

# BURY

## TRAFFIC IMPACT ANALYSIS REPORT

*Austin Oaks  
Austin, Travis County, Texas  
C814-2014-0120*

*June 26, 2014  
Revised August 19, 2014  
Revised May 22, 2015*

TBPE #F-1048



LET'S SOLVE IT.

## TABLE OF CONTENTS

## PAGE

Certification Statement .....	3
Executive Summary .....	4
Findings and Recommendations .....	12
Introduction .....	17
Study Purpose and Objective .....	17
Study Methodology .....	18
Data Collection of Roadway System .....	19
Trip Generation .....	20
Site Traffic .....	20
Background Traffic .....	22
Trip Distribution .....	23
Trip Assignment .....	24
Analysis .....	24
Intersection Operational Analysis .....	24
Neighborhood Traffic Study .....	31
Study Purpose .....	31
Analysis .....	32
Roadway Capacity Analysis .....	33
Findings and Recommendations .....	35
References .....	40

## EXECUTIVE SUMMARY

The purpose of this report is to summarize the findings of the Traffic Impact Analysis (TIA) performed by Bury, Inc. (Bury) for the proposed Austin Oaks development which is planned to be fully constructed by 2031. The proposed development will be located at the southwest corner of Spicewood Springs Road and Loop 1 (Mopac) in Austin, Travis County, Texas. A Site Location Map of the proposed development is included as *Exhibit 1* and a Conceptual Plan is included as *Exhibit 2* within the Appendix of this report.

The Austin Oaks site is currently fully developed and occupied with office land uses. The proposed redevelopment of the existing site will serve as a more mixed use development providing restaurant, residential, and office land uses. Given the current occupancy of the development, the redevelopment of Austin Oaks will occur in various phases of construction through the next 17 years. For the purposes of this TIA, the development has been analyzed in four (4) major build-out conditions: 2018, 2023, 2028, and 2031. Based on the proposed land use intensities, it is anticipated that the development will generate a total of 19,819 unadjusted daily trips; however, due to the existing office land uses, the proposed redevelopment is anticipated to generate a net increase of 15,701 unadjusted daily trips. This is taking into consideration the trips which already exist on the roadway network due to the existing development. A summary of the proposed phasing, land uses, and intensities can be seen within the Table 1 below. The Trip Generation Output is included as *Exhibit 3* within the Appendix of this report.



TABLE 1- SUMMARY OF UNADJUSTED DAILY AND PEAK HOUR TRIP GENERATION

ITE Code	Land Use	Size		24-Hour Two-Way Volume	AM Peak Hour			PM Peak Hour		
					Enter	Exit	Total	Enter	Exit	Total
Existing Development										
710	General Office	450,000	SF	4,118	561	76	637	99	483	582
Existing Subtotal				4118	561	76	637	99	483	582
Phase I 2018 Block C										
710	General Office Building	252,800	SF	2,657	354	48	402	62	300	362
932	High Turnover (Sit-Down) Restaurant	30,000	SF	3,815	178	146	324	178	118	296
Phase I Subtotal				6,472	532	194	726	240	418	658
Phase II 2023 Block E										
710	General Office Building	320,000	SF	3,178	427	58	485	74	363	437
932	High Turnover (Sit-Down) Restaurant	10,844	SF	1,378	64	53	117	64	43	107
Phase II Subtotal				4,556	491	111	602	138	406	544
Phase III 2028 Block A										
710	General Office Building	336,520	SF	3,302	444	61	505	77	378	455
932	High Turnover (Sit-Down) Restaurant	29,000	SF	3,687	172	141	313	172	114	286
Phase III Subtotal				6,989	616	202	818	249	492	741
Phase IV 2031 Block G										
220	Apartment	277	DU	1,802	28	111	139	111	59	170
Phase IV Subtotal				1,802	28	111	139	111	59	170
Total Proposed Development				19,819	1,667	618	2,285	738	1,375	2,113
Net Increase of Trips				15,701	1,106	542	1,648	639	892	1,531

As agreed upon during the scoping process, reductions were taken for internal circulation to account for persons using the same trip for multiple land-uses (an individual working in an office and dining at a restaurant within the same development, for example). Pass-by reductions were allowed for the various land-uses in which pass-by reductions are available. Transit reductions were not applied due to the lack of public transportation within close proximity to this property. As a result, Table 2 summarizes the total number of trips with regard to impact on the adjacent roadway network with these reductions in mind.

