



City Of Sedona Community & Economic Development Department

102 Roadrunner Drive Sedona, AZ 86336

(928) 282-1154 • Fax: (928) 204-7124

Memorandum

To: Planning and Zoning Commission
From: Cari Meyer, Associate Planner
Date: January 30, 2014 (For February 4, 2014 Work Session)
RE: PZ13-00014 (ZC, DEV), Sky Ranch Lodge Expansion

The Sky Ranch Lodge Expansion is currently on the Planning & Zoning Commission's February 18, 2014 public hearing agenda for final action. At the January 16, 2014 Work Session, there were some questions regarding the Traffic Impact Analysis (TIA) and the applicant's response to the list of clarifications and corrections provided by the Public Works Department. In particular, some of the Commissioners wanted to ensure that any changes to the report as a result of this list did not result in a change of the findings and recommendations contained in the report.

Due to the questions regarding the TIA, the Planning & Zoning Commission requested another work session on this application, scheduled for February 4, 2014. The only document being provided to the Commission for this work session is the revised TIA, as all other documents related to this project were provided as a part of the packet for the January 16, 2014 Work Session.

Please contact Staff as soon as possible if you have any questions.

Attachment:

1. Sky Ranch Lodge Traffic Impact Analysis (Revised January 28, 2014)



Shephard ▲ Wesnitzer, Inc.

110 West Dale Avenue
Flagstaff, AZ 86001

928.773.0354
928.774.8934 fax

www.swiaz.com

Engineering an environment of excellence.

SKY RANCH LODGE

Traffic Impact Analysis

PREPARED FOR:

Sky Ranch Lodge
1105 Airport Road
Sedona, AZ 86336

December 10, 2013
Revised: January 28, 2014

SWI File No. 12100

PREPARED BY:

Shephard-Wesnitzer Inc.
110 W. Dale Avenue
Flagstaff AZ 86001

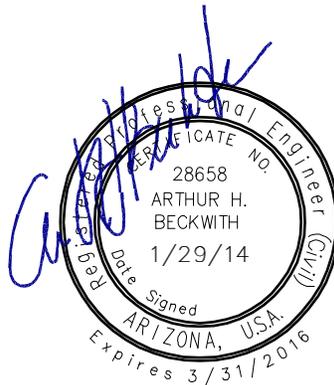


TABLE OF CONTENTS

INTRODUCTION	1
PURPOSE OF THE REPORT AND STUDY OBJECTIVE.....	1
EXECUTIVE SUMMARY	2
STUDY AREA CONDITIONS.....	2
EXISTING TRAFFIC CHARACTERISTICS	9
PROJECTED TRAFFIC	13
TRAFFIC ANALYSIS.....	17
CONCLUSIONS AND RECOMMENDATIONS	21
APPENDIX	22

LIST OF TABLES

TABLE 1 – 2013 EXISTING CONDITIONS FOR AIRPORT ROAD/HIGHWAY 89A.....	10
TABLE 2 – TRIP GENERATION	15
TABLE 3 – 2014 PROPOSED CONDITIONS COMPARISON FOR HIGHWAY 89A/AIRPORT ROAD.....	20

LIST OF FIGURES

FIGURE 1 – VICINITY MAP	5
FIGURE 2 – SITE PLAN.....	6
FIGURE 3 – EXISTING INTERSECTION LANE CONFIGURATIONS	8
FIGURE 4 – 2013 EXISTING TRAFFIC.....	12
FIGURE 6 – SITE GENERATED TRAFFIC.....	16
FIGURE 7 – 2014 TOTAL TRAFFIC.....	18
FIGURE 8 – 2014 WORST CASE TOTAL TRAFFIC.....	19

INTRODUCTION

Sky Ranch Lodge is an existing hotel in “West” Sedona located on the Airport Mesa west of the Sedona Airport on Airport Road. The project location is shown on Figure 1 -- Vicinity Map. The expansion will include 40 rooms and a meeting room capable of supporting 200 patrons. The meeting room facility is approximately 7,500 square feet including associated support space. The site plan is shown on Figure 2 – Site Plan. Per the City of Sedona, a Traffic Impact Analysis is warranted when a development generates more than 100 vehicles during a peak hour. It should be noted that the proposed additional 40 rooms are projected to generate 22 vehicles per hour during the AM peak hour, 24 vehicles per hour during the PM peak hour. The 200 person meeting room, which is anticipated to be attended mostly by patrons of the hotel, has been projected to conservatively generate 50% of its trips off-site and therefore will add 50 trips in the AM peak and 50 trips during the PM peak. The City of Sedona (COS) is requiring a Traffic Impact Analysis (TIA) be performed for the proposed “Sky Ranch Lodge” to ensure efficiency and safety in traffic operations are maintained within the surrounding transportation network.

Per ADOT's Traffic Impact Analysis for Proposed Development guideline, a Category I analysis is characterized as a development that generates less than 500 peak hour trips during the morning or afternoon peak hour and therefore will be used as the guide from which this TIA will be performed.

PURPOSE OF THE REPORT AND STUDY OBJECTIVE

The purpose of this document is to identify possible traffic impacts and to recommend any potential improvements to maintain efficient and safe traffic operations. The objectives of this study are to:

1. Determine the trip generation rates, directional distribution and travel patterns of site generated traffic at build out.
2. Determine the extent to which traffic generated by the proposed development will impact current traffic conditions in the surrounding area.
3. Determine what traffic control and/or geometric improvements might be necessary to maintain acceptable levels of service upon build out of the proposed development.

This study will specifically look at the intersection of Highway 89A/Airport Drive, as well as the overall operation of Airport Road. Although a queuing analysis is only required for Category II analyses, a queuing analysis will be included in this study.

EXECUTIVE SUMMARY

The Sky Ranch Lodge expansion is located on a 7.63 acre site on Airport Mesa in Sedona, AZ. The Project will consist of an expansion to include 40 new rooms and a new 7,500 square foot / 200 person meeting room. The property is located on Airport mesa which is approximately 1 mile south of the intersection of SR 89A and Airport Road on Airport Road. The site is surrounded by Airport facilities and Forest Service property. The hotel is not located near any other commercial facilities and approximately 4,600 feet from the nearest residential intersection therefore pedestrian and bicycle traffic is close to non-existent. Pedestrian activity is active at two locations along Airport Road; the Vortex and at the “Sunset Vista” at the top of the mesa. Both locations were observed at length on numerous days and both had all of the pedestrians arrive via vehicle.

The *Institute of Transportation Engineers (ITE) Trip Generation* land use code for hotels with meeting room facilities predicts 327 daily trips. To address the City’s concern that the ITE standards might not adequately reflect Sedona conditions, 50 additional AM and PM peak hour trips were added.

The intersection of Airport Road/Highway 89A and Airport Road will continue to operate at an acceptable Level of Service (LOS) with the additional traffic generated by the expansion. The Highway Capacity Manual (HCM) rates intersections and road capacities using a Level of Service scale of A through F, the intersection at Highway 89A and Airport Road currently operates at a Level of Service (LOS) B for both morning and evening peak hours, and will continue to do so after the Sky Ranch Lodge expansion is complete.

STUDY AREA CONDITIONS

Sky Ranch Lodge is accessible via Airport Road at the top of Airport mesa through three existing driveways to the resort. No improvements are proposed to these driveways. Airport Road in the vicinity of the site is currently a two-lane, two-way roadway with unpaved shoulders north of the

Chimney Spire Road and minimal or no shoulders south of the Chimney Spire Road. It consists of approximately 24 foot wide paved surface north of Chimney Spire Road and approximately 20 to 22 foot wide south of Chimney Spire Road and includes one travel lane in each direction. South of Chimney Spire Road, Airport Road starts to ascend on the side of the mesa creating a cut on one side of the road and a fill on the other. On the cut side of the road, a concrete curb channel was installed for drainage purposes and on the fill side of the road, a guardrail exist to protect vehicles from leaving the roadway. The posted speed limit on Airport Road is 25 mph. Airport Road is currently striped to allow no passing in both directions.

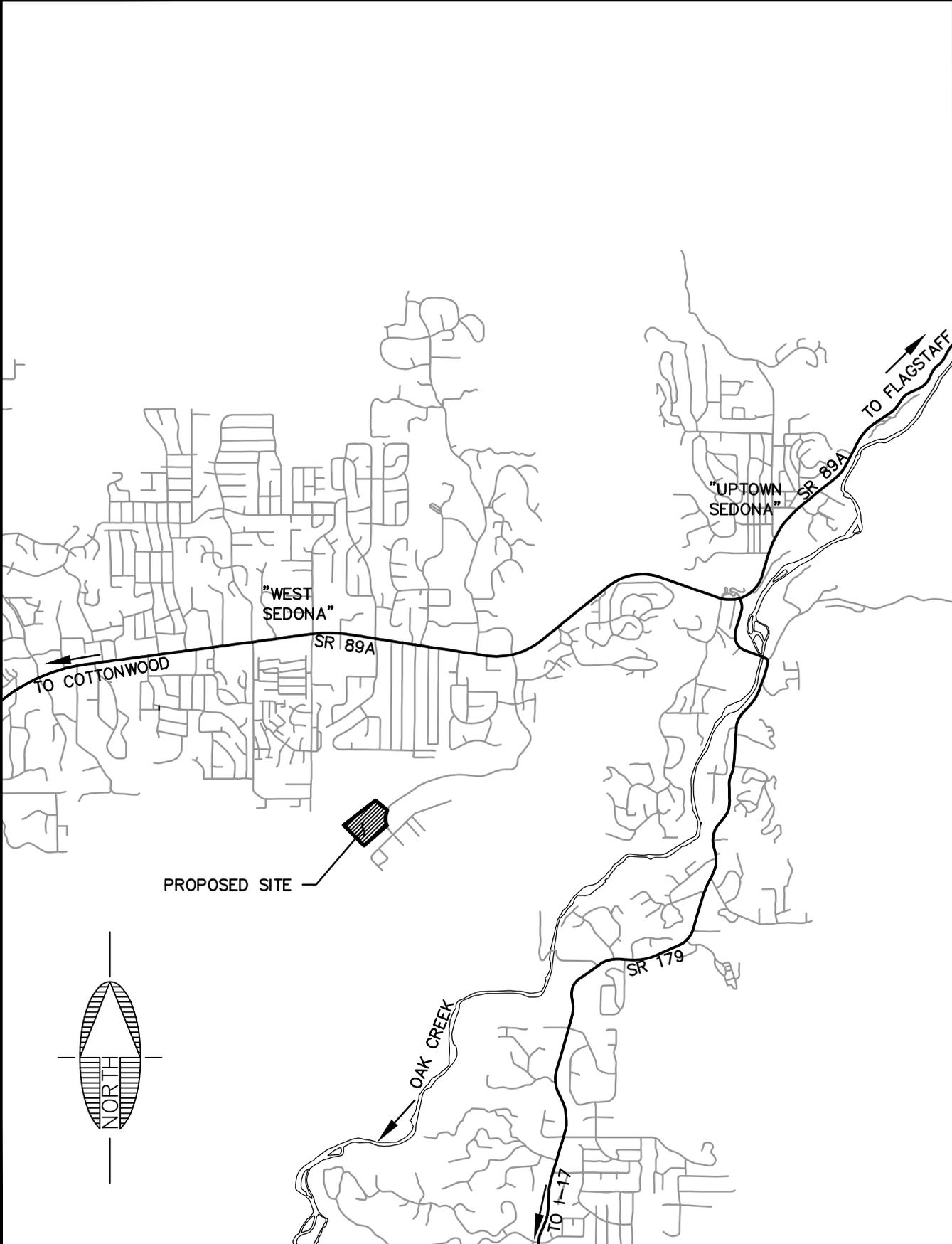
There is an existing pedestrian crossing that accesses the parking lot across Airport Road from Sky Ranch Lodge. There is no striped crosswalk, but there is a pedestrian sign warning vehicles travelling on Airport Road. Internal circulation will be addressed as the site plan moves further along in its planning process; the intent is to have a walkable site. Only minor outside pedestrian traffic is anticipated to access the Vista or nearby trails for recreational hiking. Due to the remoteness of the lodge, off-site tourist activities are expected to be done via vehicle.

As mentioned previously the site is currently developed with three existing driveways of off Airport Road. Airport Road is a collector roadway with one lane in each direction that serves as the primary access to Sedona Airport from Highway 89A. The roadway appears to be in need of some surface maintenance. Striping throughout the roadway is faded and needs to be re-striped.

The intersection of Airport Road/Highway 89A is signalized. Both westbound and eastbound legs of Highway 89A have a dedicated left turn lane, two through lanes, and a dedicated right turn lane entering the intersection. Both northbound and southbound legs of Airport Road have a dedicated left turn lane and one combination through/right turn lane entering the intersection. The through movement is minimal due to the land use on the north side of the intersection including an office complex, church and hotel. See Figure 3 for lane configuration details.

Airport Road from Highway 89A to the top of the Mesa is approximately 1 mile long. From Highway 89A intersection to approximately 1,100 feet south (Chimney Spire Road) land uses adjacent to Airport Road include commercial property and access to the Saddlerock and Les Springs

subdivisions. Beyond the 1,100 feet south to the top of the mesa at approximately 5,700 feet, Airport Road is rural in nature with no access points except to the small parking lot for the Vortex.



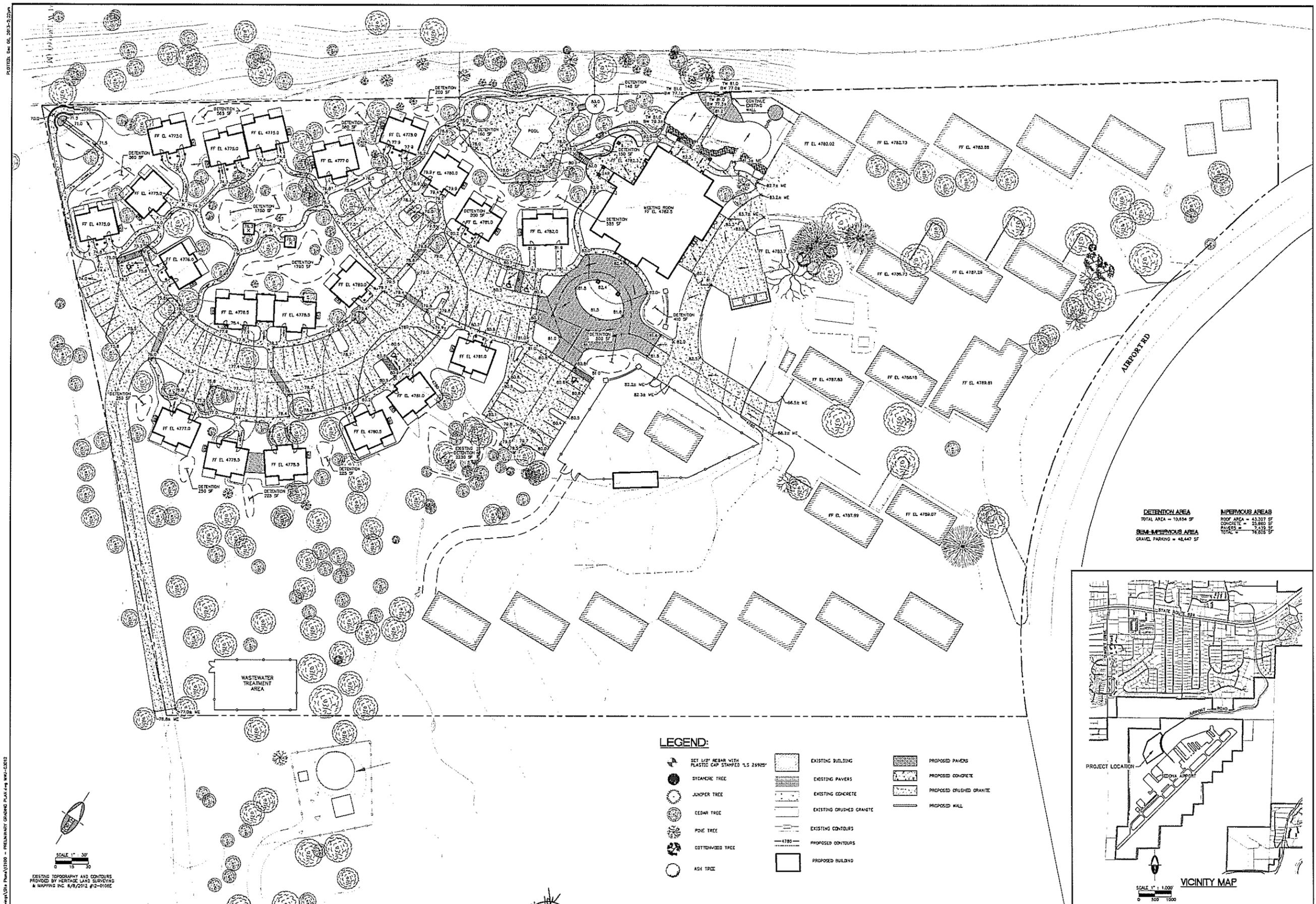
110 West Dale Ave
Flagstaff, AZ 86001
928.773.0354
928.774.8934 fax
www.swiaz.com

JOB NO:	12100
DATE:	NOV 2013
SCALE:	1"=3000'
DRAWN:	SCI
DESIGN:	SCI
CHECKED:	GEC

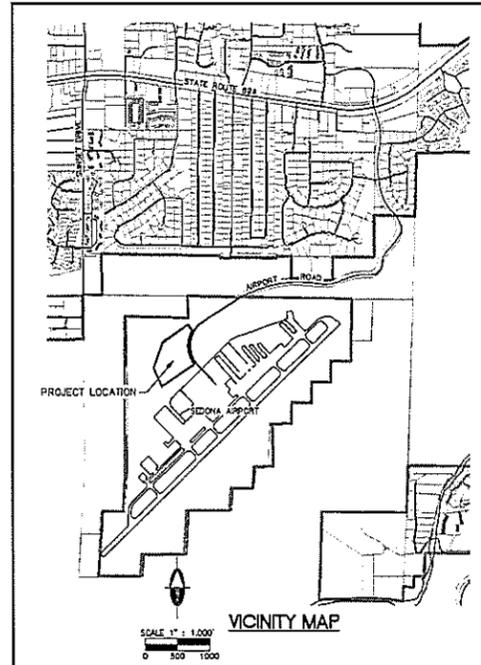
SKY RANCH LODGE CITY OF SEDONA
ARIZONA

VICINITY MAP

SHEET
F1
OF



DETECTION AREA	IMPERVIOUS AREAS
TOTAL AREA = 10,834 SF	ROOF AREA = 43,307 SF
	CONCRETE = 23,880 SF
SEMI-IMPERVIOUS AREA	PAVING = 2,419 SF
GRAVEL PARKING = 48,447 SF	TOTAL = 76,805 SF



LEGEND:

- SET 1/2" REBAR WITH PLASTIC CAP STAMPED "LS 2592"
- SYCAMORE TREE
- JUNIPER TREE
- CEDAR TREE
- PINE TREE
- COTTONWOOD TREE
- ASH TREE
- EXISTING BUILDING
- EXISTING PAVERS
- EXISTING CONCRETE
- EXISTING CRUSHED GRANITE
- EXISTING CONTOURS
- PROPOSED CONTOURS
- PROPOSED BUILDING
- PROPOSED PAVERS
- PROPOSED CONCRETE
- PROPOSED CRUSHED GRANITE
- PROPOSED WALL

EXISTING TOPOGRAPHY AND CONTOURS PROVIDED BY HERITAGE LAND SURVEYING & MAPPING INC. 8/9/2012 #12-0106C

CALL TWO WORKING DAYS BEFORE YOU GO
1-800-STAKE-IT



NO.	DESCRIPTION	REVISIONS	DATE	BY

SWI
Shephard & Wesnitzer, Inc.

