



**NOTICE OF
PLANNING COMMISSION MEETING
Thursday, February 27, 2014 7:00 p.m.
Community Recreation Center, 10640 N Clubhouse Drive**

Notice is hereby given that the Planning Commission of the City of Cedar Hills, Utah, will hold a regular **Planning Commission Meeting on Thursday, February 27, 2014 beginning at 7:00 p.m.** at the Community Recreation Center, 10640 N Clubhouse Drive, Cedar Hills, Utah. This is a public meeting and anyone is invited to attend.

PLANNING COMMISSION MEETING

1. Call to Order
2. Public Comment: Time has been set aside for the public to express their ideas, concerns, and comments (comments limited to 3 minutes per person with a total of 30 minutes for this item)

PUBLIC HEARING

3. Preliminary Plan for Cedar Hills Towne Center by Blu Line Designs, located at 4600 West Cedar Hills Drive (Rosegate)

SCHEDULED ITEMS

4. Approval of Minutes from the January 23, 2014 Planning Commission meeting
5. Review/Recommendation on Preliminary Plan for Cedar Hills Towne Center by Blu Line Designs, located at 4600 West Cedar Hills Drive (Rosegate)
6. Discussion on City Code Section 10-5-18, Fences
7. Discussion on the Development of the SC-1 Commercial Zone
8. Committee Assignments and Reports

ADJOURNMENT

9. Adjourn

Posted this 21st day of February, 2014

/s/ Colleen A. Mulvey, City Recorder

- Supporting documentation for this agenda is posted on the City's Website at www.cedarhills.org.
- In accordance with the Americans with Disabilities Act, the City of Cedar Hills will make reasonable accommodations to participate in the meeting. Requests for assistance can be made by contacting the City Recorder at 801-785-9668 at least 48 hours in advance of the meeting to be held.
- The order of agenda items may change to accommodate the needs of the Planning Commission, the staff, and the public.
- This meeting may be held electronically via telephone to permit one or more of the commission members to participate.



PUBLIC MEETING AND PUBLIC HEARING ETIQUETTE

Please remember all public meetings and public hearings are recorded

- All comments **must** be recognized by the Chairperson and addressed through the microphone.
- When speaking to the Council / Planning Commission, please stand, speak slowly and clearly into the microphone, and state your name and address for the recorded record.
- Be respectful to others and refrain from disruptions during the meeting. Please refrain from conversation with others in the audience as the microphones are very sensitive and can pick up whispers in the back of the room.
- Keep comments constructive and not disruptive.
- Avoid verbal approval or dissatisfaction of the ongoing discussion (i.e., booing or applauding).
- Exhibits (photos, petitions, etc.) given to the City become the property of the City.
- Please silence all cellular phones, beepers, pagers or other noise making devices.
- Be considerate of others who wish to speak by limiting your comments to a reasonable length, and avoiding repetition of what has already been said. Individuals may be limited to three minutes and group representatives may be limited to five minutes.
- Refrain from congregating near the doors or in the area outside the council room to talk as it can be very noisy and disruptive. If you must carry on conversation in this area, please be as quiet as possible. (The doors must remain open during a public meeting/hearing.)

Public Hearing v. Public Meeting:

If the meeting is a **public hearing**, the public may participate during that time and may present opinions and evidence for the issue for which the hearing is being held. In a public hearing there may be some restrictions on participation such as time limits.

Anyone can observe a **public meeting**, but there is no right to speak or be heard there - the public participates in presenting opinions and evidence at the pleasure of the body conducting the meeting.



CITY OF CEDAR HILLS

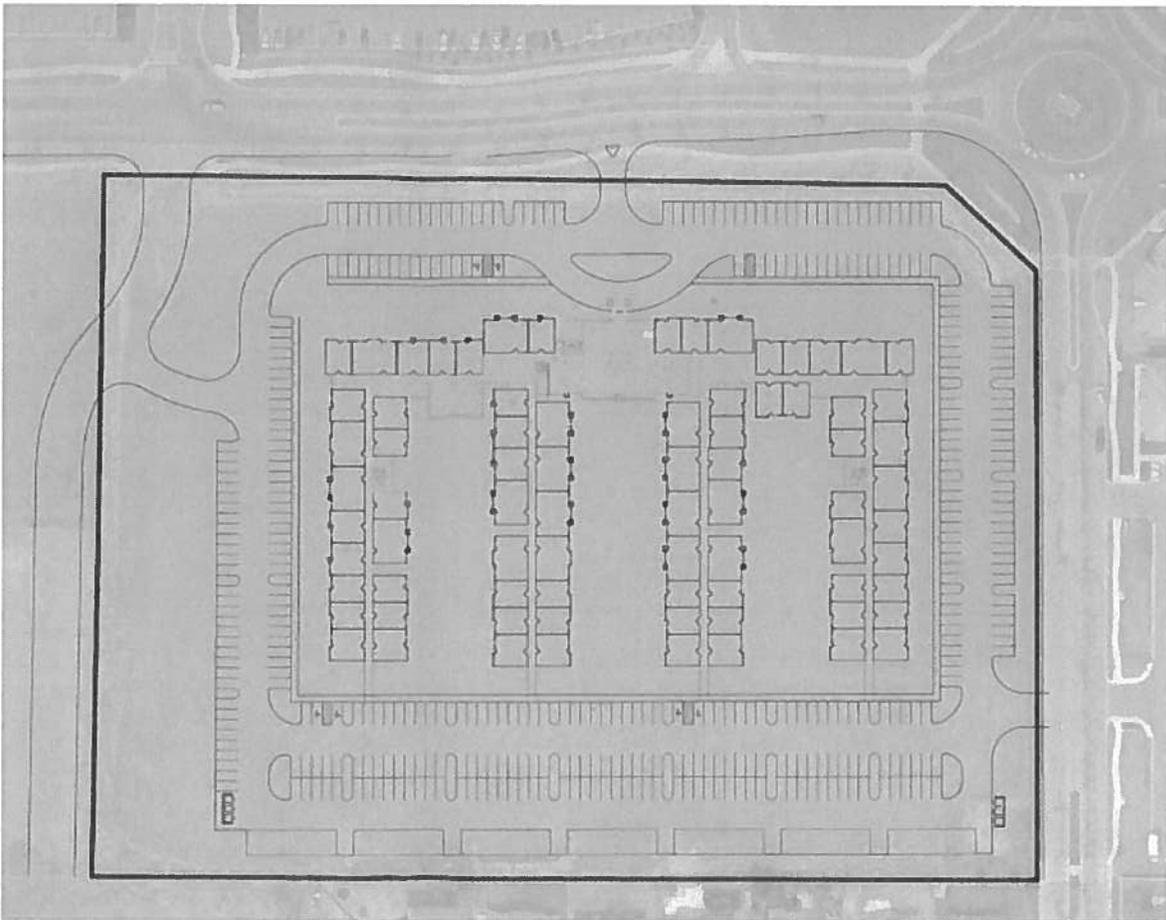
TO:	Planning Commission
FROM:	Chandler Goodwin, Assistant City Manager
DATE:	2/27/2014

Planning Commission Agenda Item

SUBJECT:	Review/Recommendation on Preliminary Plan for Blu Line Design
APPLICANT PRESENTATION:	Cory Shupe, and Doug Young
STAFF PRESENTATION:	Chandler Goodwin, Assistant City Manager
BACKGROUND AND FINDINGS: Blu Line Design and Doug Young have provided a preliminary plat for the property located at 4600 W and Cedar Hills Dr. Elements provided include grading, storm drain, utilities, landscaping, lighting, traffic and parking studies. Evidence of water conveyance will be provided. An application has been officially submitted to the City for preliminary approval. A Noise study will be provided when the scale of the building has been determined.	
PREVIOUS LEGISLATIVE ACTION: Approval of the concept plan on 1/23/2014	
FISCAL IMPACT: N/A	
SUPPORTING DOCUMENTS: Rosegate at Cedar Hills plat, Traffic Impact Study, Application	
RECOMMENDATION: Staff recommends that Planning Commission recommend/not recommend the proposed preliminary plan for 4600 W Cedar Hills Drive to the City Council for consideration.	
MOTION: Recommend/Not recommend the preliminary plan for the Cedar Hills Towne Center by Blu Line Designs, located at 4600 W Cedar Hills Dr. for approval to the City Council.	

Senior Living Facility

Traffic Impact Study



Cedar Hills, Utah
January 2014

UT14-558

EXECUTIVE SUMMARY

This study addresses the traffic impacts associated with the proposed Senior Living Facility development in Cedar Hills, Utah. The proposed development is located on the southwest corner of the 4600 West / Cedar Hills Drive intersection. Figure 1 shows a vicinity map of the proposed development.

Included within the analyses for this study are the traffic operations and recommended mitigation measures for existing conditions and plus project conditions (conditions after development of the proposed project) at key intersections and roadways in the vicinity of the site.

TRAFFIC ANALYSIS

The following is an outline of the traffic analysis performed by Hales Engineering for the traffic conditions of this project.

Existing (2014) Background Conditions Analysis

Hales Engineering has performed numerous traffic counts in the area for previous traffic impact studies. The previous traffic count data showed that at the Cedar Hills Drive / 4800 West intersection, traffic during the a.m. peak hour is approximately 13% higher than during the p.m. peak hour, due to the close proximity of Lone Peak High School. In order to analyze the worst case conditions, this study analyzed the a.m. peak hour in each scenario. Therefore, Hales Engineering performed weekday morning (7:00 – 9:00 a.m.) peak period traffic counts at the following intersections:

- Cedar Hills Drive / 4800 West
- 4700 West (Walmart Full Access) / Cedar Hills Drive
- 4600 West / Cedar Hills Drive
- Existing Access / 4600 West

These counts were performed on Thursday, January 23, 2014. The a.m. peak hour was determined to be between the hours of 7:15 and 8:15 a.m. Detailed count data are included in Appendix A.

As shown in Table ES-1, all study intersections are currently operating at acceptable levels of service during the a.m. peak hour. No significant queuing is anticipated.

Project Conditions Analysis

The proposed land use for the development has been identified as follows:

- Senior Adult Housing - Attached: 328 units
- Office: ~2,500 sq. ft.
- Retail: ~2,500 sq. ft.

The total trip generation for the development is as follows:

- Daily Trips: 1,263
- a.m. Peak Hour Trips: 72
- p.m. Peak Hour Trips: 93

Existing (2014) Plus Project Conditions Analysis

As shown in Table ES-1, all study intersections are anticipated to continue to operate at acceptable levels of service during the a.m. peak hour. No significant queuing is anticipated.

TABLE ES-1 A.M. Peak Hour Cedar Hills - Senior Living Facility TIS		
Intersection	Existing 2014 Background	Existing 2014 Plus Project
Description	LOS (Sec/Veh ¹)	LOS (Sec/Veh ¹)
Cedar Hills Drive / 4800 West	B (14.1)	B (14.4)
Walmart Access & North Access / Cedar Hills Drive	SB / B (11.4)	NB / B (13.2)
4600 West / Cedar Hills Drive	A (3.6)	A (3.7)
Existing Access & West Access / 4600 West	WB / A (5.7)	WB / A (3.7)
North RIRO / Cedar Hills Drive ²	-	NB / A (3.0)

1. Intersection LOS and delay (seconds/vehicle) values represent the overall intersection average for signalized and all-way stop controlled intersections and the worst approach for all other unsignalized intersections.
 2. These are project intersections and were only evaluated in "plus project" scenarios.

Source: Hales Engineering, January 2014

RECOMMENDATIONS

The following mitigation measures are recommended:

Existing (2014) Background Conditions Analysis

No mitigation measures are recommended.

Existing (2014) Plus Project Conditions Analysis

No mitigation measures are recommended.

Parking

Based on our experience and that of neighboring jurisdictions, it is our recommendation that 1.0 space per unit will more than adequately meet the parking needs for patrons, employees and visitors.

SUMMARY OF KEY FINDINGS/RECOMMENDATIONS

The following is a summary of key findings and recommendations:

- All study intersections currently operate at acceptable levels of service during the a.m. peak hour.
- With project traffic added, all study intersections continue to operate at acceptable levels of service.
- No mitigation measures are recommended.
- We recommend 1.0 spaces per unit to remain conservative, see parking in Chapter III.

TABLE OF CONTENTS

EXECUTIVE SUMMARY i

TRAFFIC ANALYSIS..... I

RECOMMENDATIONS..... III

SUMMARY OF KEY FINDINGS/RECOMMENDATIONS III

TABLE OF CONTENTS..... iv

LIST OF TABLES v

I. INTRODUCTION..... 1

A. PURPOSE 1

B. SCOPE 2

C. ANALYSIS METHODOLOGY 2

D. LEVEL OF SERVICE STANDARDS..... 2

II. EXISTING (2014) BACKGROUND CONDITIONS 4

A. PURPOSE 4

B. ROADWAY SYSTEM 4

C. TRAFFIC VOLUMES 4

D. LEVEL OF SERVICE ANALYSIS 5

E. QUEUING ANALYSIS 5

F. MITIGATION MEASURES 5

III. PROJECT CONDITIONS..... 7

A. PURPOSE 7

B. PROJECT DESCRIPTION 7

C. TRIP GENERATION 7

D. TRIP DISTRIBUTION AND ASSIGNMENT 7

E. ACCESS 9

F. PARKING 9

IV. EXISTING (2014) PLUS PROJECT CONDITIONS 11

A. PURPOSE 11

B. TRAFFIC VOLUMES 11

C. LEVEL OF SERVICE ANALYSIS 11

D. QUEUING ANALYSIS 11

E. MITIGATION MEASURES 11

- Appendix A: Turning Movement Counts**
- Appendix B: LOS Results**
- Appendix C: Project Site Plan**
- Appendix D: Queuing Results**

LIST OF TABLES

Table 1 Level of Service Descriptions 3
Table 2 Existing (2014) Background a.m. Peak Hour Level of Service 5
Table 3 Trip Generation 8
Table 4 Existing (2014) Plus Project a.m. Peak Hour Level of Service 12

LIST OF FIGURES

Figure 1 Vicinity map showing the project location in Cedar Hills, Utah 1
Figure 2 Existing (2014) background a.m. peak hour traffic volumes 6
Figure 3 Trip assignment for a.m. peak hour 10
Figure 4 Existing (2014) plus project a.m. peak hour traffic volumes 13

I. INTRODUCTION

A. Purpose

This study addresses the traffic impacts associated with the proposed Senior Living Facility development in Cedar Hills, Utah. The proposed development is located on the southwest corner of the 4600 West / Cedar Hills Drive intersection. Figure 1 shows a vicinity map of the proposed development.

