHBOUND				SCOTTSDALE ROAD SOUTHBOUND				ALL TOTAL	60 MIN. TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
10:00 AM	1	24	3	28	68	17	28	113	4	177	80	261	28	230	1	259	661	2,798
10:15 AM	0	16	3	19	60	26	40	126	4	175	76	255	34	217	4	255	655	2,868
10:30 AM	4	18	4	26	80	10	51	141	4	215	83	302	21	239	4	264	733	3,015
10:45 AM	6	15	3	24	81	20	49	150	0	185	82	267	27	275	6	308	749	3,086
11:00 AM	1	15	9	25	82	29	56	167	3	191	71	265	33	238	3	274	731	3,138
<b>11:15 AM</b>	<b>5</b>	<b>12</b>	<b>5</b>	<b>22</b>	<b>90</b>	<b>20</b>	<b>44</b>	<b>154</b>	<b>0</b>	<b>233</b>	<b>75</b>	<b>308</b>	<b>24</b>	<b>287</b>	<b>7</b>	<b>318</b>	<b>802</b>	3,203
11:30 AM	7	19	4	30	85	18	42	145	0	235	83	318	18	289	4	311	<b>804</b>	3,107
11:45 AM	1	13	5	19	76	19	42	137	2	253	71	326	34	277	8	319	801	3,080
12:00 PM	4	16	0	20	88	11	52	151	4	211	80	295	31	294	5	330	796	3,100
12:15 PM	2	13	4	19	60	13	55	128	0	207	71	278	30	248	3	281	706	3,069
12:30 PM	4	9	6	19	83	19	43	145	3	265	54	322	31	248	12	291	777	3,089
12:45 PM	2	13	1	16	87	25	46	158	4	240	82	326	25	292	4	321	821	3,108
1:00 PM	3	12	1	16	85	18	32	135	0	244	55	299	22	288	5	315	765	2,999
1:15 PM	1	8	1	10	60	15	39	114	5	227	68	300	23	277	2	302	726	2,993
1:30 PM	2	18	1	21	86	23	35	144	2	231	77	310	20	298	3	321	796	3,059
1:45 PM	3	13	5	21	59	23	32	114	3	236	65	304	31	238	4	273	712	3,004
2:00 PM	4	16	3	23	74	17	27	118	4	257	72	333	25	256	4	285	759	3,034
2:15 PM	4	6	2	12	75	16	47	138	3	257	80	340	29	271	2	302	792	529
2:30 PM	2	14	3	19	61	22	38	121	2	255	58	315	23	260	3	286	741	638
2:45 PM	4	11	4	19	63	19	39	121	2	233	84	319	25	254	4	283	742	689
<b>MD PEAK</b>	<b>17</b>	<b>60</b>	<b>14</b>	<b>91</b>	<b>339</b>	<b>68</b>	<b>180</b>	<b>587</b>	<b>6</b>	<b>932</b>	<b>309</b>	<b>1,247</b>	<b>107</b>	<b>1,147</b>	<b>24</b>	<b>1,278</b>	<b>3,203</b>	<b>3,203</b>
PHF	0.61	0.79	0.70	0.76	0.94	0.85	0.87	0.95	0.38	0.92	0.93	0.96	0.79	0.98	0.75	0.97	1.00	

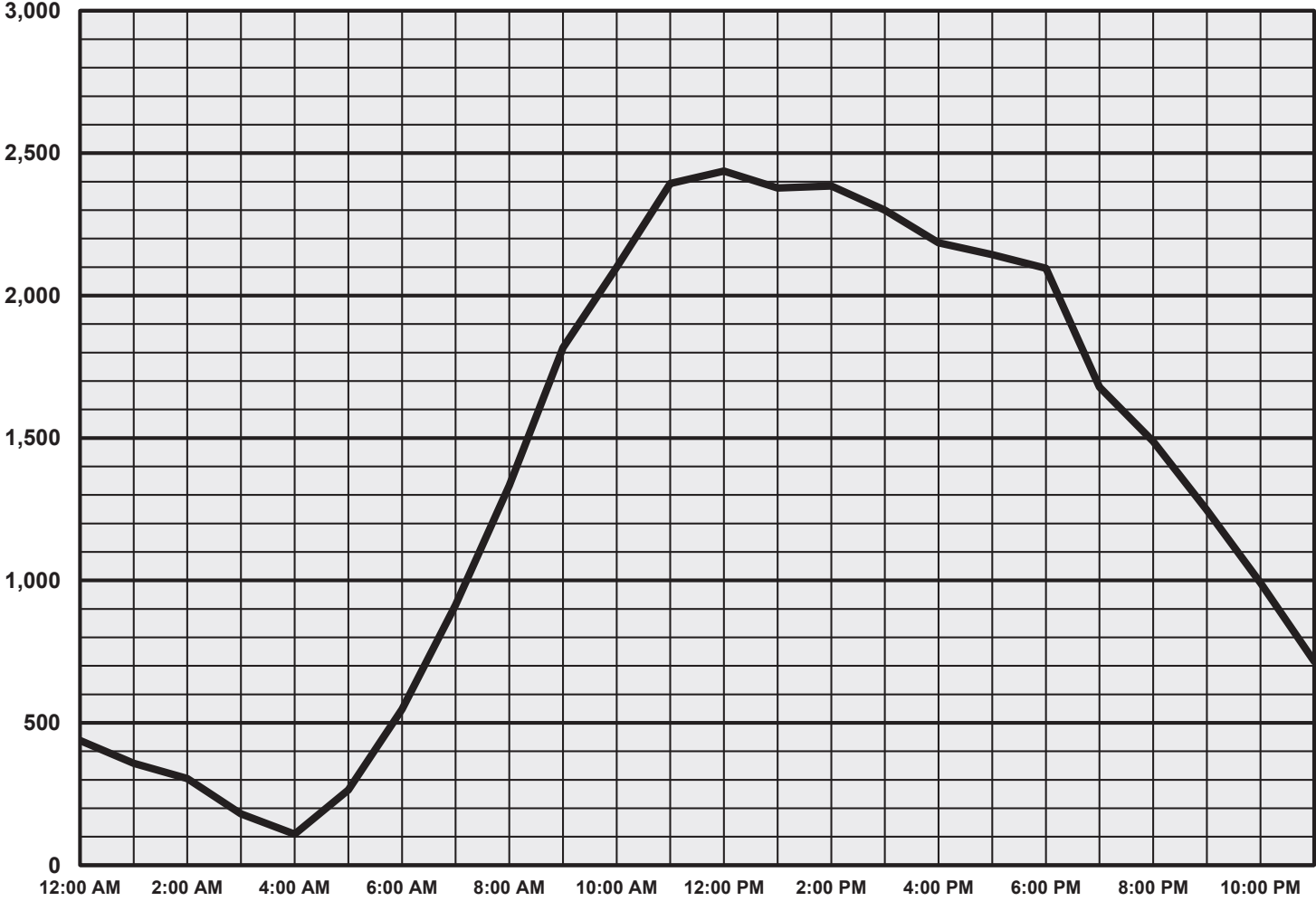
**SCOTTSDALE PLAZA RESORT RENOVATIONS**  
**SCOTTSDALE ROAD and INDIAN BEND ROAD - SATURDAY - 8/6/2022**



**EXISTING 3:00 PM to 8:00 PM**

BEGIN TIME	INDIAN BEND ROAD EASTBOUND				INDIAN BEND ROAD WESTBOUND				SCOTTSDALE ROAD NORTHBOUND				SCOTTSDALE ROAD SOUTHBOUND				ALL TOTAL	60 MIN. TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
<b>3:00 PM</b>	<b>3</b>	<b>18</b>	<b>2</b>	<b>23</b>	<b>59</b>	<b>8</b>	<b>37</b>	<b>104</b>	<b>2</b>	<b>243</b>	<b>74</b>	<b>319</b>	<b>21</b>	<b>275</b>	<b>4</b>	<b>300</b>	<b>746</b>	<b>2,908</b>
3:15 PM	4	15	4	23	59	17	23	99	5	224	55	284	28	246	2	276	682	2,845
3:30 PM	7	12	3	22	68	15	29	112	2	227	87	316	32	252	7	291	741	2,874
3:45 PM	3	13	2	18	58	24	45	127	3	265	71	339	22	227	6	255	739	2,824
4:00 PM	3	10	4	17	60	19	24	103	6	252	46	304	32	223	4	259	683	2,756
4:15 PM	3	11	5	19	68	18	23	109	1	254	68	323	17	237	6	260	711	2,798
4:30 PM	1	9	2	12	51	14	44	109	2	217	64	283	21	262	4	287	691	2,768
4:45 PM	3	16	1	20	66	16	25	107	5	229	61	295	24	223	2	249	671	2,727
5:00 PM	5	8	1	14	71	16	21	108	2	262	67	331	13	256	3	272	725	2,689
5:15 PM	12	16	3	31	65	12	27	104	2	237	59	298	14	228	6	248	681	2,662
5:30 PM	6	10	1	17	53	10	18	81	1	240	74	315	25	209	3	237	650	2,655
5:45 PM	2	6	0	8	58	18	28	104	0	223	52	275	17	225	4	246	633	2,653
6:00 PM	3	15	2	20	77	12	29	118	2	224	64	290	24	243	3	270	698	2,670
6:15 PM	6	8	1	15	68	11	27	106	3	227	72	302	6	242	3	251	674	2,580
6:30 PM	2	9	2	13	53	16	38	107	2	215	72	289	23	213	3	239	648	2,389
6:45 PM	3	7	2	12	47	13	31	91	2	227	61	290	23	232	2	257	650	2,284
7:00 PM	2	11	0	13	52	11	29	92	2	205	55	262	27	211	3	241	608	2,120
7:15 PM	0	9	2	11	51	9	25	85	1	172	41	214	15	156	2	173	483	529
7:30 PM	1	17	2	20	45	16	29	90	0	178	49	227	14	185	7	206	543	638
7:45 PM	0	4	0	4	40	19	27	86	0	153	48	201	17	177	1	195	486	689
<b>PM PEAK</b>	<b>17</b>	<b>58</b>	<b>11</b>	<b>86</b>	<b>244</b>	<b>64</b>	<b>134</b>	<b>442</b>	<b>12</b>	<b>959</b>	<b>287</b>	<b>1,258</b>	<b>103</b>	<b>1,000</b>	<b>19</b>	<b>1,122</b>	<b>2,908</b>	<b>2,908</b>
PHF	0.61	0.81	0.69	0.93	0.90	0.67	0.74	0.87	0.60	0.90	0.82	0.93	0.80	0.91	0.68	0.94	0.97	

SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS - SATURDAY - 8/6/2022





**SCOTTSDALE PLAZA RESORT RENOVATIONS**  
**SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS - SATURDAY - 8/6/2022**  
**EXISTING 5:00 AM to 10:00 AM**



BEGIN TIME	PLAZA RESORT ACCESS EASTBOUND				PLAZA RESORT ACCESS WESTBOUND				SCOTTSDALE ROAD NORTHBOUND				SCOTTSDALE ROAD SOUTHBOUND				ALL TOTAL	60 MINUTE TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
5:00 AM	0	0	1	1	0	2	2	4	3	30	2	35	15	48	0	63	103	546
5:15 AM	0	1	1	2	0	2	2	4	3	39	0	42	20	63	0	83	131	659
5:30 AM	0	0	0	0	0	2	2	4	2	46	0	48	25	73	0	98	150	754
5:45 AM	0	0	0	0	0	1	1	2	0	39	1	40	40	80	0	120	162	874
6:00 AM	1	0	0	1	0	0	1	1	3	63	1	67	41	106	0	147	216	1,133
6:15 AM	2	1	1	4	0	1	2	3	5	67	0	72	37	110	0	147	226	1,306
6:30 AM	0	0	0	0	1	0	3	4	4	76	3	83	52	131	0	183	270	1,490
6:45 AM	1	0	4	5	0	6	8	14	11	99	2	112	89	201	0	290	421	1,767
7:00 AM	0	1	5	6	1	6	7	14	5	105	5	115	68	186	0	254	389	1,888
7:15 AM	2	1	5	8	0	3	6	9	7	94	4	105	90	198	0	288	410	2,082
7:30 AM	3	0	2	5	1	0	1	2	9	151	7	167	108	265	0	373	547	2,210
7:45 AM	3	1	1	5	1	3	6	10	2	116	6	124	138	265	0	403	542	2,463
8:00 AM	2	0	3	5	0	3	5	8	3	145	5	153	131	286	0	417	583	2,729
8:15 AM	2	1	3	6	0	3	6	9	1	127	4	132	126	265	0	391	538	2,926
8:30 AM	3	1	1	5	0	2	3	5	9	209	3	221	176	393	0	569	800	3,213
8:45 AM	5	2	5	12	2	3	7	12	18	195	7	220	175	389	0	564	808	3,368
<b>9:00 AM</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>4</b>	<b>7</b>	<b>9</b>	<b>186</b>	<b>6</b>	<b>201</b>	<b>188</b>	<b>381</b>	<b>0</b>	<b>569</b>	<b>780</b>	<b>3,734</b>
9:15 AM	1	1	4	6	1	5	9	15	4	174	7	185	215	404	0	619	825	404
9:30 AM	1	0	5	6	0	4	8	12	18	221	7	246	228	463	0	691	955	463
<b>9:45 AM</b>	<b>1</b>	<b>2</b>	<b>5</b>	<b>8</b>	<b>1</b>	<b>14</b>	<b>23</b>	<b>38</b>	<b>8</b>	<b>253</b>	<b>13</b>	<b>274</b>	<b>285</b>	<b>569</b>	<b>0</b>	<b>854</b>	<b>1,174</b>	<b>569</b>
<b>AM PEAK</b>	<b>4</b>	<b>3</b>	<b>16</b>	<b>23</b>	<b>2</b>	<b>26</b>	<b>44</b>	<b>72</b>	<b>39</b>	<b>834</b>	<b>33</b>	<b>906</b>	<b>916</b>	<b>1,817</b>	<b>0</b>	<b>2,733</b>	<b>3,734</b>	<b>3,734</b>
PHF	1.00	0.38	0.80	0.72	0.50	0.46	0.48	0.47	0.54	0.82	0.63	0.83	0.80	0.80	0.00	0.80		

**SCOTTSDALE PLAZA RESORT RENOVATIONS**  
**SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS - SATURDAY - 8/6/2022**  
**EXISTING 10:00 AM to 3:00 PM**



BEGIN TIME	PLAZA RESORT ACCESS EASTBOUND				PLAZA RESORT ACCESS WESTBOUND				SCOTTSDALE ROAD NORTHBOUND				SCOTTSDALE ROAD SOUTHBOUND				ALL TOTAL	60 MIN. TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
10:00 AM	4	1	6	11	3	2	8	13	8	184	14	206	7	250	3	260	490	2,100
10:15 AM	4	0	7	11	9	0	6	15	7	198	10	215	10	239	2	251	492	2,148
10:30 AM	1	0	4	5	7	0	9	16	3	256	11	270	3	253	3	259	550	2,277
10:45 AM	2	0	6	8	5	0	11	16	9	221	10	240	3	297	4	304	568	2,330
11:00 AM	2	0	7	9	7	1	8	16	4	234	10	248	5	260	0	265	538	2,393
<b>11:15 AM</b>	<b>3</b>	<b>0</b>	<b>7</b>	<b>10</b>	<b>2</b>	<b>0</b>	<b>12</b>	<b>14</b>	<b>7</b>	<b>262</b>	<b>13</b>	<b>282</b>	<b>4</b>	<b>309</b>	<b>2</b>	<b>315</b>	<b>621</b>	<b>2,473</b>
11:30 AM	0	0	5	5	6	0	5	11	6	271	7	284	2	300	1	303	603	2,420
11:45 AM	1	0	4	5	12	0	9	21	8	283	5	296	5	303	1	309	<b>631</b>	2,440
12:00 PM	2	0	5	7	7	0	8	15	3	251	13	267	8	318	3	329	618	2,437
12:15 PM	3	1	3	7	9	0	9	18	8	250	6	264	7	269	3	279	568	2,436
12:30 PM	2	2	7	11	7	1	8	16	9	296	7	312	3	277	4	284	623	2,460
12:45 PM	1	2	5	8	6	0	8	14	6	271	11	288	7	310	1	318	628	2,445
1:00 PM	0	0	6	6	6	1	10	17	5	261	13	279	5	303	7	315	617	2,378
1:15 PM	3	2	0	5	6	2	9	17	13	246	8	267	7	296	0	303	592	2,347
1:30 PM	1	1	2	4	5	2	7	14	4	255	9	268	6	314	2	322	608	2,381
1:45 PM	0	0	3	3	6	0	12	18	4	250	17	271	5	264	0	269	561	2,367
2:00 PM	1	0	9	10	6	0	7	13	10	268	10	288	2	270	3	275	586	2,385
2:15 PM	3	1	6	10	7	1	5	13	6	290	12	308	6	289	0	295	626	404
2:30 PM	1	0	4	5	4	0	10	14	7	275	13	295	2	278	0	280	594	463
2:45 PM	3	0	9	12	2	0	11	13	8	261	7	276	4	272	2	278	579	569
<b>MD PEAK</b>	<b>6</b>	<b>0</b>	<b>21</b>	<b>27</b>	<b>27</b>	<b>0</b>	<b>34</b>	<b>61</b>	<b>24</b>	<b>1,067</b>	<b>38</b>	<b>1,129</b>	<b>19</b>	<b>1,230</b>	<b>7</b>	<b>1,256</b>	<b>2,473</b>	<b>2,473</b>
PHF	0.50	0.00	0.75	0.68	0.56	0.00	0.71	0.73	0.75	0.94	0.73	0.95	0.59	0.97	0.58	0.95	0.98	

**SCOTTSDALE PLAZA RESORT RENOVATIONS**

**SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS - SATURDAY - 8/6/2022**

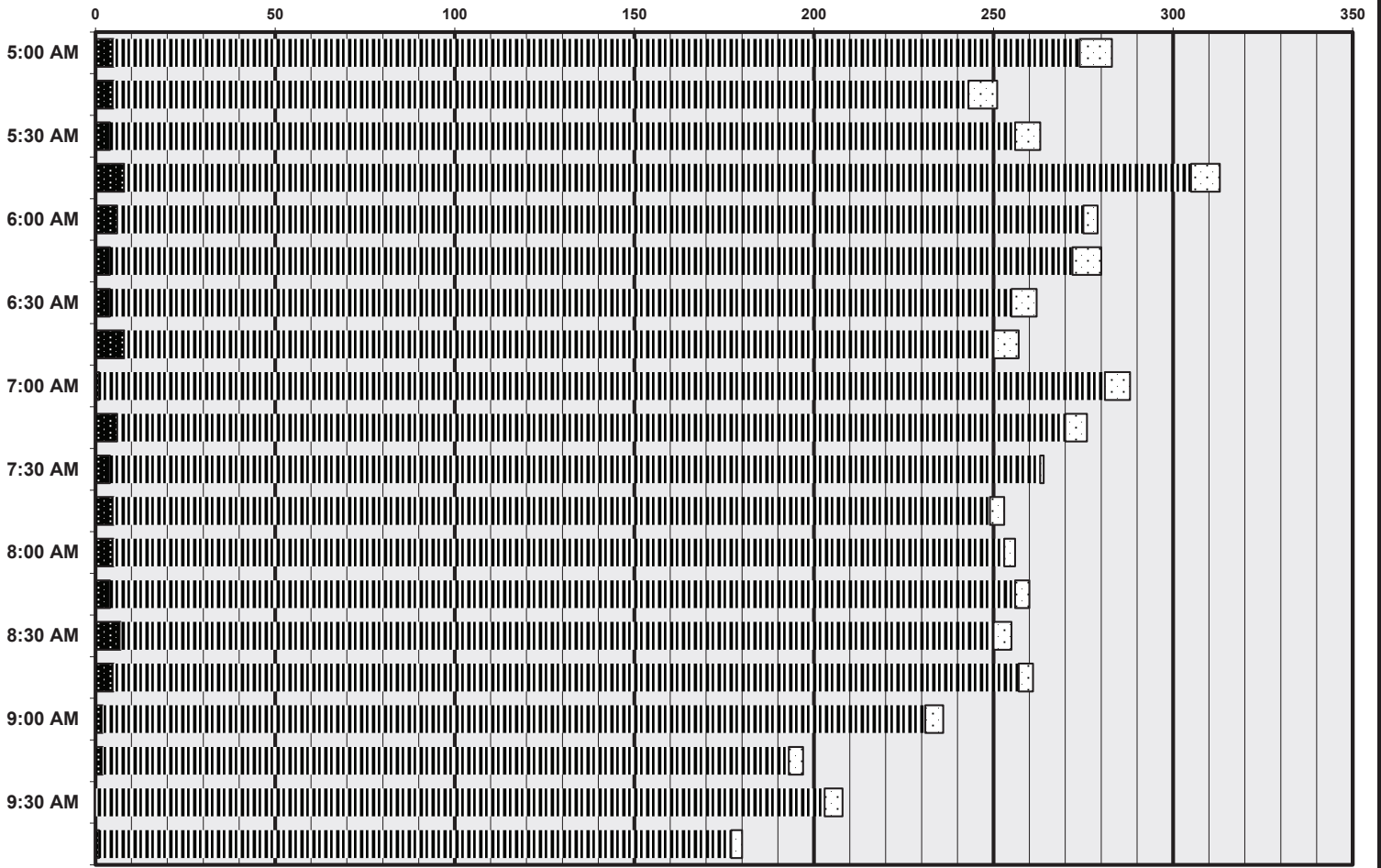


**EXISTING 3:00 PM to 8:00 PM**

BEGIN TIME	PLAZA RESORT ACCESS EASTBOUND				PLAZA RESORT ACCESS WESTBOUND				SCOTTSDALE ROAD NORTHBOUND				SCOTTSDALE ROAD SOUTHBOUND				ALL TOTAL	60 MIN. TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
<b>3:00 PM</b>	<b>5</b>	<b>0</b>	<b>7</b>	<b>12</b>	<b>6</b>	<b>0</b>	<b>9</b>	<b>15</b>	<b>5</b>	<b>269</b>	<b>9</b>	<b>283</b>	<b>4</b>	<b>287</b>	<b>1</b>	<b>292</b>	<b>602</b>	<b>2,300</b>
3:15 PM	1	0	1	2	5	0	10	15	5	238	8	251	7	270	3	280	548	2,251
3:30 PM	1	0	4	5	8	0	5	13	4	252	7	263	4	279	4	287	568	2,255
3:45 PM	1	0	9	10	8	1	7	16	8	297	8	313	2	238	3	243	582	2,245
4:00 PM	2	1	4	7	4	0	7	11	6	269	4	279	3	251	2	256	553	2,185
4:15 PM	1	0	4	5	3	0	5	8	4	268	8	280	6	253	0	259	552	2,205
4:30 PM	1	1	3	5	8	0	4	12	4	251	7	262	3	276	0	279	558	2,194
4:45 PM	2	0	6	8	5	0	5	10	8	242	7	257	9	238	0	247	522	2,154
5:00 PM	1	1	6	8	7	1	4	12	1	280	7	288	4	259	2	265	573	2,144
5:15 PM	2	1	3	6	6	0	5	11	6	264	6	276	7	239	2	248	541	2,114
5:30 PM	0	2	5	7	10	2	4	16	4	259	1	264	8	222	1	231	518	2,095
5:45 PM	2	0	6	8	8	1	8	17	5	244	4	253	2	232	0	234	512	2,079
6:00 PM	0	0	3	3	1	0	6	7	5	248	3	256	7	266	4	277	543	2,096
6:15 PM	2	0	6	8	1	0	4	5	4	252	4	260	3	244	2	249	522	2,040
6:30 PM	0	0	4	4	2	0	1	3	7	243	5	255	4	233	3	240	502	1,905
6:45 PM	0	0	4	4	4	0	4	8	5	252	4	261	4	249	3	256	529	1,829
7:00 PM	0	0	4	4	2	0	3	5	2	229	5	236	3	235	4	242	487	1,679
7:15 PM	1	1	0	2	5	0	8	13	2	191	4	197	4	168	3	175	387	404
7:30 PM	0	1	11	12	2	0	5	7	0	203	5	208	5	193	1	199	426	463
7:45 PM	1	0	6	7	0	0	3	3	1	176	3	180	0	189	0	189	379	569
<b>PM PEAK</b>	<b>8</b>	<b>0</b>	<b>21</b>	<b>29</b>	<b>27</b>	<b>1</b>	<b>31</b>	<b>59</b>	<b>22</b>	<b>1,056</b>	<b>32</b>	<b>1,110</b>	<b>17</b>	<b>1,074</b>	<b>11</b>	<b>1,102</b>	<b>2,300</b>	<b>2,300</b>
PHF	0.40	0.00	0.58	0.60	0.84	0.25	0.78	0.92	0.69	0.89	0.89	0.89	0.61	0.94	0.69	0.94	0.96	



SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS - SATURDAY - 8/6/2022  
EXISTING 5:00 AM to 10:00 AM



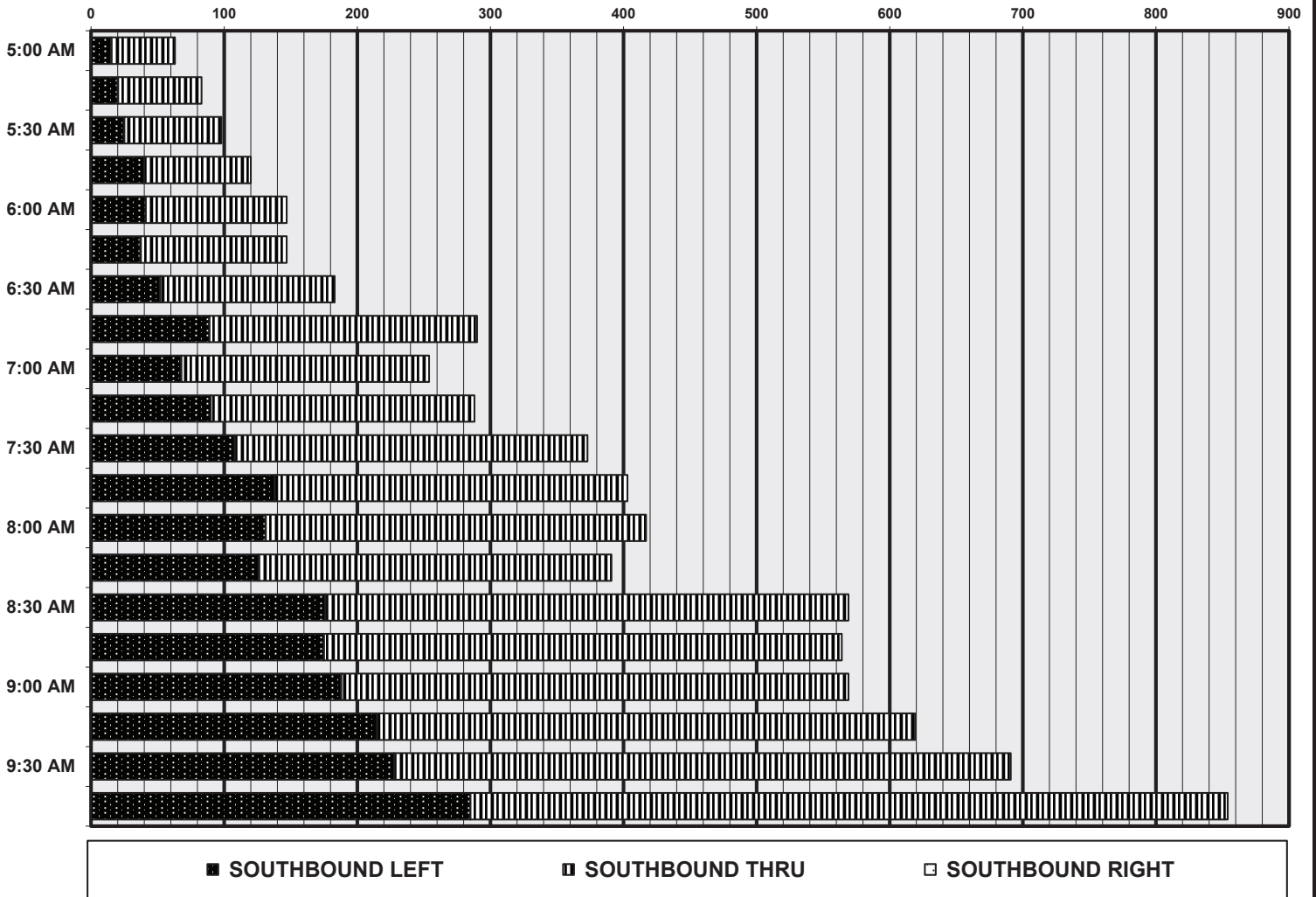
■ NORTHBOUND LEFT

|| NORTHBOUND THRU

□ NORTHBOUND RIGHT

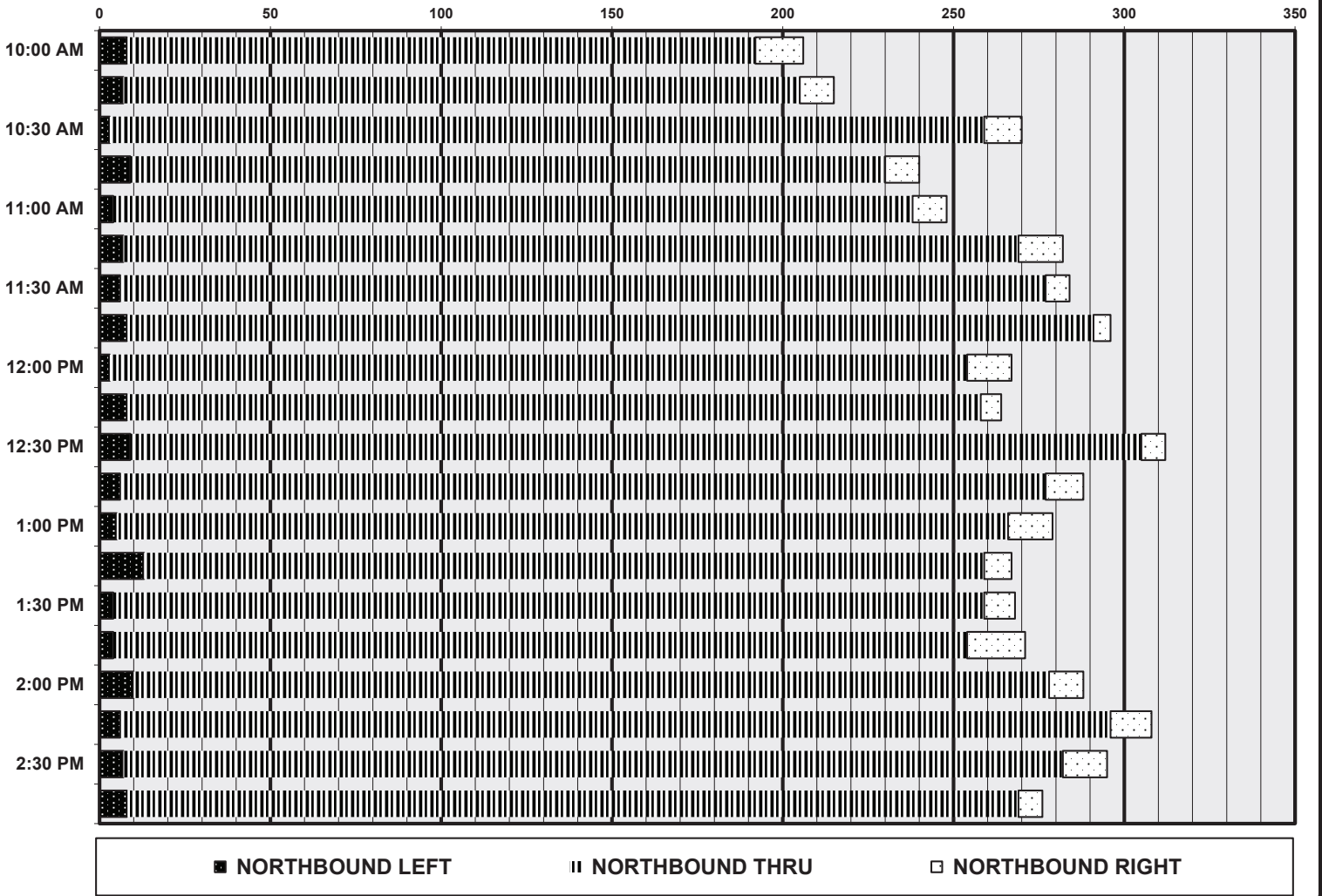


SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS - SATURDAY - 8/6/2022  
EXISTING 5:00 AM to 10:00 AM



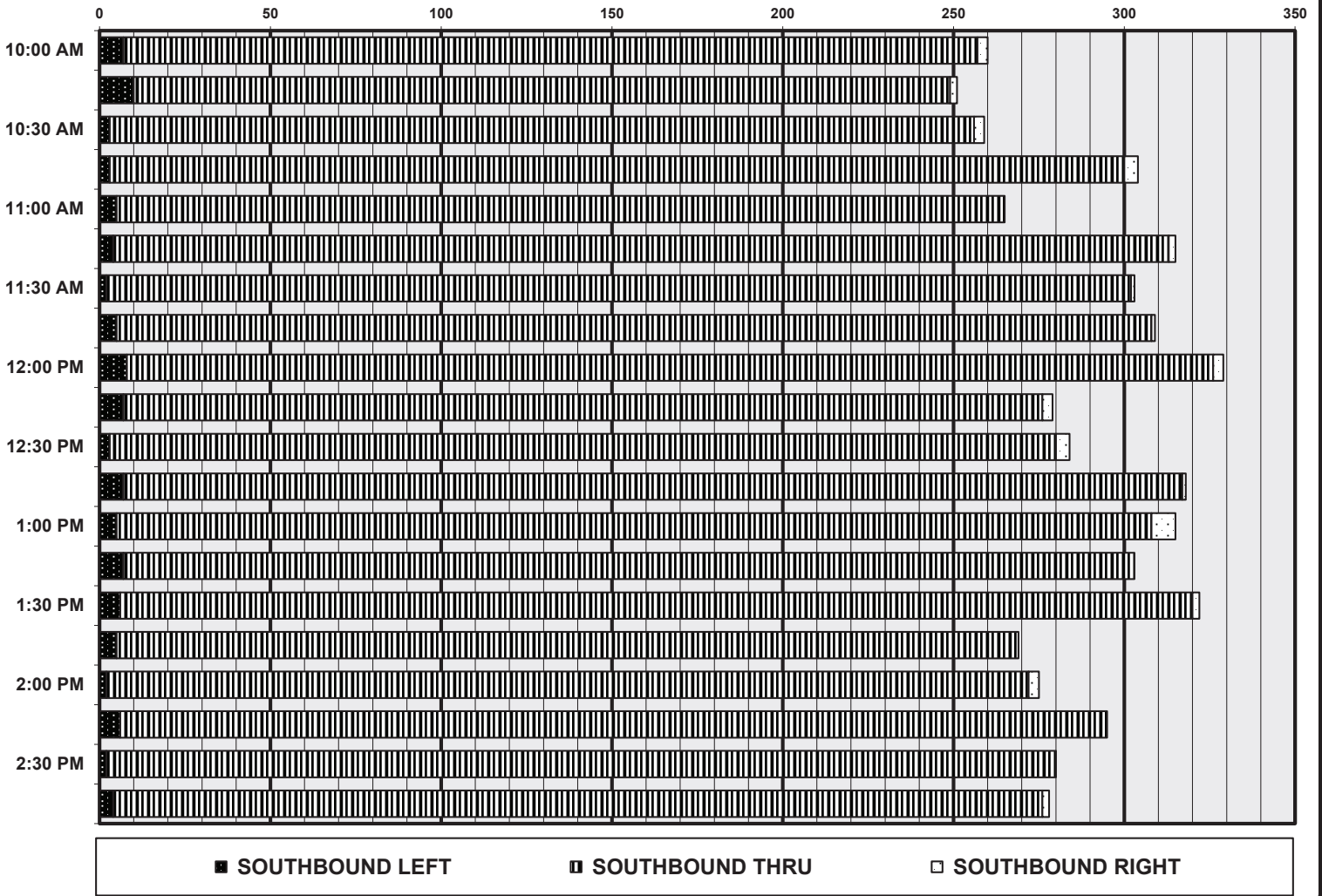


SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS - SATURDAY - 8/6/2022  
EXISTING 10:00 AM to 3:00 PM



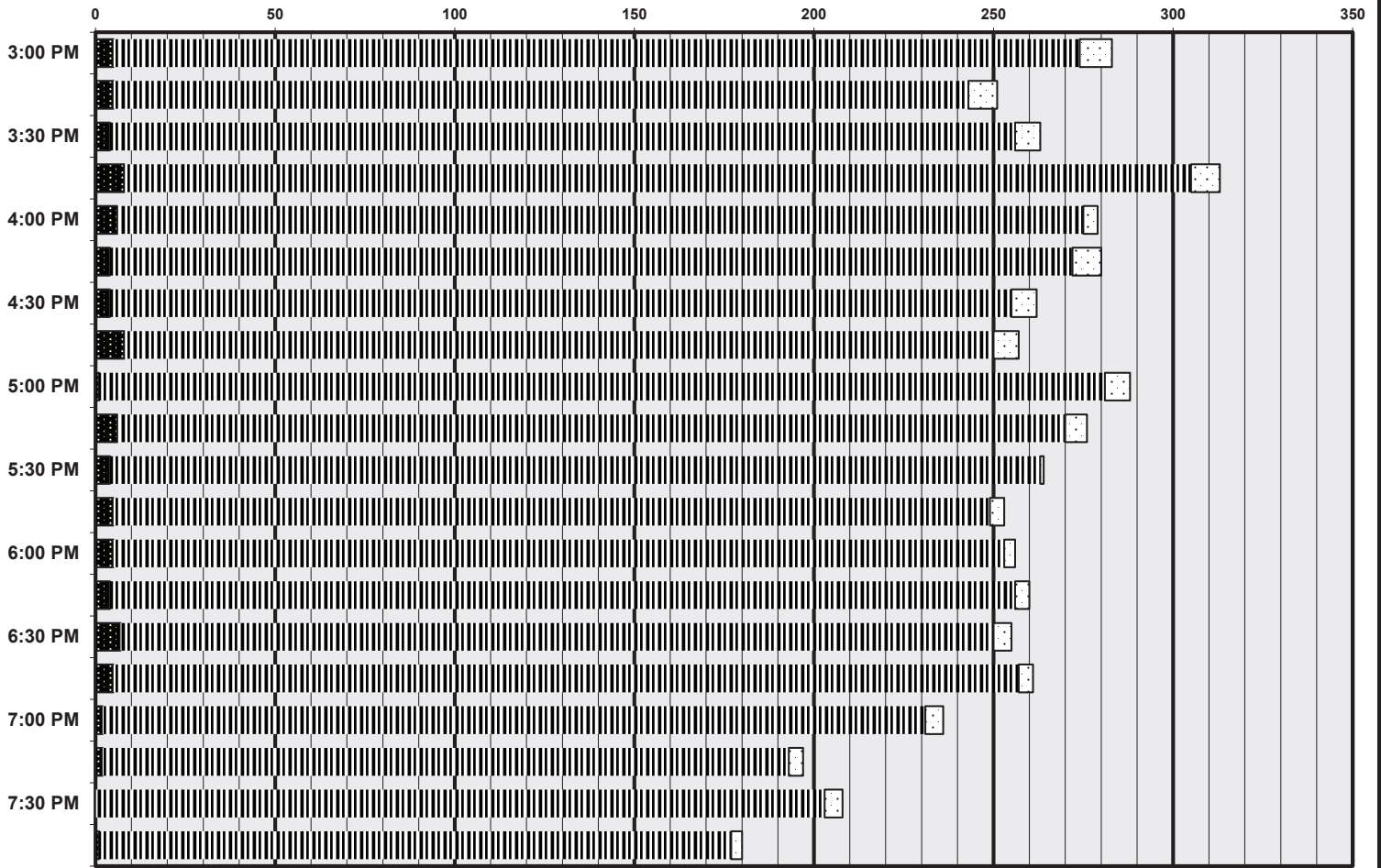


SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS - SATURDAY - 8/6/2022  
EXISTING 10:00 AM to 3:00 PM





SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS - SATURDAY - 8/6/2022  
EXISTING 3:00 PM to 8:00 PM

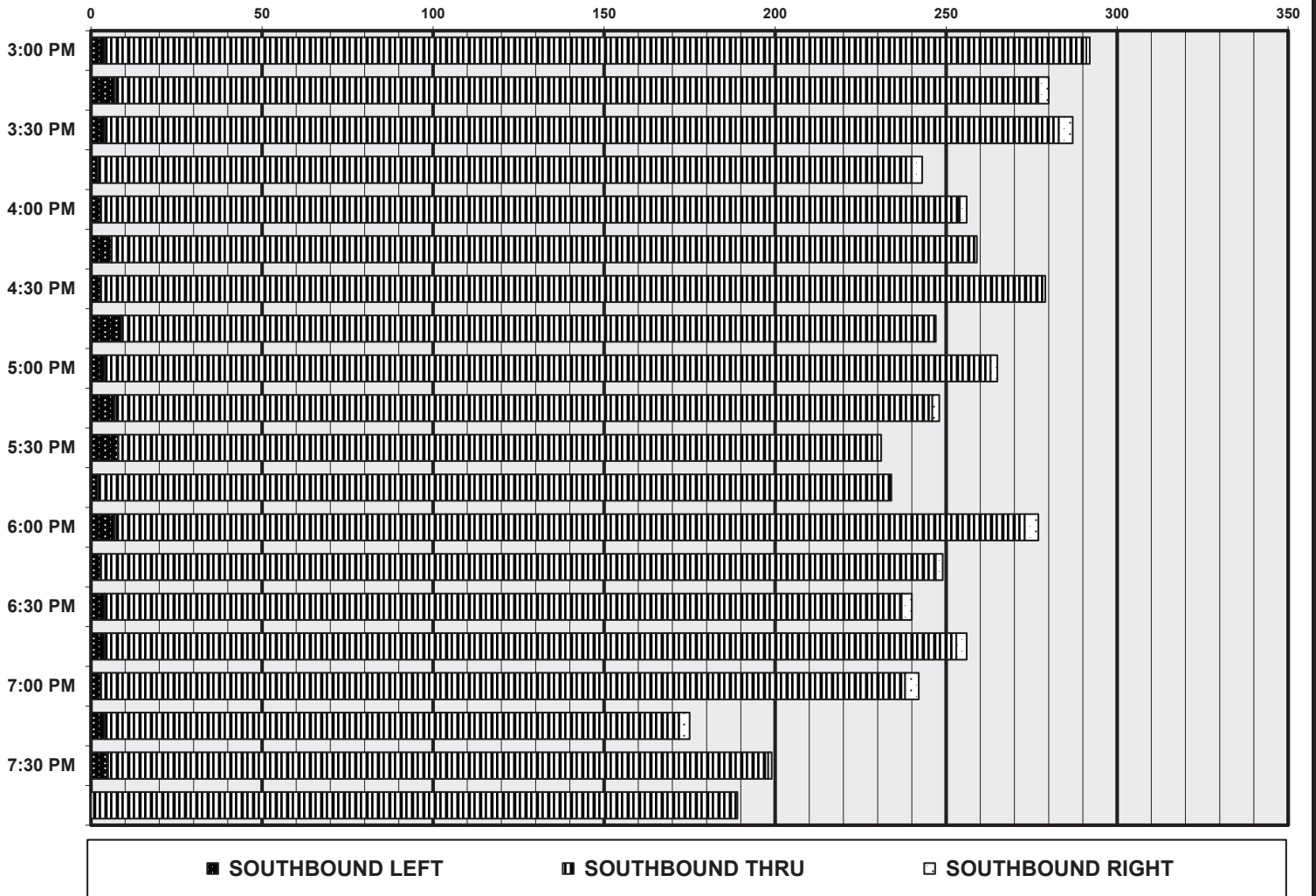


■ NORTHBOUND LEFT      || NORTHBOUND THRU      □ NORTHBOUND RIGHT

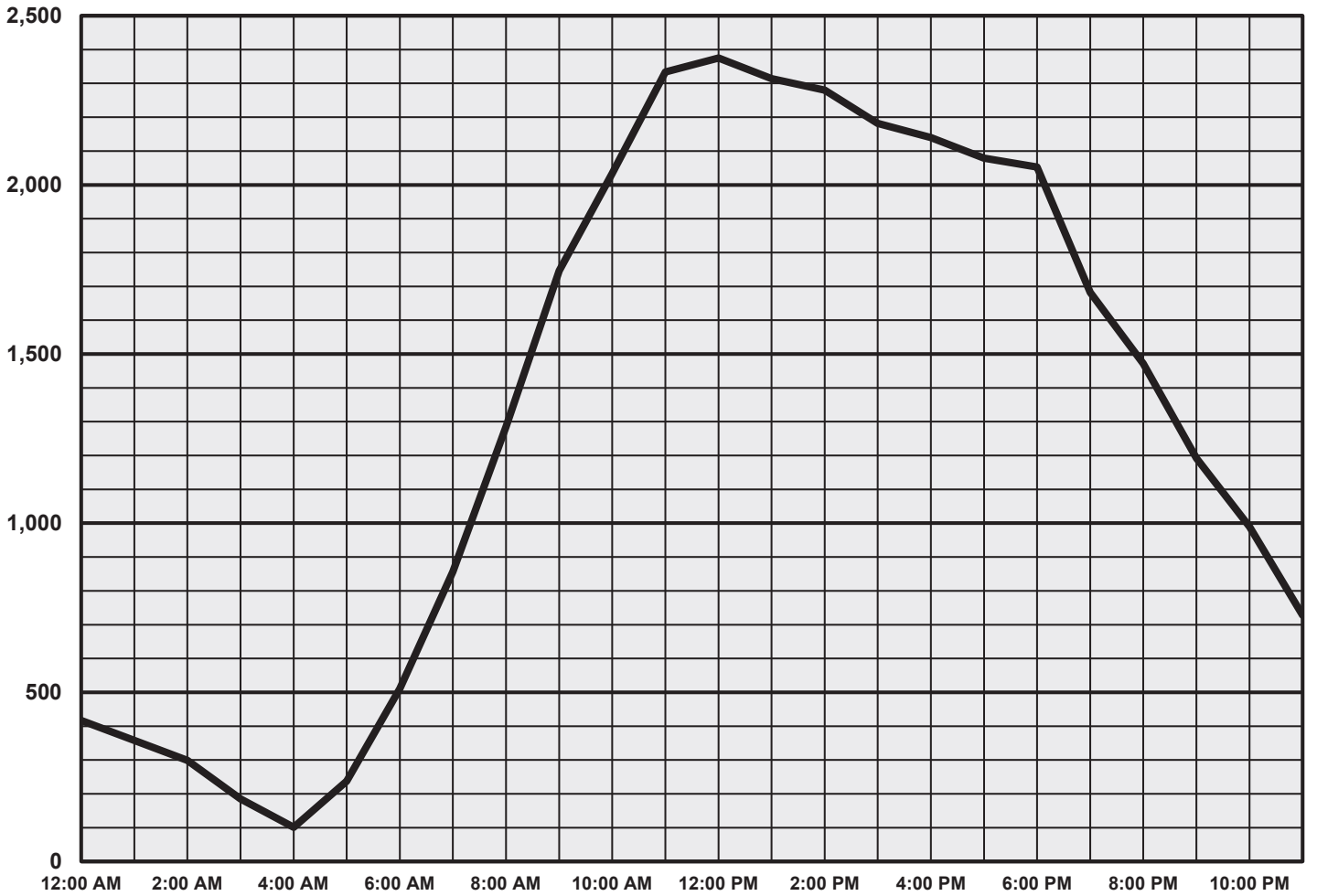




SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS - SATURDAY - 8/6/2022  
EXISTING 3:00 PM to 8:00 PM



SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE - SATURDAY - 8/6/2022



**SCOTTSDALE PLAZA RESORT RENOVATIONS**  
**SCOTTSDALE ROAD and HUMMINGBIRD LANE - SATURDAY - 8/6/2022**  
**EXISTING 5:00 AM to 10:00 AM**



BEGIN TIME	HUMMINGBIRD LANE EASTBOUND				HUMMINGBIRD LANE WESTBOUND				SCOTTSDALE ROAD NORTHBOUND				SCOTTSDALE ROAD SOUTHBOUND				ALL TOTAL	60 MINUTE TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
5:00 AM	0	0	2	2	0	0	0	0	0	27	0	27	13	42	0	55	84	475
5:15 AM	0	0	1	1	0	0	0	0	1	32	0	33	18	51	0	69	103	590
5:30 AM	0	0	1	1	0	0	1	1	0	39	0	39	23	64	0	87	128	693
5:45 AM	1	0	0	1	0	0	0	0	0	39	0	39	40	80	0	120	160	815
6:00 AM	2	0	1	3	0	1	2	3	0	56	0	56	38	99	0	137	199	1,028
6:15 AM	1	0	0	1	0	0	1	1	2	62	0	64	38	102	0	140	206	1,151
6:30 AM	2	0	2	4	1	0	1	2	0	69	1	70	50	124	0	174	250	1,324
6:45 AM	5	0	5	10	0	0	0	0	1	92	0	93	84	186	0	270	373	1,547
7:00 AM	0	0	8	8	0	0	0	0	0	92	0	92	61	161	0	222	322	1,720
7:15 AM	4	0	3	7	0	1	2	3	0	97	0	97	83	189	0	272	379	1,961
7:30 AM	2	0	4	6	0	2	4	6	0	127	1	128	98	235	0	333	473	2,088
7:45 AM	2	0	2	4	0	2	3	5	1	131	1	133	133	271	0	404	546	2,360
8:00 AM	4	0	3	7	0	0	0	0	0	142	1	143	132	281	0	413	563	2,585
8:15 AM	3	0	4	7	0	2	2	4	0	129	2	131	113	251	0	364	506	2,745
8:30 AM	2	0	2	4	0	1	1	2	0	186	2	188	180	371	0	551	745	3,091
8:45 AM	0	0	1	1	0	0	1	1	3	199	4	206	181	382	0	563	771	3,197
<b>9:00 AM</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>1</b>	<b>175</b>	<b>2</b>	<b>178</b>	<b>180</b>	<b>359</b>	<b>0</b>	<b>539</b>	<b>723</b>	<b>3,515</b>
9:15 AM	3	0	5	8	1	2	3	6	3	192	2	197	219	422	0	641	852	422
9:30 AM	0	0	3	3	0	2	2	4	2	196	3	201	221	422	0	643	851	422
<b>9:45 AM</b>	<b>3</b>	<b>0</b>	<b>8</b>	<b>11</b>	<b>0</b>	<b>1</b>	<b>4</b>	<b>5</b>	<b>1</b>	<b>273</b>	<b>1</b>	<b>275</b>	<b>255</b>	<b>543</b>	<b>0</b>	<b>798</b>	<b>1,089</b>	<b>543</b>
<b>AM PEAK</b>	<b>7</b>	<b>0</b>	<b>17</b>	<b>24</b>	<b>1</b>	<b>7</b>	<b>11</b>	<b>19</b>	<b>7</b>	<b>836</b>	<b>8</b>	<b>851</b>	<b>875</b>	<b>1,746</b>	<b>0</b>	<b>2,621</b>	<b>3,515</b>	<b>3,515</b>
PHF	0.58	0.00	0.53	0.55	0.25	0.88	0.69	0.79	0.58	0.77	0.67	0.77	0.86	0.80	0.00	0.82		

**SCOTTSDALE PLAZA RESORT RENOVATIONS**  
**SCOTTSDALE ROAD and HUMMINGBIRD LANE - SATURDAY - 8/6/2022**



**EXISTING 10:00 AM to 3:00 PM**

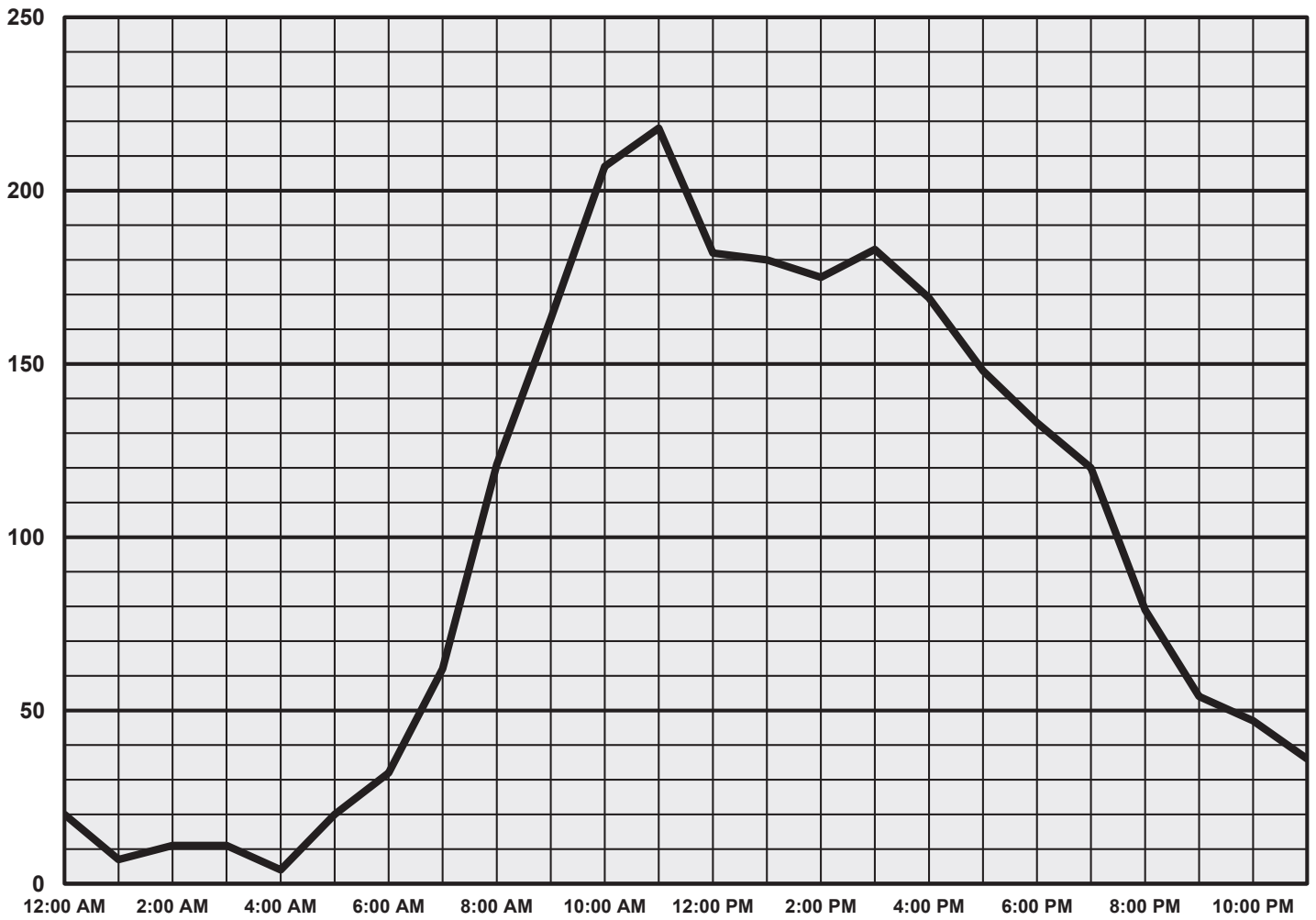
BEGIN TIME	HUMMINGBIRD LANE EASTBOUND				HUMMINGBIRD LANE WESTBOUND				SCOTTSDALE ROAD NORTHBOUND				SCOTTSDALE ROAD SOUTHBOUND				ALL TOTAL	60 MIN. TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
10:00 AM	2	0	6	8	1	0	2	3	5	194	1	200	1	258	9	268	479	2,034
10:15 AM	1	1	5	7	5	1	5	11	2	215	2	219	1	242	6	249	486	2,110
10:30 AM	1	0	8	9	0	1	1	2	5	273	0	278	2	231	2	235	524	2,211
10:45 AM	3	0	5	8	0	0	4	4	4	212	1	217	7	306	3	316	545	2,269
11:00 AM	5	0	5	10	1	0	2	3	12	264	0	276	3	261	2	266	555	2,334
11:15 AM	4	0	6	10	0	0	0	0	3	275	1	279	5	291	2	298	587	2,355
11:30 AM	2	0	3	5	1	0	1	2	2	258	3	263	2	305	5	312	582	2,345
11:45 AM	1	0	3	4	0	0	2	2	3	289	1	293	5	302	4	311	610	2,376
12:00 PM	2	0	4	6	1	0	1	2	3	256	0	259	4	300	5	309	576	2,375
<b>12:15 PM</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>278</b>	<b>1</b>	<b>283</b>	<b>3</b>	<b>280</b>	<b>4</b>	<b>287</b>	<b>577</b>	2,388
12:30 PM	4	0	1	5	2	0	1	3	2	316	1	319	2	282	2	286	<b>613</b>	2,385
12:45 PM	1	1	2	4	4	0	3	7	1	289	2	292	4	299	3	306	609	2,344
1:00 PM	1	0	4	5	3	0	1	4	2	257	3	262	1	310	7	318	589	2,314
1:15 PM	2	0	6	8	2	0	3	5	3	262	0	265	3	289	4	296	574	2,268
1:30 PM	2	0	7	9	1	0	5	6	6	259	2	267	1	284	5	290	572	2,271
1:45 PM	0	0	5	5	4	0	2	6	2	281	0	283	5	279	1	285	579	2,281
2:00 PM	2	1	3	6	2	0	3	5	3	262	0	265	1	265	1	267	543	2,280
2:15 PM	0	1	6	7	0	0	0	0	4	294	3	301	2	265	2	269	577	422
2:30 PM	2	0	2	4	1	0	3	4	6	265	0	271	1	298	4	303	582	422
2:45 PM	2	0	8	10	2	0	0	2	5	286	1	292	4	267	3	274	578	543
<b>MD PEAK</b>	<b>6</b>	<b>1</b>	<b>11</b>	<b>18</b>	<b>9</b>	<b>0</b>	<b>8</b>	<b>17</b>	<b>9</b>	<b>1,140</b>	<b>7</b>	<b>1,156</b>	<b>10</b>	<b>1,171</b>	<b>16</b>	<b>1,197</b>	<b>2,388</b>	<b>2,388</b>
PHF	0.38	0.25	0.69	0.90	0.56	0.00	0.67	0.61	0.56	0.90	0.58	0.91	0.63	0.94	0.57	0.94	0.97	

**SCOTTSDALE PLAZA RESORT RENOVATIONS**  
**SCOTTSDALE ROAD and HUMMINGBIRD LANE - SATURDAY - 8/6/2022**  
**EXISTING 3:00 PM to 8:00 PM**



BEGIN TIME	HUMMINGBIRD LANE EASTBOUND				HUMMINGBIRD LANE WESTBOUND				SCOTTSDALE ROAD NORTHBOUND				SCOTTSDALE ROAD SOUTHBOUND				ALL TOTAL	60 MIN. TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
<b>3:00 PM</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>269</b>	<b>0</b>	<b>274</b>	<b>1</b>	<b>262</b>	<b>2</b>	<b>265</b>	<b>547</b>	<b>2,182</b>
<b>3:15 PM</b>	2	0	5	7	1	0	6	7	4	257	0	261	4	283	1	288	<b>563</b>	2,178
3:30 PM	1	0	4	5	1	0	1	2	3	250	0	253	1	280	1	282	542	2,161
3:45 PM	2	0	1	3	2	0	1	3	5	285	3	293	2	226	3	231	530	2,155
4:00 PM	2	0	3	5	2	0	1	3	5	268	7	280	1	253	1	255	543	2,140
4:15 PM	1	0	5	6	0	0	2	2	4	265	3	272	4	258	4	266	546	2,136
4:30 PM	1	0	2	3	0	0	0	0	5	255	3	263	6	264	0	270	536	2,133
4:45 PM	3	0	2	5	0	0	1	1	1	251	2	254	9	244	2	255	515	2,082
5:00 PM	3	0	4	7	0	0	0	0	4	266	2	272	4	253	3	260	539	2,079
5:15 PM	1	0	9	10	4	0	7	11	2	283	4	289	5	228	0	233	543	2,063
5:30 PM	1	0	4	5	4	0	3	7	6	223	4	233	4	235	1	240	485	2,055
5:45 PM	1	0	2	3	5	0	5	10	4	269	2	275	6	218	0	224	512	2,061
6:00 PM	3	0	4	7	3	0	7	10	4	241	7	252	5	246	3	254	523	2,053
6:15 PM	4	0	6	10	0	0	2	2	7	249	5	261	2	257	3	262	535	2,014
6:30 PM	2	0	6	8	2	0	3	5	2	248	1	251	2	224	1	227	491	1,875
6:45 PM	4	0	4	8	3	0	3	6	5	251	6	262	4	223	1	228	504	1,795
7:00 PM	4	0	1	5	2	1	3	6	3	221	4	228	3	240	2	245	484	1,682
7:15 PM	1	0	4	5	3	0	5	8	2	201	3	206	4	172	1	177	396	422
7:30 PM	2	0	7	9	5	1	4	10	4	209	1	214	3	172	3	178	411	422
7:45 PM	0	0	3	3	5	0	6	11	5	187	2	194	3	178	2	183	391	543
<b>PM PEAK</b>	<b>6</b>	<b>0</b>	<b>14</b>	<b>20</b>	<b>5</b>	<b>0</b>	<b>10</b>	<b>15</b>	<b>17</b>	<b>1,061</b>	<b>3</b>	<b>1,081</b>	<b>8</b>	<b>1,051</b>	<b>7</b>	<b>1,066</b>	<b>2,182</b>	<b>2,182</b>
PHF	0.75	0.00	0.70	0.71	0.63	0.00	0.42	0.54	0.85	0.93	0.25	0.92	0.50	0.93	0.58	0.93	0.97	

SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE PLAZA RESORT ACCESS and INDIAN BEND ROAD - SATURDAY - 8/6/2022



**SCOTTSDALE PLAZA RESORT RENOVATIONS**  
**SCOTTSDALE PLAZA RESORT ACCESS and INDIAN BEND ROAD - SATURDAY - 8/6/2022**  
**EXISTING 5:00 AM to 10:00 AM**



BEGIN TIME	INDIAN BEND ROAD EASTBOUND				INDIAN BEND ROAD WESTBOUND				PLAZA RESORT ACCESS NORTHBOUND				PLAZA RESORT ACCESS SOUTHBOUND				ALL TOTAL	60 MINUTE TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
5:00 AM	0	1	0	1	4	0	4	8	0	0	0	0	0	5	0	5	14	51
5:15 AM	1	0	0	1	1	0	1	2	0	0	1	1	1	3	0	4	8	44
5:30 AM	0	2	0	2	3	0	3	6	0	0	0	0	0	5	0	5	13	49
5:45 AM	1	4	0	5	2	0	2	4	0	0	0	0	0	7	0	7	16	67
6:00 AM	0	2	0	2	1	0	1	2	0	0	0	0	0	3	0	3	7	85
6:15 AM	0	5	0	5	0	1	1	2	0	0	0	0	0	6	0	6	13	99
6:30 AM	0	2	0	2	8	0	8	16	0	0	1	1	1	11	0	12	31	111
6:45 AM	0	2	0	2	8	0	8	16	0	0	2	2	2	12	0	14	34	137
7:00 AM	1	5	0	6	2	0	2	4	0	0	1	1	1	9	0	10	21	154
7:15 AM	0	5	0	5	4	1	5	10	0	0	0	0	0	10	0	10	25	200
7:30 AM	1	10	0	11	10	0	10	20	0	0	1	1	2	23	0	25	57	227
7:45 AM	0	9	0	9	11	0	11	22	0	0	0	0	0	20	0	20	51	260
8:00 AM	0	20	0	20	8	1	9	18	0	0	0	0	0	29	0	29	67	295
8:15 AM	1	7	0	8	12	0	12	24	0	0	0	0	0	20	0	20	52	329
8:30 AM	2	15	0	17	18	0	18	36	0	0	0	0	1	36	0	37	90	364
8:45 AM	1	20	0	21	13	1	14	28	0	0	0	0	1	36	0	37	86	396
<b>9:00 AM</b>	<b>0</b>	<b>25</b>	<b>0</b>	<b>25</b>	<b>16</b>	<b>0</b>	<b>16</b>	<b>32</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>42</b>	<b>0</b>	<b>43</b>	<b>101</b>	<b>403</b>
9:15 AM	1	11	0	12	18	1	19	38	0	0	2	2	2	33	0	35	87	33
<b>9:30 AM</b>	<b>2</b>	<b>24</b>	<b>0</b>	<b>26</b>	<b>16</b>	<b>2</b>	<b>18</b>	<b>36</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>4</b>	<b>6</b>	<b>50</b>	<b>0</b>	<b>56</b>	<b>122</b>	<b>50</b>
9:45 AM	1	19	0	20	15	1	16	32	0	0	1	1	2	38	0	40	93	38
AM PEAK	4	79	0	83	65	4	69	138	0	0	8	8	11	163	0	174	403	403
PHF	0.50	0.79	0.00	0.80	0.90	0.50	0.91	0.91	0.00	0.00	0.50	0.50	0.46	0.82	0.00	0.78		

**SCOTTSDALE PLAZA RESORT RENOVATIONS**

**SCOTTSDALE PLAZA RESORT ACCESS and INDIAN BEND ROAD - SATURDAY - 8/6/2022**



**EXISTING 10:00 AM to 3:00 PM**

BEGIN TIME	INDIAN BEND ROAD EASTBOUND				INDIAN BEND ROAD WESTBOUND				PLAZA RESORT ACCESS NORTHBOUND				PLAZA RESORT ACCESS SOUTHBOUND				ALL TOTAL	60 MIN. TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
10:00 AM	3	24	0	27	0	20	2	22	0	0	0	0	4	0	0	4	53	207
10:15 AM	2	17	0	19	0	33	1	34	0	0	0	0	2	0	1	3	56	215
10:30 AM	1	25	0	26	0	15	3	18	0	0	0	0	1	0	2	3	47	210
<b>10:45 AM</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>24</b>	<b>2</b>	<b>26</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>5</b>	<b>51</b>	<b>219</b>
11:00 AM	1	24	0	25	0	34	1	35	0	0	0	0	1	0	0	1	61	218
11:15 AM	1	20	0	21	0	23	4	27	0	0	0	0	2	0	1	3	51	197
11:30 AM	2	27	0	29	0	21	1	22	0	0	0	0	3	0	2	5	56	182
11:45 AM	1	18	0	19	0	27	2	29	0	0	0	0	1	0	1	2	50	182
12:00 PM	0	18	0	18	0	19	1	20	0	0	0	0	2	0	0	2	40	182
12:15 PM	1	18	0	19	0	13	3	16	0	0	0	0	1	0	0	1	36	183
12:30 PM	2	18	0	20	0	31	3	34	0	0	0	0	1	0	1	2	56	181
12:45 PM	1	14	0	15	0	31	2	33	0	0	0	0	2	0	0	2	50	177
1:00 PM	0	13	0	13	0	18	5	23	0	0	0	0	3	0	2	5	41	180
1:15 PM	1	9	0	10	0	20	2	22	0	0	0	0	1	0	1	2	34	187
1:30 PM	2	19	0	21	0	24	4	28	0	0	0	0	2	0	1	3	52	188
1:45 PM	1	20	0	21	0	29	1	30	0	0	0	0	1	0	1	2	53	183
2:00 PM	0	19	0	19	0	19	6	25	0	0	0	0	4	0	0	4	48	175
2:15 PM	1	11	0	12	0	18	3	21	0	0	0	0	1	0	1	2	35	33
2:30 PM	0	17	0	17	0	27	0	27	0	0	0	0	2	0	1	3	47	50
2:45 PM	1	14	0	15	0	24	1	25	0	0	0	0	5	0	0	5	45	38
<b>MD PEAK</b>	<b>4</b>	<b>91</b>	<b>0</b>	<b>95</b>	<b>0</b>	<b>102</b>	<b>8</b>	<b>110</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>4</b>	<b>14</b>	<b>219</b>	<b>219</b>
PHF	0.50	0.84	0.00	0.82	0.00	0.75	0.50	0.79	0.00	0.00	0.00	0.00	0.63	0.00	0.50	0.70	0.90	



**SCOTTSDALE PLAZA RESORT RENOVATIONS**

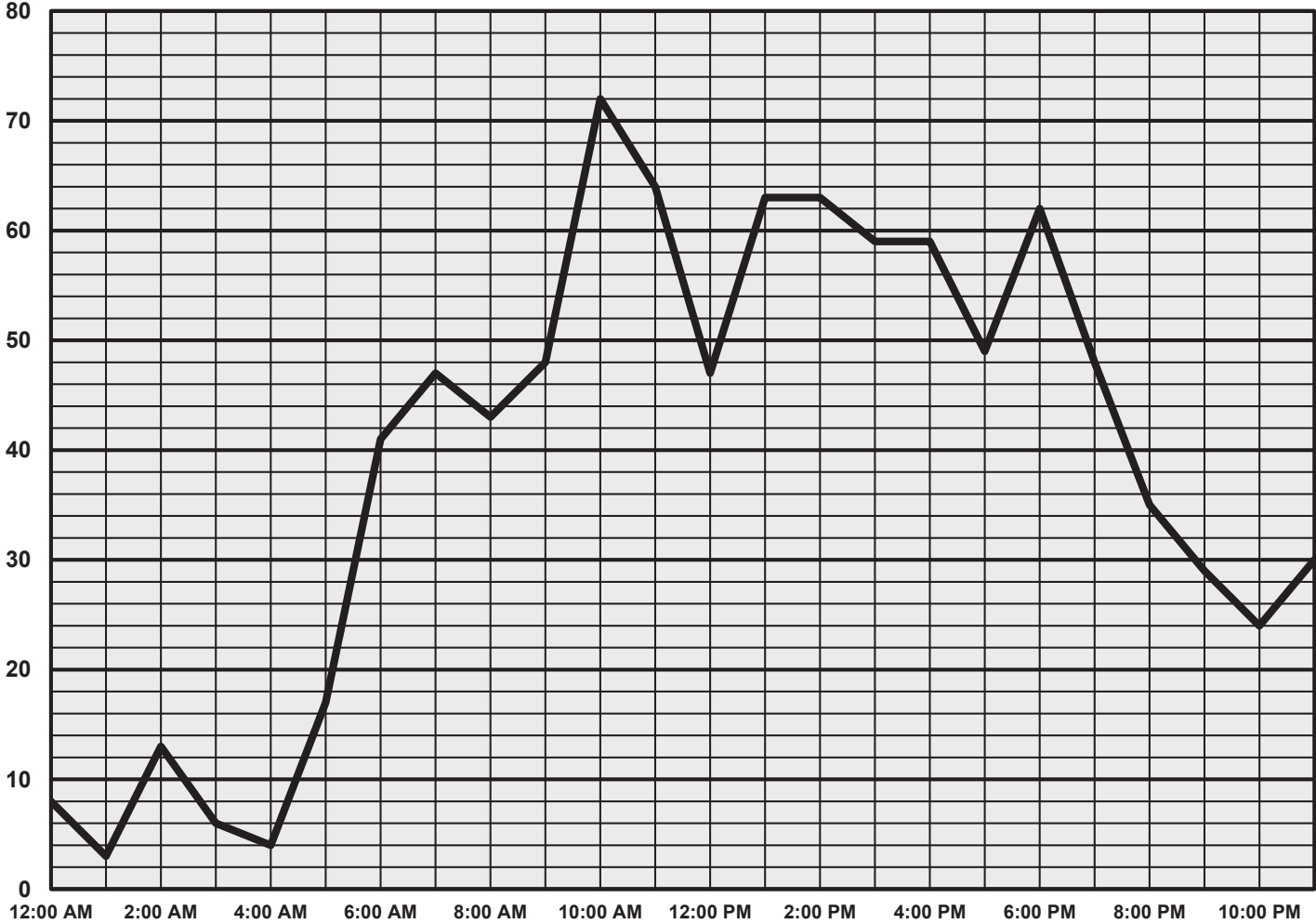
**SCOTTSDALE PLAZA RESORT ACCESS and INDIAN BEND ROAD - SATURDAY - 8/6/2022**



**EXISTING 3:00 PM to 8:00 PM**

BEGIN TIME	INDIAN BEND ROAD EASTBOUND				INDIAN BEND ROAD WESTBOUND				PLAZA RESORT ACCESS NORTHBOUND				PLAZA RESORT ACCESS SOUTHBOUND				ALL TOTAL	60 MIN. TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
3:00 PM	0	21	0	21	0	12	2	14	0	0	0	0	2	0	1	3	38	183
<b>3:15 PM</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>23</b>	<b>1</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>47</b>	<b>191</b>
3:30 PM	1	16	0	17	0	24	0	24	0	0	0	0	6	0	0	6	47	189
<b>3:45 PM</b>	0	16	0	16	0	32	1	33	0	0	0	0	2	0	0	2	<b>51</b>	176
4:00 PM	0	12	0	12	0	26	3	29	0	0	0	0	5	0	0	5	46	169
4:15 PM	0	18	0	18	0	23	2	25	0	0	0	0	1	0	1	2	45	158
4:30 PM	0	8	0	8	0	19	1	20	0	0	0	0	4	0	2	6	34	164
4:45 PM	1	19	0	20	0	19	4	23	0	0	0	0	1	0	0	1	44	162
5:00 PM	0	12	0	12	0	20	1	21	0	0	0	0	2	0	0	2	35	148
5:15 PM	0	30	0	30	0	18	2	20	0	0	0	0	1	0	0	1	51	151
5:30 PM	0	15	0	15	0	13	1	14	0	0	0	0	2	0	1	3	32	132
5:45 PM	0	7	0	7	0	22	0	22	0	0	0	0	1	0	0	1	30	134
6:00 PM	0	16	0	16	0	16	1	17	0	0	0	0	4	0	1	5	38	133
6:15 PM	0	14	0	14	0	17	0	17	0	0	0	0	1	0	0	1	32	124
6:30 PM	0	11	0	11	0	20	1	21	0	0	0	0	2	0	0	2	34	115
6:45 PM	0	9	0	9	0	17	0	17	0	0	0	0	3	0	0	3	29	125
7:00 PM	0	12	0	12	0	16	0	16	0	0	0	0	1	0	0	1	29	120
7:15 PM	0	9	0	9	0	11	1	12	0	0	0	0	2	0	0	2	23	33
7:30 PM	0	19	0	19	0	21	2	23	0	0	0	0	1	0	1	2	44	50
7:45 PM	0	2	0	2	0	19	1	20	0	0	0	0	2	0	0	2	24	38
<b>PM PEAK</b>	<b>1</b>	<b>64</b>	<b>0</b>	<b>65</b>	<b>0</b>	<b>105</b>	<b>5</b>	<b>110</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>191</b>	<b>191</b>
PHF	0.25	0.80	0.00	0.81	0.00	0.82	0.42	0.83	0.00	0.00	0.00	0.00	0.67	0.00	0.00	0.67	0.94	

SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE PLAZA RESORT ACCESS and HUMMINGBIRD LANE - SATURDAY - 8/6/2022



**SCOTTSDALE PLAZA RESORT RENOVATIONS**  
**SCOTTSDALE PLAZA RESORT ACCESS and HUMMINGBIRD LANE - SATURDAY - 8/6/2022**  
**EXISTING 5:00 AM to 10:00 AM**



BEGIN TIME	HUMMINGBIRD LANE EASTBOUND				HUMMINGBIRD LANE WESTBOUND				PLAZA RESORT ACCESS NORTHBOUND				PLAZA RESORT ACCESS SOUTHBOUND				ALL TOTAL	60 MINUTE TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
5:00 AM	0	2	0	2	1	0	1	2	0	0	0	0	0	3	0	3	7	39
5:15 AM	0	1	1	2	1	0	1	2	0	0	0	0	0	3	0	3	7	47
5:30 AM	0	0	1	1	2	0	2	4	1	2	0	3	0	5	0	5	13	55
5:45 AM	0	1	4	5	0	0	1	1	0	0	0	0	0	6	0	6	12	64
6:00 AM	0	3	3	6	1	0	1	2	0	0	0	0	0	7	0	7	15	99
6:15 AM	0	0	1	1	2	0	4	6	1	1	0	2	0	6	0	6	15	110
6:30 AM	0	2	2	4	2	0	3	5	2	2	0	4	0	9	0	9	22	121
<b>6:45 AM</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>5</b>	<b>2</b>	<b>0</b>	<b>7</b>	<b>9</b>	<b>7</b>	<b>7</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>19</b>	<b>0</b>	<b>19</b>	<b>47</b>	<b>129</b>
7:00 AM	0	2	1	3	0	0	1	1	6	6	0	12	0	10	0	10	26	110
7:15 AM	0	5	3	8	0	0	2	2	2	2	0	4	0	12	0	12	26	122
7:30 AM	0	6	2	8	2	0	5	7	0	1	0	1	0	14	0	14	30	125
7:45 AM	0	3	1	4	5	0	6	11	1	1	0	2	0	11	0	11	28	112
8:00 AM	0	5	1	6	4	0	8	12	2	2	0	4	0	16	0	16	38	104
8:15 AM	0	6	1	7	4	0	4	8	1	1	0	2	0	12	0	12	29	86
8:30 AM	0	4	0	4	3	0	3	6	0	0	0	0	0	7	0	7	17	95
8:45 AM	0	1	1	2	4	0	6	10	0	0	0	0	0	8	0	8	20	102
9:00 AM	0	1	0	1	5	0	5	10	1	1	0	2	0	7	0	7	20	126
9:15 AM	0	6	0	6	6	0	7	13	2	2	0	4	0	15	0	15	38	15
9:30 AM	0	2	0	2	5	0	6	11	1	1	0	2	0	9	0	9	24	9
9:45 AM	0	6	0	6	5	0	6	11	5	5	0	10	0	17	0	17	44	17
<b>AM PEAK</b>	<b>0</b>	<b>16</b>	<b>8</b>	<b>24</b>	<b>4</b>	<b>0</b>	<b>15</b>	<b>19</b>	<b>15</b>	<b>16</b>	<b>0</b>	<b>31</b>	<b>0</b>	<b>55</b>	<b>0</b>	<b>55</b>	<b>129</b>	<b>129</b>
PHF	0.00	0.67	0.67	0.75	0.50	0.00	0.54	0.53	0.54	0.57	0.00	0.55	0.00	0.72	0.00	0.72		

**SCOTTSDALE PLAZA RESORT RENOVATIONS**

**SCOTTSDALE PLAZA RESORT ACCESS and HUMMINGBIRD LANE - SATURDAY - 8/6/2022**



**EXISTING 10:00 AM to 3:00 PM**

BEGIN TIME	HUMMINGBIRD LANE EASTBOUND				HUMMINGBIRD LANE WESTBOUND				PLAZA RESORT ACCESS NORTHBOUND				PLAZA RESORT ACCESS SOUTHBOUND				ALL TOTAL	60 MIN. TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
10:00 AM	0	6	1	7	3	11	0	14	0	0	2	2	0	0	0	0	23	72
<b>10:15 AM</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>4</b>	<b>1</b>	<b>8</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>73</b>
10:30 AM	0	5	0	5	4	4	0	8	1	0	4	5	0	0	0	0	18	73
10:45 AM	0	5	0	5	2	5	0	7	0	0	3	3	0	0	0	0	15	68
11:00 AM	0	8	0	8	4	10	0	14	0	0	2	2	0	0	0	0	<b>24</b>	64
11:15 AM	0	8	0	8	0	5	0	5	1	0	2	3	0	0	0	0	16	54
11:30 AM	0	1	1	2	1	6	0	7	0	0	4	4	0	0	0	0	13	51
11:45 AM	0	3	0	3	1	6	0	7	0	0	1	1	0	0	0	0	11	50
12:00 PM	0	5	0	5	0	8	0	8	0	0	1	1	0	0	0	0	14	47
12:15 PM	0	4	1	5	2	6	0	8	0	0	0	0	0	0	0	0	13	48
12:30 PM	0	4	0	4	1	3	0	4	3	0	1	4	0	0	0	0	12	50
12:45 PM	0	4	0	4	0	4	0	4	0	0	0	0	0	0	0	0	8	61
1:00 PM	0	3	0	3	1	8	0	9	1	0	2	3	0	0	0	0	15	63
1:15 PM	0	7	0	7	2	5	0	7	0	0	1	1	0	0	0	0	15	60
1:30 PM	0	8	1	9	2	9	0	11	2	0	1	3	0	0	0	0	23	61
1:45 PM	0	5	0	5	0	3	0	3	2	0	0	2	0	0	0	0	10	54
2:00 PM	0	3	0	3	0	4	0	4	2	0	3	5	0	0	0	0	12	63
2:15 PM	0	5	2	7	2	4	0	6	1	0	2	3	0	0	0	0	16	15
2:30 PM	0	4	0	4	1	9	0	10	2	0	0	2	0	0	0	0	16	9
2:45 PM	0	8	0	8	4	4	0	8	1	0	2	3	0	0	0	0	19	17
<b>MD PEAK</b>	<b>0</b>	<b>22</b>	<b>0</b>	<b>22</b>	<b>11</b>	<b>27</b>	<b>0</b>	<b>38</b>	<b>1</b>	<b>0</b>	<b>12</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>73</b>	<b>73</b>
PHF	0.00	0.69	0.00	0.69	0.69	0.68	0.00	0.68	0.25	0.00	0.75	0.65	0.00	0.00	0.00	0.00	0.76	

**SCOTTSDALE PLAZA RESORT RENOVATIONS**

**SCOTTSDALE PLAZA RESORT ACCESS and HUMMINGBIRD LANE - SATURDAY - 8/6/2022**



**EXISTING 3:00 PM to 8:00 PM**

BEGIN TIME	HUMMINGBIRD LANE EASTBOUND				HUMMINGBIRD LANE WESTBOUND				PLAZA RESORT ACCESS NORTHBOUND				PLAZA RESORT ACCESS SOUTHBOUND				ALL TOTAL	60 MIN. TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
3:00 PM	0	4	2	6	1	6	0	7	2	0	1	3	0	0	0	0	16	59
3:15 PM	0	3	2	5	1	4	0	5	2	0	4	6	0	0	0	0	16	58
<b>3:30 PM</b>	<b>0</b>	<b>3</b>	<b>3</b>	<b>6</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>63</b>
3:45 PM	0	1	3	4	0	8	0	8	1	0	2	3	0	0	0	0	15	62
4:00 PM	0	3	3	6	2	4	0	6	1	0	2	3	0	0	0	0	15	59
<b>4:15 PM</b>	0	4	1	5	2	6	0	8	6	0	2	8	0	0	0	0	<b>21</b>	61
4:30 PM	0	0	1	1	1	4	0	5	2	0	3	5	0	0	0	0	11	52
4:45 PM	0	4	2	6	0	3	0	3	2	0	1	3	0	0	0	0	12	54
5:00 PM	0	7	2	9	0	7	0	7	1	0	0	1	0	0	0	0	17	49
5:15 PM	0	8	0	8	1	1	0	2	0	0	2	2	0	0	0	0	12	46
5:30 PM	0	3	0	3	0	7	0	7	1	0	2	3	0	0	0	0	13	55
5:45 PM	0	3	0	3	0	4	0	4	0	0	0	0	0	0	0	0	7	55
6:00 PM	0	5	0	5	0	7	0	7	0	0	2	2	0	0	0	0	14	62
6:15 PM	0	7	1	8	1	9	0	10	0	0	3	3	0	0	0	0	21	59
6:30 PM	0	7	2	9	0	3	0	3	0	0	1	1	0	0	0	0	13	46
6:45 PM	0	6	0	6	0	6	0	6	0	0	2	2	0	0	0	0	14	50
7:00 PM	0	4	0	4	0	6	0	6	0	0	1	1	0	0	0	0	11	48
7:15 PM	0	4	0	4	0	3	0	3	0	0	1	1	0	0	0	0	8	15
7:30 PM	0	8	0	8	0	8	0	8	0	0	1	1	0	0	0	0	17	9
7:45 PM	0	3	1	4	2	5	0	7	1	0	0	1	0	0	0	0	12	17
<b>PM PEAK</b>	<b>0</b>	<b>11</b>	<b>10</b>	<b>21</b>	<b>6</b>	<b>20</b>	<b>0</b>	<b>26</b>	<b>8</b>	<b>0</b>	<b>8</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>63</b>	<b>63</b>
PHF	0.00	0.69	0.83	0.88	0.75	0.63	0.00	0.81	0.33	0.00	1.00	0.50	0.00	0.00	0.00	0.00	0.75	

## Appendix C

### Ritz-Carlton and Palmeraie Traffic Volumes







# Palmeraie

Traffic Impact and Mitigation Analysis

Southwest Corner of Scottsdale Road  
and Indian Bend Road  
Scottsdale, AZ

May 2020  
Project No. 15-363

Prepared For:  
**Five Star Development**  
6720 North Scottsdale Road  
Suite 130  
Scottsdale, Arizona 85253

For Submittal to:  
**City of Scottsdale**

Prepared By:



10605 North Hayden Road  
Suite 140  
Scottsdale, Arizona 85260  
480-659-4250



# **PALMERAIE MASTER TRAFFIC IMPACT AND MITIGATION ANALYSIS**

## **Southwest Corner of Scottsdale Road and Indian Bend Road in Scottsdale, Arizona**

**Prepared for:**  
Five Star Development  
6720 North Scottsdale Road, Suite 130  
Scottsdale, AZ 85253

**For Submittal to:**  
City of Scottsdale

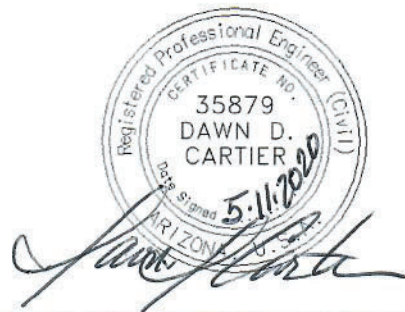
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**Prepared By:**



**CivTech Inc.**

10605 North Hayden Road  
Suite 140  
Scottsdale, Arizona 85260  
Office: (480) 659-4250  
Fax: (480) 659-0566



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**May 2020**

CivTech Project No. 15-363

**Table 6 – Trip Generation**

Proposed Use	ITE LUC	Size	Units	Weekday Trips						Saturday Trips			
				Daily	AM Peak Hour		PM Peak Hour		Mid-day Peak Hour				
				Total	In	Out	Total	In	Out	Total	In	Out	Total
<b>Phase 1</b>													
Retail	820	120.015	KSF	6,178	107	65	172	276	299	575	434	400	834
Food & Beverage	932	48.055	KSF	5,390	263	215	478	291	178	469	358	318	676
Office	710	97.3	KSF	1,020	94	15	109	17	92	109	23	19	42
Subtotals				12,588	464	295	759	584	569	1,153	815	737	1,552
<i>Internal Capture Reduction (20%)</i>				<i>(2,518)</i>	<i>(93)</i>	<i>(59)</i>	<i>(152)</i>	<i>(116)</i>	<i>(115)</i>	<i>(231)</i>	<i>(164)</i>	<i>(146)</i>	<i>(310)</i>
<b>External Trips</b>				<b>10,070</b>	<b>371</b>	<b>236</b>	<b>607</b>	<b>468</b>	<b>454</b>	<b>922</b>	<b>651</b>	<b>591</b>	<b>1,242</b>
<b>Phase 1 + Phase 2</b>													
Retail	820	162.396	KSF	8,360	144	89	233	373	405	778	587	542	1,129
Food & Beverage	932	67.355	KSF	7,556	369	301	670	408	250	658	502	446	948
Office	710	145.237	KSF	1,524	140	23	163	26	136	162	33	29	62
Apartments	221	41	DU	222	4	10	14	12	7	19	16	14	30
Hotel	310	150	Rooms	1,266	41	29	70	44	42	86	47	37	84
Subtotals				18,928	698	452	1,150	863	840	1,703	1,185	1,068	2,253
<i>Internal Capture Reduction (20%)</i>				<i>(3,876)</i>	<i>(145)</i>	<i>(93)</i>	<i>(238)</i>	<i>(180)</i>	<i>(176)</i>	<i>(356)</i>	<i>(262)</i>	<i>(239)</i>	<i>(501)</i>
<b>External Trips</b>				<b>15,440</b>	<b>567</b>	<b>369</b>	<b>936</b>	<b>701</b>	<b>682</b>	<b>1,383</b>	<b>949</b>	<b>853</b>	<b>1,802</b>

As summarized in

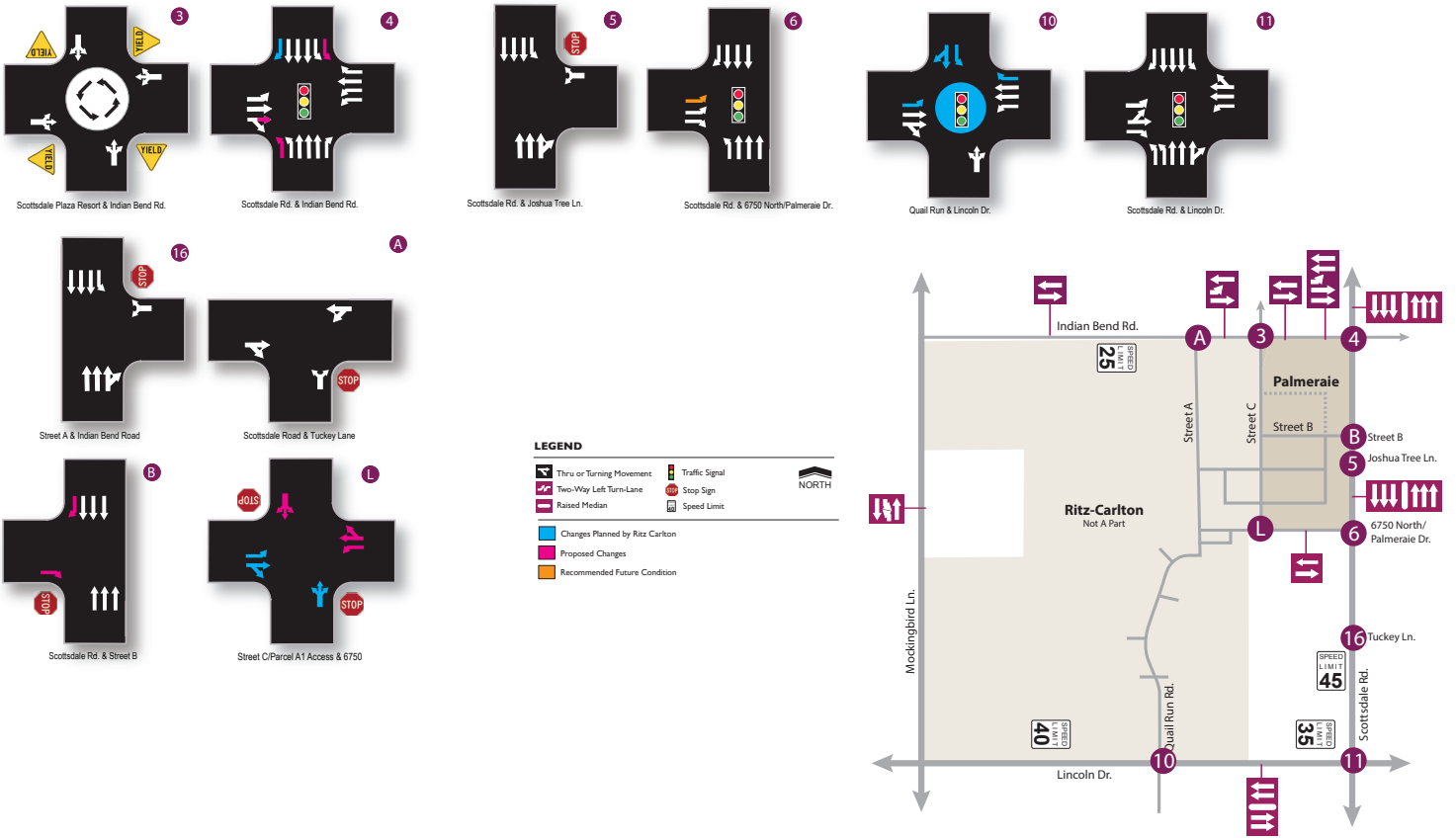
Table 6, by completion of Phase 1, the Palmeraie development is anticipated to generate approximately 10,070 external weekday daily trips with 607 trips occurring during the AM peak hour (371 in/236 out) and 922 trips occurring during the PM peak hour (468 in/454 out). On Saturdays, typically there is a single peak hour that occurs around mid-day. By completion of Phase 1, the Palmeraie development is anticipated to generate approximately 1,242 Saturday peak trips (651 in/591 out).

