

2015-2025
USF System
Campus Master Plan Updates

Appendix B
Data Collection and Analysis

Tampa

Data Collection and Analysis

Table of Contents

Element 4 Future Land Use

Element 5 Transportation

Element 6 Housing and Student Support Services

Element 7 Infrastructure

7.1 Stormwater Management

7.2 Potable Water

7.3 Sanitary Sewer

7.4 Solid Waste

7.5 Hot Water

7.6 Chilled Water

7.7 Electrical Power and other Fuels

7.8 Data/Voice Communications

Element 8 Conservation

Element 9 Recreation and Open Space

Element 10 Intergovernmental Coordination

Element 11 Capital Improvements

Data Collection and Analysis Figures**Element 4 Future Land Use:**

- Figure 4.1 Existing Building Uses**
- Figure 4.2 Campus Development Density**
- Figure 4.3 Building Development**
- Figure 4.4 Encumbrances, Leases, Subleases, and Easements**
- Figure 4.5 Developable and Underdeveloped Areas**
- Figure 4.6 Existing Campus Aerial**

Element 5 Transportation:

- Figure 5.1 Existing Parking and Vehicular Circulation System**
- Figure 5.2 Parking Utilization**
- Figure 5.3 Bull Runner Route Map**
- Figure 5.4 Bus Route Map**
- Figure 5.5 Existing and Planned Pedestrian Facilities**
- Figure 5.6 Existing and Planned Bicycle Facilities**
- Figure 5.7 Functional Roadway Classifications**
- Figure 5.8 Existing Average Daily Traffic Volumes**

Element 6 Housing and Student Support Services:

- Figure 6.1 Student and Staff Off-Campus Residences**
- Figure 6.2 Campus Housing**

Element 7 Infrastructure:

- Figure 7.1-1 Stormwater Management Plan**
- Figure 7.1-2 Stormwater Problem Areas**
- Figure 7.1-3 Permeable Surface**
- Figure 7.2-1 Potable Water Plan**
- Figure 7.2-2 Irrigation Plan**

- Figure 7.3 Sanitary Sewer Plan**
- Figure 7.4 Waste Management Plan**
- Figure 7.5 Heating Hot Water Illustrative Map**
- Figure 7.6 Chilled Water Illustrative Map**
- Figure 7.7 Electrical Illustrative Map**
- Figure 7.8-1 Communications Illustrative Map**
- Figure 7.8-2 Communications Site Distribution**

Element 8 Conservation:

- Figure 8.1 USF Campus Open Space**
- Figure 8.2 Natural and Environmental Resources**
- Figure 8.3 USF Forest Preserve**
- Figure 8.4 Sinkhole Plan**
- Figure 8.5 Tree Cover**
- Figure 8.6 Floodplains**

Element 9 Recreation and Open Space:

- Figure 9.1 Athletic and Recreation Facilities**
- Figure 9.2 Open Space**
- Figure 9.3 Riverfront Park Plan**

Element 11 Capital Improvements:

- Figure 11.1 2005-2015 Projects Completed**
- Figure 11.2 Building Maintenance Responsibilities**

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Element 4:

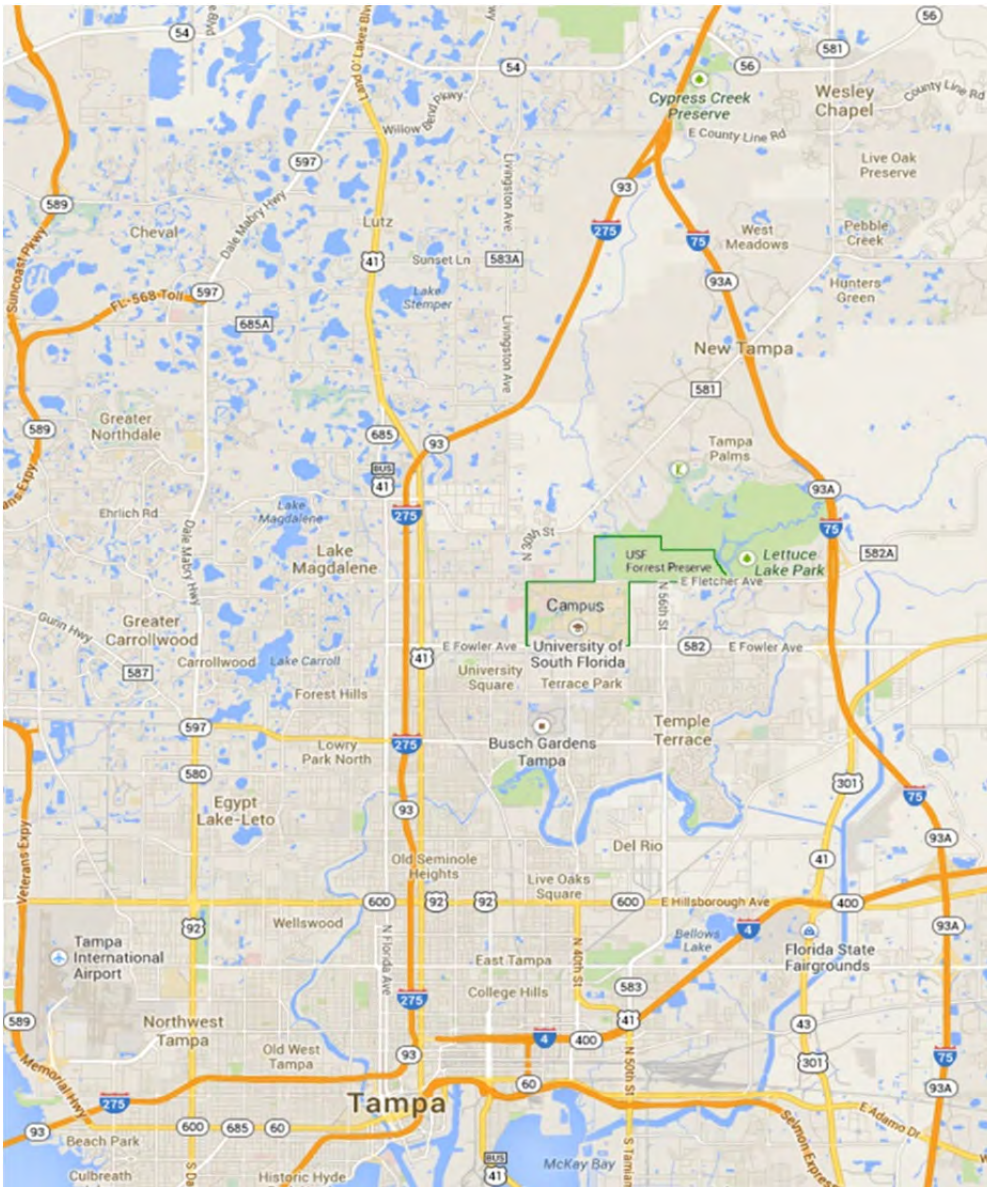
Future Land Use

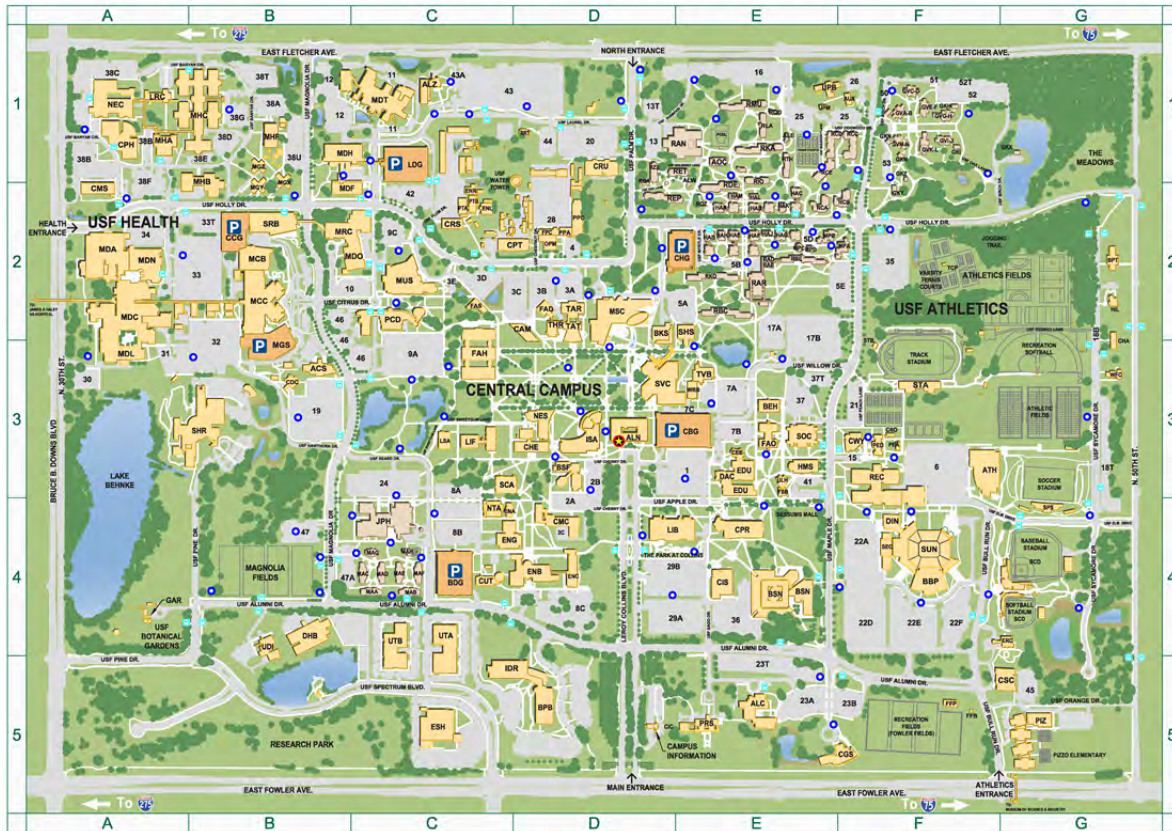
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Element 4 Future Land Use

This element designates existing and future development as reflected in the goals, objectives and policies of the campus master plan, and describes how future development will be coordinated with land uses planned by the host and/or affected local governments in the planning study area, see also Element 10

USF Tampa Campus Location Map:





(1) FUTURE LAND USE DATA AND ANALYSIS

The USF campus property consists of a total of approximately 1550 Acres and is divided by Fletcher Avenue. The property is leased from the state Trustees of the Internal Improvement Trust Fund (TIITF). The developed Academic Campus is approximately one mile north-south by one and a half miles east-west, containing approximately 815 Acres including subleased parcels, and does not include the USF Research Park. The campus is bounded by Bruce B Downs Boulevard, Fletcher Avenue, 50th Street, and partially by Fowler Avenue. USF campus development is guided by the Campus Development Agreement with the City of Tampa. The USF Research Park is a separate property leased directly to the USF Research Foundation by the TIITF. Its development is governed by a separate Development of Regional Impact (DRI) with the City of Tampa.

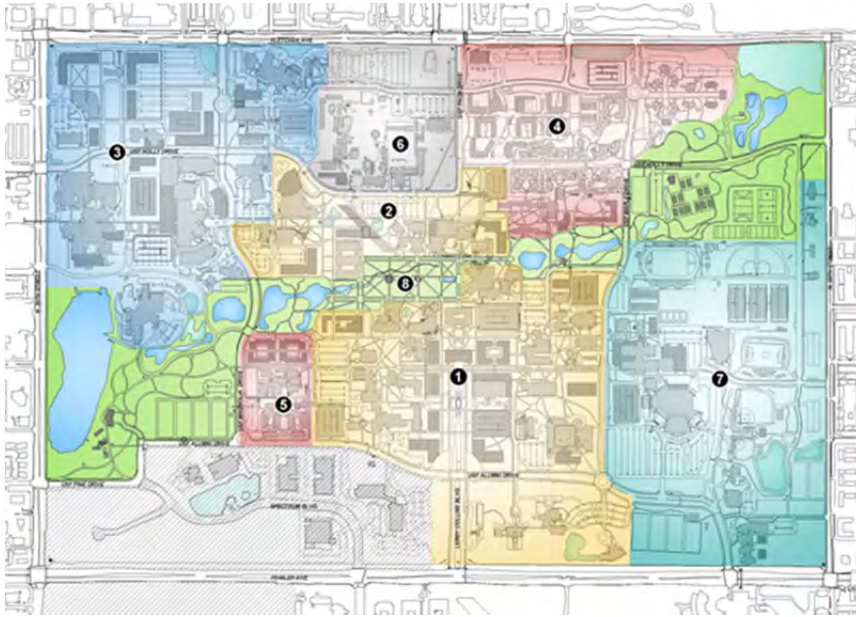
The USF property north of Fletcher Avenue is bounded by 46th Street, Fletcher Avenue, and the Hillsborough River. This property is approximately 735 Acres and contains the USF Golf Course, the USF Forest Preserve, and the USF Riverfront Park.

(a) Existing and projected space and building needs

Summary of Campus buildings GSF by area:

The campus currently contains 263 buildings. Individual building NASF and GSF are available through Facilities Planning and Construction. The facilities for the College of Marine Science and the USF Health Pediatric Research Building are located on the USF St. Petersburg campus and are included in the Campus Master Plan for that campus.

USF BUILDINGS ONLY GSF TOTAL				
			GSF	Parking Struct GSF
1 - Academic South			2,737,498	1,110,955
2 - Academic North			912,621	297,303
3 - Health Sciences			1,734,224	472,085
4 - Residential East			1,352,752	
5 - Residential West			527,916	
6 - Facilities Services			238,297	
7 - Athletics and Recreation			803,804	
8 - Greenway			3,516	
		GSF Total	8,310,628	1,880,343
		GSF Total with Parking Structures	10,190,971	
USF TAMPA CAMPUS - ALL BUILDINGS GSF TOTAL				
			GSF	Parking Struct GSF
1 - Academic South			2,737,498	1,110,955
2 - Academic North			912,621	297,303
3 - Health Sciences			1,734,224	472,085
3 - Moffitt, Shriners'			1,332,257	540,866
		Total Area 3	3,066,481	
4 - Residential East			1,352,752	
5 - Residential West			527,916	
6 - Facilities Services			238,297	
7 - Athletics and Recreation			803,804	
7 - Pizzo Elem, Patel Elem, Chapels			136,166	
		Total Area 7	939,970	
8 - Greenway			3,516	
		GSF Total	9,779,051	2,421,209
		GSF Total with Parking Structures	12,200,260	



USF Tampa Campus Enrollment Projections

Unique Headcounts on Campus*

2012	2013	2014	2020 projection	2025 projection
37101	37579	36842	37210	37583

Unique Headcounts of Distance Learning Students**

2012	2013	2014	2020 projection	2025 projection
3659	3907	4008	4048	4089

Unique Headcount per Day*^

	2012	2013	2014	2020 projection	2025 projection
Sunday	16	55	9	9	9
Monday	23614	24117	25321	25574	25830

Tuesday	26215	27248	27030	27300	27573
Wednesday	24108	24483	25696	25953	26212
Thursday	25797	26514	26320	26583	26849
Friday	13788	14379	6319	6382	6446
Saturday	877	939	1103	1114	1125

Headcounts by Home Campus*++

2012	2013	2014	2020 projection	2025 projection
41047	41703	41888	42307	42730

FTE by Home Campus*++

2012	2013	2014	2020 projection	2025 projection
15704.66	15784.33	15688.61	15845	16004

Tampa Campus Total Annual FTE Actual and Projected:

Tampa	Actual						Projected									
	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
FTE	25,705	26,270	26,058	26,417	26,765	27,048	27,249	27,429	27,612	27,798	27,988	28,180	28,370	28,562	28,754	28,948

All projects for student enrollment are based on 1% increase from Fall 2014 to Fall 2020 and a 1% increase from Fall 2020 to 2025.

*These represent the count of unique ids where course delivery campus location was USF Tampa.

**These represent the count of unique ids of students where 100% of their courses were labeled as distance learning where course funding campus was USF Tampa.

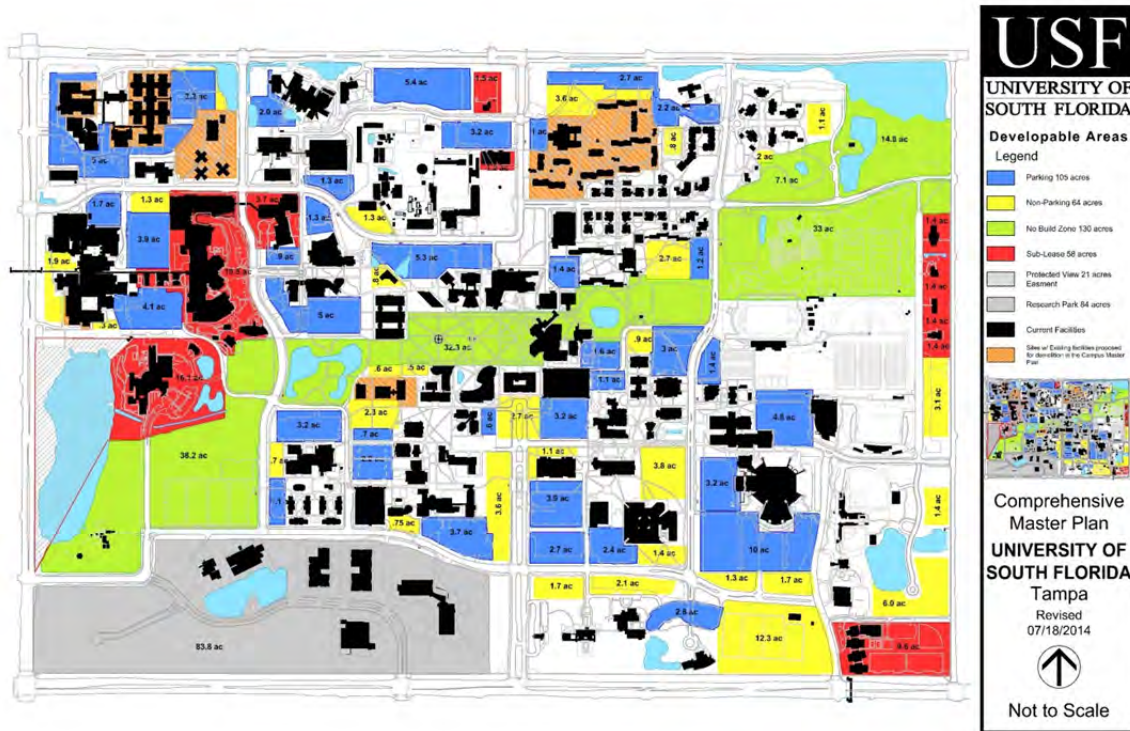
*^ These represent the count of unique ids where course delivery campus location was USF Tampa for a given day of the week.

*++ These represent the “federal” counts based on information available in InfoCenter. Note these counts do include USF Lakeland and USF Health students. FTE is the gross FTE fall contribution to the annual FTE total.

Non-Student Faculty-Staff*^#

of the Greenway system. There is approximately 79 acres that is sub-leased to other entities, including a 22 acre view easement primarily over Lake Behnke. The Greenway, USF Golf Course, USF Forest Preserve, and the USF Riverfront Park are all considered unavailable for development. See map below

The former USF Chinsegut Hill Conference Center in Brooksville FL was considered surplus land. It is now leased by the State to Hernando County.



(c) Properties within the planning study area where title interest is held by the Board of Trustees of the Internal Improvement Trust Fund (TIIF).

The USF Research Park, the property at the northeast corner of Bruce B Downs and Fowler Avenue, is leased to the USF Research Foundation by the TIIF. Development is controlled by a Development of Regional Impact agreement with the city, not the USF Master Plan. The property is approximately 87 acres (including reservations and encumbrances such as leases, subleases, or easements, and any other land held by the University within the planning study area or included in the Master Plan). The property located at the southeast corner of Bruce B Downs and Fowler Avenue (South Park) was acquired by the USF Research Foundation in November 2005. The undeveloped property is 25 acres. This property currently does not have a development agreement. Existing subleases to non-USF entities on University-controlled property, other than utility easements are shown on Fig 4.4.

Tampa Campus Property in Subleases and Encumbrances

LESSEE or SUBLESSEE	NAME of FACILITY/ STRUCTURE	FACILITY USE	LEASED ACREAGE	SUBLEASED ACREAGE	LEASE TERMINATION
USF/ Board of Trustees	USF/ Main Campus	USF/ Main Campus	1,550.00		1/22/2073
BOT Synod of Florida Presbyterian Church U.S.	Chapel Center	Student Religious Center		1.38	1/25/2059
Florida Baptist Convention	Baptist Student Center	Student Religious Center		1.38	1/25/2059
Florida Board of Education of the Florida Annual Conference of the Methodist Church	University Chapel Fellowship	Student Religious Center		1.38	1/25/2059
Credit Union	USF Federal Credit Union	Credit Union		1.17	1/17/2021
Shriners Hospital	Shriners Hospital	Shriners Hospital	includes view easement	40.96	12/13/2072
H. Lee Mofitt Cancer Ctr	H. Lee Mofitt Cancer Ctr	H. Lee Mofitt Cancer Ctr		21.64	10/10/2040
American Cancer Society	ACS: Hope Lodge	Short Term Residential Facility	incl in Moffitt sublease	4.00	4/30/2025
Hillsborough County School Board	Anthony J. Pizzo Elementary School	Elementary School		9.62	8/21/2017
Hillel Jewish Student Center	Hillel Jewish Student Center	Hillel Jewish Student Center		1.38	10/15/2017
Hillsborough County School Board	Patel Charter School	Elementary School		0.52	

ENCUMBRANCES/EASEMENTS:

TECO (substation only, no utility easements)	1.52
Shriners’ Hospital Unobstructed View Area (included above)	22.62

Note: The USF Property Corporation maintains property subleases for certain campus areas as a result of some projects.

