

## 11.0 TRANSPORTATION ELEMENT

### (1) TRANSPORTATION DATA AND ANALYSIS REQUIREMENTS

#### a) Inventory and Assessment of University Parking

##### 1. Current Campus Parking Facilities

###### MODESTO A. MAIDIQUE CAMPUS

The Parking, Transit and Service System Map (Figure 11.1A, Appendix 11.1) shows the parking layout at the Modesto A. Maidique Campus. The number of spaces by type for each parking lot is shown in Table 11.1. A total of 4,462 surface parking spaces and 8,896 multilevel parking spaces are provided on this campus. The majority of the parking spaces are allocated to students/residents (73%). Faculty and staff occupy 14% of the available spaces and the remaining 13% are allocated among executive, administrative, reserve, disabled, visitors (metered), carpool, motorbike, state vehicles, police, service, loading and car wash. All these spaces are located on campus. Currently, there are designated off-campus parking facilities within the Youth Fair property and Tamiami Park.

###### ENGINEERING CENTER

The Parking, Transit and Service System Map (Figure 11.1B, Appendix 11.1) shows the parking layout at the Engineering Center Campus. The number of spaces by type for the parking lot is shown on Table 11.2. A total of 973 surface parking spaces are provided on this campus. The majority of parking spaces are allocated to students (73%). Faculty and staff occupy 17% of the available spaces and the remaining 10% are allocated among executive, administrative, disabled, visitors (metered), carpool, electric motor bike and state vehicles. All of these spaces are located on campus. Currently, there are no designated off-campus parking facilities.

###### BISCAYNE BAY CAMPUS

The Parking, Transit and Service System Map (Figure 11.1C, Appendix 11.1) shows the parking layout at the Biscayne Bay Campus. Table 11.3 contains detailed counts of spaces by type for each lot. A total of 2711 surface parking spaces are provided at this campus. Parking spaces are allocated to students/residents (68%), faculty and staff occupy 13%, and the remaining 19% are allocated among executive, administrative, reserve, disabled, visitors (metered), carpool, motorbike, state vehicles, police, service and loading. All of these spaces are located on campus. Currently, there are no designated off-campus parking facilities.

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**Table 11.1 Parking Lot Counts by Stall Type – MODESTO A.**  
**MAIDIQUE[MK128]**

Florida International University Parking and Transportation		Modesto A. Maidique Campus - Parking Lot Counts By Space Type																				
LOT #	ADMIN	FACULTY/STAFF	STUDENT	RESIDENT	FACULTY/RESIDENT	RESERVED	DISABLED	METERED	CARPOOL	DROP OFF	ELECTRIC VEHICLE	MOTOR BIKE	STATE VEHICLE	GOLF CART	FIU POLICE	SERVICE C	SPECIAL	TIME LIMIT	CAR WASH	TOTAL		
17 - Central Utilities							6														6	
18 - Eng. & Comp. Science							10	2					2						5		19	
19 - North of OE							5														5	
20 - GC Loading														3							3	
21 - PC Loading						1		2					1	6	1				5		18	
23 - Greek Housing			8					2													10	
25 - Motorpool			34			21							12								67	
26 - CSC	50	103					5	11	1				18	4							195	
27 - CSC Loading			25					1													26	
28 - Surplus			4																		4	
29 - ROTC			5	27			1	3	1				9								46	
30 - Panthersoft Trailers			8	13			8	2					15								46	
31 - Student Athletic Center				55		17		4						2							78	
31x - Soccer Field				52																	52	
32 - HLS1 Loading								7													8	
34 - University House				56																	56	
HG - Parkview Garage				296				9					3	6							314	
PG-1 Gold Garage	127	195	561			8	22	14	7		2	4	4						5		16	983
PG-2 Blue Garage	35	303	559			1	16	45	2		1			2								968
PG-3 Panther Garage	20	121	1,241			3	8	16	3		3		5								11	1,431
PG-4 Red Garage	63	309	971				8	25	2		1		5	1							5	1,392
PG-5 MARKET STATION	52	156	1,407			61	20	36			2		6	6						3		1,755
PG-6 TECH STATION	20	198	1,718			9	32	62			2		2				2					2,053
<b>TOTAL</b>	<b>545</b>	<b>1,834</b>	<b>9,374</b>	<b>312</b>	<b>102</b>	<b>154</b>	<b>257</b>	<b>467</b>	<b>21</b>	<b>6</b>	<b>11</b>	<b>4</b>	<b>90</b>	<b>30</b>	<b>1</b>	<b>2</b>	<b>8</b>	<b>16</b>	<b>32</b>	<b>13,358</b>		

Source: FIU Department of Parking and Transportation, April 2021

FIU Parking and Transportation – MMC PARKING LOT COUNTS BY SPACE TYPE																				
LOT #	ADMIN	FAC/STAFF	STUDENT	RESIDENT	FAC/RESIDENT	RESERVED	DISABLED	METERED	CARPOOL	DROPOFF	ELECTRIC VEHICLE	MOTOR BIKE	STATE VEHICLE	GOLF CART	FIU POLICE	SERVICE	SPECIAL	TIME LIMIT	CAR WASH	TOTAL
17 – Central Utilities																				6
18 – Eng & Comp. Science																				19
19 – North of OE																				5
20 – GC Loading																				3
21 – PC																				18



TRANSPORTATION ELEMENT

Table 11.2 Parking Lot Counts by Stall Type – ENGINEERING CENTER[MK129]

Florida International University Parking and Transportation													Engineering Center - Parking Lot Counts By Space Type												
LOT #	EXECUTIVE	ADMIN	FACULTY/STAFF	STUDENT	RESERVED	DISABLED	METERED	CARPOOL	ELECTRIC VEH	MOTOR BIKE	STATE VEHICLE	TOTAL													
1 - 107th Avenue Entrance				18	173	1	10	17	6			2	227												
2 - East of Main Building				50	139								189												
3 - East of Lot 2				5	191		1	1				1	199												
4 - West of OU					10	19	3					2	34												
5 - East of OU						193							193												
6 - Covered Area	2	18		90	6	2	9		1		2	1	131												
<b>TOTAL</b>	<b>2</b>	<b>18</b>	<b>163</b>	<b>712</b>	<b>22</b>	<b>23</b>	<b>18</b>	<b>6</b>	<b>1</b>	<b>2</b>	<b>6</b>	<b>973</b>													

Source: FIU Department of Parking and Transportation, April 2021

Table 11.3 Parking Lot Counts by Stall Type – BISCAYNE BAY CAMPUS[MK130]

Florida International University Parking and													Biscayne Bay Campus - Parking Lot Counts By Space Type												
LOT #	EXECUTIVE	ADMIN	FACULTY/STAFF	STUDENT	RESIDENT	RESERVED	DISABLED	METERED	CARPOOL	ELECTRIC VEHICLE	MOTOR BIKE	STATE VEHICLE	FIU POLICE	SERVICE DELIVERY	TOTAL										
1 - West of Library	9	11	164			4	13	30	1		3				2	237									
2 - West of AC-1	2	6	88	221			14	52	3		3					389									
3 - West of AC-2				238												238									
4 - West of AC-2			20	977			7	4								1,008									
5 - West of Kovens Conference Center			34	144			12	16								206									
6 - Old Housing Lot			2			206	8				2					218									
7 - East of Central Recreation			27	18												45									
8 - Public Safety		1	1				2	1				2	10			17									
9 - South of Physical Plant												16				16									
10 - Central Utilities															2	2									
11 - East of Aquatic Center																-									
12 - South of Kovens Conference Center	2	2	20												3	27									
13 - Loading Area AC-2	1	2	10		243		7	5		4						272									
14 - Royal Caribbean						26	2									28									
15 - EL1			2	2		1		3								8									
<b>TOTAL</b>	<b>14</b>	<b>22</b>	<b>368</b>	<b>1,600</b>	<b>243</b>	<b>237</b>	<b>65</b>	<b>111</b>	<b>4</b>	<b>4</b>	<b>8</b>	<b>18</b>	<b>10</b>	<b>7</b>	<b>2,711</b>										

Source: FIU Department of Parking and Transportation, April 2021

**Existing University Parking Permit System:**

Florida International University utilizes virtual parking permits for vehicles parking on its campuses and utilizes license plate recognition hardware and software (LPR) for parking systems management. Every motor vehicle parked in a non-meter space on University property must maintain a valid permit<sup>[MK131]</sup>.

Vehicles used by members of the faculty, staff, students, (full or part-time), concessionaire employees and others who park at a nonmetered location on campus must be registered with the Parking Services during the first day the vehicle is on campus.

A student virtual permit will be issued to each student who is currently enrolled and has paid the transportation access fee or meets the criteria established by Florida Statutes 1009.25; 1009.26 and 1009.265 governing Educational Scholarships, Fees and Financial Assistance, fee exemptions, fee waivers and State employee fee waivers. A Transportation Access Fee is assessed to all students per semester as part of their enrollment fees except for students registered for a fully online degree program, students using tuition waiver, or otherwise classified as exempt.

Employees may elect to purchase a one semester, two semester or annual virtual permit. One semester and two semester permits will be valid from date of purchase and prorated accordingly. Annual permits are valid 365 days from date of purchase.

All vendors and contractors conducting business on campus are required to either purchase a staff virtual permit (at the Tier 1 rate), a daily virtual permit, or a 30-day virtual permit.

**2. Current Special Events Parking**

**MODESTO A. MAIDIQUE CAMPUS**

Existing Parking Facilities: Parking needs for baseball and soccer games are met at adjacent paved and unpaved lots. Basketball games and events at the FIU Ocean Bank Arena primarily use Lots 9, 10 and the Panther Parking Garage to accommodate parking demand. Parking demand for football games is met by reserved parking in Lots 6 and 7, as well as VIP parking in Tamiami Park, south of the FIU stadium. General football parking is accommodated in lots throughout the campus. Parking demand associated with University’s athletic events and special events has not exceeded parking capacity.

The Miami-Dade County Fair and Exposition is an 18-day event typically held at the end of March. Daily attendance averages nearly 50,000 people. Parking for the Fair is provided in Tamiami Park, but additional parking for the Fair is provided on campus, as needed, on weekdays after 8:00pm and after 4:00 pm on weekends and holidays.

**ENGINEERING CENTER**

Special events include guest speakers, social events, engineering galas, and other student organized events. Most special parking needs have been and are expected to continue to be met with the existing parking capacity.

**BISCAYNE BAY CAMPUS**

Special events, which could potentially effect on-campus parking includes swimming tournaments, guest speakers, social events, and other student organized events. Most special parking needs have been and are expected to continue to be met with the existing parking capacity.

**3. Assessment of Future Campus Parking Demand for Students, Faculty, Staff and Special Events for the Planning Period**

**MODESTO A. MAIDIQUE CAMPUS**

Existing Parking Ratios:

Analysis of parking spaces is based on the number of users and the available parking spaces. Users include students, faculty, and staff who have parking permits. The number of parking permits is the quantity issued to students, faculty, staff, and others, which were obtained from the FIU Department of Parking and Transportation. Table 11.4 summarizes number of users, number of spaces, and ratio of users to spaces. Average ratios of 1.1 students/space and 2.9 faculty-staff/space were calculated for existing conditions. The computation of these ratios does not include auxiliary parking spaces for uses such as visitors, ADA, FIU Police, loading, etc. The need for these uses should be evaluated individually for each campus based on existing ratios for these uses.

**Table 11.4 Existing Parking Ratios (2019) – MODESTO A. MAIDIQUE CAMPUS**

Type of User	Number of Users	Number of Spaces*	Ratio of Users/Space
Students (FTE)	**20,480	7,945	2.6
Faculty/Staff/Misc (FTE)	**7,171	2,366	3.0

\* Source: FIU Parking & Transportation, April 2021

\*\* Enrollment Matrix (FIU)

Future Parking Needs:

Based on discussions and information provided by the University’s Parking Department, the equation used for calculating parking spaces is based on the number of full-time enrollees (FTE) and the number of FTE living in campus housing. One (1) parking space is provided for every 2.94 FTE and one (1) parking space is provided for every two (2) FTE living in campus housing. Since future parking needs are based on FTE, it is important to obtain future enrollment data from the University. The FTE at the Modesto A. Maidique campus is estimated to be 24,650 (year 2020) and 4,930 (year 2020) full-time enrollees living in campus housing.<sup>[LR132][AC133]</sup>

Future Needs Projections:

Total parking for planning periods (2019, 2025 and 2030) is shown in Table 11.6. Although sufficient parking is available for 2015 and 2020 on the entire campus, localized parking demand within specific areas of the campus will need to be addressed, as well as the parking demand generated by the Academic Health Sciences clinical component. For year 2035, an additional 1, 647 parking spaces will be required to satisfy future demand.

**Table 11.5 Future Parking Needs Projections – MODESTO A. MAIDIQUE CAMPUS**

	2019	2025	2030
<b>Students <sup>(6)</sup></b>			
FTE (x)	20,480	20,480	20,480
FTE in campus housing (y) (Residents)	6,414	6,414	6,414
HC	29,651	29,651	29,651
<b>Faculty &amp; Staff (FTE) <sup>(8)</sup></b>	7,171	7,171	7,171
<b>Faculty &amp; Staff (HC) <sup>(7)</sup></b>	7,668	7,668	7,668
<b>Total Population <sup>(4)</sup></b>	<sup>[AC134]</sup> 37,319	37,319	37,319
FIU Total Parking Demand Methodology <sup>(1)</sup>	XXXX	XXXX	XXXX

Express Bus Adjustment (10%) <sup>(2)</sup> [AC135]	XXXX	XXXX	XXXX
FIU Adjusted Parking Demand <sup>(9)</sup>	XXXX	XXXX	XXXX
Parking Capacity (Students, Faculty & Staff) <sup>(3)</sup>	XXXX	XXXX	XXXX
FIU Methodology Available Capacity <sup>(5)</sup>	XXXX	XXXX	XXXX

- 1) Parking demand based on parking equations provided by FIU:  $P = 0.34x + 0.5y$  (x = Full Time Enrollees, y = Full Time Enrollees living in campus housing)
- 2) Express Bus adjustment (at MMC and Eng. Campuses) based upon programmed construction
- 3) Source: FIU Parking & Transportation (7/2011); includes PG6 Garage (add 2,100 spaces and remove 225 existing surface lot spaces). Computation: 10,076 (exist) + 2,100 – 225 = 11,951
- 4) Total Population includes: Headcount (HC) for Students and Faculty & Staff
- 5) Available capacity = (3) – (9). positive number indicates excess capacity & negative number indicates additional spaces needed to satisfy parking demand for year 2035
- 6) Source: FIU enrollment matrix
- 7) **Faculty/Staff (HC)** has a flat projection based on the flat projection of students until 2030.
- 8) **Faculty/Staff (FTE)** has a flat projection based on the flat projection of students until 2030.

**ENGINEERING CENTER**

Existing Parking Ratios:

The total number of permits issued to students, faculty, staff, and others was obtained from the University’s Parking Department. Table 11.6 summarize number of users, number of spaces, and ratio of users to spaces at the Engineering Center. [The average ratios of 2.1 students/space and 0.5 faculty- staff/space](#) [MK136] were found under the existing conditions. These do not include auxiliary parking spaces for uses such as visitors, disabled, and loading.

