

**Appendix 3: Signal Timing, Background Growth and Adjustment Factor**

# MIAMI-DADE ATMS SIGNAL DATA SHEET

Signal Asset ID: 2010  
 Signal Location: SR 826 & US 1  
 Analysis Period: AM / PM (Circle One)  
 Local Time of Day Schedule: 4 Plan  
 Local Time of Day Function: - Setting (Blank or Number#)

Signal Settings: \_\_\_\_\_  
 (i.e. Blank, Plan #1 - Phase Bank 1, Max 1)

Cycle Length: 169.5 seconds  
 Offset: 77 seconds

PHASE:	Φ1	Φ2	Φ3	Φ4
WALK	0	4	0	4
DON'TWALK	0	20	0	47
MIN INITIAL	5	7	5	7
VEH EXT	3	1	3	25
GREEN	22	44	26	49
YELLOW	4.8	4.8	4.8	4.8
RED	2	2.4	2	2.9
SPLIT	28.8	51.2	32.8	56.7

# MIAMI-DADE ATMS SIGNAL DATA SHEET

Signal Asset ID: 2016  
 Signal Location: SR 826 & US 1  
 Analysis Period: AM / (PM) (Circle One)  
 Local Time of Day Schedule: 11 Plan  
 Local Time of Day Function: - Setting (Blank or Number#)

Signal Settings: -  
 (i.e. Blank, Plan #1 - Phase Bank 1, Max 1)

Cycle Length: 169.5 seconds  
 Offset: 77 seconds

PHASE:	Φ1	Φ2	Φ3	Φ4
WALK	0	4	0	4
DON'TWALK	0	38	0	47
MIN INITIAL	5	7	5	7
VEH EXT	3	1	3	2.5
GREEN	25	43	26	47
YELLOW	4.8	4.8	4.8	4.8
RED	2	2.4	2	2.9
SPLIT	31.8	50.2	32.8	54.7

**TOD Schedule Report  
for 2010: SR- 826&US 1**

Print Date:  
9/24/2019

Print Time:  
3:13 PM

<u>Asset</u>	<u>Intersection</u>	<u>TOD Schedule</u>	<u>Op Mode</u>	<u>Plan #</u>	<u>Cycle</u>	<u>Offset</u>	<u>TOD Setting</u>	<u>Active PhaseBank</u>	<u>Active Maximum</u>
2010	SR- 826&US 1	DOW-3		N/A	0	0	N/A	0	Max 0
<b>Splits</b>									
<u>PH 1</u>	<u>PH 2</u>	<u>PH 3</u>	<u>PH 4</u>	<u>PH 5</u>	<u>PH 6</u>	<u>PH 7</u>	<u>PH 8</u>		
NBL	SBT	EBL	WBT	SBL	NBT	WBL	EBT		
0	0	0	0	0	0	0	0		
									

Active Phase Bank: Phase Bank 1

Phase	<u>Walk</u>			<u>Don't Walk</u>			<u>Min Initial</u>			<u>Veh Ext</u>			<u>Max Limit</u>			<u>Max 2</u>			<u>Yellow</u>	<u>Red</u>
	Phase Bank																			
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3		
1 NBL	0	0	0	0	0	0	5	5	5	3	3	3	24	24	24	27	27	27	4.8	2
2 SBT	4	4	4	38	38	38	7	7	7	1	1	1	50	50	50	50	50	50	4.8	2.4
3 EBL	0	0	0	0	0	0	5	5	5	3	3	3	25	25	25	34	34	34	4.8	2
4 WBT	4	4	4	47	47	47	7	7	7	2.5	2.5	2.5	55	55	55	55	55	55	4.8	2.9
5 SBL	0	0	0	0	0	0	5	5	5	3	3	3	24	24	24	27	27	27	4.8	2
6 NBT	4	4	4	38	38	38	7	7	7	1	1	1	50	50	50	50	50	50	4.8	2.4
7 WBL	0	0	0	0	0	0	5	5	5	3	3	3	25	25	25	34	34	34	4.8	2
8 EBT	4	4	4	47	47	47	7	7	7	2.5	2.5	2.5	55	55	55	55	55	55	4.8	2.9

Last In Service Date: unknown

<b>Permitted Phases</b>	
	<u>12345678</u>
Default	12345678
External Permit 0	-----
External Permit 1	-----
External Permit 2	-----

## TOD Schedule Report

for 2010: SR- 826&US 1

Print Date:  
9/24/2019

Print Time:  
3:13 PM

Current TOD Schedule	Plan	Cycle	Green Time								Ring Offset	Offset
			1 NBL	2 SBL	3 EBL	4 WBT	5 SBL	6 NBT	7 WBL	8 EBT		
	1	140	13	57	14	27	13	57	14	27	0	56
	2	125	15	32	17	32	15	32	17	32	0	107
	3	170	25	43	26	47	25	43	26	47	0	77
	4	170	22	44	26	49	22	44	26	49	0	77
	5	130	14	32	17	38	14	32	17	38	0	18
	6	150	19	48	19	35	19	48	19	35	0	60
	7	150	19	48	19	35	19	48	19	35	0	60
	8	105	10	32	13	21	10	32	13	21	0	60
	9	150	24	33	25	39	24	33	25	39	0	71
	10	125	16	32	17	31	16	32	17	31	0	107
	11	170	25	43	26	47	25	43	26	47	0	77
	12	115	12	32	14	28	12	32	14	28	0	79
	13	130	14	32	20	35	14	32	20	35	0	54
	14	130	14	32	17	38	14	32	17	38	0	62
	15	150	15	45	22	39	15	45	22	39	0	81
	16	115	10	34	12	30	10	34	12	30	0	56
	22	145	14	53	14	35	14	53	14	35	0	60
	23	140	14	48	14	35	14	48	14	35	0	60
	25	120	13	33	12	32	14	32	19	26	0	52
	26	135	23	32	17	33	22	33	23	28	0	5
	27	160	23	42	17	48	27	38	28	38	0	34
	28	100	13	31	12	14	12	32	13	14	0	83

Local TOD Schedule		
Time	Plan	DOW
0000	23	M T W Th F
0000	23	Su S
0100	22	Su S
0100	22	M T W Th F
0500	7	M T W Th F
0530	4	M T W Th F
0600	1	Su S
1000	11	Su S
1000	3	M T W Th F
1500	11	M T W Th F
2100	6	M T W Th F
2100	6	Su S
2300	23	M T W Th F

Current Time of Day Function			
Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	-----	SuM T W ThF S

Local Time of Day Function			
Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	-----	SuM T W ThF S

* Settings
Blank - FREE - Phase Bank 1, Max 1
Blank - Plan - Phase Bank 1, Max 2
1 - Phase Bank 2, Max 1
2 - Phase Bank 2, Max 2
3 - Phase Bank 3, Max 1
4 - Phase Bank 3, Max 2
5 - EXTERNAL PERMIT 1
6 - EXTERNAL PERMIT 2
7 - X-PED OMIT
8 - TBA

**TOD Schedule Report  
for 2010: SR- 826&US 1**

Print Date:  
**9/24/2019**

Print Time:  
**3:13 PM**

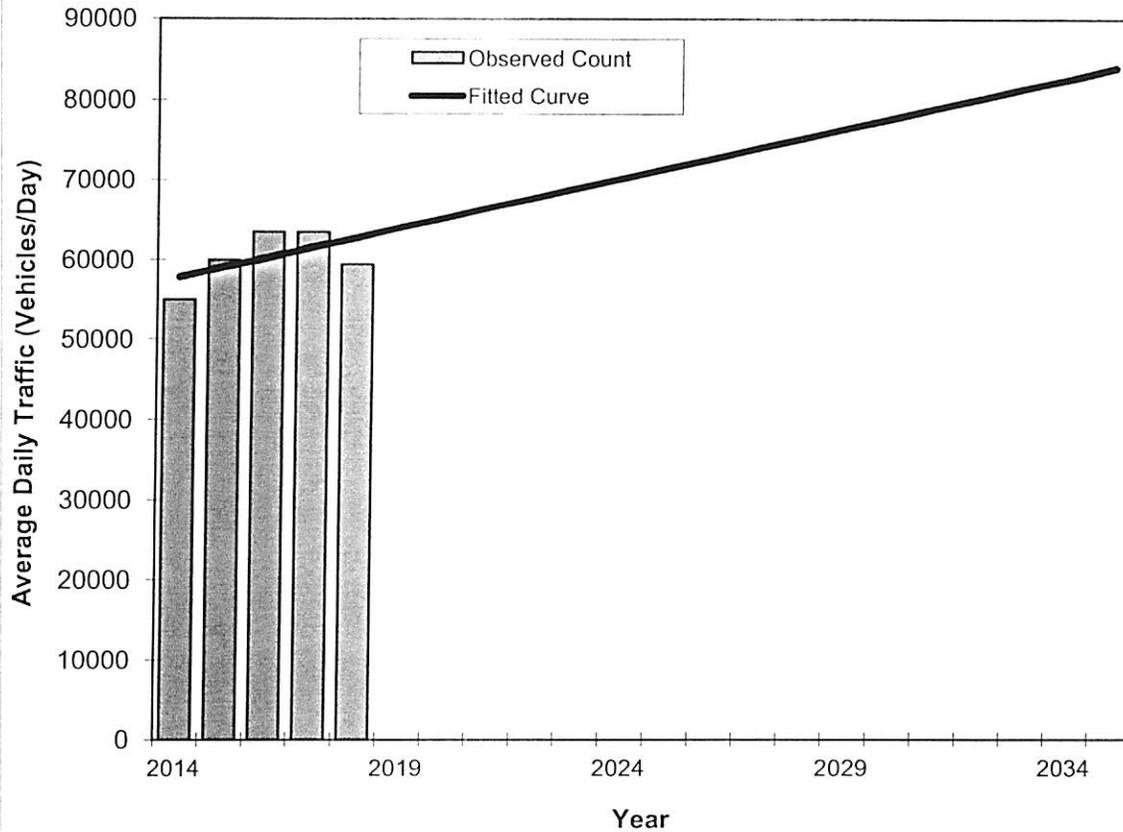
<b>No Calendar Defined/Enabled</b>
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### Traffic Trends - V03.a

SR 5 / US 1 -- 300' S NE 163 ST/SUNNY ISLES CSWY

FIN#	1234
Location	1

County:	Miami-Dade (87)
Station #:	5219
Highway:	SR 5 / US 1



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2014	55000	57800
2015	60000	59100
2016	63500	60300
2017	63500	61600
2018	59500	62800
<b>2020 Opening Year Trend</b>		
2020	N/A	65300
<b>2021 Mid-Year Trend</b>		
2021	N/A	66600
<b>2022 Design Year Trend</b>		
2022	N/A	67800
<b>TRANPLAN Forecasts/Trends</b>		

** Annual Trend Increase:	1,250
Trend R-squared:	31.69%
Trend Annual Historic Growth Rate:	2.16%
Trend Growth Rate (2018 to Design Year):	1.99%
Printed:	14-Feb-20
<b>Straight Line Growth Option</b>	

\*Axle-Adjusted

FLORIDA DEPARTMENT OF TRANSPORTATION  
 TRANSPORTATION STATISTICS OFFICE  
 2018 HISTORICAL AADT REPORT

COUNTY: 87 - MIAMI-DADE

ROUTE: 5219 - SR 5/US-1, 300' S NE 163 ST/SUNNY ISLES CSWY

YEAR	AADT		DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2018	59500	C	N 29500	S 30000	9.00	54.30	2.40
2017	63500	C	N 31500	S 32000	9.00	55.00	2.30
2016	63500	C	N 31000	S 32500	9.00	54.50	2.00
2015	60000	C	N 29500	S 30500	9.00	54.70	2.00
2014	55000	C	N 25500	S 29500	9.00	54.50	4.90
2013	54000	C	N 25000	S 29000	9.00	52.40	3.50
2012	64000	C	N 31000	S 33000	9.00	55.70	4.80
2011	61500	C	N 30500	S 31000	9.00	55.10	3.90
2010	60000	C	N 30000	S 30000	8.98	54.08	3.90
2009	60500	C	N 29500	S 31000	8.99	53.24	3.40
2008	55000	C	N 27000	S 28000	9.09	55.75	4.70
2007	60500	C	N 29000	S 31500	8.01	54.34	5.90
2006	58000	C	N 29000	S 29000	7.97	54.22	4.20
2005	57500	C	N 28500	S 29000	8.80	53.80	7.70
2004	50000	C	N 24000	S 26000	9.00	53.30	7.70
2003	44500	C	N 22000	S 22500	8.80	53.40	2.70

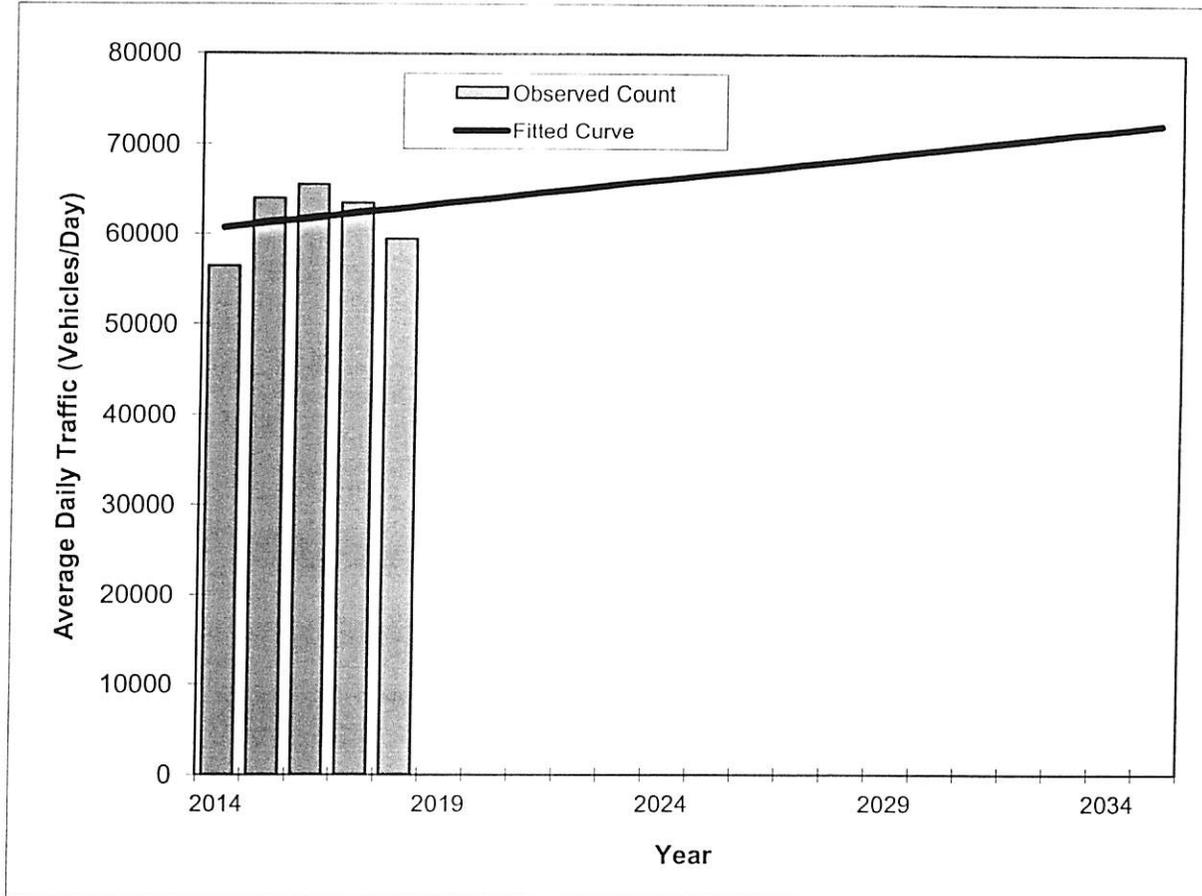
AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE  
 S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE  
 V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN  
 \*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

## Traffic Trends - V03.a

SR 826/NE 163 ST -- 1700' E SR 5/US 1

FIN#	1234
Location	1

County:	Miami-Dade (87)
Station #:	0556
Highway:	SR 826/NE 163 ST



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2014	56500	60700
2015	64000	61300
2016	65500	61800
2017	63500	62400
2018	59500	62900
<b>2020 Opening Year Trend</b>		
2020	N/A	64000
<b>2021 Mid-Year Trend</b>		
2021	N/A	64600
<b>2022 Design Year Trend</b>		
2022	N/A	65100
<b>TRANPLAN Forecasts/Trends</b>		

** Annual Trend Increase:	550
Trend R-squared:	5.52%
Trend Annual Historic Growth Rate:	0.91%
Trend Growth Rate (2018 to Design Year):	0.87%
Printed:	14-Feb-20
<b>Straight Line Growth Option</b>	

\*Axle-Adjusted

FLORIDA DEPARTMENT OF TRANSPORTATION  
 TRANSPORTATION STATISTICS OFFICE  
 2018 HISTORICAL AADT REPORT

COUNTY: 87 - MIAMI-DADE

ROUTE: 0556 - SR 826/NE 163 ST, 1700' E SR 5/US-1

EAR	AADT		DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
018	59500 C	E	29500	W 30000	9.00	54.30	5.10
017	63500 C	E	31000	W 32500	9.00	55.00	3.30
016	65500 C	E	32000	W 33500	9.00	54.50	3.10
015	64000 C	E	31500	W 32500	9.00	54.70	6.00
014	56500 C	E	27500	W 29000	9.00	54.50	6.00
013	60000 C	E	29000	W 31000	9.00	52.40	6.00
012	61000 C	E	29500	W 31500	9.00	55.70	3.40
011	63500 C	E	34000	W 29500	9.00	55.10	4.90
010	55000 C	E	26500	W 28500	8.98	54.08	4.90
009	57000 C	E	28500	W 28500	8.99	53.24	2.70
008	53000 C	E	26500	W 26500	9.09	55.75	2.70
007	42500 C	E	21000	W 21500	8.01	54.34	3.40
006	66500 C	E	35500	W 31000	7.97	54.22	2.10
005	61500 C	E	29000	W 32500	8.80	53.80	14.70
004	67500 C	E	32500	W 35000	9.00	53.30	14.70
003	45000 C	E	23000	W 22000	8.80	53.40	3.90

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 STANDARD, PRIOR YEARS ARE K30 VALUES

2018 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: COUNTY  
 CATEGORY: 8700 MIAMI-DADE NORTH

MOCF: 0.98  
 PSCF

WEEK	DATES	SF	PSCF
1	01/01/2018 - 01/06/2018	1.03	1.05
2	01/07/2018 - 01/13/2018	1.03	1.05
3	01/14/2018 - 01/20/2018	1.04	1.06
4	01/21/2018 - 01/27/2018	1.02	1.04
5	01/28/2018 - 02/03/2018	1.01	1.03
* 6	02/04/2018 - 02/10/2018	0.99	1.01
* 7	02/11/2018 - 02/17/2018	0.98	1.00
* 8	02/18/2018 - 02/24/2018	0.98	1.00
* 9	02/25/2018 - 03/03/2018	0.98	1.00
*10	03/04/2018 - 03/10/2018	0.97	0.99
*11	03/11/2018 - 03/17/2018	0.97	0.99
*12	03/18/2018 - 03/24/2018	0.97	0.99
*13	03/25/2018 - 03/31/2018	0.97	0.99
*14	04/01/2018 - 04/07/2018	0.97	0.99
*15	04/08/2018 - 04/14/2018	0.97	0.99
*16	04/15/2018 - 04/21/2018	0.97	0.99
*17	04/22/2018 - 04/28/2018	0.98	1.00
*18	04/29/2018 - 05/05/2018	0.99	1.01
19	05/06/2018 - 05/12/2018	1.00	1.02
20	05/13/2018 - 05/19/2018	1.01	1.03
21	05/20/2018 - 05/26/2018	1.01	1.03
22	05/27/2018 - 06/02/2018	1.01	1.03
23	06/03/2018 - 06/09/2018	1.01	1.03
24	06/10/2018 - 06/16/2018	1.01	1.03
25	06/17/2018 - 06/23/2018	1.01	1.03
26	06/24/2018 - 06/30/2018	1.02	1.04
27	07/01/2018 - 07/07/2018	1.02	1.04
28	07/08/2018 - 07/14/2018	1.02	1.04
29	07/15/2018 - 07/21/2018	1.02	1.04
30	07/22/2018 - 07/28/2018	1.02	1.04
31	07/29/2018 - 08/04/2018	1.01	1.03
32	08/05/2018 - 08/11/2018	1.01	1.03
33	08/12/2018 - 08/18/2018	1.00	1.02
34	08/19/2018 - 08/25/2018	1.00	1.02
35	08/26/2018 - 09/01/2018	1.00	1.02
36	09/02/2018 - 09/08/2018	1.01	1.03
37	09/09/2018 - 09/15/2018	1.01	1.03
38	09/16/2018 - 09/22/2018	1.00	1.02
39	09/23/2018 - 09/29/2018	1.00	1.02
40	09/30/2018 - 10/06/2018	1.00	1.02
41	10/07/2018 - 10/13/2018	0.99	1.01
42	10/14/2018 - 10/20/2018	0.99	1.01
43	10/21/2018 - 10/27/2018	1.00	1.02
44	10/28/2018 - 11/03/2018	1.00	1.02
45	11/04/2018 - 11/10/2018	1.01	1.03
46	11/11/2018 - 11/17/2018	1.01	1.03
47	11/18/2018 - 11/24/2018	1.02	1.04
48	11/25/2018 - 12/01/2018	1.02	1.04
49	12/02/2018 - 12/08/2018	1.02	1.04
50	12/09/2018 - 12/15/2018	1.03	1.05
51	12/16/2018 - 12/22/2018	1.03	1.05
52	12/23/2018 - 12/29/2018	1.03	1.05
53	12/30/2018 - 12/31/2018	1.04	1.06

\* PEAK SEASON

28-FEB-2019 15:24:23

830UPD

6\_8700\_PKSEASON.TXT

2019 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL  
 CATEGORY: 8700 MIAMI-DADE NORTH

MOCF: 0.97

WEEK	DATES	SF	PSCF
1	01/01/2019 - 01/05/2019	1.03	1.06
2	01/06/2019 - 01/12/2019	1.02	1.05
3	01/13/2019 - 01/19/2019	1.01	1.04
4	01/20/2019 - 01/26/2019	1.00	1.03
* 5	01/27/2019 - 02/02/2019	0.98	1.01
* 6	02/03/2019 - 02/09/2019	0.97	1.00
* 7	02/10/2019 - 02/16/2019	0.96	0.99
* 8	02/17/2019 - 02/23/2019	0.96	0.99
* 9	02/24/2019 - 03/02/2019	0.96	0.99
*10	03/03/2019 - 03/09/2019	0.96	0.99
*11	03/10/2019 - 03/16/2019	0.97	1.00
*12	03/17/2019 - 03/23/2019	0.97	1.00
*13	03/24/2019 - 03/30/2019	0.97	1.00
*14	03/31/2019 - 04/06/2019	0.97	1.00
*15	04/07/2019 - 04/13/2019	0.98	1.01
*16	04/14/2019 - 04/20/2019	0.98	1.01
*17	04/21/2019 - 04/27/2019	0.98	1.01
18	04/28/2019 - 05/04/2019	0.99	1.02
19	05/05/2019 - 05/11/2019	0.99	1.02
20	05/12/2019 - 05/18/2019	1.00	1.03
21	05/19/2019 - 05/25/2019	1.00	1.03
22	05/26/2019 - 06/01/2019	1.01	1.04
23	06/02/2019 - 06/08/2019	1.01	1.04
24	06/09/2019 - 06/15/2019	1.02	1.05
25	06/16/2019 - 06/22/2019	1.02	1.05
26	06/23/2019 - 06/29/2019	1.02	1.05
27	06/30/2019 - 07/06/2019	1.02	1.05
28	07/07/2019 - 07/13/2019	1.03	1.06
29	07/14/2019 - 07/20/2019	1.03	1.06
30	07/21/2019 - 07/27/2019	1.03	1.06
31	07/28/2019 - 08/03/2019	1.02	1.05
32	08/04/2019 - 08/10/2019	1.02	1.05
33	08/11/2019 - 08/17/2019	1.02	1.05
34	08/18/2019 - 08/24/2019	1.02	1.05
35	08/25/2019 - 08/31/2019	1.02	1.05
36	09/01/2019 - 09/07/2019	1.03	1.06
37	09/08/2019 - 09/14/2019	1.03	1.06
38	09/15/2019 - 09/21/2019	1.03	1.06
39	09/22/2019 - 09/28/2019	1.02	1.05
40	09/29/2019 - 10/05/2019	1.01	1.04
41	10/06/2019 - 10/12/2019	1.00	1.03
42	10/13/2019 - 10/19/2019	0.99	1.02
43	10/20/2019 - 10/26/2019	1.00	1.03
44	10/27/2019 - 11/02/2019	1.00	1.03
45	11/03/2019 - 11/09/2019	1.01	1.04
46	11/10/2019 - 11/16/2019	1.01	1.04
47	11/17/2019 - 11/23/2019	1.02	1.05
48	11/24/2019 - 11/30/2019	1.02	1.05
49	12/01/2019 - 12/07/2019	1.02	1.05
50	12/08/2019 - 12/14/2019	1.03	1.06
51	12/15/2019 - 12/21/2019	1.03	1.06
52	12/22/2019 - 12/28/2019	1.02	1.05
53	12/29/2019 - 12/31/2019	1.01	1.04

\* PEAK SEASON

14-FEB-2020 15:39:30

830UPD

6\_8700\_PKSEASON.TXT

**Appendix 4: Traffic Counts (TMC's) & Committed Dvelopment**

TABLE: A6

**INTERSECTION APPROACH VOLUMES - AM PEAK HOUR**

Project Name: Soleste NoMi Beach

INTERSECTION NO.	1	2	3	4	5	6	7	8	9	10	11	12	13					
	INTERSECTION NAME	APPROACH	MOVEMENT	AM PEAK HR COUNT	DATE OF COUNT	PHF	PSCF	AM PEAK SEASONALLY ADJUSTED (EXISTING)	BACKGROUND GROWTH @ 1.99% FOR PROJECT BUILD-OUT OF 2022	COMMITTED TRIPS	PROPOSED FUTURE TRAFFIC W/O PROJECT (2022)	SITE TRAFFIC (PROJECT NET TRIPS) (VPH)	EXISTING USE DRIVEWAY TRIPS & FUTURE PASS-BY TRIPS	PROPOSED FUTURE TRAFFIC W/ PROJECT (VPH) (2022)				
1	Biscayne Boulevard (SR 5 / US 1) & NE 163 Street (SR 826)	SOUTHBOUND	SBR	433	Tuesday, May 14, 2019	0.990	1.03	446	18	167	631	7	0	638				
			SBT	1,393			1.03	1,435	58	0	1,492	25	0	1,517				
			SBL	438			1.03	451	18	8	477	7	0	484				
			SBU	8			1.03	8	0	0	9	0	0	9				
			TOTAL	2,272				2,340	94	175	2,809	39	0	2,648				
		WESTBOUND	WBR	553			1.03	570	23	7	599	0	0	599				
			WBT	971			1.03	1,000	40	166	1,206	19	0	1,225				
			WBL	397			1.03	409	16	30	455	0	0	455				
			TOTAL	1,921				1,979	80	203	2,261	19	0	2,280				
		NORTHBOUND	NBR	464			1.03	478	19	14	511	0	0	511				
			NBT	980			1.03	1,009	41	34	1,084	15	0	1,099				
			NBL	224			1.03	231	9	16	256	0	0	256				
			TOTAL	1,668				1,718	69	64	1,851	15	0	1,866				
		EASTBOUND	EBR	280			1.03	288	12	0	300	0	0	300				
			EBT	1,142			1.03	1,176	47	105	1,329	0	0	1,329				
			EBL	218			1.03	225	9	134	368	16	0	384				
			TOTAL	1,640				1,689	68	239	1,996	16	0	2,012				
		<b>TOTAL</b>					<b>7,501</b>			<b>7,726</b>	<b>311</b>	<b>681</b>	<b>8,718</b>	<b>89</b>	<b>0</b>	<b>8,807</b>		
		2	Biscayne Boulevard (SR 5 / US 1) & NE 165 Terrace	SOUTHBOUND			SBR	0	Wednesday, February 19, 2020	0.951	1.00	0	0	0	0	0	0	0
							SBT	2,431			1.00	2,431	98	237	2,766	57	0	2,823
SBL	0				1.00	0	0	0			0	0	0	0				
TOTAL	2,431					2,431	98	237			2,766	57	0	2,823				
WESTBOUND	WBR			54	1.00	54	2	0			56	70	3	129				
	WBT			0	1.00	0	0	0			0	0	0	0				
	WBL			0	1.00	0	0	0			0	0	0	0				
NORTHBOUND	TOTAL			54		54	2	0			56	70	3	129				
	NBR			32	1.00	32	1	0			33	31	3	67				
	NBT			1,713	1.00	1,713	69	146			1,928	0	0	1,928				
	NBL			0	1.00	0	0	0			0	0	0	0				
EASTBOUND	TOTAL			1,745		1,745	70	146			1,961	31	3	1,995				
	EBR			0	1.00	0	0	0			0	0	0	0				
	EBT			0	1.00	0	0	0			0	0	0	0				
	EBL			0	1.00	0	0	0			0	0	0	0				
<b>TOTAL</b>				<b>0</b>			<b>0</b>	<b>0</b>			<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>			
<b>TOTAL</b>				<b>4,230</b>			<b>4,230</b>	<b>170</b>			<b>383</b>	<b>4,783</b>	<b>158</b>	<b>6</b>	<b>4,947</b>			

