

City of Peoria

CIP Prioritization
Review/Analysis
Year 2007 Update

FINAL REPORT

Prepared for:

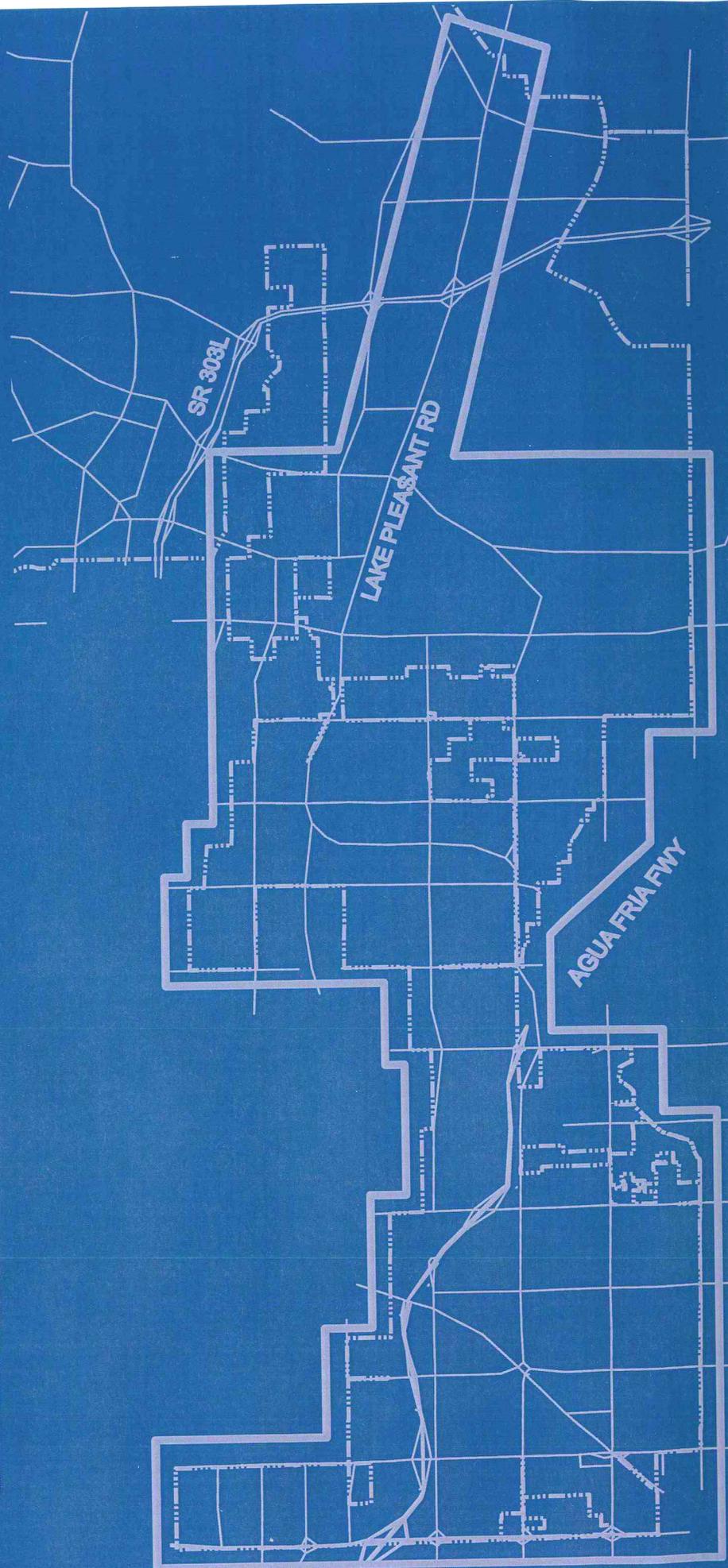


City of Peoria
8401 W. Monroe Street
Peoria, AZ 85345

Prepared by:

WILSON
& COMPANY
410 N. 44th Street
Suite 460
Phoenix, AZ 85008

March 28, 2008



City of Peoria

CIP Prioritization Review/Analysis Year 2007 Update

FINAL REPORT

Prepared for:



City of Peoria

8401 W Monroe Street
Peoria, Arizona 85345

Prepare by:

WILSON
& COMPANY
ENGINEERS & ARCHITECTS

410 North 44th Street, Suite 460
Phoenix, Arizona 85008

**This signature acknowledges
receipt of final report**

March 28, 2008


For Engineering Director **Date**



TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
1.0 INTRODUCTION & BACKGROUND _____	1-1
2.0 METHODOLOGY AND STANDARDS _____	2-1
2.1 INTRODUCTION _____	2-1
2.2 DEVELOPMENT OF FUTURE YEAR 2028 TRAFFIC VOLUMES _____	2-1
2.3 DAILY SEGMENT VOLUME PLANNING LEVEL ANALYSIS _____	2-2
2.4 PEAK HOUR INTERSECTION ANALYSIS _____	2-2
3.0 ANALYSIS OF EXISTING (YEAR 2006) NETWORK PERFORMANCE _____	3-1
4.0 YEAR 2028 TRAFFIC FORECAST DATA AND ANALYSIS _____	4-1
5.0 PROPOSED ROADWAY NETWORK MITIGATION MEASURES _____	5-1
6.0 SUMMARY OF FINDINGS AND RECOMMENDATIONS _____	6-1

APPENDICES (Separately Bound)

APPENDIX A	ESTIMATED YEAR 2028 AM AND PM PEAK HOUR INTERSECTION TURNING MOVEMENT VOLUMES
APPENDIX B	YEAR 2028 AM AND PM PEAK HOUR HCM SIGNALIZED INTERSECTION CAPACITY ANALYSIS WORKSHEETS WITH PLANNED LANE CONFIGURATIONS
APPENDIX C	YEAR 2028 AM AND PM PEAK HOUR HCM SIGNALIZED INTERSECTION CAPACITY ANALYSIS WORKSHEETS WITH MITIGATION LANE CONFIGURATIONS



LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
FIGURE 1-1 PROJECT STUDY AREA VICINITY MAP _____	1-2
FIGURE 1-2 KEY STUDY AREA INTERSECTIONS LOCATION MAP _____	1-3
FIGURE 3-1 EXISTING NUMBER OF LANES: YEAR 2007 CONDITIONS _____	3-2
FIGURE 4-1 YEAR 2010 NUMBER OF LANES: EXISTING PLUS COMMITTED CONDITIONS ____	4-2
FIGURE 4-2 YEAR 2028 SIGNALIZED INTERSECTION LANE CONFIGURATIONS: EXISTING PLUS COMMITTED AND PLANNED CONDITIONS _____	4-5
FIGURE 5-1 EXISTING PLUS COMMITTED (2010) AND PLANNED YEAR 2028 INTERSECTION LANE CONFIGURATIONS WITH MITIGATING IMPROVEMENTS _____	5-2

LIST OF TABLES

<u>Table</u>	<u>Page</u>
TABLE 2-1 ROADWAY SEGMENT CAPACITY THRESHOLDS BY FACILITY TYPE.....	2-2
TABLE 2-2 LOS THRESHOLDS FOR SIGNALIZED INTERSECTION OPERATIONS.....	2-3
TABLE 3-1 EXISTING YEAR 2007 SEGMENT-LEVEL DAILY VOLUME REVIEW AND VOLUME-TO-CAPACITY (V/C) ANALYSIS.....	3-3
TABLE 3-2 EXISTING YEAR 2007 SEGMENT PRIORITY RANKING.....	3-4
TABLE 3-3 EXISTING YEAR 2006 INTERSECTION PERFORMANCE SUMMARY.....	3-5
TABLE 4-1 FUTURE YEAR 2028 SEGMENT LEVEL DAILY VOLUME REVIEW AND VOLUME-TO-CAPACITY (V/C) ANALYSIS.....	4-3
TABLE 4-2 FUTURE YEAR 2028 SEGMENT IMPROVEMENT PRIORITY RANKING	4-4
TABLE 4-3 FUTURE YEAR 2028 INTERSECTION PERFORMANCE SUMMARY: AM & PM PEAK HOURS	4-9
TABLE 4-4 FUTURE YEAR 2028 INTERSECTION PERFORMANCE SUMMARY: AM PEAK HOUR RANKING	4-10
TABLE 4-5 FUTURE YEAR 2028 INTERSECTION PERFORMANCE SUMMARY: PM PEAK HOUR RANKING	4-11
TABLE 5-1 YEAR 2028 AM & PM PEAK HOUR INTERSECTION PERFORMANCE COMPARISON: BASE 2010 CONDITIONS V. MITIGATED CONDITIONS.....	5-14
TABLE 6-1 IDENTIFICATION OF SOURCES FOR ULTIMATE ROADWAY SEGMENT AND INTERSECTION IMPROVEMENTS BASED ON IMPACTED LOCATIONS	6-2

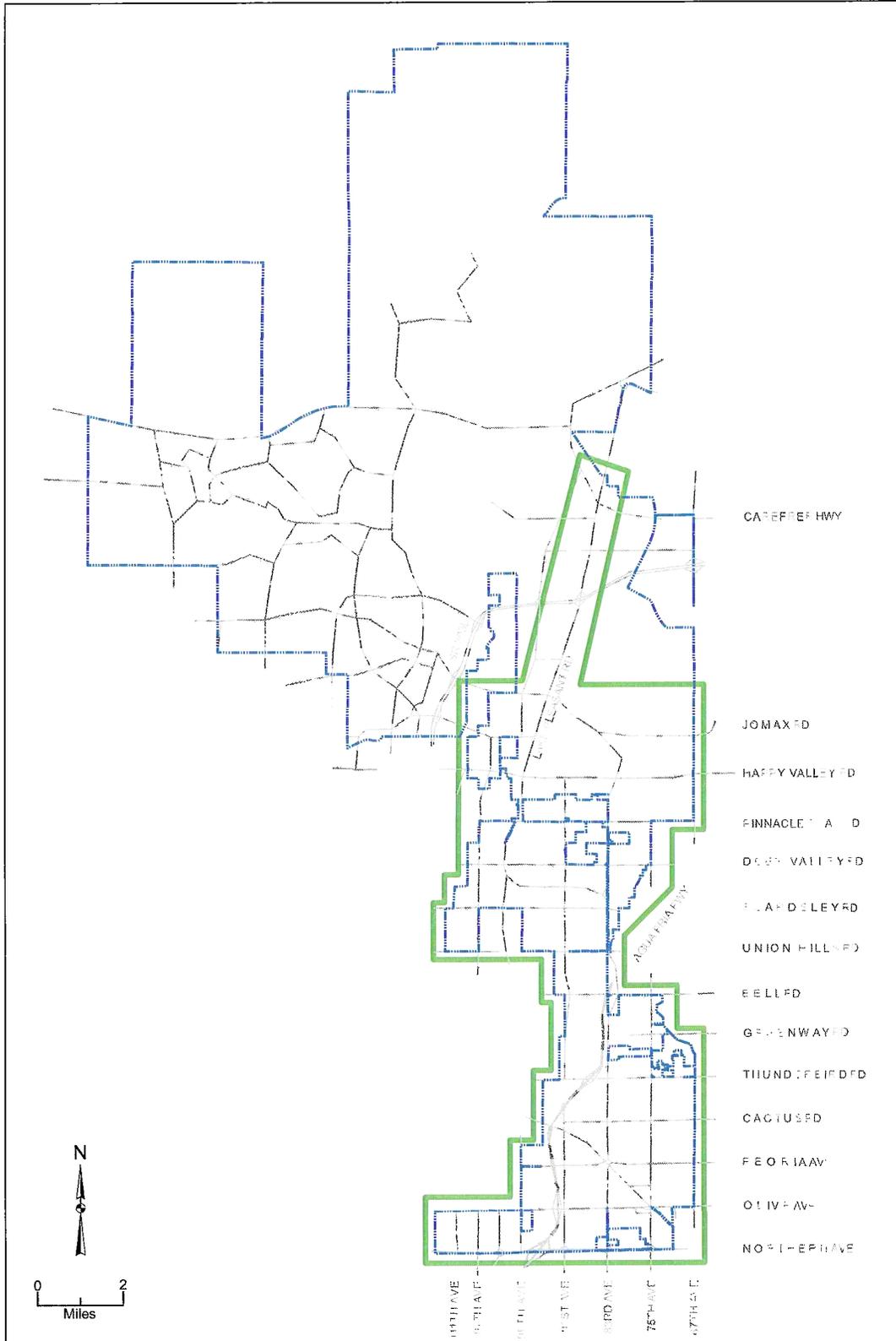


1.0 INTRODUCTION & BACKGROUND

In June 2005, Wilson & Company (WCI) prepared a Transportation Needs Study for the City of Peoria. Volume 1 of that study, entitled *Circulation System Evaluation – Existing/Future Conditions Analysis and Improvement Project Identification* provided an assessment of the existing transportation system, identified programmed system improvements, identified needed future improvements, and recommended a priority ranking for implementation of future projects. Subsequently, WCI conducted in 2006 a study of the City's Capital Improvement Program (CIP) and prepared a Prioritization Review to further refine recommendations for projects that should be incorporated in the City's new CIP, using updated forecast data for a 2015 analysis timeframe.

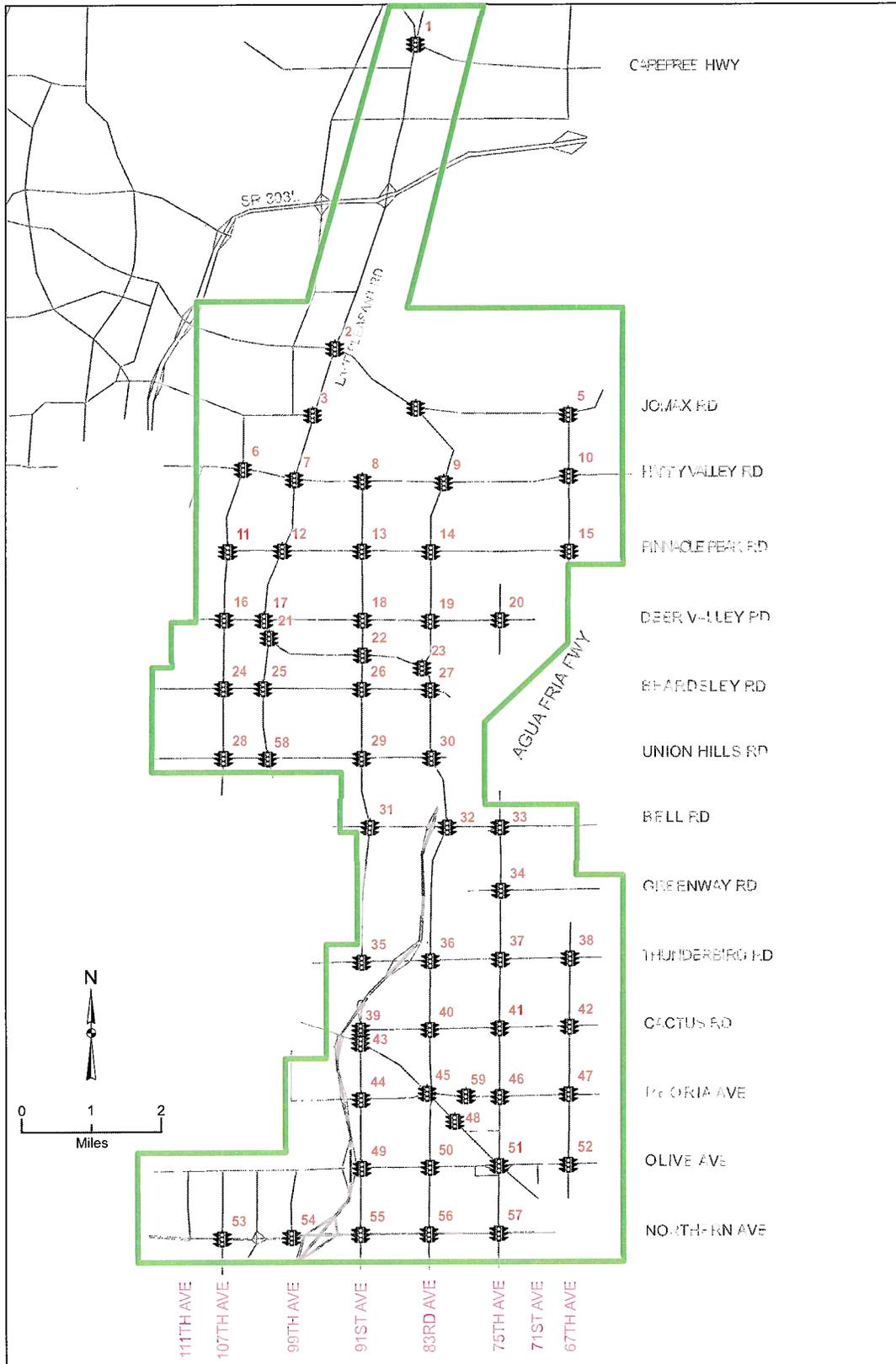
In furtherance of the City's desire to establish and maintain an effective and up-to-date CIP process, WCI undertook the preparation of this Prioritization Review/Analysis, building on information developed during the 2006 study. During this study, it was decided to link the segment analysis findings with the evaluation of intersection performance. WCI used the intersection database software package TRAFFIX recently developed by the City to aid in the evaluation of intersection performance. To conduct the peak hour capacity analysis for all intersections included in this study, the SYNCHRO software package was applied. The City directed WCI to use the travel demand forecast from the newly developed Maricopa Association of Governments (MAG) Year 2028 Regional Transportation Model for this Review/Analysis of the CIP. This model is based on recently updated and approved socio-economic data for the forecast year

The Study Area, depicted in Figure 1-1, which was defined and followed in the two previous studies for the CIP, consists of the southern and central core areas of the City of Peoria. Fifty-nine (59) intersections have been identified for analysis, all but one of these intersections are located between Northern Avenue and Westwing Parkway. The remaining intersection is located further north at the crossing of Lake Pleasant Parkway and SR-74 (Carefree Highway). Figure 1-2 shows the locations of key intersections in the Study Area that are the focus of this CIP Prioritization Review/Analysis.



Legend
City of Peoria Boundary
Study Area Boundary

Figure 1-1
Project Study Area Vicinity Map



Legend
 Key Study Area Intersection
 Study Area Boundary
 MAG Year 2028 Model Network

Figure 1-2

Key Study Area Intersections Location Map



2.0 METHODOLOGY AND STANDARDS

2.1 INTRODUCTION

This section defines the methodologies and standards utilized in analyzing the performance of Study Area roadways and intersections. All analyses conducted for this study have been based on the following key assumptions.

- *Development of Future Year 2028 Traffic Volumes:*
 - Daily Volume on Arterial Segments
 - AM and PM Peak Hour Intersection Turning Movement Volumes
- *Daily Segment Volume Planning Level Analysis* – LOS thresholds for various roadway classifications have been derived from the Florida Department of Transportation and Maricopa County
- *Peak Hour Intersection Analysis* – The methodology for assessing intersection LOS was based on criteria set forth in the *2000 Highway Capacity Manual*. LOS “D” was considered the threshold for acceptable intersection operations.

2.2 DEVELOPMENT OF FUTURE YEAR 2028 TRAFFIC VOLUMES

Daily Volume on Segments

Daily traffic volume projections from Year 2028 MAG Travel Demand Model (dated: August 27, 2007) were used for this purpose.

AM and PM Peak Hour Intersection Turning Movement Volumes

For intersections with traffic counts, existing Year 2006 turning movement volumes were recorded from the City of Peoria TRAFFIX database for use in the estimation of Year 2028 turning movement volumes. Turning percentages were estimated for intersections that did not have traffic counts. Based on the guidance provided in the NCHRP Report 255, Highway Traffic Data for Urbanized Area Project Planning and Design (dated: December, 1982), on the development of future intersection turning movement volumes and with the use of TurnsW32 software, Year 2028 intersection turning movement volumes were generated for 59 key study area intersections. Daily volumes from MAG Year 2028 Travel Demand Model were used to calculate entering and exiting volumes at each intersection as required for estimating future year turning movement volumes.



2.3 DAILY SEGMENT VOLUME PLANNING LEVEL ANALYSIS

Table 2-1 presents the roadway segment capacity thresholds employed in the analysis of daily traffic volume levels on Study Area arterial streets. The thresholds are determined in accordance with the function of the facility, the number of through lanes, and the type of median treatment.

**TABLE 2-1
ROADWAY SEGMENT CAPACITY THRESHOLDS BY FACILITY TYPE**

Facility Type/Functional Classification	No. of Thru Lanes	Median Type	Maximum Daily Volume Threshold (LOS E)
Northern Ave Parkway	Six-Lanes	Divided	80,000 ⁽¹⁾
Major Arterial	Six-Lanes	Raised	49,300 ⁽²⁾
Major Arterial	Five-Lanes	Two-Way Center Turn Lane	41,100 ⁽³⁾
Minor Arterial	Four-Lanes	Raised	32,900 ⁽²⁾
Minor Arterial	Two-Lanes	Solid Double Yellow	15,600 ⁽²⁾
Major Collector	Four-Lanes	Two-Way Center Turn Lane	25,200 ⁽²⁾
Minor Collector	Two-Lanes	Two-Way Center Turn Lane	12,600 ⁽²⁾

Prepared by Wilson & Company, November 1, 2007.

Notes:

- (1) Daily capacity threshold value (LOS E) derived from Northern Avenue Parkway Traffic Analysis, Draft Report dated May, 2002, BRW, Inc.
- (2) Daily capacity threshold values (LOS E) derived from 2002 Quality/Level of Service Handbook, Table 4-1, *Generalized Annual Average Daily Volumes for Urbanized Areas, Non-State Roadways and Major City/County Roadways*, State of Florida Department of Transportation, 2002
- (3) Daily capacity threshold value (LOS E) calculated by Wilson & Company based on 2002 Quality/Level of Service Handbook, State of Florida Department of Transportation, 2002

2.4 PEAK HOUR INTERSECTION ANALYSIS

Table 2-2 on the following page identifies the level of service (LOS) thresholds adopted for the analysis of Study Area intersections. LOS is defined in terms of average seconds of delay experienced by motorists traveling through a given signalized intersection. LOS D (highlighted in bold type) is the generally accepted standard for intersection operations in urban areas.



**TABLE 2-2
LOS THRESHOLDS FOR SIGNALIZED INTERSECTION OPERATIONS**

Level of Service	Description	Average Control Delay (Seconds/Vehicle)
A	Operations with very low delay occurring with favorable progression and/pr short cycle length	≤ 10
B	Operations with low delay occurring with good progression and/or short cycle lengths.	> 10 – 20
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear	> 20 – 35
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high v/c ratios. Many vehicles stop and individual cycle failures are noticeable.	>35 – 55
E	Operations with high delay values indicating poor progression long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences	>55 – 80
F	Operations with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.	>80

Prepared by Wilson & Company, November 1, 2007.

Notes:

Bold lettering identifies the threshold standard for acceptable LOS at signalized intersections

Source: Highway Capacity Manual (HCM) 2000.



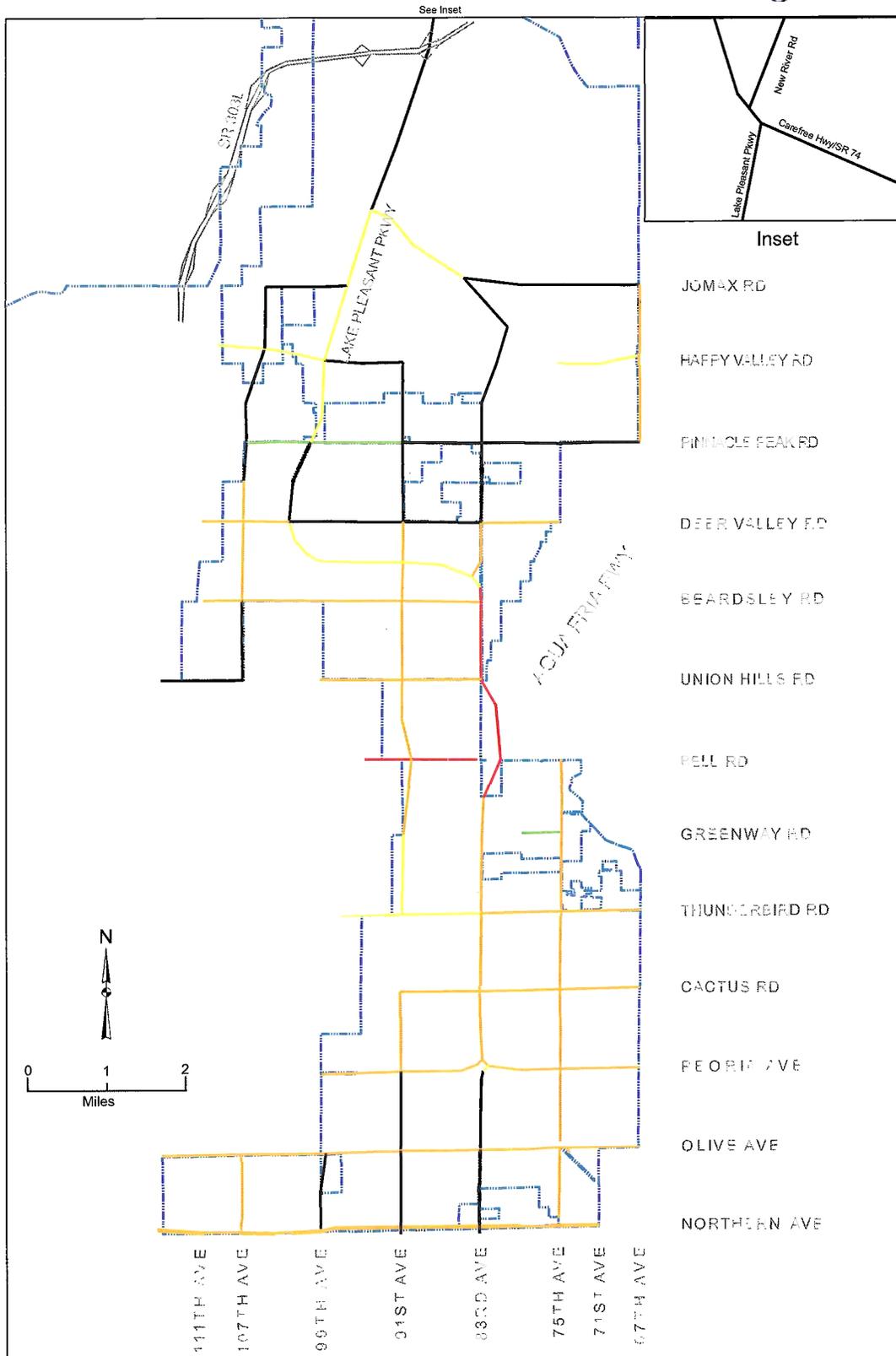
3.0 ANALYSIS OF EXISTING (YEAR 2006) NETWORK PERFORMANCE

Figure 3-1 shows the number of lanes of each existing arterial roadway analyzed within the framework of this update. The majority of the roadways in the Study Area are constructed to a five-lane cross-section. Table 3-1 identifies the number of lanes for each roadway segment analyzed. In addition, this table identifies the functional classification of each segment and the planning level daily LOS threshold capacity based on the roadway cross section and function. Table 3-1 shows the recorded Year 2006 two-way daily traffic volume and compares the existing traffic volume to the theoretical LOS capacity (refer to Table 2-1). The volume-to-capacity (v/c) ratio indicates whether the current traffic level on each roadway segment exceeds rated capacity. A v/c ratio greater than one means the forecast traffic volume is greater than the capacity of the roadway segment.

