SUSAN E. O'ROURKE, P.E., Inc.

Traffic Engineering, Transportation Planning

TRAFFIC ANALYSIS

FOR

Indian River Drive LUPA

Prepared for:

Michael Abinanti
266 Park Drive
Palantine, IL 60067

Prepared by

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SUSAN E. O'ROURKE, P.E., Inc.

Traffic Engineering, Transportation Planning

April 29, 2015

Mr. Michael Abinanti
266 Park Drive
Palantine, IL 60067

Re: Indian River Drive, 8 lots LUPA

Dear Mr. Abinanti:

Susan E. O'Rourke, P.E., Inc. has completed the analysis of the proposed land use plan amendment from OP to CBD. The land use amendment affects 8 lots with a total of 3.87 acres east of Indian River Drive in Fort Pierce, Florida. The steps in the analysis and the ensuing results are presented herein.

It has been a pleasure working with you. If you have any questions or comments, please give me a call.

Respectfully submitted,
Susan E. O'Rourke, P.E.

Susan E. O'Rourke

Registered Civil Engineer – Traffic

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TABLE OF CONTENTS

INTRODUCTION	1
PROJECT DESCRIPTION	1
TRIP GENERATION	3
LANE GEOMETRICS	3
PROJECT ASSIGNMENT	3
FUTURE TRAFFIC - 2020	7
FUTURE TRAFFIC - 2035	7
CONCLUSION	7

TABLES

TABLE 1: Trip Generation- Existing Future Land Use	4
TABLE 2: Trip Generation – Proposed Future Land Use	4
TABLE 3: Net Trips	4
TABLE 4: Project % Impact	6
TABLE 5: Link Analysis 2020	8
TABLE 6: Link Analysis 2035	9

FIGURES

FIGURE 1: Project Location	2
FIGURE 2: Project Percent Assignment	5

APPENDIX

APPENDIX A: Traffic Counts and Level of Service Report Fall 2014 and 2013 Growth Rate Calculation
APPENDIX B 2035 Traffic Volumes and Roadway Network Data

INTRODUCTION

Susan E. O'Rourke, P.E., Inc. was retained to prepare a traffic analysis for the proposed land use amendment of 3.87 acres of land with a land use category of OP Professional and business office. The proposal is to change the land use to CBD which is Central Business District. The purpose of this report is to determine the impact on the surrounding roadway system associated with the change in land use. The following analytical steps were taken:

- summary of the project description; existing land use and proposed land use,
- summary of existing lane geometrics,
- assessment of the change in trip generation
- summary of 2020 traffic volumes
- summary of 2035 traffic volumes

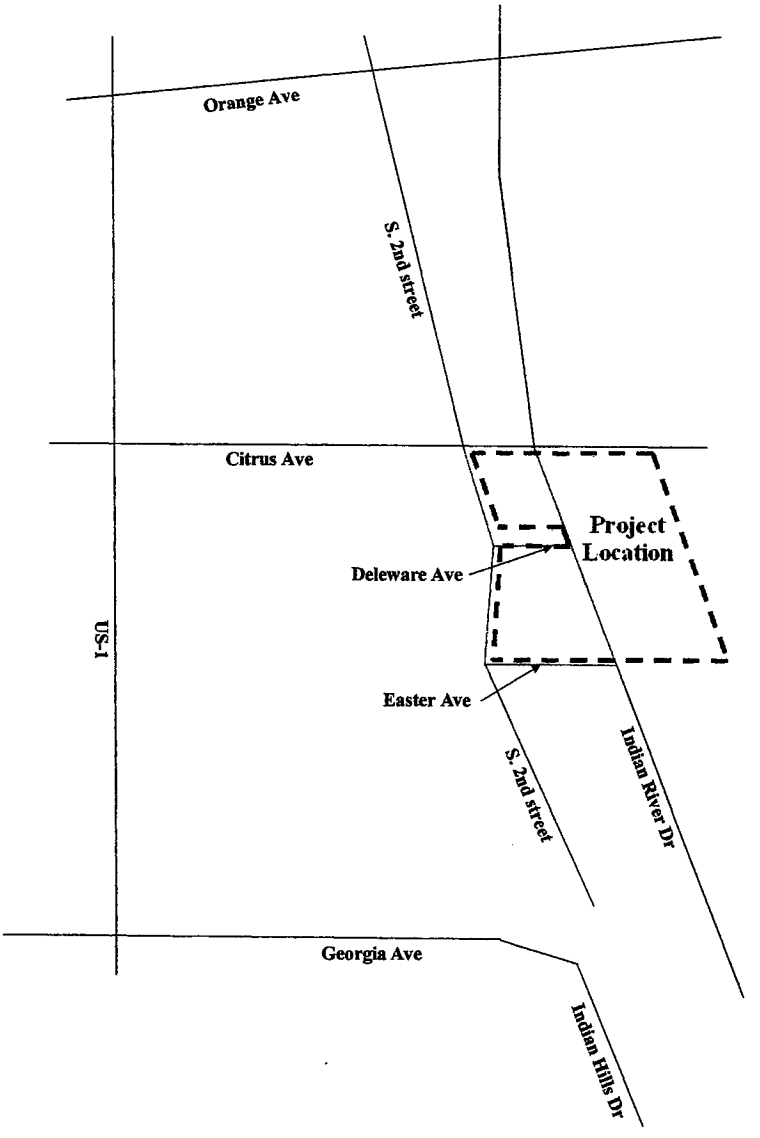
Each of these steps is outlined herein.

PROJECT DESCRIPTION

The proposed land use amendment involves 8 parcels of land located south of Citrus Avenue, North of Easter Avenue, east of 2nd Street to the Indian River. **Figure 1** shows the project's location.

The existing land use designation for the site is OP. OP allows for up to 20% of the land to be residential and an FAR (floor area ratio) of 1.0 for the site. The worst case would be to have all non-residential. Professional office of 168,577 square feet was assumed. The proposal is to change the land use to CBD. CBD allows all the land to be used as high density residential but a minimum of 25% of square footage must be residential. An FAR of 3.0 is allowed. However, given the proximity to the River and the constraints of parking and other site restrictions, it is unlikely that an FAR of 3.0 would be achieved. Therefore, a 2.0 FAR was used for this analysis. 252,866 square feet of professional office and 56 multi family dwelling units were assumed.

