
Traffic Impact Study

Cutler Gate



**8495 SW 200th Street
Cutler Bay, Florida**

January 23rd, 2018



Richard Garcia & Associates, Inc.

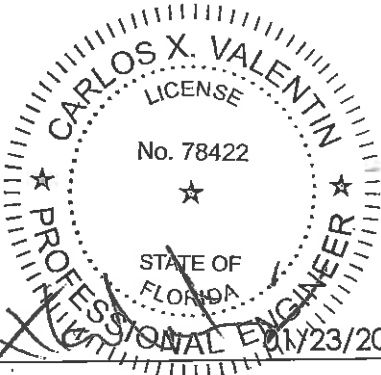
Engineer's Certification

I, Carlos X. Valentin, P.E. # 78422, certify that I currently hold an active Professional Engineers License in the State of Florida and am competent through education and experience to provide engineering services in the civil and traffic engineering disciplines contained in this report. In addition, the firm Richard Garcia & Associates, Inc. holds a Certificate of Authorization # 9592 in the State of Florida. I further certify that this report was prepared by me or under my responsible charge as defined in Chapter 61G15-18.001 F.A.C. and that all statements, conclusions and recommendations made herein are true and correct to the best of my knowledge and ability.

Project Description:

Cutler Gate - Traffic Impact Study

Project Location:8495 SW 200th Street
Cutler Bay, Florida



Florida Registration No. 78422 Date 04/23/2018

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Executive Summary

This study was prepared to evaluate the traffic impacts associated with the proposed development. The subject site is located at 8495 SW 200th Street in the Town of Cutler Bay, Florida. This vacant site will be developed as **multifamily housing** (36 dwelling units) and **retail** (4,186 square feet). The subject project will have one (1) driveway on Old Cutler Road, north of SW 200th Street and two (2) driveways on SW 85th Avenue.

The trip generation characteristics for the subject project were obtained from ITE's Trip Generation Manual, 10th Edition. ITE's Land Use 221 (Multifamily Housing) and 820 (Shopping Center), as identified by the Institute of Transportation Engineers (ITE), most closely resembles the proposed project. The trip generation analysis was performed for a typical weekday's AM and PM peak hour.

The trip generation calculations yielded 17 gross vehicle trips (5 trips-in & 12 trips-out) during the AM peak hour and 32 gross vehicle trips (18 trips-in & 14 trips-out) in the PM peak hour. The project trips were distributed to the study area and were assigned to the project's driveways consistent with the trip distribution percentages of the project's Traffic Analysis Zone 1356. The corresponding traffic distribution percentages were determined by interpolating between the 2010 TAZ and 2040 TAZ data for the projected design year of 2019.

Manual Turning Movement Counts (TMC's) and operational characteristics were gathered at the intersection of *Old Cutler Road* and *SW 200th Street*. These traffic counts were performed on Wednesday, January 17th, 2018 during the AM peak period (7:00 AM-9:00 AM) and PM peak period (4:00 PM-6:00 PM). Subsequently, the AM and PM peak hour traffic volumes were determined, adjusted for peak seasonal variations utilizing the Florida Department of Transportation Seasonal Factor (SF) and utilized in the operational analysis for the existing condition. As a result, the studied intersection yielded LOS A for the AM and PM peak hour.

Based on historical trends and published traffic data from the Florida Department of Transportation (FDOT), a regression analysis was performed to estimate any background traffic growth within the project's vicinity. The analysis yielded a growth rate of 1.76 percent (%). The existing seasonally adjusted turning movement counts were augmented with the background growth rate of 1.76 percent and the project gross trips. The resulting traffic volumes represent the proposed future condition with project trips in 2019 (Build Condition) and were evaluated to determine the future Level of Service. As a result, the operational analysis revealed that the studied intersection will maintain the existing LOS A for the future AM and PM peak hour condition in 2019. Lastly, the project's driveways were also evaluated

and yielded LOS A. Table 1 summarizes the LOS results and delay of the operational analysis for both the existing condition and proposed future condition.

Additionally, Old Cutler Road was identified as the roadway segment most impacted by the subject project and therefore, it was evaluated to determine the available roadway capacity and Level of Service (LOS) for the existing condition (2018) and proposed future condition with project (2019). The bi-directional traffic volumes for the AM and PM peak hour were obtained using the existing seasonally adjusted turning movement counts. The future roadway volumes were developed by augmenting the existing peak hour volumes with a background traffic growth rate of 1.76 percent and the project gross trips. The roadway traffic capacity was evaluated using the generalized Table 4 of the 2013 FDOT (Florida Department of Transportation) Quality / Level of Service Handbook. As result, the analysis revealed that Old Cutler Road within the project's vicinity is operating at LOS C during both the AM and PM peak hour and will maintain LOS C for the proposed future conditions in 2019. Table 2 summarizes the LOS results and available roadway capacity for the studied roadway segment.

In conclusion, the most impacted intersection and roadway segment is currently operating within the acceptable LOS and will continue to do so during the future AM and PM peak hour condition. Therefore, no off-site improvements are required or recommended at this time. Lastly, it is fair to conclude that sufficient roadway capacity exists to support the subject project.

Table 1: Intersection LOS Summary - AM & PM Peak Hour

Existing Condition (2018)			AM Peak Hour						PM Peak Hour					
Location	Intersection Control		Overall		* Critical Approach TWSC				Overall		* Critical Approach TWSC			
			LOS	Delay (sec)	Approach	LOS	Delay (sec)		LOS	Delay (sec)	Approach	LOS	Delay (sec)	
1 Old Cutler Road & SW 200 Street	Two-Way Stop		A	0.0	-	-	-		A	0.1	EB	C	15.6	
Proposed Future Condition (with Project Trips) (2019)			AM Peak Hour						PM Peak Hour					
Location	Intersection Control		Overall		* Critical Approach TWSC				Overall		* Critical Approach TWSC			
			LOS	Delay (sec)	Approach	LOS	Delay (sec)		LOS	Delay (sec)	Approach	LOS	Delay (sec)	
1 Old Cutler Road & SW 200 Street	Two-Way Stop		A	0.0	EB	B	14.1		A	0.2	EB	C	18.4	
2 Old Cutler Road & Driveway 1 (DW1)	Two-Way Stop		A	0.1	EB	C	17.1		A	0.2	EB	C	23.2	
3 SW 85 Avenue & Driveway 2 (DW2)	Two-Way Stop		A	4.1	WB	A	8.5		A	1.5	WB	A	8.5	
4 SW 85 Avenue & Driveway 3 (DW3)	Two-Way Stop		A	2.8	WB	A	8.5		A	1.3	WB	A	8.6	

Notes: * Critical Approach for TWSC.

Table 2: Roadway Link LOS Summary - AM & PM Peak Hour

Roadway Analysis - AM Peak Hour			LOS / Volume Standard	Roadway Segment			Background Growth @ 1.76% - 1 Year Build-Out (2019)	Project Gross Trips (2019)	Roadway Segment		
Roadway		Location		Existing Two-Way Volume (2018)	Available Capacity	LOS			Proposed Traffic Volume (2019)	Available Capacity	LOS
1	Old Cutler Road	North of SW 87 Avenue	LOS D / 1,600 VPH Class I - 2LU	1,105	495	C	19	8	1,132	468	C

Roadway Analysis - PM Peak Hour			LOS / Volume Standard	Roadway Segment			Background Growth @ 1.76% - 1 Year Build-Out (2019)	Project Gross Trips (2019)	Roadway Segment		
Roadway		Location		Existing Two-Way Volume (2018)	Available Capacity	LOS			Proposed Traffic Volume (2019)	Available Capacity	LOS
1	Old Cutler Road	North of SW 87 Avenue	LOS D / 1,600 VPH Class I - 2LU	1,258	342	C	22	14	1,295	305	C

Introduction

The purpose of this study is to evaluate the traffic impacts associated with the proposed development. The analysis documented herewith evaluates the existing condition and proposed future condition with the project traffic during the roadway's AM and PM peak hour.

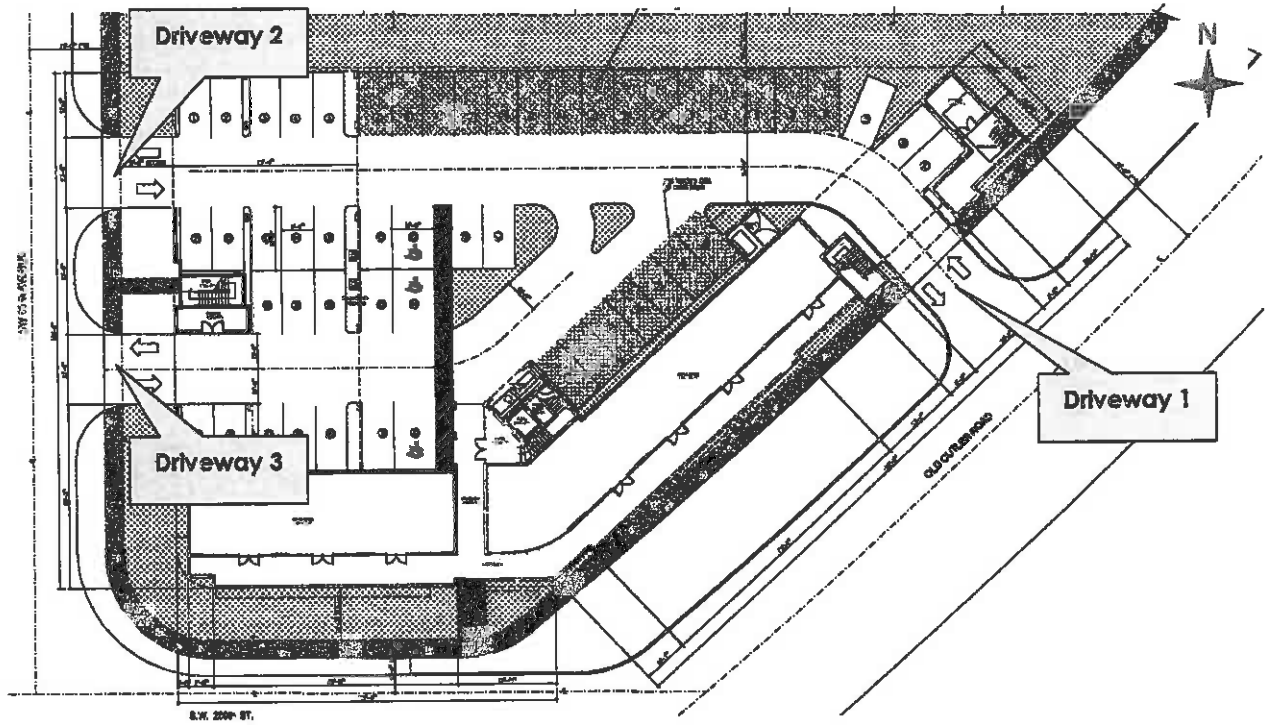
Project Location / Description

The subject site is located at 8495 SW 200th Street in the Town of Cutler Bay, Florida. This vacant site will be developed as **multifamily housing** (36 dwelling units) and **retail** (4,186 square feet). The subject project will have one (1) driveway on Old Cutler Road, north of SW 200th Street and two (2) driveways on SW 85th Avenue. Figure 1 depicts the site's location map while Figure 2 is the site plan provided for illustrative purposes only.

Figure 1: Location Map



Figure 2: Site Plan



Existing Condition (2018)

The purpose of this section is to identify the current operational and geometric characteristics at the most impacted intersections and roadways in order to provide a comparison to future conditions.

Turning Movement Counts (TMC's)

Manual Turning Movement Counts (TMC's) and operational characteristics were gathered at the intersection of *Old Cutler Road* and *SW 200th Street*. These traffic counts were performed on Wednesday, January 17th, 2018 during the AM peak period (7:00 AM-9:00 AM) and PM peak period (4:00 PM-6:00 PM). Subsequently, the AM and PM peak hour traffic volumes were determined, adjusted for peak seasonal variations utilizing the Florida Department of Transportation Seasonal Factor (SF) and utilized in the operational analysis for the existing condition. Figures 3 and 4 depict the existing seasonally adjusted AM and PM peak hour TMC's, respectively. Appendix 4 contains the raw data and the tables utilized to develop the seasonally adjusted traffic volumes.

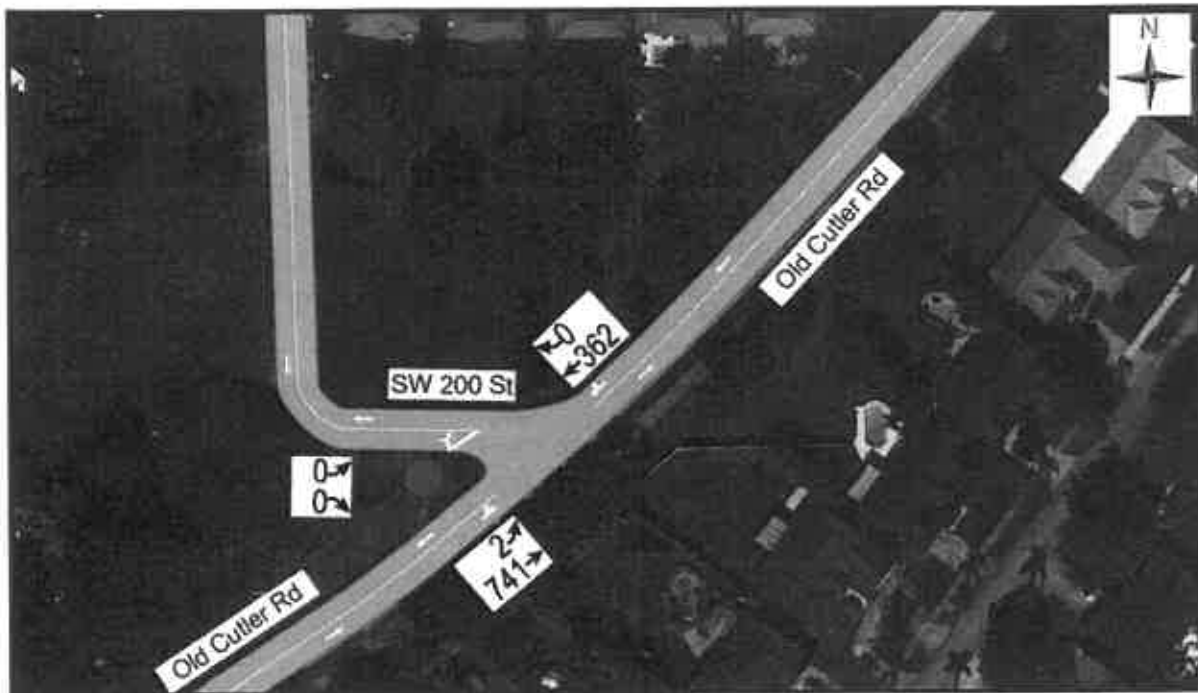
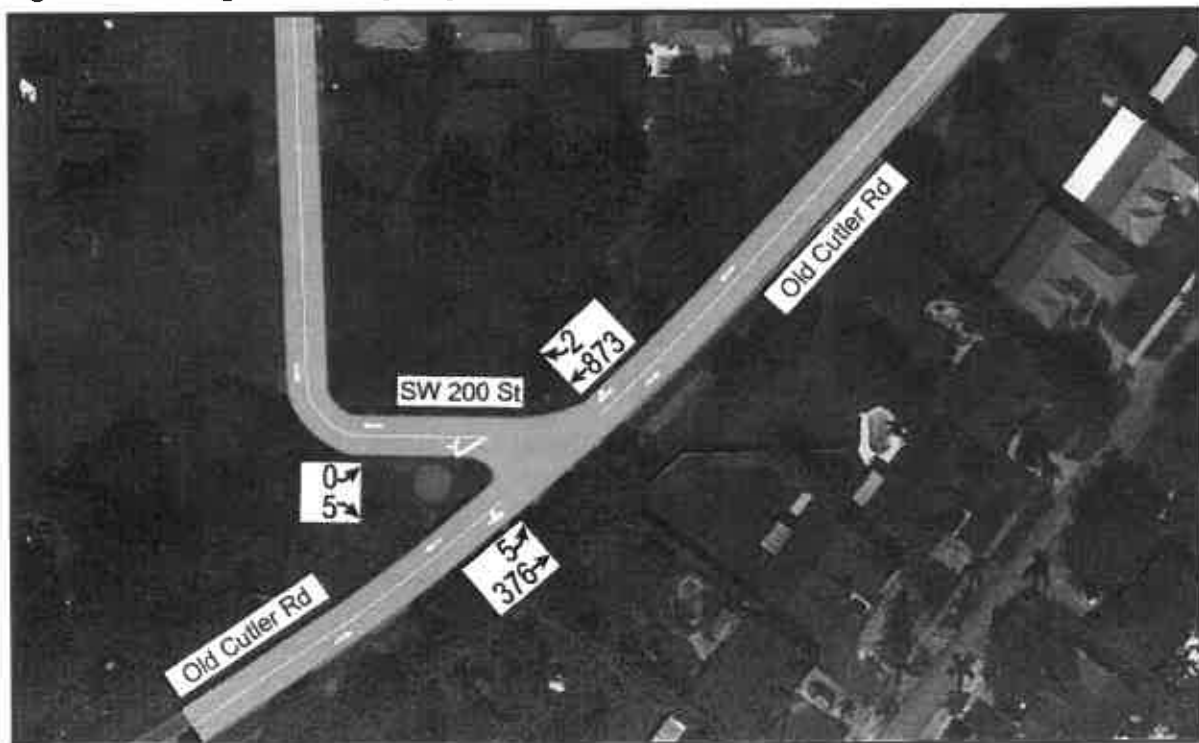
Operational Analysis - Intersection Level of Service (LOS)

The turning movement counts shown in the Figures 3 and 4 were utilized to perform an operational analysis for the AM and PM peak hour condition. This analysis was performed consistent with the traffic operational characteristics (i.e. lane geometry, traffic control, etc.) at the time data collection took place and follows the latest Highway Capacity Manual (HCM) methodology. As a result, the studied intersection yielded LOS A for the AM and PM peak hour. Table 3 summarizes the LOS and vehicle delay results. Appendix 5 contains other outputs such as volume to capacity ratio (V/C) and 95th Percentile Queue.

Table 3: Existing Condition LOS & Delay (Intersections) - AM & PM Peak Hour

Existing Condition (2018)			AM Peak Hour						PM Peak Hour			
Location	Intersection Control		Overall		* Critical Approach TWSC			Overall		* Critical Approach TWSC		
			LOS	Delay (sec)	Approach	LOS	Delay (sec)	LOS	Delay (sec)	Approach	LOS	Delay (sec)
1 Old Cutler Road & SW 200 Street	Two-Way Stop		A	0.0	EB	A	0.0	A	0.1	EB	C	15.6

Notes: * Critical Approach for TWSC.

Figure 3: Existing Seasonally Adjusted TMC's (2018) - AM Peak Hour**Figure 4: Existing Seasonally Adjusted TMC's (2018) - PM Peak Hour**

Roadway Analysis - Level of Service (LOS) & Capacity

Old Cutler Road was identified as the roadway segment most impacted by the subject project and therefore, it was evaluated to determine the available roadway capacity and Level of Service (LOS). The bi-directional traffic volumes for the AM and PM peak hour were obtained using the seasonally adjusted turning movement counts. The roadway analysis was performed using the generalized Table 4 of the 2013 FDOT (Florida Department of Transportation) Quality / Level of Service Handbook. As result, the analysis revealed that Old Cutler Road is operating at LOS C during both the AM and PM peak hour. Table 4 summarizes the LOS results and available capacity for each roadway link during the AM and PM peak hour.

Table 4: Existing Roadway Segment LOS & Capacity - AM & PM Peak Hour

Roadway Analysis - AM Peak Hour			LOS / Volume Standard	Roadway Segment		
Roadway		Location		Existing Two-Way Volume (2018)	Available Capacity	LOS
1	Old Cutler Road	North of SW 87 Avenue	LOS D / 1,600 VPH Class I - 2LU	1,105	495	C
Roadway Analysis - PM Peak Hour			LOS / Volume Standard	Roadway Segment		
Roadway		Location		Existing Two-Way Volume (2018)	Available Capacity	LOS
1	Old Cutler Road	North of SW 87 Avenue	LOS D / 1,600 VPH Class I - 2LU	1,258	342	C

Project Traffic

This section of the report describes the analysis for estimating the traffic associated with the subject project. The trip generation analysis summarized below was performed consistent with the methodology described in the Institute of Transportation Engineers (ITE) Trip Generation Handbook, 3rd Edition.