By full buildout of the development, or completion of both Phase 1 and Phase 2, the Palmeraie development is anticipated to generate approximately 15,440 external weekday daily trips with 936 occurring during the AM peak hour (567 in/369 out) and 1,383 trips occurring during the PM peak hour (701 in/682 out). On a typical Saturday, the Palmeraie development is anticipated to generate approximately 1,802 peak hour trips (949 in/853 out).

## VEHICLE TRIP DISTRIBUTION AND ASSIGNMENT

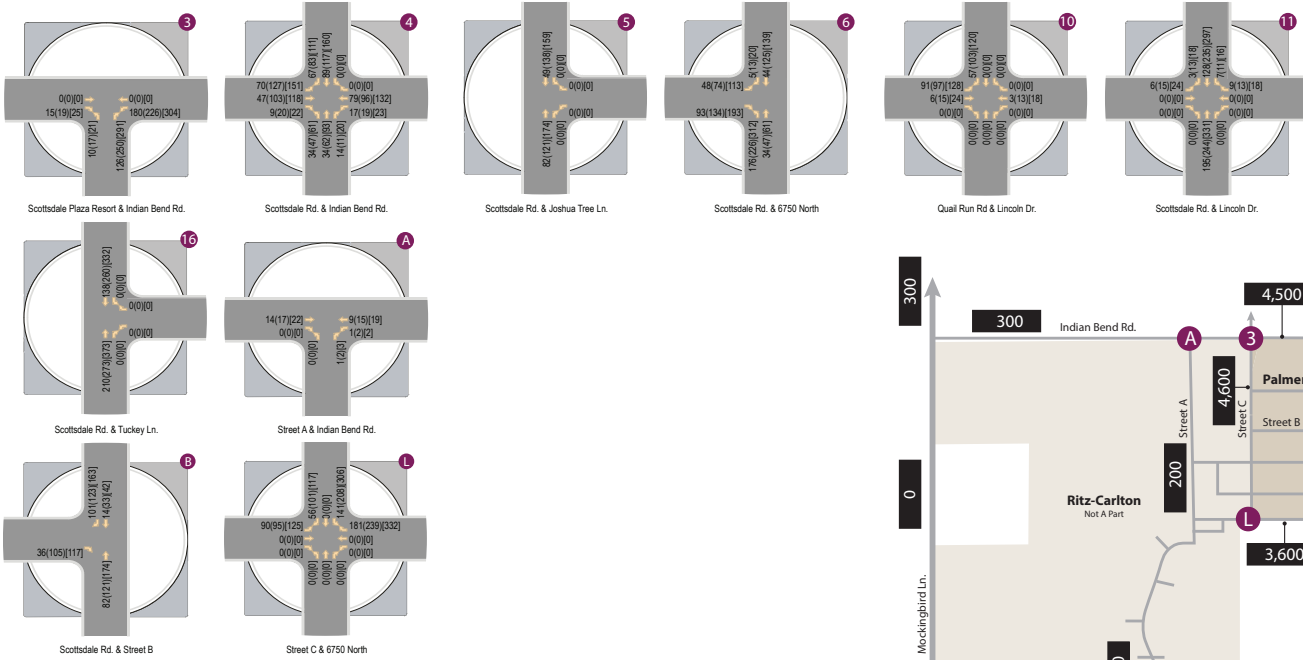
The Palmeraie development consists of multiple land uses. Trips were distributed based on the type of land use. The trip distributions for all but the hotel distribution were developed in consideration of population and employment within certain distances of the site, as estimated with socioeconomic data projected by Maricopa Association of Government (MAG). For hotel trips external to the site, most were considered to travel to/from Phoenix Sky Harbor Airport or to/from major shopping areas in the vicinity. The distributions remain consistent with the originally approved Palmeraie TIMA and





**Figure 12:** Proposed Lane Configurations and Traffic Controls

Source: CivTech, Inc. 2016



**LEGEND**  
 XXXXX[XX] - AM[PM][Sat] Peak Hour Traffic Volumes  
 XX,XXX - Average Daily Traffic Volumes



**Figure 9: 2023 Site Traffic Volumes**

Source: CivTech, Inc. 2016

## Appendix D

### Artesia Site Plan and Trip Generation



KEY#	NOTE
01	EXISTING RING ROAD WITH NEW ASPHALT OVERLAY
02	NEW ON STREET PARKING SPACES, MINIMUM 9'0" X 21'0"
03	ENTRY GATE
15	PROPOSED FIRE HYDRANT
22	RETAINING WALL - REFER TO 2.2 RETAINING WALL DETAILS AND TO CIVIL DRAWINGS FOR TOP OF WALL & BASE OF WALL INFORMATION
22.1	EXISTING RETAINING WALL - REFER TO CIVIL
28	SITE VISIBILITY TRIANGLES FOR OSPM SECTION 5.3.123 AND FIGURE 5.3.37 LEFT TURN SIGHT DISTANCE BASED ON LOCAL STREET SPEED OF 40 MPH. REFER TO A1.16 AND A1.17 PRELIMINARY PLAN FOR MORE INFORMATION.
28.1	SITE SECURITY WALLS



**PROJECT DATA**

**LEGAL DESCRIPTION:**  
A PORTION OF THE SOUTHWEST QUARTER OF SECTION 2, TOWNSHIP 2 NORTH, RANGE 4 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY ARIZONA

**PROJECT ADDRESS:**  
7291 N. SCOTTSDALE ROAD  
SCOTTSDALE, ARIZONA 85253

**CURRENT ZONING:**  
R-5 PCD

**APN:**  
174-23-261

**BUILDING CODE & TYPE INFORMATION:**  
2015 INTERNATIONAL FIRE CODE  
2015 INTERNATIONAL BUILDING CODE (IBC) WITH CITY OF SCOTTSDALE AMENDMENTS TO THE IBC  
BC SECTION 101 GENERAL - AMENDMENTS  
BC CHAPTER 4 MOTOR VEHICLE RELATED OCCUPANCIES - AMENDMENTS  
BC CHAPTER 18 FIRE PROTECTION SYSTEMS - AMENDMENTS  
BC CHAPTER 12 INTERIOR ENVIRONMENT - AMENDMENTS  
BC CHAPTER 18 SOILS AND FOUNDATIONS - AMENDMENTS  
BC CHAPTER 17 MASONRY - AMENDMENTS  
BC CHAPTER 23 WOOD - AMENDMENTS  
BC CHAPTER 24 GLASS AND GLAZING - AMENDMENTS  
BC CHAPTER 25 GYPSUM BOARD AND PLASTER - AMENDMENTS  
BC CHAPTER 33 SAFEGUARDS DURING CONSTRUCTION - AMENDMENTS  
ADOPTION AND AMENDMENTS TO IBC APPENDICES  
2015 INTERNATIONAL RESIDENTIAL CODE (IRC)  
2015 INTERNATIONAL MECHANICAL CODE (IMC)  
2015 INTERNATIONAL PLUMBING CODE (IPC)  
2015 INTERNATIONAL FUEL GAS CODE (IFGC)  
2015 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)  
2015 INTERNATIONAL EXISTING BUILDING CODE (IEBC)  
2015 INTERNATIONAL GREEN CONSTRUCTION CODE (IGCC)  
2014 NATIONAL ELECTRIC CODE (NEC)  
2010 ADA STANDARDS FOR ACCESSIBLE DESIGN

**GROSS LOT AREA:**  
30.70 ACRES (1,388,215 SF) (TOTAL SITE AREA)

**NET LOT AREA:**  
22.787 ACRES (995,142 SF) (PA1, PA2, PA3)

**BUILDING GROSS SQUARE FOOTAGE:**

PA1: 542,142 SF  
PA2: 172,004 SF  
PA3: 111,930 SF  
TOTAL: 826,076 SF

**DWELLING UNIT DENSITY:**  
851 UNITS / 22,787 ACRES = 24.27 DU/AC

PARKING	UNIT COUNT	PARKING RATIO	PARKING SPACES REQUIRED
PA1			
28 EFFICIENCIES)	1.25		3125
208 (1 BED UNITS)	1.3		2678
172 (2 BED UNITS)	1.7		2924
35 (3 BED UNITS)	1.9		265
419 TOTAL			6222
PA2			
17 SINGLE FAMILY)	2.0		148
PA3			
37 (TOWNHOME)	2.0		114
500 TOTAL UNITS			884
TOTAL REQUIRED PARKING			884

**ACCESSIBLE PARKING:**  
4% OF (PA-1) 622 PARKING SPACES = 25 SPACES REQUIRED  
4% OF (PA-2) 148 PARKING SPACES = 6 SPACES REQUIRED  
4% OF (PA-3) 114 PARKING SPACES = 5 SPACES REQUIRED

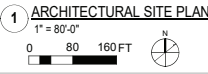
**PARKING SPACES PROVIDED:**  
SURFACE PARKING: 112 (PA1.85 / PA2.8 / PA3.21)  
PRIVATE GARAGE PARKING: 311 (PA1.44 / PA2.148 / PA3.119)  
STRUCTURED PARKING: 667 (PA1.148)  
TOTAL: 990

BICYCLE PARKING	UNIT COUNT	PARKING RATIO	PARKING SPACES
PA1			
1 BICYCLE SPACE FOR EVERY 10 PARKING SPACES			
REQUIRED:			
PA1	62210		63 SPACES REQUIRED
PA2	15010		15 SPACES REQUIRED
PA3	11210		12 SPACES REQUIRED
TOTAL			90 TOTAL SPACES REQUIRED
PROVIDED:			
TOTAL			96 SPACES PROVIDED
PA1			(63 SPACES PROVIDED INSIDE PA-1 SECURE BIKE ROOM)
PA2			(15 SPACES PROVIDED AT PA-2 EXTERIOR BIKE RACKS)
PA3			(12 SPACES PROVIDED AT PA-1 SECURE BIKE ROOM)

**OPEN SPACE:**  
REFER TO LA-401 TO LA-404

**PARKING LOT LANDSCAPE:**  
REFER TO LA-401 TO LA-404

NORTH SCOTTSDALE ROAD



DESIGN CONSULTANT  
**STREET INTERIORS**  
COPYRIGHT 2015  
STREET INTERIORS STUDIO, LLC  
2004 FIELDS STREET, SUITE 800  
DALLAS, TEXAS 75201, TEL: 214-453-1142  
WWW.STREETINTERIORS.COM

**CCBG**  
ARCHITECTURAL FIRM

AUTHORIZATION

PROJECT TITLE  
**PRELIMINARY**  
FOR REVIEW ONLY  
FOR REVIEW AND NOT FOR CONSTRUCTION.  
REGULATORY APPROVALS, CONTRACTS AND PERMITS THEY WERE PREPARED BY OR UNDER THE SUPERVISION OF:

NAME: \_\_\_\_\_  
DATE: \_\_\_\_\_

**ARTESIA**  
7291 N. SCOTTSDALE ROAD  
SCOTTSDALE, ARIZONA 85253



DRAWING ISSUES AND REVISIONS

NO.	DATE	DESCRIPTION

DRAWING NUMBER AND TITLE  
**ARCHITECTURAL SITE PLAN - OVERALL**

DRAWING NUMBER AND TITLE

**A1.10**





## **346-PA-2022**

### **Artesia (PA-1, PA-2, PA-3)**

**Project Narrative** – Development Review Board – 5/30/22

## **Introduction**

The unique character of the site and its context has directly informed the architectural design of the proposed residential building as well as the site planning of the project. The Artesia community is nestled between the McDowell Mountain range and Camelback Mountain. The existing Artesia Condominium community and surrounding retail are marked by landscaping that embraces the native plants of the Sonoran Desert and buildings that recall Spanish Colonial revival architecture. This style of architecture is defined by elements that are well suited to the heat and intense sunlight of the desert environment. Namely, deep roof overhangs provide shade for top floor windows while lower floor windows and openings are protected and shaded by arcades and colonnades. Courtyards are typically proportioned such that they are in shade throughout most of the day as the angle of the sun tracks across them. Stylistically, Spanish Colonial revival architecture is distinguished by taught stucco walls, ornamental plaster details around select windows and doors, barrel tile roofs that are frequently red as well as tower features and corbels at roof overhangs.

The overall planting design for Artesia is designed to provide an enhanced landscape theme, utilizing a variety of low water use trees, shrubs, succulents, groundcovers, and a mixture of desert adaptive Mid-iron turf and artificial turf that provides a lush landscape typical of a resort-style hotel found within the Scottsdale area. The landscape design focuses on enhanced a mixture of formal and informal plantings that provide ample shade, vertical accentuation at key amenity areas and variation in color and texture throughout the year. While adhering to low water use principles, the landscape goals noted in the City of Scottsdale's Design Standards & Policies Manual and Article X - Landscaping Requirements of the zoning code, each Planning Area provides a unique open space amenities and character for the overall development.

Landscape shading is a key component in reducing the heat island affect and aids in keeping dwelling unit's cooler during the day. Where possible, canopy trees have been placed along sidewalks and outdoor gathering spaces to provide shade for pedestrians and adjacent dwelling units. Shade trees have also been provided in the interior courtyards to provide relief from daytime temperatures and to promote year-round use of the amenity spaces.

## **PA-1**

Within PA-1, the proposed development is an approximately 419-unit 4-story residential community. The PA-1 project will utilize the existing below ground garage to shield the cars from the sun and help hide any unsightly garage façade from surrounding properties. Parking along the ring road of PA-1 will also be provided for guests and residents. Mechanical equipment at grade will be screened by stucco walls and metal gates. Mechanical equipment at the roof will be screened by a combination of pitched tile roofs and parapet walls.

Upon your arrival to the site, at the North end of PA-1, you are greeted with a large public plaza visible from Scottsdale RD. This plaza is adorned with decorative paving work, lush plantings, low walls

that will create texture and layering to soften the entry experience. This plaza also sets the main pedestrian thoroughfare that becomes the spine of the entire site cutting through the main amenity space located in a central courtyard. Along this promenade you are met with two resort style pools that serve both formal and informal desires. These pools also serve as the connection point back to the surrounding townhome neighborhoods reducing the travel distance and enhancing all portions of the community. Surrounding the heart of the project are ample landscaping areas will allow for many unique reflective moments. The site is also ordered around an internal circulation loop that has access to all points of the project. This main circulation curves you around the site, always keeping you from having the same experience with the building, creating vistas to the several mountain ranges visible in the area. You have direct access to two ramps to the subterranean garage at the center point of the project, keeping the ground plane for pedestrians.

Conceptually the four-story building at the heart of the site was conceived as a historic hotel resting at the center of a development that grew over time. The architecture of this portion of the project is characterized by several two-story arcades of varying lengths, many outdoor living rooms, and three distinct tower features that are octagonal in plan. These unique elements not only provide dwelling units with generous outdoor living space but also address the desirability of shaded outdoor space. The most ornate of these octagonal towers greets you at the main approach to the project, visible from Scottsdale RD and incorporate wrap around belvederes. The towers are an extension of the living space for three large dwelling units.

Planning Area 1 provides a total of seven landscaped amenity areas. Four amenity areas are found along the perimeter of the Multi-family Building that consist of two separate dog parks which are located on the northern and southern open space areas, a shaded formal passive gathering/dining courtyard located on the western open space area and an outdoor gathering/gaming courtyard with a shaded outdoor dining area and 3-hole putting course on the eastern open space area. Three amenity areas are found within the interior of the building. The northern amenity area contains a formal pool with patio lounge seating, a central fire pit island, at-grade rectangular spa, and shaded outdoor dining and sitting areas. The central courtyard contains two seating areas placed within two separate linear turf panels, a central gathering/seating area with a large fireplace and festoon lighting. The southern amenity area contains a large play pool, an elevated spa, patio lounge seating, shaded cabanas, and two outdoor dining and sitting areas, elevated patios at the amenity building, bocce ball court with dark sky compliant festoon lighting and two flex turf panels for gathering events and passive/active use. All exterior and interior courtyards and accessible via a contiguous exterior sidewalk as well as interior building breezeways. The PA-1 motor court has been designed with canopy trees and vertical Date Palms to provide shade for automobiles and to compliment the aesthetic character of the building.

## **PA-2**

On the northern edge of the Artesia Master Plan sits Planning Area 2. As a cohesive planned project roadways create not only an ease of connection but a sense of neighborhood with tree lined edges. The key to PA2 is the reduced height that allows the project to blend into the adjacent open areas and buffer the denser/higher interior aspects of the project. This area also connects to the existing structures to the west to form a unified seamless blend. Buildings are separated and divided into appropriate scaled buildings that complete the northern edge of the development.

Planning area 2 consists of 74 for sale residential units, each with a dedicated 2 car parking garage for a total of 144 parking spaces. The area will consist of +/- 20 guest parking spaces, and heavily landscaped pathways that connects planning area 1 and 3 to the large existing outdoor space located at the northeast corner of the overall property. All structures will be below the max height of 45'-0" to 58'-0", as well as the massing will step down closer to the outdoor space. This allows for uninterrupted views from PA1 to the mountains in the northeast. Each residential unit will have its own dedicated private outdoor space, creating a less dense area bringing the existing outdoor space within the boundaries of the development.

Planning of the individual floor plans offers "eyes on the street" to strengthen not only a sense of community but a strategy for internal security and safety. Spatial adjacencies of living spaces are arranged to provide each unit's privacy combined with a community connection for interaction creating a public realm. Individual massing of each residence provides a variety of roof lines and material changes that give the project a unique residential character. Entry porches and exterior spaces strengthen the community feeling from the perimeter streets to landscaped spaces between structures.

Landscape design unites all aspects of the project. An amenity link exists on the western border allowing for a connection via two concrete paths that lead to the existing park. Landscape design also forms a strong streetscape edge between the individual buildings and the connecting streets. Planning Area 2 also contains a central passive amenity space with shaded seating that is accessible via a shaded stabilized decomposed granite trail and a contiguous concrete path that encompassed this planning area.

### **PA-3**

Sitting to the south of PA-1, clustered around the internal circulation muse, sits approximately 57 two-story townhomes. These townhomes will be ordered around connecting paths that lead back to the amenity space in PA-1. All the townhomes will have private covered parking to shield cars from the sun and small private front yards to encourage tenant expression and community engagement. Uncovered guest parking will be provided along the rind road as well as in designated PA-3 guest parking areas. Mechanical equipment at grade will be screened by stucco walls and metal gates. Mechanical equipment at the roof will be screened by a combination of pitched tile roofs and parapet walls.

In keeping with the premise of the building as a desert resort, the design of the townhomes that surround the main building are designed as if it were a later expansion to the hotel. The architectural details of this portion of the project are more reserved and residential than those of the main building. This shift in both scale and texture will help the whole site blend into its context and allow for all units to have amazing views of the surrounding mountains. As you traverse around the internal main circulation, you will be greeted with the scale and texture of the main building to the center of the site, and the smaller and more delicate texture of the townhomes around the perimeter. The layout of the townhomes also provides the opportunity to highlight several vistas to the surrounding McDowell Mountain range.

Landscape design in PA-3 will match that of PA-1 but unique amenity courtyards have been provided at a smaller scale throughout the planning area so that each townhome cluster has open landscape area within proximity. BBQ grills, seating areas, and planting zones help to break up the townhomes into their own distinct areas. Planning Area 3 contains two amenity areas located along the

southwestern and southeastern edge of the overall development. The southwestern open space area contains three gathering/sitting areas with outdoor dining and a central fire pit and three flex turf panels for active/passive use. The southeastern open space contains a shaded outdoor dining space with a separate sitting area and fire pit and a flex turf panel for gathering events and passive/active use. Each amenity space within Planning Area 3 is accessible via the contiguous concrete pathway that leads to each Planning Unit with the project.



PROJECT		ARTESIA SINGLE-FAMILY - COMPLETE PROXY DATA					
PARCEL		ENTIRE					
ITE LAND USE CATEGORY AND CODE		SINGLE FAMILY DETACHED HOUSING - 210					
INDEPENDENT VARIABLE		DWELLING UNITS FOR FULL PROXY DATA					
SIZE		74					
		ENTERING		EXITING		TOTAL	
<b>WEEKDAY DAILY</b>				50%		50%	
STUDIES and LOW, AVERAGE, AND HIGH SIZE		174	10	246	2,945		
MINIMUM RATE	LOW RATES SUSPECT	4.65		172	172	344	
AVERAGE RATE		9.43		349	349	698	
MAXIMUM RATE	HIGH RATES SUSPECT	22.61		837	836	1,673	
STANDARD DEVIATION		2.13					
EQUATION: LN(T) = 0.92 * LN(X) + 2.68		R <sup>2</sup> = 0.95		383	382	765	
<b>LARGEST OF AVERAGE OR EQUATION</b>				<b>383</b>	<b>382</b>	<b>765</b>	
<b>AM PEAK HOUR ADJACENT STREET</b>				26%	74%		
STUDIES and LOW, AVERAGE, AND HIGH SIZE		192	5	226	2,945		
MINIMUM RATE	LOW RATES ACCEPTABLE	0.27		5	15	20	
AVERAGE RATE		0.70		14	38	52	
MAXIMUM RATE	HIGH RATES SUSPECT	2.27		44	124	168	
STANDARD DEVIATION		0.24					
EQUATION: T = 0.91 * (X) + 0.12		R <sup>2</sup> = 0.90		17	50	67	
<b>LARGEST OF AVERAGE OR EQUATION</b>				<b>17</b>	<b>50</b>	<b>67</b>	
<b>AM PEAK HOUR GENERATOR</b>				26%	74%		
STUDIES and LOW, AVERAGE, AND HIGH SIZE		217	13	217	2,945		
MINIMUM RATE	LOW RATES ACCEPTABLE	0.34		7	18	25	
AVERAGE RATE		0.75		15	41	56	
MAXIMUM RATE	HIGH RATES SUSPECT	2.27		44	124	168	
STANDARD DEVIATION		0.25					
EQUATION: T = 0.71 * (X) + 7.23		R <sup>2</sup> = 0.91		16	44	60	
<b>LARGEST OF AVERAGE OR EQUATION</b>				<b>16</b>	<b>44</b>	<b>60</b>	
<b>PM PEAK HOUR ADJACENT STREET</b>				63%	37%		
STUDIES and LOW, AVERAGE, AND HIGH SIZE		208	12	248	2,945		
MINIMUM RATE	LOW RATES ACCEPTABLE	0.35		16	10	26	
AVERAGE RATE		0.94		44	26	70	
MAXIMUM RATE	HIGH RATES SUSPECT	2.98		139	82	221	
STANDARD DEVIATION		0.31					
EQUATION: LN(T) = 0.94 * LN(X) + 0.27		R <sup>2</sup> = 0.92		47	28	75	
<b>LARGEST OF AVERAGE OR EQUATION</b>				<b>47</b>	<b>28</b>	<b>75</b>	
<b>PM PEAK HOUR GENERATOR</b>				64%	36%		
STUDIES and LOW, AVERAGE, AND HIGH SIZE		178	12	203	1,781		
MINIMUM RATE	LOW RATES ACCEPTABLE	0.49		23	13	36	
AVERAGE RATE		0.99		47	26	73	
MAXIMUM RATE	HIGH RATES SUSPECT	2.98		141	80	221	
STANDARD DEVIATION		0.28					
EQUATION: LN(T) = 0.93 * LN(X) + 0.36		R <sup>2</sup> = 0.92		50	28	78	
<b>LARGEST OF AVERAGE OR EQUATION</b>				<b>50</b>	<b>28</b>	<b>78</b>	

Checked by: PEB 08/10/2022



PROJECT		ARTESIA SINGLE-FAMILY - FILTERED PROXY DATA					
PARCEL		ENTIRE					
ITE LAND USE CATEGORY AND CODE		SINGLE FAMILY DETACHED HOUSING - 210					
INDEPENDENT VARIABLE		DWELLING UNITS FILTERED FOR FEWER THAN 200 HOUSES					
SIZE		74					
				ENTERING	EXITING	TOTAL	
<b>WEEKDAY DAILY</b>				50%	50%		
NUMBER OF STUDIES and AVERAGE SIZE		89	11	85	189		
MINIMUM RATE	LOW RATES ACCEPTABLE	6.28		232	232	464	
AVERAGE RATE		10.05		372	372	744	
MAXIMUM RATE	HIGH RATES ACCEPTABLE	13.90		514	514	1,028	
STANDARD DEVIATION		1.98					
EQUATION: NOT PROVIDED		NA		NA	NA	NA	
<b>LARGEST OF AVERAGE OR EQUATION</b>				<b>372</b>	<b>372</b>	<b>744</b>	
<b>AM PEAK HOUR ADJACENT STREET</b>				26%	74%		
NUMBER OF STUDIES and AVERAGE SIZE		122	5	89	189		
MINIMUM RATE	LOW RATES ACCEPTABLE	0.27		5	15	20	
AVERAGE RATE		0.78		15	43	58	
MAXIMUM RATE	HIGH RATES ACCEPTABLE	1.39		27	76	103	
STANDARD DEVIATION		0.25					
EQUATION: NOT PROVIDED		NA		NA	NA	NA	
<b>LARGEST OF AVERAGE OR EQUATION</b>				<b>15</b>	<b>43</b>	<b>58</b>	
<b>AM PEAK HOUR GENERATOR</b>							
NUMBER OF STUDIES and AVERAGE SIZE							
MINIMUM RATE							
AVERAGE RATE							
MAXIMUM RATE							
STANDARD DEVIATION							
<b>LARGEST OF AVERAGE OR EQUATION</b>							
<b>PM PEAK HOUR ADJACENT STREET</b>				63%	37%		
NUMBER OF STUDIES and AVERAGE SIZE		124	12	87	189		
MINIMUM RATE	LOW RATES ACCEPTABLE	0.36		16	10	26	
AVERAGE RATE		0.97		45	27	72	
MAXIMUM RATE	HIGH RATES ACCEPTABLE	1.60		74	44	118	
STANDARD DEVIATION		0.25					
EQUATION: NOT PROVIDED		NA		NA	NA	NA	
<b>LARGEST OF AVERAGE OR EQUATION</b>				<b>45</b>	<b>27</b>	<b>72</b>	
<b>PM PEAK HOUR GENERATOR</b>							
NUMBER OF STUDIES and AVERAGE SIZE							
MINIMUM RATE							
AVERAGE RATE							
MAXIMUM RATE							
STANDARD DEVIATION							
<b>LARGEST OF AVERAGE OR EQUATION</b>							

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PROJECT		ARTESIA CONDOMINIUMS					
PARCEL		ENTIRE					
ITE LAND USE CATEGORY AND CODE		MULTIFAMILY HOUSING (MID-RISE) - 221					
INDEPENDENT VARIABLE		DWELLING UNITS					
SIZE		476					
		ENTERING		EXITING		TOTAL	
<b>WEEKDAY DAILY</b>				50%		50%	
NUMBER OF STUDIES and AVERAGE SIZE		11	60	201	336		
MINIMUM RATE	LOW RATES ACCEPTABLE	3.76		895	895	1,790	
AVERAGE RATE		4.54		1,081	1,080	2,161	
MAXIMUM RATE	HIGH RATES ACCEPTABLE	5.40		1,285	1,285	2,570	
STANDARD DEVIATION		0.51					
EQUATION: T = 4.77 * (X) - 46.46		R <sup>2</sup> = 0.93		1,296	1,296	2,592	
<b>LARGEST OF AVERAGE OR EQUATION</b>				<b>1,296</b>	<b>1,296</b>	<b>2,592</b>	
<b>AM PEAK HOUR ADJACENT STREET</b>				26%	74%		
NUMBER OF STUDIES and AVERAGE SIZE		30	26	207	491		
MINIMUM RATE	LOW RATES SUSPECT	0.15		18	53	71	
AVERAGE RATE		0.37		46	130	176	
MAXIMUM RATE	HIGH RATES ACCEPTABLE	0.53		66	186	252	
STANDARD DEVIATION		0.09					
EQUATION: T = 0.44 * (X) - 11.61		R <sup>2</sup> = 0.91		51	147	198	
<b>LARGEST OF AVERAGE OR EQUATION</b>				<b>51</b>	<b>147</b>	<b>198</b>	
<b>AM PEAK HOUR GENERATOR</b>				26%	74%		
NUMBER OF STUDIES and AVERAGE SIZE		48	21	225	1,168		
MINIMUM RATE	LOW RATES ACCEPTABLE	0.13		16	46	62	
AVERAGE RATE		0.35		43	124	167	
MAXIMUM RATE	HIGH RATES ACCEPTABLE	0.53		66	186	252	
STANDARD DEVIATION		0.11					
EQUATION: T = 0.32 * (X) + 5.84		R <sup>2</sup> = 0.91		41	117	158	
<b>LARGEST OF AVERAGE OR EQUATION</b>				<b>43</b>	<b>124</b>	<b>167</b>	
<b>PM PEAK HOUR ADJACENT STREET</b>				61%	39%		
NUMBER OF STUDIES and AVERAGE SIZE		31	26	109	491		
MINIMUM RATE	LOW RATES SUSPECT	0.19		55	35	90	
AVERAGE RATE		0.39		113	73	186	
MAXIMUM RATE	HIGH RATES SUSPECT	0.57		165	106	271	
STANDARD DEVIATION		0.08					
EQUATION: T = 0.39 * (X) + 0.34		R <sup>2</sup> = 0.91		113	73	186	
<b>LARGEST OF AVERAGE OR EQUATION</b>				<b>113</b>	<b>73</b>	<b>186</b>	
<b>PM PEAK HOUR GENERATOR</b>				60%	40%		
NUMBER OF STUDIES and AVERAGE SIZE		22	26	221	1,160		
MINIMUM RATE	LOW RATES ACCEPTABLE	0.19		54	36	90	
AVERAGE RATE		0.39		112	74	186	
MAXIMUM RATE	HIGH RATES SUSPECT	0.60		172	114	286	
STANDARD DEVIATION		0.10					
EQUATION: T = 0.32 * (X) + 15.57		R <sup>2</sup> = 0.93		101	67	168	
<b>LARGEST OF AVERAGE OR EQUATION</b>				<b>112</b>	<b>74</b>	<b>186</b>	

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PROJECT	ARTESIA CONDOMINIUMS						
PARCEL	ENTIRE						
ITE LAND USE CATEGORY AND CODE	MULTIFAMILY HOUSING (MID-RISE) - 221						
INDEPENDENT VARIABLE	DWELLING UNITS						
SIZE	476						
			ENTERING	EXITING	SUM		
<b>SATURDAY DAILY</b>							
NUMBER OF STUDIES and AVERAGE SIZE							
	5	140	250	336			
MINIMUM RATE	LOW RATES ACCEPTABLE			4.03	959	959	1,918
AVERAGE RATE				4.91	1,169	1,168	2,337
MAXIMUM RATE	HIGH RATES SUSPECT			8.51	2,026	2,025	4,051
STANDARD DEVIATION				1.26			
EQUATION: LN (T) = 0.94 * LN(X) + 1.84				R <sup>2</sup> = 0.91	1,035	1,035	2,070
<b>LARGEST OF AVERAGE OR EQUATION</b>					<b>1,169</b>	<b>1,168</b>	<b>2,337</b>
<b>PEAK HOUR GENERATOR</b>							
NUMBER OF STUDIES and AVERAGE SIZE							
	5	140	250	336			
MINIMUM RATE	LOW RATES ACCEPTABLE			0.34	83	79	162
AVERAGE RATE				0.39	95	91	186
MAXIMUM RATE	HIGH RATES ACCEPTABLE			0.43	105	100	205
STANDARD DEVIATION				0.04			
EQUATION: LN (T) = 1.00 * LN(X) - 0.91				R <sup>2</sup> = 0.92	98	94	192
<b>LARGEST OF AVERAGE OR EQUATION</b>					<b>98</b>	<b>94</b>	<b>192</b>
<b>SUNDAY DAILY</b>							
NUMBER OF STUDIES and AVERAGE SIZE							
	5	140	250	336			
MINIMUM RATE	LOW RATES ACCEPTABLE			3.06	729	728	1,457
AVERAGE RATE				3.77	898	897	1,795
MAXIMUM RATE	HIGH RATES ACCEPTABLE			4.24	1,009	1,009	2,018
STANDARD DEVIATION				0.48			
EQUATION: LN (T) = 0.94 * LN(X) + 1.63				R <sup>2</sup> = 0.85	789	789	1,578
<b>LARGEST OF AVERAGE OR EQUATION</b>					<b>898</b>	<b>897</b>	<b>1,795</b>
<b>PEAK HOUR GENERATOR</b>							
NUMBER OF STUDIES and AVERAGE SIZE							
	5	140	250	336			
MINIMUM RATE	LOW RATES ACCEPTABLE			0.26	68	56	124
AVERAGE RATE				0.32	84	68	152
MAXIMUM RATE	HIGH RATES ACCEPTABLE			0.42	110	90	200
STANDARD DEVIATION				0.05			
EQUATION: T = 0.24 * X + 21.51				R <sup>2</sup> = 0.79	75	61	136
<b>LARGEST OF AVERAGE OR EQUATION</b>					<b>84</b>	<b>68</b>	<b>152</b>

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## Appendix E

### Scottsdale Plaza Resort Renovation Trip Generation





PROJECT		SCOTTSDALE PLAZA RESORT RENOVATION					
PARCEL		ENTIRE					
ITE LAND USE CATEGORY AND CODE		HOTEL - 310					
INDEPENDENT VARIABLE		ROOMS					
SIZE		64					
		ENTERING		EXITING		TOTAL	
<b>WEEKDAY DAILY</b>				50%		50%	
STUDIES and LOW, AVERAGE, AND HIGH SIZE		7	100	148	260		
MINIMUM RATE	LOW RATES ACCEPTABLE	5.31			170	170	340
AVERAGE RATE		7.99			256	255	511
MAXIMUM RATE	HIGH RATES ACCEPTABLE	9.53			305	305	610
STANDARD DEVIATION		1.92					
EQUATION: T = 10.84 * (X) - 423.51		R <sup>2</sup> = 0.85			135	135	270
<b>LARGEST OF AVERAGE OR EQUATION</b>				<b>256</b>	<b>255</b>	<b>511</b>	
<b>AM PEAK HOUR ADJACENT STREET</b>				56%		44%	
STUDIES and LOW, AVERAGE, AND HIGH SIZE		28	74	182	426		
MINIMUM RATE	LOW RATES ACCEPTABLE	0.20			7	6	13
AVERAGE RATE		0.46			16	13	29
MAXIMUM RATE	HIGH RATES SUSPECT	0.84			30	24	54
STANDARD DEVIATION		0.14					
EQUATION: T = 0.50 * (X) - 7.45		R <sup>2</sup> = 0.84			14	11	25
<b>LARGEST OF AVERAGE OR EQUATION</b>				<b>16</b>	<b>13</b>	<b>29</b>	
<b>AM PEAK HOUR GENERATOR</b>				53%		47%	
STUDIES and LOW, AVERAGE, AND HIGH SIZE		33	86	282	575		
MINIMUM RATE	LOW RATES ACCEPTABLE	0.25			8	8	16
AVERAGE RATE		0.53			18	16	34
MAXIMUM RATE	HIGH RATES SUSPECT	1.42			48	43	91
STANDARD DEVIATION		0.21					
EQUATION: T = 0.86 * Ln(X) + 0.12		R <sup>2</sup> = 0.64			29	26	55
<b>LARGEST OF AVERAGE OR EQUATION</b>				<b>29</b>	<b>26</b>	<b>55</b>	
<b>PM PEAK HOUR ADJACENT STREET</b>				51%		49%	
STUDIES and LOW, AVERAGE, AND HIGH SIZE		31	110	186	1,044		
MINIMUM RATE	LOW RATES ACCEPTABLE	0.26			9	8	17
AVERAGE RATE		0.59			19	19	38
MAXIMUM RATE	HIGH RATES SUSPECT	1.06			35	33	68
STANDARD DEVIATION		0.22					
EQUATION: T = 0.74 * (X) - 27.89		R <sup>2</sup> = 0.78			10	9	19
<b>LARGEST OF AVERAGE OR EQUATION</b>				<b>19</b>	<b>19</b>	<b>38</b>	
<b>PM PEAK HOUR GENERATOR</b>				58%		42%	
STUDIES and LOW, AVERAGE, AND HIGH SIZE		32	110	285	1,044		
MINIMUM RATE	LOW RATES SUSPECT	0.22			8	6	14
AVERAGE RATE		0.60			22	16	38
MAXIMUM RATE	HIGH RATES SUSPECT	0.97			36	26	62
STANDARD DEVIATION		0.18					
EQUATION: T = 0.95 * Ln(X) - 0.27		R <sup>2</sup> = 0.69			23	17	40
<b>LARGEST OF AVERAGE OR EQUATION</b>				<b>23</b>	<b>17</b>	<b>40</b>	

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PROJECT		SCOTTSDALE PLAZA RESORT RENOVATION						
PARCEL		ENTIRE						
ITE LAND USE CATEGORY AND CODE		HOTEL - 310 - ACTUAL TRAFFIC COUNTS						
INDEPENDENT VARIABLE		ROOMS						
SIZE		64						
				ENTERING		EXITING		SUM
<b>SATURDAY DAILY</b>				50%		50%		
STUDIES and LOW, AVERAGE, AND HIGH SIZE		9	100	202	355			
MINIMUM RATE	LOW RATES ACCEPTABLE	6.35			203	203	406	
AVERAGE RATE		8.07			258	258	516	
MAXIMUM RATE	HIGH RATES ACCEPTABLE	9.79			314	313	627	
STANDARD DEVIATION		1.35						
EQUATION: LN (T) = 0.9.69 * (X) - 326.34		R <sup>2</sup> = 0.93			14	13	27	
<b>LARGEST OF AVERAGE OR EQUATION</b>				<b>258</b>		<b>258</b>		<b>516</b>
<b>PEAK HOUR GENERATOR</b>				56%		44%		
STUDIES and LOW, AVERAGE, AND HIGH SIZE		10	100	192	355			
MINIMUM RATE	LOW RATES ACCEPTABLE	0.49			17	14	31	
AVERAGE RATE		0.72			26	20	46	
MAXIMUM RATE	HIGH RATES SUSPECT	1.23			44	35	79	
STANDARD DEVIATION		0.20						
EQUATION: LN (T) = 0.69 * (X) + 5.95		R <sup>2</sup> = 0.8			15	12	27	
<b>LARGEST OF AVERAGE OR EQUATION</b>				<b>26</b>		<b>20</b>		<b>46</b>
<b>SUNDAY DAILY</b>				50%		50%		
STUDIES and LOW, AVERAGE, AND HIGH SIZE		9	100	202	355			
MINIMUM RATE	LOW RATES ACCEPTABLE	4.01			129	128	257	
AVERAGE RATE		5.94			190	190	380	
MAXIMUM RATE	HIGH RATES ACCEPTABLE	8.48			272	271	543	
STANDARD DEVIATION		1.58						
EQUATION: LN (T) = 8.52 * (X) - 522.42		R <sup>2</sup> = 0.90			14	13	27	
<b>LARGEST OF AVERAGE OR EQUATION</b>				<b>190</b>		<b>190</b>		<b>380</b>
<b>PEAK HOUR GENERATOR</b>				48%		52%		
STUDIES and LOW, AVERAGE, AND HIGH SIZE		9	100	202	355			
MINIMUM RATE	LOW RATES ACCEPTABLE	0.39			12	13	25	
AVERAGE RATE		0.57			17	19	36	
MAXIMUM RATE	HIGH RATES ACCEPTABLE	0.72			22	24	46	
STANDARD DEVIATION		0.14						
EQUATION: LN (T) = 0.69 * (X) - 23.78		R <sup>2</sup> = 0.86			13	14	27	
<b>LARGEST OF AVERAGE OR EQUATION</b>				<b>17</b>		<b>19</b>		<b>36</b>

Checked by: PEB 1/13/2023



PROJECT		SCOTTSDALE PLAZA RESORT RENOVATION				
PARCEL		NEW BUILDINGS				
ITE LAND USE CATEGORY AND CODE		FINE DINING RESTAURANT - 931				
INDEPENDENT VARIABLE		THOUSAND SQUARE FEET				
SIZE		57.436				
			ENTERING	EXITING	TOTAL	
<b>WEEKDAY DAILY</b>			50%	50%		
STUDIES and LOW, AVERAGE, AND HIGH SIZE		10	5	9	16	
MINIMUM RATE	LOW RATES ACCEPTABLE	33.45		961	960	1,921
AVERAGE RATE		83.84		2,408	2,407	4,815
MAXIMUM RATE	HIGH RATES ACCEPTABLE	139.93		4,019	4,018	8,037
STANDARD DEVIATION		40.01				
EQUATION: NOT PROVIDED		NA		NA	NA	NA
<b>LARGEST OF AVERAGE OR EQUATION</b>				<b>2,408</b>	<b>2,407</b>	<b>4,815</b>
<b>AM PEAK HOUR ADJACENT STREET</b>			80%	20%	generator	
STUDIES and LOW, AVERAGE, AND HIGH SIZE		7	7	10	16	
MINIMUM RATE	LOW RATES ACCEPTABLE	0.25		11	3	14
AVERAGE RATE		0.73		34	8	42
MAXIMUM RATE	HIGH RATES SUSPECT	1.60		74	18	92
STANDARD DEVIATION		0.42				
EQUATION: NOT PROVIDED		NA		NA	NA	NA
<b>LARGEST OF AVERAGE OR EQUATION</b>				<b>34</b>	<b>8</b>	<b>42</b>
<b>AM PEAK HOUR GENERATOR</b>			80%	20%		
STUDIES and LOW, AVERAGE, AND HIGH SIZE		12	5	8	16	
MINIMUM RATE	LOW RATES ACCEPTABLE	0.87		40	10	50
AVERAGE RATE		4.47		206	51	257
MAXIMUM RATE	HIGH RATES ACCEPTABLE	10.38		477	119	596
STANDARD DEVIATION		3.26				
EQUATION: NOT PROVIDED		NA		NA	NA	NA
<b>LARGEST OF AVERAGE OR EQUATION</b>				<b>206</b>	<b>51</b>	<b>257</b>
<b>PM PEAK HOUR ADJACENT STREET</b>			67%	33%		
STUDIES and LOW, AVERAGE, AND HIGH SIZE		19	4	9	16	
MINIMUM RATE	LOW RATES ACCEPTABLE	2.62		101	49	150
AVERAGE RATE		7.80		300	148	448
MAXIMUM RATE	HIGH RATES SUSPECT	18.68		719	354	1,073
STANDARD DEVIATION		4.49				
EQUATION: NOT PROVIDED		NA		NA	NA	NA
<b>LARGEST OF AVERAGE OR EQUATION</b>				<b>300</b>	<b>148</b>	<b>448</b>
<b>PM PEAK HOUR GENERATOR</b>			61%	39%		
STUDIES and LOW, AVERAGE, AND HIGH SIZE		15	5	9	16	
MINIMUM RATE	LOW RATES ACCEPTABLE	2.66		93	60	153
AVERAGE RATE		8.28		290	186	476
MAXIMUM RATE	HIGH RATES ACCEPTABLE	15.90		557	356	913
STANDARD DEVIATION		3.89				
EQUATION: NOT PROVIDED		NA		NA	NA	NA
<b>LARGEST OF AVERAGE OR EQUATION</b>				<b>290</b>	<b>186</b>	<b>476</b>

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PROJECT		SCOTTSDALE PLAZA RESORT RENOVATION							
PARCEL		NEW BUILDINGS							
ITE LAND USE CATEGORY AND CODE		FINE DINING RESTAURANT - 931							
INDEPENDENT VARIABLE		THOUSAND SQUARE FEET							
SIZE		57.436							
<b>SATURDAY DAILY</b>				ENTERING		EXITING		SUM	
STUDIES and LOW, AVERAGE, AND HIGH SIZE		6	5	10	16	50%		50%	
MINIMUM RATE	LOW RATES ACCEPTABLE	53.65				1,541	1,540	3,081	
AVERAGE RATE		90.04				2,586	2,586	5,172	
MAXIMUM RATE	HIGH RATES ACCEPTABLE	126.78				3,641	3,641	7,282	
STANDARD DEVIATION		32.81							
EQUATION: NOT PROVIDED		NA				NA	NA	NA	
<b>LARGEST OF AVERAGE OR EQUATION</b>						<b>2,586</b>	<b>2,586</b>	<b>5,172</b>	
<b>PEAK HOUR GENERATOR</b>				59%		41%			
STUDIES and LOW, AVERAGE, AND HIGH SIZE		7	5	10	16				
MINIMUM RATE	LOW RATES ACCEPTABLE	5.75				195	135	330	
AVERAGE RATE		10.68				362	251	613	
MAXIMUM RATE	HIGH RATES ACCEPTABLE	15.29				518	360	878	
STANDARD DEVIATION		3.62							
EQUATION: NOT PROVIDED		NA				NA	NA	NA	
<b>LARGEST OF AVERAGE OR EQUATION</b>						<b>362</b>	<b>251</b>	<b>613</b>	
<b>SUNDAY DAILY</b>				50%		50%			
STUDIES and LOW, AVERAGE, AND HIGH SIZE		6	5	10	16				
MINIMUM RATE	LOW RATES ACCEPTABLE	41.38				1,189	1,188	2,377	
AVERAGE RATE		71.97				2,067	2,067	4,134	
MAXIMUM RATE	HIGH RATES ACCEPTABLE	120.59				3,463	3,463	6,926	
STANDARD DEVIATION		26.30							
EQUATION: NOT PROVIDED		NA				NA	NA	NA	
<b>LARGEST OF AVERAGE OR EQUATION</b>						<b>2,067</b>	<b>2,067</b>	<b>4,134</b>	
<b>PEAK HOUR GENERATOR</b>				63%		37%			
STUDIES and LOW, AVERAGE, AND HIGH SIZE		6	5	10	16				
MINIMUM RATE	LOW RATES ACCEPTABLE	4.69				169	100	269	
AVERAGE RATE		7.80				282	166	448	
MAXIMUM RATE	HIGH RATES ACCEPTABLE	12.06				437	256	693	
STANDARD DEVIATION		2.48							
EQUATION: NOT PROVIDED		NA				NA	NA	NA	
<b>LARGEST OF AVERAGE OR EQUATION</b>						<b>282</b>	<b>166</b>	<b>448</b>	

Checked by: PEB 1/13/2023



# Appendix F

## Signal Warrant Analyses





# Appendix F.1

## Signal Warrant Analyses

### Scottsdale and Scottsdale Plaza Resort Access



## SCOTTSDALE PLAZA RESORT RENOVATIONS SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES TRAFFIC CONTROL SIGNAL WARRANT STUDY SUMMARY

LOCATION: || **PARADISE VALLEY, ARIZONA**

SPECIAL CONDITIONS: || **NONE**

DATE OF COUNT: || 8/4/2022

DATE OF STUDY: || 8/13/2022

NORTH/SOUTH STREET:	SCOTTSDALE ROAD	MAJOR	MULTI-LANE
EAST/WEST STREET:	SCOTTSDALE PLAZA RESORT ACCESS	MINOR	MULTI-LANE

POSTED SPEED LIMIT ON MAJOR STREET: || 45 mph

85th PERCENTILE SPEED ON MAJOR STREET: || Unknown

WARRANT	EXISTING	REQUIRED	SATISFIED?
<b># 1. EIGHT-HOUR VEHICULAR VOLUME</b>			
A. MINIMUM VEHICULAR VOLUME	0	8	NO
B. INTERRUPTION OF CONTINUOUS TRAFFIC	2	8	NO
COMBINATION OF WARRANTS 1A AND 1B (80% of Values)	-	-	Not Applicable
COMBINATION OF WARRANTS 1A AND 1B (56% of Values)	0	8	NO
<b># 2. FOUR-HOUR VEHICULAR VOLUME</b>			
	0	4	NO
<b># 3. PEAK HOUR</b>			
A. PEAK HOUR DELAY - AM	1	3	NO
A. PEAK HOUR DELAY - PM	1	3	NO
B. PEAK HOUR VOLUME	0	1	NO
<b># 7. CRASH EXPERIENCE</b>			
WITH WARRANT # 1A (Traffic Volumes at 80% of Original Values)	-	-	Not Applicable
WITH WARRANT # 1B (Traffic Volumes at 80% of Original Values)	-	-	Not Applicable
WITH WARRANT # 1A (Traffic Volumes at 56% of Original Values)	0	8	NO
WITH WARRANT # 1B (Traffic Volumes at 56% of Original Values)	0	8	NO
TOTAL NUMBER OF CRASHES	4	-	-
NUMBER OF POTENTIALLY PREVENTABLE CRASHES	1	5	NO
HAVE LESS RESTRICTIVE MEANS BEEN ATTEMPTED?	NO	-	NO
<b># 7. ENTIRE WARRANT</b>	-	-	NO

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Checked by: PEB 8/13/2022



**TRAFFIC CONTROL SIGNAL WARRANT ESTIMATION  
LANE NUMBER, SPEED, AND VOLUME DATA**

LOCATION: **SCOTTSDALE PLAZA RESORT RENOVATIONS**  
 DATE AND DAY: **8/4/2022 THURSDAY**

NORTH / SOUTH STREET: **SCOTTSDALE ROAD** LANES: **3**  
 EAST / WEST STREET: **SCOTTSDALE PLAZA RESORT ACCESS** LANES: **2**

MAJOR STREET SPEED LIMIT OR 85<sup>th</sup> PERCENTILE SPEED: **45**

CONDITIONS: **NONE**

END TIME	STREET TRAFFIC VOLUMES			
	NB	SB	EB	WB
1:00 AM	79	59	3	0
2:00 AM	69	37	1	4
3:00 AM	44	19	0	1
4:00 AM	36	30	1	1
5:00 AM	110	71	0	1
6:00 AM	243	212	1	6
7:00 AM	493	485	7	11
8:00 AM	901	981	8	37
9:00 AM	1063	1112	17	56
10:00 AM	984	1050	25	39
11:00 AM	1033	1046	20	40
12:00 PM	1120	1119	22	64
1:00 PM	1144	1217	23	68
2:00 PM	1142	1228	23	78
3:00 PM	1296	1265	18	58
4:00 PM	1269	1175	15	63
5:00 PM	1312	1214	16	78
6:00 PM	1337	1332	32	68
7:00 PM	947	902	19	52
8:00 PM	743	688	25	43
9:00 PM	596	545	12	34
10:00 PM	428	418	16	13
11:00 PM	299	268	6	19
12:00 AM	172	144	6	4
TOTAL	16,860	16,617	316	838

WARRANT	CRITERIA		REQUIRED HOURS	ACTUAL HOURS	SATISFIED?	PROXIMITY	
	MAJOR	MINOR				Major	Minor
#1A	420	140	8	0	NO	Satisfied	150%
#1B	630	70	8	2	NO	Satisfied	25%
#1A with #1B	480	56	8	8	NO	Satisfied	Satisfied
#1B with #1A	720	112	8	0		Satisfied	100%
#2	Varying Graph		4	0	NO		18%
#3B	Varying Graph		1	0	NO		

Checked by: PEB 8/13/2022



**TRAFFIC CONTROL SIGNAL WARRANT STUDY  
LANE NUMBER, SPEED, AND VOLUME DATA**

PROJECT: **SCOTTSDALE PLAZA RESORT RENOVATIONS**  
 LOCATION: **PARADISE VALLEY, ARIZONA**

NORTH/SOUTH STREET:

**SCOTTSDALE ROAD**  
 NB LANES: **3**  
 SB LANES: **3**

EAST/WEST STREET:

**SCOTTSDALE PLAZA RESORT ACCESS**  
 EB LANES: **2**  
 WB LANES: **2**

SPEED LIMIT ON MAJOR STREET: **45**  
 85TH PERCENTILE SPEED ON MAJOR STREET: **UNKNOWN**

VOLUME DATA: **EXISTING WEEKDAY**

DATE OF COUNT: **8/4/2022**      **THURSDAY**  
 DATE OF STUDY: **8/13/2022**

SPECIAL CONDITIONS: **NONE**

INTERSECTION APPROACH TRAFFIC VOLUMES				
TIME	NORTHBOUND	SOUTHBOUND	EASTBOUND	WESTBOUND
1:00 AM	79	59	3	0
2:00 AM	69	37	1	4
3:00 AM	44	19	0	1
4:00 AM	36	30	1	1
5:00 AM	110	71	0	1
6:00 AM	243	212	1	6
7:00 AM	493	485	7	11
8:00 AM	901	981	8	37
9:00 AM	1063	1112	17	56
10:00 AM	984	1050	25	39
11:00 AM	1033	1046	20	40
12:00 PM	1120	1119	22	64
1:00 PM	1144	1217	23	68
2:00 PM	1142	1228	23	78
3:00 PM	1296	1265	18	58
4:00 PM	1269	1175	15	63
5:00 PM	1312	1214	16	78
6:00 PM	1337	1332	32	68
7:00 PM	947	902	19	52
8:00 PM	743	688	25	43
9:00 PM	596	545	12	34
10:00 PM	428	418	16	13
11:00 PM	299	268	6	19
12:00 AM	172	144	6	4
<b>TOTAL</b>	<b>16,860</b>	<b>16,617</b>	<b>316</b>	<b>838</b>

Checked by: PEB 8/13/2022



**TRAFFIC CONTROL SIGNAL WARRANT STUDY  
CRASH EXPERIENCE AND DELAY DATA**

**SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS**

**CRASH EXPERIENCE DATA**

HAVE LESS RESTRICTIVE MEANS BEEN ATTEMPTED?

**NO**

TOTAL NUMBER OF CRASHES IN A 12 MONTH PERIOD:

**4**

NUMBER OF POTENTIALLY PREVENTABLE CRASHES  
IN A 12 MONTH PERIOD:

**1**

WILL SIGNAL DISRUPT PROGRESSIVE TRAFFIC FLOW?

**YES**

**VEHICLE DELAY DATA**

TIME PERIOD	AVERAGE DELAY SECONDS/VEHICLE	SIDE STREET TOTAL DELAY VEH-HOURS	VOLUME	TOTAL INTERSECTION VOLUME
<b>7:00 AM to 8:00 AM</b>	<b>120</b>	<b>1.23</b>	<b>37</b>	<b>1,927</b>
<b>5:00 PM to 6:00 PM</b>	<b>120</b>	<b>2.27</b>	<b>68</b>	<b>2,769</b>

Checked by: PEB 8/13/2022



## SCOTTSDALE PLAZA RESORT RENOVATIONS SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS

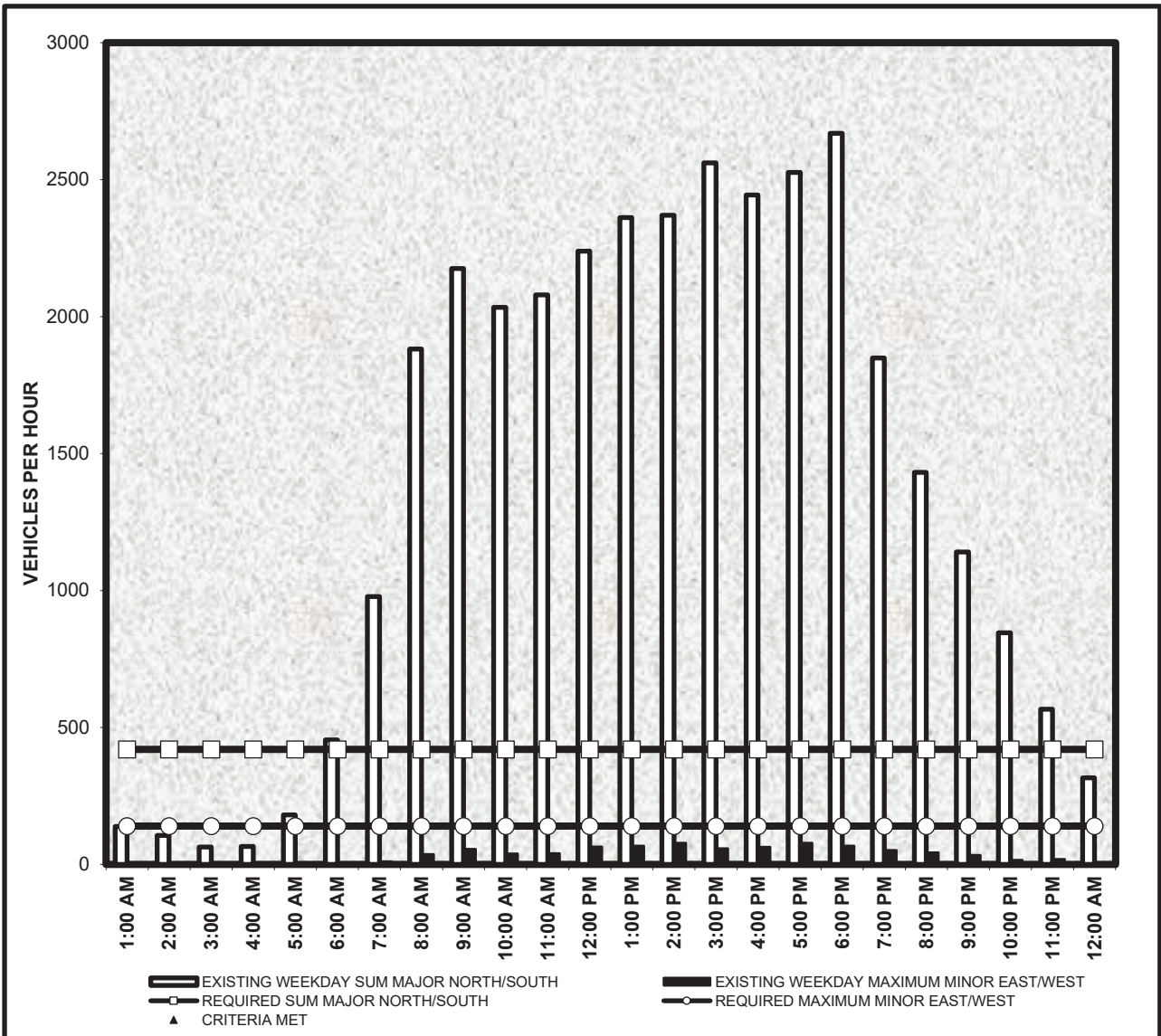
### M. U. T. C. D. WARRANT # 1A

#### Minimum Vehicular Volume

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH/SOUTH STREET	420
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST/WEST STREET	140

NUMBER OF HOURS SATISFIED:	0
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	0
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	0

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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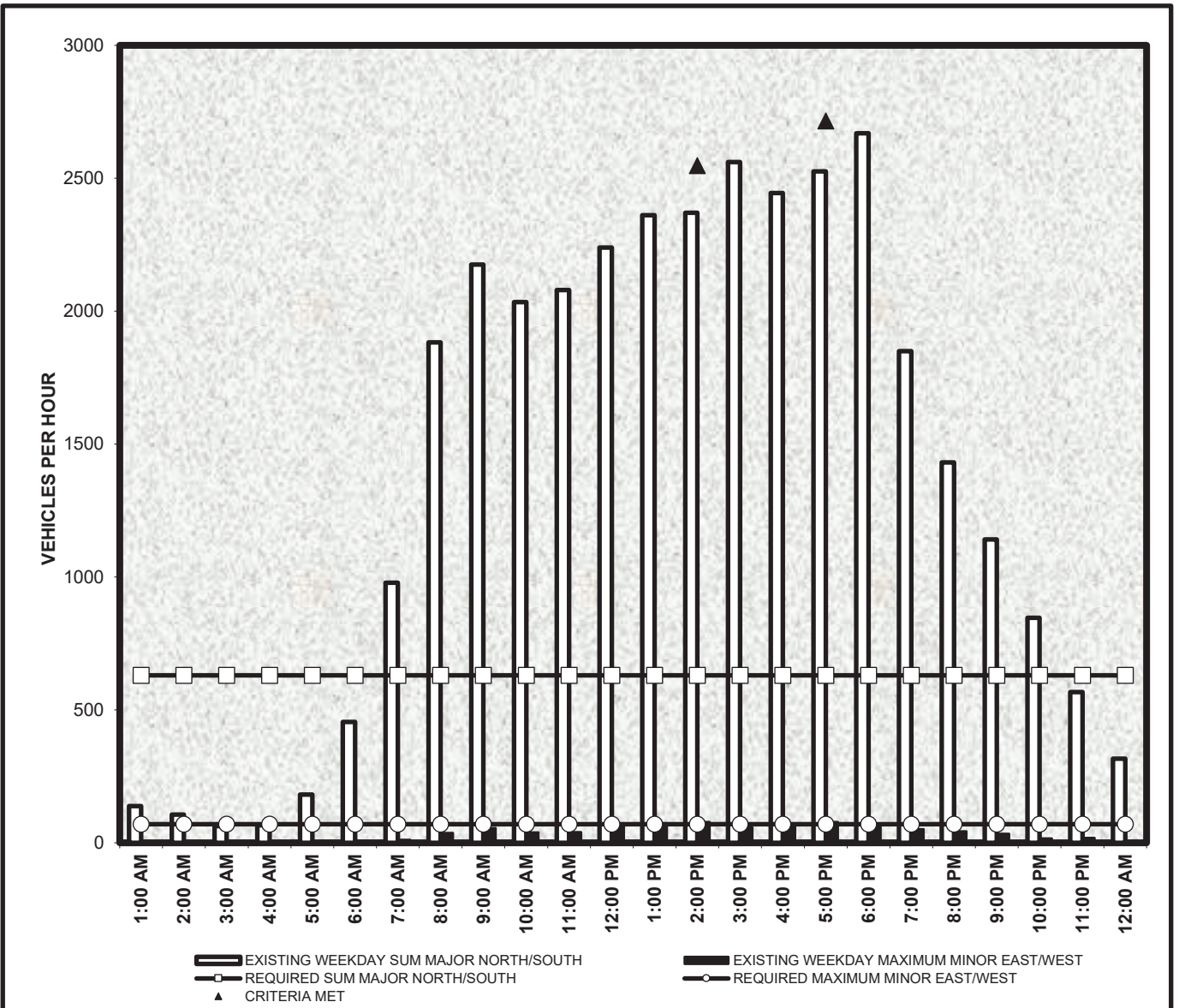


The Minimum Vehicular Volume, Condition A, is intended for application where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The warrant is satisfied when, for each of any eight hours of an average day, the traffic volumes provided in the MUTCD exist on the major street and on the higher-volume minor-street approach to the intersection, and the signal installation will not seriously disrupt progressive traffic flow.

## SCOTTSDALE PLAZA RESORT RENOVATIONS SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS

### M. U. T. C. D. WARRANT # 1B Interruption of Continuous Traffic

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH/SOUTH STREET	630
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST/WEST STREET	70
NUMBER OF HOURS SATISFIED:	<b>2</b>
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	<b>0</b>
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	<b>3</b>
<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>



The Interruption of Continuous Traffic, Condition B, is intended for application where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street. The warrant is satisfied when, for each of any eight hours of an average day, the traffic volumes provided in the MUTCD exist on the major street and on the higher-volume minor-street approach to the intersection, and the signal installation will not seriously disrupt progressive traffic flow.



# SCOTTSDALE PLAZA RESORT RENOVATIONS

## SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS

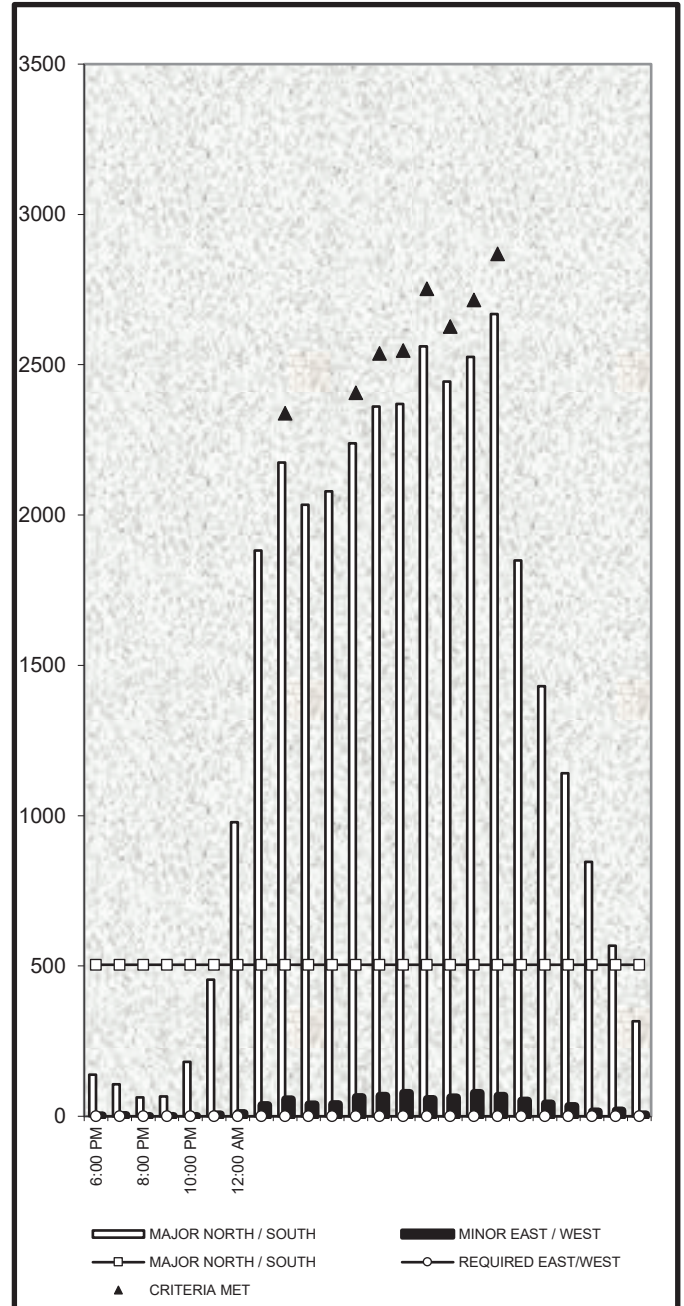
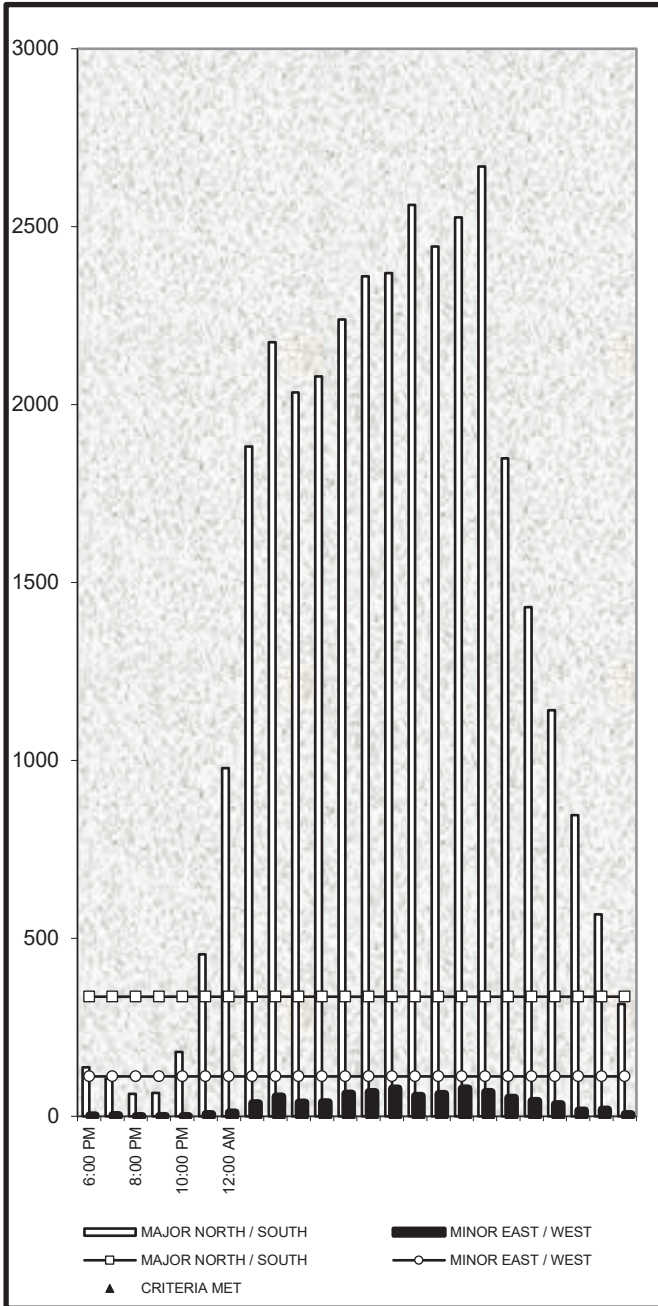
### M. U. T. C. D. WARRANT # 1

#### Combination of Conditions A and B at 56% of Original Values

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH / SOUTH STREET	336	504
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST / WEST STREET	112	80

NUMBER OF HOURS SATISFIED:	0	8
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<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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The major-street and minor-street volumes shall be for the same 8 hours for each condition; however, the 8 hours satisfied on A shall not be required to be the same 8 hours satisfied in Condition B. The combination of Conditions A and B should be applied only after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems.

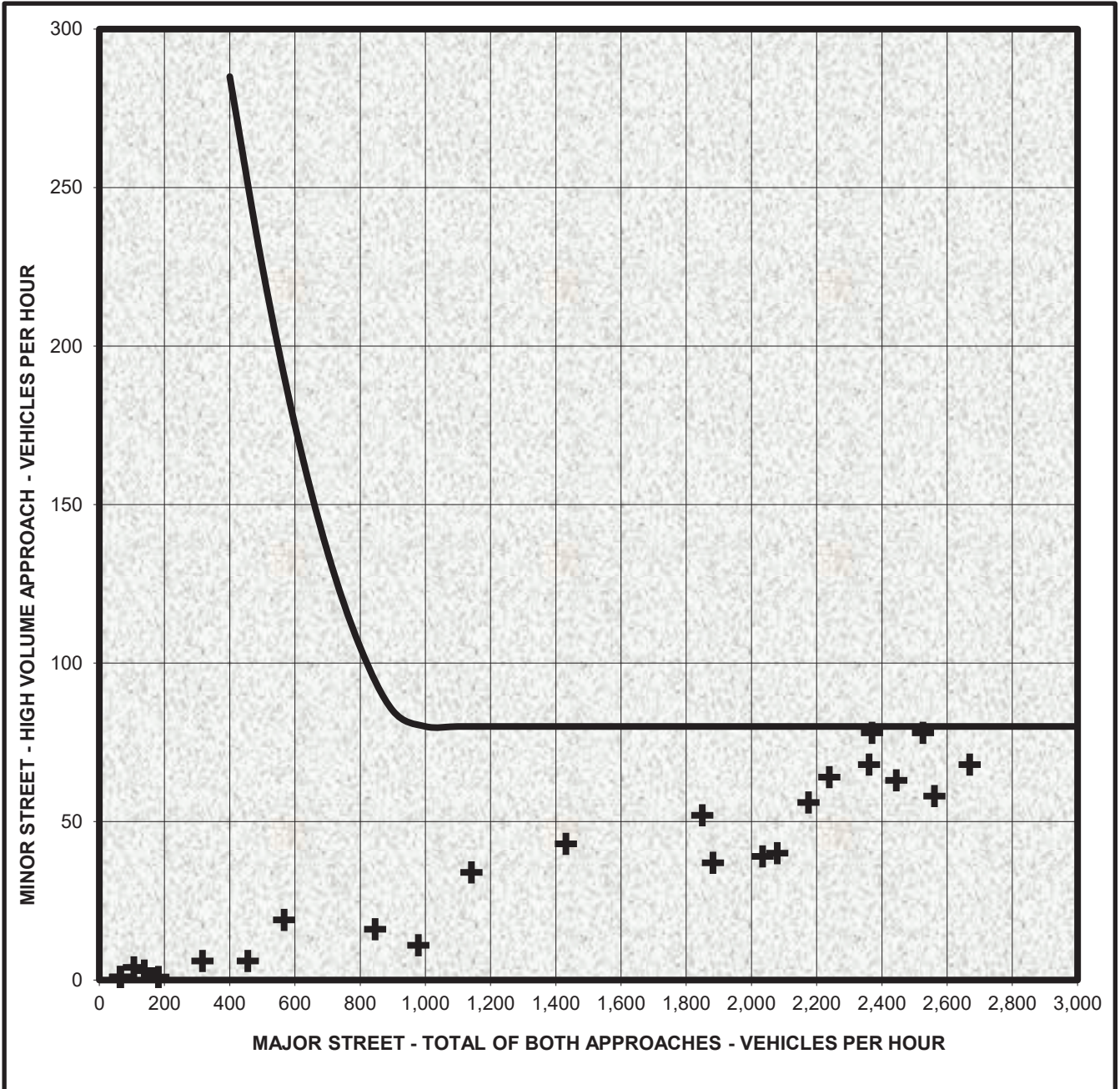


**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS**

**M. U. T. C. D. WARRANT # 2  
Four-Hour Vehicular Volume**

NUMBER OF HOURS SATISFIED:	<b>0</b>
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	<b>0</b>
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	<b>2</b>

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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The Four Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The need for a traffic control signal shall be considered if an engineering study finds that for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor-street approach (one direction only) all fall above the applicable curve provided in the MUTCD for the existing combination of approach lanes.

**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS**

**M. U. T. C. D. WARRANT # 3  
Peak Hour, Category A (Delay)**

REQUIRED SIDE STREET VEHICLE-HOURS DELAY:	5.00
REQUIRED SIDE STREET HOURLY VOLUME:	150
REQUIRED TOTAL INTERSECTION HOURLY VOLUME:	800

<b>TIME PERIOD: 7:00 AM to 8:00 AM</b>	<b>MEASURED</b>	<b>SATISFIED?</b>
SIDE STREET VEHICLE-HOURS DELAY:	1.23	NO
SIDE STREET HOURLY VOLUME:	37	NO
TOTAL INTERSECTION HOURLY VOLUME:	1927	YES
<b>ALL CRITERIA</b>		<b>NO</b>

<b>TIME PERIOD: 5:00 PM to 6:00 PM</b>	<b>MEASURED</b>	<b>SATISFIED?</b>
SIDE STREET VEHICLE-HOURS DELAY:	2.27	NO
SIDE STREET HOURLY VOLUME:	68	NO
TOTAL INTERSECTION HOURLY VOLUME:	2769	YES
<b>ALL CRITERIA</b>		<b>NO</b>

The Peak Hour signal warrant is intended for use at a location where traffic conditions are such that for a minimum of 1 hour of an average day, the minor-street suffers undue delay when entering or crossing the major street.

This signal warrant shall be applied only in unusual cases. Such cases include, but are not limited to, office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.

The need for a traffic control signal shall be considered if an engineering study finds that all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:

1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and
2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and
3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.

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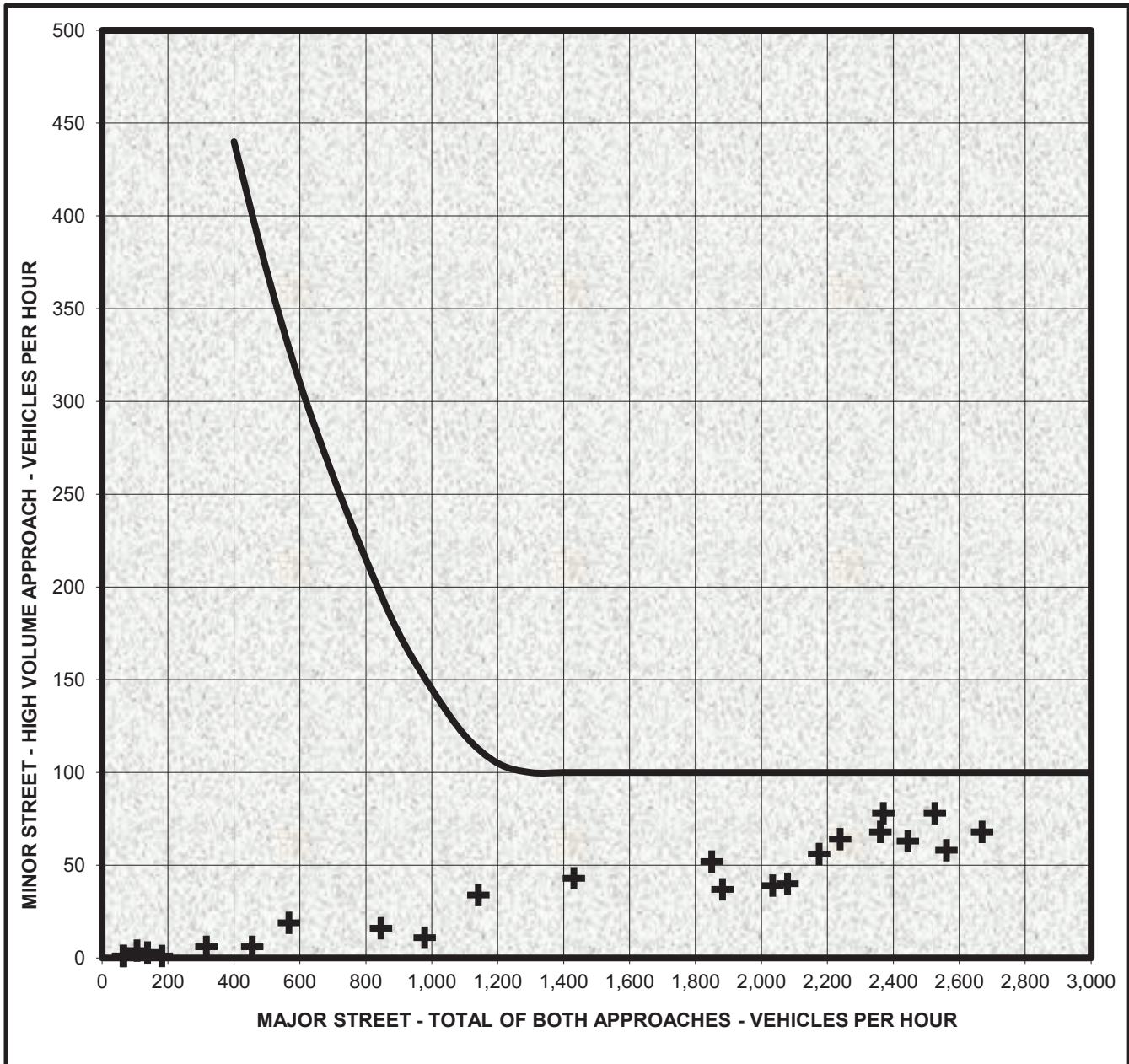


**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS**

**M. U. T. C. D. WARRANT # 3  
One-Hour Vehicular Volume**

NUMBER OF HOURS SATISFIED:	0
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	0
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	0

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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The Four Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The need for a traffic control signal shall be considered if an engineering study finds that for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor-street approach (one direction only) all fall above the applicable curve provided in the MUTCD for the existing combination of approach lanes.

**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS  
MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES  
TRAFFIC CONTROL SIGNAL WARRANT STUDY SUMMARY**

LOCATION:	<b>PARADISE VALLEY, ARIZONA</b>		
SPECIAL CONDITIONS:	<b>NONE</b>		
DATE OF COUNT:	8/5/2022		
DATE OF STUDY:	8/13/2022		
NORTH/SOUTH STREET:	SCOTTSDALE ROAD	MAJOR	MULTI-LANE
EAST/WEST STREET:	SCOTTSDALE PLAZA RESORT ACCESS	MINOR	MULTI-LANE
POSTED SPEED LIMIT ON MAJOR STREET:	45 mph		
85th PERCENTILE SPEED ON MAJOR STREET:	Unknown		

WARRANT	EXISTING	REQUIRED	SATISFIED?
# 1. EIGHT-HOUR VEHICULAR VOLUME			
A. MINIMUM VEHICULAR VOLUME	0	8	NO
B. INTERRUPTION OF CONTINUOUS TRAFFIC	5	8	NO
COMBINATION OF WARRANTS 1A AND 1B (80% of Values)	-	-	Not Applicable
COMBINATION OF WARRANTS 1A AND 1B (56% of Values)	0	8	NO
# 2. FOUR-HOUR VEHICULAR VOLUME	0	4	NO
# 3. PEAK HOUR			
A. PEAK HOUR DELAY - AM	1	3	NO
A. PEAK HOUR DELAY - PM	1	3	NO
B. PEAK HOUR VOLUME	0	1	NO
# 7. CRASH EXPERIENCE			
WITH WARRANT # 1A (Traffic Volumes at 80% of Original Values)	-	-	Not Applicable
WITH WARRANT # 1B (Traffic Volumes at 80% of Original Values)	-	-	Not Applicable
WITH WARRANT # 1A (Traffic Volumes at 56% of Original Values)	0	8	NO
WITH WARRANT # 1B (Traffic Volumes at 56% of Original Values)	0	8	NO
TOTAL NUMBER OF CRASHES	4	-	-
NUMBER OF POTENTIALLY PREVENTABLE CRASHES	1	5	NO
HAVE LESS RESTRICTIVE MEANS BEEN ATTEMPTED?	NO	-	NO
# 7. ENTIRE WARRANT	-	-	NO

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.



**TRAFFIC CONTROL SIGNAL WARRANT ESTIMATION  
LANE NUMBER, SPEED, AND VOLUME DATA**

LOCATION: **SCOTTSDALE PLAZA RESORT RENOVATIONS**  
 DATE AND DAY: **8/5/2022 FRIDAY**

NORTH / SOUTH STREET: **SCOTTSDALE ROAD** LANES: **3**  
 EAST / WEST STREET: **SCOTTSDALE PLAZA RESORT ACCESS** LANES: **2**

MAJOR STREET SPEED LIMIT OR 85<sup>th</sup> PERCENTILE SPEED: **45**

CONDITIONS: **NONE**

END TIME	STREET TRAFFIC VOLUMES			
	NB	SB	EB	WB
1:00 AM	132	106	4	1
2:00 AM	138	62	1	3
3:00 AM	74	50	1	0
4:00 AM	47	38	1	1
5:00 AM	110	93	4	0
6:00 AM	240	220	3	8
7:00 AM	491	459	12	17
8:00 AM	917	959	10	39
9:00 AM	983	1000	16	42
10:00 AM	972	1069	25	52
11:00 AM	1017	1102	25	65
12:00 PM	1231	1165	25	70
1:00 PM	1235	1296	31	79
2:00 PM	1316	1224	35	53
3:00 PM	1350	1334	22	74
4:00 PM	1334	1250	40	62
5:00 PM	1280	1287	15	78
6:00 PM	1240	1302	34	73
7:00 PM	1016	1022	23	41
8:00 PM	883	839	18	40
9:00 PM	779	725	28	24
10:00 PM	625	588	24	27
11:00 PM	467	446	14	15
12:00 AM	312	285	7	11
<b>TOTAL</b>	<b>18,189</b>	<b>17,921</b>	<b>418</b>	<b>875</b>

WARRANT	CRITERIA		REQUIRED HOURS	ACTUAL HOURS	SATISFIED?	PROXIMITY	
	MAJOR	MINOR				Major	Minor
#1A	420	140	8	0	NO	Satisfied	164%
#1B	630	70	8	5	NO	Satisfied	32%
#1A with #1B	480	56	8	7	NO	Satisfied	6%
#1B with #1A	720	112	8	0		Satisfied	111%
#2	Varying Graph		4	0	NO		10%
#3B	Varying Graph		1	0	NO		

Checked by: PEB 8/13/2022



**TRAFFIC CONTROL SIGNAL WARRANT STUDY  
LANE NUMBER, SPEED, AND VOLUME DATA**

PROJECT: **SCOTTSDALE PLAZA RESORT RENOVATIONS**  
 LOCATION: **PARADISE VALLEY, ARIZONA**

NORTH/SOUTH STREET:

**SCOTTSDALE ROAD**  
 NB LANES **3**  
 SB LANES **3**

EAST/WEST STREET:

**SCOTTSDALE PLAZA RESORT ACCESS**  
 EB LANES **2**  
 WB LANES **2**

SPEED LIMIT ON MAJOR STREET: **45**  
 85TH PERCENTILE SPEED ON MAJOR STREET: **UNKNOWN**

VOLUME DATA: **EXISTING WEEKDAY**

DATE OF COUNT: **8/5/2022** **FRIDAY**  
 DATE OF STUDY: **8/13/2022**

SPECIAL CONDITIONS: **NONE**

INTERSECTION APPROACH TRAFFIC VOLUMES				
TIME	NORTHBOUND	SOUTHBOUND	EASTBOUND	WESTBOUND
1:00 AM	132	106	4	1
2:00 AM	138	62	1	3
3:00 AM	74	50	1	0
4:00 AM	47	38	1	1
5:00 AM	110	93	4	0
6:00 AM	240	220	3	8
7:00 AM	491	459	12	17
8:00 AM	917	959	10	39
9:00 AM	983	1000	16	42
10:00 AM	972	1069	25	52
11:00 AM	1017	1102	25	65
12:00 PM	1231	1165	25	70
1:00 PM	1235	1296	31	79
2:00 PM	1316	1224	35	53
3:00 PM	1350	1334	22	74
4:00 PM	1334	1250	40	62
5:00 PM	1280	1287	15	78
6:00 PM	1240	1302	34	73
7:00 PM	1016	1022	23	41
8:00 PM	883	839	18	40
9:00 PM	779	725	28	24
10:00 PM	625	588	24	27
11:00 PM	467	446	14	15
12:00 AM	312	285	7	11
<b>TOTAL</b>	<b>18,189</b>	<b>17,921</b>	<b>418</b>	<b>875</b>

Checked by: PEB 8/13/2022



**TRAFFIC CONTROL SIGNAL WARRANT STUDY  
CRASH EXPERIENCE AND DELAY DATA**

**SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS**

**CRASH EXPERIENCE DATA**

HAVE LESS RESTRICTIVE MEANS BEEN ATTEMPTED?

**NO**

TOTAL NUMBER OF CRASHES IN A 12 MONTH PERIOD:

**4**

NUMBER OF POTENTIALLY PREVENTABLE CRASHES  
IN A 12 MONTH PERIOD:

**1**

WILL SIGNAL DISRUPT PROGRESSIVE TRAFFIC FLOW?

**YES**

**VEHICLE DELAY DATA**

TIME PERIOD	AVERAGE DELAY SECONDS/VEHICLE	SIDE STREET TOTAL DELAY VEH-HOURS	VOLUME	TOTAL INTERSECTION VOLUME
<b>7:00 AM to 8:00 AM</b>	<b>120</b>	<b>1.30</b>	<b>39</b>	<b>1,925</b>
<b>2:00 PM to 3:00 PM</b>	<b>120</b>	<b>2.47</b>	<b>74</b>	<b>2,780</b>

Checked by: PEB 8/13/2022





## SCOTTSDALE PLAZA RESORT RENOVATIONS SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS

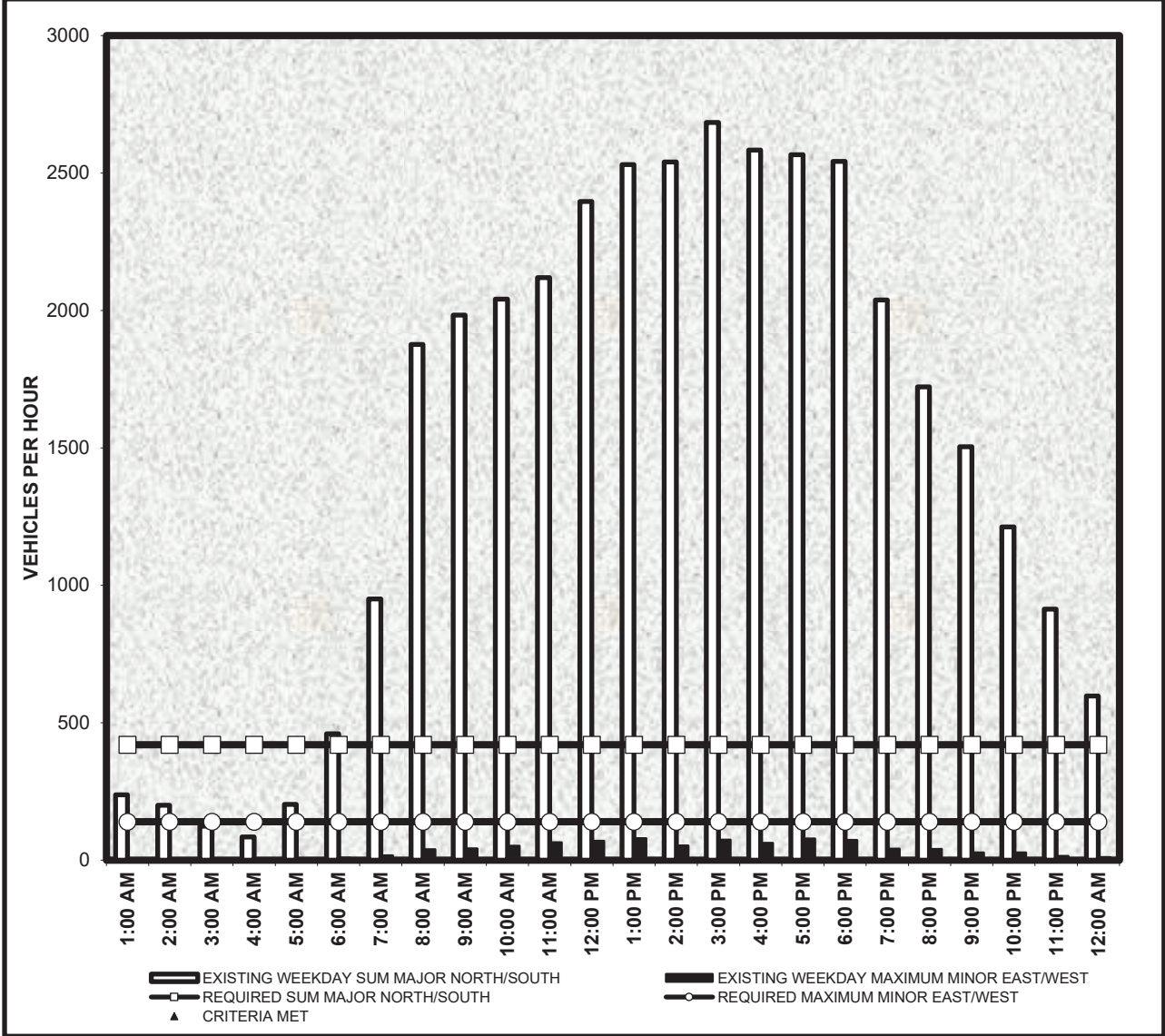
### M. U. T. C. D. WARRANT # 1A

#### Minimum Vehicular Volume

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH/SOUTH STREET	420
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST/WEST STREET	140

NUMBER OF HOURS SATISFIED:	0
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	0
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	0

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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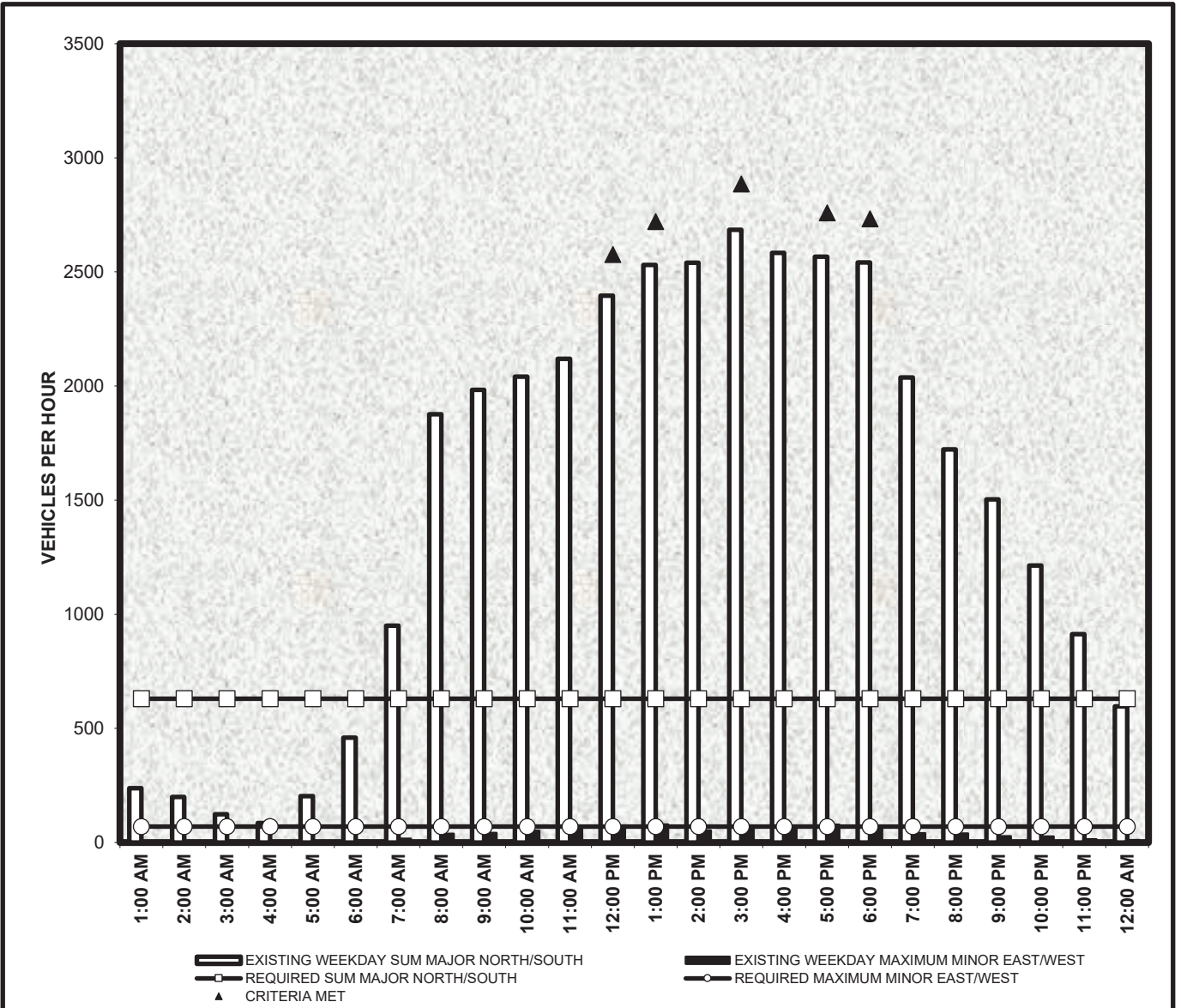
The Minimum Vehicular Volume, Condition A, is intended for application where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The warrant is satisfied when, for each of any eight hours of an average day, the traffic volumes provided in the MUTCD exist on the major street and on the higher-volume minor-street approach to the intersection, and the signal installation will not seriously disrupt progressive traffic flow.