**Table 11.6 Existing Parking Ratios (2019) – ENGINEERING CENTER**

Type of User	Number of Users	Number of Spaces**	Ratio of Users/Space
Students (FTE)	*1,532	712	2.2
Faculty/Staff (FTE)	*140	183	0.8

\* Source: FIU Enrollment Matrix

\*\* Source: FIU Parking & Transportation, updated April 2021

Future Parking Needs:

Based on discussions and information provided by the University's Parking Department, the equation used for calculating parking spaces is based on the number of FTE and the number of FTE living in campus housing. One (1) parking space is provided for every 2.94 FTE and one (1) parking space is provided for every two (2) FTE living in campus housing. [MK137] Based on the future population estimates provided by the University, the FTE population at the Engineering Center is estimated to be 1,379 (year 2020). The Engineering Center does not offer campus housing, therefore FTE on campus housing was not considered in the computation of future parking demand.

Future Needs Projections:

Total parking for the planning periods (2019, 2025 & 2030) is shown in Table 11.8. A total of 5 additional parking spaces will be required at the Engineering Center for year 2035. [AC138]

**Table 11.7 Future Parking Needs Projections – ENGINEERING CENTER**[MK139]

	2019	2025	2030
<b>Students</b> <sup>(5)</sup>			

## 11.0 TRANSPORTATION ELEMENT

### (1) TRANSPORTATION DATA AND ANALYSIS REQUIREMENTS

#### a) Inventory and Assessment of University Parking

##### 1. Current Campus Parking Facilities

###### MODESTO A. MAIDIQUE CAMPUS

The Parking, Transit and Service System Map (Figure 11.1A, Appendix 11.1) shows the parking layout at the Modesto A. Maidique Campus. The number of spaces by type for each parking lot is shown in Table 11.1. A total of 4,462 surface parking spaces and 8,896 multilevel parking spaces are provided on this campus. The majority of the parking spaces are allocated to students/residents (73%). Faculty and staff occupy 14% of the available spaces and the remaining 13% are allocated among executive, administrative, reserve, disabled, visitors (metered), carpool, motorbike, state vehicles, police, service, loading and car wash. All these spaces are located on campus. Currently, there are designated off-campus parking facilities within the Youth Fair property and Tamiami Park.

###### ENGINEERING CENTER

The Parking, Transit and Service System Map (Figure 11.1B, Appendix 11.1) shows the parking layout at the Engineering Center Campus. The number of spaces by type for the parking lot is shown on Table 11.2. A total of 973 surface parking spaces are provided on this campus. The majority of parking spaces are allocated to students (73%). Faculty and staff occupy 17% of the available spaces and the remaining 10% are allocated among executive, administrative, disabled, visitors (metered), carpool, electric motor bike and state vehicles. All of these spaces are located on campus. Currently, there are no designated off-campus parking facilities.

###### BISCAYNE BAY CAMPUS

The Parking, Transit and Service System Map (Figure 11.1C, Appendix 11.1) shows the parking layout at the Biscayne Bay Campus. Table 11.3 contains detailed counts of spaces by type for each lot. A total of 2711 surface parking spaces are provided at this campus. Parking spaces are allocated to students/residents (68%), faculty and staff occupy 13%, and the remaining 19% are allocated among executive, administrative, reserve, disabled, visitors (metered), carpool, motorbike, state vehicles, police, service and loading. All of these spaces are located on campus. Currently, there are no designated off-campus parking facilities.

## 11.0 TRANSPORTATION ELEMENT

### (1) TRANSPORTATION DATA AND ANALYSIS REQUIREMENTS

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##### 1. Current Campus Parking Facilities

###### MODESTO A. MAIDIQUE CAMPUS

The Parking, Transit and Service System Map (Figure 11.1A, Appendix 11.1) shows the parking layout at the Modesto A. Maidique Campus. The number of spaces by type for each parking lot is shown in Table 11.1. A total of 4,462 surface parking spaces and 8,896 multilevel parking spaces are provided on this campus. The majority of the parking spaces are allocated to students/residents (73%). Faculty and staff occupy 14% of the available spaces and the remaining 13% are allocated among executive, administrative, reserve, disabled, visitors (metered), carpool, motorbike, state vehicles, police, service, loading and car wash. All these spaces are located on campus. Currently, there are designated off-campus parking facilities within the Youth Fair property and Tamiami Park.

###### ENGINEERING CENTER

The Parking, Transit and Service System Map (Figure 11.1B, Appendix 11.1) shows the parking layout at the Engineering Center Campus. The number of spaces by type for the parking lot is shown on Table 11.2. A total of 973 surface parking spaces are provided on this campus. The majority of parking spaces are allocated to students (73%). Faculty and staff occupy 17% of the available spaces and the remaining 10% are allocated among executive, administrative, disabled, visitors (metered), carpool, electric motor bike and state vehicles. All of these spaces are located on campus. Currently, there are no designated off-campus parking facilities.

###### BISCAYNE BAY CAMPUS

The Parking, Transit and Service System Map (Figure 11.1C, Appendix 11.1) shows the parking layout at the Biscayne Bay Campus. Table 11.3 contains detailed counts of spaces by type for each lot. A total of 2711 surface parking spaces are provided at this campus. Parking spaces are allocated to students/residents (68%), faculty and staff occupy 13%, and the remaining 19% are allocated among executive, administrative, reserve, disabled, visitors (metered), carpool, motorbike, state vehicles, police, service and loading. All of these spaces are located on campus. Currently, there are no designated off-campus parking facilities.

TRANSPORTATION ELEMENT

**Table 11.1 Parking Lot Counts by Stall Type – MODESTO A.**  
**MAIDIQUE[MK128]**

Florida International University Parking and Transportation		Modesto A. Maidique Campus - Parking Lot Counts By Space Type																				
LOT #	ADMIN	FACULTY/STAFF	STUDENT	RESIDENT	FACULTY/RESIDENT	RESERVED	DISABLED	METERED	CARPOOL	DROP OFF	ELECTRIC VEHICLE	MOTOR BIKE	STATE VEHICLE	GOLF CART	FIU POLICE	SERVICE C	SPECIAL	TIME LIMIT	CAR WASH	TOTAL		
17 - Central Utilities							6														6	
18 - Eng. & Comp. Science							10	2					2						5		19	
19 - North of OE							5														5	
20 - GC Loading														3							3	
21 - PC Loading						1		2					1	6	1				5		18	
23 - Greek Housing			8					2													10	
25 - Motorpool			34			21							12								67	
26 - CSC	50	103					5	11	1				18	4							195	
27 - CSC Loading			25					1													26	
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29 - ROTC			5	27			1	3	1				9								46	
30 - Panthersoft Trailers			8	13			8	2					15								46	
31 - Student Athletic Center				55		17		4						2							78	
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PG-2 Blue Garage	35	303	559			1	16	45	2		1			2							968	
PG-3 Panther Garage	20	121	1,241			3	8	16	3		3		5							11	1,431	
PG-4 Red Garage	63	309	971				8	25	2		1		5	1							5	1,392
PG-5 MARKET STATION	52	156	1,407			61	20	36			2		6	6					3		1,755	
PG-6 TECH STATION	20	198	1,718			9	32	62			2		2				2				2,053	
<b>TOTAL</b>	<b>545</b>	<b>1,834</b>	<b>9,374</b>	<b>312</b>	<b>102</b>	<b>154</b>	<b>257</b>	<b>467</b>	<b>21</b>	<b>6</b>	<b>11</b>	<b>4</b>	<b>90</b>	<b>30</b>	<b>1</b>	<b>2</b>	<b>8</b>	<b>16</b>	<b>32</b>	<b>13,358</b>		

Source: FIU Department of Parking and Transportation, April 2021

FIU Parking and Transportation – MMC PARKING LOT COUNTS BY SPACE TYPE																				
LOT #	ADMIN	FAC/STAFF	STUDENT	RESIDENT	FAC/RESIDENT	RESERVED	DISABLED	METERED	CARPOOL	DROPOFF	ELECTRIC VEHICLE	MOTOR BIKE	STATE VEHICLE	GOLF CART	FIU POLICE	SERVICE	SPECIAL	TIME LIMIT	CAR WASH	TOTAL
17 – Central Utilities																				6
18 – Eng & Comp. Science																				19
19 – North of OE																				5
20 – GC Loading																				3
21 – PC																				18



TRANSPORTATION ELEMENT

Table 11.2 Parking Lot Counts by Stall Type – ENGINEERING CENTER[MK129]

Florida International University Parking and Transportation													Engineering Center - Parking Lot Counts By Space Type												
LOT #	EXECUTIVE	ADMIN	FACULTY/STAFF	STUDENT	RESERVED	DISABLED	METERED	CARPOOL	ELECTRIC VEH	MOTOR BIKE	STATE VEHICLE	TOTAL													
1 - 107th Avenue Entrance				18	173	1	10	17	6			2	227												
2 - East of Main Building				50	139								189												
3 - East of Lot 2				5	191		1	1				1	199												
4 - West of OU					10	19	3					2	34												
5 - East of OU					193								193												
6 - Covered Area	2	18		90	6	2	9		1		2	1	131												
<b>TOTAL</b>	<b>2</b>	<b>18</b>	<b>163</b>	<b>712</b>	<b>22</b>	<b>23</b>	<b>18</b>	<b>6</b>	<b>1</b>	<b>2</b>	<b>6</b>	<b>973</b>													

Source: FIU Department of Parking and Transportation, April 2021

Table 11.3 Parking Lot Counts by Stall Type – BISCAYNE BAY CAMPUS[MK130]

Florida International University Parking and													Biscayne Bay Campus - Parking Lot Counts By Space Type												
LOT #	EXECUTIVE	ADMIN	FACULTY/STAFF	STUDENT	RESIDENT	RESERVED	DISABLED	METERED	CARPOOL	ELECTRIC VEHICLE	MOTOR BIKE	STATE VEHICLE	FIU POLICE	SERVICE DELIVERY	TOTAL										
1 - West of Library	9	11	164			4	13	30	1		3				2	237									
2 - West of AC-1	2	6	88	221			14	52	3		3					389									
3 - West of AC-2				238												238									
4 - West of AC-2			20	977			7	4								1,008									
5 - West of Kovens Conference Center			34	144			12	16								206									
6 - Old Housing Lot			2			206	8				2					218									
7 - East of Central Recreation			27	18												45									
8 - Public Safety		1	1				2	1					2	10		17									
9 - South of Physical Plant												16				16									
10 - Central Utilities															2	2									
11 - East of Aquatic Center																-									
12 - South of Kovens Conference Center	2	2	20												3	27									
13 - Loading Area AC-2	1	2	10		243		7	5		4						272									
14 - Royal Caribbean						26	2									28									
15 - EL1			2	2		1		3								8									
<b>TOTAL</b>	<b>14</b>	<b>22</b>	<b>368</b>	<b>1,600</b>	<b>243</b>	<b>237</b>	<b>65</b>	<b>111</b>	<b>4</b>	<b>4</b>	<b>8</b>	<b>18</b>	<b>10</b>	<b>7</b>	<b>2,711</b>										

Source: FIU Department of Parking and Transportation, April 2021

**Existing University Parking Permit System:**

Florida International University utilizes virtual parking permits for vehicles parking on its campuses and utilizes license plate recognition hardware and software (LPR) for parking systems management. Every motor vehicle parked in a non-meter space on University property must maintain a valid permit<sup>[MK131]</sup>.

Vehicles used by members of the faculty, staff, students, (full or part-time), concessionaire employees and others who park at a nonmetered location on campus must be registered with the Parking Services during the first day the vehicle is on campus.

A student virtual permit will be issued to each student who is currently enrolled and has paid the transportation access fee or meets the criteria established by Florida Statutes 1009.25; 1009.26 and 1009.265 governing Educational Scholarships, Fees and Financial Assistance, fee exemptions, fee waivers and State employee fee waivers. A Transportation Access Fee is assessed to all students per semester as part of their enrollment fees except for students registered for a fully online degree program, students using tuition waiver, or otherwise classified as exempt.

Employees may elect to purchase a one semester, two semester or annual virtual permit. One semester and two semester permits will be valid from date of purchase and prorated accordingly. Annual permits are valid 365 days from date of purchase.

All vendors and contractors conducting business on campus are required to either purchase a staff virtual permit (at the Tier 1 rate), a daily virtual permit, or a 30-day virtual permit.

**2. Current Special Events Parking**

**MODESTO A. MAIDIQUE CAMPUS**

Existing Parking Facilities: Parking needs for baseball and soccer games are met at adjacent paved and unpaved lots. Basketball games and events at the FIU Ocean Bank Arena primarily use Lots 9, 10 and the Panther Parking Garage to accommodate parking demand. Parking demand for football games is met by reserved parking in Lots 6 and 7, as well as VIP parking in Tamiami Park, south of the FIU stadium. General football parking is accommodated in lots throughout the campus. Parking demand associated with University’s athletic events and special events has not exceeded parking capacity.

The Miami-Dade County Fair and Exposition is an 18-day event typically held at the end of March. Daily attendance averages nearly 50,000 people. Parking for the Fair is provided in Tamiami Park, but additional parking for the Fair is provided on campus, as needed, on weekdays after 8:00pm and after 4:00 pm on weekends and holidays.

**ENGINEERING CENTER**

Special events include guest speakers, social events, engineering galas, and other student organized events. Most special parking needs have been and are expected to continue to be met with the existing parking capacity.

**BISCAYNE BAY CAMPUS**

Special events, which could potentially effect on-campus parking includes swimming tournaments, guest speakers, social events, and other student organized events. Most special parking needs have been and are expected to continue to be met with the existing parking capacity.

**3. Assessment of Future Campus Parking Demand for Students, Faculty, Staff and Special Events for the Planning Period**

**MODESTO A. MAIDIQUE CAMPUS**

Existing Parking Ratios:

Analysis of parking spaces is based on the number of users and the available parking spaces. Users include students, faculty, and staff who have parking permits. The number of parking permits is the quantity issued to students, faculty, staff, and others, which were obtained from the FIU Department of Parking and Transportation. Table 11.4 summarizes number of users, number of spaces, and ratio of users to spaces. Average ratios of 1.1 students/space and 2.9 faculty-staff/space were calculated for existing conditions. The computation of these ratios does not include auxiliary parking spaces for uses such as visitors, ADA, FIU Police, loading, etc. The need for these uses should be evaluated individually for each campus based on existing ratios for these uses.

**Table 11.4 Existing Parking Ratios (2019) – MODESTO A. MAIDIQUE CAMPUS**

Type of User	Number of Users	Number of Spaces*	Ratio of Users/Space
Students (FTE)	**20,480	7,945	2.6
Faculty/Staff/Misc (FTE)	**7,171	2,366	3.0

\* Source: FIU Parking & Transportation, April 2021

\*\* Enrollment Matrix (FIU)

Future Parking Needs:

Based on discussions and information provided by the University’s Parking Department, the equation used for calculating parking spaces is based on the number of full-time enrollees (FTE) and the number of FTE living in campus housing. One (1) parking space is provided for every 2.94 FTE and one (1) parking space is provided for every two (2) FTE living in campus housing. Since future parking needs are based on FTE, it is important to obtain future enrollment data from the University. The FTE at the Modesto A. Maidique campus is estimated to be 24,650 (year 2020) and 4,930 (year 2020) full-time enrollees living in campus housing.[LR132][AC133]

Future Needs Projections:

Total parking for planning periods (2019, 2025 and 2030) is shown in Table 11.6. Although sufficient parking is available for 2015 and 2020 on the entire campus, localized parking demand within specific areas of the campus will need to be addressed, as well as the parking demand generated by the Academic Health Sciences clinical component. For year 2035, an additional 1, 647 parking spaces will be required to satisfy future demand.

