

SUMMIT

LAND MANAGEMENT

MERCADO VILLAGE Scottsdale, Arizona

Traffic Impact Analysis – Revised

May 2024

Prepared for:
92 IRONWOOD PARTNERS

For Submittal to:
CITY OF SCOTTSDALE

Prepared by: Paul E. Basha, PE, PTOE
Kayla Amado

Office: 480.505.3931
pbasha@summitlandmgmt.com

SUMMIT LAND MANAGEMENT
7144 E Stetson Drive Suite 300
Scottsdale Arizona 85251



Table of Contents

Executive Summary	1
<i>Introduction</i>	1
<i>Results</i>	1
<i>Recommendations without Mercado Village</i>	2
<i>Recommendations with Mercado Village</i>	2
Introduction	3
Scope of Study	5
Surrounding Transportation System	6
Collision Analysis	7
Existing Traffic Volumes	19
Future Ambient 2025	40
Proposed Mercado Village Estimated Trip Generation	46
Medical Office Trip Generation	47
Proposed Mercado Village Estimated Traffic Assignment	47
2025 Shea Volume and Capacity Without and With Mercado Village	63
2025 Shea Volume and Capacity Without and With Site as Medical Office	65
Traffic Signal Warrants – 92 nd Street and Cochise Drive	66
92 nd and Cochise Turn Lane Requirements	74
Level-of-Service Analysis	75

List of Figures

Figure 1: Mercado Village General Vicinity Aerial Photograph	3
Figure 2: Mercado Village Immediate Vicinity Aerial Photograph	4
Figure 3: Mercado Village Site Plan	5
Figure 4: General Vicinity Street Map and Intersection Control	6
Figure 5: Intersection Existing Lane Configurations	7
Figure 6: 2021 Day Approach and Departure Volumes	20
Figure 7: 2021 AM Peak Hour Approach and Departure Volumes	21
Figure 8: 2021 AM Peak Hour Turning Movement Volumes	22
Figure 9: 2021 PM Peak Hour Approach and Departure Volumes	23
Figure 10: 2021 PM Peak Hour Turning Volumes	24
Figure 11: Adjusted 2021 Day Approach and Departure Volumes	25
Figure 12: Adjusted 2021 AM Peak Hour Approach and Departure Volumes	26
Figure 13: Adjusted 2021 AM Peak Hour Turning Movement Volumes	27
Figure 14: Adjusted 2021 PM Peak Hour Approach and Departure Volumes	28
Figure 15: Adjusted 2021 PM Peak Hour Turning Volumes	29
Figure 16: 2023 Day Approach and Departure Volumes	30
Figure 17: 2023 AM Peak Hour Approach and Departure Volumes	31
Figure 18: 2023 AM Peak Hour Turning Movement Volumes	32
Figure 19: 2023 PM Peak Hour Approach and Departure Volumes	33
Figure 20: 2023 PM Peak Hour Turning Volumes	34

Figure 21: Adjusted 2023 Day Approach and Departure Volumes	35
Figure 22: Adjusted 2023 AM Peak Hour Approach and Departure Volumes.....	36
Figure 23: Adjusted 2023 AM Peak Hour Turning Movement Volumes	37
Figure 24: Adjusted 2023 PM Peak Hour Approach and Departure Volumes.....	38
Figure 25: Adjusted 2023 PM Peak Hour Turning Volumes	39
Figure 26: Ambient 2025 Day Approach and Departure Volumes	41
Figure 27: Ambient 2025 AM Peak Hour Approach and Departure Volumes.....	42
Figure 28: Ambient 2025 AM Peak Hour Turning Movement Volumes.....	43
Figure 29: Ambient 2025 PM Peak Hour Approach and Departure Volumes.....	44
Figure 30: Ambient 2025 PM Peak Hour Turning Volumes	45
Figure 31: Mercado Village Day Approach and Departure Volumes.....	48
Figure 32: Mercado Village AM Peak Hour Approach and Departure Volumes	49
Figure 33: Mercado Village AM Peak Hour Turning Movement Volumes	50
Figure 34: Mercado Village PM Peak Hour Approach and Departure Volumes	51
Figure 35: Mercado Village PM Peak Hour Turning Volumes.....	52
Figure 36: 2023 with Mercado Village Day Approach and Departure Volumes.....	53
Figure 37: 2023 with Mercado Village AM Peak Hour Approach and Departure Volumes	54
Figure 38: 2023 with Mercado Village AM Peak Hour Turning Movement Volumes	55
Figure 39: 2023 with Mercado Village PM Peak Hour Approach and Departure Volumes	56
Figure 40: 2023 with Mercado Village PM Peak Hour Turning Volumes.....	57
Figure 41: 2025 with Mercado Village Day Approach and Departure Volumes.....	58
Figure 42: 2025 with Mercado Village AM Peak Hour Approach and Departure Volumes	59
Figure 43: 2025 with Mercado Village AM Peak Hour Turning Movement Volumes	60
Figure 44: 2025 with Mercado Village PM Peak Hour Approach and Departure Volumes	61
Figure 45: 2025 with Mercado Village PM Peak Hour Turning Volumes.....	62
Figure 46: Mercado Village Adjacent Vacant Property (Kaplan Property).....	69

List of Tables

Table 1: Peak Hours Level-of-Service Summary for All Signalized Intersections	1
Table 2: Peak Hours Level-of-Service Summary for All Unsignalized Intersections.....	2
Table 3: Collision Manner Summary: 2015.....	8
Table 4: Collision Travel Direction Summary: 2015.....	8
Table 5: Collision Injury Severity Summary: 2015	8
Table 6: Collision Manner Summary: 2016.....	9
Table 7: Collision Travel Direction Summary: 2016.....	9
Table 8: Collision Injury Severity Summary: 2016	9
Table 9: Collision Manner Summary: 2017.....	10
Table 10: Collision Travel Direction Summary: 2017	10
Table 11: Collision Injury Severity Summary: 2017	10
Table 12: Collision Manner Summary: 2018.....	11
Table 13: Collision Travel Direction Summary: 2018.....	11
Table 14: Collision Injury Severity Summary: 2018	11
Table 15: Collision Manner Summary: 2019.....	12
Table 16: Collision Travel Direction Summary: 2019.....	12
Table 17: Collision Injury Severity Summary: 2019	12
Table 18: Collision Manner Summary: 2020.....	13
Table 19: Collision Travel Direction Summary: 2020.....	13
Table 20: Collision Injury Severity Summary: 2020	13
Table 21: Collision Manner Summary: 2021.....	14
Table 22: Collision Travel Direction Summary: 2021	14
Table 23: Collision Injury Severity Summary: 2021	14

Table 24: Collision Manner Total: 2015 through 2021	15
Table 25: Collision Travel Direction Total: 2015 through 2021	15
Table 26: Collision Manner Total of 2015 through 2021 by Intersection	16
Table 27: Collision Travel Direction Total of 2015 through 2021 by Intersection	16
Table 28: Collision Injury Severity Total of 2015 through 2021 by Intersection	16
Table 29: 2015 to 2021 Collisions at 92 nd / Shea: Manner, Direction, Injury Severity	17
Table 30: Suspected Serious Injury Collisions 2015 through 2021 at 92 nd / Shea	18
Table 31: Collisions 2015 through 2021 at 92 nd / North	18
Table 32: Collisions 2015 through 2021 at 92 nd / Cochise	18
Table 33: Collisions 2015 through 2021 at 92 nd / Ironwood	18
Table 34: Monthly Factors.....	19
Table 35: 2023 Traffic Counts Peak 60-minute Periods	19
Table 36: 2021 to 2023 Traffic Count Increase	40
Table 37: Mercado Village Trip Generation	46
Table 38: Mercado Village Trip Generation Comparison to Allowable 131,000 SF Medical Office	47
Table 39: Shea Boulevard Daily Traffic Volume Increase with Mercado Village	63
Table 40: Shea Boulevard Traffic Volume to Capacity Ratios Without and With Mercado Village	64
Table 41: Shea Boulevard Traffic Volume Increase with Mercado Village as Medical Office	65
Table 42: Shea Volume to Capacity Ratios Without and With Mercado Village as Medical Office	66
Table 43: Existing 2023 Signal Warrant Results for 92 nd Street and Cochise Drive.....	66
Table 44: Existing 2023 Signal Warranting Volume Summary for 92 nd Street and Cochise Drive.....	67
Table 45: Ambient 2025 Warrant Results for 92 nd Street and Cochise Drive	67
Table 46: Ambient 2025 Signal Warranting Volume Summary for 92 nd Street and Cochise Drive	68
Table 47: 2025 Residential Hourly Volumes at 92 nd / Cochise.....	68
Table 48: 2025 with Mercado Village Signal Warrant Results for 92 nd Street and Cochise Drive.....	68
Table 49: 2025 with Mercado Village Signal Warranting Volume Summary for 92 nd / Cochise	69
Table 50: Kaplan Medical Office Hourly Volumes at 92 nd / Cochise.....	70
Table 51: Kaplan General Office Hourly Volumes at 92 nd / Cochise	71
Table 52: 2025 with Kaplan as Office Signal Warrant Results for 92 nd Street and Cochise Drive	71
Table 53: 2025 with Kaplan as Office Signal Warranting Volume Summary for 92 nd / Cochise.....	72
Table 54: Kaplan as Residential Hourly Volumes at 92 nd / Cochise.....	72
Table 55: 2025 with Kaplan as Residential Warrant Results for 92 nd Street and Cochise Drive.....	73
Table 56: 2025 with Kaplan as Residential Signal Warranting Volume Summary for 92 nd / Cochise	73
Table 57: 2025 Signal Warrant Results for 92 nd Street and Cochise Drive for All Possibilities.....	73
Table 58: Intersection Level-of-Service Criteria.....	75
Table 59: Level-of-Service – All Signalized Intersections	76
Table 60: Level-of-Service – All Unsignalized Intersections	76
Table 61: 92 nd & Shea Turn Lane Queue Lengths.....	77
Table 62: 92 nd & Cochise Turn Lane Queue Lengths	77
Table 63: 92 nd & Mountain View Turn Lane Queue Lengths.....	78
Table 64: LOS – 92 nd & Cochise 2025 with Site PM Peak Hour With Stop Signs and Signal.....	79
Table 65: LOS – 92 nd & Shea 2025 with Site MD Peak Hour Without and With SB Right Arrow.....	79

List of Appendices

Historic Collision Analysis	A
2015.....	A.1
2016.....	A.2
2017.....	A.3
2018.....	A.4
2019.....	A.5
2020.....	A.6
2021.....	A.7
North, Cochise, and Ironwood	A.8
2023 Traffic Counts.....	B
92 nd Street and Shea Boulevard.....	B.1
92 nd Street and North Lane.....	B.2
92 nd Street and Cochise Drive	B.3
92 nd Street and Ironwood Lane.....	B.4
92 nd Street and Mountain View Road	B.5
2021 Traffic Counts.....	C
92 nd Street and Shea Boulevard.....	C.1
92 nd Street and North Lane.....	C.2
92 nd Street and Cochise Drive	C.3
92 nd Street and Ironwood Lane.....	C.4
92 nd Street and Mountain View Road	C.5
Trip Generation	D
Existing Medical Office Trip Generation	D.1
Mercado Village Trip Generation	D.1
Kaplan Property Trip Generation	D.3
Hourly Trip Generation by Land Use	D.3
Signal Warrant Analysis of 92 nd Street and Cochise Drive	E
Existing 2023 Traffic Volumes	E.1
Ambient 2025 Traffic Volumes	E.2
2025 with Site Traffic Volumes	E.3
2025 with Kaplan as Multi-family Homes	E.4
2025 with Kaplan as Office.....	E.5
Level-of-Service	F
Complete Summary	F.1
Adjusted 2023 Traffic Volumes.....	F.2
Ambient 2025 Traffic Volumes	F.3
2023 with Site Traffic Volumes	F.4
2025 with Site Traffic Volumes	F.5
Turn-Lane Queue Lengths	G
Ambient 2025 Traffic Volumes	G.1
2023 with Site Traffic Volumes	G.2
2025 with Site Traffic Volumes	G.3

Executive Summary

Introduction

92 Ironwood Partners are planning to develop Mercado Village in the City of Scottsdale, immediately east of 92nd Street, and coincident with the Cochise Drive alignment. Mercado Village will consist of 255 three-story apartments; 8,140 square feet of live / work space; and 5,000 square feet of co-work space.

Results

The existing 2023 traffic counts at the 92nd / Cochise intersection – the primary access for Mercado Village – reveal that 76% of the daily westbound Cochise traffic turns left to travel south on 92nd Street.

The proposed Mercado Village is anticipated to generate; as a total of both directions; 2,029 daily; 123 morning peak hourly; and 175 evening peak hourly vehicles.

The existing property includes 71,000 square feet of vacant medical office buildings. A portion of the property is vacant, which would allow an additional 60,000 square feet of medical office building. This 131,000 medical office building area would generate; as a total of both directions; 5,521 daily; 406 morning peak hourly; and 530 evening peak hourly vehicles.

If 131,000 square feet of medical office were constructed on the Mercado Village property; the traffic volumes on Shea Boulevard at 92nd Street would increase by an estimated 1,134 vehicles-per-day. If the proposed Mercado Village were constructed, the traffic volumes on Shea Boulevard at 92nd Street would increase by an estimated 254 vehicles-per-day; 22% fewer daily vehicles than medical office would generate.

Table 1 and **Table 2** summarize the intersection level-of-service results for 2023 and 2025, without and with Mercado Village. These tables indicate the number of intersections, approaches, and turning movements at each level-of-service for each condition. Their purpose is to provide a convenient comparison between the different years, without and with Mercado Village. (Both analyses are without the possible 131,000 square feet of medical office.

Table 1: Peak Hours Level-of-Service Summary for All Signalized Intersections

	MORNING PEAK HOUR				MID-DAY PEAK HOUR				EVENING PEAK HOUR			
	2023		2025		2023		2025		2023		2025	
	EXISTING	WITH SITE	AMBIENT	WITH SITE	EXISTING	WITH SITE	AMBIENT	WITH SITE	EXISTING	WITH SITE	AMBIENT	WITH SITE
A	7	24	25	24	8	25	25	24	8	21	24	21
B	3	3	2	2	1	1	1	2	1	5	3	5
C	17	15	16	16	14	13	15	12	17	17	15	16
D	7	9	8	9	11	11	10	12	8	8	9	9
E	0	0	0	0	0	1	0	1	0	0	0	0
F	0	0	0	0	0	0	0	0	0	0	0	0
	34	51	51	51	34	51	51	51	34	51	51	51

The signalized intersection mid-day peak level-of-service “E” is an eastbound left-turn at the 92nd / Shea intersection. The boundary between level-of-service “D” and “E” is a delay of 55 seconds. This mid-day peak delay for 2023 without Mercado Village traffic volumes is 54.9 seconds, this delay for 2023 with Mercado Village is 55.5 seconds. Therefore a 0.6 second delay increase changes the level-of-service from “D” to “E”.

Table 2: Peak Hours Level-of-Service Summary for All Unsignalized Intersections

	MORNING PEAK HOUR				MID-DAY PEAK HOUR				EVENING PEAK HOUR			
	2023		2025		2023		2025		2023		2025	
	EXISTING	WITH SITE	AMBIENT	WITH SITE	EXISTING	WITH SITE	AMBIENT	WITH SITE	EXISTING	WITH SITE	AMBIENT	WITH SITE
A	29	26	27	26	25	24	25	24	31	28	26	24
B	11	11	8	7	13	11	12	3	12	12	13	11
C	5	6	12	7	6	6	7	13	6	5	10	8
D	5	4	4	6	2	4	3	4	1	0	2	2
E	1	2	0	2	3	1	2	0	1	2	0	1
F	0	2	0	3	2	5	2	7	0	4	0	5
	51	51	51	51	51	51	51	51	51	51	51	51

The unsignalized intersection levels-of-service of “E” and “F” are left-turns from either North Lane or Cochise Drive onto 92nd Street. A traffic signal at the 92nd / Cochise intersection would improve the levels-of-service at the 92nd / Cochise intersection from “E” and “F” to “B”.

A traffic signal is within two (2) vehicles in one hour of satisfying the traffic signal warrants at the 92nd / Cochise intersection with 2025 plus Mercado Village traffic volumes. A traffic signal at the 92nd / Cochise intersection would improve the operation of both directions of Cochise Drive without diminishing the operation of either direction of 92nd Street, comparing the existing stop sign condition to the signal condition.

Furthermore, both east and west of 92nd Street, North Lane and Cochise Drive are directly connected apart from 92nd Street. On the west side of 92nd Street, Cochise Drive and Ironwood Lane are directly connected apart from 92nd Street. Therefore, drivers who wish to turn onto 92nd Street from west of 92nd Street at either North Lane or Ironwood Lane, could do so at either a stop sign or a signal. Drivers who wish to turn left onto 92nd Street from east of 92nd Street at North Lane can also do so at either a stop sign or a signal.

Additionally, a signal at Cochise; which is also the apartment, condominium, medical office, and retail left-turn access; would allow residents of Mercado Village who work at HonorHealth or the adjacent medical office buildings south of Shea Boulevard and west of 92nd Street, to walk across 92nd Street at a signal-protected intersection. This traffic signal would also aid HonorHealth and medical office employees west of 92nd Street either driving or walking to the businesses and restaurants east of 92nd Street.

Recommendations without Mercado Village

The City of Scottsdale should consider including a southbound right-turn arrow at the intersection of 92nd Street and Shea Boulevard. The right-turn arrow should be operated in conjunction with the eastbound and westbound left-turn arrows. A southbound right-turn arrow typically requires prohibition of the eastbound-to-westbound U-turns, and thereby this operation may not be acceptable at this intersection.

Recommendations with Mercado Village

A traffic signal should be installed at the intersection of 92nd Street and Cochise Drive with the Mercado Village development.

A northbound right-turn lane is required on 92nd Street at Cochise Drive, and separate left-turn lane and shared straight-and-right-turn lane are required on westbound Cochise Drive at 92nd Street.

The City of Scottsdale minimum turn lane lengths are 150 feet for turn lanes on arterial streets and 100 feet for turn lanes on streets that intersect arterial streets. Therefore, the 92nd / Cochise intersection should have a 150-foot long northbound right-turn lane, a 150-foot long southbound left-turn lane, a 100-foot long westbound left-turn lane, and a 100-foot long westbound shared-straight-right-turn lane.

Introduction

92 Ironwood Partners are planning to develop Mercado Village in the City of Scottsdale, immediately east of 92nd Street, and coincident with the Cochise Drive alignment. Mercado Village will consist of 255 three-story apartments; 8,140 square feet of live / work space; and 5,000 square feet of co-work space. The property is depicted in **Figure 1**.

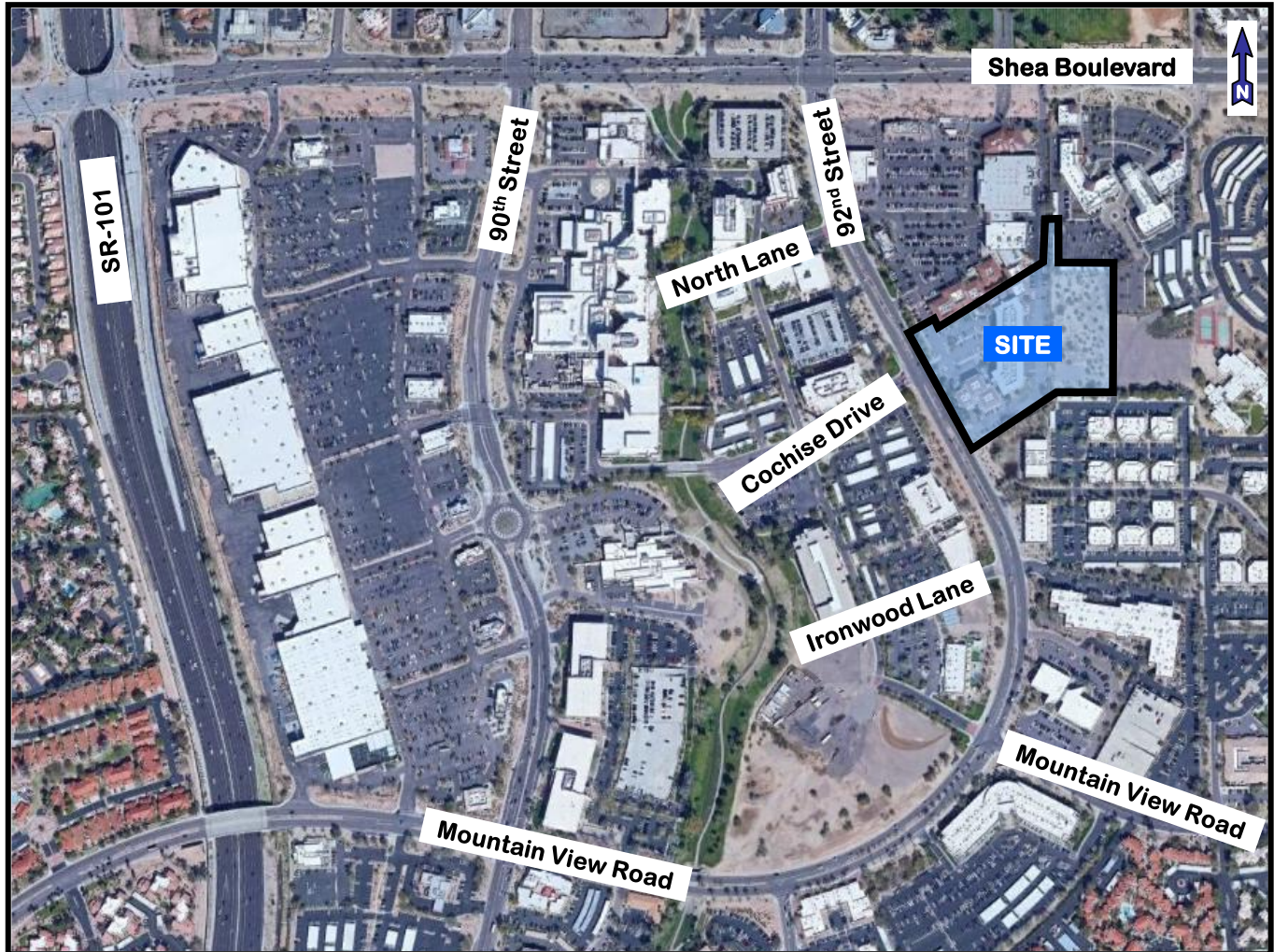


Figure 1: Mercado Village General Vicinity Aerial Photograph

Figure 2 provides the immediate vicinity of the proposed Mercado Village.



Figure 2: Mercado Village Immediate Vicinity Aerial Photograph

Figure 3 provides a site plan of the proposed Mercado Village.

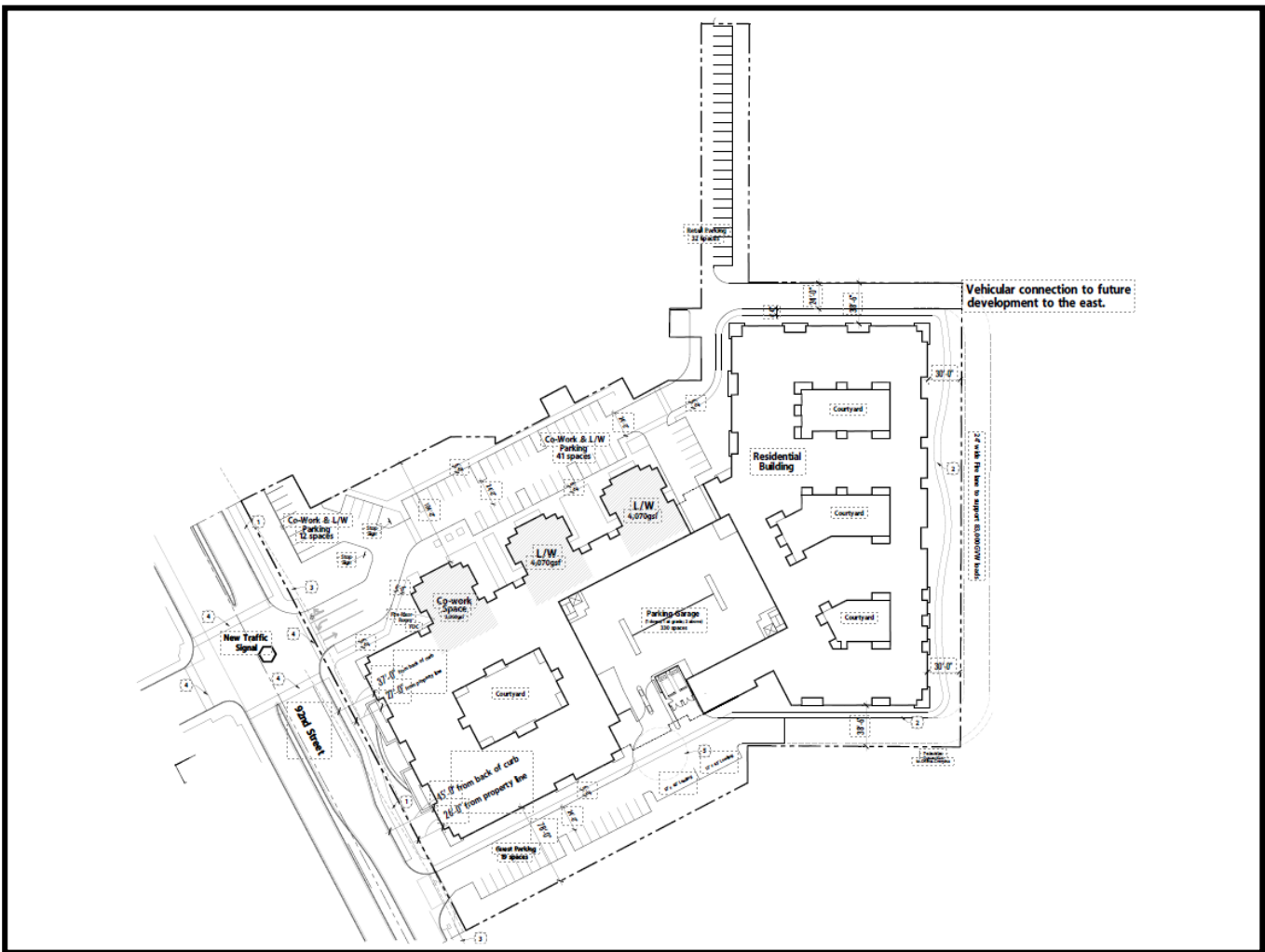


Figure 3: Mercado Village Site Plan

Scope of Study

Seven (7) purposes exist for this analysis:

1. Evaluate existing traffic conditions.
2. Evaluate recent historic traffic collisions.
3. Estimate and evaluate future ambient 2025 traffic volumes.
4. Estimate new traffic generated by Mercado Village.
5. Distribute and assign new traffic to adjacent intersections.
6. Evaluate year 2025 traffic conditions with Mercado Village.
7. Determine need for modified traffic control.

The five (5) existing study intersections are:

1. 92nd Street and Shea Boulevard
2. 92nd Street and North Lane
3. 92nd Street and Cochise Drive
4. 92nd Street and Ironwood Lane
5. 92nd Street and Mountain View Road

Surrounding Transportation System

Figure 4 provides a street map and intersection traffic control in the general vicinity.

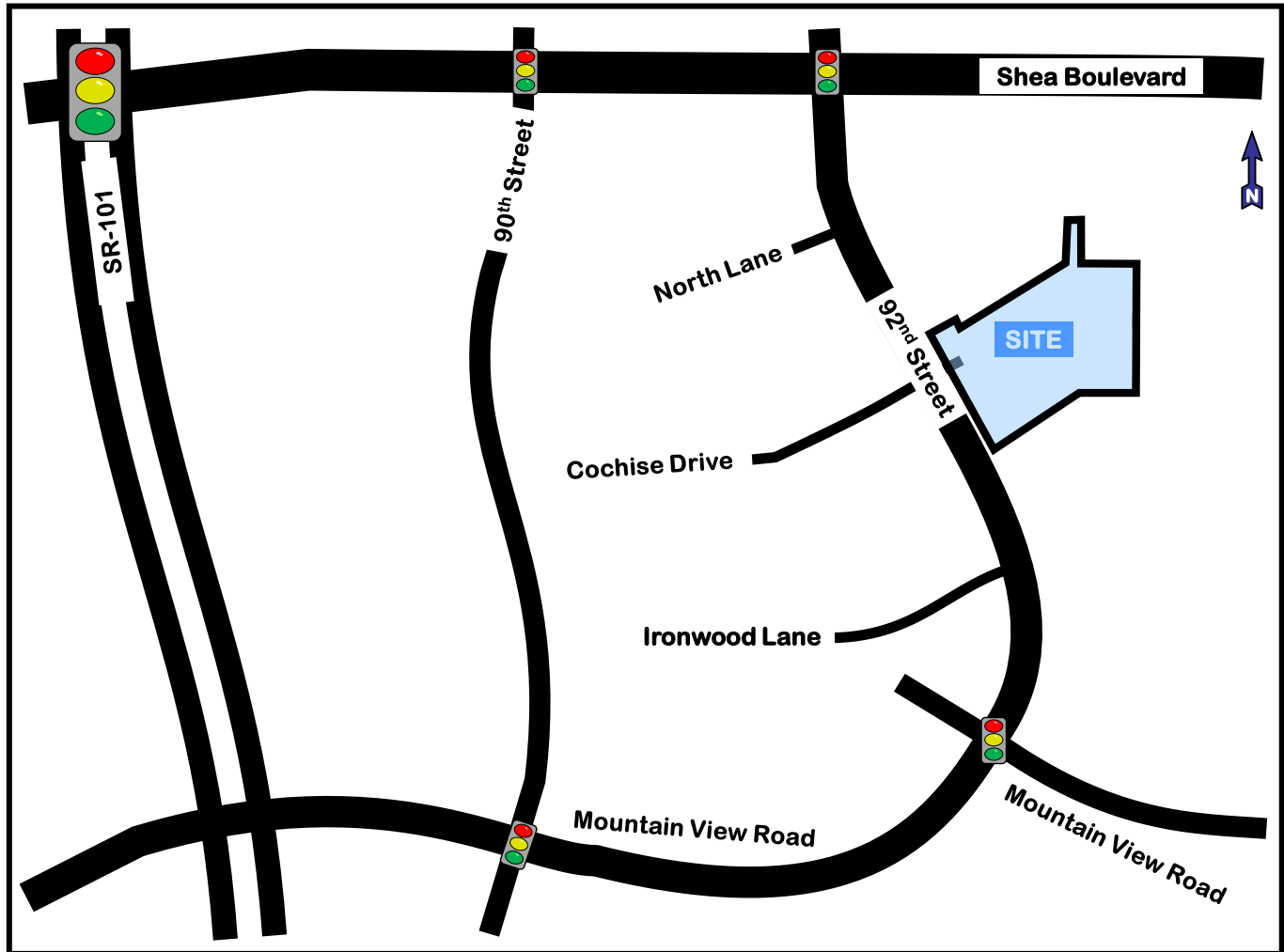


Figure 4: General Vicinity Street Map and Intersection Control

Figure 5 provides a street map, intersection traffic control, and intersection lane configurations in the general vicinity. The 92nd / Mountain View intersection does not have left-turn arrows, operating with permissive only left-turns on all four (4) approaches.

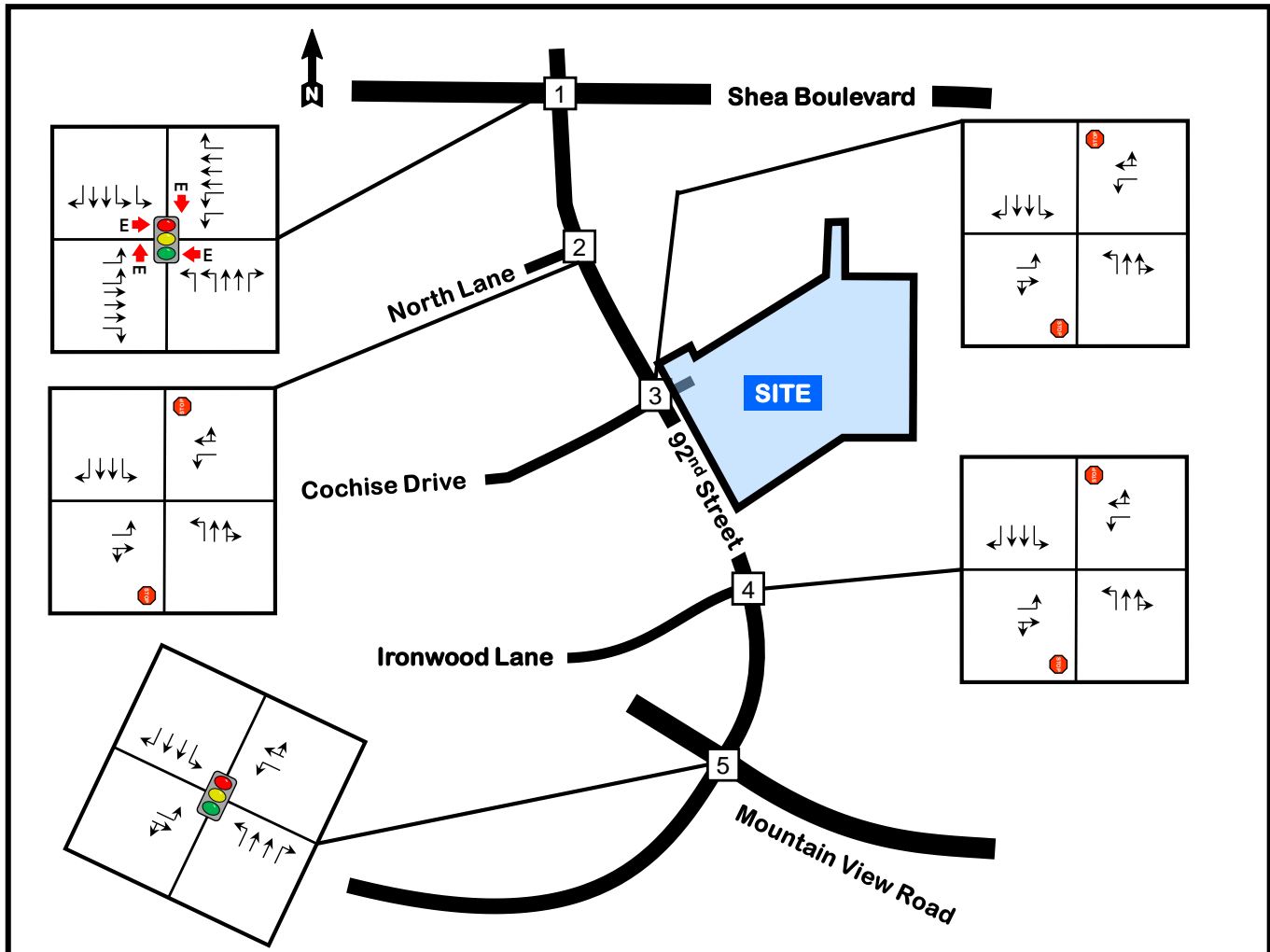


Figure 5: Intersection Existing Lane Configurations

Collision Analysis

The historic collision experience for six (6) major intersections in the vicinity of Mercado Village were analyzed. The intersections of 90th Street, 92nd Street, and 96th Street with Shea Boulevard and with Mountain View Road were analyzed. The three (3) 92nd Street intersections with North Lane, Cochise Drive, and Ironwood Lane were also analyzed. The collision data was examined for calendar years 2015 through 2021. The summary data provided by the Arizona Department of Transportation does not provide travel direction and injury severity for every collision.

Appendix A provides the complete collision data. **Appendices A.1** through **A.7** provide the collision data for each separate year for the six (6) major intersections. **Appendix A.8** provides the collision data for the three (3) lower-volume intersections.

Table 3 through **Table 23** summarize the collision data for each of the seven (7) study years, separately for each of the six (6) major intersections. The dominant collision manner is rear-end collisions in the eastbound and westbound directions on Shea Boulevard at 90th and 92nd streets. Angle collisions (one vehicle on each street) and side-swipe-same-direction collisions are respectively the second and third highest manner of collision. The total number of collisions at the six (6) intersections reduced substantially in 2020 and 2021 compared to previous years – particularly 2015 and 2016.

Table 3: Collision Manner Summary: 2015

	REAR-END	ANGLE	LEFT-TURN ANGLE	LEFT-TURN HEAD-ON	SIDE-SWIPE SAME	SIDE-SWIPE OPPOSITE	HEAD-ON	SINGLE VEHICLE	OTHER	TOTAL
90th Street & Shea Boulevard	29	7	5	0	6	0	1	1	2	51
92nd Street & Shea Boulevard	27	2	3	1	7	0	0	2	2	44
96th Street & Shea Boulevard	11	3	2	4	3	0	0	1	0	24
90th Street & Mountain View Road	4	2	4	7	2	0	0	0	0	19
92nd Street & Mountain View Road	1	1	0	1	1	0	0	2	0	6
96th Street & Mountain View Road	1	0	1	1	1	0	0	0	0	4
TOTAL	73	15	15	14	20	0	1	6	4	148

Table 4: Collision Travel Direction Summary: 2015

	90 & S	92 & S	96 & S	90 & MV	92 & MV	96 & MV	TOTAL
Northbound Only	0	0	0	0	0	0	0
Southbound Only	0	1	0	0	0	0	1
Eastbound Only	0	0	0	0	0	0	0
Westbound Only	0	0	0	1	2	0	3
Northbound and Northbound	6	2	1	0	0	0	9
Southbound and Southbound	3	0	1	6	1	1	12
Eastbound and Eastbound	14	8	4	0	1	0	27
Westbound and Westbound	17	28	9	1	1	1	57
Northbound and Eastbound	6	3	0	3	0	1	13
Northbound and Westbound	0	0	1	0	0	0	1
Southbound and Eastbound	2	0	2	1	0	0	5
Southbound and Westbound	0	1	1	0	0	0	2
Northbound and Southbound	0	1	1	6	1	0	9
Eastbound and Westbound	3	0	3	2	0	1	9
TOTAL	51	44	23	20	6	4	148

Table 5: Collision Injury Severity Summary: 2015

SEVERITY	90 & S	92 & S	96 & S	90 & MV	92 & MV	96 & MV	TOTAL
No Injury	36	36	11	12	5	2	102
Possible Injury	11	3	7	5	0	0	26
Suspected Minor Injury	4	4	5	2	0	2	17
Suspected Serious Injury	0	1	1	0	1	0	3
Fatal Injury	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0
Not Reported	0	0	0	0	0	0	0
TOTAL	51	44	24	6	19	4	148

Table 6: Collision Manner Summary: 2016

	REAR-END	ANGLE	LEFT-TURN ANGLE	LEFT-TURN HEAD-ON	SIDE-SWIPE SAME	SIDE-SWIPE OPPOSITE	HEAD-ON	SINGLE VEHICLE	OTHER	TOTAL
90th Street & Shea Boulevard	26	5	4	2	6	0	1	3	1	48
92nd Street & Shea Boulevard	26	9	3	0	4	0	1	2	1	46
96th Street & Shea Boulevard	11	3	2	4	3	0	0	0	0	23
90th Street & Mountain View Road	2	0	4	1	1	0	0	0	0	8
92nd Street & Mountain View Road	0	1	2	1	1	0	0	0	0	5
96th Street & Mountain View Road	0	0	0	1	0	0	0	0	0	1
TOTAL	65	18	15	9	15	0	2	5	2	131

Table 7: Collision Travel Direction Summary: 2016

	90 & S	92 & S	96 & S	90 & MV	92 & MV	96 & MV	TOTAL
Northbound Only	1	2	0	0	0	0	3
Southbound Only	1	0	0	0	0	0	1
Eastbound Only	1	0	0	0	0	0	1
Westbound Only	0	0	0	0	0	0	0
Northbound and Northbound	6	1	5	0	1	0	13
Southbound and Southbound	3	1	1	0	0	0	5
Eastbound and Eastbound	12	8	3	2	1	0	26
Westbound and Westbound	12	23	5	1	0	0	41
Northbound and Eastbound	2	2	4	1	1	0	10
Northbound and Westbound	1	4	0	1	0	0	6
Southbound and Eastbound	4	0	1	1	0	0	6
Southbound and Westbound	1	1	0	1	1	0	4
Northbound and Southbound	1	1	1	1	1	1	6
Eastbound and Westbound	3	2	3	0	0	0	8
TOTAL	48	45	23	8	5	1	130

Table 8: Collision Injury Severity Summary: 2016

SEVERITY	90 & S	92 & S	96 & S	90 & MV	92 & MV	96 & MV	TOTAL
No Injury	28	33	15	5	3	1	85
Possible Injury	14	9	6	1	1	0	31
Suspected Minor Injury	5	3	2	2	1	0	13
Suspected Serious Injury	1	0	0	0	0	0	1
Fatal Injury	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0
Not Reported	0	0	0	0	0	0	0
TOTAL	48	45	23	5	8	1	130

Table 9: Collision Manner Summary: 2017

	REAR-END	ANGLE	LEFT-TURN ANGLE	LEFT-TURN HEAD-ON	SIDE-SWIPE SAME	SIDE-SWIPE OPPOSITE	HEAD-ON	SINGLE VEHICLE	OTHER	TOTAL
90th Street & Shea Boulevard	25	8	2	2	3	0	1	1	0	42
92nd Street & Shea Boulevard	27	10	3	1	6	0	0	2	2	51
96th Street & Shea Boulevard	4	5	1	2	2	0	0	1	0	15
90th Street & Mountain View Road	0	3	2	1	1	0	0	2	0	9
92nd Street & Mountain View Road	0	0	0	0	0	0	0	0	0	0
96th Street & Mountain View Road	0	1	0	0	0	0	0	1	0	2
TOTAL	56	27	8	6	12	0	1	7	2	119

Table 10: Collision Travel Direction Summary: 2017

	90 & S	92 & S	96 & S	90 & MV	92 & MV	96 & MV	TOTAL
Northbound Only	0	0	0	0	0	1	1
Southbound Only	0	0	0	1	0	0	1
Eastbound Only	0	0	0	0	0	0	0
Westbound Only	0	1	0	0	0	0	1
Northbound and Northbound	0	4	1	0	0	0	5
Southbound and Southbound	2	2	0	0	0	0	4
Eastbound and Eastbound	16	6	2	1	0	0	25
Westbound and Westbound	10	21	3	1	0	0	35
Northbound and Eastbound	5	3	2	1	0	0	11
Northbound and Westbound	1	4	0	0	0	0	5
Southbound and Eastbound	3	1	3	1	0	1	9
Southbound and Westbound	1	6	0	2	0	0	9
Northbound and Southbound	2	2	0	0	0	0	4
Eastbound and Westbound	1	1	2	1	0	0	5
TOTAL	41	51	13	8	0	2	115

Table 11: Collision Injury Severity Summary: 2017

SEVERITY	90 & S	92 & S	96 & S	90 & MV	92 & MV	96 & MV	TOTAL
No Injury	31	37	11	5	0	1	85
Possible Injury	5	12	1	2	0	0	20
Suspected Minor Injury	6	2	2	2	0	0	12
Suspected Serious Injury	0	0	1	0	0	1	2
Fatal Injury	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0
Not Reported	0	0	0	0	0	0	0
TOTAL	42	51	15	0	9	2	119

Table 12: Collision Manner Summary: 2018

	REAR-END	ANGLE	LEFT-TURN ANGLE	LEFT-TURN HEAD-ON	SIDE-SWIPE SAME	SIDE-SWIPE OPPOSITE	HEAD-ON	SINGLE VEHICLE	OTHER	TOTAL
90th Street & Shea Boulevard	16	9	0	3	8	0	0	2	0	38
92nd Street & Shea Boulevard	23	2	4	2	5	0	1	0	2	39
96th Street & Shea Boulevard	19	3	1	1	2	0	1	3	0	30
90th Street & Mountain View Road	4	2	1	0	1	0	0	1	0	9
92nd Street & Mountain View Road	0	0	0	1	0	0	0	1	0	2
96th Street & Mountain View Road	1	2	0	0	0	0	0	0	6	9
TOTAL	63	18	6	7	16	0	2	7	8	127

Table 13: Collision Travel Direction Summary: 2018

	90 & S	92 & S	96 & S	90 & MV	92 & MV	96 & MV	TOTAL
Northbound Only	0	0	0	0	0	0	0
Southbound Only	0	0	1	0	0	0	1
Eastbound Only	0	0	1	0	0	0	1
Westbound Only	1	0	0	0	0	0	1
Northbound and Northbound	4	1	1	0	0	0	6
Southbound and Southbound	4	2	1	0	3	0	10
Eastbound and Eastbound	13	10	13	0	2	0	38
Westbound and Westbound	6	16	7	0	2	1	32
Northbound and Eastbound	1	2	1	0	0	0	4
Northbound and Westbound	1	2	1	0	1	0	5
Southbound and Eastbound	4	1	1	0	0	1	7
Southbound and Westbound	0	1	1	0	1	1	4
Northbound and Southbound	1	3	1	2	0	0	7
Eastbound and Westbound	2	1	1	0	0	0	4
TOTAL	37	39	30	2	9	3	120

Table 14: Collision Injury Severity Summary: 2018

SEVERITY	90 & S	92 & S	96 & S	90 & MV	92 & MV	96 & MV	TOTAL
No Injury	31	25	21	8	1	3	89
Possible Injury	2	7	6	1	0	0	16
Suspected Minor Injury	5	5	3	0	1	0	14
Suspected Serious Injury	0	2	0	0	0	0	2
Fatal Injury	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0
Not Reported	0	0	0	0	0	0	0
TOTAL	38	39	30	2	9	3	121

Table 15: Collision Manner Summary: 2019

	REAR-END	ANGLE	LEFT-TURN ANGLE	LEFT-TURN HEAD-ON	SIDE-SWIPE SAME	SIDE-SWIPE OPPOSITE	HEAD-ON	SINGLE VEHICLE	OTHER	TOTAL
90th Street & Shea Boulevard	18	7	3	1	8	0	0	1	0	38
92nd Street & Shea Boulevard	25	3	4	0	4	0	0	2	2	40
96th Street & Shea Boulevard	8	4	0	7	4	0	1	0	0	24
90th Street & Mountain View Road	3	4	2	5	2	0	0	3	1	20
92nd Street & Mountain View Road	0	0	0	0	0	0	0	0	0	0
96th Street & Mountain View Road	1	1	0	1	1	0	0	0	0	4
TOTAL	55	19	9	14	19	0	1	6	3	126

Table 16: Collision Travel Direction Summary: 2019

	90 & S	92 & S	96 & S	90 & MV	92 & MV	96 & MV	TOTAL
Northbound Only	1	1	0	0	0	0	2
Southbound Only	0	0	0	1	0	0	1
Eastbound Only	0	1	0	0	0	0	1
Westbound Only	0	0	0	1	0	0	1
Northbound and Northbound	3	0	0	3	0	0	6
Southbound and Southbound	3	0	1	3	0	2	9
Eastbound and Eastbound	10	10	5	2	0	0	27
Westbound and Westbound	14	20	5	0	0	0	39
Northbound and Eastbound	0	2	1	1	0	0	4
Northbound and Westbound	0	4	0	0	0	0	4
Southbound and Eastbound	5	1	0	2	0	0	8
Southbound and Westbound	1	1	4	1	0	1	8
Northbound and Southbound	1	0	2	2	0	0	5
Eastbound and Westbound	0	0	6	4	0	1	11
TOTAL	38	40	24	20	0	4	126

Table 17: Collision Injury Severity Summary: 2019

SEVERITY	90 & S	92 & S	96 & S	90 & MV	92 & MV	96 & MV	TOTAL
No Injury	31	27	13	13	0	1	85
Possible Injury	6	7	2	3	0	1	19
Suspected Minor Injury	1	6	5	2	0	2	16
Suspected Serious Injury	0	0	4	2	0	0	6
Fatal Injury	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0
Not Reported	0	0	0	0	0	0	0
TOTAL	38	40	24	0	20	4	126

Table 18: Collision Manner Summary: 2020

	REAR-END	ANGLE	LEFT-TURN ANGLE	LEFT-TURN HEAD-ON	SIDE-SWIPE SAME	SIDE-SWIPE OPPOSITE	HEAD-ON	SINGLE VEHICLE	OTHER	TOTAL
90th Street & Shea Boulevard	10	3	1	1	6	0	0	3	1	25
92nd Street & Shea Boulevard	18	6	2	1	5	0	0	0	2	34
96th Street & Shea Boulevard	5	1	3	3	1	0	0	0	0	13
90th Street & Mountain View Road	0	6	2	2	3	0	0	3	0	16
92nd Street & Mountain View Road	0	0	0	0	0	0	0	0	0	0
96th Street & Mountain View Road	1	0	0	0	0	0	0	0	2	3
TOTAL	34	16	8	7	15	0	0	6	5	91

Table 19: Collision Travel Direction Summary: 2020

	90 & S	92 & S	96 & S	90 & MV	92 & MV	96 & MV	TOTAL
Northbound Only	0	0	0	0	0	0	0
Southbound Only	2	0	0	0	0	0	2
Eastbound Only	0	0	0	0	0	0	0
Westbound Only	0	0	0	2	0	0	2
Northbound and Northbound	2	2	1	2	0	0	7
Southbound and Southbound	4	3	0	1	0	1	9
Eastbound and Eastbound	6	7	4	1	0	1	19
Westbound and Westbound	4	15	1	1	0	0	21
Northbound and Eastbound	1	3	2	2	0	0	8
Northbound and Westbound	1	1	2	1	0	0	5
Southbound and Eastbound	1	0	0	2	0	0	3
Southbound and Westbound	0	1	0	2	0	0	3
Northbound and Southbound	0	1	3	0	0	0	4
Eastbound and Westbound	2	1	0	2	0	1	6
TOTAL	23	34	13	16	0	3	89

Table 20: Collision Injury Severity Summary: 2020

SEVERITY	90 & S	92 & S	96 & S	90 & MV	92 & MV	96 & MV	TOTAL
No Injury	20	22	7	14	0	2	65
Possible Injury	2	7	4	1	0	0	14
Suspected Minor Injury	3	5	1	1	0	1	11
Suspected Serious Injury	0	0	1	0	0	0	1
Fatal Injury	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0
Not Reported	0	0	0	0	0	0	0
TOTAL	25	34	13	0	16	3	91

Table 21: Collision Manner Summary: 2021

	REAR-END	ANGLE	LEFT-TURN ANGLE	LEFT-TURN HEAD-ON	SIDE-SWIPE SAME	SIDE-SWIPE OPPOSITE	HEAD-ON	SINGLE VEHICLE	OTHER	TOTAL
90th Street & Shea Boulevard	15	6	0	0	4	0	0	0	0	25
92nd Street & Shea Boulevard	26	3	4	1	12	0	0	0	0	46
96th Street & Shea Boulevard	5	0	2	2	2	0	0	1	1	13
90th Street & Mountain View Road	2	1	0	0	0	0	0	1	1	5
92nd Street & Mountain View Road	0	0	1	0	0	0	0	1	1	3
96th Street & Mountain View Road	0	1	0	0	1	0	0	0	0	2
TOTAL	48	11	7	3	19	0	0	3	3	94

Table 22: Collision Travel Direction Summary: 2021

	90 & S	92 & S	96 & S	90 & MV	92 & MV	96 & MV	TOTAL
Northbound Only	0	0	0	1	0	0	1
Southbound Only	0	0	0	0	1	0	1
Eastbound Only	0	0	0	0	0	0	0
Westbound Only	0	0	0	0	0	0	0
Northbound and Northbound	1	2	1	0	2	0	6
Southbound and Southbound	2	3	0	0	1	2	8
Eastbound and Eastbound	7	11	2	1	0	0	21
Westbound and Westbound	10	19	4	0	0	0	33
Northbound and Eastbound	2	2	1	1	0	0	6
Northbound and Westbound	0	1	2	0	0	0	3
Southbound and Eastbound	2	3	0	0	0	0	5
Southbound and Westbound	1	1	1	0	0	0	3
Northbound and Southbound	0	1	1	0	1	0	3
Eastbound and Westbound	0	3	1	0	0	0	4
TOTAL	25	46	13	3	5	2	94

Table 23: Collision Injury Severity Summary: 2021

SEVERITY	90 & S	92 & S	96 & S	90 & MV	92 & MV	96 & MV	TOTAL
No Injury	20	35	5	0	3	1	64
Possible Injury	4	7	3	0	1	0	15
Suspected Minor Injury	1	3	5	3	1	0	13
Suspected Serious Injury	0	1	0	0	0	1	2
Fatal Injury	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0
Not Reported	0	0	0	0	0	0	0
TOTAL	25	46	13	3	5	2	94

Table 24 and **Table 25** respectively provide the collision manner and travel direction totals for all intersections for all years. Not all collision report summaries include travel directions. The manner of collision and the travel directions of involved vehicles with a higher portion of total collisions are highlighted in black. Rear-end and side-swipe-same-direction collisions are common at very-high-volume intersections. A surprising number of angle, left-turn-angle, and left-turn head-on collisions have occurred at the six (6) study intersections. The 90th / Shea and 92nd / Shea intersections have exclusive left-turn arrows for all approaches.

Table 24: Collision Manner Total: 2015 through 2021

			LEFT-TURN	LEFT-TURN	SIDE-SWIPE	SIDE-SWIPE		SINGLE		
	REAR-END	ANGLE	ANGLE	HEAD-ON	SAME	OPPOSITE	HEAD-ON	VEHICLE	OTHER	TOTAL
2015	73	15	15	14	20	0	1	6	4	148
2016	65	18	15	9	15	0	2	5	2	131
2017	56	27	8	6	12	0	1	7	2	119
2018	63	18	6	7	16	0	2	7	8	127
2019	55	19	9	14	19	0	1	6	3	126
2020	34	16	8	7	15	0	0	6	5	91
2021	48	11	7	3	19	0	0	3	3	94
TOTAL	394	124	68	60	116	0	7	40	27	836
PORTION	47%	15%	8%	7%	14%	0%	1%	5%	3%	100%

Table 25: Collision Travel Direction Total: 2015 through 2021

	2015	2016	2017	2018	2019	2020	2021	TOTAL	PORTION
Northbound Only	0	3	1	0	2	0	1	7	1%
Southbound Only	1	1	1	1	1	2	1	8	1%
Eastbound Only	0	1	0	1	1	0	0	3	0%
Westbound Only	3	0	1	1	1	2	0	8	1%
Northbound and Northbound	9	13	5	6	6	7	6	52	6%
Southbound and Southbound	12	5	4	10	9	9	8	57	7%
Eastbound and Eastbound	27	26	25	38	27	19	21	183	22%
Westbound and Westbound	57	41	35	32	39	21	33	258	31%
Northbound and Eastbound	13	10	11	4	4	8	6	56	7%
Northbound and Westbound	1	6	5	5	4	5	3	29	4%
Southbound and Eastbound	5	6	9	7	8	3	5	43	5%
Southbound and Westbound	2	4	9	4	8	3	3	33	4%
Northbound and Southbound	9	6	4	7	5	4	3	38	5%
Eastbound and Westbound	9	8	5	4	11	6	4	47	6%
TOTAL	148	130	115	120	126	89	94	822	100%

Table 26, **Table 27**, and **Table 28** respectively provide collision totals for all seven (7) years by collision manner, travel direction, and maximum injury severity. Not all collision report summaries include travel directions or injury severities.

Table 26: Collision Manner Total of 2015 through 2021 by Intersection

	90 & Shea	92 & Shea	96 & Shea	90 & MV	92 & MV	96 & MV	TOTAL
REAR-END	139	172	63	15	1	4	394
ANGLE	45	35	19	18	2	5	124
LEFT-TURN ANGLE	15	23	11	15	3	1	68
LEFT-TURN HEAD-ON	9	6	23	16	3	3	60
SIDE-SWIPE SAME	41	43	17	10	2	3	116
SIDE-SWIPE OPPOSITE	0	0	0	0	0	0	0
HEAD-ON	3	2	2	0	0	0	7
SINGLE VEHICLE	11	8	6	10	4	1	40
OTHER	4	11	1	2	1	8	27
TOTAL	267	289	141	84	15	17	813

Table 27: Collision Travel Direction Total of 2015 through 2021 by Intersection

	90 & Shea	92 & Shea	96 & Shea	90 & MV	92 & MV	96 & MV	TOTAL
Northbound Only	2	3	0	1	0	1	7
Southbound Only	3	1	1	2	1	0	8
Eastbound Only	1	1	1	0	0	0	3
Westbound Only	1	1	0	4	2	0	8
Northbound and Northbound	22	12	10	5	3	0	52
Southbound and Southbound	21	11	4	10	5	6	57
Eastbound and Eastbound	78	60	33	7	4	1	183
Westbound and Westbound	73	142	34	4	3	2	258
Northbound and Eastbound	17	17	11	9	1	1	56
Northbound and Westbound	4	16	6	2	1	0	29
Southbound and Eastbound	21	6	7	7	0	2	43
Southbound and Westbound	4	12	7	6	2	2	33
Northbound and Southbound	5	9	9	11	3	1	38
Eastbound and Westbound	11	8	16	9	0	3	47
TOTAL	263	299	139	77	25	19	822

Table 28: Collision Injury Severity Total of 2015 through 2021 by Intersection

SEVERITY	90 & Shea	92 & Shea	96 & Shea	90 & MV	92 & MV	96 & MV	TOTAL
No Injury	197	215	83	57	12	11	575
Possible Injury	40	45	26	13	1	1	126
Suspected Minor Injury	24	25	18	9	2	5	83
Suspected Serious Injury	1	3	7	2	1	1	15
Fatal Injury	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0
Not Reported	0	0	0	0	0	0	0
TOTAL	262	288	134	81	16	18	799

The 92nd / Shea intersection has been identified as an intersection with a relatively high collision rate. In the City of Scottsdale 2020 Traffic Volume and Collision Report, the 92nd / Shea intersection ranked 39th out of 202 major intersections in the City. It had a collision rate of 0.84 collisions-per-million-entering-vehicles. This collision rate compares to the highest major intersection collision rate of 2.03 collisions-per-million-entering-vehicles which occurred at the SR-101 / Frank Lloyd Wright and the Drinkwater / Osborn intersections, and also compares to the citywide average major intersection collision rate of 0.54 collisions-per-million-entering-vehicles.

Table 29 provides the seven-year total collision data for the intersection of 92nd Street and Shea Boulevard, in terms of collision manner, travel direction, and injury severity. The dominant collision type is westbound rear-end with no injuries. The second highest collision manner is side-swipe-same-direction.

Table 29: 2015 to 2021 Collisions at 92nd / Shea: Manner, Direction, Injury Severity

COLLISION MANNER	92 & Shea
REAR-END	172
ANGLE	28
LEFT-TURN ANGLE	23
LEFT-TURN HEAD-ON	5
SIDE-SWIPE SAME	43
SIDE-SWIPE OPPOSITE	0
HEAD-ON	2
SINGLE VEHICLE	8
OTHER	11
TOTAL	292

INJURY SEVERITY	92 & Shea
No Injury	215
Possible Injury	52
Suspected Minor Injury	28
Suspected Serious Injury	4
Fatal Injury	0
Unknown	0
Not Reported	0
TOTAL	299

TRAVEL DIRECTIONS	92 & Shea
Northbound Only	3
Southbound Only	1
Eastbound Only	1
Westbound Only	1
Northbound and Northbound	12
Southbound and Southbound	11
Eastbound and Eastbound	60
Westbound and Westbound	142
Northbound and Eastbound	17
Northbound and Westbound	16
Southbound and Eastbound	6
Southbound and Westbound	12
Northbound and Southbound	9
Eastbound and Westbound	8
TOTAL	299

No fatal injury collisions occurred at the 92nd / Shea intersection from 2015 through 2021. Four (4) suspected serious injuries occurred. These typically involve injuries that the investigating police officers perceive as serious, though the injured individual views the injuries as not serious. **Table 30** provides the collision manner, travel direction, and driver violation for the four (4) suspected serious injuries at the 92nd / Shea intersection from 2015 through 2021.

Table 30: Suspected Serious Injury Collisions 2015 through 2021 at 92nd / Shea

2015	Rear-end	Westbound	Speed too Fast For Conditions	
2018	Left-Turn-Head-On	Eastbound-Westbound	Failed to Yield Right-of-Way	Motorcycle
2018	Left-Turn-Angle	Northbound-Eastbound	Disregarded Signal	Pedestrian
2021	Angle	Eastbound-Northbound	Failed to Yield Right-of-Way	

Table 31, Table 32, and Table 33 summarize the historic collision data at the three (3) lower volume intersections. No collisions were reported to the Arizona Department of Transportation, at these intersections, for the years 2019, 2020, and 2021.

Table 31: Collisions 2015 through 2021 at 92nd / North

92nd Street and North Lane				
29 May 2016	Left-Turn-Angle	Westbound Turning Left and Northbound Straight	Suspected Minor Injury	Failed to Yield Right of Way
28 December 2016	Left-Turn-Head-On	Southbound Turning Left and Northbound Straight	Possible Injury	Made Improper Turn
23 March 2018	Angle	Northbound Turning Right and Northbound Turning Left	No Injury	Made Improper Turn
13 July 2018	Left-Turn-Angle	Eastbound Turning Left and Northbound Straight	No Injury	Failed to Yield Right of Way

Table 32: Collisions 2015 through 2021 at 92nd / Cochise

92nd Street and Cochise Drive				
18 June 2015	Angle	Westbound Straight and Northbound Straight	Possible Injury	Failed to Yield Right of Way
2 December 2015	Rear End	Westbound Turning Left and Westbound Turning Left	No Injury	Unknown
12 April 2016	Single Vehicle	Westbound Straight	Possible Injury	Made Improper Turn
8 September 2016	Left-Turn-Head-On	Northbound Turning Left and Southbound Straight	No Injury	Failed to Yield Right of Way
30 November 2016	Left-Turn-Angle	Eastbound Turning Left and Southbound Straight	No Injury	Failed to Yield Right of Way
1 May 2017	Angle	Westbound Turning Left and Northbound Turning Left	No Injury	Failed to Yield Right of Way
8 June 2017	Left-Turn-Angle	Eastbound Turning Left and Northbound Straight	No Injury	Failed to Yield Right of Way
9 May 2018	Left-Turn-Angle	Eastbound Turning Left and Northbound Straight	No Injury	Failed to Yield Right of Way

Table 33: Collisions 2015 through 2021 at 92nd / Ironwood

92nd Street and Ironwood Lane				
14 April 2016	Rear End	Northbound Turning Left and Northbound Stopped	No Injury	Unknown

The dominant collision type at the three (3) lower-volume intersections were angle at the 92nd / Cochise intersection. Four (4) collisions occurred in a 19-month period from November 2016 through May 2018. Each of these collisions were caused by a driver in a vehicle on Cochise Drive failing to yield the right-of-way to traffic on 92nd Street. These collisions are potentially preventable by a traffic signal.

Existing Traffic Volumes

Traffic counts were obtained on 22 April 2021 on the intersections of 92nd Street and North Lane, Cochise Drive, Ironwood Lane and Mountain View Road; and on 27 April 2021 at the intersection of 92nd Street and Shea Boulevard. **Appendix B** provides the turning movement counts for 24 hours in 15-minute increments for the five (5) study intersections. **Figure 6** through **Figure 10** provide the 2021 day approach and departure volumes, the morning peak hour approach and departure, the morning turning movement volumes, the evening peak hour approach and departure, and the evening turning movement volumes.

Table 34: Monthly Factors

Because traffic counts vary from month-to-month, often monthly factors are utilized to adjust a specific count month to an average for the year. The City of Scottsdale utilizes monthly factors developed by the Maricopa Association of Governments in 2007. **Table 34** provides these monthly factors. These factors indicate that counts in January, September, and October are the closest to typical. Counts in April are 4.4% greater than typical. Counts in July are 93% of typical.

The 2021 traffic counts occurred in April; and therefore, the count was divided by 1.044 to represent the typical weekday traffic volume for the entire year.

Figure 11 through **Figure 15** provide the adjusted 2021 day approach and departure volumes, the morning peak hour approach and departure, the morning turning movement volumes, the evening peak hour approach and departure, and the evening turning movement volumes.

The 2023 counts were obtained on Tuesday, 11 July 2023. **Figure 16** through **Figure 20** provide the 2023 day approach and departure volumes, the morning peak hour approach and departure, the morning turning movement volumes, the evening peak hour approach and departure, and the evening turning movement volumes at the intersections. The 2023 traffic counts were divided by 0.930 to represent the typical weekday traffic volume for the entire year.

	Factor
January	1.003
February	1.045
March	1.040
April	1.044
May	1.022
June	0.972
July	0.930
August	0.975
September	0.995
October	0.994
November	1.008
December	0.974

Table 35 provides the peak 60-minute times for 2023 traffic counts for each of the three (3) peak periods.

Table 35: 2023 Traffic Counts Peak 60-minute Periods

Intersection	Morning Peak 60-minute	Mid-Day Peak 60-minute	Evening Peak 60-minute
92nd / Shea	9:15 AM to 10:15 AM	12:00 PM to 1:00 PM	4:15 PM to 5:15 PM
92nd / North	8:45 AM to 9:45 AM	12:00 PM to 1:00 PM	4:15 PM to 5:15 PM
92nd / Cochise	8:45 AM to 9:45 AM	12:15 PM to 1:15 PM	4:15 PM to 5:15 PM
92nd / Ironwood	8:30 AM to 9:30 AM	12:15 PM to 1:15 PM	4:00 PM to 5:00 PM
92nd / Mountain View	9:00 AM to 10:00 AM	12:15 PM to 1:15 PM	4:00 PM to 5:00 PM

Figure 21 through **Figure 25** provide the adjusted 2023 day approach and departure volumes, the morning peak hour approach and departure, the morning turning movement volumes, the evening peak hour approach and departure, and the evening turning movement volumes.

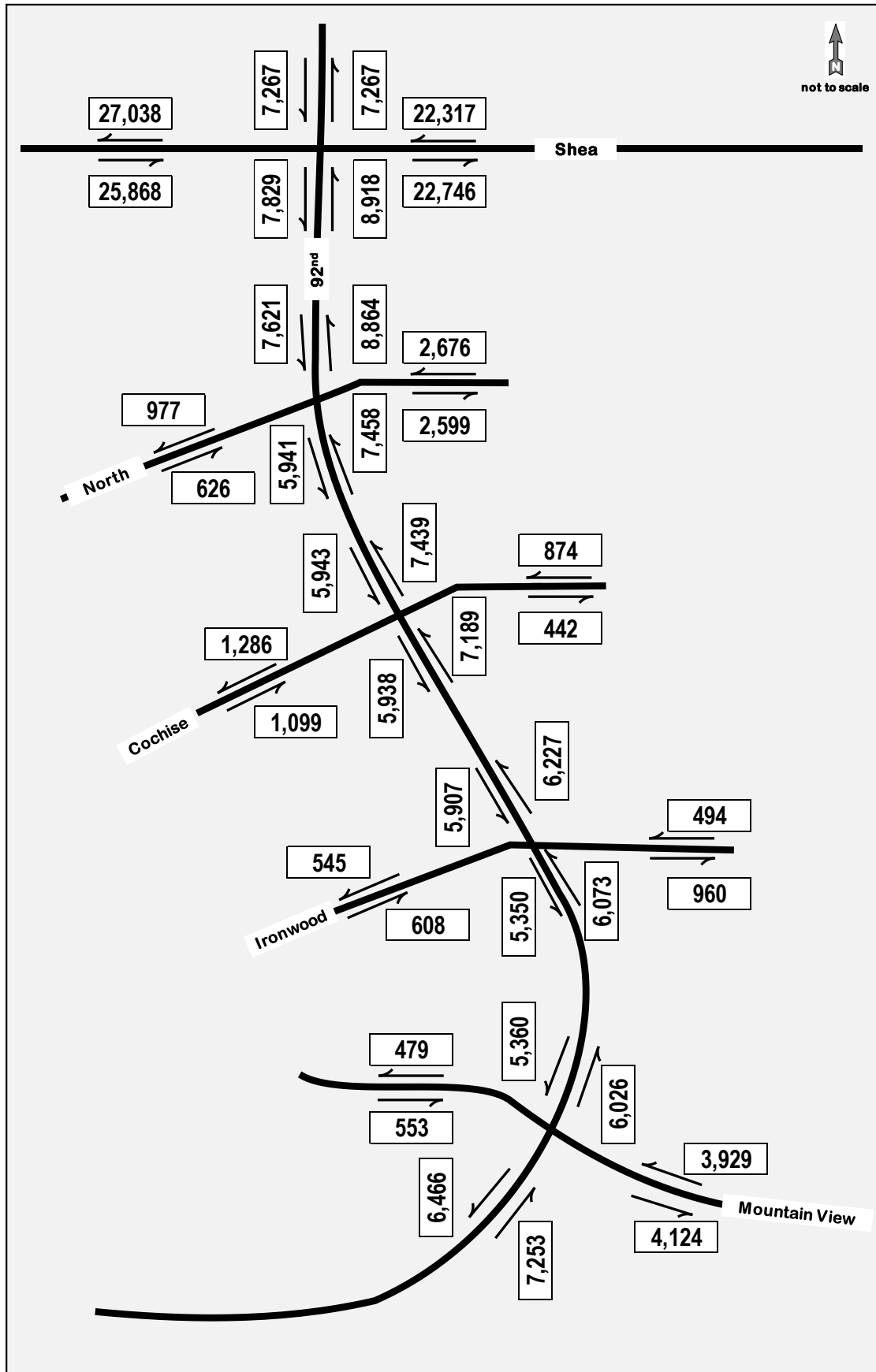


Figure 6: 2021 Day Approach and Departure Volumes

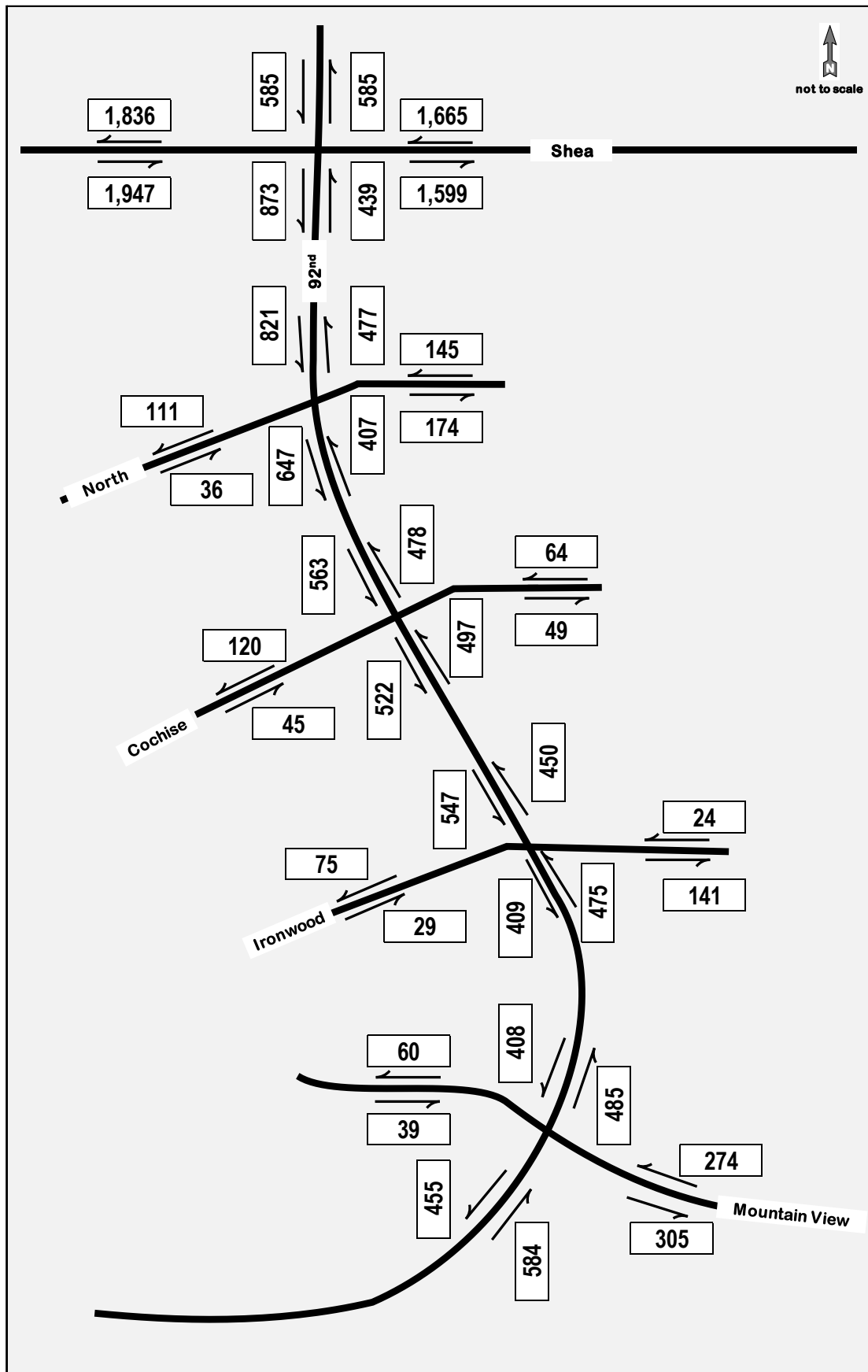


Figure 7: 2021 AM Peak Hour Approach and Departure Volumes

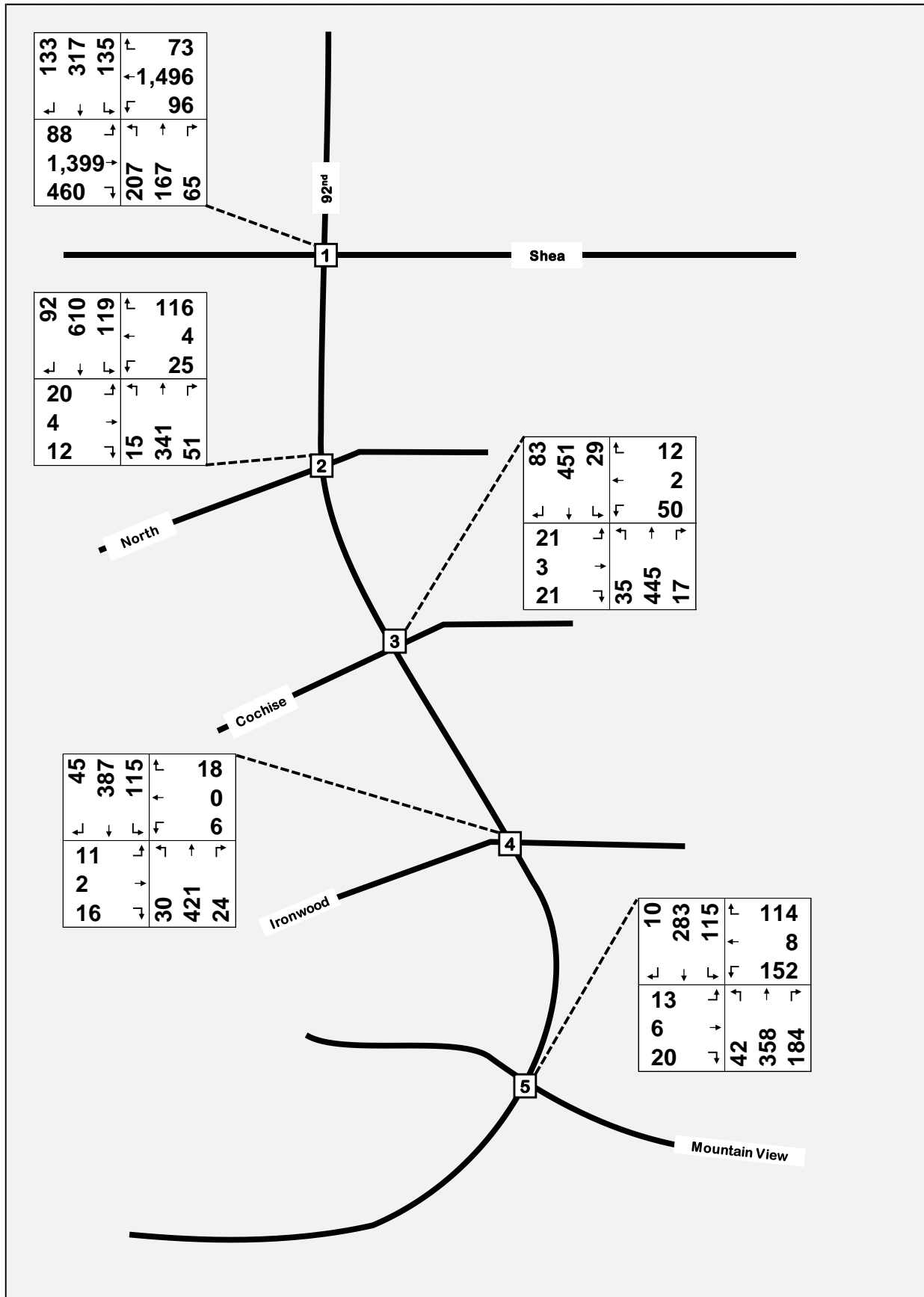


Figure 8: 2021 AM Peak Hour Turning Movement Volumes

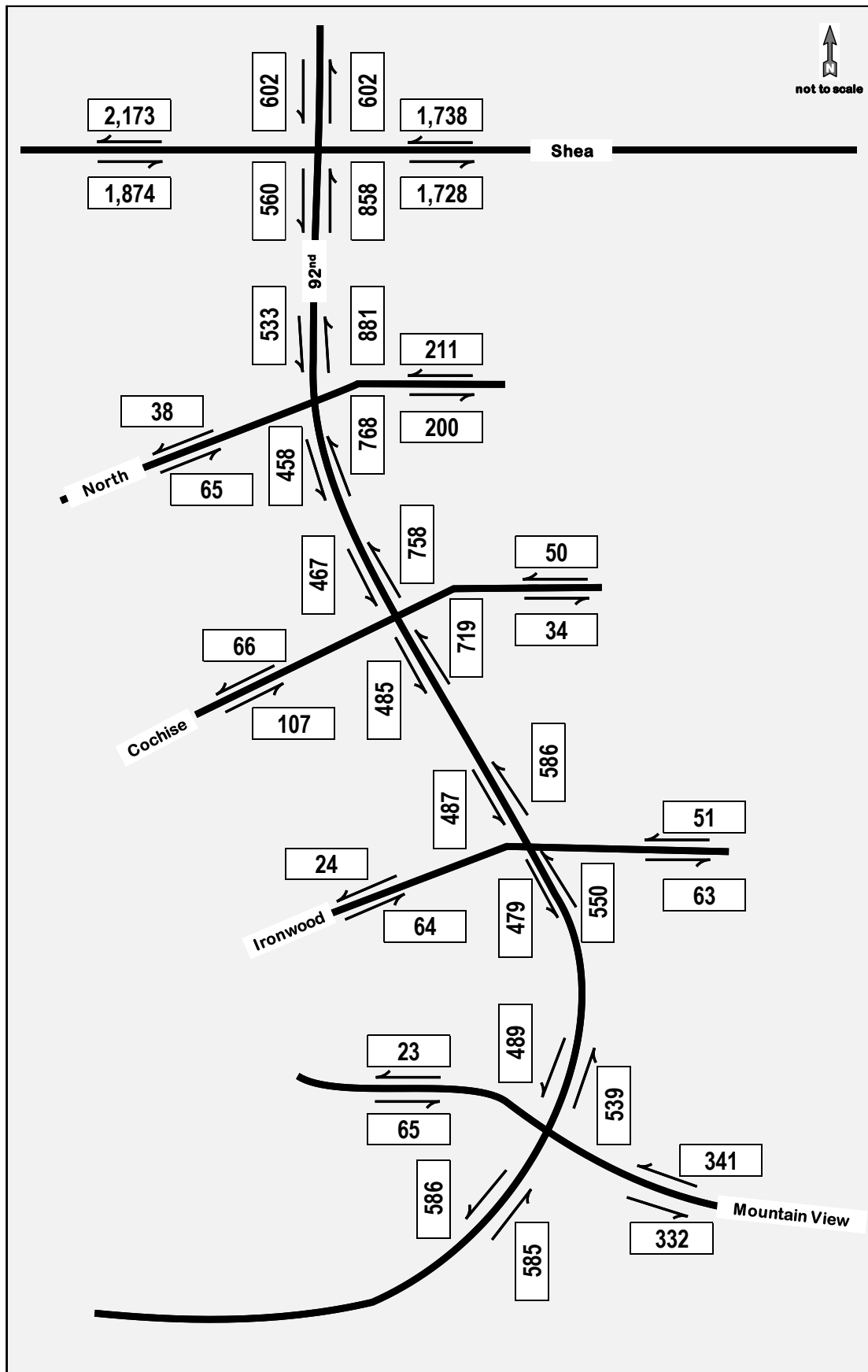


Figure 9: 2021 PM Peak Hour Approach and Departure Volumes

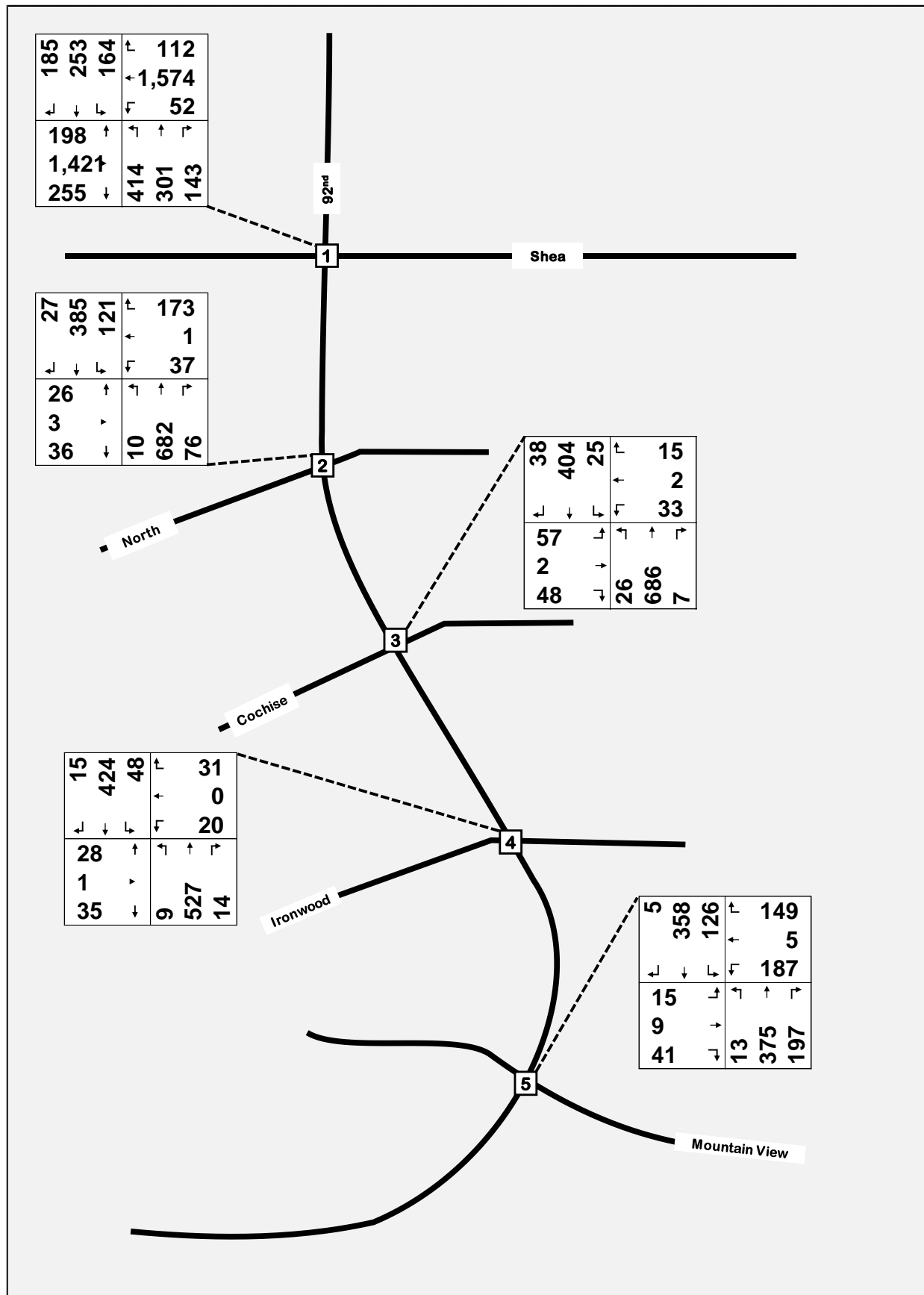


Figure 10: 2021 PM Peak Hour Turning Volumes

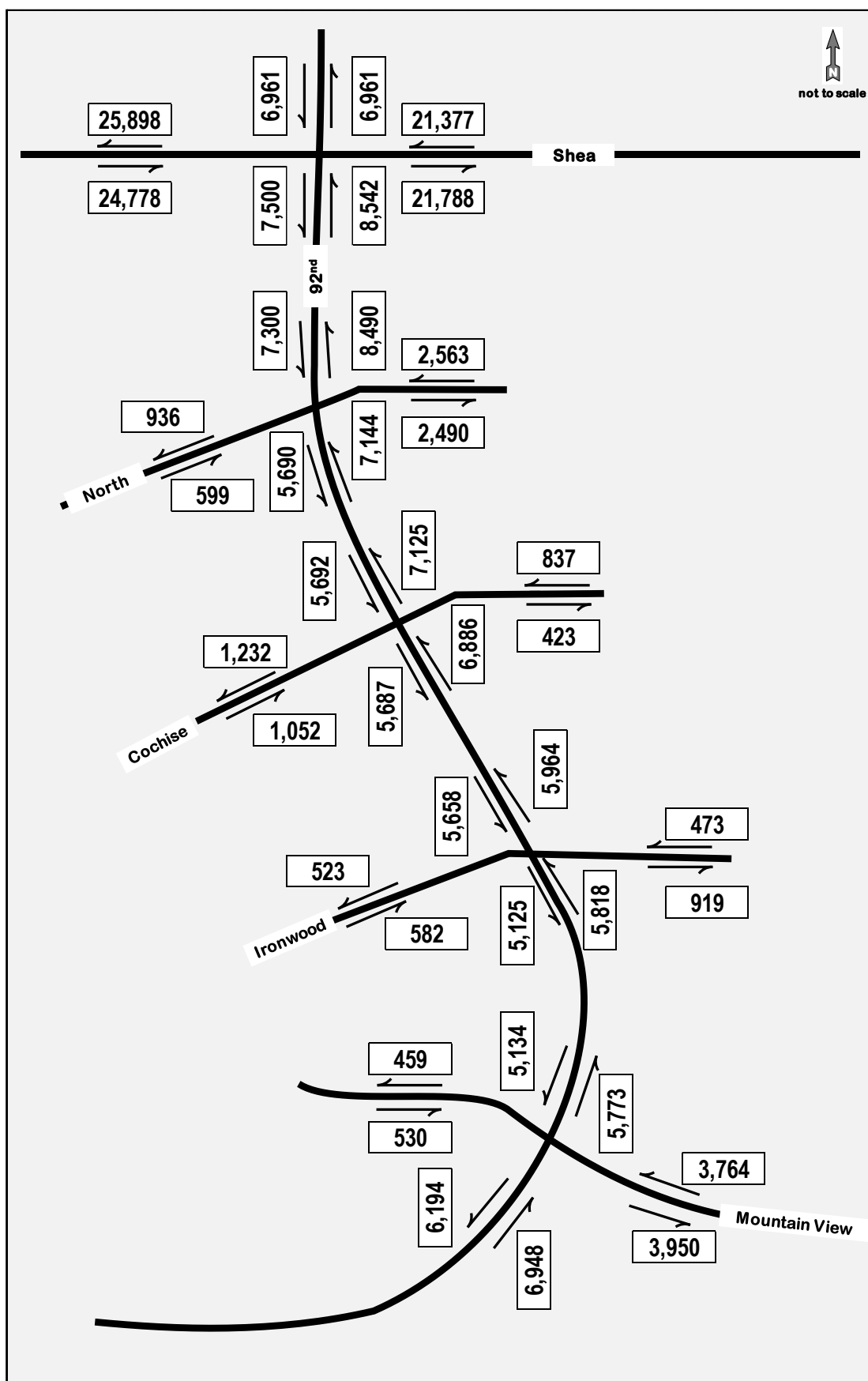


Figure 11: Adjusted 2021 Day Approach and Departure Volumes

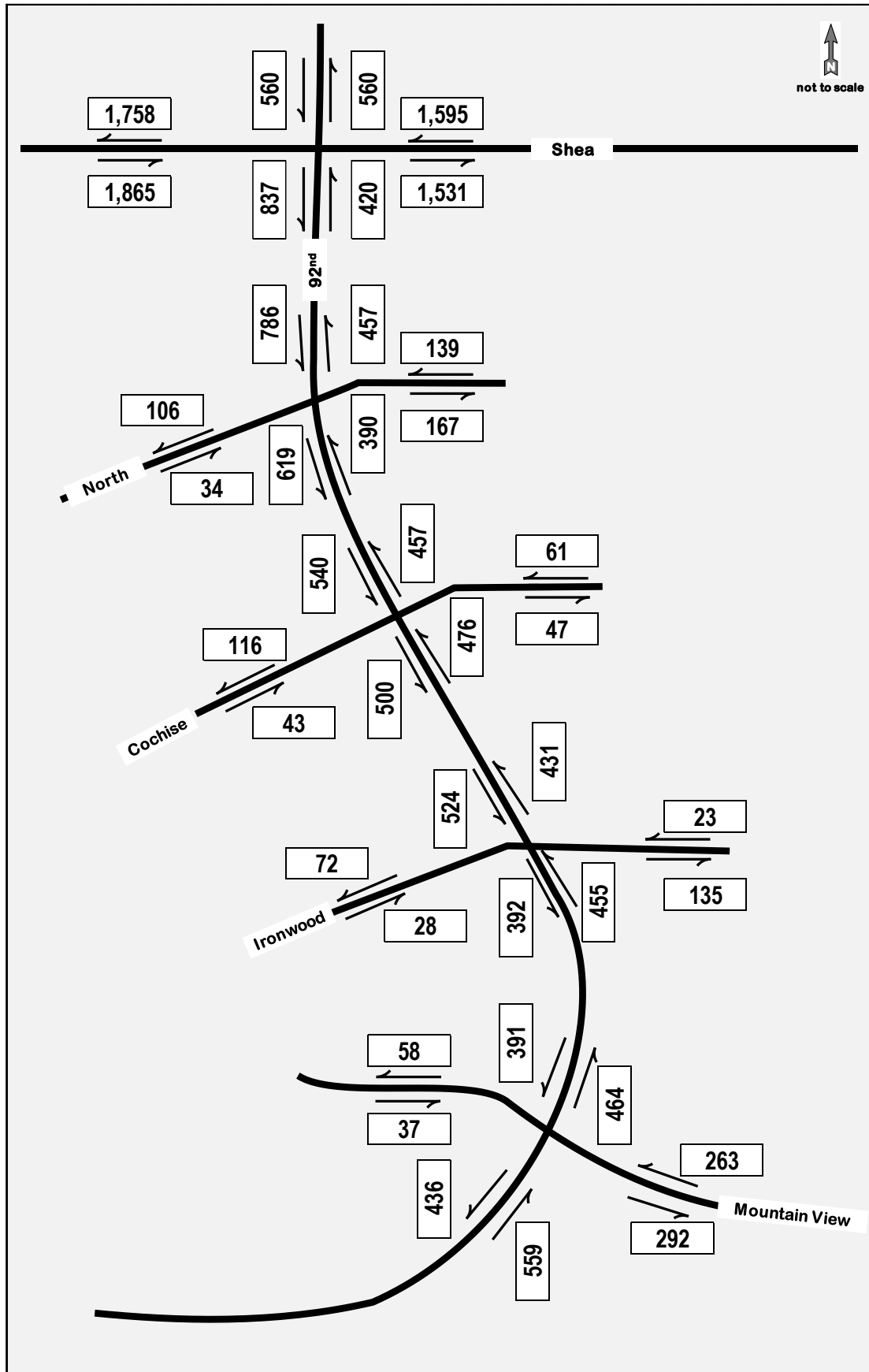


Figure 12: Adjusted 2021 AM Peak Hour Approach and Departure Volumes

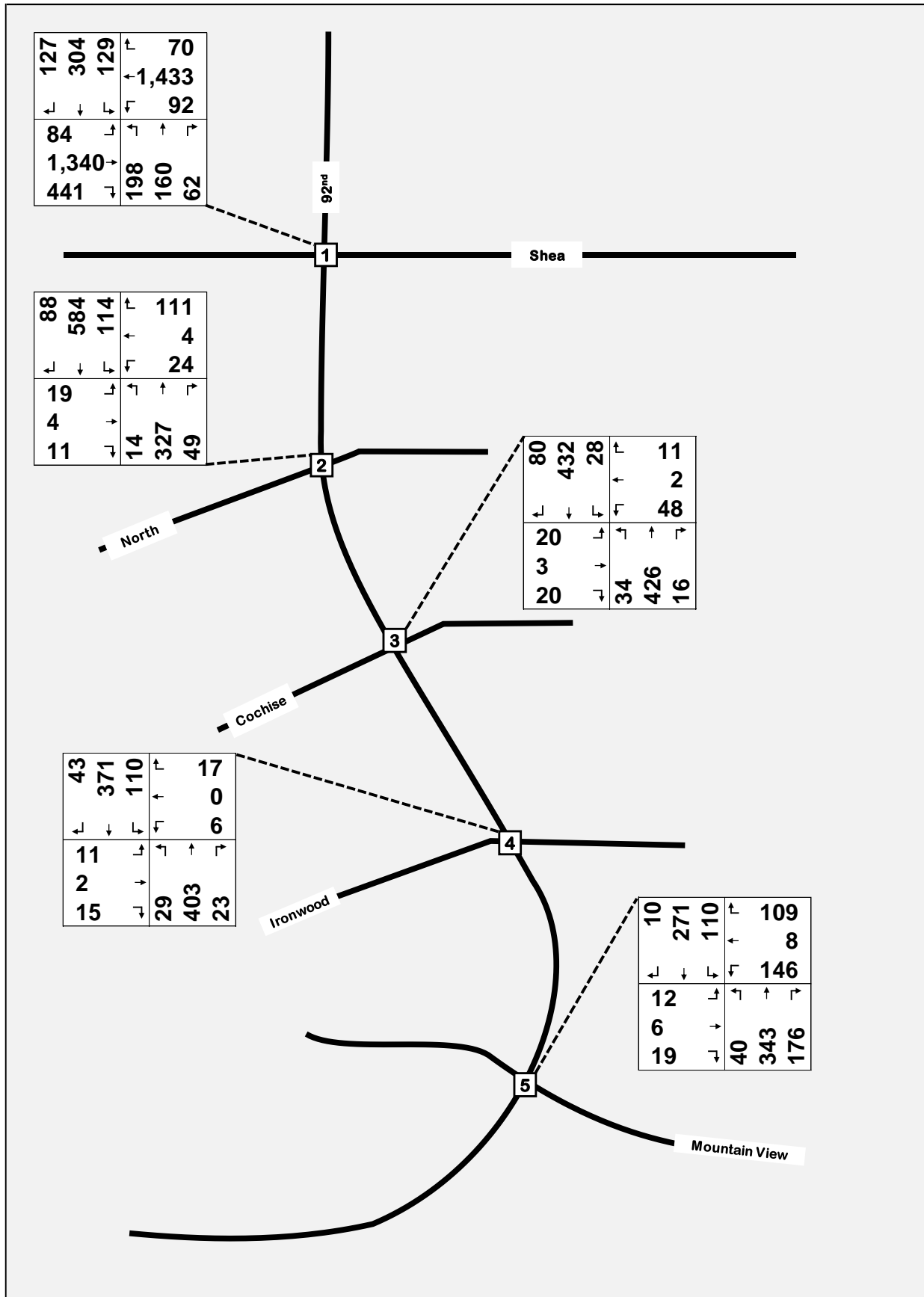


Figure 13: Adjusted 2021 AM Peak Hour Turning Movement Volumes



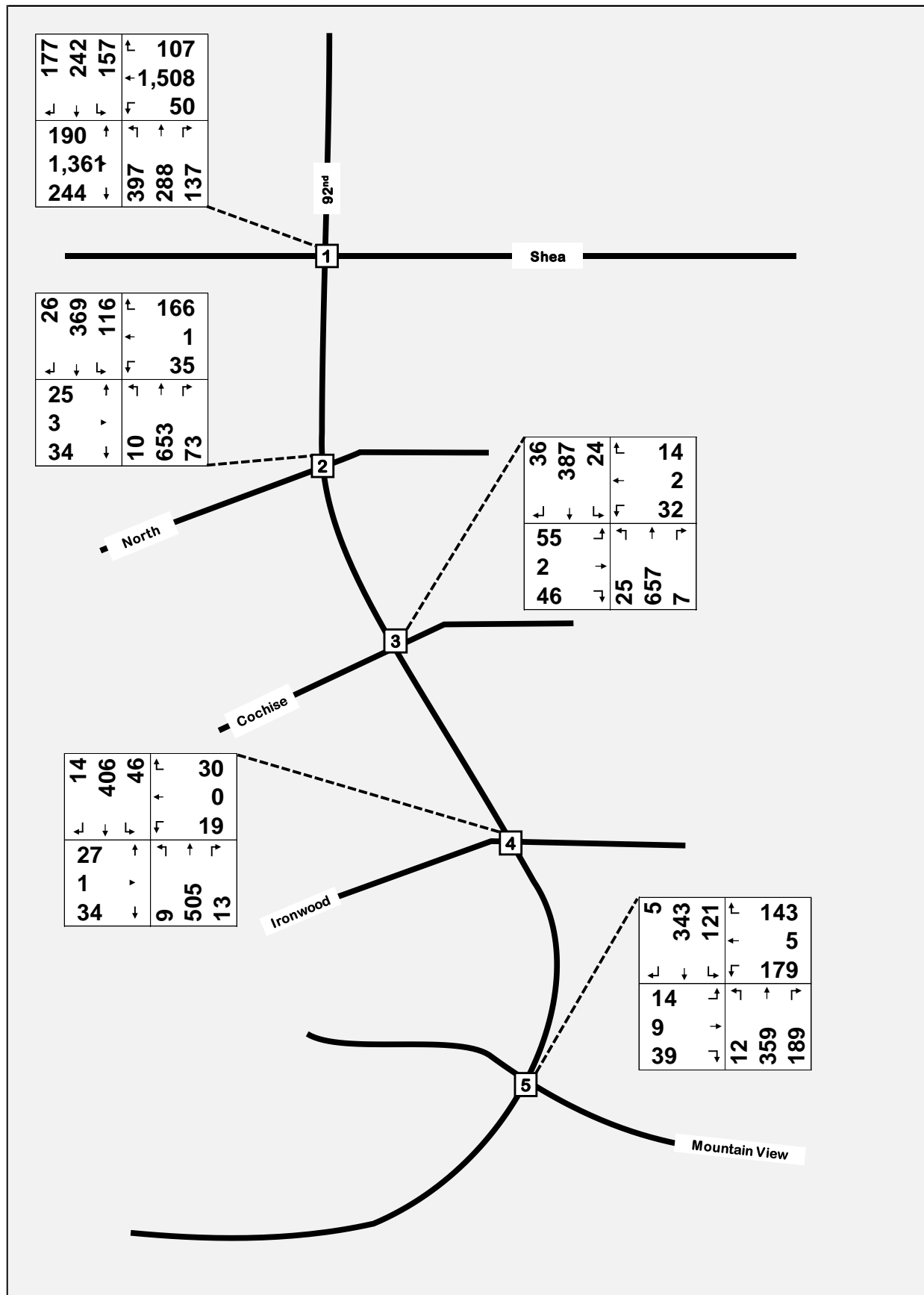


Figure 15: Adjusted 2021 PM Peak Hour Turning Volumes

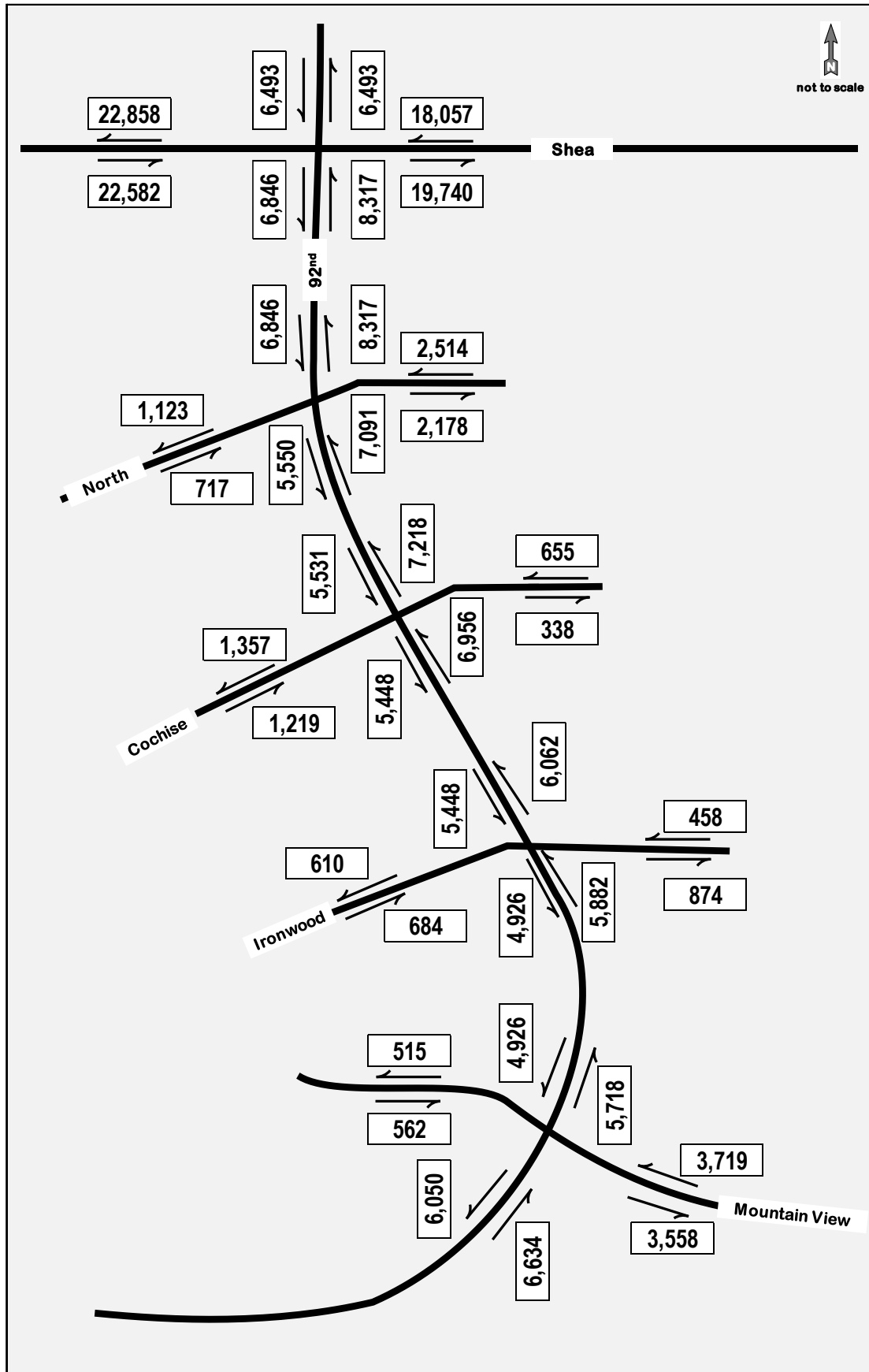
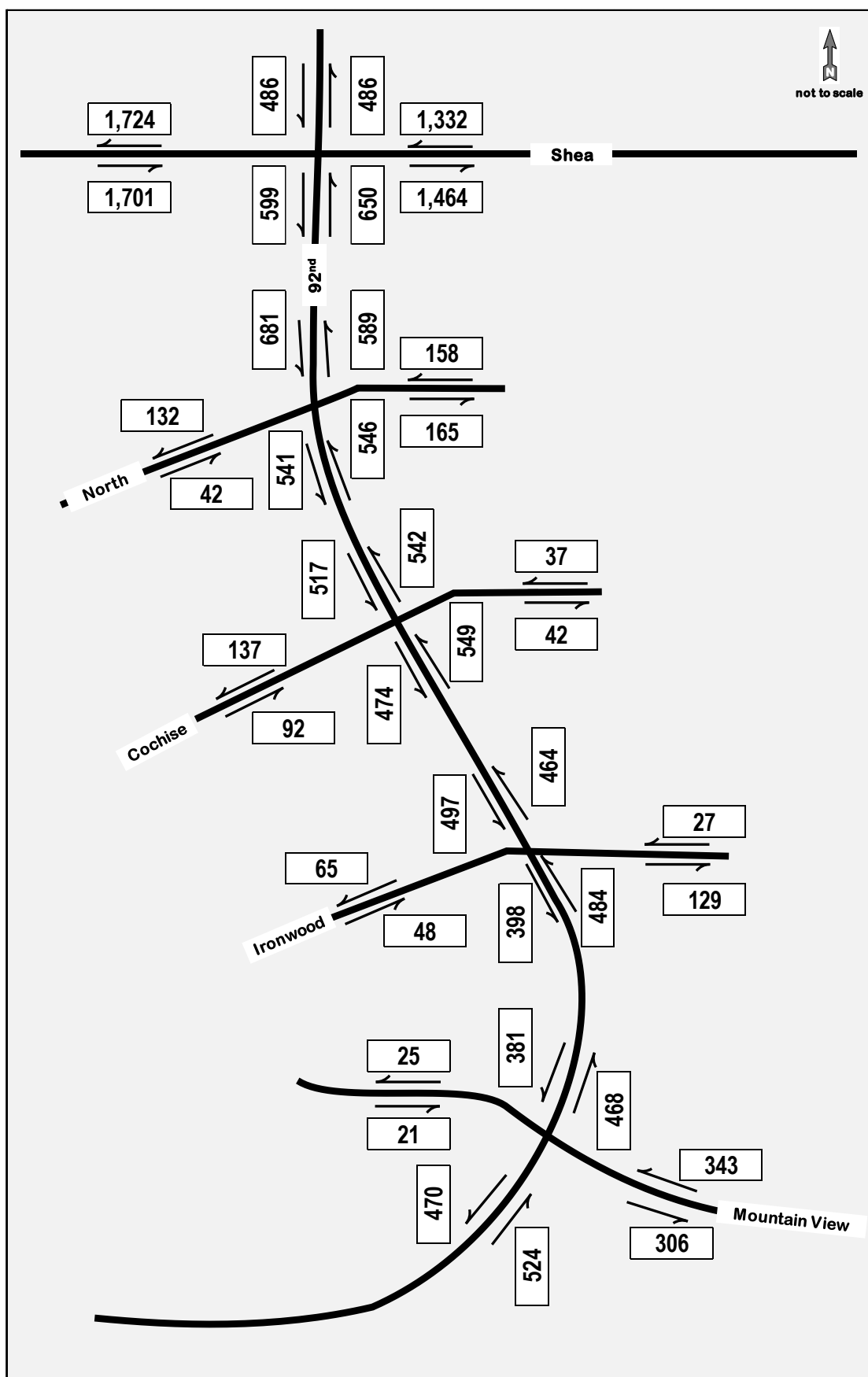


Figure 16: 2023 Day Approach and Departure Volumes



Page 31

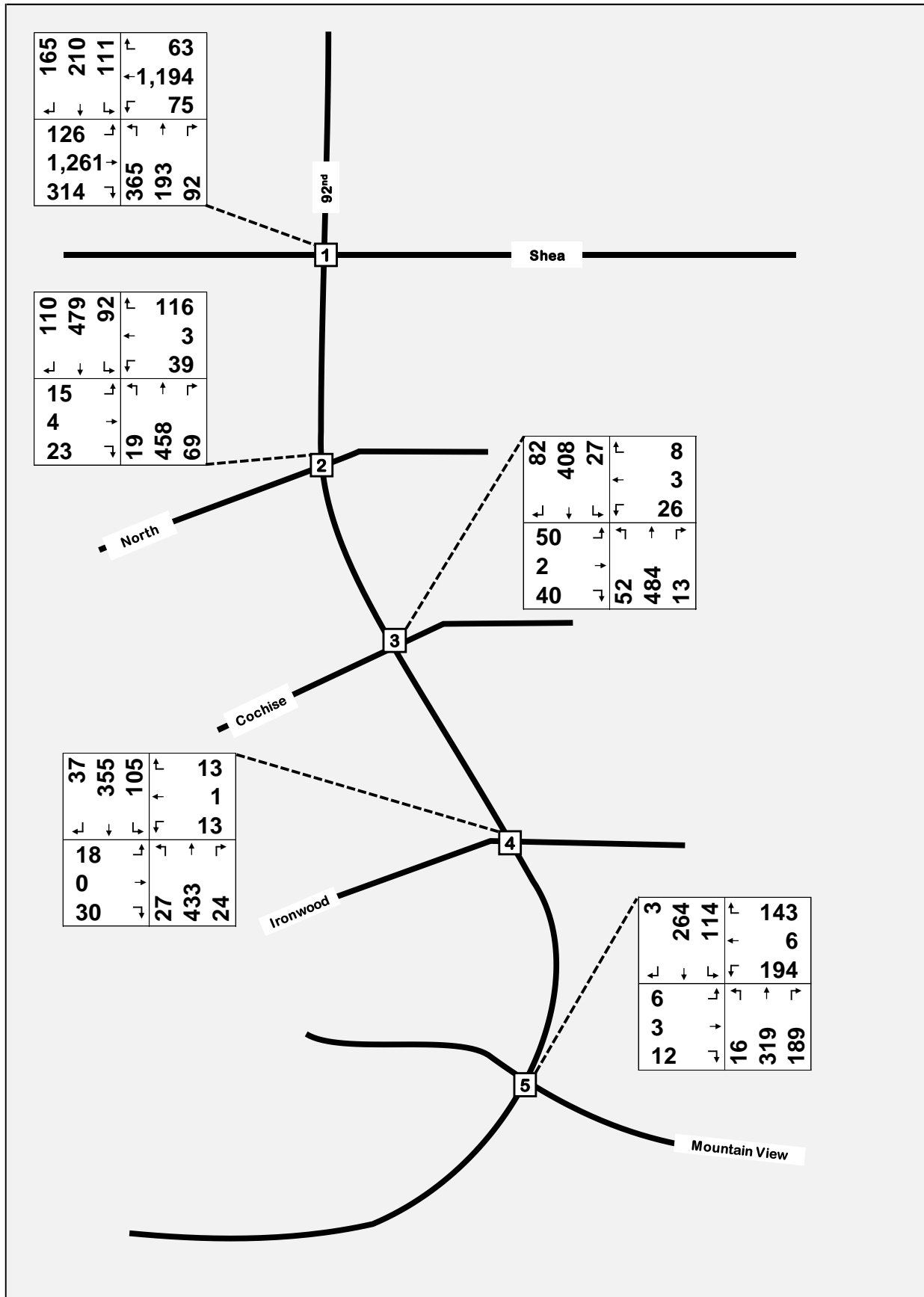


Figure 18: 2023 AM Peak Hour Turning Movement Volumes

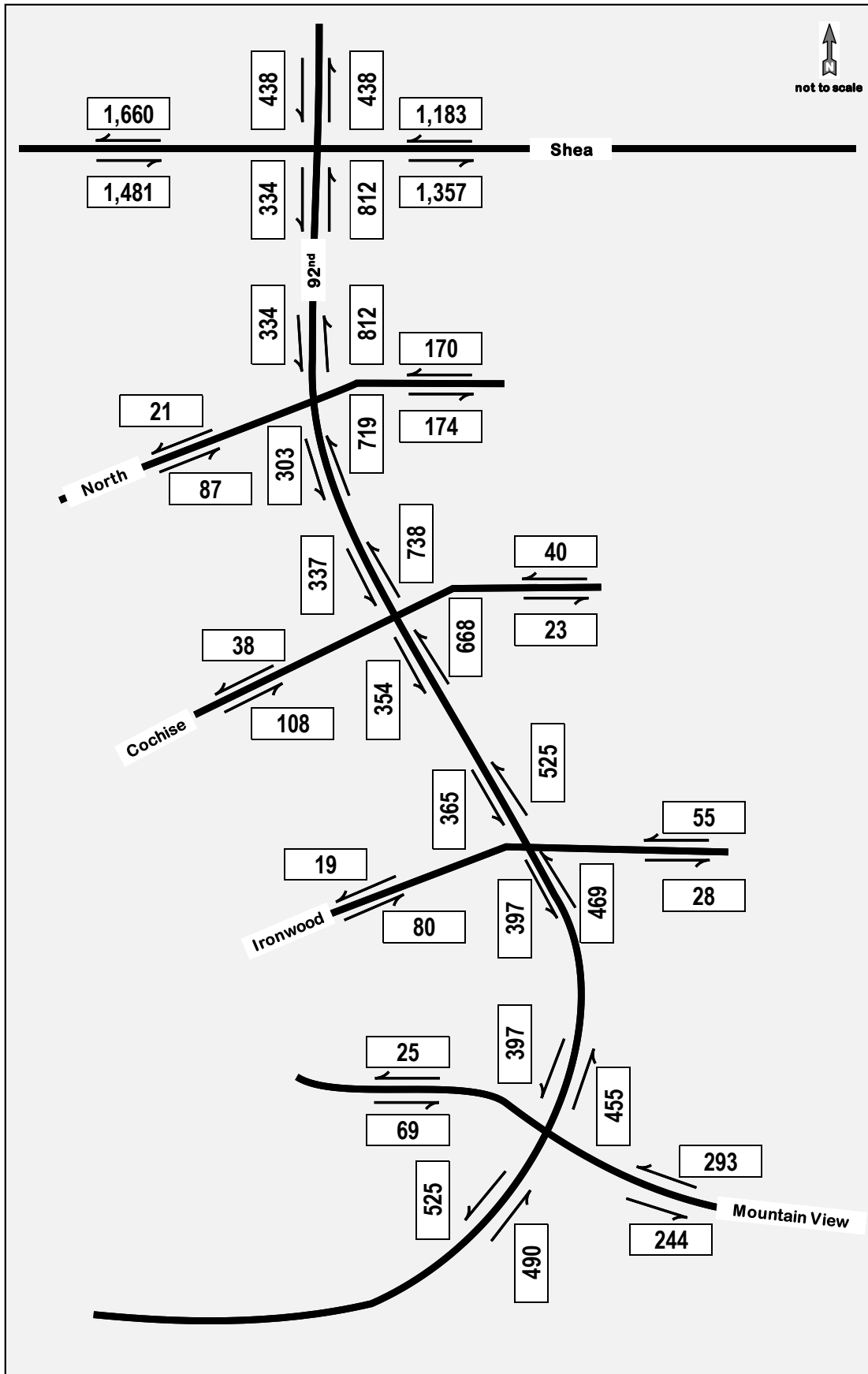


Figure 19: 2023 PM Peak Hour Approach and Departure Volumes

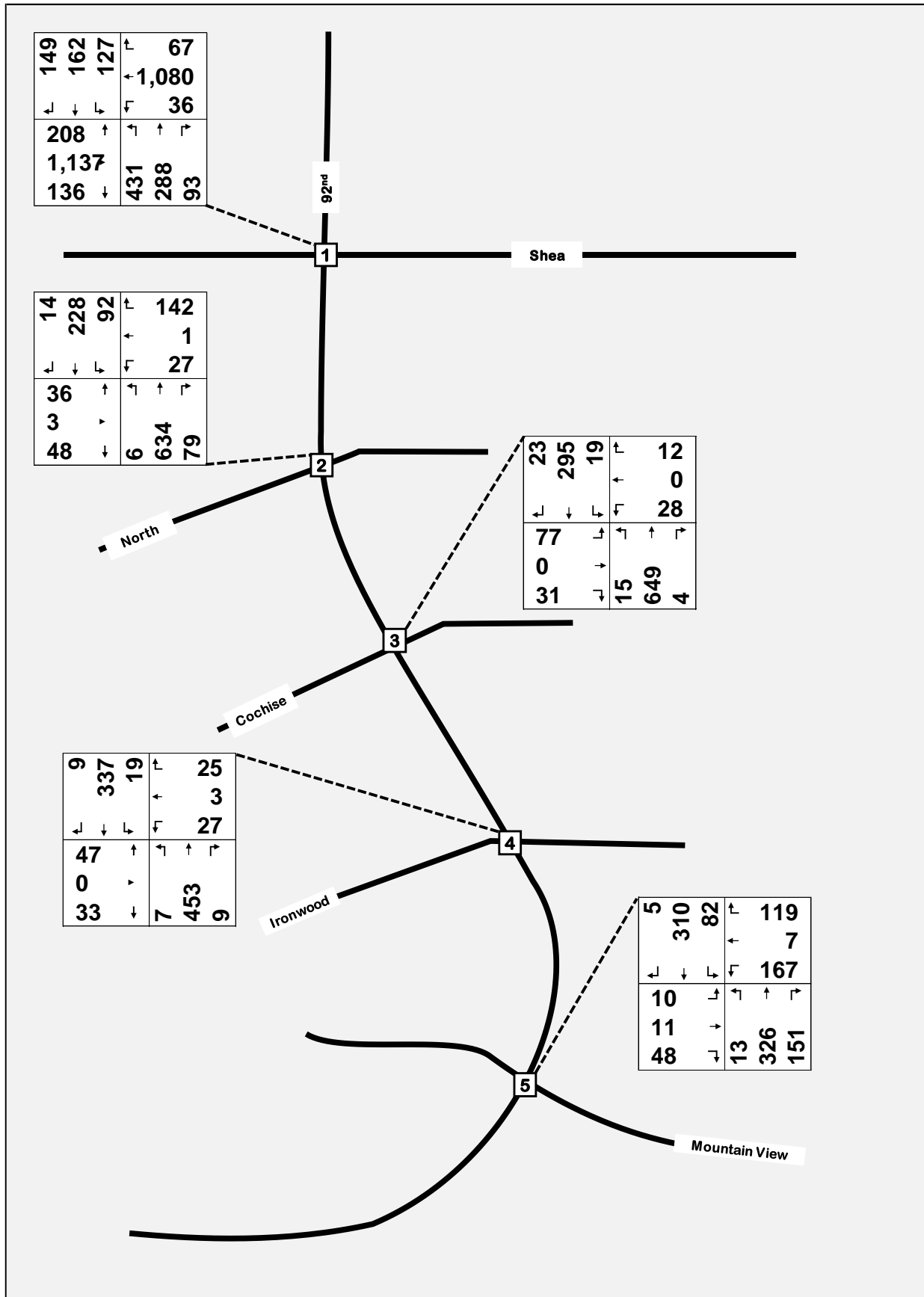


Figure 20: 2023 PM Peak Hour Turning Volumes

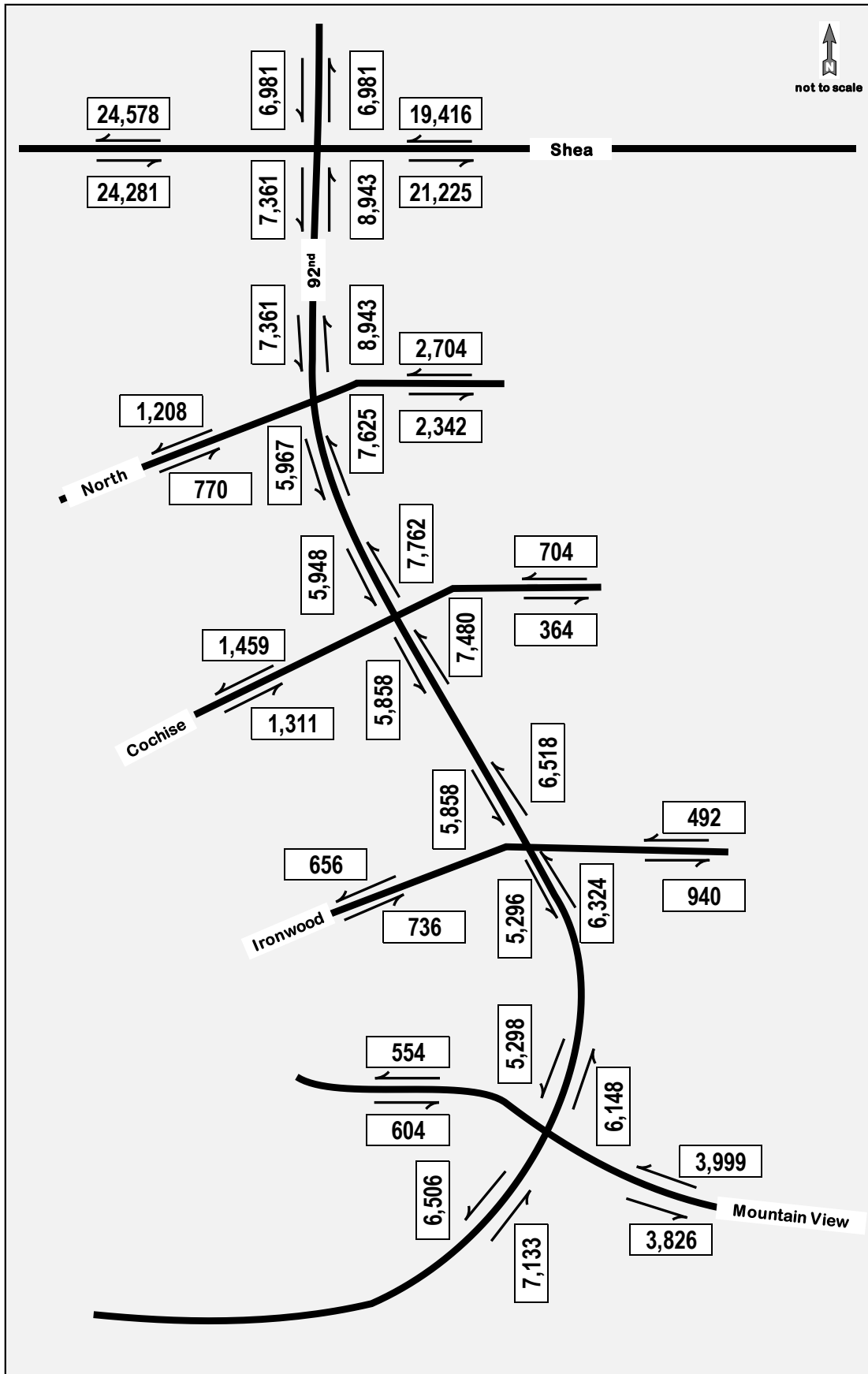


Figure 21: Adjusted 2023 Day Approach and Departure Volumes

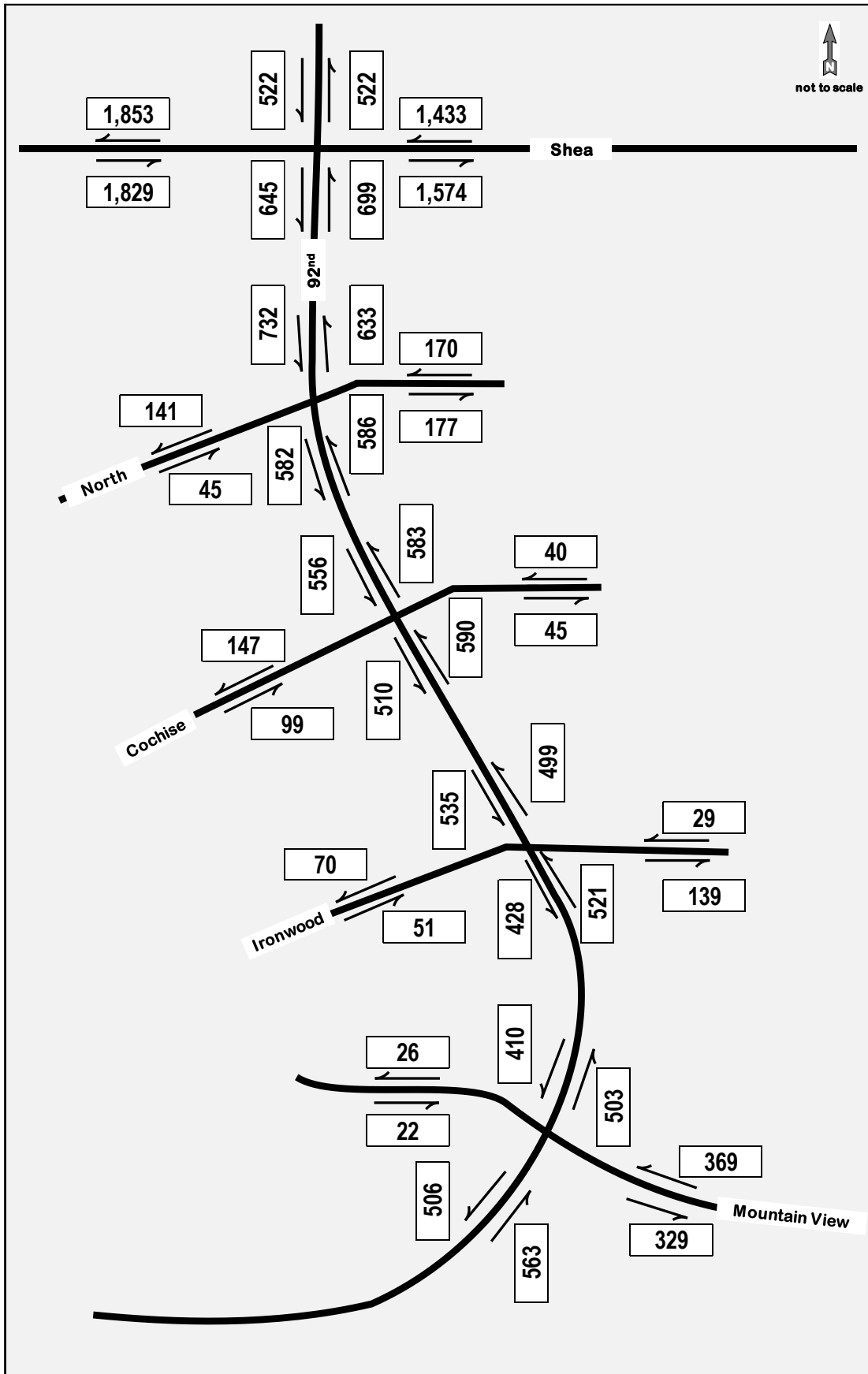


Figure 22: Adjusted 2023 AM Peak Hour Approach and Departure Volumes

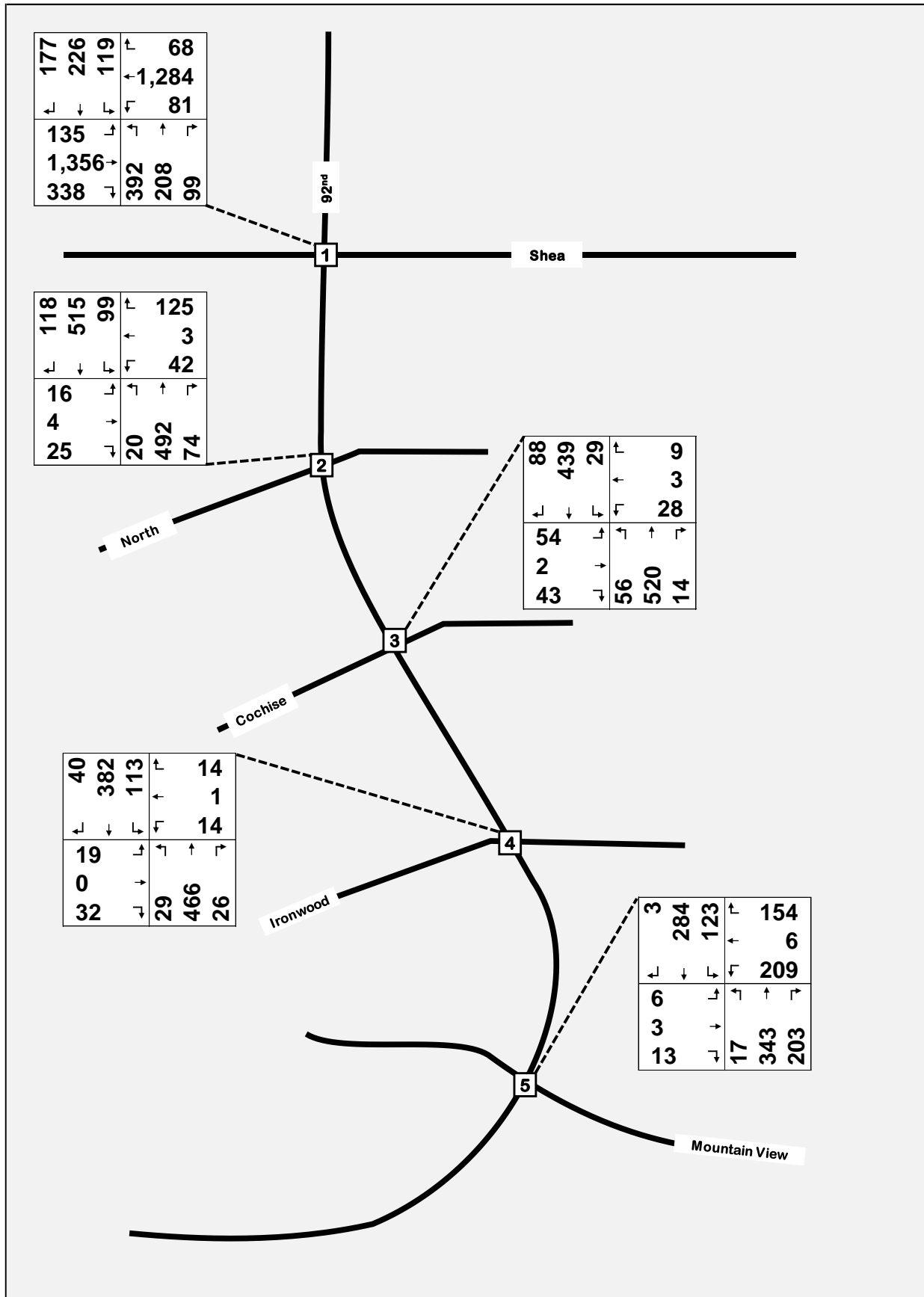


Figure 23: Adjusted 2023 AM Peak Hour Turning Movement Volumes

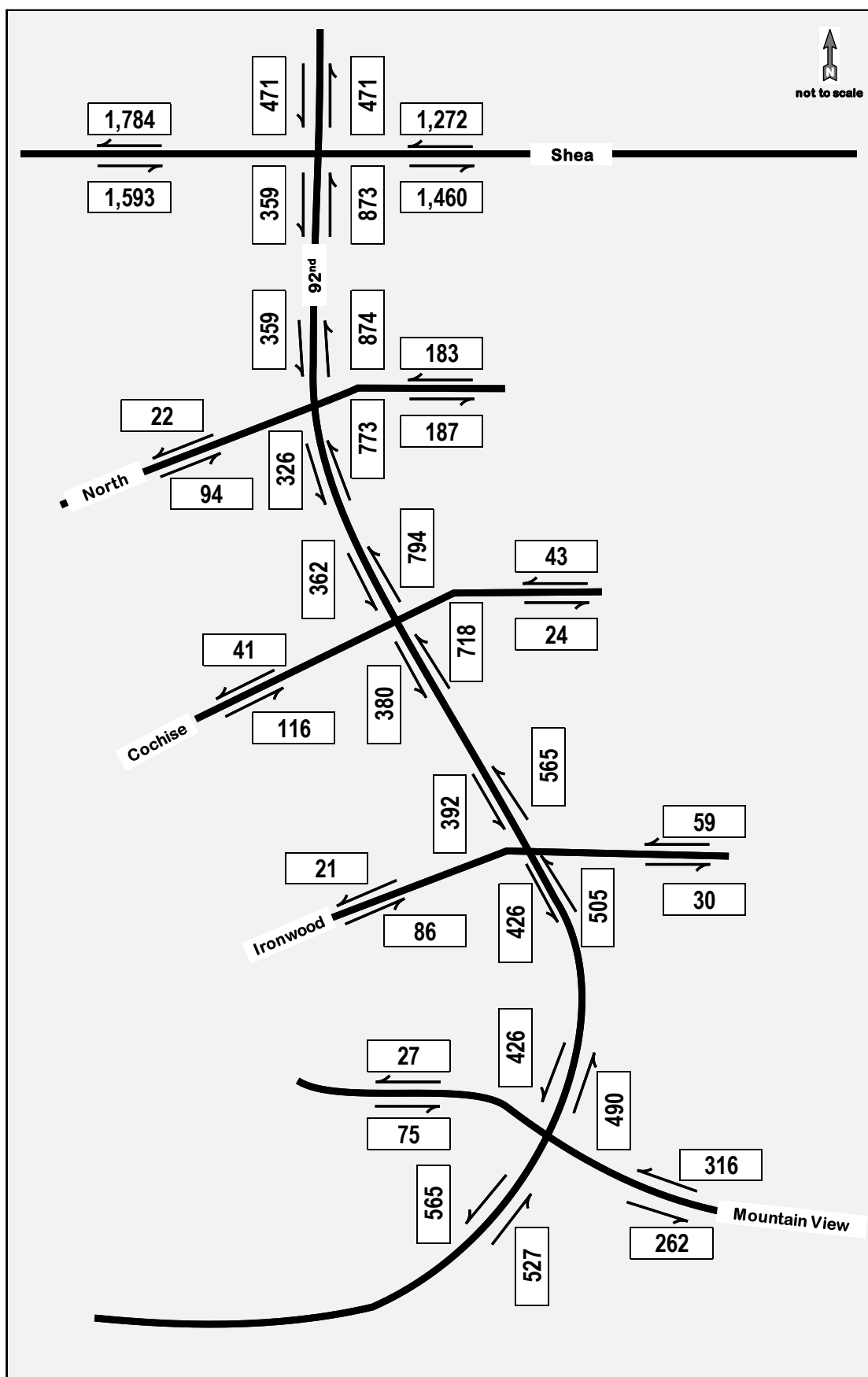


Figure 24: Adjusted 2023 PM Peak Hour Approach and Departure Volumes

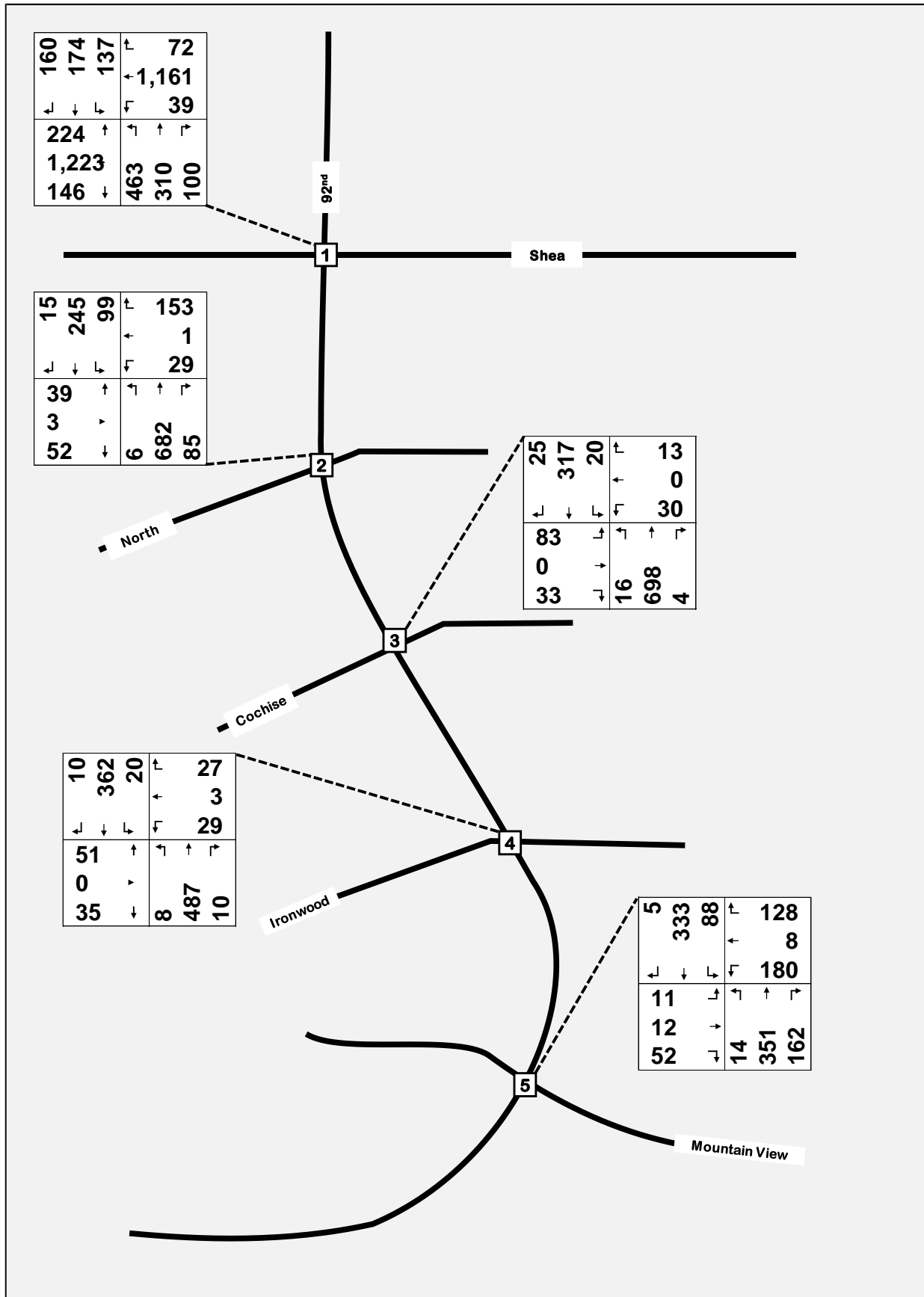


Figure 25: Adjusted 2023 PM Peak Hour Turning Volumes

Future Ambient 2025

The adjusted 2021 and 2023 traffic counts were utilized to determine the future traffic volume increase at the five (5) study intersections. The differences between the two (2) count years fluctuated dramatically.

