



April 24, 2019

Mr. Justen Cassidy, Senior Project Manager
Cawley Architects
730 North 52nd Street, Suite 203
Phoenix, Arizona 85008



**RE: Trip Generation Statement for Paradise Valley Medical Plaza
Southeast Corner of Jackrabbit and Scottsdale Roads – Town of Paradise Valley**

Dear Mr. Cassidy:

Thank you for engaging CivTech to prepare this trip generation statement for an expansion proposed for the existing Paradise Valley Medical Plaza (PVMP) on the southwest corner of Scottsdale and Jackrabbit Roads in the Town Paradise Valley, Arizona.

BACKGROUND AND PURPOSE

The PVMP consists of several buildings with a total of 52,717 square feet (SF) of gross floor area. The interior floor area is documented at 50,686 SF. Existing PVMP tenants are either medical offices, outpatient surgical facilities, or physical therapy facilities; there is no medical laboratory or pharmacy on the site. Approximately forty percent of the existing floor area is dedicated to plastic surgeons and other medical professionals whose patients are pursuing elective procedures. As a non-residential use, the PVMP operates under a Special Use Permit (SUP) from the Town, which is being reviewed as part of the expansion approval process.

A 6,444 SF portion of an existing building currently serves to provide three (3) operating rooms and related facilities, such as preparation and a 2,021 SF recovery area. It is in these operating rooms that those procedures requiring anesthesia are performed. Thus, subtracting the floor area for the operating rooms, the interior area of the plaza dedicated to medical offices is 44,242 SF.

Per the site plan provided (see **Attachment 1**), a new 8,805-square foot (gross) medical office building is being proposed; net square footage is 8,521 SF. A review of aerial photography of the existing plaza reveals that drivers exiting to either Scottsdale Road or Jackrabbit Road are required to turn right onto the adjacent streets. While entering drivers can turn right into both site driveways and left into the Jackrabbit Road access, exiting drivers can only turn right, either directly onto Scottsdale Road or onto Jackrabbit Road toward Scottsdale Road. Therefore, if an exiting patient wishes to return to his/her home, a home that is west of the plaza, there are several arterial streets that offer convenient routes west, including Chaparral Road to the south and McDonald Drive to the north, as well as numerous other arterial streets on the area's one-mile grid network.

Neighbors have expressed concern that existing patients will forgo the arterial streets and may drive through their neighborhoods, taking Vista Drive west. Vista Drive is the next signalized intersection to the south of Jackrabbit Road. Thus, their primary concern is that the new medical office building will increase this traffic traveling west on Vista Drive and then north along either 69th Place or 68th Street in order to return to Jackrabbit Road. An alternative to this is to attempt a U-turn at Vista Drive (at which there is no protected left- or U-turn movement) and another left turn back onto Jackrabbit Road.

The purpose of this statement is, therefore, to document the expected trips to be generated solely by the new building and to assign the trips to the adjacent roadways and to assess whether or not there could be a substantial number of new PVMP trips traveling through the neighborhood to the west of the plaza by using Vista Drive. Again, this statement will only look at *new* trips generated by the *new* building. The other purpose of this statement relates to the number of new trips on the west side of the property and the new trips on Jackrabbit Road.

PROPOSED EXPANSION

As noted, the new building is expected to have a maximum gross floor area or footprint of 8,806 SF with a net floor area of 8,521 SF of medical offices. Trips generated by the new building will be served by two existing site driveways. **Access A** is a right-in/right-out/left-in driveway along Jackrabbit Road. **Access B** is a right-in/right-out only driveway along Scottsdale Road

Trip Generation. Typically, the average daily traffic (ADT), weekday AM and PM peak hours hour trips are estimated using trip generation information published in the latest (10th) edition of the Institute of Transportation Engineers’ (ITE) *Trip Generation Manual*. The *Trip Generation Manual* provides average trip generation rates, equations, graphs, and other information for a wide range of different land uses developed from raw data collected in a prescribed manner by numerous contributors. The data allows the transportation professional to estimate the trips generated for a proposed development based on the independent variables that describes the sizes of each land uses in the development. In this case, as will be explained below, due to the composition of the tenants of the plaza, CivTech originally elected to develop its own trip generation based on information recorded at the site driveways on Wednesday March 27, 2019. Wednesdays are typically the busiest day of the week. In addition, the complex is completely occupied; therefore, the counts recorded represent a typical day at full occupancy and require no adjustment. **Table 1** summarizes the data recorded; **Attachment 2** provides the data sheets. (*Please note the final sheet of Attachment 2 is a worksheet that combines the trips in and out at the two site driveways.*)

Table 1 – Summary of Driveway Volumes Recorded March 27, 2019

Count/Driveway Location	Daily (Total/In/Out)	AM Pk Hr (Total/In/Out) [Start of Hour]	PM Pk Hr (Total/In/Out) [Start of Hour]
Scottsdale Road	566/238/328	74 / 32(43%) / 42(57%) [9:15]	73 / 16(22%) / 57(78%) [4:45]
Jackrabbit Road	966/520/446	106 / 75(71%) / 31(29%) [9:15]	99 / 54(54%) / 45(45%) [2:45]
Total Site Trips	1,532/758/774	180 / 107(59%) / 73(41%) [9:15] 104 / 89(86%) / 15(14%) [7:45]*	158 / 37(23%) / 121(77%) [4:30]
Internal Roadway	138/67/71	22 / 14(64%) / 8(36%) [8:30]	21 / 5(24%) / 16(76%) [4:45]

* Peak Hour of Adjacent Street Traffic

A review of **Table 1** reveals that on Wednesday March 27, 2019, the site generated a total of fewer than 1,550 trips¹ with 180 trips (107 in/73 out) recorded during the AM peak hour of the generator (that is, the highest recorded hour of trips entering or exiting the site before noon, not necessarily an hour between 7 and 9 AM, when the adjacent street traffic is typically at its peak) and 158 trips (37 in/121 out) during the PM peak hour (between 4 and 6 PM), which is not only the PM peak hour of the generator, but the peak hour of the adjacent street traffic. During the AM

¹ Over the course of the day, since the facilities are not open 24 hours, it could be expected that every trip entering has a corresponding trip exiting. The machines used to record the driveway trips and the internal roadway trips yielded similar, but not exactly equal, entering and existing trips. The references to trips over the course of a day will double the higher count recorded, inbound or outbound, to be conservative.

peak hour of the adjacent street traffic, the site generated 104 trips (89 in/15 out) in the hour beginning at 7:45.