75 Kallif Place
Sedona, AZ 86336
928.282.1061
928.282.2058 fax
www.swi.com

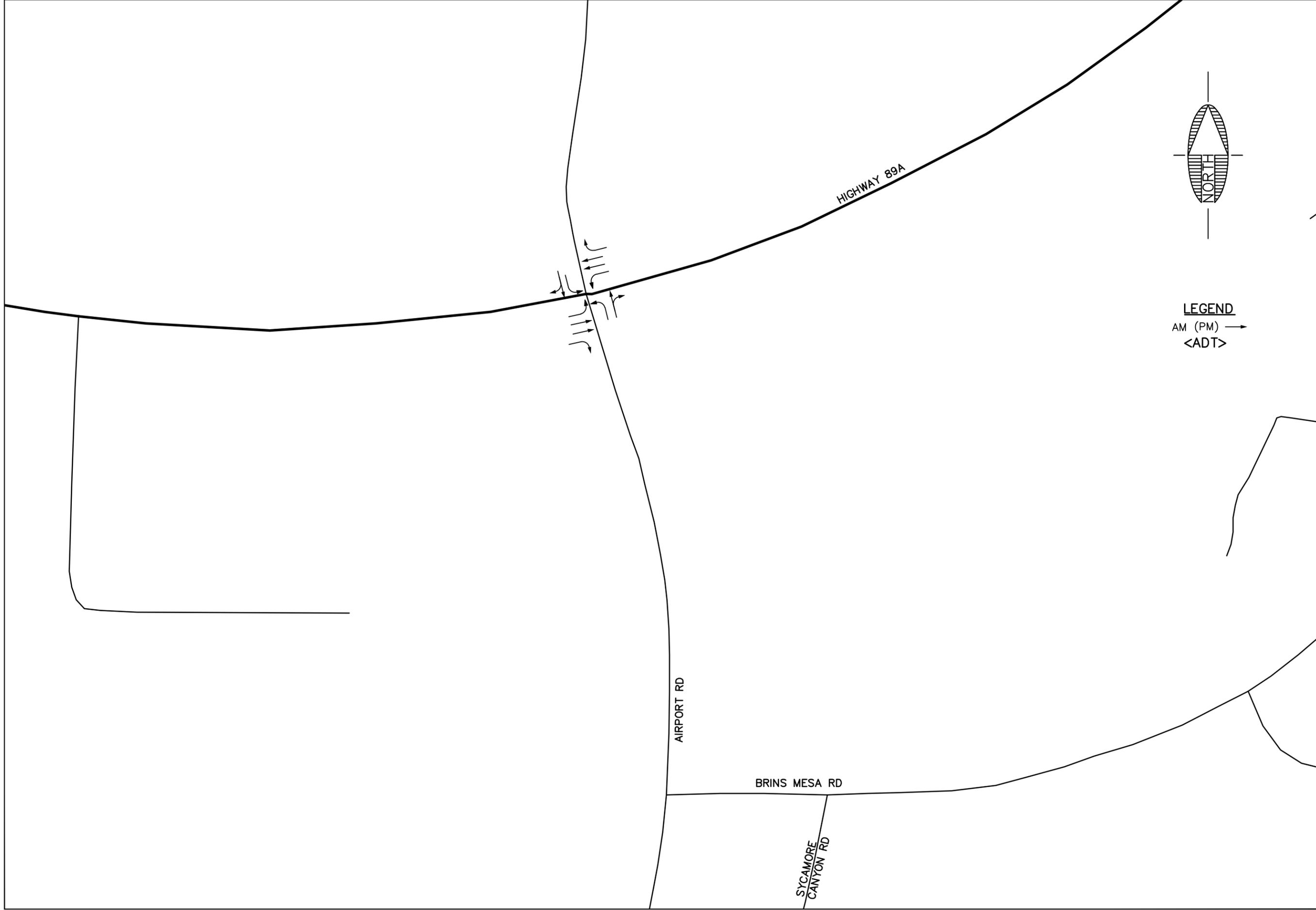
JOB NO. 12100
DATE DEC 13
SCALE: 1"=30'
DRAWN: MKJ
DESIGN: AHB
CHECKED: AHB

SKY RANCH LODGE
SEDONA ARIZONA
PRELIMINARY GRADING PLAN
SHEET 1 OF 1

The Vortex parking area does seem to be too small for its popularity and therefore feels congested as vehicles slow to look for parking. Both the Vortex and Overlook areas generate pedestrian traffic after their vehicles are parked. The Vortex parking is on the same side as the Vortex landmark, where the Overlook parking requires pedestrians to cross Airport Road. The crossing is not marked but road signage and speed bumps exist to warn drivers. On occasion the when the Vortex parking area is full a visitor may park at the Overlook and walk down Airport Road to the Vortex landmark. In order to reduce the number of visitors walking on Airport Road a new hiking trail has been constructed from the parking area at the Overlook to the parking area at the Vortex.

Signage is scheduled to be installed to direct pedestrians to use the trail.

Other than the occasional recreational bicyclist or pedestrian, bicycle and pedestrian activity is close to non-existent mostly due to the fact that there is not real connectivity to draw this type of activity.



CALL TWO WORKING DAYS BEFORE YOU DIG 1-800-STAKE-IT		REVISIONS NO. DESCRIPTION DATE BY	
DRAWING NO. T3		SHEPARD SWI WESTITZET INC. 110 West Dale Ave Flagstaff, AZ 86001 928/773-0384 928/774-6884 fax www.swiaz.com	
SHT NO. OF		JOB NO: 12100 DATE: DEC 2013 SCALE: 1"=100' DRAWN: SCI DESIGNED: SCI CHECKED: GEC	
SKY RANCH LODGE		SEDONA AZ	
2013 EXISTING INTERSECTION LANE CONFIGURATION			

EXISTING TRAFFIC CHARACTERISTICS

INTERSECTION

Three years (2011-2013) of accident data has been analyzed for Airport Road. There were eight accidents at the intersection of Airport Road and SR 89A: six occurred on SR 89A with four total injuries, and two occurred on Airport Road with one injury. There were five additional accidents along Airport Road without injuries: two single vehicle, two vehicle backings, and one left turn collision. This information was obtained from the City of Sedona Police Department; the full accident list is included in the Appendix for reference.

Results of the Final Soldiers Pass Road Area Traffic Study (SPRAT), dated April 2007, indicate that there is no distinct morning or evening peak hour travel time periods. The data indicates a peak travel period between 10AM and 5PM. Existing intersection turning movements at the intersection of Airport Road/Highway 89A were collected by Shephard-Wesnitzer, Inc. from 11 AM to 1PM and 4PM to 6PM on November 7, 2013. There is a peak hour from 12PM to 1PM and another peak hour from 5PM to 6PM. The existing traffic shows an approximate 50 percent split in eastbound traffic vs. westbound traffic. See Figure 4 for existing traffic volumes. The complete intersection counts are included in the Appendix.

Fall and spring is typically the busy time for Sedona. Sunset is around 5:30 during early November, meaning that the PM peak traffic counts from 4:00 to 6:00 PM also capture the traffic heading up the mesa on Airport Road to watch the sunset.

Level of Service (LOS) results define traffic flow conditions. A scale of “A” to “F” is used to rate congestion as determined by delay (seconds/vehicle). A LOS “A” represents optimum conditions and LOS “F” defines undesirable congested conditions. Urban environments are considered effective down to LOS “D”. Capacity analyses were conducted using the methodologies defined in the 2000 Highway Capacity Manual (HCM). HCS 2010 was used to analyze the intersection to determine existing conditions LOS. Table 1 illustrates the existing LOS for the intersection study. The completed LOS analysis worksheets are provided in the Appendix.

Queue lengths represent the number of vehicles stopped in any one lane at one time, either waiting for a gap in traffic or waiting for the light to change. The area of this study requires specific attention be paid to queue lengths and their possible conflicts, therefore each movement's queuing lengths will also be presented in Table 1. The queuing length listed for the signalized intersection represents the 50th percentile length during each cycle.

**TABLE 1 – 2013 EXISTING CONDITIONS
FOR AIRPORT ROAD/HIGHWAY 89A**

Highway 89A - Airport Rd Signal Controlled	Existing Level of Service					
	AM			PM		
	LOS	Q	Delay(sec)	LOS	Q	Delay(sec)
Intersection	B		14.2	B		14.8
Eastbound Approach	B			B		12.9
--Eastbound Left	A	0.1	8.4	A	0.1	8.2
--Eastbound Through	B	6.4	13.7	B	5.9	13.2
--Eastbound Right	A	0.6	9.5	A	0.7	9.5
Westbound Approach	B		13.1	B		12.8
--Westbound Left	A	0.3	8.8	A	0.5	8.8
--Westbound Through	B	6.0	13.4	B	5.8	13.2
--Westbound Right	A	0.2	9.0	A	0.2	9.1
Northbound Approach	C		28.9	C		30.5
--Northbound Left	C	1.1	29.5	C	2.3	31.5
--Northbound Through/Right	C	1.1	28.4	C	2.0	29.4
Southbound Approach	C		28.4	C		29.0
--Southbound Left	C	0.3	29.7	C	0.3	31.8
--Southbound Through/Right	C	0.4	27.7	C	0.7	28.0

ROADWAY

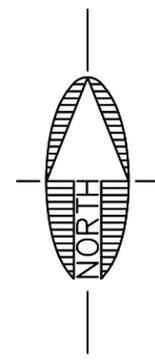
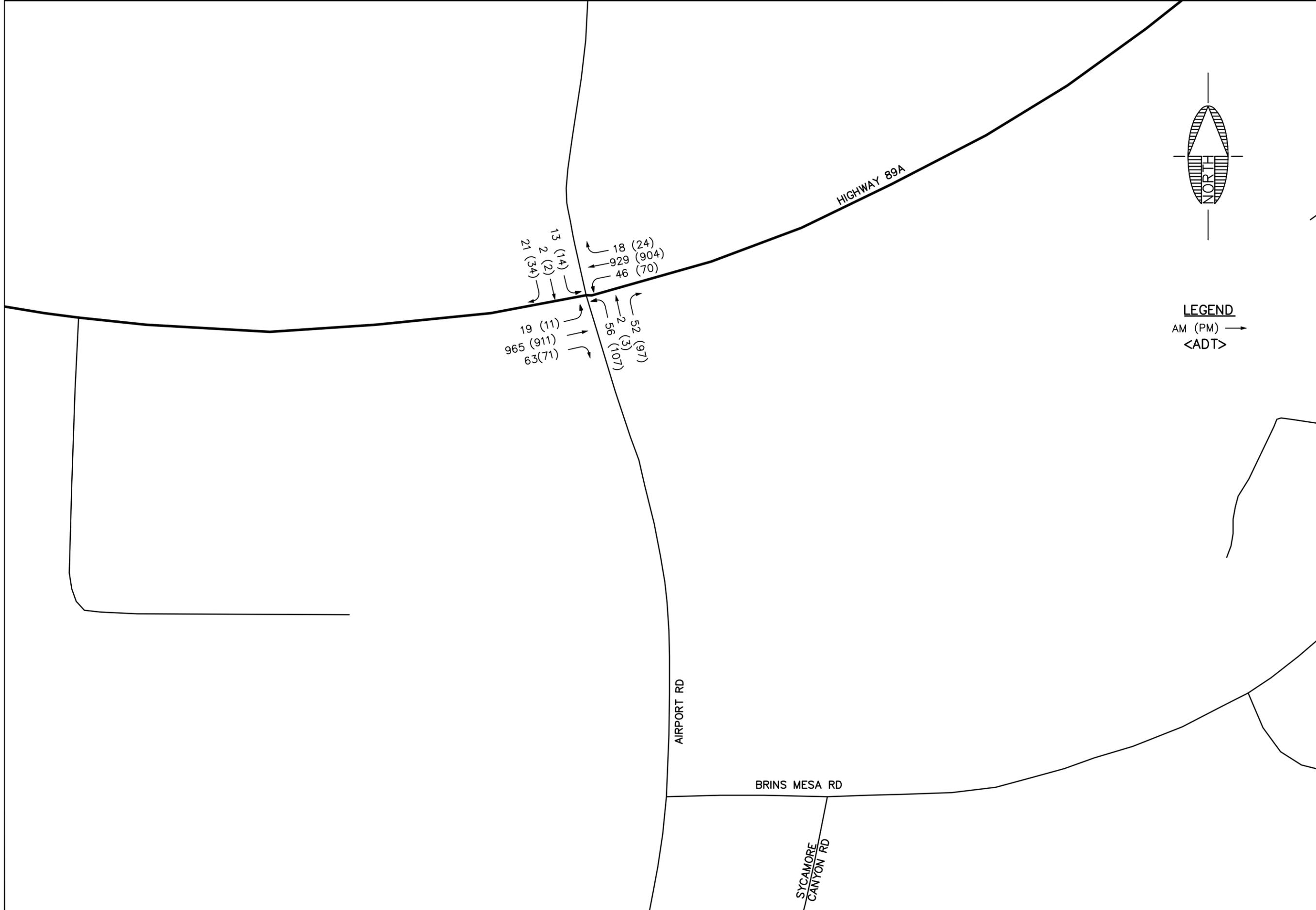
An analysis of Airport Road was conducted to determine the traffic volumes the roadway can accommodate while operating between LOS A and LOS F. HCS 2010 was used in the analysis with the following assumptions: 10 foot lane width, 0 foot shoulder width, 2 miles long with 6% grade, and 45 miles per hour (mph) base free flow speed. The Highway Capacity Manual (HCM) doesn't

allow the use of speeds less than 45 mph for a two-lane LOS analysis. Traffic volumes were entered into the model until the thresholds between each LOS was met. The following table summarizes the results of the analysis.

Volume (vehicles per hour, vph)			
LOS	Range		Average
A	0	- 192	96
B	193	- 362	278
C	363	- 784	574
D	785	- 1,538	1,162
E	1,539	- 1,752	1,646
F	1,753	- up	1,753

Average daily traffic (ADT) counts for two locations of Airport Road were collected; one just south of Highway 89A and another one uphill from the vortex parking area. Two locations were chosen in order to determine how many vehicles were using Airport Road near the Highway 89A intersection and how many are using Airport Road to travel all the way to the top of the mesa. As shown in the table below, both the AM and PM peak hour volumes are well below the actual capacity of Airport Road. The ADT traffic counts are included in the appendix.