**Table 11.5 Future Parking Needs Projections – MODESTO A. MAIDIQUE CAMPUS**

	2019	2025	2030
<b>Students <sup>(6)</sup></b>			
FTE (x)	20,480	20,480	20,480
FTE in campus housing (y) (Residents)	6,414	6,414	6,414
HC	29,651	29,651	29,651
<b>Faculty &amp; Staff (FTE) <sup>(8)</sup></b>	7,171	7,171	7,171
<b>Faculty &amp; Staff (HC) <sup>(7)</sup></b>	7,668	7,668	7,668
<b>Total Population <sup>(4)</sup></b>	[AC134]37,319	37,319	37,319
FIU Total Parking Demand Methodology <sup>(1)</sup>	XXXX	XXXX	XXXX

Express Bus Adjustment (10%) <sup>(2)</sup> [AC135]	XXXX	XXXX	XXXX
FIU Adjusted Parking Demand <sup>(9)</sup>	XXXX	XXXX	XXXX
Parking Capacity (Students, Faculty & Staff) <sup>(3)</sup>	XXXX	XXXX	XXXX
FIU Methodology Available Capacity <sup>(5)</sup>	XXXX	XXXX	XXXX

- 1) Parking demand based on parking equations provided by FIU:  $P = 0.34x + 0.5y$  (x = Full Time Enrollees, y = Full Time Enrollees living in campus housing)
- 2) Express Bus adjustment (at MMC and Eng. Campuses) based upon programmed construction
- 3) Source: FIU Parking & Transportation (7/2011); includes PG6 Garage (add 2,100 spaces and remove 225 existing surface lot spaces). Computation: 10,076 (exist) + 2,100 – 225 = 11,951
- 4) Total Population includes: Headcount (HC) for Students and Faculty & Staff
- 5) Available capacity = (3) – (9). positive number indicates excess capacity & negative number indicates additional spaces needed to satisfy parking demand for year 2035
- 6) Source: FIU enrollment matrix
- 7) **Faculty/Staff (HC)** has a flat projection based on the flat projection of students until 2030.
- 8) **Faculty/Staff (FTE)** has a flat projection based on the flat projection of students until 2030.

**ENGINEERING CENTER**

Existing Parking Ratios:

The total number of permits issued to students, faculty, staff, and others was obtained from the University’s Parking Department. Table 11.6 summarize number of users, number of spaces, and ratio of users to spaces at the Engineering Center. [The average ratios of 2.1 students/space and 0.5 faculty- staff/space](#) [MK136] were found under the existing conditions. These do not include auxiliary parking spaces for uses such as visitors, disabled, and loading.

**Table 11.6 Existing Parking Ratios (2019) – ENGINEERING CENTER**

Type of User	Number of Users	Number of Spaces**	Ratio of Users/Space
Students (FTE)	*1,532	712	2.2
Faculty/Staff (FTE)	*140	183	0.8

\* Source: FIU Enrollment Matrix

\*\* Source: FIU Parking & Transportation, updated April 2021

Future Parking Needs:

Based on discussions and information provided by the University's Parking Department, the equation used for calculating parking spaces is based on the number of FTE and the number of FTE living in campus housing. One (1) parking space is provided for every 2.94 FTE and one (1) parking space is provided for every two (2) FTE living in campus housing. [MK137] Based on the future population estimates provided by the University, the FTE population at the Engineering Center is estimated to be 1,379 (year 2020). The Engineering Center does not offer campus housing, therefore FTE on campus housing was not considered in the computation of future parking demand.

Future Needs Projections:

Total parking for the planning periods (2019, 2025 & 2030) is shown in Table 11.8. A total of 5 additional parking spaces will be required at the Engineering Center for year 2035. [AC138]

**Table 11.7 Future Parking Needs Projections – ENGINEERING CENTER**[MK139]

	2019	2025	2030
<b>Students</b> <sup>(5)</sup>			

TRANSPORTATION ELEMENT

**Table 11.1 Parking Lot Counts by Stall Type – MODESTO A.**  
**MAIDIQUE[MK128]**

Florida International University Parking and Transportation		Modesto A. Maidique Campus - Parking Lot Counts By Space Type																				
LOT #	ADMIN	FACULTY/STAFF	STUDENT	RESIDENT	FACULTY/RESIDENT	RESERVED	DISABLED	METERED	CARPOOL	DROP OFF	ELECTRIC VEHICLE	MOTOR BIKE	STATE VEHICLE	GOLF CART	FIU POLICE	SERVICE C	SPECIAL	TIME LIMIT	CAR WASH	TOTAL		
17 - Central Utilities							6														6	
18 - Eng. & Comp. Science							10	2					2						5		19	
19 - North of OE							5														5	
20 - GC Loading														3							3	
21 - PC Loading						1		2					1	6	1				5		18	
23 - Greek Housing			8					2													10	
25 - Motorpool			34			21							12								67	
26 - CSC	50	103					5	11	1				18	4							195	
27 - CSC Loading			25					1													26	
28 - Surplus			4																		4	
29 - ROTC			5	27			1	3	1				9								46	
30 - Panthersoft Trailers			8	13			8	2					15								46	
31 - Student Athletic Center				55		17		4						2							78	
31x - Soccer Field				52																	52	
32 - HLS1 Loading								7													8	
34 - University House				56																	56	
HG - Parkview Garage				296				9					3	6							314	
PG-1 Gold Garage	127	195	561			8	22	14	7		2	4	4						5		16	983
PG-2 Blue Garage	35	303	559			1	16	45	2		1			2								968
PG-3 Panther Garage	20	121	1,241			3	8	16	3		3		5								11	1,431
PG-4 Red Garage	63	309	971				8	25	2		1		5	1							5	1,392
PG-5 MARKET STATION	52	156	1,407			61	20	36			2		6	6						3		1,755
PG-6 TECH STATION	20	198	1,718			9	32	62			2		2				2					2,053
<b>TOTAL</b>	<b>545</b>	<b>1,834</b>	<b>9,374</b>	<b>312</b>	<b>102</b>	<b>154</b>	<b>257</b>	<b>467</b>	<b>21</b>	<b>6</b>	<b>11</b>	<b>4</b>	<b>90</b>	<b>30</b>	<b>1</b>	<b>2</b>	<b>8</b>	<b>16</b>	<b>32</b>	<b>13,358</b>		

Source: FIU Department of Parking and Transportation, April 2021

FIU Parking and Transportation – MMC PARKING LOT COUNTS BY SPACE TYPE																				
LOT #	ADMIN	FAC/STAFF	STUDENT	RESIDENT	FAC/RESIDENT	RESERVED	DISABLED	METERED	CARPOOL	DROPOFF	ELECTRIC VEHICLE	MOTOR BIKE	STATE VEHICLE	GOLF CART	FIU POLICE	SERVICE	SPECIAL	TIME LIMIT	CAR WASH	TOTAL
17 – Central Utilities																				6
18 – Eng & Comp. Science																				19
19 – North of OE																				5
20 – GC Loading																				3
21 – PC																				18



TRANSPORTATION ELEMENT

Table 11.2 Parking Lot Counts by Stall Type – ENGINEERING CENTER[MK129]

Florida International University Parking and Transportation													Engineering Center - Parking Lot Counts By Space Type												
LOT #	EXECUTIVE	ADMIN	FACULTY/STAFF	STUDENT	RESERVED	DISABLED	METERED	CARPOOL	ELECTRIC VEH	MOTOR BIKE	STATE VEHICLE	TOTAL													
1 - 107th Avenue Entrance				18	173	1	10	17	6			2	227												
2 - East of Main Building				50	139								189												
3 - East of Lot 2				5	191		1	1				1	199												
4 - West of OU					10	19	3					2	34												
5 - East of OU						193							193												
6 - Covered Area	2	18		90	6	2	9		1		2	1	131												
<b>TOTAL</b>	<b>2</b>	<b>18</b>	<b>163</b>	<b>712</b>	<b>22</b>	<b>23</b>	<b>18</b>	<b>6</b>	<b>1</b>	<b>2</b>	<b>6</b>	<b>973</b>													

Source: FIU Department of Parking and Transportation, April 2021

Table 11.3 Parking Lot Counts by Stall Type – BISCAYNE BAY CAMPUS[MK130]

Florida International University Parking and													Biscayne Bay Campus - Parking Lot Counts By Space Type												
LOT #	EXECUTIVE	ADMIN	FACULTY/STAFF	STUDENT	RESIDENT	RESERVED	DISABLED	METERED	CARPOOL	ELECTRIC VEHICLE	MOTOR BIKE	STATE VEHICLE	FIU POLICE	SERVICE DELIVERY	TOTAL										
1 - West of Library	9	11	164			4	13	30	1		3				2	237									
2 - West of AC-1	2	6	88	221			14	52	3		3					389									
3 - West of AC-2				238												238									
4 - West of AC-2			20	977			7	4								1,008									
5 - West of Kovens Conference Center			34	144			12	16								206									
6 - Old Housing Lot			2			206	8				2					218									
7 - East of Central Recreation			27	18												45									
8 - Public Safety		1	1				2	1				2	10			17									
9 - South of Physical Plant												16				16									
10 - Central Utilities															2	2									
11 - East of Aquatic Center																-									
12 - South of Kovens Conference Center	2	2	20												3	27									
13 - Loading Area AC-2	1	2	10		243		7	5		4						272									
14 - Royal Caribbean						26	2									28									
15 - EL1			2	2		1		3								8									
<b>TOTAL</b>	<b>14</b>	<b>22</b>	<b>368</b>	<b>1,600</b>	<b>243</b>	<b>237</b>	<b>65</b>	<b>111</b>	<b>4</b>	<b>4</b>	<b>8</b>	<b>18</b>	<b>10</b>	<b>7</b>	<b>2,711</b>										

Source: FIU Department of Parking and Transportation, April 2021

**Existing University Parking Permit System:**

Florida International University utilizes virtual parking permits for vehicles parking on its campuses and utilizes license plate recognition hardware and software (LPR) for parking systems management. Every motor vehicle parked in a non-meter space on University property must maintain a valid permit<sup>[MK131]</sup>.

Vehicles used by members of the faculty, staff, students, (full or part-time), concessionaire employees and others who park at a nonmetered location on campus must be registered with the Parking Services during the first day the vehicle is on campus.

A student virtual permit will be issued to each student who is currently enrolled and has paid the transportation access fee or meets the criteria established by Florida Statutes 1009.25; 1009.26 and 1009.265 governing Educational Scholarships, Fees and Financial Assistance, fee exemptions, fee waivers and State employee fee waivers. A Transportation Access Fee is assessed to all students per semester as part of their enrollment fees except for students registered for a fully online degree program, students using tuition waiver, or otherwise classified as exempt.

Employees may elect to purchase a one semester, two semester or annual virtual permit. One semester and two semester permits will be valid from date of purchase and prorated accordingly. Annual permits are valid 365 days from date of purchase.

All vendors and contractors conducting business on campus are required to either purchase a staff virtual permit (at the Tier 1 rate), a daily virtual permit, or a 30-day virtual permit.

**2. Current Special Events Parking**

**MODESTO A. MAIDIQUE CAMPUS**

Existing Parking Facilities: Parking needs for baseball and soccer games are met at adjacent paved and unpaved lots. Basketball games and events at the FIU Ocean Bank Arena primarily use Lots 9, 10 and the Panther Parking Garage to accommodate parking demand. Parking demand for football games is met by reserved parking in Lots 6 and 7, as well as VIP parking in Tamiami Park, south of the FIU stadium. General football parking is accommodated in lots throughout the campus. Parking demand associated with University’s athletic events and special events has not exceeded parking capacity.

The Miami-Dade County Fair and Exposition is an 18-day event typically held at the end of March. Daily attendance averages nearly 50,000 people. Parking for the Fair is provided in Tamiami Park, but additional parking for the Fair is provided on campus, as needed, on weekdays after 8:00pm and after 4:00 pm on weekends and holidays.

**ENGINEERING CENTER**

Special events include guest speakers, social events, engineering galas, and other student organized events. Most special parking needs have been and are expected to continue to be met with the existing parking capacity.

**BISCAYNE BAY CAMPUS**

Special events, which could potentially effect on-campus parking includes swimming tournaments, guest speakers, social events, and other student organized events. Most special parking needs have been and are expected to continue to be met with the existing parking capacity.

**3. Assessment of Future Campus Parking Demand for Students, Faculty, Staff and Special Events for the Planning Period**

**MODESTO A. MAIDIQUE CAMPUS**

Existing Parking Ratios:

Analysis of parking spaces is based on the number of users and the available parking spaces. Users include students, faculty, and staff who have parking permits. The number of parking permits is the quantity issued to students, faculty, staff, and others, which were obtained from the FIU Department of Parking and Transportation. Table 11.4 summarizes number of users, number of spaces, and ratio of users to spaces. Average ratios of 1.1 students/space and 2.9 faculty-staff/space were calculated for existing conditions. The computation of these ratios does not include auxiliary parking spaces for uses such as visitors, ADA, FIU Police, loading, etc. The need for these uses should be evaluated individually for each campus based on existing ratios for these uses.

**Table 11.4 Existing Parking Ratios (2019) – MODESTO A. MAIDIQUE CAMPUS**

Type of User	Number of Users	Number of Spaces*	Ratio of Users/Space
Students (FTE)	**20,480	7,945	2.6
Faculty/Staff/Misc (FTE)	**7,171	2,366	3.0

\* Source: FIU Parking & Transportation, April 2021

\*\* Enrollment Matrix (FIU)

Future Parking Needs:

Based on discussions and information provided by the University’s Parking Department, the equation used for calculating parking spaces is based on the number of full-time enrollees (FTE) and the number of FTE living in campus housing. One (1) parking space is provided for every 2.94 FTE and one (1) parking space is provided for every two (2) FTE living in campus housing. Since future parking needs are based on FTE, it is important to obtain future enrollment data from the University. The FTE at the Modesto A. Maidique campus is estimated to be 24,650 (year 2020) and 4,930 (year 2020) full-time enrollees living in campus housing.[LR132][AC133]

Future Needs Projections:

Total parking for planning periods (2019, 2025 and 2030) is shown in Table 11.6. Although sufficient parking is available for 2015 and 2020 on the entire campus, localized parking demand within specific areas of the campus will need to be addressed, as well as the parking demand generated by the Academic Health Sciences clinical component. For year 2035, an additional 1, 647 parking spaces will be required to satisfy future demand.

