

MOMENTUM BLANDING APARTMENTS

Site Access Permit Study

City of Jacksonville, Duval County, FL

Falcone Group

One Town Center Road, Suite 600
Boca Raton, FL 33486
Jacksonville, FL 32219

May 2022

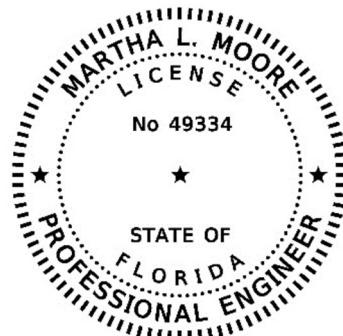


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1 INTRODUCTION

This Traffic Operational Analysis has been prepared for the Florida Department of Transportation (FDOT) review in conjunction with the Driveway Permit Application for a proposed multifamily rental complex in Jacksonville, Duval County, FL. The site location is illustrated in Figure 1 and is located on State Road (S.R.) 21 (Blanding Boulevard) (Roadway ID 7217 0000), between Anderson Road and Wesconnett Boulevard on the west side of the road.

The site plan is included in Appendix A. The straight line diagram for S.R. 21 is included in Appendix B. A pre-application meeting was held on November 4, 2021.

1.1 Proposed Development

The study is based on 240 apartment units. Construction is anticipated to begin in April 2022 with the first two residential buildings (60 units) ready for occupancy by April 2023. The entire project will be completed and operational by August 2023.

The proposed site driveway is aligned with an existing full median access point (M.P. 3.455).

1.2 Study Procedures

Standard engineering and planning procedures were used to determine the impacts of the proposed project. Reference data was obtained from the Institute of Transportation Engineers (ITE) and the Florida Department of Transportation (FDOT).

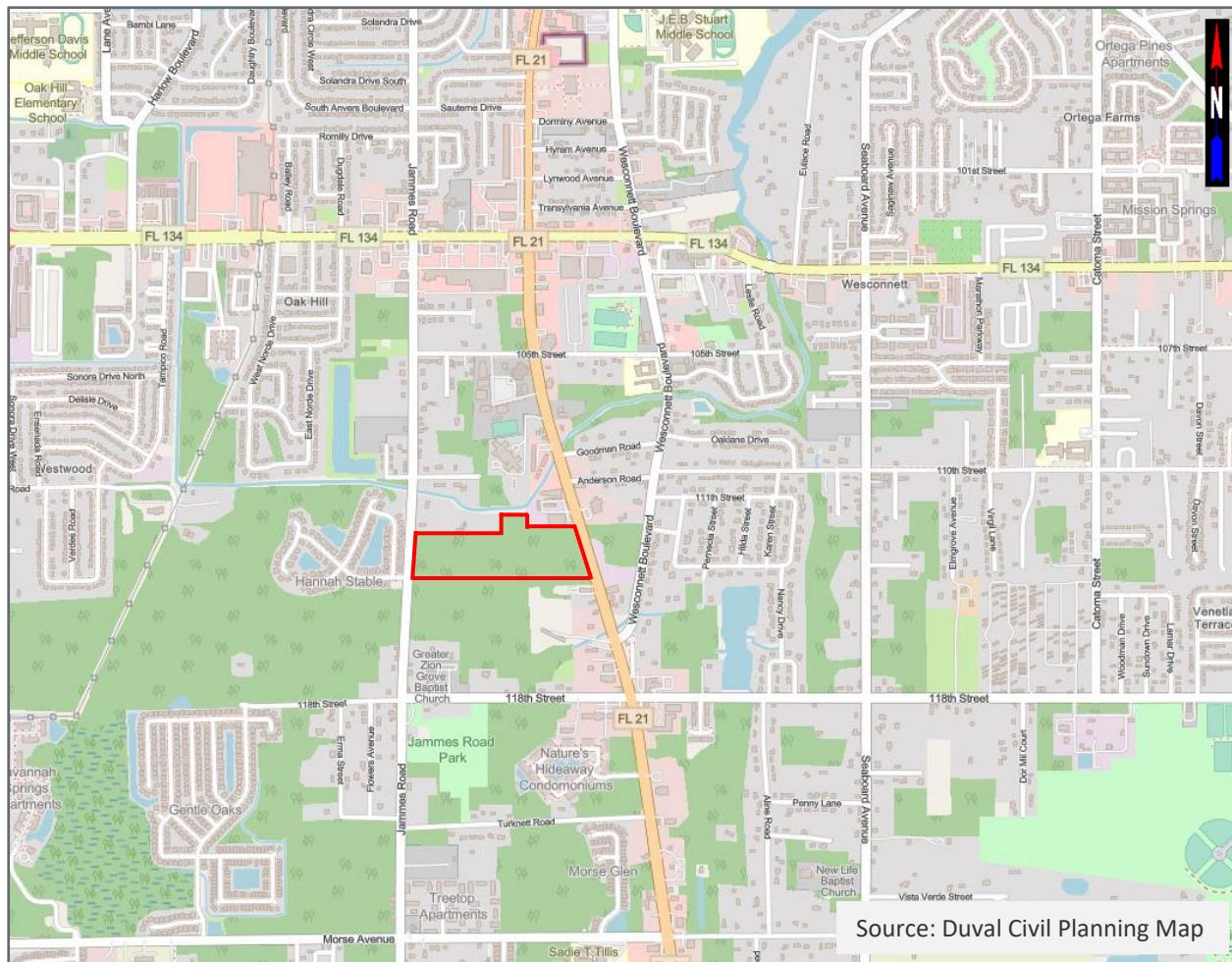


Figure 1 – Location Map

2 EXISTING CONDITIONS

2.1 Existing Conditions

Table 1 provides a description of the characteristics of S.R. 21 and the surrounding area. It is a four-lane divided urban principle arterial other (Access Class 05). The speed limit is 45 mph in the vicinity of the project access. The 2020 existing Annual Average Daily Traffic (AADT), from Florida Traffic Online, is 26,500 vehicles per day (vpd).

2.2 Field Review

Site visits were conducted by a registered professional engineer in December 2021 in both the AM and PM peak periods. Photos are provided in Appendix C. The following items were observed:

- During both the AM and PM peak hours, the segment was not congested. There appeared to be more than adequate capacity for the existing traffic volume.
- The directional split was as expected, with northbound being the heavier movement in the AM and southbound in the PM.
- The PM peak period had a greater traffic volume than the AM peak but during both there were significant gaps in the traffic stream which will allow for the introduction of unsignalized turning movements, such as those associated with this project.
- There was not a significant number of trucks and heavy vehicles observed during the peak periods. Because there are adjacent U-Haul and Goodwill facilities, it is likely that there is heavy truck traffic at times.
- Neither the median opening adjacent to the project (M.P. 3.455) nor the downstream opening to the south (M.P. 3.333, at the VFW/D&D Auto) were used by any vehicle during the field assessment.
- The grass median contains trees, bushes and oversized signs that may cause sight distance issues for turning movements.
- There is a concrete utility pole located adjacent to the proposed driveway which may cause a sight distance issue for exiting vehicles looking north.

Table 1 – Summary of Existing Conditions

Characteristic	Description
Facility	S.R. 21 (Blanding Blvd)
Roadway ID	72170000
Area Location	Southwest Jacksonville, FL (Duval County)
Adjacent Land Uses	<u>North:</u> U-Haul Moving and Storage, Goodwill Thrift Store <u>South:</u> Veterans of Foreign Wars, D&D Auto & Fleet
S.R. 21 (Blanding Blvd)	<u>Cross-Section:</u> Four-lane divided urban section with turn lanes <u>Posted Speed Limit:</u> 45 mph <u>Functional Class:</u> Urban Principal Arterial Other <u>AADT:</u> 26,500 vpd <u>Street Lighting:</u> Both sides <u>Sidewalks:</u> Both sides <u>Bike Lanes:</u> None <u>Terrain/Alignment:</u> Flat/Straight
Adjacent Signalized Intersections	North – 105 th Street South – Wesconnett Blvd

2.3 Existing Traffic Volumes

Traffic counts were conducted on S.R. 21 at the project median access and at the downstream full median access (M.P. 3.333). The counts span the 12-hour period from 7 AM to 7 PM and were adjusted for the seasonal factor. The count sheets and FDOT peak seasonal factor report are included in Appendix D.

The AM and PM peak hour count volumes are depicted in Figure 2 and Figure 3. The AM peak hour is from 7:15 AM to 8:15 AM and the PM peak hour is from 4:15 PM to 5:15 PM.

2.4 Existing Operational Analysis

The existing year 2021 operational analysis for the downstream median opening (M.P. 3.333) was performed using Synchro 11 software which uses the HCM 2010 methodologies and procedures in estimating delay and LOS at signalized and unsignalized intersections. The results are provided in Table 2 with the Synchro output worksheets provided in Appendix E. The project median access (M.P. 3.455) was not analyzed as there are no eastbound or westbound conflicting movements.

The level of service (LOS) at the VFW/D&D Auto median opening is based on the average delay per vehicle for the various movements within the intersection. S.R. 21 operates at LOS A with a minimum of LOS C for left turn movements in both the AM and PM peak hours. The east and west approaches have minimal turning movements and operate at LOS C or better in both peak hours.