Table 36 provides the results of comparison of the 2021 and 2023 volumes. The total approach volume at each intersection for each of the three (3) peak hours and the day were determined. The percent change – either increase or decrease – from 2021 to 2023 – was also determined for each intersection and each time period. The two-year percent change varied from a low of a 13% decrease to a high of a 41% increase. The average of all 20 percent changes is 8.73% for the two-year period. The average annual change is 4.40% approximated to the nearest 0.1%.

Therefore, adjusted 2023 traffic volumes were increased by 4.4% linearly annually. This increase is more conservative than the 2022 City of Scottsdale Traffic Volume and Collision Report, which indicates a 0% or 3% increase on 92nd Street at Shea Boulevard and a 4% decrease or 0% change on Shea Boulevard at 92nd Street.

Table 36: 2021 to 2023 Traffic Count Increase

INTERSECTION	TRAFFIC VOLUME			
	2021	2023	DIFFERENCE	CHANGE
92nd & Shea				
AM PEAK	4,440	4,483	43	0.97%
MD PEAK	3,185	4,490	1,305	40.97%
PM PEAK	4,858	4,209	-649	-13.36%
DAY	61,658	59,621	-2,037	-3.30%
92nd & North				
AM PEAK	1,349	1,533	184	13.64%
MD PEAK	1,470	1,643	173	11.77%
PM PEAK	1,511	1,409	-102	-6.75%
DAY	17,606	18,460	854	4.85%
92nd & Cochise				
AM PEAK	1,120	1,285	165	14.73%
MD PEAK	1,254	1,367	113	9.01%
PM PEAK	1,287	1,239	-48	-3.73%
DAY	14,467	15,443	976	6.75%
92nd & Ironwood				
AM PEAK	1,030	1,136	106	10.29%
MD PEAK	693	1,208	515	74.31%
PM PEAK	1,104	1,042	-62	-5.62%
DAY	12,531	13,410	879	7.01%
92nd & Mountain View				
AM PEAK	1,250	1,364	114	9.12%
MD PEAK	1,420	1,494	74	5.21%
PM PEAK	1,418	1,344	-74	-5.22%
DAY	16,376	17,034	658	4.02%
AVERAGE ALL CHANGE FOR TWO YEARS				8.73%
AVERAGE ANNUAL CHANGE FOR ALL VOLUMES (NEAREST 0.1%)				4.40%

These annual increases were applied to the 2023 individual turning movement traffic volumes to determine the 2025 volumes. The peak hour volumes were approximated to the nearest 10 vehicles-per-hour, with a minimum of 10 vehicles-per-hour. The day volumes were approximated to the nearest 100 vehicles-per-day. The approach and departure volumes were the sum of the appropriate turning movements.

Figure 26 through **Figure 30** provide the ambient 2025 day approach and departure volumes, morning peak hour approach and departure and turning movement volumes, and evening peak hour approach and departure and turning movement volumes at these intersections.

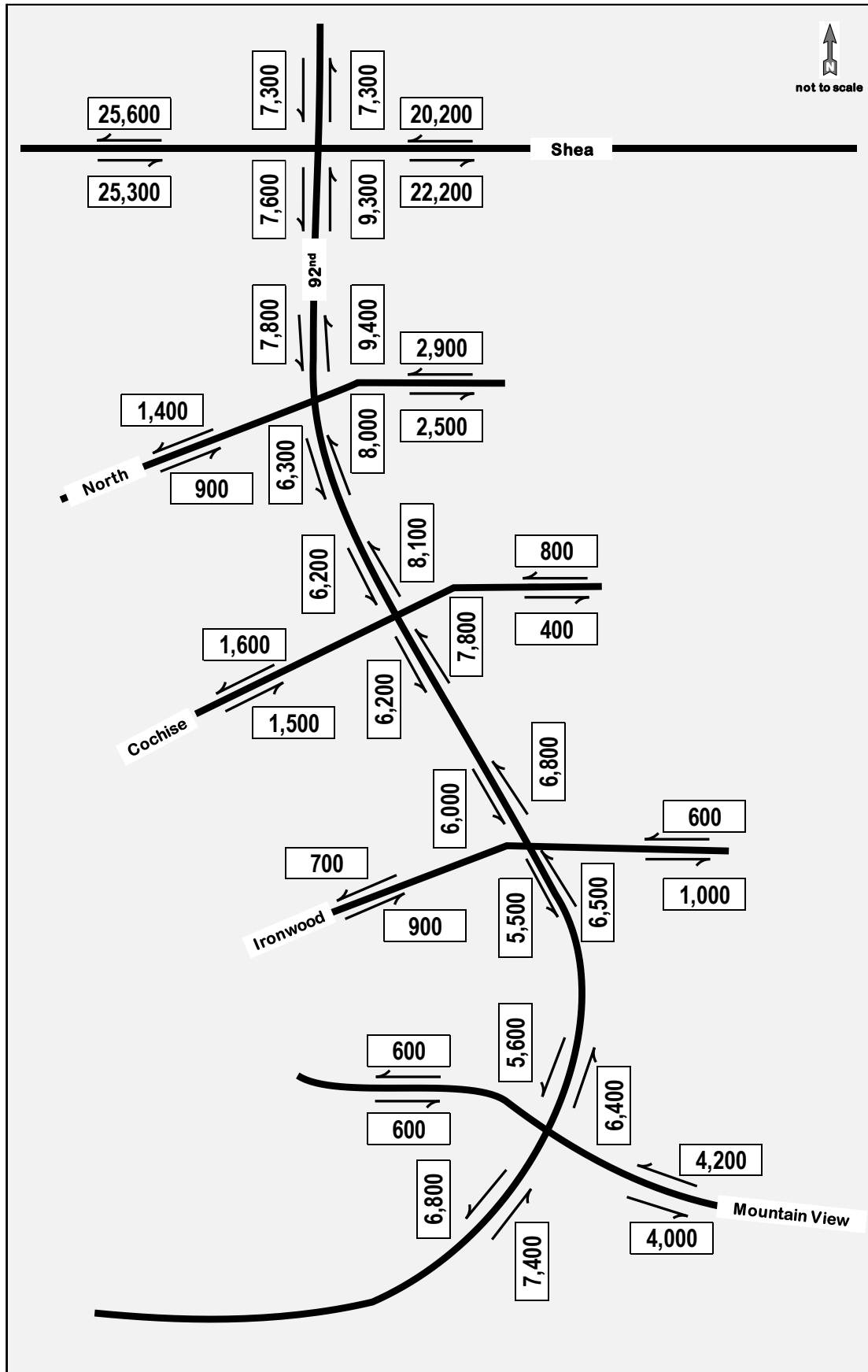


Figure 26: Ambient 2025 Day Approach and Departure Volumes

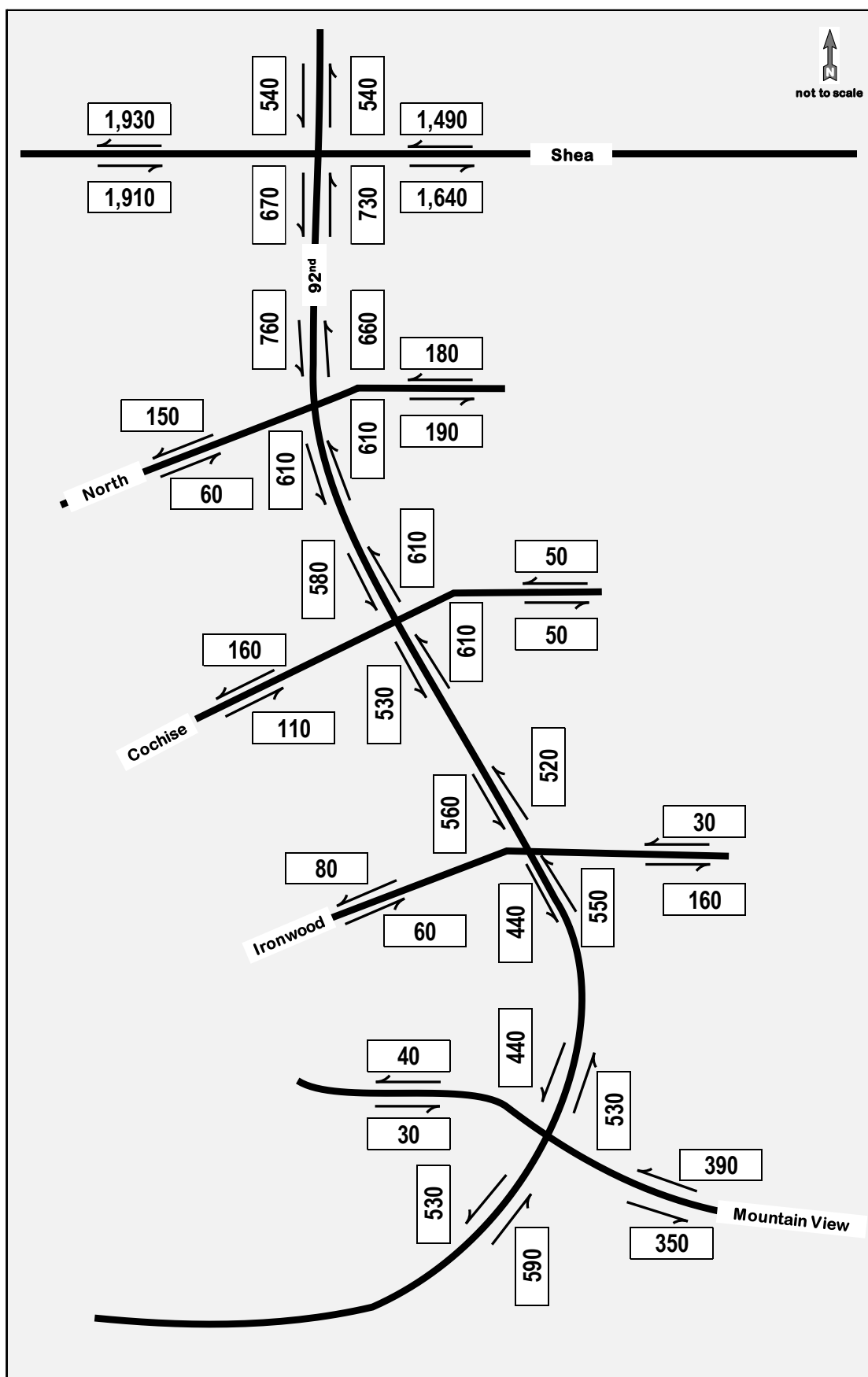


Figure 27: Ambient 2025 AM Peak Hour Approach and Departure Volumes

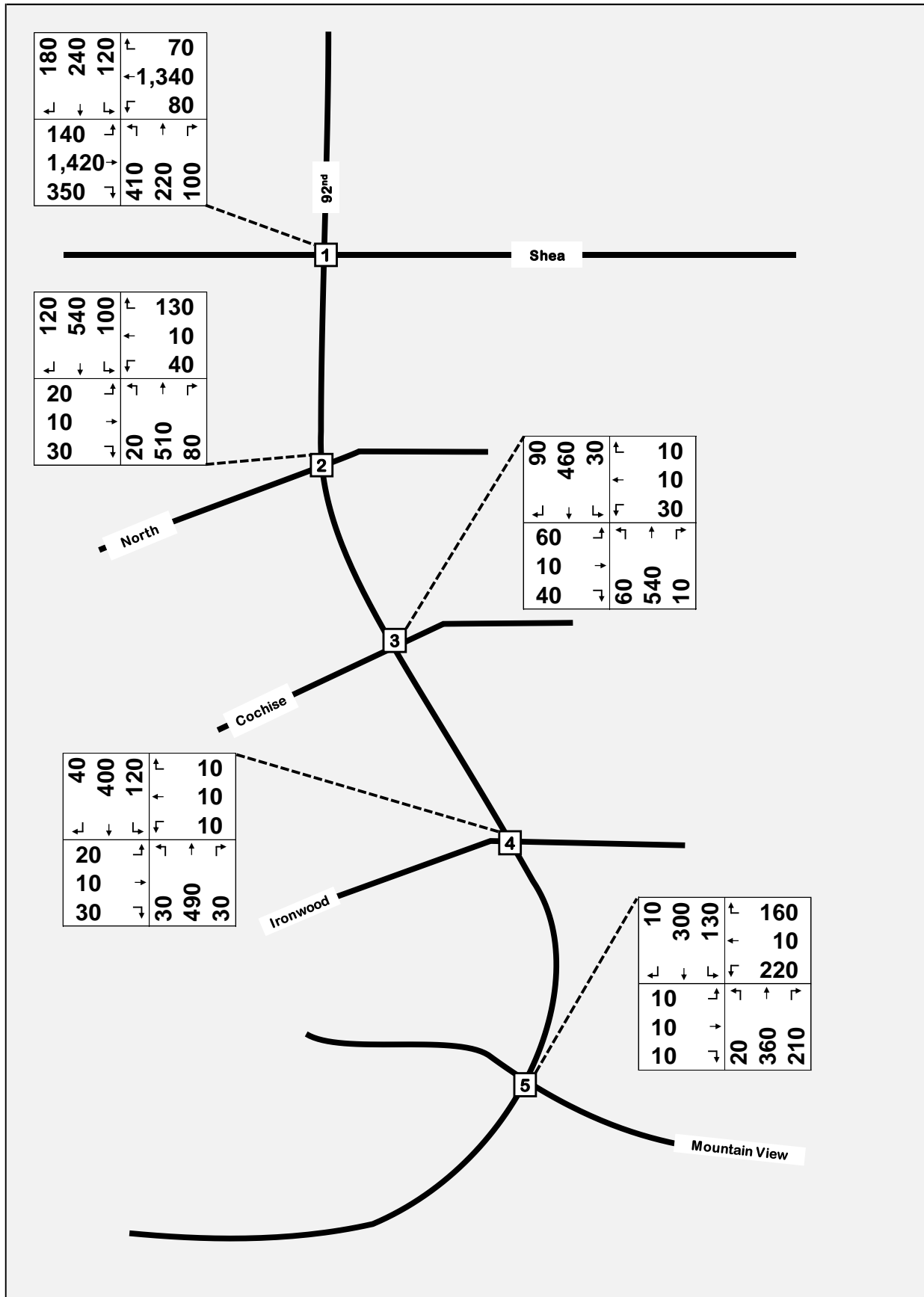


Figure 28: Ambient 2025 AM Peak Hour Turning Movement Volumes

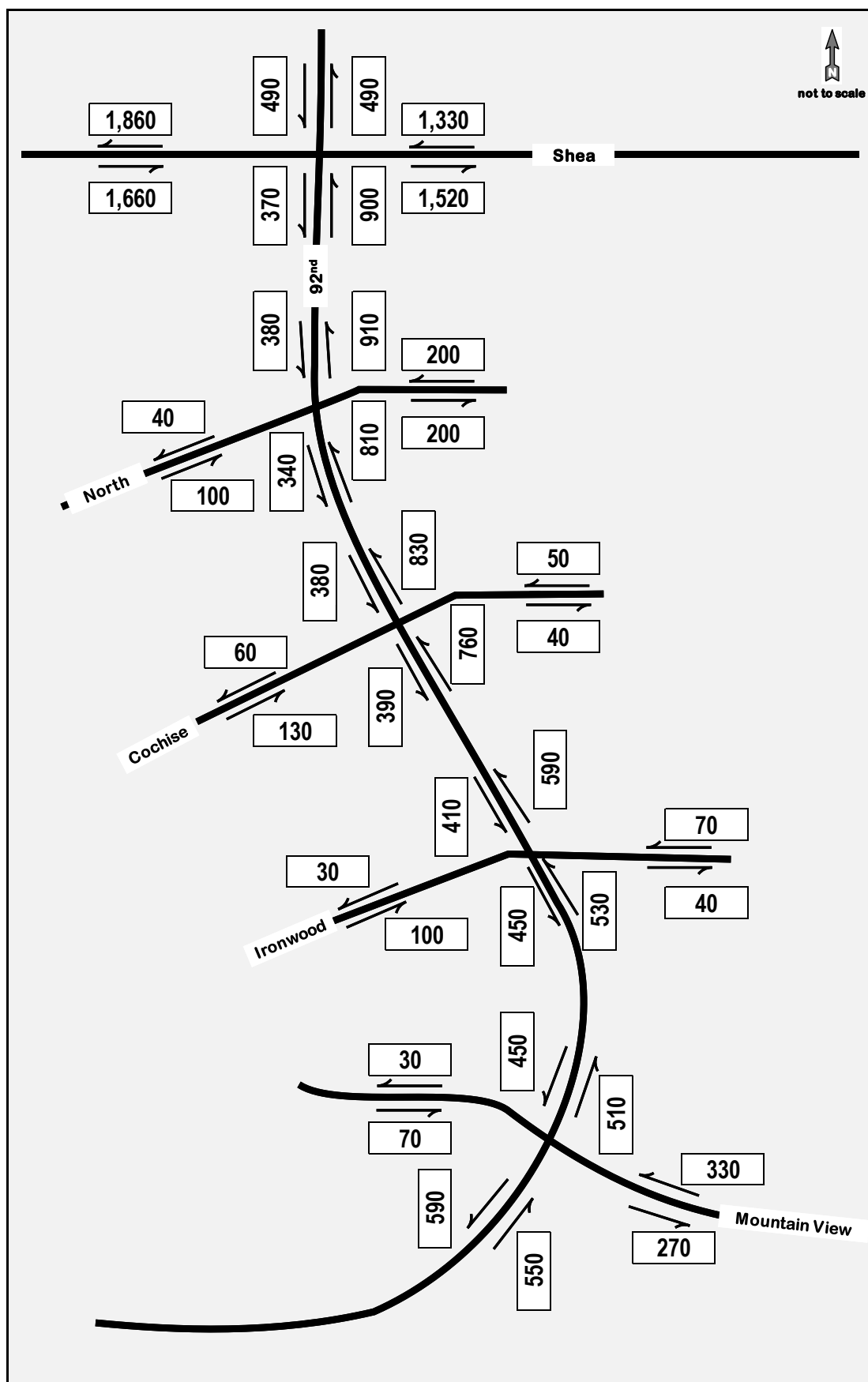


Figure 29: Ambient 2025 PM Peak Hour Approach and Departure Volumes

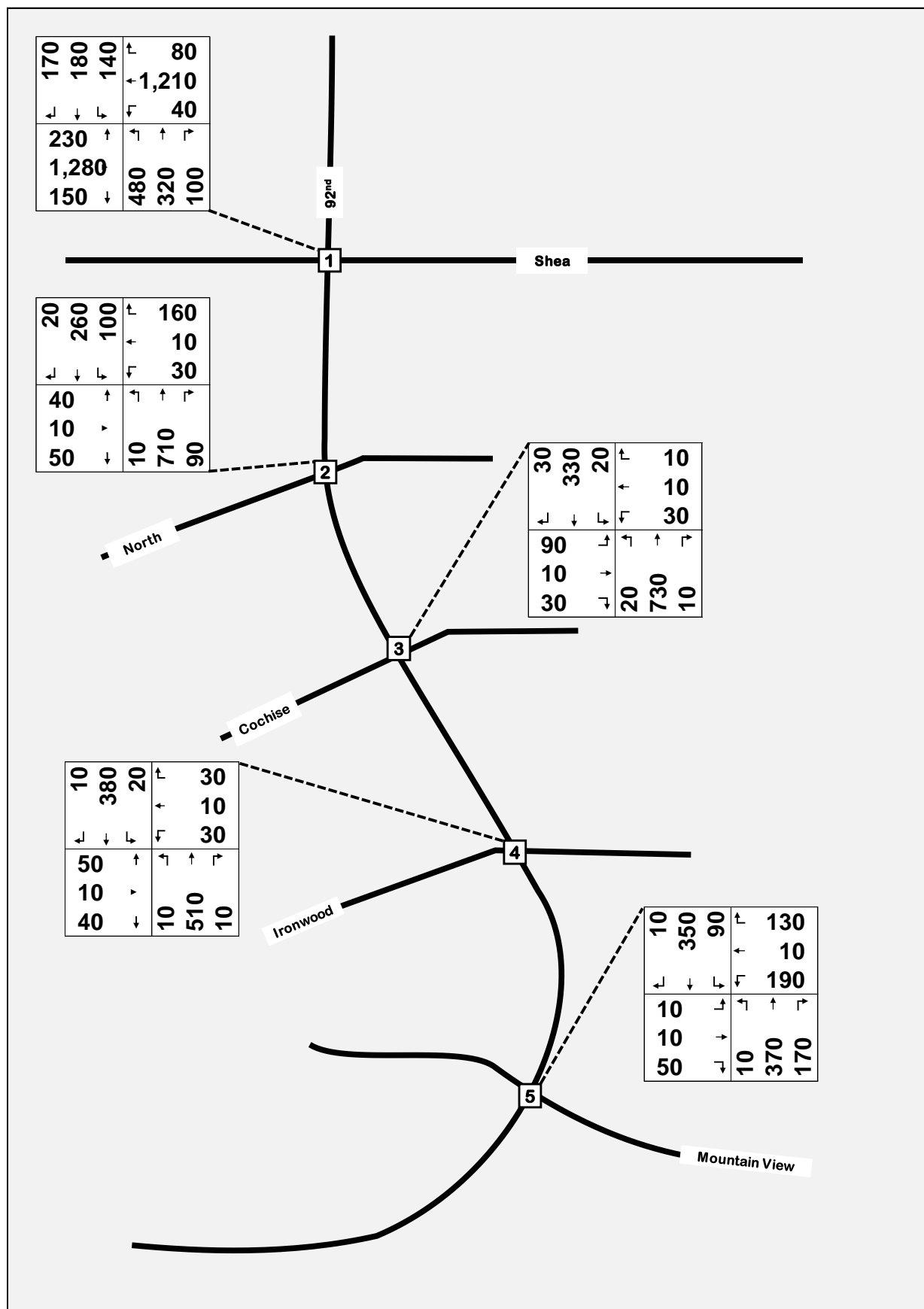


Figure 30: Ambient 2025 PM Peak Hour Turning Volumes

Proposed Mercado Village Estimated Trip Generation

Trip generation for proposed developments is estimated with the procedures and data contained within the Institute of Transportation Engineers *Trip Generation Manual, 11th Edition*, published in 2021. This document provides traffic volume data from existing developments throughout the United States and Canada, from 1980 through 2019, 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.

For the multi-family property use, the land use categories of multi-family low-rise code 220, and multi-family mid-rise, code 221, were both calculated, and the maximum volume was utilized, which in all item periods was the multi-family low-rise. Low-rise is defined as three (3) stories or less, while mid-rise is defined as four (4) to ten (10) stories. The apartments are planned to be three (3) stories.

For the live / work space and co-work space, the land use category of Small Office code 712 was utilized. The live / work space area is 8,140 square feet and the co-work space is 5,000 square feet for a total of 13,140 square feet. The General Office, code 710, and Single Tenant Office, code 715; were also considered. The General Office category for weekday time periods had average building sizes of 163,000 to 248,000 square feet, with a range of 10,000 to 1,092,000 square feet. The Single Tenant Office category for weekday time periods had average building sizes of 110,000 to 164,000 square feet, with a range of 24,000 to 587,000 square feet. The Small Office category for weekday time periods had average building sizes of 3,000 square feet, with a range of 1,000 to 9,000 square feet. While the proposed live / work and co-work space area is greater than the maximum Small Office proxy data, the proxy data have a better correspondence to the proposed property use, than either the General Office or Single Tenant Office proxy data. Also, the Small Office average trip generation rates were greater than either the General Office or Single Tenant Office average trip generation rates for the weekday day, morning, peak hour, and evening peak hour, with the exception of the Single Tenant Office for morning peak hour.

Appendix D provides the complete trip generation calculations for all property uses, and **Table 37** summarizes the results. As indicated in **Table 37**, the live / work and co-work space trip generation is approximately 10% of the site day trip generation and 22% of the site peak hour trip generation.

Table 37: Mercado Village Trip Generation

TIME PERIOD	APARTMENTS			CO-WORK AND LIVE / WORK			TOTAL		
	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
WEEKDAY	860	859	1,719	95	94	189	955	953	1,908
AM PEAK HOUR STREET	26	78	104	18	4	22	44	82	126
AM PEAK HOUR GENERATOR	29	91	120	20	14	34	49	105	154
PM PEAK HOUR STREET	82	48	130	10	18	28	92	66	158
PM PEAK HOUR GENERATOR	87	58	145	18	24	42	105	82	187
SATURDAY	626	626	1,252	NA	NA	NA	626	626	1,252
PEAK HOUR GENERATOR	53	52	105	NA	NA	NA	53	52	105
SUNDAY	492	492	984	NA	NA	NA	492	492	984
PEAK HOUR GENERATOR	46	46	92	NA	NA	NA	46	46	92

Medical Office Trip Generation

The existing and vacant medical office buildings comprise 71,000 square feet. An additional 60,000 square feet of medical office could be constructed on the existing vacant property.

Appendix D also provides the complete trip generation calculations for allowable medical office buildings for the entire property. The existing medical office buildings are 71,000 square feet. The existing vacant property would allow 60,000 square feet of medical office building. Therefore, the allowable medical office building area for the entire property is 131,000 square feet. The land use category of medical office code 720 was utilized. **Table 38** summarizes the trip generation comparison of the proposed residential versus the allowable medical office buildings.

Table 38: Mercado Village Trip Generation Comparison to Allowable 131,000 SF Medical Office

TIME PERIOD	PROPOSED			ALL MEDICAL OFFICE		
	IN	OUT	TOTAL	IN	OUT	TOTAL
WEEKDAY	955	953	1,908	2,761	2,760	5,521
AM PEAK HOUR STREET	44	82	126	321	85	406
AM PEAK HOUR GENERATOR	49	105	154	289	201	490
PM PEAK HOUR STREET	92	66	158	159	371	530
PM PEAK HOUR GENERATOR	105	82	187	353	339	692
SATURDAY	626	626	1,252	903	902	1,805
PEAK HOUR GENERATOR	53	52	105	226	170	396
SUNDAY	492	492	984	75	74	149
PEAK HOUR GENERATOR	46	46	92	15	14	29

Proposed Mercado Village Estimated Traffic Assignment

The proposed Mercado Village traffic volumes were distributed by the same percentages as the existing distribution for each intersection for each time period separately.

Figure 31 through **Figure 35** provide the Mercado Village traffic volumes, respectively for the day traffic volume approach and departure volume, the morning peak hour approach and departure volume, the morning peak hour turning movement volumes, evening peak hour approach and departure, and evening peak hour turning movement traffic volumes.

Figure 36 through **Figure 40** provide the 2023 traffic volumes plus the Mercado Village traffic volumes, respectively for the day traffic volume approach and departure volume, the morning peak hour approach and departure volume, the morning peak hour turning movement volumes, evening peak hour approach and departure, and evening peak hour turning movement traffic volumes.

Figure 41 through **Figure 44** provide the 2025 traffic volumes plus the Mercado Village traffic volumes, respectively for the day traffic volume approach and departure volume, the morning peak hour approach and departure volume, the morning peak hour turning movement volumes, evening peak hour approach and departure, and evening peak hour turning movement traffic volumes.

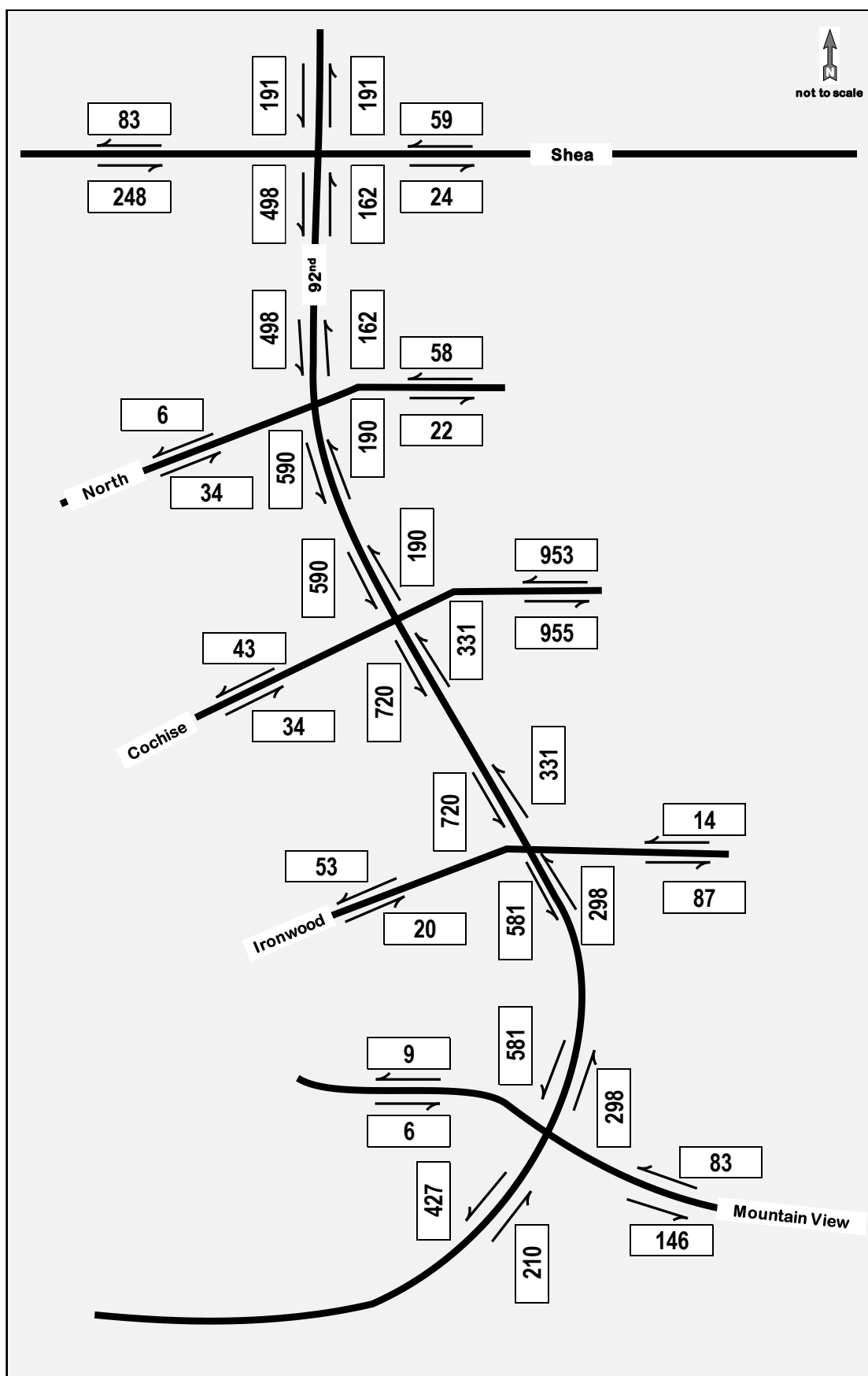


Figure 31: Mercado Village Day Approach and Departure Volumes

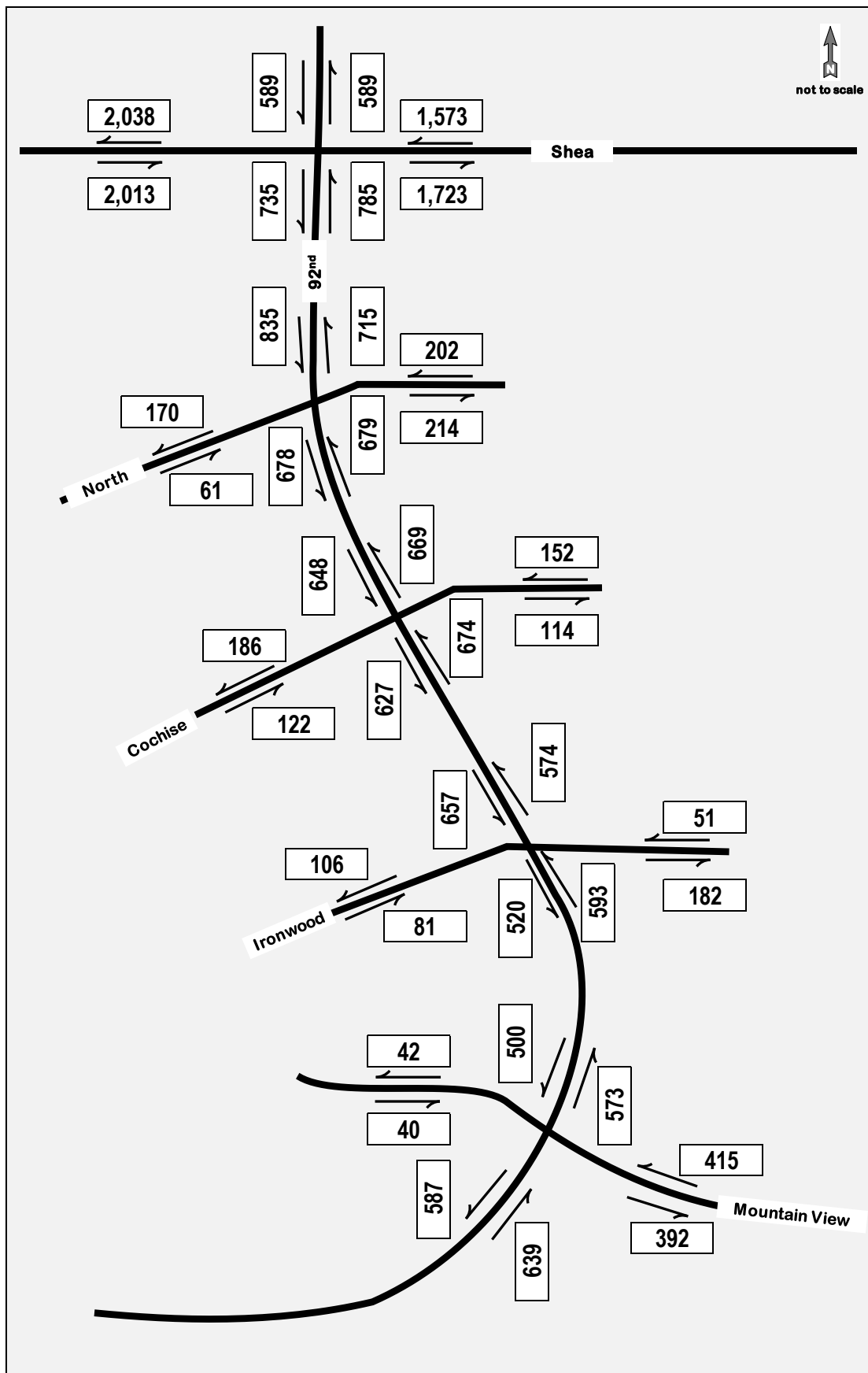


Figure 32: Mercado Village AM Peak Hour Approach and Departure Volumes

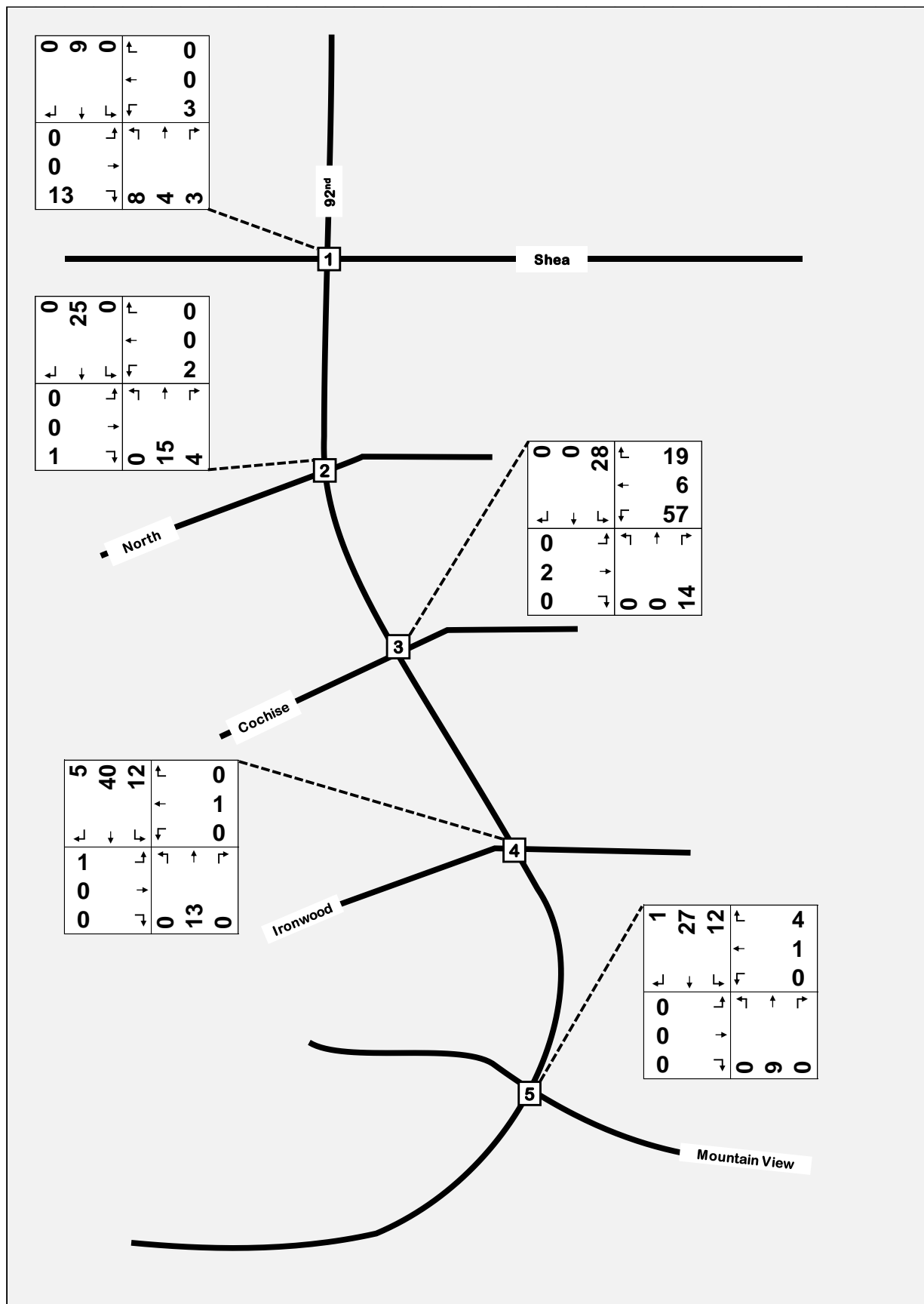


Figure 33: Mercado Village AM Peak Hour Turning Movement Volumes

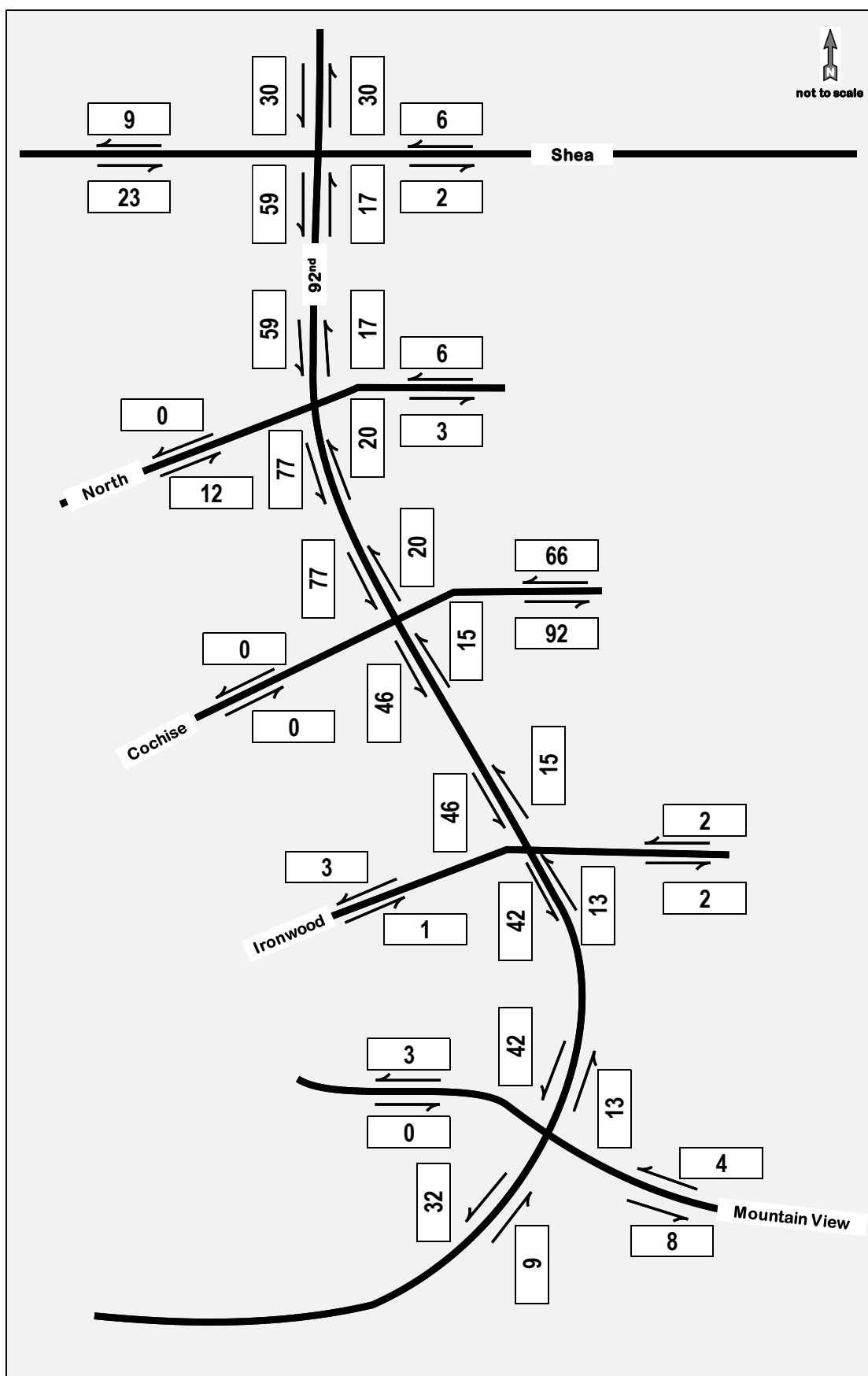


Figure 34: Mercado Village PM Peak Hour Approach and Departure Volumes

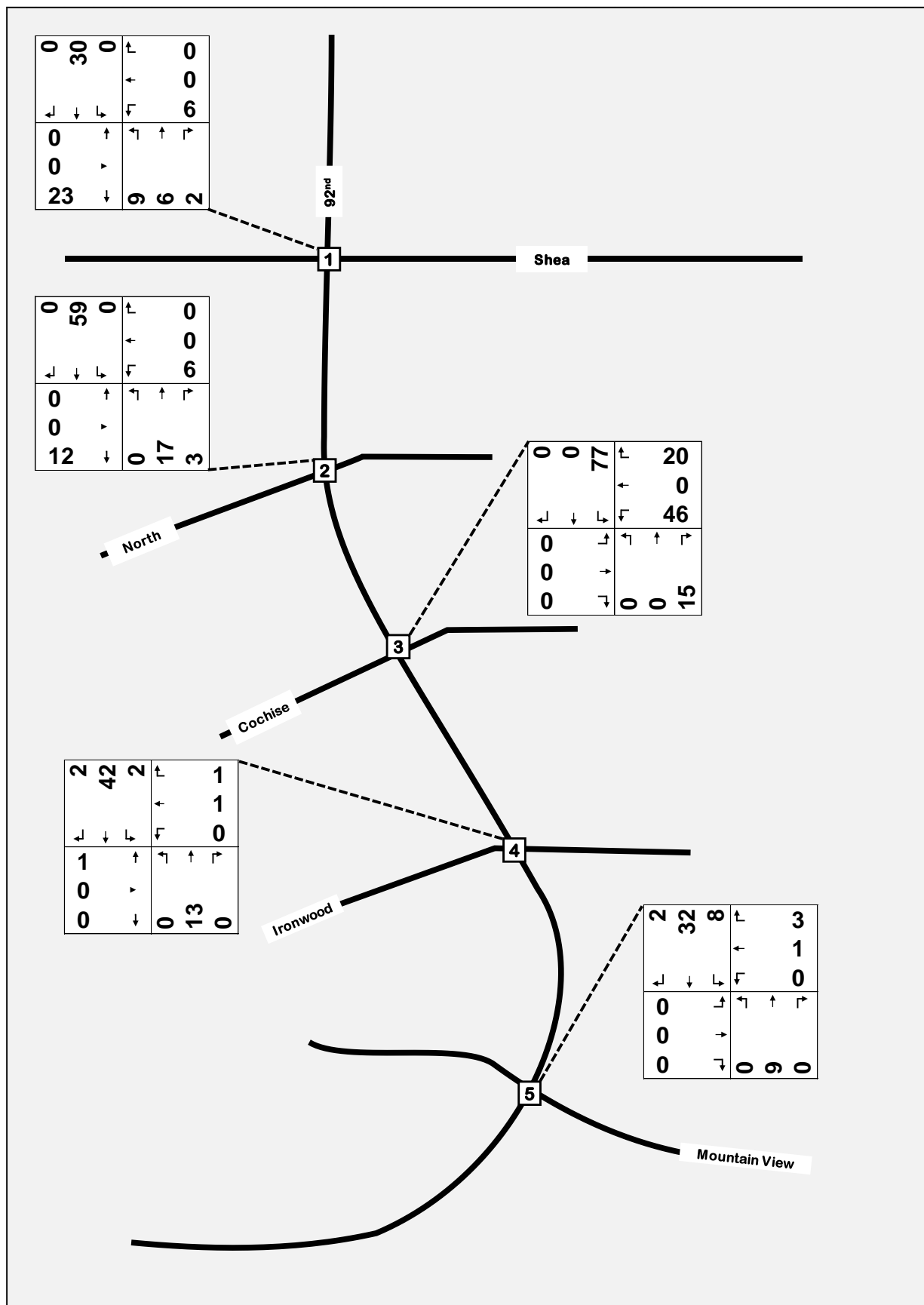


Figure 35: Mercado Village PM Peak Hour Turning Volumes

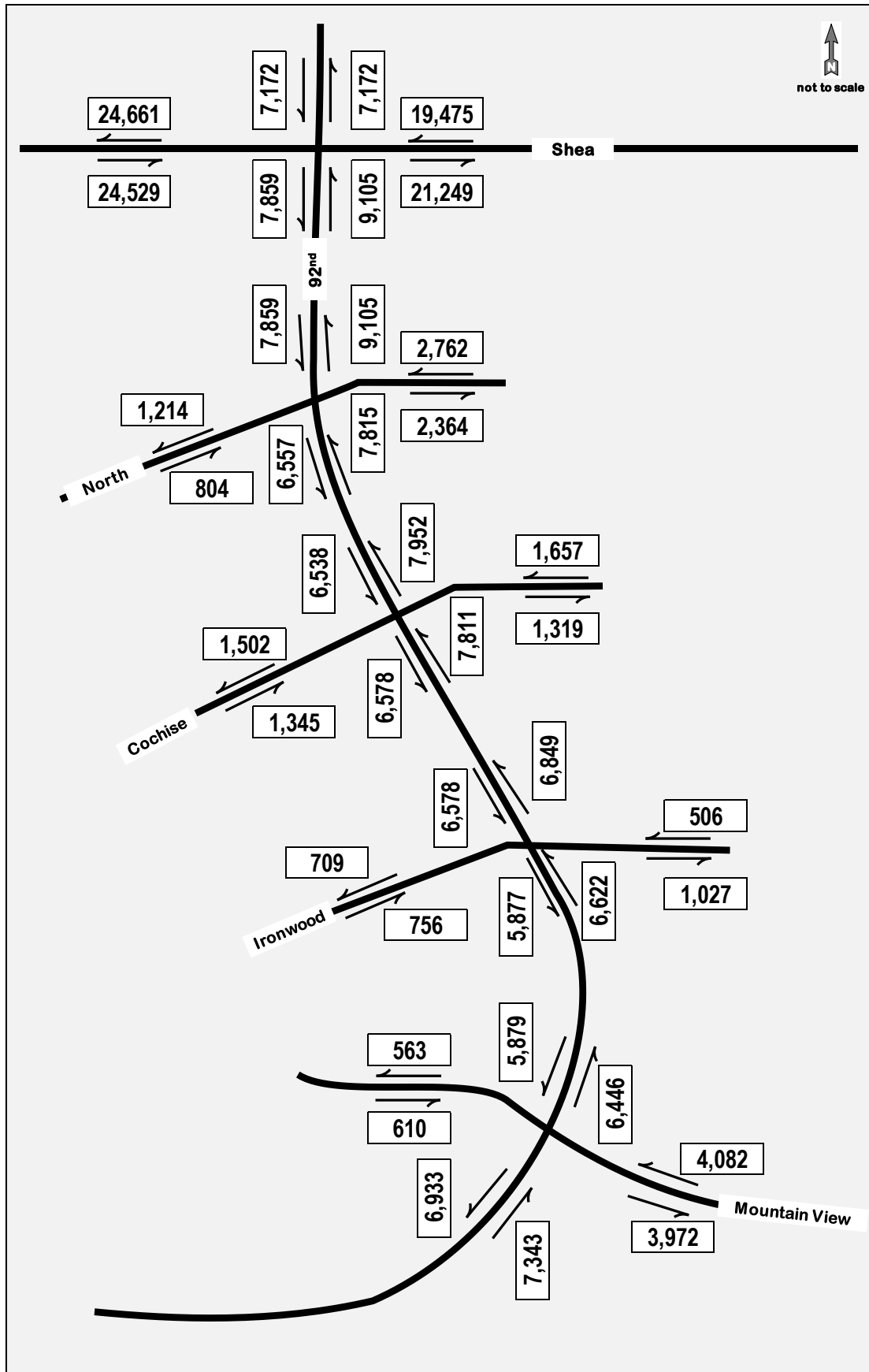


Figure 36: 2023 with Mercado Village Day Approach and Departure Volumes

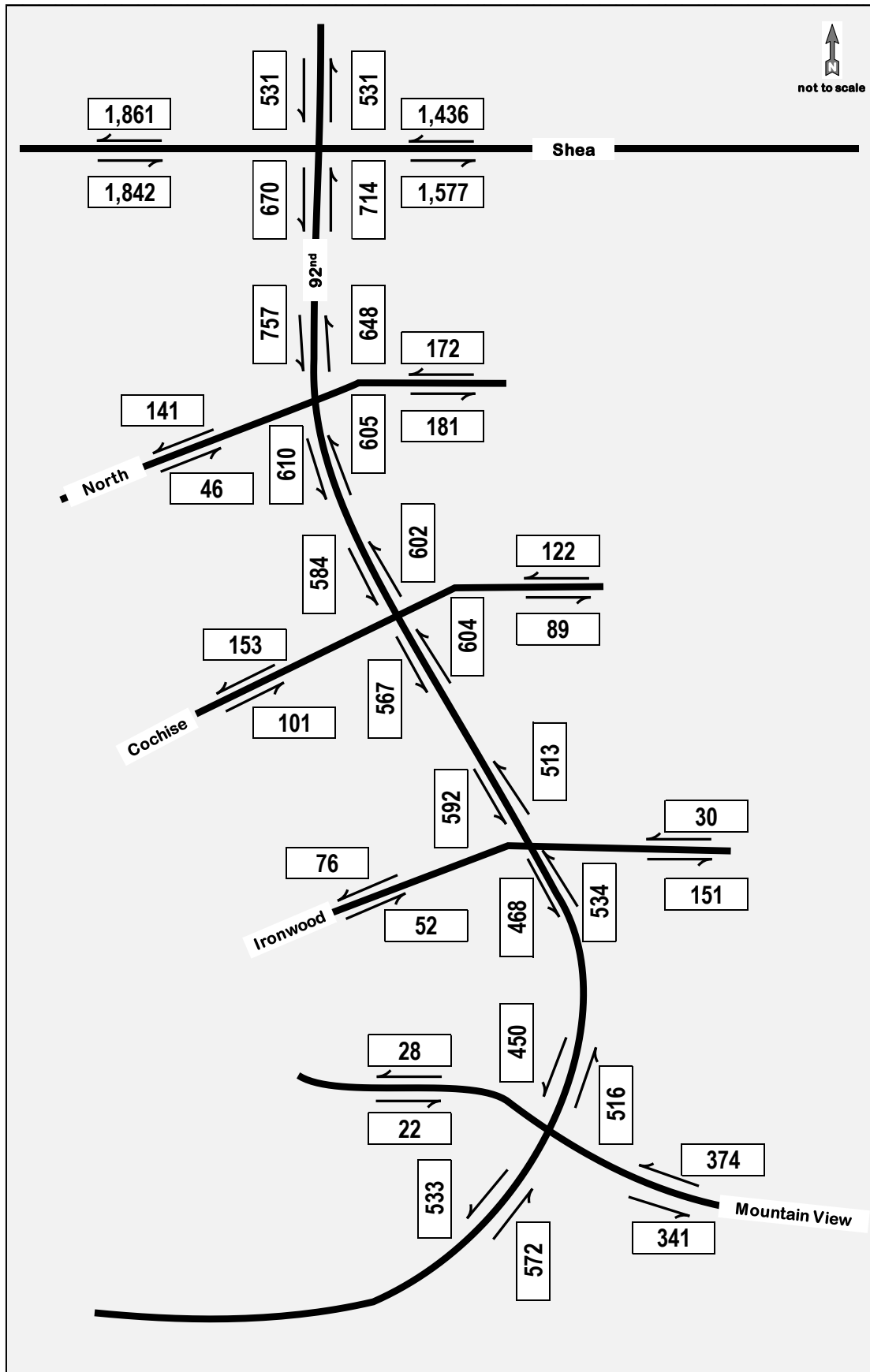


Figure 37: 2023 with Mercado Village AM Peak Hour Approach and Departure Volumes

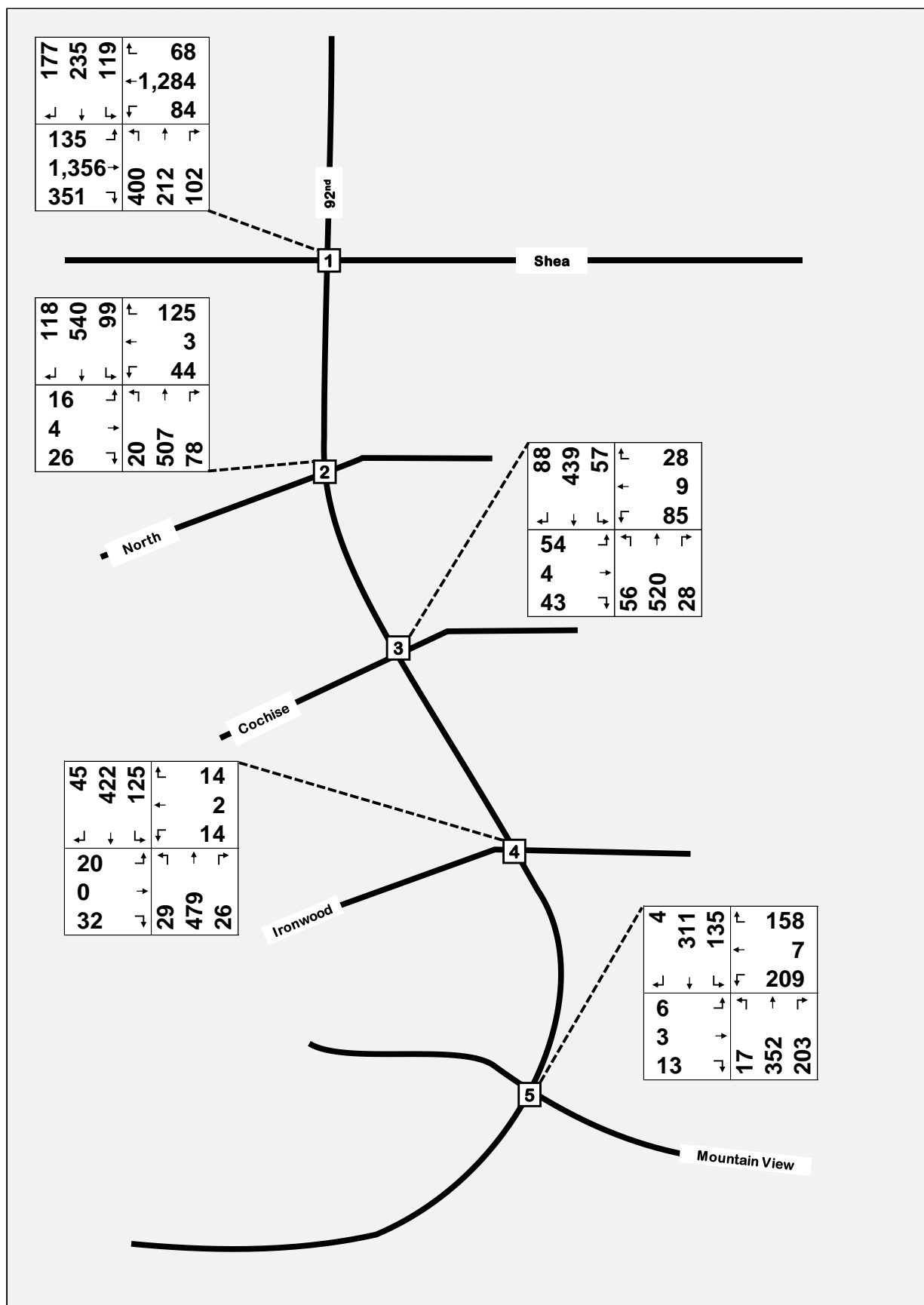


Figure 38: 2023 with Mercado Village AM Peak Hour Turning Movement Volumes

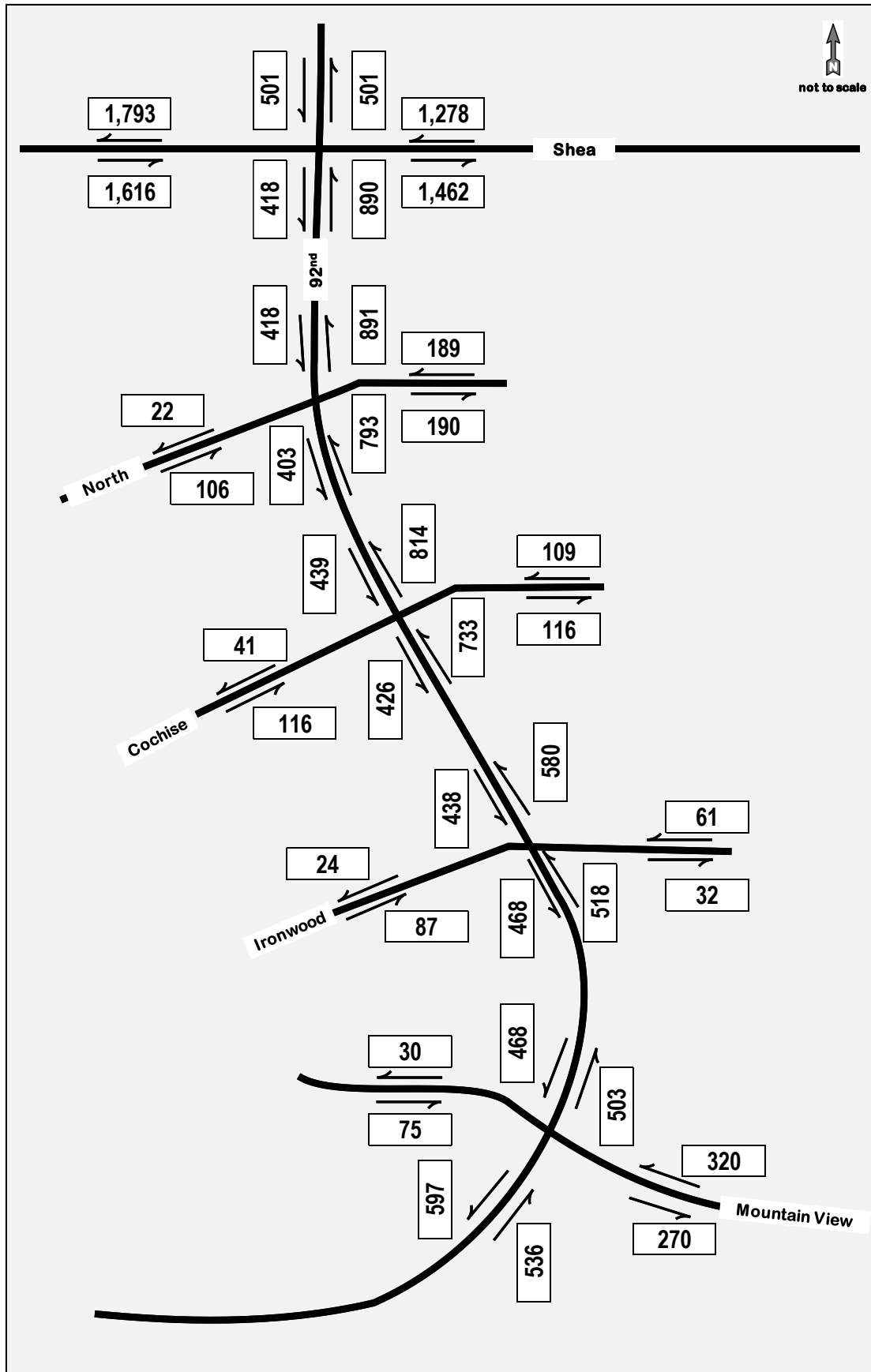


Figure 39: 2023 with Mercado Village PM Peak Hour Approach and Departure Volumes

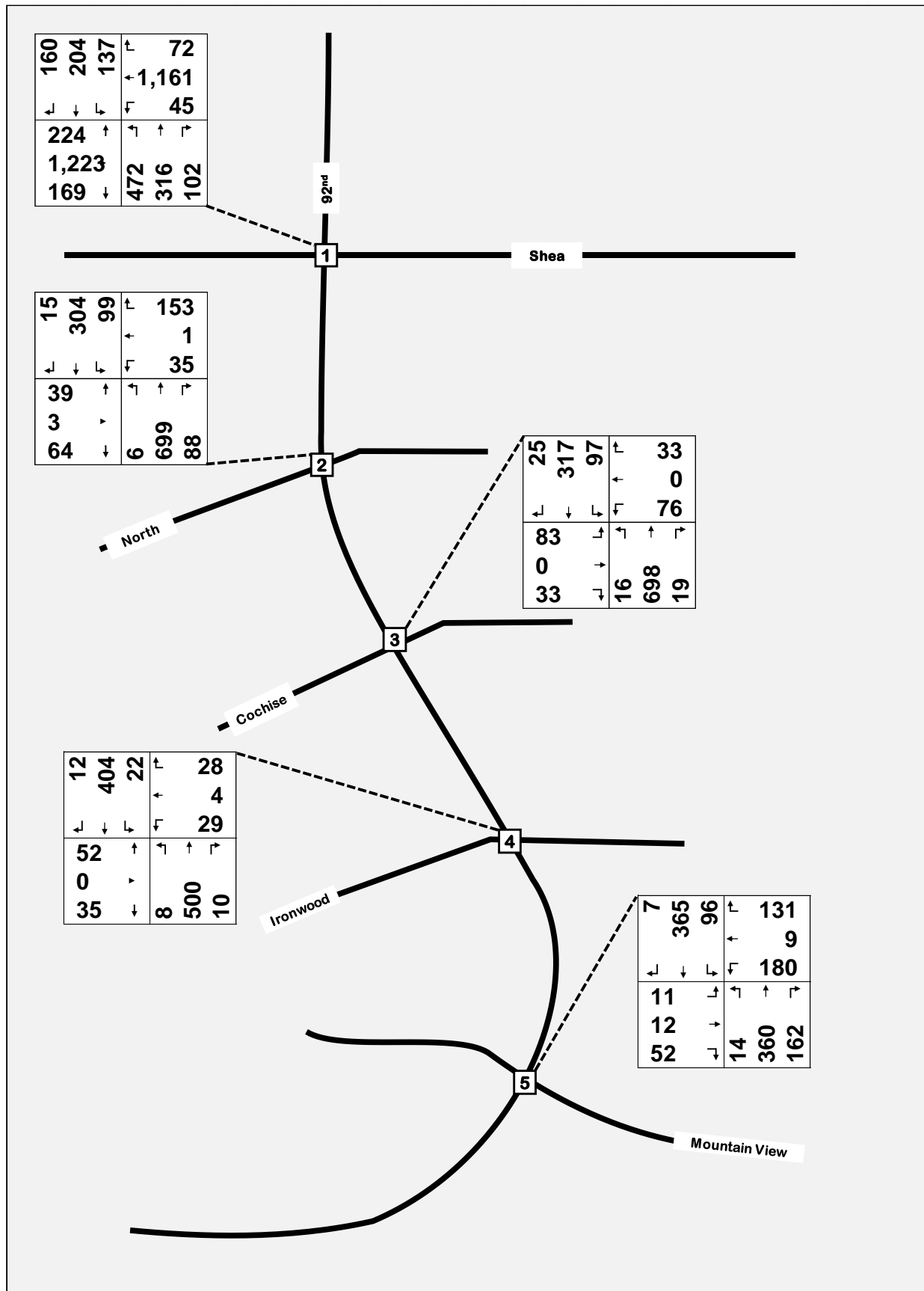


Figure 40: 2023 with Mercado Village PM Peak Hour Turning Volumes

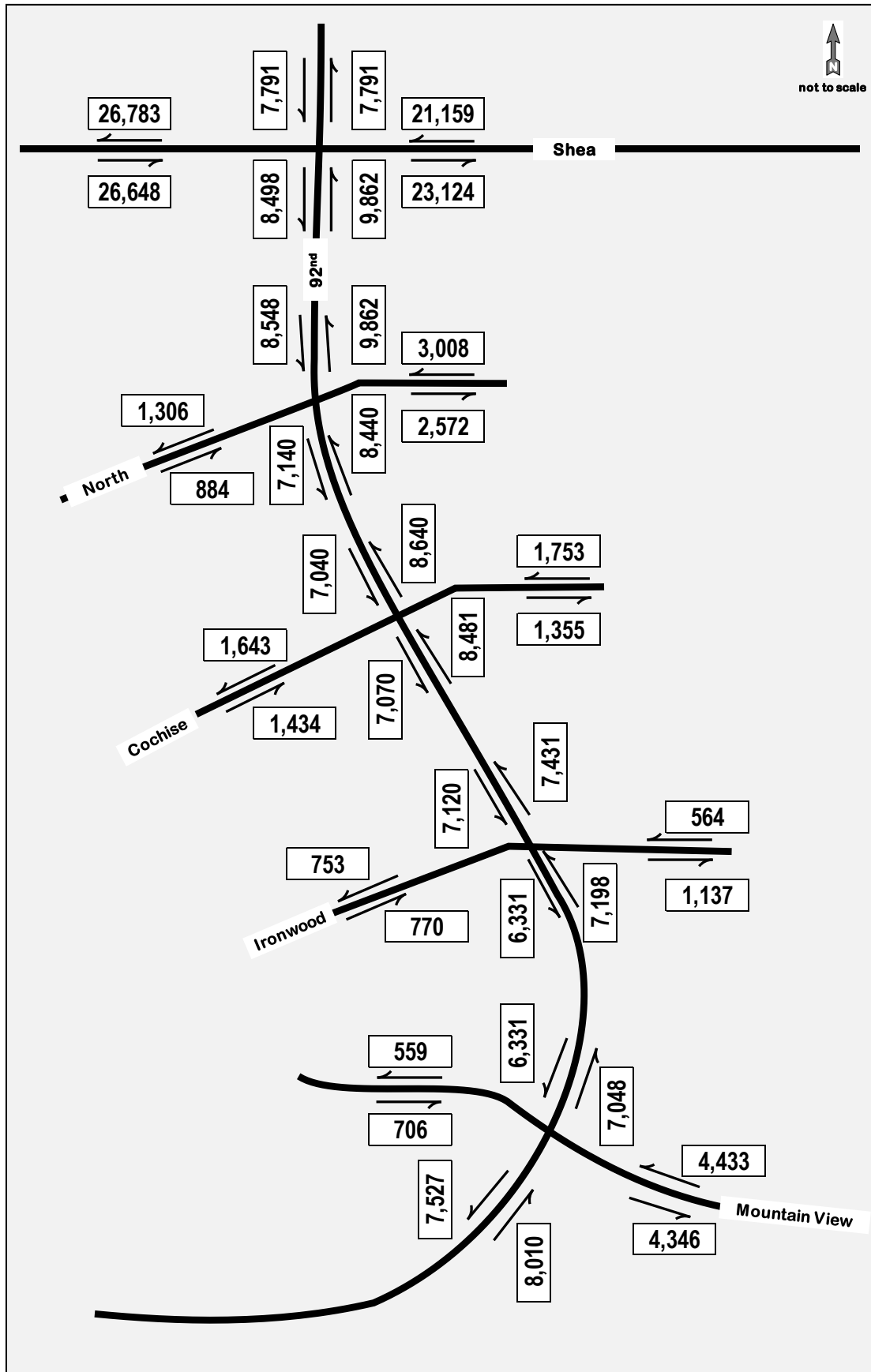


Figure 41: 2025 with Mercado Village Day Approach and Departure Volumes

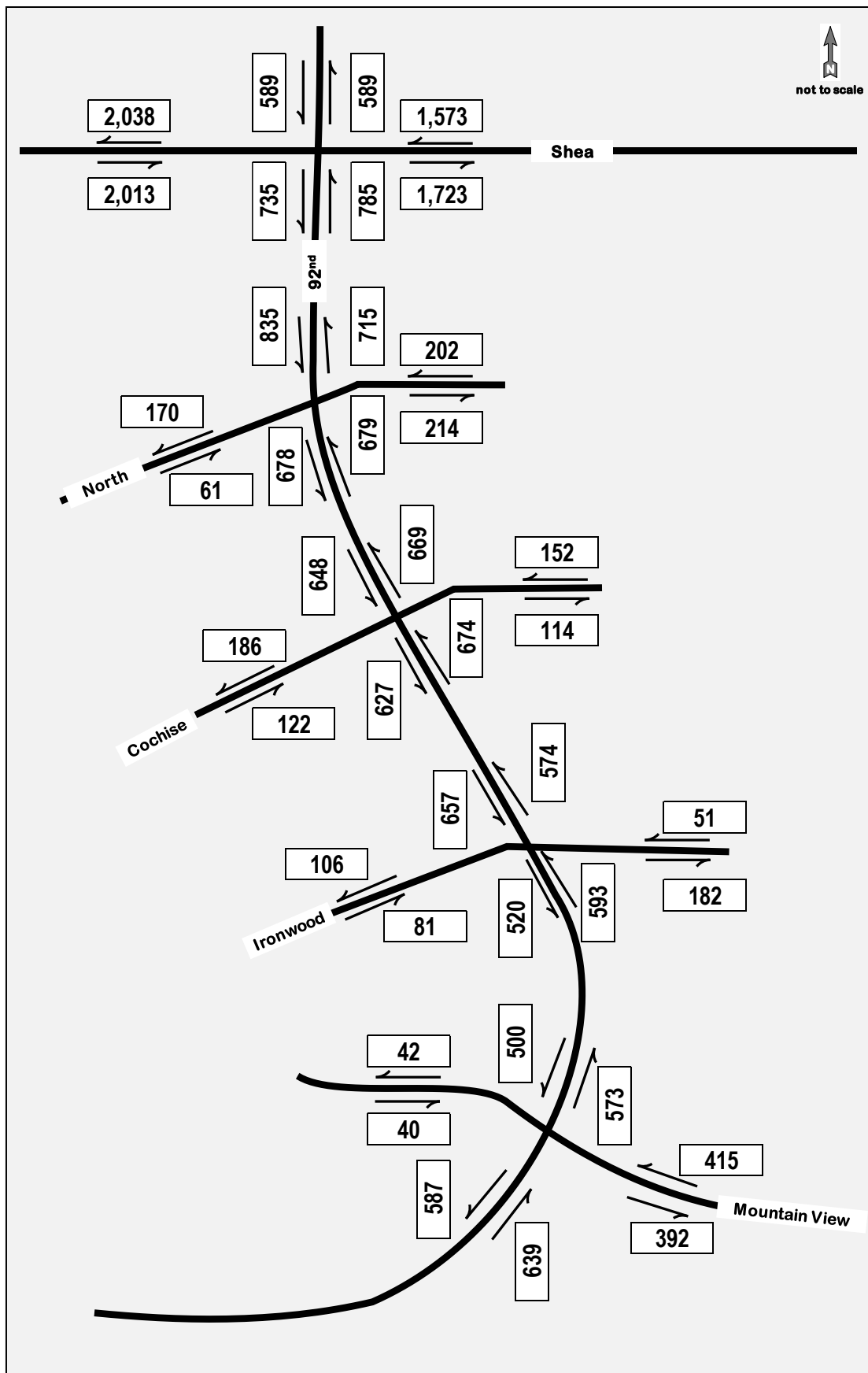


Figure 42: 2025 with Mercado Village AM Peak Hour Approach and Departure Volumes

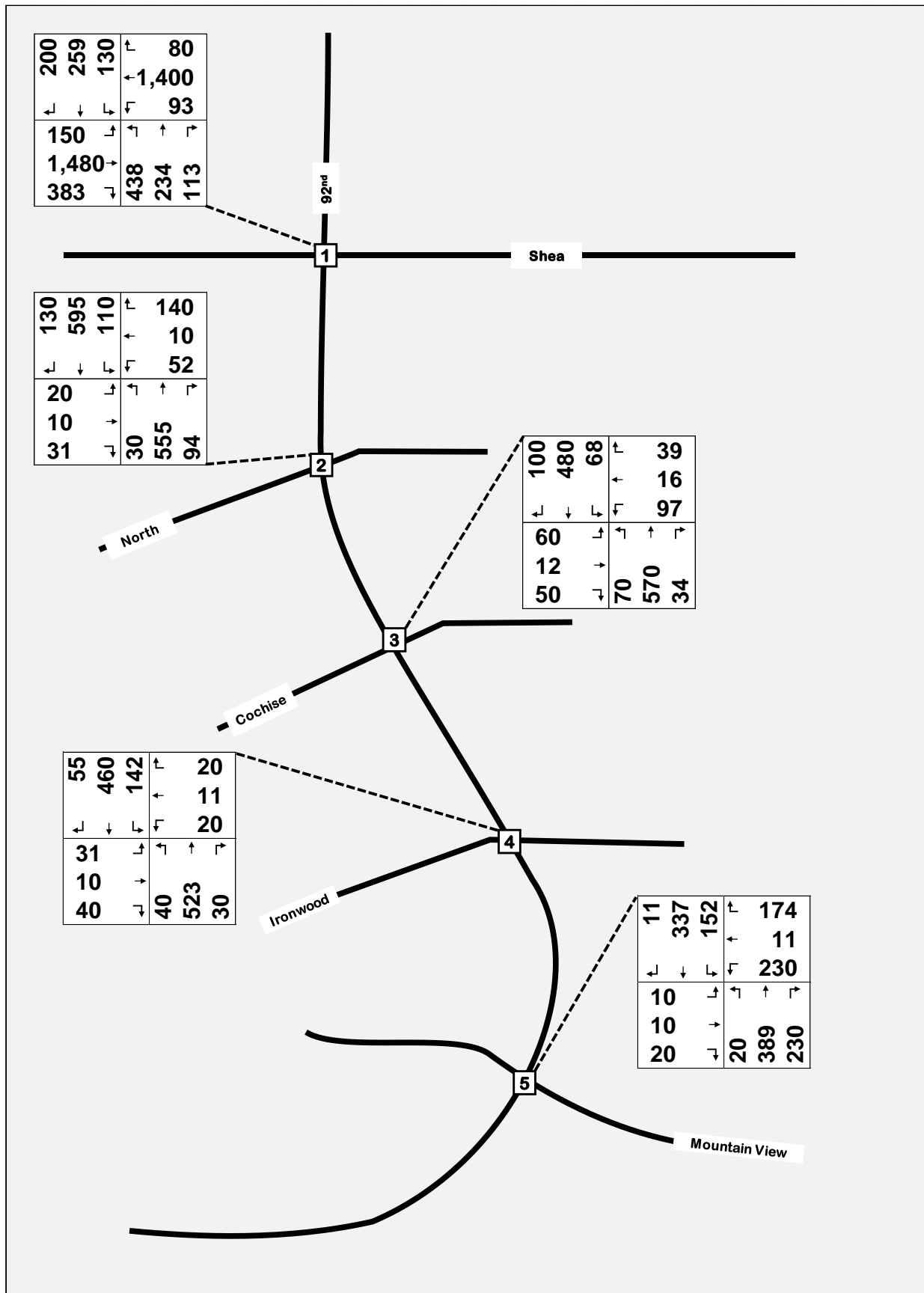


Figure 43: 2025 with Mercado Village AM Peak Hour Turning Movement Volumes

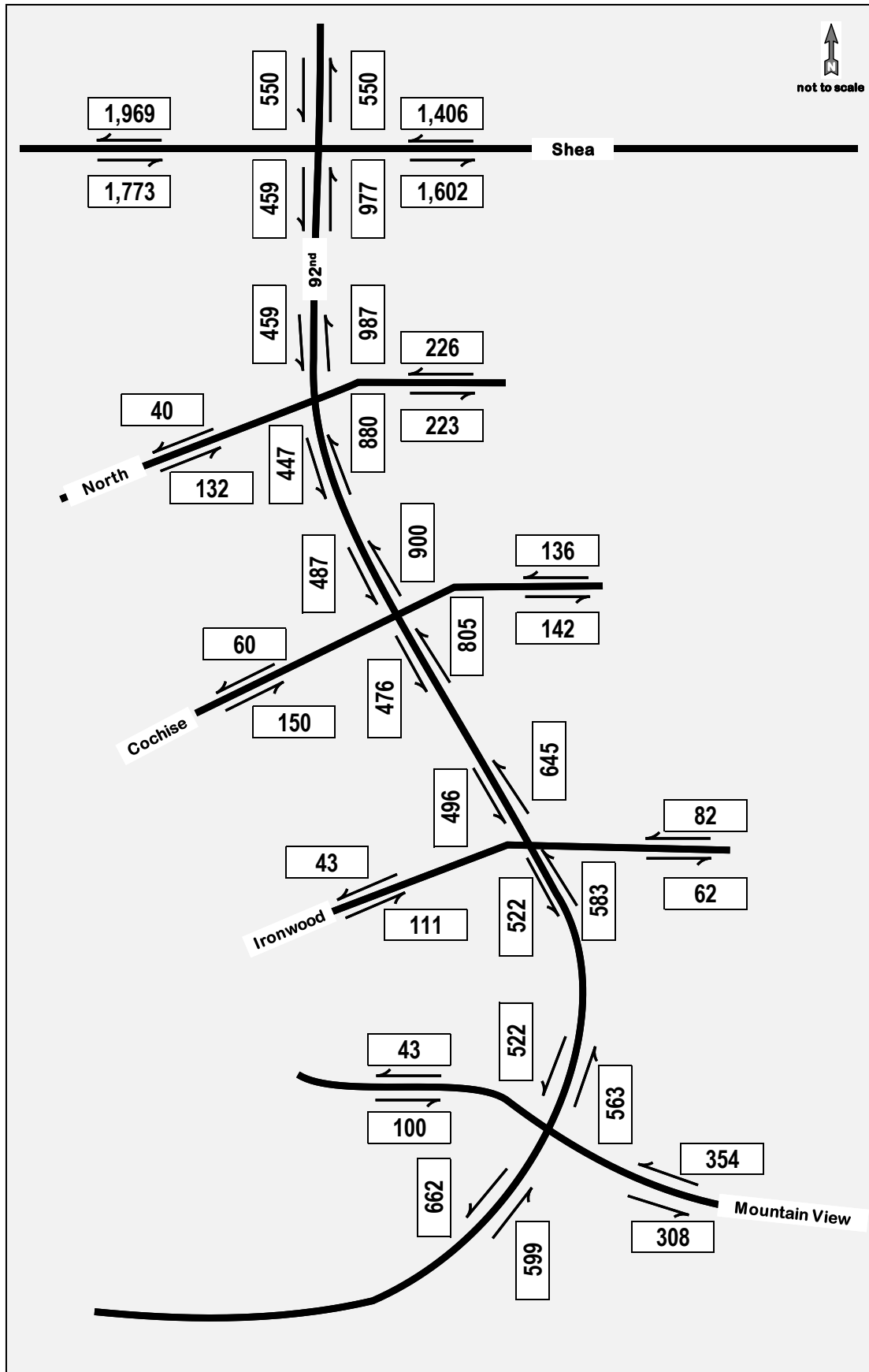


Figure 44: 2025 with Mercado Village PM Peak Hour Approach and Departure Volumes

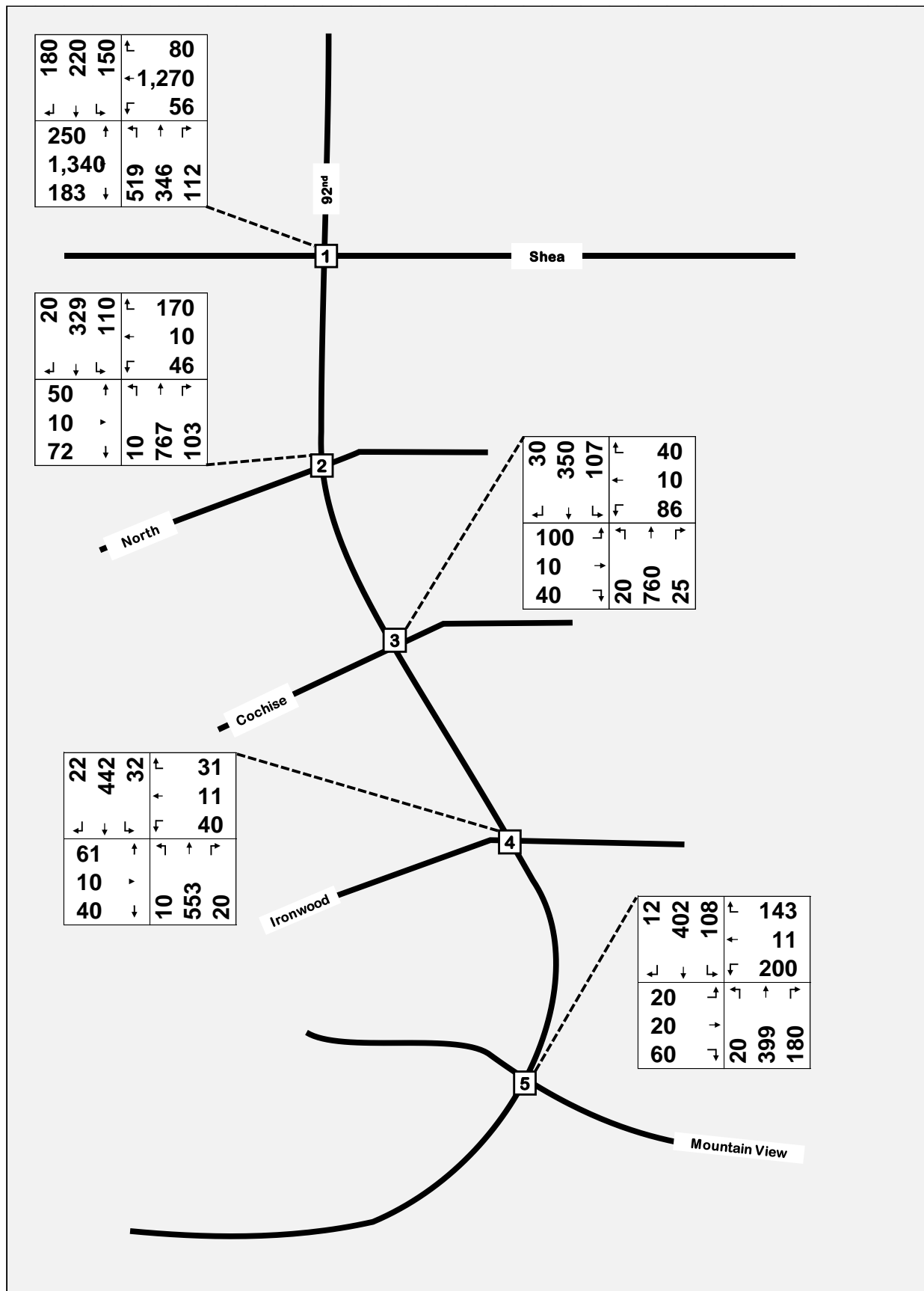


Figure 45: 2025 with Mercado Village PM Peak Hour Turning Volumes

2025 Shea Volume and Capacity Without and With Mercado Village

The daily traffic volumes on Shea Boulevard for each roadway segment from the west city limits to the east city limits were determined, without Mercado Village and with Mercado Village. The 2022 Shea Boulevard daily traffic volumes were determined from the most recent Traffic Volumes and Collision Rate Report published in 2022 by the City of Scottsdale Transportation Department. These 2022 daily traffic volumes were increased to 2025 daily traffic volumes by 3 times the annual volume increase of 4.41%, or 13.23%. **Table 39** provides the daily traffic volumes and the increase in daily traffic volumes with Mercado Village. Also provided is the percent increase in daily traffic volumes with Mercado Village for each of the 13 segments. The maximum daily traffic volume increase with Mercado Village on Shea Boulevard occurs between 90th and 92nd streets is 60,139 minus 59,900 or 239 vehicles-per-day. The traffic volume increase with Mercado Village on each of the Shea Boulevard segments is 0.4% or less.

Table 39: Shea Boulevard Daily Traffic Volume Increase with Mercado Village

	2022 VOLUME	AMBIENT 2025 VOLUME	WITH MERCADO VILLAGE		
			TOTAL VOLUME	VOLUME INCREASE	PERCENTAGE INCREASE
64th Street to 70th Street	47,600	53,900	53,976	76	0.1%
70th Street to Scottsdale Road	40,000	45,300	45,394	94	0.2%
Scottsdale Road to Hayden Road	40,700	46,100	46,218	118	0.3%
Hayden Road to Pima Freeway	46,800	53,000	53,148	148	0.3%
Pima Freeway to 90th Street	63,400	71,800	71,987	187	0.3%
90th Street to 92nd Street	52,900	59,900	60,139	239	0.4%
92nd Street to 96th Street	44,300	50,100	50,262	162	0.3%
96th Street to Via Linda	39,500	44,700	44,843	143	0.3%
Via Linda to Frank Lloyd Wright	28,200	31,900	32,028	128	0.4%
Frank Lloyd Wright to 124th Street	43,600	49,400	49,517	117	0.2%
124th Street to 130th Street	39,900	45,200	45,309	109	0.2%
130th Street to 136th Street	34,700	39,300	39,403	103	0.3%
136th Street to 142nd Street	29,500	33,400	33,499	99	0.3%

The most recent City of Scottsdale Traffic Volume and Collision Data, 2022, states that the capacity on Shea Boulevard, from 64th Street to 142nd Street, is 48,000 vehicles-per-day. **Table 40** compares the traffic volumes to the capacity of Shea Boulevard for each roadway segment from the west city limits to the east city limits. Daily volumes without Mercado Village and daily volumes with Mercado Village are provided, as are the volume-to-capacity (V / C) ratios. The maximum change for the 13 segments in the volume-to-capacity ratio with Mercado Village is 0.01.

Table 40: Shea Boulevard Traffic Volume to Capacity Ratios Without and With Mercado Village

	2022	2025		2025 WITH SITE	
	VOLUME	VOLUME	V / C	VOLUME	V / C
64th Street to 70th Street	47,600	53,900	1.12	53,976	1.12
70th Street to Scottsdale Road	40,000	45,300	0.94	45,394	0.95
Scottsdale Road to Hayden Road	40,700	46,100	0.96	46,218	0.96
Hayden Road to Pima Freeway	46,800	53,000	1.10	53,148	1.11
Pima Freeway to 90th Street	63,400	71,800	1.50	71,987	1.50
90th Street to 92nd Street	52,900	59,900	1.25	60,139	1.25
92nd Street to 96th Street	44,300	50,100	1.04	50,262	1.05
96th Street to Via Linda	39,500	44,700	0.93	44,843	0.93
Via Linda to Frank Lloyd Wright	28,200	31,900	0.66	32,028	0.67
Frank Lloyd Wright to 124th Street	43,600	49,400	1.03	49,517	1.03
124th Street to 130th Street	39,900	45,200	0.94	45,309	0.94
130th Street to 136th Street	34,700	39,300	0.82	39,403	0.82
136th Street to 142nd Street	29,500	33,400	0.70	33,499	0.70

2025 Shea Volume and Capacity Without and With Site as Medical Office

The Mercado Village property could be developed as medical office. **Table 38** provides the trip generation if the property were developed as medical office. The daily traffic volumes on Shea Boulevard for each roadway segment from the west city limits to the east city limits were again determined, without medical office and with medical office. **Table 41** provides the daily traffic volumes and the increase in daily traffic volumes with the Mercado Village property as medical office. Also provided is the percent increase in daily traffic volumes with Mercado Village property as medical office for each of the 13 segments. The maximum daily traffic volume increase with medical office is 1,385 vehicles-per-day compared to the Mercado Village maximum traffic volume increase of 239 vehicles-per-day. The maximum daily traffic volume percent increase with medical office is 2.3% compared to the proposed Mercado Village maximum daily traffic volume percent increase of 0.4%. If the Mercado Village property were developed as entirely medical office, the Shea Boulevard daily traffic volume increase would be more than five (5) times the Shea Boulevard daily traffic volume increase of Mercado Village as proposed.

Table 41: Shea Boulevard Traffic Volume Increase with Mercado Village as Medical Office

	AMBIENT	WITH MEDICAL OFFICE		
	2025 VOLUME	TOTAL VOLUME	VOLUME INCREASE	PERCENTAGE INCREASE
64th Street to 70th Street	53,900	54,343	443	0.8%
70th Street to Scottsdale Road	45,300	45,848	548	1.2%
Scottsdale Road to Hayden Road	46,100	46,783	683	1.5%
Hayden Road to Pima Freeway	53,000	53,858	858	1.6%
Pima Freeway to 90th Street	71,800	72,887	1,087	1.5%
90th Street to 92nd Street	59,900	61,285	1,385	2.3%
92nd Street to 96th Street	50,100	50,411	311	0.6%
96th Street to Via Linda	44,700	44,954	254	0.6%
Via Linda to Frank Lloyd Wright	31,900	32,112	212	0.7%
Frank Lloyd Wright to 124th Street	49,400	49,581	181	0.4%
124th Street to 130th Street	45,200	45,358	158	0.3%
130th Street to 136th Street	39,300	39,441	141	0.4%
136th Street to 142nd Street	33,400	33,528	128	0.4%

The Shea Boulevard traffic volume without and with medical office on the Mercado Village property was also compared to the Shea Boulevard capacity of 48,000 vehicles-per-day. **Table 42** compares the traffic volumes to the capacity of Shea Boulevard for each roadway segment from the west city limits to the east city limits. Volumes without and volumes with medical office on the Mercado Village property are provided, as are the volume-to-capacity (V / C) ratios. The maximum change for the 13 segments in the volume-to-capacity ratio with medical office is 0.03 compared to 0.01 with Mercado Village as proposed. Furthermore, 9 of the 13 Shea Boulevard segments would experience a volume-to-capacity increase with medical office on the Mercado Village site, compared to 4 of the 13 segments with Mercado Village as proposed.

Table 42: Shea Volume to Capacity Ratios Without and With Mercado Village as Medical Office

	2025		2025 WITH MEDICAL OFFICE	
	VOLUME	V / C	VOLUME	V / C
64th Street to 70th Street	53,900	1.12	54,343	1.13
70th Street to Scottsdale Road	45,300	0.94	45,848	0.96
Scottsdale Road to Hayden Road	46,100	0.96	46,783	0.97
Hayden Road to Pima Freeway	53,000	1.10	53,858	1.12
Pima Freeway to 90th Street	71,800	1.50	72,887	1.52
90th Street to 92nd Street	59,900	1.25	61,285	1.28
92nd Street to 96th Street	50,100	1.04	50,411	1.05
96th Street to Via Linda	44,700	0.93	44,954	0.94
Via Linda to Frank Lloyd Wright	31,900	0.66	32,112	0.67
Frank Lloyd Wright to 124th Street	49,400	1.03	49,581	1.03
124th Street to 130th Street	45,200	0.94	45,358	0.94
130th Street to 136th Street	39,300	0.82	39,441	0.82
136th Street to 142nd Street	33,400	0.70	33,528	0.70

Traffic Signal Warrants – 92nd Street and Cochise Drive

The intersection of 92nd Street and Cochise Drive was analyzed to determine if traffic signal warrants are satisfied with existing 2023 traffic data. 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 current speed limit on 92nd Street at Cochise Drive is 35 miles-per-hour. For the existing 2023 signal warrant analysis, 24-hour approach traffic was counted and utilized. These 2023 traffic counts were not adjusted for the monthly factors for two (2) reasons. First, The Manual on Uniform Traffic Control Devices specifically directs using existing traffic counts when available. Also, conservative in terms of signal warrant analyses, is defined as lower traffic volumes, ensuring that only intersections with traffic that definitely satisfies the signal warrants are installed. The complete warrant analysis is provided as **Appendix E.1** and summarized in **Table 43**.

Table 43: Existing 2023 Signal Warrant Results for 92nd Street and Cochise Drive

WARRANT	1A	1B	1A and 1B	2	3A	3B	WARRANTS
REQUIRED HOURS TO BE MET	8	8	8	4	3	1	SATISFIED?
EXISTING	0	6	0	0	1	0	NO

A traffic signal is not warranted at the intersection of 92nd Street at Cochise Drive with existing 2023 traffic volumes and conditions. The traffic volume on 92nd Street satisfies the Warrant 1B major street criteria for nine (9) hours. The eastbound traffic volume on Cochise Drive satisfies the Warrant 1B minor street for six (6) hours. A minimum of eight (8) hours must satisfy the criteria.

Table 44 indicates the traffic volume increase necessary for the traffic signal warrants to be satisfied at the 92nd / Cochise intersection. The Cochise traffic volumes would need to increase by 61% for a signal warrant to be satisfied.

Table 44: Existing 2023 Signal Warranting Volume Summary for 92nd Street and Cochise Drive

WARRANT	CRITERIA		REQUIRED HOURS	ACTUAL HOURS	MET?	INCREASE NEEDED	
	MAJOR	MINOR				92nd STREET	COCHISE DRIVE
#1A	600	200	8	0	NO		223%
#1B	900	100	8	6	NO		61%
#1A with #1B	480	160	8	0	NO		158%
#1B with #1A	720	80	8	9			
#2	Varying Graph		4	0	NO	17%	64%
#3B	Varying Graph		1	0	NO	43%	218%

A traffic signal warrant analysis was also accomplished for the estimated 2025 traffic volumes without the Mercado Village development. Each hourly volume was increased by 8.8% (an annual increase of 4.4% for two (2) years.) The eastbound Cochise Drive delay of 76.8 seconds, determined by the level-of-service analysis, was utilized. **Appendix E.2** provides the complete analysis and **Table 45** summarizes the results.

Table 45: Ambient 2025 Warrant Results for 92nd Street and Cochise Drive

WARRANT	1A	1B	1A and 1B	2	3A	3B	WARRANTS
REQUIRED HOURS TO BE MET	8	8	8	4	3	1	SATISFIED?
2025 WITHOUT SITE	0	6	0	0	1	0	NO

A traffic signal is not warranted at the intersection of 92nd Street at Cochise Drive with the ambient 2025 traffic volumes and conditions. The traffic volume on 92nd Street satisfies the Warrant 1B major street criteria for nine (9) hours, and one (1) additional 92nd Street hour is within 10% of satisfying the criteria. The eastbound traffic volume on Cochise Drive satisfies the Warrant 1B minor street for six (6) hours. Though three (3) additional Cochise Drive hours are within 10% of satisfying the criteria.

Table 46 indicates the traffic volume increase necessary for the traffic signal warrants to be satisfied at the 92nd / Cochise intersection. The Cochise traffic volumes would need to increase by 61%, or the 92nd Street volumes would need to increase by 8% and the Cochise traffic volumes would need to increase by 35%, for a signal warrant to be satisfied.

Table 46: Ambient 2025 Signal Warranting Volume Summary for 92nd Street and Cochise Drive

WARRANT	CRITERIA		REQUIRED HOURS	ACTUAL HOURS	MET?	INCREASE NEEDED	
	MAJOR	MINOR				92nd STREET	COCHISE DRIVE
#1A	600	200	8	0	NO		223%
#1B	900	100	8	6	NO		61%
#1A with #1B	480	160	8	0	NO		158%
#1B with #1A	720	80	8	9			
#2	Varying Graph		4	0	NO	8%	35%
#3B	Varying Graph		1	0	NO	31%	181%

A traffic signal warrant analysis was also accomplished for the estimated 2025 traffic volumes with the Mercado Village development. The *Trip Generation Manual* provides hourly factors for proposed developments. These factors represent the percentage of daily site traffic, by specific land use, arriving in each of the 24 hours. **Appendix E.3** provides the *Trip Generation Manual* hourly factors and the complete analysis.

For all signal warrant analyses with 2025 traffic volumes and Mercado Village and the Kaplan Property, an average delay of 120 seconds, as determined by the level-of-service analyses, was utilized for westbound Cochise Drive at 92nd Street.

Table 47 provides estimated multi-family homes hourly volumes by turning movement.

Table 48 summarizes the 92nd / Cochise signal warrant results with Mercado Village.

Table 49 provides additional detail.

Table 47: 2025 Residential Hourly Volumes at 92nd / Cochise

TIME	NB Right	SB Left	EB Thru	WB
1:00 AM	4	6	0	3
2:00 AM	2	4	0	3
3:00 AM	2	3	0	3
4:00 AM	2	3	0	3
5:00 AM	2	2	0	13
6:00 AM	2	4	0	25
7:00 AM	5	9	0	65
8:00 AM	7	13	0	103
9:00 AM	11	19	1	80
10:00 AM	10	17	0	47
11:00 AM	8	15	0	46
12:00 PM	13	23	1	46
1:00 PM	15	27	1	40
2:00 PM	14	24	1	43
3:00 PM	19	33	1	47
4:00 PM	23	40	2	50
5:00 PM	33	59	3	53
6:00 PM	37	67	3	72
7:00 PM	32	57	3	63
8:00 PM	26	47	2	45
9:00 PM	25	45	2	40
10:00 PM	20	35	2	27
11:00 PM	16	28	1	23
12:00 AM	9	15	0	13
TOTAL	955			953

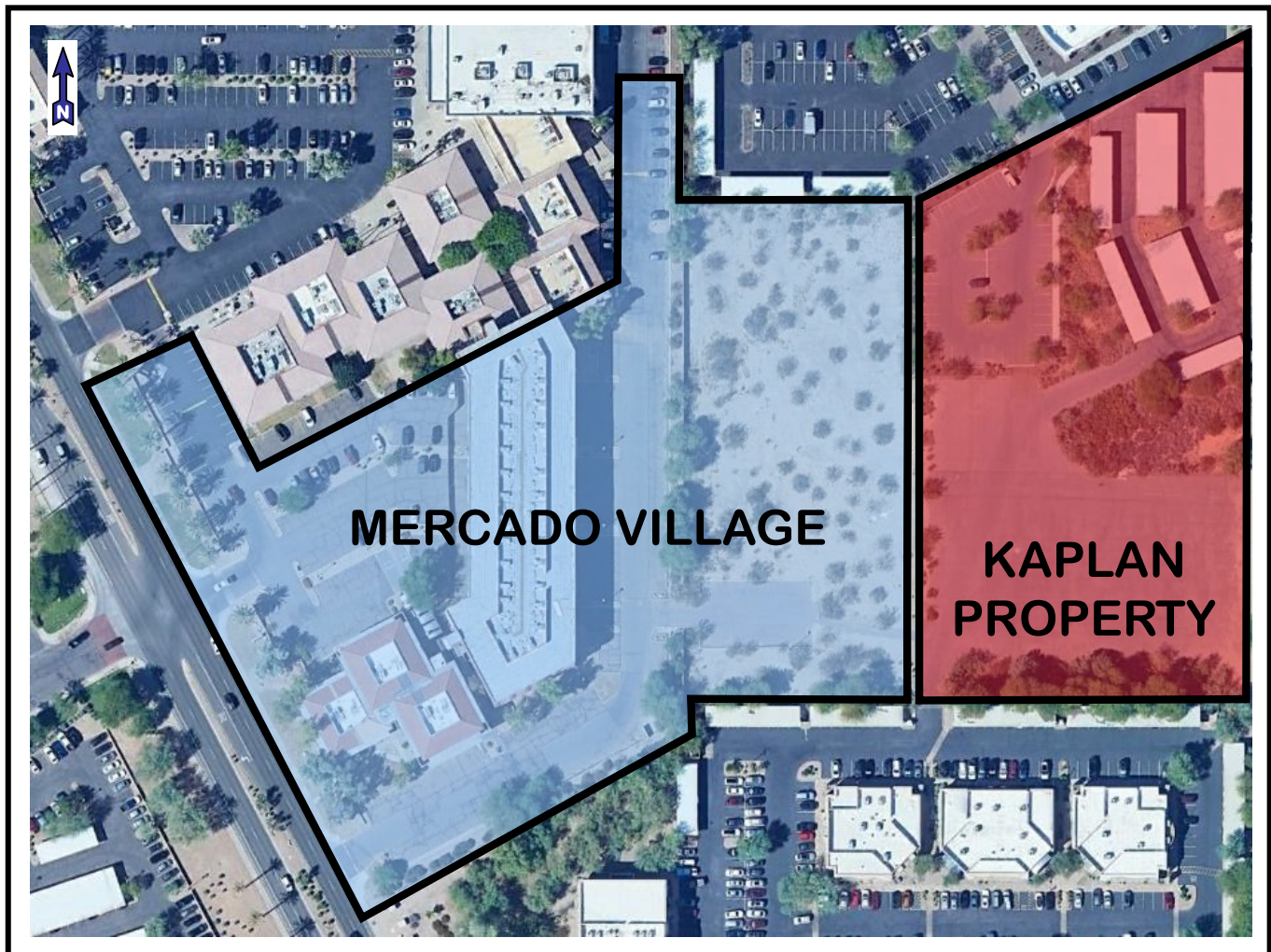
Table 48: 2025 with Mercado Village Signal Warrant Results for 92nd Street and Cochise Drive

WARRANT	1A	1B	1A and 1B	2	3A	3B	WARRANTS
REQUIRED HOURS TO BE MET	8	8	8	4	3	1	SATISFIED?
2025 WITH SITE	0	10	0	0	1	0	YES

Table 49: 2025 with Mercado Village Signal Warranting Volume Summary for 92nd / Cochise

WARRANT	CRITERIA		REQUIRED HOURS	ACTUAL HOURS	MET?	INCREASE NEEDED	
	MAJOR	MINOR				92nd STREET	COCHISE DRIVE
#1A	600	200	8	0	NO		108%
#1B	900	100	8	10	YES		
#1A with #1B	480	160	8	0	NO		67%
#1B with #1A	720	80	8	11			
#2	Varying Graph		4	2	NO		
#3B	Varying Graph		1	0	NO	27%	164%

The developers of Mercado Village have been asked to provide access to the privately owned property adjacent and immediately east of the Mercado Village property. This property is typically identified as the Kaplan Property. **Figure 46** indicates the relationship between Mercado Village and the Kaplan Property. **Figure 3** indicates the location of the vehicle connection between Mercado Village and the Kaplan Property.

**Figure 46: Mercado Village Adjacent Vacant Property (Kaplan Property)**

Two (2) possible developments for the Kaplan Property were considered: a 16,440-square foot medical office and 219 multi-family homes. **Appendix D.3** provides the trip generation calculations.

Table 50: Kaplan Medical Office Hourly Volumes at 92nd / Cochise

Appendix E.5 provides the complete analysis for the Kaplan Property as one-half General Office and one-half Medical Office. **Appendix D.4** provides the *Trip Generation Manual* hourly factors for the general and medical offices.

Without other access and trip distribution information, all Kaplan Property traffic volume was assumed to utilize the access through Mercado Village to the 92nd / Cochise intersection.

Table 50 provides estimated Medical Office hourly volumes by turning movement.

Table 51 provides estimated General Office hourly volumes by turning movement.

Table 52 summarizes the 92nd / Cochise signal warrant results with Mercado Village with Kaplan as office. **Table 53** provides additional detail. These two (2) tables sum the assumed Kaplan Property development as one-half Medical Office and one-half General Office.

TIME	NB Right	SB Left	EB Thru	WB
1:00 AM	0	0	0	0
2:00 AM	0	0	0	0
3:00 AM	0	0	0	2
4:00 AM	0	0	0	0
5:00 AM	0	0	0	0
6:00 AM	0	0	0	0
7:00 AM	4	6	0	0
8:00 AM	15	25	2	4
9:00 AM	13	22	2	17
10:00 AM	12	21	2	29
11:00 AM	9	17	2	29
12:00 PM	8	14	0	33
1:00 PM	8	15	0	28
2:00 PM	11	17	2	22
3:00 PM	9	15	0	25
4:00 PM	9	15	0	29
5:00 PM	4	7	0	33
6:00 PM	3	4	0	29
7:00 PM	2	2	0	9
8:00 PM	0	2	0	4
9:00 PM	0	0	0	4
10:00 PM	0	0	0	2
11:00 PM	0	0	0	0
12:00 AM	0	0	0	0
TOTAL	299			299

Table 51: Kaplan General Office Hourly Volumes at 92nd / Cochise

TIME	NB Right	SB Left	EB Thru	WB
1:00 AM	0	0	0	0
2:00 AM	0	0	0	0
3:00 AM	0	0	0	0
4:00 AM	0	0	0	0
5:00 AM	0	0	0	0
6:00 AM	0	0	0	0
7:00 AM	2	4	0	0
8:00 AM	6	10	0	3
9:00 AM	6	10	0	5
10:00 AM	3	5	0	6
11:00 AM	3	5	0	8
12:00 PM	3	5	0	12
1:00 PM	5	7	0	12
2:00 PM	4	7	0	7
3:00 PM	4	6	0	7
4:00 PM	4	6	0	10
5:00 PM	3	5	0	18
6:00 PM	2	4	0	18
7:00 PM	0	2	0	4
8:00 PM	0	0	0	3
9:00 PM	0	0	0	2
10:00 PM	0	0	0	2
11:00 PM	0	0	0	3
12:00 AM	0	0	0	0
TOTAL	121			120

Table 52: 2025 with Kaplan as Office Signal Warrant Results for 92nd Street and Cochise Drive

WARRANT	1A	1B	1A and 1B	2	3A	3B	WARRANTS
REQUIRED HOURS TO BE MET	8	8	8	4	3	1	SATISFIED?
2025 WITH KAPLAN AS OFFICE	0	11	2	5	3	0	YES

Table 53: 2025 with Kaplan as Office Signal Warranting Volume Summary for 92nd / Cochise

WARRANT	CRITERIA		REQUIRED HOURS	ACTUAL HOURS	MET?	INCREASE NEEDED	
	MAJOR	MINOR				92nd STREET	COCHISE DRIVE
#1A	600	200	8	0	NO		61%
#1B	900	100	8	11	YES		
#1A with #1B	480	160	8	2	NO		29%
#1B with #1A	720	80	8	11			
#2	Varying Graph		4	6	YES		
#3B	Varying Graph		1	0	NO	14%	125%

Table 54: Kaplan as Residential Hourly Volumes at 92nd / Cochise

Appendix D.4 provides the *Trip Generation Manual* hourly factors
Appendix E.5 the complete warrant analysis for the Kaplan Property as Residential Multi-family.

Without other access and trip distribution information, all Kaplan Property traffic volume was assumed to utilize the access through Mercado Village to the 92nd / Cochise intersection.

Table 54 provides estimated multi-family hourly volumes by turning movement.

Table 55 summarizes the 92nd / Cochise signal warrant results with Mercado Village and with Kaplan as multi-family residential.

Table 56 provides additional detail.

TIME	NB Right	SB Left	EB Thru	WB
1:00 AM	2	4	0	3
2:00 AM	2	2	0	2
3:00 AM	1	2	0	3
4:00 AM	1	2	0	2
5:00 AM	1	2	0	9
6:00 AM	2	2	0	16
7:00 AM	3	6	0	41
8:00 AM	5	8	0	64
9:00 AM	6	12	0	50
10:00 AM	6	11	0	29
11:00 AM	5	9	0	28
12:00 PM	7	15	0	28
1:00 PM	9	17	0	25
2:00 PM	8	15	0	26
3:00 PM	11	21	1	29
4:00 PM	14	26	1	31
5:00 PM	20	38	2	33
6:00 PM	23	43	2	45
7:00 PM	20	36	2	39
8:00 PM	16	30	1	28
9:00 PM	15	29	1	24
10:00 PM	12	23	1	17
11:00 PM	9	18	0	15
12:00 AM	6	10	0	9
TOTAL	596			596

Table 55: 2025 with Kaplan as Residential Warrant Results for 92nd Street and Cochise Drive

WARRANT	1A	1B	1A and 1B	2	3A	3B	WARRANTS
REQUIRED HOURS TO BE MET	8	8	8	4	3	1	SATISFIED?
2025 WITH KAPLAN AS APARTMENTS	1	11	2	5	1	0	YES

Table 56: 2025 with Kaplan as Residential Signal Warranting Volume Summary for 92nd / Cochise

WARRANT	CRITERIA		REQUIRED HOURS	ACTUAL HOURS	MET?	INCREASE NEEDED	
	MAJOR	MINOR				92nd STREET	COCHISE DRIVE
#1A	600	200	8	1	NO		79%
#1B	900	100	8	11	YES		
#1A with #1B	480	160	8	2	NO		43%
#1B with #1A	720	80	8	11			
#2	Varying Graph		4	5	YES		
#3B	Varying Graph		1	0	NO	16%	112%

Table 57 summarizes the five (5) different traffic volume conditions for the signal warrant analyses for existing 2023 volumes and for 2025 without and with Mercado Village and the Kaplan Property as either office or apartments.

A traffic signal is not warranted at the 92nd / Cochise intersection in 2023 or with estimated 2025 traffic volumes without either Mercado Village or Kaplan development. A traffic signal is warranted with estimated 2025 traffic volumes and only Mercado Village by satisfying Warrant #1B (Interruption of Continuous Traffic).

A traffic signal is warranted at the 92nd / Cochise intersection in 2025 with both Mercado Village and the Kaplan Property developed as one-half Medical Office and one-half General Office. For this circumstance, three (3) warrants are satisfied, #1B (Interruption of Continuous Traffic), #2 (Four Hour Vehicular Volume), and #3A (Peak Hour Delay).

A traffic signal is warranted at the 92nd / Cochise intersection in 2025 with both Mercado Village and the Kaplan Property developed as multi-family residential. For this circumstance, two (2) warrants are satisfied, #1B (Interruption of Continuous Traffic) and #2 (Four Hour Vehicular Volume).

Table 57: 2025 Signal Warrant Results for 92nd Street and Cochise Drive for All Possibilities

WARRANT	1A	1B	1A and 1B	2	3A	3B	WARRANTS
REQUIRED HOURS TO BE MET	8	8	8	4	3	1	SATISFIED?
EXISTING	0	6	0	0	1	0	NO
2025 WITHOUT SITE	0	6	0	0	1	0	NO
2025 WITH SITE	0	10	0	0	1	0	YES
2025 WITH KAPLAN AS OFFICE	0	11	2	5	3	0	YES
2025 WITH KAPLAN AS APARTMENTS	1	11	2	5	1	0	YES

Typically, traffic signals are discouraged at locations less than one-half mile from other traffic signals. Cochise Drive is approximately one-quarter mile from both Shea Boulevard and Mountain View Road. A traffic signal at the 92nd / Cochise intersection would improve the operation of both directions of Cochise Drive without diminishing the operation of either direction of 92nd Street, comparing the existing stop sign condition to the with Mercado Village signal condition. (This circumstance is detailed in the following pages.)

Both east and west of 92nd Street, North Lane and Cochise Drive are directly connected apart from 92nd Street. On the west side of 92nd Street, Cochise Drive and Ironwood Lane are directly connected apart from 92nd Street. Therefore, drivers who wish to turn onto 92nd Street from west of 92nd Street at either North Lane or Ironwood Lane, could do so at either a stop sign or a signal. Drivers who wish to turn onto 92nd Street from east of 92nd Street at North Lane can also do so at either a stop sign or a signal.

Furthermore, a signal at Cochise; which is also the apartment and retail left-turn access; would allow residents of Mercado Village who work at HonorHealth or the adjacent medical office buildings, to walk across 92nd Street at a signal-protected intersection. This traffic signal would also aid HonorHealth and medical office employees west of 92nd Street either driving or walking to the businesses and restaurants east of 92nd Street.

Also of consideration, four (4) collisions occurred in a 19-month period from November 2016 through May 2018. Each of these collisions were caused by a driver in a vehicle on Cochise Drive failing to yield the right-of-way to traffic on 92nd Street. These collisions are potentially preventable by a traffic signal.

92nd and Cochise Turn Lane Requirements

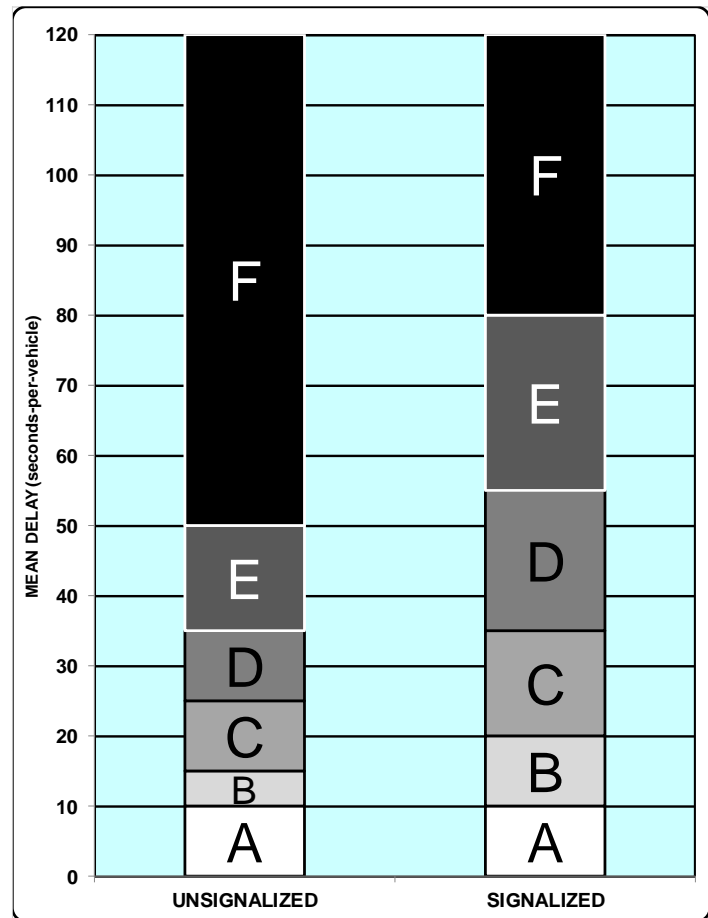
In accordance with the City of Scottsdale Design Standards and Policies Manual, Section 5-3.206, a northbound right-turn is required on 92nd Street at Cochise Drive, and separate left-turn lane and shared straight-and-right-turn lane are required on Cochise Drive at 92nd Street.

Level-of-Service Analysis

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 most preferred operation to “F” representing the least preferred operation. 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. For signalized intersections and multi-way stop intersections, the delay and level-of-service are calculated for the entire intersection, each approach, and each turning movement. For two-way intersections, the delay and level-of-service are determined only for each stopped approach and for left-turns from the uncontrolled approach. **Table 58:** provides a diagram depicting level-of-service and delay criteria for intersections.

Table 58: Intersection Level-of-Service Criteria



Synchro was utilized for these analyses. For the three (3) signalized intersections, right-turns-on-red-indications were permitted on all approaches. For the signalized intersections of 92nd Street / Shea, and of 92nd Street / Mountain View, the existing 120-second cycle lengths were utilized, while the phase lengths were optimized utilizing the Synchro capabilities. The results of these analyses are provided in **Appendix F**.

As indicated in **Appendix F**, 2025 with Mercado Village delay was calculated for one movement at the 92nd / Cochise intersection at 275.5 seconds. It is unreasonable to believe that future average delay could be more than 4 minutes. With an average delay greater than 4 minutes, the maximum delay could be 8 or more minutes.

The widely utilized signalized traffic average delay equation was empirically derived in London during the 1950's. The widely utilized unsignalized intersection traffic average delay methodologies are predicated on the signalized traffic average delay equation. This equation and methodology are accurate and very valid for average delay less than 60 seconds-per-vehicle. This equation and methodology are also valid for average delay between 60 and 120 seconds-per-vehicle. However, the equation exaggerates average delay greater than 120 seconds-per-vehicle. Therefore, all delays greater than 120 seconds were adjusted to 120 seconds.

Table 59 and **Table 60** summarize the level-of-service results for 2023 and 2025, without and with Mercado Village. These tables indicate the number of intersections, approaches, and turning movements at each level-of-service for each condition. The complete results are summarized in **Appendix F.1**. The individual year and condition Synchro delay and level-of-service reports are provided in **Appendix F.2** through **Appendix F.5**.

Table 59: Level-of-Service – All Signalized Intersections

	MORNING PEAK HOUR				MID-DAY PEAK HOUR				EVENING PEAK HOUR			
	2023		2025		2023		2025		2023		2025	
	EXISTING	WITH SITE	AMBIENT	WITH SITE	EXISTING	WITH SITE	AMBIENT	WITH SITE	EXISTING	WITH SITE	AMBIENT	WITH SITE
A	7	7	25	23	8	8	25	24	8	8	24	22
B	3	3	2	3	1	1	1	2	1	1	3	4
C	17	15	16	16	14	13	15	12	17	17	15	16
D	7	9	8	9	11	11	10	12	8	8	9	9
E	0	0	0	0	0	1	0	1	0	0	0	0
F	0	0	0	0	0	0	0	0	0	0	0	0
	34	34	51	51	34	34	51	51	34	34	51	51

Table 60: Level-of-Service – All Unsignalized Intersections

	MORNING PEAK HOUR				MID-DAY PEAK HOUR				EVENING PEAK HOUR			
	2023		2025		2023		2025		2023		2025	
	EXISTING	WITH SITE	AMBIENT	WITH SITE	EXISTING	WITH SITE	AMBIENT	WITH SITE	EXISTING	WITH SITE	AMBIENT	WITH SITE
A	29	26	27	26	25	24	25	24	31	28	26	24
B	11	11	8	7	13	11	12	3	12	12	13	11
C	5	6	12	7	6	6	7	13	6	5	10	8
D	5	4	4	6	2	4	3	4	1	0	2	2
E	1	2	0	2	3	1	2	0	1	2	0	1
F	0	2	0	3	2	5	2	7	0	4	0	5
	51	51	51	51	51	51	51	51	51	51	51	51

Synchro was also utilized to determine the estimated left-turn and right-turn queue lengths at the three (3) signalized intersections. Appendix G provides the complete queue analyses results. **Table 61**, **Table 62**, and **Table 63** respectively provide the Synchro-predicted 92nd / Shea, 92nd / Cochise, and 92nd / Mountain View turn 50th and 95th percentile queue lengths in feet for both 2023 and 2025 and both ambient and with Mercado Village.

There is minimal increase in both left-turn and right-turn predicted queue lengths at both the 92nd / Shea and 92nd / Mountain View intersections, without and with Mercado Village.

The left-turn and right-turn queue lengths at the 92nd / Cochise intersection are short.