The analysis of the project impacts in the five year period and the long range scenario, 2035 are discussed herein.



NORTH
Not to Scale

LEGEND
General Project Boundary

FIGURE 1

Project Location

Indian River Drive

TRIP GENERATION

To estimate the trips generated by the existing future land use 168,577 square feet of office were assumed. ITE 9th edition, Land Use code 710 was applied to estimate the trips associated with the project. The trip generation for the land use under the existing future land use category is shown in **Table 1**.

For the proposed future land use, 56 multi- family units were assumed with 252,866 square feet of office on site. **Table 2** summarizes the trip generation associated with the proposed future land use.

The change in land use is the subject of the land use plan amendment. As shown in **Table 3**, there will be an increase of 3,033 daily trips, 137 AM peak hour trips and 125 PM peak hour trips.

LANE GEOMETRICS

The study area was reviewed to determine the existing number and type of lanes along the roadway. Each roadway is described below.

Indian River Drive is a two lane arterial with a north/ south alignment.

Citrus Avenue is a four lane divided east/west arterial.

2nd Street is a two lane collector with a north/south alignment.

US 1 is a four lane divided major arterial with a north/south alignment.

PROJECT ASSIGNMENT

The project traffic was distributed by general geographic direction and then assigned to the roadway network. This general distribution led to an assignment of trips based on the anticipated ultimate destinations and the roadway paths used to reach those destinations.

The project percent assignment is shown in **Figure 2**.

Table 4 shows the project percent impact on the study area network.

Table 1: Trip Generation- Existing Future Land Use

DAILY

Description	Land Use Code	Quantity	Daily Equation	Daily Trips	Internal %	Net Trips
Office	710	168,577	T= 32.2 (x)	5445	0	5445
Total		168577		5445		5445

AM

Description	Land Use Code	Quantity	AM Equation	AM Trips	% In	% Out	AM In	AM Out	Internal %	Net Trips	Net in	Net out
Office	710	168,577	Ln(t)=0.80+1.57	291	88	12	256	35	0	291	256	35
Total		168577		291			256	35		291	256	35

PM

Description	Land Use Code	Quantity	PM Equation	PM Trips	% In	% Out	PM In	PM Out	Internal %	Net Trips	Net in	Net out
Office	710	168,577	T=1.12(x)+78.45	267	17	83	45	222	0	267	45	222
Total		168577		267			45	222		267	45	222

Source: Trip Generation, 9th Edition

Table 2: Trip Generation- Proposed Future Land Use

DAILY

Description	Land Use Code	Quantity	Daily Equation	Daily Trips	Internal %	Net Trips
Office	710	252,866	T= 32.2 (x)	8168	0.47%	8129
Condo Units	230	56	Ln(t)=0.87Ln(x)+2.46	388	10%	349
Total				8556		8478

AM

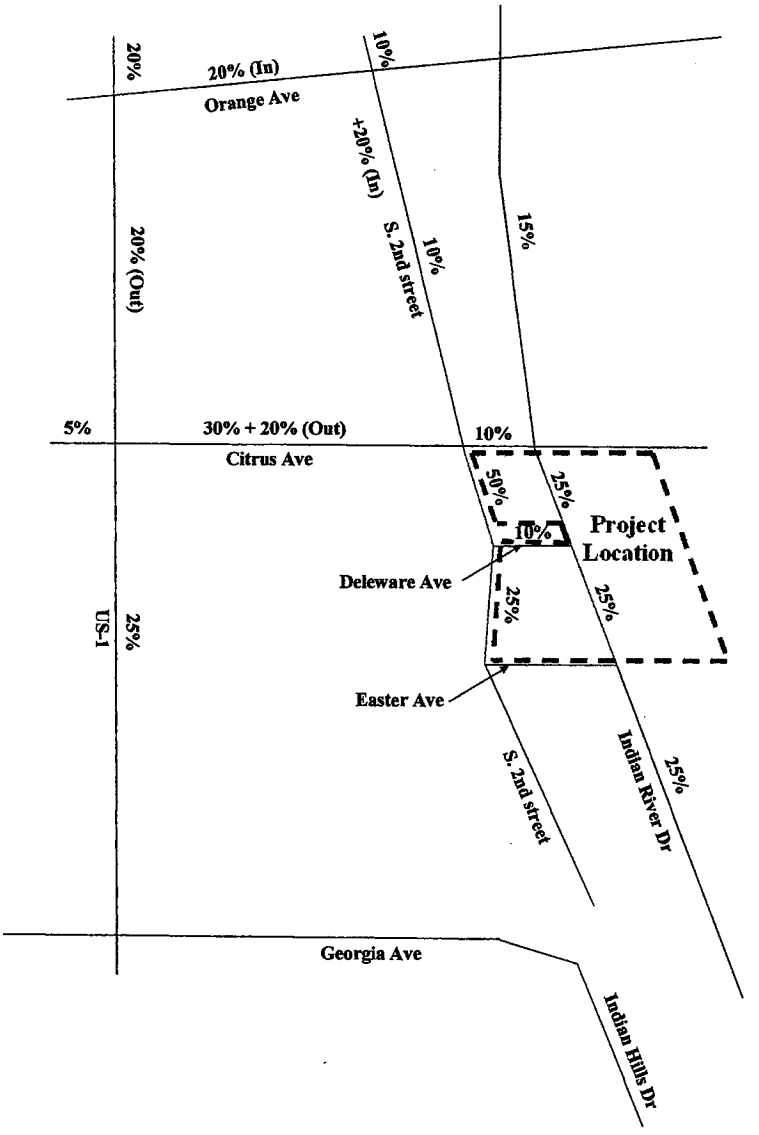
Description	Land Use Code	Quantity	AM Equation	AM Trips	% In	% Out	AM In	AM Out	Internal %	Net Trips	Net in	Net out
Office	710	252,866	Ln(t)=0.80+1.57	402	88	12	354	48	0.75%	399	351	48
Condo Units	230	56	Ln(t)=0.80+0.26	32	17	83	5	27	10%	29	5	24
Total				434			359	75		428	357	72

PM

Description	Land Use Code	Quantity	PM Equation	PM Trips	% In	% Out	PM In	PM Out	Internal %	Net Trips	Net in	Net out
Office	710	252,866	T=1.12(x)+78.45	362	17	83	61	301	1%	358	61	297
Condo Units	230	56	Ln(t)=0.82Ln(x)+0.32	37	67	33	25	12	10%	34	23	11
Total				399			86	313		392	84	308