TABLE: A6

**INTERSECTION APPROACH VOLUMES - AM PEAK HOUR**

Project Name: Soleste NoMi Beach

INTERSECTION NO.	1	2	3	4	5	6	7	8	9	10	11	12	13				
	INTERSECTION NAME	APPROACH	MOVEMENT	AM PEAK HR COUNT	DATE OF COUNT	PHF	PSCF	AM PEAK SEASONALLY ADJUSTED (EXISTING)	BACKGROUND GROWTH @ 1.99% FOR PROJECT BUILD-OUT OF 2022	COMMITTED TRIPS	PROPOSED FUTURE TRAFFIC W/O PROJECT (2022)	SITE TRAFFIC (PROJECT NET TRIPS) (VPH)	EXISTING USE DRIVEWAY TRIPS & FUTURE PASS-BY TRIPS	PROPOSED FUTURE TRAFFIC W/ PROJECT (VPH) (2022)			
3	Biscayne Boulevard (SR 5 / US 1) & Median Opening (E Greynolds Park D/W)	SOUTHBOUND	SBR	0	Wednesday, February 19, 2020	0.953	1.00	0	0	0	0	0	0	0	0		
			SBT	2,398			1.00	2,398	96	229	2,723	18	0	2,741			
			SBL	2			1.00	2	0	0	2	0	0	2			
			SBU	2			1.00	2	0	0	2	0	0	2			
			TOTAL	2,402				2,402	97	229	2,728	18	0	2,746			
		WESTBOUND	WBR	7			1.00	7	0	0	7	0	0	7			
			WBT	0			1.00	0	0	0	0	0	0	0			
			WBL	0			1.00	0	0	0	0	0	0	0			
			TOTAL	7				7	0	0	7	0	0	7			
		NORTHBOUND	NBR	2			1.00	2	0	0	2	0	0	2			
			NBT	1,732			1.00	1,732	70	138	1,940	31	0	1,971			
			NBL	0			1.00	0	0	0	0	0	0	0			
			NBU	33			1.00	33	1	8	42	39	0	81			
		TOTAL	1,767				1,767	71	146	1,984	70	0	2,054				
		EASTBOUND	EBR	0			1.00	0	0	0	0	0	0	0			
			EBT	0			1.00	0	0	0	0	0	0	0			
			EBL	0			1.00	0	0	0	0	0	0	0			
			TOTAL	0				0	0	0	0	0	0	0			
		<b>TOTAL</b>					<b>4,176</b>			<b>4,176</b>	<b>168</b>	<b>375</b>	<b>4,719</b>	<b>88</b>	<b>0</b>	<b>4,807</b>	

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 Peak Season Conversion Factor (PSCF) obtained from FDOT
- 8 Seasonally Adjusted TMC = Count \* PSCF (Existing Condition).
- 9 A 1.99 percent background growth was utilized with a project build-out of 2022.
- 10 Committed Development Trips
- 11 Proposed Traffic w/o Project = Seasonally Adjusted TMC + Background + Committed Project Trips.
- 12 Project Trips.
- 13 Total Traffic = Net Traffic w/o Project + Project Trips (Proposed Condition with Project)

TABLE: A7

**INTERSECTION APPROACH VOLUMES - PM PEAK HOUR**

Project Name: Soleste NoMi Beach

INTERSECTION NO.	1	2	3	4	5	6	7	8	9	10	11	12	13					
	INTERSECTION NAME	APPROACH	MOVEMENT	PM PEAK HR COUNT	DATE OF COUNT	PHF	PSCF	PM PEAK SEASONALLY ADJUSTED (EXISTING)	BACKGROUND GROWTH @ 1.99% FOR PROJECT BUILD-OUT OF 2022	COMMITTED TRIPS	PROPOSED FUTURE TRAFFIC W/O PROJECT (2022)	SITE TRAFFIC (PROJECT NET TRIPS) (VPH)	EXISTING USE DRIVEWAY TRIPS & FUTURE PASS-BY TRIPS	PROPOSED FUTURE TRAFFIC W/ PROJECT (VPH) (2022)				
1	Biscayne Boulevard (SR 5 / US 1) & NE 163 Street (SR 826)	SOUTHBOUND	SBR	433	Tuesday, May 14, 2019	0.970	1.03	446	18	69	533	3	0	536				
			SBT	1,298			1.03	1,337	54	0	1,391	11	0	1,402				
			SBL	459			1.03	473	19	22	514	3	0	517				
			SBU	14			1.03	14	1	0	15	0	0	15				
			<b>TOTAL</b>	<b>2,204</b>				<b>2,270</b>	<b>91</b>	<b>91</b>	<b>2,452</b>	<b>17</b>	<b>0</b>	<b>2,469</b>				
		WESTBOUND	WBR	781			1.03	804	32	16	853	0	0	853				
			WBT	1,258			1.03	1,296	52	149	1,497	8	0	1,505				
			WBL	463			1.03	477	19	87	583	0	0	583				
			<b>TOTAL</b>	<b>2,502</b>				<b>2,577</b>	<b>104</b>	<b>252</b>	<b>2,933</b>	<b>8</b>	<b>0</b>	<b>2,941</b>				
		NORTHBOUND	NBR	588			1.03	606	24	22	652	0	0	652				
			NBT	1,357			1.03	1,398	56	54	1,508	12	0	1,520				
			NBL	460			1.03	474	19	4	497	0	0	497				
			<b>TOTAL</b>	<b>2,405</b>				<b>2,477</b>	<b>100</b>	<b>80</b>	<b>2,657</b>	<b>12</b>	<b>0</b>	<b>2,669</b>				
		EASTBOUND	EBR	409			1.03	421	17	0	438	0	0	438				
			EBT	1,032			1.03	1,063	43	95	1,201	0	0	1,201				
			EBL	304			1.03	313	13	132	458	13	0	471				
			<b>TOTAL</b>	<b>1,745</b>				<b>1,797</b>	<b>72</b>	<b>227</b>	<b>2,097</b>	<b>13</b>	<b>0</b>	<b>2,110</b>				
			<b>TOTAL</b>				<b>8,856</b>				<b>9,122</b>	<b>367</b>	<b>650</b>	<b>10,138</b>	<b>50</b>	<b>0</b>	<b>10,188</b>	
		2	Biscayne Boulevard (SR 5 / US 1) & NE 165 Terrace	SOUTHBOUND			SBR	0	Wednesday, February 19, 2020	0.917	1.00	0	0	0	0	0	0	0
							SBT	2,147			1.00	2,147	86	188	2,421	32	0	2,453
SBL	0				1.00	0	0	0			0	0	0	0				
<b>TOTAL</b>	<b>2,147</b>					<b>2,147</b>	<b>86</b>	<b>188</b>			<b>2,421</b>	<b>32</b>	<b>0</b>	<b>2,453</b>				
WESTBOUND	WBR			68	1.00	68	3	0			71	31	24	126				
	WBT			0	1.00	0	0	0			0	0	0	0				
	WBL			0	1.00	0	0	0			0	0	0	0				
	<b>TOTAL</b>			<b>68</b>		<b>68</b>	<b>3</b>	<b>0</b>			<b>71</b>	<b>31</b>	<b>24</b>	<b>126</b>				
NORTHBOUND	NBR			64	1.00	64	3	0			67	25	49	141				
	NBT			2,239	1.00	2,239	90	213			2,542	0	0	2,542				
	NBL			0	1.00	0	0	0			0	0	0	0				
	<b>TOTAL</b>			<b>2,303</b>		<b>2,303</b>	<b>93</b>	<b>213</b>			<b>2,609</b>	<b>25</b>	<b>49</b>	<b>2,683</b>				
EASTBOUND	EBR			0	1.00	0	0	0			0	0	0	0				
	EBT			0	1.00	0	0	0			0	0	0	0				
	EBL			0	1.00	0	0	0			0	0	0	0				
	<b>TOTAL</b>			<b>0</b>		<b>0</b>	<b>0</b>	<b>0</b>			<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>				
	<b>TOTAL</b>				<b>4,518</b>						<b>4,518</b>	<b>182</b>	<b>401</b>	<b>5,101</b>	<b>88</b>	<b>73</b>	<b>5,262</b>	

TABLE: A7

**INTERSECTION APPROACH VOLUMES - PM PEAK HOUR**

Project Name: Soleste NoMi Beach

INTERSECTION NO.	1	2	3	4	5	6	7	8	9	10	11	12	13				
	INTERSECTION NAME	APPROACH	MOVEMENT	PM PEAK HR COUNT	DATE OF COUNT	PHF	PSCF	PM PEAK SEASONALLY ADJUSTED (EXISTING)	BACKGROUND GROWTH @ 1.99% FOR PROJECT BUILD-OUT OF 2022	COMMITTED TRIPS	PROPOSED FUTURE TRAFFIC W/O PROJECT (2022)	SITE TRAFFIC (PROJECT NET TRIPS) (VPH)	EXISTING USE DRIVEWAY TRIPS & FUTURE PASS-BY TRIPS	PROPOSED FUTURE TRAFFIC W/ PROJECT (VPH) (2022)			
3	Biscayne Boulevard (SR 5 / US 1) & Median Opening (E Greynolds Park D/W)	SOUTHBOUND	SBR	0	Wednesday, February 19, 2020	0.912	1.00	0	0	0	0	0	0	0	0		
			SBT	2,072			1.00	2,072	83	166	2,321	15	0	2,336			
			SBL	2			1.00	2	0	0	2	0	0	2			
			SBU	2			1.00	2	0	0	2	0	0	2			
			<b>TOTAL</b>	<b>2,076</b>				<b>2,076</b>	<b>83</b>	<b>166</b>	<b>2,325</b>	<b>15</b>	<b>0</b>	<b>2,340</b>			
		WESTBOUND	WBR	7			1.00	7	0	0	7	0	0	7			
			WBT	0			1.00	0	0	0	0	0	0	0			
			WBL	0			1.00	0	0	0	0	0	0	0			
			<b>TOTAL</b>	<b>7</b>				<b>7</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>7</b>			
		NORTHBOUND	NBR	4			1.00	4	0	0	4	0	0	4			
			NBT	2,225			1.00	2,225	89	191	2,505	14	0	2,519			
			NBL	0			1.00	0	0	0	0	0	0	0			
			NBU	75			1.00	75	3	22	100	17	0	117			
			<b>TOTAL</b>	<b>2,304</b>				<b>2,304</b>	<b>93</b>	<b>213</b>	<b>2,610</b>	<b>31</b>	<b>0</b>	<b>2,641</b>			
		EASTBOUND	EBR	0			1.00	0	0	0	0	0	0	0			
			EBT	0			1.00	0	0	0	0	0	0	0			
			EBL	0			1.00	0	0	0	0	0	0	0			
			<b>TOTAL</b>	<b>0</b>				<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>			
		<b>TOTAL</b>					<b>4,387</b>			<b>4,387</b>	<b>176</b>	<b>379</b>	<b>4,942</b>	<b>46</b>	<b>0</b>	<b>4,988</b>	

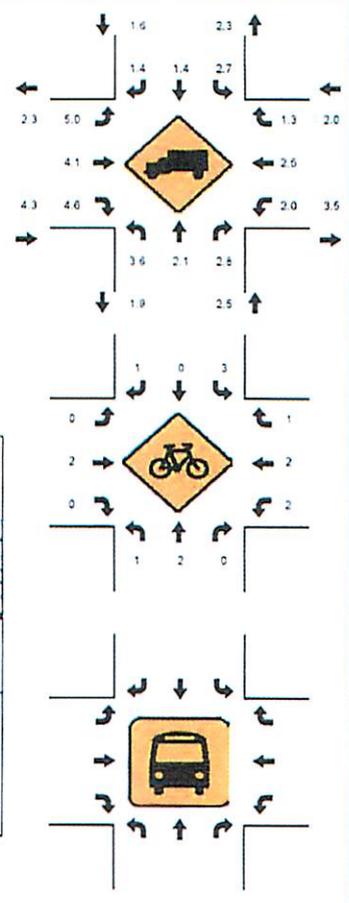
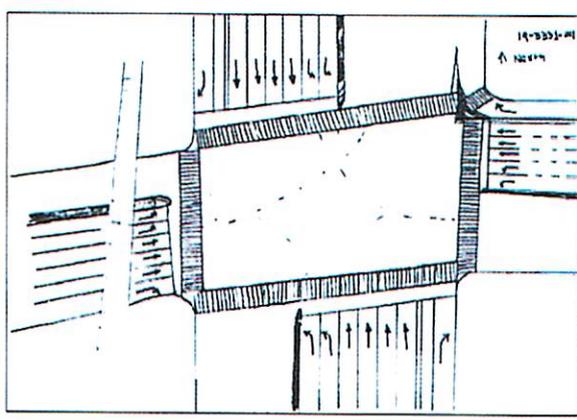
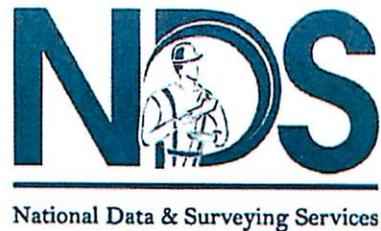
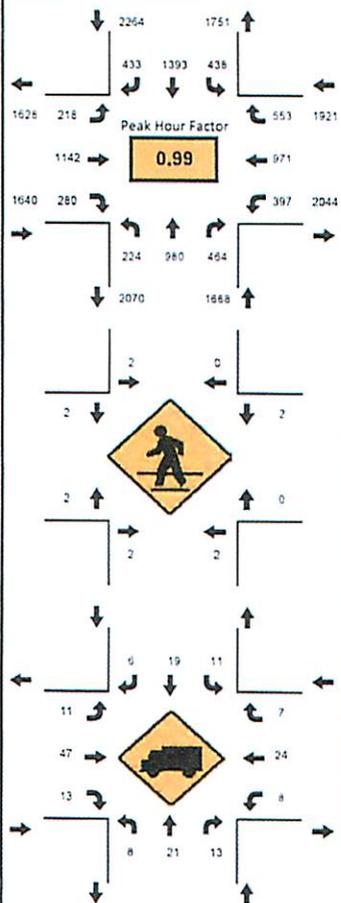
Notes:

- 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 Peak Season Conversion Factor (PSCF) obtained from FDOT
- 8 Seasonally Adjusted TMC = Count \* PSCF (Existing Condition).
- 9 A 1.99 percent background growth was utilized with a project build-out of 2022.
- 10 Committed Development Trips
- 11 Proposed Traffic w/o Project = Seasonally Adjusted TMC + Background + Committed Project Trips.
- 12 Project Trips.
- 13 Total Traffic = Net Traffic w/o Project + Project Trips (Proposed Condition with Project)

LOCATION: Biscayne Blvd/US 1 & NE 163rd St/SR 826  
 CITY/STATE: North Miami Beach, FL

PROJECT ID: 19-03331-001  
 DATE: 05/14/2019

Peak-Hour: 08:00 AM - 09:00 AM  
 Peak 15-Minute: 08:15 AM - 08:30 AM



15-Min Count Period Beginning At	Biscayne Blvd/US 1 Northbound					Biscayne Blvd/US 1 Southbound					NE 163rd St/SR 826 Eastbound					NE 163rd St/SR 826 Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
07:00 AM	47	146	73	0		93	369	77	3		36	258	64	0		125	193	80	1		1565	6235
07:15 AM	57	170	113	0		80	243	69	1		37	246	73	0		91	204	72	0		1456	6505
07:30 AM	70	176	87	5		97	269	71	1		45	274	78	0		95	230	120	2		1620	6949
07:45 AM	47	253	88	0		98	256	78	0		39	275	66	0		75	185	134	0		1594	7228
08:00 AM	47	187	83	1		110	351	111	3		68	298	89	0		97	236	154	0		1835	7493
08:15 AM	42	215	102	1		117	314	117	2		47	353	64	0		98	293	135	0		1900	5658
08:30 AM	87	310	134	2		111	324	105	2		40	245	57	0		100	249	133	0		1899	3758
08:45 AM	43	268	145	1		92	404	100	1		63	246	70	0		102	193	131	0		1859	1859
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
All Vehicles	348	1240	580	8		468	1616	468	12		272	1412	356	0		408	1172	616	0		8976	
Heavy Trucks	12	32	20			20	24	8			16	68	20			16	36	8			280	
Pedestrians		4						8				8					4				24	
Bicycles	4	4	0			4	0	4			0	8	0			8	8	4			44	
Railroad Stopped Buses																						

# 1 AM



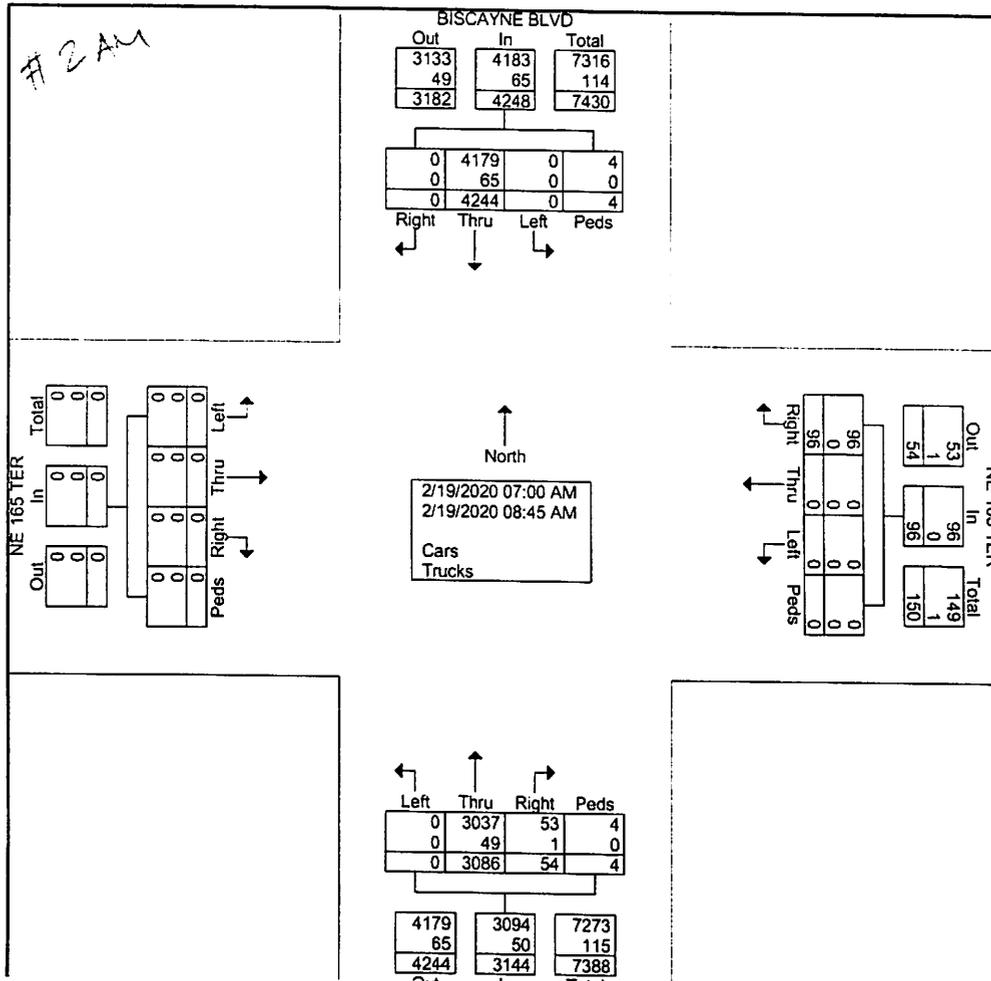
# Richard Garcia & Associates, Inc.

8065 NW 98 Street  
 Hialeah Gardens, FL 33016  
 Phone: 305-362-0677  
 Fax: 305-675-6474

File Name : Biscayne Blvd\_NE 165 Ter\_AM  
 Site Code : 00000000  
 Start Date : 2/19/2020  
 Page No : 1

## Groups Printed- Cars - Trucks

Start Time	BISCAYNE BLVD Southbound					NE 165 TER Westbound					BISCAYNE BLVD Northbound					NE 165 TER 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	424	0	2	426	10	0	0	0	10	8	249	0	0	257	0	0	0	0	0	0
07:15 AM	0	470	0	0	470	12	0	0	0	12	7	351	0	1	359	0	0	0	0	0	0
07:30 AM	0	444	0	0	444	11	0	0	0	11	2	391	0	2	395	0	0	0	0	0	0
07:45 AM	0	475	0	0	475	9	0	0	0	9	5	382	0	0	387	0	0	0	0	0	0
<b>Total</b>	0	1813	0	2	1815	42	0	0	0	42	22	1373	0	3	1398	0	0	0	0	0	0
08:00 AM	0	627	0	1	628	13	0	0	0	13	6	419	0	0	425	0	0	0	0	0	0
08:15 AM	0	635	0	1	636	17	0	0	0	17	9	450	0	1	460	0	0	0	0	0	0
08:30 AM	0	540	0	0	540	10	0	0	0	10	3	412	0	0	415	0	0	0	0	0	0
08:45 AM	0	629	0	0	629	14	0	0	0	14	14	432	0	0	446	0	0	0	0	0	0
<b>Total</b>	0	2431	0	2	2433	54	0	0	0	54	32	1713	0	1	1746	0	0	0	0	0	0
<b>Grand Total</b>	0	4244	0	4	4248	96	0	0	0	96	54	3086	0	4	3144	0	0	0	0	0	0
Apprch %	0	99.9	0	0.1		100	0	0	0		1.7	98.2	0	0.1		0	0	0	0		
Total %	0	56.7	0	0.1	56.7	1.3	0	0	0	1.3	0.7	41.2	0	0.1	42	0	0	0	0		
Cars	0	4179	0	4	4183	96	0	0	0	96	53	3037	0	4	3094	0	0	0	0	0	7373
% Cars	0	98.5	0	100	98.5	100	0	0	0	100	98.1	98.4	0	100	98.4	0	0	0	0	0	98.5
Trucks	0	65	0	0	65	0	0	0	0	0	1	49	0	0	50	0	0	0	0	0	115
% Trucks	0	1.5	0	0	1.5	0	0	0	0	0	1.9	1.6	0	0	1.6	0	0	0	0	0	1.5



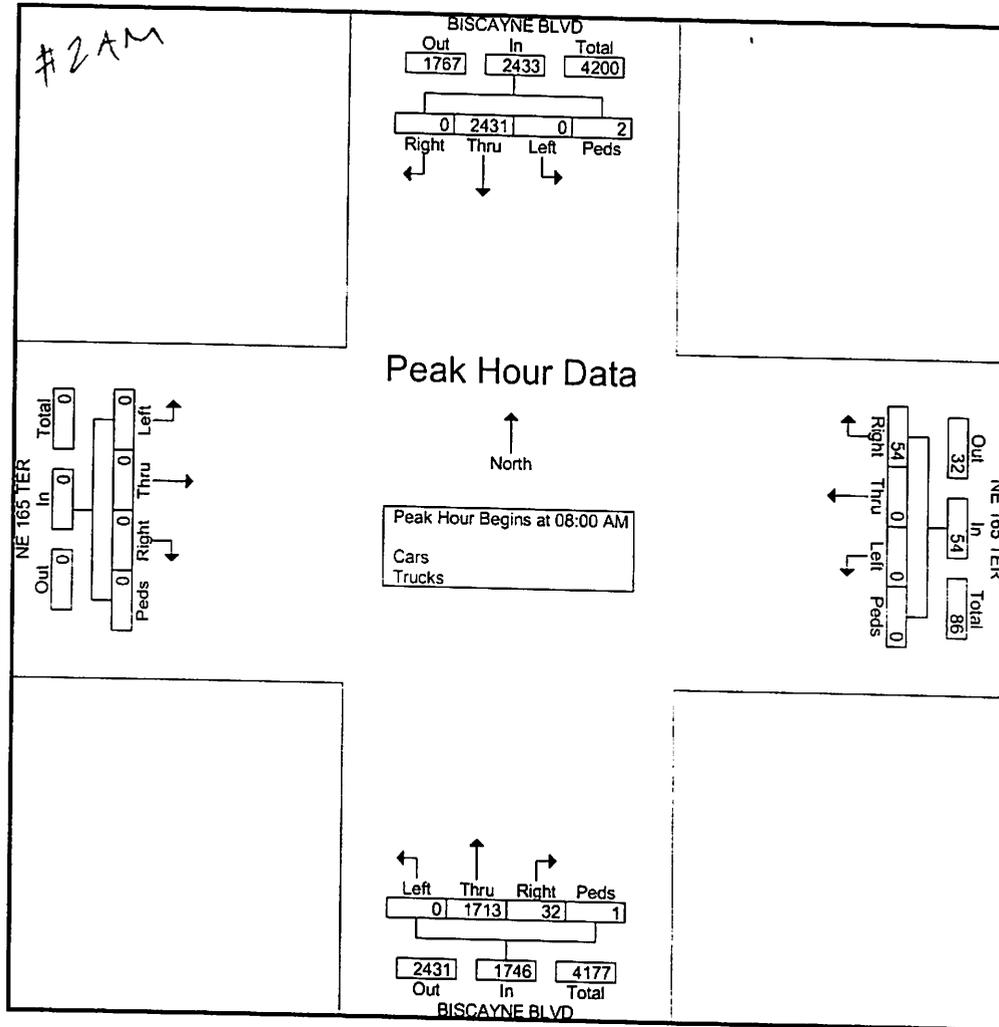


# Richard Garcia & Associates, Inc.

8065 NW 98 Street  
 Hialeah Gardens, FL 33016  
 Phone: 305-362-0677  
 Fax: 305-675-6474

File Name : Biscayne Blvd\_NE 165 Ter\_AM  
 Site Code : 00000000  
 Start Date : 2/19/2020  
 Page No : 2

Start Time	BISCAYNE BLVD Southbound					NE 165 TER Westbound					BISCAYNE BLVD Northbound					NE 165 TER 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	
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	627	0	1	628	13	0	0	0	13	6	419	0	0	425	0	0	0	0	0	0
08:15 AM	0	635	0	1	636	17	0	0	0	17	9	450	0	1	460	0	0	0	0	0	1066
08:30 AM	0	540	0	0	540	10	0	0	0	10	3	412	0	0	415	0	0	0	0	0	1113
08:45 AM	0	629	0	0	629	14	0	0	0	14	14	432	0	0	446	0	0	0	0	0	965
Total Volume	0	2431	0	2	2433	54	0	0	0	54	32	1713	0	1	1746	0	0	0	0	0	1089
% App. Total	0	99.9	0	0.1		100	0	0	0		1.8	98.1	0	0.1		0	0	0	0	0	4233
PHF	.000	.957	.000	.500	.956	.794	.000	.000	.000	.794	.571	.952	.000	.250	.949	.000	.000	.000	.000	.000	.951





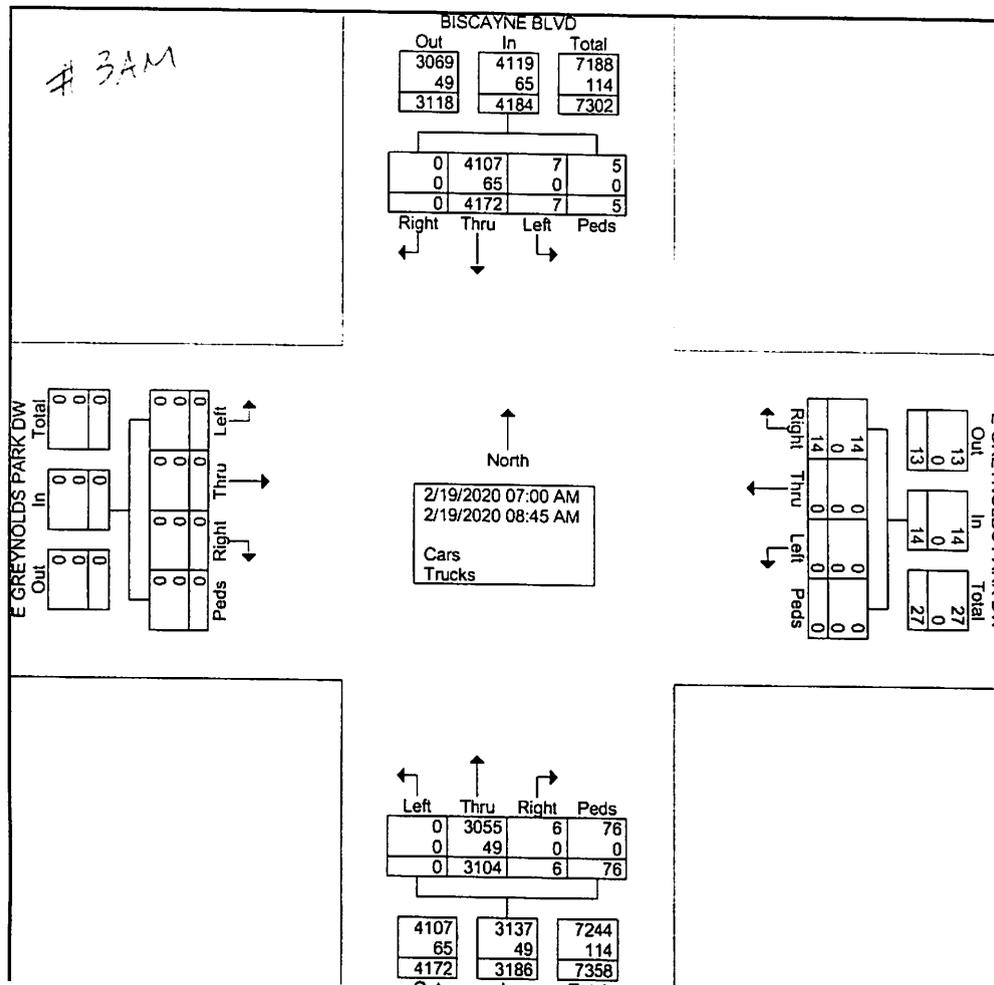
# Richard Garcia & Associates, Inc.

