



# MEMORANDUM

Department of Public Works – Transportation Division

Date:	June 7, 2022
Re:	Neighborhood Study – Desert Shores (Ward 4)

## Background

The City of Las Vegas’ Transportation Engineering Division (TED) has been conducting studies in the Desert Shores Community in an effort to understand and resolve traffic and safety concerns of the residents. On October 13, 2021, City Transportation Engineering staff met with a representative of the Desert Shores Community Association to better understand the concerns of the residents with the community and field verify where improvements could be implemented.



Figure 1: Desert Shores Community

## Existing Conditions

### Roadway characteristics

All corridors analyzed are classified as local roads and the majority are 50-feet of right of way. Harbor Island Dr. and Breakwater Dr. have 50-feet and 60-feet of right-of-way, respectively, and function more as collector roads for all the other local roads within the community. All corridors analyzed have pavement markings, with one travel lane and a bike lane in each direction. Parking is permitted on both sides of the streets, however, this is not typical as homes do not front any of the studied corridors. The posted speed limit is primarily 30 miles-per-hour (mph) throughout the community, however Breakwater Dr. and Point Conception Dr. are 25 mph. All corridors analyzed are primary fire response routes, except for Soft Winds Dr., which is a secondary fire response route.

### Intersection control

All intersections analyzed are T-intersections that are two-way stop controlled, with the uncontrolled movement on the major road (Harbor Island Dr./Coral Shores Dr./Mariner Dr./Soft Winds Dr.)

## Recent resident concerns

The Desert Shores community representative presented the City with the following requests and concerns:

- a. Multi-way stop intersection control:
  - i. Harbor Island Dr. and Breakwater Dr.
  - ii. Harbor Island Dr. and Point Conception Dr.
  - iii. Harbor Island Dr. and Soft Winds Dr.
  
- b. Additional/enhanced pedestrian crosswalks:
  - i. Mariner Dr. and Hudson Ln. (new crosswalk)
  - ii. Breakwater Dr. and Port of Call Dr. (new crosswalk)
  - iii. Harbor Island Dr. and Point Conception Dr. (new crosswalk)
  - iv. Harbor Island Dr. and Bay Crest Dr. (new crosswalk)
  - v. Breakwater Dr. and Mariner Dr. (refresh existing crosswalk)

## Crash analysis

Crash data was obtained from the Nevada Department of Transportation (NDOT) for the three-year period from 2015 through 2017 and the Las Vegas Metropolitan Police Department (LVMPD) for the three-year period from October 2018 through October 2021. Crash data from NDOT and LVMPD is included in Appendix A.

LVMPD crash data was obtained for the three intersections analyzed for a multi-way stop control: Harbor Island Dr. and Breakwater Dr., Harbor Island Dr. and Point Conception Dr. and Harbor Island Dr. and Soft Winds Dr. Only one intersection had crash data within the studied period: Harbor Island Dr. and Point Conception Dr. This crash was a property damage only crash that resulted from a golf cart failing to keep in its lane and sideswiping another vehicle.

## Speed data collection

Traffic speed and volume data were collected on October 21, 2021, along the subject corridor. Findings are summarized below and are included in-full in Appendix B.

Table 1: Intersection speed study summary

Intersection	Corridor	Speed Limit (mph)	Average (dual direction average) (mph)	85 <sup>th</sup> Percentile (dual direction average) (mph)
Harbor Island Dr. and Breakwater Dr.	Harbor Island Dr.	30	30	40
	Breakwater Dr.	25	32	43
Harbor Island Dr. and Point Conception Dr.	Harbor Island Dr.	30	34	40
	Point Conception Dr.	25	41	55
Harbor Island Dr. and Soft Winds Dr.	Harbor Island Dr.	30	33	40
	Soft Winds Dr.	30	33	39

## Multi-way stop warrant analysis

Three multi-way stop warrant analysis was performed in accordance with the Federal Highway Administration (FHWA) Manual on Uniform Traffic Control Devices (MUTCD). Multi-way stop warrant analysis findings are included in-full in Appendix C.

### Harbor Island Dr. and Breakwater Dr.

It was determined the data **did not satisfy** the justification of a multi-way stop, as none of the warrant criteria were met. The following criteria are considered in the engineering study for a multi-way stop installation:

- The minimum number of vehicular crashes within a 12-month period is five, where the study findings are none from October 2018 through October 2021.
- The highest average 8-hour (dual approach) vehicular volume for Harbor Island Dr. (Major Street) must be at least 300 vehicles per day (vpd), where the study findings are 219.6 vpd.
- The highest average 8-hour (dual approach) vehicular volume for Breakwater Dr. (Minor Street) must be at least 200 vehicles per day (vpd), where the study findings are 66.9 vpd.

Table 2: Intersection volume study summary (Harbor Island Dr. and Breakwater Dr.)

Corridor	Direction	Total Approach Volumes (vehicles per day)	Highest 8-Hr Average (vehicles per day)
Harbor Island Dr. (Major Street Approach)	Northbound	1,597	219.6
	Southbound	1,479	
Breakwater Dr. (Minor Street Approach)	Eastbound	N/A	66.9
	Westbound	909	

Harbor Island Dr. and Point Conception Dr.

It was determined the data did not satisfy the justification of a multi-way stop, as none of the warrant criteria were met. The following criteria are considered in the engineering study for a multi-way stop installation:

- The minimum number of vehicular crashes within a 12-month period is five, where the study findings are one from October 2018 through October 2021.
- The highest average 8-hour (dual approach) vehicular volume for Harbor Island Dr. (Major Street) must be at least 300 vehicles per day (vpd), where the study findings are 268.4 vpd.
- The highest average 8-hour (dual approach) vehicular volume for Point Conception Dr. (Minor Street) must be at least 200 vehicles per day (vpd), where the study findings are 60.5 vpd.

*Table 3: Intersection volume study summary (Harbor Island Dr. and Point Conception Dr.)*

Corridor	Direction	Total Approach Volumes (vehicles per day)	Highest 8-Hr Average (vehicles per day)
Harbor Island Dr. (Major Street Approach)	Northbound	1,798	268.4
	Southbound	1,891	
Point Conception Dr. (Minor Street Approach)	Eastbound	840	60.5
	Westbound	N/A	

Harbor Island Dr. and Soft Winds Dr.

It was determined the data did not satisfy the justification of a multi-way stop, as none of the warrant criteria were met. The following criteria are considered in the engineering study for a multi-way stop installation:

- The minimum number of vehicular crashes within a 12-month period is five, where the study findings are none from October 2018 through October 2021.
- The highest average 8-hour (dual approach) vehicular volume for Harbor Island Dr. (Major Street) must be at least 300 vehicles per day (vpd), and the study findings are 306 vpd.
- The highest average 8-hour (dual approach) vehicular volume for Wendell Ave. (Minor Street) must be at least 200 vehicles per day (vpd), where the study findings are 63.1 vpd.

*Table 4: Intersection volume study summary (Harbor Island Dr. and Soft Winds Dr.)*

Corridor	Direction	Total Approach Volumes (vehicles per day)	Highest 8-Hr Average (vehicles per day)
Harbor island Dr. (Major Street Approach)	Northbound	1925	306
	Southbound	2256	
Soft Winds Dr. (Minor Street Approach)	Eastbound	N/A	63.1
	Westbound	900	

## Speed limit analysis

In 2018 the City of Las Vegas Transportation Engineering Division (TED) changed the speed limit signs from 35 mph to 30 mph. In 2021 speed and volume studies were performed to compare data and justify the speed limit changes. The following methods, policies, and guidelines are used by TED for evaluating speed limits:

- Guidelines established by the Manual on Uniform Traffic Control Devices (MUTCD)
- USLIMITS2 expert system analysis tool developed by the Federal Highway Administration (FHWA)
- Engineering judgement

As part of the evaluation process, TED coordinates results and recommendations from the study with local law enforcement and other applicable stakeholders, where appropriate, for support and to identify and resolve any concerns.

In addition to traffic speed and volume, other factors routinely considered include corridor crash and crash injury rates, pedestrian and bicycle activity, number of travel lanes, on-street parking, driveway density, intersection traffic control, access, length of speed zone, adjacent speed zones, and area type.

The USLIMITS output results for the 2018 and 2021 data is summarized in Table 5 below. The corridor was broken up into logical segments for analysis. See Appendix D for USLIMITS2 Speed Zoning Reports.

*Table 5: USLIMITS2 recommended speed limit summary*

Street	Termini From	Termini To	Section Length (miles)	Posted Speed Limit (mph)	2018				2021			
					85th %tile Speed (mph)	50th %tile Speed (mph)	AADT	US Limits Recommended Speed Limit (mph)	85th %tile Speed (mph)	50th %tile Speed (mph)	AADT	US Limits Recommended Speed Limit (mph)
Breakwater Dr.	Harbor Island Dr.	Mariner Dr.	0.7	25	N/A	N/A	N/A	N/A	43	32	909	30
Coral Shores Dr.	Lazarette Dr.	Soft Breeze Dr.	0.6	30	52	43	2,301	45	43	36	2,302	35
Harbor Island Dr.	Point Conception Dr.	Lazarette Dr.	0.6	30	46	37	2,547	35	41	34	1,891	35
Harbor Island Dr.	Point Conception Dr.	Soft Winds Dr.	0.1	30	44	38	2,601	40	39	34	1,798	35
Harbor Island Dr.	Lake Mead Blvd.	Soft Winds Dr.	0.5	30	43	36	5,036	35	40	35	4,616	35
Mariner Dr.	Soft Winds Dr.	Lake Mead Blvd.	0.5	30	43	36	4,358	35	47	39	3,586	40
Mariner Dr.	Breakwater Dr.	Regatta Dr.	0.4	30	45	39	3,911	40	42	35	2,937	35
Soft Winds Dr.	Harbor Island Dr.	Mariner Dr.	0.5	30	N/A	N/A	N/A	N/A	39	33	900	35

## Staff recommendations and actions

### Multi-way stop warrant analysis

The intersections do not warrant an all-way stop per the US Department of Transportation Federal Highway Administration's Manual on Uniform Traffic Control Devices (MUTCD) at this time. The installation of an unwarranted all-way stop can create excessive delay, congestion and increased crashes to the travelling public. The installation of an unwarranted stop sign on major streets may also create excessive queuing and delay due to the difference in volumes of the intersecting streets. Additionally, for people that frequent the area, they may begin ignoring the stop signs on the major street, since it is very likely each time they stop, no one is on the minor street. Because of these factors, the City does not support the installation of a multi-way stop at this time.

### Additional/enhanced pedestrian crosswalks

The 4 locations identified for additional pedestrian improvements have been added to the City's master list for pedestrian improvements for future installation. According to the FHWA's Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations, the following future improvements are recommended:

- 1) High visibility crosswalk markings
- 2) Parking restrictions on crosswalk approach
- 3) Adequate nighttime lighting levels
- 4) Crossing warning signs

These treatments are based on Average Daily Traffic, corridor lane configurations, and posted speed limit. Furthermore, the crosswalk locations may be candidates for the following treatments as well:

- 1) Raised crosswalks
- 2) In-street pedestrian crossing signs
- 3) Curb extensions
- 4) Pedestrian refuge islands

A work order has been issued to refresh the crosswalk markings at the intersection of Breakwater Dr. and Mariner Dr.

### Speed limit analysis

The US limits software produced the following speed limit recommendations for 2021: 1 corridor had a 30 mph speed limit output, 6 corridors had a 35 mph speed limit output, and 1 corridor had a 40 mph speed limit output. With the safety of all road users in mind, and in an effort to maintain consistency within the Desert Shores community, the final recommended speed limit for all corridors, except Breakwater Dr. is 30 mph. This is the current posted speed limit on all corridors except for Breakwater Dr. This roadway has a speed limit of 25 mph, which will remain. Further investigation will be performed for appropriate traffic calming measures on Breakwater Dr.

On March 15, 2022, the TED recommended to install chicanes along Coral Shores Dr. as a speed reduction countermeasure. This suggestion was not favored by the neighborhood and it was determined that the intermediate solution will be LVMPD enforcement. Additional speed management analysis will be considered upon request.

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## Signatures

Prepared By:

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Aria Heraypur, E.I.  
Senior Engineering Associate

Reviewed By:

\_\_\_\_\_  
Lia Grimaldi, P.E.  
Project Engineer

Reviewed By:

\_\_\_\_\_  
Christina Karanikolas, P.E., PTOE  
Assistant City Traffic Engineer

Concurred By:

\_\_\_\_\_  
Joey Paskey, P.E., PTOE  
Deputy Director/City Traffic Engineer

**Requestor information:**

*Name: Ann Copeland, Desert Shores Community*

*Address: 2500 Regatta Drive*

*Phone: 702-254-1020*

*Email: gm@mydesertshores.com*

## **APPENDIX A**

### **CRASH DATA**

**INTERSECTION DETAIL**  
**POINT CONCEPTION DR & HARBOR ISLAND DR**  
**01 JAN 17 - 01 JAN 20**

COUNTY: CLARK		Crash Date	Crash Year	Crash Time	Primary Street	Distance	Dir	Secondary Street	Weather	Crash Type	Total Vehicles	V1 Type	V1 Dir	V1 Lane Num	V1 Action	V1 Driver Factors	V1 Vehicle Factors	V1 Most Harmful Event	V2 Type	V2 Dir	V2 Lane Num	V2 Action	V2 Driver Factors	V2 Most Harmful Event	Agency	Accident Rec Num
PROPERTY DAMAGE ONLY		2-Jul-2018	2018	11:03 AM	HARBOR ISLAND DR	25	S	POINT CONCEPTION DR	CLEAR	SIDESWIPE, OVERTAKING	2	GOLF CART	N	CL	LEAVING LANE	OTHER IMPROPER DRIVING	FAILURE TO KEEP IN PROPER LANE OR RUNNING OFF ROAD	MOTOR VEHICLE IN TRANSPORT	SEDAN	N	2	GOING STRAIGHT	APPARENTLY NORMAL	MOTOR VEHICLE IN TRANSPORT	LVMPD	3088943

**NDOT CRASH DATA  
2015-2017**

Crash Severity	Crash Year	Primary Street	Distance	Dir	Secondary Street	Injured	Crash Type	Total Vehicles	V1 Dir	V1 Action	V2 Dir	Pedestrian
INJURY CRASH	2015	MARINER DR	104	N	LAKE MEAD BLVD	1	REAR-END	2	S	GOING STRAIGHT	S	No Data
INJURY CRASH	2015	LAKE MEAD BLVD	0	No Data	MARINER DR	2	ANGLE	2	E	TURNING LEFT	W	No Data
INJURY CRASH	2015	CORAL SHORES DR	178	E	SOARING GULLS DR	1	NON-COLLISION	1	W	GOING STRAIGHT	No Data	No Data
INJURY CRASH	2015	CORAL SHORES DR	5	E	SPINNAKER COVE DR	1	NON-COLLISION	1	U	TURNING LEFT	No Data	YES
INJURY CRASH	2015	LAKE MEAD BLVD	0	No Data	MARINER DR	1	ANGLE	2	W	TURNING LEFT	E	No Data
INJURY CRASH	2015	HARBOR ISLAND DR	0	No Data	RUSTY DOCK DR	1	SIDESWIPE, MEETING	2	S	GOING STRAIGHT	N	No Data
INJURY CRASH	2016	LAKE MEAD BLVD	27	E	HARBOR ISLAND DR	1	ANGLE	2	W	MAKING U-TURN	E	No Data
INJURY CRASH	2016	HARBOR ISLAND DR	0	No Data	POINT CONCEPTION DR	1	ANGLE	2	E	TURNING LEFT	N	harb
INJURY CRASH	2016	LAKE MEAD BLVD	23	W	HARBOR ISLAND DR	2	ANGLE	2	W	MAKING U-TURN	W	No Data
INJURY CRASH	2016	CORAL SHORES DR	142	W	SOARING GULLS DR	1	NON-COLLISION	1	E	TURNING RIGHT	No Data	No Data
INJURY CRASH	2016	LAKE MEAD BLVD	0	No Data	HARBOR ISLAND DR	3	ANGLE	2	E	TURNING LEFT	W	No Data
INJURY CRASH	2016	HARBOR ISLAND DR	125	N	LAKE MEAD BLVD	1	REAR-END	3	S	GOING STRAIGHT	N	No Data
INJURY CRASH	2016	HARBOR ISLAND DR	0	No Data	LAKE MEAD BLVD	1	NON-COLLISION	1	S	TURNING RIGHT	No Data	YES
INJURY CRASH	2017	LAKE MEAD BLVD	0	No Data	MARINER DR	2	ANGLE	2	E	TURNING LEFT	W	No Data
INJURY CRASH	2017	LAKE MEAD BLVD	0	No Data	MARINER DR	1	NON-COLLISION	1	E	TURNING LEFT	No Data	No Data
INJURY CRASH	2017	HARBOR ISLAND DR	256	S	MIDDLEBROOK DR	1	HEAD-ON	2	N	GOING STRAIGHT	No Data	No Data
INJURY CRASH	2017	LAKE MEAD BLVD	0	No Data	MARINER DR	1	ANGLE	2	S	GOING STRAIGHT	No Data	No Data
INJURY CRASH	2017	LAKE MEAD BLVD	2	W	MARINER DR	1	NON-COLLISION	1	S	TURNING RIGHT	No Data	No Data
INJURY CRASH	2017	HARBOR ISLAND DR	0	No Data	BAY CREST DR	2	ANGLE	2	N	TURNING LEFT	S	No Data
INJURY CRASH	2017	MARINER DR	0	No Data	REGATTA DR	1	ANGLE	2	N	GOING STRAIGHT	E	No Data
INJURY CRASH	2017	W LAKE MEAD BLVD	0	No Data	MARINER DR	1	ANGLE	2	E	TURNING LEFT	W	No Data
INJURY CRASH	2017	HARBOR ISLAND DR	0	No Data	BAY CREST DR	2	REAR-END	2	N	GOING STRAIGHT	N	No Data
INJURY CRASH	2017	REGATTA DR	0	No Data	MARINER DR	1	ANGLE	2	N	GOING STRAIGHT	E	No Data
INJURY CRASH	2017	HARBOR ISLAND DR	70	S	PORT OF CALL DR	1	NON-COLLISION	1	S	GOING STRAIGHT	No Data	YES
PROPERTY DAMAGE ONLY	2015	CORAL SHORES DR	15	E	SOFT BREEZES DR	No Data	NON-COLLISION	1	S	TURNING LEFT	No Data	No Data
PROPERTY DAMAGE ONLY	2015	LAKE MEAD BLVD	0	No Data	MARINER DR	No Data	ANGLE	2	W	MAKING U-TURN	E	No Data
PROPERTY DAMAGE ONLY	2015	LAKE MEAD BLVD	0	No Data	HARBOR ISLAND DR	No Data	ANGLE	2	E	MAKING U-TURN	W	No Data
PROPERTY DAMAGE ONLY	2016	HARBOR ISLAND DR	0	No Data	MIDDLEBROOK DR	No Data	ANGLE	2	N	TURNING LEFT	S	No Data
PROPERTY DAMAGE ONLY	2016	LAKE MEAD BLVD	0	No Data	HARBOR ISLAND DR	No Data	ANGLE	2	E	TURNING LEFT	W	No Data
PROPERTY DAMAGE ONLY	2017	BREAKWATER DR	247	N	REGATTA DR	No Data	REAR-END	2	N	GOING STRAIGHT	No Data	No Data
PROPERTY DAMAGE ONLY	2017	LAKE MEAD BLVD	25	E	MARINER DR	No Data	ANGLE	2	W	TURNING RIGHT	W	No Data
PROPERTY DAMAGE ONLY	2017	LAKE MEAD BLVD	0	No Data	MARINER DR	No Data	ANGLE	2	E	TURNING LEFT	W	No Data
PROPERTY DAMAGE ONLY	2017	LAKE MEAD BLVD	40	E	HARBOR ISLAND DR	No Data	REAR-END	2	W	GOING STRAIGHT	W	No Data
PROPERTY DAMAGE ONLY	2017	HARBOR ISLAND DR	81	S	SAGE SHORE WAY	No Data	NON-COLLISION	1	S	GOING STRAIGHT	No Data	No Data
PROPERTY DAMAGE ONLY	2017	REGATTA DR	766	W	MARINER DR	No Data	ANGLE	2	E	UNKNOWN	W	No Data
PROPERTY DAMAGE ONLY	2017	W LAKE MEAD BLVD	0	No Data	MARINER DR	No Data	ANGLE	2	N	TURNING RIGHT	E	No Data
PROPERTY DAMAGE ONLY	2017	SOFT WINDS DR	166	W	MARINER DR	No Data	NON-COLLISION	1	W	GOING STRAIGHT	No Data	No Data

## **APPENDIX B**

### **SPEED AND VOLUME STUDIES**

**2018**

**SPEED AND VOLUME STUDIES**

**MH Corbin Traffic Analyzer Study  
 Computer Generated Summary Report  
 City: Las Vegas  
 Street: Coral Shores Dr W\_O Soft Breeze**

A study of vehicle traffic was conducted with the device having serial number 00000. The study was done in the Total Traffic lane at Coral Shores Dr W\_O Soft Breeze in Las Vegas, NV in Clark county. The study began on 14/08/2018 at 12:00 AM and concluded on 21/08/2018 at 12:00 AM, lasting a total of 168.00 hours. Traffic statistics were recorded in 60 minute time periods. The total recorded volume showed 16106 vehicles passed through the location with a peak volume of 204 on 16/08/2018 at [17:00-18:00] and a minimum volume of 5 on 14/08/2018 at [02:00-03:00]. The AADT count for this study was 2,301.

**SPEED**

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 40 - 45 MPH range or lower. The average speed for all classified vehicles was 43 MPH with 85.91% vehicles exceeding the posted speed of 35 MPH. 8.71% percent of the total vehicles were traveling in excess of 55 MPH. The mode speed for this traffic study was 40MPH and the 85th percentile was 51.67 MPH.

< to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to >											
250	503	1454	3274	4390	2950	1484	1364											

CHART 1

**CLASSIFICATION**

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin. Most of the vehicles classified during the study were Vans & Pickups. The number of Passenger Vehicles in the study was 0 which represents 0 percent of the total classified vehicles. The number of Vans & Pickups in the study was 13708 which represents 87 percent of the total classified vehicles. The number of Busses & Trucks in the study was 0 which represents 0 percent of the total classified vehicles. The number of Tractor Trailers in the study was 1961 which represents 0 percent of the total classified vehicles.

< to 20	21 to 37	38 to >																
13708	1730	231																

CHART 2

**HEADWAY**

During the peak traffic period, on 16/08/2018 at [17:00-18:00] the average headway between vehicles was 17.561 seconds. During the slowest traffic period, on 14/08/2018 at [02:00-03:00] the average headway between vehicles was 600 seconds.

**WEATHER**

The roadway surface temperature over the period of the study varied between 32.00 and 32.00 degrees F. The roadway surface was Dry 100.00% of the time.