Location	AM Peak Volume (vph)	PM Peak Volume (vph)	ADT (vpd)
South of Vortex Parking (1)	136	262	1,620
South of 89A (2)	186	323	2,253



LEGEND
 AM (PM) →
 <ADT>

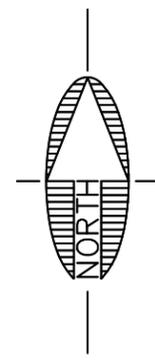
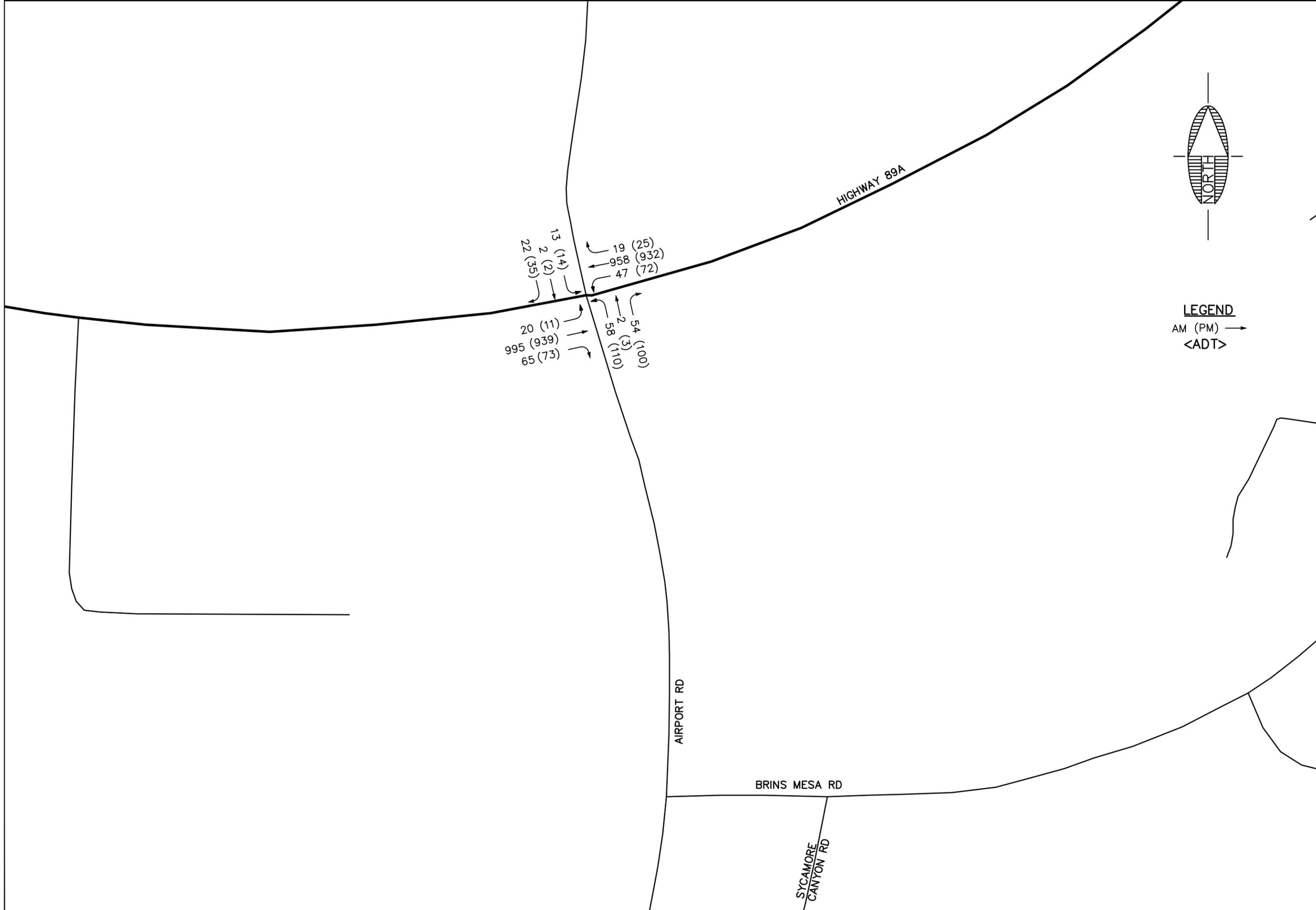
110 West Dale Ave Flagstaff, AZ 86001 928/773-0384 928/774-6884 fax www.wiaz.com		JOB NO: 12100 DATE: DEC 2013 SCALE: 1"=100' DRAWN: SCI DESIGNED: SCI CHECKED: GEC	SEDONA AZ SKY RANCH LODGE 2013 EXISTING TRAFFIC																
		REVISIONS <table border="1"> <thead> <tr> <th>NO.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>BY</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	NO.	DESCRIPTION	DATE	BY													CALL TWO WORKING DAYS BEFORE YOU DIG 1-800-STAKE-IT
NO.	DESCRIPTION	DATE	BY																
DRAWING NO. F4		SHT NO. OF																	

PROJECTED TRAFFIC

The Sky Ranch Lodge expansion is expected to be completed by the end of 2014. Therefore, one year of background traffic has been applied to the “2013 Existing” traffic counts before “site generated traffic” was added. Background traffic is the traffic existing around the site at a given year that is not due to the development being added but instead due to general population growth in the area. The ADOT Average Annual Growth Rate (AAGR) for the area is listed as 1.031; therefore a growth rate of 3.1 percent has been applied to the existing counts. One year of growth to the 2013 existing traffic counts is illustrated in Figure 5 – 2014 Background Traffic.

The average daily traffic volumes, including AM and PM peak hour trips generated by the proposed development have been estimated using trip rates provided by the *Institution of Transportation Engineers (ITE) Trip Generation, Eighth Edition*. ITE land use code 310: Hotel predicts 327 daily trips including 22 AM and 24 PM peak hour trips for the proposed site. The number of proposed rooms was used as the independent variable; for a “Hotel”, meeting space is accounted for within the expected “room” trip generation.

Although convention facilities are included in ITE land use code 310, the COS is concerned that this method underestimates the trips generated by the meeting room. ITE was contacted to see if any additional information on hotels with conference centers was available, but unfortunately that information does not exist. Research on trips generated by convention facilities shows an average of 1.5 to 3 people per vehicle for events. SWI assumes there will be 2 people per vehicle, resulting in an additional 100 daily trips generated by the conference center. SWI also assumes approximately 50% of the people will also stay at the lodge, reducing the amount of trips generated to 50 daily trips. Several municipalities throughout the southwest use methods similar to ITE land use code 310 to estimate trips generated by hotels with conference centers. Additionally, the ADOT Traffic Engineering Policies, Guidelines, and Procedures for traffic studies also recommends using ITE to estimate the amount of trips generated by a proposed development. For the purposes of this study, SWI will run an analysis with traffic volumes estimated by the ITE method as well as a worst case scenario that includes an additional 50 AM and PM peak hour vehicles per hour. See Table 2 for a full list of generated traffic, and Figure 6 for the site generated traffic distribution at the intersection of Airport Rd/Highway 89A.

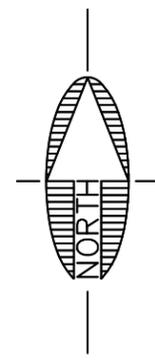
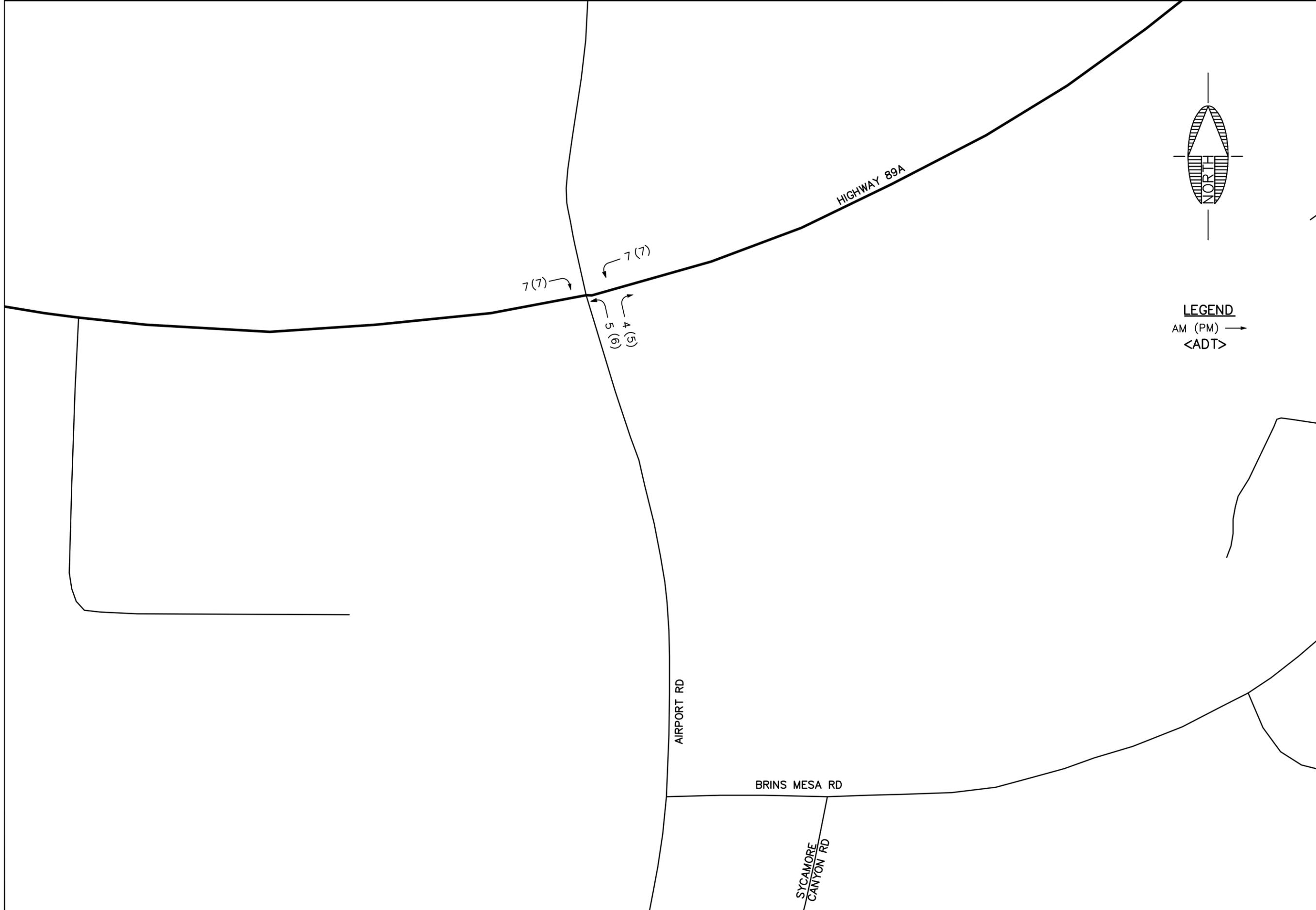


LEGEND
 AM (PM) →
 <ADT>

 Shepherd Westtzen Inc.		110 West Dale Ave Flagstaff, AZ 86001 928/773-0384 928/774-6884 fax www.swiaz.com	JOB NO: 12100 DATE: DEC 2013 SCALE: 1"=100' DRAWN: SCI DESIGNED: SCI CHECKED: GEC	SKY RANCH LODGE 2014 BACKGROUND TRAFFIC SEDONA AZ
REVISIONS		CALL TWO WORKING DAYS BEFORE YOU DIG 1-800-STAKE-IT		
NO.	DESCRIPTION	DATE	BY	
DRAWING NO. F5		SHT NO. OF		

TABLE 2 - TRIP GENERATION TABLE

LAND USE	ITE CODE	VARIABLE	TIME PERIOD	EQUATION	% ENTERING	WKDAY TOTAL	AM TOTAL	AM		PM TOTAL	PM	
								in	out		in	out
Sky Ranch Lodge	310											
Variable = Rooms		40	<i>Weekday</i>	$T=8.17(X)$	50%	327						
Hotel			<i>AM Peak</i>	$T=0.56(X)$	61%		22	14	9			
			<i>PM peak</i>	$T=0.59(X)$	53%					24	13	11
				Subtotal Trips		327	22	14	9	24	13	11
				Site Interaction	0.0%	0	0	0	0	0	0	0
				Ttotal Trips (Site Entrance/Exit Total)		327	22	14	9	24	13	11



LEGEND
 AM (PM) →
 <ADT>

110 West Dale Ave Flagstaff, AZ 86001 928/773-0384 928/774-6884 fax www.wiaz.com		JOB NO: 12100 DATE: DEC 2013 SCALE: 1"=100' DRAWN: SCI DESIGN: SCI CHECKED: GEC	SEDONA AZ 2014 SITE TRAFFIC																
		SKY RANCH LODGE																	
REVISIONS <table border="1"> <thead> <tr> <th>NO.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>BY</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>		NO.	DESCRIPTION	DATE	BY														
NO.	DESCRIPTION	DATE	BY																
CALL TWO WORKING DAYS BEFORE YOU DIG 1-800-STAKE-IT																			
DRAWING NO. T6																			
SHT NO. OF																			

TRAFFIC ANALYSIS

LEVEL OF SERVICE/QUEUING

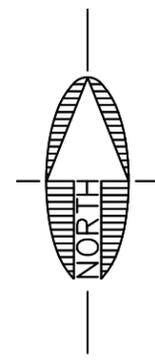
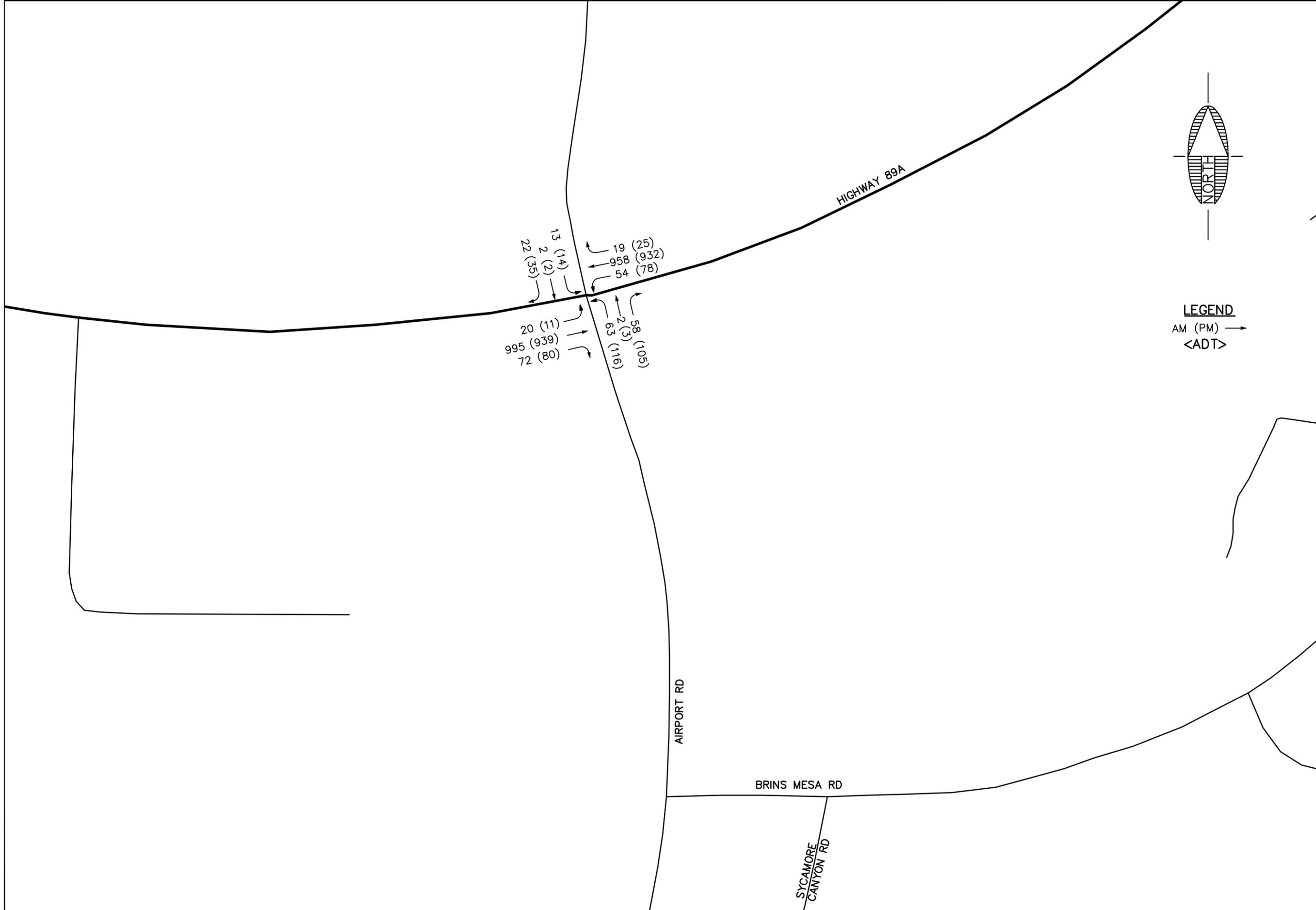
The site generated traffic estimated using the ITE method was added to the 2014 background traffic to determine the proposed total traffic volumes, see Figure 7. SWI also calculated a worst case scenario by including an additional 50 trips to the PM peak hour rates, see Figure 8. The overall peak hour volume was higher for the 5PM to 6PM peak hour than that of the 12PM to 1 PM peak hour. The peak hour traffic volume on Airport Road was higher during the 5PM to 6PM peak hour, while the traffic volume on Highway 89A was higher during the 12PM to 1PM peak hour. Both peak hours were used for this analysis. Capacity analyses were conducted using the methodologies defined in the HCM. HCS 2010 was used to analyze the intersections to determine proposed conditions. Table 3 illustrates the proposed conditions for the study area at the expected time of completion (2014) for the intersection of Airport Road and Highway 89A. Since this is a Category I study, only the opening year (2014) was studied. The completed HCS worksheets are provided in the Appendix.

AIRPORT ROAD ANALYSIS

As defined in the Existing Traffic Characteristics of the report, Airport Road in its existing configuration can accommodate an approximate average of 574 vehicles per hour (vph) for a LOS C and 1,162 vph at a LOS D. As shown in the table below, both the AM and PM peak hour volumes are well below the actual capacity of Airport Road. The ADT traffic counts are included in the appendix.