Table 61: 92nd & Shea Turn Lane Queue Lengths

	50th Percentile Queue				95th Percentile Queue			
	2023		2025		2023		2025	
	Ambient	With Site	Ambient	With Site	Ambient	With Site	Ambient	With Site
Eastbound Left	89	129	80	92	125	129	132	#153
Westbound Left	38	40	34	35	57	60	65	#77
Northbound Left	186	232	163	185	221	232	232	261
Southbound Left	55	84	55	60	92	94	96	102

	50th Percentile Queue				95th Percentile Queue			
	2023		2025		2023		2025	
	Ambient	With Site	Ambient	With Site	Ambient	With Site	Ambient	With Site
Eastbound Right	8	42	11	21	67	68	76	#99
Westbound Right	0	0	0	0	0	0	0	0
Northbound Right	0	2	0	0	39	39	46	47
Southbound Right	17	23	30	38	87	87	107	117

Table 62: 92nd & Cochise Turn Lane Queue Lengths

	50th Percentile Queue				95th Percentile Queue			
	2023		2025		2023		2025	
	Ambient	With Site	Ambient	With Site	Ambient	With Site	Ambient	With Site
Eastbound Left		16		36		15		43
Westbound Left		26		58		23		64
Northbound Left		6		24		6		27
Southbound Left		14		53		11		45

	50th Percentile Queue				95th Percentile Queue			
	2023		2025		2023		2025	
	Ambient	With Site	Ambient	With Site	Ambient	With Site	Ambient	With Site
Eastbound Right		0		0		0		0
Westbound Right		0		0		0		66
Northbound Right		0		0		0		0
Southbound Right		0		12		0		19

Table 63: 92nd & Mountain View Turn Lane Queue Lengths

	50th Percentile Queue				95th Percentile Queue			
	2023		2025		2023		2025	
	Ambient	With Site	Ambient	With Site	Ambient	With Site	Ambient	With Site
Eastbound Left	9	14	5	18	17	18	18	#27
Westbound Left	144	177	121	215	184	188	200	#215
Northbound Left	8	14	4	17	14	14	15	22
Southbound Left	38	75	28	93	75	83	73	93

	50th Percentile Queue				95th Percentile Queue			
	2023		2025		2023		2025	
	Ambient	With Site	Ambient	With Site	Ambient	With Site	Ambient	With Site
Eastbound Right	0	0	0	0	0	0	0	0
Westbound Right	0	0	0	0	0	0	0	0
Northbound Right	38	75	28	93	75	83	73	93
Southbound Right	0	0	0	0	0	0	0	0

Two (2) additional comparative levels-of-service analyses were accomplished. The first compared the operation of the 92nd / Cochise intersection with the existing stop signs and with a possible traffic signal. All three (3) peak hours were analyzed and are provided in **Appendix F.2** through **Appendix F.5**.

The evening peak hour was selected for the comparison, as this peak hour had the poorest existing level-of-service. **Table 64** provides the comparative delay and level-of-service results for the evening peak hour with the 2025 with Mercado Village traffic volumes. This comparison reveals the dramatic delay reduction and level-of-service improvement benefit of a traffic signal to eastbound and westbound traffic and the minimal detriment to northbound and southbound traffic.

The second comparative levels-of-service analysis was the operation of the 92nd / Shea intersection with the existing traffic signal operation and with the addition of a southbound right-turn arrow that operates in conjunction with the eastbound left-turn arrow. All three (3) peak hours were analyzed and are provided in **Appendix F.2** through **Appendix F.5**. The mid-day peak hour was selected for the comparison, as this peak hour had the poorest existing level-of-service.

Table 65 provides the comparative delay and level-of-service results for the mid-day peak hour with the 2025 with Mercado Village traffic volumes. This comparison reveals the substantial delay reduction benefit to the southbound right-turn movement with a right-turn arrow.

Table 64: LOS – 92nd & Cochise 2025 with Site PM Peak Hour With Stop Signs and Signal

	STOP SIGNS		TRAFFIC SIGNAL	
	DELAY	LOS	DELAY	LOS
92nd / Cochise	19.7	B	5.8	A
Northbound	0.2	A	4.7	A
Left	8.2	A	4.5	A
Through	0.0	A	4.8	A
Right	0.0	A	3.6	A
Southbound	2.3	A	4.7	A
Left	10.4	B	7.5	A
Through	0.0	A	4.0	A
Right	0.0	A	3.6	A
Eastbound	76.8	E	10.4	B
Left	106.3	F	10.8	B
Through	17.9	B	9.7	A
Right	17.9	B	9.7	A
Westbound	120.0	F	10.2	B
Left	120.0	F	10.6	B
Through	20.3	C	9.7	A
Right	20.3	C	9.7	A

Table 65: LOS – 92nd & Shea 2025 with Site MD Peak Hour Without and With SB Right Arrow

	WITHOUT ARROW		WITH ARROW	
	DELAY	LOS	DELAY	LOS
92nd / Shea	37.3	D	33.3	C
Northbound	41.7	D	39.3	D
Left	52.5	D	48.2	D
Through	29.8	C	29.1	C
Right	30.1	C	29.3	C
Southbound	46.0	D	39.3	D
Left	52.8	D	49.2	D
Through	39.4	D	39.0	D
Right	50.0	D	33.9	C
Eastbound	31.9	C	28.8	C
Left	57.1	E	51.4	D
Through	29.3	C	26.5	C
Right	26.8	C	24.1	C
Westbound	31.7	C	32.5	C
Left	54.0	D	50.2	D
Through	36.8	D	31.8	C
Right	24.0	C	22.0	C

Appendix A

Historic Collision Analysis



Appendix A.1
Historic Collision Analysis
2015



TRAVEL													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
2932756 2932756	33.5826	-111.8858	01 / 06	4:33 PM	Rear End	Possible Injury	Eastbound Eastbound	Straight Stopped	Car Car	No Controls No Controls	Unknown Unknown	Speed Too Fast For Conditions No Improper Action	
2934011 2934011	33.5826	-111.8861	01 / 05	2:41 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
2934512 2934512 2934512	33.5826	-111.8860	01 / 24	6:53 PM	Rear End	No Injury	Westbound Westbound Westbound	Straight Stopped Stopped	Car Car Car	Traffic Control Signal Traffic Control Signal Traffic Control Signal	Unknown Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action No Improper Action	
2934515 2934515 2934515	33.5826	-111.8862	01 / 12	12:16 PM	Rear End	No Injury	Eastbound Eastbound Eastbound	Straight Straight Stopped	Pick-up Truck Car Car	No Controls Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted Not Distracted	Exceeded Lawful Speed No Improper Action No Improper Action	
2937787 2937787	33.5826	-111.8861	01 / 15	1:32 PM	Sideswipe Same Direction	No Injury	Southbound Southbound	Turning Left Turning Left	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Failed to Keep in Proper Lane No Improper Action	
2938191 2938191	33.5826	-111.8862	01 / 30	11:53 AM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Car Pick-up Truck	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	
2938661 2938661	33.5826	-111.8847	01 / 26	9:48 AM	Rear End	No Injury	Eastbound Eastbound	Straight Straight	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	No Improper Action Unknown	
2940585 2940585	33.5826	-111.8859	02 / 17	4:38 PM	Angle	No Injury	Westbound Westbound	Changing Lanes Straight	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Unsafe Lane Change No Improper Action	
2942604 2942604	33.5825	-111.8861	02 / 11	7:00 PM	Rear End	No Injury	Northbound Northbound	Unknown Unknown	Pick-up Truck Car	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	No Improper Action No Improper Action	
2944246 2944246	33.5826	-111.8865	42041.6	1:41 PM	Single Vehicle	No Injury	Eastbound Unknown	Straight Stopped	Pick-up Truck Car	No Controls Warning Signs	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	
2944775 2944775	33.5826	-111.8860	02 / 10	5:19 PM	Rear End	No Injury	Westbound Eastbound	Straight Stopped	Pick-up Truck Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	
2945016 2945016	33.5826	-111.8851	03 / 05	5:10 PM	Rear End	No Injury	Eastbound Eastbound	Straight Slowing	Car Car	Traffic Control Signal Traffic Control Signal	Hands Free Device Not Distracted	Speed Too Fast For Conditions No Improper Action	
2945943 2945943	33.5826	-111.8861	03 / 20	9:05 PM	Angle	No Injury	Westbound Westbound	Making U Turn Turning Left	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Made Improper Turn	
2946815 2946815	33.5826	-111.8850	03 / 27	8:45 AM	Rear End	Possible Injury	Eastbound Eastbound	Straight Stopped	Car Car	No Controls No Controls	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
2948659 2948659	33.5825	-111.8878	04 / 13	3:05 PM	Rear End	No Injury	Westbound Westbound	Straight Straight	Car Pick-up Truck	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Unknown No Improper Action	
2949728 2949728	33.5817	-111.8862	04 / 18	10:14 AM	Left-Turn-Angle	Suspected Minor Injury	Eastbound Northbound	Turning Left Straight	Car Car	No Controls No Controls	Unknown Not Distracted	Failed to Yield Right of Way No Improper Action	
2950907 2950907	33.5826	-111.8861	42108.7	5:22 PM	Angle	No Injury	Southbound Southbound	Turning Left Turning Left	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Unsafe Lane Change No Improper Action	
2951903 2951903	33.5826	-111.8862	04 / 22	3:16 PM	Other	No Injury	Eastbound Eastbound	Backing Stopped	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	
2958982 2958982	33.5824	-111.8861	05 / 14	8:35 AM	Sideswipe Same Direction	No Injury	Northbound Northbound	Straight Turning Left	Car Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	No Improper Action Made Improper Turn	
2962090 2962090 2962090	33.5826	-111.8860	05 / 26	12:00 PM	Rear End	Possible Injury	Westbound Westbound Westbound	Straight Stopped Stopped	Pick-up Truck Car Car	No Controls No Controls No Controls	Unknown Distracted Unknown	Speed Too Fast For Conditions No Improper Action	
2962101 2962101 2962101	33.5825	-111.8843	05 / 21	4:39 PM	Rear End	Possible Injury	Westbound Westbound Westbound	Straight Straight Stopped	Pick-up Truck Car Motorcycle	No Controls No Controls No Controls	Unknown Distracted Unknown	Speed Too Fast For Conditions No Improper Action	

TRAVEL													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
2963140 2963140	33.5826	-111.8858	05 / 22	12:30 PM	Rear End	No Injury	Westbound Westbound	Straight Straight	Car Car	No Controls No Controls	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	
2963159 2963159	33.5825	-111.8861	05 / 13	5:57 PM	Angle	No Injury	Northbound Northbound	Turning Right Turning Right	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	No Improper Action No Improper Action	
2965367 2965367	33.5826	-111.8861	42152.5	12:38 PM	Rear End	Possible Injury	Eastbound Eastbound	Straight Stopped	Pick-up Truck Car	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Unknown No Improper Action	
2969165 2969165	33.5826	-111.8861	06 / 15	9:52 PM	Left-Turn-Angle	No Injury	Eastbound Southbound	Straight Turning Left	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	No Improper Action No Improper Action	
2969185 2969185	33.5811	-111.8863	06 / 16	6:46 AM	Sideswipe Same Direction	No Injury	Northbound Northbound	Changing Lanes Straight	Truck Pick-up Truck	No Controls No Controls	Unknown Distracted	Unsafe Lane Change No Improper Action	
2969187 2969187	33.5826	-111.8864	06 / 23	9:42 AM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Car Car	Traffic Control Signal Traffic Control Signal	Inside Vehicle Distracted	Speed Too Fast For Conditions	
2973505 2973505	33.5825	-111.8871	07 / 01	7:48 AM	Rear End	Possible Injury	Westbound Westbound	Straight Slowing	Car Car	No Controls No Controls	Unknown Distracted	Speed Too Fast For Conditions	
2973527 2973527 2973527	33.5825	-111.8881	07 / 01	7:42 AM	Rear End	Suspected Minor Injury	Westbound Westbound Westbound	Straight Slowing Slowing	Car Car Car	No Controls No Controls No Controls	Unknown Not Distracted Not Distracted	Unknown No Improper Action No Improper Action	
2974339 2974339	33.5826	-111.8865	07 / 08	11:36 AM	Rear End	No Injury	Eastbound Eastbound	Slowing	Pick-up Truck Car	Traffic Control Signal Traffic Control Signal	Not Distracted	Unknown No Improper Action	
2978771 2978771	33.5825	-111.8875	42207.4	9:38 AM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Car Car	No Controls No Controls	Not Distracted Distracted	Unknown No Improper Action	
2985082 2985082 2985082	33.5826	-111.8867	08 / 06	12:58 PM	Rear End	No Injury	Eastbound Eastbound Eastbound	Straight Stopped Stopped	Car Car Truck	Traffic Control Signal Traffic Control Signal Traffic Control Signal	Unknown Distracted Unknown	Unknown No Improper Action No Improper Action	
2986659 2986659	33.5826	-111.8857	08 / 13	9:17 AM	Rear End	Possible Injury	Westbound Westbound	Straight Stopped	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Unknown No Improper Action	
2989561 2989561	33.5826	-111.8860	08 / 23	4:02 PM	Rear End	No Injury	Westbound Westbound	Straight Slowing	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	Followed Too Closely
2989566 2989566	33.5826	-111.8858	08 / 24	12:59 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	
2991661 2991661	33.5826	-111.8861	08 / 25	3:00 PM	Angle	No Injury	Northbound Eastbound	Turning Right Straight	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Failed to Yield Right of Way No Improper Action	
2991833 2991833	33.5820	-111.8861	42235.5	12:02 PM	Left-Turn-Angle	No Injury	Eastbound Northbound	Turning Left Straight	Car Truck	No Controls No Controls	Unknown Not Distracted	Unknown No Improper Action	
2994953 2994953	33.5826	-111.8860	09 / 10	7:48 AM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	No Improper Action No Improper Action	
2994955 2994955	33.5825	-111.8861	09 / 02	5:30 PM	Sideswipe Same Direction	No Injury	Northbound Northbound	Turning Left Stopped	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Unsafe Lane Change	Failed to Keep in Proper Lane
2997803 2997803	33.5817	-111.8862	09 / 17	12:40 PM	Angle	No Injury	Northbound Eastbound	Turning Left Turning Left	Car Car	No Controls No Controls	Unknown Distracted	Failed to Yield Right of Way No Improper Action	

TRAVEL													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
2934124 2934124	33.5825	-111.8829	01 / 02	4:36 PM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Car Car	No Controls No Controls	Unknown Unknown	Speed Too Fast For Conditions No Improper Action	
2934126 2934126	33.5825	-111.8829	01 / 08	11:45 AM	Sideswipe Same Direction	No Injury	Eastbound Eastbound	Changing Lanes Stopped	Car Truck	No Controls No Controls	Unknown Distracted	Unsafe Lane Change No Improper Action	
2938656 2938656	33.5825	-111.8827	01 / 15	3:51 PM	Other	No Injury	Westbound Westbound	Turning Right Stopped	Truck Car	Signal Signal	Not Distracted Not Distracted	Made Improper Turn	
2938659 2938659	33.5825	-111.8827	01 / 22	5:50 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	
2944099 2944099	33.5825	-111.8820	02 / 10	4:39 PM	Left-Turn-Angle	No Injury	Northbound Eastbound	Turning Left Straight	Car Pick-up Truck	No Controls No Controls	Unknown Not Distracted	Failed to Yield Right of Way No Improper Action	
2944275 2944275	33.5825	-111.8820	02 / 20	10:50 AM	Sideswipe Same Direction	No Injury	Eastbound Eastbound	Changing Lanes Straight	Not Reported Car	Signal No Controls	Unknown Not Distracted	Unsafe Lane Change No Improper Action	
2944783 2944783	33.5792	-111.8813	02 / 17	2:35 PM	Single Vehicle	No Injury	Northbound Northbound	Turning Left Straight	Car Car	No Controls No Controls	Not Distracted Not Distracted	Made Improper Turn No Improper Action	
2945952 2945952	33.5825	-111.8825	03 / 18	11:06 AM	Rear End	Possible Injury	Westbound Westbound	Straight Slowing	Car Pick-up Truck	Signal Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
2946700 2946700	33.5825	-111.8803	03 / 30	10:31 AM	Angle	Suspected Minor Injury	Eastbound Eastbound	Turning Right Straight	Car Car	No Controls No Controls	Unknown Distracted	Made Improper Turn No Improper Action	
2946707 2946707 2946707	33.5825	-111.8824	03 / 24	10:51 AM	Rear End	No Injury	Westbound Westbound Westbound	Straight Stopped Stopped	Car Car Car	No Controls No Controls No Controls	Unknown Distracted Unknown	Speed Too Fast For Conditions No Improper Action No Improper Action	
2946817 2946817	33.5825	-111.8837	03 / 19	8:02 AM	Rear End	Possible Injury	Westbound Westbound	Straight Stopped	Car Car	Signal Signal	Other Device Not Distracted	Speed Too Fast For Conditions No Improper Action	
2947493 2947493	33.5825	-111.8812	04 / 03	12:47 PM	Rear End	No Injury	Eastbound Eastbound	Straight Slowing	Unknown Car	No Controls No Controls	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	
2961605 2961605	33.5825	-111.8844	05 / 18	8:16 AM	Sideswipe Same Direction	No Injury	Westbound Westbound	Changing Lanes Straight	Car Car	No Controls No Controls	Unknown Distracted	Unsafe Lane Change No Improper Action	
2965381 2965381	33.5825	-111.8829	05 / 26	12:03 PM	Rear End	No Injury	Westbound Westbound	Slowing Slowing	Car Pick-up Truck	Signal Signal	Not Distracted Not Distracted	Followed Too Closely	
2969175 2969175	33.5825	-111.8824	06 / 16	4:25 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	No Controls No Controls	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	
2975123 2975123	33.5826	-111.8846	07 / 15	9:39 AM	Rear End	No Injury	Westbound Westbound	Straight Straight	Car Car	No Controls No Controls	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	
2975606 2975606	33.5825	-111.8827	07 / 20	1:32 PM	Left-Turn-Angle	No Injury	Eastbound Northbound	Straight Turning Left	Car Pick-up Truck	Signal Signal	Not Distracted Not Distracted	Disregarded Traffic Signal No Improper Action	
2978786 2978786	33.5825	-111.8826	07 / 31	11:52 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	
2994973 2994973	33.5825	-111.8825	09 / 08	3:55 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Truck	Signal Signal	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	
2995293 2995293 2995293	33.5825	-111.8832	09 / 15	2:45 PM	Rear End	Possible Injury	Westbound Westbound Westbound	Straight Stopped Stopped	Car Pick-up Truck Car	Signal Signal Signal	Unknown Distracted Unknown	Speed Too Fast For Conditions No Improper Action	
2997802 2997802	33.5825	-111.8829	09 / 17	2:29 PM	Sideswipe Same Direction	No Injury	Westbound Westbound	Changing Lanes Straight	Car Car	Signal Signal	Unknown Distracted	Unsafe Lane Change No Improper Action	

TRAVEL													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3000453 3000453	33.5823	-111.8827	09 / 29	6:09 PM	Sideswipe Same Direction	No Injury	Northbound Northbound	Straight Straight	Car Pick-up Truck	Signal Signal	Not Distracted Not Distracted	Failed to Keep in Proper Lane No Improper Action	
3000462 3000462	33.5825	-111.8820	09 / 24	12:13 PM	Rear to Rear	No Injury	Westbound Westbound	Straight Stopped	Car Car	No Controls No Controls	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3000472 3000472	33.5825	-111.8826	09 / 27	12:21 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	Signal Signal	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	
3006716 3006716	33.5825	-111.8828	10 / 12	6:06 PM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Pick-up Truck Car	Signal Signal	Unknown Not Distracted	Followed Too Closely No Improper Action	
3006854 3006854	33.5825	-111.8822	10 / 05	7:44 AM	Angle	No Injury	Northbound Eastbound	Turning Right Straight	Car Car	No Controls No Controls	Unknown Distracted	Failed to Yield Right of Way No Improper Action	
3008623	33.5825	-111.8827	10 / 12	5:14 PM	Single Vehicle	No Injury	Southbound	Turning Left	Car	Signal	Passenger	Speed Too Fast For Conditions	
3012359 3012359	33.5825	-111.8820	10 / 10	3:37 PM	Rear End	Suspected Minor Injury	Westbound Westbound	Straight Slowing	Motorcycle Car	No Controls No Controls	Outside The Vehi Not Distracted	Speed Too Fast For Conditions No Improper Action	
3013336 3013336 3013336	33.5825	-111.8837	10 / 26	1:09 PM	Rear End	Suspected Minor Injury	Westbound Westbound Westbound	Straight Stopped Slowing	Car Car Car	No Controls No Controls No Controls	Unknown Distracted Unknown	Speed Too Fast For Conditions No Improper Action	
3014885 3014885	33.5825	-111.8817	10 / 23	6:45 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Pick-up Truck	Signal Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3014902 3014902	33.5825	-111.8827	10 / 29	4:27 PM	Sideswipe Same Direction	No Injury	Westbound Westbound	Straight Turning Right	Car Car	Signal Signal	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	
3017439 3017439	33.5825	-111.8827	10 / 26	1:35 PM	Rear End	No Injury	Westbound Westbound	Slowing Stopped	Car Car	Signal Signal	Unknown Not Distracted	Unknown No Improper Action	
3018456 3018456 3018456	33.5825	-111.8827	11 / 09	12:32 PM	Rear End	No Injury	Westbound Westbound Westbound	Straight Stopped Stopped	Pick-up Truck Car Car	Signal Signal Signal	Unknown Distracted Unknown	Speed Too Fast For Conditions No Improper Action No Improper Action	
3025030 3025030	33.5816	-111.8826	11 / 11	10:42 AM	Left-Turn-Angle	No Injury	Westbound Southbound	Turning Left Straight	Car Car	No Controls No Controls	Unknown Distracted	Unsafe Lane Change No Improper Action	
3028279 3028279	33.5825	-111.8820	12 / 03	5:58 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	Signal Signal	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	
3028296 3028296 3028296	33.5825	-111.8829	12 / 03	3:03 PM	Rear End	No Injury	Westbound Westbound Westbound	Straight Slowing Stopped	Pick-up Truck Car Car	No Controls No Controls No Controls	Unknown Distracted Unknown	Speed Too Fast For Conditions No Improper Action No Improper Action	
3028375 3028375	33.5825	-111.8828	11 / 30	3:51 PM	Sideswipe Same Direction	No Injury	Westbound Westbound	Turning Right Stopped	Truck Pick-up Truck	Signal Signal	Not Distracted Not Distracted	Made Improper Turn	
3028982 3028982	33.5825	-111.8806	12 / 01	5:38 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	Signal Signal	Not Distracted Not Distracted	Followed Too Closely No Improper Action	
3028992 3028992	33.5825	-111.8835	11 / 25	12:38 PM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Car Car	No Controls No Controls	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	
3035708 3035708	33.5825	-111.8827	12 / 24	11:15 AM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	Signal Signal	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	
3035760 3035760	33.5825	-111.8827	12 / 16	8:42 PM	Rear End	No Injury	Westbound Westbound	Making U Turn Turning Right	Car Car	Signal Signal	Not Distracted Not Distracted	No Improper Action No Improper Action	

92nd Street & Shea Boulevard - 2015 PAGE 3 OF 3													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3035762 3035762	33.5825	-111.8829	12 / 17	12:02 PM	Rear End	No Injury	Eastbound Eastbound	Slowing Stopped	Car Pick-up Truck	Signal Signal	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	
3041172 3041172	33.5825	-111.8824	11 / 23	12:35 PM	Rear End	Suspected Minor Injury	Westbound Westbound	Straight Stopped	Car Car	Signal Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3041370 3041370 3041370	33.5825	-111.8839	12 / 30	12:29 PM	Rear End	Suspected Serious Injury	Westbound Westbound Westbound	Straight Stopped Stopped	Car Car Car	No Controls No Controls No Controls	Unknown Distracted Unknown	Speed Too Fast For Conditions No Improper Action No Improper Action	

TRAVEL													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
2930953 2930953	33.5825	-111.8740	01 / 06	12:41 PM	Single Vehicle	Suspected Serious Injury	Northwestbo Southbound	Turning Left Straight	Car Car	Signal Signal	Unknown Unknown	Unknown Unknown	
2934062 2934062	33.5825	-111.8737	01 / 12	6:24 PM	Rear End	Possible Injury	Westbound Westbound	Straight Stopped	Car Car	Signal Signal	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	
2944778 2944778	33.5825	-111.8740	02 / 08	3:40 PM	Left-Turn-Head-On	No Injury	Northbound Southbound	Turning Left Straight	Car Car	Signal Signal	Unknown Not Distracted	Made Improper Turn	
2944971 2944971 2944971	33.5825	-111.8740	03 / 09	10:58 AM	Left-Turn-Head-On	Suspected Minor Injury	Westbound Eastbound Southbound	Straight Turning Left Stopped	Car Pick-up Truck Car	Signal Signal Signal	Unknown Distracted Unknown	Disregarded Traffic Signal No Improper Action	
2945082 2945082	33.5825	-111.8757	03 / 18	5:21 PM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Car Car	No Controls No Controls	Outside The Vehi Not Distracted	Unknown No Improper Action	
2945972 2945972	33.5825	-111.8743	02 / 24	4:29 PM	Angle	No Injury	Westbound Westbound	Changing Lanes Straight	Car Car	No Controls No Controls	Unknown Distracted	Unsafe Lane Change No Improper Action	
2948666 2948666	33.5825	-111.8737	04 / 08	1:47 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	Signal Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
2959001 2959001	33.5825	-111.8746	05 / 12	9:17 AM	Sideswipe Same Direction	No Injury	Westbound Westbound	Changing Lanes Straight	Car Pick-up Truck	Signal Signal	Unknown Distracted	Unsafe Lane Change No Improper Action	
2959003 2959003	33.5825	-111.8744	05 / 11	10:55 AM	Rear End	Suspected Minor Injury	Westbound Westbound	Changing Lanes Straight	Car Car	Signal Stop Signs	Unknown Distracted	Unsafe Lane Change No Improper Action	
2960292 2960292	33.5828	-111.8740	42140.9	9:49 PM	Rear End	Possible Injury	Eastbound Eastbound	Straight Straight	Car Car	Signal Signal	Not Distracted Not Distracted	No Improper Action No Improper Action	
2962093 2962093 2962093	33.5825	-111.8753	05 / 19	5:15 PM	Rear End	Suspected Minor Injury	Eastbound Eastbound Eastbound	Straight Straight Straight	Car Car Car	No Controls No Controls No Controls	Unknown Distracted Unknown	Speed Too Fast For Conditions Unknown	
2982185 2982185	33.5825	-111.8730	08 / 05	1:31 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	No Controls No Controls	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	
2985722 2985722	33.5825	-111.8736	08 / 17	1:53 PM	Rear End	Possible Injury	Westbound Westbound	Straight Stopped	Car Car	Signal Signal	Inside Vehicle Not Distracted	Speed Too Fast For Conditions No Improper Action	
2986888 2986888	33.5825	-111.8740	08 / 13	10:31 AM	Left-Turn-Angle	Suspected Minor Injury	Eastbound Southbound	Straight Turning Left	Car Car	Signal Signal	Unknown Distracted	Disregarded Traffic Signal	
2987867 2987867 2987867	33.5825	-111.8740	08 / 18	10:36 AM	Left-Turn-Head-On	Possible Injury	Eastbound Westbound Southbound	Turning Left Straight Stopped	Car Pick-up Truck Car	Signal Signal Signal	Unknown Distracted Unknown	Failed to Yield Right of Way Unknown No Improper Action	
2993051 2993051	33.5827	-111.8740	09 / 01	3:44 PM	Sideswipe Same Direction	No Injury	Northbound Northbound	Turning Right Properly Parked	Truck Car	Signal Signal	Not Distracted Not Distracted	Failed to Keep in Proper Lane No Improper Action	
2993053 2993053	33.5825	-111.8740	09 / 01	3:13 PM	Left-Turn-Angle	No Injury	Westbound Northbound	Straight Turning Left	Car Car	Signal Signal	Unknown Distracted	No Improper Action No Improper Action	
2995292 2995292	33.5837	-111.8740	09 / 11	12:26 PM	Sideswipe Same Direction	No Injury	Southbound Southbound	Turning Left Straight	Car Car	Stop Signs No Controls	Not Distracted Not Distracted	Other No Improper Action	
2997852 2997852	33.5825	-111.8740	09 / 18	7:18 AM	Angle	Possible Injury	Southbound Westbound	Straight Straight	Pick-up Truck Pick-up Truck	Signal Signal	Hand Held Device Not Distracted	Disregarded Traffic Signal No Improper Action	
3006776 3006776	33.5825	-111.8740	42278.2	5:54 AM	Angle	No Injury	Eastbound Southbound	Turning Right Straight	Car Pick-up Truck	Signal Signal	Unknown Distracted	Failed to Yield Right of Way No Improper Action	

96th Street & Shea Boulevard - 2015 Page 2 of 2													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3013000 3013000	33.5825	-111.8740	10 / 23	2:56 PM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Car Car	Signal Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3018441 3018441	33.5825	-111.8740	11 / 10	9:29 AM	Left-Turn-Head-On	Possible Injury	Westbound Eastbound	Turning Left Straight	Car Car	Signal Signal	Unknown Distracted	Failed to Yield Right of Way No Improper Action	
3028975 3028975	33.5825	-111.8739	12 / 02	12:29 PM	Rear End	Possible Injury	Westbound Westbound	Straight Stopped	Truck Car	Signal Signal	Unknown Distracted	Speed Too Fast For Conditions	
3036425 3036425	33.5825	-111.8739	12 / 08	6:05 PM	Rear End	Suspected Minor Injury	Westbound Westbound	Straight Stopped	Car Car	Signal Signal	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	

92nd Street & Shea Boulevard - 2015														
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION		SECOND VIOLATION
2937778 2937778	33.5751	-111.8860	01 / 29	5:19 PM	Sideswipe Same Direction	No Injury	Southbound Southbound	Turning Right Straight	Car Car	No Controls No Controls	Not Distracted Not Distracted	Made Improper Turn No Improper Action		
2938651 2938651	33.5751	-111.8860	01 / 29	8:56 AM	Sideswipe Same Direction	No Injury	Northbound Southbound	Turning Right Turning Left	Car Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Made Improper Turn		
2945087 2945087	33.5748	-111.8861	03 / 18	5:11 PM	Angle	Possible Injury	Southbound Southbound	Unknown Unknown	Car Car	Unknown No Controls	Unknown Distracted	Unknown Unknown		
2947559 2947559	33.5754	-111.8860	04 / 04	11:19 AM	Rear End	Possible Injury	Southbound Southbound	Straight Stopped	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action		
2948700 2948700	33.5770	-111.8857	04 / 08	12:53 PM	Left-Turn-Angle	No Injury	Northbound Eastbound	Turning Left Straight	Car Car	No Controls No Controls	Unknown Distracted	Failed to Yield Right of Way No Improper Action		
2949902 2949902	33.5770	-111.8857	04 / 13	4:40 PM	Left-Turn-Head-On	No Injury	Northbound Southbound	Turning Left Straight	Car Car	No Controls No Controls	Not Distracted Not Distracted	Made Improper Turn No Improper Action		
2955149 2955149	33.5770	-111.8858	04 / 27	11:30 AM	Left-Turn-Angle	No Injury	Eastbound Northbound	Turning Left Straight	Pick-up Truck Car	No Controls No Controls	Not Distracted Not Distracted	Failed to Yield Right of Way		
2968092 2968092	33.5781	-111.8861	06 / 05	3:41 PM	Left-Turn-Head-On	No Injury	Southbound Northbound	Turning Left Straight	Car Car	No Controls No Controls	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action		
2969184 2969184	33.5751	-111.8860	06 / 19	10:24 AM	Left-Turn-Head-On	No Injury	Northbound Southbound	Turning Left Straight	Car Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action		
2969200 2969200	33.5753	-111.8860	42179.3	7:55 AM	Rear End	No Injury	Southbound Southbound	Straight Stopped	Car Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Unknown No Improper Action		
2970255 2970255	33.5751	-111.8860	06 / 25	2:04 PM	Left-Turn-Angle	Possible Injury	Eastbound Northbound	Turning Left Straight	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Unknown Unknown		
2973498 2973498	33.5751	-111.8860	07 / 01	4:13 PM	Angle	No Injury	Southbound Southbound	Turning Right Straight	Car Pick-up Truck	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Failed to Yield Right of Way		
2975605 2975605	33.5746	-111.8862	07 / 20	3:32 PM	Left-Turn-Angle	Possible Injury	Eastbound Southbound	Turning Left Straight	Car Car	No Controls No Controls	Not Distracted Not Distracted	Failed to Yield Right of Way		
2978770 2978770	33.5751	-111.8858	07 / 22	10:46 AM	Rear End	Suspected Minor Injury	Westbound Westbound	Straight Stopped	Car Pick-up Truck	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Other Unsafe Passing No Improper Action		
3009700 3009700	33.5751	-111.8860	10 / 16	9:11 AM	Left-Turn-Head-On	No Injury	Northbound Southbound	Turning Left Straight	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Made Improper Turn No Improper Action		
3023969 3023969	33.5751	-111.8860	11 / 12	2:38 PM	Rear End	No Injury	Southbound Southbound	Backing Stopped	Car Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Other No Improper Action		
3024254 3024254	33.5751	-111.8860	11 / 13	11:15 PM	Left-Turn-Head-On	No Injury	Westbound Eastbound	Turning Left Straight	Car Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Unknown Unknown		
3026367 3026367	33.5751	-111.8860	11 / 16	9:20 AM	Left-Turn-Head-On	Suspected Minor Injury	Southbound Northbound	Turning Left Straight	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Made Improper Turn No Improper Action		
3035761 3035761	33.5751	-111.8860	12 / 28	1:21 PM	Left-Turn-Head-On	Possible Injury	Westbound Eastbound	Turning Left Straight	Car Truck	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Made Improper Turn No Improper Action		

92nd Street & Shea Boulevard - 2015														
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL		VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION	
							DIRECTION	ACTION						
2934521 2934521 2934521	33.5761	-111.8807	02 / 02	12:47 PM	Left-Turn-Head-On	No Injury	Northbound Southbound Southbound	Turning Left Straight Straight	Car Car Car	No Controls Traffic Control Signal Traffic Control Signal	Unknown Unknown Unknown	Failed to Yield Right of Way No Improper Action No Improper Action		
2937287 2937287	33.5761	-111.8808	01 / 12	6:24 PM	Rear End	No Injury	Westbound Westbound	Slowing Stopped	Pick-up Truck Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action		
2939473	33.5757	-111.8811	02 / 03	8:13 AM	Single Vehicle	No Injury	Westbound	Straight	Car	No Controls	Unknown	Other		
2950902 2950902	33.5761	-111.8807	04 / 14	6:22 PM	Angle	No Injury	Southbound Southbound	Turning Left Straight	Car Car	Traffic Control Signal Traffic Control Signal	Passenger Distracted	Disregarded Traffic Signal		
2975133 2975133	33.5757	-111.8799	07 / 14	7:48 AM	Sideswipe Same Direction	No Injury	Eastbound Eastbound	Turning Left Straight	Car Truck	No Controls No Controls	Unknown Distracted	Made Improper Turn No Improper Action		
3006892	33.5761	-111.8807	10 / 05	1:19 PM	Single Vehicle	Suspected Serious Injury	Westbound	Straight	Motorcycle	Traffic Control Signal	Unknown	Unknown		

92nd Street & Shea Boulevard - 2015														
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL		VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION	
							DIRECTION	ACTION						
2945047 2945047	33.5753	-111.8740	03 / 02	9:47 AM	Rear End	No Injury	Westbound Westbound	Straight Straight	Car Car	Signal Signal	Unknown Unknown	Speed Too Fast For Conditions No Improper Action		
2948672 2948672	33.5753	-111.8740	04 / 03	11:55 AM	Left-Turn-Angle	Suspected Minor Injury	Eastbound Northbound	Turning Left Straight	Car Car	Signal Signal	Unknown Distracted	Failed to Yield Right of Way No Improper Action		
2968846 2968846	33.5753	-111.8740	06 / 13	12:41 PM	Left-Turn-Head-On	Suspected Minor Injury	Eastbound Westbound	Turning Left Straight	Car Car	Signal Signal	Not Distracted Not Distracted	Made Improper Turn No Improper Action		
3006769 3006769	33.5753	-111.8740	10 / 03	4:42 PM	Sideswipe Same Direction	No Injury	Southbound Southbound	Slowing Slowing	Car Car	Signal Signal	Not Distracted Not Distracted	Unsafe Lane Change No Improper Action		

Appendix A.2
Historic Collision Analysis
2016



TRAVEL													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3043684 3043684	33.5826	-111.8857	01 / 07	2:00 PM	Rear End	Possible Injury	Westbound Westbound	Straight Stopped	Pick-up Truck Car	No Controls No Controls	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	
3046268 3046268 3046268	33.5823	-111.8861	01 / 12	4:50 PM	Rear End	Possible Injury	Northbound Northbound Northbound	Straight Stopped Stopped	Car Car Car	Traffic Control Signal Traffic Control Signal Traffic Control Signal	Unknown Distracted Unknown	Speed Too Fast For Conditions No Improper Action	
3048932 3048932	33.5824	-111.8861	01 / 12	4:25 PM	Rear End	Possible Injury	Northbound Northbound	Straight Stopped	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Speed Too Fast For Conditions	
3054860 3054860 3054860	33.5826	-111.8860	02 / 14	5:52 PM	Head On	Suspected Minor Injury	Eastbound Westbound Westbound	Straight Stopped Stopped	Car Car Pick-up Truck	Traffic Control Signal Traffic Control Signal Traffic Control Signal	Unknown Not Distracted Not Distracted	Drove or Rode in Opposing Traffic La No Improper Action	
3062694 3062694	33.5811	-111.8863	03 / 09	12:34 PM	Angle	Possible Injury	Eastbound Northbound	Straight Straight	Car Pick-up Truck	Stop Signs No Controls	Unknown Distracted	Failed to Yield Right of Way No Improper Action	
3066663 3066663	33.5828	-111.8861	03 / 18	7:13 PM	Rear End	No Injury	Southbound Southbound	Straight Stopped	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	Followed Too Closely
3072534 3072534	33.5826	-111.8861	04 / 04	4:17 PM	Rear End	No Injury	Westbound Westbound	Straight Straight	Car Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Followed Too Closely No Improper Action	
3079667 3079667	33.5825	-111.8868	04 / 12	4:07 PM	Rear End	No Injury	Westbound Westbound	Straight Straight	Car Car	No Controls No Controls	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	
3079678 3079678	33.5816	-111.8862	04 / 11	10:42 AM	Left-Turn-Angle	No Injury	Eastbound Southbound	Turning Left Straight	Car Car	No Controls No Controls	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	
3079700 3079700	33.5826	-111.8861	42469.5	11:54 AM	Rear End	Possible Injury	Westbound Westbound	Slowing Stopped	Pick-up Truck Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3081269 3081269	33.5826	-111.8862	04 / 05	12:24 PM	Left-Turn-Head-On	No Injury	Westbound Eastbound	Driverless Moving Stopped	Car Pick-up Truck	Traffic Control Signal Traffic Control Signal	Inside Vehicle Not Distracted	Drove or Rode in Opposing Traffic La No Improper Action	
3081282 3081282	33.5826	-111.8852	04 / 12	2:51 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Pick-up Truck	No Controls Traffic Control Signal	Inside Vehicle Distracted	Speed Too Fast For Conditions No Improper Action	
3087788 3087788	33.5826	-111.8848	04 / 23	9:52 AM	Rear End	Possible Injury	Westbound Westbound	Changing Lanes Stopped	Car Car	No Controls No Controls	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	
3087789 3087789	33.5754	-111.8859	04 / 22	12:26 PM	Left-Turn-Angle	No Injury	Eastbound Southbound	Turning Left Straight	Car Car	No Controls No Controls	Not Distracted Distracted	Failed to Yield Right of Way	
3087793 3087793	33.5826	-111.8863	42483.5	12:08 PM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Car Pick-up Truck	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3088002 3088002	33.5826	-111.8861	03 / 17	9:52 AM	Sideswipe Same Direction	No Injury	Southbound Southbound	Turning Left Turning Left	Truck Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Made Improper Turn No Improper Action	
3088335 3088335 3088335	33.5807	-111.8864	05 / 06	11:22 AM	Left-Turn-Angle	No Injury	Eastbound Southbound Southbound	Turning Left Straight Straight	Car Car Car	No Controls No Controls No Controls	Unknown Distracted Unknown	Failed to Yield Right of Way No Improper Action	
3088418 3088418	33.5826	-111.8859	05 / 02	4:29 PM	Rear End	Possible Injury	Eastbound Eastbound	Slowing Stopped	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	
3089537 3089537	33.5807	-111.8864	05 / 13	1:06 PM	Angle	No Injury	Northbound Northbound	Turning Left Straight	Car Car	No Controls No Controls	Unknown Distracted	Failed to Yield Right of Way No Improper Action	
3091560	33.5826	-111.8847	42495.6	1:29 PM	Single Vehicle	Suspected Serious Injury	Eastbound	Straight	Car	No Controls	Unknown	Drove or Rode in Opposing Traffic La	
3102041 3102041	33.5826	-111.8865	06 / 09	3:16 PM	Rear End	Suspected Minor Injury	Westbound Westbound	Straight Stopped	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Exceeded Lawful Speed No Improper Action	

TRAVEL													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3105597 3105597 3105597	33.5826	-111.8863	06 / 27	5:32 PM	Rear End	No Injury	Eastbound Eastbound Eastbound	Straight Stopped Stopped	Car Car Car	Traffic Control Signal Traffic Control Signal Traffic Control Signal	Inside Vehicle Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action No Improper Action	Followed Too Closely
3106986 3106986	33.5824	-111.8861	06 / 27	12:34 PM	Left-Turn-Angle	No Injury	Eastbound Southbound	Turning Left Straight	Car Car	No Controls No Controls	Unknown Distracted	Made Improper Turn No Improper Action	
3108615 3108615	33.5826	-111.8852	07 / 05	6:57 AM	Sideswipe Same Direction	No Injury	Eastbound Eastbound	Changing Lanes Straight	Car Car	No Controls No Controls	Unknown Distracted	Unsafe Lane Change No Improper Action	
3117827 3117827	33.5826	-111.8862	42576.6	1:25 PM	Rear End	No Injury	Eastbound Eastbound	Straight Turning Right	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	
3117831 3117831	33.5826	-111.8861	07 / 21	1:02 PM	Angle	Possible Injury	Northbound Westbound	Straight Straight	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Unknown	
3119213 3119213 3119213	33.5825	-111.8869	08 / 05	11:46 AM	Rear End	Possible Injury	Eastbound Eastbound Eastbound	Straight Stopped Stopped	Car Car Car	No Controls No Controls No Controls	Unknown Distracted Unknown	Speed Too Fast For Conditions No Improper Action No Improper Action	
3120203 3120203	33.5823	-111.8861	08 / 01	2:44 PM	Angle	Suspected Minor Injury	Northbound Northbound	Making U Turn Straight	Car Car	No Controls No Controls	Not Distracted Not Distracted	Made Improper Turn No Improper Action	
3121163 3121163	33.5826	-111.8861	08 / 16	3:08 PM	Rear End	Possible Injury	Westbound Westbound	Straight Stopped	Car Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Followed Too Closely	
3121174 3121174	33.5826	-111.8861	42598.6	2:56 PM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Pick-up Truck Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Followed Too Closely No Improper Action	
3124512 3124512	33.5825	-111.8861	08 / 15	11:18 AM	Sideswipe Same Direction	No Injury	Eastbound Westbound	Turning Right Turning Left	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Made Improper Turn No Improper Action	
3130810 3130810	33.5826	-111.8861	09 / 08	6:30 PM	Rear End	Suspected Minor Injury	Eastbound Eastbound	Straight Straight	Car Pick-up Truck	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	
3133179 3133179	33.5812	-111.8863	09 / 10	2:12 PM	Rear End	Possible Injury	Northbound Northbound	Straight Stopped	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Speed Too Fast For Conditions	
3134736 3134736	33.5825	-111.8871	09 / 13	9:25 AM	Angle	No Injury	Northbound Eastbound	Turning Right Straight	Car Car	Stop Signs No Controls	Unknown Distracted	Failed to Yield Right of Way No Improper Action	
3137849 3137849	33.5807	-111.8864	09 / 14	11:56 AM	Left-Turn-Head-On	No Injury	Northbound Southbound	Turning Left Straight	Car Car	No Controls No Controls	Unknown Distracted	Failed to Yield Right of Way No Improper Action	
3142992	33.5798	-111.8866	42646.2	4:27 AM	Single Vehicle	No Injury	Northbound	Straight	Car	No Controls	Unknown	Failed to Keep in Proper Lane	
3148903 3148903	33.5825	-111.8861	10 / 25	10:27 AM	Rear End	Possible Injury	Northbound Northbound	Straight Stopped	Pick-up Truck Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Exceeded Lawful Speed No Improper Action	
3152643 3152643	33.5826	-111.8864	11 / 07	10:48 AM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Car Pick-up Truck	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Unknown	
3169643		-111.8861	11 / 29	10:29 PM	Single Vehicle	No Injury	Southbound	Straight	Car	Traffic Control Signal	Not Distracted	Failed to Keep in Proper Lane	
3171893 3171893		-111.8855	12 / 01	1:34 PM	Rear End	Possible Injury	Westbound Westbound	Straight Stopped	Car Car	No Controls No Controls	Unknown Distracted	Followed Too Closely No Improper Action	

TRAVEL													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3052202 3052202	33.5825	-111.8829	01 / 27	1:03 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Pick-up Truck Car	No Controls No Controls	Not Distracted Not Distracted	Speed Too Fast For Conditions	
3052317 3052317	33.5825	-111.8836	01 / 27	6:48 PM	Sideswipe Same Direction	No Injury	Eastbound Eastbound	Changing Lanes Changing Lanes	Car Car	No Controls No Controls	Unknown Distracted	No Improper Action No Improper Action	
3054154 3054154	33.5809	-111.8823	01 / 05	12:36 PM	Angle	No Injury	Northbound Eastbound	Straight Straight	Unknown Car	No Controls Stop Signs	Unknown Distracted	Unknown Unknown	
3054750 3054750	33.5825	-111.8843	02 / 13	10:18 AM	Rear End	No Injury	Westbound Westbound	Straight Slowing	Car Car	No Controls No Controls	Inside Vehicle Not Distracted	Speed Too Fast For Conditions No Improper Action	Followed Too Closely
3054872 3054872 3054872	33.5825	-111.8830	02 / 16	10:58 AM	Rear End	No Injury	Westbound Westbound Westbound	Straight Stopped Stopped	Car Car Car	Signal Signal Signal	Unknown Distracted Unknown	Speed Too Fast For Conditions No Improper Action	
3057773 3057773 3057773	33.5825	-111.8832	02 / 18	2:28 PM	Rear End	Suspected Minor Injury	Westbound Westbound Westbound	Straight Straight Stopped	Pick-up Truck Car Car	No Controls No Controls No Controls	Unknown Distracted Unknown	Speed Too Fast For Conditions No Improper Action	
3058516 3058516	33.5798	-111.8817	02 / 18	5:16 PM	Angle	No Injury	Southbound Northbound	Making U Turn Straight	Car Car	No Controls No Controls	Unknown Not Distracted	Failed to Yield Right of Way	
3064895 3064895	33.5825	-111.8828	03 / 07	2:18 PM	Rear End	Possible Injury	Eastbound Eastbound	Straight Straight	Car Car	Signal Signal	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	
3066816 3066816 3066816	33.5825	-111.8821	03 / 15	2:43 PM	Rear End	Suspected Minor Injury	Westbound Westbound Westbound	Straight Stopped Stopped	Car Car Car	Signal Signal Signal	Unknown Distracted Unknown	Speed Too Fast For Conditions	
3069255 3069255	33.5825	-111.8837	03 / 16	3:18 PM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Truck Car	No Controls No Controls	Unknown Distracted	Speed Too Fast For Conditions	
3069854 3069854	33.5825	-111.8819	03 / 25	11:55 AM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	No Controls No Controls	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	
3070350	33.5817	-111.8827	03 / 29	1:03 PM	Single Vehicle	Possible Injury	Northbound	Turning Right	Car	No Controls	Inside Vehicle	Speed Too Fast For Conditions	
3071494 3071494	33.5825	-111.8826	04 / 04	12:04 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	Signal Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3081270 3081270	33.5825	-111.8827	04 / 13	6:13 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Pick-up Truck Car	Signal Signal	Unknown Not Distracted	Unknown No Improper Action	
3089525 3089525	33.5825	-111.8827	05 / 09	2:47 PM	Left-Turn-Angle	No Injury	Westbound Southbound	Turning Left Straight	Car Car	Signal Signal	Unknown Not Distracted	Disregarded Traffic Signal No Improper Action	
3091078 3091078	33.5825	-111.8820	05 / 17	9:30 AM	Sideswipe Same Direction	No Injury	Westbound Westbound	Changing Lanes Straight	Car Car	Signal Signal	Unknown Distracted	Unsafe Lane Change No Improper Action	
3101907 3101907	33.5825	-111.8822	06 / 17	12:03 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	Signal Signal	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	
3105598 3105598 3105598	33.5825	-111.8842	06 / 24	2:33 PM	Rear End	No Injury	Eastbound Eastbound Eastbound	Straight Stopped Stopped	Pick-up Truck Truck Pick-up Truck	No Controls No Controls No Controls	Not Distracted Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action No Improper Action	
3108670 3108670	33.5825	-111.8831	07 / 08	6:56 PM	Sideswipe Same Direction	No Injury	Eastbound Eastbound	Slowing Stopped	Car Car	Signal Signal	Unknown Not Distracted	Failed to Keep in Proper Lane No Improper Action	
3109505 3109505	33.5812	-111.8825	07 / 15	2:08 PM	Left-Turn-Angle	No Injury	Westbound Northbound	Turning Left Straight	Car Car	No Controls No Controls	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	
3109515 3109515	33.5825	-111.8826	07 / 13	1:16 PM	Rear End	Possible Injury	Westbound Westbound	Straight Stopped	Not Reported Car	Signal Signal	Unknown Not Distracted	Unknown No Improper Action	

TRAVEL													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3110236 3110236	33.5811	-111.8824	07 / 18	1:15 PM	Left-Turn-Angle	No Injury	Westbound Northbound	Turning Left Straight	Car Car	No Controls No Controls	Unknown Distracted	Failed to Yield Right of Way No Improper Action	
3111690 3111690	33.5825	-111.8840	07 / 21	8:23 AM	Rear End	No Injury	Westbound Westbound	Straight Straight	Car Car	No Controls No Controls	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	
3117790 3117790	33.5829	-111.8827	07 / 29	10:51 AM	Rear End	No Injury	Southbound Southbound	Straight Stopped	Car Car	Signal Signal	Not Distracted Not Distracted	Unknown No Improper Action	
3124530 3124530	33.5817	-111.8827	08 / 25	10:10 AM	Angle	No Injury	Westbound Northbound	Turning Right Straight	Car Car	No Controls No Controls	Unknown Distracted	Failed to Yield Right of Way No Improper Action	
3125130 3125130	33.5825	-111.8827	08 / 22	2:34 PM	Angle	No Injury	Westbound Westbound	Turning Left Straight	Car Truck	Stop Signs No Controls	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	
3125733 3125733	33.5825	-111.8820	08 / 24	4:17 PM	Rear End	No Injury	Westbound Westbound	Unknown Stopped	Unknown Truck	No Controls No Controls	Unknown Not Distracted	Unknown No Improper Action	
3130833 3130833	33.5825	-111.8829	09 / 09	2:44 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Pick-up Truck Car	Signal Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions	
3131424 3131424 3131424	33.5825	-111.8832	09 / 07	3:24 PM	Rear End	Possible Injury	Westbound Westbound Westbound	Straight Stopped Stopped	Car Car Car	No Controls No Controls No Controls	Unknown Distracted Unknown	Speed Too Fast For Conditions No Improper Action	
3134732 3134732 3134732	33.5825	-111.8832	09 / 08	6:25 PM	Rear End	No Injury	Eastbound Eastbound Eastbound	Straight Stopped Unknown	Car Car Not Reported	Signal Signal Signal	Not Distracted Not Distracted Unknown	Followed Too Closely No Improper Action Unknown	
3137816	33.5825	-111.8820	09 / 23	8:13 AM	Single Vehicle	No Injury	Northbound	Straight	Car	No Controls	Not Distracted	Speed Too Fast For Conditions	
3143063 3143063 3143063	33.5825	-111.8834	09 / 30	3:12 PM	Rear End	No Injury	Westbound Westbound Westbound	Straight Stopped Stopped	Car Pick-up Truck Car	Signal Signal Signal	Not Distracted Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3147166 3147166	33.5825	-111.8814	10 / 15	1:50 PM	Rear End	No Injury	Westbound Westbound	Straight Slowing	Car Car	Signal Signal	Not Distracted Not Distracted	Followed Too Closely No Improper Action	
3149003 3149003	33.5825	-111.8828	10 / 29	3:25 PM	Rear End	Suspected Minor Injury	Westbound Westbound	Straight Straight	Car Car	Signal Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3151834 3151834	33.5825	-111.8819	11 / 02	9:36 AM	Rear End	Possible Injury	Westbound Westbound	Straight Stopped	Truck Car	No Controls No Controls	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	
3151834 3151835 3151835	33.5811	-111.8824	11 / 02	1:39 PM	Angle	Possible Injury	Westbound Eastbound Northbound	Changing Lanes Straight Straight	Car Car Car	No Controls Stop Signs No Controls	Unknown Unknown Distracted	No Improper Action Failed to Yield Right of Way No Improper Action	
3161982 3161982	33.5825	-111.8827	11 / 11	4:52 PM	Angle	Possible Injury	Northbound Westbound	Straight Straight	Car Car	Signal Signal	Unknown Not Distracted	Other No Improper Action	
3161992 3161992		-111.8827	11 / 10	11:00 AM	Angle	No Injury	Westbound Eastbound	Turning Right Turning Left	Car Pick-up Truck	Signal Signal	Unknown Not Distracted	Disregarded Traffic Signal No Improper Action	
3171881 3171881	33.5825	-111.8824	12 / 01	3:37 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	No Controls No Controls	Unknown Distracted	Followed Too Closely No Improper Action	
3172864 3172864		-111.8828	12 / 07	9:04 PM	Head On	Possible Injury	Westbound Eastbound	Turning Right Stopped	Car Truck	Signal Signal	Unknown Not Distracted	Made Improper Turn	

TRAVEL													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3043805 3043805	33.5825	-111.8775	01 / 07	10:10 AM	Angle	Possible Injury	Northbound Eastbound	Turning Right Straight	Car Car	Stop Signs No Controls	Unknown Distracted	Failed to Yield Right of Way No Improper Action	
3049351 3049351	33.5825	-111.8740	01 / 08	6:42 PM	Sideswipe Same Direction	No Injury	Northbound Northbound	Turning Left Turning Left	Not Reported Car	Signal Signal	Unknown Not Distracted	Made Improper Turn No Improper Action	
3052295 3052295	33.5825	-111.8740	01 / 28	11:19 PM	Left-Turn-Head-On	Suspected Minor Injury	Eastbound Westbound	Turning Left Straight	Car Car	Signal Signal	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	
3058565 3058565	33.5828	-111.8740	02 / 18	3:12 PM	Angle	No Injury	Southbound Southbound	Turning Right Slowing	Car Car	No Controls No Controls	Not Distracted Not Distracted	Made Improper Turn No Improper Action	
3061854 3061854	33.5825	-111.8740	03 / 01	9:12 AM	Left-Turn-Head-On	Possible Injury	Southbound Northbound	Turning Left Straight	Pick-up Truck Car	Signal Signal	Unknown Distracted	Failed to Yield Right of Way No Improper Action	
3066681 3066681	33.5825	-111.8738	03 / 18	4:41 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	Signal No Controls	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3081289 3081289	33.5825	-111.8739	04 / 14	3:45 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	Signal Signal	Unknown Distracted	Unknown No Improper Action	
3081982 3081982	33.5825	-111.8740	04 / 18	1:19 PM	Angle	No Injury	Northbound Eastbound	Straight Straight	Car Truck	Signal Signal	Unknown Distracted	Disregarded Traffic Signal No Improper Action	
3083447 3083447	33.5825	-111.8750	04 / 18	1:46 PM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Car Car	No Controls No Controls	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3098489 3098489	33.5825	-111.8738	42523.5	12:47 PM	Rear End	Possible Injury	Westbound Westbound	Straight Stopped	Car Pick-up Truck	Signal Signal	Unknown Distracted	Unknown No Improper Action	
3099954 3099954 3099954	33.5823	-111.8740	06 / 08	9:13 AM	Rear End	No Injury	Northbound Northbound Northbound	Straight Stopped Stopped	Not Reported Car Car	Signal Signal Signal	Unknown Distracted Unknown	Speed Too Fast For Conditions No Improper Action	
3108567 3108567	33.5837	-111.8740	07 / 05	3:54 PM	Sideswipe Same Direction	No Injury	Northbound Northbound	Straight Straight	Car Pick-up Truck	Signal Signal	Not Distracted Not Distracted	Failed to Keep in Proper Lane No Improper Action	
3111612 3111612	33.5825	-111.8740	07 / 08	4:28 PM	Left-Turn-Angle	Possible Injury	Eastbound Northbound	Turning Left Straight	Car Car	Signal Signal	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	
3129523 3129523 3129523		-111.8740	08 / 26	2:58 PM	Left-Turn-Head-On	Possible Injury	Eastbound Westbound Southbound	Turning Left Straight Stopped	Car Car Car	Signal Signal Signal	Unknown Distracted Unknown	Failed to Yield Right of Way No Improper Action No Improper Action	
3130780 3130780		-111.8740	09 / 01	5:06 PM	Left-Turn-Head-On	No Injury	Eastbound Westbound	Turning Left Straight	Car Car	Signal Signal	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	
3137862 3137862		-111.8739		8:56 AM	Rear End	Possible Injury	Westbound Westbound	Straight Stopped	Car Car	Signal No Controls	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	
3137986 3137986		-111.8740		10:55 AM	Rear End	No Injury	Northbound Northbound	Straight Stopped	Car Car	No Controls Signal	Unknown Distracted	Speed Too Fast For Conditions	
3147172 3147172		-111.8740		12:17 PM	Sideswipe Same Direction	No Injury	Northbound Eastbound	Turning Right Straight	Car Car	Signal Signal	Not Distracted Not Distracted		
3152617 3152617		-111.8734		7:21 AM	Rear End	No Injury	Westbound Westbound		Car Car	Signal Signal	Inside Vehicle Not Distracted		
3152648 3152648 3152648		-111.8759		4:37 PM	Rear End	Suspected Minor Injury	Eastbound Eastbound Eastbound		Motorcycle Car Car	Signal Signal Signal	Unknown Not Distracted Not Distracted		

90th Street & Mountain View Road - 2016														
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION		SECOND VIOLATION
3043688 3043688	33.5751	-111.8861	01 / 06	10:00 AM	Sideswipe Same Direction	No Injury	Eastbound Eastbound	Turning Left Stopped	Truck Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	No Improper Action No Improper Action		
3048930 3048930	33.5750	-111.8854	01 / 14	4:12 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	No Controls No Controls	Unknown Distracted	Speed Too Fast For Conditions No Improper Action		
3051176 3051176	33.5786	-111.8863	01 / 25	8:14 AM	Left-Turn-Head-On	No Injury	Northbound Southbound	Turning Left Straight	Car Car	No Controls No Controls	Unknown Distracted	Failed to Yield Right of Way No Improper Action		
3054149 3054149	33.5771	-111.8858	01 / 22	4:01 PM	Left-Turn-Angle	Suspected Minor Injury	Eastbound Southbound	Turning Left Straight	Car Car	Stop Signs No Controls	Not Distracted Not Distracted	Made Improper Turn		
3054762 3054762	33.5751	-111.8860	02 / 14	3:36 PM	Left-Turn-Angle	Possible Injury	Westbound Southbound	Turning Left Straight	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Made Improper Turn No Improper Action		
3069856 3069856	33.5751	-111.8860	03 / 25	3:10 PM	Left-Turn-Angle	Suspected Minor Injury	Eastbound Northbound	Turning Left Straight	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Failed to Yield Right of Way No Improper Action		
3071989 3071989	33.5759	-111.8858	04 / 01	9:27 AM	Left-Turn-Angle	No Injury	Westbound Northbound	Turning Left Turning Left	Car Car	No Controls No Controls	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action		
3087921 3087921	33.5751	-111.8861	05 / 03	11:57 AM	Rear End	No Injury	Eastbound Eastbound	Straight Turning Left	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Followed Too Closely No Improper Action		

92nd Street & Mountain View Road - 2016														
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION		SECOND VIOLATION
3066819 3066819	33.5765	-111.8805	03 / 14	7:03 AM	Sideswipe Same Direction	No Injury	Northbound Northbound	Straight Stopped	Car Truck	No Controls No Controls	Unknown Distracted	Speed Too Fast For Conditions No Improper Action		
3070183 3070183	33.5761	-111.8807	03 / 23	11:07 AM	Left-Turn-Angle	No Injury	Westbound Southbound	Making U Turn Straight	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Made Improper Turn No Improper Action		
3085927 3085927	33.5761	-111.8807	04 / 21	1:23 PM	Left-Turn-Head-On	Possible Injury	Southbound Northbound	Turning Left Straight	Car Pick-up Truck	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Failed to Yield Right of Way No Improper Action		
3098131 3098131	33.5761	-111.8807	03 / 28	9:11 AM	Angle	No Injury	Eastbound Eastbound	Changing Lanes Straight	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Unsafe Lane Change No Improper Action		
3137717 3137717	33.5761	-111.8807	09 / 21	2:01 PM	Left-Turn-Angle	Suspected Minor Injury	Eastbound Northbound	Turning Left Straight	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Failed to Yield Right of Way No Improper Action		

96th Street & Mountain View Road - 2016														
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION		SECOND VIOLATION
3171880 3171880	33.5753	-111.8740	12 / 01	4:15 PM	Left-Turn-Head-On	No Injury	Southbound Northbound	Turning Left Straight	Car Car	Signal Signal	Unknown Distracted	Failed to Yield Right of Way		

Appendix A.3
Historic Collision Analysis
2017



TRAVEL													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3184657 3184657	33.5825	-111.8889	01 / 12	4:00 PM	Angle	No Injury	Northbound Eastbound	Turning Right Straight	Car Pick-up Truck	Stop Signs No Controls	Unknown Not Distracted	Failed to Yield Right of Way No Improper Action	
3184670 3184670	33.5790	-111.8865	01 / 12	2:22 PM	Left-Turn-Angle	No Injury	Eastbound Northbound	Turning Left Straight	Car Car	No Controls No Controls	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	
3184689 3184689	33.5820	-111.8861	01 / 10	2:41 PM	Left-Turn-Head-On	No Injury	Northbound Southbound	Turning Left Straight	Car Car	No Controls No Controls	Unknown Not Distracted	Failed to Yield Right of Way No Improper Action	
3184768 3184768	33.5826	-111.8858	01 / 13	1:16 PM	Sideswipe Same Direction	No Injury	Westbound Westbound	Changing Lanes Slowing	Car Car	Traffic Control Signal Traffic Control Signal	Other Device Not Distracted	Unsafe Lane Change No Improper Action	
3190541 3190541	33.5826	-111.8862	01 / 28	9:27 AM	Rear End	No Injury	Eastbound Eastbound	Slowing Stopped	Car Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	No Improper Action No Improper Action	
3194161 3194161 3194161	33.5826	-111.8859	02 / 01	3:02 PM	Rear End	No Injury	Eastbound Eastbound Eastbound	Slowing Stopped Stopped	Pick-up Truck Car Pick-up Truck	No Controls No Controls No Controls	Not Distracted Not Distracted Not Distracted	Followed Too Closely No Improper Action No Improper Action	
3194455 3194455	33.5826	-111.8864	02 / 01	3:30 PM	Rear End	No Injury	Westbound Westbound	Slowing Stopped	Car Car	No Controls No Controls	Not Distracted Not Distracted	Speed Too Fast For Conditions	
3202034 3202034 3202034	33.5826	-111.8860	02 / 25	10:45 AM	Rear End	No Injury	Westbound Westbound Westbound	Changing Lanes Stopped Slowing	Unknown Car Car	Traffic Control Signal Traffic Control Signal Traffic Control Signal	Unknown Not Distracted Not Distracted	Unsafe Lane Change No Improper Action No Improper Action	
3204919 3204919	33.5826	-111.8861	03 / 06	11:19 PM	Angle	Suspected Minor Injury	Westbound Southbound	Straight Straight	Car Car	Stop Signs No Controls	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	
3212551 3212551	33.5826	-111.8858	42827.6	2:18 PM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Car Car	No Controls No Controls	Unknown Not Distracted	Unknown	
3212566 3212566	33.5825	-111.8879	03 / 29	1:38 PM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Car Car	No Controls No Controls	Unknown Distracted	Speed Too Fast For Conditions	
3218197 3218197 3218197	33.5826	-111.8861	04 / 18	9:11 PM	Rear End	Suspected Minor Injury	Eastbound Eastbound Eastbound	Straight Straight Straight	Car Car Pick-up Truck	Traffic Control Signal Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action No Improper Action	
3218830 3218830	33.5826	-111.8862	04 / 11	12:30 PM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	
3241102 3241102	33.5825	-111.8871	05 / 23	11:45 AM	Rear End	Possible Injury	Eastbound Eastbound	Straight Stopped	Pick-up Truck Car	No Controls No Controls	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	
3241116 3241116	33.5814	-111.8863	05 / 24	12:45 PM	Angle	No Injury	Eastbound Southbound	Unknown Straight	Not Reported Car	No Controls No Controls	Unknown Not Distracted	Unknown No Improper Action	
3243439 3243439	33.5826	-111.8861	06 / 02	12:44 PM	Angle	Possible Injury	Southbound Eastbound	Straight Straight	Pick-up Truck Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Disregarded Traffic Signal No Improper Action	
3245195 3245195	33.5825	-111.8868	06 / 10	12:03 PM	Angle	No Injury	Eastbound Southbound	Straight Straight	Car Car	No Controls No Controls	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	
3246263 3246263	33.5825	-111.8889	06 / 08	4:00 PM	Angle	Possible Injury	Northbound Eastbound	Turning Right Straight	Car Car	Stop Signs No Controls	Unknown Not Distracted	Failed to Yield Right of Way No Improper Action	
3259557 3259557	33.5826	-111.8862	07 / 20	12:57 PM	Rear End	Suspected Minor Injury	Eastbound Eastbound	Straight Stopped	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	
3259906 3259906	33.5826	-111.8858	07 / 18	3:13 PM	Rear End	No Injury	Westbound Westbound	Slowing Slowing	Pick-up Truck Pick-up Truck	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	
3262056 3262056	33.5826	-111.8863	08 / 01	5:08 PM	Rear End	Possible Injury	Eastbound Eastbound	Straight Stopped	Truck Car	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Followed Too Closely No Improper Action	

TRAVEL														
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION		SECOND VIOLATION
3265692 3265692	33.5825	-111.8881	08 / 09	2:17 PM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Pick-up Truck Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Followed Too Closely No Improper Action		
3265706 3265706 3265706	33.5826	-111.8858	42951.6	3:17 PM	Rear End	No Injury	Eastbound Eastbound Eastbound	Slowing Stopped Stopped	Pick-up Truck Car Car	No Controls No Controls No Controls	Not Distracted Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action		
3269570 3269570 3269570	33.5825	-111.8870	08 / 25	8:06 PM	Rear End	No Injury	Westbound Westbound Westbound	Changing Lanes Straight Straight	Not Reported Car Car	No Controls No Controls No Controls	Unknown Not Distracted Not Distracted	Unsafe Lane Change No Improper Action No Improper Action		
3271705	33.5825	-111.8861	08 / 28	4:31 AM	Single Vehicle	No Injury	Unknown	Straight	Car	Unknown	Unknown	Speed Too Fast For Conditions		
3272564 3272564	33.5826	-111.8863	08 / 28	3:33 PM	Rear End	Possible Injury	Eastbound Eastbound	Straight Straight	Car Car	No Controls No Controls	Not Distracted Not Distracted	No Improper Action No Improper Action		
3273008 3273008	33.5819	-111.8862	08 / 30	2:06 PM	Angle	Suspected Minor Injury	Eastbound Northbound	Turning Right Making U Turn	Car Car	No Controls No Controls	Not Distracted Not Distracted	Failed to Yield Right of Way Speed Too Fast For Conditions		
3277815 3277815	33.5826	-111.8861	09 / 09	9:09 PM	Rear End	No Injury	Eastbound Eastbound	Straight Turning Right	Truck Truck	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	No Improper Action No Improper Action		
3278099 3278099	33.5826	-111.8861	42983.6	2:54 PM	Rear End	No Injury	Southbound Southbound	Straight Stopped	Pick-up Truck Car	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Followed Too Closely		
3278245 3278245	33.5826	-111.8861	09 / 01	4:44 PM	Rear End	No Injury	Westbound Westbound	Stopped	Car Car	No Controls No Controls	Not Distracted	Followed Too Closely No Improper Action		
3280273 3280273	33.5826	-111.8861	09 / 20	1:01 PM	Sideswipe Same Direction	No Injury	Westbound Westbound	Straight Turning Left	Truck Truck	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Unknown Unknown		
3280277 3280277	33.5826	-111.8861	09 / 20	9:39 PM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Pick-up Truck Car	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action		
3285512 3285512	33.5825	-111.8876	10 / 05	1:17 PM	Sideswipe Same Direction	No Injury	Eastbound Eastbound	Changing Lanes Straight	Car Car	No Controls No Controls	Not Distracted Not Distracted	Unknown Unknown		
3289710 3289710	33.5815	-111.8863	10 / 09	7:58 PM	Head On	No Injury	Southbound Northbound	Making U Turn Straight	Car Car	Other No Controls	Not Distracted Not Distracted	Disregarded Traffic Signal No Improper Action		
3296742 3296742	33.5820	-111.8861	11 / 02	12:04 PM	Left-Turn-Head-On	No Injury	Westbound Eastbound	Straight Turning Left	Car Car	No Controls No Controls	Not Distracted Not Distracted	Unknown Unknown		
3312931 3312931	33.5826	-111.8861	11 / 20	11:31 AM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	No Controls No Controls	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action		
3321533 3321533	33.5826	-111.8862	10 / 27	1:44 PM	Rear End	Suspected Minor Injury	Eastbound Eastbound	Straight Straight	Car Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action		
3322120 3322120	33.5826	-111.8858	12 / 14	6:57 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	Traffic Control Signal Traffic Control Signal	Other Device Not Distracted	Followed Too Closely No Improper Action		
3328193 3328193	33.5826	-111.8861	12 / 24	12:38 PM	Left-Turn-Angle	Suspected Minor Injury	Westbound Northbound	Straight Turning Left	Car Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Disregarded Traffic Signal No Improper Action		

TRAVEL													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3182632 3182632	33.5825	-111.8832	01 / 04	11:43 AM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	No Controls No Controls	Unknown Unknown	Speed Too Fast For Conditions No Improper Action	Followed Too Closely
3184659 3184659	33.5826	-111.8827	01 / 16	1:13 PM	Rear End	No Injury	Southbound Southbound	Straight Straight	Car Car	Signal Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3184660 3184660	33.5825	-111.8830	01 / 03	10:03 AM	Rear End	No Injury	Westbound Westbound	Straight Straight	Car Car	No Controls No Controls	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3184674 3184674	33.5824	-111.8827	01 / 11	8:54 AM	Rear End	No Injury	Northbound Northbound	Straight Stopped	Car Car	Signal Signal	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	
3191138 3191138	33.5825	-111.8826	01 / 26	12:07 AM	Rear End	Possible Injury	Westbound Westbound	Straight Straight	Car Car	Signal Signal	Unknown Not Distracted	Unknown No Improper Action	
3191691 3191691	33.5825	-111.8827	01 / 31	3:56 PM	Rear End	No Injury	Westbound Westbound	Straight Slowing	Car Truck	Signal Signal	Unknown Distracted	Followed Too Closely	
3202007 3202007	33.5825	-111.8827	02 / 22	7:31 PM	Rear End	Possible Injury	Northbound Northbound	Straight Stopped	Pick-up Truck Car	Signal Signal	Not Distracted Not Distracted	Followed Too Closely No Improper Action	
3204961 3204961	33.5820	-111.8827	03 / 01	12:36 PM	Sideswipe Same Direction	No Injury	Southbound Southbound	Straight Straight	Car Truck	No Controls No Controls	Not Distracted Not Distracted	Unknown Unknown	
3204968 3204968	33.5828	-111.8827	03 / 01	1:42 PM	Rear End	Possible Injury	Northbound Northbound	Straight Stopped	Car Car	No Controls No Controls	Unknown Distracted	Speed Too Fast For Conditions Other	
3205758 3205758	33.5825	-111.8827	03 / 07	3:01 PM	Angle	Possible Injury	Southbound Westbound	Turning Right Straight	Car Car	Signal Signal	Unknown Distracted	Made Improper Turn No Improper Action	
3207093 3207093	33.5825	-111.8829	03 / 09	4:05 PM	Sideswipe Same Direction	No Injury	Westbound Westbound	Turning Right Straight	Car Car	Signal Signal	Not Distracted Not Distracted	Unsafe Lane Change	
3229094 3229094	33.5798	-111.8817	05 / 03	10:48 AM	Left-Turn-Angle	No Injury	Westbound Southbound	Turning Left Straight	Car Pick-up Truck	No Controls No Controls	Unknown Distracted	Failed to Yield Right of Way No Improper Action	
3236495 3236495	33.5825	-111.8827	05 / 12	8:41 AM	Sideswipe Same Direction	No Injury	Northbound Northbound	Changing Lanes Straight	Car Car	Signal Signal	Not Distracted Not Distracted	Unsafe Lane Change No Improper Action	
3238944 3238944 3238944	33.5825	-111.8832	05 / 24	3:05 PM	Rear End	No Injury	Westbound Westbound Westbound	Straight Stopped Stopped	Car Pick-up Truck Car	No Controls No Controls No Controls	Other Device Not Distracted Not Distracted	Speed Too Fast For Conditions	
3244700 3244700	33.5825	-111.8805	06 / 02	1:07 PM	Rear End	Possible Injury	Westbound Westbound	Slowing Slowing	Car Car	Signal Signal	Inside Vehicle Not Distracted	Speed Too Fast For Conditions No Improper Action	
3244702 3244702	33.5825	-111.8820	06 / 02	5:19 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Pick-up Truck Car	Signal Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3246219 3246219	33.5811	-111.8824	06 / 13	10:39 AM	Left-Turn-Angle	No Injury	Westbound Southbound	Turning Left Straight	Car Car	No Controls No Controls	Unknown Distracted	Failed to Yield Right of Way No Improper Action	
3246241 3246241	33.5825	-111.8825	06 / 14	1:53 PM	Rear End	No Injury	Westbound Westbound	Stopped Slowing	Car Not Reported	Signal Signal	Not Distracted Distracted	No Improper Action Exceeded Lawful Speed	
3247798 3247798	33.5811	-111.8824	06 / 28	10:54 AM	Angle	No Injury	Westbound Northbound	Turning Right Straight	Car Car	No Controls No Controls	Unknown Distracted	Failed to Yield Right of Way No Improper Action	
3248924 3248924	33.5825	-111.8827	06 / 26	2:09 PM	Single Vehicle	No Injury	Westbound Eastbound	Turning Right Turning Left	Car Car	Signal Signal	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	
3249302 3249302	33.5825	-111.8836	06 / 27	5:17 PM	Rear End	No Injury	Westbound Westbound	Slowing Stopped	Car Car	No Controls No Controls	Unknown Not Distracted	Followed Too Closely	

TRAVEL													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3250938 3250938	33.5825	-111.8822	07 / 05	8:42 AM	Rear End	Possible Injury	Westbound Westbound	Straight Straight	Pick-up Truck Car	Signal Signal	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	
3250949 3250949	33.5825	-111.8822	07 / 08	9:05 AM	Angle	No Injury	Northbound Westbound	Turning Right Making U Turn	Car Car	No Controls No Controls	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	
3259561 3259561	33.5825	-111.8805	07 / 25	3:42 PM	Rear End	Suspected Minor Injury	Westbound Northbound	Slowing Stopped	Motorcycle Car	Signal Signal	Not Distracted Not Distracted	Followed Too Closely No Improper Action	
3262078 3262078	33.5824	-111.8827	08 / 04	8:30 AM	Angle	Possible Injury	Westbound Southbound	Straight Straight	Car Car	No Controls No Controls	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	
3265736 3265736	33.5825	-111.8827	08 / 12	3:38 PM	Rear End	Suspected Minor Injury	Westbound Westbound	Straight Stopped	Car Truck	Signal Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3270169 3270169	33.5825	-111.8826	08 / 18	2:11 PM	Rear End	No Injury	Westbound Westbound	Straight Straight	Car Car	No Controls No Controls	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	
3271699 3271699 3271699	33.5825	-111.8830	08 / 30	2:57 PM	Rear End	No Injury	Westbound Westbound Westbound	Straight Slowing Stopped	Pick-up Truck Pick-up Truck Car	No Controls No Controls Warning Signs	Not Distracted Not Distracted Not Distracted	Followed Too Closely No Improper Action No Improper Action	
3277790 3277790	33.5825	-111.8828	09 / 14	7:55 PM	Rear End	No Injury	Eastbound Eastbound	Turning Left Turning Left	Car Car	Signal Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3278163 3278163	33.5825	-111.8828	09 / 16	12:42 PM	Rear End	No Injury	Westbound Westbound	Straight Straight	Pick-up Truck Pick-up Truck	No Controls Signal	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	
3278231 3278231	33.5825	-111.8827	09 / 01	11:30 AM	Angle	No Injury	Westbound Northbound	Turning Right Straight	Car Car	No Controls No Controls	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	
3280268 3280268	33.5825	-111.8828	09 / 22	4:05 PM	Sideswipe Same Direction	No Injury	Eastbound Eastbound	Changing Lanes Stopped	Car Car	Signal Signal	Not Distracted Not Distracted	Unsafe Lane Change No Improper Action	
3281924 3281924	33.5825	-111.8817	09 / 27	2:32 PM	Rear End	No Injury	Westbound Westbound	Slowing Stopped	Pick-up Truck Car	Signal Signal	Outside The Vehi Distracted	Speed Too Fast For Conditions	
3281939 3281939 3281939	33.5825	-111.8820	09 / 26	8:20 PM	Sideswipe Same Direction	No Injury	Eastbound Eastbound Eastbound	Changing Lanes Straight Straight	Car Car Car	No Controls No Controls No Controls	Unknown Not Distracted Not Distracted	Unsafe Lane Change No Improper Action	
3284876 3284876	33.5825	-111.8827	10 / 10	2:12 PM	Angle	No Injury	Northbound Eastbound	Turning Right Straight	Car Truck	Signal Signal	Unknown Distracted	Failed to Yield Right of Way	
3285470 3285470	33.5825	-111.8806	10 / 04	12:13 PM	Sideswipe Same Direction	No Injury	Northbound Eastbound	Turning Right Straight	Car Car	Stop Signs No Controls	Unknown Distracted	Made Improper Turn	
3285472 3285472	33.5825	-111.8781	10 / 04	7:46 AM	Rear End	No Injury	Westbound Westbound	Slowing Stopped	Car Car	No Controls No Controls	Not Distracted Not Distracted	Followed Too Closely No Improper Action	
3285474 3285474	33.5825	-111.8820	10 / 04	7:57 AM	Rear End	No Injury	Westbound Westbound	Slowing Stopped	Pick-up Truck Car	No Controls No Controls	Not Distracted Not Distracted	Exceeded Lawful Speed No Improper Action	
3286391 3286391	33.5825	-111.8834	10 / 12	6:19 PM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Car Car	Signal Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3293961 3293961	33.5795	-111.8814	10 / 26	2:45 PM	Angle	No Injury	Westbound Southbound	Straight Straight	Car Car	Stop Signs Stop Signs	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	

96th Street & Shea Boulevard - 2017														
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL		VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION	
							DIRECTION	ACTION						
3190529 3190529 3190529	33.5825	-111.8739	01 / 23	9:51 AM	Sideswipe Same Direction	No Injury	Southbound Eastbound Eastbound	Turning Right Straight Straight	Car Truck Car	No Controls No Controls No Controls	Not Distracted Not Distracted Not Distracted	Made Improper Turn No Improper Action		
3194459 3194459	33.5825	-111.8740	02 / 01	6:25 PM	Angle	No Injury	Unknown Westbound	Unknown Straight	Not Reported Car	Unknown Signal	Unknown Distracted	Unknown Unknown		
3238444 3238444 3238444	33.5825	-111.8745	05 / 31	8:28 AM	Rear End	Suspected Minor Injury	Eastbound Eastbound Eastbound	Straight Stopped Straight	Car Car Car	Signal Signal Signal	Unknown Distracted Unknown	Speed Too Fast For Conditions No Improper Action Speed Too Fast For Conditions		
3246353 3246353 3246353	33.5825	-111.8739	06 / 18	9:02 AM	Rear End	Suspected Minor Injury	Westbound Westbound Westbound	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		
3255825 3255825	33.5825	-111.8740	07 / 19	10:05 AM	Angle	No Injury	Southbound Eastbound	Straight Straight	Car Pick-up Truck	Signal Signal	Unknown Not Distracted	Disregarded Traffic Signal No Improper Action		
3259457 3259457	33.5825	-111.8740	07 / 28	2:14 PM	Left-Turn-Head-On	No Injury	Eastbound Westbound	Turning Left Straight	Pick-up Truck Car	Signal Signal	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action		
3259505 3259505	33.5825	-111.8740	07 / 28	1:09 PM	Angle	Possible Injury	Northbound Northbound	Turning Right Straight	Car Car	Signal Signal	Outside The Vehi Not Distracted	Failed to Yield Right of Way		
3274866	33.5825	-111.8740	09 / 08	4:00 AM	Single Vehicle	No Injury	Unknown	Turning Right	Car	Signal	Unknown	Speed Too Fast For Conditions	Made Improper Turn	
3277799 3277799	33.5825	-111.8740	09 / 13	6:40 PM	Angle	No Injury	Eastbound Northbound	Straight Straight	Not Reported Car	Signal Signal	Unknown Distracted	Unknown No Improper Action		
3278178 3278178	33.5825	-111.8740	42991.6	2:32 PM	Left-Turn-Angle	No Injury	Northbound Eastbound	Turning Left Straight	Not Reported Car	Signal Signal	Unknown Distracted	Disregarded Traffic Signal No Improper Action		
3278224 3278224 3278224	33.5825	-111.8737	09 / 22	1:19 PM	Sideswipe Same Direction	No Injury	Eastbound Eastbound Eastbound	Overtaking Passir Straight Straight	Car Unknown Car	No Controls No Controls No Controls	Unknown Distracted Unknown	Unsafe Lane Change Unknown No Improper Action		
3283291 3283291 3283291	33.5825	-111.8740	10 / 05	8:32 AM	Left-Turn-Head-On	Suspected Serious Injury	Eastbound Westbound Eastbound	Turning Left Straight Stopped	Car Pick-up Truck Car	Signal Signal Signal	Not Distracted Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action No Improper Action		
3283311 3283311 3283311	33.5825	-111.8705	10 / 05	9:36 AM	Rear End	No Injury	Westbound Westbound Westbound	Changing Lanes Straight Slowing	Car Car Car	No Controls No Controls No Controls	Unknown Distracted Unknown	Speed Too Fast For Conditions Unknown	Unsafe Lane Change	
3296303 3296303	33.5820	-111.8740	43038.4	9:36 AM	Angle	No Injury	Eastbound Southbound	Straight Straight	Car Car	No Controls No Controls	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action		
3312853 3312853	33.5825	-111.8737	11 / 15	9:44 AM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	Signal Signal	Unknown Distracted	Speed Too Fast For Conditions No Improper Action		

90th Street & Mountain View Road - 2017													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL		VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
							DIRECTION	ACTION					
3208301 3208301	33.5769	-111.8857	03 / 17	1:02 PM	Left-Turn-Angle	Possible Injury	Westbound Southbound	Turning Left Straight	Pick-up Truck Car	No Controls No Controls	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	
3214817	33.5761	-111.8858	03 / 28	11:38 AM	Single Vehicle	No Injury	Southbound	Avoiding Vehicle	Car	No Controls	Unknown	No Improper Action	
3243090 3243090	33.5753	-111.8870	05 / 30	6:17 PM	Sideswipe Same Direction	No Injury	Westbound Westbound	Turning Right Slowing	Car Car	No Controls No Controls	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	
3246281 3246281	33.5751	-111.8860	06 / 15	11:45 AM	Angle	No Injury	Northbound Eastbound	Turning Right Making U Turn	Car Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	
3253608	33.5752	-111.8860	07 / 17	6:43 AM	Single Vehicle	No Injury	Unknown	Unknown	Car	No Controls	Unknown	Unknown	
3271682 3271682	33.5751	-111.8860	08 / 24	3:30 PM	Left-Turn-Angle	Suspected Minor Injury	Southbound Eastbound	Turning Left Straight	Car Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	
3277782 3277782	33.5752	-111.8867	09 / 15	12:22 PM	Angle	No Injury	Southbound Westbound	Straight Straight	Car Car	No Controls No Controls	Not Distracted Not Distracted	No Improper Action No Improper Action	
3289702 3289702	33.5754	-111.8876	10 / 11	6:16 PM	Angle	Suspected Minor Injury	Eastbound Eastbound	Turning Right Straight	Car Motorcycle	Stop Signs No Controls	Not Distracted Not Distracted	Disregarded Traffic Signal No Improper Action	
3328223 3328223 3328223	33.5751	-111.8860	12 / 21	12:13 PM	Left-Turn-Head-On	Possible Injury	Eastbound Westbound Southbound	Turning Left Straight Stopped	Car Car Car	Traffic Control Signal Traffic Control Signal Traffic Control Signal	Unknown Not Distracted Not Distracted	Failed to Yield Right of Way	

96th Street & Mountain View Road - 2017													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL		VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
							DIRECTION	ACTION					
3208235	33.5750	-111.8740	03 / 19	8:43 AM	Single Vehicle	No Injury	Northbound	Turning Right	Truck	No Controls	Unknown	No Improper Action	
3324912 3324912	33.5753	-111.8740	12 / 17	2:00 PM	Angle	Suspected Serious Injury	Eastbound Southbound	Straight Straight	Car Pick-up Truck	Signal Signal	Unknown Not Distracted	Disregarded Traffic Signal No Improper Action	

Appendix A.4
Historic Collision Analysis
2018



TRAVEL													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3338126 3338126	33.5826	-111.8861	01 / 17	1:30 PM	Sideswipe Same Direction	No Injury	Eastbound Eastbound	Changing Lanes Straight	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Unsafe Lane Change No Improper Action	
3342510 3342510	33.5826	-111.8855	02 / 01	3:39 PM	Rear End	No Injury	Westbound Westbound	Straight Straight	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Unknown No Improper Action	
3342529 3342529	33.5826	-111.8862	02 / 01	11:18 AM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Pick-up Truck Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3349451 3349451	33.5825	-111.8869	03 / 06	2:51 PM	Sideswipe Same Direction	No Injury	Eastbound Eastbound	Changing Lanes Changing Lanes	Car Car	No Controls No Controls	Unknown Distracted	Unsafe Lane Change	
3351005 3351005	33.5821	-111.8861	03 / 09	10:21 AM	Sideswipe Same Direction	No Injury	Southbound Southbound	Changing Lanes Straight	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Unsafe Lane Change No Improper Action	
3355748 3355748	33.5818	-111.8862	03 / 06	1:28 PM	Rear End	No Injury	Northbound Northbound	Other Stopped	Car Car	No Controls No Controls	Unknown Distracted	Other No Improper Action	
3356813 3356813 3356813	33.5826	-111.8861	03 / 26	4:09 PM	Rear End	No Injury	Southbound Southbound Westbound	Overtaking Passir Straight Curving Road	Car Pick-up Truck Not Reported	Yield Signs Yield Signs No Controls	Unknown Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action No Improper Action	
3358223 3358223	33.5826	-111.8861	03 / 22	8:06 PM	Left-Turn-Head-On	Suspected Minor Injury	Eastbound Westbound	Straight Turning Left	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Disregarded Traffic Signal No Improper Action	
3358253 3358253	33.5826	-111.8858	03 / 28	1:34 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Followed Too Closely No Improper Action	
3359493 3359493	33.5826	-111.8865	43200.5	10:59 AM	Rear End	No Injury	Westbound Westbound	Slowing Stopped	Car Car	No Controls No Controls	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3368202 3368202	33.5826	-111.8861	04 / 21	4:30 PM	Left-Turn-Head-On	Possible Injury	Eastbound Westbound	Straight Turning Left	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Disregarded Traffic Signal No Improper Action	
3368215	33.5826	-111.8863	04 / 25	4:06 AM	Single Vehicle	No Injury	Unknown	Unknown	Not Reported	Unknown	Unknown	Unknown	
3373900 3373900	33.5825	-111.8871	04 / 30	12:00 PM	Sideswipe Same Direction	No Injury	Eastbound Eastbound	Unknown Stopped	Not Reported Car	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Unsafe Lane Change No Improper Action	
3376564 3376564	33.5826	-111.8861	05 / 07	5:27 PM	Sideswipe Same Direction	Suspected Minor Injury	Southbound Southbound	Turning Right Turning Left	Car Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Failed to Keep in Proper Lane No Improper Action	
3382170 3382170	33.5811	-111.8863	05 / 24	12:11 PM	Angle	Possible Injury	Eastbound Northbound	Straight Straight	Car Car	Stop Signs No Controls	Unknown Distracted	Failed to Yield Right of Way No Improper Action	
3382499 3382499	33.5815	-111.8862	05 / 24	9:59 AM	Sideswipe Same Direction	No Injury	Northbound Northbound	Straight Slowing	Pick-up Truck Car	No Controls No Controls	Not Distracted Not Distracted	Other Unsafe Passing No Improper Action	
3382925 3382925 3382925	33.5826	-111.8861	06 / 02	11:40 AM	Angle	Suspected Minor Injury	Southbound Eastbound Eastbound	Straight Straight Straight	Car Car Car	Traffic Control Signal Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	Disregarded Traffic Signal
3383464 3383464	33.5826	-111.8859	06 / 01	3:57 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Truck Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Unknown No Improper Action	
3386988 3386988	33.5826	-111.8866	06 / 18	11:56 AM	Angle	No Injury	Eastbound Eastbound	Changing Lanes Straight	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Unsafe Lane Change No Improper Action	
3386989 3386989	33.5826	-111.8866	06 / 18	12:26 PM	Rear End	Suspected Minor Injury	Eastbound Eastbound	Straight Stopped	Pick-up Truck Truck	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	
3393983 3393983 3393983	33.5826	-111.8862	07 / 08	1:51 PM	Rear End	No Injury	Eastbound Eastbound Eastbound	Slowing Stopped Straight	Car Car Pick-up Truck	Traffic Control Signal Traffic Control Signal Traffic Control Signal	Unknown Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	

INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL		VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
							DIRECTION	ACTION					
3397721 3397721	33.5826	-111.8861	07 / 23	6:56 PM	Angle	Suspected Minor Injury	Westbound Northbound	Straight Straight	Truck Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Unknown Unknown	
3397752 3397752	33.5811	-111.8863	43305.5	11:37 AM	Angle	No Injury	Eastbound Southbound	Straight Straight	Car Car	Stop Signs No Controls	Unknown Distracted	Failed to Yield Right of Way	
3402485 3402485	33.5826	-111.8851	07 / 27	5:44 PM	Rear End	No Injury	Eastbound Eastbound	Straight Slowing	Car Car	No Controls No Controls	Unknown Not Distracted	Followed Too Closely No Improper Action	
3404232 3404232	33.5826	-111.8862	07 / 29	7:52 AM	Sideswipe Same Direction	No Injury	Southbound Eastbound	Turning Right Stopped	Truck Car	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Unknown No Improper Action	
3412572 3412572	33.5825	-111.8872	08 / 22	8:14 PM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Followed Too Closely No Improper Action	
3413575 3413575	33.5826	-111.8857	08 / 29	12:57 PM	Angle	No Injury	Westbound Westbound	Unknown Unknown	Car Pick-up Truck	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Unknown Unknown	
3413596 3413596	33.5823	-111.8861	08 / 31	1:08 PM	Rear End	No Injury	Northbound Northbound	Straight Stopped	Car Pick-up Truck	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Followed Too Closely No Improper Action	
3417145 3417145	33.5826	-111.8862	09 / 08	6:14 AM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	
3420920 3420920	33.5811	-111.8863	09 / 20	9:30 AM	Rear End	No Injury	Eastbound Eastbound	Turning Left Turning Left	Pick-up Truck Truck	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	
3420962 3420962	33.5826	-111.8861	09 / 18	1:22 PM	Angle	No Injury	Southbound Southbound	Turning Right Stopped	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Made Improper Turn	
3449308	33.5821	-111.8861	11 / 02	10:52 AM	Single Vehicle	No Injury	Westbound	Turning Right	Truck	No Controls	Unknown	Made Improper Turn	
3458420 3458420 3458420	33.5826	-111.8859	11 / 14	9:19 PM	Rear End	No Injury	Eastbound Eastbound Eastbound	Straight Stopped Stopped	Car Car Pick-up Truck	No Controls No Controls No Controls	Unknown Not Distracted Not Distracted	Followed Too Closely No Improper Action	
3459831 3459831	33.5826	-111.8855	11 / 23	1:35 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Followed Too Closely	
3460788 3460788	33.5817	-111.8862	11 / 17	2:25 PM	Angle	No Injury	Eastbound Southbound	Straight Straight	Car Car	No Controls No Controls	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	
3462212 3462212	33.5824	-111.8861	43437.5	11:09 AM	Sideswipe Same Direction	No Injury	Northbound Northbound	Changing Lanes Straight	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Unsafe Lane Change No Improper Action	
3466747 3466747	33.5825	-111.8868	12 / 10	6:09 PM	Angle	No Injury	Eastbound Eastbound	Turning Right Straight	Car Car	No Controls No Controls	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	
3471408 3471408	33.5826	-111.8861	12 / 19	1:50 PM	Left-Turn-Head-On	No Injury	Southbound Northbound	Turning Left Straight	Pick-up Truck Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	

TRAVEL													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3334965 3334965	33.5825	-111.8822	01 / 11	6:39 PM	Rear End	Possible Injury	Westbound Westbound	Straight Stopped	Car Car	Signal Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions	
3338864 3338864	33.5825	-111.8821	01 / 24	7:46 PM	Rear End	No Injury	Westbound Westbound	Straight Straight	Car Car	Signal Signal	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	
3343710 3343710	33.5826	-111.8827	02 / 03	9:39 AM	Rear End	No Injury	Southbound Southbound	Turning Left Other	Car Car	Signal Signal	Inside Vehicle Distracted	Unknown No Improper Action	
3344262 3344262	33.5825	-111.8828	02 / 05	12:18 PM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Car Car	Signal Signal	Passenger Not Distracted	Speed Too Fast For Conditions	
3345237 3345237	33.5825	-111.8818	02 / 15	3:00 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Pick-up Truck Car	Signal Signal	Other Device Not Distracted	Speed Too Fast For Conditions	
3349457 3349457	33.5825	-111.8826	03 / 02	1:36 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Truck	No Controls No Controls	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	
3366128 3366128	33.5827	-111.8827	04 / 12	2:27 PM	Other	No Injury	Northbound Southbound	Backing Stopped	Car Car	Signal Signal	Unknown Distracted	Other No Improper Action	
3377420 3377420	33.5825	-111.8830	05 / 09	8:20 AM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Pick-up Truck Car	Signal Signal	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	
3378286 3378286	33.5800	-111.8817	05 / 10	3:55 PM	Left-Turn-Angle	No Injury	Westbound Southbound	Turning Left Straight	Car Car	Stop Signs No Controls	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	
3381117 3381117	33.5826	-111.8827	05 / 21	9:37 AM	Rear End	No Injury	Southbound Southbound	Straight Stopped	Car Car	No Controls No Controls	Not Distracted Not Distracted	No Improper Action No Improper Action	
3382017 3382017	33.5825	-111.8825	05 / 10	9:04 PM	Rear End	Possible Injury	Westbound Westbound	Straight Straight	Car Car	Signal Signal	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	
3382948 3382948	33.5823	-111.8827	06 / 04	11:46 AM	Head On	No Injury	Southbound Northbound	Stopped Straight	Car Car	No Controls No Controls	Not Distracted Not Distracted	Made Improper Turn No Improper Action	
3386309 3386309 3386309	33.5825	-111.8831	06 / 07	3:35 PM	Sideswipe Same Direction	No Injury	Eastbound Eastbound Eastbound	Changing Lanes Stopped Stopped	Car Car Car	Signal Signal Signal	Not Distracted Not Distracted Not Distracted	Unsafe Lane Change No Improper Action	
3386969 3386969	33.5825	-111.8792	06 / 13	1:14 PM	Rear End	No Injury	Eastbound Eastbound	Making U Turn Straight	Pick-up Truck Pick-up Truck	No Controls No Controls	Unknown Distracted	Made Improper Turn No Improper Action	
3392536 3392536	33.5825	-111.8826	06 / 28	6:15 PM	Sideswipe Same Direction	No Injury	Eastbound Eastbound	Straight Straight	Car Car	No Controls No Controls	Not Distracted Not Distracted	Unknown No Improper Action	
3394898 3394898	33.5825	-111.8811	06 / 28	4:32 PM	Sideswipe Same Direction	No Injury	Eastbound Eastbound	Changing Lanes Straight	Car Car	No Controls No Controls	Unknown Not Distracted	Unsafe Lane Change No Improper Action	
3395772 3395772	33.5825	-111.8827	07 / 09	3:26 PM	Left-Turn-Head-On	Suspected Serious Injury	Westbound Eastbound	Turning Left Straight	Car Motorcycle	Signal Signal	Unknown Not Distracted	Failed to Yield Right of Way No Improper Action	
3407254 3407254	33.5825	-111.8811	08 / 09	7:20 AM	Rear End	Suspected Minor Injury	Westbound Westbound	Overtaking Passir Stopped	Car Car	No Controls No Controls	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3409352 3409352 3409352	33.5825	-111.8825	08 / 13	12:06 PM	Rear End	Possible Injury	Westbound Westbound Westbound	Straight Slowing Stopped	Car Car Car	Signal Signal Signal	Unknown Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action No Improper Action	
3413584 3413584 3413584	33.5825	-111.8824	08 / 27	12:25 PM	Sideswipe Same Direction	No Injury	Westbound Westbound Westbound	Straight Slowing Straight	Car Pick-up Truck Pick-up Truck	Signal Signal Signal	Unknown Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3417142 3417142 3417142	33.5825	-111.8840	09 / 11	12:32 PM	Rear End	No Injury	Westbound Westbound Westbound	Straight Stopped Straight	Car Car Car	No Controls No Controls No Controls	Unknown Not Distracted Unknown	Followed Too Closely No Improper Action	

TRAVEL														
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION		SECOND VIOLATION
3417143 3417143 3417143	33.5825	-111.8807	09 / 11	7:20 PM	Left-Turn-Angle	Suspected Minor Injury	Northbound Eastbound Westbound	Turning Left Straight Turning Left	Car Car Pick-up Truck	Stop Signs No Controls No Controls	Unknown Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action No Improper Action		
3418336 3418336	33.5798	-111.8817	09 / 11	2:09 PM	Left-Turn-Angle	Possible Injury	Eastbound Southbound	Turning Left Straight	Pick-up Truck Car	Stop Signs No Controls	Unknown Distracted	Failed to Yield Right of Way No Improper Action		
3424608 3424608	33.5825	-111.8837	09 / 26	7:07 AM	Rear End	Possible Injury	Eastbound Eastbound	Straight Slowing	Car Car	No Controls No Controls	Unknown Distracted	Speed Too Fast For Conditions No Improper Action		
3426193 3426193	33.5825	-111.8817	09 / 27	8:53 AM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Truck Truck	No Controls No Controls	Unknown Distracted	Speed Too Fast For Conditions No Improper Action		
3437307 3437307	33.5792	-111.8813	10 / 17	12:53 PM	Sideswipe Same Direction	No Injury	Northbound Northbound	Changing Lanes Straight	Car Car	No Controls No Controls	Not Distracted Not Distracted	Unsafe Lane Change No Improper Action		
3441530 3441530	33.5825	-111.8829	10 / 26	11:15 AM	Rear End	Possible Injury	Westbound Westbound	Straight Stopped	Pick-up Truck Car	No Controls No Controls	Unknown Distracted	Other No Improper Action		
3447346 3447346	33.5825	-111.8842	10 / 22	7:56 AM	Rear End	Suspected Minor Injury	Westbound Westbound	Straight Stopped	Car Car	Stop Signs Stop Signs	Inside Vehicle Not Distracted	Speed Too Fast For Conditions No Improper Action		
3447367 3447367 3447367	33.5823	-111.8827	10 / 31	1:05 PM	Angle	Suspected Minor Injury	Eastbound Northbound Westbound	Straight Straight Unknown	Car Car Car	Stop Signs No Controls Stop Signs	Unknown Distracted Unknown	Failed to Yield Right of Way No Improper Action No Improper Action		
3447419 3447419 3447419	33.5825	-111.8829	10 / 30	7:03 PM	Rear End	No Injury	Eastbound Eastbound Eastbound	Straight Stopped Stopped	Car Car Car	Signal Signal Signal	Unknown Not Distracted Not Distracted	Unknown No Improper Action No Improper Action		
3449311 3449311 3449311	33.5825	-111.8824	11 / 01	3:07 PM	Rear End	Possible Injury	Eastbound Eastbound Eastbound	Straight Stopped Stopped	Car Car Car	No Controls No Controls No Controls	Unknown Distracted Unknown	Speed Too Fast For Conditions No Improper Action		
3456811 3456811	33.5825	-111.8826	11 / 05	5:30 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Pick-up Truck Car	Signal Signal	Unknown Not Distracted	Followed Too Closely Speed Too Fast For Conditions		
3458442 3458442	33.5825	-111.8826	11 / 13	2:44 PM	Angle	No Injury	Eastbound Eastbound	Turning Right Straight	Car Car	Signal Signal	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action		
3461009 3461009	33.5825	-111.8828	11 / 29	7:30 PM	Other	Suspected Serious Injury	Northbound Westbound	Walking Against T Straight	Pedestrian Car	Signal Signal	Unknown Not Distracted	Disregarded Traffic Signal No Improper Action		
3461016 3461016 3461016	33.5825	-111.8827	12 / 04	12:00 PM	Rear End	Suspected Minor Injury	Westbound Westbound Westbound	Slowing Stopped Stopped	Car Car Car	Signal Signal Signal	Unknown Distracted Unknown	Speed Too Fast For Conditions No Improper Action		
3465580 3465580	33.5825	-111.8825	12 / 28	1:44 PM	Rear End	No Injury	Westbound Westbound	Slowing Stopped	Car Car	Signal Signal	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action		
3466764 3466764	33.5825	-111.8827	12 / 08	12:56 PM	Left-Turn-Angle	No Injury	Northbound Westbound	Turning Left Straight	Car Car	No Controls No Controls	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action		
3467942 3467942	33.5825	-111.8814	12 / 12	1:59 PM	Rear End	No Injury	Westbound Westbound	Slowing Stopped	Car Truck	No Controls No Controls	Not Distracted Not Distracted	Followed Too Closely No Improper Action		
3469262 3469262	33.5826	-111.8827	12 / 14	1:26 PM	Left-Turn-Head-On	No Injury	Northbound Southbound	Straight Making U Turn	Car Car	Signal Signal	Not Distracted Not Distracted	Disregarded Traffic Signal No Improper Action		

TRAVEL													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3334957 3334957	33.5825	-111.8740	01 / 08	9:38 AM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	No Controls No Controls	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3334989 3334989	33.5825	-111.8742	01 / 08	4:28 PM	Rear End	No Injury	Eastbound Eastbound	Straight Straight	Car Car	Signal Signal	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	
3344265 3344265	33.5825	-111.8740	02 / 07	7:40 PM	Left-Turn-Head-On	Suspected Minor Injury	Eastbound Westbound	Turning Left Straight	Car Car	Signal Signal	Not Distracted Not Distracted	Failed to Yield Right of Way	
3344270 3344270	33.5825	-111.8740	02 / 06	8:16 PM	Rear End	No Injury	Eastbound Eastbound	Straight Straight	Car Car	Signal Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions	
3345251 3345251 3345251	33.5825	-111.8753	02 / 17	1:23 PM	Rear End	Suspected Minor Injury	Eastbound Eastbound Eastbound	Straight Slowing Straight	Car Truck Motorcycle	No Controls No Controls No Controls	Unknown Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action No Improper Action	
3348969 3348969	33.5825	-111.8740	02 / 25	10:21 AM	Sideswipe Same Direction	No Injury	Eastbound Eastbound	Changing Lanes Straight	Car Car	Signal Signal	Unknown Distracted	Speed Too Fast For Conditions	
3349453 3349453	33.5826	-111.8740	03 / 06	5:11 PM	Left-Turn-Angle	No Injury	Westbound Southbound	Turning Left Straight	Car Car	No Controls No Controls	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	Made Improper Turn
3349658 3349658	33.5825	-111.8745	02 / 20	9:55 AM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Car Car	Signal Signal	Unknown Distracted	Speed Too Fast For Conditions	
3349662 3349662	33.5825	-111.8723	02 / 20	8:35 AM	Rear End	No Injury	Westbound Westbound	Straight Slowing	Pick-up Truck Car	No Controls No Controls	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	
3356824 3356824	33.5825	-111.8741	43182.6	2:42 PM	Rear End	No Injury	Eastbound Eastbound	Straight Straight	Pick-up Truck Car	Signal Signal	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	
3358245 3358245	33.5825	-111.8740	03 / 24	12:26 PM	Angle	No Injury	Southbound Southbound	Turning Right Turning Right	Car Car	Signal Signal	Not Distracted Not Distracted	No Improper Action	
3359047 3359047	33.5832	-111.8740	04 / 04	7:44 AM	Sideswipe Same Direction	No Injury	Northbound Northbound	Changing Lanes Straight	Car Car	No Controls No Controls	Unknown Not Distracted	Unsafe Lane Change No Improper Action	
3368227 3368227 3368227	33.5825	-111.8763	04 / 18	8:29 PM	Rear End	Possible Injury	Eastbound Eastbound Eastbound	Stopped Straight Stopped	Car Car Car	Signal Signal Signal	Not Distracted Not Distracted Not Distracted	Other No Improper Action No Improper Action	
3369192 3369192		-111.8741	04 / 23	4:38 PM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Not Reported Pick-up Truck	Signal Signal	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	
3372468 3372468		-111.8741	04 / 29	5:29 PM	Rear End	No Injury	Eastbound Eastbound	Straight Straight	Car Car	Signal Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3375770 3375770		-111.8738		2:28 PM	Rear End	Possible Injury	Westbound Westbound	Straight Stopped	Car Car	Signal Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3382915		-111.8729		4:27 PM	Single Vehicle	No Injury	Eastbound	Straight	Car	Signal	Inside Vehicle	Unknown	
3386261 3386261 3386261		-111.8740		3:45 PM	Angle	Possible Injury	Eastbound Northbound Northbound	Straight Straight	Car Car Car	Signal Signal Signal	Unknown Not Distracted Not Distracted		
3390870 3390870		-111.8741		2:49 PM	Rear End	No Injury	Eastbound Eastbound		Truck Car	Signal Signal	Not Distracted Not Distracted		
3407030 3407030		-111.8743		2:58 PM	Rear End	No Injury	Eastbound Eastbound		Car Car	Signal Signal	Unknown Not Distracted		

INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3407255 3407255		-111.8740		1:19 PM	Angle	No Injury	Westbound Northbound		Car Car	Signal Signal	Not Distracted Not Distracted		
3409400 3409400		-111.8732		9:36 AM	Rear End	Suspected Minor Injury	Westbound Westbound		Pick-up Truck Car		Unknown Not Distracted		
3410339 3410339		-111.8746		3:28 PM	Rear End	Possible Injury	Westbound Westbound		Car Pick-up Truck		Unknown Distracted		
3413588 3413588		-111.8740		5:42 AM	Single Vehicle	Possible Injury	Southbound Eastbound		Car Car		Unknown Not Distracted		
3420922 3420922		-111.8705		7:54 AM	Rear End	No Injury	Westbound Westbound		Car Car		Unknown Distracted		
3436630		-111.8740		1:51 PM	Single Vehicle	No Injury	Southbound		Car		Unknown		
3447347 3447347		-111.8741		12:57 PM	Rear End	No Injury	Eastbound Eastbound		Car Car				
3449279 3449279		-111.8756		3:32 PM	Rear End	No Injury	Eastbound Eastbound		Car Car				
3460994 3460994		-111.8761		2:43 PM	Rear End	No Injury	Westbound		Car Car				Followed Too Closely
3469264 3469264				9:07 AM	Head On	Possible Injury			Car Pick-up Truck				

90th Street & Mountain View Road - 2018													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3330592 3330592	33.5753	-111.8870	01 / 02	1:05 PM	Angle	Possible Injury	Northbound Westbound	Other Straight	Car Car	Stop Signs No Controls	Unknown Distracted	Failed to Yield Right of Way	
3349476 3349476	33.5759	-111.8858	02 / 28	12:06 PM	Left-Turn-Angle	No Injury	Westbound Southbound	Turning Left Straight	Car Car	No Controls No Controls	Not Distracted Not Distracted	Made Improper Turn No Improper Action	
3355833 3355833 3355833	33.5746	-111.8862	03 / 14	9:58 AM	Rear End	No Injury	Southbound Southbound Southbound	Straight Slowing Stopped	Car Car Car	No Controls No Controls No Controls	Unknown Distracted Unknown	Speed Too Fast For Conditions No Improper Action	
3356811 3356811 3356811	33.5786	-111.8863	03 / 26	4:08 PM	Rear End	No Injury	Southbound Southbound Westbound	Overtaking Passir Straight Curving Road	Car Car Car	Yield Signs Yield Signs No Controls	Unknown Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action No Improper Action	
3358235 3358235	33.5752	-111.8860	03 / 26	7:34 AM	Rear End	No Injury	Southbound Southbound	Slowing Stopped	Truck Car	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	
3376622 3376622	33.5753	-111.8870	05 / 05	11:02 AM	Sideswipe Same Direction	No Injury	Westbound Westbound	Turning Left Straight	Car Car	No Controls No Controls	Unknown Not Distracted	Made Improper Turn No Improper Action	
3378322 3378322	33.5751	-111.8860	05 / 08	2:50 PM	Single Vehicle	No Injury	Eastbound Eastbound	Turning Left Straight	Car Car	Stop Signs No Controls	Not Distracted Not Distracted	Failed to Yield Right of Way	
3397785 3397785	33.5752	-111.8867	07 / 18	9:36 AM	Rear End	No Injury	Eastbound Eastbound	Straight Straight	Car Car	No Controls No Controls	Not Distracted Not Distracted	Unknown No Improper Action	
3420973 3420973	33.5751	-111.8857	09 / 17	1:19 PM	Angle	No Injury	Westbound Westbound	Changing Lanes Slowing	Car Truck	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Unsafe Lane Change	

92nd Street & Mountain View Road - 2018													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3358275 3358275	33.5758	-111.8802	03 / 26	2:37 PM	Single Vehicle	No Injury	Northbound Southbound	Turning Left Turning Right	Car Car	No Controls Stop Signs	Unknown Not Distracted	Made Improper Turn No Improper Action	
3386289 3386289	33.5761	-111.8807	06 / 09	8:18 AM	Left-Turn-Head-On	Suspected Minor Injury	Northbound Southbound	Straight Turning Left	Car Pedalcyclist	Traffic Control Signal Traffic Control Signal	Hands Free Device Not Distracted	Disregarded Traffic Signal No Improper Action	

96th Street & Mountain View Road - 2018													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3338215 3338215	33.5753	-111.8740	01 / 12	4:20 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	Signal Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3344256 3344256	33.5753	-111.8740	02 / 05	4:36 PM	Angle	No Injury	Southbound Westbound	Turning Right Straight	Car Car	Signal Signal	Unknown Not Distracted	Disregarded Traffic Signal No Improper Action	
3449278 3449278	33.5753	-111.8740	11 / 01	2:24 PM	Angle	No Injury	Southbound Eastbound	Straight Straight	Car Car	Signal Signal	Unknown Not Distracted	Disregarded Traffic Signal No Improper Action	

Appendix A.5
Historic Collision Analysis
2019



TRAVEL														
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION		SECOND VIOLATION
3479338 3479338	33.5807	-111.8864	01 / 02	6:01 PM	Left-Turn-Angle	No Injury	Eastbound Southbound	Turning Left Straight	Car Car	Stop Signs No Controls	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action		
3498855 3498855	33.5790	-111.8865	01 / 17	10:03 AM	Rear End	Possible Injury	Southbound Southbound	Slowing Stopped	Car Car	Yield Signs Yield Signs	Unknown Distracted	Speed Too Fast For Conditions No Improper Action		
3502715 3502715	33.5825	-111.8875	01 / 29	7:57 AM	Angle	No Injury	Westbound Westbound	Stopped Straight	Car Truck	No Controls No Controls	Unknown Distracted	No Improper Action No Improper Action		
3503003 3503003	33.5826	-111.8866	02 / 01	4:15 PM	Sideswipe Same Direction	No Injury	Westbound Westbound	Avoiding Vehicle Straight	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Unsafe Lane Change		
3504240 3504240	33.5826	-111.8859	02 / 05	2:03 PM	Rear End	Possible Injury	Westbound Westbound	Straight Stopped	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action		
3504281 3504281	33.5819	-111.8862	02 / 03	12:25 PM	Angle	No Injury	Eastbound Southbound	Turning Right Straight	Car Car	No Controls No Controls	Unknown Not Distracted	Failed to Yield Right of Way No Improper Action		
3504326 3504326 3504326	33.5826	-111.8857	02 / 12	8:37 AM	Rear End	No Injury	Westbound Westbound Westbound	Straight Stopped Stopped	Car Car Truck	No Controls No Controls No Controls	Unknown Distracted Unknown	Followed Too Closely No Improper Action No Improper Action		
3505839 3505839	33.5826	-111.8861	01 / 07	12:03 PM	Rear End	Possible Injury	Westbound Westbound	Straight Stopped	Pick-up Truck Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions		
3511530 3511530 3511530	33.5826	-111.8863	03 / 05	4:19 PM	Rear End	Possible Injury	Eastbound Eastbound Eastbound	Straight Stopped Stopped	Car Car Car	Traffic Control Signal Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted Not Distracted	Speed Too Fast For Conditions		
3517902 3517902	33.5826	-111.8853	43552.7	4:15 PM	Rear End	No Injury	Eastbound Eastbound	Straight Slowing	Car Car	No Controls No Controls	Not Distracted Not Distracted	Unknown No Improper Action		
3517917 3517917	33.5825	-111.8868	03 / 23	7:24 PM	Angle	No Injury	Eastbound Eastbound	Turning Right Straight	Car Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Made Improper Turn No Improper Action		
3517965 3517965	33.5793	-111.8865	03 / 29	12:01 PM	Angle	No Injury	Northbound Northbound	Making U Turn Straight	Car Car	Traffic Control Signal Traffic Control Signal	Not Distracted Distracted	Unknown Unknown		
3517979 3517979	33.5820	-111.8861	03 / 29	5:25 PM	Rear End	No Injury	Northbound Northbound	Turning Left Stopped	Car Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Disregarded Traffic Signal No Improper Action		
3518808 3518808	33.5826	-111.8866	43556.7	5:56 PM	Sideswipe Same Direction	No Injury	Eastbound Eastbound	Changing Lanes Straight	Car Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Unsafe Lane Change No Improper Action		
3520569 3520569	33.5826	-111.8852	04 / 08	2:17 PM	Rear End	No Injury	Westbound Westbound	Straight Straight	Car Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Followed Too Closely No Improper Action		Speed Too Fast For Conditions
3520578 3520578	33.5826	-111.8859	04 / 09	8:08 AM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Pick-up Truck Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Speed Too Fast For Conditions No Improper Action		
3522829 3522829	33.5825	-111.8838	04 / 20	11:55 AM	Angle	No Injury	Westbound Westbound	Turning Right Straight	Car Car	No Controls No Controls	Not Distracted Not Distracted	Made Improper Turn No Improper Action		
3529285 3529285	33.5826	-111.8861	43588.5	11:10 AM	Sideswipe Same Direction	No Injury	Westbound Westbound	Making U Turn Turning Left	Car Pick-up Truck	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Unsafe Lane Change No Improper Action		
3535746 3535746	33.5820	-111.8861	05 / 31	11:33 AM	Sideswipe Same Direction	No Injury	Southbound Southbound	Changing Lanes Straight	Unknown Car	No Controls No Controls	Unknown Distracted	Unsafe Lane Change No Improper Action		
3535868 3535868	33.5826	-111.8861	06 / 04	5:17 PM	Sideswipe Same Direction	No Injury	Westbound Westbound	Turning Left Turning Left	Car Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Failed to Keep in Proper Lane		
3537584	33.5826	-111.8861	05 / 16	3:00 PM	Single Vehicle	No Injury	Northbound	Turning Left	Pick-up Truck	Traffic Control Signal	Not Distracted	No Improper Action		

TRAVEL													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3537808 3537808 3537808	33.5826	-111.8863	43609.6	2:05 PM	Rear End	No Injury	Eastbound Eastbound Eastbound	Straight Stopped Stopped	Car Car Car	Traffic Control Signal Traffic Control Signal Traffic Control Signal	Unknown Distracted Unknown	Speed Too Fast For Conditions No Improper Action No Improper Action	
3550392 3550392	33.5804	-111.8865	07 / 06	7:16 AM	Left-Turn-Head-On	No Injury	Southbound Northbound	Turning Left Straight	Car Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	
3551748 3551748	33.5824	-111.8905	07 / 17	4:46 PM	Angle	Suspected Minor Injury	Southbound Eastbound	Straight Straight	Car Car	No Controls No Controls	Unknown Distracted	No Improper Action No Improper Action	
3553293 3553293	33.5815	-111.8863	08 / 02	7:28 PM	Angle	Possible Injury	Southbound Westbound	Straight Straight	Car Car	Traffic Control Signal Traffic Control Signal	Outside The Vehi Not Distracted	Disregarded Traffic Signal No Improper Action	
3584182 3584182	33.5826	-111.8851	43721.5	10:58 AM	Rear End	No Injury	Westbound Westbound	Straight Straight	Pick-up Truck Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Followed Too Closely No Improper Action	
3584210 3584210	33.5826	-111.8861	09 / 11	9:45 AM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Car Car	No Controls No Controls	Unknown Distracted	Followed Too Closely No Improper Action	
3591020 3591020	33.5826	-111.8863	10 / 01	7:42 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	No Controls No Controls	Not Distracted Not Distracted	No Improper Action No Improper Action	
3591175 3591175	33.5808	-111.8864	09 / 27	12:37 PM	Left-Turn-Angle	No Injury	Eastbound Southbound	Turning Left Straight	Car Car	No Controls No Controls	Unknown Not Distracted	Failed to Yield Right of Way No Improper Action	
3591186 3591186	33.5825	-111.8870	43732.3	7:25 AM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	No Controls No Controls	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	
3591593 3591593	33.5826	-111.8862	10 / 01	7:30 AM	Rear End	No Injury	Eastbound Eastbound	Slowing Stopped	Car Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3606480 3606480	33.5807	-111.8864	10 / 18	10:37 AM	Left-Turn-Angle	No Injury	Eastbound Southbound	Turning Left Straight	Car Car	Stop Signs No Controls	Unknown Distracted	Made Improper Turn No Improper Action	
3606506 3606506	33.5817	-111.8862	10 / 20	7:36 AM	Sideswipe Same Direction	No Injury	Southbound Southbound	Straight Stopped	Truck Truck	Yield Signs Yield Signs	Not Distracted Not Distracted	Other Unsafe Passing No Improper Action	
3611756 3611756	33.5816	-111.8862	43786.7	3:44 PM	Sideswipe Same Direction	No Injury	Northbound Northbound	Changing Lanes Straight	Car Car	Yield Signs Yield Signs	Not Distracted Not Distracted	Failed to Keep in Proper Lane No Improper Action	
3617973 3617973	33.5826	-111.8862	12 / 02	12:12 PM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Car Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Other No Improper Action	
3626043 3626043	33.5825	-111.8868	12 / 19	12:46 PM	Sideswipe Same Direction	No Injury	Eastbound Eastbound	Making U Turn Straight	Car Car	No Controls No Controls	Unknown Distracted	Unsafe Lane Change	
3626073 3626073	33.5826	-111.8865	12 / 23	11:46 AM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Car Car	No Controls No Controls	Unknown Distracted	Followed Too Closely	
3626120 3626120 3626120	33.5825	-111.8870	43815.6	3:32 PM	Rear End	Possible Injury	Westbound Westbound Westbound	Straight Slowing Stopped	Pick-up Truck Car Car	No Controls No Controls No Controls	Unknown Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action No Improper Action	

92nd Street & Shea Boulevard - 2019 PAGE 1 OF 2													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3499241 3499241	33.5825	-111.8817	01 / 18	1:43 PM	Rear End	Possible Injury	Westbound Westbound	Straight Stopped	Pick-up Truck Car	Signal Signal	Outside The Vehi Not Distracted	Followed Too Closely No Improper Action	
3502752 3502752	33.5825	-111.8837	01 / 30	12:37 PM	Rear End	Possible Injury	Westbound Westbound	Straight Stopped	Car Car	No Controls No Controls	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	
3504266 3504266 3504266	33.5825	-111.8827	02 / 06	8:18 AM	Angle	Suspected Minor Injury	Westbound Northbound Northbound	Straight Straight Straight	Pick-up Truck Car Car	Signal Signal Signal	Unknown Not Distracted Not Distracted	Disregarded Traffic Signal	
3517919 3517919	33.5825	-111.8830	03 / 24	3:38 PM	Rear End	No Injury	Eastbound Eastbound	Straight Straight	Unknown Car	Signal Signal	Not Distracted Not Distracted	Followed Too Closely No Improper Action	
3518755 3518755	33.5825	-111.8829	04 / 03	2:07 PM	Rear End	Possible Injury	Eastbound Eastbound	Straight Stopped	Car Car	Signal Signal	Not Distracted Not Distracted	Other No Improper Action	
3520522 3520522 3520522	33.5825	-111.8834	04 / 11	2:07 PM	Rear End	Possible Injury	Westbound Westbound Westbound	Straight Stopped Stopped	Truck Car Car	No Controls No Controls No Controls	Unknown Not Distracted Not Distracted	Followed Too Closely No Improper Action	
3520532 3520532	33.5825	-111.8828	04 / 10	5:51 PM	Rear End	No Injury	Eastbound Eastbound	Straight Straight	Car Car	Signal Signal	Unknown Not Distracted	Followed Too Closely	
3531065 3531065	33.5825	-111.8811	05 / 07	3:33 PM	Sideswipe Same Direction	No Injury	Eastbound Eastbound	Making U Turn Straight	Car Car	No Controls No Controls	Not Distracted Not Distracted	Unsafe Lane Change	
3533961 3533961	33.5825	-111.8824	05 / 17	2:33 PM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Car Car	Signal Signal	Not Distracted Not Distracted	Followed Too Closely No Improper Action	
3535541 3535541 3535541	33.5825	-111.8834	05 / 20	8:49 AM	Rear End	Suspected Minor Injury	Eastbound Eastbound Eastbound	Straight Stopped Stopped	Car Pick-up Truck Car	No Controls No Controls No Controls	Unknown Distracted Unknown	Followed Too Closely No Improper Action No Improper Action	
3535734 3535734	33.5825	-111.8828	05 / 29	2:46 PM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Car Car	Signal Signal	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	
3535737 3535737	33.5825	-111.8827	05 / 29	2:24 PM	Left-Turn-Angle	No Injury	Eastbound Northbound	Turning Left Straight	Car Car	Stop Signs No Controls	Unknown Distracted	Failed to Yield Right of Way No Improper Action	
3546584 3546584 3546584	33.5825	-111.8822	06 / 20	11:31 AM	Rear End	No Injury	Westbound Westbound Westbound	Straight Stopped Stopped	Car Car Truck	Signal Signal Signal	Passenger Not Distracted Not Distracted	Followed Too Closely No Improper Action	
3548512 3548512	33.5825	-111.8820	06 / 26	1:36 PM	Rear End	Possible Injury	Westbound Westbound	Straight Stopped	Car Car	No Controls No Controls	Outside The Vehi Distracted	Speed Too Fast For Conditions No Improper Action	
3550348 3550348 3550348	33.5825	-111.8827	07 / 01	5:19 PM	Rear End	Suspected Minor Injury	Westbound Westbound Westbound	Straight Stopped Stopped	Car Car Pick-up Truck	Signal Signal Signal	Other Device Not Distracted Not Distracted	Unknown No Improper Action No Improper Action	
3550354 3550354 3550354	33.5825	-111.8840	07 / 01	5:09 PM	Rear End	No Injury	Westbound Westbound Westbound	Straight Straight Stopped	Pick-up Truck Car Car	Signal Signal Signal	Not Distracted Not Distracted Not Distracted	Speed Too Fast For Conditions Followed Too Closely No Improper Action	
3552301 3552301	33.5826	-111.8850	07 / 29	3:21 PM	Rear End	No Injury	Westbound Westbound	Slowing Slowing	Car Car	Signal Signal	Not Distracted Not Distracted	Followed Too Closely No Improper Action	
3552785	33.5825	-111.8794	07 / 24	6:21 PM	Single Vehicle	Suspected Minor Injury	Eastbound	Turning Right	Car	No Controls	Other Device	Speed Too Fast For Conditions	
3553301 3553301	33.5825	-111.8822	08 / 08	10:52 AM	Angle	No Injury	Northbound Westbound	Turning Left Turning Left	Car Car	No Controls No Controls	Unknown Distracted	Failed to Yield Right of Way No Improper Action	
3553348 3553348 3553348	33.5825	-111.8817	08 / 05	2:34 PM	Rear End	No Injury	Westbound Westbound Westbound	Slowing Slowing Slowing	Pick-up Truck Pick-up Truck Pick-up Truck	Signal Signal Signal	Not Distracted Not Distracted Not Distracted	Followed Too Closely No Improper Action No Improper Action	
3557828 3557828 3557828	33.5825	-111.8812	06 / 07	4:54 PM	Rear to Rear	Possible Injury	Westbound Westbound Westbound	Straight Stopped Stopped	Car Car Car	No Controls No Controls No Controls	Unknown Distracted Unknown	Speed Too Fast For Conditions No Improper Action No Improper Action	

TRAVEL													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3575948 3575948	33.5825	-111.8830	08 / 29	10:46 AM	Sideswipe Same Direction	No Injury	Eastbound Eastbound	Changing Lanes Stopped	Car Pick-up Truck	No Controls No Controls	Not Distracted Not Distracted	Unsafe Lane Change No Improper Action	
3578197 3578197 3578197	33.5825	-111.8832	06 / 27	2:49 PM	Rear End	No Injury	Westbound Westbound Westbound	Straight Slowing Stopped	Car Car Car	No Controls No Controls No Controls	Unknown Not Distracted Not Distracted	Followed Too Closely No Improper Action No Improper Action	
3584233 3584233	33.5825	-111.8827	09 / 12	8:00 AM	Rear End	No Injury	Westbound Westbound	Straight Slowing	Car Car	Signal Signal	Unknown Distracted	Followed Too Closely No Improper Action	
3584933 3584933	33.5825	-111.8826	09 / 18	12:43 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Truck Car	No Controls No Controls	Unknown Distracted	Followed Too Closely No Improper Action	
3585112 3585112	33.5825	-111.8830	09 / 17	7:04 PM	Rear to Rear	No Injury	Eastbound Eastbound	Backing Leaving Parking P	Car Car	No Controls No Controls	Not Distracted Not Distracted	No Improper Action No Improper Action	
3591046 3591046	33.5821	-111.8827	10 / 01	2:03 PM	Left-Turn-Angle	No Injury	Westbound Northbound	Turning Left Straight	Car Car	Stop Signs No Controls	Unknown Distracted	Unknown No Improper Action	
3596878 3596878	33.5796	-111.8815	10 / 03	3:01 PM	Left-Turn-Angle	No Injury	Westbound Northbound	Turning Left Straight	Car Car	No Controls No Controls	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	
3596916	33.5796	-111.8815	10 / 06	3:31 PM	Single Vehicle	Suspected Minor Injury	Northbound	Straight	Car	No Controls	Unknown	Speed Too Fast For Conditions	
3599832 3599832	33.5825	-111.8826	10 / 11	11:22 AM	Rear End	No Injury	Westbound Westbound	Straight Straight	Pick-up Truck Pick-up Truck	Signal Signal	Unknown Not Distracted	Other No Improper Action	
3605641 3605641	33.5825	-111.8827	10 / 31	2:19 PM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Car Car	Signal Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3606400 3606400	33.5825	-111.8827	10 / 24	1:38 PM	Angle	Possible Injury	Eastbound Southbound	Turning Right Straight	Car Car	Stop Signs No Controls	Unknown Distracted	Failed to Yield Right of Way	
3608657 3608657	33.5815	-111.8826	11 / 05	11:01 AM	Left-Turn-Angle	No Injury	Eastbound Northbound	Turning Left Straight	Car Pick-up Truck	Unknown No Controls	Unknown Distracted	Failed to Yield Right of Way No Improper Action	
3608816 3608816 3608816	33.5825	-111.8827	11 / 03	6:20 PM	Rear End	Suspected Minor Injury	Westbound Westbound Westbound	Straight Stopped Stopped	Truck Pick-up Truck Car	Signal Signal Signal	Not Distracted Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3620567							Westbound	Straight	Car	No Controls	Distracted	No Improper Action	
3620585	33.5825	-111.8830	12 / 06	12:18 PM	Rear End	No Injury	Westbound	Slowing	Car	Signal	Passenger	Speed Too Fast For Conditions	
3620585							Westbound	Stopped	Pick-up Truck	Signal	Not Distracted		
3626012	33.5825	-111.8828	12 / 21	9:14 AM	Sideswipe Same Direction	No Injury	Southbound	Turning Right	Car	Signal	Unknown	Made Improper Turn	
3626012							Westbound	Straight	Pick-up Truck	Signal	Not Distracted		
3626035	33.5825	-111.8825	12 / 18	2:39 PM	Sideswipe Same Direction	No Injury	Westbound	Changing Lanes	Car	No Controls	Unknown	Unsafe Lane Change	
3626035							Westbound	Straight	Car	No Controls	Distracted	No Improper Action	