## Time/Speed Report

Device ID: 00000 Street: Coral Shores Dr W_O Soft Breez State: NV City: Las Vegas County: Clark	Begin: 14/08/2018 12:00 AM Lane: Total Traffic Operator: Speed Limit: 35 AADT Factor: 1	End: 21/08/2018 12:00 AM Hours: 168.00 Period: 60 Raw Count: 16106 AADT Count: 2,301
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Date And Time Range	< to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to >								Total
<b>Tue, 14/08/2018</b>																
[00:00-01:00]	1	2	1	5	4	4	0	4	0	0	0	0	0	0	0	21
[01:00-02:00]	0	0	0	4	3	4	1	2	0	0	0	0	0	0	0	14
[02:00-03:00]	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	5
[03:00-04:00]	1	0	2	1	4	1	1	1	0	0	0	0	0	0	0	11
[04:00-05:00]	0	0	2	0	7	5	1	2	0	0	0	0	0	0	0	17
[05:00-06:00]	1	1	6	8	11	5	3	3	0	0	0	0	0	0	0	38
[06:00-07:00]	0	2	9	16	27	15	12	10	0	0	0	0	0	0	0	91
[07:00-08:00]	2	5	11	22	33	30	7	10	0	0	0	0	0	0	0	120
[08:00-09:00]	1	5	16	36	42	26	11	3	0	0	0	0	0	0	0	140
[09:00-10:00]	3	2	10	21	42	30	15	6	0	0	0	0	0	0	0	129
[10:00-11:00]	1	5	12	24	36	24	10	14	0	0	0	0	0	0	0	126
[11:00-12:00]	3	6	13	20	36	35	16	15	0	0	0	0	0	0	0	144
[12:00-13:00]	3	4	8	24	45	26	19	11	0	0	0	0	0	0	0	140
[13:00-14:00]	0	4	11	27	21	25	17	12	0	0	0	0	0	0	0	117
[14:00-15:00]	0	4	20	37	41	46	27	15	0	0	0	0	0	0	0	190
[15:00-16:00]	1	6	12	33	50	48	14	19	0	0	0	0	0	0	0	183
[16:00-17:00]	2	3	15	27	56	41	19	20	0	0	0	0	0	0	0	183
[17:00-18:00]	3	1	7	25	69	39	23	20	0	0	0	0	0	0	0	187
[18:00-19:00]	2	3	14	22	40	29	21	18	0	0	0	0	0	0	0	149
[19:00-20:00]	3	6	14	35	32	20	5	10	0	0	0	0	0	0	0	125
[20:00-21:00]	1	7	19	38	32	14	5	3	0	0	0	0	0	0	0	119
[21:00-22:00]	2	1	5	17	18	10	8	6	0	0	0	0	0	0	0	67
[22:00-23:00]	1	2	4	14	6	7	6	4	0	0	0	0	0	0	0	44
[23:00-00:00]	1	1	5	6	5	3	5	3	0	0	0	0	0	0	0	29
	32	70	217	463	661	488	247	211	0	0	0	0	0	0	0	2389
<b>Wed, 15/08/2018</b>																
[00:00-01:00]	1	1	7	3	7	1	6	1	0	0	0	0	0	0	0	27
[01:00-02:00]	0	2	3	1	3	2	1	0	0	0	0	0	0	0	0	12
[02:00-03:00]	0	0	0	2	3	2	4	0	0	0	0	0	0	0	0	11
[03:00-04:00]	0	0	0	2	2	1	1	3	0	0	0	0	0	0	0	9
[04:00-05:00]	1	1	2	2	2	4	0	5	0	0	0	0	0	0	0	17
[05:00-06:00]	2	2	2	5	14	6	3	5	0	0	0	0	0	0	0	39
[06:00-07:00]	1	6	4	14	30	21	12	9	0	0	0	0	0	0	0	97
[07:00-08:00]	1	2	13	38	36	23	16	4	0	0	0	0	0	0	0	133
[08:00-09:00]	0	8	15	26	45	28	8	12	0	0	0	0	0	0	0	142
[09:00-10:00]	5	7	11	28	45	28	14	12	0	0	0	0	0	0	0	150
[10:00-11:00]	1	3	11	23	30	18	9	8	0	0	0	0	0	0	0	103
[11:00-12:00]	2	5	14	33	58	17	10	5	0	0	0	0	0	0	0	144
[12:00-13:00]	2	2	8	24	45	21	14	12	0	0	0	0	0	0	0	128
[13:00-14:00]	3	3	11	33	37	19	16	6	0	0	0	0	0	0	0	128
[14:00-15:00]	2	3	16	27	37	33	21	15	0	0	0	0	0	0	0	154
[15:00-16:00]	5	2	13	32	52	41	26	18	0	0	0	0	0	0	0	189
[16:00-17:00]	4	5	14	25	63	35	21	18	0	0	0	0	0	0	0	185
[17:00-18:00]	1	0	16	44	41	43	18	18	0	0	0	0	0	0	0	181

## Time/Speed Report

Device ID: 00000 Street: Coral Shores Dr W_O Soft Breez State: NV City: Las Vegas County: Clark	Begin: 14/08/2018 12:00 AM Lane: Total Traffic Operator: Speed Limit: 35 AADT Factor: 1	End: 21/08/2018 12:00 AM Hours: 168.00 Period: 60 Raw Count: 16106 AADT Count: 2,301
---	---	--

Date And Time Range	< to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to >								Total
<b>Wed, 15/08/2018</b>																
[18:00-19:00]	0	3	11	29	59	35	15	21	0	0	0	0	0	0	0	173
[19:00-20:00]	0	3	20	37	27	22	14	8	0	0	0	0	0	0	0	131
[20:00-21:00]	1	7	19	23	21	11	4	7	0	0	0	0	0	0	0	93
[21:00-22:00]	6	6	15	17	26	7	1	2	0	0	0	0	0	0	0	80
[22:00-23:00]	2	3	9	15	14	12	4	3	0	0	0	0	0	0	0	62
[23:00-00:00]	0	3	2	5	5	6	0	3	0	0	0	0	0	0	0	24
	40	77	236	488	702	436	238	195	0	0	0	0	0	0	0	2412
<b>Thu, 16/08/2018</b>																
[00:00-01:00]	1	1	1	8	9	3	1	3	0	0	0	0	0	0	0	27
[01:00-02:00]	1	2	1	3	3	3	2	0	0	0	0	0	0	0	0	15
[02:00-03:00]	0	0	0	2	2	1	0	0	0	0	0	0	0	0	0	5
[03:00-04:00]	0	0	2	2	2	4	0	3	0	0	0	0	0	0	0	13
[04:00-05:00]	0	1	1	2	2	4	4	0	0	0	0	0	0	0	0	14
[05:00-06:00]	1	0	3	10	9	10	6	4	0	0	0	0	0	0	0	43
[06:00-07:00]	4	2	8	17	24	14	9	8	0	0	0	0	0	0	0	86
[07:00-08:00]	0	4	10	25	28	32	13	11	0	0	0	0	0	0	0	123
[08:00-09:00]	1	3	14	30	41	16	12	8	0	0	0	0	0	0	0	125
[09:00-10:00]	0	4	9	23	33	16	11	9	0	0	0	0	0	0	0	105
[10:00-11:00]	5	4	14	17	27	27	14	9	0	0	0	0	0	0	0	117
[11:00-12:00]	0	3	14	21	29	36	10	12	0	0	0	0	0	0	0	125
[12:00-13:00]	4	5	17	23	35	22	16	8	0	0	0	0	0	0	0	130
[13:00-14:00]	1	7	10	19	42	22	16	21	0	0	0	0	0	0	0	138
[14:00-15:00]	1	4	18	35	46	27	16	22	0	0	0	0	0	0	0	169
[15:00-16:00]	2	5	11	35	45	33	16	14	0	0	0	0	0	0	0	161
[16:00-17:00]	0	3	9	40	42	34	10	18	0	0	0	0	0	0	0	156
[17:00-18:00]	1	2	9	49	55	48	20	17	0	0	0	0	0	0	0	201
[18:00-19:00]	1	5	8	26	50	41	8	14	0	0	0	0	0	0	0	153
[19:00-20:00]	4	6	12	36	34	24	10	6	0	0	0	0	0	0	0	132
[20:00-21:00]	1	4	16	31	19	18	6	9	0	0	0	0	0	0	0	104
[21:00-22:00]	0	2	7	15	14	13	5	3	0	0	0	0	0	0	0	59
[22:00-23:00]	1	2	4	6	19	8	3	1	0	0	0	0	0	0	0	44
[23:00-00:00]	2	2	2	7	10	1	0	3	0	0	0	0	0	0	0	27
	31	71	200	482	620	457	208	203	0	0	0	0	0	0	0	2272
<b>Fri, 17/08/2018</b>																
[00:00-01:00]	0	2	4	2	7	3	3	1	0	0	0	0	0	0	0	22
[01:00-02:00]	1	0	2	5	8	0	1	2	0	0	0	0	0	0	0	19
[02:00-03:00]	0	0	0	1	3	2	0	0	0	0	0	0	0	0	0	6
[03:00-04:00]	0	0	2	2	3	2	0	1	0	0	0	0	0	0	0	10
[04:00-05:00]	0	0	1	0	2	4	1	1	0	0	0	0	0	0	0	9
[05:00-06:00]	0	1	2	10	7	2	7	5	0	0	0	0	0	0	0	34
[06:00-07:00]	1	1	5	14	23	17	9	7	0	0	0	0	0	0	0	77
[07:00-08:00]	2	8	9	21	40	31	18	18	0	0	0	0	0	0	0	147
[08:00-09:00]	1	3	18	31	33	25	11	7	0	0	0	0	0	0	0	129
[09:00-10:00]	1	1	13	28	40	31	9	12	0	0	0	0	0	0	0	135

## Time/Speed Report

Device ID: 00000		Begin: 14/08/2018 12:00 AM							End: 21/08/2018 12:00 AM							
Street: Coral Shores Dr W_O Soft Breez		Lane: Total Traffic							Hours: 168.00							
State: NV		Operator:							Period: 60							
City: Las Vegas		Speed Limit: 35							Raw Count: 16106							
County: Clark		AADT Factor: 1							AADT Count: 2,301							
Date	<	25	30	35	40	45	50	55								Total
Time Range	to	to	to	to	to	to	to	to	>							
Fri, 17/08/2018																
[10:00-11:00]	2	4	6	24	41	20	18	13	0	0	0	0	0	0	0	128
[11:00-12:00]	3	3	13	32	39	30	10	16	0	0	0	0	0	0	0	146
[12:00-13:00]	2	7	12	26	36	30	17	15	0	0	0	0	0	0	0	145
[13:00-14:00]	4	6	12	26	42	24	19	8	0	0	0	0	0	0	0	141
[14:00-15:00]	2	3	14	27	56	26	16	7	0	0	0	0	0	0	0	151
[15:00-16:00]	3	5	13	26	39	36	16	15	0	0	0	0	0	0	0	153
[16:00-17:00]	3	2	12	23	51	33	18	22	0	0	0	0	0	0	0	164
[17:00-18:00]	2	3	10	33	60	49	24	14	0	0	0	0	0	0	0	195
[18:00-19:00]	1	0	9	32	41	29	20	15	0	0	0	0	0	0	0	147
[19:00-20:00]	3	5	12	38	35	19	15	8	0	0	0	0	0	0	0	135
[20:00-21:00]	3	10	10	31	27	15	8	4	0	0	0	0	0	0	0	108
[21:00-22:00]	0	1	4	18	24	12	4	7	0	0	0	0	0	0	0	70
[22:00-23:00]	4	5	7	13	15	12	1	2	0	0	0	0	0	0	0	59
[23:00-00:00]	2	6	2	9	15	7	6	3	0	0	0	0	0	0	0	50
	40	76	192	472	687	459	251	203	0	0	0	0	0	0	0	2380
Sat, 18/08/2018																
[00:00-01:00]	0	3	9	12	12	6	2	3	0	0	0	0	0	0	0	47
[01:00-02:00]	2	1	4	7	1	2	2	0	0	0	0	0	0	0	0	19
[02:00-03:00]	2	2	0	4	3	1	1	0	0	0	0	0	0	0	0	13
[03:00-04:00]	0	2	4	3	4	1	0	1	0	0	0	0	0	0	0	15
[04:00-05:00]	1	0	1	1	5	3	0	2	0	0	0	0	0	0	0	13
[05:00-06:00]	0	0	3	0	3	1	2	2	0	0	0	0	0	0	0	11
[06:00-07:00]	2	0	3	14	13	9	3	3	0	0	0	0	0	0	0	47
[07:00-08:00]	1	4	10	16	31	12	6	8	0	0	0	0	0	0	0	88
[08:00-09:00]	0	3	9	29	28	12	10	6	0	0	0	0	0	0	0	97
[09:00-10:00]	1	4	12	34	30	17	11	13	0	0	0	0	0	0	0	122
[10:00-11:00]	4	6	15	32	38	16	7	6	0	0	0	0	0	0	0	124
[11:00-12:00]	3	3	16	36	54	31	12	14	0	0	0	0	0	0	0	169
[12:00-13:00]	2	8	19	46	38	22	7	3	0	0	0	0	0	0	0	145
[13:00-14:00]	5	8	17	34	36	22	9	17	0	0	0	0	0	0	0	148
[14:00-15:00]	4	8	15	25	35	29	11	20	0	0	0	0	0	0	0	147
[15:00-16:00]	5	7	8	27	33	32	15	19	0	0	0	0	0	0	0	146
[16:00-17:00]	3	3	5	23	43	30	13	12	0	0	0	0	0	0	0	132
[17:00-18:00]	1	2	10	25	36	20	18	10	0	0	0	0	0	0	0	122
[18:00-19:00]	1	1	9	30	35	33	13	10	0	0	0	0	0	0	0	132
[19:00-20:00]	2	2	9	17	26	21	12	7	0	0	0	0	0	0	0	96
[20:00-21:00]	0	5	10	31	30	10	9	9	0	0	0	0	0	0	0	104
[21:00-22:00]	0	9	12	24	20	18	2	4	0	0	0	0	0	0	0	89
[22:00-23:00]	0	2	13	12	18	10	1	5	0	0	0	0	0	0	0	61
[23:00-00:00]	0	3	8	8	7	7	1	4	0	0	0	0	0	0	0	38
	39	86	221	490	579	365	167	178	0	0	0	0	0	0	0	2125
Sun, 19/08/2018																
[00:00-01:00]	0	2	3	9	6	4	2	6	0	0	0	0	0	0	0	32
[01:00-02:00]	0	1	3	4	3	1	0	1	0	0	0	0	0	0	0	13

## Time/Speed Report

Device ID: 00000	Begin: 14/08/2018 12:00 AM	End: 21/08/2018 12:00 AM
Street: Coral Shores Dr W_O Soft Breez	Lane: Total Traffic	Hours: 168.00
State: NV	Operator:	Period: 60
City: Las Vegas	Speed Limit: 35	Raw Count: 16106
County: Clark	AADT Factor: 1	AADT Count: 2,301

Date And Time Range	< to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to >								Total
<b>Sun, 19/08/2018</b>																
[02:00-03:00]	2	1	5	5	5	1	2	2	0	0	0	0	0	0	0	23
[03:00-04:00]	0	0	1	3	8	5	2	2	0	0	0	0	0	0	0	21
[04:00-05:00]	1	1	0	4	2	2	0	0	0	0	0	0	0	0	0	10
[05:00-06:00]	0	0	3	6	2	5	3	1	0	0	0	0	0	0	0	20
[06:00-07:00]	0	2	2	9	5	3	3	2	0	0	0	0	0	0	0	26
[07:00-08:00]	0	3	10	17	15	12	6	1	0	0	0	0	0	0	0	64
[08:00-09:00]	3	5	8	11	16	11	6	4	0	0	0	0	0	0	0	64
[09:00-10:00]	0	3	10	19	23	17	8	6	0	0	0	0	0	0	0	86
[10:00-11:00]	2	1	8	27	37	16	14	10	0	0	0	0	0	0	0	115
[11:00-12:00]	1	2	13	25	34	17	8	14	0	0	0	0	0	0	0	114
[12:00-13:00]	1	2	4	24	41	23	10	16	0	0	0	0	0	0	0	121
[13:00-14:00]	2	5	14	29	41	25	13	20	0	0	0	0	0	0	0	149
[14:00-15:00]	1	5	9	21	29	24	20	17	0	0	0	0	0	0	0	126
[15:00-16:00]	0	6	8	17	31	28	6	13	0	0	0	0	0	0	0	109
[16:00-17:00]	3	1	7	25	39	29	12	11	0	0	0	0	0	0	0	127
[17:00-18:00]	5	2	12	24	35	31	19	12	0	0	0	0	0	0	0	140
[18:00-19:00]	1	3	12	23	34	32	12	11	0	0	0	0	0	0	0	128
[19:00-20:00]	4	2	17	33	29	21	10	10	0	0	0	0	0	0	0	126
[20:00-21:00]	1	2	10	12	25	7	4	3	0	0	0	0	0	0	0	64
[21:00-22:00]	0	2	10	15	20	13	7	5	0	0	0	0	0	0	0	72
[22:00-23:00]	2	3	6	20	6	0	4	3	0	0	0	0	0	0	0	44
[23:00-00:00]	1	1	6	11	14	4	4	1	0	0	0	0	0	0	0	42
	30	55	181	393	500	331	175	171	0	0	0	0	0	0	0	1836
<b>Mon, 20/08/2018</b>																
[00:00-01:00]	0	0	3	3	5	4	0	0	0	0	0	0	0	0	0	15
[01:00-02:00]	0	2	0	2	1	0	2	0	0	0	0	0	0	0	0	7
[02:00-03:00]	3	0	4	3	3	0	0	0	0	0	0	0	0	0	0	13
[03:00-04:00]	0	0	2	4	1	1	1	2	0	0	0	0	0	0	0	11
[04:00-05:00]	1	0	0	0	3	3	1	2	0	0	0	0	0	0	0	10
[05:00-06:00]	0	1	5	9	11	6	0	3	0	0	0	0	0	0	0	35
[06:00-07:00]	0	2	7	16	17	17	14	7	0	0	0	0	0	0	0	80
[07:00-08:00]	3	5	16	23	27	14	6	12	0	0	0	0	0	0	0	106
[08:00-09:00]	1	1	8	37	39	27	12	7	0	0	0	0	0	0	0	132
[09:00-10:00]	3	2	12	32	39	20	9	5	0	0	0	0	0	0	0	122
[10:00-11:00]	3	4	15	32	33	14	11	11	0	0	0	0	0	0	0	123
[11:00-12:00]	4	4	16	26	42	20	7	7	0	0	0	0	0	0	0	126
[12:00-13:00]	1	4	8	25	42	26	15	18	0	0	0	0	0	0	0	139
[13:00-14:00]	2	2	11	22	40	33	14	15	0	0	0	0	0	0	0	139
[14:00-15:00]	0	5	16	36	43	39	13	16	0	0	0	0	0	0	0	168
[15:00-16:00]	2	6	16	30	49	34	17	16	0	0	0	0	0	0	0	170
[16:00-17:00]	1	3	7	34	45	36	15	17	0	0	0	0	0	0	0	158
[17:00-18:00]	1	1	4	22	61	39	24	20	0	0	0	0	0	0	0	172
[18:00-19:00]	1	8	4	31	35	33	15	11	0	0	0	0	0	0	0	138
[19:00-20:00]	6	6	21	31	40	14	9	9	0	0	0	0	0	0	0	136

## Time/Speed Report

Device ID: 00000		Begin: 14/08/2018 12:00 AM				End: 21/08/2018 12:00 AM			
Street: Coral Shores Dr W_O Soft Breez		Lane: Total Traffic				Hours: 168.00			
State: NV		Operator:				Period: 60			
City: Las Vegas		Speed Limit: 35				Raw Count: 16106			
County: Clark		AADT Factor: 1				AADT Count: 2,301			

Date And Time Range	< to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to >								Total	
Mon,20/08/2018																	
[20:00-21:00]	3	5	16	24	24	8	4	9	0	0	0	0	0	0	0	0	93
[21:00-22:00]	1	4	5	19	20	14	3	4	0	0	0	0	0	0	0	0	70
[22:00-23:00]	2	1	6	15	13	9	3	6	0	0	0	0	0	0	0	0	55
[23:00-00:00]	0	2	5	10	8	3	3	6	0	0	0	0	0	0	0	0	37
	38	68	207	486	641	414	198	203	0	0	0	0	0	0	0	0	2255

14/08/2018 12:00 AM																	
21/08/2018 12:00 AM	250	503	1454	3274	4390	2950	1484	1364	0	0	0	0	0	0	0	0	15669

## CITY OF LAS VEGAS 7 DAY HOURLY VOLUME

LOCATION: Harbor Island Dr S/O Lazarette Dr  
DATE: 08/14/2018 THRU 08/20/2018

EXCEL RHCb  
MAP access

85% = 46MPH

AM

HOUR	NORTHBOUND								ADT	RK	SOUTHBOUND								ADT	RK	2 WAY Avg	RK
	Tues	Wed	Thu	Fri	Sat	Sun	Mon	Tues			Wed	Thu	Fri	Sat	Sun	Mon						
	8/14	8/15	8/16	8/17	8/18	8/19	8/20	8/14			8/15	8/16	8/17	8/18	8/19	8/20						
12 - 1	8	13	18	8	12	28	11	14		7	4	8	6	15	17	9	9		23			
1 - 2	10	4	12	5	7	16	3	8		1	3	3	6	11	8	5	5		13			
2 - 3	3	4	4	3	9	12	6	6		2	2	5	0	7	7	5	4		10			
3 - 4	7	2	3	7	6	8	8	6		1	3	3	7	4	5	2	4		9			
4 - 5	8	10	12	9	4	7	9	8		5	7	8	4	7	8	8	7		15			
5 - 6	19	9	17	13	7	6	17	13		9	12	17	8	7	6	8	10		22			
6 - 7	34	34	30	27	17	11	32	26		50	53	43	50	22	20	37	39		66			
7 - 8	73	61	63	74	46	32	81	61		118	100	105	105	45	43	115	90	4	152			
8 - 9	63	67	50	78	67	31	61	60		90	102	96	112	84	43	96	89	5	149			
9 - 10	65	70	62	63	73	54	66	65		87	106	91	96	95	67	70	87		152			
10 - 11	60	61	65	55	79	46	64	61		87	82	94	82	95	86	94	89	6	150			
11 - 12	69	68	84	71	100	71	60	75	7	73	85	96	85	110	86	73	87		162	6		
12 - 13	76	76	73	67	76	59	69	71	8	89	85	93	91	99	84	73	88		159	8		
13 - 14	71	72	80	86	78	80	89	79	6	74	88	90	105	95	79	83	88	8	167	5		
14 - 15	101	92	95	104	66	66	104	90	3	99	103	123	106	101	81	120	105	1	194	1		
15 - 16	77	98	96	106	81	65	92	88	4	104	118	90	86	81	72	107	94	2	182	4		
16 - 17	99	108	92	89	83	85	81	91	2	102	95	90	99	78	87	101	93	3	184	3		
17 - 18	114	104	104	132	76	71	100	100	1	98	115	89	100	72	60	89	89	7	189	2		
18 - 19	81	80	73	115	68	74	68	80	5	75	105	81	83	90	67	77	83		162	7		
19 - 20	63	77	69	53	60	47	58	61		73	51	73	71	71	49	58	64		125			
20 - 21	60	68	42	67	50	42	51	54		41	44	32	52	57	35	36	42		97			
21 - 22	42	37	31	36	61	33	30	39		29	36	23	35	44	34	31	33		72			
22 - 23	41	26	28	40	40	33	24	33		25	13	27	27	28	26	26	25		58			
23 - 24	17	13	17	27	27	17	16	19		9	20	8	24	28	13	11	16		35			
																				0		
24 HOURS	1261	1254	1220	1335	1193	994	1200	1208		1348	1432	1388	1440	1346	1083	1334	1339		2547			
SEVEN DAY TOTAL									8457										9371		17828	
HIGH 8 HOURS									674										736		1399	

85TH%ILE

43

46

**MH Corbin Traffic Analyzer Study  
 Computer Generated Summary Report  
 City: Las Vegas  
 Street: Harbor Island S\_O Point Concept.**

A study of vehicle traffic was conducted with the device having serial number 00000. The study was done in the Total Traffic lane at Harbor Island S\_O Point Concept. in Las Vegas, NV in Clark county. The study began on 01/11/2018 at 12:00 AM and concluded on 08/11/2018 at 12:00 AM, lasting a total of 168.00 hours. Traffic statistics were recorded in 60 minute time periods. The total recorded volume showed 18208 vehicles passed through the location with a peak volume of 252 on 01/11/2018 at [17:00-18:00] and a minimum volume of 4 on 06/11/2018 at [03:00-04:00]. The AADT count for this study was 2,601.

**SPEED**

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 35 - 40 MPH range or lower. The average speed for all classified vehicles was 38 MPH with 92.43% vehicles exceeding the posted speed of 30 MPH. 1.90% percent of the total vehicles were traveling in excess of 55 MPH. The mode speed for this traffic study was 35MPH and the 85th percentile was 44.37 MPH.

< to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to >											
275	1089	3895	6307	4293	1431	386	342											

CHART 1

**CLASSIFICATION**

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin. Most of the vehicles classified during the study were Vans & Pickups. The number of Passenger Vehicles in the study was 0 which represents 0 percent of the total classified vehicles. The number of Vans & Pickups in the study was 17058 which represents 95 percent of the total classified vehicles. The number of Busses & Trucks in the study was 0 which represents 0 percent of the total classified vehicles. The number of Tractor Trailers in the study was 960 which represents 0 percent of the total classified vehicles.

< to 20	21 to 37	38 to >																
17058	826	134																

CHART 2

**HEADWAY**

During the peak traffic period, on 01/11/2018 at [17:00-18:00] the average headway between vehicles was 14.229 seconds. During the slowest traffic period, on 06/11/2018 at [03:00-04:00] the average headway between vehicles was 720 seconds.

**WEATHER**

The roadway surface temperature over the period of the study varied between 32.00 and 32.00 degrees F. The roadway surface was Dry 100.00% of the time.