Trip Generation



The trip generation characteristics for the subject project were obtained from ITE's Trip Generation Manual, 10th Edition. ITE's Land Use 221 (Multifamily Housing) and 820 (Shopping Center), as identified by the Institute of Transportation Engineers (ITE), most closely resembles the proposed project. The trip generation analysis was performed for a typical weekday's AM and PM peak hour.

The trip generation calculations yielded **17 gross vehicle trips** (5 trips-in & 12 trips-out) during the **AM peak hour** and **32 gross vehicle trips** (18 trips-in & 14 trips-out) in the **PM peak hour**. Note, the resulting trips are likely to be reduced based on the rate and extent of internalization, transit, and pedestrian/bicycle since neither of these trip adjustments were utilized in the analysis as a conservative approach. Tables 5 and 6 summarize the trip generation results for the AM and PM peak hour, respectively.

Table 5: Trip Generation - AM Peak Hour

LAND USE (LU)	UNITS	ITE LU CODE	TRIP GENERATION RATE	AM PEAK HOUR TRIPS		
				IN	OUT	TOTAL
Proposed						
Multifamily Housing (Mid-Rise)	36 D.U.	221	0.36	3	10	13
Shopping Center (Retail)	4,186 Th.Sq.Ft.	820	0.94	2	2	4
External Trips (Gross Trips)				5	12	17

Table 6: Trip Generation - PM Peak Hour

LAND USE (LU)	UNITS	ITE LU CODE	TRIP GENERATION RATE	PM PEAK HOUR TRIPS		
				IN	OUT	TOTAL
Proposed						
Multifamily Housing (Mid-Rise)	36 D.U.	221	0.44	10	6	16
Shopping Center (Retail)	4,186 Th.Sq.Ft.	820	3.81	8	8	16
External Trips (Gross Trips)				18	14	32

Trip Distribution

The subject project is located within the Traffic Analysis Zone (TAZ) 1356 as assigned by the Metropolitan Planning Organization's (MPO) on the Miami-Dade Transportation Plan (to the Year 2040) Directional Trips Distribution Report, October 2014. As such, the trip distribution was performed consistent with the trip distribution percentages of TAZ 1356 and by interpolating between the 2010 and 2040 TAZ data for the projected design year of 2019. Figure 5 depicts the TAZ map while the directional trip distribution percentages are outlined in Table 7. Appendix 2 contains the supporting documentation.

Figure 5: TAZ Map

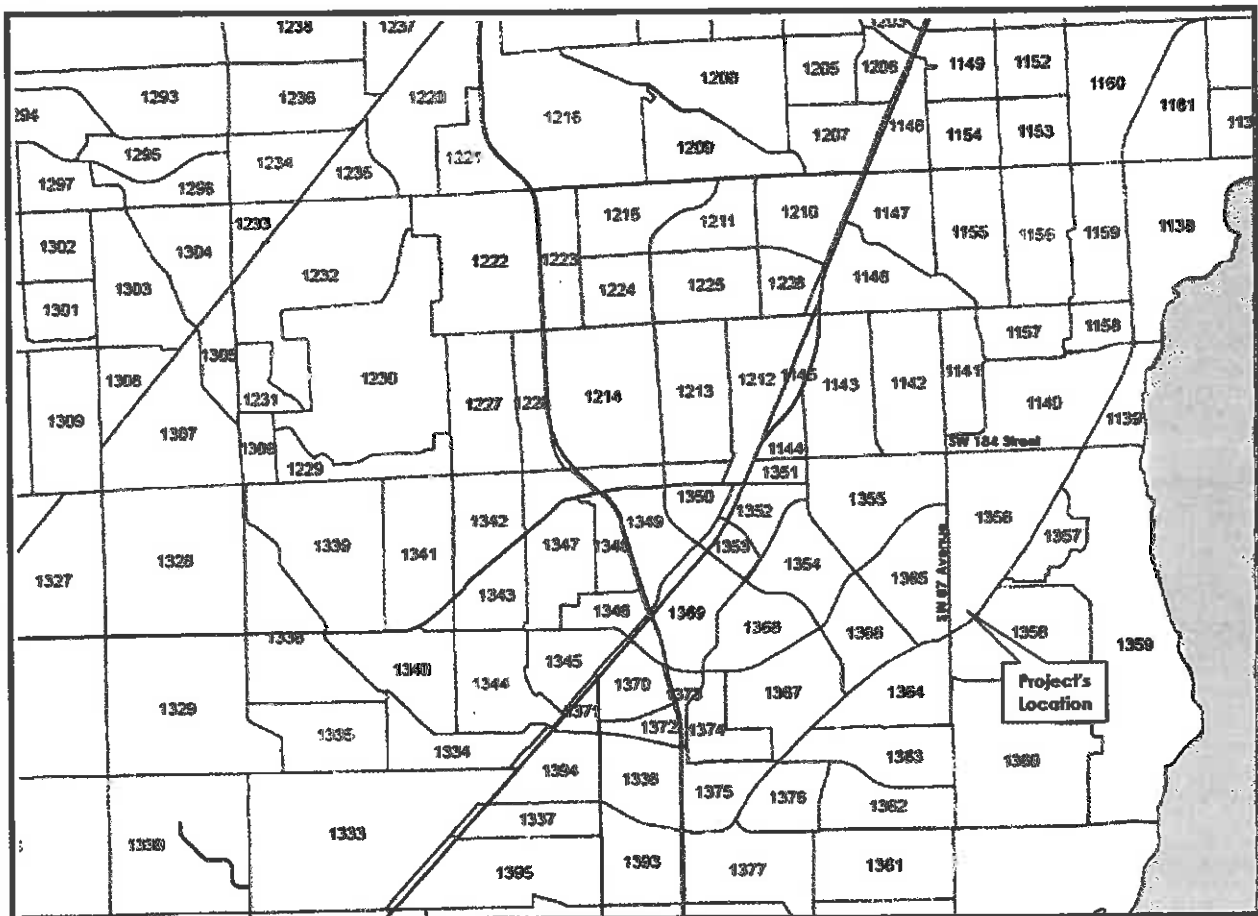


Table 7: Trip Distribution Percentages

DIRECTION	DISTRIBUTION PERCENTAGES (%)		
	MIAMI-DADE LRTP MODEL YEAR		DESIGN YEAR
	2010	2040	2019
NNE	25.40	20.00	23.78
ENE	1.60	0.50	1.27
ESE	0.40	0.60	0.46
SSE	6.40	4.20	5.74
SSW	7.20	7.60	7.32
WSW	21.50	23.00	21.95
WNW	13.80	18.40	15.18
NNW	23.80	25.70	24.37
TOTAL	100.00	100.00	100.00

Trip Assignment

The gross peak hour trips generated by the subject project have been further distributed into the four quadrants: North, South, East and West. Table 8 includes the trip distribution percentages and the corresponding trip assignments for the AM and PM peak hour. Lastly, Figures 6 and 7 depict the gross trips assigned to the study area and project's driveways for the AM and PM peak hour, respectively.

Table 8: Directional Trip Assignment

DIRECTION	DISTRIBUTION	AM PEAK HOUR TRIPS			PM PEAK HOUR TRIPS		
		IN	OUT	TOTAL	IN	OUT	TOTAL
NORTH	48.15%	2	6	8	9	7	16
EAST	1.73%	0	0	0	0	0	0
SOUTH	13.06%	1	2	3	2	2	4
WEST	37.13%	2	4	6	7	5	12
	100.00%	5	12	17	18	14	32

Figure 6: Site Traffic (Project Gross Trips) - AM Peak Hour

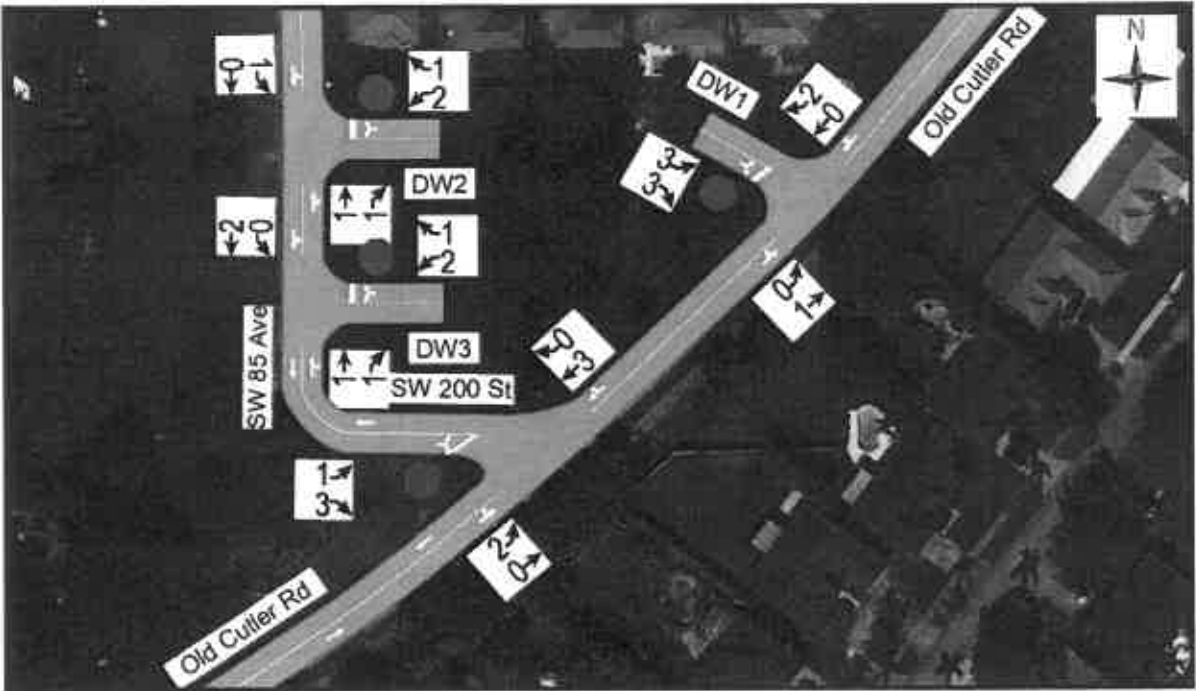
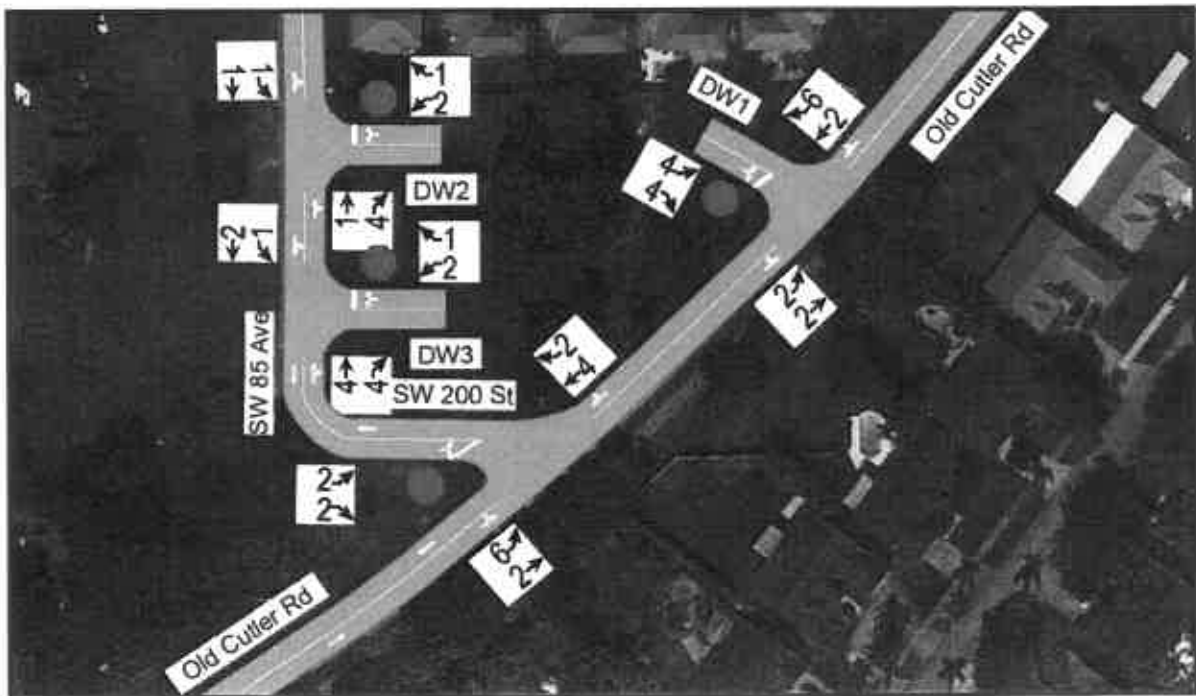


Figure 7: Site Traffic (Project Gross Trips) - PM Peak Hour



Proposed Future Condition (2019)

This section of the report describes the traffic parameters utilized to develop the future peak hour volumes and to evaluate the future condition with the project trips in 2019 (projected build-out year).

Background Traffic Growth

Using available traffic data from the Florida Department of Transportation (FDOT Count Station 8310), a regression analysis was performed to estimate any background traffic growth within the project's vicinity. The analysis yielded a growth rate of 1.76 percent (%). This growth rate was utilized to develop the traffic volumes for the proposed condition with project. Appendix 3 contains the supporting documentation.

Future Traffic Volumes (Intersection) - AM & PM Peak Hour

The existing seasonally adjusted turning movement counts were augmented with a background growth rate of 1.76 percent and the project gross trips. The resulting traffic volumes represent the proposed future condition with project traffic in 2019 (Build Condition). The calculations for the specific movements at each intersection are contained in Appendix 4. Figures 8 and 9 depict the future traffic volumes with project trips for the AM and PM peak hour, respectively.

Operational Analysis - Intersection LOS

The future traffic volumes with project traffic were evaluated to determine the future Level of Service at the intersection of Old Cutler Road and SW 200th Street. As a result, the operational analysis revealed that the studied intersection will maintain the existing LOS A for the future AM and PM peak hour condition in 2019. Lastly, the project's driveways were also evaluated and yielded LOS A. Table 9 summarizes the LOS and vehicle delays for the proposed future condition. Appendix 5 includes the Synchro software sheets with other outputs such as queue lengths and volume to capacity ratios.

Table 9: Future Condition LOS (Intersections) - AM & PM Peak Hour

Proposed Future Condition (with Project Trips) (2019)			AM Peak Hour					PM Peak Hour				
Location	Intersection Control		Overall		* Critical Approach TWSC			Overall		* Critical Approach TWSC		
			LOS	Delay (sec)	Approach	LOS	Delay (sec)	LOS	Delay (sec)	Approach	LOS	Delay (sec)
1 Old Cutler Road & SW 200 Street	Two-Way Stop		A	0.0	EB	B	14.1	A	0.2	EB	C	18.4
2 Old Cutler Road & Driveway 1 (DW1)	Two-Way Stop		A	0.1	EB	C	17.1	A	0.2	EB	C	23.2
3 SW 85 Avenue & Driveway 2 (DW2)	Two-Way Stop		A	4.1	WB	A	8.5	A	1.5	WB	A	8.5
4 SW 85 Avenue & Driveway 3 (DW3)	Two-Way Stop		A	2.8	WB	A	8.5	A	1.3	WB	A	8.6

Notes: * Critical Approach for TWSC.

Figure 8: Future Condition with Project Trips (Build 2019) - AM Peak Hour

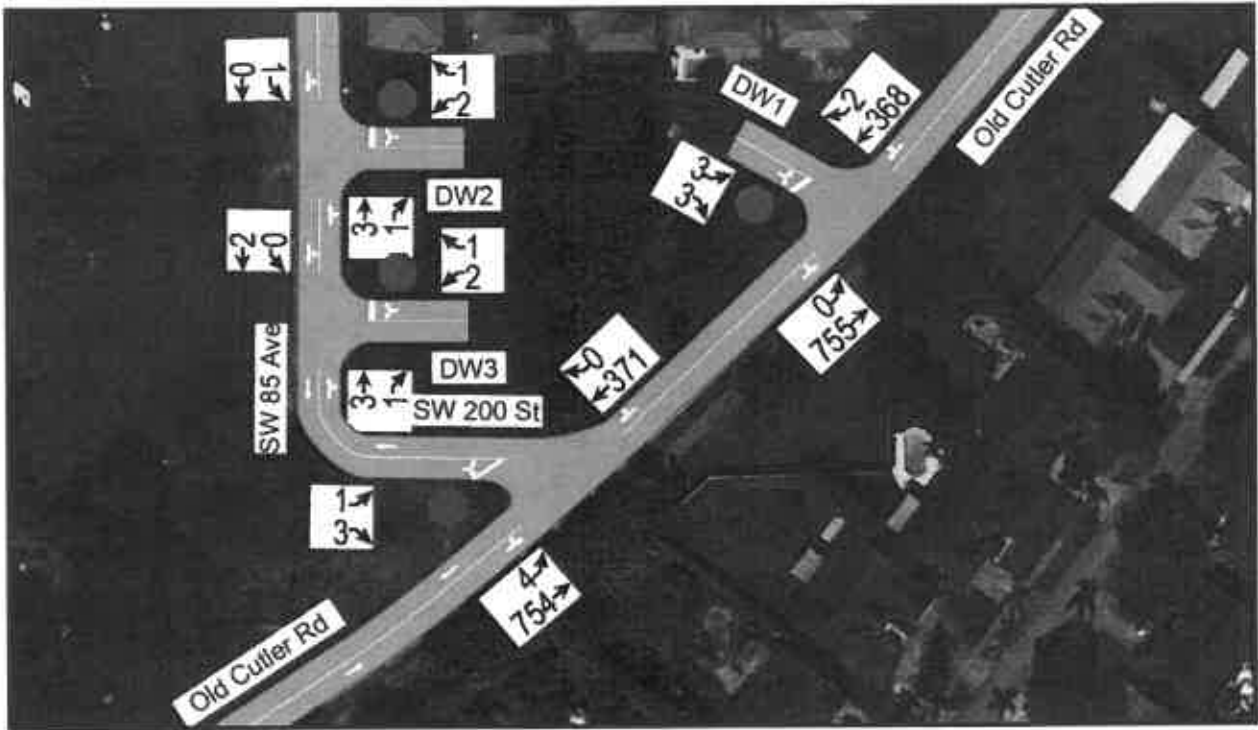
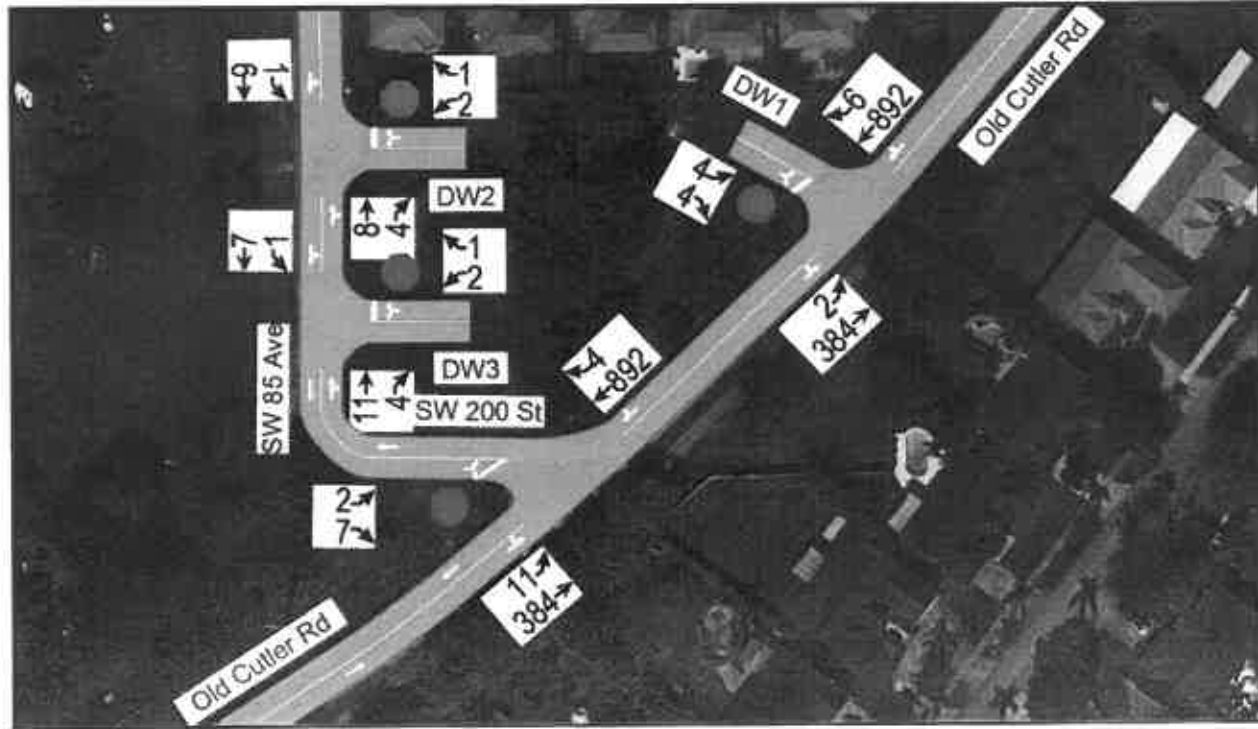


Figure 9: Future Condition with Project Trips (Build 2019) - PM Peak Hour



Roadway Analysis - Capacity / Level of Service (LOS)

A short-term traffic analysis was performed to evaluate the roadway Level of Service for the future condition in 2019. The future volumes were developed by augmenting the existing peak hour volumes with a background traffic growth rate of 1.76 percent and the project gross trips. The analysis revealed that Old Cutler Road within the project's vicinity will have LOS C during the AM and PM peak hour. Table 10 summarizes the LOS results and available capacity for the AM and PM peak hour.