Source: Trip Generation, 9th Edition

Table 3: Net Trips	Existing FLU	Proposed FLU	Difference
Daily	5445	8478	3033
AM Peak Hour Trips	291	428	137
PM Peak Hour Trips	267	392	125



NORTH
Not to Scale

LEGEND
General Project Boundary

FIGURE 2

Project Percent Assignment

Indian River Drive

TABLE 4: Project Percent Impact

Segment		To	Lanes	(1) Roadway Classification	>=3% or >= 1% Adjacent Link	(2) LOS D Capacity	Project Traffic	Project % of Capacity	Project Percent Assignment
Orange Ave	7th Street	US 1	2	State Interrupted Flow Class I	NO	17700	0	0.00%	0%
	US 1 (3)	2nd Street	4LD+	State Interrupted Flow Class I	NO	39800	303	0.76%	20%
	2nd Street	Indian River Drive	4LD	State Interrupted Flow Class I	NO	39800	0	0.00%	0%
Citrus Avenue	7th Street	US 1	4LD	State Interrupted Flow Class I	NO	39800	152	0.38%	5%
	(4)US 1	2nd Street	4LD	State Interrupted Flow Class I	Yes	39800	1213	3.05%	50%
	2nd Street	Indian River Drive	4LD	State Interrupted Flow Class I	NO	39800	303	0.76%	10%
US 1	Avenue A	Orange Avenue	4LD	State Interrupted Flow Class I	NO	39800	607	1.52%	20%
	(5)Orange Ave	Citrus Avenue	4LD	State Interrupted Flow Class I	NO	39800	303	0.76%	20%
	Citrus	Delaware	4LD	State Interrupted Flow Class I	NO	39800	758	1.91%	25%
2nd Street	North	Orange Avenue	2L	Non-State Interupted Flow ClassII	NO	13320	303	2.28%	10%
	(6)Orange Ave	Citrus Avenue	2L	Non-State Interupted Flow ClassII	Yes	13320	607	4.55%	30%
	Citrus Ave	Easter Avenue	2L	Non-State Interupted Flow ClassII	Yes	13320	1517	11.39%	50%
Indian River Drive	Avenue A	Orange	2L	State Interrupted Flow Class II	Yes	14800	455	3.07%	15%
	Orange Ave	Citrus Avenue	2L	State Interrupted Flow Class II	Yes	14800	455	3.07%	15%
	Citrus Ave	Easter Avenue	2L	State Interrupted Flow Class I	Yes	17700	758	4.28%	25%
	Easter Avenue	Savannah	2L	Uniterrupted Flow Highway	Yes	24200	758	3.13%	25%
	Savannah	South	2L	Uniterrupted Flow Highway	Yes	24200	607	2.51%	20%

1) St. Lucie County Comprehensive Plan Classification

2) FDOT 2012 Corresponding LOS

3) Inbound only

4) Inbound /outbound 30% plus 20% outbound

5) 20% Outbound Only

6) 10% plus 20% Inbound Only

Daily Trips In	1,517
Daily Trips Out	1,516
	1.010
	5
Total	3033

FUTURE TRAFFIC VOLUMES – 2020

Links where the project traffic has an impact of 3% or more were considered in the link analysis. Future traffic estimates were developed for those links. The 2013 and 2014 traffic volumes were taken from the TPO Traffic Counts and Level of Service Report Fall 2013 and 2014 to reflect existing conditions and grown to reflect the 2020 volumes before the project traffic was added. The growth rate is negative however, a 1% per year rate was used to project to 2020. The project traffic was then added to that volume to create the 2020 total traffic volumes.

Table 5 shows the link analysis for the total traffic conditions with the proposed land use plan amendment in place for 2020. As shown, all links will be operating at acceptable levels of service with the amendment in place.

Appendix A provides the TPO Traffic Counts and Level of Service Report 2013 and 2014 as well as the historic growth rate calculations.

FUTURE TRAFFIC – 2035 LINK ANALYSIS

The proposals to amend the comprehensive plan must demonstrate that the impacts created by the new project can be accommodated on the long range circulation plan that has been adopted for the existing future land use. To determine the impact created by the change in land use, the traffic volumes from the 2035 Long Range Transportation Plan were used.

Table 6 summarizes the 2035 volumes with the project traffic added. The total traffic volumes were compared to the capacity of the roadway under the 2035 conditions. As shown, all links will be operating at acceptable levels of service for the long range scenario with the amendment in place.

Appendix B contains the 2035 volumes and network data.

CONCLUSION

The proposed land use will result in an increase in trips of 3,033 daily trips.

On the links within the study area, there would be an increase in traffic associated with the land use plan amendment. However, the analysis has demonstrated that the roadway network will accommodate the change in land use.

Table 5 - Daily LINK ANALYSIS-2020

Segment	From	To	Lanes (both directions)	3% or Greater or 1% on Adjacent Link	2014 (1)	Years Grown	2020 + Growth	Existing FULA Trips	2020 Growth + Committed	LOS D Daily Capacity(FDOT Quality LOS 2012)	Project Volume	2020 Total Traffic	% Project of Capacity	Does Project Meet Concurrency?	Project Percent Assignment	LOS
Indian River Drive	Avenue A	Orange Ave	2	Yes	4680	6	4968	817	5785	14800	455	6240	3.07%	YES	15%	C
	Orange Ave	Citrus Ave	2	Yes	4524	6	4802	817	5619	14800	455	6074	3.07%	YES	15%	C
*	Citrus Ave	Easter Ave	2	Yes	4100	6	4352	1361	5713	17700	758	6472	4.28%	YES	25%	C
*	Easter Ave	Savannah Rd	2	Yes	4100	7	4396	1361	5757	24200	758	6515	3.13%	YES	25%	A
*	Savannah Rd	South	2	Yes	5369	7	5756	1089	6845	24200	607	7452	2.51%	YES	20%	B
Citrus Ave	US 1	2nd St	4LD	Yes	4020	6	4267	2723	6990	39800	1213	8203	3.05%	YES	50%	C
2nd Street	Orange Ave	Citrus Ave	2	Yes	2400	6	2548	1634	4181	13320	607	4788	4.55%	YES	30%	C
	Citrus Ave	Easter Ave	2	Yes	2400	6	2548	2723	5270	13320	1517	6787	11.39%	YES	50%	C