Proposed Momentum
Blanding Apartments

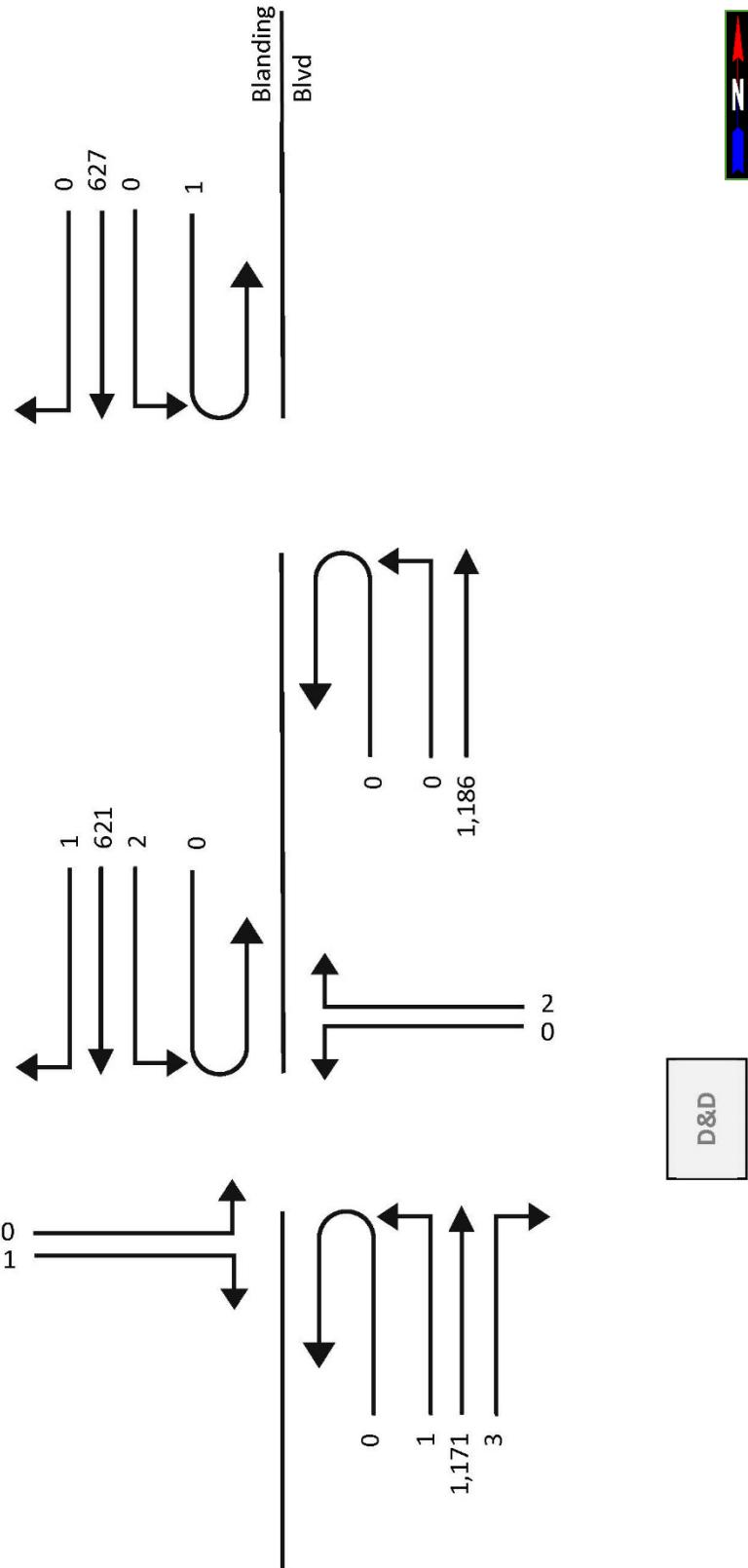


Figure 2 – Existing Weekday AM Peak Hour Traffic Volumes

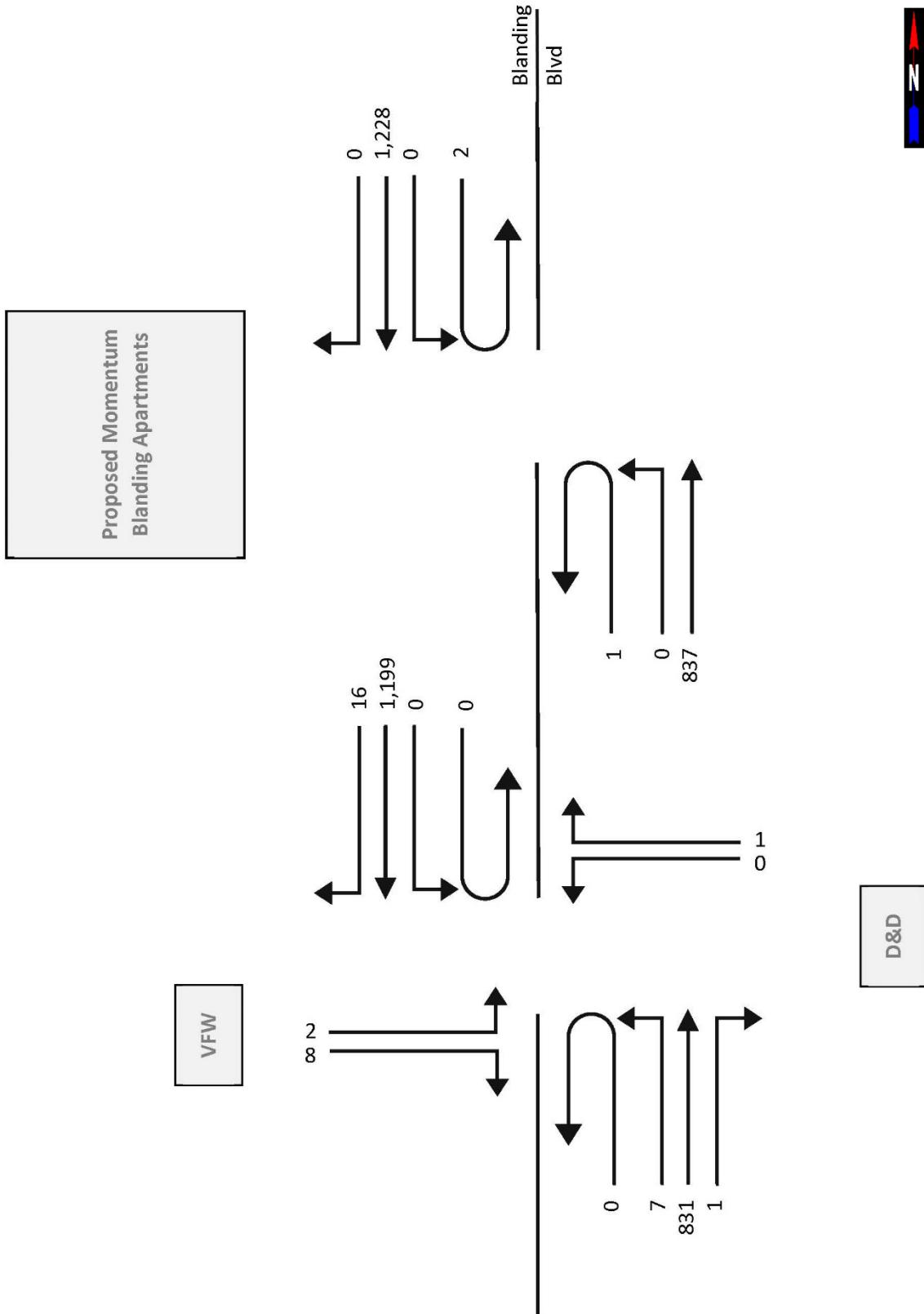


Figure 3 – Existing Weekday PM Peak Hour Traffic Volumes

Table 2 – Operational Summary

Location	Existing		2023 No Build		2023 Build	
	LOS	Delay	LOS	Delay	LOS	Delay
AM Peak Hour						
S.R. 21 at M.P. 3.455 – Momentum						
Eastbound					B	12.4
Northbound					B	11.6 ¹
Southbound					A	0
PM Peak Hour						
S.R. 21 at M.P. 3.455 – Momentum						
Eastbound	B	11.3	B	11.4	B	11.6
Westbound	B	14.7	B	14.9	C	15.1
Northbound	B	11.3 ¹	B	11.4	B	11.6 ¹
Southbound	C	17.2 ¹	C	17.7	B	13.9 ¹
S.R. 21 at M.P. 3.333 – VFW/D&D						
Eastbound						
Westbound						
Northbound						
Southbound						
S.R. 21 at M.P. 3.333 – VFW/D&D						
Eastbound	C	19.7	C	20.5	C	21.7
Westbound	B	12.2	B	12.4	B	12.6
Northbound	C	17.3 ¹	C	17.9 ¹	C	18.3 ¹
Southbound	A	0.0	A	0	B	10.5 ¹

¹ Left turn movement

3 PROPOSED DEVELOPMENT

3.1 Project Phasing

The proposed housing will be constructed in one phase, commencing in 2022 with completion in 2023.

3.2 Site Access

As indicated in the site plan, the project will have one project driveway providing access to S.R. 21. The driveway is aligned with an existing full median access point (M.P. 3.455).

3.3 Trip Generation

Estimates of project traffic were based on the ITE Trip Generation (11th Edition). The future trip generation was calculated using the regression equation for ITE Land Use Code (LUC) 220 (Multifamily Housing (Low-Rise)). Table 3 summarizes the anticipated daily, AM and PM peak hour trip generation for the project. The proposed development is anticipated to generate a total of 1,618 daily, 97 AM peak hour trips and 124 PM peak hour trips. The trip generation calculation sheets are provided in Appendix F.

Table 3 – Trip Generation

LUC	Description	Time Period	No. Units	Gross Trips	Enter	Exit
220	Multifamily Housing (Low-Rise)	AM ¹	240	97	23	74
		PM ¹		124	78	46
		Daily		1,618	809	809

¹ Peak hour of adjacent street traffic

3.4 Trip Distribution and Assignment

The existing distribution on S.R. 21 was used to determine the directional distribution to assign traffic from the Momentum Blanding Apartments project. The counts indicate that 65% of AM peak hour trips are northbound and the remaining 35% are southbound. In the PM peak hour, 41% of trips are northbound and the remaining 59% are southbound.

Project trip distribution is depicted in Figure 6 and Figure 7 in Section 4.

4 FUTURE CONDITIONS

4.1 Traffic Projections

The District 2 LOS Summary Report, included as Appendix G, was used to determine the average annual historical growth rate for S.R. 21. Based on the projected traffic volumes for S.R. 21, a compound annual growth rate (CAGR) of 1.43% was calculated (rounded to 1.5%).

This annual growth rate was applied directly to the existing peak hour turning movement volumes to develop a forecast of AM and PM peak hour traffic for the buildout year (2023). The future intersection background traffic volumes are depicted in Figure 4 (AM) and Figure 5 (PM). The Build traffic volumes include the addition of project trips and are depicted in Figure 6 (AM) and Figure 7 (PM).

4.2 Access Management Review

S.R. 21 is Access Class 05 and has a posted speed limit of 45 mph. F.A.C. 14-97 connection spacing standards require a minimum of 1,320 feet between full median openings and 660 feet between directional median openings. The existing full access point at the proposed project driveway (M.P. 3.455) does not meet these standards.

As per the pre-application meeting with FDOT, the eastbound project access will be right in/right out. Eastbound to northbound exiting vehicles will be required to make a right turn and then U-turn at a full median access. The closest downstream full median opening is at M.P. 3.333. The following changes to the S.R. 21 access are proposed:

- Directionalize the median access to allow northbound left turns only
- Add a northbound left turn lane at the project median access (M.P. 3.455)
- Add a southbound left turn lane at the downstream median access (M.P. 3.333)

The vehicle queue at both new left turn lanes is anticipated to be minimal (less than one vehicle). A two-car queue distance (50 feet) is provided in the new median turn lanes.

4.3 Operational Analysis

A Build Year 2023 operational analysis for both the project (M.P. 3.455) and downstream (M.P. 3.333) median openings was performed using Synchro for the following scenarios. The results are provided in Table 2 with the worksheets provided in Appendix H.

- Year 2023 No Build
- Year 2023 Build with the addition of a northbound left turn lane at the project access and a southbound left turn lane at the downstream access.

Under projected (2023) No Build peak hour volumes, through movements on S.R. 21 continue to operate at LOS A. The downstream median opening (M.P. 3.333) is projected to operate similar to 2021 conditions.

With the addition of project trips (2023 Build) and the geometric changes described in Section 4.2, S.R. 21 is anticipated to operate at LOS A with a minimum of LOS C for left turn movements at both median openings in the AM and PM peak hours.