TRAVEL													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3489123 3489123	33.5825	-111.8740	01 / 08	6:25 PM	Left-Turn-Head-On	No Injury	Southbound Northbound	Straight Turning Left	Car Car	Signal Signal	Not Distracted Not Distracted	Other Failed to Yield Right of Way	
3499146 3499146	33.5825	-111.8757	01 / 15	2:15 PM	Rear End	No Injury	Eastbound Eastbound	Straight Slowing	Car Car	No Controls No Controls	Other Device Distracted	Speed Too Fast For Conditions No Improper Action	
3504488 3504488	33.5825	-111.8740	01 / 22	7:27 AM	Left-Turn-Head-On	Suspected Serious Injury	Westbound Eastbound	Turning Left Straight	Car Car	Signal Signal	Unknown Not Distracted	Failed to Yield Right of Way No Improper Action	
3507372 3507372	33.5825	-111.8740	02 / 25	7:34 AM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	Signal Signal	Unknown Distracted	Followed Too Closely	
3511547 3511547	33.5825	-111.8740	03 / 05	8:45 PM	Angle	Suspected Serious Injury	Westbound Southbound	Crossing Road Turning Left	Pedalcyclist Car	Signal Signal	Unknown Not Distracted	Drove or Rode in Opposing Traffic Lane No Improper Action	
3515224 3515224	33.5825	-111.8740	03 / 16	5:22 PM	Left-Turn-Head-On	No Injury	Westbound Eastbound	Straight Turning Left	Car Car	Signal Signal	Not Distracted Not Distracted	No Improper Action	
3517886 3517886	33.5825	-111.8740	03 / 27	8:16 AM	Left-Turn-Head-On	Possible Injury	Eastbound Westbound	Turning Left Straight	Car Car	Signal Signal	Unknown Distracted	Failed to Yield Right of Way No Improper Action	
3517906 3517906	33.5825	-111.8740	03 / 25	7:55 AM	Left-Turn-Head-On	Suspected Minor Injury	Northbound Southbound	Turning Left Straight	Car Car	Signal Signal	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	
3518753 3518753	33.5825	-111.8740	04 / 04	3:07 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Pick-up Truck Car	Signal Signal	Unknown Not Distracted	Speed Too Fast For Conditions	
3520519 3520519	33.5825	-111.8748	04 / 11	2:57 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	No Controls No Controls	Unknown Distracted	Followed Too Closely No Improper Action	
3522827 3522827	33.5825	-111.8740	04 / 20	3:04 PM	Left-Turn-Head-On	Suspected Minor Injury	Eastbound Westbound	Turning Left Straight	Car Car	Signal Signal	Unknown Not Distracted	Disregarded Traffic Signal No Improper Action	Made Improper Turn
3522832 3522832	33.5825	-111.8740	04 / 22	8:29 AM	Sideswipe Same Direction	No Injury	Eastbound Eastbound	Changing Lanes Straight	Car Truck	Signal Signal	Unknown Distracted	Unsafe Lane Change No Improper Action	
3528057 3528057 3528057	33.5825	-111.8711	05 / 02	8:12 AM	Rear End	Possible Injury	Eastbound Eastbound Eastbound	Straight Stopped Stopped	Car Car Pick-up Truck	No Controls No Controls No Controls	Unknown Distracted Unknown	Speed Too Fast For Conditions No Improper Action	
3528065 3528065 3528065	33.5825	-111.8700	05 / 01	8:26 AM	Rear End	No Injury	Westbound Westbound Westbound	Straight Slowing Stopped	Car Car Car	No Controls No Controls No Controls	Unknown Distracted Unknown	Speed Too Fast For Conditions No Improper Action No Improper Action	
3528068 3528068	33.5825	-111.8739	05 / 01	9:26 AM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	Signal Signal	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	
3535756 3535756	33.5825	-111.8740	05 / 30	4:04 PM	Angle	No Injury	Eastbound Northbound	Straight Straight	Car Pick-up Truck	Signal Signal	Unknown Distracted	Disregarded Traffic Signal No Improper Action	
3535885 3535885	33.5825	-111.8779	06 / 04	7:36 PM	Sideswipe Same Direction	No Injury	Southbound Southbound	Overtaking Passenger Properly Parked	Unknown Truck	No Controls No Controls	Unknown Distracted	Failed to Keep in Proper Lane No Improper Action	
3552722 3552722	33.5825	-111.8740	07 / 19	2:00 PM	Sideswipe Same Direction	No Injury	Southbound Westbound	Turning Right Straight	Car Car	Signal Signal	Unknown Distracted	Made Improper Turn No Improper Action	
3552732 3552732 3552732	33.5825	-111.8740	07 / 19	2:50 PM	Angle	Suspected Minor Injury	Westbound Southbound Northbound	Straight Straight Straight	Car Pick-up Truck Car	Signal Signal Signal	Hand Held Device Distracted Unknown	Disregarded Traffic Signal No Improper Action No Improper Action	Speed Too Fast For Conditions
3557754 3557754	33.5825	-111.8740	06 / 08	2:26 PM	Angle	Suspected Serious Injury	Westbound Southbound	Straight Straight	Car Car	Signal Signal	Unknown Not Distracted	Disregarded Traffic Signal No Improper Action	

96th Street & Mountain View Road - 2019													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3551739 3551739	33.5753	-111.8740	07 / 14	5:01 PM	Angle	No Injury	Westbound Southbound	Straight Straight	Car Car	Signal Signal	Unknown Not Distracted	Disregarded Traffic Signal No Improper Action	
3552777 3552777	33.5753	-111.8740	07 / 22	7:52 AM	Left-Turn-Head-On	Suspected Minor Injury	Eastbound Westbound	Turning Left Straight	Car Car	Signal Signal	Not Distracted Not Distracted	Made Improper Turn No Improper Action	
3584920 3584920	33.5754	-111.8740	09 / 16	2:22 PM	Rear End	Possible Injury	Southbound Southbound	Straight Stopped	Car Car	Signal Signal	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	
3584934 3584934	33.5761	-111.8740	09 / 17	6:37 AM	Sideswipe Same Direction	Suspected Minor Injury	Southbound Southbound	Changing Lanes Straight	Car Car	No Controls No Controls	Unknown Distracted	Unsafe Lane Change No Improper Action	

Appendix A.6
Historic Collision Analysis
2020



INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL		VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
							DIRECTION	ACTION					
3630701 3630701	33.5792	-111.8865	01 / 05	8:42 PM	Sideswipe Same Direction	No Injury	Southbound Southbound	Curving Road Improperly Parked	Truck Truck	Yield Signs Yield Signs	Unknown Not Distracted	Failed to Keep in Proper Lane Failed to Keep in Proper Lane	
3633957 3633957	33.5812	-111.8863	01 / 09	10:26 PM	Sideswipe Same Direction	No Injury	Southbound Southbound	Straight Improperly Parked	Truck Truck	No Controls No Controls	Not Distracted Not Distracted	No Improper Action No Improper Action	
3634415 3634415	33.5826	-111.8861	01 / 19	11:43 AM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Followed Too Closely	
3637712 3637712 3637712	33.5825	-111.8870	01 / 23	10:46 AM	Angle	No Injury	Northbound Eastbound Eastbound	Turning Right Straight Straight	Car Truck Car	Stop Signs No Controls No Controls	Unknown Distracted Unknown	Failed to Yield Right of Way No Improper Action No Improper Action	
3662291	33.5810	-111.8864	02 / 04	4:35 PM	Single Vehicle	Possible Injury	Southbound	Curving Road	Car	Other	Not Distracted	Unknown	
3662316 3662316 3662316	33.5826	-111.8864	02 / 11	8:51 AM	Rear End	Suspected Minor Injury	Westbound Westbound Westbound	Straight Stopped Stopped	Car Car Car	No Controls No Controls No Controls	Unknown Distracted Unknown	Followed Too Closely No Improper Action No Improper Action	
3679798 3679798 3679798	33.5826	-111.8862	03 / 15	7:27 PM	Rear End	Suspected Minor Injury	Eastbound Eastbound Eastbound	Straight Stopped Stopped	Car Car Car	Traffic Control Signal Traffic Control Signal Traffic Control Signal	Unknown Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3680018 3680018	33.5826	-111.8861	04 / 14	7:10 PM	Other	No Injury	Unknown Unknown	Unknown Entering Parking Po	Car Car	Unknown Unknown	Unknown Distracted	Unknown Unknown	
3680370 3680370	33.5826	-111.8861	05 / 07	9:10 AM	Left-Turn-Head-On	No Injury	Westbound Eastbound	Straight Turning Left	Car Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Unknown Unknown	
3680372 3680372	33.5821	-111.8861	05 / 07	12:16 PM	Left-Turn-Angle	No Injury	Eastbound Southbound	Turning Left Straight	Car Car	Stop Signs No Controls	Unknown Not Distracted	Failed to Yield Right of Way No Improper Action	
3681624 3681624	33.5826	-111.8861	07 / 28	1:07 PM	Rear End	No Injury	Eastbound Eastbound	Changing Lanes Stopped	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Followed Too Closely No Improper Action	
3681740 3681740	33.5819	-111.8862	08 / 03	12:49 PM	Angle	No Injury	Northbound Northbound	Turning Left Straight	Car Pick-up Truck	No Controls No Controls	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	
3682673 3682673	33.5826	-111.8860	07 / 08	12:59 PM	Rear End	Suspected Minor Injury	Westbound Westbound	Straight Stopped	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Followed Too Closely	
3682694 3682694	33.5826	-111.8859	07 / 10	11:33 AM	Sideswipe Same Direction	No Injury	Eastbound Eastbound	Slowing Slowing	Car Car	No Controls No Controls	Not Distracted Not Distracted	No Improper Action No Improper Action	
3682792 3682792	33.5820	-111.8861	07 / 19	6:50 PM	Sideswipe Same Direction	No Injury	Southbound Southbound	Overtaking Passing Properly Parked	Truck Truck	No Controls No Controls	Not Distracted Not Distracted	No Improper Action No Improper Action	
3684914 3684914	33.5824	-111.8861	08 / 27	6:12 PM	Angle	No Injury	Westbound Northbound	Turning Right Straight	Car Car	Stop Signs Traffic Control Signal	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	
3690010 3690010	33.5826	-111.8855	09 / 15	10:08 AM	Rear End	No Injury	Eastbound Eastbound	Straight Straight	Car Truck	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3703589 3703589	33.5826	-111.8862	10 / 07	2:23 PM	Rear End	No Injury	Westbound Eastbound	Backing Stopped	Pick-up Truck Car	Traffic Control Signal Traffic Control Signal	Not Distracted Distracted	Other No Improper Action	
3713875 3713875	33.5820	-111.8861	11 / 15	6:05 PM	Sideswipe Same Direction	No Injury	Southbound Southbound	Changing Lanes Straight	Car Truck	No Controls No Controls	Unknown Not Distracted	Unsafe Lane Change No Improper Action	
3713889 3713889	33.5826	-111.8852	11 / 17	2:05 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Pick-up Truck	No Controls No Controls	Other Device Distracted	Speed Too Fast For Conditions No Improper Action	
3718842 3718842	33.5826	-111.8866	10 / 30	12:09 PM	Rear End	No Injury	Westbound Westbound	Straight Slowing	Car Pick-up Truck	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	

90th Street & Shea Boulevard - 2021 PAGE 2 OF 2													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3719002 3719002	33.5810	-111.8864	11 / 10	12:54 PM	Single Vehicle	No Injury	Northbound Northbound	Turning Left Straight	Car Pick-up Truck	No Controls No Controls	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	
3719033	33.5810	-111.8864	11 / 12	4:10 PM	Single Vehicle	No Injury	Southbound	Turning Left	Car	Traffic Control Signal	Unknown	Speed Too Fast For Conditions	
3719920 3719920	33.5826	-111.8866	11 / 25	2:54 PM	Rear End	Possible Injury	Eastbound Eastbound	Straight Stopped	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Speed Too Fast For Conditions	
3721769 3721769	33.5820	-111.8861	12 / 21	1:23 PM	Sideswipe Same Direction	No Injury	Southbound Unknown	Leaving Parking Pos Properly Parked	Unknown Car	No Controls No Controls	Unknown Distracted	Unknown No Improper Action	

TRAVEL													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3634095 3634095	33.5817	-111.8827	01 / 20	10:40 AM	Left-Turn-Angle	No Injury	Eastbound Northbound	Turning Left Straight	Car Car	Stop Signs No Controls	Unknown Distracted	Failed to Yield Right of Way No Improper Action	
3658778 3658778	33.5825	-111.8827	02 / 06	9:46 AM	Angle	No Injury	Southbound Northbound	Turning Right Turning Left	Car Car	Signal No Controls	Not Distracted Not Distracted	Made Improper Turn	
3662298 3662298	33.5825	-111.8827	02 / 07	5:30 AM	Angle	Possible Injury	Westbound Southbound	Straight Straight	Car Car	No Controls No Controls	Unknown Not Distracted	Failed to Yield Right of Way No Improper Action	
3662350 3662350	33.5825	-111.8827	02 / 13	4:47 PM	Sideswipe Same Direction	No Injury	Northbound Eastbound	Turning Right Straight	Car Car	Signal Signal	Unknown Distracted	Failed to Yield Right of Way No Improper Action	
3663608 3663608	33.5825	-111.8826	01 / 21	6:48 PM	Sideswipe Same Direction	No Injury	Eastbound Eastbound	Turning Right Straight	Car Car	Signal No Controls	Unknown Not Distracted	Made Improper Turn No Improper Action	
3669162 3669162	33.5825	-111.8827	02 / 19	2:34 PM	Other	No Injury	Northbound Northbound	Backing Stopped	Car Car	Signal Signal	Not Distracted Not Distracted	Other No Improper Action	
3669212 3669212	33.5810	-111.8824	02 / 24	12:04 PM	Angle	No Injury	Southbound Southbound	Turning Right Turning Left	Car Car	Stop Signs Stop Signs	Not Distracted Not Distracted	Unknown Unknown	
3671207 3671207 3671207	33.5825	-111.8835	03 / 04	8:53 AM	Rear End	Possible Injury	Westbound Westbound Westbound	Straight Stopped Stopped	Car Car Car	No Controls No Controls No Controls	Inside Vehicle Distracted Unknown	Speed Too Fast For Conditions No Improper Action	
3679581 3679581 3679581	33.5825	-111.8830	05 / 29	12:27 PM	Rear End	No Injury	Westbound Westbound Westbound	Slowing Stopped Stopped	Car Car Pick-up Truck	Signal Signal Signal	Not Distracted Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action No Improper Action	
3679747 3679747	33.5825	-111.8827	06 / 11	9:25 PM	Other	Suspected Minor Injury	Westbound Westbound	Crossing Road Turning Left	Pedalcyclist Car	Signal Signal	Unknown Not Distracted	Disregarded Traffic Signal No Improper Action	
3679772 3679772	33.5825	-111.8827	06 / 14	1:05 AM	Sideswipe Same Direction	No Injury	Eastbound Eastbound	Turning Left Turning Left	Car Car	Signal Signal	Unknown Not Distracted	Made Improper Turn	
3680002 3680002	33.5825	-111.8827	04 / 17	10:46 AM	Sideswipe Same Direction	No Injury	Southbound Southbound	Changing Lanes Straight	Car Car	Signal Signal	Not Distracted Not Distracted	Unsafe Lane Change No Improper Action	
3680363 3680363	33.5830	-111.8827	05 / 06	7:42 AM	Rear End	Possible Injury	Southbound Southbound	Straight Stopped	Car Car	Signal Signal	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	
3680403 3680403	33.5825	-111.8827	05 / 11	11:12 AM	Left-Turn-Angle	Suspected Minor Injury	Westbound Northbound	Straight Turning Left	Car Car	Signal Signal	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	Disregarded Traffic Signal
3680450 3680450	33.5825	-111.8829	05 / 15	12:15 PM	Rear End	No Injury	Westbound Westbound	Slowing Stopped	Car Car	No Controls No Controls	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3681622 3681622	33.5825	-111.8827	07 / 28	8:05 AM	Rear End	Possible Injury	Eastbound Eastbound	Straight Slowing	Pick-up Truck Car	No Controls No Controls	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3681692 3681692 3681692	33.5825	-111.8839	06 / 22	1:36 PM	Angle	Suspected Minor Injury	Westbound Westbound Westbound	Straight Stopped Stopped	Car Car Pick-up Truck	Signal Signal Signal	Unknown Distracted Unknown	Speed Too Fast For Conditions	
3681693 3681693 3681693	33.5810	-111.8824	06 / 22	2:04 PM	Rear End	Suspected Minor Injury	Northbound Northbound Northbound	Straight Slowing	Car Car Car	No Controls No Controls No Controls	Unknown Not Distracted Not Distracted		
3681750 3681750 3681750	33.5825	-111.8828	06 / 25	11:50 AM	Rear End	Suspected Minor Injury	Eastbound Eastbound Eastbound	Straight Stopped Stopped	Truck Car Car	Signal Signal Signal	Not Distracted Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3681872 3681872	33.5825	-111.8835	08 / 12	9:49 AM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Pick-up Truck Car	No Controls No Controls	Inside Vehicle Distracted	Speed Too Fast For Conditions No Improper Action	

TRAVEL													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3682675 3682675	33.5825	-111.8808	07 / 08	1:17 PM	Angle	Possible Injury	Northbound Eastbound	Turning Right Straight	Car Truck	Stop Signs No Controls	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	
3682677 3682677	33.5825	-111.8829	07 / 08	2:45 PM	Rear End	No Injury	Westbound Westbound	Straight Slowing	Truck Pick-up Truck	Signal Signal	Unknown Distracted	Followed Too Closely No Improper Action	
3682697 3682697	33.5825	-111.8808	07 / 10	3:47 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	No Controls No Controls	Not Distracted Not Distracted	No Improper Action	
3682748 3682748	33.5825	-111.8830	07 / 16	12:09 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	No Controls No Controls	Not Distracted Not Distracted	Unknown No Improper Action	
3684893 3684893	33.5825	-111.8836	08 / 26	10:53 AM	Rear End	No Injury	Westbound Westbound	Straight Straight	Car Pick-up Truck	No Controls No Controls	Unknown Not Distracted	Unknown No Improper Action	
3684894 3684894 3684894	33.5825	-111.8828	08 / 26	11:11 AM	Rear End	No Injury	Westbound Westbound Westbound	Straight Stopped Stopped	Car Car Car	Signal Signal Signal	Unknown Not Distracted Not Distracted	Other No Improper Action No Improper Action	
3690035 3690035	33.5825	-111.8827	09 / 17	3:40 PM	Left-Turn-Head-On	No Injury	Westbound Eastbound	Turning Left Straight	Car Car	No Controls No Controls	Unknown Not Distracted	Made Improper Turn	
3699170 3699170	33.5825	-111.8837	09 / 30	8:56 AM	Rear End	Possible Injury	Eastbound Eastbound	Straight Stopped	Car Car	Signal Signal	Unknown Distracted		
3706456 3706456	33.5825	-111.8809	10 / 20	2:30 PM	Rear End	Possible Injury	Westbound Westbound	Straight Stopped	Car Car	Signal Signal	Hand Held Device Not Distracted	Speed Too Fast For Conditions No Improper Action	
3706457 3706457	33.5825	-111.8824	10 / 20	4:44 PM	Rear End	No Injury	Westbound Westbound	Straight Slowing	Pick-up Truck Car	Signal Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3713871 3713871	33.5825	-111.8827	11 / 14	10:58 PM	Angle	No Injury	Eastbound Eastbound	Straight Straight	Car Car	Signal Signal	Unknown Not Distracted	Unsafe Lane Change No Improper Action	Made Improper Turn
3719914 3719914	33.5825	-111.8834	11 / 25	10:43 AM	Sideswipe Same Direction	No Injury	Westbound Westbound	Changing Lanes Straight	Car Car	No Controls No Controls	Not Distracted Not Distracted	Unsafe Lane Change	
3729933 3729933	33.5825	-111.8828	12 / 25	12:08 PM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Car Car	Signal Signal	Not Distracted Not Distracted		
3747325 3747325	33.5825	-111.8816	12 / 17	3:41 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	No Controls No Controls	Unknown Not Distracted	Other No Improper Action	

96th Street & Shea Boulevard - 2020													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL		VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
							DIRECTION	ACTION					
3633991 3633991	33.5825	-111.8740	01 / 13	3:58 PM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Car Car	Signal Signal	Unknown Not Distracted	Unknown	
3637741 3637741	33.5825	-111.8740	01 / 21	6:12 PM	Left-Turn-Angle	Suspected Serious Injury	Northbound Westbound	Turning Left Straight	Car Pick-up Truck	Signal Signal	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	
3676844 3676844	33.5825	-111.8740	03 / 15	4:16 PM	Angle	Possible Injury	Eastbound Northbound	Straight Straight	Car Car	Signal Signal	Unknown Not Distracted	Disregarded Traffic Signal	
3679629 3679629	33.5825	-111.8740	06 / 01	2:04 PM	Left-Turn-Angle	No Injury	Northbound Eastbound	Turning Left Straight	Car Car	No Controls No Controls	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	
3679630 3679630	33.5825	-111.8734	06 / 01	2:18 PM	Rear End	Possible Injury	Eastbound Eastbound	Straight Slowing	Car Car	Other Other	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	
3679806 3679806	33.5825	-111.8750	06 / 16	10:47 AM	Sideswipe Same Direction	No Injury	Eastbound Eastbound	Changing Lanes Straight	Truck Car	No Controls No Controls	Unknown Not Distracted	No Improper Action No Improper Action	
3681710 3681710	33.5825	-111.8740	06 / 23	10:27 AM	Rear End	Possible Injury	Eastbound Eastbound	Changing Lanes Slowing	Car Car	Signal Signal	Unknown Distracted	Speed Too Fast For Conditions Unknown	
3681844 3681844	33.5825	-111.8740	08 / 08	5:01 PM	Left-Turn-Angle	Suspected Minor Injury	Northbound Westbound	Turning Left Straight	Pick-up Truck Car	Signal Signal	Unknown Not Distracted	Made Improper Turn No Improper Action	
3681847 3681847	33.5825	-111.8740	08 / 09	10:33 AM	Left-Turn-Head-On	No Injury	Northbound Southbound	Turning Left Straight	Car Car	Signal Signal	Unknown Not Distracted	Failed to Yield Right of Way No Improper Action	
3699117 3699117	33.5824	-111.8740	09 / 25	8:42 AM	Rear End	No Injury	Northbound Northbound	Straight Stopped	Car Car	Signal Signal	Manually Operatic Not Distracted	Unknown No Improper Action	
3699153 3699153	33.5825	-111.8740	09 / 28	4:30 PM	Left-Turn-Head-On	Possible Injury	Southbound Northbound	Turning Left Straight	Car Car	Signal Signal	Unknown Not Distracted	Failed to Yield Right of Way No Improper Action	
3706506 3706506	33.5825	-111.8740	10 / 26	4:49 PM	Left-Turn-Head-On	No Injury	Northbound Southbound	Turning Left Straight	Car Car	Signal Signal	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	
3729986 3729986	33.5825	-111.8739	12 / 29	3:33 PM	Rear End	No Injury	Westbound Westbound	Straight Slowing	Car Car	Signal Signal	Unknown Not Distracted	Other	

92nd Street & Mountain View Road - 2020														
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL		VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION	
							DIRECTION	ACTION						
3633982 3633982	33.5750	-111.8854	01 / 10	4:16 PM	Single Vehicle	No Injury	Eastbound Eastbound	Turning Left Straight	Car Car	Stop Signs No Controls	Unknown Not Distracted	Failed to Yield Right of Way No Improper Action		
3637711 3637711	33.5751	-111.8860	01 / 23	2:58 PM	Left-Turn-Head-On	Possible Injury	Westbound Eastbound	Turning Left Straight	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Failed to Yield Right of Way No Improper Action		
3662352 3662352	33.5745	-111.8862	02 / 13	1:30 PM	Left-Turn-Angle	No Injury	Eastbound Northbound	Turning Left Straight	Car Car	No Controls No Controls	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action		
3669195 3669195	33.5716	-111.8869	02 / 22	7:21 PM	Angle	No Injury	Southbound Southbound	Turning Right Straight	Unknown Car	Unknown No Controls	Unknown Distracted	Made Improper Turn No Improper Action		
3679636 3679636	33.5751	-111.8858	06 / 02	10:21 AM	Sideswipe Same Direction	No Injury	Westbound Westbound	Changing Lanes Straight	Pick-up Truck Car	Traffic Control Signal Traffic Control Signal	Not Distracted Distracted	Unsafe Lane Change No Improper Action		
3681743 3681743	33.5747	-111.8861	08 / 03	2:33 PM	Left-Turn-Angle	No Injury	Westbound Northbound	Turning Left Straight	Car Pick-up Truck	No Controls No Controls	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action		
3681746 3681746	33.5751	-111.8860	08 / 03	4:53 PM	Angle	No Injury	Southbound Westbound	Straight Straight	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Disregarded Traffic Signal No Improper Action		
3681867 3681867	33.5786	-111.8863	08 / 11	5:55 PM	Sideswipe Same Direction	No Injury	Northbound Northbound	Straight Straight	Car Pick-up Truck	No Controls No Controls	Unknown Distracted	Failed to Keep in Proper Lane Failed to Keep in Proper Lane		
3682803 3682803	33.5746	-111.8862	07 / 21	2:42 PM	Single Vehicle	No Injury	Eastbound Southbound	Turning Left Slowing	Car Car	No Controls No Controls	Unknown Not Distracted	Failed to Yield Right of Way No Improper Action		
3684836 3684836	33.5793	-111.8865	08 / 18	11:23 AM	Angle	No Injury	Eastbound Unknown	Leaving Parking Pos Properly Parked	Pick-up Truck Car	No Controls No Controls	Unknown Distracted	Made Improper Turn No Improper Action		
3684847 3684847	33.5781	-111.8862	08 / 20	6:36 PM	Sideswipe Same Direction	No Injury	Northbound Northbound	Changing Lanes Curving Road	Car Car	No Controls No Controls	Not Distracted Not Distracted	Unsafe Lane Change No Improper Action		
3689983 3689983	33.5781	-111.8861	09 / 12	5:00 PM	Angle	Suspected Minor Injury	Southbound Eastbound	Straight Straight	Car Car	Other Other	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action		
3699182 3699182	33.5762	-111.8858	10 / 01	10:57 AM	Angle	No Injury	Northbound Eastbound	Straight Straight	Car Car	Yield Signs No Controls	Unknown Distracted	Failed to Yield Right of Way No Improper Action		
3703576 3703576	33.5782	-111.8862	10 / 06	1:14 PM	Angle	No Injury	Westbound Southbound	Turning Left Curving Road	Car Car	Other Other	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	Failed to Keep in Proper Lane	
3706482 3706482	33.5751	-111.8860	10 / 23	1:42 PM	Left-Turn-Head-On	No Injury	Westbound Eastbound	Turning Left Straight	Car Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action		
3729948	33.5754	-111.8859	12 / 27	2:56 AM	Single Vehicle	No Injury	Westbound	Straight	Car	No Controls	Unknown	Speed Too Fast For Conditions		

96th Street & Mountain View Road - 2020														
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION		SECOND VIOLATION
3682635 3682635	33.5753	-111.8740	07 / 07	9:26 AM	Rear End	No Injury	Southbound Southbound	Turning Right Straight	Car Car	Signal Signal	Outside The Vehi Distracted	Failed to Yield Right of Way No Improper Action		
3690025 3690025	33.5753	-111.8740	09 / 16	7:10 PM	Other	Suspected Minor Injury	Eastbound Westbound	Turning Left Crossing Road	Car Pedestrian	Signal Signal	Unknown Distracted	Unknown Unknown		
3706447 3706447	33.5753	-111.8743	10 / 19	1:20 PM	Other	No Injury	Eastbound Eastbound	Backing Stopped	Pick-up Truck Car	Signal Signal	Not Distracted Not Distracted	Other No Improper Action		

Appendix A.7
Historic Collision Analysis
2021



TRAVEL													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3737579 3737579	33.5826	-111.8866	01 / 21	6:39 AM	Rear End	No Injury	Southbound Eastbound	Straight Stopped	Car Car	Signal Signal	Unknown Unknown	Speed Too Fast For Conditions No Improper Action	
3738078 3738078	33.5830	-111.8861	01 / 26	12:53 PM	Sideswipe Same Direction	No Injury	Northbound Northbound	Straight Straight	Car Car	Signal Signal	Inside Vehicle Not Distracted	Other No Improper Action	
3738721 3738721	33.5825	-111.8868	02 / 01	1:33 PM	Sideswipe Same Direction	No Injury	Eastbound Eastbound	Changing Lanes Slowing	Car Pick-up Truck	Signal Signal	Not Distracted Not Distracted	Unsafe Lane Change No Improper Action	
3744991 3744991	33.5826	-111.8861	02 / 07	8:32 PM	Angle	No Injury	Northbound Eastbound	Turning Right Straight	Car Car	Signal Signal	Not Distracted Not Distracted	Made Improper Turn No Improper Action	
3745518 3745518	33.5826	-111.8861	02 / 24	1:39 PM	Rear End	No Injury	Eastbound Eastbound	Straight Slowing	Pick-up Truck Car	Signal Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3748174 3748174	33.5826	-111.8863	03 / 01	7:57 AM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Car Car	Signal Signal	Unknown Distracted	Unknown No Improper Action	
3748336 3748336	33.5825	-111.8875	03 / 18	1:29 PM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Car Car	No Controls No Controls	Unknown Not Distracted	Unknown No Improper Action	
3753059 3753059	33.5807	-111.8864	03 / 24	1:08 PM	Angle	No Injury	Eastbound Southbound	Slowing Straight	Car Car	Signal No Controls	Unknown Not Distracted	Failed to Yield Right of Way No Improper Action	
3753096 3753096	33.5825	-111.8868	03 / 26	4:36 PM	Rear End	Possible Injury	Eastbound Eastbound	Straight Straight	Car Car	Signal Signal	Not Distracted Distracted	Speed Too Fast For Conditions No Improper Action	
3770373 3770373	33.5826	-111.8860	04 / 10	1:00 PM	Rear End	Possible Injury	Westbound Westbound	Straight Stopped	Car Car	Signal Signal	Inside Vehicle Not Distracted	Speed Too Fast For Conditions	
3770424 3770424	33.5826	-111.8867	04 / 12	10:48 AM	Angle	Possible Injury	Westbound Westbound	Other Straight	Car Car	No Controls No Controls	Unknown Not Distracted	Failed to Yield Right of Way No Improper Action	
3782471 3782471	33.5826	-111.8855	05 / 13	4:52 PM	Rear End	Possible Injury	Westbound Westbound	Straight Stopped	Pick-up Truck Car	Signal Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions	
3801013 3801013	33.5826	-111.8855	07 / 14	12:40 PM	Rear End	No Injury	Westbound Westbound	Slowing Slowing	Car Car	No Controls No Controls	Unknown Not Distracted	Speed Too Fast For Conditions	Followed Too Closely
3801131 3801131	33.5826	-111.8848	07 / 18	1:11 PM	Rear End	No Injury	Westbound Westbound	Slowing Stopped	Truck Car	Signal Signal	Not Distracted Not Distracted	Followed Too Closely	
3801504 3801504	33.5826	-111.8863	07 / 28	7:53 AM	Rear End	Suspected Minor Injury	Eastbound Eastbound	Slowing Stopped	Car Car	Signal Signal	Unknown Distracted	Followed Too Closely No Improper Action	
3816790 3816790	33.5788	-111.8864	08 / 25	8:49 AM	Sideswipe Same Direction	No Injury	Southbound Southbound	Overtaking Passir Stopped	Truck Truck	No Controls No Controls	Not Distracted Not Distracted	Other Unsafe Passing No Improper Action	
3816898 3816898	33.5825	-111.8868	08 / 31	5:31 PM	Angle	No Injury	Southbound Westbound	Turning Right Straight	Car Car	No Controls No Controls	Unknown Not Distracted	Failed to Yield Right of Way	
3817650 3817650	33.5826	-111.8857	09 / 13	10:23 AM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	Signal Signal	Unknown Distracted		
3834797 3834797	33.5826	-111.8855	09 / 22	5:28 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Pick-up Truck	Signal Signal	Unknown Not Distracted	Unknown No Improper Action	
3835164 3835164	33.5826	-111.8848	09 / 27	2:02 PM	Rear End	No Injury	Westbound Westbound	Straight Straight	Car Truck	No Controls No Controls	Unknown Distracted	Unsafe Lane Change No Improper Action	
3835671 3835671 3835671	33.5826	-111.8855	10 / 07	6:15 PM	Rear End	No Injury	Westbound Westbound Westbound	Straight Stopped Stopped	Truck Car Car	Signal Signal Signal	Unknown Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action No Improper Action	

INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3853239 3853239	33.5825	-111.8871	10 / 12	11:33 AM	Angle	No Injury	Northbound Eastbound	Straight Straight	Car Car	Stop Signs No Controls	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	
3855145 3855145	33.5820	-111.8861	11 / 27	3:21 PM	Angle	No Injury	Southbound Southbound	Turning Right Straight	Car Truck	Signal Signal	Not Distracted Not Distracted	Made Improper Turn No Improper Action	Failed to Yield Right of Way
3857827 3857827	33.5825	-111.8876	12 / 10	9:27 AM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Car Car	Signal Signal	Not Distracted Not Distracted	Other No Improper Action	
3858594 3858594	33.5826	-111.8864	12 / 21	10:39 AM	Sideswipe Same Direction	No Injury	Westbound Westbound	Turning Right Straight	Car Car	No Controls No Controls	Unknown Distracted	Failed to Yield Right of Way No Improper Action	

INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3730053 3730053	33.5825	-111.8825	01 / 05	8:46 AM	Angle	No Injury	Eastbound Westbound	Turning Right Stopped	Car Car	No Controls Traffic Control Signal	Not Distracted Not Distracted	Drove or Rode in Opposing Traffic La	
3737619 3737619	33.5825	-111.8822	01 / 25	2:20 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Pick-up Truck Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	
3745114 3745114	33.5825	-111.8836	02 / 17	4:03 PM	Rear End	No Injury	Eastbound Westbound	Straight Slowing	Car Car	No Controls No Controls	Not Distracted Not Distracted	Other	
3745122 3745122	33.5809	-111.8823	02 / 18	12:58 PM	Left-Turn-Angle	No Injury	Westbound Southbound	Turning Left Straight	Car Car	No Controls No Controls	Unknown Distracted	Failed to Yield Right of Way	
3748271 3748271	33.5825	-111.8829	03 / 11	11:37 AM	Rear End	No Injury	Eastbound Eastbound	Straight Straight	Pick-up Truck Pick-up Truck	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Other No Improper Action	
3750860 3750860	33.5811	-111.8824	03 / 18	2:20 PM	Sideswipe Same Direction	No Injury	Westbound Northbound	Turning Right Straight	Car Car	No Controls No Controls	Unknown Distracted	Failed to Yield Right of Way No Improper Action	
3753088 3753088	33.5825	-111.8827	03 / 26	12:06 PM	Sideswipe Same Direction	No Injury	Westbound Westbound	Changing Lanes Straight	Car Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Unsafe Lane Change No Improper Action	
3753089 3753089	33.5825	-111.8825	03 / 26	12:53 PM	Rear End	Possible Injury	Westbound Westbound	Slowing Stopped	Pick-up Truck Car	No Controls No Controls	Unknown Not Distracted	Followed Too Closely No Improper Action	
3753093 3753093	33.5825	-111.8829	03 / 26	2:19 PM	Rear End	Suspected Minor Injury	Eastbound Eastbound	Straight Stopped	Car Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions	
3753145 3753145	33.5825	-111.8827	03 / 28	5:58 PM	Rear End	Possible Injury	Eastbound Eastbound	Straight Straight	Not Reported Car	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	
3753169 3753169	33.5825	-111.8822	03 / 29	3:01 PM	Rear End	No Injury	Westbound Westbound	Changing Lanes Straight	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Unsafe Lane Change	
3753188 3753188	33.5825	-111.8835	03 / 31	10:48 AM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	No Controls No Controls	Unknown Not Distracted	Unknown No Improper Action	
3770304 3770304	33.5825	-111.8824	04 / 09	11:04 AM	Rear End	Possible Injury	Westbound Westbound	Straight Slowing	Car Car	Unknown Traffic Control Signal	Unknown Distracted	Speed Too Fast For Conditions No Improper Action	
3770448 3770448	33.5825	-111.8820	04 / 13	2:18 PM	Left-Turn-Angle	No Injury	Northbound Eastbound	Turning Left Straight	Car Car	No Controls No Controls	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	
3770902 3770902	33.5825	-111.8831	04 / 20	12:27 PM	Rear End	No Injury	Eastbound Eastbound	Straight Slowing	Car Car	No Controls No Controls	Not Distracted Not Distracted	Other No Improper Action	
3770921 3770921	33.5825	-111.8827	04 / 21	1:31 PM	Sideswipe Same Direction	No Injury	Westbound Westbound	Turning Left Turning Left	Pick-up Truck Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	No Improper Action	
3770939 3770939	33.5825	-111.8829	04 / 22	9:10 AM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Truck Car	No Controls No Controls	Unknown Not Distracted	Unknown No Improper Action	
3771329 3771329	33.5825	-111.8832	04 / 26	3:49 PM	Sideswipe Same Direction	No Injury	Eastbound Eastbound	Straight Straight	Car Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Unsafe Lane Change	
3781146 3781146	33.5825	-111.8833	05 / 26	1:41 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Pick-up Truck Car	No Controls No Controls	Unknown Distracted	Followed Too Closely	
3781223 3781223	33.5825	-111.8827	05 / 28	9:36 PM	Sideswipe Same Direction	No Injury	Eastbound Eastbound	Turning Left Turning Left	Car Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	No Improper Action No Improper Action	
3781995 3781995	33.5825	-111.8827	04 / 30	9:47 PM	Sideswipe Same Direction	No Injury	Eastbound Eastbound	Straight Straight	Car Car	No Controls No Controls	Unknown Not Distracted	Failed to Keep in Proper Lane No Improper Action	

INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3782202 3782202 3782202	33.5825	-111.8827	05 / 12	10:23 AM	Angle	Possible Injury	Eastbound Southbound Southbound	Straight Straight Straight	Car Car Car	Traffic Control Signal Traffic Control Signal Traffic Control Signal	Unknown Distracted Unknown	Disregarded Traffic Signal No Improper Action	
3782210 3782210 3782210	33.5825	-111.8837	05 / 12	4:18 PM	Rear End	Suspected Minor Injury	Westbound Westbound Westbound	Straight Stopped Stopped	Car Pick-up Truck Car	No Controls No Controls No Controls	Unknown Distracted Unknown	Followed Too Closely No Improper Action No Improper Action	
3788831 3788831	33.5825	-111.8817	06 / 07	12:05 PM	Sideswipe Same Direction	No Injury	Eastbound Eastbound	Changing Lanes Straight	Car Unknown	No Controls No Controls	Not Distracted Not Distracted	Unsafe Lane Change Unknown	
3789012 3789012 3789012	33.5825	-111.8824	06 / 09	4:02 PM	Rear End	No Injury	Eastbound Westbound Westbound	Turning Left Stopped Stopped	Car Car Car	Traffic Control Signal Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted Not Distracted	Drove or Rode in Opposing Traffic La No Improper Action No Improper Action	
3789125 3789125	33.5810	-111.8824	06 / 16	3:25 PM	Sideswipe Same Direction	No Injury	Northbound Northbound	Turning Left Straight	Car Car	No Controls No Controls	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	
3789202 3789202	33.5825	-111.8824	06 / 22	12:55 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Car	Traffic Control Signal Traffic Control Signal	Manually Operatic Not Distracted	Speed Too Fast For Conditions No Improper Action	
3789892 3789892 3789892	33.5825	-111.8820	06 / 29	3:16 PM	Rear End	Possible Injury	Westbound Westbound Westbound	Straight Stopped Stopped	Car Car Car	No Controls No Controls No Controls	Unknown Not Distracted Not Distracted	Unknown No Improper Action No Improper Action	
3789899 3789899	33.5811	-111.8824	06 / 30	9:42 AM	Sideswipe Same Direction	No Injury	Northbound Northbound	Changing Lanes Straight	Car Car	No Controls No Controls	Not Distracted Not Distracted	Unsafe Lane Change	
3800700 3800700	33.5825	-111.8820	07 / 09	9:35 AM	Rear End	No Injury	Westbound Westbound	Straight Straight	Car Pick-up Truck	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3801003 3801003	33.5825	-111.8820	07 / 13	1:11 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Car Pick-up Truck	Traffic Control Signal Traffic Control Signal	Other Device Not Distracted	Unknown No Improper Action	
3801543 3801543	33.5825	-111.8803	07 / 30	12:37 PM	Sideswipe Same Direction	No Injury	Westbound Westbound	Changing Lanes Straight	Car Pick-up Truck	No Controls No Controls	Unknown Not Distracted	Unsafe Lane Change No Improper Action	
3816889 3816889	33.5825	-111.8829	08 / 30	1:02 PM	Rear End	No Injury	Westbound Westbound	Slowing Stopped	Car Pick-up Truck	No Controls No Controls	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3816893 3816893 3816893	33.5825	-111.8829	08 / 31	7:45 AM	Rear End	No Injury	Westbound Westbound Westbound	Straight Stopped Stopped	Car Truck Car	No Controls No Controls No Controls	Unknown Distracted Unknown	Followed Too Closely No Improper Action No Improper Action	
3817278 3817278 3817278	33.5825	-111.8832	09 / 06	10:33 AM	Rear End	No Injury	Eastbound Eastbound Eastbound	Straight Stopped Stopped	Car Car Pick-up Truck	Traffic Control Signal Traffic Control Signal Traffic Control Signal	Unknown Distracted Unknown	Speed Too Fast For Conditions No Improper Action	
3834808 3834808	33.5801	-111.8818	09 / 23	8:36 AM	Left-Turn-Head-On	No Injury	Northbound Southbound	Turning Left Straight	Car Car	Stop Signs Stop Signs	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	
3835324 3835324 3835324	33.5825	-111.8811	10 / 04	4:53 PM	Left-Turn-Angle	Suspected Minor Injury	Southbound Eastbound Northbound	Turning Left Straight Other	Car Pick-up Truck Car	No Controls No Controls No Controls	Unknown Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	
3835657 3835657	33.5825	-111.8834	10 / 07	1:30 PM	Rear End	No Injury	Eastbound Eastbound	Straight Stopped	Truck Car	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	
3853217 3853217	33.5827	-111.8827	10 / 04	1:37 PM	Rear End	No Injury	Southbound Southbound	Straight Stopped	Car Pick-up Truck	Traffic Control Signal Traffic Control Signal	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	
3853347 3853347	33.5810	-111.8824	10 / 18	8:30 AM	Angle	Suspected Serious Injury	Eastbound Northbound	Straight Straight	Car Car	Stop Signs No Controls	Unknown Distracted	Failed to Yield Right of Way No Improper Action	
3854545 3854545	33.5809	-111.8823	10 / 27	3:22 PM	Left-Turn-Angle	Possible Injury	Eastbound Southbound	Turning Left Straight	Car Car	Stop Signs No Controls	Unknown Not Distracted	Failed to Yield Right of Way No Improper Action	
3855124 3855124	33.5831	-111.8827	11 / 09	2:05 PM	Rear End	No Injury	Southbound Southbound	Straight Turning Right	Car Car	No Controls No Controls	Not Distracted Not Distracted	No Improper Action No Improper Action	

92nd Street & Shea Boulevard - 2021 PAGE 3 OF 3													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3855186 3855186	33.5825	-111.8827	11 / 10	2:45 PM	Sideswipe Same Direction	No Injury	Southbound Southbound	Changing Lanes Straight	Car Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Unsafe Lane Change	
3855344 3855344	33.5825	-111.8826	11 / 18	10:40 AM	Sideswipe Same Direction	No Injury	Westbound Westbound	Changing Lanes Straight	Car Truck	No Controls No Controls	Unknown Distracted	Unsafe Lane Change No Improper Action	
3857669 3857669 3857669	33.5825	-111.8831	12 / 02	3:50 PM	Rear End	Possible Injury	Westbound Westbound Westbound	Straight Stopped Stopped	Car Car Car	No Controls No Controls Traffic Control Signal	Inside Vehicle Not Distracted Not Distracted	Unknown	
3857841 3857841	33.5825	-111.8805	12 / 10	4:15 PM	Rear End	No Injury	Westbound Westbound	Straight Slowing	Car Car	No Controls No Controls	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	

96th Street & Shea Boulevard - 2021													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3738785 3738785	33.5825	-111.8742	02 / 08	10:22 AM	Sideswipe Same Direction	No Injury	Southbound Westbound	Changing Lanes Straight	Unknown Car	Signal Signal	Unknown Unknown	Other Unsafe Passing No Improper Action	
3745601 3745601	33.5825	-111.8740	02 / 26	1:08 PM	Single Vehicle	No Injury	Eastbound Northbound	Straight Straight	Car Car	Signal Signal	Inside Vehicle Not Distracted	Disregarded Traffic Signal No Improper Action	
3770896 3770896	33.5825	-111.8740	04 / 19	7:32 PM	Left-Turn-Head-On	Suspected Minor Injury	Eastbound Westbound	Turning Left Straight	Car Car	Signal Signal	Unknown Not Distracted	Failed to Yield Right of Way No Improper Action	
3781107 3781107	33.5825	-111.8739	05 / 21	11:23 AM	Rear End	Possible Injury	Westbound Westbound	Slowing Slowing	Pick-up Truck Car	Signal Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3781118 3781118	33.5825	-111.8740	05 / 22	10:52 AM	Rear End	Suspected Minor Injury	Westbound Westbound	Straight Stopped	Car Car	Signal Signal	Not Distracted Not Distracted	Speed Too Fast For Conditions No Improper Action	
3781270 3781270	33.5825	-111.8744	06 / 04	3:45 PM	Rear End	Suspected Minor Injury	Eastbound Eastbound	Straight Stopped	Car Car	Signal Signal	Unknown Not Distracted	Speed Too Fast For Conditions No Improper Action	
3807057 3807057 3807057	33.5825	-111.8727	08 / 16	8:46 AM	Rear End	Suspected Minor Injury	Westbound Westbound Westbound	Straight Stopped Stopped	Car Car Car	No Controls No Controls No Controls	Unknown Distracted Not Distracted	Unknown No Improper Action No Improper Action	
3807079 3807079	33.5825	-111.8741	08 / 17	4:41 PM	Sideswipe Same Direction	No Injury	Eastbound Eastbound	Straight Straight	Car Car	No Controls No Controls	Unknown Not Distracted	Failed to Keep in Proper Lane No Improper Action	
3834817 3834817 3834817	33.5825	-111.8740	09 / 23	3:30 PM	Left-Turn-Head-On	Possible Injury	Southbound Northbound Westbound	Turning Left Straight Stopped	Car Car Car	Signal Signal Signal	Not Distracted Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action No Improper Action	
3835188 3835188	33.5825	-111.8740	09 / 28	4:09 PM	Left-Turn-Angle	No Injury	Northbound Westbound	Turning Left Straight	Car Car	Signal Signal	Unknown Not Distracted	Made Improper Turn No Improper Action	
3853262 3853262	33.5825	-111.8739	10 / 13	12:55 PM	Rear End	No Injury	Westbound Westbound	Straight Stopped	Pick-up Truck Car	Signal Signal	Not Distracted Not Distracted	Other No Improper Action	
3855022 3855022 3855022	33.5825	-111.8740	11 / 04	2:48 PM	Left-Turn-Angle	Possible Injury	Northbound Westbound Southbound	Turning Left Straight Stopped	Car Car Car	Signal Signal No Controls	Unknown Distracted Not Distracted	Failed to Yield Right of Way No Improper Action No Improper Action	
3858339 3858339	33.5826	-111.8740	12 / 16	12:00 PM	Other	Suspected Minor Injury	Northbound Northbound	Crossing Road Turning Right	Pedalcyclist Car	Signal Signal	Unknown Distracted	Other No Improper Action	

90th Street & Mountain View Road - 2021													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3738593 3738593	33.5760	-111.8806	01 / 30	1:08 PM	Other	Suspected Minor Injury	Eastbound Eastbound	Other Slowing	Pedalcyclist Pick-up Truck	No Controls No Controls	Not Distracted Not Distracted	Other No Improper Action	
3807080	33.5759	-111.8803	08 / 17	9:25 PM	Single Vehicle	Suspected Minor Injury	Northbound	Curving Road	Car	Railroad Crossing Dev	Not Distracted	No Improper Action	
3855199 3855199	33.5761	-111.8807	11 / 11	11:40 AM	Left-Turn-Angle	Suspected Minor Injury	Eastbound Northbound	Turning Left Straight	Car Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	

92nd Street & Mountain View Road - 2021													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3730042	33.5752	-111.8867	01 / 04	9:06 AM	Single Vehicle	No Injury	Southbound	Turning Left	Car	Stop Signs	Unknown	No Improper Action	
3770929 3770929 3770929	33.5749	-111.8861	04 / 21	5:19 PM	Rear End	Suspected Minor Injury	Southbound Southbound Southbound	Straight Stopped Stopped	Car Car Car	No Controls No Controls No Controls	Unknown Not Distracted Not Distracted	Other No Improper Action	
3791802 3791802	33.5750	-111.8861	07 / 06	12:37 PM	Other	No Injury	Southbound Northbound	Backing Stopped	Pick-up Truck Car	Traffic Control Signal Traffic Control Signal	Unknown Distracted	Other No Improper Action	
3816888 3816888	33.5762	-111.8858	08 / 30	12:57 PM	Angle	Possible Injury	Northbound Northbound	Turning Left Straight	Pick-up Truck Pick-up Truck	No Controls No Controls	Not Distracted Not Distracted	Failed to Yield Right of Way No Improper Action	
3834859 3834859	33.5750	-111.8861	09 / 25	3:00 PM	Rear End	No Injury	Northbound Northbound	Straight Stopped	Car Car	Traffic Control Signal Traffic Control Signal	Not Distracted Not Distracted	Other No Improper Action	

96th Street & Mountain View Road - 2021													
INCIDENT ID	LATITUDE	LONGITUDE	DATE	TIME	COLLISION MANNER	INJURY SEVERITY	TRAVEL DIRECTION	ACTION	VEHICLE	CONTROL	DISTRACTION	FIRST VIOLATION	SECOND VIOLATION
3753154 3753154	33.5753	-111.8740	03 / 29	9:48 AM	Angle	Suspected Serious Injury	Southbound Southbound	Turning Left Straight	Car Pick-up Truck	Signal Signal	Unknown Not Distracted	Failed to Yield Right of Way No Improper Action	
3789124 3789124	33.5760	-111.8740	06 / 16	1:33 PM	Sideswipe Same Direction	No Injury	Southbound Southbound	Changing Lanes Straight	Car Car	No Controls No Controls	Unknown Distracted	Unsafe Lane Change	

Appendix A.8

Historic Collision Analysis

North, Cochise, and Ironwood



92nd Street and North Lane				
29 May 2016	Left-Turn-Angle	Westbound Turning Left and Northbound Straight	Suspected Minor Injury	Failed to Yield Right of Way
28 December 2016	Left-Turn-Head-On	Southbound Turning Left and Northbound Straight	Possible Injury	Made Improper Turn
23 March 2018	Angle	Northbound Turning Right and Northbound Turning Left	No Injury	Made Improper Turn
13 July 2018	Left-Turn-Angle	Eastbound Turning Left and Northbound Straight	No Injury	Failed to Yield Right of Way

92nd Street and Cochise Drive				
18 June 2015	Angle	Westbound Straight and Northbound Straight	Possible Injury	Failed to Yield Right of Way
2 December 2015	Rear End	Westbound Turning Left and Westbound Turning Left	No Injury	Unknown
12 April 2016	Single Vehicle	Westbound Straight	Possible Injury	Made Improper Turn
8 September 2016	Left-Turn-Head-On	Northbound Turning Left and Southbound Straight	No Injury	Failed to Yield Right of Way
30 November 2016	Left-Turn-Angle	Eastbound Turning Left and Southbound Straight	No Injury	Failed to Yield Right of Way
1 May 2017	Angle	Westbound Turning Left and Northbound Turning Left	No Injury	Failed to Yield Right of Way
8 June 2017	Left-Turn-Angle	Eastbound Turning Left and Northbound Straight	No Injury	Failed to Yield Right of Way
9 May 2018	Left-Turn-Angle	Eastbound Turning Left and Northbound Straight	No Injury	Failed to Yield Right of Way

92nd Street and Ironwood Lane				
14 April 2016	Rear End	Northbound Turning Left and Northbound Stopped	No Injury	Unknown

Appendix B

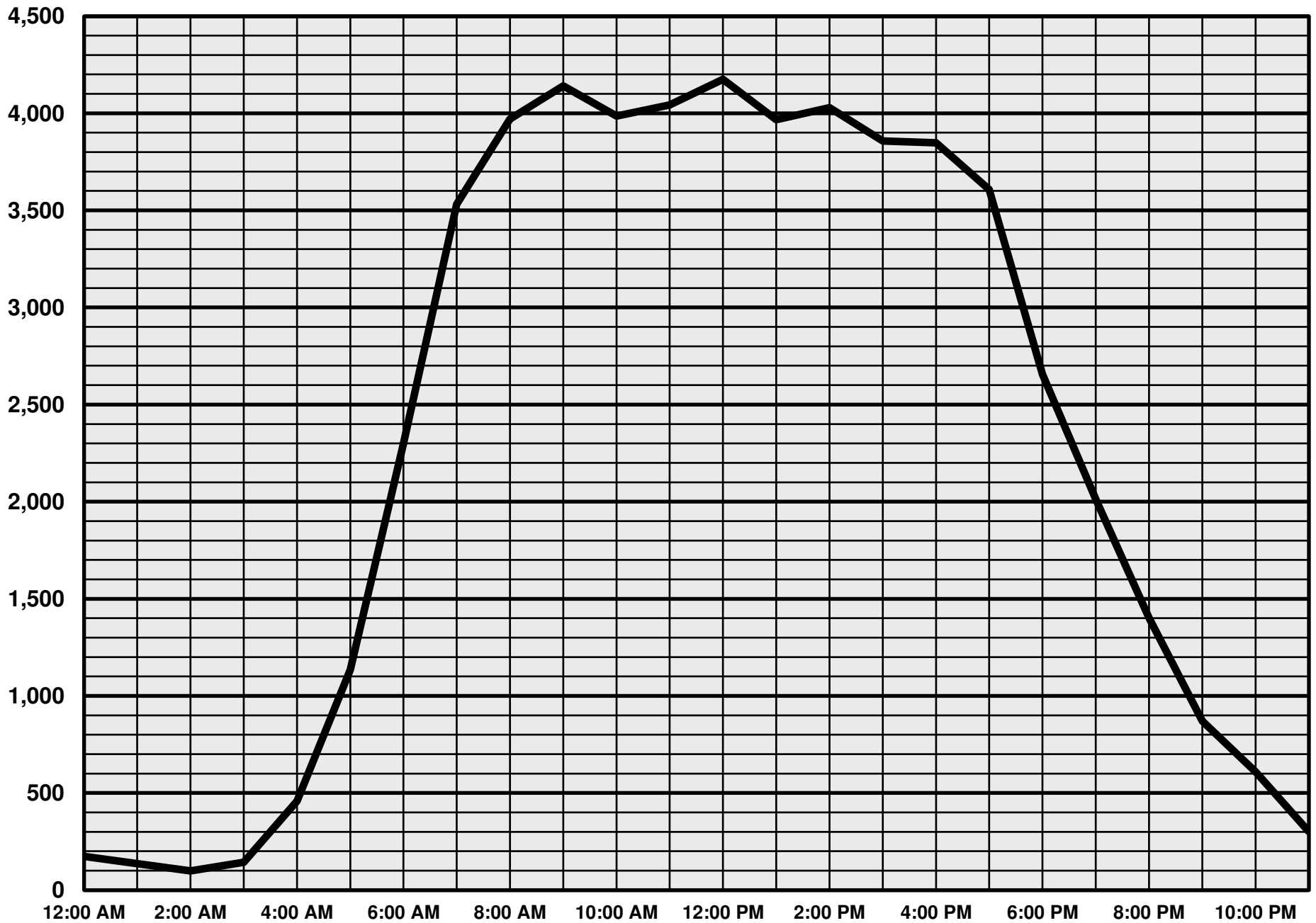
2023 Traffic Counts



Appendix B.1
2023 Traffic Counts
92nd Street and Shea Boulevard



MERCADO VILLAGE
92nd STREET and SHEA BOULEVARD - TUESDAY - 7/11/2023



MERCADO VILLAGE
92nd STREET and SHEA BOULEVARD - TUESDAY - 7/11/2023
EXISTING 5:00 AM to 10:00 AM



BEGIN TIME	SHEA BOULEVARD EASTBOUND				SHEA BOULEVARD WESTBOUND				92nd STREET NORTHBOUND				92nd STREET 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	72	10	83	1	60	5	66	8	6	2	16	3	10	10	23	188	1,135
5:15 AM	2	85	14	101	1	86	1	88	7	4	1	12	2	10	5	17	218	1,348
5:30 AM	6	132	33	171	8	95	2	105	13	5	6	24	9	11	13	33	333	1,655
5:45 AM	5	160	49	214	5	117	3	125	9	6	5	20	7	16	14	37	396	1,991
6:00 AM	11	159	40	210	8	114	2	124	16	15	5	36	6	17	8	31	401	2,298
6:15 AM	6	205	53	264	9	174	2	185	13	12	2	27	11	19	19	49	525	2,605
6:30 AM	13	219	87	319	23	188	7	218	19	13	7	39	11	51	31	93	669	2,931
6:45 AM	15	243	84	342	16	203	6	225	33	20	9	62	8	43	23	74	703	3,259
7:00 AM	20	256	64	340	10	229	9	248	22	19	8	49	17	36	18	71	708	3,532
7:15 AM	20	263	95	378	18	265	13	296	49	21	9	79	21	51	26	98	851	3,770
7:30 AM	24	308	102	434	27	333	11	371	42	38	7	87	17	62	26	105	997	3,854
7:45 AM	21	267	102	390	24	310	14	348	41	40	17	98	22	75	43	140	976	3,851
8:00 AM	27	316	94	437	17	260	14	291	38	38	17	93	28	73	24	125	946	3,971
8:15 AM	25	277	76	378	21	304	18	343	54	31	10	95	23	64	32	119	935	3,982
8:30 AM	25	291	105	421	12	287	17	316	52	38	21	111	28	75	43	146	994	4,105
8:45 AM	41	323	114	478	25	318	23	366	65	41	22	128	36	56	32	124	1,096	4,146
9:00 AM	29	276	81	386	15	259	20	294	66	55	23	144	28	66	39	133	957	4,141
9:15 AM	26	347	88	461	19	294	14	327	86	46	23	155	27	56	32	115	1,058	4,169
9:30 AM	36	323	81	440	26	271	18	315	88	49	25	162	23	54	41	118	1,035	4,110
9:45 AM	41	310	84	435	19	339	13	371	89	48	19	156	30	50	49	129	1,091	4,074
AM PEAK	126	1,261	314	1,701	75	1,194	63	1,332	365	193	92	650	111	210	165	486	4,169	4,169
PHF	0.77	0.91	0.89	0.92	0.72	0.88	0.88	0.90	0.89	0.97	0.92	0.90	0.90	0.94	0.84	0.94		

MERCADO VILLAGE

92nd STREET and SHEA BOULEVARD - TUESDAY - 7/11/2023

EXISTING 10:00 AM to 3:00 PM



BEGIN TIME	SHEA BOULEVARD EASTBOUND				SHEA BOULEVARD WESTBOUND				92nd STREET NORTHBOUND				92nd STREET 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	23	281	61	365	11	290	18	319	102	50	25	177	31	50	43	124	985	3,986
10:15 AM	31	288	71	390	28	291	18	337	82	58	23	163	33	42	34	109	999	4,001
10:30 AM	41	276	67	384	15	272	24	311	106	52	22	180	29	54	41	124	999	4,010
10:45 AM	22	277	75	374	18	294	21	333	116	57	22	195	22	42	37	101	1,003	4,035
11:00 AM	33	271	68	372	16	289	19	324	85	59	31	175	35	56	38	129	1,000	4,043
11:15 AM	38	278	83	399	12	306	12	330	90	66	22	178	32	35	34	101	1,008	4,091
11:30 AM	45	261	50	356	18	303	13	334	127	50	20	197	34	55	48	137	1,024	4,099
11:45 AM	40	300	53	393	12	293	20	325	94	51	32	177	21	57	38	116	1,011	4,143
12:00 PM	52	266	50	368	14	287	16	317	128	58	31	217	37	61	48	146	1,048	4,175
12:15 PM	22	280	57	359	16	331	15	362	81	55	19	155	33	65	42	140	1,016	4,105
12:30 PM	58	265	76	399	21	302	17	340	96	75	30	201	29	52	47	128	1,068	4,082
12:45 PM	38	302	68	408	25	280	17	322	87	57	25	169	33	63	48	144	1,043	3,976
1:00 PM	39	283	68	390	14	258	12	284	90	58	23	171	33	51	49	133	978	3,967
1:15 PM	43	297	64	404	12	302	18	332	73	52	19	144	29	47	37	113	993	3,975
1:30 PM	45	254	75	374	14	266	23	303	88	54	22	164	28	47	46	121	962	4,016
1:45 PM	49	314	86	449	14	309	16	339	77	40	22	139	20	52	35	107	1,034	4,029
2:00 PM	42	252	51	345	13	283	15	311	111	63	26	200	41	39	50	130	986	4,029
2:15 PM	34	281	48	363	17	384	15	416	83	42	13	138	29	44	44	117	1,034	4,082
2:30 PM	38	246	48	332	14	286	20	320	98	67	30	195	38	48	42	128	975	3,990
2:45 PM	43	303	45	391	10	338	13	361	82	61	32	175	25	43	39	107	1,034	3,984
MD PEAK	170	1,113	251	1,534	76	1,200	65	1,341	392	245	105	742	132	241	185	558	4,175	4,175
PHF	0.73	0.92	0.83	0.94	0.76	0.91	0.96	0.93	0.77	0.82	0.85	0.93	0.89	0.93	0.96	0.96		

MERCADO VILLAGE

92nd STREET and SHEA BOULEVARD - TUESDAY - 7/11/2023

EXISTING 3:00 PM to 8:00 PM

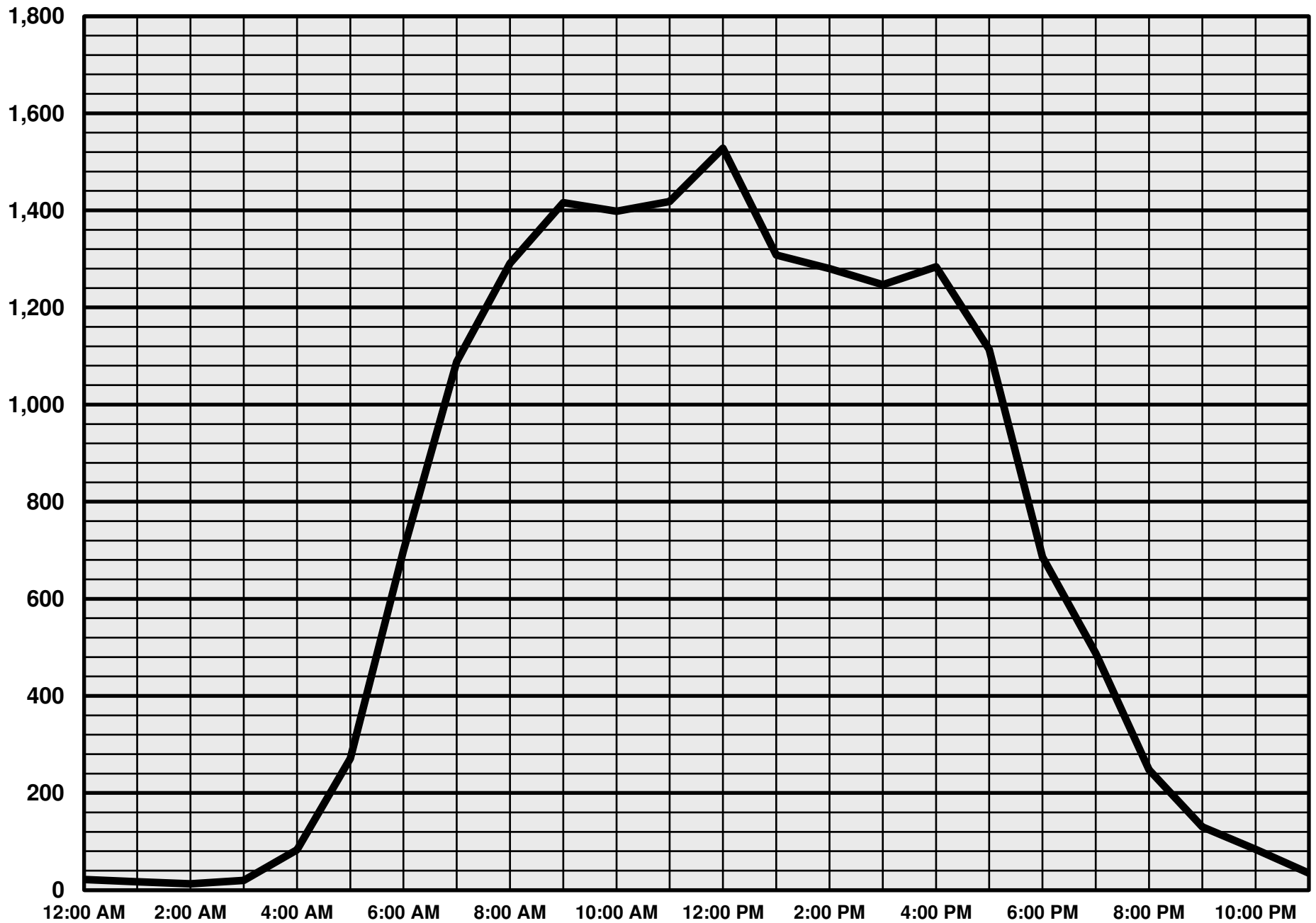


BEGIN TIME	SHEA BOULEVARD EASTBOUND				SHEA BOULEVARD WESTBOUND				92nd STREET NORTHBOUND				92nd STREET SOUTHBOUND				ALL	60
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	TOTAL	MIN. TOTAL
3:00 PM	38	288	55	381	12	314	21	347	110	65	23	198	25	39	49	113	1,039	3,857
3:15 PM	53	274	41	368	12	270	13	295	81	70	26	177	26	35	41	102	942	3,797
3:30 PM	40	282	54	376	13	283	11	307	99	57	25	181	34	29	42	105	969	3,806
3:45 PM	52	279	41	372	14	238	18	270	76	68	18	162	23	43	37	103	907	3,821
4:00 PM	44	275	33	352	12	299	11	322	118	65	30	213	28	31	33	92	979	3,848
4:15 PM	49	277	36	362	9	260	19	288	92	58	25	175	40	45	41	126	951	3,914
4:30 PM	40	292	36	368	7	278	11	296	129	68	17	214	29	38	39	106	984	3,861
4:45 PM	62	288	25	375	10	247	15	272	99	75	23	197	22	41	27	90	934	3,779
5:00 PM	57	280	39	376	10	295	22	327	111	87	28	226	36	38	42	116	1,045	3,607
5:15 PM	46	291	30	367	9	223	18	250	79	67	32	178	31	43	29	103	898	3,341
5:30 PM	43	299	25	367	10	235	10	255	86	67	22	175	32	38	35	105	902	3,106
5:45 PM	54	259	20	333	2	206	13	221	53	55	22	130	28	20	30	78	762	2,835
6:00 PM	45	255	21	321	7	241	15	263	42	31	20	93	40	24	38	102	779	2,656
6:15 PM	42	217	19	278	8	174	13	195	51	43	8	102	28	25	35	88	663	2,462
6:30 PM	28	198	35	261	8	179	12	199	44	36	13	93	27	26	25	78	631	2,283
6:45 PM	33	191	24	248	5	157	6	168	31	44	11	86	34	24	23	81	583	2,145
7:00 PM	35	196	11	242	2	166	10	178	36	37	13	86	24	24	31	79	585	2,013
7:15 PM	42	160	11	213	5	136	9	150	29	27	11	67	16	20	18	54	484	1,844
7:30 PM	21	156	10	187	7	154	14	175	39	22	6	67	21	15	28	64	493	1,732
7:45 PM	32	154	16	202	2	123	7	132	29	27	9	65	17	10	25	52	451	1,571
PM PEAK	208	1,137	136	1,481	36	1,080	67	1,183	431	288	93	812	127	162	149	438	3,914	3,914
PHF	0.84	0.97	0.87	0.98	0.90	0.92	0.76	0.90	0.84	0.83	0.83	0.90	0.79	0.90	0.89	0.87		

Appendix B.2
2023 Traffic Counts
92nd Street and North Lane



MERCADO VILLAGE
92nd STREET and NORTH LANE - TUESDAY - 7/11/2023



MERCADO VILLAGE
92nd STREET and NORTH LANE - TUESDAY - 7/11/2023
EXISTING 5:00 AM to 10:00 AM



BEGIN TIME	NORTH LANE EASTBOUND				NORTH LANE WESTBOUND				92nd STREET NORTHBOUND				92nd STREET 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	7	9	0	9	4	13	4	16	1	21	43	271
5:15 AM	0	0	0	0	1	0	5	6	0	7	2	9	5	16	4	25	40	351
5:30 AM	2	2	0	4	2	2	9	13	0	13	6	19	10	36	6	52	88	433
5:45 AM	0	0	0	0	4	0	14	18	2	6	4	12	23	38	9	70	100	567
6:00 AM	0	1	2	3	3	3	16	22	6	20	7	33	16	40	9	65	123	699
6:15 AM	1	0	0	1	5	0	7	12	1	19	8	28	6	58	17	81	122	750
6:30 AM	0	0	3	3	9	1	13	23	3	26	6	35	18	113	30	161	222	898
6:45 AM	1	2	2	5	7	4	17	28	6	44	6	56	24	98	21	143	232	982
7:00 AM	1	0	2	3	5	1	15	21	1	33	6	40	18	74	18	110	174	1,088
7:15 AM	1	1	2	4	11	2	20	33	3	58	8	69	21	116	27	164	270	1,231
7:30 AM	5	0	2	7	8	0	25	33	9	57	9	75	26	144	21	191	306	1,239
7:45 AM	6	1	4	11	4	3	18	25	11	74	16	101	21	148	32	201	338	1,264
8:00 AM	2	0	3	5	9	3	18	30	5	73	20	98	19	134	31	184	317	1,291
8:15 AM	5	1	3	9	8	0	20	28	3	70	7	80	18	112	31	161	278	1,315
8:30 AM	6	1	2	9	8	1	32	41	5	73	11	89	21	144	27	192	331	1,396
8:45 AM	4	0	3	7	13	0	33	46	6	91	20	117	23	137	35	195	365	1,427
9:00 AM	5	0	5	10	11	0	28	39	2	111	17	130	22	117	23	162	341	1,416
9:15 AM	4	3	6	13	9	2	24	35	5	127	16	148	23	122	18	163	359	1,417
9:30 AM	2	1	9	12	6	1	31	38	6	129	16	151	24	103	34	161	362	1,403
9:45 AM	4	1	9	14	10	1	30	41	8	122	16	146	25	110	18	153	354	1,393
AM PEAK	15	4	23	42	39	3	116	158	19	458	69	546	92	479	110	681	1,427	1,427
PHF	0.75	0.33	0.64	0.81	0.75	0.38	0.88	0.86	0.79	0.89	0.86	0.86	0.96	0.87	0.79	0.87		

MERCADO VILLAGE

92nd STREET and NORTH LANE - TUESDAY - 7/11/2023

EXISTING 10:00 AM to 3:00 PM



BEGIN TIME	NORTH LANE EASTBOUND				NORTH LANE WESTBOUND				92nd STREET NORTHBOUND				92nd STREET SOUTHBOUND				ALL	60
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	TOTAL	MIN. TOTAL
10:00 AM	4	0	7	11	6	1	44	51	2	129	27	158	19	90	13	122	342	1,398
10:15 AM	12	3	4	19	11	1	37	49	5	114	17	136	19	109	13	141	345	1,405
10:30 AM	11	0	7	18	10	2	22	34	7	147	10	164	19	95	22	136	352	1,420
10:45 AM	7	0	4	11	5	0	41	46	5	147	15	167	21	95	19	135	359	1,434
11:00 AM	12	0	13	25	9	0	34	43	2	129	10	141	27	91	22	140	349	1,418
11:15 AM	8	1	11	20	15	1	41	57	6	129	18	153	26	89	15	130	360	1,464
11:30 AM	11	0	8	19	15	0	33	48	8	153	15	176	26	86	11	123	366	1,453
11:45 AM	10	0	7	17	11	1	39	51	1	128	24	153	24	85	13	122	343	1,496
12:00 PM	10	2	12	24	9	0	42	51	6	165	24	195	31	82	12	125	395	1,528
12:15 PM	5	1	6	12	19	0	31	50	5	119	25	149	29	92	17	138	349	1,480
12:30 PM	6	0	6	12	19	2	58	79	8	137	24	169	34	99	16	149	409	1,425
12:45 PM	5	1	7	13	20	2	59	81	4	105	16	125	36	102	18	156	375	1,357
1:00 PM	8	1	7	16	11	1	42	54	7	121	16	144	24	87	22	133	347	1,308
1:15 PM	3	0	4	7	14	1	46	61	5	95	3	103	27	73	23	123	294	1,309
1:30 PM	9	4	6	19	16	1	43	60	3	112	11	126	31	81	24	136	341	1,297
1:45 PM	8	0	6	14	8	1	50	59	6	81	14	101	18	115	19	152	326	1,304
2:00 PM	10	1	5	16	11	0	44	55	3	146	25	174	18	75	10	103	348	1,280
2:15 PM	9	0	6	15	7	0	34	41	7	95	15	117	16	83	10	109	282	1,267
2:30 PM	4	0	11	15	8	0	44	52	2	147	22	171	27	74	9	110	348	1,283
2:45 PM	10	0	5	15	5	0	46	51	5	119	14	138	21	65	12	98	302	1,243
MD PEAK	26	4	31	61	67	4	190	261	23	526	89	638	130	375	63	568	1,528	1,528
PHF	0.65	0.50	0.65	0.64	0.84	0.50	0.81	0.81	0.72	0.80	0.89	0.81	0.90	0.92	0.88	0.91		

MERCADO VILLAGE

92nd STREET and NORTH LANE - TUESDAY - 7/11/2023

EXISTING 3:00 PM to 8:00 PM

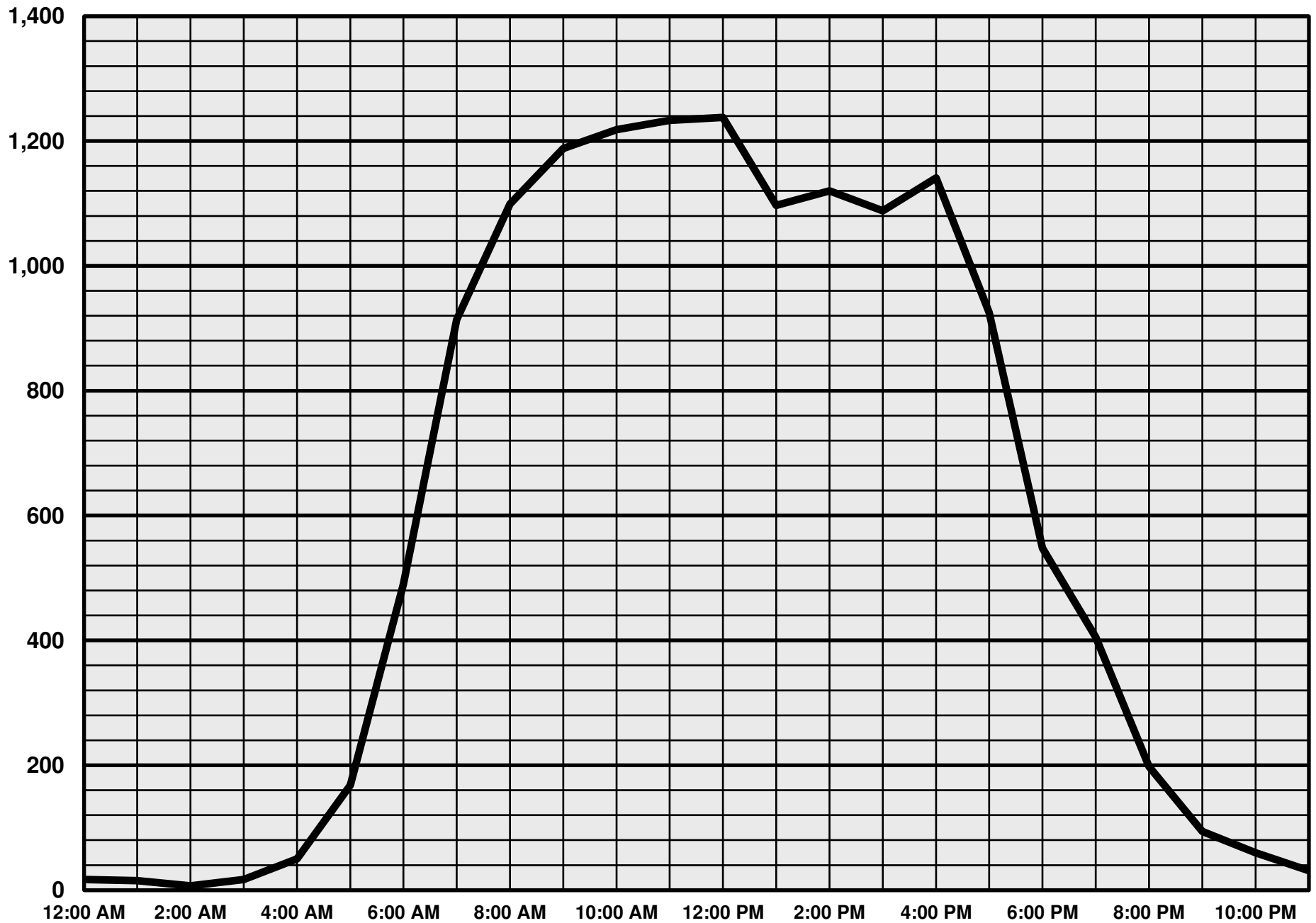


BEGIN TIME	NORTH LANE EASTBOUND				NORTH LANE WESTBOUND				92nd STREET NORTHBOUND				92nd STREET SOUTHBOUND				ALL TOTAL	60 MIN. TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
3:00 PM	7	0	7	14	6	0	31	37	3	160	15	178	19	82	5	106	335	1,247
3:15 PM	12	3	8	23	9	0	34	43	4	131	9	144	12	61	15	88	298	1,236
3:30 PM	6	1	8	15	6	1	37	44	6	138	9	153	29	58	9	96	308	1,230
3:45 PM	12	1	9	22	11	0	31	42	8	119	17	144	19	72	7	98	306	1,270
4:00 PM	8	1	13	22	4	0	31	35	3	174	14	191	15	56	5	76	324	1,284
4:15 PM	10	1	10	21	4	0	29	33	3	136	9	148	29	55	6	90	292	1,310
4:30 PM	11	1	19	31	10	0	27	37	1	176	22	199	17	57	7	81	348	1,304
4:45 PM	8	1	14	23	5	1	42	48	2	147	24	173	21	54	1	76	320	1,234
5:00 PM	7	0	5	12	8	0	44	52	0	175	24	199	25	62	0	87	350	1,114
5:15 PM	5	1	5	11	4	1	47	52	0	126	15	141	25	54	3	82	286	936
5:30 PM	8	0	4	12	9	1	30	40	3	137	13	153	30	38	5	73	278	834
5:45 PM	8	0	4	12	11	1	33	45	1	89	11	101	21	20	1	42	200	729
6:00 PM	3	0	2	5	8	1	34	43	3	56	13	72	17	26	9	52	172	686
6:15 PM	1	0	1	2	12	1	25	38	2	76	14	92	19	28	5	52	184	654
6:30 PM	6	0	2	8	5	0	21	26	0	66	4	70	20	45	4	69	173	601
6:45 PM	0	0	2	2	5	1	29	35	2	57	8	67	15	30	8	53	157	541
7:00 PM	1	0	1	2	8	0	27	35	1	58	7	66	14	21	2	37	140	488
7:15 PM	4	3	5	12	8	0	18	26	0	45	12	57	10	20	6	36	131	419
7:30 PM	5	0	1	6	7	1	20	28	1	42	4	47	5	27	0	32	113	362
7:45 PM	0	0	0	0	8	0	14	22	0	51	3	54	11	17	0	28	104	296
PM PEAK	36	3	48	87	27	1	142	170	6	634	79	719	92	228	14	334	1,310	1,310
PHF	0.82	0.75	0.63	0.70	0.68	0.25	0.81	0.82	0.50	0.90	0.82	0.82	0.79	0.92	0.50	0.93		

Appendix B.3
2023 Traffic Counts
92nd Street and Cochise Drive



MERCADO VILLAGE
92nd STREET and COCHISE DRIVE - TUESDAY - 7/11/2023



MERCADO VILLAGE
92nd STREET and COCHISE DRIVE - TUESDAY - 7/11/2023
EXISTING 5:00 AM to 10:00 AM



BEGIN TIME	COCHISE DRIVE EASTBOUND				COCHISE DRIVE WESTBOUND				92nd STREET NORTHBOUND				92nd STREET 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	0	1	0	13	0	13	0	17	0	17	31	168
5:15 AM	0	0	0	0	0	0	0	0	2	9	0	11	0	14	1	15	26	215
5:30 AM	1	0	1	2	1	0	0	1	4	20	0	24	1	19	6	26	53	278
5:45 AM	0	0	0	0	2	0	0	2	5	11	2	18	1	29	8	38	58	380
6:00 AM	0	0	1	1	3	0	0	3	5	35	0	40	1	26	7	34	78	490
6:15 AM	3	0	0	3	2	0	0	2	6	26	1	33	2	40	9	51	89	552
6:30 AM	1	0	2	3	5	1	0	6	13	33	0	46	1	67	32	100	155	678
6:45 AM	0	0	1	1	4	0	1	5	17	49	3	69	1	68	24	93	168	784
7:00 AM	5	0	0	5	4	2	0	6	7	45	1	53	7	57	12	76	140	914
7:15 AM	3	0	3	6	11	4	2	17	11	64	1	76	2	74	40	116	215	1,036
7:30 AM	9	0	5	14	10	2	0	12	14	69	3	86	1	126	22	149	261	1,073
7:45 AM	10	0	7	17	11	1	2	14	14	89	3	106	0	129	32	161	298	1,090
8:00 AM	4	0	8	12	13	1	1	15	12	90	3	105	0	100	30	130	262	1,099
8:15 AM	10	0	7	17	7	2	1	10	16	75	6	97	1	91	36	128	252	1,121
8:30 AM	4	2	8	14	15	0	1	16	8	84	3	95	5	120	28	153	278	1,153
8:45 AM	8	0	11	19	4	1	3	8	11	116	5	132	8	121	19	148	307	1,195
9:00 AM	10	0	6	16	6	0	2	8	16	110	6	132	5	109	14	128	284	1,188
9:15 AM	14	0	13	27	6	1	2	9	13	130	0	143	6	78	21	105	284	1,182
9:30 AM	18	2	10	30	10	1	1	12	12	128	2	142	8	100	28	136	320	1,189
9:45 AM	13	0	10	23	9	0	2	11	5	125	4	134	6	106	20	132	300	1,191
AM PEAK	50	2	40	92	26	3	8	37	52	484	13	549	27	408	82	517	1,195	1,195
PHF	0.69	0.25	0.77	0.77	0.65	0.75	0.67	0.77	0.81	0.93	0.54	0.77	0.84	0.84	0.73	0.87		

MERCADO VILLAGE

92nd STREET and COCHISE DRIVE - TUESDAY - 7/11/2023

EXISTING 10:00 AM to 3:00 PM



BEGIN TIME	COCHISE DRIVE EASTBOUND				COCHISE DRIVE WESTBOUND				92nd STREET NORTHBOUND				92nd STREET SOUTHBOUND				ALL	60
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	TOTAL	MIN. TOTAL
10:00 AM	18	0	9	27	7	1	4	12	8	126	1	135	6	75	23	104	278	1,218
10:15 AM	19	1	10	30	6	0	0	6	8	124	1	133	4	100	18	122	291	1,238
10:30 AM	17	1	13	31	7	0	2	9	13	145	2	160	4	94	24	122	322	1,256
10:45 AM	17	0	7	24	7	0	4	11	11	161	3	175	6	88	23	117	327	1,261
11:00 AM	18	1	14	33	13	2	3	18	16	125	2	143	6	82	16	104	298	1,233
11:15 AM	16	0	15	31	8	1	5	14	10	124	3	137	5	96	26	127	309	1,214
11:30 AM	22	0	11	33	11	0	2	13	9	149	5	163	9	93	16	118	327	1,235
11:45 AM	16	0	13	29	9	0	4	13	7	142	4	153	8	88	8	104	299	1,220
12:00 PM	23	0	16	39	17	1	1	19	9	166	2	177	12	18	14	44	279	1,238
12:15 PM	11	0	12	23	14	0	4	18	11	155	4	170	7	94	18	119	330	1,271
12:30 PM	12	0	10	22	11	1	8	20	12	135	1	148	6	89	27	122	312	1,187
12:45 PM	14	0	11	25	20	0	9	29	8	126	2	136	3	108	16	127	317	1,137
1:00 PM	14	0	13	27	23	1	2	26	12	144	1	157	4	81	17	102	312	1,097
1:15 PM	15	1	9	25	10	0	5	15	9	88	0	97	4	80	25	109	246	1,080
1:30 PM	9	0	8	17	12	0	1	13	11	115	2	128	2	84	18	104	262	1,096
1:45 PM	13	0	8	21	11	0	1	12	6	122	2	130	1	95	18	114	277	1,135
2:00 PM	16	0	19	35	12	1	0	13	6	140	1	147	4	79	17	100	295	1,120
2:15 PM	13	0	8	21	11	1	2	14	17	115	3	135	1	78	13	92	262	1,142
2:30 PM	15	0	18	33	9	1	3	13	10	140	2	152	3	88	12	103	301	1,136
2:45 PM	17	1	12	30	7	0	3	10	9	129	4	142	5	67	8	80	262	1,098
MD PEAK	51	0	46	97	68	2	23	93	43	560	8	611	20	372	78	470	1,271	1,271
PHF	0.91	0.00	0.88	0.90	0.74	0.50	0.64	0.80	0.90	0.90	0.50	0.80	0.71	0.86	0.72	0.93		

MERCADO VILLAGE

92nd STREET and COCHISE DRIVE - TUESDAY - 7/11/2023

EXISTING 3:00 PM to 8:00 PM

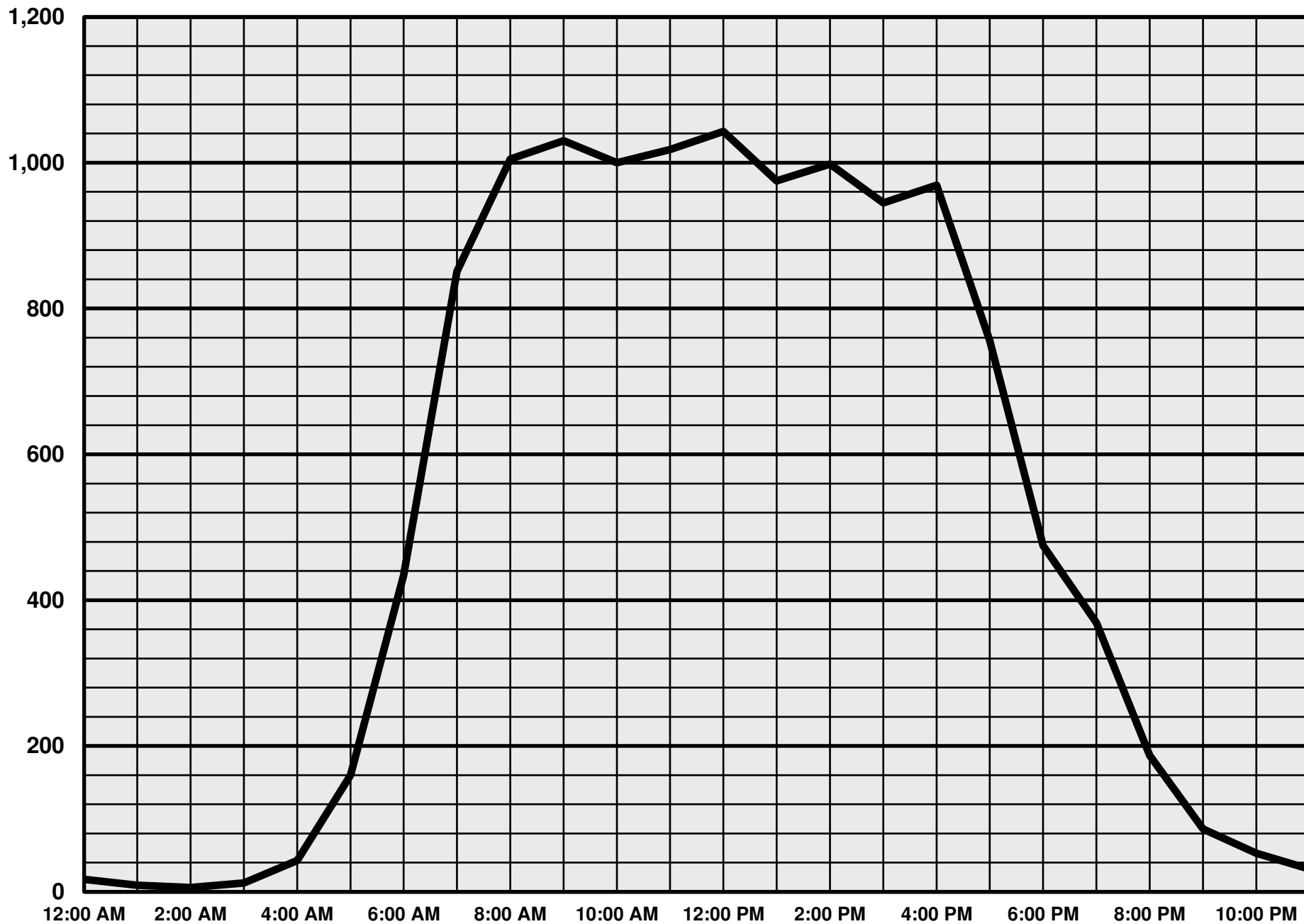


BEGIN TIME	COCHISE DRIVE EASTBOUND				COCHISE DRIVE WESTBOUND				92nd STREET NORTHBOUND				92nd STREET SOUTHBOUND				ALL	60
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	TOTAL	MIN. TOTAL
3:00 PM	23	0	17	40	8	0	0	8	3	170	1	174	0	80	15	95	317	1,088
3:15 PM	24	0	11	35	5	1	2	8	7	126	1	134	2	69	8	79	256	1,056
3:30 PM	9	0	10	19	7	1	1	9	4	146	1	151	1	74	9	84	263	1,055
3:45 PM	17	0	11	28	5	0	3	8	3	116	3	122	5	81	8	94	252	1,094
4:00 PM	16	0	21	37	7	1	5	13	2	159	0	161	3	64	7	74	285	1,141
4:15 PM	13	0	6	19	7	0	4	11	6	135	3	144	5	67	9	81	255	1,153
4:30 PM	21	0	10	31	6	0	2	8	3	175	0	178	7	75	3	85	302	1,149
4:45 PM	20	0	9	29	10	0	4	14	3	161	1	165	3	83	5	91	299	1,059
5:00 PM	23	0	6	29	5	0	2	7	3	178	0	181	4	70	6	80	297	925
5:15 PM	12	0	7	19	5	0	2	7	7	141	0	148	7	62	8	77	251	770
5:30 PM	19	1	4	24	11	0	3	14	6	114	2	122	6	45	1	52	212	667
5:45 PM	13	0	5	18	3	0	2	5	4	89	3	96	2	39	5	46	165	582
6:00 PM	10	0	7	17	5	0	1	6	1	79	1	81	0	38	0	38	142	548
6:15 PM	14	0	2	16	5	0	2	7	3	64	2	69	0	49	7	56	148	515
6:30 PM	10	0	4	14	4	1	4	9	4	60	0	64	2	36	2	40	127	471
6:45 PM	2	1	2	5	10	0	3	13	3	60	1	64	1	46	2	49	131	442
7:00 PM	3	0	2	5	7	0	2	9	0	61	2	63	1	31	0	32	109	405
7:15 PM	9	1	3	13	3	0	1	4	2	47	1	50	1	34	2	37	104	360
7:30 PM	9	0	7	16	6	0	0	6	3	36	1	40	2	34	0	36	98	304
7:45 PM	1	0	3	4	9	0	0	9	1	45	1	47	0	33	1	34	94	245
PM PEAK	77	0	31	108	28	0	12	40	15	649	4	668	19	295	23	337	1,153	1,153
PHF	0.84	0.00	0.78	0.87	0.70	0.00	0.75	0.71	0.63	0.91	0.33	0.71	0.68	0.89	0.64	0.93		

Appendix B.4
2023 Traffic Counts
92nd Street and Ironwood Lane



MERCADO VILLAGE
92nd STREET and IRONWOOD LANE - TUESDAY - 7/11/2023



MERCADO VILLAGE
92nd STREET and IRONWOOD LANE - TUESDAY - 7/11/2023
EXISTING 5:00 AM to 10:00 AM



BEGIN TIME	IRONWOOD LANE EASTBOUND				IRONWOOD LANE WESTBOUND				92nd STREET NORTHBOUND				92nd STREET 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	15	0	15	0	13	5	18	33	160
5:15 AM	0	0	0	0	0	0	0	0	1	12	0	13	1	10	3	14	27	200
5:30 AM	2	0	1	3	0	0	0	0	0	20	0	20	0	13	8	21	44	249
5:45 AM	0	0	0	0	0	0	0	0	0	21	4	25	6	17	8	31	56	342
6:00 AM	0	0	0	0	1	0	0	1	1	41	0	42	2	22	6	30	73	434
6:15 AM	1	0	0	1	0	0	0	0	1	31	1	33	3	29	10	42	76	480
6:30 AM	1	0	2	3	0	0	2	2	9	49	0	58	8	47	19	74	137	576
6:45 AM	0	0	0	0	2	0	1	3	6	65	1	72	7	51	15	73	148	702
7:00 AM	0	0	0	0	1	0	1	2	1	52	3	56	7	46	8	61	119	851
7:15 AM	1	0	3	4	0	0	1	1	6	71	2	79	14	66	8	88	172	987
7:30 AM	3	0	4	7	2	1	2	5	9	93	8	110	27	101	13	141	263	1,019
7:45 AM	5	1	4	10	3	0	0	3	9	118	10	137	29	98	20	147	297	1,025
8:00 AM	5	0	4	9	0	0	4	4	6	105	10	121	26	85	10	121	255	1,005
8:15 AM	2	0	5	7	2	0	2	4	3	80	5	88	15	81	9	105	204	1,004
8:30 AM	3	0	8	11	2	0	2	4	6	98	7	111	32	103	8	143	269	1,056
8:45 AM	3	0	5	8	4	1	2	7	5	117	4	126	32	90	14	136	277	1,049
9:00 AM	6	0	10	16	2	0	3	5	7	97	8	112	24	89	8	121	254	1,030
9:15 AM	6	0	7	13	5	0	6	11	9	121	5	135	17	73	7	97	256	997
9:30 AM	6	0	7	13	3	1	5	9	8	107	5	120	20	90	10	120	262	975
9:45 AM	8	0	4	12	3	0	7	10	6	100	5	111	24	88	13	125	258	985
AM PEAK	18	0	30	48	13	1	13	27	27	433	24	484	105	355	37	497	1,056	1,056
PHF	0.75	0.00	0.75	0.75	0.65	0.25	0.54	0.61	0.75	0.89	0.75	0.61	0.82	0.86	0.66	0.87		

MERCADO VILLAGE

92nd STREET and IRONWOOD LANE - TUESDAY - 7/11/2023

EXISTING 10:00 AM to 3:00 PM



BEGIN TIME	IRONWOOD LANE EASTBOUND				IRONWOOD LANE WESTBOUND				92nd STREET NORTHBOUND				92nd STREET 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	8	0	5	13	0	0	8	8	5	102	2	109	11	76	4	91	221	1,000
10:15 AM	12	0	2	14	0	0	5	5	5	92	2	99	21	85	10	116	234	1,027
10:30 AM	5	1	13	19	4	0	5	9	8	117	5	130	18	76	20	114	272	1,049
10:45 AM	8	0	16	24	6	1	5	12	3	127	5	135	13	85	4	102	273	1,030
11:00 AM	7	0	6	13	3	0	8	11	4	105	6	115	18	83	8	109	248	1,018
11:15 AM	5	0	16	21	4	0	3	7	5	103	1	109	21	89	9	119	256	972
11:30 AM	8	0	7	15	4	0	11	15	5	101	2	108	7	104	4	115	253	995
11:45 AM	8	0	6	14	11	0	4	15	4	117	1	122	13	94	3	110	261	1,001
12:00 PM	10	0	7	17	4	3	7	14	2	117	1	120	12	38	1	51	202	1,043
12:15 PM	3	0	8	11	6	0	9	15	5	127	1	133	15	101	4	120	279	1,123
12:30 PM	4	1	4	9	6	0	6	12	3	121	4	128	13	92	5	110	259	1,051
12:45 PM	5	1	6	12	7	0	4	11	7	126	8	141	20	110	9	139	303	1,026
1:00 PM	4	0	6	10	5	1	10	16	3	127	9	139	17	95	5	117	282	975
1:15 PM	3	0	2	5	7	1	3	11	4	81	7	92	15	76	8	99	207	953
1:30 PM	3	1	9	13	4	0	4	8	4	101	4	109	14	84	6	104	234	975
1:45 PM	5	1	8	14	2	0	6	8	2	105	9	116	24	85	5	114	252	1,003
2:00 PM	3	0	6	9	10	0	10	20	4	108	9	121	8	97	5	110	260	998
2:15 PM	8	0	3	11	3	0	6	9	2	105	5	112	15	79	3	97	229	1,007
2:30 PM	13	0	9	22	3	0	3	6	5	106	8	119	16	93	6	115	262	996
2:45 PM	11	0	12	23	5	0	8	13	8	113	4	125	12	69	5	86	247	967
MD PEAK	16	2	24	42	24	1	29	54	18	501	22	541	65	398	23	486	1,123	1,123
PHF	0.80	0.50	0.75	0.88	0.86	0.25	0.73	0.84	0.64	0.99	0.61	0.84	0.81	0.90	0.64	0.87		

MERCADO VILLAGE

92nd STREET and IRONWOOD LANE - TUESDAY - 7/11/2023

EXISTING 3:00 PM to 8:00 PM

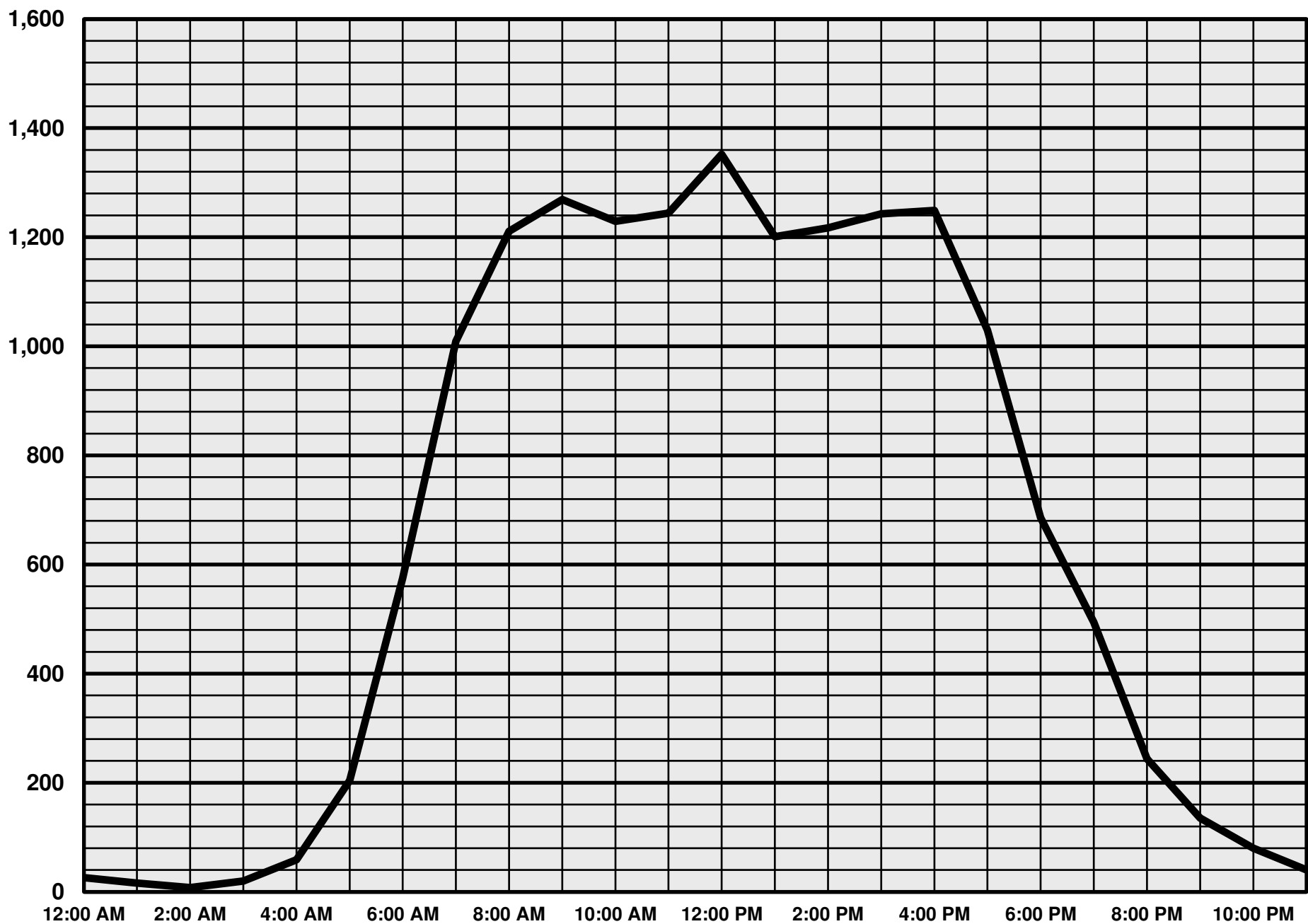


BEGIN TIME	IRONWOOD LANE EASTBOUND				IRONWOOD LANE WESTBOUND				92nd STREET NORTHBOUND				92nd STREET SOUTHBOUND				ALL TOTAL	60 MIN. TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
3:00 PM	10	0	6	16	9	0	9	18	2	124	4	130	13	84	8	105	269	945
3:15 PM	8	0	8	16	1	0	3	4	3	109	1	113	7	75	3	85	218	921
3:30 PM	11	1	5	17	5	0	5	10	4	107	4	115	4	81	6	91	233	917
3:45 PM	9	0	9	18	6	0	3	9	8	88	5	101	11	81	5	97	225	950
4:00 PM	12	0	9	21	5	0	6	11	2	118	1	121	5	83	4	92	245	969
4:15 PM	11	0	6	17	6	2	8	16	2	96	3	101	4	75	1	80	214	963
4:30 PM	15	0	8	23	8	1	5	14	2	134	2	138	5	84	2	91	266	957
4:45 PM	9	0	10	19	8	0	6	14	1	105	3	109	5	95	2	102	244	858
5:00 PM	11	0	12	23	8	0	3	11	2	121	1	124	2	73	6	81	239	756
5:15 PM	8	0	4	12	6	0	4	10	2	109	1	112	2	69	3	74	208	645
5:30 PM	9	0	2	11	4	0	2	6	1	87	2	90	1	57	2	60	167	553
5:45 PM	6	0	6	12	4	0	4	8	0	74	1	75	0	47	0	47	142	494
6:00 PM	5	0	3	8	2	0	1	3	1	66	0	67	0	50	0	50	128	475
6:15 PM	3	0	0	3	0	0	1	1	0	56	0	56	0	56	0	56	116	441
6:30 PM	3	0	0	3	1	0	7	8	1	52	0	53	0	40	4	44	108	414
6:45 PM	4	0	0	4	0	1	2	3	0	58	0	58	0	57	1	58	123	401
7:00 PM	3	0	0	3	0	0	1	1	0	50	0	50	0	40	0	40	94	369
7:15 PM	5	0	2	7	3	0	3	6	0	36	0	36	0	40	0	40	89	338
7:30 PM	8	0	7	15	0	0	0	0	0	32	1	33	1	46	0	47	95	297
7:45 PM	12	0	2	14	0	0	0	0	0	32	0	32	0	45	0	45	91	239
PM PEAK	47	0	33	80	27	3	25	55	7	453	9	469	19	337	9	365	969	969
PHF	0.78	0.00	0.83	0.87	0.84	0.38	0.78	0.86	0.88	0.85	0.75	0.86	0.95	0.89	0.56	0.89		

Appendix B.5
2023 Traffic Counts
92nd Street and Mountain View Road



MERCADO VILLAGE
92nd STREET and MOUNTAIN VIEW ROAD - TUESDAY - 7/11/2023



MERCADO VILLAGE

92nd STREET and MOUNTAIN VIEW ROAD - TUESDAY - 7/11/2023

EXISTING 5:00 AM to 10:00 AM



BEGIN TIME	MOUNTAIN VIEW ROAD EASTBOUND				MOUNTAIN VIEW ROAD WESTBOUND				92nd STREET NORTHBOUND				92nd STREET 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	5	0	3	8	2	12	5	19	4	9	0	13	40	204
5:15 AM	0	0	0	0	6	0	5	11	5	6	7	18	1	8	1	10	39	259
5:30 AM	0	0	1	1	6	0	8	14	4	12	6	22	4	10	0	14	51	332
5:45 AM	0	0	0	0	5	1	5	11	12	22	12	46	6	10	1	17	74	456
6:00 AM	0	0	0	0	6	0	8	14	12	34	12	58	7	16	0	23	95	575
6:15 AM	1	0	2	3	11	0	9	20	14	26	20	60	11	17	1	29	112	629
6:30 AM	0	0	2	2	18	1	13	32	20	46	26	92	12	37	0	49	175	738
6:45 AM	1	0	2	3	19	1	16	36	26	53	22	101	15	38	0	53	193	856
7:00 AM	1	0	1	2	14	3	19	36	8	40	16	64	14	32	1	47	149	1,009
7:15 AM	4	1	7	12	18	2	27	47	12	55	26	93	19	46	4	69	221	1,170
7:30 AM	4	1	14	19	23	3	25	51	14	81	21	116	21	84	2	107	293	1,219
7:45 AM	7	2	11	20	23	4	25	52	14	115	40	169	28	74	3	105	346	1,241
8:00 AM	1	0	7	8	33	4	24	61	15	94	43	152	24	65	0	89	310	1,211
8:15 AM	3	1	3	7	35	1	24	60	9	68	38	115	8	77	3	88	270	1,205
8:30 AM	2	2	7	11	36	2	29	67	6	79	39	124	34	74	5	113	315	1,237
8:45 AM	3	0	5	8	38	3	39	80	6	82	41	129	24	72	3	99	316	1,243
9:00 AM	1	2	5	8	46	2	32	80	3	78	34	115	37	63	1	101	304	1,269
9:15 AM	3	1	2	6	40	2	35	77	6	85	43	134	22	62	1	85	302	1,262
9:30 AM	1	0	1	2	45	1	39	85	5	79	50	134	26	73	1	100	321	1,237
9:45 AM	1	0	4	5	63	1	37	101	2	77	62	141	29	66	0	95	342	1,237
AM PEAK	6	3	12	21	194	6	143	343	16	319	189	524	114	264	3	381	1,269	1,269
PHF	0.50	0.38	0.60	0.66	0.77	0.75	0.92	0.85	0.67	0.94	0.76	0.85	0.77	0.90	0.75	0.94		

MERCADO VILLAGE

92nd STREET and MOUNTAIN VIEW ROAD - TUESDAY - 7/11/2023

EXISTING 10:00 AM to 3:00 PM



BEGIN TIME	MOUNTAIN VIEW ROAD EASTBOUND				MOUNTAIN VIEW ROAD WESTBOUND				92nd STREET NORTHBOUND				92nd STREET SOUTHBOUND				ALL	60
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	TOTAL	MIN. TOTAL
10:00 AM	1	3	3	7	38	3	27	68	4	76	61	141	22	58	1	81	297	1,229
10:15 AM	2	1	1	4	40	1	21	62	7	75	42	124	29	58	0	87	277	1,223
10:30 AM	2	0	3	5	44	3	36	83	8	91	41	140	24	67	2	93	321	1,257
10:45 AM	3	1	2	6	36	2	40	78	7	94	42	143	30	77	0	107	334	1,249
11:00 AM	2	1	5	8	48	1	33	82	2	67	40	109	23	68	1	92	291	1,244
11:15 AM	1	0	3	4	47	0	32	79	3	70	46	119	27	81	1	109	311	1,244
11:30 AM	0	0	4	4	49	2	37	88	2	67	37	106	29	86	0	115	313	1,288
11:45 AM	1	0	1	2	49	1	31	81	2	86	47	135	25	85	1	111	329	1,308
12:00 PM	3	0	2	5	60	2	32	94	1	86	56	143	17	32	0	49	291	1,352
12:15 PM	1	1	8	10	46	1	29	76	5	103	46	154	32	82	1	115	355	1,391
12:30 PM	1	3	8	12	45	2	26	73	5	98	43	146	25	76	1	102	333	1,301
12:45 PM	2	1	6	9	51	6	40	97	5	88	51	144	21	101	1	123	373	1,269
1:00 PM	3	0	6	9	31	2	44	77	2	86	50	138	30	74	2	106	330	1,201
1:15 PM	0	0	2	2	37	0	21	58	2	66	52	120	19	66	0	85	265	1,175
1:30 PM	2	1	2	5	37	4	38	79	4	70	46	120	21	74	2	97	301	1,193
1:45 PM	4	3	8	15	37	6	26	69	3	73	50	126	23	71	1	95	305	1,216
2:00 PM	0	3	3	6	46	1	14	61	3	76	45	124	20	93	0	113	304	1,217
2:15 PM	1	1	4	6	29	2	23	54	4	87	47	138	18	67	0	85	283	1,248
2:30 PM	3	1	7	11	48	7	31	86	1	82	39	122	23	80	2	105	324	1,253
2:45 PM	5	1	5	11	48	1	31	80	2	82	45	129	24	62	0	86	306	1,244
MD PEAK	7	5	28	40	173	11	139	323	17	375	190	582	108	333	5	446	1,391	1,391
PHF	0.58	0.42	0.88	0.83	0.85	0.46	0.79	0.83	0.85	0.91	0.93	0.83	0.84	0.82	0.63	0.91		

MERCADO VILLAGE

92nd STREET and MOUNTAIN VIEW ROAD - TUESDAY - 7/11/2023

EXISTING 3:00 PM to 8:00 PM



BEGIN TIME	MOUNTAIN VIEW ROAD EASTBOUND				MOUNTAIN VIEW ROAD WESTBOUND				92nd STREET NORTHBOUND				92nd STREET SOUTHBOUND				ALL	60
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	TOTAL	MIN. TOTAL
3:00 PM	1	1	7	9	48	1	28	77	5	100	45	150	22	77	0	99	335	1,243
3:15 PM	4	0	13	17	36	0	35	71	3	71	42	116	21	61	2	84	288	1,233
3:30 PM	2	1	21	24	47	1	42	90	8	65	37	110	19	67	5	91	315	1,207
3:45 PM	4	4	13	21	47	1	26	74	2	61	51	114	25	71	0	96	305	1,226
4:00 PM	2	1	9	12	46	2	23	71	4	87	54	145	20	77	0	97	325	1,249
4:15 PM	3	3	9	15	36	0	32	68	1	64	27	92	17	69	1	87	262	1,232
4:30 PM	3	4	17	24	45	1	33	79	4	92	35	131	22	77	1	100	334	1,242
4:45 PM	2	3	13	18	40	4	31	75	4	83	35	122	23	87	3	113	328	1,165
5:00 PM	7	4	15	26	43	3	26	72	4	82	31	117	17	74	2	93	308	1,030
5:15 PM	4	3	9	16	33	1	24	58	2	83	34	119	20	59	0	79	272	913
5:30 PM	1	4	13	18	35	3	26	64	7	60	45	112	15	47	1	63	257	805
5:45 PM	4	1	5	10	27	2	18	47	1	53	25	79	16	41	0	57	193	716
6:00 PM	2	2	7	11	26	1	23	50	0	40	35	75	14	41	0	55	191	686
6:15 PM	1	1	3	5	19	0	19	38	3	34	28	65	14	42	0	56	164	622
6:30 PM	0	0	8	8	28	0	14	42	14	33	30	77	5	36	0	41	168	571
6:45 PM	1	0	8	9	16	1	12	29	3	43	22	68	15	42	0	57	163	540
7:00 PM	1	1	5	7	15	0	18	33	0	31	16	47	10	30	0	40	127	494
7:15 PM	0	0	0	0	12	0	7	19	0	28	21	49	9	36	0	45	113	452
7:30 PM	0	0	18	18	13	1	12	26	0	20	20	40	18	35	0	53	137	396
7:45 PM	0	0	7	7	12	0	18	30	0	14	19	33	16	31	0	47	117	309
PM PEAK	10	11	48	69	167	7	119	293	13	326	151	490	82	310	5	397	1,249	1,249
PHF	0.83	0.69	0.71	0.72	0.91	0.44	0.90	0.93	0.81	0.89	0.70	0.93	0.89	0.89	0.42	0.88		

Appendix C

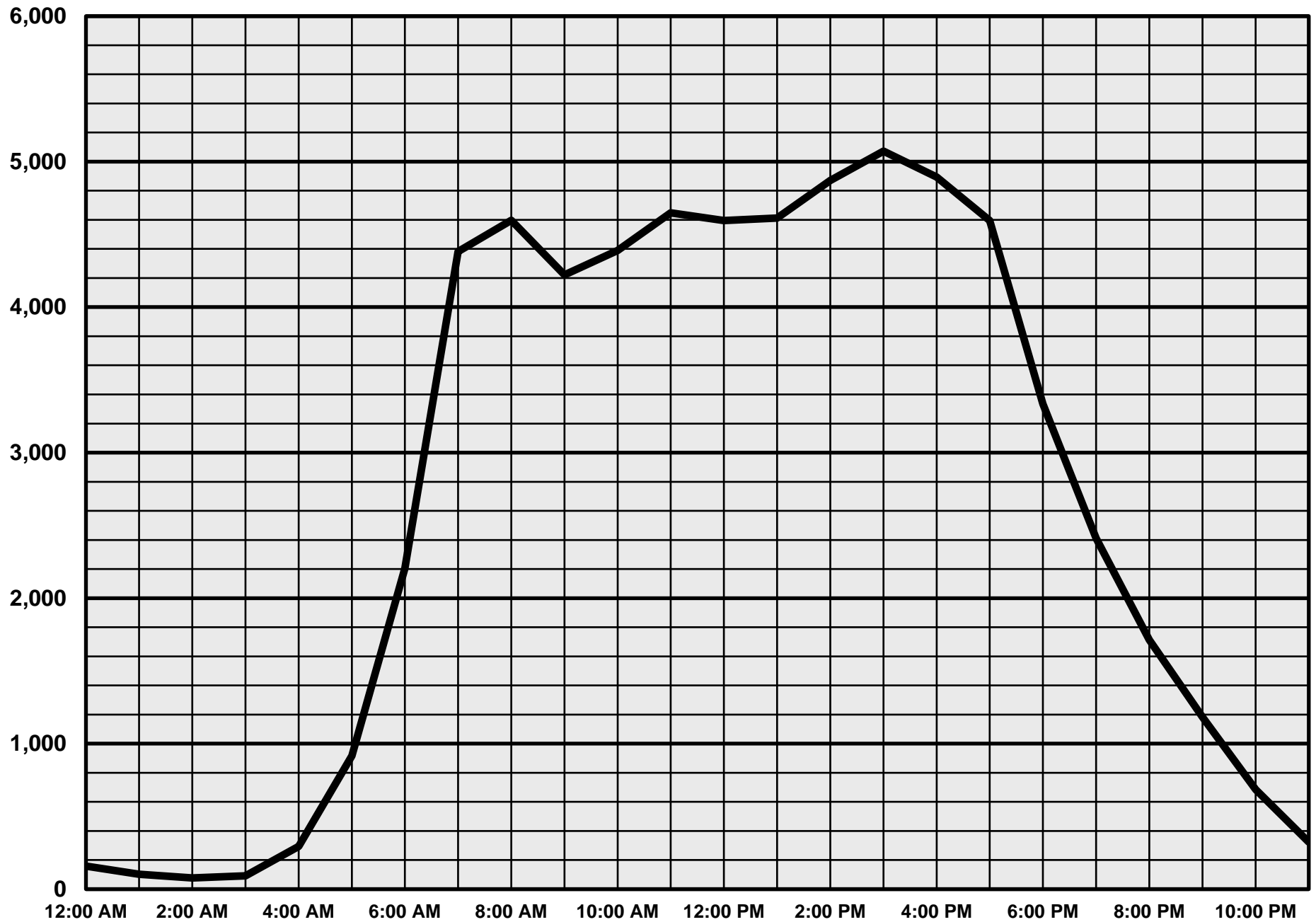
2021 Traffic Counts



Appendix C.1
2021 Traffic Counts
92nd Street and Shea Boulevard



MERCADO VILLAGE
92nd STREET and SHEA BOULEVARD - TUESDAY - 4/27/2021



MERCADO VILLAGE
92nd STREET and SHEA BOULEVARD - TUESDAY - 4/27/2021
EXISTING 5:00 AM to 10:00 AM



BEGIN TIME	SHEA BOULEVARD EASTBOUND				SHEA BOULEVARD WESTBOUND				92nd STREET NORTHBOUND				92nd STREET 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	46	6	52	1	62	0	63	4	3	0	7	0	6	4	10	132	916
5:15 AM	3	75	9	87	1	77	1	79	7	2	0	9	3	13	1	17	192	1,120
5:30 AM	5	106	32	143	2	81	1	84	11	6	2	19	2	10	9	21	267	1,425
5:45 AM	7	123	36	166	5	104	4	113	9	8	4	21	2	15	8	25	325	1,777
6:00 AM	5	125	32	162	5	119	4	128	7	10	1	18	7	10	11	28	336	2,205
6:15 AM	3	186	57	246	10	148	8	166	17	10	4	31	7	27	20	54	497	2,801
6:30 AM	5	218	82	305	13	184	3	200	18	15	9	42	10	48	14	72	619	3,361
6:45 AM	7	265	92	364	19	241	7	267	19	24	5	48	10	42	22	74	753	3,921
7:00 AM	16	354	91	461	15	296	4	315	21	17	16	54	31	53	18	102	932	4,382
7:15 AM	19	341	87	447	23	398	12	433	40	26	10	76	26	44	31	101	1,057	4,534
7:30 AM	18	361	107	486	20	426	19	465	51	32	14	97	23	67	41	131	1,179	4,622
7:45 AM	17	356	136	509	30	398	13	441	61	38	14	113	34	81	36	151	1,214	4,636
8:00 AM	25	367	116	508	23	333	23	379	34	32	17	83	31	59	24	114	1,084	4,597
8:15 AM	19	340	84	443	26	385	16	427	47	37	24	108	43	91	33	167	1,145	4,527
8:30 AM	27	336	124	487	17	380	21	418	65	60	10	135	27	86	40	153	1,193	4,454
8:45 AM	31	331	115	477	28	349	24	401	95	44	21	160	32	68	37	137	1,175	4,306
9:00 AM	24	325	83	432	17	277	25	319	86	39	17	142	33	57	31	121	1,014	4,221
9:15 AM	45	310	103	458	22	335	24	381	65	31	18	114	25	49	45	119	1,072	4,193
9:30 AM	40	311	81	432	18	290	18	326	95	52	21	168	28	48	43	119	1,045	4,242
9:45 AM	34	292	73	399	29	367	25	421	73	36	26	135	30	61	44	135	1,090	4,334
AM PEAK	88	1,399	460	1,947	96	1,496	73	1,665	207	167	65	439	135	317	133	585	4,636	4,636
PHF	0.81	0.95	0.85	0.96	0.80	0.94	0.79	0.94	0.80	0.70	0.68	0.94	0.78	0.87	0.83	0.88		

MERCADO VILLAGE

92nd STREET and SHEA BOULEVARD - TUESDAY - 4/27/2021

EXISTING 10:00 AM to 3:00 PM



BEGIN TIME	SHEA BOULEVARD EASTBOUND				SHEA BOULEVARD WESTBOUND				92nd STREET NORTHBOUND				92nd STREET 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	31	253	70	354	16	323	20	359	83	54	23	160	28	49	36	113	986	4,390
10:15 AM	34	310	66	410	21	381	29	431	94	51	21	166	32	45	37	114	1,121	4,533
10:30 AM	47	317	94	458	24	338	13	375	102	57	17	176	23	59	46	128	1,137	4,640
10:45 AM	36	312	101	449	21	370	26	417	89	51	21	161	38	43	38	119	1,146	4,645
11:00 AM	40	322	74	436	13	316	19	348	106	55	32	193	30	74	48	152	1,129	4,648
11:15 AM	42	286	68	396	27	389	20	436	130	66	36	232	48	68	48	164	1,228	4,689
11:30 AM	38	333	52	423	15	360	27	402	103	58	23	184	29	52	52	133	1,142	4,554
11:45 AM	50	318	53	421	13	327	21	361	116	65	26	207	49	53	58	160	1,149	4,542
12:00 PM	52	331	65	448	16	382	16	414	100	64	26	190	37	37	44	118	1,170	4,595
12:15 PM	36	313	71	420	12	301	22	335	92	72	32	196	38	53	51	142	1,093	4,551
12:30 PM	49	307	74	430	16	354	17	387	98	46	24	168	37	57	51	145	1,130	4,630
12:45 PM	53	336	72	461	18	390	32	440	90	47	25	162	29	69	41	139	1,202	4,609
1:00 PM	50	289	80	419	28	349	16	393	105	45	18	168	51	53	42	146	1,126	4,613
1:15 PM	40	346	84	470	29	358	20	407	67	57	28	152	38	54	51	143	1,172	4,659
1:30 PM	46	322	72	440	19	314	25	358	102	79	20	201	35	43	32	110	1,109	4,732
1:45 PM	51	348	86	485	26	384	18	428	79	57	27	163	36	51	43	130	1,206	4,809
2:00 PM	53	325	75	453	8	350	25	383	94	72	29	195	35	55	51	141	1,172	4,870
2:15 PM	41	348	91	480	16	414	18	448	106	66	20	192	41	53	31	125	1,245	5,006
2:30 PM	52	361	62	475	19	333	21	373	84	73	31	188	39	63	48	150	1,186	5,007
2:45 PM	46	355	83	484	27	387	31	445	105	60	30	195	43	57	43	143	1,267	5,139
MD PEAK	139	945	183	1,267	55	1,019	84	1,158	247	192	79	518	111	148	123	382	3,325	5,139
PHF	0.68	0.67	0.55	0.65	0.51	0.66	0.64	0.65	0.59	0.53	0.64	0.65	0.60	0.49	0.65	0.57		

MERCADO VILLAGE

92nd STREET and SHEA BOULEVARD - TUESDAY - 4/27/2021

EXISTING 3:00 PM to 8:00 PM

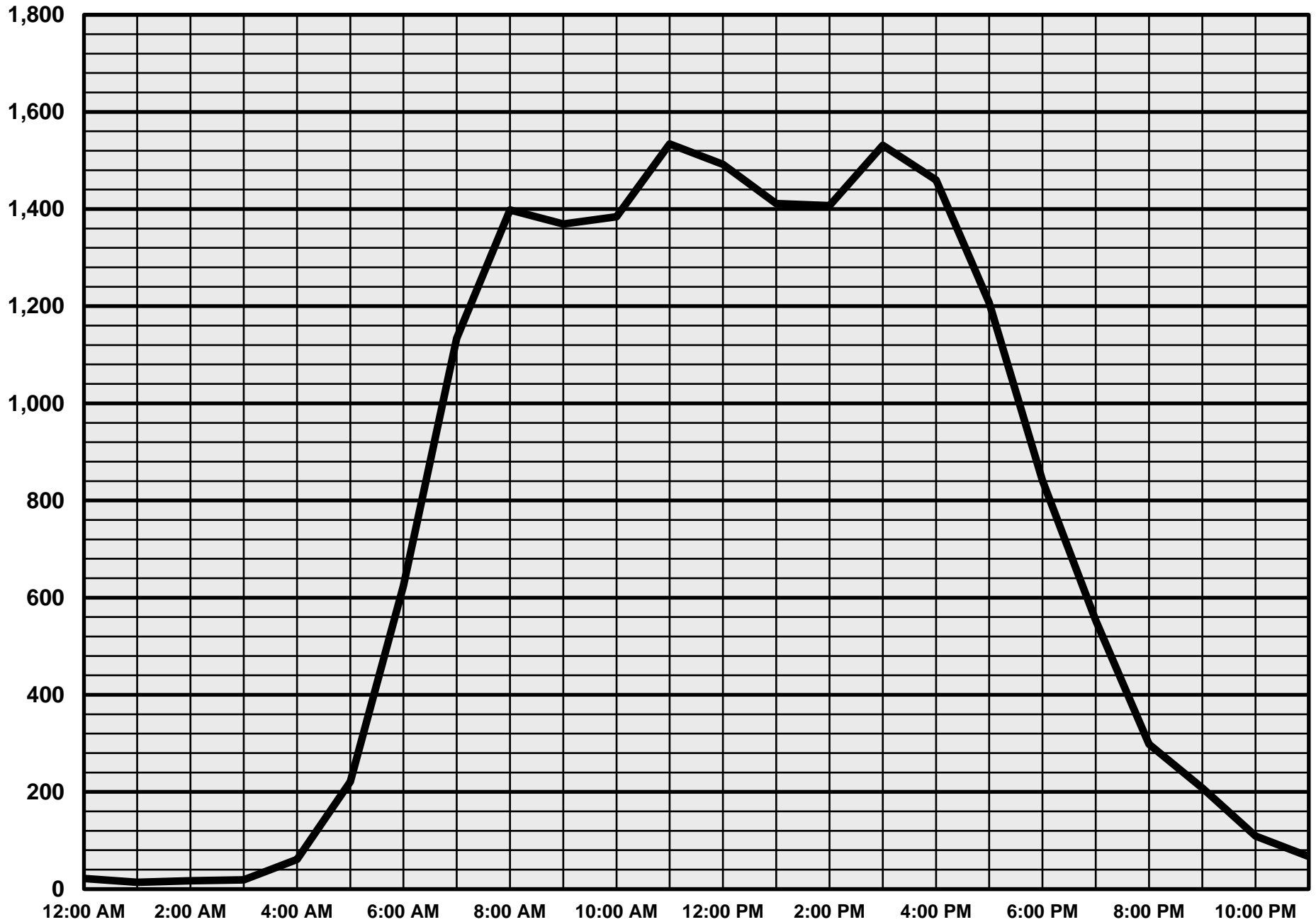


BEGIN TIME	SHEA BOULEVARD EASTBOUND				SHEA BOULEVARD WESTBOUND				92nd STREET NORTHBOUND				92nd STREET SOUTHBOUND				ALL TOTAL	60 MIN. TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
3:00 PM	50	368	64	482	12	422	25	459	109	68	33	210	41	64	52	157	1,308	5,072
3:15 PM	51	325	64	440	15	364	33	412	104	90	31	225	46	76	47	169	1,246	4,978
3:30 PM	46	371	70	487	9	443	30	482	98	65	43	206	51	48	44	143	1,318	4,957
3:45 PM	51	357	57	465	16	345	24	385	103	78	36	217	26	65	42	133	1,200	4,885
4:00 PM	57	340	44	441	16	382	29	427	127	76	22	225	34	48	39	121	1,214	4,894
4:15 PM	68	350	32	450	15	381	22	418	107	78	41	226	39	50	42	131	1,225	4,917
4:30 PM	75	358	38	471	13	355	24	392	123	96	31	250	50	51	32	133	1,246	4,909
4:45 PM	90	365	47	502	10	309	23	342	95	97	32	224	35	55	51	141	1,209	4,765
5:00 PM	53	345	36	434	15	387	23	425	147	84	35	266	33	43	36	112	1,237	4,595
5:15 PM	58	382	40	480	20	357	20	397	86	72	33	191	46	46	57	149	1,217	4,304
5:30 PM	42	335	36	413	12	351	15	378	102	59	39	200	30	44	37	111	1,102	3,928
5:45 PM	62	342	30	434	8	327	15	350	57	54	22	133	48	41	33	122	1,039	3,638
6:00 PM	50	290	40	380	12	297	19	328	59	50	17	126	27	38	47	112	946	3,334
6:15 PM	43	257	41	341	13	275	12	300	39	42	18	99	26	42	33	101	841	3,052
6:30 PM	42	265	36	343	13	268	20	301	38	42	18	98	22	15	33	70	812	2,866
6:45 PM	45	241	34	320	5	215	13	233	28	33	21	82	44	26	30	100	735	2,649
7:00 PM	30	225	12	267	6	242	10	258	31	23	15	69	23	22	25	70	664	2,412
7:15 PM	36	218	13	267	3	206	12	221	37	33	17	87	32	21	27	80	655	2,268
7:30 PM	36	191	11	238	4	195	10	209	33	38	15	86	19	14	29	62	595	2,106
7:45 PM	39	173	8	220	5	141	15	161	24	20	9	53	26	21	17	64	498	1,906
PM PEAK	198	1,421	255	1,874	52	1,574	112	1,738	414	301	143	858	164	253	185	602	5,072	5,072
PHF	0.97	0.96	0.91	0.96	0.81	0.89	0.85	0.90	0.95	0.84	0.83	0.90	0.80	0.83	0.89	0.89		