8065 NW 98 Street  
 Hialeah Gardens, FL 33016  
 Phone: 305-362-0677  
 Fax: 305-675-6474

File Name : Biscayne Blvd\_E Greynolds Park DW\_AM  
 Site Code : 00000000  
 Start Date : 2/19/2020  
 Page No : 1

## Groups Printed- Cars - Trucks

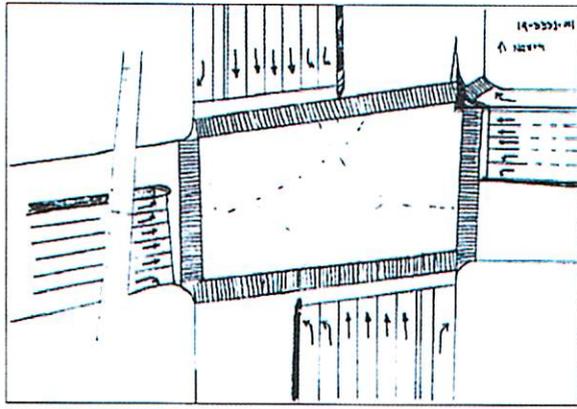
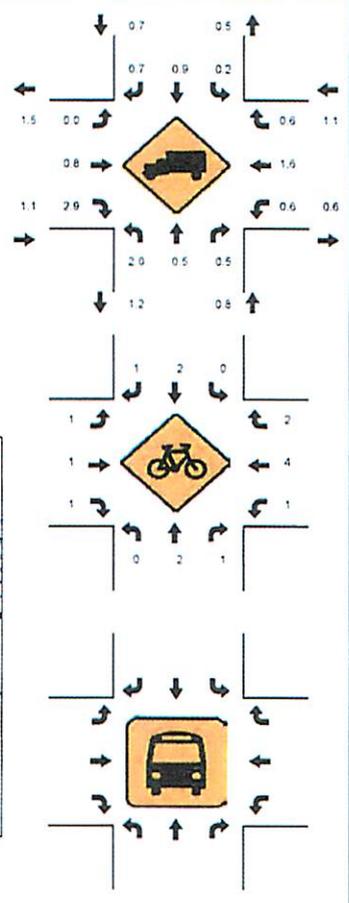
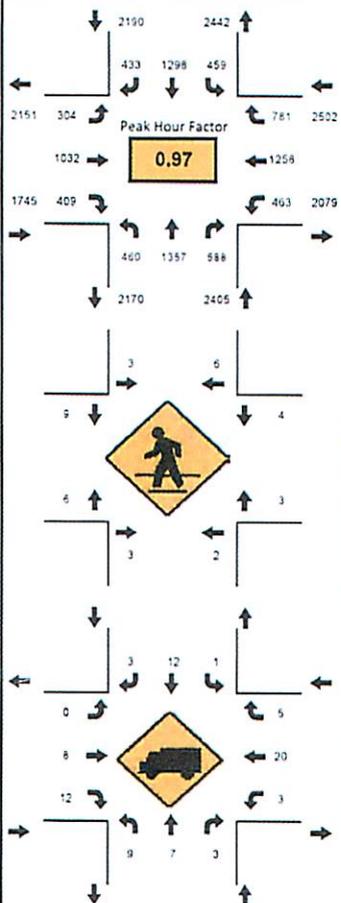
Start Time	BISCAYNE BLVD Southbound					E GREYNOLDS PARK DW Westbound					BISCAYNE BLVD Northbound					E GREYNOLDS PARK DW Eastbound					Int. Total		
	Right	Thru	Left	U-Turns	Peds	App Total	Right	Thru	Left	Peds	App Total	Right	Thru	Left	U-Turns	Peds	App Total	Right	Thru	Left		Peds	App Total
07:00 AM	0	400	1	1	0	402	0	0	0	0	0	2	233	0	24	0	259	0	0	0	0	0	0
07:15 AM	0	466	3	0	0	469	1	0	0	0	1	1	358	0	4	0	363	0	0	0	0	0	0
07:30 AM	0	440	0	0	0	440	3	0	0	0	3	1	397	0	4	1	403	0	0	0	0	0	0
07:45 AM	0	468	1	0	0	469	3	0	0	0	3	0	384	0	7	1	392	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>1774</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>1780</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>4</b>	<b>1372</b>	<b>0</b>	<b>39</b>	<b>2</b>	<b>1417</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
08:00 AM	0	621	1	0	0	622	0	0	0	0	0	0	426	0	6	0	432	0	0	0	0	0	0
08:15 AM	0	624	0	0	0	624	3	0	0	0	3	0	456	0	11	2	469	0	0	0	0	0	0
08:30 AM	0	531	0	1	0	532	2	0	0	0	2	2	411	0	9	0	422	0	0	0	0	0	0
08:45 AM	0	622	1	3	0	626	2	0	0	0	2	0	439	0	7	0	446	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>2398</b>	<b>2</b>	<b>4</b>	<b>0</b>	<b>2404</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>2</b>	<b>1732</b>	<b>0</b>	<b>33</b>	<b>2</b>	<b>1769</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Grand Total</b>	<b>0</b>	<b>4172</b>	<b>7</b>	<b>5</b>	<b>0</b>	<b>4184</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>6</b>	<b>3104</b>	<b>0</b>	<b>72</b>	<b>4</b>	<b>3186</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Apprch %</b>	<b>0</b>	<b>99.7</b>	<b>0.2</b>	<b>0.1</b>	<b>0</b>		<b>100</b>	<b>0</b>	<b>0</b>	<b>0</b>		<b>0.2</b>	<b>97.4</b>	<b>0</b>	<b>2.3</b>	<b>0.1</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total %</b>	<b>0</b>	<b>56.5</b>	<b>0.1</b>	<b>0.1</b>	<b>0</b>	<b>56.7</b>	<b>0.2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.2</b>	<b>0.1</b>	<b>42</b>	<b>0</b>	<b>1</b>	<b>0.1</b>	<b>43.1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Cars</b>	<b>0</b>	<b>4107</b>	<b>7</b>	<b>5</b>	<b>0</b>	<b>4119</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>6</b>	<b>3055</b>	<b>0</b>	<b>72</b>	<b>4</b>	<b>3137</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>% Cars</b>	<b>0</b>	<b>98.4</b>	<b>100</b>	<b>100</b>	<b>0</b>	<b>98.4</b>	<b>100</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>100</b>	<b>100</b>	<b>98.4</b>	<b>0</b>	<b>100</b>	<b>100</b>	<b>98.5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Trucks</b>	<b>0</b>	<b>65</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>65</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>49</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>49</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>% Trucks</b>	<b>0</b>	<b>1.6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>



LOCATION: Biscayne Blvd/US 1 & NE 163rd St/SR 826  
 CITY/STATE: North Miami Beach, FL

PROJECT ID: 19-03331-001  
 DATE: 05/14/2019

Peak-Hour: 05:00 PM - 06:00 PM  
 Peak 15-Minute: 05:30 PM - 05:45 PM



15-Min Count Period Beginning At	Biscayne Blvd/US 1 Northbound					Biscayne Blvd/US 1 Southbound					NE 163rd St/SR 826 Eastbound					NE 163rd St/SR 826 Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
04:00 PM	120	281	123	3		109	303	114	0		64	250	86	0		100	363	194	0		2110	8217
04:15 PM	83	333	115	1		100	280	114	2		68	228	84	0		125	267	235	1		2036	8387
04:30 PM	104	310	133	5		94	317	131	4		76	232	94	0		118	287	174	0		2079	8512
04:45 PM	91	260	114	2		101	352	122	2		58	238	78	0		109	281	184	0		1992	8718
05:00 PM	136	358	143	2		119	291	106	4		71	259	124	0		113	345	209	0		2280	8842
05:15 PM	94	391	145	1		82	379	116	3		62	219	88	0		103	269	209	0		2161	6562
05:30 PM	106	298	172	8		116	313	126	2		90	309	113	0		147	303	182	0		2285	4401
05:45 PM	106	310	128	7		128	315	85	5		81	245	84	0		100	341	181	0		2116	2116
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
All Vehicles	544	1564	688	32		512	1516	504	20		360	1236	496	0		588	1380	836	0		10276	
Heavy Trucks	12	16	4			4	20	8			0	12	16			4	32	8			136	
Pedestrians		8					12					24					12				56	
Bicycles	0	4	4			0	4	4			4	4	4			4	4	4			40	
Railroad																						
Stopped Buses																						

# 1 PM



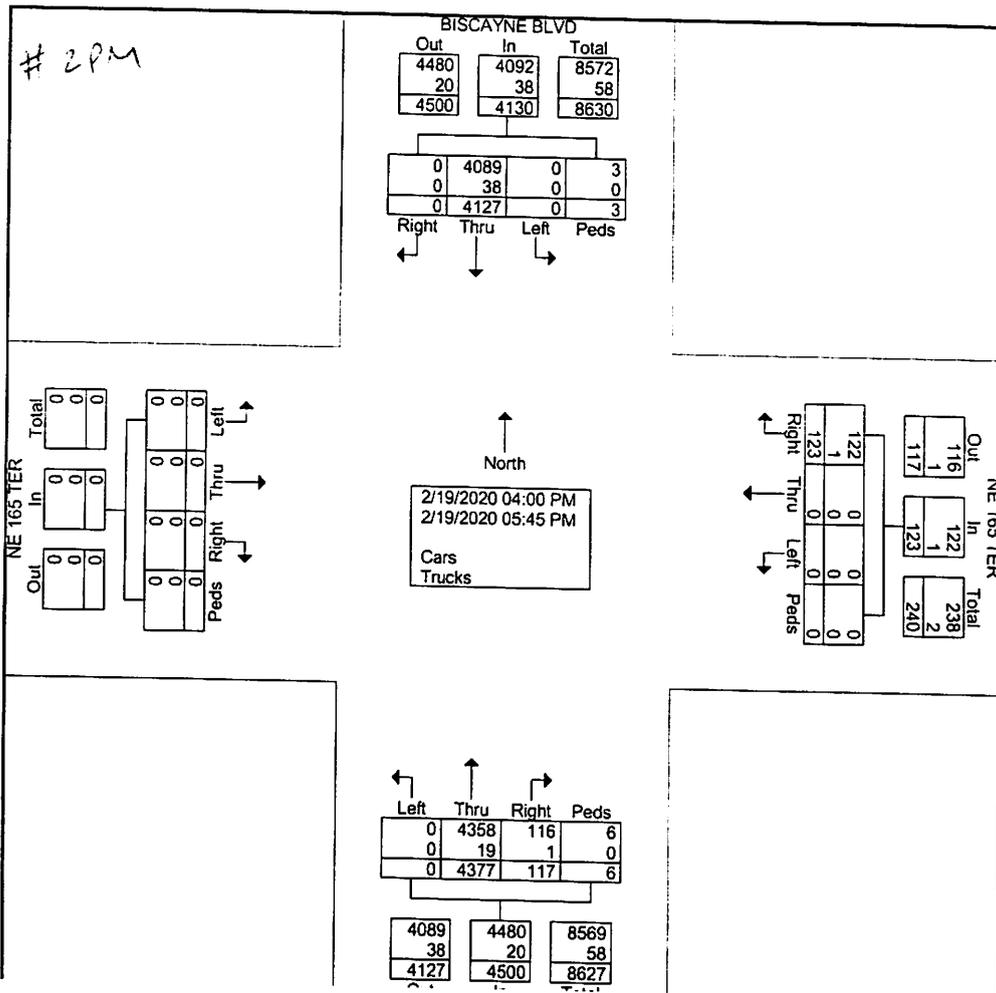
# Richard Garcia & Associates, Inc.

8065 NW 98 Street  
 Hialeah Gardens, FL 33016  
 Phone: 305-362-0677  
 Fax: 305-675-6474

File Name : Biscayne Blvd\_NE 165 Ter\_PM  
 Site Code : 00000000  
 Start Date : 2/19/2020  
 Page No : 1

## Groups Printed- Cars - Trucks

Start Time	BISCAYNE BLVD Southbound					NE 165 TER Westbound					BISCAYNE BLVD Northbound					NE 165 TER 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	495	0	0	495	22	0	0	0	22	9	556	0	1	566	0	0	0	0	0	0
04:15 PM	0	511	0	0	511	12	0	0	0	12	14	538	0	2	554	0	0	0	0	0	0
04:30 PM	0	575	0	0	575	25	0	0	0	25	11	536	0	0	547	0	0	0	0	0	0
04:45 PM	0	492	0	0	492	16	0	0	0	16	24	525	0	0	549	0	0	0	0	0	0
<b>Total</b>	0	2073	0	0	2073	75	0	0	0	75	58	2155	0	3	2216	0	0	0	0	0	0
05:00 PM	0	479	0	0	479	11	0	0	0	11	17	575	0	2	594	0	0	0	0	0	0
05:15 PM	0	601	0	0	601	16	0	0	0	16	12	603	0	1	616	0	0	0	0	0	0
05:30 PM	0	469	0	3	472	12	0	0	0	12	10	552	0	0	562	0	0	0	0	0	0
05:45 PM	0	505	0	0	505	9	0	0	0	9	20	492	0	0	512	0	0	0	0	0	0
<b>Total</b>	0	2054	0	3	2057	48	0	0	0	48	59	2222	0	3	2284	0	0	0	0	0	0
<b>Grand Total</b>	0	4127	0	3	4130	123	0	0	0	123	117	4377	0	6	4500	0	0	0	0	0	0
Apprch %	0	99.9	0	0.1		100	0	0	0		2.6	97.3	0	0.1		0	0	0	0	0	
Total %	0	47.1	0	0	47.2	1.4	0	0	0	1.4	1.3	50	0	0.1	51.4	0	0	0	0	0	
Cars	0	4089	0	3	4092	122	0	0	0	122	116	4358	0	6	4480	0	0	0	0	0	0
% Cars	0	99.1	0	100	99.1	99.2	0	0	0	99.2	99.1	99.6	0	100	99.6	0	0	0	0	0	8694
Trucks	0	38	0	0	38	1	0	0	0	1	1	19	0	0	20	0	0	0	0	0	0
% Trucks	0	0.9	0	0	0.9	0.8	0	0	0	0.8	0.9	0.4	0	0	0.4	0	0	0	0	0	59
																					0.7



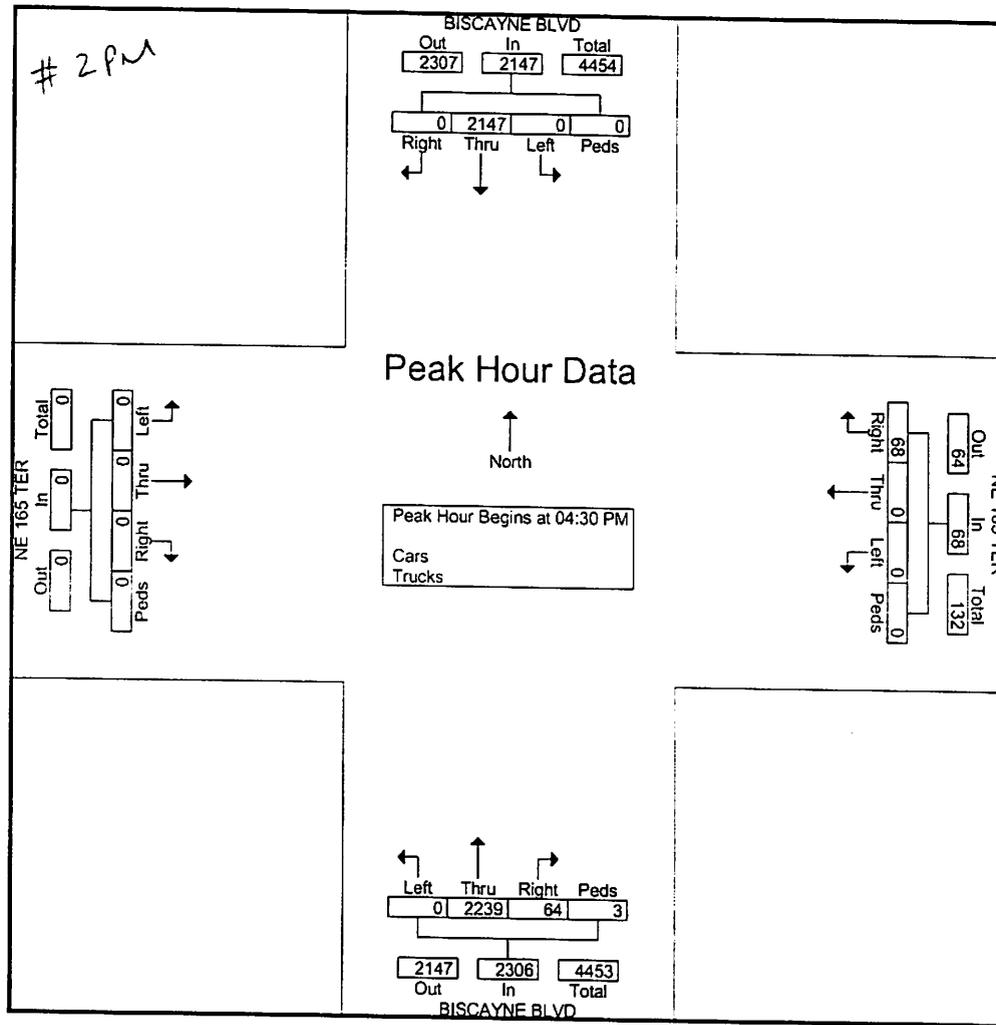


# Richard Garcia & Associates, Inc.

8065 NW 98 Street  
 Hialeah Gardens, FL 33016  
 Phone: 305-362-0677  
 Fax: 305-675-6474

File Name : Biscayne Blvd\_NE 165 Ter\_PM  
 Site Code : 00000000  
 Start Date : 2/19/2020  
 Page No : 2

Start Time	BISCAYNE BLVD Southbound					NE 165 TER Westbound					BISCAYNE BLVD Northbound					NE 165 TER Eastbound					
	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 04:30 PM																					
04:30 PM	0	575	0	0	575	25	0	0	0	25	11	536	0	0	547	0	0	0	0	0	1147
04:45 PM	0	492	0	0	492	16	0	0	0	16	24	525	0	0	549	0	0	0	0	0	1057
05:00 PM	0	479	0	0	479	11	0	0	0	11	17	575	0	2	594	0	0	0	0	0	1084
05:15 PM	0	601	0	0	601	16	0	0	0	16	12	603	0	1	616	0	0	0	0	0	1233
Total Volume	0	2147	0	0	2147	68	0	0	0	68	64	2239	0	3	2306	0	0	0	0	0	4521
% App. Total	0	100	0	0		100	0	0	0		2.8	97.1	0	0.1		0	0	0	0		
PHF	.000	.893	.000	.000	.893	.680	.000	.000	.000	.680	.667	.928	.000	.375	.936	.000	.000	.000	.000	.000	.917



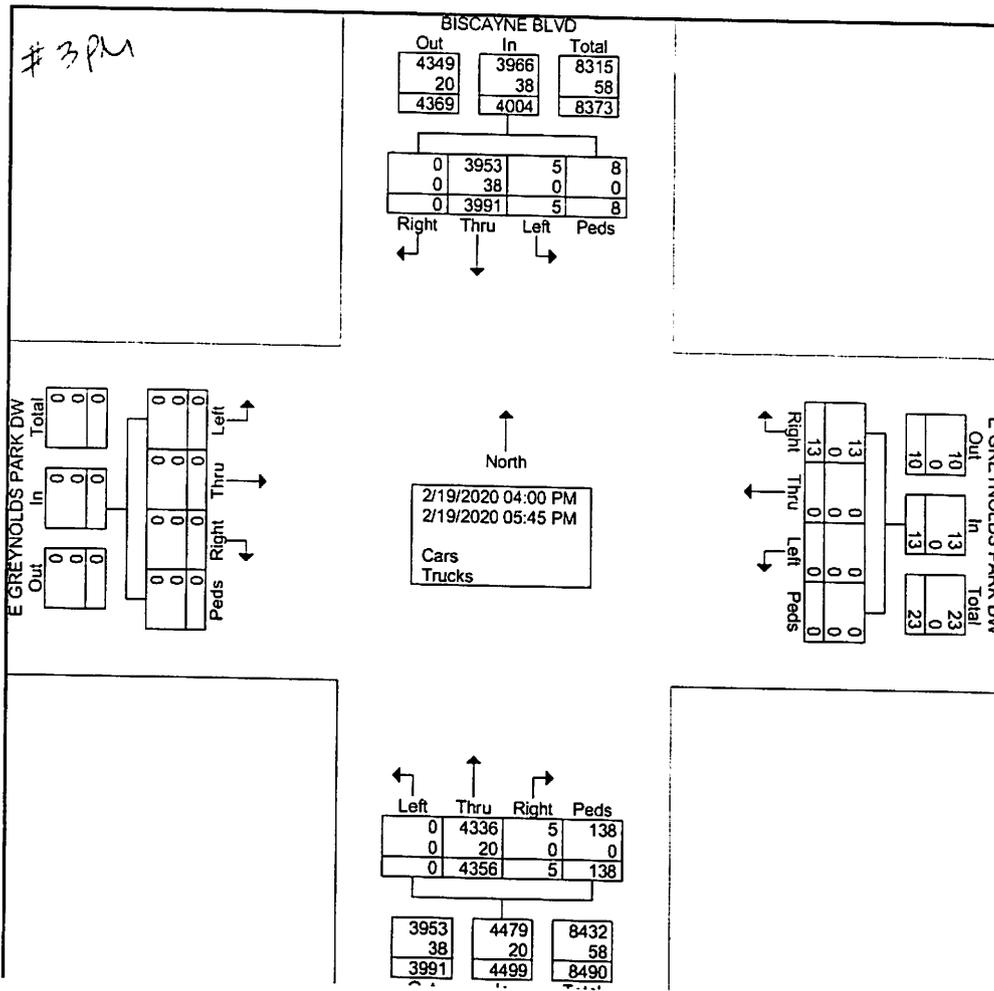


**Richard Garcia & Associates, Inc.**  
 8065 NW 98 Street  
 Hialeah Gardens, FL 33016  
 Phone: 305-362-0677  
 Fax: 305-675-6474

File Name : Biscayne Blvd\_E Greynolds Park DW\_PM  
 Site Code : 00000000  
 Start Date : 2/19/2020  
 Page No : 1

Groups Printed- Cars - Trucks

Start Time	BISCAYNE BLVD Southbound						E GREYNOLDS PARK DW Westbound					BISCAYNE BLVD Northbound						E GREYNOLDS PARK DW Eastbound					Int. Total
	Right	Thru	Left	U-Turns	Peds	App Total	Right	Thru	Left	Peds	App Total	Right	Thru	Left	U-Turns	Peds	App Total	Right	Thru	Left	Peds	App Total	
04:00 PM	0	478	3	0	0	481	2	0	0	0	2	0	561	0	17	0	578	0	0	0	0	0	0
04:15 PM	0	498	0	2	1	501	1	0	0	0	1	0	537	0	13	1	551	0	0	0	0	0	0
04:30 PM	0	554	0	0	0	554	2	0	0	0	2	3	534	0	21	0	558	0	0	0	0	0	0
04:45 PM	0	476	1	1	0	478	1	0	0	0	1	1	524	0	16	0	541	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>2006</b>	<b>4</b>	<b>3</b>	<b>1</b>	<b>2014</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>4</b>	<b>2156</b>	<b>0</b>	<b>67</b>	<b>1</b>	<b>2228</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
05:00 PM	0	462	0	0	0	462	2	0	0	0	2	0	569	0	17	0	586	0	0	0	0	0	0
05:15 PM	0	580	1	1	0	582	2	0	0	0	2	0	598	0	21	0	619	0	0	0	0	0	0
05:30 PM	0	463	0	0	1	464	0	0	0	0	0	1	557	0	6	1	565	0	0	0	0	0	0
05:45 PM	0	480	0	2	0	482	3	0	0	0	3	0	476	0	25	0	501	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>1985</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>1990</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>1</b>	<b>2200</b>	<b>0</b>	<b>69</b>	<b>1</b>	<b>2271</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Grand Total	0	3991	5	6	2	4004	13	0	0	0	13	5	4356	0	136	2	4499	0	0	0	0	0	0
Apprch %	0	99.7	0.1	0.1	0		100	0	0	0		0.1	96.8	0	3	0		0	0	0	0	0	0
Total %	0	46.9	0.1	0.1	0	47	0.2	0	0	0	0.2	0.1	51.2	0	1.6	0	52.8	0	0	0	0	0	0
Cars	0	3953	5	6	2	3966	13	0	0	0	13	5	4336	0	136	2	4479	0	0	0	0	0	0
% Cars	0	99	100	100	100	99.1	100	0	0	0	100	100	99.5	0	100	100	99.6	0	0	0	0	0	0
Trucks	0	38	0	0	0	38	0	0	0	0	0	0	20	0	0	0	20	0	0	0	0	0	0
% Trucks	0	1	0	0	0	0.9	0	0	0	0	0	0	0.5	0	0	0	0.4	0	0	0	0	0	0