Location	2013 Counts					2014 Projected Volumes				
	AM Peak		PM Peak		Average Daily Traffic (ADT)	AM Peak		PM Peak		Average Daily Traffic (ADT)
	Volume (vph)	LOS	Volume (vph)	LOS		Volume (vph)	LOS	Volume (vph)	LOS	
South of Vortex Parking	139	A	262	B	1,620	203	B	336	B	2,047
South of SR 89A	186	A	323	B	2,253	250	B	397	C	2,680

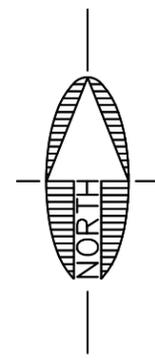
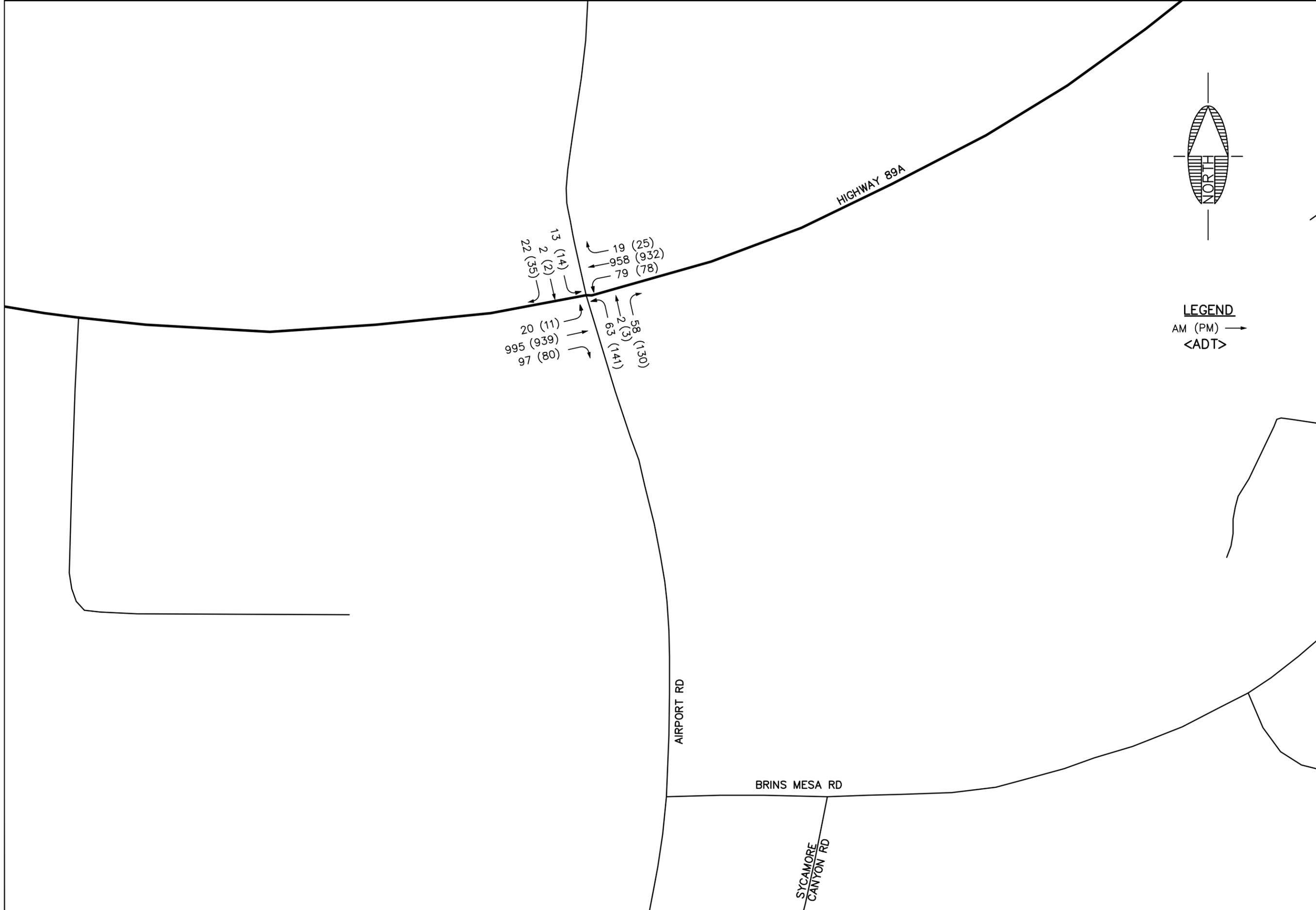
After build out of the proposed Sky Ranch Lodge, Airport Road is expected to have 397 vph during the PM peak hour, an overall increase of 74 vehicles. Most roadways are designed to operate at a LOS D. After the proposed expansion of the Sky Ranch Lodge, Airport Road will be running at 34 percent of a LOS D just south of the SR 89A signal.



LEGEND
 AM (PM) →
 <ADT>

		110 West Dale Ave Flagstaff, AZ 86001 928/773-0384 928/774-6884 fax www.swiaz.com	JOB NO: 12100 DATE: DEC 2013 SCALE: 1"=100' DRAWN: SCI DESIGN: SCI CHECKED: GEC	SKY RANCH LODGE SEDONA AZ
CALL TWO WORKING DAYS BEFORE YOU DIG 1-800-STAKE-IT		DRAWING NO. F7		
REVISIONS		SHT NO. OF		
NO.	DESCRIPTION	DATE	BY	

**2014
TOTAL TRAFFIC**



LEGEND
 AM (PM) →
 <ADT>

 Shepherd Westtzen Inc.		110 West Dale Ave Flagstaff, AZ 86001 928/773-0304 928/774-6804 fax www.swiaz.com	JOB NO: 12100 DATE: DEC 2013 SCALE: 1"=100' DRAWN: SCI DESIGNED: SCI CHECKED: GEC	SKY RANCH LODGE SEDONA AZ 2014 WORST CASE TOTAL TRAFFIC
REVISIONS NO. DESCRIPTION _____ _____ _____	DATE _____ _____ _____	BY _____ _____ _____	CALL TWO WORKING DAYS BEFORE YOU DIG 1-800-STAKE-IT	
DRAWING NO. F08		SHT NO. _____ OF _____		

**TABLE 3 – 2014 PROPOSED CONDITIONS COMPARISON
FOR HIGHWAY 89A/AIRPORT ROAD**

Highway 89A - Airport Rd Signal Controlled	2014 Background Conditions						2014 Total Conditions (Using ITE 310)						2014 Total Conditions (Worst Case)					
	AM			PM			AM			PM			AM			PM		
	LOS	Q	Delay	LOS	Q	Delay	LOS	Q	Delay	LOS	Q	Delay	LOS	Q	Delay	LOS	Q	Delay
Intersection	B		14.5	B		15.0	B		14.5	B		15.1	B		14.4	B		15.5
Eastbound Approach	B		13.5	B		13.1	B		13.5	B		13.1	B		13.4	B		13.1
--Eastbound Left	A	0.1	8.5	A	0.1	8.3	A	0.1	8.5	A	0.1	8.3	A	0.1	8.5	A	0.1	8.3
--Eastbound Through	B	6.7	12.8	B	6.1	13.5	B	6.7	13.9	B	6.2	13.5	B	6.7	13.9	B	6.1	13.5
--Eastbound Right	A	0.6	9.3	A	0.7	9.6	A	0.7	9.6	A	0.8	9.6	A	1.0	9.8	A	0.8	9.6
Westbound Approach	B		13.3	B		13.0	B		13.3	B		13.0	B		13.2	B		13.0
--Westbound Left	A	0.4	8.9	A	0.6	8.9	A	0.4	9.1	A	0.6	9.0	A	0.6	9.3	A	0.6	9.0
--Westbound Through	B	6.3	12.6	B	6.1	13.4	B	6.3	13.6	B	6.1	13.4	B	6.3	13.6	B	6.1	13.4
--Westbound Right	A	0.2	9.0	A	0.2	9.1	A	0.2	9.1	A	0.2	9.1	A	0.2	9.1	A	0.2	9.1
Northbound Approach	C		29.0	C		30.6	C		29.1	C		30.7	C		29.1	C		31.5
--Northbound Left	C	1.2	29.6	C	2.3	31.6	C	1.3	29.7	C	2.5	31.8	C	1.3	29.7	C	3.1	32.6
--Northbound Through/Right	C	1.1	28.4	C	2.1	29.5	C	1.2	28.5	C	2.2	29.6	C	1.2	28.5	C	2.8	30.2
Southbound Approach	C		28.4	C		29.1	C		28.5	C		29.1	C		28.5	C		29.5
--Southbound Left	C	0.3	29.8	C	0.3	31.9	C	0.3	29.9	C	0.3	32.2	C	0.3	29.9	C	0.3	33.4
--Southbound Through/Right	C	0.5	27.7	C	0.7	28.0	C	0.5	27.7	C	0.7	28.0	C	0.5	27.7	C	0.7	28.0

CONCLUSIONS AND RECOMMENDATIONS

The Sky Ranch Lodge expansion proposal located at the top of Airport Mesa addition of 40 rooms predicts 327 daily trips including 22 AM and 24 PM peak hour trips for the proposed site. The 200 person meeting room is assumed to generate 100 daily trips including 50 AM and 50 PM peak hour trips.

The intersection of Airport Road/Highway 89A currently operates at a LOS B for both morning and evening peak hours, and will continue to do so after the Sky Ranch Lodge expansion is complete. The additional traffic on Airport Road will not negatively impact the LOS of the roadway. The current traffic volumes on Airport Road are below the actual capacity of the roadway. SWI does not recommend any additional studies or modifications to Airport Road.

As mentioned previously, the Vortex parking area appears insufficient based on its popularity causing it to feel congested as vehicles slow to look for parking. The construction of the new Forest Service trail connecting the Vortex and Airport parking areas will reduce the probability of both bicyclists and pedestrians from traveling along Airport Road from the Overlook to the Vortex. Trail signage will help visitors to use the trail.

Airport Road reflects a combination of both urban and rural characteristics. It has the low speed limit of typical urban sections, but fewer side intersections more typical of a rural roadway. It should be noted that signage indicating the one pedestrian crossing, directions to the new trail between the Vortex and Vista, and signage prohibiting pedestrians from walking along the roadway above the Vortex, would be prudent improvements to improve safety of the existing conditions.

APPENDIX

Traffic Accidents 89A and Airport Rd

2011 - 2012 - 2013

Accident Number	Accident Type	Accident Date and Time	Accident Address Street Name	Accident Address Cross Street Name	Accident Manner Of Collision	Accident Total Injuries	Accident Total Units
20110643:	Non-Injury	2011/02/15 17:46:00:	89A	AIRPORT	Left Turn	0	2
20120951:	Injury	2012/03/02 16:03:00:	89A	AIRPORT	Rear End	2	2
20122942:	Injury	2012/05/22 21:38:00:	89A	AIRPORT	Left Turn	2	3
20124333:	Non-Injury	2012/08/03 23:41:00:	89A	AIRPORT	Angle	0	2
20132815:	Injury	2013/06/13 13:30:00:	89A	AIRPORT	Head-On	2	2
20133881:	Injury	2013/08/07 11:24:00:	89A	AIRPORT	Angle	1	2

: 6

1/22/2014 11:30:12 AM

Traffic Accidents on Airport Rd

2011 - 2012 - 2013

Accident Number	Accident Type	Accident Date and Time	Accident Address Street Name	Accident Address Cross Street Name	Accident Manner Of Collision	Accident Total Injuries	Accident Total Units
20112225:	Non-Injury	2011/05/22 19:46:00:	AIRPORT	89A	xxRear-End	0	2
20113248:	Non-Injury	2011/07/16 17:14:00:	AIRPORT		Single Vehicle	0	1
20114530:	Non-Injury	2011/09/25 17:29:00:	AIRPORT		Rear to Rear	0	2
20115563:	Non-Injury	2011/11/21 09:10:00:	AIRPORT		Single Vehicle	0	1
20130525:	Injury	2013/02/07 20:27:00:	AIRPORT	89A	Single Vehicle	1	1
20131872:	Non-Injury	2013/04/28 10:17:00:	AIRPORT		Rear to Rear	0	2
20135026:	Non-Injury	2013/10/01 15:00:00:	AIRPORT RD/TERMINAL DR		Left Turn	0	2

: 7

1/22/2014 11:31:05 AM

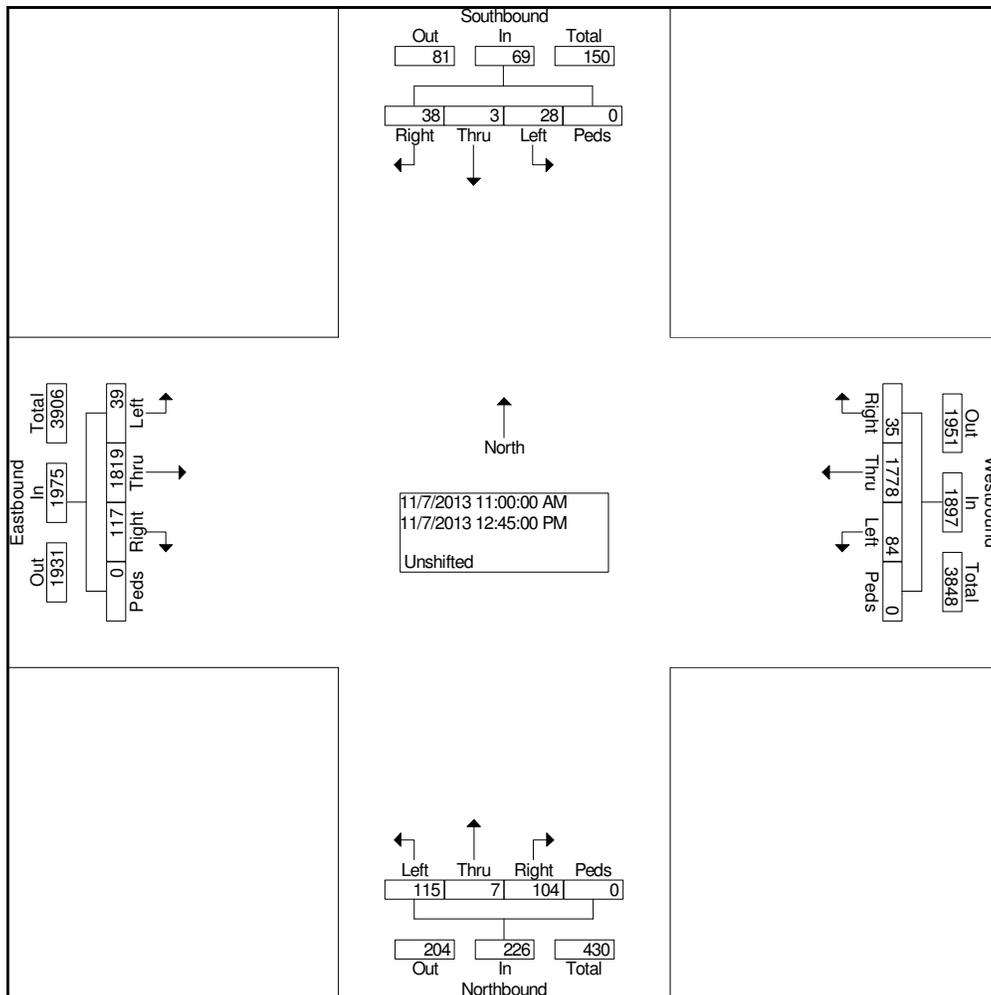
Shephard-Westnitzer, Inc.
 Sedona Flagstaff Cottonwood Prescott Kin
 (928) 773-0354

Start Time: 11:00 am
 End Time: 1:00 pm
 AM Peak Hour: Airport Rd/89A

File Name : 11am Count
 Site Code : 00000000
 Start Date : 11/7/2013
 Page No : 1