Note there are special requirements required by the EPC and DEP for any development on Lot 32 (located between the USF Health facilities and the Moffitt and Shriners Subleases). See Appendix D for more information.

Off- Campus property:

- South Tampa Clinic for Advanced Health Care:
Sublease from Tampa General Hospital To the USF Board of Trustees:
.746 Acres

Address: 2 Tampa General Circle, Tampa FL 33606

40 years, effective March 2006, expires September 30, 2046, may be extended

- Center for Advanced Medical Learning and Simulation (CAMLs):

Owner: USF Board of Trustees

1.39 Acres

Address: 124 S Franklin Street, Tampa FL 33602

- WUSF TV Riverview Transmission Tower Property

Sublease from DOE.

18.446 Acres

USF Research and Educational purposes compliant with the site and property characteristics including the replacement of the existing Transmission Tower and implementation of an Amphibian Water Tank project and future projects consistent with USF mission objectives and provisions of the Sublease.

Address: 14205 Boyette Road, Riverview, Fl. 33569

(d) Properties within the planning study area which may serve to meet existing or future needs

Property changes currently in progress:

- Downtown Tampa property transfer to the USF Board of Trustees for the purpose of building the USF Health Morsani Medical School and the USF Health Heart Institute. (not within the planning study area)
- Sublease of USF Campus property to a TBD Public/Private Partner for the purpose of building new Residence Halls, Dining and Recreation facilities.
- Sublease of USF Campus property to a TBD Public/Private Partner for the purpose of building a grocery store.

(e) Existing natural, archeological or historic resources

Natural Resources

The Greenway provides 125 acres of contiguous open space, stormwater management, and recreation for students. This is the largest natural resource currently on the USF-Tampa campus. Additionally, the east end of the USF Forest Preserve borders on the banks of the Hillsborough River, which is listed as an Outstanding Florida Water and is under the jurisdiction of the State of Florida. Alteration of the wetlands within the ERA is controlled by state agencies such as the Florida Department of Environmental Protection (FDEP) and the South West Florida Water Management District (“SWFWMD”). The ERA is currently managed as a natural area with prescribed burning employed as a research and management tool by the USF Biology Department. A portion of the USF Forest Preserve, as well as the connected hardwood area on the campus property at the southwest corner of Fletcher Avenue and 50th Street, and Lake Behnke, have all been designated as wetlands. The wetland portion of the USF Forest Preserve has been surveyed separately. See also Element 8, *Conservation*, for additional information on natural resource areas on the USF-Tampa campus.

Internal to the USF-Tampa Campus, there exists a single known location where existing regulations govern/prevent, the development of drainage features. Within the region of the H. Lee Moffitt Cancer Center, northeast of the above-ground storage tank, there was an identified petroleum spill. Proper protocols were followed for identifying and remediating the spill. In November 2008, Hillsborough County Environmental Protection Commission issued a report stating that no further action was required, with controls, for this petroleum spill. The report and corresponding legal description of the spill location are

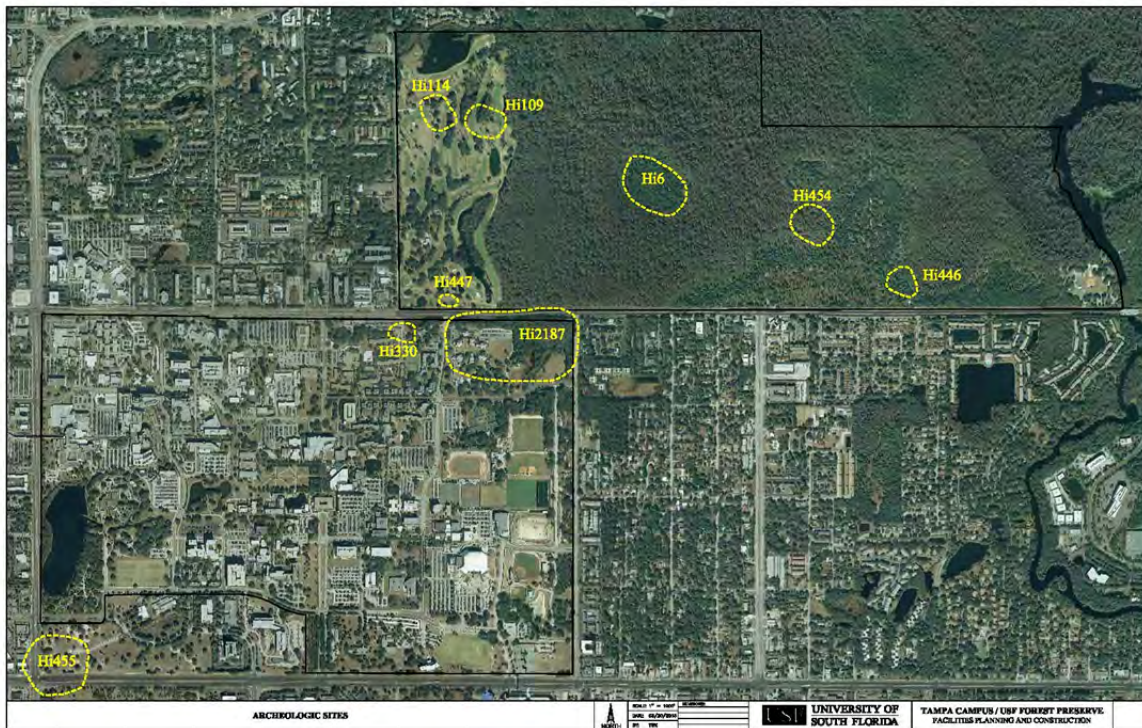
included in the Appendix D, *Resolution of Petroleum Discharge at the H. Lee Moffitt Cancer Center*. Prohibited uses in this “restricted area” include groundwater extraction and groundwater use, as well as the prohibition of developing any form of stormwater treatment system with the affected area. See also Element 7.1 C, *Stormwater Management* for additional information regarding regulations and programs which govern land use and development of natural drainage features.

Historic Resources

The Administration (ADM), Fine Arts (FAH), Theatre 1 (TAT), and Chemistry (CHE) buildings may be considered by the University for historic resource status as period examples of the Florida architectural approach to conservation. Techniques used in original design include minimizing the number of windows that face east or west, passive solar, sunscreens, courtyards and other measures.

Archaeological Resources

Several archeological sites on the campus property are listed with the State of Florida. In 2002 a small prehistoric site located at the north end of campus, near the Hillsborough River and Cypress Creek basins, golf driving range and adjacent wooded area, was documented by USF professor and students. The site, originally discovered and recorded in the 1980s, has been identified as the remnants of a camp site or habitation site, with stone and fossilized or agatized coral used as tools, and broken pieces of pottery made by ancient Floridians thought to have lived there up to two thousand or more years ago. Site investigation was also done recently on the USF Golf Course property by the USF Archeology Department for the impact of the construction of the Chowdari Golf Practice facility replacement.



(f) Facilities on University-controlled lands that are not under the jurisdiction or operation of the State University System.

South Tampa Clinic for Advanced Health Care:

Sublease from Tampa General Hospital to the USF Board of Trustees:

.746 Acres

Address: 2 Tampa General Circle, Tampa FL 33606

40 years, effective March 2006

Center for Advanced Medical Learning and Simulation (CAMLs):

Owner: USF Board of Trustees

1.39 Acres

Address: 124 S Franklin Street, Tampa FL 33602

USF Research Park of Tampa Bay

Currently leased from the TIITF to the USF Research Foundation

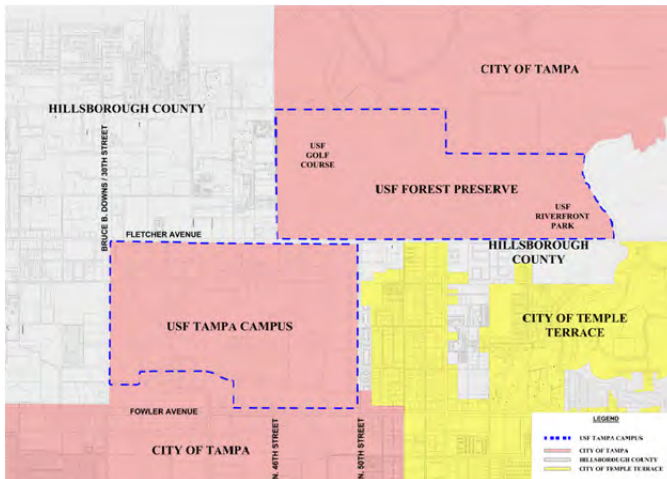
83.79 Acres north of Fowler Avenue, Development of Regional Impact (DRI)

28 Acres south of Fowler

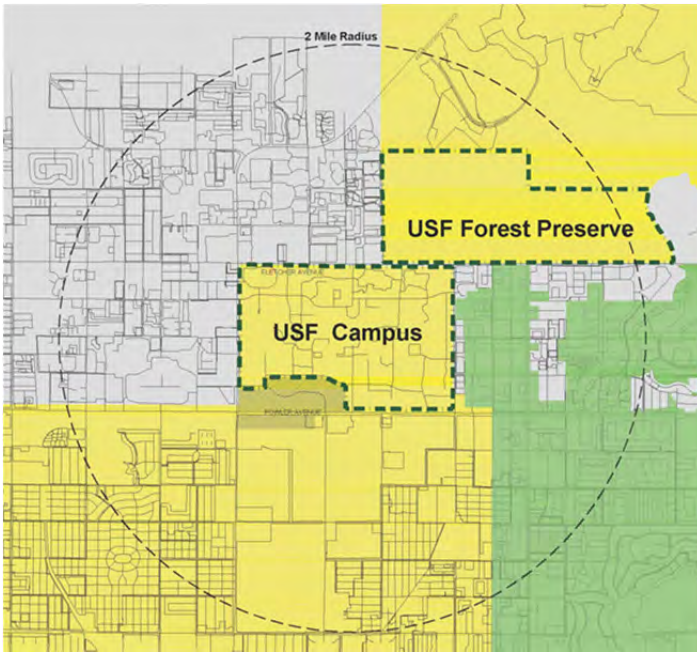
(g) Existing and projected land uses, goals, objectives, policies and zoning within the planning study area as defined in the local government’s comprehensive plans.

The use of the USF campus property is consistent with the local governments Comprehensive Plans.

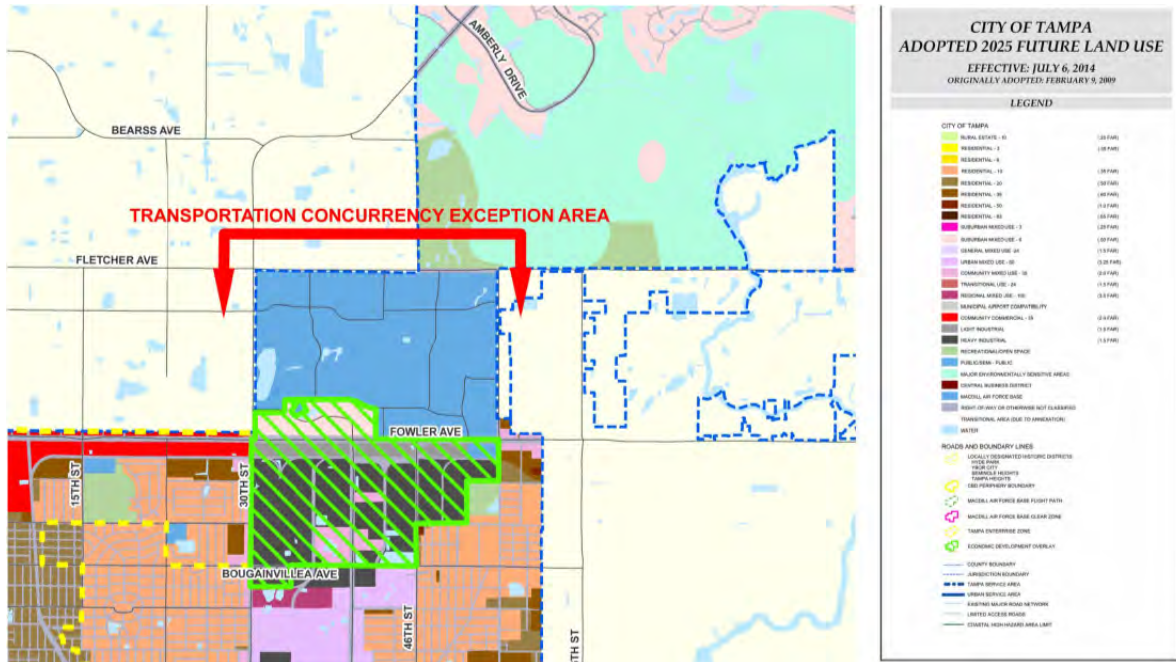
Adjacent Municipalities:



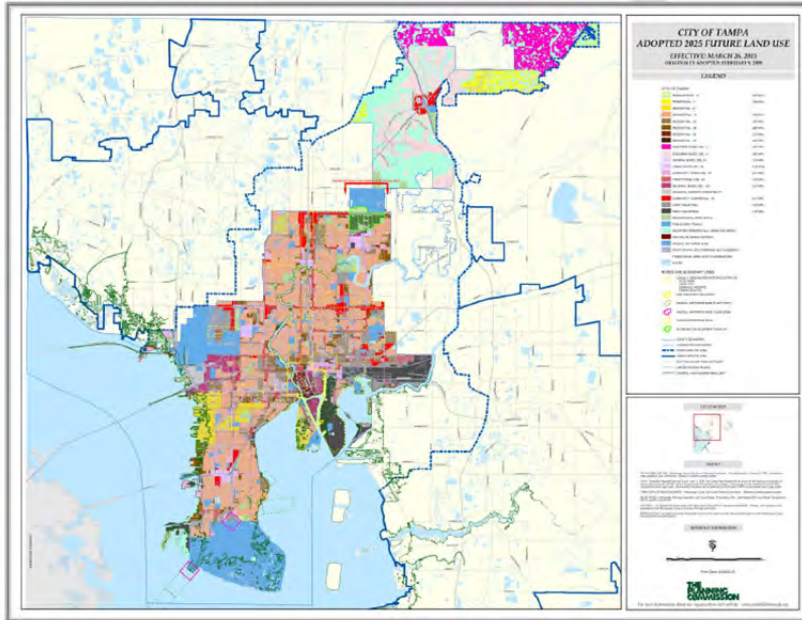
Planning Study Area:



City of Tampa Future Land use Map:

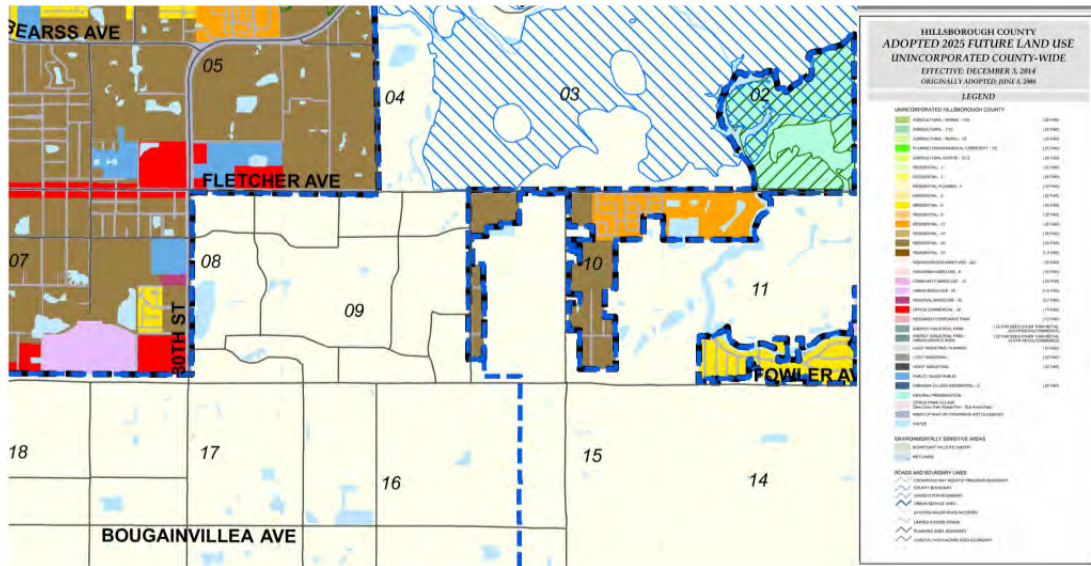


LU Map 1 - Future Land Use Map*



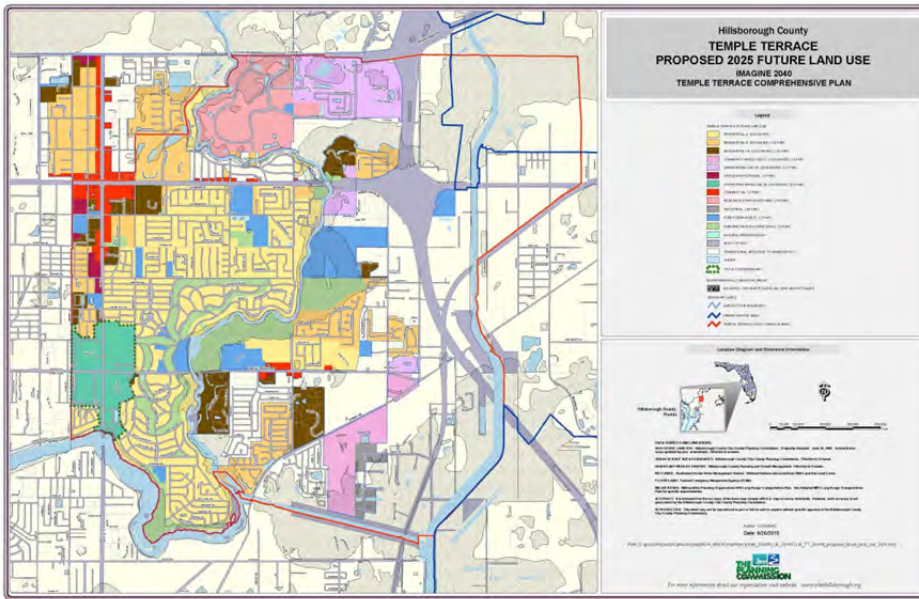
http://www.planhillsborough.org/wp-content/uploads/2014/12/Tampa-2040-Comp-Plan-September9_18_15.pdf

Hillsborough County Future Land use Map:



<http://www.planhillsborough.org/wp-content/uploads/2014/09/Pages-from-CPA-14-09-A-M-Future-Land-Use-Map-Series-Proposed-Map-Series.pdf>

City of Temple Terrace Future Land use Map:



Page 64



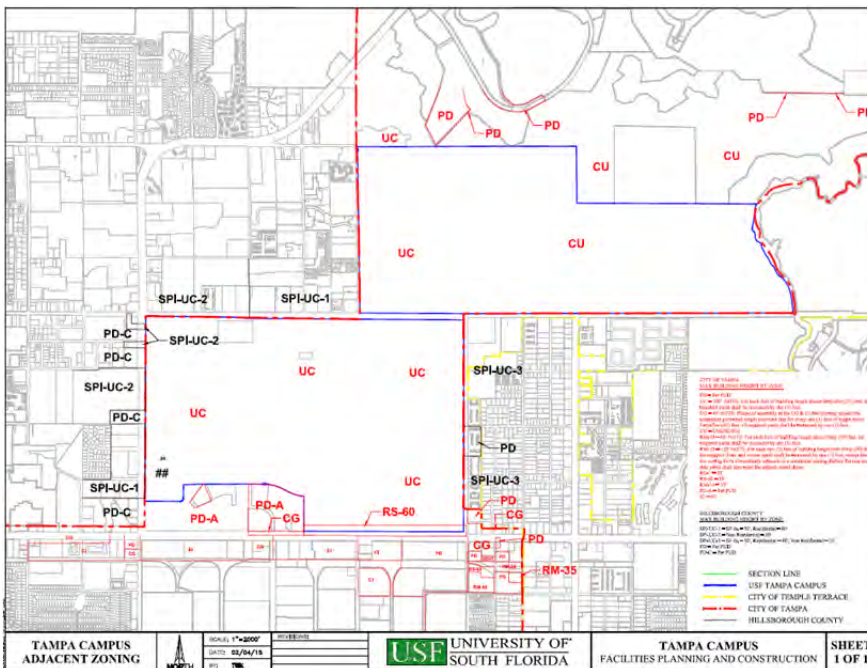
Future Land Use



Website

<http://www.planhillsborough.org/wp-content/uploads/2015/07/Full-TT-Plan-Draft-9.17.15.pdf>

Adjacent zoning areas



(h) Campus Development Agreement

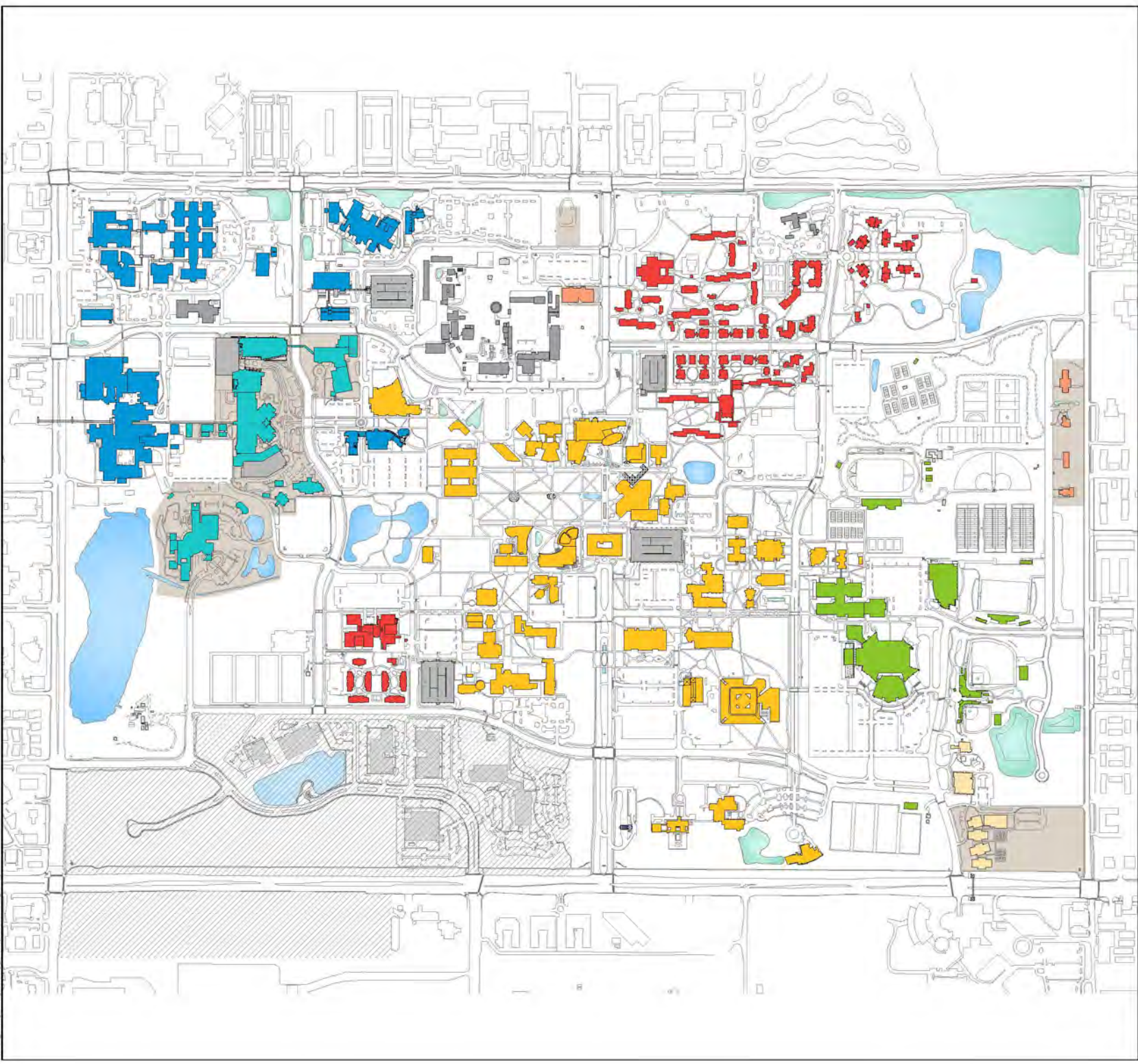
USF has an Agreement with the City of Tampa regarding development. It was based on the 2005-2015 Tampa Campus Master Plan Update and executed in April 2007 and expires on December 31, 2015. In summary it provides for maximum net increases in Academic, Support, Medical, and Sport/Recreation space as well as Housing Beds, Parking, and Outdoor Seating. These are listed in Exhibit A of the Agreement. It also requires USF to remove the northwest corner of campus from City potable water service. USF is in the process with the City of Tampa to extend the Agreement to 2025.