(1)St. Lucie County TPO 2014 ADT
*2014 Counts N/A on Indian River Drive south of Citrus Avenue; 2013 ADT used

	Net	Existing
Daily:	3033	5445
Growth	1.01	

Table 6 - Daily LINK ANALYSIS-2035

Segment	From	To	Lanes (both directions)	3% or Greater or 1% on Adjacent Link	2035	Years Grown	2035 AADT	Existing FULA Trips	2035 PM Growth	LOS D Daily Capacity(FDOT Quality LOS 2012)	Project Volume	2035 Total Traffic	% Project of Capacity	Does Project Meet Concurrency?	Project Percent Assignment	LOS
Indian River Drive	Avenue A	Orange Ave	2	Yes	9548	0	9548	0	9548	14800	455	10003	3.07%	YES	15%	D
	Orange Ave	Citrus Ave	2	Yes	9548	0	9548	0	9548	14800	455	10003	3.07%	YES	15%	D
	Citrus Ave	Easter Ave	2	Yes	16556	0	16556	0	16556	17700	758	17314	4.28%	YES	25%	D
	Easter Ave	Savannah Rd	2	Yes	16556	0	16556	0	16556	24200	758	17314	3.13%	YES	25%	D
	Savannah Rd	South	2	Yes	15506	0	15506	0	15506	24200	607	16113	2.51%	YES	20%	C
Citrus Ave	US 1	2nd St	4LD	Yes	5108	0	5108	0	5108	39800	1213	6321	3.05%	YES	50%	C
2nd Street (1)	Orange Ave	Citrus Ave	2	Yes	2814	0	2814	0	2814	13320	607	3421	4.55%	YES	30%	C
	Citrus Ave	Easter Ave	2	Yes	2814	0	2814	0	2814	13320	1517	4331	11.39%	YES	50%	C

2035 Traffic Volumes
Note: The Future Volumes assume EFLU volumes are included.
(1) 2035 Volume Estimated based on 2014 Volume grown to 2035 w/ 1% growth

	Net	Existing
Daily	3033	5445

APPENDIX A

2013 and 2014 Traffic Counts and Level of Service Report Fall Growth Rate Calculation

St. Lucie Transportation Planning Organization

Coco Vista Centre
466 SW Port St. Lucie Blvd, Suite 111
Port St. Lucie, FL 34953
772-462-1593 www.stlucietpo.org

Traffic Counts and Level of Service Report
Fall 2013

Roadway Name	Location	AADT	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
				Volume	LOS	V/C	Volume	LOS	V/C
GLADES CUT-OFF RD	RANGE LINE RD to 0.6 MILE EAST OF RESERVE BL...	1,800	1,120	135	B	0.321	153	B	0.364
GLADES CUT-OFF RD	RESERVE BLVD to COMMERCE CENTER DR	2,900	1,120	393	B	0.936	341	B	0.812
GLADES CUT-OFF RD	MARTIN COUNTY LINE to RANGE LINE RD	1,800	430	135	B	0.563	153	B	0.638
GLADES CUT-OFF RD	COMMERCE CENTER DR to MIDWAY RD	1,783	830	135	B	0.281	123	B	0.256
GLADES CUT-OFF RD	MIDWAY RD to JENKINS RD	6,000	830	401	B	0.835	358	B	0.746
GLADES CUT-OFF RD	JENKINS RD to SELVITZ RD	4,800	830	294	B	0.613	266	B	0.554
GRAHAM RD	KINGS HWY to JENKINS RD	2,800	460	219	B	0.811	175	B	0.648
GREEN RIVER PKWY	BERKSHIRE BLVD to MARIPOSA AVE	3,451	1,140	240	B	0.600	219	B	0.548
GREEN RIVER PKWY	MARIPOSA AVE to MELALEUCA	3,451	1,140	240	B	0.600	219	B	0.548
GREEN RIVER PKWY	MELALEUCA to WALTON RD	3,451	1,140	240	B	0.600	219	B	0.548
HARTMAN RD	OKEECHOBEE RD to PETERSON RD	4,800	790	302	B	0.657	297	B	0.646
HARTMAN RD	PETERSON RD to DELAWARE AVE	4,800	630	302	B	0.816	297	B	0.803
HARTMAN RD	DELAWARE AVE to ORANGE AVE	4,800	770	302	C	0.570	297	C	0.560
HEADER CANAL RD	OKEECHOBEE RD to ORANGE AVE	447	740	32	B	0.133	29	B	0.121
HILLMOOR DR	TIFFANY AVE to LENNARD RD	3,600	600	229	B	0.654	269	B	0.769
INDIAN RIVER DR	MARTIN COUNTY LINE to WALTON RD	5,400	1,140	326	B	0.815	357	B	0.893
INDIAN RIVER DR	WALTON RD to MIDWAY RD	3,800	1,140	297	B	0.743	298	B	0.745
INDIAN RIVER DR	MIDWAY RD to SAVANNAH RD	5,369	1,140	465	C	0.581	484	C	0.605
INDIAN RIVER DR	SAVANNAH RD to CITRUS AVE	4,100	1,140	366	B	0.915	383	B	0.958
INDIAN RIVER DR	CITRUS AVE to ORANGE AVE	4,423	730	263	C	0.526	301	C	0.602
INDIAN RIVER DR	ORANGE AVE to AVENUE A	4,639	790	271	B	0.589	264	B	0.574
INDIAN RIVER DR	AVENUE D to SEAWAY DR	5,876	600	343	D	0.572	404	D	0.673
INDIAN RIVER DR	AVENUE A to AVENUE D	5,876	630	343	B	0.927	404	C	0.685
INDRIO RD	3 MILES WEST OF I-95 to INTERSTATE 95 - WEST...	1,318	1,120	96	B	0.229	104	B	0.248
INDRIO RD	INTERSTATE 95 - WEST RAMPS to INTERSTATE 95 ...	1,318	3,130	96	B	0.057	104	B	0.062
INDRIO RD	INTERSTATE 95 - EAST RAMPS to KOBLEGARD RD	10,129	3,130	579	B	0.347	609	B	0.365
INDRIO RD	KOBLEGARD RD to JOHNSTON RD	10,129	640	579	C	0.965	609	D	0.952
INDRIO RD	JOHNSTON RD to EMERSON RD	10,129	800	579	C	0.772	609	C	0.812
INDRIO RD	EMERSON RD to KINGS HWY	9,745	840	587	C	0.743	494	C	0.625

