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TRAFFIC IMPACT ANALYSIS

for

**THE PINES
LOCATED ON THE NORTHWEST
CORNER OF ARIZONA PAVILIONS
DRIVE AND CONTINENTAL LINKS
ROAD**

Town of Marana, Arizona

May 2005

Prepared for:

Standard Pacific Homes

Prepared by:



**Kimley-Horn
and Associates, Inc.**

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FERNANDO
ACCEPTED
6/22/05

SUBMITTAL NO. 1

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for

The Pines **Located on the Northwest Corner** **of Arizona Pavilions Drive and** **Continental Links Drive**

May 2005

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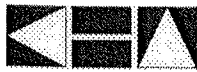


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I. INTRODUCTION

INTRODUCTION

This report documents the traffic impact analysis performed for The Pines development located in the Town of Marana, Arizona. The planned development is located on the northwest corner of Arizona Pavilions Drive and Continental Links Drive. The development is planned to consist of 431 single family detached homes. Phase I of the development will consist of 128 homes and Phase II will consist of 303 homes. The site will be accessed locally from Arizona Pavilions Drive and Continental Links Drive with an additional access along the Eastbound I-10 Frontage Road.

As directed by Town of Marana and ADOT staff, this traffic impact analysis was prepared based on current Arizona Department of Transportation standards as described in the *Traffic Impact Analysis for Proposed Development Standards*, April 1999. The specific objectives of this study are to:

- (1) Evaluate the level of service for existing conditions (2005) for the following intersections:
 - Arizona Pavilions Drive / Cortaro Road;
 - Arizona Pavilions Drive / Hospitality Road;
 - Arizona Pavilions Drive / Continental Links Drive; and
 - Arizona Pavilions Drive / Eastbound I-10 Frontage Road.

- (2) Evaluate the level of service for opening year (2006) for the following intersections:
 - Arizona Pavilions Drive / Cortaro Road;
 - Arizona Pavilions Drive / Hospitality Road;
 - Arizona Pavilions Drive / Continental Links Drive;
 - Arizona Pavilions Drive / Eastbound I-10 Frontage Road; and
 - The Pines Access Road / Eastbound I-10 Frontage Road.

II. PLANNED DEVELOPMENT

SITE LOCATION

The planned development is located on the northwest corner of Arizona Pavilions Drive and Continental Links Drive. The project location is shown in **Exhibit 1**.

SITE PLAN

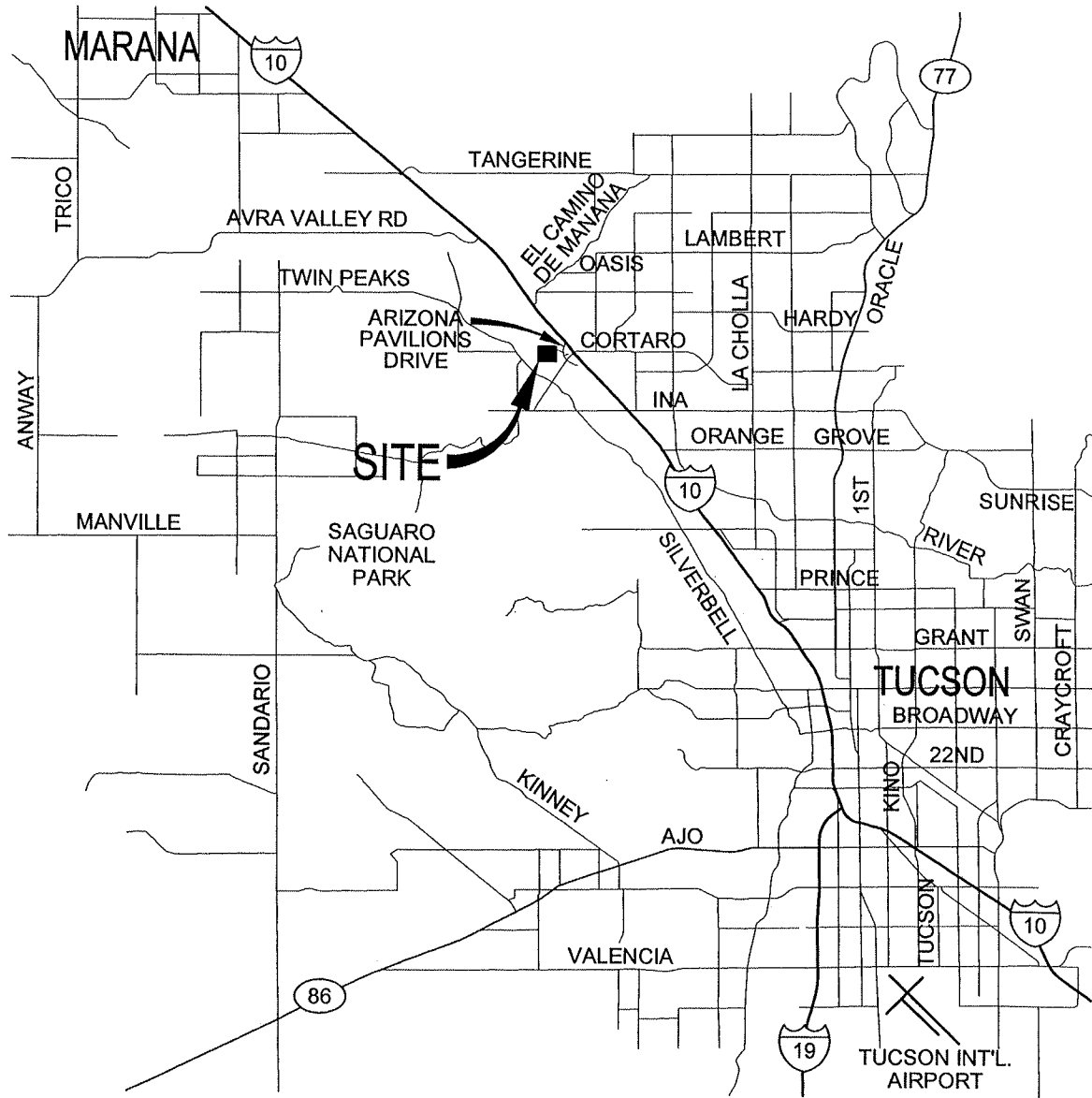
This development is planned to consist of approximately 431 single family detached homes. The planned site layout is illustrated in **Exhibit 2**. As shown in Exhibit 2, it is planned that the site will be accessed locally from Arizona Pavilions Drive and Continental Links Drive with an additional access point along the Eastbound I-10 Frontage Road. It should be noted that the driveway along the Eastbound I-10 Frontage Road is planned to accommodate right-in/right-out movements only.

ADJACENT LAND USE

Land use near the planned development is primarily commercial in nature with the exception of The Pines Golf Club at Marana.