Table 3-2 contains the same information that is in Table 3-1, but it has been reordered to show the worst v/c conditions at the top of the table. The table indicates 12 roadway segments currently are operating at a v/c ratio greater than 1.00. It also identifies the 40 worst v/c ratios for reference purposes. These 40 roadway segments should receive the highest priority when considering roadway network improvements.

Table 3-3 provides a summary of current Year 2006 operating performance information for 59 key intersections in the Study Area. Intersection performance is gauged by evaluating operations in the morning (AM) and evening (PM) peak hours. Performance is measured in terms of the delay motorists experience on through lanes and delay is measured in seconds. The delay thresholds shown in Table 2-2 are used to determine the LOS of the intersection.

Table 3-3 indicates there are three intersections currently operating at LOS 'E' during the PM peak hour. This means motorists are experiencing delays of 56 to 80 seconds before proceeding through the intersections (refer to Table 2-2). The delays at the three intersections range from 61.1 seconds at Olive Avenue and 91st Avenue to 70 seconds at Thunderbird Road and 83rd Avenue.



Legend

- 2 Lanes — 4 Lanes — 6 Lanes - - - - City of Peoria Boundary
- 3 Lanes — 5 Lanes

Figure 3-1

Existing Number of Lanes - Year 2007 Conditions



**TABLE 3-1
EXISTING YEAR 2007 SEGMENT-LEVEL DAILY VOLUME REVIEW AND VOLUME-TO-CAPACITY (v/c) ANALYSIS**

Facility	From	To	Year 2007 No. of Lanes	Facility Type/ Functional Classification	Planning Level Daily Volume Threshold Capacity ⁽¹⁾	Year 2006 Two Way Daily Volume ⁽²⁾	Volume/ Capacity Ratio ⁽³⁾
East-West Facilities							
Westwing Pkwy	Lake Pleasant Pkwy	Jomax Rd	4	Minor Arterial4	32,900	8,485	0.26
Jomax Rd	Loop 303	107th Ave	2	Minor Collector	12,600	0	0.00
Jomax Rd	107th Ave	99th Ave	2	Minor Collector	12,600	1,170	0.09
Jomax Rd	99th Ave	Lake Pleasant Pkwy	2	Minor Arterial2	15,600	2,500	0.16
Jomax Rd	Westwing Pkwy	75th Ave	2	Minor Arterial2	15,600	5,285	0.34
Jomax Rd	75th Ave	67th Ave	2	Minor Arterial2	15,600	4,354	0.28
Happy Valley Rd	Loop 303	107th Ave	4	Minor Arterial4	32,900	21,000	0.64
Happy Valley Rd	107th Ave	Lake Pleasant Pkwy	4	Minor Arterial4	32,900	19,127	0.58
Happy Valley Rd	Lake Pleasant Pkwy	91st Ave	2	Minor Arterial2	15,600	10,271	0.66
Happy Valley Rd	91st Ave	83rd Ave	0	N/A	N/A	0	0.00
Happy Valley Rd	83rd Ave	75th Ave	0	N/A	N/A	0	0.00
Happy Valley Rd	75th Ave	67th Ave	4	Major Arterial6	49,300	4,193	0.09
Pinnacle Peak Rd	107th Ave	Lake Pleasant Pkwy	0	N/A	N/A	0	0.00
Pinnacle Peak Rd	Lake Pleasant Pkwy	91st Ave	2	Minor Arterial1	25,200	6,386	0.25
Pinnacle Peak Rd	91st Ave	83rd Ave	2	Minor Arterial2	15,600	5,848	0.37
Pinnacle Peak Rd	83rd Ave	75th Ave	2	Minor Arterial2	15,600	663	0.04
Pinnacle Peak Rd	75th Ave	67th Ave	2	Minor Arterial2	15,600	2,000	0.13
Deer Valley Rd	109th Ave	107th Ave	4	Minor Arterial4	32,900	300	0.01
Deer Valley Rd	107th Ave	Lake Pleasant Pkwy	2	Minor Arterial2	15,600	848	0.05
Deer Valley Rd	Lake Pleasant Pkwy	91st Ave	2	Minor Arterial2	15,600	3,132	0.20
Deer Valley Rd	91st Ave	83rd Ave	2	Minor Arterial2	15,600	17,189	1.10
Deer Valley Rd	83rd Ave	75th Ave	4	Minor Arterial4	32,900	34,316	1.04
Beardsley Rd	111th Ave	107th Ave	4	Minor Arterial4	32,900	4,200	0.13
Beardsley Rd	107th Ave	N. Lake Pleasant Rd/99th Ave	4	Minor Arterial4	32,900	12,000	0.36
Beardsley Rd	N. Lake Pleasant Rd/99th Ave	91st Ave	4	Minor Arterial4	32,900	16,642	0.51
Beardsley Rd	91st Ave	83rd Ave	4	Minor Arterial4	32,900	13,136	0.40
Beardsley Rd	83rd Ave	Loop 101	0	N/A	N/A	0	0.00
Union Hills	111th Ave	107th Ave	2	Minor Arterial2	15,600	10,844	0.70
Union Hills	98th Ave	91st Ave	4	Minor Arterial4	32,900	21,605	0.66
Union Hills	91st Ave	83rd Ave	4	Minor Arterial4	32,900	34,272	1.04
Bell Rd	93rd Ave	Loop 101	6	Major Arterial6	49,300	45,209	0.92
Greenway Rd	81st Ave	75th Ave	3	Major Collector	25,200	3,011	0.12
Thunderbird Rd	95th Ave	91st Ave	4	Minor Arterial4	32,900	25,666	0.78
Thunderbird Rd	91st Ave	Loop 101	4	Minor Arterial4	32,900	34,675	1.05
Thunderbird Rd	Loop 101	83rd Ave	4	Minor Arterial4	32,900	40,334	1.23
Thunderbird Rd	83rd Ave	75th Ave	4	Minor Arterial4	32,900	33,278	1.01
Thunderbird Rd	75th Ave	67th Ave	4	Minor Arterial4	32,900	33,260	1.01
Cactus Rd	91st Ave	83rd Ave	4	Minor Arterial4	32,900	20,143	0.61
Cactus Rd	83rd Ave	75th Ave	4	Minor Arterial4	32,900	20,920	0.64
Cactus Rd	75th Ave	67th Ave	4	Minor Arterial4	32,900	24,985	0.76
Peoria Ave	99th Ave	Loop 101	4	Minor Arterial4	32,900	21,509	0.65
Peoria Ave	Loop 101	91st Ave	4	Minor Arterial4	32,900	20,000	0.61
Peoria Ave	91st Ave	83rd Ave	4	Minor Arterial4	32,900	15,862	0.48
Peoria Ave	83rd Ave	83rd Ave Bypass	4	Minor Arterial4	32,900	20,000	0.61
Peoria Ave	83rd Ave Bypass	75th Ave	4	Minor Arterial4	32,900	18,977	0.58
Peoria Ave	75th Ave	67th Ave	4	Minor Arterial4	32,900	22,538	0.69
Olive Ave	115th Ave	107th Ave	4	Minor Arterial4	32,900	30,074	0.91
Olive Ave	107th Ave	99th Ave	4	Minor Arterial4	32,900	33,423	1.02
Olive Ave	99th Ave	Loop 101	4	Minor Arterial4	32,900	38,567	1.17
Olive Ave	Loop 101	91st Ave	4	Minor Arterial4	32,900	35,000	1.06
Olive Ave	91st Ave	83rd Ave	4	Minor Arterial4	32,900	33,954	1.03
Olive Ave	83rd Ave	75th Ave	4	Minor Arterial4	32,900	32,982	1.00
Olive Ave	75th Ave	67th Ave	4	Minor Arterial4	32,900	29,802	0.91
Northern Ave	115th Ave	107th Ave	4	Minor Arterial4	32,900	9,089	0.28
Northern Ave	107th Ave	99th Ave	4	Minor Arterial4	32,900	14,886	0.45
Northern Ave	Loop 101	91st Ave	4	Minor Arterial4	32,900	19,309	0.59
Northern Ave	91st Ave	83rd Ave	4	Minor Arterial4	32,900	24,050	0.73
Northern Ave	83rd Ave	75th Ave	4	Minor Arterial4	32,900	22,701	0.69
Northern Ave	75th Ave	71st Ave	4	Minor Arterial4	32,900	20,921	0.64
North-South Facilities							
107th Ave	Jomax Rd	Happy Valley Rd	2	Minor Arterial2	15,600	0	0.00
107th Ave	Happy Valley Rd	Hatfield Rd	2	Minor Arterial2	15,600	3,314	0.21
107th Ave	Hatfield Rd	Pinnacle Peak Rd	2	Minor Arterial2	15,600	3,314	0.21
107th Ave	Pinnacle Peak Rd	Williams Rd	2	Minor Arterial2	15,600	3,314	0.21
107th Ave	Williams Rd	Deer Valley Rd	4	Minor Arterial4	32,900	3,987	0.12
107th Ave	Deer Valley Rd	Beardsley Rd	4	Minor Arterial4	32,900	6,418	0.20
107th Ave	Beardsley Rd	Union Hills	2	Minor Arterial2	15,600	5,252	0.34
107th Ave	Olive Ave	Northern Ave	4	Minor Arterial4	32,900	4,957	0.15
99th Ave	Olive Ave	Northern Ave	2	Minor Arterial2	15,600	2,294	0.15
Lake Pleasant Pkwy	Carefree Hwy	Loop 303	2	Minor Arterial2	15,600	5,842	0.37
Lake Pleasant Pkwy	Loop 303	Westwing Pkwy	2	Minor Arterial2	15,600	6,165	0.40
Lake Pleasant Pkwy	Westwing Pkwy	Jomax Rd	4	Minor Arterial4	32,900	10,000	0.30
Lake Pleasant Pkwy	Jomax Rd	Happy Valley Rd	4	Minor Arterial4	32,900	11,100	0.34
Lake Pleasant Pkwy	Happy Valley Rd	Pinnacle Peak Rd	4	Minor Arterial4	32,900	12,696	0.39
Lake Pleasant Pkwy	Pinnacle Peak Rd	Deer Valley Rd	2	Minor Arterial2	15,600	12,048	0.77
Lake Pleasant Pkwy	Deer Valley Rd	91st Ave	4	Minor Arterial4	32,900	17,201	0.52
Lake Pleasant Pkwy	91st Ave	83rd Ave	4	Minor Arterial4	32,900	8,191	0.25
Lake Pleasant Pkwy	83rd Ave	Beardsley Rd	4	Minor Arterial4	32,900	18,758	0.57
91st Ave	Happy Valley Rd	Pinnacle Peak Rd	2	Minor Arterial2	15,600	10,932	0.70
91st Ave	Pinnacle Peak Rd	Deer Valley Rd	2	Minor Arterial2	15,600	12,782	0.82
91st Ave	Deer Valley Rd	Lake Pleasant Pkwy	4	Minor Arterial4	32,900	10,000	0.30
91st Ave	Lake Pleasant Pkwy	Beardsley Rd	4	Minor Arterial4	32,900	9,287	0.28
91st Ave	Beardsley Rd	Union Hills	4	Minor Arterial4	32,900	13,493	0.41
91st Ave	Union Hills	Bell Rd	4	Minor Arterial4	32,900	11,651	0.35
91st Ave	Bell Rd	Greenway Rd	4	Minor Arterial4	32,900	9,422	0.29
91st Ave	Greenway Rd	Thunderbird Rd	4	Minor Arterial4	32,900	8,841	0.27
91st Ave	Cactus Rd	Grand Ave	4	Minor Arterial4	32,900	26,640	0.81
91st Ave	Grand Ave	Peoria Ave	4	Major Arterial5	41,100	10,260	0.25
91st Ave	Peoria Ave	Olive Ave	2	Minor Arterial2	15,600	14,169	0.91
91st Ave	Olive Ave	Northern Ave	2	Minor Arterial2	15,600	12,065	0.77
83rd Ave	Jomax Rd	Happy Valley Rd	2	Minor Arterial2	15,600	7,452	0.48
83rd Ave	Happy Valley Rd	Pinnacle Peak Rd	2	Minor Arterial2	15,600	9,114	0.58
83rd Ave	Pinnacle Peak Rd	Deer Valley Rd	2	Minor Arterial2	15,600	15,506	0.99
83rd Ave	Deer Valley Rd	Lake Pleasant Pkwy	4	Minor Arterial4	32,900	14,914	0.45
83rd Ave	Beardsley Rd	Union Hills	6	Major Arterial6	49,300	30,771	0.62
83rd Ave	Bell Rd	Acoma Dr	6	Major Arterial6	49,300	18,107	0.37
83rd Ave	Acoma Dr	Thunderbird Rd	4	Minor Arterial4	32,900	18,773	0.57
83rd Ave	Thunderbird Rd	Cactus Rd	4	Minor Arterial4	32,900	20,773	0.63
83rd Ave	Cactus Rd	Peoria Ave	4	Minor Arterial4	32,900	13,679	0.42
83rd Ave	Peoria Ave	Grand Ave	4	Minor Arterial4	32,900	16,000	0.49
83rd Ave	Grand Ave	Olive Ave	2	Minor Arterial2	15,600	7,769	0.50
83rd Ave	Olive Ave	Northern Ave	2	Minor Arterial2	15,600	10,616	0.68
75th Ave	Bell Rd	Greenway Rd	4	Minor Arterial4	32,900	20,459	0.62
75th Ave	Greenway Rd	Thunderbird Rd	4	Minor Arterial4	32,900	19,673	0.60
75th Ave	Thunderbird Rd	Cactus Rd	4	Minor Arterial4	32,900	19,582	0.60
75th Ave	Cactus Rd	Peoria Ave	4	Minor Arterial4	32,900	17,568	0.53
75th Ave	Peoria Ave	Olive Ave	4	Minor Arterial4	32,900	16,407	0.50
75th Ave	Olive Ave	Northern Ave	4	Minor Arterial4	32,900	12,683	0.39
67th Ave	Jomax Rd	Happy Valley Rd	4	Minor Arterial4	32,900	20,000	0.61
67th Ave	Happy Valley Rd	Pinnacle Peak Rd	4	Minor Arterial4	32,900	20,000	0.61

Prepared by: Wilson & Company, dated: November 1, 2007

Notes:

(1) Daily capacity threshold values (LOS E) obtained from 2002, Quality/Level of Service Handbook, Table 4-1, Generalized Annual Average Daily Volumes for Florida's Urbanized Areas (Non-State Roadways, Major City/County Roadways), Florida Department of Transportation.

(2) Source: City of Peoria Annual Daily Traffic Counts, April 16, 2007.

(3) Year 2006 v/c ratio based on comparison of forecasted volumes to LOS E threshold for existing Year 2006/2007 roadway functional classification and number of lanes.



**TABLE 3-2
EXISTING YEAR 2007 SEGMENT PRIORITY RANKING**

Facility	From	To	Year 2007 No. of Lanes	Facility Type/ Functional Classification	Planning Level Daily Volume Threshold Capacity ⁽¹⁾	Year 2006 Two-Way Daily Volume ⁽²⁾	Volume/ Capacity Ratio ⁽³⁾	V/C Rank ⁽⁴⁾
Thunderbird Rd	Loop 101	83rd Ave	4	Minor Arterial4	32,900	40,334	1.23	1
Olive Ave	99th Ave	Loop 101	4	Minor Arterial4	32,900	38,567	1.17	2
Deer Valley Rd	91st Ave	83rd Ave	2	Minor Arterial2	15,600	17,189	1.10	3
Olive Ave	Loop 101	91st Ave	4	Minor Arterial4	32,900	35,000	1.06	4
Thunderbird Rd	91st Ave	Loop 101	4	Minor Arterial4	32,900	34,675	1.05	5
Deer Valley Rd	83rd Ave	75th Ave	4	Minor Arterial4	32,900	34,316	1.04	6
Union Hills	91st Ave	83rd Ave	4	Minor Arterial4	32,900	34,272	1.04	7
Olive Ave	91st Ave	83rd Ave	4	Minor Arterial4	32,900	33,954	1.03	8
Olive Ave	107th Ave	99th Ave	4	Minor Arterial4	32,900	33,423	1.02	9
Thunderbird Rd	83rd Ave	75th Ave	4	Minor Arterial4	32,900	33,278	1.01	10
Thunderbird Rd	75th Ave	67th Ave	4	Minor Arterial4	32,900	33,260	1.01	11
Olive Ave	83rd Ave	75th Ave	4	Minor Arterial4	32,900	32,982	1.00	12
83rd Ave	Pinnacle Peak Rd	Deer Valley Rd	2	Minor Arterial2	15,600	15,506	0.99	13
Bell Rd	93rd Ave	Loop 101	6	Major Arterial6	49,300	45,209	0.92	14
Olive Ave	115th Ave	107th Ave	4	Minor Arterial4	32,900	30,074	0.91	15
91st Ave	Peoria Ave	Olive Ave	2	Minor Arterial2	15,600	14,169	0.91	16
Olive Ave	75th Ave	67th Ave	4	Minor Arterial4	32,900	29,802	0.91	17
91st Ave	Pinnacle Peak Rd	Deer Valley Rd	2	Minor Arterial2	15,600	12,782	0.82	18
91st Ave	Cactus Rd	Grand Ave	4	Minor Arterial4	32,900	26,640	0.81	19
Thunderbird Rd	95th Ave	91st Ave	4	Minor Arterial4	32,900	25,666	0.78	20
91st Ave	Olive Ave	Northern Ave	2	Minor Arterial2	15,600	12,065	0.77	21
Lake Pleasant Pkwy	Pinnacle Peak Rd	Deer Valley Rd	2	Minor Arterial2	15,600	12,048	0.77	22
Cactus Rd	75th Ave	67th Ave	4	Minor Arterial4	32,900	24,985	0.76	23
Northern Ave	91st Ave	83rd Ave	4	Minor Arterial4	32,900	24,050	0.73	24
91st Ave	Happy Valley Rd	Pinnacle Peak Rd	2	Minor Arterial2	15,600	10,932	0.70	25
Union Hills	111th Ave	107th Ave	2	Minor Arterial2	15,600	10,844	0.70	26
Northern Ave	83rd Ave	75th Ave	4	Minor Arterial4	32,900	22,701	0.69	27
Peoria Ave	75th Ave	67th Ave	4	Minor Arterial4	32,900	22,538	0.69	28
83rd Ave	Olive Ave	Northern Ave	2	Minor Arterial2	15,600	10,616	0.68	29
Happy Valley Rd	Lake Pleasant Pkwy	91st Ave	2	Minor Arterial2	15,600	10,271	0.66	30
Union Hills	98th Ave	91st Ave	4	Minor Arterial4	32,900	21,605	0.66	31
Peoria Ave	99th Ave	Loop 101	4	Minor Arterial4	32,900	21,509	0.65	32
Happy Valley Rd	Loop 303	107th Ave	4	Minor Arterial4	32,900	21,000	0.64	33
Northern Ave	75th Ave	71st Ave	4	Minor Arterial4	32,900	20,921	0.64	34
Cactus Rd	83rd Ave	75th Ave	4	Minor Arterial4	32,900	20,920	0.64	35
83rd Ave	Thunderbird Rd	Cactus Rd	4	Minor Arterial4	32,900	20,773	0.63	36
83rd Ave	Beardsley Rd	Union Hills	6	Major Arterial6	49,300	30,771	0.62	37
75th Ave	Bell Rd	Greenway Rd	4	Minor Arterial4	32,900	20,459	0.62	38
Cactus Rd	91st Ave	83rd Ave	4	Minor Arterial4	32,900	20,143	0.61	39
Peoria Ave	Loop 101	91st Ave	4	Minor Arterial4	32,900	20,000	0.61	40
Peoria Ave	83rd Ave	83rd Ave Bypass	4	Minor Arterial4	32,900	20,000	0.61	41
67th Ave	Jomax Rd	Happy Valley Rd	4	Minor Arterial4	32,900	20,000	0.61	42
67th Ave	Happy Valley Rd	Pinnacle Peak Rd	4	Minor Arterial4	32,900	20,000	0.61	43
75th Ave	Greenway Rd	Thunderbird Rd	4	Minor Arterial4	32,900	19,673	0.60	44
75th Ave	Thunderbird Rd	Cactus Rd	4	Minor Arterial4	32,900	19,582	0.60	45
Northern Ave	Loop 101	91st Ave	4	Minor Arterial4	32,900	19,309	0.59	46
83rd Ave	Happy Valley Rd	Pinnacle Peak Rd	2	Minor Arterial2	15,600	9,114	0.58	47
Happy Valley Rd	107th Ave	Lake Pleasant Pkwy	4	Minor Arterial4	32,900	19,127	0.58	48
Peoria Ave	83rd Ave Bypass	75th Ave	4	Minor Arterial4	32,900	18,977	0.58	49
83rd Ave	Acoma Dr	Thunderbird Rd	4	Minor Arterial4	32,900	18,773	0.57	50
Lake Pleasant Pkwy	83rd Ave	Beardsley Rd	4	Minor Arterial4	32,900	18,758	0.57	51
75th Ave	Cactus Rd	Peoria Ave	4	Minor Arterial4	32,900	17,568	0.53	52
Lake Pleasant Pkwy	Deer Valley Rd	91st Ave	4	Minor Arterial4	32,900	17,201	0.52	53
Beardsley Rd	N. Lake Pleasant Rd/99th Ave	91st Ave	4	Minor Arterial4	32,900	16,642	0.51	54
75th Ave	Peoria Ave	Olive Ave	4	Minor Arterial4	32,900	16,407	0.50	55
83rd Ave	Grand Ave	Olive Ave	2	Minor Arterial2	15,600	7,769	0.50	56
83rd Ave	Peoria Ave	Grand Ave	4	Minor Arterial4	32,900	16,000	0.49	57
Peoria Ave	91st Ave	83rd Ave	4	Minor Arterial4	32,900	15,862	0.48	58
83rd Ave	Jomax Rd	Happy Valley Rd	2	Minor Arterial2	15,600	7,452	0.48	59
83rd Ave	Deer Valley Rd	Lake Pleasant Pkwy	4	Minor Arterial4	32,900	14,914	0.45	60
Northern Ave	107th Ave	99th Ave	4	Minor Arterial4	32,900	14,886	0.45	61
83rd Ave	Cactus Rd	Peoria Ave	4	Minor Arterial4	32,900	13,679	0.42	62
91st Ave	Beardsley Rd	Union Hills	4	Minor Arterial4	32,900	13,493	0.41	63
Beardsley Rd	91st Ave	83rd Ave	4	Minor Arterial4	32,900	13,136	0.40	64
Lake Pleasant Pkwy	Loop 303	Westwing Pkwy	2	Minor Arterial2	15,600	6,165	0.40	65
Lake Pleasant Pkwy	Happy Valley Rd	Pinnacle Peak Rd	4	Minor Arterial4	32,900	12,696	0.39	66
75th Ave	Olive Ave	Northern Ave	4	Minor Arterial4	32,900	12,683	0.39	67
Pinnacle Peak Rd	91st Ave	83rd Ave	2	Minor Arterial2	15,600	5,848	0.37	68
Lake Pleasant Pkwy	Carefree Hwy	Loop 303	2	Minor Arterial2	15,600	5,842	0.37	69
83rd Ave	Bell Rd	Acoma Dr	6	Major Arterial6	49,300	18,107	0.37	70
Beardsley Rd	107th Ave	N. Lake Pleasant Rd/99th Ave	4	Minor Arterial4	32,900	12,000	0.36	71
91st Ave	Union Hills	Bell Rd	4	Minor Arterial4	32,900	11,651	0.35	72
Jomax Rd	Westwing Pkwy	75th Ave	2	Minor Arterial2	15,600	5,285	0.34	73
Lake Pleasant Pkwy	Jomax Rd	Happy Valley Rd	4	Minor Arterial4	32,900	11,100	0.34	74
107th Ave	Beardsley Rd	Union Hills	2	Minor Arterial2	15,600	5,252	0.34	75
Lake Pleasant Pkwy	Westwing Pkwy	Jomax Rd	4	Minor Arterial4	32,900	10,000	0.30	76
91st Ave	Deer Valley Rd	Lake Pleasant Pkwy	4	Minor Arterial4	32,900	10,000	0.30	77
91st Ave	Bell Rd	Greenway Rd	4	Minor Arterial4	32,900	9,422	0.29	78
91st Ave	Lake Pleasant Pkwy	Beardsley Rd	4	Minor Arterial4	32,900	9,287	0.28	79
Jomax Rd	75th Ave	67th Ave	2	Minor Arterial2	15,600	4,354	0.28	80
Northern Ave	115th Ave	107th Ave	4	Minor Arterial4	32,900	9,089	0.28	81
91st Ave	Greenway Rd	Thunderbird Rd	4	Minor Arterial4	32,900	8,841	0.27	82
Westwing Pkwy	Lake Pleasant Pkwy	Jomax Rd	4	Minor Arterial4	32,900	8,485	0.26	83
Pinnacle Peak Rd	Lake Pleasant Pkwy	91st Ave	2	Minor Arterial1	25,200	6,386	0.25	84
91st Ave	Grand Ave	Peoria Ave	4	Major Arterial5	41,100	10,260	0.25	85
Lake Pleasant Pkwy	91st Ave	83rd Ave	4	Minor Arterial4	32,900	8,191	0.25	86
107th Ave	Happy Valley Rd	Hatfield Rd	2	Minor Arterial2	15,600	3,314	0.21	87
107th Ave	Hatfield Rd	Pinnacle Peak Rd	2	Minor Arterial2	15,600	3,314	0.21	88
107th Ave	Pinnacle Peak Rd	Williams Rd	2	Minor Arterial2	15,600	3,314	0.21	89
Deer Valley Rd	Lake Pleasant Pkwy	91st Ave	2	Minor Arterial2	15,600	3,132	0.20	90
107th Ave	Deer Valley Rd	Beardsley Rd	4	Minor Arterial4	32,900	6,418	0.20	91
Jomax Rd	99th Ave	Lake Pleasant Pkwy	2	Minor Arterial2	15,600	2,500	0.16	92
107th Ave	Olive Ave	Northern Ave	4	Minor Arterial4	32,900	4,957	0.15	93
99th Ave	Olive Ave	Northern Ave	2	Minor Arterial2	15,600	2,294	0.15	94
Pinnacle Peak Rd	75th Ave	67th Ave	2	Minor Arterial2	15,600	2,000	0.13	95
Beardsley Rd	111th Ave	107th Ave	4	Minor Arterial4	32,900	4,200	0.13	96
107th Ave	Williams Rd	Deer Valley Rd	4	Minor Arterial4	32,900	3,987	0.12	97
Greenway Rd	81st Ave	75th Ave	3	Major Collector	25,200	3,011	0.12	98
Jomax Rd	107th Ave	99th Ave	2	Minor Collector	12,600	1,170	0.09	99
Happy Valley Rd	75th Ave	67th Ave	4	Major Arterial6	49,300	4,193	0.09	100
Deer Valley Rd	107th Ave	Lake Pleasant Pkwy	2	Minor Arterial2	15,600	848	0.05	101
Pinnacle Peak Rd	83rd Ave	75th Ave	2	Minor Arterial2	15,600	663	0.04	102
Deer Valley Rd	109th Ave	107th Ave	4	Minor Arterial4	32,900	300	0.01	103
Jomax Rd	Loop 303	107th Ave	2	Minor Collector	12,600	0	0.00	104
Happy Valley Rd	91st Ave	83rd Ave	0	N/A	N/A	0	0.00	105
Happy Valley Rd	83rd Ave	75th Ave	0	N/A	N/A	0	0.00	106
Pinnacle Peak Rd	107th Ave	Lake Pleasant Pkwy	0	N/A	N/A	0	0.00	107
Beardsley Rd	83rd Ave	Loop 101	0	N/A	N/A	0	0.00	108
107th Ave	Jomax Rd	Happy Valley Rd	2	Minor Arterial2	15,600	0	0.00	109