Groups Printed- Unshifted

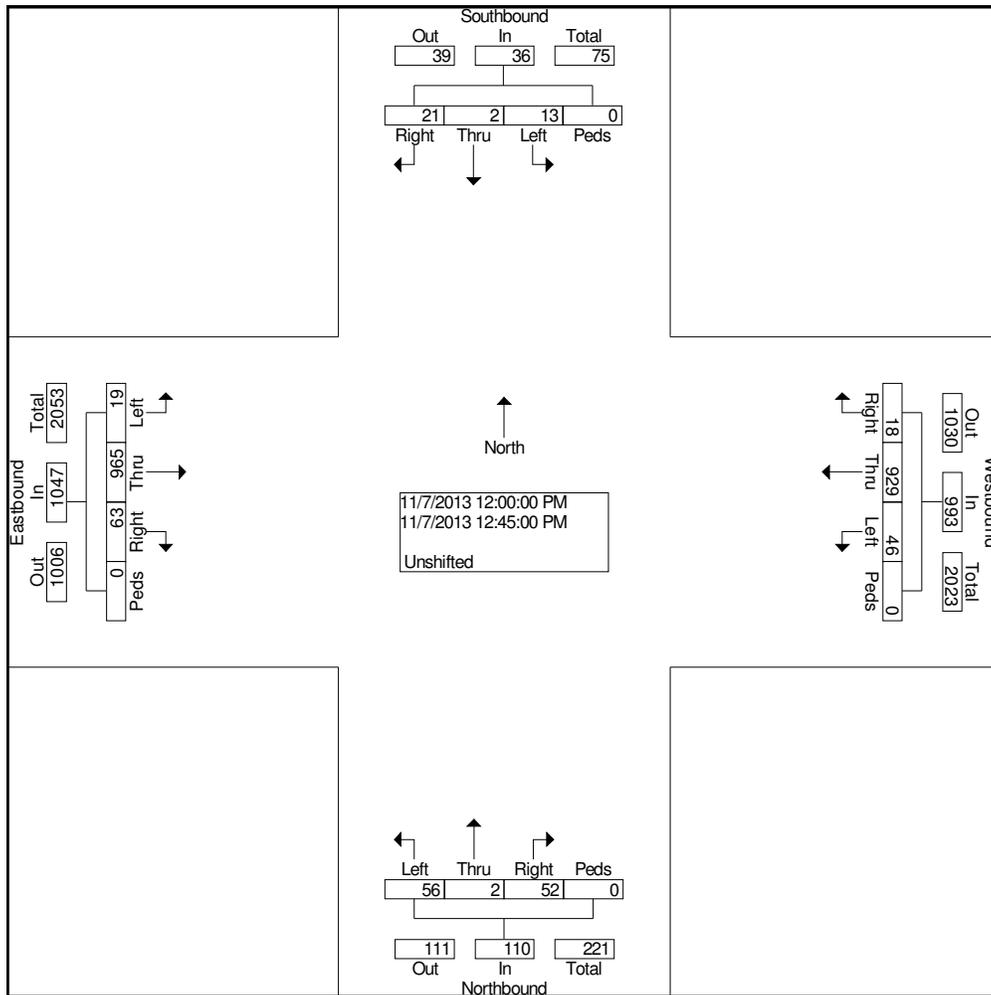
Start Time	Southbound Southbound				Westbound Westbound				Northbound Northbound				Eastbound Eastbound				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
11:00 AM	2	0	5	0	4	215	12	0	11	1	10	0	10	202	5	0	477
11:15 AM	7	1	2	0	7	209	11	0	19	2	13	0	16	229	7	0	523
11:30 AM	5	0	5	0	4	213	6	0	14	2	17	0	13	210	3	0	492
11:45 AM	3	0	3	0	2	212	9	0	8	0	19	0	15	213	5	0	489
Total	17	1	15	0	17	849	38	0	52	5	59	0	54	854	20	0	1981
12:00 PM	3	1	7	0	5	227	7	0	10	1	11	0	14	250	1	0	537
12:15 PM	8	0	2	0	3	230	8	0	19	0	16	0	11	242	5	0	544
12:30 PM	2	1	1	0	1	214	16	0	10	0	14	0	19	260	4	0	542
12:45 PM	8	0	3	0	9	258	15	0	13	1	15	0	19	213	9	0	563
Total	21	2	13	0	18	929	46	0	52	2	56	0	63	965	19	0	2186
Grand Total	38	3	28	0	35	1778	84	0	104	7	115	0	117	1819	39	0	4167
Apprch %	55.1	4.3	40.6	0.0	1.8	93.7	4.4	0.0	46.0	3.1	50.9	0.0	5.9	92.1	2.0	0.0	
Total %	0.9	0.1	0.7	0.0	0.8	42.7	2.0	0.0	2.5	0.2	2.8	0.0	2.8	43.7	0.9	0.0	



Shephard-Westnitzer, Inc.
 Sedona Flagstaff Cottonwood Prescott Kin
 (928) 773-0354

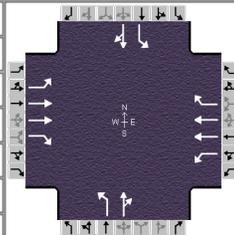
File Name : 11am Count
 Site Code : 00000000
 Start Date : 11/7/2013
 Page No : 2

Start Time	Southbound Southbound					Westbound Westbound					Northbound Northbound					Eastbound Eastbound					Int. Total
	Rig ht	Thru	Left	Ped s	App. Total	Rig ht	Thru	Left	Ped s	App. Total	Rig ht	Thru	Left	Ped s	App. Total	Rig ht	Thru	Left	Ped s	App. Total	
Intersection	12:00 PM																				
Volume	21	2	13	0	36	18	929	46	0	993	52	2	56	0	110	63	965	19	0	1047	2186
Percent	58.3	5.6	36.1	0.0		1.8	93.6	4.6	0.0		47.3	1.8	50.9	0.0		6.0	92.2	1.8	0.0		
12:45 Volume	8	0	3	0	11	9	258	15	0	282	13	1	15	0	29	19	213	9	0	241	563
Peak Factor																					0.971
High Int. Volume	12:00 PM					12:45 PM					12:15 PM					12:30 PM					
Peak Factor	0.818					0.880					0.786					0.925					



HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information		
Agency		Duration, h	0.25			
Analyst		Analysis Date	Nov 8, 2013		Area Type	Other
Jurisdiction		Time Period		PHF	0.90	
Intersection	89A/Airport Rd	Analysis Year	2013		Analysis Period	1 > 7:00
File Name	89A-Airport 2013 AM Peak.xus					
Project Description	2013 Existing AM Peak					



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	19	965	63	46	929	18	56	2	52	13	2	21

Signal Information				Signal Phases								
Cycle, s	90.0	Reference Phase	6									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
Green	5.0	50.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	4.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4		8
Case Number	1.1	3.0	1.1	3.0		6.0		6.0
Phase Duration, s	10.0	55.0	10.0	55.0		25.0		25.0
Change Period, (Y+R _c), s	5.0	5.0	5.0	5.0		5.0		5.0
Max Allow Headway (MAH), s	3.1	0.0	3.1	0.0		3.4		3.4
Queue Clearance Time (g _s), s	2.4		3.0			6.4		5.5
Green Extension Time (g _e), s	0.0	0.0	0.0	0.0		0.3		0.3
Phase Call Probability	1.00		1.00			1.00		1.00
Max Out Probability	1.00		1.00			0.00		0.00

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h	21	1072	70	51	1032	20	62	60		14	26	
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1809	1610	1810	1809	1610	1407	1619		1364	1632	
Queue Service Time (g _s), s	0.4	16.8	1.8	1.0	16.0	0.5	3.3	2.7		0.8	1.1	
Cycle Queue Clearance Time (g _c), s	0.4	16.8	1.8	1.0	16.0	0.5	4.4	2.7		3.5	1.1	
Capacity (c), veh/h	390	2010	895	377	2010	895	375	360		342	363	
Volume-to-Capacity Ratio (X)	0.054	0.534	0.078	0.135	0.514	0.022	0.166	0.167		0.042	0.070	
Available Capacity (c _a), veh/h	390	2010	895	377	2010	895	375	360		342	363	
Back of Queue (Q), veh/ln (50th percentile)	0.1	6.4	0.6	0.3	6.0	0.2	1.1	1.1		0.3	0.4	
Overflow Queue (Q ₃), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Queue Storage Ratio (RQ) (50th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	
Uniform Delay (d ₁), s/veh	8.4	12.6	9.3	8.7	12.4	9.0	29.4	28.3		29.7	27.7	
Incremental Delay (d ₂), s/veh	0.0	1.0	0.2	0.1	0.9	0.0	0.1	0.1		0.0	0.0	
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (d), s/veh	8.4	13.7	9.5	8.8	13.4	9.0	29.5	28.4		29.7	27.7	
Level of Service (LOS)	A	B	A	A	B	A	C	C		C	C	
Approach Delay, s/veh / LOS	13.3		B	13.1		B	28.9		C	28.4		C
Intersection Delay, s/veh / LOS	14.2						B					

Multimodal Results	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	2.2		B	2.2		B	3.0		C	3.0		C
Bicycle LOS Score / LOS	1.4		A	1.4		A	0.7		A	0.6		A

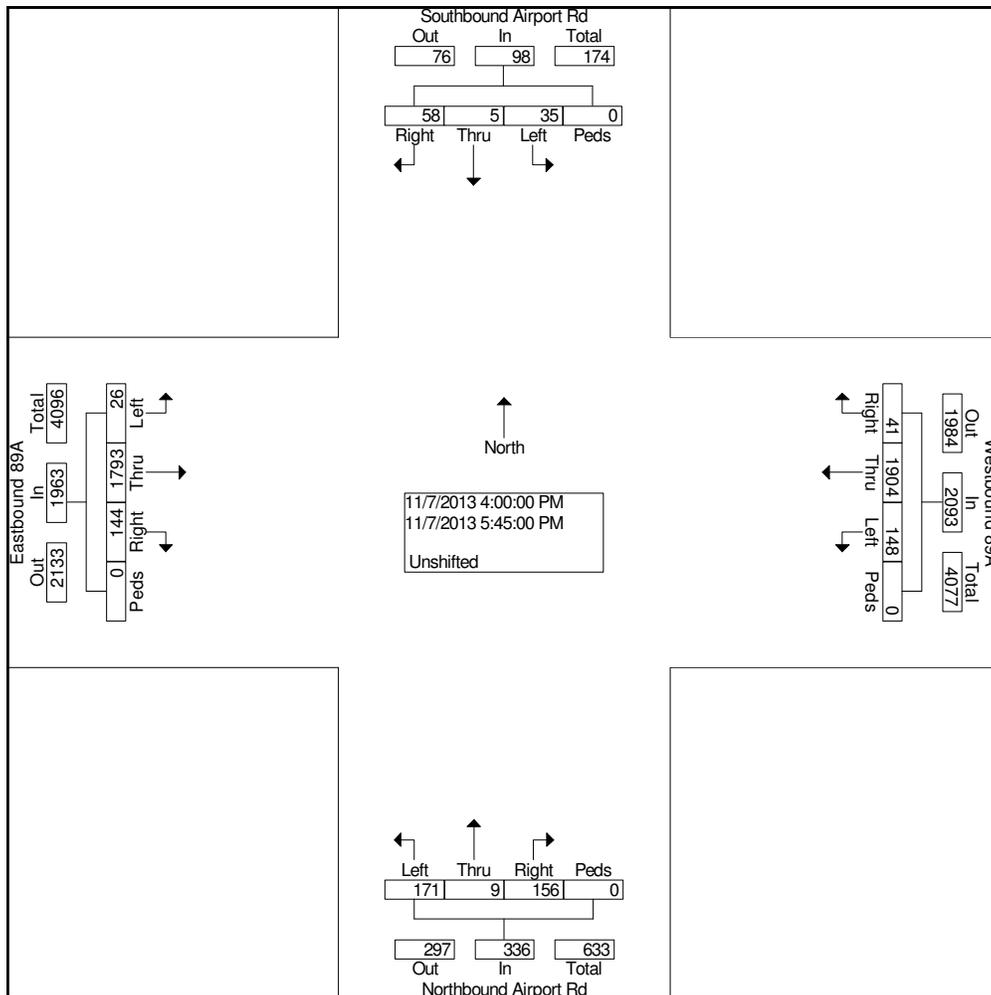
Shephard-Westnitzer, Inc.
 Sedona Flagstaff Cottonwood Prescott Kin
 (928) 773-0354

Start Time: 4:00 pm
 End Time: 5:00 pm
 PM Peak Hour: Airport Rd/89A

File Name : 4pm Count
 Site Code : 00000000
 Start Date : 11/7/2013
 Page No : 1

Groups Printed- Unshifted

Start Time	Southbound Airport Rd Southbound				Westbound 89A Westbound				Northbound Airport Rd Northbound				Eastbound 89A Eastbound				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
04:00 PM	8	2	4	0	3	280	22	0	13	0	8	0	13	256	7	0	616
04:15 PM	5	0	4	0	6	257	17	0	19	1	9	0	14	224	1	0	557
04:30 PM	3	1	6	0	6	247	13	0	19	3	33	0	28	218	3	0	580
04:45 PM	8	0	7	0	2	216	26	0	8	2	14	0	18	184	4	0	489
Total	24	3	21	0	17	1000	78	0	59	6	64	0	73	882	15	0	2242
05:00 PM	5	1	5	0	5	234	28	0	14	1	13	0	30	250	1	0	587
05:15 PM	14	0	3	0	7	236	21	0	25	0	18	0	25	231	3	0	583
05:30 PM	9	1	4	0	4	216	9	0	29	1	50	0	9	220	4	0	556
05:45 PM	6	0	2	0	8	218	12	0	29	1	26	0	7	210	3	0	522
Total	34	2	14	0	24	904	70	0	97	3	107	0	71	911	11	0	2248
Grand Total	58	5	35	0	41	1904	148	0	156	9	171	0	144	1793	26	0	4490
Apprch %	59.2	5.1	35.7	0.0	2.0	91.0	7.1	0.0	46.4	2.7	50.9	0.0	7.3	91.3	1.3	0.0	
Total %	1.3	0.1	0.8	0.0	0.9	42.4	3.3	0.0	3.5	0.2	3.8	0.0	3.2	39.9	0.6	0.0	



Shephard-Westnitzer, Inc.
 Sedona Flagstaff Cottonwood Prescott Kin
 (928) 773-0354

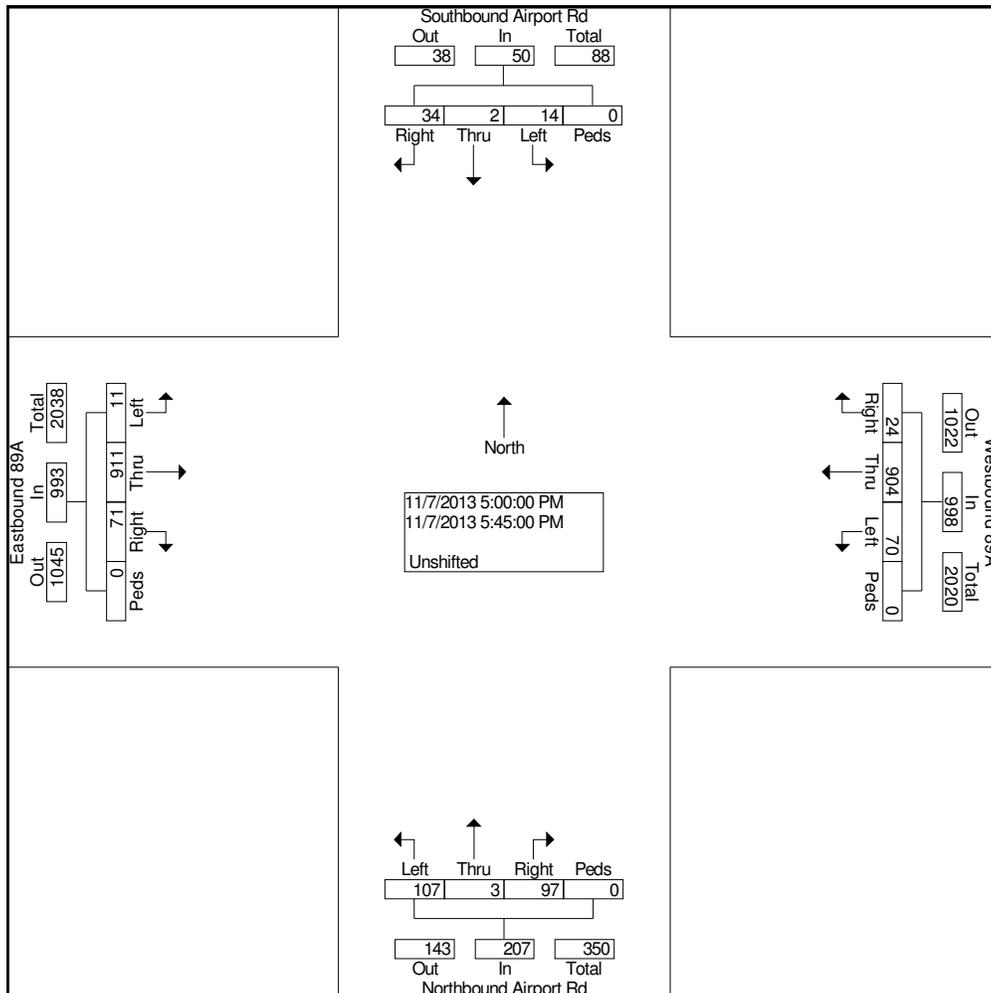
File Name : 4pm Count
 Site Code : 00000000
 Start Date : 11/7/2013
 Page No : 2

Start Time	Southbound Airport Rd Southbound					Westbound 89A Westbound					Northbound Airport Rd Northbound					Eastbound 89A Eastbound					Int. Total
	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	
05:00 PM	34	2	14	0	50	24	904	70	0	998	97	3	107	0	207	71	911	11	0	993	2248
Volume	68.0	4.0	28.0	0.0		2.4	90.6	7.0	0.0		46.9	1.4	51.7	0.0		7.2	91.7	1.1	0.0		
Percent																					
05:00 Volume	5	1	5	0	11	5	234	28	0	267	14	1	13	0	28	30	250	1	0	281	587
Peak Factor																					0.957
High Int. 05:15 PM	14	0	3	0	17	5	234	28	0	267	29	1	50	0	80	30	250	1	0	281	
Volume																					
Peak Factor					0.735					0.934					0.647						0.883

Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1

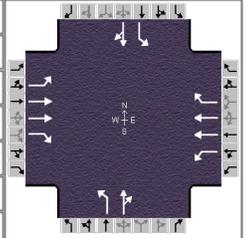
Intersection

05:00 PM



HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information		
Agency		Duration, h	0.25			
Analyst		Analysis Date	Nov 8, 2013		Area Type	Other
Jurisdiction		Time Period		PHF	0.90	
Intersection	89A/Airport Rd	Analysis Year	2013	Analysis Period	1 > 7:00	
File Name	89A-Airport 2013 PM Peak.xus					
Project Description	2013 Existing PM Peak					



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	11	911	71	70	904	24	107	3	97	14	2	34

Signal Information				Signal Phases								
Cycle, s	90.0	Reference Phase	6									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
Green	5.0	50.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	4.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