Trip Generation Rates. Based on a gross floor area of 52,717 SF (or 52.717 KSF since the *Trip Generation Manual* uses quantities in units of 1,000 SF and gross floor areas are used), the site generated trips at rates lower than the published ITE average rates for a medical office building. A comparison of these rates can be found in **Table 2**.

Table 2 – Comparison of Trip Generation Rates of Based on Recorded Driveway Volumes

Period	Recorded Trips	Trip Rate per 1,000 SF / In%	ITE Average Rate / In%
Daily	1,548	29.36 / 50%	34.80 / 50%
AM Peak Hour of Street	104	1.97 / 86%	2.78 / 78%
AM Peak Hour of Generator	180	3.41 / 59%	4.10 / 39%
PM Peak Hour	158	3.00 / 23%	3.46 / 28%

A review of the results summarized in **Table 2** is supportive of CivTech’s conclusion below that the mix of the tenants in the PVMP is such that it does not generate trips at the rate of a typical medical office building. In each case, the rate calculated by CivTech for a particular period is less than the published ITE rate.

Peak Hour Trips. To calculate the percentage of trips that could be expected to be generated by the new 8,806-SF building, CivTech applied the rates and inbound percentages shown in **Table 2** to the gross floor area during each period. The trip generation information developed by CivTech for the PVMP expansion is detailed in **Table 3**. The table also shows the trip generation based on the ITE rates shown in **Table 2**.

Table 3 – Trip Generation

Land Use	ITE Code	ITE Land Use Name	Quantity Units*	AM Distribution		PM Distribution	
				In	Out	In	Out
Medical Offices (per calculated rates)	n/a	Medical-Dental Office Building	8.805 KSF	86%	14%	23%	77%
Medical Offices (per ITE average rates)	720	Medical-Dental Office Building	8.805 KSF	78%	22%	28%	72%

Land Use	Average Daily Traffic (ADT)		AM Peak Hour				PM Peak Hour			
	Avg. Rate	Volume	Avg. Rate	In	Out	Total	Avg. Rate	In	Out	Total
Medical Offices (per calculated rates)	29.36	260	1.97	15	2	17	3.00	6	20	26
Medical Offices (per ITE average rates)	34.80	306	2.78	19	5	27	3.46	9	21	30

+ KSF = 1,000 SF

A review of the trip generation for the new building detailed in **Table 3**, which is based on the trip generation rates calculated for PVMP from the recorded driveway counts, reveals that the new building could generate a total of approximately 260 trips each day with 17 trips (15 in/2 out) generated during the AM peak hour of the adjacent street traffic (an hour between 7 and 9 AM) and 26 trips (6 in/20 out) generated during the PM peak hour (an hour between 4 and 6 PM). The generator’s (i.e., new building’s) AM peak hour of trip generation could begin at 9:15, when 18 inbound and 12 outbound trips could be expected, a total of 30 trips during that one-hour period. Using ITE average rates, the new building could generate 306 trips each day with 27 trips (19 in/5 out) generated during the AM peak hour of the adjacent street traffic (an hour between 7 and 9 AM) and 30 trips (9 in/21 out) generated during the PM peak hour (an hour between 4 and 6 PM).

Trip Distribution and Assignment. As noted above, PVMP provides a substantial percentage of its floor area for medical specialists and specialties. Therefore, it could be that its professionals attract patients from all over the Paradise Valley-Scottsdale area. Therefore, when attempting to define a market area, CivTech assumed a radius of ten (10) miles, also assuming that the majority

of the patients would reside within that radius and that the trips would be to/from their homes. Therefore, CivTech distributed site trips through the site driveways to the roadway network based on the Maricopa Association of Governments' (MAG) estimate of population within the assumed 10-mile radius of the site. At the request of the Town a smaller market area of five miles was also used. The projected distribution of population was used as a base for determining the trip distribution of trips generated by the site. **Table 4** summarizes the trip distribution percentages applied. The detailed calculations can be found as **Attachment 3**.

In addition, since CivTech recorded entering and exiting traffic volumes at the site driveways, the data was used to calculate the percentages of trips entering and exiting each driveway by time period. These percentages are also shown in **Table 4**.

The percentages shown in **Table 4** were applied to the site trips generated in **Table 3** and these site trips assigned to the internal and external roadway network. Site generated peak hour and daily turning movements and daily directional link volumes are also depicted on **Attachment 4**. CivTech showed separate percentages for those living to the northwest and southwest because simply living west of the site does not mean that a patient in that area would automatically, by default, travel west on Vista Drive since exiting directly to Jackrabbit Road westbound is not possible. The farther away a patient lives from the site, the more likely he/she would use arterial roads to return to home. Therefore, CivTech will assume approximately one-third of the patients living northwest or southwest of the site live close enough to make traveling along Vista Drive through the adjacent neighborhood somewhat convenient. These are also the people one could expect would be more familiar with the streets in that neighborhood.

Table 4 – Trip Distribution

Direction(s) (To/From)	Distribution Percentages	
By Direction	<i>10-Mile Radius</i>	<i>5-Mile Radius</i>
North	22%	21%
South	33%	37%
East	9%	21%
Northwest	13%	9%
Southwest	23%	12%
By Driveway: AM(PM)[Daily]		
Scottsdale In	30%(32%[31%])	
Jackrabbit In	70%(68%[69%])	
Scottsdale Out	47%(44%[42%])	
Jackrabbit Out	53%(56%[58%])	

Thus, with 36 percent of the total population residing within a 10-mile radius west (that is, northwest or southwest) of the site and two thirds (or more) of that likely using conveniently-located arterial streets such as Chaparral Road and McDonald Drive to travel west, CivTech estimates that only one-third of the 36 percent westbound/outbound trips, that is, twelve percent (approximately one of each eight exiting vehicles) might find traveling along Vista Drive through the neighborhood more convenient. With a peak exiting volume of 20 vehicles per hour, the result is between two and three additional vehicles (12% of 20 vehicles is 2.4 vehicles, which is shown as three vehicles on **Attachment 4**) traveling westbound on Vista Drive during the PM peak hour, most likely between 4:45 and 5:45 PM. That averages to just one additional vehicle on Vista Drive every 25 minutes. Such a small increase in the hourly traffic volume, especially when others are returning home on their afternoon commute, should be virtually imperceptible to area residents and certainly within the normal variations in traffic volumes that might be observed during the same hour from one day to the next.