**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS**

**M. U. T. C. D. WARRANT # 1B  
Interruption of Continuous Traffic**

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH/SOUTH STREET	630
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST/WEST STREET	70
NUMBER OF HOURS SATISFIED:	<b>5</b>
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	<b>3</b>
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	<b>1</b>
<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>



The Interruption of Continuous Traffic, Condition B, is intended for application where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street. The warrant is satisfied when, for each of any eight hours of an average day, the traffic volumes provided in the MUTCD exist on the major street and on the higher-volume minor-street approach to the intersection, and the signal installation will not seriously disrupt progressive traffic flow.

# SCOTTSDALE PLAZA RESORT RENOVATIONS

## SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS

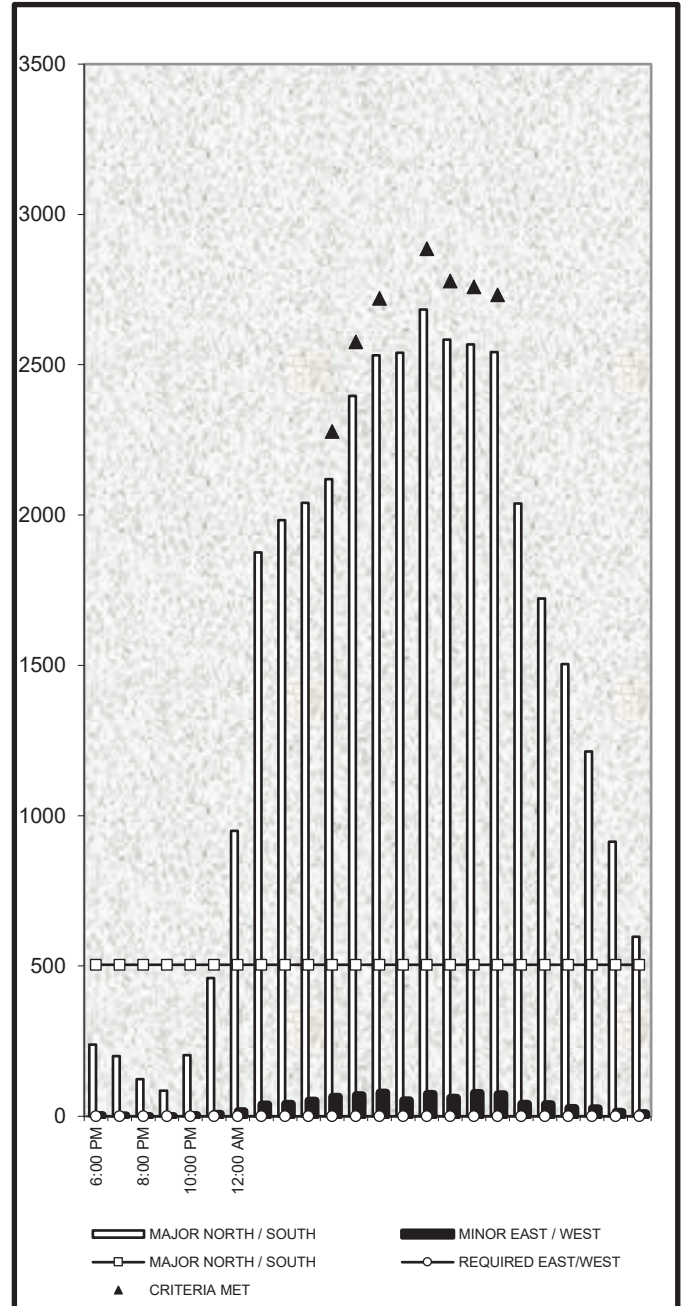
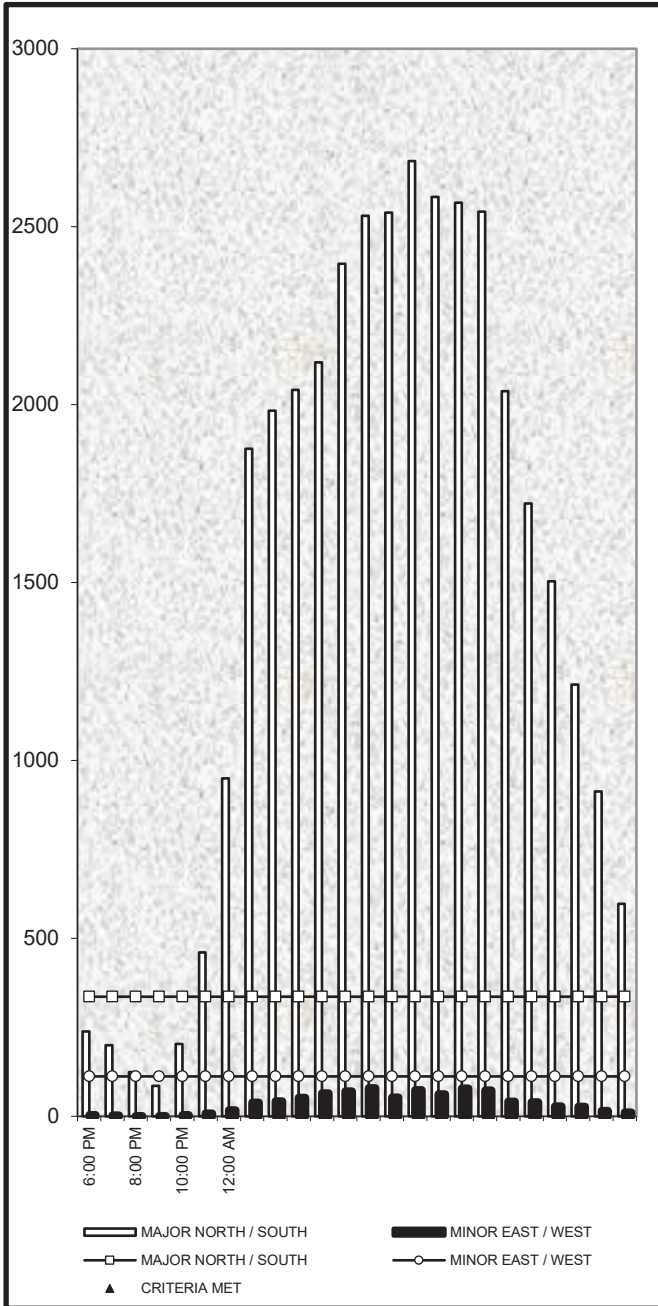
### M. U. T. C. D. WARRANT # 1

#### Combination of Conditions A and B at 56% of Original Values

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH / SOUTH STREET	336	504
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST / WEST STREET	112	80

NUMBER OF HOURS SATISFIED:	0	7
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<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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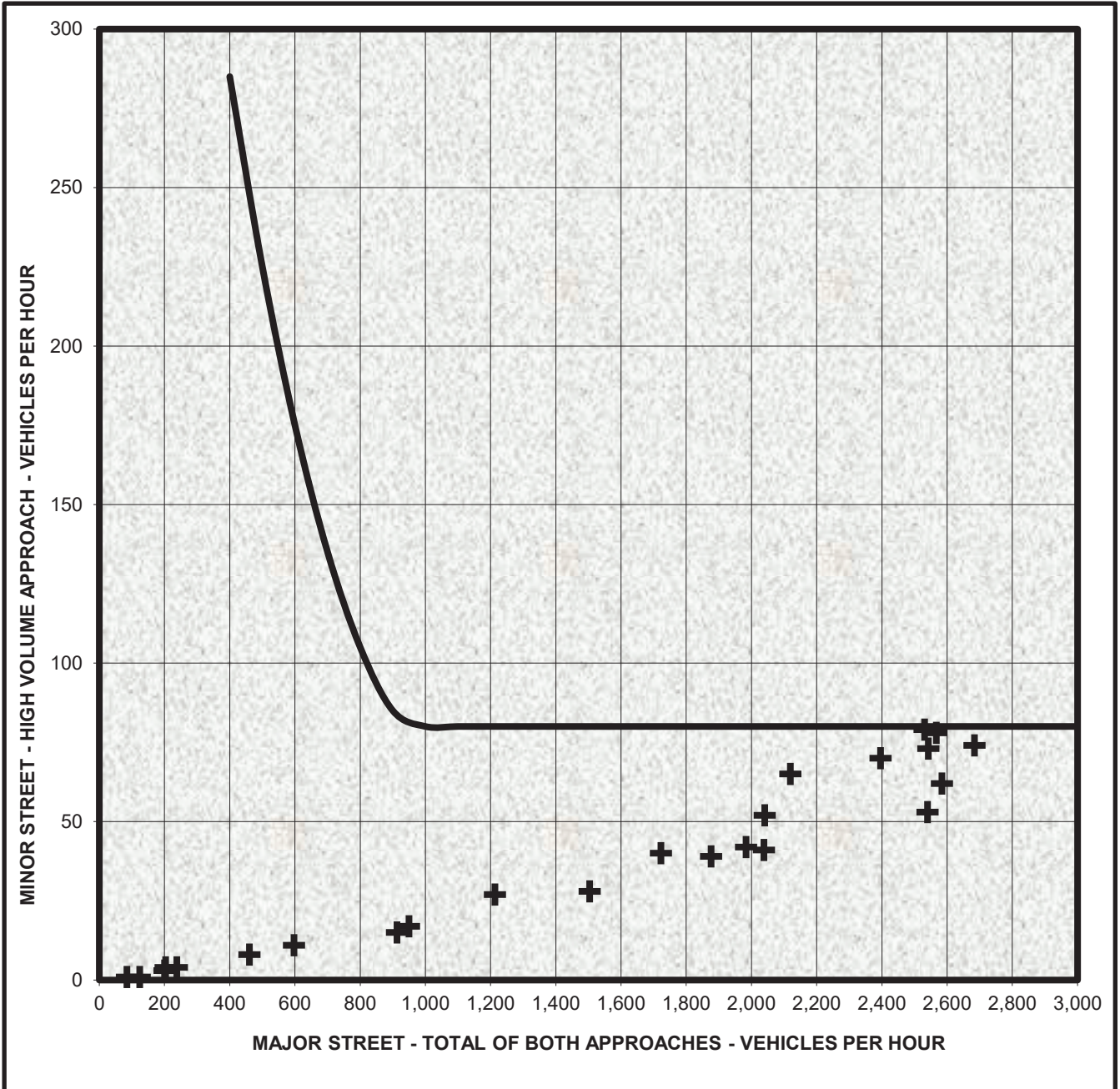
The major-street and minor-street volumes shall be for the same 8 hours for each condition; however, the 8 hours satisfied on A shall not be required to be the same 8 hours satisfied in Condition B. The combination of Conditions A and B should be applied only after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems.

**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS**

**M. U. T. C. D. WARRANT # 2  
Four-Hour Vehicular Volume**

NUMBER OF HOURS SATISFIED:	<b>0</b>
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	<b>0</b>
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	<b>4</b>

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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The Four Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The need for a traffic control signal shall be considered if an engineering study finds that for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor-street approach (one direction only) all fall above the applicable curve provided in the MUTCD for the existing combination of approach lanes.

**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS**

**M. U. T. C. D. WARRANT # 3  
Peak Hour, Category A (Delay)**

REQUIRED SIDE STREET VEHICLE-HOURS DELAY:	5.00
REQUIRED SIDE STREET HOURLY VOLUME:	150
REQUIRED TOTAL INTERSECTION HOURLY VOLUME:	800

<b>TIME PERIOD: 7:00 AM to 8:00 AM</b>	<b>MEASURED</b>	<b>SATISFIED?</b>
SIDE STREET VEHICLE-HOURS DELAY:	1.30	NO
SIDE STREET HOURLY VOLUME:	39	NO
TOTAL INTERSECTION HOURLY VOLUME:	1925	YES
<b>ALL CRITERIA</b>		<b>NO</b>

<b>TIME PERIOD: 2:00 PM to 3:00 PM</b>	<b>MEASURED</b>	<b>SATISFIED?</b>
SIDE STREET VEHICLE-HOURS DELAY:	2.47	NO
SIDE STREET HOURLY VOLUME:	74	NO
TOTAL INTERSECTION HOURLY VOLUME:	2780	YES
<b>ALL CRITERIA</b>		<b>NO</b>

The Peak Hour signal warrant is intended for use at a location where traffic conditions are such that for a minimum of 1 hour of an average day, the minor-street suffers undue delay when entering or crossing the major street.

This signal warrant shall be applied only in unusual cases. Such cases include, but are not limited to, office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.

The need for a traffic control signal shall be considered if an engineering study finds that all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:

1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and
2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and
3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.

Checked by: PEB 8/13/2022

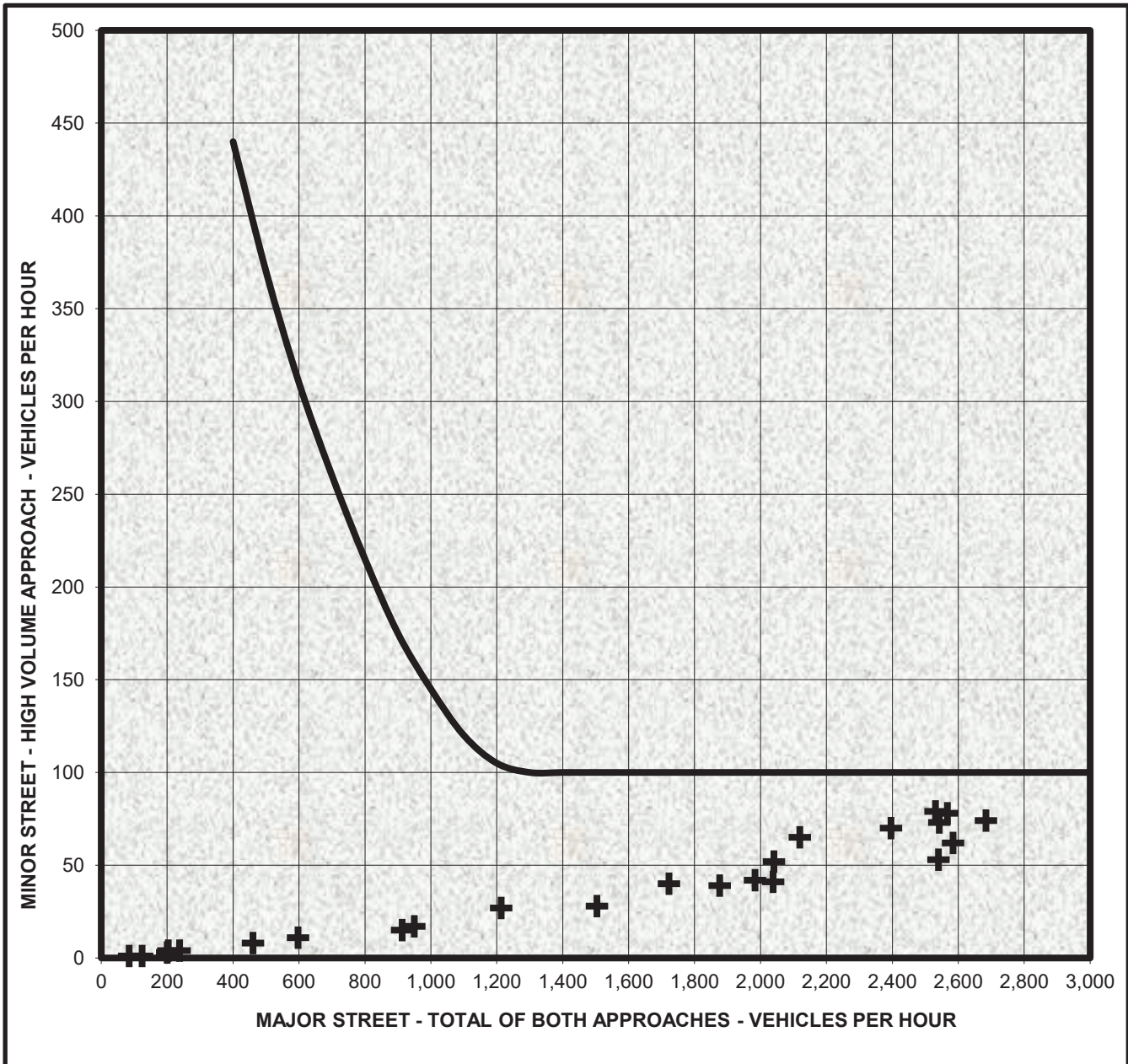


**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS**

**M. U. T. C. D. WARRANT # 3  
One-Hour Vehicular Volume**

NUMBER OF HOURS SATISFIED:	0
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	0
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	0

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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The Four Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The need for a traffic control signal shall be considered if an engineering study finds that for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor-street approach (one direction only) all fall above the applicable curve provided in the MUTCD for the existing combination of approach lanes.





**TRAFFIC CONTROL SIGNAL WARRANT ESTIMATION  
LANE NUMBER, SPEED, AND VOLUME DATA**

LOCATION: **SCOTTSDALE PLAZA RESORT RENOVATIONS**  
 DATE AND DAY: **8/6/2022 SATURDAY**

NORTH / SOUTH STREET: **SCOTTSDALE ROAD** LANES: **3**  
 EAST / WEST STREET: **SCOTTSDALE PLAZA RESORT ACCESS** LANES: **2**

MAJOR STREET SPEED LIMIT OR 85<sup>th</sup> PERCENTILE SPEED: **45**

CONDITIONS: **NONE**

END TIME	STREET TRAFFIC VOLUMES			
	NB	SB	EB	WB
1:00 AM	249	170	10	9
2:00 AM	223	133	2	0
3:00 AM	212	92	0	0
4:00 AM	108	71	1	0
5:00 AM	67	40	2	0
6:00 AM	154	100	3	7
7:00 AM	305	219	10	14
8:00 AM	466	404	24	20
9:00 AM	676	608	28	21
10:00 AM	834	916	23	44
11:00 AM	931	1074	35	60
12:00 PM	1110	1192	29	62
1:00 PM	1131	1210	33	63
2:00 PM	1085	1209	18	66
3:00 PM	1167	1128	37	53
4:00 PM	1110	1102	29	59
5:00 PM	1078	1041	25	41
6:00 PM	1081	978	29	56
7:00 PM	1032	1022	19	23
8:00 PM	821	805	25	28
9:00 PM	827	627	14	20
10:00 PM	622	583	20	22
11:00 PM	489	469	18	15
12:00 AM	385	305	13	13
TOTAL	16,163	15,498	447	696

WARRANT	CRITERIA		REQUIRED HOURS	ACTUAL HOURS	SATISFIED?	PROXIMITY	
	MAJOR	MINOR				Major	Minor
#1A	420	140	8	0	NO	Satisfied	241%
#1B	630	70	8	0	NO	Satisfied	71%
#1A with #1B	480	56	8	6	NO	Satisfied	37%
#1B with #1A	720	112	8	0		Satisfied	173%
#2	Varying Graph		4	0	NO		33%
#3B	Varying Graph		1	0	NO		

Checked by: PEB 8/13/2022



**TRAFFIC CONTROL SIGNAL WARRANT STUDY  
LANE NUMBER, SPEED, AND VOLUME DATA**

PROJECT: **SCOTTSDALE PLAZA RESORT RENOVATIONS**  
 LOCATION: **PARADISE VALLEY, ARIZONA**

NORTH/SOUTH STREET:

**SCOTTSDALE ROAD**  
 NB LANES: **3**  
 SB LANES: **3**

EAST/WEST STREET:

**SCOTTSDALE PLAZA RESORT ACCESS**  
 EB LANES: **2**  
 WB LANES: **2**

SPEED LIMIT ON MAJOR STREET: **45**  
 85TH PERCENTILE SPEED ON MAJOR STREET: **UNKNOWN**

VOLUME DATA: **EXISTING WEEKDAY**

DATE OF COUNT: **8/6/2022**      **SATURDAY**  
 DATE OF STUDY: **8/13/2022**

SPECIAL CONDITIONS: **NONE**

INTERSECTION APPROACH TRAFFIC VOLUMES				
TIME	NORTHBOUND	SOUTHBOUND	EASTBOUND	WESTBOUND
1:00 AM	249	170	10	9
2:00 AM	223	133	2	0
3:00 AM	212	92	0	0
4:00 AM	108	71	1	0
5:00 AM	67	40	2	0
6:00 AM	154	100	3	7
7:00 AM	305	219	10	14
8:00 AM	466	404	24	20
9:00 AM	676	608	28	21
10:00 AM	834	916	23	44
11:00 AM	931	1074	35	60
12:00 PM	1110	1192	29	62
1:00 PM	1131	1210	33	63
2:00 PM	1085	1209	18	66
3:00 PM	1167	1128	37	53
4:00 PM	1110	1102	29	59
5:00 PM	1078	1041	25	41
6:00 PM	1081	978	29	56
7:00 PM	1032	1022	19	23
8:00 PM	821	805	25	28
9:00 PM	827	627	14	20
10:00 PM	622	583	20	22
11:00 PM	489	469	18	15
12:00 AM	385	305	13	13
<b>TOTAL</b>	<b>16,163</b>	<b>15,498</b>	<b>447</b>	<b>696</b>

Checked by: PEB 8/13/2022





**TRAFFIC CONTROL SIGNAL WARRANT STUDY  
CRASH EXPERIENCE AND DELAY DATA**

**SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS**

**CRASH EXPERIENCE DATA**

HAVE LESS RESTRICTIVE MEANS BEEN ATTEMPTED?

**NO**

TOTAL NUMBER OF CRASHES IN A 12 MONTH PERIOD:

**5**

NUMBER OF POTENTIALLY PREVENTABLE CRASHES  
IN A 12 MONTH PERIOD:

**1**

WILL SIGNAL DISRUPT PROGRESSIVE TRAFFIC FLOW?

**YES**

**VEHICLE DELAY DATA**

TIME PERIOD	AVERAGE DELAY SECONDS/VEHICLE	SIDE STREET TOTAL DELAY VEH-HOURS	VOLUME	TOTAL INTERSECTION VOLUME
<b>7:00 AM to 8:00 AM</b>	<b>120</b>	<b>0.80</b>	<b>24</b>	<b>914</b>
<b>2:00 PM to 3:00 PM</b>	<b>120</b>	<b>1.77</b>	<b>53</b>	<b>2,385</b>

Checked by: PEB 8/13/2022



## SCOTTSDALE PLAZA RESORT RENOVATIONS SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS

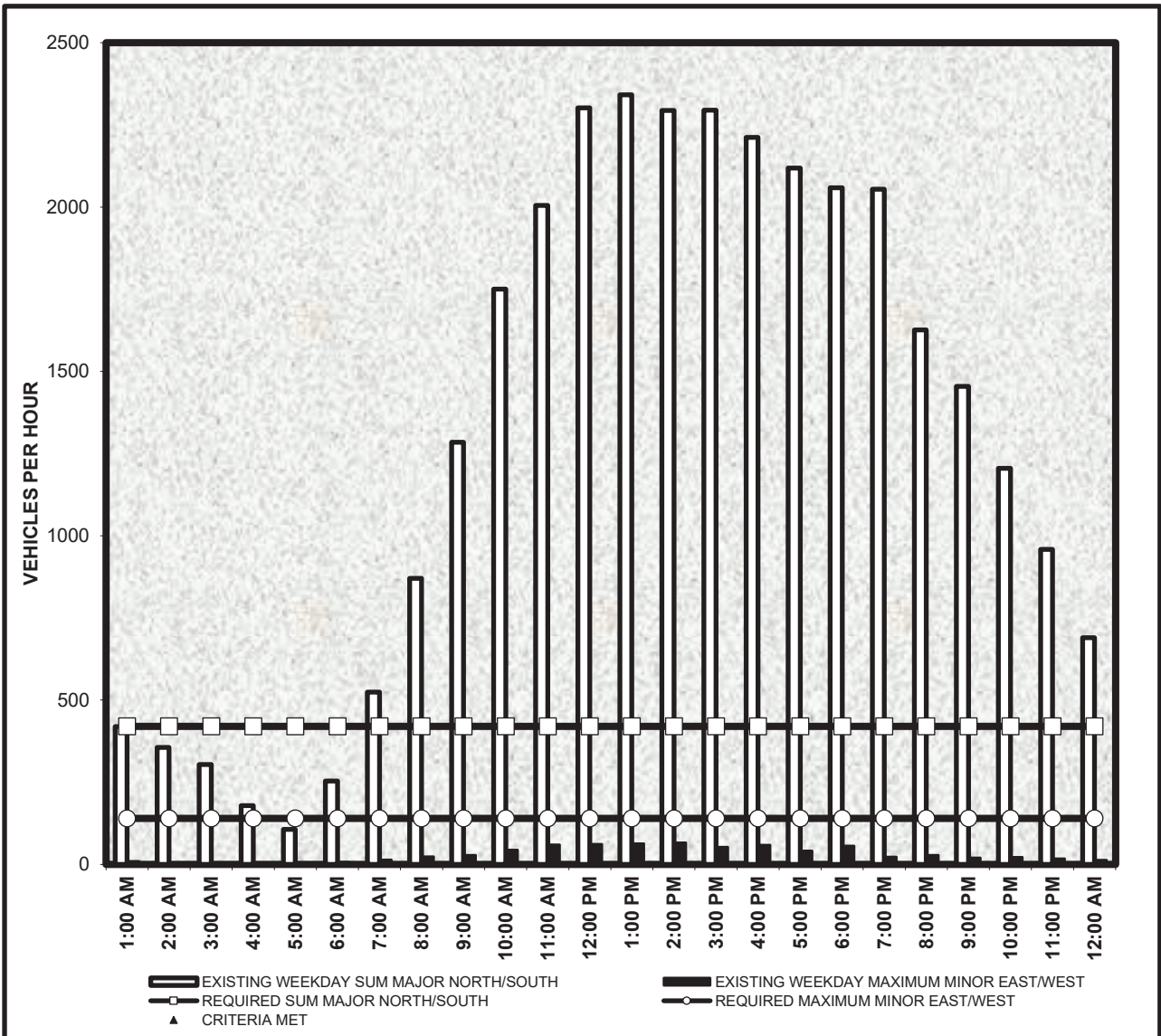
### M. U. T. C. D. WARRANT # 1A

#### Minimum Vehicular Volume

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH/SOUTH STREET	420
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST/WEST STREET	140

NUMBER OF HOURS SATISFIED:	0
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	0
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	0

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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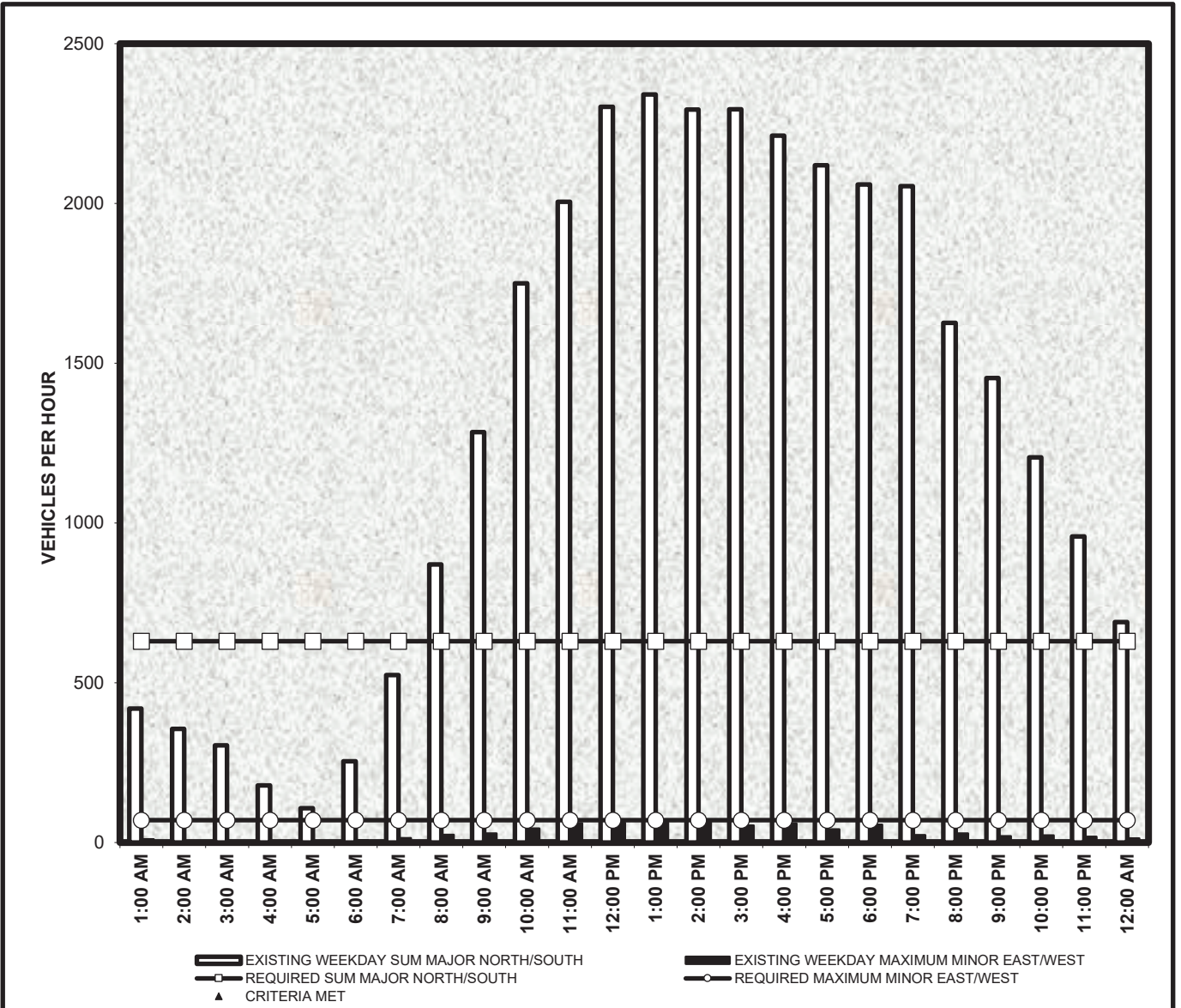
The Minimum Vehicular Volume, Condition A, is intended for application where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The warrant is satisfied when, for each of any eight hours of an average day, the traffic volumes provided in the MUTCD exist on the major street and on the higher-volume minor-street approach to the intersection, and the signal installation will not seriously disrupt progressive traffic flow.

**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS**

**M. U. T. C. D. WARRANT # 1B  
Interruption of Continuous Traffic**

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH/SOUTH STREET	630
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST/WEST STREET	70
NUMBER OF HOURS SATISFIED:	<b>0</b>
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	<b>0</b>
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	<b>1</b>

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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The Interruption of Continuous Traffic, Condition B, is intended for application where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street. The warrant is satisfied when, for each of any eight hours of an average day, the traffic volumes provided in the MUTCD exist on the major street and on the higher-volume minor-street approach to the intersection, and the signal installation will not seriously disrupt progressive traffic flow.

# SCOTTSDALE PLAZA RESORT RENOVATIONS

## SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS

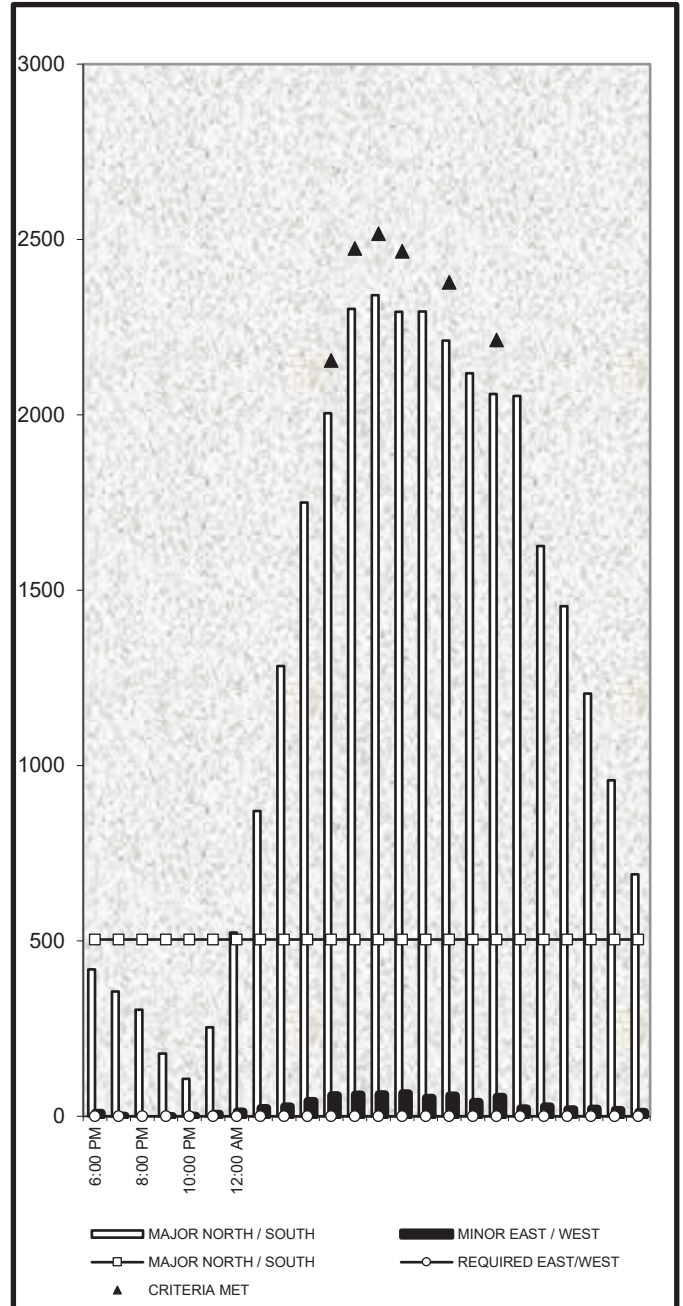
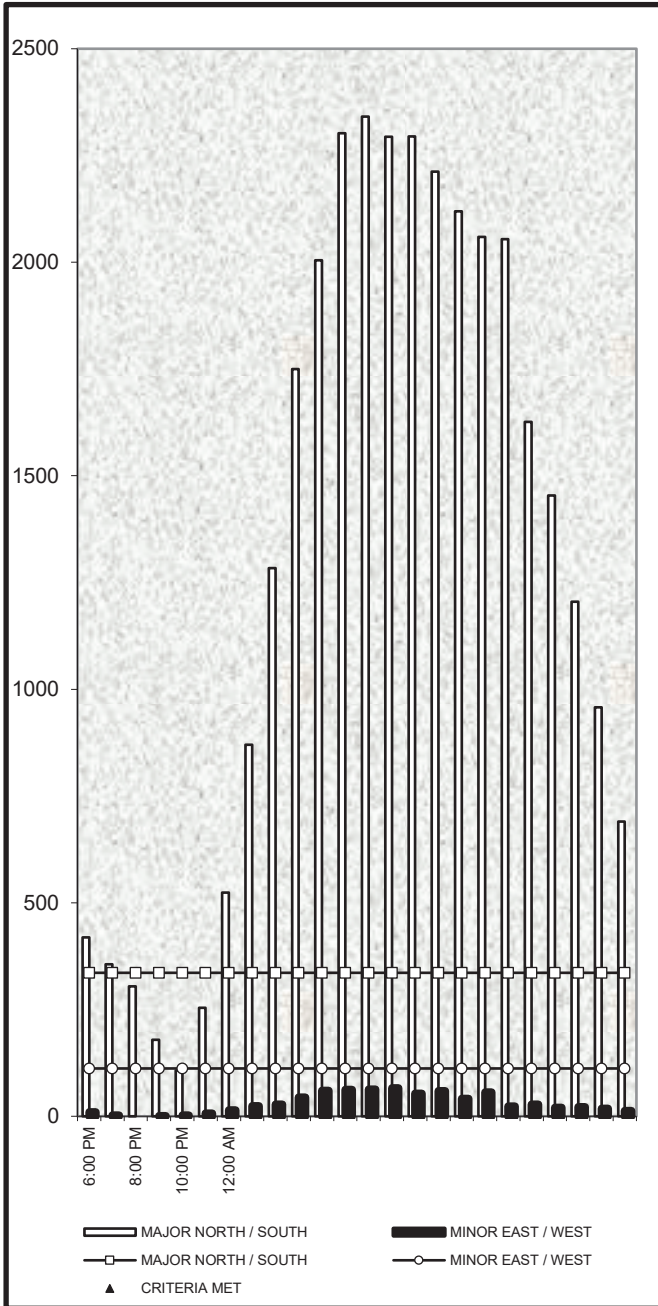
### M. U. T. C. D. WARRANT # 1

**Combination of Conditions A and B at 56% of Original Values**

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH / SOUTH STREET	336	504
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST / WEST STREET	112	80

NUMBER OF HOURS SATISFIED:	0	6
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<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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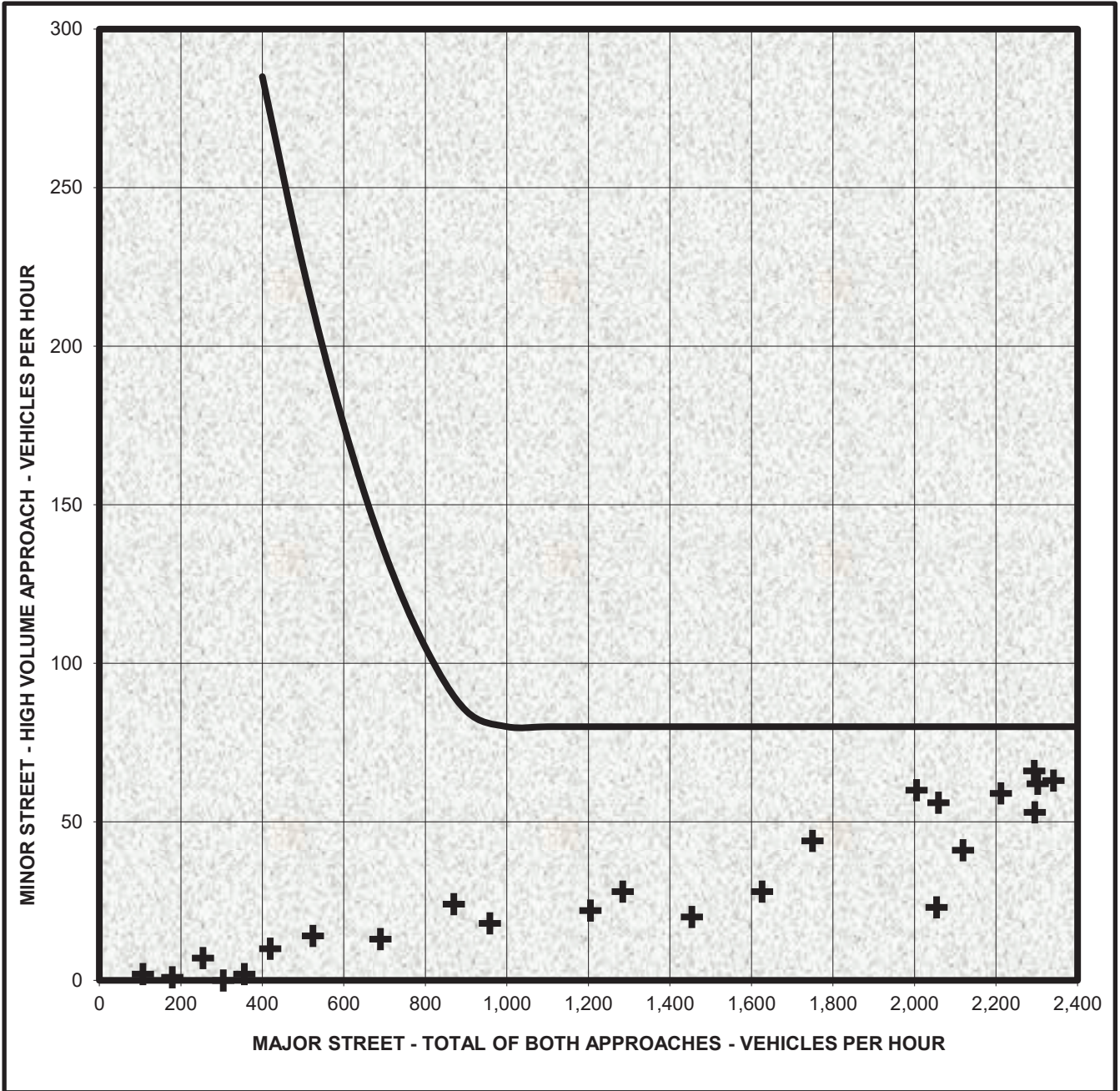
The major-street and minor-street volumes shall be for the same 8 hours for each condition; however, the 8 hours satisfied on A shall not be required to be the same 8 hours satisfied in Condition B. The combination of Conditions A and B should be applied only after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems.

**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS**

**M. U. T. C. D. WARRANT # 2  
Four-Hour Vehicular Volume**

NUMBER OF HOURS SATISFIED:	0
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	0
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	0

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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The Four Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The need for a traffic control signal shall be considered if an engineering study finds that for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor-street approach (one direction only) all fall above the applicable curve provided in the MUTCD for the existing combination of approach lanes.

**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS**

**M. U. T. C. D. WARRANT # 3  
Peak Hour, Category A (Delay)**

REQUIRED SIDE STREET VEHICLE-HOURS DELAY:	5.00
REQUIRED SIDE STREET HOURLY VOLUME:	150
REQUIRED TOTAL INTERSECTION HOURLY VOLUME:	800

<b>TIME PERIOD: 7:00 AM to 8:00 AM</b>	<b>MEASURED</b>	<b>SATISFIED?</b>
SIDE STREET VEHICLE-HOURS DELAY:	0.80	NO
SIDE STREET HOURLY VOLUME:	24	NO
TOTAL INTERSECTION HOURLY VOLUME:	914	YES
<b>ALL CRITERIA</b>		<b>NO</b>

<b>TIME PERIOD: 2:00 PM to 3:00 PM</b>	<b>MEASURED</b>	<b>SATISFIED?</b>
SIDE STREET VEHICLE-HOURS DELAY:	1.77	NO
SIDE STREET HOURLY VOLUME:	53	NO
TOTAL INTERSECTION HOURLY VOLUME:	2385	YES
<b>ALL CRITERIA</b>		<b>NO</b>

The Peak Hour signal warrant is intended for use at a location where traffic conditions are such that for a minimum of 1 hour of an average day, the minor-street suffers undue delay when entering or crossing the major street.

This signal warrant shall be applied only in unusual cases. Such cases include, but are not limited to, office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.

The need for a traffic control signal shall be considered if an engineering study finds that all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:

1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and
2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and
3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.

Checked by: PEB 8/13/2022



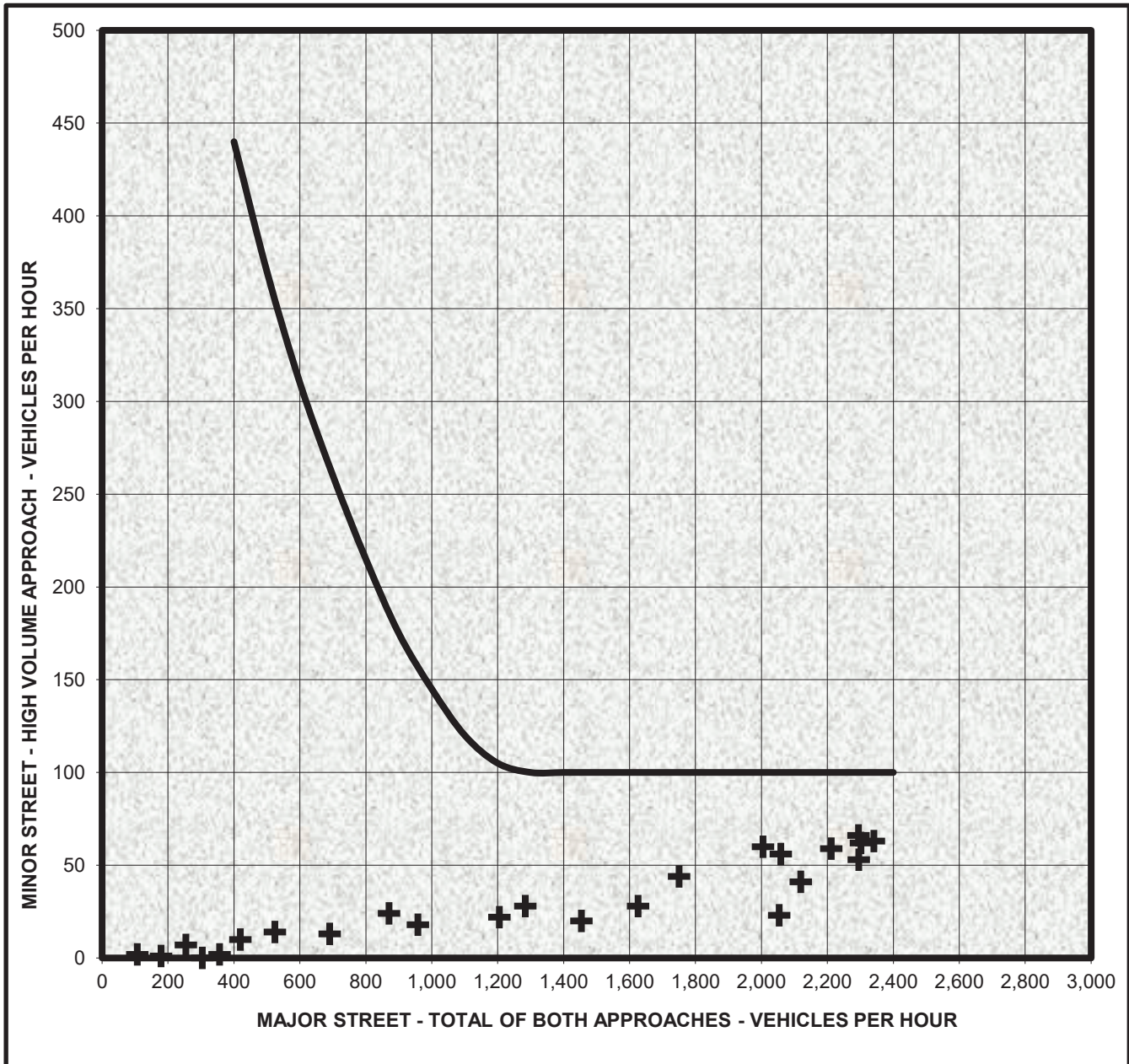


**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and SCOTTSDALE PLAZA RESORT ACCESS**

**M. U. T. C. D. WARRANT # 3  
One-Hour Vehicular Volume**

NUMBER OF HOURS SATISFIED:	0
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	0
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	0

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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The Four Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The need for a traffic control signal shall be considered if an engineering study finds that for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor-street approach (one direction only) all fall above the applicable curve provided in the MUTCD for the existing combination of approach lanes.

Checked by: PEB 8/13/2022



**TRAFFIC CONTROL SIGNAL WARRANT ESTIMATION  
LANE NUMBER, SPEED, AND VOLUME DATA**

LOCATION: **SCOTTSDALE PLAZA RESORT RENOVATIONS**  
 DATE AND DAY: **2025 WITH PLAZA RESORT EXPANSION**

NORTH / SOUTH STREET: **SCOTTSDALE ROAD** LANES: **3**  
 EAST / WEST STREET: **SCOTTSDALE PLAZA RESORT ACCESS** LANES: **2**

MAJOR STREET SPEED LIMIT OR 85<sup>th</sup> PERCENTILE SPEED: **45**

CONDITIONS: **EXCLUDING EASTBOUND RIGHT-TURNS**

END TIME	STREET TRAFFIC VOLUMES			
	NB	SB	EB	WB
1:00 AM	136	118	9	1
2:00 AM	138	69	1	3
3:00 AM	74	50	2	0
4:00 AM	50	38	1	1
5:00 AM	113	93	5	0
6:00 AM	247	220	4	8
7:00 AM	502	463	21	17
8:00 AM	927	963	14	39
9:00 AM	998	1004	29	42
10:00 AM	993	1078	39	52
11:00 AM	1067	1181	61	65
12:00 PM	1273	1228	50	70
1:00 PM	1290	1435	49	79
2:00 PM	1368	1321	78	53
3:00 PM	1412	1414	65	74
4:00 PM	1438	1319	180	62
5:00 PM	1322	1360	28	78
6:00 PM	1313	1428	88	73
7:00 PM	1070	1120	54	41
8:00 PM	938	911	54	40
9:00 PM	854	839	77	24
10:00 PM	661	683	49	27
11:00 PM	521	555	32	15
12:00 AM	330	295	25	11
TOTAL	19,035	19,185	1,015	875

WARRANT	CRITERIA		REQUIRED HOURS	ACTUAL HOURS	SATISFIED?	PROXIMITY	
	MAJOR	MINOR				Major	Minor
#1A	420	140	8	1	NO	Satisfied	115%
#1B	630	70	8	8	YES		
#1A with #1B	480	56	8	9	NO		
#1B with #1A	720	112	8	1		Satisfied	72%
#2	Varying Graph		4	2	NO		3%
#3B	Varying Graph		1	1	YES		

Checked by: PEB 12/3/2022





**TRAFFIC CONTROL SIGNAL WARRANT ESTIMATION  
LANE NUMBER, SPEED, AND VOLUME DATA**

LOCATION: **SCOTTSDALE PLAZA RESORT RENOVATIONS**  
 DATE AND DAY: **2025 WITH PLAZA RESORT EXPANSION**

NORTH / SOUTH STREET: **SCOTTSDALE ROAD** LANES: **3**  
 EAST / WEST STREET: **SCOTTSDALE PLAZA RESORT ACCESS** LANES: **2**

MAJOR STREET SPEED LIMIT OR 85<sup>th</sup> PERCENTILE SPEED: **45**

CONDITIONS: **INCLUDING ALL EASTBOUND RIGHT-TURNS**

END TIME	STREET TRAFFIC VOLUMES			
	NB	SB	EB	WB
1:00 AM	136	118	26	1
2:00 AM	138	69	7	3
3:00 AM	74	50	2	0
4:00 AM	50	38	2	1
5:00 AM	113	93	9	0
6:00 AM	247	220	7	8
7:00 AM	502	463	31	17
8:00 AM	927	963	24	39
9:00 AM	998	1004	40	42
10:00 AM	993	1078	60	52
11:00 AM	1067	1181	157	65
12:00 PM	1273	1228	146	70
1:00 PM	1290	1435	209	79
2:00 PM	1368	1321	226	53
3:00 PM	1412	1414	139	74
4:00 PM	1438	1319	271	62
5:00 PM	1322	1360	102	78
6:00 PM	1313	1428	219	73
7:00 PM	1070	1120	157	41
8:00 PM	938	911	123	40
9:00 PM	854	839	191	24
10:00 PM	661	683	152	27
11:00 PM	521	555	94	15
12:00 AM	330	295	48	11
<b>TOTAL</b>	<b>19,035</b>	<b>19,185</b>	<b>2,442</b>	<b>875</b>

WARRANT	CRITERIA		REQUIRED HOURS	ACTUAL HOURS	SATISFIED?	PROXIMITY	
	MAJOR	MINOR				Major	Minor
#1A	420	140	8	9	YES		
#1B	630	70	8	13	YES		
#1A with #1B	480	56	8	14	YES		
#1B with #1A	720	112	8	11			
#2	Varying Graph		4	13	YES		
#3B	Varying Graph		1	12	YES		

Checked by: PEB 12/3/2022



**TRAFFIC CONTROL SIGNAL WARRANT ESTIMATION  
LANE NUMBER, SPEED, AND VOLUME DATA**

LOCATION: **SCOTTSDALE PLAZA RESORT RENOVATIONS**  
 DATE AND DAY: **2025 WITH PLAZA RESORT EXPANSION**

NORTH / SOUTH STREET: **SCOTTSDALE ROAD** LANES: **3**  
 EAST / WEST STREET: **SCOTTSDALE PLAZA RESORT ACCESS** LANES: **2**

MAJOR STREET SPEED LIMIT OR 85<sup>th</sup> PERCENTILE SPEED: **45**

CONDITIONS: **INCLUDING 15% EASTBOUND RIGHT-TURNS**

END TIME	STREET TRAFFIC VOLUMES			
	NB	SB	EB	WB
1:00 AM	136	118	12	1
2:00 AM	138	69	2	3
3:00 AM	74	50	2	0
4:00 AM	50	38	1	1
5:00 AM	113	93	6	0
6:00 AM	247	220	4	8
7:00 AM	502	463	23	17
8:00 AM	927	963	16	39
9:00 AM	998	1004	31	42
10:00 AM	993	1078	42	52
11:00 AM	1067	1181	75	65
12:00 PM	1273	1228	64	70
1:00 PM	1290	1435	73	79
2:00 PM	1368	1321	100	53
3:00 PM	1412	1414	76	74
4:00 PM	1438	1319	194	62
5:00 PM	1322	1360	39	78
6:00 PM	1313	1428	108	73
7:00 PM	1070	1120	69	41
8:00 PM	938	911	64	40
9:00 PM	854	839	94	24
10:00 PM	661	683	64	27
11:00 PM	521	555	41	15
12:00 AM	330	295	28	11
<b>TOTAL</b>	<b>19,035</b>	<b>19,185</b>	<b>1,229</b>	<b>875</b>

WARRANT	CRITERIA		REQUIRED HOURS	ACTUAL HOURS	SATISFIED?	PROXIMITY	
	MAJOR	MINOR				Major	Minor
#1A	420	140	8	1	NO	Satisfied	100%
#1B	630	70	8	9	YES		
#1A with #1B	480	56	8	12	NO		
#1B with #1A	720	112	8	1		Satisfied	60%
#2	Varying Graph		4	4	YES		
#3B	Varying Graph		1	3	YES		

Checked by: PEB 12/3/2022





## Appendix F.2

### Signal Warrant Analyses Scottsdale and Hummingbird





**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE  
MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES  
TRAFFIC CONTROL SIGNAL WARRANT STUDY SUMMARY**

LOCATION: **PARADISE VALLEY, ARIZONA**

SPECIAL CONDITIONS: **NONE**

DATE OF COUNT: 8/4/2022

DATE OF STUDY: 8/13/2022

NORTH/SOUTH STREET: SCOTTSDALE ROAD

MAJOR

MULTI-LANE

EAST/WEST STREET: HUMMINGBIRD LANE

MINOR

MULTI-LANE

POSTED SPEED LIMIT ON MAJOR STREET:

45 mph

85th PERCENTILE SPEED ON MAJOR STREET:

Unknown

**WARRANT**

**EXISTING**

**REQUIRED**

**SATISFIED?**

**# 1. EIGHT-HOUR VEHICULAR VOLUME**

A. MINIMUM VEHICULAR VOLUME

0

8

NO

B. INTERRUPTION OF CONTINUOUS TRAFFIC

0

8

NO

COMBINATION OF WARRANTS 1A AND 1B (80% of Values)

-

-

Not Applicable

COMBINATION OF WARRANTS 1A AND 1B (56% of Values)

0

8

NO

**# 2. FOUR-HOUR VEHICULAR VOLUME**

0

4

NO

**# 3. PEAK HOUR**

A. PEAK HOUR DELAY - AM

1

3

NO

A. PEAK HOUR DELAY - PM

1

3

NO

B. PEAK HOUR VOLUME

0

1

NO

**# 7. CRASH EXPERIENCE**

WITH WARRANT # 1A (Traffic Volumes at 80% of Original Values)

-

-

Not Applicable

WITH WARRANT # 1B (Traffic Volumes at 80% of Original Values)

-

-

Not Applicable

WITH WARRANT # 1A (Traffic Volumes at 56% of Original Values)

0

8

NO

WITH WARRANT # 1B (Traffic Volumes at 56% of Original Values)

0

8

NO

TOTAL NUMBER OF CRASHES

4

-

-

NUMBER OF POTENTIALLY PREVENTABLE CRASHES

1

5

NO

HAVE LESS RESTRICTIVE MEANS BEEN ATTEMPTED?

NO

-

NO

**# 7. ENTIRE WARRANT**

-

-

NO

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Checked by: PEB 8/13/2022



**TRAFFIC CONTROL SIGNAL WARRANT ESTIMATION  
LANE NUMBER, SPEED, AND VOLUME DATA**

LOCATION: **SCOTTSDALE PLAZA RESORT RENOVATIONS**  
 DATE AND DAY: **8/4/2022 THURSDAY**

NORTH / SOUTH STREET: **SCOTTSDALE ROAD** LANES: **3**  
 EAST / WEST STREET: **HUMMINGBIRD LANE** LANES: **2**

MAJOR STREET SPEED LIMIT OR 85<sup>th</sup> PERCENTILE SPEED: **45**

CONDITIONS: **NONE**

END TIME	STREET TRAFFIC VOLUMES			
	NB	SB	EB	WB
1:00 AM	74	61	5	2
2:00 AM	66	35	1	1
3:00 AM	42	18	1	0
4:00 AM	37	30	3	0
5:00 AM	95	74	1	1
6:00 AM	232	216	5	1
7:00 AM	469	481	13	5
8:00 AM	879	964	19	11
9:00 AM	1023	1130	32	11
10:00 AM	935	1063	22	20
11:00 AM	1005	1021	31	23
12:00 PM	1101	1093	33	22
1:00 PM	1119	1179	32	19
2:00 PM	1151	1225	28	24
3:00 PM	1271	1255	29	19
4:00 PM	1300	1157	41	24
5:00 PM	1315	1210	27	28
6:00 PM	1344	1287	23	17
7:00 PM	974	878	21	20
8:00 PM	748	665	20	17
9:00 PM	614	517	10	15
10:00 PM	411	384	9	28
11:00 PM	294	261	6	16
12:00 AM	199	142	11	6
<b>TOTAL</b>	<b>16,698</b>	<b>16,346</b>	<b>423</b>	<b>330</b>

WARRANT	CRITERIA		REQUIRED HOURS	ACTUAL HOURS	SATISFIED?	PROXIMITY	
	MAJOR	MINOR				Major	Minor
#1A	420	140	8	0	NO	Satisfied	509%
#1B	630	70	8	0	NO	Satisfied	204%
#1A with #1B	480	56	8	0	NO	Satisfied	143%
#1B with #1A	720	112	8	0		Satisfied	387%
#2	Varying Graph		4	0	NO		150%
#3B	Varying Graph		1	0	NO		

Checked by: PEB 8/13/2022



**TRAFFIC CONTROL SIGNAL WARRANT STUDY  
LANE NUMBER, SPEED, AND VOLUME DATA**

PROJECT: **SCOTTSDALE PLAZA RESORT RENOVATIONS**  
 LOCATION: **PARADISE VALLEY, ARIZONA**

NORTH/SOUTH STREET: **SCOTTSDALE ROAD**  
 NB LANES: **3**  
 SB LANES: **3**

EAST/WEST STREET: **HUMMINGBIRD LANE**  
 EB LANES: **1**  
 WB LANES: **2**

SPEED LIMIT ON MAJOR STREET: **45**  
 85TH PERCENTILE SPEED ON MAJOR STREET: **UNKNOWN**

VOLUME DATA: **EXISTING**

DATE OF COUNT: **8/4/2022** **THURSDAY**  
 DATE OF STUDY: **8/13/2022**

SPECIAL CONDITIONS: **NONE**

INTERSECTION APPROACH TRAFFIC VOLUMES				
TIME	NORTHBOUND	SOUTHBOUND	EASTBOUND	WESTBOUND
1:00 AM	74	61	5	2
2:00 AM	66	35	1	1
3:00 AM	42	18	1	0
4:00 AM	37	30	3	0
5:00 AM	95	74	1	1
6:00 AM	232	216	5	1
7:00 AM	469	481	13	5
8:00 AM	879	964	19	11
9:00 AM	1023	1130	32	11
10:00 AM	935	1063	22	20
11:00 AM	1005	1021	31	23
12:00 PM	1101	1093	33	22
1:00 PM	1119	1179	32	19
2:00 PM	1151	1225	28	24
3:00 PM	1271	1255	29	19
4:00 PM	1300	1157	41	24
5:00 PM	1315	1210	27	28
6:00 PM	1344	1287	23	17
7:00 PM	974	878	21	20
8:00 PM	748	665	20	17
9:00 PM	614	517	10	15
10:00 PM	411	384	9	28
11:00 PM	294	261	6	16
12:00 AM	199	142	11	6
<b>TOTAL</b>	<b>16,698</b>	<b>16,346</b>	<b>423</b>	<b>330</b>

Checked by: PEB 8/13/2022





**TRAFFIC CONTROL SIGNAL WARRANT STUDY  
CRASH EXPERIENCE AND DELAY DATA**

**SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**CRASH EXPERIENCE DATA**

HAVE LESS RESTRICTIVE MEANS BEEN ATTEMPTED?

**NO**

TOTAL NUMBER OF CRASHES IN A 12 MONTH PERIOD:

**4**

NUMBER OF POTENTIALLY PREVENTABLE CRASHES  
IN A 12 MONTH PERIOD:

**1**

WILL SIGNAL DISRUPT PROGRESSIVE TRAFFIC FLOW?

**YES**

**VEHICLE DELAY DATA**

TIME PERIOD	AVERAGE DELAY SECONDS/VEHICLE	SIDE STREET TOTAL DELAY VEH-HOURS	VOLUME	TOTAL INTERSECTION VOLUME
<b>7:00 AM to 8:00 AM</b>	<b>62</b>	<b>0.33</b>	<b>19</b>	<b>1,873</b>
<b>5:00 PM to 6:00 PM</b>	<b>120</b>	<b>0.77</b>	<b>23</b>	<b>2,671</b>

Checked by: PEB 8/13/2022



## SCOTTSDALE PLAZA RESORT RENOVATIONS SCOTTSDALE ROAD and HUMMINGBIRD LANE

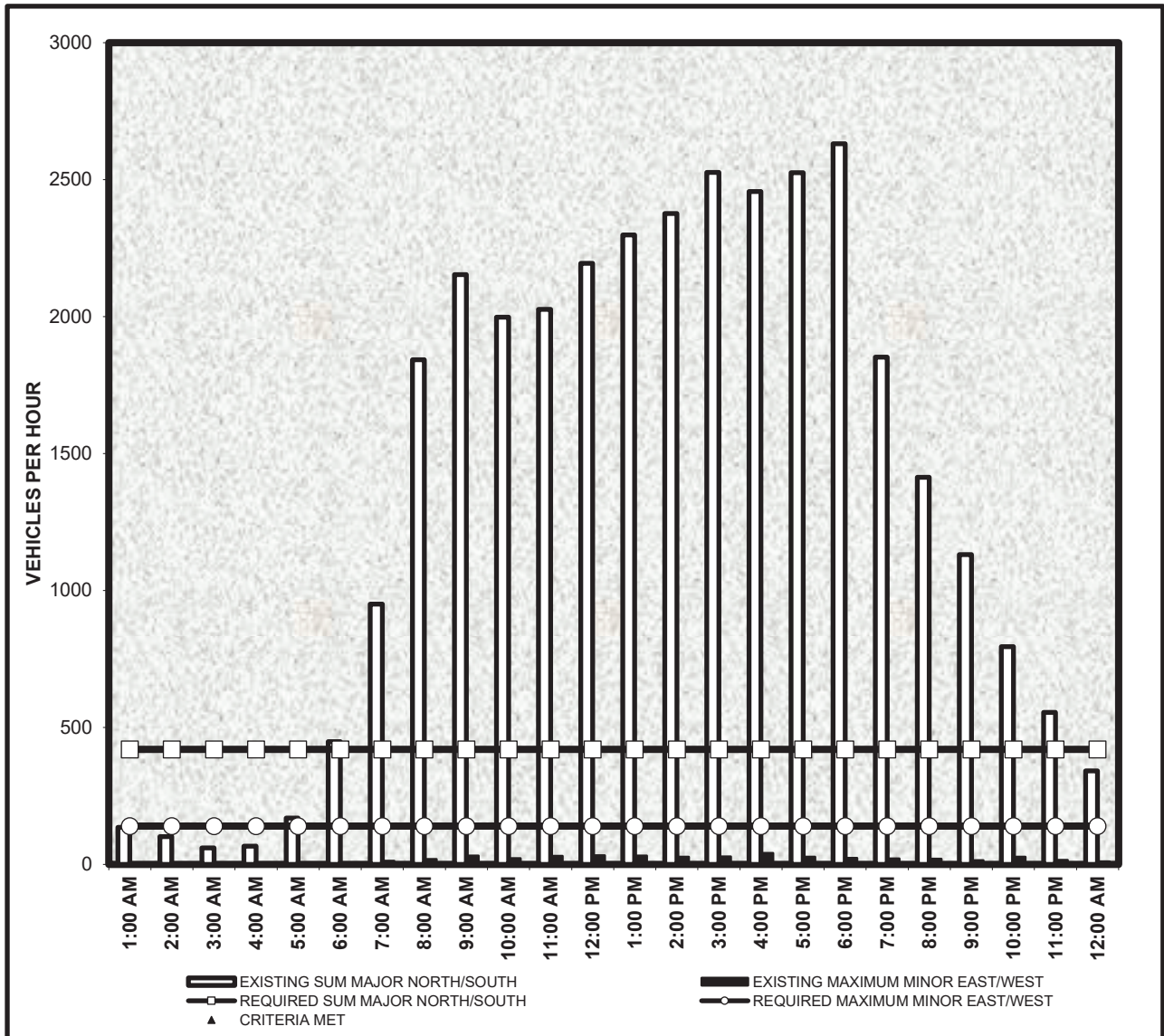
### M. U. T. C. D. WARRANT # 1A

#### Minimum Vehicular Volume

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH/SOUTH STREET	420
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST/WEST STREET	140

NUMBER OF HOURS SATISFIED:	0
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	0
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	0

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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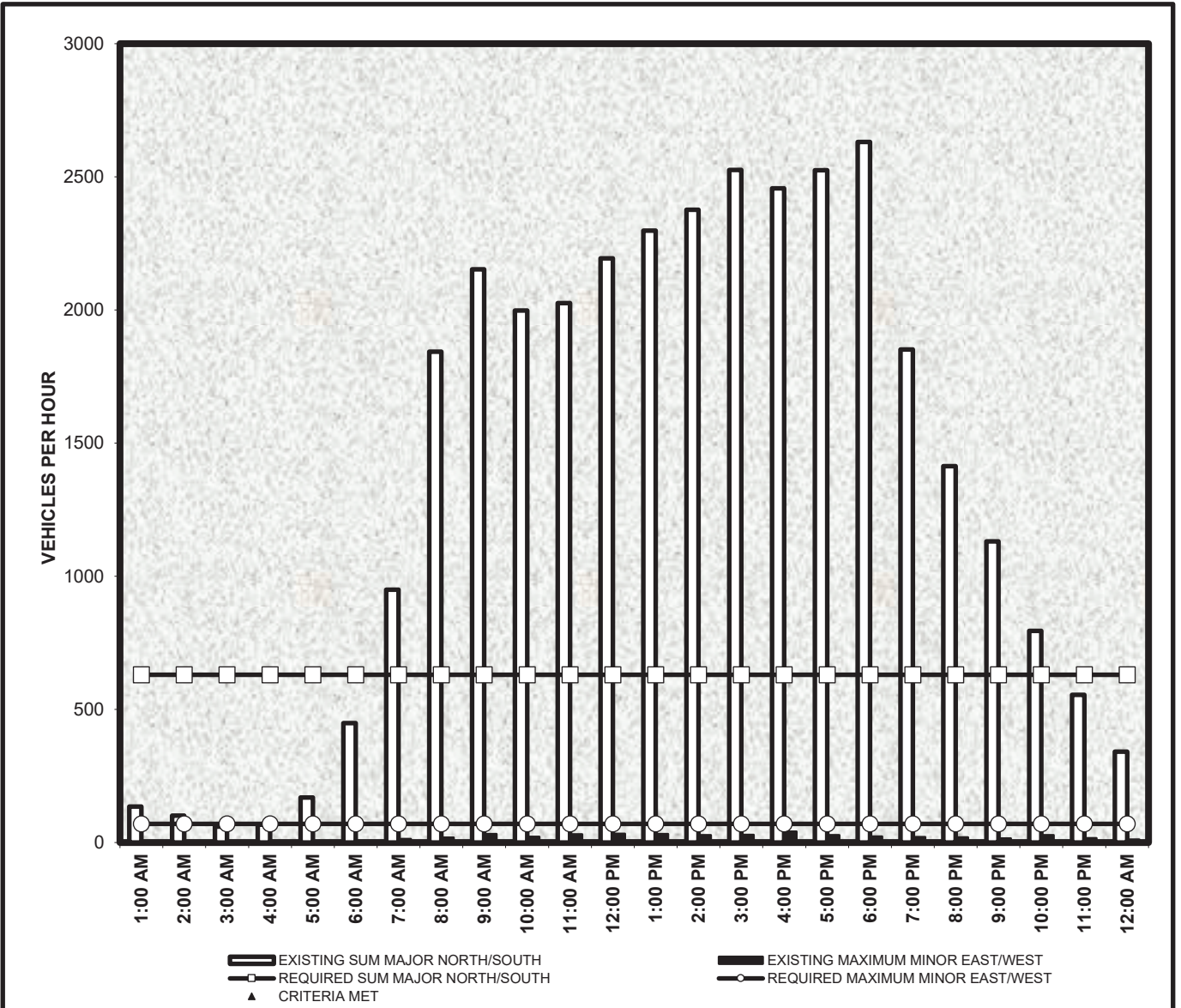


The Minimum Vehicular Volume, Condition A, is intended for application where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The warrant is satisfied when, for each of any eight hours of an average day, the traffic volumes provided in the MUTCD exist on the major street and on the higher-volume minor-street approach to the intersection, and the signal installation will not seriously disrupt progressive traffic flow.

## SCOTTSDALE PLAZA RESORT RENOVATIONS SCOTTSDALE ROAD and HUMMINGBIRD LANE

### M. U. T. C. D. WARRANT # 1B Interruption of Continuous Traffic

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH/SOUTH STREET	630
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST/WEST STREET	70
NUMBER OF HOURS SATISFIED:	<i>0</i>
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	<i>0</i>
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	<i>0</i>
<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>



The Interruption of Continuous Traffic, Condition B, is intended for application where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street. The warrant is satisfied when, for each of any eight hours of an average day, the traffic volumes provided in the MUTCD exist on the major street and on the higher-volume minor-street approach to the intersection, and the signal installation will not seriously disrupt progressive traffic flow.

# SCOTTSDALE PLAZA RESORT RENOVATIONS SCOTTSDALE ROAD and HUMMINGBIRD LANE

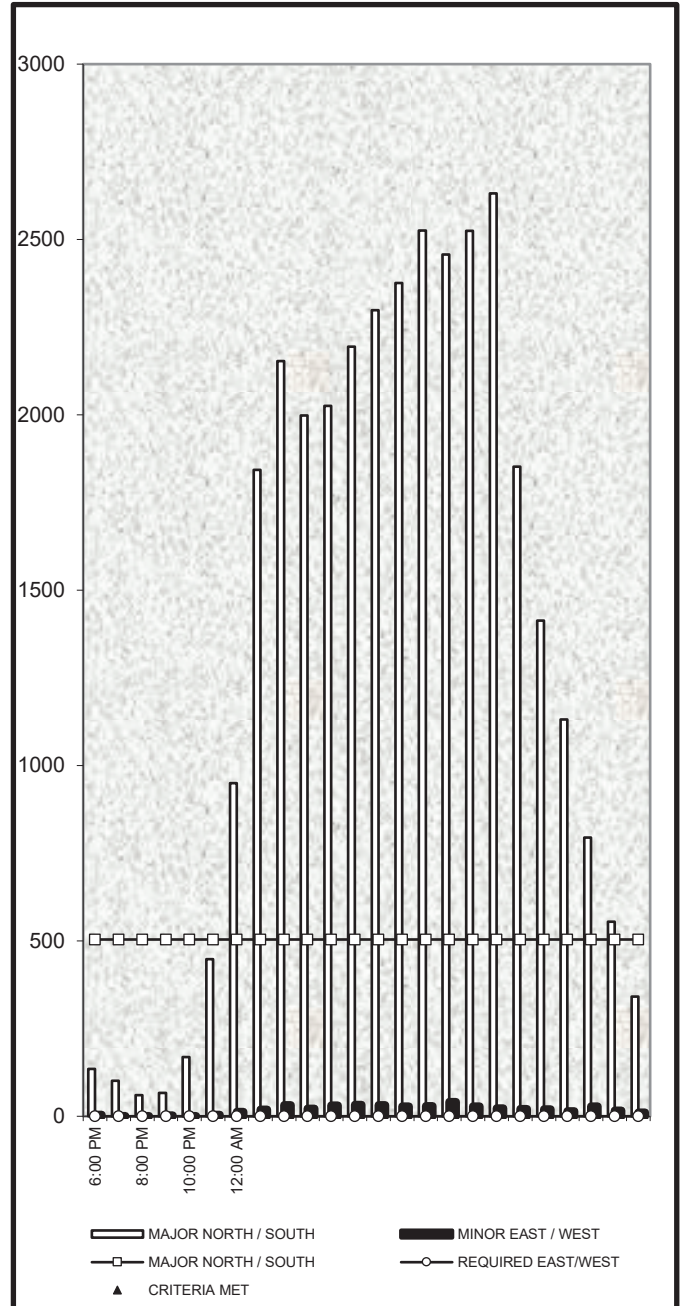
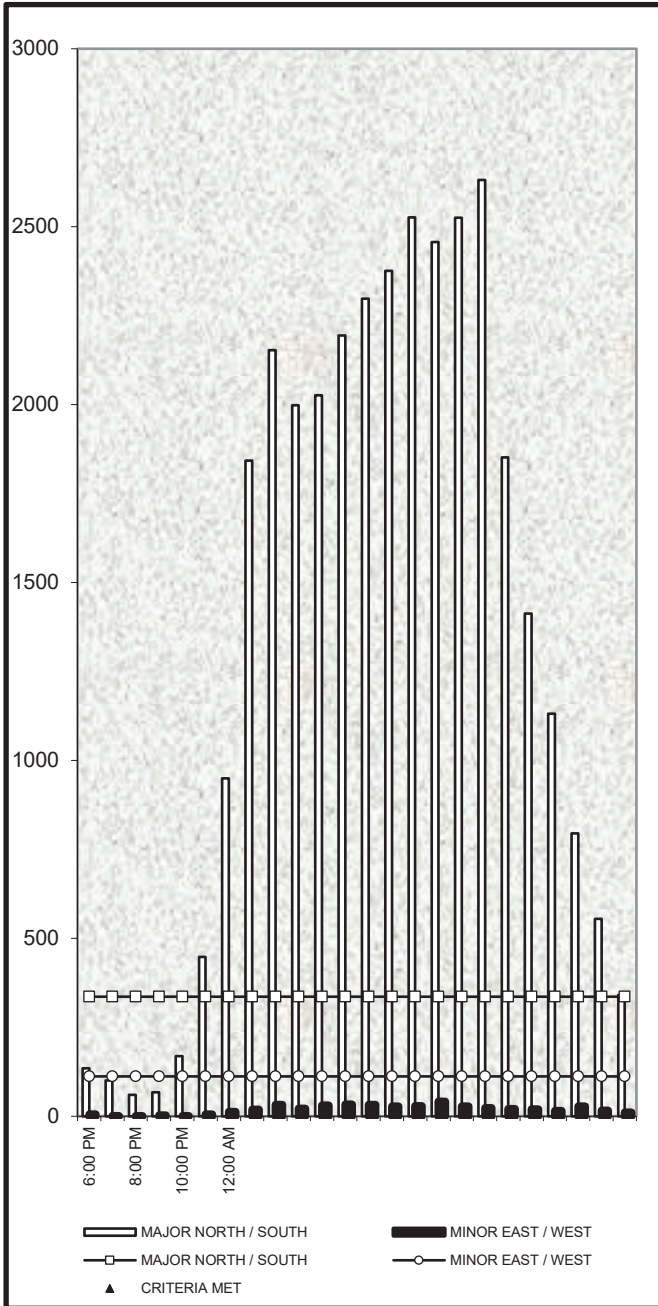
## M. U. T. C. D. WARRANT # 1

### Combination of Conditions A and B at 56% of Original Values

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH / SOUTH STREET	336	504
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST / WEST STREET	112	80

NUMBER OF HOURS SATISFIED:	0	0
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<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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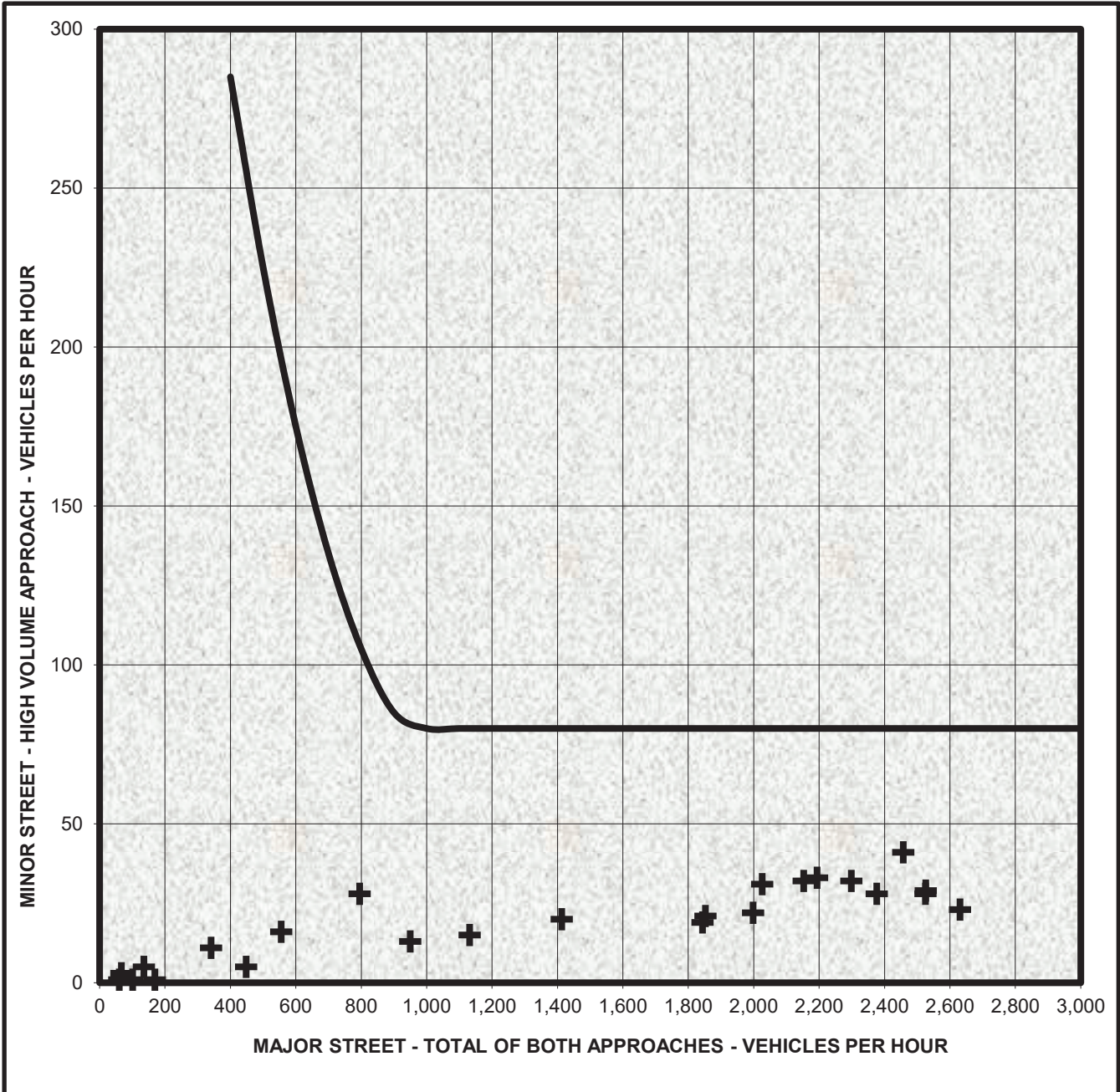
The major-street and minor-street volumes shall be for the same 8 hours for each condition; however, the 8 hours satisfied on A shall not be required to be the same 8 hours satisfied in Condition B. The combination of Conditions A and B should be applied only after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems.

**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**M. U. T. C. D. WARRANT # 2  
Four-Hour Vehicular Volume**

NUMBER OF HOURS SATISFIED:	0
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	0
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	0

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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The Four Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The need for a traffic control signal shall be considered if an engineering study finds that for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor-street approach (one direction only) all fall above the applicable curve provided in the MUTCD for the existing combination of approach lanes.

**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**M. U. T. C. D. WARRANT # 3  
Peak Hour, Category A (Delay)**

REQUIRED SIDE STREET VEHICLE-HOURS DELAY:	5.00
REQUIRED SIDE STREET HOURLY VOLUME:	150
REQUIRED TOTAL INTERSECTION HOURLY VOLUME:	800

<b>TIME PERIOD: 7:00 AM to 8:00 AM</b>	<b>MEASURED</b>	<b>SATISFIED?</b>
SIDE STREET VEHICLE-HOURS DELAY:	0.33	NO
SIDE STREET HOURLY VOLUME:	19	NO
TOTAL INTERSECTION HOURLY VOLUME:	1873	YES
<b>ALL CRITERIA</b>		<b>NO</b>

<b>TIME PERIOD: 5:00 PM to 6:00 PM</b>	<b>MEASURED</b>	<b>SATISFIED?</b>
SIDE STREET VEHICLE-HOURS DELAY:	0.77	NO
SIDE STREET HOURLY VOLUME:	23	NO
TOTAL INTERSECTION HOURLY VOLUME:	2671	YES
<b>ALL CRITERIA</b>		<b>NO</b>

The Peak Hour signal warrant is intended for use at a location where traffic conditions are such that for a minimum of 1 hour of an average day, the minor-street suffers undue delay when entering or crossing the major street.

This signal warrant shall be applied only in unusual cases. Such cases include, but are not limited to, office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.

The need for a traffic control signal shall be considered if an engineering study finds that all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:

1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and
2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and
3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.

Checked by: PEB 8/13/2022



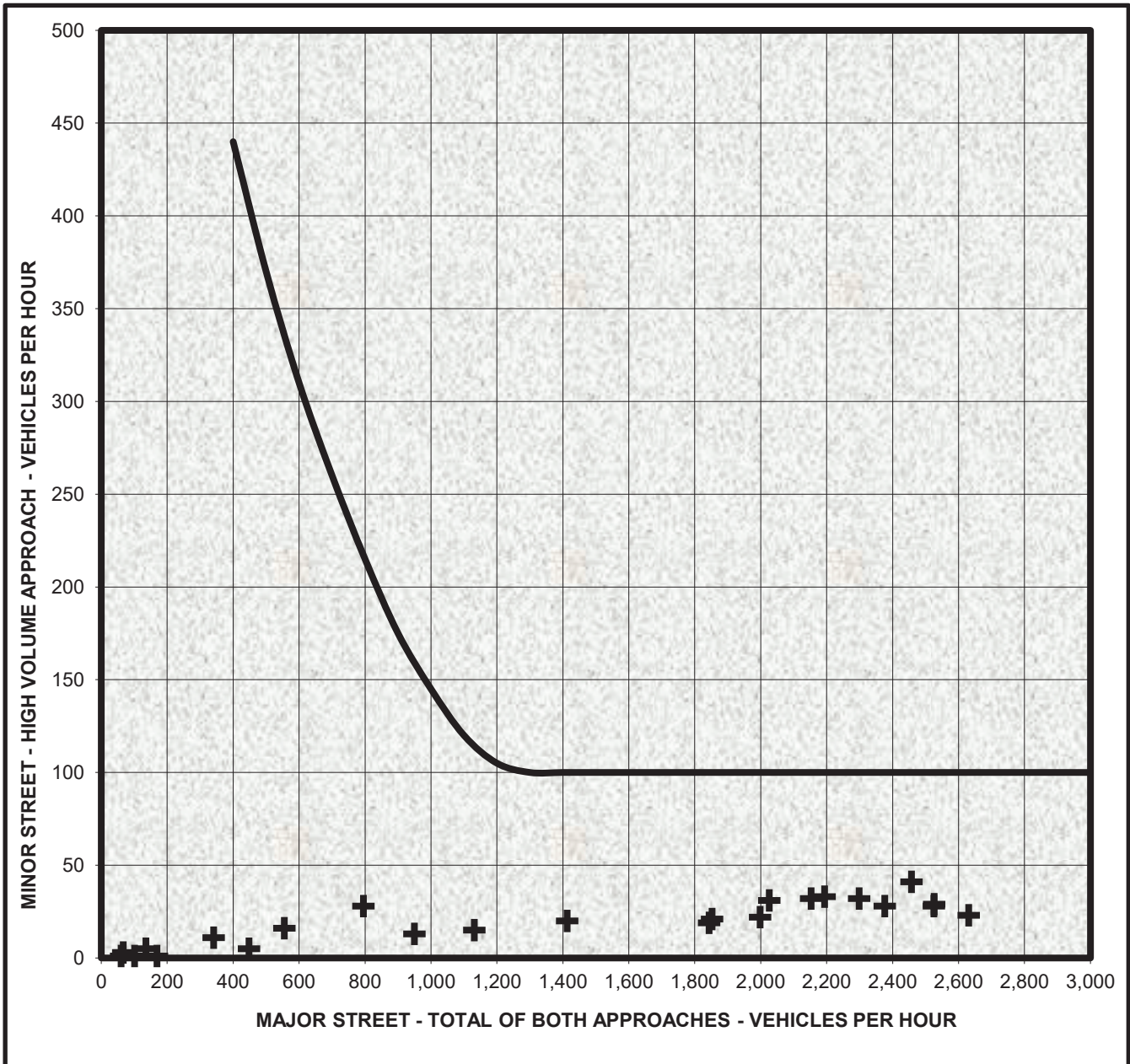


**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**M. U. T. C. D. WARRANT # 3  
One-Hour Vehicular Volume**

NUMBER OF HOURS SATISFIED:	0
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	0
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	0

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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The Four Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The need for a traffic control signal shall be considered if an engineering study finds that for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor-street approach (one direction only) all fall above the applicable curve provided in the MUTCD for the existing combination of approach lanes.

Checked by: PEB 8/13/2022



**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE  
MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES  
TRAFFIC CONTROL SIGNAL WARRANT STUDY SUMMARY**

LOCATION: **PARADISE VALLEY, ARIZONA**

SPECIAL CONDITIONS: **NONE**

DATE OF COUNT: 8/5/2022

DATE OF STUDY: 8/13/2022

NORTH/SOUTH STREET: SCOTTSDALE ROAD

MAJOR

MULTI-LANE

EAST/WEST STREET: HUMMINGBIRD LANE

MINOR

MULTI-LANE

POSTED SPEED LIMIT ON MAJOR STREET:

45 mph

85th PERCENTILE SPEED ON MAJOR STREET:

Unknown

**WARRANT**

**EXISTING**

**REQUIRED**

**SATISFIED?**

**# 1. EIGHT-HOUR VEHICULAR VOLUME**

A. MINIMUM VEHICULAR VOLUME

0

8

NO

B. INTERRUPTION OF CONTINUOUS TRAFFIC

0

8

NO

COMBINATION OF WARRANTS 1A AND 1B (80% of Values)

-

-

Not Applicable

COMBINATION OF WARRANTS 1A AND 1B (56% of Values)

0

8

NO

**# 2. FOUR-HOUR VEHICULAR VOLUME**

0

4

NO

**# 3. PEAK HOUR**

A. PEAK HOUR DELAY - AM

1

3

NO

A. PEAK HOUR DELAY - PM

1

3

NO

B. PEAK HOUR VOLUME

0

1

NO

**# 7. CRASH EXPERIENCE**

WITH WARRANT # 1A (Traffic Volumes at 80% of Original Values)

-

-

Not Applicable

WITH WARRANT # 1B (Traffic Volumes at 80% of Original Values)

-

-

Not Applicable

WITH WARRANT # 1A (Traffic Volumes at 56% of Original Values)

0

8

NO

WITH WARRANT # 1B (Traffic Volumes at 56% of Original Values)

0

8

NO

TOTAL NUMBER OF CRASHES

4

-

-

NUMBER OF POTENTIALLY PREVENTABLE CRASHES

1

5

NO

HAVE LESS RESTRICTIVE MEANS BEEN ATTEMPTED?