Included within the analyses for this study are the traffic operations and recommended mitigation measures for existing conditions and plus project conditions (conditions after development of the proposed project) at key intersections and roadways in the vicinity of the site.

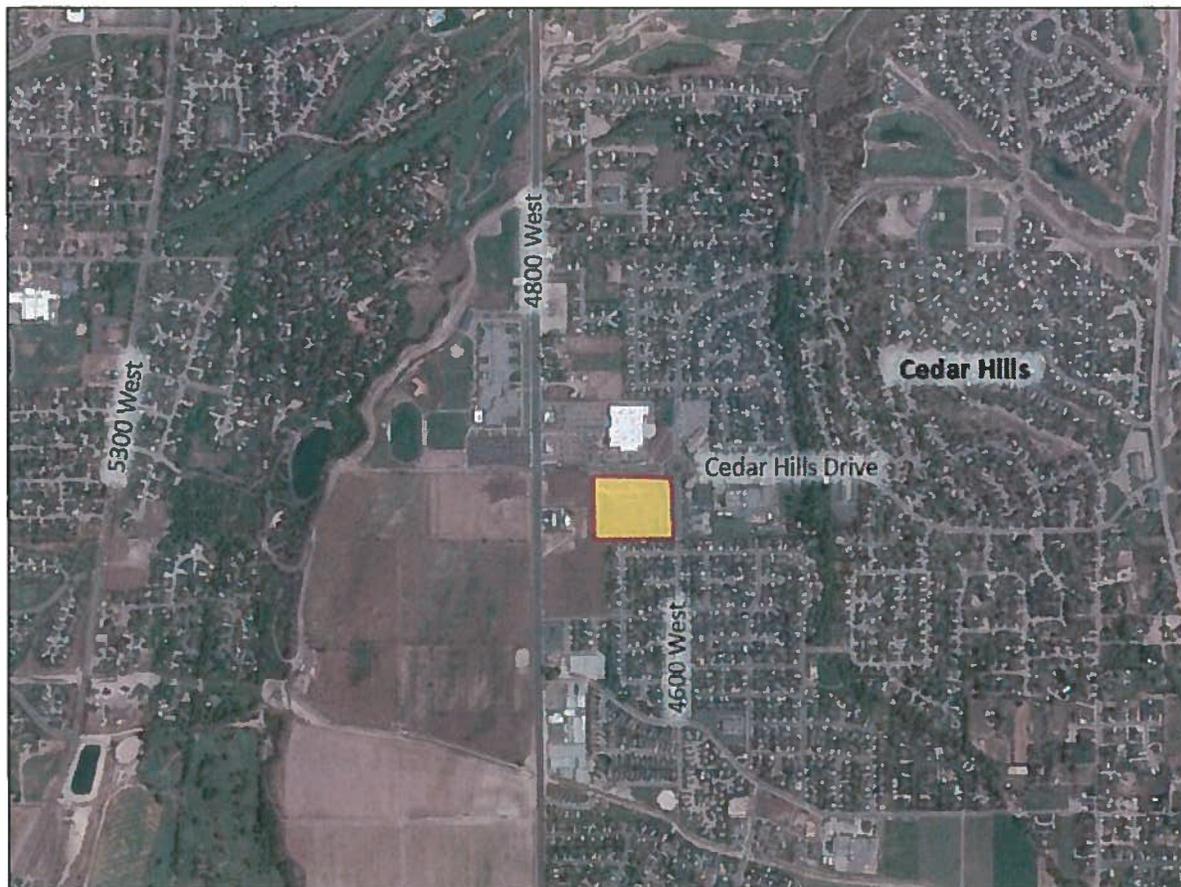


Figure 1 Vicinity map showing the project location in Cedar Hills, Utah

B. Scope

The study area was defined based on conversations with the development team. This study was scoped to evaluate the traffic operational performance impacts of the project on the following intersections:

- Cedar Hills Drive / 4800 West
- 4700 West (Walmart Full Access) / Cedar Hills Drive
- 4600 West / Cedar Hills Drive
- Existing Access / 4600 West

C. Analysis Methodology

Level of service (LOS) is a term that describes the operating performance of an intersection or roadway. LOS is measured quantitatively and reported on a scale from A to F, with A representing the best performance and F the worst. Table 1 provides a brief description of each LOS letter designation and an accompanying average delay per vehicle for both signalized and unsignalized intersections.

The Highway Capacity Manual 2010 (HCM 2010) methodology was used in this study to remain consistent with “state-of-the-practice” professional standards. This methodology has different quantitative evaluations for signalized and unsignalized intersections. For signalized and all-way stop intersections, the LOS is provided for the overall intersection (weighted average of all approach delays). For all other unsignalized intersections LOS is reported based on the worst approach.

D. Level of Service Standards

For the purposes of this study, a minimum overall intersection performance for each of the study intersections was set at LOS D. However, if LOS E or F conditions exist, an explanation and/or mitigation measures will be presented. An LOS D threshold is consistent with “state-of-the-practice” traffic engineering principles for urbanized areas.

Table 1 Level of Service Descriptions

Level of Service	Description of Traffic Conditions	Average Delay (seconds/vehicle)
Signalized Intersections		Overall Intersection
A	Extremely favorable progression and a very low level of control delay. Individual users are virtually unaffected by others in the traffic stream.	$0 \leq 10.0$
B	Good progression and a low level of control delay. The presence of other users in the traffic stream becomes noticeable.	> 10.0 and ≤ 20.0
C	Fair progression and a moderate level of control delay. The operation of individual users becomes somewhat affected by interactions with others in the traffic stream.	>20.0 and ≤ 35.0
D	Marginal progression with relatively high levels of control delay. Operating conditions are noticeably more constrained.	> 35.0 and ≤ 55.0
E	Poor progression with unacceptably high levels of control delay. Operating conditions are at or near capacity.	> 55.0 and ≤ 80.0
F	Unacceptable progression with forced or breakdown operating conditions.	> 80.0
Unsignalized Intersections		Worst Approach
A	Free Flow / Insignificant Delay	$0 \leq 10.0$
B	Stable Operations / Minimum Delays	>10.0 and ≤ 15.0
C	Stable Operations / Acceptable Delays	>15.0 and ≤ 25.0
D	Approaching Unstable Flows / Tolerable Delays	>25.0 and ≤ 35.0
E	Unstable Operations / Significant Delays Can Occur	>35.0 and ≤ 50.0
F	Forced Flows / Unpredictable Flows / Excessive Delays Occur	> 50.0

Source: Hales Engineering Descriptions, based on Highway Capacity Manual, 2010 Methodology (Transportation Research Board, 2010)

II. EXISTING (2014) BACKGROUND CONDITIONS

A. Purpose

The purpose of the existing (2014) background analysis is to study the intersections and roadways during the peak travel periods of the day with background traffic and geometric conditions. Through this analysis, background traffic operational deficiencies can be identified and potential mitigation measures recommended. This analysis will provide a baseline condition that may be compared to the build conditions to identify the impacts of the development.

B. Roadway System

The primary roadways that will provide access to the project site is described below:

4800 West – is a city maintained roadway classified as an Arterial Street. 4800 West has two travel lanes in each direction south of Cedar Hills Drive and three southbound lanes with two northbound lanes north of Cedar Hills Drive. 4800 West also has a two-way left-turn lane (TWLTL) and right turn pockets at intersections. The posted speed limit on 4800 West is 40 mph.

Cedar Hills Drive – is a city maintained roadway classified as a Collector Street. Cedar Hills Drive has one travel lane in each direction as well as a center median that opens for left-turn pockets. The posted speed limit on Cedar Hills Drive is 25 mph.

4600 West – is a city maintained roadway classified as a Local Street. 4600 West has one travel lane in each direction with wide shoulders. The posted speed limit on 4600 West is 25 mph.

C. Traffic Volumes

Hales Engineering has performed numerous traffic counts in the area for previous traffic impact studies. The previous traffic count data showed that at the Cedar Hills Drive / 4800 West intersection, traffic during the a.m. peak hour is approximately 13% higher than during the p.m. peak hour, due to the close proximity of Lone Peak High School. In order to analyze the worst case conditions, this study analyzed the a.m. peak hour in each scenario. Therefore, Hales Engineering performed weekday morning (7:00 – 9:00 a.m.) peak period traffic counts at the following intersections:

- Cedar Hills Drive / 4800 West
- 4700 West (Walmart Full Access) / Cedar Hills Drive
- 4600 West / Cedar Hills Drive
- Existing Access / 4600 West

These counts were performed on Thursday, January 23, 2014. The a.m. peak hour was determined to be between the hours of 7:15 and 8:15 a.m. Detailed count data are included in Appendix A. Figure 2 shows the existing a.m. peak hour volume as well as intersection geometry at the study intersections.

D. Level of Service Analysis

Using Synchro/SimTraffic, which follow the Highway Capacity Manual (HCM) 2010 methodology introduced in Chapter I, the a.m. peak hour LOS was computed for each study intersection. The results of this analysis are reported in Table 2 (see Appendix B for the detailed LOS reports). Multiple runs of SimTraffic were used to provide a statistical evaluation of the interaction between the intersections. These results serve as a baseline condition for the impact analysis of the proposed development during existing (2014) conditions. As shown in Table 2, all study intersections are currently operating at acceptable levels of service during the a.m. peak hour.

E. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. The queue reports can be found in Appendix D. No significant queuing is currently observed.

F. Mitigation Measures

No mitigation measures are recommended.

Table 2 Existing (2014) Background a.m. Peak Hour Level of Service

Intersection		Worst Approach			Overall Intersection	
Description	Control	Approach ^{1,3}	Aver. Delay (Sec/Veh) ¹	LOS ¹	Aver. Delay (Sec/Veh) ²	LOS ²
Cedar Hills Drive / 4800 West	Signal	-	-	-	14.1	B
Walmart Access / Cedar Hills Drive	SB Stop	SB	11.4	B	-	-
4600 West / Cedar Hills Drive	Round-about	-	-	-	3.6	A
Existing Access / 4600 West	WB Stop	WB	5.7	A	-	-

1. This represents the worst approach LOS and delay (seconds / vehicle) and is only reported for non-all-way stop unsignalized intersections.
2. This represents the overall intersection LOS and delay (seconds / vehicle) and is reported for all-way stop and signal controlled intersections.
3. SB = Southbound approach, etc.

Source: Hales Engineering, January 2014

III. PROJECT CONDITIONS

A. Purpose

The project conditions analysis explains the type and intensity of development. This provides the basis for trip generation, distribution, and assignment of project trips to the surrounding study intersections defined in the Introduction.

B. Project Description

This study addresses the traffic impacts associated with the proposed Senior Living Facility development in Cedar Hills, Utah. The proposed development is located on the southwest corner of the 4600 West / Cedar Hills Drive intersection. A concept plan for the proposed development has been included in Appendix C.

The proposed land use for the development has been identified as follows:

- Senior Adult Housing - Attached: 328 units
- Office: ~2,500 sq. ft.
- Retail: ~2,500 sq. ft.

C. Trip Generation

Trip generation for the project was calculated using trip generation rates published in the Institute of Transportation Engineers (ITE) *Trip Generation (9th Edition, 2012)*. Trip Generation for the proposed project is included in Table 3.

D. Trip Distribution and Assignment

Project traffic is assigned to the roadway network based on the type of trip and the proximity of project access points to major streets, high population densities, and regional trip attractions. Existing travel patterns observed during data collection also provide helpful guidance to establishing these distribution percentages, especially in close proximity to the site. The resulting distribution of project generated trips is as follows:

To/From Project:

- 5% South (on 4600 West)
- 10% North (on 4600 West)
- 15% East (on Cedar Hills Drive)
- 35% North (on 4800 West)
- 35% South (on 4800 West)

These trip distribution assumptions were used to assign the a.m. peak hour generated traffic at the study intersections to create trip assignment for the proposed development. Trip assignment for the development is shown in Figure 3.