## Time/Speed Report

Device ID: 00000	Begin: 01/11/2018 12:00 AM	End: 08/11/2018 12:00 AM
Street: Harbor Island S_O Point Concep	Lane: Total Traffic	Hours: 168.00
State: NV	Operator:	Period: 60
City: Las Vegas	Speed Limit: 30	Raw Count: 18208
County: Clark	AADT Factor: 1	AADT Count: 2,601

Date And Time Range	< to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to >								Total
Thu, 01/11/2018																
[00:00-01:00]	1	3	10	10	4	3	0	0	0	0	0	0	0	0	0	31
[01:00-02:00]	0	3	2	5	3	1	0	1	0	0	0	0	0	0	0	15
[02:00-03:00]	1	0	1	5	1	4	0	0	0	0	0	0	0	0	0	12
[03:00-04:00]	0	1	2	2	1	0	0	0	0	0	0	0	0	0	0	6
[04:00-05:00]	2	3	4	6	1	0	0	0	0	0	0	0	0	0	0	16
[05:00-06:00]	1	4	4	2	5	2	0	2	0	0	0	0	0	0	0	20
[06:00-07:00]	0	1	9	22	18	8	2	3	0	0	0	0	0	0	0	63
[07:00-08:00]	1	7	24	51	52	18	5	3	0	0	0	0	0	0	0	161
[08:00-09:00]	2	7	37	54	35	18	6	1	0	0	0	0	0	0	0	160
[09:00-10:00]	4	14	27	49	30	7	0	4	0	0	0	0	0	0	0	135
[10:00-11:00]	1	12	40	48	21	11	1	1	0	0	0	0	0	0	0	135
[11:00-12:00]	3	6	32	66	41	14	5	3	0	0	0	0	0	0	0	170
[12:00-13:00]	1	7	23	70	31	15	3	2	0	0	0	0	0	0	0	152
[13:00-14:00]	2	13	37	73	43	16	4	6	0	0	0	0	0	0	0	194
[14:00-15:00]	4	8	42	71	56	20	1	9	0	0	0	0	0	0	0	211
[15:00-16:00]	4	15	44	77	52	30	8	0	0	0	0	0	0	0	0	230
[16:00-17:00]	4	14	49	74	69	15	6	3	0	0	0	0	0	0	0	234
[17:00-18:00]	5	11	50	103	53	17	7	6	0	0	0	0	0	0	0	252
[18:00-19:00]	1	14	41	56	35	11	3	5	0	0	0	0	0	0	0	166
[19:00-20:00]	5	8	20	45	21	6	2	1	0	0	0	0	0	0	0	108
[20:00-21:00]	1	9	15	41	22	4	2	2	0	0	0	0	0	0	0	96
[21:00-22:00]	1	2	16	37	18	2	2	1	0	0	0	0	0	0	0	79
[22:00-23:00]	1	5	11	15	15	1	1	1	0	0	0	0	0	0	0	50
[23:00-00:00]	0	1	6	8	6	2	0	0	0	0	0	0	0	0	0	23
	45	168	546	990	633	225	58	54	0	0	0	0	0	0	0	2719
Fri, 02/11/2018																
[00:00-01:00]	1	2	2	9	6	0	0	0	0	0	0	0	0	0	0	20
[01:00-02:00]	0	3	6	8	1	0	0	3	0	0	0	0	0	0	0	21
[02:00-03:00]	0	0	0	2	2	2	4	1	0	0	0	0	0	0	0	11
[03:00-04:00]	0	1	4	1	0	0	0	0	0	0	0	0	0	0	0	6
[04:00-05:00]	0	2	1	6	2	2	0	0	0	0	0	0	0	0	0	13
[05:00-06:00]	1	3	6	10	3	3	2	0	0	0	0	0	0	0	0	28
[06:00-07:00]	0	0	12	19	16	4	4	1	0	0	0	0	0	0	0	56
[07:00-08:00]	2	14	41	59	43	15	6	2	0	0	0	0	0	0	0	182
[08:00-09:00]	2	5	28	68	46	17	3	3	0	0	0	0	0	0	0	172
[09:00-10:00]	3	8	29	62	45	8	3	4	0	0	0	0	0	0	0	162
[10:00-11:00]	3	15	39	63	39	7	2	2	0	0	0	0	0	0	0	170
[11:00-12:00]	2	12	38	66	46	15	2	5	0	0	0	0	0	0	0	186
[12:00-13:00]	1	6	37	47	52	22	4	5	0	0	0	0	0	0	0	174
[13:00-14:00]	1	12	33	65	40	17	2	5	0	0	0	0	0	0	0	175
[14:00-15:00]	4	21	42	61	46	26	6	6	0	0	0	0	0	0	0	212
[15:00-16:00]	3	12	36	75	63	19	7	5	0	0	0	0	0	0	0	220
[16:00-17:00]	2	11	53	85	60	20	8	2	0	0	0	0	0	0	0	241
[17:00-18:00]	0	12	35	80	68	21	5	7	0	0	0	0	0	0	0	228

## Time/Speed Report

Device ID: 00000		Begin: 01/11/2018 12:00 AM							End: 08/11/2018 12:00 AM							
Street: Harbor Island S_O Point Concep		Lane: Total Traffic							Hours: 168.00							
State: NV		Operator:							Period: 60							
City: Las Vegas		Speed Limit: 30							Raw Count: 18208							
County: Clark		AADT Factor: 1							AADT Count: 2,601							
Date And Time Range	< to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to >								Total
Fri, 02/11/2018																
[18:00-19:00]	6	17	42	61	37	9	2	3	0	0	0	0	0	0	0	177
[19:00-20:00]	1	10	23	42	32	8	1	2	0	0	0	0	0	0	0	119
[20:00-21:00]	1	8	26	25	20	6	3	0	0	0	0	0	0	0	0	89
[21:00-22:00]	2	6	20	32	18	3	0	0	0	0	0	0	0	0	0	81
[22:00-23:00]	1	7	19	31	14	6	0	0	0	0	0	0	0	0	0	78
[23:00-00:00]	1	3	11	8	10	6	3	1	0	0	0	0	0	0	0	43
	37	190	583	985	709	236	67	57	0	0	0	0	0	0	0	2864
Sat, 03/11/2018																
[00:00-01:00]	0	6	5	7	4	1	1	0	0	0	0	0	0	0	0	24
[01:00-02:00]	2	2	4	4	6	2	3	1	0	0	0	0	0	0	0	24
[02:00-03:00]	1	1	1	3	4	3	2	0	0	0	0	0	0	0	0	15
[03:00-04:00]	1	2	0	3	2	2	2	0	0	0	0	0	0	0	0	12
[04:00-05:00]	0	0	1	3	2	0	1	0	0	0	0	0	0	0	0	7
[05:00-06:00]	1	0	6	5	7	1	1	0	0	0	0	0	0	0	0	21
[06:00-07:00]	0	0	6	7	5	3	1	1	0	0	0	0	0	0	0	23
[07:00-08:00]	2	4	11	17	16	8	4	2	0	0	0	0	0	0	0	64
[08:00-09:00]	2	4	18	36	25	11	4	4	0	0	0	0	0	0	0	104
[09:00-10:00]	1	10	31	44	31	6	2	3	0	0	0	0	0	0	0	128
[10:00-11:00]	1	13	38	68	36	9	4	1	0	0	0	0	0	0	0	170
[11:00-12:00]	3	8	39	50	52	12	2	6	0	0	0	0	0	0	0	172
[12:00-13:00]	1	7	54	59	47	16	6	8	0	0	0	0	0	0	0	198
[13:00-14:00]	4	14	44	61	51	14	2	6	0	0	0	0	0	0	0	196
[14:00-15:00]	0	18	27	56	48	13	3	5	0	0	0	0	0	0	0	170
[15:00-16:00]	5	9	28	57	56	19	5	2	0	0	0	0	0	0	0	181
[16:00-17:00]	8	5	31	66	47	12	5	6	0	0	0	0	0	0	0	180
[17:00-18:00]	3	11	38	68	47	11	3	3	0	0	0	0	0	0	0	184
[18:00-19:00]	4	9	39	56	25	7	3	4	0	0	0	0	0	0	0	147
[19:00-20:00]	0	7	28	36	28	11	1	2	0	0	0	0	0	0	0	113
[20:00-21:00]	3	7	28	22	21	8	1	1	0	0	0	0	0	0	0	91
[21:00-22:00]	2	7	27	30	14	4	1	1	0	0	0	0	0	0	0	86
[22:00-23:00]	2	4	16	18	19	5	2	0	0	0	0	0	0	0	0	66
[23:00-00:00]	0	3	8	7	9	3	1	3	0	0	0	0	0	0	0	34
	46	151	528	783	602	181	60	59	0	0	0	0	0	0	0	2410
Sun, 04/11/2018																
[00:00-01:00]	1	2	6	11	6	3	0	1	0	0	0	0	0	0	0	30
[01:00-02:00]	0	0	10	7	3	3	1	0	0	0	0	0	0	0	0	24
[02:00-03:00]	2	1	6	4	4	1	0	2	0	0	0	0	0	0	0	20
[03:00-04:00]	0	0	0	4	2	0	1	0	0	0	0	0	0	0	0	7
[04:00-05:00]	0	0	1	3	1	0	2	1	0	0	0	0	0	0	0	8
[05:00-06:00]	1	0	0	1	3	1	0	0	0	0	0	0	0	0	0	6
[06:00-07:00]	1	0	1	2	2	1	0	1	0	0	0	0	0	0	0	8
[07:00-08:00]	2	2	8	13	7	5	2	0	0	0	0	0	0	0	0	39
[08:00-09:00]	2	4	12	25	19	13	2	2	0	0	0	0	0	0	0	79
[09:00-10:00]	0	2	17	38	22	12	1	2	0	0	0	0	0	0	0	94

## Time/Speed Report

Device ID: 00000		Begin: 01/11/2018 12:00 AM							End: 08/11/2018 12:00 AM							
Street: Harbor Island S_O Point Concep		Lane: Total Traffic							Hours: 168.00							
State: NV		Operator:							Period: 60							
City: Las Vegas		Speed Limit: 30							Raw Count: 18208							
County: Clark		AADT Factor: 1							AADT Count: 2,601							
Date	<	25	30	35	40	45	50	55								Total
Time Range	to	to	to	to	to	to	to	to	>							
<b>Sun, 04/11/2018</b>																
[10:00-11:00]	2	12	32	45	38	13	2	2	0	0	0	0	0	0	0	146
[11:00-12:00]	3	4	39	53	44	14	0	1	0	0	0	0	0	0	0	158
[12:00-13:00]	2	7	41	51	50	14	6	2	0	0	0	0	0	0	0	173
[13:00-14:00]	4	8	38	62	45	22	3	2	0	0	0	0	0	0	0	184
[14:00-15:00]	1	10	25	74	32	17	4	1	0	0	0	0	0	0	0	164
[15:00-16:00]	3	8	27	40	34	5	3	5	0	0	0	0	0	0	0	125
[16:00-17:00]	3	18	40	63	38	9	1	2	0	0	0	0	0	0	0	174
[17:00-18:00]	3	8	32	62	34	14	0	4	0	0	0	0	0	0	0	157
[18:00-19:00]	4	14	38	60	29	10	3	3	0	0	0	0	0	0	0	161
[19:00-20:00]	2	7	20	35	21	10	0	3	0	0	0	0	0	0	0	98
[20:00-21:00]	1	7	27	27	25	10	1	0	0	0	0	0	0	0	0	98
[21:00-22:00]	1	6	8	18	17	4	1	3	0	0	0	0	0	0	0	58
[22:00-23:00]	1	5	9	22	7	4	1	3	0	0	0	0	0	0	0	52
[23:00-00:00]	0	1	4	6	6	2	0	0	0	0	0	0	0	0	0	19
	39	126	441	726	489	187	34	40	0	0	0	0	0	0	0	2082
<b>Mon, 05/11/2018</b>																
[00:00-01:00]	1	3	5	4	12	2	3	0	0	0	0	0	0	0	0	30
[01:00-02:00]	0	4	7	4	3	2	0	0	0	0	0	0	0	0	0	20
[02:00-03:00]	1	1	3	0	2	3	0	1	0	0	0	0	0	0	0	11
[03:00-04:00]	0	0	0	3	2	0	1	0	0	0	0	0	0	0	0	6
[04:00-05:00]	1	2	0	0	2	2	0	1	0	0	0	0	0	0	0	8
[05:00-06:00]	0	1	4	5	1	2	0	0	0	0	0	0	0	0	0	13
[06:00-07:00]	1	1	2	6	4	5	2	0	0	0	0	0	0	0	0	21
[07:00-08:00]	0	2	13	26	18	6	0	0	0	0	0	0	0	0	0	65
[08:00-09:00]	4	10	22	50	59	19	3	3	0	0	0	0	0	0	0	170
[09:00-10:00]	0	3	32	48	39	14	4	3	0	0	0	0	0	0	0	143
[10:00-11:00]	4	7	36	45	33	11	4	2	0	0	0	0	0	0	0	142
[11:00-12:00]	3	7	34	77	36	8	4	1	0	0	0	0	0	0	0	170
[12:00-13:00]	1	5	32	62	46	15	4	4	0	0	0	0	0	0	0	169
[13:00-14:00]	4	13	42	68	48	15	6	2	0	0	0	0	0	0	0	198
[14:00-15:00]	4	7	42	58	64	16	2	3	0	0	0	0	0	0	0	196
[15:00-16:00]	1	12	40	75	41	17	4	8	0	0	0	0	0	0	0	198
[16:00-17:00]	2	9	50	92	50	9	7	5	0	0	0	0	0	0	0	224
[17:00-18:00]	3	7	51	82	57	10	5	4	0	0	0	0	0	0	0	219
[18:00-19:00]	1	7	45	70	43	9	2	1	0	0	0	0	0	0	0	178
[19:00-20:00]	0	13	36	43	33	9	3	3	0	0	0	0	0	0	0	140
[20:00-21:00]	2	4	27	40	18	9	1	0	0	0	0	0	0	0	0	101
[21:00-22:00]	1	7	17	34	14	1	1	1	0	0	0	0	0	0	0	76
[22:00-23:00]	1	1	11	26	14	13	2	0	0	0	0	0	0	0	0	68
[23:00-00:00]	1	6	8	14	6	1	0	0	0	0	0	0	0	0	0	36
	36	132	559	932	645	198	58	42	0	0	0	0	0	0	0	2602
<b>Tue, 06/11/2018</b>																
[00:00-01:00]	1	3	7	9	4	0	0	0	0	0	0	0	0	0	0	24
[01:00-02:00]	2	0	9	3	4	3	0	0	0	0	0	0	0	0	0	21

## Time/Speed Report

Device ID: 00000	Begin: 01/11/2018 12:00 AM	End: 08/11/2018 12:00 AM
Street: Harbor Island S_O Point Concep	Lane: Total Traffic	Hours: 168.00
State: NV	Operator:	Period: 60
City: Las Vegas	Speed Limit: 30	Raw Count: 18208
County: Clark	AADT Factor: 1	AADT Count: 2,601

Date And Time Range	< to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to >									Total
<b>Tue, 06/11/2018</b>																	
[02:00-03:00]	0	2	1	4	0	0	0	0	0	0	0	0	0	0	0	0	7
[03:00-04:00]	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	4
[04:00-05:00]	1	5	2	4	1	1	1	1	0	0	0	0	0	0	0	0	16
[05:00-06:00]	1	1	4	6	4	4	0	0	0	0	0	0	0	0	0	0	20
[06:00-07:00]	2	0	4	4	8	5	0	0	0	0	0	0	0	0	0	0	23
[07:00-08:00]	1	1	17	15	20	6	2	1	0	0	0	0	0	0	0	0	63
[08:00-09:00]	1	3	30	49	35	18	7	5	0	0	0	0	0	0	0	0	148
[09:00-10:00]	0	13	33	50	43	19	2	2	0	0	0	0	0	0	0	0	162
[10:00-11:00]	0	8	39	43	27	10	4	1	0	0	0	0	0	0	0	0	132
[11:00-12:00]	1	7	38	65	37	15	2	2	0	0	0	0	0	0	0	0	167
[12:00-13:00]	1	13	43	83	51	7	6	4	0	0	0	0	0	0	0	0	208
[13:00-14:00]	4	8	56	66	43	16	4	3	0	0	0	0	0	0	0	0	200
[14:00-15:00]	1	9	43	64	45	16	5	3	0	0	0	0	0	0	0	0	186
[15:00-16:00]	2	13	38	71	45	20	5	7	0	0	0	0	0	0	0	0	201
[16:00-17:00]	6	13	55	79	60	12	6	7	0	0	0	0	0	0	0	0	238
[17:00-18:00]	4	8	58	86	63	22	3	1	0	0	0	0	0	0	0	0	245
[18:00-19:00]	0	13	43	77	57	11	2	4	0	0	0	0	0	0	0	0	207
[19:00-20:00]	1	8	39	49	39	14	1	1	0	0	0	0	0	0	0	0	152
[20:00-21:00]	1	10	23	38	20	13	2	0	0	0	0	0	0	0	0	0	107
[21:00-22:00]	0	6	21	38	21	1	4	1	0	0	0	0	0	0	0	0	92
[22:00-23:00]	0	3	15	15	8	2	1	1	0	0	0	0	0	0	0	0	45
[23:00-00:00]	1	8	6	12	9	3	2	0	0	0	0	0	0	0	0	0	41
	32	155	625	931	645	218	59	44	0	0	0	0	0	0	0	0	2709
<b>Wed, 07/11/2018</b>																	
[00:00-01:00]	0	2	4	7	1	2	2	3	0	0	0	0	0	0	0	0	21
[01:00-02:00]	0	1	4	7	3	1	1	0	0	0	0	0	0	0	0	0	17
[02:00-03:00]	0	1	6	5	3	2	1	0	0	0	0	0	0	0	0	0	18
[03:00-04:00]	0	1	3	2	0	0	0	0	0	0	0	0	0	0	0	0	6
[04:00-05:00]	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	8
[05:00-06:00]	0	2	4	5	4	1	0	1	0	0	0	0	0	0	0	0	17
[06:00-07:00]	2	2	1	3	7	1	1	1	0	0	0	0	0	0	0	0	18
[07:00-08:00]	0	4	17	30	16	8	0	1	0	0	0	0	0	0	0	0	76
[08:00-09:00]	2	10	42	66	36	7	3	2	0	0	0	0	0	0	0	0	168
[09:00-10:00]	2	14	51	69	41	9	3	4	0	0	0	0	0	0	0	0	193
[10:00-11:00]	0	8	40	51	25	13	3	1	0	0	0	0	0	0	0	0	141
[11:00-12:00]	0	4	33	49	35	13	2	3	0	0	0	0	0	0	0	0	139
[12:00-13:00]	2	10	39	62	45	20	3	5	0	0	0	0	0	0	0	0	186
[13:00-14:00]	3	19	52	54	42	13	3	5	0	0	0	0	0	0	0	0	191
[14:00-15:00]	4	12	38	75	30	9	3	2	0	0	0	0	0	0	0	0	173
[15:00-16:00]	4	10	44	69	45	14	5	2	0	0	0	0	0	0	0	0	193
[16:00-17:00]	1	15	46	76	49	10	7	2	0	0	0	0	0	0	0	0	206
[17:00-18:00]	3	18	43	75	47	14	3	4	0	0	0	0	0	0	0	0	207
[18:00-19:00]	4	5	33	75	43	15	5	3	0	0	0	0	0	0	0	0	183
[19:00-20:00]	4	10	42	72	36	14	1	4	0	0	0	0	0	0	0	0	183

## Time/Speed Report

Device ID: 00000		Begin: 01/11/2018 12:00 AM					End: 08/11/2018 12:00 AM									
Street: Harbor Island S_O Point Concep		Lane: Total Traffic					Hours: 168.00									
State: NV		Operator:					Period: 60									
City: Las Vegas		Speed Limit: 30					Raw Count: 18208									
County: Clark		AADT Factor: 1					AADT Count: 2,601									
Date	<	25	30	35	40	45	50	55								
And	to	to	to	to	to	to	to	to								
Time Range	24	29	34	39	44	49	54	>	Total							
Wed, 07/11/2018																
[20:00-21:00]	2	9	20	47	21	6	3	0	0	0	0	0	0	0	0	108
[21:00-22:00]	0	2	16	28	17	8	0	0	0	0	0	0	0	0	0	71
[22:00-23:00]	3	4	21	15	18	4	1	2	0	0	0	0	0	0	0	68
[23:00-00:00]	2	2	12	16	6	2	0	1	0	0	0	0	0	0	0	41
	40	167	613	960	570	186	50	46	0	0	0	0	0	0	0	2632
01/11/2018 12:00 AM																
08/11/2018 12:00 AM																
	275	1089	3895	6307	4293	1431	386	342	0	0	0	0	0	0	0	18018

**MH Corbin Traffic Analyzer Study  
 Computer Generated Summary Report  
 City: Las Vegas  
 Street: Harbor Island Dr S\_O Soft Winds**

A study of vehicle traffic was conducted with the device having serial number 00000. The study was done in the Total Traffic lane at Harbor Island Dr S\_O Soft Winds in Las Vegas, NV in Clark county. The study began on 01/11/2018 at 12:00 AM and concluded on 08/11/2018 at 12:00 AM, lasting a total of 168.00 hours. Traffic statistics were recorded in 60 minute time periods. The total recorded volume showed 35255 vehicles passed through the location with a peak volume of 495 on 01/11/2018 at [17:00-18:00] and a minimum volume of 7 on 05/11/2018 at [03:00-04:00]. The AADT count for this study was 5,036.

**SPEED**

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 35 - 40 MPH range or lower. The average speed for all classified vehicles was 36 MPH with 86.85% vehicles exceeding the posted speed of 30 MPH. 2.50% percent of the total vehicles were traveling in excess of 55 MPH. The mode speed for this traffic study was 35MPH and the 85th percentile was 42.83 MPH.

< to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to >											
985	3576	10344	11663	5130	1552	559	866											

CHART 1

**CLASSIFICATION**

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin. Most of the vehicles classified during the study were Vans & Pickups. The number of Passenger Vehicles in the study was 0 which represents 0 percent of the total classified vehicles. The number of Vans & Pickups in the study was 33056 which represents 95 percent of the total classified vehicles. The number of Busses & Trucks in the study was 0 which represents 0 percent of the total classified vehicles. The number of Tractor Trailers in the study was 1619 which represents 0 percent of the total classified vehicles.

< to 20	21 to 37	38 to >																
33056	1407	212																

CHART 2

**HEADWAY**

During the peak traffic period, on 01/11/2018 at [17:00-18:00] the average headway between vehicles was 7.258 seconds. During the slowest traffic period, on 05/11/2018 at [03:00-04:00] the average headway between vehicles was 450 seconds.

**WEATHER**

The roadway surface temperature over the period of the study varied between 32.00 and 32.00 degrees F. The roadway surface was Dry 100.00% of the time.

## Time/Speed Report

Device ID: 00000 Street: Harbor Island Dr S_O Soft Wind: State: NV City: Las Vegas County: Clark	Begin: 01/11/2018 12:00 AM Lane: Total Traffic Operator: Speed Limit: 30 AADT Factor: 1	End: 08/11/2018 12:00 AM Hours: 168.00 Period: 60 Raw Count: 35255 AADT Count: 5,036
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Date And Time Range	< to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to >								Total
Thu, 01/11/2018																
[00:00-01:00]	3	3	15	17	10	1	1	0	0	0	0	0	0	0	0	50
[01:00-02:00]	1	5	9	8	4	2	1	0	0	0	0	0	0	0	0	30
[02:00-03:00]	1	2	4	4	9	0	1	0	0	0	0	0	0	0	0	21
[03:00-04:00]	1	4	4	4	1	1	2	1	0	0	0	0	0	0	0	18
[04:00-05:00]	1	3	4	4	3	2	2	1	0	0	0	0	0	0	0	20
[05:00-06:00]	1	8	21	18	9	1	0	3	0	0	0	0	0	0	0	61
[06:00-07:00]	1	18	44	63	25	6	1	2	0	0	0	0	0	0	0	160
[07:00-08:00]	7	28	92	111	60	23	4	14	0	0	0	0	0	0	0	339
[08:00-09:00]	9	37	97	113	36	15	6	14	0	0	0	0	0	0	0	327
[09:00-10:00]	14	28	87	74	39	13	1	9	0	0	0	0	0	0	0	265
[10:00-11:00]	7	30	94	84	37	16	5	6	0	0	0	0	0	0	0	279
[11:00-12:00]	7	52	110	119	52	11	7	9	0	0	0	0	0	0	0	367
[12:00-13:00]	4	26	73	115	48	13	8	10	0	0	0	0	0	0	0	297
[13:00-14:00]	10	30	93	122	58	22	6	7	0	0	0	0	0	0	0	348
[14:00-15:00]	13	51	133	119	59	14	4	4	0	0	0	0	0	0	0	397
[15:00-16:00]	9	52	132	148	59	15	7	15	0	0	0	0	0	0	0	437
[16:00-17:00]	9	45	148	151	69	26	10	9	0	0	0	0	0	0	0	467
[17:00-18:00]	13	50	155	164	72	21	4	9	0	0	0	0	0	0	0	488
[18:00-19:00]	8	38	115	124	55	9	6	3	0	0	0	0	0	0	0	358
[19:00-20:00]	4	28	67	69	32	10	5	2	0	0	0	0	0	0	0	217
[20:00-21:00]	2	20	69	64	12	11	1	3	0	0	0	0	0	0	0	182
[21:00-22:00]	5	15	38	45	16	8	4	4	0	0	0	0	0	0	0	135
[22:00-23:00]	0	15	26	31	17	3	2	0	0	0	0	0	0	0	0	94
[23:00-00:00]	0	7	11	15	8	2	0	2	0	0	0	0	0	0	0	45
	130	595	1641	1786	790	245	88	127	0	0	0	0	0	0	0	5402
Fri, 02/11/2018																
[00:00-01:00]	3	2	15	12	4	2	1	0	0	0	0	0	0	0	0	39
[01:00-02:00]	0	4	11	8	4	2	0	2	0	0	0	0	0	0	0	31
[02:00-03:00]	0	1	10	7	4	1	0	0	0	0	0	0	0	0	0	23
[03:00-04:00]	1	1	6	5	3	0	0	1	0	0	0	0	0	0	0	17
[04:00-05:00]	2	4	8	10	4	1	1	0	0	0	0	0	0	0	0	30
[05:00-06:00]	4	10	11	16	8	4	1	0	0	0	0	0	0	0	0	54
[06:00-07:00]	1	10	45	52	21	10	1	4	0	0	0	0	0	0	0	144
[07:00-08:00]	17	38	115	150	44	11	11	9	0	0	0	0	0	0	0	395
[08:00-09:00]	9	33	101	121	39	16	4	12	0	0	0	0	0	0	0	335
[09:00-10:00]	6	29	99	93	41	12	6	6	0	0	0	0	0	0	0	292
[10:00-11:00]	15	37	98	112	51	12	6	9	0	0	0	0	0	0	0	340
[11:00-12:00]	9	36	121	109	45	16	4	12	0	0	0	0	0	0	0	352
[12:00-13:00]	8	31	83	118	53	19	9	9	0	0	0	0	0	0	0	330
[13:00-14:00]	6	32	93	119	69	13	5	16	0	0	0	0	0	0	0	353
[14:00-15:00]	13	45	109	119	53	16	0	11	0	0	0	0	0	0	0	366
[15:00-16:00]	7	43	116	155	65	21	2	17	0	0	0	0	0	0	0	426
[16:00-17:00]	11	46	127	168	51	24	7	8	0	0	0	0	0	0	0	442
[17:00-18:00]	16	40	129	140	67	21	4	11	0	0	0	0	0	0	0	428