Prepared by: Wilson & Company, dated: November 1, 2007.

Notes.

- (1) Daily capacity threshold values (LOS E) provided by the Florida Department of Transportation, 2002. Quality/Level of Service Handbook, Table 4-1. Generalized Annual Average Daily Volumes for Florida's Urbanized Areas (Non-State Roadways, Major City/County Roadways).
- (2) Source: City of Peoria Annual Daily Traffic Counts, April 16, 2007.
- (3) Year 2006 v/c ratio based on comparison of forecasted volumes to LOS E threshold for existing Year 2006/2007 roadway functional classification and number of lanes.
- (4) Red shading indicated roadway segments with highest V/C Ranking (1 thru 20). Yellow shading indicated roadway segments with highest V/C Ranking (21 thru 40).



**TABLE 3-3
EXISTING YEAR 2006 INTERSECTION PERFORMANCE SUMMARY**

2007 CIP Prioritization Update Intersection ID	2006 Traffix Database Intersection ID	East-West Facilities	North-South Facilities	Year 2006 Peak-Hour Conditions ⁽¹⁾			
				AM		PM	
				Delay (Secs)	LOS	Delay (Secs)	LOS ⁽²⁾
1	--	Carefree Hwy	Lake Pleasant Rd	N/A	N/A	N/A	N/A
2	--	Westwing Pkwy	Lake Pleasant Rd	N/A	N/A	N/A	N/A
3	--	Jomax Rd	Lake Pleasant Rd	N/A	N/A	N/A	N/A
4	--	Westwing Pkwy	Jomax Rd	N/A	N/A	N/A	N/A
5	--	Jomax Rd	Pyramid Peak Rd	N/A	N/A	N/A	N/A
6	--	Happy Valley Rd	107th Ave	N/A	N/A	N/A	N/A
7	76	Happy Valley Rd	Lake Pleasant Rd	37.9	D	44.5	D
8	--	Happy Valley Rd	91st Ave	N/A	N/A	N/A	N/A
9	--	Happy Valley Rd	83rd Ave	N/A	N/A	N/A	N/A
10	--	Happy Valley Rd	67th Ave	N/A	N/A	N/A	N/A
11	--	Pinnacle Peak Rd	107th Ave	N/A	N/A	N/A	N/A
12	77	Pinnacle Peak Rd	Lake Pleasant Rd	27.6	C	29.8	C
13	--	Pinnacle Peak Rd	91st Ave	N/A	N/A	N/A	N/A
14	--	Pinnacle Peak Rd	83rd Ave	N/A	N/A	N/A	N/A
15	--	Pinnacle Peak Rd	67th Ave	N/A	N/A	N/A	N/A
16	--	Deer Valley Rd	107th Ave	N/A	N/A	N/A	N/A
17	--	Deer Valley Rd	Lake Pleasant Rd	N/A	N/A	N/A	N/A
18	--	Deer Valley Rd	91st Ave	N/A	N/A	N/A	N/A
19	22	Deer Valley Rd	83rd Ave	49.3	D	49.3	D
20	--	Deer Valley Rd	67th Ave	N/A	N/A	N/A	N/A
21	--	Rose Garden Ln	Lake Pleasant Rd	N/A	N/A	N/A	N/A
22	57	Lake Pleasant Pkwy	91st Ave	26.3	C	27.4	C
23	55	Lake Pleasant Pkwy	83rd Ave	31.9	C	40.3	D
24	70	Beardsley Rd	107th Ave	15.4	B	13.6	B
25	65	Beardsley Rd	Lake Pleasant Rd	30.9	C	31.9	C
26	38	Beardsley Rd	91st Ave	25.4	C	33.7	C
27	54	Beardsley Rd	83rd Ave	47.3	D	66.4	E
28	--	Union Hills Rd	107th Ave	N/A	N/A	N/A	N/A
29	43	Union Hills Rd	91st Ave	31.2	C	39.6	D
30	31	Union Hills Rd	83rd Ave	36.7	D	49.0	D
31	39	Bell Rd	91st Ave	32.7	C	41.9	D
32	32	Bell Rd	83rd Ave ⁽³⁾	33.1	C	52.5	D
33	--	Bell Rd	75th Ave	N/A	N/A	N/A	N/A
34	8	Greenway Rd	75th Ave	20.9	C	16.8	B
35	42	Thunderbird Rd	91st Ave	28.9	C	25.7	C
36	30	Thunderbird Rd	83rd Ave	40.0	D	70.0	E
37	14	Thunderbird Rd	75th Ave	37.8	D	52.5	D
38	--	Thunderbird Rd	67th Ave	N/A	N/A	N/A	N/A
39	62	Cactus Rd	91st Ave	30.2	C	32.6	C
40	20	Cactus Rd	83rd Ave	29.2	C	31.7	C
41	6	Cactus Rd	75th Ave	35.5	D	41.0	D
42	--	Cactus Rd	67th Ave	N/A	N/A	N/A	N/A
43	--	Grand Ave	91st Ave	N/A	N/A	N/A	N/A
44	41	Peoria Ave	91st Ave	27.1	C	31.8	C
45	--	Peoria Ave	Grand Ave	N/A	N/A	N/A	N/A
46	12	Peoria Ave	75th Ave	27.2	C	40.2	D
47	--	Peoria Ave	67th Ave	N/A	N/A	N/A	N/A
48	--	Grand Ave	Cotton Crossing	N/A	N/A	N/A	N/A
49	40	Olive Ave	91st Ave	44.4	D	61.1	E
50	24	Olive Ave	83rd Ave	28.0	C	12.6	B
51	--	Olive Ave	75th Ave	N/A	N/A	N/A	N/A
52	--	Olive Ave	67th Ave	N/A	N/A	N/A	N/A
53	79	Northern Ave	107th Ave	11.7	B	8.1	A
54	--	Northern Ave	99th Ave	N/A	N/A	N/A	N/A
55	50	Northern Ave	91st Ave	24.9	C	25.3	C
56	49	Northern Ave	83rd Ave	38.9	D	30.8	C
57	10	Northern Ave	75th Ave	16.4	B	17.4	B
58	--	Union Hills Rd	99th Ave	N/A	N/A	N/A	N/A
59	18	Peoria Ave	Cotton Crossing	13.7	B	11.4	B

Prepared by: Wilson & Company, March 10, 2008.

Notes:

- (1) "N/A" represents intersections that do not have any available traffic data or intersections that do not exist under existing conditions.
- (2) Shading indicates intersection level of service E or F conditions for either the AM or PM peak hour time frame.
- (3) 84th Ave and Bell Rd in the 2006 Circulation System Assessment should have read 83rd Ave and Bell Rd.

Source: Year 2006 intersection performance data derived from previous City report - "City of Peoria 2006 Circulation System Assessment", dated June, 2007



4.0 YEAR 2028 TRAFFIC FORECAST DATA AND ANALYSIS

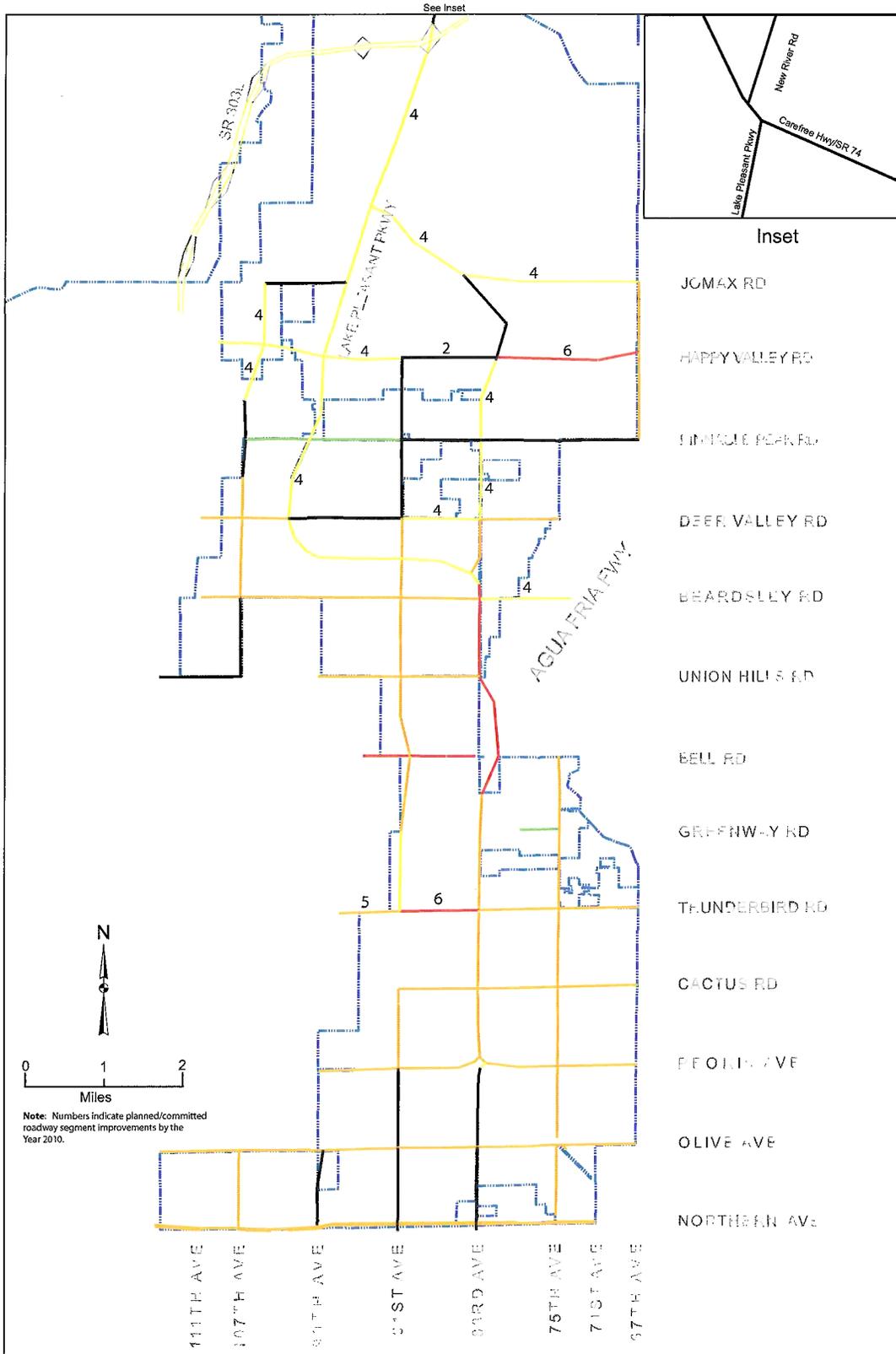
This section reviews the expected improvements to the Study Area roadway network based on information provided by the City and information presented in the City's Capital Improvement Program (CIP). Figure 4-1 shows the Year 2010 lane configurations at the 59 key Study Area intersections. The lane configurations shown in this figure represent conditions based on the existing intersection design and Year 2010 committed improvements specified in the City's CIP.

The lane configurations shown in Figure 4-1 were the basis of the review for this Update. Table 4-1 lists all roadway segments in the study area, identifies the Existing plus Committed lanes and functional classification, establishes the future Year 2028 two-way daily traffic volumes, and shows the v/c ratio at LOS 'E'. Table 4-2 shows the same roadway segments ranked according to v/c ratio and highlights the 20 worst performing roadway segments as well as the next 20 poorly performing segments. This has been done to identify those segments needing attention.

Appendix A shows the estimated Year 2028 intersection turning movement volumes for 59 key study area intersections. Please refer to the methodology used for estimating Year 2028 intersection turning movement volumes described in Section 2.0. Figure 4-2 shows the planned Year 2028 lane configurations for 59 key study area intersections with committed and planned improvements highlighted in red. Table 4-3 summarizes the performance of these 59 intersections relative to expected traffic volumes in 2028. Results in Table 4-3 show that under current conditions three intersections are operating at LOS 'E': Beardsley Road at 83rd Avenue; Thunderbird Road at 83rd Avenue; and Olive Avenue at 91st Avenue. Table 4-3 also shows that planned improvements will result in Thunderbird Road/83rd Avenue intersection achieving LOS 'C' during the AM peak hour and LOS 'E' during the PM peak hour.

Table 4-3 indicates that 32 intersections are expected to be operating at LOS 'E' or worse during the AM peak hour in 2028 should only those improvements now planned be implemented. The average delay would be 1.42 minutes with the longest delay of 6.64 minutes occurring at the Northern Avenue/83rd Avenue intersection. A few intersections would operate better in the PM peak hour. However, 41 intersections would operate at LOS 'E' or worse. Average delay during the PM peak hour would be 1.57 minutes, compared to 1.42 minutes in the AM peak hour. The longest delay of 6.16 minutes would occur at the Northern Avenue/83rd Avenue intersection.

Tables 4-4 and 4-5 show the 59 intersections arranged according to LOS and highlights the worst performing intersections. This has been done to identify the intersections most critically needing attention in order to accommodate forecast 2028 traffic volumes. Appendix B provides detailed SYNCHRO software output for the 59 key Study Area intersections.



Legend

- 2 Lanes — 4 Lanes — 6 Lanes City of Peoria Boundary
- 3 Lanes — 5 Lanes

Figure 4-1

Year 2010 Number of Lanes: Existing Plus Committed Conditions

**TABLE 4-1
FUTURE YEAR 2028 SEGMENT LEVEL DAILY VOLUME REVIEW AND VOLUME-TO-CAPACITY (V/C) ANALYSIS**

Facility	From	To	Existing Year 2006/Near-Term Year 2010 Conditions				Future Year 2028 Conditions	
			Year 2007 No. of Lanes	Year 2010 Programmed or Developer Funded Improvements	Facility Type/ Functional Classification	Planning Level Daily Volume Threshold Capacity ⁽¹⁾	Year 2028 Two Way Daily Volume ⁽²⁾	Volume/ Capacity Ratio ⁽³⁾
East-West Facilities								
Westwing Pkwy	Lake Pleasant Pkwy	Jomax Rd	4	4	Minor Arterial4	32,900	39,610	1.20
Jomax Rd	Loop 303	107th Ave	2	4	Minor Arterial4	32,900	30,406	0.92
Jomax Rd	107th Ave	99th Ave	2	4	Minor Arterial4	32,900	5,895	0.18
Jomax Rd	99th Ave	Lake Pleasant Pkwy	2	4	Minor Arterial4	32,900	12,269	0.37
Jomax Rd	Westwing Pkwy	75th Ave	2	4	Minor Arterial4	32,900	13,573	0.41
Jomax Rd	75th Ave	67th Ave	2	4	Minor Arterial4	32,900	21,340	0.65
Happy Valley Rd	Loop 303	107th Ave	4	4	Minor Arterial4	32,900	48,049	1.46
Happy Valley Rd	107th Ave	Lake Pleasant Pkwy	4	4	Minor Arterial4	32,900	58,495	1.78
Happy Valley Rd	Lake Pleasant Pkwy	91st Ave	2	4	Minor Arterial4	32,900	55,644	1.69
Happy Valley Rd	91st Ave	83rd Ave	0	2	Minor Arterial2	15,600	29,794	1.91
Happy Valley Rd	83rd Ave	75th Ave	0	6	Major Arterial6	49,300	39,730	0.81
Happy Valley Rd	75th Ave	67th Ave	4	6	Major Arterial6	49,300	43,641	0.89
Pinnacle Peak Rd	107th Ave	Lake Pleasant Pkwy	0	3	Minor Collector	12,600	5,479	0.43
Pinnacle Peak Rd	Lake Pleasant Pkwy	91st Ave	2	3	Minor Collector	12,600	7,782	0.62
Pinnacle Peak Rd	91st Ave	83rd Ave	2		Minor Arterial2	15,600	12,433	0.80
Pinnacle Peak Rd	83rd Ave	75th Ave	2		Minor Arterial2	15,600	9,441	0.61
Pinnacle Peak Rd	75th Ave	67th Ave	2		Minor Arterial2	15,600	7,801	0.50
Deer Valley Rd	109th Ave	107th Ave	4		Minor Arterial4	32,900	24,391	0.74
Deer Valley Rd	107th Ave	Lake Pleasant Pkwy	2	4	Minor Arterial4	32,900	28,976	0.88
Deer Valley Rd	Lake Pleasant Pkwy	91st Ave	2		Minor Arterial2	15,600	14,200	0.91
Deer Valley Rd	91st Ave	83rd Ave	2	4	Minor Arterial4	32,900	26,077	0.79
Deer Valley Rd	83rd Ave	75th Ave	4		Minor Arterial4	32,900	30,227	0.92
Beardsley Rd	111th Ave	107th Ave	4		Minor Arterial4	32,900	21,184	0.64
Beardsley Rd	107th Ave	N. Lake Pleasant Rd/99th Ave	4		Minor Arterial4	32,900	26,584	0.81
Beardsley Rd	N. Lake Pleasant Rd/99th Ave	91st Ave	4		Minor Arterial4	32,900	25,207	0.77
Beardsley Rd	91st Ave	83rd Ave	4		Minor Arterial4	32,900	32,254	0.98
Beardsley Rd	83rd Ave	Loop 101	0	4	Minor Arterial4	32,900	27,043	0.82
Union Hills	111th Ave	107th Ave	2		Minor Arterial2	15,600	20,182	1.29
Union Hills	98th Ave	91st Ave	4		Minor Arterial4	32,900	25,207	0.77
Union Hills	91st Ave	83rd Ave	4		Minor Arterial4	32,900	32,254	0.98
Bell Rd	93rd Ave	Loop 101	6		Major Arterial6	49,300	39,969	0.81
Greenway Rd	81st Ave	75th Ave	3		Major Collector	25,200	11,443	0.45
Thunderbird Rd	95th Ave	91st Ave	4	5	Major Arterial5	41,100	46,611	1.13
Thunderbird Rd	91st Ave	Loop 101	4	6	Major Arterial6	49,300	51,940	1.05
Thunderbird Rd	Loop 101	83rd Ave	4	6	Major Arterial6	49,300	50,373	1.02
Thunderbird Rd	83rd Ave	75th Ave	4		Minor Arterial4	32,900	43,050	1.31
Thunderbird Rd	75th Ave	67th Ave	4		Minor Arterial4	32,900	39,192	1.19
Cactus Rd	91st Ave	83rd Ave	4		Minor Arterial4	32,900	25,250	0.77
Cactus Rd	83rd Ave	75th Ave	4		Minor Arterial4	32,900	31,986	0.97
Cactus Rd	75th Ave	67th Ave	4		Minor Arterial4	32,900	38,557	1.17
Peoria Ave	99th Ave	Loop 101	4		Minor Arterial4	32,900	34,713	1.06
Peoria Ave	Loop 101	91st Ave	4		Minor Arterial4	32,900	34,713	1.06
Peoria Ave	91st Ave	83rd Ave	4		Minor Arterial4	32,900	28,002	0.85
Peoria Ave	83rd Ave	83rd Ave Bypass	4		Minor Arterial4	32,900	40,000	1.22
Peoria Ave	83rd Ave Bypass	75th Ave	4		Minor Arterial4	32,900	42,557	1.29
Peoria Ave	75th Ave	67th Ave	4		Minor Arterial4	32,900	40,293	1.22
Olive Ave	115th Ave	107th Ave	4		Minor Arterial4	32,900	37,889	1.15
Olive Ave	107th Ave	99th Ave	4		Minor Arterial4	32,900	46,250	1.41
Olive Ave	99th Ave	Loop 101	4		Minor Arterial4	32,900	42,968	1.31
Olive Ave	Loop 101	91st Ave	4		Minor Arterial4	32,900	51,821	1.58
Olive Ave	91st Ave	83rd Ave	4		Minor Arterial4	32,900	34,787	1.06
Olive Ave	83rd Ave	75th Ave	4		Minor Arterial4	32,900	33,284	1.01
Olive Ave	75th Ave	67th Ave	4		Minor Arterial4	32,900	39,488	1.20
Northern Ave	115th Ave	107th Ave	4		Minor Arterial4	32,900	24,383	0.74
Northern Ave	107th Ave	99th Ave	4		Minor Arterial4	32,900	50,794	1.54
Northern Ave	Loop 101	91st Ave	4		Minor Arterial4	32,900	35,481	1.08
Northern Ave	91st Ave	83rd Ave	4		Minor Arterial4	32,900	36,049	1.10
Northern Ave	83rd Ave	75th Ave	4		Minor Arterial4	32,900	41,038	1.25
Northern Ave	75th Ave	71st Ave	4		Minor Arterial4	32,900	44,915	1.37
North-South Facilities								
107th Ave	Jomax Rd	Happy Valley Rd	2	4	Minor Arterial4	32,900	27,139	0.82
107th Ave	Happy Valley Rd	Hatfield Rd	2	4	Minor Arterial4	32,900	27,139	0.82
107th Ave	Hatfield Rd	Pinnacle Peak Rd	2		Minor Arterial2	15,600	15,384	0.99
107th Ave	Pinnacle Peak Rd	Williams Rd	2		Minor Arterial2	15,600	15,384	0.99
107th Ave	Williams Rd	Deer Valley Rd	4		Minor Arterial4	32,900	18,391	0.56
107th Ave	Deer Valley Rd	Beardsley Rd	4		Minor Arterial4	32,900	20,690	0.63
107th Ave	Beardsley Rd	Union Hills	2		Minor Arterial2	15,600	21,387	1.37
107th Ave	Olive Ave	Northern Ave	4		Minor Arterial4	32,900	7,721	0.23
99th Ave	Olive Ave	Northern Ave	2		Minor Arterial2	15,600	28,526	1.83
Lake Pleasant Pkwy	Carefree Hwy	Loop 303	2		Minor Arterial2	15,600	42,683	2.74
Lake Pleasant Pkwy	Loop 303	Westwing Pkwy	2	4	Minor Arterial4	32,900	30,273	0.92
Lake Pleasant Pkwy	Westwing Pkwy	Jomax Rd	4		Minor Arterial4	32,900	22,317	0.68
Lake Pleasant Pkwy	Jomax Rd	Happy Valley Rd	4		Minor Arterial4	32,900	31,506	0.96
Lake Pleasant Pkwy	Happy Valley Rd	Pinnacle Peak Rd	4		Minor Arterial4	32,900	42,760	1.30
Lake Pleasant Pkwy	Pinnacle Peak Rd	Deer Valley Rd	2	4	Minor Arterial4	32,900	45,007	1.37
Lake Pleasant Pkwy	Deer Valley Rd	91st Ave	4		Minor Arterial4	32,900	33,034	1.00
Lake Pleasant Pkwy	91st Ave	83rd Ave	4		Minor Arterial4	32,900	38,727	1.18
Lake Pleasant Pkwy	83rd Ave	Beardsley Rd	4		Minor Arterial4	32,900	55,396	1.68
91st Ave	Happy Valley Rd	Pinnacle Peak Rd	2		Minor Arterial2	15,600	26,815	1.72
91st Ave	Pinnacle Peak Rd	Deer Valley Rd	2		Minor Arterial2	15,600	27,714	1.78
91st Ave	Deer Valley Rd	Lake Pleasant Pkwy	4		Minor Arterial4	32,900	21,064	0.64
91st Ave	Lake Pleasant Pkwy	Beardsley Rd	4		Minor Arterial4	32,900	17,870	0.54
91st Ave	Beardsley Rd	Union Hills	4		Minor Arterial4	32,900	27,388	0.83
91st Ave	Union Hills	Bell Rd	4		Minor Arterial4	32,900	22,466	0.68
91st Ave	Bell Rd	Greenway Rd	4		Minor Arterial4	32,900	21,338	0.65
91st Ave	Greenway Rd	Thunderbird Rd	4		Minor Arterial4	32,900	28,454	0.86
91st Ave	Cactus Rd	Grand Ave	4		Minor Arterial4	32,900	34,992	1.06
91st Ave	Grand Ave	Peoria Ave	4		Minor Arterial4	32,900	27,753	0.84
91st Ave	Peoria Ave	Olive Ave	2		Minor Arterial2	15,600	20,325	1.30
91st Ave	Olive Ave	Northern Ave	2		Minor Arterial2	15,600	26,945	1.73
83rd Ave	Jomax Rd	Happy Valley Rd	2		Minor Arterial2	15,600	33,683	2.16
83rd Ave	Happy Valley Rd	Pinnacle Peak Rd	2	4	Minor Arterial4	32,900	34,043	1.03
83rd Ave	Pinnacle Peak Rd	Deer Valley Rd	2	4	Minor Arterial4	32,900	33,933	1.03
83rd Ave	Deer Valley Rd	Lake Pleasant Pkwy	4		Minor Arterial4	32,900	26,065	0.79
83rd Ave	Beardsley Rd	Union Hills	6		Major Arterial6	49,300	47,869	0.97
83rd Ave	Bell Rd	Acoma Dr	6		Major Arterial6	49,300	26,240	0.53
83rd Ave	Acoma Dr	Thunderbird Rd	4		Minor Arterial4	32,900	28,000	0.85
83rd Ave	Thunderbird Rd	Cactus Rd	4		Minor Arterial4	32,900	30,768	0.94
83rd Ave	Cactus Rd	Peoria Ave	4		Minor Arterial4	32,900	27,465	0.83
83rd Ave	Peoria Ave	Grand Ave	4		Minor Arterial4	32,900	30,000	0.91
83rd Ave	Grand Ave	Olive Ave	2		Minor Arterial2	15,600	36,905	2.37
83rd Ave	Olive Ave	Northern Ave	2		Minor Arterial2	15,600	31,992	2.05
75th Ave	Bell Rd	Greenway Rd	4		Minor Arterial4	32,900	26,442	0.80
75th Ave	Greenway Rd	Thunderbird Rd	4		Minor Arterial4	32,900	28,508	0.87
75th Ave	Thunderbird Rd	Cactus Rd	4		Minor Arterial4	32,900	27,756	0.84
75th Ave	Cactus Rd	Peoria Ave	4		Minor Arterial4	32,900	28,601	0.87
75th Ave	Peoria Ave	Olive Ave	4		Minor Arterial4	32,900	29,587	0.90
75th Ave	Olive Ave	Northern Ave	4		Minor Arterial4	32,900	28,916	0.88
67th Ave	Jomax Rd	Happy Valley Rd	4		Minor Arterial4	32,900	38,397	1.17
67th Ave	Happy Valley Rd	Pinnacle Peak Rd	4		Minor Arterial4	32,900	35,968	1.09