<http://www.usf.edu/administrative-services/facilities-planning/documents/master-dev-agreement.pdf>

The fair share of cost for off-campus roadway and intersection improvements, based on projected headcount enrollment increases, was a payment of \$5,273,205 from the State Concurrency Trust Fund (this fund no longer exists). Of this amount, \$3,000,000 was retained by the City and \$2,273,205 was received by the USF Parking and Transportation Services to improve USF BullRunner transit service to the Campus. This resulted in the expansion of service with a new route to the south of the USF Campus and has been very successful.

ENROLLMENT	2004-05	2014-15	Change	2005 MP projection for 2013-14	less than 2013-14 projection	Current projection for 2025
Headcount enrollment	36,160	41,888	5,728	47,136	5,248	42,730.00

Benchmarks to the USF Campus Development Agreement				
8.19.15	Development Allowed	Current Used	Remaining balance	% used
Academic GSF	1,723,269	686,101	1,037,168	40%
Support GSF	683,566	150,391	533,175	22%
Parking	11,200	2,971	8,229	27%
		incl Moffitt		
Medical GSF	2,580,384	589,888	1,990,496	23%
		incl Moffitt		
Housing beds	2,526	1,000	1,526	40%
Sports and Recreation GSF	546,800	142,443	404,357	26%
Outdoor Seating (seats)	16,000	2,055	13,945	13%
GSF Totals	5,534,019	1,568,823	3,965,196	



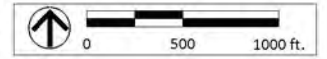
- Academic (USF)
- Academic (non-USF)
- Residence Halls (USF)
- Support (non-USF)
- Health Sciences (USF)
- Health Sciences (non-USF)
- Facilities (USF)
- Athletics (USF)
- Parking facilities
- Sub-Lease

Area Not Included in Campus Master Plan


Element 4
Future Land Use

Figure 4.1
Existing Building Uses

Date
12/03/2015



-  1-2 Story Building
-  > 2 Story Building
-  Parking Structure
-  Surface Parking

 Area Not Included in
Campus Master Plan

Element 4
Future Land Use

Figure 4.2
Campus Development
Density

Date
12/03/2015



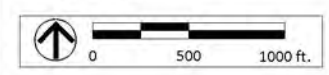
- 1956 - 1960
- 1961 - 1970
- 1971 - 1980
- 1981 - 1990
- 1991 - 2000
- 2001 - 2015

Area Not Included in
Campus Master Plan


Element 4
Future Land Use

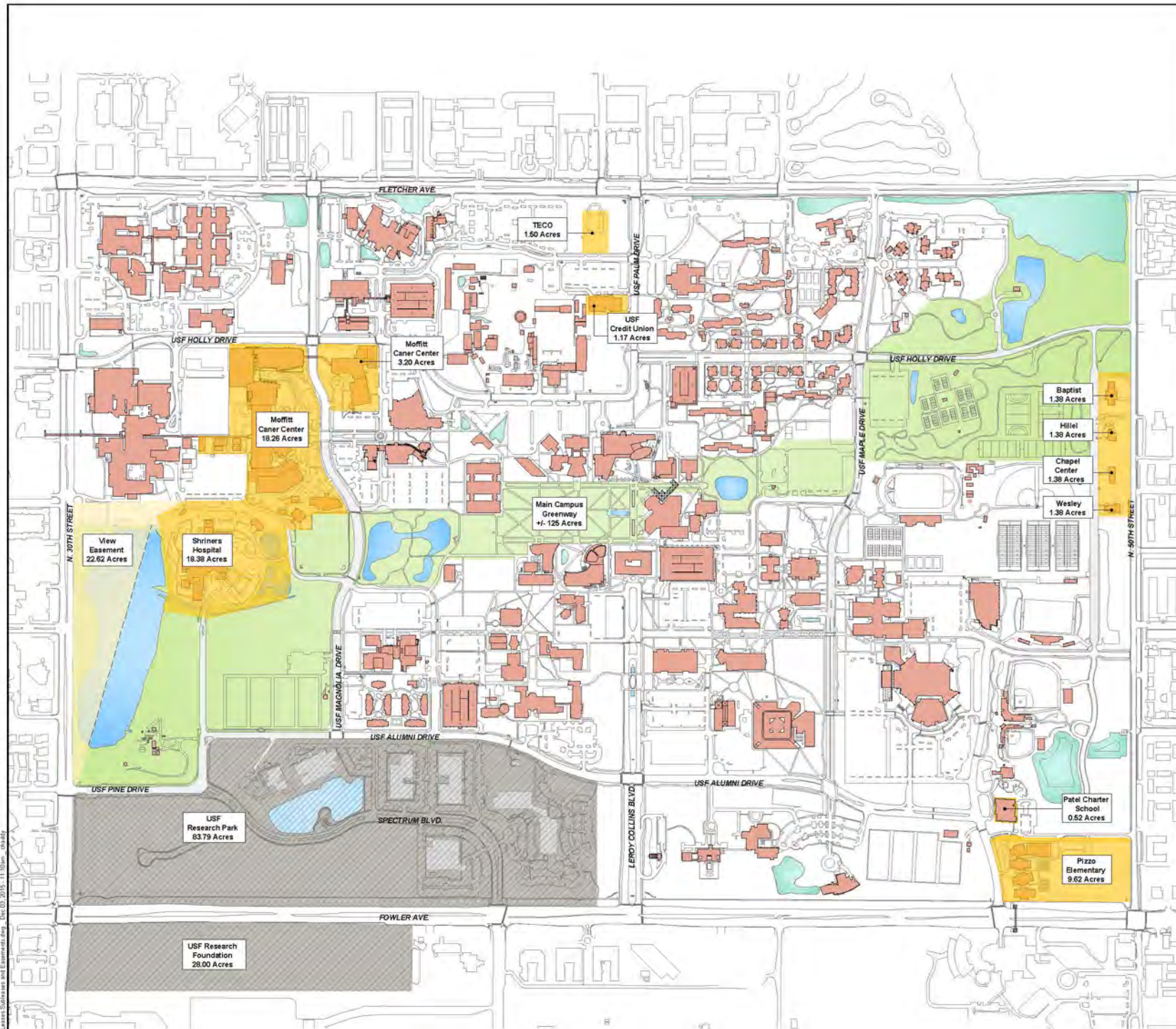
Figure 4.3
Building Development

Date
12/03/2015



-  Sub-lease
(Total = 58.17 Acres)
-  Research Park
-  Protected View
-  Greenway

 Area Not Included in
Campus Master Plan

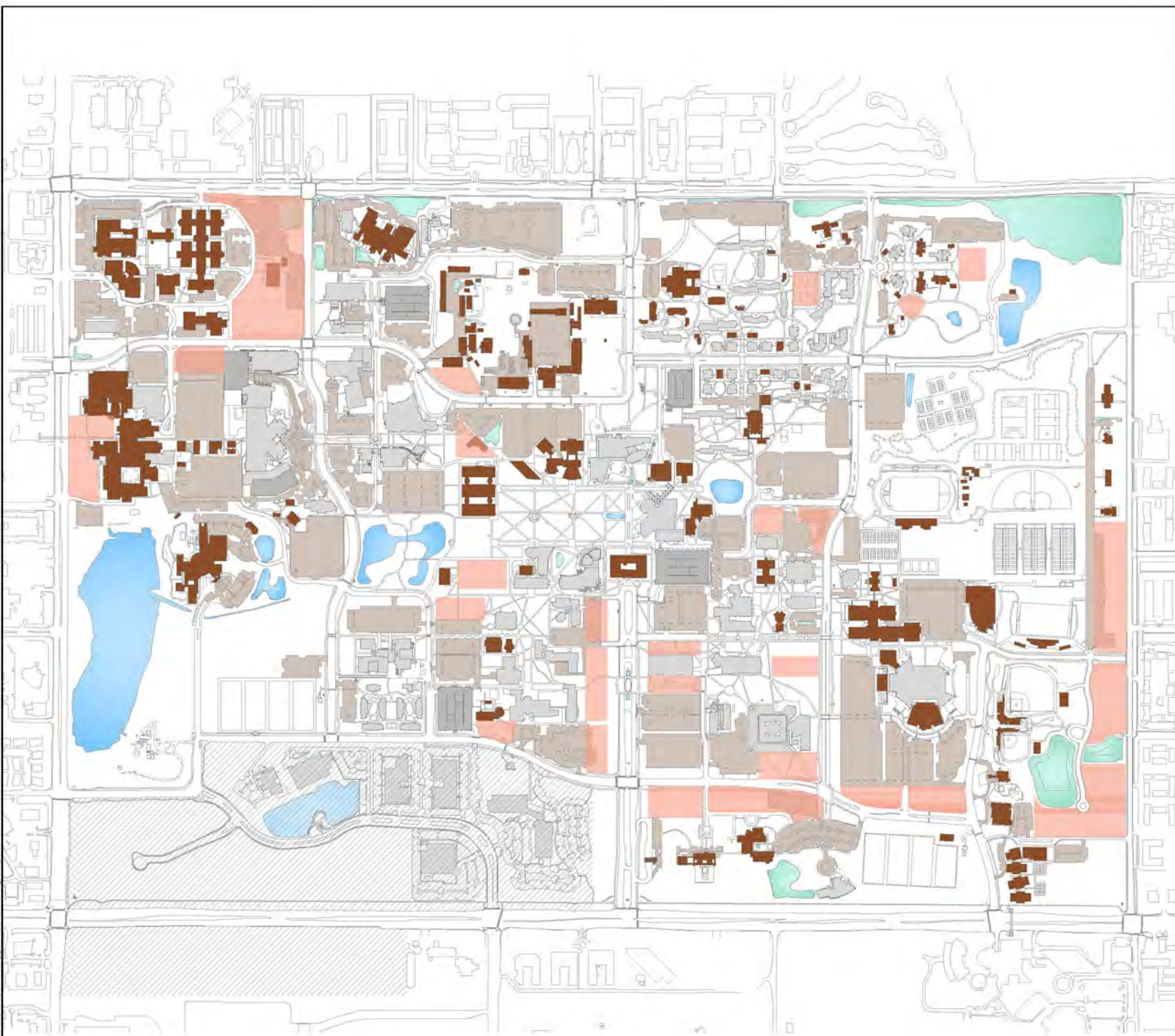


Element 4
Future Land Use

Figure 4.4
Encumbrances, Leases,
Subleases and Easements

Date
12/03/2015





- 1 - 2 Story Buildings
- Low Density Buildings
- Non-Parking Vacant
- Surface Parking

Area Not Included in Campus Master Plan

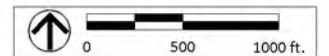
Notes

Non-Parking Vacant: 75 Acres
Surface Parking: 86 Acres

Element 4
Future Land Use

Figure 4.5
Developable and Underdeveloped Areas

Date
12/03/2015





Element 4
Future Land Use

Figure 4.6
Existing Campus Aerial

Date
12/03/2015



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Element 5:

Transportation

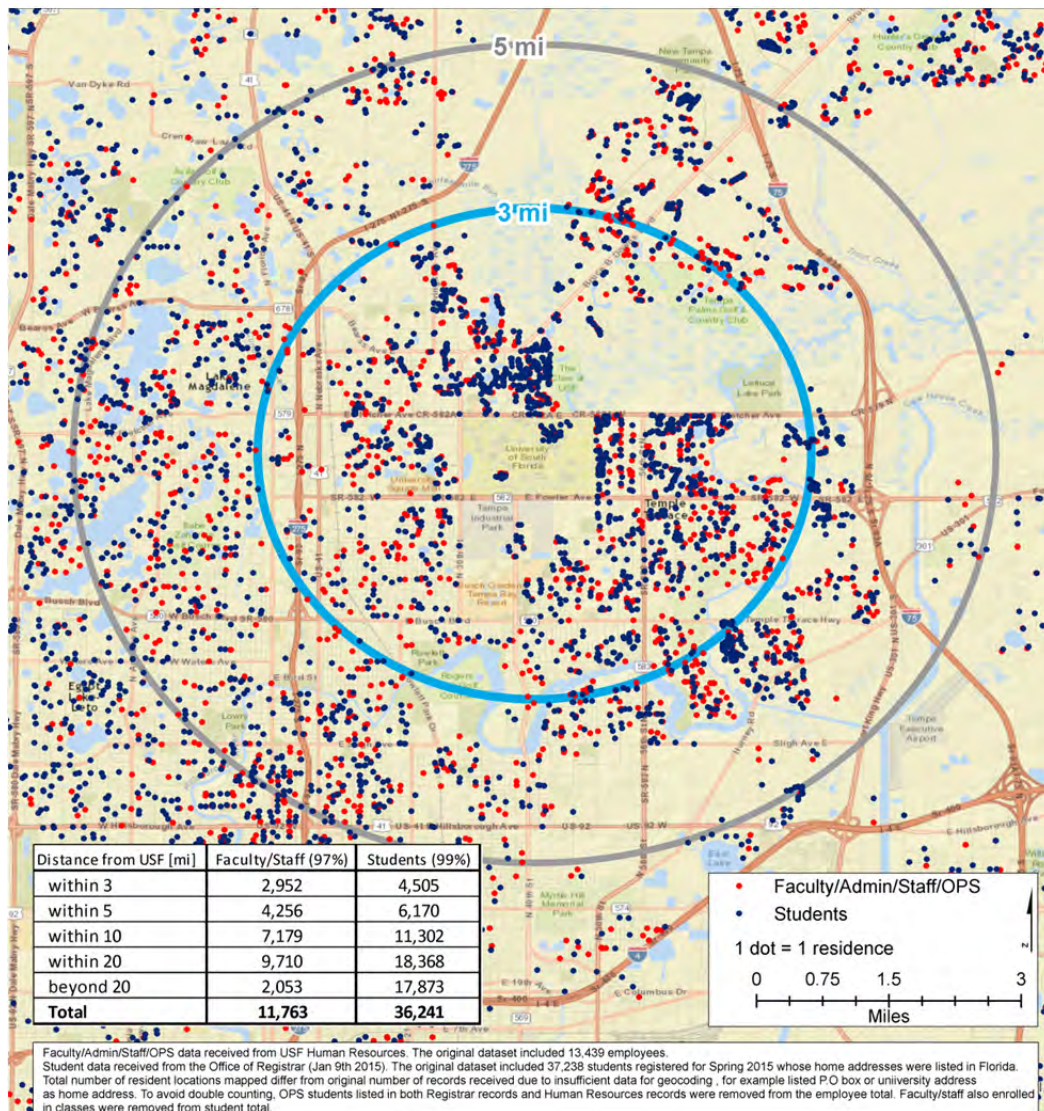
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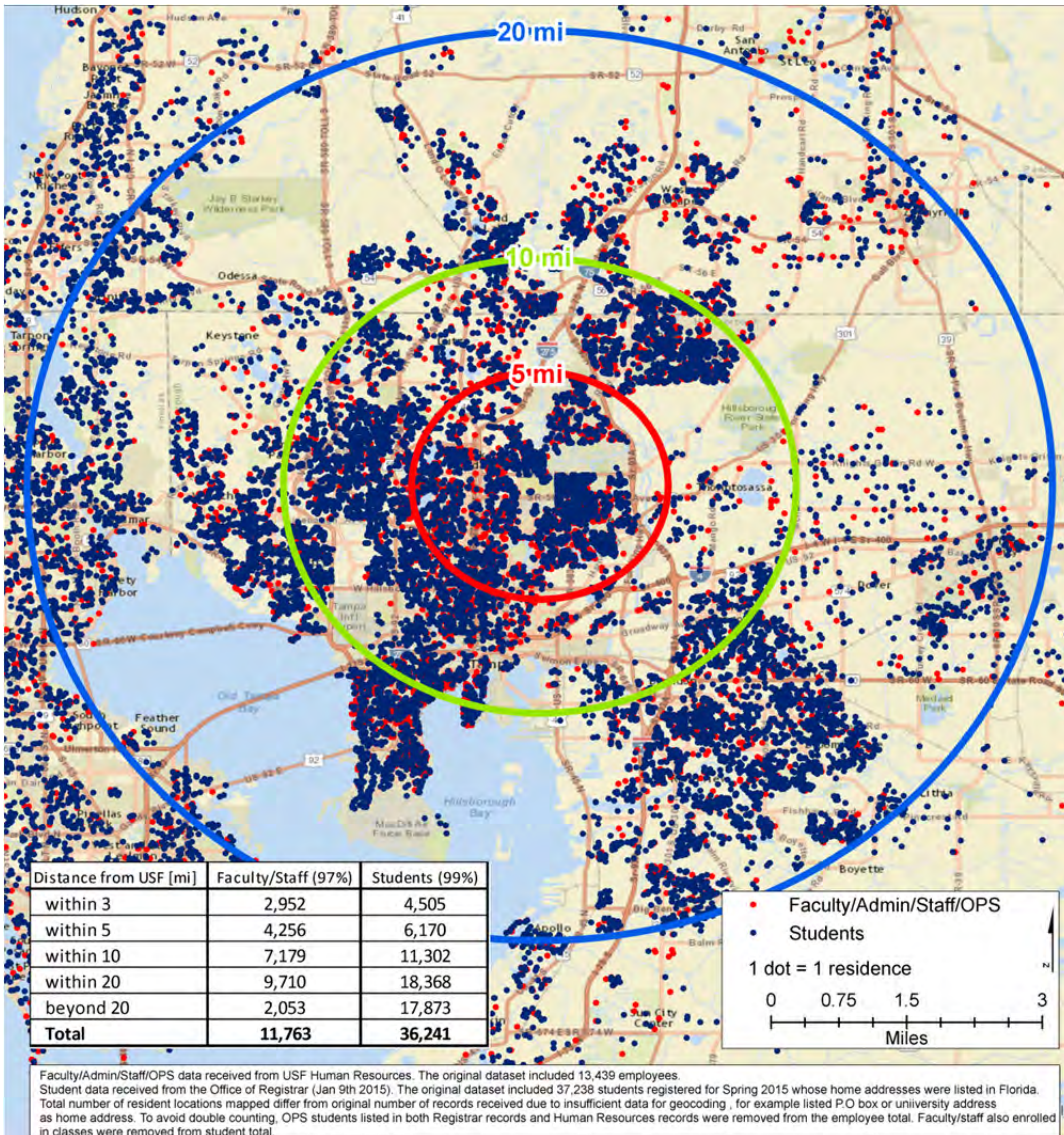
Element 5 Transportation

This element assesses and makes transportation recommendations for integrating all modes of travel (bicycle, pedestrian, bus/transit, and motor vehicle) both on campus and in the off-campus planning study area. These recommendations shall coordinate policies, programs and projects with the host and/or affected local governments, as well as with other state and regional agencies.