TABLE 2- SUMMARY OF ADJUSTED DAILY AND PEAK HOUR TRIP GENERATION

ITE Code	Land Use	Size	24-Hour Two-Way Volume	AM Peak Hour			PM Peak Hour			
				Enter	Exit	Total	Enter	Exit	Total	
Existing Development										
710	General Office	450,000	SF	3,912	533	72	605	94	459	553
Existing Subtotal				3912	533	72	605	94	459	553
Phase I 2018										
710	General Office Building	252,800	SF	2,524	336	46	382	59	285	344
932	High Turnover (Sit-Down) Restaurant	30,000	SF	2,804	169	139	308	93	61	154
Phase I Subtotal				5,328	505	184	690	151	346	498
Phase II 2023										
710	General Office Building	320,000	SF	3,019	406	55	461	70	345	415
932	High Turnover (Sit-Down) Restaurant	10,844	SF	1,013	61	50	111	33	22	56
Phase II Subtotal				4,032	466	105	572	104	367	471
Phase III 2028										
710	General Office Building	336,520	SF	3,137	422	58	480	73	359	432
932	High Turnover (Sit-Down) Restaurant	29,000	SF	2,710	163	134	297	89	59	149
Phase III Subtotal				5,847	585	192	777	163	418	581
Phase IV 2031										
220	Apartment	277	DU	1,712	27	105	132	105	56	162
Phase IV Subtotal				1,712	27	105	132	105	56	162
Total Proposed Development				16,919	1,584	587	2171	523	1,188	1,711
Net Increase of Trips				13,007	1,051	515	1566	429	729	1,158

Based on the Scoping Agreement with the City of Austin, the TIA analyzed 16 existing intersections and 11 proposed driveways which have been identified in Table 3, below. Table 3 summarizes the operations at each intersection under the Existing, Forecasted (future, no-build with Background Traffic), and Site+Forecasted (future, build) conditions for each of the phases. Additionally, Table 3 represents the intersections as they would perform as they exist today, with no improvements.



TABLE 3- SUMMARY OF INTERSECTION LE

Intersection	2014		2018		2018		2023	
	Existing		Forecasted		Site + Forecasted		Forecasted	
	AM	PM	AM	PM	AM	PM	AM	PM
Far West Boulevard & Hart Lane	D	D	D	D	E	D	F	
	51.6	36.2	54.9	36.7	55.5	36.9	80.8	3
Far West Boulevard & Wood Hollow Drive	D	D	D	D	D	D	D	
	42.1	42.1	43.4	43.4	43.6	43.5	48.9	5
Far West Boulevard & Mopac SB FR	C	E	C	F	C	F	D	
	24.8	77.5	28.0	96.5	28.2	96.5	35.9	12
Far West Boulevard & Mopac NB FR	B	E	C	E	C	E	C	
	19.2	67.3	20.9	68.8	20.6	69.1	22.1	6
Spicewood Springs Road & Mopac SB FR	F	F	F	F	F	F	F	
	118.8	88.3	151.1	110.9	159.4	114.8	199.6	14
Spicewood Springs Road & Mopac NB FR	D	E	E	E	E	F	F	
	53.8	61.0	67.7	77.8	75.8	81.9	98.5	18
Spicewood Springs Road & Wood Hollow Drive / Private Driveway	D	C	E	C	E	C	F	
	46.2	23.7	60.3	24.9	73.9	25.9	94.0	3
Steck Avenue & Mopac SB FR	E	F	F	F	F	F	F	
	65.0	99.7	132.8	167.0	134.2	168.0	181.2	2
Steck Avenue & Mopac NB FR	C	D	D	F	D	F	E	
	28.2	53.2	47.9	94.6	48.6	94.6	62.4	12
Greystone Drive & Hart Lane	C	B	C	C	D	C	E	
	18.2	14.3	23.6	16.7	25.4	17.1	36.9	2
Greystone Drive & Wood Hollow Drive	B	C	B	C	B	C	C	
	11.3	16.7	12.4	21.0	13.0	21.7	15.1	3