## Time/Speed Report

Device ID: 00000		Begin: 01/11/2018 12:00 AM							End: 08/11/2018 12:00 AM							
Street: Harbor Island Dr S_O Soft Wind:		Lane: Total Traffic							Hours: 168.00							
State: NV		Operator:							Period: 60							
City: Las Vegas		Speed Limit: 30							Raw Count: 35255							
County: Clark		AADT Factor: 1							AADT Count: 5,036							
Date	<	25	30	35	40	45	50	55								Total
And	to	to	to	to	to	to	to	to								
Time Range	24	29	34	39	44	49	54	>								
Fri, 02/11/2018																
[18:00-19:00]	3	29	114	103	45	14	3	7	0	0	0	0	0	0	0	318
[19:00-20:00]	11	35	77	89	38	9	6	6	0	0	0	0	0	0	0	271
[20:00-21:00]	6	21	68	52	28	5	3	3	0	0	0	0	0	0	0	186
[21:00-22:00]	7	20	47	54	20	4	7	6	0	0	0	0	0	0	0	165
[22:00-23:00]	5	16	35	34	25	3	1	1	0	0	0	0	0	0	0	120
[23:00-00:00]	4	10	31	31	22	6	2	4	0	0	0	0	0	0	0	110
	164	573	1669	1877	804	242	84	154	0	0	0	0	0	0	0	5567
Sat, 03/11/2018																
[00:00-01:00]	4	5	15	21	5	2	1	0	0	0	0	0	0	0	0	53
[01:00-02:00]	2	5	13	13	5	2	1	0	0	0	0	0	0	0	0	41
[02:00-03:00]	0	3	7	7	2	2	0	1	0	0	0	0	0	0	0	22
[03:00-04:00]	1	0	4	11	2	1	0	0	0	0	0	0	0	0	0	19
[04:00-05:00]	0	2	3	3	0	0	0	1	0	0	0	0	0	0	0	9
[05:00-06:00]	1	4	13	15	2	0	0	0	0	0	0	0	0	0	0	35
[06:00-07:00]	1	8	21	23	17	3	1	0	0	0	0	0	0	0	0	74
[07:00-08:00]	2	20	39	44	18	5	2	5	0	0	0	0	0	0	0	135
[08:00-09:00]	8	19	59	67	25	8	4	10	0	0	0	0	0	0	0	200
[09:00-10:00]	10	30	88	93	37	9	8	3	0	0	0	0	0	0	0	278
[10:00-11:00]	14	40	114	110	33	11	7	8	0	0	0	0	0	0	0	337
[11:00-12:00]	12	34	92	102	51	18	7	12	0	0	0	0	0	0	0	328
[12:00-13:00]	12	35	115	96	41	11	6	9	0	0	0	0	0	0	0	325
[13:00-14:00]	11	31	106	100	48	9	7	12	0	0	0	0	0	0	0	324
[14:00-15:00]	7	35	68	104	49	17	8	11	0	0	0	0	0	0	0	299
[15:00-16:00]	9	32	89	105	41	22	10	9	0	0	0	0	0	0	0	317
[16:00-17:00]	7	38	94	107	60	24	4	5	0	0	0	0	0	0	0	339
[17:00-18:00]	11	42	122	104	43	12	2	2	0	0	0	0	0	0	0	338
[18:00-19:00]	10	40	104	96	42	15	3	2	0	0	0	0	0	0	0	312
[19:00-20:00]	6	35	73	58	24	6	2	1	0	0	0	0	0	0	0	205
[20:00-21:00]	4	18	53	49	32	4	4	4	0	0	0	0	0	0	0	168
[21:00-22:00]	10	15	47	28	22	6	1	3	0	0	0	0	0	0	0	132
[22:00-23:00]	2	15	45	47	23	4	3	1	0	0	0	0	0	0	0	140
[23:00-00:00]	4	11	31	20	13	4	4	1	0	0	0	0	0	0	0	88
	148	517	1415	1423	635	195	85	100	0	0	0	0	0	0	0	4518
Sun, 04/11/2018																
[00:00-01:00]	1	7	13	23	10	0	1	3	0	0	0	0	0	0	0	58
[01:00-02:00]	1	4	9	12	7	2	1	0	0	0	0	0	0	0	0	36
[02:00-03:00]	1	2	4	8	4	1	0	1	0	0	0	0	0	0	0	21
[03:00-04:00]	1	3	5	6	2	0	0	1	0	0	0	0	0	0	0	18
[04:00-05:00]	0	2	3	11	0	1	0	1	0	0	0	0	0	0	0	18
[05:00-06:00]	0	1	4	1	4	3	0	0	0	0	0	0	0	0	0	13
[06:00-07:00]	1	3	3	8	9	3	0	0	0	0	0	0	0	0	0	27
[07:00-08:00]	3	10	14	24	6	4	0	6	0	0	0	0	0	0	0	67
[08:00-09:00]	4	12	30	43	19	5	4	3	0	0	0	0	0	0	0	120
[09:00-10:00]	7	13	53	59	29	11	3	4	0	0	0	0	0	0	0	179

## Time/Speed Report

Device ID: 00000		Begin: 01/11/2018 12:00 AM							End: 08/11/2018 12:00 AM							
Street: Harbor Island Dr S_O Soft Wind:		Lane: Total Traffic							Hours: 168.00							
State: NV		Operator:							Period: 60							
City: Las Vegas		Speed Limit: 30							Raw Count: 35255							
County: Clark		AADT Factor: 1							AADT Count: 5,036							
Date	<	25	30	35	40	45	50	55								Total
And	to	to	to	to	to	to	to	to								
Time Range	24	29	34	39	44	49	54	>								
<b>Sun, 04/11/2018</b>																
[10:00-11:00]	7	25	61	102	43	6	4	8	0	0	0	0	0	0	0	256
[11:00-12:00]	8	41	88	100	40	10	5	3	0	0	0	0	0	0	0	295
[12:00-13:00]	12	23	94	115	52	13	3	8	0	0	0	0	0	0	0	320
[13:00-14:00]	8	27	97	112	46	19	8	12	0	0	0	0	0	0	0	329
[14:00-15:00]	12	22	76	104	39	20	5	5	0	0	0	0	0	0	0	283
[15:00-16:00]	4	17	66	79	37	11	0	4	0	0	0	0	0	0	0	218
[16:00-17:00]	10	29	87	101	51	10	8	6	0	0	0	0	0	0	0	302
[17:00-18:00]	12	24	98	104	48	8	5	4	0	0	0	0	0	0	0	303
[18:00-19:00]	6	34	101	109	43	10	2	2	0	0	0	0	0	0	0	307
[19:00-20:00]	6	23	55	73	38	10	4	4	0	0	0	0	0	0	0	213
[20:00-21:00]	7	13	48	64	34	9	0	2	0	0	0	0	0	0	0	177
[21:00-22:00]	3	15	44	49	18	9	1	0	0	0	0	0	0	0	0	139
[22:00-23:00]	2	10	30	34	23	5	1	4	0	0	0	0	0	0	0	109
[23:00-00:00]	4	3	13	22	9	3	0	1	0	0	0	0	0	0	0	55
	120	363	1096	1363	611	173	55	82	0	0	0	0	0	0	0	3863
<b>Mon, 05/11/2018</b>																
[00:00-01:00]	2	2	12	13	8	4	0	0	0	0	0	0	0	0	0	41
[01:00-02:00]	0	3	11	7	3	1	0	1	0	0	0	0	0	0	0	26
[02:00-03:00]	0	6	3	5	6	0	0	1	0	0	0	0	0	0	0	21
[03:00-04:00]	1	1	1	2	1	1	0	0	0	0	0	0	0	0	0	7
[04:00-05:00]	0	3	3	5	2	1	0	0	0	0	0	0	0	0	0	14
[05:00-06:00]	0	4	8	4	2	0	1	2	0	0	0	0	0	0	0	21
[06:00-07:00]	3	6	13	27	13	3	1	0	0	0	0	0	0	0	0	66
[07:00-08:00]	4	14	35	47	21	8	3	4	0	0	0	0	0	0	0	136
[08:00-09:00]	10	25	98	137	50	21	7	13	0	0	0	0	0	0	0	361
[09:00-10:00]	14	28	86	107	47	25	6	8	0	0	0	0	0	0	0	321
[10:00-11:00]	7	30	83	105	44	13	5	8	0	0	0	0	0	0	0	295
[11:00-12:00]	4	38	88	110	39	13	4	9	0	0	0	0	0	0	0	305
[12:00-13:00]	7	30	97	110	34	16	2	9	0	0	0	0	0	0	0	305
[13:00-14:00]	15	35	86	110	50	18	7	11	0	0	0	0	0	0	0	332
[14:00-15:00]	10	28	100	111	45	14	7	15	0	0	0	0	0	0	0	330
[15:00-16:00]	9	44	117	149	58	15	7	15	0	0	0	0	0	0	0	414
[16:00-17:00]	10	31	132	126	58	17	6	11	0	0	0	0	0	0	0	391
[17:00-18:00]	14	49	136	128	59	27	3	8	0	0	0	0	0	0	0	424
[18:00-19:00]	13	45	139	138	46	13	4	8	0	0	0	0	0	0	0	406
[19:00-20:00]	7	35	90	96	57	17	6	6	0	0	0	0	0	0	0	314
[20:00-21:00]	5	16	70	89	35	7	1	3	0	0	0	0	0	0	0	226
[21:00-22:00]	7	14	42	53	18	6	2	2	0	0	0	0	0	0	0	144
[22:00-23:00]	1	7	32	36	21	7	5	3	0	0	0	0	0	0	0	112
[23:00-00:00]	2	6	16	30	6	4	3	2	0	0	0	0	0	0	0	69
	145	500	1498	1745	723	251	80	139	0	0	0	0	0	0	0	5081
<b>Tue, 06/11/2018</b>																
[00:00-01:00]	0	7	9	16	2	1	1	2	0	0	0	0	0	0	0	38
[01:00-02:00]	1	2	3	10	3	0	1	0	0	0	0	0	0	0	0	20

## Time/Speed Report

Device ID: 00000 Street: Harbor Island Dr S_O Soft Wind: State: NV City: Las Vegas County: Clark	Begin: 01/11/2018 12:00 AM Lane: Total Traffic Operator: Speed Limit: 30 AADT Factor: 1	End: 08/11/2018 12:00 AM Hours: 168.00 Period: 60 Raw Count: 35255 AADT Count: 5,036
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Date And Time Range	< to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to >								Total
<b>Tue, 06/11/2018</b>																
[02:00-03:00]	0	0	4	5	2	2	0	0	0	0	0	0	0	0	0	13
[03:00-04:00]	0	1	3	1	2	0	0	1	0	0	0	0	0	0	0	8
[04:00-05:00]	1	2	3	4	2	2	0	0	0	0	0	0	0	0	0	14
[05:00-06:00]	0	4	10	4	3	2	1	0	0	0	0	0	0	0	0	24
[06:00-07:00]	2	7	22	20	7	4	2	1	0	0	0	0	0	0	0	65
[07:00-08:00]	5	15	45	42	28	6	2	6	0	0	0	0	0	0	0	149
[08:00-09:00]	8	23	96	107	50	19	6	12	0	0	0	0	0	0	0	321
[09:00-10:00]	7	39	87	99	59	14	7	11	0	0	0	0	0	0	0	323
[10:00-11:00]	10	37	98	113	44	7	5	5	0	0	0	0	0	0	0	319
[11:00-12:00]	8	34	106	116	46	15	5	11	0	0	0	0	0	0	0	341
[12:00-13:00]	8	29	97	117	48	19	8	12	0	0	0	0	0	0	0	338
[13:00-14:00]	9	31	81	108	61	17	7	11	0	0	0	0	0	0	0	325
[14:00-15:00]	11	25	83	111	64	12	8	12	0	0	0	0	0	0	0	326
[15:00-16:00]	11	34	105	112	53	19	4	7	0	0	0	0	0	0	0	345
[16:00-17:00]	12	38	113	146	75	18	9	11	0	0	0	0	0	0	0	422
[17:00-18:00]	12	40	143	155	61	19	7	8	0	0	0	0	0	0	0	445
[18:00-19:00]	9	48	150	154	53	9	5	7	0	0	0	0	0	0	0	435
[19:00-20:00]	6	32	83	116	51	15	1	7	0	0	0	0	0	0	0	311
[20:00-21:00]	4	18	59	82	33	6	3	5	0	0	0	0	0	0	0	210
[21:00-22:00]	5	14	42	45	31	6	3	5	0	0	0	0	0	0	0	151
[22:00-23:00]	0	12	31	23	33	1	0	1	0	0	0	0	0	0	0	101
[23:00-00:00]	2	8	25	21	8	3	1	2	0	0	0	0	0	0	0	70
	131	500	1498	1727	819	216	86	137	0	0	0	0	0	0	0	5114
<b>Wed, 07/11/2018</b>																
[00:00-01:00]	0	4	10	14	8	5	2	1	0	0	0	0	0	0	0	44
[01:00-02:00]	0	2	8	3	8	2	0	1	0	0	0	0	0	0	0	24
[02:00-03:00]	0	2	7	2	3	2	1	2	0	0	0	0	0	0	0	19
[03:00-04:00]	1	1	4	2	0	3	0	0	0	0	0	0	0	0	0	11
[04:00-05:00]	0	1	0	7	2	1	0	1	0	0	0	0	0	0	0	12
[05:00-06:00]	1	1	6	7	5	2	2	1	0	0	0	0	0	0	0	25
[06:00-07:00]	2	6	17	24	13	3	1	1	0	0	0	0	0	0	0	67
[07:00-08:00]	0	11	53	63	26	12	3	4	0	0	0	0	0	0	0	172
[08:00-09:00]	12	39	98	123	52	20	5	7	0	0	0	0	0	0	0	356
[09:00-10:00]	8	36	93	109	50	11	6	9	0	0	0	0	0	0	0	322
[10:00-11:00]	8	35	92	99	34	15	7	6	0	0	0	0	0	0	0	296
[11:00-12:00]	15	27	96	106	40	16	6	8	0	0	0	0	0	0	0	314
[12:00-13:00]	11	29	94	113	49	14	6	7	0	0	0	0	0	0	0	323
[13:00-14:00]	16	31	79	108	47	15	5	13	0	0	0	0	0	0	0	314
[14:00-15:00]	10	32	97	101	33	12	5	12	0	0	0	0	0	0	0	302
[15:00-16:00]	13	31	125	117	40	12	4	19	0	0	0	0	0	0	0	361
[16:00-17:00]	10	50	118	131	65	13	8	7	0	0	0	0	0	0	0	402
[17:00-18:00]	9	51	137	142	71	11	6	3	0	0	0	0	0	0	0	430
[18:00-19:00]	12	48	130	142	54	13	2	9	0	0	0	0	0	0	0	410
[19:00-20:00]	6	37	97	116	54	20	4	5	0	0	0	0	0	0	0	339

## Time/Speed Report

Device ID: 00000		Begin: 01/11/2018 12:00 AM					End: 08/11/2018 12:00 AM									
Street: Harbor Island Dr S_O Soft Wind:		Lane: Total Traffic					Hours: 168.00									
State: NV		Operator:					Period: 60									
City: Las Vegas		Speed Limit: 30					Raw Count: 35255									
County: Clark		AADT Factor: 1					AADT Count: 5,036									
Date	<	25	30	35	40	45	50	55								
And	to	to	to	to	to	to	to	to								
Time Range	24	29	34	39	44	49	54	>	Total							
Wed, 07/11/2018																
[20:00-21:00]	5	19	51	77	41	9	1	6	0	0	0	0	0	0	0	209
[21:00-22:00]	3	14	62	67	27	8	6	2	0	0	0	0	0	0	0	189
[22:00-23:00]	3	14	27	46	15	7	0	3	0	0	0	0	0	0	0	115
[23:00-00:00]	2	7	26	23	11	4	1	0	0	0	0	0	0	0	0	74
	147	528	1527	1742	748	230	81	127	0	0	0	0	0	0	0	5130
01/11/2018 12:00 AM																
08/11/2018 12:00 AM																
	985	3576	10344	11663	5130	1552	559	866	0	0	0	0	0	0	0	34675

**CITY OF LAS VEGAS  
7 DAY HOURLY VOLUME**

LOCATION: **Mariner Dr S/O Soft Winds Dr**  
DATE: **8/14/2018 THRU 8/20/2018**

MAP EXCEL RHC  
AM access

85% = 43MPH

HOUR	NORTHBOUND								ADT	RK	SOUTHBOUND								ADT	RK	2 WAY Avg	RK
	Tues	Wed	Thu	Fri	Sat	Sun	Mon	Tues			Wed	Thu	Fri	Sat	Sun	Mon						
	8/14	8/15	8/16	8/17	8/18	8/19	8/20	8/14			8/15	8/16	8/17	8/18	8/19	8/20						
12 - 1	19	28	21	30	42	54	35	33		8	16	8	17	18	22	18	15		48			
1 - 2	14	19	15	25	28	22	18	20		5	13	10	21	27	16	11	15		35			
2 - 3	7	9	15	14	20	25	16	15		8	7	14	5	9	11	8	9		24			
3 - 4	7	7	9	17	16	12	9	11		8	6	9	9	6	9	8	8		19			
4 - 5	11	15	17	11	23	17	14	15		13	15	13	14	12	9	15	13		28			
5 - 6	20	20	20	22	17	12	19	19		41	34	30	30	20	18	35	30		48			
6 - 7	76	62	87	61	24	17	81	58		86	92	92	81	43	31	103	75		134			
7 - 8	114	133	128	135	55	46	98	101		191	185	173	179	93	50	187	151	1	252			
8 - 9	108	130	111	136	87	72	118	109		145	123	137	133	83	69	139	118	4	227			
9 - 10	106	133	104	119	110	106	98	111		105	120	122	127	94	99	110	111		222			
10 - 11	122	116	123	126	127	106	116	119		101	101	112	117	128	112	114	112		232			
11 - 12	124	135	121	137	139	137	136	133		107	110	90	114	102	124	97	106		239			
12 - 13	147	150	153	165	154	139	149	151	8	107	125	93	126	113	106	111	112		263	7		
13 - 14	145	164	166	159	139	161	154	155	7	123	117	90	134	117	101	121	115	8	270	6		
14 - 15	176	163	178	193	131	140	198	168	5	141	122	133	121	124	117	122	126	2	294	4		
15 - 16	170	178	173	211	169	119	193	173	4	117	112	136	111	128	101	111	117	5	290	5		
16 - 17	197	189	206	207	159	127	223	187	2	106	112	128	117	103	113	128	115	7	302	2		
17 - 18	262	228	253	221	166	169	260	223	1	113	139	127	130	114	106	119	121	3	344	1		
18 - 19	210	214	190	212	135	133	188	183	3	119	128	122	131	102	109	106	117	6	300	3		
19 - 20	158	160	162	171	125	160	170	158	6	99	83	109	113	76	99	91	96		254	8		
20 - 21	115	130	134	124	111	117	120	122		77	103	79	76	82	67	71	79		201			
21 - 22	89	113	89	96	86	85	94	93		42	64	52	85	68	57	46	59		152			
22 - 23	58	68	76	81	76	55	51	66		35	34	38	65	48	41	42	43		110			
23 - 24	36	43	42	59	58	33	34	44		26	23	20	31	30	28	31	27		71			
																				0		
24 HOURS	2491	2607	2593	2732	2197	2064	2592	2468		1923	1984	1937	2087	1740	1615	1944	1890		4358			
SEVEN DAY TOTAL									17276										13230		30506	
HIGH 8 HOURS									1399										980		2316	

85TH%ILE

42

43

**CITY OF LAS VEGAS  
7 DAY HOURLY VOLUME**

LOCATION: **Mariner Dr N/O Regatta Dr**  
DATE: **8/14/2018 THRU 8/20/2018**

MAP      EXCEL      RHC  
AM      ACCESS

85% = 45MPH

HOUR	NORTHBOUND							ADT	RK	SOUTHBOUND							ADT	RK	2 WAY Avg	RK	
	Tues	Wed	Thu	Fri	Sat	Sun	Mon			Tues	Wed	Thu	Fri	Sat	Sun	Mon					
	8/14	8/15	8/16	8/17	8/18	8/19	8/20			8/14	8/15	8/16	8/17	8/18	8/19	8/20					
12 - 1	20	23	17	25	34	40	21	26		12	13	14	18	20	23	18	17		43		
1 - 2	16	7	15	21	20	17	7	15		7	7	8	12	19	14	2	10		25		
2 - 3	8	10	7	10	16	16	9	11		11	13	10	5	15	12	6	10		21		
3 - 4	9	6	8	8	9	8	5	8		9	7	9	8	14	12	8	10		17		
4 - 5	5	8	4	5	13	9	3	7		8	14	11	8	6	10	9	9		16		
5 - 6	16	11	17	13	5	9	17	13		33	32	43	29	23	17	40	31		44		
6 - 7	45	46	49	43	14	17	50	38		111	108	112	115	51	28	114	91		129		
7 - 8	83	83	80	81	37	25	67	65		204	203	206	175	84	66	199	162	1	228		
8 - 9	90	76	83	110	54	46	70	76		170	152	148	159	98	75	134	134	8	209		
9 - 10	78	81	82	75	87	61	64	75		140	153	146	137	124	107	137	135	6	210		
10 - 11	92	93	80	96	126	92	87	95		118	135	114	121	143	136	108	125		220		
11 - 12	103	118	82	108	114	82	89	99		146	133	132	160	166	146	105	141	2	241	8	
12 - 13	114	101	120	131	138	104	97	115	8	137	120	121	159	141	104	141	132		247	7	
13 - 14	120	121	131	122	111	119	133	122	6	138	131	134	147	130	129	134	135	7	257	5	
14 - 15	130	121	131	122	118	118	131	124	5	159	136	154	122	119	111	149	136	4	260	4	
15 - 16	134	153	133	132	118	103	145	131	4	167	146	123	141	147	112	127	138	3	269	2	
16 - 17	144	158	137	162	102	115	163	140	2	125	120	118	121	104	102	117	115		255	6	
17 - 18	199	171	165	191	125	108	187	164	1	133	155	128	157	119	125	133	136	5	299	1	
18 - 19	164	153	142	149	106	108	128	136	3	139	121	141	123	133	113	121	127		263	3	
19 - 20	120	132	112	134	98	111	127	119	7	112	88	108	109	87	100	87	99		218		
20 - 21	107	101	108	78	93	72	94	93		54	89	67	83	75	54	74	71		164		
21 - 22	68	73	62	88	71	62	67	70		45	52	47	70	46	59	36	51		121		
22 - 23	57	55	53	70	67	52	50	58		44	41	27	52	41	27	36	38		96		
23 - 24	31	35	36	49	40	37	24	36		19	13	20	32	43	13	23	23		59		
																				0	
24 HOURS	1953	1936	1854	2023	1716	1531	1835	1835		2241	2182	2141	2263	1948	1695	2058	2075		3911		
SEVEN DAY TOTAL								12848									14528			27376	
HIGH 8 HOURS								1052									1116			2091	

85TH%ILE

44

45

**2021**

**SPEED AND VOLUME STUDIES**

**MH Corbin Traffic Analyzer Study  
 Computer Generated Summary Report  
 City: Las Vegas  
 Street: Breakwater Dr E/O Harbor Island**

A study of vehicle traffic was conducted with the device having serial number 111572. The study was done in the WBT lane at Breakwater Dr E/O Harbor Island in Las Vegas, Nv in Clark county. The study began on 18/10/2021 at 01:00 PM and concluded on 19/10/2021 at 01:00 PM, lasting a total of 24.00 hours. Traffic statistics were recorded in 60 minute time periods. The total recorded volume showed 909 vehicles passed through the location with a peak volume of 79 on 18/10/2021 at [14:00-15:00] and a minimum volume of 0 on 19/10/2021 at [01:00-02:00]. The AADT count for this study was 909.

**SPEED**

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 25 - 30 MPH range or lower. The average speed for all classified vehicles was 32 MPH with 81.14% vehicles exceeding the posted speed of 25 MPH. 7.15% percent of the total vehicles were traveling in excess of 55 MPH. The mode speed for this traffic study was 25MPH and the 85th percentile was 42.98 MPH.

< to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >							
145	203	188	92	42	25	19	11	4	3	4	33							

CHART 1

**CLASSIFICATION**

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin. Most of the vehicles classified during the study were Passenger Vehicles. The number of Passenger Vehicles in the study was 639 which represents 83 percent of the total classified vehicles. The number of Vans & Pickups in the study was 65 which represents 8 percent of the total classified vehicles. The number of Busses & Trucks in the study was 43 which represents 6 percent of the total classified vehicles. The number of Tractor Trailers in the study was 22 which represents 3 percent of the total classified vehicles.

< to 18	19 to 23	24 to 35	36 to 79	80 to >														
639	65	43	19	3														

CHART 2

**HEADWAY**

During the peak traffic period, on 18/10/2021 at [14:00-15:00] the average headway between vehicles was 45 seconds. During the slowest traffic period, on 19/10/2021 at [01:00-02:00] the average headway between vehicles was 3600 seconds.

**WEATHER**

The roadway surface temperature over the period of the study varied between 77.00 and 111.00 degrees F.