Applying the same method to the residents within a five-mile radius, with 21 percent of the total population residing west (that is, northwest or southwest) of the site and two thirds (or more) of that likely using conveniently-located arterial streets such as Chaparral Road and McDonald Drive to travel west, CivTech estimates that only one-third of the 21 percent westbound/outbound trips, that is, seven percent (approximately one of each 14 exiting vehicles) might find traveling along Vista Drive through the

neighborhood more convenient. With a peak exiting volume of 20 vehicles per hour, the result is between one and two additional vehicles (7% of 20 vehicles is 1.4 vehicles), which can be rounded up to two vehicles traveling westbound on Vista Drive during the PM peak hour, most likely between 4:45 and 5:45 PM. That averages to just one additional vehicle on Vista Drive every 42 minutes. Again, such a small increase in the hourly traffic volume, especially when others are returning home on their afternoon commute, should be virtually imperceptible to area residents and certainly within the normal variations in traffic volumes that might be observed during the same hour from one day to the next.

Similarly, the prohibition of left turns out from the site driveways limits the site trips that could be expected to travel along Jackrabbit Road west of the site driveway. West of this driveway, only inbound trips can travel along Jackrabbit Road. **Attachment 4** shows that, within a 10-mile radius, CivTech expects just three trips to arrive during the AM peak hour, an average rate of one new trip every twenty minutes between 7:45 and 8:45 AM. Such a small increase in the hourly traffic volume, especially when others are leaving home on their morning commute, should be virtually imperceptible to area residents and certainly within the normal variations in traffic volumes that might be observed during the same hour from one day to the next.

Similarly, for the five-mile radius, CivTech expects less than two trips (1.4) to arrive during the AM peak hour, an average rate of one new trip every 42 minutes between 7:45 and 8:45 AM. The same conclusion as above for the 10-mile radius can be drawn from this data.

West-Side Parking Area. CivTech recorded traffic volumes on the internal driveway south of the Jackrabbit Road driveway that leading to the existing west side of the plaza. As can be seen in **Table 1**, approximately 140 vehicles per day were recorded into and out of that western parking area. These 140 vehicles made use of the 58 existing parking spaces—50 uncovered and 8 covered—that are located along the west side of the property. With the proposed expansion, the eight covered spaces will be eliminated and 29 new spaces will be provided, for a net increase of 21 spaces and a new total of 79 spaces along the west side of the property, an increase of just over 36%. If the 79 spaces were used at approximately the same rates as the existing 58 spaces, it could be expected that the 140 trips daily could increase to 192 trips on a typical weekday, a net increase of 52 trips per day. Applying the same ratio to the peak hours would add eight (8) trips each during the hour beginning at 8:30 AM and during the PM peak hour of street traffic, from 22 to 30 and from 21 to 29, respectively.

Other factors to be considered are that 26 of the ultimate 79 spaces (33%) will be designated as employee-only spaces, which are vehicles that will remain parked most of the day; truck deliveries including medical waste will now be collected on the east side of the new building, where a new loading zone will be provided; and the dumpster will be relocated to just east of the Jackrabbit Road driveway, eliminating the need for trash trucks to travel along the western wall of the property.

CONCLUSIONS

A new 8,806-square foot (SF) building is being proposed for the existing Paradise Valley Medical Plaza on the southeast corner of Scottsdale and Jackrabbit Roads in the Town Paradise Valley. The new building will provide medical offices. From the above analysis, the following could be concluded:

- On Wednesday March 27, 2019, the site generated a total of fewer than 1,550 trips with 180 trips (107 in/73 out) recorded during the AM peak hour of the generator (that is, , the highest recorded hour of trips entering or exiting the site before noon, not necessarily an hour between 7 and 9 AM, when the adjacent street traffic is typically at its peak) and 158 trips (37 in/121 out) during the PM


peak hour (between 4 and 6 PM), which is not only the PM peak hour of the generator, but the peak hour of the adjacent street traffic. During the AM peak hour of the adjacent street traffic, the site generated 104 trips (89 in/15 out) in the hour beginning at 7:45.

- Based on the trip generation rates calculated for PVMP from the recorded driveway counts, the new building could generate a total of approximately 260 trips each day with 17 trips (15 in/2 out) generated during the AM peak hour of the adjacent street traffic (an hour between 7 and 9 AM) and 26 trips (6 in/20 out) generated during the PM peak hour (an hour between 4 and 6 PM). The generator's (i.e., new building's) AM peak hour of trip generation could begin at 9:15, when 18 inbound and 12 outbound trips could be expected, a total of 30 trips during that one-hour period. Using ITE average rates, the new building could generate 306 trips each day with 27 trips (19 in/5 out) generated during the AM peak hour of the adjacent street traffic (an hour between 7 and 9 AM) and 30 trips (9 in/21 out) generated during the PM peak hour (an hour between 4 and 6 PM).
- The maximum outbound volume of 20 exiting vehicles per hour is expected to be during the PM peak hour of adjacent street traffic, an hour between 4:45 and 5:45 PM, when many of the offices are closing and employees as well as patients are leaving.
- With 36 percent of the total population residing within a 10-mile radius west (that is, northwest or southwest) of the site and two thirds (or more) of that likely using conveniently-located arterial streets such as Chaparral Road and McDonald Drive to travel west, CivTech estimates that only one-third of the 36 percent westbound/outbound trips, that is, twelve percent (approximately one of each eight exiting vehicles) might find traveling along Vista Drive through the neighborhood more convenient. With a peak exiting volume of 20 vehicles per hour, the result is between two and three additional vehicles (12% of 20 vehicles is 2.4 vehicles) traveling westbound on Vista Drive during the PM peak hour, most likely between 5 and 6 PM. That averages to just one additional vehicle on Vista Drive every 25 minutes. Similarly, on Jackrabbit Toad, CivTech expects just three inbound trips to arrive during the AM peak hour, an average rate of one new trip every twenty minutes between 7:45 and 8:45 AM. Such small increases in the hourly traffic volume, especially when others are traveling to/from home on their morning and afternoon commutes, should be virtually imperceptible to area residents and certainly within the normal variations in traffic volumes that might be observed during the same hour from one day to the next. Assuming that most patients lived within a five-mile did not adversely affect these results at all and actually slightly decreased the average frequency and number of arrivals from the west via Jackrabbit Road and of those departing vehicles that may use Vista Drive.

Thank you for allowing CivTech to assist you on this project. Please contact me with any questions you may have on this study.