## ION LEVEL OF SERVICE AND DELAY

2023	2023		2028		2028		2031		2031	
Forecasted	Site + Forecasted		Forecasted		Site + Forecasted		Forecasted		Site + Forecasted	
PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
LOS										
Delay (s)										
D	F	D	F	D	F	D	F	D	F	D
36.2	82.1	36.5	103.9	36.5	110.7	42.3	126.9	44.3	131.0	45.1
D	D	D	E	E	E	E	E	E	E	E
50.0	49.3	51.0	57.3	60.6	59.7	60.7	69.3	70.4	69.8	70.5
F	D	F	D	F	D	F	E	F	E	F
124.2	36.4	130.4	47.1	165.9	47.4	177.5	55.3	200.5	55.6	201.7
E	C	E	C	F	C	F	C	F	C	F
68.3	22.1	79.6	24.6	117.6	24.7	143.6	27.6	171.4	27.9	174.3
F	F	F	F	F	F	F	F	F	F	F
142.9	206.4	154.9	261.6	195.5	278.3	225.7	313.0	252.9	318.0	255.6
F	F	F	F	F	F	F	F	F	F	F
101.6	108.6	104.3	130.5	123.6	148.5	136.6	167.1	147.7	169.5	159.6
C	F	C	F	C	F	D	F	D	F	D
32.4	120.9	34.6	157.4	32.0	265.4	38.8	314.1	45.2	321.6	48.3
F	F	F	F	F	F	F	F	F	F	F
212.7	183.6	212.6	237.8	262.3	249.5	262.1	287.0	295.1	286.9	295.5
F	E	F	E	F	F	F	F	F	F	F
123.8	64.0	123.4	79.1	158.2	87.0	158.7	98.1	184.8	98.6	185.2
C	E	C	E	E	F	E	F	E	F	E
23.3	37.8	24.4	43.1	37.9	52.0	41.4	56.1	46.6	56.3	47.8
D	C	D	C	E	C	E	D	E	D	E
31.6	16.0	33.3	19.7	40.2	22.0	42.5	26.6	46.6	27.2	46.8



CONTINUED

Intersection		2014		2018		2018			
		Existing		Forecasted		Site + Forecasted		For	
		AM	PM	AM	PM	AM	PM	AM	
Greystone Drive & Mopac SB FR	EB	F	D	F	E	F	F	F	
		220.2	33.9	366.1	49.6	386.4	51.4	644.9	
Executive Center Drive & Mopac SB FR	EB	C	C	C	D	E	E	F	
		21.2	24.2	24.0	30.8	43.9	37.0	72.7	
Executive Center Drive & Wood Hollow Drive	EB	C	C	C	D	D	E	E	
		19.8	24.5	23.2	34.5	31.2	44.6	44.9	
	WB	B	B	C	C	C	C	D	
		13.5	14.8	17.8	18.0	23.3	19.6	29.9	
Executive Center Drive & Hart Lane	WB	B	B	B	B	B	B	B	
		11.4	12.5	11.6	13.3	13.0	13.8	13.9	
Spicewood Springs Road & Hart Lane	NB	F	F	F	F	F	F	F	
		4068.6	466.5	4113.0	4549.6	4211.5	4574.5	4219.9	
Executive Center Drive & Driveway 1	NB	-	-	-	-	A	A	A	
		-	-	-	-	0.0	0.0	0.0	
Executive Center Drive & Driveway 2	SB	-	-	-	-	B	A	B	
		-	-	-	-	10.2	9.2	10.5	
Executive Center Drive & Driveway 3	NB	-	-	-	-	A	A	A	
		-	-	-	-	0.0	0.0	0.0	
Executive Center Drive & Driveway 4	SB	-	-	-	-	A	A	A	
		-	-	-	-	8.5	8.3	8.6	
Executive Center Drive & Driveway 5	SB	-	-	-	-	A	A	A	
		-	-	-	-	0.0	0.0	0.0	
Executive Center Drive & Driveway 6	SB	-	-	-	-	A	A	A	
		-	-	-	-	0.0	0.0	0.0	
Executive Center Drive & Driveway 7	NB	-	-	-	-	A	A	A	
		-	-	-	-	0.0	0.0	0.0	
Executive Center Drive & Driveway 8	SB	-	-	-	-	A	A	A	
		-	-	-	-	0.0	0.0	0.0	
Executive Center Drive & Driveway 9	NB	-	-	-	-	A	A	A	
		-	-	-	-	0.0	0.0	0.0	
Executive Center Drive & Driveway 10	WB	-	-	-	-	B	B	C	
		-	-	-	-	14.6	12.1	15.9	
Wood Hollow Drive & Driveway 11	EB					A	A	A	
						0.0	0.0	0.0	
	WB	-	-	-	-	A	B	B	
		-	-	-	-	10.0	10.7	10.2	