NO

-

NO

**# 7. ENTIRE WARRANT**

-

-

NO

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Checked by: PEB 8/13/2022





**TRAFFIC CONTROL SIGNAL WARRANT ESTIMATION  
LANE NUMBER, SPEED, AND VOLUME DATA**

LOCATION: **SCOTTSDALE PLAZA RESORT RENOVATIONS**  
 DATE AND DAY: **8/5/2022 FRIDAY**

NORTH / SOUTH STREET: **SCOTTSDALE ROAD** LANES: **3**  
 EAST / WEST STREET: **HUMMINGBIRD LANE** LANES: **2**

MAJOR STREET SPEED LIMIT OR 85<sup>th</sup> PERCENTILE SPEED: **45**

CONDITIONS: **NONE**

END TIME	STREET TRAFFIC VOLUMES			
	NB	SB	EB	WB
1:00 AM	134	106	4	1
2:00 AM	137	59	3	0
3:00 AM	78	48	6	1
4:00 AM	54	34	3	1
5:00 AM	106	87	7	3
6:00 AM	224	218	8	5
7:00 AM	469	459	18	4
8:00 AM	931	931	37	6
9:00 AM	973	1013	36	12
10:00 AM	981	1076	18	12
11:00 AM	1010	1118	35	22
12:00 PM	1246	1169	44	19
1:00 PM	1244	1265	31	32
2:00 PM	1327	1248	34	22
3:00 PM	1357	1336	30	28
4:00 PM	1386	1244	33	18
5:00 PM	1298	1276	25	20
6:00 PM	1256	1294	36	19
7:00 PM	1044	1024	35	24
8:00 PM	882	819	20	29
9:00 PM	762	706	12	32
10:00 PM	618	559	15	37
11:00 PM	469	413	4	31
12:00 AM	348	282	14	15
<b>TOTAL</b>	<b>18,334</b>	<b>17,784</b>	<b>508</b>	<b>393</b>

WARRANT	CRITERIA		REQUIRED HOURS	ACTUAL HOURS	SATISFIED?	PROXIMITY	
	MAJOR	MINOR				Major	Minor
#1A	420	140	8	0	NO	Satisfied	460%
#1B	630	70	8	0	NO	Satisfied	180%
#1A with #1B	480	56	8	0	NO	Satisfied	124%
#1B with #1A	720	112	8	0		Satisfied	348%
#2	Varying Graph		4	0	NO		122%
#3B	Varying Graph		1	0	NO		

Checked by: PEB 8/13/2022



**TRAFFIC CONTROL SIGNAL WARRANT STUDY  
LANE NUMBER, SPEED, AND VOLUME DATA**

PROJECT: **SCOTTSDALE PLAZA RESORT RENOVATIONS**  
 LOCATION: **PARADISE VALLEY, ARIZONA**

NORTH/SOUTH STREET: **SCOTTSDALE ROAD**  
 NB LANES: **3**  
 SB LANES: **3**

EAST/WEST STREET: **HUMMINGBIRD LANE**  
 EB LANES: **1**  
 WB LANES: **2**

SPEED LIMIT ON MAJOR STREET: **45**  
 85TH PERCENTILE SPEED ON MAJOR STREET: **UNKNOWN**

VOLUME DATA: **EXISTING**

DATE OF COUNT: **8/5/2022** **FRIDAY**  
 DATE OF STUDY: **8/13/2022**

SPECIAL CONDITIONS: **NONE**

INTERSECTION APPROACH TRAFFIC VOLUMES				
TIME	NORTHBOUND	SOUTHBOUND	EASTBOUND	WESTBOUND
1:00 AM	134	106	4	1
2:00 AM	137	59	3	0
3:00 AM	78	48	6	1
4:00 AM	54	34	3	1
5:00 AM	106	87	7	3
6:00 AM	224	218	8	5
7:00 AM	469	459	18	4
8:00 AM	931	931	37	6
9:00 AM	973	1013	36	12
10:00 AM	981	1076	18	12
11:00 AM	1010	1118	35	22
12:00 PM	1246	1169	44	19
1:00 PM	1244	1265	31	32
2:00 PM	1327	1248	34	22
3:00 PM	1357	1336	30	28
4:00 PM	1386	1244	33	18
5:00 PM	1298	1276	25	20
6:00 PM	1256	1294	36	19
7:00 PM	1044	1024	35	24
8:00 PM	882	819	20	29
9:00 PM	762	706	12	32
10:00 PM	618	559	15	37
11:00 PM	469	413	4	31
12:00 AM	348	282	14	15
<b>TOTAL</b>	<b>18,334</b>	<b>17,784</b>	<b>508</b>	<b>393</b>

Checked by: PEB 8/13/2022



**TRAFFIC CONTROL SIGNAL WARRANT STUDY  
CRASH EXPERIENCE AND DELAY DATA**

**SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**CRASH EXPERIENCE DATA**

HAVE LESS RESTRICTIVE MEANS BEEN ATTEMPTED?

**NO**

TOTAL NUMBER OF CRASHES IN A 12 MONTH PERIOD:

**4**

NUMBER OF POTENTIALLY PREVENTABLE CRASHES  
IN A 12 MONTH PERIOD:

**1**

WILL SIGNAL DISRUPT PROGRESSIVE TRAFFIC FLOW?

**YES**

**VEHICLE DELAY DATA**

TIME PERIOD	AVERAGE DELAY SECONDS/VEHICLE	SIDE STREET TOTAL DELAY VEH-HOURS	VOLUME	TOTAL INTERSECTION VOLUME
<b>7:00 AM to 8:00 AM</b>	<b>62</b>	<b>0.64</b>	<b>37</b>	<b>1,905</b>
<b>2:00 PM to 3:00 PM</b>	<b>120</b>	<b>1.00</b>	<b>30</b>	<b>2,751</b>

Checked by: PEB 8/13/2022



## SCOTTSDALE PLAZA RESORT RENOVATIONS SCOTTSDALE ROAD and HUMMINGBIRD LANE

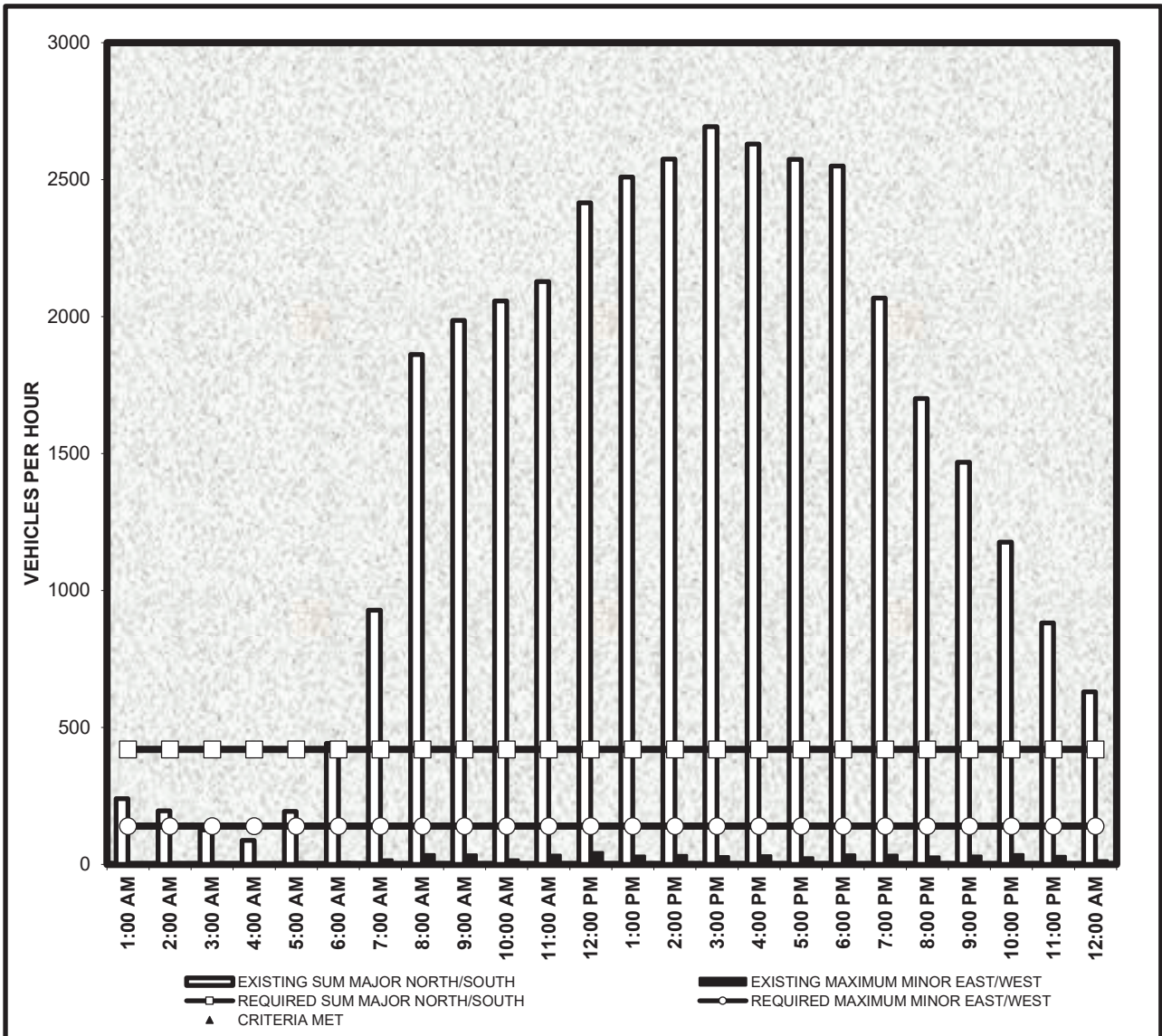
### M. U. T. C. D. WARRANT # 1A

#### Minimum Vehicular Volume

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH/SOUTH STREET	420
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST/WEST STREET	140

NUMBER OF HOURS SATISFIED:	0
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	0
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	0

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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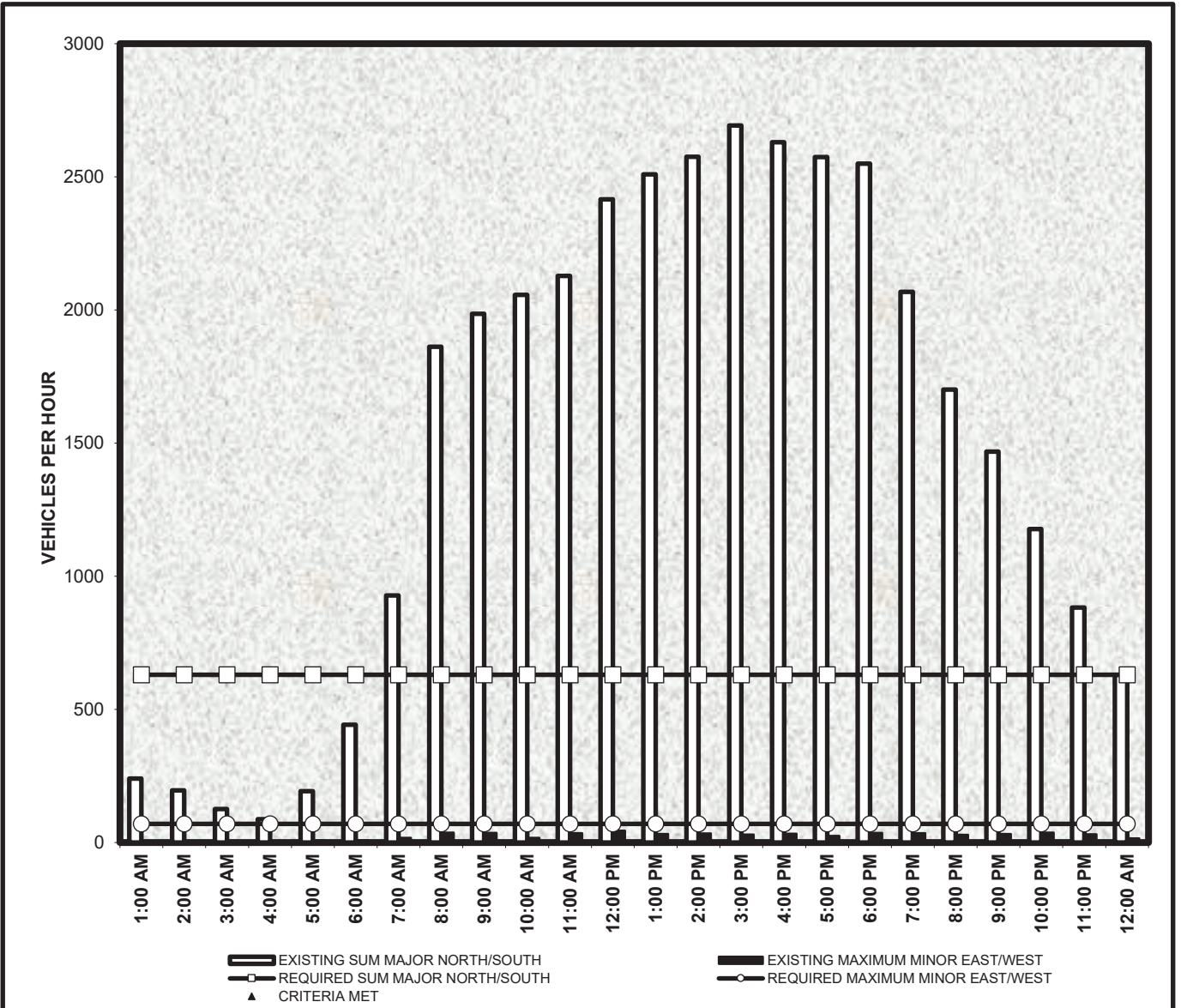


The Minimum Vehicular Volume, Condition A, is intended for application where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The warrant is satisfied when, for each of any eight hours of an average day, the traffic volumes provided in the MUTCD exist on the major street and on the higher-volume minor-street approach to the intersection, and the signal installation will not seriously disrupt progressive traffic flow.

## SCOTTSDALE PLAZA RESORT RENOVATIONS SCOTTSDALE ROAD and HUMMINGBIRD LANE

### M. U. T. C. D. WARRANT # 1B Interruption of Continuous Traffic

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH/SOUTH STREET	630
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST/WEST STREET	70
NUMBER OF HOURS SATISFIED:	<i>0</i>
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	<i>0</i>
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	<i>0</i>
<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>



The Interruption of Continuous Traffic, Condition B, is intended for application where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street. The warrant is satisfied when, for each of any eight hours of an average day, the traffic volumes provided in the MUTCD exist on the major street and on the higher-volume minor-street approach to the intersection, and the signal installation will not seriously disrupt progressive traffic flow.

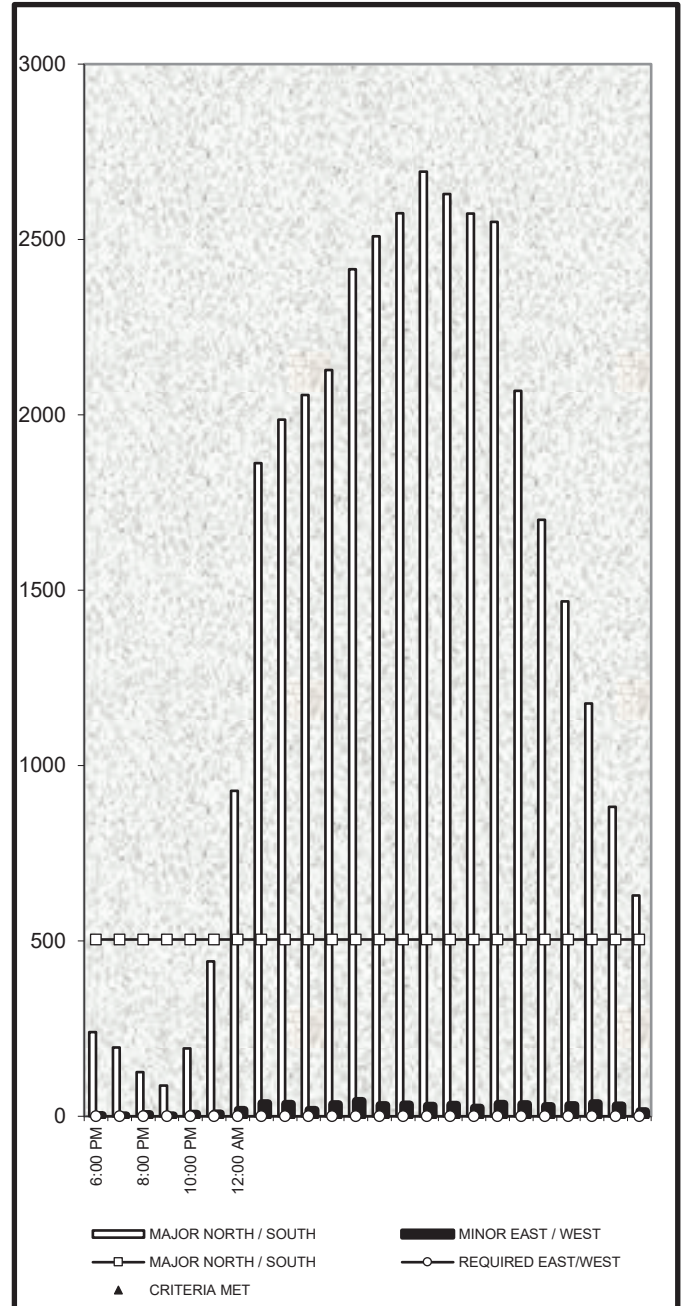
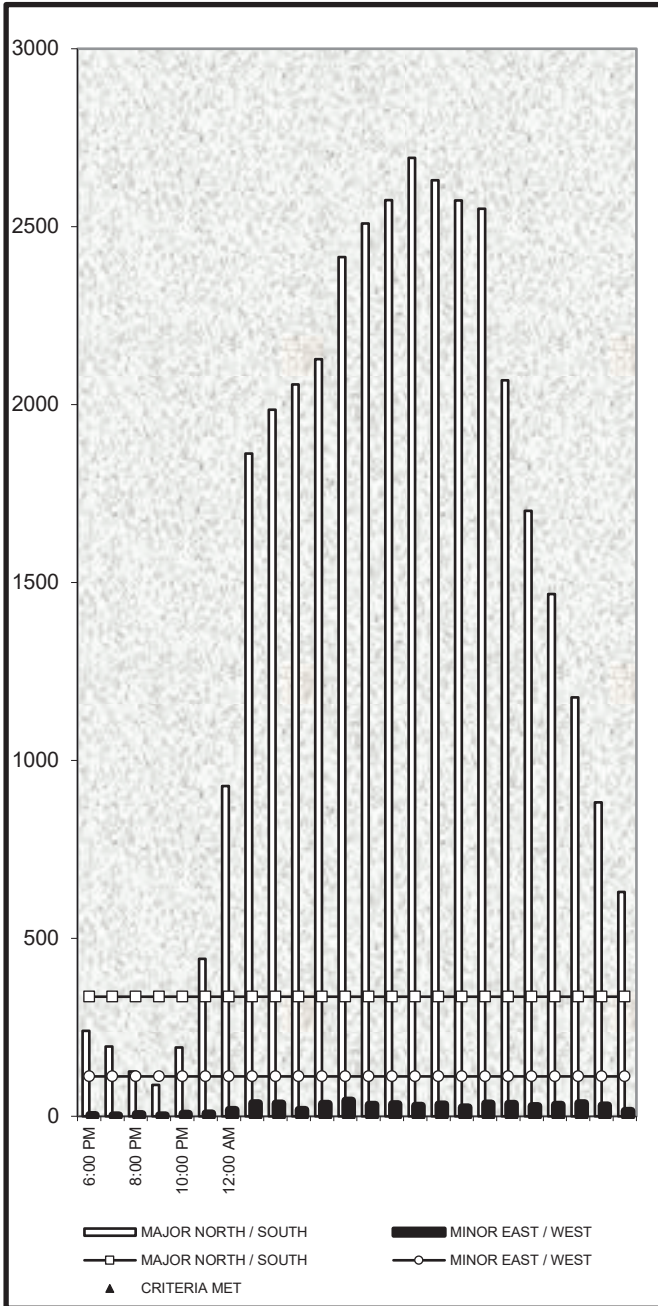
# SCOTTSDALE PLAZA RESORT RENOVATIONS SCOTTSDALE ROAD and HUMMINGBIRD LANE

## M. U. T. C. D. WARRANT # 1

### Combination of Conditions A and B at 56% of Original Values

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH / SOUTH STREET	336	504
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST / WEST STREET	112	80
NUMBER OF HOURS SATISFIED:	<b>0</b>	<b>0</b>

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
--------------------------	----------------------



The major-street and minor-street volumes shall be for the same 8 hours for each condition; however, the 8 hours satisfied on A shall not be required to be the same 8 hours satisfied in Condition B. The combination of Conditions A and B should be applied only after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems.

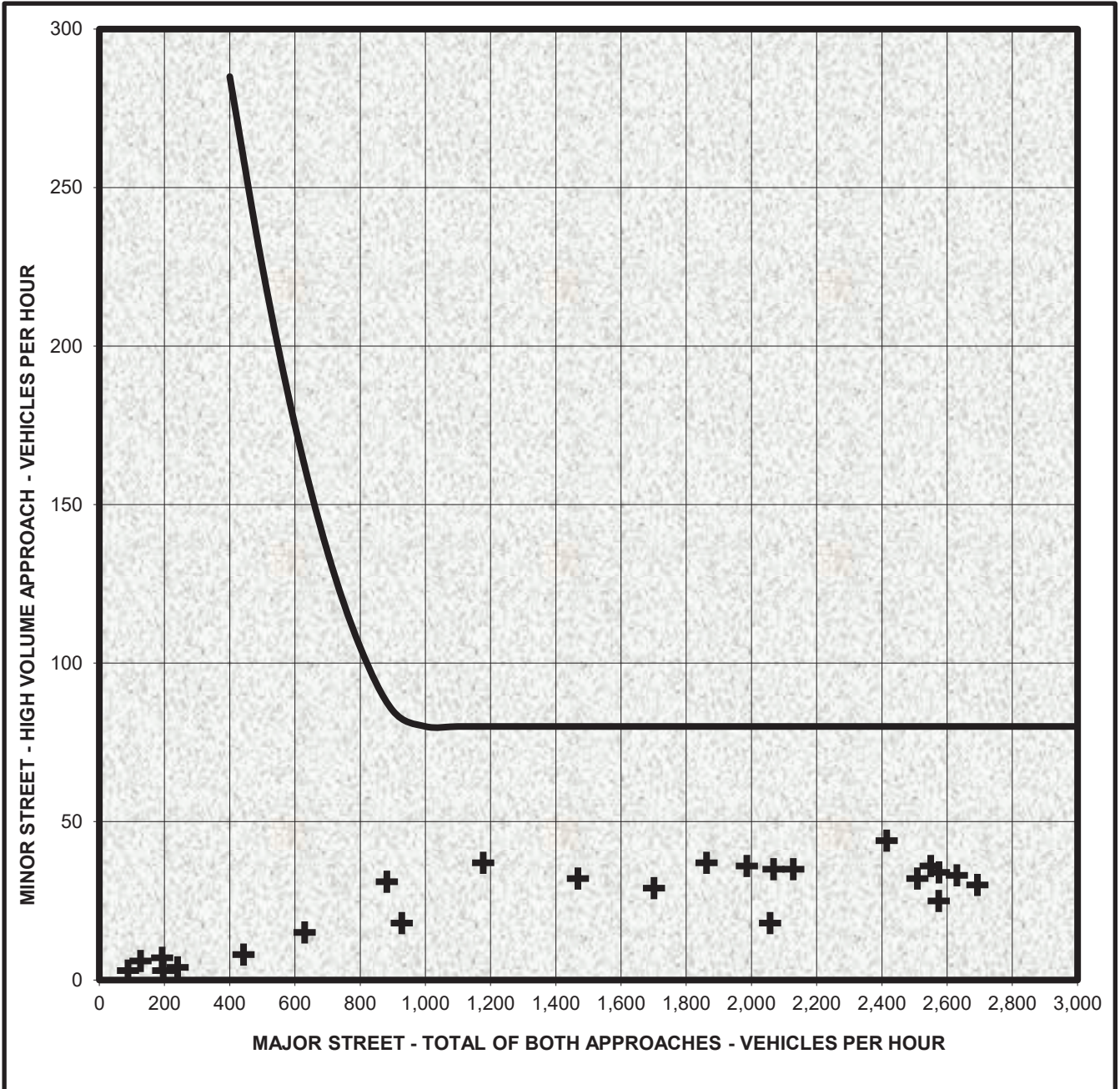


**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**M. U. T. C. D. WARRANT # 2  
Four-Hour Vehicular Volume**

NUMBER OF HOURS SATISFIED:	0
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	0
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	0

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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The Four Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The need for a traffic control signal shall be considered if an engineering study finds that for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor-street approach (one direction only) all fall above the applicable curve provided in the MUTCD for the existing combination of approach lanes.

**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**M. U. T. C. D. WARRANT # 3  
Peak Hour, Category A (Delay)**

REQUIRED SIDE STREET VEHICLE-HOURS DELAY:	5.00
REQUIRED SIDE STREET HOURLY VOLUME:	150
REQUIRED TOTAL INTERSECTION HOURLY VOLUME:	800

<b>TIME PERIOD: 7:00 AM to 8:00 AM</b>	<b>MEASURED</b>	<b>SATISFIED?</b>
SIDE STREET VEHICLE-HOURS DELAY:	0.64	NO
SIDE STREET HOURLY VOLUME:	37	NO
TOTAL INTERSECTION HOURLY VOLUME:	1905	YES
<b>ALL CRITERIA</b>		<b>NO</b>

<b>TIME PERIOD: 2:00 PM to 3:00 PM</b>	<b>MEASURED</b>	<b>SATISFIED?</b>
SIDE STREET VEHICLE-HOURS DELAY:	1.00	NO
SIDE STREET HOURLY VOLUME:	30	NO
TOTAL INTERSECTION HOURLY VOLUME:	2751	YES
<b>ALL CRITERIA</b>		<b>NO</b>

The Peak Hour signal warrant is intended for use at a location where traffic conditions are such that for a minimum of 1 hour of an average day, the minor-street suffers undue delay when entering or crossing the major street.

This signal warrant shall be applied only in unusual cases. Such cases include, but are not limited to, office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.

The need for a traffic control signal shall be considered if an engineering study finds that all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:

1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and
2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and
3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.

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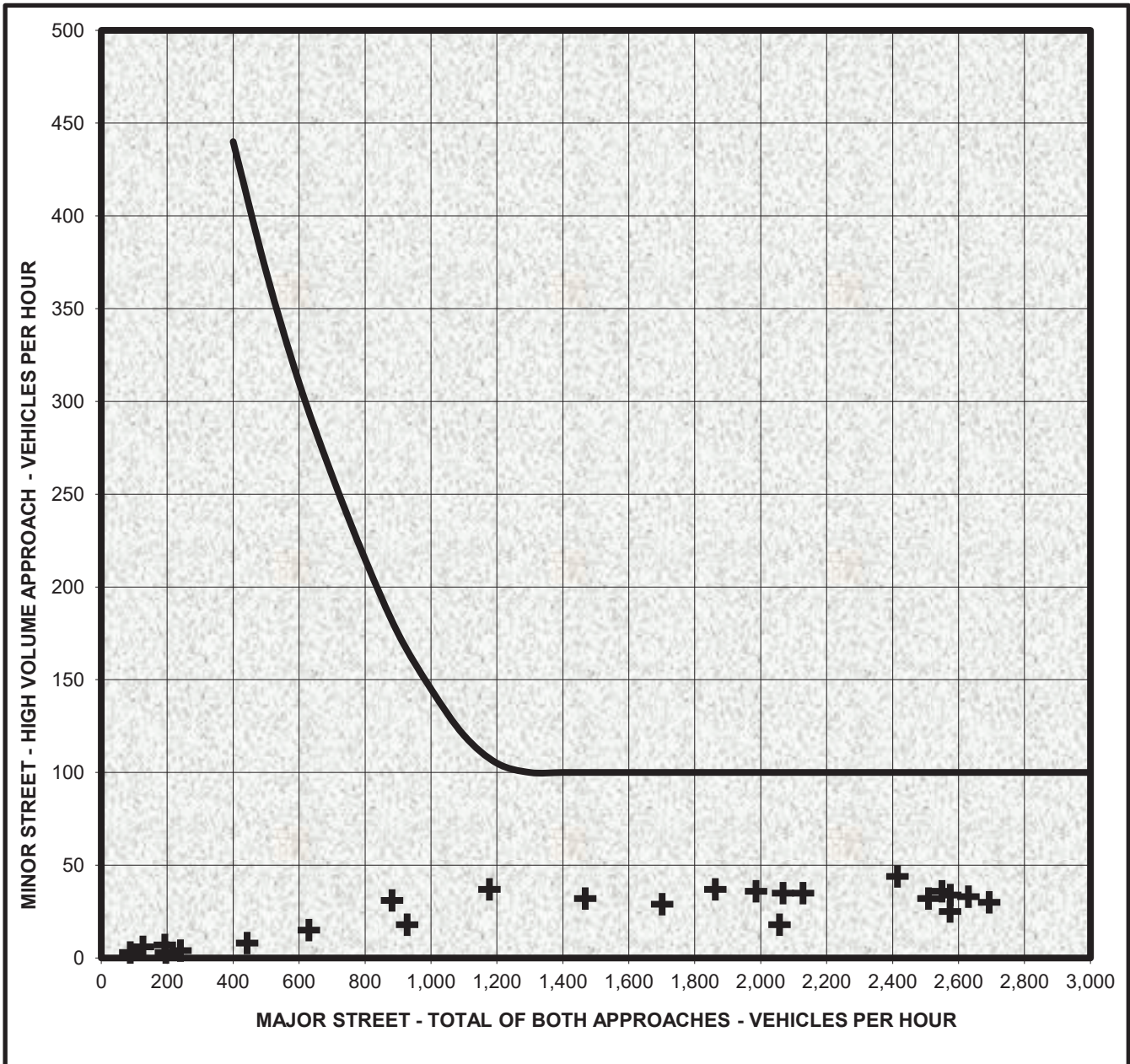


**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**M. U. T. C. D. WARRANT # 3  
One-Hour Vehicular Volume**

NUMBER OF HOURS SATISFIED:	0
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	0
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	0

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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The Four Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The need for a traffic control signal shall be considered if an engineering study finds that for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor-street approach (one direction only) all fall above the applicable curve provided in the MUTCD for the existing combination of approach lanes.

Checked by: PEB 8/13/2022



**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE  
MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES  
TRAFFIC CONTROL SIGNAL WARRANT STUDY SUMMARY**

LOCATION: **PARADISE VALLEY, ARIZONA**

SPECIAL CONDITIONS: **NONE**

DATE OF COUNT: 8/4/2022

DATE OF STUDY: 8/15/2022

NORTH/SOUTH STREET: SCOTTSDALE ROAD

MAJOR

MULTI-LANE

EAST/WEST STREET: HUMMINGBIRD LANE

MINOR

MULTI-LANE

POSTED SPEED LIMIT ON MAJOR STREET:

45 mph

85th PERCENTILE SPEED ON MAJOR STREET:

Unknown

**WARRANT**

**EXISTING**

**REQUIRED**

**SATISFIED?**

**# 1. EIGHT-HOUR VEHICULAR VOLUME**

A. MINIMUM VEHICULAR VOLUME

0

8

NO

B. INTERRUPTION OF CONTINUOUS TRAFFIC

0

8

NO

COMBINATION OF WARRANTS 1A AND 1B (80% of Values)

-

-

Not Applicable

COMBINATION OF WARRANTS 1A AND 1B (56% of Values)

0

8

NO

**# 2. FOUR-HOUR VEHICULAR VOLUME**

0

4

NO

**# 3. PEAK HOUR**

A. PEAK HOUR DELAY - AM

1

3

NO

A. PEAK HOUR DELAY - PM

1

3

NO

B. PEAK HOUR VOLUME

0

1

NO

**# 7. CRASH EXPERIENCE**

WITH WARRANT # 1A (Traffic Volumes at 80% of Original Values)

-

-

Not Applicable

WITH WARRANT # 1B (Traffic Volumes at 80% of Original Values)

-

-

Not Applicable

WITH WARRANT # 1A (Traffic Volumes at 56% of Original Values)

0

8

NO

WITH WARRANT # 1B (Traffic Volumes at 56% of Original Values)

0

8

NO

TOTAL NUMBER OF CRASHES

4

-

-

NUMBER OF POTENTIALLY PREVENTABLE CRASHES

1

5

NO

HAVE LESS RESTRICTIVE MEANS BEEN ATTEMPTED?

NO

-

NO

**# 7. ENTIRE WARRANT**

-

-

NO

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Checked by: PEB 8/13/2022



**TRAFFIC CONTROL SIGNAL WARRANT ESTIMATION  
LANE NUMBER, SPEED, AND VOLUME DATA**

LOCATION: **SCOTTSDALE PLAZA RESORT RENOVATIONS**  
 DATE AND DAY: **8/4/2022 THURSDAY**

NORTH / SOUTH STREET: **SCOTTSDALE ROAD** LANES: **3**  
 EAST / WEST STREET: **HUMMINGBIRD LANE** LANES: **2**

MAJOR STREET SPEED LIMIT OR 85<sup>th</sup> PERCENTILE SPEED: **45**

CONDITIONS: **NONE**

END TIME	STREET TRAFFIC VOLUMES			
	NB	SB	EB	WB
1:00 AM	74	61	6	2
2:00 AM	66	35	1	1
3:00 AM	42	18	1	0
4:00 AM	37	30	4	0
5:00 AM	95	74	1	1
6:00 AM	232	216	6	1
7:00 AM	469	481	15	5
8:00 AM	879	964	22	11
9:00 AM	1023	1130	37	11
10:00 AM	935	1063	26	20
11:00 AM	1005	1021	36	23
12:00 PM	1102	1094	39	22
1:00 PM	1119	1179	38	19
2:00 PM	1152	1226	33	24
3:00 PM	1271	1255	33	19
4:00 PM	1301	1158	48	24
5:00 PM	1315	1210	32	28
6:00 PM	1346	1288	28	17
7:00 PM	974	879	24	20
8:00 PM	748	666	24	17
9:00 PM	615	518	12	15
10:00 PM	411	385	10	28
11:00 PM	294	261	7	16
12:00 AM	199	142	0	6
<b>TOTAL</b>	<b>16,704</b>	<b>16,354</b>	<b>483</b>	<b>330</b>

WARRANT	CRITERIA		REQUIRED HOURS	ACTUAL HOURS	SATISFIED?	PROXIMITY	
	MAJOR	MINOR				Major	Minor
#1A	420	140	8	0	NO	Satisfied	400%
#1B	630	70	8	0	NO	Satisfied	150%
#1A with #1B	480	56	8	0	NO	Satisfied	100%
#1B with #1A	720	112	8	0		Satisfied	300%
#2	Varying Graph		4	0	NO		116%
#3B	Varying Graph		1	0	NO		

Checked by: PEB 8/13/2022



**TRAFFIC CONTROL SIGNAL WARRANT STUDY  
LANE NUMBER, SPEED, AND VOLUME DATA**

PROJECT: **SCOTTSDALE PLAZA RESORT RENOVATIONS**  
 LOCATION: **PARADISE VALLEY, ARIZONA**

NORTH/SOUTH STREET:

**SCOTTSDALE ROAD**

NB LANES: **3**  
 SB LANES: **3**

EAST/WEST STREET:

**HUMMINGBIRD LANE**

EB LANES: **1**  
 WB LANES: **2**

SPEED LIMIT ON MAJOR STREET: **45**  
 85TH PERCENTILE SPEED ON MAJOR STREET: **UNKNOWN**

VOLUME DATA: **EXISTING 2022 WITH PLAZA RESORT**

DATE OF COUNT: **8/4/2022**      **THURSDAY**  
 DATE OF STUDY: **8/15/2022**

SPECIAL CONDITIONS: **NONE**

**INTERSECTION APPROACH TRAFFIC VOLUMES**

TIME	NORTHBOUND	SOUTHBOUND	EASTBOUND	WESTBOUND
1:00 AM	74	61	6	2
2:00 AM	66	35	1	1
3:00 AM	42	18	1	0
4:00 AM	37	30	4	0
5:00 AM	95	74	1	1
6:00 AM	232	216	6	1
7:00 AM	469	481	15	5
8:00 AM	879	964	22	11
9:00 AM	1023	1130	37	11
10:00 AM	935	1063	26	20
11:00 AM	1005	1021	36	23
12:00 PM	1102	1094	39	22
1:00 PM	1119	1179	38	19
2:00 PM	1152	1226	33	24
3:00 PM	1271	1255	33	19
4:00 PM	1301	1158	48	24
5:00 PM	1315	1210	32	28
6:00 PM	1346	1288	28	17
7:00 PM	974	879	24	20
8:00 PM	748	666	24	17
9:00 PM	615	518	12	15
10:00 PM	411	385	10	28
11:00 PM	294	261	7	16
12:00 AM	199	142	0	6
<b>TOTAL</b>	<b>16,704</b>	<b>16,354</b>	<b>483</b>	<b>330</b>

Checked by: PEB 8/13/2022



**TRAFFIC CONTROL SIGNAL WARRANT STUDY  
CRASH EXPERIENCE AND DELAY DATA**

**SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**CRASH EXPERIENCE DATA**

HAVE LESS RESTRICTIVE MEANS BEEN ATTEMPTED?	<b>NO</b>
TOTAL NUMBER OF CRASHES IN A 12 MONTH PERIOD:	<b>4</b>
NUMBER OF POTENTIALLY PREVENTABLE CRASHES IN A 12 MONTH PERIOD:	<b>1</b>
WILL SIGNAL DISRUPT PROGRESSIVE TRAFFIC FLOW?	<b>YES</b>

**VEHICLE DELAY DATA**

TIME PERIOD	AVERAGE DELAY SECONDS/VEHICLE	SIDE STREET TOTAL DELAY VEH-HOURS	VOLUME	TOTAL INTERSECTION VOLUME
<b>7:00 AM to 8:00 AM</b>	<b>62</b>	<b>0.38</b>	<b>22</b>	<b>1,876</b>
<b>5:00 PM to 6:00 PM</b>	<b>120</b>	<b>0.93</b>	<b>28</b>	<b>2,679</b>

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## SCOTTSDALE PLAZA RESORT RENOVATIONS SCOTTSDALE ROAD and HUMMINGBIRD LANE

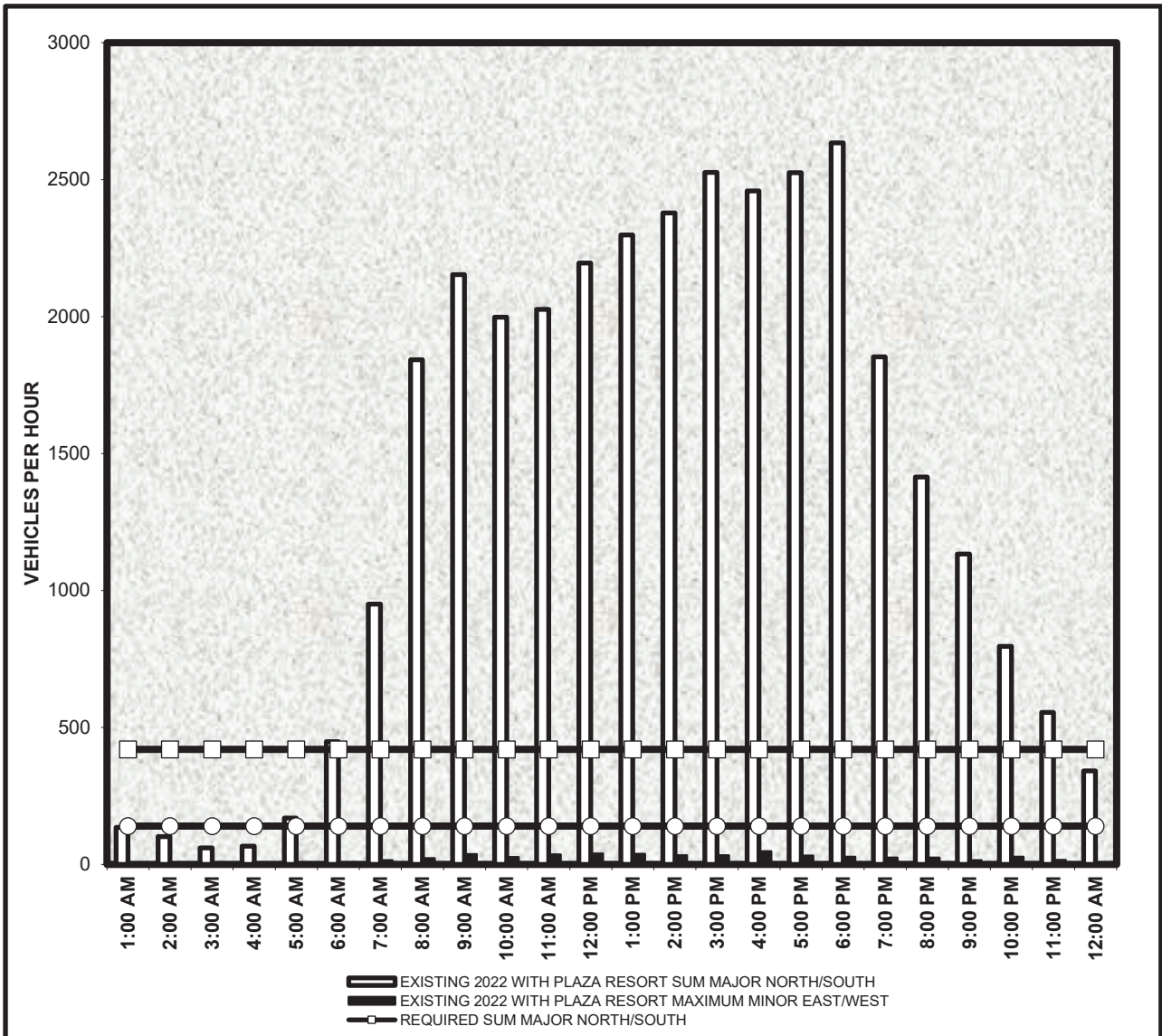
### M. U. T. C. D. WARRANT # 1A

#### Minimum Vehicular Volume

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH/SOUTH STREET	420
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST/WEST STREET	140

NUMBER OF HOURS SATISFIED:	0
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	0
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	0

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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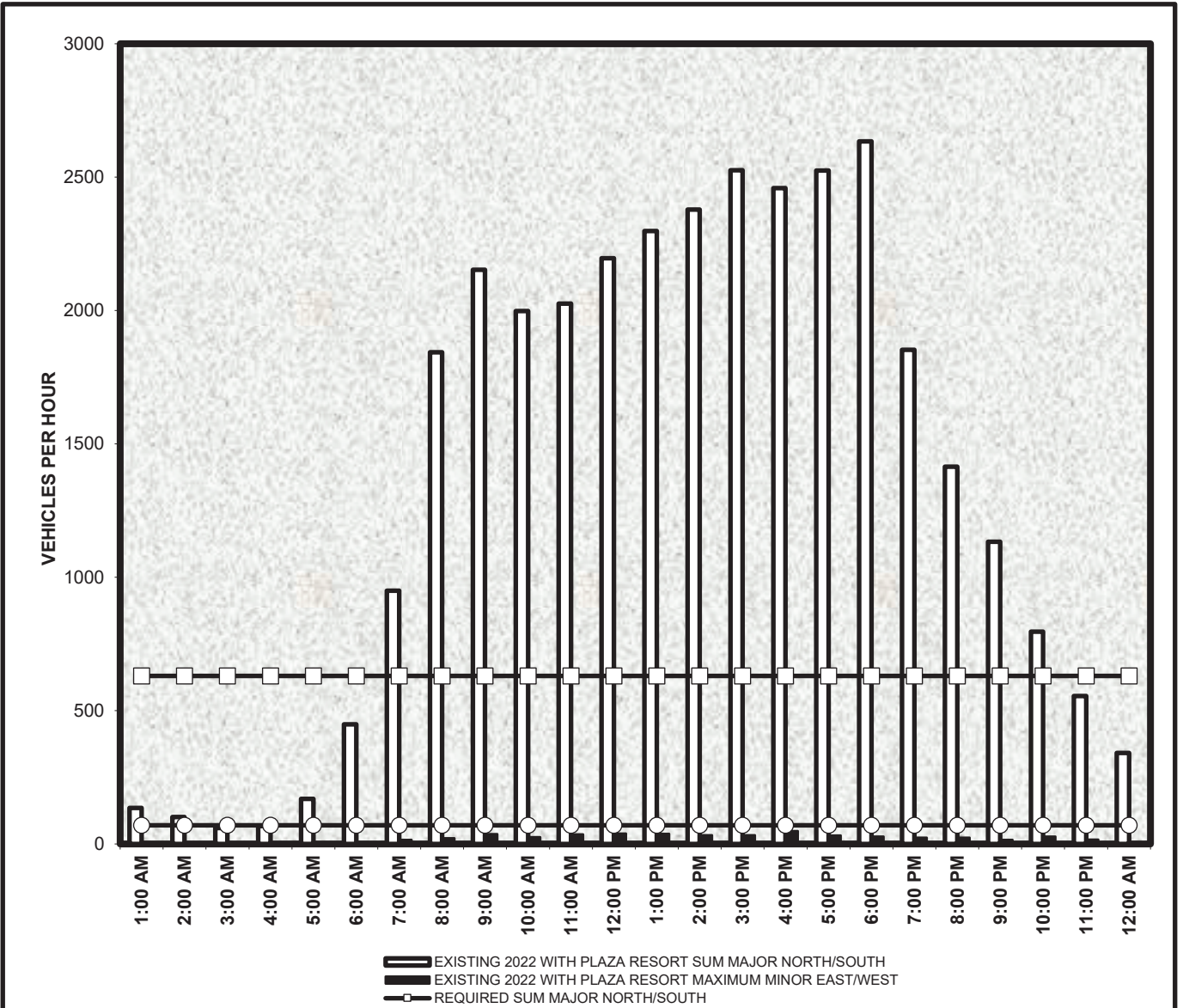


The Minimum Vehicular Volume, Condition A, is intended for application where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The warrant is satisfied when, for each of any eight hours of an average day, the traffic volumes provided in the MUTCD exist on the major street and on the higher-volume minor-street approach to the intersection, and the signal installation will not seriously disrupt progressive traffic flow.

## SCOTTSDALE PLAZA RESORT RENOVATIONS SCOTTSDALE ROAD and HUMMINGBIRD LANE

### M. U. T. C. D. WARRANT # 1B Interruption of Continuous Traffic

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH/SOUTH STREET	630
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST/WEST STREET	70
NUMBER OF HOURS SATISFIED:	<i>0</i>
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	<i>0</i>
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	<i>0</i>
<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>



The Interruption of Continuous Traffic, Condition B, is intended for application where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street. The warrant is satisfied when, for each of any eight hours of an average day, the traffic volumes provided in the MUTCD exist on the major street and on the higher-volume minor-street approach to the intersection, and the signal installation will not seriously disrupt progressive traffic flow.

Checked by: PEB 8/13/2022





# SCOTTSDALE PLAZA RESORT RENOVATIONS SCOTTSDALE ROAD and HUMMINGBIRD LANE

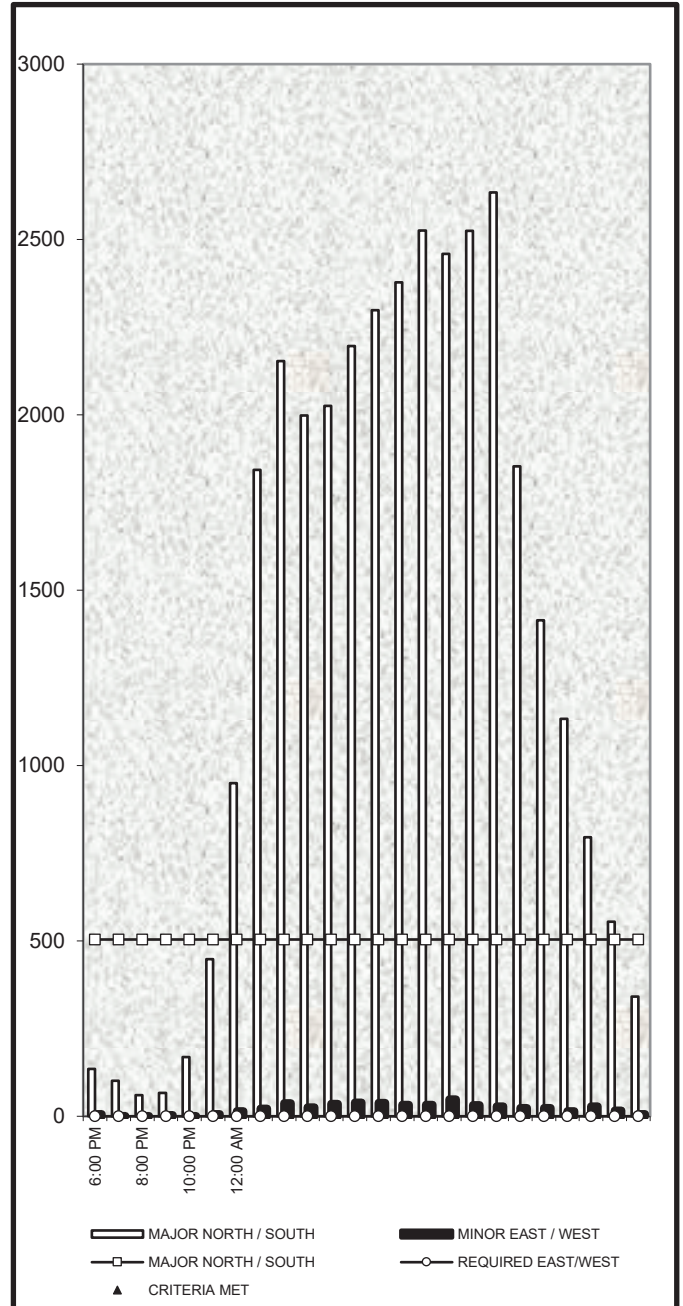
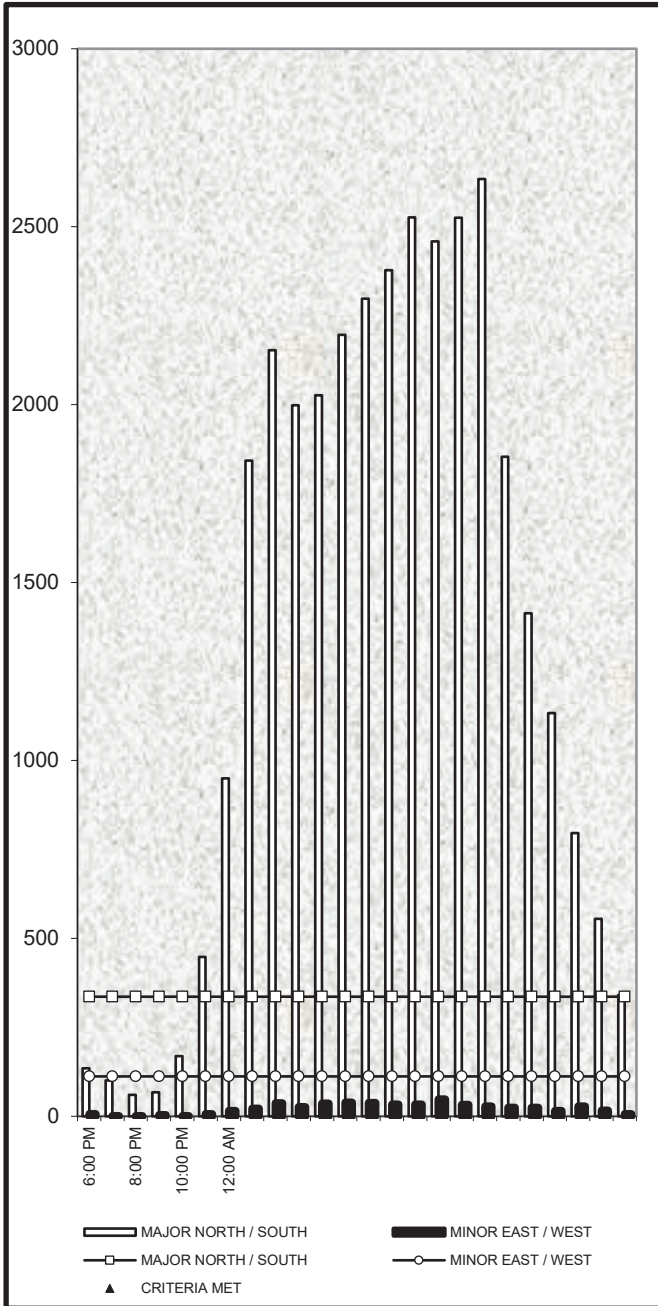
## M. U. T. C. D. WARRANT # 1

### Combination of Conditions A and B at 56% of Original Values

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH / SOUTH STREET	336	504
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST / WEST STREET	112	80

NUMBER OF HOURS SATISFIED:	0	0
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<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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The major-street and minor-street volumes shall be for the same 8 hours for each condition; however, the 8 hours satisfied on A shall not be required to be the same 8 hours satisfied in Condition B. The combination of Conditions A and B should be applied only after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems.

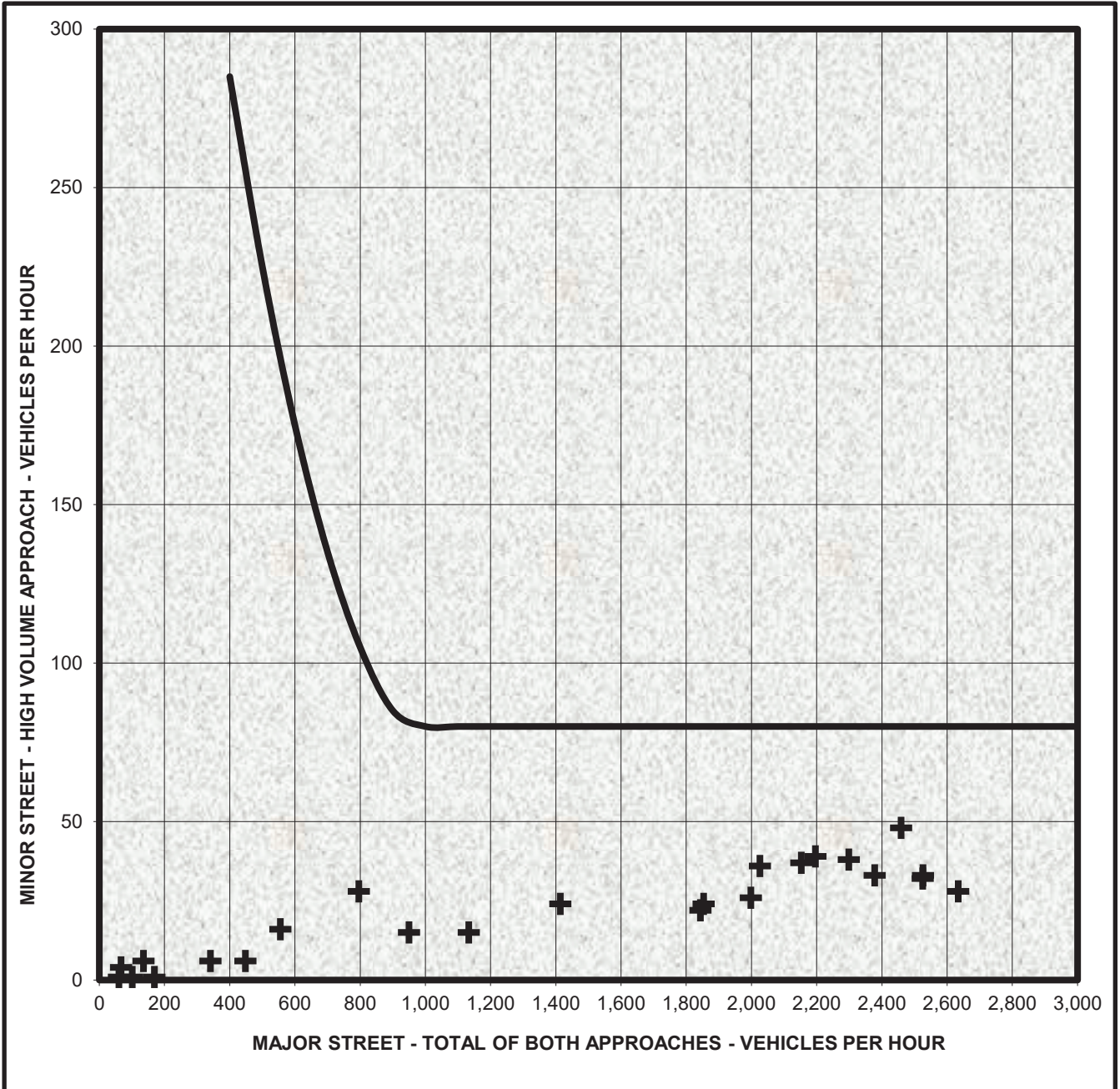


**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**M. U. T. C. D. WARRANT # 2  
Four-Hour Vehicular Volume**

NUMBER OF HOURS SATISFIED:	0
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	0
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	0

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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The Four Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The need for a traffic control signal shall be considered if an engineering study finds that for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor-street approach (one direction only) all fall above the applicable curve provided in the MUTCD for the existing combination of approach lanes.

**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**M. U. T. C. D. WARRANT # 3  
Peak Hour, Category A (Delay)**

REQUIRED SIDE STREET VEHICLE-HOURS DELAY:	5.00
REQUIRED SIDE STREET HOURLY VOLUME:	150
REQUIRED TOTAL INTERSECTION HOURLY VOLUME:	800

<b>TIME PERIOD: 7:00 AM to 8:00 AM</b>	<b>MEASURED</b>	<b>SATISFIED?</b>
SIDE STREET VEHICLE-HOURS DELAY:	0.38	NO
SIDE STREET HOURLY VOLUME:	22	NO
TOTAL INTERSECTION HOURLY VOLUME:	1876	YES
<b>ALL CRITERIA</b>		<b>NO</b>

<b>TIME PERIOD: 5:00 PM to 6:00 PM</b>	<b>MEASURED</b>	<b>SATISFIED?</b>
SIDE STREET VEHICLE-HOURS DELAY:	0.93	NO
SIDE STREET HOURLY VOLUME:	28	NO
TOTAL INTERSECTION HOURLY VOLUME:	2679	YES
<b>ALL CRITERIA</b>		<b>NO</b>

The Peak Hour signal warrant is intended for use at a location where traffic conditions are such that for a minimum of 1 hour of an average day, the minor-street suffers undue delay when entering or crossing the major street.

This signal warrant shall be applied only in unusual cases. Such cases include, but are not limited to, office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.

The need for a traffic control signal shall be considered if an engineering study finds that all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:

1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and
2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and
3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.

Checked by: PEB 8/13/2022

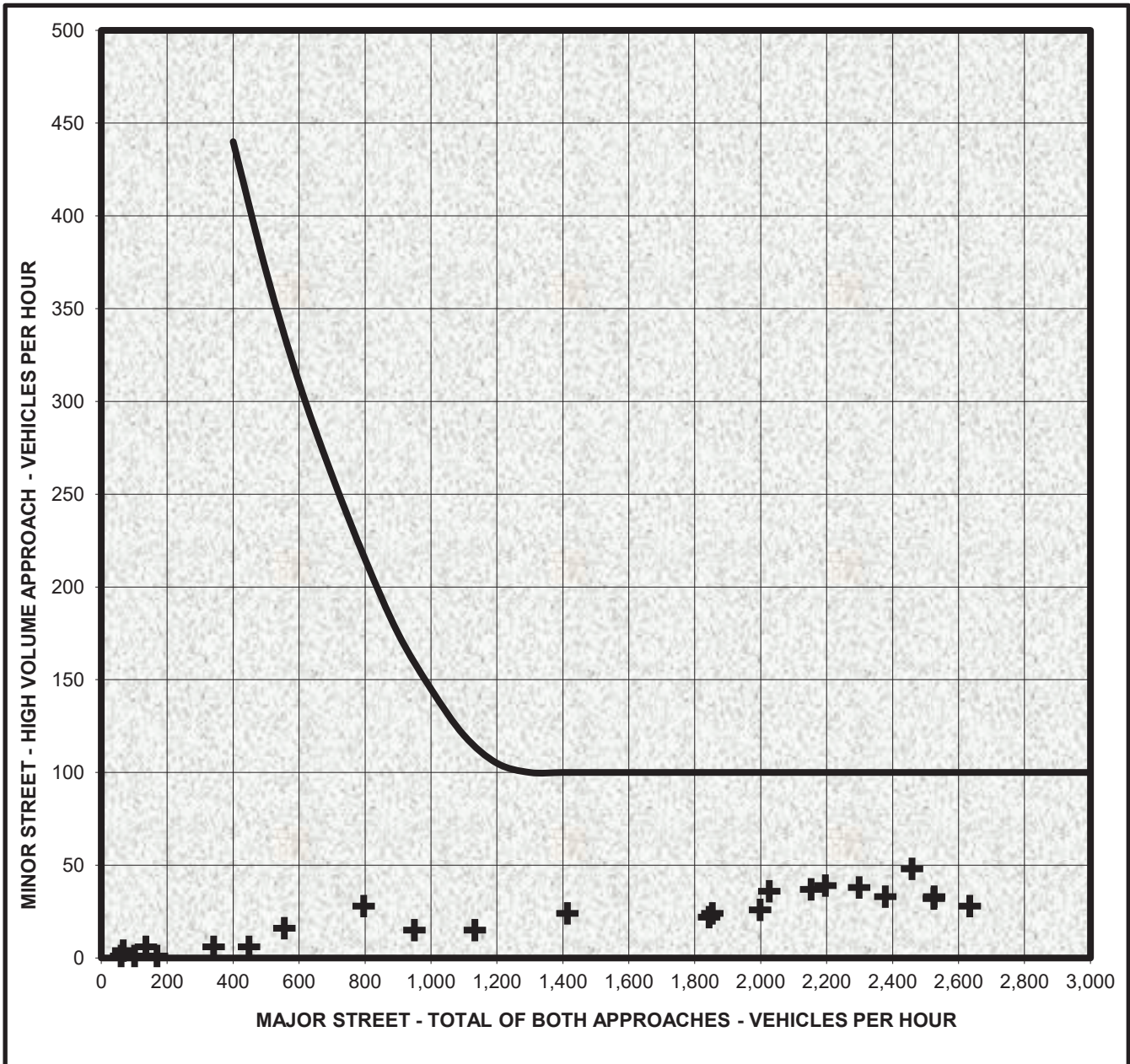


**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**M. U. T. C. D. WARRANT # 3  
One-Hour Vehicular Volume**

NUMBER OF HOURS SATISFIED:	0
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	0
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	0

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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The Four Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The need for a traffic control signal shall be considered if an engineering study finds that for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor-street approach (one direction only) all fall above the applicable curve provided in the MUTCD for the existing combination of approach lanes.

**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE  
MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES  
TRAFFIC CONTROL SIGNAL WARRANT STUDY SUMMARY**

LOCATION: **PARADISE VALLEY, ARIZONA**

SPECIAL CONDITIONS: **NONE**

DATE OF COUNT: 8/5/2022

DATE OF STUDY: 8/15/2022

NORTH/SOUTH STREET: SCOTTSDALE ROAD

MAJOR

MULTI-LANE

EAST/WEST STREET: HUMMINGBIRD LANE

MINOR

MULTI-LANE

POSTED SPEED LIMIT ON MAJOR STREET:

45 mph

85th PERCENTILE SPEED ON MAJOR STREET:

Unknown

**WARRANT**

**EXISTING**

**REQUIRED**

**SATISFIED?**

**# 1. EIGHT-HOUR VEHICULAR VOLUME**

A. MINIMUM VEHICULAR VOLUME

0

8

NO

B. INTERRUPTION OF CONTINUOUS TRAFFIC

0

8

NO

COMBINATION OF WARRANTS 1A AND 1B (80% of Values)

-

-

Not Applicable

COMBINATION OF WARRANTS 1A AND 1B (56% of Values)

0

8

NO

**# 2. FOUR-HOUR VEHICULAR VOLUME**

0

4

NO

**# 3. PEAK HOUR**

A. PEAK HOUR DELAY - AM

1

3

NO

A. PEAK HOUR DELAY - PM

1

3

NO

B. PEAK HOUR VOLUME

0

1

NO

**# 7. CRASH EXPERIENCE**

WITH WARRANT # 1A (Traffic Volumes at 80% of Original Values)

-

-

Not Applicable

WITH WARRANT # 1B (Traffic Volumes at 80% of Original Values)

-

-

Not Applicable

WITH WARRANT # 1A (Traffic Volumes at 56% of Original Values)

0

8

NO

WITH WARRANT # 1B (Traffic Volumes at 56% of Original Values)

0

8

NO

TOTAL NUMBER OF CRASHES

4

-

-

NUMBER OF POTENTIALLY PREVENTABLE CRASHES

1

5

NO

HAVE LESS RESTRICTIVE MEANS BEEN ATTEMPTED?

NO

-

NO

**# 7. ENTIRE WARRANT**

-

-

NO

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Checked by: PEB 8/13/2022



**TRAFFIC CONTROL SIGNAL WARRANT ESTIMATION  
LANE NUMBER, SPEED, AND VOLUME DATA**

LOCATION: **SCOTTSDALE PLAZA RESORT RENOVATIONS**  
 DATE AND DAY: **8/5/2022 FRIDAY**

NORTH / SOUTH STREET: **SCOTTSDALE ROAD** LANES: **3**  
 EAST / WEST STREET: **HUMMINGBIRD LANE** LANES: **2**

MAJOR STREET SPEED LIMIT OR 85<sup>th</sup> PERCENTILE SPEED: **45**

CONDITIONS: **NONE**

END TIME	STREET TRAFFIC VOLUMES			
	NB	SB	EB	WB
1:00 AM	134	106	4	1
2:00 AM	137	59	3	0
3:00 AM	78	48	7	1
4:00 AM	54	34	3	1
5:00 AM	106	87	9	3
6:00 AM	224	218	10	5
7:00 AM	470	459	21	4
8:00 AM	931	931	44	6
9:00 AM	974	1013	42	12
10:00 AM	983	1076	20	12
11:00 AM	1010	1118	42	22
12:00 PM	1247	1169	53	19
1:00 PM	1244	1267	36	32
2:00 PM	1328	1248	41	22
3:00 PM	1358	1337	35	28
4:00 PM	1391	1245	38	18
5:00 PM	1298	1277	30	20
6:00 PM	1257	1297	42	19
7:00 PM	1044	1026	40	24
8:00 PM	882	820	23	29
9:00 PM	763	706	15	32
10:00 PM	618	560	17	37
11:00 PM	469	414	5	31
12:00 AM	348	282	0	15
<b>TOTAL</b>	<b>18,348</b>	<b>17,797</b>	<b>580</b>	<b>393</b>

WARRANT	CRITERIA		REQUIRED HOURS	ACTUAL HOURS	SATISFIED?	PROXIMITY	
	MAJOR	MINOR				Major	Minor
#1A	420	140	8	0	NO	Satisfied	367%
#1B	630	70	8	0	NO	Satisfied	133%
#1A with #1B	480	56	8	0	NO	Satisfied	87%
#1B with #1A	720	112	8	0		Satisfied	273%
#2	Varying Graph		4	0	NO		90%
#3B	Varying Graph		1	0	NO		

Checked by: PEB 8/13/2022



**TRAFFIC CONTROL SIGNAL WARRANT STUDY  
LANE NUMBER, SPEED, AND VOLUME DATA**

PROJECT: **SCOTTSDALE PLAZA RESORT RENOVATIONS**  
 LOCATION: **PARADISE VALLEY, ARIZONA**

NORTH/SOUTH STREET:  
**SCOTTSDALE ROAD**

NB LANES: **3**  
 SB LANES: **3**

EAST/WEST STREET:  
**HUMMINGBIRD LANE**

EB LANES: **1**  
 WB LANES: **2**

SPEED LIMIT ON MAJOR STREET: **45**  
 85TH PERCENTILE SPEED ON MAJOR STREET: **UNKNOWN**

VOLUME DATA: **EXISTING 2022 WITH PLAZA RESORT**

DATE OF COUNT: **8/5/2022** **FRIDAY**  
 DATE OF STUDY: **8/15/2022**

SPECIAL CONDITIONS: **NONE**

INTERSECTION APPROACH TRAFFIC VOLUMES				
TIME	NORTHBOUND	SOUTHBOUND	EASTBOUND	WESTBOUND
1:00 AM	134	106	4	1
2:00 AM	137	59	3	0
3:00 AM	78	48	7	1
4:00 AM	54	34	3	1
5:00 AM	106	87	9	3
6:00 AM	224	218	10	5
7:00 AM	470	459	21	4
8:00 AM	931	931	44	6
9:00 AM	974	1013	42	12
10:00 AM	983	1076	20	12
11:00 AM	1010	1118	42	22
12:00 PM	1247	1169	53	19
1:00 PM	1244	1267	36	32
2:00 PM	1328	1248	41	22
3:00 PM	1358	1337	35	28
4:00 PM	1391	1245	38	18
5:00 PM	1298	1277	30	20
6:00 PM	1257	1297	42	19
7:00 PM	1044	1026	40	24
8:00 PM	882	820	23	29
9:00 PM	763	706	15	32
10:00 PM	618	560	17	37
11:00 PM	469	414	5	31
12:00 AM	348	282	0	15
<b>TOTAL</b>	<b>18,348</b>	<b>17,797</b>	<b>580</b>	<b>393</b>

Checked by: PEB 8/13/2022



**TRAFFIC CONTROL SIGNAL WARRANT STUDY  
CRASH EXPERIENCE AND DELAY DATA**

**SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**CRASH EXPERIENCE DATA**

HAVE LESS RESTRICTIVE MEANS BEEN ATTEMPTED?

**NO**

TOTAL NUMBER OF CRASHES IN A 12 MONTH PERIOD:

**4**

NUMBER OF POTENTIALLY PREVENTABLE CRASHES  
IN A 12 MONTH PERIOD:

**1**

WILL SIGNAL DISRUPT PROGRESSIVE TRAFFIC FLOW?

**YES**

**VEHICLE DELAY DATA**

TIME PERIOD	AVERAGE DELAY SECONDS/VEHICLE	SIDE STREET TOTAL DELAY VEH-HOURS	VOLUME	TOTAL INTERSECTION VOLUME
<b>7:00 AM to 8:00 AM</b>	<b>62</b>	<b>0.76</b>	<b>44</b>	<b>1,912</b>
<b>2:00 PM to 3:00 PM</b>	<b>120</b>	<b>1.17</b>	<b>35</b>	<b>2,758</b>

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## SCOTTSDALE PLAZA RESORT RENOVATIONS SCOTTSDALE ROAD and HUMMINGBIRD LANE

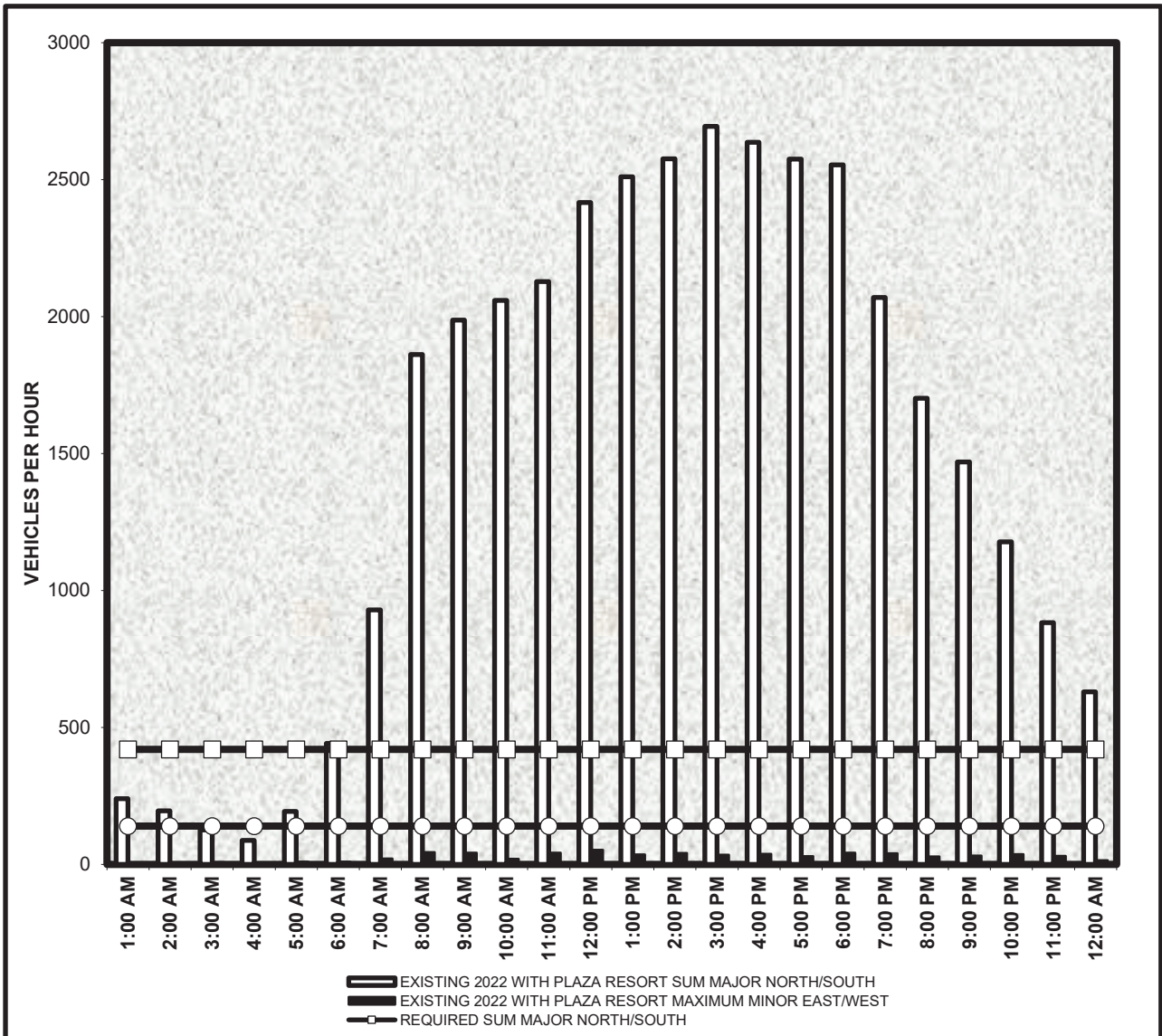
### M. U. T. C. D. WARRANT # 1A

#### Minimum Vehicular Volume

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH/SOUTH STREET	420
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST/WEST STREET	140

NUMBER OF HOURS SATISFIED:	0
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	0
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	0

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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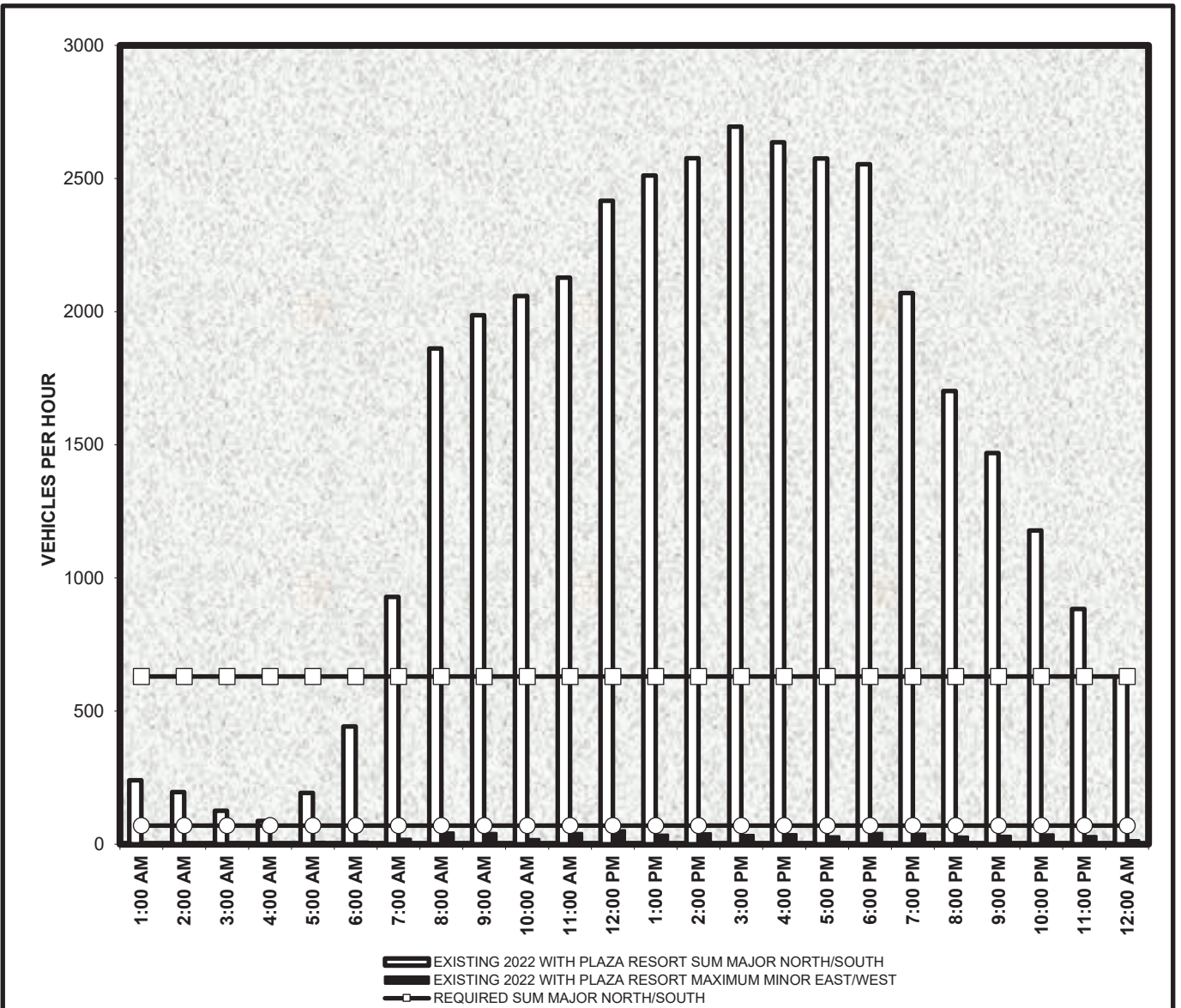
The Minimum Vehicular Volume, Condition A, is intended for application where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The warrant is satisfied when, for each of any eight hours of an average day, the traffic volumes provided in the MUTCD exist on the major street and on the higher-volume minor-street approach to the intersection, and the signal installation will not seriously disrupt progressive traffic flow.



## SCOTTSDALE PLAZA RESORT RENOVATIONS SCOTTSDALE ROAD and HUMMINGBIRD LANE

### M. U. T. C. D. WARRANT # 1B Interruption of Continuous Traffic

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH/SOUTH STREET	630
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST/WEST STREET	70
NUMBER OF HOURS SATISFIED:	<b>0</b>
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	<b>0</b>
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	<b>0</b>
<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>



The Interruption of Continuous Traffic, Condition B, is intended for application where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street. The warrant is satisfied when, for each of any eight hours of an average day, the traffic volumes provided in the MUTCD exist on the major street and on the higher-volume minor-street approach to the intersection, and the signal installation will not seriously disrupt progressive traffic flow.

# SCOTTSDALE PLAZA RESORT RENOVATIONS SCOTTSDALE ROAD and HUMMINGBIRD LANE

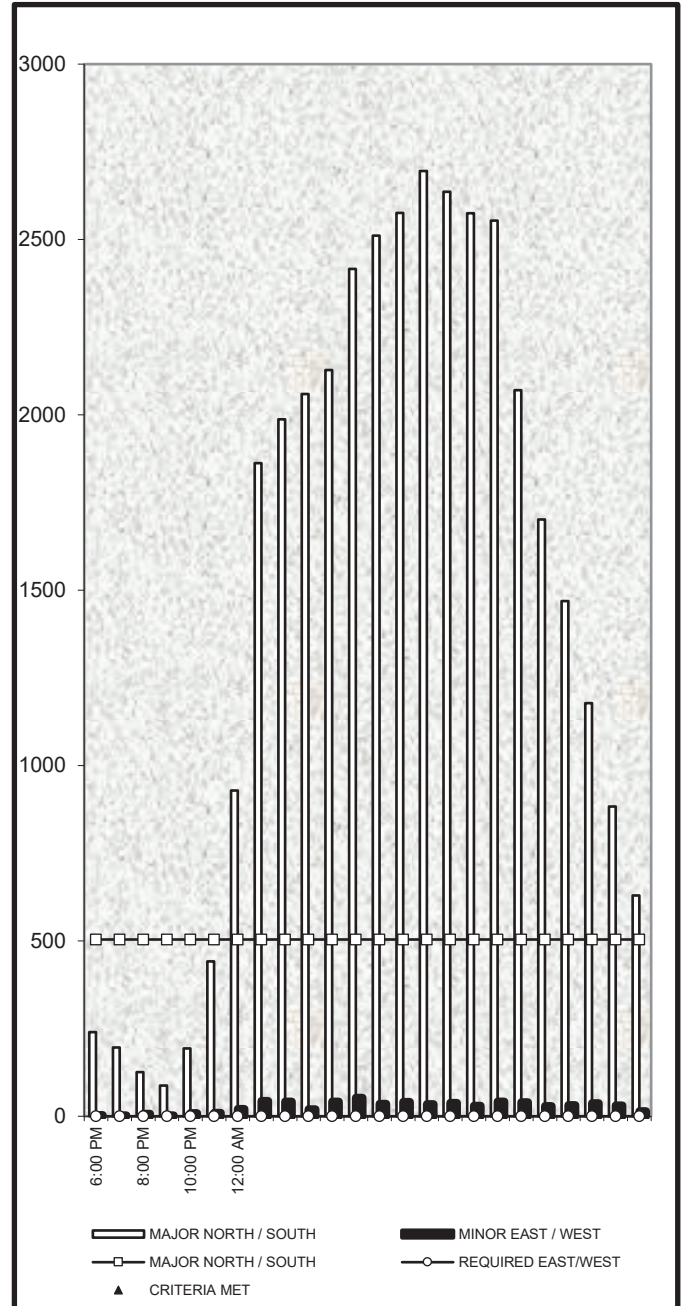
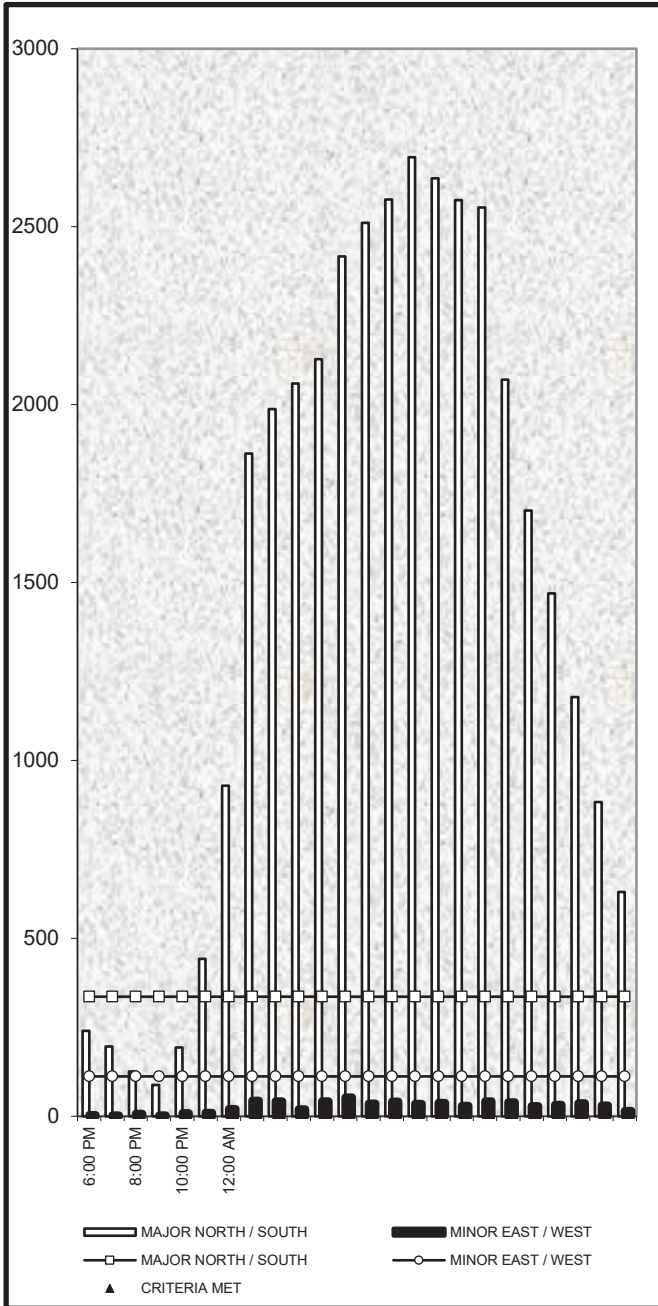
## M. U. T. C. D. WARRANT # 1

### Combination of Conditions A and B at 56% of Original Values

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH / SOUTH STREET	336	504
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST / WEST STREET	112	80

NUMBER OF HOURS SATISFIED:	0	0
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<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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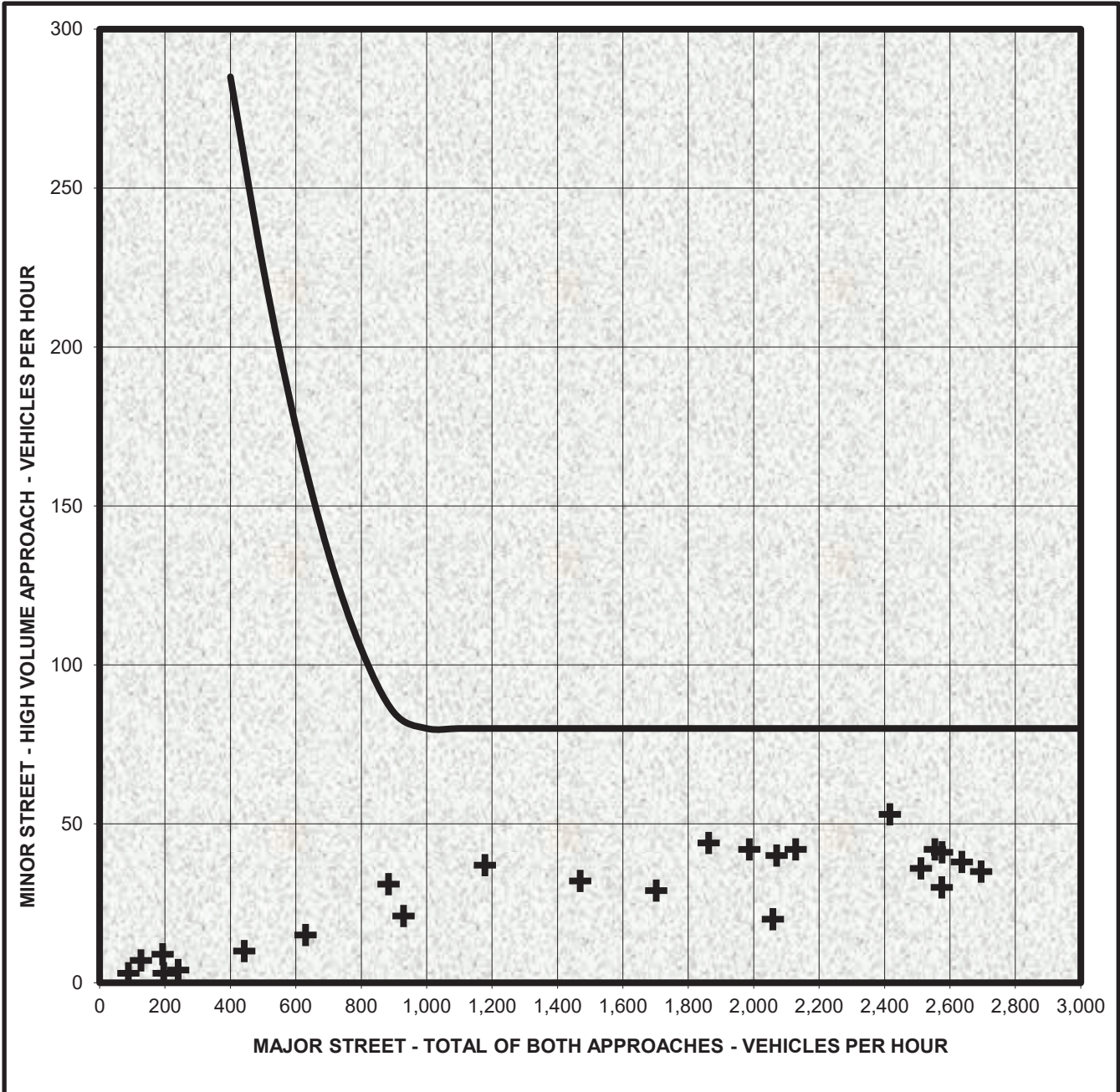
The major-street and minor-street volumes shall be for the same 8 hours for each condition; however, the 8 hours satisfied on A shall not be required to be the same 8 hours satisfied in Condition B. The combination of Conditions A and B should be applied only after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems.

**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**M. U. T. C. D. WARRANT # 2  
Four-Hour Vehicular Volume**

NUMBER OF HOURS SATISFIED:	0
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	0
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	0

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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The Four Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The need for a traffic control signal shall be considered if an engineering study finds that for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor-street approach (one direction only) all fall above the applicable curve provided in the MUTCD for the existing combination of approach lanes.

**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**M. U. T. C. D. WARRANT # 3  
Peak Hour, Category A (Delay)**

REQUIRED SIDE STREET VEHICLE-HOURS DELAY:	5.00
REQUIRED SIDE STREET HOURLY VOLUME:	150
REQUIRED TOTAL INTERSECTION HOURLY VOLUME:	800

<b>TIME PERIOD: 7:00 AM to 8:00 AM</b>	<b>MEASURED</b>	<b>SATISFIED?</b>
SIDE STREET VEHICLE-HOURS DELAY:	0.76	NO
SIDE STREET HOURLY VOLUME:	44	NO
TOTAL INTERSECTION HOURLY VOLUME:	1912	YES
<b>ALL CRITERIA</b>		<b>NO</b>

<b>TIME PERIOD: 2:00 PM to 3:00 PM</b>	<b>MEASURED</b>	<b>SATISFIED?</b>
SIDE STREET VEHICLE-HOURS DELAY:	1.17	NO
SIDE STREET HOURLY VOLUME:	35	NO
TOTAL INTERSECTION HOURLY VOLUME:	2758	YES
<b>ALL CRITERIA</b>		<b>NO</b>

The Peak Hour signal warrant is intended for use at a location where traffic conditions are such that for a minimum of 1 hour of an average day, the minor-street suffers undue delay when entering or crossing the major street.

This signal warrant shall be applied only in unusual cases. Such cases include, but are not limited to, office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.

The need for a traffic control signal shall be considered if an engineering study finds that all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:

1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and
2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and
3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.