Appendix C.2
2021 Traffic Counts
92nd Street and North Lane



MERCADO VILLAGE
92nd STREET and NORTH LANE - THURSDAY - 4/22/2021



MERCADO VILLAGE
92nd STREET and NORTH LANE - THURSDAY - 4/22/2021
EXISTING 5:00 AM to 10:00 AM



BEGIN TIME	NORTH LANE EASTBOUND				NORTH LANE WESTBOUND				92nd STREET NORTHBOUND				92nd STREET 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	6	7	3	2	2	7	2	5	5	12	26	221
5:15 AM	0	0	0	0	4	0	6	10	0	4	3	7	4	13	5	22	39	282
5:30 AM	1	0	0	1	4	1	9	14	0	12	2	14	5	32	7	44	73	370
5:45 AM	0	0	2	2	5	1	7	13	2	9	5	16	6	37	9	52	83	500
6:00 AM	0	0	0	0	4	2	13	19	4	11	9	24	13	27	4	44	87	624
6:15 AM	0	0	0	0	2	1	14	17	4	15	6	25	21	53	11	85	127	737
6:30 AM	2	0	1	3	7	2	22	31	5	25	4	34	23	88	24	135	203	858
6:45 AM	0	1	1	2	6	1	18	25	4	32	4	40	18	106	16	140	207	981
7:00 AM	5	1	0	6	6	0	17	23	5	35	6	46	21	86	18	125	200	1,134
7:15 AM	2	0	1	3	7	1	23	31	4	52	13	69	27	94	24	145	248	1,267
7:30 AM	3	0	1	4	5	2	28	35	7	67	17	91	39	137	20	196	326	1,382
7:45 AM	5	1	0	6	2	2	28	32	4	69	12	85	34	171	32	237	360	1,409
8:00 AM	7	2	5	14	8	0	27	35	6	64	15	85	32	139	28	199	333	1,398
8:15 AM	3	0	2	5	5	1	32	38	1	94	13	108	21	180	11	212	363	1,375
8:30 AM	5	1	5	11	10	1	29	40	4	114	11	129	32	120	21	173	353	1,387
8:45 AM	3	1	3	7	8	0	29	37	8	91	17	116	30	140	19	189	349	1,358
9:00 AM	5	0	6	11	8	0	35	43	4	108	7	119	33	89	15	137	310	1,369
9:15 AM	7	1	7	15	15	0	33	48	7	103	15	125	33	126	28	187	375	1,405
9:30 AM	5	0	5	10	5	1	39	45	7	105	8	120	31	103	15	149	324	1,357
9:45 AM	10	0	3	13	10	1	26	37	8	130	15	153	29	103	25	157	360	1,377
AM PEAK	20	4	12	36	25	4	116	145	15	341	51	407	119	610	92	821	1,409	1,409
PHF	0.71	0.50	0.60	0.64	0.63	0.50	0.91	0.91	0.63	0.75	0.85	0.91	0.88	0.85	0.72	0.87		

MERCADO VILLAGE

92nd STREET and NORTH LANE - THURSDAY - 4/22/2021

EXISTING 10:00 AM to 3:00 PM



BEGIN TIME	NORTH LANE EASTBOUND				NORTH LANE WESTBOUND				92nd STREET NORTHBOUND				92nd STREET 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	8	1	5	14	7	1	35	43	6	109	21	136	29	95	29	153	346	1,384
10:15 AM	5	0	7	12	8	0	46	54	0	108	17	125	30	88	18	136	327	1,423
10:30 AM	7	2	9	18	9	1	38	48	4	114	18	136	31	102	9	142	344	1,480
10:45 AM	10	1	3	14	8	1	43	52	6	110	11	127	31	125	18	174	367	1,511
11:00 AM	9	2	6	17	5	0	37	42	6	143	19	168	41	101	16	158	385	1,534
11:15 AM	7	1	6	14	12	0	61	73	3	128	19	150	34	100	13	147	384	1,522
11:30 AM	9	2	10	21	8	1	36	45	8	135	28	171	43	78	17	138	375	1,505
11:45 AM	5	1	7	13	9	2	46	57	4	150	16	170	40	94	16	150	390	1,496
12:00 PM	3	1	9	13	11	2	44	57	6	128	24	158	45	91	9	145	373	1,492
12:15 PM	5	1	5	11	9	1	52	62	6	154	18	178	33	74	9	116	367	1,461
12:30 PM	4	2	10	16	10	0	45	55	10	110	16	136	35	111	13	159	366	1,446
12:45 PM	5	0	11	16	10	2	41	53	6	119	25	150	47	108	12	167	386	1,451
1:00 PM	6	0	3	9	4	0	40	44	4	122	15	141	41	95	12	148	342	1,411
1:15 PM	6	1	10	17	7	0	43	50	5	113	15	133	31	105	16	152	352	1,407
1:30 PM	4	3	5	12	9	1	51	61	5	117	16	138	41	108	11	160	371	1,389
1:45 PM	7	3	4	14	6	0	34	40	5	132	18	155	28	94	15	137	346	1,381
2:00 PM	10	0	5	15	11	2	44	57	3	119	15	137	27	90	12	129	338	1,407
2:15 PM	9	0	3	12	8	0	39	47	6	115	19	140	40	86	9	135	334	1,443
2:30 PM	7	1	3	11	12	0	38	50	4	141	15	160	21	108	13	142	363	1,498
2:45 PM	5	0	7	12	8	1	45	54	3	129	17	149	32	115	10	157	372	1,495
MD PEAK	30	6	29	65	34	3	180	217	21	556	82	659	158	373	62	593	1,534	1,534
PHF	0.83	0.75	0.73	0.77	0.71	0.38	0.74	0.74	0.66	0.93	0.73	0.74	0.92	0.92	0.91	0.94		

MERCADO VILLAGE

92nd STREET and NORTH LANE - THURSDAY - 4/22/2021

EXISTING 3:00 PM to 8:00 PM

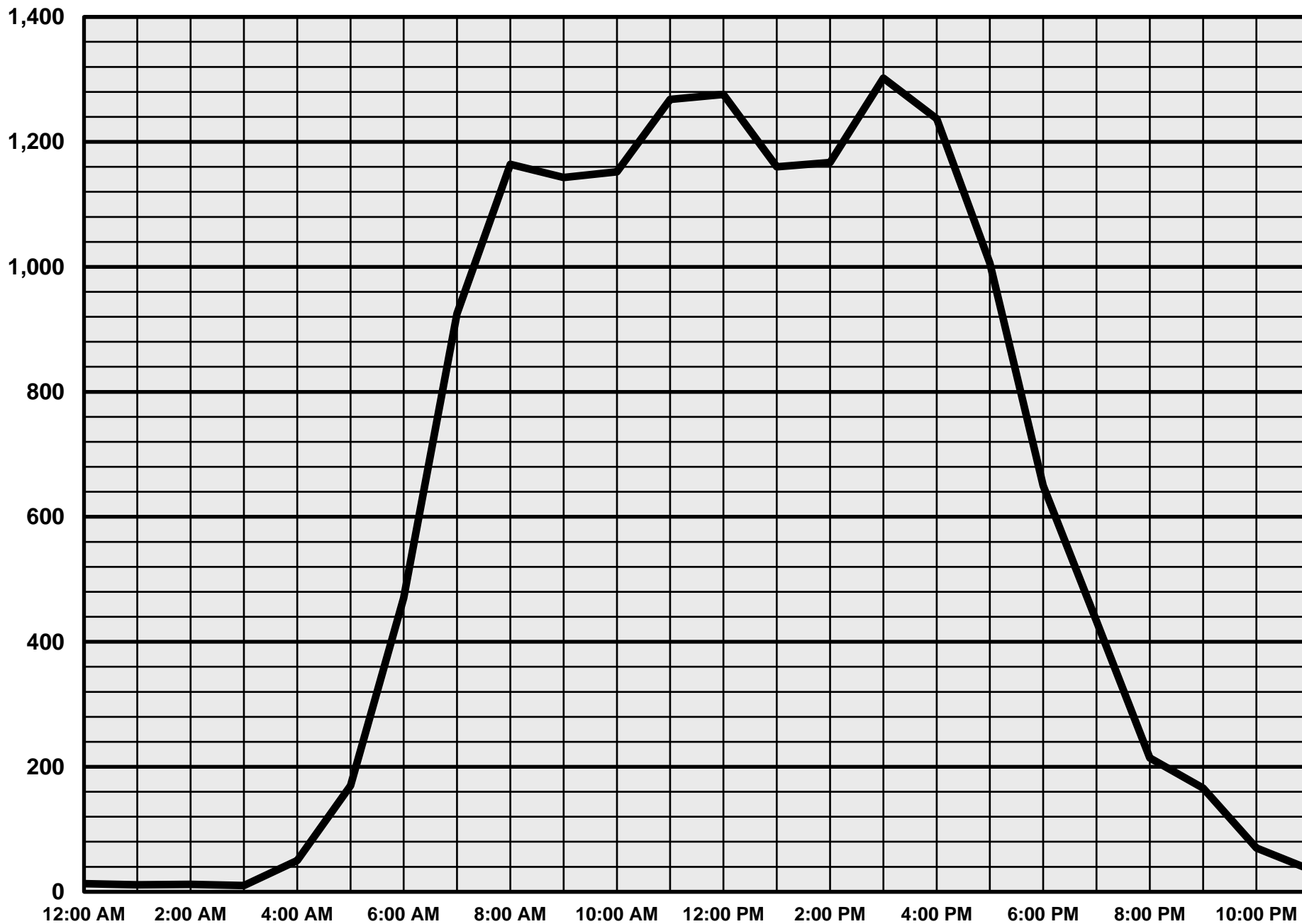


BEGIN TIME	NORTH LANE EASTBOUND				NORTH LANE WESTBOUND				92nd STREET NORTHBOUND				92nd STREET SOUTHBOUND				ALL TOTAL	60 MIN. TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
3:00 PM	8	0	9	17	8	0	40	48	1	155	18	174	27	99	9	135	374	1,531
3:15 PM	7	1	11	19	5	0	42	47	2	167	19	188	30	95	10	135	389	1,577
3:30 PM	6	0	8	14	10	0	35	45	2	152	19	173	24	101	3	128	360	1,539
3:45 PM	5	1	6	12	14	1	42	57	3	177	17	197	35	98	9	142	408	1,555
4:00 PM	8	1	11	20	8	0	54	62	3	186	21	210	32	91	5	128	420	1,460
4:15 PM	8	0	4	12	8	1	42	51	2	166	22	190	26	66	6	98	351	1,388
4:30 PM	8	0	13	21	8	0	50	58	1	185	12	198	30	64	5	99	376	1,349
4:45 PM	4	0	2	6	5	0	46	51	3	150	15	168	18	67	3	88	313	1,264
5:00 PM	8	3	7	18	7	2	37	46	2	172	15	189	26	67	2	95	348	1,207
5:15 PM	5	1	3	9	2	1	35	38	0	153	6	159	28	73	5	106	312	1,077
5:30 PM	3	0	8	11	9	0	37	46	3	133	11	147	36	49	2	87	291	977
5:45 PM	2	0	3	5	5	0	41	46	0	106	10	116	22	61	6	89	256	897
6:00 PM	0	0	3	3	5	0	33	38	0	112	10	122	13	40	2	55	218	841
6:15 PM	1	0	1	2	3	2	28	33	1	88	5	94	29	52	2	83	212	763
6:30 PM	5	0	1	6	4	0	32	36	4	72	13	89	29	43	8	80	211	707
6:45 PM	3	1	1	5	12	0	31	43	3	72	10	85	16	45	6	67	200	640
7:00 PM	2	0	5	7	4	0	22	26	1	59	6	66	15	25	1	41	140	553
7:15 PM	2	1	2	5	2	0	34	36	0	61	8	69	16	28	2	46	156	504
7:30 PM	3	2	3	8	9	0	23	32	0	68	7	75	12	16	1	29	144	432
7:45 PM	3	0	1	4	6	0	18	24	0	45	6	51	12	22	0	34	113	360
PM PEAK	26	3	36	65	37	1	173	211	10	682	76	768	121	385	27	533	1,577	1,577
PHF	0.81	0.75	0.82	0.81	0.66	0.25	0.80	0.85	0.83	0.92	0.90	0.85	0.86	0.95	0.68	0.94		

Appendix C.3
2021 Traffic Counts
92nd Street and Cochise Drive



MERCADO VILLAGE
92nd STREET and COCHISE ROAD - THURSDAY - 4/22/2021



MERCADO VILLAGE
92nd STREET and COCHISE ROAD - THURSDAY - 4/22/2021
EXISTING 5:00 AM to 10:00 AM



BEGIN TIME	COCHISE ROAD EASTBOUND				COCHISE ROAD WESTBOUND				92nd STREET NORTHBOUND				92nd STREET 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	0	0	0	2	7	0	9	0	5	0	5	15	170
5:15 AM	1	0	1	2	2	0	0	2	0	8	0	8	0	16	3	19	31	216
5:30 AM	2	0	0	2	1	0	0	1	5	17	2	24	1	26	6	33	60	276
5:45 AM	0	0	1	1	3	0	0	3	8	19	0	27	2	24	7	33	64	366
6:00 AM	1	0	0	1	4	3	0	7	4	23	0	27	0	20	6	26	61	470
6:15 AM	0	0	1	1	5	0	0	5	3	29	1	33	2	36	14	52	91	558
6:30 AM	5	1	1	7	5	3	0	8	11	35	1	47	0	61	27	88	150	671
6:45 AM	0	0	1	1	5	3	0	8	28	35	0	63	2	65	29	96	168	791
7:00 AM	3	0	3	6	11	0	0	11	10	39	1	50	1	54	27	82	149	925
7:15 AM	8	0	5	13	9	1	0	10	10	70	0	80	8	78	15	101	204	1,033
7:30 AM	8	0	10	18	11	1	3	15	11	82	2	95	6	113	23	142	270	1,143
7:45 AM	4	0	11	15	8	0	2	10	16	94	3	113	6	127	31	164	302	1,161
8:00 AM	3	0	7	10	9	2	1	12	9	81	1	91	4	112	28	144	257	1,164
8:15 AM	2	0	4	6	9	0	1	10	7	107	2	116	4	148	30	182	314	1,169
8:30 AM	5	1	6	12	13	0	1	14	7	116	4	127	5	113	17	135	288	1,146
8:45 AM	5	2	7	14	14	0	3	17	13	115	4	132	15	106	21	142	305	1,129
9:00 AM	9	0	4	13	14	2	7	23	8	107	7	122	5	84	15	104	262	1,143
9:15 AM	20	0	4	24	9	0	8	17	6	101	6	113	12	109	16	137	291	1,159
9:30 AM	12	0	5	17	8	2	6	16	13	107	1	121	6	85	26	117	271	1,126
9:45 AM	9	1	19	29	11	0	10	21	5	132	9	146	18	86	19	123	319	1,157
AM PEAK	21	3	21	45	50	2	12	64	35	445	17	497	29	451	83	563	1,169	1,169
PHF	0.58	0.38	0.75	0.80	0.89	0.25	0.43	0.70	0.67	0.96	0.61	0.70	0.48	0.76	0.69	0.77		

MERCADO VILLAGE

92nd STREET and COCHISE ROAD - THURSDAY - 4/22/2021

EXISTING 10:00 AM to 3:00 PM



BEGIN TIME	COCHISE ROAD EASTBOUND				COCHISE ROAD WESTBOUND				92nd STREET NORTHBOUND				92nd STREET 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	11	0	8	19	10	4	7	21	5	121	3	129	5	81	23	109	278	1,152
10:15 AM	16	0	5	21	12	0	8	20	6	94	7	107	5	84	21	110	258	1,165
10:30 AM	12	2	16	30	10	2	5	17	12	124	6	142	1	96	16	113	302	1,244
10:45 AM	13	0	4	17	11	0	2	13	12	121	5	138	7	120	19	146	314	1,245
11:00 AM	10	0	8	18	9	0	5	14	8	147	4	159	6	81	13	100	291	1,268
11:15 AM	22	1	13	36	16	1	5	22	17	130	9	156	1	108	14	123	337	1,310
11:30 AM	15	1	13	29	17	1	5	23	8	144	2	154	4	83	10	97	303	1,281
11:45 AM	11	0	15	26	17	1	6	24	12	157	5	174	5	95	13	113	337	1,280
12:00 PM	14	0	13	27	15	0	3	18	11	153	5	169	8	102	9	119	333	1,276
12:15 PM	13	0	10	23	16	1	8	25	10	146	7	163	7	77	13	97	308	1,214
12:30 PM	14	0	11	25	12	0	6	18	8	122	2	132	6	107	14	127	302	1,200
12:45 PM	7	0	10	17	21	1	2	24	9	137	7	153	11	105	23	139	333	1,194
1:00 PM	10	1	10	21	17	0	6	23	8	118	2	128	5	76	18	99	271	1,160
1:15 PM	6	0	7	13	21	0	6	27	10	114	5	129	5	96	24	125	294	1,153
1:30 PM	9	0	8	17	13	0	4	17	8	128	7	143	7	97	15	119	296	1,125
1:45 PM	12	0	7	19	17	0	3	20	10	132	3	145	1	94	20	115	299	1,134
2:00 PM	19	0	7	26	6	0	2	8	6	126	3	135	5	77	13	95	264	1,167
2:15 PM	11	0	9	20	8	0	1	9	7	127	1	135	2	84	16	102	266	1,228
2:30 PM	15	0	11	26	14	1	2	17	3	140	1	144	4	99	15	118	305	1,290
2:45 PM	18	0	11	29	9	2	3	14	9	139	3	151	4	117	17	138	332	1,305
MD PEAK	62	2	54	118	65	3	19	87	48	584	21	653	18	388	46	452	1,310	1,310
PHF	0.70	0.50	0.90	0.82	0.96	0.75	0.79	0.91	0.71	0.93	0.58	0.91	0.56	0.90	0.82	0.92		

MERCADO VILLAGE

92nd STREET and COCHISE ROAD - THURSDAY - 4/22/2021

EXISTING 3:00 PM to 8:00 PM

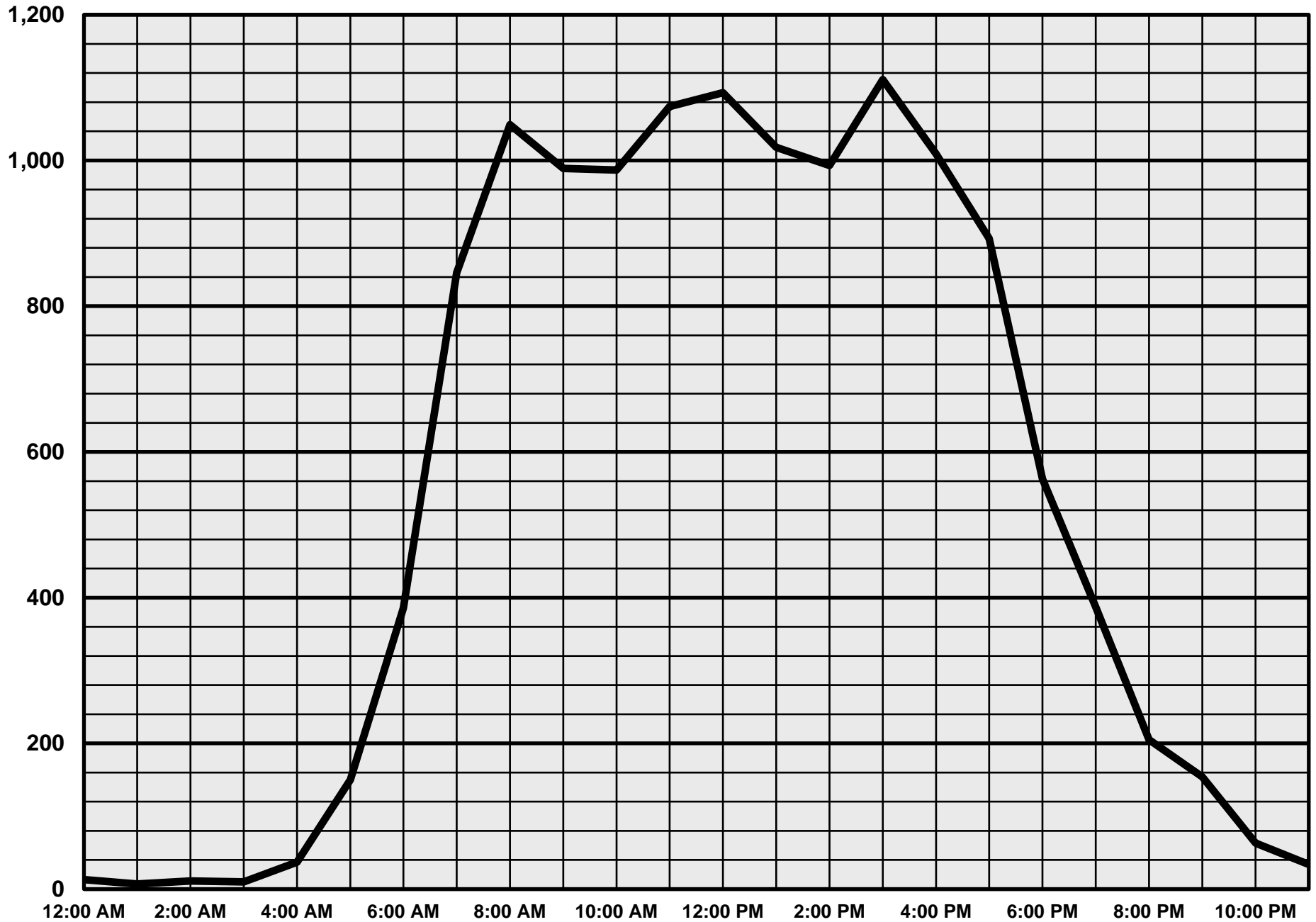


BEGIN TIME	COCHISE ROAD EASTBOUND				COCHISE ROAD WESTBOUND				92nd STREET NORTHBOUND				92nd STREET SOUTHBOUND				ALL TOTAL	60 MIN. TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
3:00 PM	18	0	10	28	10	1	6	17	6	155	1	162	7	98	13	118	325	1,302
3:15 PM	12	1	11	24	8	0	1	9	7	171	3	181	6	99	9	114	328	1,343
3:30 PM	17	0	10	27	8	0	6	14	8	149	2	159	6	105	9	120	320	1,298
3:45 PM	16	0	11	27	8	0	1	9	4	166	1	171	5	104	13	122	329	1,290
4:00 PM	12	1	16	29	9	2	7	18	7	200	1	208	8	96	7	111	366	1,237
4:15 PM	21	3	6	30	13	0	7	20	4	146	1	151	5	71	6	82	283	1,181
4:30 PM	23	1	8	32	10	2	6	18	3	169	2	174	5	82	1	88	312	1,161
4:45 PM	15	1	7	23	10	0	5	15	4	152	1	157	2	79	0	81	276	1,097
5:00 PM	17	1	14	32	9	0	1	10	2	168	2	172	3	89	4	96	310	1,006
5:15 PM	7	1	11	19	17	0	6	23	3	137	5	145	4	70	2	76	263	895
5:30 PM	12	0	10	22	5	3	4	12	2	134	3	139	1	68	6	75	248	789
5:45 PM	7	0	3	10	7	0	3	10	1	98	1	100	1	61	3	65	185	695
6:00 PM	12	0	4	16	11	1	1	13	6	105	3	114	1	52	3	56	199	650
6:15 PM	10	0	1	11	11	0	1	12	1	84	1	86	1	44	3	48	157	571
6:30 PM	6	0	5	11	10	2	4	16	6	72	1	79	2	33	13	48	154	525
6:45 PM	8	0	4	12	2	1	1	4	5	67	1	73	1	44	6	51	140	484
7:00 PM	8	0	4	12	8	1	2	11	0	58	0	58	0	39	0	39	120	433
7:15 PM	13	0	5	18	9	0	0	9	1	46	3	50	2	32	0	34	111	380
7:30 PM	13	0	6	19	3	1	1	5	0	52	0	52	0	37	0	37	113	323
7:45 PM	7	0	4	11	4	0	1	5	1	41	0	42	1	29	1	31	89	267
PM PEAK	57	2	48	107	33	2	15	50	26	686	7	719	25	404	38	467	1,343	1,343
PHF	0.84	0.50	0.75	0.92	0.92	0.25	0.54	0.69	0.81	0.86	0.58	0.69	0.78	0.96	0.73	0.96		

Appendix C.4
2021 Traffic Counts
92nd Street and Ironwood Lane



MERCADO VILLAGE
92nd STREET and IRONWOOD LANE - THURSDAY - 4/22/2021



MERCADO VILLAGE
92nd STREET and IRONWOOD LANE - THURSDAY - 4/22/2021
EXISTING 5:00 AM to 10:00 AM



BEGIN TIME	IRONWOOD LANE EASTBOUND				IRONWOOD LANE WESTBOUND				92nd STREET NORTHBOUND				92nd STREET 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	10	0	10	0	5	1	6	16	150
5:15 AM	0	0	0	0	0	0	0	0	0	9	0	9	0	11	4	15	24	186
5:30 AM	0	0	0	0	0	0	0	0	1	21	1	23	4	17	8	29	52	240
5:45 AM	0	0	0	0	0	0	1	1	3	28	0	31	1	19	6	26	58	298
6:00 AM	0	0	0	0	0	0	0	0	2	26	1	29	1	17	5	23	52	386
6:15 AM	0	0	0	0	0	0	0	0	4	32	2	38	7	25	8	40	78	463
6:30 AM	1	0	1	2	0	0	1	1	2	43	3	48	5	38	16	59	110	558
6:45 AM	2	0	0	2	0	0	0	0	4	64	1	69	8	47	20	75	146	698
7:00 AM	1	0	1	2	0	0	1	1	1	53	2	56	19	43	8	70	129	846
7:15 AM	2	0	2	4	1	0	3	4	2	74	6	82	24	51	8	83	173	948
7:30 AM	2	1	3	6	1	0	3	4	8	104	2	114	23	85	18	126	250	1,066
7:45 AM	5	0	5	10	3	0	3	6	13	109	9	131	32	94	21	147	294	1,075
8:00 AM	3	1	2	6	0	0	2	2	3	95	6	104	26	85	8	119	231	1,049
8:15 AM	2	1	6	9	2	0	8	10	10	108	4	122	35	106	9	150	291	1,056
8:30 AM	1	0	3	4	1	0	5	6	4	109	5	118	22	102	7	131	259	1,020
8:45 AM	8	0	4	12	2	0	6	8	3	108	9	120	21	95	12	128	268	987
9:00 AM	9	0	5	14	6	0	3	9	4	96	11	111	18	80	6	104	238	989
9:15 AM	3	0	6	9	4	1	2	7	9	100	13	122	16	96	5	117	255	987
9:30 AM	2	1	8	11	7	0	13	20	7	78	11	96	16	73	10	99	226	963
9:45 AM	4	1	12	17	5	0	7	12	11	113	13	137	24	75	5	104	270	995
AM PEAK	11	2	16	29	6	0	18	24	30	421	24	475	115	387	45	547	1,075	1,075
PHF	0.55	0.50	0.67	0.73	0.50	0.00	0.56	0.60	0.58	0.97	0.67	0.60	0.82	0.91	0.54	0.91		

MERCADO VILLAGE

92nd STREET and IRONWOOD LANE - THURSDAY - 4/22/2021

EXISTING 10:00 AM to 3:00 PM



BEGIN TIME	IRONWOOD LANE EASTBOUND				IRONWOOD LANE WESTBOUND				92nd STREET NORTHBOUND				92nd STREET 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	4	7	11	0	7	18	1	100	9	110	13	81	7	101	236	987
10:15 AM	6	1	7	14	6	0	4	10	4	84	10	98	11	90	8	109	231	1,017
10:30 AM	5	0	7	12	3	0	4	7	4	110	4	118	16	96	9	121	258	1,061
10:45 AM	5	1	7	13	3	0	5	8	2	99	8	109	20	105	7	132	262	1,060
11:00 AM	8	0	12	20	5	1	7	13	6	114	9	129	10	90	4	104	266	1,074
11:15 AM	6	0	6	12	3	0	4	7	2	113	5	120	24	109	3	136	275	1,101
11:30 AM	12	1	6	19	6	0	7	13	4	107	5	116	13	93	3	109	257	1,072
11:45 AM	3	1	10	14	5	1	9	15	1	114	3	118	11	111	7	129	276	1,062
12:00 PM	9	0	7	16	7	0	13	20	1	119	5	125	15	116	1	132	293	1,093
12:15 PM	5	0	2	7	5	0	6	11	4	121	1	126	10	87	5	102	246	1,036
12:30 PM	6	0	9	15	4	0	2	6	1	101	3	105	15	99	7	121	247	1,047
12:45 PM	2	1	4	7	6	0	3	9	9	135	7	151	22	114	4	140	307	1,048
1:00 PM	5	0	6	11	1	0	8	9	4	100	4	108	17	85	6	108	236	1,018
1:15 PM	5	2	2	9	2	0	5	7	0	105	9	114	17	104	6	127	257	988
1:30 PM	3	0	7	10	4	0	6	10	5	106	10	121	16	86	5	107	248	965
1:45 PM	3	0	4	7	3	1	4	8	6	130	6	142	18	95	7	120	277	979
2:00 PM	8	0	4	12	4	1	6	11	3	90	1	94	6	81	2	89	206	993
2:15 PM	3	1	5	9	4	0	8	12	0	95	6	101	10	93	9	112	234	1,055
2:30 PM	12	0	8	20	3	0	5	8	2	108	4	114	19	96	5	120	262	1,129
2:45 PM	6	1	12	19	6	0	9	15	6	113	8	127	16	102	12	130	291	1,138
MD PEAK	11	1	24	36	9	0	18	27	10	338	12	360	33	252	15	300	723	1,138
PHF	0.46	0.25	0.50	0.47	0.38	0.00	0.50	0.45	0.42	0.55	0.38	0.45	0.49	0.60	0.31	0.58		

MERCADO VILLAGE

92nd STREET and IRONWOOD LANE - THURSDAY - 4/22/2021

EXISTING 3:00 PM to 8:00 PM

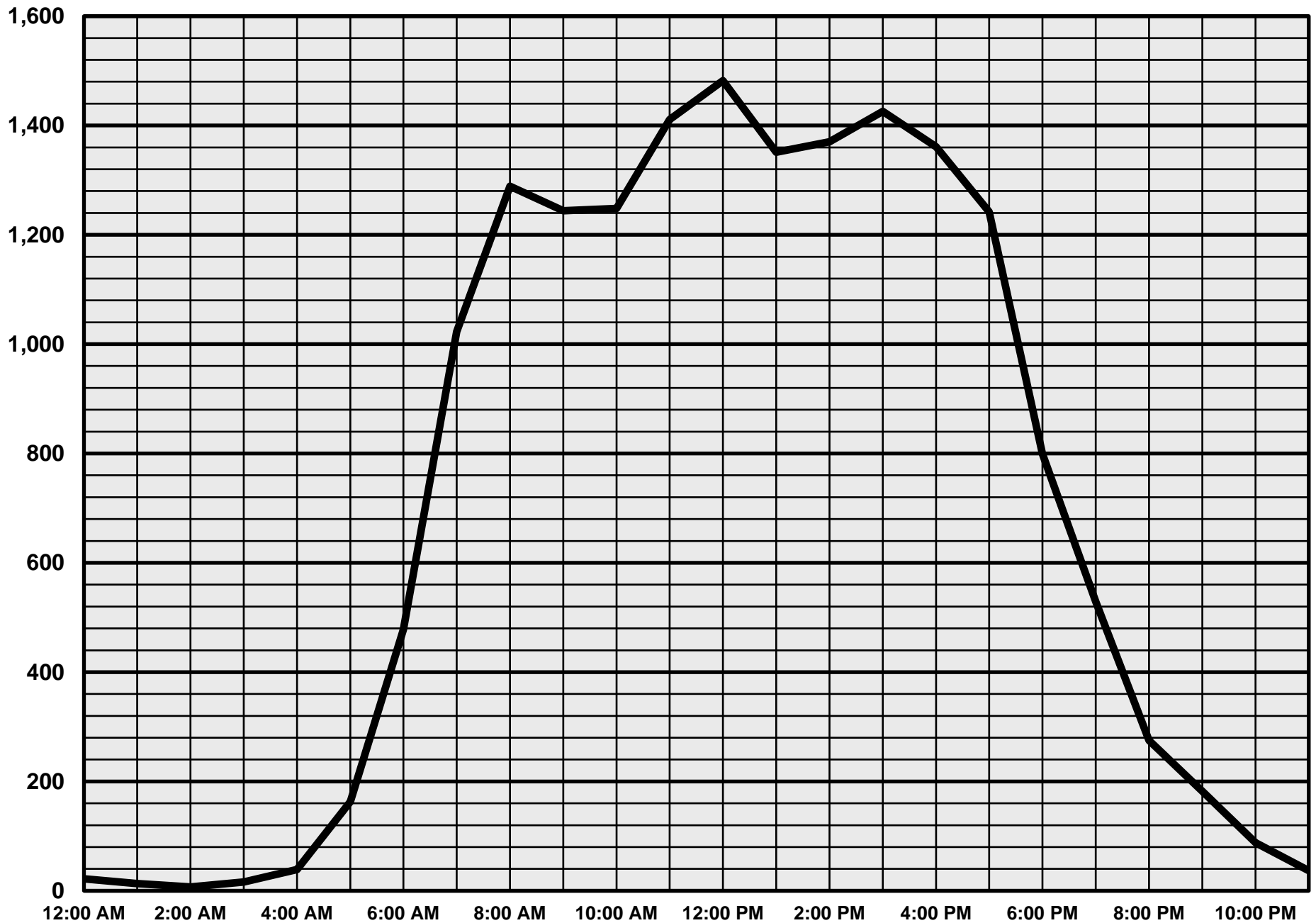


BEGIN TIME	IRONWOOD LANE EASTBOUND				IRONWOOD LANE WESTBOUND				92nd STREET NORTHBOUND				92nd STREET SOUTHBOUND				ALL TOTAL	60 MIN. TOTAL
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL		
3:00 PM	6	0	10	16	7	0	8	15	2	115	2	119	13	100	5	118	268	1,111
3:15 PM	3	0	9	12	3	0	9	12	3	154	4	161	17	105	1	123	308	1,152
3:30 PM	12	0	10	22	5	0	5	10	3	115	3	121	17	94	7	118	271	1,076
3:45 PM	8	1	3	12	5	0	7	12	2	115	2	119	11	107	3	121	264	1,049
4:00 PM	5	0	13	18	7	0	10	17	1	143	5	149	3	118	4	125	309	1,009
4:15 PM	14	0	8	22	2	0	6	8	2	107	3	112	4	82	4	90	232	972
4:30 PM	8	0	7	15	7	0	10	17	0	106	1	107	4	97	4	105	244	974
4:45 PM	7	0	6	13	7	0	6	13	1	108	1	110	3	83	2	88	224	939
5:00 PM	9	0	8	17	15	0	2	17	1	125	0	126	3	105	4	112	272	893
5:15 PM	3	0	5	8	4	0	5	9	1	108	3	112	3	97	5	105	234	787
5:30 PM	6	0	2	8	5	0	6	11	0	105	1	106	1	78	5	84	209	696
5:45 PM	4	0	3	7	6	0	1	7	0	86	0	86	1	74	3	78	178	611
6:00 PM	2	0	1	3	3	0	2	5	0	92	0	92	2	63	1	66	166	563
6:15 PM	5	0	0	5	5	0	3	8	0	71	0	71	3	55	1	59	143	502
6:30 PM	2	0	3	5	0	0	0	0	1	71	0	72	0	45	2	47	124	455
6:45 PM	1	0	0	1	0	0	3	3	2	71	0	73	0	53	0	53	130	432
7:00 PM	1	0	0	1	0	0	2	2	0	51	0	51	0	51	0	51	105	387
7:15 PM	6	0	2	8	1	0	0	1	0	44	0	44	1	41	1	43	96	345
7:30 PM	9	0	3	12	0	0	0	0	0	44	0	44	0	45	0	45	101	308
7:45 PM	6	0	2	8	1	0	0	1	0	34	0	34	1	41	0	42	85	253
PM PEAK	28	1	35	64	20	0	31	51	9	527	14	550	48	424	15	487	1,152	1,152
PHF	0.58	0.25	0.67	0.73	0.71	0.00	0.78	0.75	0.75	0.86	0.70	0.75	0.71	0.90	0.54	0.97		

Appendix C.5
2021 Traffic Counts
92nd Street and Mountain View Road



MERCADO VILLAGE
92nd STREET and MOUNTAIN VIEW ROAD - THURSDAY - 4/22/2021



MERCADO VILLAGE
92nd STREET and MOUNTAIN VIEW ROAD - THURSDAY - 4/22/2021
EXISTING 5:00 AM to 10:00 AM



BEGIN TIME	MOUNTAIN VIEW ROAD EASTBOUND				MOUNTAIN VIEW ROAD WESTBOUND				92nd STREET NORTHBOUND				92nd STREET 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	3	4	2	7	0	9	2	2	0	4	18	163
5:15 AM	0	0	0	0	1	0	4	5	7	3	3	13	5	5	0	10	28	217
5:30 AM	0	1	0	1	3	0	12	15	6	13	0	19	4	13	0	17	52	288
5:45 AM	0	0	0	0	5	1	9	15	11	19	2	32	5	12	1	18	65	370
6:00 AM	0	1	2	3	3	1	7	11	11	25	5	41	2	15	0	17	72	478
6:15 AM	1	0	1	2	7	0	13	20	11	27	12	50	12	14	1	27	99	563
6:30 AM	0	1	1	2	10	2	15	27	17	35	14	66	15	23	1	39	134	685
6:45 AM	0	0	1	1	9	2	10	21	15	60	29	104	18	28	1	47	173	849
7:00 AM	0	1	3	4	13	1	17	31	9	43	25	77	13	30	2	45	157	1,023
7:15 AM	4	1	8	13	20	1	22	43	17	62	30	109	19	35	2	56	221	1,154
7:30 AM	3	1	14	18	24	2	32	58	18	80	34	132	26	63	1	90	298	1,270
7:45 AM	4	1	8	13	34	3	24	61	11	113	47	171	31	68	3	102	347	1,305
8:00 AM	2	1	6	9	36	2	28	66	9	74	40	123	29	60	1	90	288	1,289
8:15 AM	1	3	3	7	35	1	25	61	9	94	50	153	32	79	5	116	337	1,280
8:30 AM	6	1	3	10	47	2	37	86	13	77	47	137	23	76	1	100	333	1,271
8:45 AM	1	1	9	11	42	3	36	81	9	83	44	136	30	72	1	103	331	1,233
9:00 AM	0	1	3	4	37	2	31	70	5	80	32	117	23	65	0	88	279	1,244
9:15 AM	1	0	2	3	42	5	34	81	6	78	52	136	27	81	0	108	328	1,245
9:30 AM	3	2	2	7	44	2	35	81	2	66	47	115	25	64	3	92	295	1,209
9:45 AM	0	1	2	3	53	2	30	85	3	108	50	161	19	73	1	93	342	1,251
AM PEAK	13	6	20	39	152	8	114	274	42	358	184	584	115	283	10	408	1,305	1,305
PHF	0.54	0.50	0.63	0.75	0.81	0.67	0.77	0.80	0.81	0.79	0.92	0.80	0.90	0.90	0.50	0.88		

MERCADO VILLAGE

92nd STREET and MOUNTAIN VIEW ROAD - THURSDAY - 4/22/2021

EXISTING 10:00 AM to 3:00 PM



BEGIN TIME	MOUNTAIN VIEW ROAD EASTBOUND				MOUNTAIN VIEW ROAD WESTBOUND				92nd STREET NORTHBOUND				92nd STREET SOUTHBOUND				ALL	60
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	TOTAL	MIN. TOTAL
10:00 AM	2	2	2	6	45	3	36	84	0	57	39	96	20	74	0	94	280	1,248
10:15 AM	1	0	1	2	47	3	20	70	4	78	44	126	24	70	0	94	292	1,323
10:30 AM	3	3	2	8	53	6	37	96	1	71	50	122	33	77	1	111	337	1,390
10:45 AM	2	1	5	8	51	2	37	90	5	78	45	128	31	80	2	113	339	1,391
11:00 AM	2	2	3	7	56	2	41	99	3	83	52	138	23	87	1	111	355	1,411
11:15 AM	1	0	6	7	51	4	36	91	3	83	58	144	34	83	0	117	359	1,408
11:30 AM	0	0	2	2	54	0	41	95	5	75	57	137	32	72	0	104	338	1,414
11:45 AM	2	0	4	6	50	1	34	85	1	86	52	139	21	107	1	129	359	1,448
12:00 PM	0	1	3	4	45	0	36	81	1	83	56	140	32	95	0	127	352	1,482
12:15 PM	0	1	7	8	57	6	36	99	5	89	69	163	19	74	2	95	365	1,457
12:30 PM	1	1	4	6	74	0	23	97	5	82	66	153	25	91	0	116	372	1,428
12:45 PM	4	0	3	7	47	5	42	94	4	95	75	174	35	81	2	118	393	1,396
1:00 PM	3	1	8	12	56	1	24	81	6	79	57	142	25	66	1	92	327	1,351
1:15 PM	2	1	5	8	38	3	26	67	3	91	61	155	31	75	0	106	336	1,325
1:30 PM	2	1	4	7	47	1	30	78	2	84	69	155	28	71	1	100	340	1,318
1:45 PM	2	1	6	9	37	4	31	72	7	104	60	171	34	61	1	96	348	1,323
2:00 PM	4	2	10	16	48	0	24	72	0	68	55	123	23	67	0	90	301	1,370
2:15 PM	0	1	5	6	53	1	26	80	8	78	56	142	19	81	1	101	329	1,418
2:30 PM	5	1	9	15	45	1	35	81	5	75	64	144	28	77	0	105	345	1,469
2:45 PM	4	2	10	16	48	4	31	83	3	93	77	173	20	98	5	123	395	1,465
MD PEAK	5	3	17	25	223	11	137	371	15	349	266	630	111	341	4	456	1,482	1,482
PHF	0.31	0.75	0.61	0.78	0.75	0.46	0.82	0.94	0.75	0.92	0.89	0.94	0.79	0.90	0.50	0.90		

MERCADO VILLAGE

92nd STREET and MOUNTAIN VIEW ROAD - THURSDAY - 4/22/2021

EXISTING 3:00 PM to 8:00 PM



BEGIN TIME	MOUNTAIN VIEW ROAD EASTBOUND				MOUNTAIN VIEW ROAD WESTBOUND				92nd STREET NORTHBOUND				92nd STREET 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	5	3	10	18	41	2	30	73	0	86	52	138	33	85	2	120	349	1,426
3:15 PM	6	1	8	15	46	1	38	85	3	107	60	170	32	76	2	110	380	1,480
3:30 PM	1	6	10	17	39	1	37	77	4	80	44	128	24	93	2	119	341	1,401
3:45 PM	4	2	13	19	44	3	32	79	2	78	57	137	31	89	1	121	356	1,404
4:00 PM	4	0	10	14	58	0	42	100	4	110	36	150	39	100	0	139	403	1,361
4:15 PM	2	2	9	13	50	3	27	80	2	68	48	118	23	66	1	90	301	1,314
4:30 PM	3	4	16	23	42	2	27	71	5	79	56	140	16	92	2	110	344	1,353
4:45 PM	5	1	12	18	46	2	32	80	7	76	37	120	21	72	2	95	313	1,313
5:00 PM	7	0	13	20	47	0	32	79	2	77	49	128	27	102	0	129	356	1,242
5:15 PM	3	4	10	17	44	1	34	79	4	77	52	133	24	86	1	111	340	1,129
5:30 PM	7	1	17	25	42	0	28	70	3	76	48	127	20	60	2	82	304	985
5:45 PM	5	1	3	9	40	1	20	61	5	51	30	86	24	61	1	86	242	858
6:00 PM	2	1	8	11	33	0	22	55	1	66	45	112	18	47	0	65	243	799
6:15 PM	0	0	5	5	19	1	21	41	1	50	37	88	14	46	2	62	196	709
6:30 PM	0	0	3	3	21	0	12	33	2	65	30	97	19	25	0	44	177	638
6:45 PM	0	0	3	3	17	0	18	35	2	45	43	90	10	45	0	55	183	596
7:00 PM	0	0	6	6	15	1	14	30	0	41	24	65	19	33	0	52	153	529
7:15 PM	0	1	3	4	13	0	7	20	0	35	21	56	14	31	0	45	125	466
7:30 PM	0	0	7	7	15	0	14	29	0	29	23	52	9	38	0	47	135	405
7:45 PM	0	1	7	8	15	1	8	24	0	27	15	42	9	33	0	42	116	342
PM PEAK	15	9	41	65	187	5	149	341	13	375	197	585	126	358	5	489	1,480	1,480
PHF	0.63	0.38	0.79	0.86	0.81	0.42	0.89	0.85	0.81	0.85	0.82	0.85	0.81	0.90	0.63	0.88		

Appendix D

Trip Generation



Appendix D.1

Allowable All Medical Office Trip Generation



PROJECT		ALLOWABLE ALL MEDICAL OFFICES							
PARCEL		ENTIRE							
ITE LAND USE CATEGORY AND CODE		MEDICAL OFFICE - 720							
INDEPENDENT VARIABLE		THOUSAND SQUARE FEET							
SIZE		131.00							
				ENTERING		EXITING		TOTAL	
WEEKDAY DAILY				50%		50%			
STUDIES and LOW, AVERAGE, AND HIGH SIZE		18	2	15	65				
MINIMUM RATE	LOW RATES ACCEPTABLE	14.52				951	951	1,902	
AVERAGE RATE		36.00				2,358	2,358	4,716	
MAXIMUM RATE	HIGH RATES SUSPECT	100.75				6,599	6,599	13,198	
STANDARD DEVIATION		13.38							
EQUATION: T = 42.97 * (X) - 108.01		R ² = 0.92				2,761	2,760	5,521	
LARGEST OF AVERAGE OR EQUATION						2,761	2,760	5,521	
AM PEAK HOUR ADJACENT STREET				79%		21%			
STUDIES and LOW, AVERAGE, AND HIGH SIZE		24	2	25	95				
MINIMUM RATE	LOW RATES ACCEPTABLE	0.87				90	24	114	
AVERAGE RATE		3.10				321	85	406	
MAXIMUM RATE	HIGH RATES SUSPECT	14.30				1,480	393	1,873	
STANDARD DEVIATION		1.49							
EQUATION: LN (T) = 0.90 * LN(X) + 1.34		R ² = 0.80				243	64	307	
LARGEST OF AVERAGE OR EQUATION						321	85	406	
AM PEAK HOUR GENERATOR				59%		41%			
STUDIES and LOW, AVERAGE, AND HIGH SIZE		21	2	15	60				
MINIMUM RATE	LOW RATES ACCEPTABLE	1.21				94	65	159	
AVERAGE RATE		3.74				289	201	490	
MAXIMUM RATE	HIGH RATES SUSPECT	19.28				1,490	1,036	2,526	
STANDARD DEVIATION		2.14							
EQUATION: T = 3.56 * (X) + 2.66		R ² = 0.74				277	192	469	
LARGEST OF AVERAGE OR EQUATION						289	201	490	
PM PEAK HOUR ADJACENT STREET				30%		70%			
STUDIES and LOW, AVERAGE, AND HIGH SIZE		30	2	25	95				
MINIMUM RATE	LOW RATES ACCEPTABLE	0.62				24	57	81	
AVERAGE RATE		3.93				155	360	515	
MAXIMUM RATE	HIGH RATES SUSPECT	8.86				348	813	1,161	
STANDARD DEVIATION		1.86							
EQUATION: T = 4.07 * (X) - 3.17		R ² = 0.77				159	371	530	
LARGEST OF AVERAGE OR EQUATION						159	371	530	
PM PEAK HOUR GENERATOR				51%		49%			
STUDIES and LOW, AVERAGE, AND HIGH SIZE		22	2	18	90				
MINIMUM RATE	LOW RATES ACCEPTABLE	1.88				125	121	246	
AVERAGE RATE		4.79				320	307	627	
MAXIMUM RATE	HIGH RATES SUSPECT	15.55				1,039	998	2,037	
STANDARD DEVIATION		1.62							
EQUATION: T = 5.36 * (X) - 10.42		R ² = 0.95				353	339	692	
LARGEST OF AVERAGE OR EQUATION						353	339	692	

Checked by: PEB 7/18/2023



Appendix D.2

Site Trip Generation




PROJECT		MERCADO VILLAGE						
PARCEL		APARTMENTS						
ITE LAND USE CATEGORY AND CODE		MULTIFAMILY HOUSING (LOW-RISE) - 220						
INDEPENDENT VARIABLE		DWELLING UNITS						
SIZE		255						
				ENTERING		EXITING		TOTAL
WEEKDAY DAILY				50%		50%		
NUMBER OF STUDIES and AVERAGE SIZE		22	33	229	494			
MINIMUM RATE	LOW RATES SUSPECT	2.46			314	313	627	
AVERAGE RATE		6.74			860	859	1,719	
MAXIMUM RATE	HIGH RATES SUSPECT	12.50			1,594	1,594	3,188	
STANDARD DEVIATION		1.79						
EQUATION: T = 6.41 * X + 75.31		R ² = 0.86			855	855	1,710	
LARGEST OF AVERAGE OR EQUATION					860	859	1,719	
AM PEAK HOUR ADJACENT STREET					24%	76%		
NUMBER OF STUDIES and AVERAGE SIZE		49	12	249	1,103			
MINIMUM RATE	LOW RATES SUSPECT	0.13			8	25	33	
AVERAGE RATE		0.40			24	78	102	
MAXIMUM RATE	HIGH RATES SUSPECT	0.76			47	147	194	
STANDARD DEVIATION		0.12						
EQUATION: T = 0.31 * (X) + 22.85		R ² = 0.79			13	43	56	
LARGEST OF AVERAGE OR EQUATION					24	78	102	
AM PEAK HOUR GENERATOR					24%	76%		
NUMBER OF STUDIES and AVERAGE SIZE		40	12	234	1,103			
MINIMUM RATE	LOW RATES ACCEPTABLE	0.25			15	49	64	
AVERAGE RATE		0.47			29	91	120	
MAXIMUM RATE	HIGH RATES SUSPECT	0.98			60	190	250	
STANDARD DEVIATION		0.16						
EQUATION: T = 0.35 * (X) + 28.13		R ² = 0.76			21	66	87	
LARGEST OF AVERAGE OR EQUATION					29	91	120	
PM PEAK HOUR ADJACENT STREET					63%	37%		
NUMBER OF STUDIES and AVERAGE SIZE		59	12	241	1,103			
MINIMUM RATE	LOW RATES SUSPECT	0.08			13	7	20	
AVERAGE RATE		0.51			82	48	130	
MAXIMUM RATE	HIGH RATES SUSPECT	1.04			167	98	265	
STANDARD DEVIATION		0.15						
EQUATION: T = 0.43 * (X) + 20.55		R ² = 0.84			82	48	130	
LARGEST OF AVERAGE OR EQUATION					82	48	130	
PM PEAK HOUR GENERATOR					60%	40%		
NUMBER OF STUDIES and AVERAGE SIZE		22	26	146	1,160			
MINIMUM RATE	LOW RATES ACCEPTABLE	0.25			38	26	64	
AVERAGE RATE		0.57			87	58	145	
MAXIMUM RATE	HIGH RATES SUSPECT	1.26			193	128	321	
STANDARD DEVIATION		0.20						
EQUATION: T = 0.42 * (X) + 34.78		R ² = 0.94			85	57	142	
LARGEST OF AVERAGE OR EQUATION					87	58	145	

Checked by: PEB 04/17/2024



PROJECT		MERCADO VILLAGE							
PARCEL		APARTMENTS							
ITE LAND USE CATEGORY AND CODE		MULTIFAMILY HOUSING (LOW-RISE) - 220							
INDEPENDENT VARIABLE		DWELLING UNITS							
SIZE		255							
				ENTERING		EXITING		SUM	
SATURDAY DAILY				50%		50%			
NUMBER OF STUDIES and AVERAGE SIZE		1	282	282	282				
MINIMUM RATE		4.55			580	580	1,160		
AVERAGE RATE		4.55			580	580	1,160		
MAXIMUM RATE		4.55			580	580	1,160		
STANDARD DEVIATION		NA							
EQUATION: NOT PROVIDED		NA			NA	NA	NA		
LARGEST OF AVERAGE OR EQUATION					580	580	1,160		
PEAK HOUR GENERATOR				50%		50%		estimated	
NUMBER OF STUDIES and AVERAGE SIZE		1	282	282	282				
MINIMUM RATE		0.41			53	52	105		
AVERAGE RATE		0.41			53	52	105		
MAXIMUM RATE		0.41			53	52	105		
STANDARD DEVIATION		NA							
EQUATION: NOT PROVIDED		NA			NA	NA	NA		
LARGEST OF AVERAGE OR EQUATION					53	52	105		
SUNDAY DAILY				50%		50%			
NUMBER OF STUDIES and AVERAGE SIZE		1	282	282	282				
MINIMUM RATE		3.86			492	492	984		
AVERAGE RATE		3.86			492	492	984		
MAXIMUM RATE		3.86			492	492	984		
STANDARD DEVIATION		NA							
EQUATION: NOT PROVIDED		NA			NA	NA	NA		
LARGEST OF AVERAGE OR EQUATION					492	492	984		
PEAK HOUR GENERATOR				50%		50%		estimated	
NUMBER OF STUDIES and AVERAGE SIZE		1	282	282	282				
MINIMUM RATE		0.36			46	46	92		
AVERAGE RATE		0.36			46	46	92		
MAXIMUM RATE		0.36			46	46	92		
STANDARD DEVIATION		NA							
EQUATION: NOT PROVIDED		NA			NA	NA	NA		
LARGEST OF AVERAGE OR EQUATION					46	46	92		

Checked by: PEB 04/17/2024




Appendix D.3

Kaplan Trip Generation




PROJECT		HALF MEDICAL OFFICE			
PARCEL		KAPLAN			
ITE LAND USE CATEGORY AND CODE		MEDICAL OFFICE - 720			
INDEPENDENT VARIABLE		THOUSAND SQUARE FEET			
SIZE		16.44			
		ENTERING		EXITING	TOTAL
WEEKDAY DAILY		50%		50%	
STUDIES and LOW, AVERAGE, AND HIGH SIZE		18	2	15	65
MINIMUM RATE	LOW RATES ACCEPTABLE	14.52		120	119
AVERAGE RATE		36.00		296	296
MAXIMUM RATE	HIGH RATES SUSPECT	100.75		828	828
STANDARD DEVIATION		13.38			
EQUATION: T = 42.97 * (X) - 108.01		R ² = 0.92		299	299
LARGEST OF AVERAGE OR EQUATION				299	598
AM PEAK HOUR ADJACENT STREET		79%		21%	
STUDIES and LOW, AVERAGE, AND HIGH SIZE		24	2	25	95
MINIMUM RATE	LOW RATES ACCEPTABLE	0.87		11	3
AVERAGE RATE		3.10		40	11
MAXIMUM RATE	HIGH RATES SUSPECT	14.30		186	49
STANDARD DEVIATION		1.49			
EQUATION: LN (T) = 0.90 * LN(X) + 1.34		R ² = 0.80		37	10
LARGEST OF AVERAGE OR EQUATION				40	51
AM PEAK HOUR GENERATOR		59%		41%	
STUDIES and LOW, AVERAGE, AND HIGH SIZE		21	2	15	60
MINIMUM RATE	LOW RATES ACCEPTABLE	1.21		12	8
AVERAGE RATE		3.74		36	25
MAXIMUM RATE	HIGH RATES SUSPECT	19.28		187	130
STANDARD DEVIATION		2.14			
EQUATION: T = 3.56 * (X) + 2.66		R ² = 0.74		36	25
LARGEST OF AVERAGE OR EQUATION				36	61
PM PEAK HOUR ADJACENT STREET		30%		70%	
STUDIES and LOW, AVERAGE, AND HIGH SIZE		30	2	25	95
MINIMUM RATE	LOW RATES ACCEPTABLE	0.62		3	7
AVERAGE RATE		3.93		20	45
MAXIMUM RATE	HIGH RATES SUSPECT	8.86		44	102
STANDARD DEVIATION		1.86			
EQUATION: T = 4.07 * (X) - 3.17		R ² = 0.77		19	45
LARGEST OF AVERAGE OR EQUATION				20	65
PM PEAK HOUR GENERATOR		51%		49%	
STUDIES and LOW, AVERAGE, AND HIGH SIZE		22	2	18	90
MINIMUM RATE	LOW RATES ACCEPTABLE	1.88		16	15
AVERAGE RATE		4.79		40	39
MAXIMUM RATE	HIGH RATES SUSPECT	15.55		131	125
STANDARD DEVIATION		1.62			
EQUATION: T = 5.36 * (X) - 10.42		R ² = 0.95		40	38
LARGEST OF AVERAGE OR EQUATION				40	79

Checked by: PEB 4/1/2024




PROJECT		ALL APARTMENTS						
PARCEL		KAPLAN						
ITE LAND USE CATEGORY AND CODE		MULTIFAMILY HOUSING (MID-RISE) - 221						
INDEPENDENT VARIABLE		DWELLING UNITS						
SIZE		219						
				ENTERING		EXITING		TOTAL
WEEKDAY DAILY				50%		50%		
NUMBER OF STUDIES and AVERAGE SIZE		11	60	201	336			
MINIMUM RATE	LOW RATES ACCEPTABLE	3.76			412	411	823	
AVERAGE RATE		4.54			497	497	994	
MAXIMUM RATE	HIGH RATES ACCEPTABLE	5.40			592	591	1,183	
STANDARD DEVIATION		0.51						
EQUATION: T = 4.77 * (X) - 46.46		R ² = 0.93			596	596	1,192	
LARGEST OF AVERAGE OR EQUATION					596	596	1,192	
AM PEAK HOUR ADJACENT STREET				26%		74%		
NUMBER OF STUDIES and AVERAGE SIZE		30	26	207	491			
MINIMUM RATE	LOW RATES SUSPECT	0.15			9	24	33	
AVERAGE RATE		0.37			21	60	81	
MAXIMUM RATE	HIGH RATES ACCEPTABLE	0.53			30	86	116	
STANDARD DEVIATION		0.09						
EQUATION: T = 0.44 * (X) - 11.61		R ² = 0.91			22	63	85	
LARGEST OF AVERAGE OR EQUATION					22	63	85	
AM PEAK HOUR GENERATOR				26%		74%		
NUMBER OF STUDIES and AVERAGE SIZE		48	21	225	1,168			
MINIMUM RATE	LOW RATES ACCEPTABLE	0.13			7	21	28	
AVERAGE RATE		0.35			20	57	77	
MAXIMUM RATE	HIGH RATES ACCEPTABLE	0.53			30	86	116	
STANDARD DEVIATION		0.11						
EQUATION: T = 0.32 * (X) + 5.84		R ² = 0.91			20	56	76	
LARGEST OF AVERAGE OR EQUATION					20	57	77	
PM PEAK HOUR ADJACENT STREET				61%		39%		
NUMBER OF STUDIES and AVERAGE SIZE		31	26	109	491			
MINIMUM RATE	LOW RATES SUSPECT	0.19			26	16	42	
AVERAGE RATE		0.39			52	33	85	
MAXIMUM RATE	HIGH RATES SUSPECT	0.57			76	49	125	
STANDARD DEVIATION		0.08						
EQUATION: T = 0.39 * (X) + 0.34		R ² = 0.91			52	34	86	
LARGEST OF AVERAGE OR EQUATION					52	34	86	
PM PEAK HOUR GENERATOR				60%		40%		
NUMBER OF STUDIES and AVERAGE SIZE		22	26	221	1,160			
MINIMUM RATE	LOW RATES ACCEPTABLE	0.19			25	17	42	
AVERAGE RATE		0.39			51	34	85	
MAXIMUM RATE	HIGH RATES SUSPECT	0.60			79	52	131	
STANDARD DEVIATION		0.10						
EQUATION: T = 0.32 * (X) + 15.57		R ² = 0.93			52	34	86	
LARGEST OF AVERAGE OR EQUATION					52	34	86	

Checked by: PEB 05/28/2023



PROJECT		ALL APARTMENTS						
PARCEL		KAPLAN						
ITE LAND USE CATEGORY AND CODE		MULTIFAMILY HOUSING (MID-RISE) - 221						
INDEPENDENT VARIABLE		DWELLING UNITS						
SIZE		219						
				ENTERING		EXITING		SUM
				50%		50%		
SATURDAY DAILY								
NUMBER OF STUDIES and AVERAGE SIZE		5	140	250	336			
MINIMUM RATE	LOW RATES ACCEPTABLE	4.03		442		441		883
AVERAGE RATE		4.91		538		537		1,075
MAXIMUM RATE	HIGH RATES SUSPECT	8.51		932		932		1,864
STANDARD DEVIATION		1.26						
EQUATION: LN (T) = 0.94 * LN(X) + 1.84		R ² = 0.91		499		499		998
LARGEST OF AVERAGE OR EQUATION				538		537		1,075
PEAK HOUR GENERATOR				51%		49%		
NUMBER OF STUDIES and AVERAGE SIZE		5	140	250	336			
MINIMUM RATE	LOW RATES ACCEPTABLE	0.34		38		36		74
AVERAGE RATE		0.39		43		42		85
MAXIMUM RATE	HIGH RATES ACCEPTABLE	0.43		48		46		94
STANDARD DEVIATION		0.04						
EQUATION: LN (T) = 1.00 * LN(X) - 0.91		R ² = 0.92		45		43		88
LARGEST OF AVERAGE OR EQUATION				45		43		88
SUNDAY DAILY				50%		50%		
NUMBER OF STUDIES and AVERAGE SIZE		5	140	250	336			
MINIMUM RATE	LOW RATES ACCEPTABLE	3.06		335		335		670
AVERAGE RATE		3.77		413		413		826
MAXIMUM RATE	HIGH RATES ACCEPTABLE	4.24		465		464		929
STANDARD DEVIATION		0.48						
EQUATION: LN (T) = 0.94 * LN(X) + 1.63		R ² = 0.85		384		383		767
LARGEST OF AVERAGE OR EQUATION				413		413		826
PEAK HOUR GENERATOR				55%		45%		
NUMBER OF STUDIES and AVERAGE SIZE		5	140	250	336			
MINIMUM RATE	LOW RATES ACCEPTABLE	0.26		31		26		57
AVERAGE RATE		0.32		39		31		70
MAXIMUM RATE	HIGH RATES ACCEPTABLE	0.42		51		41		92
STANDARD DEVIATION		0.05						
EQUATION: T = 0.24 * X + 21.51		R ² = 0.79		41		33		74
LARGEST OF AVERAGE OR EQUATION				41		33		74

Checked by: PEB 05/28/2023



Appendix D.4

Hourly Trip Generation by Land Use



Hourly Distribution of Entering and Exiting Vehicle Trips by Land Use

Source: ITE *Trip Generation Manual* , 11th Edition

Land Use Code	712		
Land Use	Small Office Building		
Setting	General Urban/Suburban		
Time Period	Weekday		
# Data Sites	22		
	% of 24-Hour Vehicle Trips		
Time	Total	Entering	Exiting
12:00 - 1:00 AM	0.0%	0.0%	0.0%
1:00 - 2:00 AM	0.0%	0.0%	0.0%
2:00 - 3:00 AM	0.0%	0.0%	0.0%
3:00 - 4:00 AM	0.0%	0.0%	0.0%
4:00 - 5:00 AM	0.0%	0.0%	0.0%
5:00 - 6:00 AM	0.0%	0.0%	0.0%
6:00 - 7:00 AM	0.0%	0.0%	0.0%
7:00 - 8:00 AM	3.6%	6.8%	0.4%
8:00 - 9:00 AM	9.5%	15.0%	3.9%
9:00 - 10:00 AM	6.9%	9.5%	4.3%
10:00 - 11:00 AM	7.4%	8.4%	6.4%
11:00 - 12:00 PM	10.5%	8.2%	12.8%
12:00 - 1:00 PM	12.6%	10.9%	14.2%
1:00 - 2:00 PM	7.6%	8.6%	6.6%
2:00 - 3:00 PM	9.6%	9.7%	9.5%
3:00 - 4:00 PM	10.8%	10.3%	11.3%
4:00 - 5:00 PM	8.1%	7.2%	9.1%
5:00 - 6:00 PM	11.2%	4.7%	17.7%
6:00 - 7:00 PM	2.2%	0.6%	3.7%
7:00 - 8:00 PM	0.0%	0.0%	0.0%
8:00 - 9:00 PM	0.0%	0.0%	0.0%
9:00 - 10:00 PM	0.0%	0.0%	0.0%
10:00 - 11:00 PM	0.0%	0.0%	0.0%
11:00 - 12:00 AM	0.0%	0.0%	0.0%

Hourly Distribution of Entering and Exiting Vehicle Trips by Land Use

Source: ITE *Trip Generation Manual* , 11th Edition

Land Use Code	710		
Land Use	General Office Building		
Setting	General Urban/Suburban		
Time Period	Weekday		
# Data Sites	11		
	% of 24-Hour Vehicle Trips		
Time	Total	Entering	Exiting
12:00 - 1:00 AM	0.1%	0.2%	0.1%
1:00 - 2:00 AM	0.0%	0.0%	0.1%
2:00 - 3:00 AM	0.0%	0.0%	0.0%
3:00 - 4:00 AM	0.1%	0.0%	0.1%
4:00 - 5:00 AM	0.2%	0.2%	0.2%
5:00 - 6:00 AM	0.3%	0.4%	0.1%
6:00 - 7:00 AM	2.6%	4.8%	0.5%
7:00 - 8:00 AM	7.8%	13.6%	2.0%
8:00 - 9:00 AM	8.9%	14.3%	3.4%
9:00 - 10:00 AM	5.3%	6.3%	4.4%
10:00 - 11:00 AM	5.7%	5.5%	6.0%
11:00 - 12:00 PM	8.1%	6.0%	10.3%
12:00 - 1:00 PM	10.2%	10.2%	10.1%
1:00 - 2:00 PM	7.8%	9.0%	6.6%
2:00 - 3:00 PM	7.4%	8.3%	6.5%
3:00 - 4:00 PM	7.8%	7.3%	8.4%
4:00 - 5:00 PM	10.3%	5.4%	15.2%
5:00 - 6:00 PM	9.9%	4.0%	15.8%
6:00 - 7:00 PM	2.1%	1.7%	2.6%
7:00 - 8:00 PM	1.6%	0.9%	2.3%
8:00 - 9:00 PM	1.0%	0.7%	1.3%
9:00 - 10:00 PM	1.1%	0.5%	1.6%
10:00 - 11:00 PM	1.2%	0.3%	2.1%
11:00 - 12:00 AM	0.3%	0.4%	0.2%

Hourly Distribution of Entering and Exiting Vehicle Trips by Land Use

Source: ITE *Trip Generation Manual* , 11th Edition

Land Use Code	720		
Land Use	Medical-Dental Office Building		
	Within/Near Hospital Campus		
Setting	General Urban/Suburban		
Time Period	Weekday		
# Data Sites	4		
	% of 24-Hour Vehicle Trips		
Time	Total	Entering	Exiting
12:00 - 1:00 AM	0.1%	0.1%	0.1%
1:00 - 2:00 AM	0.1%	0.1%	0.1%
2:00 - 3:00 AM	0.2%	0.1%	0.4%
3:00 - 4:00 AM	0.0%	0.0%	0.0%
4:00 - 5:00 AM	0.1%	0.1%	0.1%
5:00 - 6:00 AM	0.2%	0.3%	0.1%
6:00 - 7:00 AM	1.6%	3.0%	0.3%
7:00 - 8:00 AM	7.6%	13.8%	1.3%
8:00 - 9:00 AM	8.7%	12.1%	5.4%
9:00 - 10:00 AM	10.7%	11.4%	9.9%
10:00 - 11:00 AM	9.8%	9.6%	10.0%
11:00 - 12:00 PM	9.3%	7.5%	11.0%
12:00 - 1:00 PM	8.5%	7.6%	9.5%
1:00 - 2:00 PM	8.4%	9.7%	7.1%
2:00 - 3:00 PM	8.2%	8.3%	8.1%
3:00 - 4:00 PM	8.8%	7.9%	9.6%
4:00 - 5:00 PM	7.6%	3.7%	11.3%
5:00 - 6:00 PM	5.7%	1.9%	9.5%
6:00 - 7:00 PM	1.9%	1.0%	2.8%
7:00 - 8:00 PM	0.9%	0.6%	1.2%
8:00 - 9:00 PM	0.8%	0.4%	1.3%
9:00 - 10:00 PM	0.3%	0.3%	0.4%
10:00 - 11:00 PM	0.2%	0.2%	0.2%
11:00 - 12:00 AM	0.2%	0.1%	0.2%

Hourly Distribution of Entering and Exiting Vehicle Trips by Land Use

Source: ITE *Trip Generation Manual*, 11th Edition

Land Use Code	220		
Land Use	Multifamily Housing (Low-Rise)		
Subcategory	Not Close to Rail Transit		
Setting	General Urban/Suburban		
Time Period	Weekday		
# Data Sites	6		
	% of 24-Hour Vehicle Trips		
Time	Total	Entering	Exiting
12:00 - 1:00 AM	0.7%	0.9%	0.4%
1:00 - 2:00 AM	0.4%	0.5%	0.3%
2:00 - 3:00 AM	0.4%	0.4%	0.4%
3:00 - 4:00 AM	0.4%	0.4%	0.3%
4:00 - 5:00 AM	0.9%	0.3%	1.4%
5:00 - 6:00 AM	1.6%	0.5%	2.6%
6:00 - 7:00 AM	4.2%	1.4%	6.9%
7:00 - 8:00 AM	6.5%	2.0%	10.8%
8:00 - 9:00 AM	5.8%	3.1%	8.5%
9:00 - 10:00 AM	3.9%	2.9%	4.9%
10:00 - 11:00 AM	3.6%	2.4%	4.8%
11:00 - 12:00 PM	4.3%	3.8%	4.7%
12:00 - 1:00 PM	4.3%	4.5%	4.1%
1:00 - 2:00 PM	4.2%	4.0%	4.4%
2:00 - 3:00 PM	5.2%	5.6%	4.9%
3:00 - 4:00 PM	6.1%	6.9%	5.3%
4:00 - 5:00 PM	7.9%	10.1%	5.6%
5:00 - 6:00 PM	9.5%	11.4%	7.6%
6:00 - 7:00 PM	8.2%	9.7%	6.7%
7:00 - 8:00 PM	6.4%	8.1%	4.7%
8:00 - 9:00 PM	5.9%	7.7%	4.2%
9:00 - 10:00 PM	4.4%	6.0%	2.7%
10:00 - 11:00 PM	3.5%	4.7%	2.4%
11:00 - 12:00 AM	1.9%	2.5%	1.4%

Appendix E

Signal Warrant Analysis
of 92nd Street and Cochise Drive



Appendix E.1

Existing 2023



MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
TRAFFIC CONTROL SIGNAL WARRANT STUDY SUMMARY

LOCATION: **SCTTSDALE, ARIZONA**
CONDITIONS: **NONE**

DATE OF COUNT: 11 July 2023
DATE OF STUDY: 29 March 2024

NORTH/SOUTH STREET:	92nd STREET	MAJOR	MULTI-LANE
EAST/WEST STREET:	COCHISE DRIVE	MINOR	MULTI-LANE

POSTED SPEED LIMIT ON MAJOR STREET:	35 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	6	8	NO
COMBINATION OF WARRANTS 1A AND 1B (80% of Values)	0	8	NO
COMBINATION OF WARRANTS 1A AND 1B (56% of Values)	-	-	Not Applicable
# 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 (Volumes at 80% of Original Values)	0	8	NO
WITH WARRANT # 1B (Volumes at 80% of Original Values)	0	8	NO
WITH WARRANT # 1A (Volumes at 56% of Original Values)	-	-	Not Applicable
WITH WARRANT # 1B (Volumes at 56% of Original Values)	-	-	Not Applicable
TOTAL NUMBER OF CRASHES IN 12 CONSECUTIVE MONTHS:	4	-	-
NUMBER OF POTENTIALLY PREVENTABLE CRASHES	4	5	NO
# 7. ENTIRE WARRANT	-	-	NO

WARRANT	CRITERIA		REQUIRED HOURS	ACTUAL HOURS	SATISFIED	PROXIMITY	
	MAJOR	MINOR				MAJOR	MINOR
#1A	600	200	8	0	NO		223%
#1B	900	100	8	6	NO		61%
#1A with #1B	480	80	8	9	NO		
#1B with #1A	720	160	8	0			158%
#2	Varying Graph		4	0	NO	17%	64%
#3B	Varying Graph		1	0	NO	43%	218%

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

Analysis by: PEB 4/16/2024



MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
TRAFFIC CONTROL MULTIWAY STOP WARRANT STUDY SUMMARY

LOCATION: **SCTTSDALE, ARIZONA**
 CONDITIONS: **NONE**

DATE OF COUNT: 11 July 2023
 DATE OF STUDY: 29 March 2024

NORTH/SOUTH STREET:	92nd STREET	MAJOR	MULTI-LANE
EAST/WEST STREET:	COCHISE DRIVE	MINOR	MULTI-LANE

POSTED SPEED LIMIT ON MAJOR STREET:	35 mph
85th PERCENTILE SPEED ON MAJOR STREET:	Unknown

WARRANT	EXISTING	REQUIRED	SATISFIED?
A. INTERIM MEASURE FOR TRAFFIC CONTROL SIGNAL			
TRAFFIC SIGNAL WARRANTS	0	1	NO
B. CRASH EXPERIENCE			
TOTAL NUMBER OF CRASHES	4	-	-
NUMBER OF POTENTIALLY PREVENTABLE CRASHES	4	5	NO
C. MINIMUM VOLUMES			
EIGHT-HOUR PERIODS SATISFYING VOLUME WARRANT	0	1	NO
PEAK HOUR DELAY - MORN	120	30	YES
PEAK HOUR DELAY - EVENI	120	30	YES
ENTIRE WARRANT			NO
D. COMBINATION OF WARRANTS B AND C (80% of Values)			
TOTAL NUMBER OF CRASHES	4	-	-
NUMBER OF POTENTIALLY PREVENTABLE CRASHES	4	4	YES
EIGHT-HOUR PERIODS SATISFYING VOLUME WARRANT	1	1	YES
PEAK HOUR DELAY - MORN	120	24	YES
PEAK HOUR DELAY - EVENI	120	24	YES
ENTIRE WARRANT			YES

The decision to install multiway stop control should be based on an engineering study.

Analysis by: PEB 4/16/2024



TRAFFIC CONTROL SIGNAL WARRANT STUDY

PROJECT: **MERCADO VILLAGE**
LOCATION: **SCTTSDALE, ARIZONA**

NORTH/SOUTH STREET: **92nd STREET**

NB LANES **2** SB LANES **2**

EAST/WEST STREET: **COCHISE DRIVE**

EB LANES **2** WB LANES **2**

SPEED LIMIT ON MAJOR STREET: **35**
85TH PERCENTILE SPEED ON MAJOR STREET: **UNKNOWN**

VOLUME DATA: **EXISTING** CONDITIONS: **NONE**

DATE OF COUNT: **11 July 2023** DATE OF STUDY: **29 March 2024**

INTERSECTION APPROACH TRAFFIC VOLUMES				
TIME PERIOD	NORTHBOUND	SOUTHBOUND	EASTBOUND	WESTBOUND
12:00 AM to 1:00 AM	8	6	3	0
1:00 AM to 2:00 AM	5	4	6	0
2:00 AM to 3:00 AM	2	5	0	0
3:00 AM to 4:00 AM	2	12	3	0
4:00 AM to 5:00 AM	19	29	2	0
5:00 AM to 6:00 AM	66	96	2	4
6:00 AM to 7:00 AM	188	278	8	16
7:00 AM to 8:00 AM	321	502	42	49
8:00 AM to 9:00 AM	429	559	62	49
9:00 AM to 10:00 AM	551	501	96	40
10:00 AM to 11:00 AM	603	465	112	38
11:00 AM to 12:00 PM	596	453	126	58
12:00 PM to 1:00 PM	631	412	109	86
1:00 PM to 2:00 PM	512	429	90	66
2:00 PM to 3:00 PM	576	375	119	50
3:00 PM to 4:00 PM	581	352	122	33
4:00 PM to 5:00 PM	648	331	116	46
5:00 PM to 6:00 PM	547	255	90	33
6:00 PM to 7:00 PM	278	183	52	35
7:00 PM to 8:00 PM	200	139	38	28
8:00 PM to 9:00 PM	97	76	10	15
9:00 PM to 10:00 PM	49	34	5	6
10:00 PM to 11:00 PM	34	19	4	3
11:00 PM to 12:00 AM	13	16	2	0
TOTAL	6,956	5,531	1,219	655

CRASH EXPERIENCE AND DELAY DATA

TOTAL NUMBER OF CRASHES IN A 12 MONTH PERIOD: **4**
POTENTIALLY PREVENTABLE BY SIGNAL: **4** BY FOUR-WAY STOP: **4**

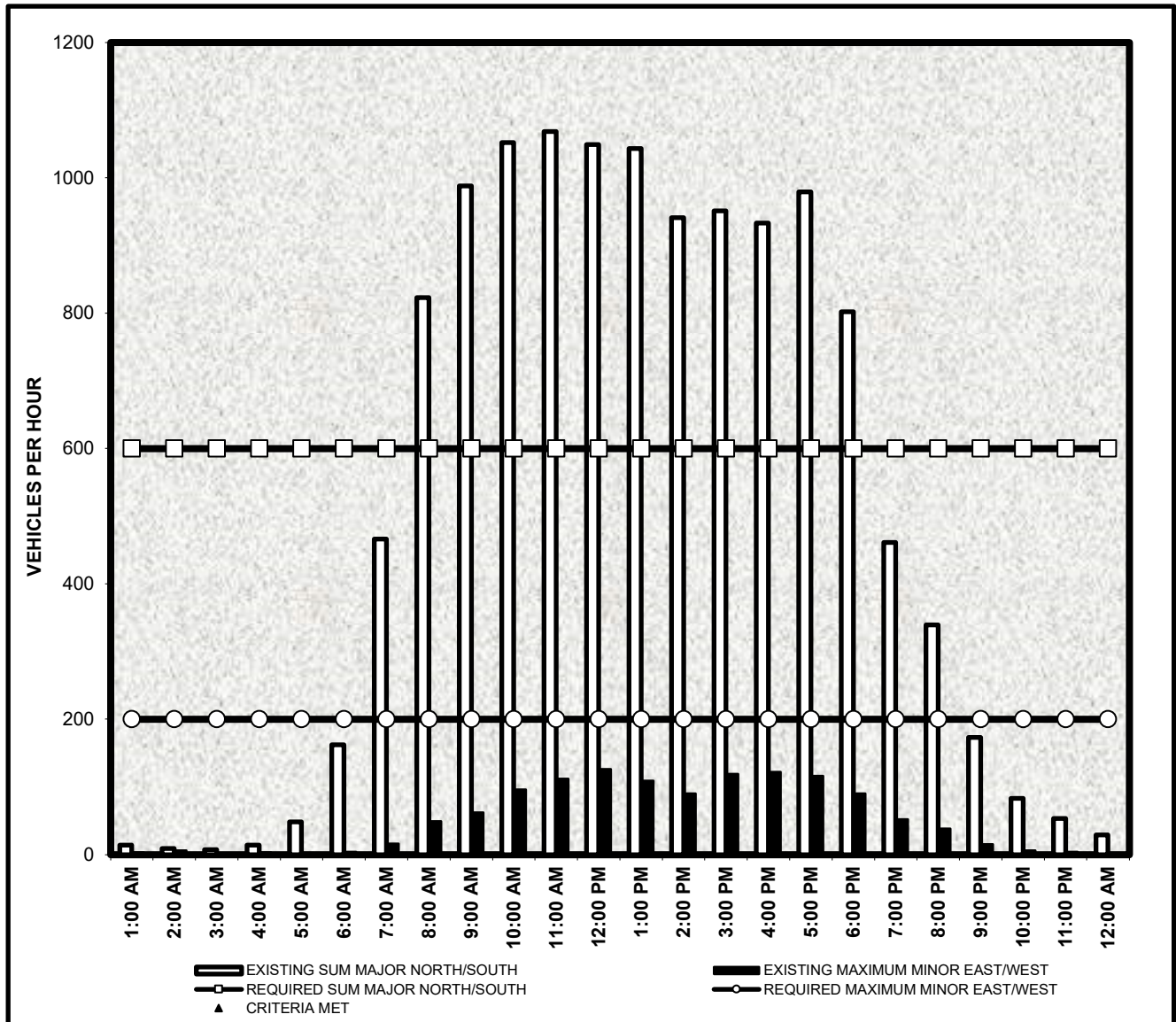
TIME PERIOD	AVERAGE DELAY SECONDS/VEHICLE	SIDE STREET TOTAL DELAY VEH-HOURS	VOLUME	TOTAL INTERSECTION VOLUME
11:00 AM to 12:00 PM	120	4.20	126	1,233
12:00 PM to 1:00 PM	120	3.63	109	1,238

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
M. U. T. C. D. WARRANT # 1A
Minimum Vehicular Volume

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH/SOUTH STREET	600
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST/WEST STREET	200

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

WARRANT CRITERIA:	NOT SATISFIED
--------------------------	----------------------



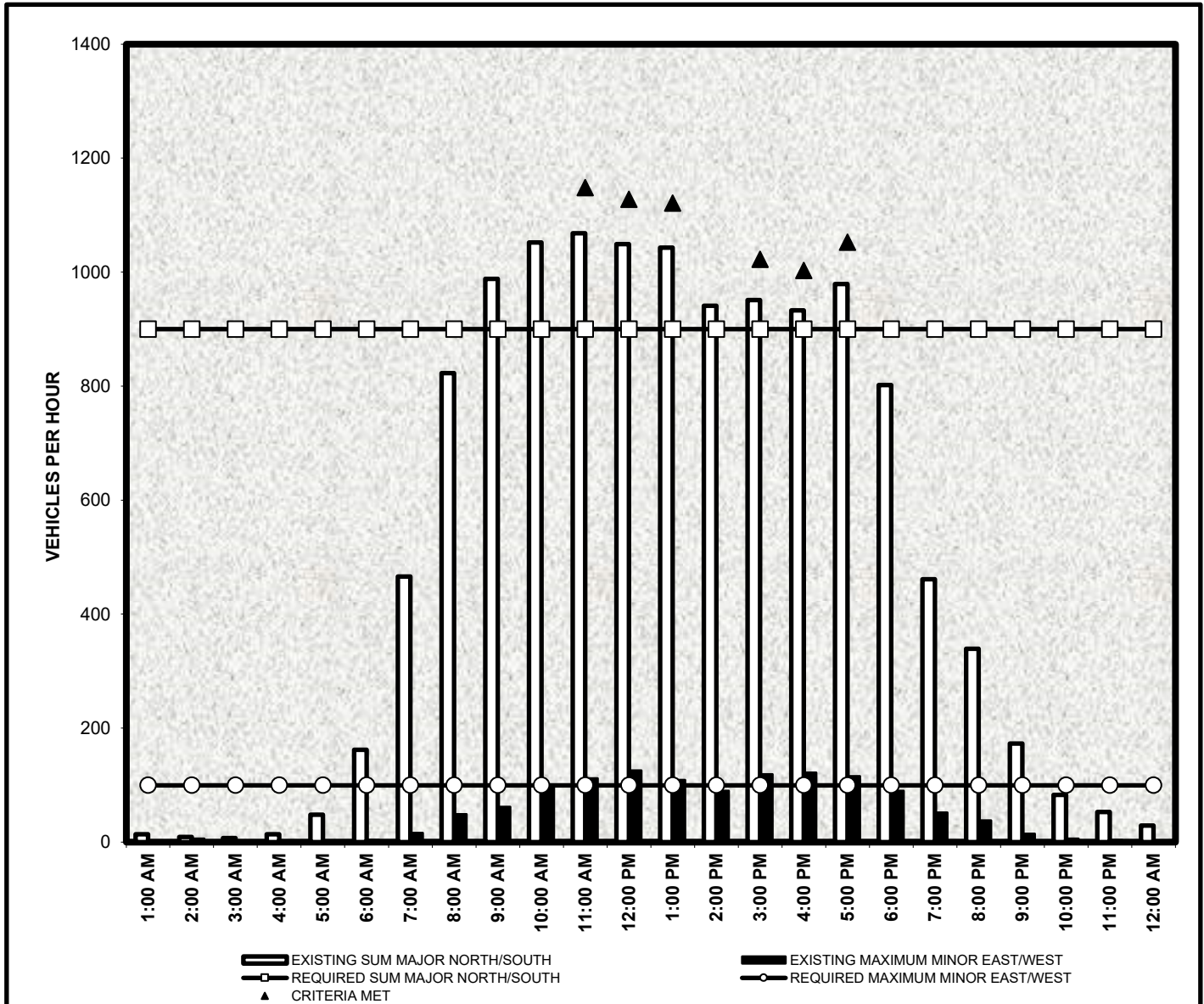
The Minimum Vehicular Volume, Condition A, is intended for application where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The warrant is satisfied when, for each of any eight hours of an average day, the traffic volumes provided in the 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.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
M. U. T. C. D. WARRANT # 1B
Interruption of Continuous Traffic

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH/SOUTH STREET	900
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST/WEST STREET	100

NUMBER OF HOURS SATISFIED:	6
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	4
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	1

WARRANT CRITERIA:	NOT SATISFIED
--------------------------	----------------------



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.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE

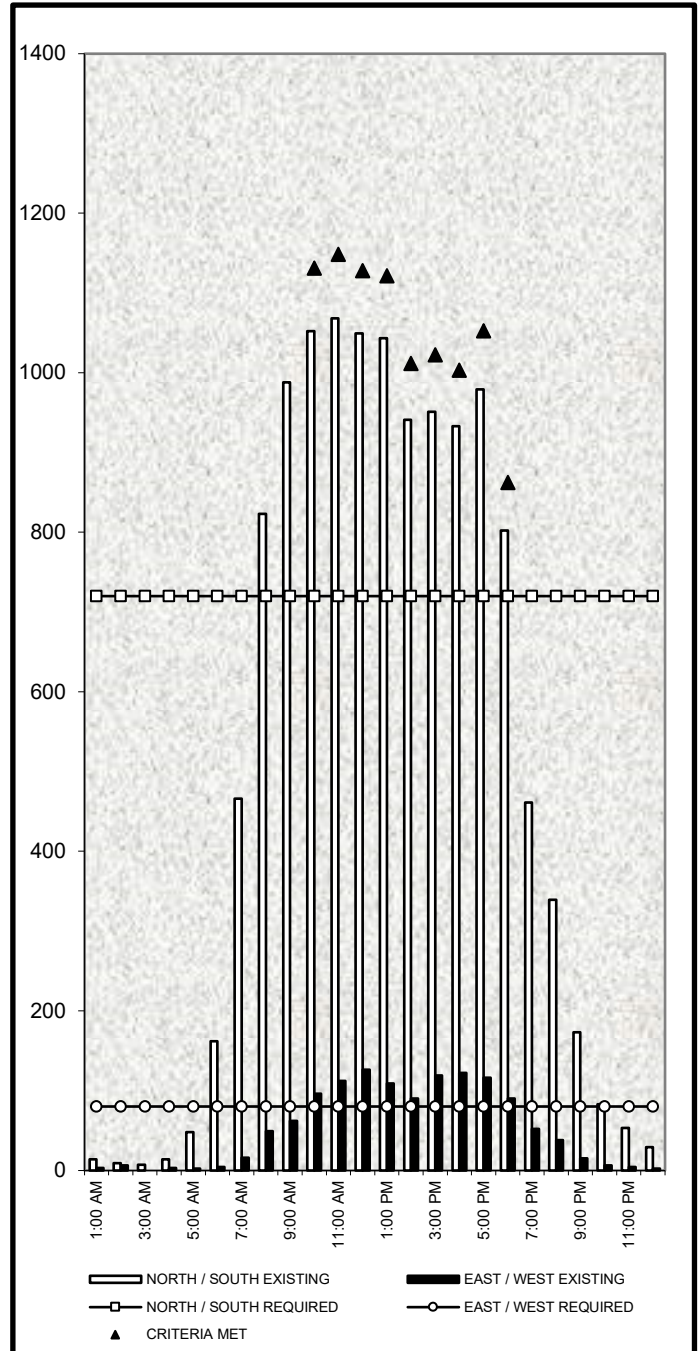
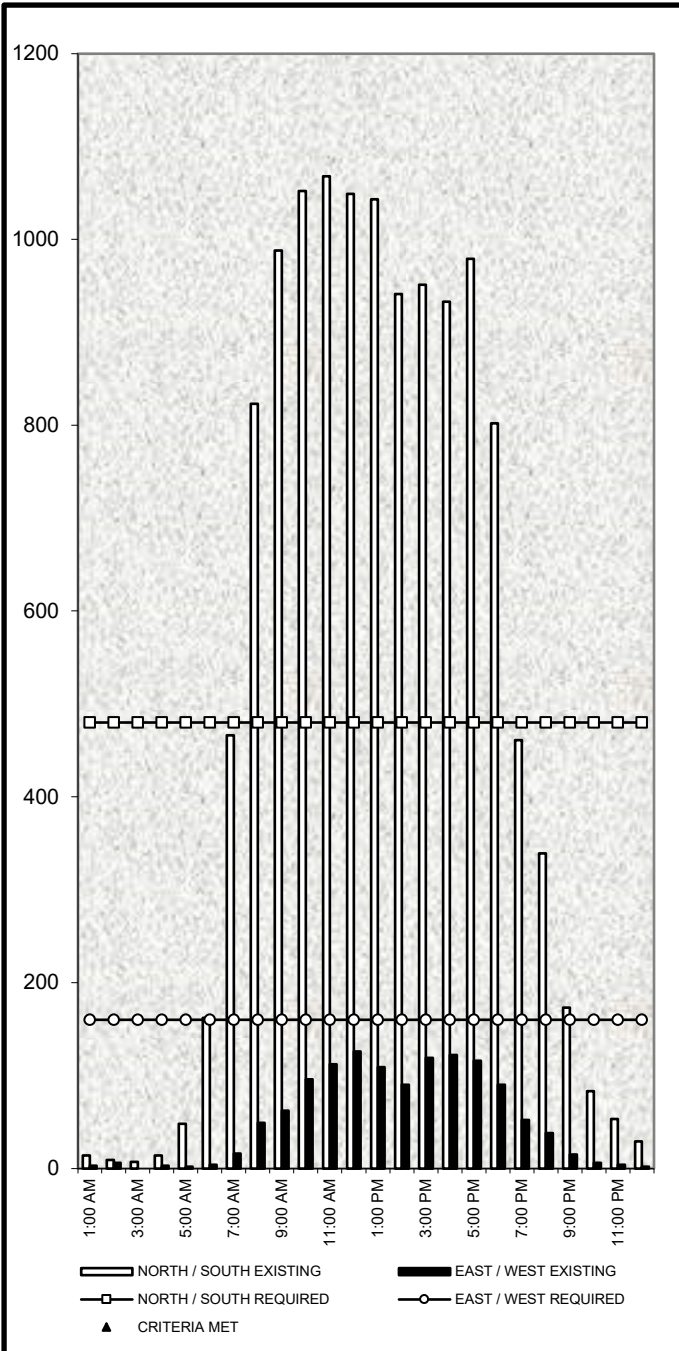
M. U. T. C. D. WARRANT # 1

Combination of Conditions A and B at 80% of Original Values

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH / SOUTH STREET	480	720
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST / WEST STREET	160	80

NUMBER OF HOURS SATISFIED:	0	9
----------------------------	---	---

WARRANT CRITERIA:	NOT SATISFIED
--------------------------	----------------------

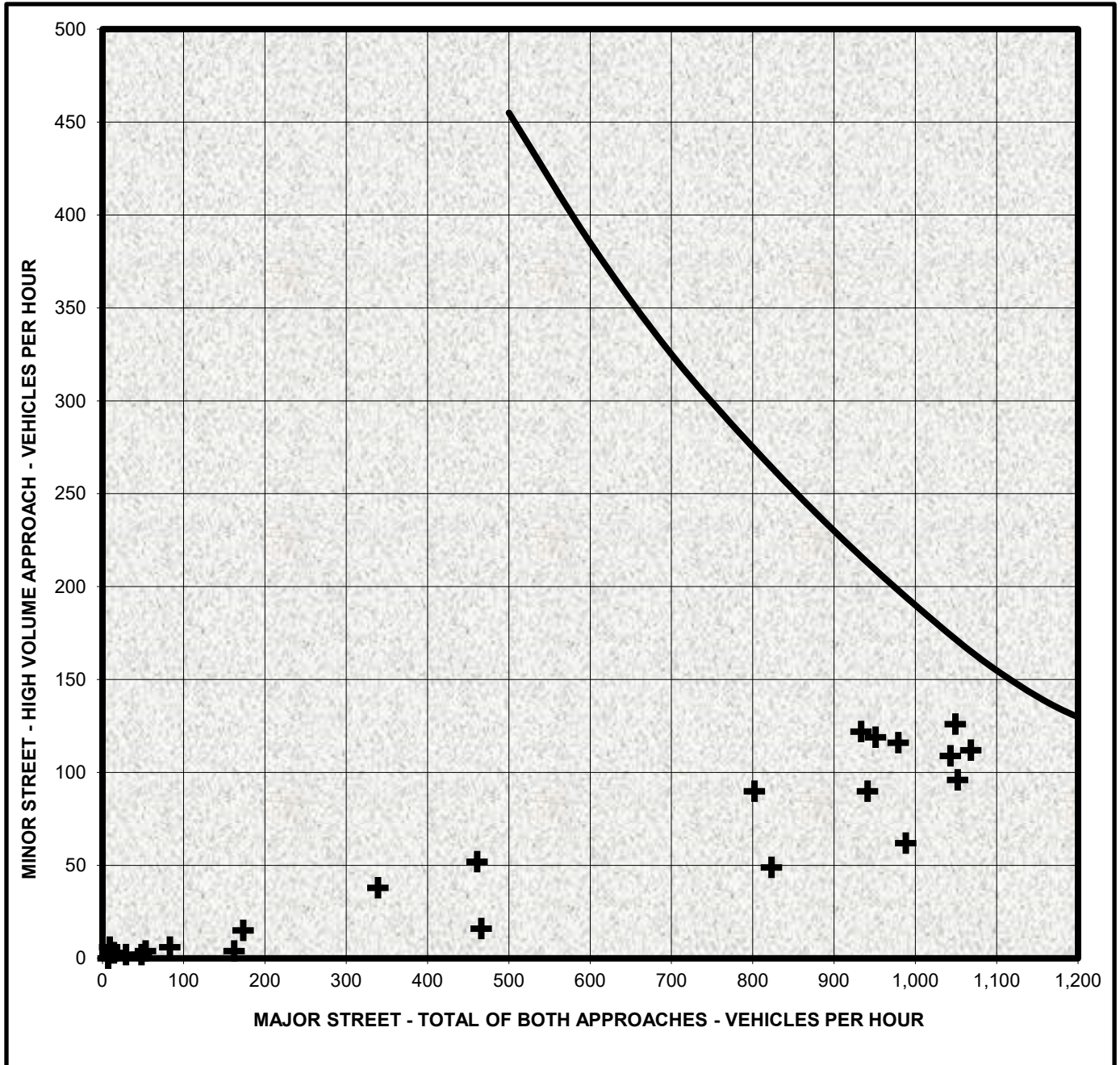


The major-street and minor-street volumes shall be for the same 8 hours for each condition; however, the 8 hours satisfied on A shall not be required to be the same 8 hours satisfied in Condition B. The combination of Conditions A and B should be applied only after an adequate trial of other alternatives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

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
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

WARRANT CRITERIA:	NOT SATISFIED
--------------------------	----------------------



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.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
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

TIME PERIOD: 11:00 AM to 12:00 PM	MEASURED	SATISFIED?
SIDE STREET VEHICLE-HOURS DELAY:	4.20	NO
SIDE STREET HOURLY VOLUME:	126	NO
TOTAL INTERSECTION HOURLY VOLUME:	1,233	YES
ALL CRITERIA		NO

TIME PERIOD: 12:00 PM to 1:00 PM	MEASURED	SATISFIED?
SIDE STREET VEHICLE-HOURS DELAY:	3.63	NO
SIDE STREET HOURLY VOLUME:	109	NO
TOTAL INTERSECTION HOURLY VOLUME:	1,238	YES
ALL CRITERIA		NO

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.

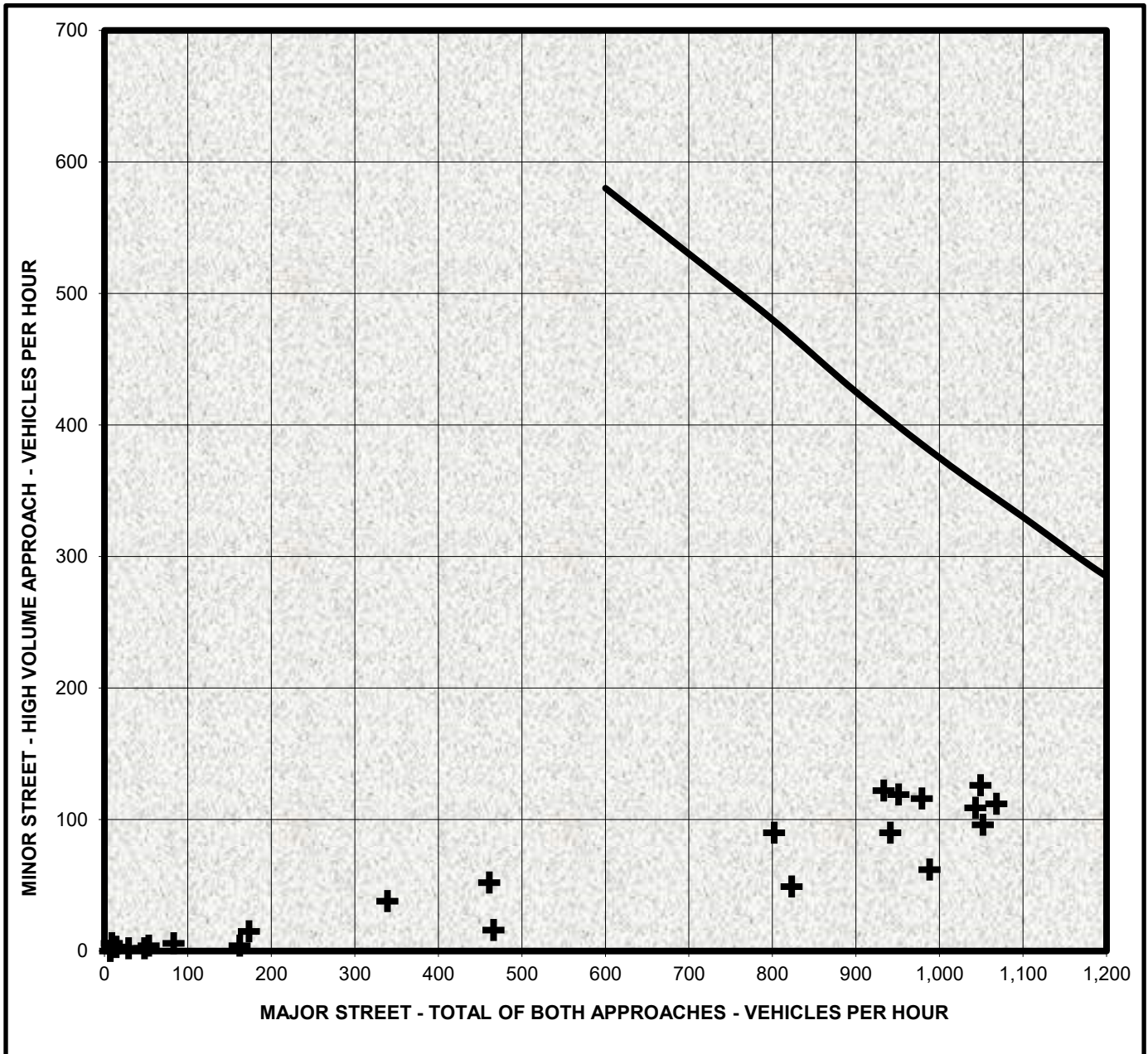
The need for a traffic control signal shall be considered if an engineering study finds that all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:

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.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
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

WARRANT CRITERIA:	NOT SATISFIED
--------------------------	----------------------

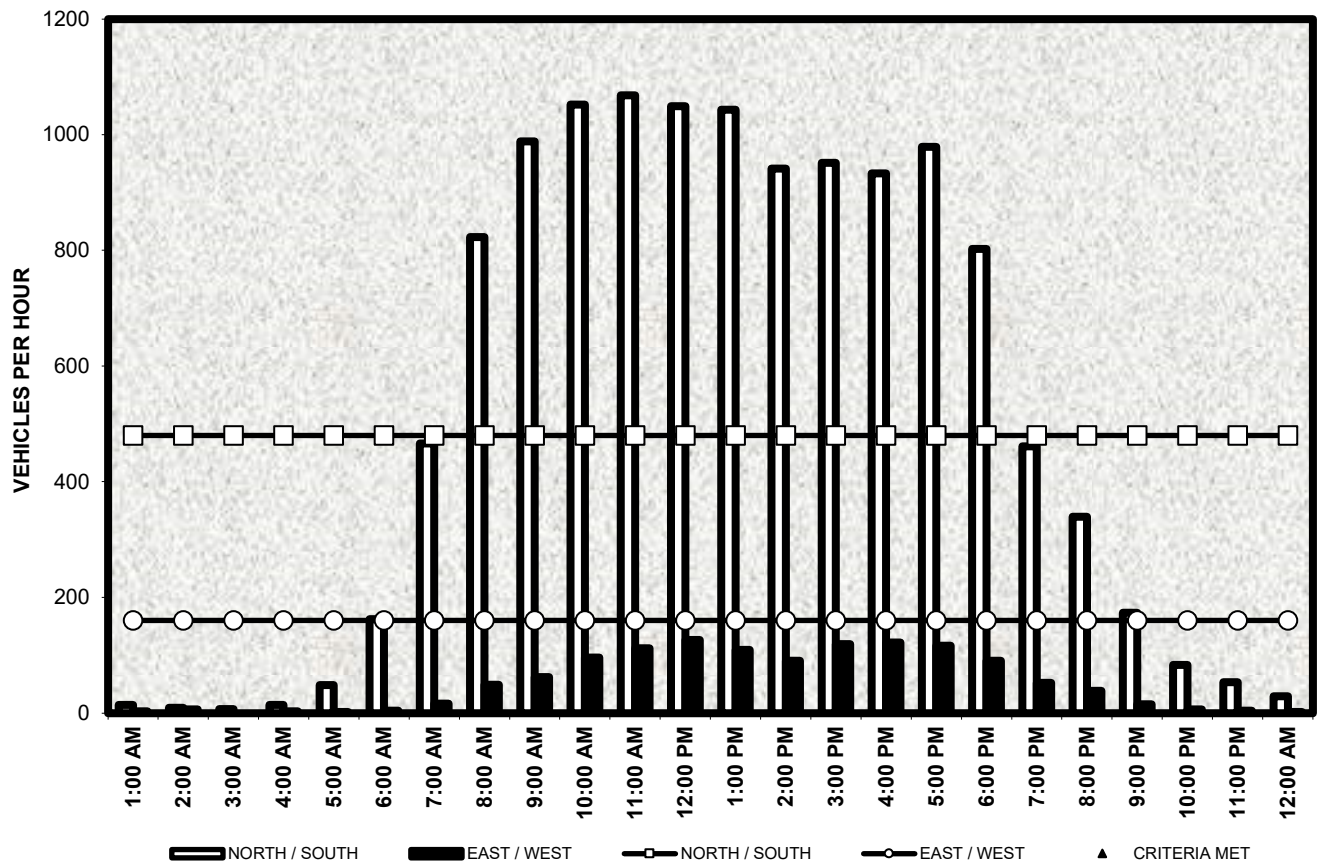


The Four Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The need for a traffic control signal shall be considered if an engineering study finds that for each of 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.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE

M. U. T. C. D. WARRANT #7 (In combination with Warrant # 1A)
Crash Experience with Traffic Volumes at 80% of Original Values

HAVE LESS RESTRICTIVE MEANS BEEN ATTEMPTED?	#REF!
TOTAL NUMBER OF CRASHES:	4
NUMBER OF POTENTIALLY PREVENTABLE CRASHES:	4
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH / SOUTH STREET	480
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST / WEST STREET	160
NUMBER OF HOURS SATISFIED:	0
WARRANT CRITERIA:	NOT SATISFIED



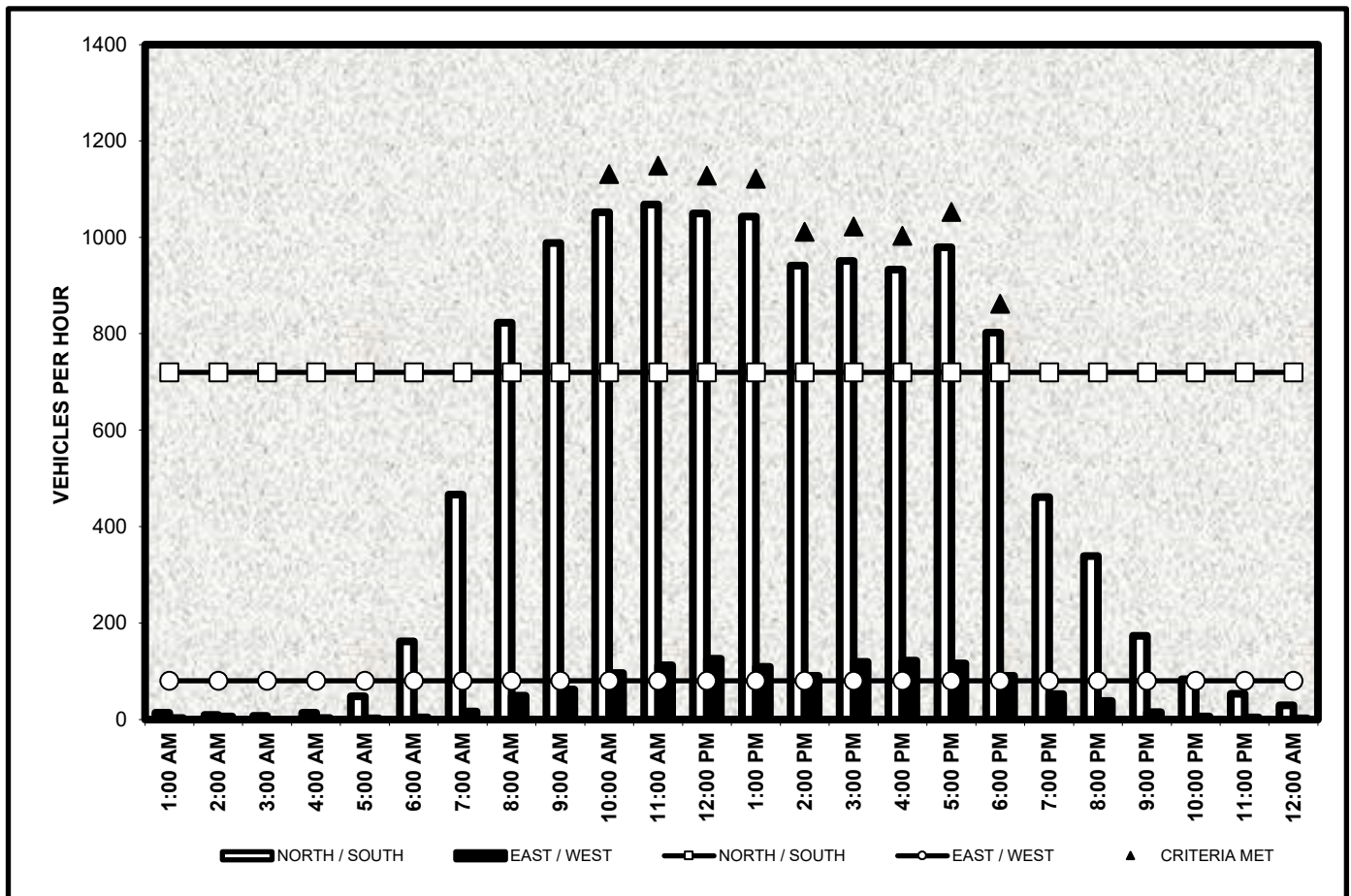
The need for a traffic control signal shall be considered if an engineering study finds that all of the following criteria are met:

- Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce crash frequency, and
- Five or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash, and
- For each of any 8 hours of an average day, the vehicles per hour given in both of the 80% columns of Condition A for Warrant 1, or the vehicles per hour in both of the 80% columns of Condition B for Warrant 1, exists on the major street and on the higher-volume minor-street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 80% of the requirements specified in the Pedestrian Volume warrant. These major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE

M. U. T. C. D. WARRANT # 7 (In combination with Warrant # 1B)
Crash Experience with Traffic Volumes at 80% of Original Values

HAVE LESS RESTRICTIVE MEANS BEEN ATTEMPTED?	#REF!
TOTAL NUMBER OF CRASHES:	4
NUMBER OF POTENTIALLY PREVENTABLE CRASHES:	4
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH / SOUTH STREET	720
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST / WEST STREET	80
NUMBER OF HOURS SATISFIED:	9
WARRANT CRITERIA:	NOT SATISFIED



The need for a traffic control signal shall be considered if an engineering study finds that all of the following criteria are met:

- Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce crash frequency, and
- Five or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash, and
- For each of any 8 hours of an average day, the vehicles per hour given in both of the 80% columns of Condition A for Warrant 1, or the vehicles per hour in both of the 80% columns of Condition B for Warrant 1, exists on the major street and on the higher-volume minor-street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 80% of the requirements specified in the Pedestrian Volume warrant. These major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
M. U. T. C. D. MULTIWAY STOP - WARRANT # C
Minimum Volume

REQUIRED AVERAGE VOLUME FOR 8 HOURS ON NORTH / SOUTH STREET	300
REQUIRED AVERAGE VOLUME FOR 8 HOURS ON EAST / WEST STREET	200
REQUIRED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	30
MEASURED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	45
NUMBER OF EIGHT-HOUR PERIODS SATISFIED:	0
WARRANT CRITERIA:	NOT SATISFIED

RANKING BY MAJOR STREET (NORTH / SOUTH STREET) HOURLY VOLUMES

HOURLY VOLUME				AVERAGE OF EIGHT HOURLY VOLUMES			
RANK	BEGIN TIME	MAJOR STREET	MINOR STREET	RANKED HOURS	MAJOR STREET	MINOR STREET	SATISFIED?
1	11:00 AM	1,068	150	1 to 8	1,009	158	NO
2	10:00 AM	1,052	136	2 to 9	992	159	NO
3	NOON	1,049	184	3 to 10	963	153	NO
4	1:00 PM	1,043	195	4 to 11	933	145	NO
5	9:00 AM	988	111	5 to 12	860	124	NO
6	5:00 PM	979	162	6 to 13	795	121	NO
7	3:00 PM	951	169	7 to 14	715	109	NO
8	2:00 PM	941	156	8 to 15	617	91	NO
9	4:00 PM	933	155	9 to 16	520	72	NO
10	8:00 AM	823	91	10 to 17	414	54	NO
11	6:00 PM	802	123	11 to 18	317	44	NO
12	7:00 AM	466	24	12 to 19	223	29	NO
13	7:00 PM	461	87	13 to 20	169	26	NO
14	8:00 PM	339	66	14 to 21	113	15	NO
15	9:00 PM	173	25	15 to 22	72	7	NO
16	6:00 AM	162	6	16 to 23	52	5	NO
17	10:00 PM	83	11	17 to 24	32	4	NO
18	11:00 PM	53	7				
19	5:00 AM	48	2				
20	MIDNITE	29	2				
21	1:00 AM	14	3				
22	4:00 AM	14	3				
23	2:00 AM	9	6				
24	3:00 AM	7	0				

1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day, and
2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour, but
3. If the 85th-percentile approach speed of the major-street vehicular traffic exceeds 65 km/h or exceeds 40 mph, the minimum vehicular volume warrants are 70% of the above values.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
M. U. T. C. D. MULTIWAY STOP - WARRANT # C
Minimum Vehicular Volume

REQUIRED AVERAGE VOLUME FOR 8 HOURS ON NORTH / SOUTH STREET	300
REQUIRED AVERAGE VOLUME FOR 8 HOURS ON EAST / WEST STREET	200
REQUIRED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	30
MEASURED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	45
NUMBER OF EIGHT-HOUR PERIODS SATISFIED:	0
WARRANT CRITERIA:	NOT SATISFIED

RANKING BY MINOR STREET (EAST / WEST STREET) HOURLY VOLUMES

HOURLY VOLUME				AVERAGE OF EIGHT HOURLY VOLUMES			
RANK	BEGIN TIME	MINOR STREET	MAJOR STREET	RANKED HOURS	MINOR STREET	MAJOR STREET	SATISFIED?
1	1:00 PM	195	1,043	1 to 8	163	1,002	NO
2	NOON	184	1,049	2 to 9	154	972	NO
3	3:00 PM	169	951	3 to 10	145	964	NO
4	5:00 PM	162	979	4 to 11	136	948	NO
5	2:00 PM	156	941	5 to 12	126	884	NO
6	4:00 PM	155	933	6 to 13	115	808	NO
7	11:00 AM	150	1,068	7 to 14	99	713	NO
8	10:00 AM	136	1,052	8 to 15	83	638	NO
9	6:00 PM	123	802	9 to 16	67	517	NO
10	9:00 AM	111	988	10 to 17	53	423	NO
11	8:00 AM	91	823	11 to 18	40	301	NO
12	7:00 PM	87	461	12 to 19	29	218	NO
13	8:00 PM	66	339	13 to 20	19	162	NO
14	9:00 PM	25	173	14 to 21	11	122	NO
15	7:00 AM	24	466	15 to 22	8	106	NO
16	10:00 PM	11	83	16 to 23	5	52	NO
17	11:00 PM	7	53	17 to 24	4	42	NO
18	2:00 AM	6	9				
19	6:00 AM	6	162				
20	1:00 AM	3	14				
21	4:00 AM	3	14				
22	5:00 AM	2	48				
23	MIDNITE	2	29				
24	3:00 AM	0	7				

1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day, and
2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour, but
3. If the 85th-percentile approach speed of the major-street vehicular traffic exceeds 65 km/h or exceeds 40 mph, the minimum vehicular volume warrants are 70% of the above values.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
M. U. T. C. D. MULTIWAY STOP - WARRANT # D
80% of Warrants B, C.1, and C.2

REQUIRED AVERAGE VOLUME FOR 8 HOURS ON NORTH / SOUTH STREET	240
REQUIRED AVERAGE VOLUME FOR 8 HOURS ON EAST / WEST STREET	160
REQUIRED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	24
MEASURED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	120
NUMBER OF EIGHT-HOUR PERIODS SATISFIED:	0
WARRANT CRITERIA:	NOT SATISFIED

RANKING BY MAJOR STREET (NORTH / SOUTH STREET) HOURLY VOLUMES

HOURLY VOLUME				AVERAGE OF EIGHT HOURLY VOLUMES			
RANK	BEGIN TIME	MAJOR STREET	MINOR STREET	RANKED HOURS	MAJOR STREET	MINOR STREET	SATISFIED?
1	11:00 AM	1,068	150	1 to 8	1,009	158	NO
2	10:00 AM	1,052	136	2 to 9	992	159	NO
3	NOON	1,049	184	3 to 10	963	153	NO
4	1:00 PM	1,043	195	4 to 11	933	145	NO
5	9:00 AM	988	111	5 to 12	860	124	NO
6	5:00 PM	979	162	6 to 13	795	121	NO
7	3:00 PM	951	169	7 to 14	715	109	NO
8	2:00 PM	941	156	8 to 15	617	91	NO
9	4:00 PM	933	155	9 to 16	520	72	NO
10	8:00 AM	823	91	10 to 17	414	54	NO
11	6:00 PM	802	123	11 to 18	317	44	NO
12	7:00 AM	466	24	12 to 19	223	29	NO
13	7:00 PM	461	87	13 to 20	169	26	NO
14	8:00 PM	339	66	14 to 21	113	15	NO
15	9:00 PM	173	25	15 to 22	72	7	NO
16	6:00 AM	162	6	16 to 23	52	5	NO
17	10:00 PM	83	11	17 to 24	32	4	NO
18	11:00 PM	53	7				
19	5:00 AM	48	2				
20	MIDNITE	29	2				
21	1:00 AM	14	3				
22	4:00 AM	14	3				
23	2:00 AM	9	6				
24	3:00 AM	7	0				

1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 240 vehicles per hour for any 8 hours of an average day, and
2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 160 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 24 seconds per vehicle during the highest hour.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
M. U. T. C. D. MULTIWAY STOP - WARRANT # D
80% of Warrants B, C.1, and C.2

REQUIRED AVERAGE VOLUME FOR 8 HOURS ON NORTH / SOUTH STREET	240
REQUIRED AVERAGE VOLUME FOR 8 HOURS ON EAST / WEST STREET	160
REQUIRED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	24
MEASURED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	120
NUMBER OF EIGHT-HOUR PERIODS SATISFIED:	1
WARRANT CRITERIA:	SATISFIED

RANKING BY MINOR STREET (EAST / WEST STREET) HOURLY VOLUMES

HOURLY VOLUME				AVERAGE OF EIGHT HOURLY VOLUMES			
RANK	BEGIN TIME	MINOR STREET	MAJOR STREET	RANKED HOURS	MINOR STREET	MAJOR STREET	SATISFIED?
1	1:00 PM	195	1,043	1 to 8	163	1,002	YES
2	NOON	184	1,049	2 to 9	154	972	NO
3	3:00 PM	169	951	3 to 10	145	964	NO
4	5:00 PM	162	979	4 to 11	136	948	NO
5	2:00 PM	156	941	5 to 12	126	884	NO
6	4:00 PM	155	933	6 to 13	115	808	NO
7	11:00 AM	150	1,068	7 to 14	99	713	NO
8	10:00 AM	136	1,052	8 to 15	83	638	NO
9	6:00 PM	123	802	9 to 16	67	517	NO
10	9:00 AM	111	988	10 to 17	53	423	NO
11	8:00 AM	91	823	11 to 18	40	301	NO
12	7:00 PM	87	461	12 to 19	29	218	NO
13	8:00 PM	66	339	13 to 20	19	162	NO
14	9:00 PM	25	173	14 to 21	11	122	NO
15	7:00 AM	24	466	15 to 22	8	106	NO
16	10:00 PM	11	83	16 to 23	5	52	NO
17	11:00 PM	7	53	17 to 24	4	42	NO
18	2:00 AM	6	9				
19	6:00 AM	6	162				
20	1:00 AM	3	14				
21	4:00 AM	3	14				
22	5:00 AM	2	48				
23	MIDNITE	2	29				
24	3:00 AM	0	7				

1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 240 vehicles per hour for any 8 hours of an average day, and
2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 160 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 24 seconds per vehicle during the highest hour.

Appendix E.2

Ambient 2025



MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
TRAFFIC CONTROL SIGNAL WARRANT STUDY SUMMARY

LOCATION: **SCOTTSDALE, ARIZONA**
 CONDITIONS: **WITH 4.41% ANNUAL INCREASE**

DATE OF COUNT: 11 July 2023
 DATE OF STUDY: 29 March 2024

NORTH/SOUTH STREET:	92nd STREET	MAJOR	MULTI-LANE
EAST/WEST STREET:	COCHISE DRIVE	MINOR	MULTI-LANE

POSTED SPEED LIMIT ON MAJOR STREET:	35 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	6	8	NO
COMBINATION OF WARRANTS 1A AND 1B (80% of Values)	0	8	NO
COMBINATION OF WARRANTS 1A AND 1B (56% of Values)	-	-	Not Applicable
# 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 (Volumes at 80% of Original Values)	0	8	NO
WITH WARRANT # 1B (Volumes at 80% of Original Values)	0	8	NO
WITH WARRANT # 1A (Volumes at 56% of Original Values)	-	-	Not Applicable
WITH WARRANT # 1B (Volumes at 56% of Original Values)	-	-	Not Applicable
TOTAL NUMBER OF CRASHES IN 12 CONSECUTIVE MONTHS:	4	-	-
NUMBER OF POTENTIALLY PREVENTABLE CRASHES	4	5	NO
# 7. ENTIRE WARRANT	-	-	NO

WARRANT	CRITERIA		REQUIRED HOURS	ACTUAL HOURS	SATISFIED	PROXIMITY	
	MAJOR	MINOR				MAJOR	MINOR
#1A	600	200	8	0	NO		223%
#1B	900	100	8	6	NO		61%
#1A with #1B	480	80	8	9	NO		
#1B with #1A	720	160	8	0			158%
#2	Varying Graph		4	0	NO	8%	35%
#3B	Varying Graph		1	0	NO	31%	181%

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

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
TRAFFIC CONTROL MULTIWAY STOP WARRANT STUDY SUMMARY

LOCATION: **SCOTTSDALE, ARIZONA**
 CONDITIONS: **WITH 4.41% ANNUAL INCREASE**

DATE OF COUNT: 11 July 2023
 DATE OF STUDY: 29 March 2024

NORTH/SOUTH STREET:	92nd STREET	MAJOR	MULTI-LANE
EAST/WEST STREET:	COCHISE DRIVE	MINOR	MULTI-LANE

POSTED SPEED LIMIT ON MAJOR STREET:	35 mph
85th PERCENTILE SPEED ON MAJOR STREET:	Unknown

WARRANT	EXISTING	REQUIRED	SATISFIED?
A. INTERIM MEASURE FOR TRAFFIC CONTROL SIGNAL			
TRAFFIC SIGNAL WARRANTS	0	1	NO
B. CRASH EXPERIENCE			
TOTAL NUMBER OF CRASHES	4	-	-
NUMBER OF POTENTIALLY PREVENTABLE CRASHES	4	5	NO
C. MINIMUM VOLUMES			
EIGHT-HOUR PERIODS SATISFYING VOLUME WARRANT	0	1	NO
PEAK HOUR DELAY - MORN	77	30	YES
PEAK HOUR DELAY - EVENI	77	30	YES
ENTIRE WARRANT			NO
D. COMBINATION OF WARRANTS B AND C (80% of Values)			
TOTAL NUMBER OF CRASHES	4	-	-
NUMBER OF POTENTIALLY PREVENTABLE CRASHES	4	4	YES
EIGHT-HOUR PERIODS SATISFYING VOLUME WARRANT	1	1	YES
PEAK HOUR DELAY - MORN	77	24	YES
PEAK HOUR DELAY - EVENI	77	24	YES
ENTIRE WARRANT			YES

The decision to install multiway stop control should be based on an engineering study.