**Table 11.5 Future Parking Needs Projections – MODESTO A. MAIDIQUE CAMPUS**

	2019	2025	2030
<b>Students <sup>(6)</sup></b>			
FTE (x)	20,480	20,480	20,480
FTE in campus housing (y) (Residents)	6,414	6,414	6,414
HC	29,651	29,651	29,651
<b>Faculty &amp; Staff (FTE) <sup>(8)</sup></b>	7,171	7,171	7,171
<b>Faculty &amp; Staff (HC) <sup>(7)</sup></b>	7,668	7,668	7,668
<b>Total Population <sup>(4)</sup></b>	[AC134]37,319	37,319	37,319
FIU Total Parking Demand Methodology <sup>(1)</sup>	XXXX	XXXX	XXXX

Express Bus Adjustment (10%) <sup>(2)</sup> [AC135]	XXXX	XXXX	XXXX
FIU Adjusted Parking Demand <sup>(9)</sup>	XXXX	XXXX	XXXX
Parking Capacity (Students, Faculty & Staff) <sup>(3)</sup>	XXXX	XXXX	XXXX
FIU Methodology Available Capacity <sup>(5)</sup>	XXXX	XXXX	XXXX

- 1) Parking demand based on parking equations provided by FIU:  $P = 0.34x + 0.5y$  (x = Full Time Enrollees, y = Full Time Enrollees living in campus housing)
- 2) Express Bus adjustment (at MMC and Eng. Campuses) based upon programmed construction
- 3) Source: FIU Parking & Transportation (7/2011); includes PG6 Garage (add 2,100 spaces and remove 225 existing surface lot spaces). Computation: 10,076 (exist) + 2,100 – 225 = 11,951
- 4) Total Population includes: Headcount (HC) for Students and Faculty & Staff
- 5) Available capacity = (3) – (9). positive number indicates excess capacity & negative number indicates additional spaces needed to satisfy parking demand for year 2035
- 6) Source: FIU enrollment matrix
- 7) **Faculty/Staff (HC)** has a flat projection based on the flat projection of students until 2030.
- 8) **Faculty/Staff (FTE)** has a flat projection based on the flat projection of students until 2030.

**ENGINEERING CENTER**

Existing Parking Ratios:

The total number of permits issued to students, faculty, staff, and others was obtained from the University’s Parking Department. Table 11.6 summarize number of users, number of spaces, and ratio of users to spaces at the Engineering Center. [The average ratios of 2.1 students/space and 0.5 faculty- staff/space](#) [MK136] were found under the existing conditions. These do not include auxiliary parking spaces for uses such as visitors, disabled, and loading.

**Table 11.6 Existing Parking Ratios (2019) – ENGINEERING CENTER**

Type of User	Number of Users	Number of Spaces**	Ratio of Users/Space
Students (FTE)	*1,532	712	2.2
Faculty/Staff (FTE)	*140	183	0.8

\* Source: FIU Enrollment Matrix

\*\* Source: FIU Parking & Transportation, updated April 2021

Future Parking Needs:

Based on discussions and information provided by the University's Parking Department, the equation used for calculating parking spaces is based on the number of FTE and the number of FTE living in campus housing. One (1) parking space is provided for every 2.94 FTE and one (1) parking space is provided for every two (2) FTE living in campus housing. [MK137] Based on the future population estimates provided by the University, the FTE population at the Engineering Center is estimated to be 1,379 (year 2020). The Engineering Center does not offer campus housing, therefore FTE on campus housing was not considered in the computation of future parking demand.

Future Needs Projections:

Total parking for the planning periods (2019, 2025 & 2030) is shown in Table 11.8. A total of 5 additional parking spaces will be required at the Engineering Center for year 2035. [AC138]

**Table 11.7 Future Parking Needs Projections – ENGINEERING CENTER** [MK139]

	2019	2025	2030
<b>Students</b> <sup>(5)</sup>			

FTE (x)	1,532	1,532	1,532
FTE in campus housing (y) (Residents)	NA	NA	NA
HC	2,216	2,216	2,216
<b>Faculty &amp; Staff (FTE)<sup>(7)</sup></b>	140	140	140
<b>Faculty &amp; Staff (HC)<sup>(6)</sup></b>	143	143	143
<b>Total Population<sup>(4)</sup></b>	2,359	2,359	2,359
<b>FIU Total Parking Demand Methodology<sup>(1)</sup></b>	XX	XX	XX
<b>Parking Capacity (Students, Faculty &amp; Staff)<sup>(3)</sup></b>	XX	XX	XX
<b>FIU Methodology Available Capacity<sup>(2)</sup></b>	XX	XX	XX

- 1) Parking demand based upon parking equations provided by FIU:  $P = 0.34x + 0.5y$  (x = Full Time Enrollees, y = Full Time Enrollees living in campus housing)
- 2) Available capacity = (3) – (1). Positive number indicates excess capacity & negative number indicates additional spaces needed to satisfy parking demand for year 2035
- 3) Source: FIU Parking & Transportation (7/2011)
- 4) Total Population includes Headcount (HC) for Students and Faculty & Staff
- 5) Source: FIU enrollment matrix
- 6) **Faculty/Staff (HC)** has a flat projection based on the flat projection of students until 2030.
- 7) **Faculty/Staff (FTE)** has a flat projection based on the flat projection of students until 2030.

NA – not available

**BISCAYNE BAY CAMPUS**

Existing Parking Ratios:

The total number of permits issued to students, faculty, staff, and others was obtained from the Department of Parking and Transportation. Table 11.8 summarize the number of users, number of spaces, and ratio of users to spaces. Average ratios of 1.7 students/space and 0.7 faculty-staff/space were found under the existing conditions. These do not include auxiliary parking spaces for uses such as visitors, disabled, loading, etc.[LR140]

**Table 11.8 Existing Parking Ratios (year 2019) – BISCAYNE BAY CAMPUS**

Type of User	Number of Users	Number of Spaces**	Ratio of User/Space
Students (FTE)	*2,363	1,967	1.2
Faculty/Staff (FTE)	*326	399	0.8

\* Source: FIU enrollment matrix

\*\* Source: FIU Parking & Transportation, updated April 2021

Future Parking Needs:

Based on discussions and information provided by the University's Parking Department, the equation used for calculating parking spaces is based on the number of full-time enrollees (FTE) and the number of FTE living in campus housing. One (1) parking space is provided for every 2.94 FTE and one (1) parking space is provided for every two (2) FTE living in campus housing[MK141]. Based on the future population estimates provided by the University, the FTE population at the Biscayne Bay Campus is estimated to be 3,906 (year 2020) and 781 FTE living in campus housing.

Future Needs Projections:

Total parking for the planning periods (2019, 2025 & 2030) is shown in Table 11.10. A total of 304 additional parking spaces[AC142] will be required at the Biscayne Bay Campus for year

2035.

**Table 11.9 Future Parking Needs Projections – BISCAYNE BAY CAMPUS**

	2019	2025	2030
<b>Students <sup>(5)</sup></b>			
FTE (x)	2,363	2,363	2,363
FTE in campus housing (y) (Residents)	XXXX[AC143]	XXXX	XXXX
HC	3,418	3,418	3,418
<b>Faculty &amp; Staff (FTE) <sup>(7)</sup></b>	326	326	326
<b>Faculty &amp; Staff (HC) <sup>(6)</sup></b>	338	338	338
<b>Total Population <sup>(4)</sup></b>	3,756	3,756	3,756
<b>FIU Total Parking Demand Methodology <sup>(1)</sup></b>	XXXX	XXXX	XXXX
<b>Parking Capacity (Students, Faculty &amp; Staff) <sup>(3)</sup></b>	XXXX	XXXX	XXXX
<b>FIU Methodology Available Capacity <sup>(2)</sup></b>	XXXX	XXXX	XXXX

- 1) Parking demand based upon parking equations provided by FIU:  $P = 0.34x + 0.5y$  (x = Full Time Enrollees, y = Full Time Enrollees living in campus housing)
- 2) Available capacity = (3) – (1). Positive number indicates excess capacity & negative number indicates additional spaces needed to satisfy parking demand for year 2035
- 3) Source: FIU Parking & Transportation (7/2011)
- 4) Total Population includes Headcount (HC) for Students and Faculty & Staff
- 5) Source: FIU enrollment matrix
- 6) **Faculty/Staff (HC)** has a flat projection based on the flat projection of students until 2030.
- 7) **Faculty/Staff (FTE)** has a flat projection based on the flat projection of students until 2030.

**4. Management Policies That May Reduce Parking Demand[AC144]**

a. Decreasing Automobile Trips

The automobile is the primary transportation mode for students and employees to commute to the University and most automobile trips continue to be single-occupant vehicle (SOV) trips. By promoting ridesharing with carpool and vanpool programs, many SOV trips could be eliminated reducing the demand on the number of parking spaces.

Encouraging students and employees who live in the residential areas around the campuses to use bicycle or pedestrian modes as the preferred commuting modes could decrease automobile trips. Improved bicycle and pedestrian facilities would promote the use of these modes as viable alternatives to automobile trips.

b. Increasing Parking Space Utilization

The survey of parking facilities shows that parking demand was high during peak hours and low during off-peak hours. Parking utilization could be improved by evenly distributing parking demand during peak and off-peak hours. Continuing to distribute class schedules throughout the school week will positively impact parking demand. The degree of parking demand reduction will depend on the actual implementation of class schedules and will need to be determined based on an assessment.

c. Increasing Use of Public or University-Provided Transit

Improving public transportation is crucial in reducing the need for new parking facilities and congestion near the university campuses. Long range improvements like the planned express bus route(s) connecting FIU to multimodal hubs such as the Miami Intermodal

Center (MIC) may alleviate some of the parking and traffic issues. In the short term, improvements to the bus transit services may help increase public transit use and reduce automobile trips to the campuses. This will require that the University continue to work with Miami-Dade Transit to identify the necessary improvements, which may require a travel characteristics study including origin-destination, travel time, mode, purpose, etc. Improved weather protection at transit stations may also increase public transit use.

d. Utilization of Off-Campus Parking Areas

Off-campus parking is currently being utilized during football games at the Modesto A. Maidique Campus. These off-campus spaces are located within Tamiami Park. There are also approximately 280 overflow parking spaces provided at the Youth Fair property south of Parking Lot #5 on the Modesto A. Maidique campus. No other campus currently utilizes off-campus parking facilities, but locations for this should be considered in all phases of planning.

b) **Inventory and Assessment of Transit Facilities and Services**[AC145]

**MODESTO A. MAIDIQUE CAMPUS**

A Miami-Dade Transit (MDT) bus terminal is located on campus, east of Lot #5 (Figure 11.1A, Appendix 11.1). Five bus routes serve the area. Table 11.11 provides information on the weekly schedule for each bus route, including frequency during weekday peak hours. For transit, weekday peak hour services operate from approximately 6:30 am through 9:00 am and in the evening from 4:00 pm to 6:30 pm. The buses operate with less frequent headways during the weekends. MDTA buses have a seated capacity of approximately 38 persons and a standing load of 31 persons.

Future MDT Express Bus service is anticipated to provide service to the MMC. This Express Bus route is proposed to link the Miami Intermodal Center (MIC) near Miami International Airport to SW 8th Street and 147th Avenue. The MMC is anticipated as a key station/stop for this Express Bus service. The MMC Express Bus route station will be located at PG 6.

The Cities of Doral and Sweetwater have trolley service to the Modesto A. Maidique Campus. The Doral trolley operates during weekdays only. The City of Sweetwater trolley operates seven days a week with reduced hours on the weekends.

The Panther Express Shuttle is available to the FIU community who are traveling between the Modesto A. Maidique and the Biscayne Bay Campuses. The service is free for students who are currently enrolled and pay the transportation access fee as part of their enrollment fees and non-students. Non-students and affiliates pay \$5.00 each trip. Table 11.15 give the service frequency, route alignment, and service hours of the Panther Express Shuttle. Fall semester 2019 ridership data shows 115,000 passenger transports.

Campus Area Transit System (CATS) is a free transportation system, which is operated by [MK146] FIU personnel at Modesto A. Maidique Campus. The shuttle transports FIU students, faculty, and staff between the Modesto A. Maidique campus and the Engineering Center campus which stops along the way at off campus housing residences (Figure 11.1B, Appendix 11.1). Table 11.13 summarize the frequency of service, route alignment, and service hours. Vans used for CATS have a seated capacity of 15 passengers.

The Panther Mover service expanded route now provides continuous golf cart transportation throughout the Modesto A. Maidique Campus. Table 11.15 summarize the frequency of service, route alignment, and service hours[MK147].

Freebee service was launched at FIU on September 8, 2020. Freebee, a free on-demand door to door transportation service is available to the FIU community. The ride must begin or end within the Modesto A. Maidique Campus or Engineering Center. Freebee service was launched

at FIU on September 8, 2020 through a grant match funding. Freebee is transporting approximately 4000 plus passengers a month.

TapRide provides on demand point to point golf cart transportation throughout the Modesto A. Maidique [MK148] Campus. The service is available for the DRC registered community and injured riders during the core hours of the day and opens to the full FIU community at 6:00pm. Table 11.16 summarize the frequency of service, route alignment, and service hours.

**Table 11.10 Public Transit Routes – MODESTO A. MAIDIQUE CAMPUS**

Route #	Frequency during Peak Hours [AC149]	Route Alignment	Service Hours
8	10-20 minutes	From Brickell Metrorail to Modesto A. Maidique Terminal	4:39am-11:04pm (Eastbound) 6:11am-10:52pm (Westbound)
11	10-30 minutes	From Metro-Dade Government Center to Modesto A. Maidique Terminal	4:46am-10:53pm (Eastbound) 24 hours Service Anticipated 6:02am-12:43am (Westbound) 24 hours Service Anticipated
24	20-45 minutes	From SW 26 <sup>th</sup> Street and SW 147 <sup>th</sup> Ave to Brickell Metrorail	5:45am-11:50pm (Eastbound)
24	30-45 minutes	From Brickell Metrorail to SW 26 <sup>th</sup> Street and SW 146 <sup>th</sup> Ave	6:17am-11:49pm (Westbound)
71	30 minutes	From Miami Dade College South to Dolphin Mall	7:12am-7:59pm (Northbound)
71	30-35 minutes	From Dolphin Mall to Miami Dade College South	6:25am-8:11pm (Southbound)
82	50 minutes	Modesto A Maidique Terminal to SW 8 <sup>th</sup> Street and 69 <sup>th</sup> Ave Circulator	8:00am-5:10pm (Eastbound) Monday- Saturday
82	50 minutes	Modesto A Maidique Terminal to SW 8 <sup>th</sup> Street and 69 <sup>th</sup> Ave Circulator	8:40am-5:42pm (Westbound) Monday - Saturday
Doral Trolley Route 4	30-40 minutes	FIU PG 6 to NW 107 <sup>th</sup> Ave and NW 88 <sup>th</sup> Street	6:53am-10:28pm Monday - Friday
Sweetwater Trolley	90 minutes	FIU PG5 [MK150] to 1701 NW 112 <sup>th</sup> Ave	6:00am -10:00pm Monday – Friday 7:00am – 8:00pm Saturday - Sunday

Source: Miami-Dade Transit, 2019, City of Doral, 2021, City of Sweetwater 2021

**ENGINEERING CENTER**

Four (4) MDT bus routes serve the Engineering Center daily. Table 11.12 provides information on the weekly schedule for each bus route, including frequency during weekday peak hours. For transit, weekday peak hour services operate from approximately 6:30 am through 9:00 am and in the evening from 4:00 pm to 6:30 pm. The buses operate with less frequent headways during the weekends.

The Cities of Doral and Sweetwater have trolley service to the Engineering Center. The Doral trolley operates during weekdays only. The City of Sweetwater trolley operates seven days a week with reduced hours on the weekends.