## Time/Speed Report

Device ID: 111572		Begin: 18/10/2021 01:00 PM						End: 19/10/2021 01:00 PM								
Street: Breakwater Dr E/O Harbor Islanc		Lane: WBT						Hours: 24.00								
State: Nv		Operator: JD						Period: 60								
City: Las Vegas		Speed Limit: 25						Raw Count: 909								
County: Clark		AADT Factor: 1						AADT Count: 909								
Date And Time Range	< to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >				Total
Mon, 18/10/2021																
[13:00-14:00]	18	12	12	6	3	2	2	0	1	0	0	3	0	0	0	59
[14:00-15:00]	5	19	19	10	5	1	2	2	0	0	1	4	0	0	0	68
[15:00-16:00]	10	16	8	8	3	3	0	1	0	0	0	2	0	0	0	51
[16:00-17:00]	5	19	17	7	6	2	0	1	0	0	0	0	0	0	0	57
[17:00-18:00]	7	12	15	9	1	2	0	0	1	1	0	4	0	0	0	52
[18:00-19:00]	8	14	10	4	0	4	2	2	0	0	0	1	0	0	0	45
[19:00-20:00]	11	12	12	2	0	1	3	0	0	0	0	2	0	0	0	43
[20:00-21:00]	4	9	5	1	1	1	0	0	0	2	1	0	0	0	0	24
[21:00-22:00]	3	4	3	4	1	0	0	1	0	0	0	0	0	0	0	16
[22:00-23:00]	4	4	2	0	0	2	0	0	0	0	0	1	0	0	0	13
[23:00-00:00]	2	3	3	2	0	0	0	0	1	0	0	0	0	0	0	11
	77	124	106	53	20	18	9	7	3	3	2	17	0	0	0	439
Tue, 19/10/2021																
[00:00-01:00]	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
[01:00-02:00]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[02:00-03:00]	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3
[03:00-04:00]	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
[04:00-05:00]	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	5
[05:00-06:00]	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	3
[06:00-07:00]	4	9	4	2	1	3	0	0	0	0	0	3	0	0	0	26
[07:00-08:00]	11	11	10	7	3	0	1	1	1	0	0	0	0	0	0	45
[08:00-09:00]	5	7	12	8	4	1	1	0	0	0	0	1	0	0	0	39
[09:00-10:00]	17	14	8	10	1	1	3	0	0	0	0	4	0	0	0	58
[10:00-11:00]	6	9	16	4	2	1	0	0	0	0	2	2	0	0	0	42
[11:00-12:00]	13	10	12	3	5	0	2	1	0	0	0	4	0	0	0	50
[12:00-13:00]	10	15	14	5	4	1	3	2	0	0	0	2	0	0	0	56
	68	79	82	39	22	7	10	4	1	0	2	16	0	0	0	330
18/10/2021 01:00 PM																
19/10/2021 01:00 PM																
	145	203	188	92	42	25	19	11	4	3	4	33	0	0	0	769

**MH Corbin Traffic Analyzer Study  
Computer Generated Summary Report  
City: Las Vegas  
Street: HarborIslandDrN/OPointConception**

A study of vehicle traffic was conducted with the device having serial number 107915. The study was done in the SBT lane at HarborIslandDrN/OPointConception in Las Vegas, Nv in Clark county. The study began on 18/10/2021 at 01:00 PM and concluded on 19/10/2021 at 01:00 PM, lasting a total of 24.00 hours. Traffic statistics were recorded in 60 minute time periods. The total recorded volume showed 1891 vehicles passed through the location with a peak volume of 155 on 19/10/2021 at [07:00-08:00] and a minimum volume of 2 on 19/10/2021 at [01:00-02:00]. The AADT count for this study was 1,891.

**SPEED**

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 30 - 35 MPH range or lower. The average speed for all classified vehicles was 34 MPH with 75.52% vehicles exceeding the posted speed of 30 MPH. 3.23% percent of the total vehicles were traveling in excess of 55 MPH. The mode speed for this traffic study was 30MPH and the 85th percentile was 41.10 MPH.

< to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >							
110	345	622	463	181	61	17	19	11	5	5	20							

CHART 1

**CLASSIFICATION**

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin. Most of the vehicles classified during the study were Passenger Vehicles. The number of Passenger Vehicles in the study was 1592 which represents 86 percent of the total classified vehicles. The number of Vans & Pickups in the study was 184 which represents 10 percent of the total classified vehicles. The number of Busses & Trucks in the study was 44 which represents 2 percent of the total classified vehicles. The number of Tractor Trailers in the study was 39 which represents 2 percent of the total classified vehicles.

< to 18	19 to 23	24 to 35	36 to 79	80 to >														
1592	184	44	39	0														

CHART 2

**HEADWAY**

During the peak traffic period, on 19/10/2021 at [07:00-08:00] the average headway between vehicles was 23.077 seconds. During the slowest traffic period, on 19/10/2021 at [01:00-02:00] the average headway between vehicles was 1200 seconds.

**WEATHER**

The roadway surface temperature over the period of the study varied between 52.00 and 108.00 degrees F.

## Time/Speed Report

Device ID: 107915		Begin: 18/10/2021 01:00 PM						End: 19/10/2021 01:00 PM					
Street: HarborIslandDrN/OPointConcept		Lane: SBT						Hours: 24.00					
State: Nv		Operator: JD						Period: 60					
City: Las Vegas		Speed Limit: 30						Raw Count: 1891					
County: Clark		AADT Factor: 1						AADT Count: 1,891					

Date And Time Range	< to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >					Total
Mon, 18/10/2021																	
[13:00-14:00]	10	25	59	26	13	4	0	4	3	1	0	1	0	0	0	146	
[14:00-15:00]	5	18	48	30	12	5	3	0	0	1	0	1	0	0	0	123	
[15:00-16:00]	14	20	43	31	19	3	1	1	1	0	0	1	0	0	0	134	
[16:00-17:00]	9	25	57	26	11	7	1	3	0	0	0	1	0	0	0	140	
[17:00-18:00]	5	26	39	36	12	7	2	1	1	0	0	0	0	0	0	129	
[18:00-19:00]	8	17	42	13	10	1	1	2	1	1	0	0	0	0	0	96	
[19:00-20:00]	4	17	37	15	5	0	0	1	0	0	1	2	0	0	0	82	
[20:00-21:00]	3	10	15	11	2	1	0	1	0	0	0	0	0	0	0	43	
[21:00-22:00]	1	4	8	14	4	2	0	1	0	0	0	0	0	0	0	34	
[22:00-23:00]	3	5	3	5	0	1	0	0	0	0	0	0	0	0	0	17	
[23:00-00:00]	3	5	3	0	1	0	0	0	0	0	0	0	0	0	0	12	
	65	172	354	207	89	31	8	14	6	3	1	6	0	0	0	956	
Tue, 19/10/2021																	
[00:00-01:00]	1	4	0	2	3	0	0	0	0	0	0	0	0	0	0	10	
[01:00-02:00]	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	
[02:00-03:00]	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	3	
[03:00-04:00]	0	2	0	3	0	0	0	0	0	0	0	0	0	0	0	5	
[04:00-05:00]	0	3	1	1	1	1	1	0	0	0	0	0	0	0	0	8	
[05:00-06:00]	0	2	7	4	2	2	0	0	0	0	0	0	0	0	0	17	
[06:00-07:00]	5	12	18	15	2	2	1	1	1	0	1	0	0	0	0	58	
[07:00-08:00]	2	27	42	48	25	4	1	0	1	0	0	1	0	0	0	151	
[08:00-09:00]	3	24	44	37	12	4	0	1	1	0	0	4	0	0	0	130	
[09:00-10:00]	9	29	32	43	12	7	2	0	1	1	1	2	0	0	0	139	
[10:00-11:00]	8	16	40	27	12	6	2	0	0	0	0	3	0	0	0	114	
[11:00-12:00]	11	27	37	37	7	0	1	1	0	0	0	2	0	0	0	123	
[12:00-13:00]	5	27	45	38	15	4	1	2	1	1	2	2	0	0	0	143	
	45	173	268	256	92	30	9	5	5	2	4	14	0	0	0	903	
18/10/2021 01:00 PM																	
19/10/2021 01:00 PM																	
	110	345	622	463	181	61	17	19	11	5	5	20	0	0	0	1859	

**MH Corbin Traffic Analyzer Study  
 Computer Generated Summary Report  
 City: Las Vegas  
 Street: HarborIslandDrS/OPointConception**

A study of vehicle traffic was conducted with the device having serial number 134839. The study was done in the NBT lane at HarborIslandDrS/OPointConception in Las Vegas, Nv in Clark county. The study began on 20/10/2021 at 08:00 AM and concluded on 21/10/2021 at 08:00 AM, lasting a total of 24.00 hours. Traffic statistics were recorded in 60 minute time periods. The total recorded volume showed 1798 vehicles passed through the location with a peak volume of 180 on 20/10/2021 at [16:00-17:00] and a minimum volume of 3 on 21/10/2021 at [03:00-04:00]. The AADT count for this study was 1,798.

**SPEED**

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 30 - 35 MPH range or lower. The average speed for all classified vehicles was 34 MPH with 77.04% vehicles exceeding the posted speed of 30 MPH. 1.52% percent of the total vehicles were traveling in excess of 55 MPH. The mode speed for this traffic study was 30MPH and the 85th percentile was 39.14 MPH.

< to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >							
72	336	735	443	125	23	16	5	5	1	2	14							

CHART 1

**CLASSIFICATION**

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin. Most of the vehicles classified during the study were Passenger Vehicles. The number of Passenger Vehicles in the study was 1539 which represents 87 percent of the total classified vehicles. The number of Vans & Pickups in the study was 164 which represents 9 percent of the total classified vehicles. The number of Busses & Trucks in the study was 53 which represents 3 percent of the total classified vehicles. The number of Tractor Trailers in the study was 21 which represents 1 percent of the total classified vehicles.

< to 18	19 to 23	24 to 35	36 to 79	80 to >														
1539	164	53	20	1														

CHART 2

**HEADWAY**

During the peak traffic period, on 20/10/2021 at [16:00-17:00] the average headway between vehicles was 19.89 seconds. During the slowest traffic period, on 21/10/2021 at [03:00-04:00] the average headway between vehicles was 900 seconds.

**WEATHER**

The roadway surface temperature over the period of the study varied between 57.00 and 106.00 degrees F.

## Time/Speed Report

Device ID: 134839		Begin: 20/10/2021 08:00 AM										End: 21/10/2021 08:00 AM					
Street: HarborIslandDrS/OPointConcept		Lane: NBT										Hours: 24.00					
State: Nv		Operator: JD										Period: 60					
City: Las Vegas		Speed Limit: 30										Raw Count: 1798					
County: Clark		AADT Factor: 1										AADT Count: 1,798					
Date And Time Range	< to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >					Total
Wed, 20/10/2021																	
[08:00-09:00]	6	13	42	15	7	0	0	0	0	0	0	0	0	0	0	83	
[09:00-10:00]	1	26	32	18	6	1	0	0	0	0	0	0	0	0	0	84	
[10:00-11:00]	2	22	50	23	6	1	1	0	1	0	0	0	0	0	0	106	
[11:00-12:00]	4	21	56	26	9	3	0	2	0	0	0	1	0	0	0	122	
[12:00-13:00]	10	35	51	26	11	0	1	0	0	0	0	1	0	0	0	135	
[13:00-14:00]	2	16	40	27	13	0	2	0	0	1	0	2	0	0	0	103	
[14:00-15:00]	7	24	49	39	9	3	1	0	1	0	1	4	0	0	0	138	
[15:00-16:00]	8	29	52	29	6	0	1	1	1	0	0	4	0	0	0	131	
[16:00-17:00]	7	27	73	53	7	4	2	1	0	0	1	1	0	0	0	176	
[17:00-18:00]	1	25	61	32	12	1	1	0	0	0	0	0	0	0	0	133	
[18:00-19:00]	3	16	56	32	9	0	1	0	1	0	0	1	0	0	0	119	
[19:00-20:00]	2	24	39	31	6	0	1	0	0	0	0	0	0	0	0	103	
[20:00-21:00]	4	10	29	16	5	2	0	0	0	0	0	0	0	0	0	66	
[21:00-22:00]	3	8	16	16	2	3	1	0	0	0	0	0	0	0	0	49	
[22:00-23:00]	1	6	10	11	2	0	1	0	0	0	0	0	0	0	0	31	
[23:00-00:00]	2	2	8	3	3	1	1	0	0	0	0	0	0	0	0	20	
	63	304	664	397	113	19	14	4	4	1	2	14	0	0	0	1599	
Thu, 21/10/2021																	
[00:00-01:00]	1	2	6	3	2	1	0	0	0	0	0	0	0	0	0	15	
[01:00-02:00]	0	1	3	3	2	0	0	0	0	0	0	0	0	0	0	9	
[02:00-03:00]	1	0	1	4	1	0	0	0	0	0	0	0	0	0	0	7	
[03:00-04:00]	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	3	
[04:00-05:00]	0	0	2	3	0	0	0	0	0	0	0	0	0	0	0	5	
[05:00-06:00]	1	4	3	4	1	0	0	0	0	0	0	0	0	0	0	13	
[06:00-07:00]	6	8	13	7	2	2	1	0	0	0	0	0	0	0	0	39	
[07:00-08:00]	0	16	41	22	4	1	1	1	1	0	0	0	0	0	0	87	
	9	32	71	46	12	4	2	1	1	0	0	0	0	0	0	178	
20/10/2021 08:00 AM																	
21/10/2021 08:00 AM																	
	72	336	735	443	125	23	16	5	5	1	2	14	0	0	0	1777	

**MH Corbin Traffic Analyzer Study  
Computer Generated Summary Report  
City: Las Vegas  
Street: Harbor Island DrS/Osoft Winds Dr**

A study of vehicle traffic was conducted with the device having serial number 00000. The study was done in the Total Traffic lane at Harbor Island DrS/Osoft Winds Dr in Las Vegas, Nv in Clark county. The study began on 03/05/2021 at 09:00 AM and concluded on 04/05/2021 at 09:00 AM, lasting a total of 24.00 hours. Traffic statistics were recorded in 60 minute time periods. The total recorded volume showed 4616 vehicles passed through the location with a peak volume of 381 on 03/05/2021 at [16:00-17:00] and a minimum volume of 12 on 04/05/2021 at [02:00-03:00]. The AADT count for this study was 4,616.

**SPEED**

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 30 - 35 MPH range or lower. The average speed for all classified vehicles was 35 MPH with 81.54% vehicles exceeding the posted speed of 30 MPH. 1.60% percent of the total vehicles were traveling in excess of 55 MPH. The mode speed for this traffic study was 30MPH and the 85th percentile was 40.25 MPH.

< to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >							
166	674	1646	1358	464	124	45	17	12	5	9	30							

CHART 1

**CLASSIFICATION**

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin. Most of the vehicles classified during the study were Passenger Vehicles. The number of Passenger Vehicles in the study was 4161 which represents 91 percent of the total classified vehicles. The number of Vans & Pickups in the study was 280 which represents 6 percent of the total classified vehicles. The number of Busses & Trucks in the study was 77 which represents 2 percent of the total classified vehicles. The number of Tractor Trailers in the study was 32 which represents 1 percent of the total classified vehicles.

< to 18	19 to 23	24 to 35	36 to 79	80 to >														
4161	280	77	31	1														

CHART 2

**HEADWAY**

During the peak traffic period, on 03/05/2021 at [16:00-17:00] the average headway between vehicles was 9.424 seconds. During the slowest traffic period, on 04/05/2021 at [02:00-03:00] the average headway between vehicles was 276.923 seconds.

**WEATHER**

The roadway surface temperature over the period of the study varied between 66.00 and 135.00 degrees F. The roadway surface was Dry 100.00% of the time.

## Time/Speed Report

Device ID: 00000		Begin: 03/05/2021 09:00 AM						End: 04/05/2021 09:00 AM					
Street: Harbor Island DrS/Osoft Winds I		Lane: Total Traffic						Hours: 24.00					
State: Nv		Operator: JD						Period: 60					
City: Las Vegas		Speed Limit: 30						Raw Count: 4616					
County: Clark		AADT Factor: 1						AADT Count: 4,616					

Date And Time Range	< to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >					Total
Mon, 03/05/2021																	
[09:00-10:00]	12	41	89	68	27	11	6	1	1	0	0	2	0	0	0	258	
[10:00-11:00]	11	44	105	99	26	6	3	0	0	0	0	1	0	0	0	295	
[11:00-12:00]	4	47	106	96	36	9	1	1	1	0	1	1	0	0	0	303	
[12:00-13:00]	12	52	91	74	38	11	5	1	0	1	0	2	0	0	0	287	
[13:00-14:00]	9	45	124	101	28	8	2	3	0	1	1	3	0	0	0	325	
[14:00-15:00]	10	56	121	118	48	8	4	0	2	2	1	3	0	0	0	373	
[15:00-16:00]	8	42	146	108	37	5	1	0	2	0	1	4	0	0	0	354	
[16:00-17:00]	10	46	144	129	28	11	4	2	0	0	1	4	0	0	0	379	
[17:00-18:00]	10	42	129	113	41	11	3	4	2	0	0	0	0	0	0	355	
[18:00-19:00]	7	38	102	88	31	7	2	2	1	1	0	4	0	0	0	283	
[19:00-20:00]	8	35	82	32	9	6	1	0	1	0	0	1	0	0	0	175	
[20:00-21:00]	17	39	66	28	10	3	2	0	0	0	0	1	0	0	0	166	
[21:00-22:00]	4	12	42	27	6	3	0	0	0	0	0	1	0	0	0	95	
[22:00-23:00]	5	7	15	18	9	1	1	0	1	0	0	0	0	0	0	57	
[23:00-00:00]	1	7	18	21	2	0	0	0	0	0	0	0	0	0	0	49	
	128	553	1380	1120	376	100	35	14	11	5	5	27	0	0	0	3754	
Tue, 04/05/2021																	
[00:00-01:00]	3	8	6	8	1	0	0	0	0	0	0	0	0	0	0	26	
[01:00-02:00]	1	6	4	6	1	0	0	1	0	0	0	0	0	0	0	19	
[02:00-03:00]	1	4	2	2	2	1	0	0	0	0	0	0	0	0	0	12	
[03:00-04:00]	0	4	4	5	5	1	0	0	0	0	0	0	0	0	0	19	
[04:00-05:00]	3	2	7	1	4	1	0	0	0	0	0	0	0	0	0	18	
[05:00-06:00]	2	2	10	10	6	1	0	0	0	0	1	0	0	0	0	32	
[06:00-07:00]	4	21	44	34	8	3	1	0	0	0	1	1	0	0	0	117	
[07:00-08:00]	11	35	107	92	31	8	4	0	1	0	2	2	0	0	0	293	
[08:00-09:00]	13	39	82	80	30	9	5	2	0	0	0	0	0	0	0	260	
	38	121	266	238	88	24	10	3	1	0	4	3	0	0	0	796	
03/05/2021 09:00 AM																	
04/05/2021 09:00 AM																	
	166	674	1646	1358	464	124	45	17	12	5	9	30	0	0	0	4550	

**MH Corbin Traffic Analyzer Study  
Computer Generated Summary Report  
City: Las Vegas  
Street: Mariner Dr S/O Soft Winds Dr**

A study of vehicle traffic was conducted with the device having serial number 00000. The study was done in the Total Traffic lane at Mariner Dr S/O Soft Winds Dr in Las Vegas, Nv in Clark county. The study began on 03/05/2021 at 09:00 AM and concluded on 04/05/2021 at 09:00 AM, lasting a total of 24.00 hours. Traffic statistics were recorded in 60 minute time periods. The total recorded volume showed 3586 vehicles passed through the location with a peak volume of 279 on 03/05/2021 at [17:00-18:00] and a minimum volume of 7 on 04/05/2021 at [03:00-04:00]. The AADT count for this study was 3,586.

**SPEED**

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 35 - 40 MPH range or lower. The average speed for all classified vehicles was 39 MPH with 89.59% vehicles exceeding the posted speed of 30 MPH. 3.82% percent of the total vehicles were traveling in excess of 55 MPH. The mode speed for this traffic study was 35MPH and the 85th percentile was 46.66 MPH.

< to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >							
84	284	836	955	723	371	148	60	19	13	9	34							

CHART 1

**CLASSIFICATION**

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin. Most of the vehicles classified during the study were Passenger Vehicles. The number of Passenger Vehicles in the study was 2944 which represents 83 percent of the total classified vehicles. The number of Vans & Pickups in the study was 453 which represents 13 percent of the total classified vehicles. The number of Busses & Trucks in the study was 103 which represents 3 percent of the total classified vehicles. The number of Tractor Trailers in the study was 36 which represents 1 percent of the total classified vehicles.

< to 18	19 to 23	24 to 35	36 to 79	80 to >														
2944	453	103	31	5														

CHART 2

**HEADWAY**

During the peak traffic period, on 03/05/2021 at [17:00-18:00] the average headway between vehicles was 12.857 seconds. During the slowest traffic period, on 04/05/2021 at [03:00-04:00] the average headway between vehicles was 450 seconds.

**WEATHER**

The roadway surface temperature over the period of the study varied between 88.00 and 135.00 degrees F. The roadway surface was Dry 100.00% of the time.

## Time/Speed Report

	<	25	30	35	40	45	50	55	60	65	70	75				
Date	to	to	to	to	to	to	to	to	to	to	to	to				Total
Time Range	24	29	34	39	44	49	54	59	64	69	74	>				
<b>Mon,03/05/2021</b>																
[09:00-10:00]	4	19	44	48	41	20	6	5	3	1	0	2	0	0	0	193
[10:00-11:00]	6	16	40	45	42	30	9	2	3	0	0	0	0	0	0	193
[11:00-12:00]	9	28	52	50	39	20	8	4	0	0	1	0	0	0	0	211
[12:00-13:00]	8	19	54	58	35	16	12	3	2	1	1	0	0	0	0	209
[13:00-14:00]	7	14	54	68	44	22	12	3	0	0	0	1	0	0	0	225
[14:00-15:00]	8	24	54	78	60	26	9	2	1	2	1	3	0	0	0	268
[15:00-16:00]	6	20	73	75	49	19	14	8	1	2	0	0	0	0	0	267
[16:00-17:00]	3	11	71	67	65	26	4	5	1	2	1	1	0	0	0	257
[17:00-18:00]	1	13	64	87	74	20	9	3	2	1	0	2	0	0	0	276
[18:00-19:00]	5	21	57	72	46	22	5	3	0	1	2	5	0	0	0	239
[19:00-20:00]	8	13	47	53	29	15	7	5	0	0	1	3	0	0	0	181
[20:00-21:00]	0	13	35	35	30	14	9	2	0	1	0	0	0	0	0	139
[21:00-22:00]	3	6	19	23	15	8	6	1	0	0	0	3	0	0	0	84
[22:00-23:00]	0	6	22	21	4	9	1	1	0	0	0	0	0	0	0	64
[23:00-00:00]	2	11	12	7	3	7	1	1	0	0	0	1	0	0	0	45
	70	234	698	787	576	274	112	48	13	11	7	21	0	0	0	2851
<b>Tue,04/05/2021</b>																
[00:00-01:00]	0	5	12	7	8	2	2	0	0	0	0	2	0	0	0	38
[01:00-02:00]	2	3	3	2	3	2	0	1	0	0	0	0	0	0	0	16
[02:00-03:00]	0	1	7	4	3	2	0	0	0	0	0	0	0	0	0	17
[03:00-04:00]	0	0	0	4	2	0	0	0	0	0	0	1	0	0	0	7
[04:00-05:00]	2	2	1	6	4	4	2	1	1	0	0	0	0	0	0	23
[05:00-06:00]	0	3	4	4	13	7	2	1	1	0	0	0	0	0	0	35
[06:00-07:00]	0	4	20	23	22	16	4	2	1	0	1	0	0	0	0	93
[07:00-08:00]	4	14	40	54	50	40	14	3	2	1	0	7	0	0	0	229
[08:00-09:00]	6	18	51	64	42	24	12	4	1	1	1	3	0	0	0	227
	14	50	138	168	147	97	36	12	6	2	2	13	0	0	0	685
<b>03/05/2021 09:00 AM</b>																
04/05/2021 09:00 AM	84	284	836	955	723	371	148	60	19	13	9	34	0	0	0	3536

**MH Corbin Traffic Analyzer Study  
 Computer Generated Summary Report  
 City: Las Vegas  
 Street: SoftWinds Dr E/O HarborIsland Dr**

A study of vehicle traffic was conducted with the device having serial number 134863. The study was done in the WBT lane at SoftWinds Dr E/O HarborIsland Dr in Las Vegas, Nv in Clark county. The study began on 18/10/2021 at 01:00 PM and concluded on 19/10/2021 at 01:00 PM, lasting a total of 24.00 hours. Traffic statistics were recorded in 60 minute time periods. The total recorded volume showed 900 vehicles passed through the location with a peak volume of 78 on 18/10/2021 at [16:00-17:00] and a minimum volume of 0 on 19/10/2021 at [01:00-02:00]. The AADT count for this study was 900.

**SPEED**

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 30 - 35 MPH range or lower. The average speed for all classified vehicles was 33 MPH with 69.62% vehicles exceeding the posted speed of 30 MPH. 1.37% percent of the total vehicles were traveling in excess of 55 MPH. The mode speed for this traffic study was 30MPH and the 85th percentile was 39.44 MPH.

< to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >								
62	205	306	196	63	23	12	3	2	0	1	6								

CHART 1

**CLASSIFICATION**

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin. Most of the vehicles classified during the study were Passenger Vehicles. The number of Passenger Vehicles in the study was 777 which represents 88 percent of the total classified vehicles. The number of Vans & Pickups in the study was 72 which represents 8 percent of the total classified vehicles. The number of Busses & Trucks in the study was 22 which represents 3 percent of the total classified vehicles. The number of Tractor Trailers in the study was 8 which represents 1 percent of the total classified vehicles.

< to 18	19 to 23	24 to 35	36 to 79	80 to >															
777	72	22	8	0															

CHART 2

**HEADWAY**

During the peak traffic period, on 18/10/2021 at [16:00-17:00] the average headway between vehicles was 45.57 seconds. During the slowest traffic period, on 19/10/2021 at [01:00-02:00] the average headway between vehicles was 3600 seconds.

**WEATHER**

The roadway surface temperature over the period of the study varied between 50.00 and 88.00 degrees F.