Sincerely,

CivTech



Joseph F. Spadafino, P.E., PTOE, PTP
Project Manager/Senior Traffic Engineer

Attachments (4)

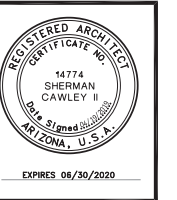
X:\18-0840 Cawley PPMC Parking & TIA Study, Paradise Valley\Submittals\Apr 2019 Revised Trip Gen + Assignment Statement\PMMP_TGS+Assignment - FINAL V3_1.docx



CAWLEY ARCHITECTS

730 N. 52nd St. Ste. 203
Phoenix, Arizona 85008
P 602.393.5060

CawleyArchitects.com



PARADISE VALLEY MEDICAL PLAZA

SWC OF SCOTTSDALE AND JACKRABBIT

PARADISE VALLEY, AZ

DATE

- PRE-APP SUBMITTAL 06-20-2018
- SUP SUBMITTAL 08-01-2018
- SUP - 1ST COMMENTS 10-01-2018
- SUP - 2ND COMMENTS 10-15-2018
- P.C. COMMENTS 12-10-2018
- 2ND CITY COUNCIL MTG. 01-31-2019
- CITY COUNCIL REBOOT 04-12-2019

NOTICE OF ALTERNATE BILLING CYCLE:

This contract allows the owner to require submission of bills or estimates in billing cycles other than thirty days. A written description of such other billing cycle applicable to this project is available from the owner or the owner's designated agent (see owner's telephone number and address on cover sheet) and the owner or its designated agent shall provide the written description upon request.

The architectural design and data presented in these documents is an instrument of service provided by Cawley Architects.

All discrepancies found in these documents, or conflicts between these documents and actual field conditions shall be reported to Cawley Architects for resolution prior to commencement of the work.

Discrepancies between field amounts and these documents shall be reported to the General Contractor prior to commencement of work.

Project - PVMC

A1.1
Attachment 1

SITE DATA

PROJECT:	PARADISE VALLEY MEDICAL PLAZA
ADDRESS:	SWC OF SCOTTSDALE AND JACKRABBIT ROAD
DEVELOPER:	PLAZA COMPANIES 9401 W. THUNDERBIRD ROAD PEORIA, AZ 85381
SCOPE:	ADDITION OF NEW BUILDING TO EXISTING MEDICAL OFFICE PLAZA
ASSESSOR PARCEL NO.:	173-18-002C
ZONING:	SPECIAL USE PERMIT (EXISTING)
SITE AREA:	+/- 367,808 S.F. +/- 8.44 ACRES
EXISTING BUILDING AREA (GROSS):	52,717 S.F. GROSS
EXISTING BUILDING AREA (INTERIOR):	50,686 S.F. INTERIOR (NET)
EXISTING PKNG. CANOPES:	10,523 S.F.
NEW BUILDING AREA (INCLUDING OVERHANGS):	9,837 S.F. GROSS
NEW BUILDING AREA (GROSS @ PERIMETER):	8,805 S.F. GROSS
NEW BUILDING AREA (NET @ INTERIOR):	8,521 S.F. INTERIOR (NET)
TOTAL BUILDING AREA (GROSS):	62,544 S.F. GROSS
TOTAL BUILDING AREA (NET):	59,207 S.F. NET
NEW BLDG. CANOPY AREA:	668 S.F.
NEW PKNG. CANOPY AREA:	3,359 S.F.
NEW TOTAL PARKING CANOPY AREA:	10,998 S.F.
STORIES:	SINGLE STORY
LOT COVERAGE (EXIST):	17.19 %
LOT COVERAGE (NEW):	19.99 %
BUILDING HEIGHT (EXIST):	24'-5" AT HIGHEST RIDGE
BUILDING HEIGHT (NEW):	20'-0 1/2" AT HIGHEST RIDGE

PARKING CALCULATIONS

BUILDING AREA CALCULATIONS			
OCCUPANCY	1ST FLOOR	TOTALS	
EXIST. BLDGS	50,686 S.F. (NET)	50,686 S.F.	
NEW BUILDING	8,521 S.F. (NET)	8,521 S.F.	
TOTAL S.F.	59,207 S.F. (NET)	59,207 S.F.	

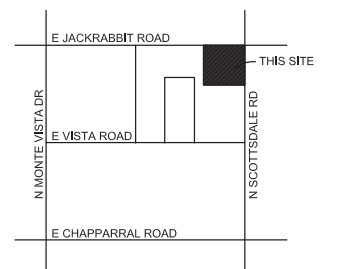
REQUIRED PARKING CALCULATIONS			
OCCUPANCY	S.F.	FACTOR	TOTAL
EXIST. BLDGS	50,686 S.F.	VARIES	230
NEW BUILDING	8,521 S.F.	5:1000	43
TOTAL:			273

PARKING PROVIDED	
TOTAL REGULAR SPACES (EXISTING)	221
TOTAL REGULAR SPACES (NEW)	26
TOTAL ACCESSIBLE SPACES (EXISTING)	16
TOTAL ACCESSIBLE SPACES (NEW)	3
TOTAL SPACES ON SITE	266
TOTAL COVERED SPACES (FOR REFERENCE)	78