Table 10: Future Roadway Segment LOS & Capacity - AM & PM Peak Hour

Roadway Analysis - AM Peak Hour			LOS / Volume Standard	Existing Two-Way Volume (2018)	Background Growth @ 1.76% - 1 Year Build-Out (2019)	Project Gross Trips (2019)	Roadway Segment		
Roadway	Location						Proposed Traffic Volume (2019)	Available Capacity	LOS
1	Old Cutler Road	North of SW 87 Avenue	LOS D / 1,600 VPH Class I - 2LU	1,105	19	8	1,132	468	C
Roadway Analysis - PM Peak Hour			LOS / Volume Standard	Existing Two-Way Volume (2018)	Background Growth @ 1.76% - 1 Year Build-Out (2019)	Project Gross Trips (2019)	Roadway Segment		
Roadway	Location						Proposed Traffic Volume (2019)	Available Capacity	LOS
1	Old Cutler Road	North of SW 87 Avenue	LOS D / 1,600 VPH Class I - 2LU	1,258	22	14	1,295	305	C

Conclusion

In conclusion, the most impacted intersection and roadway segment is currently operating within the acceptable LOS and will continue to do so during the future AM and PM peak hour condition. Therefore, no off-site improvements are required or recommended at this time. Lastly, it is fair to conclude that sufficient roadway capacity exists to support the subject project.

Appendix 1: Trip Generation



TABLE: A1
TRIP GENERATION ANALYSIS
AM PEAK HOUR

Project Name: Cutler Gate

LAND USE (LU)	UNITS	ITE LU CODE	TRIP GENERATION RATE	AM PEAK HOUR TRIPS				
				%	IN	%	OUT	TOTAL
Proposed								
Multifamily Housing (Mid-Rise)	36 D.U.	221	0.36	26%	3	74%	10	13
Shopping Center (Retail)	4,186 Th.Sq.Ft.	820	0.94	62%	2	38%	2	4
External Trips (Gross Trips)				29%	5	71%	12	17

Notes: Sources: ITE Trip Generation, 10th Edition & ITE Trip Generation Handbook, 3rd Edition.

TABLE: A2
TRIP GENERATION ANALYSIS
PM PEAK HOUR

Project Name: Cutler Gate

LAND USE (LU)	UNITS	ITE LU CODE	TRIP GENERATION RATE	PM PEAK HOUR TRIPS			
				%	IN	%	OUT
Proposed Multifamily Housing (Mid-Rise) Shopping Center (Retail)	36 D.U.	221	0.44	61%	10	39%	6
	4,186 Th.Sq.Ft.	820	3.81	48%	8	52%	8
External Trips (Gross Trips)				56%	18	44%	14
							32

Notes: Sources: ITE Trip Generation, 10th Edition & ITE Trip Generation Handbook, 3rd Edition.

Multifamily Housing (Mid-Rise) (221)

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: 53
 Avg. Num. of Dwelling Units: 207
 Directional Distribution: 26% entering, 74% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate

Range of Rates

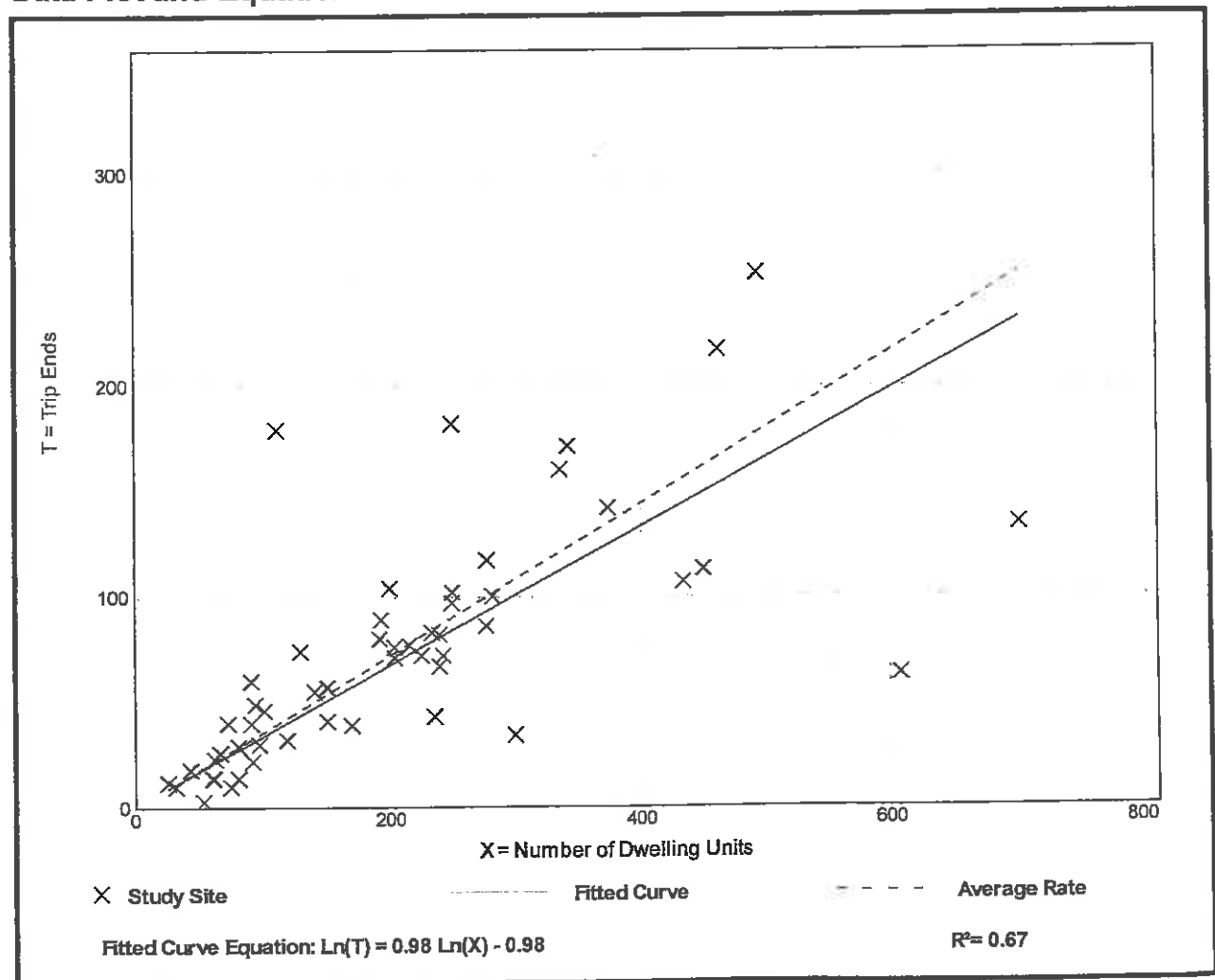
Standard Deviation

0.36

0.06 - 1.61

0.19

Data Plot and Equation



Multifamily Housing (Mid-Rise) (221)

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: 60
 Avg. Num. of Dwelling Units: 208
 Directional Distribution: 61% entering, 39% exiting

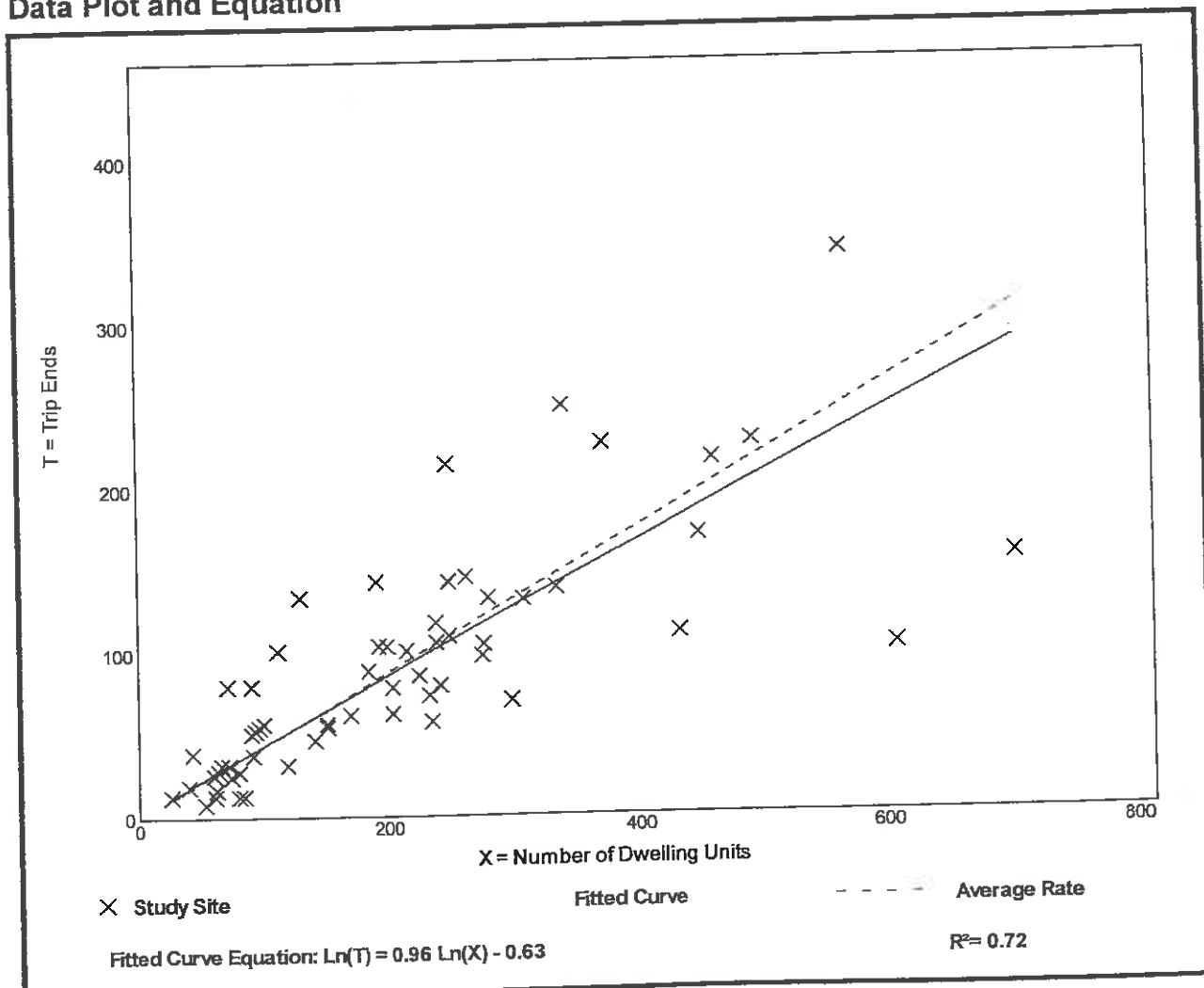
Vehicle Trip Generation per Dwelling Unit

Average Rate
 0.44

Range of Rates
 0.15 - 1.11

Standard Deviation
 0.19

Data Plot and Equation



Shopping Center (820)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
 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: 84
 1000 Sq. Ft. GLA: 351
 Directional Distribution: 62% entering, 38% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate

Range of Rates

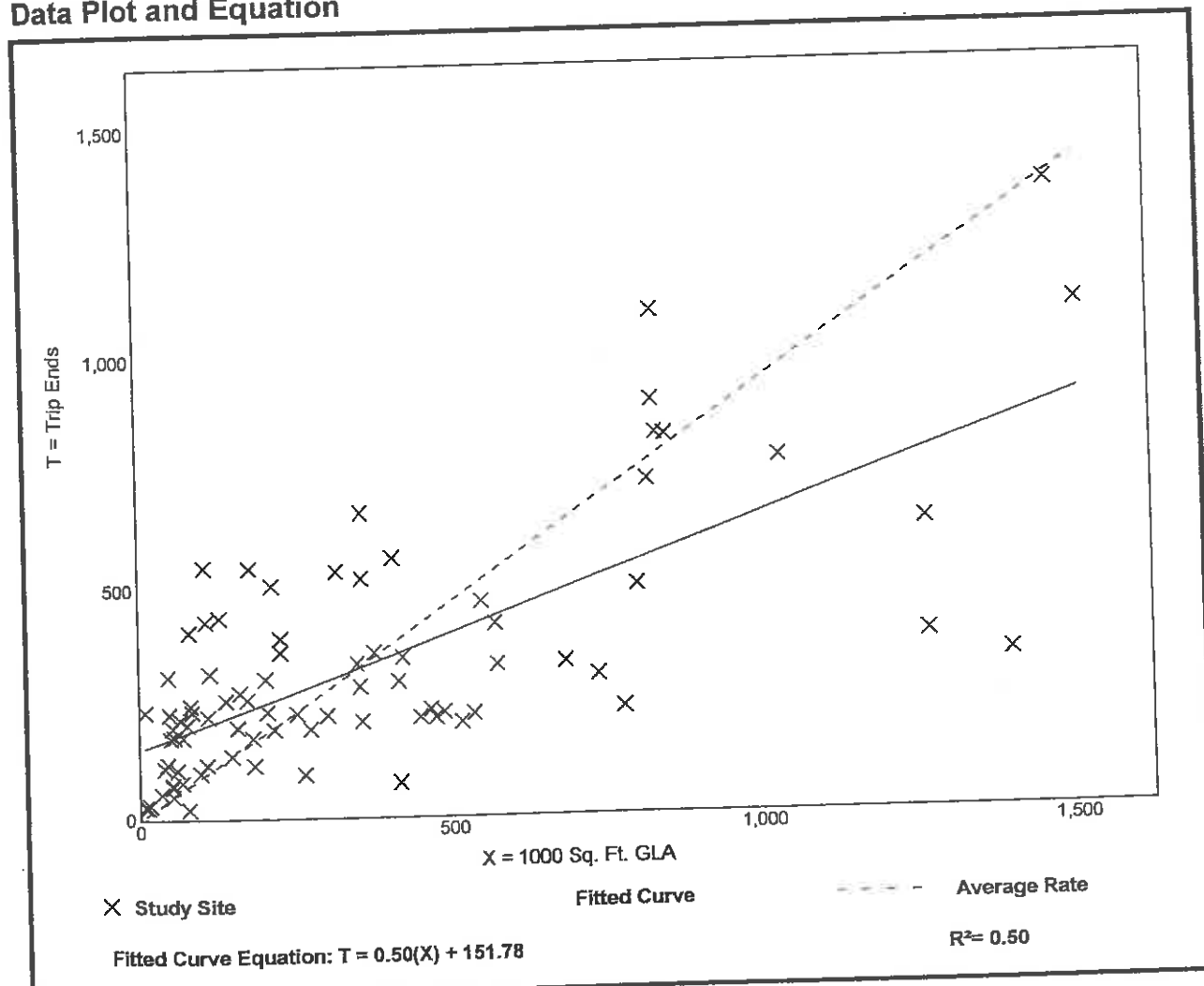
Standard Deviation

0.94

0.18 - 23.74

0.87

Data Plot and Equation



Shopping Center (820)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
 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: 261
 1000 Sq. Ft. GLA: 327
 Directional Distribution: 48% entering, 52% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate

Range of Rates

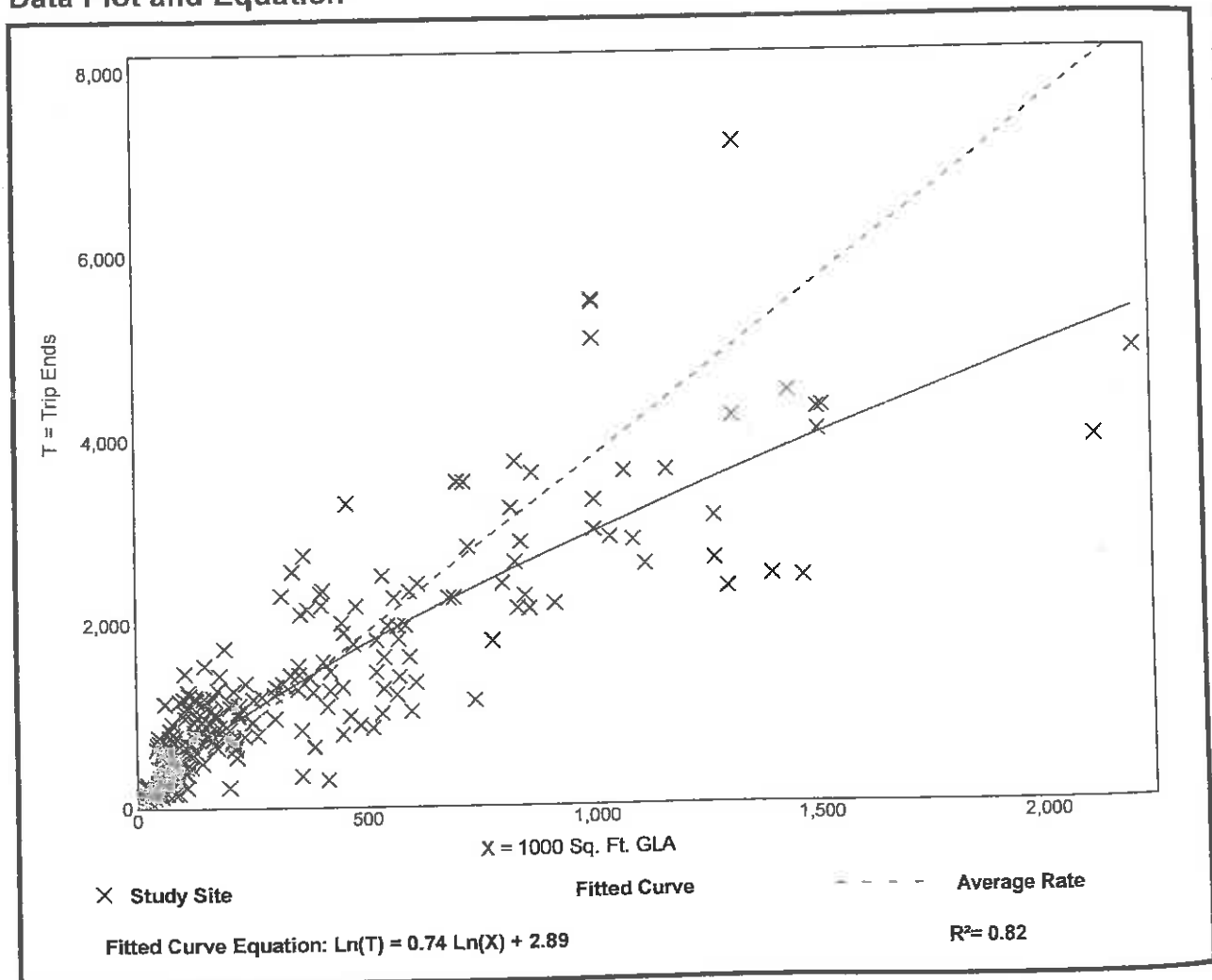
Standard Deviation

3.81

0.74 - 18.69

2.04

Data Plot and Equation



Appendix 2: Trip Distribution / Assignment



Cutler Gate

Site Traffic (Project Gross Trips) - AM Peak Hour

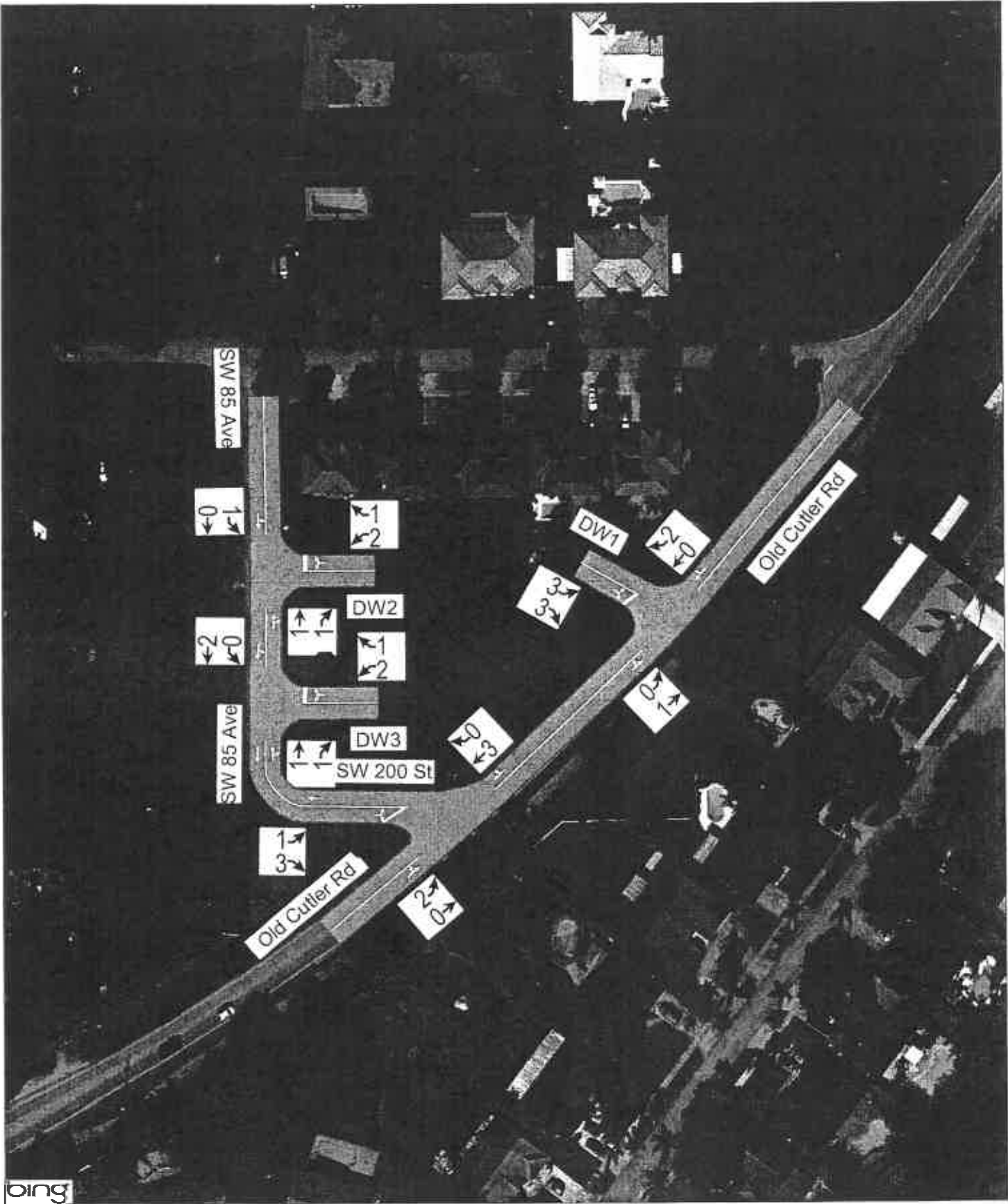


TABLE: A3

Cardinal Distribution
AM Peak Hour
Traffic Analysis Zone (TAZ) 1356
Project Name: Cutler Gate

DIRECTION	DISTRIBUTION (%) DESIGN YEAR	DIRECTION	DISTRIBUTION	AM PEAK HOUR TRIPS		
				IN	OUT	TOTAL
NNE	23.78	NORTH	48.15%	2	6	8
ENE	1.27	EAST	1.73%	0	0	0
ESE	0.46					
SSE	5.74	SOUTH	13.06%	1	2	3
SSW	7.32	WEST	37.13%	2	4	6
WSW	21.95					
WNW	15.18					
NNW	24.37					
TOTAL	100.00		100.00%	5	12	17

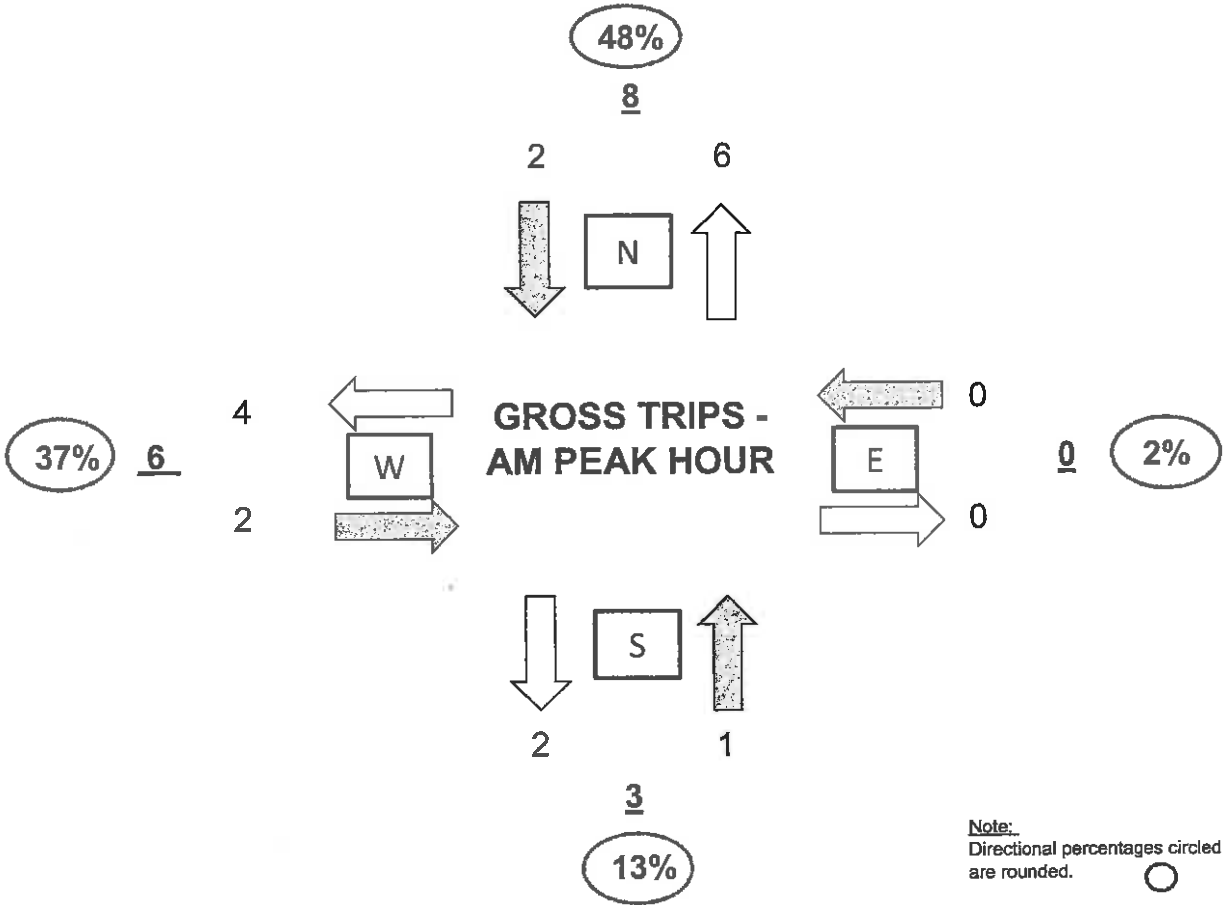


TABLE: A3-1

Cardinal Distribution
AM Peak Hour
Traffic Analysis Zone (TAZ) 1356
 Project Name: Cutler Gate

DIRECTION	DISTRIBUTION PERCENTAGES (%)			AM PEAK HOUR		
	MIAMI-DADE LRTP MODEL YEAR		DESIGN YEAR	IN	OUT	TOTAL
	2010	2040	2019			
NNE	25.40	20.00	23.78	1	3	4
ENE	1.60	0.50	1.27	0	0	0
ESE	0.40	0.60	0.46	0	0	0
SSE	6.40	4.20	5.74	0	1	1
SSW	7.20	7.60	7.32	1	1	2
WSW	21.50	23.00	21.95	1	2	3
WNW	13.80	18.40	15.18	1	2	3
NNW	23.80	25.70	24.37	1	3	4
TOTAL	100.00	100.00	100.00	5	12	17

Note:

Based on Miami-Dade Transportation Plan (to the Year 2040) Directional Trip Distribution Report, October 2014. Since the current data is only available for the model years 2010 and 2040, the eight (8) cardinal directions were interpolated to the design year of 2019.

TABLE: A3-2

AM PEAK HOUR	IN	OUT	TOTAL
TRIPS:	5	12	17
PERCENT:	29.41%	70.59%	(Calculated)

DIRECTION	DISTRIBUTION %	INGRESS		EGRESS		TOTAL
		CALCULATED	USED	CALCULATED	USED	
NNE	23.78	1.189	1	2.854	3	4
ENE	1.27	0.064	0	0.152	0	0
ESE	0.46	0.023	0	0.055	0	0
SSE	5.74	0.287	0	0.689	1	1
SSW	7.32	0.366	1	0.878	1	2
WSW	21.95	1.098	1	2.634	2	3
WNW	15.18	0.759	1	1.822	2	3
NNW	24.37	1.219	1	2.924	3	4
TOTAL	100.00	5.004	5	12.008	12	17

Cutler Gate

Site Traffic (Project Gross Trips) - PM Peak Hour

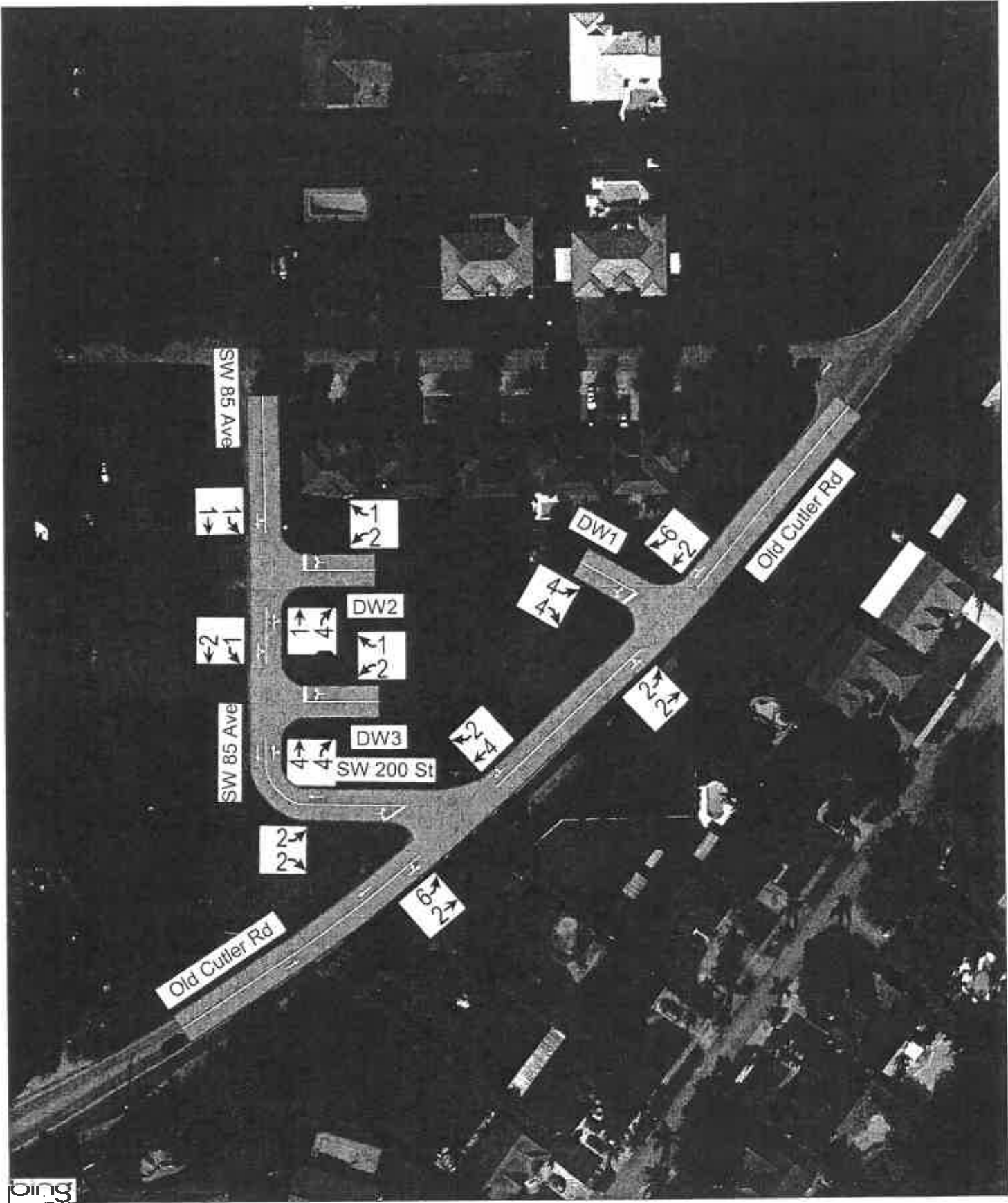


TABLE: A4

Cardinal Distribution
PM Peak Hour
Traffic Analysis Zone (TAZ) 1356
Project Name: Cutler Gate

DIRECTION	DISTRIBUTION (%) DESIGN YEAR	DIRECTION	DISTRIBUTION	PM PEAK HOUR TRIPS		
				IN	OUT	TOTAL
NNE	23.78	NORTH	48.15%	9	7	16
ENE	1.27					
ESE	0.46	EAST	1.73%	0	0	0
SSE	5.74					
SSW	7.32	SOUTH	13.06%	2	2	4
WSW	21.95					
WNW	15.18	WEST	37.13%	7	5	12
NNW	24.37					
TOTAL	100.00		100.00%	18	14	32

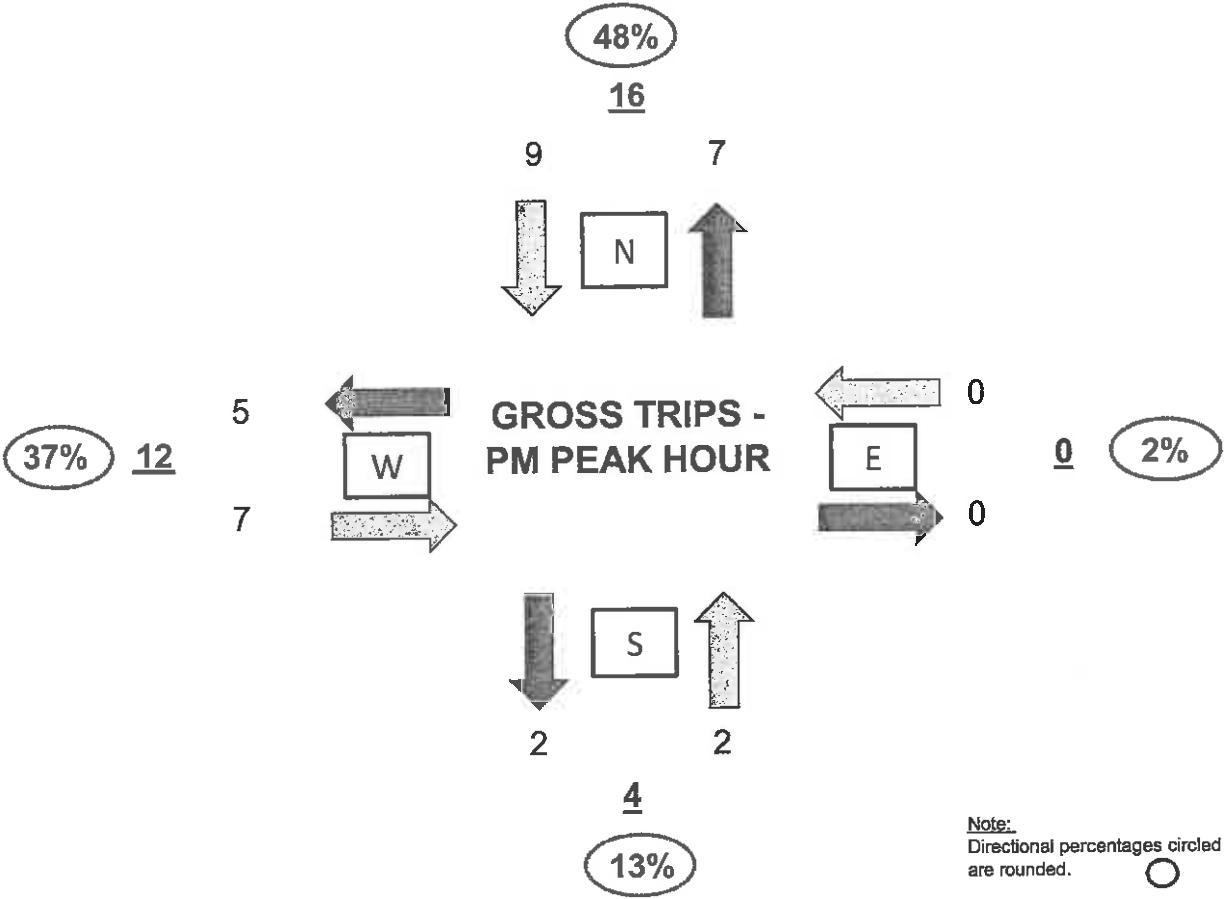


TABLE: A4-1

Cardinal Distribution
PM Peak Hour
Traffic Analysis Zone (TAZ) 1356
 Project Name: Cutler Gate

DIRECTION	DISTRIBUTION PERCENTAGES (%)			PM PEAK HOUR		
	MIAMI-DADE LRTP MODEL YEAR		DESIGN YEAR	IN	OUT	TOTAL
	2010	2040	2019			
NNE	25.40	20.00	23.78	4	3	7
ENE	1.60	0.50	1.27	0	0	0
ESE	0.40	0.60	0.46	0	0	0
SSE	6.40	4.20	5.74	1	1	2
SSW	7.20	7.60	7.32	1	1	2
WSW	21.50	23.00	21.95	4	3	7
WNW	13.80	18.40	15.18	3	2	5
NNW	23.80	25.70	24.37	5	4	9
TOTAL	100.00	100.00	100.00	18	14	32

Note:

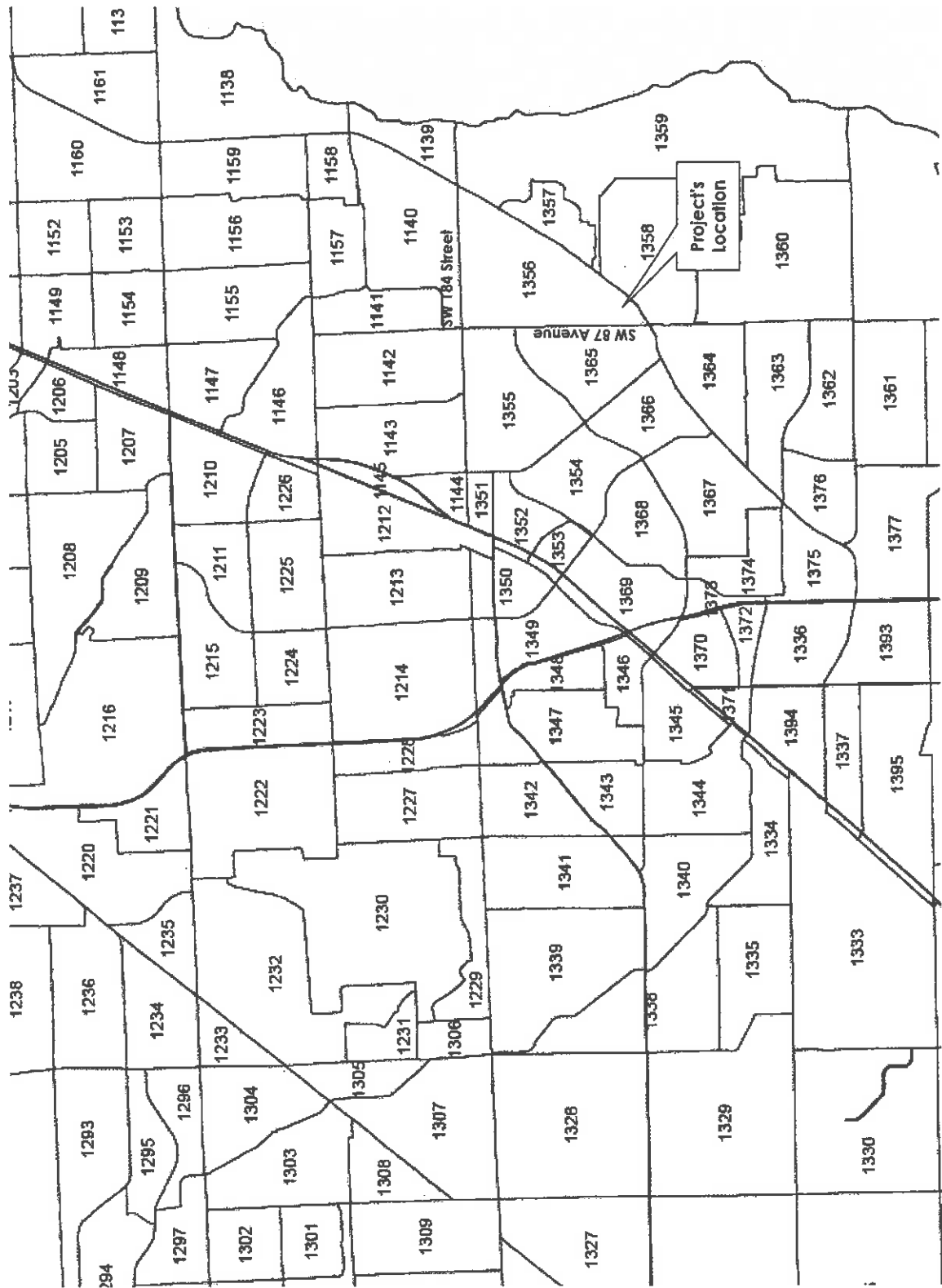
Based on Miami-Dade Transportation Plan (to the Year 2040) Directional Trip Distribution Report, October 2014. Since the current data is only available for the model years 2010 and 2040, the eight (8) cardinal directions were interpolated to the design year of 2019.

TABLE: A4-2

PM PEAK HOUR	IN	OUT	TOTAL
TRIPS:	18	14	32
PERCENT:	56.25%	43.75%	(Calculated)

DIRECTION	DISTRIBUTION %	INGRESS		EGRESS		TOTAL
		CALCULATED	USED	CALCULATED	USED	
NNE	23.78	4.280	4	3.329	3	7
ENE	1.27	0.229	0	0.178	0	0
ESE	0.46	0.083	0	0.064	0	0
SSE	5.74	1.033	1	0.804	1	2
SSW	7.32	1.318	1	1.025	1	2
WSW	21.95	3.951	4	3.073	3	7
WNW	15.18	2.732	3	2.125	2	5
NNW	24.37	4.387	5	3.412	4	9
TOTAL	100.00	18.013	18	14.010	14	32

TRAFFIC ANALYSIS ZONE (TAZ)

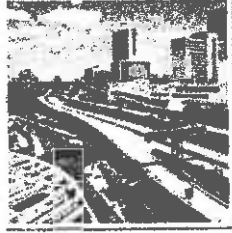




MOBILITY OPTIONS ---
2040 Miami-Dade
Transportation Plan
--- EYES ON THE FUTURE

MIAMI-DADE 2040

Long Range Transportation Plan
Directional Trip Distribution Report
October 23, 2014



MIAMI-DADE METROPOLITAN
PLANNING ORGANIZATION



Photo by Asad Gilani

Miami-Dade 2010 Directional Distribution Summary

Origin TAZ			Cardinal Directions								Total
County TAZ	Regional TAZ		NNE	ENE	ESE	SSE	SSW	WSW	WNW	NNW	
1354	4254	TRIPS	772	139	56	130	317	390	359	487	2,650
1354	4254	PERCENT	29.1	5.3	2.1	4.9	12.0	14.7	13.6	18.4	
1355	4255	TRIPS	1,441	39	114	303	465	507	512	993	4,374
1355	4255	PERCENT	32.9	0.9	2.6	6.9	10.6	11.6	11.7	22.7	
1356	4256	TRIPS	988	61	16	251	279	837	538	927	3,897
1356	4256	PERCENT	25.4	1.6	0.4	6.4	7.2	21.5	13.8	23.8	
1357	4257	TRIPS	151	0	0	8	63	71	91	141	525
1357	4257	PERCENT	28.8	0.0	0.0	1.5	12.0	13.5	17.3	26.9	
1358	4258	TRIPS	806	3	13	238	90	316	562	982	3,010
1358	4258	PERCENT	26.8	0.1	0.4	7.9	3.0	10.5	18.7	32.6	
1359	4259	TRIPS	700	5	0	0	14	414	414	841	2,388
1359	4259	PERCENT	29.3	0.2	0.0	0.0	0.6	17.3	17.3	35.2	
1360	4260	TRIPS	904	65	0	0	111	769	963	1,780	4,592
1360	4260	PERCENT	19.7	1.4	0.0	0.0	2.4	16.8	21.0	38.8	
1361	4261	TRIPS	1,058	33	0	0	39	207	448	871	2,656
1361	4261	PERCENT	39.8	1.2	0.0	0.0	1.5	7.8	16.9	32.8	
1362	4262	TRIPS	601	131	0	0	46	174	440	749	2,141
1362	4262	PERCENT	28.1	6.1	0.0	0.0	2.2	8.1	20.6	35.0	
1363	4263	TRIPS	1,113	103	0	40	43	463	584	869	3,215
1363	4263	PERCENT	34.6	3.2	0.0	1.2	1.3	14.4	18.2	27.0	
1364	4264	TRIPS	1,341	161	191	71	348	759	745	1,251	4,867
1364	4264	PERCENT	27.6	3.3	3.9	1.5	7.2	15.6	15.3	25.7	
1365	4265	TRIPS	900	198	84	51	353	382	466	837	3,271
1365	4265	PERCENT	27.5	6.1	2.6	1.6	10.8	11.7	14.3	25.6	
1366	4266	TRIPS	865	54	57	220	169	440	502	658	2,965
1366	4266	PERCENT	29.2	1.8	1.9	7.4	5.7	14.8	16.9	22.2	
1367	4267	TRIPS	1,586	202	242	149	315	712	536	1,260	5,002
1367	4267	PERCENT	31.7	4.0	4.8	3.0	6.3	14.2	10.7	25.2	
1368	4268	TRIPS	922	71	171	212	313	292	443	435	2,859
1368	4268	PERCENT	32.3	2.5	6.0	7.4	11.0	10.2	15.5	15.2	
1369	4269	TRIPS	1,773	294	456	386	1,128	650	688	1,133	6,508
1369	4269	PERCENT	27.2	4.5	7.0	5.9	17.3	10.0	10.6	17.4	
1370	4270	TRIPS	1,163	466	437	214	1,118	389	616	901	5,304
1370	4270	PERCENT	21.9	8.8	8.2	4.0	21.1	7.3	11.6	17.0	
1371	4271	TRIPS	640	243	156	140	444	102	279	537	2,541
1371	4271	PERCENT	25.2	9.6	6.1	5.5	17.5	4.0	11.0	21.1	
1372	4272	TRIPS	75	0	20	0	50	38	58	49	290
1372	4272	PERCENT	25.9	0.0	6.9	0.0	17.2	13.1	20.0	16.9	
1373	4273	TRIPS	83	23	13	13	22	25	35	29	243
1373	4273	PERCENT	34.2	9.5	5.4	5.4	9.1	10.3	14.4	11.9	
1374	4274	TRIPS	1,589	387	169	0	343	262	524	880	4,154

Miami-Dade 2040 Directional Distribution Summary

Origin TAZ			Cardinal Directions								Total
County TAZ	Regional TAZ		NNE	ENE	ESE	SSE	SSW	WSW	WNW	NNW	
1354	4254	TRIPS	785	126	39	143	431	443	476	714	3,157
1354	4254	PERCENT	24.9	4.0	1.2	4.5	13.7	14.0	15.1	22.6	
1355	4255	TRIPS	1,260	35	86	232	526	839	533	1,085	4,596
1355	4255	PERCENT	27.4	0.8	1.9	5.1	11.4	18.3	11.6	23.6	
1356	4256	TRIPS	1,050	26	33	218	399	1,204	966	1,348	5,244
1356	4256	PERCENT	20.0	0.5	0.6	4.2	7.6	23.0	18.4	25.7	
1357	4257	TRIPS	162	0	0	6	64	168	117	161	678
1357	4257	PERCENT	23.9	0.0	0.0	0.9	9.4	24.8	17.3	23.8	
1358	4258	TRIPS	797	0	20	172	107	721	684	992	3,493
1358	4258	PERCENT	22.8	0.0	0.6	4.9	3.1	20.6	19.6	28.4	
1359	4259	TRIPS	489	0	0	0	29	611	524	846	2,499
1359	4259	PERCENT	19.6	0.0	0.0	0.0	1.2	24.5	21.0	33.9	
1360	4260	TRIPS	1,066	69	0	0	270	1,361	1,211	2,072	6,049
1360	4260	PERCENT	17.6	1.1	0.0	0.0	4.5	22.5	20.0	34.3	
1361	4261	TRIPS	1,797	43	0	4	107	916	1,216	1,574	5,657
1361	4261	PERCENT	31.8	0.8	0.0	0.1	1.9	16.2	21.5	27.8	
1362	4262	TRIPS	669	197	0	0	139	642	580	929	3,156
1362	4262	PERCENT	21.2	6.2	0.0	0.0	4.4	20.3	18.4	29.4	
1363	4263	TRIPS	949	111	0	80	89	851	875	966	3,921
1363	4263	PERCENT	24.2	2.8	0.0	2.0	2.3	21.7	22.3	24.6	
1364	4264	TRIPS	1,298	155	104	107	372	1,230	857	1,610	5,733
1364	4264	PERCENT	22.6	2.7	1.8	1.9	6.5	21.5	15.0	28.1	
1365	4265	TRIPS	814	153	76	111	425	558	469	977	3,583
1365	4265	PERCENT	22.7	4.3	2.1	3.1	11.9	15.6	13.1	27.3	
1366	4266	TRIPS	790	104	85	174	166	573	357	638	2,887
1366	4266	PERCENT	27.4	3.6	2.9	6.0	5.8	19.9	12.4	22.1	
1367	4267	TRIPS	1,229	224	295	102	442	898	591	1,060	4,841
1367	4267	PERCENT	25.4	4.6	6.1	2.1	9.1	18.6	12.2	21.9	
1368	4268	TRIPS	944	102	197	263	460	515	549	516	3,546
1368	4268	PERCENT	26.6	2.9	5.6	7.4	13.0	14.5	15.5	14.6	
1369	4269	TRIPS	2,342	286	483	337	1,822	950	590	1,182	7,992
1369	4269	PERCENT	29.3	3.6	6.0	4.2	22.8	11.9	7.4	14.8	
1370	4270	TRIPS	4,691	1,256	1,320	1,059	5,372	2,645	1,818	3,513	21,674
1370	4270	PERCENT	21.6	5.8	6.1	4.9	24.8	12.2	8.4	16.2	
1371	4271	TRIPS	948	623	251	190	1,048	448	280	710	4,498
1371	4271	PERCENT	21.1	13.9	5.6	4.2	23.3	10.0	6.2	15.8	
1372	4272	TRIPS	258	19	18	4	132	140	109	252	932
1372	4272	PERCENT	27.7	2.0	1.9	0.4	14.2	15.0	11.7	27.0	
1373	4273	TRIPS	127	23	8	15	24	42	40	53	332
1373	4273	PERCENT	38.3	6.9	2.4	4.5	7.2	12.7	12.1	16.0	
1374	4274	TRIPS	1,372	317	125	2	456	416	644	864	4,196

Appendix 3: Growth Rate & Adjustment Factor

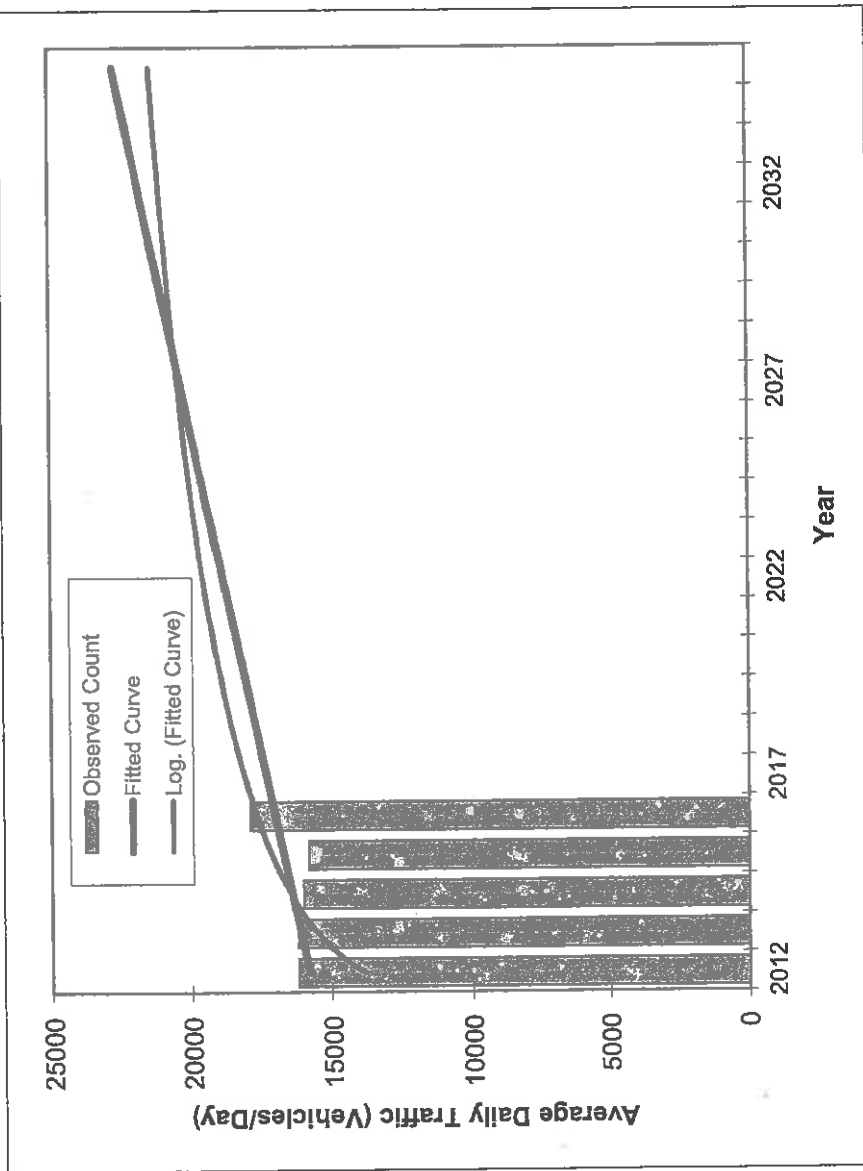


Traffic Trends - V2.0

OLD CUTLER RD -- 200' SOUTH OF FRANJO RD

PIN#	973215-1
Location	1

County:	Miami (87)
Station #:	8310
Highway:	OLD CUTLER RD



** Annual Trend Increase:	300
Trend R-squared:	31.60%
Trend Annual Historic Growth Rate:	1.90%
Trend Growth Rate (2016 to Design Year):	1.76%
Printed:	22-Jan-18

Straight Line Growth Option

Traffic (ADT/AADT)	
Year	Count*
2012	16200
2013	16200
2014	16000
2015	15800
2016	17900
Trend**	
2012	15800
2013	16100
2014	16400
2015	16700
2016	17000

2017 Opening Year Trend	
2017	N/A
2018 Mid-Year Trend	
2018	N/A
2019 Design Year Trend	
2019	N/A
TRANPLAN Forecasts/Trends	

*Axle-Adjusted

FLORIDA DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION STATISTICS OFFICE
 2016 HISTORICAL AADT REPORT

COUNTY: 87 - MIAMI-DADE

SITE: 8310 - OLD CUTLER RD, 200' SOUTH OF FRANJO RD

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2016	17900 C	N 8900	S 9000	9.00	56.10	13.50
2015	15800 T	N 8100	S 7700	9.00	57.40	13.70
2014	16000 S	N 8200	S 7800	9.00	59.30	17.40
2013	16200 F	N 8300	S 7900	9.00	58.90	16.20
2012	16200 C	N 8300	S 7900	9.00	59.70	16.00

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
 S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
 V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
 *K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

2016 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
 CATEGORY: 8701 MIAMI-DADE SOUTH

WEEK	DATES	SF	MOCF: 0.99 PSCF
1	01/01/2016 - 01/02/2016	0.99	1.00
2	01/03/2016 - 01/09/2016	1.00	1.01
3	01/10/2016 - 01/16/2016	1.02	1.03
4	01/17/2016 - 01/23/2016	1.01	1.02
5	01/24/2016 - 01/30/2016	1.01	1.02
6	01/31/2016 - 02/06/2016	1.00	1.01
7	02/07/2016 - 02/13/2016	0.99	1.00
* 8	02/14/2016 - 02/20/2016	0.99	1.00
* 9	02/21/2016 - 02/27/2016	0.99	1.00
*10	02/28/2016 - 03/05/2016	0.99	1.00
*11	03/06/2016 - 03/12/2016	0.99	1.00
*12	03/13/2016 - 03/19/2016	0.99	1.00
*13	03/20/2016 - 03/26/2016	0.99	1.00
*14	03/27/2016 - 04/02/2016	0.99	1.00
*15	04/03/2016 - 04/09/2016	0.98	0.99
*16	04/10/2016 - 04/16/2016	0.98	0.99
*17	04/17/2016 - 04/23/2016	0.98	0.99
*18	04/24/2016 - 04/30/2016	0.99	1.00
*19	05/01/2016 - 05/07/2016	0.99	1.00
*20	05/08/2016 - 05/14/2016	0.99	1.00
21	05/15/2016 - 05/21/2016	1.00	1.01
22	05/22/2016 - 05/28/2016	1.00	1.01
23	05/29/2016 - 06/04/2016	1.00	1.01
24	06/05/2016 - 06/11/2016	1.00	1.01
25	06/12/2016 - 06/18/2016	1.00	1.01
26	06/19/2016 - 06/25/2016	1.01	1.02
27	06/26/2016 - 07/02/2016	1.02	1.03
28	07/03/2016 - 07/09/2016	1.02	1.03
29	07/10/2016 - 07/16/2016	1.03	1.04
30	07/17/2016 - 07/23/2016	1.03	1.04
31	07/24/2016 - 07/30/2016	1.02	1.03
32	07/31/2016 - 08/06/2016	1.02	1.03
33	08/07/2016 - 08/13/2016	1.01	1.02
34	08/14/2016 - 08/20/2016	1.01	1.02
35	08/21/2016 - 08/27/2016	1.01	1.02
36	08/28/2016 - 09/03/2016	1.02	1.03
37	09/04/2016 - 09/10/2016	1.02	1.03
38	09/11/2016 - 09/17/2016	1.03	1.04
39	09/18/2016 - 09/24/2016	1.02	1.03
40	09/25/2016 - 10/01/2016	1.01	1.02
41	10/02/2016 - 10/08/2016	1.00	1.01
42	10/09/2016 - 10/15/2016	1.00	1.01
43	10/16/2016 - 10/22/2016	1.00	1.01
44	10/23/2016 - 10/29/2016	1.00	1.01
45	10/30/2016 - 11/05/2016	1.00	1.01
46	11/06/2016 - 11/12/2016	1.00	1.01
47	11/13/2016 - 11/19/2016	1.01	1.02
48	11/20/2016 - 11/26/2016	1.00	1.01
49	11/27/2016 - 12/03/2016	1.00	1.01
50	12/04/2016 - 12/10/2016	0.99	1.00
51	12/11/2016 - 12/17/2016	0.99	1.00
52	12/18/2016 - 12/24/2016	1.00	1.01
53	12/25/2016 - 12/31/2016	1.02	1.03