## Time/Speed Report

Device ID: 134863		Begin: 18/10/2021 01:00 PM						End: 19/10/2021 01:00 PM					
Street: SoftWinds Dr E/O HarborIsland I		Lane: WBT						Hours: 24.00					
State: Nv		Operator: JD						Period: 60					
City: Las Vegas		Speed Limit: 30						Raw Count: 900					
County: Clark		AADT Factor: 1						AADT Count: 900					

Date And Time Range	< to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >	Total
<b>Mon, 18/10/2021</b>													
[13:00-14:00]	6	15	16	11	3	1	2	1	0	0	0	0	55
[14:00-15:00]	1	9	22	12	5	7	1	0	1	0	0	1	59
[15:00-16:00]	7	11	24	12	7	2	1	0	0	0	1	0	65
[16:00-17:00]	3	10	27	23	9	3	0	0	0	0	0	0	75
[17:00-18:00]	3	14	19	18	5	1	0	0	0	0	0	0	60
[18:00-19:00]	4	13	22	6	6	1	1	0	0	0	0	1	54
[19:00-20:00]	2	8	16	10	2	1	0	0	0	0	0	1	40
[20:00-21:00]	3	5	4	9	0	0	0	0	0	0	0	1	22
[21:00-22:00]	1	0	7	5	1	1	0	0	0	0	0	0	15
[22:00-23:00]	2	1	2	4	2	0	0	0	0	0	0	0	11
[23:00-00:00]	0	0	2	1	0	0	0	0	0	0	0	0	3
	32	86	161	111	40	17	5	1	1	0	1	4	459
<b>Tue, 19/10/2021</b>													
[00:00-01:00]	0	1	1	0	0	0	0	0	0	0	0	0	2
[01:00-02:00]	0	0	0	0	0	0	0	0	0	0	0	0	0
[02:00-03:00]	1	0	1	0	0	0	0	0	0	0	0	0	2
[03:00-04:00]	0	1	0	0	0	0	0	0	0	0	0	0	1
[04:00-05:00]	1	0	3	1	0	0	0	0	0	0	0	0	5
[05:00-06:00]	2	3	3	2	1	0	0	0	0	0	0	0	11
[06:00-07:00]	2	9	15	13	1	1	1	1	0	0	0	0	43
[07:00-08:00]	1	24	24	13	4	1	2	0	1	0	0	0	70
[08:00-09:00]	4	14	27	12	6	0	1	0	0	0	0	2	66
[09:00-10:00]	7	17	12	10	0	0	0	0	0	0	0	0	46
[10:00-11:00]	8	21	20	10	2	1	1	0	0	0	0	0	63
[11:00-12:00]	2	16	19	7	2	2	0	0	0	0	0	0	48
[12:00-13:00]	2	13	20	17	7	1	2	1	0	0	0	0	63
	30	119	145	85	23	6	7	2	1	0	0	2	420
<b>Summary</b>													
18/10/2021 01:00 PM	62	205	306	196	63	23	12	3	2	0	1	6	879
19/10/2021 01:00 PM													

**MH Corbin Traffic Analyzer Study  
Computer Generated Summary Report  
City: Las Vegas  
Street: PointConceptionDrW/OHarborIsland**

A study of vehicle traffic was conducted with the device having serial number 111558. The study was done in the EBT lane at PointConceptionDrW/OHarborIsland in Las Vegas, Nv in Clark county. The study began on 18/10/2021 at 01:00 PM and concluded on 19/10/2021 at 01:00 PM, lasting a total of 24.00 hours. Traffic statistics were recorded in 60 minute time periods. The total recorded volume showed 840 vehicles passed through the location with a peak volume of 76 on 19/10/2021 at [10:00-11:00] and a minimum volume of 0 on 19/10/2021 at [01:00-02:00]. The AADT count for this study was 840.

**SPEED**

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 35 - 40 MPH range or lower. The average speed for all classified vehicles was 41 MPH with 94.55% vehicles exceeding the posted speed of 25 MPH. 14.81% percent of the total vehicles were traveling in excess of 55 MPH. The mode speed for this traffic study was 35MPH and the 85th percentile was 54.80 MPH.

< to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >							
42	82	131	155	124	72	50	38	15	19	5	37							

CHART 1

**CLASSIFICATION**

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin. Most of the vehicles classified during the study were Passenger Vehicles. The number of Passenger Vehicles in the study was 517 which represents 67 percent of the total classified vehicles. The number of Vans & Pickups in the study was 139 which represents 18 percent of the total classified vehicles. The number of Busses & Trucks in the study was 79 which represents 10 percent of the total classified vehicles. The number of Tractor Trailers in the study was 35 which represents 5 percent of the total classified vehicles.

< to 18	19 to 23	24 to 35	36 to 79	80 to >														
517	139	79	26	9														

CHART 2

**HEADWAY**

During the peak traffic period, on 19/10/2021 at [10:00-11:00] the average headway between vehicles was 46.753 seconds. During the slowest traffic period, on 19/10/2021 at [01:00-02:00] the average headway between vehicles was 3600 seconds.

**WEATHER**

The roadway surface temperature over the period of the study varied between 77.00 and 122.00 degrees F.

## Time/Speed Report

Device ID: 111558		Begin: 18/10/2021 01:00 PM						End: 19/10/2021 01:00 PM					
Street: PointConceptionDrW/OHarborIsl		Lane: EBT						Hours: 24.00					
State: Nv		Operator: JD						Period: 60					
City: Las Vegas		Speed Limit: 25						Raw Count: 840					
County: Clark		AADT Factor: 1						AADT Count: 840					

Date And Time Range	< to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >					Total
<b>Mon, 18/10/2021</b>																	
[13:00-14:00]	2	6	12	16	11	5	3	4	0	0	1	5	0	0	0	65	
[14:00-15:00]	7	4	7	10	12	7	5	1	2	3	1	0	0	0	0	59	
[15:00-16:00]	2	4	8	14	7	7	6	5	0	3	0	6	0	0	0	62	
[16:00-17:00]	3	6	14	19	11	4	4	2	2	1	0	0	0	0	0	66	
[17:00-18:00]	2	4	11	11	9	3	6	2	2	0	0	2	0	0	0	52	
[18:00-19:00]	2	2	9	8	8	5	4	2	3	2	1	1	0	0	0	47	
[19:00-20:00]	1	5	4	2	6	2	0	1	0	1	0	2	0	0	0	24	
[20:00-21:00]	2	1	3	7	4	1	2	2	0	0	0	4	0	0	0	26	
[21:00-22:00]	1	6	3	3	2	0	0	0	0	1	0	0	0	0	0	16	
[22:00-23:00]	1	0	2	1	3	0	0	0	1	0	0	0	0	0	0	8	
[23:00-00:00]	0	0	1	1	1	0	1	0	1	1	0	3	0	0	0	9	
	23	38	74	92	74	34	31	19	11	12	3	23	0	0	0	434	
<b>Tue, 19/10/2021</b>																	
[00:00-01:00]	0	2	1	1	0	1	0	0	0	0	0	0	0	0	0	5	
[01:00-02:00]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
[02:00-03:00]	1	0	0	0	1	1	1	0	0	0	0	0	0	0	0	4	
[03:00-04:00]	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	
[04:00-05:00]	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	
[05:00-06:00]	0	0	2	0	0	1	0	0	0	0	0	1	0	0	0	4	
[06:00-07:00]	2	2	3	5	1	2	1	0	0	0	0	0	0	0	0	16	
[07:00-08:00]	3	2	7	9	2	0	0	0	0	1	0	0	0	0	0	24	
[08:00-09:00]	1	7	5	9	11	2	1	2	1	2	0	5	0	0	0	46	
[09:00-10:00]	2	8	11	7	10	6	2	3	1	1	0	0	0	0	0	51	
[10:00-11:00]	1	9	11	17	7	6	3	7	1	0	1	4	0	0	0	67	
[11:00-12:00]	1	9	8	10	12	8	6	2	0	2	1	0	0	0	0	59	
[12:00-13:00]	8	5	9	4	6	10	4	5	1	1	0	4	0	0	0	57	
	19	44	57	63	50	38	19	19	4	7	2	14	0	0	0	336	

18/10/2021 01:00 PM	42	82	131	155	124	72	50	38	15	19	5	37	0	0	0	770
19/10/2021 01:00 PM																

## **APPENDIX C**

### **MULTI-WAY STOP WARRANT STUDIES**



**CITY OF LAS VEGAS**  
**TRANSPORTATION ENGINEERING**

Warrant Study

Study Name : Breakwater & Harbor Island Stop War 10-21

Study Date : 10/21/21

**Multi-Way Stop Warrant Report**

**Major Street Approaches**

**Minor Street Approaches**

**Northbound: Harbor Island Dr S/O Breakwater**

Total Approach Volume: **1,597**  
 85% Speed > 40 MPH.

**Southbound: Harbor Island Dr N/O Breakwater**

Total Approach Volume: **1,479**  
 85% Speed > 40 MPH.

**Westbound: Breakwater Dr E/O Harbor Island**

Total Approach Volume: **909**

**Warrant Summary**

**Criteria A - Interim Measure** ..... **Not Evaluated**

If traffic signals are justified, stop signs can be installed as an interim measure.

**Criteria B - Crash Experience** ..... **Not Satisfied**

Number of crashes (0) is less than the minimum required (5).

**Criteria C - Minimum Volumes and Delays** ..... **Not Satisfied**

Delay data not evaluated  
 Average of 8 highest hours does not meet volume criteria.

**Criteria D - 80% of Volumes, Delays, and Crashes** ..... **Not Satisfied**

Delay data not evaluated  
 Number of crashes (0) is less than the minimum required (4).  
 Average of 8 highest hours does not meet volume criteria.

**Analysis of 8-Hour Volume Warrants:**

Time	Major Total	Major Avg	Minor Total	Minor Avg	Crit C			Crit D		
					Major	Minor	Meets?	Major	Minor	Meets?
16:00 - 17:00	258	219.6	71	66.9	210-Yes	140-No	Major	240-No	160-No	No
13:00 - 14:00	231		67							
15:00 - 16:00	232		65							
14:00 - 15:00	214		79							
12:00 - 13:00	217		68							
17:00 - 18:00	212		65							
09:00 - 10:00	192		68							
07:00 - 08:00	201		52							
18:00 - 19:00	195		53							
11:00 - 12:00	191		57							
08:00 - 09:00	195		47							
10:00 - 11:00	194		47							
19:00 - 20:00	150		55							
06:00 - 07:00	87		30							
20:00 - 21:00	89		26							
21:00 - 22:00	71		17							
22:00 - 23:00	36		16							
05:00 - 06:00	33		3							
23:00 - 00:00	23		11							
00:00 - 01:00	21		2							
02:00 - 03:00	12		3							
04:00 - 05:00	8		6							
01:00 - 02:00	8		0							
03:00 - 04:00	6		1							



**CITY OF LAS VEGAS**  
**TRANSPORTATION ENGINEERING**

Warrant Study  
 Study Name : **Point Conception & Harbor Island Stop War 10-21**  
 Study Date : **10/21/21**

## Multi-Way Stop Warrant Report

### Major Street Approaches

**Northbound: Harbor Island Dr**  
 Total Approach Volume: **1,798**  
 85% Speed > 40 MPH.

**Southbound: Harbor Island Dr**  
 Total Approach Volume: **1,891**  
 85% Speed > 40 MPH.

### Minor Street Approaches

**Eastbound: Point Conception Dr**  
 Total Approach Volume: **840**

### Warrant Summary

- Criteria A - Interim Measure** ..... **Not Evaluated**  
 If traffic signals are justified, stop signs can be installed as an interim measure.
- Criteria B - Crash Experience** ..... **Not Satisfied**  
 Number of crashes (0) is less than the minimum required (5).
- Criteria C - Minimum Volumes and Delays** ..... **Not Satisfied**  
 Delay data not evaluated  
 Average of 8 highest hours does not meet volume criteria.
- Criteria D - 80% of Volumes, Delays, and Crashes** ..... **Not Satisfied**  
 Delay data not evaluated  
 Number of crashes (0) is less than the minimum required (4).  
 Average of 8 highest hours does not meet volume criteria.

### Analysis of 8-Hour Volume Warrants:

Time	Major Total	Major Avg	Minor Total	Minor Avg	Crit C			Crit D		
					Major	Minor	Meets?	Major	Minor	Meets?
16:00 - 17:00	322	268.4	70	60.5	210-Yes	140-No	Major	240-Yes	160-No	Major
12:00 - 13:00	283		61							
15:00 - 16:00	269		67							
17:00 - 18:00	264		56							
14:00 - 15:00	262		61							
13:00 - 14:00	254		72							
11:00 - 12:00	251		70							
07:00 - 08:00	242		27							
09:00 - 10:00	228		57							
10:00 - 11:00	225		76							
18:00 - 19:00	217		53							
08:00 - 09:00	215		49							
19:00 - 20:00	186		29							
20:00 - 21:00	110		26							
06:00 - 07:00	98		16							
21:00 - 22:00	83		16							
22:00 - 23:00	48		9							
23:00 - 00:00	34		9							
05:00 - 06:00	30		4							
00:00 - 01:00	25		5							
04:00 - 05:00	13		1							
02:00 - 03:00	11		4							
01:00 - 02:00	11		0							
03:00 - 04:00	8		2							



**CITY OF LAS VEGAS**  
**TRANSPORTATION ENGINEERING**

Warrant Study

Study Name : **Soft Winds & Harbor Island Stop War 10-21**

Study Date : **10/21/21**

**Multi-Way Stop Warrant Report**

**Major Street Approaches**

**Northbound: Harbor Island Dr**

Total Approach Volume: **1,925**  
 85% Speed > 40 MPH.

**Southbound: Harbor Island Dr**

Total Approach Volume: **2,256**  
 85% Speed > 40 MPH.

**Minor Street Approaches**

**Westbound: Soft Winds Dr**

Total Approach Volume: **900**

**Warrant Summary**

**Criteria A - Interim Measure** ..... **Not Evaluated**

If traffic signals are justified, stop signs can be installed as an interim measure.

**Criteria B - Crash Experience** ..... **Not Satisfied**

Number of crashes (0) is less than the minimum required (5).

**Criteria C - Minimum Volumes and Delays** ..... **Not Satisfied**

Delay data not evaluated  
 Average of 8 highest hours does not meet volume criteria.

**Criteria D - 80% of Volumes, Delays, and Crashes** ..... **Not Satisfied**

Delay data not evaluated  
 Number of crashes (0) is less than the minimum required (4).  
 Average of 8 highest hours does not meet volume criteria.

**Analysis of 8-Hour Volume Warrants:**

Time	Major Total	Major Avg	Minor Total	Minor Avg	Crit C			Crit D		
					Major	Minor	Meets?	Major	Minor	Meets?
16:00 - 17:00	342	306.0	78	63.1	210-Yes	140-No	Major	240-Yes	160-No	Major
15:00 - 16:00	321		68							
12:00 - 13:00	323		64							
17:00 - 18:00	320		60							
14:00 - 15:00	303		61							
13:00 - 14:00	288		57							
07:00 - 08:00	269		71							
09:00 - 10:00	282		46							
08:00 - 09:00	257		68							
11:00 - 12:00	272		49							
10:00 - 11:00	250		64							
18:00 - 19:00	247		55							
19:00 - 20:00	192		41							
20:00 - 21:00	132		23							
06:00 - 07:00	102		45							
21:00 - 22:00	90		15							
22:00 - 23:00	51		11							
05:00 - 06:00	34		11							
23:00 - 00:00	34		3							
00:00 - 01:00	31		2							
04:00 - 05:00	13		5							
03:00 - 04:00	13		1							
02:00 - 03:00	10		2							
01:00 - 02:00	5		0							

## **APPENDIX D**

### **US LIMITS2 SPEED ZONING REPORTS**

**2018**

**US LIMITS2 SPEED ZONING REPORTS**

# USLIMITS2 Speed Zoning Report

## Project Overview

**Project Name: Coral Shores WO Soft Breeze**

**Analyst:** Aria

**Date:** 2022-04-06

### Basic Project Information

Route Name: Coral Shores WO Soft Breeze  
From: Coral Shores Dr. and Lazarette Dr.  
To: Coral Shores Dr. and N Soft Breeze Dr.  
State: Nevada  
County: Clark County  
City: Las Vegas city  
Route Type: Road Section in Developed Area  
Route Status: Existing

### Crash Data Information

Crash Data Years: 3.00  
Crash AADT: 2301 veh/day  
Total Number of Crashes: 1  
Total Number of Injury Crashes: 0  
Section Crash Rate: 66 per 100 MVM  
Section Injury Crash Rate: 0 per 100 MVM  
Crash Rate Average for Similar Roads: 315  
Injury Rate Average for Similar Roads: 75

### Roadway Information

Section Length: 0.6 mile(s)  
Statutory Speed Limit: 30 mph  
Existing Speed Limit: 30 mph  
Adverse Alignment: No  
One-Way Street: No  
Divided/Undivided: Undivided  
Number of Through Lanes: 2  
Area Type: Residential-Collector/Arterial  
Number of Driveways: 10  
Number of Signals: 0

### Traffic Information

85th Percentile Speed: 52 mph  
50th Percentile Speed: 43 mph  
AADT: 2301 veh/day  
On Street Parking and Usage: Not High  
Pedestrian / Bicyclist Activity: High

### Recommended Speed Limit:



**Note:** The final recommended speed limit is higher than the 30 mph statutory speed limit for this type of road. An engineering study such as the one carried out with USLIMITS is usually required to set a speed limit above the statutory limit.

**Note:** The road section is in an area with high pedestrian or bicycle activity. Consider implementing engineering measures to reduce speeds before lowering the recommended speed limit. See [Engineering Countermeasures for Speed Management](#) and [PedSafe](#) for more guidance.

**Disclaimer:** The U.S. Government assumes no liability for the use of the information contained in this report. This report does not constitute a standard, specification, or regulation.

## Equations Used in the Crash Data Calculations

### Exposure (M)

$$M = (\text{Section AADT} * 365 * \text{Section Length} * \text{Duration of Crash Data}) / (100000000)$$
$$M = (2301 * 365 * 0.6 * 3.00) / (100000000)$$
$$M = 0.0151$$

### Crash Rate (Rc)

$$Rc = (\text{Section Crash Average} * 100000000) / (\text{Section AADT} * 365 * \text{Section Length})$$
$$Rc = (0.33 * 100000000) / (2301 * 365 * 0.6)$$
$$Rc = 66.15 \text{ crashes per 100 MVM}$$

### Injury Rate (Ri)

$$Ri = (\text{Section Injury Crash Average} * 100000000) / (\text{Section AADT} * 365 * \text{Section Length})$$
$$Ri = (0.00 * 100000000) / (2301 * 365 * 0.6)$$
$$Ri = 0.00 \text{ injuries per 100 MVM}$$

### Critical Crash Rate (Cc)

$C_c = \text{Crash Average of Similar Sections} + 1.645 * (\text{Crash Average of Similar Sections} / \text{Exposure})^{(1/2)} + (1 / (2 * \text{Exposure}))$

$C_c = 315.48 + 1.645 * (315.48 / 0.0151)^{(1/2)} + (1 / (2 * 0.0151))$

$C_c = 586.19$  crashes per 100 MVM

*Critical Injury Rate (Ic)*

$I_c = \text{Injury Crash Average of Similar Sections} + 1.645 * (\text{Injury Crash Average of Similar Sections} / \text{Exposure})^{(1/2)} + (1 / (2 * \text{Exposure}))$

$I_c = 74.98 + 1.645 * (74.98 / 0.0151)^{(1/2)} + (1 / (2 * 0.0151))$

$I_c = 223.90$  injuries per 100 MVM

# USLIMITS2 Speed Zoning Report

## Project Overview

**Project Name: Harbor Island SO Lazarette**

**Analyst:** Aria

**Date:** 2022-04-07

### Basic Project Information

Route Name: Harbor Island SO Lazarette  
From: N Harbor Island Dr. and Point Conception Dr.  
To: N Harbor Island Dr. and Soft Winds Dr.  
State: Nevada  
County: Clark County  
City: Las Vegas city  
Route Type: Road Section in Developed Area  
Route Status: Existing

### Crash Data Information

Crash Data Years: 3.00  
Crash AADT: 2547 veh/day  
Total Number of Crashes: 5  
Total Number of Injury Crashes: 4  
Section Crash Rate: 299 per 100 MVM  
Section Injury Crash Rate: 239 per 100 MVM  
Crash Rate Average for Similar Roads: 232  
Injury Rate Average for Similar Roads: 66

### Roadway Information

Section Length: 0.6 mile(s)  
Statutory Speed Limit: 30 mph  
Existing Speed Limit: 30 mph  
Adverse Alignment: No  
One-Way Street: No  
Divided/Undivided: Undivided  
Number of Through Lanes: 2  
Area Type: Residential-Collector/Arterial  
Number of Driveways: 6  
Number of Signals: 0

### Traffic Information

85th Percentile Speed: 46 mph  
50th Percentile Speed: 37 mph  
AADT: 2547 veh/day  
On Street Parking and Usage: Not High  
Pedestrian / Bicyclist Activity: High

## Recommended Speed Limit:



**Note:** The final recommended speed limit is higher than the 30 mph statutory speed limit for this type of road. An engineering study such as the one carried out with USLIMITS is usually required to set a speed limit above the statutory limit.

**Note:** The injury crash rate for the section of 239 per 100 MVM is above the critical rate (200). A comprehensive crash study should be undertaken to identify engineering and traffic control deficiencies and appropriate corrective actions. The speed limit should only be reduced as a last measure after all other treatments have either been tried or ruled out.

**Note:** The road section is in an area with high pedestrian or bicycle activity. Consider implementing engineering measures to reduce speeds before lowering the recommended speed limit. See [Engineering Countermeasures for Speed Management](#) and [PedSafe](#) for more guidance.

**Disclaimer:** The U.S. Government assumes no liability for the use of the information contained in this report. This report does not constitute a standard, specification, or regulation.

## Equations Used in the Crash Data Calculations

*Exposure (M)*

$$M = (\text{Section AADT} * 365 * \text{Section Length} * \text{Duration of Crash Data}) / (100000000)$$
$$M = (2547 * 365 * 0.6 * 3.00) / (100000000)$$
$$M = 0.0167$$

*Crash Rate (Rc)*

$$Rc = (\text{Section Crash Average} * 100000000) / (\text{Section AADT} * 365 * \text{Section Length})$$
$$Rc = (1.67 * 100000000) / (2547 * 365 * 0.6)$$
$$Rc = 298.80 \text{ crashes per 100 MVM}$$

*Injury Rate (Ri)*

$$Ri = (\text{Section Injury Crash Average} * 100000000) / (\text{Section AADT} * 365 * \text{Section Length})$$

$$R_i = (1.33 * 100000000) / (2547 * 365 * 0.6)$$

$R_i = 239.04$  injuries per 100 MVM

*Critical Crash Rate (Cc)*

$$C_c = \text{Crash Average of Similar Sections} + 1.645 * (\text{Crash Average of Similar Sections} / \text{Exposure})^{(1/2)} + (1 / (2 * \text{Exposure}))$$

$$C_c = 231.80 + 1.645 * (231.80 / 0.0167)^{(1/2)} + (1 / (2 * 0.0167))$$

$$C_c = 455.29$$
 crashes per 100 MVM

*Critical Injury Rate (Ic)*

$$I_c = \text{Injury Crash Average of Similar Sections} + 1.645 * (\text{Injury Crash Average of Similar Sections} / \text{Exposure})^{(1/2)} + (1 / (2 * \text{Exposure}))$$

$$I_c = 66.27 + 1.645 * (66.27 / 0.0167)^{(1/2)} + (1 / (2 * 0.0167))$$

$$I_c = 199.67$$
 injuries per 100 MVM

# USLIMITS2 Speed Zoning Report

## Project Overview

**Project Name: Harbor Island SO Point Conception**

**Analyst:** Aria

**Date:** 2022-04-06

### Basic Project Information

Route Name: Harbor Island SO Point Conception  
From: N Harbor Island Dr. and W. Point Conception Dr.  
To: N Harbor Island Dr. and Soft Winds Dr.  
State: Nevada  
County: Clark County  
City: Las Vegas city  
Route Type: Road Section in Developed Area  
Route Status: Existing

### Crash Data Information

Crash Data Years: 3.00  
Crash AADT: 2601 veh/day  
Total Number of Crashes: 2  
Total Number of Injury Crashes: 1  
Section Crash Rate: 702 per 100 MVM  
Section Injury Crash Rate: 351 per 100 MVM  
Crash Rate Average for Similar Roads: 232  
Injury Rate Average for Similar Roads: 66

### Roadway Information

Section Length: 0.1 mile(s)  
Statutory Speed Limit: 30 mph  
Existing Speed Limit: 30 mph  
Adverse Alignment: No  
One-Way Street: No  
Divided/Undivided: Undivided  
Number of Through Lanes: 2  
Area Type: Residential-Collector/Arterial  
Number of Driveways: 3  
Number of Signals: 0

### Traffic Information

85th Percentile Speed: 44 mph  
50th Percentile Speed: 38 mph  
AADT: 2601 veh/day  
On Street Parking and Usage: Not High  
Pedestrian / Bicyclist Activity: High

## Recommended Speed Limit:



**Note:** The final recommended speed limit is higher than the 30 mph statutory speed limit for this type of road. An engineering study such as the one carried out with USLIMITS is usually required to set a speed limit above the statutory limit.

**Note:** The section crash rate of 702 per 100 MVM is more than 30 percent above the average for similar roads (232) but below the critical rate (877). The injury crash rate for the section of 351 per 100 MVM is more than 30 percent above the average for similar roads (66) but below the critical rate (493). A comprehensive crash study should be undertaken to identify engineering and traffic control deficiencies and appropriate corrective actions. The speed limit should only be reduced as a last measure after all other treatments have either been tried or ruled out.

**Note:** A speed zone of 0.1 miles is generally too short for the recommended speed limit. Consider lengthening the speed zone (if that is possible) or using the speed limits from adjacent sections (if they are appropriate for this section). If the speed and other data you provided are representative of conditions for this short section, then the speed limit noted above may be considered.

**Note:** The road section is in an area with high pedestrian or bicycle activity. Consider implementing engineering measures to reduce speeds before lowering the recommended speed limit. See [Engineering Countermeasures for Speed Management](#) and [PedSafe](#) for more guidance.