Proposed Momentum
Blanding Apartments

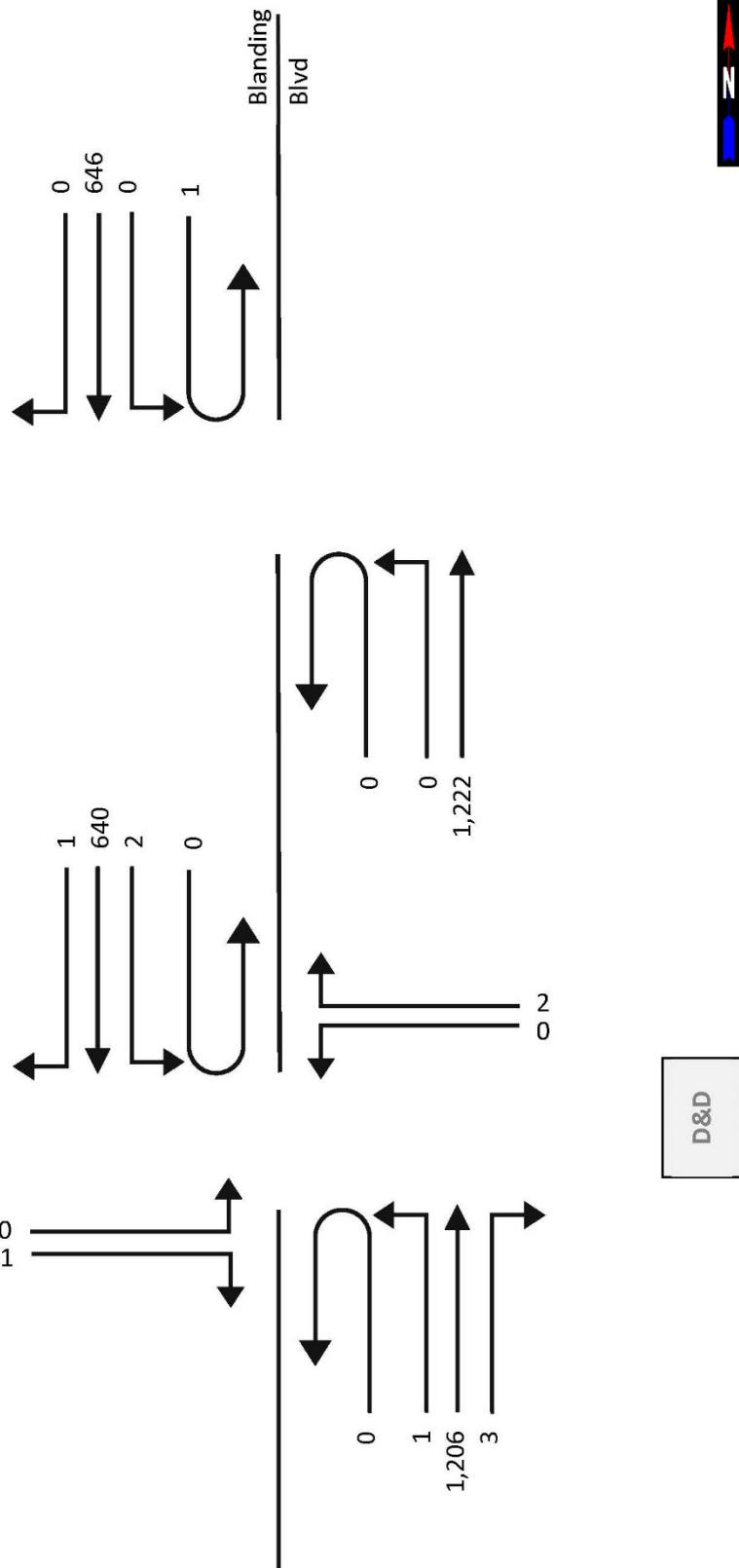


Figure 4 – 2023 No Build Weekday AM Peak Hour Traffic Volumes

Proposed Momentum
Blanding Apartments

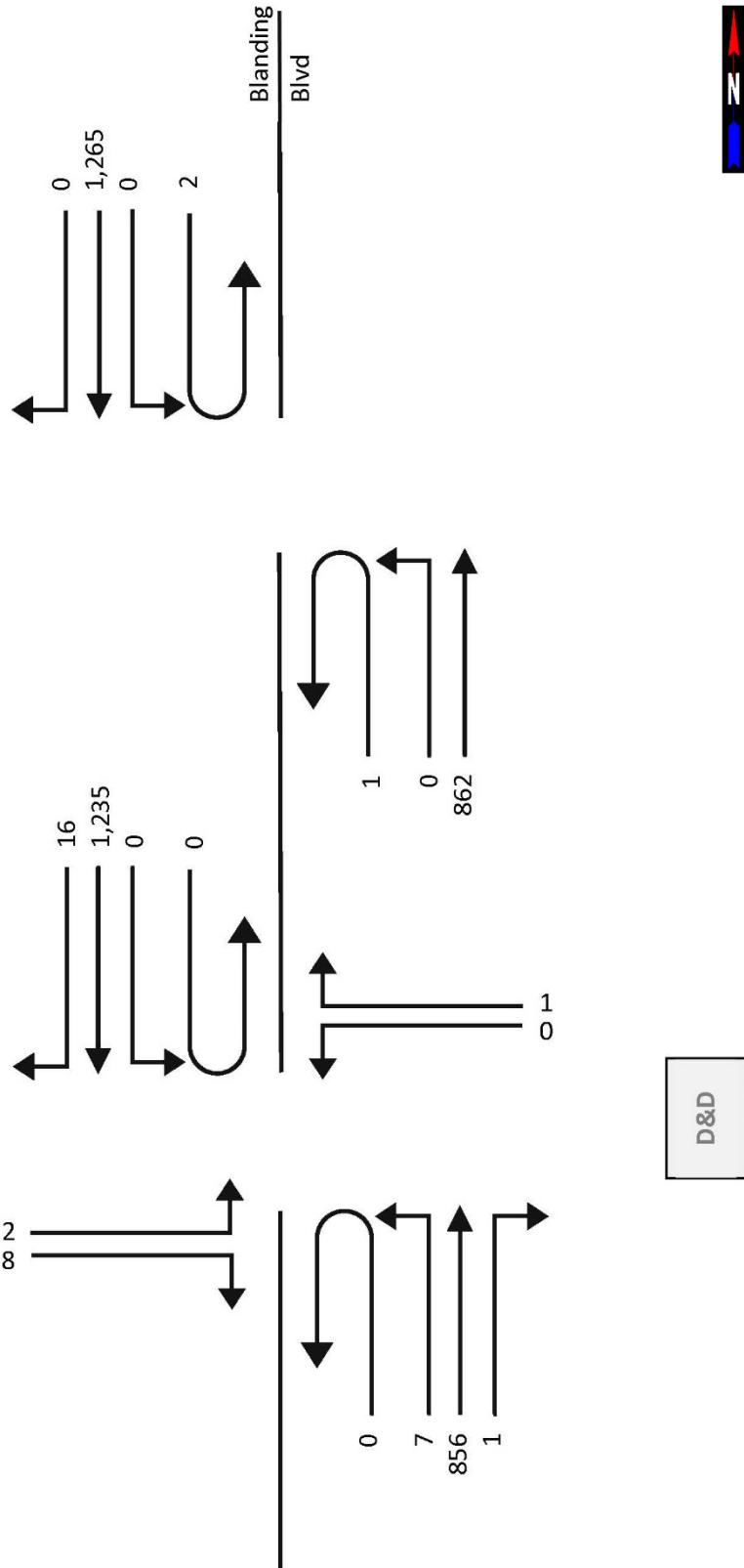


Figure 5 – 2023 No Build Weekday PM Peak Hour Traffic Volumes

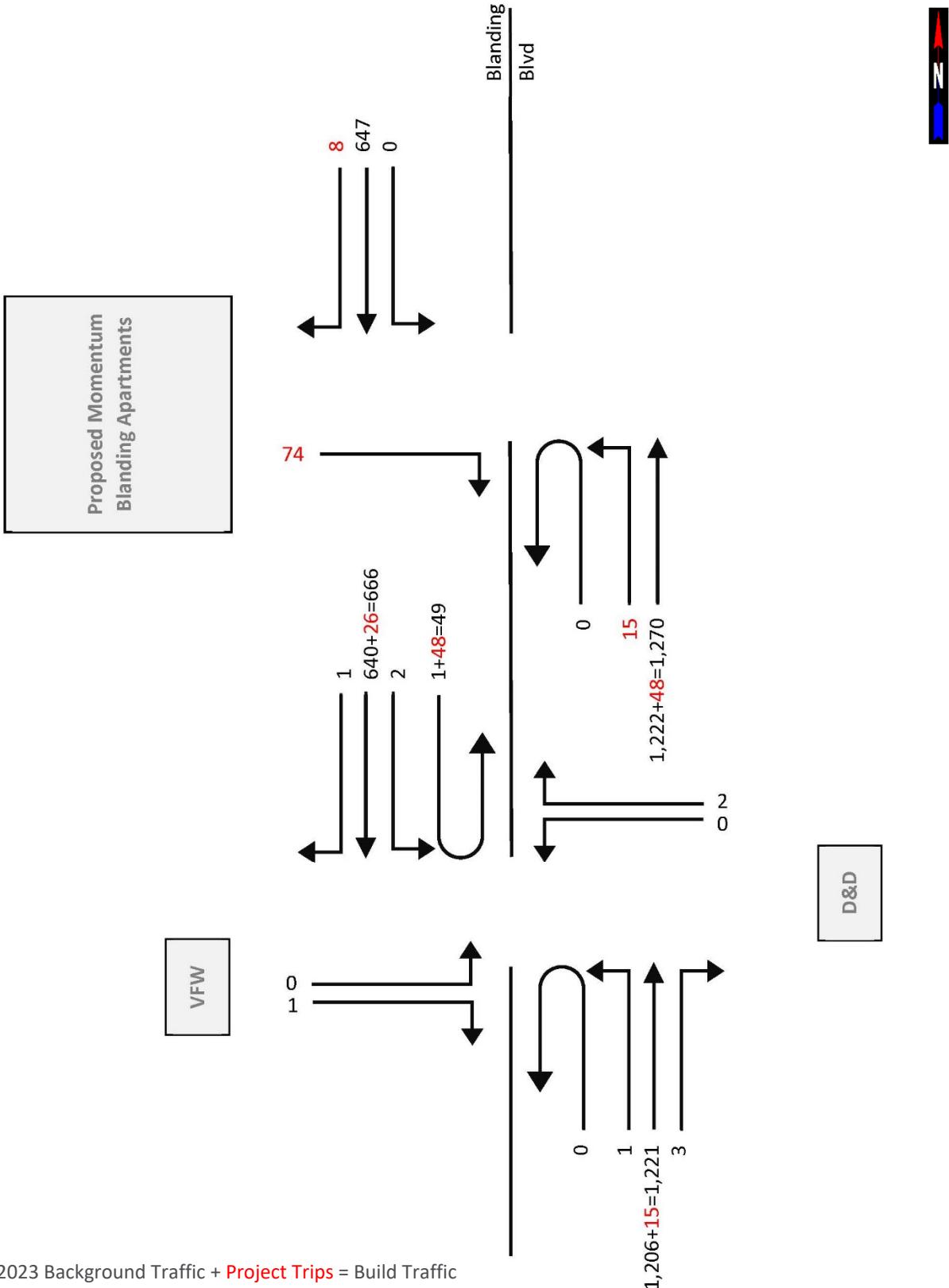


Figure 6 – 2023 Build Weekday AM Peak Hour Traffic Volumes

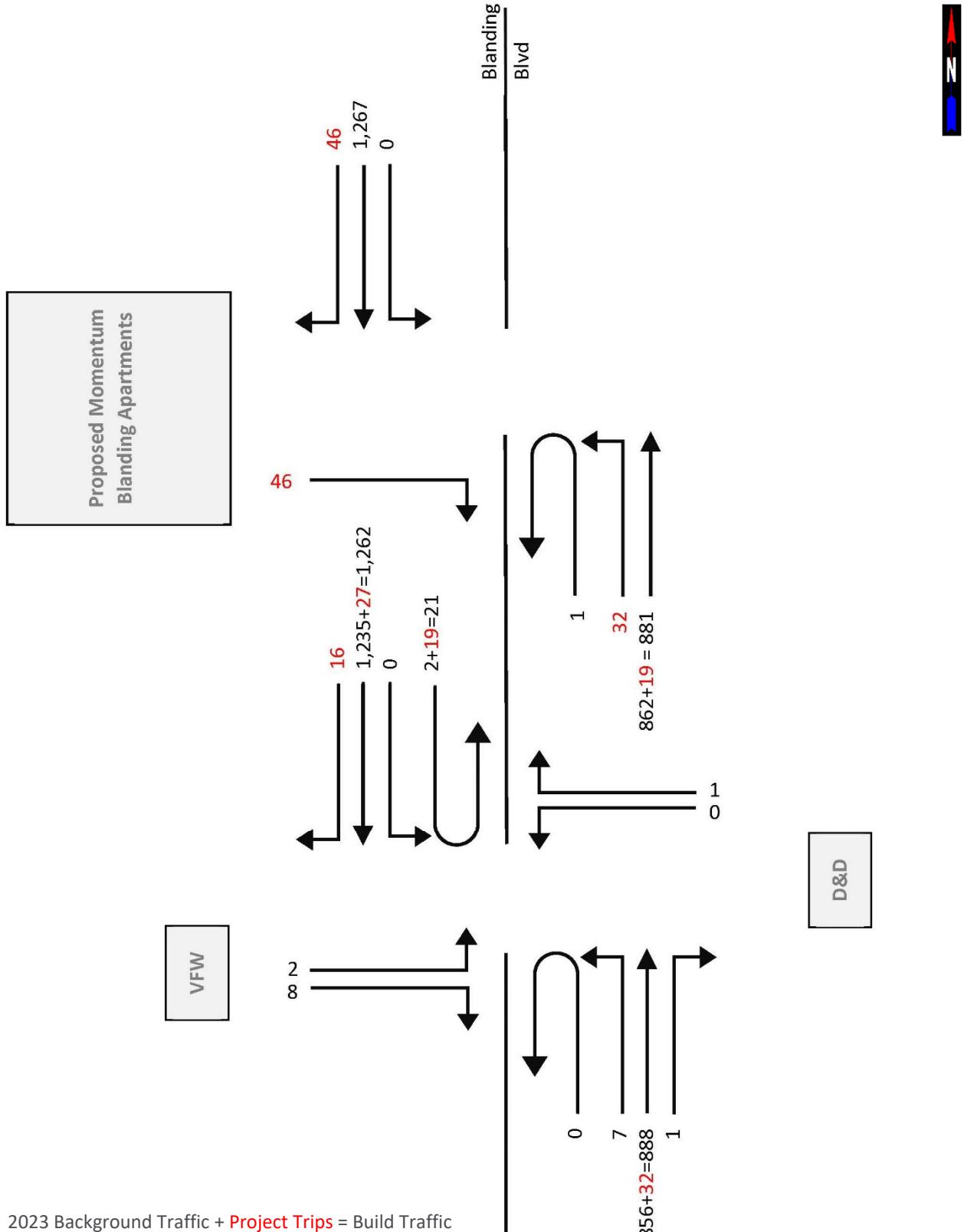


Figure 7 – 2023 Build Weekday PM Peak Hour Traffic Volumes

5 SUMMARY AND CONCLUSIONS

A 240-unit apartment complex is proposed for the west side of S.R. 21, between Anderson Road and Wesconnett Boulevard. Access to the development will be provided by the existing median opening at M.P. 3.455, which will be modified to directionalize the opening to allow northbound left turning movements only. Vehicles will enter the project driveway via the new northbound left turn lane or by making a southbound right turn from S.R. 21. All vehicles will exit via an eastbound to southbound right turn; those desiring to go north will make a U-turn at the downstream median opening (M.P. 3.333).

The proposed development is anticipated to generate a total of 1,618 daily, 97 AM peak hour trips and 124 PM peak hour trips.

With the addition of 240 apartments on S.R. 21, through movements on the mainline will continue to operate acceptably with a minimum of LOS B. Left turn movements at the project median access (M.P. 3.455) and the downstream access (M.P. 3.333) will operate at LOS C or higher in the AM and PM peak hours.

APPENDIX A

Site Plan

PROSSER

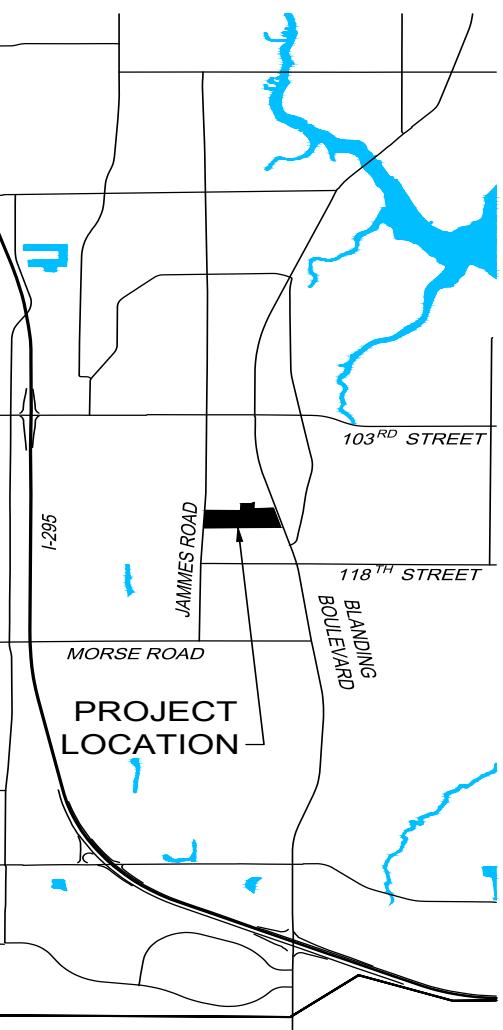
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MOMENTUM BLANDING, LLC

MOMENTUM BLANDING APARTMENTS



DATE : 2022-02-11
PROJECT NO. : 119041.02
DESIGNED BY : NEB
DRAWN BY : KMDW
SCALE : 1" = 80'