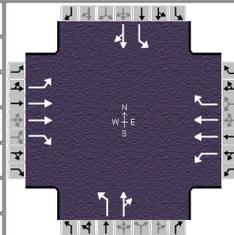
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4		8
Case Number	1.1	3.0	1.1	3.0		6.0		6.0
Phase Duration, s	10.0	55.0	10.0	55.0		25.0		25.0
Change Period, (Y+R _c), s	5.0	5.0	5.0	5.0		5.0		5.0
Max Allow Headway (MAH), s	3.1	0.0	3.1	0.0		3.4		3.4
Queue Clearance Time (g _s), s	2.2		3.6			10.5		8.1
Green Extension Time (g _e), s	0.0	0.0	0.0	0.0		0.4		0.5
Phase Call Probability	1.00		1.00			1.00		1.00
Max Out Probability	1.00		1.00			0.01		0.00

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h	12	1012	79	78	1004	27	119	111		16	40	
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1809	1610	1810	1809	1610	1389	1618		1302	1624	
Queue Service Time (g _s), s	0.2	15.5	2.1	1.6	15.4	0.7	6.7	5.2		0.9	1.8	
Cycle Queue Clearance Time (g _c), s	0.2	15.5	2.1	1.6	15.4	0.7	8.5	5.2		6.1	1.8	
Capacity (c), veh/h	400	2010	895	397	2010	895	361	359		295	361	
Volume-to-Capacity Ratio (X)	0.031	0.504	0.088	0.196	0.500	0.030	0.329	0.309		0.053	0.111	
Available Capacity (c _a), veh/h	400	2010	895	397	2010	895	361	359		295	361	
Back of Queue (Q), veh/ln (50th percentile)	0.1	5.9	0.7	0.5	5.8	0.2	2.3	2.0		0.3	0.7	
Overflow Queue (Q ₃), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Queue Storage Ratio (RQ) (50th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	
Uniform Delay (d ₁), s/veh	8.2	12.3	9.3	8.7	12.3	9.0	31.3	29.2		31.8	27.9	
Incremental Delay (d ₂), s/veh	0.0	0.9	0.2	0.1	0.9	0.1	0.2	0.2		0.0	0.0	
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (d), s/veh	8.2	13.2	9.5	8.8	13.2	9.1	31.5	29.4		31.8	28.0	
Level of Service (LOS)	A	B	A	A	B	A	C	C		C	C	
Approach Delay, s/veh / LOS	12.9		B	12.8		B	30.5		C	29.0		C
Intersection Delay, s/veh / LOS	14.8						B					

Multimodal Results	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	2.2		B	2.2		B	3.0		C	3.0		C
Bicycle LOS Score / LOS	1.4		A	1.4		A	0.9		A	0.6		A

HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency		Duration, h	0.25				
Analyst		Analysis Date	Nov 8, 2013		Area Type	Other	
Jurisdiction		Time Period				PHF	0.90
Intersection	89A/Airport Rd	Analysis Year	2014		Analysis Period	1 > 7:00	
File Name	89A-Airport 2014 Worst Case AM Peak.xus						
Project Description	2014 Worst Case AM Peak						



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	20	995	97	79	958	19	63	2	58	13	2	22

Signal Information												
Cycle, s	90.0	Reference Phase	6									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
Green	5.0	50.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	4.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

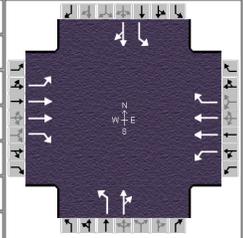
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4		8
Case Number	1.1	3.0	1.1	3.0		6.0		6.0
Phase Duration, s	10.0	55.0	10.0	55.0		25.0		25.0
Change Period, (Y+R _c), s	5.0	5.0	5.0	5.0		5.0		5.0
Max Allow Headway (MAH), s	3.1	0.0	3.1	0.0		3.4		3.4
Queue Clearance Time (g _s), s	2.4		3.8			6.9		5.8
Green Extension Time (g _e), s	0.0	0.0	0.0	0.0		0.3		0.3
Phase Call Probability	1.00		1.00			1.00		1.00
Max Out Probability	1.00		1.00			0.00		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h	22	1106	108	88	1064	21	70	67		14	27	
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1809	1610	1810	1809	1610	1406	1618		1356	1631	
Queue Service Time (g _s), s	0.4	17.6	2.9	1.8	16.7	0.5	3.7	3.0		0.8	1.2	
Cycle Queue Clearance Time (g _c), s	0.4	17.6	2.9	1.8	16.7	0.5	4.9	3.0		3.8	1.2	
Capacity (c), veh/h	380	2010	895	367	2010	895	374	360		336	362	
Volume-to-Capacity Ratio (X)	0.058	0.550	0.120	0.239	0.530	0.024	0.187	0.185		0.043	0.074	
Available Capacity (c _a), veh/h	380	2010	895	367	2010	895	374	360		336	362	
Back of Queue (Q), veh/ln (50th percentile)	0.1	6.7	1.0	0.6	6.3	0.2	1.3	1.2		0.3	0.5	
Overflow Queue (Q ₃), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Queue Storage Ratio (RQ) (50th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	
Uniform Delay (d ₁), s/veh	8.5	12.8	9.5	9.2	12.6	9.0	29.6	28.4		29.9	27.7	
Incremental Delay (d ₂), s/veh	0.0	1.1	0.3	0.1	1.0	0.0	0.1	0.1		0.0	0.0	
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (d), s/veh	8.5	13.9	9.8	9.3	13.6	9.1	29.7	28.5		29.9	27.7	
Level of Service (LOS)	A	B	A	A	B	A	C	C		C	C	
Approach Delay, s/veh / LOS	13.4		B	13.2		B	29.1		C	28.5		C
Intersection Delay, s/veh / LOS	14.4						B					

Multimodal Results	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	2.2		B	2.2		B	3.0		C	3.0		C
Bicycle LOS Score / LOS	1.5		A	1.5		A	0.7		A	0.6		A

HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information		
Agency		Duration, h	0.25			
Analyst		Analysis Date	Nov 8, 2013		Area Type	Other
Jurisdiction		Time Period		PHF	0.90	
Intersection	89A/Airport Rd	Analysis Year	2014		Analysis Period	1 > 7:00
File Name	89A-Airport 2014 Total PM Peak.xus					
Project Description	2014 Total PM Peak					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	11	939	80	78	932	25	116	3	105	14	2	35

Signal Information				Signal Phases								
Cycle, s	90.0	Reference Phase	6									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
Green	5.0	50.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	4.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

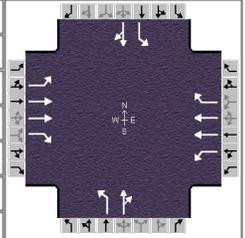
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4		8
Case Number	1.1	3.0	1.1	3.0		6.0		6.0
Phase Duration, s	10.0	55.0	10.0	55.0		25.0		25.0
Change Period, (Y+R _c), s	5.0	5.0	5.0	5.0		5.0		5.0
Max Allow Headway (MAH), s	3.1	0.0	3.1	0.0		3.4		3.4
Queue Clearance Time (g _s), s	2.2		3.8			11.2		8.5
Green Extension Time (g _e), s	0.0	0.0	0.0	0.0		0.5		0.5
Phase Call Probability	1.00		1.00			1.00		1.00
Max Out Probability	1.00		1.00			0.02		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h	12	1043	89	87	1036	28	129	120		16	41	
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1809	1610	1810	1809	1610	1387	1617		1292	1624	
Queue Service Time (g _s), s	0.2	16.2	2.3	1.8	16.0	0.7	7.4	5.6		0.9	1.8	
Cycle Queue Clearance Time (g _c), s	0.2	16.2	2.3	1.8	16.0	0.7	9.2	5.6		6.5	1.8	
Capacity (c), veh/h	389	2010	895	387	2010	895	360	359		287	361	
Volume-to-Capacity Ratio (X)	0.031	0.519	0.099	0.224	0.515	0.031	0.358	0.334		0.054	0.114	
Available Capacity (c _a), veh/h	389	2010	895	387	2010	895	360	359		287	361	
Back of Queue (Q), veh/ln (50th percentile)	0.1	6.1	0.8	0.6	6.1	0.2	2.5	2.2		0.3	0.7	
Overflow Queue (Q ₃), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Queue Storage Ratio (RQ) (50th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	
Uniform Delay (d ₁), s/veh	8.3	12.5	9.4	8.9	12.5	9.0	31.6	29.4		32.1	27.9	
Incremental Delay (d ₂), s/veh	0.0	1.0	0.2	0.1	0.9	0.1	0.2	0.2		0.0	0.1	
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (d), s/veh	8.3	13.5	9.6	9.0	13.4	9.1	31.8	29.6		32.2	28.0	
Level of Service (LOS)	A	B	A	A	B	A	C	C		C	C	
Approach Delay, s/veh / LOS	13.1		B	13.0		B	30.7		C	29.1		C
Intersection Delay, s/veh / LOS	15.1						B					

Multimodal Results	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	2.2		B	2.2		B	3.0		C	3.0		C
Bicycle LOS Score / LOS	1.4		A	1.4		A	0.9		A	0.6		A

HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency		Duration, h	0.25				
Analyst		Analysis Date	Nov 8, 2013		Area Type	Other	
Jurisdiction		Time Period				PHF	0.90
Intersection	89A/Airport Rd	Analysis Year	2014		Analysis Period	1 > 7:00	
File Name	89A-Airport 2014 Total AM Peak.xus						
Project Description	2014 Total AM Peak						



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	20	995	72	54	958	19	63	2	58	13	2	22

Signal Information												
Cycle, s	90.0	Reference Phase	6									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
Green	5.0	50.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	4.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

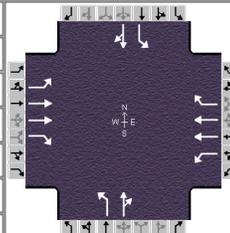
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4		8
Case Number	1.1	3.0	1.1	3.0		6.0		6.0
Phase Duration, s	10.0	55.0	10.0	55.0		25.0		25.0
Change Period, (Y+R _c), s	5.0	5.0	5.0	5.0		5.0		5.0
Max Allow Headway (MAH), s	3.1	0.0	3.1	0.0		3.4		3.4
Queue Clearance Time (g _s), s	2.4		3.2			6.9		5.8
Green Extension Time (g _e), s	0.0	0.0	0.0	0.0		0.3		0.3
Phase Call Probability	1.00		1.00			1.00		1.00
Max Out Probability	1.00		1.00			0.00		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h	22	1106	80	60	1064	21	70	67		14	27	
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1809	1610	1810	1809	1610	1406	1618		1356	1631	
Queue Service Time (g _s), s	0.4	17.6	2.1	1.2	16.7	0.5	3.7	3.0		0.8	1.2	
Cycle Queue Clearance Time (g _c), s	0.4	17.6	2.1	1.2	16.7	0.5	4.9	3.0		3.8	1.2	
Capacity (c), veh/h	380	2010	895	367	2010	895	374	360		336	362	
Volume-to-Capacity Ratio (X)	0.058	0.550	0.089	0.164	0.530	0.024	0.187	0.185		0.043	0.074	
Available Capacity (c _a), veh/h	380	2010	895	367	2010	895	374	360		336	362	
Back of Queue (Q), veh/ln (50th percentile)	0.1	6.7	0.7	0.4	6.3	0.2	1.3	1.2		0.3	0.5	
Overflow Queue (Q ₃), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Queue Storage Ratio (RQ) (50th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	
Uniform Delay (d ₁), s/veh	8.5	12.8	9.4	9.0	12.6	9.0	29.6	28.4		29.9	27.7	
Incremental Delay (d ₂), s/veh	0.0	1.1	0.2	0.1	1.0	0.0	0.1	0.1		0.0	0.0	
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (d), s/veh	8.5	13.9	9.6	9.1	13.6	9.1	29.7	28.5		29.9	27.7	
Level of Service (LOS)	A	B	A	A	B	A	C	C		C	C	
Approach Delay, s/veh / LOS	13.5	B		13.3	B		29.1	C		28.5	C	
Intersection Delay, s/veh / LOS	14.5						B					

Multimodal Results	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	2.2	B		2.2	B		3.0	C		3.0	C	
Bicycle LOS Score / LOS	1.5	A		1.4	A		0.7	A		0.6	A	

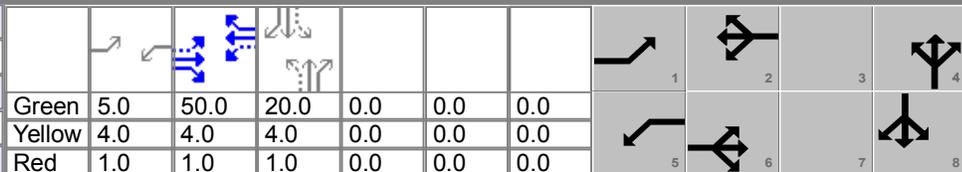
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information		
Agency		Duration, h	0.25			
Analyst		Analysis Date	Nov 8, 2013		Area Type	Other
Jurisdiction		Time Period		PHF	0.90	
Intersection	89A/Airport Rd	Analysis Year	2014		Analysis Period	1 > 7:00
File Name	89A-Airport 2014 Background PM Peak.xus					
Project Description	2014 Background PM Peak					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	11	939	73	72	932	25	110	3	100	14	2	35

Signal Information			
Cycle, s	90.0	Reference Phase	6
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



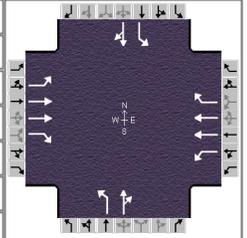
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4		8
Case Number	1.1	3.0	1.1	3.0		6.0		6.0
Phase Duration, s	10.0	55.0	10.0	55.0		25.0		25.0
Change Period, (Y+R _c), s	5.0	5.0	5.0	5.0		5.0		5.0
Max Allow Headway (MAH), s	3.1	0.0	3.1	0.0		3.4		3.4
Queue Clearance Time (g _s), s	2.2		3.6			10.8		8.2
Green Extension Time (g _e), s	0.0	0.0	0.0	0.0		0.5		0.5
Phase Call Probability	1.00		1.00			1.00		1.00
Max Out Probability	1.00		1.00			0.01		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h	12	1043	81	80	1036	28	122	114		16	41	
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1809	1610	1810	1809	1610	1387	1617		1298	1624	
Queue Service Time (g _s), s	0.2	16.2	2.1	1.6	16.0	0.7	6.9	5.3		0.9	1.8	
Cycle Queue Clearance Time (g _c), s	0.2	16.2	2.1	1.6	16.0	0.7	8.8	5.3		6.2	1.8	
Capacity (c), veh/h	389	2010	895	387	2010	895	360	359		292	361	
Volume-to-Capacity Ratio (X)	0.031	0.519	0.091	0.207	0.515	0.031	0.339	0.318		0.053	0.114	
Available Capacity (c _a), veh/h	389	2010	895	387	2010	895	360	359		292	361	
Back of Queue (Q), veh/ln (50th percentile)	0.1	6.1	0.7	0.6	6.1	0.2	2.3	2.1		0.3	0.7	
Overflow Queue (Q ₃), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Queue Storage Ratio (RQ) (50th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	
Uniform Delay (d ₁), s/veh	8.3	12.5	9.4	8.8	12.5	9.0	31.4	29.3		31.9	27.9	
Incremental Delay (d ₂), s/veh	0.0	1.0	0.2	0.1	0.9	0.1	0.2	0.2		0.0	0.1	
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (d), s/veh	8.3	13.5	9.6	8.9	13.4	9.1	31.6	29.5		31.9	28.0	
Level of Service (LOS)	A	B	A	A	B	A	C	C		C	C	
Approach Delay, s/veh / LOS	13.1		B	13.0		B	30.6		C	29.1		C
Intersection Delay, s/veh / LOS	15.0						B					

Multimodal Results	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	2.2		B	2.2		B	3.0		C	3.0		C
Bicycle LOS Score / LOS	1.4		A	1.4		A	0.9		A	0.6		A

HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency		Duration, h	0.25				
Analyst		Analysis Date	Nov 8, 2013		Area Type	Other	
Jurisdiction		Time Period				PHF	0.90
Intersection	89A/Airport Rd	Analysis Year	2014		Analysis Period	1 > 7:00	
File Name	89A-Airport 2014 Background AM Peak.xus						
Project Description	2014 Background Traffic						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	20	995	65	47	958	19	58	2	54	13	2	22

Signal Information												
Cycle, s	90.0	Reference Phase	6									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
Green	5.0	50.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	4.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

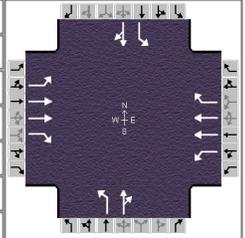
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4		8
Case Number	1.1	3.0	1.1	3.0		6.0		6.0
Phase Duration, s	10.0	55.0	10.0	55.0		25.0		25.0
Change Period, (Y+R _c), s	5.0	5.0	5.0	5.0		5.0		5.0
Max Allow Headway (MAH), s	3.1	0.0	3.1	0.0		3.4		3.4
Queue Clearance Time (g _s), s	2.4		3.0			6.6		5.6
Green Extension Time (g _e), s	0.0	0.0	0.0	0.0		0.3		0.3
Phase Call Probability	1.00		1.00			1.00		1.00
Max Out Probability	1.00		1.00			0.00		0.00