(1) TRANSPORTATION DATA AND ANALYSIS

Non-resident Students, Faculty, and Staff are distributed across the Tampa Bay area. The number of faculty, staff, and students residents is illustrated in the dot density maps below for the 3, 5, 10, 20 mile campus radius. Note there are a few students shown with a USF address but there are 5,390 students living on campus that have likely used a different permanent address.



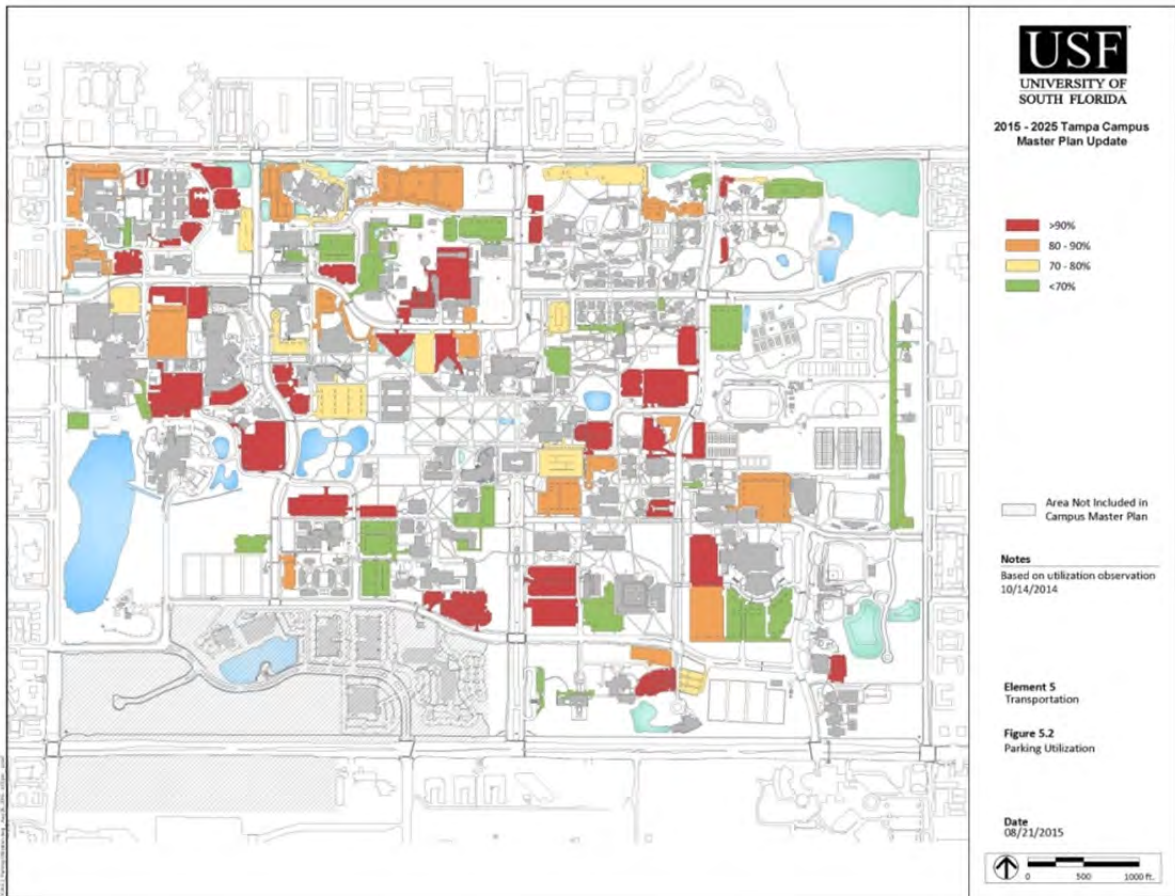


(a) Parking

USF-Tampa conducted an inventory of University-controlled parking facilities to understand overall parking capacity and occupancy in the University parking system. The University does not control or operate any off-campus parking. Parking at the University is provided in approximately 45 separate parking lots and six parking structures on the USF campus. Students, faculty, staff, vendors, and visitors are required to display a parking pass to park on campus property. There are a variety of daily, semester, and annual passes at different rates for different users.

The University currently makes no special on-campus parking assignments for specific special events (football, basketball, baseball, swimming, auditoriums, performing arts facilities, concert halls, conference centers, etc.). Sun Dome patrons may use the parking areas adjacent to the facility for a fee during most events. The Sun Dome parking lots include Lots 6, 22A, 22D, 22E, and 22F, which contain a total of 2,184 parking spaces.

Note see larger map at the end of this section



Lot Observation Summary			Monday, October 13, 2014		
			Morning		Afternoon
Day	Capacity	AM Count	Utilization	PM Count	Utilization
Average	20,840	14,618	70%	15,937	76%

Lot Observation Summary			Tuesday, October 14, 2014		
			Morning		Afternoon
Day	Capacity	AM Count	Utilization	PM Count	Utilization
Average	20,840	14,860	71%	16,811	81%

Lot Observation Summary			Wednesday, October 15, 2014		
			Morning		Afternoon
Day	Capacity	AM Count	Utilization	PM Count	Utilization
Average	20,840	13,822	66%	16,535	79%

Lot Observation Summary			Thursday, October 16, 2014		
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			Morning		Afternoon
Day	Capacity	AM Count	Utilization	PM Count	Utilization
Average	20,840	14,680	70%	16,671	80%

Lot Observation Summary			Friday, October 17, 2014		
			Morning		Afternoon
Day	Capacity	AM Count	Utilization	PM Count	Utilization
Average	20,840	11,376	55%	11,937	57%

Moffitt Cancer Center sublease has 1,765 parking spaces in surface and structured parking

Lot Observation Counts as of Tuesday, October 14, 2014

Note Tuesdays hold the largest number of campus classes. Statistics for all weekdays are available upon request.

Colors on the Average % column are keyed to Fig 5.1

Lot / Designation	Capacity	AM Count	AM %	PM Count	PM %	AVG
01-E	326	270	83%	307	94%	89%
02A-GZ2	92	11	12%	87	95%	54%
02B-GZ2	118	41	35%	64	54%	45%
02C-GZ2	16	16	100%	4	25%	63%
03A-E	105	82	78%	97	92%	85%
03B-E/S/D	115	108	94%	109	95%	95%
03C-E/S/D	198	135	68%	169	85%	77%
03D-E/S/D	107	107	100%	107	100%	100%
03E-E	18	16	89%	16	89%	89%
04-E	40	31	78%	36	90%	84%
05A-R	121	89	74%	33	27%	51%
05B-Designated	27	9	33%	12	44%	39%
05D-Designated	16	2	13%	2	13%	13%
05E-R	168	159	95%	163	97%	96%
06-E/S/D	534	392	73%	476	89%	81%
07A-E	178	156	88%	166	93%	91%
07B-E	118	90	76%	110	93%	85%
07C-Designated	30	19	63%	27	90%	77%
08A-E	92	86	93%	85	92%	93%
08B-E/D	276	116	42%	191	69%	56%

08C-E/S	250	214	86%	233	93%	90%
09A-E/S	417	243	58%	354	85%	72%
09C-E/D	99	86	87%	87	88%	88%
10-Designated	108	81	75%	88	81%	78%
11-E	67	48	72%	46	69%	71%
12-E/D	226	184	81%	185	82%	82%
13A-R	28	23	82%	25	89%	86%
13-R	73	70	96%	71	97%	97%
14-Designated	68	35	51%	39	57%	54%
15-E	15	10	67%	10	67%	67%
16-R	418	337	81%	318	76%	79%
17A-R	117	116	99%	116	99%	99%
17B-S/R	450	441	98%	440	98%	98%
18B-Y/S/R//E/ALLGZ/HE/D/WB	416	140	34%	160	38%	36%
18T-Y/S/R//E/ALLGZ/HE/D/WB	240	65	27%	68	28%	28%
19-E/S/D/HE	479	479	100%	469	98%	99%
20-R/S/E/D	232	124	53%	124	53%	53%
21-S/E	113	104	92%	103	91%	92%
22A-E/S/D	348	324	93%	323	93%	93%
22D-E/S/D	533	433	81%	493	92%	87%
22E-E/S/D	364	32	9%	235	65%	37%
22F-E/S/D	196	29	15%	130	66%	41%
23A-E	134	121	90%	124	93%	92%
23B-E/D	105	67	64%	82	78%	71%
23T-E/S/D	150	109	73%	137	91%	82%
24-R	314	295	94%	304	97%	96%
25-R	177	155	88%	152	86%	87%
26-Designated	49	31	63%	31	63%	63%
27-Designated	3	2	67%	3	100%	84%
28Sub-Designated	34	30	88%	31	91%	90%
29A-S	320	320	100%	319	100%	100%
29B-S	365	364	100%	358	98%	99%
30-GZ33/S	76	44	58%	49	64%	61%
31-GZ33	28	15	54%	18	64%	59%
32-E/S	477	472	99%	468	98%	99%
33-GZ33	543	436	80%	446	82%	81%
33T-S	113	112	99%	109	96%	98%
34-E/S/D	127	99	78%	100	79%	79%

35-R/S	384	223	58%	258	67%	63%
36-GZ36	247	181	73%	137	55%	64%
37-E	117	104	89%	113	97%	93%
37T-E/S	66	46	70%	66	100%	85%
38A-E/S/HE	110	99	90%	99	90%	90%
38B-E/HE	251	220	88%	219	87%	88%
38C-Designated	297	246	83%	241	81%	82%
38D-E/S	63	59	94%	61	97%	96%
38E-E	25	24	96%	22	88%	92%
38F-E/S/HE	135	124	92%	129	96%	94%
38G-E	107	100	93%	98	92%	93%
38H-Designated	20	11	55%	15	75%	65%
38R-Designated	67	62	93%	62	93%	93%
38T-E/S/D/HE	96	84	88%	91	95%	92%
38U-E/S/HE	100	68	68%	73	73%	71%
40-E/S/D	22	16	73%	11	50%	62%
41-E	60	52	87%	57	95%	91%
42-E/D	116	115	99%	112	97%	98%
43-Y/S/R/E/GZ/D	698	580	83%	655	94%	89%
44-R/E/S/D/W	76	0	0%	10	13%	7%
45-E/S	69	66	96%	61	88%	92%
46-E/HE	182	165	91%	172	95%	93%
47A-R	88	74	84%	76	86%	85%
47-E/S/D/R	109	38	35%	64	59%	47%
50-R	30	27	90%	27	90%	90%
51-R	21	16	76%	17	81%	79%
52-R	200	118	59%	102	51%	55%
52T-S/D	35	11	31%	17	49%	40%
53-R	43	40	93%	41	95%	94%
APPLE-Designated	35	14	40%	31	89%	65%
BDGL1-Designated	256	201	79%	209	82%	81%
BDGL2-Designated	262	115	44%	93	35%	40%
BDGL3-Designated	262	260	99%	254	97%	98%
BDGL4-Designated	262	257	98%	249	95%	97%
BDGL5-Designated	262	201	77%	238	91%	84%
BDGL6-Designated	262	96	37%	234	89%	63%
BDGL7-Designated	262	38	15%	209	80%	48%
BDGL8-	182	3	2%	73	40%	21%

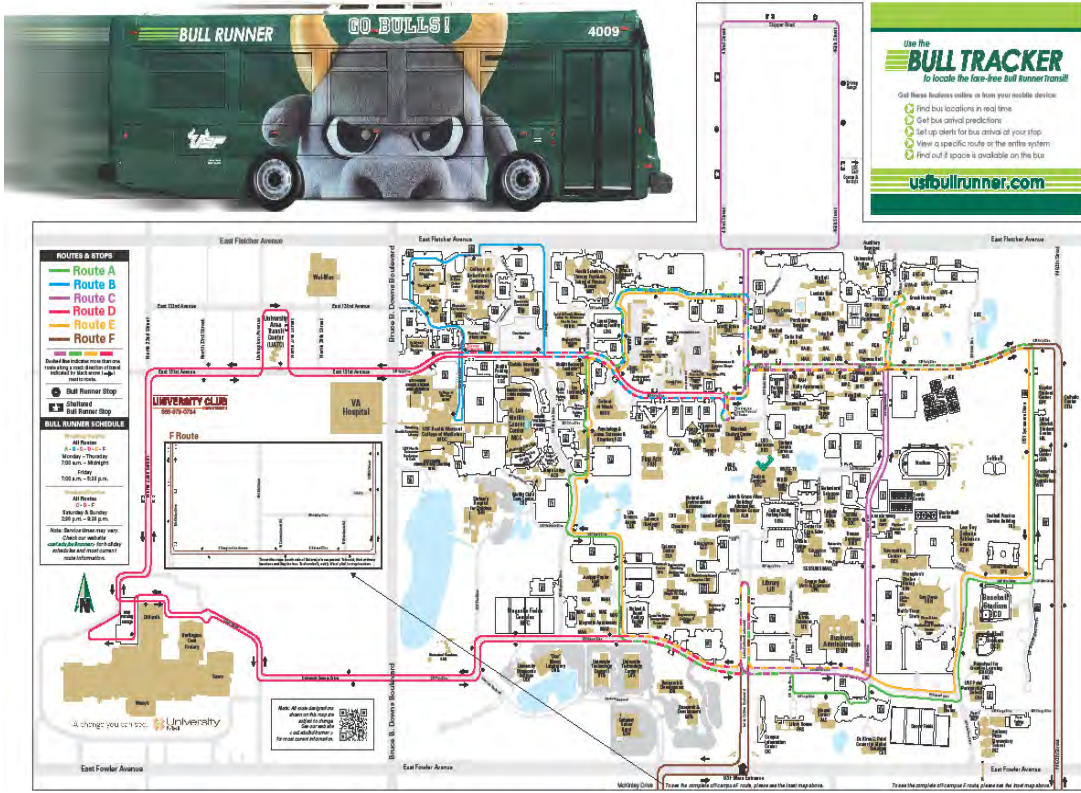
Designated							
CBGL1-Designated	347	288	83%		313	90%	87%
CBGL2-Designated	320	176	55%		229	72%	64%
CBGL3-S	325	286	88%		325	100%	94%
CBGL4-S	325	139	43%		322	99%	71%
CBGL5-S	233	14	6%		232	100%	53%
Cedar Drive-Designated	7	7	100%		6	86%	93%
CHGL1-E/S/D	137	134	98%		135	99%	99%
CHGL2-E/S/D	142	142	100%		142	100%	100%
CHGL3-E/S/D	145	144	99%		143	99%	99%
CHGL4-E/S/D	145	136	94%		140	97%	96%
CHGL5-E/S/D	146	87	60%		115	79%	70%
CHGL6-E/S/D	116	5	4%		24	21%	13%
CIC-E/S/D	35	4	11%		18	51%	31%
Intramural Field-Designated	11	10	91%		7	64%	78%
LDGL1-Designated	259	207	80%		171	66%	73%
LDGL2-Designated	267	246	92%		229	86%	89%
LDGL3-Designated	267	220	82%		222	83%	83%
LDGL4-Designated	267	132	49%		117	44%	47%
LDGL5-Designated	267	93	35%		102	38%	37%
LDGL6-Designated	186	1	1%		2	1%	1%
Life Science Annex Lab	3	0	0%		0	0%	0%
Lifsey-Designated	17	1	6%		2	12%	9%
Morsani Service Area	3	3	100%		1	33%	67%
Sago Drive	13	6	46%		8	62%	54%
Varsity Tennis Court-Designated	11	0	0%		1	9%	5%

Full Summary Report for week of Oct 13, 2014 - Oct 17, 2014

Provided by USF Parking and Transportation Services

(b) Transit facilities and services on campus and in the planning study area include:

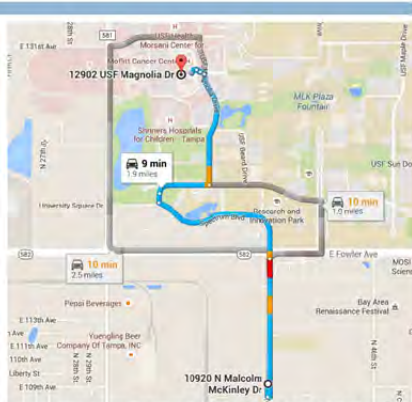
1. Service providers; Bull Runner, Moffitt, Hart
2. Routes; Bull Runner, Moffitt, Hart
Bull Runner



Moffitt Cancer Center Shuttles

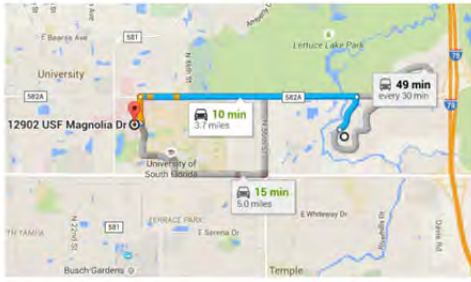
M ESCOT Shuttle

Route: The Escot Shuttle Bus begins their route at the McKinley Garage at 5:45 am. The route begins going south on McKinley Dr. Then west on Bougainvillea Ave. to 30th St. North on 30th St. to Holly Dr. Then east on Holly Dr. to Magnolia Dr. The return route to McKinley is Magnolia Dr. to USF Spectrum Blvd. via USF Pine Dr. Spectrum becomes McKinley Dr. south of Fowler Ave. There are two buses that run approximately 12 minutes apart.



Ridership: The Escot Shuttle Bus averages 240 riders a day. Peak times are from 6:30 am to 8:30am and 4:15pm to 6:00pm.

MBC Shuttle

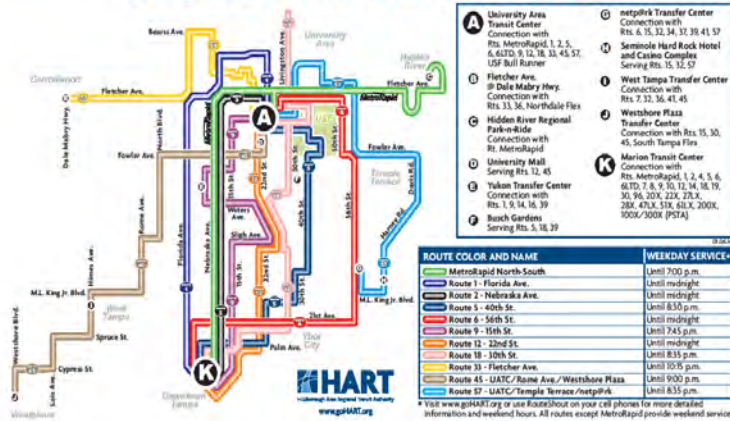


Route: The shuttle begins with a 7:40 am pick-up at MBC and is scheduled to arrive at MCC at 7:55 am. The travel route is Fletcher Ave. to Magnolia Dr., and back. The shuttle is scheduled for a 30 minute turnaround. During heavy afternoon traffic the shuttle will go east on Holly Dr. to take a left on Palm Dr. to access Fletcher Ave.

Ridership: The MBC Shuttle averages between 40 to 50 riders a day, evenly divided between a.m. and p.m. hours.

HART Service Routes

**ELEVEN HART BUS ROUTES SERVE USF AREA
CHECK OUT THE LATE NIGHT SERVICE!**



3. Transit stop locations

Bullrunner :

Route A	Route B	Route C	Route D	Route E	Route F
<ul style="list-style-type: none"> Marshall Student Center Andros Housing/ Lot 13 Park-n-Ride Lot 43, 2 stops Laurel Drive Garage Eye Institute Communicatio 	<ul style="list-style-type: none"> Marshall Student Center Andros Housing/ Lot 13 Park-n-Ride Lot 43, 2 stops Laurel Drive Garage 	<ul style="list-style-type: none"> Marshall Student Center Holly Mail Room Maple Suites at Holly Maple Suites Social Science 	<ul style="list-style-type: none"> Marshall Student Center Post Office Parking and Transportation Central Receiving Morsani Center Moffitt 	<ul style="list-style-type: none"> Marshall Student Center Holly Mail Room Maple Suites at Holly Greek Housing Cypress Housing 	<ul style="list-style-type: none"> Marshall Student Center Holly Mail Room Maple Suites at Holly Tennis Courts/ Lot 35 Holly at 50th 50th St southbound, 2 stops north of Fowler and 2 stops south of Fowler

<ul style="list-style-type: none"> • n Sciences • Hope Lodge • Juniper-Poplar • Research and Development • Library • Engineering • Alumni Center • Patel Center • Softball Stadium • Soccer Stadium • Park-n-Ride Lot 18, 3 stops • Tennis Courts/ Lot 35 • Greek Housing • Cypress Housing • Holly Security Office • Epsilon Hall • Marshall Student Center 	<ul style="list-style-type: none"> • Morsani Health Center • Moffitt Tower/ Heart Health • College of Nursing • Westside Conference Center • College of Public Health • Continuing Education • FMHI • Moffitt Research • School of Music • Fine Arts Studio • Theater • Marshall Student Center 	<ul style="list-style-type: none"> • Cooper Hall • Business Administration • Business Administration at Alumni • Library • Engineering • Sun Dome/ Lot 22 • Recreation Center • CW Young Hall • Tennis Courts/ Lot 35 • Holly Security Office • Epsilon Hall • Andros Housing/ Lot 13 • 46th Street, 3 stops • Skipper Road, 2 stops • 42nd Street, 3 stops • Palm and Laurel • Marshall Student Center 	<ul style="list-style-type: none"> • Tower/ Heart Health • Holly at Banyan • Children Medical Services • UATC to Library • Campus Palms to Library • University Mall to Library • University Collection • Botanical Gardens to Library • University Diagnostic Institute • University Technology Institute • Research and Development • Library • Engineering • CUTR • Magnolia Apartments • Magnolia Fields • Botanical Gardens to Mall • Fountainwood Apartments • University Mall to MSC • University Club to MSC • Campus Palms to MSC • UATC to MSC • College of Medicine • Moffitt 	<ul style="list-style-type: none"> • Tennis Courts/ Lot 35 • Park-n-Ride Lot 18, 3 stops • Soccer Stadium • Sun Dome, Lot 22 • Business Administration at Alumni • Library • Engineering • Center for Transportation Research • Juniper-Poplar • The Lakes • Fine Arts • Psychology • Eye Institute • Laurel Drive Garage • Park-n-Ride Lot 43, 2 stops • Marshall Student Center 	<ul style="list-style-type: none"> • Serena/Bougainville a westbound, 3 stops • McKinley northbound, 3 stops • Library • Engineering • McKinley southbound, 3 stops • Bougainvillea/ Serena eastbound, 3 stops • 50th St northbound, 2 stops south of Fowler and 3 stops north of Fowler • Tennis Courts/ Lot 35 • Holly Security Office • Epsilon Hall • Marshall Student Center
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			<ul style="list-style-type: none"> • Tower • Moffitt Research • School of Music • Fine Arts Studio • Theater • Marshall Student Center 		
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4. Transit frequency of service

Bull Runner, 12 min. headway;
Moffitt, 8 – 12 minutes
Hart
Route 5 = 30 min
Route 6 = 20 min peak 30 min. off-peak
Route18 = 30 min.
Route 57 = 60 min.