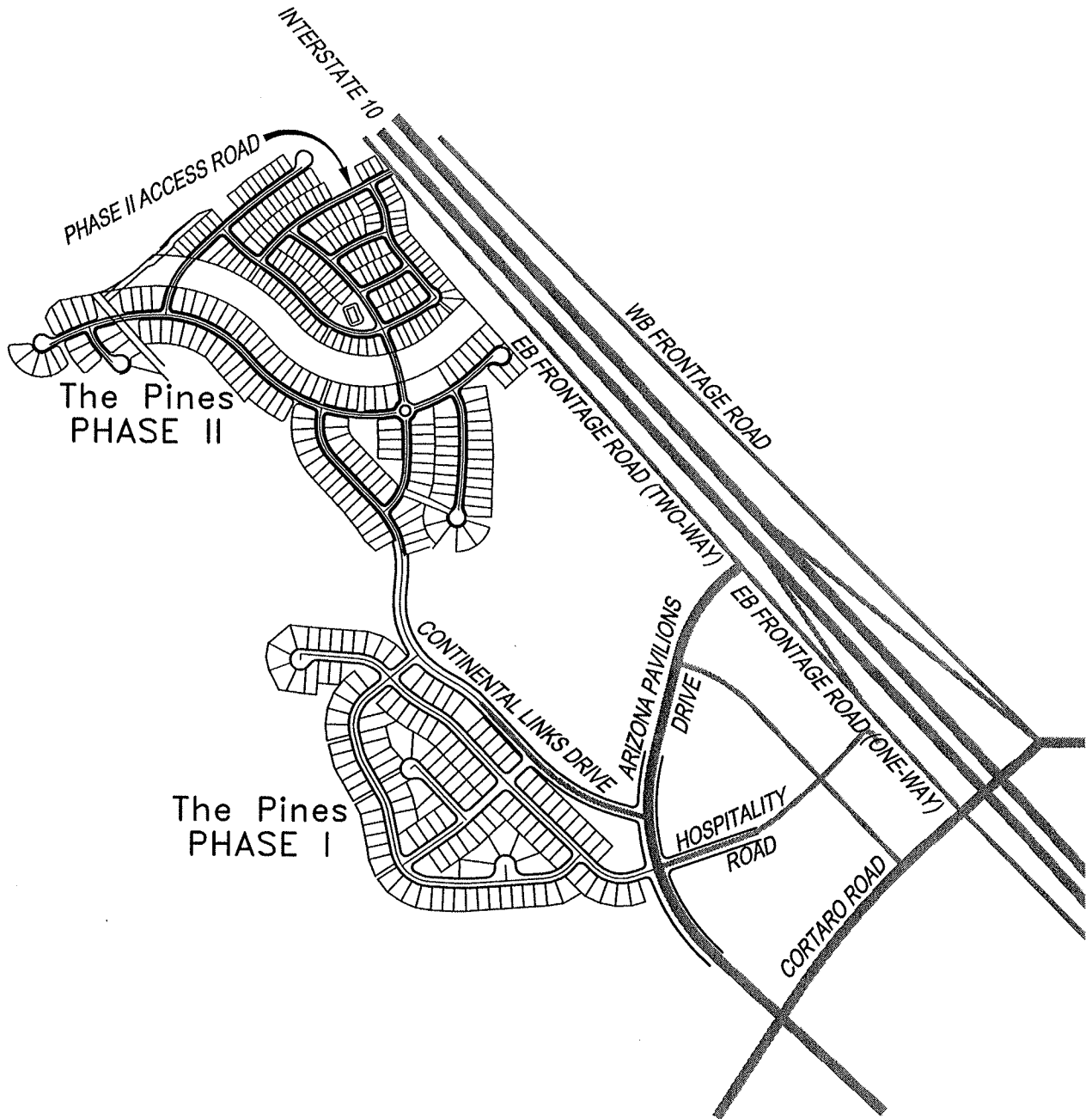
Project Location Map



NOT TO SCALE



Site Plan



NOT TO SCALE



IV. EXISTING CONDITIONS

PHYSICAL CHARACTERISTICS

The existing roadway network within the study area includes Cortaro Road, Arizona Pavilions Drive, Continental Links Drive, Hospitality Road, and the Eastbound I-10 Frontage Road. Cortaro Road is classified as an Arterial Roadway with 150' of right of way by The Town of Marana's *Major Routes and Rights of Way Plan*, December 2002. Arizona Pavilions Drive is classified as an Urban Collector based on information provided the Federal Highway Administration's Functional Classification Map for Tucson Arizona, March 2005. No other study roadways are classified.

A graphical illustration of existing intersection geometrics, traffic control, and posted speed limits in the vicinity of the planned development is shown in **Exhibit 3**. The following are summaries of the roadways providing access to the planned development:

Arizona Pavilions Drive, in the vicinity of the site, is a three lane facility with a continuous center-left-turn-lane. The posted speed limit is 25 mph in the vicinity of the site.

Continental Links Drive, in the vicinity of the site, provides one lane in each direction. The posted speed limit is 25 mph.

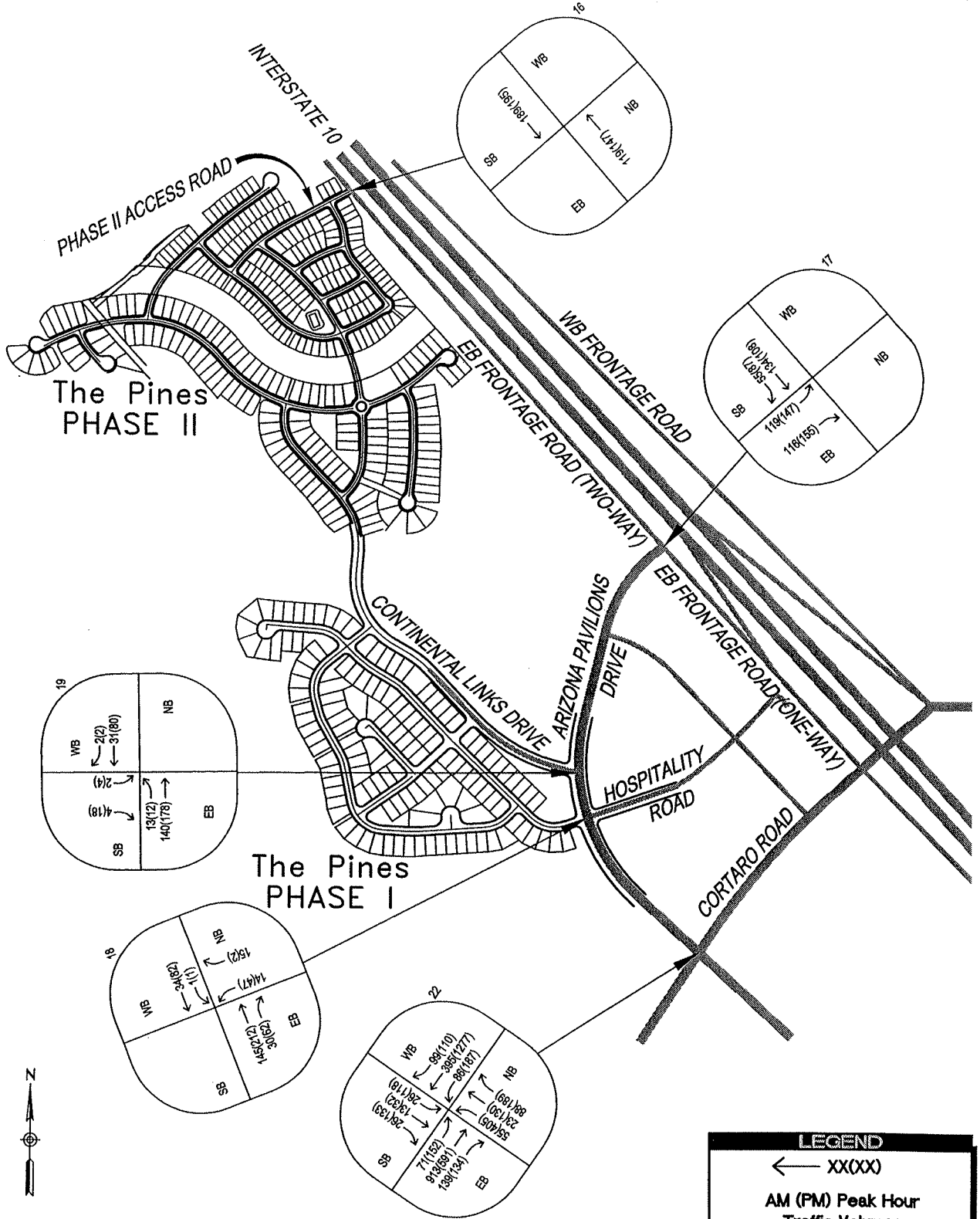
Hospitality Road, in the vicinity of the site, provides one lane in each direction but is not striped. The posted speed limit is 25 mph.

Eastbound I-10 Frontage Road, in the vicinity of the site is a two-lane facility providing both eastbound and westbound travel north of Arizona Pavilions Drive and one-way travel south of Arizona Pavilions Drive. The posted speed limit near Arizona Pavilions Drive is 25 mph while the posted speed limit in the vicinity of the planned Pines Access Road intersection is 55 mph.

Cortaro Road, in the vicinity of the site is a four-lane divided facility with a posted speed limit of 35 mph east of Arizona Pavilions Drive and 45 mph west of Arizona Pavilions Drive.



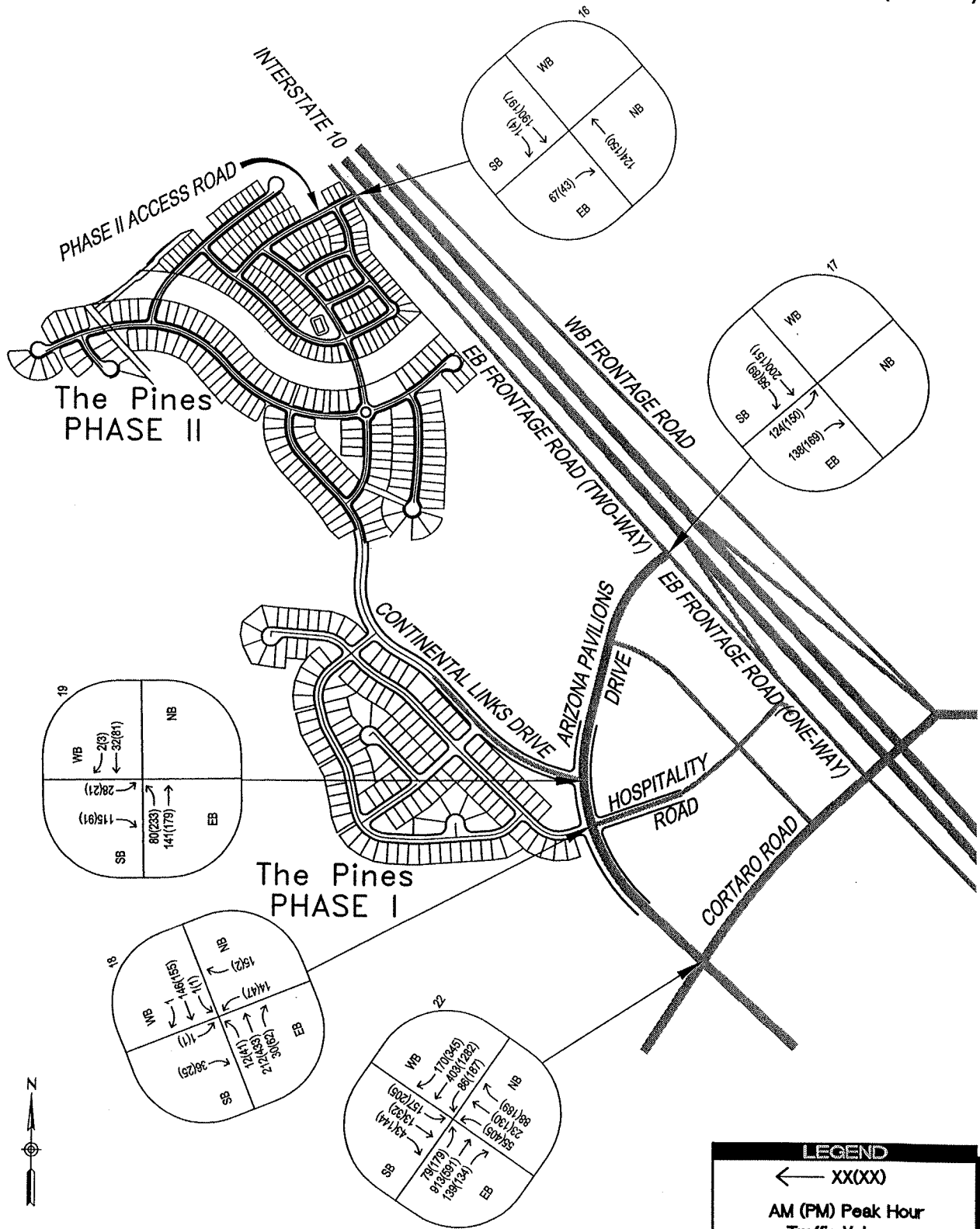
Background Traffic (2006)