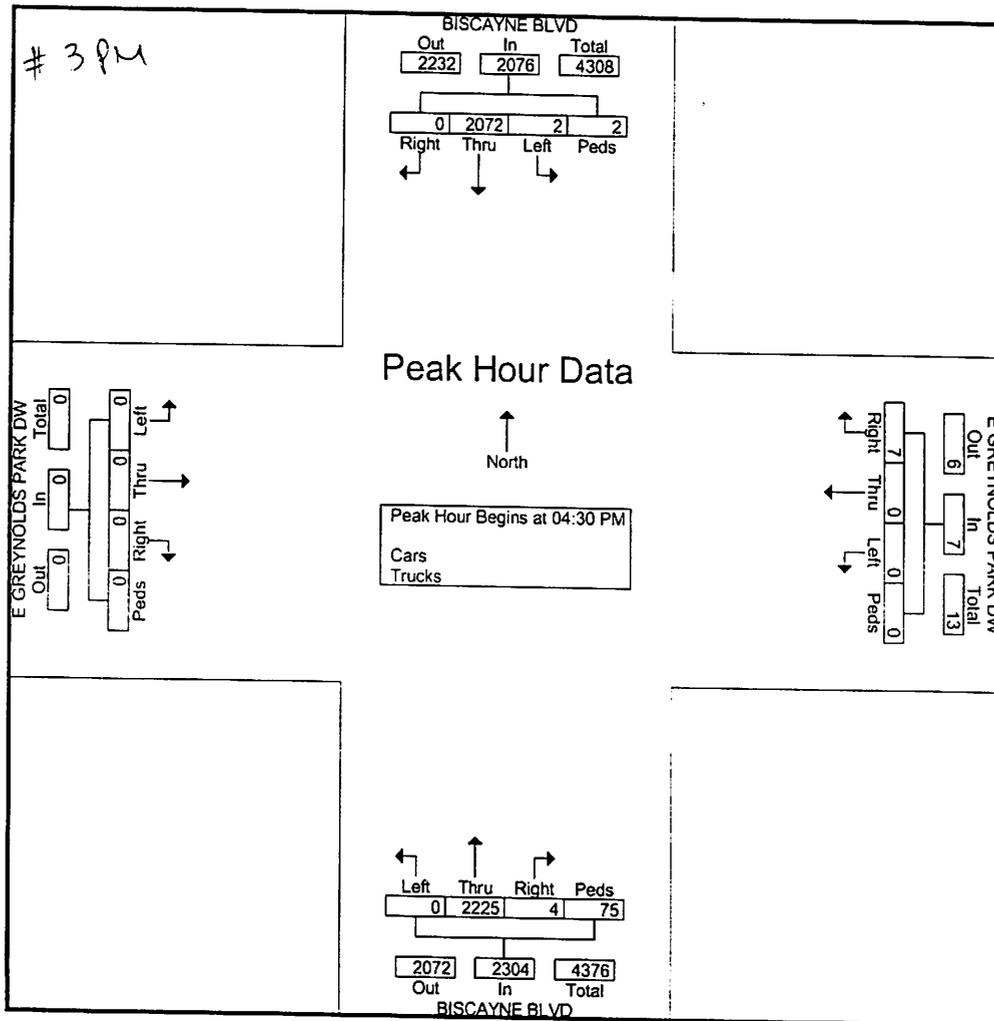


# Richard Garcia & Associates, Inc.

8065 NW 98 Street  
 Hialeah Gardens, FL 33016  
 Phone: 305-362-0677  
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File Name : Biscayne Blvd\_E Greynolds Park DW\_PM  
 Site Code : 00000000  
 Start Date : 2/19/2020  
 Page No : 2

Start Time	BISCAYNE BLVD Southbound					E GREYNOLDS PARK DW Westbound					BISCAYNE BLVD Northbound					E GREYNOLDS PARK DW Eastbound					Int. Total			
	Right	Thru	Left	U-Turns	Peds	App Total	Right	Thru	Left	Peds	App Total	Right	Thru	Left	U-Turns	Peds	App Total	Right	Thru	Left		Peds	App Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																								
Peak Hour for Entire Intersection Begins at 04:30 PM																								
04:30 PM	0	554	0	0	0	554	2	0	0	0	2	3	534	0	21	0	558	0	0	0	0	0	0	1114
04:45 PM	0	476	1	1	0	478	1	0	0	0	1	1	524	0	16	0	541	0	0	0	0	0	0	1020
05:00 PM	0	462	0	0	0	462	2	0	0	0	2	0	569	0	17	0	586	0	0	0	0	0	0	1050
05:15 PM	0	580	1	1	0	582	2	0	0	0	2	0	598	0	21	0	619	0	0	0	0	0	0	1203
Total Volume	0	2072	2	2	0	2076	7	0	0	0	7	4	2225	0	75	0	2304	0	0	0	0	0	0	4387
% App. Total	0	99.8	0.1	0.1	0		100	0	0	0		0.2	96.6	0	3.3	0		0	0	0	0	0		
PHF	.000	.893	.500	.500	.000	.892	.875	.000	.000	.000	.875	.333	.930	.000	.893	.000	.931	.000	.000	.000	.000	.000		.912





## *Traffic Impact Analysis*

# Uptown Biscayne North Miami Beach, Florida



 **Kimley»»Horn**

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Updated October 2017  
043745000

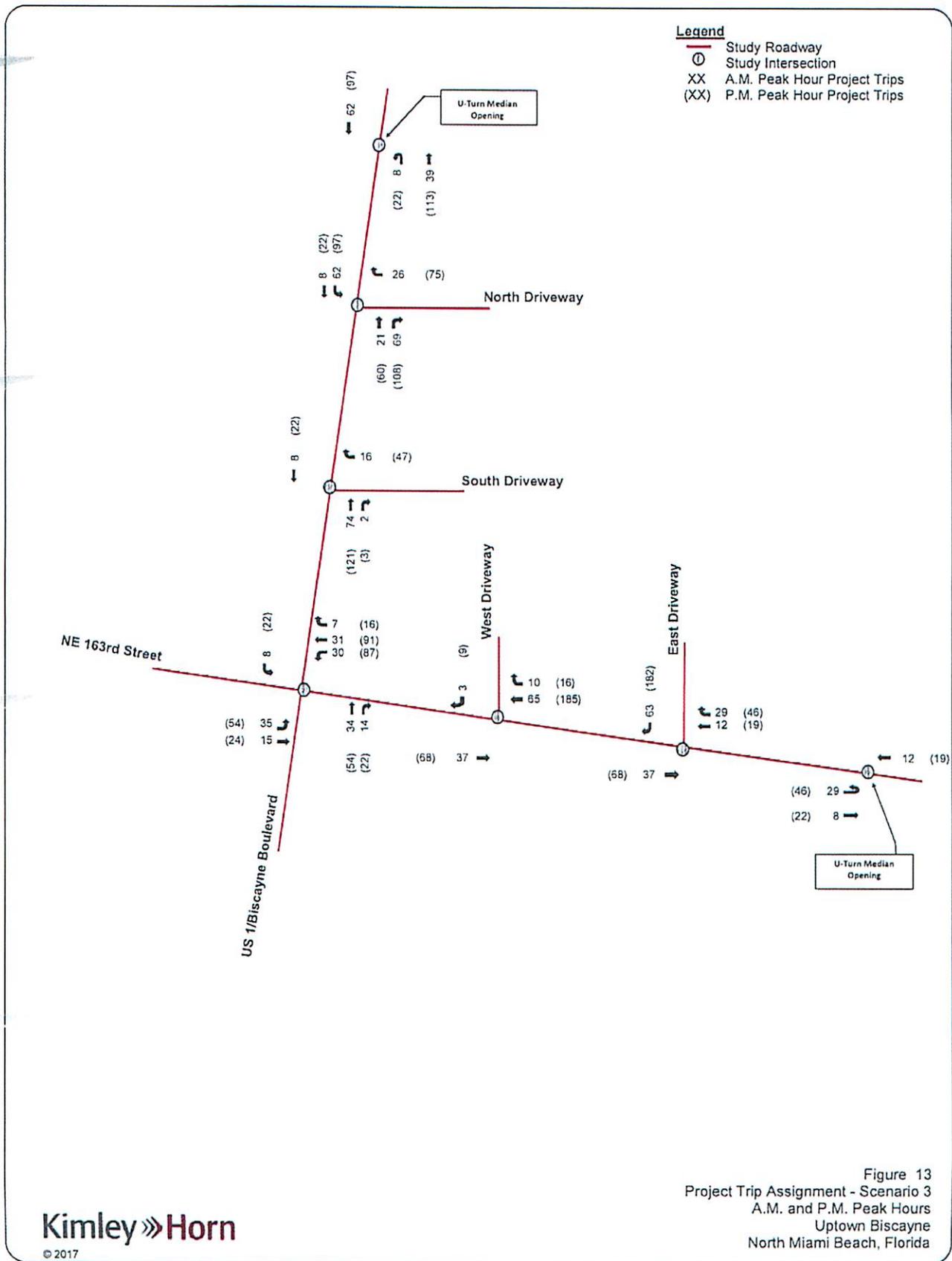
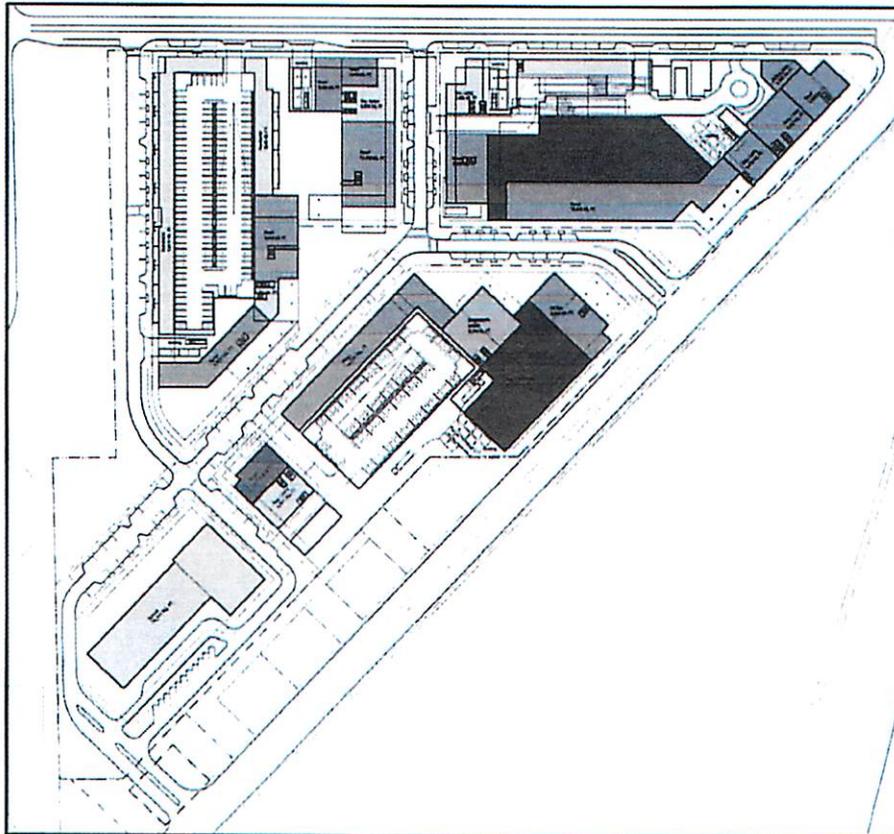


Figure 13  
 Project Trip Assignment - Scenario 3  
 A.M. and P.M. Peak Hours  
 Uptown Biscayne  
 North Miami Beach, Florida



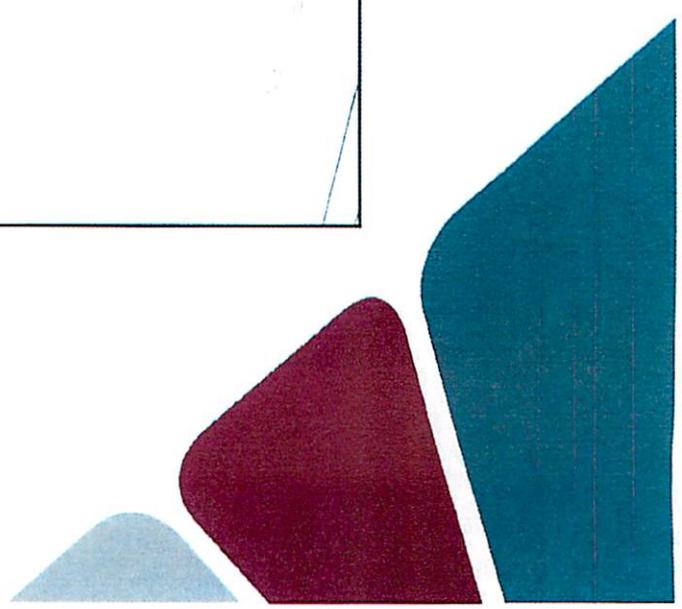
*Traffic Impact Analysis for  
Submittal to the  
City of North Miami Beach*

**15780 West Dixie Highway**  
North Miami Beach, Florida



**Kimley»»Horn**

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Revised May 2018  
March 2018  
043932000



- Legend**
- Study Roadway
  - Study Intersection
  - XX A.M. Peak Hour Project Trip Assignment

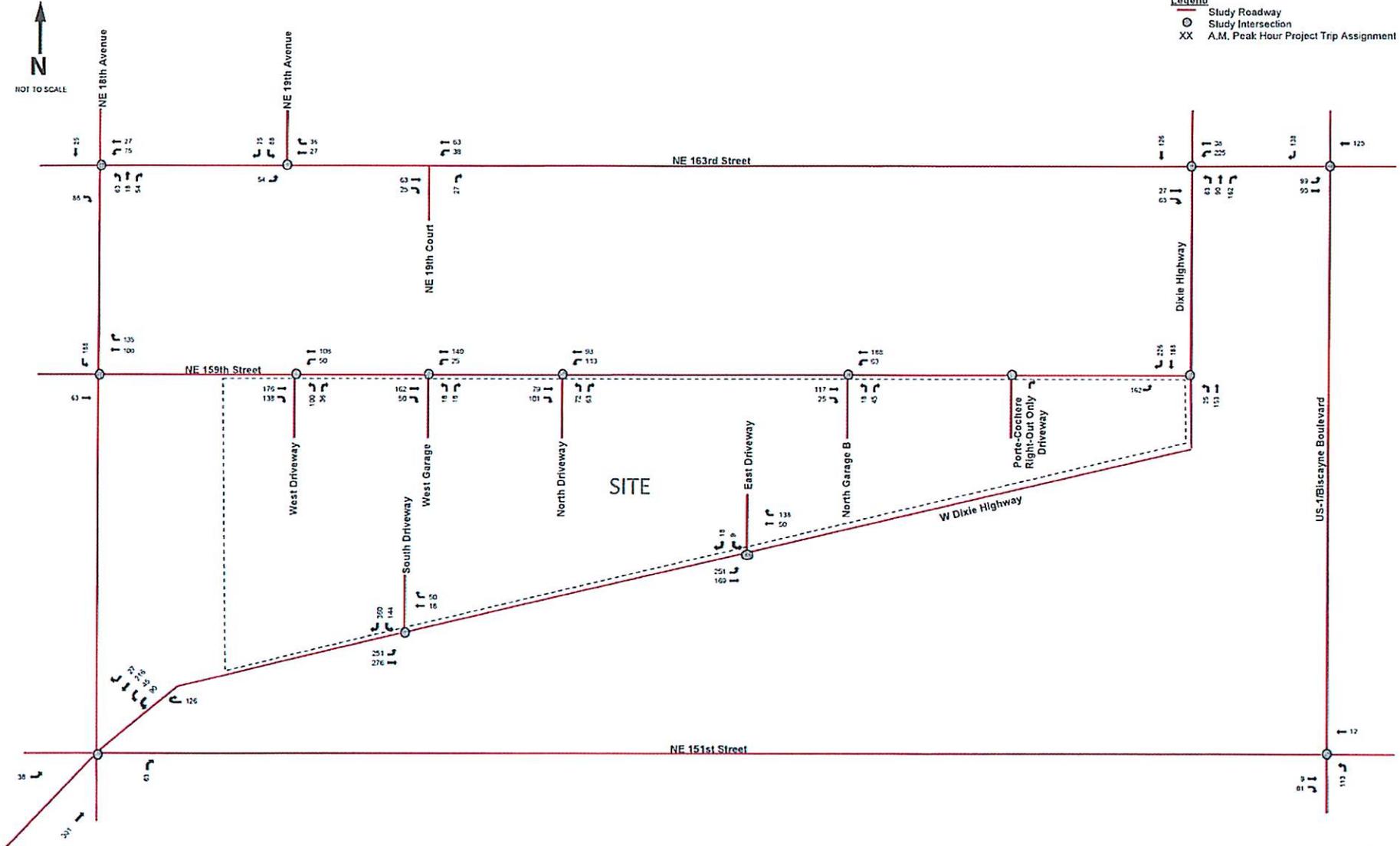


Figure 9  
 A.M. Peak Hour Net New Trip Assignment  
 15780 West Dixie Highway  
 North Miami Beach, Florida

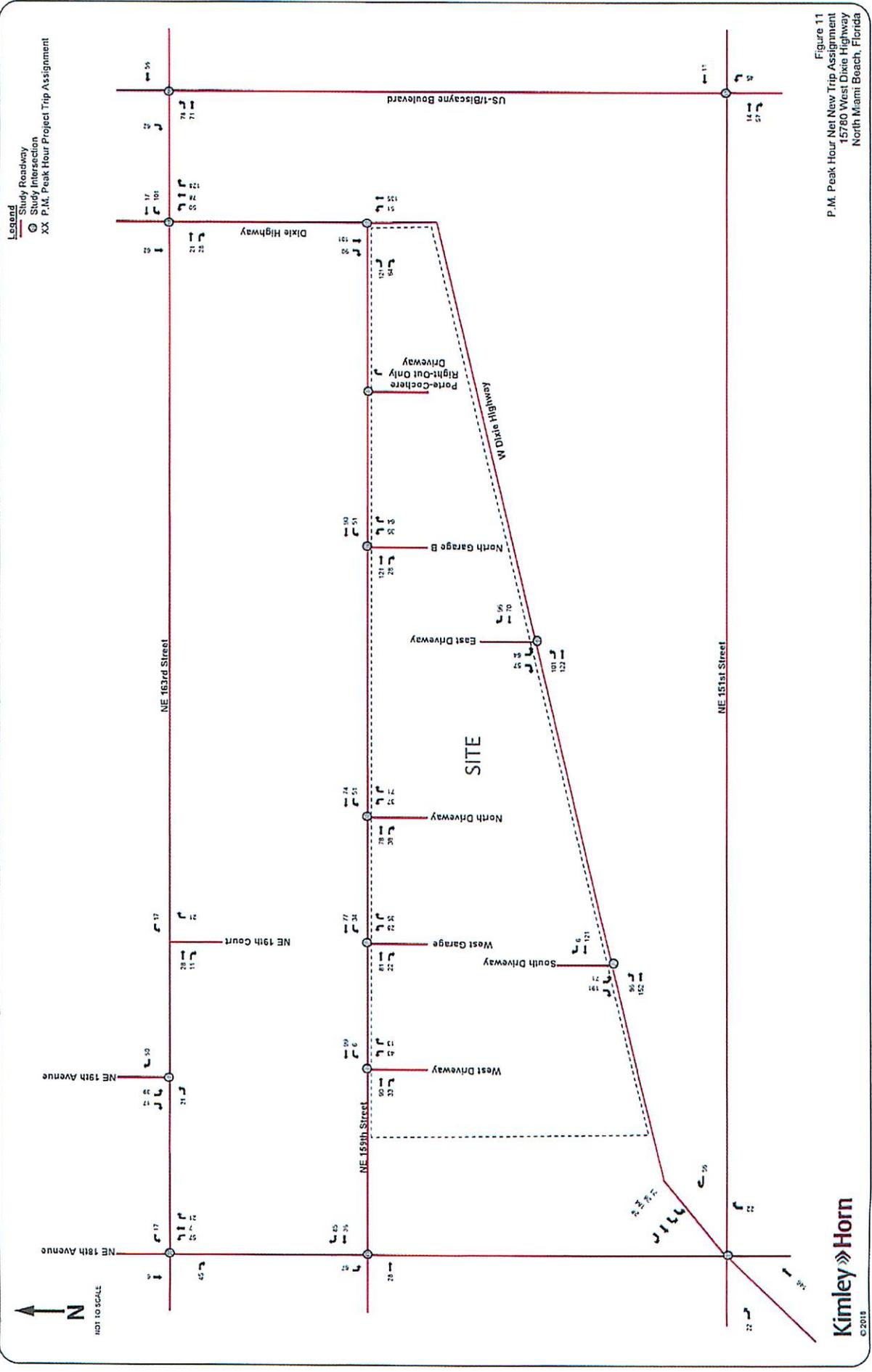
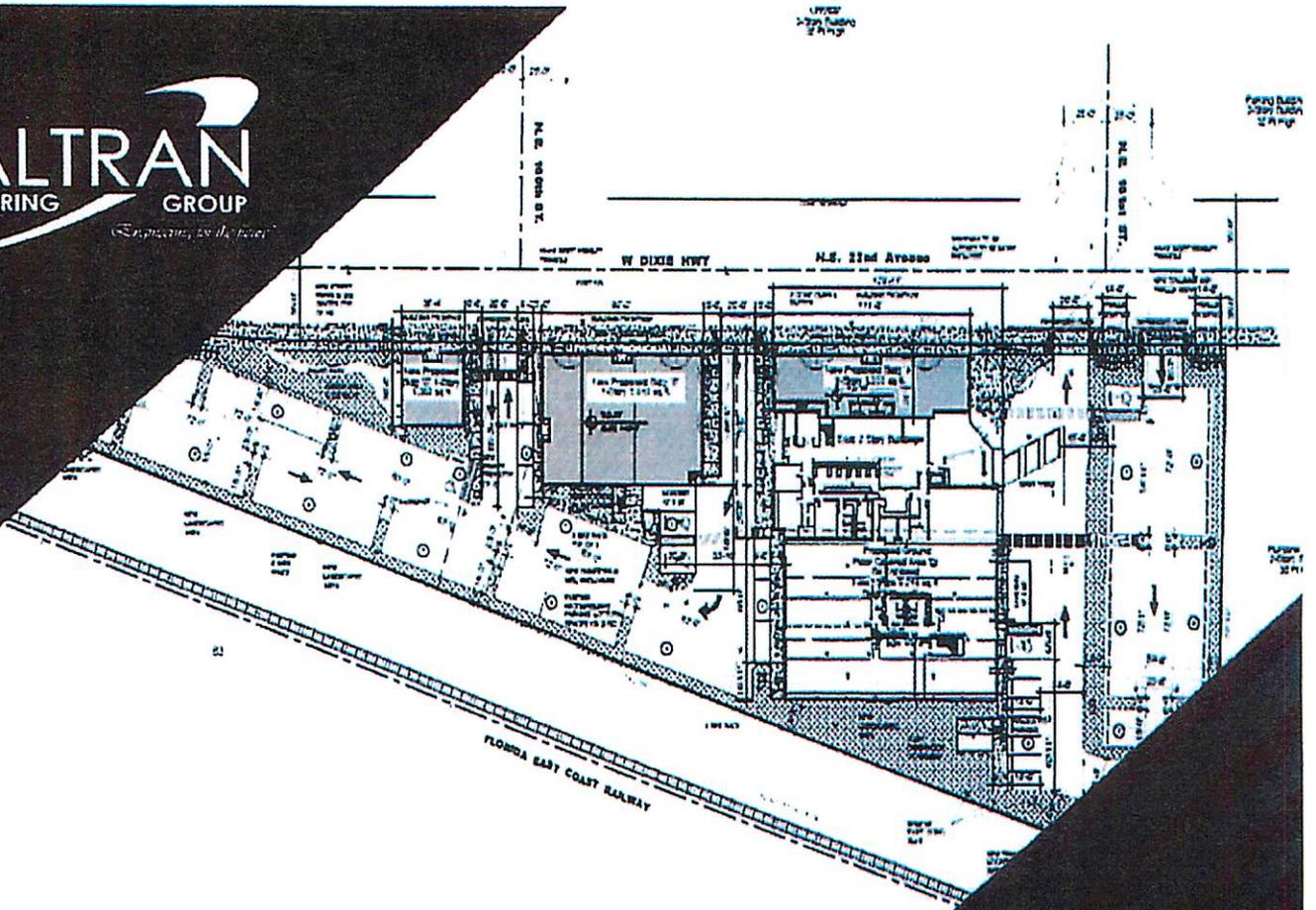


Figure 11  
 P.M. Peak Hour Net New Trip Assignment  
 15780 West Dixie Highway  
 North Miami Beach, Florida



**16051 West Dixie Highway**  
***Trip Generation Memorandum***

March 2020

Caltran Engineering Group, Inc.  
790 NW 107 Avenue, Suite 200  
Miami, FL 33172  
Phone: 786-456-7700  
Fax: 786-513-0711

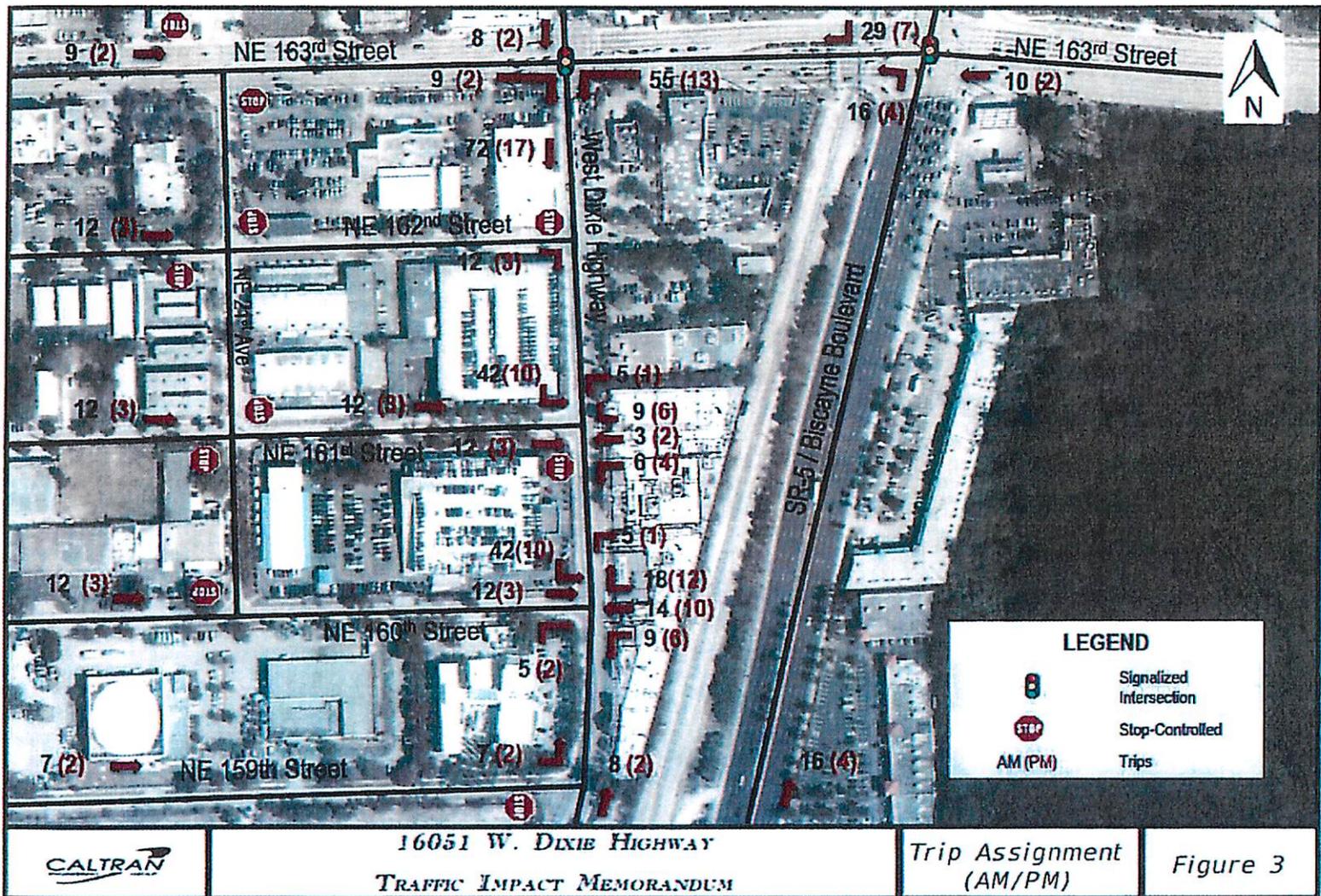


Figure 3: AM and PM Peak Hour Future Trips Demand from proposed Re-development.

September 2019



Traffic Impact Statement

# 15699 West Dixie Highway

PREPARED FOR A PROJECT WITHIN



PREPARED BY

MARLIN Engineering, Inc.