Analysis by: PEB 4/16/2024



TRAFFIC CONTROL SIGNAL WARRANT STUDY

PROJECT: **MERCADO VILLAGE**
LOCATION: **SCOTTSDALE, ARIZONA**

NORTH/SOUTH STREET: **92nd STREET**

NB LANES **2** SB LANES **2**

EAST/WEST STREET: **COCHISE DRIVE**

EB LANES **2** WB LANES **2**

SPEED LIMIT ON MAJOR STREET: **35**
85TH PERCENTILE SPEED ON MAJOR STREET: **UNKNOWN**

VOLUME DATA: **2025** CONDITIONS: **WITH 4.41% ANNUAL INCREASE**

DATE OF COUNT: **11 July 2023** DATE OF STUDY: **29 March 2024**

INTERSECTION APPROACH TRAFFIC VOLUMES				
TIME PERIOD	NORTHBOUND	SOUTHBOUND	EASTBOUND	WESTBOUND
12:00 AM to 1:00 AM	8	6	3	0
1:00 AM to 2:00 AM	5	4	6	0
2:00 AM to 3:00 AM	2	5	0	0
3:00 AM to 4:00 AM	2	13	3	0
4:00 AM to 5:00 AM	20	31	2	0
5:00 AM to 6:00 AM	71	104	2	4
6:00 AM to 7:00 AM	204	302	8	16
7:00 AM to 8:00 AM	349	546	42	49
8:00 AM to 9:00 AM	466	608	62	49
9:00 AM to 10:00 AM	599	545	96	40
10:00 AM to 11:00 AM	656	506	112	38
11:00 AM to 12:00 PM	648	492	126	58
12:00 PM to 1:00 PM	686	448	109	86
1:00 PM to 2:00 PM	557	466	90	66
2:00 PM to 3:00 PM	626	408	119	50
3:00 PM to 4:00 PM	632	383	122	33
4:00 PM to 5:00 PM	705	360	116	46
5:00 PM to 6:00 PM	595	277	90	33
6:00 PM to 7:00 PM	302	199	52	35
7:00 PM to 8:00 PM	217	151	38	28
8:00 PM to 9:00 PM	105	82	10	15
9:00 PM to 10:00 PM	53	36	5	6
10:00 PM to 11:00 PM	36	20	4	3
11:00 PM to 12:00 AM	14	17	2	0
TOTAL	7,558	6,009	1,219	655

CRASH EXPERIENCE AND DELAY DATA

TOTAL NUMBER OF CRASHES IN A 12 MONTH PERIOD: **4**
POTENTIALLY PREVENTABLE BY SIGNAL: **4** BY FOUR-WAY STOP: **4**

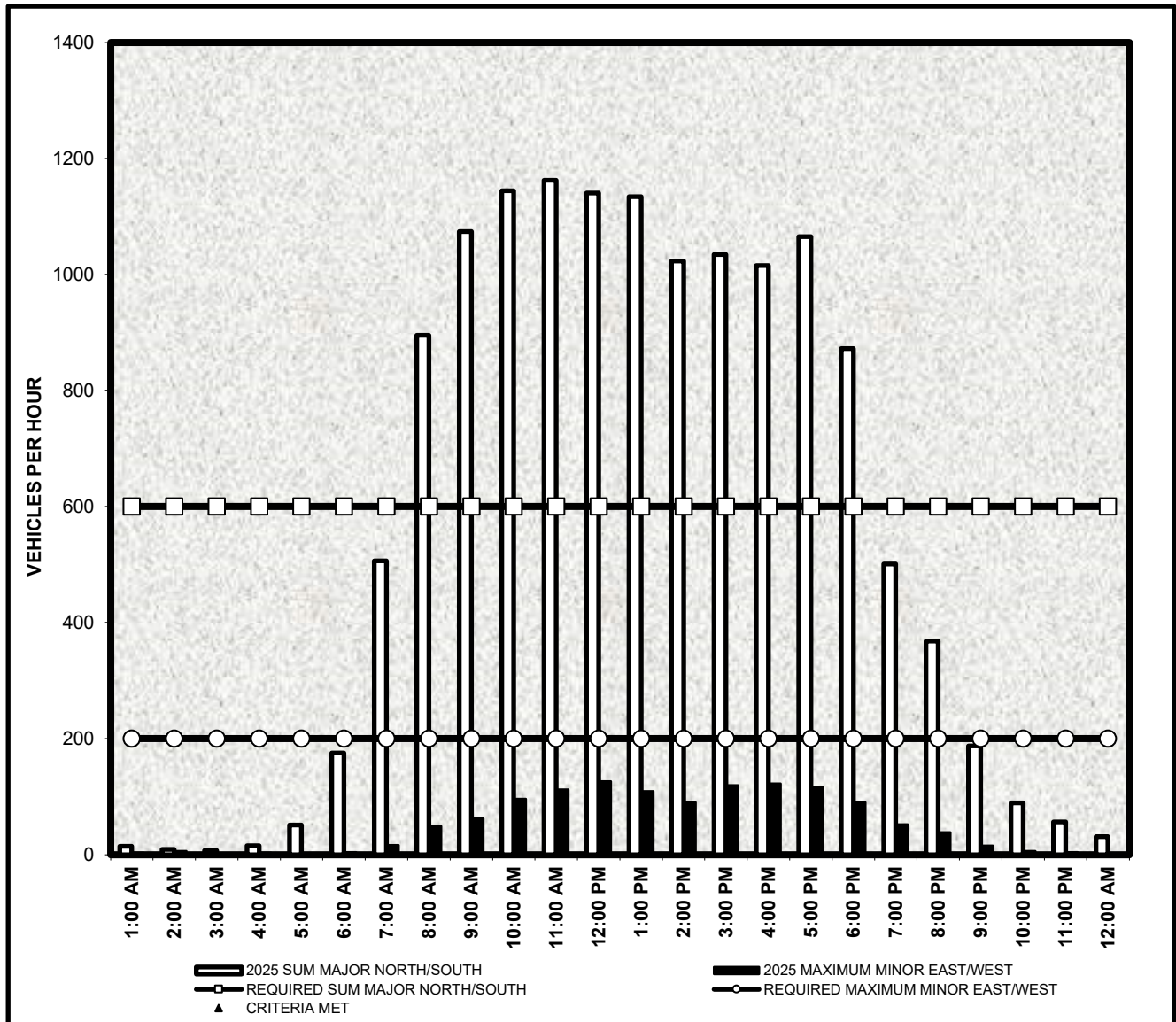
TIME PERIOD	AVERAGE DELAY SECONDS/VEHICLE	SIDE STREET TOTAL DELAY VEH-HOURS	VOLUME	TOTAL INTERSECTION VOLUME
11:00 AM to 12:00 PM	76.8	2.69	126	1,324
12:00 PM to 1:00 PM	76.8	2.33	109	1,329

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
M. U. T. C. D. WARRANT # 1A
Minimum Vehicular Volume

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH/SOUTH STREET	600
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST/WEST STREET	200

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

WARRANT CRITERIA:	NOT SATISFIED
--------------------------	----------------------



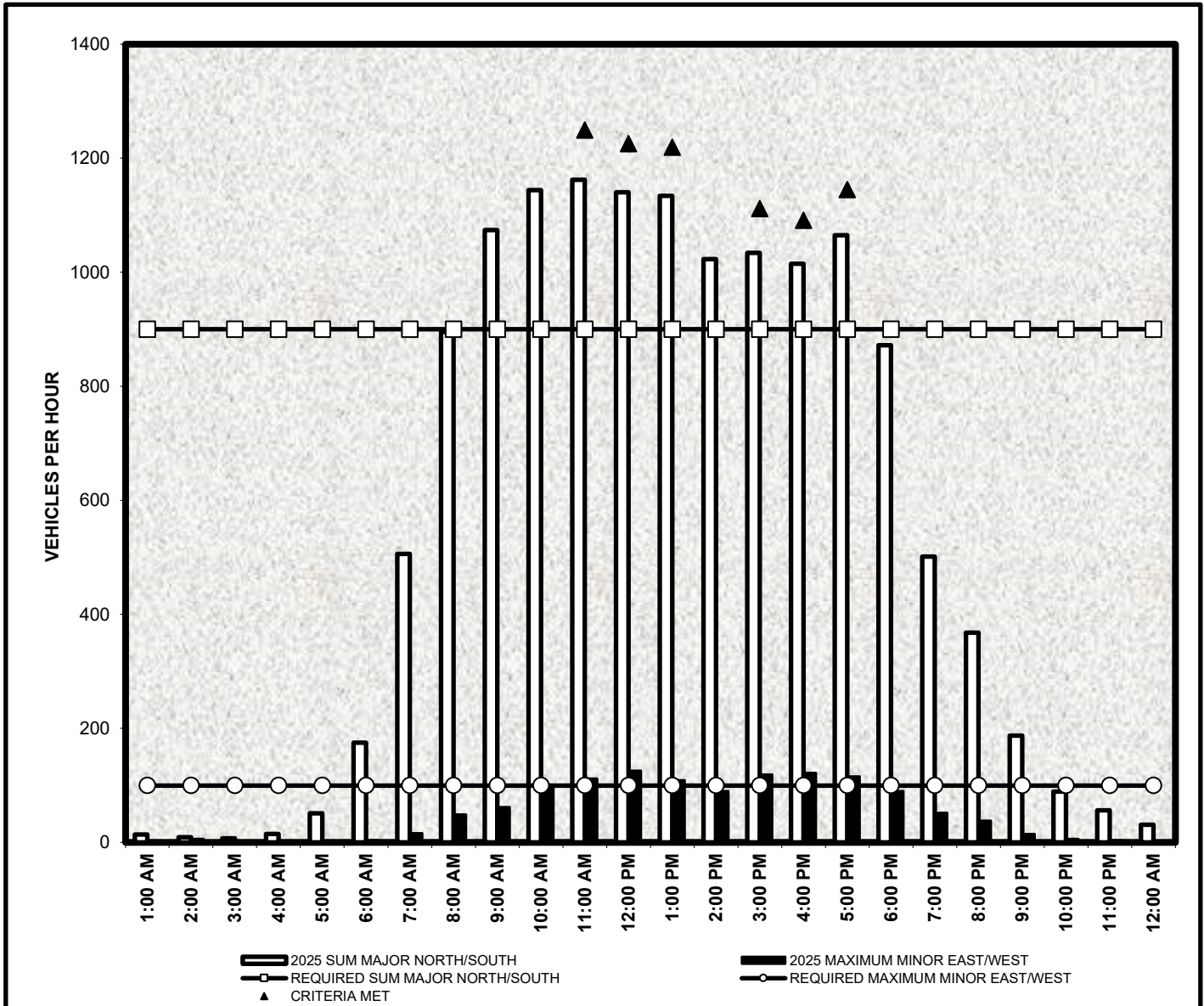
The Minimum Vehicular Volume, Condition A, is intended for application where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The warrant is satisfied when, for each of any eight hours of an average day, the traffic volumes provided in the 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.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
M. U. T. C. D. WARRANT # 1B
Interruption of Continuous Traffic

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH/SOUTH STREET	900
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST/WEST STREET	100

NUMBER OF HOURS SATISFIED:	6
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	1
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	1

WARRANT CRITERIA:	NOT SATISFIED
--------------------------	----------------------



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.

MERCADO VILLAGE 92nd STREET and COCHISE DRIVE

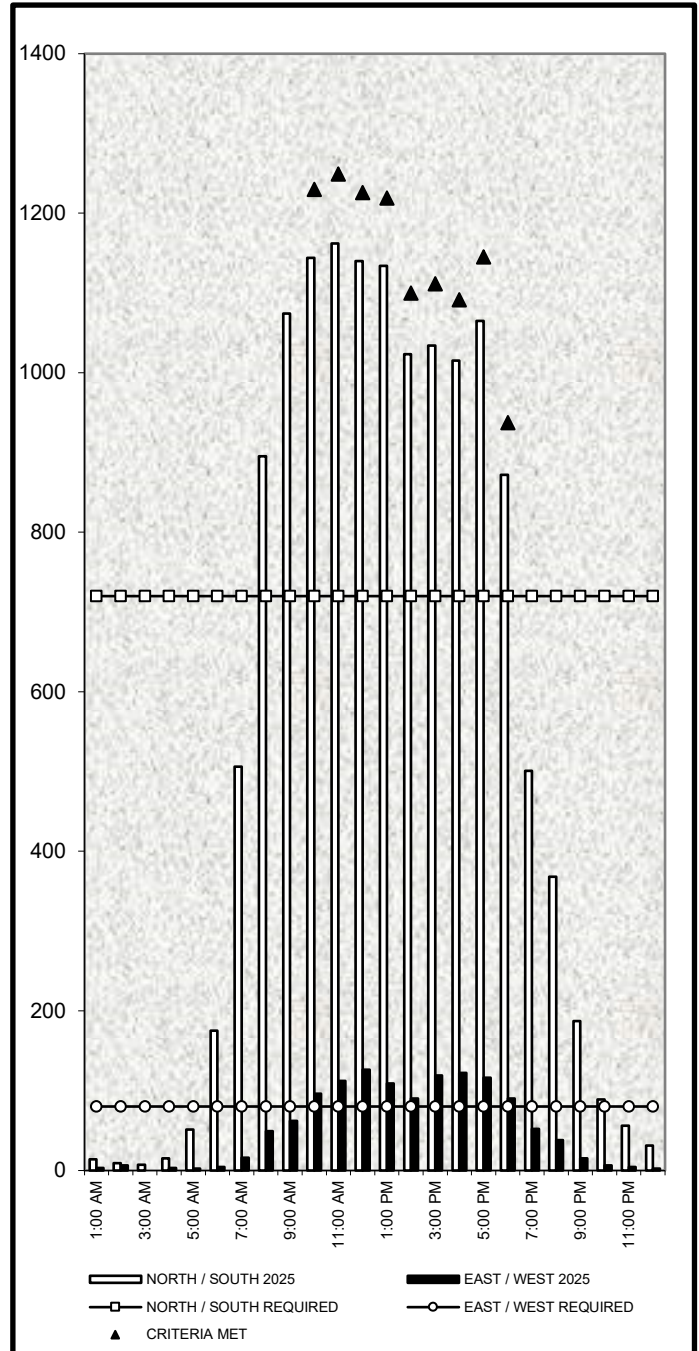
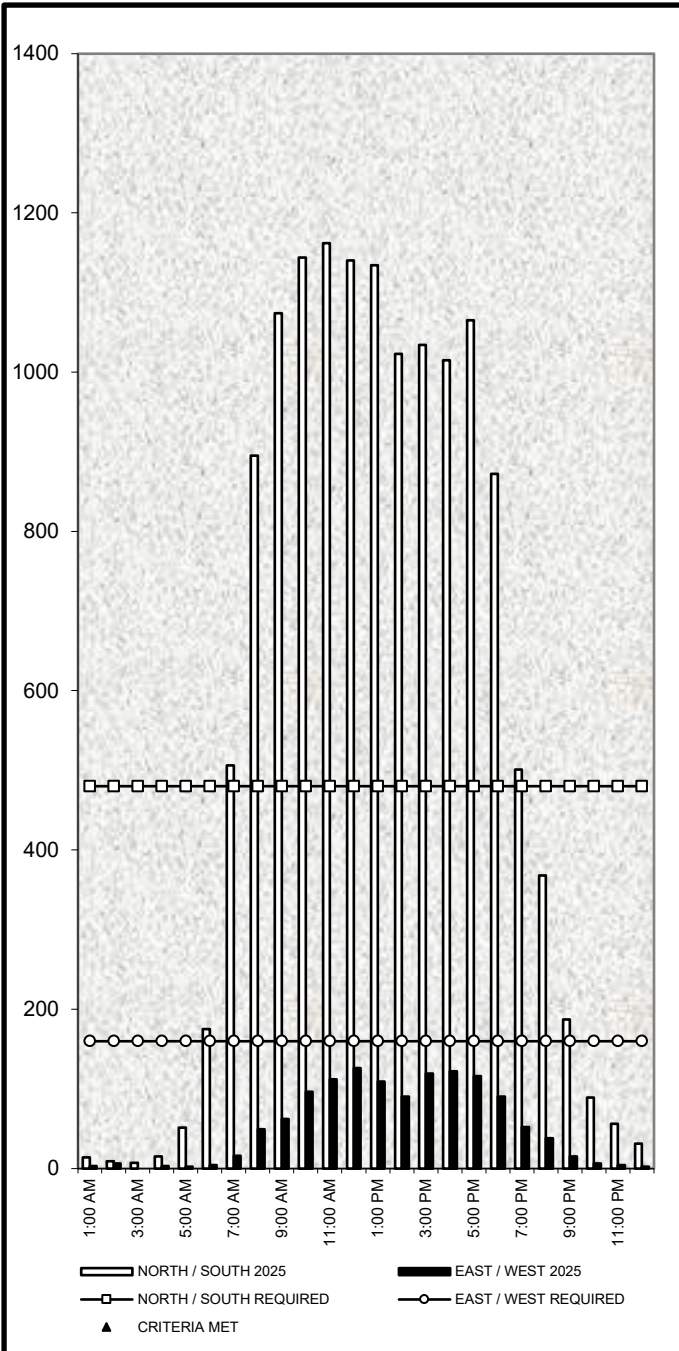
M. U. T. C. D. WARRANT # 1

Combination of Conditions A and B at 80% of Original Values

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH / SOUTH STREET	480	720
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST / WEST STREET	160	80

NUMBER OF HOURS SATISFIED:	0	9
----------------------------	---	---

WARRANT CRITERIA:	NOT SATISFIED
-------------------	---------------

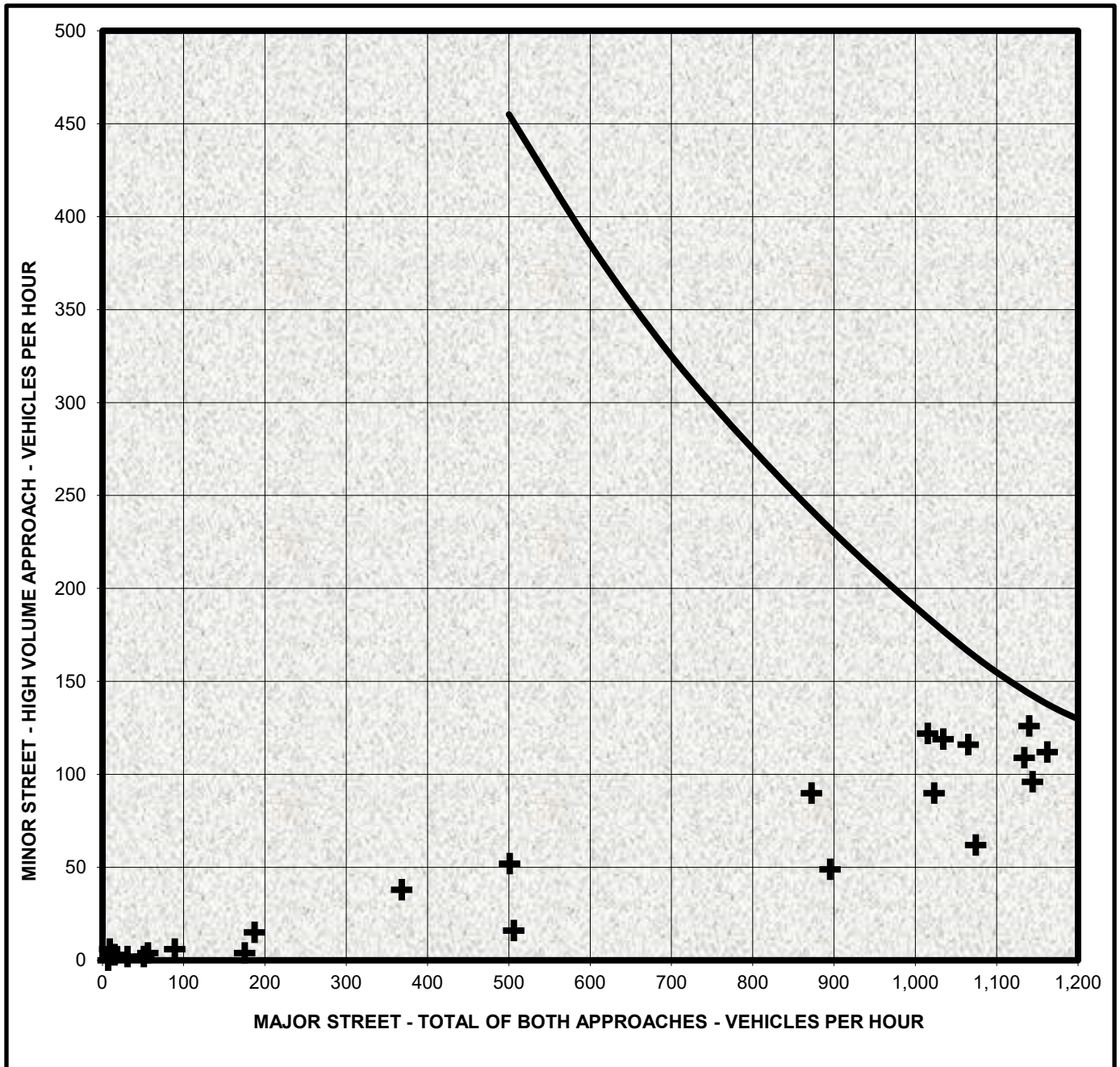


The major-street and minor-street volumes shall be for the same 8 hours for each condition; however, the 8 hours satisfied on A shall not be required to be the same 8 hours satisfied in Condition B. The combination of Conditions A and B should be applied only after an adequate trial of other alternatives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

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
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:	1

WARRANT CRITERIA:	NOT SATISFIED
--------------------------	----------------------



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.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
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

TIME PERIOD: 11:00 AM to 12:00 PM	MEASURED	SATISFIED?
SIDE STREET VEHICLE-HOURS DELAY:	2.69	NO
SIDE STREET HOURLY VOLUME:	126	NO
TOTAL INTERSECTION HOURLY VOLUME:	1,324	YES
ALL CRITERIA		NO

TIME PERIOD: 12:00 PM to 1:00 PM	MEASURED	SATISFIED?
SIDE STREET VEHICLE-HOURS DELAY:	2.33	NO
SIDE STREET HOURLY VOLUME:	109	NO
TOTAL INTERSECTION HOURLY VOLUME:	1,329	YES
ALL CRITERIA		NO

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.

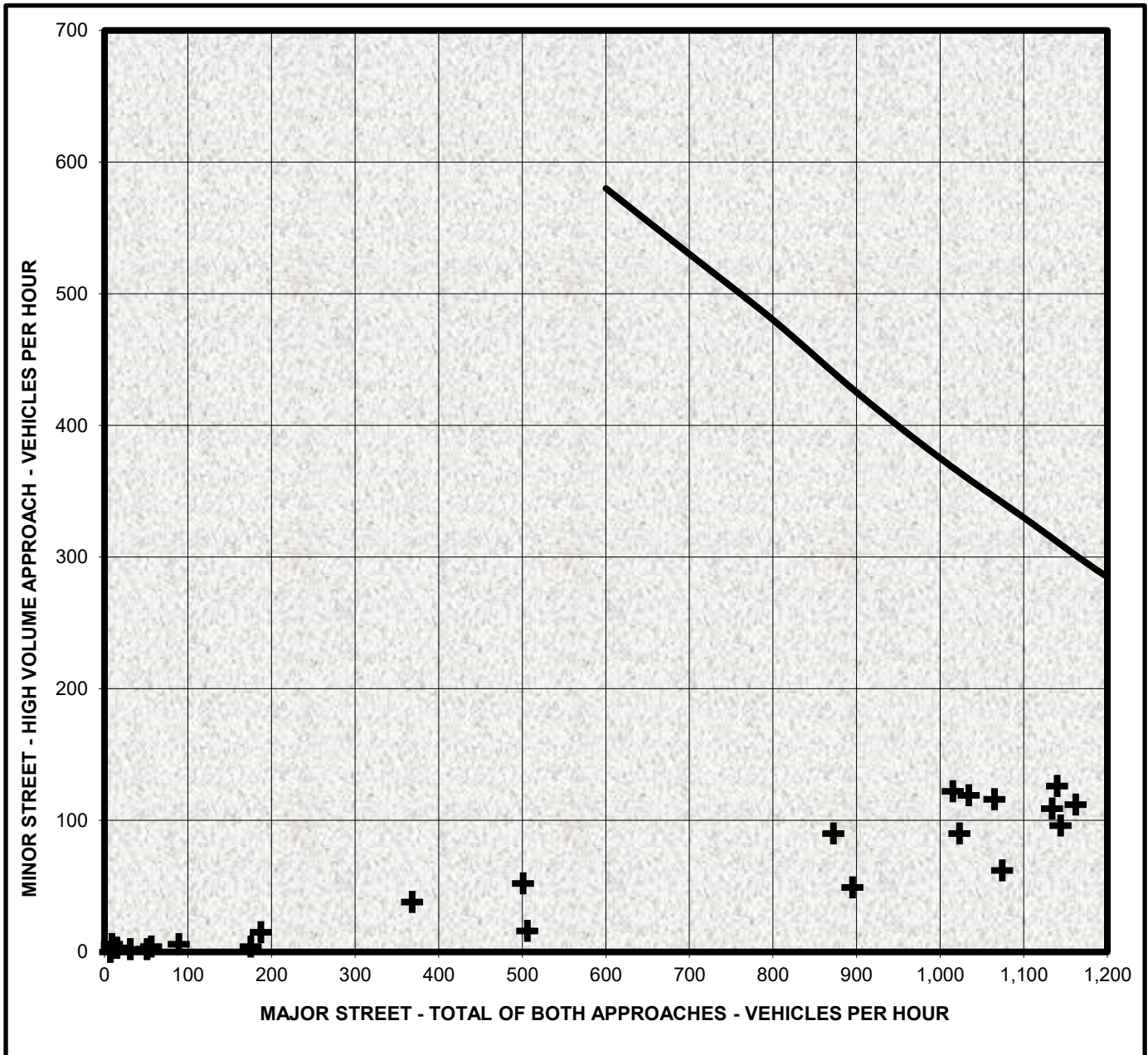
The need for a traffic control signal shall be considered if an engineering study finds that all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:

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.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
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

WARRANT CRITERIA:	NOT SATISFIED
--------------------------	----------------------



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.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE

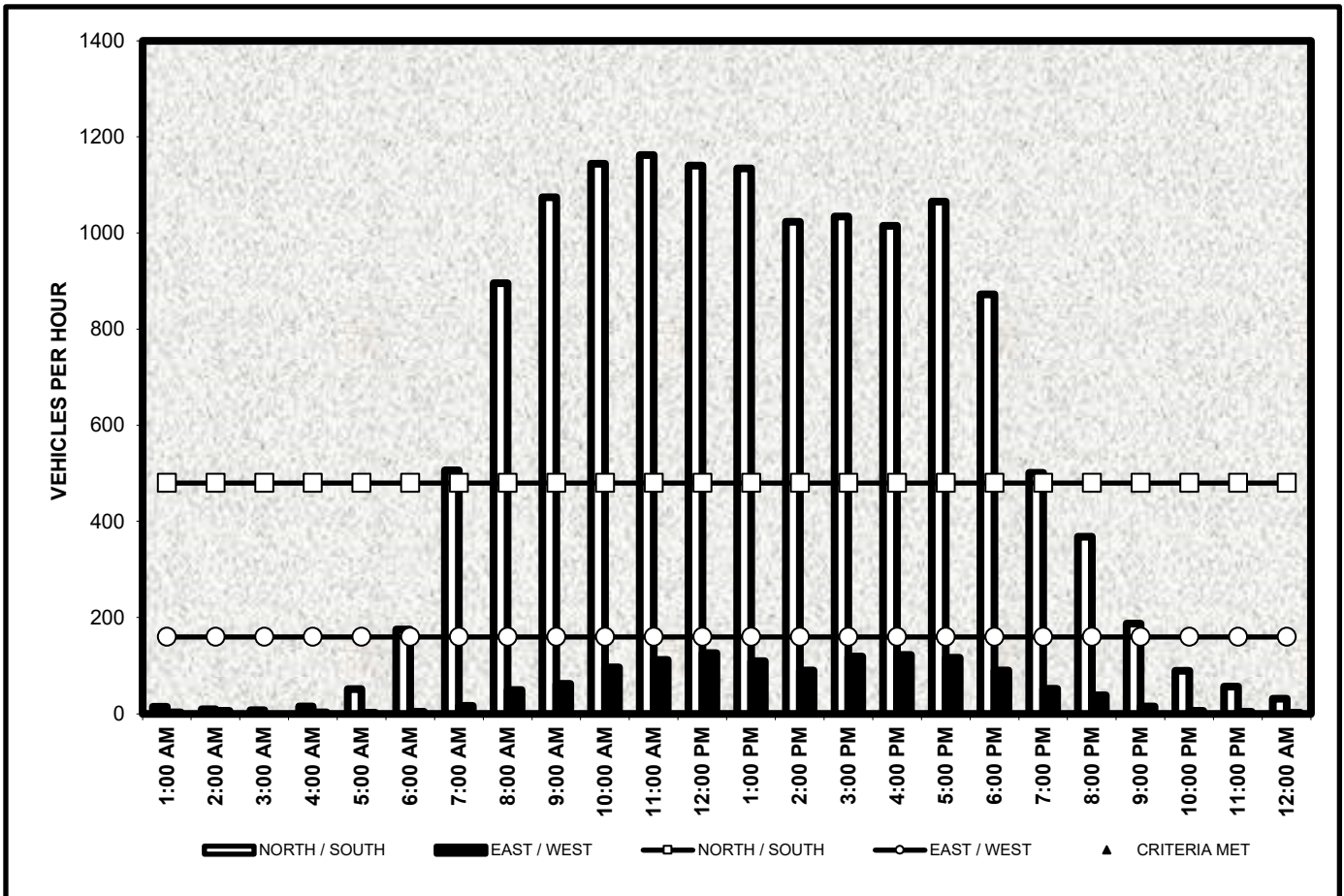
M. U. T. C. D. WARRANT #7 (In combination with Warrant # 1A)
Crash Experience with Traffic Volumes at 80% of Original Values

HAVE LESS RESTRICTIVE MEANS BEEN ATTEMPTED?	#REF!
TOTAL NUMBER OF CRASHES:	4
NUMBER OF POTENTIALLY PREVENTABLE CRASHES:	4

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH / SOUTH STREET	480
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST / WEST STREET	160

NUMBER OF HOURS SATISFIED:	0
----------------------------	---

WARRANT CRITERIA:	NOT SATISFIED
--------------------------	----------------------



The need for a traffic control signal shall be considered if an engineering study finds that all of the following criteria are met:

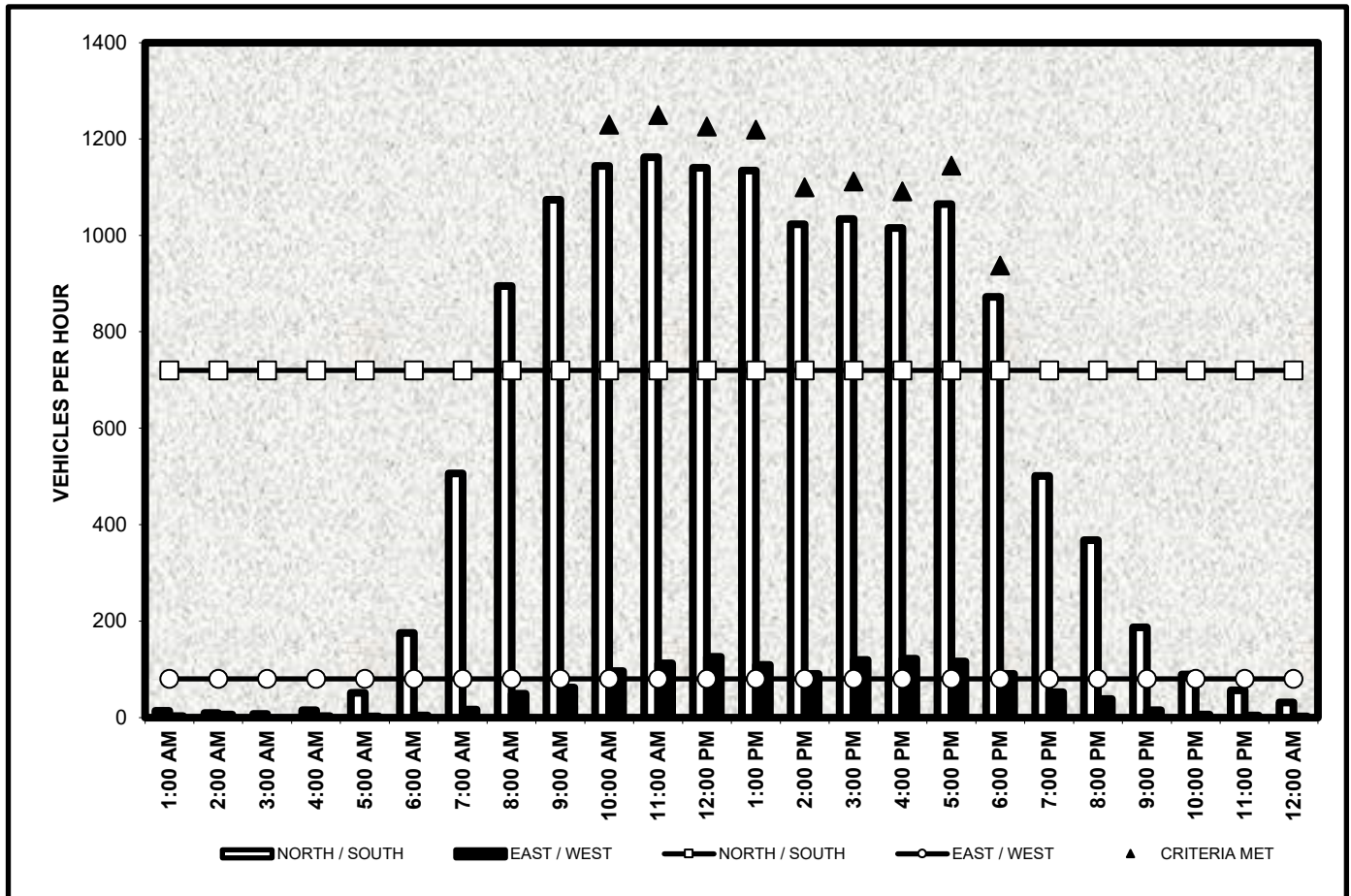
- A. Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce crash frequency, and
- B. Five or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash, and

C. For each of any 8 hours of an average day, the vehicles per hour given in both of the 80% columns of Condition A for Warrant 1, or the vehicles per hour in both of the 80% columns of Condition B for Warrant 1, exists on the major street and on the higher-volume minor-street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 80% of the requirements specified in the Pedestrian Volume warrant. These major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE

M. U. T. C. D. WARRANT # 7 (In combination with Warrant # 1B)
Crash Experience with Traffic Volumes at 80% of Original Values

HAVE LESS RESTRICTIVE MEANS BEEN ATTEMPTED?	#REF!
TOTAL NUMBER OF CRASHES:	4
NUMBER OF POTENTIALLY PREVENTABLE CRASHES:	4
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH / SOUTH STREET	720
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST / WEST STREET	80
NUMBER OF HOURS SATISFIED:	9
WARRANT CRITERIA:	NOT SATISFIED



The need for a traffic control signal shall be considered if an engineering study finds that all of the following criteria are met:

- Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce crash frequency, and
- Five or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash, and
- For each of any 8 hours of an average day, the vehicles per hour given in both of the 80% columns of Condition A for Warrant 1, or the vehicles per hour in both of the 80% columns of Condition B for Warrant 1, exists on the major street and on the higher-volume minor-street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 80% of the requirements specified in the Pedestrian Volume warrant. These major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
M. U. T. C. D. MULTIWAY STOP - WARRANT # C
Minimum Volume

REQUIRED AVERAGE VOLUME FOR 8 HOURS ON NORTH / SOUTH STREET	300
REQUIRED AVERAGE VOLUME FOR 8 HOURS ON EAST / WEST STREET	200
REQUIRED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	30
MEASURED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	45
NUMBER OF EIGHT-HOUR PERIODS SATISFIED:	0
WARRANT CRITERIA:	NOT SATISFIED

RANKING BY MAJOR STREET (NORTH / SOUTH STREET) HOURLY VOLUMES

HOURLY VOLUME				AVERAGE OF EIGHT HOURLY VOLUMES			
RANK	BEGIN TIME	MAJOR STREET	MINOR STREET	RANKED HOURS	MAJOR STREET	MINOR STREET	SATISFIED?
1	11:00 AM	1,162	150	1 to 8	1,097	158	NO
2	10:00 AM	1,144	136	2 to 9	1,079	159	NO
3	NOON	1,140	184	3 to 10	1,048	153	NO
4	1:00 PM	1,134	195	4 to 11	1,014	145	NO
5	9:00 AM	1,074	111	5 to 12	936	124	NO
6	5:00 PM	1,065	162	6 to 13	864	121	NO
7	3:00 PM	1,034	169	7 to 14	777	109	NO
8	2:00 PM	1,023	156	8 to 15	671	91	NO
9	4:00 PM	1,015	155	9 to 16	565	72	NO
10	8:00 AM	895	91	10 to 17	449	54	NO
11	6:00 PM	872	123	11 to 18	344	44	NO
12	7:00 AM	506	24	12 to 19	242	29	NO
13	7:00 PM	501	87	13 to 20	182	26	NO
14	8:00 PM	368	66	14 to 21	122	15	NO
15	9:00 PM	187	25	15 to 22	77	7	NO
16	6:00 AM	175	6	16 to 23	55	5	NO
17	10:00 PM	89	11	17 to 24	34	4	NO
18	11:00 PM	56	7				
19	5:00 AM	51	2				
20	MIDNITE	31	2				
21	4:00 AM	15	3				
22	1:00 AM	14	3				
23	2:00 AM	9	6				
24	3:00 AM	7	0				

1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day, and
2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour, but
3. If the 85th-percentile approach speed of the major-street vehicular traffic exceeds 65 km/h or exceeds 40 mph, the minimum vehicular volume warrants are 70% of the above values.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
M. U. T. C. D. MULTIWAY STOP - WARRANT # C
Minimum Vehicular Volume

REQUIRED AVERAGE VOLUME FOR 8 HOURS ON NORTH / SOUTH STREET	300
REQUIRED AVERAGE VOLUME FOR 8 HOURS ON EAST / WEST STREET	200
REQUIRED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	30
MEASURED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	45
NUMBER OF EIGHT-HOUR PERIODS SATISFIED:	0
WARRANT CRITERIA:	NOT SATISFIED

RANKING BY MINOR STREET (EAST / WEST STREET) HOURLY VOLUMES

HOURLY VOLUME				AVERAGE OF EIGHT HOURLY VOLUMES			
RANK	BEGIN TIME	MINOR STREET	MAJOR STREET	RANKED HOURS	MINOR STREET	MAJOR STREET	SATISFIED?
1	1:00 PM	195	1,134	1 to 8	163	1,090	NO
2	NOON	184	1,140	2 to 9	154	1,057	NO
3	3:00 PM	169	1,034	3 to 10	145	1,049	NO
4	5:00 PM	162	1,065	4 to 11	136	1,031	NO
5	2:00 PM	156	1,023	5 to 12	126	961	NO
6	4:00 PM	155	1,015	6 to 13	115	879	NO
7	11:00 AM	150	1,162	7 to 14	99	775	NO
8	10:00 AM	136	1,144	8 to 15	83	693	NO
9	6:00 PM	123	872	9 to 16	67	562	NO
10	9:00 AM	111	1,074	10 to 17	53	460	NO
11	8:00 AM	91	895	11 to 18	40	326	NO
12	7:00 PM	87	501	12 to 19	29	236	NO
13	8:00 PM	66	368	13 to 20	19	176	NO
14	9:00 PM	25	187	14 to 21	11	131	NO
15	7:00 AM	24	506	15 to 22	8	114	NO
16	10:00 PM	11	89	16 to 23	5	55	NO
17	11:00 PM	7	56	17 to 24	4	45	NO
18	2:00 AM	6	9				
19	6:00 AM	6	175				
20	1:00 AM	3	14				
21	4:00 AM	3	15				
22	5:00 AM	2	51				
23	MIDNITE	2	31				
24	3:00 AM	0	7				

1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day, and
2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour, but
3. If the 85th-percentile approach speed of the major-street vehicular traffic exceeds 65 km/h or exceeds 40 mph, the minimum vehicular volume warrants are 70% of the above values.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
M. U. T. C. D. MULTIWAY STOP - WARRANT # D
80% of Warrants B, C.1, and C.2

REQUIRED AVERAGE VOLUME FOR 8 HOURS ON NORTH / SOUTH STREET	240
REQUIRED AVERAGE VOLUME FOR 8 HOURS ON EAST / WEST STREET	160
REQUIRED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	24
MEASURED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	77
NUMBER OF EIGHT-HOUR PERIODS SATISFIED:	0
WARRANT CRITERIA:	NOT SATISFIED

RANKING BY MAJOR STREET (NORTH / SOUTH STREET) HOURLY VOLUMES

HOURLY VOLUME				AVERAGE OF EIGHT HOURLY VOLUMES			
RANK	BEGIN TIME	MAJOR STREET	MINOR STREET	RANKED HOURS	MAJOR STREET	MINOR STREET	SATISFIED?
1	11:00 AM	1,162	150	1 to 8	1,097	158	NO
2	10:00 AM	1,144	136	2 to 9	1,079	159	NO
3	NOON	1,140	184	3 to 10	1,048	153	NO
4	1:00 PM	1,134	195	4 to 11	1,014	145	NO
5	9:00 AM	1,074	111	5 to 12	936	124	NO
6	5:00 PM	1,065	162	6 to 13	864	121	NO
7	3:00 PM	1,034	169	7 to 14	777	109	NO
8	2:00 PM	1,023	156	8 to 15	671	91	NO
9	4:00 PM	1,015	155	9 to 16	565	72	NO
10	8:00 AM	895	91	10 to 17	449	54	NO
11	6:00 PM	872	123	11 to 18	344	44	NO
12	7:00 AM	506	24	12 to 19	242	29	NO
13	7:00 PM	501	87	13 to 20	182	26	NO
14	8:00 PM	368	66	14 to 21	122	15	NO
15	9:00 PM	187	25	15 to 22	77	7	NO
16	6:00 AM	175	6	16 to 23	55	5	NO
17	10:00 PM	89	11	17 to 24	34	4	NO
18	11:00 PM	56	7				
19	5:00 AM	51	2				
20	MIDNITE	31	2				
21	4:00 AM	15	3				
22	1:00 AM	14	3				
23	2:00 AM	9	6				
24	3:00 AM	7	0				

1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 240 vehicles per hour for any 8 hours of an average day, and
2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 160 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 24 seconds per vehicle during the highest hour.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
M. U. T. C. D. MULTIWAY STOP - WARRANT # D
80% of Warrants B, C.1, and C.2

REQUIRED AVERAGE VOLUME FOR 8 HOURS ON NORTH / SOUTH STREET	240
REQUIRED AVERAGE VOLUME FOR 8 HOURS ON EAST / WEST STREET	160
REQUIRED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	24
MEASURED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	77
NUMBER OF EIGHT-HOUR PERIODS SATISFIED:	1
WARRANT CRITERIA:	SATISFIED

RANKING BY MINOR STREET (EAST / WEST STREET) HOURLY VOLUMES

HOURLY VOLUME				AVERAGE OF EIGHT HOURLY VOLUMES			
RANK	BEGIN TIME	MINOR STREET	MAJOR STREET	RANKED HOURS	MINOR STREET	MAJOR STREET	SATISFIED?
1	1:00 PM	195	1,134	1 to 8	163	1,090	YES
2	NOON	184	1,140	2 to 9	154	1,057	NO
3	3:00 PM	169	1,034	3 to 10	145	1,049	NO
4	5:00 PM	162	1,065	4 to 11	136	1,031	NO
5	2:00 PM	156	1,023	5 to 12	126	961	NO
6	4:00 PM	155	1,015	6 to 13	115	879	NO
7	11:00 AM	150	1,162	7 to 14	99	775	NO
8	10:00 AM	136	1,144	8 to 15	83	693	NO
9	6:00 PM	123	872	9 to 16	67	562	NO
10	9:00 AM	111	1,074	10 to 17	53	460	NO
11	8:00 AM	91	895	11 to 18	40	326	NO
12	7:00 PM	87	501	12 to 19	29	236	NO
13	8:00 PM	66	368	13 to 20	19	176	NO
14	9:00 PM	25	187	14 to 21	11	131	NO
15	7:00 AM	24	506	15 to 22	8	114	NO
16	10:00 PM	11	89	16 to 23	5	55	NO
17	11:00 PM	7	56	17 to 24	4	45	NO
18	2:00 AM	6	9				
19	6:00 AM	6	175				
20	1:00 AM	3	14				
21	4:00 AM	3	15				
22	5:00 AM	2	51				
23	MIDNITE	2	31				
24	3:00 AM	0	7				

1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 240 vehicles per hour for any 8 hours of an average day, and
2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 160 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 24 seconds per vehicle during the highest hour.

Appendix E.3 2025 with Site



MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
TRAFFIC CONTROL SIGNAL WARRANT STUDY SUMMARY

LOCATION: **SCOTTSDALE, ARIZONA**
 CONDITIONS: **TH 4.41% ANNUAL INCREASE AND SITE**

DATE OF COUNT: 11 July 2023
 DATE OF STUDY: 29 March 2024

NORTH/SOUTH STREET:	92nd STREET	MAJOR	MULTI-LANE
EAST/WEST STREET:	COCHISE DRIVE	MINOR	MULTI-LANE

POSTED SPEED LIMIT ON MAJOR STREET:	35 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	10	8	YES
COMBINATION OF WARRANTS 1A AND 1B (80% of Values)	0	8	NO
COMBINATION OF WARRANTS 1A AND 1B (56% of Values)	-	-	Not Applicable
# 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 (Volumes at 80% of Original Values)	0	8	NO
WITH WARRANT # 1B (Volumes at 80% of Original Values)	0	8	NO
WITH WARRANT # 1A (Volumes at 56% of Original Values)	-	-	Not Applicable
WITH WARRANT # 1B (Volumes at 56% of Original Values)	-	-	Not Applicable
TOTAL NUMBER OF CRASHES IN 12 CONSECUTIVE MONTHS:	4	-	-
NUMBER OF POTENTIALLY PREVENTABLE CRASHES	4	5	NO
# 7. ENTIRE WARRANT	-	-	NO

WARRANT	CRITERIA		REQUIRED HOURS	ACTUAL HOURS	SATISFIED	PROXIMITY	
	MAJOR	MINOR				MAJOR	MINOR
#1A	600	200	8	0	NO		108%
#1B	900	100	8	10	YES		
#1A with #1B	480	80	8	13	NO		
#1B with #1A	720	160	8	0			67%
#2	Varying Graph		4	2	NO		7%
#3B	Varying Graph		1	0	NO	27%	164%

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

Analysis by: PEB 4/16/2024



MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
TRAFFIC CONTROL MULTIWAY STOP WARRANT STUDY SUMMARY

LOCATION: **SCOTTSDALE, ARIZONA**
 CONDITIONS: **TH 4.41% ANNUAL INCREASE AND SITE**

DATE OF COUNT: 11 July 2023
 DATE OF STUDY: 29 March 2024

NORTH/SOUTH STREET:	92nd STREET	MAJOR	MULTI-LANE
EAST/WEST STREET:	COCHISE DRIVE	MINOR	MULTI-LANE

POSTED SPEED LIMIT ON MAJOR STREET:	35 mph
85th PERCENTILE SPEED ON MAJOR STREET:	Unknown

WARRANT	EXISTING	REQUIRED	SATISFIED?
A. INTERIM MEASURE FOR TRAFFIC CONTROL SIGNAL			
TRAFFIC SIGNAL WARRANTS	1	1	YES
B. CRASH EXPERIENCE			
TOTAL NUMBER OF CRASHES	4	-	-
NUMBER OF POTENTIALLY PREVENTABLE CRASHES	4	5	NO
C. MINIMUM VOLUMES			
EIGHT-HOUR PERIODS SATISFYING VOLUME WARRANT	4	1	YES
PEAK HOUR DELAY - MORN	120	30	YES
PEAK HOUR DELAY - EVENI	120	30	YES
ENTIRE WARRANT			YES
D. COMBINATION OF WARRANTS B AND C (80% of Values)			
TOTAL NUMBER OF CRASHES	4	-	-
NUMBER OF POTENTIALLY PREVENTABLE CRASHES	4	4	YES
EIGHT-HOUR PERIODS SATISFYING VOLUME WARRANT	7	1	YES
PEAK HOUR DELAY - MORN	120	24	YES
PEAK HOUR DELAY - EVENI	120	24	YES
ENTIRE WARRANT			YES

The decision to install multiway stop control should be based on an engineering study.

Analysis by: PEB 4/16/2024



TRAFFIC CONTROL SIGNAL WARRANT STUDY

PROJECT:	MERCADO VILLAGE		
LOCATION:	SCOTTSDALE, ARIZONA		
NORTH/SOUTH STREET:			
	92nd STREET		
NB LANES	2	SB LANES	2
EAST/WEST STREET:			
	COCHISE DRIVE		
EB LANES	2	WB LANES	2
SPEED LIMIT ON MAJOR STREET:		35	
85TH PERCENTILE SPEED ON MAJOR STREET:		UNKNOWN	
VOLUME DATA:	2025	CONDITIONS:	WITH 4.41% ANNUAL INCREASE AND SITE
DATE OF COUNT:	11 July 2023	DATE OF STUDY:	29 March 2024

INTERSECTION APPROACH TRAFFIC VOLUMES				
TIME PERIOD	NORTHBOUND	SOUTHBOUND	EASTBOUND	WESTBOUND
12:00 AM to 1:00 AM	12	12	3	3
1:00 AM to 2:00 AM	7	8	6	3
2:00 AM to 3:00 AM	4	8	0	3
3:00 AM to 4:00 AM	4	16	3	3
4:00 AM to 5:00 AM	22	33	2	13
5:00 AM to 6:00 AM	73	108	2	29
6:00 AM to 7:00 AM	209	311	8	81
7:00 AM to 8:00 AM	356	559	42	152
8:00 AM to 9:00 AM	477	627	63	129
9:00 AM to 10:00 AM	609	562	96	87
10:00 AM to 11:00 AM	664	521	112	84
11:00 AM to 12:00 PM	661	515	127	104
12:00 PM to 1:00 PM	701	475	110	126
1:00 PM to 2:00 PM	571	490	91	109
2:00 PM to 3:00 PM	645	441	120	97
3:00 PM to 4:00 PM	655	423	124	83
4:00 PM to 5:00 PM	738	419	119	99
5:00 PM to 6:00 PM	632	344	93	105
6:00 PM to 7:00 PM	334	256	55	98
7:00 PM to 8:00 PM	243	198	40	73
8:00 PM to 9:00 PM	130	127	12	55
9:00 PM to 10:00 PM	73	71	7	33
10:00 PM to 11:00 PM	52	48	5	26
11:00 PM to 12:00 AM	23	32	2	13
TOTAL	7,895	6,604	1,242	1,608

CRASH EXPERIENCE AND DELAY DATA

TOTAL NUMBER OF CRASHES IN A 12 MONTH PERIOD:	4
POTENTIALLY PREVENTABLE BY SIGNAL:	4
BY FOUR-WAY STOP:	4

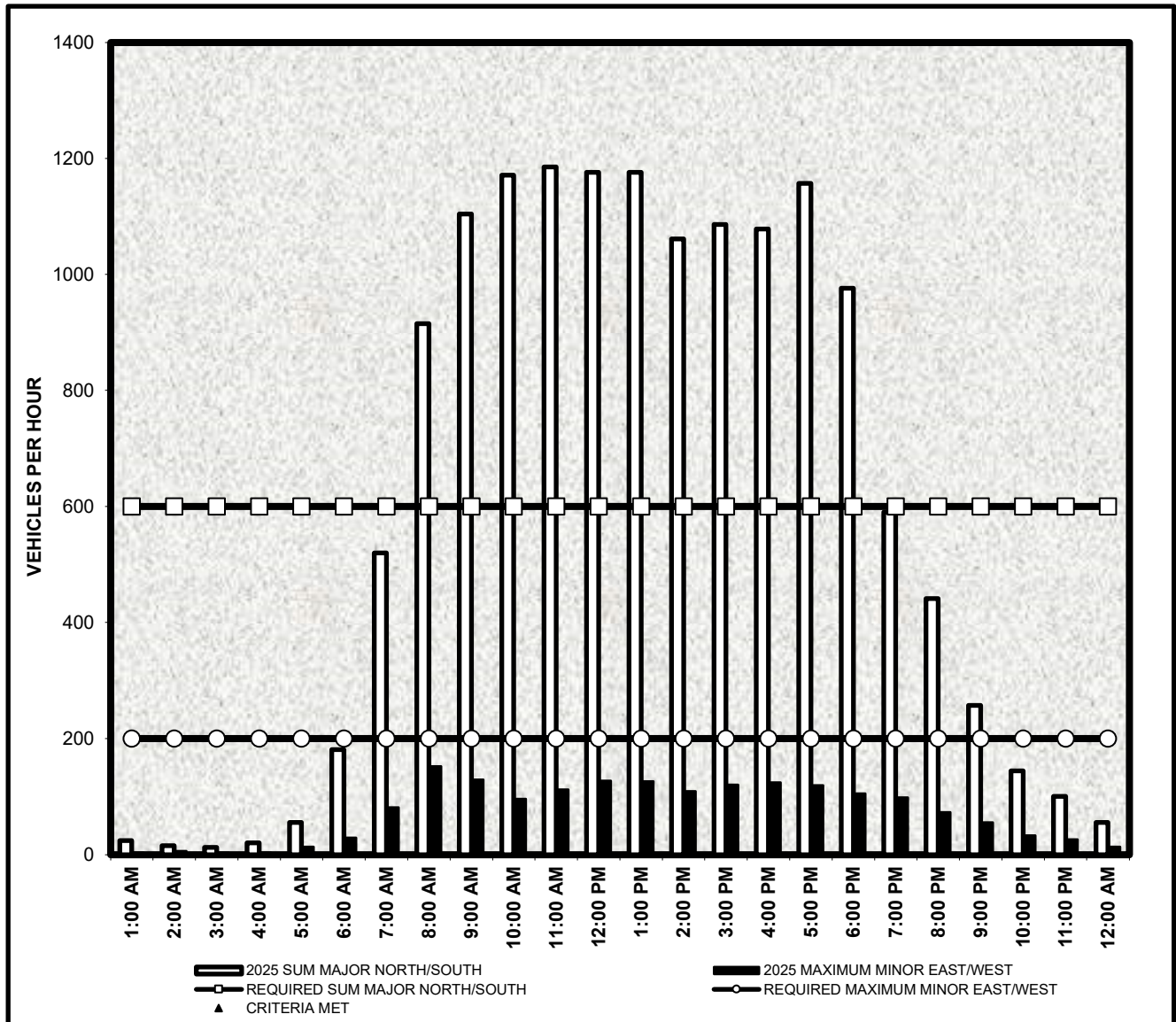
TIME PERIOD	AVERAGE DELAY SECONDS/VEHICLE	SIDE STREET TOTAL DELAY VEH-HOURS	VOLUME	TOTAL INTERSECTION VOLUME
11:00 AM to 12:00 PM	120	4.23	127	1,407
12:00 PM to 1:00 PM	120	4.20	126	1,412

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
M. U. T. C. D. WARRANT # 1A
Minimum Vehicular Volume

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH/SOUTH STREET	600
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST/WEST STREET	200

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

WARRANT CRITERIA:	NOT SATISFIED
--------------------------	----------------------



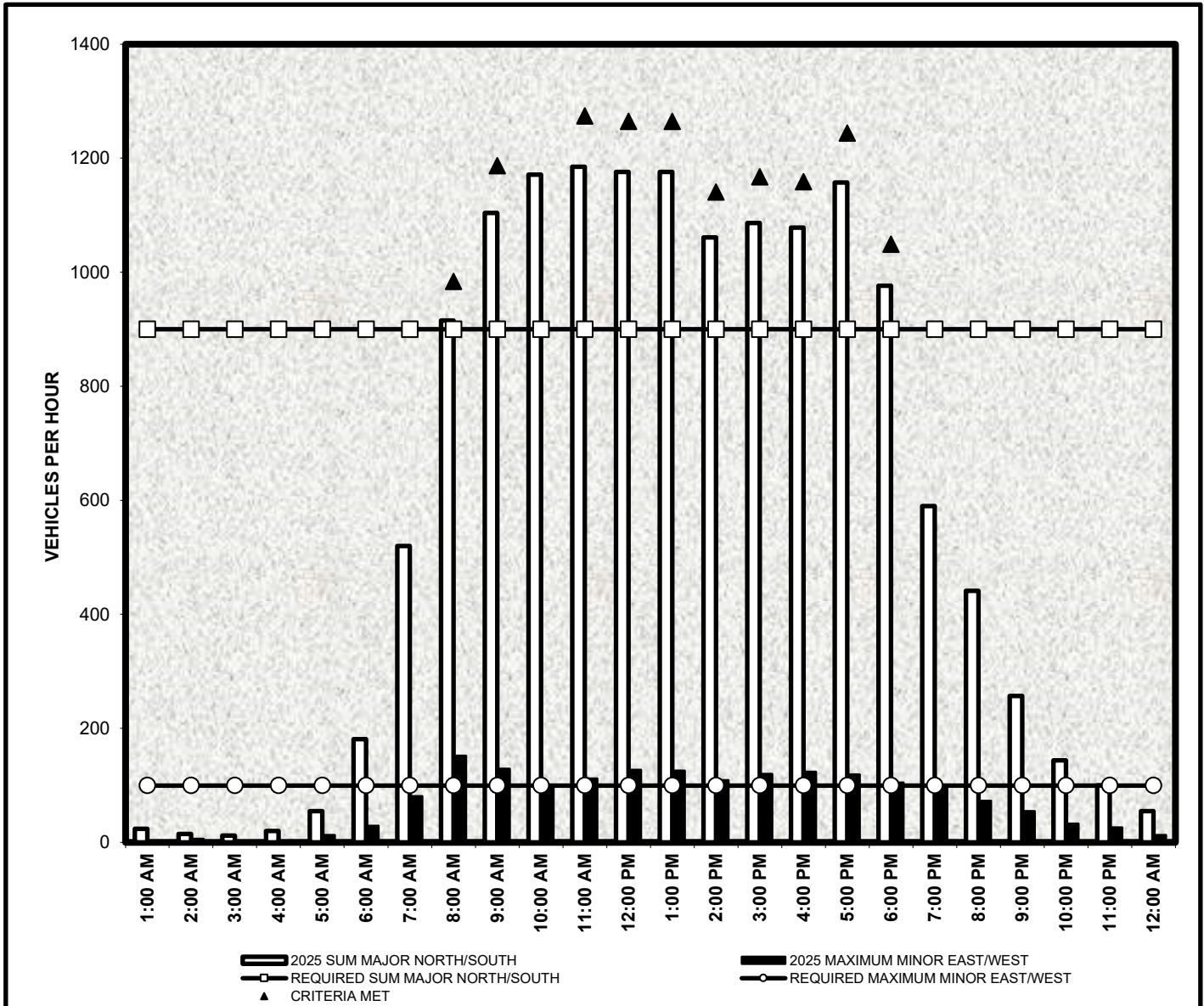
The Minimum Vehicular Volume, Condition A, is intended for application where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The warrant is satisfied when, for each of any eight hours of an average day, the traffic volumes provided in the 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.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
M. U. T. C. D. WARRANT # 1B
Interruption of Continuous Traffic

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH/SOUTH STREET	900
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST/WEST STREET	100

NUMBER OF HOURS SATISFIED:	10
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	3
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	1

WARRANT CRITERIA:	SATISFIED
--------------------------	------------------



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.

MERCADO VILLAGE 92nd STREET and COCHISE DRIVE

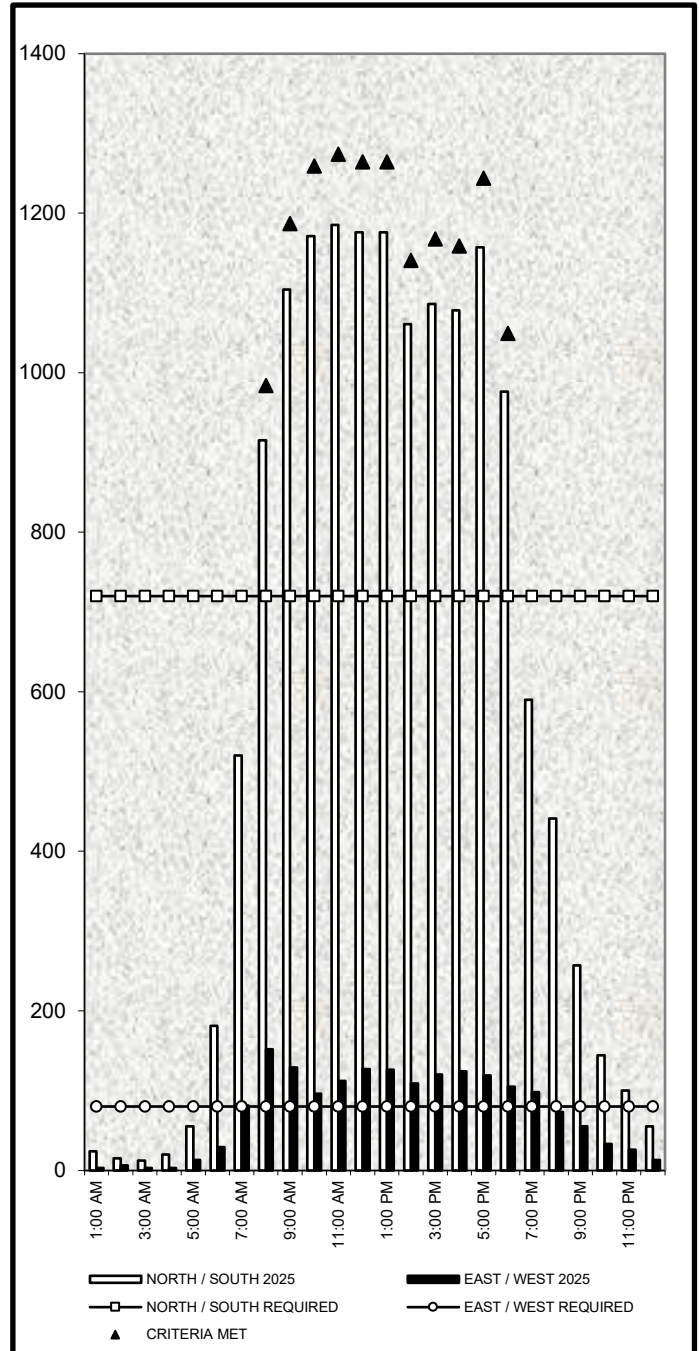
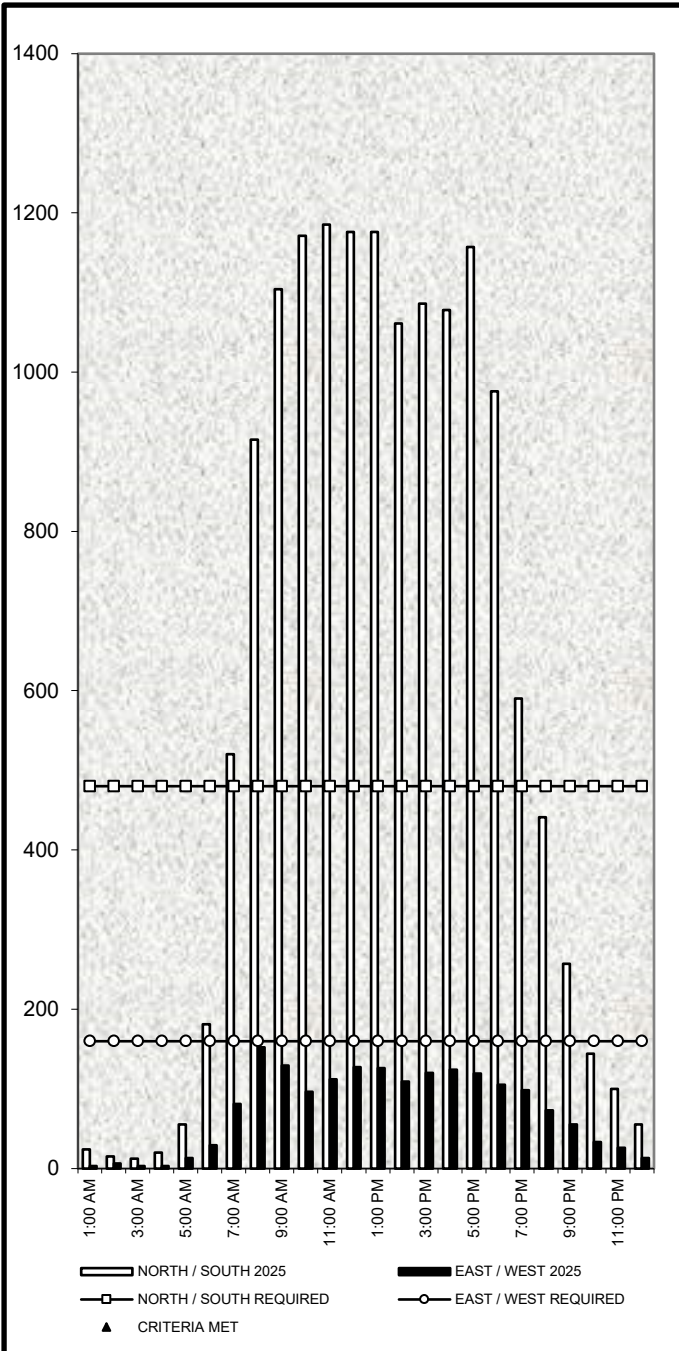
M. U. T. C. D. WARRANT # 1

Combination of Conditions A and B at 80% of Original Values

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH / SOUTH STREET	480	720
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST / WEST STREET	160	80

NUMBER OF HOURS SATISFIED:	0	11
----------------------------	---	----

WARRANT CRITERIA:	NOT SATISFIED
-------------------	---------------

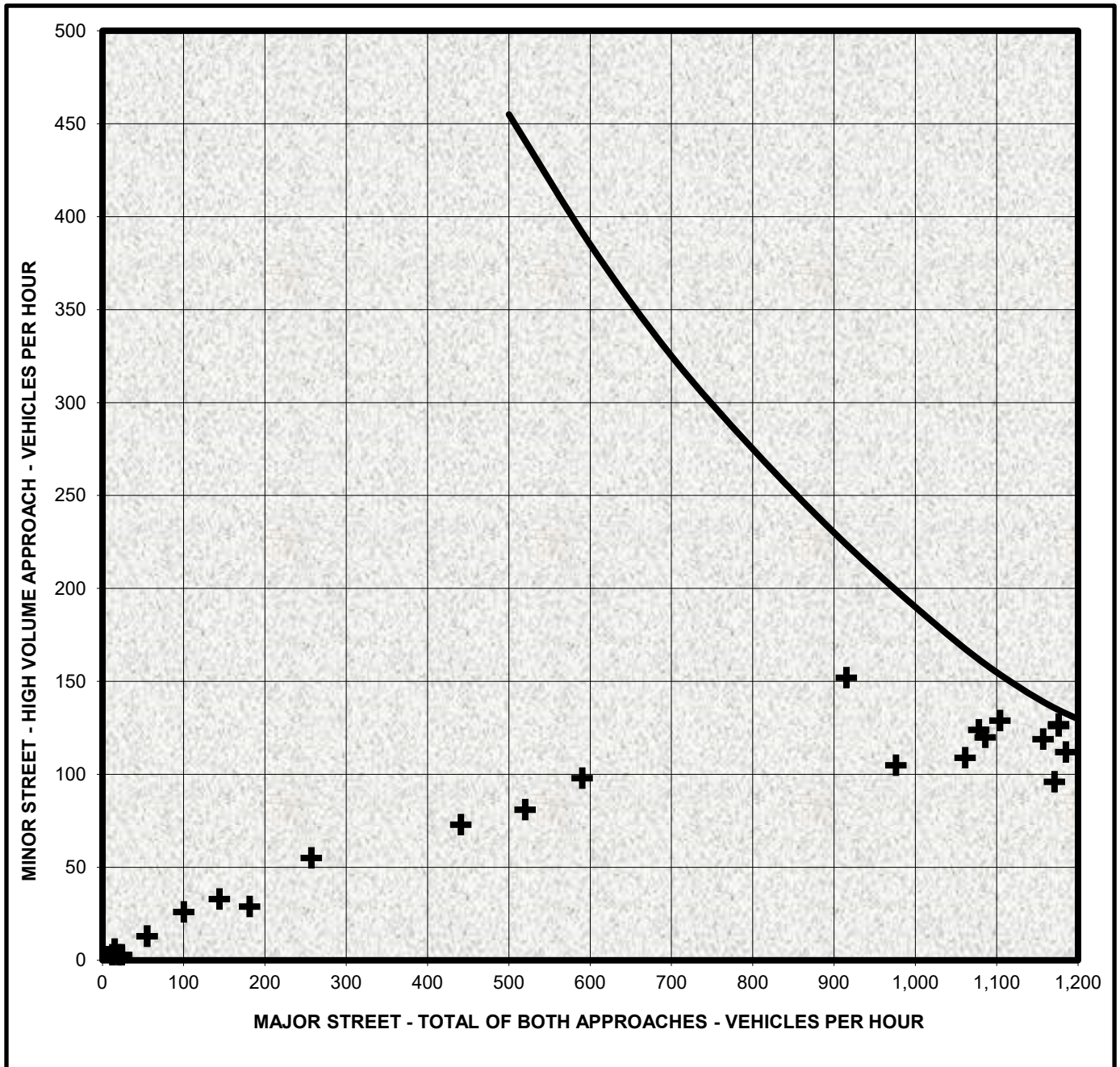


The major-street and minor-street volumes shall be for the same 8 hours for each condition; however, the 8 hours satisfied on A shall not be required to be the same 8 hours satisfied in Condition B. The combination of Conditions A and B should be applied only after an adequate trial of other alternatives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

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
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:	3

WARRANT CRITERIA:	NOT SATISFIED
--------------------------	----------------------



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.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
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

TIME PERIOD: 11:00 AM to 12:00 PM	MEASURED	SATISFIED?
SIDE STREET VEHICLE-HOURS DELAY:	4.23	NO
SIDE STREET HOURLY VOLUME:	127	NO
TOTAL INTERSECTION HOURLY VOLUME:	1,407	YES
ALL CRITERIA		NO

TIME PERIOD: 12:00 PM to 1:00 PM	MEASURED	SATISFIED?
SIDE STREET VEHICLE-HOURS DELAY:	4.20	NO
SIDE STREET HOURLY VOLUME:	126	NO
TOTAL INTERSECTION HOURLY VOLUME:	1,412	YES
ALL CRITERIA		NO

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.

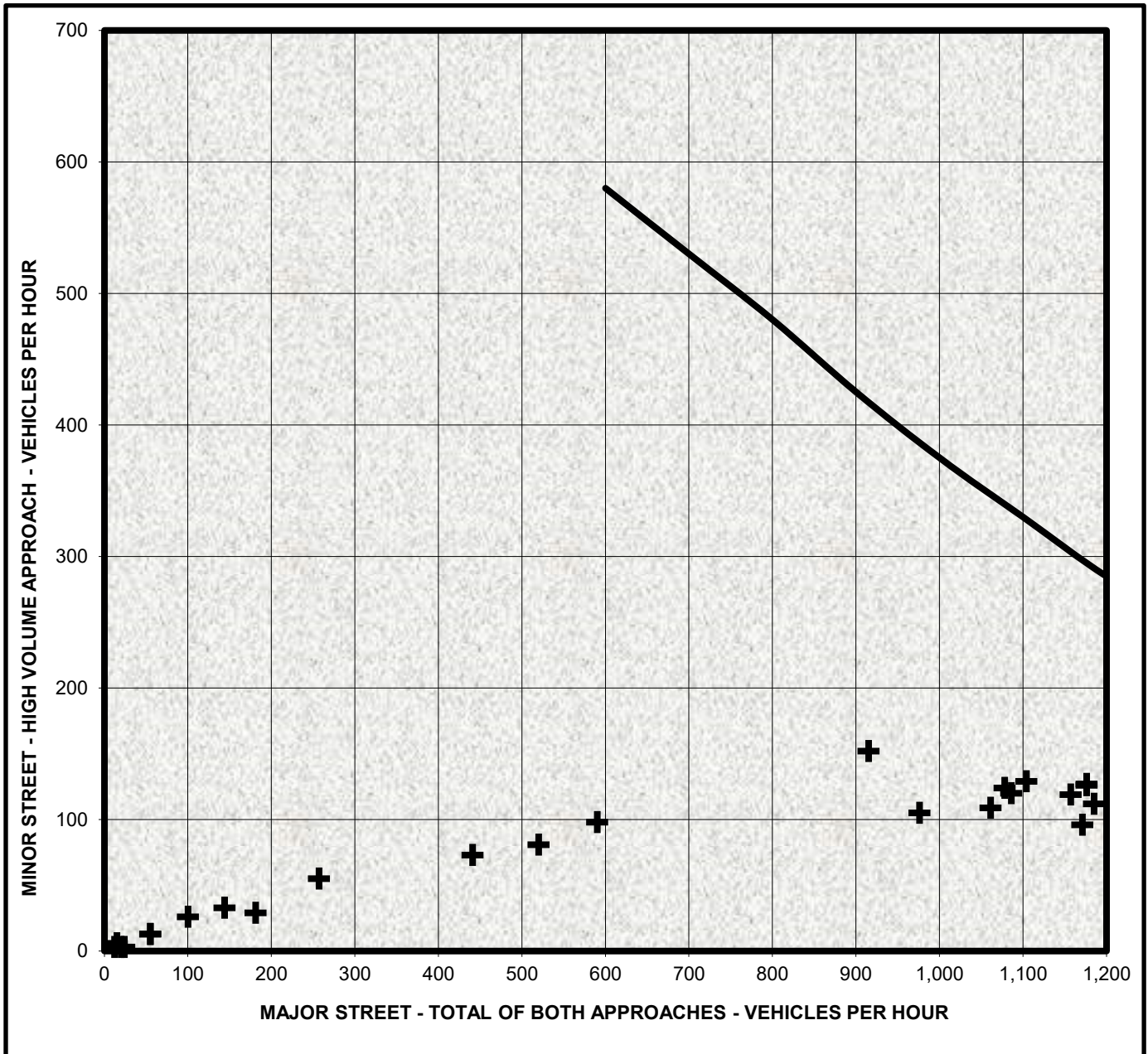
The need for a traffic control signal shall be considered if an engineering study finds that all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:

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.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
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

WARRANT CRITERIA:	NOT SATISFIED
--------------------------	----------------------



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.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE

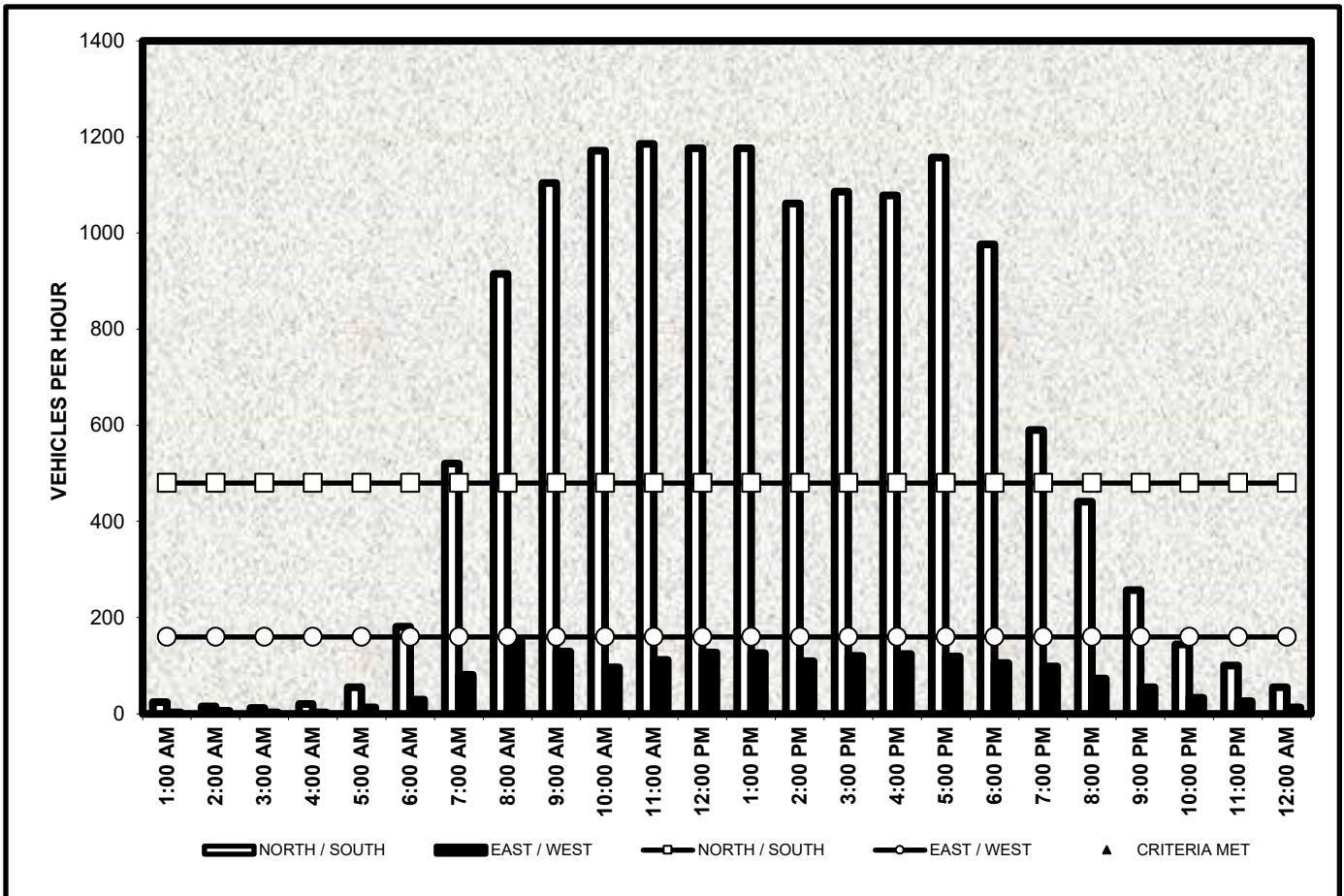
M. U. T. C. D. WARRANT #7 (In combination with Warrant # 1A)
Crash Experience with Traffic Volumes at 80% of Original Values

HAVE LESS RESTRICTIVE MEANS BEEN ATTEMPTED?	#REF!
TOTAL NUMBER OF CRASHES:	4
NUMBER OF POTENTIALLY PREVENTABLE CRASHES:	4

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH / SOUTH STREET	480
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST / WEST STREET	160

NUMBER OF HOURS SATISFIED:	0
----------------------------	---

WARRANT CRITERIA:	NOT SATISFIED
--------------------------	----------------------



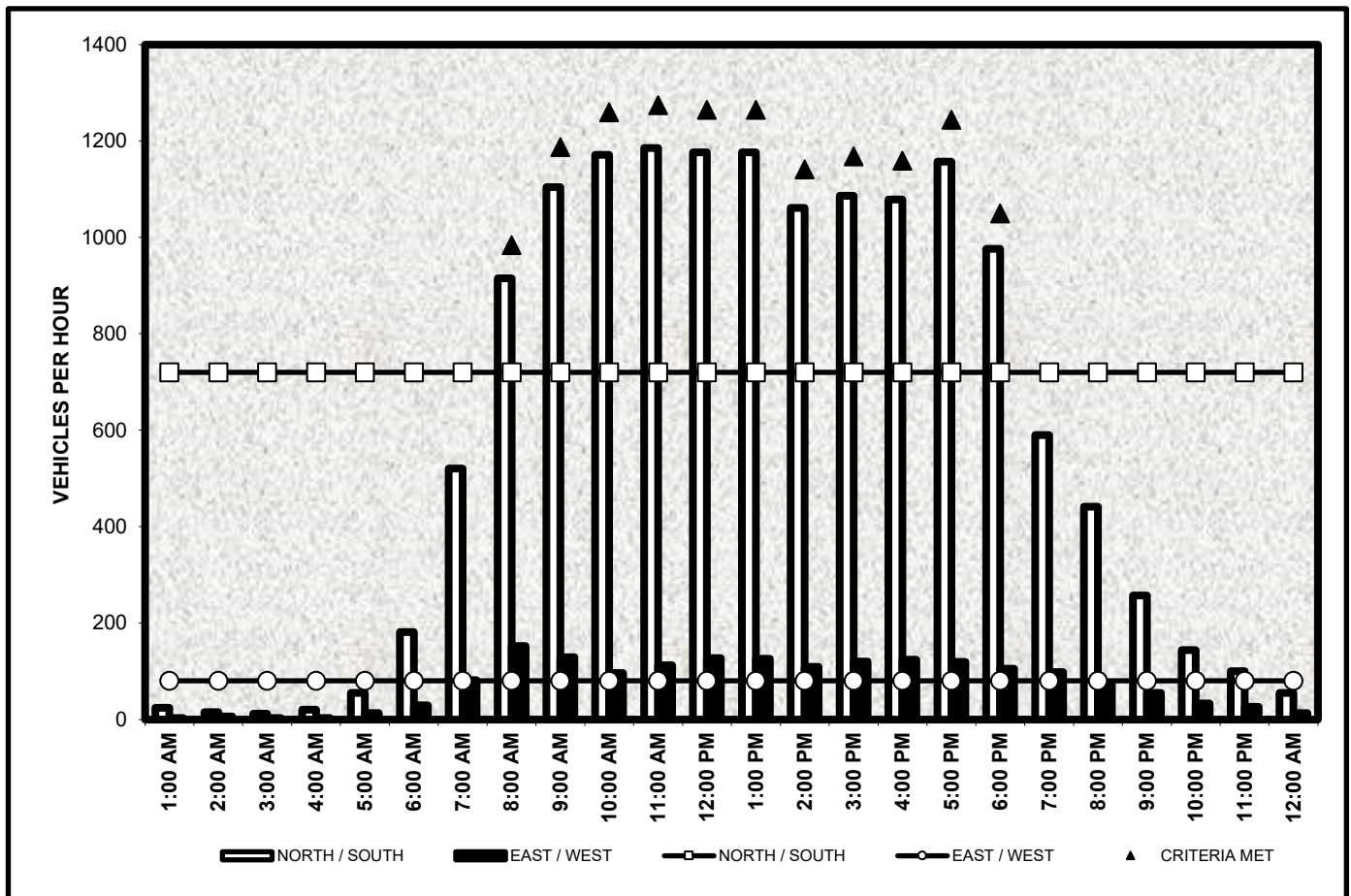
The need for a traffic control signal shall be considered if an engineering study finds that all of the following criteria are met:

- A. Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce crash frequency, and
- B. Five or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash, and
- C. For each of any 8 hours of an average day, the vehicles per hour given in both of the 80% columns of Condition A for Warrant 1, or the vehicles per hour in both of the 80% columns of Condition B for Warrant 1, exists on the major street and on the higher-volume minor-street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 80% of the requirements specified in the Pedestrian Volume warrant. These major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE

M. U. T. C. D. WARRANT # 7 (In combination with Warrant # 1B)
Crash Experience with Traffic Volumes at 80% of Original Values

HAVE LESS RESTRICTIVE MEANS BEEN ATTEMPTED?	#REF!
TOTAL NUMBER OF CRASHES:	4
NUMBER OF POTENTIALLY PREVENTABLE CRASHES:	4
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH / SOUTH STREET	720
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST / WEST STREET	80
NUMBER OF HOURS SATISFIED:	11
WARRANT CRITERIA:	NOT SATISFIED



The need for a traffic control signal shall be considered if an engineering study finds that all of the following criteria are met:

- Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce crash frequency, and
- Five or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash, and
- For each of any 8 hours of an average day, the vehicles per hour given in both of the 80% columns of Condition A for Warrant 1, or the vehicles per hour in both of the 80% columns of Condition B for Warrant 1, exists on the major street and on the higher-volume minor-street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 80% of the requirements specified in the Pedestrian Volume warrant. These major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
M. U. T. C. D. MULTIWAY STOP - WARRANT # C
Minimum Volume

REQUIRED AVERAGE VOLUME FOR 8 HOURS ON NORTH / SOUTH STREET	300
REQUIRED AVERAGE VOLUME FOR 8 HOURS ON EAST / WEST STREET	200
REQUIRED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	30
MEASURED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	45
NUMBER OF EIGHT-HOUR PERIODS SATISFIED:	4
WARRANT CRITERIA:	SATISFIED

RANKING BY MAJOR STREET (NORTH / SOUTH STREET) HOURLY VOLUMES

HOURLY VOLUME				AVERAGE OF EIGHT HOURLY VOLUMES			
RANK	BEGIN TIME	MAJOR STREET	MINOR STREET	RANKED HOURS	MAJOR STREET	MINOR STREET	SATISFIED?
1	11:00 AM	1,185	196	1 to 8	1,142	210	YES
2	NOON	1,176	231	2 to 9	1,126	211	YES
3	1:00 PM	1,176	236	3 to 10	1,101	206	YES
4	10:00 AM	1,171	183	4 to 11	1,069	201	YES
5	5:00 PM	1,157	218	5 to 12	996	197	NO
6	9:00 AM	1,104	192	6 to 13	916	181	NO
7	3:00 PM	1,086	217	7 to 14	833	171	NO
8	4:00 PM	1,078	207	8 to 15	730	153	NO
9	2:00 PM	1,061	200	9 to 16	618	131	NO
10	6:00 PM	976	198	10 to 17	503	111	NO
11	8:00 AM	915	194	11 to 18	394	90	NO
12	7:00 PM	590	153	12 to 19	286	67	NO
13	7:00 AM	520	89	13 to 20	219	50	NO
14	8:00 PM	441	113	14 to 21	157	40	NO
15	9:00 PM	257	67	15 to 22	105	26	NO
16	6:00 AM	181	31	16 to 23	74	19	NO
17	10:00 PM	144	40	17 to 24	53	16	NO
18	11:00 PM	100	31				
19	5:00 AM	55	15				
20	MIDNITE	55	15				
21	1:00 AM	24	6				
22	4:00 AM	20	6				
23	2:00 AM	15	9				
24	3:00 AM	12	3				

1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day, and
2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour, but
3. If the 85th-percentile approach speed of the major-street vehicular traffic exceeds 65 km/h or exceeds 40 mph, the minimum vehicular volume warrants are 70% of the above values.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
M. U. T. C. D. MULTIWAY STOP - WARRANT # C
Minimum Vehicular Volume

REQUIRED AVERAGE VOLUME FOR 8 HOURS ON NORTH / SOUTH STREET	300
REQUIRED AVERAGE VOLUME FOR 8 HOURS ON EAST / WEST STREET	200
REQUIRED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	30
MEASURED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	45
NUMBER OF EIGHT-HOUR PERIODS SATISFIED:	3
WARRANT CRITERIA:	SATISFIED

RANKING BY MINOR STREET (EAST / WEST STREET) HOURLY VOLUMES

HOURLY VOLUME				AVERAGE OF EIGHT HOURLY VOLUMES			
RANK	BEGIN TIME	MINOR STREET	MAJOR STREET	RANKED HOURS	MINOR STREET	MAJOR STREET	SATISFIED?
1	1:00 PM	236	1,176	1 to 8	213	1,112	YES
2	NOON	231	1,176	2 to 9	208	1,079	YES
3	5:00 PM	218	1,157	3 to 10	203	1,070	YES
4	3:00 PM	217	1,086	4 to 11	198	1,072	NO
5	4:00 PM	207	1,078	5 to 12	190	1,010	NO
6	2:00 PM	200	1,061	6 to 13	179	930	NO
7	6:00 PM	198	976	7 to 14	165	863	NO
8	11:00 AM	196	1,185	8 to 15	148	773	NO
9	8:00 AM	194	915	9 to 16	129	643	NO
10	9:00 AM	192	1,104	10 to 17	109	551	NO
11	10:00 AM	183	1,171	11 to 18	88	426	NO
12	7:00 PM	153	590	12 to 19	67	286	NO
13	8:00 PM	113	441	13 to 20	50	219	NO
14	7:00 AM	89	520	14 to 21	37	166	NO
15	9:00 PM	67	257	15 to 22	27	104	NO
16	10:00 PM	40	144	16 to 23	19	74	NO
17	6:00 AM	31	181	17 to 24	15	58	NO
18	11:00 PM	31	100				
19	5:00 AM	15	55				
20	MIDNITE	15	55				
21	2:00 AM	9	15				
22	1:00 AM	6	24				
23	4:00 AM	6	20				
24	3:00 AM	3	12				

1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day, and
2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour, but
3. If the 85th-percentile approach speed of the major-street vehicular traffic exceeds 65 km/h or exceeds 40 mph, the minimum vehicular volume warrants are 70% of the above values.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
M. U. T. C. D. MULTIWAY STOP - WARRANT # D
80% of Warrants B, C.1, and C.2

REQUIRED AVERAGE VOLUME FOR 8 HOURS ON NORTH / SOUTH STREET	240
REQUIRED AVERAGE VOLUME FOR 8 HOURS ON EAST / WEST STREET	160
REQUIRED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	24
MEASURED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	120
NUMBER OF EIGHT-HOUR PERIODS SATISFIED:	7
WARRANT CRITERIA:	SATISFIED

RANKING BY MAJOR STREET (NORTH / SOUTH STREET) HOURLY VOLUMES

HOURLY VOLUME				AVERAGE OF EIGHT HOURLY VOLUMES			
RANK	BEGIN TIME	MAJOR STREET	MINOR STREET	RANKED HOURS	MAJOR STREET	MINOR STREET	SATISFIED?
1	11:00 AM	1,185	196	1 to 8	1,142	210	YES
2	NOON	1,176	231	2 to 9	1,126	211	YES
3	1:00 PM	1,176	236	3 to 10	1,101	206	YES
4	10:00 AM	1,171	183	4 to 11	1,069	201	YES
5	5:00 PM	1,157	218	5 to 12	996	197	YES
6	9:00 AM	1,104	192	6 to 13	916	181	YES
7	3:00 PM	1,086	217	7 to 14	833	171	YES
8	4:00 PM	1,078	207	8 to 15	730	153	NO
9	2:00 PM	1,061	200	9 to 16	618	131	NO
10	6:00 PM	976	198	10 to 17	503	111	NO
11	8:00 AM	915	194	11 to 18	394	90	NO
12	7:00 PM	590	153	12 to 19	286	67	NO
13	7:00 AM	520	89	13 to 20	219	50	NO
14	8:00 PM	441	113	14 to 21	157	40	NO
15	9:00 PM	257	67	15 to 22	105	26	NO
16	6:00 AM	181	31	16 to 23	74	19	NO
17	10:00 PM	144	40	17 to 24	53	16	NO
18	11:00 PM	100	31				
19	5:00 AM	55	15				
20	MIDNITE	55	15				
21	1:00 AM	24	6				
22	4:00 AM	20	6				
23	2:00 AM	15	9				
24	3:00 AM	12	3				

1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 240 vehicles per hour for any 8 hours of an average day, and
2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 160 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 24 seconds per vehicle during the highest hour.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
M. U. T. C. D. MULTIWAY STOP - WARRANT # D
80% of Warrants B, C.1, and C.2

REQUIRED AVERAGE VOLUME FOR 8 HOURS ON NORTH / SOUTH STREET	240
REQUIRED AVERAGE VOLUME FOR 8 HOURS ON EAST / WEST STREET	160
REQUIRED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	24
MEASURED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	120
NUMBER OF EIGHT-HOUR PERIODS SATISFIED:	7
WARRANT CRITERIA:	SATISFIED

RANKING BY MINOR STREET (EAST / WEST STREET) HOURLY VOLUMES

HOURLY VOLUME				AVERAGE OF EIGHT HOURLY VOLUMES			
RANK	BEGIN TIME	MINOR STREET	MAJOR STREET	RANKED HOURS	MINOR STREET	MAJOR STREET	SATISFIED?
1	1:00 PM	236	1,176	1 to 8	213	1,112	YES
2	NOON	231	1,176	2 to 9	208	1,079	YES
3	5:00 PM	218	1,157	3 to 10	203	1,070	YES
4	3:00 PM	217	1,086	4 to 11	198	1,072	YES
5	4:00 PM	207	1,078	5 to 12	190	1,010	YES
6	2:00 PM	200	1,061	6 to 13	179	930	YES
7	6:00 PM	198	976	7 to 14	165	863	YES
8	11:00 AM	196	1,185	8 to 15	148	773	NO
9	8:00 AM	194	915	9 to 16	129	643	NO
10	9:00 AM	192	1,104	10 to 17	109	551	NO
11	10:00 AM	183	1,171	11 to 18	88	426	NO
12	7:00 PM	153	590	12 to 19	67	286	NO
13	8:00 PM	113	441	13 to 20	50	219	NO
14	7:00 AM	89	520	14 to 21	37	166	NO
15	9:00 PM	67	257	15 to 22	27	104	NO
16	10:00 PM	40	144	16 to 23	19	74	NO
17	6:00 AM	31	181	17 to 24	15	58	NO
18	11:00 PM	31	100				
19	5:00 AM	15	55				
20	MIDNITE	15	55				
21	2:00 AM	9	15				
22	1:00 AM	6	24				
23	4:00 AM	6	20				
24	3:00 AM	3	12				

1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 240 vehicles per hour for any 8 hours of an average day, and
2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 160 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 24 seconds per vehicle during the highest hour.

Appendix E.4
2025 with Mercado and with Kaplan as Apartments



MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
TRAFFIC CONTROL SIGNAL WARRANT STUDY SUMMARY

LOCATION:	SCOTTSDALE, ARIZONA	DATE OF COUNT:	11 July 2023
CONDITIONS:	WITH MERCADO AND WITH KAPLAN AS HOMES	DATE OF STUDY:	01 April 2024

NORTH/SOUTH STREET:	92nd STREET	MAJOR	MULTI-LANE
EAST/WEST STREET:	COCHISE DRIVE	MINOR	MULTI-LANE

POSTED SPEED LIMIT ON MAJOR STREET:	35 mph
85th PERCENTILE SPEED ON MAJOR STREET:	Unknown

WARRANT	EXISTING	REQUIRED	SATISFIED?
# 1. EIGHT-HOUR VEHICULAR VOLUME			
A. MINIMUM VEHICULAR VOLUME	1	8	NO
B. INTERRUPTION OF CONTINUOUS TRAFFIC	11	8	YES
COMBINATION OF WARRANTS 1A AND 1B (80% of Values)	2	8	NO
COMBINATION OF WARRANTS 1A AND 1B (56% of Values)	-	-	Not Applicable
# 2. FOUR-HOUR VEHICULAR VOLUME	5	4	YES
# 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 (Volumes at 80% of Original Values)	0	8	NO
WITH WARRANT # 1B (Volumes at 80% of Original Values)	0	8	NO
WITH WARRANT # 1A (Volumes at 56% of Original Values)	-	-	Not Applicable
WITH WARRANT # 1B (Volumes at 56% of Original Values)	-	-	Not Applicable
TOTAL NUMBER OF CRASHES IN 12 CONSECUTIVE MONTHS:	4	-	-
NUMBER OF POTENTIALLY PREVENTABLE CRASHES	4	5	NO
# 7. ENTIRE WARRANT	-	-	NO

WARRANT	CRITERIA		REQUIRED HOURS	ACTUAL HOURS	SATISFIED	PROXIMITY	
	MAJOR	MINOR				MAJOR	MINOR
#1A	600	200	8	1	NO		79%
#1B	900	100	8	11	YES		
#1A with #1B	480	80	8	14	NO		
#1B with #1A	720	160	8	2			43%
#2	Varying Graph		4	5	YES		
#3B	Varying Graph		1	0	NO	16%	112%

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

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
TRAFFIC CONTROL MULTIWAY STOP WARRANT STUDY SUMMARY

LOCATION: **SCOTTSDALE, ARIZONA**
 CONDITIONS: **MERCADO AND WITH KAPLAN AS HOMES**

DATE OF COUNT: 11 July 2023
 DATE OF STUDY: 01 April 2024

NORTH/SOUTH STREET:	92nd STREET	MAJOR	MULTI-LANE
EAST/WEST STREET:	COCHISE DRIVE	MINOR	MULTI-LANE

POSTED SPEED LIMIT ON MAJOR STREET:	35 mph
85th PERCENTILE SPEED ON MAJOR STREET:	Unknown

WARRANT	EXISTING	REQUIRED	SATISFIED?
A. INTERIM MEASURE FOR TRAFFIC CONTROL SIGNAL			
TRAFFIC SIGNAL WARRANTS	2	1	YES
B. CRASH EXPERIENCE			
TOTAL NUMBER OF CRASHES	4	-	-
NUMBER OF POTENTIALLY PREVENTABLE CRASHES	4	5	NO
C. MINIMUM VOLUMES			
EIGHT-HOUR PERIODS SATISFYING VOLUME WARRANT	7	1	YES
PEAK HOUR DELAY - MORN	120	30	YES
PEAK HOUR DELAY - EVENI	120	30	YES
ENTIRE WARRANT			YES
D. COMBINATION OF WARRANTS B AND C (80% of Values)			
TOTAL NUMBER OF CRASHES	4	-	-
NUMBER OF POTENTIALLY PREVENTABLE CRASHES	4	4	YES
EIGHT-HOUR PERIODS SATISFYING VOLUME WARRANT	9	1	YES
PEAK HOUR DELAY - MORN	120	24	YES
PEAK HOUR DELAY - EVENI	120	24	YES
ENTIRE WARRANT			YES

The decision to install multiway stop control should be based on an engineering study.

Analysis by: PEB 4/16/2024



TRAFFIC CONTROL SIGNAL WARRANT STUDY

PROJECT: **MERCADO VILLAGE**
LOCATION: **SCOTTSDALE, ARIZONA**

NORTH/SOUTH STREET: **92nd STREET**

NB LANES **2** SB LANES **2**

EAST/WEST STREET: **COCHISE DRIVE**

EB LANES **2** WB LANES **2**

SPEED LIMIT ON MAJOR STREET: **35**
85TH PERCENTILE SPEED ON MAJOR STREET: **UNKNOWN**

VOLUME DATA: **2025** CONDITIONS: **WITH MERCADO AND WITH KAPLAN AS HOMES**

DATE OF COUNT: **11 July 2023** DATE OF STUDY: **01 April 2024**

INTERSECTION APPROACH TRAFFIC VOLUMES				
TIME PERIOD	NORTHBOUND	SOUTHBOUND	EASTBOUND	WESTBOUND
12:00 AM to 1:00 AM	14	16	3	6
1:00 AM to 2:00 AM	9	10	6	5
2:00 AM to 3:00 AM	5	10	0	6
3:00 AM to 4:00 AM	5	18	3	5
4:00 AM to 5:00 AM	23	35	2	22
5:00 AM to 6:00 AM	75	110	2	45
6:00 AM to 7:00 AM	212	317	8	122
7:00 AM to 8:00 AM	361	567	42	216
8:00 AM to 9:00 AM	483	639	63	179
9:00 AM to 10:00 AM	615	573	96	116
10:00 AM to 11:00 AM	669	530	112	112
11:00 AM to 12:00 PM	668	530	127	132
12:00 PM to 1:00 PM	710	492	110	151
1:00 PM to 2:00 PM	579	505	91	135
2:00 PM to 3:00 PM	656	462	121	126
3:00 PM to 4:00 PM	669	449	125	114
4:00 PM to 5:00 PM	758	457	121	132
5:00 PM to 6:00 PM	655	387	95	150
6:00 PM to 7:00 PM	354	292	57	137
7:00 PM to 8:00 PM	259	228	41	101
8:00 PM to 9:00 PM	145	156	13	79
9:00 PM to 10:00 PM	85	94	8	50
10:00 PM to 11:00 PM	61	66	5	41
11:00 PM to 12:00 AM	29	42	2	22
TOTAL	8,099	6,985	1,253	2,204

CRASH EXPERIENCE AND DELAY DATA

TOTAL NUMBER OF CRASHES IN A 12 MONTH PERIOD: **4**
POTENTIALLY PREVENTABLE BY SIGNAL: **4** BY FOUR-WAY STOP: **4**

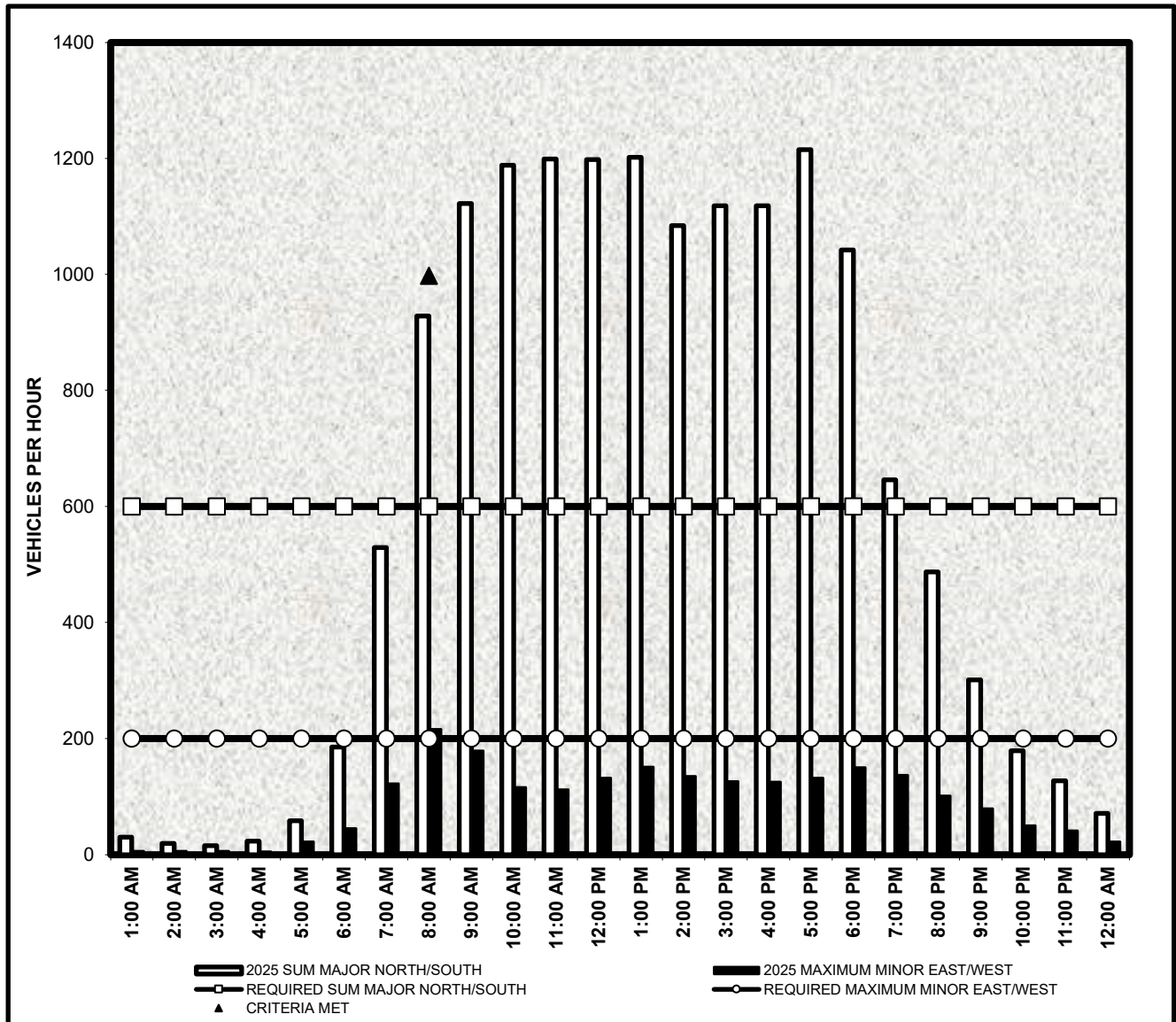
TIME PERIOD	AVERAGE DELAY SECONDS/VEHICLE	SIDE STREET TOTAL DELAY VEH-HOURS	VOLUME	TOTAL INTERSECTION VOLUME
11:00 AM to 12:00 PM	120	4.40	132	1,457
4:00 PM to 5:00 PM	120	4.40	132	1,468

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
M. U. T. C. D. WARRANT # 1A
Minimum Vehicular Volume

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH/SOUTH STREET	600
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST/WEST STREET	200

NUMBER OF HOURS SATISFIED:	1
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	1
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	0

WARRANT CRITERIA:	NOT SATISFIED
--------------------------	----------------------



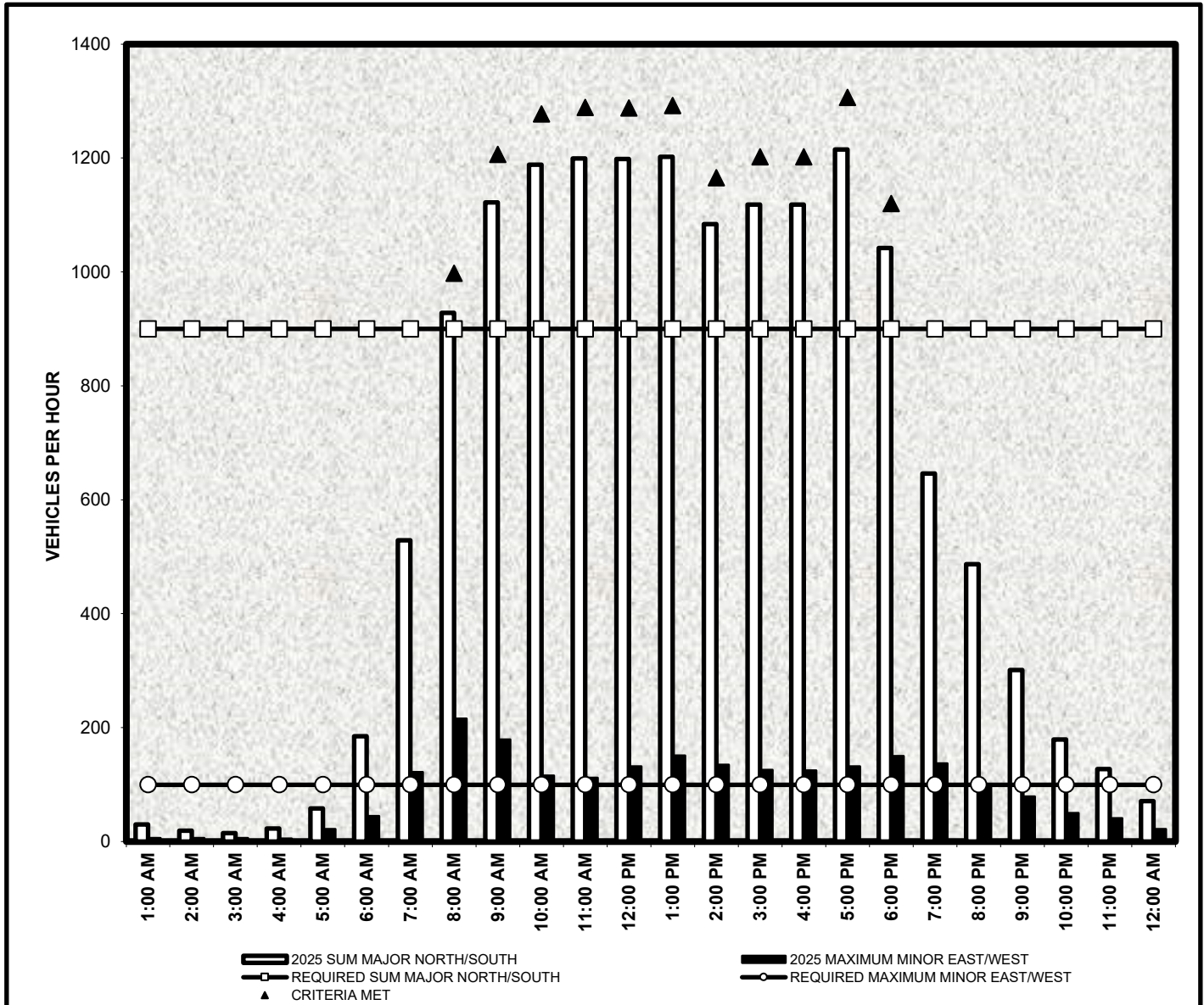
The Minimum Vehicular Volume, Condition A, is intended for application where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The warrant is satisfied when, for each of any eight hours of an average day, the traffic volumes provided in the 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.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
M. U. T. C. D. WARRANT # 1B
Interruption of Continuous Traffic

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH/SOUTH STREET	900
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST/WEST STREET	100

NUMBER OF HOURS SATISFIED:	11
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	1
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	0

WARRANT CRITERIA:	SATISFIED
--------------------------	------------------



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.

MERCADO VILLAGE 92nd STREET and COCHISE DRIVE

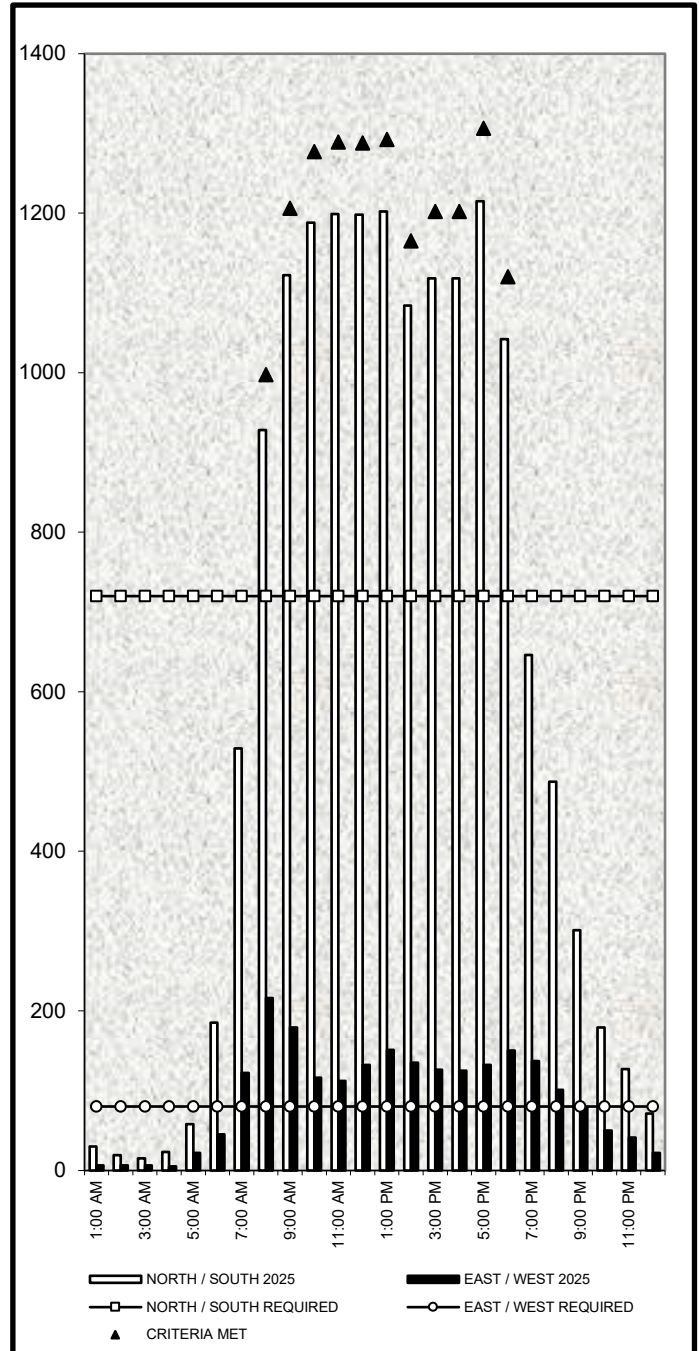
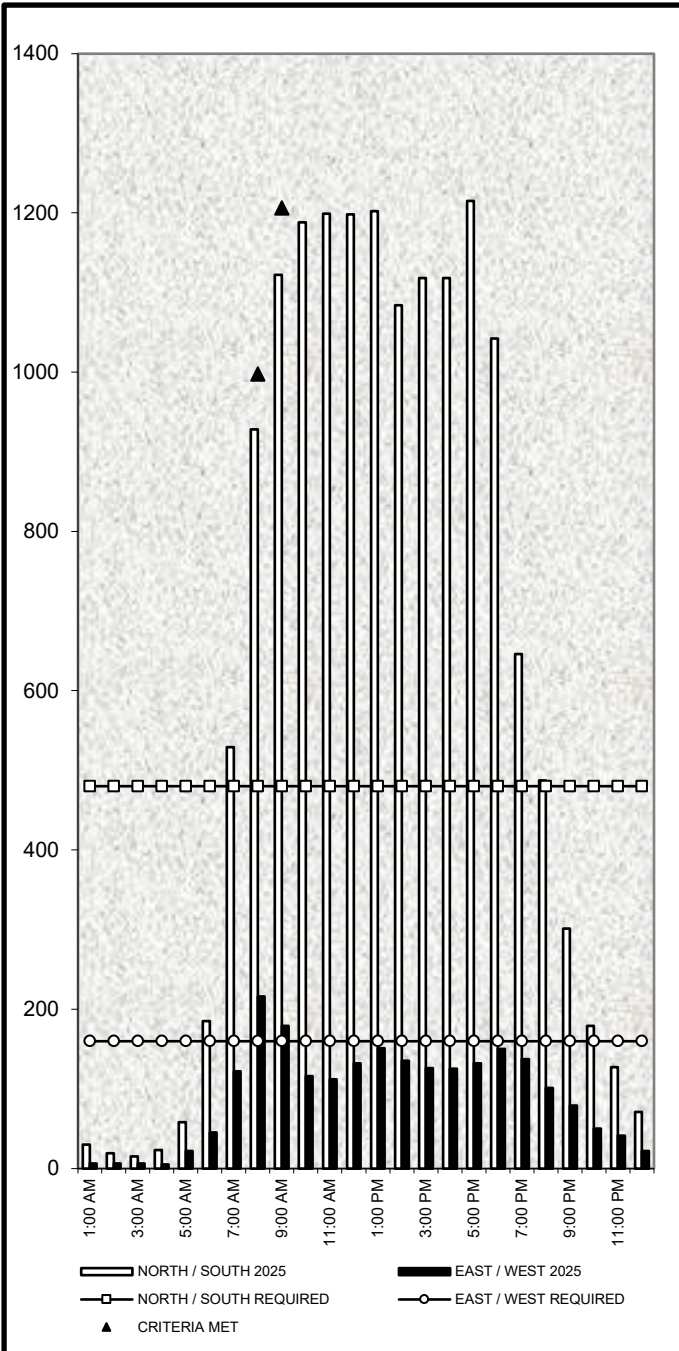
M. U. T. C. D. WARRANT # 1

Combination of Conditions A and B at 80% of Original Values

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH / SOUTH STREET	480	720
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST / WEST STREET	160	80

NUMBER OF HOURS SATISFIED:	2	11
----------------------------	---	----

WARRANT CRITERIA:	NOT SATISFIED
-------------------	---------------

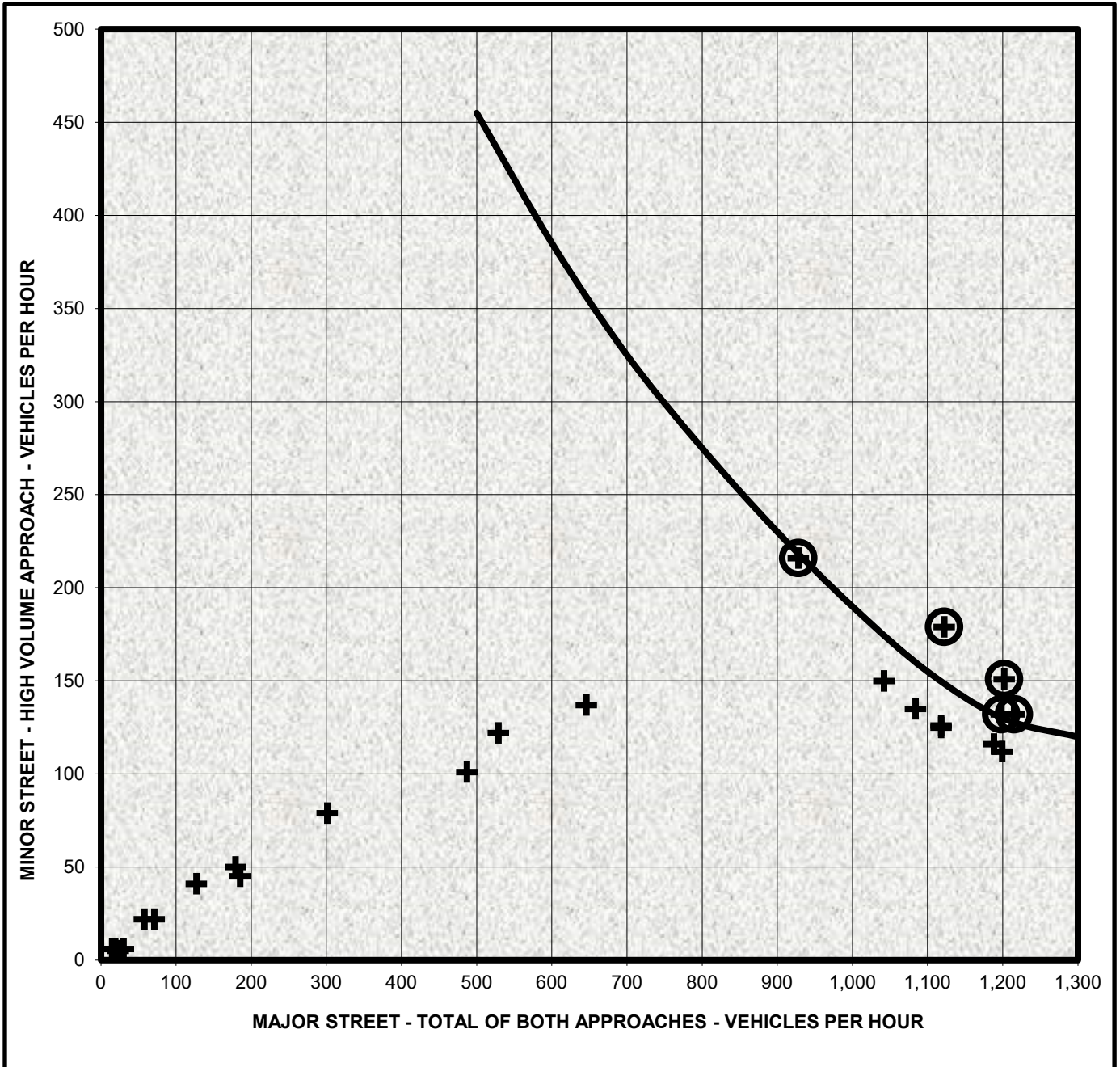


The major-street and minor-street volumes shall be for the same 8 hours for each condition; however, the 8 hours satisfied on A shall not be required to be the same 8 hours satisfied in Condition B. The combination of Conditions A and B should be applied only after an adequate trial of other alternatives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

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
M. U. T. C. D. WARRANT # 2
Four-Hour Vehicular Volume

NUMBER OF HOURS SATISFIED:	5
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	3
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	1

WARRANT CRITERIA:	SATISFIED
--------------------------	------------------



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.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
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

TIME PERIOD: 11:00 AM to 12:00 PM	MEASURED	SATISFIED?
SIDE STREET VEHICLE-HOURS DELAY:	4.40	NO
SIDE STREET HOURLY VOLUME:	132	NO
TOTAL INTERSECTION HOURLY VOLUME:	1,457	YES
ALL CRITERIA		NO

TIME PERIOD: 4:00 PM to 5:00 PM	MEASURED	SATISFIED?
SIDE STREET VEHICLE-HOURS DELAY:	4.40	NO
SIDE STREET HOURLY VOLUME:	132	NO
TOTAL INTERSECTION HOURLY VOLUME:	1,468	YES
ALL CRITERIA		NO

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.

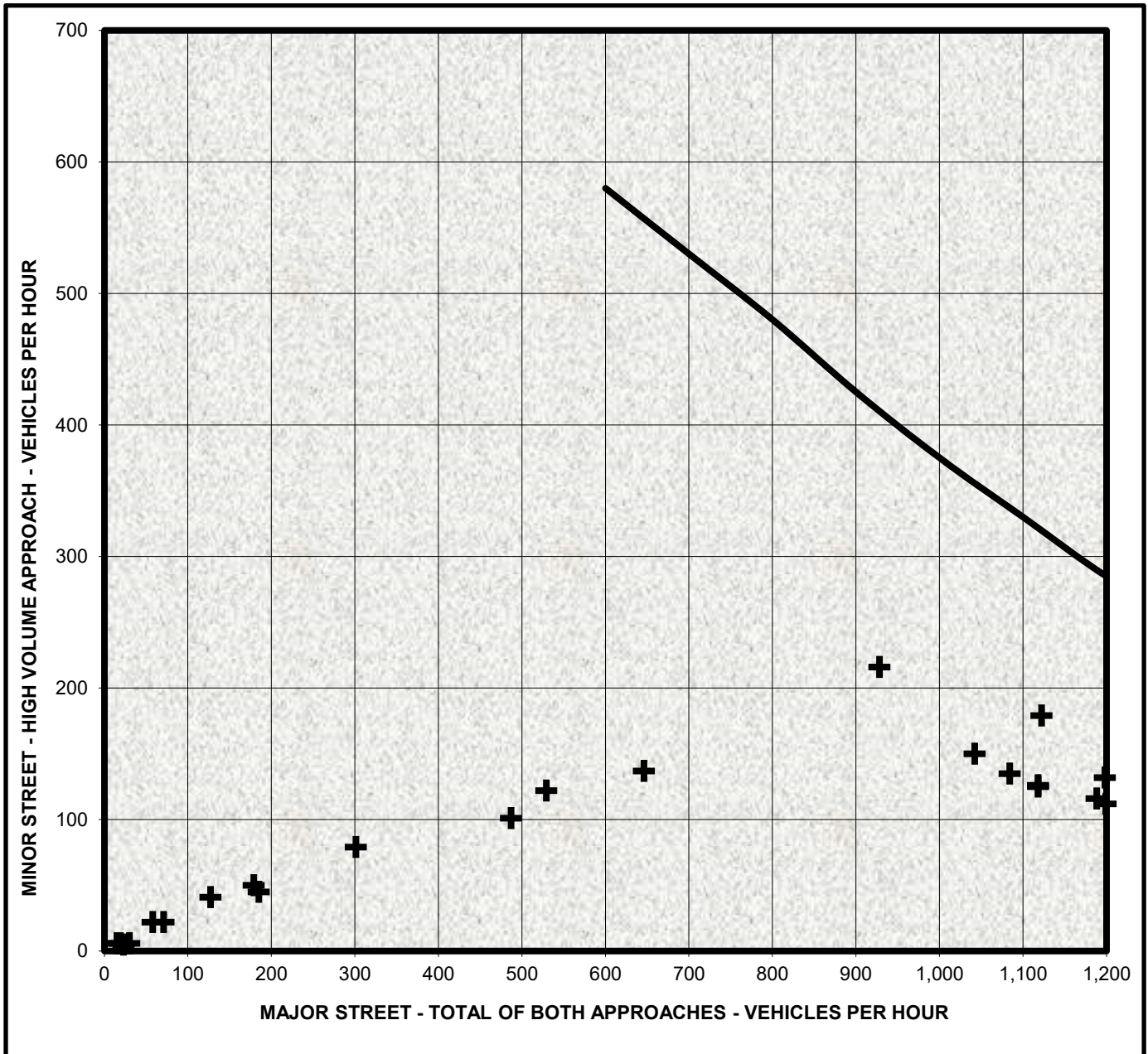
The need for a traffic control signal shall be considered if an engineering study finds that all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:

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.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
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

WARRANT CRITERIA:	NOT SATISFIED
--------------------------	----------------------



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.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE

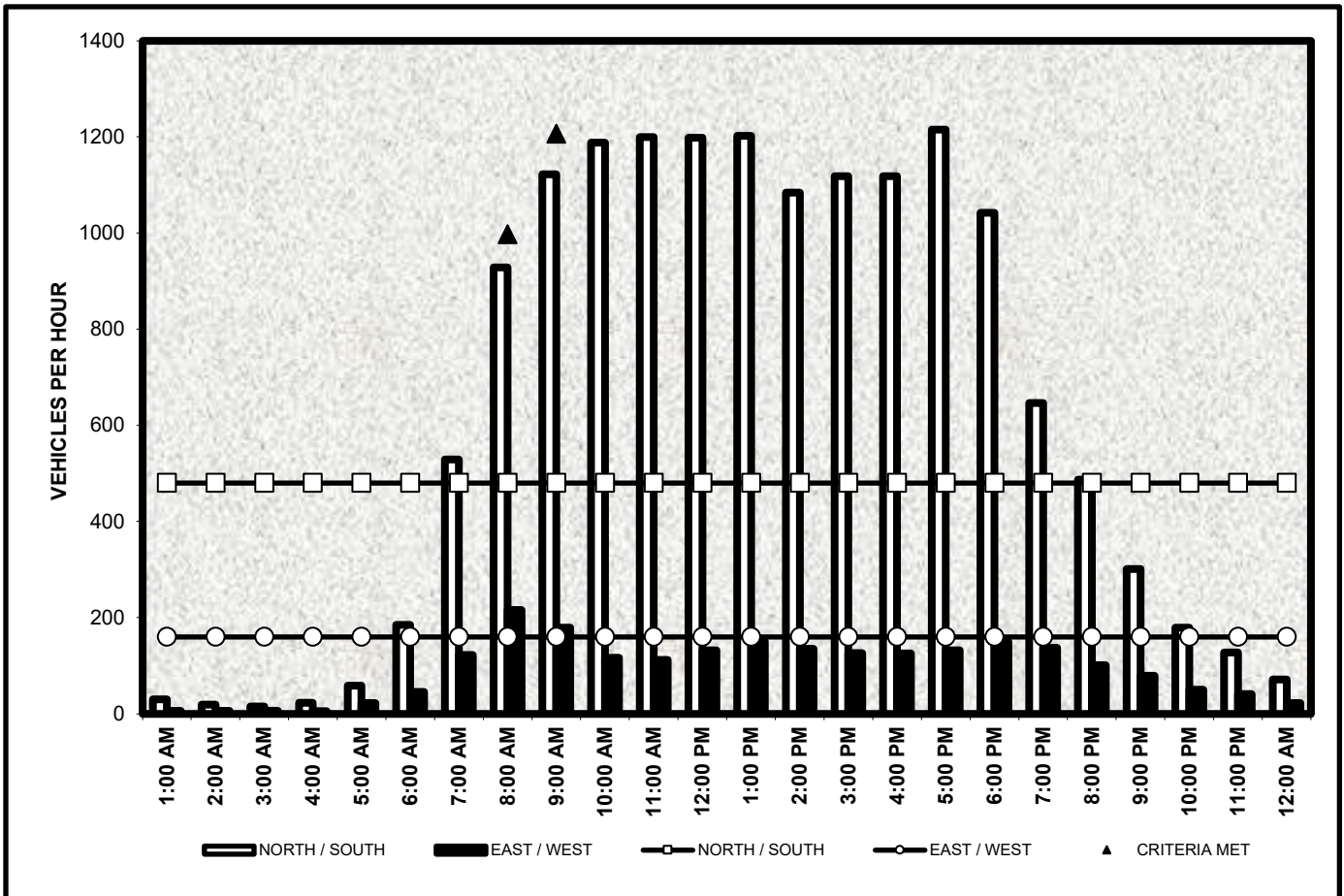
M. U. T. C. D. WARRANT #7 (In combination with Warrant # 1A)
Crash Experience with Traffic Volumes at 80% of Original Values

HAVE LESS RESTRICTIVE MEANS BEEN ATTEMPTED?	#REF!
TOTAL NUMBER OF CRASHES:	4
NUMBER OF POTENTIALLY PREVENTABLE CRASHES:	4

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH / SOUTH STREET	480
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST / WEST STREET	160

NUMBER OF HOURS SATISFIED:	2
----------------------------	---

WARRANT CRITERIA:	NOT SATISFIED
--------------------------	----------------------



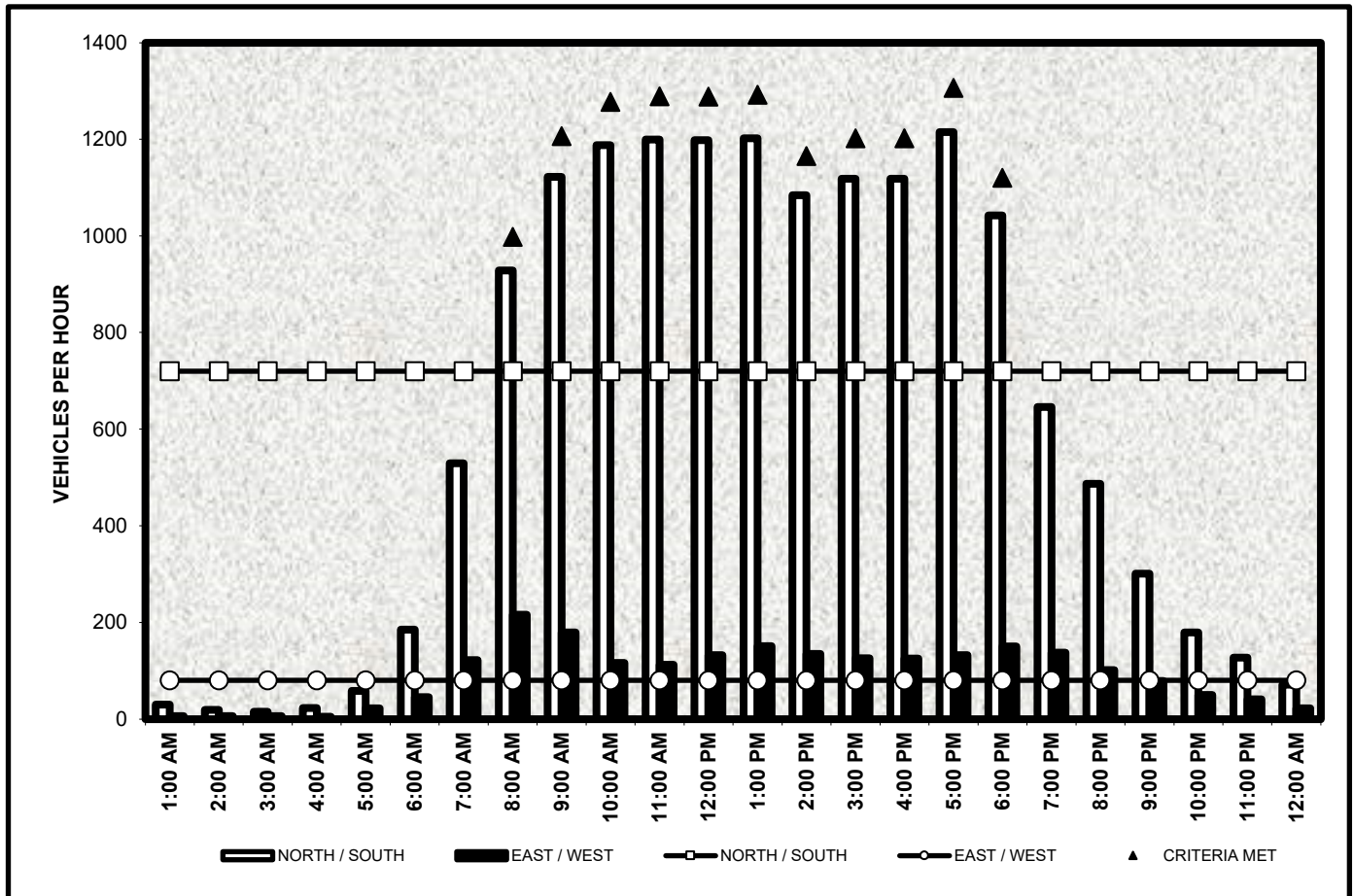
The need for a traffic control signal shall be considered if an engineering study finds that all of the following criteria are met:

- Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce crash frequency, and
- Five or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash, and
- For each of any 8 hours of an average day, the vehicles per hour given in both of the 80% columns of Condition A for Warrant 1, or the vehicles per hour in both of the 80% columns of Condition B for Warrant 1, exists on the major street and on the higher-volume minor-street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 80% of the requirements specified in the Pedestrian Volume warrant. These major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE

M. U. T. C. D. WARRANT # 7 (In combination with Warrant # 1B)
Crash Experience with Traffic Volumes at 80% of Original Values

HAVE LESS RESTRICTIVE MEANS BEEN ATTEMPTED?	#REF!
TOTAL NUMBER OF CRASHES:	4
NUMBER OF POTENTIALLY PREVENTABLE CRASHES:	4
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH / SOUTH STREET	720
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST / WEST STREET	80
NUMBER OF HOURS SATISFIED:	11
WARRANT CRITERIA:	NOT SATISFIED



The need for a traffic control signal shall be considered if an engineering study finds that all of the following criteria are met:

- Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce crash frequency, and
- Five or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash, and
- For each of any 8 hours of an average day, the vehicles per hour given in both of the 80% columns of Condition A for Warrant 1, or the vehicles per hour in both of the 80% columns of Condition B for Warrant 1, exists on the major street and on the higher-volume minor-street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 80% of the requirements specified in the Pedestrian Volume warrant. These major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
M. U. T. C. D. MULTIWAY STOP - WARRANT # C
Minimum Volume

REQUIRED AVERAGE VOLUME FOR 8 HOURS ON NORTH / SOUTH STREET	300
REQUIRED AVERAGE VOLUME FOR 8 HOURS ON EAST / WEST STREET	200
REQUIRED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	30
MEASURED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	45
NUMBER OF EIGHT-HOUR PERIODS SATISFIED:	7
WARRANT CRITERIA:	SATISFIED

RANKING BY MAJOR STREET (NORTH / SOUTH STREET) HOURLY VOLUMES

HOURLY VOLUME				AVERAGE OF EIGHT HOURLY VOLUMES			
RANK	BEGIN TIME	MAJOR STREET	MINOR STREET	RANKED HOURS	MAJOR STREET	MINOR STREET	SATISFIED?
1	5:00 PM	1,215	253	1 to 8	1,170	242	YES
2	1:00 PM	1,202	261	2 to 9	1,154	239	YES
3	11:00 AM	1,199	224	3 to 10	1,134	237	YES
4	NOON	1,198	259	4 to 11	1,100	241	YES
5	10:00 AM	1,188	212	5 to 12	1,031	233	YES
6	9:00 AM	1,122	242	6 to 13	948	223	YES
7	3:00 PM	1,118	247	7 to 14	869	210	YES
8	4:00 PM	1,118	239	8 to 15	767	191	NO
9	2:00 PM	1,084	226	9 to 16	650	167	NO
10	6:00 PM	1,042	245	10 to 17	537	146	NO
11	8:00 AM	928	258	11 to 18	423	121	NO
12	7:00 PM	646	194	12 to 19	316	92	NO
13	7:00 AM	529	130	13 to 20	242	70	NO
14	8:00 PM	487	142	14 to 21	180	55	NO
15	9:00 PM	301	92	15 to 22	122	39	NO
16	6:00 AM	185	47	16 to 23	87	28	NO
17	10:00 PM	179	58	17 to 24	65	23	NO
18	11:00 PM	127	46				
19	MIDNITE	71	24				
20	5:00 AM	58	24				
21	1:00 AM	30	9				
22	4:00 AM	23	8				
23	2:00 AM	19	11				
24	3:00 AM	15	6				

1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day, and
2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour, but
3. If the 85th-percentile approach speed of the major-street vehicular traffic exceeds 65 km/h or exceeds 40 mph, the minimum vehicular volume warrants are 70% of the above values.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
M. U. T. C. D. MULTIWAY STOP - WARRANT # C
Minimum Vehicular Volume

REQUIRED AVERAGE VOLUME FOR 8 HOURS ON NORTH / SOUTH STREET	300
REQUIRED AVERAGE VOLUME FOR 8 HOURS ON EAST / WEST STREET	200
REQUIRED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	30
MEASURED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	45
NUMBER OF EIGHT-HOUR PERIODS SATISFIED:	7
WARRANT CRITERIA:	SATISFIED

RANKING BY MINOR STREET (EAST / WEST STREET) HOURLY VOLUMES

HOURLY VOLUME				AVERAGE OF EIGHT HOURLY VOLUMES			
RANK	BEGIN TIME	MINOR STREET	MAJOR STREET	RANKED HOURS	MINOR STREET	MAJOR STREET	SATISFIED?
1	1:00 PM	261	1,202	1 to 8	251	1,118	YES
2	NOON	259	1,198	2 to 9	246	1,103	YES
3	8:00 AM	258	928	3 to 10	242	1,103	YES
4	5:00 PM	253	1,215	4 to 11	236	1,136	YES
5	3:00 PM	247	1,118	5 to 12	229	1,065	YES
6	6:00 PM	245	1,042	6 to 13	216	986	YES
7	9:00 AM	242	1,122	7 to 14	201	922	YES
8	4:00 PM	239	1,118	8 to 15	182	819	NO
9	2:00 PM	226	1,084	9 to 16	160	702	NO
10	11:00 AM	224	1,199	10 to 17	137	589	NO
11	10:00 AM	212	1,188	11 to 18	115	455	NO
12	7:00 PM	194	646	12 to 19	92	314	NO
13	8:00 PM	142	487	13 to 20	70	242	NO
14	7:00 AM	130	529	14 to 21	54	184	NO
15	9:00 PM	92	301	15 to 22	39	121	NO
16	10:00 PM	58	179	16 to 23	28	87	NO
17	6:00 AM	47	185	17 to 24	22	66	NO
18	11:00 PM	46	127				
19	5:00 AM	24	58				
20	MIDNITE	24	71				
21	2:00 AM	11	19				
22	1:00 AM	9	30				
23	4:00 AM	8	23				
24	3:00 AM	6	15				

1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day, and
2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour, but
3. If the 85th-percentile approach speed of the major-street vehicular traffic exceeds 65 km/h or exceeds 40 mph, the minimum vehicular volume warrants are 70% of the above values.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
M. U. T. C. D. MULTIWAY STOP - WARRANT # D
80% of Warrants B, C.1, and C.2

REQUIRED AVERAGE VOLUME FOR 8 HOURS ON NORTH / SOUTH STREET	240
REQUIRED AVERAGE VOLUME FOR 8 HOURS ON EAST / WEST STREET	160
REQUIRED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	24
MEASURED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	120
NUMBER OF EIGHT-HOUR PERIODS SATISFIED:	9
WARRANT CRITERIA:	SATISFIED

RANKING BY MAJOR STREET (NORTH / SOUTH STREET) HOURLY VOLUMES

HOURLY VOLUME				AVERAGE OF EIGHT HOURLY VOLUMES			
RANK	BEGIN TIME	MAJOR STREET	MINOR STREET	RANKED HOURS	MAJOR STREET	MINOR STREET	SATISFIED?
1	5:00 PM	1,215	253	1 to 8	1,170	242	YES
2	1:00 PM	1,202	261	2 to 9	1,154	239	YES
3	11:00 AM	1,199	224	3 to 10	1,134	237	YES
4	NOON	1,198	259	4 to 11	1,100	241	YES
5	10:00 AM	1,188	212	5 to 12	1,031	233	YES
6	9:00 AM	1,122	242	6 to 13	948	223	YES
7	3:00 PM	1,118	247	7 to 14	869	210	YES
8	4:00 PM	1,118	239	8 to 15	767	191	YES
9	2:00 PM	1,084	226	9 to 16	650	167	YES
10	6:00 PM	1,042	245	10 to 17	537	146	NO
11	8:00 AM	928	258	11 to 18	423	121	NO
12	7:00 PM	646	194	12 to 19	316	92	NO
13	7:00 AM	529	130	13 to 20	242	70	NO
14	8:00 PM	487	142	14 to 21	180	55	NO
15	9:00 PM	301	92	15 to 22	122	39	NO
16	6:00 AM	185	47	16 to 23	87	28	NO
17	10:00 PM	179	58	17 to 24	65	23	NO
18	11:00 PM	127	46				
19	MIDNITE	71	24				
20	5:00 AM	58	24				
21	1:00 AM	30	9				
22	4:00 AM	23	8				
23	2:00 AM	19	11				
24	3:00 AM	15	6				

1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 240 vehicles per hour for any 8 hours of an average day, and
2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 160 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 24 seconds per vehicle during the highest hour.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
M. U. T. C. D. MULTIWAY STOP - WARRANT # D
80% of Warrants B, C.1, and C.2

REQUIRED AVERAGE VOLUME FOR 8 HOURS ON NORTH / SOUTH STREET	240
REQUIRED AVERAGE VOLUME FOR 8 HOURS ON EAST / WEST STREET	160
REQUIRED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	24
MEASURED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	120
NUMBER OF EIGHT-HOUR PERIODS SATISFIED:	8
WARRANT CRITERIA:	SATISFIED

RANKING BY MINOR STREET (EAST / WEST STREET) HOURLY VOLUMES

HOURLY VOLUME				AVERAGE OF EIGHT HOURLY VOLUMES			
RANK	BEGIN TIME	MINOR STREET	MAJOR STREET	RANKED HOURS	MINOR STREET	MAJOR STREET	SATISFIED?
1	1:00 PM	261	1,202	1 to 8	251	1,118	YES
2	NOON	259	1,198	2 to 9	246	1,103	YES
3	8:00 AM	258	928	3 to 10	242	1,103	YES
4	5:00 PM	253	1,215	4 to 11	236	1,136	YES
5	3:00 PM	247	1,118	5 to 12	229	1,065	YES
6	6:00 PM	245	1,042	6 to 13	216	986	YES
7	9:00 AM	242	1,122	7 to 14	201	922	YES
8	4:00 PM	239	1,118	8 to 15	182	819	YES
9	2:00 PM	226	1,084	9 to 16	160	702	NO
10	11:00 AM	224	1,199	10 to 17	137	589	NO
11	10:00 AM	212	1,188	11 to 18	115	455	NO
12	7:00 PM	194	646	12 to 19	92	314	NO
13	8:00 PM	142	487	13 to 20	70	242	NO
14	7:00 AM	130	529	14 to 21	54	184	NO
15	9:00 PM	92	301	15 to 22	39	121	NO
16	10:00 PM	58	179	16 to 23	28	87	NO
17	6:00 AM	47	185	17 to 24	22	66	NO
18	11:00 PM	46	127				
19	5:00 AM	24	58				
20	MIDNITE	24	71				
21	2:00 AM	11	19				
22	1:00 AM	9	30				
23	4:00 AM	8	23				
24	3:00 AM	6	15				

1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 240 vehicles per hour for any 8 hours of an average day, and
2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 160 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 24 seconds per vehicle during the highest hour.