Prepared by Wilson & Company, November 1, 2007.

Notes.

(1) Daily capacity threshold values (LOS E) obtained from 2002 Quality/Level of Service Handbook, Table 4-1, Generalized Annual Average Daily Volumes for Florida's Urbanized Areas (Non-State Roadways, Major City/County Roadways), Florida Department of Transportation.

(2) Source: Maricopa Association of Governments Year 2028 Regional Travel Demand Model Forecast, dated: August 27, 2007.

(3) Year 2028 V/C ratio based on comparison of forecasted volumes to LOS E threshold for existing Year 2006/2007 roadway functional classification and number of lanes. Red highlighting indicates segment that is over capacity.



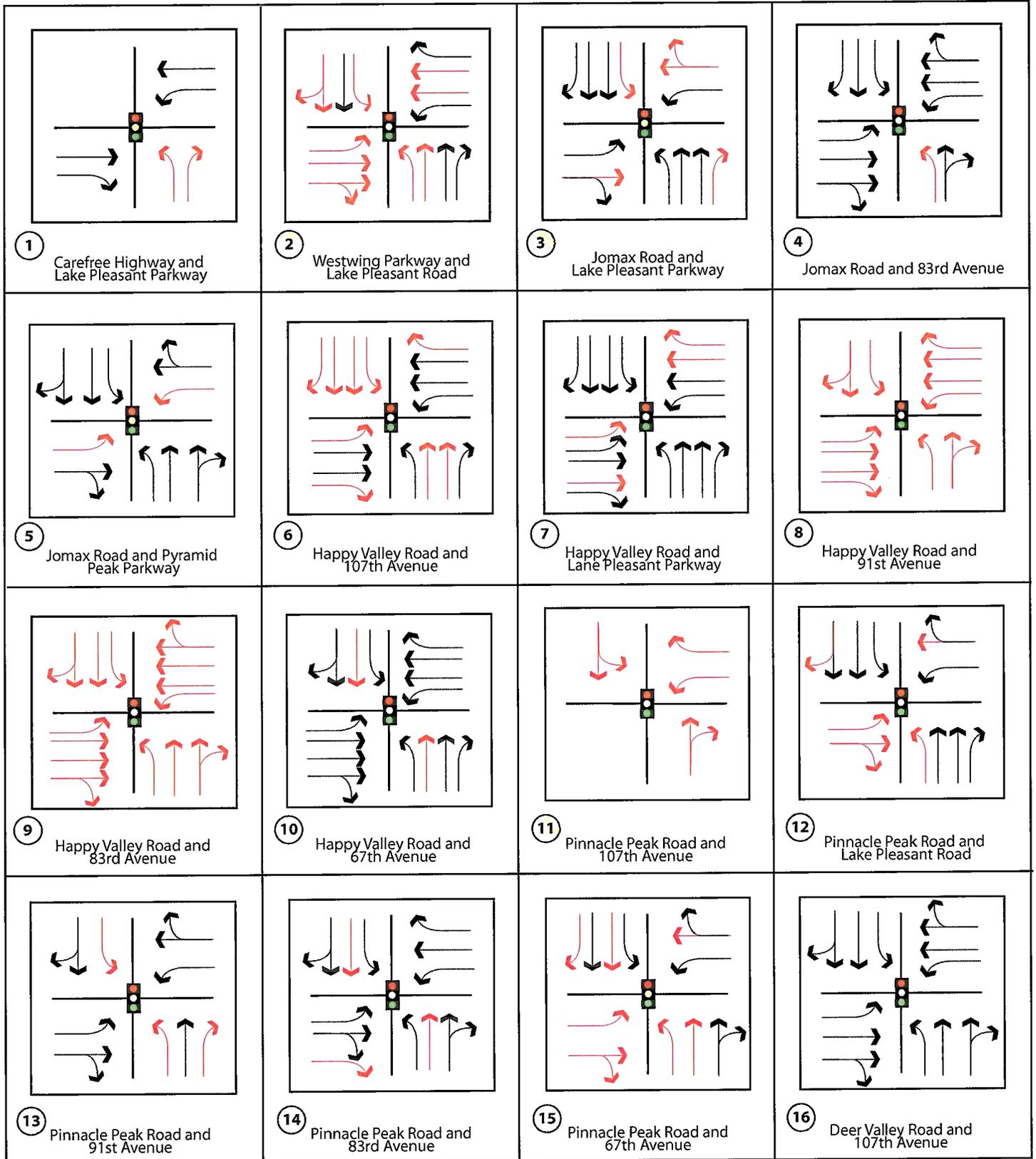
**TABLE 4-2
FUTURE YEAR 2028 SEGMENT IMPROVEMENT PRIORITY RANKING**

Facility	From	To	Existing Year 2006/Near-Term Year 2010 Conditions				Future Year 2028 Conditions			
			Year 2007 No. of Lanes	Year 2010 Programmed or Developer Funded Improvements	Facility Type/ Functional Classification	Planning Level Daily Volume Threshold Capacity ⁽¹⁾	Year 2028 Two-Way Daily Volume ⁽²⁾	Volume/ Capacity Ratio ⁽³⁾	V/C Rank ⁽⁴⁾	
Lake Pleasant Pkwy	Carefree Hwy	Loop 303	2		Minor Arterial2	15,600	42,683	2.74	1	
83rd Ave	Grand Ave	Olive Ave	2		Minor Arterial2	15,600	36,905	2.37	2	
83rd Ave	Jomax Rd	Happy Valley Rd	2		Minor Arterial2	15,600	33,683	2.16	3	
83rd Ave	Olive Ave	Northern Ave	2		Minor Arterial2	15,600	31,992	2.05	4	
Happy Valley Rd	91st Ave	83rd Ave	0	2	Minor Arterial2	15,600	29,794	1.91	5	
99th Ave	Olive Ave	Northern Ave	2		Minor Arterial2	15,600	28,526	1.83	6	
Happy Valley Rd	107th Ave	Lake Pleasant Pkwy	4	4	Minor Arterial4	32,900	58,495	1.78	7	
91st Ave	Pinnacle Peak Rd	Deer Valley Rd	2		Minor Arterial2	15,600	27,714	1.78	8	
91st Ave	Olive Ave	Northern Ave	2		Minor Arterial2	15,600	26,945	1.73	9	
91st Ave	Happy Valley Rd	Pinnacle Peak Rd	2		Minor Arterial2	15,600	26,815	1.72	10	
Happy Valley Rd	Lake Pleasant Pkwy	91st Ave	2	4	Minor Arterial4	32,900	55,644	1.69	11	
Lake Pleasant Pkwy	83rd Ave	Beardsley Rd	4		Minor Arterial4	32,900	55,396	1.66	12	
Olive Ave	Loop 101	91st Ave	4		Minor Arterial4	32,900	51,821	1.58	13	
Northern Ave	107th Ave	99th Ave	4		Minor Arterial4	32,900	50,794	1.54	14	
Happy Valley Rd	Loop 303	107th Ave	4	4	Minor Arterial4	32,900	48,049	1.46	15	
Olive Ave	107th Ave	99th Ave	4		Minor Arterial4	32,900	46,250	1.41	16	
107th Ave	Beardsley Rd	Union Hills	2		Minor Arterial2	15,600	21,387	1.37	17	
Lake Pleasant Pkwy	Pinnacle Peak Rd	Deer Valley Rd	2	4	Minor Arterial4	32,900	45,007	1.37	18	
Northern Ave	75th Ave	71st Ave	4		Minor Arterial4	32,900	44,915	1.37	19	
Thunderbird Rd	83rd Ave	75th Ave	4		Minor Arterial4	32,900	43,050	1.31	20	
Olive Ave	99th Ave	Loop 101	4		Minor Arterial4	32,900	42,968	1.31	21	
91st Ave	Peoria Ave	Olive Ave	2		Minor Arterial2	15,600	20,325	1.30	22	
Lake Pleasant Pkwy	Happy Valley Rd	Pinnacle Peak Rd	4		Minor Arterial4	32,900	42,760	1.30	23	
Union Hills	111th Ave	107th Ave	2		Minor Arterial2	15,600	20,182	1.29	24	
Peoria Ave	83rd Ave Bypass	75th Ave	4		Minor Arterial4	32,900	42,557	1.29	25	
Northern Ave	83rd Ave	75th Ave	4		Minor Arterial4	32,900	41,038	1.25	26	
Peoria Ave	75th Ave	67th Ave	4		Minor Arterial4	32,900	40,293	1.22	27	
Peoria Ave	83rd Ave	83rd Ave Bypass	4		Minor Arterial4	32,900	40,000	1.22	28	
Westwing Pkwy	Lake Pleasant Pkwy	Jomax Rd	4	4	Minor Arterial4	32,900	39,610	1.20	29	
Olive Ave	75th Ave	67th Ave	4		Minor Arterial4	32,900	39,488	1.20	30	
Thunderbird Rd	75th Ave	67th Ave	4		Minor Arterial4	32,900	39,192	1.19	31	
Lake Pleasant Pkwy	91st Ave	83rd Ave	4		Minor Arterial4	32,900	38,727	1.18	32	
Cactus Rd	75th Ave	67th Ave	4		Minor Arterial4	32,900	38,557	1.17	33	
67th Ave	Jomax Rd	Happy Valley Rd	4		Minor Arterial4	32,900	38,397	1.17	34	
Olive Ave	115th Ave	107th Ave	4		Minor Arterial4	32,900	37,889	1.15	35	
Thunderbird Rd	95th Ave	91st Ave	4	5	Major Arterial5	41,100	46,611	1.13	36	
Northern Ave	91st Ave	83rd Ave	4		Minor Arterial4	32,900	36,049	1.10	37	
67th Ave	Happy Valley Rd	Pinnacle Peak Rd	4		Minor Arterial4	32,900	35,968	1.09	38	
Northern Ave	Loop 101	91st Ave	4		Minor Arterial4	32,900	35,481	1.08	39	
91st Ave	Cactus Rd	Grand Ave	4		Minor Arterial4	32,900	34,992	1.06	40	
Olive Ave	91st Ave	83rd Ave	4		Minor Arterial4	32,900	34,787	1.06	41	
Peoria Ave	99th Ave	Loop 101	4		Minor Arterial4	32,900	34,713	1.06	42	
Peoria Ave	Loop 101	91st Ave	4		Minor Arterial4	32,900	34,713	1.06	43	
Thunderbird Rd	91st Ave	Loop 101	4	6	Major Arterial6	49,300	51,940	1.05	44	
83rd Ave	Happy Valley Rd	Pinnacle Peak Rd	2	4	Minor Arterial4	32,900	34,043	1.03	45	
83rd Ave	Pinnacle Peak Rd	Deer Valley Rd	2	4	Minor Arterial4	32,900	33,933	1.03	46	
Thunderbird Rd	Loop 101	83rd Ave	4	6	Major Arterial6	49,300	50,373	1.02	47	
Olive Ave	83rd Ave	75th Ave	4		Minor Arterial4	32,900	33,284	1.01	48	
Lake Pleasant Pkwy	Deer Valley Rd	91st Ave	4		Minor Arterial4	32,900	33,034	1.00	49	
107th Ave	Hatfield Rd	Pinnacle Peak Rd	2		Minor Arterial2	15,600	15,384	0.99	50	
107th Ave	Pinnacle Peak Rd	Williams Rd	2		Minor Arterial2	15,600	15,384	0.99	51	
Beardsley Rd	91st Ave	83rd Ave	4		Minor Arterial4	32,900	32,254	0.98	52	
Union Hills	91st Ave	83rd Ave	4		Minor Arterial4	32,900	32,254	0.98	53	
Cactus Rd	83rd Ave	75th Ave	4		Minor Arterial4	32,900	31,986	0.97	54	
83rd Ave	Beardsley Rd	Union Hills	6		Major Arterial6	49,300	47,869	0.97	55	
Lake Pleasant Pkwy	Jomax Rd	Happy Valley Rd	4		Minor Arterial4	32,900	31,506	0.96	56	
83rd Ave	Thunderbird Rd	Cactus Rd	4		Minor Arterial4	32,900	30,768	0.94	57	
Jomax Rd	Loop 303	107th Ave	2	4	Minor Arterial4	32,900	30,406	0.92	58	
Lake Pleasant Pkwy	Loop 303	Westwing Pkwy	2	4	Minor Arterial4	32,900	30,273	0.92	59	
Deer Valley Rd	83rd Ave	75th Ave	4		Minor Arterial4	32,900	30,227	0.92	60	
83rd Ave	Peoria Ave	Grand Ave	4		Minor Arterial4	32,900	30,000	0.91	61	
Deer Valley Rd	Lake Pleasant Pkwy	91st Ave	2		Minor Arterial2	15,600	14,200	0.91	62	
75th Ave	Peoria Ave	Olive Ave	4		Minor Arterial4	32,900	29,587	0.90	63	
Happy Valley Rd	75th Ave	67th Ave	4	6	Major Arterial6	49,300	43,641	0.89	64	
Deer Valley Rd	107th Ave	Lake Pleasant Pkwy	2	4	Minor Arterial4	32,900	28,976	0.88	65	
75th Ave	Olive Ave	Northern Ave	4		Minor Arterial4	32,900	28,916	0.88	66	
75th Ave	Cactus Rd	Peoria Ave	4		Minor Arterial4	32,900	28,601	0.87	67	
75th Ave	Greenway Rd	Thunderbird Rd	4		Minor Arterial4	32,900	28,508	0.87	68	
91st Ave	Greenway Rd	Thunderbird Rd	4		Minor Arterial4	32,900	28,454	0.86	69	
Peoria Ave	91st Ave	83rd Ave	4		Minor Arterial4	32,900	28,002	0.85	70	
83rd Ave	Acoma Dr	Thunderbird Rd	4		Minor Arterial4	32,900	28,000	0.85	71	
75th Ave	Thunderbird Rd	Cactus Rd	4		Minor Arterial4	32,900	27,756	0.84	72	
91st Ave	Grand Ave	Peoria Ave	4		Minor Arterial4	32,900	27,753	0.84	73	
83rd Ave	Cactus Rd	Peoria Ave	4		Minor Arterial4	32,900	27,465	0.83	74	
91st Ave	Beardsley Rd	Union Hills	4		Minor Arterial4	32,900	27,388	0.83	75	
107th Ave	Jomax Rd	Happy Valley Rd	2	4	Minor Arterial4	32,900	27,139	0.82	76	
107th Ave	Happy Valley Rd	Hatfield Rd	2	4	Minor Arterial4	32,900	27,139	0.82	77	
Beardsley Rd	83rd Ave	Loop 101	0	4	Minor Arterial4	32,900	27,043	0.82	78	
Bell Rd	93rd Ave	Loop 101	6		Major Arterial6	49,300	39,969	0.81	79	
Beardsley Rd	107th Ave	N. Lake Pleasant Rd/99th Ave	4		Minor Arterial4	32,900	26,584	0.81	80	
Happy Valley Rd	83rd Ave	75th Ave	0	6	Major Arterial6	49,300	39,730	0.81	81	
75th Ave	Bell Rd	Greenway Rd	4		Minor Arterial4	32,900	26,442	0.80	82	
Pinnacle Peak Rd	91st Ave	83rd Ave	2		Minor Arterial2	15,600	12,433	0.80	83	
Deer Valley Rd	91st Ave	83rd Ave	2	4	Minor Arterial4	32,900	26,077	0.79	84	
83rd Ave	Deer Valley Rd	Lake Pleasant Pkwy	4		Minor Arterial4	32,900	26,065	0.79	85	
Cactus Rd	91st Ave	83rd Ave	4		Minor Arterial4	32,900	25,250	0.77	86	
Beardsley Rd	N. Lake Pleasant Rd/99th Ave	91st Ave	4		Minor Arterial4	32,900	25,207	0.77	87	
Union Hills	98th Ave	91st Ave	4		Minor Arterial4	32,900	25,207	0.77	88	
Deer Valley Rd	109th Ave	107th Ave	4		Minor Arterial4	32,900	24,391	0.74	89	
Northern Ave	115th Ave	107th Ave	4		Minor Arterial4	32,900	24,383	0.74	90	
91st Ave	Union Hills	Bell Rd	4		Minor Arterial4	32,900	22,466	0.68	91	
Lake Pleasant Pkwy	Westwing Pkwy	Jomax Rd	4		Minor Arterial4	32,900	22,317	0.68	92	
Jomax Rd	75th Ave	67th Ave	2	4	Minor Arterial4	32,900	21,340	0.65	93	
91st Ave	Bell Rd	Greenway Rd	4		Minor Arterial4	32,900	21,338	0.65	94	
Beardsley Rd	111th Ave	107th Ave	4		Minor Arterial4	32,900	21,184	0.64	95	
91st Ave	Deer Valley Rd	Lake Pleasant Pkwy	4		Minor Arterial4	32,900	21,064	0.64	96	
107th Ave	Deer Valley Rd	Beardsley Rd	4		Minor Arterial4	32,900	20,690	0.63	97	
Pinnacle Peak Rd	Lake Pleasant Pkwy	91st Ave	2	3	Minor Collector	12,600	7,782	0.62	98	
Pinnacle Peak Rd	83rd Ave	75th Ave	2		Minor Arterial2	15,600	9,441	0.61	99	
107th Ave	Williams Rd	Deer Valley Rd	4		Minor Arterial4	32,900	18,391	0.56	100	
91st Ave	Lake Pleasant Pkwy	Beardsley Rd	4		Minor Arterial4	32,900	17,870	0.54	101	
83rd Ave	Bell Rd	Acoma Dr	6		Major Arterial6	49,300	26,240	0.53	102	
Pinnacle Peak Rd	75th Ave	67th Ave	2		Minor Arterial2	15,600	7,801	0.50	103	
Greenway Rd	81st Ave	75th Ave	3		Major Collector	25,200	11,443	0.45	104	
Pinnacle Peak Rd	107th Ave	Lake Pleasant Pkwy	0	3	Minor Collector	12,600	5,479	0.43	105	
Jomax Rd	Westwing Pkwy	75th Ave	2	4	Minor Arterial4	32,900	13,573	0.41	106	
Jomax Rd	99th Ave	Lake Pleasant Pkwy	2	4	Minor Arterial4	32,900	12,269	0.37	107	
107th Ave	Olive Ave	Northern Ave	4		Minor Arterial4	32,900	7,721	0.23	108	
Jomax Rd	107th Ave	99th Ave	2	4	Minor Arterial4	32,900	5,895	0.18	109	

Prepared by: Wilson & Company, dated: November 1, 2007.

Notes:

- Daily capacity threshold values (LOS E) provided by the Florida Department of Transportation, 2002. Quality/Level of Service Handbook, Table 4-1, Generalized Annual Average Daily Volumes for Florida's Urbanized Areas (Non-State Roadways, Major City/County Roadways).
- Source: Maricopa Association of Governments Year 2028 Regional Travel Demand Model Forecast, dated: August 27, 2007.
- Year 2028 V/C ratio based on comparison of forecasted volumes to LOS E threshold for existing Year 2006/2007 roadway functional classification and number of lanes. Shading indicates roadway segments operating at LOS F.
- Red shading indicates roadway segments with highest V/C Ranking (1 thru 20). Yellow shading indicates roadway segments with next highest V/C Ranking (21 thru 40).