MetroRapid (on Fletcher) = 30 min.5. ridership;

Bull Runner FY14 Total – 1,398,217
Route A – 73,576
Route B – 126,879
Route C – 618,928
Route D – 321,148
Route E – 76,264
Route F – 181,422

Moffitt: 30,000

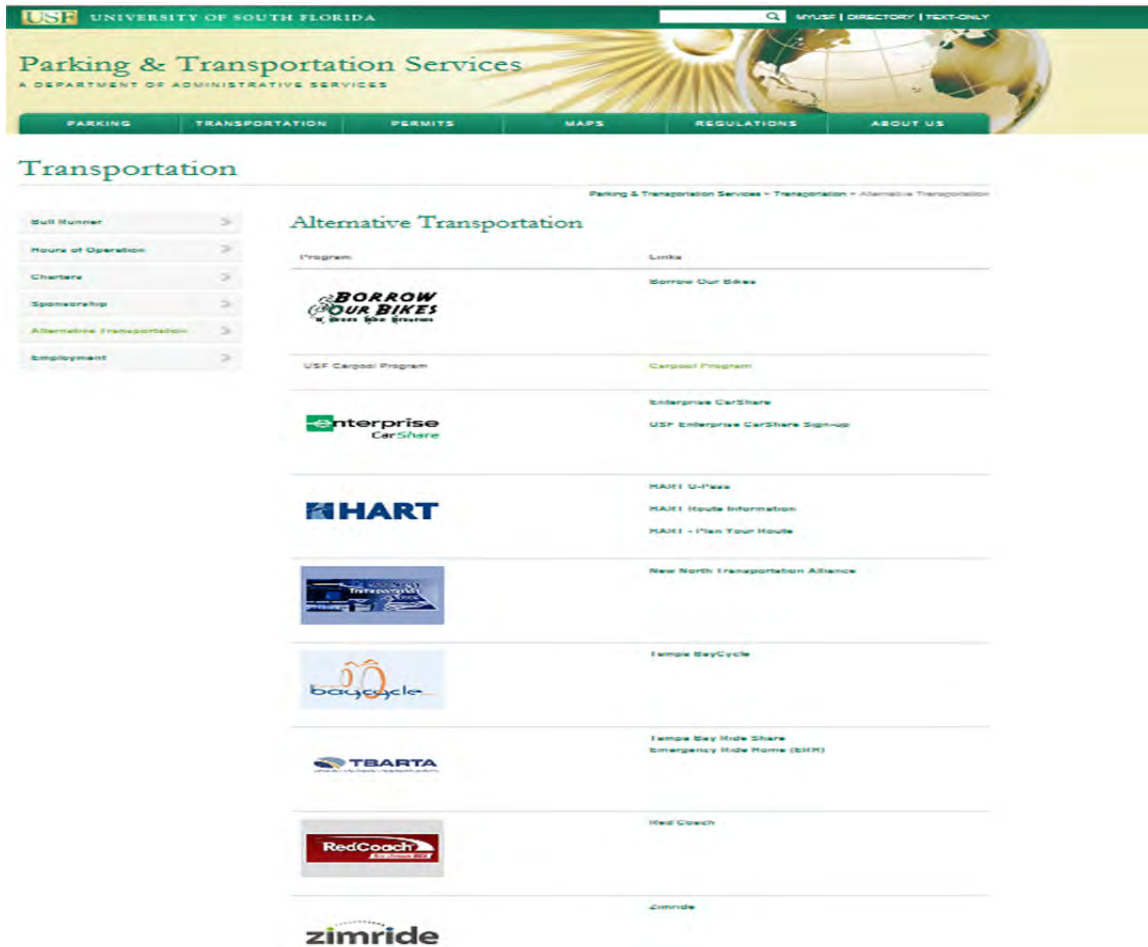
Hart:

Route 5 = 111 boarding 145 alighting
Route 6 = 318 boarding 408 alighting
Route18 = (includes student housing north of campus) 285 boarding 408 alighting
Route 57 = 77 boarding 135 alighting
MetroRapid (on Fletcher) = 39 boarding 27 alighting

6. Vehicle capacity

The Bull Runner fleet has a fleet ranging from 25’ – 40’ with average seating of 25 and average maximum capacity of 40
Moffitt: 36 seats
Hart: 39 seats + 19 standing

Alternative Transportation options are listed with connective links on the USF Parking and Transportation web site:



<http://www.usf.edu/administrative-services/parking/transportation/alternative-transportation.aspx>

(c) Facilities and services for bicycling and walking

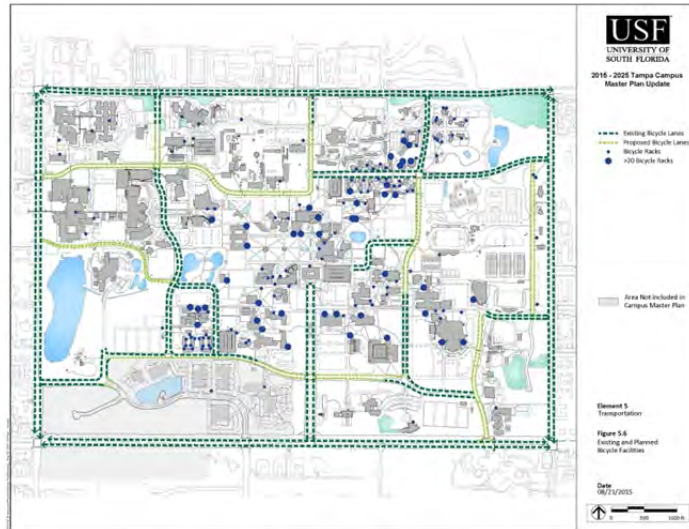
Pedestrians and bicyclists significantly outnumber vehicles on most college campuses. Campus sustainability is dependent on the adequacy of facilities in order to accommodate the high number of trips generated from pedestrians and bicyclists. Facilities accommodating these mode choices include bicycle lanes, and sidewalks and pedestrian pathways which are present throughout the campus. Along the perimeter roads of the campus, sidewalks are present along Fowler Avenue, Fletcher Avenue, and 50th Street. Crosswalks are marked at most intersections and numerous mid-block locations throughout campus and at gateway intersections along the campus perimeter.

Bicycle lanes are provided on roadways or pathways throughout the campus. Existing bicycle lanes are present along one or both sides of sections of Magnolia Drive, Leroy Collins Boulevard, Beard Drive, Holly Drive, Maple Drive, Palm Drive, Alumni Drive, Elm Drive, and Willow Drive. Bicycle signage is posted along selected bicycle lanes within campus. Bicycle lanes are also marked on all public roadways surrounding the campus (Fowler Avenue, Bruce B. Downs Boulevard, Fletcher Avenue, and 50th Street) as well as at intersections with right-

turn lanes. Lanes for bicycle traffic proceeding straight through an intersection are typically marked to the left of right-turning vehicle traffic.

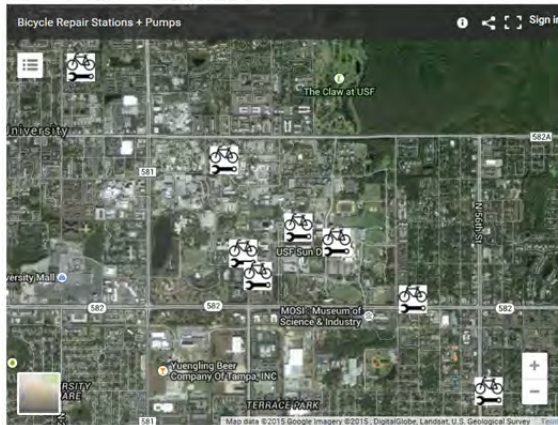
Figure 5-6, Existing and Planned Bicycle Facilities, shows the locations of existing and proposed bicycle lanes. The completion of the bicycle lane network is very important for the safety of bicyclists on campus, as it designates a separate space for bicyclists to ride, reduces dangerous sidewalk riding, improves predictability for bicycle movements, sends a message to motorists that bicyclists have rights and responsibilities as roadway users, and encourages operation of one’s bicycle according to Florida state rules of the road. Current University policy provides for the establishment of bicycle lanes concurrent with the construction of other planned roadway improvements, such as widening or repaving. Such roadway improvements are sometimes completed in small segments. As a result, several existing bicycle lanes abruptly end at a midblock location. Until funding is available, in locations where there are no bike lanes or incomplete bike lanes, sharrows are recommended to be considered to be marked on the roadway surface, according to MUTCD guidelines. Sharrows reduce wrong way riding by bicyclists, indicate to motorists where bicyclists are likely to be positioned and encourage safe passing.

Note see larger bike and pedestrian maps at the end of this section



USF and other organizations offer services and benefits to encourage the USF community to use bicycles. The USF Outdoor Recreation Program operates a bike shop with maintenance personnel in the Recreation Building, as well as the bike rental program, Borrow Our Bikes and the new Share-a-Bull bike share program. Tampa BayCycle is a bicycling encouragement and support program that was co-created by the New North Transportation Alliance (NNTA) and the Tampa Downtown Partnership. Tampa BayCycle provides free bicycle safety courses to USF students and employees.

The New North Transportation Alliance (NNTA) with funding from the Florida Department of Transportation District 7 provided several bike repair stations around the area. The stations include heavy duty air pumps and tools for making small adjustments and are planned to be increased in locations in the future.



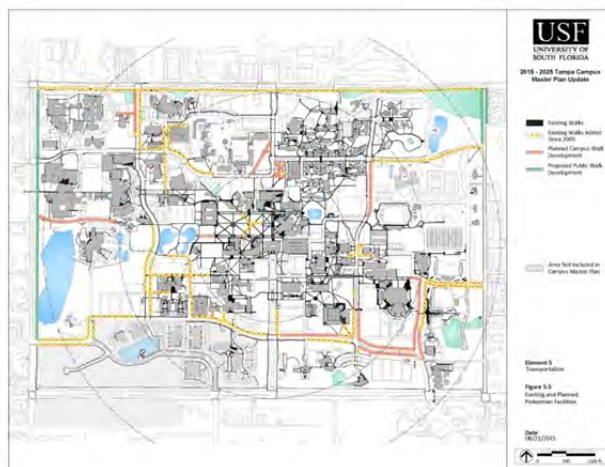
<http://www.tampabaycycle.com/resources/bicycle-repair-stations/>

A count of 1537 racks, with typically storage for 2 bicycles each, yields existing storage capacity of 3,074 bicycles. In addition, approximately 150 bike racks are in the process of installation. In September 100 bikes will be added to campus with the new Share-a-Bull student funded bike share program. Current pedestrian and bicycle challenges include:

- The volume of students traveling by foot, bicycle, and skateboard to the northern off-campus neighborhoods. A count of 1500 crossings to campus at USF Palm and Fletcher taken on a Tuesday in October 2014 roughly equates to 3,000 crossings for round-trips.
- On-campus vehicle conflicts: USF East Holly Dr between USF Maple and USF Palm, Leroy Collins Blvd at the Library, USF Maple Dr between the Sundome and the Muma College of Business.
- Shared use of sidewalks by pedestrians, bicyclists, and golf carts.

WalkWise Tampa Bay is a program managed by the Center for Urban Transportation Research providing free interactive pedestrian safety presentations to USF students and employees. USF has continued to plant shade trees along sidewalks and bikelanes to increase the comfort of those using them. Sections of bike lanes and sidewalks have been constructed on campus including:

- East USF Holly between USF Maple and 50th St.
- USF Elm between Bull Run and 50th St
- USF Pine drive to Bruce B Downs
- Short sections of USF Magnolia and USF Palm at Fletcher



(d) Transportation Demand Management (TDM) strategies

The existing USF TDM programs are primarily focused on the existing transit services and some additional commuter flexibility services. Additional or expanded TDM programs would support the University’s goals of reducing single occupant vehicles and developing more sustainable transportation patterns throughout the campus and community. The following is a list of additional measures, representing a range of options to consider for incorporation into its TDM program:

- Provide Additional Student Housing – Increasing the proportion of students living on or adjacent to the campus can significantly reduce the level of trip activity associated with student commuting.
- Bicycling Improvements (pathways, intersections, showers, racks) – The University is providing additional bicycle lanes and should consider further safety improvement on campus roadways. Additionally, bicyclist amenities, like access to shower facilities in new and renovated buildings would aid and encourage bicycle commuters. Expansion of the bicycle sharing program could also reduce vehicle dependence within the USF community. USF-related bicycle trips are generally possible within five miles of the campus, depending on the presence and quality of bicycle facilities that provide casual bicyclists with sufficient comfort to consider bicycle travel as a viable alternative to vehicles.
- Pedestrian Improvements (sidewalks, signal priority, street trees, etc.) – Improvements to the pedestrian environment both on and off-campus are essential to demonstrating to commuters that walking is a viable alternative to driving to campus. Pedestrians are typically willing to walk distances up to ¾ mile, which corresponds to a 15-minute walk, to and from a campus.
- No Parking Expansion –The University would maintain its current parking supply and not build additional spaces to accommodate increased parking demand.
- Consider a staged approach to the decision whether to build two additional parking structures in Zones 1 and 3. For example, a funded plan for coordinated TDM strategy implementation should be included in the Master Plan to achieve a 10% reduction in parking demand by providing effective transportation options to single-occupant vehicle travel. If TDM strategy implementation does not achieve the necessary parking demand reduction, then plans for parking structure building could be triggered.
- It is recommended to provide real time message signs at parking facilities and smartphone apps that indicate the availability of parking spaces. This can reduce circulating and increase the effective capacity of the parking facility.
- Parking Price Increase – An aggressive pricing approach (i.e. across-the board fee increase) would help the University decrease the number of single occupant vehicles that travel to campus. Some institutions vary their permit prices based on parking location, which can influence some commuters to use transit or carpool.
- If new parking structures are built, then the raised parking fees would likely go toward paying for the garages. Instituting TDM strategies does not necessarily require raising parking fees. If increasing parking fees is used as a TDM strategy (whether for this purpose alone, or as an addition to increases required to pay for any new parking garages), then those raised revenues can get channeled back into bolstering alternative transportation facilities and services, such as the Bull Runner Shuttle. Paying for TDM strategies (executed properly and on a scale that yields a measurable difference) is not a “forfeiture” of University funding and resources. It is an investment in a more effective, affordable and sustainable transportation system for the campus, and needs to be consistently expressed as such.

- Restrict parking permit access based upon progress through a degree program, such as prohibiting freshman from having cars on campus. Although USF is making strides in providing on-campus student housing, USF attracts many nontraditional students. Many freshmen hold down jobs and need the use of a car. Additionally, this strategy would send the wrong message that allowing upperclassmen to have parking permits is a reward. Parking permit privileges for driving alone should never be a reward. Instead, continue to incentivize parking for doing the right things, such as carpooling, or at least driving a smaller car.
- Parking Permit Buyback – A permit buyback program rewards current parking permit holders by paying commuters to surrender their parking permit and choosing an alternative commute mode (i.e. rideshare, transit, bicycling, or walking). The program can also be structured to reward anyone currently using alternative transportation modes.
- Housing Incentives – Some institutions provide subsidies to employees who purchase homes in proximity to their workplace to incentivize their employees to commute by walking or bicycling. Some states maintain commute-distance-based housing subsidy programs for employers to offer to their employees.
- TDM Coordinator – A full-time TDM coordinator can be very helpful to coordinate changes with local and regional transportation authorities, assist commuters with their options, provide program marketing, and assess effectiveness. A key function for a TDM coordinator would be to develop systems for commuters to find appropriate ride share partners.
- Commuter Membership Program – An alternative commuter program could be created, so the University can track participation, commuting behavior, and market program updates. To market the program, the use of rewards, prize drawings, and refer-a-friend bonuses can help increase participation. For instance, a modest financial reward could be provided for people who commute to campus by bicycle or walking. This reward could either be a direct cash reward, or could be provided through an outside service provider through a sponsored reward program (i.e. www.muride.com).
- Member Spot-Rewards – Providing spot rewards as overall transportation milestones are achieved would help maintain interest in alternative commuting and possibly lure new participants while encouraging the USF community to work together on achieving mode split or parking goals.
- Transportation Events – Campus-wide events, like employee and new student orientations provide great forums to communicate commuting options before people have already developed a travel pattern. The TDM manager would emphasize the cost savings and ecological benefits of alternative commutes, while providing guidance to individuals wondering what the most appropriate option is for them.
- Transit Advocacy/Coordination – The University should continue to offer the HART U-pass and seek additional opportunities to coordinate with HART, TBARTA, or other transit providers and connect USF systems to others. USF should also consider new opportunities to provide transit service to off-campus housing to maximize the proportion of students and staff using transit options to travel to the campus.
- Transit Financial Incentives – The University could better publicize the HART Pass and pre-tax payroll deduction for transit expenses. Other financial incentives for transit use could also be considered.
- Flexible Work Arrangements – Telecommuting has the clear benefit of taking commuters off the road. Permitting flexible schedules would help shift commuters to different time schedules and may help reduce congestion at the typical peak hours.
- Occasional Parking Program – This program provides flexibility to commuters who transition to alternative modes by allowing commuters who choose to relinquish their parking permits to still occasionally park on campus.
- Program Marketing – Frequent communications, including email newsletters, articles in student and faculty newspapers, print advertisements, banners, and involvement in

University events would help increase the recognition and benefits of alternative commuting.

- Website Enhancements – The TDM website could be enhanced present a more interactive and impressive resource for information on different commuting options. Attention would continue to be given to the various resources available to the campus community and the ecological and economic benefits of non-single occupancy vehicle commutes.
- Pre-tax payroll deduction could be expanded to include the option to purchase transit and vanpool fares with pre-tax dollars.
- In addition to riders’ use of their smartphones, include the placement of more monitoring screens in lobbies of campus buildings to display Bull Runner Shuttle location and service updates.

The discussion of TDM strategies includes a recommendation to provide additional student housing to reduce student commuting activity yet there are concerns cited regarding insufficient proximate parking for student housing, both for convenience and for safety concerns at night. Some students do need cars and proximate access and this option should be available. But it should also be a focus to make resident student life easy without a car. Those resident students who desire a car on campus but not for regular use could have the opportunity to purchase a discounted parking permit for a parking space in a remote lot that is served by the Bull Runner. Supporting services to reduce the need for a car, in addition to the Enterprise campus car sharing program, and Zimride, the USF ridematching service, also promote the existing USF Student Government’s intercity motor coach service provided for weekend travel and the USF Safe Team which provides golf cart service on-call between classes, residence halls, and parking lots.

USF plays an active role in the New North Transportation Alliance (NNTA), a public/private partnership. The New North Transportation Alliance (NNTA) is a public-private partnership in Northeast Tampa that provides a forum for businesses, local governments, residents, and commuters to address the transportation needs of the area. The group’s purpose is to improve and expand transportation options for all travelers in the New North area. NNTA receives funding from the Florida Department of Transportation (District Seven), Hillsborough County, and the University of South Florida.

NNTA already attempts to do many of the TDM strategies listed in the draft Campus Master Plan, without any direct funding support of the University. NNTA receives funding from FDOT to provide a forum, technical support and promotional services to all businesses and government partners throughout the entire New North service area. Because of USF’s size and influence, the funding by the University of its own TDM program is especially important. NNTA also advocates for traffic congestion relief on roadways adjacent to the campus and fosters public-private partnering on solutions.

The USF Center for Urban Transportation Research (CUTR) is a leader in Transportation Demand Management research and advocacy. CUTR maintains excellent resources for the USF community and other area employers to utilize in starting or refining TDM programs. CUTR staff can be consulted and utilized to research and develop effective TDM programs that are appropriate for the University. Other resources can be found at:

<http://www.nctr.usf.edu/clearinghouse/index.htm>

(e) Safety of the on-campus transportation system

The University of South Florida places a priority on safety for its students, employees, and visitors. USF maintains evacuation and emergency plans, and coordinates with neighboring jurisdictions, in the event of severe weather. USF and surrounding communities have implemented pedestrian treatments and bicycle lanes to provide non-vehicular traffic with safe and dedicated facilities. \Traffic calming measures, such as raised crosswalks, have been installed to improve pedestrian and bicyclist safety. As the result of a speed limit study by USF Center for Transportation Research (CUTR), consistent posted speed limits of 25 miles per hour were implemented campus-wide on roadways also encourage slower speeds on campus. USF provides lighting on most major roadways and pedestrian pathways to reduce potential conflicts and other safety concerns during dark conditions.