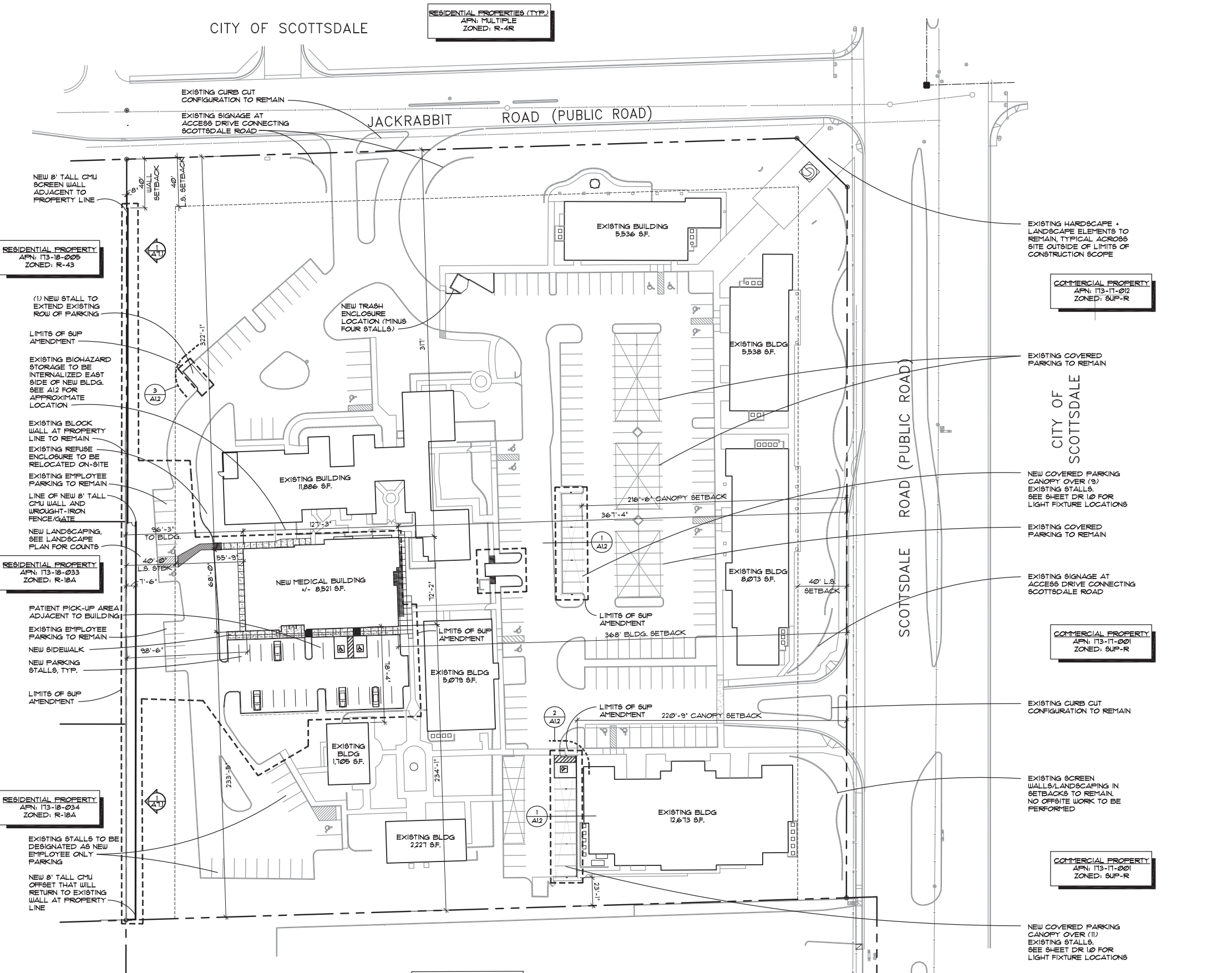
LEGEND

- PROPERTY LINE
- EASEMENT / SETBACK LINE
- LIMITS OF SUP AMENDMENT
- CAR OVERHANG, MEASURED FROM FACE OF CURB AS DIMENSIONED ON SITE PLAN
- SITE WALL
- PAINT STRIPING ON PAVEMENT
- NEW FIRE HYDRANT
- EXISTING FIRE HYDRANT
- FIRE DEPARTMENT CONNECTION
- ACCESSIBLE ROUTE/PATH OF TRAVEL FIRE RISER
- EXISTING CURB CUT CONFIGURATION TO REMAIN
- EXISTING SCREEN WALLS/LANDSCAPING IN SETBACKS TO REMAIN. NO OFFSITE WORK TO BE PERFORMED

VICINITY MAP N.T.S.



NOTE: NO WORK TO BE PERFORMED OUTSIDE OF LIMITS OF CONSTRUCTION, WITH THE EXCEPTION OF TRENCHING FOR UTILITY CONNECTIONS TO ON OR OFFSITE MAINS



COMMERCIAL PROPERTY APN: 173-11-012 ZONED: SUP-R

COMMERCIAL PROPERTY APN: 173-11-001 ZONED: SUP-R

COMMERCIAL PROPERTY APN: 173-11-001 ZONED: SUP-R

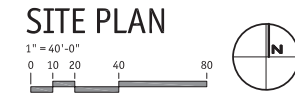
RESIDENTIAL PROPERTIES (TYP.) APN: MULTIPLE ZONED: R-4R

RESIDENTIAL PROPERTY APN: 173-18-005 ZONED: R-43

RESIDENTIAL PROPERTY APN: 173-18-033 ZONED: R-18A

RESIDENTIAL PROPERTY APN: 173-18-034 ZONED: R-18A

SOUTHERN BAPTIST CHURCH APN: 173-18-009A ZONED: SUP-P



Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Wednesday, March 27, 2019

City: Paradise Valley

Project #: 19-1160-002

Location: Paradise Valley Medical Center Driveway Internal Roadway

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00	0	0			12:00	1	0		
00:15	0	0			12:15	3	0		
00:30	0	0			12:30	1	0		
00:45	0	0	0	0	12:45	2	7	1	1
01:00	0	0			13:00	1	0		
01:15	0	0			13:15	2	1		
01:30	0	0			13:30	0	2		
01:45	0	0	0	0	13:45	2	5	0	3
02:00	0	0			14:00	1	1		
02:15	0	0			14:15	2	0		
02:30	0	0			14:30	0	1		
02:45	0	0	0	0	14:45	1	4	0	2
03:00	0	0			15:00	1	0		
03:15	0	0			15:15	3	3		
03:30	0	0			15:30	3	1		
03:45	0	0	0	0	15:45	3	10	1	5
04:00	0	0			16:00	3	2		
04:15	0	0			16:15	0	1		
04:30	0	0			16:30	2	1		
04:45	0	0	0	0	16:45	5	10	2	6
05:00	0	1			17:00	7	0		
05:15	0	1			17:15	2	1		
05:30	2	1			17:30	2	2		
05:45	0	2	2	5	17:45	0	11	0	3
06:00	0	1			18:00	2	1		
06:15	0	2			18:15	0	0		
06:30	0	5			18:30	0	0		
06:45	0	0	3	11	18:45	1	3	0	1
07:00	1	0			19:00	0	0		
07:15	0	1			19:15	0	0		
07:30	0	1			19:30	1	0		
07:45	0	1	3	5	19:45	0	1	0	0
08:00	1	3			20:00	0	0		
08:15	2	2			20:15	0	0		
08:30	1	4			20:30	0	0		
08:45	2	6	5	14	20:45	0	0	0	0
09:00	2	2			21:00	0	0		
09:15	3	3			21:15	0	0		
09:30	0	1			21:30	0	0		
09:45	2	7	0	6	21:45	0	0	0	0
10:00	1	1			22:00	0	0		
10:15	1	0			22:15	0	0		
10:30	0	0			22:30	0	1		
10:45	1	3	1	2	22:45	0	0	0	1
11:00	0	0			23:00	0	0		
11:15	0	0			23:15	0	0		
11:30	0	1			23:30	0	0		
11:45	1	1	1	2	23:45	0	0	0	0

Total Vol. 20 45 **65** 51 22 **73**

GPS Coordinates: 33.516100, -111.928000

Daily Totals

NB	SB	EB	WB	Combined
71	67			138

Split %	AM			PM		
	30.8%	69.2%	47.1%	69.9%	30.1%	52.9%

Peak Hour	08:30	08:00	08:30	16:30	15:15	16:45
Volume	8	14	22	16	7	21
P.H.F.	0.67	0.70	0.79	0.57	0.58	0.75

Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Wednesday, March 27, 2019

City: Paradise Valley

Project #: 19-1160-003

Location: Paradise Valley Medical Center Driveway off of Scottsdale Rd.