* Volumes shown were adjusted using FDOT Seasonal Factors
* AADT = Annual Average Daily Traffic

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Traffic Counts and Level of Service Report
Fall 2014

Roadway Name	Location	AADT	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
				Volume	LOS	V/C	Volume	LOS	V/C
2ND ST	CITRUS AVE to ORANGE AVE	2,400	510	211	C	0.844	173	C	0.692
2ND ST	ORANGE AVE to AVENUE A	2,000	510	122	C	0.488	123	C	0.492
7TH ST	SUNRISE BLVD to GEORGIA AVE	584	510	41	C	0.164	41	C	0.164
7TH ST	GEORGIA AVE to DELAWARE AVE	1,209	710	72	C	0.206	85	C	0.243
7TH ST	DELAWARE AVE to CITRUS AVE	2,168	710	118	C	0.337	116	C	0.331
7TH ST	CITRUS AVE to ORANGE AVE	2,168	640	118	C	0.369	116	C	0.363
7TH ST	ORANGE AVE to AVENUE C	3,700	640	194	C	0.606	202	C	0.631
7TH ST	AVENUE C to AE BACKUS AVE	3,700	510	194	C	0.776	202	C	0.808
7TH ST	AE BACKUS AVE to AVENUE D	3,700	640	194	C	0.606	202	C	0.631
7TH ST	AVENUE D to AVENUE H	1,700	640	108	C	0.338	107	C	0.334
10TH ST	DELAWARE AVE to ORANGE AVE	150	510	11	C	0.044	14	C	0.056
10TH ST	ORANGE AVE to AVENUE C	150	510	11	C	0.044	14	C	0.056
10TH ST	AVENUE C to AVENUE D	150	510	11	C	0.044	14	C	0.056
13TH ST	VIRGINIA AVE to NEBRASKA AVE	6,937	640	405	D	0.633	367	D	0.573
13TH ST	NEBRASKA AVE to GEORGIA AVE	6,937	710	405	D	0.570	367	D	0.517
13TH ST	GEORGIA AVE to DELAWARE AVE	5,100	640	269	C	0.841	269	C	0.841
13TH ST	DELAWARE AVE to ORANGE AVE	4,400	640	315	C	0.984	308	C	0.963
13TH ST	ORANGE AVE to AVENUE B	3,400	640	190	C	0.594	191	C	0.597
13TH ST	AVENUE B to AVENUE D	3,400	640	190	C	0.594	191	C	0.597
13TH ST	AVENUE D to AVENUE H	3,600	640	204	C	0.638	194	C	0.606
13TH ST	AVENUE H to AVENUE I	3,600	510	204	C	0.816	194	C	0.776
13TH ST	AVENUE I to AVENUE O	3,600	510	204	C	0.816	194	C	0.776
13TH ST	AVENUE O to AVENUE Q	3,600	510	204	C	0.816	194	C	0.776
17TH ST	GEORGIA AVE to DELAWARE AVE	2,533	510	139	C	0.556	133	C	0.532
17TH ST	DELAWARE AVE to ORANGE AVE	6,500	710	305	C	0.871	297	C	0.849
17TH ST	ORANGE AVE to AVENUE D	3,367	640	168	C	0.525	166	C	0.519
17TH ST	AVENUE D to AVENUE Q	3,367	640	168	C	0.525	166	C	0.519
25TH ST	MIDWAY RD to BELL AVE	16,311	2,100	1,169	C	0.582	1,090	C	0.542

* Volumes shown were adjusted using FDOT Seasonal Factors
* AADT = Annual Average Daily Traffic

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Traffic Counts and Level of Service Report
Fall 2014

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				Volume	LOS	V/C	Volume	LOS	V/C
CAMEO BLVD	PORT ST LUICE BLVD to CALIFORNIA BLVD	4,600	640	299	C	0.934	286	C	0.894
CAMEO BLVD	CALIFORNIA BLVD to CROSSTOWN PKWY	7,633	710	528	D	0.744	448	D	0.631
CAMPBELL RD	PICOS RD to ORANGE AVE	600	510	44	C	0.176	39	C	0.156
CANE SLOUGH RD	US 1 to LENNARD RD	9,178	1,540	510	C	0.739	528	C	0.765
CITRUS AVE	7TH ST to US 1	900	680	129	C	0.391	129	C	0.391
CITRUS AVE	US 1 to 2ND ST	4,020	710	239	C	0.683	244	C	0.697
CITRUS AVE	2ND ST to INDIAN RIVER DR	3,050	510	166	C	0.664	172	C	0.688
COMMUNITY BLVD	WESTCLIFFE LN to TRADITION PKWY	3,300	1,470	233	C	0.353	209	C	0.317
COMMERCE CENTER DR	CROSSTOWN PKWY to ST LUCIE WEST BLVD	2,600	1,540	162	C	0.235	143	C	0.207
COMMERCE CENTER DR	ST LUCIE WEST BLVD to GLADES CUT-OFF RD	4,400	510	233	C	0.932	261	D	0.512
CORTEZ BLVD	35TH ST to 25TH ST	4,300	640	0	B	0.000	0	B	0.000
CORTEZ BLVD	25TH ST to SUNRISE BLVD	2,400	640	159	C	0.497	148	C	0.463
COUNTRY CLUB DR	ST LUCIE WEST BLVD to CALIFORNIA BLVD	6,000	1,540	336	C	0.487	318	C	0.461
CROSSTOWN PKWY	COMMERCE CENTER DR to I-95	10,167	2,850	589	C	0.212	559	C	0.201
CROSSTOWN PKWY	I-95 to CALIFORNIA BLVD	14,333	2,850	899	C	0.323	868	C	0.312
CROSSTOWN PKWY	CALIFORNIA BLVD to CASHMERE BLVD	12,667	2,850	692	C	0.249	620	C	0.223
CROSSTOWN PKWY	CASHMERE BLVD to CAMEO BLVD	14,500	2,850	743	C	0.267	677	C	0.244
CROSSTOWN PKWY	CAMEO BLVD to BAYSHORE BLVD	16,667	2,850	779	C	0.280	792	C	0.285
CROSSTOWN PKWY	BAYSHORE BLVD to AIROSO BLVD	10,500	2,850	550	C	0.198	533	C	0.192
CROSSTOWN PKWY	AIROSO BLVD to SANDIA DR	7,233	2,850	410	C	0.147	406	C	0.146
CROSSTOWN PKWY	SANDIA DR to MANTH LN	5,333	830	269	C	0.345	292	C	0.374
CROSSTOWN PKWY	MANTH LN to FLORESTA DR	4,567	510	259	D	0.508	242	C	0.968
CROSSROADS PKWY	OKEECHOBEE RD to KINGS HWY	1,300	710	81	C	0.231	74	C	0.211
DARWIN BLVD	BECKER RD to PAAR DR	5,080	590	462	C	0.825	407	C	0.727
DARWIN BLVD	PAAR DR to TULIP BLVD	5,080	830	462	C	0.592	407	C	0.522
DARWIN BLVD	TULIP BLVD to PORT ST LUCIE BLVD	13,000	830	653	C	0.837	667	C	0.855
DEL RIO BLVD	PORT ST LUCIE BLVD to CALIFORNIA BLVD	10,000	830	605	C	0.776	544	C	0.697
DEL RIO BLVD	CALIFORNIA BLVD to CASHMERE BLVD	3,567	750	202	C	0.285	218	C	0.307
DEL RIO BLVD	CASHMERE BLVD to CALIFORNIA BLVD	4,300	750	237	C	0.334	277	C	0.390