* PEAK SEASON

21-FEB-2017 10:54:35

830UPD

6_8701_PKSEASON.TXT

Appendix 4: Traffic Counts (TMC's)



TABLE: A5

INTERSECTION APPROACH VOLUMES - AM PEAK HOUR

Project Name: Cutler Gate

INTERSECTION NO.	1	2	3	4	5	6	7	8	9	10	11	12
	INTERSECTION NAME	APPROACH	MOVEMENT	AM PEAK HR COUNT	DATE OF COUNT	PHF	SF	AM PEAK SEASONALLY ADJUSTED (EXISTING) (2018)	BACKGROUND GROWTH @ 1.76% FOR PROJECT BUILD-OUT OF 2019 (1 YEAR GROWTH)	PROPOSED FUTURE TRAFFIC W/O PROJECT (2019)	SITE TRAFFIC (PROJECT GROSS TRIPS) (VPH)	PROPOSED FUTURE TRAFFIC W/ PROJECT (VPH) (2019)
1	Old Cutler Road & SW 200 Street	SOUTHBOUND	SBR	0	Wednesday, January 17, 2018	0.900	1.01	0	0	0	0	0
			SBT	358			1.01	362	6	368	3	371
			SBL	0			1.01	0	0	0	0	0
			TOTAL	358				362	6	368	3	371
		WESTBOUND	WBR	0			1.01	0	0	0	0	0
			WBT	0			1.01	0	0	0	0	0
			WBL	0			1.01	0	0	0	0	0
			TOTAL	0				0	0	0	0	0
		NORTHBOUND	NBR	0			1.01	0	0	0	0	0
			NBT	734			1.01	741	13	754	0	754
			NBL	2			1.01	2	0	2	2	4
			TOTAL	736				743	13	756	2	758
		EASTBOUND	EBR	0			1.01	0	0	0	3	3
			EBT	0			1.01	0	0	0	0	0
			EBL	0			1.01	0	0	0	1	1
			TOTAL	0				0	0	0	4	4
		TOTAL		1,094				1,105	19	1,124	9	1,133

Notes:

- 1 Intersection Name
- 2 Intersection Approach
- 3 Intersection Approach Movement
- 4 TMC data provided by RGA, Inc.
- 5 Date of Count
- 6 Peak Hour Factor
- 7 Seasonal Factor
- 8 Seasonally Adjusted TMC = Count * SF (Existing Condition).
- 9 A 1.76 percent background growth was utilized with a project build-out of 2019.
- 10 Proposed Traffic w/o Project = Seasonally Adjusted TMC + Background
- 11 Project Gross Trips.
- 12 Total Traffic = Net Traffic w/o Project + Site Traffic (Proposed Condition with Project)

TABLE: A6

INTERSECTION APPROACH VOLUMES - PM PEAK HOUR

Project Name: Cutler Gate

INTERSECTION NO.	1	2	3	4	5	6	7	8	9	10	11	12
	INTERSECTION NAME	APPROACH	MOVEMENT	PM PEAK HR COUNT	DATE OF COUNT	PHF	SF	PM PEAK SEASONALLY ADJUSTED (EXISTING)	BACKGROUND GROWTH @ 1.76% FOR PROJECT BUILD-OUT OF 2019 (1 YEAR GROWTH)	PROPOSED FUTURE TRAFFIC W/O PROJECT (2019)	SITE TRAFFIC (PROJECT GROSS TRIPS) (VPH)	PROPOSED FUTURE TRAFFIC W/ PROJECT (VPH) (2019)
1	Old Cutler Road & SW 200 Street	SOUTHBOUND	SBR	2	Wednesday, January 17, 2018	0.987	1.01	2	0	2	2	4
			SBT	864			1.01	873	15	888	4	892
			SBL	0			1.01	0	0	0	0	0
			TOTAL	866				875	15	890	6	896
		WESTBOUND	WBR	0			1.01	0	0	0	0	0
			WBT	0			1.01	0	0	0	0	0
			WBL	0			1.01	0	0	0	0	0
			TOTAL	0				0	0	0	0	0
		NORTHBOUND	NBR	0			1.01	0	0	0	0	0
			NBT	372			1.01	376	7	382	2	384
			NBL	5			1.01	5	0	5	6	11
			TOTAL	377				381	7	387	8	395
		EASTBOUND	EBR	5			1.01	5	0	5	2	7
			EBT	0			1.01	0	0	0	0	0
			EBL	0			1.01	0	0	0	2	2
			TOTAL	5				5	0	5	4	9
		TOTAL		1,248				1,260	22	1,283	18	1,301

Notes:

- 1 Intersection Name
- 2 Intersection Approach
- 3 Intersection Approach Movement
- 4 TMC data provided by RGA, Inc.
- 5 Date of Count
- 6 Peak Hour Factor
- 7 Seasonal Factor
- 8 Seasonally Adjusted TMC = Count * SF (Existing Condition).
- 9 A 1.76 percent background growth was utilized with a project build-out of 2019.
- 10 Proposed Traffic w/o Project = Seasonally Adjusted TMC + Background
- 11 Project Gross Trips.
- 12 Total Traffic = Net Traffic w/o Project + Site Traffic (Proposed Condition with Project)



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File Name : Old Cutler Rd_SW 200 St_AM

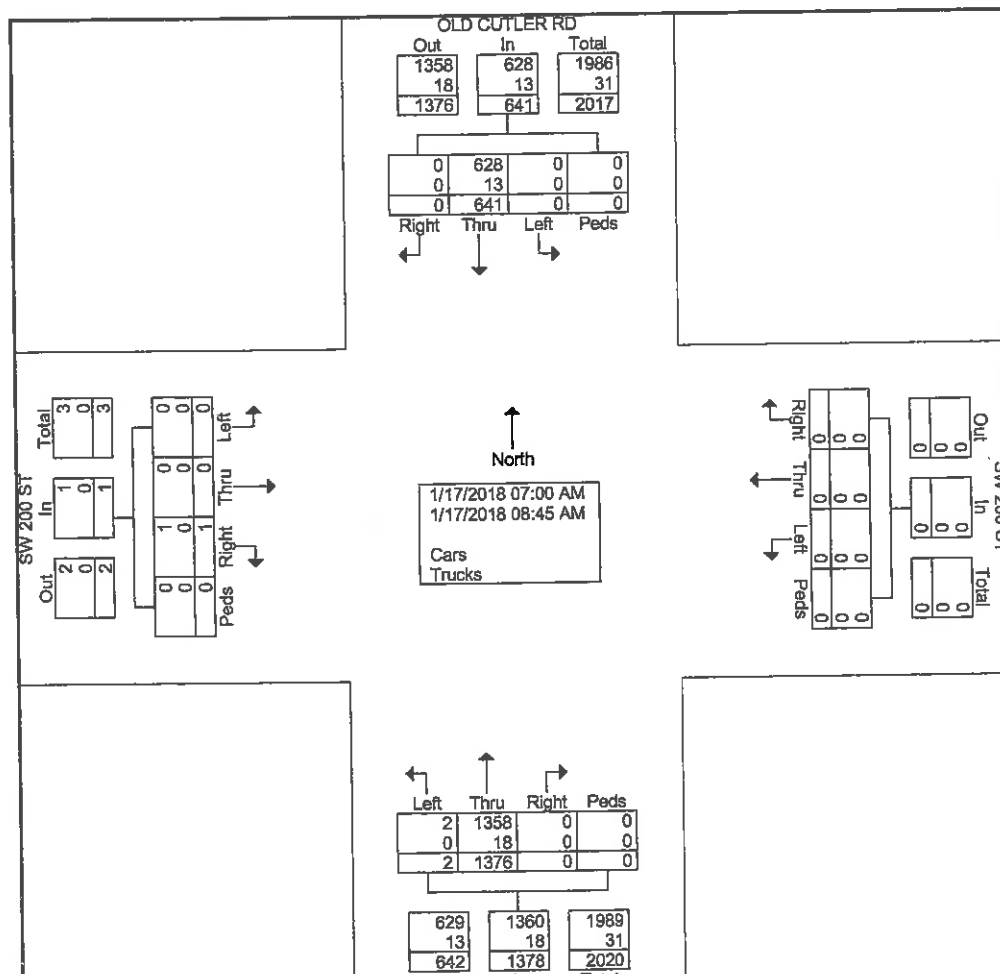
Site Code : 00000000

Start Date : 1/17/2018

Page No : 1

Groups Printed- Cars - Trucks

Start Time	OLD CUTLER RD Southbound					SW 200 ST Westbound					OLD CUTLER RD Northbound					SW 200 ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	55	0	0	55	0	0	0	0	0	0	173	0	0	173	0	0	0	0	0	228
07:15 AM	0	57	0	0	57	0	0	0	0	0	0	156	0	0	156	0	0	0	0	0	213
07:30 AM	0	96	0	0	96	0	0	0	0	0	0	153	0	0	153	1	0	0	0	1	250
07:45 AM	0	75	0	0	75	0	0	0	0	0	0	160	0	0	160	0	0	0	0	0	235
Total	0	283	0	0	283	0	0	0	0	0	0	642	0	0	642	1	0	0	0	1	926
08:00 AM	0	80	0	0	80	0	0	0	0	0	0	153	1	0	154	0	0	0	0	0	234
08:15 AM	0	96	0	0	96	0	0	0	0	0	0	197	0	0	197	0	0	0	0	0	293
08:30 AM	0	96	0	0	96	0	0	0	0	0	0	207	1	0	208	0	0	0	0	0	304
08:45 AM	0	86	0	0	86	0	0	0	0	0	0	177	0	0	177	0	0	0	0	0	263
Total	0	358	0	0	358	0	0	0	0	0	0	734	2	0	736	0	0	0	0	0	1094
Grand Total	0	641	0	0	641	0	0	0	0	0	0	1376	2	0	1378	1	0	0	0	1	2020
Apprch %	0	100	0	0		0	0	0	0		0	99.9	0.1	0		100	0	0	0		
Total %	0	31.7	0	0	31.7	0	0	0	0		0	68.1	0.1	0	68.2	0	0	0	0		
Cars	0	628	0	0	628	0	0	0	0		0	1358	2	0	1360	1	0	0	0	1	1989
% Cars	0	98	0	0	98	0	0	0	0		0	98.7	100	0	98.7	100	0	0	0	100	98.5
Trucks	0	13	0	0	13	0	0	0	0		0	18	0	0	18	0	0	0	0	0	31
% Trucks	0	2	0	0	2	0	0	0	0		0	1.3	0	0	1.3	0	0	0	0	0	1.5

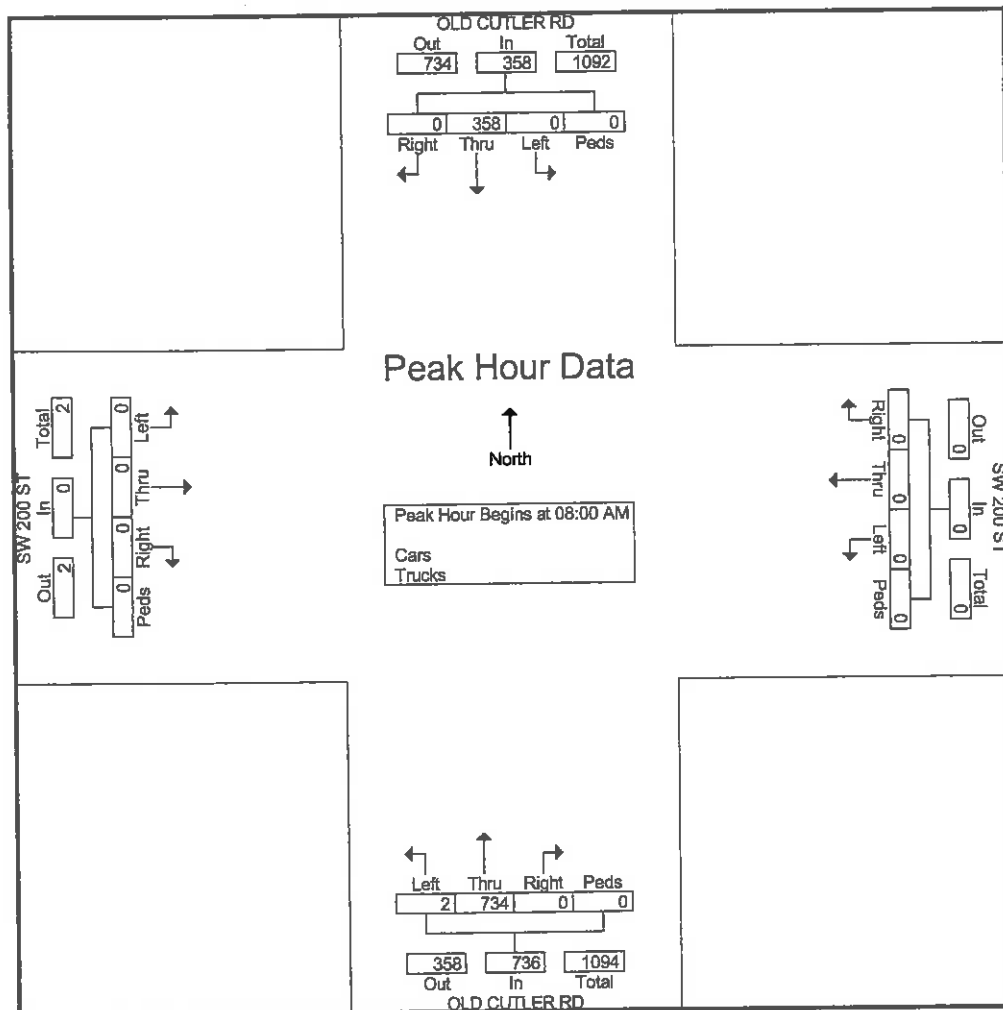




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 Site Code : 00000000
 Start Date : 1/17/2018
 Page No : 2

	OLD CUTLER RD Southbound					SW 200 ST Westbound					OLD CUTLER RD Northbound					SW 200 ST Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	80	0	0	80	0	0	0	0	0	0	153	1	0	154	0	0	0	0	0	234
08:15 AM	0	96	0	0	96	0	0	0	0	0	0	197	0	0	197	0	0	0	0	0	293
08:30 AM	0	96	0	0	96	0	0	0	0	0	0	207	1	0	208	0	0	0	0	0	304
08:45 AM	0	86	0	0	86	0	0	0	0	0	0	177	0	0	177	0	0	0	0	0	263
Total Volume	0	358	0	0	358	0	0	0	0	0	0	734	2	0	736	0	0	0	0	0	1094
% App. Total																					
PHF	.000	.932	.000	.000	.932	.000	.000	.000	.000	.000	.000	.886	.500	.000	.885	.000	.000	.000	.000	.000	.900





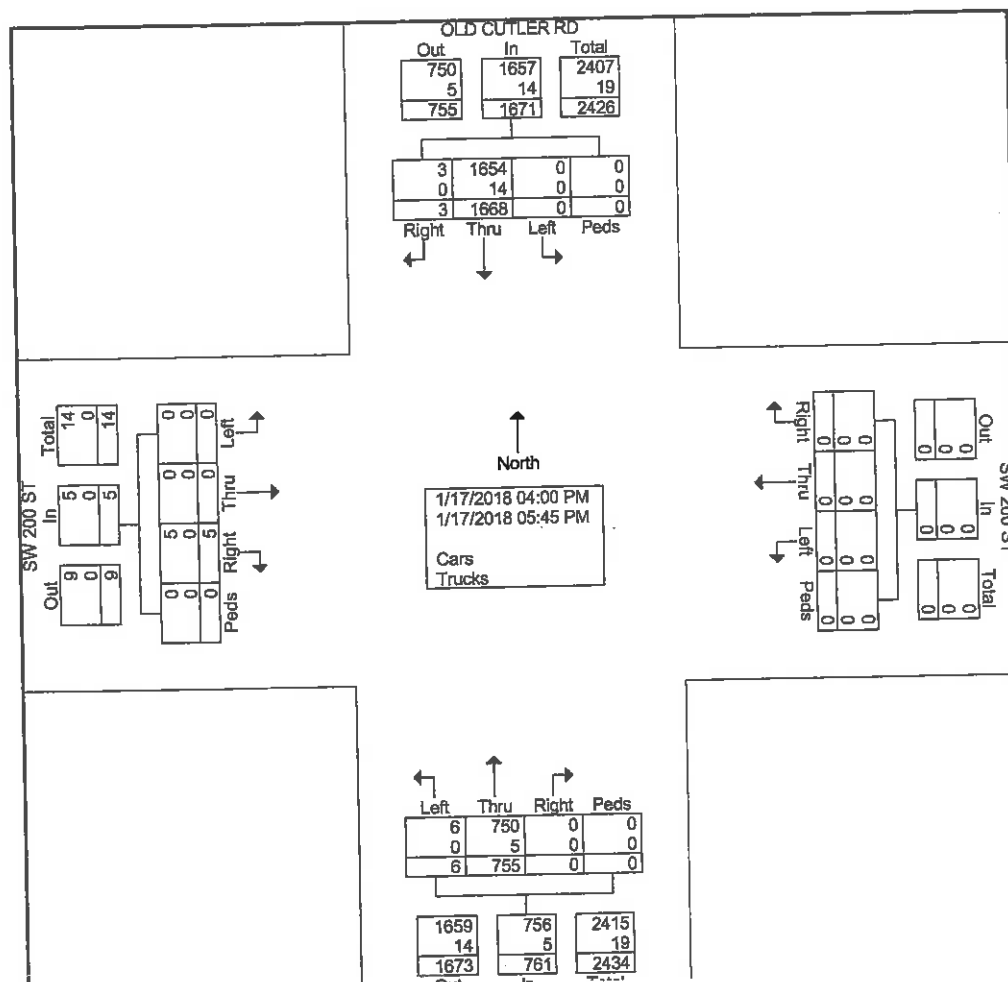
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File Name : Old Cutler Rd_SW 200 St_PM
Site Code : 00000000
Start Date : 1/17/2018
Page No : 1