Table 3 Cedar Hills - Senior Living Facility TIS Trip Generation								
Weekday Daily								
Land Use ¹	Number of Units	Unit Type	Trip Generation	%	%	Trips Entering	Trips Exiting	Total Daily Trips
Senior Adult Housing- Attached (252)	328	Dwelling Units	1,128	50%	50%	564	564	1,128
General Office Building (710) [average rate]	2.5	1,000 Sq. Ft. GFA	28	50%	50%	14	14	28
Shopping Center (820) [average rate]	2.5	1,000 Sq. Ft. GLA	107	50%	50%	53	53	107
Project Total Daily Trips						631	631	1,263
A.M. Peak Hour								
Land Use ¹	Number of Units	Unit Type	Trip Generation	%	%	Trips Entering	Trips Exiting	Total a.m. Trips
Senior Adult Housing- Attached (252)	328	Dwelling Units	65	34%	66%	22	43	65
General Office Building (710) [average rate]	2.5	1,000 Sq. Ft. GFA	4	88%	12%	3	0	4
Shopping Center (820) [average rate]	2.5	1,000 Sq. Ft. GLA	2	62%	38%	1	1	2
Project Total a.m. Peak Hour Trips						27	45	72
P.M. Peak Hour								
Land Use ¹	Number of Units	Unit Type	Trip Generation	%	%	Trips Entering	Trips Exiting	Total p.m. Trips
Senior Adult Housing- Attached (252)	328	Dwelling Units	80	54%	46%	43	37	80
General Office Building (710) [average rate]	2.5	1,000 Sq. Ft. GFA	4	17%	83%	1	3	4
Shopping Center (820) [average rate]	2.5	1,000 Sq. Ft. GLA	9	48%	52%	4	5	9
Project Total p.m. Peak Hour Trips						48	45	93
Saturday Daily								
Land Use ¹	Number of Units	Unit Type	Trip Generation	%	%	Trips Entering	Trips Exiting	Total Sat. Daily Trips
Senior Adult Housing- Attached (252)	328	Dwelling Units	856	50%	50%	428	428	856
General Office Building (710) [average rate]	2.5	1,000 Sq. Ft. GFA	6	50%	50%	3	3	6
Shopping Center (820) [average rate]	2.5	1,000 Sq. Ft. GLA	125	50%	50%	62	62	125
Project Total Saturday Trips						494	494	987
Saturday Peak Hour								
Land Use ¹	Number of Units	Unit Type	Trip Generation	%	%	Trips Entering	Trips Exiting	Total Sat Pk Hr Trips
Senior Adult Housing- Attached (252)	328	Dwelling Units	102	57%	43%	58	44	102
General Office Building (710) [average rate]	2.5	1,000 Sq. Ft. GFA	1	54%	46%	1	0	1
Shopping Center (820) [average rate]	2.5	1,000 Sq. Ft. GLA	12	52%	48%	6	6	12
Project Total Saturday Peak Hour Trips						65	50	115

¹ Land Use Code from the Institute of Transportation Engineers - 9th Edition Trip Generation Manual (ITE Manual)

SOURCE: Hales Engineering, January 2014

E. Access

The proposed access for the site will be gained at the following locations (see also site plan in Appendix C):

Cedar Hills Drive:

- North Access: The proposed full-movement access will be located approximately 460 feet east of 4800 West and will line up directly with the Walmart Access. The proposed access is also planned to serve future developments and will extend further south.
- North RIRO Access: The proposed right-in right-out (RIRO) access will be located approximately halfway between the North Access and the roundabout at the 4600 West / Cedar Hills Drive intersection. There is an existing raised center median on Cedar Hills Drive that will prevent left-turns into and out of the access.

4600 West:

- West Access: The proposed full-movement access will be located approximately 400 feet south of the roundabout at the 4600 West / Cedar Hills Drive intersection. The proposed access will line up directly with the existing access to the nursing home across the street.

F. Parking

Parking generation for a “congregate care facility,” a surrogate for this site, shows that for the two sites studied, one had a peak hour demand of 0.41 vehicles per dwelling unit, and the other had 0.48 vehicles per dwelling unit. Several locations in Sandy, Utah have parking rates of 1.0 spaces for senior housing (Rosegate being one of them). Experience in Sandy at Silver Pines, Sunrise, Ranches and Wentworth show that low parking rates for these types of projects has not created a parking issue.

Based on our experience and that of neighboring jurisdictions, it is our recommendation that 1.0 space per unit will more than adequately meet the parking needs for patrons, employees and visitors.



IV. EXISTING (2014) PLUS PROJECT CONDITIONS

A. Purpose

This section of the report examines the traffic impacts of the proposed project at each of the study intersections. The net trips generated by the proposed development were combined with the existing background traffic volumes to create the existing plus project conditions. This scenario provides valuable insight into the potential impacts of the proposed project on background traffic conditions.

B. Traffic Volumes

Project trips were assigned to the study intersections based on the trip distribution percentages discussed in Chapter III and permitted intersection turning movements. The existing (2014) plus project a.m. peak hour volumes were generated for the study intersections and are shown in Figure 4.

C. Level of Service Analysis

Using Synchro/SimTraffic, which follow the Highway Capacity Manual (HCM) 2010 methodology introduced in Chapter I, the p.m. peak hour LOS was computed for each study intersection. The results of this analysis are reported in Table 4 (see Appendix B for the detailed LOS reports). Multiple runs of SimTraffic were used to provide a statistical evaluation of the interaction between the intersections. As shown in Table 4, all study intersections are anticipated to continue to operate at acceptable levels of service during the a.m. peak hour.

D. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. The queue reports can be found in Appendix D. No significant queuing is anticipated.

E. Mitigation Measures

No mitigation measures are recommended.

Table 4 Existing (2014) Plus Project a.m. Peak Hour Level of Service

Intersection		Worst Approach			Overall Intersection	
Description	Control	Approach ^{1,3}	Aver. Delay (Sec/Veh) ¹	LOS ¹	Aver. Delay (Sec/Veh) ²	LOS ²
Cedar Hills Drive / 4800 West	Signal	-	-	-	14.4	B
Walmart & North Access / Cedar Hills Drive	NB & SB Stop	NB	13.2	B	-	-
4600 West / Cedar Hills Drive	Round-about	-	-	-	3.7	A
West Access / 4600 West	EB & WB Stop	WB	3.7	A	-	-
North RIRO / Cedar Hills Drive	NB Stop	NB	3.0	A	-	-

1. This represents the worst approach LOS and delay (seconds / vehicle) and is only reported for non-all-way stop unsignalized intersections.
 2. This represents the overall intersection LOS and delay (seconds / vehicle) and is reported for all-way stop and signal controlled intersections.
 3. SB = Southbound approach, etc.

Source: Hales Engineering, January 2014



APPENDIX A

Turning Movement Counts

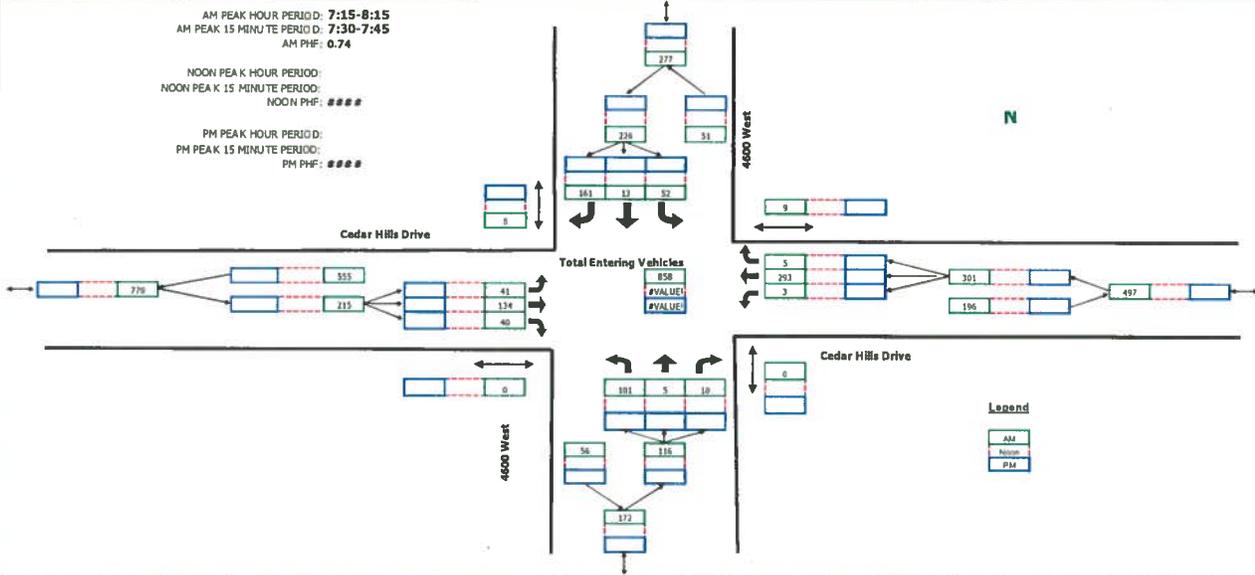
TrafficCounts

2364 North 1450 East
Lehi, UT 84043
801.636.0891

Intersection Turning Movement Summary

Intersection: 4600 West / Cedar Hills Drive
North/South: 4600 West
East/West: Cedar Hills Drive
Jurisdiction: Cedar Hills
Project Title: Cedar Hills Senior Living Facility TIS
Project No: P543
Weather: Clear

Date: 1-23-14, Thu
Day of Week Adjustment: 100.0%
Month of Year Adjustment: 100.0%
Adjustment Station #: 0
Growth Rate: 0.0%
Number of Years: 0



RAW COUNT	4600 West Northbound				4600 West Southbound				Cedar Hills Drive Eastbound				Cedar Hills Drive Westbound				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
AM PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
7:00-7:15	10	3	1	0	1	2	18	0	3	13	8	0	0	25	1	0	85
7:15-7:30	20	1	1	0	1	1	35	4	5	25	7	0	0	55	0	3	151
7:30-7:45	35	2	2	0	1	3	75	1	16	47	8	0	0	101	0	1	290
7:45-8:00	24	1	6	0	44	6	34	0	12	38	16	0	0	94	2	2	277
8:00-8:15	22	1	1	0	6	3	17	0	8	24	9	0	3	43	3	3	140
8:15-8:30	10	0	0	0	2	1	30	0	5	18	6	0	0	35	1	1	108
8:30-8:45	7	2	0	0	1	1	17	0	5	15	10	0	0	24	1	0	83
8:45-9:00	10	0	3	1	1	0	16	0	2	16	10	0	7	39	1	1	109
NOON PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
11:30-11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45-12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00-12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15-12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30-12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45-13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00-13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15-13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
16:00-16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15-16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30-16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45-17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

APPENDIX B

LOS Results

SimTraffic LOS Report

Project: Cedar Hills - Senior Living Facility TIS
Analysis Period: Existing 2014 Conditions
Time Period: a.m. peak hour **Project #:** UT14-558

Intersection: 4800 West & Cedar Hills Blvd
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	64	62	97	16.7	B
	T	466	466	100	15.8	B
	R	81	86	107	2.7	A
	Subtotal	611	614	100	14.1	B
SB	L	100	103	103	16.2	B
	T	589	593	101	14.7	B
	R	141	151	107	3.8	A
	Subtotal	830	847	102	12.9	B
EB	L	73	74	102	24.2	C
	T	41	40	98	29.4	C
	R	20	19	94	4.4	A
	Subtotal	134	133	99	22.9	C
WB	L	155	152	98	17.2	B
	T	174	174	100	17.4	B
	R	164	160	97	6.2	A
	Subtotal	493	486	99	13.7	B
Total		2,067	2,080	101	14.1	B

Intersection: Cedar Hills Blvd & Walmart Access
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SB	L	33	30	91	13.0	B
	R	8	8	100	5.3	A
	Subtotal	41	38	93	11.4	B
EB	L	33	30	91	5.0	A
	T	196	207	105	0.9	A
	Subtotal	229	237	103	1.4	A
WB	T	508	504	99	0.6	A
	R	47	50	107	0.3	A
	Subtotal	555	554	100	0.6	A
Total		826	829	100	1.3	A

SimTraffic LOS Report

Project: Cedar Hills - Senior Living Facility TIS
Analysis Period: Existing 2014 Conditions
Time Period: a.m. peak hour **Project #:** UT14-558

Intersection: 4600 West & Cedar Hills Blvd
Type: Roundabout

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	101	98	97	2.6	A
	T	5	5	105	3.5	A
	R	10	9	88	2.8	A
	Subtotal	116	112	97	2.7	A
SB	L	52	50	96	5.0	A
	T	13	13	102	5.4	A
	R	161	165	102	5.0	A
	Subtotal	226	228	101	5.0	A
EB	L	41	42	103	2.3	A
	T	142	146	103	2.5	A
	R	40	40	101	2.3	A
	Subtotal	223	228	102	2.4	A
WB	L	3	2	62	3.9	A
	T	293	290	99	3.7	A
	R	5	6	126	3.4	A
	Subtotal	301	298	99	3.7	A
Total		865	866	100	3.6	A

Intersection: 4600 West & Existing Access
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	112	109	97	0.1	A
	Subtotal	112	109	97	0.1	A
SB	L	2	1	44	1.8	A
	T	54	53	99	0.3	A
	Subtotal	56	54	96	0.3	A
WB	L	2	2	89	5.7	A
	Subtotal	2	2	100	5.7	A
Total		170	165	97	0.2	A

1: 4800 West & Cedar Hills Blvd Performance by movement Interval #1 7:15

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.3	3.1	4.3	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.2	0.2
Total Delay (hr)	0.1	0.1	0.0	0.2	0.2	0.0	0.0	0.5	0.0	0.1	0.5	0.0
Total Del/Veh (s)	23.3	29.0	4.6	16.8	16.0	5.2	13.1	14.6	2.6	13.6	11.6	2.8
Vehicles Entered	17	9	4	34	38	32	13	110	22	28	141	37
Vehicles Exited	17	9	4	36	38	32	13	112	22	28	143	37
Hourly Exit Rate	68	36	16	144	152	128	52	448	88	112	572	148
Input Volume	64	36	18	137	153	145	60	439	76	94	554	133
% of Volume	106	100	89	105	99	88	87	102	116	119	103	111

1: 4800 West & Cedar Hills Blvd Performance by movement Interval #1 7:15

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.3
Total Delay (hr)	1.7
Total Del/Veh (s)	12.4
Vehicles Entered	485
Vehicles Exited	491
Hourly Exit Rate	1964
Input Volume	1909
% of Volume	103

1: 4800 West & Cedar Hills Blvd Performance by movement Interval #2 7:30

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.4	3.4	3.5	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.2	0.2
Total Delay (hr)	0.2	0.1	0.0	0.2	0.3	0.1	0.1	0.7	0.0	0.2	0.9	0.1
Total Del/Veh (s)	24.4	27.7	3.9	17.2	19.2	7.7	20.1	19.2	3.6	20.6	18.6	5.1
Vehicles Entered	23	12	6	50	57	56	19	138	25	28	174	47
Vehicles Exited	23	12	6	48	57	55	18	135	25	28	169	47
Hourly Exit Rate	92	48	24	192	228	220	72	540	100	112	676	188
Input Volume	99	55	27	209	235	222	75	548	95	118	693	166
% of Volume	93	87	89	92	97	99	96	99	105	95	98	113