Appendix E.5

2025 with Mercado and with Kaplan as Office



MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
TRAFFIC CONTROL SIGNAL WARRANT STUDY SUMMARY

LOCATION:	SCOTTSDALE, ARIZONA	DATE OF COUNT:	11 July 2023
CONDITIONS:	WITH MERCADO AND WITH KAPLAN AS OFFICE	DATE OF STUDY:	01 April 2024

NORTH/SOUTH STREET:	92nd STREET	MAJOR	MULTI-LANE
EAST/WEST STREET:	COCHISE DRIVE	MINOR	MULTI-LANE

POSTED SPEED LIMIT ON MAJOR STREET:	35 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	11	8	YES
COMBINATION OF WARRANTS 1A AND 1B (80% of Values)	2	8	NO
COMBINATION OF WARRANTS 1A AND 1B (56% of Values)	-	-	Not Applicable
# 2. FOUR-HOUR VEHICULAR VOLUME	5	4	YES
# 3. PEAK HOUR			
A. PEAK HOUR DELAY - AM	1	3	NO
A. PEAK HOUR DELAY - PM	3	3	YES
B. PEAK HOUR VOLUME	0	1	NO
# 7. CRASH EXPERIENCE			
WITH WARRANT # 1A (Volumes at 80% of Original Values)	0	8	NO
WITH WARRANT # 1B (Volumes at 80% of Original Values)	0	8	NO
WITH WARRANT # 1A (Volumes at 56% of Original Values)	-	-	Not Applicable
WITH WARRANT # 1B (Volumes at 56% of Original Values)	-	-	Not Applicable
TOTAL NUMBER OF CRASHES IN 12 CONSECUTIVE MONTHS:	4	-	-
NUMBER OF POTENTIALLY PREVENTABLE CRASHES	4	5	NO
# 7. ENTIRE WARRANT	-	-	NO

WARRANT	CRITERIA		REQUIRED HOURS	ACTUAL HOURS	SATISFIED	PROXIMITY	
	MAJOR	MINOR				MAJOR	MINOR
#1A	600	200	8	0	NO		61%
#1B	900	100	8	11	YES		
#1A with #1B	480	80	8	13	NO		
#1B with #1A	720	160	8	2			29%
#2	Varying Graph		4	6	YES		
#3B	Varying Graph		1	0	NO	14%	125%

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

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
TRAFFIC CONTROL MULTIWAY STOP WARRANT STUDY SUMMARY

LOCATION: **SCOTTSDALE, ARIZONA**
 CONDITIONS: **MERCADO AND WITH KAPLAN AS OFFICE**

DATE OF COUNT: 11 July 2023
 DATE OF STUDY: 01 April 2024

NORTH/SOUTH STREET:	92nd STREET	MAJOR	MULTI-LANE
EAST/WEST STREET:	COCHISE DRIVE	MINOR	MULTI-LANE

POSTED SPEED LIMIT ON MAJOR STREET:	35 mph
85th PERCENTILE SPEED ON MAJOR STREET:	Unknown

WARRANT	EXISTING	REQUIRED	SATISFIED?
A. INTERIM MEASURE FOR TRAFFIC CONTROL SIGNAL			
TRAFFIC SIGNAL WARRANTS	3	1	YES
B. CRASH EXPERIENCE			
TOTAL NUMBER OF CRASHES	4	-	-
NUMBER OF POTENTIALLY PREVENTABLE CRASHES	4	5	NO
C. MINIMUM VOLUMES			
EIGHT-HOUR PERIODS SATISFYING VOLUME WARRANT	6	1	YES
PEAK HOUR DELAY - MORN	120	30	YES
PEAK HOUR DELAY - EVENI	120	30	YES
ENTIRE WARRANT			YES
D. COMBINATION OF WARRANTS B AND C (80% of Values)			
TOTAL NUMBER OF CRASHES	4	-	-
NUMBER OF POTENTIALLY PREVENTABLE CRASHES	4	4	YES
EIGHT-HOUR PERIODS SATISFYING VOLUME WARRANT	8	1	YES
PEAK HOUR DELAY - MORN	120	24	YES
PEAK HOUR DELAY - EVENI	120	24	YES
ENTIRE WARRANT			YES

The decision to install multiway stop control should be based on an engineering study.

Analysis by: PEB 4/16/2024



TRAFFIC CONTROL SIGNAL WARRANT STUDY

PROJECT: **MERCADO VILLAGE**
LOCATION: **SCOTTSDALE, ARIZONA**

NORTH/SOUTH STREET: **92nd STREET**

NB LANES **2** SB LANES **2**

EAST/WEST STREET: **COCHISE DRIVE**

EB LANES **2** WB LANES **2**

SPEED LIMIT ON MAJOR STREET: **35**
85TH PERCENTILE SPEED ON MAJOR STREET: **UNKNOWN**

VOLUME DATA: **2025** CONDITIONS: **WITH MERCADO AND WITH KAPLAN AS OFFICE**

DATE OF COUNT: **11 July 2023** DATE OF STUDY: **01 April 2024**

INTERSECTION APPROACH TRAFFIC VOLUMES				
TIME PERIOD	NORTHBOUND	SOUTHBOUND	EASTBOUND	WESTBOUND
12:00 AM to 1:00 AM	12	12	3	3
1:00 AM to 2:00 AM	7	8	6	3
2:00 AM to 3:00 AM	4	8	0	5
3:00 AM to 4:00 AM	4	16	3	3
4:00 AM to 5:00 AM	24	33	2	13
5:00 AM to 6:00 AM	79	112	2	29
6:00 AM to 7:00 AM	219	327	8	84
7:00 AM to 8:00 AM	374	594	44	161
8:00 AM to 9:00 AM	493	654	65	152
9:00 AM to 10:00 AM	624	588	98	124
10:00 AM to 11:00 AM	678	543	114	125
11:00 AM to 12:00 PM	673	536	127	149
12:00 PM to 1:00 PM	713	497	110	161
1:00 PM to 2:00 PM	586	513	93	138
2:00 PM to 3:00 PM	657	462	120	132
3:00 PM to 4:00 PM	666	443	124	130
4:00 PM to 5:00 PM	742	430	119	150
5:00 PM to 6:00 PM	635	350	93	138
6:00 PM to 7:00 PM	336	258	55	110
7:00 PM to 8:00 PM	243	200	40	79
8:00 PM to 9:00 PM	130	127	12	61
9:00 PM to 10:00 PM	73	71	7	38
10:00 PM to 11:00 PM	173	48	5	26
11:00 PM to 12:00 AM	23	32	2	133
TOTAL	8,168	6,862	1,252	2,147

CRASH EXPERIENCE AND DELAY DATA

TOTAL NUMBER OF CRASHES IN A 12 MONTH PERIOD: **4**
POTENTIALLY PREVENTABLE BY SIGNAL: **4** BY FOUR-WAY STOP: **4**

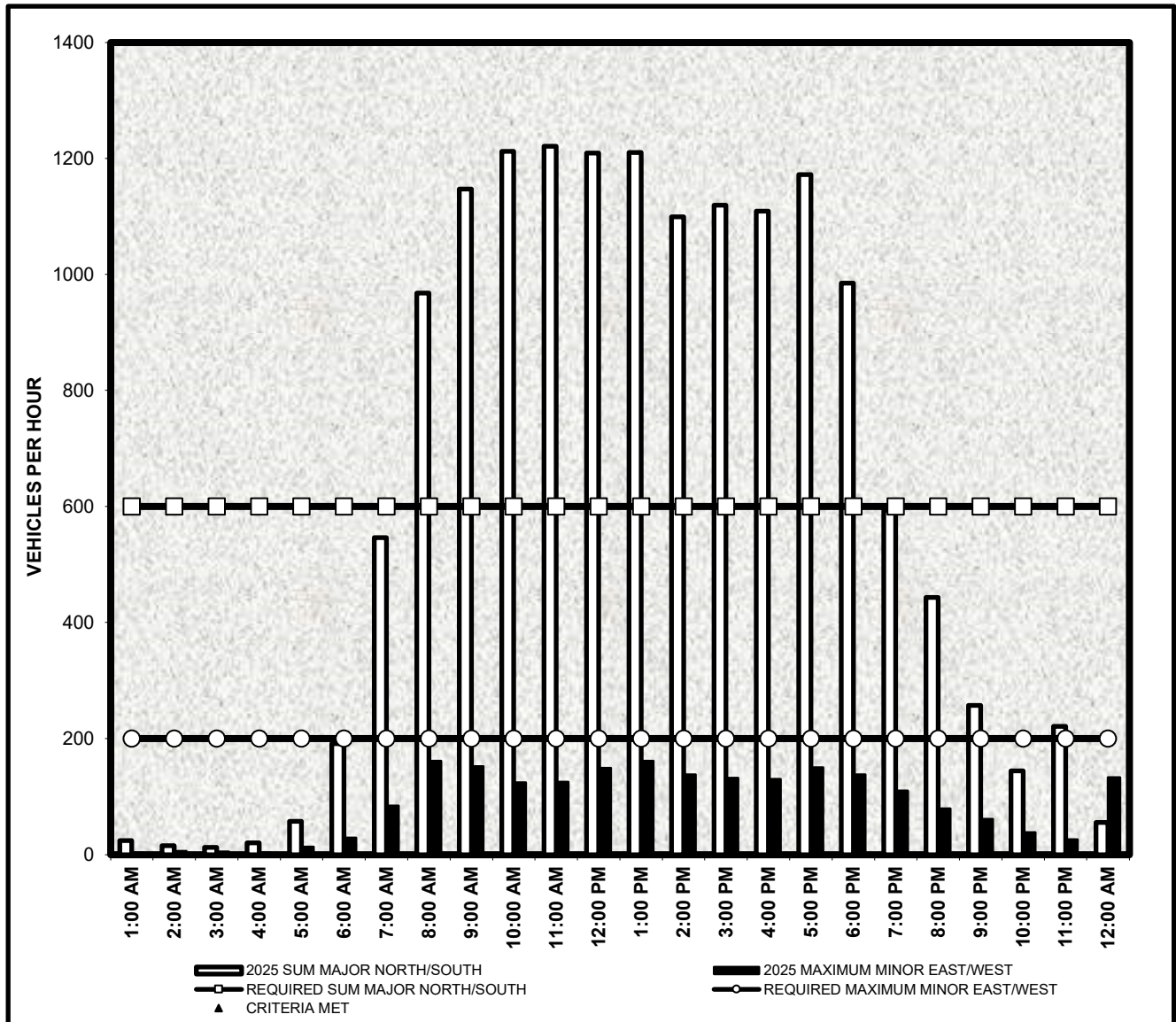
TIME PERIOD	AVERAGE DELAY SECONDS/VEHICLE	SIDE STREET TOTAL DELAY VEH-HOURS	VOLUME	TOTAL INTERSECTION VOLUME
11:00 AM to 12:00 PM	120	4.97	149	1,485
12:00 PM to 1:00 PM	120	5.37	161	1,481

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
M. U. T. C. D. WARRANT # 1A
Minimum Vehicular Volume

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH/SOUTH STREET	600
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST/WEST STREET	200

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

WARRANT CRITERIA:	NOT SATISFIED
--------------------------	----------------------



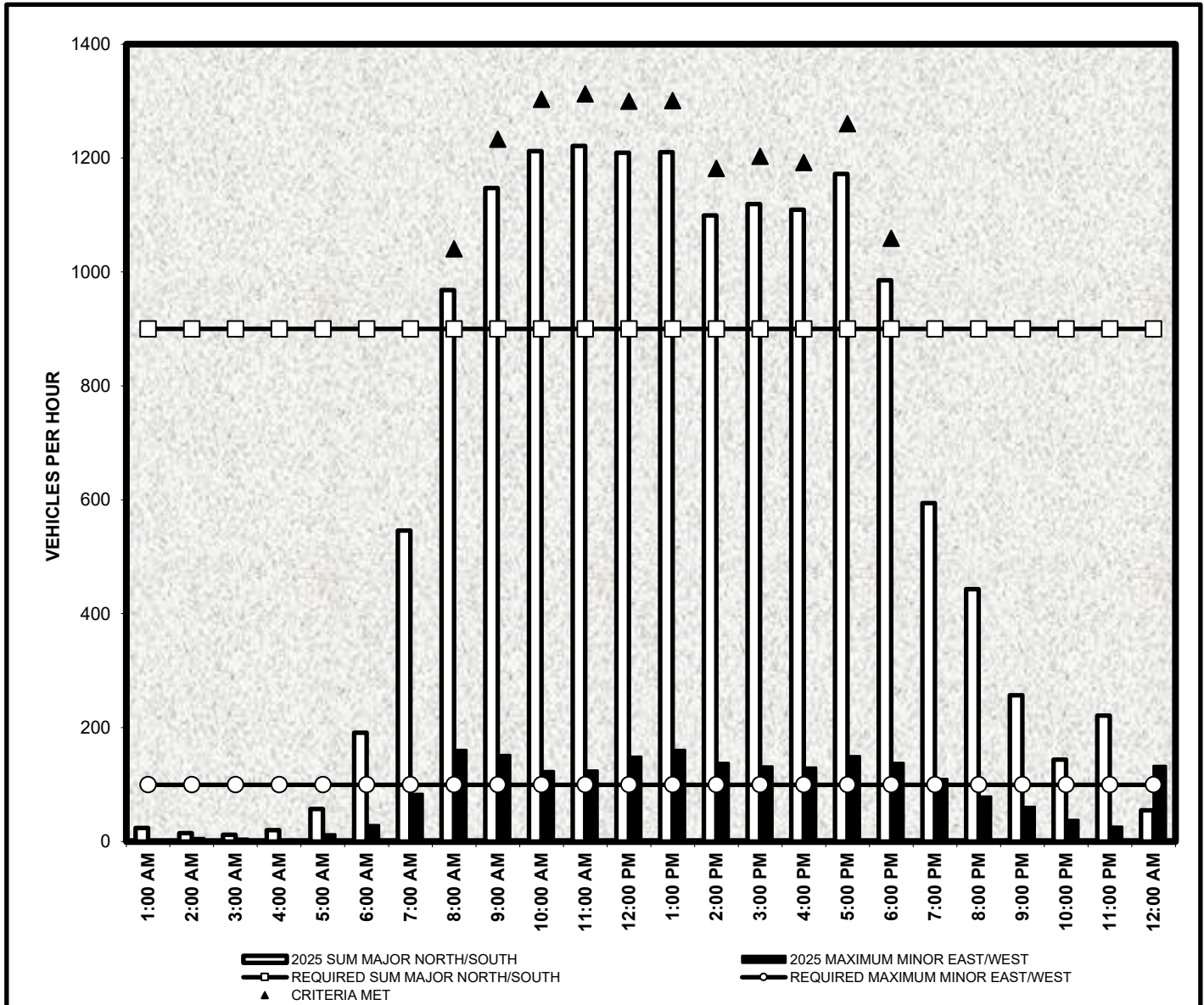
The Minimum Vehicular Volume, Condition A, is intended for application where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The warrant is satisfied when, for each of any eight hours of an average day, the traffic volumes provided in the 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.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
M. U. T. C. D. WARRANT # 1B
Interruption of Continuous Traffic

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH/SOUTH STREET	900
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST/WEST STREET	100

NUMBER OF HOURS SATISFIED:	11
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	2
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	0

WARRANT CRITERIA:	SATISFIED
--------------------------	------------------



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.

MERCADO VILLAGE 92nd STREET and COCHISE DRIVE

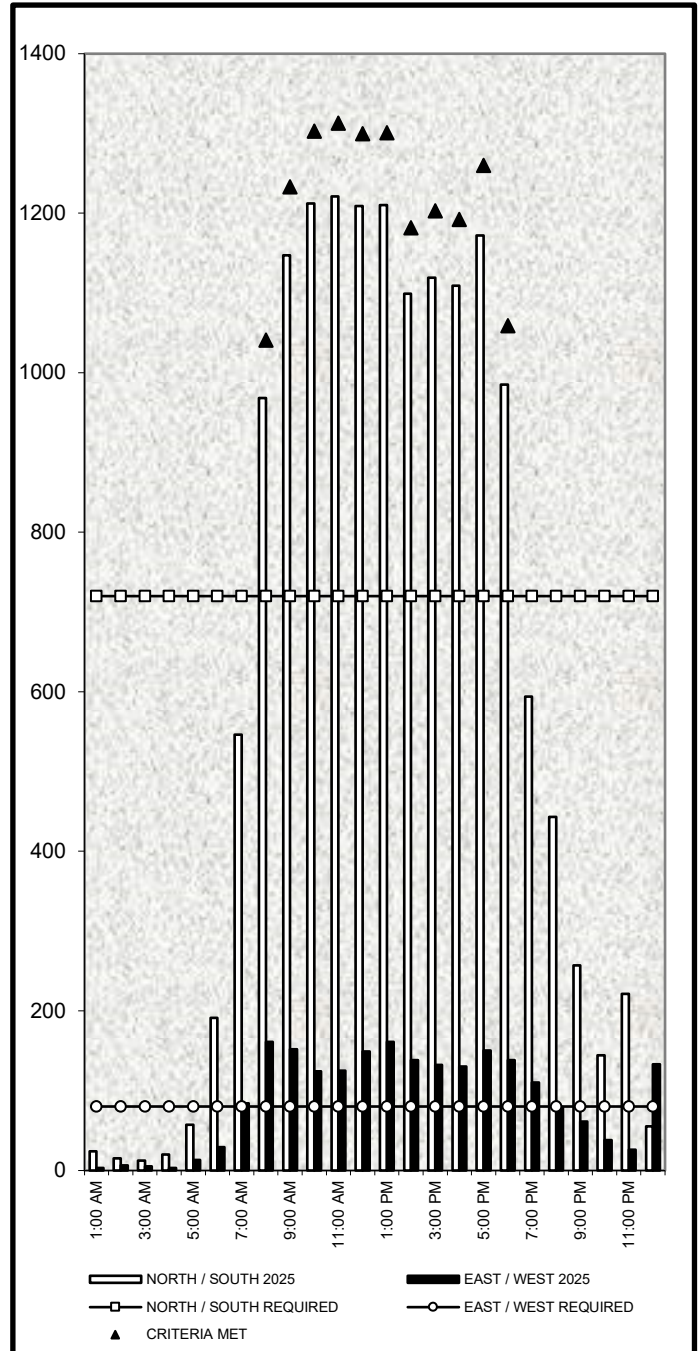
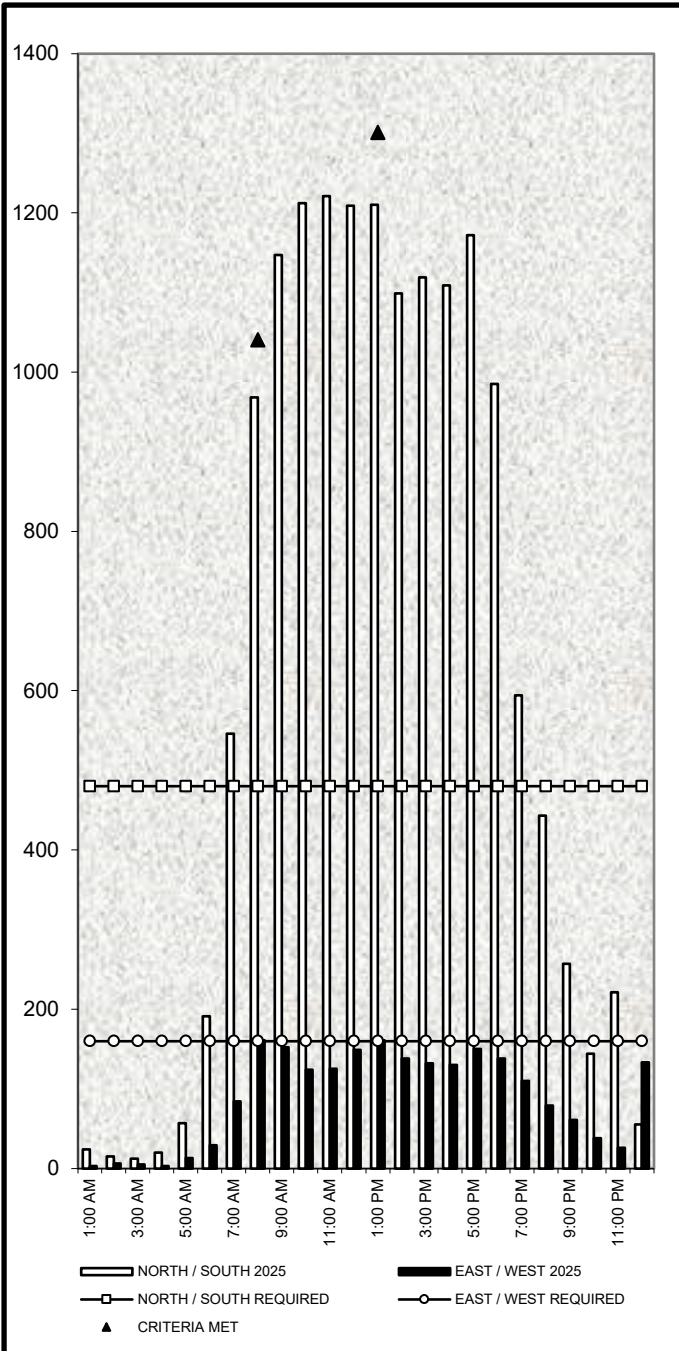
M. U. T. C. D. WARRANT # 1

Combination of Conditions A and B at 80% of Original Values

REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH / SOUTH STREET	480	720
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST / WEST STREET	160	80

NUMBER OF HOURS SATISFIED:	2	11
----------------------------	---	----

WARRANT CRITERIA:	NOT SATISFIED
-------------------	---------------

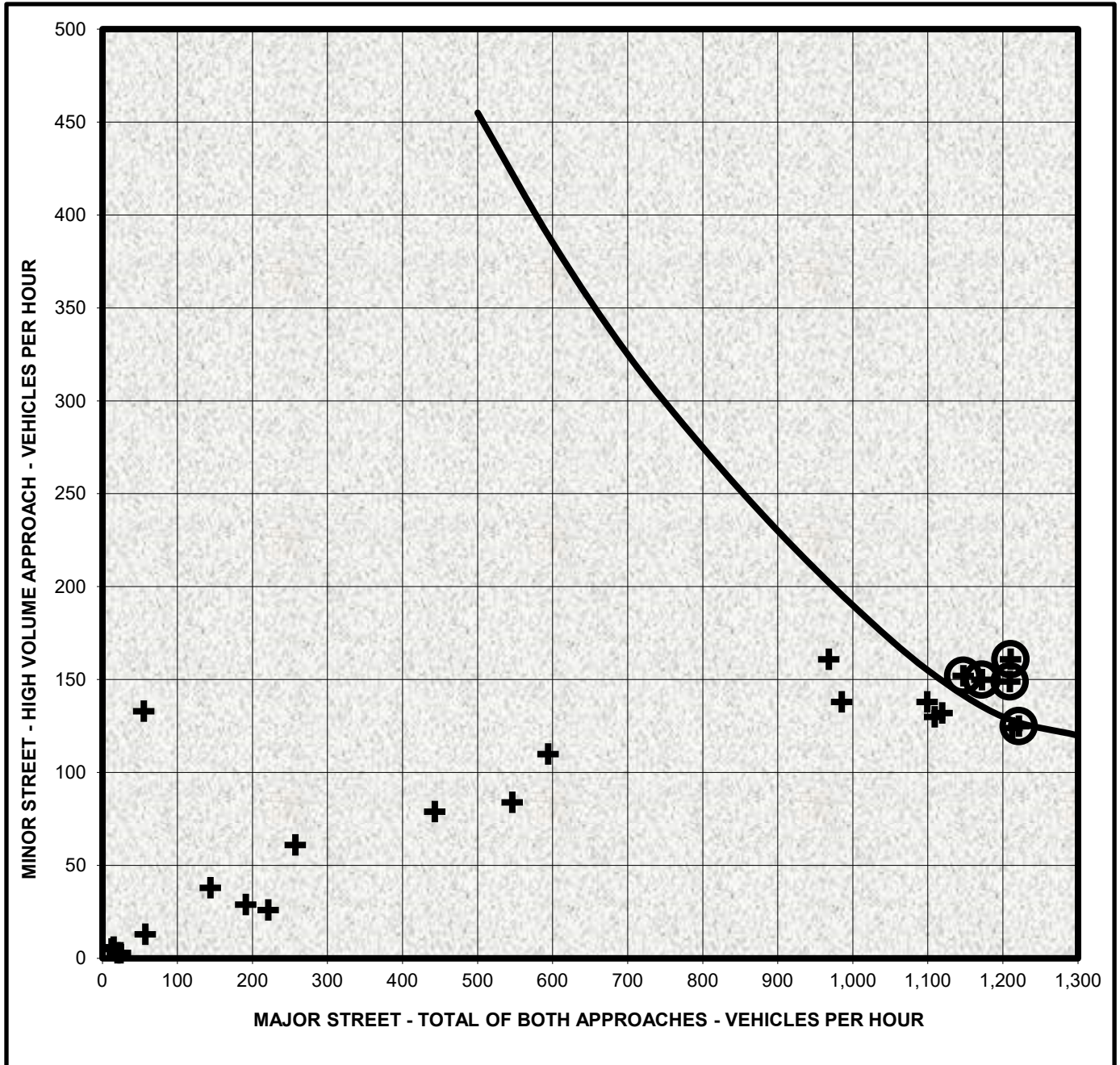


The major-street and minor-street volumes shall be for the same 8 hours for each condition; however, the 8 hours satisfied on A shall not be required to be the same 8 hours satisfied in Condition B. The combination of Conditions A and B should be applied only after an adequate trial of other alternatives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

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
M. U. T. C. D. WARRANT # 2
Four-Hour Vehicular Volume

NUMBER OF HOURS SATISFIED:	5
NUMBER OF HOURS SATISFIED BY LESS THAN 10%:	1
NUMBER OF HOURS WITHIN 10% OF BEING SATISFIED:	3

WARRANT CRITERIA:	SATISFIED
--------------------------	------------------



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.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
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

TIME PERIOD: 11:00 AM to 12:00 PM	MEASURED	SATISFIED?
SIDE STREET VEHICLE-HOURS DELAY:	4.97	NO
SIDE STREET HOURLY VOLUME:	149	NO
TOTAL INTERSECTION HOURLY VOLUME:	1,485	YES
ALL CRITERIA		NO

TIME PERIOD: 12:00 PM to 1:00 PM	MEASURED	SATISFIED?
SIDE STREET VEHICLE-HOURS DELAY:	5.37	YES
SIDE STREET HOURLY VOLUME:	161	YES
TOTAL INTERSECTION HOURLY VOLUME:	1,481	YES
ALL CRITERIA		YES

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.

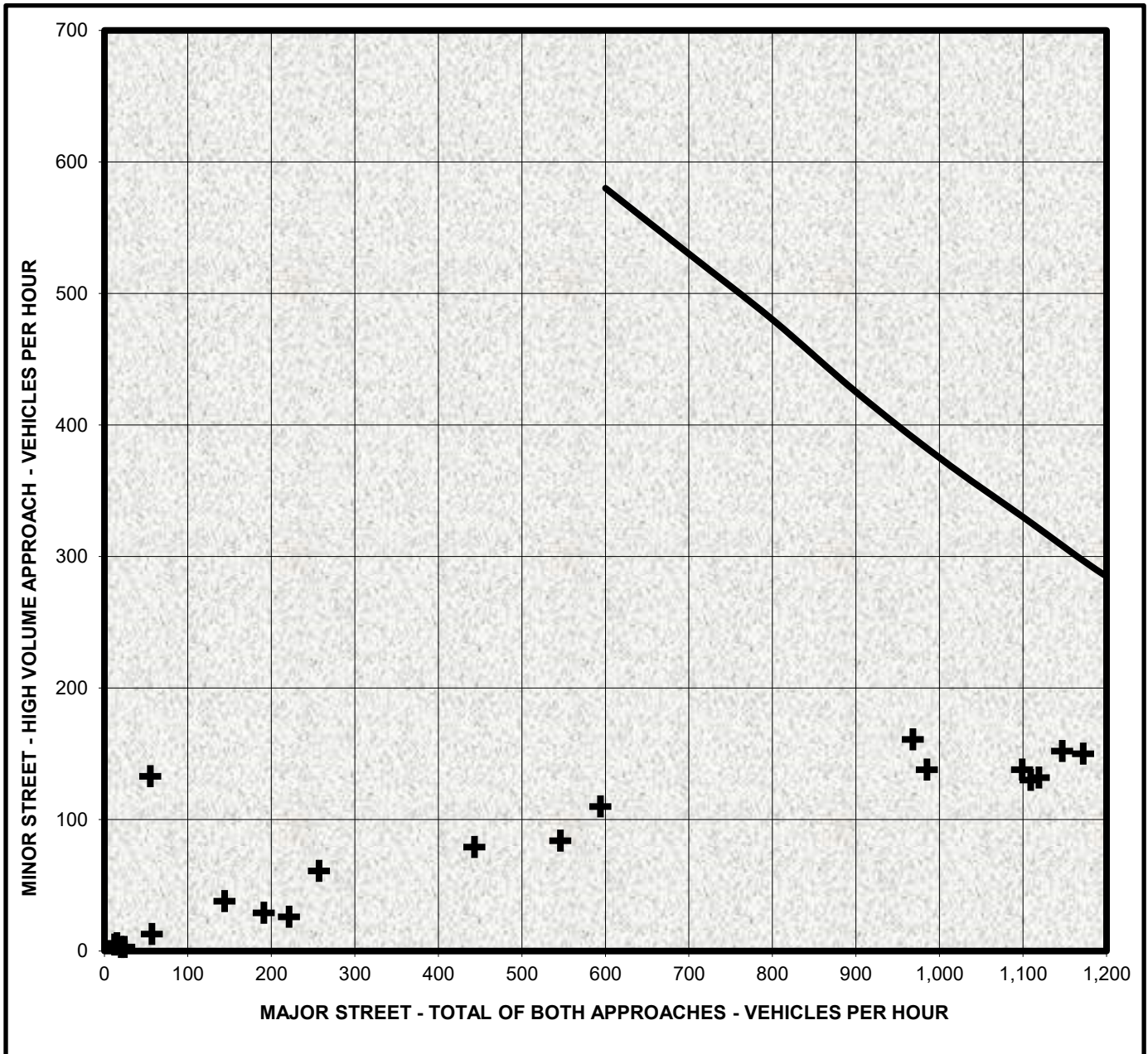
The need for a traffic control signal shall be considered if an engineering study finds that all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:

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.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
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

WARRANT CRITERIA:	NOT SATISFIED
--------------------------	----------------------

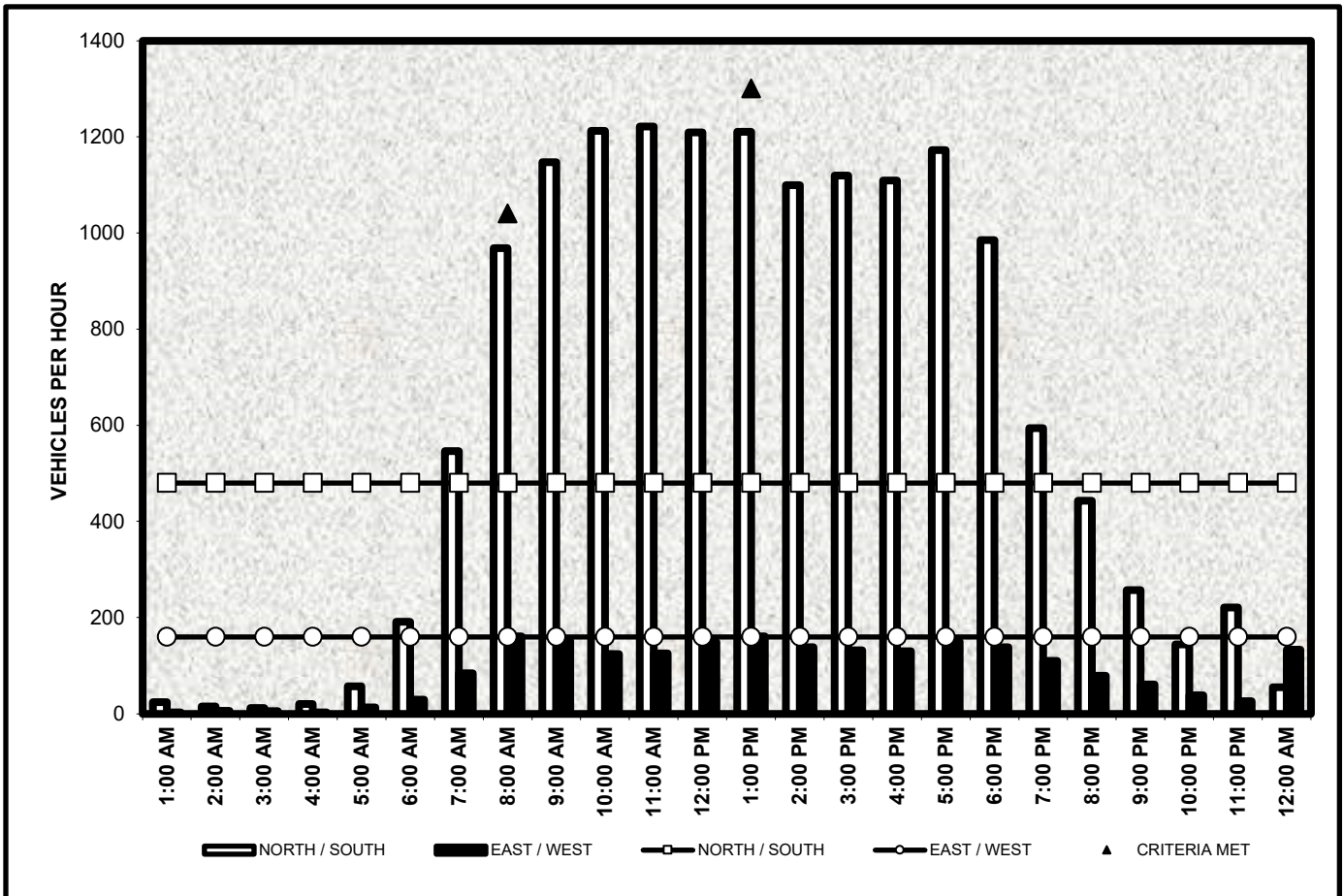


The Four Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The need for a traffic control signal shall be considered if an engineering study finds that for each of 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.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE

M. U. T. C. D. WARRANT #7 (In combination with Warrant # 1A)
Crash Experience with Traffic Volumes at 80% of Original Values

HAVE LESS RESTRICTIVE MEANS BEEN ATTEMPTED?	#REF!
TOTAL NUMBER OF CRASHES:	4
NUMBER OF POTENTIALLY PREVENTABLE CRASHES:	4
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH / SOUTH STREET	480
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST / WEST STREET	160
NUMBER OF HOURS SATISFIED:	2
WARRANT CRITERIA:	NOT SATISFIED



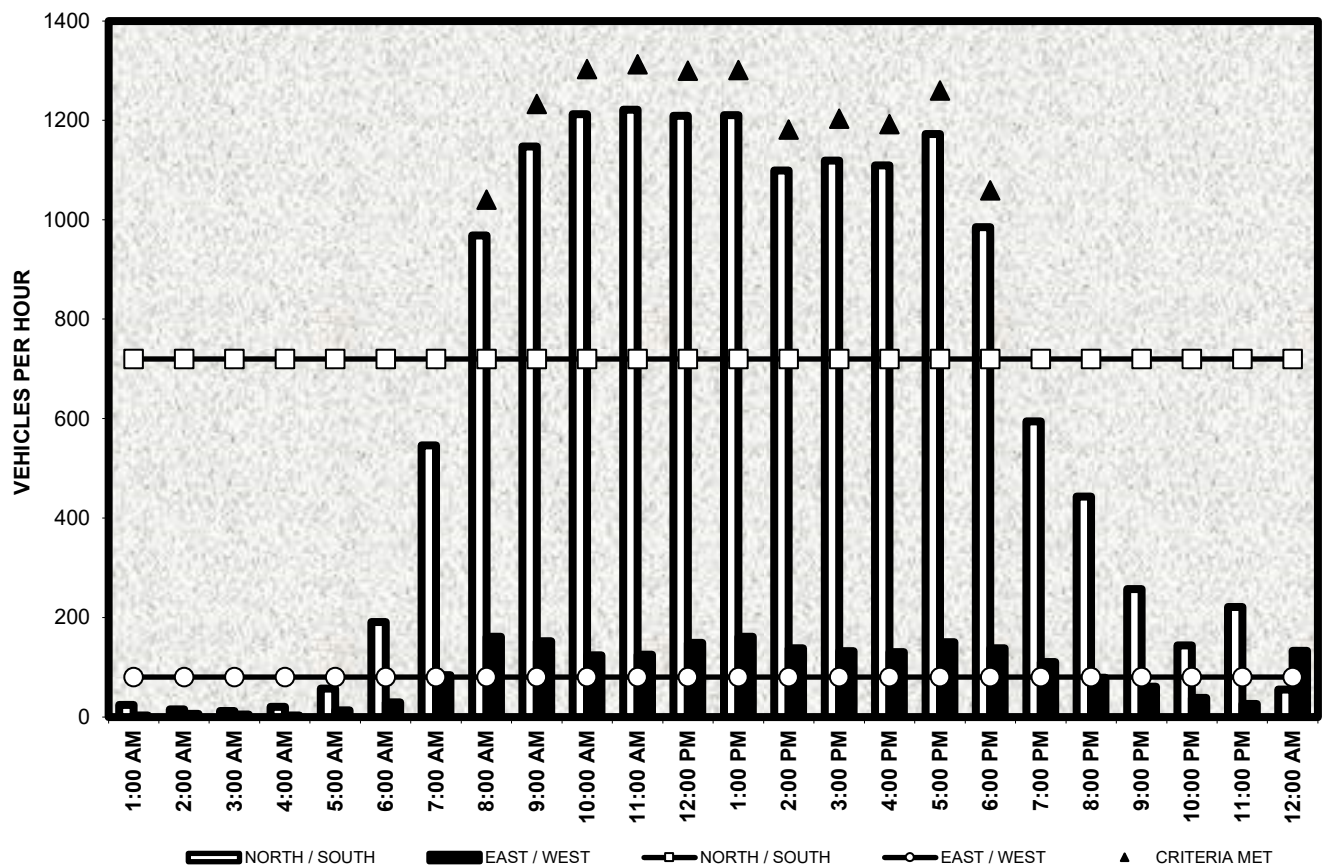
The need for a traffic control signal shall be considered if an engineering study finds that all of the following criteria are met:

- Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce crash frequency, and
- Five or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash, and
- For each of any 8 hours of an average day, the vehicles per hour given in both of the 80% columns of Condition A for Warrant 1, or the vehicles per hour in both of the 80% columns of Condition B for Warrant 1, exists on the major street and on the higher-volume minor-street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 80% of the requirements specified in the Pedestrian Volume warrant. These major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE

M. U. T. C. D. WARRANT # 7 (In combination with Warrant # 1B)
Crash Experience with Traffic Volumes at 80% of Original Values

HAVE LESS RESTRICTIVE MEANS BEEN ATTEMPTED?	#REF!
TOTAL NUMBER OF CRASHES:	4
NUMBER OF POTENTIALLY PREVENTABLE CRASHES:	4
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON NORTH / SOUTH STREET	720
REQUIRED HOURLY VOLUMES FOR 8 HOURS ON EAST / WEST STREET	80
NUMBER OF HOURS SATISFIED:	11
WARRANT CRITERIA:	NOT SATISFIED



The need for a traffic control signal shall be considered if an engineering study finds that all of the following criteria are met:

- Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce crash frequency, and
- Five or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash, and
- For each of any 8 hours of an average day, the vehicles per hour given in both of the 80% columns of Condition A for Warrant 1, or the vehicles per hour in both of the 80% columns of Condition B for Warrant 1, exists on the major street and on the higher-volume minor-street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 80% of the requirements specified in the Pedestrian Volume warrant. These major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
M. U. T. C. D. MULTIWAY STOP - WARRANT # C
Minimum Volume

REQUIRED AVERAGE VOLUME FOR 8 HOURS ON NORTH / SOUTH STREET	300
REQUIRED AVERAGE VOLUME FOR 8 HOURS ON EAST / WEST STREET	200
REQUIRED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	30
MEASURED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	45
NUMBER OF EIGHT-HOUR PERIODS SATISFIED:	6
WARRANT CRITERIA:	SATISFIED

RANKING BY MAJOR STREET (NORTH / SOUTH STREET) HOURLY VOLUMES

HOURLY VOLUME				AVERAGE OF EIGHT HOURLY VOLUMES			
RANK	BEGIN TIME	MAJOR STREET	MINOR STREET	RANKED HOURS	MAJOR STREET	MINOR STREET	SATISFIED?
1	11:00 AM	1,221	239	1 to 8	1,175	250	YES
2	10:00 AM	1,212	222	2 to 9	1,160	249	YES
3	1:00 PM	1,210	271	3 to 10	1,131	250	YES
4	NOON	1,209	276	4 to 11	1,101	242	YES
5	5:00 PM	1,172	269	5 to 12	1,024	228	YES
6	9:00 AM	1,147	217	6 to 13	946	206	YES
7	3:00 PM	1,119	252	7 to 14	858	194	NO
8	4:00 PM	1,109	254	8 to 15	750	171	NO
9	2:00 PM	1,099	231	9 to 16	639	143	NO
10	6:00 PM	985	231	10 to 17	526	118	NO
11	8:00 AM	968	205	11 to 18	421	95	NO
12	7:00 PM	594	165	12 to 19	307	71	NO
13	7:00 AM	546	92	13 to 20	239	68	NO
14	8:00 PM	443	119	14 to 21	174	57	NO
15	9:00 PM	257	73	15 to 22	121	43	NO
16	11:00 PM	221	31	16 to 23	91	35	NO
17	6:00 AM	191	31	17 to 24	65	32	NO
18	10:00 PM	144	45				
19	5:00 AM	57	15				
20	MIDNITE	55	135				
21	1:00 AM	24	6				
22	4:00 AM	20	6				
23	2:00 AM	15	9				
24	3:00 AM	12	5				

1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day, and
2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour, but
3. If the 85th-percentile approach speed of the major-street vehicular traffic exceeds 65 km/h or exceeds 40 mph, the minimum vehicular volume warrants are 70% of the above values.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
M. U. T. C. D. MULTIWAY STOP - WARRANT # C
Minimum Vehicular Volume

REQUIRED AVERAGE VOLUME FOR 8 HOURS ON NORTH / SOUTH STREET	300
REQUIRED AVERAGE VOLUME FOR 8 HOURS ON EAST / WEST STREET	200
REQUIRED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	30
MEASURED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	45
NUMBER OF EIGHT-HOUR PERIODS SATISFIED:	6
WARRANT CRITERIA:	SATISFIED

RANKING BY MINOR STREET (EAST / WEST STREET) HOURLY VOLUMES

HOURLY VOLUME				AVERAGE OF EIGHT HOURLY VOLUMES			
RANK	BEGIN TIME	MINOR STREET	MAJOR STREET	RANKED HOURS	MINOR STREET	MAJOR STREET	SATISFIED?
1	NOON	276	1,209	1 to 8	253	1,141	YES
2	1:00 PM	271	1,210	2 to 9	246	1,141	YES
3	5:00 PM	269	1,172	3 to 10	239	1,133	YES
4	4:00 PM	254	1,109	4 to 11	231	1,108	YES
5	3:00 PM	252	1,119	5 to 12	220	1,043	YES
6	11:00 AM	239	1,221	6 to 13	206	910	YES
7	2:00 PM	231	1,099	7 to 14	191	813	NO
8	6:00 PM	231	985	8 to 15	173	744	NO
9	10:00 AM	222	1,212	9 to 16	154	653	NO
10	9:00 AM	217	1,147	10 to 17	131	519	NO
11	8:00 AM	205	968	11 to 18	108	400	NO
12	7:00 PM	165	594	12 to 19	86	306	NO
13	MIDNITE	135	55	13 to 20	68	239	NO
14	8:00 PM	119	443	14 to 21	52	234	NO
15	7:00 AM	92	546	15 to 22	38	182	NO
16	9:00 PM	73	257	16 to 23	27	116	NO
17	10:00 PM	45	144	17 to 24	19	86	NO
18	6:00 AM	31	191				
19	11:00 PM	31	221				
20	5:00 AM	15	57				
21	2:00 AM	9	15				
22	1:00 AM	6	24				
23	4:00 AM	6	20				
24	3:00 AM	5	12				

1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day, and
2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour, but
3. If the 85th-percentile approach speed of the major-street vehicular traffic exceeds 65 km/h or exceeds 40 mph, the minimum vehicular volume warrants are 70% of the above values.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
M. U. T. C. D. MULTIWAY STOP - WARRANT # D
80% of Warrants B, C.1, and C.2

REQUIRED AVERAGE VOLUME FOR 8 HOURS ON NORTH / SOUTH STREET	240
REQUIRED AVERAGE VOLUME FOR 8 HOURS ON EAST / WEST STREET	160
REQUIRED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	24
MEASURED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	120
NUMBER OF EIGHT-HOUR PERIODS SATISFIED:	8
WARRANT CRITERIA:	SATISFIED

RANKING BY MAJOR STREET (NORTH / SOUTH STREET) HOURLY VOLUMES

HOURLY VOLUME				AVERAGE OF EIGHT HOURLY VOLUMES			
RANK	BEGIN TIME	MAJOR STREET	MINOR STREET	RANKED HOURS	MAJOR STREET	MINOR STREET	SATISFIED?
1	11:00 AM	1,221	239	1 to 8	1,175	250	YES
2	10:00 AM	1,212	222	2 to 9	1,160	249	YES
3	1:00 PM	1,210	271	3 to 10	1,131	250	YES
4	NOON	1,209	276	4 to 11	1,101	242	YES
5	5:00 PM	1,172	269	5 to 12	1,024	228	YES
6	9:00 AM	1,147	217	6 to 13	946	206	YES
7	3:00 PM	1,119	252	7 to 14	858	194	YES
8	4:00 PM	1,109	254	8 to 15	750	171	YES
9	2:00 PM	1,099	231	9 to 16	639	143	NO
10	6:00 PM	985	231	10 to 17	526	118	NO
11	8:00 AM	968	205	11 to 18	421	95	NO
12	7:00 PM	594	165	12 to 19	307	71	NO
13	7:00 AM	546	92	13 to 20	239	68	NO
14	8:00 PM	443	119	14 to 21	174	57	NO
15	9:00 PM	257	73	15 to 22	121	43	NO
16	11:00 PM	221	31	16 to 23	91	35	NO
17	6:00 AM	191	31	17 to 24	65	32	NO
18	10:00 PM	144	45				
19	5:00 AM	57	15				
20	MIDNITE	55	135				
21	1:00 AM	24	6				
22	4:00 AM	20	6				
23	2:00 AM	15	9				
24	3:00 AM	12	5				

1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 240 vehicles per hour for any 8 hours of an average day, and
2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 160 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 24 seconds per vehicle during the highest hour.

MERCADO VILLAGE
92nd STREET and COCHISE DRIVE
M. U. T. C. D. MULTIWAY STOP - WARRANT # D
80% of Warrants B, C.1, and C.2

REQUIRED AVERAGE VOLUME FOR 8 HOURS ON NORTH / SOUTH STREET	240
REQUIRED AVERAGE VOLUME FOR 8 HOURS ON EAST / WEST STREET	160
REQUIRED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	24
MEASURED PEAK HOUR DELAY ON EAST / WEST STREET (seconds/vehicle)	120
NUMBER OF EIGHT-HOUR PERIODS SATISFIED:	8
WARRANT CRITERIA:	SATISFIED

RANKING BY MINOR STREET (EAST / WEST STREET) HOURLY VOLUMES

HOURLY VOLUME				AVERAGE OF EIGHT HOURLY VOLUMES			
RANK	BEGIN TIME	MINOR STREET	MAJOR STREET	RANKED HOURS	MINOR STREET	MAJOR STREET	SATISFIED?
1	NOON	276	1,209	1 to 8	253	1,141	YES
2	1:00 PM	271	1,210	2 to 9	246	1,141	YES
3	5:00 PM	269	1,172	3 to 10	239	1,133	YES
4	4:00 PM	254	1,109	4 to 11	231	1,108	YES
5	3:00 PM	252	1,119	5 to 12	220	1,043	YES
6	11:00 AM	239	1,221	6 to 13	206	910	YES
7	2:00 PM	231	1,099	7 to 14	191	813	YES
8	6:00 PM	231	985	8 to 15	173	744	YES
9	10:00 AM	222	1,212	9 to 16	154	653	NO
10	9:00 AM	217	1,147	10 to 17	131	519	NO
11	8:00 AM	205	968	11 to 18	108	400	NO
12	7:00 PM	165	594	12 to 19	86	306	NO
13	MIDNITE	135	55	13 to 20	68	239	NO
14	8:00 PM	119	443	14 to 21	52	234	NO
15	7:00 AM	92	546	15 to 22	38	182	NO
16	9:00 PM	73	257	16 to 23	27	116	NO
17	10:00 PM	45	144	17 to 24	19	86	NO
18	6:00 AM	31	191				
19	11:00 PM	31	221				
20	5:00 AM	15	57				
21	2:00 AM	9	15				
22	1:00 AM	6	24				
23	4:00 AM	6	20				
24	3:00 AM	5	12				

1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 240 vehicles per hour for any 8 hours of an average day, and
2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 160 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 24 seconds per vehicle during the highest hour.

Appendix F

Level-of-Service



Appendix F.1
Level-of-Service
Complete Summary



SIGNALIZED INTERSECTIONS: MORNING PEAK HOUR

	2023		2023 WITH SITE		2025		2025 WITH SITE	
	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS
92nd / Shea	30.4	C	30.9	C	30.8	C	34.0	C
Northbound	37.0	D	37.4	D	37.6	D	39.9	D
Left	34.4	C	44.2	D	44.6	D	48.6	D
Through	28.0	C	28.1	C	28.6	C	28.9	C
Right	28.5	C	28.6	C	28.8	C	29.3	C
Southbound	41.0	D	41.3	D	42.1	D	43.8	D
Left	46.9	D	47.4	D	48.5	D	50.9	D
Through	36.4	D	36.9	D	37.4	D	38.4	D
Right	42.8	D	43.1	D	44.0	D	46.1	D
Eastbound	26.9	C	27.4	C	27.4	C	30.8	C
Left	47.1	D	47.7	D	49.1	D	53.6	D
Through	25.3	C	25.7	C	26.2	C	29.3	C
Right	23.7	C	24.6	C	23.9	C	27.6	C
Westbound	28.2	C	28.6	C	27.7	C	31.5	C
Left	47.7	D	48.9	D	47.8	D	54.4	D
Through	27.2	C	27.4	C	27.0	C	30.5	C
Right	19.4	B	19.6	B	19.4	B	21.2	C
92nd / Cochise			5.7	A	4.8	A	5.5	A
Northbound			5.1	A	4.4	A	4.9	A
Left			6.3	A	8.3	A	5.9	A
Through			5.1	A	5.1	A	4.8	A
Right			4.3	A	4.4	A	3.9	A
Southbound			5.1	A	4.1	A	4.7	A
Left			6.4	A	5.1	A	6.3	A
Through			5.0	A	4.1	A	4.6	A
Right			4.6	A	3.7	A	4.2	A
Eastbound			8.2	A	8.8	A	8.6	A
Left			8.4	A	8.8	A	8.8	A
Through			7.9	A	8.8	A	8.4	A
Right			7.9	A	8.8	A	8.4	A
Westbound			8.7	A	8.7	A	8.9	A
Left			9.1	A	8.9	A	9.2	A
Through			7.8	A	8.0	A	8.2	A
Right			7.8	A	8.3	A	8.2	A
92nd / Mountain View	14.8	B	15.1	B	13.6	B	14.4	B
Northbound	6.9	A	7.0	A	5.9	A	6.6	A
Left	7.5	A	7.7	A	6.2	A	7.0	A
Through	6.6	A	6.7	A	5.7	A	6.4	A
Right	7.3	A	7.4	A	6.2	A	7.0	A
Southbound	7.8	A	8.1	A	6.4	A	7.5	A
Left	10.5	B	11.1	B	8.5	A	10.4	B
Through	6.5	A	6.7	A	5.6	A	6.2	A
Right	5.8	A	5.9	A	5.0	A	5.5	A
Eastbound	28.7	C	29.8	C	28.6	C	28.7	C
Left	32.8	C	34.2	C	33.4	C	34.5	C
Through	25.3	C	26.1	C	26.2	C	26.7	C
Right	25.3	C	26.1	C	26.2	C	26.7	C
Westbound	32.0	C	33.0	C	32.3	C	33.3	C
Left	33.9	C	35.0	D	33.7	C	35.1	D
Through	29.2	C	30.3	C	30.4	C	31.0	C
Right	29.2	C	30.3	C	30.4	C	31.0	C

SIGNALIZED INTERSECTIONS: MIDDAY PEAK HOUR

	2023		2023 WITH SITE		2025		2025 WITH SITE	
	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS
92nd / Shea	35.6	D	36.1	D	34.2	C	37.3	D
Northbound	40.1	D	40.2	D	39.4	D	41.7	D
Left	49.2	D	49.5	D	48.3	D	52.5	D
Through	29.1	C	29.1	C	29.2	C	29.8	C
Right	29.1	C	29.2	C	29.4	C	30.1	C
Southbound	44.6	D	45.2	D	44.0	D	46.0	D
Left	50.7	D	51.2	D	50.2	D	52.8	D
Through	39.3	D	39.9	D	37.8	D	39.4	D
Right	40.7	D	48.0	D	47.4	D	50.0	D
Eastbound	30.7	C	31.3	C	29.3	C	31.9	C
Left	54.9	D	55.6	E	52.9	D	57.1	E
Through	27.2	C	27.8	C	26.2	C	29.3	C
Right	25.6	C	26.7	C	24.2	C	26.8	C
Westbound	34.9	C	35.5	D	32.9	C	31.7	C
Left	51.8	D	52.2	D	51.2	D	54.0	D
Through	34.2	C	34.8	C	32.3	C	36.8	D
Right	23.7	C	24.1	C	22.4	C	24.0	C
92nd / Cochise			6.6	A	5.5	A	6.4	A
Northbound			6.0	A	5.2	A	5.9	A
Left			6.7	A	5.5	A	6.6	A
Through			6.0	A	5.2	A	5.9	A
Right			4.9	A	5.2	A	4.7	A
Southbound			5.8	A	4.5	A	5.6	A
Left			8.2	A	6.1	A	8.0	A
Through			5.5	A	4.5	A	5.3	A
Right			5.2	A	4.2	A	5.0	A
Eastbound			8.3	A	8.1	A	8.5	A
Left			8.8	A	8.2	A	8.9	A
Through			7.8	A	8.0	A	9.1	A
Right			7.8	A	8.0	A	8.1	A
Westbound			9.2	A	8.3	A	9.3	A
Left			9.7	A	8.6	A	9.8	A
Through			8.1	A	7.7	A	8.1	A
Right			8.1	A	7.7	A	8.1	A
92nd / Mountain View	14.0	B	13.8	B	13.2	B	14.3	B
Northbound	6.1	A	6.1	A	5.7	A	6.6	A
Left	6.8	A	7.1	A	6.2	A	7.7	A
Through	6.0	A	6.0	A	5.6	A	6.5	A
Right	6.3	A	6.3	A	5.8	A	6.8	A
Southbound	6.7	A	6.9	A	6.1	A	7.5	A
Left	9.1	A	9.6	A	8.4	A	10.8	B
Through	5.9	A	6.1	A	5.5	A	6.5	A
Right	5.1	A	5.1	A	4.8	A	5.5	A
Eastbound	29.8	C	29.9	C	29.6	C	29.8	C
Left	36.4	D	36.6	D	35.3	D	36.6	D
Through	27.8	C	27.8	C	28.2	C	28.4	C
Right	27.8	C	27.8	C	28.2	C	28.4	C
Westbound	34.2	C	34.3	C	34.1	C	35.0	D
Left	35.7	D	35.7	D	35.7	D	37.1	D
Through	32.6	C	32.8	C	32.2	C	32.8	C
Right	32.6	C	32.8	C	32.2	C	32.8	C

SIGNALIZED INTERSECTIONS: EVENING PEAK HOUR

	2023		2023 WITH SITE		2025		2025 WITH SITE	
	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS
92nd / Shea	31.8	C	32.3	C	31.7	C	35.1	D
Northbound	35.3	D	35.3	D	35.9	D	38.8	D
Left	41.9	D	41.9	D	42.8	D	47.3	D
Through	28.1	C	28.1	C	25.0	C	29.3	C
Right	27.4	C	27.3	C	19.8	B	28.5	C
Southbound	41.3	D	41.5	D	30.2	C	44.1	D
Left	45.5	D	46.0	D	45.6	D	49.7	D
Through	35.9	D	36.7	D	36.0	D	38.7	D
Right	43.0	D	43.1	D	43.2	D	46.1	D
Eastbound	27.5	C	28.1	C	35.9	D	30.8	C
Left	46.9	D	47.6	D	42.8	D	52.8	D
Through	24.3	C	25.0	C	28.1	C	27.9	C
Right	20.3	C	21.2	C	27.3	C	22.0	C
Westbound	30.8	C	31.5	C	41.5	D	34.4	C
Left	45.2	D	45.6	D	46.3	D	49.0	D
Through	30.9	C	31.5	C	30.2	C	34.4	C
Right	23.3	C	23.7	C	22.4	C	24.2	C
92nd / Cochise			5.6	A	5.1	A	5.8	A
Northbound			4.4	A	4.6	A	4.7	A
Left			4.3	A	4.2	A	4.5	A
Through			4.5	A	4.6	A	4.8	A
Right			3.5	A	4.6	A	3.6	A
Southbound			4.7	A	3.8	A	4.7	A
Left			7.3	A	5.6	A	7.5	A
Through			3.8	A	3.7	A	4.0	A
Right			3.5	A	3.4	A	3.6	A
Eastbound			10.5	B	9.8	A	10.4	B
Left			10.8	B	10.0	B	10.8	B
Through			9.8	A	9.4	A	9.7	A
Right			9.8	A	9.4	A	9.7	A
Westbound			10.6	B	9.4	A	10.2	B
Left			10.9	B	9.6	A	10.6	B
Through			9.9	A	9.1	A	9.7	A
Right			9.9	A	9.1	A	9.7	A
92nd / Mountain View	12.9	B	13.3	B	12.6	B	13.7	B
Northbound	6.3	A	6.4	A	5.9	A	6.8	A
Left	6.8	A	7.0	A	6.4	A	7.7	A
Through	6.1	A	6.2	A	5.8	A	6.7	A
Right	6.7	A	6.7	A	6.0	A	6.9	A
Southbound	6.5	A	6.6	A	6.1	A	7.2	A
Left	8.3	A	8.6	A	7.8	A	9.5	A
Through	6.1	A	6.2	A	5.8	A	6.7	A
Right	5.3	A	5.4	A	5.0	A	5.7	A
Eastbound	25.6	C	26.9	C	25.5	C	26.9	C
Left	29.2	C	30.9	C	29.2	C	30.9	C
Through	25.1	C	26.3	C	24.9	C	25.8	C
Right	25.1	C	26.3	C	24.9	C	25.8	C
Westbound	29.9	C	31.4	C	29.8	C	31.4	C
Left	32.5	C	34.1	C	32.0	C	34.1	C
Through	26.7	C	28.2	C	26.9	C	27.8	C
Right	26.7	C	28.2	C	26.9	C	27.8	C

UNSIGNALIZED INTERSECTIONS: MORNING PEAK HOUR

	2023		2023 WITH SITE		2025		2025 WITH SITE	
	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS
92nd / North	5.0	A	5.4	A	4.5	A	6.5	A
Northbound	0.4	A	0.3	A	0.3	A	0.4	A
Left	9.3	A	9.4	A	9.2	A	9.5	A
Through	0.0	A	0.0	A	0.0	A	0.0	A
Right	0.0	A	0.0	A	0.0	A	0.0	A
Southbound	1.1	A	1.1	A	1.2	A	1.3	A
Left	9.3	A	9.4	A	9.3	A	9.7	A
Through	0.0	A	0.0	A	0.0	A	0.0	A
Right	0.0	A	0.0	A	0.0	A	0.0	A
Eastbound	27.8	C	29.4	C	29.5	C	39.0	D
Left	47.8	D	52.3	D	49.6	D	71.5	E
Through	19.4	B	20.2	C	19.5	B	23.2	C
Right	19.4	B	20.2	C	19.5	B	23.2	C
Westbound	27.4	C	31.2	C	24.2	C	39.0	D
Left	60.4	E	71.2	E	51.7	D	96.6	F
Through	15.1	B	15.6	B	16.4	B	19.0	B
Right	15.1	B	15.6	B	16.4	B	19.0	B
92nd / Cochise	4.6	A	19.1	B	4.0	A	15.7	B
Northbound	1.0	A	0.9	A	0.9	A	0.9	A
Left	9.1	A	9.1	A	9.0	A	9.1	A
Through	0.0	A	0.0	A	0.0	A	0.0	A
Right	0.0	A	0.0	A	0.0	A	0.0	A
Southbound	0.4	A	0.9	A	0.5	A	1.0	A
Left	8.8	A	9.0	A	8.8	A	9.2	A
Through	0.0	A	0.0	A	0.0	A	0.0	A
Right	0.0	A	0.0	A	0.0	A	0.0	A
Eastbound	29.9	C	43.1	D	28.0	C	46.4	D
Left	43.1	D	65.8	E	38.8	D	75.7	E
Through	13.7	B	18.3	B	15.1	B	18.0	B
Right	13.7	B	18.3	B	15.1	B	18.0	B
Westbound	32.3	C	120.0	F	30.7	C	119.0	F
Left	38.7	D	120.0	F	35.5	D	120.0	F
Through	16.4	B	18.3	B	23.5	C	25.0	C
Right	16.4	B	18.3	B	23.5	C	25.0	C
92nd / Ironwood	3.1	A	3.4	A	3.0	A	4.4	A
Northbound	0.6	A	0.6	A	0.5	A	0.6	A
Left	8.5	A	8.7	A	8.4	A	8.7	A
Through	0.0	A	0.0	A	0.0	A	0.0	A
Right	0.0	A	0.0	A	0.0	A	0.0	A
Southbound	2.0	A	2.0	A	2.0	A	2.0	A
Left	9.1	A	9.3	A	9.1	A	9.4	A
Through	0.0	A	0.0	A	0.0	A	0.0	A
Right	0.0	A	0.0	A	0.0	A	0.0	A
Eastbound	19.3	B	22.9	C	22.1	C	31.6	C
Left	35.0	D	43.4	D	32.8	C	52.8	D
Through	9.9	A	10.1	B	16.8	B	18.4	B
Right	9.9	A	10.1	B	16.8	B	18.4	B
Westbound	23.8	C	28.3	C	27.4	C	35.7	D
Left	37.2	D	42.6	D	34.7	C	51.9	D
Through	14.1	B	19.2	B	23.8	C	25.3	C
Right	14.1	B	19.2	B	23.8	C	25.3	C

UNSIGNALIZED INTERSECTIONS: MIDDAY PEAK HOUR

	2023		2023 WITH SITE		2025		2025 WITH SITE	
	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS
92nd / North	17.6	B	21.7	C	15.4	B	26.1	C
Northbound	0.3	A	0.3	A	0.4	A	0.3	A
Left	8.6	A	8.7	A	8.6	A	8.8	A
Through	0.0	A	0.0	A	0.0	A	0.0	A
Right	0.0	A	0.0	A	0.0	A	0.0	A
Southbound	2.4	A	2.4	A	2.4	A	2.4	A
Left	10.5	B	10.7	B	10.2	B	10.7	B
Through	0.0	A	0.0	A	0.0	A	0.0	A
Right	0.0	A	0.0	A	0.0	A	0.0	A
Eastbound	68.1	E	78.2	E	53.6	D	108.4	F
Left	120.0	F	120.0	F	95.1	F	120.0	F
Through	17.3	B	18.2	B	22.5	C	24.1	C
Right	17.3	B	18.2	B	22.5	C	24.1	C
Westbound	74.5	E	97.7	F	70.1	E	117.2	F
Left	120.0	F	120.0	F	120.0	F	120.0	F
Through	20.3	C	21.7	C	20.0	C	24.9	C
Right	20.3	C	21.7	C	20.0	C	24.9	C
92nd / Cochise	6.5	A	47.6	D	6.4	A	46.1	D
Northbound	0.6	A	0.6	A	0.6	A	0.7	A
Left	8.8	A	8.8	A	8.8	A	8.9	A
Through	0.0	A	0.0	A	0.0	A	0.0	A
Right	0.0	A	0.0	A	0.0	A	0.0	A
Southbound	0.5	A	1.2	A	0.3	A	1.0	A
Left	9.1	A	9.5	A	9.1	A	9.6	A
Through	0.0	A	0.0	A	0.0	A	0.0	A
Right	0.0	A	0.0	A	0.0	A	0.0	A
Eastbound	23.0	C	33.3	C	25.5	C	48.3	D
Left	35.0	D	54.7	D	36.7	D	80.4	F
Through	10.0	B	10.0	B	14.3	B	16.2	B
Right	10.0	B	10.0	B	14.3	B	16.2	B
Westbound	49.6	D	120.0	F	48.0	D	120.0	F
Left	65.3	E	120.0	F	63.1	E	120.0	F
Through	13.5	B	15.6	B	17.9	B	20.3	C
Right	13.5	B	15.6	B	17.9	B	20.3	C
92nd / Ironwood	2.7	A	3.0	A	2.9	A	3.8	A
Northbound	0.4	A	0.4	A	0.2	A	0.4	A
Left	8.5	A	8.8	A	8.2	A	8.9	A
Through	0.0	A	0.0	A	0.0	A	0.0	A
Right	0.0	A	0.0	A	0.0	A	0.0	A
Southbound	1.3	A	1.3	A	0.4	A	1.3	A
Left	9.0	A	9.1	A	8.7	A	9.5	A
Through	0.0	A	0.0	A	0.0	A	0.0	A
Right	0.0	A	0.0	A	0.0	A	0.0	A
Eastbound	18.3	B	21.3	C	17.4	B	28.5	C
Left	29.0	C	36.0	D	22.2	C	45.2	D
Through	12.4	B	13.2	B	12.6	B	20.1	C
Right	12.4	B	13.2	B	12.6	B	20.1	C
Westbound	20.6	C	24.0	C	17.2	B	32.5	C
Left	32.9	C	38.6	D	23.2	C	54.0	D
Through	12.6	B	15.5	B	13.7	B	20.1	C
Right	12.6	B	15.5	B	13.7	B	20.1	C

UNSIGNALIZED INTERSECTIONS: EVENING PEAK HOUR

























	2023		2023 WITH SITE		2025		2025 WITH SITE	
	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS
92nd / North	6.2	A	7.2	A	5.6	A	9.1	A
Northbound	0.1	A	0.1	A	0.1	A	0.1	A
Left	7.9	A	8.0	A	7.9	A	8.1	A
Through	0.0	A	0.0	A	0.0	A	0.0	A
Right	0.0	A	0.0	A	0.0	A	0.0	A
Southbound	3.1	A	2.8	A	2.7	A	2.6	A
Left	10.5	B	10.7	B	10.4	B	11.0	B
Through	0.0	A	0.0	A	0.0	A	0.0	A
Right	0.0	A	0.0	A	0.0	A	0.0	A
Eastbound	24.5	C	26.4	C	27.2	C	41.3	D
Left	48.9	D	59.8	E	45.6	D	83.0	F
Through	11.1	B	11.4	B	14.9	B	15.9	B
Right	11.1	B	11.4	B	14.9	B	15.9	B
Westbound	23.8	C	30.3	C	22.7	C	38.3	D
Left	61.0	E	83.7	F	52.1	D	108.7	F
Through	15.6	B	16.1	B	17.5	B	20.3	C
Right	15.6	B	16.1	B	17.5	B	20.3	C
92nd / Cochise	3.2	A	20.7	C	4.0	A	19.7	B
Northbound	0.2	A	0.2	A	0.2	A	0.2	A
Left	8.2	A	8.2	A	8.2	A	8.2	A
Through	0.0	A	0.0	A	0.0	A	0.0	A
Right	0.0	A	0.0	A	0.0	A	0.0	A
Southbound	0.6	A	2.8	A	0.5	A	2.3	A
Left	8.7	A	10.5	B	9.5	A	10.4	B
Through	0.0	A	0.0	A	0.0	A	0.0	A
Right	0.0	A	0.0	A	0.0	A	0.0	A
Eastbound	17.5	B	59.0	E	26.8	C	76.8	E
Left	23.2	C	80.2	F	32.2	C	106.3	F
Through	9.7	A	9.5	A	14.8	B	17.9	B
Right	9.7	A	9.5	A	14.8	B	17.9	B
Westbound	8.3	A	120.0	F	29.0	C	120.0	F
Left	23.4	C	120.0	F	34.5	C	120.0	F
Through	13.9	B	11.6	B	20.8	C	20.3	C
Right	13.9	B	11.6	B	20.8	C	20.3	C
92nd / Ironwood	2.8	A	3.0	A	2.9	A	3.7	A
Northbound	0.1	A	0.1	A	0.2	A	0.1	A
Left	8.2	A	8.4	A	8.2	A	8.4	A
Through	0.0	A	0.0	A	0.0	A	0.0	A
Right	0.0	A	0.0	A	0.0	A	0.0	A
Southbound	0.4	A	0.4	A	0.4	A	0.6	A
Left	8.7	A	8.8	A	8.7	A	8.9	A
Through	0.0	A	0.0	A	0.0	A	0.0	A
Right	0.0	A	0.0	A	0.0	A	0.0	A
Eastbound	17.6	B	19.7	B	17.4	B	22.7	C
Left	22.7	C	25.9	C	22.2	C	29.9	C
Through	9.7	A	9.9	A	12.6	B	13.9	B
Right	9.7	A	9.9	A	12.6	B	13.9	B
Westbound	17.4	B	18.5	B	17.8	B	22.7	C
Left	22.8	C	24.3	C	23.2	C	30.2	C
Through	13.0	B	14.2	B	13.7	B	15.6	B
Right	13.0	B	14.2	B	13.7	B	15.6	B

Appendix F.2
Level-of-Service
Adjusted 2023 Traffic Volumes



Existing 2023 AM Peak

1: 92nd Street & Shea Boulevard










												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	1356	338	81	1284	68	392	208	99	119	226	177
Future Volume (veh/h)	135	1356	338	81	1284	68	392	208	99	119	226	177
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	175	1490	380	112	1459	77	440	214	108	132	240	188
Peak Hour Factor	0.77	0.91	0.89	0.72	0.88	0.88	0.89	0.97	0.92	0.90	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	247	2015	626	175	1909	593	535	897	400	201	553	247
Arrive On Green	0.07	0.39	0.39	0.05	0.37	0.37	0.15	0.25	0.25	0.06	0.16	0.16
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	175	1490	380	112	1459	77	440	214	108	132	240	188
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	4.6	23.4	17.9	3.0	23.5	3.0	11.6	4.5	5.1	3.5	5.7	10.7
Cycle Q Clear(g_c), s	4.6	23.4	17.9	3.0	23.5	3.0	11.6	4.5	5.1	3.5	5.7	10.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	247	2015	626	175	1909	593	535	897	400	201	553	247
V/C Ratio(X)	0.71	0.74	0.61	0.64	0.76	0.13	0.82	0.24	0.27	0.66	0.43	0.76
Avail Cap(c_a), veh/h	332	2358	732	221	2195	681	756	1470	656	332	1035	461
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	42.6	24.3	22.6	43.7	25.7	19.3	38.4	27.9	28.1	43.3	35.9	37.9
Incr Delay (d2), s/veh	4.5	1.1	1.1	4.1	1.4	0.1	5.0	0.1	0.4	3.7	0.5	4.8
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	2.1	9.2	6.6	1.4	9.4	1.1	5.2	1.9	2.0	1.6	2.5	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.1	25.3	23.7	47.7	27.2	19.4	43.4	28.0	28.5	46.9	36.4	42.8
LnGrp LOS	D	C	C	D	C	B	D	C	C	D	D	D
Approach Vol, veh/h		2045			1648			762			560	
Approach Delay, s/veh		26.9			28.2			37.0			41.0	
Approach LOS		C			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.9	29.4	10.7	42.7	20.0	20.3	12.7	40.8				
Change Period (Y+Rc), s	5.5	* 5.7	6.0	5.7	5.5	* 5.7	6.0	5.7				
Max Green Setting (Gmax), s	9.0	* 39	6.0	43.3	20.5	* 27	9.0	40.3				
Max Q Clear Time (g_c+I1), s	5.5	7.1	5.0	25.4	13.6	12.7	6.6	25.5				
Green Ext Time (p_c), s	0.1	1.8	0.0	11.6	1.0	1.9	0.1	9.2				

Intersection Summary

HCM 6th Ctrl Delay	30.4
HCM 6th LOS	C










Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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	16	4	25	42	3	125	20	492	74	99	515	118
Future Vol, veh/h	16	4	25	42	3	125	20	492	74	99	515	118
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	75	33	64	75	38	88	79	89	86	96	87	79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	12	39	56	8	142	25	553	86	103	592	149
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1129	1487	296	1154	1593	320	741	0	0	639	0	0
Stage 1	798	798	-	646	646	-	-	-	-	-	-	-
Stage 2	331	689	-	508	947	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	159	123	700	152	106	676	862	-	-	941	-	-
Stage 1	346	396	-	427	465	-	-	-	-	-	-	-
Stage 2	656	445	-	516	338	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	105	106	700	118	92	676	862	-	-	941	-	-
Mov Cap-2 Maneuver	105	106	-	118	92	-	-	-	-	-	-	-
Stage 1	336	353	-	415	452	-	-	-	-	-	-	-
Stage 2	494	432	-	419	301	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	27.8		27.4		0.4		1.1					
HCM LOS	D		D									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	862	-	-	105	301	118	507	941	-	-		
HCM Lane V/C Ratio	0.029	-	-	0.203	0.17	0.475	0.296	0.11	-	-		
HCM Control Delay (s)	9.3	-	-	47.8	19.4	60.4	15.1	9.3	-	-		
HCM Lane LOS	A	-	-	E	C	F	C	A	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	0.7	0.6	2.1	1.2	0.4	-	-		

Existing 2023 AM Peak

3: 92nd Street & Cochise Drive










Intersection												
Int Delay, s/veh	4.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	54	2	43	28	3	9	56	520	14	29	439	88
Future Vol, veh/h	54	2	43	28	3	9	56	520	14	29	439	88
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	69	25	77	65	75	67	81	93	54	84	84	73
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	78	8	56	43	4	13	69	559	26	35	523	121
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1013	1316	262	1046	1424	293	644	0	0	585	0	0
Stage 1	593	593	-	710	710	-	-	-	-	-	-	-
Stage 2	420	723	-	336	714	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	193	156	737	183	135	703	937	-	-	986	-	-
Stage 1	459	492	-	391	435	-	-	-	-	-	-	-
Stage 2	581	429	-	652	433	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	170	139	737	149	121	703	937	-	-	986	-	-
Mov Cap-2 Maneuver	170	139	-	149	121	-	-	-	-	-	-	-
Stage 1	425	475	-	362	403	-	-	-	-	-	-	-
Stage 2	523	397	-	571	418	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	29.9		32.3		1		0.4					
HCM LOS	D		D									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	937	-	-	170	479	149	334	986	-	-		
HCM Lane V/C Ratio	0.074	-	-	0.46	0.133	0.289	0.052	0.035	-	-		
HCM Control Delay (s)	9.1	-	-	43.1	13.7	38.7	16.4	8.8	-	-		
HCM Lane LOS	A	-	-	E	B	E	C	A	-	-		
HCM 95th %tile Q(veh)	0.2	-	-	2.2	0.5	1.1	0.2	0.1	-	-		

Existing 2023 AM Peak

4: 92nd Street & Ironwood Lane

Intersection

Int Delay, s/veh 3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	0	32	14	1	14	29	466	26	113	382	40
Future Vol, veh/h	19	0	32	14	1	14	29	466	26	113	382	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	0	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	25	75	65	25	54	75	89	75	82	86	66
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	0	43	22	4	26	39	524	35	138	444	61























Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1062	1357	222	1118	1401	280	505	0	0	559	0	0
Stage 1	720	720	-	620	620	-	-	-	-	-	-	-
Stage 2	342	637	-	498	781	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	178	148	782	162	139	717	1056	-	-	1008	-	-
Stage 1	385	430	-	442	478	-	-	-	-	-	-	-
Stage 2	646	470	-	523	403	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	145	123	782	133	116	717	1056	-	-	1008	-	-
Mov Cap-2 Maneuver	145	123	-	133	116	-	-	-	-	-	-	-
Stage 1	371	371	-	426	460	-	-	-	-	-	-	-
Stage 2	594	453	-	427	348	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	19.3		23.8		0.6		2	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1056	-	-	145	782	133	424	1008	-	-
HCM Lane V/C Ratio	0.037	-	-	0.175	0.055	0.162	0.071	0.137	-	-
HCM Control Delay (s)	8.5	-	-	35	9.9	37.2	14.1	9.1	-	-
HCM Lane LOS	A	-	-	E	A	E	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.6	0.2	0.6	0.2	0.5	-	-

Existing 2023 AM Peak

5: 92nd Street & Mountain View Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	3	13	209	6	154	17	343	203	123	284	3
Future Volume (veh/h)	6	3	13	209	6	154	17	343	203	123	284	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	20	4	20	275	21	171	40	373	231	168	330	8
Peak Hour Factor	0.30	0.75	0.64	0.76	0.29	0.90	0.42	0.92	0.88	0.73	0.86	0.38
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	255	67	335	409	44	355	707	2263	1009	567	2263	1009
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.64	0.64	0.64	0.64	0.64	0.64
Sat Flow, veh/h	1191	271	1355	1387	176	1436	1042	3554	1585	816	3554	1585
Grp Volume(v), veh/h	20	0	24	275	0	192	40	373	231	168	330	8
Grp Sat Flow(s),veh/h/ln	1191	0	1626	1387	0	1612	1042	1777	1585	816	1777	1585
Q Serve(g_s), s	1.3	0.0	1.0	16.6	0.0	9.0	1.4	3.7	5.5	9.3	3.3	0.2
Cycle Q Clear(g_c), s	10.2	0.0	1.0	17.6	0.0	9.0	4.7	3.7	5.5	13.0	3.3	0.2
Prop In Lane	1.00		0.83	1.00		0.89	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	255	0	402	409	0	399	707	2263	1009	567	2263	1009
V/C Ratio(X)	0.08	0.00	0.06	0.67	0.00	0.48	0.06	0.16	0.23	0.30	0.15	0.01
Avail Cap(c_a), veh/h	689	0	995	915	0	986	707	2263	1009	567	2263	1009
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	32.7	0.0	25.3	32.0	0.0	28.3	7.3	6.5	6.8	9.1	6.4	5.8
Incr Delay (d2), s/veh	0.1	0.0	0.1	1.9	0.0	0.9	0.2	0.2	0.5	1.3	0.1	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	0.4	0.0	0.4	5.6	0.0	3.5	0.3	1.3	1.7	1.7	1.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.8	0.0	25.3	33.9	0.0	29.2	7.5	6.6	7.3	10.5	6.5	5.8
LnGrp LOS	C	A	C	C	A	C	A	A	A	B	A	A
Approach Vol, veh/h		44			467			644			506	
Approach Delay, s/veh		28.7			32.0			6.9			7.8	
Approach LOS		C			C			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		61.0		26.9		61.0		26.9				
Change Period (Y+Rc), s		5.0		* 5.2		5.0		* 5.2				
Max Green Setting (Gmax), s		56.0		* 54		56.0		* 54				
Max Q Clear Time (g_c+I1), s		7.5		12.2		15.0		19.6				
Green Ext Time (p_c), s		3.6		0.2		3.7		2.1				

Intersection Summary

























HCM 6th Ctrl Delay	14.8
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.










Existing 2023 MD Peak

1: 92nd Street & Shea Boulevard

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	183	1197	270	82	1290	70	422	263	113	142	259	199
Future Volume (veh/h)	183	1197	270	82	1290	70	422	263	113	142	259	199
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	251	1301	325	108	1418	73	548	321	133	160	278	207
Peak Hour Factor	0.73	0.92	0.83	0.76	0.91	0.96	0.77	0.82	0.85	0.89	0.93	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	318	1938	602	168	1716	533	634	1003	447	227	584	261
Arrive On Green	0.09	0.38	0.38	0.05	0.34	0.34	0.18	0.28	0.28	0.07	0.16	0.16
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	251	1301	325	108	1418	73	548	321	133	160	278	207
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	7.3	21.7	16.4	3.1	26.1	3.3	15.7	7.3	6.7	4.6	7.2	12.8
Cycle Q Clear(g_c), s	7.3	21.7	16.4	3.1	26.1	3.3	15.7	7.3	6.7	4.6	7.2	12.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	318	1938	602	168	1716	533	634	1003	447	227	584	261
V/C Ratio(X)	0.79	0.67	0.54	0.64	0.83	0.14	0.86	0.32	0.30	0.70	0.48	0.79
Avail Cap(c_a), veh/h	372	2013	625	270	1863	578	771	1338	597	348	904	403
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	45.4	26.4	24.8	47.8	31.2	23.6	40.5	29.0	28.8	46.8	38.7	41.0
Incr Delay (d2), s/veh	9.4	0.8	0.9	4.1	3.0	0.1	8.7	0.2	0.4	4.0	0.6	5.9
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	3.5	8.7	6.2	1.4	10.9	1.2	7.4	3.1	2.6	2.1	3.2	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.9	27.2	25.6	51.8	34.2	23.7	49.2	29.1	29.1	50.7	39.3	47.0
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	D	D
Approach Vol, veh/h		1877			1599			1002			645	
Approach Delay, s/veh		30.7			34.9			40.1			44.6	
Approach LOS		C			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.2	34.5	11.0	44.5	24.3	22.5	15.4	40.1				
Change Period (Y+Rc), s	5.5	* 5.7	6.0	5.7	5.5	* 5.7	6.0	5.7				
Max Green Setting (Gmax), s	10.3	* 39	8.0	40.3	22.8	* 26	11.0	37.3				
Max Q Clear Time (g_c+I1), s	6.6	9.3	5.1	23.7	17.7	14.8	9.3	28.1				
Green Ext Time (p_c), s	0.2	2.7	0.1	9.7	1.0	2.0	0.2	6.3				
Intersection Summary												
HCM 6th Ctrl Delay			35.6									
HCM 6th LOS			D									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection

Int Delay, s/veh 17.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	4	33	72	4	204	25	566	96	140	403	68
Future Vol, veh/h	28	4	33	72	4	204	25	566	96	140	403	68
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	65	50	65	84	50	81	72	80	89	90	92	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	43	8	51	86	8	252	35	708	108	156	438	77

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1178	1636	219	1367	1659	408	515	0	0	816	0	0
Stage 1	750	750	-	832	832	-	-	-	-	-	-	-
Stage 2	428	886	-	535	827	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	146	100	785	106	97	593	1047	-	-	807	-	-
Stage 1	369	417	-	330	382	-	-	-	-	-	-	-
Stage 2	575	361	-	497	384	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	64	78	785	~ 76	76	593	1047	-	-	807	-	-
Mov Cap-2 Maneuver	64	78	-	~ 76	76	-	-	-	-	-	-	-
Stage 1	357	337	-	319	369	-	-	-	-	-	-	-
Stage 2	313	349	-	366	310	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	68.1		74.5		0.3		2.4	
HCM LOS	F		F					










Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1047	-	-	64	351	76	490	807	-	-
HCM Lane V/C Ratio	0.033	-	-	0.673	0.167	1.128	0.53	0.193	-	-
HCM Control Delay (s)	8.6	-	-	137.5	17.3	238.8	20.3	10.5	-	-
HCM Lane LOS	A	-	-	F	C	F	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	2.9	0.6	6.3	3.1	0.7	-	-

Notes

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

Intersection










Int Delay, s/veh 6.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	55	0	49	73	2	25	46	602	9	22	400	84
Future Vol, veh/h	55	0	49	73	2	25	46	602	9	22	400	84
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	91	25	88	74	50	64	90	90	50	71	86	72
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	60	0	56	99	4	39	51	669	18	31	465	117

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	966	1316	233	1075	1424	344	582	0	0	687	0	0
Stage 1	527	527	-	780	780	-	-	-	-	-	-	-
Stage 2	439	789	-	295	644	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	209	156	769	174	135	652	988	-	-	903	-	-
Stage 1	502	527	-	354	404	-	-	-	-	-	-	-
Stage 2	567	400	-	689	466	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	179	143	769	151	124	652	988	-	-	903	-	-
Mov Cap-2 Maneuver	179	143	-	151	124	-	-	-	-	-	-	-
Stage 1	476	509	-	336	383	-	-	-	-	-	-	-
Stage 2	500	379	-	617	450	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	23	49.6	0.6	0.5
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	988	-	-	179	769	151	467	903	-	-
HCM Lane V/C Ratio	0.052	-	-	0.338	0.072	0.653	0.092	0.034	-	-
HCM Control Delay (s)	8.8	-	-	35	10	65.3	13.5	9.1	-	-
HCM Lane LOS	A	-	-	E	B	F	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1.4	0.2	3.6	0.3	0.1	-	-

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	2	26	26	1	31	19	539	24	70	428	25
Future Vol, veh/h	17	2	26	26	1	31	19	539	24	70	428	25
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	80	50	75	86	25	73	64	99	61	81	90	64
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	4	35	30	4	42	30	544	39	86	476	39























Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	982	1291	238	1036	1311	292	515	0	0	583	0	0
Stage 1	648	648	-	624	624	-	-	-	-	-	-	-
Stage 2	334	643	-	412	687	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	203	162	763	186	158	704	1047	-	-	987	-	-
Stage 1	425	464	-	440	476	-	-	-	-	-	-	-
Stage 2	653	467	-	588	446	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	171	144	763	159	140	704	1047	-	-	987	-	-
Mov Cap-2 Maneuver	171	144	-	159	140	-	-	-	-	-	-	-
Stage 1	413	424	-	427	462	-	-	-	-	-	-	-
Stage 2	591	453	-	508	407	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	18.3		20.6		0.4		1.3	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1047	-	-	171	528	159	523	987	-	-
HCM Lane V/C Ratio	0.028	-	-	0.124	0.073	0.19	0.089	0.088	-	-
HCM Control Delay (s)	8.5	-	-	29	12.4	32.9	12.6	9	-	-
HCM Lane LOS	A	-	-	D	B	D	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	0.2	0.7	0.3	0.3	-	-

Existing 2023 MD Peak

5: 92nd Street & Mountain View Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	5	30	186	12	149	18	403	204	116	358	5
Future Volume (veh/h)	8	5	30	186	12	149	18	403	204	116	358	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	14	12	34	219	26	189	21	443	219	138	437	8
Peak Hour Factor	0.58	0.42	0.88	0.85	0.46	0.79	0.85	0.91	0.93	0.84	0.82	0.63
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	201	96	271	353	43	316	663	2356	1051	556	2356	1051
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.66	0.66	0.66	0.66	0.66	0.66
Sat Flow, veh/h	1166	431	1220	1360	195	1420	945	3554	1585	773	3554	1585
Grp Volume(v), veh/h	14	0	46	219	0	215	21	443	219	138	437	8
Grp Sat Flow(s),veh/h/ln	1166	0	1651	1360	0	1615	945	1777	1585	773	1777	1585
Q Serve(g_s), s	1.0	0.0	2.0	13.7	0.0	10.6	0.8	4.3	4.8	7.4	4.2	0.2
Cycle Q Clear(g_c), s	11.6	0.0	2.0	15.6	0.0	10.6	5.0	4.3	4.8	11.7	4.2	0.2
Prop In Lane	1.00		0.74	1.00		0.88	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	201	0	367	353	0	359	663	2356	1051	556	2356	1051
V/C Ratio(X)	0.07	0.00	0.13	0.62	0.00	0.60	0.03	0.19	0.21	0.25	0.19	0.01
Avail Cap(c_a), veh/h	607	0	942	827	0	922	663	2356	1051	556	2356	1051
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	36.2	0.0	27.7	33.9	0.0	31.0	6.7	5.8	5.9	8.0	5.8	5.1
Incr Delay (d2), s/veh	0.1	0.0	0.2	1.8	0.0	1.6	0.1	0.2	0.5	1.1	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	0.3	0.0	0.8	4.6	0.0	4.2	0.2	1.4	1.5	1.3	1.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.4	0.0	27.8	35.7	0.0	32.6	6.8	6.0	6.3	9.1	5.9	5.1
LnGrp LOS	D	A	C	D	A	C	A	A	A	A	A	A
Approach Vol, veh/h		60			434			683			583	
Approach Delay, s/veh		29.8			34.2			6.1			6.7	
Approach LOS		C			C			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		64.0		25.0		64.0		25.0				
Change Period (Y+Rc), s		5.0		* 5.2		5.0		* 5.2				
Max Green Setting (Gmax), s		59.0		* 51		59.0		* 51				
Max Q Clear Time (g_c+I1), s		7.0		13.6		13.7		17.6				
Green Ext Time (p_c), s		4.1		0.3		4.5		2.1				

Intersection Summary

HCM 6th Ctrl Delay 14.0

























HCM 6th LOS B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Existing 2023 PM Peak

1: 92nd Street & Shea Boulevard










												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	224	1223	146	39	1161	72	463	310	100	137	174	160
Future Volume (veh/h)	224	1223	146	39	1161	72	463	310	100	137	174	160
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	267	1261	168	43	1262	95	551	373	120	173	193	180
Peak Hour Factor	0.84	0.97	0.87	0.90	0.92	0.76	0.84	0.83	0.83	0.79	0.90	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	345	1933	600	125	1608	499	655	946	422	249	529	236
Arrive On Green	0.10	0.38	0.38	0.04	0.31	0.31	0.19	0.27	0.27	0.07	0.15	0.15
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	267	1261	168	43	1262	95	551	373	120	173	193	180
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	7.0	18.9	6.8	1.1	20.8	4.0	14.2	8.0	5.6	4.5	4.5	10.1
Cycle Q Clear(g_c), s	7.0	18.9	6.8	1.1	20.8	4.0	14.2	8.0	5.6	4.5	4.5	10.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	345	1933	600	125	1608	499	655	946	422	249	529	236
V/C Ratio(X)	0.77	0.65	0.28	0.34	0.78	0.19	0.84	0.39	0.28	0.70	0.37	0.76
Avail Cap(c_a), veh/h	448	2221	689	186	1835	570	876	1561	696	414	1085	484
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	40.7	23.8	20.0	43.6	28.9	23.1	36.2	27.9	27.0	42.0	35.5	37.9
Incr Delay (d2), s/veh	6.2	0.6	0.3	1.6	2.0	0.2	5.7	0.3	0.4	3.5	0.4	5.1
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	3.2	7.4	2.5	0.5	8.5	1.5	6.4	3.4	2.1	2.1	2.0	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.9	24.3	20.3	45.2	30.9	23.3	41.9	28.1	27.4	45.5	35.9	43.0
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	D	D
Approach Vol, veh/h		1696			1400			1044			546	
Approach Delay, s/veh		27.5			30.8			35.3			41.3	
Approach LOS		C			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.2	30.4	9.3	40.8	23.0	19.5	15.2	34.9				
Change Period (Y+Rc), s	5.5	* 5.7	6.0	5.7	5.5	* 5.7	6.0	5.7				
Max Green Setting (Gmax), s	11.1	* 41	5.0	40.3	23.5	* 28	12.0	33.3				
Max Q Clear Time (g_c+I1), s	6.5	10.0	3.1	20.9	16.2	12.1	9.0	22.8				
Green Ext Time (p_c), s	0.2	3.0	0.0	9.8	1.3	1.7	0.3	6.3				

Intersection Summary

HCM 6th Ctrl Delay	31.8
HCM 6th LOS	C










Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection												
Int Delay, s/veh	6.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	39	3	52	29	1	153	6	682	85	99	245	15
Future Vol, veh/h	39	3	52	29	1	153	6	682	85	99	245	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	0	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	75	63	68	25	81	50	90	82	79	92	50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	48	4	83	43	4	189	12	758	104	125	266	30
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	921	1402	133	1219	1380	431	296	0	0	862	0	0
Stage 1	516	516	-	834	834	-	-	-	-	-	-	-
Stage 2	405	886	-	385	546	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	225	139	892	136	143	573	1262	-	-	776	-	-
Stage 1	510	533	-	329	381	-	-	-	-	-	-	-
Stage 2	593	361	-	610	516	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	128	116	892	105	119	573	1262	-	-	776	-	-
Mov Cap-2 Maneuver	128	116	-	105	119	-	-	-	-	-	-	-
Stage 1	505	447	-	326	377	-	-	-	-	-	-	-
Stage 2	390	357	-	460	433	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	24.5		23.8		0.1		3.1					
HCM LOS	C		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1262	-	-	128	681	105	531	776	-	-		
HCM Lane V/C Ratio	0.01	-	-	0.372	0.127	0.406	0.363	0.161	-	-		
HCM Control Delay (s)	7.9	-	-	48.9	11.1	61	15.6	10.5	-	-		
HCM Lane LOS	A	-	-	E	B	F	C	B	-	-		
HCM 95th %tile Q(veh)	0	-	-	1.5	0.4	1.7	1.6	0.6	-	-		










Existing 2023 PM Peak

3: 92nd Street & Cochise Drive

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	51	0	35	29	3	27	8	487	10	20	362	10
Future Vol, veh/h	51	0	35	29	3	27	8	487	10	20	362	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	84	25	78	70	25	75	63	91	33	68	89	64
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	61	0	45	41	12	36	13	535	30	29	407	16
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	765	1056	204	838	1057	283	423	0	0	565	0	0
Stage 1	465	465	-	576	576	-	-	-	-	-	-	-
Stage 2	300	591	-	262	481	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	293	224	803	259	224	714	1133	-	-	1003	-	-
Stage 1	547	561	-	470	500	-	-	-	-	-	-	-
Stage 2	684	493	-	720	552	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	258	215	803	237	215	714	1133	-	-	1003	-	-
Mov Cap-2 Maneuver	258	215	-	237	215	-	-	-	-	-	-	-
Stage 1	541	545	-	465	495	-	-	-	-	-	-	-
Stage 2	626	488	-	660	536	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	17.5		18.3		0.2		0.6					
HCM LOS	C		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1133	-	-	258	803	237	452	1003	-	-		
HCM Lane V/C Ratio	0.011	-	-	0.235	0.056	0.175	0.106	0.029	-	-		
HCM Control Delay (s)	8.2	-	-	23.2	9.7	23.4	13.9	8.7	-	-		
HCM Lane LOS	A	-	-	C	A	C	B	A	-	-		
HCM 95th %tile Q(veh)	0	-	-	0.9	0.2	0.6	0.4	0.1	-	-		























Existing 2023 PM Peak

4: 92nd Street & Ironwood Lane

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	51	0	35	29	3	27	8	487	10	20	362	10
Future Vol, veh/h	51	0	35	29	3	27	8	487	10	20	362	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	78	25	83	84	38	78	88	85	75	95	89	56
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	65	0	42	35	8	35	9	573	13	21	407	18
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	758	1053	204	844	1065	293	425	0	0	586	0	0
Stage 1	449	449	-	598	598	-	-	-	-	-	-	-
Stage 2	309	604	-	246	467	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	296	225	803	256	221	703	1131	-	-	985	-	-
Stage 1	559	571	-	456	489	-	-	-	-	-	-	-
Stage 2	676	486	-	736	560	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	268	218	803	237	215	703	1131	-	-	985	-	-
Mov Cap-2 Maneuver	268	218	-	237	215	-	-	-	-	-	-	-
Stage 1	555	559	-	452	485	-	-	-	-	-	-	-
Stage 2	627	482	-	682	548	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	17.6		17.4		0.1		0.4					
HCM LOS	C		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1131	-	-	268	803	237	495	985	-	-		
HCM Lane V/C Ratio	0.008	-	-	0.244	0.053	0.146	0.086	0.021	-	-		
HCM Control Delay (s)	8.2	-	-	22.7	9.7	22.8	13	8.7	-	-		
HCM Lane LOS	A	-	-	C	A	C	B	A	-	-		
HCM 95th %tile Q(veh)	0	-	-	0.9	0.2	0.5	0.3	0.1	-	-		

Existing 2023 PM Peak

5: 92nd Street & Mountain View Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	12	52	180	8	128	14	351	162	88	333	5
Future Volume (veh/h)	11	12	52	180	8	128	14	351	162	88	333	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	13	17	73	198	18	142	17	394	231	99	374	12
Peak Hour Factor	0.83	0.69	0.71	0.91	0.44	0.90	0.81	0.89	0.70	0.89	0.89	0.42
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	276	73	312	340	43	337	683	2263	1009	563	2263	1009
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.64	0.64	0.64	0.64	0.64	0.64
Sat Flow, veh/h	1226	308	1324	1307	181	1431	997	3554	1585	800	3554	1585
Grp Volume(v), veh/h	13	0	90	198	0	160	17	394	231	99	374	12
Grp Sat Flow(s),veh/h/ln	1226	0	1632	1307	0	1613	997	1777	1585	800	1777	1585
Q Serve(g_s), s	0.7	0.0	3.6	11.6	0.0	6.7	0.6	3.6	5.0	4.6	3.4	0.2
Cycle Q Clear(g_c), s	7.5	0.0	3.6	15.1	0.0	6.7	4.0	3.6	5.0	8.2	3.4	0.2
Prop In Lane	1.00		0.81	1.00		0.89	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	276	0	385	340	0	380	683	2263	1009	563	2263	1009
V/C Ratio(X)	0.05	0.00	0.23	0.58	0.00	0.42	0.02	0.17	0.23	0.18	0.17	0.01
Avail Cap(c_a), veh/h	887	0	1198	991	0	1184	683	2263	1009	563	2263	1009
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	29.1	0.0	24.8	30.9	0.0	26.0	6.7	5.9	6.2	7.6	5.9	5.3
Incr Delay (d2), s/veh	0.1	0.0	0.3	1.6	0.0	0.7	0.1	0.2	0.5	0.7	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	0.2	0.0	1.4	3.7	0.0	2.6	0.1	1.2	1.5	0.8	1.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.2	0.0	25.1	32.5	0.0	26.7	6.8	6.1	6.7	8.3	6.1	5.3
LnGrp LOS	C	A	C	C	A	C	A	A	A	A	A	A
Approach Vol, veh/h		103			358			642			485	
Approach Delay, s/veh		25.6			29.9			6.3			6.5	
Approach LOS		C			C			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		56.0		24.1		56.0		24.1				
Change Period (Y+Rc), s		5.0		* 5.2		5.0		* 5.2				
Max Green Setting (Gmax), s		51.0		* 59		51.0		* 59				
Max Q Clear Time (g_c+I1), s		7.0		9.5		10.2		17.1				
Green Ext Time (p_c), s		3.7		0.6		3.6		1.7				

Intersection Summary

HCM 6th Ctrl Delay	12.9
HCM 6th LOS	B

Notes

























* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Appendix F.3
Level-of-Service
Ambient 2025 Traffic Volumes





















Ambient 2025 AM Peak










1: 92nd Street & Shea Boulevard

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	1420	350	80	1340	70	410	220	100	120	240	180
Future Volume (veh/h)	140	1420	350	80	1340	70	410	220	100	120	240	180
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	152	1543	380	87	1457	76	446	239	109	130	261	196
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	219	2045	635	161	1959	608	540	921	411	197	568	253
Arrive On Green	0.06	0.40	0.40	0.05	0.38	0.38	0.16	0.26	0.26	0.06	0.16	0.16
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	152	1543	380	87	1457	76	446	239	109	130	261	196
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	4.2	25.1	18.3	2.4	23.8	3.0	12.1	5.2	5.3	3.6	6.4	11.5
Cycle Q Clear(g_c), s	4.2	25.1	18.3	2.4	23.8	3.0	12.1	5.2	5.3	3.6	6.4	11.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	219	2045	635	161	1959	608	540	921	411	197	568	253
V/C Ratio(X)	0.69	0.75	0.60	0.54	0.74	0.12	0.83	0.26	0.27	0.66	0.46	0.77
Avail Cap(c_a), veh/h	286	2340	726	179	2181	677	768	1430	638	318	967	431
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	44.4	24.9	22.9	45.1	25.7	19.3	39.5	28.4	28.5	44.7	36.8	39.0
Incr Delay (d2), s/veh	4.8	1.2	1.1	2.8	1.3	0.1	5.1	0.1	0.3	3.8	0.6	5.0
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	1.9	10.0	6.8	1.1	9.5	1.1	5.4	2.2	2.0	1.6	2.8	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.1	26.2	23.9	47.8	27.0	19.4	44.6	28.6	28.8	48.5	37.4	44.0
LnGrp LOS	D	C	C	D	C	B	D	C	C	D	D	D
Approach Vol, veh/h		2075			1620			794			587	
Approach Delay, s/veh		27.4			27.7			37.6			42.1	
Approach LOS		C			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	30.8	10.5	44.4	20.6	21.1	12.1	42.8				
Change Period (Y+Rc), s	5.5	* 5.7	6.0	5.7	5.5	* 5.7	6.0	5.7				
Max Green Setting (Gmax), s	8.9	* 39	5.0	44.3	21.5	* 26	8.0	41.3				
Max Q Clear Time (g_c+I1), s	5.6	7.3	4.4	27.1	14.1	13.5	6.2	25.8				
Green Ext Time (p_c), s	0.1	2.0	0.0	11.6	1.0	2.0	0.1	9.4				
Intersection Summary												
HCM 6th Ctrl Delay			30.8									
HCM 6th LOS			C									
Notes												

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection												
Int Delay, s/veh	4.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	10	30	40	10	130	20	510	80	100	540	120
Future Vol, veh/h	20	10	30	40	10	130	20	510	80	100	540	120
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	43	11	141	22	554	87	109	587	130
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1132	1490	294	1159	1577	321	717	0	0	641	0	0
Stage 1	805	805	-	642	642	-	-	-	-	-	-	-
Stage 2	327	685	-	517	935	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	158	123	702	151	109	675	880	-	-	939	-	-
Stage 1	342	393	-	429	467	-	-	-	-	-	-	-
Stage 2	660	447	-	509	342	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	102	106	702	119	94	675	880	-	-	939	-	-
Mov Cap-2 Maneuver	102	106	-	119	94	-	-	-	-	-	-	-
Stage 1	333	347	-	418	455	-	-	-	-	-	-	-
Stage 2	497	436	-	416	302	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	29.5		24.2		0.3		1.2					
HCM LOS	D		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	880	-	-	102	292	119	468	939	-	-		
HCM Lane V/C Ratio	0.025	-	-	0.213	0.149	0.365	0.325	0.116	-	-		
HCM Control Delay (s)	9.2	-	-	49.6	19.5	51.7	16.4	9.3	-	-		
HCM Lane LOS	A	-	-	E	C	F	C	A	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	0.8	0.5	1.5	1.4	0.4	-	-		

Intersection												
Int Delay, s/veh	4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	60	10	40	30	10	10	60	540	10	30	460	90
Future Vol, veh/h	60	10	40	30	10	10	60	540	10	30	460	90
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	65	11	43	33	11	11	65	587	11	33	500	98
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	995	1294	250	1045	1387	299	598	0	0	598	0	0
Stage 1	566	566	-	723	723	-	-	-	-	-	-	-
Stage 2	429	728	-	322	664	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	199	161	750	183	142	697	975	-	-	975	-	-
Stage 1	476	506	-	384	429	-	-	-	-	-	-	-
Stage 2	574	427	-	664	456	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	170	145	750	150	128	697	975	-	-	975	-	-
Mov Cap-2 Maneuver	170	145	-	150	128	-	-	-	-	-	-	-
Stage 1	444	489	-	358	400	-	-	-	-	-	-	-
Stage 2	513	398	-	591	440	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	28		30.7		0.9		0.5					
HCM LOS	D		D									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	975	-	-	170	409	150	216	975	-	-		
HCM Lane V/C Ratio	0.067	-	-	0.384	0.133	0.217	0.101	0.033	-	-		
HCM Control Delay (s)	9	-	-	38.8	15.1	35.5	23.5	8.8	-	-		
HCM Lane LOS	A	-	-	E	C	E	C	A	-	-		
HCM 95th %tile Q(veh)	0.2	-	-	1.7	0.5	0.8	0.3	0.1	-	-		

Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	10	30	10	10	10	30	490	30	120	400	40
Future Vol, veh/h	20	10	30	10	10	10	30	490	30	120	400	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	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	11	11	33	533	33	130	435	43























Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1033	1327	218	1099	1354	283	478	0	0	566	0	0
Stage 1	695	695	-	616	616	-	-	-	-	-	-	-
Stage 2	338	632	-	483	738	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	187	154	786	167	148	714	1081	-	-	1002	-	-
Stage 1	399	442	-	445	480	-	-	-	-	-	-	-
Stage 2	650	472	-	534	422	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	151	130	786	132	125	714	1081	-	-	1002	-	-
Mov Cap-2 Maneuver	151	130	-	132	125	-	-	-	-	-	-	-
Stage 1	387	385	-	431	465	-	-	-	-	-	-	-
Stage 2	606	457	-	433	367	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	22.1		27.4		0.5		2	
HCM LOS	C		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1081	-	-	151	348	132	213	1002	-	-
HCM Lane V/C Ratio	0.03	-	-	0.144	0.125	0.082	0.102	0.13	-	-
HCM Control Delay (s)	8.4	-	-	32.8	16.8	34.7	23.8	9.1	-	-
HCM Lane LOS	A	-	-	D	C	D	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.5	0.4	0.3	0.3	0.4	-	-

























Ambient 2025 AM Peak










5: 92nd Street & Mountain View Road










												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	10	220	10	160	20	360	210	130	300	10
Future Volume (veh/h)	10	10	10	220	10	160	20	360	210	130	300	10
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	11	11	11	239	11	174	22	391	228	141	326	11
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	227	190	190	378	21	332	736	2342	1045	581	2342	1045
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.66	0.66	0.66	0.66	0.66	0.66
Sat Flow, veh/h	1199	858	858	1390	95	1504	1043	3554	1585	804	3554	1585
Grp Volume(v), veh/h	11	0	22	239	0	185	22	391	228	141	326	11
Grp Sat Flow(s),veh/h/ln	1199	0	1716	1390	0	1600	1043	1777	1585	804	1777	1585
Q Serve(g_s), s	0.7	0.0	0.9	13.9	0.0	8.7	0.7	3.6	4.9	6.9	2.9	0.2
Cycle Q Clear(g_c), s	9.4	0.0	0.9	14.8	0.0	8.7	3.6	3.6	4.9	10.5	2.9	0.2
Prop In Lane	1.00		0.50	1.00		0.94	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	227	0	379	378	0	353	736	2342	1045	581	2342	1045
V/C Ratio(X)	0.05	0.00	0.06	0.63	0.00	0.52	0.03	0.17	0.22	0.24	0.14	0.01
Avail Cap(c_a), veh/h	722	0	1086	951	0	1013	736	2342	1045	581	2342	1045
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	33.3	0.0	26.1	32.0	0.0	29.2	6.1	5.5	5.8	7.6	5.4	5.0
Incr Delay (d2), s/veh	0.1	0.0	0.1	1.8	0.0	1.2	0.1	0.2	0.5	1.0	0.1	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	0.2	0.0	0.4	4.7	0.0	3.4	0.1	1.1	1.5	1.2	1.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.4	0.0	26.2	33.7	0.0	30.4	6.2	5.7	6.2	8.5	5.6	5.0
LnGrp LOS	C	A	C	C	A	C	A	A	A	A	A	A
Approach Vol, veh/h		33			424			641			478	
Approach Delay, s/veh		28.6			32.3			5.9			6.4	
Approach LOS		C			C			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		61.0		24.0		61.0		24.0				
Change Period (Y+Rc), s		5.0		* 5.2		5.0		* 5.2				
Max Green Setting (Gmax), s		56.0		* 54		56.0		* 54				
Max Q Clear Time (g_c+I1), s		6.9		11.4		12.5		16.8				
Green Ext Time (p_c), s		3.7		0.1		3.5		2.0				
Intersection Summary												
HCM 6th Ctrl Delay				13.6								
HCM 6th LOS				B								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												










Ambient 2025 MD Peak

1: 92nd Street & Shea Boulevard

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	1250	280	90	1350	70	440	270	120	150	270	210
Future Volume (veh/h)	190	1250	280	90	1350	70	440	270	120	150	270	210
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	207	1359	304	98	1467	76	478	293	130	163	293	228
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	275	1972	612	160	1802	559	565	976	435	231	633	282
Arrive On Green	0.08	0.39	0.39	0.05	0.35	0.35	0.16	0.27	0.27	0.07	0.18	0.18
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	207	1359	304	98	1467	76	478	293	130	163	293	228
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	5.9	22.6	14.8	2.8	26.4	3.3	13.6	6.6	6.6	4.7	7.5	14.0
Cycle Q Clear(g_c), s	5.9	22.6	14.8	2.8	26.4	3.3	13.6	6.6	6.6	4.7	7.5	14.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	275	1972	612	160	1802	559	565	976	435	231	633	282
V/C Ratio(X)	0.75	0.69	0.50	0.61	0.81	0.14	0.85	0.30	0.30	0.71	0.46	0.81
Avail Cap(c_a), veh/h	341	2132	662	239	1981	615	734	1312	585	355	923	412
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	45.6	26.0	23.6	47.4	29.8	22.3	41.1	29.0	29.0	46.3	37.3	40.0
Incr Delay (d2), s/veh	7.2	0.9	0.6	3.8	2.5	0.1	7.2	0.2	0.4	3.9	0.5	7.4
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	2.8	9.0	5.5	1.3	10.9	1.2	6.3	2.8	2.5	2.1	3.3	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.9	26.9	24.2	51.2	32.3	22.4	48.3	29.2	29.4	50.2	37.8	47.4
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	D	D
Approach Vol, veh/h		1870			1641			901			684	
Approach Delay, s/veh		29.3			32.9			39.4			44.0	
Approach LOS		C			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.3	33.5	10.7	44.8	22.1	23.7	14.1	41.4				
Change Period (Y+Rc), s	5.5	* 5.7	6.0	5.7	5.5	* 5.7	6.0	5.7				
Max Green Setting (Gmax), s	10.4	* 37	7.0	42.3	21.5	* 26	10.0	39.3				
Max Q Clear Time (g_c+I1), s	6.7	8.6	4.8	24.6	15.6	16.0	7.9	28.4				
Green Ext Time (p_c), s	0.2	2.4	0.0	10.4	1.0	2.0	0.1	7.3				
Intersection Summary												
HCM 6th Ctrl Delay			34.2									
HCM 6th LOS			C									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												























Intersection												
Int Delay, s/veh	15.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	10	30	80	10	210	30	590	100	150	420	70
Future Vol, veh/h	30	10	30	80	10	210	30	590	100	150	420	70
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	33	11	33	87	11	228	33	641	109	163	457	76
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1175	1599	229	1322	1621	375	533	0	0	750	0	0
Stage 1	783	783	-	762	762	-	-	-	-	-	-	-
Stage 2	392	816	-	560	859	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	147	105	774	114	102	623	1031	-	-	855	-	-
Stage 1	353	403	-	363	412	-	-	-	-	-	-	-
Stage 2	604	389	-	480	371	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	70	82	774	~ 82	80	623	1031	-	-	855	-	-
Mov Cap-2 Maneuver	70	82	-	~ 82	80	-	-	-	-	-	-	-
Stage 1	342	326	-	351	399	-	-	-	-	-	-	-
Stage 2	360	377	-	360	300	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	53.6		70.1		0.4		2.4					
HCM LOS	F		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1031	-	-	70	249	82	476	855	-	-		
HCM Lane V/C Ratio	0.032	-	-	0.466	0.175	1.06	0.502	0.191	-	-		
HCM Control Delay (s)	8.6	-	-	95.1	22.5	207.9	20	10.2	-	-		
HCM Lane LOS	A	-	-	F	C	F	C	B	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	1.9	0.6	6	2.8	0.7	-	-		
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined				*: All major volume in platoon				

Intersection												
Int Delay, s/veh	6.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	60	10	50	80	10	30	50	630	10	20	420	90
Future Vol, veh/h	60	10	50	80	10	30	50	630	10	20	420	90
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	65	11	54	87	11	33	54	685	11	22	457	98
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	957	1305	229	1077	1398	348	555	0	0	696	0	0
Stage 1	501	501	-	799	799	-	-	-	-	-	-	-
Stage 2	456	804	-	278	599	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	212	159	774	173	140	648	1011	-	-	896	-	-
Stage 1	521	541	-	345	396	-	-	-	-	-	-	-
Stage 2	554	394	-	705	489	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	177	147	774	143	129	648	1011	-	-	896	-	-
Mov Cap-2 Maneuver	177	147	-	143	129	-	-	-	-	-	-	-
Stage 1	493	527	-	327	375	-	-	-	-	-	-	-
Stage 2	484	373	-	626	477	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	25.5		48		0.6		0.3					
HCM LOS	D		E									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1011	-	-	177	452	143	323	896	-	-		
HCM Lane V/C Ratio	0.054	-	-	0.368	0.144	0.608	0.135	0.024	-	-		
HCM Control Delay (s)	8.8	-	-	36.7	14.3	63.1	17.9	9.1	-	-		
HCM Lane LOS	A	-	-	E	B	F	C	A	-	-		
HCM 95th %tile Q(veh)	0.2	-	-	1.6	0.5	3.2	0.5	0.1	-	-		

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	50	10	40	30	10	30	10	510	10	20	380	10
Future Vol, veh/h	50	10	40	30	10	30	10	510	10	20	380	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	54	11	43	33	11	33	11	554	11	22	413	11
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	762	1044	207	838	1050	283	424	0	0	565	0	0
Stage 1	457	457	-	582	582	-	-	-	-	-	-	-
Stage 2	305	587	-	256	468	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	294	228	799	259	226	714	1132	-	-	1003	-	-
Stage 1	553	566	-	466	497	-	-	-	-	-	-	-
Stage 2	680	495	-	726	560	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	263	221	799	230	219	714	1132	-	-	1003	-	-
Mov Cap-2 Maneuver	263	221	-	230	219	-	-	-	-	-	-	-
Stage 1	547	554	-	461	492	-	-	-	-	-	-	-
Stage 2	628	490	-	658	548	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	17.4		17.8		0.2		0.4					
HCM LOS	C		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1132	-	-	263	525	230	456	1003	-	-		
HCM Lane V/C Ratio	0.01	-	-	0.207	0.104	0.142	0.095	0.022	-	-		
HCM Control Delay (s)	8.2	-	-	22.2	12.6	23.2	13.7	8.7	-	-		
HCM Lane LOS	A	-	-	C	B	C	B	A	-	-		
HCM 95th %tile Q(veh)	0	-	-	0.8	0.3	0.5	0.3	0.1	-	-		

Ambient 2025 MD Peak

























5: 92nd Street & Mountain View Road










												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	30	190	10	160	20	420	210	120	370	10
Future Volume (veh/h)	10	10	30	190	10	160	20	420	210	120	370	10
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	11	11	33	207	11	174	22	457	210	130	402	11
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	1.00	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	87	261	340	20	318	696	2390	1066	562	2390	1066
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.67	0.67	0.67	0.67	0.67	0.67
Sat Flow, veh/h	1199	412	1236	1362	95	1504	973	3554	1585	769	3554	1585
Grp Volume(v), veh/h	11	0	44	207	0	185	22	457	210	130	402	11
Grp Sat Flow(s),veh/h/ln	1199	0	1648	1362	0	1600	973	1777	1585	769	1777	1585
Q Serve(g_s), s	0.7	0.0	1.9	12.7	0.0	9.1	0.7	4.2	4.4	6.7	3.7	0.2
Cycle Q Clear(g_c), s	9.8	0.0	1.9	14.6	0.0	9.1	4.4	4.2	4.4	10.9	3.7	0.2
Prop In Lane	1.00		0.75	1.00		0.94	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	212	0	348	340	0	338	696	2390	1066	562	2390	1066
V/C Ratio(X)	0.05	0.00	0.13	0.61	0.00	0.55	0.03	0.19	0.20	0.23	0.17	0.01
Avail Cap(c_a), veh/h	653	0	954	841	0	926	696	2390	1066	562	2390	1066
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	35.2	0.0	28.0	34.0	0.0	30.9	6.1	5.4	5.4	7.5	5.3	4.7
Incr Delay (d2), s/veh	0.1	0.0	0.2	1.8	0.0	1.4	0.1	0.2	0.4	1.0	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	0.2	0.0	0.8	4.3	0.0	3.5	0.1	1.3	1.3	1.1	1.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.3	0.0	28.2	35.7	0.0	32.2	6.2	5.6	5.8	8.4	5.5	4.8
LnGrp LOS	D	A	C	D	A	C	A	A	A	A	A	A
Approach Vol, veh/h		55			392			689			543	
Approach Delay, s/veh		29.6			34.1			5.7			6.1	
Approach LOS		C			C			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		64.0		23.7		64.0		23.7				
Change Period (Y+Rc), s		5.0		* 5.2		5.0		* 5.2				
Max Green Setting (Gmax), s		59.0		* 51		59.0		* 51				
Max Q Clear Time (g_c+I1), s		6.4		11.8		12.9		16.6				
Green Ext Time (p_c), s		4.2		0.3		4.2		1.9				
Intersection Summary												
HCM 6th Ctrl Delay			13.2									
HCM 6th LOS			B									
Notes												

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Ambient 2025 PM Peak

1: 92nd Street & Shea Boulevard










												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	1280	150	40	1210	80	480	320	100	140	180	170
Future Volume (veh/h)	230	1280	150	40	1210	80	480	320	100	140	180	170
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	250	1391	163	43	1315	87	522	348	109	152	196	185
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	325	1978	614	124	1682	522	622	948	423	224	539	240
Arrive On Green	0.09	0.39	0.39	0.04	0.33	0.33	0.18	0.27	0.27	0.06	0.15	0.15
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	250	1391	163	43	1315	87	522	348	109	152	196	185
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	6.6	21.4	6.6	1.1	21.7	3.6	13.6	7.4	5.1	4.0	4.6	10.5
Cycle Q Clear(g_c), s	6.6	21.4	6.6	1.1	21.7	3.6	13.6	7.4	5.1	4.0	4.6	10.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	325	1978	614	124	1682	522	622	948	423	224	539	240
V/C Ratio(X)	0.77	0.70	0.27	0.35	0.78	0.17	0.84	0.37	0.26	0.68	0.36	0.77
Avail Cap(c_a), veh/h	407	2256	700	185	1928	599	832	1551	692	370	1076	480
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	41.3	24.1	19.5	44.0	28.3	22.2	37.0	27.9	27.0	42.8	35.6	38.1
Incr Delay (d2), s/veh	6.8	0.9	0.2	1.6	1.9	0.1	5.8	0.2	0.3	3.6	0.4	5.1
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	3.1	8.5	2.4	0.5	8.9	1.4	6.2	3.1	1.9	1.8	2.0	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.2	25.0	19.8	45.6	30.2	22.4	42.8	28.1	27.3	46.3	36.0	43.2
LnGrp LOS	D	C	B	D	C	C	D	C	C	D	D	D
Approach Vol, veh/h		1804			1445			979			533	
Approach Delay, s/veh		27.7			30.2			35.9			41.5	
Approach LOS		C			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.6	30.6	9.4	41.9	22.3	19.9	14.8	36.5				
Change Period (Y+Rc), s	5.5	* 5.7	6.0	5.7	5.5	* 5.7	6.0	5.7				
Max Green Setting (Gmax), s	10.0	* 41	5.0	41.3	22.5	* 28	11.0	35.3				
Max Q Clear Time (g_c+I1), s	6.0	9.4	3.1	23.4	15.6	12.5	8.6	23.7				
Green Ext Time (p_c), s	0.2	2.8	0.0	10.2	1.2	1.7	0.2	7.0				
Intersection Summary												
HCM 6th Ctrl Delay			31.7									
HCM 6th LOS			C									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												










Intersection												
Int Delay, s/veh	5.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	10	50	30	10	160	10	710	90	100	260	20
Future Vol, veh/h	40	10	50	30	10	160	10	710	90	100	260	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	43	11	54	33	11	174	11	772	98	109	283	22

Major/Minor	Minor2		Minor1		Major1		Major2	
Conflicting Flow All	915	1393	142	1208	1366	435	305	0
Stage 1	501	501	-	843	843	-	-	-
Stage 2	414	892	-	365	523	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-
Pot Cap-1 Maneuver	228	141	880	139	146	569	1253	-
Stage 1	521	541	-	325	378	-	-	-
Stage 2	586	358	-	627	529	-	-	-
Platoon blocked, %								-
Mov Cap-1 Maneuver	131	120	880	108	124	569	1253	-
Mov Cap-2 Maneuver	131	120	-	108	124	-	-	-
Stage 1	516	464	-	322	375	-	-	-
Stage 2	392	355	-	493	454	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	27.2	22.7	0.1	2.7
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1253	-	-	131	428	108	470	770	-	-
HCM Lane V/C Ratio	0.009	-	-	0.332	0.152	0.302	0.393	0.141	-	-
HCM Control Delay (s)	7.9	-	-	45.6	14.9	52.1	17.5	10.4	-	-
HCM Lane LOS	A	-	-	E	B	F	C	B	-	-
HCM 95th %tile Q(veh)	0	-	-	1.3	0.5	1.2	1.8	0.5	-	-

Intersection												
Int Delay, s/veh	4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	90	10	30	30	10	10	20	730	10	20	330	30
Future Vol, veh/h	90	10	30	30	10	10	20	730	10	20	330	30
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	98	11	33	33	11	11	22	793	11	22	359	33
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	849	1251	180	1072	1279	402	392	0	0	804	0	0
Stage 1	403	403	-	843	843	-	-	-	-	-	-	-
Stage 2	446	848	-	229	436	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	254	171	832	175	165	598	1163	-	-	816	-	-
Stage 1	595	598	-	325	378	-	-	-	-	-	-	-
Stage 2	561	376	-	753	578	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	228	163	832	154	158	598	1163	-	-	816	-	-
Mov Cap-2 Maneuver	228	163	-	154	158	-	-	-	-	-	-	-
Stage 1	584	582	-	319	371	-	-	-	-	-	-	-
Stage 2	525	369	-	691	562	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	26.8		29		0.2		0.5					
HCM LOS	D		D									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1163	-	-	228	411	154	250	816	-	-		
HCM Lane V/C Ratio	0.019	-	-	0.429	0.106	0.212	0.087	0.027	-	-		
HCM Control Delay (s)	8.2	-	-	32.2	14.8	34.5	20.8	9.5	-	-		
HCM Lane LOS	A	-	-	D	B	D	C	A	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	2	0.4	0.8	0.3	0.1	-	-		

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	50	10	40	30	10	30	10	510	10	20	380	10
Future Vol, veh/h	50	10	40	30	10	30	10	510	10	20	380	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	54	11	43	33	11	33	11	554	11	22	413	11























Major/Minor	Minor2		Minor1		Major1		Major2	
Conflicting Flow All	762	1044	207	838	1050	283	424	0
Stage 1	457	457	-	582	582	-	-	-
Stage 2	305	587	-	256	468	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-
Pot Cap-1 Maneuver	294	228	799	259	226	714	1132	-
Stage 1	553	566	-	466	497	-	-	-
Stage 2	680	495	-	726	560	-	-	-
Platoon blocked, %								-
Mov Cap-1 Maneuver	263	221	799	230	219	714	1132	-
Mov Cap-2 Maneuver	263	221	-	230	219	-	-	-
Stage 1	547	554	-	461	492	-	-	-
Stage 2	628	490	-	658	548	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.4	17.8	0.2	0.4
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1132	-	-	263	525	230	456	1003	-	-
HCM Lane V/C Ratio	0.01	-	-	0.207	0.104	0.142	0.095	0.022	-	-
HCM Control Delay (s)	8.2	-	-	22.2	12.6	23.2	13.7	8.7	-	-
HCM Lane LOS	A	-	-	C	B	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.8	0.3	0.5	0.3	0.1	-	-






















Ambient 2025 PM Peak

5: 92nd Street & Mountain View Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	50	190	10	130	10	370	170	90	350	10
Future Volume (veh/h)	10	10	50	190	10	130	10	370	170	90	350	10
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	11	11	54	207	11	141	11	402	185	98	380	11
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	271	62	306	351	26	337	689	2291	1022	588	2291	1022
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.64	0.64	0.64	0.64	0.64	0.64
Sat Flow, veh/h	1235	275	1352	1337	116	1487	993	3554	1585	829	3554	1585
Grp Volume(v), veh/h	11	0	65	207	0	152	11	402	185	98	380	11
Grp Sat Flow(s),veh/h/ln	1235	0	1627	1337	0	1603	993	1777	1585	829	1777	1585
Q Serve(g_s), s	0.6	0.0	2.5	11.7	0.0	6.4	0.4	3.6	3.7	4.3	3.4	0.2
Cycle Q Clear(g_c), s	7.0	0.0	2.5	14.2	0.0	6.4	3.7	3.6	3.7	7.8	3.4	0.2
Prop In Lane	1.00		0.83	1.00		0.93	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	271	0	368	351	0	363	689	2291	1022	588	2291	1022
V/C Ratio(X)	0.04	0.00	0.18	0.59	0.00	0.42	0.02	0.18	0.18	0.17	0.17	0.01
Avail Cap(c_a), veh/h	909	0	1209	1041	0	1191	689	2291	1022	588	2291	1022
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	29.2	0.0	24.7	30.4	0.0	26.2	6.3	5.6	5.7	7.2	5.6	5.0
Incr Delay (d2), s/veh	0.1	0.0	0.2	1.6	0.0	0.8	0.0	0.2	0.4	0.6	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	0.2	0.0	1.0	3.8	0.0	2.4	0.1	1.1	1.1	0.8	1.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.2	0.0	24.9	32.0	0.0	26.9	6.4	5.8	6.0	7.8	5.8	5.0
LnGrp LOS	C	A	C	C	A	C	A	A	A	A	A	A
Approach Vol, veh/h		76			359			598			489	
Approach Delay, s/veh		25.5			29.8			5.9			6.1	
Approach LOS		C			C			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		56.0		23.1		56.0		23.1				
Change Period (Y+Rc), s		5.0		* 5.2		5.0		* 5.2				
Max Green Setting (Gmax), s		51.0		* 59		51.0		* 59				
Max Q Clear Time (g_c+I1), s		5.7		9.0		9.8		16.2				
Green Ext Time (p_c), s		3.5		0.4		3.6		1.7				
Intersection Summary												
HCM 6th Ctrl Delay				12.6								
HCM 6th LOS				B								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												






















Ambient 2025 AM Peak

3: 92nd Street & Cochise Drive

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	10	40	30	10	10	60	540	10	30	460	90
Future Volume (veh/h)	60	10	40	30	10	10	60	540	10	30	460	90
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	65	11	43	33	11	11	65	587	11	33	500	98
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	514	49	193	484	127	127	616	1596	30	601	1589	709
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.45	0.45	0.45	0.45	0.45	0.45
Sat Flow, veh/h	1390	333	1303	1350	858	858	820	3568	67	820	3554	1585
Grp Volume(v), veh/h	65	0	54	33	0	22	65	292	306	33	500	98
Grp Sat Flow(s),veh/h/ln	1390	0	1636	1350	0	1716	820	1777	1858	820	1777	1585
Q Serve(g_s), s	0.9	0.0	0.6	0.5	0.0	0.2	1.2	2.4	2.4	0.6	2.0	0.8
Cycle Q Clear(g_c), s	1.2	0.0	0.6	1.1	0.0	0.2	3.2	2.4	2.4	3.0	2.0	0.8
Prop In Lane	1.00		0.80	1.00		0.50	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	514	0	242	484	0	254	616	795	831	601	1589	709
V/C Ratio(X)	0.13	0.00	0.22	0.07	0.00	0.09	0.11	0.37	0.37	0.05	0.31	0.14
Avail Cap(c_a), veh/h	2652	0	2759	2561	0	2894	2961	5873	6142	2946	11745	5239
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	8.7	0.0	8.3	8.8	0.0	8.2	5.0	4.1	4.1	5.1	4.0	3.6
Incr Delay (d2), s/veh	0.1	0.0	0.5	0.1	0.0	0.1	0.1	0.3	0.3	0.0	0.1	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	0.2	0.0	0.2	0.1	0.0	0.1	0.1	0.2	0.2	0.0	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.8	0.0	8.8	8.9	0.0	8.3	5.1	4.4	4.3	5.1	4.1	3.7
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		119			55			663			631	
Approach Delay, s/veh		8.8			8.7			4.4			4.1	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		14.4		7.8		14.4		7.8				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		73.5		37.5		73.5		37.5				
Max Q Clear Time (g_c+I1), s		5.2		3.2		5.0		3.1				
Green Ext Time (p_c), s		4.7		0.5		4.3		0.2				
Intersection Summary												
HCM 6th Ctrl Delay			4.8									
HCM 6th LOS			A									






















Ambient 2025 MD Peak

3: 92nd Street & Cochise Drive

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	10	50	80	10	30	50	630	10	20	420	90
Future Volume (veh/h)	60	10	50	80	10	30	50	630	10	20	420	90
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	65	11	54	87	11	33	54	685	11	22	457	98
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	509	48	234	490	71	214	616	1599	26	540	1587	708
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.45	0.45	0.45	0.45	0.45	0.45
Sat Flow, veh/h	1362	275	1352	1337	412	1236	854	3579	57	749	3554	1585
Grp Volume(v), veh/h	65	0	65	87	0	44	54	340	356	22	457	98
Grp Sat Flow(s),veh/h/ln	1362	0	1627	1337	0	1648	854	1777	1860	749	1777	1585
Q Serve(g_s), s	1.0	0.0	0.8	1.4	0.0	0.5	1.0	3.1	3.1	0.5	1.9	0.9
Cycle Q Clear(g_c), s	1.5	0.0	0.8	2.2	0.0	0.5	2.9	3.1	3.1	3.6	1.9	0.9
Prop In Lane	1.00		0.83	1.00		0.75	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	509	0	282	490	0	285	616	794	831	540	1587	708
V/C Ratio(X)	0.13	0.00	0.23	0.18	0.00	0.15	0.09	0.43	0.43	0.04	0.29	0.14
Avail Cap(c_a), veh/h	2489	0	2646	2432	0	2680	2848	5441	5696	2499	10883	4854
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	9.0	0.0	8.4	9.4	0.0	8.3	5.1	4.5	4.5	5.7	4.2	3.9
Incr Delay (d2), s/veh	0.1	0.0	0.4	0.2	0.0	0.2	0.1	0.4	0.4	0.0	0.1	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	0.2	0.0	0.2	0.3	0.0	0.1	0.1	0.4	0.4	0.0	0.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.1	0.0	8.8	9.6	0.0	8.6	5.2	4.8	4.8	5.7	4.3	4.0
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		130			131			750			577	
Approach Delay, s/veh		9.0			9.2			4.9			4.3	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.1		8.6		15.1		8.6				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		72.5		38.5		72.5		38.5				
Max Q Clear Time (g_c+I1), s		5.1		3.5		5.6		4.2				
Green Ext Time (p_c), s		5.5		0.6		3.8		0.5				
Intersection Summary												
HCM 6th Ctrl Delay			5.3									
HCM 6th LOS			A									

Ambient 2025 PM Peak

3: 92nd Street & Cochise Drive

























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	10	30	30	10	10	20	730	10	20	330	30
Future Volume (veh/h)	90	10	30	30	10	10	20	730	10	20	330	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	98	11	33	33	11	11	22	793	11	22	359	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	487	62	186	467	129	129	715	1732	24	521	1715	765
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.48	0.48	0.48	0.48	0.48	0.48
Sat Flow, veh/h	1390	412	1236	1362	858	858	992	3588	50	677	3554	1585
Grp Volume(v), veh/h	98	0	44	33	0	22	22	393	411	22	359	33
Grp Sat Flow(s),veh/h/ln	1390	0	1648	1362	0	1716	992	1777	1861	677	1777	1585
Q Serve(g_s), s	1.6	0.0	0.6	0.5	0.0	0.3	0.3	3.6	3.6	0.5	1.4	0.3
Cycle Q Clear(g_c), s	1.9	0.0	0.6	1.1	0.0	0.3	1.7	3.6	3.6	4.1	1.4	0.3
Prop In Lane	1.00		0.75	1.00		0.50	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	487	0	248	467	0	258	715	857	898	521	1715	765
V/C Ratio(X)	0.20	0.00	0.18	0.07	0.00	0.09	0.03	0.46	0.46	0.04	0.21	0.04
Avail Cap(c_a), veh/h	2346	0	2452	2288	0	2553	3248	5396	5652	2250	10791	4813
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	9.8	0.0	9.1	9.6	0.0	9.0	4.2	4.2	4.2	5.6	3.7	3.4
Incr Delay (d2), s/veh	0.2	0.0	0.3	0.1	0.0	0.1	0.0	0.4	0.4	0.0	0.1	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	0.3	0.0	0.2	0.1	0.0	0.1	0.0	0.4	0.4	0.0	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.0	0.0	9.4	9.6	0.0	9.1	4.2	4.6	4.6	5.6	3.7	3.4
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		142			55			826			414	
Approach Delay, s/veh		9.8			9.4			4.6			3.8	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		16.3		8.2		16.3		8.2				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		74.5		36.5		74.5		36.5				
Max Q Clear Time (g_c+I1), s		5.6		3.9		6.1		3.1				
Green Ext Time (p_c), s		6.2		0.5		2.8		0.2				
Intersection Summary												
HCM 6th Ctrl Delay			5.1									
HCM 6th LOS			A									

Appendix F.4
Level-of-Service
2023 with Site Traffic Volumes



2023 with Site AM Peak

1: 92nd Street & Shea Boulevard

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	1356	351	84	1284	68	400	212	102	119	235	177
Future Volume (veh/h)	135	1356	351	84	1284	68	400	212	102	119	235	177
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	175	1490	394	117	1459	77	449	219	111	132	250	188
Peak Hour Factor	0.77	0.91	0.89	0.72	0.88	0.88	0.89	0.97	0.92	0.90	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	246	2007	623	180	1910	593	543	906	404	200	554	247
Arrive On Green	0.07	0.39	0.39	0.05	0.37	0.37	0.16	0.26	0.26	0.06	0.16	0.16
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	175	1490	394	117	1459	77	449	219	111	132	250	188
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	4.7	23.7	19.0	3.1	23.7	3.0	11.9	4.6	5.3	3.5	6.0	10.8
Cycle Q Clear(g_c), s	4.7	23.7	19.0	3.1	23.7	3.0	11.9	4.6	5.3	3.5	6.0	10.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	246	2007	623	180	1910	593	543	906	404	200	554	247
V/C Ratio(X)	0.71	0.74	0.63	0.65	0.76	0.13	0.83	0.24	0.27	0.66	0.45	0.76
Avail Cap(c_a), veh/h	329	2335	725	219	2174	675	748	1456	650	329	1025	457
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	43.0	24.6	23.2	44.0	26.0	19.5	38.7	28.0	28.2	43.7	36.3	38.3
Incr Delay (d2), s/veh	4.7	1.1	1.4	4.9	1.5	0.1	5.5	0.1	0.4	3.7	0.6	4.8
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	2.1	9.4	7.1	1.5	9.5	1.1	5.4	2.0	2.0	1.6	2.7	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.7	25.7	24.6	48.9	27.4	19.6	44.2	28.1	28.6	47.4	36.9	43.1
LnGrp LOS	D	C	C	D	C	B	D	C	C	D	D	D
Approach Vol, veh/h		2059			1653			779			570	
Approach Delay, s/veh		27.4			28.6			37.4			41.3	
Approach LOS		C			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	29.8	10.9	42.9	20.4	20.4	12.7	41.1				
Change Period (Y+Rc), s	5.5	* 5.7	6.0	5.7	5.5	* 5.7	6.0	5.7				
Max Green Setting (Gmax), s	9.0	* 39	6.0	43.3	20.5	* 27	9.0	40.3				
Max Q Clear Time (g_c+I1), s	5.5	7.3	5.1	25.7	13.9	12.8	6.7	25.7				
Green Ext Time (p_c), s	0.1	1.8	0.0	11.5	1.0	2.0	0.1	9.1				

Intersection Summary























HCM 6th Ctrl Delay	30.9
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.






