NUED

2023		2023		2028		2028		2031		2031	
Forecasted		Site + Forecasted		Forecasted		Site + Forecasted		Forecasted		Site + Forecasted	
AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
LOS											
Delay (s)											
F	F	F	F	F	F	F	F	F	F	F	F
44.9	98.3	663.5	114.6	>9999.9	225.0	>9999.9	279.4	>9999.9	393.7	>9999.9	408.7
F	F	F	F	F	F	F	F	F	F	F	F
7.7	62.0	174.8	156.0	335.7	282.2	778.6	588.8	>9999.9	743.9	>9999.9	835.6
E	F	F	F	F	F	F	F	F	F	F	F
44.9	82.5	255.8	419.2	537.8	748.1	>9999.9	>9999.9	>9999.9	>9999.9	>9999.9	>9999.9
D	C	F	E	F	F	F	F	F	F	F	F
23.9	23.5	184.1	49.2	>9999.9	118.3	>9999.9	>9999.9	>9999.9	>9999.9	>9999.9	>9999.9
B	C	C	C	C	C	E	F	F	F	F	F
13.9	15.1	15.0	16.4	16.9	19.1	38.0	62.2	54.2	96.1	88.0	124.0
F	F	F	F	F	F	F	F	F	F	F	F
419.9	4580.3	4307.9	4679.1	4329.4	4693.6	4065.9	4529.2	4107.1	4552.0	4086.5	4541.0
A	A	B	B	B	B	C	B	C	B	C	C
0.0	0.0	13.3	10.8	14.3	11.2	20.0	13.5	21.7	14.2	23.9	15.1
B	A	B	B	B	B	C	B	C	B	C	B
10.5	9.3	11.7	10.1	12.2	10.3	18.0	11.7	19.4	12.0	21.4	12.5
A	A	B	A	B	A	C	B	C	B	C	B
0.0	0.0	11.1	9.6	11.5	9.7	15.1	10.9	16.0	11.1	17.3	11.5
A	A	A	A	A	A	B	A	B	A	B	A
1.6	8.4	8.6	8.8	8.6	8.8	10.4	8.9	10.5	8.9	10.6	9.0
A	A	A	A	A	A	C	B	C	B	C	C
0.0	0.0	0.0	0.0	0.0	0.0	17.8	12.9	18.9	13.2	21.1	15.1
A	A	A	A	A	A	C	B	C	B	C	C
0.0	0.0	0.0	0.0	0.0	0.0	19.1	14.1	20.9	14.9	24.7	20.0
A	A	A	A	A	A	A	A	A	A	B	A
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.6	9.0
A	A	A	A	A	A	B	A	B	A	B	A
0.0	0.0	0.0	0.0	0.0	0.0	14.2	9.7	14.9	9.8	11.7	9.9
A	A	A	A	A	A	A	A	A	A	B	B
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.7	10.5
C	B	C	B	C	B	D	C	E	C	E	C
5.9	12.7	17.8	14.0	19.7	14.9	33.5	18.3	43.8	19.5	48.0	21.0
A	A	A	A	A	A	F	D	F	D	F	D
0.0	0.0	0.0	0.0	0.0	0.0	77.9	26.0	120.5	28.8	135.7	31.6
B	B	B	B	B	B	B	B	B	B	B	C
11.2	11.0	10.5	11.8	10.8	12.4	11.2	14.3	11.5	14.9	11.7	15.1

In order to mitigate the impacts to the various intersections which are failing, improvements have been evaluated for the failing intersections. Additionally, a discussion of these improvements can be found in the Findings and Recommendations. **Table 4** below provides a summary of the Level of Service (LOS) grade and delay for the intersections in which improvements have been implemented for AM and PM peak periods.



TABLE 4- INTERSECTION LEVEL OF SERVICE

Intersection	2014		2018		2018		2023	
	Existing		Site + Forecasted		Site + Forecasted w/Imps		Site + Forecast	
	AM	PM	AM	PM	AM	PM	AM	PM
Far West Boulevard & Hart Lane	D	D	E	D	D	C	F	D
	51.6	36.2	55.5	36.9	42.7	26.6	82.1	36.9
Far West Boulevard & Wood Hollow Drive	D	D	D	D	D	C	D	D
	42.1	42.1	43.6	43.5	36.8	32.6	49.3	51.0
Far West Boulevard & Mopac SB FR	C	E	C	F	B	C	D	F
	24.8	77.5	28.2	96.5	15.8	22.2	36.4	130.0
Far West Boulevard & Mopac NB FR	B	E	C	E	C	D	C	E
	19.2	67.3	20.6	69.1	29.5	35.2	22.1	79.0
Spicewood Springs Road & Mopac SB FR	F	F	F	F	F	E	F	F
	118.8	88.3	159.4	114.8	91.9	63.8	206.4	154.0
Spicewood Springs Road & Mopac NB FR	D	E	E	F	D	E	F	F
	53.8	61.0	75.8	81.9	49.9	66.7	108.6	104.0
Spicewood Springs Road & Wood Hollow Drive / Private Driveway	D	C	E	C	E	C	F	C
	46.2	23.7	73.9	25.9	66.4	20.5	120.9	34.0
Steck Avenue & Mopac SB FR	E	F	F	F	F	F	F	F
	65.0	99.7	134.2	168.0	123.0	100.5	183.6	212.0
Steck Avenue & Mopac NB FR	C	D	D	F	D	F	E	F
	28.2	53.2	48.6	94.6	49.5	106.1	64.0	123.0
Greystone Drive & Hart Lane	C	B	D	C	D	C	E	C
	18.2	14.3	25.4	17.1	25.4	17.1	37.8	24.0
Greystone Drive & Wood Hollow Drive	B	C	B	C	B	C	C	D
	11.3	16.7	13.0	21.7	13.0	21.7	16.0	33.0
*Spicewood Springs Road & Hart Lane	F	F	F	F	B	B	F	F
	4068.6	466.5	4211.5	4574.5	13.3	11.4	4307.9	4679.0