1: 4800 West & Cedar Hills Blvd Performance by movement Interval #2 7:30

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.3
Total Delay (hr)	3.0
Total Del/Veh (s)	16.5
Vehicles Entered	635
Vehicles Exited	623
Hourly Exit Rate	2492
Input Volume	2542
% of Volume	98

1: 4800 West & Cedar Hills Blvd Performance by movement Interval #3 7:45

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.3	3.0	4.1	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.2	0.2
Total Delay (hr)	0.1	0.1	0.0	0.2	0.2	0.1	0.1	0.4	0.0	0.1	0.6	0.0
Total Del/Veh (s)	21.9	28.5	4.5	16.4	15.7	5.1	16.8	14.4	2.4	14.6	13.3	3.5
Vehicles Entered	17	9	4	33	40	37	15	108	20	23	140	33
Vehicles Exited	18	10	5	33	40	38	15	110	20	23	145	33
Hourly Exit Rate	72	40	20	132	160	152	60	440	80	92	580	132
Input Volume	64	36	18	137	153	145	60	439	76	94	554	133
% of Volume	112	111	111	96	105	105	100	100	105	98	105	99

1: 4800 West & Cedar Hills Blvd Performance by movement Interval #3 7:45

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.3
Total Delay (hr)	1.8
Total Del/Veh (s)	13.0
Vehicles Entered	479
Vehicles Exited	490
Hourly Exit Rate	1960
Input Volume	1909
% of Volume	103

1: 4800 West & Cedar Hills Blvd Performance by movement Interval #4 8:00

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.4	3.2	4.1	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.1	0.2
Total Delay (hr)	0.1	0.1	0.0	0.2	0.2	0.1	0.1	0.4	0.0	0.1	0.5	0.0
Total Del/Veh (s)	20.5	27.1	4.8	16.6	15.7	5.2	15.5	13.1	2.3	13.5	12.9	3.1
Vehicles Entered	16	10	4	34	40	36	15	111	19	24	139	34
Vehicles Exited	17	9	4	35	41	36	15	110	20	24	136	34
Hourly Exit Rate	68	36	16	140	164	144	60	440	80	96	544	136
Input Volume	64	36	18	137	153	145	60	439	76	94	554	133
% of Volume	106	100	89	102	107	99	100	100	105	102	98	102

1: 4800 West & Cedar Hills Blvd Performance by movement Interval #4 8:00

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.3
Total Delay (hr)	1.7
Total Del/Veh (s)	12.3
Vehicles Entered	482
Vehicles Exited	481
Hourly Exit Rate	1924
Input Volume	1909
% of Volume	101

1: 4800 West & Cedar Hills Blvd Performance by movement Entire Run

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Denied Del/Veh (s)	0.3	3.2	3.9	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.2	0.2
Total Delay (hr)	0.5	0.3	0.0	0.7	0.8	0.3	0.3	2.1	0.1	0.5	2.5	0.2
Total Del/Veh (s)	24.2	29.4	4.4	17.2	17.4	6.2	16.7	15.8	2.7	16.2	14.7	3.8
Vehicles Entered	74	40	18	152	175	161	62	466	86	103	594	151
Vehicles Exited	74	40	19	152	174	160	62	466	86	103	593	151
Hourly Exit Rate	74	40	19	152	174	160	62	466	86	103	593	151
Input Volume	73	41	20	155	174	164	64	466	81	100	589	141
% of Volume	102	98	94	98	100	97	97	100	107	103	101	107

1: 4800 West & Cedar Hills Blvd Performance by movement Entire Run

Movement	All
Denied Delay (hr)	0.2
Denied Del/Veh (s)	0.3
Total Delay (hr)	8.2
Total Del/Veh (s)	14.1
Vehicles Entered	2082
Vehicles Exited	2080
Hourly Exit Rate	2080
Input Volume	2067
% of Volume	101

2: Cedar Hills Blvd & Walmart Access Performance by movement Interval #1 7:15

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	4.3	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	4.6	0.9	0.5	0.3	9.7	5.1	1.2
Vehicles Entered	9	50	107	11	6	2	185
Vehicles Exited	9	50	107	11	6	2	185
Hourly Exit Rate	36	200	428	44	24	8	740
Input Volume	29	177	449	41	29	7	732
% of Volume	124	113	95	107	83	114	101

2: Cedar Hills Blvd & Walmart Access Performance by movement Interval #2 7:30

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.3	0.0	0.0	0.0	0.1	5.0	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	5.8	0.9	0.8	0.4	16.8	7.9	1.6
Vehicles Entered	9	64	170	17	10	2	272
Vehicles Exited	9	64	169	16	10	2	270
Hourly Exit Rate	36	256	676	64	40	8	1080
Input Volume	45	255	686	64	45	11	1106
% of Volume	80	100	99	100	89	73	98

2: Cedar Hills Blvd & Walmart Access Performance by movement Interval #3 7:45

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	5.9	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	4.5	0.9	0.5	0.3	12.9	5.2	1.2
Vehicles Entered	6	46	114	11	7	1	185
Vehicles Exited	7	47	115	11	7	1	188
Hourly Exit Rate	28	188	460	44	28	4	752
Input Volume	29	177	449	41	29	7	732
% of Volume	97	106	102	107	97	57	103

2: Cedar Hills Blvd & Walmart Access Performance by movement Interval #4 8:00

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.2	4.3	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	4.1	0.9	0.5	0.3	10.4	5.3	1.1
Vehicles Entered	6	46	113	12	6	2	185
Vehicles Exited	6	46	113	12	7	2	186
Hourly Exit Rate	24	184	452	48	28	8	744
Input Volume	29	177	449	41	29	7	732
% of Volume	83	104	101	117	97	114	102

2: Cedar Hills Blvd & Walmart Access Performance by movement Entire Run

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.1	4.2	0.1
Total Delay (hr)	0.0	0.1	0.1	0.0	0.1	0.0	0.3
Total Del/Veh (s)	5.0	0.9	0.6	0.3	13.0	5.3	1.3
Vehicles Entered	30	207	504	50	30	8	829
Vehicles Exited	30	207	504	50	30	8	829
Hourly Exit Rate	30	207	504	50	30	8	829
Input Volume	33	196	508	47	33	8	826
% of Volume	91	105	99	107	91	100	100

3: 4600 West & Cedar Hills Blvd Performance by movement Interval #1 7:15

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0		0.2	0.4	0.0	0.0	0.0	0.2	0.2	0.2
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	2.4	2.5	2.4		3.0	2.3	2.5	2.6	2.2	3.5	3.5	3.5
Vehicles Entered	10	34	9	0	61	1	21	1	3	10	4	36
Vehicles Exited	10	34	9	0	61	2	22	1	3	10	4	35
Hourly Exit Rate	40	136	36	0	244	8	88	4	12	40	16	140
Input Volume	36	125	35	3	259	4	89	4	9	46	11	142
% of Volume	111	109	103	0	94	200	99	100	133	87	145	99

3: 4600 West & Cedar Hills Blvd Performance by movement Interval #1 7:15

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.1
Total Delay (hr)	0.2
Total Del/Veh (s)	2.9
Vehicles Entered	190
Vehicles Exited	191
Hourly Exit Rate	764
Input Volume	763
% of Volume	100

3: 4600 West & Cedar Hills Blvd Performance by movement Interval #2 7:30

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0		0.4	0.3	0.0	0.0	0.0	0.3	0.4	0.3
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	2.4	2.5	2.5		4.3	4.0	2.9	2.5	2.9	7.0	11.0	6.8
Vehicles Entered	14	46	13	0	100	2	34	2	3	17	3	59
Vehicles Exited	14	45	13	0	98	2	33	2	2	17	3	58
Hourly Exit Rate	56	180	52	0	392	8	132	8	8	68	12	232
Input Volume	55	191	54	4	396	7	136	7	14	70	18	218
% of Volume	102	94	96	0	99	114	97	114	57	97	67	106

3: 4600 West & Cedar Hills Blvd Performance by movement Interval #2 7:30

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.2
Total Delay (hr)	0.4
Total Del/Veh (s)	4.4
Vehicles Entered	293
Vehicles Exited	287
Hourly Exit Rate	1148
Input Volume	1170
% of Volume	98

3: 4600 West & Cedar Hills Blvd Performance by movement Interval #3 7:45

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0		0.2	0.3	0.0	0.0	0.0	0.2	0.2	0.2
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	2.2	2.5	2.1		3.2	4.5	2.4	5.7	2.9	4.1	3.7	4.2
Vehicles Entered	10	33	9	0	64	1	20	1	2	12	3	34
Vehicles Exited	10	33	9	0	66	1	21	1	2	12	3	36
Hourly Exit Rate	40	132	36	0	264	4	84	4	8	48	12	144
Input Volume	36	125	35	3	259	4	89	4	9	46	11	142
% of Volume	111	106	103	0	102	100	94	100	89	104	109	101

3: 4600 West & Cedar Hills Blvd Performance by movement Interval #3 7:45

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.1
Total Delay (hr)	0.2
Total Del/Veh (s)	3.2
Vehicles Entered	189
Vehicles Exited	194
Hourly Exit Rate	776
Input Volume	763
% of Volume	102

3: 4600 West & Cedar Hills Blvd Performance by movement Interval #4 8:00

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0		0.3	0.6	0.0	0.0	0.0	0.2	0.2	0.2
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	2.1	2.5	2.1	1.9	3.3	3.6	2.3	3.9	2.0	3.6	4.0	3.7
Vehicles Entered	8	33	9	0	66	1	22	1	2	11	3	36
Vehicles Exited	8	34	10	1	65	1	22	1	2	11	3	36
Hourly Exit Rate	32	136	40	4	260	4	88	4	8	44	12	144
Input Volume	36	125	35	3	259	4	89	4	9	46	11	142
% of Volume	89	109	114	133	100	100	99	100	89	96	109	101

3: 4600 West & Cedar Hills Blvd Performance by movement Interval #4 8:00

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.1
Total Delay (hr)	0.2
Total Del/Veh (s)	3.0
Vehicles Entered	192
Vehicles Exited	194
Hourly Exit Rate	776
Input Volume	763
% of Volume	102

3: 4600 West & Cedar Hills Blvd Performance by movement Entire Run

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.3	0.3	0.0	0.0	0.0	0.2	0.2	0.2
Total Delay (hr)	0.0	0.1	0.0	0.0	0.3	0.0	0.1	0.0	0.0	0.1	0.0	0.2
Total Del/Veh (s)	2.3	2.5	2.3	3.9	3.7	3.4	2.6	3.5	2.8	5.0	5.4	5.0
Vehicles Entered	42	146	40	2	291	6	98	5	9	50	13	165
Vehicles Exited	42	146	40	2	290	6	98	5	9	50	13	165
Hourly Exit Rate	42	146	40	2	290	6	98	5	9	50	13	165
Input Volume	41	142	40	3	293	5	101	5	10	52	13	161
% of Volume	103	103	101	62	99	126	97	105	88	96	102	102

3: 4600 West & Cedar Hills Blvd Performance by movement Entire Run

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.2
Total Delay (hr)	0.9
Total Del/Veh (s)	3.6
Vehicles Entered	867
Vehicles Exited	866
Hourly Exit Rate	866
Input Volume	865
% of Volume	100

4: 4600 West & Existing Access Performance by movement Interval #1 7:15

Movement	WBL	NBT	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)		0.1		0.0	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)		0.1		0.2	0.2
Vehicles Entered	0	24	0	13	37
Vehicles Exited	0	25	0	13	38
Hourly Exit Rate	0	100	0	52	152
Input Volume	2	99	2	47	150
% of Volume	0	101	0	111	101

4: 4600 West & Existing Access Performance by movement Interval #2 7:30

Movement	WBL	NBT	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.7	0.1	1.3	0.3	0.3
Vehicles Entered	1	36	1	16	54
Vehicles Exited	1	36	1	16	54
Hourly Exit Rate	4	144	4	64	216
Input Volume	3	151	3	73	230
% of Volume	133	95	133	88	94

4: 4600 West & Existing Access Performance by movement Interval #3 7:45

Movement	WBL	NBT	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1		0.0	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	2.5	0.1		0.2	0.2
Vehicles Entered	1	23	0	12	36
Vehicles Exited	1	23	0	12	36
Hourly Exit Rate	4	92	0	48	144
Input Volume	2	99	2	47	150
% of Volume	200	93	0	102	96

4: 4600 West & Existing Access Performance by movement Interval #4 8:00

Movement	WBL	NBT	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)		0.1		0.0	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)		0.1		0.2	0.2
Vehicles Entered	0	25	0	12	37
Vehicles Exited	0	25	0	12	37
Hourly Exit Rate	0	100	0	48	148
Input Volume	2	99	2	47	150
% of Volume	0	101	0	102	99

4: 4600 West & Existing Access Performance by movement Entire Run

Movement	WBL	NBT	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	5.7	0.1	1.8	0.3	0.2
Vehicles Entered	2	109	2	53	166
Vehicles Exited	2	109	1	53	165
Hourly Exit Rate	2	109	1	53	165
Input Volume	2	112	2	54	170
% of Volume	89	97	44	99	97

5: North RIRO & Cedar Hills Blvd Performance by movement Interval #1 7:15

Movement	EBT	WBT	All
Denied Delay (hr)	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0
Total Del/Veh (s)	0.3	0.5	0.5
Vehicles Entered	53	118	171
Vehicles Exited	53	118	171
Hourly Exit Rate	212	472	684
Input Volume	196	490	686
% of Volume	108	96	100