NOT TO SCALE



Total Traffic (2006)



NOT TO SCALE

IV. TRAFFIC AND IMPROVEMENT ANALYSIS

LEVEL OF SERVICE

The study area intersections were evaluated on the basis of future traffic projections shown in Exhibit 11. All intersections were analyzed using Synchro 5.0 which utilizes the methodologies outlined in the *Highway Capacity Manual 2000*. The results of the traffic analysis are shown in Exhibit 12 for opening year (2006). Exhibit 13 shows the intersection lane use assumptions used in the analysis. Software output sheets for the analyses are located in the Appendix.

EXHIBIT 12 – LEVEL OF SERVICE ANALYSIS (2006)

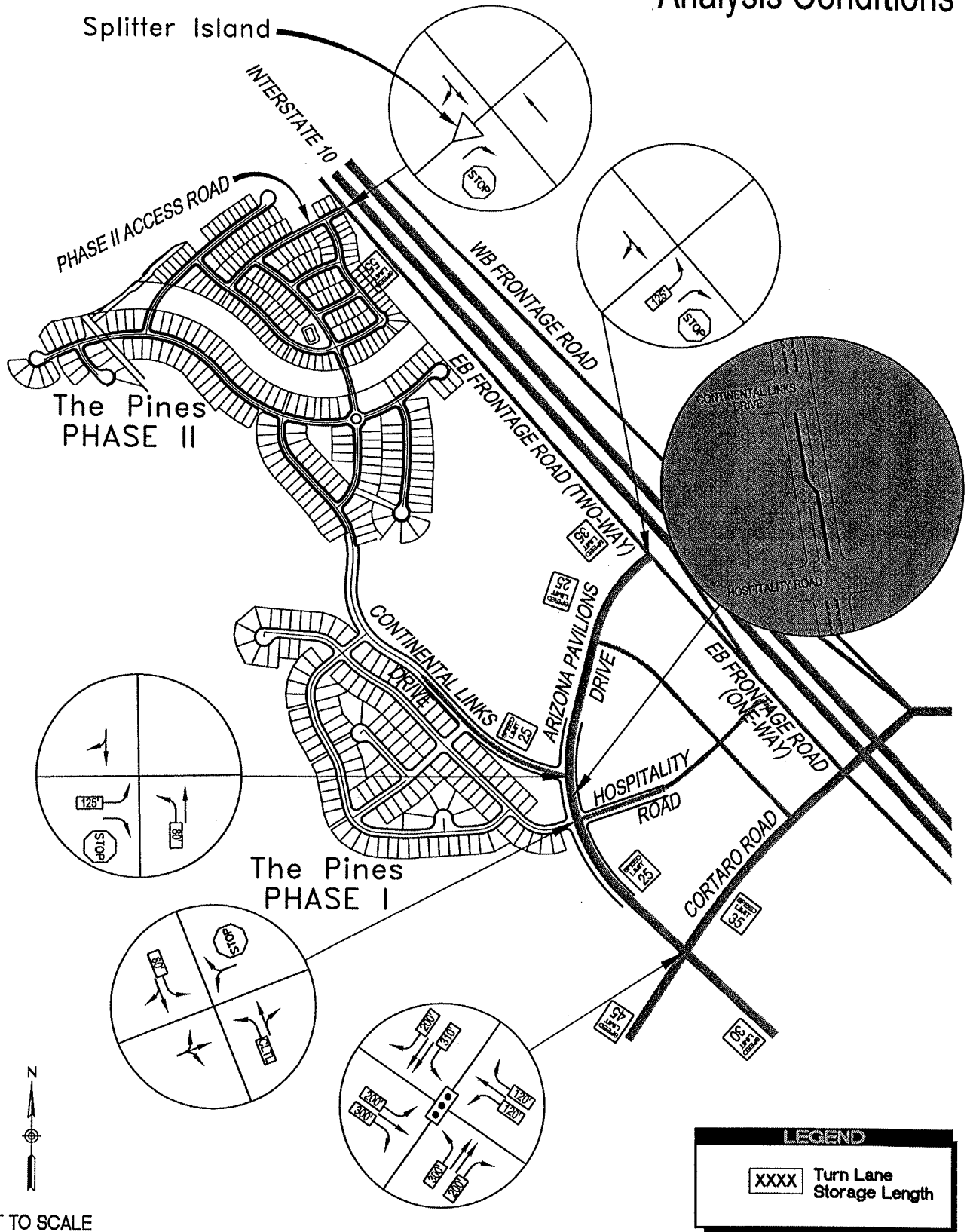
Local Intersections	NB			SE			EB			WB			Intersection LOS	Traffic Control	
	L	T	R	L	T	R	L	T	R	L	T	R			
Cortaro Road / Arizona Pavillions Drive															
AM Peak Hour	C	C	A	C	C	B	A	B	A	D	B	A	B	Signalized	
PM Peak Hour	D	D	A	D	D	A	D	C	A	B	D	B	C		
Hospitality Road / Arizona Pavillions Drive															
AM Peak Hour	B			A			A			A			B	Unsignalized	
PM Peak Hour	C			A			A			B			C		
Continental Links Drive / Arizona Pavillions Drive															
AM Peak Hour				A			A						A	Unsignalized	
PM Peak Hour				B			A						B		
Eastbound Frontage Road / Arizona Pavillions Drive															
AM Peak Hour							B		B					B	Unsignalized
PM Peak Hour							B		B					B	
Eastbound Frontage Road / The Pines Access Road															
AM Peak Hour										A			A	Unsignalized	
PM Peak Hour										A			A		

* Intersection LOS for unsignalized intersections is reported as "Worst-Movement LOS"

As shown in Exhibit 12, all study area intersections are anticipated to operate at acceptable levels of service during both the AM and PM peak hours.



Analysis Conditions



TURN LANE ANALYSIS

Level of service and traffic volume data were used to determine the need for exclusive turn lanes, median placement, and improvements to existing facilities if necessary.

Arizona Pavilions Drive

The existing center-left-turn-lane along Arizona Pavilions Drive currently provides a safe refuge for drivers making left-turn movements into Continental Links Drive and Hospitality Road. However, the increase in volume at Continental Links Drive due to the planned residential development and the close driveway spacing between Continental Links Drive and Hospitality Road increases the likelihood of turning conflicts between opposing left-turn traffic within the center-left-turn-lane. The current driveway spacing between Continental Links Drive and Hospitality Road is approximately 225 feet. To eliminate the turning conflicts into these driveways, it is recommended that a raised median be provided along Arizona Pavilions Drive between Continental Links Drive and Hospitality Road. A minimum of 80 feet of storage should be provided at both driveways to accommodate queuing demands.

Arizona Pavilions Drive / Eastbound (two-way) I-10 Frontage Road

It is anticipated that the existing left-turn and right-turn storage lengths of approximately 125 feet along Arizona Pavilions Drive at the Eastbound I-10 Frontage Road will accommodate storage demands for opening year (2006).

Cortaro Road / Arizona Pavilions Drive

It is anticipated that the existing intersection of Cortaro Road and Arizona Pavilions Drive will operate at acceptable levels of service with the addition of The Pines development. It should be noted that signal timing changes were made during the analysis to achieve acceptable levels of service on all movements.

Continental Links Drive / Arizona Pavilions Drive

It is anticipated that the existing left-turn and right-turn lane outbound storage lengths of approximately 125 feet along Continental Links Drive will accommodate storage demands for opening year (2006).

Hospitality Road / Arizona Pavilions Drive

It is anticipated that the proposed turn lanes at the intersection of Arizona Pavilions Drive and Hospitality Road will accommodate traffic operations for opening year (2006).

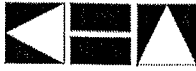
The Pines Access Road / Eastbound (two-way) I-10 Frontage Road

It is recommended that a raised "splitter island" be installed at this driveway to reinforce the restricted right-in / right-out access. This structure should be designed and signed to restrict northbound left-turning movements into Phase II.

V. CONCLUSIONS AND RECOMMENDATIONS

This analysis has provided an overview of the traffic operations and the recommended improvements for a The Pines development in the Town of Marana, Arizona. Following are the major conclusions of this analysis:

- All study area intersections operate at acceptable levels of service during both the AM and PM peak hours under existing (2005) conditions.
- It is anticipated that all study area intersections are anticipated to operate at acceptable levels of service during both the AM and PM peak hours opening year (2006) under the analysis conditions shown in **Exhibit 13**.
- It is recommended that a raised “splitter island” be installed at this driveway to reinforce the restricted right-in / right-out access. This structure should be designed and signed to restrict northbound left-turning movements into Phase II.
- It is recommended that a raised median be provided along Arizona Pavilions Drive between Continental Links Drive and Hospitality Road. A minimum of 80 feet of storage should be provided at both driveways to accommodate queuing demands.