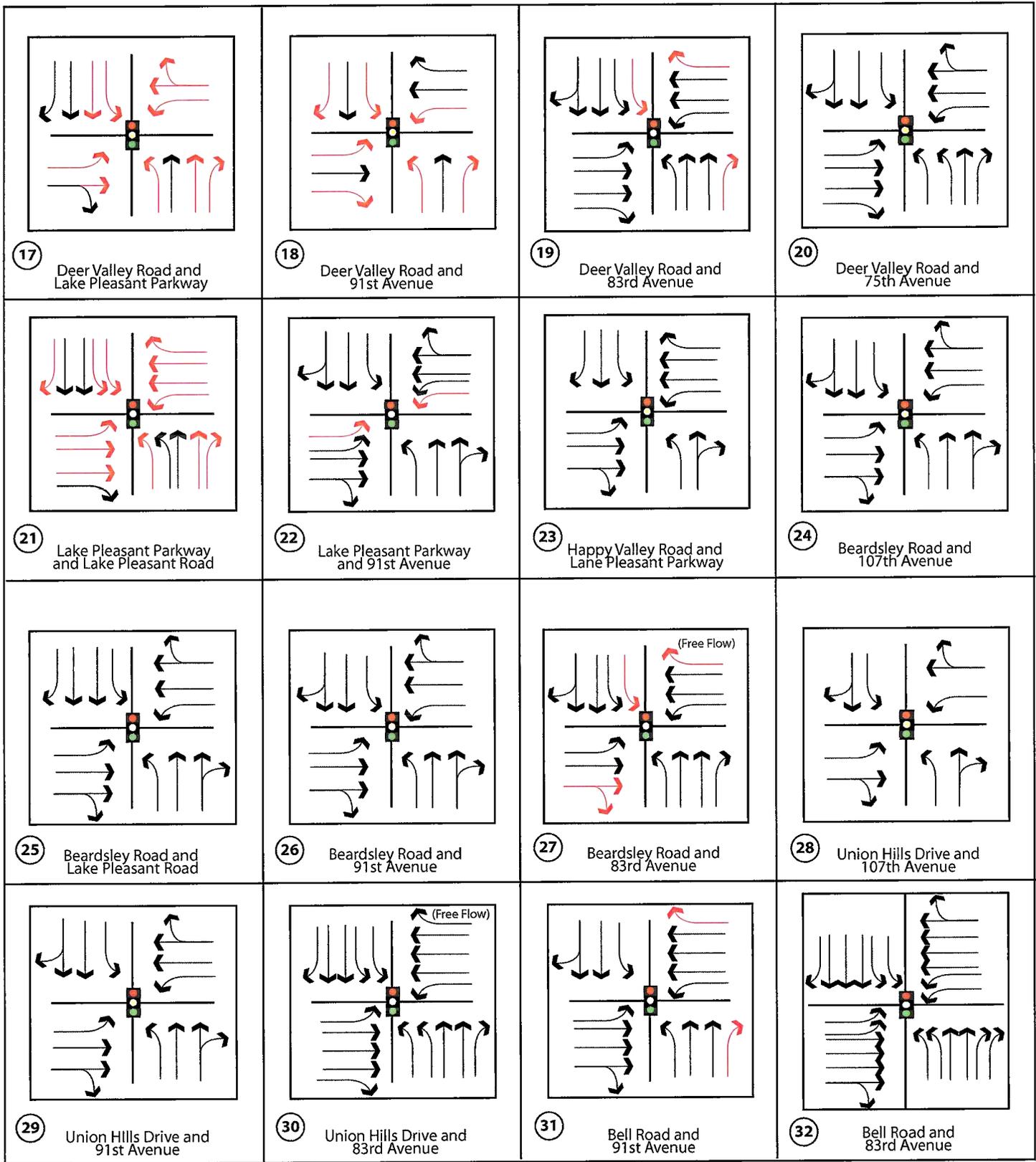


Source: Wilson & Company, October, 2007

⊕ No Scale (X) = Key Study Area Intersection → = Committed/Planned Improvements

Figure 4-2

Year 2028 Signalized Intersection Lane Configurations:
Existing Plus Committed and Planned Conditions

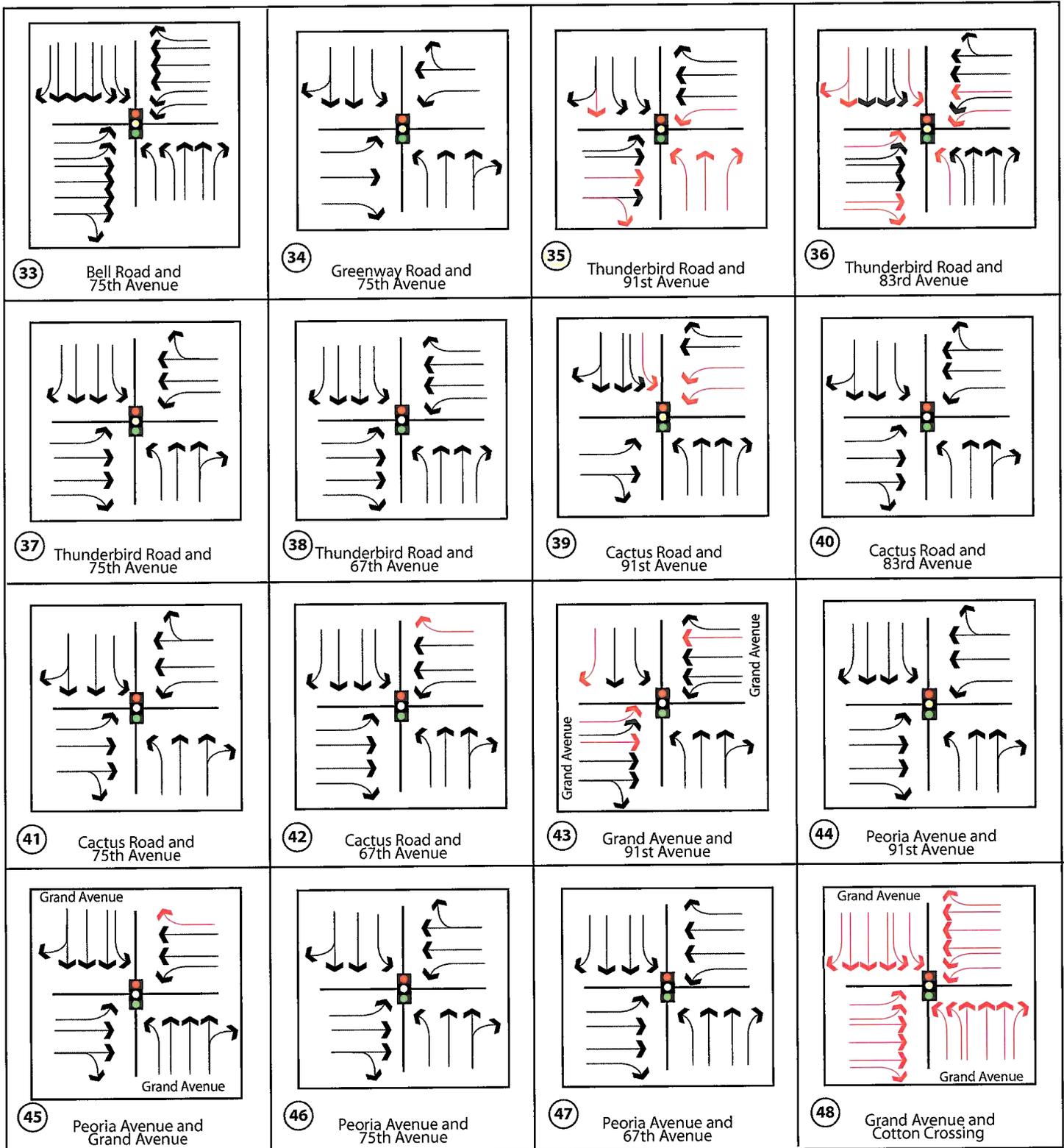


Source Wilson & Company, October, 2007.

⊙ = Key Study Area Intersection → = Committed/Planned Improvements
 No Scale

Figure 4-2 (Cont'd)

**Year 2028 Signalized Intersection Lane Configurations:
 Existing Plus Committed and Planned Conditions**



Source: Wilson & Company, October, 2007



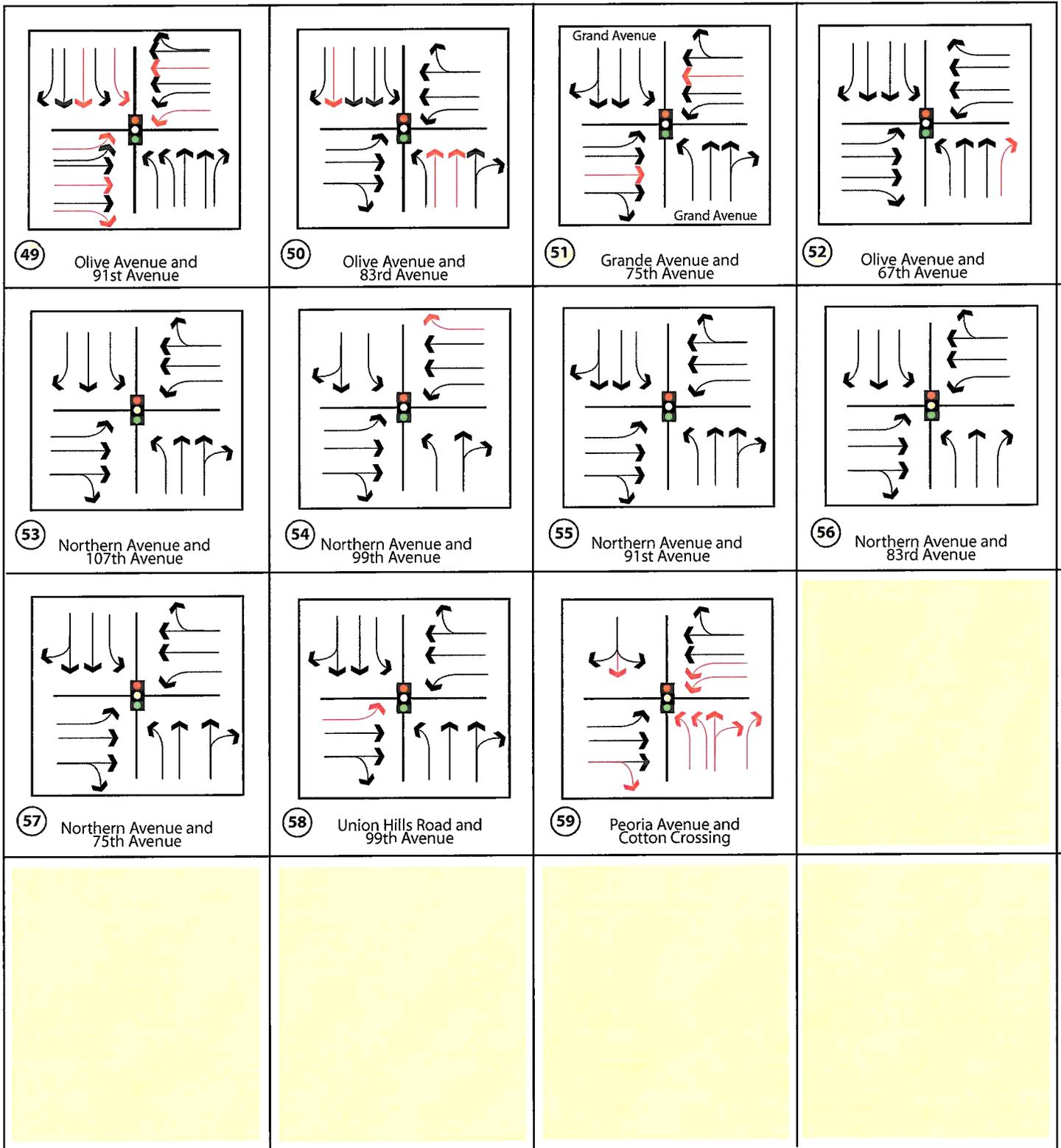
(X) = Key Study Area Intersection

→ = Committed/Planned Improvements

No Scale

Figure 4-2 (Cont'd)

Year 2028 Signalized Intersection Lane Configurations:
Existing Plus Committed and Planned Conditions



Source: Wilson & Company, October, 2007.



No Scale

(X) = Key Study Area Intersection

→ = Committed/Planned Improvements

Figure 4-2 (Cont'd)

Year 2028 Signalized Intersection Lane Configurations:
Existing Plus Committed and Planned Conditions



**TABLE 4-3
FUTURE YEAR 2028 INTERSECTION PERFORMANCE SUMMARY: AM & PM PEAK HOURS**

2007 CIP Prioritization Update Intersection ID	2006 Traffix Database Intersection ID	East-West Facility	North-South Facility	Year 2006 Conditions ⁽¹⁾				Year 2028 Conditions ^(2,3)			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS
1	--	Carefree Hwy	Lake Pleasant Rd	N/A ⁽⁴⁾	N/A	N/A	N/A	71.00	E ⁽⁵⁾	67.40	E
2	--	Westwing Pkwy	Lake Pleasant Rd	N/A	N/A	N/A	N/A	113.30	F	103.40	F
3	--	Jomax Rd	Lake Pleasant Rd	N/A	N/A	N/A	N/A	24.70	C	35.80	D
4	--	Westwing Pkwy	Jomax Rd	N/A	N/A	N/A	N/A	31.10	C	27.30	C
5	--	Jomax Rd	Pyramid Peak Rd	N/A	N/A	N/A	N/A	48.70	D	47.90	D
6	--	Happy Valley Rd	107th Ave	N/A	N/A	N/A	N/A	108.20	F	136.90	F
7	76	Happy Valley Rd	Lake Pleasant Rd	37.9	D	44.5	D	91.30	F	144.10	F
8	--	Happy Valley Rd	91st Ave	N/A	N/A	N/A	N/A	62.90	E	132.80	F
9	--	Happy Valley Rd	83rd Ave	N/A	N/A	N/A	N/A	60.10	E	61.80	E
10	--	Happy Valley Rd	67th Ave	N/A	N/A	N/A	N/A	86.60	F	144.60	F
11	--	Pinnacle Peak Rd	107th Ave	N/A	N/A	N/A	N/A	8.70	A	12.00	B
12	77	Pinnacle Peak Rd	Lake Pleasant Rd	27.6	C	29.8	C	21.70	C	23.80	C
13	--	Pinnacle Peak Rd	91st Ave	N/A	N/A	N/A	N/A	71.70	E	110.30	F
14	--	Pinnacle Peak Rd	83rd Ave	N/A	N/A	N/A	N/A	41.80	D	37.80	D
15	--	Pinnacle Peak Rd	67th Ave	N/A	N/A	N/A	N/A	51.70	D	58.40	E
16	--	Deer Valley Rd	107th Ave	N/A	N/A	N/A	N/A	41.10	D	48.70	D
17	--	Deer Valley Rd	Lake Pleasant Rd	N/A	N/A	N/A	N/A	246.30	F	182.90	F
18	--	Deer Valley Rd	91st Ave	N/A	N/A	N/A	N/A	124.90	F	119.80	F
19	22	Deer Valley Rd	83rd Ave	49.3	D	49.3	D	51.70	D	42.80	D
20	--	Deer Valley Rd	67th Ave	N/A	N/A	N/A	N/A	77.50	E	59.00	E
21	--	Rose Garden Ln	Lake Pleasant Rd	N/A	N/A	N/A	N/A	51.30	D	33.50	C
22	57	Lake Pleasant Pkwy	91st Ave	26.3	C	27.4	C	101.40	F	120.90	F
23	55	Lake Pleasant Pkwy	83rd Ave	31.9	C	40.3	D	95.60	F	202.00	F
24	70	Beardsley Rd	107th Ave	15.4	B	13.6	B	19.40	B	17.00	B
25	65	Beardsley Rd	Lake Pleasant Rd	30.9	C	31.9	C	41.80	D	24.00	C
26	38	Beardsley Rd	91st Ave	25.4	C	33.7	C	31.90	C	89.70	F
27	54	Beardsley Rd	83rd Ave	47.3	D	66.4	E	116.40	F	101.20	F
28	--	Union Hills Rd	107th Ave	N/A	N/A	N/A	N/A	111.80	F	207.90	F
29	43	Union Hills Rd	91st Ave	31.2	C	39.6	D	28.60	C	37.50	D
30	31	Union Hills Rd	83rd Ave	36.7	D	49.0	D	28.20	C	50.10	D
31	39	Bell Rd	91st Ave	32.7	C	41.9	D	49.00	D	71.80	E
32	32	Bell Rd	83rd Ave ⁽⁶⁾	33.1	C	52.5	D	82.30	F	88.90	F
33	--	Bell Rd	75th Ave	N/A	N/A	N/A	N/A	42.50	D	40.10	D
34	8	Greenway Rd	75th Ave	20.9	C	16.8	B	13.90	B	26.30	C
35	42	Thunderbird Rd	91st Ave	28.9	C	25.7	C	40.50	D	59.90	E
36	30	Thunderbird Rd	83rd Ave	40.0	D	70.0	E	31.60	C	62.80	E
37	14	Thunderbird Rd	75th Ave	37.8	D	52.5	D	72.90	E	170.40	F
38	--	Thunderbird Rd	67th Ave	N/A	N/A	N/A	N/A	73.20	E	70.20	E
39	62	Cactus Rd	91st Ave	30.2	C	32.6	C	32.00	C	67.60	E
40	20	Cactus Rd	83rd Ave	29.2	C	31.7	C	37.80	D	93.10	F
41	6	Cactus Rd	75th Ave	35.5	D	41.0	D	48.60	D	72.30	E
42	--	Cactus Rd	67th Ave	N/A	N/A	N/A	N/A	105.30	F	119.60	F
43	--	Grand Ave	91st Ave	N/A	N/A	N/A	N/A	156.30	F	150.60	F
44	41	Peoria Ave	91st Ave	27.1	C	31.8	C	88.60	F	103.60	F
45	--	Peoria Ave	Grand Ave	N/A	N/A	N/A	N/A	204.50	F	175.40	F
46	12	Peoria Ave	75th Ave	27.2	C	40.2	D	135.30	F	74.70	E
47	--	Peoria Ave	67th Ave	N/A	N/A	N/A	N/A	100.20	F	97.20	F
48	--	Peoria Ave	Cotton Crossing	N/A	N/A	N/A	N/A	52.60	D	51.90	D
49	40	Olive Ave	91st Ave	44.4	D	61.1	E	45.70	D	63.50	E
50	24	Olive Ave	83rd Ave	28.0	C	12.6	B	127.60	F	116.90	F
51	--	Grand Ave	75th Ave	N/A	N/A	N/A	N/A	68.60	E	67.30	E
52	--	Olive Ave	67th Ave	N/A	N/A	N/A	N/A	52.40	D	50.30	D
53	79	Northern Ave	107th Ave	11.7	B	8.1	A	32.30	C	17.80	B
54	--	Northern Ave	99th Ave	N/A	N/A	N/A	N/A	373.00	F	328.30	F
55	50	Northern Ave	91st Ave	24.9	C	25.3	C	157.30	F	131.10	F
56	49	Northern Ave	83rd Ave	38.9	D	30.8	C	398.10	F	369.80	F
57	10	Northern Ave	75th Ave	16.4	B	17.4	B	148.20	F	86.70	F
58	--	Union Hills Rd	99th Ave	N/A	N/A	N/A	N/A	110.80	F	79.10	E
59	18	Peoria Ave	Cotton Crossing	13.70	B	11.4	B	74.70	E	186.20	F

Prepared by: Wilson & Company, dated: March 10, 2008.

Notes.

- Year 2006 intersection performance data from "City of Peoria 2006 Circulation System Assessment" dated: June, 2007.
- Year 2028 intersection performance data calculated by Wilson & Company as part of the "City of Peoria Year 2007 CIP Prioritization Update", dated: November, 2007. Future peak hour intersection turning movement volume estimates developed by Wilson & Company based on daily volume projections from the Maricopa Association of Governments Year 2028 Regional Travel Demand Model Forecast, dated: August 27, 2007.
- The following traffic signals control parameters were utilized as input guidelines for Year 2028 intersection capacity analyses:
 - All capacity analyses conducted in "Synchro 6, Traffic Signal Coordination Software".
 - Traffic signal phasing and cycle lengths fully optimized utilizing Synchro software program.
 - Cycle Length range limited to 75 - 120 Seconds.
 - "Protected/Permissive" left turn phasing for all Intersections with single left turn lanes.
 - "Protected" phase for left turns for intersections with higher left turn volumes and dual left turn lanes.
 - All signals are assumed to be "Actuated - Uncoordinated".
- "N/A" represents intersections that do not have any available traffic data or intersections that do not exist under existing conditions.
- Shading indicates intersection level of service E or F conditions for either the AM or PM peak hour time frame.
- 84th Ave and Bell Rd in the 2006 Circulation System Assessment should have read 83rd Ave and Bell Rd.

TABLE 4-4
FUTURE YEAR 2028 INTERSECTION PERFORMANCE SUMMARY: AM PEAK HOUR RANKING

2007 CIP Prioritization Update Intersection ID	2006 Traffic Database Intersection ID	East-West Facility	North-South Facility	Year 2006 Conditions ⁽¹⁾				Year 2028 Conditions ^(2,3)			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS
56	49	Northern Ave	83rd Ave	38.90	D	30.8	C	398.10	F	369.80	F
54	--	Northern Ave	99th Ave	N/A	N/A	N/A	N/A	373.00	F	328.30	F
17	--	Deer Valley Rd	Lake Pleasant Rd	N/A	N/A	N/A	N/A	246.30	F	182.90	F
45	--	Peoria Ave	Grand Ave	N/A	N/A	N/A	N/A	204.50	F	175.40	F
55	50	Northern Ave	91st Ave	24.90	C	25.3	C	157.30	F	131.10	F
43	--	Grand Ave	91st Ave	N/A	N/A	N/A	N/A	156.30	F	150.60	F
57	10	Northern Ave	75th Ave	16.40	B	17.4	B	148.20	F	86.70	F
46	12	Peoria Ave	75th Ave	27.20	C	40.2	D	135.30	F	74.70	E
50	24	Olive Ave	83rd Ave	28.00	C	12.6	B	127.60	F	116.90	F
18	--	Deer Valley Rd	91st Ave	N/A	N/A	N/A	N/A	124.90	F	119.80	F
27	54	Beardsley Rd	83rd Ave	47.30	D	66.4	E	116.40	F	101.20	F
2	--	Westwing Pkwy	Lake Pleasant Rd	N/A	N/A	N/A	N/A	113.30	F	103.40	F
28	--	Union Hills Rd	107th Ave	N/A	N/A	N/A	N/A	111.80	F	207.90	F
58	--	Union Hills Rd	99th Ave	N/A	N/A	N/A	N/A	110.80	F	79.10	E
6	--	Happy Valley Rd	107th Ave	N/A	N/A	N/A	N/A	106.20	F	136.90	F
42	--	Cactus Rd	67th Ave	N/A	N/A	N/A	N/A	105.30	F	119.60	F
22	57	Lake Pleasant Pkwy	91st Ave	26.30	C	27.4	C	101.40	F	120.90	F
47	--	Peoria Ave	67th Ave	N/A	N/A	N/A	N/A	100.20	F	97.20	F
23	55	Lake Pleasant Pkwy	83rd Ave	31.90	C	40.3	D	95.60	F	202.00	F
7	76	Happy Valley Rd	Lake Pleasant Rd	37.90	D	44.5	D	91.30	F	144.10	F
44	41	Peoria Ave	91st Ave	27.10	C	31.8	C	88.60	F	103.60	F
10	--	Happy Valley Rd	67th Ave	N/A	N/A	N/A	N/A	86.60	F	144.60	F
32	--	Bell Rd	83rd Ave ⁽⁶⁾	N/A	N/A	N/A	N/A	82.30	F	88.90	F
20	--	Deer Valley Rd	67th Ave	N/A	N/A	N/A	N/A	77.50	E	59.00	E
59	18	Peoria Ave	Cotton Crossing	13.70	B	11.4	B	74.70	E	186.20	F
38	--	Thunderbird Rd	67th Ave	N/A	N/A	N/A	N/A	73.20	E	70.20	E
37	14	Thunderbird Rd	75th Ave	37.80	D	52.5	D	72.90	E	170.40	F
13	--	Pinnacle Peak Rd	91st Ave	N/A	N/A	N/A	N/A	71.70	E	110.30	F
1	--	Carefree Hwy	Lake Pleasant Rd	N/A	N/A	N/A	N/A	71.00	E	67.40	E
51	--	Grand Ave	75th Ave	N/A	N/A	N/A	N/A	68.60	E	67.30	E
8	--	Happy Valley Rd	91st Ave	N/A	N/A	N/A	N/A	62.90	E	132.80	F
9	--	Happy Valley Rd	83rd Ave	N/A	N/A	N/A	N/A	60.10	E	61.80	E
48	--	Grand Ave	Cotton Crossing	N/A	N/A	N/A	N/A	52.60	D	51.90	D
52	--	Olive Ave	67th Ave	N/A	N/A	N/A	N/A	52.40	D	50.30	D
15	--	Pinnacle Peak Rd	67th Ave	N/A	N/A	N/A	N/A	51.70	D	58.40	E
19	22	Deer Valley Rd	83rd Ave	49.30	D	49.3	D	51.70	D	42.80	D
21	--	Rose Garden Ln	Lake Pleasant Rd	N/A	N/A	N/A	N/A	51.30	D	33.50	C
31	39	Bell Rd	91st Ave	32.70	C	41.9	D	49.00	D	71.80	E
5	--	Jomax Rd	Pyramid Peak Rd	N/A	N/A	N/A	N/A	48.70	D	47.90	D
41	6	Cactus Rd	75th Ave	35.50	D	41	D	48.60	D	72.30	E
49	40	Olive Ave	91st Ave	44.40	D	61.1	E	45.70	D	63.50	E
33	--	Bell Rd	75th Ave	N/A	N/A	N/A	N/A	42.50	D	40.10	D
14	--	Pinnacle Peak Rd	83rd Ave	N/A	N/A	N/A	N/A	41.80	D	37.80	D
25	65	Beardsley Rd	Lake Pleasant Rd	30.90	C	31.9	C	41.80	D	24.00	C
16	--	Deer Valley Rd	107th Ave	N/A	N/A	N/A	N/A	41.10	D	48.70	D
35	42	Thunderbird Rd	91st Ave	28.90	C	25.7	C	40.50	D	59.90	E
40	20	Cactus Rd	83rd Ave	29.20	C	31.7	C	37.80	D	93.10	F
53	79	Northern Ave	107th Ave	11.70	B	8.1	A	32.30	C	17.80	B
39	62	Cactus Rd	91st Ave	30.20	C	32.6	C	32.00	C	67.60	E
26	38	Beardsley Rd	91st Ave	25.40	C	33.7	C	31.90	C	89.70	F
36	30	Thunderbird Rd	83rd Ave	40.00	D	70	E	31.60	C	62.80	E
4	--	Westwing Pkwy	Jomax Rd	N/A	N/A	N/A	N/A	31.10	C	27.30	C
30	31	Union Hills Rd	83rd Ave	36.70	D	49	D	28.20	C	50.10	D
29	43	Union Hills Rd	91st Ave	31.20	C	39.6	D	26.60	C	37.50	D
3	--	Jomax Rd	Lake Pleasant Rd	N/A	N/A	N/A	N/A	24.70	C	35.80	D
12	77	Pinnacle Peak Rd	Lake Pleasant Rd	27.60	C	29.8	C	21.70	C	23.80	C
24	70	Beardsley Rd	107th Ave	15.40	B	13.6	B	19.40	B	17.00	B
34	8	Greenway Rd	75th Ave	20.90	C	16.8	B	13.90	B	26.30	C
11	--	Pinnacle Peak Rd	107th Ave	N/A	N/A	N/A	N/A	8.70	A	12.00	B

Prepared by: Wilson & Company, dated: March 10, 2008.