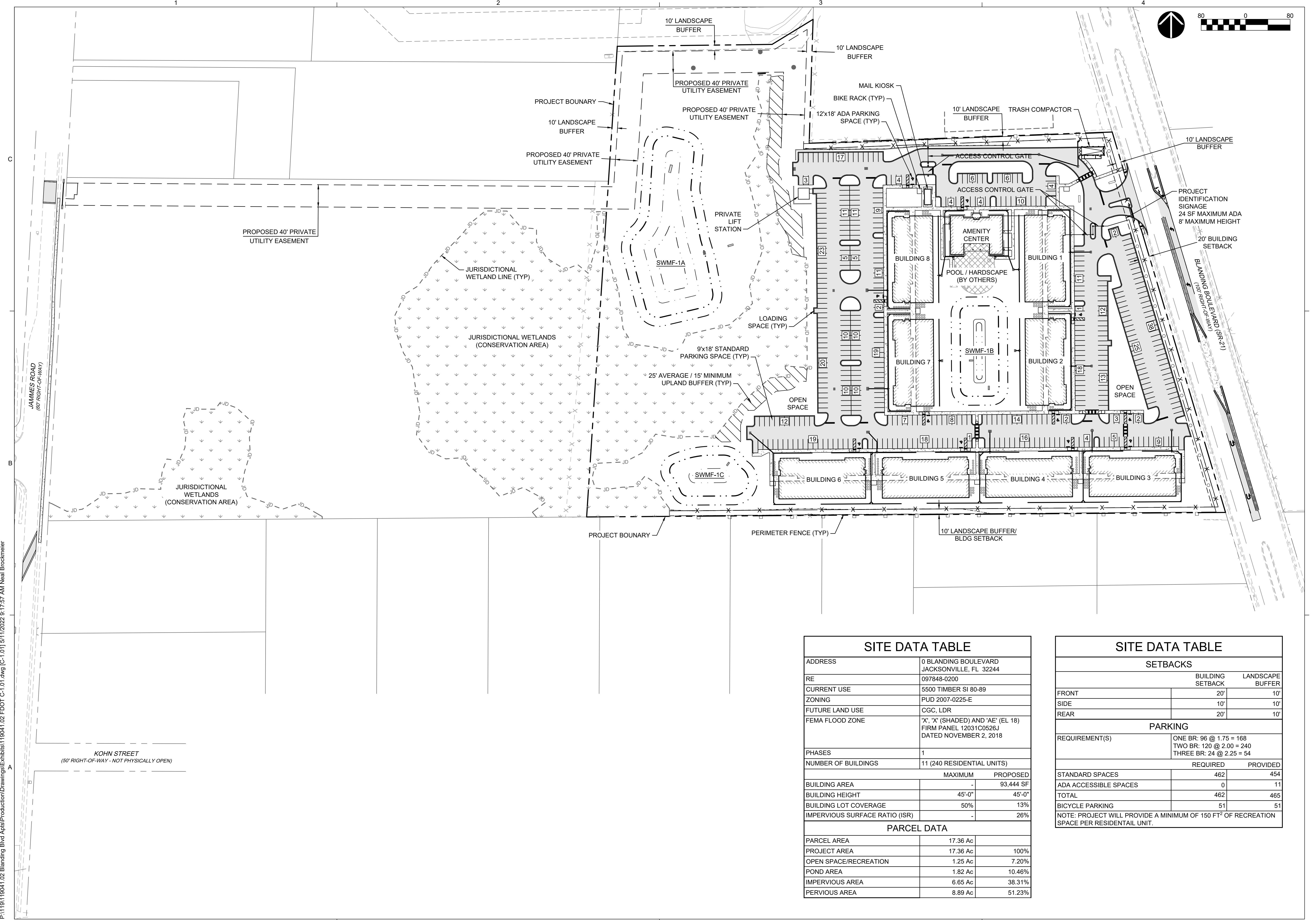
No.	Date	Revision

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CONSTRUCTION UNLESS SO NOTED ABOVE

SHEET TITLE

OVERALL SITE PLAN

C-1.01



SITE DATA TABLE

ADDRESS	0 BLANDING BOULEVARD JACKSONVILLE, FL 32244	
RE	097848-0200	
CURRENT USE	5500 TIMBER SI 80-89	
ZONING	PUD 2007-0225-E	
FUTURE LAND USE	CGC, LDR	
FEMA FLOOD ZONE	'X', 'X' (SHADE) AND 'AE' (EL 18) FIRM PANEL 12031C0526J DATED NOVEMBER 2, 2018	
PHASES	1	
NUMBER OF BUILDINGS	11 (240 RESIDENTIAL UNITS)	
	MAXIMUM	PROPOSED
BUILDING AREA	-	93,444 SF
BUILDING HEIGHT	45'-0"	45'-0"
BUILDING LOT COVERAGE	50%	13%
IMPERVIOUS SURFACE RATIO (ISR)	-	26%
	REQUIRED	PROVIDED
STANDARD SPACES	462	454
ADA ACCESSIBLE SPACES	0	11
TOTAL	462	465
BICYCLE PARKING	51	51
NOTE: PROJECT WILL PROVIDE A MINIMUM OF 150 FT ² OF RECREATION SPACE PER RESIDENTIAL UNIT.		

SITE DATA TABLE

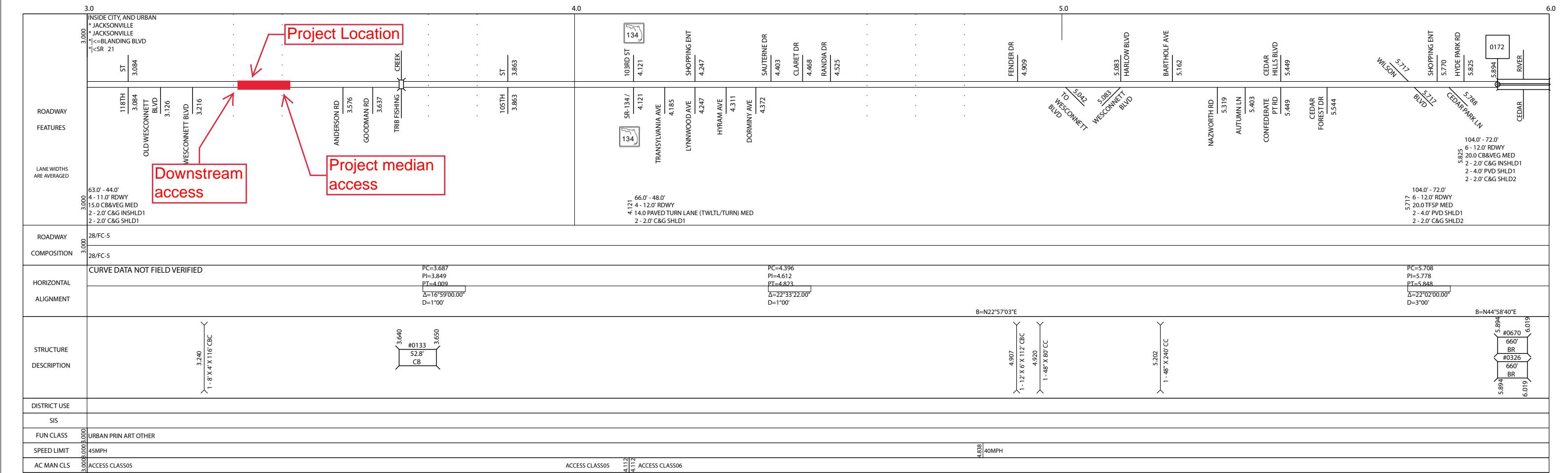
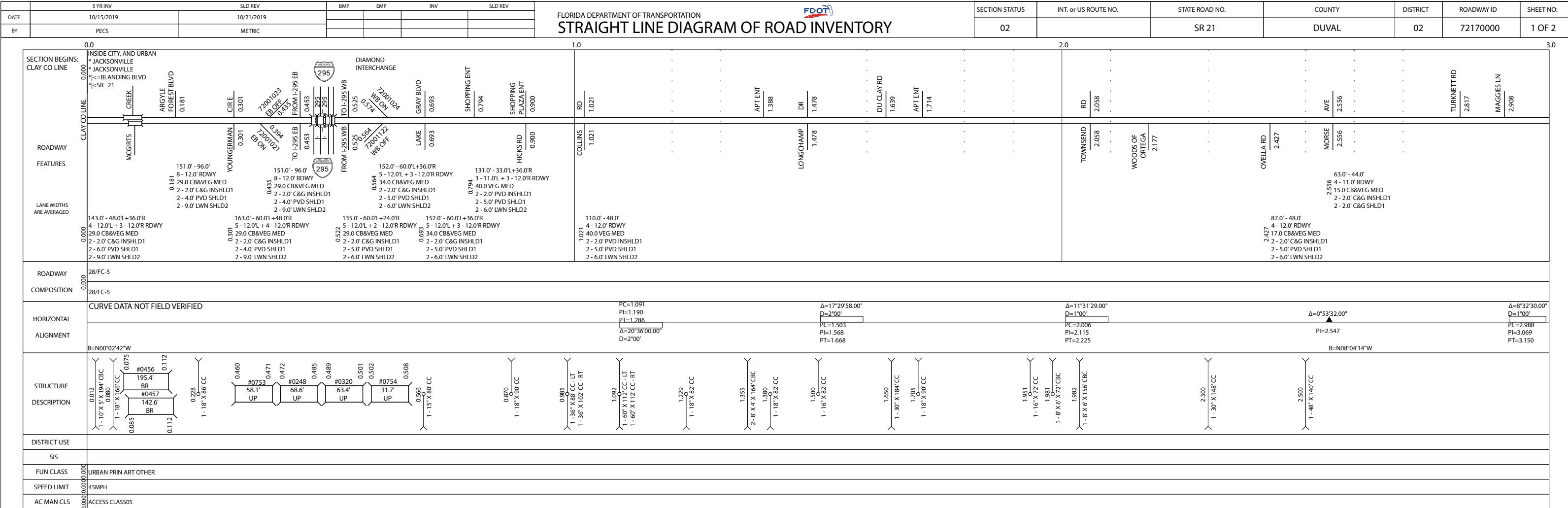
SETBACKS		
	BUILDING SETBACK	LANDSCAPE BUFFER
FRONT	20'	10'
SIDE	10'	10'
REAR	20'	10'

PARKING		
REQUIREMENT(S)	ONE BR: 96 @ 1.75 = 168	TWO BR: 120 @ 2.00 = 240
TOTAL	462	465
BICYCLE PARKING	51	51

PARCEL AREA	17.36 Ac
PROJECT AREA	17.36 Ac
OPEN SPACE/RECREATION	1.25 Ac
POND AREA	1.82 Ac
IMPERVIOUS AREA	6.65 Ac
PERVIOUS AREA	8.89 Ac
	100%
	7.20%
	10.46%
	38.31%
	51.23%

APPENDIX B

S.R. 21 Straight Line Diagram



APPENDIX C

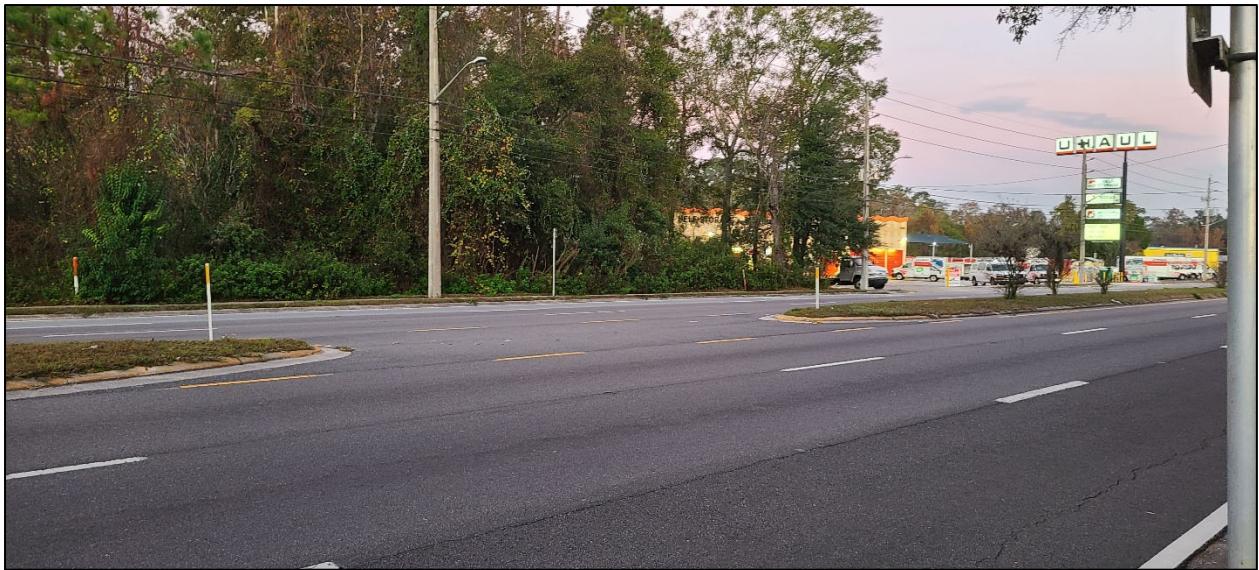
Site Photos



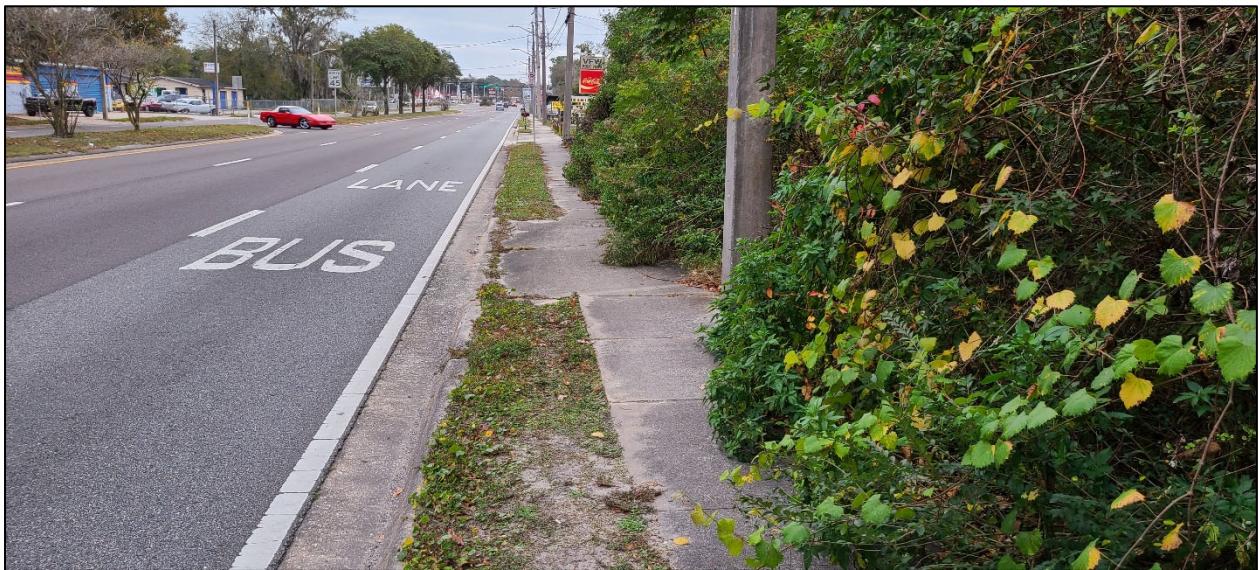
Median Access on S.R. 21 (M.P. 3.455); looking south during the AM peak. Project site is on the right.