Kimley-Horn
and Associates, Inc.

VIII. APPENDIX

TRAFFIC COUNTS

Intersection Turning Movement

Prepared by: Field Data Services of Arizona, Inc.

N-S STREET: ARIZONA PAVILIONS DR. DATE: 05/12/05 LOCATION: MARANA
 E-W STREET: CORTARO RD. DAY: THURSDAY PROJECT# 05-5090-001

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	59	19	32	9	4	9	12	98	28	32	228	9	539
4:15 PM	62	18	37	8	7	9	22	112	29	36	240	7	587
4:30 PM	76	25	39	11	3	14	20	125	30	31	263	12	649
4:45 PM	82	26	43	13	5	13	22	136	33	43	300	13	729
5:00 PM	102	32	38	14	4	21	20	144	35	46	318	15	789
5:15 PM	88	33	42	12	6	14	21	133	26	39	278	8	700
5:30 PM	96	21	49	14	7	7	14	124	28	42	265	14	681
5:45 PM	79	16	53	9	5	8	13	122	35	40	252	11	643
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	644	190	333	90	41	95	144	994	244	309	2144	89	5317

PM Peak Hr Begins at: 445 PM

PEAK VOLUMES =	368	112	172	53	22	55	77	537	122	170	1161	50	2899
PEAK HR. FACTOR:		0.948			0.833			0.925			0.911		0.919

CONTROL: SIGNALIZED

Intersection Turning Movement

Prepared by: Field Data Services of Arizona, Inc.

N-S STREET: ARIZONA PAVILIONS DR. DATE: 05/12/05 LOCATION: MARANA
 E-W STREET: CORTARO RD. DAY: THURSDAY PROJECT# 05-5090-001

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	14	3	21	3	2	3	11	145	22	12	76	12	324
7:15 AM	15	6	20	4	2	4	14	162	36	19	82	17	381
7:30 AM	13	4	19	2	3	2	13	195	32	23	93	14	413
7:45 AM	12	7	21	5	3	3	10	202	31	18	88	17	417
8:00 AM	14	3	20	3	4	3	12	213	33	22	72	20	419
8:15 AM	11	4	20	3	0	3	10	220	30	15	106	22	444
8:30 AM	14	5	14	2	1	5	18	174	28	28	80	19	388
8:45 AM	16	4	12	4	5	6	16	176	32	22	83	21	397
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	109	36	147	26	20	29	104	1487	244	159	680	142	3183

AM Peak Hr Begins at: 730 AM

PEAK VOLUMES =	50	18	80	13	10	11	45	830	126	78	359	73	1693
PEAK HR. FACTOR:		0.925			0.773			0.963			0.892		0.953

CONTROL: SIGNALIZED

Intersection Turning Movement

Prepared by: Field Data Services of Arizona, Inc.

N-S STREET: ARIZONA PAVILIONS DR. DATE: 05/12/05 LOCATION: MARANA
 E-W STREET: HOSPITALITY RD. DAY: THURSDAY PROJECT# 05-5090-004

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	0	39	11	0	14	0	0	0	0	11	0	0	75
4:15 PM	0	42	14	1	22	0	0	0	0	9	0	1	89
4:30 PM	0	64	12	0	21	0	0	0	0	11	0	1	109
4:45 PM	0	44	19	0	11	0	0	0	0	12	0	0	86
5:00 PM	0	33	13	0	19	0	0	0	0	8	0	1	74
5:15 PM	0	38	10	0	23	0	0	0	0	10	0	0	81
5:30 PM	0	36	5	0	21	0	0	0	0	5	0	1	68
5:45 PM	0	28	8	0	20	0	0	0	0	12	0	1	69
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	324	92	1	151	0	0	0	0	78	0	5	651

PM Peak Hr Begins at: 400 PM

PEAK VOLUMES =	0	189	56	1	68	0	0	0	0	43	0	2	359
PEAK HR. FACTOR:		0.806			0.750			0.000			0.938		0.823

CONTROL: 1-WAY STOP (WB)

Intersection Turning Movement

Prepared by: Field Data Services of Arizona, Inc.

N-S STREET: ARIZONA PAVILIONS DR. DATE: 05/12/05 LOCATION: MARANA
 E-W STREET: HOSPITALITY RD. DAY: THURSDAY PROJECT# 05-5090-004

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	0	21	4	0	1	0	0	0	0	1	0	2	29
7:15 AM	0	24	5	0	4	0	0	0	0	5	0	3	41
7:30 AM	0	28	6	0	8	0	0	0	0	2	0	2	46
7:45 AM	0	34	3	0	3	0	0	0	0	3	0	4	47
8:00 AM	0	34	6	0	4	0	0	0	0	3	0	4	51
8:15 AM	0	33	8	0	6	0	0	0	0	4	0	2	53
8:30 AM	0	30	10	0	15	0	0	0	0	3	0	4	62
8:45 AM	0	22	4	0	8	0	0	0	0	2	0	3	39
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	226	46	0	49	0	0	0	0	23	0	24	368

AM Peak Hr Begins at: 7:45 AM

PEAK VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	131	27	0	28	0	0	0	0	13	0	14	213
PEAK HR. FACTOR:		0.963			0.467			0.000			0.964		0.859

CONTROL: 1-WAY STOP (WB)

Intersection Turning Movement

Prepared by: Field Data Services of Arizona, Inc.

N-S STREET: ARIZONA PAVILIONS DR. DATE: 05/12/05 LOCATION: MARANA
 E-W STREET: I-10 EB FRONTAGE RD. DAY: THURSDAY PROJECT# 05-5090-002

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	27	0	24	0	0	0	0	32	19	0	0	0	102
4:15 PM	29	0	34	0	0	0	0	22	20	0	0	0	105
4:30 PM	36	0	34	0	0	0	0	30	23	0	0	0	123
4:45 PM	32	0	28	0	0	0	0	17	14	0	0	0	91
5:00 PM	31	0	37	0	0	0	0	21	16	0	0	0	105
5:15 PM	31	0	42	0	0	0	0	30	20	0	0	0	123
5:30 PM	37	0	27	0	0	0	0	14	16	0	0	0	94
5:45 PM	22	0	30	0	0	0	0	15	9	0	0	0	76
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	245	0	256	0	0	0	0	181	137	0	0	0	819

PM Peak Hr Begins at: 430 PM

PEAK VOLUMES =	130	0	141	0	0	0	0	98	73	0	0	0	442
PEAK HR. FACTOR:		0.928			0.000			0.807			0.000		0.898

CONTROL: 1-WAY STOP (EB)

Intersection Turning Movement

Prepared by: Field Data Services of Arizona, Inc.

N-S STREET: ARIZONA PAVILIONS DR. DATE: 05/12/05 LOCATION: MARANA
 E-W STREET: I-10 EB FRONTAGE RD. DAY: THURSDAY PROJECT# 05-5090-002

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	22	0	14	0	0	0	0	23	13	0	0	0	72
7:15 AM	26	0	23	0	0	0	0	28	14	0	0	0	91
7:30 AM	27	0	27	0	0	0	0	29	15	0	0	0	98
7:45 AM	26	0	26	0	0	0	0	23	12	0	0	0	87
8:00 AM	28	0	29	0	0	0	0	42	6	0	0	0	105
8:15 AM	23	0	12	0	0	0	0	15	6	0	0	0	56
8:30 AM	15	0	20	0	0	0	0	13	6	0	0	0	54
8:45 AM	16	0	12	0	0	0	0	24	11	0	0	0	63
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	183	0	163	0	0	0	0	197	83	0	0	0	626

AM Peak Hr Begins at: 7:15 AM

PEAK VOLUMES =	107	0	105	0	0	0	0	122	47	0	0	0	381
PEAK HR. FACTOR:		0.930			0.000			0.880			0.000		0.907

CONTROL: 1-WAY STOP (EB)

Intersection Turning Movement

Prepared by: Field Data Services of Arizona, Inc.

N-S STREET: ARIZONA PAVILIONS DR. DATE: 05/12/05 LOCATION: MARANA
 E-W STREET: CONTINENTAL LINKS DR. DAY: THURSDAY PROJECT# 05-5090-003

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	2	22	0	0	14	1	1	0	3	0	0	0	43
4:15 PM	3	43	0	0	13	0	2	0	2	0	0	0	63
4:30 PM	4	59	0	0	17	1	1	0	4	0	0	0	86
4:45 PM	5	38	0	0	19	0	1	0	2	0	0	0	65
5:00 PM	1	24	0	0	12	1	1	0	4	0	0	0	43
5:15 PM	1	37	0	0	18	0	1	0	6	0	0	0	63
5:30 PM	0	37	0	0	12	0	1	0	9	0	0	0	59
5:45 PM	2	28	0	0	18	1	0	0	3	0	0	0	52
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	18	288	0	0	123	4	8	0	33	0	0	0	474

PM Peak Hr Begins at: 430 PM

PEAK VOLUMES =	11	158	0	0	66	2	4	0	16	0	0	0	257
PEAK HR. FACTOR:	0.671			0.895			0.714			0.000			0.747

CONTROL: 1-WAY STOP (EB)

Intersection Turning Movement

Prepared by: Field Data Services of Arizona, Inc.