Notes.

- Year 2006 intersection performance data from "City of Peoria 2006 Circulation System Assessment", dated: June, 2007.
- Year 2028 intersection performance data calculated by Wilson & Company as part of the "City of Peoria Year 2007 CIP Prioritization Update", dated: November, 2007. Future peak hour intersection turning movement volume estimates developed by Wilson & Company based on daily volume projections from the Maricopa Association of Governments Year 2028 Regional Travel Demand Model Forecast, dated: August 27, 2007.
- The following traffic signals control parameters were utilized as input guidelines for Year 2028 intersection capacity analyses:
 - * All capacity analyses conducted in "Synchro 6, Traffic Signal Coordination Software".
 - * Traffic signal phasing and cycle lengths fully optimized utilizing Synchro software program.
 - * Cycle Length range limited to 75 - 120 Seconds.
 - * "Protected/Permissive" left turn phasing for all Intersections with single left turn lanes.
 - * "Protected" phase for left turns for intersections with higher left turn volumes and dual left turn lanes.
 - * All signals are assumed to be "Actuated - Uncoordinated".
- "N/A" represents intersections that do not have any available traffic data or intersections that do not exist under existing conditions.
- Shading indicates intersection level of service E or F conditions for either the AM or PM peak hour time frame.
- 84th Ave and Bell Rd in the 2006 Circulation System Assessment should have read 83rd Ave and Bell Rd.



**TABLE 4-5
FUTURE YEAR 2028 INTERSECTION PERFORMANCE SUMMARY: PM PEAK HOUR RANKING**

2007 CIP Prioritization Update Intersection ID	2006 Traffic Database Intersection ID	East-West Facility	North-South Facility	Year 2006 Conditions ⁽¹⁾				Year 2028 Conditions ^(2,3)			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS
56	49	Northern Ave	83rd Ave	38.90	D	30.8	C	398.10	F	369.80	F
54	--	Northern Ave	99th Ave	N/A	N/A	N/A	N/A	373.00	F	328.30	F
28	--	Union Hills Rd	107th Ave	N/A	N/A	N/A	N/A	111.80	F	207.90	F
23	55	Lake Pleasant Pkwy	83rd Ave	31.90	C	40.3	D	95.60	F	202.00	F
59	18	Peoria Ave	Cotton Crossing	13.70	B	11.4	B	74.70	E	186.20	F
17	--	Deer Valley Rd	Lake Pleasant Rd	N/A	N/A	N/A	N/A	246.30	F	182.90	F
45	--	Peoria Ave	Grand Ave	N/A	N/A	N/A	N/A	204.50	F	175.40	F
37	14	Thunderbird Rd	75th Ave	37.80	D	52.5	D	72.90	E	170.40	F
43	--	Grand Ave	91st Ave	N/A	N/A	N/A	N/A	156.30	F	150.60	F
10	--	Happy Valley Rd	67th Ave	N/A	N/A	N/A	N/A	86.60	F	144.60	F
7	76	Happy Valley Rd	Lake Pleasant Rd	37.90	D	44.5	D	91.30	F	144.10	F
6	--	Happy Valley Rd	107th Ave	N/A	N/A	N/A	N/A	106.20	F	136.90	F
8	--	Happy Valley Rd	91st Ave	N/A	N/A	N/A	N/A	62.90	E	132.80	F
55	50	Northern Ave	91st Ave	24.90	C	25.3	C	157.30	F	131.10	F
22	57	Lake Pleasant Pkwy	91st Ave	26.30	C	27.4	C	101.40	F	120.90	F
18	--	Deer Valley Rd	91st Ave	N/A	N/A	N/A	N/A	124.90	F	119.80	F
42	--	Cactus Rd	67th Ave	N/A	N/A	N/A	N/A	105.30	F	119.60	F
50	24	Olive Ave	83rd Ave	28.00	C	12.6	B	127.60	F	116.90	F
13	--	Pinnacle Peak Rd	91st Ave	N/A	N/A	N/A	N/A	71.70	E	110.30	F
44	41	Peoria Ave	91st Ave	27.10	C	31.8	C	88.60	F	103.60	F
2	--	Westwing Pkwy	Lake Pleasant Rd	N/A	N/A	N/A	N/A	113.30	F	103.40	F
27	54	Beardsley Rd	83rd Ave	47.30	D	66.4	E	116.40	F	101.20	F
47	--	Peoria Ave	67th Ave	N/A	N/A	N/A	N/A	100.20	F	97.20	F
40	20	Cactus Rd	83rd Ave	29.20	C	31.7	C	37.80	D	93.10	F
26	38	Beardsley Rd	91st Ave	25.40	C	33.7	C	31.90	C	89.70	F
32	--	Bell Rd	83rd Ave ⁽⁶⁾	N/A	N/A	N/A	N/A	82.30	F	88.90	F
57	10	Northern Ave	75th Ave	16.40	B	17.4	B	148.20	F	86.70	F
58	--	Union Hills Rd	99th Ave	N/A	N/A	N/A	N/A	110.80	F	79.10	E
46	12	Peoria Ave	75th Ave	27.20	C	40.2	D	135.30	F	74.70	E
41	6	Cactus Rd	75th Ave	35.50	D	41	D	48.60	D	72.30	E
31	39	Bell Rd	91st Ave	32.70	C	41.9	D	49.00	D	71.80	E
38	--	Thunderbird Rd	67th Ave	N/A	N/A	N/A	N/A	73.20	E	70.20	E
39	62	Cactus Rd	91st Ave	30.20	C	32.6	C	32.00	C	67.60	E
1	--	Carefree Hwy	Lake Pleasant Rd	N/A	N/A	N/A	N/A	71.00	E	67.40	E
51	--	Grand Ave	75th Ave	N/A	N/A	N/A	N/A	68.60	E	67.30	E
49	40	Olive Ave	91st Ave	44.40	D	61.1	E	45.70	D	63.50	E
36	30	Thunderbird Rd	83rd Ave	40.00	D	70	E	31.60	C	62.80	E
9	--	Happy Valley Rd	83rd Ave	N/A	N/A	N/A	N/A	60.10	E	61.80	E
35	42	Thunderbird Rd	91st Ave	28.90	C	25.7	C	40.50	D	59.90	E
20	--	Deer Valley Rd	67th Ave	N/A	N/A	N/A	N/A	77.50	E	59.00	E
15	--	Pinnacle Peak Rd	67th Ave	N/A	N/A	N/A	N/A	51.70	D	58.40	E
48	--	Grand Ave	Cotton Crossing	N/A	N/A	N/A	N/A	52.60	D	51.90	D
52	--	Olive Ave	67th Ave	N/A	N/A	N/A	N/A	52.40	D	50.30	D
30	31	Union Hills Rd	83rd Ave	36.70	D	49	D	28.20	C	50.10	D
16	--	Deer Valley Rd	107th Ave	N/A	N/A	N/A	N/A	41.10	D	48.70	D
5	--	Jomax Rd	Pyramid Peak Rd	N/A	N/A	N/A	N/A	48.70	D	47.90	D
19	22	Deer Valley Rd	83rd Ave	49.30	D	49.3	D	51.70	D	42.80	D
33	--	Bell Rd	75th Ave	N/A	N/A	N/A	N/A	42.50	D	40.10	D
14	--	Pinnacle Peak Rd	83rd Ave	N/A	N/A	N/A	N/A	41.80	D	37.80	D
29	43	Union Hills Rd	91st Ave	31.20	C	39.6	D	26.60	C	37.50	D
3	--	Jomax Rd	Lake Pleasant Rd	N/A	N/A	N/A	N/A	24.70	C	35.80	D
21	--	Rose Garden Ln	Lake Pleasant Rd	N/A	N/A	N/A	N/A	51.30	D	33.50	C
4	--	Westwing Pkwy	Jomax Rd	N/A	N/A	N/A	N/A	31.10	C	27.30	C
34	8	Greenway Rd	75th Ave	20.90	C	16.8	B	13.90	B	26.30	C
25	65	Beardsley Rd	Lake Pleasant Rd	30.90	C	31.9	C	41.80	D	24.00	C
12	77	Pinnacle Peak Rd	Lake Pleasant Rd	27.60	C	29.8	C	21.70	C	23.80	C
53	79	Northern Ave	107th Ave	11.70	B	8.1	A	32.30	C	17.80	B
24	70	Beardsley Rd	107th Ave	15.40	B	13.6	B	19.40	B	17.00	B
11	--	Pinnacle Peak Rd	107th Ave	N/A	N/A	N/A	N/A	8.70	A	12.00	B

Prepared by: Wilson & Company, dated: March 10, 2008.

Notes

- Year 2006 intersection performance data from "City of Peoria 2006 Circulation System Assessment", dated: June, 2007.
- Year 2028 intersection performance data calculated by Wilson & Company as part of the "City of Peoria Year 2007 CIP Prioritization Update", dated: November, 2007. Future peak hour intersection turning movement volume estimates developed by Wilson & Company based on daily volume projections from the Maricopa Association of Governments Year 2028 Regional Travel Demand Model Forecast, dated: August 27, 2007.
- The following traffic signals control parameters were utilized as input guidelines for Year 2028 intersection capacity analyses
 - * All capacity analyses conducted in "Synchro 6, Traffic Signal Coordination Software".
 - * Traffic signal phasing and cycle lengths fully optimized utilizing Synchro software program.
 - * Cycle Length range limited to 75 - 120 Seconds.
 - * "Protected/Permissive" left turn phasing for all Intersections with single left turn lanes.
 - * "Protected" phase for left turns for intersections with higher left turn volumes and dual left turn lanes.
 - * All signals are assumed to be "Actuated - Uncoordinated".
- "N/A" represents intersections that do not have any available traffic data or intersections that do not exist under existing conditions.
- Shading indicates intersection level of service E or F conditions for either the AM or PM peak hour time frame.
- 84th Ave and Bell Rd in the 2006 Circulation System Assessment should have read 83rd Ave and Bell Rd.



5.0 PROPOSED ROADWAY NETWORK MITIGATION MEASURES

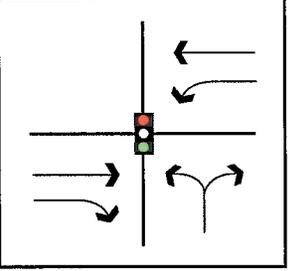
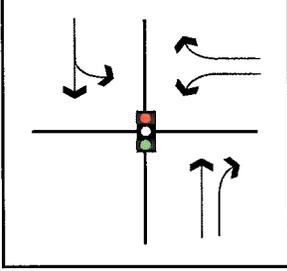
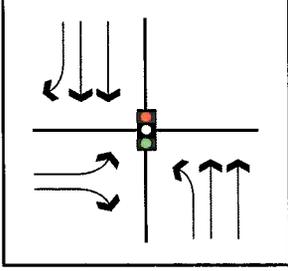
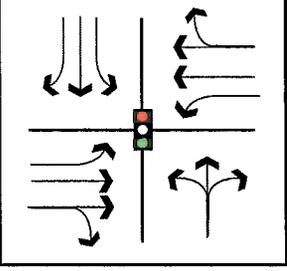
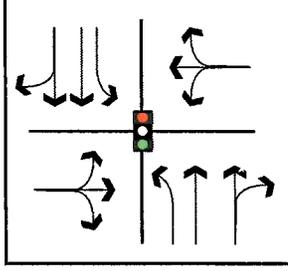
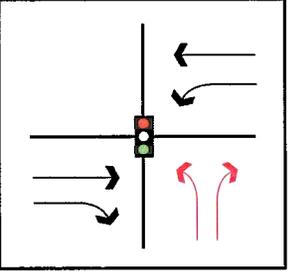
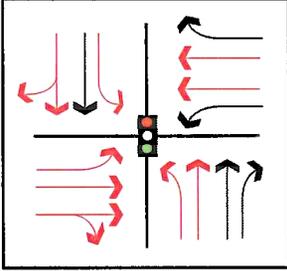
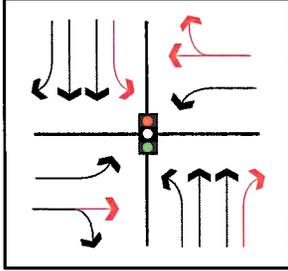
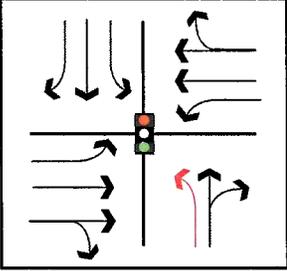
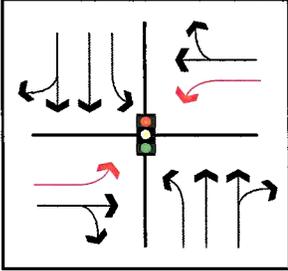
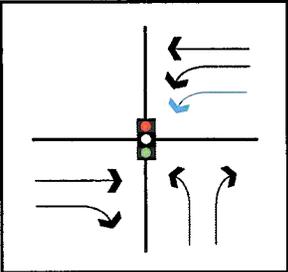
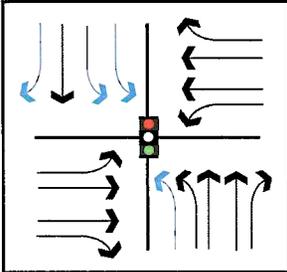
This section presents the results of the mitigation analysis performed to address the network improvements identified in Section 4.0. The mitigation analysis focused on intersection performance as the key factor influencing future mobility. While there may be roadway segments which could be widened to six-lanes ultimately, the mitigation analysis in this study did not assume this condition unless the full segment widening improvement was anticipated prior to Year 2028. Thus, no additional roadway mitigation (widening) beyond the improvements documented in Section 4.0 are proposed to address arterial segment deficiencies based on daily volume conditions.

Figure 5-1 displays a set of lane configuration diagrams for each of the 59 key intersections in the Study Area. Each set compares the existing intersection lane configuration, the committed and planned lane configuration expected to be in place by Year 2028, and the proposed lane configuration incorporating mitigation improvements. The design improvements are intended to mitigate the expected poor performance of impacted intersections. The results of this analysis identify future capacity related needs and, therefore, give a rational basis for prioritizing intersection improvements.

Table 5-1 summarizes the results of these mitigation actions relative to intersection LOS. This table compares the expected Year 2028 operations of the 41 intersections with and without the proposed mitigation. The table indicates the mitigation actions would be successful at improving operations to LOS 'D' or better at all but two intersections. LOS 'E' or 'F' operating conditions would remain at:

- Grand Avenue and 91st Avenue (AM & PM peak hours)
- Northern Avenue and 99th Avenue (AM & PM peak hours)

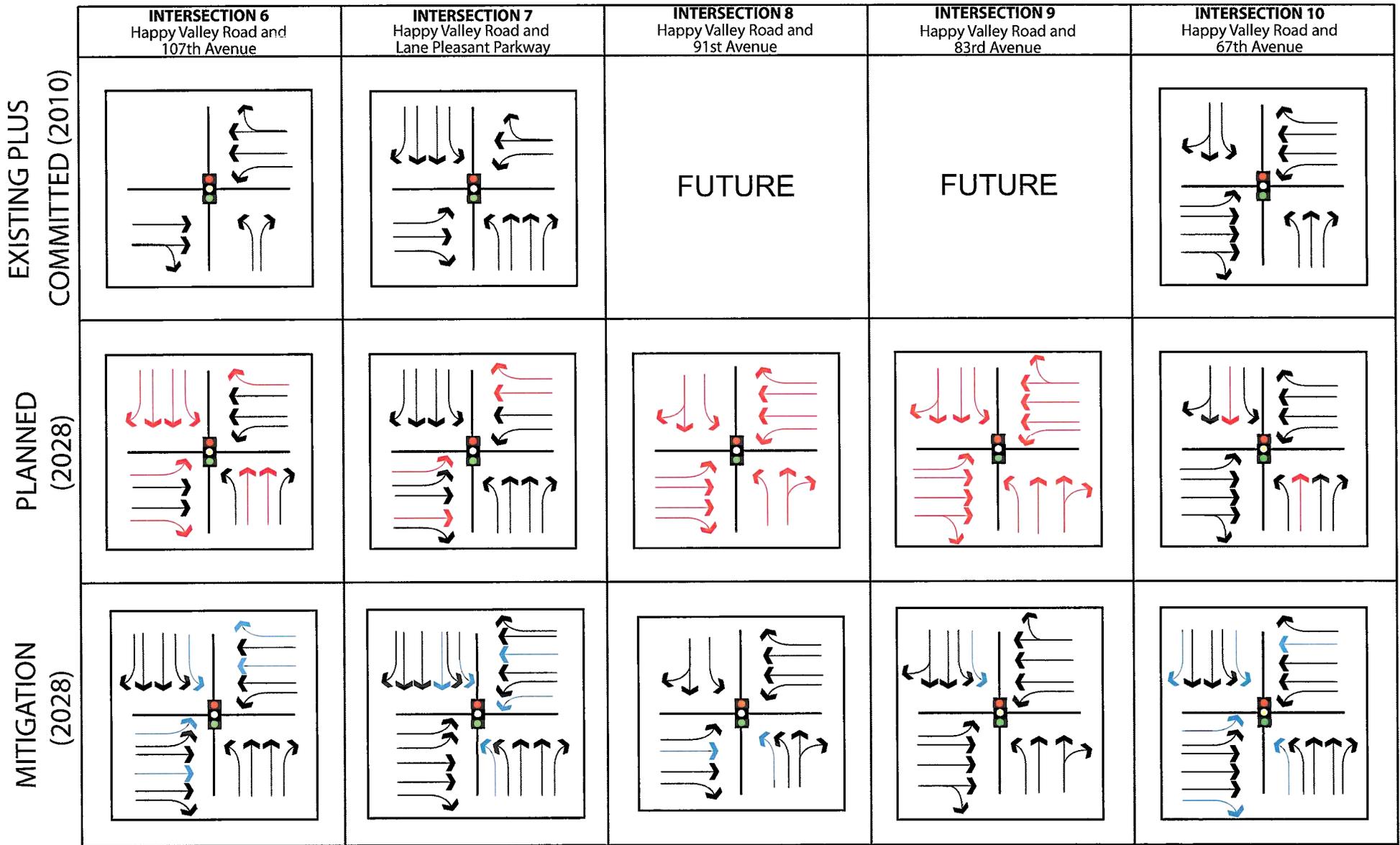
Appendix C provides detailed SYNCHRO software output for the 59 key Study Area intersections, based on the proposed mitigation improvements.

	INTERSECTION 1 Carefree Highway and Lake Pleasant Parkway	INTERSECTION 2 Westwing Parkway and Lake Pleasant Road	INTERSECTION 3 Jomax Road and Lake Pleasant Parkway	INTERSECTION 4 Jomax Road and 83rd Avenue	INTERSECTION 5 Jomax Road and Pyramid Peak Parkway
EXISTING PLUS COMMITTED (2010)					
PLANNED (2028)					
MITIGATION (2028)			NO CHANGE	NO CHANGE	NO CHANGE

Source: Wilson & Company, October, 2007


 = Existing
  = Committed/Planned Improvements
  = Mitigating Improvements

No Scale



Source: Wilson & Company, October, 2007



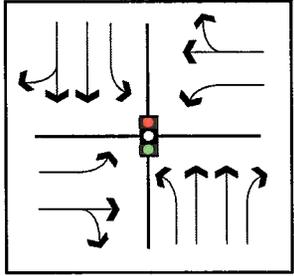
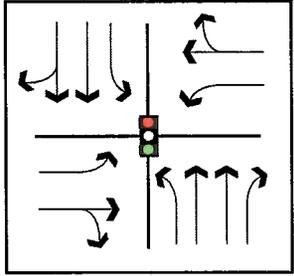
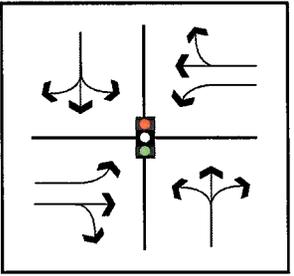
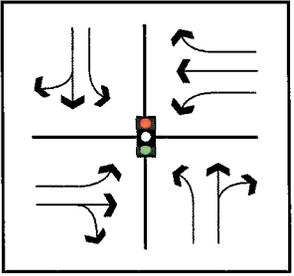
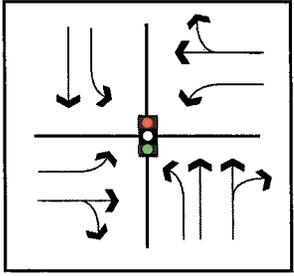
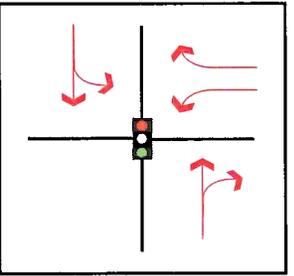
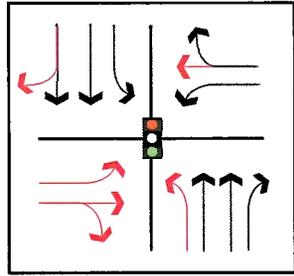
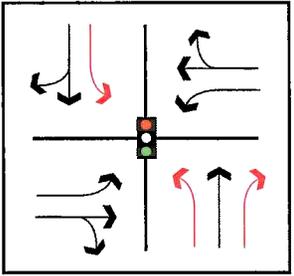
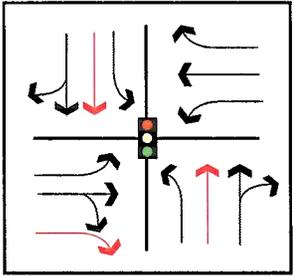
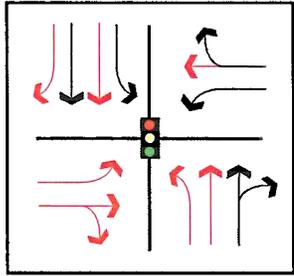
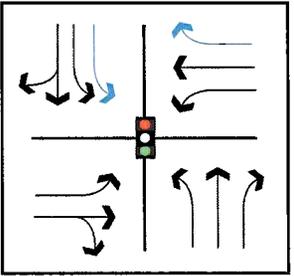
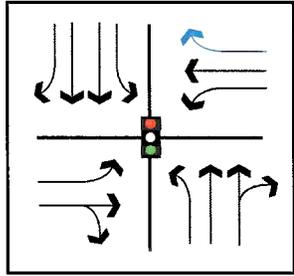
No Scale

→ = Existing

→ = Committed/Planned Improvements

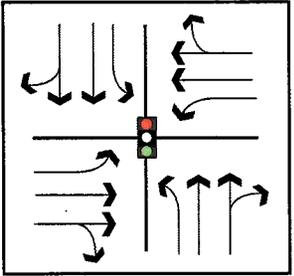
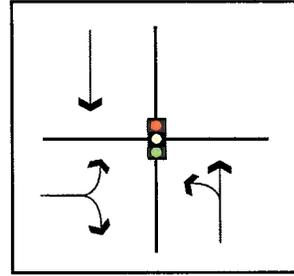
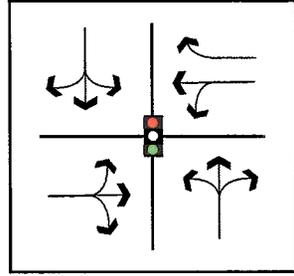
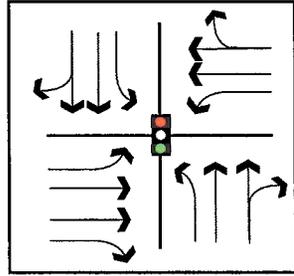
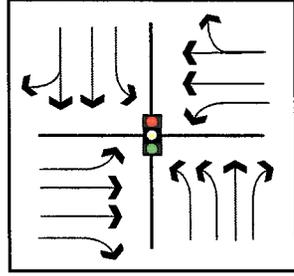
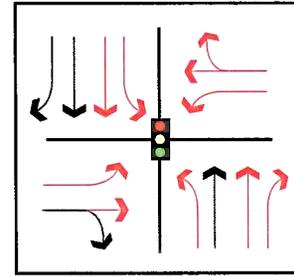
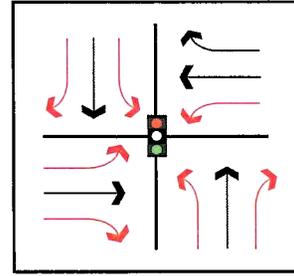
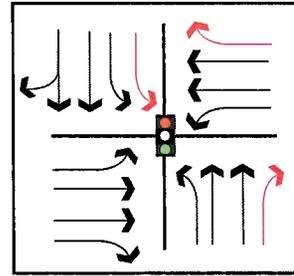
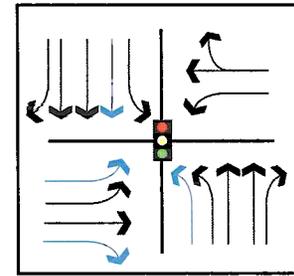
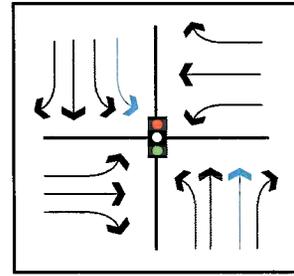
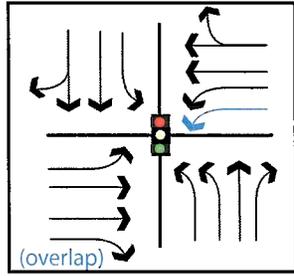
→ = Mitigating Improvements

Figure 5-1 (Cont'd)