\* Signalized as an Improvement

## PRICE AND DELAY WITH IMPROVEMENTS

	2023		2028		2028		2031		2031	
Forecasted	Site + Forecasted w/Imps		Site + Forecasted		Site + Forecasted w/Imps		Site + Forecasted		Site + Forecasted w/Imps	
PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
LOS										
Delay (s)										
D	D	C	F	D	F	C	F	D	F	D
36.5	54.0	29.6	110.7	42.3	81.0	32.8	131.0	45.1	97.3	35.7
D	D	D	E	E	D	C	E	E	D	D
51.0	36.4	39.6	59.7	60.7	46.4	33.4	69.8	70.5	49.8	35.3
F	B	D	D	F	B	D	E	F	B	D
130.4	17.8	35.8	47.4	177.5	14.0	39.9	55.6	201.7	17.9	46.6
E	C	E	C	F	C	E	C	F	D	E
79.6	30.6	65.6	24.7	143.6	28.1	66.6	27.9	174.3	35.8	66.8
F	F	F	F	F	F	F	F	F	F	F
154.9	123.2	97.5	278.3	225.7	179.3	193.9	318.0	255.6	207.0	160.3
F	E	E	F	F	F	F	F	F	F	F
104.3	67.7	79.1	148.5	136.6	94.9	133.8	169.5	159.6	112.9	127.7
C	F	C	F	D	F	C	F	D	F	C
34.6	108.7	22.9	265.4	38.8	204.5	22.8	321.6	48.3	233.4	25.0
F	F	F	F	F	F	F	F	F	F	F
212.6	166.0	149.7	249.5	262.1	237.2	183.9	286.9	295.5	280.3	207.8
F	E	F	F	F	F	F	F	F	F	F
123.4	63.0	134.6	87.0	158.7	87.0	174.9	98.6	185.2	96.1	199.4
C	C	B	F	E	C	C	F	E	D	C
24.4	16.8	12.6	52.0	41.4	23.1	15.2	56.3	47.8	28.6	17.1
D	C	D	C	E	C	C	D	E	C	C
33.3	16.0	33.3	22.0	42.5	17.7	19.3	27.2	46.8	20.8	22.4
F	B	B	F	F	B	B	F	F	B	B
4679.1	11.7	13.5	4065.9	4529.2	13.3	15.3	4086.5	4541.0	15.8	16.4



CONTINUE

Intersection		2014		2018		2018		20
		Existing		Site + Forecasted		Site + Forecasted w/Imps		Site + Fo
		AM	PM	AM	PM	AM	PM	AM
Greystone Drive & Mopac SB FR	EB	F	D	F	F	F	F	F
		220.2	33.9	386.4	51.4	386.4	51.4	663.5
Executive Center Drive & Mopac SB FR	EB	C	C	E	E	D	D	F
		21.2	24.2	43.9	37.0	34.8	32.8	174.8
Executive Center Drive & Wood Hollow Drive	EB	C	C	D	E	A	A	F
		19.8	24.5	31.2	44.6	5.3	6.2	255.8
	WB	B	B	C	C	A	A	F
		13.5	14.8	23.3	19.6	3.4	5.4	184.1
	NB	-	-	-	-	A	B	-
		-	-	-	-	6.5	10.1	-
	SB	-	-	-	-	A	A	-
		-	-	-	-	5.1	4.4	-
Executive Center Drive & Hart Lane	WB	B	B	B	B	B	B	C
		11.4	12.5	13.0	13.8	13.0	13.8	15.0
Executive Center Drive & Driveway 1	NB	-	-	A	A	A	A	B
		-	-	0.0	0.0	0.0	0.0	13.3
Executive Center Drive & Driveway 2	SB	-	-	B	A	B	A	B
		-	-	10.2	9.2	10.2	9.2	11.7
Executive Center Drive & Driveway 3	NB	-	-	A	A	A	A	B
		-	-	0.0	0.0	0.0	0.0	11.1
Executive Center Drive & Driveway 4	SB	-	-	A	A	A	A	A
		-	-	8.5	8.3	8.5	8.3	8.6
Executive Center Drive & Driveway 5	SB	-	-	A	A	A	A	A
		-	-	0.0	0.0	0.0	0.0	0.0
Executive Center Drive & Driveway 6	SB	-	-	A	A	A	A	A
		-	-	0.0	0.0	0.0	0.0	0.0
Executive Center Drive & Driveway 7	NB	-	-	A	A	A	A	A
		-	-	0.0	0.0	0.0	0.0	0.0
Executive Center Drive & Driveway 8	SB	-	-	A	A	A	A	A
		-	-	0.0	0.0	0.0	0.0	0.0
Executive Center Drive & Driveway 9	NB	-	-	A	A	A	A	A
		-	-	0.0	0.0	0.0	0.0	0.0
Executive Center Drive & Driveway 10	WB	-	-	B	B	B	B	C
		-	-	14.6	12.1	14.5	12.1	17.8
Wood Hollow Drive & Driveway 11	EB			A	A	A	A	A
				0.0	0.0	0.0	0.0	0.0
	WB	-	-	A	B	A	B	B
		-	-	10.0	10.7	10.0	10.7	10.5