N-S STREET: ARIZONA PAVILIONS DR. DATE: 05/12/05 LOCATION: MARANA
 E-W STREET: CONTINENTAL LINKS DR. DAY: THURSDAY PROJECT# 05-5090-003

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
LANES:													
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	1	22	0	0	4	0	1	0	0	0	0	0	28
7:15 AM	2	29	0	0	3	1	0	0	1	0	0	0	36
7:30 AM	4	27	0	0	6	0	0	0	1	0	0	0	38
7:45 AM	2	33	0	0	6	0	1	0	0	0	0	0	42
8:00 AM	3	34	0	0	4	0	0	0	1	0	0	0	42
8:15 AM	3	30	0	0	8	1	0	0	1	0	0	0	43
8:30 AM	4	29	0	0	7	1	1	0	2	0	0	0	44
8:45 AM	4	24	0	0	7	0	0	0	2	0	0	0	37
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	23	228	0	0	45	3	3	0	8	0	0	0	310

AM Peak Hr Begins at: 7:45 AM

PEAK VOLUMES =	12	126	0	0	25	2	2	0	4	0	0	0	171
PEAK HR. FACTOR:		0.932			0.750			0.500			0.000		0.972

CONTROL: 1-WAY STOP (EB)

Lanes, Volumes, Timings
 22: Cortaro Road & Arizona Pavillions Drive

5/17/2005



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		200	310		200	120		120	270		165
Storage Lanes	1		1	1		1	1		1	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fit			0.850			0.850			0.850			0.850
Fit Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863	1583
Fit Permitted	0.485			0.950			0.750			0.744		
Satd. Flow (perm)	903	3539	1583	1770	3539	1583	1397	1863	1583	1386	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			123			79			87			12
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		45			35			25			25	
Link Distance (ft)		772			652			2208			1376	
Travel Time (s)		11.7			12.7			60.2			37.5	
Volume (vph)	45	830	126	78	359	73	50	18	80	13	10	11
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	49	902	137	85	390	79	54	20	87	14	11	12
Lane Group Flow (vph)	49	902	137	85	390	79	54	20	87	14	11	12
Turn Type	pm+pt		custom	Prot		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		4			6	8		8	4		4
Detector Phases	5	2	4	1	6	6	3	8	8	7	4	4
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	12.1	38.4	46.2	12.1	41.4	41.4	12.4	44.2	44.2	12.0	46.2	46.2
Total Split (s)	15.0	41.0	18.0	17.0	43.0	43.0	14.0	18.0	18.0	14.0	18.0	18.0
Total Split (%)	17%	46%	20%	19%	48%	48%	16%	20%	20%	16%	20%	20%
Maximum Green (s)	7.9	33.6	9.8	9.9	35.6	35.6	6.6	9.8	9.8	7.0	9.8	9.8
Yellow Time (s)	4.1	4.4	5.2	4.1	4.4	4.4	4.4	5.2	5.2	4.0	5.2	5.2
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Coord	None	None	Coord	Coord	None	None	None	None	None	None
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	52.7	44.4	14.0	11.7	48.7	48.7	25.4	21.8	21.8	20.9	14.0	14.0
Actuated g/C Ratio	0.59	0.49	0.16	0.13	0.54	0.54	0.28	0.24	0.24	0.23	0.16	0.16
v/c Ratio	0.08	0.52	0.39	0.37	0.20	0.09	0.13	0.04	0.19	0.04	0.04	0.05
Uniform Delay, d1	8.9	21.8	3.3	35.4	15.5	0.0	20.8	26.1	0.0	21.0	32.3	0.0
Delay	7.7	18.0	8.8	35.6	13.0	3.7	23.4	27.5	7.5	22.8	32.6	17.1
LOS	A	B	A	D	B	A	C	C	A	C	C	B
Approach Delay		16.3			15.2			15.3			23.9	

Lanes, Volumes, Timings
 22: Cortaro Road & Arizona Pavillions Drive

5/17/2005



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	B			B			B			C		
90th %ile Green (s)	7.9	34.5	9.8	9.9	36.5	36.5	5.7	9.8	9.8	6.1	9.8	9.8
90th %ile Term Code	Hold	Coord	Max	Max	Coord	Coord	Gap	Max	Max	Hold	Max	Max
70th %ile Green (s)	7.9	34.6	9.8	9.9	36.6	36.6	5.6	22.8	22.8	0.0	9.8	9.8
70th %ile Term Code	Hold	Coord	Max	Max	Coord	Coord	Gap	Hold	Hold	Skip	Max	Max
50th %ile Green (s)	7.6	34.9	9.8	9.6	36.9	36.9	5.6	22.8	22.8	0.0	9.8	9.8
50th %ile Term Code	Hold	Coord	Max	Gap	Coord	Coord	Gap	Hold	Hold	Skip	Max	Max
30th %ile Green (s)	0.0	36.6	9.8	8.0	51.7	51.7	5.5	22.7	22.7	0.0	9.8	9.8
30th %ile Term Code	Skip	Coord	Max	Gap	Coord	Coord	Gap	Hold	Hold	Skip	Max	Max
10th %ile Green (s)	0.0	64.6	9.8	0.0	64.6	64.6	0.0	9.8	9.8	0.0	9.8	9.8
10th %ile Term Code	Skip	Coord	Max	Skip	Coord	Coord	Skip	Hold	Hold	Skip	Max	Max
Queue Length 50th (ft)	10	202	7	44	70	0	22	8	0	6	5	0
Queue Length 95th (ft)	24	266	58	89	101	24	50	30	40	20	20	15
Internal Link Dist (ft)	692			572			2128			1296		
50th Up Block Time (%)												
95th Up Block Time (%)												
Turn Bay Length (ft)	300	200		310	200		120	120		270	165	
50th Bay Block Time %												
95th Bay Block Time %												
Queuing Penalty (veh)												

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 7 (8%), Referenced to phase 2:EBTL and 6:WBT, Start of Green

Natural Cycle: 115

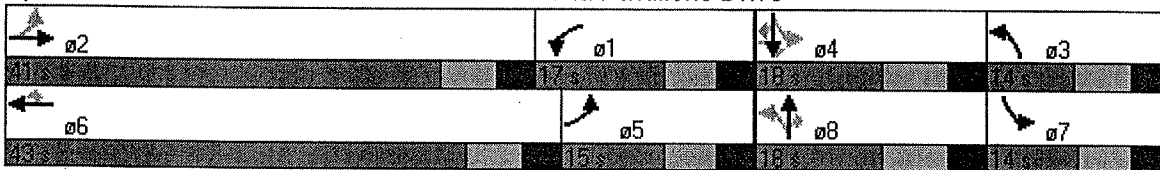
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.52

Intersection Signal Delay: 16.1 Intersection LOS: B

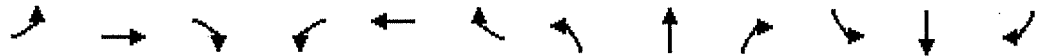
Intersection Capacity Utilization 48.0% ICU Level of Service A

Splits and Phases: 22: Cortaro Road & Arizona Pavillions Drive



HCM Unsignalized Intersection Capacity Analysis
 18: Arizona Pavillions Drive & Hospitality Road

5/18/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↖ ↗			↖ ↗				↕			↕		
Sign Control	Free			Free			Stop			Stop			
Grade	0%			0%			0%			0%			
Volume (veh/h)	0	131	27	1	28	0	13	0	14	0	0	0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (veh/h)	0	142	29	1	30	0	14	0	15	0	0	0	
Pedestrians													
Lane Width (ft)													
Walking Speed (ft/s)													
Percent Blockage													
Right turn flare (veh)													
Median type													
Median storage veh													
Upstream signal (ft)													
pX, platoon unblocked													
vC, conflicting volume	30		172			190		190		157		190	
vC1, stage 1 conf vol	0		0										
vC2, stage 2 conf vol	0		0										
vCu, unblocked vol	30		172			190		190		157		190	
tC, single (s)	4.1		4.1			7.1		6.5		6.2		7.1	
tC, 2 stage (s)	3.1		3.1										
tF (s)	2.2		2.2			3.5		4.0		3.3		3.5	
p0 queue free %	100		100			98		100		98		100	
cM capacity (veh/h)	1076		956			770		704		888		756	
Direction, Lane #													
	EB 1	EB 2	WB 1	NB 1	SB 1								
Volume Total	0	172	32	29	0								
Volume Left	0	0	1	14	0								
Volume Right	0	29	0	15	0								
cSH	1700	1700	956	827	1700								
Volume to Capacity	0.00	0.10	0.00	0.04	0.00								
Queue Length (ft)	0	0	0	3	0								
Control Delay (s)	0.0	0.0	0.3	9.5	0.0								
Lane LOS			A	A	A								
Approach Delay (s)	0.0		0.3	9.5	0.0								
Approach LOS			A	A									
Intersection Summary													
Average Delay			1.2										
Intersection Capacity Utilization			19.3%			ICU Level of Service		A					

HCM Unsignalized Intersection Capacity Analysis
 19: Arizona Pavillions Drive & Continental Links Drive

5/17/2005



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↑	↑		↵	↵
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	12	126	25	2	2	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (veh/h)	13	137	27	2	2	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						5
Median type					None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	29				191	28
vC1, stage 1 conf vol	0					
vC2, stage 2 conf vol	0					
vCu, unblocked vol	29				191	28
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)	3.1					
tF (s)	2.2				3.5	3.3
p0 queue free %	99				100	100
cM capacity (veh/h)	1077				788	1047

Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	13	137	29	7
Volume Left	13	0	0	2
Volume Right	0	0	2	4
cSH	1077	1700	1700	1570
Volume to Capacity	0.01	0.08	0.02	0.00
Queue Length (ft)	1	0	0	0
Control Delay (s)	8.4	0.0	0.0	8.8
Lane LOS	A			A
Approach Delay (s)	0.7		0.0	8.8
Approach LOS				A

Intersection Summary			
Average Delay		0.9	
Intersection Capacity Utilization	17.2%	ICU Level of Service	A

HCM Unsignalized Intersection Capacity Analysis
 17: Arizona Pavillions Drive & EB Frontage Road

5/17/2005



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↙	↘		↑	↑	↘
Sign Control	Stop			Stop	Yield	
Volume (veh/h)	107	105	0	0	122	47
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (veh/h)	116	114	0	0	133	51

Direction, Lane #	EB 1	EB 2	SB 1
Volume Total (vph)	116	114	184
Volume Left (vph)	116	0	0
Volume Right (vph)	0	114	51
Hadj (s)	0.2	-0.6	-0.1
Departure Headway (s)	5.1	4.3	4.3
Degree Utilization, x	0.17	0.14	0.22
Capacity (veh/h)	672	799	808
Control Delay (s)	8.0	6.8	8.5
Approach Delay (s)	7.4		8.5
Approach LOS	A		A

Intersection Summary			
Delay		7.9	
HCM Level of Service		A	
Intersection Capacity Utilization	23.8%		ICU Level of Service A

Lanes, Volumes, Timings
 22: Cortaro Road & Arizona Pavillions Drive

5/17/2005



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		200	310		200	120		120	270		165
Storage Lanes	1		1	1		1	1		1	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.114			0.950			0.742			0.642		
Satd. Flow (perm)	212	3539	1583	1770	3539	1583	1382	1863	1583	1196	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			133			35			187			60
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		45			35			25			25	
Link Distance (ft)		772			652			2208			1376	
Travel Time (s)		11.7			12.7			60.2			37.5	
Volume (vph)	77	537	122	170	1161	50	368	112	172	53	22	55
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	84	584	133	185	1262	54	400	122	187	58	24	60
Lane Group Flow (vph)	84	584	133	185	1262	54	400	122	187	58	24	60
Turn Type	pm+pt		custom	Prot		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		4			6	8		8	4		4
Detector Phases	5	2	4	1	6	6	3	8	8	7	4	4
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	12.1	38.4	46.2	12.1	41.4	41.4	12.4	44.2	44.2	12.0	46.2	46.2
Total Split (s)	15.0	39.0	39.0	25.0	49.0	49.0	17.0	43.0	43.0	13.0	39.0	39.0
Total Split (%)	13%	33%	33%	21%	41%	41%	14%	36%	36%	11%	33%	33%
Maximum Green (s)	7.9	31.6	30.8	17.9	41.6	41.6	9.6	34.8	34.8	6.0	30.8	30.8
Yellow Time (s)	4.1	4.4	5.2	4.1	4.4	4.4	4.4	5.2	5.2	4.0	5.2	5.2
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Coord	None	None	Coord	Coord	None	None	None	None	None	None
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	67.1	57.0	14.5	19.2	68.6	68.6	30.8	20.5	20.5	24.4	14.5	14.5
Actuated g/C Ratio	0.56	0.48	0.12	0.16	0.57	0.57	0.26	0.17	0.17	0.20	0.12	0.12
v/c Ratio	0.34	0.35	0.43	0.65	0.62	0.06	1.01	0.38	0.44	0.20	0.11	0.25
Uniform Delay, d1	12.8	21.7	0.0	45.8	19.1	4.4	43.2	44.1	0.0	33.3	47.0	0.0
Delay	16.3	20.5	8.2	47.2	18.3	6.5	74.9	45.8	6.3	34.6	47.1	11.9
LOS	B	C	A	D	B	A	E	D	A	C	D	B
Approach Delay		18.0			21.5			51.8			27.1	

Lanes, Volumes, Timings
 22: Cortaro Road & Arizona Pavillions Drive

5/17/2005

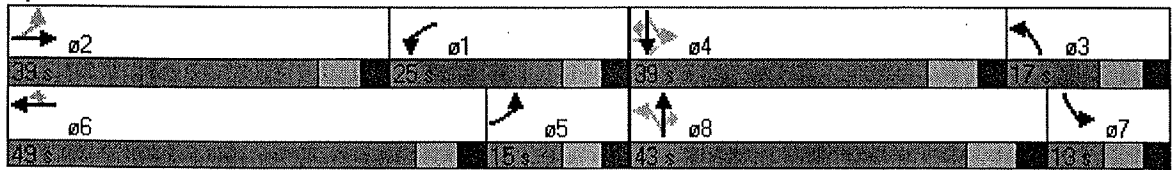


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	B			C			D			C		
90th %ile Green (s)	7.9	49.3	11.5	17.9	59.3	59.3	11.2	17.1	17.1	6.0	11.5	11.5
90th %ile Term Code	Max	Coord	Gap	Max	Coord	Coord	Hold	Gap	Gap	Max	Gap	Gap
70th %ile Green (s)	7.9	52.3	10.0	17.9	62.3	62.3	9.7	14.3	14.3	5.8	10.0	10.0
70th %ile Term Code	Hold	Coord	Min	Max	Coord	Coord	Hold	Gap	Gap	Gap	Min	Min
50th %ile Green (s)	7.7	52.6	10.0	17.7	62.6	62.6	9.6	12.4	12.4	7.6	10.0	10.0
50th %ile Term Code	Hold	Coord	Min	Gap	Coord	Coord	Max	Gap	Gap	Hold	Min	Min
30th %ile Green (s)	5.9	54.4	10.0	15.9	64.4	64.4	9.6	10.5	10.5	9.5	10.0	10.0
30th %ile Term Code	Gap	Coord	Min	Hold	Coord	Coord	Max	Min	Min	Hold	Min	Min
10th %ile Green (s)	0.0	59.1	10.0	11.2	77.4	77.4	9.6	27.0	27.0	0.0	10.0	10.0
10th %ile Term Code	Skip	Coord	Min	Gap	Coord	Coord	Max	Hold	Hold	Skip	Min	Min
Queue Length 50th (ft)	20	148	0	134	344	6	~315	88	0	35	17	0
Queue Length 95th (ft)	41	203	58	212	446	27	#485	144	63	67	43	40
Internal Link Dist (ft)	692			572			2128			1296		
50th Up Block Time (%)												
95th Up Block Time (%)												
Turn Bay Length (ft)	300		200	310		200	120		120	270		165
50th Bay Block Time %				7%			49%					
95th Bay Block Time %				17%			56%			18%		
Queuing Penalty (veh)				22			162			36		

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 86 (72%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
 Natural Cycle: 115
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.01
 Intersection Signal Delay: 27.7 Intersection LOS: C
 Intersection Capacity Utilization 78.3% ICU Level of Service C
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 22: Cortaro Road & Arizona Pavillions Drive



HCM Unsignalized Intersection Capacity Analysis
 18: Arizona Pavillions Drive & Hospitality Road

5/17/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷		↶	↷	
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Volume (veh/h)	0	189	56	1	68	0	43	0	2	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (veh/h)	0	205	61	1	74	0	47	0	2	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None			None		
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	74			266			312	312	236	284	342	74
vC1, stage 1 conf vol	0			0								
vC2, stage 2 conf vol	0			0								
vCu, unblocked vol	74			266			312	312	236	284	342	74
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)	3.1			3.1								
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			93	100	100	100	100	100
cM capacity (veh/h)	1037			882			640	602	803	666	579	988

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	SB 1
Volume Total	0	266	75	49	0
Volume Left	0	0	1	47	0
Volume Right	0	61	0	2	0
cSH	1700	1700	882	646	1700
Volume to Capacity	0.00	0.16	0.00	0.08	0.00
Queue Length (ft)	0	0	0	6	0
Control Delay (s)	0.0	0.0	0.1	11.0	0.0
Lane LOS			A	B	A
Approach Delay (s)	0.0		0.1	11.0	0.0
Approach LOS			B	A	

Intersection Summary		
Average Delay	1.4	
Intersection Capacity Utilization	24.5%	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis
 19: Arizona Pavillions Drive & Continental Links Drive

5/17/2005



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↶	↑	↷		↶	↷
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	11	158	66	2	4	16
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (veh/h)	12	172	72	2	4	17
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						5
Median type				None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	74				268	73
vC1, stage 1 conf vol	0					
vC2, stage 2 conf vol	0					
vCu, unblocked vol	74				268	73
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)	3.1					
tF (s)	2.2				3.5	3.3
p0 queue free %	99				99	98
cM capacity (veh/h)	1037				712	989

Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	12	172	74	22
Volume Left	12	0	0	4
Volume Right	0	0	2	17
cSH	1037	1700	1700	1236
Volume to Capacity	0.01	0.10	0.04	0.02
Queue Length (ft)	1	0	0	1
Control Delay (s)	8.5	0.0	0.0	9.0
Lane LOS	A			A
Approach Delay (s)	0.6		0.0	9.0
Approach LOS				A

Intersection Summary			
Average Delay		1.1	
Intersection Capacity Utilization	19.0%	ICU Level of Service	A

HCM Unsignalized Intersection Capacity Analysis
 17: Arizona Pavillions Drive & EB Frontage Road