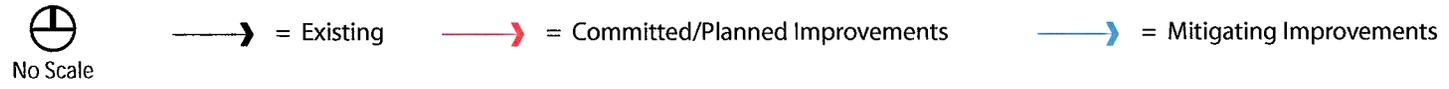
	INTERSECTION 11 Pinnacle Peak Road and 107th Avenue	INTERSECTION 12 Pinnacle Peak Road and Lake Pleasant Road	INTERSECTION 13 Pinnacle Peak Road and 91st Avenue	INTERSECTION 14 Pinnacle Peak Road and 83rd Avenue	INTERSECTION 15 Pinnacle Peak Road and 67th Avenue
EXISTING PLUS COMMITTED (2010)	FUTURE 				
PLANNED (2028)					
MITIGATION (2028)	NO CHANGE	NO CHANGE		NO CHANGE	

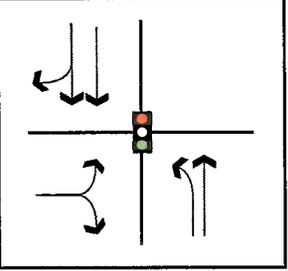
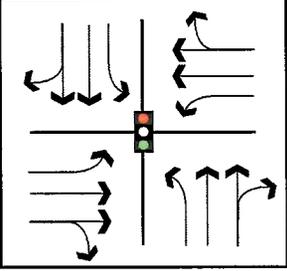
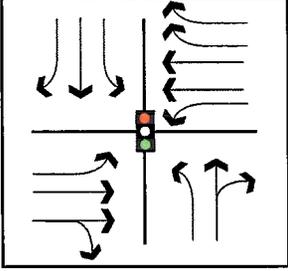
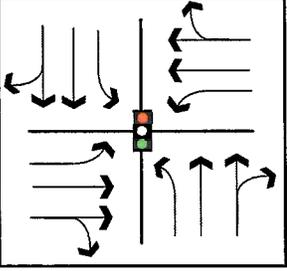
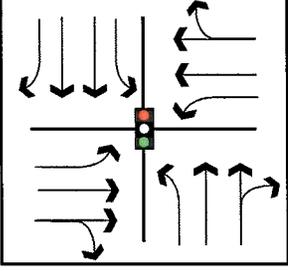
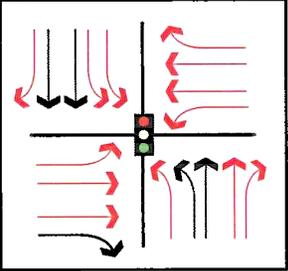
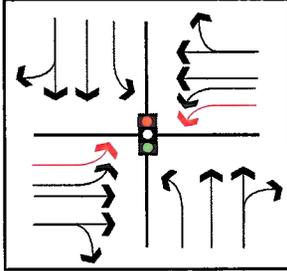
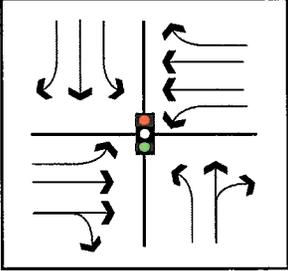
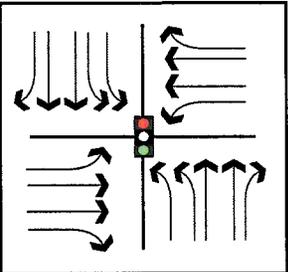
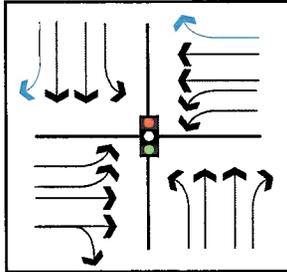
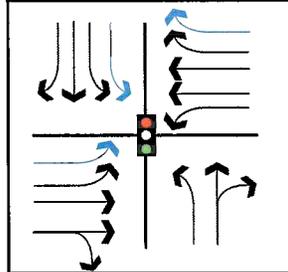
Source: Wilson & Company, October, 2007

 No Scale
  = Existing
  = Committed/Planned Improvements
  = Mitigating Improvements

	INTERSECTION 16 Deer Valley Road and 107th Avenue	INTERSECTION 17 Deer Valley Road and Lake Pleasant Parkway	INTERSECTION 18 Deer Valley Road and 91st Avenue	INTERSECTION 19 Deer Valley Road and 83rd Avenue	INTERSECTION 20 Deer Valley Road and 75th Avenue
EXISTING PLUS COMMITTED (2010)					
PLANNED (2028)	NO CHANGE				NO CHANGE
MITIGATION (2028)	NO CHANGE			NO CHANGE	

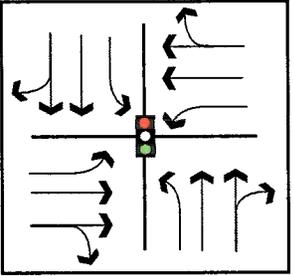
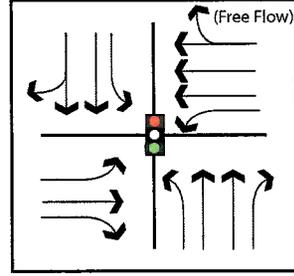
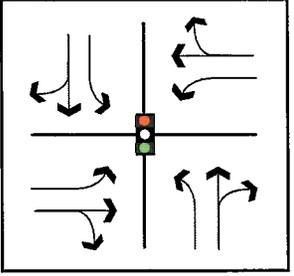
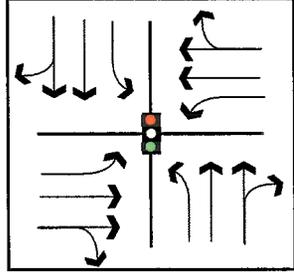
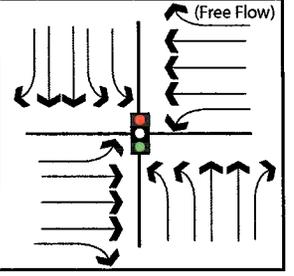
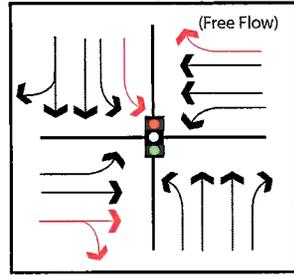
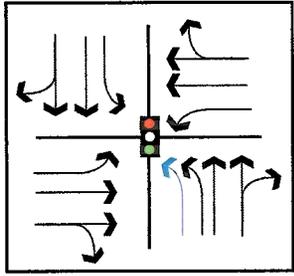
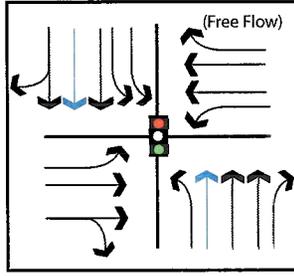
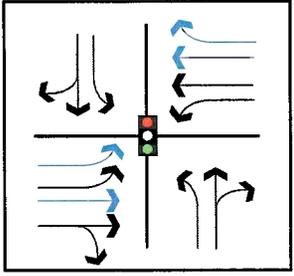
Source: Wilson & Company, October, 2007



	INTERSECTION 21 Lake Pleasant Parkway and Lake Pleasant Road	INTERSECTION 22 Lake Pleasant Parkway and 91st Avenue	INTERSECTION 23 Happy Valley Road and Lake Pleasant Parkway	INTERSECTION 24 Beardsley Road and 107th Avenue	INTERSECTION 25 Beardsley Road and Lake Pleasant Road
EXISTING PLUS COMMITTED (2010)					
PLANNED (2028)				NO CHANGE	NO CHANGE
MITIGATION (2028)				NO CHANGE	NO CHANGE

Source: Wilson & Company, October, 2007.

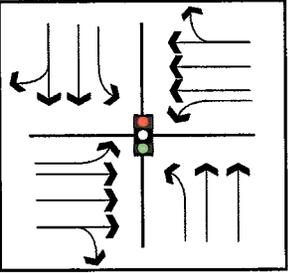
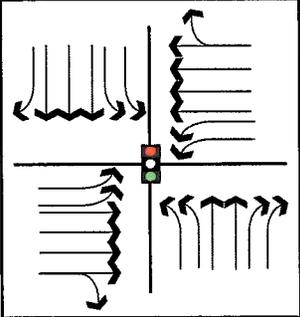
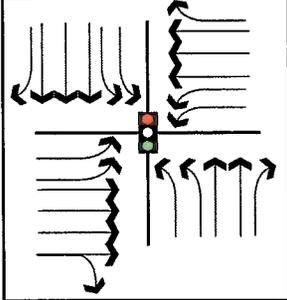
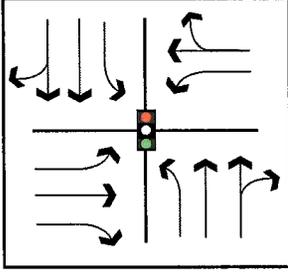
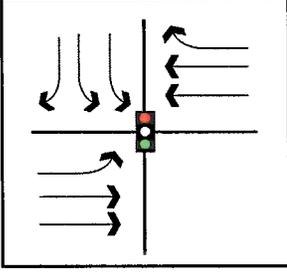
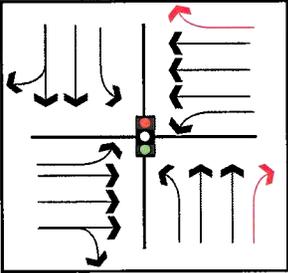
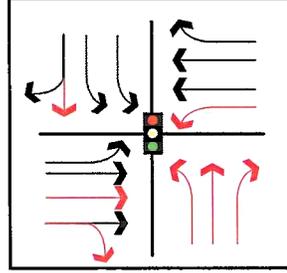
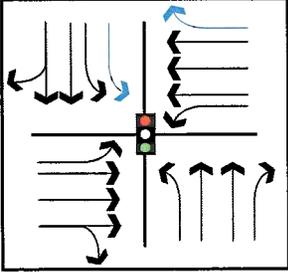
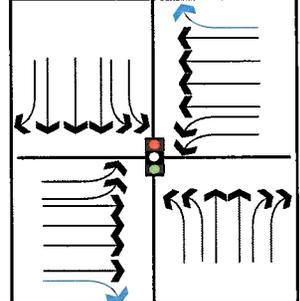
 No Scale
  = Existing
  = Committed/Planned Improvements
  = Mitigating Improvements

	INTERSECTION 26 Beardsley Road and 91st Avenue	INTERSECTION 27 Beardsley Road and 83rd Avenue	INTERSECTION 28 Union Hills Drive and 107th Avenue	INTERSECTION 29 Union Hills Drive and 91st Avenue	INTERSECTION 30 Union Hills Drive and 83rd Avenue
EXISTING PLUS COMMITTED (2010)					
PLANNED (2028)	NO CHANGE		NO CHANGE	NO CHANGE	NO CHANGE
MITIGATION (2028)				NO CHANGE	NO CHANGE

Source: Wilson & Company, October, 2007.

 No Scale
  = Existing
  = Committed/Planned Improvements
  = Mitigating Improvements

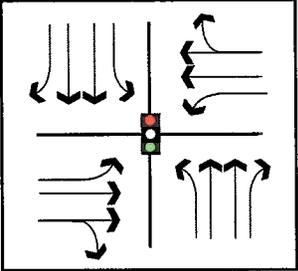
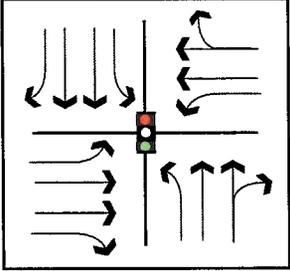
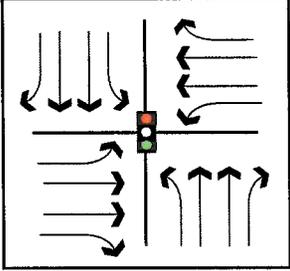
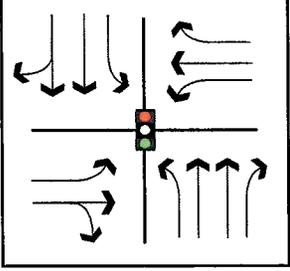
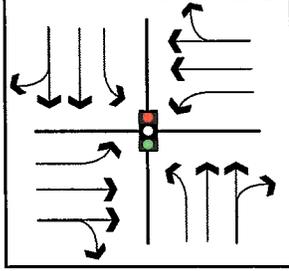
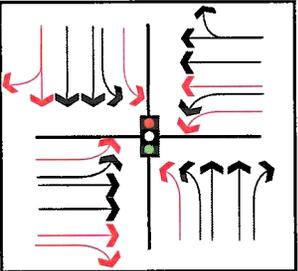
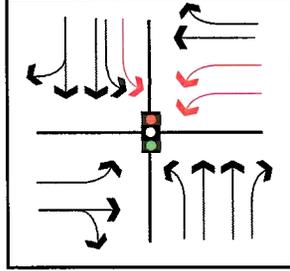
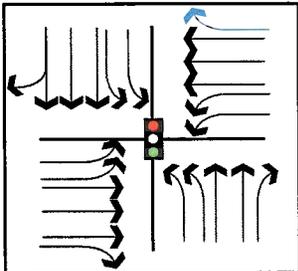
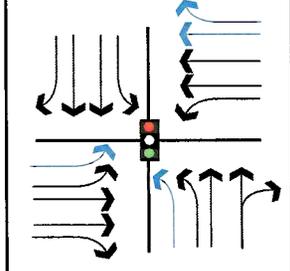
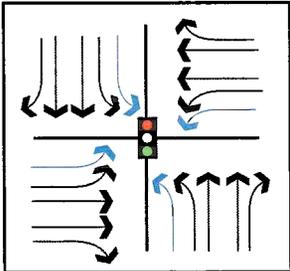
Figure 5-1 (Cont'd)

	INTERSECTION 31 Bell Road and 91st Avenue	INTERSECTION 32 Bell Road and 83rd Avenue	INTERSECTION 33 Bell Road and 75th Avenue	INTERSECTION 34 Greenway Road and 75th Avenue	INTERSECTION 35 Thunderbird Road and 91st Avenue
EXISTING PLUS COMMITTED (2010)					
PLANNED (2028)		NO CHANGE	NO CHANGE	NO CHANGE	
MITIGATION (2028)			NO CHANGE	NO CHANGE	NO CHANGE

Source: Wilson & Company, October, 2007.

 No Scale
  = Existing
  = Committed/Planned Improvements
  = Mitigating Improvements

Figure 5-1 (Cont'd)

	INTERSECTION 36 Thunderbird Road and 83rd Avenue	INTERSECTION 37 Thunderbird Road and 75th Avenue	INTERSECTION 38 Thunderbird Road and 67th Avenue	INTERSECTION 39 Cactus Road and 91st Avenue	INTERSECTION 40 Cactus Road and 83rd Avenue
EXISTING PLUS COMMITTED (2010)					
PLANNED (2028)		NO CHANGE	NO CHANGE		NO CHANGE
MITIGATION (2028)				NO CHANGE	NO CHANGE

Source: Wilson & Company, October, 2007.



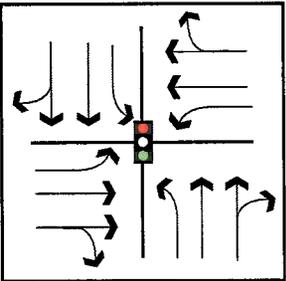
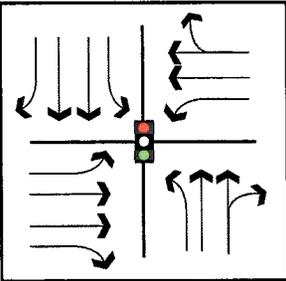
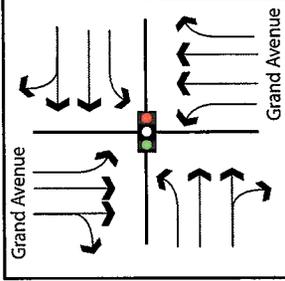
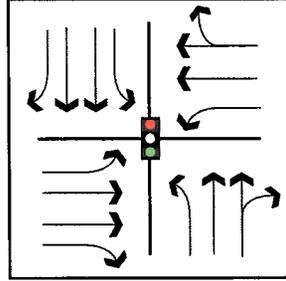
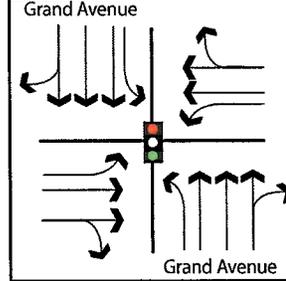
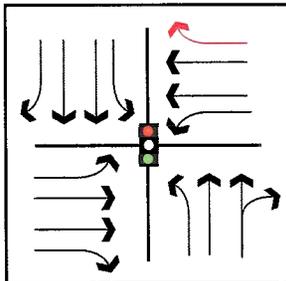
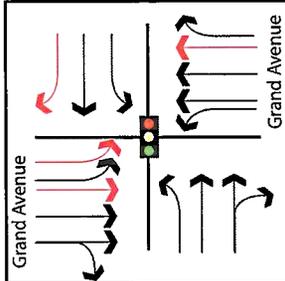
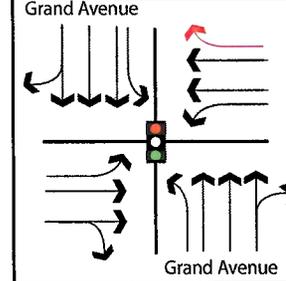
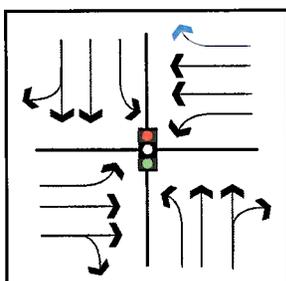
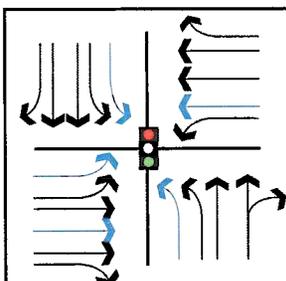
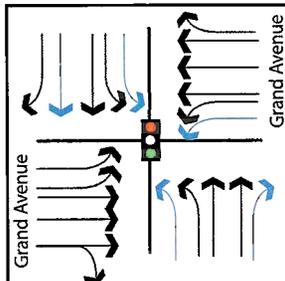
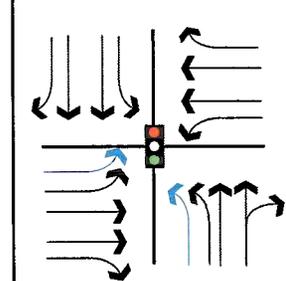
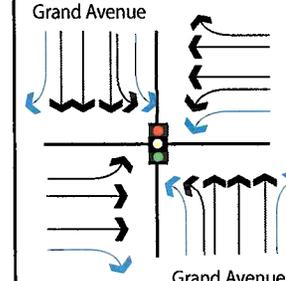
No Scale

→ = Existing

→ = Committed/Planned Improvements

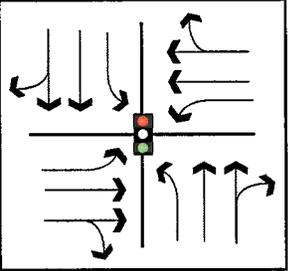
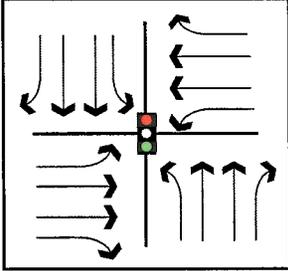
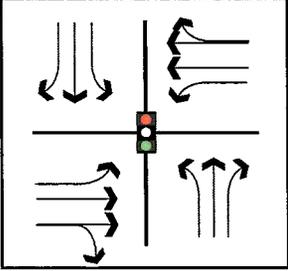
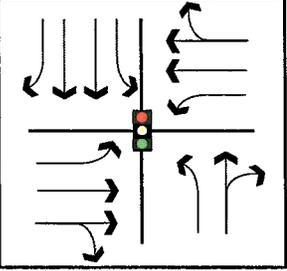
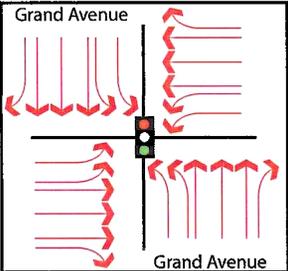
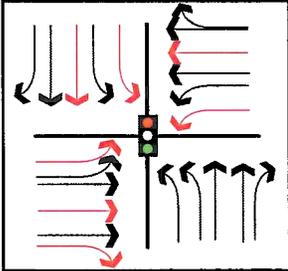
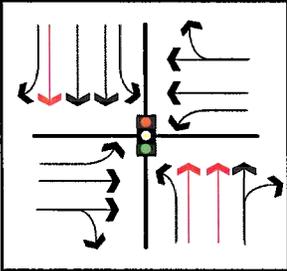
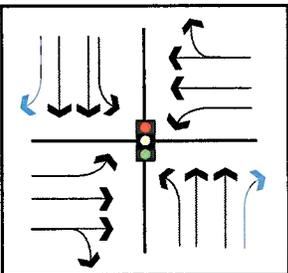
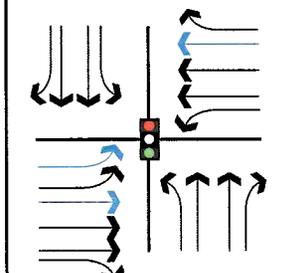
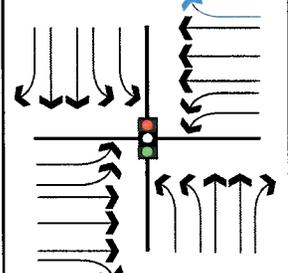
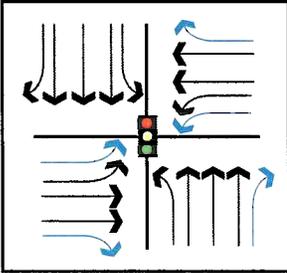
→ = Mitigating Improvements

Figure 5-1 (Cont'd)

	INTERSECTION 41 Cactus Road and 75th Avenue	INTERSECTION 42 Cactus Road and 67th Avenue	INTERSECTION 43 Grand Avenue and 91st Avenue	INTERSECTION 44 Peoria Avenue and 91st Avenue	INTERSECTION 45 Peoria Avenue and Grand Avenue
EXISTING PLUS COMMITTED (2010)					
PLANNED (2028)	NO CHANGE			NO CHANGE	
MITIGATION (2028)					

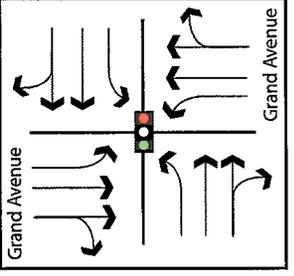
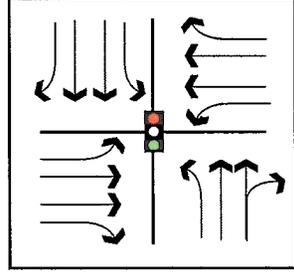
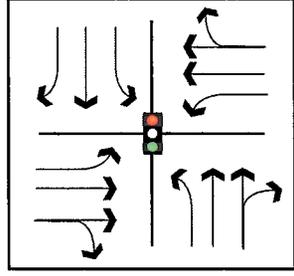
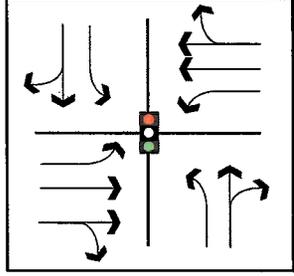
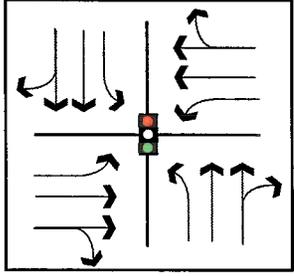
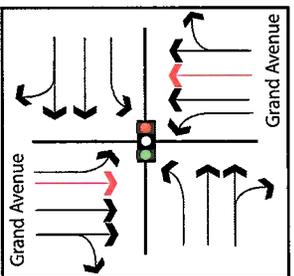
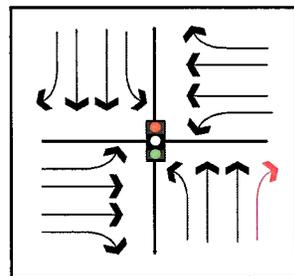
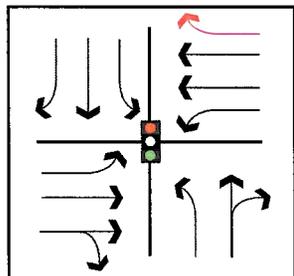
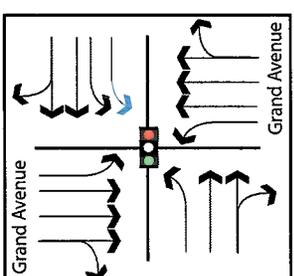
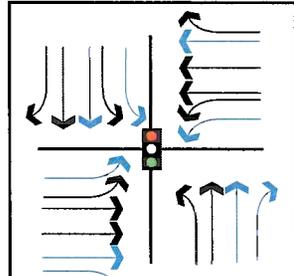
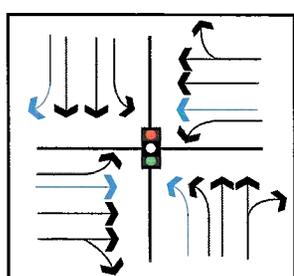
Source: Wilson & Company, October, 2007.