Hillsborough County has made significant safety improvements west of campus on Fletcher, east of campus on 50th St, and completed construction of a continuous sidewalk along the north edge of campus on Fletcher. USF continues to work with Hillsborough County to improve pedestrian and bicycle safety along roads that provide access to the campus.

University Police publishes an Annual Security and Fire Safety Report (ASR) and distributes it to all current students and employees. Such publication and distribution of the ASR is an important part of our ongoing effort to encourage all USF Community members to be aware of safety concerns, to report issues, and to prevent crime. Briefly, the ASR contains information about USF policies and procedures regarding campus security, fire safety, emergency response and evacuation procedures, sexual assault, missing student notification, and other matters as required by The Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act (the “Clery Act”). The ASR also contains statistics for the previous three calendar years concerning reported crimes occurring on the USF campus; in certain off-campus buildings or property owned or controlled by USF; and on public property within, or immediately adjacent to and accessible from, the USF campus. The 2015-2016 Security and Fire Safety Report is available on the USF Police Department web site at:

<http://www.usf.edu/administrative-services/university-police/documents/safety-guide-2015-16.pdf>

Traffic crash data for bicycles; pedestrians and motor vehicles:

Maps below based on data provided by USF Police. Data spreadsheets are available upon request.

Lighting assessment for bicycle and pedestrian facilities:

Lighting assessments are done on an annual basis with students, USF Police and others to determine additional campus lighting needs. Nite Walk findings are available upon request.

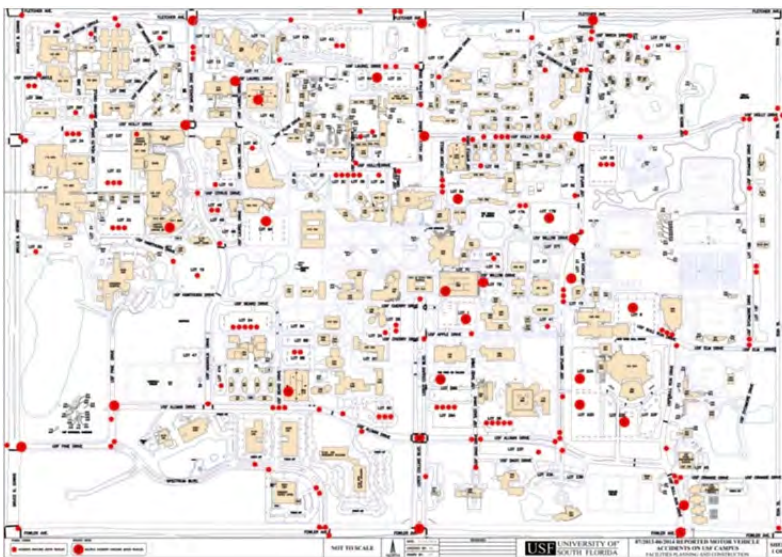
Identification of high traffic crash locations and other safety concerns on campus.

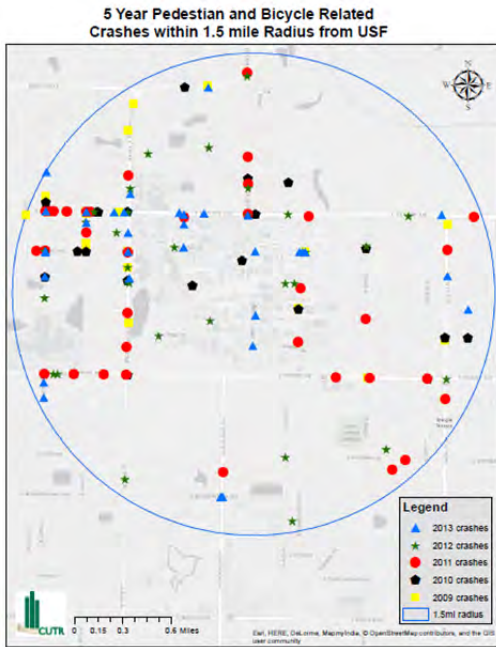
Maps below based on data from USF Police

Pedestrian, bicycle, skateboard accident locations



Motor vehicle accident locations:





(f) Planned new roads, road modifications, and other planned transportation system modifications.

USF has expanded the Bull Runner shuttle service to the south of the campus.

- New proposed roads include (require coordination with Hillsborough County):
 - Extension of USF Dogwood Dr. from USF Palm to USF Maple to facilitate closing East USF Holly Dr between USF Palm and USF Maple except to bicycles, transit, emergency, service, and move-in move out. This will create a more safe pedestrian connection of the residential students living north of USF Holly. Provide a connection north to Fletcher and 46th ST at the existing traffic signal.
 - Extend USF Hawthorn from USF Magnolia to Bruce B Downs to alleviate long wait times at USF Pine and USF West Holly at peak hour.



**USF – Tampa Campus
Transportation 2014 Survey Results**

Prepared by the New North Transportation Alliance and the USF Center for Urban Transportation Research
January 22, 2015

Survey Purpose

The survey provides measures of various aspects of travel by students, staff and faculty, commuting to and from the USF Tampa Campus. Survey has three purposes:

- Measure travel mode changes as part of the Tampa Campus Master Plan Update process, by USF Facilities Planning and Construction.
- Plan for future parking and improvements to the Bull Runner Shuttle and HART UPASS program, by USF Parking & Transportation Services.
- Guide activities and submit progress reports in keeping with campus sustainability commitments made by USF, by the USF Office of Sustainability.



NNTA’s mission is to provide a forum for public and private partners in the area surrounding USF (aka “New North”) to jointly address shared transportation concerns, such as traffic congestion, safety, and parking.

Overview

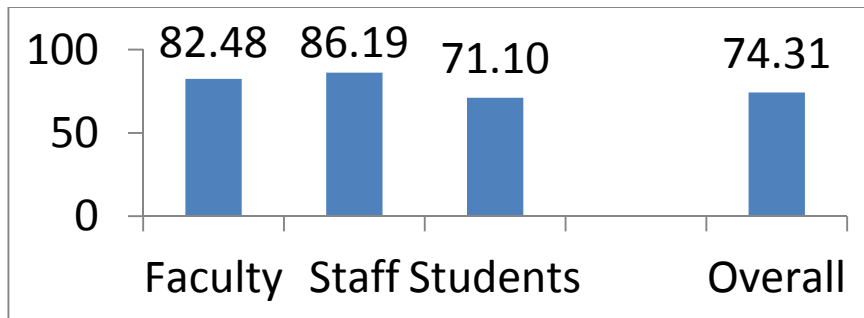
- Methodology
- Section 1 – Commuting Characteristics
- Section 2 – Awareness and Self-Reported Levels of Use of Various Travel Choices
- Section 3 – Interest in Valet Parking and Potential Effect of More Plug-in Locations on EV Consideration
- Section 4 – Survey Profiles

Methodology

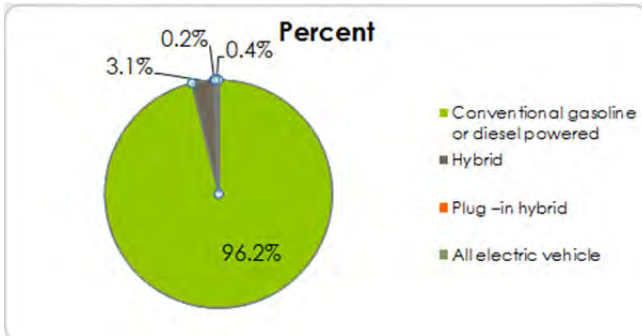
- Online survey link distributed by USF IT to faculty, staff and students
- 2,821 respondents (est. 4.6% of USF)
- Limitations
 - No incentive provided to increase response rate
 - Single email sent to official USF email account
 - Minority populations underrepresented slightly
 - Open-ended responses yet to be analyzed

Section 1 Commuting Characteristics

Auto Dominates: 74 private vehicle trips per 100 People

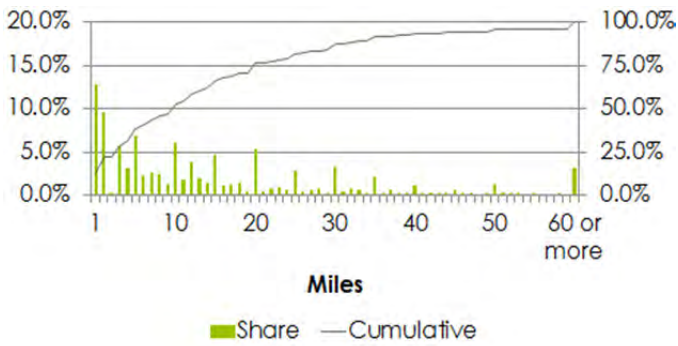


Conventionally Fueled Vehicles Dominate



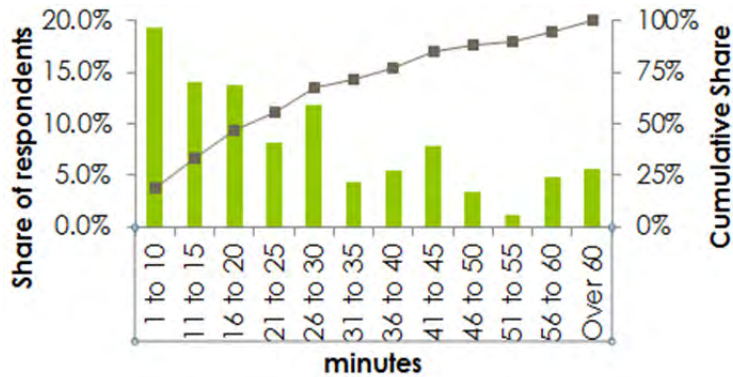
Mileage

The average trip to campus, excluding on-campus residents, is 15.8 miles one-way. 13% commute 30 miles or more

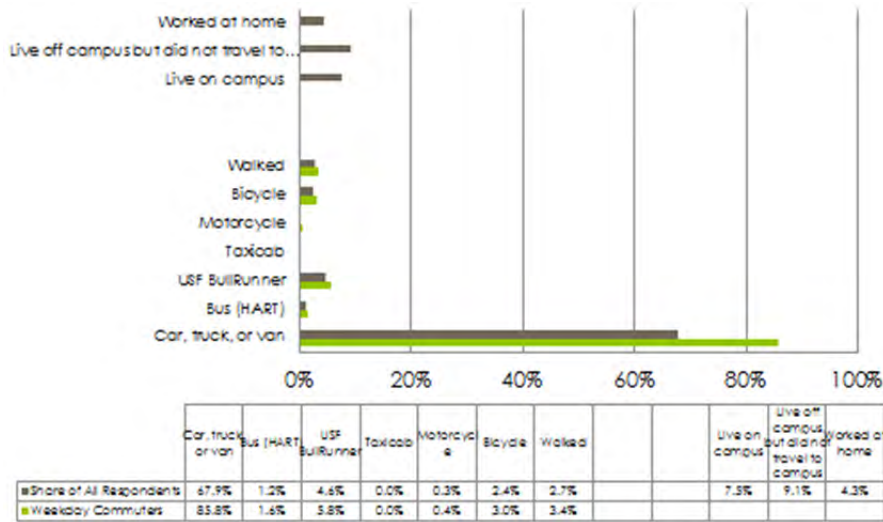


Minutes

19% have 10 minute or less commute but 15% have 45 minute or more commute



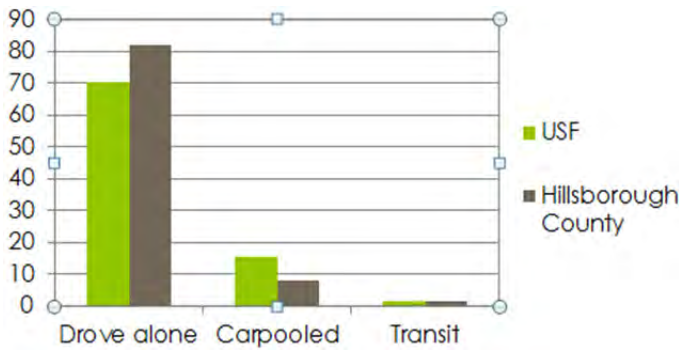
Commute Method of an Average Weekday in the Previous Week



Single Occupant Vehicles

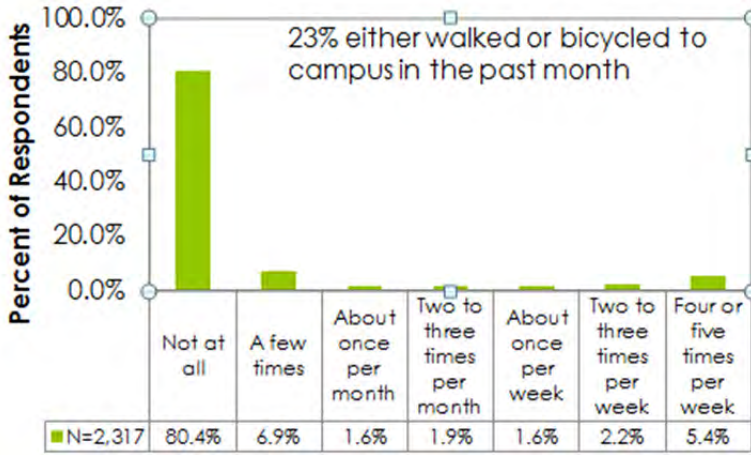
- Overall, 81.8% of USF commuters who travel by car, truck or van are single-occupant vehicles

USF versus Hillsborough County Commute Mode

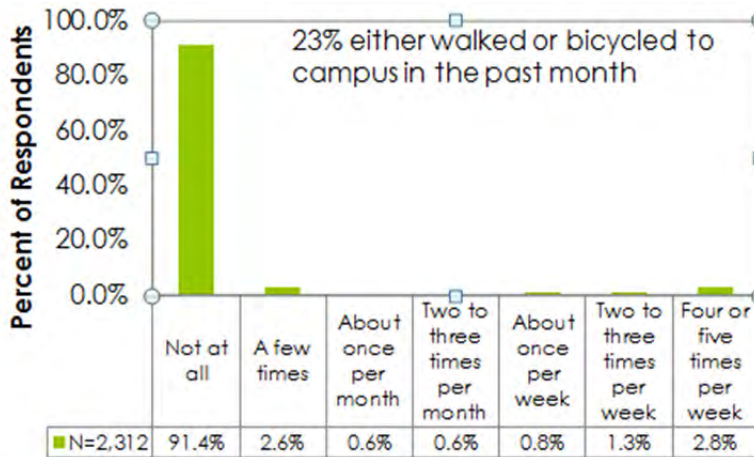


Hillsborough County data from 2013 American Community Survey 1-Year Estimates

Walk to and from Campus



Bike to and from Campus



Section 1 Findings and Recommendations

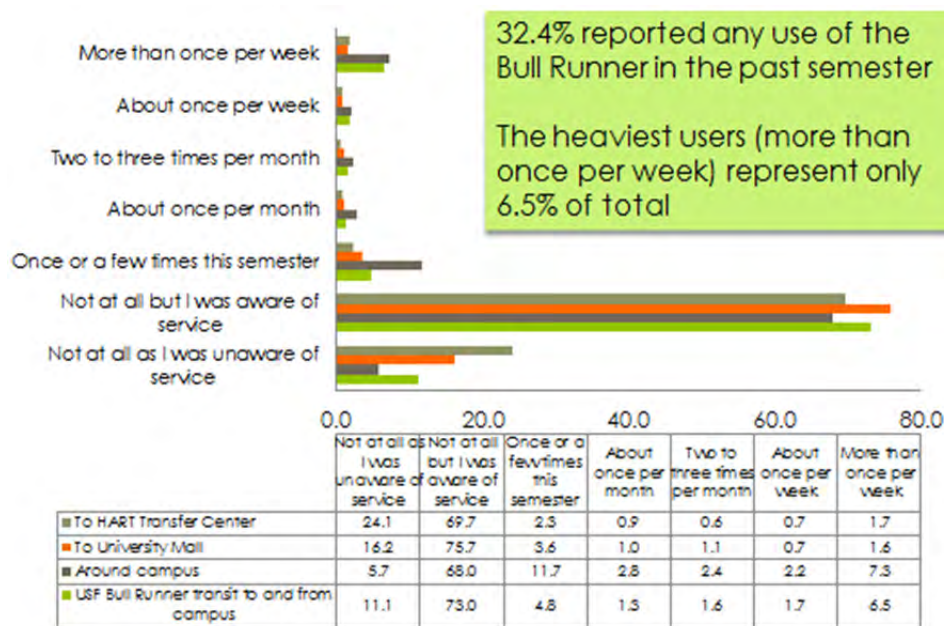
- While 23% either walked or bicycled to campus in the past month, the data suggest that commuters may find walking and bicycling to campus is not easy. Less than 5 percent bicycle to campus at least once per week and less than 10 percent walk to campus at least once per week.
 - With an estimated 4,500 students and 2,900 faculty/staff within 3 miles of campus, USF should partner with surrounding municipalities to creating a safe and pleasant walking and bicycling environment to campus
 - USF should continue to improve the connectivity of bicycle facilities on campus



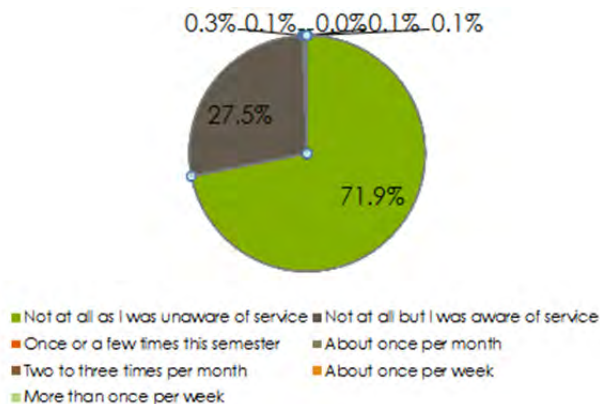
- For those who live in Hillsborough County: USF should actively promote HART’s U-Pass that allow students showing a USF ID to ride HART Local, Limited Express, MetroRapid and Flex routes for free and USF faculty and staff to pay 50¢ with a valid USF ID card.
- For the 13% who live outside of the County and commute at least 30 miles, USF should work with TBARTA and its vendor to create vanpools by funding a new vanpool incentive program for USF. PATS should provide free parking for the vanpools (may reduce parking demand by 4 to 9 spaces per vanpool)

Section 2 Awareness and Self-Reported Levels of Use of Various Travel Choices

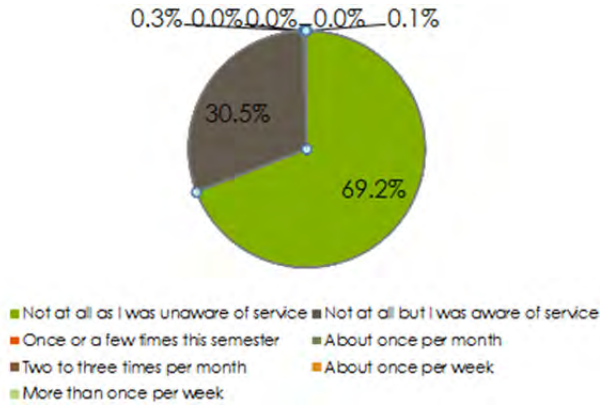
USF Bull Runner Awareness and Self-Reported Use



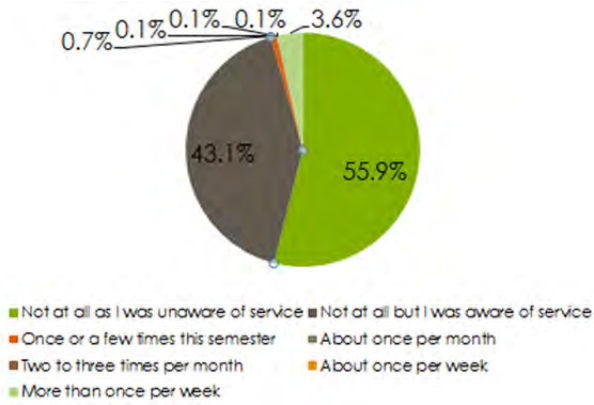
Emergency Ride Home Awareness and Self-Reported Use



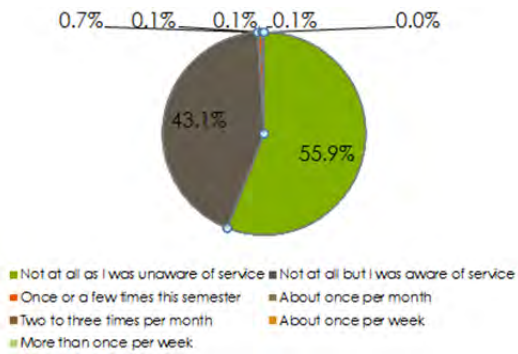
Zimride Ridematching Service Awareness and Self-Reported Use



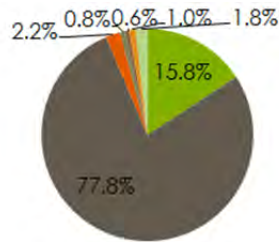
USF Bicycle Rack or Lid Awareness and Self-Reported Use



Enterprise Carshare Awareness and Self-Reported Use

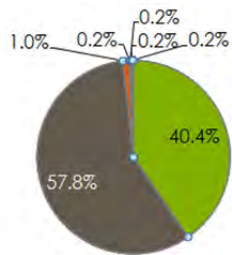


HART Awareness and Self-Reported Use



- Not at all as I was unaware of service
- Not at all but I was aware of service
- Once or a few times this semester
- About once per month
- Two to three times per month
- About once per week
- More than once per week

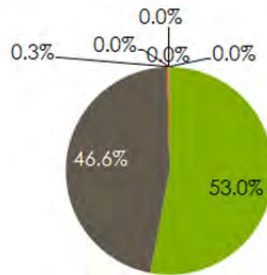
USF Borrow Our Bikes Awareness and Self-Reported Use



N=2,307

- Not at all as I was unaware of service
- Not at all but I was aware of service
- Once or a few times this semester
- About once per month
- Two to three times per month
- About once per week
- More than once per week

Moffitt Parking Shuttle Awareness and Self-Reported Use



N=2,302

- Not at all as I was unaware of service
- Not at all but I was aware of service
- Once or a few times this semester
- About once per month
- Two to three times per month
- About once per week
- More than once per week

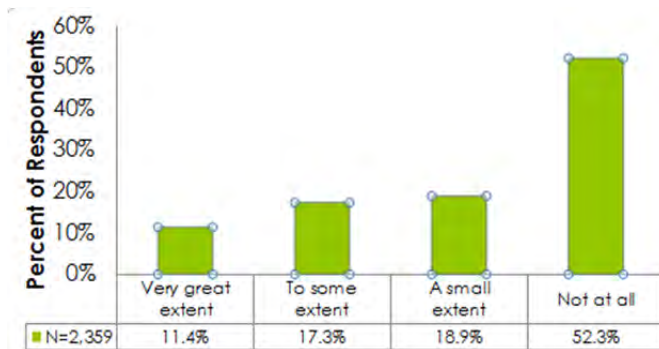
Section 2 – Findings and Recommendations

- About one in three use at least one of the Bull Runner services (to/from campus, on-campus, University Mall and HART transfer center).
- However, the heaviest users (more than once per week) of Bull Runner around campus represent only about seven percent of all respondents.
- Low level of awareness of Bull Runner services to University Mall and HART Transit Center.
 - PATS should promote Bull Runner’s access to off-campus destinations and activities
 - Increase Awareness of Travel Choices
 - Opportunity for growth in usage of travel options is great. The high lack of awareness levels of travel options range from Borrow Our Bikes at 40% to TBARTA’s emergency ride home at 72%.