5/17/2005



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↗		↑	↓	↘
Sign Control	Stop			Stop	Yield	
Volume (veh/h)	130	141	0	0	98	73
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (veh/h)	141	153	0	0	107	79
Direction, Lane #	EB 1	EB 2	SB 1			
Volume Total (vph)	141	153	186			
Volume Left (vph)	141	0	0			
Volume Right (vph)	0	153	79			
Hadj (s)	0.2	-0.6	-0.2			
Departure Headway (s)	5.1	4.3	4.3			
Degree Utilization, x	0.20	0.18	0.22			
Capacity (veh/h)	673	800	796			
Control Delay (s)	8.2	7.1	8.6			
Approach Delay (s)	7.7		8.6			
Approach LOS	A		A			
Intersection Summary						
Delay			8.0			
HCM Level of Service			A			
Intersection Capacity Utilization	26.6%		ICU Level of Service	A		

HCM Unsignalized Intersection Capacity Analysis
 16: Phase II Access Road & EB Frontage Road

6/1/2005



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↖		↑	↓	↘
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	67	0	124	190	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (veh/h)	0	73	0	135	207	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	342	207	208			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	342	207	208			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	91	100			
cM capacity (veh/h)	654	833	1363			
Direction, Lane #						
	EB 1	NB 1	SB 1			
Volume Total	73	135	208			
Volume Left	0	0	0			
Volume Right	73	0	1			
cSH	833	1700	1700			
Volume to Capacity	0.09	0.08	0.12			
Queue Length (ft)	7	0	0			
Control Delay (s)	9.7	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	9.7	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			1.7			
Intersection Capacity Utilization	22.1%		ICU Level of Service	A		

HCM Unsignalized Intersection Capacity Analysis
 17: Arizona Pavillions Drive & EB Frontage Road

6/1/2005



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↙	↗		↑	↓	↘
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	124	138	0	0	200	56
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (veh/h)	135	150	0	0	217	61
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	248	248	278			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	248	248	278			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	82	81	100			
cM capacity (veh/h)	741	791	1284			
Direction Lane #						
	EB 1	EB 2	SB			
Volume Total	135	150	278			
Volume Left	135	0	0			
Volume Right	0	150	61			
cSH	741	791	1700			
Volume to Capacity	0.18	0.19	0.16			
Queue Length (ft)	17	17	0			
Control Delay (s)	10.9	10.6	0.0			
Lane LOS	B	B				
Approach Delay (s)	10.8		0.0			
Approach LOS	B					
Intersection Summary						
Average Delay	5.4					
Intersection Capacity Utilization	31.1%		ICU Level of Service		A	

HCM Unsignalized Intersection Capacity Analysis
 18: Arizona Pavillions Drive & Hospitality Road

6/1/2005



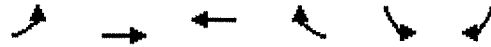
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR				
Lane Configurations	↖	↗		↖	↗			↕			↕					
Sign Control	Free			Free			Stop			Stop						
Grade	0%			0%			0%			0%						
Volume (veh/h)	12	212	30	1	146	0	14	0	15	1	0	36				
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92				
Hourly flow rate (veh/h)	13	230	33	1	159	0	15	0	16	1	0	39				
Pedestrians																
Lane Width (ft)																
Walking Speed (ft/s)																
Percent Blockage																
Right turn flare (veh)																
Median type							None			None						
Median storage (veh)																
Upstream signal (ft)																
pX, platoon unblocked																
vC, conflicting volume	159		263		473		434		247		434		450		159	
vC1, stage 1 conf vol	0		0													
vC2, stage 2 conf vol	0		0													
vCu, unblocked vol	159		263		473		434		247		434		450		159	
tC, single (s)	4.1		4.1		7.1		6.5		6.2		7.1		6.5		6.2	
tC, 2 stage (s)	3.1		3.1													
IF (s)	2.2		2.2		3.5		4.0		3.3		3.5		4.0		3.3	
p0 queue free %	99		100		97		100		98		100		100		96	
CM capacity (veh/h)	966		885		474		508		792		516		497		887	

Direction/Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1		
Volume Total	13	263	1	159	32	40		
Volume Left	13	0	1	0	15	1		
Volume Right	0	33	0	0	16	39		
cSH	966	1700	885	1700	598	870		
Volume to Capacity	0.01	0.15	0.00	0.09	0.05	0.05		
Queue Length (ft)	1	0	0	0	4	4		
Control Delay (s)	8.8	0.0	9.1	0.0	11.4	9.3		
Lane LOS	A		A		B	A		
Approach Delay (s)	0.4		0.1		11.4		9.3	
Approach LOS					B		A	

Intersection Summary	
Average Delay	1.7
Intersection Capacity Utilization	24.1%
ICU Level of Service	A

HCM Unsignalized Intersection Capacity Analysis
 19: Arizona Pavillions Drive & Continental Links Drive

6/1/2005



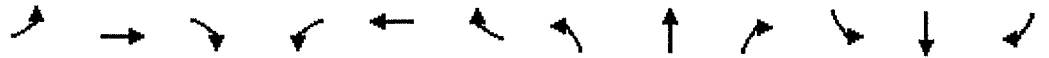
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑	↗		↖	↗
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	80	141	32	2	28	115
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (veh/h)	87	153	35	2	30	125
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						5
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	37				363	36
vC1, stage 1 conf vol	0					
vC2, stage 2 conf vol	0					
vCu, unblocked vol	37				363	36
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)	3.1					
tF (s)	2.2				3.5	3.3
p0 queue free %	92				95	88
cM capacity (veh/h)	1070				585	1037

Direction / Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	87	153	37	155
Volume Left	87	0	0	30
Volume Right	0	0	2	125
cSH	1070	1700	1700	1289
Volume to Capacity	0.08	0.09	0.02	0.12
Queue Length (ft)	7	0	0	10
Control Delay (s)	8.7	0.0	0.0	9.4
Lane LOS	A			A
Approach Delay (s)	3.1		0.0	9.4
Approach LOS				A

Intersection Summary			
Average Delay		5.1	
Intersection Capacity Utilization	21.5%	ICU Level of Service	A

Lanes, Volumes, Timings
22: Cortaro Road & Arizona Pavillions Drive

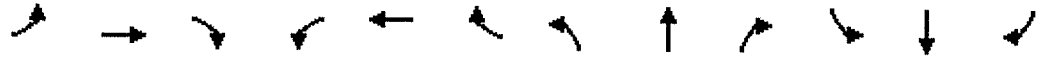
6/1/2005



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕	↗	↖	↕	↗	↖	↕	↗	↖	↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		200	310		200	120		120	270		165
Storage Lanes	1		1	1		1	1		1	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.447			0.950			0.748			0.741		
Satd. Flow (perm)	833	3539	1583	1770	3539	1583	1393	1863	1583	1380	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			151			185			96			47
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		45			35			25			25	
Link Distance (ft)		772			652			2208			1376	
Travel Time (s)		11.7			12.7			60.2			37.5	
Volume (vph)	79	913	139	86	403	170	55	23	88	157	13	43
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	86	992	151	93	438	185	60	25	96	171	14	47
Lane Group Flow (vph)	86	992	151	93	438	185	60	25	96	171	14	47
Turn Type	pm+pt		Perm	Prot		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2			6	8		8	4		4
Detector Phases	5	2	2	1	6	6	3	8	8	7	4	4
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	12.1	38.4	38.4	12.1	41.4	41.4	12.4	44.2	44.2	12.0	46.2	46.2
Total Split (s)	17.0	41.0	41.0	17.0	41.0	41.0	14.0	18.0	18.0	14.0	18.0	18.0
Total Split (%)	19%	46%	46%	19%	46%	46%	16%	20%	20%	16%	20%	20%
Maximum Green (s)	9.9	33.6	33.6	9.9	33.6	33.6	6.6	9.8	9.8	7.0	9.8	9.8
Yellow Time (s)	4.1	4.4	4.4	4.1	4.4	4.4	4.4	5.2	5.2	4.0	5.2	5.2
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Coord	Coord	None	Coord	Coord	None	None	None	None	None	None
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		26.0	26.0		29.0	29.0		31.0	31.0		33.0	33.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	54.8	44.7	44.7	11.9	44.7	44.7	21.4	14.0	14.0	18.0	13.2	13.2
Actuated g/C Ratio	0.61	0.50	0.50	0.13	0.50	0.50	0.24	0.16	0.16	0.20	0.15	0.15
v/c Ratio	0.14	0.56	0.18	0.40	0.25	0.21	0.16	0.09	0.29	0.54	0.05	0.17
Uniform Delay, d1	17.6	33.9	0.0	36.8	29.1	0.0	14.3	34.2	0.0	12.8	20.6	0.0
Delay	8.2	18.9	3.1	35.7	15.7	2.8	23.2	32.9	7.8	28.9	32.6	10.7
LOS	A	B	A	D	B	A	C	C	A	C	C	B
Approach Delay		16.2			15.0			16.4			25.4	

Lanes, Volumes, Timings
 22: Cortaro Road & Arizona Pavillions Drive

6/1/2005



Lane Group	EB	EBTL	EBR	WB	WBTL	WBR	NBL	NBT	NBR	SBL	SBTL	SBR
Approach LOS	B			B			B			C		
Queue Length 50th (ft)	18	232	0	48	84	0	25	12	0	75	7	0
Queue Length 95th (ft)	38	307	35	95	121	38	53	35	42	127	24	30
Internal Link Dist (ft)	692			572			2128			1296		
50th Up Block Time (%)												
95th Up Block Time (%)												
Turn Bay Length (ft)	300	200		310	200		120	120		270	165	
50th Bay Block Time %												
95th Bay Block Time %	5%											
Queuing Penalty (veh)	2											