5: North RIRO & Cedar Hills Blvd Performance by movement Interval #2 7:30

Movement	EBT	WBT	All
Denied Delay (hr)	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0
Total Delay (hr)	0.0	0.1	0.1
Total Del/Veh (s)	0.3	1.1	0.9
Vehicles Entered	73	189	262
Vehicles Exited	72	187	259
Hourly Exit Rate	288	748	1036
Input Volume	300	750	1050
% of Volume	96	100	99

5: North RIRO & Cedar Hills Blvd Performance by movement Interval #3 7:45

Movement	EBT	WBT	All
Denied Delay (hr)	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0
Total Del/Veh (s)	0.3	0.6	0.5
Vehicles Entered	51	123	174
Vehicles Exited	52	125	177
Hourly Exit Rate	208	500	708
Input Volume	196	490	686
% of Volume	106	102	103

5: North RIRO & Cedar Hills Blvd Performance by movement Interval #4 8:00

Movement	EBT	WBT	All
Denied Delay (hr)	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0
Total Del/Veh (s)	0.3	0.6	0.5
Vehicles Entered	51	123	174
Vehicles Exited	51	125	176
Hourly Exit Rate	204	500	704
Input Volume	196	490	686
% of Volume	104	102	103

5: North RIRO & Cedar Hills Blvd Performance by movement Entire Run

Movement	EBT	WBT	All
Denied Delay (hr)	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0
Total Delay (hr)	0.0	0.1	0.1
Total Del/Veh (s)	0.3	0.7	0.6
Vehicles Entered	228	553	781
Vehicles Exited	228	554	782
Hourly Exit Rate	228	554	782
Input Volume	222	555	777
% of Volume	103	100	101

Total Zone Performance By Interval

Interval Start	7:15	7:30	7:45	8:00	All
Denied Delay (hr)	0.1	0.1	0.1	0.1	0.3
Denied Del/Veh (s)	0.4	0.4	0.4	0.4	0.4
Total Delay (hr)	2.3	4.0	2.4	2.2	10.9
Total Del/Veh (s)	14.4	19.1	14.7	14.4	16.9
Vehicles Entered	525	710	514	525	2281
Vehicles Exited	528	685	544	525	2280
Hourly Exit Rate	2112	2740	2176	2100	2280
Input Volume	7519	10468	7519	7519	8256
% of Volume	28	26	29	28	28

Intersection: 1: 4800 West & Cedar Hills Blvd, Interval #1

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	82	66	36	102	131	87	48	138	115	36	78	117
Average Queue (ft)	47	33	13	62	64	39	26	86	50	18	44	85
95th Queue (ft)	88	72	40	103	136	82	50	146	114	39	82	131
Link Distance (ft)	1025			450			283		283		1110	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	75		75	60		60	180		180		170	
Storage Blk Time (%)	4	2	7		8	1	0					
Queuing Penalty (veh)	2	1	18		22	2	0					

Intersection: 1: 4800 West & Cedar Hills Blvd, Interval #1

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	108	42
Average Queue (ft)	56	21
95th Queue (ft)	112	44
Link Distance (ft)	1110	1110
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 1: 4800 West & Cedar Hills Blvd, Interval #2

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SE
Directions Served	L	T	R	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	87	65	40	114	184	113	76	179	158	50	87	190
Average Queue (ft)	52	34	15	76	100	67	37	117	92	23	52	128
95th Queue (ft)	95	70	44	125	186	129	74	179	169	51	98	200
Link Distance (ft)	1025			450			283		283		1110	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	75		75	60		60	180		180		170	
Storage Blk Time (%)	6	1	0	12	17	4	1		0	0		2
Queuing Penalty (veh)	5	1	0	49	72	15	1		0	0		3

Intersection: 1: 4800 West & Cedar Hills Blvd, Interval #2

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	164	66
Average Queue (ft)	94	33
95th Queue (ft)	174	67
Link Distance (ft)	1110	1110
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 1: 4800 West & Cedar Hills Blvd, Interval #3

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	91	68	35	96	125	91	48	135	94	41	73	158
Average Queue (ft)	46	31	15	53	62	41	28	89	54	18	39	99
95th Queue (ft)	96	70	43	94	129	89	53	147	104	42	79	166
Link Distance (ft)	1025			450			283		283		1110	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	75		75	60		60	180		180		170	
Storage Blk Time (%)	2	2	0	6	8	1	0		0		1	
Queuing Penalty (veh)	1	1	0	15	24	2	0		0		1	

Intersection: 1: 4800 West & Cedar Hills Blvd, Interval #3

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	129	52
Average Queue (ft)	67	26
95th Queue (ft)	136	54
Link Distance (ft)	1110	1110
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 1: 4800 West & Cedar Hills Blvd, Interval #4

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	72	60	35	98	115	78	59	124	102	35	67	143
Average Queue (ft)	40	31	13	57	62	39	29	77	56	16	39	90
95th Queue (ft)	77	62	39	101	114	83	59	127	113	37	73	152
Link Distance (ft)	1025			450			283		283		1110	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	75		75	60		60		180		180		170
Storage Blk Time (%)	2	1	6		8		0				0	
Queuing Penalty (veh)	1	0	16		21		1				0	

Intersection: 1: 4800 West & Cedar Hills Blvd, Interval #4

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	115	48
Average Queue (ft)	58	23
95th Queue (ft)	122	47
Link Distance (ft)	1110	1110
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 1: 4800 West & Cedar Hills Blvd, All Intervals

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	
Directions Served	L	T	R	L	T	R	L	T	T	R	L	T	
Maximum Queue (ft)	113	83	50	115	195	119	79	179	162	59	109	194	
Average Queue (ft)	46	32	14	62	72	46	30	92	63	19	44	101	
95th Queue (ft)	90	69	42	108	147	100	60	155	132	43	84	169	
Link Distance (ft)	1025			450			283		283		1110		
Upstream Blk Time (%)													
Queuing Penalty (veh)													
Storage Bay Dist (ft)	75		75		60		60		180		180		170
Storage Blk Time (%)	3	1	0	8	10	1	0	0	0	0	0	1	
Queuing Penalty (veh)	2	1	0	25	35	5	0	0	0	0	0	1	

Intersection: 1: 4800 West & Cedar Hills Blvd, All Intervals

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	172	70
Average Queue (ft)	69	26
95th Queue (ft)	141	54
Link Distance (ft)	1110	1110
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Cedar Hills Blvd & Walmart Access, Interval #1

Movement	EB	SB	SB
Directions Served	L	LT	R
Maximum Queue (ft)	30	34	28
Average Queue (ft)	12	20	7
95th Queue (ft)	36	45	29
Link Distance (ft)	198		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	100	100	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: Cedar Hills Blvd & Walmart Access, Interval #2

Movement	EB	WB	SB	SB
Directions Served	L	TR	LT	R
Maximum Queue (ft)	37	1	56	23
Average Queue (ft)	13	0	26	9
95th Queue (ft)	36	3	58	30
Link Distance (ft)		287	198	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	100			100
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: Cedar Hills Blvd & Walmart Access, Interval #3

Movement	EB	WB	SB	SB
Directions Served	L	TR	LT	R
Maximum Queue (ft)	34	4	47	23
Average Queue (ft)	10	1	22	3
95th Queue (ft)	36	9	50	18
Link Distance (ft)		287	198	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	100			100
Storage Blk Time (%)	0			
Queuing Penalty (veh)	0			

Intersection: 2: Cedar Hills Blvd & Walmart Access, Interval #4

Movement	EB	WB	SB	SB
Directions Served	L	TR	LT	R
Maximum Queue (ft)	28	1	48	26
Average Queue (ft)	7	0	20	7
95th Queue (ft)	28	2	52	27
Link Distance (ft)		287	198	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	100			100
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: Cedar Hills Blvd & Walmart Access, All Intervals

Movement	EB	WB	SB	SB
Directions Served	L	TR	LT	R
Maximum Queue (ft)	45	6	64	31
Average Queue (ft)	10	0	22	6
95th Queue (ft)	34	5	52	26
Link Distance (ft)		287	198	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	100			100
Storage Blk Time (%)	0			
Queuing Penalty (veh)	0			

Intersection: 3: 4600 West & Cedar Hills Blvd, Interval #1

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	29	49	42	66
Average Queue (ft)	8	16	14	34
95th Queue (ft)	32	48	45	70
Link Distance (ft)	310	989	394	774
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: 4600 West & Cedar Hills Blvd, Interval #2

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	39	86	49	134
Average Queue (ft)	12	43	22	61
95th Queue (ft)	41	91	52	118
Link Distance (ft)	310	989	394	774
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: 4600 West & Cedar Hills Blvd, Interval #3

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	37	54	42	82
Average Queue (ft)	11	24	12	36
95th Queue (ft)	39	57	41	88
Link Distance (ft)	310	989	394	774
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: 4600 West & Cedar Hills Blvd, Interval #4

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	37	58	36	68
Average Queue (ft)	10	21	12	35
95th Queue (ft)	39	60	39	72
Link Distance (ft)	310	989	394	774
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: 4600 West & Cedar Hills Blvd, All Intervals

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	53	87	58	138
Average Queue (ft)	10	26	15	41
95th Queue (ft)	38	68	45	91
Link Distance (ft)	310	989	394	774
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: 4600 West & Existing Access, Interval #1

Movement	WB	SB
Directions Served	LTR	LTR
Maximum Queue (ft)	9	3
Average Queue (ft)	2	0
95th Queue (ft)	13	6
Link Distance (ft)	104	394
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: 4600 West & Existing Access, Interval #2

Movement	WB
Directions Served	LTR
Maximum Queue (ft)	14
Average Queue (ft)	2
95th Queue (ft)	14
Link Distance (ft)	104
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: 4600 West & Existing Access, Interval #3

Movement	WB	SB
Directions Served	LTR	LTR
Maximum Queue (ft)	14	3
Average Queue (ft)	3	0
95th Queue (ft)	17	6
Link Distance (ft)	104	394
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: 4600 West & Existing Access, Interval #4

Movement	WB
Directions Served	LTR
Maximum Queue (ft)	12
Average Queue (ft)	2
95th Queue (ft)	16
Link Distance (ft)	104
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: 4600 West & Existing Access, All Intervals

Movement	WB	SB
Directions Served	LTR	LTR
Maximum Queue (ft)	26	6
Average Queue (ft)	2	0
95th Queue (ft)	15	4
Link Distance (ft)	104	394
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: North RIRO & Cedar Hills Blvd, Interval #1

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 5: North RIRO & Cedar Hills Blvd, Interval #2

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 5: North RIRO & Cedar Hills Blvd, Interval #3

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 5: North RIRO & Cedar Hills Blvd, Interval #4

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 5: North RIRO & Cedar Hills Blvd, All Intervals

Movement

Directions Served

Maximum Queue (ft)

Average Queue (ft)

95th Queue (ft)

Link Distance (ft)

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (ft)

Storage Blk Time (%)

Queuing Penalty (veh)

Zone Summary

Zone wide Queuing Penalty, Interval #1: 45

Zone wide Queuing Penalty, Interval #2: 146

Zone wide Queuing Penalty, Interval #3: 44

Zone wide Queuing Penalty, Interval #4: 40

Zone wide Queuing Penalty, All Intervals: 69

SimTraffic LOS Report

Project: Cedar Hills - Senior Living Facility TIS
Analysis Period: Existing 2014 Plus Project
Time Period: a.m. peak hour **Project #:** UT14-558

Intersection: 4800 West & Cedar Hills Drive
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	64	60	94	15.8	B
	T	466	460	99	16.8	B
	R	90	94	104	2.8	A
	Subtotal	620	614	99	14.6	B
SB	L	110	106	96	15.9	B
	T	589	580	99	15.1	B
	R	141	139	98	3.9	A
	Subtotal	840	825	98	13.3	B
EB	L	73	74	102	23.4	C
	T	41	42	103	29.2	C
	R	20	21	104	4.1	A
	Subtotal	134	137	102	22.2	C
WB	L	171	166	97	18.5	B
	T	174	175	101	16.9	B
	R	180	180	100	7.0	A
	Subtotal	525	521	99	14.0	B
Total		2,119	2,097	99	14.4	B

Intersection: North Access/Walmart Access & Cedar Hills Drive
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	32	33	103	13.5	B
	R	1	1	100	4.9	A
	Subtotal	33	34	103	13.2	B
SB	L	33	32	97	14.2	B
	R	8	10	125	7.5	A
	Subtotal	41	42	102	12.6	B
EB	L	33	34	103	5.7	A
	T	205	206	100	1.0	A
	R	12	14	114	0.8	A
	Subtotal	250	254	102	1.6	A
WB	L	3	3	92	2.0	A
	T	508	506	100	0.8	A
	R	47	50	107	0.5	A
	Subtotal	558	559	100	0.8	A
Total		882	889	101	2.1	A

SimTraffic LOS Report

Project: Cedar Hills - Senior Living Facility TIS
Analysis Period: Existing 2014 Plus Project
Time Period: a.m. peak hour **Project #: UT14-558**

Intersection: 4600 West & Cedar Hills Drive
Type: Roundabout

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	101	97	96	2.7	A
	T	7	6	89	3.2	A
	R	12	11	90	2.9	A
	Subtotal	120	114	95	2.7	A
SB	L	52	56	108	5.4	A
	T	15	14	95	5.7	A
	R	162	165	102	5.1	A
	Subtotal	229	235	103	5.2	A
EB	L	43	38	88	2.5	A
	T	146	148	101	2.7	A
	R	40	41	103	2.4	A
	Subtotal	229	227	99	2.6	A
WB	L	5	4	84	3.0	A
	T	295	295	100	3.6	A
	R	5	4	84	3.4	A
	Subtotal	305	303	99	3.6	A
Total		882	879	100	3.7	A