UED

2023		2023		2028		2028		2031		2031	
Forecasted		Site + Forecasted w/Imps		Site + Forecasted		Site + Forecasted w/Imps		Site + Forecasted		Site + Forecasted w/Imps	
	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
LOS											
Delay (s)											
	F	F	F	F	F	F	F	F	F	F	F
	114.6	663.5	114.6	>9999.9	279.4	>9999.9	279.4	>9999.9	408.7	>9999.9	408.7
	F	F	F	F	F	F	F	F	F	F	F
	156.0	103.8	124.5	778.6	588.8	523.8	505.1	>9999.9	835.6	>9999.9	705.1
	F	A	A	F	F	C	F	F	F	F	F
	419.2	7.6	7.4	>9999.9	>9999.9	22.5	105.2	>9999.9	>9999.9	96.2	181.5
	E	A	A	F	F	F	C	F	F	F	F
	49.2	2.7	3.2	>9999.9	>9999.9	97.3	17.8	>9999.9	>9999.9	197.9	61.3
	-	A	B	-	-	C	F	-	-	F	F
	-	8.0	12.0	-	-	19.8	153.6	-	-	50.5	284.8
	-	A	A	-	-	E	A	-	-	F	A
	-	7.0	5.1	-	-	44.5	5.4	-	-	72.0	5.3
	C	C	C	E	F	C	C	F	F	D	C
	16.4	15.0	16.4	38.0	62.2	20.4	18.9	88.0	124.0	28.3	22.4
	B	B	B	C	B	C	B	C	C	C	C
	10.8	13.3	10.8	20.0	13.5	20.0	13.5	23.9	15.1	23.9	15.1
	B	B	B	C	B	C	B	C	B	C	B
	10.1	11.7	10.1	18.0	11.7	18.0	11.7	21.4	12.5	21.4	12.5
	A	B	A	C	B	C	B	C	B	C	B
	9.6	11.1	9.6	15.1	10.9	15.1	10.9	17.3	11.5	17.3	11.5
	A	A	A	B	A	B	A	B	A	B	A
	8.8	8.6	8.8	10.4	8.9	10.4	8.9	10.6	9.0	10.6	9.0
	A	A	A	C	B	C	B	C	C	C	C
	0.0	0.0	0.0	17.8	12.9	17.8	12.8	21.1	15.1	21.0	15.0
	A	A	A	C	B	C	B	C	C	C	C
	0.0	0.0	0.0	19.1	14.1	19.1	14.1	24.7	20.0	24.7	20.0
	A	A	A	A	A	A	A	B	A	B	A
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.6	9.0	10.6	9.0
	A	A	A	B	A	B	A	B	A	B	A
	0.0	0.0	0.0	14.2	9.7	14.2	9.7	11.7	9.9	11.7	9.9
	A	A	A	A	A	A	A	B	B	B	B
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.7	10.5	11.7	10.5
	B	C	B	D	C	C	C	E	C	E	C
	14.0	17.6	13.9	33.5	18.3	24.4	18.1	48.0	21.0	47.4	20.7
	A	A	A	F	D	F	D	F	D	F	D
	0.0	0.0	0.0	77.9	26.0	86.5	25.9	135.7	31.6	193.5	31.5
	B	B	B	B	B	B	B	B	C	B	C
	11.8	10.5	11.8	11.2	14.3	11.2	14.3	11.7	15.1	11.7	15.1



## FINDINGS AND RECOMMENDATIONS

Upon completing the analysis for the roadway network, it became evident that with the anticipated future growth of the area and the proposed development, improvements will be needed in order to mitigate the degradation of specific intersections. The intersections identified below will require traffic improvements to improve the LOS. All other intersections perform at an acceptable LOS and do not require any improvements. The recommended improvements, when constructed, adequately mitigate the traffic created by the proposed development.