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				Volume	LOS	V/C	Volume	LOS	V/C
I-95	DRANGE AVE to INDRID RD	40,869	7,320	1,966	B	0.437	1,809	B	0.402
INDIAN RIVER DR	CITRUS AVE to DRANGE AVE	4,524	640	269	C	0.841	308	C	0.963
INDIAN RIVER DR	DRANGE AVE to AVENUE A	4,680	640	273	C	0.853	266	C	0.831
INDIAN RIVER DR	AVENUE D to SEAWAY DR	5,792	710	338	C	0.966	398	D	0.561
INDIAN RIVER DR	AVENUE A to AVENUE D	5,792	510	338	D	0.663	398	D	0.780
INDRID RD	PRIVATE RD to I-95 W RAMP	1,056	810	77	B	0.257	83	B	0.277
INDRID RD	I-95 W RAMP to I-95 E RAMP	1,056	3,240	77	B	0.043	83	B	0.046
INDRID RD	I-95 E RAMP to KDBLEGARD RD	9,713	3,240	555	B	0.307	584	B	0.323
INDRID RD	KOBLEGARD RD to JOHNSTDN RD	9,713	660	555	C	0.895	584	C	0.942
INDRID RD	JDHNSTDN RD to EMERSDN AVE	9,713	840	555	C	0.703	584	C	0.739
INDRID RD	EMERSDN RD to SEMINDLE RD	9,247	920	557	C	0.640	469	C	0.539
INDRID RD	SEMINDLE RD to KINGS HWY	9,247	790	557	D	0.705	469	D	0.594
INDRID RD	KINGS HWY to SLASH PINE TRL	5,525	710	377	D	0.531	357	D	0.503
INDRID RD	SLASH PINE TRL to US 1	5,525	830	377	C	0.483	357	C	0.458
INDRID RD	US 1 to DLD DIXIE HWY	900	640	61	C	0.191	76	C	0.238
JENNINGS RD	US 1 to LENNARD RD	3,833	1,890	308	C	0.171	221	C	0.123
JENKINS RD	EDWARDS RD to DKEECHDBEE RD	7,179	750	360	C	0.507	367	C	0.517
JENKINS RD	DKEECHDBEE RD to GRAHAM RD	9,848	830	592	C	0.759	521	C	0.668
JENKINS RD	GRAHAM RD to PETERSDN RD	9,848	590	592	F	1.003	521	C	0.930
JENKINS RD	PETERSDN RD to ORANGE AVE	9,848	830	592	C	0.759	521	C	0.668
JDHNSTDN RD	ANGLE RD to L20	2,100	800	151	B	0.539	122	B	0.436
JDHNSTDN RD	L20 to MEADDWDDD DR	1,800	1,020	123	B	0.342	116	B	0.322
JDHNSTDN RD	MEADDWDOD DR to DLD JDHNSTDN RD	1,800	800	123	B	0.439	116	B	0.414
JDHNSTDN RD	DLD JDHNSTDN RD to INDRID RD	1,800	800	123	B	0.439	116	B	0.414
JOHNSTON RD	INDRID RD to RUSSDS RD	6,674	800	428	C	0.751	432	C	0.758
JDHNSTDN RD	RUSSOS RD to INDIAN RIVER C.L.	6,674	800	428	C	0.751	432	C	0.758
JUANITA AVE	53RD ST to 25TH ST	2,200	640	127	C	0.397	135	C	0.422
JUANITA AVE	25TH ST to US 1	3,300	640	223	C	0.697	202	C	0.631
KEEN RD	ANGLE RD to JUANITA AVE	2,566	590	220	C	0.393	225	C	0.402