Campus Area Transit System (CATS) is a free transportation system, which is operated by [MK151] FIU personnel at Modesto A. Maidique Campus. The shuttle transports FIU students, faculty, and staff between the Modesto A. Maidique campus and the Engineering Center campus which stops along the way at off campus housing residences (Figure 11.1B, Appendix 11.1). Table 11.13 summarize the frequency of service, route alignment, and service hours. Vans used for CATS have a seated capacity of 15 passengers.

**Table 11.11 Public Transit Routes – ENGINEERING CENTER**

Route #	Frequency during Peak Hours	Route Alignment	Service Hours
11	10-30 minutes	From Metro-Dade Government Center to Modesto A. Maidique Terminal	24 hours (Eastbound) 24 hours (Westbound)
1137	35-45 minutes	Dol From South Dade Government Center to Dolphin Mall	6:50am-9:20pm(Northbound)
131137	35-45 minutes	From Dolphin Mall to South Dade Government Center	5:25am-9:20pm(Southbound)
51 Flagler MAX	5-30 minutes	From SW 8th Street and SW 137th Avenue to NW 1st Street and NW 1 <sup>st</sup> Avenue	5:08am-7:19pm(Eastbound) 6:34am-8:58pm(Westbound)
212 Sweetwater Circulator	30 minutes	From SW 2nd Street and SW 109 <sup>th</sup> Avenue to NW 2nd Street and NW 117 <sup>th</sup> Avenue	9:13am-3:13am(Eastbound) 9:21am-2:51pm (Westbound)
Sweetwater Trolley	90 minutes	FIU PG 5 [MK152]to 1701 NW 112 <sup>th</sup> Ave	6:00am -10:00pm Monday – Friday 7:00am – 8:00pm Saturday - Sunday
Doral Trolley Route 4	30-40 minutes	FIU PG 6 to NW 107 <sup>th</sup> Ave and NW 88 <sup>th</sup> Street	6:53am-10:28pm Monday - Friday

Source: Miami-Dade County Transit, 2019, City of Doral 2021, City of Sweetwater 2021

**BISCAYNE BAY CAMPUS**

MDT bus shelters are located south of the library and east of parking lot #1 (Figure 11.1C, Appendix 11.1). Two MDT bus routes and one North Miami circulator service the Biscayne Bay Campus and are listed in Table 11.14 with service frequency, route alignment, and service hours. The buses operate with less frequent headways during the weekends.

The NOMI Express provides community bus service within the City of North Miami. Efforts should continue to strengthen coordination efforts with the City of North Miami to promote use of this bus service as an alternative transportation option available to both students and faculty.

The Panther Express Shuttle is available to the FIU community who are traveling between Modesto A. Maidique and the Biscayne Bay Campuses. The service is free for students who are currently enrolled and pay the transportation access fee as part of their enrollment fees and non-students. Non-students and affiliates pay \$5.00 each trip. Table 11.15 give the service frequency, route alignment, and service hours of the Panther Express Shuttle. Fall semester 2019 ridership data shows 115,000 passenger transports.

**Table 11.12 Public Transit Routes – BISCAYNE BAY CAMPUS**

Route #	Frequency during Peak Hours	Route Alignment	Service Hours
75	30-40 minutes	From Miami Lakes Technical Education Center to FIU Biscayne Bay Campus	6:37am-10:11pm (Eastbound)
75	30-40 minutes	From FIU Biscayne Bay Campus to Miami Lakes Technical Education Center	5:20am-10:29pm (Westbound)
135	30 minutes	From Hialeah MetroRail Station to FIU Biscayne Bay Campus	6:56am-10:15pm (Eastbound)
135	15-30 minutes	From FIU Biscayne Bay Campus to Hialeah MetroRail Station	5:09am-8:32pm (Westbound)
NOMI Express Red Route	60 minutes	FIU Biscayne Bay Campus to Biscayne Boulevard and 128th Street	7:00am–7:00pm Monday-Friday

Source: Miami-Dade County Transit, 2019, City of North Miami, 2021

**Table 11.13 Campus Transit Routes**

Route #	Frequency during Peak Hours	Route Alignment	Service Hours
Panther Express	30 minutes	Modesto A. Maidique Campus to and from Biscayne Bay Campus	6:00am-11:00pm
Campus Area Transit System (CATS)	Continuous (15–20 minutes)	Modesto A. Maidique Campus to and from Engineering Center	6:00am-11:00pm
Panther Mover	10 minutes between stops	Continuous circulation through Modesto A. Maidique Campus	6:00am-11:00pm
Freebee	On Demand	Throughout Modesto A. Maidique Campus	7:00am-7:00pm
TapRide	On Demand	Throughout Modesto A. Maidique Campus	7:00am-6:00pm DRC registered and injured community.
TapRide	On Demand	Throughout Modesto A. Maidique Campus	7:00am-6:00pm DRC entire FIU community.

Source: FIU Department of Parking and Transportation, 2021

**c) Inventory and Assessment of Pedestrian and Bicycle Facilities and Services**

**1. Existing On-Campus Facilities**

**MODESTO A. MAIDIQUE CAMPUS**

Modesto A. Maidique Campus consists of a conglomerate of buildings connected by covered and uncovered walkways that serve pedestrians. A vehicular loop road surrounds the core academic facilities. The athletic facilities are located on the west side of the campus. Student housing is located on the east side and the south side of the campus. There are seven (7) general parking lots and six (6) parking garages provided on the campus. **Figure 11.1D** shows the general configuration of pedestrian and non-vehicular circulation on the campus. Pedestrian and non-vehicular circulation facilities are highlighted. A description of the pedestrian and non-vehicular facilities available on the campus is provided below.

**Walkways:**

Pedestrian access among the existing campus buildings is provided by covered and uncovered walkways. Walkway widths vary between 6’ and 14’. Pedestrian walkways are also provided along the campus loop road, leading to parking lots, garages, student housing, athletic/recreation facilities, and the host communities. Surface material of these walkways consists of cast-in-place concrete and asphalt.

**Crosswalks/Bridges:**

There are numerous crosswalks located along the campus loop road, connecting academic facilities located in the campus core to parking lots, garages, student housing, athletic/recreation facilities, and the host communities. Crosswalks are located at all signalized intersections and have pedestrian button activated countdown timing signals. Midblock crossings are marked and include pedestrian crossing flashing signage.

To minimize pedestrian conflicts crossing the campus loop road at Parking Garage 6, in addition to at grade signalized crosswalks, there is an elevated pedestrian bridge linking PG6 to the campus core. To improve safe crossing of SW 8<sup>th</sup> St/ US 41 to many off campus housing facilities in Sweetwater, FIU has partnered with FDOT to construct a pedestrian bridge over SW 8<sup>th</sup> Street. This bridge is anticipated to be complete in 2023.

**Bikeways:**

Bicycle racks are currently located in the courtyards of the residential housing dormitories on the campus. The Modesto A. Maidique campus currently contains over 50 bike racks that

provide over 400 parking spaces within the campus. Many of the pedestrian and non-vehicular facilities are being shared with cyclists in the campus core and on the campus loop road. However, a designated and marked bikeway does not exist on this campus.

**Golf Carts:**

Golf carts and similar four-wheel vehicles are used extensively throughout the Modesto A. Maidique Campus for service maintenance, delivery, and staff transportation activities, including the Panther Mover service. In an effort to minimize conflicts between golf carts and pedestrians or bicycle uses within the campus, the University has developed a campus map that identifies golf cart access points to all building loading areas and routes prohibited for golf carts. These areas are shown in [Figure 11.1D](#).

**ENGINEERING CENTER**

The Engineering Campus consists of one (1) primary educational building with parking areas on the East and West sides. Parking Lot #2 on the east side of campus are shaded with photovoltaic panels. An entry from SW 107th Avenue and an entry on Flagler Street provide access to the campus. The general configuration of the vehicular and non-vehicular circulation is shown in [Figure 11.1E](#). The pedestrian and non-vehicular facilities available on the Engineering Center are described below.

**Walkways:**

There are uncovered pedestrian walkways 6' wide, linking the Engineering building and the parking lots #1 and #2. Surface material of these walkways consists of cast-in-place concrete.

**Crosswalks:**

There are crosswalks providing access to the east parking lots from the Engineering building.

**Bikeways:**

Bicycle racks are currently located in the area close to the west entrance of the Engineering building. The Engineering Campus contains a bike parking rack that provides over ten (10) bicycle parking spots on the campus. However, an official marked bikeway does not exist on this campus.

**Golf Carts:**

Golf carts and similar four-wheel vehicles are used extensively throughout the Engineering Campus for service maintenance, delivery and staff transportation activities. In an effort to minimize conflicts between golf carts and pedestrians or bicycle users within the campuses, the University has developed a campus map that identifies golf cart access points to all building loading areas and routes prohibited for golf carts. These areas are shown in [Figure 11.1E](#).

**BISCAYNE BAY CAMPUS**

Biscayne Bay Campus consists of a group of academic buildings on the east side of the campus with Bayview student housing and Conference Center south of the campus core. Parking lots are located on the western areas of the campus. One (1) main and two (2) secondary entrances provide vehicular access to the campus. The general configuration of pedestrian and non-vehicular circulation is shown in [Figure 11.1F](#). The pedestrian and non-vehicular facilities available on the Biscayne Bay Campus are described below.

**Walkways:**

Pedestrian access among the existing buildings is provided via covered and uncovered walkways that vary in width between 5' to 10'. Walkways provide access to student housing from the campus parking areas, academic core, and recreational facilities. Sidewalks are provided along the campus roads to furnish access to the parking lots. There is a shared-use

path that runs along the Biscayne Bay side of the campus and ties into the Arch Creek Trail at the southwest portion of the campus. Walkways consist of cast-in-place concrete and asphalt surface material.

**Crosswalks:**

Crosswalks are provided along key pedestrian crossings on NE 145th Street and University Drive. Most pedestrian activity occurs on the crosswalks, since they link the academic facilities and parking lots. Additional crosswalks provide access between the parking lots and the support facilities located on the northwest portion of the campus as well as the Bayview student housing.

**Bikeways:**

Bicycle racks are currently located in the courtyards of the residential housing dormitories on the campus. The Biscayne Bay campus currently contains eleven (11) bike racks providing over fifty (50) bike parking spaces within the campus. Many of the pedestrian and vehicular facilities are being shared with cyclists on the campus core and the loop road. A non-continuous marked bike lane exists along Bay Vista Drive on campus.

**Golf Carts:**

Golf carts and similar four-wheel vehicles are used extensively throughout the Biscayne Bay Campus for service maintenance, delivery and staff transportation activities. To minimize conflicts between golf carts and pedestrians or bicycle uses within the campuses, the University has developed a campus map that identifies golf cart access points to all building loading areas and routes prohibited for golf carts. These areas are shown in **Figure 11.1F**.

**2. Existing facilities within the planning study area.**

**MODESTO A. MAIDIQUE CAMPUS AND ENGINEERING CENTER**

Within the context area of the Modesto A. Maidique Campus and the Engineering Center, sidewalks are provided along major roadways surrounding the campuses. The MMC campus loop road has segments of designated and undesignated bike lanes as well as segment without any bicycle facilities. No designated bicycle facilities are found within the Engineering Center campus.

**BISCAYNE BAY CAMPUS**

There is a pedestrian sidewalk along Bay Vista Drive that runs from Biscayne Boulevard to the David Lawrence Jr. K-8 Center with a flashing pedestrian crossing to Alonzo & Tracy Mournig Sr. High School. There is a non-continuous undesignated bike lane along NE 151st Street and Bay Vista Boulevard to the main entrance of the Biscayne Bay Campus. This sidewalk and bike lane are the primary non-vehicular links between the Biscayne Bay Campus and the residential neighborhoods in the City of North Miami. There is also a pedestrian/bike path that is an extension of NE 135th Street which bisects the Arch Creek East Preserve and provides a non-vehicular link to the residential communities southwest of the Campus.

**3. Planned Pedestrian and Non-Vehicular Facilities on Campus and In the Planning Study Area.[AC153]**

At the MMC, to improve safe crossing of SW 8<sup>th</sup> St/ US 41 to many off campus housing facilities in Sweetwater, FIU has partnered with FDOT to construct a pedestrian bridge over SW 8<sup>th</sup> Street. This is part of the UniversityCity TIGER Grant awarded to FIU and the City of Sweetwater. This project also includes Complete Street pedestrian improvements along 109<sup>th</sup> Ave from SW 6<sup>th</sup> Street into the campus core. This bridge and the associated improvements are anticipated to be complete in 2023.

FDOT conducted a due diligence analysis for creating a Raised Bike Lane system at MMC.

The analysis considered opportunities and constraints for varied strategies to achieve a Raised Bike Lane System to improve bicycle safety on the campus. Some of these strategies include raised bike lanes, designated off street bike lanes, conventional bike lanes and two-way cycle tracks. This analysis covered the campus loop road as well as SW 16<sup>th</sup> Street and SW 109<sup>th</sup> Avenue. [FIU has submitted for a FDOT Transportation Alternatives Program \(TAP\) Grant in the amount of \\$1.25 million to design, permit and construct the strategies outlined in the FDOT analysis.](#) [MK154]

**d) Inventory and Assessment of Opportunities to Implement Transportation Demand Management Strategies** [AC155]

Transportation demand management (TDM) strategies are intended to reduce or shift the number of single occupant vehicle (SOV) trips to non-SOV modes or to nonpeak periods. These TDM strategies can be achieved at all FIU campuses by continuing to encourage and facilitate pedestrian and bicycle modes, transit use, ridesharing and other alternatives. Some of the TDM strategies that are in place and/or could become improved upon at FIU's campuses include the following:

**Parking**

Parking Rates - Variable parking rates could be implemented on the campuses. Currently students are eligible for an annual pass at no cost. Variable parking rates could be charged throughout the day depending upon demand with higher rates being charged during peak times. An entitlement to 'free' parking would not be perceived and SOV trips could be reduced. Reduced rates may also be available to registered carpool vehicles.

Reduced Parking Availability - The parking availability or expansion of existing parking facilities could be limited therefore reducing the continual increase of parking on campus. This 'inconvenience' of the lack of readily available parking could encourage greater usage of alternative transportation methods to all campuses.

Carpool Spaces - Continue to encourage ride sharing and carpooling by providing more easily accessible parking spaces for these types of vehicles.

Parking Permit Buyback - A buyback program for parking permit holders could be implemented that would reimburse commuters that give back their parking permit and choose to use public transportation or ridesharing activities.

**Transit**

Local Connectors – Continue to encourage the use of local connector public transportation. This can be achieved by continuing to improve the relationships with these host communities and improving local commuter bus facilities within the FIU campuses. Partnering with the host communities to allow their residents to enjoy activities on campus at reduced rates may encourage these communities to further enhance the quality/ frequency of these connector routes.

Reduced Transit Rates – Continuing to work with Miami Dade Transit (MDT) to provide reduced student transit rider rates. This could also be extended to FIU employees to encourage their use of this service as well.

Transit in Lieu of Parking – Providing an annual or semester pass for public transit to students rather than a parking pass would be another alternative strategy.

Express Transit Routes - Currently an Express Bus Route that is jointly being initiated by Miami Dade Transit (MDT), Miami-Dade Expressway Authority (MDX) and the Florida Department of Transportation (FDOT) is being coordinated to have a hub on the Modesto A. Maidique campus at Parking Garage Number 6 (PG6). This campus hub would be a key stop between the Miami

Intermodal Center and western Miami-Dade County. This Express route would provide direct access from the campus to key transportation destinations such as Miami International Airport, Port of Miami, Metrorail and Tri-Rail. These will also provide for as well as efficient linkages and transfer locations from Broward County. By providing a transit hub such as this at the Modesto A. Maidique Campus would provide a key catalyst for the desired TOD's to occur within the planning study area and host community of Sweetwater.