### Far West Boulevard and Hart Lane

The intersection of Far West Boulevard and Hart Lane currently performs at acceptable LOS until the 2023 Forecasted AM Peak condition at which it operates at a LOS F. In order to mitigate the failing condition of the intersection, the following improvements are recommended:

- Revise the Southbound Approach lane configuration to provide exclusive left, thru, and shared thru-right lanes. This would provide three southbound movements; therefore the Southbound Approach would be revised to only provide one (1) northbound receiving lane. The Northbound Approach would then be revised to provide thru-left and right-turn lanes.
- Convert the split phasing on the North and Southbound Approach to a permissive phase on the Northbound and a Permissive+Protected phase on the Southbound Approach.

With the addition of these improvements, the LOS for this intersection improves through the 2023 conditions, however the AM begins to fail during the 2028 conditions. No additional improvements can be recommended at this time due to right-of-way (ROW) constraints and the physical limitations of mature trees.

### Far West Boulevard and Wood Hollow Drive

The intersection of Far West Boulevard and Wood Hollow Drive currently operates at an acceptable LOS until the 2028 Forecasted condition at which it operates at a LOS E. In order to mitigate the failing condition of the intersection, the following improvements are recommended:

- The addition of second northbound right-turn lane which would ultimately provide a left, thru, right, and right-turn lanes for the Northbound Approach.
- Provide left-turn Permissive+Protected phase for the North and Southbound Approaches.

The recommended signal phasing for the northbound and southbound approaches have been incorporated starting with 2028 Site+Forecasted condition; with this mitigation measure the intersection will operate at an acceptable LOS on all conditions. No additional improvements are recommended at this time.

### Far West Boulevard and Mopac

The diamond interchange of Far West Boulevard and Mopac currently operates at an acceptable level of service during the AM Peak Hour, but is failing during the PM Peak Hour. This condition continues until the final phase of the development is constructed in 2031. At the 2031 condition, the intersections begin to fail during both the AM and PM Peak Hour. In order to mitigate the failing condition of the intersection, the following improvements are recommended:

- During the AM and PM Peak, there is a very low volume of vehicles make a northbound left, then westbound left at the diamond interchange (less than 25 movements). Given this extremely low volume relative to other critical Peak Hour movements, it is recommended that during the AM and PM Peak Hour periods these movements be eliminated. When eliminated, the westbound approach will now provide two (2) exclusive thru lanes, the eastbound approach to Northbound Mopac will provide three (3) left-turn lanes, and the northbound approach will provide left and thru-left lanes. This can be accomplished through restriping the roadway.
- Signal timing will be required to be modified in order to accommodate the new lane configurations.
- This improvement is intended to be implemented during the AM and PM Hour conditions only. The original lane configurations should be providing during other times of the day. This can be accomplished through dynamic lane signs and message boards.

With this improvement, the diamond interchange drastically improves with regards to LOS and performs at an acceptable LOS during all conditions of the analysis. No additional improvements are recommended at this time.

### Spicewood Springs Road and Mopac

The diamond interchange of Spicewood Springs Road and Mopac currently operates at an unacceptable LOS and continues to do so through all conditions of the analysis. The primary reason for the failure of this intersection is the limitation of the bridge. Additional lanes cannot be added since the bridge cannot be replaced. The following improvements are recommended to assist in traffic operations and safety:

- A right-turn acceleration/deceleration lane shall be constructed between Spicewood Springs Road and Executive Center Drive. This will allow for free southbound rights at Spicewood Springs Road and Mopac Southbound Frontage Road. Providing a free right will significantly reduce this approach delay.
- The restriping of the northern most lane along Spicewood Springs Road west of Mopac to create a travel lane. Constructing a southbound right-turn lane. This will allow for southbound rights to make the movement freely and not yield. This will significantly reduce delay for this approach.



- With the construction of a new southbound right-turn lane, the southbound approach shall be revised to provide right, thru, thru, left, and left turn lanes. In order to accommodate this, the channelized median within the intersection will be required to be modified.
- Signal timings will be required to be modified to accommodate the new lane configurations and volumes.

#### Spicewood Springs Road and Wood Hollow Drive/Private Driveway

The Spicewood Springs Road and Wood Hollow Drive/Private Driveway currently operates at acceptable LOS, however the LOS is unacceptable starting with 2018 Forecasted AM condition. The intersection is starting to fail at 2023 Site+Forecasted condition. In order to mitigate the failing condition of the intersection, the following improvements are recommended:

- Revise the northbound lane configuration to provide left, left-thru-right, and right turn lanes.
- Revise the signal timing to accommodate the new lane configurations and assignments.