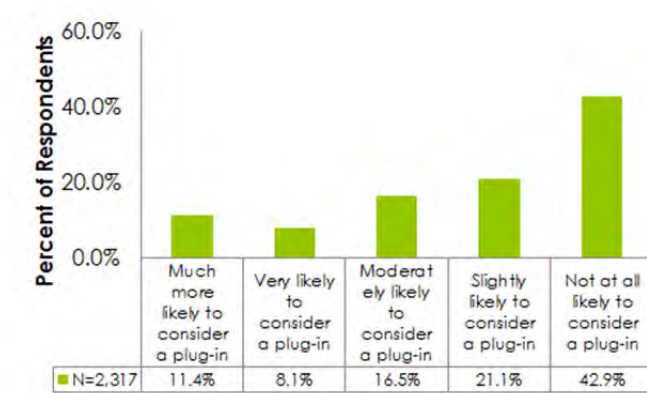
- NNTA should work with TBARTA to promote the ERH program on campus
 - USF email policy and restrictions on direct marketing USF-sponsored services provided by private vendors like Enterprise Carshare and Zimride and is inconsistent with USF’s stated commitment to promoting sustainability. USF should modify the email policy to allow regular communication on transportation and parking issues via email for USF sanctioned services like Enterprise Carshare and Zimride.
- PATS and NNTA should promote how to download Bull Tracker and OneBusAway (HART’s real-time bus information app)

Section 3 Interest in Valet Parking Interest in Electric Vehicle

To what extent would you be interested in a valet parking service on the Tampa campus?



If there was access to more electric vehicle charging options on campus, how likely would you consider an electric plug-in vehicle as your next vehicle?



Section 3 – Findings and Recommendations

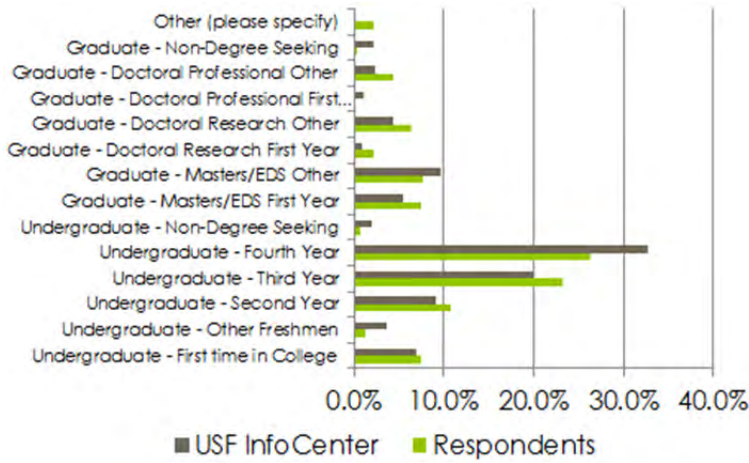
- 11% have high level of interest in valet parking service
 - PATS may want to examine this option in high demand areas.
- 57% would consider an electric vehicle as their next vehicle if there was access to more electric vehicle charging options on campus with 20% much more to very likely

Section 4 Survey Respondent Profiles

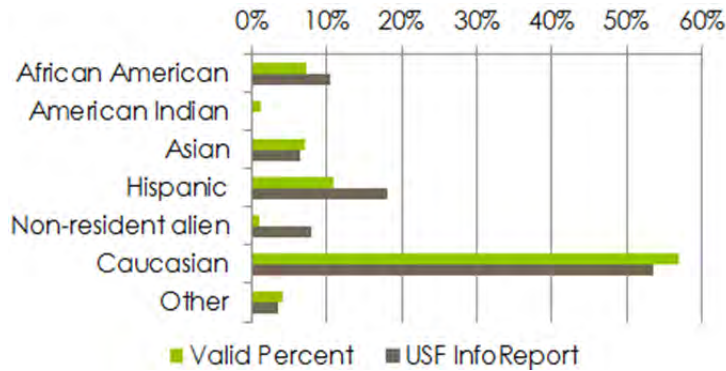
Survey Respondents

- Faculty 5.6%
- Staff 14.9%
- Student 69.3%
- Unknown 10.2%
- Female 67.2%
- Male 32.8%

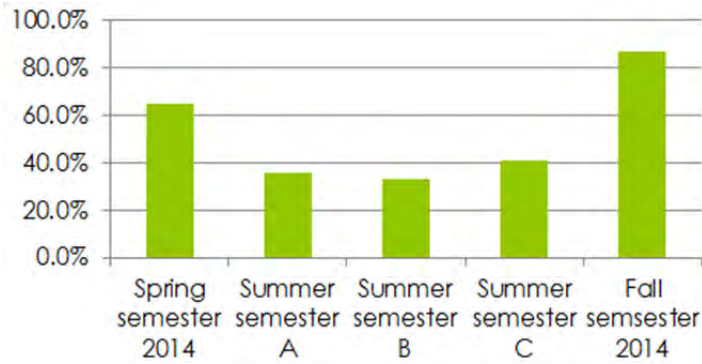
Survey Respondents – Students



Survey Respondents – Students by Race/Ethnicity

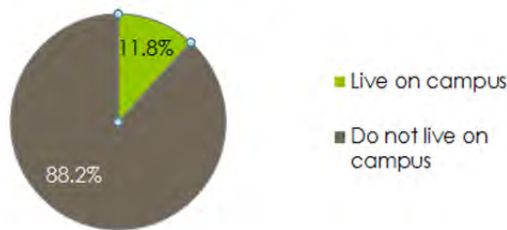


Share of Student-Respondents Who Traveled to/from USF-Tampa by Semester

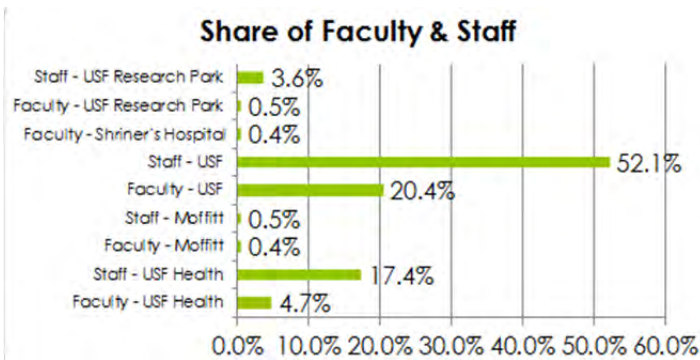


Survey Respondents – Residency

Share of Respondents



Respondents – Share of Faculty and Staff by Campus Location



Contacts

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 Center for Urban Transportation Research
 University of South Florida
winters@cutr.usf.edu
 813-974-9811

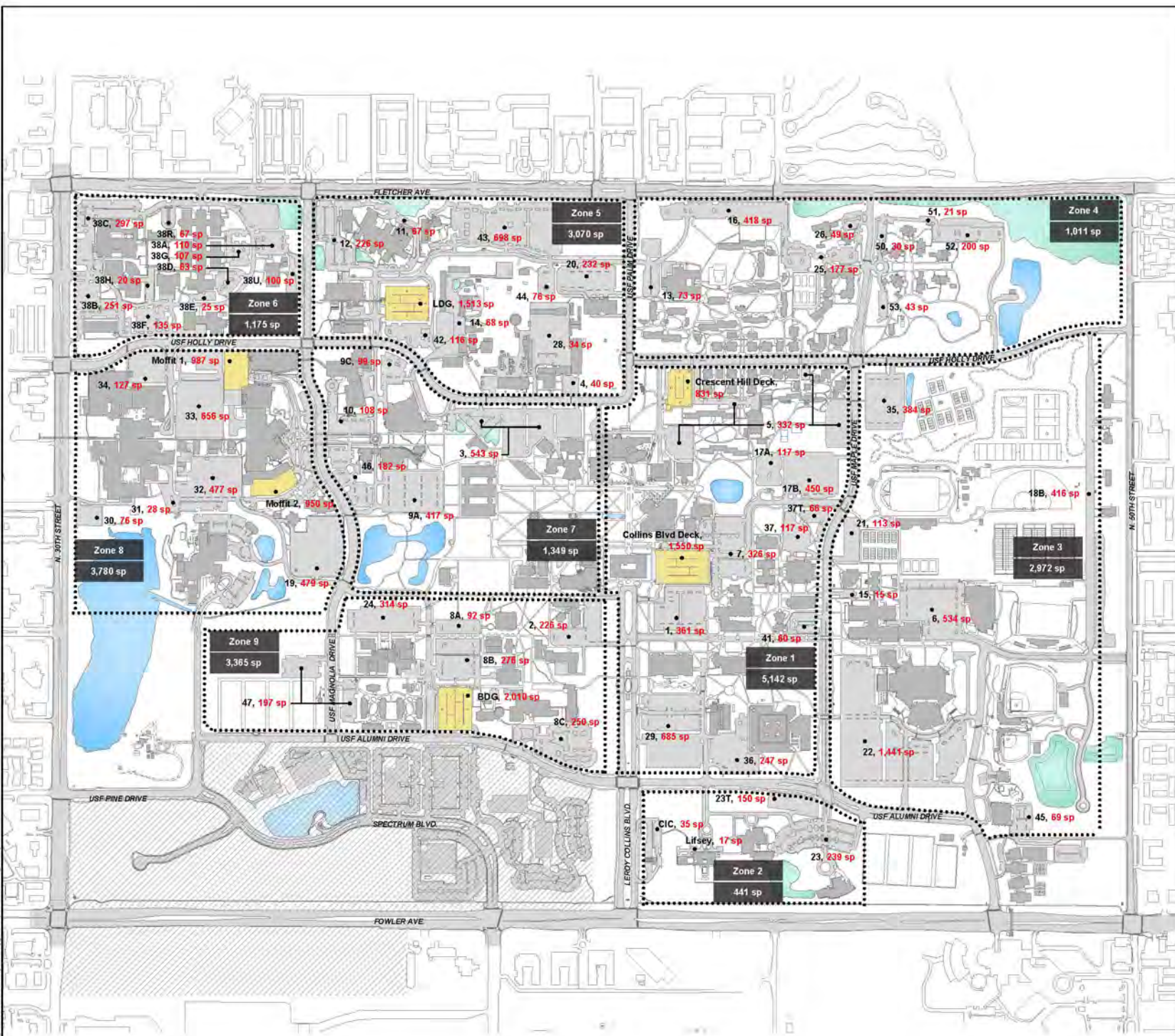
Sara Hendricks
 Senior Research Associate
 Center for Urban Transportation Research
 University of South Florida
hendricks@cutr.usf.edu
 813-974-9801

Links to Sustainability Tracking, Assessment & Rating System (STARS) report:

<https://stars.aashe.org/institutions/university-of-south-florida-fl/report/2014-01-14/>

See:

- Transportation
 - [OP-14: Campus Fleet](#)
 - [OP-15: Student Commute Modal Split](#)
 - [OP-16: Employee Commute Modal Split](#)
 - Tier 2 Credits
 - [OP-T2-26: Bicycle Sharing](#)
 - [OP-T2-27: Facilities for Bicyclists](#)
 - [OP-T2-28: Bicycle and Pedestrian Plan](#)
 - [OP-T2-29: Mass Transit Programs](#)
 - [OP-T2-30: Condensed Work Week](#)
 - [OP-T2-31: Telecommuting](#)
 - [OP-T2-32: Carpool/Vanpool Matching](#)
 - [OP-T2-33: Cash-out of Parking](#)
 - [OP-T2-34: Carpool Discount](#)
 - [OP-T2-35: Local Housing](#)
 - [OP-T2-36: Prohibiting Idling](#)
 - [OP-T2-37: Car Sharing](#)



- Surface Parking
- Structured Parking
- #, # sp Lot #, Space #

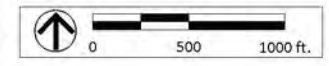
Area Not Included in Campus Master Plan

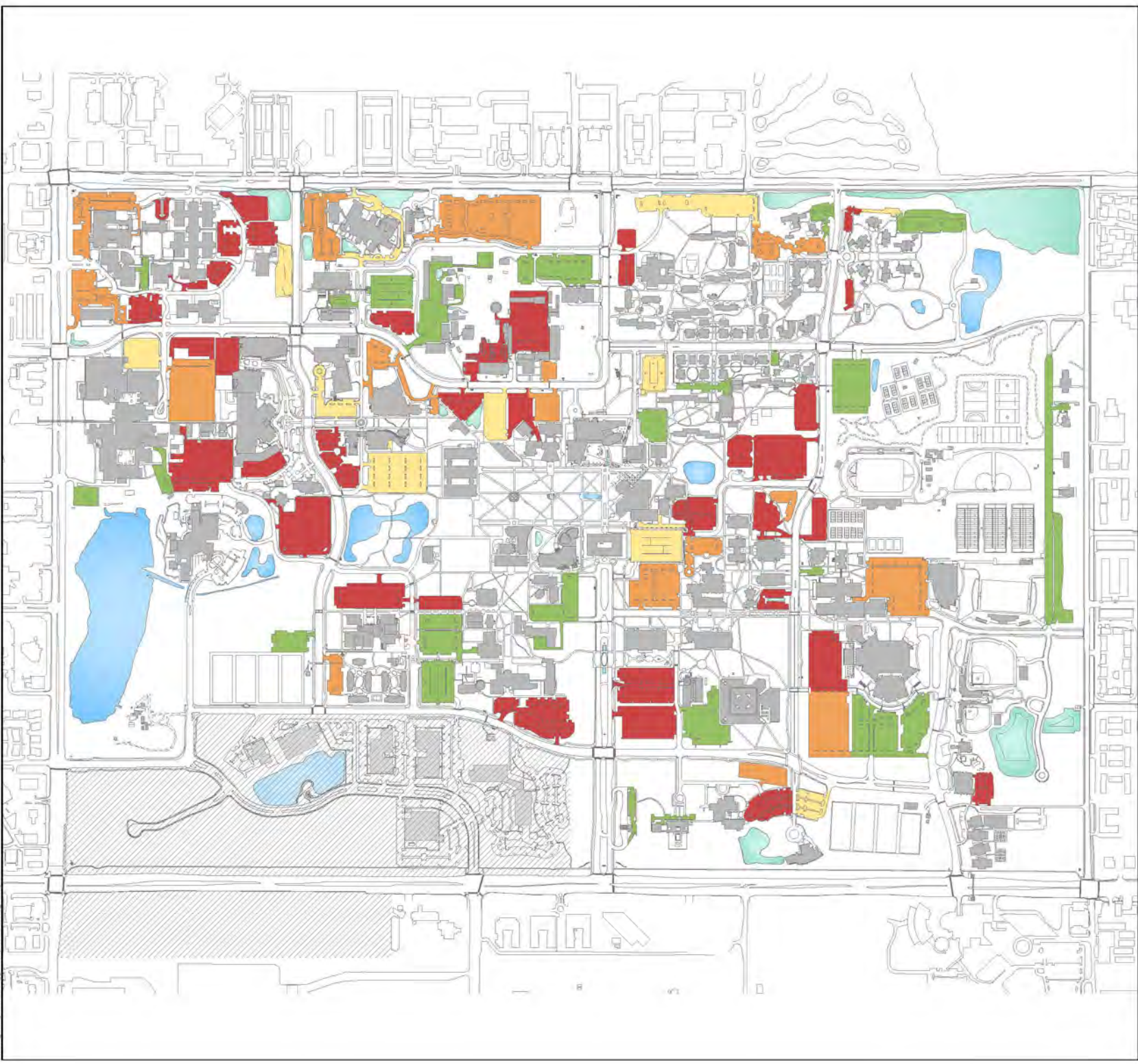
Notes
Based on utilization observation
10/14/2014

Element 5
Transportation

Figure 5.1
Existing Parking and
Vehicular Circulation System

Date
12/03/2015





- >90%
- 80 - 90%
- 70 - 80%
- <70%

Area Not Included in Campus Master Plan

Notes
Based on utilization observation
10/14/2014

Element 5
Transportation

Figure 5.2
Parking Utilization

Date
12/03/2015



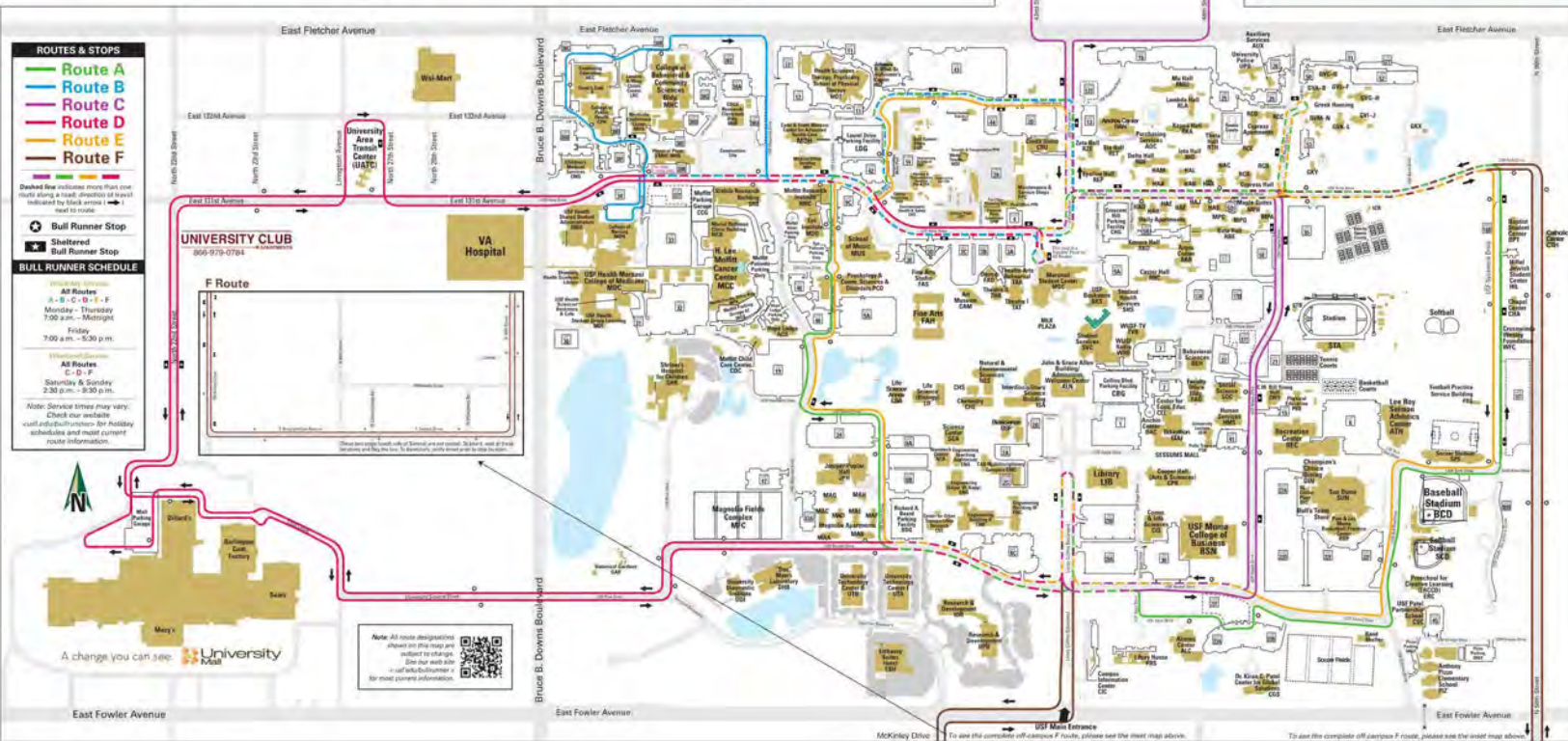


Use the
BULL TRACKER
to locate the fare-free Bull Runner Transit!