Improving Transit Facilities - Providing user-friendly bus stop locations on campus that are inclement weather protected and safe that encourages usage.

### **Bicycle and Pedestrian Modes**

Bicycle Improvements – Provide clearly marked bicycle routes throughout all campuses. These trails and/or lanes would need to connect to adjacent host communities as well as public transportation and parking facilities within the campus. Each of these bicycle routes needs to be clearly identified and marked for ease of use. This would also minimize the conflict between pedestrian and bicycle users within the campus. It is also critical that FIU work with the local host communities, Miami-Dade County and FDOT to encourage that all local roadways within the planning area include clearly designated continuous bike routes to the campuses.

Bicycle Support Facilities - The continuation of bike friendly support facilities on all campuses should continually be encouraged by the University. An example of this is the Campus Bike Shop on the Modesto A. Maidique campus<sup>[k156]</sup>. Once demand is met, a similar facility could be provided on the Biscayne Bay campus also.

Bike Share Program - A bike share program could be implemented with locations near transit stops and parking garages to allow for easily rented bikes that students could use to commute from these transportation hubs into the core of the campuses.

Pedestrian Improvements - Sidewalks within the host communities need to be provided and include facilities that adequately and safely provide a route for campus commuters. Participating with these host communities and ensuring that these facilities provide a pedestrian friendly route is critical to encourage this type of commuting. This pedestrian network needs to continuously enhance on campus as well to provide a contiguous and uninterrupted pedestrian system. Designated walking/biking only areas should be clearly delineated on all campuses. This is critical to avoid conflicts with motorized vehicles and promote a user-friendly environment.

### **Operational Improvements**

Parking Information – MMC's real time parking area availability status via information boards at key transportation decision points on campus allow for more efficient commuting from the point of campus entry to available campus parking facilities. This helps minimize traffic on the campus by commuters driving through heavy pedestrian areas to find parking. This information is also be linked to a wireless network and made available to commuters' wireless or smart phone devices. These systems need to be considered for use at EC and BBC as growth of those campuses continue.

Transit Information – This information should also be provided via a system whereby commuters could access and monitor real-time public transportation route and schedule/arrival times on their wireless devices. This is currently being reviewed as a potential initiative project by FIU.<sup>[k157]</sup>

Shared Car Program - The shared car program "Connect by Hertz"<sup>[k158]</sup> is another way that residents on campus or those who use alternative commuting modes can have access to a vehicle located within a campus (currently only on the Modesto A. Maidique campus). The University should also look to implement this program at the Biscayne Bay campus to reduce the amount of SOV trips generated by resident students.

Carpool and Ridesharing - The University should continue to promote the carpool program that is being coordinated with the Florida Department of Transportation’s South Florida Commuter Services. This program encourages carpool usage by allowing users to search for other carpool members by selecting the location and schedules they need to meet.

Flexible Working Schedule – Flexible schedules could be provided for the FIU administration, staff and faculty. This would allow for telecommuting and clearly benefit the volume of traffic that is generated by these personnel. This will also help reduce traffic flows at peak times.

Increase On-Campus Housing - By increasing the amount of on-campus housing the need for those residents to have a vehicle would be reduced for regular educational accessibility. This would significantly reduce the number of SOV trips required by nonresident commuters.

Distance-Learning Programs - Distance learning programs offered by the University enable students to take classes without traveling to the campuses. Providing more courses and programs through distance learning will reduce trips to the University by students significantly.

Transit Oriented Development (TOD) - Some of the most significant opportunities for TDM strategy implementation are the opportunity for Transit Oriented Developments (TOD) on campus or within the planning study area. TOD refers to mixed-use education, residential and commercial centers designed to maximize access by transit and non-motorized transportation. These centers include features to encourage transit ridership. There are current projects being contemplated within the host communities that are focused on the TOD development model. The greatest activity in this area is at the Modesto A. Maidique campus.

**e) Inventory and Assessment of On-Campus Transportation System Safety**

**1. Traffic Crash Data for Bicycles, Pedestrians and Motor vehicles**

**MODESTO A. MAIDIQUE CAMPUS**

Crash data recorded for the Modesto A. Maidique Campus roadway network were obtained from the FIU Police Department for the 2½-year period of June 2009 to December 2011. Table 11.17 summarizes crashes by location and year. During that period, there was a total of 502 crashes on the Modesto A. Maidique Campus, averaging 201 crashes per year. [LR159][LR160][AC161]

**Table 11.14 Intersection Crashes– MODESTO A. MAIDIQUE CAMPUS**

Year	LOCATION	NUMBER OF ACCIDENTS [AC162]
2017	Unidentified Location	
2017	Parking Garages	
2017	Parking Lots	
2017	SW 11 <sup>th</sup> Street	
2017	SW 107 <sup>th</sup> Avenue & SW 16 <sup>th</sup> Street	
2017	SW 107 <sup>th</sup> Avenue & SW 17 <sup>th</sup> Street	
2017	SW 108 <sup>th</sup> Avenue	
2017	SW 108 <sup>th</sup> Avenue & SW 16 <sup>th</sup> Street	
2017	SW 17 <sup>th</sup> Street	
2017	SW 109 <sup>th</sup> Avenue & SW 8 <sup>th</sup> Street	
2017	SW 109 <sup>th</sup> Avenue & SW 11 <sup>th</sup> Street	

TRANSPORTATION ELEMENT

2017	SW 109 <sup>th</sup> Avenue & SW 16 <sup>th</sup> Street (circle)	
2017	SW 111 <sup>th</sup> Avenue & SW 14 <sup>th</sup> Street	
2017	SW 112 <sup>th</sup> Avenue & SW 8 <sup>th</sup> Street	
2017	SW 112 <sup>th</sup> Avenue	
2017	SW 113 <sup>th</sup> Avenue & SW 10 <sup>th</sup> Street	
2017	SW 113 <sup>th</sup> Avenue	
<b>2017 SUBTOTAL</b>		

Year	LOCATION	NUMBER OF ACCIDENTS
2018	Unidentified Location	
2018	Parking Garages	
2018	Parking Lots	
2018	SW 11th Street	
2018	SW 107th Avenue & SW 17th Street	
2018	SW 108th Avenue	
2018	SW 10th Street	
2018	SW 16th Street	
2018	SW 108th Avenue & SW 16th Street	
2018	SW 17th Street	
2018	SW 109th Avenue & SW 8th Street	
2018	SW 109th Avenue	
2018	SW 109th Avenue & SW 16th Street (circle)	
2018	SW 110th Avenue & SW 12th Street	
2018	SW 110th Avenue & SW 14th Street	
2018	SW 112th Avenue & SW 8th Street	
2018	SW 112th Avenue & SW 9th Street	
2018	SW 112th Avenue & SW 10th Street	
2018	SW 112th Avenue	
2018	SW 113th Avenue & SW 10th Street	
2018	SW 113th Avenue	
<b>2018 SUBTOTAL</b>		

Year	LOCATION	NUMBER OF ACCIDENTS
2019	Unidentified Location	7
2019	Parking Garages	41
2019	Parking Lots	51
2019	SW 107 <sup>th</sup> Avenue & SW 12 <sup>th</sup> Street	1

2019	SW 107 <sup>th</sup> Avenue & SW 15 <sup>th</sup> Street	3
2019	SW 107 <sup>th</sup> Avenue & SW 17 <sup>th</sup> Street	1
2019	SW 108 <sup>th</sup> Avenue (Unidentified location)	3
2019	SW 108 <sup>th</sup> Avenue & SW 9 <sup>th</sup> Street	1
2019	SW 108 <sup>th</sup> Avenue & SW 10 <sup>th</sup> Street	1
2019	SW 108 <sup>th</sup> Avenue & SW 12 <sup>th</sup> Street	1
2019	SW 108 <sup>th</sup> Avenue & SW 16 <sup>th</sup> Street	11
2019	SW 108 <sup>th</sup> Avenue & SW 17 <sup>th</sup> Street	1
2019	SW 109 <sup>th</sup> Avenue (Unidentified location)	1
2019	SW 109 <sup>th</sup> Avenue & SW 8 <sup>th</sup> Street	11
2019	SW 109 <sup>th</sup> Avenue & SW 9 <sup>th</sup> Street	1
2019	SW 109 <sup>th</sup> Avenue & SW 15 <sup>th</sup> Street	4
2019	SW 109 <sup>th</sup> Avenue & SW 16 <sup>th</sup> Street (circle)	9
2019	SW 110 <sup>th</sup> Avenue (Unidentified location)	1
2019	SW 111 <sup>th</sup> Avenue & SW 14 <sup>th</sup> Street	1
2019	SW 112 <sup>th</sup> Avenue (Unidentified location)	3
2019	SW 112 <sup>th</sup> Avenue & SW 8 <sup>th</sup> Street	6
2019	SW 112 <sup>th</sup> Avenue & SW 10 <sup>th</sup> Street	1
2019	SW 112 <sup>th</sup> Avenue & SW 12 <sup>th</sup> Street	2
2019	SW 112 <sup>th</sup> Avenue & SW 17 <sup>th</sup> Street	3
2019	SW 113 <sup>th</sup> Avenue	3
2019	SW 113 <sup>th</sup> Avenue & SW 10 <sup>th</sup> Street	7
2019	SW 113 <sup>th</sup> Avenue & SW 11 <sup>th</sup> Street	1
2019	SW 114 <sup>th</sup> Avenue & SW 18 <sup>th</sup> Street	1
2019	SW 115 <sup>th</sup> Avenue	2
2019	SW 115 <sup>th</sup> Avenue & SW 12 <sup>th</sup> Street	1
2019	SW 12 <sup>th</sup> Street (Unidentified location)	1
2019	SW 14 <sup>th</sup> Street (Unidentified location)	2
2019	SW 15 <sup>th</sup> Street (Unidentified location)	1
2019	SW 16 <sup>th</sup> Street (Unidentified location)	6
2019	SW 17 <sup>th</sup> Street (Unidentified location)	3
<b>2019 SUBTOTAL</b>		<b>193</b>

[LR163]Source: FIU Police Department, 2012

**MODESTO A. MAIDIQUE CAMPUS AND ENGINEERING CENTER**

Crash data recorded for the Engineering Center roadway network were obtained from the FIU Police Department for the most recent 2½-year period (June 2009-December 2011). Table 11.19 summarizes crashes by location and year. There was a total of 6 crashes on the Engineering Center, averaging 2.5 crashes per year. None of the intersections or roadway segments surrounding the Modesto A. Maidique Campus or Engineering Center was within the top 5% of the FDOT High Crash List.[AC164]

**Table 11.15 Intersection Crashes – ENGINEERING CENTER**<sup>[AC165]</sup>

Year	LOCATION	NUMBER OF ACCIDENTS
2017	SW 107th Avenue (SR 985) & W. Flagler Street (SR 968)	
2017	SW 105th Place & W. Flagler Street (SR 968)	
<b>2017 SUBTOTAL</b>		
2018	SW 107th Avenue (SR 985) & W. Flagler Street (SR 968)	
2018	SW 105th Place & W. Flagler Street (SR 968)	
<b>2018 SUBTOTAL</b>		
2019	SW 107th Avenue (SR 985) & W. Flagler Street (SR 968)	
2019	SW 105th Place & W. Flagler Street (SR 968)	
<b>2019 SUBTOTAL</b>		

Source: FIU Police Department, 2012

**BISCAYNE BAY CAMPUS**

Crash data recorded for the Biscayne Bay Campus roadway network were obtained from the FIU Police Department for crashes in the most recent 2½-year period (June 2009-December 2011). Table 11.21 shows that there was a total of 32 crashes on this campus in the period, or approximately 13 crashes per year. None of the intersections or roadway segments surrounding the Biscayne Bay Campus was within the top 5% of the FDOT High-Crash List.<sup>[LR166]</sup>

**Table 11.16 Intersection Crashes – BISCAYNE BAY CAMPUS**<sup>[LR167]</sup>

Year	LOCATION	NUMBER OF ACCIDENTS
2017	NE 145th Street and N University Dr	
2017	Bay Vista Blvd (unidentified location)	
2017	NE 144th Street and Bay Vista Blvd	
2017	NE 147th Street (unidentified location)	
2017	NE 145th Street and Bay Vista Blvd	
<b>2017 SUBTOTAL</b>		
2018	NE 147th Street and N University Dr	
2018	NE 145th Street and N University Dr	
<b>2018 SUBTOTAL</b>		
2019	NE 144th Street and N University Dr	
2019	NE 145th Street (unidentified location)	
<b>2019 SUBTOTAL</b>		

Source: FIU Police Department, 2012

**2. Lighting Assessment for Bicycle and Pedestrian Facilities**<sup>[AC168]</sup>

**MODESTO A. MAIDIQUE CAMPUS**

The campus loop roadway lighting is consistent, using a shoe box type fixture on a short twelve to fifteen-foot post and was deemed acceptable. Parking Lots are adequately lit by shoe box

type fixtures on tall, twenty-four-foot poles.

The pedestrian areas appear adequately lit with standardized twelve-foot pedestrian pole mounted luminaires throughout the campus. FIU maintains a minimum of 1.0 footcandles throughout the pedestrian areas. In addition to the standard lights, accent lights and bollards are used on the campus for aesthetic and security issues. Additional lighting for pedestrian walkways is provided by architectural pedestrian fixtures. These fixtures are typically associated with recent construction projects.

Some of the most critical locations to provide adequate lighting are at the pedestrian crosswalks. An analysis of lighting at pedestrian crosswalks should be conducted to ensure safe conditions at these locations.

### ENGINEERING CENTER

The Engineering Center lighting is consistent. The west parking lot is adequately lit by shoe box type fixtures on a tall, twenty-four-foot pole. [How is East lot lit under solar panels? Don't see lights.](#) [k169] The pedestrian area on the west side of the academic building appears adequately lit with standardized twelve-foot pedestrian pole mounted luminaires.

### BISCAYNE BAY CAMPUS

The parking lots have a series of light fixtures on a tall twenty-four-foot, square concrete pole. These aluminum fixtures with concrete standards are also used along primary roadways, recreational and maintenance facilities, the pedestrian path along Biscayne Bay and throughout the Kovens Center site. Occasionally illumination for roadways and open lawn areas on campus is provided by a shoe box type fixture on a shorter twelve-foot post. Some of the temporary/overflow parking areas did not appear to have lighting. This will need to be studied more thoroughly to ensure safe conditions.

Tall Cobra-head lights are used along Bay Vista Boulevard.

The pedestrian areas appear adequately lit with standardized twelve-foot pedestrian pole mounted luminaires throughout the campus. FIU maintains a minimum of 1.0 footcandles throughout the pedestrian areas.

### 3. Identification of High Traffic Crash Locations and Other Safety Concerns on Campus[AC170]

The highest crash locations on the FIU campuses occur within the parking areas. There appears to be adequate signage and lighting within these areas.[k171]

On the Modesto A. Maidique campus, the most frequently occurring crash location was attributed to 16th Street and the 109th Avenue/16th Street circle. To alleviate this, the University has made modifications to this traffic circle to improve ease of use.