1700 NW 66<sup>th</sup> Avenue, Suite 106

Plantation, FL 33313

954.870.5070 | [www.marlinengineering.com](http://www.marlinengineering.com)

# MARLIN

Figure 3 - Distribution Percentages and AM Trip Assignments

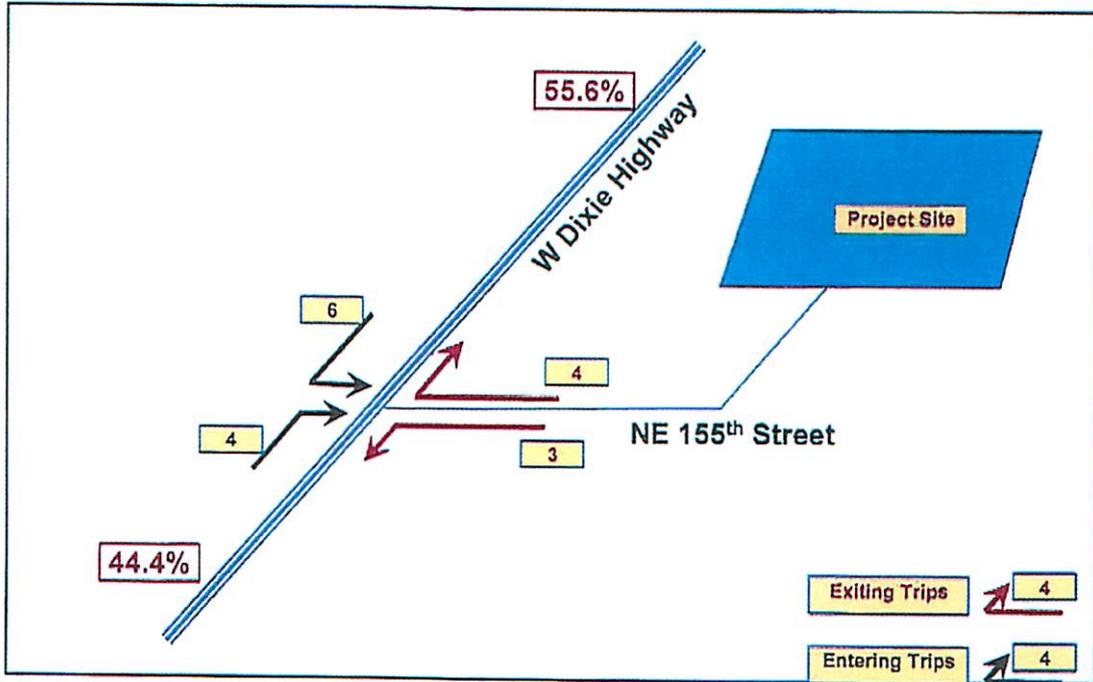
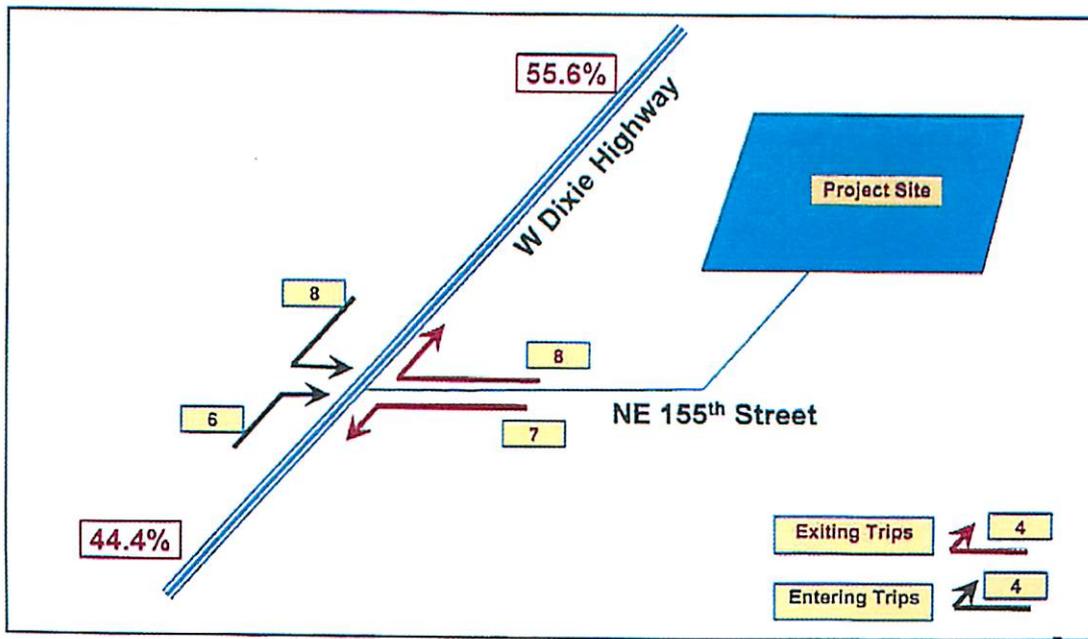


Figure 4 - Distribution Percentages and PM Trip Assignments



**Appendix 5: Traffic Operational Analysis - Level of Service (LOS)**

TABLE: A8

## Level of Service (LOS) Summary - AM &amp; PM Peak Hour

Project Name: Soleste NoMi Beach

Existing Condition (2020)		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	Biscayne Boulevard (SR 5 / US 1) & NE 163 Street (SR 826)	Traffic Signal	D	53.2	-	-	-	E	60.5	-	-	-
2	Biscayne Boulevard (SR 5 / US 1) & NE 165 Terrace (Project's Main Driveway)	Two-Way Stop	A	0.2	WB	B	12.4	A	0.2	WB	C	15.5
3	Biscayne Boulevard (SR 5 / US 1) & Median Opening (E Greynolds Park D/W)	Two-Way Stop	A	0.3	WB	C	20.7	A	0.8	WB	D	31.0
Proposed Future Condition (with Project) (2022)		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	Biscayne Boulevard (SR 5 / US 1) & NE 163 Street (SR 826)	Traffic Signal	E	60.7	-	-	-	E	79.3	-	-	-
2	Biscayne Boulevard (SR 5 / US 1) & NE 165 Terrace (Project's Main Driveway)	Two-Way Stop	A	0.3	WB	A	9.7	A	0.3	WB	B	10.5
3	Biscayne Boulevard (SR 5 / US 1) & Median Opening (E Greynolds Park D/W)	Two-Way Stop	A	2.0	WB	C	24.2	A	2.7	WB	E	38.9
4	Biscayne Boulevard (SR 5 / US 1) & Proposed South Driveway	Traffic Signal	A	2.5	-	-	-	A	4.1	-	-	-
5	NE 163 Street (SR 826) & Existing Driveway	Two-Way Stop	A	0.3	SB	C	15.4	A	1.1	SB	D	30.6



HCM Signalized Intersection Capacity Analysis  
 1: Biscayne Blvd & NE 163 St

Soleste NoMi Beach  
 Existing Condition - AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	225	1176	288	409	1000	570	231	1009	478	8	451	1435
Future Volume (vph)	225	1176	288	409	1000	570	231	1009	478	8	451	1435
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	7.7	7.7	6.8	7.7	4.0	6.8	7.2	7.2		6.8	7.2
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.86	1.00		0.97	0.86
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3433	5085	1583	3433	5085	1583	3433	6408	1583		3433	6408
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3433	5085	1583	3433	5085	1583	3433	6408	1583		3433	6408
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	227	1188	291	413	1010	576	233	1019	483	8	456	1449
RTOR Reduction (vph)	0	0	42	0	0	0	0	0	41	0	0	0
Lane Group Flow (vph)	227	1188	249	413	1010	576	233	1019	442	0	464	1449
Turn Type	Prot	NA	pt+ov	Prot	NA	Free	Prot	NA	pt+ov	Prot	Prot	NA
Protected Phases	7	4	4 5	3	8		5	2	2 3	1	1	6
Permitted Phases						Free						
Actuated Green, G (s)	17.1	45.5	70.2	24.5	52.9	169.5	17.0	43.9	75.6		27.1	54.0
Effective Green, g (s)	17.1	45.5	70.2	24.5	52.9	169.5	17.0	43.9	75.6		27.1	54.0
Actuated g/C Ratio	0.10	0.27	0.41	0.14	0.31	1.00	0.10	0.26	0.45		0.16	0.32
Clearance Time (s)	6.8	7.7		6.8	7.7		6.8	7.2			6.8	7.2
Vehicle Extension (s)	3.0	2.5		3.0	2.5		3.0	1.0			3.0	1.0
Lane Grp Cap (vph)	346	1365	655	496	1587	1583	344	1659	706		548	2041
v/s Ratio Prot	0.07	c0.23	0.16	c0.12	c0.20		0.07	0.16	0.28		c0.14	c0.23
v/s Ratio Perm						0.36						
v/c Ratio	0.66	0.87	0.38	0.83	0.64	0.36	0.68	0.61	0.63		0.85	0.71
Uniform Delay, d1	73.4	59.2	34.5	70.5	50.0	0.0	73.6	55.3	36.1		69.2	50.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	4.4	6.3	0.3	11.4	0.7	0.6	5.2	1.7	1.7		11.6	2.1
Delay (s)	77.8	65.5	34.8	81.9	50.8	0.6	78.8	57.0	37.8		80.7	53.0
Level of Service	E	E	C	F	D	A	E	E	D		F	D
Approach Delay (s)		61.9			42.8			54.6				54.8
Approach LOS		E			D			D				D

Intersection Summary

HCM 2000 Control Delay	53.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	169.5	Sum of lost time (s)	28.5
Intersection Capacity Utilization	85.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Timings

1: Biscayne Blvd & NE 163 St

Soleste NoMi Beach  
Existing Condition - AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	225	1176	288	409	1000	570	231	1009	478	451	1435	446
Future Volume (vph)	225	1176	288	409	1000	570	231	1009	478	451	1435	446
Turn Type	Prot	NA	pt+ov	Prot	NA	Free	Prot	NA	pt+ov	Prot	NA	pt+ov
Protected Phases	7	4	4 5	3	8		5	2	2 3	1	6	6 7
Permitted Phases						Free						
Detector Phase	7	4	4 5	3	8		5	2	2 3	1	6	6 7
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0		5.0	7.0		5.0	7.0	
Minimum Split (s)	11.8	56.7		11.8	56.7		12.0	49.2		12.0	49.2	
Total Split (s)	32.8	56.7		32.8	56.7		28.8	51.2		28.8	51.2	
Total Split (%)	19.4%	33.5%		19.4%	33.5%		17.0%	30.2%		17.0%	30.2%	
Yellow Time (s)	4.8	4.8		4.8	4.8		4.8	4.8		4.8	4.8	
All-Red Time (s)	2.0	2.9		2.0	2.9		2.0	2.4		2.0	2.4	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.8	7.7		6.8	7.7		6.8	7.2		6.8	7.2	
Lead/Lag	Lead	Lag										
Lead-Lag Optimize?	Yes	Yes										
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Act Effect Green (s)	17.1	45.5	69.2	24.5	52.9	169.5	17.0	44.0	75.3	27.1	54.1	78.0
Actuated g/C Ratio	0.10	0.27	0.41	0.14	0.31	1.00	0.10	0.26	0.44	0.16	0.32	0.46
v/c Ratio	0.66	0.87	0.42	0.83	0.64	0.36	0.68	0.61	0.65	0.85	0.71	0.59
Control Delay	82.4	66.9	27.5	85.7	52.0	0.6	83.5	57.3	35.4	82.8	54.3	32.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.4	66.9	27.5	85.7	52.0	0.6	83.5	57.3	35.4	82.8	54.3	32.5
LOS	F	E	C	F	D	A	F	E	D	F	D	C
Approach Delay		62.3			44.2			54.8			55.8	
Approach LOS		E			D			D			E	

Intersection Summary

Cycle Length: 169.5

Actuated Cycle Length: 169.5

Offset: 77 (45%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 54.0

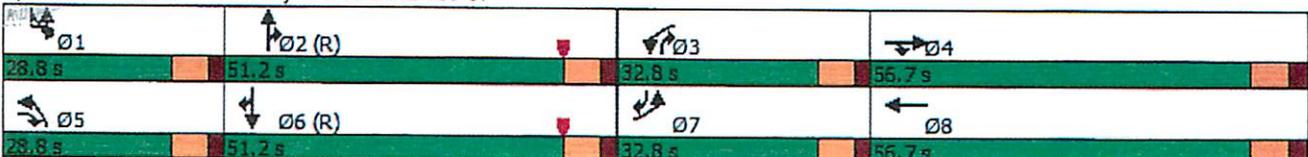
Intersection LOS: D

Intersection Capacity Utilization 85.9%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 1: Biscayne Blvd & NE 163 St



HCM Signalized Intersection Capacity Analysis  
 1: Biscayne Blvd & NE 163 St

Soleste NoMi Beach  
 Existing Condition - AM Peak Hour

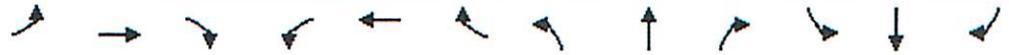


Movement	SBR
Lane Configurations	7
Traffic Volume (vph)	446
Future Volume (vph)	446
Ideal Flow (vphpl)	1900
Total Lost time (s)	7.2
Lane Util. Factor	1.00
Flt Prot	0.85
Flt Protected	1.00
Satd. Flow (prot)	1583
Flt Permitted	1.00
Satd. Flow (perm)	1583
Peak-hour factor, PHF	0.99
Adj. Flow (vph)	451
RTOR Reduction (vph)	40
Lane Group Flow (vph)	411
Turn Type	pt+ov
Protected Phases	6 7
Permitted Phases	
Actuated Green, G (s)	78.3
Effective Green, g (s)	78.3
Actuated g/C Ratio	0.46
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	731
v/s Ratio Prot	0.26
v/s Ratio Perm	
v/c Ratio	0.56
Uniform Delay, d1	33.1
Progression Factor	1.00
Incremental Delay, d2	1.0
Delay (s)	34.1
Level of Service	C
Approach Delay (s)	
Approach LOS	

Intersection Summary

Queues  
1: Biscayne Blvd & NE 163 St

Soleste NoMi Beach  
Existing Condition - AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	227	1188	291	413	1010	576	233	1019	483	464	1449	451
v/c Ratio	0.66	0.87	0.42	0.83	0.64	0.36	0.68	0.61	0.65	0.85	0.71	0.59
Control Delay	82.4	66.9	27.5	85.7	52.0	0.6	83.5	57.3	35.4	82.8	54.3	32.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.4	66.9	27.5	85.7	52.0	0.6	83.5	57.3	35.4	82.8	54.3	32.5
Queue Length 50th (ft)	127	461	171	230	346	0	131	303	367	259	424	318
Queue Length 95th (ft)	171	510	236	294	405	0	175	332	483	#404	499	458
Internal Link Dist (ft)		555			496			546			359	
Turn Bay Length (ft)	230		235	400		485	440		410			
Base Capacity (vph)	526	1470	720	528	1597	1583	445	1708	743	548	2045	847
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.81	0.40	0.78	0.63	0.36	0.52	0.60	0.65	0.85	0.71	0.53

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.



HCM Signalized Intersection Capacity Analysis  
 1: Biscayne Blvd & NE 163 St

Soleste NoMi Beach  
 Existing Condition - PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	313	1063	421	477	1296	804	474	1398	606	14	473	1337
Future Volume (vph)	313	1063	421	477	1296	804	474	1398	606	14	473	1337
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	7.7	7.7	6.8	7.7	4.0	6.8	7.2	7.2		6.8	7.2
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.86	1.00		0.97	0.86
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3433	5085	1583	3433	5085	1583	3433	6408	1583		3433	6408
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3433	5085	1583	3433	5085	1583	3433	6408	1583		3433	6408
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	323	1096	434	492	1336	829	489	1441	625	14	488	1378
RTOR Reduction (vph)	0	0	38	0	0	0	0	0	40	0	0	0
Lane Group Flow (vph)	323	1096	396	492	1336	829	489	1441	585	0	502	1378
Turn Type	Prot	NA	pt+ov	Prot	NA	Free	Prot	NA	pt+ov	Prot	Prot	NA
Protected Phases	7	4	4 5	3	8		5	2	2 3	1	1	6
Permitted Phases						Free						
Actuated Green, G (s)	21.6	44.1	77.8	26.0	48.5	169.5	26.0	44.3	77.5		26.6	44.9
Effective Green, g (s)	21.6	44.1	77.8	26.0	48.5	169.5	26.0	44.3	77.5		26.6	44.9
Actuated g/C Ratio	0.13	0.26	0.46	0.15	0.29	1.00	0.15	0.26	0.46		0.16	0.26
Clearance Time (s)	6.8	7.7		6.8	7.7		6.8	7.2			6.8	7.2
Vehicle Extension (s)	3.0	2.5		3.0	2.5		3.0	1.0			3.0	1.0
Lane Grp Cap (vph)	437	1323	726	526	1455	1583	526	1674	723		538	1697
v/s Ratio Prot	0.09	0.22	0.25	c0.14	c0.26		0.14	0.22	c0.37		c0.15	0.22
v/s Ratio Perm						c0.52						
v/c Ratio	0.74	0.83	0.54	0.94	0.92	0.52	0.93	0.86	0.81		0.93	0.81
Uniform Delay, d1	71.2	59.1	33.1	70.9	58.6	0.0	70.8	59.7	39.6		70.6	58.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		0.99	1.00
Incremental Delay, d2	6.4	4.3	0.7	24.1	9.5	1.2	22.9	6.1	6.7		23.3	4.4
Delay (s)	77.7	63.5	33.7	95.0	68.0	1.2	93.7	65.7	46.3		93.2	62.9
Level of Service	E	E	C	F	E	A	F	E	D		F	E
Approach Delay (s)		59.0			52.2			66.3				64.7
Approach LOS		E			D			E				E

Intersection Summary

HCM 2000 Control Delay	60.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	169.5	Sum of lost time (s)	28.5
Intersection Capacity Utilization	92.0%	ICU Level of Service	F
Analysis Period (min)	15		
Critical Lane Group			

HCM Signalized Intersection Capacity Analysis  
 1: Biscayne Blvd & NE 163 St

Soleste NoMi Beach  
 Existing Condition - PM Peak Hour

Movement	SBR
Lane Configurations	7
Traffic Volume (vph)	446
Future Volume (vph)	446
Ideal Flow (vphpl)	1900
Total Lost time (s)	7.2
Lane Util. Factor	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1583
Flt Permitted	1.00
Satd. Flow (perm)	1583
Peak-hour factor, PHF	0.97
Adj. Flow (vph)	460
RTOR Reduction (vph)	42
Lane Group Flow (vph)	418
Turn Type	pt+ov
Protected Phases	6 7
Permitted Phases	
Actuated Green, G (s)	73.7
Effective Green, g (s)	73.7
Actuated g/C Ratio	0.43
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	688
v/s Ratio Prot	0.26
v/s Ratio Perm	
v/c Ratio	0.61
Uniform Delay, d1	36.8
Progression Factor	1.02
Incremental Delay, d2	1.5
Delay (s)	39.1
Level of Service	D
Approach Delay (s)	
Approach LOS	
<b>Intersection Summary</b>	

Timings  
1: Biscayne Blvd & NE 163 St

Soleste NoMi Beach  
Existing Condition - PM Peak Hour



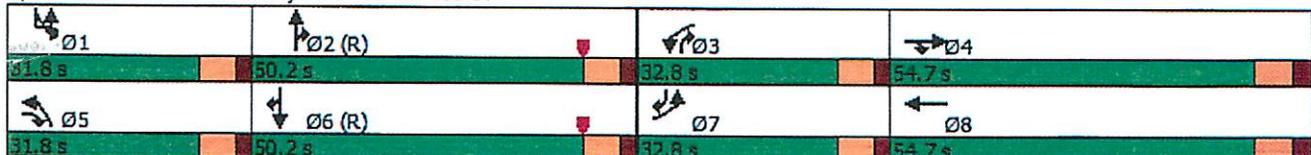
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↗	↖↗	↑↑↑	↗	↖↗	↑↑↑	↗	↖↗	↑↑↑	↗
Traffic Volume (vph)	313	1063	421	477	1296	804	474	1398	606	473	1337	446
Future Volume (vph)	313	1063	421	477	1296	804	474	1398	606	473	1337	446
Turn Type	Prot	NA	pt+ov	Prot	NA	Free	Prot	NA	pt+ov	Prot	NA	pt+ov
Protected Phases	7	4	4 5	3	8		5	2	2 3	1	6	6 7
Permitted Phases						Free						
Detector Phase	7	4	4 5	3	8		5	2	2 3	1	6	6 7
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0		5.0	7.0		5.0	7.0	
Minimum Split (s)	11.8	54.7		11.8	54.7		12.0	49.2		12.0	49.2	
Total Split (s)	32.8	54.7		32.8	54.7		31.8	50.2		31.8	50.2	
Total Split (%)	19.4%	32.3%		19.4%	32.3%		18.8%	29.6%		18.8%	29.6%	
Yellow Time (s)	4.8	4.8		4.8	4.8		4.8	4.8		4.8	4.8	
All-Red Time (s)	2.0	2.9		2.0	2.9		2.0	2.4		2.0	2.4	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.8	7.7		6.8	7.7		6.8	7.2		6.8	7.2	
Lead/Lag	Lead	Lag										
Lead-Lag Optimize?	Yes	Yes										
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Act Effct Green (s)	21.6	44.1	77.0	26.0	48.5	169.5	26.0	44.3	77.0	26.6	44.9	73.3
Actuated g/C Ratio	0.13	0.26	0.45	0.15	0.29	1.00	0.15	0.26	0.45	0.16	0.26	0.43
v/c Ratio	0.74	0.83	0.57	0.94	0.92	0.52	0.93	0.86	0.82	0.93	0.81	0.63
Control Delay	81.4	65.0	31.1	96.3	69.1	1.2	94.7	66.1	46.1	93.7	63.5	36.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.4	65.0	31.1	96.3	69.1	1.2	94.7	66.1	46.1	93.7	63.5	36.2
LOS	F	E	C	F	E	A	F	E	D	F	E	D
Approach Delay		59.9			53.0			66.7			64.6	
Approach LOS		E			D			E			E	

Intersection Summary

Cycle Length: 169.5  
 Actuated Cycle Length: 169.5  
 Offset: 77 (45%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.94  
 Intersection Signal Delay: 61.0  
 Intersection Capacity Utilization 92.0%  
 Analysis Period (min) 15

Intersection LOS: E  
 ICU Level of Service F

Splits and Phases: 1: Biscayne Blvd & NE 163 St



Queues

1: Biscayne Blvd & NE 163 St

Soleste NoMi Beach  
Existing Condition - PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	323	1096	434	492	1336	829	489	1441	625	502	1378	460
v/c Ratio	0.74	0.83	0.57	0.94	0.92	0.52	0.93	0.86	0.82	0.93	0.81	0.63
Control Delay	81.4	65.0	31.1	96.3	69.1	1.2	94.7	66.1	46.1	93.7	63.5	36.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.4	65.0	31.1	96.3	69.1	1.2	94.7	66.1	46.1	93.7	63.5	36.2
Queue Length 50th (ft)	180	414	290	282	519	0	282	452	550	291	428	346
Queue Length 95th (ft)	230	471	406	#391	#629	0	#400	500	744	m#416	475	m460
Internal Link Dist (ft)		555			496			546			359	
Turn Bay Length (ft)	230		235	400		485	440		410			
Base Capacity (vph)	526	1410	750	526	1457	1583	527	1673	759	539	1695	765
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.78	0.58	0.94	0.92	0.52	0.93	0.86	0.82	0.93	0.81	0.60

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

11/16/17

11/16/17



HCM Signalized Intersection Capacity Analysis  
1: Biscayne Blvd & NE 163 St

Soleste NoMi Beach  
Future Condition w/ Project - AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations	↖↗	↖↖↖	↗	↖↗	↖↖↖	↗	↖↗	↑↑↑	↗		↖↗	↑↑↑
Traffic Volume (vph)	384	1329	300	455	1225	599	256	1099	511	9	484	1517
Future Volume (vph)	384	1329	300	455	1225	599	256	1099	511	9	484	1517
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	7.7	7.7	6.8	7.7	4.0	6.8	7.2	7.2		6.8	7.2
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.86	1.00		0.97	0.86
Flt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3433	5085	1583	3433	5085	1583	3433	6408	1583		3433	6408
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3433	5085	1583	3433	5085	1583	3433	6408	1583		3433	6408
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	388	1342	303	460	1237	605	259	1110	516	9	489	1532
RTOR Reduction (vph)	0	0	40	0	0	0	0	0	41	0	0	0
Lane Group Flow (vph)	388	1342	263	460	1237	605	259	1110	475	0	498	1532
Turn Type	Prot	NA	pt+ov	Prot	NA	Free	Prot	NA	pt+ov	Prot	Prot	NA
Protected Phases	7	4	4 5	3	8		5	2	2 3	1	1	6
Permitted Phases						Free						
Actuated Green, G (s)	24.1	48.1	73.7	25.5	49.5	169.5	17.9	44.0	76.7		23.4	49.5
Effective Green, g (s)	24.1	48.1	73.7	25.5	49.5	169.5	17.9	44.0	76.7		23.4	49.5
Actuated g/C Ratio	0.14	0.28	0.43	0.15	0.29	1.00	0.11	0.26	0.45		0.14	0.29
Clearance Time (s)	6.8	7.7		6.8	7.7		6.8	7.2			6.8	7.2
Vehicle Extension (s)	3.0	2.5		3.0	2.5		3.0	1.0			3.0	1.0
Lane Grp Cap (vph)	488	1443	688	516	1485	1583	362	1663	716		473	1871
v/s Ratio Prot	0.11	c0.26	0.17	c0.13	0.24		0.08	0.17	0.30		c0.15	c0.24
v/s Ratio Perm						c0.38						
v/c Ratio	0.80	0.93	0.38	0.89	0.83	0.38	0.72	0.67	0.66		1.05	0.82
Uniform Delay, d1	70.3	59.1	32.5	70.6	56.1	0.0	73.3	56.2	36.3		73.0	55.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	8.7	10.9	0.3	17.4	4.1	0.7	6.6	2.1	2.3		56.0	4.1
Delay (s)	79.0	70.0	32.7	88.0	60.2	0.7	79.9	58.3	38.6		129.0	60.0
Level of Service	E	E	C	F	E	A	E	E	D		F	E
Approach Delay (s)		66.2			50.1			55.9				68.9
Approach LOS		E			D			E				E

Intersection Summary			
HCM 2000 Control Delay	60.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	169.5	Sum of lost time (s)	28.5
Intersection Capacity Utilization	92.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis  
 1: Biscayne Blvd & NE 163 St

Soleste NoMi Beach  
 Future Condition w/ Project - AM Peak Hour

Movement	SBR
Lane Configurations	7
Traffic Volume (vph)	638
Future Volume (vph)	638
Ideal Flow (vphpl)	1900
Total Lost time (s)	7.2
Lane Util. Factor	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1583
Flt Permitted	1.00
Satd. Flow (perm)	1583
Peak-hour factor, PHF	0.99
Adj. Flow (vph)	644
RTOR Reduction (vph)	39
Lane Group Flow (vph)	605
Turn Type	pt+ov
Protected Phases	6 7
Permitted Phases	
Actuated Green, G (s)	80.8
Effective Green, g (s)	80.8
Actuated g/C Ratio	0.48
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	754
v/s Ratio Prot	c0.38
v/s Ratio Perm	
v/c Ratio	0.80
Uniform Delay, d1	37.6
Progression Factor	1.00
Incremental Delay, d2	6.2
Delay (s)	43.8
Level of Service	D
Approach Delay (s)	
Approach LOS	

Intersection Summary

Timings

1: Biscayne Blvd & NE 163 St

Soleste NoMi Beach

Future Condition w/ Project - AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	384	1329	300	455	1225	599	256	1099	511	484	1517	638
Future Volume (vph)	384	1329	300	455	1225	599	256	1099	511	484	1517	638
Turn Type	Prot	NA	pt+ov	Prot	NA	Free	Prot	NA	pt+ov	Prot	NA	pt+ov
Protected Phases	7	4	4 5	3	8		5	2	2 3	1	6	6 7
Permitted Phases						Free						
Detector Phase	7	4	4 5	3	8		5	2	2 3	1	6	6 7
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0		5.0	7.0		5.0	7.0	
Minimum Split (s)	11.8	56.7		11.8	56.7		12.0	49.2		12.0	49.2	
Total Split (s)	32.8	56.7		32.8	56.7		28.8	51.2		28.8	51.2	
Total Split (%)	19.4%	33.5%		19.4%	33.5%		17.0%	30.2%		17.0%	30.2%	
Yellow Time (s)	4.8	4.8		4.8	4.8		4.8	4.8		4.8	4.8	
All-Red Time (s)	2.0	2.9		2.0	2.9		2.0	2.4		2.0	2.4	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.8	7.7		6.8	7.7		6.8	7.2		6.8	7.2	
Lead/Lag	Lead	Lag										
Lead-Lag Optimize?	Yes	Yes										
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Act Effct Green (s)	24.1	48.1	72.8	25.5	49.5	169.5	17.9	44.0	76.3	23.4	49.5	80.4
Actuated g/C Ratio	0.14	0.28	0.43	0.15	0.29	1.00	0.11	0.26	0.45	0.14	0.29	0.47
v/c Ratio	0.80	0.93	0.42	0.89	0.83	0.38	0.72	0.67	0.69	1.05	0.82	0.82
Control Delay	82.9	70.8	26.5	90.7	62.1	0.7	84.4	58.5	36.8	122.5	60.5	43.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	24.4
Total Delay	82.9	70.8	26.5	90.7	62.1	0.7	84.4	58.5	36.8	122.5	60.9	68.1
LOS	F	E	C	F	E	A	F	E	D	F	E	E
Approach Delay		66.5			51.7			56.1			74.1	
Approach LOS		E			D			E			E	

Intersection Summary

Cycle Length: 169.5

Actuated Cycle Length: 169.5

Offset: 77 (45%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.05

Intersection Signal Delay: 62.8

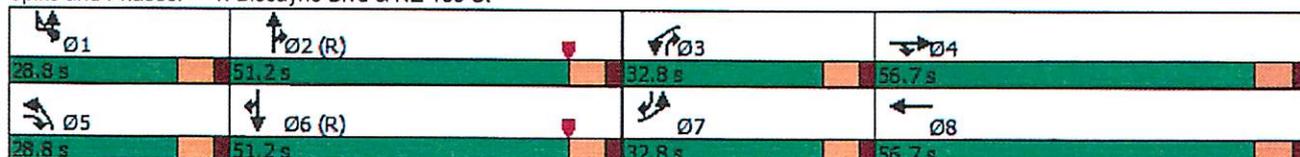
Intersection LOS: E

Intersection Capacity Utilization 92.4%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 1: Biscayne Blvd & NE 163 St



Queues

1: Biscayne Blvd & NE 163 St

Soleste NoMi Beach  
Future Condition w/ Project - AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	388	1342	303	460	1237	605	259	1110	516	498	1532	644
v/c Ratio	0.80	0.93	0.42	0.89	0.83	0.38	0.72	0.67	0.69	1.05	0.82	0.82
Control Delay	82.9	70.8	26.5	90.7	62.1	0.7	84.4	58.5	36.8	122.5	60.5	43.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	24.4
Total Delay	82.9	70.8	26.5	90.7	62.1	0.7	84.4	58.5	36.8	122.5	60.9	68.1
Queue Length 50th (ft)	215	531	175	261	476	0	145	323	390	~326	469	547
Queue Length 95th (ft)	276	595	250	#353	537	0	192	366	534	#446	534	772
Internal Link Dist (ft)		555			547			546			513	
Turn Bay Length (ft)	230		235	400			440		410	465		410
Base Capacity (vph)	526	1470	751	526	1489	1583	445	1663	757	474	1871	806
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	59	179
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.91	0.40	0.87	0.83	0.38	0.58	0.67	0.68	1.05	0.85	1.03

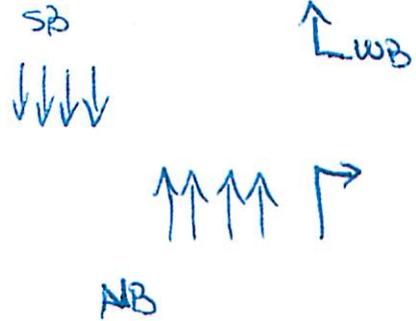
Intersection Summary

- Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Intersection has too many lanes per leg.