Median Access on S.R. 21 (M.P. 3.455); looking north during the AM peak. Project site is on the left.



Median Access on S.R. 21 (M.P. 3.455); looking northwest during the AM peak at the project site.



Looking south toward the downstream median access on S.R. 21 (M.P. 3.333) during the PM peak.

APPENDIX D

Traffic Count Data

Peggy Malone & Associates
(888) 247-8602

File Name : 1- Blanding Blvd & Median Cut 600 Ft from Anderson Rd
Site Code :
Start Date : 12/1/2021
Page No : 1

Groups Printed- Cars

		Blanding Blvd Southbound			Blanding Blvd Northbound			
Start Time		Thru	U-Turn	App. Total	Thru	U-Turn	App. Total	Int. Total
07:00 AM		94	0	94	214	0	214	308
07:15 AM		126	0	126	299	0	299	425
07:30 AM		156	0	156	313	0	313	469
07:45 AM		186	0	186	284	0	284	470
Total		562	0	562	1110	0	1110	1672
08:00 AM		147	1	148	298	0	298	446
08:15 AM		148	0	148	220	0	220	368
08:30 AM		160	0	160	212	0	212	372
08:45 AM		162	0	162	198	0	198	360
Total		617	1	618	928	0	928	1546
09:00 AM		182	0	182	220	0	220	402
09:15 AM		159	1	160	191	0	191	351
09:30 AM		174	0	174	155	0	155	329
09:45 AM		195	1	196	173	0	173	369
Total		710	2	712	739	0	739	1451
10:00 AM		174	0	174	162	0	162	336
10:15 AM		190	1	191	167	0	167	358
10:30 AM		203	0	203	178	2	180	383
10:45 AM		205	0	205	234	0	234	439
Total		772	1	773	741	2	743	1516
11:00 AM		204	2	206	209	0	209	415
11:15 AM		222	1	223	188	0	188	411
11:30 AM		209	1	210	191	1	192	402
11:45 AM		211	0	211	188	0	188	399
Total		846	4	850	776	1	777	1627
12:00 PM		200	0	200	209	1	210	410
12:15 PM		235	0	235	225	0	225	460
12:30 PM		226	1	227	253	0	253	480
12:45 PM		200	0	200	218	0	218	418
Total		861	1	862	905	1	906	1768
01:00 PM		213	0	213	237	1	238	451
01:15 PM		212	2	214	155	0	155	369
01:30 PM		227	2	229	182	0	182	411
01:45 PM		195	2	197	208	0	208	405
Total		847	6	853	782	1	783	1636
02:00 PM		244	0	244	200	0	200	444
02:15 PM		232	1	233	203	2	205	438
02:30 PM		212	0	212	221	1	222	434
02:45 PM		247	2	249	183	0	183	432
Total		935	3	938	807	3	810	1748
03:00 PM		275	0	275	185	1	186	461
03:15 PM		275	1	276	216	0	216	492
03:30 PM		245	1	246	227	0	227	473
03:45 PM		267	0	267	207	0	207	474
Total		1062	2	1064	835	1	836	1900
04:00 PM		284	1	285	210	0	210	495
04:15 PM		321	2	323	202	0	202	525
04:30 PM		305	0	305	222	0	222	527
04:45 PM		301	0	301	186	0	186	487
Total		1211	3	1214	820	0	820	2034
05:00 PM		300	0	300	225	1	226	526
05:15 PM		292	0	292	219	0	219	511
05:30 PM		308	0	308	198	1	199	507
05:45 PM		268	0	268	215	0	215	483
Total		1168	0	1168	857	2	859	2027
06:00 PM		252	0	252	195	0	195	447
06:15 PM		238	1	239	190	0	190	429
06:30 PM		202	1	203	171	0	171	374
06:45 PM		189	1	190	163	0	163	353
Total		881	3	884	719	0	719	1603

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File Name : 1- Blanding Blvd & Median Cut 600 Ft from Anderson Rd
 Site Code :
 Start Date : 12/1/2021
 Page No : 2

Groups Printed- Cars

	Blanding Blvd Southbound			Blanding Blvd Northbound			Int. Total
	Thru	U-Turn	App. Total	Thru	U-Turn	App. Total	
Grand Total	10472	26	10498	10019	11	10030	20528
Apprch %	99.8	0.2		99.9	0.1		
Total %	51	0.1	51.1	48.8	0.1	48.9	

	Blanding Blvd Southbound			Blanding Blvd Northbound			Int. Total
	Start Time	Thru	App. Total	Thru	App. Total		
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1							
Peak Hour for Entire Intersection Begins at 07:15 AM							
07:15 AM	126	126		299	299		425
07:30 AM	156	156		313	313		469
07:45 AM	186	186		284	284		470
08:00 AM	147	147		298	298		445
Total Volume	615	615		1194	1194		1809
% App. Total	100			100			
PHF	.827	.827		.954	.954		.962

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

	Blanding Blvd Southbound			Blanding Blvd Northbound			Int. Total
	Start Time	Thru	App. Total	Thru	App. Total		
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1							
Peak Hour for Entire Intersection Begins at 04:15 PM							
04:15 PM	321	321		202	202		523
04:30 PM	305	305		222	222		527
04:45 PM	301	301		186	186		487
05:00 PM	300	300		225	225		525
Total Volume	1227	1227		835	835		2062
% App. Total	100			100			
PHF	.956	.956		.928	.928		.978

Peggy Malone & Associates
(888) 247-8602

File Name : 1- Blanding Blvd & Median Cut 600 Ft from Anderson Rd
Site Code :
Start Date : 12/1/2021
Page No : 1

Groups Printed- Trucks

	Blanding Blvd Southbound			Blanding Blvd Northbound			Int. Total	
	Start Time	Thru	U-Turn	App. Total	Thru	U-Turn	App. Total	
07:00 AM		1	0	1	1	0	1	2
07:15 AM		7	0	7	4	0	4	11
07:30 AM		7	0	7	4	0	4	11
07:45 AM		5	0	5	5	0	5	10
Total		20	0	20	14	0	14	34
08:00 AM		6	0	6	3	0	3	9
08:15 AM		7	0	7	6	0	6	13
08:30 AM		4	0	4	6	0	6	10
08:45 AM		9	0	9	7	0	7	16
Total		26	0	26	22	0	22	48
09:00 AM		8	0	8	6	0	6	14
09:15 AM		9	0	9	5	0	5	14
09:30 AM		4	0	4	3	0	3	7
09:45 AM		8	0	8	6	0	6	14
Total		29	0	29	20	0	20	49
10:00 AM		7	0	7	6	0	6	13
10:15 AM		13	0	13	6	0	6	19
10:30 AM		3	0	3	10	0	10	13
10:45 AM		10	0	10	6	0	6	16
Total		33	0	33	28	0	28	61
11:00 AM		4	0	4	5	0	5	9
11:15 AM		8	0	8	7	0	7	15
11:30 AM		6	0	6	6	0	6	12
11:45 AM		7	0	7	9	0	9	16
Total		25	0	25	27	0	27	52
12:00 PM		4	0	4	4	0	4	8
12:15 PM		12	0	12	5	0	5	17
12:30 PM		9	0	9	7	0	7	16
12:45 PM		4	0	4	6	0	6	10
Total		29	0	29	22	0	22	51
01:00 PM		3	0	3	3	0	3	6
01:15 PM		5	0	5	7	0	7	12
01:30 PM		2	0	2	6	0	6	8
01:45 PM		4	0	4	7	0	7	11
Total		14	0	14	23	0	23	37
02:00 PM		10	0	10	6	0	6	16
02:15 PM		11	0	11	7	0	7	18
02:30 PM		4	0	4	3	0	3	7
02:45 PM		6	0	6	4	0	4	10
Total		31	0	31	20	0	20	51
03:00 PM		10	0	10	4	0	4	14
03:15 PM		5	0	5	5	0	5	10
03:30 PM		5	0	5	4	0	4	9
03:45 PM		8	0	8	5	0	5	13
Total		28	0	28	18	0	18	46
04:00 PM		2	0	2	8	0	8	10
04:15 PM		8	0	8	1	0	1	9
04:30 PM		3	0	3	8	0	8	11
04:45 PM		11	0	11	6	0	6	17
Total		24	0	24	23	0	23	47
05:00 PM		4	0	4	4	0	4	8
05:15 PM		5	0	5	2	0	2	7
05:30 PM		2	0	2	4	0	4	6
05:45 PM		5	0	5	1	0	1	6
Total		16	0	16	11	0	11	27
06:00 PM		0	0	0	4	0	4	4
06:15 PM		4	1	5	1	0	1	6
06:30 PM		0	0	0	4	0	4	4
06:45 PM		3	0	3	4	0	4	7
Total		7	1	8	13	0	13	21

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File Name : 1- Blanding Blvd & Median Cut 600 Ft from Anderson Rd
 Site Code :
 Start Date : 12/1/2021
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Groups Printed- Trucks

	Blanding Blvd Southbound			Blanding Blvd Northbound			Int. Total
	Thru	U-Turn	App. Total	Thru	U-Turn	App. Total	
Grand Total	282	1	283	241	0	241	524
Apprch %	99.6	0.4		100	0		
Total %	53.8	0.2	54	46	0	46	

	Blanding Blvd Southbound			Blanding Blvd Northbound			Int. Total	
	Start Time	Thru	App. Total	Thru	App. Total			
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1								
Peak Hour for Entire Intersection Begins at 10:00 AM								
10:00 AM		7	7	6		6	13	
10:15 AM		13	13	6		6	19	
10:30 AM		3	3	10		10	13	
10:45 AM		10	10	6		6	16	
Total Volume		33	33	28		28	61	
% App. Total		100		100				
PHF		.635	.635	.700		.700	.803	

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 01:30 PM

	Blanding Blvd Southbound			Blanding Blvd Northbound			Int. Total	
	Start Time	Thru	App. Total	Thru	App. Total			
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1								
Peak Hour for Entire Intersection Begins at 01:30 PM								
01:30 PM		2	2	6		6	8	
01:45 PM		4	4	7		7	11	
02:00 PM		10	10	6		6	16	
02:15 PM		11	11	7		7	18	
Total Volume		27	27	26		26	53	
% App. Total		100		100				
PHF		.614	.614	.929		.929	.736	

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File Name : 1- Blanding Blvd & Median Cut 600 Ft from Anderson Rd
Site Code :
Start Date : 12/1/2021
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Groups Printed- Bicycles on Crosswalk

		Blanding Blvd Southbound			Blanding Blvd Northbound			
Start Time		Thru	U-Turn	App. Total	Thru	U-Turn	App. Total	Int. Total
07:00 AM		0	0	0	0	0	0	0
07:15 AM		0	0	0	0	0	0	0
07:30 AM		0	0	0	0	0	0	0
07:45 AM		0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0
08:00 AM		0	0	0	0	0	0	0
08:15 AM		0	0	0	0	0	0	0
08:30 AM		0	0	0	0	0	0	0
08:45 AM		0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0
09:00 AM		0	0	0	0	0	0	0
09:15 AM		0	0	0	0	0	0	0
09:30 AM		0	0	0	0	0	0	0
09:45 AM		0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0
10:00 AM		0	0	0	0	0	0	0
10:15 AM		0	0	0	0	0	0	0
10:30 AM		0	0	0	0	0	0	0
10:45 AM		0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0
11:00 AM		0	0	0	0	0	0	0
11:15 AM		0	0	0	0	0	0	0
11:30 AM		0	0	0	0	0	0	0
11:45 AM		0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0
12:00 PM		0	0	0	0	0	0	0
12:15 PM		0	0	0	0	0	0	0
12:30 PM		0	0	0	0	0	0	0
12:45 PM		0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0
01:00 PM		0	0	0	0	0	0	0
01:15 PM		0	0	0	0	0	0	0
01:30 PM		0	0	0	0	0	0	0
01:45 PM		0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0
02:00 PM		0	0	0	0	0	0	0
02:15 PM		0	0	0	0	0	0	0
02:30 PM		0	0	0	0	0	0	0
02:45 PM		0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0
03:00 PM		0	0	0	0	0	0	0
03:15 PM		0	0	0	0	0	0	0
03:30 PM		0	0	0	0	0	0	0
03:45 PM		0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0
04:00 PM		0	0	0	0	0	0	0
04:15 PM		0	0	0	0	0	0	0
04:30 PM		0	0	0	0	0	0	0
04:45 PM		0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0
05:00 PM		0	0	0	0	0	0	0
05:15 PM		0	0	0	0	0	0	0
05:30 PM		0	0	0	0	0	0	0
05:45 PM		0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0
06:00 PM		0	0	0	0	0	0	0
06:15 PM		0	0	0	0	0	0	0
06:30 PM		0	0	0	0	0	0	0
06:45 PM		0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0

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File Name : 1- Blanding Blvd & Median Cut 600 Ft from Anderson Rd
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Groups Printed- Bicycles on Crosswalk

	Blanding Blvd Southbound			Blanding Blvd Northbound			
	Thru	U-Turn	App. Total	Thru	U-Turn	App. Total	Int. Total
Grand Total	0	0	0	0	0	0	0
Approch %	0	0		0	0		
Total %							0

	Blanding Blvd Southbound		Blanding Blvd Northbound		
Start Time	Thru	App. Total	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1					
Peak Hour for Entire Intersection Begins at 07:00 AM					
07:00 AM	0	0	0	0	0
07:15 AM	0	0	0	0	0
07:30 AM	0	0	0	0	0
07:45 AM	0	0	0	0	0
Total Volume	0	0	0	0	0
% App. Total	0	0			
PHF	.000	.000	.000	.000	.000

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour Analysis From 12:00 PM to 03:45 PM - Peak Hour for Entire Intersection Begins at 12:00 PM