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				Volume	LOS	V/C	Volume	LOS	V/C
ORANGE AVE	KINGS HWY to I-95	18,209	0	784	C	0.390	790	C	0.393
ORANGE AVE	I-95 to JENKINS RD	13,335	0	916	C	0.456	861	C	0.428
ORANGE AVE	JENKINS RD to HARTMAN RD	12,597	0	678	C	0.337	631	C	0.314
ORANGE AVE	HARTMAN RD to ANGLE RD	12,597	0	678	C	0.337	631	C	0.314
ORANGE AVE	ANGLE RD to 25TH ST	12,251	1,710	965	D	0.564	1,123	D	0.657
ORANGE AVE	25TH ST to 17TH ST	13,066	1,630	683	C	0.936	749	D	0.460
ORANGE AVE	17TH ST to 13TH ST	13,066	1,710	683	C	0.887	749	C	0.973
ORANGE AVE	13TH ST to 10TH ST	13,066	350	683	D	0.962	749	E	0.986
ORANGE AVE	10TH ST to 7TH ST	7,816	280	395	D	0.705	454	D	0.811
ORANGE AVE	7TH ST to US 1	6,904	280	440	D	0.786	391	D	0.698
ORANGE AVE	US 1 to 2ND ST	3,109	250	198	C	0.792	193	C	0.772
ORANGE AVE	2ND ST to INDIAN RIVER DR	3,109	320	198	C	0.619	193	C	0.603
PARR DR	PORT ST LUCIE BLVD to DARWIN BLVD	927	590	69	C	0.123	66	C	0.118
PARR DR	DARWIN BLVD to TULIP BLVD	1,800	510	121	C	0.484	110	C	0.440
PARR DR	SAVONA BLVD to PORT ST LUCIE BLVD	927	590	69	C	0.123	66	C	0.118
PARR DR	ROSSER BLVD to SAVONA BLVD	927	590	69	C	0.123	66	C	0.118
PEACOCK BLVD	CALIFORNIA BLVD to CASHMERE BLVD	3,300	590	280	C	0.500	236	C	0.421
PEACOCK BLVD	UNIVERSITY BLVD to CALIFORNIA BLVD	7,867	830	609	C	0.781	502	C	0.644
PEACOCK BLVD	ST LUCIE WEST BLVD to UNIVERSITY BLVD	18,400	1,890	0	B	0.000	0	B	0.000
PETERSON RD	BENT CREEK DR to HARTMAN RD	1,400	510	102	C	0.408	132	C	0.528
PICOS RD	CAMPBELL RD to KINGS HWY	1,400	510	99	C	0.396	93	C	0.372
PORT ST LUCIE BLVD	MARTIN C.L. to BECKER RD	9,300	830	0	B	0.000	0	B	0.000
PORT ST LUCIE BLVD	BECKER RD to PAAR DR	9,300	830	0	B	0.000	0	B	0.000
PORT ST LUCIE BLVD	PAAR DR to TULIP BLVD	9,300	590	0	B	0.000	0	B	0.000
PORT ST LUCIE BLVD	TULIP BLVD to DARWIN BLVD	9,300	830	0	B	0.000	0	B	0.000
PORT ST LUCIE BLVD	DARWIN BLVD to GATLIN BLVD	29,000	2,720	1,703	C	0.643	1,507	C	0.569
PORT ST LUCIE BLVD	GATLIN BLVD to DEL RIO BLVD	38,500	2,850	2,395	C	0.862	2,128	C	0.765
PORT ST LUCIE BLVD	DEL RIO BLVD to CAMEO BLVD	48,065	2,850	3,214	F	1.128	2,917	F	1.024
PORT ST LUCIE BLVD	CAMEO BLVD to FLORIDA'S TURNPIKE	48,065	2,720	3,214	F	1.182	2,917	F	1.072

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				Volume	LOS	V/C	Volume	LOS	V/C
US 1	S OF SAEGER AVE to EASY ST	30,989	3,170	1,515	C	0.490	1,372	C	0.444
US 1	EASY ST to MIDWAY RD	29,394	3,170	1,370	C	0.443	1,332	C	0.431
US 1	MIDWAY RD to WEATHERBEE RD	29,824	2,100	1,401	C	0.697	1,418	C	0.705
US 1	WEATHERBEE RD to FARMER'S MARKET RD	29,824	2,000	1,401	C	0.734	1,418	C	0.742
US 1	FARMER'S MARKET RD to EDWARDS RD	29,824	2,000	1,401	C	0.734	1,418	C	0.742
US 1	EDWARDS RD to SAVANNAH RD	30,490	2,000	1,397	C	0.731	1,370	C	0.717
US 1	GARDENIA AVE to VIRGINIA AVE	30,490	2,000	1,397	C	0.731	1,370	C	0.717
US 1	SAVANNAH RD to GARDENIA AVE	30,490	2,000	1,397	C	0.731	1,370	C	0.717
US 1	VIRGINIA AVE to OHIO AVE	27,870	2,000	1,342	C	0.703	1,352	C	0.708
US 1	OHIO AVE to GEORGIA AVE	27,870	1,630	1,342	D	0.823	1,352	D	0.829
US 1	GEORGIA AVE to DELAWARE AVE	24,720	1,630	1,275	D	0.782	1,218	D	0.747
US 1	DELAWARE AVE to CITRUS AVE	25,675	1,630	1,301	D	0.798	1,267	D	0.777
US 1	CITRUS AVE to ORANGE AVE	24,421	1,630	1,216	D	0.746	1,096	D	0.672
US 1	ORANGE AVE to AVENUE A	25,675	1,630	1,301	D	0.798	1,267	D	0.777
US 1	AVENUE A to AE BACKUS AVE	25,675	1,630	1,301	D	0.798	1,267	D	0.777
US 1	AE BACKUS AVE to AVENUE D	25,675	1,630	1,301	D	0.798	1,267	D	0.777
US 1	AVENUE D to SR A1A SOUTH	25,675	1,630	1,301	D	0.798	1,267	D	0.777
US 1	SR A1A SOUTH to AVENUE H	28,000	2,100	1,496	C	0.744	1,378	C	0.686
US 1	AVENUE H to OLD DIXIE HWY	28,000	2,000	1,496	C	0.783	1,378	C	0.721
US 1	OLD DIXIE HWY to AVENUE O	23,190	2,000	1,610	C	0.843	1,258	C	0.659
US 1	AVENUE O to SR A1A NORTH	23,190	2,100	1,610	C	0.801	1,258	C	0.626
US 1	SR A1A NORTH to JUANITA AVE	15,177	2,100	911	C	0.453	729	C	0.363
US 1	JUANITA AVE to ST LUCIE BLVD	15,177	2,100	911	C	0.453	729	C	0.363
US 1	ST LUCIE BLVD to 25TH ST	15,795	2,100	940	C	0.468	902	C	0.449
US 1	25TH ST to INDRIO RD	15,795	2,100	940	C	0.468	902	C	0.449
US 1	INDRIO RD to TURNPIKE FEEDER RD	18,319	2,100	997	C	0.496	991	C	0.493
US 1	TURNPIKE FEEDER RD to INDIAN RIVER C.L.	18,319	2,100	997	C	0.496	991	C	0.493
VETERANS MEMORIAL PKWY	PORT ST LUCIE BLVD to LYNGATE DR	16,500	1,890	1,080	C	0.600	1,027	C	0.571
VETERANS MEMORIAL PKWY	LYNGATE DR to US 1	13,500	1,890	804	C	0.447	780	C	0.433

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Historical Growth Calculation