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB			
00:00			0	0	12:00			13	7			
00:15			0	0	12:15			12	2			
00:30			0	0	12:30			3	3			
00:45			0	0	12:45			8	36	6	18	54
01:00			0	1	13:00			9	2			
01:15			0	0	13:15			4	8			
01:30			2	0	13:30			1	6			
01:45			0	2	13:45			4	18	3	19	37
02:00			0	0	14:00			13	4			
02:15			0	0	14:15			3	6			
02:30			0	0	14:30			3	2			
02:45			0	0	14:45			6	25	13	25	50
03:00			0	0	15:00			4	8			
03:15			0	0	15:15			7	3			
03:30			0	0	15:30			7	2			
03:45			0	0	15:45			11	29	9	22	51
04:00			0	0	16:00			5	4			
04:15			0	0	16:15			5	2			
04:30			0	0	16:30			6	2			
04:45			0	0	16:45			9	25	5	13	38
05:00			0	0	17:00			16	2			
05:15			0	0	17:15			22	3			
05:30			0	0	17:30			10	6			
05:45			0	0	17:45			5	53	1	12	65
06:00			0	0	18:00			6	3			
06:15			0	1	18:15			1	0			
06:30			0	3	18:30			7	0			
06:45			0	0	18:45			4	18	0	3	21
07:00			0	3	19:00			9	0			
07:15			0	3	19:15			1	0			
07:30			0	2	19:30			0	0			
07:45			0	0	19:45			0	10	0	0	10
08:00			1	5	20:00			0	1			
08:15			4	5	20:15			3	1			
08:30			2	7	20:30			0	1			
08:45			3	10	20:45			0	3	0	3	6
09:00			5	6	21:00			0	0			
09:15			4	11	21:15			2	0			
09:30			12	4	21:30			0	0			
09:45			13	34	21:45			0	2	0	0	2
10:00			13	5	22:00			0	0			
10:15			7	0	22:15			0	0			
10:30			8	6	22:30			0	0			
10:45			5	33	22:45			0	0	0	0	
11:00			10	6	23:00			0	0			
11:15			7	2	23:15			0	0			
11:30			7	6	23:30			0	0			
11:45			6	30	23:45			0	0	0	0	

Total Vol. 109 123 **232** 219 115 **334**

GPS Coordinates: 33.515463, -111.926475

Daily Totals

NB	SB	EB	WB	Combined
		328	238	566

AM

PM

Split %	47.0%	53.0%	41.0%	65.6%	34.4%	59.0%
Peak Hour	09:30	08:30	09:15	16:45	14:15	16:45
Volume	45	33	74	57	29	73
P.H.F.	0.87	0.75	0.74	0.65	0.56	0.73

Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Wednesday, March 27, 2019

City: Paradise Valley

Project #: 19-1160-001

Location: Paradise Valley Medical Center Driveway off of Jackrabbit Rd.

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00	0	0			12:00	14	3		
00:15	0	0			12:15	13	9		
00:30	0	0			12:30	13	11		
00:45	0	0	0	0	12:45	12	52	6	29
01:00	0	0			13:00	15	6		
01:15	0	0			13:15	9	6		
01:30	0	0			13:30	4	8		
01:45	0	0	0	0	13:45	8	36	19	39
02:00	0	0			14:00	5	5		
02:15	0	0			14:15	12	7		
02:30	0	0			14:30	7	8		
02:45	0	0	0	0	14:45	19	43	16	36
03:00	0	0			15:00	7	12		
03:15	0	0			15:15	14	7		
03:30	0	0			15:30	14	10		
03:45	0	0	0	0	15:45	16	51	12	41
04:00	0	0			16:00	15	10		
04:15	0	0			16:15	8	5		
04:30	0	2			16:30	18	13		
04:45	0	0	0	2	16:45	18	59	9	37
05:00	0	1			17:00	23	1		
05:15	0	4			17:15	9	2		
05:30	1	2			17:30	11	5		
05:45	0	1	3	10	17:45	3	46	0	8
06:00	2	5			18:00	7	3		
06:15	1	6			18:15	2	0		
06:30	0	12			18:30	6	2		
06:45	1	4	9	32	18:45	4	19	0	5
07:00	1	5			19:00	4	2		
07:15	0	6			19:15	2	2		
07:30	3	6			19:30	1	0		
07:45	1	5	24	41	19:45	1	8	0	4
08:00	3	15			20:00	0	0		
08:15	0	11			20:15	0	0		
08:30	4	12			20:30	0	0		
08:45	7	14	13	51	20:45	0	0	0	0
09:00	6	18			21:00	0	3		
09:15	8	20			21:15	0	0		
09:30	7	14			21:30	0	0		
09:45	9	30	21	73	21:45	0	0	0	3
10:00	7	20			22:00	0	0		
10:15	9	12			22:15	0	0		
10:30	11	15			22:30	0	1		
10:45	8	35	15	62	22:45	0	0	2	3
11:00	14	6			23:00	0	0		
11:15	6	13			23:15	0	0		
11:30	11	14			23:30	0	0		
11:45	12	43	11	44	23:45	0	0	0	0

Total Vol. 132 315 **447** 314 205 **519**

GPS Coordinates: 33.516527, -111.927528

Daily Totals

NB	SB	EB	WB	Combined
446	520			966

AM

PM

Split %	29.5%	70.5%	46.3%	60.5%	39.5%	53.7%
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Peak Hour	11:45	09:15	09:15	16:30	14:45	14:45
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Volume	52	75	106	68	45	99
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P.H.F.	0.93	0.89	0.88	0.74	0.70	0.71
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Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Wednesday, March 27, 2019