Intersection: 4600 West & West Access/Existing Access
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	1	0	0		
	T	112	107	96	0.1	A
	Subtotal	113	107	95	0.1	A
SB	L	2	1	44	1.8	A
	T	53	54	102	0.4	A
	R	4	4	94	0.3	A
Subtotal	59	59	100	0.4	A	
EB	L	4	4	94	3.7	A
	R	2	3	150	3.0	A
	Subtotal	6	7	117	3.4	A
WB	L	2	3	133	3.7	A
	Subtotal	2	3	150	3.7	A
Total		181	176	97	0.4	A

SimTraffic LOS Report

Project: Cedar Hills - Senior Living Facility TIS
Analysis Period: Existing 2014 Plus Project
Time Period: a.m. peak hour **Project #:** UT14-558

Intersection: North RIRO & Cedar Hills Drive
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	R	6	6	96	3.0	A
	Subtotal	6	6	100	3.0	A
EB	T	223	222	99	0.4	A
	R	7	6	89	0.3	A
	Subtotal	230	228	99	0.4	A
WB	T	558	558	100	0.8	A
	Subtotal	558	558	100	0.8	A
Total		794	792	100	0.7	A

Intersection:
Type:

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
Total						

1: 4800 West & Cedar Hills Drive Performance by movement Interval #1 7:15

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	3.3	3.6	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.1	0.2
Total Delay (hr)	0.1	0.1	0.0	0.2	0.2	0.1	0.1	0.5	0.0	0.1	0.5	0.0
Total Del/Veh (s)	22.2	27.2	3.6	15.9	16.8	5.5	15.4	14.8	2.4	14.0	12.9	3.7
Vehicles Entered	17	9	5	35	38	41	14	108	23	26	132	31
Vehicles Exited	17	9	4	34	37	41	15	109	23	26	132	31
Hourly Exit Rate	68	36	16	136	148	164	60	436	92	104	528	124
Input Volume	64	36	18	151	155	159	60	439	85	104	554	133
% of Volume	106	100	89	90	95	103	100	99	108	100	95	93

1: 4800 West & Cedar Hills Drive Performance by movement Interval #1 7:15

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.3
Total Delay (hr)	1.7
Total Del/Veh (s)	12.8
Vehicles Entered	479
Vehicles Exited	478
Hourly Exit Rate	1912
Input Volume	1958
% of Volume	98

1: 4800 West & Cedar Hills Drive Performance by movement Interval #2 7:30

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.4	3.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.2	0.2
Total Delay (hr)	0.2	0.1	0.0	0.3	0.3	0.2	0.1	0.8	0.0	0.2	0.9	0.1
Total Del/Veh (s)	22.8	28.3	4.0	20.9	18.3	9.7	17.6	21.5	3.7	18.9	19.2	4.7
Vehicles Entered	25	14	8	56	57	60	18	136	28	34	170	40
Vehicles Exited	26	15	8	56	56	60	18	134	27	33	167	40
Hourly Exit Rate	104	60	32	224	224	240	72	536	108	132	668	160
Input Volume	99	55	27	231	230	243	75	548	106	129	693	166
% of Volume	105	109	119	97	97	99	96	98	102	102	96	96

1: 4800 West & Cedar Hills Drive Performance by movement Interval #2 7:30

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.3
Total Delay (hr)	3.2
Total Del/Veh (s)	17.4
Vehicles Entered	646
Vehicles Exited	640
Hourly Exit Rate	2560
Input Volume	2602
% of Volume	98

1: 4800 West & Cedar Hills Drive Performance by movement Interval #3 7:45

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.3	3.3	3.5	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.1	0.2
Total Delay (hr)	0.1	0.1	0.0	0.2	0.2	0.1	0.1	0.4	0.0	0.1	0.5	0.0
Total Del/Veh (s)	23.1	23.2	3.8	16.0	14.7	5.7	13.9	13.9	2.4	14.2	12.9	3.8
Vehicles Entered	15	10	5	38	41	37	12	108	22	23	140	36
Vehicles Exited	16	10	5	39	42	38	13	110	22	23	141	36
Hourly Exit Rate	64	40	20	156	168	152	52	440	88	92	564	144
Input Volume	64	36	18	151	155	159	60	439	85	104	554	133
% of Volume	100	111	111	103	108	96	87	100	104	88	102	108

1: 4800 West & Cedar Hills Drive Performance by movement Interval #3 7:45

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.3
Total Delay (hr)	1.8
Total Del/Veh (s)	12.3
Vehicles Entered	487
Vehicles Exited	495
Hourly Exit Rate	1980
Input Volume	1958
% of Volume	101

1: 4800 West & Cedar Hills Drive Performance by movement Interval #4 8:00

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	3.2	4.1	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.2	0.2
Total Delay (hr)	0.1	0.1	0.0	0.2	0.2	0.1	0.1	0.5	0.0	0.1	0.5	0.0
Total Del/Veh (s)	21.7	27.4	4.3	17.6	15.4	5.0	13.5	14.8	2.2	14.2	12.8	2.9
Vehicles Entered	16	8	4	36	40	42	14	108	22	25	139	32
Vehicles Exited	16	8	4	37	40	41	15	107	22	25	140	31
Hourly Exit Rate	64	32	16	148	160	164	60	428	88	100	560	124
Input Volume	64	36	18	151	155	159	60	439	85	104	554	133
% of Volume	100	89	89	98	103	103	100	97	104	96	101	93

1: 4800 West & Cedar Hills Drive Performance by movement Interval #4 8:00

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.3
Total Delay (hr)	1.8
Total Del/Veh (s)	12.6
Vehicles Entered	486
Vehicles Exited	486
Hourly Exit Rate	1944
Input Volume	1958
% of Volume	99

1: 4800 West & Cedar Hills Drive Performance by movement Entire Run

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Denied Del/Veh (s)	0.3	3.1	3.9	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.2	0.2
Total Delay (hr)	0.5	0.3	0.0	0.9	0.8	0.4	0.3	2.2	0.1	0.5	2.5	0.2
Total Del/Veh (s)	23.4	29.2	4.1	18.5	16.9	7.0	15.8	16.8	2.8	15.9	15.1	3.9
Vehicles Entered	74	42	21	166	176	180	60	460	95	107	581	139
Vehicles Exited	74	42	21	166	175	180	60	460	94	106	580	139
Hourly Exit Rate	74	42	21	166	175	180	60	460	94	106	580	139
Input Volume	73	41	20	171	174	180	64	466	90	110	589	141
% of Volume	102	103	104	97	101	100	94	99	104	96	99	98

1: 4800 West & Cedar Hills Drive Performance by movement Entire Run

Movement	All
Denied Delay (hr)	0.2
Denied Del/Veh (s)	0.3
Total Delay (hr)	8.5
Total Del/Veh (s)	14.4
Vehicles Entered	2101
Vehicles Exited	2097
Hourly Exit Rate	2097
Input Volume	2119
% of Volume	99

2: North Access/Walmart Access & Cedar Hills Drive Performance by movement Interval #1 7:15

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.1		0.1	4.2	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	5.2	1.0	1.0	0.7	0.5	0.2	11.2		9.2	6.1	1.6
Vehicles Entered	6	48	3	1	108	11	9	0	6	2	194
Vehicles Exited	6	48	3	1	108	10	9	0	6	2	193
Hourly Exit Rate	24	192	12	4	432	40	36	0	24	8	772
Input Volume	29	185	11	3	449	41	30	1	29	7	785
% of Volume	83	104	109	133	96	98	120	0	83	114	98

2: North Access/Walmart Access & Cedar Hills Drive Performance by movement Interval #2 7:30

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.7	0.1	0.1	0.0	0.0	0.0	0.1		0.2	3.7	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.3
Total Del/Veh (s)	7.0	1.1	0.8	3.3	1.4	0.9	22.6		22.2	10.0	3.1
Vehicles Entered	13	68	4	1	171	17	9	0	11	4	298
Vehicles Exited	13	69	4	1	171	17	9	0	11	4	299
Hourly Exit Rate	52	276	16	4	684	68	36	0	44	16	1196
Input Volume	45	265	16	4	686	64	38	1	45	11	1175
% of Volume	116	104	100	100	100	106	95	0	98	145	102

2: North Access/Walmart Access & Cedar Hills Drive Performance by movement Interval #3 7:45

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.1		0.1	4.0	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	4.6	1.0	1.0	1.5	0.5	0.2	8.6		9.1	6.6	1.5
Vehicles Entered	6	45	4	1	112	11	7	0	8	2	196
Vehicles Exited	6	44	4	1	113	11	8	0	8	2	197
Hourly Exit Rate	24	176	16	4	452	44	32	0	32	8	788
Input Volume	29	185	11	3	449	41	30	1	29	7	785
% of Volume	83	95	145	133	101	107	107	0	110	114	100

2: North Access/Walmart Access & Cedar Hills Drive Performance by movement Interval #4 8:00

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0		0.0	0.0	0.1		0.1	4.2	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	3.8	0.9	0.6		0.5	0.3	9.1		8.6	4.9	1.4
Vehicles Entered	8	44	3	0	114	11	8	0	7	2	197
Vehicles Exited	8	45	3	0	114	12	8	0	7	2	199
Hourly Exit Rate	32	180	12	0	456	48	32	0	28	8	796
Input Volume	29	185	11	3	449	41	30	1	29	7	785
% of Volume	110	97	109	0	102	117	107	0	97	114	101

2: North Access/Walmart Access & Cedar Hills Drive Performance by movement Entire Run

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.3	0.0	0.0	0.0	0.0	0.0	0.1	5.0	0.1	4.0	0.1
Total Delay (hr)	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.5
Total Del/Veh (s)	5.7	1.0	0.8	2.0	0.8	0.5	13.5	4.9	14.2	7.5	2.1
Vehicles Entered	34	206	14	3	505	50	33	1	32	10	888
Vehicles Exited	34	206	14	3	506	50	33	1	32	10	889
Hourly Exit Rate	34	206	14	3	506	50	33	1	32	10	889
Input Volume	33	205	12	3	508	47	32	1	33	8	882
% of Volume	103	100	114	92	100	107	103	100	97	125	101

3: 4600 West & Cedar Hills Drive Performance by movement Interval #1 7:15

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.3	0.2	0.2
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	2.6	2.6	2.1	2.6	3.0	3.1	2.4	3.7	2.5	4.7	4.7	3.8
Vehicles Entered	8	31	10	1	60	1	22	1	3	11	3	35
Vehicles Exited	8	31	10	1	61	1	22	1	3	11	3	36
Hourly Exit Rate	32	124	40	4	244	4	88	4	12	44	12	144
Input Volume	38	130	35	4	260	4	89	6	11	46	13	143
% of Volume	84	95	114	100	94	100	99	67	109	96	92	101

3: 4600 West & Cedar Hills Drive Performance by movement Interval #1 7:15

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.1
Total Delay (hr)	0.2
Total Del/Veh (s)	3.1
Vehicles Entered	186
Vehicles Exited	188
Hourly Exit Rate	752
Input Volume	779
% of Volume	97

3: 4600 West & Cedar Hills Drive Performance by movement Interval #2 7:30

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.4	0.4	0.2	0.0	0.0	0.0	0.3	0.4	0.3
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	3.1	2.9	2.7	3.4	4.3	3.8	3.0	4.4	2.3	7.8	8.3	7.4
Vehicles Entered	12	52	16	1	104	2	35	2	4	20	5	56
Vehicles Exited	12	51	15	1	102	2	34	2	4	19	5	54
Hourly Exit Rate	48	204	60	4	408	8	136	8	16	76	20	216
Input Volume	58	196	54	7	399	7	136	9	16	70	20	219
% of Volume	83	104	111	57	102	114	100	89	100	109	100	99

3: 4600 West & Cedar Hills Drive Performance by movement Interval #2 7:30

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.2
Total Delay (hr)	0.4
Total Del/Veh (s)	4.6
Vehicles Entered	309
Vehicles Exited	301
Hourly Exit Rate	1204
Input Volume	1191
% of Volume	101

3: 4600 West & Cedar Hills Drive Performance by movement Interval #3 7:45

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.5	0.2	0.4	0.0	0.0	0.0	0.2	0.1	0.2
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	2.2	2.4	2.2	5.0	3.2	3.6	2.3	3.7	3.5	3.3	3.5	3.5
Vehicles Entered	10	31	8	1	62	1	22	1	2	12	3	37
Vehicles Exited	10	32	8	1	64	1	22	1	2	13	3	37
Hourly Exit Rate	40	128	32	4	256	4	88	4	8	52	12	148
Input Volume	38	130	35	4	260	4	89	6	11	46	13	143
% of Volume	105	98	91	100	98	100	99	67	73	113	92	103

3: 4600 West & Cedar Hills Drive Performance by movement Interval #3 7:45

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.1
Total Delay (hr)	0.2
Total Del/Veh (s)	3.0
Vehicles Entered	190
Vehicles Exited	194
Hourly Exit Rate	776
Input Volume	779
% of Volume	100

3: 4600 West & Cedar Hills Drive Performance by movement Interval #4 8:00

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0		0.2	0.2	0.0	0.0	0.1	0.2	0.2	0.2
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	2.1	2.5	2.3		3.1	2.8	2.6	2.8	2.8	3.9	4.6	4.0
Vehicles Entered	8	34	8	0	69	1	19	1	3	12	3	37
Vehicles Exited	8	34	8	0	68	1	19	1	3	13	3	37
Hourly Exit Rate	32	136	32	0	272	4	76	4	12	52	12	148
Input Volume	38	130	35	4	260	4	89	6	11	46	13	143
% of Volume	84	105	91	0	105	100	85	67	109	113	92	103

3: 4600 West & Cedar Hills Drive Performance by movement Interval #4 8:00

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.1
Total Delay (hr)	0.2
Total Del/Veh (s)	3.2
Vehicles Entered	195
Vehicles Exited	195
Hourly Exit Rate	780
Input Volume	779
% of Volume	100