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## Equations Used in the Crash Data Calculations

*Exposure (M)*

$$M = (\text{Section AADT} * 365 * \text{Section Length} * \text{Duration of Crash Data}) / (100000000)$$

$$M = (2601 * 365 * 0.1 * 3.00) / (100000000)$$

$$M = 0.0028$$

*Crash Rate (Rc)*

$$R_c = (\text{Section Crash Average} * 100000000) / (\text{Section AADT} * 365 * \text{Section Length})$$
$$R_c = (0.67 * 100000000) / (2601 * 365 * 0.1)$$
$$R_c = 702.22 \text{ crashes per 100 MVM}$$

*Injury Rate (Ri)*

$$R_i = (\text{Section Injury Crash Average} * 100000000) / (\text{Section AADT} * 365 * \text{Section Length})$$
$$R_i = (0.33 * 100000000) / (2601 * 365 * 0.1)$$
$$R_i = 351.11 \text{ injuries per 100 MVM}$$

*Critical Crash Rate (Cc)*

$$C_c = \text{Crash Average of Similar Sections} + 1.645 * (\text{Crash Average of Similar Sections} / \text{Exposure}) ^ (1/2) + (1 / (2 * \text{Exposure}))$$
$$C_c = 231.80 + 1.645 * (231.80 / 0.0028) ^ (1/2) + (1 / (2 * 0.0028))$$
$$C_c = 876.66 \text{ crashes per 100 MVM}$$

*Critical Injury Rate (Ic)*

$$I_c = \text{Injury Crash Average of Similar Sections} + 1.645 * (\text{Injury Crash Average of Similar Sections} / \text{Exposure}) ^ (1/2) + (1 / (2 * \text{Exposure}))$$
$$I_c = 66.27 + 1.645 * (66.27 / 0.0028) ^ (1/2) + (1 / (2 * 0.0028))$$
$$I_c = 492.76 \text{ injuries per 100 MVM}$$

# USLIMITS2 Speed Zoning Report

## Project Overview

**Project Name: Harbor Island SO Soft Winds**

**Analyst:** Aria

**Date:** 2022-04-06

### Basic Project Information

Route Name: Harbor Island SO Soft Winds  
From: N Harbor Island Dr. and W. Lake Mead Blvd  
To: N Harbor Island Dr. and Soft Winds Dr.  
State: Nevada  
County: Clark County  
City: Las Vegas city  
Route Type: Road Section in Developed Area  
Route Status: Existing

### Crash Data Information

Crash Data Years: 3.00  
Crash AADT: 5036 veh/day  
Total Number of Crashes: 2  
Total Number of Injury Crashes: 2  
Section Crash Rate: 73 per 100 MVM  
Section Injury Crash Rate: 73 per 100 MVM  
Crash Rate Average for Similar Roads: 235  
Injury Rate Average for Similar Roads: 68

### Roadway Information

Section Length: 0.5 mile(s)  
Statutory Speed Limit: 30 mph  
Existing Speed Limit: 30 mph  
Adverse Alignment: No  
One-Way Street: No  
Divided/Undivided: Undivided  
Number of Through Lanes: 2  
Area Type: Residential-Collector/Arterial  
Number of Driveways: 5  
Number of Signals: 0

### Traffic Information

85th Percentile Speed: 43 mph  
50th Percentile Speed: 36 mph  
AADT: 5036 veh/day  
On Street Parking and Usage: Not High  
Pedestrian / Bicyclist Activity: High

## Recommended Speed Limit:



**Note:** The final recommended speed limit is higher than the 30 mph statutory speed limit for this type of road. An engineering study such as the one carried out with USLIMITS is usually required to set a speed limit above the statutory limit.

**Note:** The road section is in an area with high pedestrian or bicycle activity. Consider implementing engineering measures to reduce speeds before lowering the recommended speed limit. See [Engineering Countermeasures for Speed Management](#) and [PedSafe](#) for more guidance.

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## Equations Used in the Crash Data Calculations

### Exposure (M)

$$M = (\text{Section AADT} * 365 * \text{Section Length} * \text{Duration of Crash Data}) / (100000000)$$
$$M = (5036 * 365 * 0.5 * 3.00) / (100000000)$$
$$M = 0.0276$$

### Crash Rate (Rc)

$$Rc = (\text{Section Crash Average} * 100000000) / (\text{Section AADT} * 365 * \text{Section Length})$$
$$Rc = (0.67 * 100000000) / (5036 * 365 * 0.5)$$
$$Rc = 72.54 \text{ crashes per 100 MVM}$$

### Injury Rate (Ri)

$$Ri = (\text{Section Injury Crash Average} * 100000000) / (\text{Section AADT} * 365 * \text{Section Length})$$
$$Ri = (0.67 * 100000000) / (5036 * 365 * 0.5)$$
$$Ri = 72.54 \text{ injuries per 100 MVM}$$

### Critical Crash Rate (Cc)

$C_c = \text{Crash Average of Similar Sections} + 1.645 * (\text{Crash Average of Similar Sections} / \text{Exposure})^{(1/2)} + (1 / (2 * \text{Exposure}))$

$C_c = 235.03 + 1.645 * (235.03 / 0.0276)^{(1/2)} + (1 / (2 * 0.0276))$

$C_c = 405.04$  crashes per 100 MVM

*Critical Injury Rate (Ic)*

$I_c = \text{Injury Crash Average of Similar Sections} + 1.645 * (\text{Injury Crash Average of Similar Sections} / \text{Exposure})^{(1/2)} + (1 / (2 * \text{Exposure}))$

$I_c = 67.63 + 1.645 * (67.63 / 0.0276)^{(1/2)} + (1 / (2 * 0.0276))$

$I_c = 167.23$  injuries per 100 MVM

# USLIMITS2 Speed Zoning Report

## Project Overview

**Project Name: Mariner SO Soft Winds**

**Analyst:** Aria

**Date:** 2022-04-06

### Basic Project Information

Route Name: Mariner SO Soft Winds  
From: Mariner Dr. Soft Winds Dr.  
To: Mariner Dr. W. Lake Mead Blvd.  
State: Nevada  
County: Clark County  
City: Las Vegas city  
Route Type: Road Section in Developed Area  
Route Status: Existing

### Crash Data Information

Crash Data Years: 3.00  
Crash AADT: 4358 veh/day  
Total Number of Crashes: 4  
Total Number of Injury Crashes: 3  
Section Crash Rate: 168 per 100 MVM  
Section Injury Crash Rate: 126 per 100 MVM  
Crash Rate Average for Similar Roads: 232  
Injury Rate Average for Similar Roads: 66

### Roadway Information

Section Length: 0.5 mile(s)  
Statutory Speed Limit: 30 mph  
Existing Speed Limit: 30 mph  
Adverse Alignment: Yes  
One-Way Street: No  
Divided/Undivided: Undivided  
Number of Through Lanes: 2  
Area Type: Residential-Collector/Arterial  
Number of Driveways: 9  
Number of Signals: 0

### Traffic Information

85th Percentile Speed: 43 mph  
50th Percentile Speed: 36 mph  
AADT: 4358 veh/day  
On Street Parking and Usage: Not High  
Pedestrian / Bicyclist Activity: High

## Recommended Speed Limit:



**Note:** The final recommended speed limit is higher than the 30 mph statutory speed limit for this type of road. An engineering study such as the one carried out with USLIMITS is usually required to set a speed limit above the statutory limit.

**Note:** Sections with adverse alignments may need specific 'advisory speed warnings' which may be different from the general speed limit for the section. See [Procedures for Setting Advisory Speeds on Curves](#), Publication No. FHWA-SA-11-22, June 2011, for more guidance.

**Note:** The injury crash rate for the section of 126 per 100 MVM is more than 30 percent above the average for similar roads (66) but below the critical rate (174). A comprehensive crash study should be undertaken to identify engineering and traffic control deficiencies and appropriate corrective actions. The speed limit should only be reduced as a last measure after all other treatments have either been tried or ruled out.

**Note:** The road section is in an area with high pedestrian or bicycle activity. Consider implementing engineering measures to reduce speeds before lowering the recommended speed limit. See [Engineering Countermeasures for Speed Management](#) and [PedSafe](#) for more guidance.

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## Equations Used in the Crash Data Calculations

*Exposure (M)*

$$M = (\text{Section AADT} * 365 * \text{Section Length} * \text{Duration of Crash Data}) / (100000000)$$

$$M = (4358 * 365 * 0.5 * 3.00) / (100000000)$$

$$M = 0.0239$$

*Crash Rate (Rc)*

$$Rc = (\text{Section Crash Average} * 100000000) / (\text{Section AADT} * 365 * \text{Section Length})$$

$$Rc = (1.33 * 100000000) / (4358 * 365 * 0.5)$$

Rc = 167.64 crashes per 100 MVM

*Injury Rate (Ri)*

Ri = (Section Injury Crash Average \* 100000000) / (Section AADT \* 365 \* Section Length)

Ri = (1.00 \* 100000000) / (4358 \* 365 \* 0.5)

Ri = 125.73 injuries per 100 MVM

*Critical Crash Rate (Cc)*

Cc = Crash Average of Similar Sections + 1.645 \* (Crash Average of Similar Sections / Exposure) ^ (1/2) + (1 / (2 \* Exposure))

Cc = 231.80 + 1.645 \* (231.80 / 0.0239) ^ (1/2) + (1 / (2 \* 0.0239))

Cc = 414.90 crashes per 100 MVM

*Critical Injury Rate (Ic)*

Ic = Injury Crash Average of Similar Sections + 1.645 \* (Injury Crash Average of Similar Sections / Exposure) ^ (1/2) + (1 / (2 \* Exposure))

Ic = 66.27 + 1.645 \* (66.27 / 0.0239) ^ (1/2) + (1 / (2 \* 0.0239))

Ic = 173.92 injuries per 100 MVM

# USLIMITS2 Speed Zoning Report

## Project Overview

**Project Name: Mariner NO Regatta**

**Analyst:** Aria

**Date:** 2022-04-06

### Basic Project Information

Route Name: Mariner NO Regatta  
From: Mariner Dr. and Breakwater Dr.  
To: Mariner Dr. and Regatta Dr.  
State: Nevada  
County: Clark County  
City: Las Vegas city  
Route Type: Road Section in Developed Area  
Route Status: Existing

### Crash Data Information

Crash Data Years: 3.00  
Crash AADT: 3911 veh/day  
Total Number of Crashes: 2  
Total Number of Injury Crashes: 2  
Section Crash Rate: 117 per 100 MVM  
Section Injury Crash Rate: 117 per 100 MVM  
Crash Rate Average for Similar Roads: 232  
Injury Rate Average for Similar Roads: 66

### Roadway Information

Section Length: 0.4 mile(s)  
Statutory Speed Limit: 30 mph  
Existing Speed Limit: 30 mph  
Adverse Alignment: No  
One-Way Street: No  
Divided/Undivided: Undivided  
Number of Through Lanes: 2  
Area Type: Residential-Collector/Arterial  
Number of Driveways: 5  
Number of Signals: 0

### Traffic Information

85th Percentile Speed: 45 mph  
50th Percentile Speed: 39 mph  
AADT: 3911 veh/day  
On Street Parking and Usage: Not High  
Pedestrian / Bicyclist Activity: High

## Recommended Speed Limit:



**Note:** The final recommended speed limit is higher than the 30 mph statutory speed limit for this type of road. An engineering study such as the one carried out with USLIMITS is usually required to set a speed limit above the statutory limit.

**Note:** The injury crash rate for the section of 117 per 100 MVM is more than 30 percent above the average for similar roads (66) but below the critical rate (198). A comprehensive crash study should be undertaken to identify engineering and traffic control deficiencies and appropriate corrective actions. The speed limit should only be reduced as a last measure after all other treatments have either been tried or ruled out.

**Note:** The road section is in an area with high pedestrian or bicycle activity. Consider implementing engineering measures to reduce speeds before lowering the recommended speed limit. See [Engineering Countermeasures for Speed Management](#) and [PedSafe](#) for more guidance.

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## Equations Used in the Crash Data Calculations

*Exposure (M)*

$$M = (\text{Section AADT} * 365 * \text{Section Length} * \text{Duration of Crash Data}) / (100000000)$$
$$M = (3911 * 365 * 0.4 * 3.00) / (100000000)$$
$$M = 0.0171$$

*Crash Rate (Rc)*

$$Rc = (\text{Section Crash Average} * 100000000) / (\text{Section AADT} * 365 * \text{Section Length})$$
$$Rc = (0.67 * 100000000) / (3911 * 365 * 0.4)$$
$$Rc = 116.75 \text{ crashes per 100 MVM}$$

*Injury Rate (Ri)*

$$Ri = (\text{Section Injury Crash Average} * 100000000) / (\text{Section AADT} * 365 * \text{Section Length})$$

$$R_i = (0.67 * 100000000) / (3911 * 365 * 0.4)$$

$R_i = 116.75$  injuries per 100 MVM

*Critical Crash Rate (Cc)*

$$C_c = \text{Crash Average of Similar Sections} + 1.645 * (\text{Crash Average of Similar Sections} / \text{Exposure})^{(1/2)} + (1 / (2 * \text{Exposure}))$$

$$C_c = 231.80 + 1.645 * (231.80 / 0.0171)^{(1/2)} + (1 / (2 * 0.0171))$$

$$C_c = 452.35$$
 crashes per 100 MVM

*Critical Injury Rate (Ic)*

$$I_c = \text{Injury Crash Average of Similar Sections} + 1.645 * (\text{Injury Crash Average of Similar Sections} / \text{Exposure})^{(1/2)} + (1 / (2 * \text{Exposure}))$$

$$I_c = 66.27 + 1.645 * (66.27 / 0.0171)^{(1/2)} + (1 / (2 * 0.0171))$$

$$I_c = 197.78$$
 injuries per 100 MVM

**2021**

**US LIMITS2 SPEED ZONING REPORTS**

# USLIMITS2 Speed Zoning Report

## Project Overview

**Project Name: Breakwater EO Harbor Island**

**Analyst:** Aria

**Date:** 2022-04-05

### Basic Project Information

Route Name: Breakwater EO Harbor Island  
From: N. Harbor Island Dr. and Breakwater Dr.  
To: Mariner Dr. and Breakwater Dr.  
State: Nevada  
County: Clark County  
City: Las Vegas city  
Route Type: Road Section in Developed Area  
Route Status: Existing

### Crash Data Information

Crash Data Years: 3.00  
Crash AADT: 909 veh/day  
Total Number of Crashes: 1  
Total Number of Injury Crashes: 0  
Section Crash Rate: 144 per 100 MVM  
Section Injury Crash Rate: 0 per 100 MVM  
Crash Rate Average for Similar Roads: 315  
Injury Rate Average for Similar Roads: 75

### Roadway Information

Section Length: 0.7 mile(s)  
Statutory Speed Limit: 25 mph  
Existing Speed Limit: 25 mph  
Adverse Alignment: Yes  
One-Way Street: No  
Divided/Undivided: Undivided  
Number of Through Lanes: 2  
Area Type: Residential-Collector/Arterial  
Number of Driveways: 7  
Number of Signals: 0

### Traffic Information

85th Percentile Speed: 43 mph  
50th Percentile Speed: 32 mph  
AADT: 909 veh/day  
On Street Parking and Usage: Not High  
Pedestrian / Bicyclist Activity: High

### Recommended Speed Limit:



**Note:** The final recommended speed limit is higher than the 25 mph statutory speed limit for this type of road. An engineering study such as the one carried out with USLIMITS is usually required to set a speed limit above the statutory limit.

**Note:** Sections with adverse alignments may need specific 'advisory speed warnings' which may be different from the general speed limit for the section. See [Procedures for Setting Advisory Speeds on Curves](#), Publication No. FHWA-SA-11-22, June 2011, for more guidance.

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## Equations Used in the Crash Data Calculations

### Exposure (M)

$$M = (\text{Section AADT} * 365 * \text{Section Length} * \text{Duration of Crash Data}) / (100000000)$$
$$M = (909 * 365 * 0.7 * 3.00) / (100000000)$$
$$M = 0.0070$$

### Crash Rate (Rc)

$$Rc = (\text{Section Crash Average} * 100000000) / (\text{Section AADT} * 365 * \text{Section Length})$$
$$Rc = (0.33 * 100000000) / (909 * 365 * 0.7)$$
$$Rc = 143.52 \text{ crashes per 100 MVM}$$

### Injury Rate (Ri)

$$Ri = (\text{Section Injury Crash Average} * 100000000) / (\text{Section AADT} * 365 * \text{Section Length})$$
$$Ri = (0.00 * 100000000) / (909 * 365 * 0.7)$$
$$Ri = 0.00 \text{ injuries per 100 MVM}$$

### Critical Crash Rate (Cc)

$C_c = \text{Crash Average of Similar Sections} + 1.645 * (\text{Crash Average of Similar Sections} / \text{Exposure})^{(1/2)} + (1 / (2 * \text{Exposure}))$

$C_c = 315.48 + 1.645 * (315.48 / 0.0070)^{(1/2)} + (1 / (2 * 0.0070))$

$C_c = 737.28$  crashes per 100 MVM

*Critical Injury Rate (Ic)*

$I_c = \text{Injury Crash Average of Similar Sections} + 1.645 * (\text{Injury Crash Average of Similar Sections} / \text{Exposure})^{(1/2)} + (1 / (2 * \text{Exposure}))$

$I_c = 74.98 + 1.645 * (74.98 / 0.0070)^{(1/2)} + (1 / (2 * 0.0070))$

$I_c = 317.38$  injuries per 100 MVM

# USLIMITS2 Speed Zoning Report

## Project Overview

**Project Name: Harbor Island NO Point Conception**

**Analyst:** Aria

**Date:** 2022-04-15

### Basic Project Information

Route Name: Harbor Island NO Point Conception  
From: N Harbor Island Dr. and W. Point Conception Dr.  
To: N Harbor Island Dr. and Lazarette Dr.  
State: Nevada  
County: Clark County  
City: Las Vegas city  
Route Type: Road Section in Developed Area  
Route Status: Existing

### Crash Data Information

Crash Data Years: 3.00  
Crash AADT: 1891 veh/day  
Total Number of Crashes: 2  
Total Number of Injury Crashes: 1  
Section Crash Rate: 161 per 100 MVM  
Section Injury Crash Rate: 80 per 100 MVM  
Crash Rate Average for Similar Roads: 315  
Injury Rate Average for Similar Roads: 75

### Roadway Information

Section Length: 0.6 mile(s)  
Statutory Speed Limit: 30 mph  
Existing Speed Limit: 30 mph  
Adverse Alignment: Yes  
One-Way Street: No  
Divided/Undivided: Undivided  
Number of Through Lanes: 2  
Area Type: Residential-Collector/Arterial  
Number of Driveways: 6  
Number of Signals: 0

### Traffic Information

85th Percentile Speed: 41 mph  
50th Percentile Speed: 34 mph  
AADT: 1891 veh/day  
On Street Parking and Usage: Not High  
Pedestrian / Bicyclist Activity: High

## Recommended Speed Limit:



**Note:** The final recommended speed limit is higher than the 30 mph statutory speed limit for this type of road. An engineering study such as the one carried out with USLIMITS is usually required to set a speed limit above the statutory limit.

**Note:** Sections with adverse alignments may need specific 'advisory speed warnings' which may be different from the general speed limit for the section. See [Procedures for Setting Advisory Speeds on Curves](#), Publication No. FHWA-SA-11-22, June 2011, for more guidance.

**Note:** The road section is in an area with high pedestrian or bicycle activity. Consider implementing engineering measures to reduce speeds before lowering the recommended speed limit. See [Engineering Countermeasures for Speed Management](#) and [PedSafe](#) for more guidance.

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## Equations Used in the Crash Data Calculations

*Exposure (M)*

$$M = (\text{Section AADT} * 365 * \text{Section Length} * \text{Duration of Crash Data}) / (100000000)$$

$$M = (1891 * 365 * 0.6 * 3.00) / (100000000)$$

$$M = 0.0124$$

*Crash Rate (Rc)*

$$Rc = (\text{Section Crash Average} * 100000000) / (\text{Section AADT} * 365 * \text{Section Length})$$

$$Rc = (0.67 * 100000000) / (1891 * 365 * 0.6)$$

$$Rc = 160.98 \text{ crashes per 100 MVM}$$

*Injury Rate (Ri)*

$$Ri = (\text{Section Injury Crash Average} * 100000000) / (\text{Section AADT} * 365 * \text{Section Length})$$

$$Ri = (0.33 * 100000000) / (1891 * 365 * 0.6)$$

Ri = 80.49 injuries per 100 MVM

*Critical Crash Rate (Cc)*

Cc = Crash Average of Similar Sections + 1.645 \* (Crash Average of Similar Sections / Exposure) ^ (1/2) + (1 / (2 \* Exposure))

Cc = 315.48 + 1.645 \* (315.48 / 0.0124) ^ (1/2) + (1 / (2 \* 0.0124))

Cc = 617.86 crashes per 100 MVM

*Critical Injury Rate (Ic)*

Ic = Injury Crash Average of Similar Sections + 1.645 \* (Injury Crash Average of Similar Sections / Exposure) ^ (1/2) + (1 / (2 \* Exposure))

Ic = 74.98 + 1.645 \* (74.98 / 0.0124) ^ (1/2) + (1 / (2 \* 0.0124))

Ic = 243.01 injuries per 100 MVM

# USLIMITS2 Speed Zoning Report

## Project Overview

**Project Name: Harbor Island SO Point Conception**

**Analyst:** Aria

**Date:** 2022-04-06

### Basic Project Information

Route Name: Harbor Island SO Point Conception  
From: N Harbor Island Dr. and W. Point Conception Dr.  
To: N Harbor Island Dr. and Soft Winds Dr.  
State: Nevada  
County: Clark County  
City: Las Vegas city  
Route Type: Road Section in Developed Area  
Route Status: Existing

### Crash Data Information

Crash Data Years: 3.00  
Crash AADT: 1798 veh/day  
Total Number of Crashes: 2  
Total Number of Injury Crashes: 1  
Section Crash Rate: 1016 per 100 MVM  
Section Injury Crash Rate: 508 per 100 MVM  
Crash Rate Average for Similar Roads: 315  
Injury Rate Average for Similar Roads: 75

### Roadway Information

Section Length: 0.1 mile(s)  
Statutory Speed Limit: 30 mph  
Existing Speed Limit: 30 mph  
Adverse Alignment: No  
One-Way Street: No  
Divided/Undivided: Undivided  
Number of Through Lanes: 2  
Area Type: Residential-Collector/Arterial  
Number of Driveways: 3  
Number of Signals: 0

### Traffic Information

85th Percentile Speed: 39 mph  
50th Percentile Speed: 34 mph  
AADT: 1798 veh/day  
On Street Parking and Usage: Not High  
Pedestrian / Bicyclist Activity: High

## Recommended Speed Limit:



**Note:** The final recommended speed limit is higher than the 30 mph statutory speed limit for this type of road. An engineering study such as the one carried out with USLIMITS is usually required to set a speed limit above the statutory limit.

**Note:** The section crash rate of 1016 per 100 MVM is more than 30 percent above the average for similar roads (315) but below the critical rate (1228). The injury crash rate for the section of 508 per 100 MVM is more than 30 percent above the average for similar roads (75) but below the critical rate (650). A comprehensive crash study should be undertaken to identify engineering and traffic control deficiencies and appropriate corrective actions. The speed limit should only be reduced as a last measure after all other treatments have either been tried or ruled out.

**Note:** A speed zone of 0.1 miles is generally too short for the recommended speed limit. Consider lengthening the speed zone (if that is possible) or using the speed limits from adjacent sections (if they are appropriate for this section). If the speed and other data you provided are representative of conditions for this short section, then the speed limit noted above may be considered.

**Note:** The road section is in an area with high pedestrian or bicycle activity. Consider implementing engineering measures to reduce speeds before lowering the recommended speed limit. See [Engineering Countermeasures for Speed Management](#) and [PedSafe](#) for more guidance.

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## Equations Used in the Crash Data Calculations

*Exposure (M)*

$$M = (\text{Section AADT} * 365 * \text{Section Length} * \text{Duration of Crash Data}) / (100000000)$$

$$M = (1798 * 365 * 0.1 * 3.00) / (100000000)$$

$$M = 0.0020$$

*Crash Rate (Rc)*

$$R_c = (\text{Section Crash Average} * 100000000) / (\text{Section AADT} * 365 * \text{Section Length})$$
$$R_c = (0.67 * 100000000) / (1798 * 365 * 0.1)$$
$$R_c = 1015.84 \text{ crashes per 100 MVM}$$

*Injury Rate (Ri)*

$$R_i = (\text{Section Injury Crash Average} * 100000000) / (\text{Section AADT} * 365 * \text{Section Length})$$
$$R_i = (0.33 * 100000000) / (1798 * 365 * 0.1)$$
$$R_i = 507.92 \text{ injuries per 100 MVM}$$

*Critical Crash Rate (Cc)*

$$C_c = \text{Crash Average of Similar Sections} + 1.645 * (\text{Crash Average of Similar Sections} / \text{Exposure}) ^ (1/2) + (1 / (2 * \text{Exposure}))$$
$$C_c = 315.48 + 1.645 * (315.48 / 0.0020) ^ (1/2) + (1 / (2 * 0.0020))$$
$$C_c = 1227.93 \text{ crashes per 100 MVM}$$

*Critical Injury Rate (Ic)*

$$I_c = \text{Injury Crash Average of Similar Sections} + 1.645 * (\text{Injury Crash Average of Similar Sections} / \text{Exposure}) ^ (1/2) + (1 / (2 * \text{Exposure}))$$
$$I_c = 74.98 + 1.645 * (74.98 / 0.0020) ^ (1/2) + (1 / (2 * 0.0020))$$
$$I_c = 649.96 \text{ injuries per 100 MVM}$$

# USLIMITS2 Speed Zoning Report

## Project Overview

**Project Name: Harbor Island SO Soft Winds**

**Analyst:** Aria

**Date:** 2022-04-06

### Basic Project Information

Route Name: Harbor Island SO Soft Winds  
From: N Harbor Island Dr. and W. Lake Mead Blvd  
To: N Harbor Island Dr. and Soft Winds Dr.  
State: Nevada  
County: Clark County  
City: Las Vegas city  
Route Type: Road Section in Developed Area  
Route Status: Existing

### Crash Data Information

Crash Data Years: 3.00  
Crash AADT: 4616 veh/day  
Total Number of Crashes: 2  
Total Number of Injury Crashes: 2  
Section Crash Rate: 79 per 100 MVM  
Section Injury Crash Rate: 79 per 100 MVM  
Crash Rate Average for Similar Roads: 232  
Injury Rate Average for Similar Roads: 66

### Roadway Information

Section Length: 0.5 mile(s)  
Statutory Speed Limit: 30 mph  
Existing Speed Limit: 30 mph  
Adverse Alignment: No  
One-Way Street: No  
Divided/Undivided: Undivided  
Number of Through Lanes: 2  
Area Type: Residential-Collector/Arterial  
Number of Driveways: 5  
Number of Signals: 0

### Traffic Information

85th Percentile Speed: 40 mph  
50th Percentile Speed: 35 mph  
AADT: 4616 veh/day  
On Street Parking and Usage: Not High  
Pedestrian / Bicyclist Activity: High

### Recommended Speed Limit:



**Note:** The final recommended speed limit is higher than the 30 mph statutory speed limit for this type of road. An engineering study such as the one carried out with USLIMITS is usually required to set a speed limit above the statutory limit.