Groups Printed- Cars - Trucks

Start Time	OLD CUTLER RD Southbound					SW 200 ST Westbound					OLD CUTLER RD Northbound					SW 200 ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	211	0	0	211	0	0	0	0	0	0	110	0	0	110	0	0	0	0	0	321
04:15 PM	0	182	0	0	182	0	0	0	0	0	0	92	1	0	93	0	0	0	0	0	275
04:30 PM	1	189	0	0	190	0	0	0	0	0	0	101	0	0	101	0	0	0	0	0	291
04:45 PM	1	218	0	0	219	0	0	0	0	0	0	92	3	0	95	2	0	0	0	2	316
Total	2	800	0	0	802	0	0	0	0	0	0	395	4	0	399	2	0	0	0	2	1203
05:00 PM	1	201	0	0	202	0	0	0	0	0	0	105	0	0	105	1	0	0	0	1	308
05:15 PM	0	224	0	0	224	0	0	0	0	0	0	84	0	0	84	1	0	0	0	1	309
05:30 PM	0	221	0	0	221	0	0	0	0	0	0	91	2	0	93	1	0	0	0	1	315
05:45 PM	0	222	0	0	222	0	0	0	0	0	0	80	0	0	80	0	0	0	0	0	302
Total	1	868	0	0	869	0	0	0	0	0	0	360	2	0	362	3	0	0	0	3	1234
Grand Total	3	1668	0	0	1671	0	0	0	0	0	0	755	6	0	761	5	0	0	0	5	2437
Apprch %	0.2	99.8	0	0		0	0	0	0		0	99.2	0.8	0		100	0	0	0		
Total %	0.1	68.4	0	0	68.6	0	0	0	0		0	31	0.2	0	31.2	0.2	0	0	0	0.2	
Cars	3	1654	0	0	1657	0	0	0	0	0	0	750	6	0	756	5	0	0	0	5	2418
% Cars	100	99.2	0	0	99.2	0	0	0	0		0	99.3	100	0	99.3	100	0	0	0	100	99.2
Trucks	0	14	0	0	14	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	19
% Trucks	0	0.8	0	0	0.8	0	0	0	0		0	0.7	0	0	0.7	0	0	0	0	0	0.8



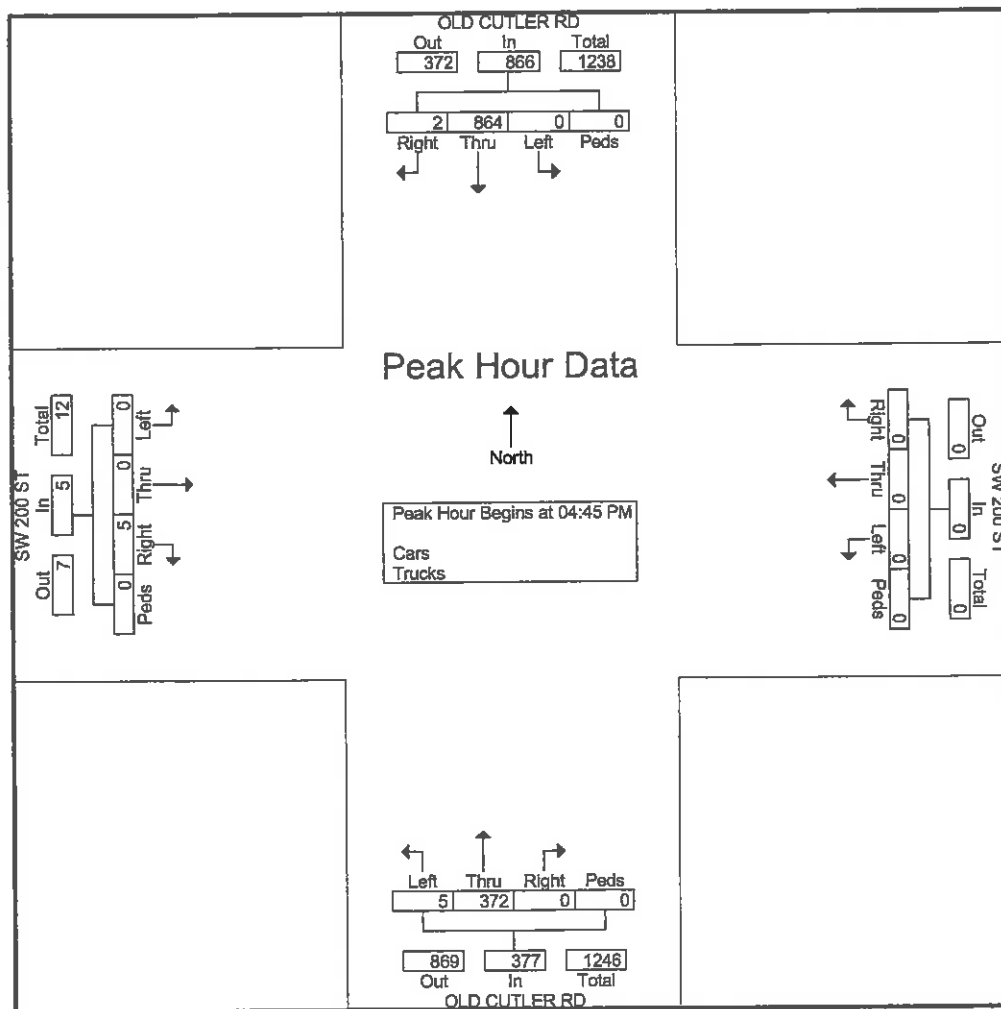


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Start Date : 1/17/2018
Page No : 2

	OLD CUTLER RD Southbound					SW 200 ST Westbound					OLD CUTLER RD Northbound					SW 200 ST Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	1	218	0	0	219	0	0	0	0	0	0	92	3	0	95	2	0	0	0	2	316
05:00 PM	1	201	0	0	202	0	0	0	0	0	0	105	0	0	105	1	0	0	0	1	308
05:15 PM	0	224	0	0	224	0	0	0	0	0	0	84	0	0	84	1	0	0	0	1	309
05:30 PM	0	221	0	0	221	0	0	0	0	0	0	91	2	0	93	1	0	0	0	1	315
Total Volume	2	864	0	0	866	0	0	0	0	0	0	372	5	0	377	5	0	0	0	5	1248
% App. Total																					
PHF	.500	.964	.000	.000	.967	.000	.000	.000	.000	.000	.000	.886	.417	.000	.898	.625	.000	.000	.000	.625	.987



Appendix 5: Operational Analysis - Intersection Level of Service



TABLE: A7
Level of Service (LOS) Summary - AM & PM Peak Hour

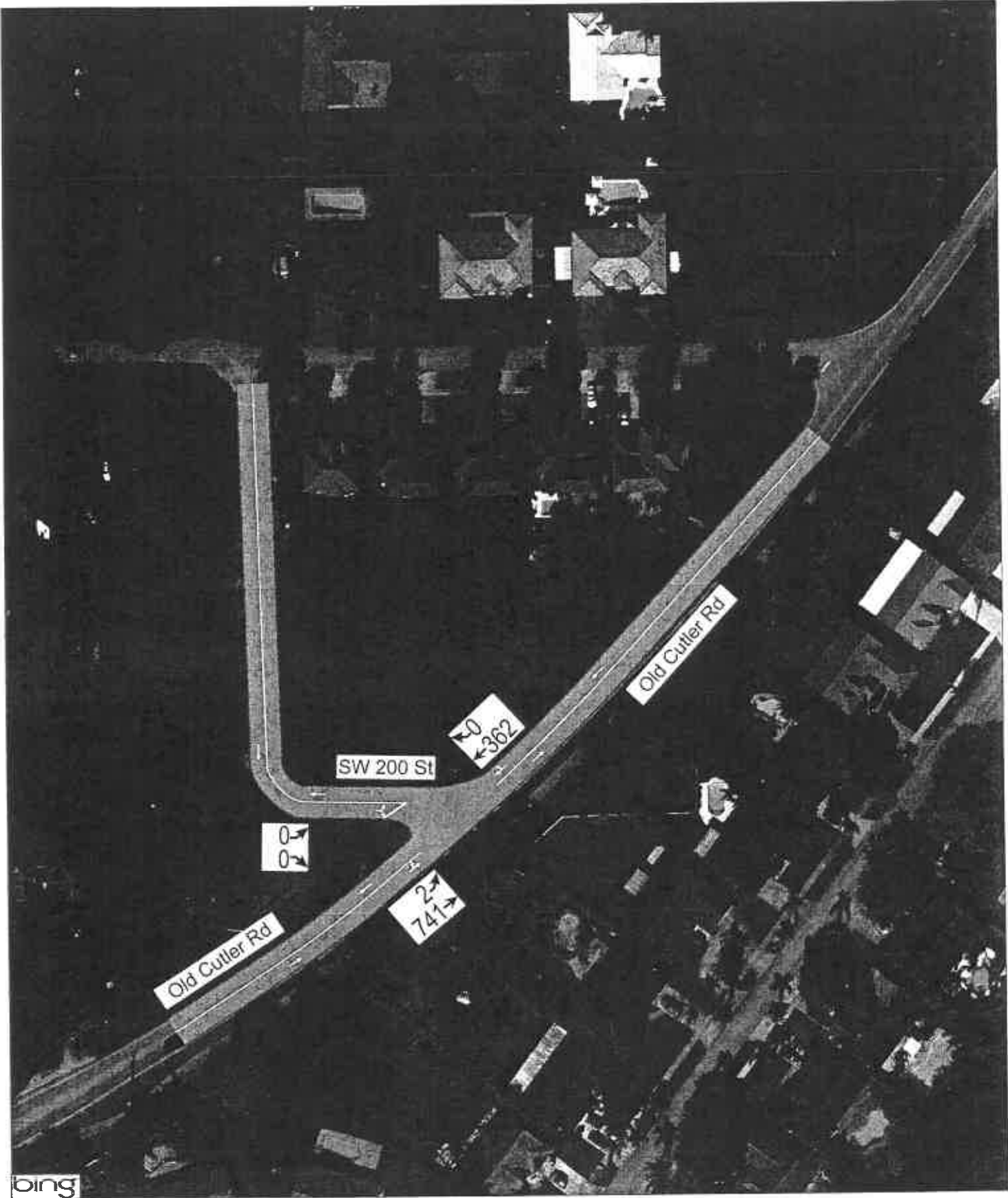
Project Name: Cutler Gate

Existing Condition (2018)			AM Peak Hour							PM Peak Hour						
Location	Intersection Control	Overall		* Critical Approach			TWSC		Overall		* Critical Approach			TWSC		
		LOS	Delay (sec)	Approach	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	Approach	LOS	Delay (sec)	LOS	Delay (sec)	
1 Old Cutler Road & SW 200 Street	Two-Way Stop	A	0.0	-	-	-	-	-	A	0.1	EB	C	15.6			
Proposed Future Condition (with Project Trips) (2019)			AM Peak Hour							PM Peak Hour						
Location	Intersection Control	Overall		* Critical Approach			TWSC		Overall		* Critical Approach			TWSC		
		LOS	Delay (sec)	Approach	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	Approach	LOS	Delay (sec)	LOS	Delay (sec)	
1 Old Cutler Road & SW 200 Street	Two-Way Stop	A	0.0	EB	B	14.1			A	0.2	EB	C	18.4			
2 Old Cutler Road & Driveway 1 (DW1)	Two-Way Stop	A	0.1	EB	C	17.1			A	0.2	EB	C	23.2			
3 SW 85 Avenue & Driveway 2 (DW2)	Two-Way Stop	A	4.1	WB	A	8.5			A	1.5	WB	A	8.5			
4 SW 85 Avenue & Driveway 3 (DW3)	Two-Way Stop	A	2.8	WB	A	8.5			A	1.3	WB	A	8.6			

Notes: * Critical Approach for TWSC.

Cutler Gate

Existing Condition - AM Peak Hour



HCM 6th TWSC 1: Old Cutler Rd & SW 200 St

Cutler Gate
Existing Condition - AM Peak Hour

Int Delay, s/veh 0

Major Street	EB	WB	MB	WB	SB	WB
Lane Configurations	Y			↑	↑	
Traffic Vol, veh/h	0	0	2	741	362	0
Future Vol, veh/h	0	0	2	741	362	0
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	2	823	402	0

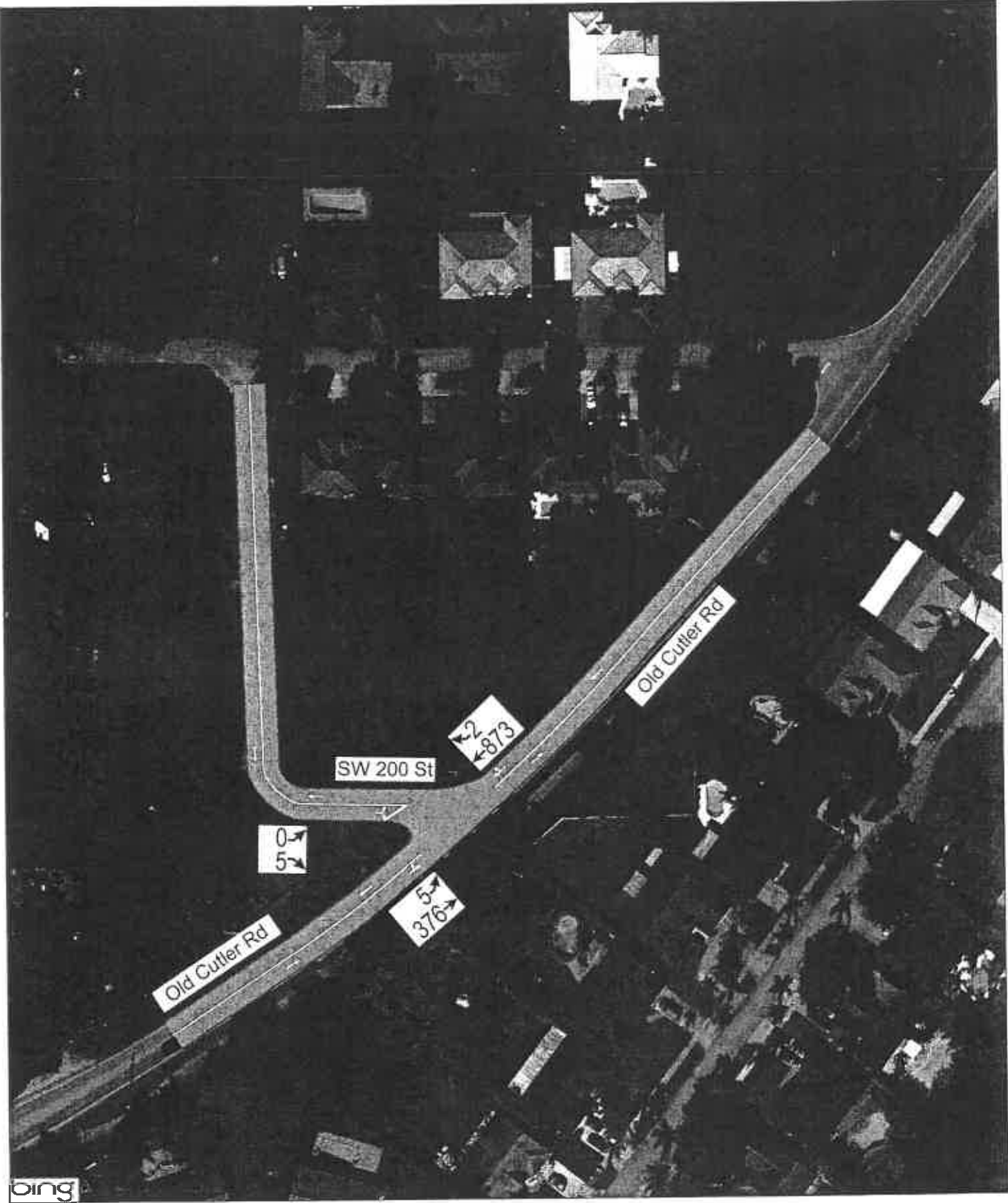
Major Street	EB	WB	MB	WB	SB	WB
Conflicting Flow All	1229	402	402	0	-	0
Stage 1	402	-	-	-	-	-
Stage 2	827	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	196	648	1157	-	-	-
Stage 1	676	-	-	-	-	-
Stage 2	430	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	195	648	1157	-	-	-
Mov Cap-2 Maneuver	195	-	-	-	-	-
Stage 1	674	-	-	-	-	-
Stage 2	430	-	-	-	-	-

Major Street	EB	WB	MB	WB	SB	WB
HCM Control Delay, s	0	0	0	0	0	0
HCM LOS	A	A	A	A	A	A

Major Street	EB	WB	MB	WB	SB	WB
Capacity (veh/h)	1157	-	-	-	-	-
HCM Lane V/C Ratio	0.002	-	-	-	-	-
HCM Control Delay (s)	8.1	0	0	-	-	-
HCM Lane LOS	A	A	A	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-	-

Cutler Gate

Existing Condition - PM Peak Hour



HCM 6th TWSC
1: Old Cutler Rd & SW 200 St

Cutler Gate
Existing Condition - PM Peak Hour

Intersection: Old Cutler Rd & SW 200 St

Int Delay, s/veh 0.1

Control: SEMA - 555 - NED - 555 - SEMA - 555 - SEMA - 555

Lane Configurations	W			4	4	
Traffic Vol, veh/h	0	5	5	376	873	2
Future Vol, veh/h	0	5	5	376	873	2
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	5	5	380	882	2

Flow: 1273 - 883 - 884 - 0 - - - 0

Conflicting Flow All	1273	883	884	0	-	0
Stage 1	883	-	-	-	-	-
Stage 2	390	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	185	345	765	-	-	-
Stage 1	404	-	-	-	-	-
Stage 2	684	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	184	345	765	-	-	-
Mov Cap-2 Maneuver	184	-	-	-	-	-
Stage 1	401	-	-	-	-	-
Stage 2	684	-	-	-	-	-

Control: SEMA - 555 - NED - 555 - SEMA - 555 - SEMA - 555

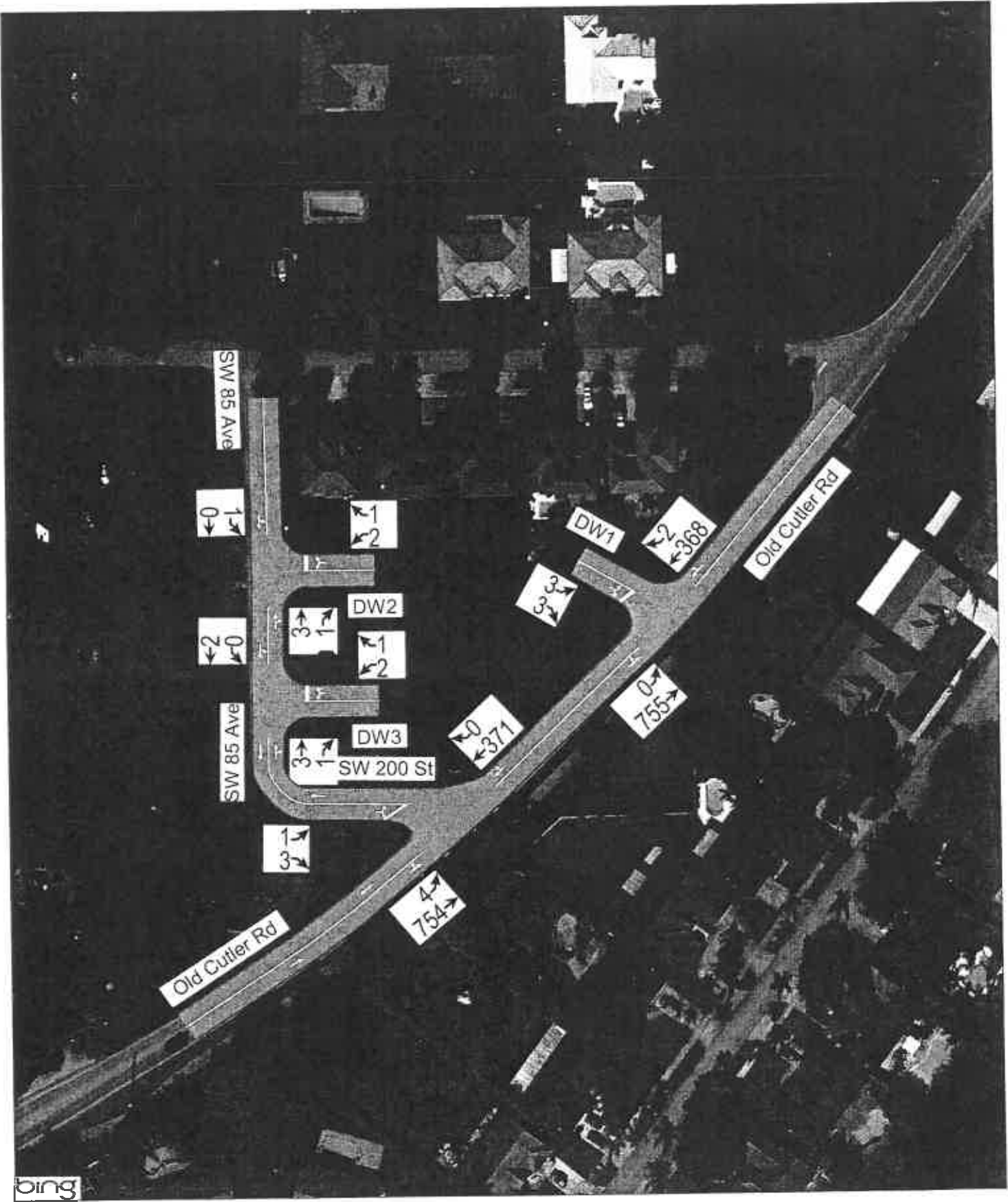
HCM Control Delay, s	15.6	0.1	0			
HCM LOS	C					