3: 4600 West & Cedar Hills Drive Performance by movement Entire Run

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.3	0.3	0.2	0.0	0.0	0.0	0.3	0.2	0.2
Total Delay (hr)	0.0	0.1	0.0	0.0	0.3	0.0	0.1	0.0	0.0	0.1	0.0	0.2
Total Del/Veh (s)	2.5	2.7	2.4	3.0	3.6	3.4	2.7	3.2	2.9	5.4	5.7	5.1
Vehicles Entered	38	148	42	4	294	5	97	6	11	55	14	165
Vehicles Exited	38	148	41	4	295	4	97	6	11	56	14	165
Hourly Exit Rate	38	148	41	4	295	4	97	6	11	56	14	165
Input Volume	43	146	40	5	295	5	101	7	12	52	15	162
% of Volume	88	101	103	84	100	84	96	89	90	108	95	102

3: 4600 West & Cedar Hills Drive Performance by movement Entire Run

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.2
Total Delay (hr)	0.9
Total Del/Veh (s)	3.7
Vehicles Entered	879
Vehicles Exited	879
Hourly Exit Rate	879
Input Volume	882
% of Volume	100

4: 4600 West & West Access/Existing Access Performance by movement Interval #1 7:15

Movement	EBL	EBR	WBL	NBL	NBT	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.1		0.2		0.0	0.0	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	5.0	2.3	4.7		0.1		0.3	0.2	0.5
Vehicles Entered	1	1	1	0	24	0	13	1	41
Vehicles Exited	1	1	1	0	24	0	13	1	41
Hourly Exit Rate	4	4	4	0	96	0	52	4	164
Input Volume	4	2	2	1	99	2	46	4	160
% of Volume	100	200	200	0	97	0	113	100	102

4: 4600 West & West Access/Existing Access Performance by movement Interval #2 7:30

Movement	EBL	EBR	WBL	NBL	NBT	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.1		0.2		0.0	0.0	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	5.1	2.7	2.5		0.1		0.5	0.3	0.4
Vehicles Entered	1	1	1	0	38	0	20	2	63
Vehicles Exited	1	1	1	0	38	0	19	2	62
Hourly Exit Rate	4	4	4	0	152	0	76	8	248
Input Volume	5	2	3	1	151	3	73	5	243
% of Volume	80	200	133	0	101	0	104	160	102

4: 4600 West & West Access/Existing Access Performance by movement Interval #3 7:45

Movement	EBL	EBR	WBL	NBL	NBT	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.1		0.1		0.0	0.0	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.7	2.7	3.0		0.1		0.4	0.0	0.4
Vehicles Entered	1	1	1	0	23	0	10	1	37
Vehicles Exited	1	1	1	0	23	0	11	1	38
Hourly Exit Rate	4	4	4	0	92	0	44	4	152
Input Volume	4	2	2	1	99	2	46	4	160
% of Volume	100	200	200	0	93	0	96	100	95

4: 4600 West & West Access/Existing Access Performance by movement Interval #4 8:00

Movement	EBL	EBR	WBL	NBT	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)				0.1		0.0	0.0	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)				0.1		0.3	0.3	0.3
Vehicles Entered	0	0	0	22	0	11	1	34
Vehicles Exited	0	0	0	22	0	11	0	33
Hourly Exit Rate	0	0	0	88	0	44	0	132
Input Volume	4	2	2	99	2	46	4	160
% of Volume	0	0	0	89	0	96	0	82

4: 4600 West & West Access/Existing Access Performance by movement Entire Run

Movement	EBL	EBR	WBL	NBL	NBT	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.1		0.2	0.0	0.0	0.0	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.7	3.0	3.7		0.1	1.8	0.4	0.3	0.4
Vehicles Entered	4	3	3	0	106	1	54	4	175
Vehicles Exited	4	3	3	0	107	1	54	4	176
Hourly Exit Rate	4	3	3	0	107	1	54	4	176
Input Volume	4	2	2	1	112	2	53	4	181
% of Volume	94	150	133	0	96	44	102	94	97

5: North RIRO & Cedar Hills Drive Performance by movement Interval #1 7:15

Movement	EBT	EBR	WBT	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	0.4	0.2	0.5	3.9	0.5
Vehicles Entered	49	2	119	1	171
Vehicles Exited	48	2	119	1	170
Hourly Exit Rate	192	8	476	4	680
Input Volume	197	6	493	6	702
% of Volume	97	133	97	67	97

5: North RIRO & Cedar Hills Drive Performance by movement Interval #2 7:30

Movement	EBT	EBR	WBT	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0
Total Delay (hr)	0.0	0.0	0.1	0.0	0.1
Total Del/Veh (s)	0.4	0.4	1.1	3.2	0.9
Vehicles Entered	78	2	190	2	272
Vehicles Exited	78	2	189	2	271
Hourly Exit Rate	312	8	756	8	1084
Input Volume	302	9	754	7	1072
% of Volume	103	89	100	114	101

5: North RIRO & Cedar Hills Drive Performance by movement Interval #3 7:45

Movement	EBT	EBR	WBT	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	0.3	0.1	0.6	3.8	0.5
Vehicles Entered	48	1	123	1	173
Vehicles Exited	48	1	124	1	174
Hourly Exit Rate	192	4	496	4	696
Input Volume	197	6	493	6	702
% of Volume	97	67	101	67	99

5: North RIRO & Cedar Hills Drive Performance by movement Interval #4 8:00

Movement	EBT	EBR	WBT	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	0.3	0.2	0.6	2.0	0.5
Vehicles Entered	48	1	125	2	176
Vehicles Exited	48	1	126	2	177
Hourly Exit Rate	192	4	504	8	708
Input Volume	197	6	493	6	702
% of Volume	97	67	102	133	101

5: North RIRO & Cedar Hills Drive Performance by movement Entire Run

Movement	EBT	EBR	WBT	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0
Total Delay (hr)	0.0	0.0	0.1	0.0	0.1
Total Del/Veh (s)	0.4	0.3	0.8	3.0	0.7
Vehicles Entered	222	6	558	6	792
Vehicles Exited	222	6	558	6	792
Hourly Exit Rate	222	6	558	6	792
Input Volume	223	7	558	6	794
% of Volume	99	89	100	96	100

Total Zone Performance By Interval

Interval Start	7:15	7:30	7:45	8:00	All
Denied Delay (hr)	0.1	0.1	0.1	0.1	0.3
Denied Del/Veh (s)	0.4	0.5	0.4	0.4	0.4
Total Delay (hr)	2.3	4.4	2.3	2.3	11.4
Total Del/Veh (s)	14.8	20.1	14.1	14.6	17.3
Vehicles Entered	522	741	531	532	2329
Vehicles Exited	516	724	550	537	2330
Hourly Exit Rate	2064	2896	2200	2148	2330
Input Volume	7752	10780	7752	7752	8509
% of Volume	27	27	28	28	27

Intersection: 1: 4800 West & Cedar Hills Drive, Interval #1

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	
Directions Served	L	T	R	L	T	R	L	T	T	R	L	T	
Maximum Queue (ft)	72	64	33	92	114	96	53	129	103	34	86	131	
Average Queue (ft)	41	29	14	55	61	43	26	90	53	18	41	83	
95th Queue (ft)	73	63	40	97	116	90	53	139	107	36	87	137	
Link Distance (ft)	1025			450			283		283		1110		
Upstream Blk Time (%)													
Queuing Penalty (veh)													
Storage Bay Dist (ft)	75		75		60		60		180		180		170
Storage Blk Time (%)	2		1		6		8		1		0		0
Queuing Penalty (veh)	1		1		17		26		3		0		0

Intersection: 1: 4800 West & Cedar Hills Drive, Interval #1

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	110	51
Average Queue (ft)	53	24
95th Queue (ft)	110	51
Link Distance (ft)	1110	1110
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 1: 4800 West & Cedar Hills Drive, Interval #2

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	94	90	48	118	257	118	64	185	154	47	106	183
Average Queue (ft)	55	45	20	77	119	68	35	120	90	26	58	128
95th Queue (ft)	105	91	53	125	291	127	65	182	163	52	107	192
Link Distance (ft)	1025			450			283		283		1110	
Upstream Blk Time (%)	1											
Queuing Penalty (veh)	6											
Storage Bay Dist (ft)	75		75		60		60		180		170	
Storage Blk Time (%)	7	2	0	16	16	4	1		0		2	
Queuing Penalty (veh)	5	2	0	69	75	18	1		0		2	

Intersection: 1: 4800 West & Cedar Hills Drive, Interval #2

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	165	65
Average Queue (ft)	102	31
95th Queue (ft)	170	64
Link Distance (ft)	1110	1110
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 1: 4800 West & Cedar Hills Drive, Interval #3

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	
Directions Served	L	T	R	L	T	R	L	T	T	R	L	T	
Maximum Queue (ft)	71	59	33	104	132	80	53	136	101	37	72	150	
Average Queue (ft)	38	31	13	60	63	42	25	90	52	17	40	92	
95th Queue (ft)	74	63	39	107	132	88	55	147	110	37	75	156	
Link Distance (ft)	1025			450			283		283		1110		
Upstream Blk Time (%)													
Queuing Penalty (veh)													
Storage Bay Dist (ft)	75		75		60		60		180		180		170
Storage Blk Time (%)	2	0	8		6	1	0						1
Queuing Penalty (veh)	1	0	23		19	4	0						1

Intersection: 1: 4800 West & Cedar Hills Drive, Interval #3

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	124	46
Average Queue (ft)	56	26
95th Queue (ft)	122	52
Link Distance (ft)	1110	1110
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 1: 4800 West & Cedar Hills Drive, Interval #4

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	
Directions Served	L	T	R	L	T	R	L	T	T	R	L	T	
Maximum Queue (ft)	78	55	33	98	122	94	51	130	104	46	68	145	
Average Queue (ft)	42	26	13	55	64	40	26	86	56	16	38	95	
95th Queue (ft)	80	61	38	101	128	86	48	147	118	40	72	163	
Link Distance (ft)	1025			450			283		283		1110		
Upstream Blk Time (%)													
Queuing Penalty (veh)													
Storage Bay Dist (ft)	75		75		60		60		180		180		170
Storage Blk Time (%)	3		0		9		8		1		0		0
Queuing Penalty (veh)	1		0		25		23		2		0		0

Intersection: 1: 4800 West & Cedar Hills Drive, Interval #4

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	120	42
Average Queue (ft)	60	20
95th Queue (ft)	125	42
Link Distance (ft)	1110	1110
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 1: 4800 West & Cedar Hills Drive, All Intervals

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	108	95	53	118	269	120	70	191	158	62	116	194
Average Queue (ft)	44	33	15	62	77	49	28	96	63	19	44	99
95th Queue (ft)	85	72	43	110	186	102	56	158	130	42	88	168
Link Distance (ft)	1025			450			283		283		1110	
Upstream Blk Time (%)	0											
Queuing Penalty (veh)	2											
Storage Bay Dist (ft)	75		75		60		60		180		170	
Storage Blk Time (%)	3	1	0	10	9	2	0		0		1	
Queuing Penalty (veh)	2	1	0	33	36	7	0		0		1	

Intersection: 1: 4800 West & Cedar Hills Drive, All Intervals

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	173	70
Average Queue (ft)	68	25
95th Queue (ft)	140	53
Link Distance (ft)	1110	1110
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: North Access/Walmart Access & Cedar Hills Drive, Interval #1

Movement	EB	NB	NB	SB	SB
Directions Served	L	LT	R	LT	R
Maximum Queue (ft)	28	50	6	37	29
Average Queue (ft)	9	27	1	16	7
95th Queue (ft)	31	49	11	43	28
Link Distance (ft)	241		198		
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100	100		100	
Storage Blk Time (%)	0				
Queuing Penalty (veh)	0				

Intersection: 2: North Access/Walmart Access & Cedar Hills Drive, Interval #2

Movement	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	L	TR	LT	R	LT	R
Maximum Queue (ft)	43	8	44	57	9	64	35
Average Queue (ft)	22	1	10	25	1	34	11
95th Queue (ft)	49	10	84	61	10	66	38
Link Distance (ft)			287	241		198	
Upstream Blk Time (%)			0				
Queuing Penalty (veh)			0				
Storage Bay Dist (ft)	100	100			100		100
Storage Blk Time (%)			1				
Queuing Penalty (veh)			0				

Intersection: 2: North Access/Walmart Access & Cedar Hills Drive, Interval #3

Movement	EB	WB	NB	NB	SB	SB
Directions Served	L	L	LT	R	LT	R
Maximum Queue (ft)	28	3	39	3	41	29
Average Queue (ft)	10	0	23	1	23	7
95th Queue (ft)	31	5	51	7	48	26
Link Distance (ft)			241		198	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	100	100		100		100
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: North Access/Walmart Access & Cedar Hills Drive, Interval #4

Movement	EB	NB	NB	SB	SB
Directions Served	L	LT	R	LT	R
Maximum Queue (ft)	26	51	15	34	26
Average Queue (ft)	9	22	2	19	8
95th Queue (ft)	30	56	15	44	29
Link Distance (ft)		241		198	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100		100		100
Storage Blk Time (%)		0			
Queuing Penalty (veh)		0			

Intersection: 2: North Access/Walmart Access & Cedar Hills Drive, All Intervals

Movement	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	L	TR	LT	R	LT	R
Maximum Queue (ft)	45	10	44	70	21	66	35
Average Queue (ft)	13	0	2	25	1	23	8
95th Queue (ft)	37	5	40	55	11	53	31
Link Distance (ft)			287	241		198	
Upstream Blk Time (%)			0				
Queuing Penalty (veh)			0				
Storage Bay Dist (ft)	100	100			100		100
Storage Blk Time (%)			0	0			
Queuing Penalty (veh)			0	0			

Intersection: 3: 4600 West & Cedar Hills Drive, Interval #1

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	36	48	42	77
Average Queue (ft)	8	17	14	38
95th Queue (ft)	33	50	47	74
Link Distance (ft)	310	989	394	774
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: 4600 West & Cedar Hills Drive, Interval #2