**Note:** The road section is in an area with high pedestrian or bicycle activity. Consider implementing engineering measures to reduce speeds before lowering the recommended speed limit. See [Engineering Countermeasures for Speed Management](#) and [PedSafe](#) for more guidance.

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## Equations Used in the Crash Data Calculations

### Exposure (M)

$$M = (\text{Section AADT} * 365 * \text{Section Length} * \text{Duration of Crash Data}) / (100000000)$$
$$M = (4616 * 365 * 0.5 * 3.00) / (100000000)$$
$$M = 0.0253$$

### Crash Rate (Rc)

$$Rc = (\text{Section Crash Average} * 100000000) / (\text{Section AADT} * 365 * \text{Section Length})$$
$$Rc = (0.67 * 100000000) / (4616 * 365 * 0.5)$$
$$Rc = 79.14 \text{ crashes per 100 MVM}$$

### Injury Rate (Ri)

$$Ri = (\text{Section Injury Crash Average} * 100000000) / (\text{Section AADT} * 365 * \text{Section Length})$$
$$Ri = (0.67 * 100000000) / (4616 * 365 * 0.5)$$
$$Ri = 79.14 \text{ injuries per 100 MVM}$$

### Critical Crash Rate (Cc)

$C_c = \text{Crash Average of Similar Sections} + 1.645 * (\text{Crash Average of Similar Sections} / \text{Exposure})^{(1/2)} + (1 / (2 * \text{Exposure}))$

$C_c = 231.80 + 1.645 * (231.80 / 0.0253)^{(1/2)} + (1 / (2 * 0.0253))$

$C_c = 409.13$  crashes per 100 MVM

*Critical Injury Rate (Ic)*

$I_c = \text{Injury Crash Average of Similar Sections} + 1.645 * (\text{Injury Crash Average of Similar Sections} / \text{Exposure})^{(1/2)} + (1 / (2 * \text{Exposure}))$

$I_c = 66.27 + 1.645 * (66.27 / 0.0253)^{(1/2)} + (1 / (2 * 0.0253))$

$I_c = 170.29$  injuries per 100 MVM

# USLIMITS2 Speed Zoning Report

## Project Overview

**Project Name: Mariner SO Soft Winds**

**Analyst:** Aria

**Date:** 2022-04-06

### Basic Project Information

Route Name: Mariner SO Soft Winds  
From: Mariner Dr. Soft Winds Dr.  
To: Mariner Dr. W. Lake Mead Blvd.  
State: Nevada  
County: Clark County  
City: Las Vegas city  
Route Type: Road Section in Developed Area  
Route Status: Existing

### Crash Data Information

Crash Data Years: 3.00  
Crash AADT: 3586 veh/day  
Total Number of Crashes: 4  
Total Number of Injury Crashes: 3  
Section Crash Rate: 204 per 100 MVM  
Section Injury Crash Rate: 153 per 100 MVM  
Crash Rate Average for Similar Roads: 232  
Injury Rate Average for Similar Roads: 66

### Roadway Information

Section Length: 0.5 mile(s)  
Statutory Speed Limit: 30 mph  
Existing Speed Limit: 30 mph  
Adverse Alignment: Yes  
One-Way Street: No  
Divided/Undivided: Undivided  
Number of Through Lanes: 2  
Area Type: Residential-Collector/Arterial  
Number of Driveways: 9  
Number of Signals: 0

### Traffic Information

85th Percentile Speed: 47 mph  
50th Percentile Speed: 39 mph  
AADT: 3586 veh/day  
On Street Parking and Usage: Not High  
Pedestrian / Bicyclist Activity: High

## Recommended Speed Limit:



**Note:** The final recommended speed limit is higher than the 30 mph statutory speed limit for this type of road. An engineering study such as the one carried out with USLIMITS is usually required to set a speed limit above the statutory limit.

**Note:** Sections with adverse alignments may need specific 'advisory speed warnings' which may be different from the general speed limit for the section. See [Procedures for Setting Advisory Speeds on Curves](#), Publication No. FHWA-SA-11-22, June 2011, for more guidance.

**Note:** The injury crash rate for the section of 153 per 100 MVM is more than 30 percent above the average for similar roads (66) but below the critical rate (187). A comprehensive crash study should be undertaken to identify engineering and traffic control deficiencies and appropriate corrective actions. The speed limit should only be reduced as a last measure after all other treatments have either been tried or ruled out.

**Note:** The road section is in an area with high pedestrian or bicycle activity. Consider implementing engineering measures to reduce speeds before lowering the recommended speed limit. See [Engineering Countermeasures for Speed Management](#) and [PedSafe](#) for more guidance.

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## Equations Used in the Crash Data Calculations

*Exposure (M)*

$$M = (\text{Section AADT} * 365 * \text{Section Length} * \text{Duration of Crash Data}) / (100000000)$$

$$M = (3586 * 365 * 0.5 * 3.00) / (100000000)$$

$$M = 0.0196$$

*Crash Rate (Rc)*

$$Rc = (\text{Section Crash Average} * 100000000) / (\text{Section AADT} * 365 * \text{Section Length})$$

$$Rc = (1.33 * 100000000) / (3586 * 365 * 0.5)$$

Rc = 203.73 crashes per 100 MVM

*Injury Rate (Ri)*

Ri = (Section Injury Crash Average \* 100000000) / (Section AADT \* 365 \* Section Length)

Ri = (1.00 \* 100000000) / (3586 \* 365 \* 0.5)

Ri = 152.80 injuries per 100 MVM

*Critical Crash Rate (Cc)*

Cc = Crash Average of Similar Sections + 1.645 \* (Crash Average of Similar Sections / Exposure) ^ (1/2) + (1 / (2 \* Exposure))

Cc = 231.80 + 1.645 \* (231.80 / 0.0196) ^ (1/2) + (1 / (2 \* 0.0196))

Cc = 436.01 crashes per 100 MVM

*Critical Injury Rate (Ic)*

Ic = Injury Crash Average of Similar Sections + 1.645 \* (Injury Crash Average of Similar Sections / Exposure) ^ (1/2) + (1 / (2 \* Exposure))

Ic = 66.27 + 1.645 \* (66.27 / 0.0196) ^ (1/2) + (1 / (2 \* 0.0196))

Ic = 187.31 injuries per 100 MVM

# USLIMITS2 Speed Zoning Report

## Project Overview

**Project Name: Soft Winds EO Harbor Island**

**Analyst:** Aria

**Date:** 2022-04-06

### Basic Project Information

Route Name: Soft Winds EO Harbor Island  
From: Soft Winds Dr. and N Harbor Island Dr.  
To: Soft Winds Dr. and Mariner Dr.  
State: Nevada  
County: Clark County  
City: Las Vegas city  
Route Type: Road Section in Developed Area  
Route Status: Existing

### Crash Data Information

Crash Data Years: 3.00  
Crash AADT: 900 veh/day  
Total Number of Crashes: 0  
Total Number of Injury Crashes: 0  
Section Crash Rate: 0 per 100 MVM  
Section Injury Crash Rate: 0 per 100 MVM  
Crash Rate Average for Similar Roads: 315  
Injury Rate Average for Similar Roads: 75

### Roadway Information

Section Length: 0.5 mile(s)  
Statutory Speed Limit: 30 mph  
Existing Speed Limit: 30 mph  
Adverse Alignment: No  
One-Way Street: No  
Divided/Undivided: Undivided  
Number of Through Lanes: 2  
Area Type: Residential-Collector/Arterial  
Number of Driveways: 6  
Number of Signals: 0

### Traffic Information

85th Percentile Speed: 39 mph  
50th Percentile Speed: 33 mph  
AADT: 900 veh/day  
On Street Parking and Usage: Not High  
Pedestrian / Bicyclist Activity: High

## Recommended Speed Limit:



**Note:** The final recommended speed limit is higher than the 30 mph statutory speed limit for this type of road. An engineering study such as the one carried out with USLIMITS is usually required to set a speed limit above the statutory limit.

**Note:** The road section is in an area with high pedestrian or bicycle activity. Consider implementing engineering measures to reduce speeds before lowering the recommended speed limit. See [Engineering Countermeasures for Speed Management](#) and [PedSafe](#) for more guidance.

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## Equations Used in the Crash Data Calculations

### Exposure (M)

$$M = (\text{Section AADT} * 365 * \text{Section Length} * \text{Duration of Crash Data}) / (100000000)$$
$$M = (900 * 365 * 0.5 * 3.00) / (100000000)$$
$$M = 0.0049$$

### Crash Rate (Rc)

$$Rc = (\text{Section Crash Average} * 100000000) / (\text{Section AADT} * 365 * \text{Section Length})$$
$$Rc = (0.00 * 100000000) / (900 * 365 * 0.5)$$
$$Rc = 0.00 \text{ crashes per 100 MVM}$$

### Injury Rate (Ri)

$$Ri = (\text{Section Injury Crash Average} * 100000000) / (\text{Section AADT} * 365 * \text{Section Length})$$
$$Ri = (0.00 * 100000000) / (900 * 365 * 0.5)$$
$$Ri = 0.00 \text{ injuries per 100 MVM}$$

### Critical Crash Rate (Cc)

$C_c = \text{Crash Average of Similar Sections} + 1.645 * (\text{Crash Average of Similar Sections} / \text{Exposure})^{(1/2)} + (1 / (2 * \text{Exposure}))$

$C_c = 315.48 + 1.645 * (315.48 / 0.0049)^{(1/2)} + (1 / (2 * 0.0049))$

$C_c = 833.19$  crashes per 100 MVM

*Critical Injury Rate (Ic)*

$I_c = \text{Injury Crash Average of Similar Sections} + 1.645 * (\text{Injury Crash Average of Similar Sections} / \text{Exposure})^{(1/2)} + (1 / (2 * \text{Exposure}))$

$I_c = 74.98 + 1.645 * (74.98 / 0.0049)^{(1/2)} + (1 / (2 * 0.0049))$

$I_c = 379.36$  injuries per 100 MVM

# USLIMITS2 Speed Zoning Report

## Project Overview

**Project Name: Point Conception WO Harbor Island**

**Analyst:** Aria

**Date:** 2022-04-06

### Basic Project Information

Route Name: Point Conception WO Harbor Island  
From: Point Conception and Rampart Blvd.  
To: Point Conception and Harbor Island Dr.  
State: Nevada  
County: Clark County  
City: Las Vegas city  
Route Type: Road Section in Developed Area  
Route Status: Existing

### Crash Data Information

Crash Data Years: 3.00  
Crash AADT: 840 veh/day  
Total Number of Crashes: 1  
Total Number of Injury Crashes: 0  
Section Crash Rate: 544 per 100 MVM  
Section Injury Crash Rate: 0 per 100 MVM  
Crash Rate Average for Similar Roads: 315  
Injury Rate Average for Similar Roads: 75

### Roadway Information

Section Length: 0.2 mile(s)  
Statutory Speed Limit: 30 mph  
Existing Speed Limit: 25 mph  
Adverse Alignment: No  
One-Way Street: No  
Divided/Undivided: Undivided  
Number of Through Lanes: 2  
Area Type: Residential-Collector/Arterial  
Number of Driveways: 3  
Number of Signals: 0

### Traffic Information

85th Percentile Speed: 55 mph  
50th Percentile Speed: 41 mph  
AADT: 840 veh/day  
On Street Parking and Usage: Not High  
Pedestrian / Bicyclist Activity: High

### Recommended Speed Limit:



**Note:** The final recommended speed limit is higher than the 30 mph statutory speed limit for this type of road. An engineering study such as the one carried out with USLIMITS is usually required to set a speed limit above the statutory limit.

**Note:** The section crash rate of 544 per 100 MVM is more than 30 percent above the average for similar roads (315) but below the critical rate (1269). A comprehensive crash study should be undertaken to identify engineering and traffic control deficiencies and appropriate corrective actions. The speed limit should only be reduced as a last measure after all other treatments have either been tried or ruled out.

**Note:** A speed zone of 0.2 miles is generally too short for the recommended speed limit. Consider lengthening the speed zone (if that is possible) or using the speed limits from adjacent sections (if they are appropriate for this section). If the speed and other data you provided are representative of conditions for this short section, then the speed limit noted above may be considered.

**Note:** The road section is in an area with high pedestrian or bicycle activity. Consider implementing engineering measures to reduce speeds before lowering the recommended speed limit. See [Engineering Countermeasures for Speed Management](#) and [PedSafe](#) for more guidance.

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## Equations Used in the Crash Data Calculations

*Exposure (M)*

$$M = (\text{Section AADT} * 365 * \text{Section Length} * \text{Duration of Crash Data}) / (100000000)$$
$$M = (840 * 365 * 0.2 * 3.00) / (100000000)$$
$$M = 0.0018$$

*Crash Rate (Rc)*

$$Rc = (\text{Section Crash Average} * 100000000) / (\text{Section AADT} * 365 * \text{Section Length})$$

$$R_c = (0.33 * 100000000) / (840 * 365 * 0.2)$$

R<sub>c</sub> = 543.60 crashes per 100 MVM

*Injury Rate (R<sub>i</sub>)*

$$R_i = (\text{Section Injury Crash Average} * 100000000) / (\text{Section AADT} * 365 * \text{Section Length})$$

$$R_i = (0.00 * 100000000) / (840 * 365 * 0.2)$$

R<sub>i</sub> = 0.00 injuries per 100 MVM

*Critical Crash Rate (C<sub>c</sub>)*

$$C_c = \text{Crash Average of Similar Sections} + 1.645 * (\text{Crash Average of Similar Sections} / \text{Exposure})^{(1/2)} + (1 / (2 * \text{Exposure}))$$

$$C_c = 315.48 + 1.645 * (315.48 / 0.0018)^{(1/2)} + (1 / (2 * 0.0018))$$

C<sub>c</sub> = 1268.50 crashes per 100 MVM

*Critical Injury Rate (I<sub>c</sub>)*

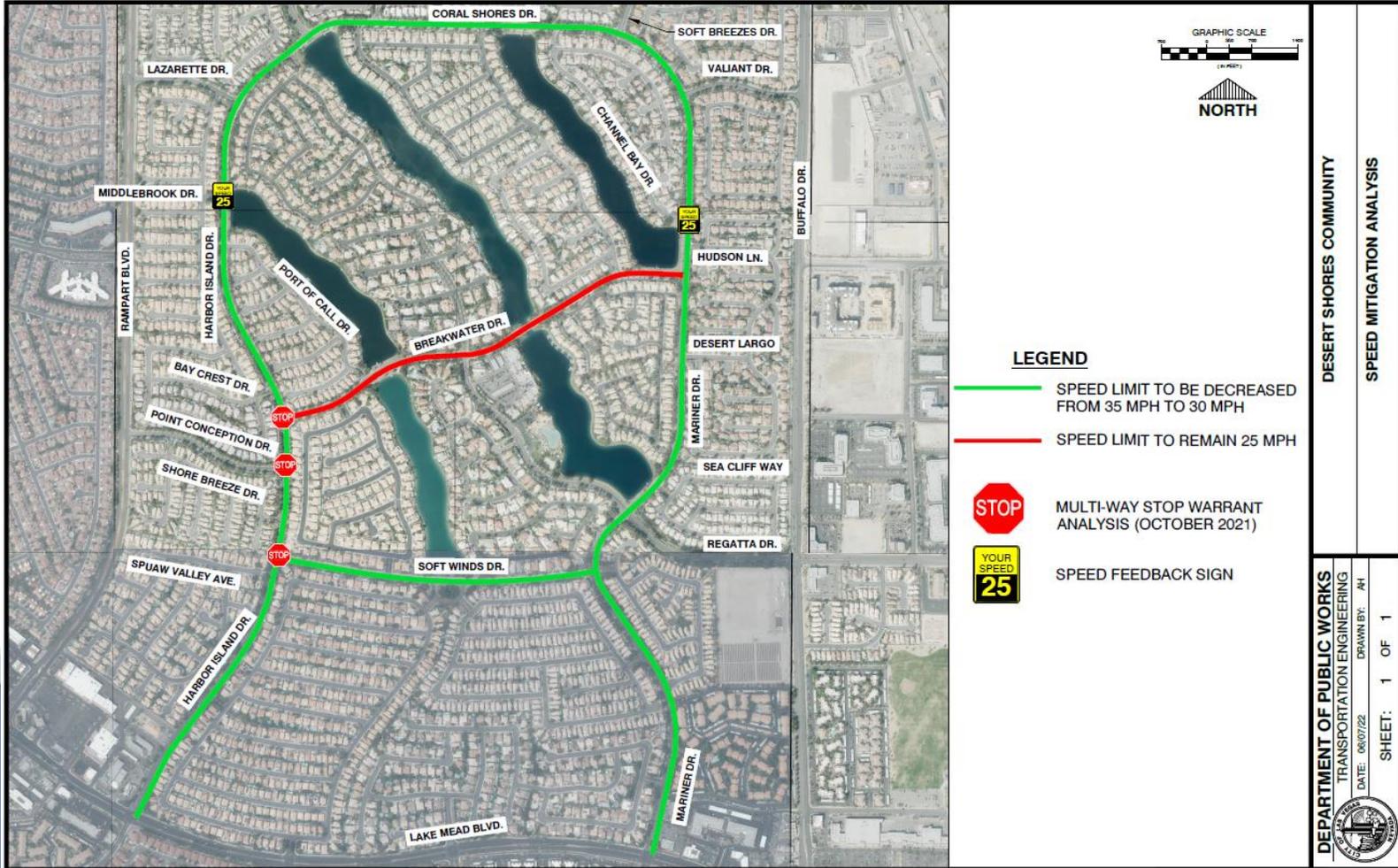
$$I_c = \text{Injury Crash Average of Similar Sections} + 1.645 * (\text{Injury Crash Average of Similar Sections} / \text{Exposure})^{(1/2)} + (1 / (2 * \text{Exposure}))$$

$$I_c = 74.98 + 1.645 * (74.98 / 0.0018)^{(1/2)} + (1 / (2 * 0.0018))$$

I<sub>c</sub> = 678.88 injuries per 100 MVM



# Item 5 – Desert Shores Speed Limit



## Speed Study History:

- In 2018 Desert Shores HOA contacted TED concerned about speeding in the community.
- Data collected in 2018 confirmed speeding within the community roadways.
- As part of a Department of Operations and Maintenance overlay project at the end of 2018, lane widths were narrowed to install bike lanes.
- TED temporarily changed posted speed limits from 35 mph to 30 mph on
  - Mariner Dr.
  - Coral Shores Dr.
  - Harbor Island Dr.
  - Soft Winds Dr.



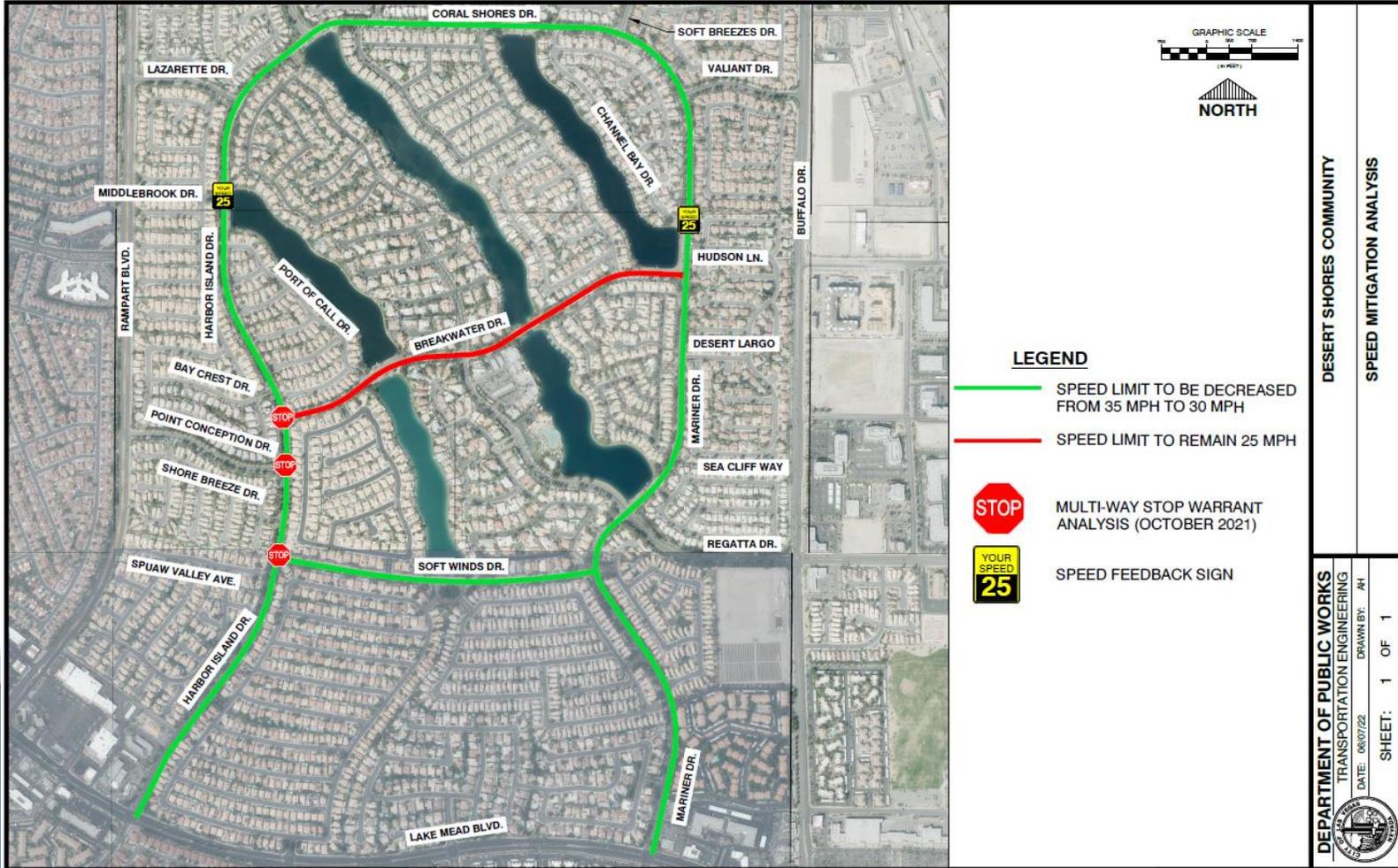
# Item 5 – Desert Shores Speed Limit

## Before and After Speed Data

Street	Termini From	Termini To	Section Length (miles)	Posted Speed Limit (mph)	2018				2021			
					85th Percentile Speed (mph)	50th Percentile Speed (mph)	AADT	US Limits Recommended Speed Limit (mph)	85th Percentile Speed (mph)	50th Percentile Speed (mph)	AADT	US Limits Recommended Speed Limit (mph)
Breakwater Dr.	Harbor Island Dr.	Mariner Dr.	0.7	25	N/A	N/A	N/A	N/A	43	32	909	30
Coral Shores Dr.	Lazarette Dr.	Soft Breeze Dr.	0.6	30	52	43	2,301	45	43	36	2,302	35
Harbor Island Dr.	Point Conception Dr.	Lazarette Dr.	0.6	30	46	37	2,547	35	41	34	1,891	35
Harbor Island Dr.	Point Conception Dr.	Soft Winds Dr.	0.1	30	44	38	2,601	40	39	34	1,798	35
Harbor Island Dr.	Lake Mead Blvd.	Soft Winds Dr.	0.5	30	43	36	5,036	35	40	35	4,616	35
Mariner Dr.	Soft Winds Dr.	Lake Mead Blvd.	0.5	30	43	36	4,358	35	47	39	3,586	40
Mariner Dr.	Breakwater Dr.	Regatta Dr.	0.4	30	45	39	3,911	40	42	35	2,937	35
Soft Winds Dr.	Harbor Island Dr.	Mariner Dr.	0.5	30	N/A	N/A	N/A	N/A	39	33	900	35



# Item 5 – Desert Shores Speed Limit



- LEGEND**
- SPEED LIMIT TO BE DECREASED FROM 35 MPH TO 30 MPH
  - SPEED LIMIT TO REMAIN 25 MPH
  -  MULTI-WAY STOP WARRANT ANALYSIS (OCTOBER 2021)
  -  SPEED FEEDBACK SIGN

DESERT SHORES COMMUNITY  
 SPEED MITIGATION ANALYSIS  
 DEPARTMENT OF PUBLIC WORKS  
 TRANSPORTATION ENGINEERING  
 DATE: 06/07/22 DRAWN BY: AH  
 SHEET: 1 OF 1

## Proposed Changes

- TED presented proposed changes to the Desert Shores HOA on April 27, 2022, the board and residents supported speed limit decreases on Mariner Dr. Coral Shores Dr., Harbor Island Dr., Soft Winds Dr., but did not support the increase on Breakwater Dr.
- TED reviewed the operational characteristics of Breakwater Dr. and decided to conduct further research for traffic calming treatments. Breakwater Dr. will remain at 25 mph.
- TED proposing to change speed limit from 35 mph to 30 mph
  - Mariner Dr.
  - Coral Shores Dr.
  - Harbor Island Dr.
  - Soft Winds Dr.