Checked by: PEB 8/13/2022

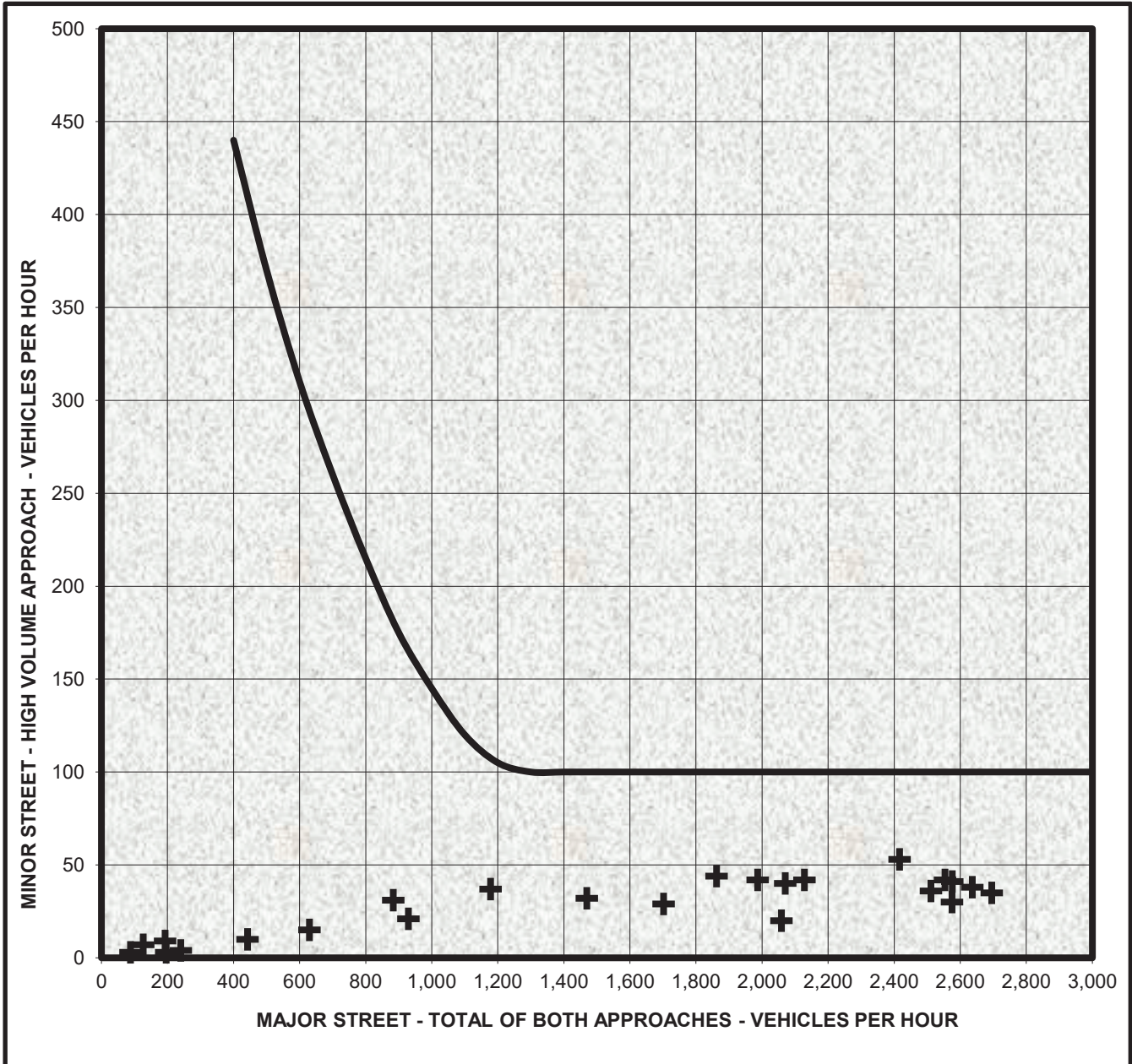


**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**M. U. T. C. D. WARRANT # 3  
One-Hour Vehicular Volume**

NUMBER OF HOURS SATISFIED:	0
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	0
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	0

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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The Four Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The need for a traffic control signal shall be considered if an engineering study finds that for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor-street approach (one direction only) all fall above the applicable curve provided in the MUTCD for the existing combination of approach lanes.



**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE  
MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES  
TRAFFIC CONTROL SIGNAL WARRANT STUDY SUMMARY**

LOCATION: **PARADISE VALLEY, ARIZONA**

SPECIAL CONDITIONS: **NONE**

DATE OF COUNT: 8/4/2022

DATE OF STUDY: 8/15/2022

NORTH/SOUTH STREET: SCOTTSDALE ROAD

MAJOR

MULTI-LANE

EAST/WEST STREET: HUMMINGBIRD LANE

MINOR

MULTI-LANE

POSTED SPEED LIMIT ON MAJOR STREET:

45 mph

85th PERCENTILE SPEED ON MAJOR STREET:

Unknown

**WARRANT**

**EXISTING**

**REQUIRED**

**SATISFIED?**

**# 1. EIGHT-HOUR VEHICULAR VOLUME**

A. MINIMUM VEHICULAR VOLUME

0

8

NO

B. INTERRUPTION OF CONTINUOUS TRAFFIC

0

8

NO

COMBINATION OF WARRANTS 1A AND 1B (80% of Values)

-

-

Not Applicable

COMBINATION OF WARRANTS 1A AND 1B (56% of Values)

0

8

NO

**# 2. FOUR-HOUR VEHICULAR VOLUME**

0

4

NO

**# 3. PEAK HOUR**

A. PEAK HOUR DELAY - AM

1

3

NO

A. PEAK HOUR DELAY - PM

1

3

NO

B. PEAK HOUR VOLUME

0

1

NO

**# 7. CRASH EXPERIENCE**

WITH WARRANT # 1A (Traffic Volumes at 80% of Original Values)

-

-

Not Applicable

WITH WARRANT # 1B (Traffic Volumes at 80% of Original Values)

-

-

Not Applicable

WITH WARRANT # 1A (Traffic Volumes at 56% of Original Values)

0

8

NO

WITH WARRANT # 1B (Traffic Volumes at 56% of Original Values)

0

8

NO

TOTAL NUMBER OF CRASHES

4

-

-

NUMBER OF POTENTIALLY PREVENTABLE CRASHES

1

5

NO

HAVE LESS RESTRICTIVE MEANS BEEN ATTEMPTED?

NO

-

NO

**# 7. ENTIRE WARRANT**

-

-

NO

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Checked by: PEB 8/13/2022



**TRAFFIC CONTROL SIGNAL WARRANT ESTIMATION  
LANE NUMBER, SPEED, AND VOLUME DATA**

LOCATION: **SCOTTSDALE PLAZA RESORT RENOVATIONS**  
 DATE AND DAY: **8/4/2022 THURSDAY**

NORTH / SOUTH STREET: **SCOTTSDALE ROAD** LANES: **3**  
 EAST / WEST STREET: **HUMMINGBIRD LANE** LANES: **2**

MAJOR STREET SPEED LIMIT OR 85<sup>th</sup> PERCENTILE SPEED: **45**

CONDITIONS: **NONE**

END TIME	STREET TRAFFIC VOLUMES			
	NB	SB	EB	WB
1:00 AM	81	67	7	2
2:00 AM	72	38	1	1
3:00 AM	46	20	1	0
4:00 AM	40	33	4	0
5:00 AM	104	81	1	1
6:00 AM	254	236	7	1
7:00 AM	512	526	16	5
8:00 AM	961	1053	24	12
9:00 AM	1118	1235	40	12
10:00 AM	1022	1162	28	22
11:00 AM	1098	1116	39	25
12:00 PM	1204	1195	43	24
1:00 PM	1223	1288	35	21
2:00 PM	1258	1339	31	26
3:00 PM	1389	1371	32	21
4:00 PM	1421	1264	45	26
5:00 PM	1437	1322	30	31
6:00 PM	1469	1406	25	19
7:00 PM	1064	959	23	22
8:00 PM	817	727	22	19
9:00 PM	671	565	11	16
10:00 PM	449	420	10	31
11:00 PM	321	285	7	17
12:00 AM	217	155	12	7
<b>TOTAL</b>	<b>18,248</b>	<b>17,863</b>	<b>494</b>	<b>361</b>

WARRANT	CRITERIA		REQUIRED HOURS	ACTUAL HOURS	SATISFIED?	PROXIMITY	
	MAJOR	MINOR				Major	Minor
#1A	420	140	8	0	NO	Satisfied	460%
#1B	630	70	8	0	NO	Satisfied	180%
#1A with #1B	480	56	8	0	NO	Satisfied	124%
#1B with #1A	720	112	8	0		Satisfied	348%
#2	Varying Graph		4	0	NO		105%
#3B	Varying Graph		1	0	NO		

Checked by: PEB 8/13/2022



**TRAFFIC CONTROL SIGNAL WARRANT STUDY  
LANE NUMBER, SPEED, AND VOLUME DATA**

PROJECT: **SCOTTSDALE PLAZA RESORT RENOVATIONS**  
 LOCATION: **PARADISE VALLEY, ARIZONA**

NORTH/SOUTH STREET: **SCOTTSDALE ROAD**  
 NB LANES: **3**  
 SB LANES: **3**

EAST/WEST STREET: **HUMMINGBIRD LANE**  
 EB LANES: **1**  
 WB LANES: **2**

SPEED LIMIT ON MAJOR STREET: **45**  
 85TH PERCENTILE SPEED ON MAJOR STREET: **UNKNOWN**

VOLUME DATA: **2025 WITH PLAZA RESORT**

DATE OF COUNT: **8/4/2022**      **THURSDAY**  
 DATE OF STUDY: **8/15/2022**

SPECIAL CONDITIONS: **NONE**

INTERSECTION APPROACH TRAFFIC VOLUMES				
TIME	NORTHBOUND	SOUTHBOUND	EASTBOUND	WESTBOUND
1:00 AM	81	67	7	2
2:00 AM	72	38	1	1
3:00 AM	46	20	1	0
4:00 AM	40	33	4	0
5:00 AM	104	81	1	1
6:00 AM	254	236	7	1
7:00 AM	512	526	16	5
8:00 AM	961	1053	24	12
9:00 AM	1118	1235	40	12
10:00 AM	1022	1162	28	22
11:00 AM	1098	1116	39	25
12:00 PM	1204	1195	43	24
1:00 PM	1223	1288	35	21
2:00 PM	1258	1339	31	26
3:00 PM	1389	1371	32	21
4:00 PM	1421	1264	45	26
5:00 PM	1437	1322	30	31
6:00 PM	1469	1406	25	19
7:00 PM	1064	959	23	22
8:00 PM	817	727	22	19
9:00 PM	671	565	11	16
10:00 PM	449	420	10	31
11:00 PM	321	285	7	17
12:00 AM	217	155	12	7
<b>TOTAL</b>	<b>18,248</b>	<b>17,863</b>	<b>494</b>	<b>361</b>

Checked by: PEB 8/13/2022





**TRAFFIC CONTROL SIGNAL WARRANT STUDY  
CRASH EXPERIENCE AND DELAY DATA**

**SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**CRASH EXPERIENCE DATA**

HAVE LESS RESTRICTIVE MEANS BEEN ATTEMPTED?

**NO**

TOTAL NUMBER OF CRASHES IN A 12 MONTH PERIOD:

**4**

NUMBER OF POTENTIALLY PREVENTABLE CRASHES  
IN A 12 MONTH PERIOD:

**1**

WILL SIGNAL DISRUPT PROGRESSIVE TRAFFIC FLOW?

**YES**

**VEHICLE DELAY DATA**

TIME PERIOD	AVERAGE DELAY SECONDS/VEHICLE	SIDE STREET TOTAL DELAY VEH-HOURS	VOLUME	TOTAL INTERSECTION VOLUME
<b>0:00 AM to 0:00 AM</b>		<b>0.00</b>	<b>0</b>	<b>2,567</b>
<b>5:00 PM to 6:00 PM</b>		<b>0.00</b>	<b>25</b>	<b>2,919</b>

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## SCOTTSDALE PLAZA RESORT RENOVATIONS SCOTTSDALE ROAD and HUMMINGBIRD LANE

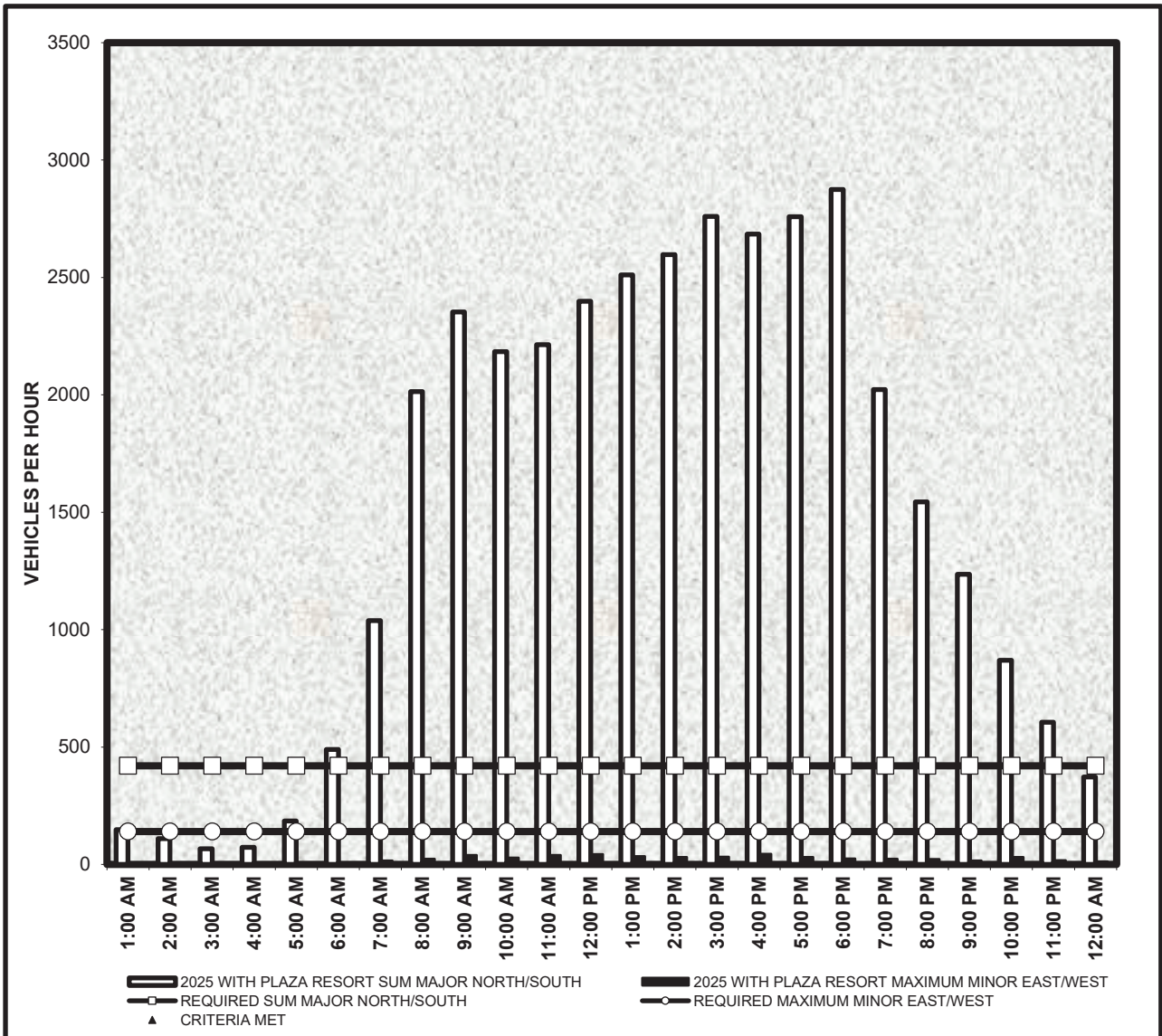
### M. U. T. C. D. WARRANT # 1A

#### Minimum Vehicular Volume

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH/SOUTH STREET	420
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST/WEST STREET	140

NUMBER OF HOURS SATISFIED:	0
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	0
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	0

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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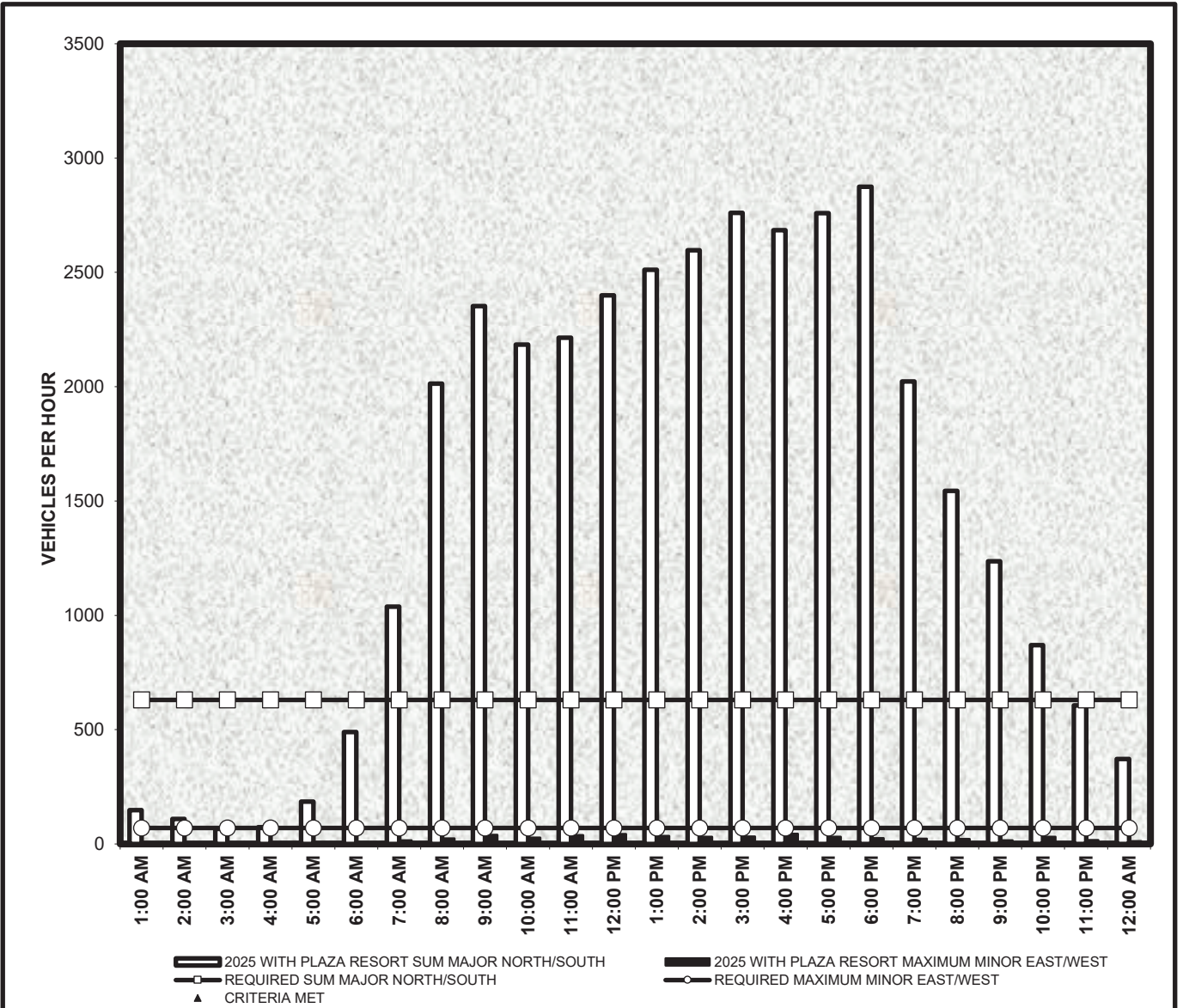


The Minimum Vehicular Volume, Condition A, is intended for application where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The warrant is satisfied when, for each of any eight hours of an average day, the traffic volumes provided in the MUTCD exist on the major street and on the higher-volume minor-street approach to the intersection, and the signal installation will not seriously disrupt progressive traffic flow.

## SCOTTSDALE PLAZA RESORT RENOVATIONS SCOTTSDALE ROAD and HUMMINGBIRD LANE

### M. U. T. C. D. WARRANT # 1B Interruption of Continuous Traffic

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH/SOUTH STREET	630
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST/WEST STREET	70
NUMBER OF HOURS SATISFIED:	<i>0</i>
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	<i>0</i>
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	<i>0</i>
<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>



The Interruption of Continuous Traffic, Condition B, is intended for application where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street. The warrant is satisfied when, for each of any eight hours of an average day, the traffic volumes provided in the MUTCD exist on the major street and on the higher-volume minor-street approach to the intersection, and the signal installation will not seriously disrupt progressive traffic flow.

Checked by: PEB 8/13/2022



# SCOTTSDALE PLAZA RESORT RENOVATIONS SCOTTSDALE ROAD and HUMMINGBIRD LANE

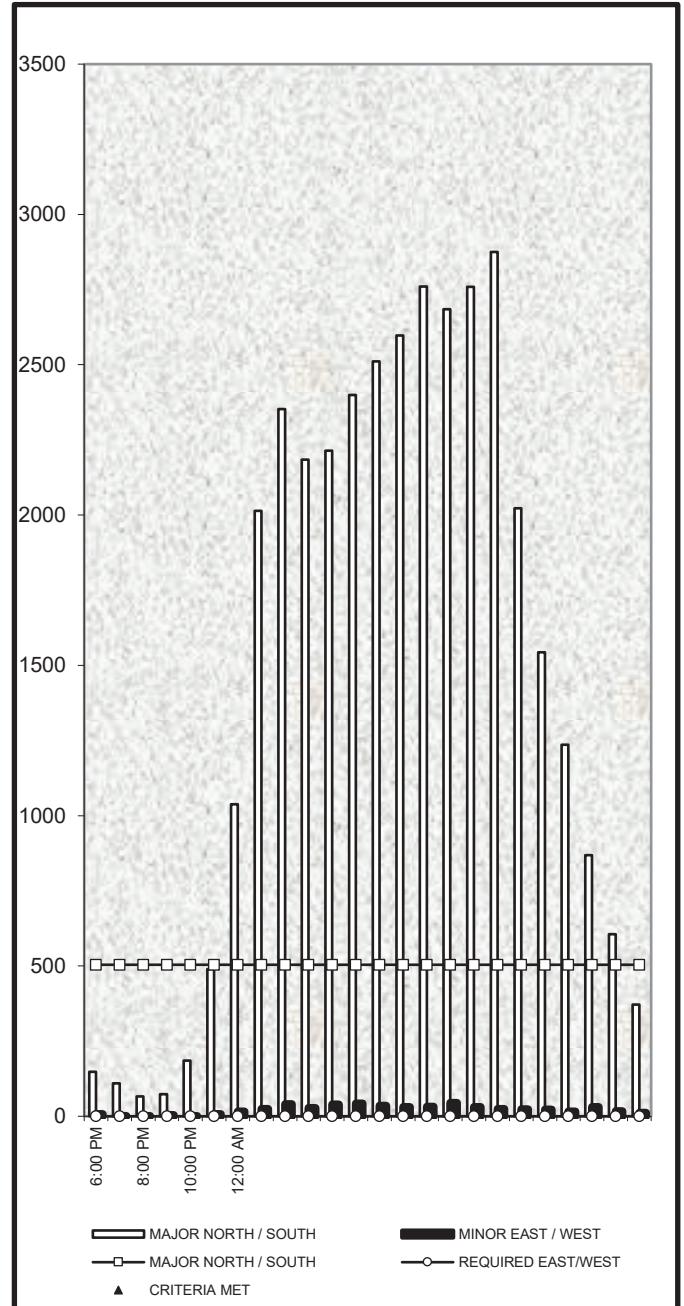
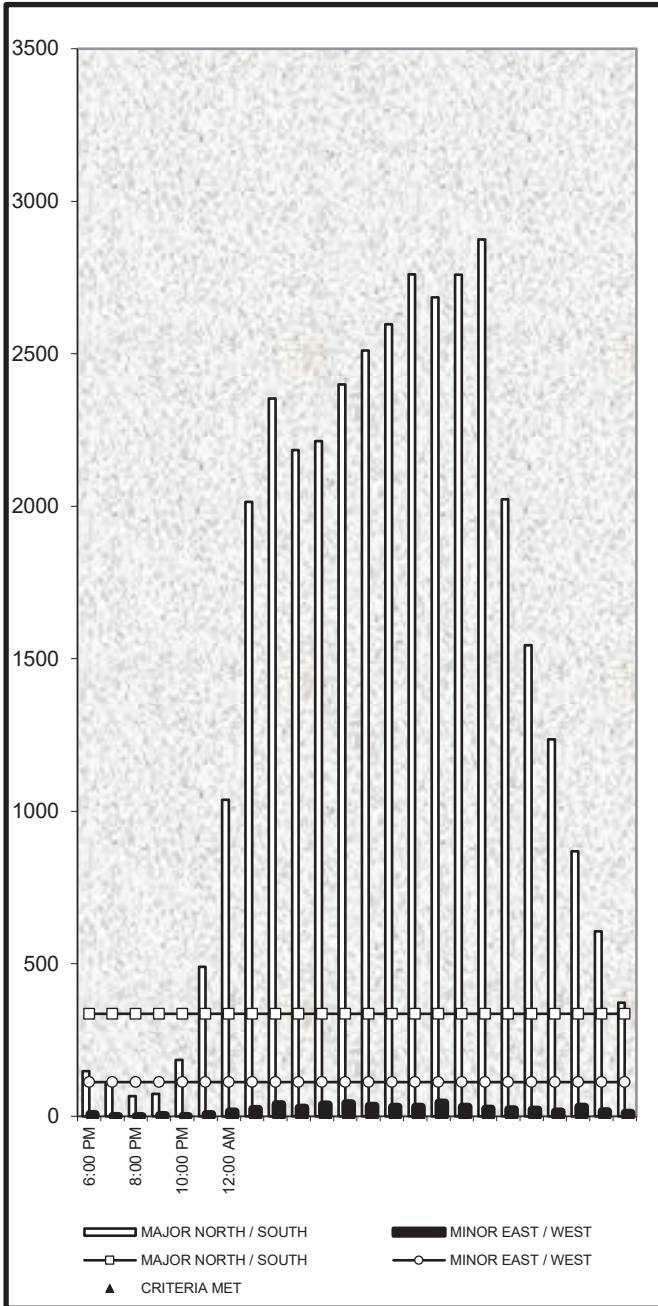
## M. U. T. C. D. WARRANT # 1

### Combination of Conditions A and B at 56% of Original Values

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH / SOUTH STREET	336	504
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST / WEST STREET	112	80

NUMBER OF HOURS SATISFIED:	0	0
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<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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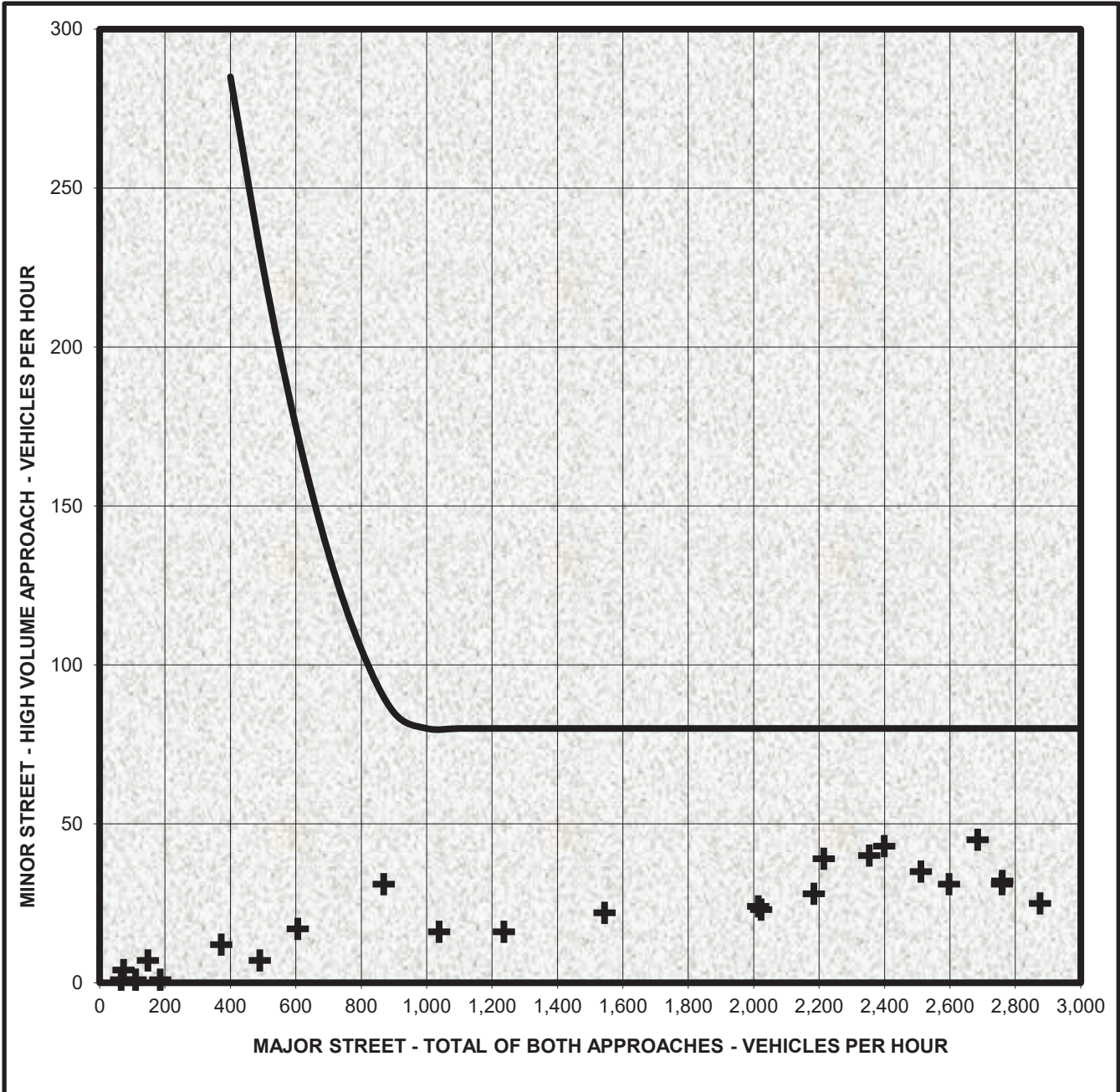
The major-street and minor-street volumes shall be for the same 8 hours for each condition; however, the 8 hours satisfied on A shall not be required to be the same 8 hours satisfied in Condition B. The combination of Conditions A and B should be applied only after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems.

**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**M. U. T. C. D. WARRANT # 2  
Four-Hour Vehicular Volume**

NUMBER OF HOURS SATISFIED:	0
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	0
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	0

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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The Four Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The need for a traffic control signal shall be considered if an engineering study finds that for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor-street approach (one direction only) all fall above the applicable curve provided in the MUTCD for the existing combination of approach lanes.

**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**M. U. T. C. D. WARRANT # 3  
Peak Hour, Category A (Delay)**

REQUIRED SIDE STREET VEHICLE-HOURS DELAY:	5.00
REQUIRED SIDE STREET HOURLY VOLUME:	150
REQUIRED TOTAL INTERSECTION HOURLY VOLUME:	800

<b>TIME PERIOD: 0:00 AM to 0:00 AM</b>	<b>MEASURED</b>	<b>SATISFIED?</b>
SIDE STREET VEHICLE-HOURS DELAY:	0.00	NO
SIDE STREET HOURLY VOLUME:	0	NO
TOTAL INTERSECTION HOURLY VOLUME:	2567	YES
<b>ALL CRITERIA</b>		<b>NO</b>

<b>TIME PERIOD: 5:00 PM to 6:00 PM</b>	<b>MEASURED</b>	<b>SATISFIED?</b>
SIDE STREET VEHICLE-HOURS DELAY:	0.00	NO
SIDE STREET HOURLY VOLUME:	25	NO
TOTAL INTERSECTION HOURLY VOLUME:	2919	YES
<b>ALL CRITERIA</b>		<b>NO</b>

The Peak Hour signal warrant is intended for use at a location where traffic conditions are such that for a minimum of 1 hour of an average day, the minor-street suffers undue delay when entering or crossing the major street.

This signal warrant shall be applied only in unusual cases. Such cases include, but are not limited to, office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.

The need for a traffic control signal shall be considered if an engineering study finds that all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:

1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and
2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and
3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.

Checked by: PEB 8/13/2022



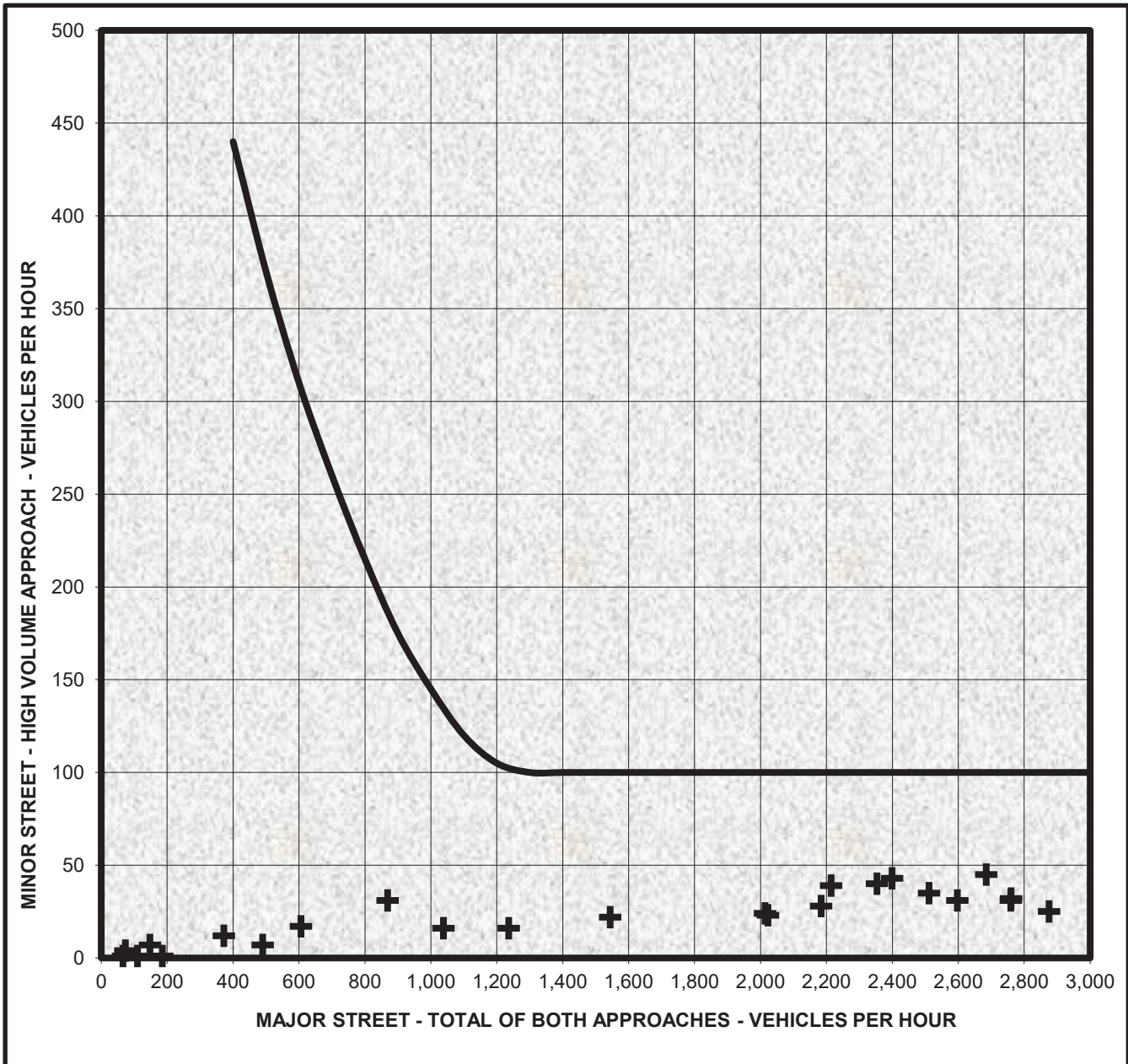


**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**M. U. T. C. D. WARRANT # 3  
One-Hour Vehicular Volume**

NUMBER OF HOURS SATISFIED:	0
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	0
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	0

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
--------------------------	----------------------



The Four Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The need for a traffic control signal shall be considered if an engineering study finds that for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor-street approach (one direction only) all fall above the applicable curve provided in the MUTCD for the existing combination of approach lanes.

Checked by: PEB 8/13/2022



**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE  
MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES  
TRAFFIC CONTROL SIGNAL WARRANT STUDY SUMMARY**

LOCATION: **PARADISE VALLEY, ARIZONA**

SPECIAL CONDITIONS: **NONE**

DATE OF COUNT: 8/5/2022

DATE OF STUDY: 8/15/2022

NORTH/SOUTH STREET: SCOTTSDALE ROAD

MAJOR

MULTI-LANE

EAST/WEST STREET: HUMMINGBIRD LANE

MINOR

MULTI-LANE

POSTED SPEED LIMIT ON MAJOR STREET:

45 mph

85th PERCENTILE SPEED ON MAJOR STREET:

Unknown

**WARRANT**

**EXISTING**

**REQUIRED**

**SATISFIED?**

# 1. EIGHT-HOUR VEHICULAR VOLUME

A. MINIMUM VEHICULAR VOLUME

0

8

NO

B. INTERRUPTION OF CONTINUOUS TRAFFIC

0

8

NO

COMBINATION OF WARRANTS 1A AND 1B (80% of Values)

-

-

Not Applicable

COMBINATION OF WARRANTS 1A AND 1B (56% of Values)

0

8

NO

# 2. FOUR-HOUR VEHICULAR VOLUME

0

4

NO

# 3. PEAK HOUR

A. PEAK HOUR DELAY - AM

1

3

NO

A. PEAK HOUR DELAY - PM

1

3

NO

B. PEAK HOUR VOLUME

0

1

NO

# 7. CRASH EXPERIENCE

WITH WARRANT # 1A (Traffic Volumes at 80% of Original Values)

-

-

Not Applicable

WITH WARRANT # 1B (Traffic Volumes at 80% of Original Values)

-

-

Not Applicable

WITH WARRANT # 1A (Traffic Volumes at 56% of Original Values)

0

8

NO

WITH WARRANT # 1B (Traffic Volumes at 56% of Original Values)

0

8

NO

TOTAL NUMBER OF CRASHES

4

-

-

NUMBER OF POTENTIALLY PREVENTABLE CRASHES

1

5

NO

HAVE LESS RESTRICTIVE MEANS BEEN ATTEMPTED?

NO

-

NO

# 7. ENTIRE WARRANT

-

-

NO

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Checked by: PEB 8/13/2022





**TRAFFIC CONTROL SIGNAL WARRANT ESTIMATION  
LANE NUMBER, SPEED, AND VOLUME DATA**

LOCATION: **SCOTTSDALE PLAZA RESORT RENOVATIONS**  
 DATE AND DAY: **8/5/2022 FRIDAY**

NORTH / SOUTH STREET: **SCOTTSDALE ROAD** LANES: **3**  
 EAST / WEST STREET: **HUMMINGBIRD LANE** LANES: **2**

MAJOR STREET SPEED LIMIT OR 85<sup>th</sup> PERCENTILE SPEED: **45**

CONDITIONS: **NONE**

END TIME	STREET TRAFFIC VOLUMES			
	NB	SB	EB	WB
1:00 AM	146	116	4	1
2:00 AM	150	64	3	0
3:00 AM	85	52	8	1
4:00 AM	59	37	3	1
5:00 AM	116	95	10	3
6:00 AM	245	238	11	5
7:00 AM	514	502	23	4
8:00 AM	1017	1017	48	7
9:00 AM	1064	1107	46	13
10:00 AM	1074	1176	22	13
11:00 AM	1104	1222	46	24
12:00 PM	1363	1277	58	21
1:00 PM	1359	1382	34	35
2:00 PM	1450	1364	37	24
3:00 PM	1483	1460	33	31
4:00 PM	1515	1359	36	20
5:00 PM	1418	1394	27	22
6:00 PM	1372	1414	39	21
7:00 PM	1141	1119	38	26
8:00 PM	964	895	22	32
9:00 PM	833	771	13	35
10:00 PM	675	611	16	40
11:00 PM	512	451	4	34
12:00 AM	380	308	15	16
<b>TOTAL</b>	<b>20,039</b>	<b>19,431</b>	<b>596</b>	<b>429</b>

WARRANT	CRITERIA		REQUIRED HOURS	ACTUAL HOURS	SATISFIED?	PROXIMITY	
	MAJOR	MINOR				Major	Minor
#1A	420	140	8	0	NO	Satisfied	419%
#1B	630	70	8	0	NO	Satisfied	159%
#1A with #1B	480	56	8	1	NO	Satisfied	107%
#1B with #1A	720	112	8	0		Satisfied	315%
#2	Varying Graph		4	0	NO		74%
#3B	Varying Graph		1	0	NO		

Checked by: PEB 8/13/2022



**TRAFFIC CONTROL SIGNAL WARRANT STUDY  
LANE NUMBER, SPEED, AND VOLUME DATA**

PROJECT: **SCOTTSDALE PLAZA RESORT RENOVATIONS**  
 LOCATION: **PARADISE VALLEY, ARIZONA**

NORTH/SOUTH STREET:

**SCOTTSDALE ROAD**

NB LANES: **3**  
 SB LANES: **3**

EAST/WEST STREET:

**HUMMINGBIRD LANE**

EB LANES: **1**  
 WB LANES: **2**

SPEED LIMIT ON MAJOR STREET: **45**  
 85TH PERCENTILE SPEED ON MAJOR STREET: **UNKNOWN**

VOLUME DATA: **2025 WITH PLAZA RESORT**

DATE OF COUNT: **8/5/2022** **FRIDAY**  
 DATE OF STUDY: **8/15/2022**

SPECIAL CONDITIONS: **NONE**

**INTERSECTION APPROACH TRAFFIC VOLUMES**

TIME	NORTHBOUND	SOUTHBOUND	EASTBOUND	WESTBOUND
1:00 AM	146	116	4	1
2:00 AM	150	64	3	0
3:00 AM	85	52	8	1
4:00 AM	59	37	3	1
5:00 AM	116	95	10	3
6:00 AM	245	238	11	5
7:00 AM	514	502	23	4
8:00 AM	1017	1017	48	7
9:00 AM	1064	1107	46	13
10:00 AM	1074	1176	22	13
11:00 AM	1104	1222	46	24
12:00 PM	1363	1277	58	21
1:00 PM	1359	1382	34	35
2:00 PM	1450	1364	37	24
3:00 PM	1483	1460	33	31
4:00 PM	1515	1359	36	20
5:00 PM	1418	1394	27	22
6:00 PM	1372	1414	39	21
7:00 PM	1141	1119	38	26
8:00 PM	964	895	22	32
9:00 PM	833	771	13	35
10:00 PM	675	611	16	40
11:00 PM	512	451	4	34
12:00 AM	380	308	15	16
<b>TOTAL</b>	<b>20,039</b>	<b>19,431</b>	<b>596</b>	<b>429</b>

Checked by: PEB 8/13/2022



**TRAFFIC CONTROL SIGNAL WARRANT STUDY  
CRASH EXPERIENCE AND DELAY DATA**

**SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**CRASH EXPERIENCE DATA**

HAVE LESS RESTRICTIVE MEANS BEEN ATTEMPTED?

TOTAL NUMBER OF CRASHES IN A 12 MONTH PERIOD:

NUMBER OF POTENTIALLY PREVENTABLE CRASHES  
IN A 12 MONTH PERIOD:

WILL SIGNAL DISRUPT PROGRESSIVE TRAFFIC FLOW?

**VEHICLE DELAY DATA**

TIME PERIOD	AVERAGE DELAY SECONDS/VEHICLE	SIDE STREET TOTAL DELAY VEH-HOURS	VOLUME	TOTAL INTERSECTION VOLUME
<b>0:00 AM to 0:00 AM</b>		<b>0.00</b>	<b>0</b>	<b>2,810</b>
<b>2:00 PM to 3:00 PM</b>		<b>0.00</b>	<b>33</b>	<b>3,007</b>

Checked by: PEB 8/13/2022



## SCOTTSDALE PLAZA RESORT RENOVATIONS SCOTTSDALE ROAD and HUMMINGBIRD LANE

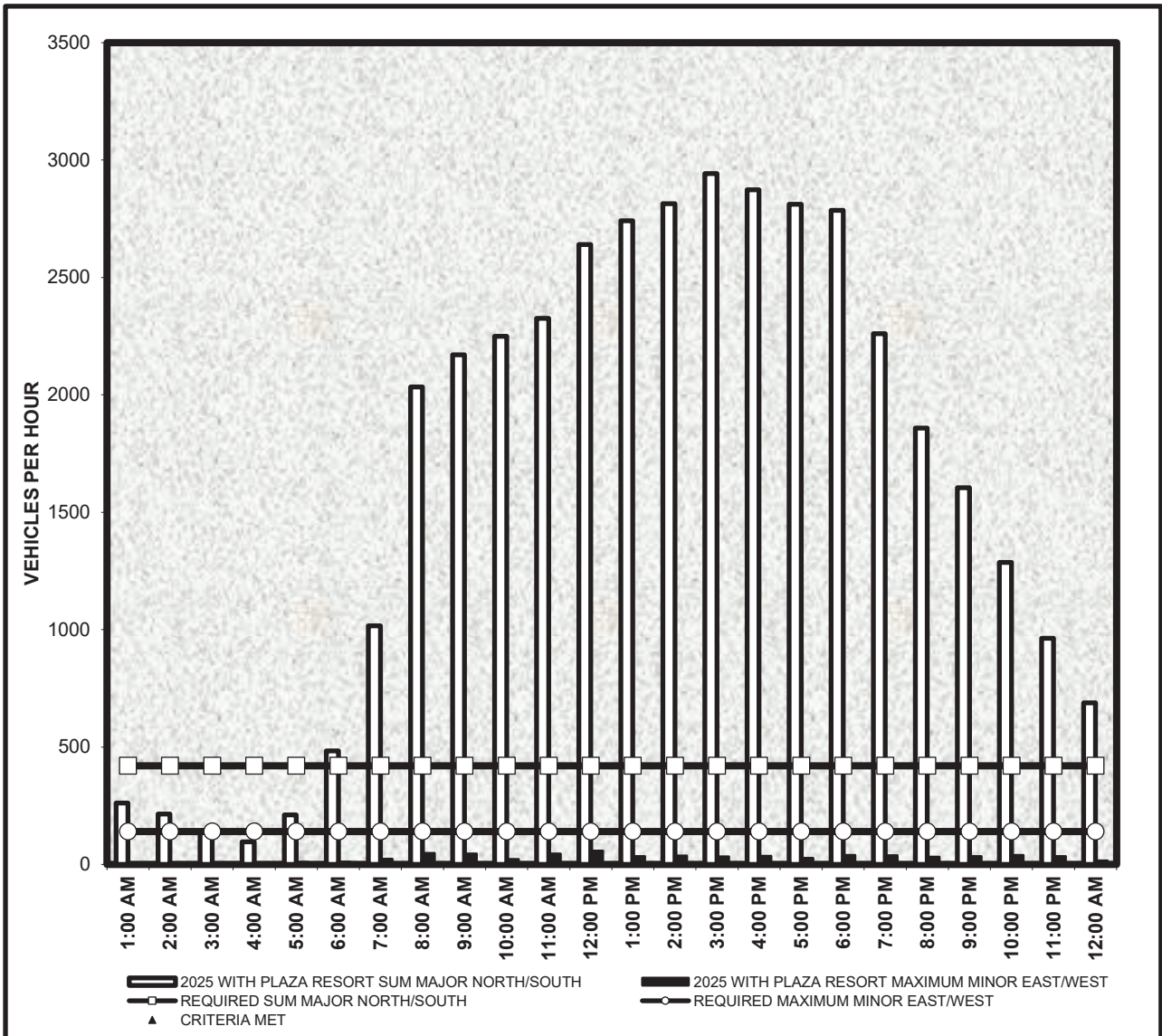
### M. U. T. C. D. WARRANT # 1A

#### Minimum Vehicular Volume

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH/SOUTH STREET	420
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST/WEST STREET	140

NUMBER OF HOURS SATISFIED:	0
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	0
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	0

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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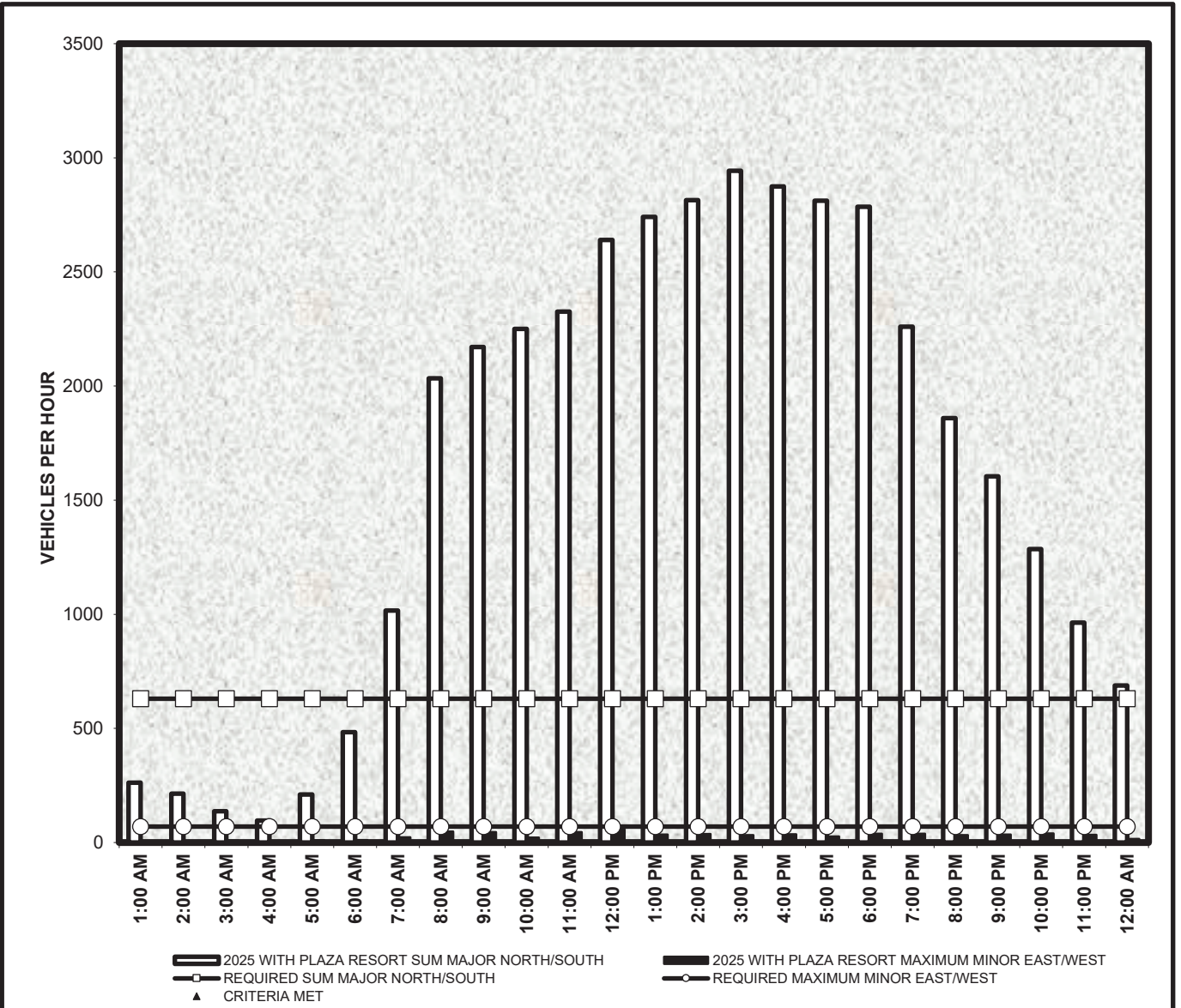


The Minimum Vehicular Volume, Condition A, is intended for application where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The warrant is satisfied when, for each of any eight hours of an average day, the traffic volumes provided in the MUTCD exist on the major street and on the higher-volume minor-street approach to the intersection, and the signal installation will not seriously disrupt progressive traffic flow.

**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**M. U. T. C. D. WARRANT # 1B  
Interruption of Continuous Traffic**

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH/SOUTH STREET	630
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST/WEST STREET	70
NUMBER OF HOURS SATISFIED:	0
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	0
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	0
<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>



The Interruption of Continuous Traffic, Condition B, is intended for application where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street. The warrant is satisfied when, for each of any eight hours of an average day, the traffic volumes provided in the MUTCD exist on the major street and on the higher-volume minor-street approach to the intersection, and the signal installation will not seriously disrupt progressive traffic flow.

# SCOTTSDALE PLAZA RESORT RENOVATIONS SCOTTSDALE ROAD and HUMMINGBIRD LANE

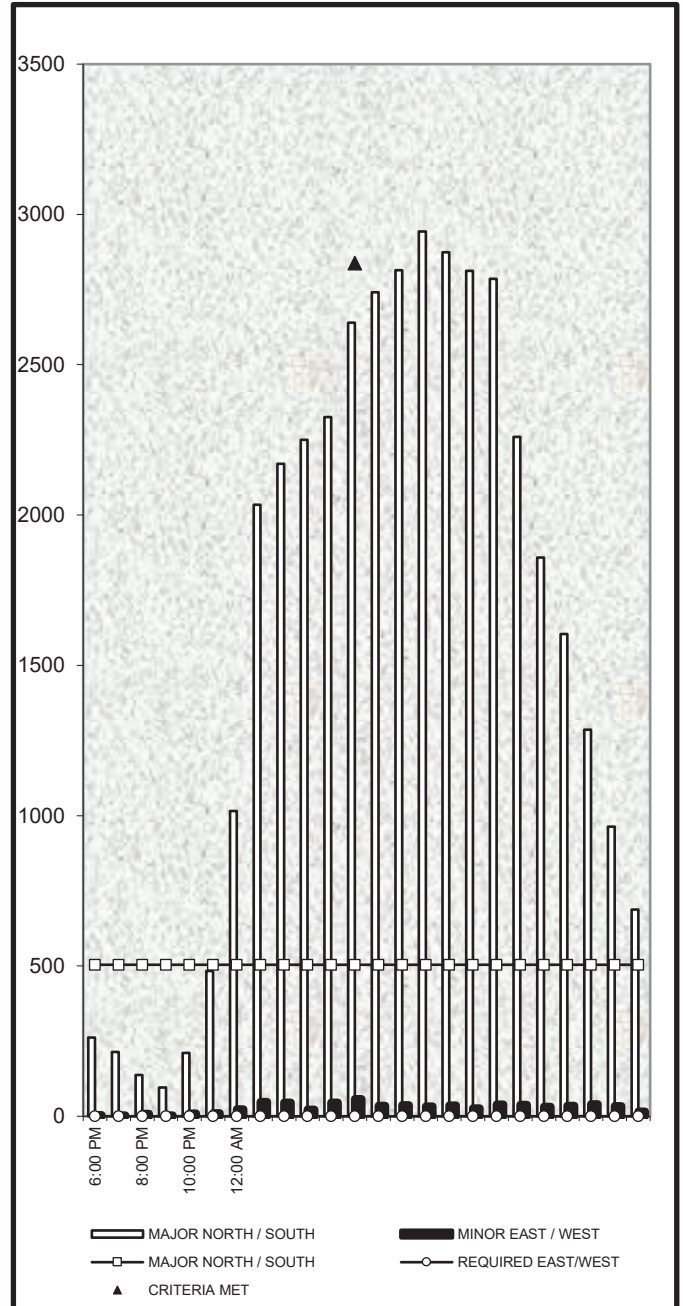
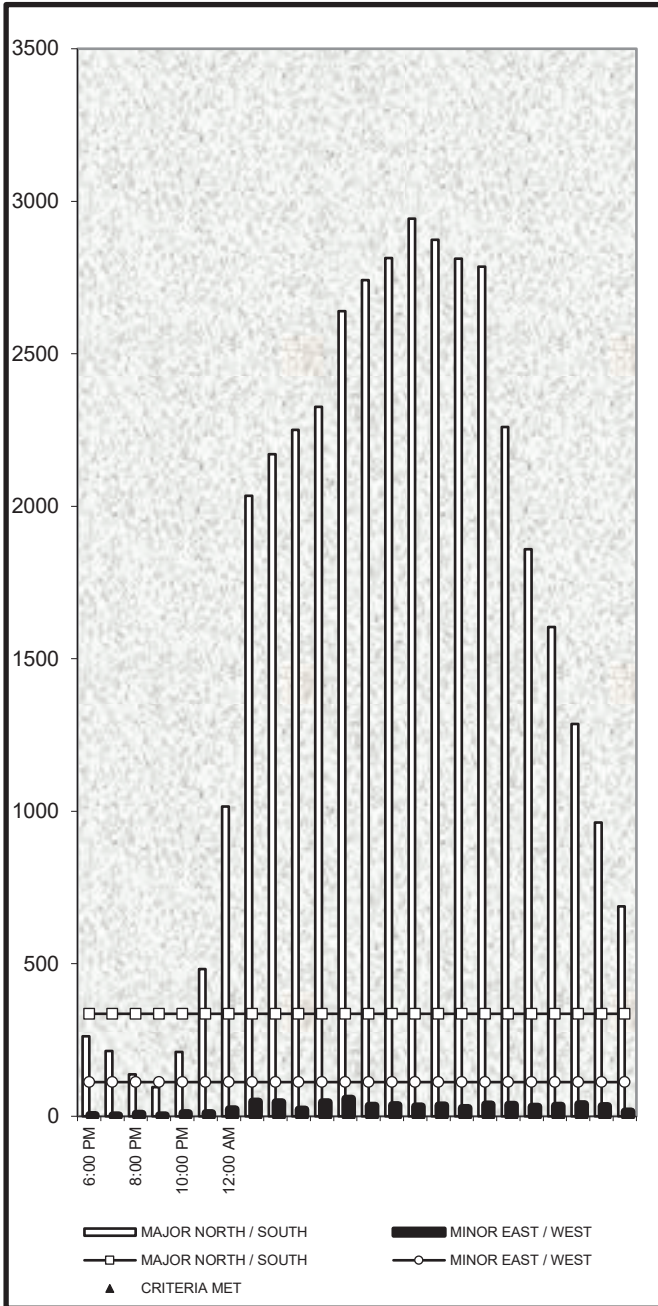
## M. U. T. C. D. WARRANT # 1

### Combination of Conditions A and B at 56% of Original Values

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH / SOUTH STREET	336	504
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST / WEST STREET	112	80

NUMBER OF HOURS SATISFIED:	0	1
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<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
--------------------------	----------------------



The major-street and minor-street volumes shall be for the same 8 hours for each condition; however, the 8 hours satisfied on A shall not be required to be the same 8 hours satisfied in Condition B. The combination of Conditions A and B should be applied only after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems.

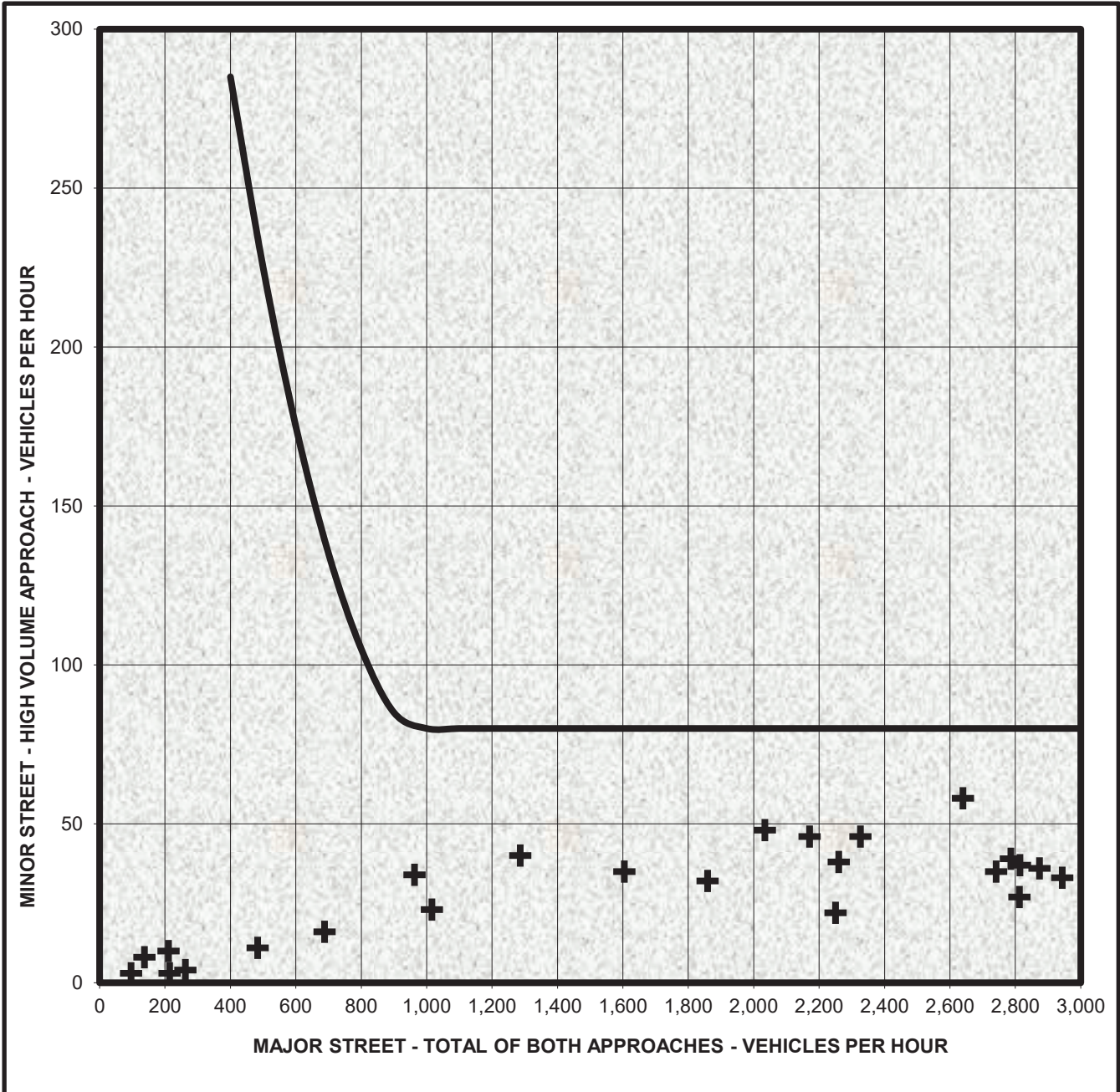


**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**M. U. T. C. D. WARRANT # 2  
Four-Hour Vehicular Volume**

NUMBER OF HOURS SATISFIED:	0
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	0
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	0

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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The Four Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The need for a traffic control signal shall be considered if an engineering study finds that for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor-street approach (one direction only) all fall above the applicable curve provided in the MUTCD for the existing combination of approach lanes.

**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**M. U. T. C. D. WARRANT # 3  
Peak Hour, Category A (Delay)**

REQUIRED SIDE STREET VEHICLE-HOURS DELAY:	5.00
REQUIRED SIDE STREET HOURLY VOLUME:	150
REQUIRED TOTAL INTERSECTION HOURLY VOLUME:	800

<b>TIME PERIOD: 0:00 AM to 0:00 AM</b>	<b>MEASURED</b>	<b>SATISFIED?</b>
SIDE STREET VEHICLE-HOURS DELAY:	0.00	NO
SIDE STREET HOURLY VOLUME:	0	NO
TOTAL INTERSECTION HOURLY VOLUME:	2810	YES
<b>ALL CRITERIA</b>		<b>NO</b>

<b>TIME PERIOD: 2:00 PM to 3:00 PM</b>	<b>MEASURED</b>	<b>SATISFIED?</b>
SIDE STREET VEHICLE-HOURS DELAY:	0.00	NO
SIDE STREET HOURLY VOLUME:	33	NO
TOTAL INTERSECTION HOURLY VOLUME:	3007	YES
<b>ALL CRITERIA</b>		<b>NO</b>

The Peak Hour signal warrant is intended for use at a location where traffic conditions are such that for a minimum of 1 hour of an average day, the minor-street suffers undue delay when entering or crossing the major street.

This signal warrant shall be applied only in unusual cases. Such cases include, but are not limited to, office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.

The need for a traffic control signal shall be considered if an engineering study finds that all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:

1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and
2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and
3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.

Checked by: PEB 8/13/2022



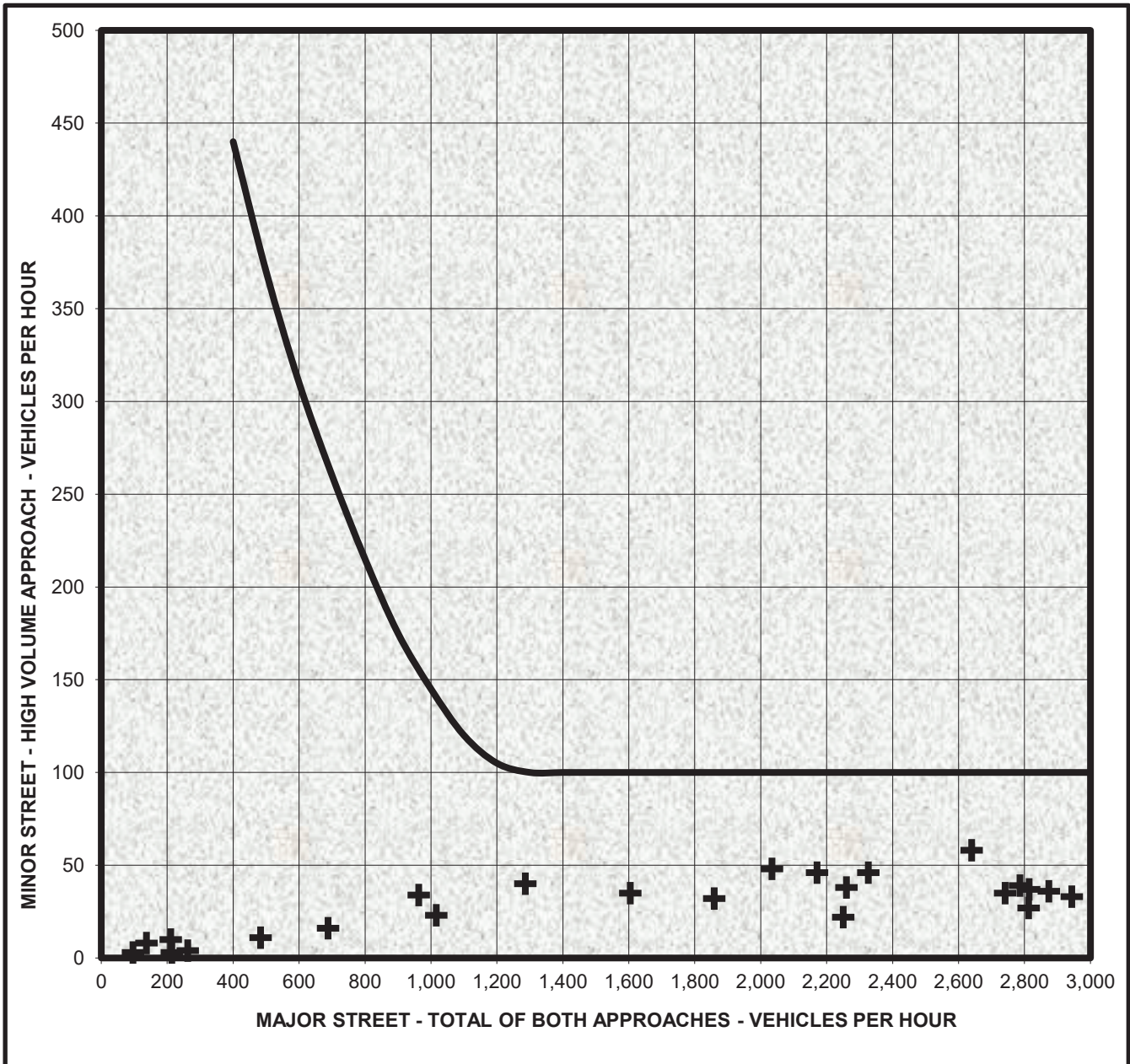


**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**M. U. T. C. D. WARRANT # 3  
One-Hour Vehicular Volume**

NUMBER OF HOURS SATISFIED:	0
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	0
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	0

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
--------------------------	----------------------



The Four Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The need for a traffic control signal shall be considered if an engineering study finds that for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor-street approach (one direction only) all fall above the applicable curve provided in the MUTCD for the existing combination of approach lanes.

Checked by: PEB 8/13/2022



**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE  
MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES  
TRAFFIC CONTROL SIGNAL WARRANT STUDY SUMMARY**

LOCATION: **PARADISE VALLEY, ARIZONA**

SPECIAL CONDITIONS: **NONE**

DATE OF COUNT: 8/4/2022

DATE OF STUDY: 8/15/2022

NORTH/SOUTH STREET: SCOTTSDALE ROAD

MAJOR

MULTI-LANE

EAST/WEST STREET: HUMMINGBIRD LANE

MINOR

MULTI-LANE

POSTED SPEED LIMIT ON MAJOR STREET:

45 mph

85th PERCENTILE SPEED ON MAJOR STREET:

Unknown

**WARRANT**

**EXISTING**

**REQUIRED**

**SATISFIED?**

**# 1. EIGHT-HOUR VEHICULAR VOLUME**

A. MINIMUM VEHICULAR VOLUME

0

8

NO

B. INTERRUPTION OF CONTINUOUS TRAFFIC

3

8

NO

COMBINATION OF WARRANTS 1A AND 1B (80% of Values)

-

-

Not Applicable

COMBINATION OF WARRANTS 1A AND 1B (56% of Values)

0

8

NO

**# 2. FOUR-HOUR VEHICULAR VOLUME**

2

4

NO

**# 3. PEAK HOUR**

A. PEAK HOUR DELAY - AM

1

3

NO

A. PEAK HOUR DELAY - PM

1

3

NO

B. PEAK HOUR VOLUME

1

1

YES

**# 7. CRASH EXPERIENCE**

WITH WARRANT # 1A (Traffic Volumes at 80% of Original Values)

-

-

Not Applicable

WITH WARRANT # 1B (Traffic Volumes at 80% of Original Values)

-

-

Not Applicable

WITH WARRANT # 1A (Traffic Volumes at 56% of Original Values)

0

8

NO

WITH WARRANT # 1B (Traffic Volumes at 56% of Original Values)

0

8

NO

TOTAL NUMBER OF CRASHES

4

-

-

NUMBER OF POTENTIALLY PREVENTABLE CRASHES

1

5

NO

HAVE LESS RESTRICTIVE MEANS BEEN ATTEMPTED?

NO

-

NO

**# 7. ENTIRE WARRANT**

-

-

NO

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Checked by: PEB 8/13/2022



**TRAFFIC CONTROL SIGNAL WARRANT ESTIMATION  
LANE NUMBER, SPEED, AND VOLUME DATA**

LOCATION: **SCOTTSDALE PLAZA RESORT RENOVATIONS**  
 DATE AND DAY: **8/4/2022 THURSDAY**

NORTH / SOUTH STREET: **SCOTTSDALE ROAD** LANES: **3**  
 EAST / WEST STREET: **HUMMINGBIRD LANE** LANES: **2**

MAJOR STREET SPEED LIMIT OR 85<sup>th</sup> PERCENTILE SPEED: **45**

CONDITIONS: **NONE**

END TIME	STREET TRAFFIC VOLUMES			
	NB	SB	EB	WB
1:00 AM	76	65	5	4
2:00 AM	66	38	1	3
3:00 AM	42	20	1	0
4:00 AM	37	32	3	2
5:00 AM	95	75	1	6
6:00 AM	232	220	5	16
7:00 AM	469	491	13	56
8:00 AM	886	977	19	103
9:00 AM	1023	1155	32	90
10:00 AM	941	1077	22	67
11:00 AM	1014	1038	31	61
12:00 PM	1113	1114	33	56
1:00 PM	1131	1204	32	58
2:00 PM	1163	1252	28	62
3:00 PM	1283	1284	29	56
4:00 PM	1320	1191	41	61
5:00 PM	1342	1256	27	74
6:00 PM	1394	1323	23	66
7:00 PM	999	930	21	64
8:00 PM	778	693	20	53
9:00 PM	639	544	10	38
10:00 PM	451	384	9	43
11:00 PM	316	261	6	26
12:00 AM	205	149	11	11
<b>TOTAL</b>	<b>17,015</b>	<b>16,773</b>	<b>423</b>	<b>1,076</b>

WARRANT	CRITERIA		REQUIRED HOURS	ACTUAL HOURS	SATISFIED?	PROXIMITY	
	MAJOR	MINOR				Major	Minor
#1A	420	140	8	0	NO	Satisfied	150%
#1B	630	70	8	3	NO	Satisfied	25%
#1A with #1B	480	56	8	13	NO		
#1B with #1A	720	112	8	0		Satisfied	100%
#2	Varying Graph		4	2	NO		19%
#3B	Varying Graph		1	1	YES		

Checked by: PEB 8/13/2022



**TRAFFIC CONTROL SIGNAL WARRANT STUDY  
LANE NUMBER, SPEED, AND VOLUME DATA**

PROJECT: **SCOTTSDALE PLAZA RESORT RENOVATIONS**  
 LOCATION: **PARADISE VALLEY, ARIZONA**

NORTH/SOUTH STREET:  
**SCOTTSDALE ROAD**

NB LANES: **3**  
 SB LANES: **3**

EAST/WEST STREET:  
**HUMMINGBIRD LANE**

EB LANES: **1**  
 WB LANES: **2**

SPEED LIMIT ON MAJOR STREET: **45**  
 85TH PERCENTILE SPEED ON MAJOR STREET: **UNKNOWN**

VOLUME DATA: **EXISTING 2022 WITH ARTESIA**

DATE OF COUNT: **8/4/2022** **THURSDAY**  
 DATE OF STUDY: **8/15/2022**

SPECIAL CONDITIONS: **NONE**

INTERSECTION APPROACH TRAFFIC VOLUMES				
TIME	NORTHBOUND	SOUTHBOUND	EASTBOUND	WESTBOUND
1:00 AM	76	65	5	4
2:00 AM	66	38	1	3
3:00 AM	42	20	1	0
4:00 AM	37	32	3	2
5:00 AM	95	75	1	6
6:00 AM	232	220	5	16
7:00 AM	469	491	13	56
8:00 AM	886	977	19	103
9:00 AM	1023	1155	32	90
10:00 AM	941	1077	22	67
11:00 AM	1014	1038	31	61
12:00 PM	1113	1114	33	56
1:00 PM	1131	1204	32	58
2:00 PM	1163	1252	28	62
3:00 PM	1283	1284	29	56
4:00 PM	1320	1191	41	61
5:00 PM	1342	1256	27	74
6:00 PM	1394	1323	23	66
7:00 PM	999	930	21	64
8:00 PM	778	693	20	53
9:00 PM	639	544	10	38
10:00 PM	451	384	9	43
11:00 PM	316	261	6	26
12:00 AM	205	149	11	11
<b>TOTAL</b>	<b>17,015</b>	<b>16,773</b>	<b>423</b>	<b>1,076</b>

Checked by: PEB 8/13/2022



**TRAFFIC CONTROL SIGNAL WARRANT STUDY  
CRASH EXPERIENCE AND DELAY DATA**

**SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**CRASH EXPERIENCE DATA**

HAVE LESS RESTRICTIVE MEANS BEEN ATTEMPTED?

**NO**

TOTAL NUMBER OF CRASHES IN A 12 MONTH PERIOD:

**4**

NUMBER OF POTENTIALLY PREVENTABLE CRASHES  
IN A 12 MONTH PERIOD:

**1**

WILL SIGNAL DISRUPT PROGRESSIVE TRAFFIC FLOW?

**YES**

**VEHICLE DELAY DATA**

TIME PERIOD	AVERAGE DELAY SECONDS/VEHICLE	SIDE STREET TOTAL DELAY VEH-HOURS	VOLUME	TOTAL INTERSECTION VOLUME
<b>7:00 AM to 8:00 AM</b>	<b>120</b>	<b>3.43</b>	<b>103</b>	<b>1,985</b>
<b>5:00 PM to 6:00 PM</b>	<b>120</b>	<b>2.20</b>	<b>66</b>	<b>2,806</b>

Checked by: PEB 8/13/2022



## SCOTTSDALE PLAZA RESORT RENOVATIONS SCOTTSDALE ROAD and HUMMINGBIRD LANE

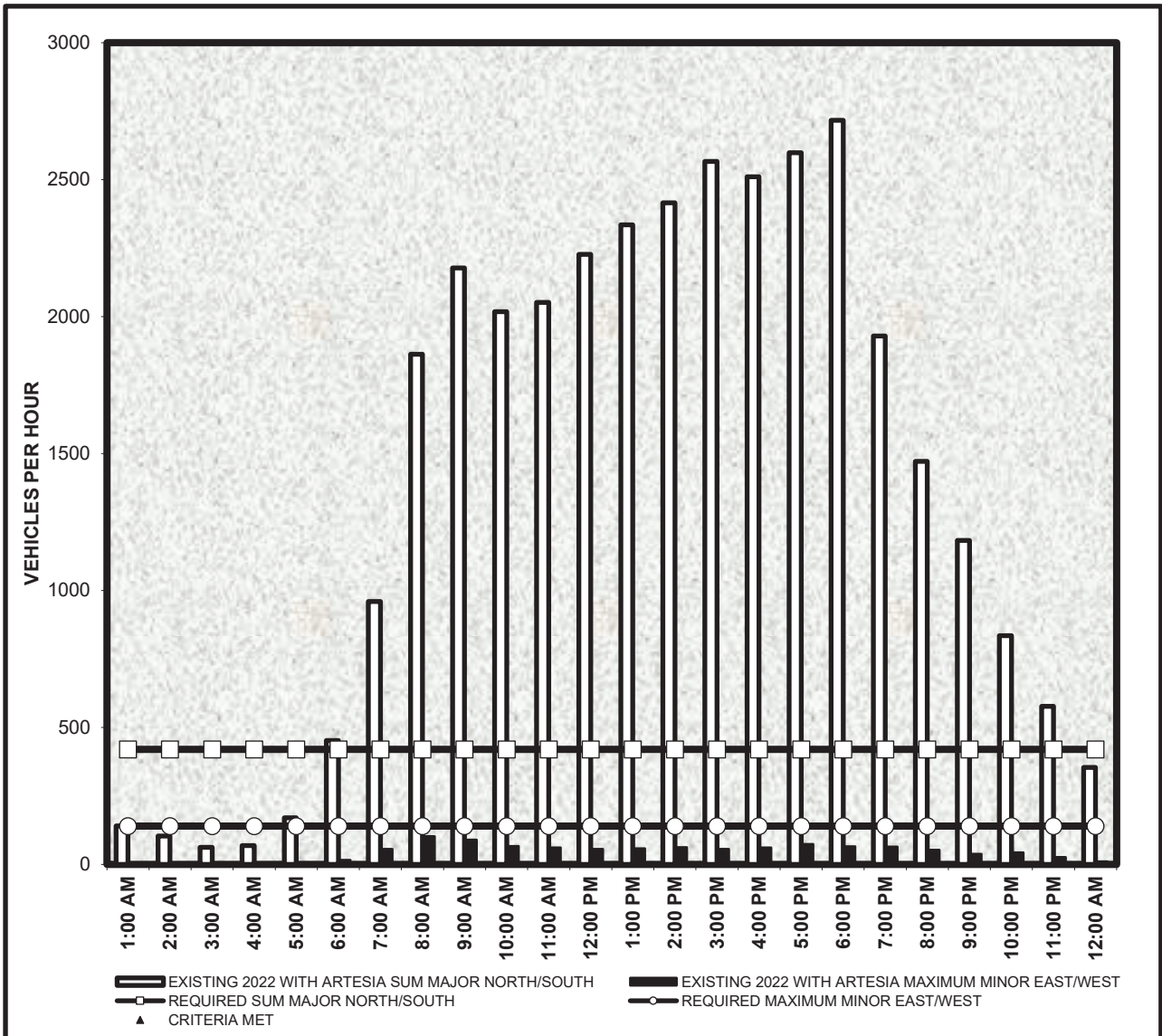
### M. U. T. C. D. WARRANT # 1A

#### Minimum Vehicular Volume

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH/SOUTH STREET	420
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST/WEST STREET	140

NUMBER OF HOURS SATISFIED:	0
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	0
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	0

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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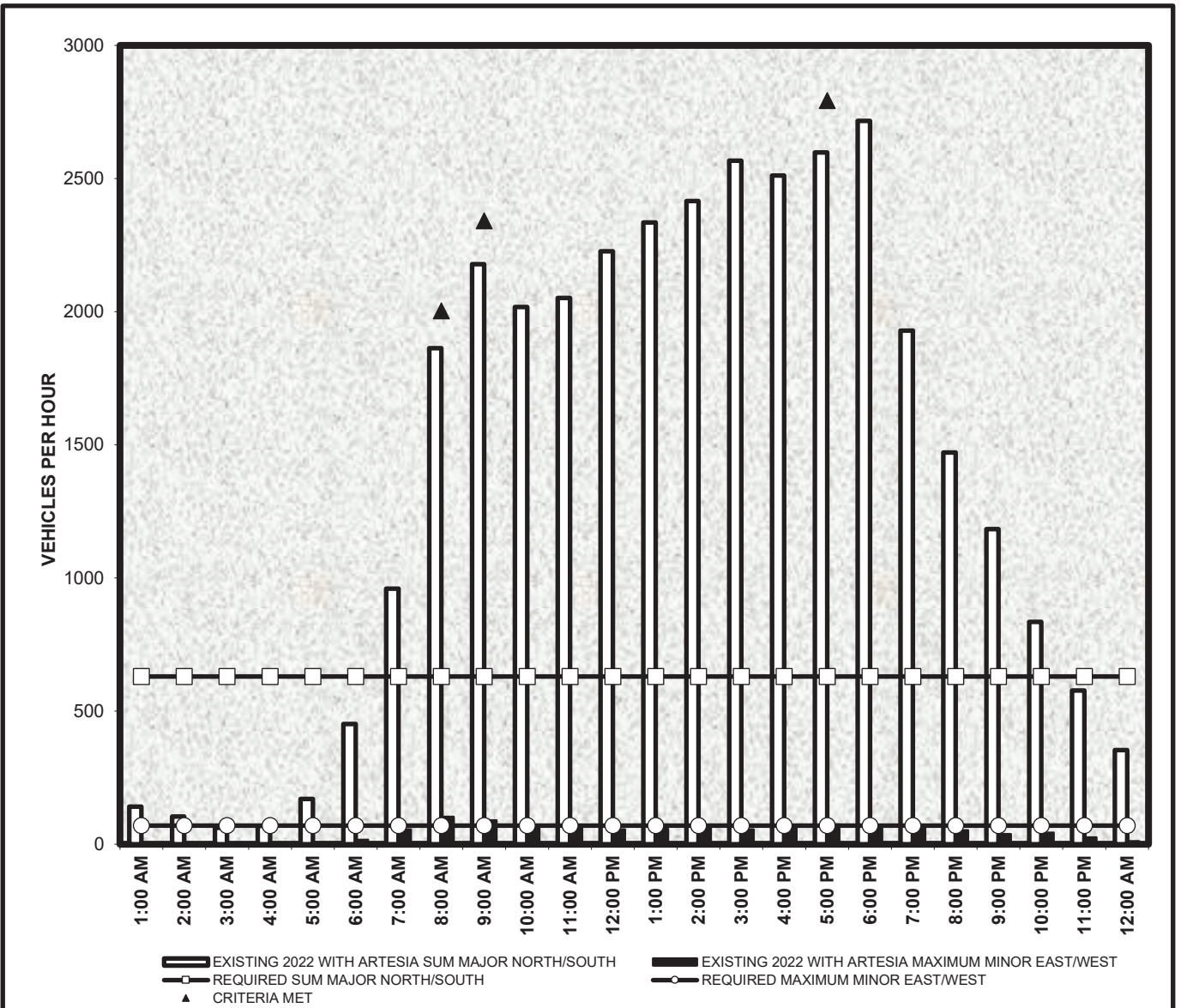


The Minimum Vehicular Volume, Condition A, is intended for application where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The warrant is satisfied when, for each of any eight hours of an average day, the traffic volumes provided in the MUTCD exist on the major street and on the higher-volume minor-street approach to the intersection, and the signal installation will not seriously disrupt progressive traffic flow.

## SCOTTSDALE PLAZA RESORT RENOVATIONS SCOTTSDALE ROAD and HUMMINGBIRD LANE

### M. U. T. C. D. WARRANT # 1B Interruption of Continuous Traffic

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH/SOUTH STREET	630
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST/WEST STREET	70
NUMBER OF HOURS SATISFIED:	<b>3</b>
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	<b>1</b>
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	<b>3</b>
<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>



The Interruption of Continuous Traffic, Condition B, is intended for application where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street. The warrant is satisfied when, for each of any eight hours of an average day, the traffic volumes provided in the MUTCD exist on the major street and on the higher-volume minor-street approach to the intersection, and the signal installation will not seriously disrupt progressive traffic flow.



# SCOTTSDALE PLAZA RESORT RENOVATIONS SCOTTSDALE ROAD and HUMMINGBIRD LANE

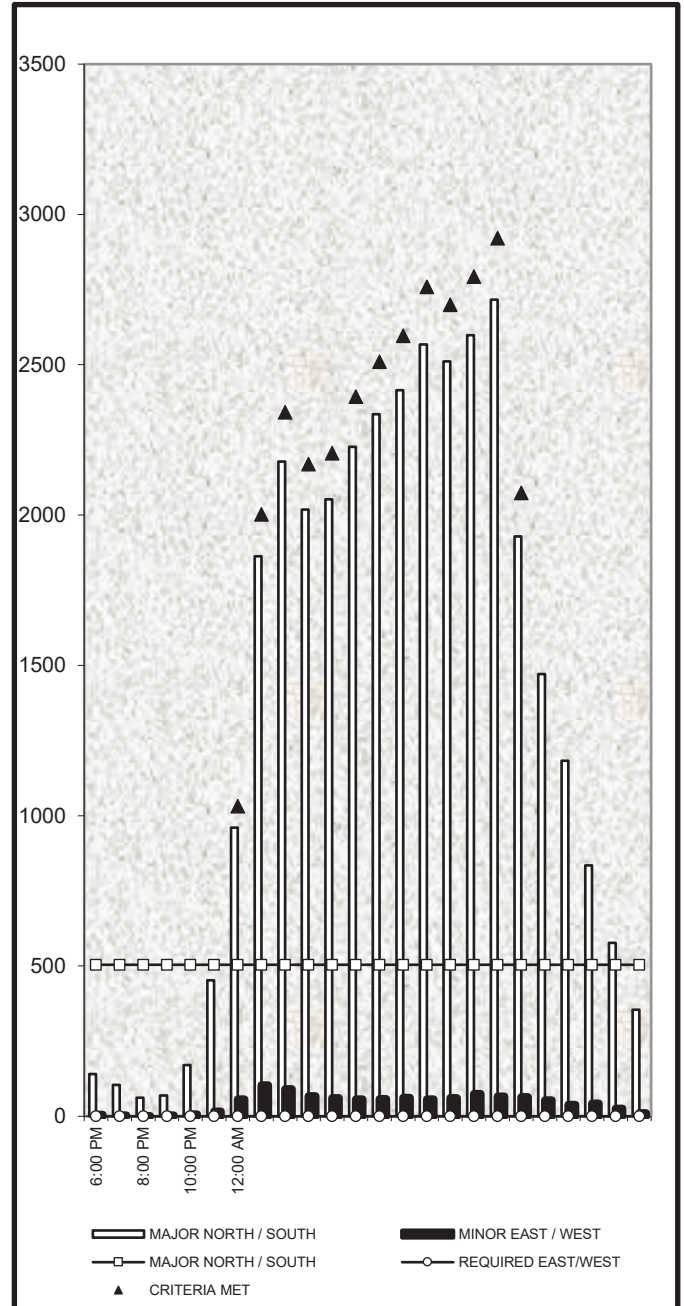
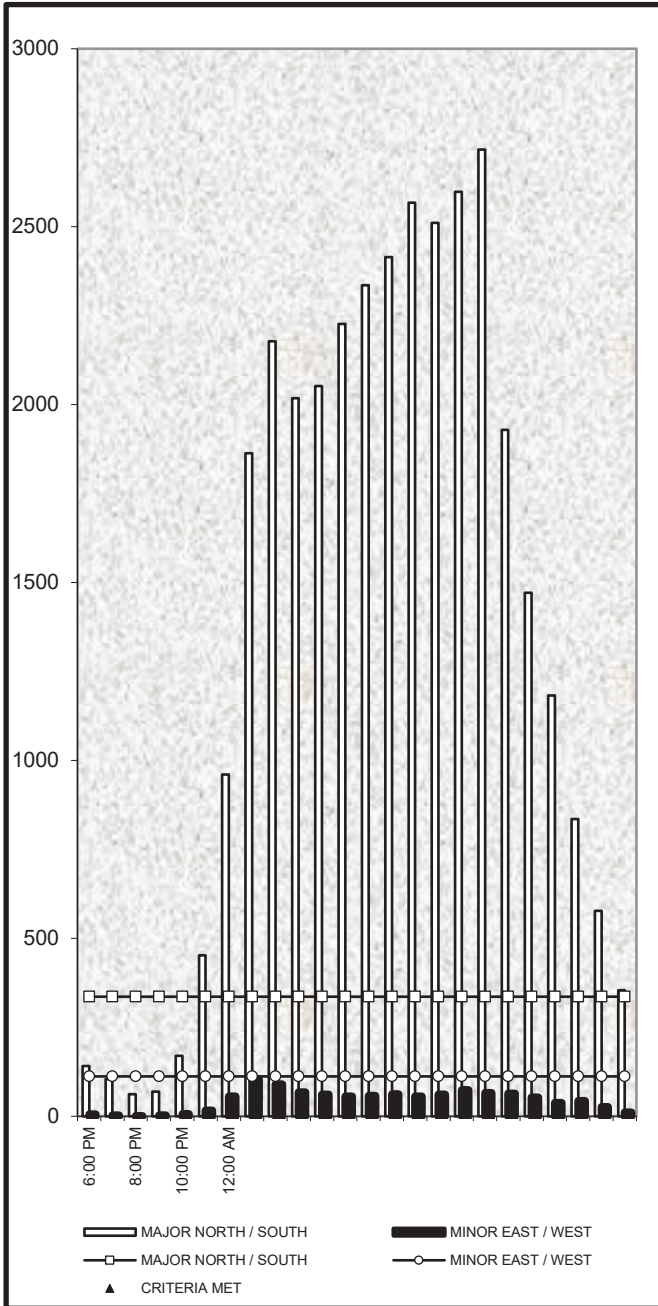
## M. U. T. C. D. WARRANT # 1

### Combination of Conditions A and B at 56% of Original Values

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH / SOUTH STREET	336	504
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST / WEST STREET	112	80

NUMBER OF HOURS SATISFIED:	<b>0</b>	<b>13</b>
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<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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The major-street and minor-street volumes shall be for the same 8 hours for each condition; however, the 8 hours satisfied on A shall not be required to be the same 8 hours satisfied in Condition B. The combination of Conditions A and B should be applied only after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems.

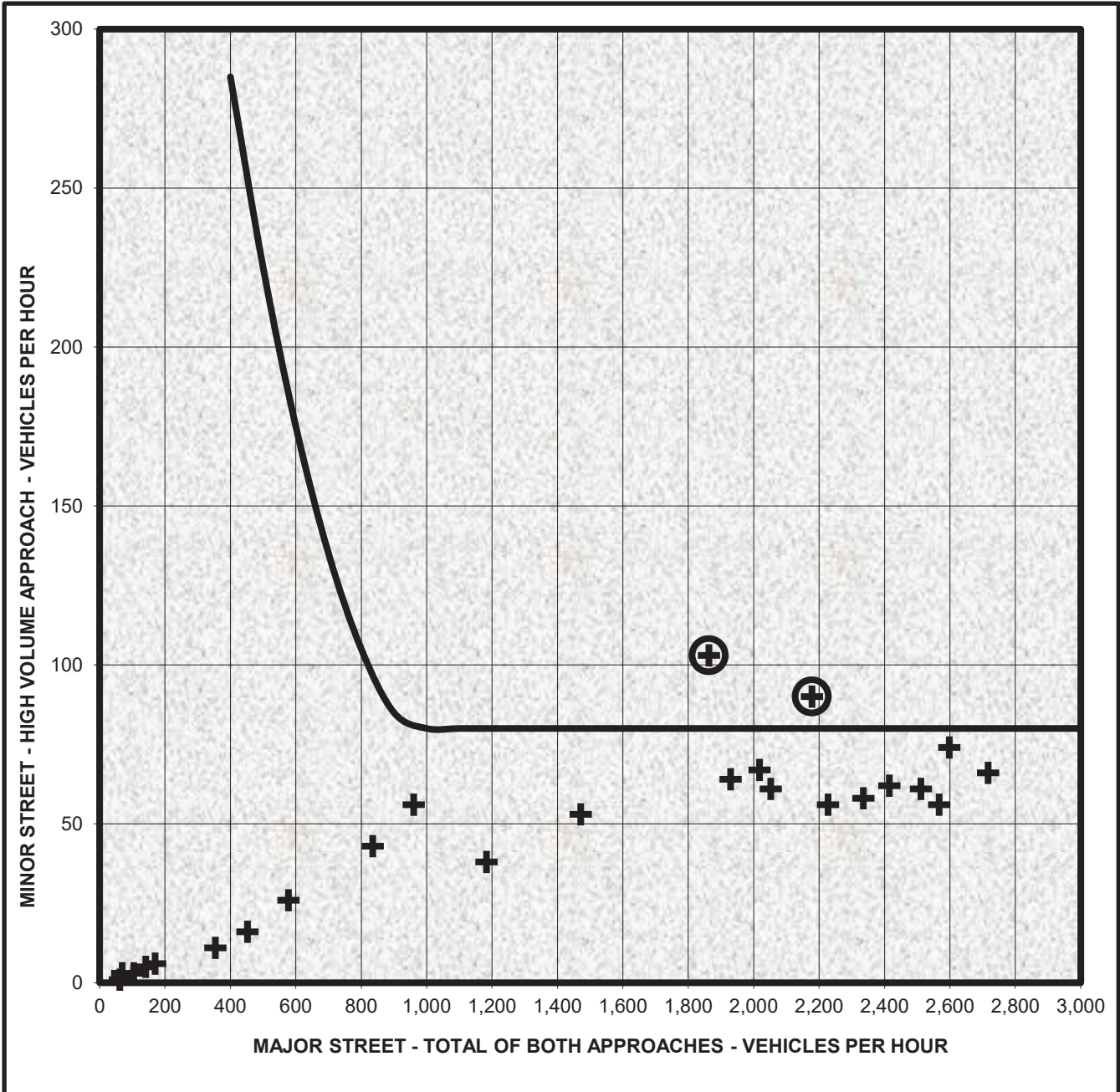


**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**M. U. T. C. D. WARRANT # 2  
Four-Hour Vehicular Volume**

NUMBER OF HOURS SATISFIED:	<b>2</b>
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	<b>0</b>
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	<b>1</b>

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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The Four Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The need for a traffic control signal shall be considered if an engineering study finds that for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor-street approach (one direction only) all fall above the applicable curve provided in the MUTCD for the existing combination of approach lanes.