HCM All-Way analysis is limited to two lanes per leg.  
Channelized right turn lanes are not counted.

HCM does not support lane geometry  
See next pages for alternative  
analysis & results



HCM

HCM

HCM

HCM

HCM Unsignalized Intersection Capacity Analysis  
 2: Biscayne Blvd & NE 165 Ter / DW1

Soleste NoMi Beach  
 Future Condition w/ Project - AM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↖	↑↑↑↑	↗		↓↓↓
Traffic Volume (veh/h)	0	129	1928	67	0	2823
Future Volume (Veh/h)	0	129	1928	67	0	2823
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	136	2029	71	0	2972
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)			370			
pX, platoon unblocked	0.83	0.83			0.83	
vC, conflicting volume	2772	676			2029	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2420	0			1526	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	85			100	
cM capacity (veh/h)	22	901			360	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	136	676	676	676	71	743	743	743	743
Volume Left	0	0	0	0	0	0	0	0	0
Volume Right	136	0	0	0	71	0	0	0	0
cSH	901	1700	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.15	0.40	0.40	0.40	0.04	0.44	0.44	0.44	0.44
Queue Length 95th (ft)	13	0	0	0	0	0	0	0	0
Control Delay (s)	9.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A								
Approach Delay (s)	9.7	0.0				0.0			
Approach LOS	A								

Intersection Summary	
Average Delay	0.3
Intersection Capacity Utilization	51.9%
ICU Level of Service	A
Analysis Period (min)	15

Alt. 1: w/o 1 NB lane (3 NBT lanes w/ exclusive NBR lane)

HCM Unsignalized Intersection Capacity Analysis  
 2: Biscayne Blvd & NE 165 Ter / DW1

Soleste NoMi Beach  
 Future Condition w/ Project - AM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↑↑↑↑			↑↑↑↑
Traffic Volume (veh/h)	0	129	1928	67	0	2823
Future Volume (Veh/h)	0	129	1928	67	0	2823
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	136	2029	71	0	2972
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)			370			
pX, platoon unblocked	0.87	0.87			0.87	
vC, conflicting volume	2808	543			2029	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2347	0			1456	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	86			100	
cM capacity (veh/h)	26	948			402	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	136	580	580	580	361	743	743	743	743
Volume Left	0	0	0	0	0	0	0	0	0
Volume Right	136	0	0	0	71	0	0	0	0
cSH	948	1700	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.14	0.34	0.34	0.34	0.21	0.44	0.44	0.44	0.44
Queue Length 95th (ft)	13	0	0	0	0	0	0	0	0
Control Delay (s)	9.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A								
Approach Delay (s)	9.4	0.0				0.0			
Approach LOS	A								

Intersection Summary	
Average Delay	0.2
Intersection Capacity Utilization	44.2%
ICU Level of Service	A
Analysis Period (min)	15

Alt. 2: w/o exclusive NBR2 - 4 NBT lanes w/ shared right.

Intersection has too many lanes per leg.

HCM All-Way analysis is limited to two lanes per leg.

Channelized right turn lanes are not counted.

HCM does not support lane config.

See next page w/ alternative analysis.

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Page 12

Page 13

Page 14

**Intersection**

Int Delay, s/veh 2

Movement	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations		T	T	T	T		T	T
Traffic Vol, veh/h	0	7	81	1971	2	2	2	2741
Future Vol, veh/h	0	7	81	1971	2	2	2	2741
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	-	None
Storage Length	-	0	205	-	-	-	205	-
Veh in Median Storage, #	0	-	-	0	-	-	-	0
Grade, %	0	-	-	0	-	-	-	0
Peak Hour Factor	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2
Mvmt Flow	0	7	85	2075	2	2	2	2885

**Major/Minor**

	Minor1	Major1	Major2				
Conflicting Flow All	-	1039	2106	0	0	1516	2077
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-
Critical Hdwy	-	7.14	5.64	-	-	5.64	5.34
Critical Hdwy Stg 1	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	2.32	-	-	2.32	3.12
Pot Cap-1 Maneuver	0	195	105	-	-	226	114
Stage 1	0	-	-	-	-	-	-
Stage 2	0	-	-	-	-	-	-
Platoon blocked, %				-	-		
Mov Cap-1 Maneuver	-	195	105	-	-	150	150
Mov Cap-2 Maneuver	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-

**Approach**

	WB	NB	SB
HCM Control Delay, s	24.2	4.6	0
HCM LOS	C		

**Minor Lane/Major Mvmt**

	NBU	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	105	-	-	195	150
HCM Lane V/C Ratio	0.812	-	-	0.038	0.028
HCM Control Delay (s)	116.6	-	-	24.2	29.7
HCM Lane LOS	F	-	-	C	D
HCM 95th %tile Q(veh)	4.6	-	-	0.1	0.1

HCM Signalized Intersection Capacity Analysis  
 4: Biscayne Blvd & Prop. South DW

Soleste NoMi Beach  
 Future Condition w/ Project - AM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↑↑↑↑		↖	↑↑↑↑
Traffic Volume (vph)	0	26	1969	69	80	2743
Future Volume (vph)	0	26	1969	69	80	2743
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0	4.0
Lane Util. Factor		1.00	0.81		0.97	0.86
Frt		0.86	0.99		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		1611	7506		3433	6408
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		1611	7506		3433	6408
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	28	2140	75	87	2982
RTOR Reduction (vph)	0	5	13	0	0	0
Lane Group Flow (vph)	0	23	2202	0	87	2982
Turn Type		Perm	NA		Prot	NA
Protected Phases			2		1	Free
Permitted Phases		1				
Actuated Green, G (s)		3.7	24.3		3.7	40.0
Effective Green, g (s)		3.7	24.3		3.7	40.0
Actuated g/C Ratio		0.09	0.61		0.09	1.00
Clearance Time (s)		6.0	6.0		6.0	
Vehicle Extension (s)		3.0	1.0		3.0	
Lane Grp Cap (vph)		149	4559		317	6408
v/s Ratio Prot			0.29		0.03	0.47
v/s Ratio Perm		0.01				
v/c Ratio		0.15	0.48		0.27	0.47
Uniform Delay, d1		16.7	4.4		16.9	0.0
Progression Factor		1.00	1.00		1.01	1.00
Incremental Delay, d2		0.5	0.4		0.5	0.2
Delay (s)		17.2	4.7		17.6	0.2
Level of Service		B	A		B	A
Approach Delay (s)	17.2		4.7			0.7
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay		2.5	HCM 2000 Level of Service A
HCM 2000 Volume to Capacity ratio		0.66	
Actuated Cycle Length (s)		40.0	Sum of lost time (s) 12.0
Intersection Capacity Utilization		43.1%	ICU Level of Service A
Analysis Period (min)		15	
c Critical Lane Group			

Timings  
4: Biscayne Blvd & Prop. South DW

Soleste NoMi Beach  
Future Condition w/ Project - AM Peak Hour



Lane Group	WBR	NBT	SBL	SBT
Lane Configurations	↖	↑↑↑↑	↗	↑↑↑
Traffic Volume (vph)	26	1969	80	2743
Future Volume (vph)	26	1969	80	2743
Turn Type	Perm	NA	Prot	NA
Protected Phases		2	1	Free
Permitted Phases	1			
Detector Phase	1	2	1	
Switch Phase				
Minimum Initial (s)	5.0	7.0	5.0	
Minimum Split (s)	11.0	24.0	11.0	
Total Split (s)	11.0	29.0	11.0	
Total Split (%)	27.5%	72.5%	27.5%	
Yellow Time (s)	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	
Lead/Lag	Lead	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	
Recall Mode	None	C-Min	None	
Act Effct Green (s)	5.9	29.1	5.9	40.0
Actuated g/C Ratio	0.15	0.73	0.15	1.00
v/c Ratio	0.11	0.40	0.17	0.47
Control Delay	14.5	4.3	16.1	0.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	14.5	4.3	16.1	0.2
LOS	B	A	B	A
Approach Delay		4.3		0.7
Approach LOS		A		A

Intersection Summary

Cycle Length: 40  
 Actuated Cycle Length: 40  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:, Start of Yellow  
 Natural Cycle: 40  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.47  
 Intersection Signal Delay: 2.3  
 Intersection Capacity Utilization 43.1%  
 Analysis Period (min) 15

Intersection LOS: A  
 ICU Level of Service A

Splits and Phases: 4: Biscayne Blvd & Prop. South DW



Queues  
4: Biscayne Blvd & Prop. South DW

Soleste NoMi Beach  
Future Condition w/ Project - AM Peak Hour



Lane Group	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	28	2215	87	2982
v/c Ratio	0.11	0.40	0.17	0.47
Control Delay	14.5	4.3	16.1	0.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	14.5	4.3	16.1	0.2
Queue Length 50th (ft)	4	65	8	0
Queue Length 95th (ft)	20	76	23	0
Internal Link Dist (ft)		513		290
Turn Bay Length (ft)			300	
Base Capacity (vph)	244	5600	510	6408
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.11	0.40	0.17	0.47

Intersection Summary

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HCM Unsignalized Intersection Capacity Analysis  
 5: NE 163 St & Exist DW

Soleste NoMi Beach  
 Future Condition w/ Project - AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑			↗
Traffic Volume (veh/h)	0	2333	2197	33	0	82
Future Volume (Veh/h)	0	2333	2197	33	0	82
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	2536	2388	36	0	89
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (ft)		627				
pX, platoon unblocked					0.75	
vC, conflicting volume	2424				3251	615
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2424				2824	615
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	79
cM capacity (veh/h)	192				10	434

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4	SB 1
Volume Total	845	845	845	682	682	682	377	89
Volume Left	0	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	36	89
cSH	1700	1700	1700	1700	1700	1700	1700	434
Volume to Capacity	0.50	0.50	0.50	0.40	0.40	0.40	0.22	0.21
Queue Length 95th (ft)	0	0	0	0	0	0	0	19
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.4
Lane LOS								C
Approach Delay (s)	0.0			0.0				15.4
Approach LOS								C

Intersection Summary		
Average Delay		0.3
Intersection Capacity Utilization	48.4%	ICU Level of Service
Analysis Period (min)	15	A



HCM Signalized Intersection Capacity Analysis  
1: Biscayne Blvd & NE 163 St

Soleste NoMi Beach  
Future Condition w/ Project - PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖		↖↗	↑↑↑
Traffic Volume (vph)	471	1201	438	583	1505	853	497	1520	652	15	517	1402
Future Volume (vph)	471	1201	438	583	1505	853	497	1520	652	15	517	1402
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	7.7	7.7	6.8	7.7	4.0	6.8	7.2	7.2		6.8	7.2
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.86	1.00		0.97	0.86
Flt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3433	5085	1583	3433	5085	1583	3433	6408	1583		3433	6408
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3433	5085	1583	3433	5085	1583	3433	6408	1583		3433	6408
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	486	1238	452	601	1552	879	512	1567	672	15	533	1445
RTOR Reduction (vph)	0	0	38	0	0	0	0	41	0	0	0	0
Lane Group Flow (vph)	486	1238	414	601	1552	879	512	1567	631	0	548	1445
Turn Type	Prot	NA	pt+ov	Prot	NA	Free	Prot	NA	pt+ov	Prot	Prot	NA
Protected Phases	7	4	4 5	3	8		5	2	2 3	1	1	6
Permitted Phases						Free						
Actuated Green, G (s)	25.9	47.0	79.7	26.0	47.1	169.5	25.0	43.0	76.2		25.0	43.0
Effective Green, g (s)	25.9	47.0	79.7	26.0	47.1	169.5	25.0	43.0	76.2		25.0	43.0
Actuated g/C Ratio	0.15	0.28	0.47	0.15	0.28	1.00	0.15	0.25	0.45		0.15	0.25
Clearance Time (s)	6.8	7.7		6.8	7.7		6.8	7.2			6.8	7.2
Vehicle Extension (s)	3.0	2.5		3.0	2.5		3.0	1.0			3.0	1.0
Lane Grp Cap (vph)	524	1410	744	526	1413	1583	506	1625	711		506	1625
v/s Ratio Prot	0.14	0.24	0.26	c0.18	c0.31		0.15	0.24	c0.40		c0.16	0.23
v/s Ratio Perm						c0.56						
v/c Ratio	0.93	0.88	0.56	1.14	1.10	0.56	1.01	0.96	0.89		1.08	0.89
Uniform Delay, d1	70.9	58.5	32.2	71.8	61.2	0.0	72.2	62.5	42.7		72.2	61.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	22.6	6.5	0.7	84.9	55.6	1.4	43.0	15.3	12.9		64.3	7.7
Delay (s)	93.5	65.0	33.0	156.6	116.8	1.4	115.3	77.8	55.6		136.6	68.7
Level of Service	F	E	C	F	F	A	F	E	E		F	E
Approach Delay (s)		64.7			91.2			79.4				77.4
Approach LOS		E			F			E				E

Intersection Summary

HCM 2000 Control Delay	79.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	169.5	Sum of lost time (s)	28.5
Intersection Capacity Utilization	103.5%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis  
 1: Biscayne Blvd & NE 163 St

Soleste NoMi Beach  
 Future Condition w/ Project - PM Peak Hour

Movement	SBR
Lane Configurations	7
Traffic Volume (vph)	536
Future Volume (vph)	536
Ideal Flow (vphpl)	1900
Total Lost time (s)	7.2
Lane Util. Factor	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1583
Flt Permitted	1.00
Satd. Flow (perm)	1583
Peak-hour factor, PHF	0.97
Adj. Flow (vph)	553
RTOR Reduction (vph)	41
Lane Group Flow (vph)	512
Turn Type	pt+ov
Protected Phases	6 7
Permitted Phases	
Actuated Green, G (s)	76.1
Effective Green, g (s)	76.1
Actuated g/C Ratio	0.45
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	710
v/s Ratio Prot	0.32
v/s Ratio Perm	
v/c Ratio	0.72
Uniform Delay, d1	38.1
Progression Factor	1.00
Incremental Delay, d2	3.6
Delay (s)	41.7
Level of Service	D
Approach Delay (s)	
Approach LOS	

Intersection Summary

Timings

1: Biscayne Blvd & NE 163 St

Soleste NoMi Beach

Future Condition w/ Project - PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	471	1201	438	583	1505	853	497	1520	652	517	1402	536
Future Volume (vph)	471	1201	438	583	1505	853	497	1520	652	517	1402	536
Turn Type	Prot	NA	pt+ov	Prot	NA	Free	Prot	NA	pt+ov	Prot	NA	pt+ov
Protected Phases	7	4	4 5	3	8		5	2	2 3	1	6	6 7
Permitted Phases						Free						
Detector Phase	7	4	4 5	3	8		5	2	2 3	1	6	6 7
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0		5.0	7.0		5.0	7.0	
Minimum Split (s)	11.8	54.7		11.8	54.7		12.0	49.2		12.0	49.2	
Total Split (s)	32.8	54.7		32.8	54.7		31.8	50.2		31.8	50.2	
Total Split (%)	19.4%	32.3%		19.4%	32.3%		18.8%	29.6%		18.8%	29.6%	
Yellow Time (s)	4.8	4.8		4.8	4.8		4.8	4.8		4.8	4.8	
All-Red Time (s)	2.0	2.9		2.0	2.9		2.0	2.4		2.0	2.4	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.8	7.7		6.8	7.7		6.8	7.2		6.8	7.2	
Lead/Lag	Lead	Lag										
Lead-Lag Optimize?	Yes	Yes										
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Act Effct Green (s)	25.9	47.0	78.8	26.0	47.1	169.5	25.0	43.0	75.8	25.0	43.0	75.7
Actuated g/C Ratio	0.15	0.28	0.46	0.15	0.28	1.00	0.15	0.25	0.45	0.15	0.25	0.45
v/c Ratio	0.93	0.88	0.58	1.14	1.10	0.56	1.01	0.96	0.90	1.08	0.89	0.74
Control Delay	95.3	66.7	31.2	145.9	110.6	1.4	112.7	77.3	54.5	129.3	68.7	40.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.8
Total Delay	95.3	66.7	31.2	145.9	110.6	1.4	112.7	77.3	54.5	129.3	68.7	52.2
LOS	F	E	C	F	F	A	F	E	D	F	E	D
Approach Delay		65.7			85.9			78.3			78.2	
Approach LOS		E			F			E			E	

Intersection Summary

Cycle Length: 169.5

Actuated Cycle Length: 169.5

Offset: 77 (45%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.14

Intersection Signal Delay: 77.9

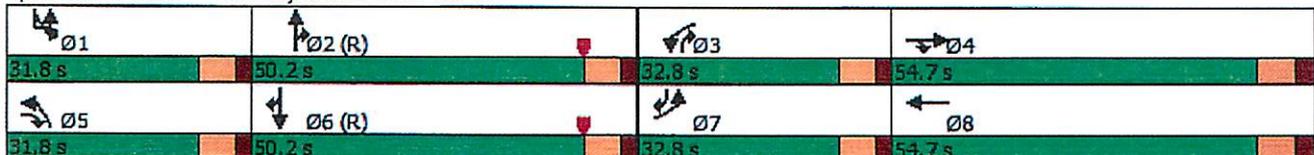
Intersection LOS: E

Intersection Capacity Utilization 103.5%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 1: Biscayne Blvd & NE 163 St



Queues

1: Biscayne Blvd & NE 163 St

Soleste NoMi Beach

Future Condition w/ Project - PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	486	1238	452	601	1552	879	512	1567	672	548	1445	553
v/c Ratio	0.93	0.88	0.58	1.14	1.10	0.56	1.01	0.96	0.90	1.08	0.89	0.74
Control Delay	95.3	66.7	31.2	145.9	110.6	1.4	112.7	77.3	54.5	129.3	68.7	40.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.8
Total Delay	95.3	66.7	31.2	145.9	110.6	1.4	112.7	77.3	54.5	129.3	68.7	52.2
Queue Length 50th (ft)	278	484	310	~400	~713	0	~302	504	628	~349	454	444
Queue Length 95th (ft)	#385	547	430	#527	#809	0	#429	#579	#890	#473	501	604
Internal Link Dist (ft)		555			547			546			513	
Turn Bay Length (ft)	230		235	400			440		410	465		410
Base Capacity (vph)	526	1410	773	526	1414	1583	506	1625	748	506	1625	748
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	175
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.88	0.58	1.14	1.10	0.56	1.01	0.96	0.90	1.08	0.89	0.97

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Intersection has too many lanes per leg.

HCM All-Way analysis is limited to two lanes per leg.  
Channelized right turn lanes are not counted.

HCM does not support lane config.  
See next pages w/ alternative analysis.

HCM Unsignalized Intersection Capacity Analysis  
 2: Biscayne Blvd & NE 165 Ter / DW1

Soleste NoMi Beach  
 Future Condition w/ Project - PM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↑↑↑	↖		↓↓↓
Traffic Volume (veh/h)	0	126	2542	141	0	2453
Future Volume (Veh/h)	0	126	2542	141	0	2453
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	137	2763	153	0	2666
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (ft)			370			
pX, platoon unblocked	0.73	0.73			0.73	
vC, conflicting volume	3430	921			2763	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	3035	0			2122	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	83			100	
cM capacity (veh/h)	7	792			185	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	137	921	921	921	153	666	666	666	666
Volume Left	0	0	0	0	0	0	0	0	0
Volume Right	137	0	0	0	153	0	0	0	0
cSH	792	1700	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.17	0.54	0.54	0.54	0.09	0.39	0.39	0.39	0.39
Queue Length 95th (ft)	16	0	0	0	0	0	0	0	0
Control Delay (s)	10.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B								
Approach Delay (s)	10.5	0.0				0.0			
Approach LOS	B								

Intersection Summary	
Average Delay	0.3
Intersection Capacity Utilization	63.6%
ICU Level of Service	B
Analysis Period (min)	15

Alt. 1: w/o 1 NBT lane.

HCM Unsignalized Intersection Capacity Analysis  
 2: Biscayne Blvd & NE 165 Ter / DW1

Soleste NoMi Beach  
 Future Condition w/ Project - PM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↑↑↑			↑↑↑
Traffic Volume (veh/h)	0	126	2542	141	0	2453
Future Volume (Veh/h)	0	126	2542	141	0	2453
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	137	2763	153	0	2666
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None		None	
Median storage veh						
Upstream signal (ft)			370			
pX, platoon unblocked	0.79	0.79			0.79	
vC, conflicting volume	3506	767			2763	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2860	0			1924	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	84			100	
CM capacity (veh/h)	11	861			241	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	137	789	789	789	548	666	666	666	666
Volume Left	0	0	0	0	0	0	0	0	0
Volume Right	137	0	0	0	153	0	0	0	0
cSH	861	1700	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.16	0.46	0.46	0.46	0.32	0.39	0.39	0.39	0.39
Queue Length 95th (ft)	14	0	0	0	0	0	0	0	0
Control Delay (s)	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A								
Approach Delay (s)	10.0	0.0				0.0			
Approach LOS	A								

Intersection Summary	
Average Delay	0.2
Intersection Capacity Utilization	53.7%
ICU Level of Service	A
Analysis Period (min)	15

Alt. 2: w/o exclusive NBR lane.

Intersection has too many lanes per leg.

HCM All-Way analysis is limited to two lanes per leg.  
Channelized right turn lanes are not counted.

HCM does not support lane config.  
See next page for alternative analysis.

**Intersection**

Int Delay, s/veh 2.7

Movement	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations		↑	↑ ↑ ↑	↑ ↑ ↑			↑ ↑ ↑	↑ ↑ ↑
Traffic Vol, veh/h	0	7	117	2519	4	2	2	2336
Future Vol, veh/h	0	7	117	2519	4	2	2	2336
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	-	None
Storage Length	-	0	205	-	-	-	205	-
Veh in Median Storage, #	0	-	-	0	-	-	-	0
Grade, %	0	-	-	0	-	-	-	0
Peak Hour Factor	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2
Mvmt Flow	0	8	129	2768	4	2	2	2567

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	1386 1874	0 0 2024 2772
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	7.14 5.64	- 5.64 5.34
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.92 2.32	- 2.32 3.12
Pot Cap-1 Maneuver	0	114 142	- 117 50
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %			-
Mov Cap-1 Maneuver	-	114 142	- 69 69
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	38.9	5	0.1
HCM LOS	E		

Minor Lane/Major Mvmt	NBU	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	142	-	- 114	69	-
HCM Lane V/C Ratio	0.905	-	- 0.067	0.064	-
HCM Control Delay (s)	112.9	-	- 38.9	60.9	-
HCM Lane LOS	F	-	- E	F	-
HCM 95th %tile Q(veh)	6.2	-	- 0.2	0.2	-

All analysis.

# HCM Signalized Intersection Capacity Analysis

## 4: Biscayne Blvd & Prop. South DW

Soleste NoMi Beach  
 Future Condition w/ Project - PM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↙	↑↑↑↑	↑	↘↘	↑↑↑↑
Traffic Volume (vph)	0	75	2608	108	112	2341
Future Volume (vph)	0	75	2608	108	112	2341
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0	4.0
Lane Util. Factor		1.00	0.81		0.97	0.86
Frt		0.86	0.99		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		1611	7499		3433	6408
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		1611	7499		3433	6408
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	82	2835	117	122	2545
RTOR Reduction (vph)	0	1	16	0	0	0
Lane Group Flow (vph)	0	81	2936	0	122	2545
Turn Type		Perm	NA		Prot	NA
Protected Phases			2		1	Free
Permitted Phases		1				
Actuated Green, G (s)		4.8	23.2		4.8	40.0
Effective Green, g (s)		4.8	23.2		4.8	40.0
Actuated g/C Ratio		0.12	0.58		0.12	1.00
Clearance Time (s)		6.0	6.0		6.0	
Vehicle Extension (s)		3.0	1.0		3.0	
Lane Grp Cap (vph)		193	4349		411	6408
v/s Ratio Prot			c0.39		0.04	0.40
v/s Ratio Perm		0.05				
v/c Ratio		0.42	0.68		0.30	0.40
Uniform Delay, d1		16.3	5.8		16.1	0.0
Progression Factor		1.00	1.00		1.03	1.00
Incremental Delay, d2		1.5	0.9		0.4	0.2
Delay (s)		17.8	6.7		16.9	0.2
Level of Service		B	A		B	A
Approach Delay (s)	17.8		6.7			1.0
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay		4.1	HCM 2000 Level of Service A
HCM 2000 Volume to Capacity ratio		0.71	
Actuated Cycle Length (s)		40.0	Sum of lost time (s) 12.0
Intersection Capacity Utilization		46.3%	ICU Level of Service A
Analysis Period (min)		15	
c Critical Lane Group			

Timings  
4: Biscayne Blvd & Prop. South DW

Soleste NoMi Beach  
Future Condition w/ Project - PM Peak Hour



Lane Group	WBR	NBT	SBL	SBT
Lane Configurations	↗	↑↑↑↑	↖	↑↑↑
Traffic Volume (vph)	75	2608	112	2341
Future Volume (vph)	75	2608	112	2341
Turn Type	Perm	NA	Prot	NA
Protected Phases		2	1	Free
Permitted Phases	1			
Detector Phase	1	2	1	
Switch Phase				
Minimum Initial (s)	5.0	7.0	5.0	
Minimum Split (s)	11.0	24.0	11.0	
Total Split (s)	12.0	28.0	12.0	
Total Split (%)	30.0%	70.0%	30.0%	
Yellow Time (s)	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	
Lead/Lag	Lead	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	
Recall Mode	None	C-Min	None	
Act Effct Green (s)	5.9	25.6	5.9	40.0
Actuated g/C Ratio	0.15	0.64	0.15	1.00
v/c Ratio	0.34	0.61	0.24	0.40
Control Delay	19.6	6.4	16.8	0.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	19.6	6.4	16.8	0.2
LOS	B	A	B	A
Approach Delay		6.4		0.9
Approach LOS		A		A

Intersection Summary

Cycle Length: 40  
 Actuated Cycle Length: 40  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:, Start of Yellow  
 Natural Cycle: 40  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.61  
 Intersection Signal Delay: 4.1  
 Intersection Capacity Utilization 46.3%  
 Analysis Period (min) 15

Intersection LOS: A  
 ICU Level of Service A

Splits and Phases: 4: Biscayne Blvd & Prop. South DW



Queues

4: Biscayne Blvd & Prop. South DW

Soleste NoMi Beach  
 Future Condition w/ Project - PM Peak Hour



Lane Group	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	82	2952	122	2545
v/c Ratio	0.34	0.61	0.24	0.40
Control Delay	19.6	6.4	16.8	0.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	19.6	6.4	16.8	0.2
Queue Length 50th (ft)	17	98	12	0
Queue Length 95th (ft)	45	127	m28	0
Internal Link Dist (ft)		513		290
Turn Bay Length (ft)			300	
Base Capacity (vph)	242	4813	514	6408
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.34	0.61	0.24	0.40

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

0.000000

0.000000

0.000000

HCM Unsignalized Intersection Capacity Analysis  
 5: NE 163 St & Exist DW

Soleste NoMi Beach  
 Future Condition w/ Project - PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑			↗
Traffic Volume (veh/h)	0	2370	2751	49	0	190
Future Volume (Veh/h)	0	2370	2751	49	0	190
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	2576	2990	53	0	207
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (ft)		627				
pX; platoon unblocked					0.77	
vC, conflicting volume	3043				3875	774
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	3043				3689	774
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	39
cM capacity (veh/h)	109				3	341

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4	SB 1
Volume Total	859	859	859	854	854	854	480	207
Volume Left	0	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	53	207
cSH	1700	1700	1700	1700	1700	1700	1700	341
Volume to Capacity	0.51	0.51	0.51	0.50	0.50	0.50	0.28	0.61
Queue Length 95th (ft)	0	0	0	0	0	0	0	94
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.6
Lane LOS								D
Approach Delay (s)	0.0			0.0				30.6
Approach LOS								D

Intersection Summary	
Average Delay	1.1
Intersection Capacity Utilization	59.1%
ICU Level of Service	B
Analysis Period (min)	15

**Appendix 6: City's Review Comments & Additional Supporting  
Documentation**

date: July 23, 2020  
to: Sharon Cino, Planning and Zoning Manager, City of North Miami Beach  
from: Eric Czerniejewski, P.E., ENV SP  
subject: Traffic Impact Analysis Review for The Riverwalk at North Miami Beach

## MEMORANDUM

The Corradino Group, Inc (Corradino) has been requested to review a Traffic Impact Analysis for the Riverwalk at North Miami Beach development located at 16395 Biscayne Boulevard in the City of North Miami Beach, Florida. The following are our traffic review comments from the 07/13/20 resubmittal:

1. **Page 1:** Projects that have direct or immediate access to Biscayne Boulevard/US-1 shall be subject to the review and approval by FDOT for compliance with FDOT standards. Please provide an approval letter from FDOT as part of your resubmittal for the new southern driveway connection along US-1/Biscayne Boulevard.