Peak Hour for Entire Intersection Begins at 12:00 PM					
12:00 PM	0	0	0	0	0
12:15 PM	0	0	0	0	0
12:30 PM	0	0	0	0	0
12:45 PM	0	0	0	0	0
Total Volume	0	0	0	0	0
% App. Total	0	0			
PHF	.000	.000	.000	.000	.000

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File Name : 1- Blanding Blvd & Median Cut 600 Ft from Anderson Rd
Site Code :
Start Date : 12/1/2021
Page No : 1

Groups Printed- Pedestrians

	Blanding Blvd Southbound			Blanding Blvd Northbound			Int. Total	
	Start Time	Thru	U-Turn	App. Total	Thru	U-Turn	App. Total	
07:00 AM		0	0	0	0	0	0	0
07:15 AM		0	0	0	0	0	0	0
07:30 AM		0	0	0	0	0	0	0
07:45 AM		0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0
08:00 AM		0	0	0	0	0	0	0
08:15 AM		0	0	0	0	0	0	0
08:30 AM		0	0	0	0	0	0	0
08:45 AM		0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0
09:00 AM		0	0	0	0	0	0	0
09:15 AM		0	0	0	0	0	0	0
09:30 AM		0	0	0	0	0	0	0
09:45 AM		0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0
10:00 AM		0	0	0	0	0	0	0
10:15 AM		0	0	0	0	0	0	0
10:30 AM		0	0	0	0	0	0	0
10:45 AM		0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0
11:00 AM		0	0	0	0	0	0	0
11:15 AM		0	0	0	0	0	0	0
11:30 AM		0	0	0	0	0	0	0
11:45 AM		0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0
12:00 PM		0	0	0	0	0	0	0
12:15 PM		0	0	0	0	0	0	0
12:30 PM		0	0	0	0	0	0	0
12:45 PM		0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0
01:00 PM		0	0	0	0	0	0	0
01:15 PM		0	0	0	0	0	0	0
01:30 PM		0	0	0	0	0	0	0
01:45 PM		0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0
02:00 PM		0	0	0	0	0	0	0
02:15 PM		0	0	0	0	0	0	0
02:30 PM		0	0	0	0	0	0	0
02:45 PM		0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0
03:00 PM		0	0	0	0	0	0	0
03:15 PM		0	0	0	0	0	0	0
03:30 PM		0	0	0	0	0	0	0
03:45 PM		0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0
04:00 PM		0	0	0	0	0	0	0
04:15 PM		0	0	0	0	0	0	0
04:30 PM		0	0	0	0	0	0	0
04:45 PM		0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0
05:00 PM		0	0	0	0	0	0	0
05:15 PM		0	0	0	0	0	0	0
05:30 PM		0	0	0	0	0	0	0
05:45 PM		0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0
06:00 PM		0	0	0	0	0	0	0
06:15 PM		0	0	0	0	0	0	0
06:30 PM		0	0	0	0	0	0	0
06:45 PM		0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0

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File Name : 1- Blanding Blvd & Median Cut 600 Ft from Anderson Rd
Site Code :
Start Date : 12/1/2021
Page No : 2

Groups Printed- Pedestrians

	Blanding Blvd Southbound			Blanding Blvd Northbound			
	Thru	U-Turn	App. Total	Thru	U-Turn	App. Total	Int. Total
Grand Total	0	0	0	0	0	0	0
Approch %	0	0		0	0		
Total %							0

	Blanding Blvd Southbound		Blanding Blvd Northbound		
Start Time	Thru	App. Total	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1					
Peak Hour for Entire Intersection Begins at 07:00 AM					
07:00 AM	0	0	0	0	0
07:15 AM	0	0	0	0	0
07:30 AM	0	0	0	0	0
07:45 AM	0	0	0	0	0
Total Volume	0	0	0	0	0
% App. Total	0	0			
PHF	.000	.000	.000	.000	.000

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour Analysis From 12:00 PM to 03:45 PM Peak Hour for Entire Intersection Begins at 12:00 PM

Peak Hour for Entire Intersection Begins at 12:00 PM					
12:00 PM	0	0	0	0	0
12:15 PM	0	0	0	0	0
12:30 PM	0	0	0	0	0
12:45 PM	0	0	0	0	0
Total Volume	0	0	0	0	0
% App. Total	0	0			
PHF	.000	.000	.000	.000	.000

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File Name : 1- Blanding Blvd & Median Cut 600 Ft from Anderson Rd
Site Code :
Start Date : 12/1/2021
Page No : 1

Groups Printed- Combined

		Blanding Blvd Southbound			Blanding Blvd Northbound			
Start Time		Thru	U-Turn	App. Total	Thru	U-Turn	App. Total	Int. Total
07:00 AM		95	0	95	215	0	215	310
07:15 AM		133	0	133	303	0	303	436
07:30 AM		163	0	163	317	0	317	480
07:45 AM		191	0	191	289	0	289	480
Total		582	0	582	1124	0	1124	1706
08:00 AM		153	1	154	301	0	301	455
08:15 AM		155	0	155	226	0	226	381
08:30 AM		164	0	164	218	0	218	382
08:45 AM		171	0	171	205	0	205	376
Total		643	1	644	950	0	950	1594
09:00 AM		190	0	190	226	0	226	416
09:15 AM		168	1	169	196	0	196	365
09:30 AM		178	0	178	158	0	158	336
09:45 AM		203	1	204	179	0	179	383
Total		739	2	741	759	0	759	1500
10:00 AM		181	0	181	168	0	168	349
10:15 AM		203	1	204	173	0	173	377
10:30 AM		206	0	206	188	2	190	396
10:45 AM		215	0	215	240	0	240	455
Total		805	1	806	769	2	771	1577
11:00 AM		208	2	210	214	0	214	424
11:15 AM		230	1	231	195	0	195	426
11:30 AM		215	1	216	197	1	198	414
11:45 AM		218	0	218	197	0	197	415
Total		871	4	875	803	1	804	1679
12:00 PM		204	0	204	213	1	214	418
12:15 PM		247	0	247	230	0	230	477
12:30 PM		235	1	236	260	0	260	496
12:45 PM		204	0	204	224	0	224	428
Total		890	1	891	927	1	928	1819
01:00 PM		216	0	216	240	1	241	457
01:15 PM		217	2	219	162	0	162	381
01:30 PM		229	2	231	188	0	188	419
01:45 PM		199	2	201	215	0	215	416
Total		861	6	867	805	1	806	1673
02:00 PM		254	0	254	206	0	206	460
02:15 PM		243	1	244	210	2	212	456
02:30 PM		216	0	216	224	1	225	441
02:45 PM		253	2	255	187	0	187	442
Total		966	3	969	827	3	830	1799
03:00 PM		285	0	285	189	1	190	475
03:15 PM		280	1	281	221	0	221	502
03:30 PM		250	1	251	231	0	231	482
03:45 PM		275	0	275	212	0	212	487
Total		1090	2	1092	853	1	854	1946
04:00 PM		286	1	287	218	0	218	505
04:15 PM		329	2	331	203	0	203	534
04:30 PM		308	0	308	230	0	230	538
04:45 PM		312	0	312	192	0	192	504
Total		1235	3	1238	843	0	843	2081
05:00 PM		304	0	304	229	1	230	534
05:15 PM		297	0	297	221	0	221	518
05:30 PM		310	0	310	202	1	203	513
05:45 PM		273	0	273	216	0	216	489
Total		1184	0	1184	868	2	870	2054
06:00 PM		252	0	252	199	0	199	451
06:15 PM		242	2	244	191	0	191	435
06:30 PM		202	1	203	175	0	175	378
06:45 PM		192	1	193	167	0	167	360
Total		888	4	892	732	0	732	1624

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File Name : 1- Blanding Blvd & Median Cut 600 Ft from Anderson Rd
 Site Code :
 Start Date : 12/1/2021
 Page No : 2

Groups Printed- Combined

	Blanding Blvd Southbound			Blanding Blvd Northbound			Int. Total
	Thru	U-Turn	App. Total	Thru	U-Turn	App. Total	
Grand Total	10754	27	10781	10260	11	10271	21052
Apprch %	99.7	0.3		99.9	0.1		
Total %	51.1	0.1	51.2	48.7	0.1	48.8	

	Blanding Blvd Southbound			Blanding Blvd Northbound			Int. Total
	Start Time	Thru	App. Total	Thru	App. Total		
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1							
Peak Hour for Entire Intersection Begins at 07:15 AM							
07:15 AM	133	133		303	303		436
07:30 AM	163	163		317	317		480
07:45 AM	191	191		289	289		480
08:00 AM	153	153		301	301		454
Total Volume	640	640		1210	1210		1850
% App. Total	100			100			
PHF	.838	.838		.954	.954		.964

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

	Blanding Blvd Southbound			Blanding Blvd Northbound			Int. Total
	Start Time	Thru	App. Total	Thru	App. Total		
04:15 PM	329	329		203	203		532
04:30 PM	308	308		230	230		538
04:45 PM	312	312		192	192		504
05:00 PM	304	304		229	229		533
Total Volume	1253	1253		854	854		2107
% App. Total	100			100			
PHF	.952	.952		.928	.928		.979

2020 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 7200 DUVAL COUNTYWIDE

MOCF: 0.96
PSCF

WEEK	DATES	SF	
* 1	01/01/2020 - 01/04/2020	0.98	1.02
* 2	01/05/2020 - 01/11/2020	0.95	0.99
* 3	01/12/2020 - 01/18/2020	0.92	0.96
* 4	01/19/2020 - 01/25/2020	0.91	0.95
* 5	01/26/2020 - 02/01/2020	0.90	0.94
* 6	02/02/2020 - 02/08/2020	0.90	0.94
* 7	02/09/2020 - 02/15/2020	0.89	0.93
* 8	02/16/2020 - 02/22/2020	0.92	0.96
* 9	02/23/2020 - 02/29/2020	0.94	0.98
*10	03/01/2020 - 03/07/2020	0.97	1.01
*11	03/08/2020 - 03/14/2020	1.00	1.04
*12	03/15/2020 - 03/21/2020	1.03	1.07
*13	03/22/2020 - 03/28/2020	1.12	1.17
14	03/29/2020 - 04/04/2020	1.21	1.26
15	04/05/2020 - 04/11/2020	1.31	1.36
16	04/12/2020 - 04/18/2020	1.40	1.46
17	04/19/2020 - 04/25/2020	1.32	1.38
18	04/26/2020 - 05/02/2020	1.25	1.30
19	05/03/2020 - 05/09/2020	1.17	1.22
20	05/10/2020 - 05/16/2020	1.10	1.15
21	05/17/2020 - 05/23/2020	1.07	1.11
22	05/24/2020 - 05/30/2020	1.05	1.09
23	05/31/2020 - 06/06/2020	1.03	1.07
24	06/07/2020 - 06/13/2020	1.01	1.05
25	06/14/2020 - 06/20/2020	0.99	1.03
26	06/21/2020 - 06/27/2020	1.00	1.04
27	06/28/2020 - 07/04/2020	1.01	1.05
28	07/05/2020 - 07/11/2020	1.01	1.05
29	07/12/2020 - 07/18/2020	1.02	1.06
30	07/19/2020 - 07/25/2020	1.01	1.05
31	07/26/2020 - 08/01/2020	1.00	1.04
32	08/02/2020 - 08/08/2020	0.99	1.03
33	08/09/2020 - 08/15/2020	0.99	1.03
34	08/16/2020 - 08/22/2020	0.98	1.02
35	08/23/2020 - 08/29/2020	0.98	1.02
36	08/30/2020 - 09/05/2020	0.98	1.02
37	09/06/2020 - 09/12/2020	0.97	1.01
38	09/13/2020 - 09/19/2020	0.97	1.01
39	09/20/2020 - 09/26/2020	0.96	1.00
40	09/27/2020 - 10/03/2020	0.95	0.99
41	10/04/2020 - 10/10/2020	0.95	0.99
42	10/11/2020 - 10/17/2020	0.94	0.98
43	10/18/2020 - 10/24/2020	0.95	0.99
44	10/25/2020 - 10/31/2020	0.95	0.99
45	11/01/2020 - 11/07/2020	0.96	1.00
46	11/08/2020 - 11/14/2020	0.97	1.01
47	11/15/2020 - 11/21/2020	0.98	1.02
48	11/22/2020 - 11/28/2020	0.98	1.02
49	11/29/2020 - 12/05/2020	0.98	1.02
50	12/06/2020 - 12/12/2020	0.98	1.02
51	12/13/2020 - 12/19/2020	0.98	1.02
52	12/20/2020 - 12/26/2020	0.95	0.99
53	12/27/2020 - 12/31/2020	0.92	0.96

* PEAK SEASON

APPENDIX E

Existing Conditions Operational Analysis

HCM 6th TWSC

Existing Condition

PM Peak

3: Blanding Blvd & VFW Driveway/Auto Garage Driveway

Intersection

Int Delay, s/veh 0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	0	8	0	0	1	7	831	1	0	1199	16
Future Vol, veh/h	2	0	8	0	0	1	7	831	1	0	1199	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	0	0	0	2	2	2	2	2	2
Mvmt Flow	2	0	8	0	0	1	7	848	1	0	1223	16

Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	1584	2094	620	1352	2102	425	1239	0	0	849	0	0
Stage 1	1231	1231	-	863	863	-	-	-	-	-	-	-
Stage 2	353	863	-	489	1239	-	-	-	-	-	-	-
Critical Hdwy	6.4	6.5	7.1	6.4	6.5	7.1	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.3	5.5	-	7.3	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.7	5.5	-	6.7	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.8	4	3.9	3.8	4	3.9	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	117	53	373	161	52	498	300	-	-	463	-	-
Stage 1	139	252	-	251	374	-	-	-	-	-	-	-
Stage 2	588	374	-	488	250	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	113	51	373	152	50	498	300	-	-	463	-	-
Mov Cap-2 Maneuver	113	51	-	152	50	-	-	-	-	-	-	-
Stage 1	133	252	-	240	358	-	-	-	-	-	-	-
Stage 2	561	358	-	477	250	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19.7	12.2	0.3	0
HCM LOS	C	B		
<hr/>				
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1
Capacity (veh/h)	300	-	-	255 498
HCM Lane V/C Ratio	0.024	-	-	0.04 0.002
HCM Control Delay (s)	17.3	0.2	-	19.7 12.2
HCM Lane LOS	C	A	-	C B A
HCM 95th %tile Q(veh)	0.1	-	-	0.1 0 0