With these improvements the intersection continues to operate at LOS F, but with improved delay. No additional improvements are recommended at this time.

#### Steck Avenue and Mopac

The diamond interchange of Steck Avenue and Mopac currently operates at an unacceptable LOS. This intersection is extremely limited by the existing bridge and upstream and downstream conditions. The only improvement recommended at this time is to optimize the splits in order to accommodate the new traffic volumes as growth occurs in the area. No additional improvements are recommended at this time.

#### Greystone Drive and Hart Lane

The intersection of Greystone Drive and Hart Lane currently operates at acceptable LOS and continues to do the same until 2023 Forecasted condition. Therefore, mitigations measures have been evaluated starting with 2023 Site+Forecasted condition. In order to mitigate the failing condition of the intersection, the following improvements are recommended:

- Modify the existing lane configuration to provide left-thru and right-thru lanes for all approaches.

With these improvements the intersection performs at an acceptable level of service through all conditions of development. No additional improvements are recommended at this time.

### Greystone Drive and Wood Hollow Drive

The intersection of Greystone Drive and Wood Hollow Drive currently operates at acceptable LOS and continues to do the same until 2028 Forecasted condition. Therefore, mitigations measures have been evaluated starting with 2028 Site+Forecasted condition. In order to mitigate the failing condition of the intersection, the following improvements are recommended:

- Modify the existing lane configuration to provide left-thru and right-thru lanes for all approaches.

With these improvements the intersection performs at an acceptable level of service through all conditions of development. No additional improvements are recommended at this time.

### Executive Center Drive and Wood Hollow Drive

The intersection of Executive Center Drive and Wood Hollow Drive currently operates at an acceptable LOS until the 2018 Site+Forecasted PM Peak condition. As part of this development, this intersection will be converted from a four (4) way stop controlled intersection to a single lane roundabout with right-turn lane bypasses for all approaches. With the addition of this improvement this intersection shall perform at an acceptable level of service until the 2028 condition where it begins to fail predominately in the PM Peak Hour. No additional improvements are recommended at this time.

### Executive Center Drive and Hart Lane

The intersection of Executive Center Drive and Hart Lane currently operates at an acceptable LOS until 2028 Site+Forecasted PM peak condition. In order to mitigate the failing condition of the intersection, the following improvements are recommended:

- Separated movements for all approached are recommended. All approached provide adequate pavement width to accommodate separated movements; therefore, the striping will be revised/added for this improvement.

With these improvements the intersection performs at an acceptable level of service through all conditions of development. No additional improvements are recommended at this time.

### Spicewood Springs Road and Hart Lane

The intersection of Spicewood Springs Road and Hart Lane is failing in the existing condition and it continues to operate the same with increased delay through to the 2031 Site+Forecasted conditions. This intersection geometry is very unique given the upstream/downstream condition as well as the fact that it is a T-intersection. Signalization of this intersection is the only means in which it will perform at an acceptable LOS. This allows for a higher level of capacity at this intersection. With this recommended improvement, the intersection operates at acceptable LOS D or better through all the phases where it is completely built out in 2031 Site+Forecasted. No additional improvements are recommended at this time.



### NTS Results and Recommendations

Based on the results of the Neighborhood Traffic Study (NTS), the maximum desirable volumes are currently being exceeded along the roadway segments which were evaluated. Additionally, without the proposed development and only considering the natural growth of the area and traffic volumes, the roadway segments will continue to exceed the desirable volumes. With the Austin Oaks redevelopment, the volumes along those roadway segments will continue to increase, however the traffic volumes associated with the redevelopment is a small percentage }? than that of the overall traffic volumes present on the roadways.

Although the volumes along the segments exceed the City of Austin's maximum desirable volumes, it does not mean that the roadways have exceeded its capacity. The results of the Roadway Capacity Analysis show us that roadway segments are performing at an acceptable LOS in the existing conditions as well and all future conditions of the redevelopment. None of the roadway segments analyzed have exceeded capacity. }

In order to address the roadway segments exceeding the City of Austin's maximum desirable volumes, the following mitigation measures are recommended to persuade drivers to utilize the major arterials and minimize the use of the neighborhood collectors. Since all these six (6) segments are 2-lane roadways with on-street parking and bicycle lanes, new improvements are limited. The intersection improvements recommended in the previous section will reduce the intersection delays and thus, improving the travel time on the arterial roadway. This will encourage through traffic to return to the arterial roadway system rather than the use of residential streets. The other mitigation measures recommended are as follows: —?

- Provide adequate striping and signage;
- Install speed limit signs along all street segments;
- Speed cushion installation and
- Speed enforcement.