**Richard Garcia and Associates, Inc. 06/12/20 Response:** The new southern driveway connection was approved by FDOT as part of another development project located adjacent to the subject site. FDOT has also approved a median opening, currently under construction, to provide direct access into the driveway that will be controlled by a traffic signal. Appendix 6 of the traffic study update contains the supporting documentation that was provided to us.

**TCG 06/30/20 Response:** Addressed. Please provide a copy of the FDOT approval during the building permit process.

2. **Page 2:** Please confirm if there will be valet parking to any of the proposed land uses. The site plan provided shows a drop off area at the front of the hotel use. If valet parking will be provided, please include a valet traffic circulation analysis to and from the parking garage locations.

**Richard Garcia and Associates, Inc. 06/12/20 Response:** The Client has indicated that no valet services will be provided at the drop-off area.

**TCG 06/30/20 Response:** Addressed. A condition of approval will be issued to require a detailed valet traffic operational plan for review and approval by the City if valet is ever implemented on site.

3. **Page 3:** Please update the intersection volume worksheets to use the peak season correction factor (PSCF) instead of just the seasonal factor (SF). Please update the traffic operational analysis accordingly.

**Richard Garcia and Associates, Inc. 06/12/20 Response:** We respectfully disagree with the reviewer. The appropriate traffic data adjustment is the Seasonal Factor (SF) and not the Peak Season Conversion Factor (PSCF) as indicated by FDOT which is the agency responsible for developing the adjustment factors and their respective uses (See Appendix 6). FDOT has stated to us the following: "Unless you are feeding your data into an urban model, use the Seasonal Factors to turn your counts into AADT estimates." Nevertheless, the traffic volumes were updated with the use of the PSCF in an effort to address and satisfy the reviewer's concerns. Also, the traffic operational analysis was revised and yielded the same LOS results as previously documented in the original report. See traffic study update.

**TCG 06/30/20 Response:** Addressed.

4. **Page 10/Page 11:** Please provide any comments provided by Miami Dade County Public Works and Waste Management Traffic Engineering Division. This should include approval of the additional southbound U-turns being added to the US-1/Biscayne Boulevard and NE 163<sup>rd</sup> Street intersection. This intersection currently has U-turn restrictions at the other three approaches (eastbound, westbound and northbound) to this intersection.

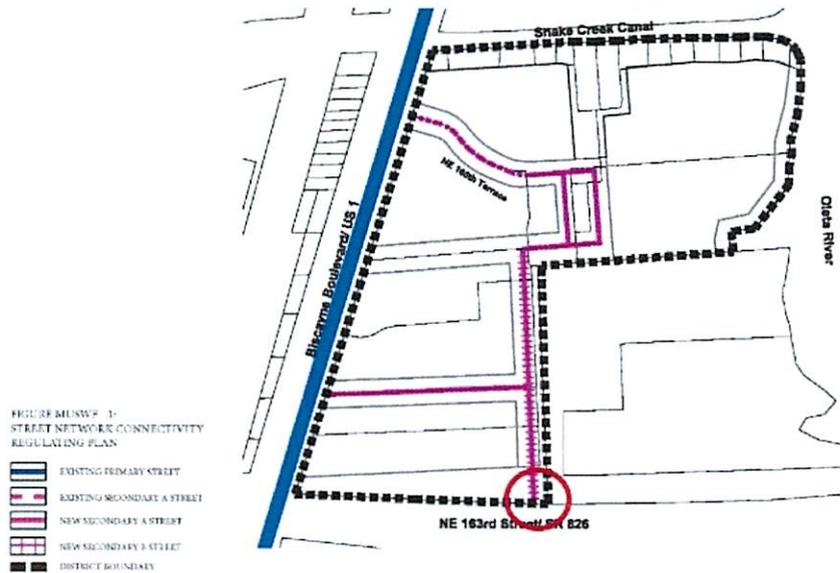
**Richard Garcia and Associates, Inc. 06/12/20 Response:** Both Biscayne Boulevard (US 1 / SR 5) and NE 163<sup>rd</sup> Street (SR 826) are state roads and FDOT (Florida Department of Transportation) maintains jurisdiction over these facilities. The Client will submit the traffic study to FDOT and will address any comments they may have in reference to the subject intersection. Moreover, there is no restriction for southbound U-turns at the subject

intersection and drivers are allowed to do so legally. Regardless, the subject project is not expecting to add southbound U-turns at the subject intersection. The new median opening and driveway connection on Biscayne Boulevard just south of NE 165th Terrace (existing driveway) will provide access to the subject site and thus would eliminate potential southbound U-turns at the intersection of Biscayne Boulevard (SR 5) and NE 163rd Street (SR 826).

**TCG 06/30/20 Response:** Addressed.

5. **Page 9:** Please confirm if there will be future site generated trips that will access the Riverwalk development through the existing site access from NE 163rd Street. Per the MU/SWF guidelines, this site access leads to a future planned secondary street.

Figure MU/SWF-1: Street Network Connectivity Regulating Plan



**Richard Garcia and Associates, Inc. 06/12/20 Response:** It is expected that some of the project traffic will utilize the existing access point on NE 163rd Street since this driveway provides connection to the subject site and adjacent properties. The revised site traffic exhibit depicts the project trips assigned to the existing driveway on NE 163rd Street.

**TCG 06/30/20 Response:** Addressed.

6. **Page 12:** Please confirm if the City of North Miami Beach indicated that there were no committed trips from approved but unbuilt development projects to include in the traffic analysis.

**Richard Garcia and Associates, Inc. 06/12/20 Response:** The committed development trips were included in the revised analysis as provided by the City of North Miami Beach. See revised report.

**TCG 06/30/20 Response:** Please add committed development trips for the attached Uptown Biscayne and the 15780 West Dixie Highway development projects in addition to the Regions Bank and the 15699 West Dixie Highway development projects.

**Richard Garcia and Associates, Inc. 07/13/20 Response:** As requested, the committed development trips for the Uptown Biscayne and 15780 West Dixie Highway were included in the revised analysis attached herewith. See attachment.

**TCG 07/23/20 Response:** Addressed. Please incorporate the new traffic analysis into an updated/revised final traffic impact study. Please incorporate the new traffic analysis into an updated/revised final traffic impact study. Please add narrative regarding prior approval and mention of vested trips in the updated traffic study.

7. **Page 12:** Please provide a traffic operational analysis at the main site access driveway. Please include warrant analysis for a potential northbound right turn lane at the main site access driveway.

**Richard Garcia and Associates, Inc. 06/12/20 Response:** The traffic operational analysis for the main site access (NE 165th Terrace) was included in the traffic study. Please note the revised analysis includes an exclusive northbound right-turn lane at the main access driveway. This right-turn lane is part of the future roadway improvements on Biscayne Boulevard provided by other development project. The traffic study update includes the supporting documentation.

**TCG 06/30/20 Response:** Addressed. Please incorporate the new traffic analysis into an updated/revised final traffic impact study. Please add narrative regarding prior approval and mention of vested trips in the updated traffic study.

8. **Appendix:** Please include a pavement marking and signage plan that provides the detailed traffic control at each of the driveway connections and for the on-site parking garage access locations. The pavement marking and signage plans should include labeling of the proposed loading space, stop sign traffic control and pedestrian crossing locations with required signage.

**Form Group Architecture + Planning's 06/12/20 Response:** Refer to updated CIVIL Engineering drawings C-1 and C-2 by VSN Engineering for all Paving Marking, signage and Traffic Control details.

**TCG 06/30/20 Response:** Addressed.

9. **Appendix 5:** Please revise the Synchro analysis for all scenarios for the US-1/Biscayne Boulevard and NE 163<sup>rd</sup> Street intersection. The southbound U-turns should be modeled for this intersection in the existing and future conditions. Please separate the southbound U-turn movements from the southbound left turn movements.

**Richard Garcia and Associates, Inc. 06/12/20 Response:** Please note the latest HCM 6 methodology does not analyze U-turn movements. As such, we added the U-turns to the left-turn movements in order to evaluate them since for the most part both movements are the same. In addition, the subject intersection was evaluated using the HCM 2000 methodology in the revised traffic operational analysis since the HCM 2000 does analyze U-turns. Both analyses yielded similar and acceptable LOS results for the subject intersection. See traffic study update.



construction occurring along NE 163<sup>rd</sup> Street in February 2020 (see below

**TCG 06/30/20  
Response:**

Please update the traffic analysis for the US-1/Biscayne Boulevard and NE 163<sup>rd</sup> Street intersection with the attached 05/14/2019 traffic counts. We have determined that there was

photo of westbound vehicular queues). The traffic data from the 02/19/2020 traffic counts was compared to traffic data collected on 05/14/2019, 02/05/2020 (AM) and 02/18/2020 (PM) for projects that another traffic consultant was working on to determine if the construction that was present during February 2020 had significant impact on the traffic volumes. The comparison found that A.M. volumes were not impacted significantly, indicated by a reduction in total volume of less than 5% and the P.M. volumes were impacted significantly, indicated by a reduction in total volume of greater than 5% under construction conditions. The comparison with the 02/19/2020 used for this study also showed similar reduction in the PM peak hour greater than 5%.

**Richard Garcia and Associates, Inc. 07/13/20 Response:** The traffic operational analysis for the intersection of Biscayne Boulevard (US-1 / SR 5) and NE 163rd Street (SR 826) was revised using the traffic counts provided by the City's traffic consultant. The revised traffic operational analysis for the existing condition yielded overall LOS D and LOS E for the AM and PM peak hour, respectively. Moreover, the revised analysis for the future condition with project resulted in LOS E for both the AM and PM peak hour. Please note, the future traffic volumes included the additional committed development trips provided by the City. See attachment for supporting documentation.

**TCG 07/23/20 Response:** Addressed. Please incorporate the new traffic analysis into an updated/revised final traffic impact study. Please add narrative regarding prior approval and mention of vested trips in the updated traffic study.

10. **Appendix 5:** Please provide narrative regarding field traffic operations for the existing turn lane vehicles queues since Synchro is displaying the 95<sup>th</sup> percentile vehicle queues as metered from upstream signal. Field observations should be provided for both the AM and PM peak hour conditions.

**Richard Garcia and Associates, Inc. 06/12/20 Response:** The upstream metering stated by Synchro is with respect to the traffic volumes and more importantly traffic progression, as expected. The Synchro output sheets on the original traffic study display the "m" footnote for the exclusive southbound turn lanes of the intersection of Biscayne Boulevard and NE 163rd Street. This "m" footnote indicates that volume for the 95th percentile queue is metered by upstream signal.

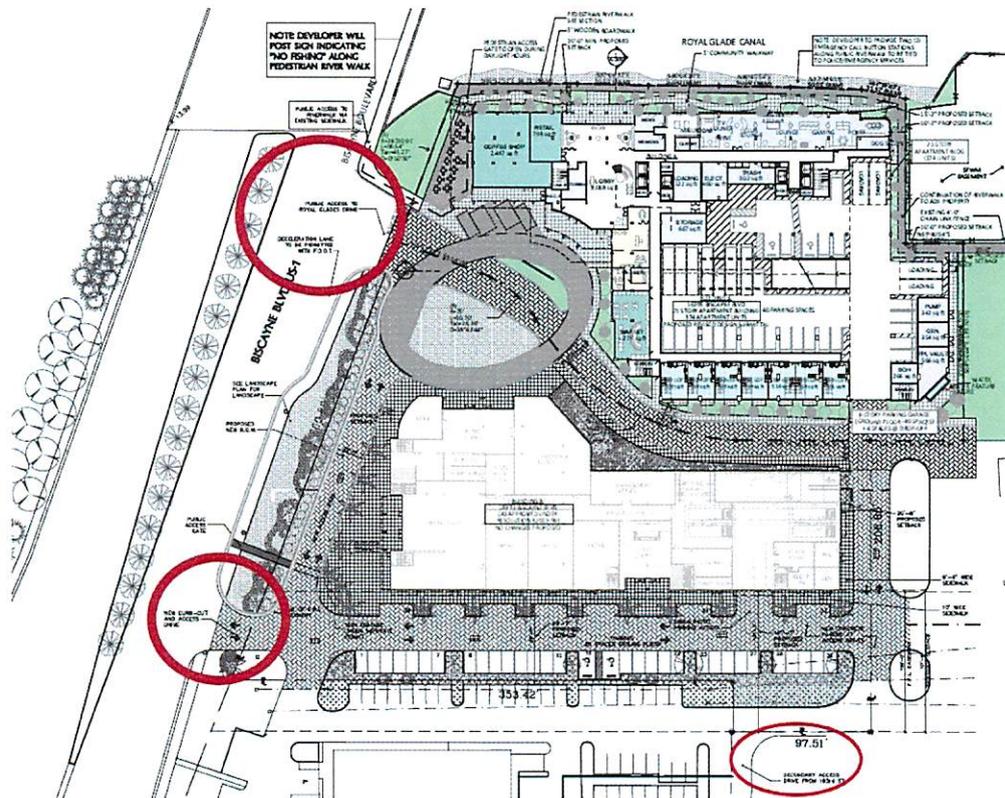
Moreover, a review of the 95th percentile queues indicates the queues for some of the existing turn lanes are currently exceeding the turn bay storage length. This is an existing condition that will remain with or without the subject project. Lastly, as previously mentioned, both Biscayne Boulevard (US 1 / SR 5) and NE 163rd Street (SR 826) are state roads and FDOT maintains jurisdiction over these facilities. As such, the Client will submit the traffic study to FDOT and will address any comments they may have in reference to the subject intersection.

**TCG 06/30/20 Response:** Addressed. Please provide any traffic review comments received from FDOT of the submitted traffic analysis.

11. **Site Plan:** Please confirm if there are site generated trips distributed and assigned to the new southern driveway connection along US-1/Biscayne Boulevard.

**Richard Garcia and Associates, Inc. 06/12/20 Response:** The revised site traffic exhibit depicts trips at the new southern driveway connection. See revised report.

**TCG 06/29/20 Response:** Addressed.



12. **Site Plan:** Plan Sheets A-100 and/or A-101 should include a bicycle parking calculation per the MU/SWF District parking requirements/criteria. The site plan indicates there are 36 bicycle parking spaces on the ground floor.

**Form Group Architecture + Planning's 06/12/20 Response:** See Sheet A-101 DATA sheet section "8A" for Bicycle Rack breakdown & Parking Breakdown legend. See sheets A-108 Overall Ground Floor for bicycle rack locations.

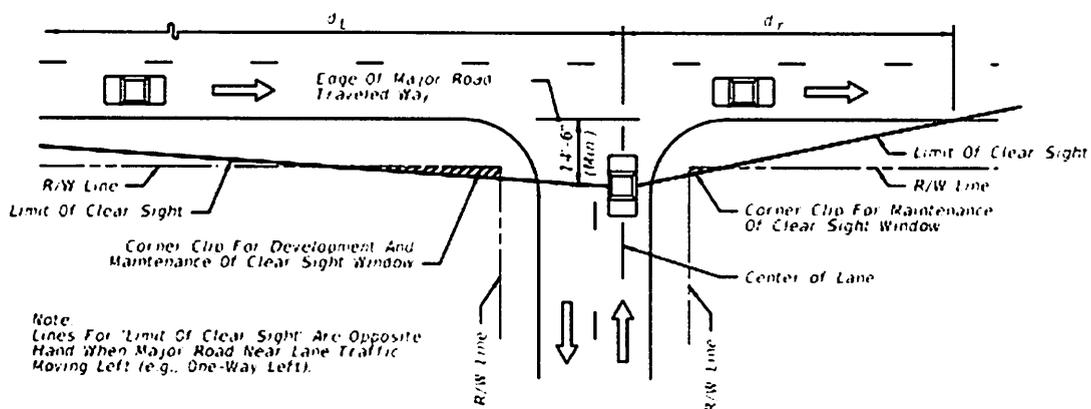
**TCG 06/30/20 Response:** Addressed.

13. **Site Plan:** Please provide sight triangles on the site plan at each of the driveway connections to US-1/Biscayne Boulevard. The sight triangles should also be depicted on the landscape plans and the pavement marking and signage plan.

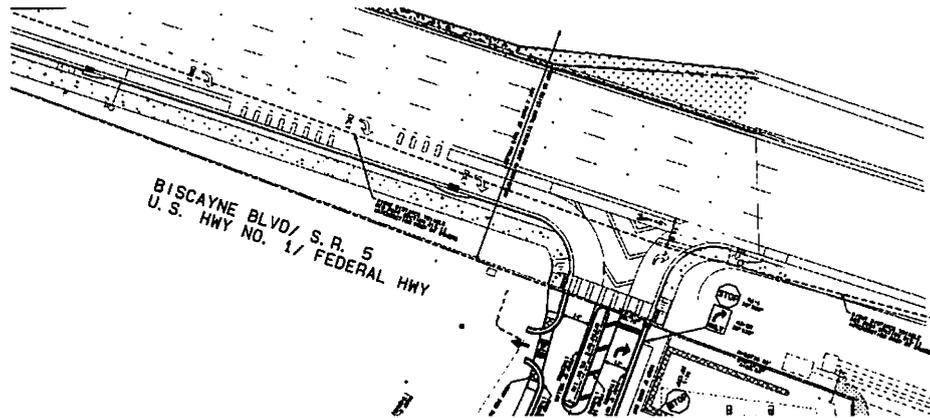
**Form Group Architecture + Planning's 06/12/20 Response:** See Sheet A-102 Ground Floor Site Plan & A-108 Overall Ground Floor Site Plan for Sight triangle locations.

**TCG 06/30/20 Response:** Please update the sight visibility triangles at each of the driveway connections to US-1/Biscayne Boulevard so that they meet FDOT criteria as outlined in the FDOT Design Manual (Section 212.11).

**Figure 212.11.1 Clear Sight Triangles**



**Form Group Architecture + Planning's 07/23/20 Response:** See updated Sheet C-2.



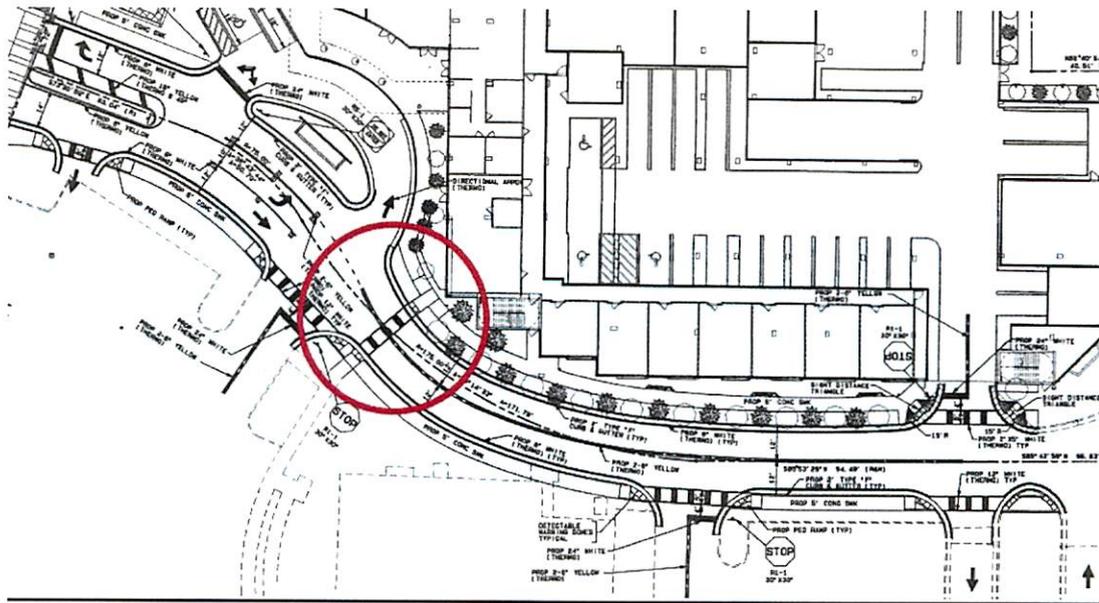
**TCG 07/23/20 Response:** Addressed. A condition of approval will be issued that requires that the construction of the secondary stop control at the primary driveway west of the marked crosswalk prior to final certificate of occupancy. This includes the installation of the stop bar and stop sign at the US-1/Biscayne Boulevard driveway connection.

14. **Site Plan:** The MU/SWF guidelines requires urban greenway design along secondary streets. The MU/SWF calls for a north-south secondary street that provides access to NE 163<sup>rd</sup> Street just east of US-1/Biscayne Boulevard (reference Comment #5).

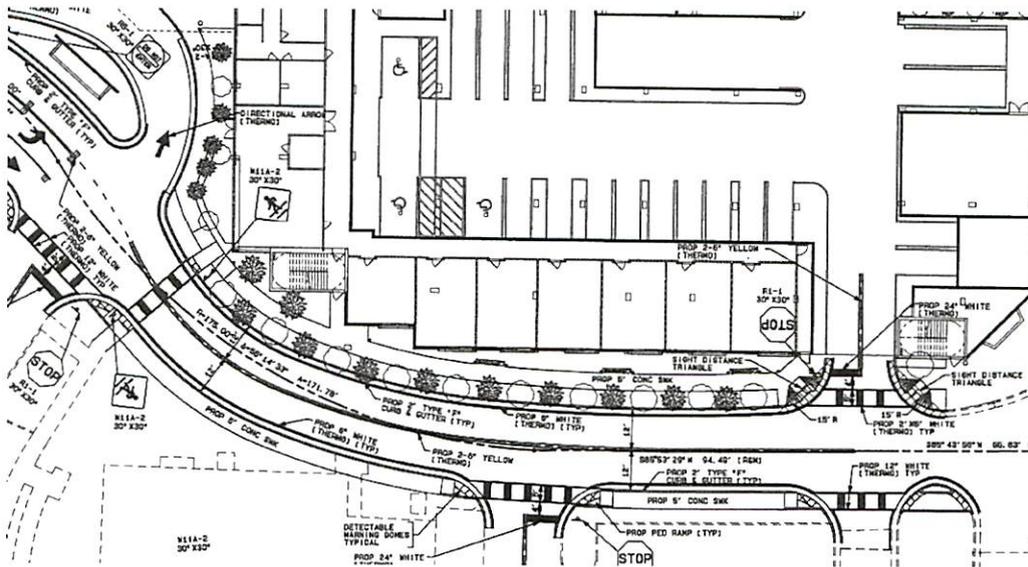
**Form Group Architecture + Planning's 06/12/20 Response:** See sheet A-102 Ground Floor Site Plan & A-108 Overall Ground Floor Site Plan new greenway proposed as requested. Landscape plans have been updated accordingly.

**TCG 06/30/20 Response:** Addressed.

15. **Site Plan:** Please provide pedestrian crossing signs at the midblock crossing on the primary east west access road per MUTCD criteria.

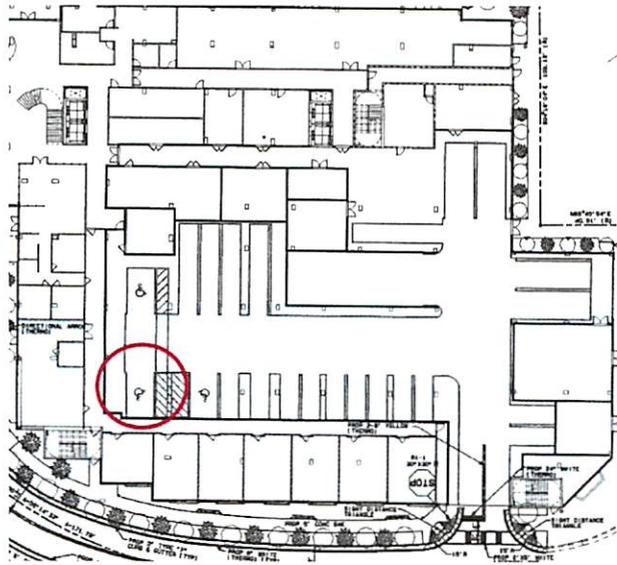


Form Group Architecture + Planning's 07/23/20 Response: See updated Sheet C-2.



TCG 07/23/20 Response: Addressed.

- Please ensure that the handicap parking spaces are oriented appropriately on all plan sheets per the handicap parking space details and criteria.



Form Group Architecture + Planning's 07/23/20 Response: See updated Sheet C-2.

TCG 07/23/20 Response: Addressed.

## Memorandum

**Date:** July 13<sup>th</sup>, 2020

**To:** David Deka  
The Estate Companies  
4949 SW 75<sup>th</sup> Avenue  
Miami, Florida 33155

**From:** Carlos X. Valentin, P.E.  
8065 NW 98<sup>th</sup> Street  
Hialeah Gardens, Florida 33016

**Subject:** Soleste NoMi Beach (The Riverwalk at NMB) - Traffic Study 2<sup>nd</sup> Review Comments

This technical memorandum was prepared to provide responses to the City of North Miami Beach traffic review comments dated June 30<sup>th</sup>, 2020. Please accept this memorandum as an addendum to the Traffic Impact Study dated May 26<sup>th</sup>, 2020. The comments and responses are as follows:

6. **Page 12:** Please confirm if the City of North Miami Beach indicated that there were no committed trips from approved but unbuilt development projects to include in the traffic analysis.

**RGA Response (May 26<sup>th</sup>, 2020):** The committed development trips were included in the revised analysis as provided by the City of North Miami Beach. See revised report.

**TCG 06/30/20 Response:** Please add committed development trips for the attached Uptown Biscayne and the 15780 West Dixie Highway development projects in addition to the Regions Bank and the 15699 West Dixie Highway development projects.