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h	22	1106	72	52	1064	21	64	62		14	27	
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1809	1610	1810	1809	1610	1406	1619		1361	1631	
Queue Service Time (g _s), s	0.4	17.6	1.9	1.0	16.7	0.5	3.4	2.8		0.8	1.2	
Cycle Queue Clearance Time (g _c), s	0.4	17.6	1.9	1.0	16.7	0.5	4.6	2.8		3.6	1.2	
Capacity (c), veh/h	380	2010	895	367	2010	895	374	360		340	362	
Volume-to-Capacity Ratio (X)	0.058	0.550	0.081	0.142	0.530	0.024	0.172	0.173		0.042	0.074	
Available Capacity (c _a), veh/h	380	2010	895	367	2010	895	374	360		340	362	
Back of Queue (Q), veh/ln (50th percentile)	0.1	6.7	0.6	0.4	6.3	0.2	1.2	1.1		0.3	0.5	
Overflow Queue (Q ₃), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Queue Storage Ratio (RQ) (50th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	
Uniform Delay (d ₁), s/veh	8.5	12.8	9.3	8.9	12.6	9.0	29.5	28.3		29.8	27.7	
Incremental Delay (d ₂), s/veh	0.0	1.1	0.2	0.1	1.0	0.0	0.1	0.1		0.0	0.0	
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (d), s/veh	8.5	13.9	9.5	9.0	13.6	9.1	29.6	28.4		29.8	27.7	
Level of Service (LOS)	A	B	A	A	B	A	C	C		C	C	
Approach Delay, s/veh / LOS	13.5		B	13.3		B	29.0		C	28.4		C
Intersection Delay, s/veh / LOS	14.5						B					

Multimodal Results	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	2.2		B	2.2		B	3.0		C	3.0		C
Bicycle LOS Score / LOS	1.5		A	1.4		A	0.7		A	0.6		A

HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information		
Agency		Duration, h	0.25			
Analyst		Analysis Date	Nov 8, 2013		Area Type	Other
Jurisdiction		Time Period		PHF	0.90	
Intersection	89A/Airport Rd	Analysis Year	2014	Analysis Period	1 > 7:00	
File Name	89A-Airport 2014 Worst Case PM Peak.xus					
Project Description	2014 Worst Case PM Peak					



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	11	939	80	78	932	25	141	3	130	14	2	35

Signal Information				Signal Phases									
Cycle, s	90.0	Reference Phase	6										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On										
Force Mode	Fixed	Simult. Gap N/S	On										
		Green		5.0	50.0	20.0	0.0	0.0	0.0				
		Yellow		4.0	4.0	4.0	0.0	0.0	0.0				
		Red		1.0	1.0	1.0	0.0	0.0	0.0				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4		8
Case Number	1.1	3.0	1.1	3.0		6.0		6.0
Phase Duration, s	10.0	55.0	10.0	55.0		25.0		25.0
Change Period, (Y+R _c), s	5.0	5.0	5.0	5.0		5.0		5.0
Max Allow Headway (MAH), s	3.1	0.0	3.1	0.0		3.4		3.4
Queue Clearance Time (g _s), s	2.2		3.8			13.0		10.0
Green Extension Time (g _e), s	0.0	0.0	0.0	0.0		0.5		0.6
Phase Call Probability	1.00		1.00			1.00		1.00
Max Out Probability	1.00		1.00			0.09		0.01

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h	12	1043	89	87	1036	28	157	148		16	41	
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1809	1610	1810	1809	1610	1387	1616		1260	1624	
Queue Service Time (g _s), s	0.2	16.2	2.3	1.8	16.0	0.7	9.1	7.0		1.0	1.8	
Cycle Queue Clearance Time (g _c), s	0.2	16.2	2.3	1.8	16.0	0.7	11.0	7.0		8.0	1.8	
Capacity (c), veh/h	389	2010	895	387	2010	895	360	359		261	361	
Volume-to-Capacity Ratio (X)	0.031	0.519	0.099	0.224	0.515	0.031	0.435	0.412		0.060	0.114	
Available Capacity (c _a), veh/h	389	2010	895	387	2010	895	360	359		261	361	
Back of Queue (Q), veh/ln (50th percentile)	0.1	6.1	0.8	0.6	6.1	0.2	3.1	2.8		0.3	0.7	
Overflow Queue (Q ₃), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Queue Storage Ratio (RQ) (50th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	
Uniform Delay (d ₁), s/veh	8.3	12.5	9.4	8.9	12.5	9.0	32.3	30.0		33.4	27.9	
Incremental Delay (d ₂), s/veh	0.0	1.0	0.2	0.1	0.9	0.1	0.3	0.3		0.0	0.1	
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (d), s/veh	8.3	13.5	9.6	9.0	13.4	9.1	32.6	30.2		33.4	28.0	
Level of Service (LOS)	A	B	A	A	B	A	C	C		C	C	
Approach Delay, s/veh / LOS	13.1		B	13.0		B	31.5		C	29.5		C
Intersection Delay, s/veh / LOS	15.5						B					

Multimodal Results	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	2.2		B	2.2		B	3.0		C	3.0		C
Bicycle LOS Score / LOS	1.4		A	1.4		A	1.0		A	0.6		A

Traffic Data Service

2224 E. Cedar Ave. #7
 Flagstaff AZ 86004
 800-837-2562

Site Code: 1
 Station ID:
 Airport Road South of Parking area

Latitude: 0' 0.000 Undefined

Start Time	09-Nov-13 Sat		North		South		Combined		10-Nov-Sun		North		South		Combined	
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00	3	28	3	25	6	53	0	22	1	35	1	57				
12:15	0	24	0	29	0	53	0	28	0	27	0	55				
12:30	0	37	1	27	1	64	1	41	0	23	1	64				
12:45	0	31	0	36	0	67	0	35	0	24	0	59				
01:00	0	21	0	24	0	45	1	22	1	23	2	45				
01:15	0	17	0	31	0	48	0	21	0	26	0	47				
01:30	0	18	0	22	0	40	0	21	0	20	0	41				
01:45	1	34	2	22	3	56	0	20	1	13	1	33				
02:00	0	27	0	26	0	53	0	32	0	26	0	58				
02:15	0	33	0	33	0	66	0	23	0	21	0	44				
02:30	0	23	0	35	0	58	0	32	0	28	0	60				
02:45	0	33	0	25	0	58	0	26	0	33	0	59				
03:00	0	29	0	41	0	70	0	33	0	27	0	60				
03:15	0	28	0	33	0	61	0	17	0	23	0	40				
03:30	0	25	0	28	0	53	0	30	0	24	0	54				
03:45	0	30	0	42	0	72	0	32	0	19	0	51				
04:00	0	26	0	22	0	48	1	29	1	34	2	63				
04:15	0	35	0	23	0	58	0	36	0	24	0	60				
04:30	1	47	0	32	1	79	0	56	0	25	0	81				
04:45	0	52	2	28	2	80	1	60	1	38	2	98				
05:00	0	82	0	33	0	115	1	52	0	39	1	91				
05:15	2	43	0	58	2	101	2	23	1	73	3	96				
05:30	1	17	0	79	1	96	1	18	1	52	2	70				
05:45	1	16	2	45	3	61	1	13	0	70	1	83				
06:00	6	11	2	16	8	27	4	6	0	16	4	22				
06:15	9	14	1	11	10	25	7	8	3	10	10	18				
06:30	10	10	3	16	13	26	12	9	1	15	13	24				
06:45	10	11	3	10	13	21	14	11	9	6	23	17				
07:00	5	7	3	9	8	16	7	12	5	13	12	25				
07:15	10	5	7	7	17	12	3	9	10	7	13	16				
07:30	10	9	14	12	24	21	6	8	15	8	21	16				
07:45	7	4	10	10	17	14	12	7	10	4	22	11				
08:00	11	2	7	7	18	9	10	7	13	5	23	12				
08:15	8	7	12	4	20	11	10	5	14	6	24	11				
08:30	8	2	12	13	20	15	12	8	8	7	20	15				
08:45	15	4	11	6	26	10	9	3	5	5	14	8				
09:00	17	2	15	6	32	8	19	6	8	2	27	8				
09:15	22	7	24	7	46	14	15	8	13	4	28	12				
09:30	14	8	23	14	37	22	22	5	13	3	35	8				
09:45	15	4	19	5	34	9	34	6	21	2	55	8				
10:00	17	2	20	4	37	6	22	0	36	4	58	4				
10:15	18	8	9	13	27	21	16	1	25	2	41	3				
10:30	18	2	30	6	48	8	11	1	25	2	36	3				
10:45	10	6	27	3	37	9	26	2	26	1	52	3				
11:00	31	5	14	2	45	7	28	1	36	3	64	4				
11:15	41	3	21	0	62	3	28	1	26	1	54	2				
11:30	18	0	21	6	39	6	22	2	34	2	56	4				
11:45	16	1	22	3	38	4	28	0	40	3	68	3				
Total	355	890	340	989	695	1879	386	848	403	878	789	1726				
Day Total	1245		1329		2574		1234		1281		2515					
% Total	13.8%	34.6%	13.2%	38.4%			15.3%	33.7%	16.0%	34.9%						
Peak	11:00	04:30	10:30	05:00	10:30	04:45	11:00	04:15	11:00	05:00	11:00	04:30				
Vol.	106	224	92	215	192	392	106	204	136	234	242	366				
P.H.F.	0.646	0.683	0.767	0.680	0.774	0.852	0.946	0.850	0.850	0.801	0.890	0.934				

Traffic Data Service

2224 E. Cedar Ave. #7
 Flagstaff AZ 86004
 800-837-2562

Site Code: 1
 Station ID:
 Airport Road South of Parking area

Latitude: 0' 0.000 Undefined

Start Time	11-Nov-13		North		South		Combined		12-Nov-		North		South		Combined	
	Mon		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	Tue	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	
12:00			1	25	1	22	2	47		2	25	2	21	4	46	
12:15			0	21	0	29	0	50		1	31	1	19	2	50	
12:30			1	32	0	23	1	55		1	30	2	22	3	52	
12:45			0	18	1	19	1	37		1	24	0	27	1	51	
01:00			0	21	1	20	1	41		0	22	1	14	1	36	
01:15			0	23	1	18	1	41		0	21	2	19	2	40	
01:30			0	37	0	23	0	60		0	18	0	26	0	44	
01:45			0	24	0	32	0	56		0	18	0	27	0	45	
02:00			0	23	0	23	0	46		0	20	0	27	0	47	
02:15			0	22	0	29	0	51		0	18	0	17	0	35	
02:30			0	31	0	26	0	57		0	25	0	30	0	55	
02:45			0	21	0	24	0	45		0	28	0	30	0	58	
03:00			0	26	0	26	0	52		0	21	0	35	0	56	
03:15			0	33	0	25	0	58		0	24	0	22	0	46	
03:30			0	25	0	35	0	60		0	19	0	29	0	48	
03:45			0	26	0	27	0	53		0	21	0	25	0	46	
04:00			0	24	0	34	0	58		0	16	0	30	0	46	
04:15			0	44	0	30	0	74		0	30	0	19	0	49	
04:30			0	31	0	41	0	72		0	38	0	31	0	69	
04:45			1	62	2	27	3	89		0	50	0	18	0	68	
05:00			1	49	1	23	2	72		0	42	0	30	0	72	
05:15			1	32	0	68	1	100		1	18	1	59	2	77	
05:30			3	14	1	75	4	89		0	7	0	38	0	45	
05:45			1	12	2	29	3	41		2	7	1	34	3	41	
06:00			2	5	1	27	3	32		4	14	3	12	7	26	
06:15			7	7	1	11	8	18		4	6	0	12	4	18	
06:30			6	3	2	11	8	14		4	7	5	13	9	20	
06:45			7	13	4	9	11	22		8	3	3	6	11	9	
07:00			7	5	5	12	12	17		4	8	1	16	5	24	
07:15			7	6	8	10	15	16		8	4	8	3	16	7	
07:30			10	5	5	5	15	10		9	1	5	2	14	3	
07:45			14	5	13	6	27	11		17	2	12	2	29	4	
08:00			8	7	9	2	17	9		13	3	5	5	18	8	
08:15			14	5	12	1	26	6		13	4	8	3	21	7	
08:30			12	2	18	1	30	3		12	5	18	1	30	6	
08:45			23	4	18	2	41	6		15	9	13	3	28	12	
09:00			10	2	21	0	31	2		10	4	13	3	23	7	
09:15			18	6	18	6	36	12		7	8	17	11	24	19	
09:30			16	2	29	4	45	6		17	4	21	2	38	6	
09:45			18	5	22	2	40	7		19	5	20	5	39	10	
10:00			18	2	31	4	49	6		22	2	13	6	35	8	
10:15			17	3	20	4	37	7		15	1	25	0	40	1	
10:30			20	0	24	0	44	0		15	2	18	0	33	2	
10:45			21	0	23	1	44	1		11	0	22	0	33	0	
11:00			21	0	33	0	54	0		18	1	24	1	42	2	
11:15			24	0	24	1	48	1		19	2	16	1	35	3	
11:30			15	0	20	0	35	0		14	0	20	2	34	2	
11:45			21	1	29	0	50	1		13	0	19	0	32	0	
Total			345	764	400	847	745	1611		299	668	319	758	618	1426	
Day Total			1109		1247		2356			967		1077		2044		
% Total			14.6%	32.4%	17.0%	36.0%				14.6%	32.7%	15.6%	37.1%			
Peak			10:30	04:15	11:00	05:15	10:30	04:45		09:30	04:15	10:15	05:00	09:30	04:30	
Vol.			86	186	106	199	190	350		73	160	89	161	152	286	
P.H.F.			0.896	0.750	0.803	0.663	0.880	0.875		0.830	0.800	0.890	0.682	0.950	0.929	

Traffic Data Service

2224 E. Cedar Ave. #7
 Flagstaff AZ 86004
 800-837-2562

Site Code: 1
 Station ID:
 Airport Road South of Parking area

Latitude: 0' 0.000 Undefined

Start Time	13-Nov-13		North		South		Combined		14-Nov-		North		South		Combined		
	Wed		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	Thu	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00			1	21	1	25	2	46		0	23	0	20	0	43		
12:15			0	20	0	23	0	43		0	17	0	17	0	34		
12:30			0	38	0	28	0	66		0	27	0	18	0	45		
12:45			0	22	0	28	0	50		0	16	0	22	0	38		
01:00			0	19	0	20	0	39		0	21	0	16	0	37		
01:15			0	15	0	16	0	31		0	18	0	19	0	37		
01:30			1	15	1	15	2	30		0	25	0	22	0	47		
01:45			0	19	0	18	0	37		0	21	1	17	1	38		
02:00			0	15	0	24	0	39		0	25	0	13	0	38		
02:15			0	26	0	26	0	52		0	19	0	19	0	38		
02:30			0	19	0	22	0	41		1	15	0	20	1	35		
02:45			0	19	0	20	0	39		1	13	1	28	2	41		
03:00			0	13	0	14	0	27		0	22	0	30	0	52		
03:15			0	20	0	29	0	49		0	27	0	20	0	47		
03:30			0	26	0	24	0	50		0	18	0	25	0	43		
03:45			0	17	0	26	0	43		0	22	0	22	0	44		
04:00			0	25	0	21	0	46		0	28	0	26	0	54		
04:15			0	22	0	27	0	49		0	32	0	25	0	57		
04:30			0	30	0	32	0	62		0	28	0	23	0	51		
04:45			0	49	0	14	0	63		0	43	0	31	0	74		
05:00			0	45	0	20	0	65		1	38	0	25	1	63		
05:15			1	28	1	76	2	104		1	36	1	40	2	76		
05:30			2	15	0	53	2	68		0	16	0	64	0	80		
05:45			2	17	4	29	6	46		0	8	2	52	2	60		
06:00			1	4	1	21	2	25		5	3	2	11	7	14		
06:15			6	10	3	19	9	29		6	14	2	5	8	19		
06:30			6	8	1	8	7	16		6	20	4	4	10	24		
06:45			9	6	4	7	13	13		11	25	2	13	13	38		
07:00			7	2	7	6	14	8		6	10	6	7	12	17		
07:15			13	8	9	3	22	11		6	7	8	3	14	10		
07:30			12	5	7	4	19	9		6	3	9	5	15	8		
07:45			14	6	10	4	24	10		21	7	6	6	27	13		
08:00			11	2	9	1	20	3		17	3	11	1	28	4		
08:15			7	4	13	2	20	6		31	6	9	6	40	12		
08:30			6	2	11	2	17	4		20	5	11	5	31	10		
08:45			11	6	7	4	18	10		13	3	14	20	27	23		
09:00			16	4	16	6	32	10		7	6	14	21	21	27		
09:15			13	4	9	12	22	16		11	4	40	8	51	12		
09:30			18	2	13	9	31	11		18	2	19	6	37	8		
09:45			17	4	29	4	46	8		16	3	20	2	36	5		
10:00			22	1	17	2	39	3		14	0	17	6	31	6		
10:15			12	2	20	3	32	5		22	3	27	2	49	5		
10:30			18	1	16	0	34	1		14	2	15	0	29	2		
10:45			18	0	21	1	39	1		14	0	22	2	36	2		
11:00			23	0	31	2	54	2		22	0	16	1	38	1		
11:15			30	4	23	0	53	4		21	0	19	0	40	0		
11:30			20	0	23	0	43	0		14	1	34	0	48	1		
11:45			14	0	23	0	37	0		18	0	28	1	46	1		
Total			331	640	330	750	661	1390		343	685	360	749	703	1434		
Day Total			971		1080		2051			1028		1109		2137			
% Total			16.1%	31.2%	16.1%	36.6%				16.1%	32.1%	16.8%	35.0%				
Peak			10:45	04:30	11:00	05:15	10:45	04:45		07:45	04:30	11:00	05:00	11:00	04:45		
Vol.			91	152	100	179	189	300		89	145	97	181	172	293		
P.H.F.			0.758	0.776	0.806	0.589	0.875	0.721		0.718	0.843	0.713	0.707	0.896	0.916		