APPENDIX F

Trip Generation

Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

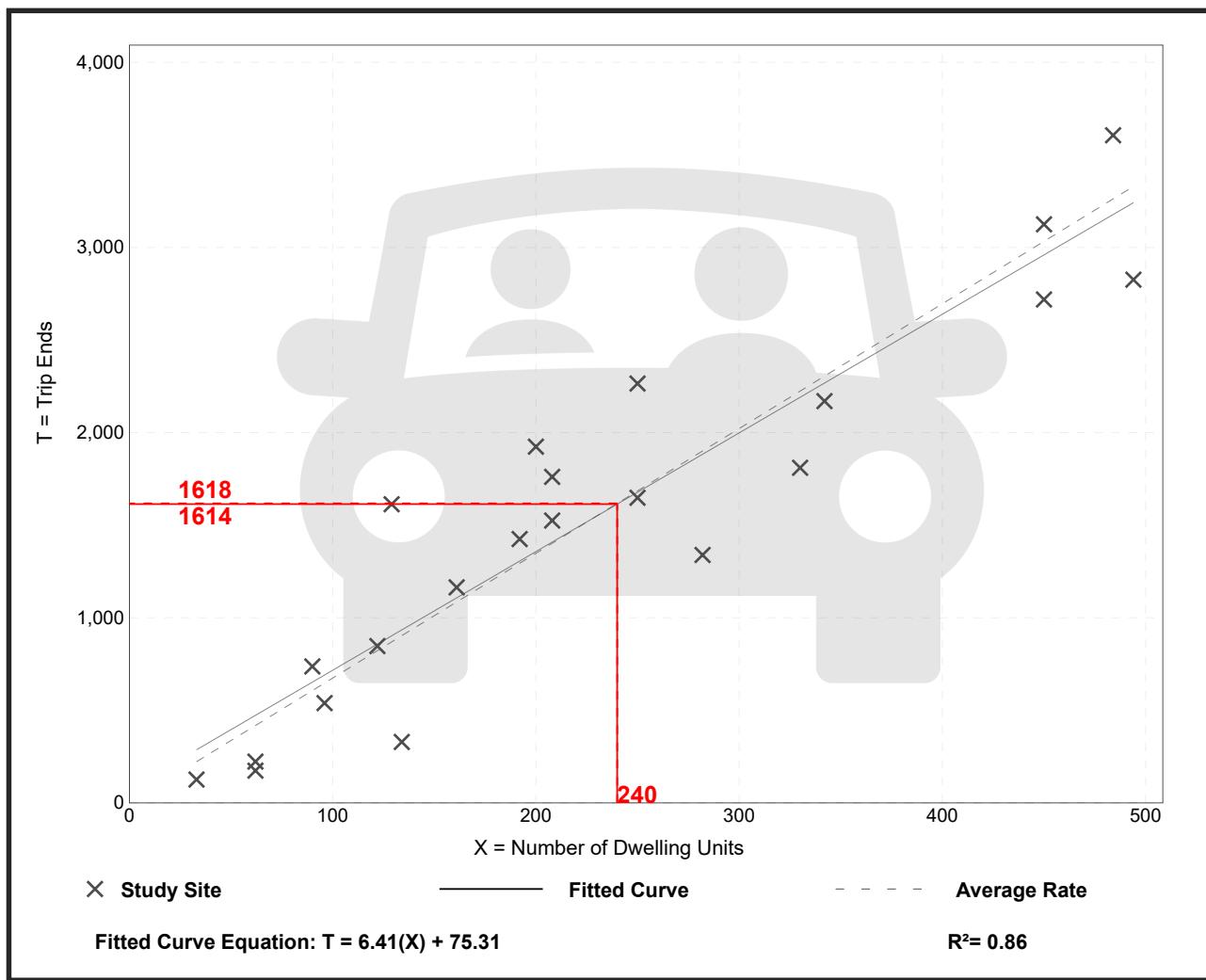
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 22
Avg. Num. of Dwelling Units: 229
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
6.74	2.46 - 12.50	1.79

Data Plot and Equation



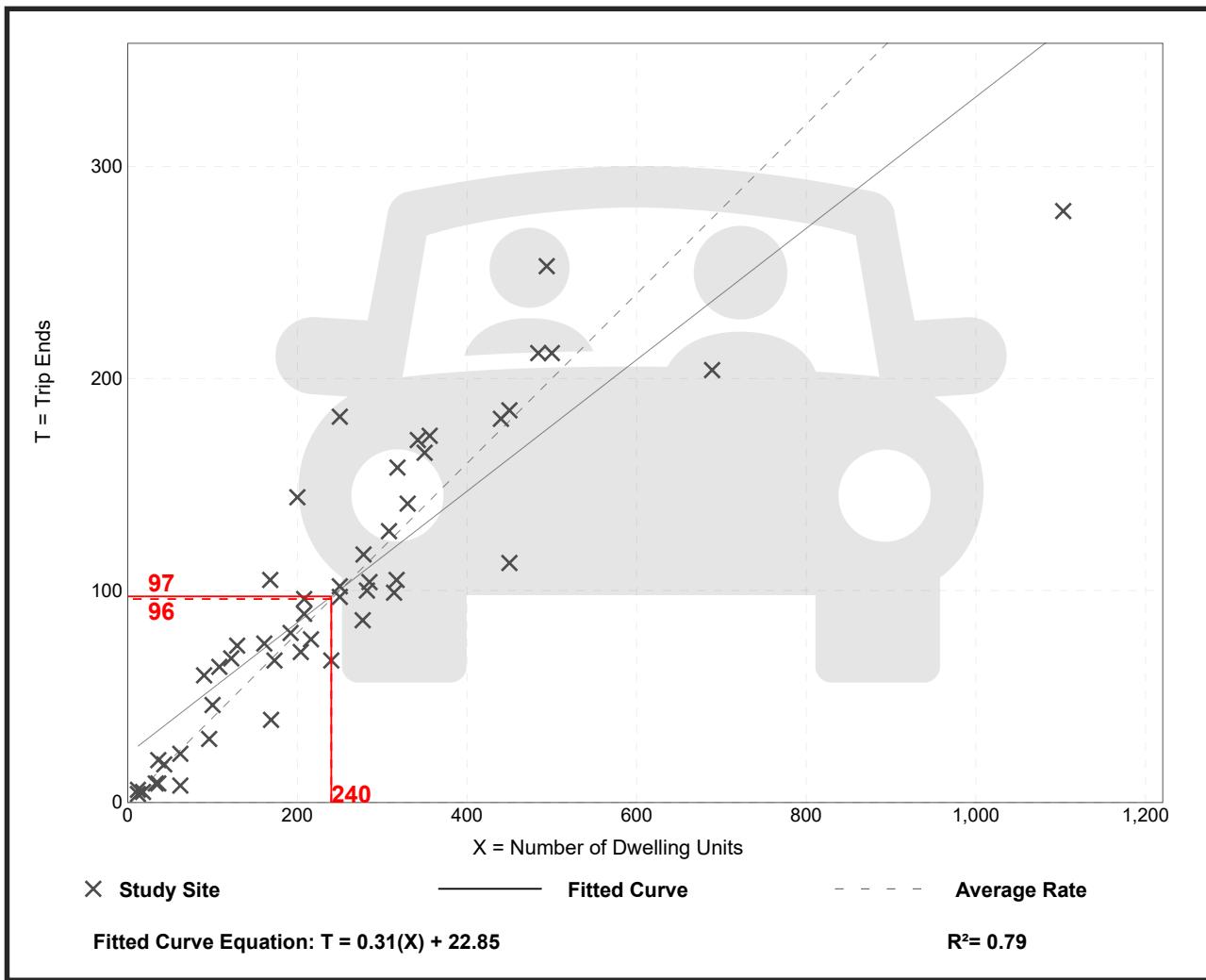
Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
 Number of Studies: 49
 Avg. Num. of Dwelling Units: 249
 Directional Distribution: 24% entering, 76% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.40	0.13 - 0.73	0.12

Data Plot and Equation



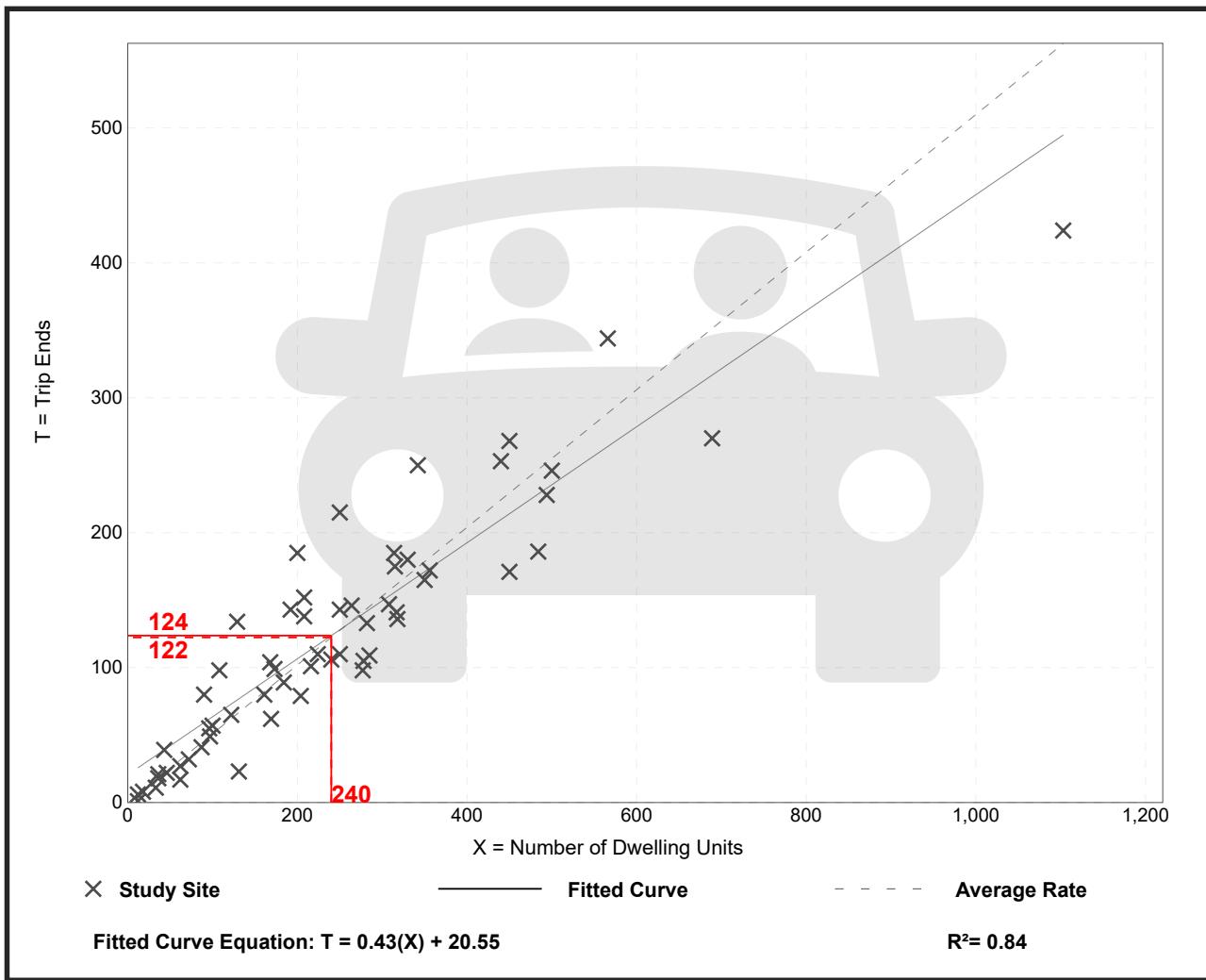
Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
 Number of Studies: 59
 Avg. Num. of Dwelling Units: 241
 Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

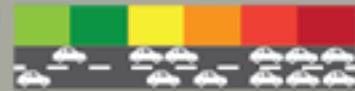
Average Rate	Range of Rates	Standard Deviation
0.51	0.08 - 1.04	0.15