**RGA Response:** As requested, the committed development trips for the Uptown Biscayne and 15780 West Dixie Highway were included in the revised analysis attached herewith. See attachment.

9. **Appendix 5:** Please revise the Synchro analysis for all scenarios for the US-1/Biscayne Boulevard and NE 163<sup>rd</sup> Street intersection. The southbound U-turns should be modeled for this intersection in the existing and future conditions. Please separate the southbound U-turn movements from the southbound left turn movements.

**RGA Response (May 26<sup>th</sup>, 2020):** Please note the latest HCM 6 methodology does not analyze U-turn movements. As such, we added the U-turns to the left-turn movements in order to evaluate them since for the most part both movements are the same. In addition, the

subject intersection was evaluated using the HCM 2000 methodology in the revised traffic operational analysis since the HCM 2000 does analyze U-turns. Both analyses yielded similar and acceptable LOS results for the subject intersection. See traffic study update.

**TCG 06/30/20 Response:** Please update the traffic analysis for the US-1/Biscayne Boulevard and NE 163<sup>rd</sup> Street intersection with the attached 05/14/2019 traffic counts. We have determined that there was construction occurring along NE 163<sup>rd</sup> Street in February 2020 (see below photo of westbound vehicular queues). The traffic data from the 02/19/2020 traffic counts was compared to traffic data collected on 05/14/2019, 02/05/2020 (AM) and 02/18/2020 (PM) for projects that another traffic consultant was working on to determine if the construction that was present during February 2020 had significant impact on the traffic volumes. The comparison found that A.M. volumes were not impacted significantly, indicated by a reduction in total volume of less than 5% and the P.M. volumes were impacted significantly, indicated by a reduction in total volume of greater than 5% under construction conditions. The comparison with the 02/19/2020 used for this study also showed similar reduction in the PM peak hour greater than 5%.

**RGA Response:** The traffic operational analysis for the intersection of Biscayne Boulevard (US-1 / SR 5) and NE 163<sup>rd</sup> Street (SR 826) was revised using the traffic counts provided by the City's traffic consultant. The revised traffic operational analysis for the existing condition yielded overall LOS D and LOS E for the AM and PM peak hour, respectively. Moreover, the revised analysis for the future condition with project resulted in LOS E for both the AM and PM peak hour. Please note, the future traffic volumes included the additional committed development trips provided by the City. See attachment for supporting documentation.

# Traffic Impact Study

## Soleste NoMi Beach



16395 Biscayne Boulevard  
North Miami Beach, Florida

March 3<sup>rd</sup>, 2020  
May 26<sup>th</sup>, 2020 (Update)



Richard Garcia & Associates, Inc.

## City's Traffic Review Comments with Responses

We have reviewed the traffic comments from the City's traffic consultant, The Corradino Group, dated March 24<sup>th</sup>, 2019 for the subject project. We hereby offer the following responses to address the comments made.

1. **Page 1:** Projects that have direct or immediate access to Biscayne Boulevard/US-1 shall be subject to the review and approval by FDOT for compliance with FDOT standards. Please provide an approval letter from FDOT as part of your resubmittal for the new southern driveway connection along US-1/Biscayne Boulevard.

**Response:** The new southern driveway connection was approved by FDOT as part of another development project located adjacent to the subject site. FDOT has also approved a median opening, currently under construction, to provide direct access into the driveway that will be controlled by a traffic signal. Appendix 6 of the traffic study update contains the supporting documentation that was provided to us.

2. **Page 2:** Please confirm if there will be valet parking to any of the proposed land uses. The site plan provided shows a drop off area at the front of the hotel use. If valet parking will be provided, please include a valet traffic circulation analysis to and from the parking garage locations.

**Response:** The Client has indicated that no valet services will be provided at the drop-off area.

3. **Page 3:** Please update the intersection volume worksheets to use the peak season correction factor (PSCF) instead of just the seasonal factor (SF). Please update the traffic operational analysis accordingly.

**Response:** We respectfully disagree with the reviewer. The appropriate traffic data adjustment is the Seasonal Factor (SF) and not the Peak Season Conversion Factor (PSCF) as indicated by FDOT which is the agency responsible for developing the adjustment factors and their respective uses (See Appendix 6). FDOT has stated to us the following:

**"Unless you are feeding your data into an urban model, use the Seasonal Factors to turn your counts into AADT estimates."**

Nevertheless the traffic volumes were updated with the use of the PSCF in an effort to address and satisfy the reviewer's concerns. Also, the traffic operational analysis

was revised and yielded the same LOS results as previously documented in the original report. See traffic study update.

4. **Page 10/Page 11:** Please provide any comments provided by Miami Dade County Public Works and Waste Management Traffic Engineering Division. This should include approval of the additional southbound U-turns being added to the US-1/Biscayne Boulevard and NE 163<sup>rd</sup> Street intersection. This intersection currently has U-turn restrictions at the other three approaches (eastbound, westbound and northbound) to this intersection.

**Response:** Both Biscayne Boulevard (US 1 / SR 5) and NE 163<sup>rd</sup> Street (SR 826) are state roads and FDOT (Florida Department of Transportation) maintains jurisdiction over these facilities. The Client will submit the traffic study to FDOT and will address any comments they may have in reference to the subject intersection. Moreover, there is no restriction for southbound U-turns at the subject intersection and drivers are allowed to do so legally.

Regardless, the subject project is not expecting to add southbound U-turns at the subject intersection. The new median opening and driveway connection on Biscayne Boulevard just south of NE 165<sup>th</sup> Terrace (existing driveway) will provide access to the subject site and thus would eliminate potential southbound U-turns at the intersection of Biscayne Boulevard (SR 5) and NE 163<sup>rd</sup> Street (SR 826).

5. **Page 9:** Please confirm if there will be future site generated trips that will access the Riverwalk development through the existing site access from NE 163<sup>rd</sup> Street. Per the MU/SWF guidelines, this site access leads to a future planned secondary street.

**Response:** It is expected that some of the project traffic will utilize the existing access point on NE 163<sup>rd</sup> Street since this driveway provides connection to the subject site and adjacent properties. The revised site traffic exhibit depicts the project trips assigned to the existing driveway on NE 163<sup>rd</sup> Street.

6. **Page 12:** Please confirm if the City of North Miami Beach indicated that there were no committed trips from approved but unbuilt development projects to include in the traffic analysis.

**Response:** The committed development trips were included in the revised analysis as provided by the City of North Miami Beach. See revised report.

7. **Page 12:** Please provide a traffic operational analysis at the main site access driveway. Please include warrant analysis for a potential northbound right turn lane at the main site access driveway.

**Response:** The traffic operational analysis for the main site access (NE 165<sup>th</sup> Terrace) was included in the traffic study. Please note the revised analysis includes an exclusive northbound right-turn lane at the main access driveway. This right-turn lane is part of the future roadway improvements on Biscayne Boulevard provided by other development project. The traffic study update includes the supporting documentation.

8. **Appendix:** Please include a pavement marking and signage plan that provides the detailed traffic control at each of the driveway connections and for the on-site parking garage access locations. The pavement marking and signage plans should include labeling of the proposed loading space, stop sign traffic control and pedestrian crossing locations with required signage.

**Response:** Typically, pavement marking and signage plans are not part of a traffic impact study. These are essentially design items and will be provided by the Client.

9. **Appendix 5:** Please revise the Synchro analysis for all scenarios for the US-1/Biscayne Boulevard and NE 163<sup>rd</sup> Street intersection. The southbound U-turns should be modeled for this intersection in the existing and future conditions. Please separate the southbound U-turn movements from the southbound left turn movements.

**Response:** Please note the latest HCM 6 methodology does not analyze U-turn movements. As such, we added the U-turns to the left-turn movements in order to evaluate them since for the most part both movements are the same. In addition, the subject intersection was evaluated using the HCM 2000 methodology in the revised traffic operational analysis since the HCM 2000 does analyze U-turns. Both analyses yielded similar and acceptable LOS results for the subject intersection. See traffic study update.

10. **Appendix 5:** Please provide narrative regarding field traffic operations for the existing turn lane vehicles queues since Synchro is displaying the 95<sup>th</sup> percentile vehicle queues as metered from upstream signal. Field observations should be provided for both the AM and PM peak hour conditions.

**Response:** The upstream metering stated by Synchro is with respect to the traffic volumes and more importantly traffic progression, as expected. The Synchro output sheets on the original traffic study display the "m" footnote for the exclusive southbound turn lanes of the intersection of Biscayne Boulevard and NE 163<sup>rd</sup> Street.

This "m" footnote indicates that volume for the 95th percentile queue is metered by upstream signal.

Moreover, a review of the 95th percentile queues indicates the queues for some of the existing turn lanes are currently exceeding the turn bay storage length. This is an existing condition that will remain with or without the subject project. Lastly, as previously mentioned, both Biscayne Boulevard (US 1 / SR 5) and NE 163<sup>rd</sup> Street (SR 826) are state roads and FDOT maintains jurisdiction over these facilities. As such, the Client will submit the traffic study to FDOT and will address any comments they may have in reference to the subject intersection.

11. **Site Plan:** Please confirm if there are site generated trips distributed and assigned to the new southern driveway connection along US-1/Biscayne Boulevard.

**Response:** The revised site traffic exhibit depicts trips at the new southern driveway connection. See revised report.

12. **Site Plan:** Plan Sheets A-100 and/or A-101 should include a bicycle parking calculation per the MU/SWF District parking requirements/criteria. The site plan indicates there are 36 bicycle parking spaces on the ground floor.

**Response:** The design team for this project will address these comments and will provide the revised plans.

13. **Site Plan:** Please provide sight triangles on the site plan at each of the driveway connections to US-1/Biscayne Boulevard. The sight triangles should also be depicted on the landscape plans and the pavement marking and signage plan.

**Response:** The design team for this project will address this comment and will provide the revised plans.

14. **Site Plan:** The MU/SWF guidelines requires urban greenway design along secondary streets. The MU/SWF calls for a north-south secondary street that provides access to NE 163<sup>rd</sup> Street just east of US-1/Biscayne Boulevard (reference Comment #5).

**Response:** The design team for this project will address this comment and will provide the revised plans.

**Carlos Valentin**

---

**From:** Richard Garcia [rgarcia@rgattraffic.com]  
**Sent:** Wednesday, July 28, 2010 8:48 AM  
**To:** 'Carlos Valentin'  
**Subject:** FW: Traffic Impact Analysis

**Categories:** Red Category

Respectfully,

Richard Garcia, P.E.



**Richard Garcia & Associates Inc.**  
13117 NW 107th Avenue, Suite 4  
Hialeah Gardens, FL 33018  
PH: 305-595-7505  
FAX: 305-675-6474

---

**From:** Reel, Richard [mailto:Richard.Reel@dot.state.fl.us]  
**Sent:** Wednesday, July 28, 2010 8:44 AM  
**To:** Richard Garcia  
**Cc:** Al-Said, Ali; Corkery, Terrence; Bonyani, Gina; Sokolow, Gary  
**Subject:** RE: Traffic Impact Analysis

Richard,

Unless you are feeding your data into an urban model, use the Seasonal Factors to turn your counts into AADT estimates.

Rick Reel  
Transportation Statistics Office  
605 Suwannee St. MS27  
Tallahassee, FL 32399-0450  
PH: 850-414-4709 FAX: 850-414-4878

***"Slow down in work zones"***

---

**From:** Richard Garcia [mailto:rgarcia@rgattraffic.com]  
**Sent:** Wednesday, July 28, 2010 8:31 AM  
**To:** Reel, Richard  
**Cc:** Al-Said, Ali; Corkery, Terrence; Bonyani, Gina; Sokolow, Gary  
**Subject:** RE: Traffic Impact Analysis

Hi Rick,

I agree the purpose is key. We are using the factors to adjust traffic counts, both ADT and TMC, for Traffic Impact Analysis Studies. In such a study we analyze the existing intersection and arterial LOS as well as a near future (i.e. 2 to 3 years from now) proposed LOS.

The question then becomes should we use an SF or PSCF to adjust the raw counts, either TMC or ADT. Your input is greatly appreciated.

Respectfully,

Richard Garcia, P.E.



**Richard Garcia & Associates Inc.**  
13117 NW 107th Avenue, Suite 4  
Hialeah Gardens, FL 33018  
PH: 305-595-7505  
FAX: 305-675-6474

---

**From:** Reel, Richard [mailto:Richard.Reel@dot.state.fl.us]  
**Sent:** Tuesday, July 27, 2010 4:12 PM  
**To:** Richard Garcia  
**Cc:** Al-Said, Ali; Corkery, Terrence; Bonyani, Gina; Sokolow, Gary  
**Subject:** RE: Traffic Impact Analysis

Richard:

The factors you use determine the results you get. You first need to figure out what you're trying to do. Then pick the appropriate factors.

For example, we typically compute Annual Average Daily Traffic (AADT) using this formula:

$AADT = \text{raw count} * \text{Seasonal Factor} * \text{Axle Correction Factor (if required)}$

Note: Axle Correction Factors are not required when the raw count is a vehicle count, which is usually obtained using loops or a vehicle classification sensor array.

Urban models use Peak Season Weekday Average Daily Traffic (PSWADT), so if you want to feed a model with traffic data you have collected, you will need to convert it as follows:

$PSWADT = \text{raw count} * \text{Peak Season Conversion Factor} * \text{Axle Correction Factor (if required)}$

If you want to take a traffic volume from an urban model and turn it into an AADT, use the following formula:

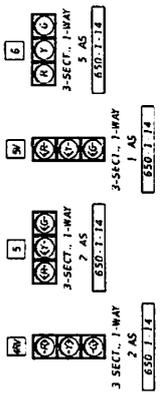
$AADT = PSWADT * \text{Model Output Conversion Factor}$

Hope this helps.

Rick Reel  
Transportation Statistics Office  
605 Suwannee St. MS27  
Tallahassee, FL 32399-0450  
PH: 850-414-4709 FAX: 850-414-4878

***"Slow down in work zones"***

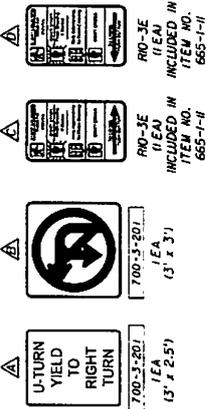
**SIGNAL DISPLAY DETAILS**



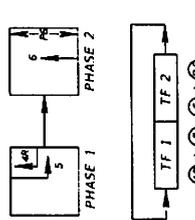
**PEDESTRIAN HEAD DETAILS**



**SIGN DETAILS**

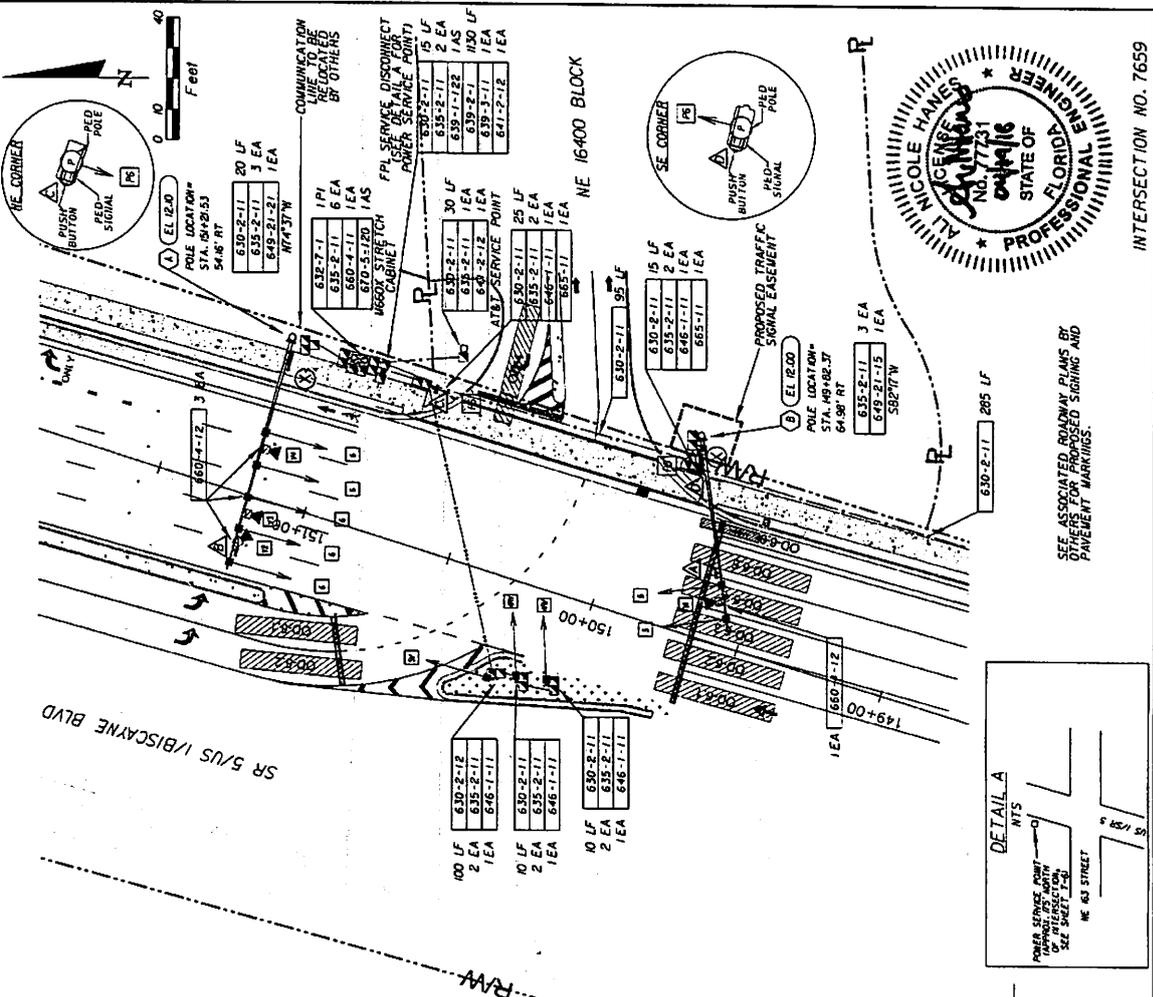
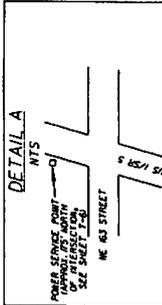
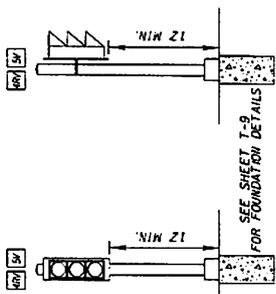


**SIGNAL OPERATING PLAN**



- CONTROLLER OPERATIONS NOTES**
- MAJOR STREET: SR 5/US /BISCAYNE BLVD
  - MINOR STREET: NE 16400 BLK
  - FLASHING OPERATIONS: MOVEMENT 6 YELLOW, AND MOVEMENTS 4R & 5 RED
  - TRAFFIC SIGNAL TIMING TO BE PROVIDED BY MIAMI-DADE COUNTY DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS - TRAFFIC SIGNALS AND SIGNS DIVISION
  - OPERATIONS FOR SIGNAL HEADS 4R SHALL BE AT THE SAME ELEVATION. SIGNAL HEAD MOUNTING HEIGHTS SHALL MEET MUTCD REQUIREMENTS.
- NOTES**
- FPL REPRESENTATIVE IS ALEJANDRO RODRIGUEZ, TEL: 305-770-7938.
  - AT&T REPRESENTATIVE IS JOSE SUAREZ, TEL: 305-222-8247.

**PEDESTAL MOUNT DETAILS**



INTERSECTION NO. 7659

DATE	BY	DESCRIPTION	REVISIONS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
5	MIAMI-DADE	

PROJECT NO.	SHEET NO.
	T-5

**Kimley-Horn**  
 Consulting Engineers, Inc. CA 000088  
 All Nicole Hanes, P.E.  
 License No. 77721  
 600 North West 7th Street, Suite 400  
 Miami, Florida 33135

No.	REVISIONS	DATE	BY

**Kimley»Horn**  
 400 N. BEECH CANYON BLVD. SUITE 100, P.O. BOX 11111  
 DENVER, CO 80202-1111  
 PHONE: 303-733-1100 FAX: 303-733-1175  
 WWW.KIMLEY-HORN.COM CA 00020986

George  
Balaban

PROJECT NO.	043745000
DATE	06/20/2018
SCALE AS SHOWN	AS SHOWN
DRAWN BY	ST
CHECKED BY	CB

**OVERALL  
SITE PLAN**

BISCAYNE BOULEVARD (S.R. 5)  
 AND NE 163RD STREET (S.R. 826)  
 PREPARED FOR  
 CK PRIVE GROUP 1800 LLC

SHEET NUMBER  
**C-103**

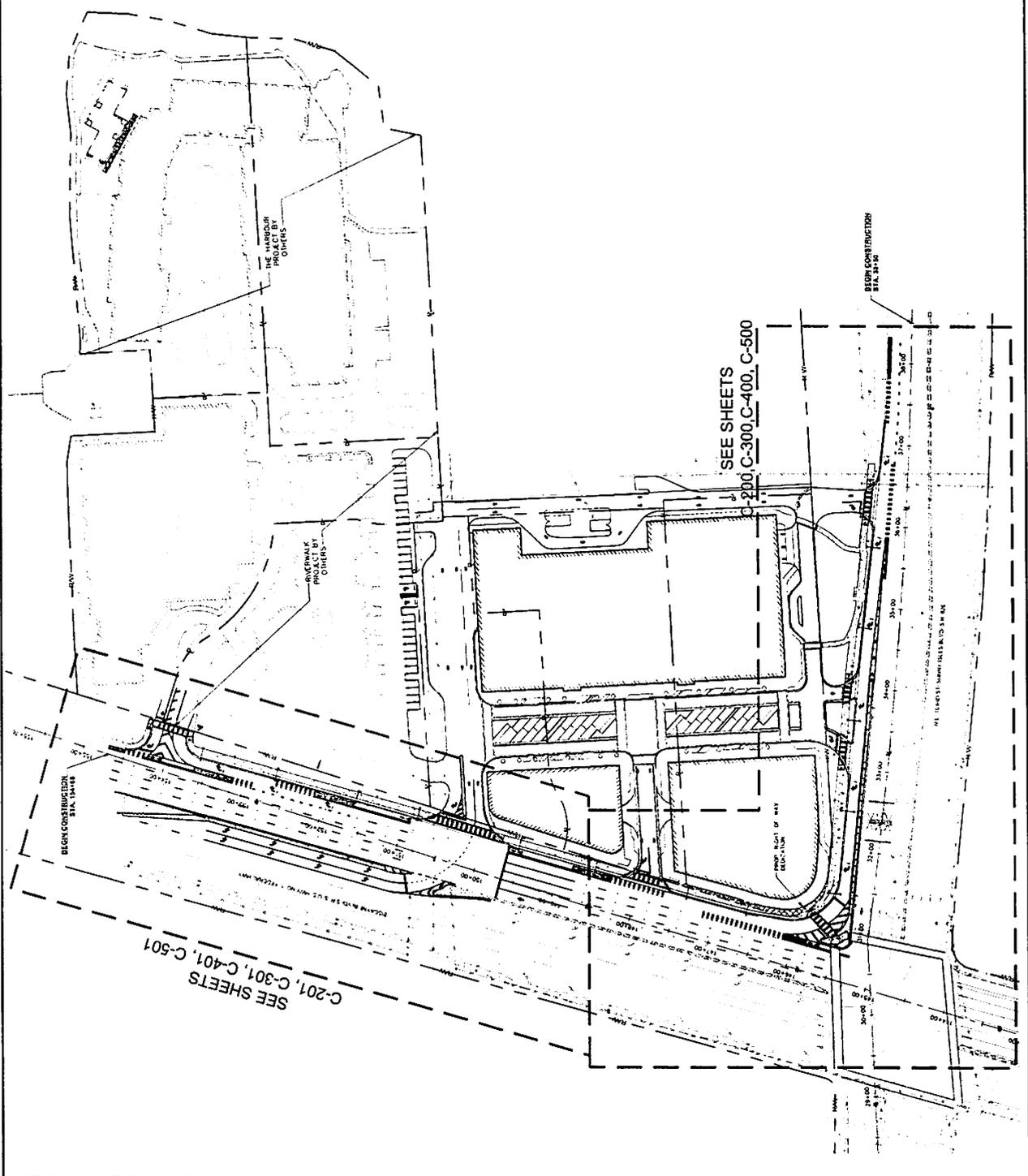


**LEGEND**

- PROPOSED DRIVE
- EXISTING DRIVE
- CENTER LINE OF ROADWAY

GRAPHIC SCALE IN FEET  
 0 30 60 120

NORTH



This drawing is prepared by Kimley-Horn and Associates, Inc. for the use of the client. It is not to be used for any other purpose without the written consent of Kimley-Horn and Associates, Inc. The client is responsible for the accuracy of the information provided to Kimley-Horn and Associates, Inc. and for the accuracy of the information shown on this drawing. Kimley-Horn and Associates, Inc. is not responsible for the accuracy of the information provided to the client or for the accuracy of the information shown on this drawing. Kimley-Horn and Associates, Inc. is not responsible for the accuracy of the information provided to the client or for the accuracy of the information shown on this drawing. Kimley-Horn and Associates, Inc. is not responsible for the accuracy of the information provided to the client or for the accuracy of the information shown on this drawing.

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# Traffic Impact Study

## The Riverwalk at North Miami Beach



16375/16395 Biscayne Boulevard  
North Miami Beach, Florida

August 21<sup>st</sup>, 2015



Richard Garcia & Associates, Inc.

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**Table 3: Trip Generation - AM Peak Hour**

LAND USE (LU)	UNITS	ITE LU CODE	ITE TRIP GENERATION RATE	AM PEAK HOUR TRIPS		
				IN	OUT	TOTAL
<b>Existing</b>						
Quality Restaurant (Parcel # 1)	8,569 Th.Sq.Ft.	931	0.81	3	4	7
Quality Restaurant (Parcel # 2)	8,249 Th.Sq.Ft.	931	0.81	3	4	7
<b>Existing Trips</b>				<b>6</b>	<b>8</b>	<b>14</b>
<b>Proposed</b>						
High-Rise Apartment (Bldg. A)	501 D.U.	222	0.30	38	113	151
High-Rise Residential Condominium (Bldg. B)	250 D.U.	232	0.34	16	69	85
Hotel (Bldg. B)	160 Rooms	310	0.53	50	35	85
Specialty Retail * (Bldg. B)	9,360 Th.Sq.Ft.	820/82	0.96	6	3	9
<b>Proposed Trips</b>				<b>110</b>	<b>220</b>	<b>330</b>
<i>Internal Capture 1%</i>				1	2	3
<b>External Trips (Proposed - Internal Capture Trips)</b>				<b>109</b>	<b>218</b>	<b>327</b>
<b>New External Trips (External - Existing Trips)</b>				<b>103</b>	<b>210</b>	<b>313</b>

Notes: Sources: ITE Trip Generation, 9th Edition & ITE Trip Generation Handbook, 2nd Edition.

\* Since ITE does not provide AM data for Specialty Retail (LU 826), ITE's rate for LU 820 (Shopping Center) was used to estimate the AM peak hour trips for LU 826.

**Table 4: Trip Generation - PM Peak Hour**

LAND USE (LU)	UNITS	ITE LU CODE	ITE TRIP GENERATION RATE	PM PEAK HOUR TRIPS		
				IN	OUT	TOTAL
<b>Existing</b>						
Quality Restaurant (Parcel # 1)	8,569 Th.Sq.Ft.	931	7.49	43	21	64
Quality Restaurant (Parcel # 2)	8,249 Th.Sq.Ft.	931	7.49	42	20	62
<b>Existing Trips</b>				<b>85</b>	<b>41</b>	<b>126</b>
<b>Proposed</b>						
High-Rise Apartment (Bldg. A)	501 D.U.	222	0.35	107	68	175
High-Rise Residential Condominium (Bldg. B)	250 D.U.	232	0.38	59	36	95
Hotel (Bldg. B)	160 Rooms	310	0.60	49	47	96
Specialty Retail (Bldg. B)	9,360 Th.Sq.Ft.	826	2.71	11	14	25
<b>Proposed Trips</b>				<b>226</b>	<b>165</b>	<b>391</b>
<i>Internal Capture 4%</i>				9	7	16
<b>External Trips (Proposed - Internal Capture Trips)</b>				<b>217</b>	<b>158</b>	<b>375</b>
<b>New External Trips (External - Existing Trips)</b>				<b>132</b>	<b>117</b>	<b>249</b>

Notes: Sources: ITE Trip Generation, 9th Edition & ITE Trip Generation Handbook, 2nd Edition.