Traffic Data Service

2224 E. Cedar Ave. #7
 Flagstaff AZ 86004
 800-837-2562

Site Code: 2
 Station ID:
 Airport Road South of US 89

Latitude: 0' 0.000 Undefined

Start Time	09-Nov-13 Sat		North		South		Combined		10-Nov-Sun		North		South		Combined	
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00	2	21	1	16	3	37	0	14	0	20	0	34				
12:15	0	18	0	25	0	43	0	18	0	19	0	37				
12:30	0	19	1	15	1	34	0	28	0	18	0	46				
12:45	0	23	0	19	0	42	1	24	0	19	1	43				
01:00	0	19	0	16	0	35	1	14	1	18	2	32				
01:15	0	17	0	25	0	42	0	17	0	14	0	31				
01:30	0	17	0	19	0	36	0	10	0	18	0	28				
01:45	0	30	1	13	1	43	0	24	1	15	1	39				
02:00	0	20	0	24	0	44	0	20	0	19	0	39				
02:15	0	31	0	27	0	58	0	22	0	21	0	43				
02:30	0	18	0	26	0	44	0	25	0	13	0	38				
02:45	0	21	0	11	0	32	0	20	0	24	0	44				
03:00	0	20	0	39	0	59	0	23	0	20	0	43				
03:15	0	27	0	24	0	51	0	16	0	17	0	33				
03:30	0	26	0	29	0	55	0	28	0	24	0	52				
03:45	0	23	0	31	0	54	0	23	0	16	0	39				
04:00	0	17	0	16	0	33	1	24	1	26	2	50				
04:15	0	34	0	18	0	52	0	28	0	15	0	43				
04:30	0	40	0	16	0	56	0	38	0	20	0	58				
04:45	0	42	0	19	0	61	0	46	0	15	0	61				
05:00	0	63	0	21	0	84	1	55	0	25	1	80				
05:15	2	29	0	64	2	93	2	27	1	54	3	81				
05:30	0	13	1	64	1	77	1	18	1	50	2	68				
05:45	2	9	0	27	2	36	0	10	0	52	0	62				
06:00	4	7	2	13	6	20	3	5	1	11	4	16				
06:15	7	8	2	11	9	19	4	7	1	8	5	15				
06:30	5	9	4	12	9	21	6	9	2	12	8	21				
06:45	7	7	4	8	11	15	11	8	5	5	16	13				
07:00	5	7	1	7	6	14	5	9	6	13	11	22				
07:15	7	5	4	5	11	10	4	9	9	6	13	15				
07:30	9	8	10	10	19	18	6	6	6	7	12	13				
07:45	8	5	5	9	13	14	11	4	10	3	21	7				
08:00	6	1	4	8	10	9	11	7	8	3	19	10				
08:15	11	5	7	2	18	7	10	3	11	6	21	9				
08:30	6	4	10	6	16	10	8	7	6	5	14	12				
08:45	10	4	8	4	18	8	5	3	4	4	9	7				
09:00	13	2	11	2	24	4	16	5	7	2	23	7				
09:15	9	5	18	6	27	11	10	8	12	4	22	12				
09:30	15	9	13	8	28	17	15	3	14	3	29	6				
09:45	13	4	12	1	25	5	20	4	16	2	36	6				
10:00	13	2	15	5	28	7	17	0	29	3	46	3				
10:15	12	7	10	7	22	14	12	0	23	1	35	1				
10:30	16	2	16	6	32	8	9	0	17	2	26	2				
10:45	7	4	25	0	32	4	26	2	21	1	47	3				
11:00	19	2	11	2	30	4	19	1	23	3	42	4				
11:15	37	4	14	2	51	6	27	1	23	2	50	3				
11:30	20	0	15	6	35	6	15	1	25	0	40	1				
11:45	14	1	19	3	33	4	20	0	29	3	49	3				
Total	279	709	244	747	523	1456	297	674	313	661	610	1335				
Day Total	988		991		1979		971		974		1945					
% Total	14.1%	35.8%	12.3%	37.7%			15.3%	34.7%	16.1%	34.0%						
Peak	11:00	04:15	10:00	05:00	11:00	04:45	10:45	04:15	11:00	05:00	11:00	05:00				
Vol.	90	179	66	176	149	315	87	167	100	181	181	291				
P.H.F.	0.608	0.710	0.660	0.688	0.730	0.847	0.806	0.759	0.862	0.838	0.905	0.898				

Traffic Data Service

2224 E. Cedar Ave. #7
 Flagstaff AZ 86004
 800-837-2562

Site Code: 2
 Station ID:
 Airport Road South of US 89

Latitude: 0' 0.000 Undefined

Start Time	11-Nov-13		North		South		Combined		12-Nov-		North		South		Combined		
	Mon		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	Tue	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00			1	16	0	12	1	28		0	19	2	10	2	29		
12:15			0	16	0	20	0	36		1	21	0	14	1	35		
12:30			0	19	0	16	0	35		1	13	2	14	3	27		
12:45			0	7	0	17	0	24		1	11	0	16	1	27		
01:00			0	15	0	11	0	26		0	14	1	11	1	25		
01:15			0	19	1	12	1	31		0	15	2	14	2	29		
01:30			0	25	0	15	0	40		0	19	0	12	0	31		
01:45			0	17	0	18	0	35		0	13	0	21	0	34		
02:00			0	15	0	15	0	30		0	17	0	19	0	36		
02:15			0	13	0	17	0	30		0	13	0	15	0	28		
02:30			0	22	0	19	0	41		0	19	0	15	0	34		
02:45			0	16	0	14	0	30		0	23	0	11	0	34		
03:00			0	17	0	27	0	44		0	16	0	30	0	46		
03:15			0	23	0	16	0	39		0	16	0	18	0	34		
03:30			0	24	0	23	0	47		0	12	0	17	0	29		
03:45			0	19	0	19	0	38		0	17	0	17	0	34		
04:00			0	17	0	22	0	39		0	12	0	21	0	33		
04:15			0	42	0	16	0	58		0	23	0	11	0	34		
04:30			0	23	0	30	0	53		0	36	0	19	0	55		
04:45			1	46	2	21	3	67		0	38	0	12	0	50		
05:00			1	50	2	22	1	72		0	47	0	26	0	73		
05:15			0	33	1	62	1	95		1	16	0	56	1	72		
05:30			2	13	0	51	2	64		0	7	0	31	0	38		
05:45			2	7	2	17	4	24		1	3	1	23	2	26		
06:00			2	3	1	19	3	22		4	7	2	5	6	12		
06:15			6	6	0	10	6	16		3	4	1	7	4	11		
06:30			4	3	5	9	9	12		4	5	3	11	7	16		
06:45			4	9	2	8	6	17		7	1	1	4	8	5		
07:00			7	4	4	8	11	12		3	5	2	12	5	17		
07:15			7	4	6	8	13	12		2	2	5	2	7	4		
07:30			4	4	6	5	10	9		5	3	3	2	8	5		
07:45			16	4	3	3	19	7		12	2	4	2	16	4		
08:00			11	5	5	1	16	6		12	4	1	5	13	9		
08:15			9	2	13	1	22	3		10	2	6	2	16	4		
08:30			11	2	10	1	21	3		7	5	7	1	14	6		
08:45			15	2	11	2	26	4		9	1	9	2	18	3		
09:00			8	1	10	0	18	1		9	3	9	1	18	4		
09:15			15	4	15	5	30	9		7	5	9	4	16	9		
09:30			12	1	28	3	40	4		15	3	15	4	30	7		
09:45			14	4	13	3	27	7		11	3	15	2	26	5		
10:00			10	0	19	3	29	3		17	1	4	6	21	7		
10:15			16	2	8	2	24	4		10	1	18	0	28	1		
10:30			16	0	20	0	36	0		9	1	16	0	25	1		
10:45			23	0	16	1	39	1		8	0	10	0	18	0		
11:00			14	0	28	0	42	0		12	1	17	1	29	2		
11:15			20	0	19	1	39	1		15	0	9	1	24	1		
11:30			11	0	16	0	27	0		11	0	14	1	25	1		
11:45			14	1	19	0	33	1		9	0	11	0	20	0		
Total			276	575	283	605	559	1180		216	499	199	528	415	1027		
Day Total			851		888		1739			715		727		1442			
% Total			15.9%	33.1%	16.3%	34.8%				15.0%	34.6%	13.8%	36.6%				
Peak			10:30	04:15	10:30	04:45	10:30	04:45		09:30	04:15	10:15	05:00	09:30	04:30		
Vol.			73	161	83	156	156	298		53	144	61	136	105	250		
P.H.F.			0.793	0.805	0.741	0.629	0.929	0.784		0.779	0.766	0.847	0.607	0.875	0.856		

Traffic Data Service

2224 E. Cedar Ave. #7
Flagstaff AZ 86004
800-837-2562

Site Code: 2
Station ID:
Airport Road South of US 89

Latitude: 0' 0.000 Undefined

Start Time	13-Nov-13		North		South		Combined		14-Nov-		North		South		Combined		
	Wed		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	Thu	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00			0	14	0	14	0	28		0	12	0	10	0	22		
12:15			0	15	0	12	0	27		0	8	0	12	0	20		
12:30			0	25	0	20	0	45		0	18	0	9	0	27		
12:45			0	14	0	20	0	34		0	9	0	17	0	26		
01:00			0	18	0	14	0	32		0	12	0	6	0	18		
01:15			0	18	0	13	0	31		0	17	0	11	0	28		
01:30			0	11	0	13	0	24		0	11	0	16	0	27		
01:45			0	11	0	14	0	25		0	14	1	9	1	23		
02:00			0	8	0	12	0	20		0	17	0	12	0	29		
02:15			0	14	0	19	0	33		0	17	0	11	0	28		
02:30			0	12	0	14	0	26		1	13	0	16	1	29		
02:45			0	14	0	7	0	21		0	11	1	20	1	31		
03:00			0	11	0	13	0	24		0	16	0	15	0	31		
03:15			0	11	0	10	0	21		0	19	0	13	0	32		
03:30			0	15	0	13	0	28		0	9	0	17	0	26		
03:45			0	14	0	22	0	36		0	16	0	16	0	32		
04:00			0	18	0	14	0	32		0	16	0	21	0	37		
04:15			0	17	0	17	0	34		0	25	0	14	0	39		
04:30			0	27	0	16	0	43		0	29	0	14	0	43		
04:45			0	44	0	7	0	51		0	40	0	8	0	48		
05:00			0	31	0	12	0	43		0	39	0	18	0	57		
05:15			1	25	1	60	2	85		2	28	0	37	2	65		
05:30			2	13	0	40	2	53		1	14	0	67	1	81		
05:45			1	12	4	23	5	35		0	7	1	29	1	36		
06:00			2	5	1	13	3	18		3	2	3	9	6	11		
06:15			4	5	2	11	6	16		4	6	2	6	6	12		
06:30			4	5	0	5	4	10		4	4	1	4	5	8		
06:45			9	3	4	5	13	8		8	7	1	11	9	18		
07:00			3	1	4	2	7	3		7	5	4	4	11	9		
07:15			11	5	3	2	14	7		5	6	6	3	11	9		
07:30			8	4	5	3	13	7		3	2	4	5	7	7		
07:45			10	5	1	2	11	7		10	3	1	1	11	4		
08:00			10	2	5	2	15	4		12	4	5	1	17	5		
08:15			6	3	7	1	13	4		9	2	6	5	15	7		
08:30			3	1	8	3	11	4		9	4	5	4	14	8		
08:45			10	4	3	1	13	5		8	3	6	1	14	4		
09:00			10	1	8	5	18	6		4	4	8	1	12	5		
09:15			11	3	7	12	18	15		7	4	7	5	14	9		
09:30			14	2	5	9	19	11		10	1	8	4	18	5		
09:45			8	1	20	3	28	4		10	2	9	2	19	4		
10:00			15	1	6	2	21	3		9	0	13	5	22	5		
10:15			10	1	13	0	23	1		10	3	17	3	27	6		
10:30			12	1	16	0	28	1		8	1	8	0	16	1		
10:45			15	0	14	1	29	1		10	0	16	1	26	1		
11:00			16	0	14	2	30	2		19	0	11	1	27	1		
11:15			16	2	17	1	33	3		16	0	11	0	27	0		
11:30			13	1	16	0	29	1		14	1	25	0	39	1		
11:45			9	0	13	0	22	0		13	0	15	1	28	1		
Total			233	468	197	504	430	972		216	481	195	495	411	976		
Day Total			701		701		1402			697		690		1387			
% Total			16.6%	33.4%	14.1%	35.9%				15.6%	34.7%	14.1%	35.7%				
Peak			10:45	04:30	10:30	05:15	10:45	04:45		11:00	04:30	10:45	05:00	11:00	04:45		
Vol.			60	127	61	136	121	232		62	136	63	151	124	251		
P.H.F.			0.938	0.722	0.897	0.567	0.917	0.682		0.816	0.850	0.630	0.563	0.795	0.775		

Traffic Data Service

2224 E. Cedar Ave. #7
 Flagstaff AZ 86004
 800-837-2562

Site Code: 2
 Station ID:
 Airport Road South of US 89
 Latitude: 0' 0.000 Undefined

Start Time	15-Nov-13		North		South		Combined		16-Nov-		North		South		Combined	
	Fri		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	Sat	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	
12:00			0	12	0	9	0	21	*	*	*	*	*	*	*	
12:15			0	14	0	13	0	27	*	*	*	*	*	*	*	
12:30			0	12	0	17	0	29	*	*	*	*	*	*	*	
12:45			0	16	0	11	0	27	*	*	*	*	*	*	*	
01:00			0	9	0	15	0	24	*	*	*	*	*	*	*	
01:15			0	6	0	10	0	16	*	*	*	*	*	*	*	
01:30			1	19	0	7	1	26	*	*	*	*	*	*	*	
01:45			0	16	1	15	1	31	*	*	*	*	*	*	*	
02:00			1	17	0	16	1	33	*	*	*	*	*	*	*	
02:15			0	16	0	18	0	34	*	*	*	*	*	*	*	
02:30			0	16	0	18	0	34	*	*	*	*	*	*	*	
02:45			0	18	0	22	0	40	*	*	*	*	*	*	*	
03:00			0	23	0	20	0	43	*	*	*	*	*	*	*	
03:15			0	25	0	15	0	40	*	*	*	*	*	*	*	
03:30			0	11	0	27	0	38	*	*	*	*	*	*	*	
03:45			0	17	0	9	0	26	*	*	*	*	*	*	*	
04:00			0	16	0	14	0	30	*	*	*	*	*	*	*	
04:15			0	20	0	13	0	33	*	*	*	*	*	*	*	
04:30			0	20	0	10	0	30	*	*	*	*	*	*	*	
04:45			0	35	0	13	0	48	*	*	*	*	*	*	*	
05:00			0	32	0	23	0	55	*	*	*	*	*	*	*	
05:15			1	9	0	48	1	57	*	*	*	*	*	*	*	
05:30			0	12	0	24	0	36	*	*	*	*	*	*	*	
05:45			2	6	1	15	3	21	*	*	*	*	*	*	*	
06:00			1	7	0	7	1	14	*	*	*	*	*	*	*	
06:15			6	12	1	10	7	22	*	*	*	*	*	*	*	
06:30			2	7	0	9	2	16	*	*	*	*	*	*	*	
06:45			9	4	3	3	12	7	*	*	*	*	*	*	*	
07:00			3	5	5	9	8	14	*	*	*	*	*	*	*	
07:15			5	6	4	6	9	12	*	*	*	*	*	*	*	
07:30			4	4	8	6	12	10	*	*	*	*	*	*	*	
07:45			17	6	7	5	24	11	*	*	*	*	*	*	*	
08:00			9	9	2	10	11	19	*	*	*	*	*	*	*	
08:15			5	10	6	5	11	15	*	*	*	*	*	*	*	
08:30			3	11	7	2	10	13	*	*	*	*	*	*	*	
08:45			17	1	3	3	20	4	*	*	*	*	*	*	*	
09:00			9	5	9	5	18	10	*	*	*	*	*	*	*	
09:15			15	6	12	0	27	6	*	*	*	*	*	*	*	
09:30			10	4	15	3	25	7	*	*	*	*	*	*	*	
09:45			9	2	8	4	17	6	*	*	*	*	*	*	*	
10:00			15	1	17	9	32	10	*	*	*	*	*	*	*	
10:15			17	1	19	1	36	2	*	*	*	*	*	*	*	
10:30			11	0	17	0	28	0	*	*	*	*	*	*	*	
10:45			10	0	13	0	23	0	*	*	*	*	*	*	*	
11:00			9	0	12	0	21	0	*	*	*	*	*	*	*	
11:15			16	1	17	0	33	1	*	*	*	*	*	*	*	
11:30			8	0	11	0	19	0	*	*	*	*	*	*	*	
11:45			10	2	19	1	29	3	*	*	*	*	*	*	*	
Total			225	501	217	500	442	1001		0	0	0	0	0	0	
Day Total			726		717		1443			0	0	0	0	0	0	
% Total			15.6%	34.7%	15.0%	34.7%				0.0%	0.0%	0.0%	0.0%			
Peak			10:00	04:15	10:00	05:00	10:00	04:45								
Vol.			53	107	66	110	119	196								
P.H.F.			0.779	0.764	0.868	0.573	0.826	0.860								

ADT ADT 1,620 AADT 1,620