Data Plot and Equation



APPENDIX G

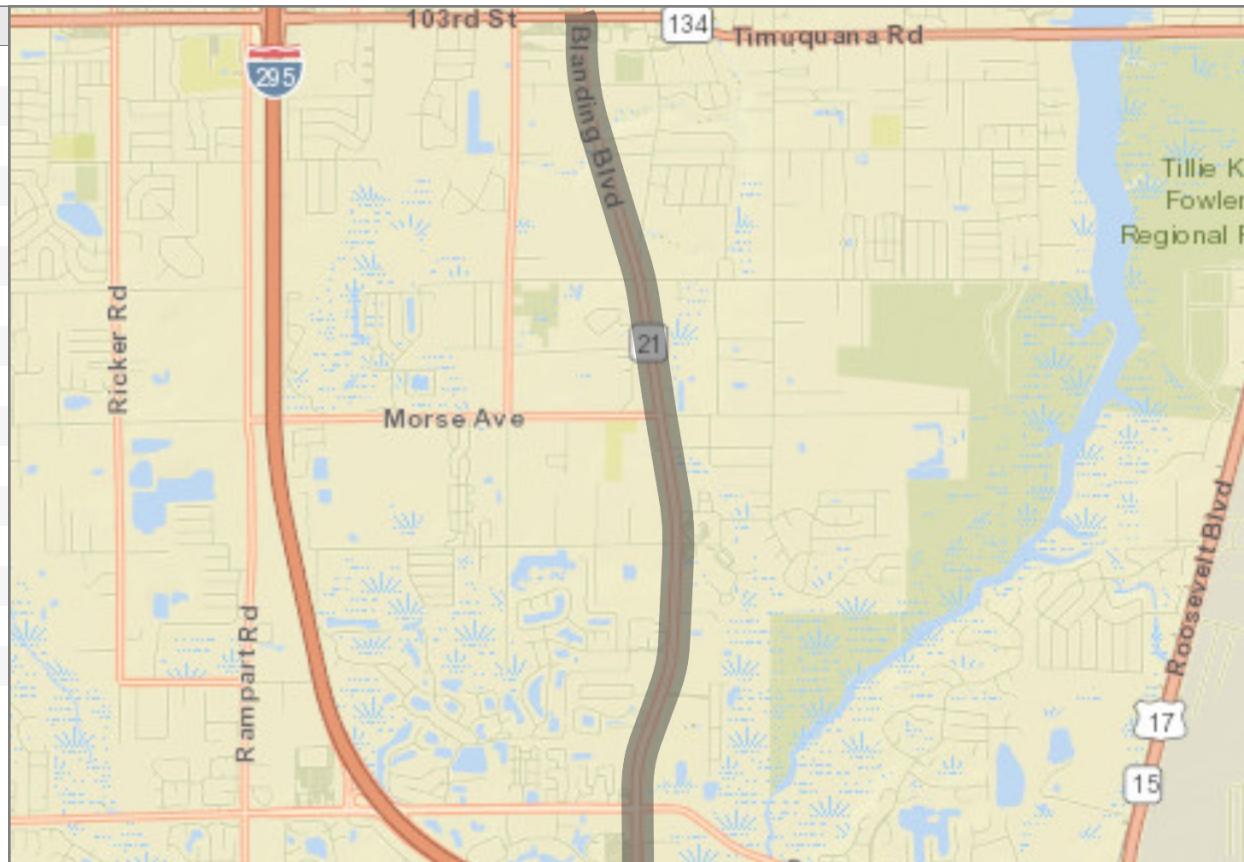
FDOT District 2 LOS Summary Report



SR 21 / Blanding Blvd. from I-295 to SR 134 / 103rd St

Attribute	Value
Segment ID:	402
Segment Length (miles):	3.326 mi
Location:	Jacksonville
County:	Duval
Roadway ID:	72170000
Begin MP:	0.795
End MP:	4.120
SIS:	No
SIS Type:	Non SIS
Median Treatment:	Divided
Directionality:	Two-Way
Posted Speed:	45 mph
Facility Type:	Arterial
Area Type:	Urbanized
Standard K:	9.0%
FDOT LOS Standard:	D
Max. Service Vol. Adj. Factor:	0.00

Data Sources: RCI; TCI; NERPM AB; GUATS; FLSWM
Google Street View:
<http://maps.google.com/maps?q=&layer=c&cbl=30.2249999573959,-81.7376413645958>



Projected Values	2020	2025	2030	2035	2040	2045
Number of Lanes	4	6	6	6	6	6
AADT	29,942	35,885	37,577	39,270	40,963	42,656
Peak Hour Maximum Service Volume at LOS Standard	3,580	5,390	5,390	5,390	5,390	5,390
Peak Hour Traffic Volume	2,695	3,230	3,382	3,534	3,687	3,839
Peak Hour LOS	C	C	C	C	C	C

Notes:

$$\text{CAGR} = (42,656/29,942)^{(1/25)} - 1 = 1.43\%$$

APPENDIX H

Future Conditions Operational Analysis

Intersection

Int Delay, s/veh 0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔			↔			↔↑	↑↑		↔	↑↑	
Traffic Vol, veh/h	0	0	1	0	0	2	1	1206	3	2	640	1
Future Vol, veh/h	0	0	1	0	0	2	1	1206	3	2	640	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	1	1	1	3	3	3
Mvmt Flow	0	0	1	0	0	2	1	1269	3	2	674	1

Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	1189	1953	338	1547	1952	636	675	0	0	1272	0	0
Stage 1	679	679	-	1273	1273	-	-	-	-	-	-	-
Stage 2	510	1274	-	274	679	-	-	-	-	-	-	-
Critical Hdwy	6.4	6.5	7.1	6.4	6.5	7.1	5.32	-	-	5.36	-	-
Critical Hdwy Stg 1	7.3	5.5	-	7.3	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.7	5.5	-	6.7	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.8	4	3.9	3.8	4	3.9	3.11	-	-	3.13	-	-
Pot Cap-1 Maneuver	201	65	566	123	65	364	563	-	-	286	-	-
Stage 1	335	454	-	130	241	-	-	-	-	-	-	-
Stage 2	474	240	-	655	454	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	197	64	566	121	64	364	563	-	-	286	-	-
Mov Cap-2 Maneuver	197	64	-	121	64	-	-	-	-	-	-	-
Stage 1	333	449	-	129	240	-	-	-	-	-	-	-
Stage 2	468	239	-	647	449	-	-	-	-	-	-	-

Approach	EB	WB			NB			SB		
HCM Control Delay, s	11.4	14.9			0			0.2		
HCM LOS	B	B								
<hr/>										
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR		
Capacity (veh/h)	563	-	-	566	364	286	-	-		
HCM Lane V/C Ratio	0.002	-	-	0.002	0.006	0.007	-	-		
HCM Control Delay (s)	11.4	0	-	11.4	14.9	17.7	0.1	-		
HCM Lane LOS	B	A	-	B	B	C	A	-		
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-		

Intersection

Int Delay, s/veh 0.3

Movement	EBL	EBT	EBC	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	0	8	0	0	1	7	856	1	0	1235	16
Future Vol, veh/h	2	0	8	0	0	1	7	856	1	0	1235	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	0	0	0	2	2	2	2	2	2
Mvmt Flow	2	0	8	0	0	1	7	873	1	0	1260	16

Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	1631	2156	638	1392	2164	437	1276	0	0	874	0	0
Stage 1	1268	1268	-	888	888	-	-	-	-	-	-	-
Stage 2	363	888	-	504	1276	-	-	-	-	-	-	-
Critical Hdwy	6.4	6.5	7.1	6.4	6.5	7.1	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.3	5.5	-	7.3	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.7	5.5	-	6.7	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.8	4	3.9	3.8	4	3.9	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	109	48	363	152	48	489	287	-	-	450	-	-
Stage 1	131	242	-	241	365	-	-	-	-	-	-	-
Stage 2	580	365	-	478	240	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	105	46	363	143	46	489	287	-	-	450	-	-
Mov Cap-2 Maneuver	105	46	-	143	46	-	-	-	-	-	-	-
Stage 1	125	242	-	230	348	-	-	-	-	-	-	-
Stage 2	552	348	-	467	240	-	-	-	-	-	-	-

Approach	EB	WB			NB			SB		
HCM Control Delay, s	20.5	12.4			0.4			0		
HCM LOS	C	B								

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	287	-	-	243	489	450	-	-
HCM Lane V/C Ratio	0.025	-	-	0.042	0.002	-	-	-
HCM Control Delay (s)	17.9	0.3	-	20.5	12.4	0	-	-
HCM Lane LOS	C	A	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0	0	-	-

Intersection

Int Delay, s/veh	0.4												
Movement	EBL	EBT	EBC	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations	↔			↔			↑↓↑	↑↓↑		↔	↑↓↑	↔	↑↓↑
Traffic Vol, veh/h	0	0	1	0	0	2	1	1221	3	49	2	666	1
Future Vol, veh/h	0	0	1	0	0	2	1	1221	3	49	2	666	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free						
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	190	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	1	1	1	3	3	3	3
Mvmt Flow	0	0	1	0	0	2	1	1285	3	52	2	701	1

Major/Minor	Minor2	Minor1			Major1			Major2					
Conflicting Flow All	1326	2100	351	1677	2099	644	702	0	0	941	1288	0	0
Stage 1	810	810	-	1289	1289	-	-	-	-	-	-	-	-
Stage 2	516	1290	-	388	810	-	-	-	-	-	-	-	-
Critical Hdwy	6.4	6.5	7.1	6.4	6.5	7.1	5.32	-	-	5.66	5.36	-	-
Critical Hdwy Stg 1	7.3	5.5	-	7.3	5.5	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.7	5.5	-	6.7	5.5	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.8	4	3.9	3.8	4	3.9	3.11	-	-	2.33	3.13	-	-
Pot Cap-1 Maneuver	167	52	555	103	53	360	547	-	-	470	281	-	-
Stage 1	273	396	-	127	236	-	-	-	-	-	-	-	-
Stage 2	470	236	-	561	396	-	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	150	46	555	93	46	360	547	-	-	455	455	-	-
Mov Cap-2 Maneuver	150	46	-	93	46	-	-	-	-	-	-	-	-
Stage 1	271	349	-	126	235	-	-	-	-	-	-	-	-
Stage 2	464	235	-	494	349	-	-	-	-	-	-	-	-

Approach	EB	WB		NB		SB		
HCM Control Delay, s	11.5	15.1		0		1		
HCM LOS	B	C						
<hr/>								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	547	-	-	555	360	455	-	-
HCM Lane V/C Ratio	0.002	-	-	0.002	0.006	0.118	-	-
HCM Control Delay (s)	11.6	0	-	11.5	15.1	14	-	-
HCM Lane LOS	B	A	-	B	C	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0.4	-	-

HCM 6th TWSC
6: Blanding Blvd & Momentum Apts Driveway

2023 Build
AM Peak

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	74	15	1271	647	8
Future Vol, veh/h	0	74	15	1271	647	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	190	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	1	1	4	4
Mvmt Flow	0	77	16	1324	674	8
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	341	682	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.1	5.32	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.9	3.11	-	-	-
Pot Cap-1 Maneuver	0	564	559	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	564	559	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB	SB			
HCM Control Delay, s	12.4	0.1	0			
HCM LOS	B					
Minor Lane/Major Mvmt		NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)		559	-	564	-	-
HCM Lane V/C Ratio		0.028	-	0.137	-	-
HCM Control Delay (s)		11.6	-	12.4	-	-
HCM Lane LOS		B	-	B	-	-
HCM 95th %tile Q(veh)		0.1	-	0.5	-	-

3: Blanding Blvd & VFW Driveway/Auto Garage Driveway

Intersection

Int Delay, s/veh 0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	2	0	8	0	0	1	7	888	1	21	0	1262	16
Future Vol, veh/h	2	0	8	0	0	1	7	888	1	21	0	1262	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free						
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	190	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	0	0	0	2	2	2	2	2	2	2
Mvmt Flow	2	0	8	0	0	1	7	906	1	21	0	1288	16

Major/Minor	Minor2	Minor1			Major1			Major2					
Conflicting Flow All	1714	2259	652	1478	2267	454	1304	0	0	662	907	0	0
Stage 1	1338	1338	-	921	921	-	-	-	-	-	-	-	-
Stage 2	376	921	-	557	1346	-	-	-	-	-	-	-	-
Critical Hdwy	6.4	6.5	7.1	6.4	6.5	7.1	5.34	-	-	5.64	5.34	-	-
Critical Hdwy Stg 1	7.3	5.5	-	7.3	5.5	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.7	5.5	-	6.7	5.5	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.8	4	3.9	3.8	4	3.9	3.12	-	-	2.32	3.12	-	-
Pot Cap-1 Maneuver	97	42	356	135	41	477	278	-	-	676	434	-	-
Stage 1	117	224	-	229	352	-	-	-	-	-	-	-	-
Stage 2	570	352	-	444	222	-	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-	-
Mov Cap-1 Maneuver	91	39	356	124	38	477	278	-	-	675	675	-	-
Mov Cap-2 Maneuver	91	39	-	124	38	-	-	-	-	-	-	-	-
Stage 1	111	217	-	217	334	-	-	-	-	-	-	-	-
Stage 2	540	334	-	420	215	-	-	-	-	-	-	-	-

Approach	EB	WB			NB			SB		
HCM Control Delay, s	21.8	12.6			0.4			0.2		
HCM LOS	C	B								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR		
Capacity (veh/h)	278	-	-	225	477	675	-	-		
HCM Lane V/C Ratio	0.026	-	-	0.045	0.002	0.032	-	-		
HCM Control Delay (s)	18.3	0.3	-	21.8	12.6	10.5	-	-		
HCM Lane LOS	C	A	-	C	B	B	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0	0.1	-	-		

HCM 6th TWSC
6: Blanding Blvd & Momentum Apts Driveway

2023 Build
PM Peak

Intersection							
Int Delay, s/veh	0.6						
Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Traffic Vol, veh/h	0	46	1	32	883	1267	46
Future Vol, veh/h	0	46	1	32	883	1267	46
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	-	0	-	190	-	-	-
Veh in Median Storage, #	0	-	-	-	0	0	-
Grade, %	0	-	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98	98
Heavy Vehicles, %	0	0	2	2	2	2	2
Mvmt Flow	0	47	1	33	901	1293	47
Major/Minor	Minor2	Major1		Major2			
Conflicting Flow All	-	670	978	1340	0	-	0
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-
Critical Hdwy	-	7.1	5.64	5.34	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-
Follow-up Hdwy	-	3.9	2.32	3.12	-	-	-
Pot Cap-1 Maneuver	0	346	452	267	-	-	-
Stage 1	0	-	-	-	-	-	-
Stage 2	0	-	-	-	-	-	-
Platoon blocked, %					-	-	-
Mov Cap-1 Maneuver	-	346	270	270	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-
Approach	EB	NB		SB			
HCM Control Delay, s	17	0.7		0			
HCM LOS	C						
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR		
Capacity (veh/h)	270	-	346	-	-		
HCM Lane V/C Ratio	0.125	-	0.136	-	-		
HCM Control Delay (s)	20.2	-	17	-	-		
HCM Lane LOS	C	-	C	-	-		
HCM 95th %tile Q(veh)	0.4	-	0.5	-	-		