With the addition of PG5, a significant increase in the number of crashes has occurred along 109th Avenue. With the additional parking facilities being planned for this area of the campus, this crash data must be monitored to prevent further increases.

The University has installed traffic/pedestrian signals at the SW 109th Avenue/ SW 10th Street, SW 108th Avenue/SW 10th Street and SW 113th Avenue/SW 10th Street intersections to help control pedestrian crossings at these locations adjacent to Parking Garages #4, #5, and #3 respectively.

All other campuses are not experiencing significant crash concerns.

### f) Inventory Planned New Roads, Road Modifications, and Other Planned Transportation System Modifications

The Miami-Dade Metropolitan Planning Organization's 2015 Transportation Improvement Program indicates various projects that are planned to occur within the campus' planning study areas. These projects are primarily focused on resurfacing, capacity, and intersection improvements. No projects are currently planned for bicycle or pedestrian improvements within the campus' planning study areas.

**Table 11.17 Proposed MPO Transportation Improvement Program Projects**

MPO Project No.	Facility	Location/ From	Location/ To	Project Type	Proposed Funding (Millions)	Proposed Construction Date
4124792	SW 107 Ave	SW 5th Street	W. Flagler Street	Add Lanes and Pavement Rehabilitation	\$11.8	
4124793	SW 107 Ave	SW 12th Street	SW 4 <sup>th</sup> Street	Add Lanes and Pavement Rehabilitation	\$ 15	
4311771	SW 107 Ave	SW 24th Street	1100 Block	Resurfacing	\$1.2	
4291623	SW 8th St	SW 127th Avenue	HEFT on-Ramp	Resurfacing	\$2.5	
4291901	US 1/ Biscayne Blvd	Ne 121 Street	NE 151 Street	Resurfacing	\$4.5	
4291902	US 1/ Biscayne Blvd	NE 135 Street	NE 135 Street	Intersection Improvements	\$0.55	

**g) Inventory and Assessment of Roadways on Campus and in the Planning Study Area**

**1. Adopted Level of Service (LOS)/Maximum Service Volumes**

A level of service (LOS) analysis was conducted to evaluate the existing 2021 PM peak hour traffic conditions without any new capacity improvements. FIU experiences the highest volume of traffic during the PM peak period as many part-time students commute to/from campus during this period.

**MODESTO A. MAIDIQUE CAMPUS**

The study area includes access roadways and intersections adjacent to the campus. Highway Capacity Software (HCS) 2010 was used to analyze the LOS on each of the study area roadway segments. The current PM peak hour LOS for the roadways on campus and within the study area are shown in Table 11.23. All the roadway segments currently operate above adopted LOS "E".

Capacity analyses for critical intersections around the campus were performed using HCS 2010. The existing intersection LOS for the existing 2012 PM peak hour is shown in Table 11.24. All locations, except for two (2), currently satisfy the minimum adopted LOS threshold. The intersections of SW 109th Avenue/SW 8th Street and SW 107th Avenue/SW 16th Street operate at a LOS E (capacity) during the 2012 PM peak hour. With future growth and traffic anticipation, these intersections could potentially fail. These locations need to be evaluated for future traffic impacts and capacity improvements.

**Table 11.18 Existing Roadway Segment Level of Service (LOS) Analysis 2020 PM PeakHour – MODESTO A. MAIDIQUE CAMPUS**

Location	Direction	Lanes (3)	LOS E Capacity (1)	Traffic Volumes (2)	LOS (4)
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TRANSPORTATION ELEMENT

SW 117 <sup>th</sup> Avenue, S/O SW 17 <sup>th</sup> Street	NB	1	-	540	D
	SB	1	-	877	D
SW 17 <sup>th</sup> Street, E/O SW 117 <sup>th</sup> Avenue	EB	1	-	217	C
	WB	1	-	643	C
SW 117 <sup>th</sup> Avenue, N/O SW 17 <sup>th</sup> Street	NB	1	-	595	C
	SB	1	-	506	C
SW 8 <sup>th</sup> Street, W/O SW 109 <sup>th</sup> Avenue	EB	3	-	2163	B
	WB	3	-	2333	C
SW 109 <sup>th</sup> Avenue, S/O SW 8 <sup>th</sup> Street	NB	2	-	726	A
	SB	2	-	535	A
SW 8 <sup>th</sup> Street, E/O SW 109 <sup>th</sup> Avenue	EB	3	-	2240	C
	WB	3	-	2038	B
SW 109 <sup>th</sup> Avenue, N/O SW 8 <sup>th</sup> Street	NB	1	-	442	C
	SB	1	-	623	C
SW 8 <sup>th</sup> Street, W/O SW 112 <sup>th</sup> Avenue	EB	3	-	2520	C
	WB	3	-	2967	C
SW 112 <sup>th</sup> Avenue, S/O SW 8 <sup>th</sup> Street	NB	2	-	678	A
	SB	2	-	717	A
SW 8 <sup>th</sup> Street, E/O SW 112 <sup>th</sup> Avenue	EB	3	-	2353	C
	WB	3	-	2839	C
SW 107 <sup>th</sup> Avenue, N/O SW 12 <sup>th</sup> Street	NB	3	-	2170	B
	SB	3	-	2067	B
SW 12 <sup>th</sup> Street, W/O SW 107 <sup>th</sup> Avenue	EB	1	-	745	D
	WB	1	-	542	D
SW 12 <sup>th</sup> Street, E/O SW 107 <sup>th</sup> Avenue	EB	1	-	227	A
	WB	1	-	0	A
SW 107 <sup>th</sup> Avenue, S/O SW 12 <sup>th</sup> Street	NB	3	-	2215	B
	SB	3	-	1941	B
SW 16 <sup>th</sup> Street, W/O SW 107 <sup>th</sup> Avenue	EB	2	-	820	A
	WB	2	-	679	A
SW 16 <sup>th</sup> Street, E/O SW 107 <sup>th</sup> Avenue	EB	2	-	531	A
	WB	2	-	798	A
SW 107 <sup>th</sup> Ave N/O SW 16 <sup>th</sup> Street	NB	3	-	1465	B
	SB	3	-	1571	B
SW 107 <sup>th</sup> Ave S/O SW 16 <sup>th</sup> Street	NB	3	-	1258	A
	SB	3	-	1772	B
SW 108 <sup>th</sup> Ave, W/O SW 107 <sup>th</sup> Avenue	EB	2	-	97	A
	WB	2	-	116	A
SW 107 <sup>th</sup> Ave S/O SW 108 <sup>th</sup> Ave	NB	3	-	1613	B
	SB	3	-	1869	B
SW 107 <sup>th</sup> Ave N/O SW 108 <sup>th</sup> Ave	NB	3	-	1525	B
	SB	3	-	1800	B

- 1) For LOS thresholds refer to HCM 2010 for Multi-Lane (HCM Exhibit 14-4, LOS based on density within segment) & Two-Lane highways (HCM Exhibit 15-3, LOS based on percent of free flow speed).
- 2) Traffic volumes are based on 2012 PM peak turning movement counts.
- 3) Denotes number of through lanes by direction.
- 4) From HCS 2010 analysis, see Appendix 11.5

**Table 11.19 Existing Intersection Level of Service (LOS) Year 2020 PM Peak Hour - MODESTO A. MAIDIQUE CAMPUS**

SIGNALIZED INTERSECTIONS		
Location	OPTIMIZED TIMINGS (1)	
	Average Stopped Delay (secs/veh)	LOS
SW 107 <sup>th</sup> Avenue and SW 12 <sup>th</sup> Street	29.3	C
SW 107 <sup>th</sup> Avenue and SW 16 <sup>th</sup> Street	65.8	E
SW 107 <sup>th</sup> Avenue and SW 8 <sup>th</sup> Street (2)	-	-
SW 107 <sup>th</sup> Avenue and SW 1700 Block (SW 108 <sup>th</sup> Ave)	9.7	A
SW 109 <sup>th</sup> Avenue and SW 8 <sup>th</sup> Street	76.1	E
SW 112 <sup>th</sup> Avenue and SW 8 <sup>th</sup> Street	31.2	C
SW 117 <sup>th</sup> Avenue and SW 17 <sup>th</sup> Street	32.9	C
SW 112 <sup>th</sup> Ave & University Dr (Unsignalized-2 way stop controlled) (on campus) (3)	(EB approach=228.1) (WB approach = 31.1)	F D
University Dr & SW 109 <sup>th</sup> Ave (on campus)	6.1	A

- 1) From HCS 2010 analysis, see Appendix 11.4
- 2) Intersection is not analyzed since FDOT is making improvements
- 3) Stop control on SW 112<sup>th</sup> Avenue

**ENGINEERING CENTER**

The study area includes access roadways and intersections adjacent to the campus. HCS 2010 was used to analyze the LOS on each of the roadway segments within the study area. All the roadway segments currently operate at or above adopted levels of service, as shown in Table 11.25.

HCS 2010 was also used to analyze the intersection LOS. Table 11.26 summarizes the existing LOS for study area intersections. Analysis results indicate that all study intersections operate at or above adopted levels of service.

**Table 11.20 Existing Roadway Segment Level of Service (LOS) Analysis 2020 PM Peak Hour - ENGINEERING CENTER**

Location	Direction	Lanes (3)	LOS E Capacity (1)	Traffic Volumes (2)	LOS (4)
NW 107 <sup>th</sup> Ave (SR 985) S/O EC Entrance	NB	3	-	1281	A
	SB	2	-	1546	C
NW 107 <sup>th</sup> Ave (SR 985) N/O EC Entrance	NB	3	-	1284	A
	SB	3	-	1606	B
W Flagler Street E/O EC Entrance/SW 105 Pl.	EB	3	-	1051	A
	WB	3	-	1203	A
W Flagler Street W/O EC Entrance/SW 105 Pl.	EB	3	-	1010	A
	WB	3	-	1223	A

- 1) For LOS thresholds refer to HCM 2010 for Multi-Lane (HCM Exhibit 14-4, LOS based on density within segment).
- 2) Traffic volumes are based on 2012 PM peak turning movement counts.
- 3) Denotes number of through lanes by direction.
- 4) From HCS 2010 analysis, see Appendix 11.5

**Table 11.21 Existing Intersection Level of Service (LOS) Analysis 2020 PM Peak Hour –ENGINEERING CENTER**

SIGNALIZED INTERSECTION			
LOCATION		OPTIMIZED TIMINGS	
		Average Stopped Delay (secs/veh)	LOS
SW 105 <sup>th</sup> PI and W Flagler St (SR 968)		33.8	C
UNSIGNALIZED INTERSECTION			
		Control Delay (secs/veh)	LOS
NW 107 <sup>th</sup> Street and EC Entrance	WBR only (Stop Control)	16.4	C
	SBL	14.4	B
	NBL	12.0	B
	EBR only (Stop Control)	12.5	B

Source: From HCS 2010 analysis, Appendix 11.4

**BISCAYNE BAY CAMPUS**

The study area includes access roadways and intersections adjacent to the campus. HCS 2010 was used to analyze the LOS on each of the roadway segments within the study area. All the roadway segments currently operate above the adopted LOS “E” as presented in Table 11.27.

**Table 11.22 Existing Roadway Segment Level of Service (LOS) Analysis 2020 PM Peak Hour – BISCAYNE BAY CAMPUS**

Location	Direction	Lanes (3)	LOS E Capacity (1)	Traffic Volumes (2)	LOS (4)
Bay Vista Boulevard, (NE151 <sup>st</sup> St) N/O NE 145 Street	NB	2	-	311	A
	SB	2	-	256	A
Bay Vista Boulevard (NE 151 <sup>st</sup> St) E/O Biscayne Blvd	EB	2	-	580	A
	WB	2	-	782	A
Campus Entrance (NE 145 <sup>th</sup> St) E/O Bay Vista Boulevard (NE 151 <sup>st</sup> Street)	EB	1	-	210	B
	WB	1	-	184	B

- 1) For LOS thresholds refer to HCM 2010 for Multi-Lane (HCM Exhibit 14-4, LOS based on density within segment) & Two-Lane highways (HCM Exhibit 15-3, LOS based on percent of free flow speed).
- 2) Traffic volumes are based on 2012 PM peak turning movement counts.
- 3) Denotes number of through lanes by direction.
- 4) From HCS 2010 analysis, see Appendix 11.5

HCS 2010 was also used to analyze the intersection LOS. Table 11.28 summarizes the existing level of service for study area intersections. Analysis results indicate that the intersection of US 1/Biscayne Boulevard and NE 151st Street is currently operating at LOS E (capacity). With future growth and anticipated traffic, this intersection could potentially fail. This location needs to be evaluated for future traffic impacts and capacity improvements.

**Table 11.23 Existing Intersection Level of Service (LOS) 2020 PM Peak Hour – BISCAYNE BAY CAMPUS**

SIGNALIZED INTERSECTIONS	
OPTIMIZED TIMINGS	

LOCATION	Average Stopped Delay (secs/veh)	LOS
US 1 (Biscayne Blvd) and NE 151 <sup>st</sup> Street	72.2	E
<b>UNSIGNALIZED INTERSECTION</b>		
Bay Vista Boulevard(NE 151 <sup>st</sup> St) and Campus Entrance (NE 145 <sup>th</sup> Street)	Approach Delay (secs/veh)	LOS
WB Approach (L+R)	8.42	A
NB Approach (2 lane)	8.41	A
SB Approach (1 LT+2 THRU)	10.38	B

Source: From HCS 2010 analysis, see Appendix 11.4

**2. Traffic Counts**

**MODESTO A. MAIDIQUE CAMPUS**

PM peak period turning movement counts (TMCs) were collected at the following University access locations:

- SW 107th Avenue and SW 12th Street
- SW 107th Avenue and SW 16th Street
- SW 107th Avenue and SW 1700 Block (SW 108th Avenue)
- SW 109th Avenue and SW 8th Street
- SW 112th Avenue and SW 8th Street
- SW 117th Avenue and SW 17th Street

The TMC’s were collected in September 2012 between Tuesday and Thursday during the PM peak periods from 4:00 PM to 6:00 PM. The data collected is included in the Appendix 11.3.

**ENGINEERING CENTER**

PM peak period TMC’s were collected at the following intersections:

- NW 107th Avenue and Engineering Center Entrance (West Entrance)
- W Flagler Street and SW 105th Place (South Entrance)

The TMCs was collected in September 2012 between Tuesday and Thursday during the PM peak periods from 4:00 PM to 6:00 PM. The data collected is included in the Appendix 11.3.

**BISCAYNE BAY CAMPUS**

PM peak period TMCs was collected at the following intersections:

- US 1 (Biscayne Blvd)/NE 151 Street,
- Bay Vista Blvd (NE 151 Street) and FIU entrance (NE 145th Street).

The TMCs was collected in September 2012 between Tuesday and Thursday during the PM peak periods from 4:00 PM to 6:00 PM. The data collected is included in Appendix 11.3.

**3. Pavement Condition[AC177]**

Pavement conditions throughout the campuses appear to be at acceptable levels. With the large amount of construction activities at MMC, attention will need to be paid to ensure the pavement and associated signing/markings are returned to acceptable conditions.