City: Paradise Valley

Project #: 19-1160-001

Location: Paradise Valley Medical Center (Both Driveways Totaled)

AM Period	In	Out	In+Out	PM Period	In	Out	In+Out
00:00	0	0		12:00	10	63	73
00:15	0	0		12:15	11	59	70
00:30	0	0		12:30	14	53	67
00:45	0	0	0	12:45	12	47	59
01:00	1	1	2	13:00	8	45	53
01:15	0	1	1	13:15	14	48	62
01:30	0	1	2	13:30	14	48	62
01:45	0	1	2	13:45	22	58	80
02:00	0	0	0	14:00	9	59	68
02:15	0	0	0	14:15	13	58	71
02:30	0	0	0	14:30	10	54	64
02:45	0	0	0	14:45	29	61	90
03:00	0	0	0	15:00	20	72	92
03:15	0	0	0	15:15	10	69	79
03:30	0	0	0	15:30	12	71	83
03:45	0	0	0	15:45	21	63	84
04:00	0	0	0	16:00	14	57	71
04:15	0	0	0	16:15	7	54	61
04:30	2	2	4	16:30	15	57	72
04:45	0	2	2	16:45	14	50	64
05:00	1	3	4	17:00	3	39	42
05:15	4	7	11	17:15	5	37	42
05:30	2	7	9	17:30	11	33	44
05:45	5	12	17	17:45	1	20	21
06:00	5	16	21	18:00	6	23	29
06:15	7	19	26	18:15	0	18	18
06:30	15	32	47	18:30	2	9	11
06:45	10	37	47	18:45	0	8	8
07:00	8	40	48	19:00	2	4	6
07:15	9	42	51	19:15	2	6	8
07:30	8	35	43	19:30	0	4	4
07:45	34	59	93	19:45	0	4	4
08:00	20	71	91	20:00	1	3	4
08:15	16	78	94	20:15	1	2	3
08:30	19	89	108	20:30	1	3	4
08:45	22	77	99	20:45	0	3	3
09:00	24	81	105	21:00	3	5	8
09:15	31	96	127	21:15	0	4	4
09:30	18	95	113	21:30	0	3	3
09:45	33	106	139	21:45	0	3	3
10:00	25	107	132	22:00	0	0	0
10:15	12	88	100	22:15	0	0	0
10:30	21	91	112	22:30	1	1	2
10:45	21	79	100	22:45	2	3	5
11:00	12	66	78	23:00	0	3	3
11:15	15	69	84	23:15	0	3	3
11:30	20	68	88	23:30	0	2	2
11:45	18	65	83	23:45	0	0	0

Total Vol. 438 438 241 241 180 **679** 320 320 533 533 158 **853**

GPS Coordinates: 33.516527, -111.927528

Daily Totals

Combined

Out	In	Combined
758	774	1532

AM

PM

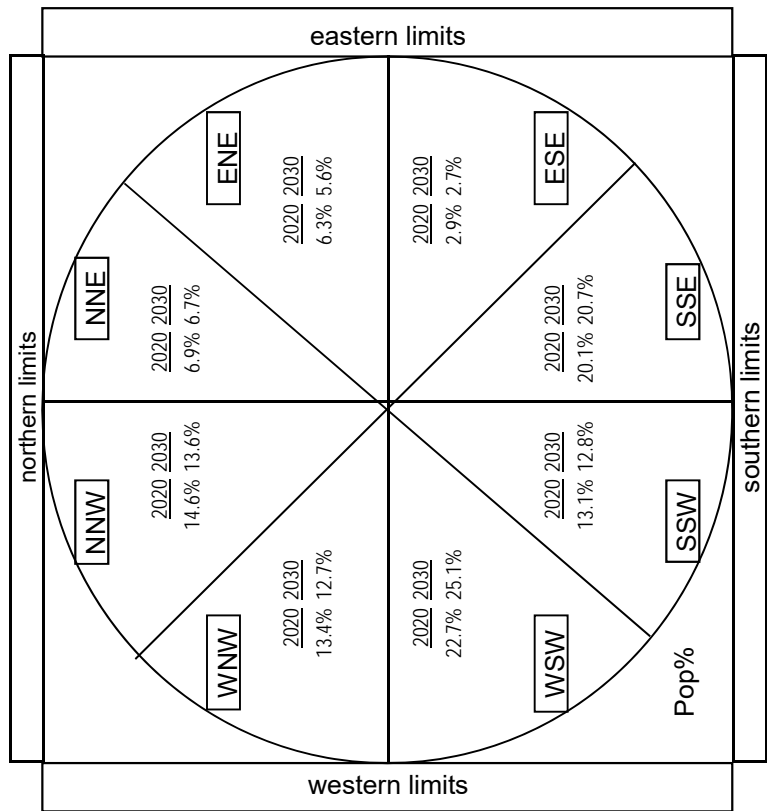
Split %	64.5%	35.5%	44.3%	37.5%	62.5%	55.7%
Peak Hour	09:15	11:30	09:45	14:15	16:30	16:45
Volume	107	88	683	72	121	585
P.H.F.	0.81	0.81	0.95	0.62	0.78	0.93
			851			736
			0.95			0.95

Quadrant	2020		2030	
	Population	Percent	Population	Percent
North Northwest	155,235	14.6%	170,415	13.6%
North Northeast	73,492	6.9%	83,821	6.7%
North	228,727	21.5%	254,235	20.3%
East Northeast	67,278	6.3%	70,506	5.6%
East Southeast	31,142	2.9%	33,853	2.7%
East	98,420	9.2%	104,359	8.3%
South Southeast	213,741	20.1%	258,962	20.7%
South Southwest	138,987	13.1%	160,028	12.8%
South	352,728	33.2%	418,990	33.5%
West Southwest	241,451	22.7%	314,831	25.1%
West Northwest	142,652	13.4%	159,559	12.7%
West	384,103	36.1%	474,390	37.8%
Totals	1,063,978	100.0%	1,251,974	99.9%