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	61	83	47	122
Average Queue (ft)	22	46	23	66
95th Queue (ft)	62	86	52	127
Link Distance (ft)	310	989	394	774
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: 4600 West & Cedar Hills Drive, Interval #3

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	32	56	38	57
Average Queue (ft)	7	24	11	34
95th Queue (ft)	32	65	38	62
Link Distance (ft)	310	989	394	774
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: 4600 West & Cedar Hills Drive, Interval #4

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	36	52	40	70
Average Queue (ft)	11	21	16	37
95th Queue (ft)	37	57	46	74
Link Distance (ft)	310	989	394	774
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: 4600 West & Cedar Hills Drive, All Intervals

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	65	86	61	127
Average Queue (ft)	12	27	16	44
95th Queue (ft)	43	69	46	91
Link Distance (ft)	310	989	394	774
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: 4600 West & West Access/Existing Access, Interval #1

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	28	20	3
Average Queue (ft)	7	5	0
95th Queue (ft)	28	22	7
Link Distance (ft)	217	104	394
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: 4600 West & West Access/Existing Access, Interval #2

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	30	12
Average Queue (ft)	9	3
95th Queue (ft)	31	16
Link Distance (ft)	217	104
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: 4600 West & West Access/Existing Access, Interval #3

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	30	14
Average Queue (ft)	8	3
95th Queue (ft)	29	18
Link Distance (ft)	217	104
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: 4600 West & West Access/Existing Access, Interval #4

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	15	9
Average Queue (ft)	3	1
95th Queue (ft)	19	9
Link Distance (ft)	217	104
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: 4600 West & West Access/Existing Access, All Intervals

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	31	29	3
Average Queue (ft)	7	3	0
95th Queue (ft)	27	17	3
Link Distance (ft)	217	104	394
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: North RIRO & Cedar Hills Drive, Interval #1

Movement	NB
Directions Served	R
Maximum Queue (ft)	21
Average Queue (ft)	5
95th Queue (ft)	24
Link Distance (ft)	181
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: North RIRO & Cedar Hills Drive, Interval #2

Movement	WB	NB
Directions Served	T	R
Maximum Queue (ft)	5	30
Average Queue (ft)	1	8
95th Queue (ft)	11	30
Link Distance (ft)	310	181
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: North RIRO & Cedar Hills Drive, Interval #3

Movement	NB
Directions Served	R
Maximum Queue (ft)	27
Average Queue (ft)	5
95th Queue (ft)	23
Link Distance (ft)	181
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: North RIRO & Cedar Hills Drive, Interval #4

Movement	NB
Directions Served	R
Maximum Queue (ft)	27
Average Queue (ft)	6
95th Queue (ft)	25
Link Distance (ft)	181
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: North RIRO & Cedar Hills Drive, All Intervals

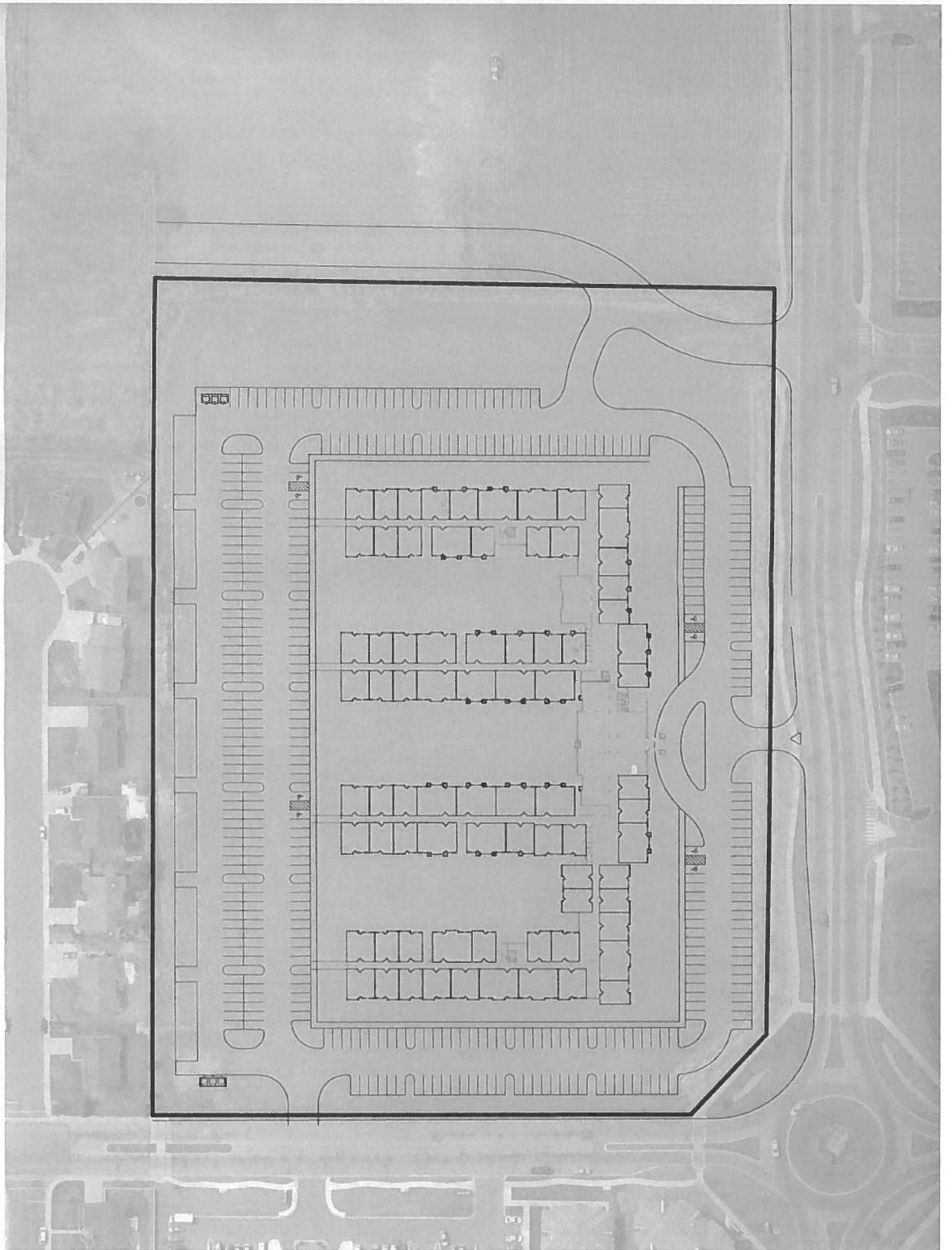
Movement	WB	NB
Directions Served	T	R
Maximum Queue (ft)	5	30
Average Queue (ft)	0	6
95th Queue (ft)	6	26
Link Distance (ft)	310	181
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Zone Summary

Zone wide Queuing Penalty, Interval #1: 48
Zone wide Queuing Penalty, Interval #2: 180
Zone wide Queuing Penalty, Interval #3: 48
Zone wide Queuing Penalty, Interval #4: 52
Zone wide Queuing Penalty, All Intervals: 82

APPENDIX C

Site Plan



APPENDIX D

95th Percentile Queue Length Reports

SimTraffic Queueing Report

Project: Cedar Hills - Senior Living Facility TIS

Time Period: a.m. peak hour

95th Percentile Queue Length (feet)



Project #: UT-14-558

Intersection	Time Period	EB			NB			SB			WB						
		L	LTR	R	T	L	LTR	R	T	L	LT	LTR	R	T	TR		
4600 West & Cedar Hills Blvd	Existing 2014 Conditions	--	38	--	--	45	--	--	--	--	91	--	--	68	--	--	
4600 West & Existing Access	Existing 2014 Conditions	--	--	--	--	--	--	--	4	--	--	--	15	--	--	--	
4800 West & Cedar Hills Blvd	Existing 2014 Conditions	90	--	42	69	60	--	43	144	84	--	54	155	108	--	100	
Cedar Hills Blvd & Walmart Access	Existing 2014 Conditions	34	--	--	--	--	--	--	--	52	--	26	--	--	--	--	5

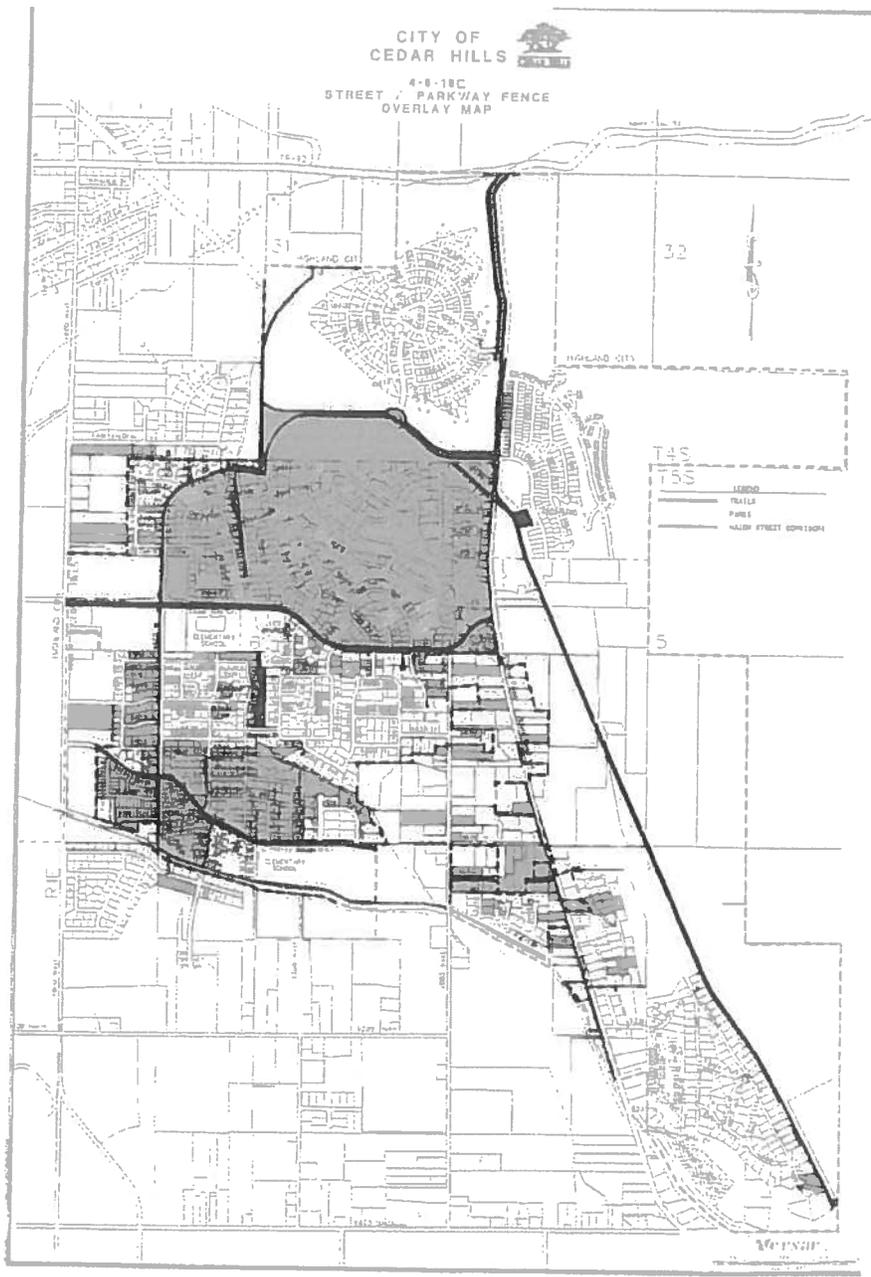


CITY OF CEDAR HILLS

TO:	Planning Commission
FROM:	Chandler Goodwin, Assistant City Manager
DATE:	2/27/2014

Planning Commission Agenda Item

SUBJECT:	Discussion on City Code 10-5-18F, Fences
APPLICANT PRESENTATION:	N/A
STAFF PRESENTATION:	Chandler Goodwin, Assistant City Manager
BACKGROUND AND FINDINGS: City Council has recommended to the Planning Commission that they consider modifying current City Code regarding fencing along a park trail. Current code requires that fencing along trails be open fencing. (Open is defined as 40%) Residents have expressed interest in having private fencing options along the trail corridors, specifically Sugarloaf. The open fencing provision was originally passed to allow for more visibility and as a result increase safety along the trail. However there are sections of trail that border main roads, such as Canyon Road, that a private fence would still leave the trail corridor visible. Council would like Planning Commission to consider modifying the code to allow more private fencing in these areas of the trail corridor.	
PREVIOUS LEGISLATIVE ACTION: N/A	
FISCAL IMPACT: N/A	
SUPPORTING DOCUMENTS: Street/Parkway Fence Overlay Map	
RECOMMENDATION: Staff recommends that the Planning Commission consider language to modify the current code to allow for private fencing along portions of the Trail corridor.	
MOTION: No motion necessary, discussion item only.	



(Ord. 4-16-2002A, 4-16-2002)



CITY OF CEDAR HILLS

TO:	Planning Commission
FROM:	Chandler Goodwin, Assistant City Manager
DATE:	2/27/2014

Planning Commission Agenda Item

SUBJECT:	Discussion on the SC-1 Commercial Zone
APPLICANT PRESENTATION:	N/A
STAFF PRESENTATION:	Chandler Goodwin, Assistant City Manager
BACKGROUND AND FINDINGS:	<p>As we begin to discuss potential development in the SC-1 zone, we would like to have a discussion on the proposed layout provided by Blu Line Design and Doug Young. Currently the proposal has a movie theatre, as well as retail and restaurant pads. As we consider development in this area, the impact on the neighboring residential community needs to be considered, and balanced against the goals of the City as a whole.</p>
PREVIOUS LEGISLATIVE ACTION:	N/A
FISCAL IMPACT:	N/A
SUPPORTING DOCUMENTS:	Proposal from Blu Line
RECOMMENDATION:	N/A
MOTION:	No motion necessary, discussion item only.