**4. Road Designations[AC178]**

**MODESTO A. MAIDIQUE CAMPUS**

**Collector Roads:** The entrance roads and campus loop road (SW 10th Street/University Drive,

SW 12th Street, SW 115th Avenue, SW 17th Street and SW 14th Street), function as collectors on this campus. These loop road(s) serve to collect traffic and segregate it from the campus core, yet provide vehicular linkage to key parking, education, athletic, housing and support facilities.

**Local Roads:** All other roads on campus function as local Streets; these Streets are SW 12th Street (west of SW 115th Avenue) on the western part of campus; SW 113th Avenue, just east of the nature preserve, SW 14th Street which runs east/west on the north side of University Towers; and the SW 12th Street entry to University Apartments at SW 107th Avenue.

The roadways in the planning study area are classified as follows: Tamiami Trail (SW 8th Street) is a state principal arterial. The Homestead Extension of Florida's Turnpike (HEFT) is a limited-access tolled expressway.

The following roadways are minor arterials:

- SW 24th Street (Coral Way)
- SW 107th Avenue (SR 985)
- SW 117th Avenue
- W Flagler Street (SR 968)

The following roadways are collectors:

- SW 16th Street
- NW 7th Street
- SW 97th Avenue
- SW 102nd Avenue
- SW 109<sup>th</sup> Avenue
- SW 122nd Avenue
- SW 127th Avenue

## ENGINEERING CENTER

**Collector Roads:** The campus entrance roads to NW 107th Avenue and W. Flagler Street function as collectors.

**Local Roads:** All other roads providing access to the campus parking lots and engineering center building function as local Streets.

The roadways in the planning study area are classified as follows: Tamiami Trail (SW 8th Street) is a state principal arterial. The Homestead Extension of Florida's Turnpike (HEFT) is a limited-access tolled expressway.

The following roadways are minor arterials:

- SW 24th Street (Coral Way)
- SW 107th Avenue (SR 985)
- SW 117th Avenue
- W Flagler Street (SR 968)

The following roadways are collectors:

- SW 16th Street
- NW 7th Street
- SW 97th Avenue
- SW 102nd Avenue
- SW 122nd Avenue
- SW 127th Avenue

## BISCAYNE BAY CAMPUS

**Collector Roads:** Bay Vista Boulevard is the main collector road which leads into the Biscayne Bay Campus. Bay Vista Boulevard intersects with US 1 (Biscayne Boulevard) and becomes NE 151st Street east of US1.

**Local Roads:** All other roads providing access to the campus parking lots function as local Streets.

In the Biscayne Bay Campus planning study area, US 1 (Biscayne Boulevard) and NE 163rd Street are classified as principal arterials. W. Dixie Highway is classified as a minor arterial, while the following are classified as collectors: NE 159th Street, NE 151st Street, and Bay Vista Boulevard.

5. **Evaluation of Opportunities to Implement Transportation System Management Strategies (TSM)**<sup>[AC179]</sup>

- Add intersection turning lanes.
- Optimize traffic signal phasing and timings.
- Improve signal progression.
- Modify an interchange by following the Department’s Interchange Modification Report Procedure.
- Implement incident management programs.
- Implement intelligent transportation systems (ITS).

The above TSM strategies are improvements intended to fully utilize the existing transportation system’s capacity. Among these TSM strategies, the interchange modification strategy needs to be applied to the interchange of the Homestead Extension of Florida’s Turnpike (HEFT) and SW 8th Street immediately. Long queues and traffic congestion occur on SW 8th Street because of traffic on westbound SW 8th Street traveling to northbound HEFT. The westbound left- turn lane is not long enough to accommodate traffic which can block through lanes on SW 8th Street during the PM peak hour.

A right-turn lane may be required on 107th Avenue northbound at the entrance to the Engineering Center. A right-turn lane improvement would increase capacity on 107th Avenue and provide safety improvements.

h) **Assessment of the Roadway Capacity on Campus and in the Planning Study Area for the Campus Master Plan Base Year and Projected Year**<sup>[AC180]</sup>

1. **Future Conditions for Enrollment, Building Program and Parking Facilities**

**MODESTO A. MAIDIQUE CAMPUS**

Locations of future academic facilities, support facilities, and utilities elements for the Modesto A. Maidique Campus are anticipated. Academic facilities are located mostly inside of the campus loop road. The northeast area, which is outside of the campus loop road, will also accommodate future academic facilities.

**ENGINEERING CENTER**

Locations of future academic facilities, support facilities, and utilities elements for the Engineering Center are anticipated. Future facilities will be in the southwest area of the Engineering Center building.

**BISCAYNE BAY CAMPUS**

Future academic, support facilities and utilities are anticipated for the Biscayne Bay Campus.

2. **Mode split**

No current data is available regarding the mode split for the FIU campuses.

**3. Trip generation:**

For the years 2015 and 2020, the ITE (Institute of Transportation Engineers) Trip Generation Manual (8th Edition) was utilized for student headcount (land use code 550, page 1033) and for faculty/staff (employees) headcount (land use code 550, page 1039). Trip generation is based on equations or rates and the equations specified on these pages were utilized to compute the PM peak hour trips between 4:00 and 6:00 PM to match the adjacent street traffic peak hour. Tables 11.29 and 11.30 summarize the estimated total PM peak hour trips of the student and faculty/staff (employee) trip generation.

**Table 11.24 Fall 2025 PM Peak Hour Trips by FIU Campuses**

University Campus	Fall 2015 Student Headcount (1)	Fall 2015 Faculty/Staff (employees) Headcount (2)	2015 PM Peak Hour Trips (Veh/hr) (3)
Modesto A. Maidique	36,084	6,400	9,133
Engineering Center	2,647	88	651
Biscayne Bay Campus	7,838	344	1,721

- 1) From FIU enrollment matrix
- 2) Not provided by FIU, Projections calculated based on faculty/staff to student ratio for 2012, and percentage of total faculty/staff (employees) in 2012 which is FTE.
- 3) Total PM Peak hour trips = trip generation based on student headcount (1) + trip generation based on faculty/staff (employees) headcount (2).

**Table 11.25 Fall 2030 PM Peak Hour Trips by FIU Campuses**

University Campus	Fall 2020 Student Headcount (1)	Fall 2020 Faculty/Staff (employees) Headcount (2)	2020 PM Peak Hour Trips (Veh/hr) (3)
Modesto A. Maidique	37,719	6,690	9,493
Engineering Center	2,918	97	705
Biscayne Bay Campus	9,055	397	1,970

- 1) From FIU enrollment matrix
- 2) Not provided by FIU, Projections calculated based on faculty/staff to student ratio for 2012, and percentage of total faculty/staff (employees) in 2012 which is FTE.
- 3) Total PM Peak hour trips = trip generation based on student headcount (1) + trip generation based on faculty/staff (employees) headcount (2).

**4. Roadway Capacity Assessment and Assessment of University Traffic Impacts on Off-Campus**

**MODESTO A. MAIDIQUE CAMPUS AND ENGINEERING CENTER**

The Modesto A. Maidique Campus is located within the Miami-Dade County Metropolitan Planning Organization (MPO) Traffic Analysis Zone (TAZ) 983 while Engineering Center is located within TAZ 814. Trip distribution was accomplished using the cardinal directional distribution method, which is currently used in Miami-Dade County. Distribution percentages of each TAZ were obtained from the Department of Planning and Zoning. Tables 11.31 and 11.32 show the distribution percentage and trip distribution corresponding to the cardinal direction for the TAZs in which the Modesto A. Maidique campus and the Engineering Center are located.

**Table 11.26 Trip Distribution by Cardinal Direction – MODESTO A. MAIDIQUE CAMPUS**

TRANSPORTATION ELEMENT

Cardinal Direction	Percent of Trip Distribution for TAZ 983 (1)	Trip Distribution (Year 2015) (Veh/hr) (2)	Trip Distribution (Year 2020) (Veh/hr) (2)
NNE	11.2	1,023	1,063
ENE	16.91	1,544	1,605
ESE	9.12	833	866
SSE	13.88	1,268	1,318
SSW	23.2	2,119	2,203
WSW	14.94	1,365	1,418
WNW	4.85	443	460
NNW	5.89	539	560
TOTAL	100	9,133 (2)	9,493

- 1) Percent trip distribution for TAZ from Miami-Dade County MPO.
- 2) Trip generation computed earlier from ITE Trip Generation Manual, 8th Edition.

**Table 11.27 Trip Distribution by Cardinal Direction – ENGINEERING CENTER**

Cardinal Direction	Percent of Trip Distribution for TAZ 814 (1)	Trip Distribution (Year 2015) (Veh/hr)	Trip Distribution (Year 2020) (Veh/hr)
NNE	14.49	94	102
ENE	18.5	120	130
ESE	14.62	95	103
SSE	11.97	78	84
SSW	20.46	133	144
WSW	10.98	71	77
WNW	3.90	25	27
NNW	5.08	33	36
TOTAL	100	651 (2)	705 (2)

- 1) Percent trip distribution for TAZ from Miami-Dade County MPO.
- 2) Trip generation computed earlier from ITE Trip Generation Manual, 8th Ed.

**Existing Traffic Concurrency Evaluation:** [AC181]

The traffic assignment has been documented to establish the project traffic contribution on roadways within one mile of the campuses using the concurrency data kept by the Miami-Dade County Public Works Department. The resulting two-way assignment of project traffic along with the percentage of project traffic contribution for each concurrency station is shown in Table 11.33.

If Master Plan Update is a multi-year process, Miami-Dade County recommends delaying traffic study until near the end so that traffic numbers are more accurate at time of Campus Development Agreement. [AC182]

**Table 11.28 Traffic Impact Assessment – Two Way Analysis – MODESTO A. MAIDIQUE CAMPUS AND ENGINEERING CENTER – Year 2020** [AC183]

Roadway	Limits	Station No.	Roadway LOS Standard (5)	Roadway Capacity	PHP	Two-Way Project Traffic (3)	Project Traffic Contribution (2)	Background Traffic (DHV) (4)
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TRANSPORTATION ELEMENT

SW 127 Ave (1)	SW 7 St to NW 6 St	9770	A	2,840	1,741	112	1.1%	1,628
SW 127 Ave (1)	SW 8 St to SW 26 St	9772	B	3,150	2,386	31	0.3%	2,385
SW 122 Ave	SW 8 St to SW 26 St	877046	B	2,050	2,393	143	1.4%	1,310 (4)
HEFT	300' N of SW 8 St	2250	D	9,800	12,702	122	1.2%	7,208 (4)
HEFT	1000' N of Bird Rd	2270	F	9,800	11,580	275	2.7%	6,478 (4)
NW 107 Ave	Flagler St to SR 836	1218	D/C	5,590	6,450	1,275	12.5%	3,012 (4)
SW 107 Ave	Flagler St to SW 8 St	2580	F/D	4,630	6,127	2,662	26.1%	2,016 (4)
SW 107 Ave	SW 8 St to SW 24 St	1090	C	6,540	5,384	704	6.9%	2,723 (4)
SW 97 Ave (1)	SW 8 St to SW 40 St	9698	D	1,320	1,369	214	2.1%	1,154
SW 26 St. (Coral Way) (1)	SW 117 Ave to 127 Ave	9130	D	4,900	4,535	826	8.1%	3,709
SW 24 St (Coral Way) (1)	SW 107 Ave to 117 Ave	9128	C	4,330	3,783	51	0.5%	3,732
SW 24 St Coral Way) (1)	SW 97 Ave to 107 Ave	9126	C	7,380	3,647	357	3.5%	3,290
SW 8 St	SW 127 Ave to SW 137 Ave	88	C	7,320	5,405	275	2.7%	2,986 (4)
SW 8 St	SW 117 Ave to SW 127 Ave	2561	D/C	5,860	5,804	449	4.4%	3,116 (4)
SW 8 St	SW 107 Ave to SW 117 Ave	90	D/C	8,590	5,683	418	4.1%	3,064 (4)
W Flagler St (1)	NW 107 Ave to 114 Ave	9158	B	6,990	3,502	255	2.5%	3,247
W Flagler St (1)	NW 97 Ave to 107 Ave	9156	B	4,660	3,567	540	5.3%	3,026

- 1) Items had no FDOT 2011 volumes, therefore a 20% increase was applied (based on increase on other segments) to the previous numbers from 2006 Campus Master Plan
- 2) Same contribution as 2006 Campus Master Plan
- 3) Two-way project traffic = (Sum of 2020 PM peak trip generation trips for MMC (9493 from Table 11.31) + EC (705 from Table 11.32) campuses) x (2).
- 4) Background traffic (design hourly volume, DHV) computed from 2011 AADT. K factor of 0.09 used.
- 5) From HCS 2010, see Appendix 11.7

**BISCAYNE BAY CAMPUS**

The Biscayne Bay Campus is located within the Miami-Dade County Metropolitan Planning Organization (MPO) Traffic Analysis Zone (TAZ) 190. Trip distribution was accomplished using the cardinal directional distribution method. Distribution percentages of TAZ 190 were obtained from the Department of Planning and Zoning. Table 11.34 summarizes the distribution percentage and trip distribution corresponding to the cardinal direction of TAZ 190.

**Table 11.29 Trip Distribution by Cardinal Direction – BISCAYNE BAY CAMPUS**

Cardinal Direction	Percent of Trip Distribution for TAZ 190 (1)	Trip Distribution (Year 2015) (Veh/hr)	Trip Distribution (Year 2020) (Veh/hr)
NNE	10.51	181	207
ENE	0.15	3	3
ESE	0.01	0	0
SSE	4.13	71	81

TRANSPORTATION ELEMENT

SSW	11.31	195	223
WSW	26.71	460	526
WNW	23.44	403	462
NNW	23.73	408	467
TOTAL	100	1,721(2)	1,970 (2)

- (1) Percent trip distribution for TAZ from Miami-Dade County MPO.
- (2) Trip generation computed earlier from ITE Trip Generation Manual, 8th Edition.

Existing Traffic Concurrency Evaluation:

2 Table 11.35 depicts the project traffic contribution on all roadway links within one (1) mile of campus using concurrency data kept by the Miami-Dade County Public Works Department.

**Traffic Impact Assessment – Two Way Analysis – BISCAYNE BAY CAMPUS - Year 2020**

Roadway	Limits	Station No.	Roadway LOS Standard (5)	Roadway Capacity	PHP	Two-Way Project Traffic (3)	Project Traffic Contribution (2)	Background Traffic (DHV) (4)
West Dixie Hwy	NE 16 Ave to NE 163 St	531	A	2,910	1,370	2	0.1%	1,368 (4)
Biscayne Blvd	NE 135 St to NE 163 St	5219	C	9,540	5,608	73	3.7%	5,535 (4)
Biscayne Blvd	NE 121 St to NE 135 St	524	B	5,800	3,500	35	1.8%	3,465 (4)
NE 135 <sup>th</sup> St	NE 12 Ave to Biscayne Blvd	1026	B/A	3,150	1,888	160	8.1%	1,728 (4)
NE 151 St/Bay Vista Blvd (1)	Biscayne Blvd to Biscayne Bay Campus Entrance	NA	A	3,420	1,244	670	34.0%	574

- 1) Obtained from 2012 TMCs.
- 2) Same contribution as 2006 Campus Master Plan
- 3) Two-way project traffic = (2020 PM peak trip generation trips for BC campus, i.e.1970, from Table 11.34) x (2).
- 4) Background traffic (design hourly volume, DHV) computed from 2011 AADT. K factor of 0.09 used.
- 5) From HCS 2010, see Appendix 11.7.