**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**M. U. T. C. D. WARRANT # 3  
Peak Hour, Category A (Delay)**

REQUIRED SIDE STREET VEHICLE-HOURS DELAY:	5.00
REQUIRED SIDE STREET HOURLY VOLUME:	150
REQUIRED TOTAL INTERSECTION HOURLY VOLUME:	800

<b>TIME PERIOD: 7:00 AM to 8:00 AM</b>	<b>MEASURED</b>	<b>SATISFIED?</b>
SIDE STREET VEHICLE-HOURS DELAY:	3.43	NO
SIDE STREET HOURLY VOLUME:	103	NO
TOTAL INTERSECTION HOURLY VOLUME:	1985	YES
<b>ALL CRITERIA</b>		<b>NO</b>

<b>TIME PERIOD: 5:00 PM to 6:00 PM</b>	<b>MEASURED</b>	<b>SATISFIED?</b>
SIDE STREET VEHICLE-HOURS DELAY:	2.20	NO
SIDE STREET HOURLY VOLUME:	66	NO
TOTAL INTERSECTION HOURLY VOLUME:	2806	YES
<b>ALL CRITERIA</b>		<b>NO</b>

The Peak Hour signal warrant is intended for use at a location where traffic conditions are such that for a minimum of 1 hour of an average day, the minor-street suffers undue delay when entering or crossing the major street.

This signal warrant shall be applied only in unusual cases. Such cases include, but are not limited to, office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.

The need for a traffic control signal shall be considered if an engineering study finds that all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:

1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and
2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and
3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.

Checked by: PEB 8/13/2022

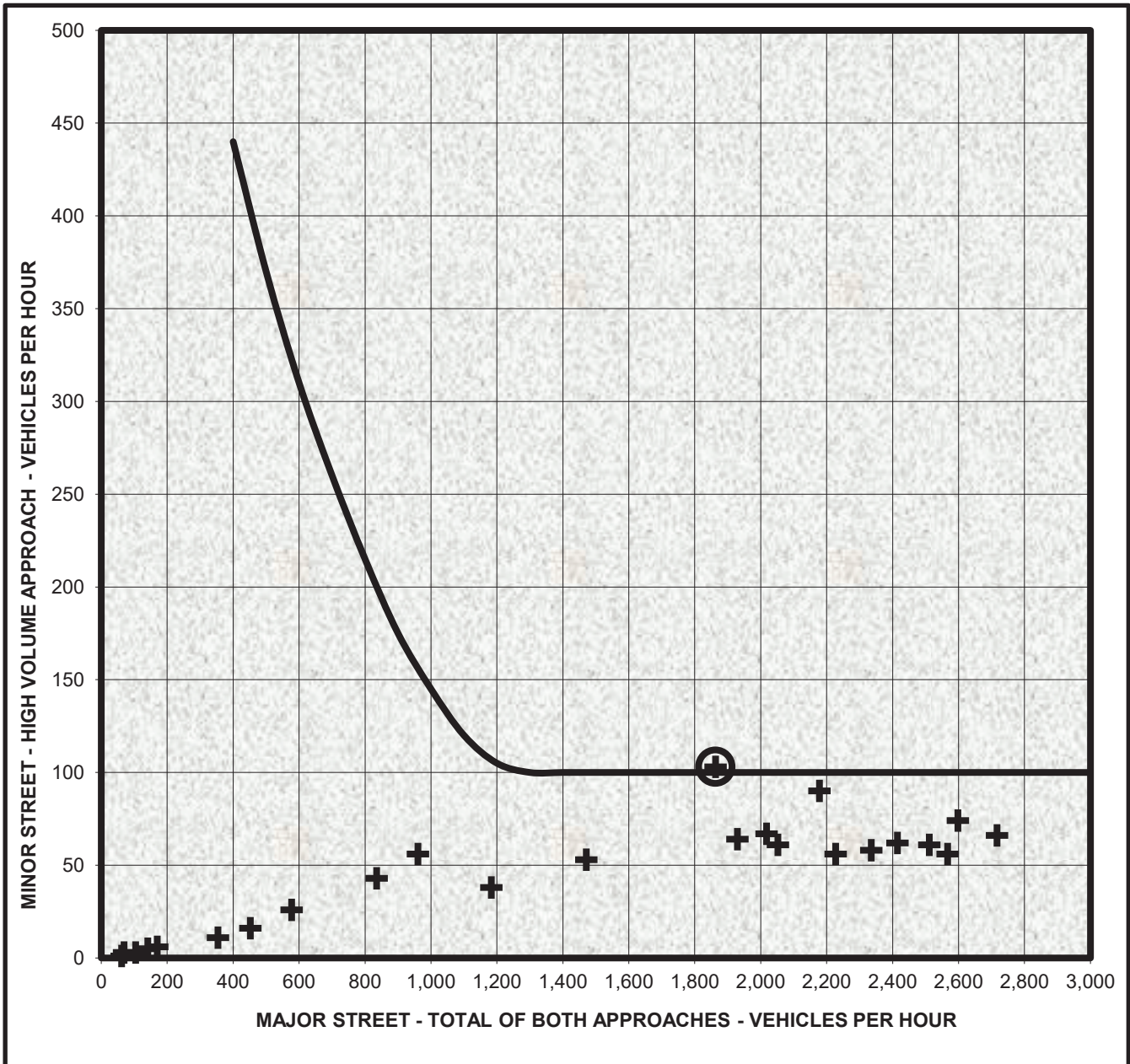


**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**M. U. T. C. D. WARRANT # 3  
One-Hour Vehicular Volume**

NUMBER OF HOURS SATISFIED:	<b>1</b>
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	<b>1</b>
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	<b>0</b>

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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The Four Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The need for a traffic control signal shall be considered if an engineering study finds that for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor-street approach (one direction only) all fall above the applicable curve provided in the MUTCD for the existing combination of approach lanes.

Checked by: PEB 8/13/2022



**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE  
MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES  
TRAFFIC CONTROL SIGNAL WARRANT STUDY SUMMARY**

LOCATION: **PARADISE VALLEY, ARIZONA**

SPECIAL CONDITIONS: **NONE**

DATE OF COUNT: 8/4/2022

DATE OF STUDY: 8/15/2022

NORTH/SOUTH STREET: SCOTTSDALE ROAD

MAJOR

MULTI-LANE

EAST/WEST STREET: HUMMINGBIRD LANE

MINOR

MULTI-LANE

POSTED SPEED LIMIT ON MAJOR STREET:

45 mph

85th PERCENTILE SPEED ON MAJOR STREET:

Unknown

**WARRANT**

**EXISTING**

**REQUIRED**

**SATISFIED?**

**# 1. EIGHT-HOUR VEHICULAR VOLUME**

A. MINIMUM VEHICULAR VOLUME

0

8

NO

B. INTERRUPTION OF CONTINUOUS TRAFFIC

3

8

NO

COMBINATION OF WARRANTS 1A AND 1B (80% of Values)

-

-

Not Applicable

COMBINATION OF WARRANTS 1A AND 1B (56% of Values)

0

8

NO

**# 2. FOUR-HOUR VEHICULAR VOLUME**

2

4

NO

**# 3. PEAK HOUR**

A. PEAK HOUR DELAY - AM

1

3

NO

A. PEAK HOUR DELAY - PM

1

3

NO

B. PEAK HOUR VOLUME

0

1

NO

**# 7. CRASH EXPERIENCE**

WITH WARRANT # 1A (Traffic Volumes at 80% of Original Values)

-

-

Not Applicable

WITH WARRANT # 1B (Traffic Volumes at 80% of Original Values)

-

-

Not Applicable

WITH WARRANT # 1A (Traffic Volumes at 56% of Original Values)

0

8

NO

WITH WARRANT # 1B (Traffic Volumes at 56% of Original Values)

0

8

NO

TOTAL NUMBER OF CRASHES

4

-

-

NUMBER OF POTENTIALLY PREVENTABLE CRASHES

1

5

NO

HAVE LESS RESTRICTIVE MEANS BEEN ATTEMPTED?

NO

-

NO

**# 7. ENTIRE WARRANT**

-

-

NO

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Checked by: PEB 8/13/2022



**TRAFFIC CONTROL SIGNAL WARRANT ESTIMATION  
LANE NUMBER, SPEED, AND VOLUME DATA**

LOCATION: **SCOTTSDALE PLAZA RESORT RENOVATIONS**  
 DATE AND DAY: **8/4/2022 THURSDAY**

NORTH / SOUTH STREET: **SCOTTSDALE ROAD** LANES: **3**  
 EAST / WEST STREET: **HUMMINGBIRD LANE** LANES: **2**

MAJOR STREET SPEED LIMIT OR 85<sup>th</sup> PERCENTILE SPEED: **45**

CONDITIONS: **NONE**

END TIME	STREET TRAFFIC VOLUMES			
	NB	SB	EB	WB
1:00 AM	136	110	4	3
2:00 AM	137	62	3	2
3:00 AM	78	50	6	1
4:00 AM	54	36	3	3
5:00 AM	106	88	7	8
6:00 AM	224	222	8	20
7:00 AM	469	469	18	55
8:00 AM	938	944	37	98
9:00 AM	973	1038	36	91
10:00 AM	987	1090	18	59
11:00 AM	1019	1135	35	60
12:00 PM	1258	1190	44	53
1:00 PM	1256	1290	31	71
2:00 PM	1339	1275	34	60
3:00 PM	1369	1365	30	65
4:00 PM	1406	1278	33	55
5:00 PM	1325	1322	25	66
6:00 PM	1306	1330	36	68
7:00 PM	1069	1076	35	68
8:00 PM	912	847	20	65
9:00 PM	787	733	12	55
10:00 PM	658	559	15	52
11:00 PM	491	413	4	41
12:00 AM	354	289	14	20
<b>TOTAL</b>	<b>18,651</b>	<b>18,211</b>	<b>508</b>	<b>1,139</b>

WARRANT	CRITERIA		REQUIRED HOURS	ACTUAL HOURS	SATISFIED?	PROXIMITY	
	MAJOR	MINOR				Major	Minor
#1A	420	140	8	0	NO	Satisfied	164%
#1B	630	70	8	3	NO	Satisfied	32%
#1A with #1B	480	56	8	11	NO		
#1B with #1A	720	112	8	0		Satisfied	111%
#2	Varying Graph		4	2	NO		18%
#3B	Varying Graph		1	0	NO		

Checked by: PEB 8/13/2022



**TRAFFIC CONTROL SIGNAL WARRANT STUDY  
LANE NUMBER, SPEED, AND VOLUME DATA**

PROJECT: **SCOTTSDALE PLAZA RESORT RENOVATIONS**  
 LOCATION: **PARADISE VALLEY, ARIZONA**

NORTH/SOUTH STREET:

**SCOTTSDALE ROAD**

NB LANES **3**  
 SB LANES **3**

EAST/WEST STREET:

**HUMMINGBIRD LANE**

EB LANES **1**  
 WB LANES **2**

SPEED LIMIT ON MAJOR STREET: **45**  
 85TH PERCENTILE SPEED ON MAJOR STREET: **UNKNOWN**

VOLUME DATA: **EXISTING 2022 WITH ARTESIA**

DATE OF COUNT: **8/4/2022** **THURSDAY**  
 DATE OF STUDY: **8/15/2022**

SPECIAL CONDITIONS: **NONE**

**INTERSECTION APPROACH TRAFFIC VOLUMES**

TIME	NORTHBOUND	SOUTHBOUND	EASTBOUND	WESTBOUND
1:00 AM	136	110	4	3
2:00 AM	137	62	3	2
3:00 AM	78	50	6	1
4:00 AM	54	36	3	3
5:00 AM	106	88	7	8
6:00 AM	224	222	8	20
7:00 AM	469	469	18	55
8:00 AM	938	944	37	98
9:00 AM	973	1038	36	91
10:00 AM	987	1090	18	59
11:00 AM	1019	1135	35	60
12:00 PM	1258	1190	44	53
1:00 PM	1256	1290	31	71
2:00 PM	1339	1275	34	60
3:00 PM	1369	1365	30	65
4:00 PM	1406	1278	33	55
5:00 PM	1325	1322	25	66
6:00 PM	1306	1330	36	68
7:00 PM	1069	1076	35	68
8:00 PM	912	847	20	65
9:00 PM	787	733	12	55
10:00 PM	658	559	15	52
11:00 PM	491	413	4	41
12:00 AM	354	289	14	20
<b>TOTAL</b>	<b>18,651</b>	<b>18,211</b>	<b>508</b>	<b>1,139</b>

Checked by: PEB 8/13/2022



**TRAFFIC CONTROL SIGNAL WARRANT STUDY  
CRASH EXPERIENCE AND DELAY DATA**

**SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**CRASH EXPERIENCE DATA**

HAVE LESS RESTRICTIVE MEANS BEEN ATTEMPTED?

**NO**

TOTAL NUMBER OF CRASHES IN A 12 MONTH PERIOD:

**4**

NUMBER OF POTENTIALLY PREVENTABLE CRASHES  
IN A 12 MONTH PERIOD:

**1**

WILL SIGNAL DISRUPT PROGRESSIVE TRAFFIC FLOW?

**YES**

**VEHICLE DELAY DATA**

TIME PERIOD	AVERAGE DELAY SECONDS/VEHICLE	SIDE STREET TOTAL DELAY VEH-HOURS	VOLUME	TOTAL INTERSECTION VOLUME
<b>7:00 AM to 8:00 AM</b>	<b>120</b>	<b>3.27</b>	<b>98</b>	<b>2,017</b>
<b>2:00 PM to 3:00 PM</b>	<b>120</b>	<b>2.17</b>	<b>65</b>	<b>2,829</b>

Checked by: PEB 8/13/2022





## SCOTTSDALE PLAZA RESORT RENOVATIONS SCOTTSDALE ROAD and HUMMINGBIRD LANE

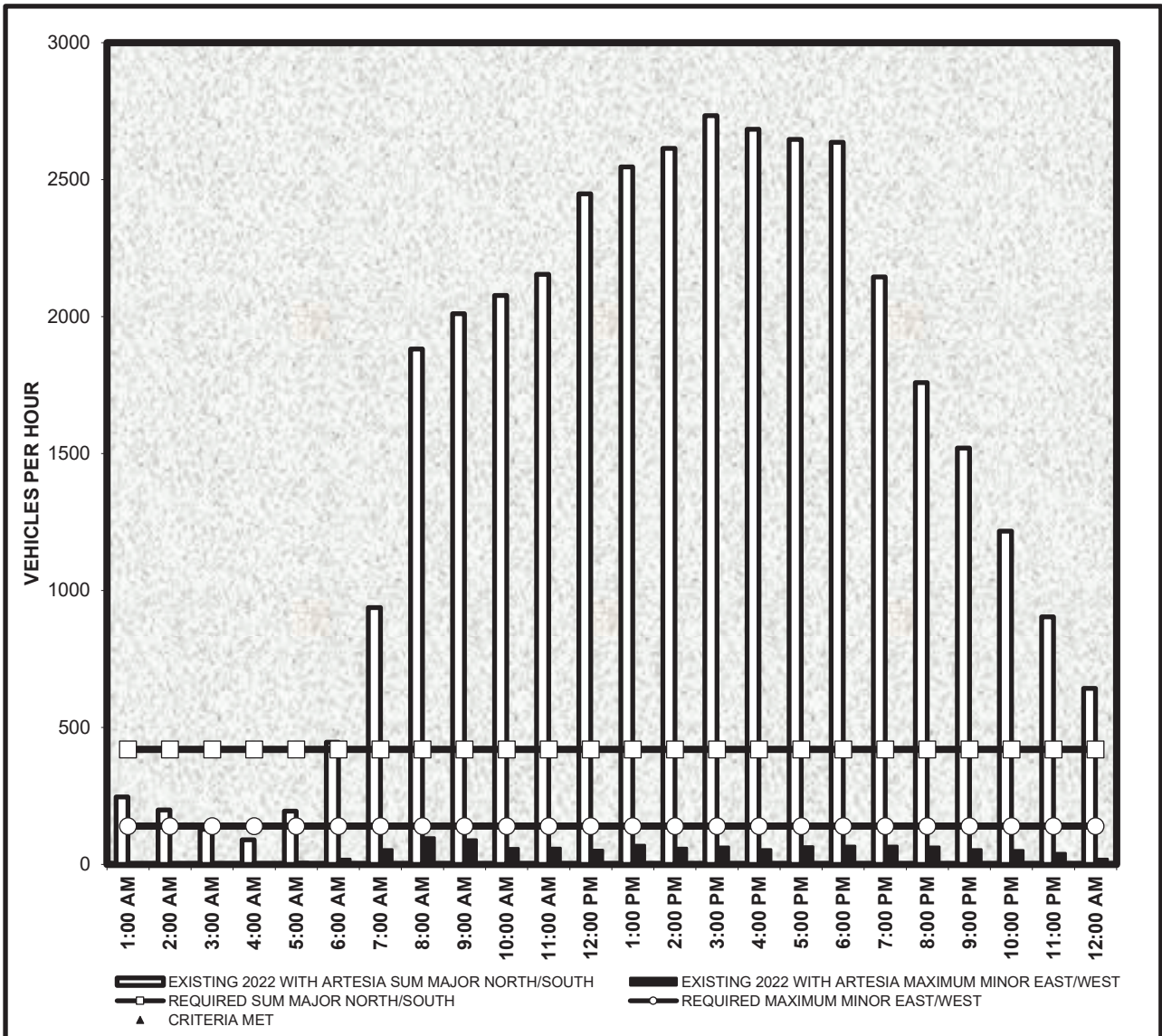
### M. U. T. C. D. WARRANT # 1A

#### Minimum Vehicular Volume

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH/SOUTH STREET	420
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST/WEST STREET	140

NUMBER OF HOURS SATISFIED:	0
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	0
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	0

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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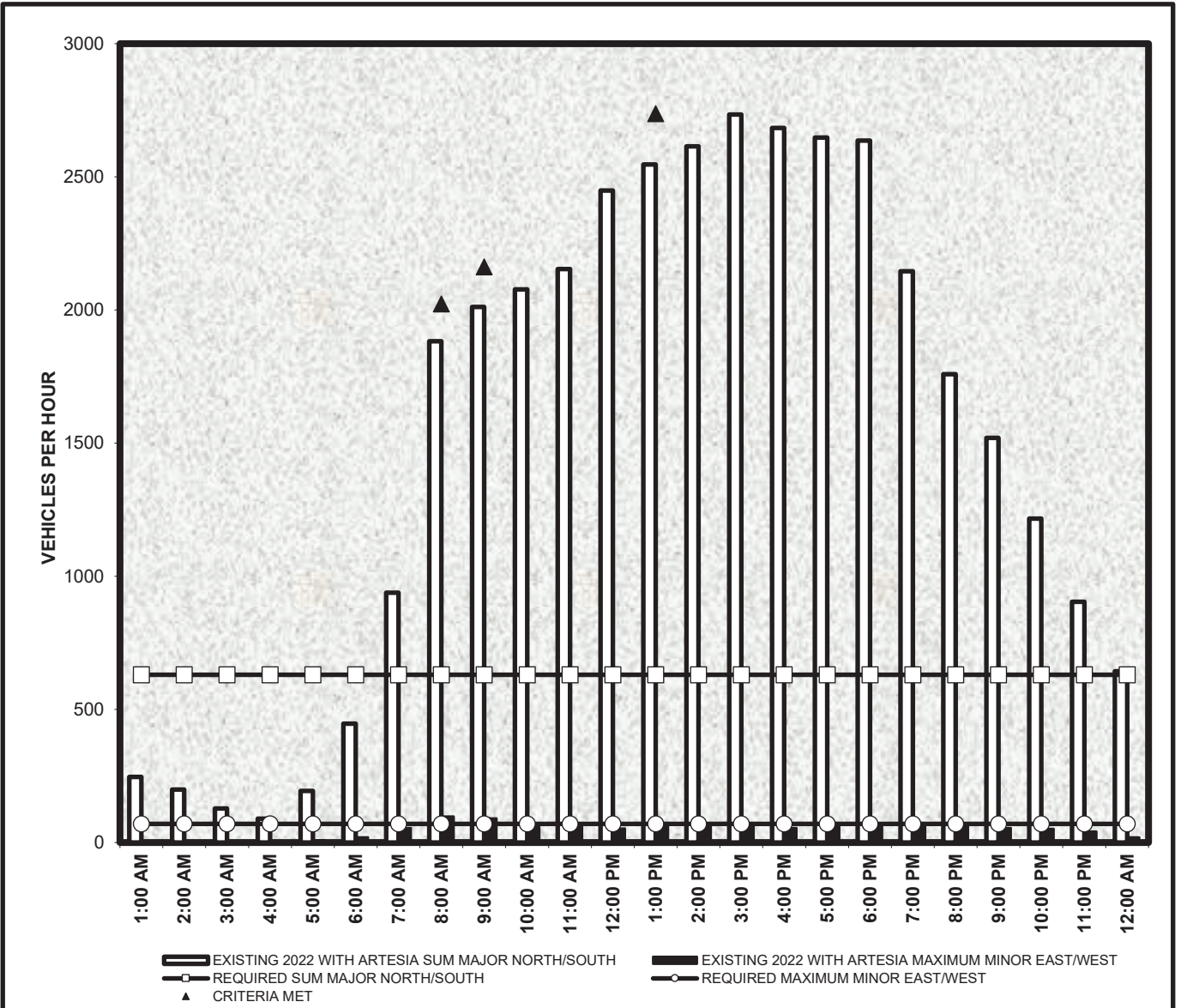
The Minimum Vehicular Volume, Condition A, is intended for application where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The warrant is satisfied when, for each of any eight hours of an average day, the traffic volumes provided in the MUTCD exist on the major street and on the higher-volume minor-street approach to the intersection, and the signal installation will not seriously disrupt progressive traffic flow.



**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**M. U. T. C. D. WARRANT # 1B  
Interruption of Continuous Traffic**

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH/SOUTH STREET	630
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST/WEST STREET	70
NUMBER OF HOURS SATISFIED:	<b>3</b>
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	<b>1</b>
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	<b>5</b>
<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>



The Interruption of Continuous Traffic, Condition B, is intended for application where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street. The warrant is satisfied when, for each of any eight hours of an average day, the traffic volumes provided in the MUTCD exist on the major street and on the higher-volume minor-street approach to the intersection, and the signal installation will not seriously disrupt progressive traffic flow.

# SCOTTSDALE PLAZA RESORT RENOVATIONS SCOTTSDALE ROAD and HUMMINGBIRD LANE

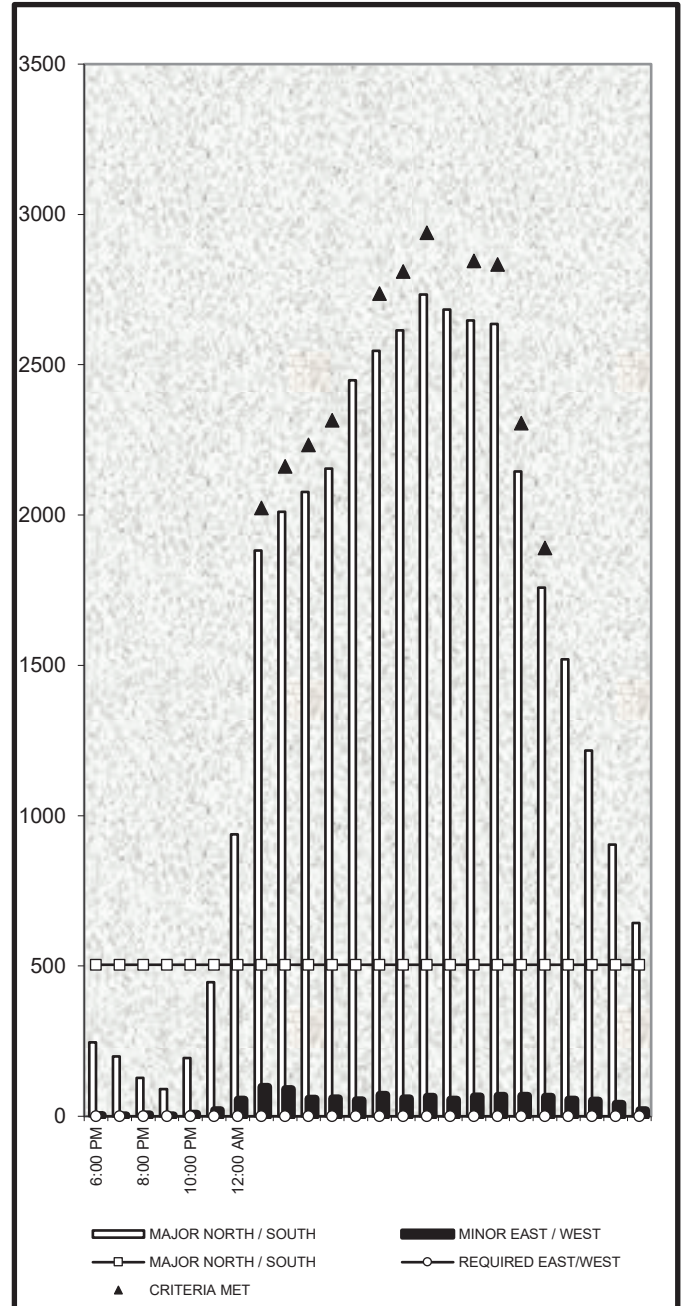
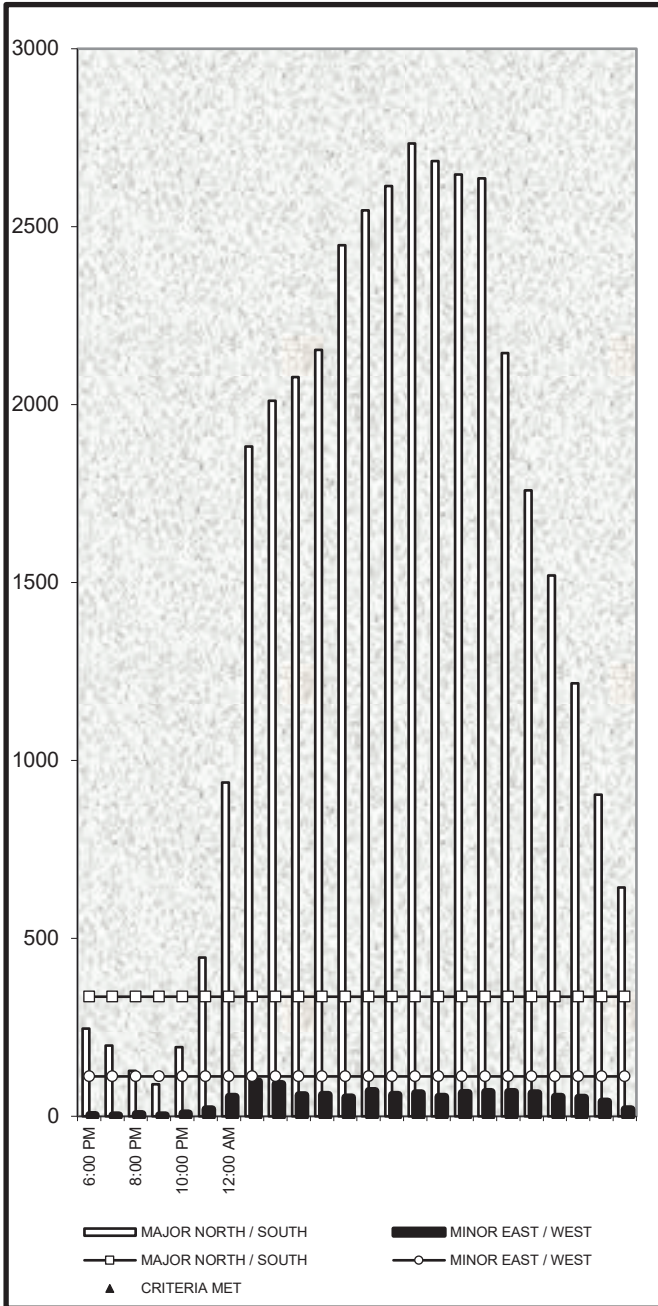
## M. U. T. C. D. WARRANT # 1

### Combination of Conditions A and B at 56% of Original Values

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH / SOUTH STREET	336	504
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST / WEST STREET	112	80

NUMBER OF HOURS SATISFIED:	0	11
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<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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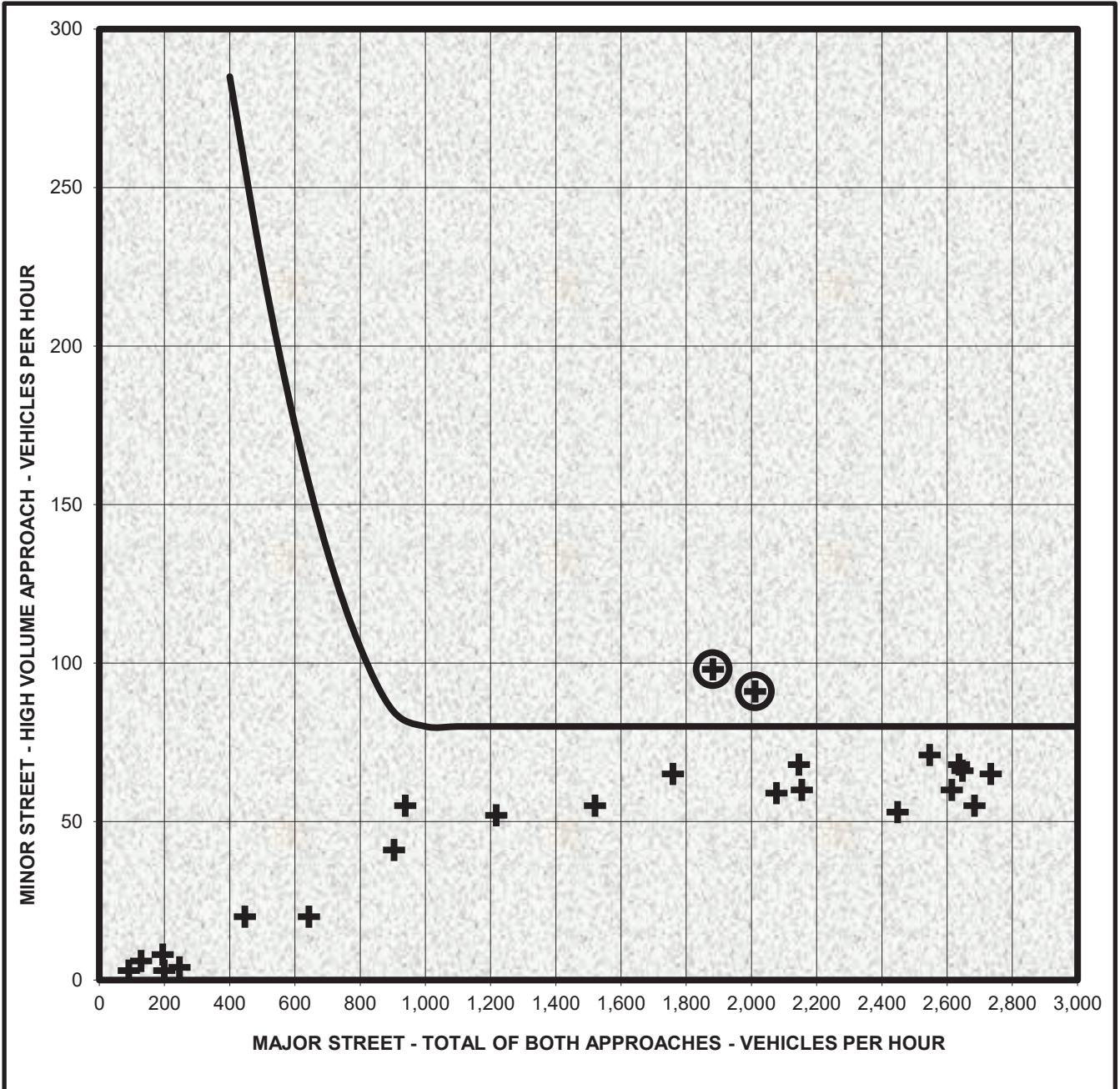
The major-street and minor-street volumes shall be for the same 8 hours for each condition; however, the 8 hours satisfied on A shall not be required to be the same 8 hours satisfied in Condition B. The combination of Conditions A and B should be applied only after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems.

**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**M. U. T. C. D. WARRANT # 2  
Four-Hour Vehicular Volume**

NUMBER OF HOURS SATISFIED:	<b>2</b>
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	<b>0</b>
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	<b>0</b>

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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The Four Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The need for a traffic control signal shall be considered if an engineering study finds that for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor-street approach (one direction only) all fall above the applicable curve provided in the MUTCD for the existing combination of approach lanes.

**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**M. U. T. C. D. WARRANT # 3  
Peak Hour, Category A (Delay)**

REQUIRED SIDE STREET VEHICLE-HOURS DELAY:	5.00
REQUIRED SIDE STREET HOURLY VOLUME:	150
REQUIRED TOTAL INTERSECTION HOURLY VOLUME:	800

<b>TIME PERIOD: 7:00 AM to 8:00 AM</b>	<b>MEASURED</b>	<b>SATISFIED?</b>
SIDE STREET VEHICLE-HOURS DELAY:	3.27	NO
SIDE STREET HOURLY VOLUME:	98	NO
TOTAL INTERSECTION HOURLY VOLUME:	2017	YES
<b>ALL CRITERIA</b>		<b>NO</b>

<b>TIME PERIOD: 2:00 PM to 3:00 PM</b>	<b>MEASURED</b>	<b>SATISFIED?</b>
SIDE STREET VEHICLE-HOURS DELAY:	2.17	NO
SIDE STREET HOURLY VOLUME:	65	NO
TOTAL INTERSECTION HOURLY VOLUME:	2829	YES
<b>ALL CRITERIA</b>		<b>NO</b>

The Peak Hour signal warrant is intended for use at a location where traffic conditions are such that for a minimum of 1 hour of an average day, the minor-street suffers undue delay when entering or crossing the major street.

This signal warrant shall be applied only in unusual cases. Such cases include, but are not limited to, office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.

The need for a traffic control signal shall be considered if an engineering study finds that all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:

1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and
2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and
3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.

Checked by: PEB 8/13/2022

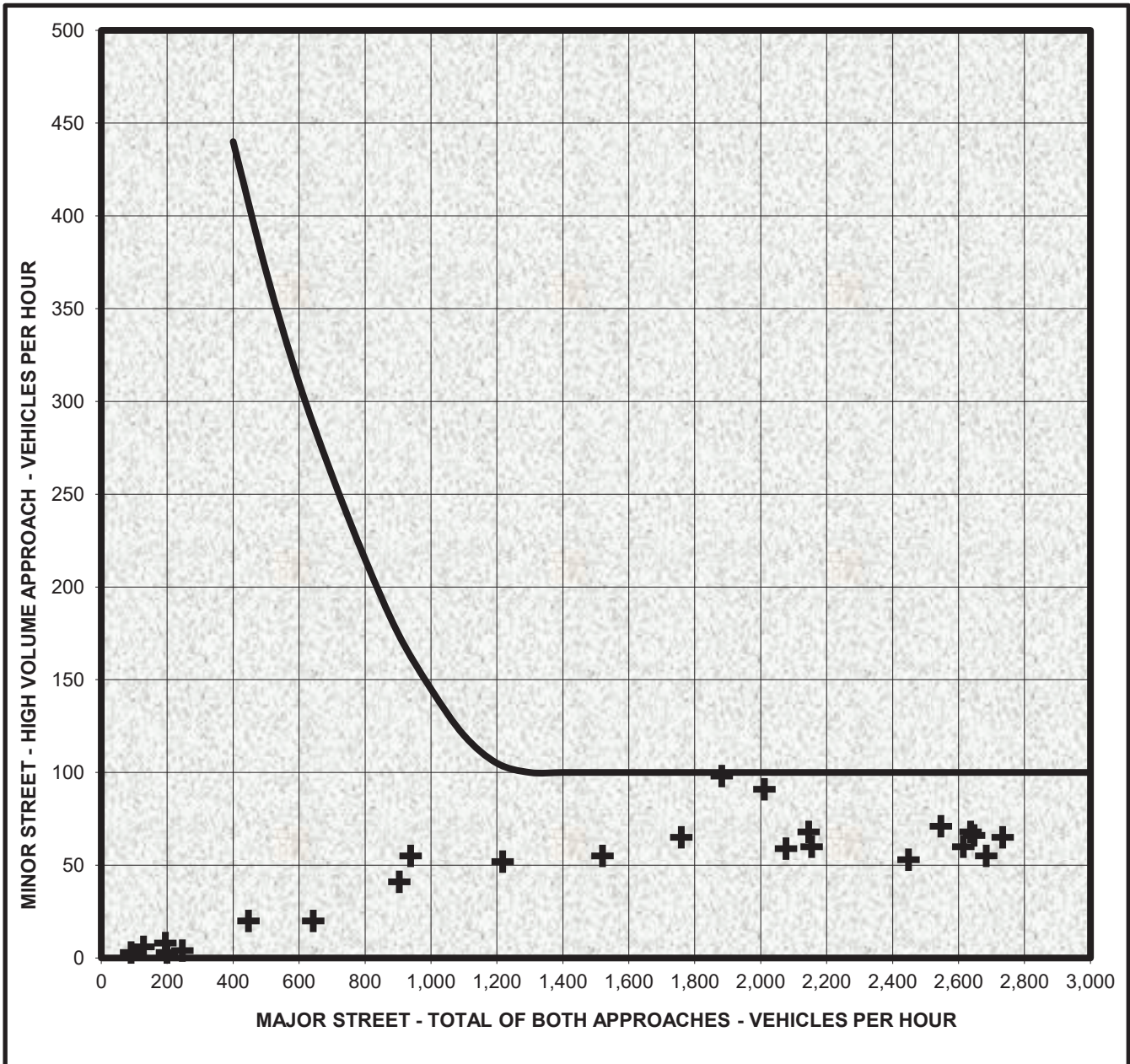


**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**M. U. T. C. D. WARRANT # 3  
One-Hour Vehicular Volume**

NUMBER OF HOURS SATISFIED:	0
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	0
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	2

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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The Four Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The need for a traffic control signal shall be considered if an engineering study finds that for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor-street approach (one direction only) all fall above the applicable curve provided in the MUTCD for the existing combination of approach lanes.



**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE  
MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES  
TRAFFIC CONTROL SIGNAL WARRANT STUDY SUMMARY**

LOCATION: **PARADISE VALLEY, ARIZONA**

SPECIAL CONDITIONS: **NONE**

DATE OF COUNT: 8/4/2022

DATE OF STUDY: 8/15/2022

NORTH/SOUTH STREET: SCOTTSDALE ROAD

MAJOR

MULTI-LANE

EAST/WEST STREET: HUMMINGBIRD LANE

MINOR

MULTI-LANE

POSTED SPEED LIMIT ON MAJOR STREET:

45 mph

85th PERCENTILE SPEED ON MAJOR STREET:

Unknown

**WARRANT**

**EXISTING**

**REQUIRED**

**SATISFIED?**

**# 1. EIGHT-HOUR VEHICULAR VOLUME**

A. MINIMUM VEHICULAR VOLUME

0

8

NO

B. INTERRUPTION OF CONTINUOUS TRAFFIC

3

8

NO

COMBINATION OF WARRANTS 1A AND 1B (80% of Values)

-

-

Not Applicable

COMBINATION OF WARRANTS 1A AND 1B (56% of Values)

0

8

NO

**# 2. FOUR-HOUR VEHICULAR VOLUME**

2

4

NO

**# 3. PEAK HOUR**

A. PEAK HOUR DELAY - AM

1

3

NO

A. PEAK HOUR DELAY - PM

1

3

NO

B. PEAK HOUR VOLUME

1

1

YES

**# 7. CRASH EXPERIENCE**

WITH WARRANT # 1A (Traffic Volumes at 80% of Original Values)

-

-

Not Applicable

WITH WARRANT # 1B (Traffic Volumes at 80% of Original Values)

-

-

Not Applicable

WITH WARRANT # 1A (Traffic Volumes at 56% of Original Values)

0

8

NO

WITH WARRANT # 1B (Traffic Volumes at 56% of Original Values)

0

8

NO

TOTAL NUMBER OF CRASHES

4

-

-

NUMBER OF POTENTIALLY PREVENTABLE CRASHES

1

5

NO

HAVE LESS RESTRICTIVE MEANS BEEN ATTEMPTED?

NO

-

NO

**# 7. ENTIRE WARRANT**

-

-

NO

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Checked by: PEB 8/13/2022



**TRAFFIC CONTROL SIGNAL WARRANT ESTIMATION  
LANE NUMBER, SPEED, AND VOLUME DATA**

LOCATION: **SCOTTSDALE PLAZA RESORT RENOVATIONS**  
 DATE AND DAY: **8/4/2022 THURSDAY**

NORTH / SOUTH STREET: **SCOTTSDALE ROAD** LANES: **3**  
 EAST / WEST STREET: **HUMMINGBIRD LANE** LANES: **2**

MAJOR STREET SPEED LIMIT OR 85<sup>th</sup> PERCENTILE SPEED: **45**

CONDITIONS: **NONE**

END TIME	STREET TRAFFIC VOLUMES			
	NB	SB	EB	WB
1:00 AM	91	78	5	4
2:00 AM	79	45	1	3
3:00 AM	50	24	1	0
4:00 AM	44	38	3	2
5:00 AM	114	90	1	6
6:00 AM	278	263	5	16
7:00 AM	561	587	14	56
8:00 AM	1060	1169	21	104
9:00 AM	1225	1381	35	91
10:00 AM	1126	1290	24	69
11:00 AM	1212	1242	34	63
12:00 PM	1330	1332	36	58
1:00 PM	1352	1439	35	60
2:00 PM	1391	1497	31	64
3:00 PM	1534	1534	32	58
4:00 PM	1577	1422	45	63
5:00 PM	1602	1498	30	77
6:00 PM	1660	1580	25	68
7:00 PM	1191	1105	23	66
8:00 PM	925	826	22	55
9:00 PM	760	647	11	39
10:00 PM	532	461	10	46
11:00 PM	374	313	7	27
12:00 AM	244	177	12	12
<b>TOTAL</b>	<b>20,312</b>	<b>20,038</b>	<b>463</b>	<b>1,107</b>

WARRANT	CRITERIA		REQUIRED HOURS	ACTUAL HOURS	SATISFIED?	PROXIMITY	
	MAJOR	MINOR				Major	Minor
#1A	420	140	8	0	NO	Satisfied	141%
#1B	630	70	8	3	NO	Satisfied	21%
#1A with #1B	480	56	8	13	NO		
#1B with #1A	720	112	8	0		Satisfied	93%
#2	Varying Graph		4	2	NO		16%
#3B	Varying Graph		1	1	YES		

Checked by: PEB 8/13/2022



**TRAFFIC CONTROL SIGNAL WARRANT STUDY  
LANE NUMBER, SPEED, AND VOLUME DATA**

PROJECT: **SCOTTSDALE PLAZA RESORT RENOVATIONS**  
 LOCATION: **PARADISE VALLEY, ARIZONA**

NORTH/SOUTH STREET:

**SCOTTSDALE ROAD**

NB LANES **3**  
 SB LANES **3**

EAST/WEST STREET:

**HUMMINGBIRD LANE**

EB LANES **1**  
 WB LANES **2**

SPEED LIMIT ON MAJOR STREET: **45**  
 85TH PERCENTILE SPEED ON MAJOR STREET: **UNKNOWN**

VOLUME DATA: **2025 WITH ARTESIA & RITZ-CARLTON**

DATE OF COUNT: **8/4/2022** **THURSDAY**  
 DATE OF STUDY: **8/15/2022**

SPECIAL CONDITIONS: **NONE**

**INTERSECTION APPROACH TRAFFIC VOLUMES**

TIME	NORTHBOUND	SOUTHBOUND	EASTBOUND	WESTBOUND
1:00 AM	91	78	5	4
2:00 AM	79	45	1	3
3:00 AM	50	24	1	0
4:00 AM	44	38	3	2
5:00 AM	114	90	1	6
6:00 AM	278	263	5	16
7:00 AM	561	587	14	56
8:00 AM	1060	1169	21	104
9:00 AM	1225	1381	35	91
10:00 AM	1126	1290	24	69
11:00 AM	1212	1242	34	63
12:00 PM	1330	1332	36	58
1:00 PM	1352	1439	35	60
2:00 PM	1391	1497	31	64
3:00 PM	1534	1534	32	58
4:00 PM	1577	1422	45	63
5:00 PM	1602	1498	30	77
6:00 PM	1660	1580	25	68
7:00 PM	1191	1105	23	66
8:00 PM	925	826	22	55
9:00 PM	760	647	11	39
10:00 PM	532	461	10	46
11:00 PM	374	313	7	27
12:00 AM	244	177	12	12
<b>TOTAL</b>	<b>20,312</b>	<b>20,038</b>	<b>463</b>	<b>1,107</b>

Checked by: PEB 8/13/2022





**TRAFFIC CONTROL SIGNAL WARRANT STUDY  
CRASH EXPERIENCE AND DELAY DATA**

**SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**CRASH EXPERIENCE DATA**

HAVE LESS RESTRICTIVE MEANS BEEN ATTEMPTED?

**NO**

TOTAL NUMBER OF CRASHES IN A 12 MONTH PERIOD:

**4**

NUMBER OF POTENTIALLY PREVENTABLE CRASHES  
IN A 12 MONTH PERIOD:

**1**

WILL SIGNAL DISRUPT PROGRESSIVE TRAFFIC FLOW?

**YES**

**VEHICLE DELAY DATA**

TIME PERIOD	AVERAGE DELAY SECONDS/VEHICLE	SIDE STREET TOTAL DELAY VEH-HOURS	VOLUME	TOTAL INTERSECTION VOLUME
<b>7:00 AM to 8:00 AM</b>	<b>120</b>	<b>3.47</b>	<b>104</b>	<b>2,354</b>
<b>5:00 PM to 6:00 PM</b>	<b>120</b>	<b>2.27</b>	<b>68</b>	<b>3,333</b>

Checked by: PEB 8/13/2022



## SCOTTSDALE PLAZA RESORT RENOVATIONS SCOTTSDALE ROAD and HUMMINGBIRD LANE

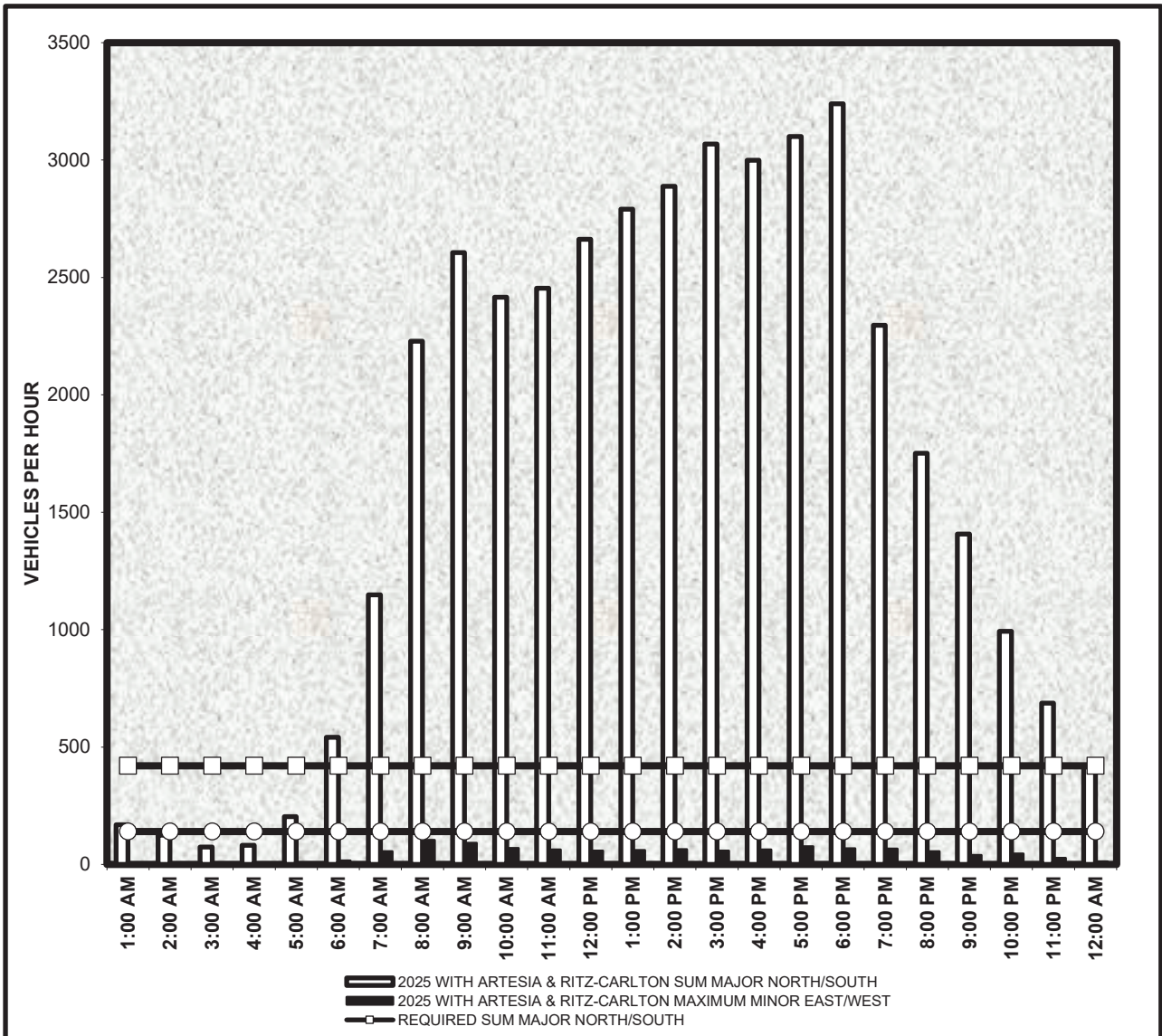
### M. U. T. C. D. WARRANT # 1A

#### Minimum Vehicular Volume

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH/SOUTH STREET	420
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST/WEST STREET	140

NUMBER OF HOURS SATISFIED:	0
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	0
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	0

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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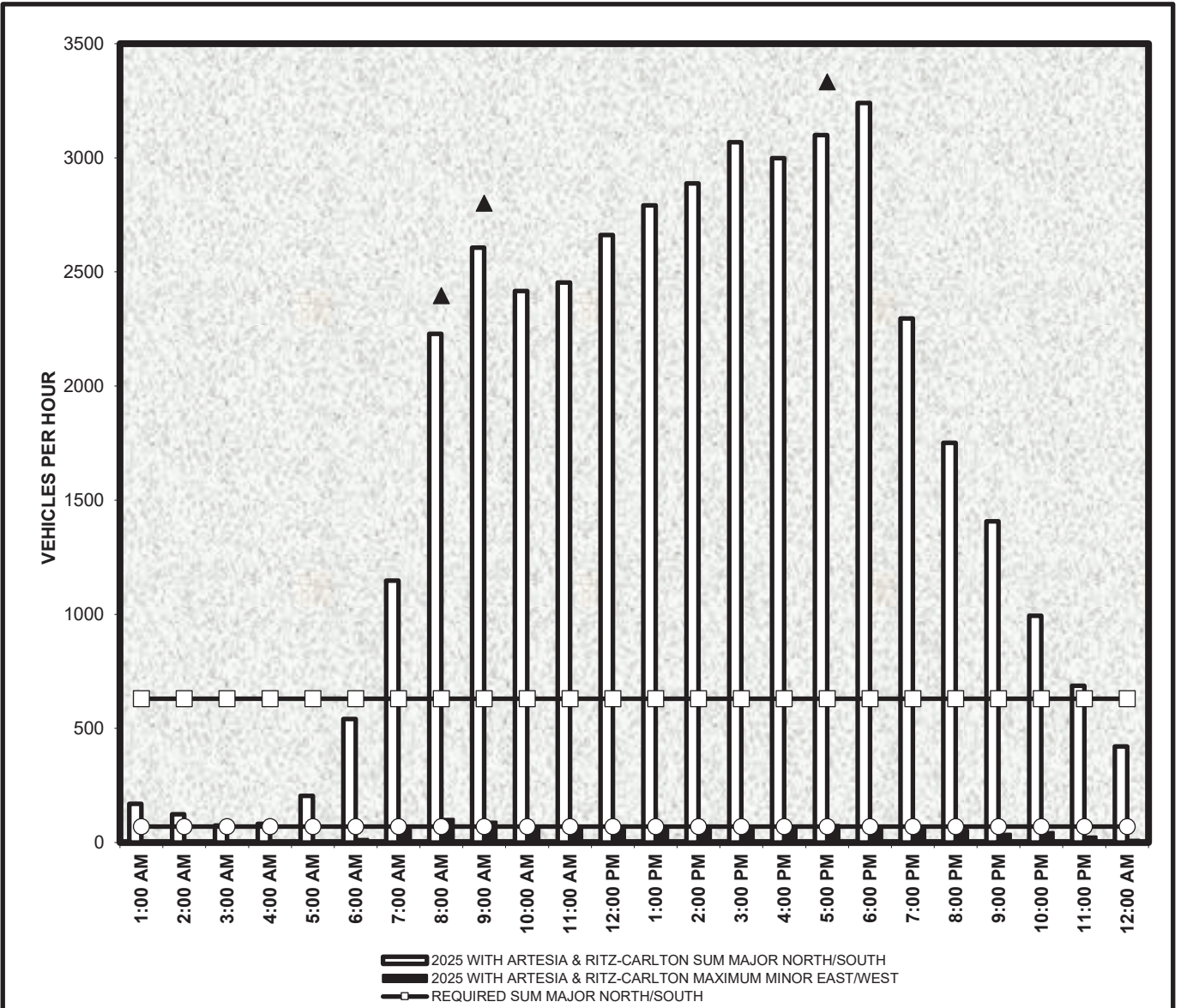


The Minimum Vehicular Volume, Condition A, is intended for application where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The warrant is satisfied when, for each of any eight hours of an average day, the traffic volumes provided in the MUTCD exist on the major street and on the higher-volume minor-street approach to the intersection, and the signal installation will not seriously disrupt progressive traffic flow.

**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**M. U. T. C. D. WARRANT # 1B  
Interruption of Continuous Traffic**

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH/SOUTH STREET	630
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST/WEST STREET	70
NUMBER OF HOURS SATISFIED:	<b>3</b>
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	<b>1</b>
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	<b>4</b>
<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>



The Interruption of Continuous Traffic, Condition B, is intended for application where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street. The warrant is satisfied when, for each of any eight hours of an average day, the traffic volumes provided in the MUTCD exist on the major street and on the higher-volume minor-street approach to the intersection, and the signal installation will not seriously disrupt progressive traffic flow.

# SCOTTSDALE PLAZA RESORT RENOVATIONS SCOTTSDALE ROAD and HUMMINGBIRD LANE

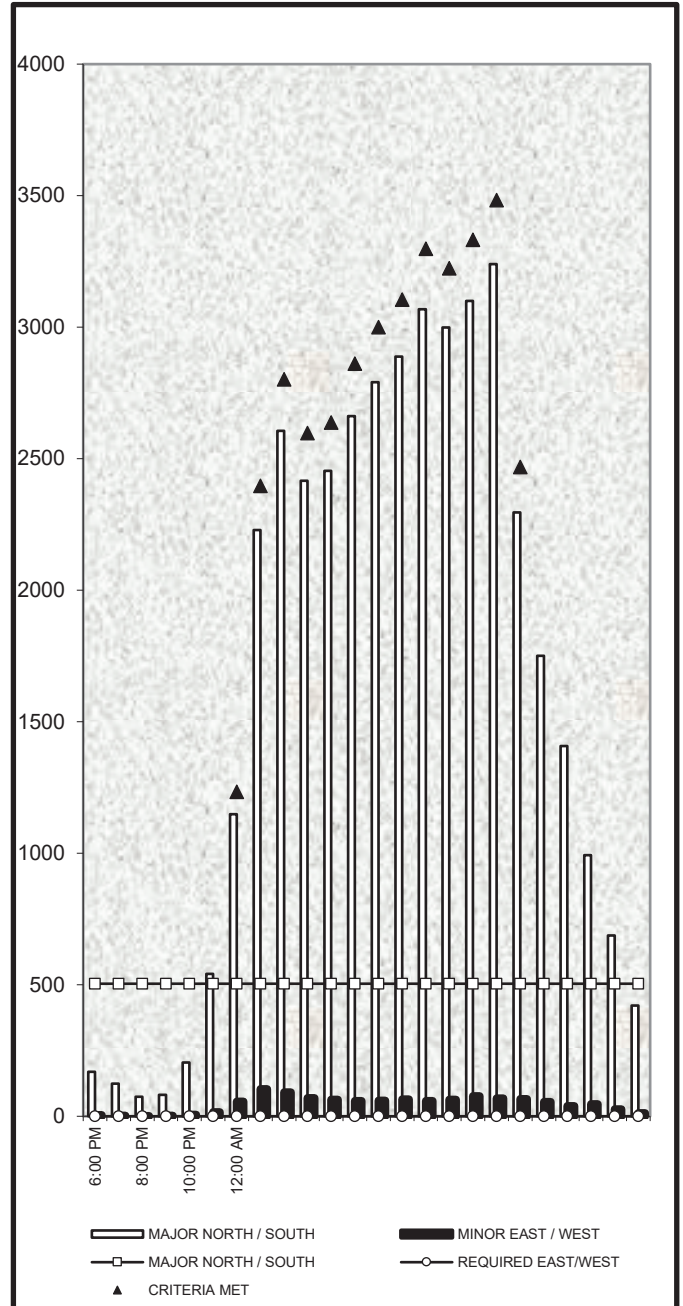
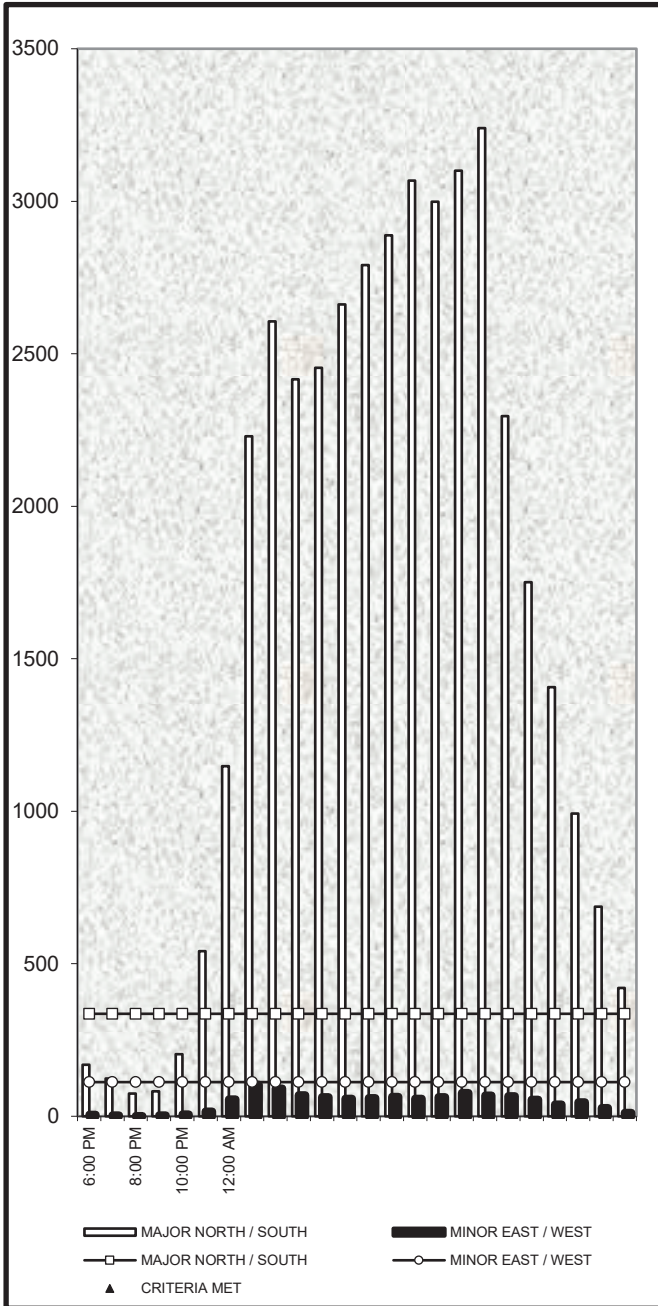
## M. U. T. C. D. WARRANT # 1

### Combination of Conditions A and B at 56% of Original Values

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH / SOUTH STREET	336	504
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST / WEST STREET	112	80

NUMBER OF HOURS SATISFIED:	0	13
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<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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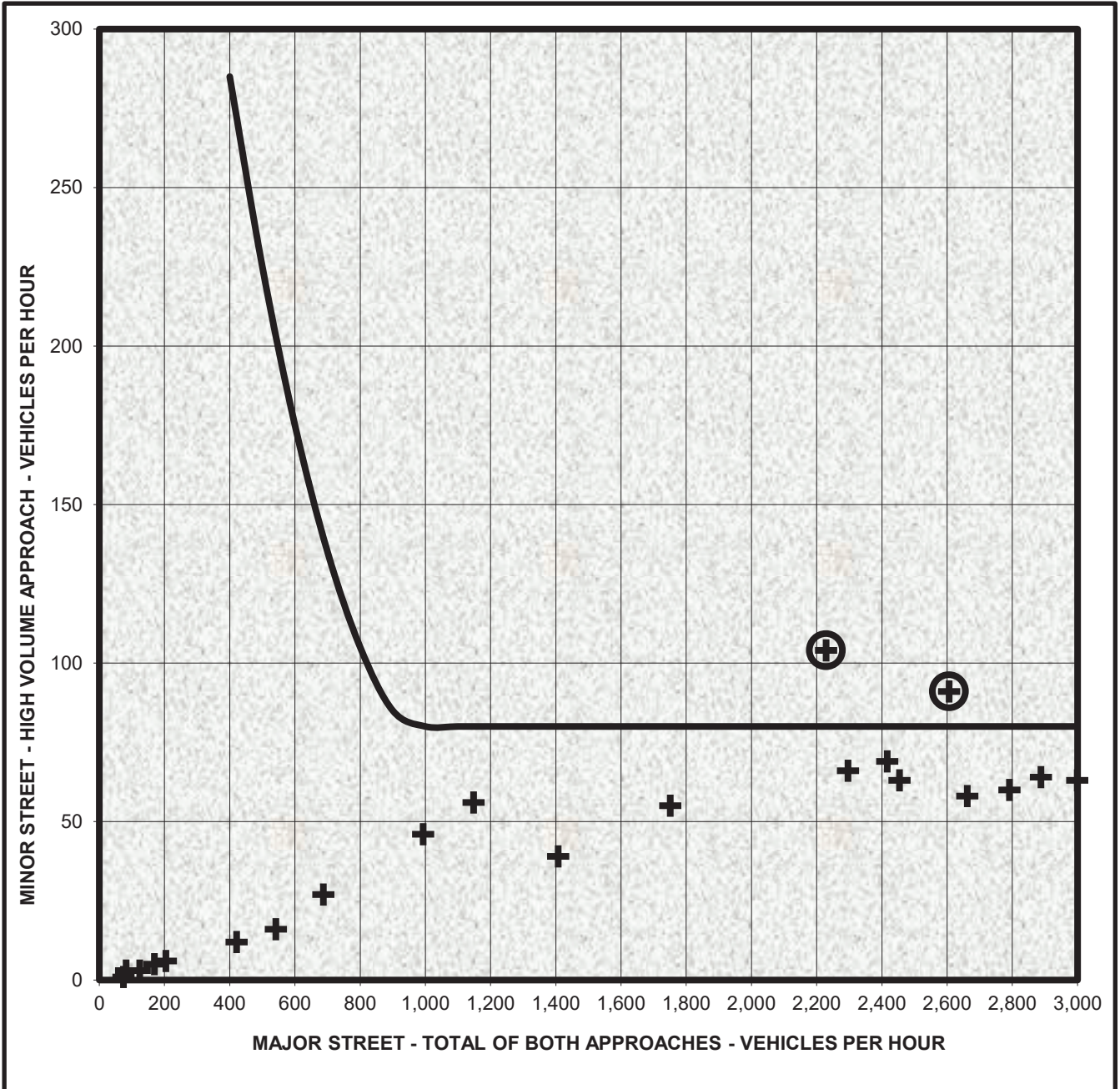
The major-street and minor-street volumes shall be for the same 8 hours for each condition; however, the 8 hours satisfied on A shall not be required to be the same 8 hours satisfied in Condition B. The combination of Conditions A and B should be applied only after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems.

**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**M. U. T. C. D. WARRANT # 2  
Four-Hour Vehicular Volume**

NUMBER OF HOURS SATISFIED:	<b>2</b>
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	<b>0</b>
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	<b>1</b>

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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The Four Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The need for a traffic control signal shall be considered if an engineering study finds that for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor-street approach (one direction only) all fall above the applicable curve provided in the MUTCD for the existing combination of approach lanes.

**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**M. U. T. C. D. WARRANT # 3  
Peak Hour, Category A (Delay)**

REQUIRED SIDE STREET VEHICLE-HOURS DELAY:	5.00
REQUIRED SIDE STREET HOURLY VOLUME:	150
REQUIRED TOTAL INTERSECTION HOURLY VOLUME:	800

<b>TIME PERIOD: 7:00 AM to 8:00 AM</b>	<b>MEASURED</b>	<b>SATISFIED?</b>
SIDE STREET VEHICLE-HOURS DELAY:	3.47	NO
SIDE STREET HOURLY VOLUME:	104	NO
TOTAL INTERSECTION HOURLY VOLUME:	2354	YES
<b>ALL CRITERIA</b>		<b>NO</b>

<b>TIME PERIOD: 5:00 PM to 6:00 PM</b>	<b>MEASURED</b>	<b>SATISFIED?</b>
SIDE STREET VEHICLE-HOURS DELAY:	2.27	NO
SIDE STREET HOURLY VOLUME:	68	NO
TOTAL INTERSECTION HOURLY VOLUME:	3333	YES
<b>ALL CRITERIA</b>		<b>NO</b>

The Peak Hour signal warrant is intended for use at a location where traffic conditions are such that for a minimum of 1 hour of an average day, the minor-street suffers undue delay when entering or crossing the major street.

This signal warrant shall be applied only in unusual cases. Such cases include, but are not limited to, office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.

The need for a traffic control signal shall be considered if an engineering study finds that all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:

1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and
2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and
3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.

Checked by: PEB 8/13/2022



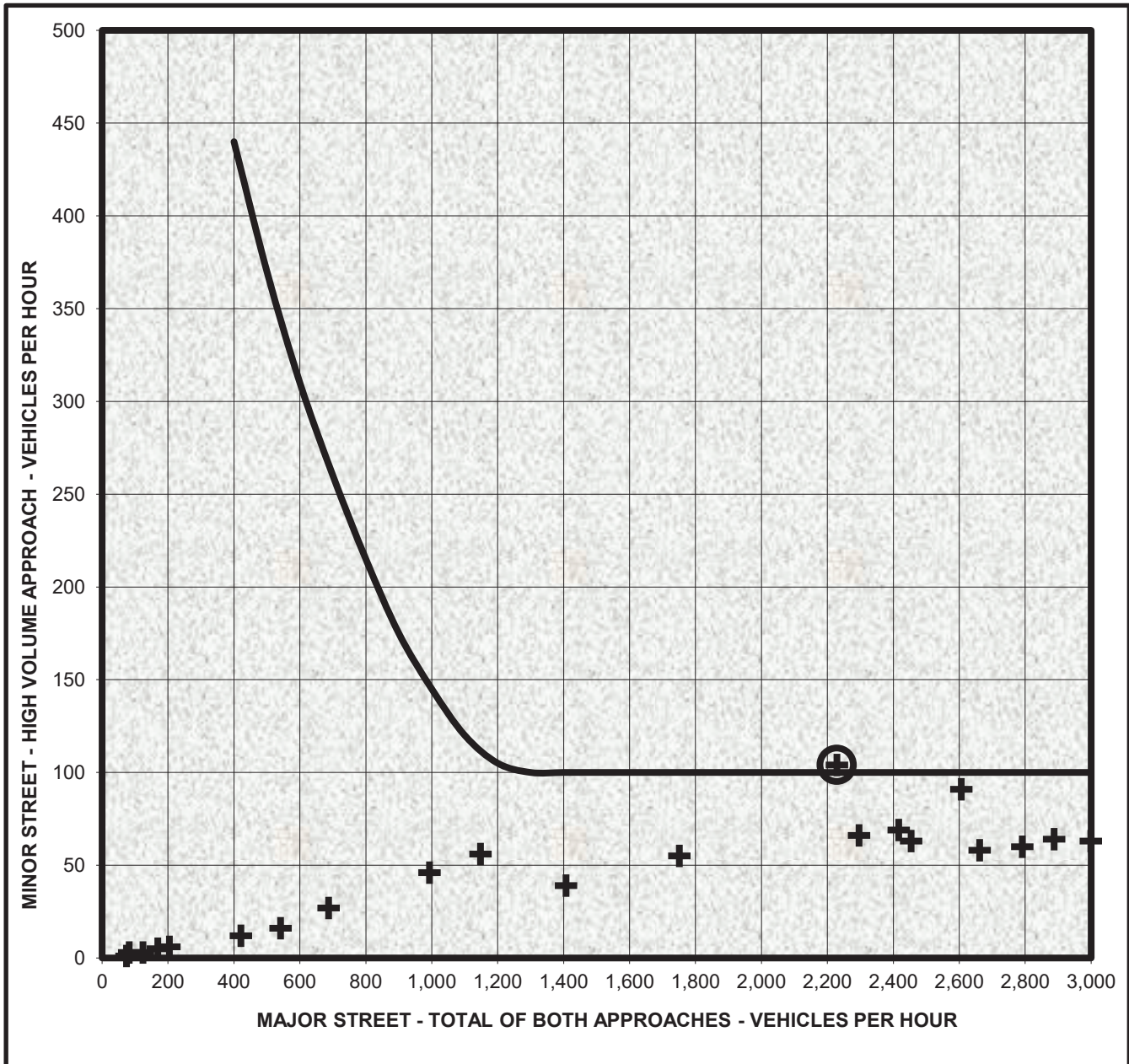


**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**M. U. T. C. D. WARRANT # 3  
One-Hour Vehicular Volume**

NUMBER OF HOURS SATISFIED:	<b>1</b>
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	<b>1</b>
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	<b>1</b>

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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The Four Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The need for a traffic control signal shall be considered if an engineering study finds that for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor-street approach (one direction only) all fall above the applicable curve provided in the MUTCD for the existing combination of approach lanes.

Checked by: PEB 8/13/2022



**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE  
MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES  
TRAFFIC CONTROL SIGNAL WARRANT STUDY SUMMARY**

LOCATION: **PARADISE VALLEY, ARIZONA**

SPECIAL CONDITIONS: **NONE**

DATE OF COUNT: 8/5/2022

DATE OF STUDY: 8/15/2022

NORTH/SOUTH STREET: SCOTTSDALE ROAD

MAJOR

MULTI-LANE

EAST/WEST STREET: HUMMINGBIRD LANE

MINOR

MULTI-LANE

POSTED SPEED LIMIT ON MAJOR STREET:

45 mph

85th PERCENTILE SPEED ON MAJOR STREET:

Unknown

**WARRANT**

**EXISTING**

**REQUIRED**

**SATISFIED?**

**# 1. EIGHT-HOUR VEHICULAR VOLUME**

A. MINIMUM VEHICULAR VOLUME

0

8

NO

B. INTERRUPTION OF CONTINUOUS TRAFFIC

5

8

NO

COMBINATION OF WARRANTS 1A AND 1B (80% of Values)

-

-

Not Applicable

COMBINATION OF WARRANTS 1A AND 1B (56% of Values)

0

8

NO

**# 2. FOUR-HOUR VEHICULAR VOLUME**

2

4

NO

**# 3. PEAK HOUR**

A. PEAK HOUR DELAY - AM

1

3

NO

A. PEAK HOUR DELAY - PM

1

3

NO

B. PEAK HOUR VOLUME

0

1

NO

**# 7. CRASH EXPERIENCE**

WITH WARRANT # 1A (Traffic Volumes at 80% of Original Values)

-

-

Not Applicable

WITH WARRANT # 1B (Traffic Volumes at 80% of Original Values)

-

-

Not Applicable

WITH WARRANT # 1A (Traffic Volumes at 56% of Original Values)

0

8

NO

WITH WARRANT # 1B (Traffic Volumes at 56% of Original Values)

0

8

NO

TOTAL NUMBER OF CRASHES

4

-

-

NUMBER OF POTENTIALLY PREVENTABLE CRASHES

1

5

NO

HAVE LESS RESTRICTIVE MEANS BEEN ATTEMPTED?

NO

-

NO

**# 7. ENTIRE WARRANT**

-

-

NO

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Checked by: PEB 8/13/2022





**TRAFFIC CONTROL SIGNAL WARRANT ESTIMATION  
LANE NUMBER, SPEED, AND VOLUME DATA**

LOCATION: **SCOTTSDALE PLAZA RESORT RENOVATIONS**  
 DATE AND DAY: **8/5/2022 FRIDAY**

NORTH / SOUTH STREET: **SCOTTSDALE ROAD** LANES: **3**  
 EAST / WEST STREET: **HUMMINGBIRD LANE** LANES: **2**

MAJOR STREET SPEED LIMIT OR 85<sup>th</sup> PERCENTILE SPEED: **45**

CONDITIONS: **NONE**

END TIME	STREET TRAFFIC VOLUMES			
	NB	SB	EB	WB
1:00 AM	154	129	4	3
2:00 AM	160	68	3	2
3:00 AM	89	56	7	1
4:00 AM	63	42	3	3
5:00 AM	126	104	8	8
6:00 AM	269	265	9	20
7:00 AM	561	563	20	55
8:00 AM	1114	1135	40	99
9:00 AM	1172	1251	39	92
10:00 AM	1178	1302	20	60
11:00 AM	1216	1350	38	62
12:00 PM	1492	1412	48	55
1:00 PM	1494	1527	34	74
2:00 PM	1584	1521	37	62
3:00 PM	1637	1614	33	68
4:00 PM	1653	1535	36	57
5:00 PM	1584	1569	27	68
6:00 PM	1550	1601	39	70
7:00 PM	1291	1242	38	70
8:00 PM	1071	995	22	68
9:00 PM	922	853	13	58
10:00 PM	747	663	16	55
11:00 PM	554	490	4	44
12:00 AM	414	323	15	21
<b>TOTAL</b>	<b>22,095</b>	<b>21,610</b>	<b>553</b>	<b>1,175</b>

WARRANT	CRITERIA		REQUIRED HOURS	ACTUAL HOURS	SATISFIED?	PROXIMITY	
	MAJOR	MINOR				Major	Minor
#1A	420	140	8	0	NO	Satisfied	155%
#1B	630	70	8	5	NO	Satisfied	27%
#1A with #1B	480	56	8	13	NO		
#1B with #1A	720	112	8	0		Satisfied	104%
#2	Varying Graph		4	2	NO		14%
#3B	Varying Graph		1	0	NO		

Checked by: PEB 8/13/2022



**TRAFFIC CONTROL SIGNAL WARRANT STUDY  
LANE NUMBER, SPEED, AND VOLUME DATA**

PROJECT: **SCOTTSDALE PLAZA RESORT RENOVATIONS**  
 LOCATION: **PARADISE VALLEY, ARIZONA**

NORTH/SOUTH STREET: **SCOTTSDALE ROAD**  
 NB LANES: **3**  
 SB LANES: **3**

EAST/WEST STREET: **HUMMINGBIRD LANE**  
 EB LANES: **1**  
 WB LANES: **2**

SPEED LIMIT ON MAJOR STREET: **45**  
 85TH PERCENTILE SPEED ON MAJOR STREET: **UNKNOWN**

VOLUME DATA: **2025 WITH ARTESIA & RITZ-CARLTON**

DATE OF COUNT: **8/5/2022** **FRIDAY**  
 DATE OF STUDY: **8/15/2022**

SPECIAL CONDITIONS: **NONE**

INTERSECTION APPROACH TRAFFIC VOLUMES				
TIME	NORTHBOUND	SOUTHBOUND	EASTBOUND	WESTBOUND
1:00 AM	154	129	4	3
2:00 AM	160	68	3	2
3:00 AM	89	56	7	1
4:00 AM	63	42	3	3
5:00 AM	126	104	8	8
6:00 AM	269	265	9	20
7:00 AM	561	563	20	55
8:00 AM	1114	1135	40	99
9:00 AM	1172	1251	39	92
10:00 AM	1178	1302	20	60
11:00 AM	1216	1350	38	62
12:00 PM	1492	1412	48	55
1:00 PM	1494	1527	34	74
2:00 PM	1584	1521	37	62
3:00 PM	1637	1614	33	68
4:00 PM	1653	1535	36	57
5:00 PM	1584	1569	27	68
6:00 PM	1550	1601	39	70
7:00 PM	1291	1242	38	70
8:00 PM	1071	995	22	68
9:00 PM	922	853	13	58
10:00 PM	747	663	16	55
11:00 PM	554	490	4	44
12:00 AM	414	323	15	21
<b>TOTAL</b>	<b>22,095</b>	<b>21,610</b>	<b>553</b>	<b>1,175</b>

Checked by: PEB 8/13/2022



**TRAFFIC CONTROL SIGNAL WARRANT STUDY  
CRASH EXPERIENCE AND DELAY DATA**

**SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**CRASH EXPERIENCE DATA**

HAVE LESS RESTRICTIVE MEANS BEEN ATTEMPTED?

**NO**

TOTAL NUMBER OF CRASHES IN A 12 MONTH PERIOD:

**4**

NUMBER OF POTENTIALLY PREVENTABLE CRASHES  
IN A 12 MONTH PERIOD:

**1**

WILL SIGNAL DISRUPT PROGRESSIVE TRAFFIC FLOW?

**YES**

**VEHICLE DELAY DATA**

TIME PERIOD	AVERAGE DELAY SECONDS/VEHICLE	SIDE STREET TOTAL DELAY VEH-HOURS	VOLUME	TOTAL INTERSECTION VOLUME
<b>7:00 AM to 8:00 AM</b>	<b>120</b>	<b>3.30</b>	<b>99</b>	<b>2,388</b>
<b>2:00 PM to 3:00 PM</b>	<b>120</b>	<b>2.27</b>	<b>68</b>	<b>3,352</b>

Checked by: PEB 8/13/2022



## SCOTTSDALE PLAZA RESORT RENOVATIONS SCOTTSDALE ROAD and HUMMINGBIRD LANE

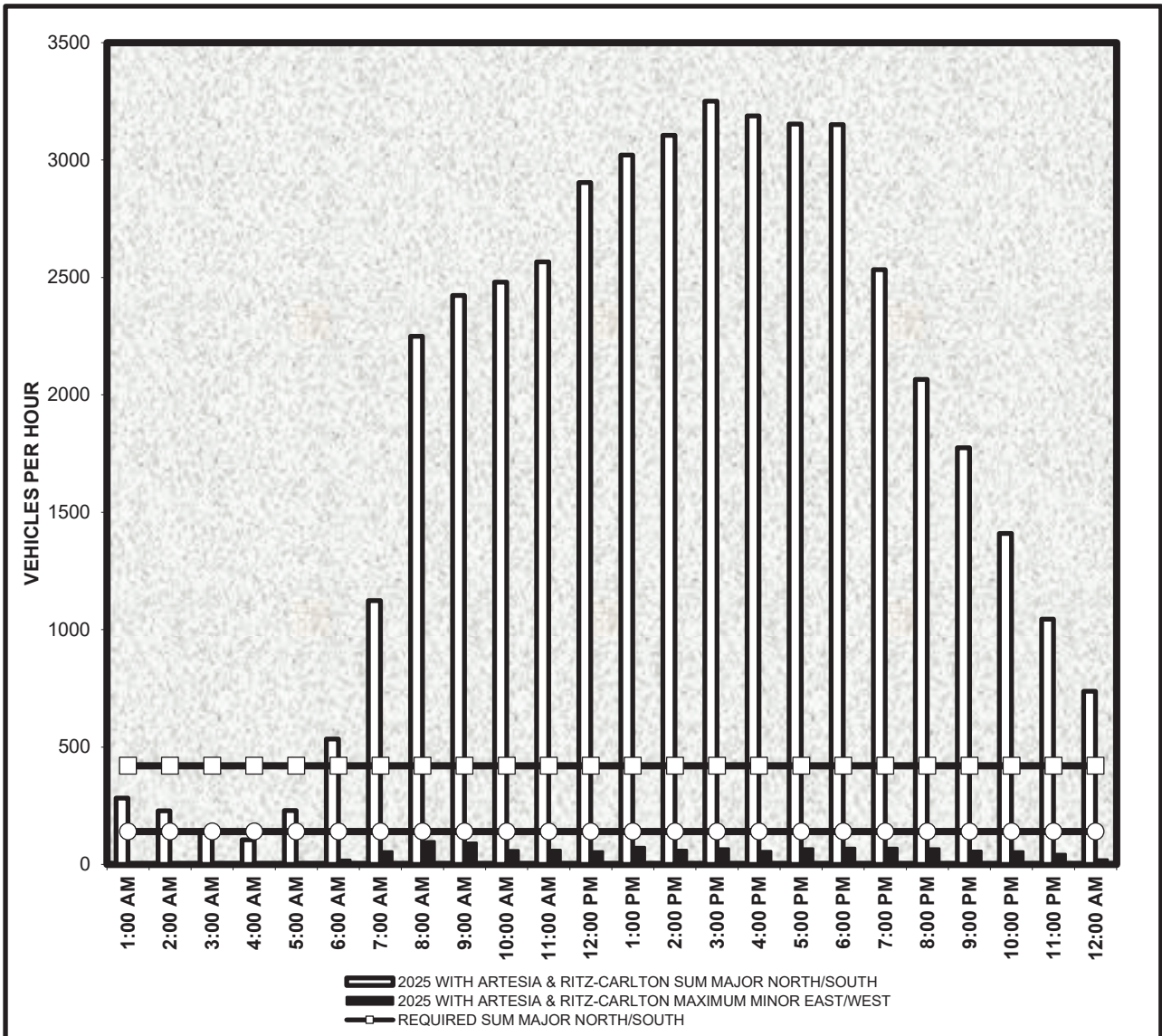
### M. U. T. C. D. WARRANT # 1A

#### Minimum Vehicular Volume

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH/SOUTH STREET	420
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST/WEST STREET	140

NUMBER OF HOURS SATISFIED:	0
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	0
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	0

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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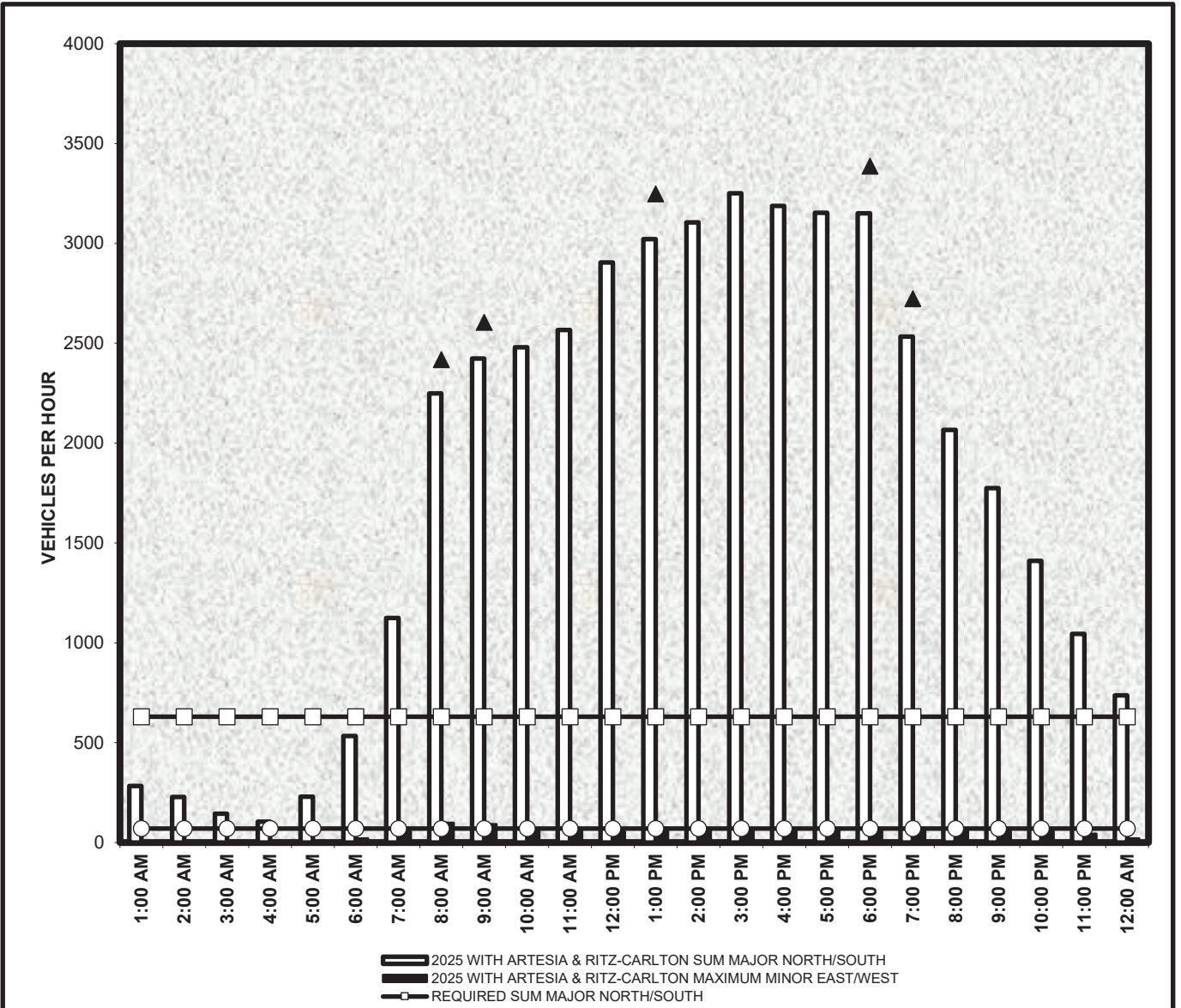


The Minimum Vehicular Volume, Condition A, is intended for application where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The warrant is satisfied when, for each of any eight hours of an average day, the traffic volumes provided in the MUTCD exist on the major street and on the higher-volume minor-street approach to the intersection, and the signal installation will not seriously disrupt progressive traffic flow.

**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**M. U. T. C. D. WARRANT # 1B  
Interruption of Continuous Traffic**

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH/SOUTH STREET	630
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST/WEST STREET	70
NUMBER OF HOURS SATISFIED:	<b>5</b>
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	<b>3</b>
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	<b>3</b>
<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>



The Interruption of Continuous Traffic, Condition B, is intended for application where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street. The warrant is satisfied when, for each of any eight hours of an average day, the traffic volumes provided in the MUTCD exist on the major street and on the higher-volume minor-street approach to the intersection, and the signal installation will not seriously disrupt progressive traffic flow.

Checked by: PEB 8/13/2022



# SCOTTSDALE PLAZA RESORT RENOVATIONS SCOTTSDALE ROAD and HUMMINGBIRD LANE

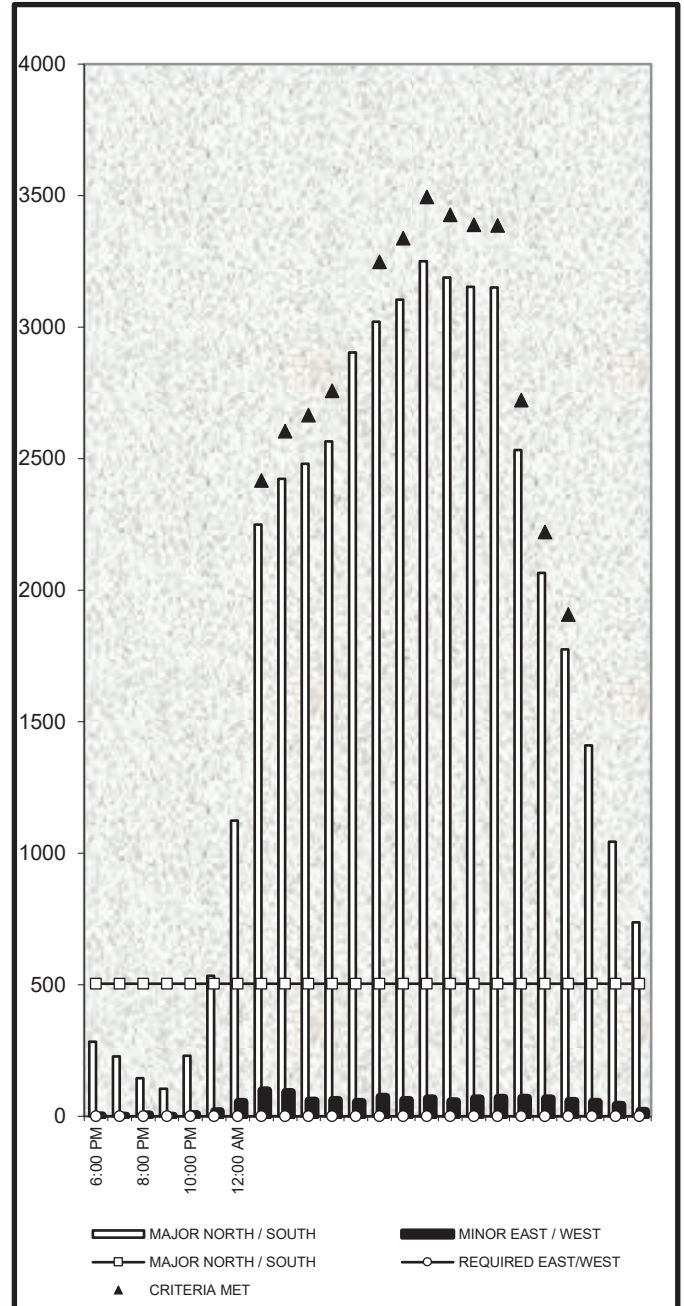
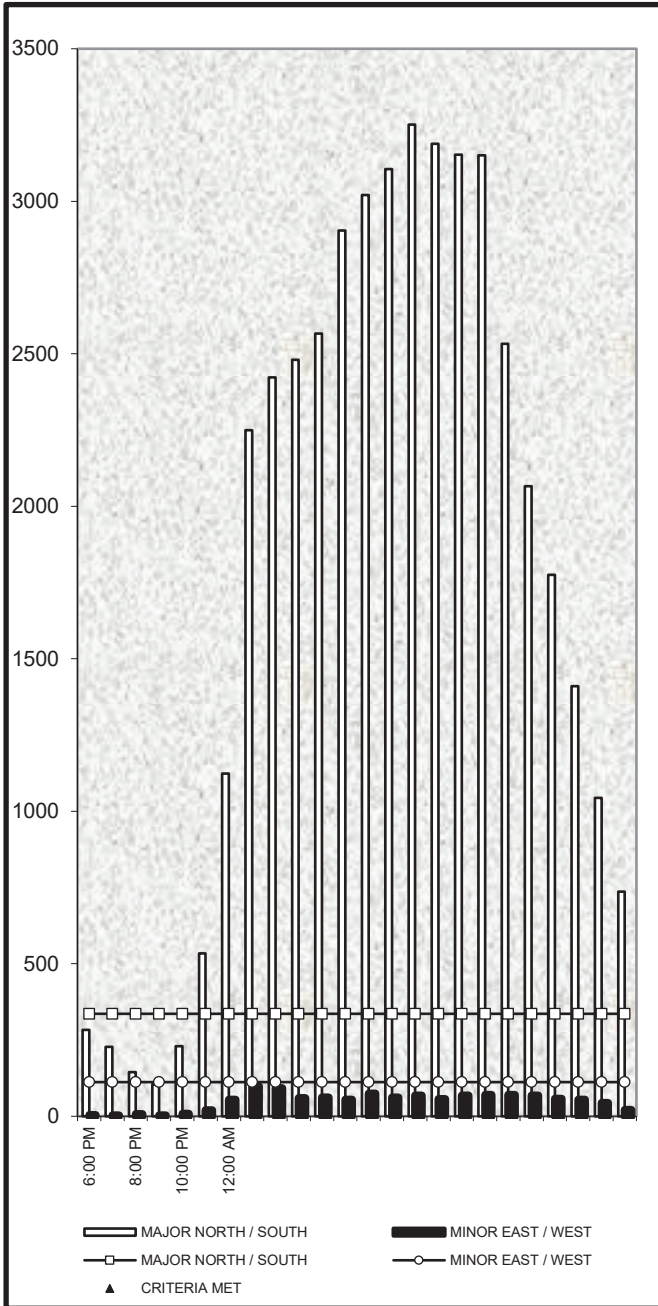
## M. U. T. C. D. WARRANT # 1

### Combination of Conditions A and B at 56% of Original Values

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH / SOUTH STREET	336	504
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST / WEST STREET	112	80

NUMBER OF HOURS SATISFIED:	0	13
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<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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The major-street and minor-street volumes shall be for the same 8 hours for each condition; however, the 8 hours satisfied on A shall not be required to be the same 8 hours satisfied in Condition B. The combination of Conditions A and B should be applied only after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems.