⊕ No Scale
 → = Existing → = Committed/Planned Improvements → = Mitigating Improvements

	INTERSECTION 46 Peoria Avenue and 75th Avenue	INTERSECTION 47 Peoria Avenue and 67th Avenue	INTERSECTION 48 Grand Avenue and Cotton Crossing	INTERSECTION 49 Olive Avenue and 91st Avenue	INTERSECTION 50 Olive Avenue and 83rd Avenue
EXISTING PLUS COMMITTED (2010)			FUTURE		
PLANNED (2028)	NO CHANGE	NO CHANGE			
MITIGATION (2028)			NO CHANGE		

Source: Wilson & Company, October, 2007

 No Scale
  = Existing
  = Committed/Planned Improvements
  = Mitigating Improvements

	INTERSECTION 51 Grande Avenue and 75th Avenue	INTERSECTION 52 Olive Avenue and 67th Avenue	INTERSECTION 53 Northern Avenue and 107th Avenue	INTERSECTION 54 Northern Avenue and 99th Avenue	INTERSECTION 55 Northern Avenue and 91st Avenue
EXISTING PLUS COMMITTED (2010)					
PLANNED (2028)			NO CHANGE		NO CHANGE
MITIGATION (2028)		NO CHANGE	NO CHANGE		

Source: Wilson & Company, October, 2007

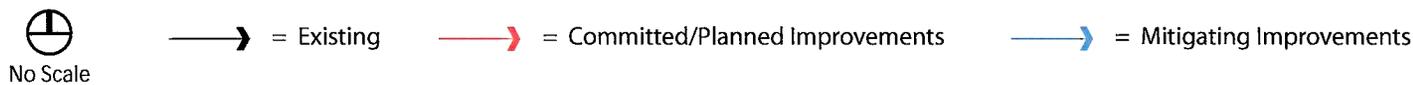
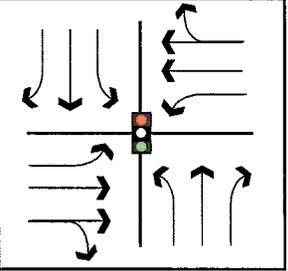
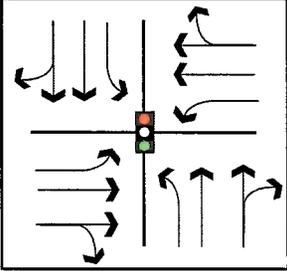
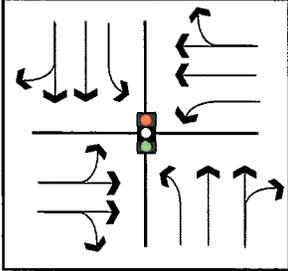
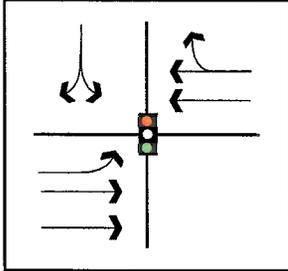
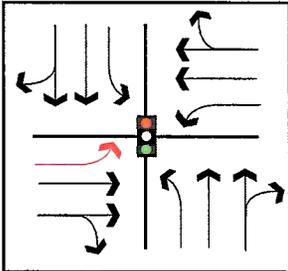
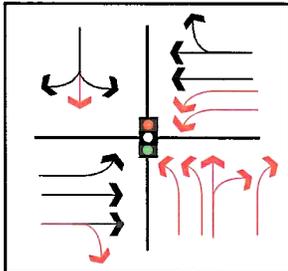
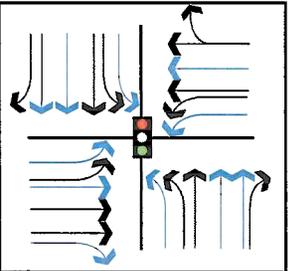
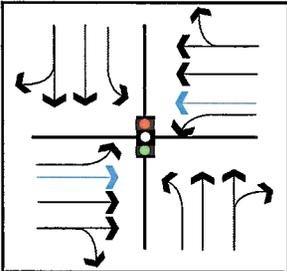
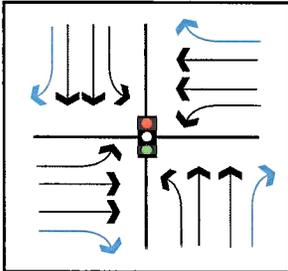
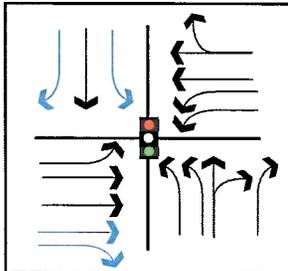
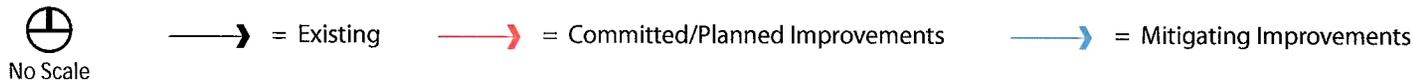


Figure 5-1 (Cont'd)
Existing Plus Committed (2010) and Planned Year 2028 Intersection Lane Configurations
with Mitigating Improvements

	INTERSECTION 56 Northern Avenue and 83rd Avenue	INTERSECTION 57 Northern Avenue and 75th Avenue	INTERSECTION 58 Union Hills Road and 99th Avenue	INTERSECTION 59 Peoria Avenue and Cotton Crossing	
EXISTING PLUS COMMITTED (2010)					
PLANNED (2028)	NO CHANGE	NO CHANGE			
MITIGATION (2028)					

Source: Wilson & Company, October, 2007



**TABLE 5-1
YEAR 2028 AM & PM PEAK HOUR INTERSECTION PERFORMANCE COMPARISON:
BASE 2010 CONDITIONS V. MITIGATED CONDITIONS**

2007 CIP Prioritization Update Intersection ID	2006 Traffic Database Intersection ID	East-West Facility	North-South Facility	Year 2028 Base Conditions ⁽²⁾				Year 2028 Mitigated Conditions ⁽²⁾			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS
1	--	Carefree Hwy	Lake Pleasant Rd	71.00	E	67.40	E	52.50	D	54.00	D
2	--	Westwing Pkwy	Lake Pleasant Rd	113.30	F	103.40	F	52.00	D	50.00	D
3	--	Jomax Rd	Lake Pleasant Rd	24.70	C	35.80	D	25.40	C	35.80	D
4	--	Westwing Pkwy	Jomax Rd	31.10	C	27.30	C	40.20	D	35.40	D
5	--	Jomax Rd	Pyramid Peak Rd	48.70	D	47.90	D	44.10	D	48.60	D
6	--	Happy Valley Rd	107th Ave	106.20	F	136.90	F	44.00	D	49.40	D
7	76	Happy Valley Rd	Lake Pleasant Rd	91.30	F	144.10	F	44.90	D	52.80	D
8	--	Happy Valley Rd	91st Ave	62.90	E	132.50	F	30.50	C	40.30	D
9	--	Happy Valley Rd	83rd Ave	60.10	E	61.80	E	51.20	D	52.00	D
10	--	Happy Valley Rd	67th Ave	86.60	F	144.60	F	49.00	D	50.50	D
11	--	Pinnacle Peak Rd	107th Ave	8.70	A	12.00	B	7.10	A	5.10	A
12	77	Pinnacle Peak Rd	Lake Pleasant Rd	21.60	C	23.80	C	34.70	C	28.30	C
13	--	Pinnacle Peak Rd	91st Ave	71.70	E	110.30	F	39.90	D	46.50	D
14	--	Pinnacle Peak Rd	83rd Ave	41.80	D	37.80	D	47.00	D	38.40	D
15	--	Pinnacle Peak Rd	67th Ave	51.70	D	58.40	E	41.90	D	30.90	C
16	--	Deer Valley Rd	107th Ave	41.10	D	48.70	D	39.50	D	51.40	D
17	--	Deer Valley Rd	Lake Pleasant Rd	246.30	F	182.90	F	53.30	D	53.20	D
18	--	Deer Valley Rd	91st Ave	124.90	F	119.80	F	37.90	D	36.90	D
19	22	Deer Valley Rd	83rd Ave	51.70	D	42.80	D	53.20	D	52.10	D
20	--	Deer Valley Rd	67th Ave	77.50	E	59.00	E	33.30	C	35.90	D
21	--	Rose Garden Ln	Lake Pleasant Rd	51.40	D	33.50	C	53.80	D	44.60	D
22	57	Lake Pleasant Pkwy	91st Ave	101.40	F	120.90	F	51.20	D	54.10	D
23	55	Lake Pleasant Pkwy	83rd Ave	95.70	F	201.10	F	51.90	D	52.20	D
24	70	Beardsley Rd	107th Ave	19.40	B	17.00	B	20.10	C	16.40	B
25	65	Beardsley Rd	Lake Pleasant Rd	41.50	D	24.00	C	44.00	D	33.70	C
26	38	Beardsley Rd	91st Ave	32.10	C	89.70	F	38.20	D	52.40	D
27	54	Beardsley Rd	83rd Ave	116.40	F	101.20	F	51.80	D	43.30	D
28	--	Union Hills Rd	107th Ave	111.50	F	207.90	F	37.60	D	36.10	D
29	43	Union Hills Rd	91st Ave	27.00	C	37.50	D	25.00	C	41.80	D
30	31	Union Hills Rd	83rd Ave	28.10	C	50.10	D	26.80	C	48.70	D
31	39	Bell Rd	91st Ave	47.70	D	71.80	E	29.80	C	44.00	D
32	--	Bell Rd	83rd Ave	82.20	F	88.90	F	52.00	D	53.50	D
33	--	Bell Rd	75th Ave	42.50	D	40.10	D	42.70	D	39.40	D
34	8	Greenway Rd	75th Ave	13.90	B	26.30	C	13.30	B	24.60	C
35	42	Thunderbird Rd	91st Ave	40.50	D	59.90	E	42.80	D	39.60	D
36	30	Thunderbird Rd	83rd Ave	31.60	C	62.80	E	35.00	C	42.90	D
37	14	Thunderbird Rd	75th Ave	72.90	E	170.40	F	52.00	D	54.40	D
38	--	Thunderbird Rd	67th Ave	73.20	E	70.20	E	49.80	D	53.70	D
39	62	Cactus Rd	91st Ave	32.00	C	67.50	E	30.50	C	40.40	D
40	20	Cactus Rd	83rd Ave	37.80	D	93.10	F	32.30	C	36.30	D
41	6	Cactus Rd	75th Ave	48.60	D	72.30	E	47.80	D	50.90	D
42	--	Cactus Rd	67th Ave	105.30	F	119.30	F	52.20	D	52.70	D
43	--	Grand Ave	91st Ave	156.30	F	150.40	F	68.70	E	81.00	F
44	41	Peoria Ave	91st Ave	88.50	F	103.70	F	44.90	D	54.40	D
45	--	Peoria Ave	Grand Ave	204.80	F	175.80	F	54.50	D	44.10	D
46	12	Peoria Ave	75th Ave	134.70	F	74.90	E	53.10	D	48.70	D
47	--	Peoria Ave	67th Ave	100.10	F	97.30	F	53.50	D	54.70	D
48	--	Grand Ave	Cotton Crossing	52.70	D	52.00	D	51.40	D	53.30	D
49	40	Olive Ave	91st Ave	45.80	D	63.70	E	49.60	D	54.40	D
50	24	Olive Ave	83rd Ave	127.80	F	116.70	F	53.50	D	51.10	D
51	--	Grand Ave	75th Ave	68.50	E	67.30	E	43.10	D	49.80	D
52	--	Olive Ave	67th Ave	52.30	D	50.40	D	54.10	D	52.20	D
53	79	Northern Ave	107th Ave	32.30	C	17.80	B	32.90	C	17.80	B
54	--	Northern Ave	99th Ave	373.00	F	328.30	F	92.70	F	91.50	F
55	50	Northern Ave	91st Ave	157.30	F	131.10	F	37.80	D	39.30	D
56	49	Northern Ave	83rd Ave	398.10	F	369.70	F	51.30	D	52.60	D
57	10	Northern Ave	75th Ave	148.00	F	86.80	E	54.80	D	46.90	D
58	--	Union Hills Rd	99th Ave	110.60	F	79.20	E	53.30	D	53.00	D
59	18	Peoria Ave	Cotton Crossing	74.80	E	186.00	F	52.90	D	42.10	D

Prepared by: Wilson & Company, dated: March 10, 2008.

Notes

- Year 2006 intersection performance data from "City of Peoria 2006 Circulation System Assessment", dated: June, 2007.
- Year 2028 intersection performance data calculated by Wilson & Company as part of the "City of Peoria Year 2007 CIP Prioritization Update", dated: November, 2007. Future peak hour intersection turning movement volume estimates developed by Wilson & Company based on daily volume projections from the Maricopa Association of Governments Year 2028 Regional Travel Demand Model Forecast, dated: August 27, 2007.
- The following traffic signals control parameters were utilized as input guidelines for Year 2028 intersection capacity analyses:
 - * All capacity analyses conducted in "Synchro 6, Traffic Signal Coordination Software".
 - * Traffic signal phasing and cycle lengths fully optimized utilizing Synchro software program.
 - * Cycle Length range limited to 75 - 120 Seconds.
 - * "Protected/Permissive" left turn phasing for all Intersections with single left turn lanes.
 - * "Protected" phase for left turns for intersections with higher left turn volumes and dual left turn lanes.
 - * All signals are assumed to be "Actuated Uncoordinated".
- Shading indicates intersection level of service E or F conditions for either the AM or PM peak hour time frame.
- "N/A" represents intersections that do not have any available traffic data or intersections that do not exist under existing conditions.



6.0 SUMMARY OF FINDINGS AND RECOMMENDATIONS

As described in Section 4.0 (Tables 4-1 and 4-2), a significant increase in daily segment volumes is anticipated by Year 2028 as a result of planned growth and development in Peoria and the greater Northwest Valley. The analysis indicates that approximately 50 percent of all analyzed segments will experience over-capacity conditions in Year 2028 if no additional roadway widening projects are implemented beyond those included in the current CIP through Year 2010. Section 4.0 also presented the results of the peak hour intersection analysis. The analysis indicates that approximately 70 percent of all analyzed intersections will experience over-capacity conditions in Year 2028. Section 5.0 presents the results of mitigation analysis focused on intersection performance. The mitigating actions described in Section 5.0 would improve operations to acceptable levels (LOS D or better) at all but two intersections. LOS 'E' or 'F' operating conditions would remain at:

- Grand Avenue and 91st Avenue (PM peak hour only)
- Northern Avenue and 99th Avenue (AM & PM peak hours)

Projects on some of the roadway segments that will experience over-capacity conditions in Year 2028 may already be slated for funding under the following two sources:

- Proposition 400 – Extension of Maricopa County's transportation sales tax approved by county-wide vote on November 2, 2004
- City of Peoria CIP – Projects included in the current or future City of Peoria Capital Improvement Program

Table 6-1 provides a summary of the top 40 ranked roadway segments, and ultimate improvement needs for the segments and potential funding sources. This ranking was determined by the daily traffic volume projections from Year 2028 MAG Travel Demand Model and the analysis documented in Section 4.0. In addition to the identification of known sources for segment improvements, Table 6-1 also provides a summary of impacted intersections which are located along each of the top 40 poorly performing roadway segments. For each listed intersection, Table 6-1 identifies the future performance level under "Base Conditions" as well as "Mitigated Conditions". Finally, this table also presents a summary of key performance measures for all remaining study area signalized intersections which were identified as impacted under future year 2028 "Base Conditions". As shown in Table 6-1, all study area intersections with the exception of two locations, will operate at accepted levels (LOS D or better) with the implementation of the mitigation measures recommended in this report.

**TABLE 6-1
IDENTIFICATION OF SOURCES FOR ULTIMATE ROADWAY SEGMENT AND INTERSECTION IMPROVEMENTS BASED ON IMPACTED LOCATIONS**

Segment Based Impacts			Year 2007 No. of Lanes	Ultimate No. of Lanes (1)	Volume	Source of Future Roadway Improvements (New Lanes to be Constructed (2))				Segment Related Impacted Intersection(s)								Summary of Residual Segment/Intersection Impacts & Further Actions						
Facility	From	To				Proposition 400 (3)	City of Peoria CIP (4)	Construction by Others	Not Programmed	2007 CIP Prioritization Update Intersection ID	2006 Traffic Database Intersection ID	Intersection Name	AM Year 2028 Base Condition Delay (Sec)	AM Year 2028 Base Condition LOS	PM Year 2028 Base Condition Delay (Sec)	PM Year 2028 Base Condition LOS	AM Year 2028 Mitigated Condition Delay (Sec)	AM Year 2028 Mitigated Condition LOS	PM Year 2028 Mitigated Condition Delay (Sec)	PM Year 2028 Mitigated Condition LOS	Impacted Segments with Ultimate Number of Lanes (LOS E/F)	2007 CIP Prioritization Update Intersection ID	Remaining Impact Peak Period (LOS E/F)	Additional Recommended Comments/Actions
Impacted Intersections Located Along Impacted Segments																								
East-West Facilities																								
Happy Valley Rd	Happy Ave	107th Ave	4	6	48,049	4 (2020-2026)						6		Happy Valley Rd & 107th Ave	106.20	F	136.90	F	44.00	D	49.40	D		
Happy Valley Rd	107th Ave	Lake Pleasant Pkwy	4	6	58,495	4 (2020-2026)						7	76	Happy Valley Rd & Lake Pleasant Rd	91.30	F	144.10	F	44.90	D	52.80	D		
Happy Valley Rd	Lake Pleasant Pkwy	91st Ave	2	6	55,644	4 (2020-2026)	FY09					8		Happy Valley Rd & 91st Ave	62.90	E	132.80	F	30.50	C	40.30	D		
Happy Valley Rd	91st Ave	83rd Ave	0	6	29,794	4 (2020-2026)	FY09					10		Happy Valley Rd & 67th Ave	86.60	F	144.60	F	49.00	D	50.50	D		
Union Hills	111th Ave	107th Ave	2		20,182							28		Union Hills Rd & 107th Ave	111.8	F	207.9	F	37.6	D	36.1	D		
Thunderbird Rd	95th Ave	91st Ave	4	5	46,611							35	42	Thunderbird Rd & 91st Ave	40.5	D	59.9	E	42.8	D	39.6	D		
Thunderbird Rd	83rd Ave	79th Ave	4		43,050		FY13-FY16					36	30	Thunderbird Rd & 83rd Ave	31.60	C	62.80	E	35.00	C	42.80	D		
Thunderbird Rd	75th Ave	67th Ave	4		39,192		FY19-FY21					37	14	Thunderbird Rd & 75th Ave	72.90	E	170.40	F	52.00	D	54.40	D		
Thunderbird Rd	75th Ave	67th Ave	4		39,192		FY19-FY21					38		Thunderbird Rd & 67th Ave	73.20	E	70.20	E	49.80	D	53.70	D		
Cactus Rd	75th Ave	67th Ave	4		38,557							41	6	Cactus Rd & 75th Ave	48.60	D	72.30	E	47.60	D	50.90	D		
Cactus Rd	75th Ave	67th Ave	4		38,557							42		Cactus Rd & 67th Ave	105.30	F	119.60	F	52.20	D	52.70	D		
Peoria Ave	83rd Ave	83rd Ave Bypass	4		40,000																			
Peoria Ave	83rd Ave Bypass	79th Ave	4		42,557		FY21-FY22					48	12	Peoria Ave & 75th Ave	135.30	F	74.90	E	53.10	D	48.70	D		
Peoria Ave	75th Ave	67th Ave	4		40,293		FY21-FY22					47		Peoria Ave & 67th Ave	100.10	F	97.20	F	53.50	D	54.70	D		
Olive Ave	115th Ave	107th Ave	4		37,859																			
Olive Ave	107th Ave	99th Ave	4		45,250																			
Olive Ave	99th Ave	Loop 101	4		42,968																			
Olive Ave	Loop 101	93rd Ave	4		51,821		FY17-FY18					49	40	Olive Ave & 91st Ave	45.70	D	63.50	E	49.60	D	54.40	D		
Olive Ave	91st Ave	83rd Ave	4		34,787		FY22-FY23					50	24	Olive Ave & 83rd Ave	127.60	F	116.90	F	53.50	D	51.10	D		
Olive Ave	75th Ave	67th Ave	4		39,488		FY22-FY23																	
Northern Ave	107th Ave	99th Ave	4		50,794		FY09-FY17					54		Northern Ave & 99th Ave	373.00	F	328.30	F	92.70	F	91.30	F	54	AM & PM
Northern Ave	Loop 101	91st Ave	4		35,481		FY09-FY17					55	50	Northern Ave & 91st Ave	157.30	F	131.10	F	37.80	D	39.10	D		
Northern Ave	91st Ave	83rd Ave	4		36,049		FY09-FY17					56	49	Northern Ave & 83rd Ave	398.10	F	369.80	F	51.30	D	52.40	D		
Northern Ave	83rd Ave	75th Ave	4		41,038		FY09-FY17					57	10	Northern Ave & 75th Ave	148.20	F	86.70	F	54.80	D	48.80	D		
Northern Ave	75th Ave	71st Ave	4		44,915		FY09-FY17																	
North-South Facilities																								
107th Ave	Beardsley Rd	Union Hills	2		21,387		FY19-FY20																	
99th Ave	Olive Ave	Northern Ave	2		28,526																			
Lake Pleasant Pkwy	Carefree Hwy	Loop 303	2		42,683	2 (2011-2014)						1		Carefree Hwy & Lake Pleasant Pkwy	71.00	E	67.40	E	52.50	D	54.00	D		
Lake Pleasant Pkwy	Happy Valley Rd	Pinnacle Peak Rd	4		42,760	2 (2011-2014)																		
Lake Pleasant Pkwy	Pinnacle Peak Rd	Deer Valley Rd	2	4	45,007	2 (2012-2013)						17		Deer Valley Rd & Lake Pleasant Pkwy	246.30	F	182.90	F	53.30	D	53.20	D		
Lake Pleasant Pkwy	91st Ave	83rd Ave	4		38,727	2 (2012-2013)						22	57	Lake Pleasant Pkwy & 91st Ave	101.40	F	120.90	F	51.20	D	54.10	D		
Lake Pleasant Pkwy	83rd Ave	Beardsley Rd	4		55,396	2 (2012-2013)						23	55	Lake Pleasant Pkwy & 83rd Ave	95.60	F	202.00	F	51.90	D	52.20	D		
91st Ave	Happy Valley Rd	Pinnacle Peak Rd	2		26,815							13		Pinnacle Peak Rd & 91st Ave	71.70	E	110.30	F	39.90	D	46.50	D		
91st Ave	Pinnacle Peak Rd	Deer Valley Rd	2		27,714							18		Deer Valley Rd & 91st Ave	124.90	F	119.60	F	37.90	D	36.90	D		
91st Ave	Cactus Rd	Grand Ave	4		34,992							39	62	Cactus Rd & 91st Ave	32.00	C	67.80	E	30.50	C	40.40	D		
91st Ave	Peoria Ave	Olive Ave	2		20,325		FY19-FY21					43		Grand Ave & 91st Ave	156.30	F	150.60	F	68.70	E	81.00	F	43	AM & PM
91st Ave	Olive Ave	Northern Ave	2		26,345		FY16-FY18					44	41	Peoria Ave & 91st Ave	86.60	F	103.60	F	44.90	D	54.40	D		
83rd Ave	Jomax Rd	Happy Valley Rd	2		33,653		FY09					9		Happy Valley Rd & 83rd Ave	60.10	E	61.80	E	51.20	D	52.00	D		
83rd Ave	Grand Ave	Olive Ave	2		36,905																			
83rd Ave	Olive Ave	Northern Ave	2		31,992																			
67th Ave	Jomax Rd	Happy Valley Rd	4		38,397																			
67th Ave	Happy Valley Rd	Pinnacle Peak Rd	4		35,968		FY11-FY14					15		Pinnacle Peak Rd & 67th Ave	51.70	D	58.40	E	41.90	D	30.90	C		

Prepared by: Wilson & Company, dated: March 28, 2008.

Additional/Isolated Impacted Intersections not Located Along Impacted Segments										
2		Westwing Pkwy & Lake Pleasant Pkwy	113.30	F	103.40	F	52.00	D	50.00	D
20		Deer Valley Rd & 67th Ave	77.50	E	59.00	E	33.30	C	35.90	D
26	38	Beardsley Rd & 91st Ave	31.90	C	89.70	F	38.20	D	52.40	D
27	54	Beardsley Rd & 83rd Ave	116.40	F	101.20	F	51.80	D	43.30	D
31	39	Bell Rd & 91st Ave	49.00	D	71.80	E	29.80	C	44.00	D
32		Bell Rd & 83rd Ave	52.30	F	88.90	F	62.00	D	53.50	D
40		Cactus Rd & 83rd Ave	37.80	D	93.10	F	32.30	C	36.30	D
45	20	Peoria Ave & Grand Ave	204.50	F	175.40	F	54.50	D	44.10	D
51		Grand Ave & 75th Ave	68.60	E	67.30	E	43.10	D	49.80	D
58		Union Hills Rd & 99th Ave	110.80	F	79.10	E	53.30	D	53.00	D
59		Peoria Ave & Cotton Crossing	74.70	E	186.20	F	62.90	D	42.10	D

- Notes:
1. Future Year 2028 Number of Lanes provided by City of Peoria and based on the Street Classification Map, dated: December 16, 2007.
 2. Funding sources for roadway segment and intersection improvements.
 3. Information Source: MAG 2007 Annual Report on the Status of the Implementation of Proposition 400, August 2007.
 4. Information Source: City of Peoria CIP Prioritization Period (FY 2008 - FY 2017).
 5. Red shading indicated roadway segments with highest V/C Ranking (1 thru 20). Yellow shading indicated roadway segments with highest V/C Ranking (21 thru 40).