Roadway	From	To	2008	2013	Growth
Indian River Drive	Savannah	Citrus	4720	4100	0.87
	Citrus	Orange	5333	4423	0.83
	Orange	Ave A	5102	4639	0.91
Orange Ave	25th St	US 1	7514	7175	0.95
US 1	Delaware	Citrus	31419	27451	0.87
	Citrus	Orange	29995	22239	0.74
Citrus	US 1	2nd St	5607	3237	0.58
Total			91698	75277	0.82
					-1.04

APPENDIX B
2035 Traffic Volumes and Roadway Network Data

TABLE 1

Generalized **Annual Average Daily** Volumes for Florida's **Urbanized Areas**

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	*	16,800	17,700	**
4	Divided	*	37,900	39,800	**
6	Divided	*	58,400	59,900	**
8	Divided	*	78,800	80,100	**

Class II (35 mph or slower posted speed limit)

Lanes	Median	B	C	D	E
2	Undivided	*	7,300	14,800	15,600
4	Divided	*	14,500	32,400	33,800
6	Divided	*	23,300	50,000	50,900
8	Divided	*	32,000	67,300	68,100

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 MODE[2]

(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%	*	2,900	7,600	19,700
50-84%	2,100	6,700	19,700	>19,700
85-100%	9,300	19,700	>19,700	**

PEDESTRIAN MODE[2]

(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%	*	*	2,800	9,500
50-84%	*	1,600	8,700	15,800
85-100%	3,800	10,700	17,400	>19,700

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

Core Urbanized

Lanes	B	C	D	E
4	47,400	64,000	77,900	84,600
6	69,900	95,200	116,600	130,600
8	92,500	126,400	154,300	176,600
10	115,100	159,700	194,500	222,700
12	162,400	216,700	256,600	268,900

Urbanized

Lanes	B	C	D	E
4	45,800	61,500	74,400	79,900
6	68,100	93,000	111,800	123,300
8	91,500	123,500	148,700	166,800
10	114,800	156,000	187,100	210,300

Freeway Adjustments

Auxiliary Lanes Present in Both Directions	Ramp Metering
+ 20,000	+ 5%

UNINTERRUPTED FLOW HIGHWAYS

Lanes	Median	B	C	D	E
2	Undivided	8,600	17,000	24,200	33,300
4	Divided	36,700	51,800	65,600	72,600
6	Divided	55,000	77,700	98,300	108,800

Uninterrupted Flow Highway Adjustments

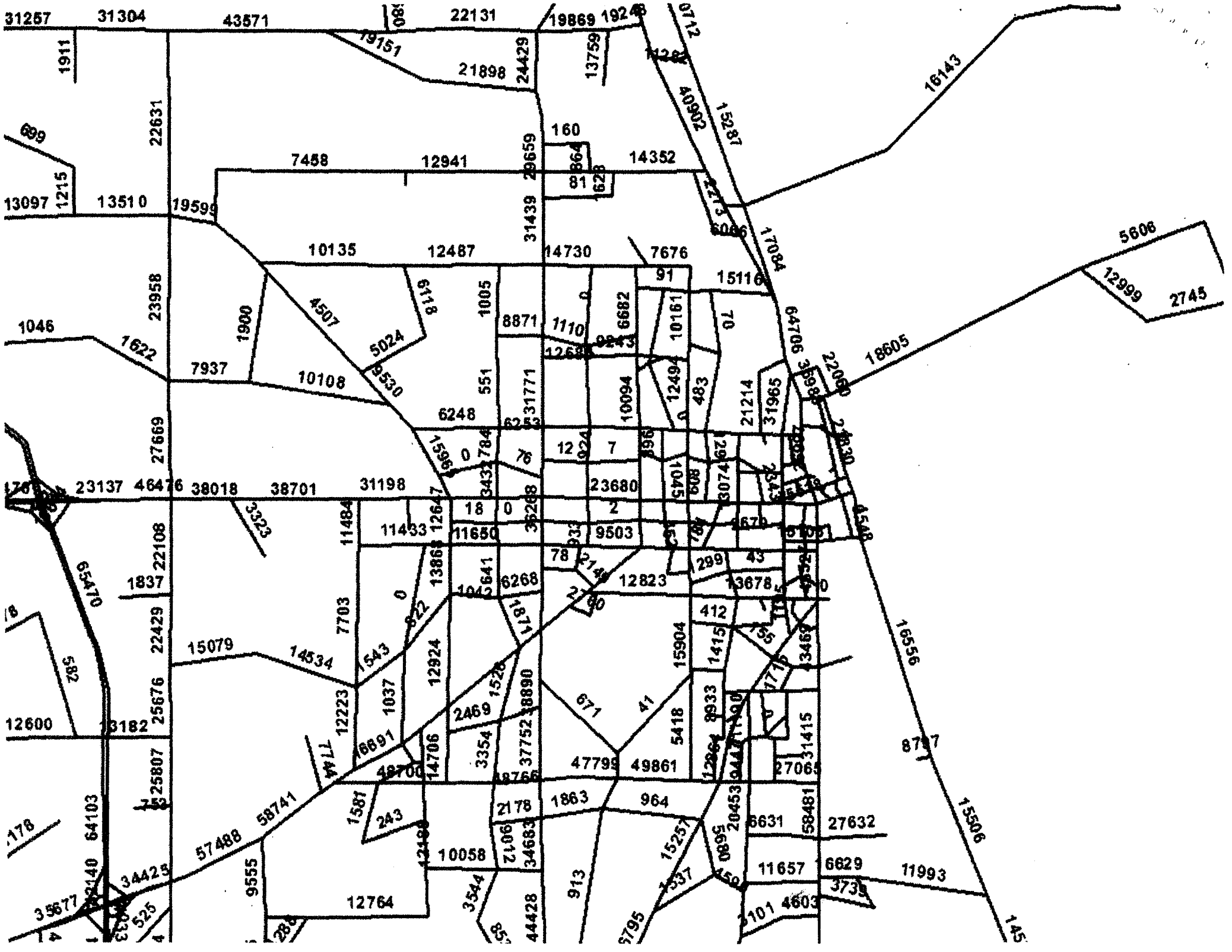
Lanes	Median	Exclusive left lanes	Adjustment factors
2	Divided	Yes	+5%
Multi	Undivided	Yes	-5%
Multi	Undivided	No	-25%

[1]Values shown are presented as two-way annual average daily 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.

[2] Level 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.

[3] Buses 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.

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