2023 with Site AM Peak

5: 92nd Street & Mountain View Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	3	13	209	7	158	17	352	203	135	311	4
Future Volume (veh/h)	6	3	13	209	7	158	17	352	203	135	311	4
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	20	4	20	275	24	176	40	383	231	185	362	11
Peak Hour Factor	0.30	0.75	0.64	0.76	0.29	0.90	0.42	0.92	0.88	0.73	0.86	0.38
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	245	67	334	406	48	350	685	2277	1016	562	2277	1016
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.64	0.64	0.64	0.64	0.64	0.64
Sat Flow, veh/h	1182	271	1355	1387	194	1421	1009	3554	1585	808	3554	1585
Grp Volume(v), veh/h	20	0	24	275	0	200	40	383	231	185	362	11
Grp Sat Flow(s),veh/h/ln	1182	0	1626	1387	0	1615	1009	1777	1585	808	1777	1585
Q Serve(g_s), s	1.3	0.0	1.0	17.1	0.0	9.6	1.5	3.9	5.5	10.8	3.7	0.2
Cycle Q Clear(g_c), s	11.0	0.0	1.0	18.1	0.0	9.6	5.2	3.9	5.5	14.7	3.7	0.2
Prop In Lane	1.00		0.83	1.00		0.88	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	245	0	401	406	0	398	685	2277	1016	562	2277	1016
V/C Ratio(X)	0.08	0.00	0.06	0.68	0.00	0.50	0.06	0.17	0.23	0.33	0.16	0.01
Avail Cap(c_a), veh/h	630	0	931	858	0	924	685	2277	1016	562	2277	1016
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	34.0	0.0	26.1	33.0	0.0	29.3	7.5	6.5	6.8	9.5	6.5	5.9
Incr Delay (d2), s/veh	0.1	0.0	0.1	2.0	0.0	1.0	0.2	0.2	0.5	1.6	0.1	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	0.4	0.0	0.4	5.8	0.0	3.8	0.3	1.3	1.8	2.0	1.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.2	0.0	26.1	35.0	0.0	30.3	7.7	6.7	7.4	11.1	6.7	5.9
LnGrp LOS	C	A	C	C	A	C	A	A	A	B	A	A
Approach Vol, veh/h		44			475			654			558	
Approach Delay, s/veh		29.8			33.0			7.0			8.1	
Approach LOS		C			C			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		63.0		27.5		63.0		27.5				
Change Period (Y+Rc), s		5.0		* 5.2		5.0		* 5.2				
Max Green Setting (Gmax), s		58.0		* 52		58.0		* 52				
Max Q Clear Time (g_c+I1), s		7.5		13.0		16.7		20.1				
Green Ext Time (p_c), s		3.7		0.2		4.2		2.2				
Intersection Summary												
HCM 6th Ctrl Delay				15.1								
HCM 6th LOS				B								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												























2023 with Site AM Peak










3: 92nd Street & Cochise Drive










												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	4	43	85	9	28	56	520	28	57	439	88
Future Volume (veh/h)	54	4	43	85	9	28	56	520	28	57	439	88
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	78	16	56	131	12	42	69	559	52	68	523	121
Peak Hour Factor	0.69	0.25	0.77	0.65	0.75	0.67	0.81	0.93	0.54	0.84	0.84	0.73
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	527	77	270	511	77	270	549	1450	135	542	1568	699
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.44	0.44	0.44	0.44	0.44	0.44
Sat Flow, veh/h	1350	365	1276	1328	365	1276	786	3287	305	810	3554	1585
Grp Volume(v), veh/h	78	0	72	131	0	54	69	302	309	68	523	121
Grp Sat Flow(s),veh/h/ln	1350	0	1641	1328	0	1641	786	1777	1815	810	1777	1585
Q Serve(g_s), s	1.3	0.0	0.9	2.3	0.0	0.7	1.6	3.0	3.0	1.6	2.5	1.2
Cycle Q Clear(g_c), s	2.0	0.0	0.9	3.3	0.0	0.7	4.1	3.0	3.0	4.6	2.5	1.2
Prop In Lane	1.00		0.78	1.00		0.78	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	527	0	347	511	0	347	549	784	801	542	1568	699
V/C Ratio(X)	0.15	0.00	0.21	0.26	0.00	0.16	0.13	0.38	0.39	0.13	0.33	0.17
Avail Cap(c_a), veh/h	2666	0	2946	2615	0	2946	2160	4425	4521	2203	8850	3947
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	9.1	0.0	8.4	9.8	0.0	8.3	6.1	4.9	4.9	6.4	4.7	4.4
Incr Delay (d2), s/veh	0.1	0.0	0.3	0.3	0.0	0.2	0.1	0.3	0.3	0.1	0.1	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	0.3	0.0	0.2	0.5	0.0	0.2	0.2	0.5	0.5	0.1	0.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.3	0.0	8.7	10.0	0.0	8.5	6.2	5.2	5.2	6.5	4.9	4.5
LnGrp LOS	A	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		150			185			680			712	
Approach Delay, s/veh		9.0			9.6			5.3			5.0	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.9		10.0		15.9		10.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		64.5		46.5		64.5		46.5				
Max Q Clear Time (g_c+I1), s		6.1		4.0		6.6		5.3				
Green Ext Time (p_c), s		4.9		0.7		4.9		0.7				
Intersection Summary												
HCM 6th Ctrl Delay				5.9								
HCM 6th LOS				A								

2023 with Site AM Peak

3: 92nd Street & Cochise Drive

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	4	43	85	9	28	56	520	28	57	439	88
Future Volume (veh/h)	54	4	43	85	9	28	56	520	28	57	439	88
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	78	16	56	131	12	42	69	559	52	68	523	121
Peak Hour Factor	0.69	0.25	0.77	0.65	0.75	0.67	0.81	0.93	0.54	0.84	0.84	0.73
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	554	76	266	537	76	266	547	1441	643	548	1441	643
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	1350	365	1276	1328	365	1276	786	3554	1585	810	3554	1585
Grp Volume(v), veh/h	78	0	72	131	0	54	69	559	52	68	523	121
Grp Sat Flow(s),veh/h/ln	1350	0	1641	1328	0	1641	786	1777	1585	810	1777	1585
Q Serve(g_s), s	1.2	0.0	0.8	2.1	0.0	0.6	1.6	2.6	0.5	1.5	2.4	1.1
Cycle Q Clear(g_c), s	1.8	0.0	0.8	3.0	0.0	0.6	4.0	2.6	0.5	4.1	2.4	1.1
Prop In Lane	1.00		0.78	1.00		0.78	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	554	0	342	537	0	342	547	1441	643	548	1441	643
V/C Ratio(X)	0.14	0.00	0.21	0.24	0.00	0.16	0.13	0.39	0.08	0.12	0.36	0.19
Avail Cap(c_a), veh/h	1316	0	1268	1287	0	1268	836	2745	1225	845	2745	1225
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	8.3	0.0	7.6	8.9	0.0	7.6	6.2	4.9	4.3	6.3	4.8	4.5
Incr Delay (d2), s/veh	0.1	0.0	0.3	0.2	0.0	0.2	0.1	0.2	0.1	0.1	0.2	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	0.2	0.0	0.2	0.4	0.0	0.1	0.1	0.4	0.1	0.1	0.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.4	0.0	7.9	9.1	0.0	7.8	6.3	5.1	4.3	6.4	5.0	4.6
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		150			185			680			712	
Approach Delay, s/veh		8.2			8.7			5.1			5.1	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		13.9		9.4		13.9		9.4				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		6.0		3.8		6.1		5.0				
Green Ext Time (p_c), s		3.5		0.5		3.3		0.5				
Intersection Summary												
HCM 6th Ctrl Delay			5.7									
HCM 6th LOS			A									

Intersection												
Int Delay, s/veh	5.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	4	26	44	3	125	20	507	78	99	540	118
Future Vol, veh/h	16	4	26	44	3	125	20	507	78	99	540	118
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	75	33	64	75	38	88	79	89	86	96	87	79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	12	41	59	8	142	25	570	91	103	621	149
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1166	1538	311	1189	1642	331	770	0	0	661	0	0
Stage 1	827	827	-	666	666	-	-	-	-	-	-	-
Stage 2	339	711	-	523	976	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	149	115	685	143	99	665	840	-	-	923	-	-
Stage 1	332	384	-	415	456	-	-	-	-	-	-	-
Stage 2	649	434	-	505	327	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	97	99	685	109	85	665	840	-	-	923	-	-
Mov Cap-2 Maneuver	97	99	-	109	85	-	-	-	-	-	-	-
Stage 1	322	341	-	403	442	-	-	-	-	-	-	-
Stage 2	486	421	-	407	290	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	29.4		31.2		0.3		1.1					
HCM LOS	D		D									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	840	-	-	97	290	109	489	923	-	-		
HCM Lane V/C Ratio	0.03	-	-	0.22	0.182	0.538	0.307	0.112	-	-		
HCM Control Delay (s)	9.4	-	-	52.3	20.2	71.2	15.6	9.4	-	-		
HCM Lane LOS	A	-	-	F	C	F	C	A	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	0.8	0.7	2.5	1.3	0.4	-	-		

Intersection												
Int Delay, s/veh	19.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	54	4	43	85	9	28	56	520	28	57	439	88
Future Vol, veh/h	54	4	43	85	9	28	56	520	28	57	439	88
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	69	25	77	65	75	67	81	93	54	84	84	73
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	78	16	56	131	12	42	69	559	52	68	523	121










Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1083	1408	262	1129	1503	306	644	0	0	611	0	0
Stage 1	659	659	-	723	723	-	-	-	-	-	-	-
Stage 2	424	749	-	406	780	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	172	138	737	159	120	690	937	-	-	964	-	-
Stage 1	419	459	-	384	429	-	-	-	-	-	-	-
Stage 2	578	417	-	593	404	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	132	119	737	~ 118	103	690	937	-	-	964	-	-
Mov Cap-2 Maneuver	132	119	-	~ 118	103	-	-	-	-	-	-	-
Stage 1	388	426	-	356	397	-	-	-	-	-	-	-
Stage 2	488	386	-	490	375	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	43.1		137.2		0.9		0.9	
HCM LOS	E		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	937	-	-	132	342	118	304	964	-	-
HCM Lane V/C Ratio	0.074	-	-	0.593	0.21	1.108	0.177	0.07	-	-
HCM Control Delay (s)	9.1	-	-	65.8	18.3	185.6	19.4	9	-	-
HCM Lane LOS	A	-	-	F	C	F	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	3	0.8	7.8	0.6	0.2	-	-

























Notes

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

Intersection												
Int Delay, s/veh	3.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	0	32	14	2	14	29	479	26	125	422	45
Future Vol, veh/h	20	0	32	14	2	14	29	479	26	125	422	45
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	75	25	75	65	25	54	75	89	75	82	86	66
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	0	43	22	8	26	39	538	35	152	491	68
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1146	1446	246	1184	1497	287	559	0	0	573	0	0
Stage 1	795	795	-	634	634	-	-	-	-	-	-	-
Stage 2	351	651	-	550	863	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	154	131	754	145	121	710	1008	-	-	996	-	-
Stage 1	347	398	-	434	471	-	-	-	-	-	-	-
Stage 2	639	463	-	487	370	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	120	107	754	117	98	710	1008	-	-	996	-	-
Mov Cap-2 Maneuver	120	107	-	117	98	-	-	-	-	-	-	-
Stage 1	333	337	-	417	453	-	-	-	-	-	-	-
Stage 2	581	445	-	389	313	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	22.9			28.3			0.6			2		
HCM LOS	C			D								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1008	-	-	120	754	117	287	996	-	-		
HCM Lane V/C Ratio	0.038	-	-	0.222	0.057	0.184	0.118	0.153	-	-		
HCM Control Delay (s)	8.7	-	-	43.4	10.1	42.6	19.2	9.3	-	-		
HCM Lane LOS	A	-	-	E	B	E	C	A	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	0.8	0.2	0.6	0.4	0.5	-	-		























2023 with Site MD Peak






















1: 92nd Street & Shea Boulevard

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	183	1197	282	85	1290	70	433	270	117	142	273	199
Future Volume (veh/h)	183	1197	282	85	1290	70	433	270	117	142	273	199
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	251	1301	340	112	1418	73	562	329	138	160	294	207
Peak Hour Factor	0.73	0.92	0.83	0.76	0.91	0.96	0.77	0.82	0.85	0.89	0.93	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	317	1922	597	172	1707	530	648	1017	454	227	584	260
Arrive On Green	0.09	0.38	0.38	0.05	0.33	0.33	0.19	0.29	0.29	0.07	0.16	0.16
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	251	1301	340	112	1418	73	562	329	138	160	294	207
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	7.3	22.0	17.6	3.3	26.4	3.3	16.3	7.5	7.0	4.7	7.8	12.9
Cycle Q Clear(g_c), s	7.3	22.0	17.6	3.3	26.4	3.3	16.3	7.5	7.0	4.7	7.8	12.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	317	1922	597	172	1707	530	648	1017	454	227	584	260
V/C Ratio(X)	0.79	0.68	0.57	0.65	0.83	0.14	0.87	0.32	0.30	0.71	0.50	0.79
Avail Cap(c_a), veh/h	369	1995	619	268	1847	573	784	1326	592	345	875	390
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	45.9	26.9	25.5	48.1	31.6	24.0	40.7	29.0	28.8	47.2	39.3	41.4
Incr Delay (d2), s/veh	9.7	0.9	1.2	4.1	3.2	0.1	8.8	0.2	0.4	4.0	0.7	6.6
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	3.6	8.9	6.7	1.5	11.1	1.3	7.6	3.2	2.7	2.1	3.5	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.6	27.8	26.7	52.2	34.8	24.1	49.5	29.1	29.2	51.2	39.9	48.0
LnGrp LOS	E	C	C	D	C	C	D	C	C	D	D	D
Approach Vol, veh/h		1892			1603			1029			661	
Approach Delay, s/veh		31.3			35.5			40.2			45.2	
Approach LOS		C			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.3	35.2	11.1	44.5	24.8	22.6	15.5	40.2				
Change Period (Y+Rc), s	5.5	* 5.7	6.0	5.7	5.5	* 5.7	6.0	5.7				
Max Green Setting (Gmax), s	10.3	* 39	8.0	40.3	23.4	* 25	11.0	37.3				
Max Q Clear Time (g_c+I1), s	6.7	9.5	5.3	24.0	18.3	14.9	9.3	28.4				
Green Ext Time (p_c), s	0.2	2.7	0.1	9.6	1.1	2.0	0.1	6.1				
Intersection Summary												
HCM 6th Ctrl Delay			36.1									
HCM 6th LOS			D									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

2023 with Site MD Peak























5: 92nd Street & Mountain View Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	5	30	186	13	152	18	412	204	131	404	6
Future Volume (veh/h)	8	5	30	186	13	152	18	412	204	131	404	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	14	12	34	219	28	192	21	453	219	156	493	10
Peak Hour Factor	0.58	0.42	0.88	0.85	0.46	0.79	0.85	0.91	0.93	0.84	0.82	0.63
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	197	96	272	353	46	314	626	2355	1050	551	2355	1050
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.66	0.66	0.66	0.66	0.66	0.66
Sat Flow, veh/h	1161	431	1220	1360	206	1411	896	3554	1585	766	3554	1585
Grp Volume(v), veh/h	14	0	46	219	0	220	21	453	219	156	493	10
Grp Sat Flow(s),veh/h/ln	1161	0	1651	1360	0	1616	896	1777	1585	766	1777	1585
Q Serve(g_s), s	1.0	0.0	2.0	13.7	0.0	10.9	0.8	4.4	4.8	8.8	4.8	0.2
Cycle Q Clear(g_c), s	11.9	0.0	2.0	15.6	0.0	10.9	5.7	4.4	4.8	13.2	4.8	0.2
Prop In Lane	1.00		0.74	1.00		0.87	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	197	0	368	353	0	360	626	2355	1050	551	2355	1050
V/C Ratio(X)	0.07	0.00	0.13	0.62	0.00	0.61	0.03	0.19	0.21	0.28	0.21	0.01
Avail Cap(c_a), veh/h	601	0	942	826	0	922	626	2355	1050	551	2355	1050
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	36.5	0.0	27.7	33.9	0.0	31.1	7.0	5.8	5.9	8.4	5.9	5.1
Incr Delay (d2), s/veh	0.2	0.0	0.2	1.8	0.0	1.7	0.1	0.2	0.5	1.3	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	0.3	0.0	0.8	4.6	0.0	4.3	0.2	1.4	1.5	1.5	1.6	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.6	0.0	27.8	35.7	0.0	32.8	7.1	6.0	6.3	9.6	6.1	5.1
LnGrp LOS	D	A	C	D	A	C	A	A	A	A	A	A
Approach Vol, veh/h		60			439			693			659	
Approach Delay, s/veh		29.9			34.3			6.1			6.9	
Approach LOS		C			C			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		64.0		25.0		64.0		25.0				
Change Period (Y+Rc), s		5.0		* 5.2		5.0		* 5.2				
Max Green Setting (Gmax), s		59.0		* 51		59.0		* 51				
Max Q Clear Time (g_c+I1), s		7.7		13.9		15.2		17.6				
Green Ext Time (p_c), s		4.2		0.3		5.2		2.2				
Intersection Summary												
HCM 6th Ctrl Delay				13.8								
HCM 6th LOS				B								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	0	49	149	4	52	46	602	23	57	400	84
Future Volume (veh/h)	55	0	49	149	4	52	46	602	23	57	400	84
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	60	0	56	201	8	81	51	669	46	80	465	117
Peak Hour Factor	0.91	0.25	0.88	0.74	0.50	0.64	0.90	0.90	0.50	0.71	0.86	0.72
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	523	0	411	553	37	380	537	1486	102	462	1566	698
Arrive On Green	0.26	0.00	0.26	0.26	0.26	0.26	0.44	0.44	0.44	0.44	0.44	0.44
Sat Flow, veh/h	1308	0	1585	1348	144	1463	833	3374	232	736	3554	1585
Grp Volume(v), veh/h	60	0	56	201	0	89	51	352	363	80	465	117
Grp Sat Flow(s),veh/h/ln	1308	0	1585	1348	0	1607	833	1777	1829	736	1777	1585
Q Serve(g_s), s	1.1	0.0	0.8	4.0	0.0	1.3	1.3	4.1	4.2	2.6	2.5	1.3
Cycle Q Clear(g_c), s	2.4	0.0	0.8	4.9	0.0	1.3	3.8	4.1	4.2	6.7	2.5	1.3
Prop In Lane	1.00		1.00	1.00		0.91	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	523	0	411	553	0	417	537	783	806	462	1566	698
V/C Ratio(X)	0.11	0.00	0.14	0.36	0.00	0.21	0.10	0.45	0.45	0.17	0.30	0.17
Avail Cap(c_a), veh/h	2427	0	2720	2515	0	2757	1820	3522	3625	1596	7044	3142
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	9.7	0.0	8.5	10.4	0.0	8.7	6.6	5.9	5.9	8.2	5.4	5.1
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.4	0.0	0.3	0.1	0.4	0.4	0.2	0.1	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	0.2	0.0	0.2	0.9	0.0	0.3	0.1	0.9	0.9	0.3	0.4	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.8	0.0	8.7	10.8	0.0	9.0	6.7	6.3	6.3	8.4	5.5	5.2
LnGrp LOS	A	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		116			290			766			662	
Approach Delay, s/veh		9.2			10.2			6.3			5.8	
Approach LOS		A			B			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		17.7		12.3		17.7		12.3				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		59.5		51.5		59.5		51.5				
Max Q Clear Time (g_c+I1), s		6.2		4.4		8.7		6.9				
Green Ext Time (p_c), s		5.7		0.5		4.5		1.2				
Intersection Summary												
HCM 6th Ctrl Delay			6.9									
HCM 6th LOS			A									










2023 with Site MD Peak

3: 92nd Street & Cochise Drive

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	0	49	149	4	52	46	602	23	57	400	84
Future Volume (veh/h)	55	0	49	149	4	52	46	602	23	57	400	84
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	60	0	56	201	8	81	51	669	46	80	465	117
Peak Hour Factor	0.91	0.25	0.88	0.74	0.50	0.64	0.90	0.90	0.50	0.71	0.86	0.72
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	548	0	406	578	37	375	534	1447	645	468	1447	645
Arrive On Green	0.26	0.00	0.26	0.26	0.26	0.26	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	1308	0	1585	1348	144	1463	833	3554	1585	736	3554	1585
Grp Volume(v), veh/h	60	0	56	201	0	89	51	669	46	80	465	117
Grp Sat Flow(s),veh/h/ln	1308	0	1585	1348	0	1607	833	1777	1585	736	1777	1585
Q Serve(g_s), s	1.0	0.0	0.7	3.6	0.0	1.2	1.2	3.7	0.5	2.4	2.4	1.3
Cycle Q Clear(g_c), s	2.2	0.0	0.7	4.3	0.0	1.2	3.6	3.7	0.5	6.1	2.4	1.3
Prop In Lane	1.00		1.00	1.00		0.91	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	548	0	406	578	0	412	534	1447	645	468	1447	645
V/C Ratio(X)	0.11	0.00	0.14	0.35	0.00	0.22	0.10	0.46	0.07	0.17	0.32	0.18
Avail Cap(c_a), veh/h	1093	0	1067	1140	0	1082	755	2392	1067	663	2392	1067
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	8.7	0.0	7.7	9.3	0.0	7.8	6.6	5.8	4.8	8.0	5.4	5.1
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.4	0.0	0.3	0.1	0.2	0.0	0.2	0.1	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	0.2	0.0	0.2	0.7	0.0	0.3	0.1	0.7	0.1	0.2	0.4	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.8	0.0	7.8	9.7	0.0	8.1	6.7	6.0	4.9	8.2	5.5	5.2
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		116			290			766			662	
Approach Delay, s/veh		8.3			9.2			6.0			5.8	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.4		11.4		15.4		11.4				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		5.7		4.2		8.1		6.3				
Green Ext Time (p_c), s		4.0		0.3		2.8		0.9				
Intersection Summary												
HCM 6th Ctrl Delay				6.6								
HCM 6th LOS				A								

Intersection

Int Delay, s/veh 21.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	4	35	76	4	204	25	588	101	140	432	68
Future Vol, veh/h	28	4	35	76	4	204	25	588	101	140	432	68
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	65	50	65	84	50	81	72	80	89	90	92	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	43	8	54	90	8	252	35	735	113	156	470	77

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1224	1700	235	1413	1721	424	547	0	0	848	0	0
Stage 1	782	782	-	862	862	-	-	-	-	-	-	-
Stage 2	442	918	-	551	859	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	135	91	767	98	88	579	1018	-	-	785	-	-
Stage 1	353	403	-	316	370	-	-	-	-	-	-	-
Stage 2	564	349	-	486	371	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	58	70	767	~ 69	68	579	1018	-	-	785	-	-
Mov Cap-2 Maneuver	58	70	-	~ 69	68	-	-	-	-	-	-	-
Stage 1	341	323	-	305	357	-	-	-	-	-	-	-
Stage 2	301	337	-	353	297	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	78.2		97.7		0.3		2.4	
HCM LOS	F		F					










Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1018	-	-	58	335	69	470	785	-	-
HCM Lane V/C Ratio	0.034	-	-	0.743	0.185	1.311	0.553	0.198	-	-
HCM Control Delay (s)	8.7	-	-	164.4	18.2	316.1	21.7	10.7	-	-
HCM Lane LOS	A	-	-	F	C	F	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	3.2	0.7	7.3	3.3	0.7	-	-

Notes

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

Intersection

Int Delay, s/veh 47.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	55	0	49	149	4	52	46	602	23	57	400	84
Future Vol, veh/h	55	0	49	149	4	52	46	602	23	57	400	84
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	91	25	88	74	50	64	90	90	50	71	86	72
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	60	0	56	201	8	81	51	669	46	80	465	117










Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1066	1442	233	1187	1536	358	582	0	0	715	0	0
Stage 1	625	625	-	794	794	-	-	-	-	-	-	-
Stage 2	441	817	-	393	742	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	177	131	769	~ 144	115	638	988	-	-	881	-	-
Stage 1	439	475	-	348	398	-	-	-	-	-	-	-
Stage 2	565	388	-	603	420	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	130	113	769	~ 120	99	638	988	-	-	881	-	-
Mov Cap-2 Maneuver	130	113	-	~ 120	99	-	-	-	-	-	-	-
Stage 1	416	432	-	330	377	-	-	-	-	-	-	-
Stage 2	458	368	-	509	382	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	33.3		283.2		0.6		1.2	
HCM LOS	D		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	988	-	-	130	769	120	429	881	-	-
HCM Lane V/C Ratio	0.052	-	-	0.465	0.072	1.678	0.208	0.091	-	-
HCM Control Delay (s)	8.8	-	-	54.7	10\$	401.8	15.6	9.5	-	-
HCM Lane LOS	A	-	-	F	B	F	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	2.1	0.2	15.2	0.8	0.3	-	-

























Notes

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

Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	2	26	26	2	32	19	552	24	80	490	29
Future Vol, veh/h	17	2	26	26	2	32	19	552	24	80	490	29
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	80	50	75	86	25	73	64	99	61	81	90	64
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	4	35	30	8	44	30	558	39	99	544	45
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1085	1399	272	1110	1425	299	589	0	0	597	0	0
Stage 1	742	742	-	638	638	-	-	-	-	-	-	-
Stage 2	343	657	-	472	787	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	171	139	726	164	134	697	982	-	-	976	-	-
Stage 1	374	420	-	431	469	-	-	-	-	-	-	-
Stage 2	646	460	-	542	401	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	137	121	726	137	117	697	982	-	-	976	-	-
Mov Cap-2 Maneuver	137	121	-	137	117	-	-	-	-	-	-	-
Stage 1	362	378	-	418	454	-	-	-	-	-	-	-
Stage 2	577	446	-	459	360	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	21.3		24		0.4		1.3					
HCM LOS	C		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	982	-	-	137	479	137	395	976	-	-		
HCM Lane V/C Ratio	0.03	-	-	0.155	0.081	0.221	0.131	0.101	-	-		
HCM Control Delay (s)	8.8	-	-	36	13.2	38.6	15.5	9.1	-	-		
HCM Lane LOS	A	-	-	E	B	E	C	A	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	0.5	0.3	0.8	0.4	0.3	-	-		























2023 with Site PM Peak

1: 92nd Street & Shea Boulevard

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	224	1223	169	45	1161	72	472	316	102	137	204	160
Future Volume (veh/h)	224	1223	169	45	1161	72	472	316	102	137	204	160
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	267	1261	194	50	1262	95	562	381	123	173	227	180
Peak Hour Factor	0.84	0.97	0.87	0.90	0.92	0.76	0.84	0.83	0.83	0.79	0.90	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	344	1909	592	134	1599	496	667	964	430	248	533	238
Arrive On Green	0.10	0.37	0.37	0.04	0.31	0.31	0.19	0.27	0.27	0.07	0.15	0.15
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	267	1261	194	50	1262	95	562	381	123	173	227	180
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	7.1	19.2	8.2	1.3	21.1	4.1	14.7	8.2	5.7	4.6	5.4	10.2
Cycle Q Clear(g_c), s	7.1	19.2	8.2	1.3	21.1	4.1	14.7	8.2	5.7	4.6	5.4	10.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	344	1909	592	134	1599	496	667	964	430	248	533	238
V/C Ratio(X)	0.78	0.66	0.33	0.37	0.79	0.19	0.84	0.40	0.29	0.70	0.43	0.76
Avail Cap(c_a), veh/h	443	2196	682	184	1815	563	904	1544	689	409	1036	462
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	41.2	24.4	20.9	43.9	29.4	23.5	36.4	27.9	27.0	42.5	36.2	38.2
Incr Delay (d2), s/veh	6.5	0.6	0.3	1.7	2.2	0.2	5.5	0.3	0.4	3.5	0.5	4.9
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	3.3	7.6	3.0	0.6	8.7	1.5	6.6	3.5	2.2	2.1	2.4	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.6	25.0	21.2	45.6	31.5	23.7	41.9	28.1	27.3	46.0	36.7	43.1
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	D	D
Approach Vol, veh/h		1722			1407			1066			580	
Approach Delay, s/veh		28.1			31.5			35.3			41.5	
Approach LOS		C			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.2	31.1	9.6	40.7	23.6	19.7	15.3	35.0				
Change Period (Y+Rc), s	5.5	* 5.7	6.0	5.7	5.5	* 5.7	6.0	5.7				
Max Green Setting (Gmax), s	11.1	* 41	5.0	40.3	24.5	* 27	12.0	33.3				
Max Q Clear Time (g_c+I1), s	6.6	10.2	3.3	21.2	16.7	12.2	9.1	23.1				
Green Ext Time (p_c), s	0.2	3.1	0.0	9.7	1.4	1.8	0.3	6.2				
Intersection Summary												
HCM 6th Ctrl Delay			32.3									
HCM 6th LOS			C									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												






















2023 with Site PM Peak

5: 92nd Street & Mountain View Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	12	52	180	9	131	14	360	162	96	365	7
Future Volume (veh/h)	11	12	52	180	9	131	14	360	162	96	365	7
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	13	17	73	198	20	146	17	404	231	108	410	17
Peak Hour Factor	0.83	0.69	0.71	0.91	0.44	0.90	0.81	0.89	0.70	0.89	0.89	0.42
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	265	72	310	334	46	333	660	2289	1021	560	2289	1021
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.64	0.64	0.64	0.64	0.64	0.64
Sat Flow, veh/h	1220	308	1324	1307	195	1420	961	3554	1585	793	3554	1585
Grp Volume(v), veh/h	13	0	90	198	0	166	17	404	231	108	410	17
Grp Sat Flow(s),veh/h/ln	1220	0	1632	1307	0	1615	961	1777	1585	793	1777	1585
Q Serve(g_s), s	0.8	0.0	3.7	12.1	0.0	7.4	0.6	3.8	5.1	5.3	3.9	0.3
Cycle Q Clear(g_c), s	8.1	0.0	3.7	15.9	0.0	7.4	4.5	3.8	5.1	9.1	3.9	0.3
Prop In Lane	1.00		0.81	1.00		0.88	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	265	0	383	334	0	378	660	2289	1021	560	2289	1021
V/C Ratio(X)	0.05	0.00	0.24	0.59	0.00	0.44	0.03	0.18	0.23	0.19	0.18	0.02
Avail Cap(c_a), veh/h	790	0	1086	897	0	1075	660	2289	1021	560	2289	1021
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	30.9	0.0	26.0	32.4	0.0	27.4	6.9	6.0	6.2	7.8	6.0	5.4
Incr Delay (d2), s/veh	0.1	0.0	0.3	1.7	0.0	0.8	0.1	0.2	0.5	0.8	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	0.2	0.0	1.5	3.9	0.0	2.8	0.1	1.2	1.5	0.9	1.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.9	0.0	26.3	34.1	0.0	28.2	7.0	6.2	6.7	8.6	6.2	5.4
LnGrp LOS	C	A	C	C	A	C	A	A	A	A	A	A
Approach Vol, veh/h		103			364			652			535	
Approach Delay, s/veh		26.9			31.4			6.4			6.6	
Approach LOS		C			C			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		59.0		24.9		59.0		24.9				
Change Period (Y+Rc), s		5.0		* 5.2		5.0		* 5.2				
Max Green Setting (Gmax), s		54.0		* 56		54.0		* 56				
Max Q Clear Time (g_c+I1), s		7.1		10.1		11.1		17.9				
Green Ext Time (p_c), s		3.8		0.6		4.0		1.8				
Intersection Summary												
HCM 6th Ctrl Delay				13.3								
HCM 6th LOS				B								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												























2023 with Site PM Peak










3: 92nd Street & Cochise Drive










												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	0	33	76	0	33	16	698	19	97	317	25
Future Volume (veh/h)	83	0	33	76	0	33	16	698	19	97	317	25
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	99	0	42	109	0	44	25	767	58	143	356	39
Peak Hour Factor	0.84	0.25	0.78	0.70	0.25	0.75	0.63	0.91	0.33	0.68	0.89	0.64
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	471	0	267	473	0	267	702	1636	124	498	1736	774
Arrive On Green	0.17	0.00	0.17	0.17	0.00	0.17	0.49	0.49	0.49	0.49	0.49	0.49
Sat Flow, veh/h	1362	0	1585	1365	0	1585	989	3349	253	664	3554	1585
Grp Volume(v), veh/h	99	0	42	109	0	44	25	407	418	143	356	39
Grp Sat Flow(s),veh/h/ln	1362	0	1585	1365	0	1585	989	1777	1825	664	1777	1585
Q Serve(g_s), s	1.8	0.0	0.6	1.9	0.0	0.6	0.4	4.0	4.0	4.8	1.5	0.3
Cycle Q Clear(g_c), s	2.4	0.0	0.6	2.5	0.0	0.6	1.9	4.0	4.0	8.8	1.5	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	471	0	267	473	0	267	702	868	892	498	1736	774
V/C Ratio(X)	0.21	0.00	0.16	0.23	0.00	0.16	0.04	0.47	0.47	0.29	0.21	0.05
Avail Cap(c_a), veh/h	1177	0	1088	1180	0	1088	897	1219	1252	629	2439	1088
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	10.4	0.0	9.3	10.4	0.0	9.3	4.3	4.4	4.4	7.4	3.8	3.5
Incr Delay (d2), s/veh	0.2	0.0	0.3	0.2	0.0	0.3	0.0	0.4	0.4	0.3	0.1	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	0.4	0.0	0.2	0.4	0.0	0.2	0.0	0.5	0.6	0.4	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.6	0.0	9.6	10.7	0.0	9.6	4.4	4.8	4.8	7.7	3.9	3.5
LnGrp LOS	B	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		141			153			850			538	
Approach Delay, s/veh		10.3			10.4			4.8			4.9	
Approach LOS		B			B			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		17.3		8.9		17.3		8.9				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		6.0		4.4		10.8		4.5				
Green Ext Time (p_c), s		4.3		0.4		2.1		0.4				
Intersection Summary												
HCM 6th Ctrl Delay				5.8								
HCM 6th LOS				A								










2023 with Site PM Peak

3: 92nd Street & Cochise Drive

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	0	33	76	0	33	16	698	19	97	317	25
Future Volume (veh/h)	83	0	33	76	0	33	16	698	19	97	317	25
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	99	0	42	109	0	44	25	767	58	143	356	39
Peak Hour Factor	0.84	0.25	0.78	0.70	0.25	0.75	0.63	0.91	0.33	0.68	0.89	0.64
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	463	0	263	465	0	263	706	1768	788	508	1768	788
Arrive On Green	0.17	0.00	0.17	0.17	0.00	0.17	0.50	0.50	0.50	0.50	0.50	0.50
Sat Flow, veh/h	1362	0	1585	1365	0	1585	989	3554	1585	664	3554	1585
Grp Volume(v), veh/h	99	0	42	109	0	44	25	767	58	143	356	39
Grp Sat Flow(s),veh/h/ln	1362	0	1585	1365	0	1585	989	1777	1585	664	1777	1585
Q Serve(g_s), s	1.8	0.0	0.6	2.0	0.0	0.6	0.4	3.7	0.5	4.7	1.5	0.3
Cycle Q Clear(g_c), s	2.4	0.0	0.6	2.6	0.0	0.6	1.9	3.7	0.5	8.4	1.5	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	463	0	263	465	0	263	706	1768	788	508	1768	788
V/C Ratio(X)	0.21	0.00	0.16	0.23	0.00	0.17	0.04	0.43	0.07	0.28	0.20	0.05
Avail Cap(c_a), veh/h	1154	0	1067	1157	0	1067	1065	3057	1364	749	3057	1364
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	10.6	0.0	9.6	10.7	0.0	9.6	4.3	4.3	3.5	7.0	3.8	3.5
Incr Delay (d2), s/veh	0.2	0.0	0.3	0.3	0.0	0.3	0.0	0.2	0.0	0.3	0.1	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	0.4	0.0	0.2	0.4	0.0	0.2	0.0	0.5	0.1	0.3	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.8	0.0	9.8	10.9	0.0	9.9	4.3	4.5	3.5	7.3	3.8	3.5
LnGrp LOS	B	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		141			153			850			538	
Approach Delay, s/veh		10.5			10.6			4.4			4.7	
Approach LOS		B			B			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		17.8		8.9		17.8		8.9				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		23.0		18.0		23.0		18.0				
Max Q Clear Time (g_c+I1), s		5.7		4.4		10.4		4.6				
Green Ext Time (p_c), s		5.4		0.4		2.9		0.4				
Intersection Summary												
HCM 6th Ctrl Delay			5.6									
HCM 6th LOS			A									

Intersection												
Int Delay, s/veh	7.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	39	3	64	35	1	153	6	699	88	99	304	15
Future Vol, veh/h	39	3	64	35	1	153	6	699	88	99	304	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	0	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	75	63	68	25	81	50	90	82	79	92	50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	48	4	102	51	4	189	12	777	107	125	330	30
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	995	1488	165	1272	1465	442	360	0	0	884	0	0
Stage 1	580	580	-	855	855	-	-	-	-	-	-	-
Stage 2	415	908	-	417	610	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	199	123	850	125	127	563	1195	-	-	761	-	-
Stage 1	467	498	-	319	373	-	-	-	-	-	-	-
Stage 2	585	352	-	584	483	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	111	102	850	93	105	563	1195	-	-	761	-	-
Mov Cap-2 Maneuver	111	102	-	93	105	-	-	-	-	-	-	-
Stage 1	462	416	-	316	369	-	-	-	-	-	-	-
Stage 2	381	348	-	426	404	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	26.4		30.3		0.1		2.8					
HCM LOS	D		D									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1195	-	-	111	665	93	516	761	-	-		
HCM Lane V/C Ratio	0.01	-	-	0.428	0.159	0.553	0.374	0.165	-	-		
HCM Control Delay (s)	8	-	-	59.8	11.4	83.7	16.1	10.7	-	-		
HCM Lane LOS	A	-	-	F	B	F	C	B	-	-		
HCM 95th %tile Q(veh)	0	-	-	1.8	0.6	2.5	1.7	0.6	-	-		

Intersection												
Int Delay, s/veh	20.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	83	0	33	76	0	33	16	698	19	97	317	25
Future Vol, veh/h	83	0	33	76	0	33	16	698	19	97	317	25
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	84	25	78	70	25	75	63	91	33	68	89	64
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	99	0	42	109	0	44	25	767	58	143	356	39
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	1076	1517	178	1310	1527	413	395	0	0	825	0	0
Stage 1	642	642	-	846	846	-	-	-	-	-	-	-
Stage 2	434	875	-	464	681	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	174	118	834	117	116	588	1160	-	-	801	-	-
Stage 1	429	467	-	323	377	-	-	-	-	-	-	-
Stage 2	570	365	-	548	448	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	137	95	834	~ 94	93	588	1160	-	-	801	-	-
Mov Cap-2 Maneuver	137	95	-	~ 94	93	-	-	-	-	-	-	-
Stage 1	420	383	-	316	369	-	-	-	-	-	-	-
Stage 2	516	357	-	427	368	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	59		162.4			0.2			2.8			
HCM LOS	F		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1160	-	-	137	834	94	588	801	-	-		
HCM Lane V/C Ratio	0.022	-	-	0.721	0.051	1.155	0.075	0.178	-	-		
HCM Control Delay (s)	8.2	-	-	80.2	9.5	223.5	11.6	10.5	-	-		
HCM Lane LOS	A	-	-	F	A	F	B	B	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	4.2	0.2	7.4	0.2	0.6	-	-		
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined				*: All major volume in platoon				

























Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	52	0	35	29	4	28	8	500	10	22	404	12
Future Vol, veh/h	52	0	35	29	4	28	8	500	10	22	404	12
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	78	25	83	84	38	78	88	85	75	95	89	56
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	67	0	42	35	11	36	9	588	13	23	454	21
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	818	1119	227	886	1134	301	475	0	0	601	0	0
Stage 1	500	500	-	613	613	-	-	-	-	-	-	-
Stage 2	318	619	-	273	521	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	268	205	776	239	201	695	1083	-	-	972	-	-
Stage 1	521	541	-	446	481	-	-	-	-	-	-	-
Stage 2	668	478	-	710	530	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	238	198	776	221	195	695	1083	-	-	972	-	-
Mov Cap-2 Maneuver	238	198	-	221	195	-	-	-	-	-	-	-
Stage 1	517	528	-	442	477	-	-	-	-	-	-	-
Stage 2	614	474	-	656	517	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	19.7		18.5		0.1		0.4					
HCM LOS	C		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1083	-	-	238	776	221	439	972	-	-		
HCM Lane V/C Ratio	0.008	-	-	0.28	0.054	0.156	0.106	0.024	-	-		
HCM Control Delay (s)	8.4	-	-	25.9	9.9	24.3	14.2	8.8	-	-		
HCM Lane LOS	A	-	-	D	A	C	B	A	-	-		
HCM 95th %tile Q(veh)	0	-	-	1.1	0.2	0.5	0.4	0.1	-	-		

Appendix F.5
Level-of-Service
2025 with Site Traffic Volumes

























2025 with Site AM Peak

1: 92nd Street & Shea Boulevard

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	1480	383	93	1400	80	438	234	113	130	259	200
Future Volume (veh/h)	150	1480	383	93	1400	80	438	234	113	130	259	200
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	163	1609	416	101	1522	87	476	254	123	141	282	217
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	228	2011	624	160	1912	593	563	977	436	206	610	272
Arrive On Green	0.07	0.39	0.39	0.05	0.37	0.37	0.16	0.27	0.27	0.06	0.17	0.17
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	163	1609	416	101	1522	87	476	254	123	141	282	217
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	4.7	28.4	21.9	2.9	27.0	3.7	13.6	5.7	6.2	4.1	7.3	13.4
Cycle Q Clear(g_c), s	4.7	28.4	21.9	2.9	27.0	3.7	13.6	5.7	6.2	4.1	7.3	13.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	228	2011	624	160	1912	593	563	977	436	206	610	272
V/C Ratio(X)	0.72	0.80	0.67	0.63	0.80	0.15	0.85	0.26	0.28	0.69	0.46	0.80
Avail Cap(c_a), veh/h	272	2174	675	170	2023	628	731	1394	622	302	954	425
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	46.6	27.3	25.3	47.6	28.4	21.1	41.3	28.8	29.0	46.9	37.9	40.4
Incr Delay (d2), s/veh	7.0	2.1	2.3	6.7	2.2	0.1	7.2	0.1	0.4	4.0	0.5	5.7
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	2.2	11.5	8.4	1.4	11.1	1.4	6.3	2.4	2.4	1.9	3.2	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.6	29.3	27.6	54.4	30.5	21.2	48.6	28.9	29.3	50.9	38.4	46.1
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	D	D
Approach Vol, veh/h		2188			1710			853			640	
Approach Delay, s/veh		30.8			31.5			39.9			43.8	
Approach LOS		C			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.6	33.7	10.7	45.8	22.1	23.2	12.7	43.8				
Change Period (Y+Rc), s	5.5	* 5.7	6.0	5.7	5.5	* 5.7	6.0	5.7				
Max Green Setting (Gmax), s	8.9	* 40	5.0	43.3	21.5	* 27	8.0	40.3				
Max Q Clear Time (g_c+I1), s	6.1	8.2	4.9	30.4	15.6	15.4	6.7	29.0				
Green Ext Time (p_c), s	0.1	2.1	0.0	9.7	1.0	2.1	0.1	7.8				
Intersection Summary												
HCM 6th Ctrl Delay			34.0									
HCM 6th LOS			C									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

2025 with Site AM Peak

5: 92nd Street & Mountain View Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	20	230	11	174	20	389	230	152	337	11
Future Volume (veh/h)	10	10	20	230	11	174	20	389	230	152	337	11
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	11	11	22	250	12	189	22	423	250	165	366	12
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	229	131	262	383	22	354	694	2312	1031	542	2312	1031
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.65	0.65	0.65	0.65	0.65	0.65
Sat Flow, veh/h	1181	557	1113	1376	95	1504	1005	3554	1585	765	3554	1585
Grp Volume(v), veh/h	11	0	33	250	0	201	22	423	250	165	366	12
Grp Sat Flow(s),veh/h/ln	1181	0	1670	1376	0	1600	1005	1777	1585	765	1777	1585
Q Serve(g_s), s	0.7	0.0	1.4	15.4	0.0	9.8	0.8	4.2	5.8	9.7	3.6	0.2
Cycle Q Clear(g_c), s	10.5	0.0	1.4	16.8	0.0	9.8	4.4	4.2	5.8	13.9	3.6	0.2
Prop In Lane	1.00		0.67	1.00		0.94	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	229	0	393	383	0	376	694	2312	1031	542	2312	1031
V/C Ratio(X)	0.05	0.00	0.08	0.65	0.00	0.53	0.03	0.18	0.24	0.30	0.16	0.01
Avail Cap(c_a), veh/h	637	0	970	859	0	929	694	2312	1031	542	2312	1031
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	34.4	0.0	26.6	33.2	0.0	29.8	6.9	6.2	6.5	8.9	6.1	5.5
Incr Delay (d2), s/veh	0.1	0.0	0.1	1.9	0.0	1.2	0.1	0.2	0.6	1.4	0.1	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	0.2	0.0	0.5	5.2	0.0	3.8	0.2	1.4	1.8	1.7	1.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.5	0.0	26.7	35.1	0.0	31.0	7.0	6.4	7.0	10.4	6.2	5.5
LnGrp LOS	C	A	C	D	A	C	A	A	A	B	A	A
Approach Vol, veh/h		44			451			695			543	
Approach Delay, s/veh		28.7			33.3			6.6			7.5	
Approach LOS		C			C			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		63.0		26.2		63.0		26.2				
Change Period (Y+Rc), s		5.0		* 5.2		5.0		* 5.2				
Max Green Setting (Gmax), s		58.0		* 52		58.0		* 52				
Max Q Clear Time (g_c+I1), s		7.8		12.5		15.9		18.8				
Green Ext Time (p_c), s		4.1		0.2		4.2		2.1				

Intersection Summary






















HCM 6th Ctrl Delay	14.4
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.























2025 with Site AM Peak










3: 92nd Street & Cochise Drive

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	12	50	97	16	39	70	570	34	68	480	100
Future Volume (veh/h)	60	12	50	97	16	39	70	570	34	68	480	100
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	65	13	54	105	17	42	76	620	37	74	522	109
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	492	59	245	484	89	219	575	1569	94	547	1637	730
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	1344	317	1316	1334	478	1180	796	3408	203	777	3554	1585
Grp Volume(v), veh/h	65	0	67	105	0	59	76	323	334	74	522	109
Grp Sat Flow(s),veh/h/ln	1344	0	1633	1334	0	1658	796	1777	1834	777	1777	1585
Q Serve(g_s), s	1.1	0.0	0.9	1.8	0.0	0.8	1.7	3.1	3.1	1.8	2.4	1.0
Cycle Q Clear(g_c), s	1.9	0.0	0.9	2.7	0.0	0.8	4.1	3.1	3.1	4.8	2.4	1.0
Prop In Lane	1.00		0.81	1.00		0.71	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	492	0	304	484	0	308	575	818	845	547	1637	730
V/C Ratio(X)	0.13	0.00	0.22	0.22	0.00	0.19	0.13	0.39	0.40	0.14	0.32	0.15
Avail Cap(c_a), veh/h	2433	0	2662	2411	0	2702	2380	4850	5005	2309	9699	4326
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	9.5	0.0	8.8	10.0	0.0	8.7	5.6	4.5	4.5	6.1	4.3	4.0
Incr Delay (d2), s/veh	0.1	0.0	0.4	0.2	0.0	0.3	0.1	0.3	0.3	0.1	0.1	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	0.2	0.0	0.2	0.4	0.0	0.2	0.2	0.4	0.5	0.1	0.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.7	0.0	9.2	10.2	0.0	9.0	5.7	4.8	4.8	6.2	4.5	4.1
LnGrp LOS	A	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		132			164			733			705	
Approach Delay, s/veh		9.4			9.8			4.9			4.6	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		16.2		9.2		16.2		9.2				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		69.5		41.5		69.5		41.5				
Max Q Clear Time (g_c+I1), s		6.1		3.9		6.8		4.7				
Green Ext Time (p_c), s		5.4		0.6		4.9		0.7				
Intersection Summary												
HCM 6th Ctrl Delay			5.6									
HCM 6th LOS			A									

2025 with Site AM Peak

3: 92nd Street & Cochise Drive

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	12	50	97	16	39	70	570	34	68	480	100
Future Volume (veh/h)	60	12	50	97	16	39	70	570	34	68	480	100
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	65	13	54	105	17	42	76	620	37	74	522	109
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	520	58	243	512	88	218	572	1509	673	548	1509	673
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.42	0.42	0.42	0.42	0.42	0.42
Sat Flow, veh/h	1344	317	1316	1334	478	1180	796	3554	1585	777	3554	1585
Grp Volume(v), veh/h	65	0	67	105	0	59	76	620	37	74	522	109
Grp Sat Flow(s),veh/h/ln	1344	0	1633	1334	0	1658	796	1777	1585	777	1777	1585
Q Serve(g_s), s	1.0	0.0	0.8	1.7	0.0	0.7	1.6	2.8	0.3	1.7	2.3	1.0
Cycle Q Clear(g_c), s	1.7	0.0	0.8	2.5	0.0	0.7	3.9	2.8	0.3	4.5	2.3	1.0
Prop In Lane	1.00		0.81	1.00		0.71	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	520	0	301	512	0	306	572	1509	673	548	1509	673
V/C Ratio(X)	0.12	0.00	0.22	0.21	0.00	0.19	0.13	0.41	0.05	0.14	0.35	0.16
Avail Cap(c_a), veh/h	1323	0	1277	1309	0	1296	856	2778	1239	825	2778	1239
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	8.7	0.0	8.0	9.0	0.0	7.9	5.8	4.6	3.9	6.2	4.5	4.1
Incr Delay (d2), s/veh	0.1	0.0	0.4	0.2	0.0	0.3	0.1	0.2	0.0	0.1	0.1	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	0.2	0.0	0.2	0.3	0.0	0.2	0.1	0.3	0.0	0.1	0.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.8	0.0	8.4	9.2	0.0	8.2	5.9	4.8	3.9	6.3	4.6	4.2
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		132			164			733			705	
Approach Delay, s/veh		8.6			8.9			4.9			4.7	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		14.3		8.7		14.3		8.7				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		5.9		3.7		6.5		4.5				
Green Ext Time (p_c), s		3.8		0.4		3.3		0.5				
Intersection Summary												
HCM 6th Ctrl Delay			5.5									
HCM 6th LOS			A									

Intersection												
Int Delay, s/veh	6.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	10	31	52	10	140	30	555	94	110	595	130
Future Vol, veh/h	20	10	31	52	10	140	30	555	94	110	595	130
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	34	57	11	152	33	603	102	120	647	141
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1260	1658	324	1289	1748	353	788	0	0	705	0	0
Stage 1	887	887	-	720	720	-	-	-	-	-	-	-
Stage 2	373	771	-	569	1028	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	127	97	672	121	85	643	827	-	-	889	-	-
Stage 1	305	360	-	385	430	-	-	-	-	-	-	-
Stage 2	620	408	-	474	310	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	75	81	672	90	71	643	827	-	-	889	-	-
Mov Cap-2 Maneuver	75	81	-	90	71	-	-	-	-	-	-	-
Stage 1	293	311	-	370	413	-	-	-	-	-	-	-
Stage 2	442	392	-	376	268	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	39			39			0.4			1.3		
HCM LOS	E			E								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	827	-	-	75	242	90	418	889	-	-		
HCM Lane V/C Ratio	0.039	-	-	0.29	0.184	0.628	0.39	0.134	-	-		
HCM Control Delay (s)	9.5	-	-	71.5	23.2	96.6	19	9.7	-	-		
HCM Lane LOS	A	-	-	F	C	F	C	A	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	1.1	0.7	3	1.8	0.5	-	-		

Intersection												
Int Delay, s/veh	15.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	60	12	50	97	16	39	70	570	34	68	480	100
Future Vol, veh/h	60	12	50	97	16	39	70	570	34	68	480	100
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	65	13	54	105	17	42	76	620	37	74	522	109










Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1141	1479	261	1207	1570	329	631	0	0	657	0	0
Stage 1	670	670	-	791	791	-	-	-	-	-	-	-
Stage 2	471	809	-	416	779	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	156	125	738	139	110	667	947	-	-	926	-	-
Stage 1	413	454	-	349	399	-	-	-	-	-	-	-
Stage 2	542	392	-	585	404	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	111	106	738	~ 103	93	667	947	-	-	926	-	-
Mov Cap-2 Maneuver	111	106	-	~ 103	93	-	-	-	-	-	-	-
Stage 1	380	418	-	321	367	-	-	-	-	-	-	-
Stage 2	445	361	-	483	372	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	46.4		119		0.9		1	
HCM LOS	E		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	947	-	-	111	343	103	239	926	-	-
HCM Lane V/C Ratio	0.08	-	-	0.588	0.196	1.024	0.25	0.08	-	-
HCM Control Delay (s)	9.1	-	-	75.7	18	172.3	25	9.2	-	-
HCM Lane LOS	A	-	-	F	C	F	D	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	2.9	0.7	6.4	1	0.3	-	-

























Notes























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






















Intersection												
Int Delay, s/veh	4.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	10	40	20	11	20	40	523	30	142	460	55
Future Vol, veh/h	31	10	40	20	11	20	40	523	30	142	460	55
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	34	11	43	22	12	22	43	568	33	154	500	60
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1184	1495	250	1235	1539	301	560	0	0	601	0	0
Stage 1	808	808	-	671	671	-	-	-	-	-	-	-
Stage 2	376	687	-	564	868	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	145	122	750	133	115	695	1007	-	-	972	-	-
Stage 1	341	392	-	412	453	-	-	-	-	-	-	-
Stage 2	617	446	-	478	368	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	108	98	750	98	93	695	1007	-	-	972	-	-
Mov Cap-2 Maneuver	108	98	-	98	93	-	-	-	-	-	-	-
Stage 1	326	330	-	394	434	-	-	-	-	-	-	-
Stage 2	556	427	-	366	310	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	31.6		35.7		0.6		2					
HCM LOS	D		E									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1007	-	-	108	322	98	211	972	-	-		
HCM Lane V/C Ratio	0.043	-	-	0.312	0.169	0.222	0.16	0.159	-	-		
HCM Control Delay (s)	8.7	-	-	52.8	18.4	51.9	25.3	9.4	-	-		
HCM Lane LOS	A	-	-	F	C	F	D	A	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	1.2	0.6	0.8	0.6	0.6	-	-		























2025 with Site MD Peak










1: 92nd Street & Shea Boulevard

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	1310	312	93	1410	80	471	297	134	160	304	220
Future Volume (veh/h)	200	1310	312	93	1410	80	471	297	134	160	304	220
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	217	1424	339	101	1533	87	512	323	146	174	330	239
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	281	1953	606	157	1770	550	591	1018	454	240	657	293
Arrive On Green	0.08	0.38	0.38	0.05	0.35	0.35	0.17	0.29	0.29	0.07	0.18	0.18
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	217	1424	339	101	1533	87	512	323	146	174	330	239
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	6.5	25.3	17.8	3.0	29.7	4.0	15.3	7.6	7.7	5.2	8.8	15.3
Cycle Q Clear(g_c), s	6.5	25.3	17.8	3.0	29.7	4.0	15.3	7.6	7.7	5.2	8.8	15.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	281	1953	606	157	1770	550	591	1018	454	240	657	293
V/C Ratio(X)	0.77	0.73	0.56	0.64	0.87	0.16	0.87	0.32	0.32	0.73	0.50	0.82
Avail Cap(c_a), veh/h	326	1992	618	229	1847	573	702	1289	575	340	916	409
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	47.7	28.0	25.7	49.7	32.3	23.9	42.7	29.7	29.7	48.3	38.8	41.4
Incr Delay (d2), s/veh	9.4	1.4	1.1	4.3	4.5	0.1	9.8	0.2	0.4	4.5	0.6	8.6
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	3.2	10.3	6.8	1.4	12.7	1.5	7.3	3.2	3.0	2.4	3.9	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.1	29.3	26.8	54.0	36.8	24.0	52.5	29.8	30.1	52.8	39.4	50.0
LnGrp LOS	E	C	C	D	D	C	D	C	C	D	D	D
Approach Vol, veh/h		1980			1721			981			743	
Approach Delay, s/veh		31.9			37.1			41.7			46.0	
Approach LOS		C			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.8	36.0	10.8	46.2	23.6	25.3	14.6	42.4				
Change Period (Y+Rc), s	5.5	* 5.7	6.0	5.7	5.5	* 5.7	6.0	5.7				
Max Green Setting (Gmax), s	10.4	* 38	7.0	41.3	21.5	* 27	10.0	38.3				
Max Q Clear Time (g_c+l1), s	7.2	9.7	5.0	27.3	17.3	17.3	8.5	31.7				
Green Ext Time (p_c), s	0.2	2.7	0.0	9.3	0.8	2.2	0.1	5.0				
Intersection Summary												
HCM 6th Ctrl Delay			37.3									
HCM 6th LOS			D									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	40	210	21	173	30	449	230	145	436	11
Future Volume (veh/h)	10	10	40	210	21	173	30	449	230	145	436	11
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	11	11	43	228	23	188	33	488	230	158	474	12
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	1.00	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	214	77	302	356	41	333	628	2338	1043	520	2338	1043
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.66	0.66	0.66	0.66	0.66	0.66
Sat Flow, veh/h	1171	333	1303	1350	176	1436	910	3554	1585	734	3554	1585
Grp Volume(v), veh/h	11	0	54	228	0	211	33	488	230	158	474	12
Grp Sat Flow(s),veh/h/ln	1171	0	1636	1350	0	1612	910	1777	1585	734	1777	1585
Q Serve(g_s), s	0.8	0.0	2.4	15.0	0.0	10.7	1.4	5.0	5.4	10.1	4.9	0.2
Cycle Q Clear(g_c), s	11.5	0.0	2.4	17.4	0.0	10.7	6.3	5.0	5.4	15.1	4.9	0.2
Prop In Lane	1.00		0.80	1.00		0.89	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	214	0	380	356	0	374	628	2338	1043	520	2338	1043
V/C Ratio(X)	0.05	0.00	0.14	0.64	0.00	0.56	0.05	0.21	0.22	0.30	0.20	0.01
Avail Cap(c_a), veh/h	558	0	861	753	0	848	628	2338	1043	520	2338	1043
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	36.5	0.0	28.3	35.2	0.0	31.5	7.5	6.3	6.3	9.3	6.3	5.5
Incr Delay (d2), s/veh	0.1	0.0	0.2	1.9	0.0	1.3	0.2	0.2	0.5	1.5	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	0.2	0.0	1.0	5.0	0.0	4.2	0.3	1.7	1.7	1.7	1.7	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.6	0.0	28.4	37.1	0.0	32.8	7.7	6.5	6.8	10.8	6.5	5.5
LnGrp LOS	D	A	C	D	A	C	A	A	A	B	A	A
Approach Vol, veh/h		65			439			751			644	
Approach Delay, s/veh		29.8			35.0			6.6			7.5	
Approach LOS		C			D			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		66.0		26.7		66.0		26.7				
Change Period (Y+Rc), s		5.0		* 5.2		5.0		* 5.2				
Max Green Setting (Gmax), s		61.0		* 49		61.0		* 49				
Max Q Clear Time (g_c+I1), s		8.3		13.5		17.1		19.4				
Green Ext Time (p_c), s		4.6		0.3		5.2		2.1				
Intersection Summary												
HCM 6th Ctrl Delay			14.3									
HCM 6th LOS			B									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	10	60	156	12	57	60	660	34	65	440	100
Future Volume (veh/h)	70	10	60	156	12	57	60	660	34	65	440	100
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	76	11	65	170	13	62	65	717	37	71	478	109
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	545	57	337	544	69	327	542	1434	74	459	1482	661
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.42	0.42	0.42	0.42	0.42	0.42
Sat Flow, veh/h	1325	235	1386	1323	282	1346	829	3438	177	710	3554	1585
Grp Volume(v), veh/h	76	0	76	170	0	75	65	370	384	71	478	109
Grp Sat Flow(s),veh/h/ln	1325	0	1621	1323	0	1628	829	1777	1838	710	1777	1585
Q Serve(g_s), s	1.3	0.0	1.0	3.1	0.0	1.0	1.5	4.1	4.1	2.2	2.4	1.1
Cycle Q Clear(g_c), s	2.2	0.0	1.0	4.1	0.0	1.0	3.9	4.1	4.1	6.2	2.4	1.1
Prop In Lane	1.00		0.86	1.00		0.83	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	545	0	394	544	0	396	542	741	767	459	1482	661
V/C Ratio(X)	0.14	0.00	0.19	0.31	0.00	0.19	0.12	0.50	0.50	0.15	0.32	0.16
Avail Cap(c_a), veh/h	1124	0	1102	1122	0	1107	760	1208	1250	645	2415	1077
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	8.8	0.0	8.0	9.6	0.0	8.0	6.5	5.7	5.7	8.0	5.2	4.8
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.3	0.0	0.2	0.1	0.5	0.5	0.2	0.1	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	0.3	0.0	0.2	0.6	0.0	0.2	0.2	0.8	0.8	0.2	0.4	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.0	0.0	8.2	9.9	0.0	8.2	6.6	6.2	6.2	8.1	5.3	4.9
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		152			245			819			658	
Approach Delay, s/veh		8.6			9.4			6.2			5.6	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.5		10.9		15.5		10.9				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		6.1		4.2		8.2		6.1				
Green Ext Time (p_c), s		4.1		0.5		2.8		0.7				
Intersection Summary												
HCM 6th Ctrl Delay			6.6									
HCM 6th LOS			A									

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	10	60	156	12	57	60	660	34	65	440	100
Future Volume (veh/h)	70	10	60	156	12	57	60	660	34	65	440	100
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	76	11	65	170	13	62	65	717	37	71	478	109
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	548	57	338	547	69	328	542	1471	656	463	1471	656
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	1325	235	1386	1323	282	1346	829	3554	1585	710	3554	1585
Grp Volume(v), veh/h	76	0	76	170	0	75	65	717	37	71	478	109
Grp Sat Flow(s),veh/h/ln	1325	0	1621	1323	0	1628	829	1777	1585	710	1777	1585
Q Serve(g_s), s	1.3	0.0	1.0	3.1	0.0	1.0	1.5	3.9	0.4	2.1	2.4	1.1
Cycle Q Clear(g_c), s	2.2	0.0	1.0	4.1	0.0	1.0	3.9	3.9	0.4	6.0	2.4	1.1
Prop In Lane	1.00		0.86	1.00		0.83	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	548	0	395	547	0	396	542	1471	656	463	1471	656
V/C Ratio(X)	0.14	0.00	0.19	0.31	0.00	0.19	0.12	0.49	0.06	0.15	0.32	0.17
Avail Cap(c_a), veh/h	1133	0	1110	1131	0	1115	766	2435	1086	655	2435	1086
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	8.8	0.0	7.9	9.5	0.0	7.9	6.5	5.7	4.6	7.9	5.2	4.8
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.3	0.0	0.2	0.1	0.3	0.0	0.2	0.1	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	0.3	0.0	0.2	0.6	0.0	0.2	0.2	0.7	0.1	0.2	0.3	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.9	0.0	8.1	9.8	0.0	8.1	6.6	5.9	4.7	8.0	5.3	5.0
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		152			245			819			658	
Approach Delay, s/veh		8.5			9.3			5.9			5.6	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.4		10.9		15.4		10.9				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		5.9		4.2		8.0		6.1				
Green Ext Time (p_c), s		4.3		0.5		2.8		0.7				
Intersection Summary												
HCM 6th Ctrl Delay			6.4									
HCM 6th LOS			A									

Intersection												
Int Delay, s/veh	26.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	10	42	84	10	230	30	642	115	160	469	80
Future Vol, veh/h	40	10	42	84	10	230	30	642	115	160	469	80
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	43	11	46	91	11	250	33	698	125	174	510	87
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1279	1747	255	1436	1772	412	597	0	0	823	0	0
Stage 1	858	858	-	827	827	-	-	-	-	-	-	-
Stage 2	421	889	-	609	945	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	123	85	744	94	82	589	976	-	-	803	-	-
Stage 1	318	372	-	332	384	-	-	-	-	-	-	-
Stage 2	581	360	-	449	339	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	50	64	744	~ 63	62	589	976	-	-	803	-	-
Mov Cap-2 Maneuver	50	64	-	~ 63	62	-	-	-	-	-	-	-
Stage 1	307	291	-	321	371	-	-	-	-	-	-	-
Stage 2	314	348	-	318	265	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	108.4		117.2		0.3		2.4					
HCM LOS	F		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	976	-	-	50	244	63	435	803	-	-		
HCM Lane V/C Ratio	0.033	-	-	0.87	0.232	1.449	0.6	0.217	-	-		
HCM Control Delay (s)	8.8	-	-	218	24.1	381.1	24.9	10.7	-	-		
HCM Lane LOS	A	-	-	F	C	F	C	B	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	3.7	0.9	7.9	3.8	0.8	-	-		
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined				*: All major volume in platoon				

Intersection												
Int Delay, s/veh	46.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	70	10	60	156	12	57	60	660	34	65	440	100
Future Vol, veh/h	70	10	60	156	12	57	60	660	34	65	440	100
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	76	11	65	170	13	62	65	717	37	71	478	109

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1115	1504	239	1253	1595	377	587	0	0	754	0	0
Stage 1	620	620	-	866	866	-	-	-	-	-	-	-
Stage 2	495	884	-	387	729	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	163	120	762	~ 129	106	621	984	-	-	852	-	-
Stage 1	442	478	-	314	369	-	-	-	-	-	-	-
Stage 2	525	362	-	608	426	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	117	103	762	~ 97	91	621	984	-	-	852	-	-
Mov Cap-2 Maneuver	117	103	-	~ 97	91	-	-	-	-	-	-	-
Stage 1	413	438	-	293	345	-	-	-	-	-	-	-
Stage 2	425	338	-	497	391	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	48.3	\$ 318.4	0.7	1
HCM LOS	E	F		










Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	984	-	-	117	398	97	309	852	-	-
HCM Lane V/C Ratio	0.066	-	-	0.65	0.191	1.748	0.243	0.083	-	-
HCM Control Delay (s)	8.9	-	-	80.4	16.2	\$ 450.3	20.3	9.6	-	-
HCM Lane LOS	A	-	-	F	C	F	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	3.4	0.7	13.7	0.9	0.3	-	-

Notes

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

Intersection

Int Delay, s/veh 3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	10	30	30	11	41	30	603	30	90	532	34
Future Vol, veh/h	20	10	30	30	11	41	30	603	30	90	532	34
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	33	12	45	33	655	33	98	578	37

























Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1174	1528	289	1229	1549	344	615	0	0	688	0	0
Stage 1	774	774	-	738	738	-	-	-	-	-	-	-
Stage 2	400	754	-	491	811	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	147	116	708	134	113	652	961	-	-	902	-	-
Stage 1	357	406	-	376	422	-	-	-	-	-	-	-
Stage 2	597	415	-	528	391	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	111	100	708	105	97	652	961	-	-	902	-	-
Mov Cap-2 Maneuver	111	100	-	105	97	-	-	-	-	-	-	-
Stage 1	345	362	-	363	408	-	-	-	-	-	-	-
Stage 2	521	401	-	435	348	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	28.5		32.5		0.4		1.3	
HCM LOS	D		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	961	-	-	111	281	105	295	902	-	-
HCM Lane V/C Ratio	0.034	-	-	0.196	0.155	0.311	0.192	0.108	-	-
HCM Control Delay (s)	8.9	-	-	45.2	20.1	54	20.1	9.5	-	-
HCM Lane LOS	A	-	-	E	C	F	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.7	0.5	1.2	0.7	0.4	-	-

2025 with Site PM Peak

1: 92nd Street & Shea Boulevard

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	1340	183	56	1270	80	519	346	112	150	220	180
Future Volume (veh/h)	250	1340	183	56	1270	80	519	346	112	150	220	180
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	272	1457	199	61	1380	87	564	376	122	163	239	196
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	342	1962	609	141	1665	517	655	993	443	231	558	249
Arrive On Green	0.10	0.38	0.38	0.04	0.33	0.33	0.19	0.28	0.28	0.07	0.16	0.16
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	272	1457	199	61	1380	87	564	376	122	163	239	196
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	7.7	24.6	8.9	1.7	25.0	3.9	15.8	8.5	6.0	4.6	6.1	11.9
Cycle Q Clear(g_c), s	7.7	24.6	8.9	1.7	25.0	3.9	15.8	8.5	6.0	4.6	6.1	11.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	342	1962	609	141	1665	517	655	993	443	231	558	249
V/C Ratio(X)	0.79	0.74	0.33	0.43	0.83	0.17	0.86	0.38	0.28	0.70	0.43	0.79
Avail Cap(c_a), veh/h	414	2155	669	172	1798	558	810	1411	629	345	933	416
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	44.1	26.6	21.7	46.9	31.2	24.1	39.3	29.1	28.2	45.8	38.2	40.6
Incr Delay (d2), s/veh	8.6	1.3	0.3	2.1	3.2	0.2	7.9	0.2	0.3	3.9	0.5	5.5
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	3.7	9.9	3.3	0.8	10.5	1.5	7.4	3.6	2.3	2.1	2.7	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.8	27.9	22.0	49.0	34.4	24.2	47.3	29.3	28.5	49.7	38.7	46.1
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	D	D
Approach Vol, veh/h		1928			1528			1062			598	
Approach Delay, s/veh		30.8			34.4			38.8			44.1	
Approach LOS		C			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.2	33.7	10.1	44.2	24.5	21.4	15.9	38.4				
Change Period (Y+Rc), s	5.5	* 5.7	6.0	5.7	5.5	* 5.7	6.0	5.7				
Max Green Setting (Gmax), s	10.0	* 40	5.0	42.3	23.5	* 26	12.0	35.3				
Max Q Clear Time (g_c+I1), s	6.6	10.5	3.7	26.6	17.8	13.9	9.7	27.0				
Green Ext Time (p_c), s	0.2	3.0	0.0	9.8	1.1	1.8	0.2	5.7				

Intersection Summary























HCM 6th Ctrl Delay	35.1
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.






















2025 with Site PM Peak

5: 92nd Street & Mountain View Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	20	60	200	11	143	20	399	180	108	402	12
Future Volume (veh/h)	20	20	60	200	11	143	20	399	180	108	402	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	22	22	65	217	12	155	22	434	196	117	437	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	277	102	302	351	28	365	633	2256	1006	550	2256	1006
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.63	0.63	0.63	0.63	0.63	0.63
Sat Flow, veh/h	1218	417	1232	1310	115	1487	940	3554	1585	796	3554	1585
Grp Volume(v), veh/h	22	0	87	217	0	167	22	434	196	117	437	13
Grp Sat Flow(s),veh/h/ln	1218	0	1649	1310	0	1603	940	1777	1585	796	1777	1585
Q Serve(g_s), s	1.3	0.0	3.6	13.5	0.0	7.5	0.8	4.3	4.4	6.1	4.4	0.3
Cycle Q Clear(g_c), s	8.8	0.0	3.6	17.0	0.0	7.5	5.2	4.3	4.4	10.4	4.4	0.3
Prop In Lane	1.00		0.75	1.00		0.93	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	277	0	405	351	0	393	633	2256	1006	550	2256	1006
V/C Ratio(X)	0.08	0.00	0.22	0.62	0.00	0.42	0.03	0.19	0.19	0.21	0.19	0.01
Avail Cap(c_a), veh/h	777	0	1081	889	0	1051	633	2256	1006	550	2256	1006
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	30.7	0.0	25.6	32.4	0.0	27.0	7.6	6.5	6.5	8.6	6.5	5.7
Incr Delay (d2), s/veh	0.1	0.0	0.3	1.8	0.0	0.7	0.1	0.2	0.4	0.9	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	0.4	0.0	1.4	4.3	0.0	2.9	0.2	1.4	1.4	1.1	1.5	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.9	0.0	25.8	34.1	0.0	27.8	7.7	6.7	6.9	9.5	6.7	5.7
LnGrp LOS	C	A	C	C	A	C	A	A	A	A	A	A
Approach Vol, veh/h		109			384			652			567	
Approach Delay, s/veh		26.9			31.4			6.8			7.2	
Approach LOS		C			C			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		59.0		26.1		59.0		26.1				
Change Period (Y+Rc), s		5.0		* 5.2		5.0		* 5.2				
Max Green Setting (Gmax), s		54.0		* 56		54.0		* 56				
Max Q Clear Time (g_c+I1), s		7.2		10.8		12.4		19.0				
Green Ext Time (p_c), s		3.9		0.6		4.3		1.8				
Intersection Summary												
HCM 6th Ctrl Delay				13.7								
HCM 6th LOS				B								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												























2025 with Site PM Peak










3: 92nd Street & Cochise Drive










												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	10	40	86	10	40	20	760	25	107	350	30
Future Volume (veh/h)	100	10	40	86	10	40	20	760	25	107	350	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	109	11	43	93	11	43	22	826	27	116	380	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	480	59	230	480	59	230	679	1663	54	481	1683	751
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.47	0.47	0.47	0.47	0.47	0.47
Sat Flow, veh/h	1350	333	1303	1350	333	1303	973	3512	115	647	3554	1585
Grp Volume(v), veh/h	109	0	54	93	0	54	22	418	435	116	380	33
Grp Sat Flow(s),veh/h/ln	1350	0	1636	1350	0	1636	973	1777	1850	647	1777	1585
Q Serve(g_s), s	1.9	0.0	0.7	1.6	0.0	0.7	0.4	4.2	4.2	3.9	1.6	0.3
Cycle Q Clear(g_c), s	2.6	0.0	0.7	2.3	0.0	0.7	2.0	4.2	4.2	8.0	1.6	0.3
Prop In Lane	1.00		0.80	1.00		0.80	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	480	0	289	480	0	289	679	842	876	481	1683	751
V/C Ratio(X)	0.23	0.00	0.19	0.19	0.00	0.19	0.03	0.50	0.50	0.24	0.23	0.04
Avail Cap(c_a), veh/h	1186	0	1144	1186	0	1144	899	1243	1294	627	2486	1109
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	10.1	0.0	9.0	10.0	0.0	9.0	4.6	4.7	4.7	7.4	4.0	3.6
Incr Delay (d2), s/veh	0.2	0.0	0.3	0.2	0.0	0.3	0.0	0.5	0.4	0.3	0.1	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	0.4	0.0	0.2	0.3	0.0	0.2	0.0	0.6	0.6	0.3	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.4	0.0	9.3	10.2	0.0	9.3	4.6	5.1	5.1	7.7	4.1	3.7
LnGrp LOS	B	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		163			147			875			529	
Approach Delay, s/veh		10.0			9.9			5.1			4.8	
Approach LOS		B			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		16.7		9.0		16.7		9.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		6.2		4.6		10.0		4.3				
Green Ext Time (p_c), s		4.3		0.5		2.2		0.4				
Intersection Summary												
HCM 6th Ctrl Delay			5.9									
HCM 6th LOS			A									

2025 with Site PM Peak

3: 92nd Street & Cochise Drive

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	10	40	86	10	40	20	760	25	107	350	30
Future Volume (veh/h)	100	10	40	86	10	40	20	760	25	107	350	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	109	11	43	93	11	43	22	826	27	116	380	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	470	58	229	470	58	229	684	1727	770	484	1727	770
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.49	0.49	0.49	0.49	0.49	0.49
Sat Flow, veh/h	1350	333	1303	1350	333	1303	973	3554	1585	647	3554	1585
Grp Volume(v), veh/h	109	0	54	93	0	54	22	826	27	116	380	33
Grp Sat Flow(s),veh/h/ln	1350	0	1636	1350	0	1636	973	1777	1585	647	1777	1585
Q Serve(g_s), s	2.0	0.0	0.7	1.7	0.0	0.7	0.4	4.1	0.2	3.9	1.6	0.3
Cycle Q Clear(g_c), s	2.7	0.0	0.7	2.4	0.0	0.7	2.0	4.1	0.2	8.0	1.6	0.3
Prop In Lane	1.00		0.80	1.00		0.80	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	470	0	287	470	0	287	684	1727	770	484	1727	770
V/C Ratio(X)	0.23	0.00	0.19	0.20	0.00	0.19	0.03	0.48	0.04	0.24	0.22	0.04
Avail Cap(c_a), veh/h	1147	0	1108	1147	0	1108	1053	3076	1372	730	3076	1372
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	10.5	0.0	9.3	10.4	0.0	9.3	4.5	4.6	3.6	7.3	3.9	3.6
Incr Delay (d2), s/veh	0.2	0.0	0.3	0.2	0.0	0.3	0.0	0.2	0.0	0.3	0.1	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	0.4	0.0	0.2	0.4	0.0	0.2	0.0	0.5	0.0	0.3	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.8	0.0	9.7	10.6	0.0	9.7	4.5	4.8	3.6	7.5	4.0	3.6
LnGrp LOS	B	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		163			147			875			529	
Approach Delay, s/veh		10.4			10.2			4.7			4.7	
Approach LOS		B			B			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		17.4		9.2		17.4		9.2				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		23.0		18.0		23.0		18.0				
Max Q Clear Time (g_c+I1), s		6.1		4.7		10.0		4.4				
Green Ext Time (p_c), s		5.6		0.5		2.9		0.4				
Intersection Summary												
HCM 6th Ctrl Delay			5.8									
HCM 6th LOS			A									

Intersection												
Int Delay, s/veh	9.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	50	10	72	46	10	170	10	767	103	110	329	20
Future Vol, veh/h	50	10	72	46	10	170	10	767	103	110	329	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	54	11	78	50	11	185	11	834	112	120	358	22
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1043	1566	179	1337	1532	473	380	0	0	946	0	0
Stage 1	598	598	-	912	912	-	-	-	-	-	-	-
Stage 2	445	968	-	425	620	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	184	110	833	111	116	538	1175	-	-	721	-	-
Stage 1	456	489	-	295	351	-	-	-	-	-	-	-
Stage 2	562	330	-	578	478	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	96	91	833	79	96	538	1175	-	-	721	-	-
Mov Cap-2 Maneuver	96	91	-	79	96	-	-	-	-	-	-	-
Stage 1	452	408	-	292	348	-	-	-	-	-	-	-
Stage 2	354	327	-	425	399	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	41.3		38.3		0.1		2.6					
HCM LOS	E		E									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1175	-	-	96	418	79	428	721	-	-		
HCM Lane V/C Ratio	0.009	-	-	0.566	0.213	0.633	0.457	0.166	-	-		
HCM Control Delay (s)	8.1	-	-	83	15.9	108.7	20.3	11	-	-		
HCM Lane LOS	A	-	-	F	C	F	C	B	-	-		
HCM 95th %tile Q(veh)	0	-	-	2.6	0.8	2.9	2.3	0.6	-	-		

Intersection												
Int Delay, s/veh	19.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	100	10	40	86	10	40	20	760	25	107	350	30
Future Vol, veh/h	100	10	40	86	10	40	20	760	25	107	350	30
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	109	11	43	93	11	43	22	826	27	116	380	33










Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1075	1509	190	1312	1529	427	413	0	0	853	0	0
Stage 1	612	612	-	884	884	-	-	-	-	-	-	-
Stage 2	463	897	-	428	645	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	174	119	820	116	116	576	1142	-	-	782	-	-
Stage 1	447	482	-	307	362	-	-	-	-	-	-	-
Stage 2	548	357	-	575	466	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	129	99	820	~ 88	97	576	1142	-	-	782	-	-
Mov Cap-2 Maneuver	129	99	-	~ 88	97	-	-	-	-	-	-	-
Stage 1	439	411	-	301	355	-	-	-	-	-	-	-
Stage 2	482	350	-	451	397	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	76.8		134.3		0.2		2.3	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1142	-	-	129	334	88	290	782	-	-
HCM Lane V/C Ratio	0.019	-	-	0.843	0.163	1.062	0.187	0.149	-	-
HCM Control Delay (s)	8.2	-	-	106.3	17.9	200.5	20.3	10.4	-	-
HCM Lane LOS	A	-	-	F	C	F	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	5.2	0.6	6.3	0.7	0.5	-	-

Notes

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

Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	61	10	40	40	11	31	10	553	20	32	442	22
Future Vol, veh/h	61	10	40	40	11	31	10	553	20	32	442	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	66	11	43	43	12	34	11	601	22	35	480	24
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	879	1195	240	950	1208	312	504	0	0	623	0	0
Stage 1	550	550	-	634	634	-	-	-	-	-	-	-
Stage 2	329	645	-	316	574	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	242	185	761	215	182	684	1057	-	-	954	-	-
Stage 1	487	514	-	434	471	-	-	-	-	-	-	-
Stage 2	658	466	-	670	501	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	210	176	761	186	173	684	1057	-	-	954	-	-
Mov Cap-2 Maneuver	210	176	-	186	173	-	-	-	-	-	-	-
Stage 1	482	495	-	430	466	-	-	-	-	-	-	-
Stage 2	603	461	-	595	482	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	22.7			22.7			0.1			0.6		
HCM LOS	C			C								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1057	-	-	210	457	186	386	954	-	-		
HCM Lane V/C Ratio	0.01	-	-	0.316	0.119	0.234	0.118	0.036	-	-		
HCM Control Delay (s)	8.4	-	-	29.9	13.9	30.2	15.6	8.9	-	-		
HCM Lane LOS	A	-	-	D	B	D	C	A	-	-		
HCM 95th %tile Q(veh)	0	-	-	1.3	0.4	0.9	0.4	0.1	-	-		

Appendix G

Turn Lane Queue Lengths















Appendix G.1
Turn Lane Queue Lengths
Existing 2023













Existing 2023 AM Peak

1: 92nd Street & Shea Boulevard

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	175	1490	380	113	1459	77	440	214	108	132	240	188
v/c Ratio	0.59	0.71	0.44	0.55	0.75	0.11	0.74	0.28	0.24	0.46	0.54	0.53
Control Delay	54.8	27.7	4.8	59.1	30.5	0.3	48.3	33.9	5.2	51.6	46.6	13.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.8	27.7	4.8	59.1	30.5	0.3	48.3	33.9	5.2	51.6	46.6	13.1
Queue Length 50th (ft)	58	287	8	38	294	0	141	62	0	43	79	5
Queue Length 95th (ft)	84	386	67	56	381	0	204	95	30	78	122	69
Internal Link Dist (ft)		567			1332			386			123	
Turn Bay Length (ft)												
Base Capacity (vph)	308	2199	888	205	2047	744	702	1371	692	308	964	561
Starvation Cap Reductn	0	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	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.68	0.43	0.55	0.71	0.10	0.63	0.16	0.16	0.43	0.25	0.34
Intersection Summary												













Existing 2023 AM Peak

5: 92nd Street & Mountain View Road

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	20	24	275	192	40	373	231	168	330	8
v/c Ratio	0.07	0.06	0.77	0.35	0.06	0.17	0.21	0.27	0.15	0.01
Control Delay	24.3	11.6	45.5	7.3	8.8	8.2	1.9	10.5	8.1	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.3	11.6	45.5	7.3	8.8	8.2	1.9	10.5	8.1	1.7
Queue Length 50th (ft)	9	2	144	9	8	40	0	38	35	0
Queue Length 95th (ft)	8	15	184	0	12	83	30	74	71	0
Internal Link Dist (ft)		740		1280		27			211	
Turn Bay Length (ft)										
Base Capacity (vph)	631	990	833	1040	646	2220	1079	619	2220	1000
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.02	0.33	0.18	0.06	0.17	0.21	0.27	0.15	0.01
Intersection Summary										











Existing 2023 MD Peak

1: 92nd Street & Shea Boulevard

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	251	1301	325	108	1418	73	548	321	133	160	278	207
v/c Ratio	0.71	0.69	0.41	0.43	0.81	0.11	0.80	0.37	0.27	0.52	0.58	0.56
Control Delay	59.2	30.7	4.5	54.4	36.6	0.3	50.8	34.4	7.0	53.5	48.1	15.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.2	30.7	4.5	54.4	36.6	0.3	50.8	34.4	7.0	53.5	48.1	15.6
Queue Length 50th (ft)	89	277	0	37	327	0	186	97	0	55	96	17
Queue Length 95th (ft)	109	354	41	57	413	0	215	124	39	92	140	87
Internal Link Dist (ft)		567			1332			386			123	
Turn Bay Length (ft)												
Base Capacity (vph)	361	1962	810	262	1814	679	748	1303	666	338	880	528
Starvation Cap Reductn	0	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	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.66	0.40	0.41	0.78	0.11	0.73	0.25	0.20	0.47	0.32	0.39
Intersection Summary												













Existing 2023 MD Peak

5: 92nd Street & Mountain View Road

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	14	46	219	215	21	443	219	138	437	8
v/c Ratio	0.07	0.12	0.73	0.42	0.03	0.19	0.20	0.23	0.19	0.01
Control Delay	26.8	12.7	46.3	8.7	7.2	6.9	1.6	8.5	6.8	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.8	12.7	46.3	8.7	7.2	6.9	1.6	8.5	6.8	1.6
Queue Length 50th (ft)	6	5	115	12	4	43	0	27	43	0
Queue Length 95th (ft)	14	6	177	0	14	87	28	66	77	1
Internal Link Dist (ft)		740		1280		27			211	
Turn Bay Length (ft)										
Base Capacity (vph)	522	959	772	1003	615	2345	1123	610	2345	1055
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.05	0.28	0.21	0.03	0.19	0.20	0.23	0.19	0.01
Intersection Summary										











Existing 2023 PM Peak

1: 92nd Street & Shea Boulevard

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	267	1261	168	43	1262	95	551	373	120	173	193	180
v/c Ratio	0.66	0.56	0.21	0.25	0.76	0.14	0.77	0.47	0.24	0.50	0.48	0.47
Control Delay	51.5	23.4	3.6	51.3	34.0	0.4	45.2	35.7	2.1	48.8	46.0	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.5	23.4	3.6	51.3	34.0	0.4	45.2	35.7	2.1	48.8	46.0	6.1
Queue Length 50th (ft)	85	231	0	13	261	0	172	110	0	55	62	0
Queue Length 95th (ft)	125	308	33	33	344	0	221	142	2	81	100	24
Internal Link Dist (ft)		567			1332			386			123	
Turn Bay Length (ft)												
Base Capacity (vph)	422	2242	797	175	1735	694	826	1475	767	390	1026	625
Starvation Cap Reductn	0	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	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.56	0.21	0.25	0.73	0.14	0.67	0.25	0.16	0.44	0.19	0.29
Intersection Summary												

Existing 2023 PM Peak

5: 92nd Street & Mountain View Road













										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	13	90	198	160	17	394	231	99	374	12
v/c Ratio	0.05	0.22	0.70	0.35	0.03	0.17	0.21	0.16	0.16	0.01
Control Delay	23.5	9.8	41.8	8.2	6.6	6.3	1.6	7.3	6.2	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.5	9.8	41.8	8.2	6.6	6.3	1.6	7.3	6.2	2.4
Queue Length 50th (ft)	5	7	89	7	3	34	0	16	32	0
Queue Length 95th (ft)	17	24	157	0	11	68	9	46	65	0
Internal Link Dist (ft)		740		1280		27			211	
Turn Bay Length (ft)										
Base Capacity (vph)	874	1246	978	1248	643	2306	1112	630	2306	1038
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.07	0.20	0.13	0.03	0.17	0.21	0.16	0.16	0.01
Intersection Summary										

Appendix G.2
Turn Lane Queue Lengths
Ambient 2025












Ambient 2025 AM Peak

1: 92nd Street & Shea Boulevard

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	152	1543	380	87	1457	76	446	239	109	130	261	196
v/c Ratio	0.57	0.69	0.43	0.51	0.75	0.11	0.73	0.29	0.24	0.46	0.55	0.53
Control Delay	56.6	26.7	4.9	61.3	30.6	0.3	48.2	33.5	5.1	52.5	46.7	14.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.6	26.7	4.9	61.3	30.6	0.3	48.2	33.5	5.1	52.5	46.7	14.0
Queue Length 50th (ft)	51	307	11	29	299	0	146	70	0	43	87	10
Queue Length 95th (ft)	91	410	76	#62	398	0	211	105	30	78	132	76
Internal Link Dist (ft)		567			1332			386			123	
Turn Bay Length (ft)												
Base Capacity (vph)	272	2236	893	170	2085	754	732	1366	690	303	924	545
Starvation Cap Reductn	0	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	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.69	0.43	0.51	0.70	0.10	0.61	0.17	0.16	0.43	0.28	0.36











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	SBL	SBT	SBR
Lane Group Flow (vph)	65	54	33	22	65	598	33	500	98
v/c Ratio	0.21	0.13	0.11	0.06	0.12	0.28	0.07	0.24	0.10
Control Delay	11.5	5.5	10.1	7.2	5.7	5.2	5.3	5.0	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.5	5.5	10.1	7.2	5.7	5.2	5.3	5.0	1.9
Queue Length 50th (ft)	9	1	4	1	5	26	2	21	0
Queue Length 95th (ft)	25	15	16	10	18	50	11	41	11
Internal Link Dist (ft)		595		535		500		360	
Turn Bay Length (ft)									
Base Capacity (vph)	1369	1624	1331	1705	874	3529	794	3539	1583
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	0.05	0.03	0.02	0.01	0.07	0.17	0.04	0.14	0.06
Intersection Summary									

Ambient 2025 AM Peak










5: 92nd Street & Mountain View Road











										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	11	22	239	185	22	391	228	141	326	11
v/c Ratio	0.04	0.05	0.74	0.37	0.03	0.17	0.21	0.22	0.14	0.01
Control Delay	24.7	16.9	45.0	7.1	7.4	7.0	1.7	8.7	6.9	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.7	16.9	45.0	7.1	7.4	7.0	1.7	8.7	6.9	2.2
Queue Length 50th (ft)	5	5	121	5	4	38	0	28	31	0
Queue Length 95th (ft)	17	22	200	52	15	77	29	73	64	5
Internal Link Dist (ft)		740		1280		27			211	
Turn Bay Length (ft)										
Base Capacity (vph)	654	1077	862	1062	670	2295	1106	629	2295	1033
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.02	0.28	0.17	0.03	0.17	0.21	0.22	0.14	0.01
Intersection Summary										

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	207	1359	304	98	1467	76	478	293	130	163	293	228
v/c Ratio	0.65	0.69	0.38	0.44	0.80	0.11	0.77	0.35	0.28	0.52	0.58	0.60
Control Delay	57.8	29.5	4.3	55.9	34.7	0.3	50.9	34.9	7.2	53.6	47.1	18.2
Queue Delay	0.0	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	29.5	4.3	55.9	34.7	0.3	50.9	34.9	7.2	53.6	47.1	18.2
Queue Length 50th (ft)	72	278	0	34	326	0	161	89	0	55	101	30
Queue Length 95th (ft)	#123	369	57	65	428	0	232	128	46	96	146	107
Internal Link Dist (ft)		567			1332			386			123	
Turn Bay Length (ft)												
Base Capacity (vph)	330	2073	825	231	1926	710	711	1276	653	344	897	535
Starvation Cap Reductn	0	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	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.66	0.37	0.42	0.76	0.11	0.67	0.23	0.20	0.47	0.33	0.43

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	SBL	SBT	SBR
Lane Group Flow (vph)	65	65	87	44	54	696	22	457	98
v/c Ratio	0.17	0.15	0.23	0.10	0.09	0.29	0.05	0.19	0.09
Control Delay	10.9	5.5	11.4	6.1	5.5	5.0	5.5	4.6	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.9	5.5	11.4	6.1	5.5	5.0	5.5	4.6	1.9
Queue Length 50th (ft)	7	1	10	1	4	32	2	20	0
Queue Length 95th (ft)	28	19	36	16	17	68	9	44	13
Internal Link Dist (ft)		595		535		500		360	
Turn Bay Length (ft)									
Base Capacity (vph)	913	1001	913	1006	666	2583	527	2587	1184
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	0.07	0.06	0.10	0.04	0.08	0.27	0.04	0.18	0.08
Intersection Summary									

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	11	44	207	185	22	457	210	130	402	11
v/c Ratio	0.05	0.12	0.72	0.39	0.03	0.19	0.19	0.21	0.17	0.01
Control Delay	26.8	13.0	46.4	7.8	6.7	6.4	1.5	7.8	6.3	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.8	13.0	46.4	7.8	6.7	6.4	1.5	7.8	6.3	2.0
Queue Length 50th (ft)	5	5	107	5	4	43	0	24	37	0
Queue Length 95th (ft)	18	31	181	55	15	84	26	64	74	5
Internal Link Dist (ft)		740		1280		27			211	
Turn Bay Length (ft)										
Base Capacity (vph)	588	968	783	997	643	2374	1131	611	2374	1068
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.05	0.26	0.19	0.03	0.19	0.19	0.21	0.17	0.01
Intersection Summary										










Ambient 2025 PM Peak

1: 92nd Street & Shea Boulevard

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	250	1391	163	43	1315	87	522	348	109	152	196	185
v/c Ratio	0.67	0.61	0.20	0.25	0.76	0.13	0.76	0.44	0.24	0.48	0.49	0.55
Control Delay	53.2	23.7	3.2	51.4	32.6	0.4	45.7	35.2	5.3	49.3	46.0	13.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.2	23.7	3.2	51.4	32.6	0.4	45.7	35.2	5.3	49.3	46.0	13.7
Queue Length 50th (ft)	80	261	0	13	268	0	163	103	0	48	63	4
Queue Length 95th (ft)	#132	343	34	33	352	0	231	146	31	85	101	67
Internal Link Dist (ft)		567			1332			386			123	
Turn Bay Length (ft)												
Base Capacity (vph)	386	2283	809	175	1839	686	791	1479	736	351	1026	586
Starvation Cap Reductn	0	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	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.61	0.20	0.25	0.72	0.13	0.66	0.24	0.15	0.43	0.19	0.32











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	SBL	SBT	SBR
Lane Group Flow (vph)	98	44	33	22	22	804	22	359	33
v/c Ratio	0.30	0.11	0.11	0.05	0.04	0.37	0.06	0.16	0.03
Control Delay	14.7	7.0	12.1	8.8	5.0	5.8	5.4	4.9	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.7	7.0	12.1	8.8	5.0	5.8	5.4	4.9	2.5
Queue Length 50th (ft)	15	2	5	2	2	42	2	16	0
Queue Length 95th (ft)	46	18	20	13	9	83	10	35	8
Internal Link Dist (ft)		595		535		500		360	
Turn Bay Length (ft)									
Base Capacity (vph)	1325	1583	1298	1650	1000	3532	637	3539	1583
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	0.07	0.03	0.03	0.01	0.02	0.23	0.03	0.10	0.02
Intersection Summary									













Ambient 2025 PM Peak










5: 92nd Street & Mountain View Road











										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	11	65	207	152	11	402	185	98	380	11
v/c Ratio	0.04	0.16	0.70	0.33	0.02	0.17	0.17	0.16	0.17	0.01
Control Delay	23.3	9.9	41.7	7.5	6.7	6.4	1.6	7.4	6.3	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.3	9.9	41.7	7.5	6.7	6.4	1.6	7.4	6.3	2.1
Queue Length 50th (ft)	4	4	94	4	2	35	0	16	33	0
Queue Length 95th (ft)	16	33	163	47	9	71	25	47	67	4
Internal Link Dist (ft)		740		1280		27			211	
Turn Bay Length (ft)										
Base Capacity (vph)	894	1232	995	1234	636	2298	1093	622	2298	1035
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.05	0.21	0.12	0.02	0.17	0.17	0.16	0.17	0.01
Intersection Summary										













Appendix G.3
Turn Lane Queue Lengths
2023 with Site






















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	175	1490	394	117	1459	77	449	219	111	132	250	188
v/c Ratio	0.59	0.72	0.45	0.57	0.75	0.11	0.75	0.28	0.24	0.47	0.54	0.52
Control Delay	55.4	28.2	4.8	60.7	31.0	0.3	48.9	33.7	5.4	52.1	46.6	12.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.4	28.2	4.8	60.7	31.0	0.3	48.9	33.7	5.4	52.1	46.6	12.8
Queue Length 50th (ft)	59	297	8	40	304	0	147	64	0	44	83	5
Queue Length 95th (ft)	84	389	68	58	384	0	209	97	33	79	126	68
Internal Link Dist (ft)		567			1332			386			123	
Turn Bay Length (ft)												
Base Capacity (vph)	306	2181	892	204	2030	739	697	1360	687	306	957	558
Starvation Cap Reductn	0	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	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.68	0.44	0.57	0.72	0.10	0.64	0.16	0.16	0.43	0.26	0.34
Intersection Summary												













									
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	78	72	131	54	69	611	68	523	121
v/c Ratio	0.21	0.14	0.34	0.11	0.15	0.32	0.16	0.27	0.13
Control Delay	10.9	5.3	12.6	5.4	7.2	6.5	7.4	6.4	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.9	5.3	12.6	5.4	7.2	6.5	7.4	6.4	2.2
Queue Length 50th (ft)	9	2	16	1	6	31	6	26	0
Queue Length 95th (ft)	25	0	35	13	22	67	23	53	11
Internal Link Dist (ft)		595		535		500		360	
Turn Bay Length (ft)									
Base Capacity (vph)	1345	1645	1323	1645	853	3493	784	3539	1583
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	0.06	0.04	0.10	0.03	0.08	0.17	0.09	0.15	0.08
Intersection Summary									










										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	20	24	275	200	40	383	231	185	362	11
v/c Ratio	0.08	0.06	0.77	0.37	0.06	0.17	0.21	0.30	0.16	0.01
Control Delay	25.2	11.8	46.6	7.6	8.9	8.3	1.9	11.0	8.3	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.2	11.8	46.6	7.6	8.9	8.3	1.9	11.0	8.3	2.5
Queue Length 50th (ft)	9	2	148	11	8	44	0	45	41	0
Queue Length 95th (ft)	8	15	188	0	12	87	30	83	78	0
Internal Link Dist (ft)		740		1280		27			211	
Turn Bay Length (ft)										
Base Capacity (vph)	569	927	779	988	629	2233	1084	617	2233	1006
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.03	0.35	0.20	0.06	0.17	0.21	0.30	0.16	0.01
Intersection Summary										











												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	251	1301	340	112	1418	73	562	329	138	160	294	207
v/c Ratio	0.73	0.69	0.43	0.45	0.82	0.11	0.81	0.36	0.27	0.52	0.58	0.55
Control Delay	60.8	31.8	4.6	55.8	37.9	0.3	51.9	33.9	6.7	54.6	48.1	15.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.8	31.8	4.6	55.8	37.9	0.3	51.9	33.9	6.7	54.6	48.1	15.1
Queue Length 50th (ft)	89	282	0	39	332	0	193	100	0	56	103	18
Queue Length 95th (ft)	111	365	42	60	426	0	225	126	39	94	148	87
Internal Link Dist (ft)		567			1332			386			123	
Turn Bay Length (ft)												
Base Capacity (vph)	355	1933	812	259	1788	672	757	1285	662	333	847	515
Starvation Cap Reductn	0	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	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.67	0.42	0.43	0.79	0.11	0.74	0.26	0.21	0.48	0.35	0.40
Intersection Summary												

									
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	60	56	201	89	51	715	80	465	117
v/c Ratio	0.15	0.09	0.48	0.16	0.11	0.39	0.22	0.25	0.13
Control Delay	9.7	0.3	14.0	4.0	8.1	7.9	9.8	7.4	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.7	0.3	14.0	4.0	8.1	7.9	9.8	7.4	2.7
Queue Length 50th (ft)	7	0	26	1	5	41	8	25	0
Queue Length 95th (ft)	26	0	58	5	24	101	27	62	12
Internal Link Dist (ft)		595		535		500		360	
Turn Bay Length (ft)									
Base Capacity (vph)	720	982	741	925	555	2160	428	2175	1018
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	0.08	0.06	0.27	0.10	0.09	0.33	0.19	0.21	0.11
Intersection Summary									

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	14	46	219	220	21	453	219	156	493	10
v/c Ratio	0.07	0.12	0.73	0.43	0.04	0.19	0.20	0.26	0.21	0.01
Control Delay	26.8	12.7	46.3	8.8	7.3	6.9	1.6	8.8	7.0	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.8	12.7	46.3	8.8	7.3	6.9	1.6	8.8	7.0	1.8
Queue Length 50th (ft)	6	5	115	13	4	44	0	31	49	0
Queue Length 95th (ft)	14	6	177	0	14	89	28	75	87	1
Internal Link Dist (ft)		740		1280		27			211	
Turn Bay Length (ft)										
Base Capacity (vph)	511	959	772	1006	581	2345	1123	606	2345	1055
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.05	0.28	0.22	0.04	0.19	0.20	0.26	0.21	0.01
Intersection Summary										













												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	267	1261	194	50	1262	95	562	381	123	173	227	180
v/c Ratio	0.67	0.60	0.25	0.29	0.78	0.14	0.78	0.46	0.24	0.51	0.52	0.45
Control Delay	53.3	26.1	4.3	53.5	35.5	0.4	46.2	34.9	2.1	50.1	46.4	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.3	26.1	4.3	53.5	35.5	0.4	46.2	34.9	2.1	50.1	46.4	5.6
Queue Length 50th (ft)	87	237	0	16	268	0	178	113	0	55	74	0
Queue Length 95th (ft)	129	324	42	38	360	0	232	144	2	84	116	23
Internal Link Dist (ft)		567			1332			386			123	
Turn Bay Length (ft)												
Base Capacity (vph)	414	2091	765	172	1703	685	846	1449	756	383	971	604
Starvation Cap Reductn	0	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	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.60	0.25	0.29	0.74	0.14	0.66	0.26	0.16	0.45	0.23	0.30
Intersection Summary												

									
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	99	42	109	44	25	825	143	356	39
v/c Ratio	0.28	0.06	0.30	0.10	0.04	0.34	0.32	0.14	0.04
Control Delay	12.8	0.2	13.1	1.9	5.4	5.1	8.9	4.5	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.8	0.2	13.1	1.9	5.4	5.1	8.9	4.5	2.6
Queue Length 50th (ft)	16	0	17	0	2	42	14	15	0
Queue Length 95th (ft)	36	0	32	0	7	87	35	36	5
Internal Link Dist (ft)	595		535		500		360		
Turn Bay Length (ft)									
Base Capacity (vph)	814	1035	814	921	698	2441	441	2462	1113
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	0.12	0.04	0.13	0.05	0.04	0.34	0.32	0.14	0.04
Intersection Summary									

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	13	90	198	166	17	404	231	108	410	17
v/c Ratio	0.05	0.22	0.71	0.36	0.03	0.17	0.21	0.17	0.18	0.02
Control Delay	24.7	10.2	43.9	8.6	6.6	6.3	1.5	7.4	6.3	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.7	10.2	43.9	8.6	6.6	6.3	1.5	7.4	6.3	2.9
Queue Length 50th (ft)	5	7	94	8	3	35	0	18	36	0
Queue Length 95th (ft)	18	24	165	0	11	71	9	51	72	1
Internal Link Dist (ft)		740		1280		27			211	
Turn Bay Length (ft)										
Base Capacity (vph)	766	1138	888	1149	628	2336	1123	631	2336	1051
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.08	0.22	0.14	0.03	0.17	0.21	0.17	0.18	0.02
Intersection Summary										










Appendix G.4
Turn Lane Queue Lengths
2025 with Site

























												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	163	1609	416	101	1522	87	476	254	123	141	282	217
v/c Ratio	0.62	0.77	0.48	0.61	0.78	0.12	0.77	0.30	0.26	0.51	0.57	0.58
Control Delay	59.4	30.5	6.1	67.0	32.8	0.3	50.4	33.1	6.3	54.2	46.8	16.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.4	30.5	6.1	67.0	32.8	0.3	50.4	33.1	6.3	54.2	46.8	16.6
Queue Length 50th (ft)	56	337	21	35	328	0	158	74	0	47	95	23
Queue Length 95th (ft)	#103	446	99	#77	433	0	227	109	40	85	140	96
Internal Link Dist (ft)		567			1332			386			123	
Turn Bay Length (ft)												
Base Capacity (vph)	264	2123	873	165	1976	724	711	1361	688	294	931	548
Starvation Cap Reductn	0	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	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.76	0.48	0.61	0.77	0.12	0.67	0.19	0.18	0.48	0.30	0.40

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	SBL	SBT	SBR
Lane Group Flow (vph)	65	67	105	59	76	657	74	522	109
v/c Ratio	0.19	0.15	0.30	0.13	0.16	0.33	0.18	0.26	0.12
Control Delay	11.2	5.5	12.6	6.0	6.7	6.1	7.0	5.8	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.2	5.5	12.6	6.0	6.7	6.1	7.0	5.8	2.0
Queue Length 50th (ft)	8	1	13	2	6	32	6	24	0
Queue Length 95th (ft)	30	20	44	19	24	66	25	53	15
Internal Link Dist (ft)		595		535		500		360	
Turn Bay Length (ft)									
Base Capacity (vph)	1339	1637	1328	1663	855	3511	749	3539	1583
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	0.05	0.04	0.08	0.04	0.09	0.19	0.10	0.15	0.07
Intersection Summary									











										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	11	33	250	201	22	423	250	165	366	12
v/c Ratio	0.05	0.08	0.76	0.38	0.03	0.19	0.23	0.27	0.16	0.01
Control Delay	25.1	13.8	46.4	7.0	8.1	7.6	1.8	9.8	7.5	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.1	13.8	46.4	7.0	8.1	7.6	1.8	9.8	7.5	2.6
Queue Length 50th (ft)	5	5	132	5	4	44	0	35	37	0
Queue Length 95th (ft)	18	26	215	55	17	90	32	93	78	5
Internal Link Dist (ft)		740		1280		27			211	
Turn Bay Length (ft)										
Base Capacity (vph)	572	974	789	1001	641	2282	1109	606	2282	1028
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.03	0.32	0.20	0.03	0.19	0.23	0.27	0.16	0.01
Intersection Summary										













												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	217	1424	339	101	1533	87	512	323	146	174	330	239
v/c Ratio	0.69	0.73	0.42	0.46	0.85	0.13	0.81	0.37	0.29	0.56	0.61	0.61
Control Delay	60.8	31.9	5.0	57.2	38.2	0.4	53.3	34.4	6.7	55.4	47.5	19.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.8	31.9	5.0	57.2	38.2	0.4	53.3	34.4	6.7	55.4	47.5	19.1
Queue Length 50th (ft)	76	309	5	35	360	0	175	98	0	60	115	38
Queue Length 95th (ft)	#134	401	67	67	#469	0	#254	138	47	102	162	117
Internal Link Dist (ft)		567			1332			386			123	
Turn Bay Length (ft)												
Base Capacity (vph)	321	1968	813	225	1825	682	691	1273	663	334	905	538
Starvation Cap Reductn	0	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	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.72	0.42	0.45	0.84	0.13	0.74	0.25	0.22	0.52	0.36	0.44

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	SBL	SBT	SBR
Lane Group Flow (vph)	76	76	170	75	65	754	71	478	109
v/c Ratio	0.20	0.15	0.44	0.14	0.13	0.39	0.20	0.25	0.12
Control Delay	10.7	4.6	14.1	4.8	7.8	7.5	9.0	6.8	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.7	4.6	14.1	4.8	7.8	7.5	9.0	6.8	2.5
Queue Length 50th (ft)	10	1	23	2	6	43	7	25	0
Queue Length 95th (ft)	32	19	64	20	27	102	32	63	19
Internal Link Dist (ft)		595		535		500		360	
Turn Bay Length (ft)									
Base Capacity (vph)	724	921	724	924	545	2153	406	2163	1010
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	0.10	0.08	0.23	0.08	0.12	0.35	0.17	0.22	0.11
Intersection Summary									











										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	11	54	228	211	33	488	230	158	474	12
v/c Ratio	0.05	0.13	0.75	0.41	0.06	0.21	0.20	0.27	0.20	0.01
Control Delay	26.9	11.6	48.3	8.4	7.6	7.3	1.6	9.4	7.2	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.9	11.6	48.3	8.4	7.6	7.3	1.6	9.4	7.2	2.5
Queue Length 50th (ft)	5	5	124	11	6	51	0	33	49	0
Queue Length 95th (ft)	18	33	204	63	22	101	29	88	98	5
Internal Link Dist (ft)		740		1280		27			211	
Turn Bay Length (ft)										
Base Capacity (vph)	492	888	711	942	591	2341	1125	582	2341	1054
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.06	0.32	0.22	0.06	0.21	0.20	0.27	0.20	0.01
Intersection Summary										

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	272	1457	199	61	1380	87	564	376	122	163	239	196
v/c Ratio	0.70	0.68	0.26	0.37	0.81	0.13	0.80	0.44	0.24	0.53	0.54	0.49
Control Delay	56.1	27.6	4.7	56.6	36.7	0.4	49.1	35.2	1.9	52.9	47.8	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.1	27.6	4.7	56.6	36.7	0.4	49.1	35.2	1.9	52.9	47.8	7.1
Queue Length 50th (ft)	92	296	4	21	309	0	185	114	0	54	81	0
Queue Length 95th (ft)	#153	387	51	45	400	0	261	158	10	93	122	38
Internal Link Dist (ft)		567			1332			386			123	
Turn Bay Length (ft)												
Base Capacity (vph)	401	2150	779	167	1748	697	785	1371	726	334	906	579
Starvation Cap Reductn	0	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	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.68	0.26	0.37	0.79	0.12	0.72	0.27	0.17	0.49	0.26	0.34

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	SBL	SBT	SBR
Lane Group Flow (vph)	109	54	93	54	22	853	116	380	33
v/c Ratio	0.30	0.12	0.26	0.12	0.03	0.35	0.28	0.16	0.03
Control Delay	12.6	5.8	12.1	5.8	5.5	5.4	8.4	4.7	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.6	5.8	12.1	5.8	5.5	5.4	8.4	4.7	2.6
Queue Length 50th (ft)	15	1	12	1	2	45	11	17	0
Queue Length 95th (ft)	43	17	38	17	9	93	45	39	8
Internal Link Dist (ft)		595		535		500		360	
Turn Bay Length (ft)									
Base Capacity (vph)	832	972	832	972	691	2488	431	2497	1127
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	0.13	0.06	0.11	0.06	0.03	0.34	0.27	0.15	0.03
Intersection Summary									

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	22	87	217	167	22	434	196	117	437	13
v/c Ratio	0.09	0.20	0.73	0.35	0.04	0.19	0.18	0.19	0.19	0.01
Control Delay	25.0	10.9	44.6	7.4	7.2	6.8	1.7	8.2	6.8	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.0	10.9	44.6	7.4	7.2	6.8	1.7	8.2	6.8	2.6
Queue Length 50th (ft)	9	9	105	5	4	41	0	21	41	0
Queue Length 95th (ft)	27	43	179	50	15	82	27	59	83	6
Internal Link Dist (ft)		740		1280		27			211	
Turn Bay Length (ft)										
Base Capacity (vph)	755	1131	876	1127	603	2299	1097	604	2299	1035
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.08	0.25	0.15	0.04	0.19	0.18	0.19	0.19	0.01
Intersection Summary										