Capacity: 765 - - 345 - - -

Capacity (veh/h)	765	-	345	-	-	-
HCM Lane V/C Ratio	0.007	-	0.015	-	-	-
HCM Control Delay (s)	9.7	0	15.6	-	-	-
HCM Lane LOS	A	A	C	-	-	-
HCM 95th %ile Q(veh)	0	-	0	-	-	-

Cutler Gate

Future Condition w/ Project - AM Peak Hour



HCM 6th TWSC
1: Old Cutler Rd & SW 200 St

Cutler Gate
Future Condition w/ Project - AM Peak Hour

Int Delay, s/veh 0

Lane Configurations	Y			↑	↑	
Traffic Vol, veh/h	1	3	4	754	371	0
Future Vol, veh/h	1	3	4	754	371	0
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	3	4	838	412	0

Conflicting Flow All	1258	412	412	0	-	0
Stage 1	412	-	-	-	-	-
Stage 2	846	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	189	640	1147	-	-	-
Stage 1	669	-	-	-	-	-
Stage 2	421	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	188	640	1147	-	-	-
Mov Cap-2 Maneuver	188	-	-	-	-	-
Stage 1	664	-	-	-	-	-
Stage 2	421	-	-	-	-	-

HCM Control Delay, s 14.1 0 0

HCM LOS B

Capacity (veh/h)	1147	-	400	-	-
HCM Lane V/C Ratio	0.004	-	0.011	-	-
HCM Control Delay (s)	8.2	0	14.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

HCM 6th TWSC
2: Old Cutler Rd & DW1

Cutler Gate
Future Condition w/ Project - AM Peak Hour

Intersection						
Int Delay, s/veh	0.1					

	EB	WB	NB	SB	WB	SB
Lane Configurations	W			W	W	
Traffic Vol, veh/h	3	3	0	755	368	2
Future Vol, veh/h	3	3	0	755	368	2
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	3	0	821	400	2

	EB	WB	NB	SB	WB	SB
Conflicting Flow All	1222	401	402	0	-	0
Stage 1	401	-	-	-	-	-
Stage 2	821	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	198	649	1157	-	-	-
Stage 1	676	-	-	-	-	-
Stage 2	432	-	-	-	-	-
Platoon blocked, %						
Mov Cap-1 Maneuver	198	649	1157	-	-	-
Mov Cap-2 Maneuver	198	-	-	-	-	-
Stage 1	676	-	-	-	-	-
Stage 2	432	-	-	-	-	-

	EB	WB	NB	SB	WB	SB
HCM Control Delay, s	17.1		0		0	
HCM LOS	C					

	EB	WB	NB	SB	WB	SB
Capacity (veh/h)	1157	-	303	-	-	-
HCM Lane V/C Ratio	-	-	0.022	-	-	-
HCM Control Delay (s)	0	-	17.1	-	-	-
HCM Lane LOS	A	-	C	-	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-	-

HCM 6th TWSC
3: SW 85 Ave & DW2

Cutler Gate
Future Condition w/ Project - AM Peak Hour

Intersection						
Int Delay, s/veh	4.1					

Level	EB	WB	NB	SB	ST	LT
Lane Configurations	Y		1		1	1
Traffic Vol, veh/h	2	1	3	1	1	0
Future Vol, veh/h	2	1	3	1	1	0
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	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	1	3	1	1	0

Major Minor	Minor	Major	Major	Major	Major
Conflicting Flow All	6	4	0	0	4
Stage 1	4	-	-	-	-
Stage 2	2	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	1015	1080	-	-	1618
Stage 1	1019	-	-	-	-
Stage 2	1021	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	1014	1080	-	-	1618
Mov Cap-2 Maneuver	1014	-	-	-	-
Stage 1	1018	-	-	-	-
Stage 2	1021	-	-	-	-

95th %	5th %	5th %	5th %
HCM Control Delay, s	8.5	0	7.2
HCM LOS	A		

95th %	5th %	5th %	5th %	5th %
Capacity (veh/h)	-	-	1035	1618
HCM Lane V/C Ratio	-	-	0.003	0.001
HCM Control Delay (s)	-	-	8.5	7.2
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

HCM 6th TWSC
4: SW 85 Ave & DW3

Cutler Gate
Future Condition w/ Project - AM Peak Hour

Int Delay, s/veh 2.8

Lane Configurations	W	T	T	T	T	T
Traffic Vol, veh/h	2	1	3	1	0	2
Future Vol, veh/h	2	1	3	1	0	2
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	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	1	3	1	0	2

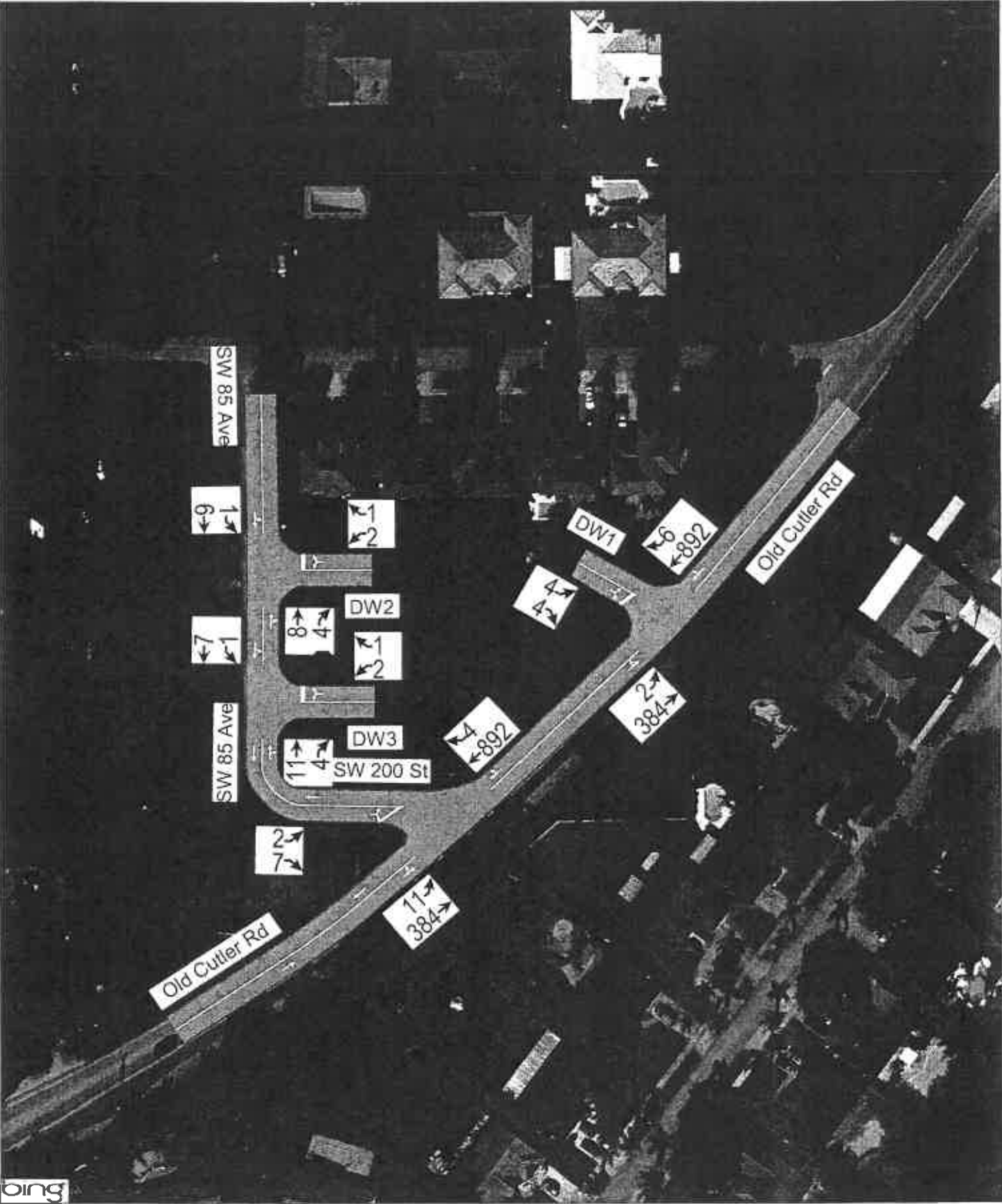
Conflicting Flow All	6	4	0	0	4	0
Stage 1	4	-	-	-	-	-
Stage 2	2	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	1015	1080	-	-	1618	-
Stage 1	1019	-	-	-	-	-
Stage 2	1021	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1015	1080	-	-	1618	-
Mov Cap-2 Maneuver	1015	-	-	-	-	-
Stage 1	1019	-	-	-	-	-
Stage 2	1021	-	-	-	-	-

HCM Control Delay, s 8.5
HCM LOS A

Capacity (veh/h)	-	-	1036	1618	-
HCM Lane V/C Ratio	-	-	0.003	-	-
HCM Control Delay (s)	-	-	8.5	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Cutler Gate

Future Condition w/ Project - PM Peak Hour



HCM 6th TWSC
1: Old Cutler Rd & SW 200 St

Cutler Gate
 Future Condition w/ Project - PM Peak Hour

Intersection

Int Delay, s/veh 0.2

Approach

Lane Configurations	EB	WB	EB	WB	EB	WB
Traffic Vol, veh/h	2	7	11	384	892	4
Future Vol, veh/h	2	7	11	384	892	4
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	7	11	388	901	4

Approach

Conflicting Flow All	EB	WB	EB	WB	EB	WB
Stage 1	903	-	-	-	-	-
Stage 2	410	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	175	336	752	-	-	-
Stage 1	396	-	-	-	-	-
Stage 2	670	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	172	336	752	-	-	-
Mov Cap-2 Maneuver	172	-	-	-	-	-
Stage 1	388	-	-	-	-	-
Stage 2	670	-	-	-	-	-

Approach

HCM Control Delay, s	18.4	0.3	0
HCM LOS	C		

Approach

Capacity (veh/h)	EB	WB	EB	WB	EB	WB
HCM Lane V/C Ratio	0.015	-	0.033	-	-	-
HCM Control Delay (s)	9.9	0	18.4	-	-	-
HCM Lane LOS	A	A	C	-	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-	-

HCM 6th TWSC
2: Old Cutler Rd & DW1

Cutler Gate
Future Condition w/ Project - PM Peak Hour

Int Delay, s/veh 0.2

Lane Configurations	4	4	2	384	892	6
Traffic Vol, veh/h	4	4	2	384	892	6
Future Vol, veh/h	4	4	2	384	892	6
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	4	2	417	970	7

Conflicting Flow All	1395	974	977	0	-	0
Stage 1	974	-	-	-	-	-
Stage 2	421	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	156	306	706	-	-	-
Stage 1	366	-	-	-	-	-
Stage 2	662	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	155	306	706	-	-	-
Mov Cap-2 Maneuver	155	-	-	-	-	-
Stage 1	365	-	-	-	-	-
Stage 2	662	-	-	-	-	-

HCM Control Delay, s	23.2	0.1	0
HCM LOS	C		

Capacity (veh/h)	706	-	206
HCM Lane V/C Ratio	0.003	-	0.042
HCM Control Delay (s)	10.1	0	23.2
HCM Lane LOS	B	A	C
HCM 95th %tile Q(veh)	0	-	0.1

HCM 6th TWSC
3: SW 85 Ave & DW2

Cutler Gate
 Future Condition w/ Project - PM Peak Hour

Int Delay, s/veh 1.5

Lane Configurations	Y		1		1	
Traffic Vol, veh/h	2	1	8	4	1	6
Future Vol, veh/h	2	1	8	4	1	6
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	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	1	9	4	1	7

Conflicting Flow All	20	11	0	0	13	0
Stage 1	11	-	-	-	-	-
Stage 2	9	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	997	1070	-	-	1606	-
Stage 1	1012	-	-	-	-	-
Stage 2	1014	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	996	1070	-	-	1606	-
Mov Cap-2 Maneuver	996	-	-	-	-	-
Stage 1	1011	-	-	-	-	-
Stage 2	1014	-	-	-	-	-

HCM Control Delay, s 8.5 0 1
 HCM LOS A

Capacity (veh/h)	-	-	1020	1606	-
HCM Lane V/C Ratio	-	-	0.003	0.001	-
HCM Control Delay (s)	-	-	8.5	7.2	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

HCM 6th TWSC
4: SW 85 Ave & DW3

Cutler Gate
Future Condition w/ Project - PM Peak Hour

Int Delay, s/veh 1.3

Lane Configurations	Y	T	TB	TB	TB	TB
Traffic Vol, veh/h	2	1	11	4	1	7
Future Vol, veh/h	2	1	11	4	1	7
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	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	1	12	4	1	8

Conflicting Flow All	24	14	0	0	16	0
Stage 1	14	-	-	-	-	-
Stage 2	10	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	992	1066	-	-	1602	-
Stage 1	1009	-	-	-	-	-
Stage 2	1013	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	991	1066	-	-	1602	-
Mov Cap-2 Maneuver	991	-	-	-	-	-
Stage 1	1008	-	-	-	-	-
Stage 2	1013	-	-	-	-	-

HCM Control Delay, s 8.6 0 0.9
HCM LOS A

Capacity (veh/h)	-	-	1015	1602	-
HCM Lane V/C Ratio	-	-	0.003	0.001	-
HCM Control Delay (s)	-	-	8.6	7.2	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Appendix 6: Roadway Analysis



TABLE: A8

ROADWAY ANALYSIS - AM & PM PEAK HOUR EXISTING CONDITION (2018) & FUTURE CONDITION (2019)

Project Name: Cutler Gate

1		2		3		4			5		6		7			
Roadway Analysis - AM Peak Hour																
Roadway		Location		LOS / Volume Standard		Roadway Segment			Background Growth @ 1.76% - 1 Year Build-Out (2019)		Project Gross Trips (2019)		Roadway Segment			
						Existing Two-Way Volume (2018)	Available Capacity	LOS					Proposed Traffic Volume (2019)	Available Capacity	LOS	
1		Old Cutler Road		North of SW 87 Avenue		LOS D / 1,600 VPH Class I - 2LU	1,105	495	C	19		8		1,132	468	C
Roadway Analysis - PM Peak Hour																
Roadway		Location		LOS / Volume Standard		Roadway Segment			Background Growth @ 1.76% - 1 Year Build-Out (2019)		Project Gross Trips (2019)		Roadway Segment			
						Existing Two-Way Volume (2018)	Available Capacity	LOS					Proposed Traffic Volume (2019)	Available Capacity	LOS	
1		Old Cutler Road		North of SW 87 Avenue		LOS D / 1,600 VPH Class I - 2LU	1,258	342	C	22		14		1,295	305	C

Notes:

1 Roadway Name

2 Location

3 Roadway / Volume Standard *

4 Existing Roadway Segment Two-Way Volume, Available Capacity & LOS**

5 Background Traffic Growth by 2019

6 Project Gross Trips by 2019

7 Proposed Roadway Segment Two-Way Volume, Available Capacity & LOS by Year 2019

* LOS / Volume Standard based on the FDOT generalized Table 4 (Peak Hour Two-Way Volumes for Florida's Urbanized Areas).

** Existing Roadway volumes obtained from TMC's

TABLE 4

Generalized **Peak Hour Two-Way** Volumes for Florida's
Urbanized Areas¹

12/18/12

12/18/12

INTERRUPTED FLOW FACILITIES

STATE SIGNALIZED ARTERIALS

Class I (40 mph or higher posted speed limit)					
Lanes	Median	B	C	D	E
2	Undivided	*	1,510	1,600	**
4	Divided	*	3,420	3,580	**
6	Divided	*	5,250	5,390	**
8	Divided	*	7,090	7,210	**

Class II (35 mph or slower posted speed limit)					
Lanes	Median	B	C	D	E
2	Undivided	*	660	1,330	1,410
4	Divided	*	1,310	2,920	3,040
6	Divided	*	2,090	4,500	4,590
8	Divided	*	2,880	6,060	6,130

Non-State Signalized Roadway Adjustments

(Alter corresponding state volumes
by the indicated percent.)

Non-State Signalized Roadways - 10%

Median & Turn Lane Adjustments

Lanes	Median	Exclusive Left Lanes	Exclusive Right Lanes	Adjustment Factors
2	Divided	Yes	No	+5%
2	Undivided	No	No	-20%
Multi	Undivided	Yes	No	-5%
Multi	Undivided	No	No	-25%
			Yes	+ 5%

One-Way Facility Adjustment

Multiply the corresponding two-directional
volumes in this table by 0.6

BICYCLE MODE²

(Multiply motorized vehicle volumes shown below by number of
directional roadway lanes to determine two-way maximum service
volumes.)

Paved Shoulder/Bicycle

Lane Coverage	B	C	D	E
0-49%	*	260	680	1,770
50-84%	190	600	1,770	>1,770
85-100%	830	1,770	>1,770	**

PEDESTRIAN MODE²

(Multiply motorized vehicle volumes shown below by number of
directional roadway lanes to determine two-way maximum service
volumes.)

Sidewalk Coverage	B	C	D	E
0-49%	*	*	250	850
50-84%	*	150	780	1,420
85-100%	340	960	1,560	>1,770

BUS MODE (Scheduled Fixed Route)³

(Buses in peak hour in peak direction)

Sidewalk Coverage	B	C	D	E
0-84%	> 5	≥ 4	≥ 3	≥ 2
85-100%	> 4	≥ 3	≥ 2	≥ 1

UNINTERRUPTED FLOW FACILITIES

FREEWAYS

Lanes	B	C	D	E
4	4,120	5,540	6,700	7,190
6	6,130	8,370	10,060	11,100
8	8,230	11,100	13,390	15,010
10	10,330	14,040	16,840	18,930
12	14,450	18,880	22,030	22,860

Freeway Adjustments

Auxiliary Lanes	Ramp Metering
Present in Both Directions + 1,800	+ 5%

UNINTERRUPTED FLOW HIGHWAYS

Lanes	Median	B	C	D	E
2	Undivided	770	1,530	2,170	2,990
4	Divided	3,300	4,660	5,900	6,530
6	Divided	4,950	6,990	8,840	9,790

Uninterrupted Flow Highway Adjustments

Lanes	Median	Exclusive left lanes	Adjustment factors
2	Divided	Yes	+5%
Multi	Undivided	Yes	-5%
Multi	Undivided	No	-25%

¹Values shown are presented as peak hour two-way volumes for levels of service and are for the automobile/truck modes unless specifically stated. This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Calculations are based on planning applications of the Highway Capacity Manual and the Transit Capacity and Quality of Service Manual.

²Level of service for the bicycle and pedestrian modes in this table is based on number of motorized vehicles, not number of bicyclists or pedestrians using the facility.

³Buses per hour shown are only for the peak hour in the single direction of the higher traffic flow.

* Cannot be achieved using table input value defaults.

** Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached. For the bicycle mode, the level of service letter grade (including F) is not achievable because there is no maximum vehicle volume threshold using table input value defaults.

Source:

Florida Department of Transportation
Systems Planning Office

www.dot.state.fl.us/planning/systems/sip/los/default.shtm