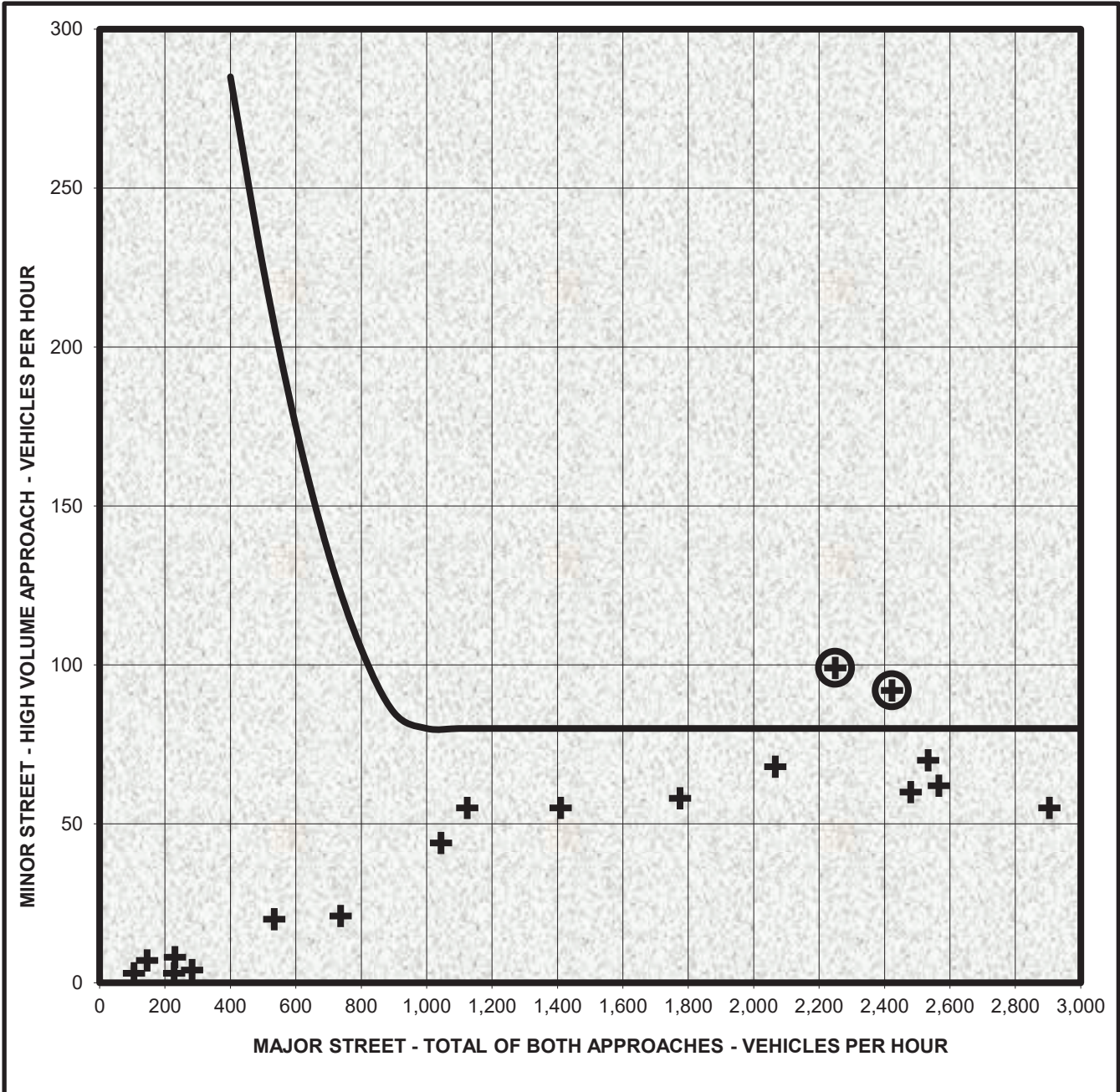


**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**M. U. T. C. D. WARRANT # 2  
Four-Hour Vehicular Volume**

NUMBER OF HOURS SATISFIED:	<b>2</b>
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	<b>0</b>
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	<b>1</b>

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
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The Four Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The need for a traffic control signal shall be considered if an engineering study finds that for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor-street approach (one direction only) all fall above the applicable curve provided in the MUTCD for the existing combination of approach lanes.

**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**M. U. T. C. D. WARRANT # 3  
Peak Hour, Category A (Delay)**

REQUIRED SIDE STREET VEHICLE-HOURS DELAY:	5.00
REQUIRED SIDE STREET HOURLY VOLUME:	150
REQUIRED TOTAL INTERSECTION HOURLY VOLUME:	800

<b>TIME PERIOD: 7:00 AM to 8:00 AM</b>	<b>MEASURED</b>	<b>SATISFIED?</b>
SIDE STREET VEHICLE-HOURS DELAY:	3.30	NO
SIDE STREET HOURLY VOLUME:	99	NO
TOTAL INTERSECTION HOURLY VOLUME:	2388	YES
<b>ALL CRITERIA</b>		<b>NO</b>

<b>TIME PERIOD: 2:00 PM to 3:00 PM</b>	<b>MEASURED</b>	<b>SATISFIED?</b>
SIDE STREET VEHICLE-HOURS DELAY:	2.27	NO
SIDE STREET HOURLY VOLUME:	68	NO
TOTAL INTERSECTION HOURLY VOLUME:	3352	YES
<b>ALL CRITERIA</b>		<b>NO</b>

The Peak Hour signal warrant is intended for use at a location where traffic conditions are such that for a minimum of 1 hour of an average day, the minor-street suffers undue delay when entering or crossing the major street.

This signal warrant shall be applied only in unusual cases. Such cases include, but are not limited to, office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.

The need for a traffic control signal shall be considered if an engineering study finds that all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:

1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and
2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and
3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.

Checked by: PEB 8/13/2022



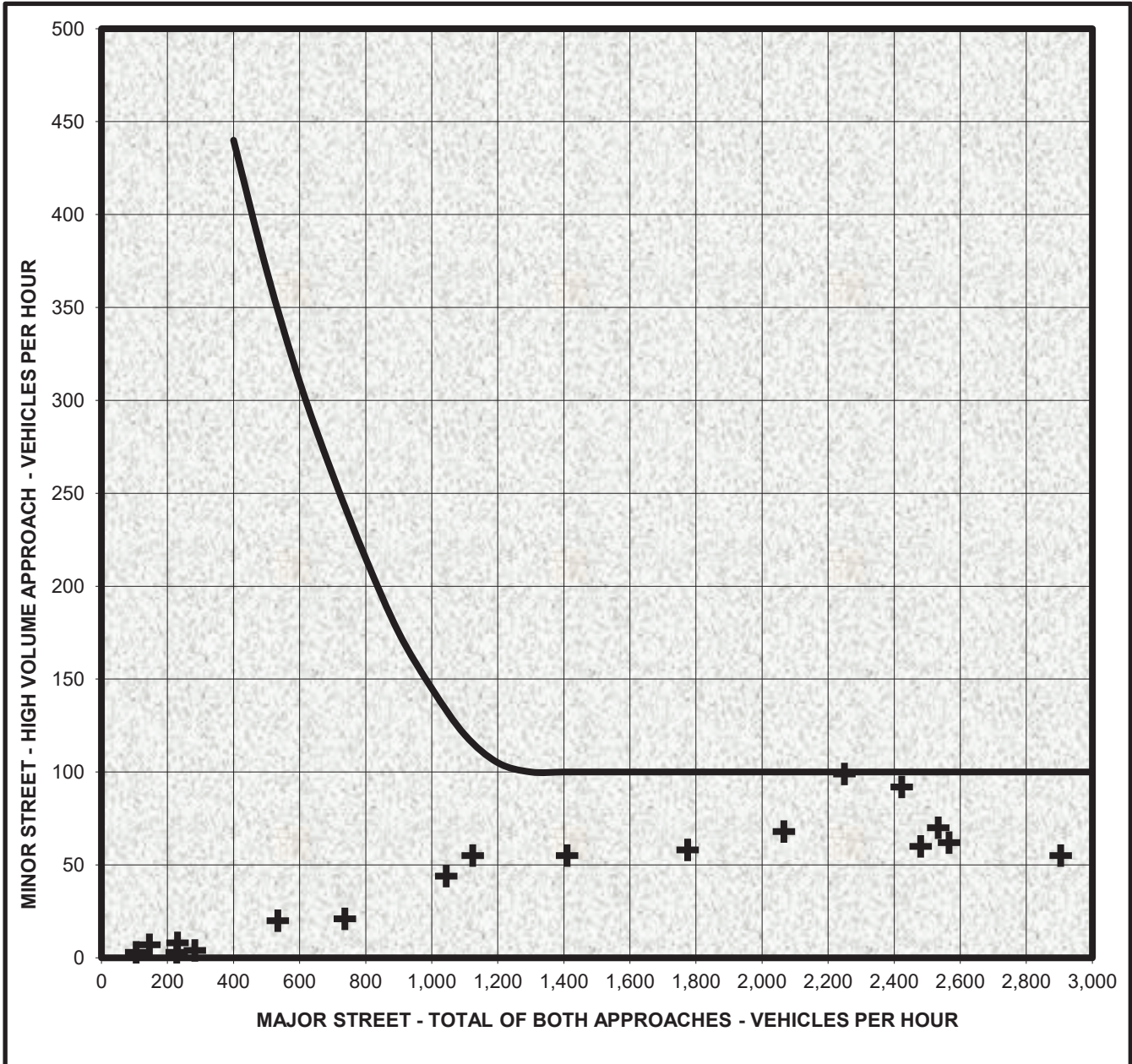


**SCOTTSDALE PLAZA RESORT RENOVATIONS  
SCOTTSDALE ROAD and HUMMINGBIRD LANE**

**M. U. T. C. D. WARRANT # 3  
One-Hour Vehicular Volume**

NUMBER OF HOURS SATISFIED:	0
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	0
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	2

<b>WARRANT CRITERIA:</b>	<b>NOT SATISFIED</b>
--------------------------	----------------------



The Four Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The need for a traffic control signal shall be considered if an engineering study finds that for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor-street approach (one direction only) all fall above the applicable curve provided in the MUTCD for the existing combination of approach lanes.

## Appendix G

Level-of Service without and with Scottsdale Plaza Resort Renovation



## Appendix G.1

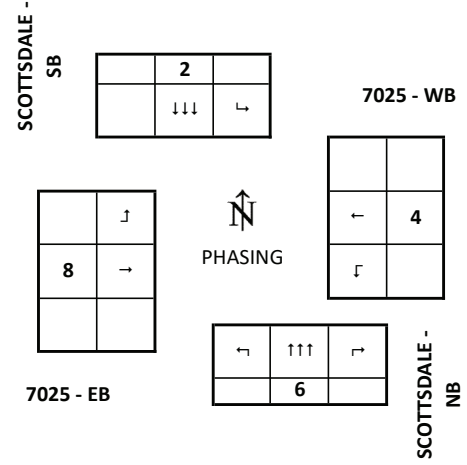
Level-of Service without and with Scottsdale Plaza Resort Renovation  
City of Scottsdale Signal Timing Plans



<b>SCOTTSDALE &amp; 7025</b>			<b>System # 78</b>
<b>BASIC TIMING PLAN</b>	Section #	I.P. Address <b>MM1-5-1</b>	Date Designed
		<b>172.27.10.78</b>	6/28/2021

<b>TIMING PLAN - MM-2-1</b>	Phase		2		4		6		8
	Movement		SBT		WBT		NBT		EBT
	NOTES		COORD				COORD		
	MIN GRN		10		7		10		7
	BK MGRN								
	CS MGRN								
	DLY GRN								
	WALK		4		4		4		4
	WALK2								
	WLK MAX								
	PED CLR/FDW		15		33		15		33
	PD CLR2								
	PC MAX								
	PED CO								
	VEH EXT				2				2
	VH EXT2								
	MAX 1		65		45		65		45
	MAX 2		75		55		75		55
	MAX 3								
	DYM MAX								
DYM STP									
YELLOW		4.7		3.3		4.7		3.3	
RED CLR		1.2		3.0		1.2		3.0	
RED MAX									
RED RVT		2		2		2		2	
ACT B4									
SEC/ACT									
MAX INT									
TIME B4									
CARS WT									
STPTDUC									
TTREDUC									
MIN GAP									
<b>RECALLS - MM-2-8</b>	LOCK DET								
	VEH RECALL								
	PED RECALL		X			X			
	MAX RECALL								
	SOFT RECALL								
NO REST									
ADD INIT CAL									

NOTES



PHASING SEQUENCES	
TOD: MORNING	
R1	2 4
R2	6 8
Use Timing plan:	
TOD: MIDDAY	
R1	2 4
R2	6 8
Use Timing plan:	
TOD: EVENING	
R1	2 4
R2	6 8
Use Timing plan:	
TOD: NIGHT	
R1	2 4
R2	6 8
Use Timing plan:	
<b>FREE</b>	
R1	2 4
R2	6 8
Use Timing plan: 254	

Approved By
Effective Date 6/28/2021

SCOTTSDALE & 7025								System #	78		
COORDINATOR					Section #			Date Updated			
					0			6/28/2021			
	PHASE	1	2	3	4	5	6	7	8		
	FDW		15		33		15		33		
	YELLOW		4.7		3.3		4.7		3.3		
	ALL RED		1.2		3		1.2		3		
	WALK		15		33		15		33		
PLAN 1 AM PLAN OPERATIVE TIMES 6:00	R1	2	↓			4	←			COORD PATTERN	OFFSET
	R2	6	↑			8	→			Balanced	108
		RING 1				RING 2					
	PHASE		2		4		6		8		
	SPLIT		95		25		95		25	Target Cycle Length	
	COORD		X				X			120	
	RECALLS		P				P			Actual Cycle Length	
	GREEN		89.1		18.7		89.1		18.7	120	
PLAN 2 MIDDAY PLAN OPERATIVE TIMES 9:00	R1	2	↓			4	←			COORD PATTERN	OFFSET
	R2	6	↑			8	→			Balanced	37
		RING 1				RING 2					
	PHASE		2		4		6		8		
	SPLIT		86		22		86		22	Target Cycle Length	
	COORD		X				X			108	
	RECALLS		P				P			Actual Cycle Length	
	GREEN		80.2		15.7		80.2		15.7	108	
PLAN 3 PM PLAN OPERATIVE TIMES 15:00	R1	2	↓			4	←			COORD PATTERN	OFFSET
	R2	6	↑			8	→			Balanced	41
		RING 1				RING 2					
	PHASE		2		4		6		8		
	SPLIT		100		20		100		20	Target Cycle Length	
	COORD		X				X			120	
	RECALLS		P				P			Actual Cycle Length	
	GREEN		94.2		13.7		94.2		13.7	120	
PLAN 10 MIDNIGHT PLAN OPERATIVE TIMES	R1	2	↓			4	←			COORD PATTERN	OFFSET
	R2	6	↑			8	→			Balanced	75
		RING 1				RING 2					
	PHASE		2		4		6		8		
	SPLIT		74		16		74		16	Target Cycle Length	
	COORD		X				X			90	
	RECALLS		P				P			Actual Cycle Length	
	GREEN		68.2		9.7		68.2		9.7	90	

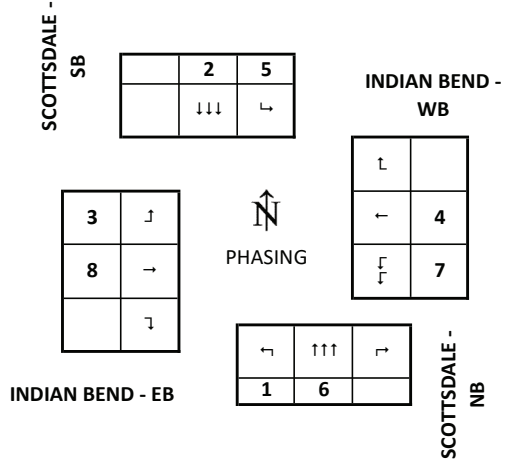
<b>SCOTTSDALE &amp; INDIAN BEND</b>			<b>System # 82</b>
<b>BASIC TIMING PLAN</b>	Section #	I.P. Address	Date Designed
		<b>MM1-5-1</b> <b>172.27.10.82</b>	6/28/2021

Phase	1	2	3	4	5	6	7	8
Movement	NBL	SBT	EBL	WBT	SBL	NBT	WBL	EBT
NOTES	PROT	COORD	PROT		PROT	COORD	PROT	
MIN GRN	5	10	5	7	5	10	5	7
BK MGRN				15				
CS MGRN					5			
DLY GRN								
WALK		7		4		7		4
WALK2								
WLK MAX								
PED CLR/FDW		18		28		18		31
PD CLR2								
PC MAX								
PED CO								
VEH EXT	2	1	2	1	2	1	2	1
VH EXT2								
MAX 1	20	60	20	45	20	60	35	55
MAX 2	35	75	35	50	35	75	40	65
MAX 3								
DYM MAX								
DYM STP								
YELLOW	4	4.7	3	4.4	4	4.7	3.6	3.3
RED CLR	2	1.0	2	1.3	2	1.0	2	2.4
RED MAX								
RED RVT	2	2	2	2	2	2	2	2
ACT B4								
SEC/ACT								
MAX INT								
TIME B4								
CARS WT								
STPTDUC								
TTREDUC								
MIN GAP								
LOCK DET								
VEH RECALL		X				X		
PED RECALL								
MAX RECALL								
SOFT RECALL								
NO REST								
ADD INIT CAL								

TIMING PLAN - MM-2-1

RECALLS - MM-2-8

NOTES	



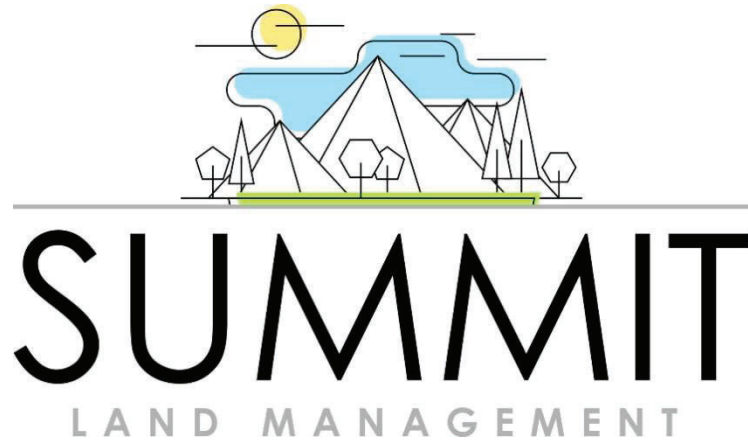
PHASING SEQUENCES									
TOD: MORNING									
R1	<table border="1"><tr><td>2</td><td>1</td><td>3</td><td>4</td></tr><tr><td>6</td><td>5</td><td>8</td><td>7</td></tr></table>	2	1	3	4	6	5	8	7
2	1	3	4						
6	5	8	7						
R2	<table border="1"><tr><td>2</td><td>1</td><td>3</td><td>4</td></tr><tr><td>6</td><td>5</td><td>8</td><td>7</td></tr></table>	2	1	3	4	6	5	8	7
2	1	3	4						
6	5	8	7						
Use Timing plan:									
TOD: MIDDAY									
R1	<table border="1"><tr><td>2</td><td>1</td><td>3</td><td>4</td></tr><tr><td>6</td><td>5</td><td>8</td><td>7</td></tr></table>	2	1	3	4	6	5	8	7
2	1	3	4						
6	5	8	7						
R2	<table border="1"><tr><td>2</td><td>1</td><td>3</td><td>4</td></tr><tr><td>6</td><td>5</td><td>8</td><td>7</td></tr></table>	2	1	3	4	6	5	8	7
2	1	3	4						
6	5	8	7						
Use Timing plan:									
TOD: EVENING									
R1	<table border="1"><tr><td>2</td><td>1</td><td>3</td><td>4</td></tr><tr><td>6</td><td>5</td><td>8</td><td>7</td></tr></table>	2	1	3	4	6	5	8	7
2	1	3	4						
6	5	8	7						
R2	<table border="1"><tr><td>2</td><td>1</td><td>3</td><td>4</td></tr><tr><td>6</td><td>5</td><td>8</td><td>7</td></tr></table>	2	1	3	4	6	5	8	7
2	1	3	4						
6	5	8	7						
Use Timing plan:									
TOD: NIGHT									
R1	<table border="1"><tr><td>2</td><td>1</td><td>3</td><td>4</td></tr><tr><td>6</td><td>5</td><td>8</td><td>7</td></tr></table>	2	1	3	4	6	5	8	7
2	1	3	4						
6	5	8	7						
R2	<table border="1"><tr><td>2</td><td>1</td><td>3</td><td>4</td></tr><tr><td>6</td><td>5</td><td>8</td><td>7</td></tr></table>	2	1	3	4	6	5	8	7
2	1	3	4						
6	5	8	7						
Use Timing plan:									
FREE									
R1	<table border="1"><tr><td>2</td><td>1</td><td>3</td><td>4</td></tr><tr><td>6</td><td>5</td><td>8</td><td>7</td></tr></table>	2	1	3	4	6	5	8	7
2	1	3	4						
6	5	8	7						
R2	<table border="1"><tr><td>2</td><td>1</td><td>3</td><td>4</td></tr><tr><td>6</td><td>5</td><td>8</td><td>7</td></tr></table>	2	1	3	4	6	5	8	7
2	1	3	4						
6	5	8	7						
Use Timing plan: 254									

Approved By
Effective Date 6/28/2021

SCOTTSDALE & INDIAN BEND										System #	82
COORDINATOR					Section #					Date Updated	
					0					6/28/2021	
	PHASE	1	2	3	4	5	6	7	8		
	FDW		18		28		18		31		
	YELLOW	4	4.7	3	4.4	4	4.7	3.6	3.3		
	ALL RED	2	1	2	1.3	2	1	2	2.4		
	WALK		18		28		18		31		
PLAN 1 AM PLAN OPERATIVE TIMES 6:30	R1	2	↓	1	↶	3	↑	4	↷	COORD PATTERN	OFFSET
	R2	6	↑	5	↷	8	→	7	↶	Balanced	88
		RING 1				RING 2					
	PHASE	1	2	3	4	5	6	7	8		
	SPLIT	11	70	12	27	16	65	23	16	Target Cycle Length	
	COORD		X				X			120	
	RECALLS		V				V			Actual Cycle Length	
	GREEN	5.0	64.3	7.0	21.3	10.0	59.3	17.4	10.3	120	
PLAN 2 MIDDAY PLAN OPERATIVE TIMES 9:00	R1	2	↓	1	↶	3	↑	4	↷	COORD PATTERN	OFFSET
	R2	6	↑	5	↷	8	→	7	↶	Balanced	7
		RING 1				RING 2					
	PHASE	1	2	3	4	5	6	7	8		
	SPLIT	11	54	14	29	14	51	29	14	Target Cycle Length	
	COORD		X				X			108	
	RECALLS		V				V			Actual Cycle Length	
	GREEN	5.0	48.3	9.0	23.3	8.0	45.3	23.4	8.3	108	
PLAN 3 PM PLAN OPERATIVE TIMES 15:00	R1	2	↓	1	↶	3	↑	4	↷	COORD PATTERN	OFFSET
	R2	6	↑	5	↷	8	→	7	↶	Balanced	11
		RING 1				RING 2					
	PHASE	1	2	3	4	5	6	7	8		
	SPLIT	12	62	12	34	17	57	22	24	Target Cycle Length	
	COORD		X				X			120	
	RECALLS		V				V			Actual Cycle Length	
	GREEN	6.0	56.3	7.0	28.3	###	51.3	16.4	18.3	120	
PLAN 10 MIDNIGHT PLAN OPERATIVE TIMES	R1	2	↓	1	↶	3	↑	4	↷	COORD PATTERN	OFFSET
	R2	6	↑	5	↷	8	→	7	↶	Balanced	64
		RING 1				RING 2					
	PHASE	1	2	3	4	5	6	7	8		
	SPLIT	11	47	10	22	16	42	17	15	Target Cycle Length	
	COORD		X				X			90	
	RECALLS		V				V			Actual Cycle Length	
	GREEN	5.0	41.3	5.0	16.3	###	36.3	11.4	9.3	90	

## Appendix G.2

Level-of Service without and with Scottsdale Plaza Resort Renovation  
Existing 2022 Traffic Volumes







Existing 2022 AM Peak Hour

1: Scottsdale Road & Indian Bend Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	65	8	297	72	161	7	904	306	75	1008	18
Future Volume (veh/h)	16	65	8	297	72	161	7	904	306	75	1008	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	24	72	20	349	76	192	8	962	369	88	1039	24
Peak Hour Factor	0.67	0.90	0.40	0.85	0.95	0.84	0.88	0.94	0.83	0.85	0.97	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	48	140	119	481	367	311	18	1940	602	209	2207	51
Arrive On Green	0.03	0.08	0.08	0.14	0.20	0.20	0.01	0.38	0.38	0.06	0.43	0.43
Sat Flow, veh/h	1781	1870	1585	3456	1870	1585	1781	5106	1585	3456	5135	119
Grp Volume(v), veh/h	24	72	20	349	76	192	8	962	369	88	689	374
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1728	1870	1585	1781	1702	1585	1728	1702	1849
Q Serve(g_s), s	0.9	2.5	0.8	6.4	2.3	7.4	0.3	9.6	12.5	1.6	9.6	9.6
Cycle Q Clear(g_c), s	0.9	2.5	0.8	6.4	2.3	7.4	0.3	9.6	12.5	1.6	9.6	9.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	48	140	119	481	367	311	18	1940	602	209	1463	795
V/C Ratio(X)	0.50	0.51	0.17	0.73	0.21	0.62	0.43	0.50	0.61	0.42	0.47	0.47
Avail Cap(c_a), veh/h	187	289	245	903	598	507	134	4548	1412	519	3032	1647
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.9	29.6	28.8	27.4	22.4	24.5	32.7	15.8	16.7	30.2	13.6	13.6
Incr Delay (d2), s/veh	7.9	2.9	0.7	2.1	0.3	2.0	15.3	0.2	1.0	1.4	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.2	0.3	2.7	1.0	2.8	0.2	3.4	4.3	0.7	3.3	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.8	32.5	29.5	29.5	22.7	26.4	48.1	16.0	17.7	31.5	13.8	14.0
LnGrp LOS	D	C	C	C	C	C	D	B	B	C	B	B
Approach Vol, veh/h		116			617			1339			1151	
Approach Delay, s/veh		33.5			27.7			16.6			15.2	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	31.0	14.9	10.7	6.7	34.3	6.8	18.8				
Change Period (Y+Rc), s	6.0	5.7	5.6	* 5.7	6.0	5.7	5.0	* 5.7				
Max Green Setting (Gmax), s	10.0	59.3	17.4	* 10	5.0	59.3	7.0	* 21				
Max Q Clear Time (g_c+I1), s	3.6	14.5	8.4	4.5	2.3	11.6	2.9	9.4				
Green Ext Time (p_c), s	0.1	10.8	0.8	0.1	0.0	9.2	0.0	0.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			18.9									
HCM 6th LOS			B									
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Existing 2022 PM Peak Hour

1: Scottsdale Road & Indian Bend Road/Indian Bend

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	61	10	343	102	170	13	1212	404	133	1254	26
Future Volume (veh/h)	22	61	10	343	102	170	13	1212	404	133	1254	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	33	68	25	404	107	202	15	1289	487	156	1293	35
Peak Hour Factor	0.67	0.90	0.40	0.85	0.95	0.84	0.88	0.94	0.83	0.85	0.97	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	57	118	100	504	344	292	31	2262	702	238	2525	68
Arrive On Green	0.03	0.06	0.06	0.15	0.18	0.18	0.02	0.44	0.44	0.07	0.49	0.49
Sat Flow, veh/h	1781	1870	1585	3456	1870	1585	1781	5106	1585	3456	5111	138
Grp Volume(v), veh/h	33	68	25	404	107	202	15	1289	487	156	861	467
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1728	1870	1585	1781	1702	1585	1728	1702	1845
Q Serve(g_s), s	1.5	2.9	1.2	9.3	4.1	9.8	0.7	15.5	20.3	3.6	14.1	14.1
Cycle Q Clear(g_c), s	1.5	2.9	1.2	9.3	4.1	9.8	0.7	15.5	20.3	3.6	14.1	14.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	57	118	100	504	344	292	31	2262	702	238	1682	912
V/C Ratio(X)	0.58	0.58	0.25	0.80	0.31	0.69	0.48	0.57	0.69	0.66	0.51	0.51
Avail Cap(c_a), veh/h	152	416	352	689	643	545	130	3183	988	462	2329	1262
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.3	37.5	36.7	34.0	29.1	31.4	40.0	17.1	18.4	37.4	14.1	14.1
Incr Delay (d2), s/veh	8.8	4.4	1.3	4.8	0.5	2.9	10.8	0.2	1.2	3.1	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	1.5	0.5	4.1	1.8	3.9	0.4	5.7	7.2	1.6	5.1	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.1	41.9	38.0	38.8	29.6	34.4	50.9	17.3	19.7	40.4	14.3	14.5
LnGrp LOS	D	D	D	D	C	C	D	B	B	D	B	B
Approach Vol, veh/h		126			713			1791			1484	
Approach Delay, s/veh		42.8			36.2			18.2			17.1	
Approach LOS		D			D			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.7	42.2	17.6	10.9	7.5	46.4	7.6	20.8				
Change Period (Y+Rc), s	6.0	5.7	5.6	* 5.7	6.0	5.7	5.0	* 5.7				
Max Green Setting (Gmax), s	11.0	51.3	16.4	* 18	6.0	56.3	7.0	* 28				
Max Q Clear Time (g_c+I1), s	5.6	22.3	11.3	4.9	2.7	16.1	3.5	11.8				
Green Ext Time (p_c), s	0.2	14.1	0.7	0.3	0.0	12.3	0.0	1.1				

Intersection Summary

HCM 6th Ctrl Delay	21.7
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Existing 2022 AM Peak Hour

2: Scottsdale Road & Resort Plaza Access/Seville Access

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	1	9	21	3	25	8	1003	70	44	1071	3
Future Volume (veh/h)	4	1	9	21	3	25	8	1003	70	44	1071	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	8	4	16	28	8	28	12	1056	100	56	1116	8
Peak Hour Factor	0.50	0.25	0.56	0.75	0.38	0.89	0.67	0.95	0.70	0.79	0.96	0.38
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	291	28	110	305	31	107	431	2912	904	427	2982	21
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.57	0.57	0.57	0.57	0.57	0.57
Sat Flow, veh/h	1372	327	1308	1392	365	1276	501	5106	1585	486	5230	37
Grp Volume(v), veh/h	8	0	20	28	0	36	12	1056	100	56	726	398
Grp Sat Flow(s),veh/h/ln	1372	0	1635	1392	0	1641	501	1702	1585	486	1702	1864
Q Serve(g_s), s	0.2	0.0	0.4	0.7	0.0	0.7	0.5	4.0	1.0	2.5	4.1	4.1
Cycle Q Clear(g_c), s	0.9	0.0	0.4	1.1	0.0	0.7	4.6	4.0	1.0	6.4	4.1	4.1
Prop In Lane	1.00		0.80	1.00		0.78	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	291	0	138	305	0	138	431	2912	904	427	1941	1063
V/C Ratio(X)	0.03	0.00	0.15	0.09	0.00	0.26	0.03	0.36	0.11	0.13	0.37	0.37
Avail Cap(c_a), veh/h	903	0	866	926	0	869	1410	12888	4001	1376	8592	4704
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.6	0.0	15.0	15.5	0.0	15.1	5.4	4.1	3.5	5.9	4.1	4.1
Incr Delay (d2), s/veh	0.0	0.0	0.5	0.1	0.0	1.0	0.0	0.1	0.1	0.1	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.1	0.2	0.0	0.3	0.0	0.6	0.2	0.2	0.6	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.6	0.0	15.5	15.6	0.0	16.1	5.4	4.2	3.5	6.0	4.3	4.4
LnGrp LOS	B	A	B	B	A	B	A	A	A	A	A	A
Approach Vol, veh/h		28			64			1168			1180	
Approach Delay, s/veh		15.5			15.9			4.1			4.4	
Approach LOS		B			B			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		26.0		9.3		26.0		9.3				
Change Period (Y+Rc), s		* 5.9		* 6.3		* 5.9		* 6.3				
Max Green Setting (Gmax), s		* 89		* 19		* 89		* 19				
Max Q Clear Time (g_c+I1), s		6.6		2.9		8.4		3.1				
Green Ext Time (p_c), s		11.1		0.1		11.7		0.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				4.7								
HCM 6th LOS				A								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Existing 2022 PM Peak Hour

2: Scottsdale Road & Resort Plaza Access/Seville Access

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	1	12	43	0	36	14	1392	30	18	1328	5
Future Volume (veh/h)	8	1	12	43	0	36	14	1392	30	18	1328	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	16	4	21	57	0	40	21	1465	43	23	1383	13
Peak Hour Factor	0.50	0.25	0.56	0.75	0.38	0.89	0.67	0.95	0.70	0.79	0.96	0.38
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	256	24	126	270	0	146	356	3235	1004	331	3305	31
Arrive On Green	0.09	0.09	0.09	0.09	0.00	0.09	0.63	0.63	0.63	0.63	0.63	0.63
Sat Flow, veh/h	1367	260	1365	1386	0	1585	387	5106	1585	347	5217	49
Grp Volume(v), veh/h	16	0	25	57	0	40	21	1465	43	23	902	494
Grp Sat Flow(s),veh/h/ln	1367	0	1625	1386	0	1585	387	1702	1585	347	1702	1862
Q Serve(g_s), s	0.5	0.0	0.6	1.8	0.0	1.0	1.3	6.6	0.5	1.6	5.9	5.9
Cycle Q Clear(g_c), s	1.5	0.0	0.6	2.4	0.0	1.0	7.2	6.6	0.5	8.2	5.9	5.9
Prop In Lane	1.00		0.84	1.00		1.00	1.00		1.00	1.00		0.03
Lane Grp Cap(c), veh/h	256	0	149	270	0	146	356	3235	1004	331	2157	1179
V/C Ratio(X)	0.06	0.00	0.17	0.21	0.00	0.27	0.06	0.45	0.04	0.07	0.42	0.42
Avail Cap(c_a), veh/h	551	0	501	569	0	488	929	10806	3355	846	7204	3940
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.5	0.0	18.6	19.7	0.0	18.8	5.8	4.2	3.1	6.3	4.1	4.1
Incr Delay (d2), s/veh	0.1	0.0	0.5	0.4	0.0	1.0	0.1	0.1	0.0	0.1	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.2	0.5	0.0	0.4	0.1	1.1	0.1	0.1	1.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.6	0.0	19.1	20.1	0.0	19.8	5.9	4.3	3.1	6.4	4.2	4.3
LnGrp LOS	B	A	B	C	A	B	A	A	A	A	A	A
Approach Vol, veh/h		41			97			1529			1419	
Approach Delay, s/veh		19.3			20.0			4.3			4.3	
Approach LOS		B			B			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		34.1		10.4		34.1		10.4				
Change Period (Y+Rc), s		* 5.9		* 6.3		* 5.9		* 6.3				
Max Green Setting (Gmax), s		* 94		* 14		* 94		* 14				
Max Q Clear Time (g_c+I1), s		9.2		3.5		10.2		4.4				
Green Ext Time (p_c), s		19.0		0.1		15.8		0.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				5.0								
HCM 6th LOS				A								
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Existing 2022 AM Peak Hour

3: Scottsdale Road & Hummingbird Lane/Artesia Access

Intersection												
Int Delay, s/veh	1.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↑	↔	↔	↑↑↑	↔	↔	↑↑↑	↔
Traffic Vol, veh/h	10	2	20	3	0	8	15	1008	0	19	1095	16
Future Vol, veh/h	10	2	20	3	0	8	15	1008	0	19	1095	16
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	-	0	0	-	0	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	50	83	38	25	50	47	90	25	68	97	67
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	4	24	8	0	16	32	1120	0	28	1129	24

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1709	2381	577	1694	2393	560	1153	0	0	1120	0	0
Stage 1	1197	1197	-	1184	1184	-	-	-	-	-	-	-
Stage 2	512	1184	-	510	1209	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	96	34	394	98	33	404	330	-	-	342	-	-
Stage 1	145	257	-	148	261	-	-	-	-	-	-	-
Stage 2	468	261	-	470	254	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	80	28	394	71	27	404	330	-	-	342	-	-
Mov Cap-2 Maneuver	80	28	-	71	27	-	-	-	-	-	-	-
Stage 1	131	236	-	134	236	-	-	-	-	-	-	-
Stage 2	406	236	-	398	233	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	58.8		30.1		0.5		0.4	
HCM LOS	F		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	330	-	-	109	71	-	404	342	-	-
HCM Lane V/C Ratio	0.097	-	-	0.403	0.111	-	0.04	0.082	-	-
HCM Control Delay (s)	17.1	-	-	58.8	62	0	14.3	16.5	-	-
HCM Lane LOS	C	-	-	F	F	A	B	C	-	-
HCM 95th %tile Q(veh)	0.3	-	-	1.7	0.4	-	0.1	0.3	-	-

Existing 2022 PM Peak Hour

3: Scottsdale Road & Hummingbird Lane/Artesia Access

Intersection												
Int Delay, s/veh	3.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↑	↔	↔	↑↑↑	↔	↔	↑↑↑	
Traffic Vol, veh/h	10	0	24	6	0	14	27	1396	15	20	1277	16
Future Vol, veh/h	10	0	24	6	0	14	27	1396	15	20	1277	16
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	-	0	0	-	0	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	50	83	38	25	50	47	90	25	68	97	67
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	0	29	16	0	28	57	1551	60	29	1316	24

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2120	3111	670	2249	3063	776	1340	0	0	1611	0	0
Stage 1	1386	1386	-	1665	1665	-	-	-	-	-	-	-
Stage 2	734	1725	-	584	1398	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	53	11	343	44	12	292	267	-	-	196	-	-
Stage 1	107	209	-	67	152	-	-	-	-	-	-	-
Stage 2	343	142	-	424	206	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	36	7	343	30	8	292	267	-	-	196	-	-
Mov Cap-2 Maneuver	36	7	-	30	8	-	-	-	-	-	-	-
Stage 1	84	178	-	53	120	-	-	-	-	-	-	-
Stage 2	244	112	-	331	176	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	87.1		90.5		0.8		0.6	
HCM LOS	F		F					




Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	267	-	-	85	30	-	292	196	-	-
HCM Lane V/C Ratio	0.215	-	-	0.527	0.526	-	0.096	0.15	-	-
HCM Control Delay (s)	22.1	-	-	87.1	217.9	0	18.6	26.6	-	-
HCM Lane LOS	C	-	-	F	F	A	C	D	-	-
HCM 95th %tile Q(veh)	0.8	-	-	2.3	1.7	-	0.3	0.5	-	-

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	3	91	93	4	8	0
Future Vol, veh/h	3	91	93	4	8	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	38	78	83	50	50	25
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	117	112	8	16	0
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	120	0	-	0	249	116
Stage 1	-	-	-	-	116	-
Stage 2	-	-	-	-	133	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1468	-	-	-	739	936
Stage 1	-	-	-	-	909	-
Stage 2	-	-	-	-	893	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1468	-	-	-	735	936
Mov Cap-2 Maneuver	-	-	-	-	735	-
Stage 1	-	-	-	-	904	-
Stage 2	-	-	-	-	893	-
Approach	EB	WB	SB			
HCM Control Delay, s	0.5	0	10			
HCM LOS			B			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1468	-	-	-	735	
HCM Lane V/C Ratio	0.005	-	-	-	0.022	
HCM Control Delay (s)	7.5	0	-	-	10	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	



Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	2	99	129	10	4	6
Future Vol, veh/h	2	99	129	10	4	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	38	78	83	50	50	25
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	127	155	20	8	24
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	175	0	-	0	302	165
Stage 1	-	-	-	-	165	-
Stage 2	-	-	-	-	137	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1401	-	-	-	690	879
Stage 1	-	-	-	-	864	-
Stage 2	-	-	-	-	890	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1401	-	-	-	687	879
Mov Cap-2 Maneuver	-	-	-	-	687	-
Stage 1	-	-	-	-	861	-
Stage 2	-	-	-	-	890	-
Approach	EB	WB	SB			
HCM Control Delay, s	0.3	0	9.6			
HCM LOS			A			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBRn1
Capacity (veh/h)	1401	-	-	-	-	822
HCM Lane V/C Ratio	0.004	-	-	-	-	0.039
HCM Control Delay (s)	7.6	0	-	-	-	9.6
HCM Lane LOS	A	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-	0.1

Intersection						
Int Delay, s/veh	1.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	28	3	4	27	1	4
Future Vol, veh/h	28	3	4	27	1	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	38	50	84	25	50
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	8	8	32	4	8
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	40	0	84	36
Stage 1	-	-	-	-	36	-
Stage 2	-	-	-	-	48	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1570	-	918	1037
Stage 1	-	-	-	-	986	-
Stage 2	-	-	-	-	974	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1570	-	913	1037
Mov Cap-2 Maneuver	-	-	-	-	913	-
Stage 1	-	-	-	-	986	-
Stage 2	-	-	-	-	969	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	1.5	8.7			
HCM LOS			A			
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	992	-	-	1570	-	
HCM Lane V/C Ratio	0.012	-	-	0.005	-	
HCM Control Delay (s)	8.7	-	-	7.3	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0	-	-	0	-	

Intersection						
Int Delay, s/veh	3.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	19	3	4	39	2	15
Future Vol, veh/h	19	3	4	39	2	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	38	50	84	25	50
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	8	8	46	8	30
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	30	0	88	26
Stage 1	-	-	-	-	26	-
Stage 2	-	-	-	-	62	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1583	-	913	1050
Stage 1	-	-	-	-	997	-
Stage 2	-	-	-	-	961	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1583	-	908	1050
Mov Cap-2 Maneuver	-	-	-	-	908	-
Stage 1	-	-	-	-	997	-
Stage 2	-	-	-	-	956	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	1.1	8.7			
HCM LOS				A		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	1017	-	-	1583	-	
HCM Lane V/C Ratio	0.037	-	-	0.005	-	
HCM Control Delay (s)	8.7	-	-	7.3	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.1	-	-	0	-	

## Appendix G.3

Level-of Service without and with Scottsdale Plaza Resort Renovation  
Adjusted Existing 2022 Traffic Volumes





























Adjusted Existing 2022 AM Peak Hour

1: Scottsdale Road & Indian Bend Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	70	9	319	77	173	8	972	329	81	1084	19
Future Volume (veh/h)	17	70	9	319	77	173	8	972	329	81	1084	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	25	78	22	375	81	206	9	1034	396	95	1118	25
Peak Hour Factor	0.67	0.90	0.40	0.85	0.95	0.84	0.88	0.94	0.83	0.85	0.97	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	49	133	112	500	368	312	20	2031	631	207	2293	51
Arrive On Green	0.03	0.07	0.07	0.14	0.20	0.20	0.01	0.40	0.40	0.06	0.45	0.45
Sat Flow, veh/h	1781	1870	1585	3456	1870	1585	1781	5106	1585	3456	5139	115
Grp Volume(v), veh/h	25	78	22	375	81	206	9	1034	396	95	740	403
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1728	1870	1585	1781	1702	1585	1728	1702	1850
Q Serve(g_s), s	1.0	2.8	0.9	7.3	2.6	8.5	0.4	10.8	14.1	1.9	10.8	10.8
Cycle Q Clear(g_c), s	1.0	2.8	0.9	7.3	2.6	8.5	0.4	10.8	14.1	1.9	10.8	10.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	49	133	112	500	368	312	20	2031	631	207	1519	825
V/C Ratio(X)	0.51	0.59	0.20	0.75	0.22	0.66	0.44	0.51	0.63	0.46	0.49	0.49
Avail Cap(c_a), veh/h	177	274	232	854	566	479	126	4299	1334	491	2866	1557
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.8	31.7	30.8	28.9	23.7	26.1	34.6	16.0	17.0	32.0	13.8	13.8
Incr Delay (d2), s/veh	8.0	4.1	0.8	2.3	0.3	2.4	14.2	0.2	1.0	1.6	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.4	0.4	3.1	1.1	3.2	0.2	3.9	4.9	0.8	3.8	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.8	35.8	31.7	31.2	24.0	28.5	48.8	16.2	18.1	33.6	14.0	14.2
LnGrp LOS	D	D	C	C	C	C	D	B	B	C	B	B
Approach Vol, veh/h		125			662			1439			1238	
Approach Delay, s/veh		36.3			29.5			16.9			15.6	
Approach LOS		D			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.2	33.7	15.8	10.7	6.8	37.1	6.9	19.6				
Change Period (Y+Rc), s	6.0	5.7	5.6	* 5.7	6.0	5.7	5.0	* 5.7				
Max Green Setting (Gmax), s	10.0	59.3	17.4	* 10	5.0	59.3	7.0	* 21				
Max Q Clear Time (g_c+I1), s	3.9	16.1	9.3	4.8	2.4	12.8	3.0	10.5				
Green Ext Time (p_c), s	0.1	11.9	0.9	0.2	0.0	10.1	0.0	0.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			19.6									
HCM 6th LOS			B									
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Adjusted Existing 2022 PM Peak Hour

1: Scottsdale Road & Indian Bend Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	66	11	369	110	183	14	1303	434	143	1348	28
Future Volume (veh/h)	24	66	11	369	110	183	14	1303	434	143	1348	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	36	73	28	434	116	218	16	1386	523	168	1390	37
Peak Hour Factor	0.67	0.90	0.40	0.85	0.95	0.84	0.88	0.94	0.83	0.85	0.97	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	59	119	101	522	353	299	33	2318	720	246	2592	69
Arrive On Green	0.03	0.06	0.06	0.15	0.19	0.19	0.02	0.45	0.45	0.07	0.51	0.51
Sat Flow, veh/h	1781	1870	1585	3456	1870	1585	1781	5106	1585	3456	5114	136
Grp Volume(v), veh/h	36	73	28	434	116	218	16	1386	523	168	925	502
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1728	1870	1585	1781	1702	1585	1728	1702	1846
Q Serve(g_s), s	1.8	3.4	1.5	10.8	4.8	11.5	0.8	18.0	23.8	4.2	16.3	16.3
Cycle Q Clear(g_c), s	1.8	3.4	1.5	10.8	4.8	11.5	0.8	18.0	23.8	4.2	16.3	16.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	59	119	101	522	353	299	33	2318	720	246	1725	936
V/C Ratio(X)	0.61	0.61	0.28	0.83	0.33	0.73	0.49	0.60	0.73	0.68	0.54	0.54
Avail Cap(c_a), veh/h	141	386	328	640	598	506	121	2958	918	429	2164	1173
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.2	40.4	39.5	36.5	31.1	33.8	43.1	18.1	19.7	40.2	14.8	14.8
Incr Delay (d2), s/veh	9.7	5.0	1.5	7.6	0.5	3.4	10.9	0.2	2.1	3.3	0.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	1.7	0.6	5.0	2.2	4.6	0.4	6.7	8.6	1.9	5.9	6.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.0	45.4	41.0	44.1	31.6	37.2	53.9	18.4	21.8	43.5	15.0	15.3
LnGrp LOS	D	D	D	D	C	D	D	B	C	D	B	B
Approach Vol, veh/h		137			768			1925			1595	
Approach Delay, s/veh		46.2			40.3			19.6			18.1	
Approach LOS		D			D			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.3	45.9	19.0	11.4	7.6	50.6	7.9	22.4				
Change Period (Y+Rc), s	6.0	5.7	5.6	* 5.7	6.0	5.7	5.0	* 5.7				
Max Green Setting (Gmax), s	11.0	51.3	16.4	* 18	6.0	56.3	7.0	* 28				
Max Q Clear Time (g_c+I1), s	6.2	25.8	12.8	5.4	2.8	18.3	3.8	13.5				
Green Ext Time (p_c), s	0.2	14.4	0.6	0.3	0.0	13.5	0.0	1.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			23.5									
HCM 6th LOS			C									
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Adjusted Existing 2022 AM Peak Hour

2: Scottsdale Road & Resort Plaza Access/Seville Access

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	1	9	23	3	27	8	1078	75	47	1152	3
Future Volume (veh/h)	4	1	9	23	3	27	8	1078	75	47	1152	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	8	4	16	31	8	30	12	1135	107	59	1200	8
Peak Hour Factor	0.50	0.25	0.56	0.75	0.38	0.89	0.67	0.95	0.70	0.79	0.96	0.38
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	275	28	110	290	29	109	409	3041	944	404	3117	21
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.60	0.60	0.60	0.60	0.60	0.60
Sat Flow, veh/h	1370	327	1308	1392	345	1293	463	5106	1585	448	5233	35
Grp Volume(v), veh/h	8	0	20	31	0	38	12	1135	107	59	781	427
Grp Sat Flow(s),veh/h/ln	1370	0	1635	1392	0	1638	463	1702	1585	448	1702	1864
Q Serve(g_s), s	0.2	0.0	0.4	0.8	0.0	0.8	0.5	4.4	1.1	3.0	4.6	4.6
Cycle Q Clear(g_c), s	1.0	0.0	0.4	1.2	0.0	0.8	5.1	4.4	1.1	7.4	4.6	4.6
Prop In Lane	1.00		0.80	1.00		0.79	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	275	0	138	290	0	138	409	3041	944	404	2027	1110
V/C Ratio(X)	0.03	0.00	0.15	0.11	0.00	0.28	0.03	0.37	0.11	0.15	0.38	0.39
Avail Cap(c_a), veh/h	831	0	802	856	0	804	1215	11940	3706	1185	7960	4359
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.8	0.0	16.2	16.7	0.0	16.4	5.4	4.0	3.3	5.9	4.0	4.0
Incr Delay (d2), s/veh	0.0	0.0	0.5	0.2	0.0	1.1	0.0	0.1	0.1	0.2	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.2	0.2	0.0	0.3	0.0	0.7	0.2	0.2	0.7	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.9	0.0	16.7	16.9	0.0	17.4	5.4	4.1	3.4	6.1	4.2	4.3
LnGrp LOS	B	A	B	B	A	B	A	A	A	A	A	A
Approach Vol, veh/h		28			69			1254			1267	
Approach Delay, s/veh		16.7			17.2			4.0			4.3	
Approach LOS		B			B			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		28.6		9.5		28.6		9.5				
Change Period (Y+Rc), s		* 5.9		* 6.3		* 5.9		* 6.3				
Max Green Setting (Gmax), s		* 89		* 19		* 89		* 19				
Max Q Clear Time (g_c+I1), s		7.1		3.0		9.4		3.2				
Green Ext Time (p_c), s		12.4		0.1		13.3		0.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				4.6								
HCM 6th LOS				A								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												



Adjusted Existing 2022 PM Peak Hour

2: Scottsdale Road & Resort Plaza Access/Seville Access

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	1	12	46	0	39	14	1497	32	19	1428	5
Future Volume (veh/h)	8	1	12	46	0	39	14	1497	32	19	1428	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	16	4	21	61	0	44	21	1576	46	24	1488	13
Peak Hour Factor	0.50	0.25	0.56	0.75	0.38	0.89	0.67	0.95	0.70	0.79	0.96	0.38
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	234	23	121	252	0	141	332	3369	1046	306	3445	30
Arrive On Green	0.09	0.09	0.09	0.09	0.00	0.09	0.66	0.66	0.66	0.66	0.66	0.66
Sat Flow, veh/h	1362	260	1365	1386	0	1585	350	5106	1585	311	5221	46
Grp Volume(v), veh/h	16	0	25	61	0	44	21	1576	46	24	970	531
Grp Sat Flow(s),veh/h/ln	1362	0	1625	1386	0	1585	350	1702	1585	311	1702	1862
Q Serve(g_s), s	0.5	0.0	0.7	2.1	0.0	1.3	1.5	7.4	0.5	2.0	6.6	6.6
Cycle Q Clear(g_c), s	1.8	0.0	0.7	2.8	0.0	1.3	8.1	7.4	0.5	9.4	6.6	6.6
Prop In Lane	1.00		0.84	1.00		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	234	0	144	252	0	141	332	3369	1046	306	2246	1229
V/C Ratio(X)	0.07	0.00	0.17	0.24	0.00	0.31	0.06	0.47	0.04	0.08	0.43	0.43
Avail Cap(c_a), veh/h	498	0	459	520	0	448	779	9906	3075	705	6604	3613
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.6	0.0	20.5	21.7	0.0	20.7	5.8	4.1	2.9	6.4	3.9	3.9
Incr Delay (d2), s/veh	0.1	0.0	0.6	0.5	0.0	1.3	0.1	0.1	0.0	0.1	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.3	0.6	0.0	0.5	0.1	1.3	0.1	0.1	1.2	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.7	0.0	21.0	22.2	0.0	22.0	5.9	4.2	2.9	6.5	4.1	4.2
LnGrp LOS	C	A	C	C	A	C	A	A	A	A	A	A
Approach Vol, veh/h		41			105			1643			1525	
Approach Delay, s/veh		21.3			22.1			4.1			4.1	
Approach LOS		C			C			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		37.9		10.6		37.9		10.6				
Change Period (Y+Rc), s		* 5.9		* 6.3		* 5.9		* 6.3				
Max Green Setting (Gmax), s		* 94		* 14		* 94		* 14				
Max Q Clear Time (g_c+I1), s		10.1		3.8		11.4		4.8				
Green Ext Time (p_c), s		22.0		0.1		18.2		0.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				4.9								
HCM 6th LOS				A								
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Adjusted Existing 2022 AM Peak Hour

3: Scottsdale Road & Hummingbird Lane/Artesia Access

Intersection												
Int Delay, s/veh	2.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↑	↔	↔	↑↑↑	↔	↔	↑↑↑	↔
Traffic Vol, veh/h	11	2	22	3	0	9	16	1084	0	20	1177	17
Future Vol, veh/h	11	2	22	3	0	9	16	1084	0	20	1177	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	-	0	0	-	0	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	50	83	38	25	50	47	90	25	68	97	67
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	4	27	8	0	18	34	1204	0	29	1213	25

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1834	2556	619	1817	2568	602	1238	0	0	1204	0	0
Stage 1	1284	1284	-	1272	1272	-	-	-	-	-	-	-
Stage 2	550	1272	-	545	1296	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	80	26	370	82	26	379	300	-	-	312	-	-
Stage 1	126	234	-	128	237	-	-	-	-	-	-	-
Stage 2	444	237	-	447	231	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	65	21	370	56	21	379	300	-	-	312	-	-
Mov Cap-2 Maneuver	65	21	-	56	21	-	-	-	-	-	-	-
Stage 1	112	212	-	114	210	-	-	-	-	-	-	-
Stage 2	375	210	-	369	210	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	83.6	34.7	0.5	0.4
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	300	-	-	90	56	-	379	312	-	-
HCM Lane V/C Ratio	0.113	-	-	0.533	0.141	-	0.047	0.094	-	-
HCM Control Delay (s)	18.5	-	-	83.6	79.6	0	15	17.7	-	-
HCM Lane LOS	C	-	-	F	F	A	C	C	-	-
HCM 95th %tile Q(veh)	0.4	-	-	2.4	0.5	-	0.1	0.3	-	-

Adjusted Existing 2022 PM Peak Hour

3: Scottsdale Road & Hummingbird Lane/Artesia Access

Intersection												
Int Delay, s/veh	5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↑	↔	↔	↑↑↑	↔	↔	↑↑↑	
Traffic Vol, veh/h	11	0	26	6	0	15	29	1501	16	22	1373	17
Future Vol, veh/h	11	0	26	6	0	15	29	1501	16	22	1373	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	-	0	0	-	0	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	50	83	38	25	50	47	90	25	68	97	67
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	0	31	16	0	30	62	1668	64	32	1415	25

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2283	3348	720	2422	3296	834	1440	0	0	1732	0	0
Stage 1	1492	1492	-	1792	1792	-	-	-	-	-	-	-
Stage 2	791	1856	-	630	1504	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	42	8	318	34	8	267	239	-	-	171	-	-
Stage 1	90	185	-	55	131	-	-	-	-	-	-	-
Stage 2	317	122	-	397	183	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	26	5	318	21	5	267	239	-	-	171	-	-
Mov Cap-2 Maneuver	26	5	-	21	5	-	-	-	-	-	-	-
Stage 1	67	150	-	41	97	-	-	-	-	-	-	-
Stage 2	208	90	-	291	149	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	161.3	140.1	0.9	0.7
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	239	-	-	63	21	-	267	171	-	-
HCM Lane V/C Ratio	0.258	-	-	0.774	0.752	-	0.112	0.189	-	-
HCM Control Delay (s)	25.2	-	-	161.3	367.8	0	20.2	30.9	-	-
HCM Lane LOS	D	-	-	F	F	A	C	D	-	-
HCM 95th %tile Q(veh)	1	-	-	3.5	2.1	-	0.4	0.7	-	-

# Adjusted Existing 2022 AM Peak Hour

4: Indian Bend Road & Plaza Resort Access

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	3	98	100	4	8	0
Future Vol, veh/h	3	98	100	4	8	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	38	78	83	50	50	25
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	126	120	8	16	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	128	0	-	0	266
Stage 1	-	-	-	-	124
Stage 2	-	-	-	-	142
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1458	-	-	-	723
Stage 1	-	-	-	-	902
Stage 2	-	-	-	-	885
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1458	-	-	-	719
Mov Cap-2 Maneuver	-	-	-	-	719
Stage 1	-	-	-	-	897
Stage 2	-	-	-	-	885

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1458	-	-	-	719
HCM Lane V/C Ratio	0.005	-	-	-	0.022
HCM Control Delay (s)	7.5	0	-	-	10.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Adjusted Existing 2022 PM Peak Hour

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	2	106	139	10	4	6
Future Vol, veh/h	2	106	139	10	4	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	38	78	83	50	50	25
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	136	167	20	8	24

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	187	0	-	0	323
Stage 1	-	-	-	-	177
Stage 2	-	-	-	-	146
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1387	-	-	-	671
Stage 1	-	-	-	-	854
Stage 2	-	-	-	-	881
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1387	-	-	-	668
Mov Cap-2 Maneuver	-	-	-	-	668
Stage 1	-	-	-	-	851
Stage 2	-	-	-	-	881

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1387	-	-	-	806
HCM Lane V/C Ratio	0.004	-	-	-	0.04
HCM Control Delay (s)	7.6	0	-	-	9.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Adjusted Existing 2022 AM Peak Hour

Intersection						
Int Delay, s/veh	1.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	30	3	4	29	1	4
Future Vol, veh/h	30	3	4	29	1	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	38	50	84	25	50
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	34	8	8	35	4	8
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	42	0	89	38
Stage 1	-	-	-	-	38	-
Stage 2	-	-	-	-	51	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1567	-	912	1034
Stage 1	-	-	-	-	984	-
Stage 2	-	-	-	-	971	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1567	-	907	1034
Mov Cap-2 Maneuver	-	-	-	-	907	-
Stage 1	-	-	-	-	984	-
Stage 2	-	-	-	-	966	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	1.4	8.7			
HCM LOS				A		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	988	-	-	1567	-	
HCM Lane V/C Ratio	0.012	-	-	0.005	-	
HCM Control Delay (s)	8.7	-	-	7.3	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0	-	-	0	-	

Adjusted Existing 2022 PM Peak Hour

Intersection						
Int Delay, s/veh	3.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	20	3	4	42	2	16
Future Vol, veh/h	20	3	4	42	2	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	38	50	84	25	50
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	8	8	50	8	32
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	31	0	93	27
Stage 1	-	-	-	-	27	-
Stage 2	-	-	-	-	66	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1582	-	907	1048
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	957	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1582	-	902	1048
Mov Cap-2 Maneuver	-	-	-	-	902	-
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	952	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	1	8.7			
HCM LOS						A
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	1015	-	-	1582	-	
HCM Lane V/C Ratio	0.039	-	-	0.005	-	
HCM Control Delay (s)	8.7	-	-	7.3	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.1	-	-	0	-	

## Appendix G.4

Level-of Service without and with Scottsdale Plaza Resort Renovation  
Ambient 2025 Traffic Volumes







Ambient 2025 AM Peak Hour

1: Scottsdale Road & Indian Bend Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	70	10	320	80	180	10	980	330	90	1090	20
Future Volume (veh/h)	20	70	10	320	80	180	10	980	330	90	1090	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	22	76	11	348	87	196	11	1065	359	98	1185	22
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	45	138	117	477	366	310	25	1979	614	214	2250	42
Arrive On Green	0.03	0.07	0.07	0.14	0.20	0.20	0.01	0.39	0.39	0.06	0.44	0.44
Sat Flow, veh/h	1781	1870	1585	3456	1870	1585	1781	5106	1585	3456	5161	96
Grp Volume(v), veh/h	22	76	11	348	87	196	11	1065	359	98	781	426
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1728	1870	1585	1781	1702	1585	1728	1702	1853
Q Serve(g_s), s	0.8	2.7	0.4	6.6	2.7	7.7	0.4	11.0	12.2	1.9	11.4	11.4
Cycle Q Clear(g_c), s	0.8	2.7	0.4	6.6	2.7	7.7	0.4	11.0	12.2	1.9	11.4	11.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	45	138	117	477	366	310	25	1979	614	214	1484	808
V/C Ratio(X)	0.49	0.55	0.09	0.73	0.24	0.63	0.45	0.54	0.58	0.46	0.53	0.53
Avail Cap(c_a), veh/h	184	284	240	885	587	497	131	4459	1384	509	2972	1618
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.7	30.4	29.3	28.0	23.0	25.1	33.2	16.1	16.5	30.7	14.0	14.0
Incr Delay (d2), s/veh	8.2	3.4	0.3	2.2	0.3	2.1	12.2	0.2	0.9	1.5	0.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.3	0.2	2.7	1.2	2.9	0.3	3.9	4.2	0.8	4.0	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.9	33.8	29.7	30.2	23.4	27.2	45.5	16.3	17.3	32.3	14.3	14.6
LnGrp LOS	D	C	C	C	C	C	D	B	B	C	B	B
Approach Vol, veh/h		109			631			1435			1305	
Approach Delay, s/veh		34.8			28.3			16.8			15.7	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.2	32.0	15.0	10.7	6.9	35.3	6.7	19.0				
Change Period (Y+Rc), s	6.0	5.7	5.6	* 5.7	6.0	5.7	5.0	* 5.7				
Max Green Setting (Gmax), s	10.0	59.3	17.4	* 10	5.0	59.3	7.0	* 21				
Max Q Clear Time (g_c+I1), s	3.9	14.2	8.6	4.7	2.4	13.4	2.8	9.7				
Green Ext Time (p_c), s	0.1	12.1	0.8	0.1	0.0	10.9	0.0	0.8				
Intersection Summary												
HCM 6th Ctrl Delay			19.1									
HCM 6th LOS			B									
Notes												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Ambient 2025 PM Peak Hour

1: Scottsdale Road & Indian Bend Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	70	20	370	110	190	20	1310	440	150	1350	30
Future Volume (veh/h)	30	70	20	370	110	190	20	1310	440	150	1350	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	33	76	22	402	120	207	22	1424	478	163	1467	33
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	57	124	105	499	348	295	42	2282	708	244	2536	57
Arrive On Green	0.03	0.07	0.07	0.14	0.19	0.19	0.02	0.45	0.45	0.07	0.49	0.49
Sat Flow, veh/h	1781	1870	1585	3456	1870	1585	1781	5106	1585	3456	5138	116
Grp Volume(v), veh/h	33	76	22	402	120	207	22	1424	478	163	972	528
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1728	1870	1585	1781	1702	1585	1728	1702	1850
Q Serve(g_s), s	1.5	3.3	1.1	9.5	4.7	10.4	1.0	18.1	20.2	3.9	17.1	17.1
Cycle Q Clear(g_c), s	1.5	3.3	1.1	9.5	4.7	10.4	1.0	18.1	20.2	3.9	17.1	17.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	57	124	105	499	348	295	42	2282	708	244	1680	913
V/C Ratio(X)	0.58	0.61	0.21	0.81	0.34	0.70	0.52	0.62	0.67	0.67	0.58	0.58
Avail Cap(c_a), veh/h	147	404	343	669	625	530	126	3094	961	449	2264	1230
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.4	38.4	37.4	35.1	30.0	32.3	40.8	18.0	18.5	38.4	15.2	15.2
Incr Delay (d2), s/veh	9.1	4.8	1.0	5.3	0.6	3.0	9.4	0.3	1.1	3.2	0.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	1.7	0.5	4.3	2.1	4.1	0.6	6.7	7.1	1.7	6.2	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.5	43.2	38.4	40.4	30.6	35.3	50.3	18.2	19.7	41.5	15.5	15.8
LnGrp LOS	D	D	D	D	C	D	D	B	B	D	B	B
Approach Vol, veh/h		131			729			1924			1663	
Approach Delay, s/veh		44.0			37.3			19.0			18.1	
Approach LOS		D			D			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.0	43.5	17.8	11.3	8.0	47.5	7.7	21.4				
Change Period (Y+Rc), s	6.0	5.7	5.6	* 5.7	6.0	5.7	5.0	* 5.7				
Max Green Setting (Gmax), s	11.0	51.3	16.4	* 18	6.0	56.3	7.0	* 28				
Max Q Clear Time (g_c+I1), s	5.9	22.2	11.5	5.3	3.0	19.1	3.5	12.4				
Green Ext Time (p_c), s	0.2	15.6	0.7	0.3	0.0	14.4	0.0	1.2				

Intersection Summary

HCM 6th Ctrl Delay	22.4
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Ambient 2025 AM Peak Hour

2: Scottsdale Road & Resort Plaza Access/Seville Access

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	1	9	30	3	30	8	1092	80	50	1161	3
Future Volume (veh/h)	4	1	9	30	3	30	8	1092	80	50	1161	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	4	1	10	33	3	33	9	1187	87	54	1262	3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	262	11	112	285	10	113	398	3106	964	399	3199	8
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.61	0.61	0.61	0.61	0.61	0.61
Sat Flow, veh/h	1372	146	1461	1404	134	1472	438	5106	1585	434	5260	13
Grp Volume(v), veh/h	4	0	11	33	0	36	9	1187	87	54	817	448
Grp Sat Flow(s),veh/h/ln	1372	0	1607	1404	0	1605	438	1702	1585	434	1702	1868
Q Serve(g_s), s	0.1	0.0	0.2	0.9	0.0	0.8	0.4	4.6	0.9	2.8	4.8	4.8
Cycle Q Clear(g_c), s	0.9	0.0	0.2	1.1	0.0	0.8	5.2	4.6	0.9	7.4	4.8	4.8
Prop In Lane	1.00		0.91	1.00		0.92	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	262	0	123	285	0	123	398	3106	964	399	2071	1136
V/C Ratio(X)	0.02	0.00	0.09	0.12	0.00	0.29	0.02	0.38	0.09	0.14	0.39	0.39
Avail Cap(c_a), veh/h	819	0	776	854	0	775	1139	11743	3645	1133	7829	4296
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.3	0.0	16.6	17.1	0.0	16.9	5.3	3.9	3.1	5.8	3.9	3.9
Incr Delay (d2), s/veh	0.0	0.0	0.3	0.2	0.0	1.3	0.0	0.1	0.0	0.2	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.1	0.3	0.0	0.3	0.0	0.7	0.1	0.2	0.7	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.3	0.0	16.9	17.3	0.0	18.2	5.3	3.9	3.2	5.9	4.0	4.1
LnGrp LOS	B	A	B	B	A	B	A	A	A	A	A	A
Approach Vol, veh/h		15			69			1283			1319	
Approach Delay, s/veh		17.0			17.8			3.9			4.1	
Approach LOS		B			B			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		29.5		9.3		29.5		9.3				
Change Period (Y+Rc), s		* 5.9		* 6.3		* 5.9		* 6.3				
Max Green Setting (Gmax), s		* 89		* 19		* 89		* 19				
Max Q Clear Time (g_c+I1), s		7.2		2.9		9.4		3.1				
Green Ext Time (p_c), s		13.1		0.0		14.2		0.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				4.5								
HCM 6th LOS				A								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Ambient 2025 PM Peak Hour

2: Scottsdale Road & Resort Plaza Access/Seville Access

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	1	12	50	0	40	14	1476	40	20	1468	5
Future Volume (veh/h)	8	1	12	50	0	40	14	1476	40	20	1468	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	9	1	13	54	0	43	15	1604	43	22	1596	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	225	9	122	251	0	130	313	3411	1059	304	3511	11
Arrive On Green	0.08	0.08	0.08	0.08	0.00	0.08	0.67	0.67	0.67	0.67	0.67	0.67
Sat Flow, veh/h	1364	114	1488	1400	0	1585	317	5106	1585	304	5255	16
Grp Volume(v), veh/h	9	0	14	54	0	43	15	1604	43	22	1034	567
Grp Sat Flow(s),veh/h/ln	1364	0	1603	1400	0	1585	317	1702	1585	304	1702	1867
Q Serve(g_s), s	0.3	0.0	0.4	1.8	0.0	1.3	1.2	7.4	0.5	1.8	7.1	7.1
Cycle Q Clear(g_c), s	1.6	0.0	0.4	2.2	0.0	1.3	8.2	7.4	0.5	9.3	7.1	7.1
Prop In Lane	1.00		0.93	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	225	0	132	251	0	130	313	3411	1059	304	2274	1248
V/C Ratio(X)	0.04	0.00	0.11	0.22	0.00	0.33	0.05	0.47	0.04	0.07	0.45	0.45
Avail Cap(c_a), veh/h	495	0	449	528	0	444	713	9833	3052	686	6555	3596
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.9	0.0	20.8	21.8	0.0	21.2	5.8	3.9	2.8	6.2	3.9	3.9
Incr Delay (d2), s/veh	0.1	0.0	0.4	0.4	0.0	1.5	0.1	0.1	0.0	0.1	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.1	0.6	0.0	0.5	0.1	1.3	0.1	0.1	1.3	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.0	0.0	21.1	22.2	0.0	22.6	5.9	4.0	2.8	6.3	4.0	4.1
LnGrp LOS	C	A	C	C	A	C	A	A	A	A	A	A
Approach Vol, veh/h		23			97			1662			1623	
Approach Delay, s/veh		21.4			22.4			4.0			4.1	
Approach LOS		C			C			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		38.5		10.3		38.5		10.3				
Change Period (Y+Rc), s		* 5.9		* 6.3		* 5.9		* 6.3				
Max Green Setting (Gmax), s		* 94		* 14		* 94		* 14				
Max Q Clear Time (g_c+I1), s		10.2		3.6		11.3		4.2				
Green Ext Time (p_c), s		22.4		0.0		20.5		0.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				4.7								
HCM 6th LOS				A								
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Ambient 2025 AM Peak Hour

3: Scottsdale Road & Hummingbird Lane/Artesia Access

Intersection												
Int Delay, s/veh	6.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↑	↔	↔	↑↑↑	↔	↔	↑↑↑	
Traffic Vol, veh/h	20	10	30	10	0	10	20	1106	0	30	1174	20
Future Vol, veh/h	20	10	30	10	0	10	20	1106	0	30	1174	20
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	-	0	0	-	0	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	11	33	11	0	11	22	1202	0	33	1276	22

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1878	2599	649	1828	2610	601	1298	0	0	1202	0	0
Stage 1	1353	1353	-	1246	1246	-	-	-	-	-	-	-
Stage 2	525	1246	-	582	1364	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	76	24	354	81	24	380	280	-	-	312	-	-
Stage 1	113	216	-	134	244	-	-	-	-	-	-	-
Stage 2	460	244	-	425	214	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	64	20	354	37	20	380	280	-	-	312	-	-
Mov Cap-2 Maneuver	64	20	-	37	20	-	-	-	-	-	-	-
Stage 1	104	193	-	123	225	-	-	-	-	-	-	-
Stage 2	412	225	-	326	191	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	206.3	76.7	0.3	0.4
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	280	-	-	67	37	-	380	312	-	-
HCM Lane V/C Ratio	0.078	-	-	0.973	0.294	-	0.029	0.105	-	-
HCM Control Delay (s)	18.9	-	-	206.3	138.6	0	14.8	17.9	-	-
HCM Lane LOS	C	-	-	F	F	A	B	C	-	-
HCM 95th %tile Q(veh)	0.3	-	-	4.8	1	-	0.1	0.3	-	-

Intersection												
Int Delay, s/veh	4.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↑	↔	↔	↑↑↑	↔	↔	↑↑↑	
Traffic Vol, veh/h	20	0	30	10	0	20	30	1474	20	30	1453	20
Future Vol, veh/h	20	0	30	10	0	20	30	1474	20	30	1453	20
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	-	0	0	-	0	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	0	33	11	0	22	33	1602	22	33	1579	22

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	2363	3346	801	2366	3335	801	1601	0	0	1624	0	0
Stage 1	1656	1656	-	1668	1668	-	-	-	-	-	-	-
Stage 2	707	1690	-	698	1667	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	38	8	281	37	8	281	199	-	-	193	-	-
Stage 1	68	154	-	67	152	-	-	-	-	-	-	-
Stage 2	357	148	-	361	152	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	27	6	281	25	6	281	199	-	-	193	-	-
Mov Cap-2 Maneuver	27	6	-	25	6	-	-	-	-	-	-	-
Stage 1	57	128	-	56	127	-	-	-	-	-	-	-
Stage 2	275	123	-	265	126	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	208.3	90.1	0.5	0.5
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	199	-	-	59	25	-	281	193	-	-
HCM Lane V/C Ratio	0.164	-	-	0.921	0.435	-	0.077	0.169	-	-
HCM Control Delay (s)	26.6	-	-	208.3	232.4	0	18.9	27.4	-	-
HCM Lane LOS	D	-	-	F	F	A	C	D	-	-
HCM 95th %tile Q(veh)	0.6	-	-	4.2	1.3	-	0.2	0.6	-	-

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	3	92	106	4	8	0
Future Vol, veh/h	3	92	106	4	8	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	100	115	4	9	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	119	0	-	0	223
Stage 1	-	-	-	-	117
Stage 2	-	-	-	-	106
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1469	-	-	-	765
Stage 1	-	-	-	-	908
Stage 2	-	-	-	-	918
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1469	-	-	-	763
Mov Cap-2 Maneuver	-	-	-	-	763
Stage 1	-	-	-	-	906
Stage 2	-	-	-	-	918

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1469	-	-	-	763
HCM Lane V/C Ratio	0.002	-	-	-	0.011
HCM Control Delay (s)	7.5	0	-	-	9.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	2	116	150	10	4	6
Future Vol, veh/h	2	116	150	10	4	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	126	163	11	4	7

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	174	0	-	0	299
Stage 1	-	-	-	-	169
Stage 2	-	-	-	-	130
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1403	-	-	-	692
Stage 1	-	-	-	-	861
Stage 2	-	-	-	-	896
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1403	-	-	-	691
Mov Cap-2 Maneuver	-	-	-	-	691
Stage 1	-	-	-	-	859
Stage 2	-	-	-	-	896

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	9.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1403	-	-	-	791
HCM Lane V/C Ratio	0.002	-	-	-	0.014
HCM Control Delay (s)	7.6	0	-	-	9.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection						
Int Delay, s/veh	0.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	56	3	4	36	1	4
Future Vol, veh/h	56	3	4	36	1	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	61	3	4	39	1	4

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	64	0	110
Stage 1	-	-	-	-	63
Stage 2	-	-	-	-	47
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1538	-	887
Stage 1	-	-	-	-	960
Stage 2	-	-	-	-	975
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1538	-	884
Mov Cap-2 Maneuver	-	-	-	-	884
Stage 1	-	-	-	-	960
Stage 2	-	-	-	-	972

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	976	-	-	1538	-
HCM Lane V/C Ratio	0.006	-	-	0.003	-
HCM Control Delay (s)	8.7	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection						
Int Delay, s/veh	1.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	34	3	4	46	2	16
Future Vol, veh/h	34	3	4	46	2	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	37	3	4	50	2	17

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	40	0	97 39
Stage 1	-	-	-	-	39 -
Stage 2	-	-	-	-	58 -
Critical Hdwy	-	-	4.12	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	2.218	-	3.518 3.318
Pot Cap-1 Maneuver	-	-	1570	-	902 1033
Stage 1	-	-	-	-	983 -
Stage 2	-	-	-	-	965 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1570	-	899 1033
Mov Cap-2 Maneuver	-	-	-	-	899 -
Stage 1	-	-	-	-	983 -
Stage 2	-	-	-	-	962 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1016	-	-	1570	-
HCM Lane V/C Ratio	0.019	-	-	0.003	-
HCM Control Delay (s)	8.6	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

## Appendix G.5

Level-of Service without and with Scottsdale Plaza Resort Renovation  
2025 with Artesia





2025 with Artesia AM Peak Hour

1: Scottsdale Road & Indian Bend Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	70	10	320	80	180	10	980	330	94	1138	20
Future Volume (veh/h)	20	70	10	320	80	180	10	980	330	94	1138	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	22	76	11	348	87	196	11	1065	359	102	1237	22
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	45	140	118	490	375	318	25	1919	596	220	2198	39
Arrive On Green	0.03	0.07	0.07	0.14	0.20	0.20	0.01	0.38	0.38	0.06	0.43	0.43
Sat Flow, veh/h	1781	1870	1585	3456	1870	1585	1781	5106	1585	3456	5166	92
Grp Volume(v), veh/h	22	76	11	348	87	196	11	1065	359	102	815	444
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1728	1870	1585	1781	1702	1585	1728	1702	1854
Q Serve(g_s), s	0.8	2.6	0.4	6.4	2.6	7.5	0.4	11.0	12.2	1.9	12.1	12.1
Cycle Q Clear(g_c), s	0.8	2.6	0.4	6.4	2.6	7.5	0.4	11.0	12.2	1.9	12.1	12.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	45	140	118	490	375	318	25	1919	596	220	1449	789
V/C Ratio(X)	0.49	0.54	0.09	0.71	0.23	0.62	0.45	0.55	0.60	0.46	0.56	0.56
Avail Cap(c_a), veh/h	133	568	481	1210	1100	932	133	3384	1050	465	2459	1339
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.2	29.8	28.8	27.4	22.4	24.4	32.7	16.5	16.8	30.2	14.5	14.5
Incr Delay (d2), s/veh	8.2	3.3	0.3	1.9	0.3	1.9	12.2	0.3	1.0	1.5	0.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.3	0.2	2.7	1.1	2.8	0.3	3.9	4.2	0.8	4.2	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.3	33.1	29.2	29.3	22.7	26.3	44.9	16.7	17.8	31.7	14.8	15.1
LnGrp LOS	D	C	C	C	C	C	D	B	B	C	B	B
Approach Vol, veh/h		109			631			1435			1361	
Approach Delay, s/veh		34.2			27.5			17.2			16.2	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.2	30.8	15.1	10.7	6.9	34.1	6.7	19.1				
Change Period (Y+Rc), s	6.0	5.7	5.6	* 5.7	6.0	5.7	5.0	* 5.7				
Max Green Setting (Gmax), s	9.0	44.3	23.4	* 20	5.0	48.3	5.0	* 39				
Max Q Clear Time (g_c+I1), s	3.9	14.2	8.4	4.6	2.4	14.1	2.8	9.5				
Green Ext Time (p_c), s	0.1	10.9	1.1	0.3	0.0	10.9	0.0	1.2				

Intersection Summary

HCM 6th Ctrl Delay	19.2
HCM 6th LOS	B

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

2025 with Artesia PM Peak Hour

1: Scottsdale Road & Indian Bend Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	70	20	370	110	198	20	1369	440	153	1377	30
Future Volume (veh/h)	31	70	20	370	110	198	20	1369	440	153	1377	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	34	76	22	402	120	215	22	1488	478	166	1497	33
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	58	125	106	513	354	300	43	2254	700	246	2513	55
Arrive On Green	0.03	0.07	0.07	0.15	0.19	0.19	0.02	0.44	0.44	0.07	0.49	0.49
Sat Flow, veh/h	1781	1870	1585	3456	1870	1585	1781	5106	1585	3456	5141	113
Grp Volume(v), veh/h	34	76	22	402	120	215	22	1488	478	166	991	539
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1728	1870	1585	1781	1702	1585	1728	1702	1850
Q Serve(g_s), s	1.6	3.3	1.1	9.5	4.7	10.7	1.0	19.4	20.4	4.0	17.7	17.7
Cycle Q Clear(g_c), s	1.6	3.3	1.1	9.5	4.7	10.7	1.0	19.4	20.4	4.0	17.7	17.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	58	125	106	513	354	300	43	2254	700	246	1664	904
V/C Ratio(X)	0.59	0.61	0.21	0.78	0.34	0.72	0.52	0.66	0.68	0.67	0.60	0.60
Avail Cap(c_a), veh/h	127	405	343	876	760	644	105	2860	888	409	2108	1146
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.3	38.3	37.3	34.7	29.6	32.1	40.7	18.6	18.9	38.3	15.6	15.6
Incr Delay (d2), s/veh	9.1	4.8	1.0	2.7	0.6	3.2	9.4	0.4	1.5	3.2	0.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	1.7	0.5	4.1	2.1	4.3	0.6	7.2	7.3	1.8	6.4	7.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.4	43.1	38.3	37.3	30.2	35.3	50.1	19.0	20.4	41.5	15.9	16.2
LnGrp LOS	D	D	D	D	C	D	D	B	C	D	B	B
Approach Vol, veh/h		132			737			1988			1696	
Approach Delay, s/veh		43.9			35.6			19.7			18.5	
Approach LOS		D			D			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.0	43.0	18.1	11.3	8.0	47.0	7.7	21.7				
Change Period (Y+Rc), s	6.0	5.7	5.6	* 5.7	6.0	5.7	5.0	* 5.7				
Max Green Setting (Gmax), s	10.0	47.3	21.4	* 18	5.0	52.3	6.0	* 34				
Max Q Clear Time (g_c+I1), s	6.0	22.4	11.5	5.3	3.0	19.7	3.6	12.7				
Green Ext Time (p_c), s	0.2	14.9	1.1	0.3	0.0	14.1	0.0	1.3				

Intersection Summary

HCM 6th Ctrl Delay	22.5
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

2025 with Artesia AM Peak Hour

2: Scottsdale Road & Resort Plaza Access/Seville Access

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	1	9	30	3	30	8	1092	80	50	1213	3
Future Volume (veh/h)	4	1	9	30	3	30	8	1092	80	50	1213	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	4	1	10	33	3	33	9	1187	87	54	1318	3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	257	11	111	279	10	112	384	3149	978	399	3244	7
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.62	0.62	0.62	0.62	0.62	0.62
Sat Flow, veh/h	1372	146	1461	1404	134	1472	415	5106	1585	434	5260	12
Grp Volume(v), veh/h	4	0	11	33	0	36	9	1187	87	54	853	468
Grp Sat Flow(s),veh/h/ln	1372	0	1607	1404	0	1605	415	1702	1585	434	1702	1868
Q Serve(g_s), s	0.1	0.0	0.3	0.9	0.0	0.8	0.4	4.6	0.9	2.8	5.1	5.1
Cycle Q Clear(g_c), s	1.0	0.0	0.3	1.1	0.0	0.8	5.5	4.6	0.9	7.4	5.1	5.1
Prop In Lane	1.00		0.91	1.00		0.92	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	257	0	122	279	0	122	384	3149	978	399	2100	1152
V/C Ratio(X)	0.02	0.00	0.09	0.12	0.00	0.29	0.02	0.38	0.09	0.14	0.41	0.41
Avail Cap(c_a), veh/h	1075	0	1081	1116	0	1079	976	10426	3237	1018	6951	3815
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.8	0.0	17.1	17.6	0.0	17.3	5.3	3.8	3.1	5.7	3.9	3.9
Incr Delay (d2), s/veh	0.0	0.0	0.3	0.2	0.0	1.3	0.0	0.1	0.0	0.2	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.1	0.3	0.0	0.3	0.0	0.7	0.1	0.2	0.8	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.8	0.0	17.4	17.8	0.0	18.7	5.3	3.9	3.1	5.8	4.0	4.1
LnGrp LOS	B	A	B	B	A	B	A	A	A	A	A	A
Approach Vol, veh/h		15			69			1283			1375	
Approach Delay, s/veh		17.5			18.2			3.8			4.1	
Approach LOS		B			B			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		30.4		9.3		30.4		9.3				
Change Period (Y+Rc), s		* 5.9		* 6.3		* 5.9		* 6.3				
Max Green Setting (Gmax), s		* 81		* 27		* 81		* 27				
Max Q Clear Time (g_c+I1), s		7.5		3.0		9.4		3.1				
Green Ext Time (p_c), s		13.0		0.0		15.1		0.2				

Intersection Summary

HCM 6th Ctrl Delay	4.4
HCM 6th LOS	A

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



2025 with Artesia PM Peak Hour

2: Scottsdale Road & Resort Plaza Access/Seville Access

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	1	12	50	0	40	14	1544	40	20	1498	5
Future Volume (veh/h)	8	1	12	50	0	40	14	1544	40	20	1498	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	9	1	13	54	0	43	15	1678	43	22	1628	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	217	9	120	244	0	128	307	3462	1075	290	3564	11
Arrive On Green	0.08	0.08	0.08	0.08	0.00	0.08	0.68	0.68	0.68	0.68	0.68	0.68
Sat Flow, veh/h	1364	114	1488	1400	0	1585	308	5106	1585	283	5255	16
Grp Volume(v), veh/h	9	0	14	54	0	43	15	1678	43	22	1054	579
Grp Sat Flow(s),veh/h/ln	1364	0	1603	1400	0	1585	308	1702	1585	283	1702	1867
Q Serve(g_s), s	0.3	0.0	0.4	1.9	0.0	1.3	1.2	8.0	0.5	2.0	7.3	7.3
Cycle Q Clear(g_c), s	1.6	0.0	0.4	2.3	0.0	1.3	8.5	8.0	0.5	10.0	7.3	7.3
Prop In Lane	1.00		0.93	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	217	0	129	244	0	128	307	3462	1075	290	2308	1266
V/C Ratio(X)	0.04	0.00	0.11	0.22	0.00	0.34	0.05	0.48	0.04	0.08	0.46	0.46
Avail Cap(c_a), veh/h	801	0	815	843	0	806	598	8293	2574	557	5528	3033
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.7	0.0	21.6	22.6	0.0	22.0	5.8	3.9	2.7	6.3	3.8	3.8
Incr Delay (d2), s/veh	0.1	0.0	0.4	0.5	0.0	1.5	0.1	0.1	0.0	0.1	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.2	0.6	0.0	0.5	0.1	1.4	0.1	0.1	1.3	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.8	0.0	21.9	23.1	0.0	23.5	5.8	4.0	2.7	6.4	3.9	4.1
LnGrp LOS	C	A	C	C	A	C	A	A	A	A	A	A
Approach Vol, veh/h		23			97			1736			1655	
Approach Delay, s/veh		22.3			23.3			4.0			4.0	
Approach LOS		C			C			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		40.2		10.4		40.2		10.4				
Change Period (Y+Rc), s		* 5.9		* 6.3		* 5.9		* 6.3				
Max Green Setting (Gmax), s		* 82		* 26		* 82		* 26				
Max Q Clear Time (g_c+I1), s		10.5		3.6		12.0		4.3				
Green Ext Time (p_c), s		23.8		0.0		20.9		0.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				4.7								
HCM 6th LOS				A								
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection												
Int Delay, s/veh	21.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↔		↕	↑	↗	↕	↑↑↑	↗	↕	↑↑↑	
Traffic Vol, veh/h	20	16	30	62	0	148	20	1106	0	90	1174	20
Future Vol, veh/h	20	16	30	62	0	148	20	1106	0	90	1174	20
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	-	0	0	-	0	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	17	33	67	0	161	22	1202	0	98	1276	22

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2008	2729	649	1961	2740	601	1298	0	0	1202	0	0
Stage 1	1483	1483	-	1246	1246	-	-	-	-	-	-	-
Stage 2	525	1246	-	715	1494	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	63	20	354	~67	20	380	280	-	-	312	-	-
Stage 1	91	187	-	134	244	-	-	-	-	-	-	-
Stage 2	460	244	-	353	185	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	26	~ 13	354	-	13	380	280	-	-	312	-	-
Mov Cap-2 Maneuver	26	~ 13	-	-	13	-	-	-	-	-	-	-
Stage 1	84	128	-	123	225	-	-	-	-	-	-	-
Stage 2	244	225	-	190	127	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	\$ 834.6		0.3	1.5
HCM LOS	F	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	280	-	-	32	-	-	380	312	-	-
HCM Lane V/C Ratio	0.078	-	-	2.242	-	-	0.423	0.314	-	-
HCM Control Delay (s)	18.9	-	-	\$ 834.6	-	0	21.3	21.7	-	-
HCM Lane LOS	C	-	-	F	-	A	C	C	-	-
HCM 95th %tile Q(veh)	0.3	-	-	8.2	-	-	2	1.3	-	-

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

Intersection												
Int Delay, s/veh	55											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↑	↗	↕	↑↑↑	↗	↕	↑↑↑	
Traffic Vol, veh/h	20	0	30	40	0	90	30	1474	88	120	1453	20
Future Vol, veh/h	20	0	30	40	0	90	30	1474	88	120	1453	20
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	-	0	0	-	0	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	0	33	43	0	98	33	1602	96	130	1579	22