Radius

Population radius: 10 miles

Select Analysis Year (2020, 2030, 2040, 2050)
2020



10-mile radius

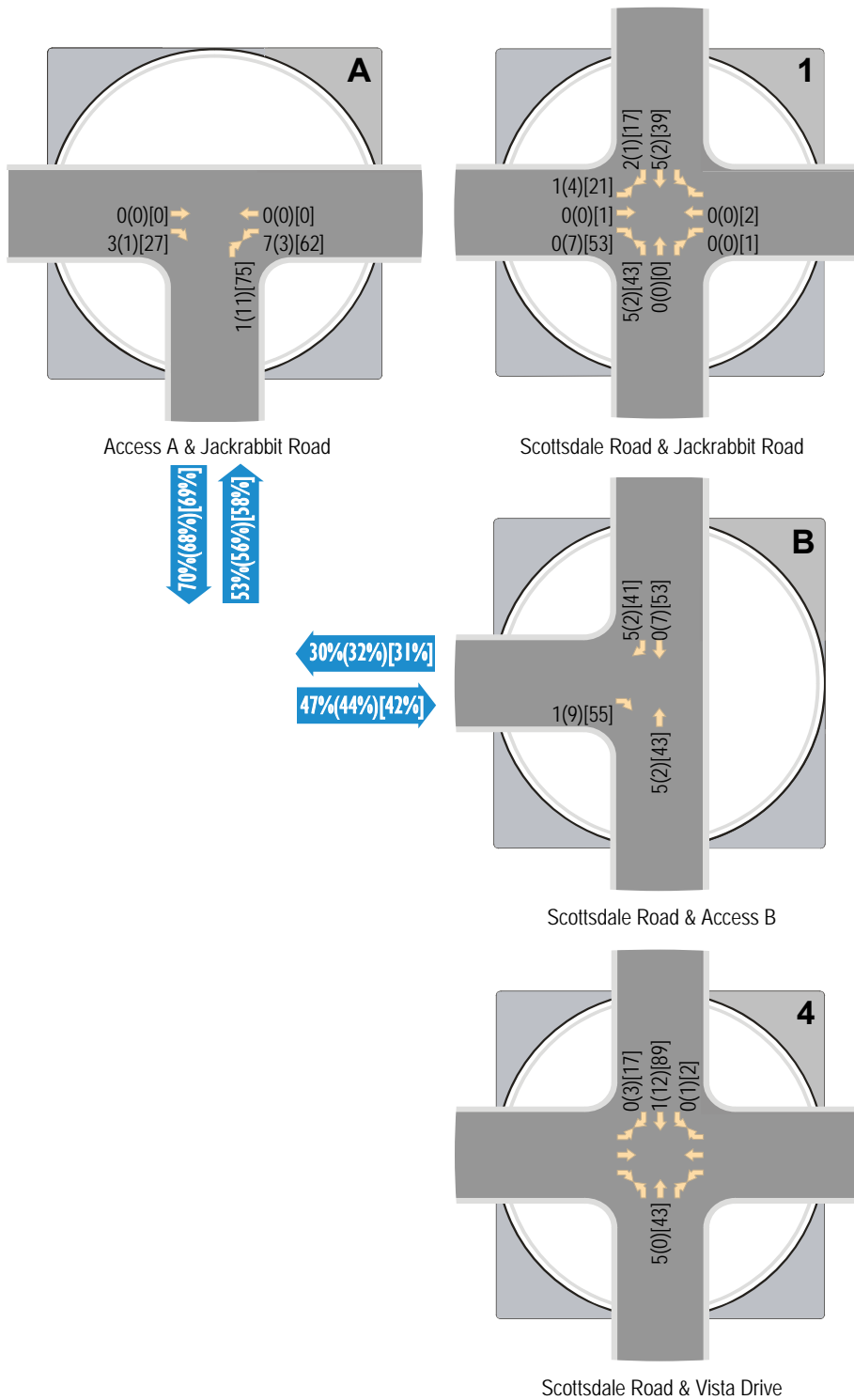
		2020					2030					2020					2030						
		Population	Population	% of TAZ	Adjusted	Adjusted	Population	Population	% of TAZ	Adjusted	Adjusted	Population	Population	% of TAZ	Adjusted	Adjusted	Population	Population	% of TAZ	Adjusted	Adjusted		
Traffic Impact (and Mitigation) Analysis/Study	WSW																						
	259	PH	82,183	92,727	40%	32,873	37,091	WNW															
	270	PH	78,598	117,041	100%	78,598	117,041	259	PH	82,183	92,727	10%	8,218	9,273									
	275	PH	35,083	49,545	100%	35,083	49,545	260	PH	63,126	80,568	30%	18,938	24,170									
	271	PH	67,978	72,784	30%	20,393	21,835	261	PH	35,232	38,363	20%	7,046	7,673									
	261	PH	35,232	38,363	80%	28,186	30,690	349	MC	391	416	100%	391	416									
	260	PH	63,126	80,568	70%	44,188	56,398	242	PH	30,543	31,232	50%	15,272	15,616									
	262	PV	14,198	14,871	15%	2,130	2,231	241	PH	46,027	47,014	10%	4,603	4,701									
								243	PH	61,862	72,596	50%	30,931	36,298									
								244	PH	55,833	59,925	100%	55,833	59,925									
								262	PV	14,198	14,871	10%	1,420	1,487									
	From WSW		241,451					314,831					From WNW		142,652					159,559			
From West		384,103																				474,390	



10-mile radius

		2020					2030					2020					2030						
		Population	Population	% of TAZ	Adjusted	Adjusted	Population	Population	% of TAZ	Adjusted	Adjusted	Population	Population	% of TAZ	Adjusted	Adjusted	Population	Population	% of TAZ	Adjusted	Adjusted		
Traffic Impact (and Mitigation) Analysis/Study	SSE																						
	262	PV	14,198	14,871	10%	1,420	1,487	SSW															
	271	PH	67,978	72,784	10%	6,798	7,278	262	PV	14,198	14,871	5%	710	744									
	272	SC	72,339	81,764	90%	65,105	73,588	271	PH	67,978	72,784	60%	40,787	43,670									
	288	TE	78,175	107,704	100%	78,175	107,704	276	PH	48,517	52,834	90%	43,665	47,551									
	289	ME	62,351	71,208	50%	31,176	35,604	287	PH	29,030	39,119	100%	29,030	39,119									
	264	SR	6,766	7,102	5%	338	355	296	PH	39,582	46,292	55%	21,770	25,461									
	276	PH	48,517	52,834	10%	4,852	5,283	286	PH	15,126	17,421	20%	3,025	3,484									
	297	TE	51,755	55,324	50%	25,878	27,662																
	From SSE		213,741					258,962					From SSW		138,987					160,028			
From South		352,728																				418,990	





LEGEND

47%(44%) [42%] AM(PM)[Daily] Trip Distribution Percentages
 XX(XX)[XXX] - AM(PM)[Daily] Traffic Volumes



Attachment 4: Site Trip Distribution and Assignment