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 7 (8%), Referenced to phase 2:EBTL and 6:WBT, Start of Green

Natural Cycle: 115

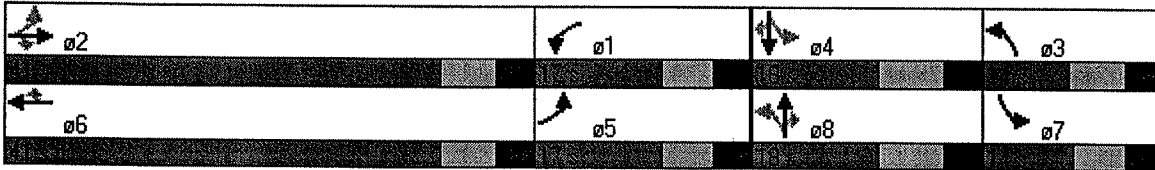
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.56

Intersection Signal Delay: 16.8 Intersection LOS: B

Intersection Capacity Utilization 58.7% ICU Level of Service A

Splits and Phases: 22: Cortaro Road & Arizona Pavillions Drive



HCM Unsignalized Intersection Capacity Analysis
 16: Phase II Access Road & EB Frontage Road

6/1/2005



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑	↘	
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	43	0	150	197	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (veh/h)	0	47	0	163	214	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	379	216	218			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	379	216	218			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	94	100			
cM capacity (veh/h)	623	824	1351			
Direction Lane #	EB 1	NB 1	SB 1			
Volume Total	47	163	218			
Volume Left	0	0	0			
Volume Right	47	0	4			
cSH	824	1700	1700			
Volume to Capacity	0.06	0.10	0.13			
Queue Length (ft)	5	0	0			
Control Delay (s)	9.6	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	9.6	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay	1.1					
Intersection Capacity Utilization	21.5%		ICU Level of Service		A	

HCM Unsignalized Intersection Capacity Analysis
 17: Arizona Pavillions Drive & EB Frontage Road

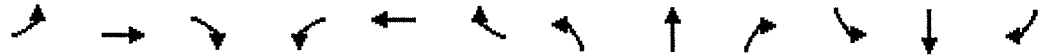
6/1/2005



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↙	↗		↑	↓	↘
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	150	169	0	0	151	89
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (veh/h)	163	184	0	0	164	97
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	212	212	261			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	212	212	261			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	79	78	100			
cM capacity (veh/h)	776	828	1304			
Direction Lane #						
	EB 1	EB 2	SB 1			
Volume Total	163	184	261			
Volume Left	163	0	0			
Volume Right	0	184	97			
cSH	776	828	1700			
Volume to Capacity	0.21	0.22	0.15			
Queue Length (ft)	20	21	0			
Control Delay (s)	10.9	10.6	0.0			
Lane LOS	B	B				
Approach Delay (s)	10.7		0.0			
Approach LOS	B					
Intersection Summary						
Average Delay			6.1			
Intersection Capacity Utilization	32.6%		ICU Level of Service	A		

HCM Unsignalized Intersection Capacity Analysis
 18: Arizona Pavillions Drive & Hospitality Road

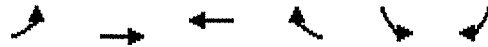
6/1/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕				↕
Sign Control		Free			Free			Stop				Stop
Grade		0%			0%			0%				0%
Volume (veh/h)	41	433	62	1	155	1	47	0	2	1	0	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (veh/h)	45	471	67	1	168	1	51	0	2	1	0	27
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None				None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	170			538			791	765	504	733	798	169
vC1, stage 1 conf vol	0			0								
vC2, stage 2 conf vol	0			0								
vCu, unblocked vol	170			538			791	765	504	733	798	169
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)	3.1			3.1								
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			100			82	100	100	100	100	97
cM capacity (veh/h)	957			701			287	317	568	323	304	875
Direction Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1						
Volume Total	45	538	1	170	53	28						
Volume Left	45	0	1	0	51	1						
Volume Right	0	67	0	1	2	27						
cSH	957	1700	701	1700	293	821						
Volume to Capacity	0.05	0.32	0.00	0.10	0.18	0.03						
Queue Length (ft)	4	0	0	0	16	3						
Control Delay (s)	8.9	0.0	10.1	0.0	20.0	9.5						
Lane LOS	A		B		C	A						
Approach Delay (s)	0.7		0.1		20.0	9.5						
Approach LOS					C	A						
Intersection Summary												
Average Delay			2.1									
Intersection Capacity Utilization			38.9%									
ICU Level of Service										A		

HCM Unsignalized Intersection Capacity Analysis
 19: Arizona Pavillions Drive & Continental Links Drive

6/1/2005



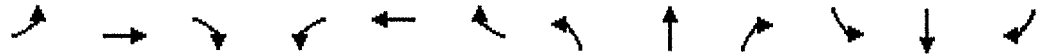
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↶	↷	↷		↶	↷
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	233	179	81	3	21	91
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (veh/h)	253	195	88	3	23	99
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						5
Median type					None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	91				791	90
vC1, stage 1 conf vol	0					
vC2, stage 2 conf vol	0					
vCu, unblocked vol	91				791	90
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)	3.1					
tF (s)	2.2				3.5	3.3
p0 queue free %	75				92	90
cM capacity (veh/h)	1022				270	968

Direction / Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	253	195	91	122
Volume Left	253	0	0	23
Volume Right	0	0	3	99
cSH	1022	1700	1700	1192
Volume to Capacity	0.25	0.11	0.05	0.10
Queue Length (ft)	24	0	0	9
Control Delay (s)	9.7	0.0	0.0	11.1
Lane LOS	A			B
Approach Delay (s)	5.5		0.0	11.1
Approach LOS				B

Intersection Summary			
Average Delay		5.8	
Intersection Capacity Utilization	30.7%		ICU Level of Service A

Lanes, Volumes, Timings
 22: Cortaro Road & Arizona Pavillions Drive

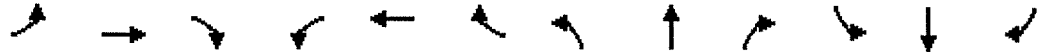
6/1/2005



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↕	↗	↘	↕	↗	↘	↕	↗	↘	↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		200	310		200	120		120	270		165
Storage Lanes	1		1	1		1	1		1	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.091			0.282			0.734			0.551		
Satd. Flow (perm)	170	3539	1583	525	3539	1583	1367	1863	1583	1026	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			146			218			205			157
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		45			35			25			25	
Link Distance (ft)		772			652			2208			1376	
Travel Time (s)		11.7			12.7			60.2			37.5	
Volume (vph)	179	591	134	187	1282	345	405	130	189	205	32	144
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	195	642	146	203	1393	375	440	141	205	223	35	157
Lane Group Flow (vph)	195	642	146	203	1393	375	440	141	205	223	35	157
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phases	5	2	2	1	6	6	3	8	8	7	4	4
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	12.1	38.4	38.4	12.1	41.4	41.4	12.4	44.2	44.2	12.0	46.2	46.2
Total Split (s)	18.0	48.0	48.0	18.0	48.0	48.0	26.0	28.0	28.0	26.0	28.0	28.0
Total Split (%)	15%	40%	40%	15%	40%	40%	22%	23%	23%	22%	23%	23%
Maximum Green (s)	10.9	40.6	40.6	10.9	40.6	40.6	18.6	19.8	19.8	19.0	19.8	19.8
Yellow Time (s)	4.1	4.4	4.4	4.1	4.4	4.4	4.4	5.2	5.2	4.0	5.2	5.2
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Coord	Coord	None	Coord	Coord	None	None	None	None	None	None
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		26.0	26.0		29.0	29.0		31.0	31.0		33.0	33.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	67.2	54.0	54.0	67.2	54.0	54.0	39.7	18.6	18.6	33.0	14.7	14.7
Actuated g/C Ratio	0.56	0.45	0.45	0.56	0.45	0.45	0.33	0.16	0.16	0.28	0.12	0.12
v/c Ratio	0.72	0.40	0.18	0.47	0.87	0.45	0.83	0.49	0.49	0.56	0.15	0.47
Uniform Delay, d1	37.3	22.2	0.0	16.3	29.9	8.6	37.6	46.4	0.0	35.2	47.1	0.0
Delay	40.9	23.3	3.7	19.7	40.3	10.0	37.7	45.8	5.8	35.6	47.1	7.5
LOS	D	C	A	B	D	B	D	D	A	D	D	A
Approach Delay		23.9			32.4			30.8			25.9	

Lanes, Volumes, Timings
 22: Cortaro Road & Arizona Pavillions Drive

6/1/2005



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	C			C			C			C		
Queue Length 50th (ft)	81	172	0	67	505	74	300	101	0	131	25	0
Queue Length 95th (ft)	#193	248	42	124	#742	176	383	159	64	181	56	62
Internal Link Dist (ft)	692			572			2128			1296		
50th Up Block Time (%)												
95th Up Block Time (%)	23%											
Turn Bay Length (ft)	300	200		310	200		120	120		270	165	
50th Bay Block Time %	23%											
95th Bay Block Time %	40%											
Queuing Penalty (veh)				63			146			51		

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 86 (72%), Referenced to phase 2 EBTL and 6 WBTL, Start of Green
 Natural Cycle: 125
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.87
 Intersection Signal Delay: 29.4
 Intersection LOS: C
 Intersection Capacity Utilization 95.4%
 ICU Level of Service E
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 22: Cortaro Road & Arizona Pavillions Drive