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	2557	3614	801	2560	3529	801	1601	0	0	1698	0	0
Stage 1	1850	1850	-	1668	1668	-	-	-	-	-	-	-
Stage 2	707	1764	-	892	1861	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	28	5	281	~28	6	281	199	-	-	178	-	-
Stage 1	50	123	-	67	152	-	-	-	-	-	-	-
Stage 2	357	136	-	274	121	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~7	1	281	~9	1	281	199	-	-	178	-	-
Mov Cap-2 Maneuver	~7	1	-	~9	1	-	-	-	-	-	-	-
Stage 1	42	33	-	56	127	-	-	-	-	-	-	-
Stage 2	194	113	-	65	33	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s \$	1452	\$ 797.5	0.5	5
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	199	-	-	17	9	-	281	178	-	-
HCM Lane V/C Ratio	0.164	-	-	3.197	4.831	-	0.348	0.733	-	-
HCM Control Delay (s)	26.6	-	-	\$ 1452	2536.8	0	24.5	66.5	-	-
HCM Lane LOS	D	-	-	F	F	A	C	F	-	-
HCM 95th %tile Q(veh)	0.6	-	-	7.4	6.7	-	1.5	4.6	-	-

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

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	3	92	106	4	8	0
Future Vol, veh/h	3	92	106	4	8	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	100	115	4	9	0

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	119	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1469	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1469	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1469	-	-	-	763
HCM Lane V/C Ratio	0.002	-	-	-	0.011
HCM Control Delay (s)	7.5	0	-	-	9.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Traffic Vol, veh/h	2	117	150	10	4	6
Future Vol, veh/h	2	117	150	10	4	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	127	163	11	4	7

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	174	0	-	0	300
Stage 1	-	-	-	-	169
Stage 2	-	-	-	-	131
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1403	-	-	-	691
Stage 1	-	-	-	-	861
Stage 2	-	-	-	-	895
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1403	-	-	-	690
Mov Cap-2 Maneuver	-	-	-	-	690
Stage 1	-	-	-	-	859
Stage 2	-	-	-	-	895

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	9.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1403	-	-	-	790
HCM Lane V/C Ratio	0.002	-	-	-	0.014
HCM Control Delay (s)	7.6	0	-	-	9.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection						
Int Delay, s/veh	0.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	61	3	4	36	1	5
Future Vol, veh/h	61	3	4	36	1	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	66	3	4	39	1	5

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	69	0	115
Stage 1	-	-	-	-	68
Stage 2	-	-	-	-	47
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1532	-	881
Stage 1	-	-	-	-	955
Stage 2	-	-	-	-	975
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1532	-	878
Mov Cap-2 Maneuver	-	-	-	-	878
Stage 1	-	-	-	-	955
Stage 2	-	-	-	-	972

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	973	-	-	1532	-
HCM Lane V/C Ratio	0.007	-	-	0.003	-
HCM Control Delay (s)	8.7	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection						
Int Delay, s/veh	1.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	34	3	4	46	2	16
Future Vol, veh/h	34	3	4	46	2	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	37	3	4	50	2	17

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	40	0	97 39
Stage 1	-	-	-	-	39 -
Stage 2	-	-	-	-	58 -
Critical Hdwy	-	-	4.12	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	2.218	-	3.518 3.318
Pot Cap-1 Maneuver	-	-	1570	-	902 1033
Stage 1	-	-	-	-	983 -
Stage 2	-	-	-	-	965 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1570	-	899 1033
Mov Cap-2 Maneuver	-	-	-	-	899 -
Stage 1	-	-	-	-	983 -
Stage 2	-	-	-	-	962 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1016	-	-	1570	-
HCM Lane V/C Ratio	0.019	-	-	0.003	-
HCM Control Delay (s)	8.6	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

## Appendix G.6

Level-of Service without and with Scottsdale Plaza Resort Renovation  
2025 with Artesia and Ritz-Carlton







2025 plus Ritz-Carlton and Artesia AM Peak Hour

1: Scottsdale Road & Indian Bend Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	117	19	337	159	180	44	1014	344	94	1227	87
Future Volume (veh/h)	90	117	19	337	159	180	44	1014	344	94	1227	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	98	127	21	366	173	196	48	1102	374	102	1334	95
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	125	177	150	479	319	270	74	2086	647	200	2066	147
Arrive On Green	0.07	0.09	0.09	0.14	0.17	0.17	0.04	0.41	0.41	0.06	0.42	0.42
Sat Flow, veh/h	1781	1870	1585	3456	1870	1585	1781	5106	1585	3456	4866	346
Grp Volume(v), veh/h	98	127	21	366	173	196	48	1102	374	102	933	496
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1728	1870	1585	1781	1702	1585	1728	1702	1808
Q Serve(g_s), s	4.1	5.0	0.9	7.8	6.5	9.0	2.0	12.5	14.0	2.2	16.6	16.6
Cycle Q Clear(g_c), s	4.1	5.0	0.9	7.8	6.5	9.0	2.0	12.5	14.0	2.2	16.6	16.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.19
Lane Grp Cap(c), veh/h	125	177	150	479	319	270	74	2086	647	200	1445	768
V/C Ratio(X)	0.78	0.72	0.14	0.76	0.54	0.72	0.64	0.53	0.58	0.51	0.65	0.65
Avail Cap(c_a), veh/h	163	252	213	786	520	441	116	3956	1228	451	2637	1401
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.0	33.7	31.8	31.8	29.0	30.0	36.1	17.1	17.5	35.0	17.5	17.5
Incr Delay (d2), s/veh	16.5	5.6	0.4	2.6	1.4	3.7	9.0	0.2	0.8	2.0	0.5	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	2.5	0.4	3.3	2.9	3.6	1.0	4.6	4.9	1.0	6.1	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.4	39.2	32.2	34.3	30.4	33.7	45.1	17.3	18.3	37.0	17.9	18.4
LnGrp LOS	D	D	C	C	C	C	D	B	B	D	B	B
Approach Vol, veh/h		246			735			1524			1531	
Approach Delay, s/veh		43.5			33.2			18.4			19.4	
Approach LOS		D			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.4	37.0	16.2	12.9	9.2	38.2	10.4	18.8				
Change Period (Y+Rc), s	6.0	5.7	5.6	* 5.7	6.0	5.7	5.0	* 5.7				
Max Green Setting (Gmax), s	10.0	59.3	17.4	* 10	5.0	59.3	7.0	* 21				
Max Q Clear Time (g_c+I1), s	4.2	16.0	9.8	7.0	4.0	18.6	6.1	11.0				
Green Ext Time (p_c), s	0.1	12.7	0.8	0.2	0.0	13.9	0.0	1.2				
Intersection Summary												
HCM 6th Ctrl Delay			23.0									
HCM 6th LOS			C									
Notes												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

2025 with Artesia and Ritz-Carlton PM Peak Hour

1: Scottsdale Road & Indian Bend Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	158	173	40	389	206	198	20	1486	523	200	1439	41
Future Volume (veh/h)	158	173	40	389	206	198	20	1486	523	200	1439	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	172	188	43	423	224	215	22	1615	568	217	1564	45
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	203	217	50	497	343	290	77	2128	661	279	2427	753
Arrive On Green	0.11	0.15	0.15	0.14	0.18	0.18	0.02	0.42	0.42	0.08	0.48	0.48
Sat Flow, veh/h	1781	1473	337	3456	1870	1585	3456	5106	1585	3456	5106	1585
Grp Volume(v), veh/h	172	0	231	423	224	215	22	1615	568	217	1564	45
Grp Sat Flow(s),veh/h/ln	1781	0	1810	1728	1870	1585	1728	1702	1585	1728	1702	1585
Q Serve(g_s), s	10.3	0.0	13.6	13.0	12.1	14.0	0.7	29.4	35.5	6.7	25.3	1.7
Cycle Q Clear(g_c), s	10.3	0.0	13.6	13.0	12.1	14.0	0.7	29.4	35.5	6.7	25.3	1.7
Prop In Lane	1.00		0.19	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	203	0	267	497	343	290	77	2128	661	279	2427	753
V/C Ratio(X)	0.85	0.00	0.86	0.85	0.65	0.74	0.29	0.76	0.86	0.78	0.64	0.06
Avail Cap(c_a), veh/h	261	0	337	615	417	353	158	2215	688	317	2449	760
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.4	0.0	45.4	45.5	41.3	42.1	52.5	27.1	28.9	49.2	21.6	15.5
Incr Delay (d2), s/veh	18.2	0.0	17.0	9.3	2.7	6.5	2.0	1.5	10.4	10.4	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	0.0	7.3	6.2	5.8	6.0	0.3	11.9	15.0	3.3	9.9	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.6	0.0	62.4	54.8	44.0	48.5	54.5	28.6	39.3	59.5	22.2	15.5
LnGrp LOS	E	A	E	D	D	D	D	C	D	E	C	B
Approach Vol, veh/h		403			862			2205			1826	
Approach Delay, s/veh		63.8			50.4			31.6			26.5	
Approach LOS		E			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.8	51.2	21.3	21.8	8.4	57.5	17.4	25.7				
Change Period (Y+Rc), s	6.0	5.7	5.6	* 5.7	6.0	5.7	5.0	* 5.7				
Max Green Setting (Gmax), s	10.0	47.3	19.4	* 20	5.0	52.3	16.0	* 24				
Max Q Clear Time (g_c+I1), s	8.7	37.5	15.0	15.6	2.7	27.3	12.3	16.0				
Green Ext Time (p_c), s	0.1	7.9	0.7	0.5	0.0	13.6	0.1	1.3				
Intersection Summary												
HCM 6th Ctrl Delay			35.4									
HCM 6th LOS			D									
Notes												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

2025 plus Ritz-Carlton and Artesia AM Peak Hour

2: Scottsdale Road & Resort Plaza Access/Seville Access

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	1	9	30	3	30	8	1196	80	50	1369	3
Future Volume (veh/h)	4	1	9	30	3	30	8	1196	80	50	1369	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	4	1	10	33	3	33	9	1300	87	54	1488	3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	230	11	106	252	10	106	344	3354	1041	370	3456	7
Arrive On Green	0.07	0.07	0.07	0.07	0.07	0.07	0.66	0.66	0.66	0.66	0.66	0.66
Sat Flow, veh/h	1372	146	1461	1404	134	1472	353	5106	1585	390	5262	11
Grp Volume(v), veh/h	4	0	11	33	0	36	9	1300	87	54	963	528
Grp Sat Flow(s),veh/h/ln	1372	0	1607	1404	0	1605	353	1702	1585	390	1702	1868
Q Serve(g_s), s	0.1	0.0	0.3	1.0	0.0	1.0	0.6	5.3	0.9	3.3	6.1	6.1
Cycle Q Clear(g_c), s	1.1	0.0	0.3	1.3	0.0	1.0	6.7	5.3	0.9	8.6	6.1	6.1
Prop In Lane	1.00		0.91	1.00		0.92	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	230	0	116	252	0	116	344	3354	1041	370	2236	1227
V/C Ratio(X)	0.02	0.00	0.09	0.13	0.00	0.31	0.03	0.39	0.08	0.15	0.43	0.43
Avail Cap(c_a), veh/h	701	0	668	734	0	667	811	10104	3136	886	6736	3697
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.3	0.0	19.5	20.1	0.0	19.8	5.3	3.6	2.8	5.5	3.7	3.7
Incr Delay (d2), s/veh	0.0	0.0	0.4	0.2	0.0	1.5	0.0	0.1	0.0	0.2	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.1	0.3	0.0	0.4	0.0	0.8	0.1	0.2	1.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.4	0.0	19.9	20.4	0.0	21.3	5.3	3.6	2.8	5.7	3.8	3.9
LnGrp LOS	C	A	B	C	A	C	A	A	A	A	A	A
Approach Vol, veh/h		15			69			1396			1545	
Approach Delay, s/veh		20.0			20.9			3.6			3.9	
Approach LOS		B			C			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		35.5		9.6		35.5		9.6				
Change Period (Y+Rc), s		* 5.9		* 6.3		* 5.9		* 6.3				
Max Green Setting (Gmax), s		* 89		* 19		* 89		* 19				
Max Q Clear Time (g_c+I1), s		8.7		3.1		10.6		3.3				
Green Ext Time (p_c), s		15.3		0.0		19.0		0.2				

Intersection Summary

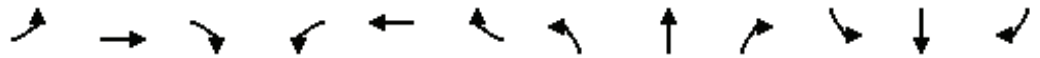
HCM 6th Ctrl Delay	4.2
HCM 6th LOS	A

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

2025 with Artesia and Ritz-Carlton PM Peak Hour

2: Scottsdale Road & Resort Plaza Access/Seville Access



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑↑↑	↗	↖	↑↑↑	
Traffic Volume (veh/h)	8	1	12	50	0	40	14	1788	40	20	1618	5
Future Volume (veh/h)	8	1	12	50	0	40	14	1788	40	20	1618	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	9	1	13	54	0	43	15	1943	43	22	1759	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	183	8	108	210	0	115	278	3702	1149	241	3812	11
Arrive On Green	0.07	0.07	0.07	0.07	0.00	0.07	0.73	0.73	0.73	0.73	0.73	0.73
Sat Flow, veh/h	1364	114	1488	1400	0	1585	271	5106	1585	218	5257	15
Grp Volume(v), veh/h	9	0	14	54	0	43	15	1943	43	22	1139	625
Grp Sat Flow(s),veh/h/ln	1364	0	1603	1400	0	1585	271	1702	1585	218	1702	1868
Q Serve(g_s), s	0.4	0.0	0.5	2.3	0.0	1.6	1.5	10.2	0.5	3.0	8.3	8.3
Cycle Q Clear(g_c), s	1.9	0.0	0.5	2.8	0.0	1.6	9.8	10.2	0.5	13.2	8.3	8.3
Prop In Lane	1.00		0.93	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	183	0	116	210	0	115	278	3702	1149	241	2468	1354
V/C Ratio(X)	0.05	0.00	0.12	0.26	0.00	0.37	0.05	0.52	0.04	0.09	0.46	0.46
Avail Cap(c_a), veh/h	620	0	630	658	0	623	460	7122	2211	387	4748	2605
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.6	0.0	26.2	27.4	0.0	26.7	5.4	3.7	2.3	6.6	3.4	3.4
Incr Delay (d2), s/veh	0.1	0.0	0.5	0.6	0.0	2.0	0.1	0.1	0.0	0.2	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.2	0.8	0.0	0.6	0.1	1.8	0.1	0.1	1.5	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.7	0.0	26.6	28.1	0.0	28.7	5.5	3.8	2.4	6.8	3.6	3.7
LnGrp LOS	C	A	C	C	A	C	A	A	A	A	A	A
Approach Vol, veh/h		23			97			2001			1786	
Approach Delay, s/veh		27.0			28.3			3.8			3.6	
Approach LOS		C			C			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		49.6		10.7		49.6		10.7				
Change Period (Y+Rc), s		* 5.9		* 6.3		* 5.9		* 6.3				
Max Green Setting (Gmax), s		* 84		* 24		* 84		* 24				
Max Q Clear Time (g_c+I1), s		12.2		3.9		15.2		4.8				
Green Ext Time (p_c), s		31.5		0.0		24.5		0.3				

Intersection Summary

HCM 6th Ctrl Delay	4.5
HCM 6th LOS	A

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection												
Int Delay, s/veh	41											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↑	↕	↕	↑↑↑	↕	↕	↑↑↑	
Traffic Vol, veh/h	20	16	33	62	0	148	22	1260	0	90	1327	20
Future Vol, veh/h	20	16	33	62	0	148	22	1260	0	90	1327	20
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	-	0	0	-	0	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	17	36	67	0	161	24	1370	0	98	1442	22

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2245	3067	732	2199	3078	685	1464	0	0	1370	0	0
Stage 1	1649	1649	-	1418	1418	-	-	-	-	-	-	-
Stage 2	596	1418	-	781	1660	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	45	~ 12	312	~ 48	12	335	232	-	-	258	-	-
Stage 1	69	155	-	101	201	-	-	-	-	-	-	-
Stage 2	417	201	-	321	153	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 15	~ 7	312	-	7	335	232	-	-	258	-	-
Mov Cap-2 Maneuver	~ 15	~ 7	-	-	7	-	-	-	-	-	-	-
Stage 1	62	96	-	91	180	-	-	-	-	-	-	-
Stage 2	194	180	-	144	95	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, \$ 1738.7			0.4	1.7
HCM LOS	F	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	232	-	-	19	-	-	335	258	-	-
HCM Lane V/C Ratio	0.103	-	-	3.947	-	-	0.48	0.379	-	-
HCM Control Delay (s)	22.3	-	-	\$ 1738.7	-	0	25.3	27.2	-	-
HCM Lane LOS	C	-	-	F	-	A	D	D	-	-
HCM 95th %tile Q(veh)	0.3	-	-	9.9	-	-	2.5	1.7	-	-

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

Intersection												
Int Delay, s/veh	113.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↔		↕	↑	↗	↕	↑↑↑	↗	↕	↑↑↑	
Traffic Vol, veh/h	20	0	32	41	0	90	32	1590	90	120	1570	20
Future Vol, veh/h	20	0	32	41	0	90	32	1590	90	120	1570	20
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	-	0	0	-	0	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	0	35	45	0	98	35	1728	98	130	1707	22

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	2739	3874	865	2741	3787	864	1729	0	0	1826	0	0
Stage 1	1978	1978	-	1798	1798	-	-	-	-	-	-	-
Stage 2	761	1896	-	943	1989	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	22	3	255	~22	4	255	171	-	-	153	-	-
Stage 1	40	106	-	54	131	-	-	-	-	-	-	-
Stage 2	330	117	-	255	105	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~3	0	255	~5	0	255	171	-	-	153	-	-
Mov Cap-2 Maneuver	~3	0	-	~5	0	-	-	-	-	-	-	-
Stage 1	32	16	-	~43	104	-	-	-	-	-	-	-
Stage 2	162	93	-	~33	16	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, \$	3634.3	1573.4	0.6	6.7
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	171	-	-	8	5	-	255	153	-	-
HCM Lane V/C Ratio	0.203	-	-	7.065	8.913	-	0.384	0.853	-	-
HCM Control Delay (s)	31.4	-	-	\$ 3634.3	\$ 4966.7	0	27.6	96	-	-
HCM Lane LOS	D	-	-	F	F	A	D	F	-	-
HCM 95th %tile Q(veh)	0.7	-	-	8.5	7.3	-	1.7	5.7	-	-

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

Intersection									
Intersection Delay, s/veh	3.7								
Intersection LOS	A								
Approach	EB		WB		NB		SB		
Entry Lanes	2		2		2		2		
Conflicting Circle Lanes	1		1		1		1		
Adj Approach Flow, veh/h	119		315		148		9		
Demand Flow Rate, veh/h	121		321		151		9		
Vehicles Circulating, veh/h	209		14		114		328		
Vehicles Exiting, veh/h	128		251		216		7		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	3.9		3.6		3.7		3.5		
Approach LOS	A		A		A		A		
Lane	Left	Right	Left	Right	Left	Right	Left	Right	
Designated Moves	L	TR	L	TR	L	TR	L	TR	
Assumed Moves	L	TR	L	TR	L	TR	L	TR	
RT Channelized									
Lane Util	0.025	0.975	0.623	0.377	0.073	0.927	1.000	0.000	
Follow-Up Headway, s	2.535	2.535	2.535	2.535	2.535	2.535	2.535	2.535	
Critical Headway, s	4.544	4.544	4.544	4.544	4.544	4.544	4.544	4.544	
Entry Flow, veh/h	3	118	200	121	11	140	9	0	
Cap Entry Lane, veh/h	1174	1174	1402	1402	1280	1280	1054	1054	
Entry HV Adj Factor	1.000	0.983	0.980	0.981	1.000	0.979	1.000	1.000	
Flow Entry, veh/h	3	116	196	119	11	137	9	0	
Cap Entry, veh/h	1174	1154	1374	1376	1280	1253	1054	1054	
V/C Ratio	0.003	0.101	0.143	0.086	0.009	0.109	0.009	0.000	
Control Delay, s/veh	3.1	4.0	3.8	3.3	2.9	3.8	3.5	3.4	
LOS	A	A	A	A	A	A	A	A	
95th %tile Queue, veh	0	0	0	0	0	0	0	0	



Intersection									
Intersection Delay, s/veh	4.3								
Intersection LOS	A								
Approach	EB		WB		NB		SB		
Entry Lanes	2		2		2		2		
Conflicting Circle Lanes	1		1		1		1		
Adj Approach Flow, veh/h	150		420		290		11		
Demand Flow Rate, veh/h	153		428		295		11		
Vehicles Circulating, veh/h	255		20		136		435		
Vehicles Exiting, veh/h	191		411		272		13		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	4.4		3.9		4.7		3.8		
Approach LOS	A		A		A		A		
Lane	Left	Right	Left	Right	Left	Right	Left	Right	
Designated Moves	L	TR	L	TR	L	TR	L	TR	
Assumed Moves	L	TR	L	TR	L	TR	L	TR	
RT Channelized									
Lane Util	0.013	0.987	0.586	0.414	0.061	0.939	0.364	0.636	
Follow-Up Headway, s	2.535	2.535	2.535	2.535	2.535	2.535	2.535	2.535	
Critical Headway, s	4.544	4.544	4.544	4.544	4.544	4.544	4.544	4.544	
Entry Flow, veh/h	2	151	251	177	18	277	4	7	
Cap Entry Lane, veh/h	1126	1126	1395	1395	1255	1255	956	956	
Entry HV Adj Factor	1.000	0.983	0.980	0.982	1.000	0.982	1.000	1.000	
Flow Entry, veh/h	2	148	246	174	18	272	4	7	
Cap Entry, veh/h	1126	1107	1367	1369	1255	1232	956	956	
V/C Ratio	0.002	0.134	0.180	0.127	0.014	0.221	0.004	0.007	
Control Delay, s/veh	3.2	4.4	4.1	3.6	3.0	4.9	3.8	3.8	
LOS	A	A	A	A	A	A	A	A	
95th %tile Queue, veh	0	0	1	0	0	1	0	0	

Intersection						
Int Delay, s/veh	0.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	64	3	4	38	1	5
Future Vol, veh/h	64	3	4	38	1	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	70	3	4	41	1	5

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	73	0	121
Stage 1	-	-	-	-	72
Stage 2	-	-	-	-	49
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1527	-	874
Stage 1	-	-	-	-	951
Stage 2	-	-	-	-	973
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1527	-	871
Mov Cap-2 Maneuver	-	-	-	-	871
Stage 1	-	-	-	-	951
Stage 2	-	-	-	-	970

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	968	-	-	1527	-
HCM Lane V/C Ratio	0.007	-	-	0.003	-
HCM Control Delay (s)	8.7	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection						
Int Delay, s/veh	1.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	36	3	4	48	2	16
Future Vol, veh/h	36	3	4	48	2	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	39	3	4	52	2	17












Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	42	0	101
Stage 1	-	-	-	-	41
Stage 2	-	-	-	-	60
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1567	-	898
Stage 1	-	-	-	-	981
Stage 2	-	-	-	-	963
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1567	-	895
Mov Cap-2 Maneuver	-	-	-	-	895
Stage 1	-	-	-	-	981
Stage 2	-	-	-	-	960

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1013	-	-	1567	-
HCM Lane V/C Ratio	0.019	-	-	0.003	-
HCM Control Delay (s)	8.6	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

2025 plus Ritz-Carlton and Artesia AM Peak Hour

1: Scottsdale Road & Indian Bend Road

											
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	98	148	366	173	196	48	1102	374	102	1334	95
v/c Ratio	0.46	0.37	0.60	0.43	0.40	0.23	0.55	0.44	0.36	0.60	0.12
Control Delay	48.1	39.4	40.3	39.9	9.5	49.5	22.5	4.0	48.6	21.0	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.1	39.4	40.3	39.9	9.5	49.5	22.5	4.0	48.6	21.0	0.3
Queue Length 50th (ft)	52	37	100	91	4	13	173	0	28	213	0
Queue Length 95th (ft)	122	80	176	185	68	38	259	57	67	318	0
Internal Link Dist (ft)		781		871			467			569	
Turn Bay Length (ft)											
Base Capacity (vph)	321	819	972	638	665	207	2912	1066	291	3035	1015
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.18	0.38	0.27	0.29	0.23	0.38	0.35	0.35	0.44	0.09
Intersection Summary											



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	4	11	33	36	9	1300	87	54	1491
v/c Ratio	0.02	0.05	0.13	0.15	0.04	0.32	0.07	0.18	0.37
Control Delay	23.0	14.6	24.6	12.1	4.1	3.5	1.2	5.7	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.0	14.6	24.6	12.1	4.1	3.5	1.2	5.7	3.7
Queue Length 50th (ft)	1	0	12	1	1	58	0	6	71
Queue Length 95th (ft)	9	13	33	23	5	87	11	21	105
Internal Link Dist (ft)		324		870		569			299
Turn Bay Length (ft)									
Base Capacity (vph)	894	796	894	806	296	5085	1583	373	5085
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.00	0.01	0.04	0.04	0.03	0.26	0.05	0.14	0.29
Intersection Summary									



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	172	231	423	224	215	22	1615	568	217	1564	45
v/c Ratio	0.77	0.80	0.80	0.64	0.53	0.15	0.78	0.60	0.74	0.63	0.05
Control Delay	73.1	66.9	59.9	52.5	22.4	57.6	33.8	6.2	68.8	24.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.1	66.9	59.9	52.5	22.4	57.6	33.8	6.2	68.8	24.9	0.1
Queue Length 50th (ft)	130	166	163	159	56	8	401	22	86	354	0
Queue Length 95th (ft)	#231	#276	220	244	135	23	464	113	#142	410	0
Internal Link Dist (ft)		781		871			467			569	
Turn Bay Length (ft)											
Base Capacity (vph)	245	325	576	392	435	148	2082	956	297	2483	837
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.71	0.73	0.57	0.49	0.15	0.78	0.59	0.73	0.63	0.05

Intersection Summary

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



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	9	14	54	43	15	1943	43	22	1764
v/c Ratio	0.06	0.07	0.33	0.21	0.09	0.48	0.03	0.17	0.44
Control Delay	36.8	20.3	41.7	22.8	4.8	4.6	1.1	7.0	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.8	20.3	41.7	22.8	4.8	4.7	1.1	7.0	4.3
Queue Length 50th (ft)	4	0	24	7	2	119	0	3	102
Queue Length 95th (ft)	20	19	72	43	9	185	8	13	159
Internal Link Dist (ft)		324		870		569			299
Turn Bay Length (ft)									
Base Capacity (vph)	452	542	464	544	201	4892	1524	160	4892
Starvation Cap Reductn	0	0	0	0	0	545	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.03	0.12	0.08	0.07	0.45	0.03	0.14	0.36
Intersection Summary									

2025 with Artesia and Ritz-Carlton Saturday Peak Hour

1: Scottsdale Road & Indian Bend Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	193	190	37	296	190	144	10	1161	403	157	1133	36
Future Volume (veh/h)	193	190	37	296	190	144	10	1161	403	157	1133	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	210	207	40	322	207	157	11	1262	438	171	1232	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	252	254	49	418	286	243	46	1935	601	250	2235	694
Arrive On Green	0.14	0.17	0.17	0.12	0.15	0.15	0.01	0.38	0.38	0.07	0.44	0.44
Sat Flow, veh/h	1781	1523	294	3456	1870	1585	3456	5106	1585	3456	5106	1585
Grp Volume(v), veh/h	210	0	247	322	207	157	11	1262	438	171	1232	39
Grp Sat Flow(s),veh/h/ln	1781	0	1817	1728	1870	1585	1728	1702	1585	1728	1702	1585
Q Serve(g_s), s	10.1	0.0	11.5	8.0	9.3	8.2	0.3	18.0	20.9	4.3	15.7	1.2
Cycle Q Clear(g_c), s	10.1	0.0	11.5	8.0	9.3	8.2	0.3	18.0	20.9	4.3	15.7	1.2
Prop In Lane	1.00		0.16	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	252	0	303	418	286	243	46	1935	601	250	2235	694
V/C Ratio(X)	0.83	0.00	0.82	0.77	0.72	0.65	0.24	0.65	0.73	0.68	0.55	0.06
Avail Cap(c_a), veh/h	465	0	557	698	476	403	196	2389	741	432	2736	849
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.8	0.0	35.4	37.5	35.5	35.1	43.0	22.6	23.5	39.9	18.3	14.3
Incr Delay (d2), s/veh	7.1	0.0	5.3	3.0	3.5	2.9	2.6	0.5	2.8	3.3	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	0.0	5.5	3.5	4.4	3.3	0.1	7.0	7.9	1.9	5.9	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.9	0.0	40.7	40.5	39.0	38.0	45.6	23.0	26.3	43.2	18.6	14.3
LnGrp LOS	D	A	D	D	D	D	D	C	C	D	B	B
Approach Vol, veh/h		457			686			1711			1442	
Approach Delay, s/veh		42.2			39.5			24.0			21.4	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.4	39.1	16.3	20.4	7.2	44.3	17.5	19.2				
Change Period (Y+Rc), s	6.0	5.7	5.6	* 5.7	6.0	5.7	5.0	* 5.7				
Max Green Setting (Gmax), s	11.0	41.2	17.8	* 27	5.0	47.2	23.0	* 22				
Max Q Clear Time (g_c+I1), s	6.3	22.9	10.0	13.5	2.3	17.7	12.1	11.3				
Green Ext Time (p_c), s	0.2	10.5	0.7	1.1	0.0	11.0	0.4	1.3				

Intersection Summary

HCM 6th Ctrl Delay	27.5
HCM 6th LOS	C

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



2025 with Artesia and Ritz-Carlton Saturday Peak Hour2: Scottsdale Road & Resort Plaza Access/Seville Access

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	0	17	10	0	20	21	1457	20	20	1299	12
Future Volume (veh/h)	2	0	17	10	0	20	21	1457	20	20	1299	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	2	0	18	11	0	22	23	1584	22	22	1412	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	216	0	85	220	0	85	369	3446	1070	327	3521	32
Arrive On Green	0.05	0.00	0.05	0.05	0.00	0.05	0.67	0.67	0.67	0.67	0.67	0.67
Sat Flow, veh/h	1390	0	1585	1395	0	1585	376	5106	1585	316	5218	48
Grp Volume(v), veh/h	2	0	18	11	0	22	23	1584	22	22	921	504
Grp Sat Flow(s),veh/h/ln	1390	0	1585	1395	0	1585	376	1702	1585	316	1702	1862
Q Serve(g_s), s	0.1	0.0	0.5	0.3	0.0	0.6	1.3	6.6	0.2	1.6	5.4	5.4
Cycle Q Clear(g_c), s	0.7	0.0	0.5	0.8	0.0	0.6	6.7	6.6	0.2	8.2	5.4	5.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.03
Lane Grp Cap(c), veh/h	216	0	85	220	0	85	369	3446	1070	327	2297	1256
V/C Ratio(X)	0.01	0.00	0.21	0.05	0.00	0.26	0.06	0.46	0.02	0.07	0.40	0.40
Avail Cap(c_a), veh/h	843	0	800	849	0	800	826	9663	3000	712	6442	3523
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.7	0.0	20.4	20.8	0.0	20.4	4.8	3.4	2.4	5.4	3.3	3.3
Incr Delay (d2), s/veh	0.0	0.0	1.2	0.1	0.0	1.6	0.1	0.1	0.0	0.1	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.2	0.1	0.0	0.2	0.1	0.9	0.0	0.1	0.8	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.7	0.0	21.6	20.8	0.0	22.0	4.8	3.5	2.4	5.5	3.4	3.5
LnGrp LOS	C	A	C	C	A	C	A	A	A	A	A	A
Approach Vol, veh/h		20			33			1629			1447	
Approach Delay, s/veh		21.5			21.6			3.5			3.4	
Approach LOS		C			C			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		36.2		8.7		36.2		8.7				
Change Period (Y+Rc), s		* 5.9		* 6.3		* 5.9		* 6.3				
Max Green Setting (Gmax), s		* 85		* 23		* 85		* 23				
Max Q Clear Time (g_c+I1), s		8.7		2.7		10.2		2.8				
Green Ext Time (p_c), s		21.6		0.0		16.3		0.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				3.8								
HCM 6th LOS				A								
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

2025 with Artesia and Ritz-Carlton Saturday Peak Hour 3: Scottsdale Road & Hummingbird Lane/Artesia Access

Intersection												
Int Delay, s/veh	21.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↑	↗	↕	↑↑↑	↗	↕	↑↑↑	
Traffic Vol, veh/h	10	0	23	55	0	105	23	1239	49	110	1253	10
Future Vol, veh/h	10	0	23	55	0	105	23	1239	49	110	1253	10
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	-	0	0	-	0	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	0	25	60	0	114	25	1347	53	120	1362	11

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	2197	3058	687	2182	3010	674	1373	0	0	1400	0	0
Stage 1	1608	1608	-	1397	1397	-	-	-	-	-	-	-
Stage 2	589	1450	-	785	1613	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	48	12	334	~49	13	341	257	-	-	250	-	-
Stage 1	74	162	-	105	206	-	-	-	-	-	-	-
Stage 2	421	194	-	319	161	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	19	6	334	~26	6	341	257	-	-	250	-	-
Mov Cap-2 Maneuver	19	6	-	~26	6	-	-	-	-	-	-	-
Stage 1	67	84	-	95	186	-	-	-	-	-	-	-
Stage 2	253	175	-	153	84	-	-	-	-	-	-	-

Approach	EB		WB		NB			SB		
HCM Control Delay, s	151.4		\$ 327.9		0.4			2.6		
HCM LOS	F		F							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	257	-	-	55	26	-	341	250	-	-
HCM Lane V/C Ratio	0.097	-	-	0.652	2.299	-	0.335	0.478	-	-
HCM Control Delay (s)	20.5	-	-	151.4	\$ 914.1	0	20.8	31.9	-	-
HCM Lane LOS	C	-	-	F	F	A	C	D	-	-
HCM 95th %tile Q(veh)	0.3	-	-	2.7	7.3	-	1.4	2.4	-	-

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

Intersection									
Intersection Delay, s/veh	4.7								
Intersection LOS	A								
Approach	EB		WB		NB		SB		
Entry Lanes	2		2		2		2		
Conflicting Circle Lanes	1		1		1		1		
Adj Approach Flow, veh/h	100		432		393		17		
Demand Flow Rate, veh/h	102		441		401		17		
Vehicles Circulating, veh/h	358		26		90		461		
Vehicles Exiting, veh/h	120		464		370		6		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	4.5		4.4		5.2		4.0		
Approach LOS	A		A		A		A		
Lane	Left	Right	Left	Right	Left	Right	Left	Right	
Designated Moves	L	TR	L	TR	L	TR	L	TR	
Assumed Moves	L	TR	L	TR	L	TR	L	TR	
RT Channelized									
Lane Util	0.010	0.990	0.773	0.227	0.065	0.935	1.000	0.000	
Follow-Up Headway, s	2.535	2.535	2.535	2.535	2.535	2.535	2.535	2.535	
Critical Headway, s	4.544	4.544	4.544	4.544	4.544	4.544	4.544	4.544	
Entry Flow, veh/h	1	101	341	100	26	375	17	0	
Cap Entry Lane, veh/h	1025	1025	1387	1387	1308	1308	933	933	
Entry HV Adj Factor	1.000	0.976	0.979	0.981	0.962	0.981	1.000	1.000	
Flow Entry, veh/h	1	99	334	98	25	368	17	0	
Cap Entry, veh/h	1025	1001	1358	1361	1258	1284	933	933	
V/C Ratio	0.001	0.099	0.246	0.072	0.020	0.287	0.018	0.000	
Control Delay, s/veh	3.5	4.5	4.7	3.2	3.0	5.4	4.0	3.9	
LOS	A	A	A	A	A	A	A	A	
95th %tile Queue, veh	0	0	1	0	0	1	0	0	

Intersection						
Int Delay, s/veh	2.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	24	11	6	27	9	9
Future Vol, veh/h	24	11	6	27	9	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	12	7	29	10	10

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	38	0	75
Stage 1	-	-	-	-	32
Stage 2	-	-	-	-	43
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1572	-	928
Stage 1	-	-	-	-	991
Stage 2	-	-	-	-	979
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1572	-	923
Mov Cap-2 Maneuver	-	-	-	-	923
Stage 1	-	-	-	-	991
Stage 2	-	-	-	-	974

Approach	EB	WB	NB
HCM Control Delay, s	0	1.3	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	979	-	-	1572	-
HCM Lane V/C Ratio	0.02	-	-	0.004	-
HCM Control Delay (s)	8.8	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	210	247	322	207	157	11	1262	438	171	1232	39
v/c Ratio	0.72	0.73	0.67	0.67	0.40	0.07	0.69	0.52	0.53	0.49	0.05
Control Delay	57.8	53.7	52.0	54.9	9.8	54.8	32.0	5.0	54.7	20.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.8	53.7	52.0	54.9	9.8	54.8	32.0	5.0	54.7	20.3	0.1
Queue Length 50th (ft)	142	163	112	140	0	4	269	0	60	191	0
Queue Length 95th (ft)	235	256	172	230	58	14	366	71	103	326	0
Internal Link Dist (ft)		781		871			467			569	
Turn Bay Length (ft)											
Base Capacity (vph)	393	479	591	403	466	166	2026	894	365	2581	867
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.52	0.54	0.51	0.34	0.07	0.62	0.49	0.47	0.48	0.04

Intersection Summary

2025 with Artesia and Ritz-Carlton Saturday Peak Hour2: Scottsdale Road & Resort Plaza Access/Seville Access



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	2	18	11	22	23	1584	22	22	1425
v/c Ratio	0.01	0.07	0.05	0.09	0.08	0.35	0.02	0.09	0.32
Control Delay	27.0	0.5	27.0	3.1	3.2	2.2	1.0	3.6	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.0	0.5	27.0	3.1	3.2	2.2	1.0	3.6	2.1
Queue Length 50th (ft)	1	0	3	0	0	0	0	0	0
Queue Length 95th (ft)	6	0	18	6	9	100	4	9	86
Internal Link Dist (ft)		324		870		569			299
Turn Bay Length (ft)									
Base Capacity (vph)	841	757	841	745	328	5085	1583	270	5080
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.00	0.02	0.01	0.03	0.07	0.31	0.01	0.08	0.28
Intersection Summary									



## Appendix G.7

Level-of Service without and with Scottsdale Plaza Resort Renovation  
2025 with Artesia, Ritz-Carlton, and Scottsdale Plaza Resort Renovation







2025 plus Plaza Resort AM Peak Hour

1: Scottsdale Road & Indian Bend Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	117	19	337	159	182	44	1025	344	94	1232	87
Future Volume (veh/h)	90	117	19	337	159	182	44	1025	344	94	1232	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	98	127	21	366	173	198	48	1114	374	102	1339	95
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	128	265	43	497	312	265	147	2018	626	206	2106	654
Arrive On Green	0.07	0.09	0.09	0.14	0.17	0.17	0.04	0.40	0.40	0.06	0.41	0.41
Sat Flow, veh/h	1781	3062	496	3456	1870	1585	3456	5106	1585	3456	5106	1585
Grp Volume(v), veh/h	98	73	75	366	173	198	48	1114	374	102	1339	95
Grp Sat Flow(s),veh/h/ln	1781	1777	1781	1728	1870	1585	1728	1702	1585	1728	1702	1585
Q Serve(g_s), s	4.0	2.8	3.0	7.4	6.2	8.7	1.0	12.3	13.7	2.1	15.3	2.7
Cycle Q Clear(g_c), s	4.0	2.8	3.0	7.4	6.2	8.7	1.0	12.3	13.7	2.1	15.3	2.7
Prop In Lane	1.00		0.28	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	128	154	154	497	312	265	147	2018	626	206	2106	654
V/C Ratio(X)	0.77	0.47	0.49	0.74	0.55	0.75	0.33	0.55	0.60	0.49	0.64	0.15
Avail Cap(c_a), veh/h	365	469	470	1106	724	613	236	3302	1025	331	3442	1068
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.3	31.8	31.9	30.0	28.0	29.0	34.0	17.1	17.5	33.3	17.1	13.4
Incr Delay (d2), s/veh	9.2	2.2	2.4	2.1	1.5	4.2	1.3	0.2	0.9	1.8	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	1.3	1.3	3.1	2.8	3.5	0.4	4.5	4.8	0.9	5.5	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.5	34.0	34.2	32.1	29.5	33.2	35.3	17.3	18.4	35.1	17.4	13.5
LnGrp LOS	D	C	C	C	C	C	D	B	B	D	B	B
Approach Vol, veh/h		246			737			1536			1536	
Approach Delay, s/veh		37.5			31.8			18.2			18.4	
Approach LOS		D			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.4	34.6	16.1	12.0	9.1	35.9	10.3	17.9				
Change Period (Y+Rc), s	6.0	5.7	5.6	* 5.7	6.0	5.7	5.0	* 5.7				
Max Green Setting (Gmax), s	7.0	47.3	23.4	* 19	5.0	49.3	15.0	* 28				
Max Q Clear Time (g_c+I1), s	4.1	15.7	9.4	5.0	3.0	17.3	6.0	10.7				
Green Ext Time (p_c), s	0.1	11.8	1.1	0.6	0.0	12.9	0.1	1.5				
Intersection Summary												
HCM 6th Ctrl Delay			21.9									
HCM 6th LOS			C									
Notes												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

2025 with Plaza Resort PM Peak Hour

1: Scottsdale Road & Indian Bend Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	173	40	389	206	214	20	1602	523	207	1505	42
Future Volume (veh/h)	160	173	40	389	206	214	20	1602	523	207	1505	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	174	188	43	423	224	233	22	1741	568	225	1636	46
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	203	215	49	491	336	284	77	2163	671	285	2470	767
Arrive On Green	0.11	0.15	0.15	0.14	0.18	0.18	0.02	0.42	0.42	0.08	0.48	0.48
Sat Flow, veh/h	1781	1473	337	3456	1870	1585	3456	5106	1585	3456	5106	1585
Grp Volume(v), veh/h	174	0	231	423	224	233	22	1741	568	225	1636	46
Grp Sat Flow(s),veh/h/ln	1781	0	1810	1728	1870	1585	1728	1702	1585	1728	1702	1585
Q Serve(g_s), s	10.7	0.0	14.0	13.4	12.5	15.8	0.7	33.3	36.0	7.1	27.2	1.7
Cycle Q Clear(g_c), s	10.7	0.0	14.0	13.4	12.5	15.8	0.7	33.3	36.0	7.1	27.2	1.7
Prop In Lane	1.00		0.19	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	203	0	265	491	336	284	77	2163	671	285	2470	767
V/C Ratio(X)	0.86	0.00	0.87	0.86	0.67	0.82	0.29	0.81	0.85	0.79	0.66	0.06
Avail Cap(c_a), veh/h	239	0	313	569	390	331	155	2253	699	309	2482	770
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.6	0.0	46.7	46.9	42.7	44.1	53.8	28.2	28.9	50.3	21.9	15.3
Incr Delay (d2), s/veh	22.3	0.0	20.4	11.5	3.5	13.2	2.0	2.2	9.2	12.1	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	0.0	7.7	6.5	6.1	7.2	0.3	13.7	15.0	3.6	10.7	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.9	0.0	67.0	58.4	46.2	57.3	55.8	30.3	38.1	62.4	22.6	15.4
LnGrp LOS	E	A	E	E	D	E	E	C	D	E	C	B
Approach Vol, veh/h		405			880			2331			1907	
Approach Delay, s/veh		68.7			55.0			32.5			27.1	
Approach LOS		E			E			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.2	53.0	21.5	22.0	8.5	59.7	17.8	25.7				
Change Period (Y+Rc), s	6.0	5.7	5.6	* 5.7	6.0	5.7	5.0	* 5.7				
Max Green Setting (Gmax), s	10.0	49.3	18.4	* 19	5.0	54.3	15.0	* 23				
Max Q Clear Time (g_c+I1), s	9.1	38.0	15.4	16.0	2.7	29.2	12.7	17.8				
Green Ext Time (p_c), s	0.1	9.3	0.5	0.4	0.0	14.3	0.1	1.0				

Intersection Summary

HCM 6th Ctrl Delay	36.9
HCM 6th LOS	D

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

2025 plus Plaza Resort AM Peak Hour

2: Scottsdale Road & Resort Plaza Access/Seville Access

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	1	13	30	7	30	18	1199	80	50	1370	6
Future Volume (veh/h)	6	1	13	30	7	30	18	1199	80	50	1370	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	7	1	14	33	8	33	20	1303	87	54	1489	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	232	8	116	255	25	102	340	3339	1036	367	3430	16
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.65	0.65	0.65	0.65	0.65	0.65
Sat Flow, veh/h	1366	107	1495	1398	319	1315	351	5106	1585	389	5245	25
Grp Volume(v), veh/h	7	0	15	33	0	41	20	1303	87	54	966	530
Grp Sat Flow(s),veh/h/ln	1366	0	1601	1398	0	1634	351	1702	1585	389	1702	1866
Q Serve(g_s), s	0.2	0.0	0.4	1.0	0.0	1.1	1.3	5.4	0.9	3.4	6.2	6.2
Cycle Q Clear(g_c), s	1.3	0.0	0.4	1.4	0.0	1.1	7.6	5.4	0.9	8.8	6.2	6.2
Prop In Lane	1.00		0.93	1.00		0.80	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	232	0	124	255	0	126	340	3339	1036	367	2226	1220
V/C Ratio(X)	0.03	0.00	0.12	0.13	0.00	0.32	0.06	0.39	0.08	0.15	0.43	0.43
Avail Cap(c_a), veh/h	869	0	871	907	0	889	754	9348	2902	824	6232	3416
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.4	0.0	19.5	20.2	0.0	19.8	5.6	3.6	2.9	5.7	3.8	3.8
Incr Delay (d2), s/veh	0.1	0.0	0.4	0.2	0.0	1.5	0.1	0.1	0.0	0.2	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.1	0.3	0.0	0.4	0.1	0.9	0.1	0.2	1.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.5	0.0	19.9	20.4	0.0	21.3	5.7	3.7	2.9	5.9	3.9	4.0
LnGrp LOS	C	A	B	C	A	C	A	A	A	A	A	A
Approach Vol, veh/h		22			74			1410			1550	
Approach Delay, s/veh		20.1			20.9			3.7			4.0	
Approach LOS		C			C			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		35.6		9.8		35.6		9.8				
Change Period (Y+Rc), s		* 5.9		* 6.3		* 5.9		* 6.3				
Max Green Setting (Gmax), s		* 83		* 25		* 83		* 25				
Max Q Clear Time (g_c+I1), s		9.6		3.3		10.8		3.4				
Green Ext Time (p_c), s		15.7		0.0		18.9		0.2				

Intersection Summary

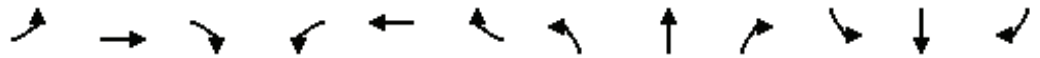
HCM 6th Ctrl Delay	4.4
HCM 6th LOS	A

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

2025 with Plaza Resort PM Peak Hour

2: Scottsdale Road & Resort Plaza Access/Seville Access



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑↑↑	↗	↖	↑↑↑	
Traffic Volume (veh/h)	34	4	51	50	0	40	127	1809	40	20	1653	46
Future Volume (veh/h)	34	4	51	50	0	40	127	1809	40	20	1653	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	37	4	55	54	0	43	138	1966	43	22	1797	50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	164	10	141	150	0	150	238	4021	1248	209	4022	112
Arrive On Green	0.09	0.09	0.09	0.09	0.00	0.09	0.79	0.79	0.79	0.79	0.79	0.79
Sat Flow, veh/h	1364	109	1493	1344	0	1585	250	5106	1585	213	5107	142
Grp Volume(v), veh/h	37	0	59	54	0	43	138	1966	43	22	1197	650
Grp Sat Flow(s),veh/h/ln	1364	0	1602	1344	0	1585	250	1702	1585	213	1702	1845
Q Serve(g_s), s	2.7	0.0	3.6	4.1	0.0	2.6	41.8	13.8	0.6	4.1	11.9	12.0
Cycle Q Clear(g_c), s	5.3	0.0	3.6	7.7	0.0	2.6	53.8	13.8	0.6	17.9	11.9	12.0
Prop In Lane	1.00		0.93	1.00		1.00	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	164	0	152	150	0	150	238	4021	1248	209	2681	1453
V/C Ratio(X)	0.23	0.00	0.39	0.36	0.00	0.29	0.58	0.49	0.03	0.11	0.45	0.45
Avail Cap(c_a), veh/h	272	0	278	257	0	276	257	4428	1375	226	2952	1600
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.1	0.0	44.1	47.7	0.0	43.6	12.4	3.8	2.4	6.9	3.6	3.6
Incr Delay (d2), s/veh	0.7	0.0	1.6	1.4	0.0	1.0	2.8	0.1	0.0	0.2	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	1.5	1.4	0.0	1.1	2.2	3.5	0.1	0.2	3.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.8	0.0	45.7	49.1	0.0	44.7	15.2	3.9	2.4	7.1	3.7	3.8
LnGrp LOS	D	A	D	D	A	D	B	A	A	A	A	A
Approach Vol, veh/h		96			97			2147			1869	
Approach Delay, s/veh		46.1			47.1			4.6			3.8	
Approach LOS		D			D			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		87.5		16.1		87.5		16.1				
Change Period (Y+Rc), s		* 5.9		* 6.3		* 5.9		* 6.3				
Max Green Setting (Gmax), s		* 90		* 18		* 90		* 18				
Max Q Clear Time (g_c+I1), s		55.8		7.3		19.9		9.7				
Green Ext Time (p_c), s		25.8		0.2		26.9		0.2				

Intersection Summary

HCM 6th Ctrl Delay	6.2
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

2025 plus Plaza Resort AM Peak Hour

3: Scottsdale Road & Hummingbird Lane/Artesia Access

Intersection												
Int Delay, s/veh	43.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↔		↕	↑	↕	↕	↑↑↑	↕	↕	↑↑↑	
Traffic Vol, veh/h	21	16	34	62	0	148	25	1262	0	90	1330	23
Future Vol, veh/h	21	16	34	62	0	148	25	1262	0	90	1330	23
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	-	0	0	-	0	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	17	37	67	0	161	27	1372	0	98	1446	25

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2258	3081	736	2209	3093	686	1471	0	0	1372	0	0
Stage 1	1655	1655	-	1426	1426	-	-	-	-	-	-	-
Stage 2	603	1426	-	783	1667	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	44	~ 12	310	~ 47	12	334	230	-	-	258	-	-
Stage 1	68	154	-	100	199	-	-	-	-	-	-	-
Stage 2	413	199	-	320	152	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 15	~ 7	310	-	7	334	230	-	-	258	-	-
Mov Cap-2 Maneuver	~ 15	~ 7	-	-	7	-	-	-	-	-	-	-
Stage 1	60	95	-	88	176	-	-	-	-	-	-	-
Stage 2	189	176	-	143	94	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, \$ 1789.4			0.4	1.7
HCM LOS	F	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	230	-	-	19	-	-	334	258	-	-
HCM Lane V/C Ratio	0.118	-	-	4.062	-	-	0.482	0.379	-	-
HCM Control Delay (s)	22.7	-	-	\$ 1789.4	-	0	25.4	27.2	-	-
HCM Lane LOS	C	-	-	F	-	A	D	D	-	-
HCM 95th %tile Q(veh)	0.4	-	-	10.1	-	-	2.5	1.7	-	-

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

Intersection												
Int Delay, s/veh	339.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↑	↗	↕	↑↑↑	↗	↕	↑↑↑	
Traffic Vol, veh/h	34	0	67	41	0	90	53	1616	90	120	1611	32
Future Vol, veh/h	34	0	67	41	0	90	53	1616	90	120	1611	32
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	-	0	0	-	0	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	37	0	73	45	0	98	58	1757	98	130	1751	35

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	2848	4000	893	2833	3919	879	1786	0	0	1855	0	0
Stage 1	2029	2029	-	1873	1873	-	-	-	-	-	-	-
Stage 2	819	1971	-	960	2046	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	~ 18	3	244	~ 19	3	250	160	-	-	148	-	-
Stage 1	37	100	-	48	120	-	-	-	-	-	-	-
Stage 2	304	107	-	249	98	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 2	0	244	~ 3	0	250	160	-	-	148	-	-
Mov Cap-2 Maneuver	~ 2	0	-	~ 3	0	-	-	-	-	-	-	-
Stage 1	~ 24	12	-	~ 31	77	-	-	-	-	-	-	-
Stage 2	118	68	-	~ 21	12	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, \$	8978.7	2690.6	1.2	7.1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	160	-	-	6	3	-	250	148	-	-
HCM Lane V/C Ratio	0.36	-	-	18.297	14.855	-	0.391	0.881	-	-
HCM Control Delay (s)	39.6	-	-	8978.7	8534.3	0	28.4	104.4	-	-
HCM Lane LOS	E	-	-	F	F	A	D	F	-	-
HCM 95th %tile Q(veh)	1.5	-	-	15.6	7.4	-	1.8	6	-	-

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

Intersection									
Intersection Delay, s/veh	3.7								
Intersection LOS	A								
Approach	EB		WB		NB		SB		
Entry Lanes	2		2		2		2		
Conflicting Circle Lanes	1		1		1		1		
Adj Approach Flow, veh/h	128		319		148		13		
Demand Flow Rate, veh/h	130		325		151		13		
Vehicles Circulating, veh/h	210		23		124		328		
Vehicles Exiting, veh/h	131		252		216		20		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	3.9		3.6		3.7		3.5		
Approach LOS	A		A		A		A		
Lane	Left	Right	Left	Right	Left	Right	Left	Right	
Designated Moves	L	TR	L	TR	L	TR	L	TR	
Assumed Moves	L	TR	L	TR	L	TR	L	TR	
RT Channelized									
Lane Util	0.092	0.908	0.615	0.385	0.073	0.927	0.769	0.231	
Follow-Up Headway, s	2.535	2.535	2.535	2.535	2.535	2.535	2.535	2.535	
Critical Headway, s	4.544	4.544	4.544	4.544	4.544	4.544	4.544	4.544	
Entry Flow, veh/h	12	118	200	125	11	140	10	3	
Cap Entry Lane, veh/h	1173	1173	1391	1391	1269	1269	1054	1054	
Entry HV Adj Factor	1.000	0.983	0.980	0.982	1.000	0.979	1.000	1.000	
Flow Entry, veh/h	12	116	196	123	11	137	10	3	
Cap Entry, veh/h	1173	1153	1363	1365	1269	1241	1054	1054	
V/C Ratio	0.010	0.101	0.144	0.090	0.009	0.110	0.009	0.003	
Control Delay, s/veh	3.2	4.0	3.8	3.3	2.9	3.8	3.5	3.4	
LOS	A	A	A	A	A	A	A	A	
95th %tile Queue, veh	0	0	1	0	0	0	0	0	



Intersection									
Intersection Delay, s/veh	4.6								
Intersection LOS	A								
Approach	EB		WB		NB		SB		
Entry Lanes	2		2		2		2		
Conflicting Circle Lanes	1		1		1		1		
Adj Approach Flow, veh/h	226		449		290		46		
Demand Flow Rate, veh/h	231		458		295		47		
Vehicles Circulating, veh/h	264		98		223		435		
Vehicles Exiting, veh/h	218		420		272		121		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	4.3		4.3		5.2		4.1		
Approach LOS	A		A		A		A		
Lane	Left	Right	Left	Right	Left	Right	Left	Right	
Designated Moves	L	TR	L	TR	L	TR	L	TR	
Assumed Moves	L	TR	L	TR	L	TR	L	TR	
RT Channelized									
Lane Util	0.346	0.654	0.548	0.452	0.061	0.939	0.277	0.723	
Follow-Up Headway, s	2.535	2.535	2.535	2.535	2.535	2.535	2.535	2.535	
Critical Headway, s	4.544	4.544	4.544	4.544	4.544	4.544	4.544	4.544	
Entry Flow, veh/h	80	151	251	207	18	277	13	34	
Cap Entry Lane, veh/h	1117	1117	1299	1299	1159	1159	956	956	
Entry HV Adj Factor	0.975	0.983	0.980	0.979	1.000	0.982	1.000	0.971	
Flow Entry, veh/h	78	148	246	203	18	272	13	33	
Cap Entry, veh/h	1089	1098	1273	1272	1159	1138	956	928	
V/C Ratio	0.072	0.135	0.193	0.159	0.016	0.239	0.014	0.036	
Control Delay, s/veh	3.9	4.5	4.5	4.2	3.2	5.3	3.9	4.2	
LOS	A	A	A	A	A	A	A	A	
95th %tile Queue, veh	0	0	1	1	0	1	0	0	

Intersection						
Int Delay, s/veh	1.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	64	8	10	38	1	7
Future Vol, veh/h	64	8	10	38	1	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	70	9	11	41	1	8

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	79	0	138
Stage 1	-	-	-	-	75
Stage 2	-	-	-	-	63
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1519	-	855
Stage 1	-	-	-	-	948
Stage 2	-	-	-	-	960
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1519	-	849
Mov Cap-2 Maneuver	-	-	-	-	849
Stage 1	-	-	-	-	948
Stage 2	-	-	-	-	953

Approach	EB	WB	NB
HCM Control Delay, s	0	1.5	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	967	-	-	1519	-
HCM Lane V/C Ratio	0.009	-	-	0.007	-
HCM Control Delay (s)	8.8	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection						
Int Delay, s/veh	4.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	36	27	37	48	8	65
Future Vol, veh/h	36	27	37	48	8	65
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	39	29	40	52	9	71












Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	68	0	186 54
Stage 1	-	-	-	-	54 -
Stage 2	-	-	-	-	132 -
Critical Hdwy	-	-	4.12	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	2.218	-	3.518 3.318
Pot Cap-1 Maneuver	-	-	1533	-	803 1013
Stage 1	-	-	-	-	969 -
Stage 2	-	-	-	-	894 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1533	-	781 1013
Mov Cap-2 Maneuver	-	-	-	-	781 -
Stage 1	-	-	-	-	969 -
Stage 2	-	-	-	-	870 -

Approach	EB	WB	NB
HCM Control Delay, s	0	3.2	9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	981	-	-	1533	-
HCM Lane V/C Ratio	0.081	-	-	0.026	-
HCM Control Delay (s)	9	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-










2025 plus Plaza Resort AM Peak Hour

1: Scottsdale Road & Indian Bend Road

											
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	98	148	366	173	198	48	1114	374	102	1339	95
v/c Ratio	0.46	0.37	0.60	0.43	0.40	0.23	0.56	0.44	0.37	0.60	0.12
Control Delay	48.2	39.4	40.3	39.9	9.8	49.4	22.6	4.0	48.7	21.1	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.2	39.4	40.3	39.9	9.8	49.4	22.6	4.0	48.7	21.1	0.3
Queue Length 50th (ft)	53	38	100	91	6	13	175	0	28	214	0
Queue Length 95th (ft)	122	80	176	185	70	38	263	57	67	319	0
Internal Link Dist (ft)		781		871			467			569	
Turn Bay Length (ft)											
Base Capacity (vph)	320	818	971	637	664	207	2908	1065	290	3031	1014
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.18	0.38	0.27	0.30	0.23	0.38	0.35	0.35	0.44	0.09
Intersection Summary											

2025 plus Plaza Resort AM Peak Hour

2: Scottsdale Road & Resort Plaza Access/Seville Access

									
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	7	15	33	41	20	1303	87	54	1496
v/c Ratio	0.03	0.07	0.13	0.16	0.09	0.32	0.07	0.18	0.37
Control Delay	22.8	13.6	24.1	13.1	4.9	3.5	1.2	5.8	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.8	13.6	24.1	13.1	4.9	3.5	1.2	5.8	3.7
Queue Length 50th (ft)	2	0	11	3	2	59	0	6	71
Queue Length 95th (ft)	12	15	33	26	9	88	11	21	105
Internal Link Dist (ft)		324		870		569			299
Turn Bay Length (ft)									
Base Capacity (vph)	904	804	904	831	294	5085	1583	373	5080
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.02	0.04	0.05	0.07	0.26	0.05	0.14	0.29
Intersection Summary									



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	174	231	423	224	233	22	1741	568	225	1636	46
v/c Ratio	0.81	0.83	0.83	0.66	0.59	0.15	0.81	0.60	0.78	0.64	0.05
Control Delay	79.0	71.5	63.3	54.7	26.9	57.8	34.3	6.7	71.8	24.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
Total Delay	79.0	71.5	63.3	54.7	26.9	57.8	34.3	6.7	71.8	24.5	0.1
Queue Length 50th (ft)	133	168	164	160	74	8	435	33	89	366	0
Queue Length 95th (ft)	#247	#289	#235	246	160	23	501	129	#150	423	0
Internal Link Dist (ft)		781		871			467			569	
Turn Bay Length (ft)											
Base Capacity (vph)	226	304	538	369	414	146	2137	954	292	2546	855
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	213	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.76	0.79	0.61	0.56	0.15	0.81	0.60	0.77	0.70	0.05

Intersection Summary

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



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	37	59	54	43	138	1966	43	22	1847
v/c Ratio	0.32	0.33	0.47	0.26	0.85	0.46	0.03	0.16	0.43
Control Delay	55.0	25.0	61.9	25.5	55.4	3.8	0.9	6.0	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Total Delay	55.0	25.0	61.9	25.5	55.4	4.0	0.9	6.0	3.6
Queue Length 50th (ft)	25	11	38	8	53	130	0	3	117
Queue Length 95th (ft)	60	51	79	43	#115	193	7	13	175
Internal Link Dist (ft)		324		870		569			299
Turn Bay Length (ft)									
Base Capacity (vph)	213	288	210	275	162	4264	1334	140	4249
Starvation Cap Reductn	0	0	0	0	0	1149	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.20	0.26	0.16	0.85	0.63	0.03	0.16	0.43

Intersection Summary

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

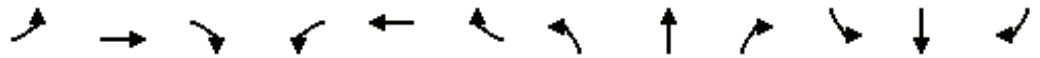
2025 with Three Developments Saturday Peak Hour

1: Scottsdale Road & Indian Bend Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	190	37	296	190	164	10	1308	403	167	1256	37
Future Volume (veh/h)	195	190	37	296	190	164	10	1308	403	167	1256	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	212	207	40	322	207	178	11	1422	438	182	1365	40
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	252	251	48	414	280	237	46	1992	618	257	2304	715
Arrive On Green	0.14	0.16	0.16	0.12	0.15	0.15	0.01	0.39	0.39	0.07	0.45	0.45
Sat Flow, veh/h	1781	1523	294	3456	1870	1585	3456	5106	1585	3456	5106	1585
Grp Volume(v), veh/h	212	0	247	322	207	178	11	1422	438	182	1365	40
Grp Sat Flow(s),veh/h/ln	1781	0	1817	1728	1870	1585	1728	1702	1585	1728	1702	1585
Q Serve(g_s), s	10.6	0.0	12.0	8.3	9.7	9.9	0.3	21.6	21.3	4.7	18.3	1.3
Cycle Q Clear(g_c), s	10.6	0.0	12.0	8.3	9.7	9.9	0.3	21.6	21.3	4.7	18.3	1.3
Prop In Lane	1.00		0.16	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	252	0	299	414	280	237	46	1992	618	257	2304	715
V/C Ratio(X)	0.84	0.00	0.83	0.78	0.74	0.75	0.24	0.71	0.71	0.71	0.59	0.06
Avail Cap(c_a), veh/h	428	0	514	671	455	386	189	2413	749	377	2692	836
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.3	0.0	37.0	39.1	37.3	37.3	44.7	23.6	23.5	41.4	18.8	14.2
Incr Delay (d2), s/veh	7.4	0.0	5.7	3.2	3.8	4.7	2.6	0.8	2.4	3.6	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	0.0	5.7	3.6	4.7	4.1	0.1	8.4	8.1	2.1	6.9	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.7	0.0	42.7	42.3	41.1	42.1	47.4	24.4	26.0	45.0	19.1	14.2
LnGrp LOS	D	A	D	D	D	D	D	C	C	D	B	B
Approach Vol, veh/h		459			707			1871			1587	
Approach Delay, s/veh		44.1			41.9			24.9			21.9	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.8	41.4	16.6	20.8	7.2	47.0	18.0	19.4				
Change Period (Y+Rc), s	6.0	5.7	5.6	* 5.7	6.0	5.7	5.0	* 5.7				
Max Green Setting (Gmax), s	10.0	43.3	17.8	* 26	5.0	48.3	22.0	* 22				
Max Q Clear Time (g_c+I1), s	6.7	23.6	10.3	14.0	2.3	20.3	12.6	11.9				
Green Ext Time (p_c), s	0.2	12.2	0.7	1.1	0.0	12.2	0.4	1.3				
Intersection Summary												
HCM 6th Ctrl Delay			28.4									
HCM 6th LOS			C									
Notes												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												



2025 with Three Developments Saturday Peak Hour 2: Scottsdale Road & Resort Plaza Access/Seville Access



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑↑↑	↗	↖	↑↑↑	
Traffic Volume (veh/h)	15	0	121	10	0	20	162	1485	20	20	1323	92
Future Volume (veh/h)	15	0	121	10	0	20	162	1485	20	20	1323	92
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	16	0	132	11	0	22	176	1614	22	22	1438	100
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	212	0	175	114	0	175	299	3880	1204	276	3704	258
Arrive On Green	0.11	0.00	0.11	0.11	0.00	0.11	0.76	0.76	0.76	0.76	0.76	0.76
Sat Flow, veh/h	1390	0	1585	1258	0	1585	337	5106	1585	307	4874	339
Grp Volume(v), veh/h	16	0	132	11	0	22	176	1614	22	22	1004	534
Grp Sat Flow(s),veh/h/ln	1390	0	1585	1258	0	1585	337	1702	1585	307	1702	1809
Q Serve(g_s), s	1.0	0.0	7.6	0.8	0.0	1.2	34.9	10.4	0.3	2.5	9.4	9.4
Cycle Q Clear(g_c), s	2.2	0.0	7.6	8.4	0.0	1.2	44.3	10.4	0.3	13.0	9.4	9.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.19
Lane Grp Cap(c), veh/h	212	0	175	114	0	175	299	3880	1204	276	2587	1375
V/C Ratio(X)	0.08	0.00	0.76	0.10	0.00	0.13	0.59	0.42	0.02	0.08	0.39	0.39
Avail Cap(c_a), veh/h	326	0	304	216	0	304	366	4885	1517	336	3257	1731
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.7	0.0	40.5	44.6	0.0	37.7	11.4	4.0	2.7	6.2	3.8	3.8
Incr Delay (d2), s/veh	0.1	0.0	6.5	0.4	0.0	0.3	1.8	0.1	0.0	0.1	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	3.2	0.3	0.0	0.5	2.4	2.7	0.1	0.2	2.4	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.8	0.0	47.1	45.0	0.0	38.0	13.2	4.0	2.7	6.4	3.9	4.0
LnGrp LOS	D	A	D	D	A	D	B	A	A	A	A	A
Approach Vol, veh/h		148			33			1812			1560	
Approach Delay, s/veh		46.2			40.3			4.9			4.0	
Approach LOS		D			D			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		77.2		16.6		77.2		16.6				
Change Period (Y+Rc), s		* 5.9		* 6.3		* 5.9		* 6.3				
Max Green Setting (Gmax), s		* 90		* 18		* 90		* 18				
Max Q Clear Time (g_c+I1), s		46.3		9.6		15.0		10.4				
Green Ext Time (p_c), s		25.0		0.4		19.0		0.0				

Intersection Summary

HCM 6th Ctrl Delay	6.6
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection												
Int Delay, s/veh	42.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↑	↗	↕	↑↑↑	↗	↕	↑↑↑	
Traffic Vol, veh/h	20	0	47	55	0	105	51	1252	49	110	1333	22
Future Vol, veh/h	20	0	47	55	0	105	51	1252	49	110	1333	22
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	-	0	0	-	0	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	0	51	60	0	114	55	1361	53	120	1449	24

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	2355	3225	737	2291	3184	681	1473	0	0	1414	0	0
Stage 1	1701	1701	-	1471	1471	-	-	-	-	-	-	-
Stage 2	654	1524	-	820	1713	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	38	9	310	~42	10	337	230	-	-	246	-	-
Stage 1	63	146	-	93	190	-	-	-	-	-	-	-
Stage 2	384	179	-	304	144	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~13	4	310	~18	4	337	230	-	-	246	-	-
Mov Cap-2 Maneuver	~13	4	-	~18	4	-	-	-	-	-	-	-
Stage 1	48	75	-	71	145	-	-	-	-	-	-	-
Stage 2	193	136	-	130	74	-	-	-	-	-	-	-

Approach	EB		WB		NB			SB		
HCM Control Delay, s	\$ 608		\$ 523.8		1			2.5		
HCM LOS	F		F							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	230	-	-	40	18	-	337	246	-	-
HCM Lane V/C Ratio	0.241	-	-	1.821	3.321	-	0.339	0.486	-	-
HCM Control Delay (s)	25.6	-	-	\$ 608	1483.4	0	21.1	32.7	-	-
HCM Lane LOS	D	-	-	F	F	A	C	D	-	-
HCM 95th %tile Q(veh)	0.9	-	-	7.7	8	-	1.5	2.5	-	-

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

Intersection									
Intersection Delay, s/veh	4.9								
Intersection LOS	A								
Approach	EB		WB		NB		SB		
Entry Lanes	2		2		2		2		
Conflicting Circle Lanes	1		1		1		1		
Adj Approach Flow, veh/h	132		443		393		92		
Demand Flow Rate, veh/h	135		452		401		94		
Vehicles Circulating, veh/h	377		59		142		460		
Vehicles Exiting, veh/h	177		483		370		51		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	4.4		4.5		5.5		4.4		
Approach LOS	A		A		A		A		
Lane	Left	Right	Left	Right	Left	Right	Left	Right	
Designated Moves	L	TR	L	TR	L	TR	L	TR	
Assumed Moves	L	TR	L	TR	L	TR	L	TR	
RT Channelized									
Lane Util	0.252	0.748	0.754	0.246	0.065	0.935	0.383	0.617	
Follow-Up Headway, s	2.535	2.535	2.535	2.535	2.535	2.535	2.535	2.535	
Critical Headway, s	4.544	4.544	4.544	4.544	4.544	4.544	4.544	4.544	
Entry Flow, veh/h	34	101	341	111	26	375	36	58	
Cap Entry Lane, veh/h	1008	1008	1346	1346	1248	1248	934	934	
Entry HV Adj Factor	0.971	0.976	0.979	0.983	0.962	0.981	0.972	0.983	
Flow Entry, veh/h	33	99	334	109	25	368	35	57	
Cap Entry, veh/h	978	984	1318	1324	1200	1225	908	918	
V/C Ratio	0.034	0.100	0.253	0.082	0.021	0.300	0.039	0.062	
Control Delay, s/veh	4.0	4.6	4.9	3.4	3.2	5.7	4.3	4.5	
LOS	A	A	A	A	A	A	A	A	
95th %tile Queue, veh	0	0	1	0	0	1	0	0	

Intersection						
Int Delay, s/veh	4.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	24	78	46	27	43	43
Future Vol, veh/h	24	78	46	27	43	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	85	50	29	47	47












Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	111	0	198
Stage 1	-	-	-	-	69
Stage 2	-	-	-	-	129
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1479	-	791
Stage 1	-	-	-	-	954
Stage 2	-	-	-	-	897
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1479	-	764
Mov Cap-2 Maneuver	-	-	-	-	764
Stage 1	-	-	-	-	954
Stage 2	-	-	-	-	867

Approach	EB	WB	NB
HCM Control Delay, s	0	4.7	9.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	864	-	-	1479	-
HCM Lane V/C Ratio	0.108	-	-	0.034	-
HCM Control Delay (s)	9.7	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-

2025 with Three Developments Saturday Peak Hour

1: Scottsdale Road & Indian Bend Road

											
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	212	247	322	207	178	11	1422	438	182	1365	40
v/c Ratio	0.74	0.75	0.68	0.69	0.47	0.07	0.73	0.50	0.60	0.53	0.05
Control Delay	60.9	56.3	53.7	57.0	14.7	55.3	32.5	4.8	59.1	20.6	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.9	56.3	53.7	57.0	14.7	55.3	32.5	4.8	59.1	20.6	0.1
Queue Length 50th (ft)	146	166	114	143	17	4	315	2	65	221	0
Queue Length 95th (ft)	239	260	172	230	83	14	414	71	110	365	0
Internal Link Dist (ft)		781		871			467			569	
Turn Bay Length (ft)											
Base Capacity (vph)	362	443	568	386	447	159	2050	897	319	2584	868
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.56	0.57	0.54	0.40	0.07	0.69	0.49	0.57	0.53	0.05
Intersection Summary											

2025 with Three Developments Saturday Peak Hour 2: Scottsdale Road & Resort Plaza Access/Seville Access



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	16	132	11	22	176	1614	22	22	1538
v/c Ratio	0.13	0.61	0.11	0.11	0.81	0.40	0.02	0.11	0.39
Control Delay	48.6	32.3	48.8	1.1	38.5	3.8	0.8	4.3	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	48.6	32.3	48.8	1.1	38.5	3.9	0.8	4.3	3.6
Queue Length 50th (ft)	11	32	7	0	51	90	0	3	82
Queue Length 95th (ft)	32	95	26	0	#254	149	4	11	137
Internal Link Dist (ft)		324		870		569			299
Turn Bay Length (ft)									
Base Capacity (vph)	243	348	191	328	234	4329	1352	215	4290
Starvation Cap Reductn	0	0	0	0	0	1294	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.38	0.06	0.07	0.75	0.53	0.02	0.10	0.36

Intersection Summary

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



## Appendix G.8

### Level-of Service without and with Scottsdale Plaza Resort Renovation Complete Level-of-Service Results Summary







MORNING PEAK HOUR

	EXISTING 2022		ADJUSTED 2022		2025		2025 WITH ARTESIA		2025 ARTESIA & RITZ		2025 WITH PLAZA	
	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS
Scottsdale / Indian Bend	18.9	B	19.6	B	19.1	B	19.2	B	23.0	C	21.9	C
Northbound	16.6	B	16.9	B	16.8	B	17.2	B	18.4	B	18.2	B
Left	48.1	D	48.8	D	45.5	D	44.9	D	45.1	D	35.3	D
Through	16.0	B	16.2	B	16.3	B	16.7	B	17.3	B	17.3	B
Right	17.7	B	18.1	B	17.3	B	17.8	B	18.3	B	18.4	B
Southbound	15.2	B	15.6	B	15.7	B	16.2	B	19.4	B	18.4	B
Left	31.5	C	33.6	C	32.3	C	31.7	C	37.0	D	35.1	D
Through	13.8	B	14.0	B	14.3	B	14.8	B	17.9	B	17.4	B
Right	14.0	B	14.2	B	14.6	B	15.1	B	18.4	B	13.5	B
Eastbound	33.5	C	36.3	D	34.8	C	34.2	C	43.5	D	37.5	D
Left	39.8	D	41.8	D	40.9	D	40.3	D	51.4	D	42.5	D
Through	32.5	C	35.8	D	33.8	C	33.1	C	39.2	D	34.0	C
Right	29.5	C	31.7	C	29.7	C	29.2	C	32.2	C	34.2	C
Westbound	27.7	C	29.5	C	28.3	C	27.5	C	33.2	C	31.8	C
Left	29.5	C	31.2	C	30.2	C	29.3	C	34.3	C	32.1	C
Through	22.7	C	24.0	C	23.4	C	22.7	C	30.4	C	29.5	C
Right	26.4	C	28.5	C	27.2	C	26.3	C	33.7	C	33.2	C

	EXISTING 2022		ADJUSTED 2022		2025		2025 WITH ARTESIA		2025 ARTESIA & RITZ		2025 WITH PLAZA	
	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS
Scottsdale / Resort	4.7	A	4.6	A	4.5	A	4.4	A	4.2	A	4.4	A
Northbound	4.1	A	4.0	A	3.9	A	3.8	A	3.6	A	3.7	A
Left	5.4	A	5.4	A	5.3	A	5.3	A	5.3	A	5.7	A
Through	4.2	A	4.1	A	3.9	A	3.9	A	3.6	A	3.7	A
Right	3.5	A	3.4	A	3.2	A	3.1	A	2.8	A	2.9	A
Southbound	4.4	A	4.3	A	4.1	A	4.1	A	3.9	A	4.0	A
Left	6.0	A	6.1	A	5.9	A	5.8	A	5.7	A	5.9	A
Through	4.3	A	4.2	A	4.0	A	4.0	A	3.8	A	3.9	A
Right	4.4	A	4.3	A	4.1	A	4.1	A	3.9	A	4.0	A
Eastbound	15.5	B	16.7	B	17.0	B	17.5	B	20.0	C	20.1	C
Left	15.6	B	16.9	B	17.3	B	17.8	B	20.4	C	20.5	C
Through and Right	15.5	B	16.7	B	16.9	B	17.4	B	19.9	B	19.9	B
Westbound	15.9	B	17.2	B	17.8	B	18.2	B	20.9	C	20.9	C
Left	15.6	B	16.9	B	17.3	B	17.8	B	20.4	C	20.4	C
Through and Right	16.1	B	17.4	B	18.2	B	18.7	B	21.3	C	21.3	C



EVENING PEAK HOUR

	EXISTING 2022		ADJUSTED 2022		2025		2025 WITH ARTESIA		2025 ARTESIA & RITZ		2025 WITH PLAZA	
	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS
Scottsdale / Indian Bend	21.7	C	23.5	C	22.4	C	22.5	C	35.4	D	36.9	D
Northbound	18.2	B	19.6	B	19.0	B	19.7	B	31.6	C	32.5	C
Left	50.9	D	53.9	D	50.3	D	50.1	D	54.5	D	55.8	E
Through	17.3	B	18.4	B	18.2	B	19.0	B	28.6	C	30.3	C
Right	19.7	B	21.8	C	19.7	B	20.4	C	39.3	D	38.1	D
Southbound	17.1	B	18.1	B	18.1	B	18.5	B	26.5	C	27.1	C
Left	40.4	D	43.5	D	41.5	D	41.5	D	59.5	E	62.4	E
Through	14.3	B	15.0	B	15.5	B	15.9	B	22.2	C	22.6	C
Right	14.5	B	15.3	B	15.8	B	16.2	B	15.5	B	15.4	B
Eastbound	42.8	D	46.2	D	44.0	D	43.9	D	63.8	E	68.7	E
Left	48.1	D	52.0	D	49.5	D	49.4	D	65.6	E	70.9	E
Through	41.9	D	45.0	D	43.2	D	43.1	D	62.4	E	67.0	E
Right	38.0	D	41.0	D	38.4	D	38.3	D	62.4	E	67.0	E
Westbound	36.2	D	40.3	D	37.3	D	35.6	D	50.4	D	55.0	E
Left	38.8	D	44.1	D	40.4	D	37.3	D	54.8	D	58.4	E
Through	29.6	C	31.6	C	30.6	C	30.2	C	44.0	D	46.2	D
Right	34.4	C	37.2	D	35.3	D	35.3	D	48.5	D	57.3	E

	EXISTING 2022		ADJUSTED 2022		2025		2025 WITH ARTESIA		2025 ARTESIA & RITZ		2025 WITH PLAZA	
	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS
Scottsdale / Resort	5.0	A	4.9	A	4.7	A	4.7	A	4.5	A	6.2	A
Northbound	4.3	A	4.1	A	4.0	A	4.0	A	3.8	A	4.6	A
Left	5.9	A	5.9	A	5.9	A	5.8	A	5.5	A	15.2	B
Through	4.3	A	4.2	A	4.0	A	4.0	A	3.8	A	3.9	A
Right	3.1	A	2.9	A	2.8	A	2.7	A	2.4	A	2.4	A
Southbound	4.3	A	4.1	A	4.1	A	4.0	A	3.6	A	3.8	A
Left	6.4	A	6.5	A	6.3	A	6.4	A	6.8	A	7.1	A
Through	4.2	A	4.1	A	4.0	A	3.9	A	3.6	A	3.7	A
Right	4.3	A	4.2	A	4.1	A	4.1	A	3.7	A	3.8	A
Eastbound	19.3	B	21.3	C	21.4	C	22.3	C	27.0	C	46.1	D
Left	19.6	B	21.7	C	22.0	C	22.8	C	27.7	C	46.8	D
Through and Right	19.1	B	21.0	C	21.1	C	21.9	C	26.6	C	45.7	D
Westbound	20.0	C	22.1	C	22.4	C	23.3	C	28.3	C	47.1	D
Left	20.1	C	22.2	C	22.2	C	23.1	C	28.1	C	49.1	D
Through and Right	19.8	B	22.0	C	22.6	C	23.5	C	28.7	C	44.7	D



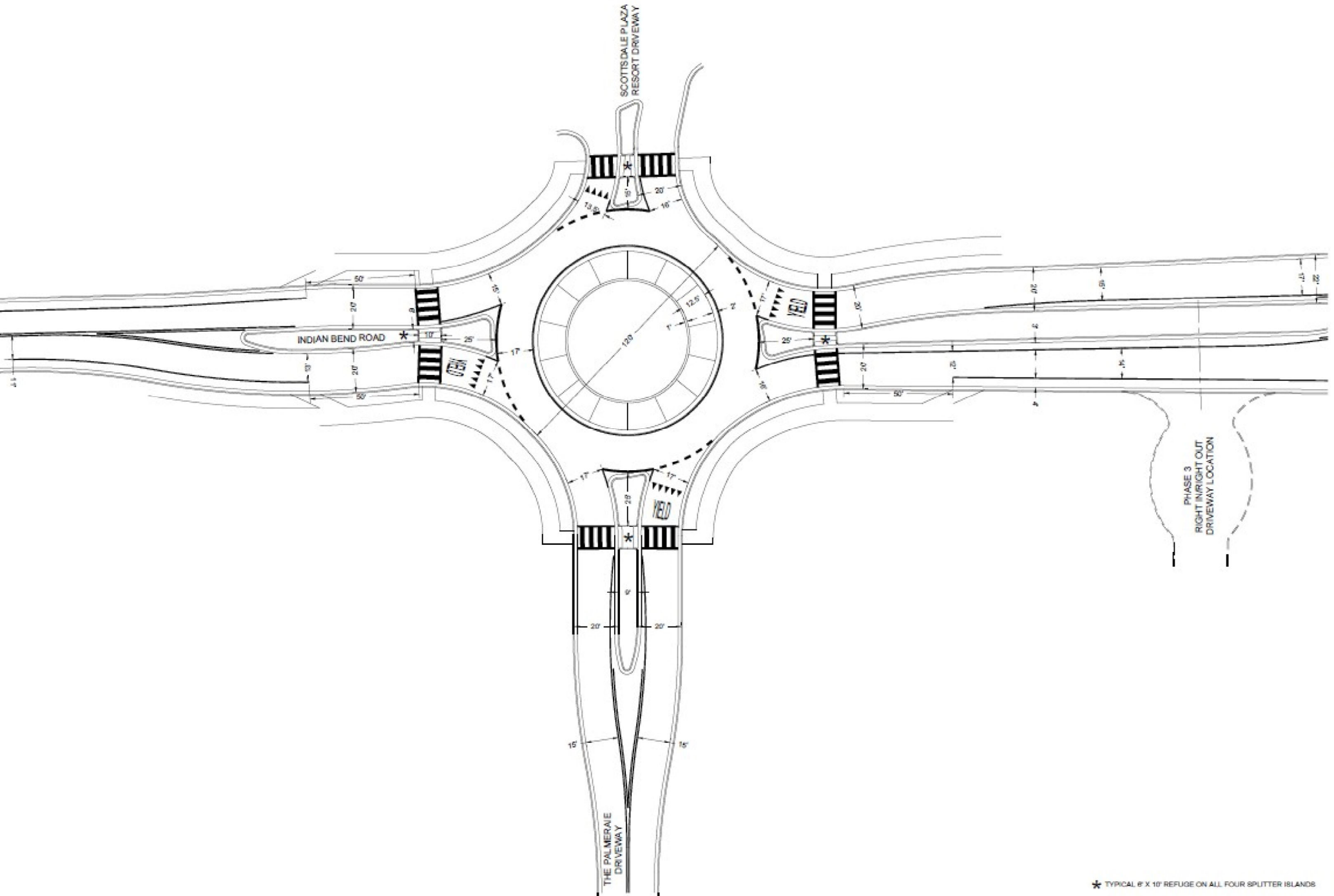
SATURDAY PEAK HOUR

	2025 ARTESIA & RITZ		2025 WITH PLAZA	
	DELAY	LOS	DELAY	LOS
Scottsdale / Indian Bend	30.9	C	29.0	C
Northbound	26.9	C	25.0	C
Left	48.5	D	48.6	D
Through	25.7	C	24.6	C
Right	29.6	C	25.6	C
Southbound	24.2	C	22.2	C
Left	49.7	D	47.9	D
Through	20.5	C	18.9	<b>B</b>
Right	15.6	B	14.1	B
Eastbound	49.1	D	45.5	D
Left	51.1	D	47.5	D
Through	47.5	D	43.9	D
Right	47.5	D	43.9	D
Westbound	43.6	D	44.2	D
Left	46.7	D	44.6	D
Through	41.3	D	42.6	D
Right	40.7	D	45.4	D

	2025 ARTESIA & RITZ		2025 WITH PLAZA	
	DELAY	LOS	DELAY	LOS
Scottsdale / Resort	4.8	A	7.1	A
Northbound	4.2	A	5.5	A
Left	5.9	A	16.7	<b>B</b>
Through	4.2	A	4.1	A
Right	3.2	A	2.8	A
Southbound	4.3	A	4.0	A
Left	6.0	A	6.6	A
Through	4.3	A	4.0	A
Right	4.4	A	4.0	A
Eastbound	17.5	B	50.2	<b>D</b>
Left	17.8	B	42.2	<b>D</b>
Through and Right	17.5	B	51.2	<b>D</b>
Westbound	18.1	B	44.0	<b>D</b>
Left	17.8	B	49.3	<b>D</b>
Through and Right	18.4	B	41.3	<b>D</b>

SATURDAY PEAK HOUR

	2025 ARTESIA & RITZ		2025 WITH PLAZA	
	DELAY	LOS	DELAY	LOS
Scottsdale / Hummingbird	21.4	C	42.6	E
Northbound	0.4	A	1.0	A
Left	20.5	C	25.6	D
Through	0.0	A	0.0	A
Right	0.0	A	0.0	A
Southbound	2.6	A	2.5	A
Left	31.9	D	32.7	D
Through and Right	0.0	A	0.0	A
Eastbound	120.0	F	120.0	F
Westbound	120.0	F	120.0	F
Left	120.0	F	120.0	F
Through	0.0	A	0.0	A
Right	20.8	C	21.1	C
Resort / Indian Bend	4.8	A	4.9	A
Northbound	5.4	A	5.5	A
Left	3.1	A	3.2	A
Through and Right	5.6	A	5.7	A
Southbound	4.1	A	4.4	A
Left	4.1	A	4.3	A
Through and Right	4.0	A	4.5	A
Eastbound	4.8	A	4.4	A
Left	3.5	A	4.0	A
Through and Right	4.8	A	4.6	A
Westbound	4.4	A	4.5	A
Left	4.7	A	4.9	A
Through and Right	3.4	A	3.4	A
Resort / Hummingbird	2.3	A	4.5	A
Northbound	8.8	A	9.7	A
Eastbound	0.0	A	0.0	A
Westbound	1.3	A	4.7	A
Left	7.3	A	7.5	A
Through	7.3	A	7.5	A



PHASE 3  
RIGHT IN/RIGHT OUT  
DRIVEWAY LOCATION

\* TYPICAL 6' X 10' REFUGE ON ALL FOUR SPLITTER ISLANDS  
ALL DIMENSIONS ARE TO FACE OF CURB, LIP OF GUTTER  
OR CENTER OF STRIPE UNLESS SPECIFICALLY NOTED  
OTHERWISE

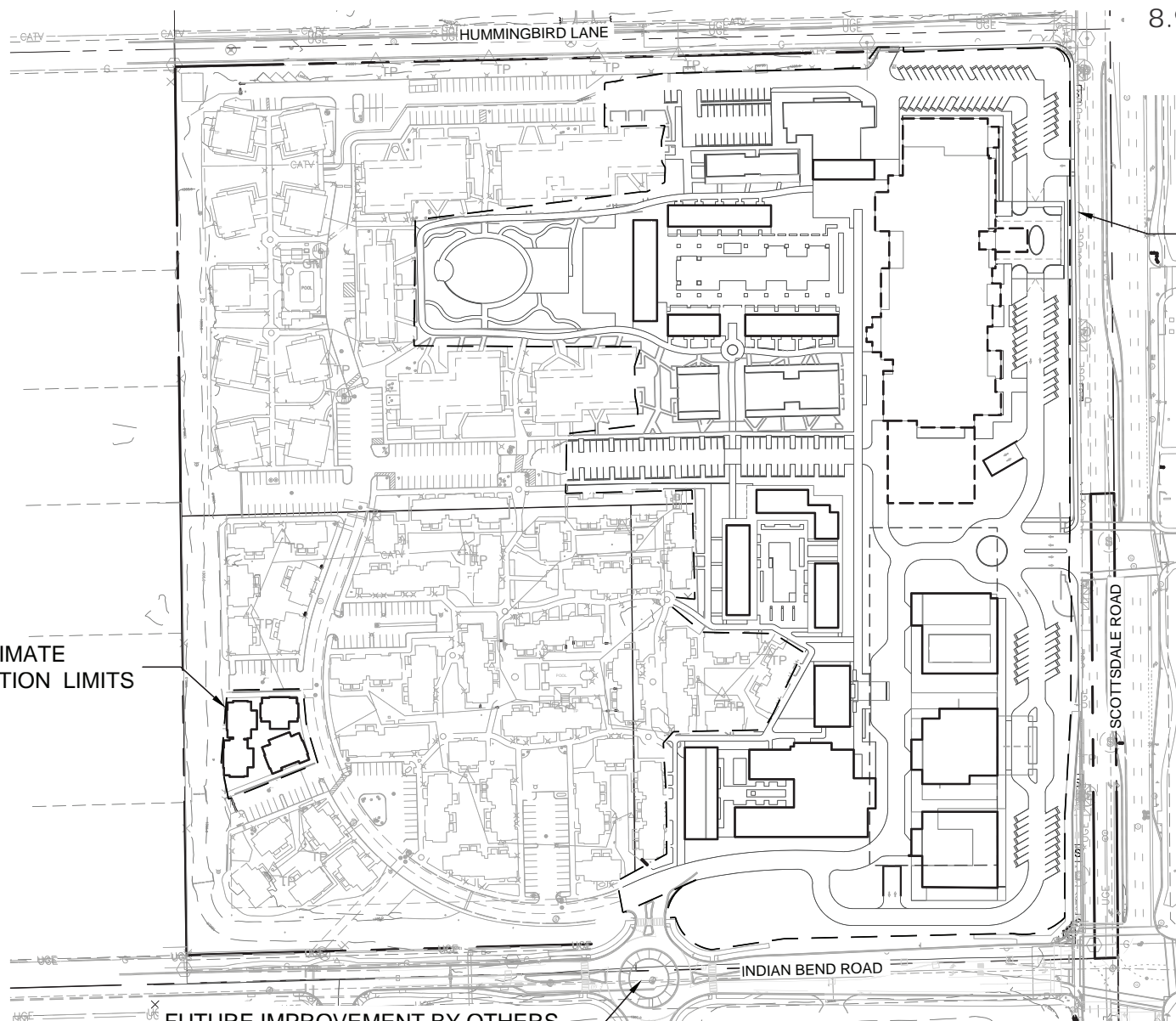
REVISIONS

PRELIMINARY

CITY OF SCOTTSDALE

PROJ. NO.  
DATE  
SCALE  
DESIGNER  
CHECKER





8.9 GRADING, DRAINAGE & UTILITIES PLANS  
RENOVATION LIMITS

APPROXIMATE  
RENOVATION LIMITS

APPROXIMATE  
RENOVATION LIMITS