Get these features online or from your mobile device:

- Find bus locations in real time
- Get bus arrival predictions
- Set up alerts for bus arrival at your stop
- View a specific route or the entire system
- Find out if space is available on the bus

usfbullrunner.com



Element 5
Transportation

Figure 5.3
Bull Runner Route Map

Date
12/03/2015



Route Number
University of
South Florida

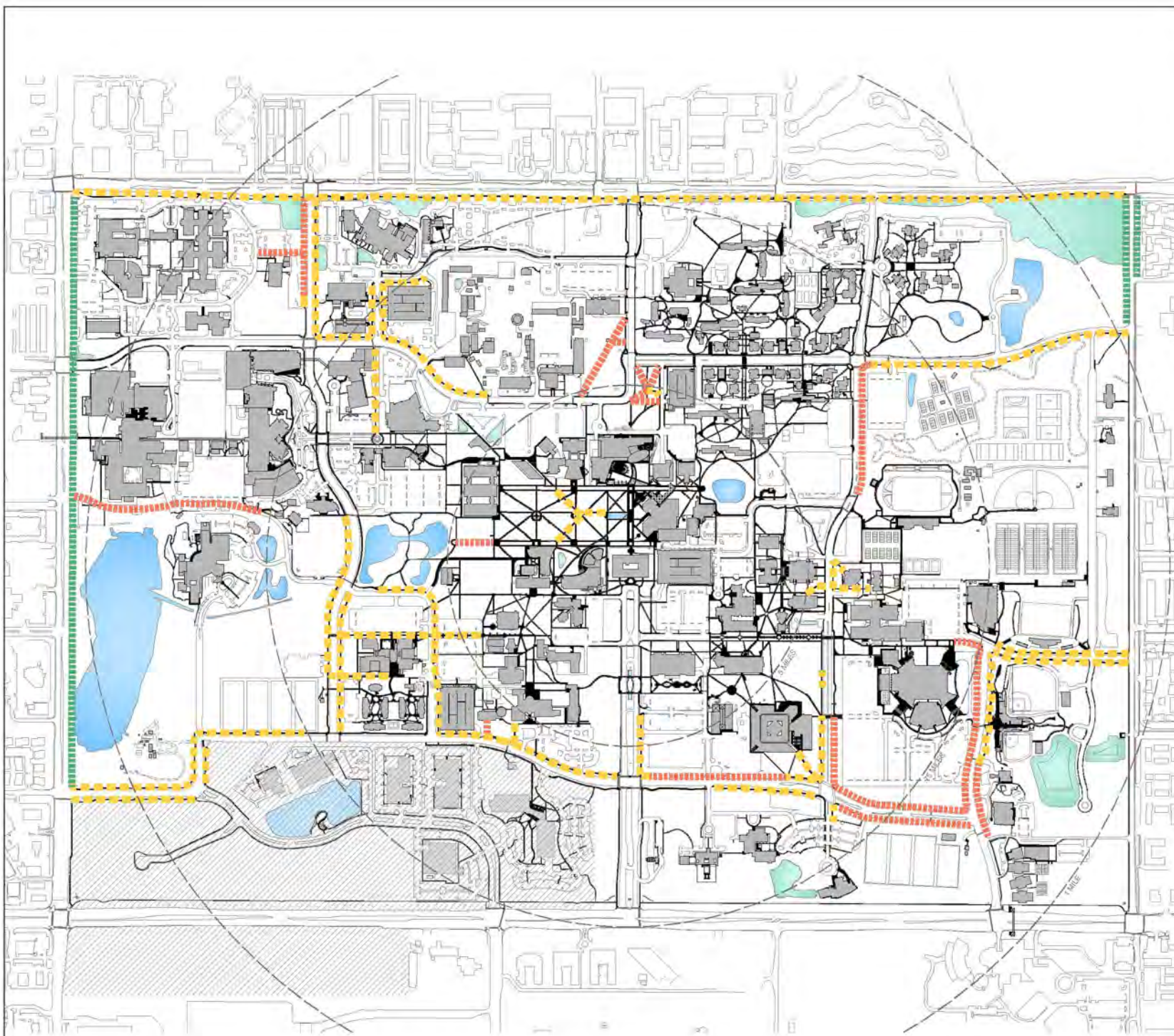


Element 5
Transportation


Figure 5.4
Bus Route Map

Date
12/03/2015





-  Existing Walks
-  Existing Walks Added Since 2005
-  Planned Campus Walk Development
-  Proposed Public Walk Development

 Area Not included in Campus Master Plan

Element 5
Transportation

Figure 5.5
Existing and Planned
Pedestrian Facilities

Date
12/03/2015



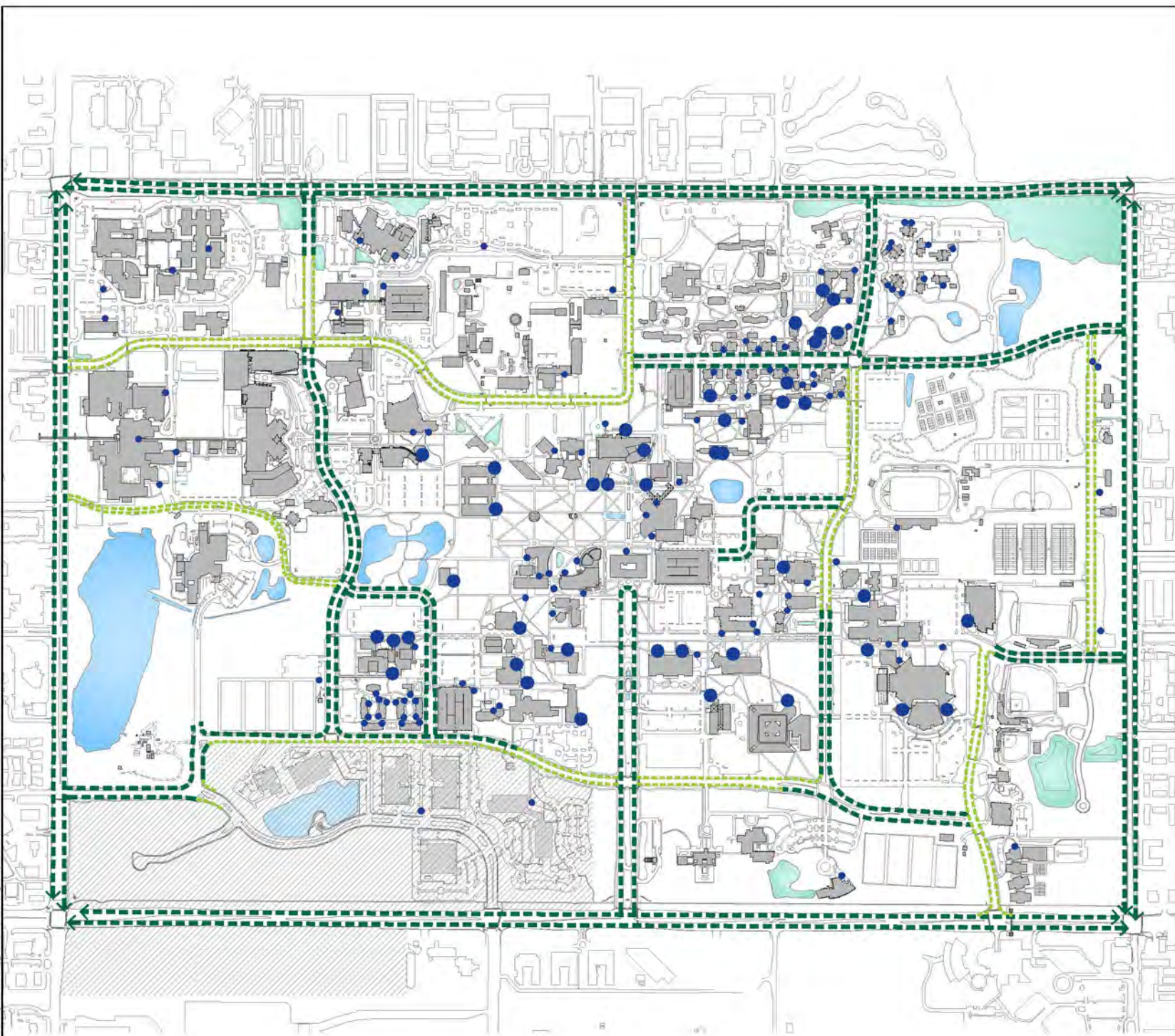
- Existing Bicycle Lanes
- Proposed Bicycle Lanes
- Bicycle Racks
- >20 Bicycle Racks

Area Not Included in
Campus Master Plan


Element 5
Transportation

Figure 5.6
Existing and Planned
Bicycle Facilities

Date
12/03/2015



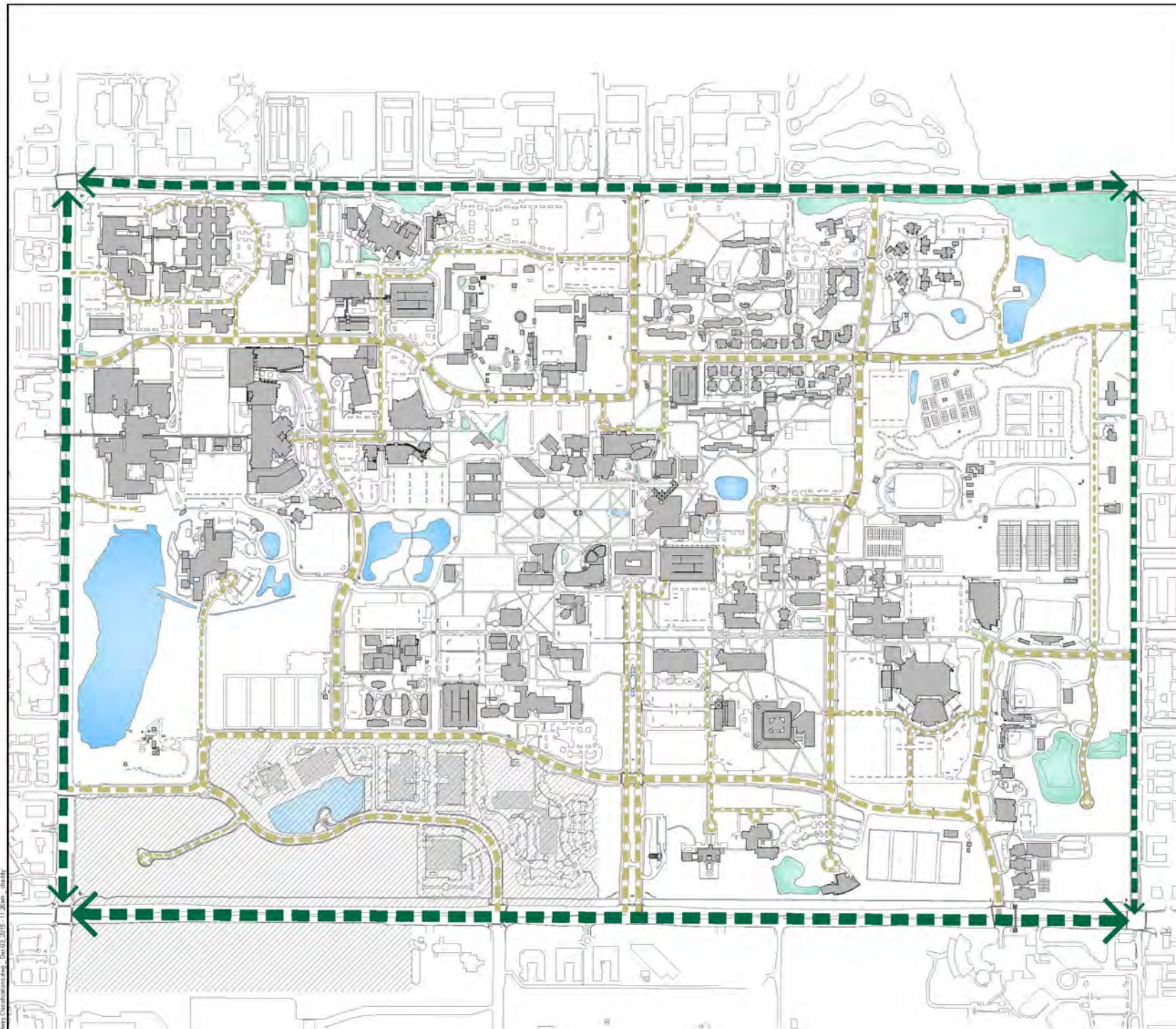
-  Principal Arterial
-  Minor Arterial
-  Collector Roadway
-  Collector Roadway (USF)
-  Drive (USF)

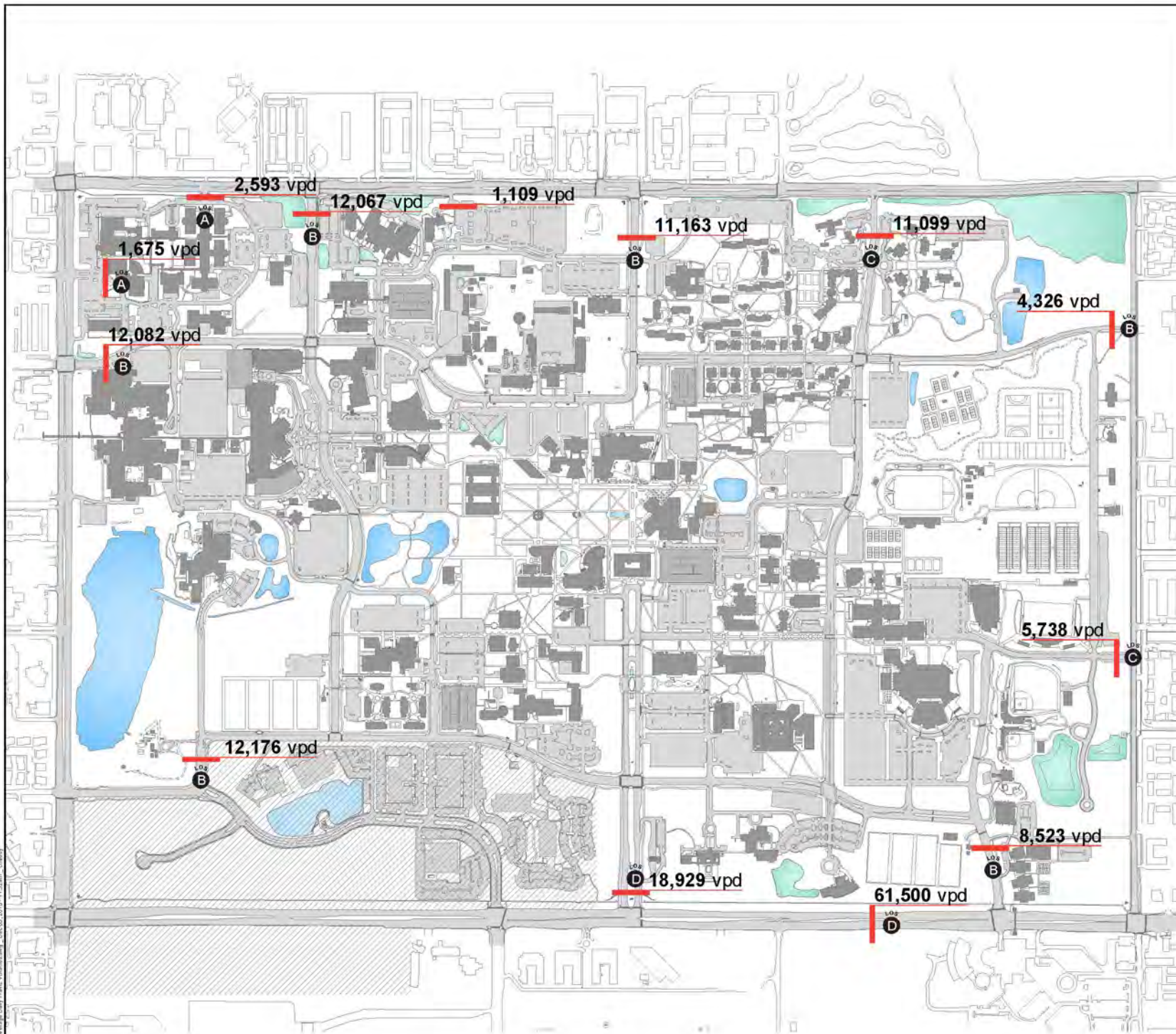
 Area Not Included in
Campus Master Plan

Element 5
Transportation

Figure 5.7
Functional Roadway
Classifications

Date
12/03/2015





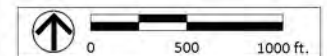
- Surface parking
- Vehicles Per Day
- Daily Level of Service

Area Not Included in Campus Master Plan

Element 5
Transportation

Figure 5.8
Existing Average Daily
Traffic Volumes

Date
12/03/2015



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Element 6:

Housing and Student Support Services

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Element 6 Housing and Student Support Services

This element ensures the provision of public and private housing facilities on the University campus and within the host and/or affected communities that is adequate to meet the needs of the projected University enrollment.

Housing & Residential Education’s vision is for the dynamic residential experience to produce proud USF alumni and engaged global citizens. Housing & Residential Education is dedicated to creating safe and welcoming residential communities that promote student success.

Due to the University’s first year live-on requirement, first time in college students comprise the majority of the on campus residential community. For Fall 2013, demand for housing by returning undergraduate students exceeded capacity and allowed for only limited transfer student space to be available.

The strategic enrollment plan goals to increase out-of-state and international students will dictate an even higher demand for on-campus housing. With increased access to an affordable, high-quality residential experience, demand will continue to grow beyond the current capacity.

With a current capacity of 5,390, Housing & Residential Education is a mix of single and double occupancy spaces in traditional, suite, and apartment style beds along with doubles in the fourteen Greek Village houses. While the primary focus of Housing & Residential Education is supporting the needs of our full-time enrolled students, accommodations are also offered to faculty, staff, visiting scholars, camps and conferences.

Acknowledging strategic priorities to keep a high quality residential experience accessible to the USF student body and the focus on first time in college student needs, new construction will add traditional double and single rooms with modern, spa-like community bathrooms and suite style housing to the inventory. Initial estimates project 85% double and 15% single options in new construction. The competitive off-campus apartment style options satisfy the market demand and inform the decision to not expand beyond the 1,750+ three and four bedroom apartment options already on-campus.

(1) HOUSING DATA AND ANALYSIS

The USF BOT approval of the Student Housing Development Project:

<http://system.usf.edu/board-of-trustees/meetings/pdfs/upcoming-meetings/2015/06.04.15/FL%20114.pdf>

Student Housing Demand Assessment Report:

<http://system.usf.edu/board-of-trustees/meetings/pdfs/upcoming-meetings/2015/06.04.15/Demand%20Assessment%20Report.pdf>

		2014-15 Standard Capacity Projections																Total					
Configuration	Building Name	Building Abbreviation	# of Floors	Room Type								Total Capacity	Standard Bed Capacity by Room Type								Total		
				Double	Corser Double	Single	Super Single	Faculty Staff	Non-Revenue	RA	Guest		Double	Corser Double	Single	Super Single	Faculty Staff	Non-Revenue	RA	Guest	Complete Capacity	Student Capacity	Revenue Capacity
Traditional	Barn	BBE	5	138	0	0	0	2	0	5	0	286	276	0	0	0	2	0	0	0	286	284	276
Traditional	Center	BBC	5	172	0	10	0	1	1	9	0	465	444	0	10	0	1	1	9	0	465	464	454
Agnes Totak				310	0	10	0	3	1	17	0	651	630	0	10	0	3	1	17	0	651	648	630
Suite	Daina	RDE	3	108	0	0	2	4	16	6	0	244	216	0	0	2	4	16	6	0	244	240	218
Suite	Epalim	REP	3	112	0	0	2	0	6	6	0	240	224	0	0	2	0	6	6	0	240	240	226
Suite	Era	RET	2	40	0	0	0	0	0	2	0	82	80	0	0	0	0	0	2	0	82	82	80
Suite	Ion	RJO	3	0	0	60	0	0	1	2	0	63	0	0	60	0	0	1	2	0	63	63	60
Suite	Kappa	RKA	3	0	0	112	0	0	0	8	0	116	0	0	112	0	0	8	8	0	116	116	112
Suite	Lambda	RLA	2	0	0	40	0	0	0	2	0	42	0	0	40	0	0	0	2	0	42	42	40
Suite	Mu	RMU	3	0	0	108	2	0	8	6	0	124	0	0	108	2	0	8	6	0	124	124	110
Suite	Theta	RTH	2	0	0	36	2	0	0	2	0	40	0	0	36	2	0	0	2	0	40	40	38
Suite	Zeta	RZT	2	40	0	0	0	0	0	2	0	82	80	0	0	0	0	0	2	0	82	82	80
Andromeda Totak				309	0	356	8	4	41	34	0	1043	690	0	356	8	4	41	34	0	1043	1039	964
Suite	Maple A	MPA	4	54	0	0	0	1	4	4	0	117	108	0	0	1	4	4	0	117	116	108	
Suite	Maple B	MPB	4	54	0	0	0	1	0	4	0	113	108	0	0	1	0	4	0	113	112	108	
Suite	Cypress A	RCA	5	68	5	0	0	1	0	5	0	152	136	10	0	0	1	0	5	0	152	151	148
Suite	Cypress B	RCB	5	54	4	0	0	0	0	4	0	120	108	8	0	0	0	4	0	120	120	116	
Apartment	Cypress C	RCC	4	0	0	164	0	0	0	4	0	168	0	0	164	0	0	4	0	168	168	164	
Apartment	Cypress D	RCD	4	0	0	124	0	1	0	4	0	129	0	0	124	0	1	0	4	0	129	128	124
Cypress-Maple Totals				230	9	288	0	4	4	25	0	799	460	18	288	0	4	4	25	0	799	795	766
Apartment	Kenova	RKO	5	87	0	65	0	1	3	6	0	254	174	0	65	0	1	3	6	0	254	253	241
Apartment	Holy A	HAA	3	0	0	72	4	1	0	2	0	85	0	0	78	4	1	0	2	0	85	84	81
Apartment	Holy B	HAB	3	0	0	81	6	0	0	3	0	90	0	0	81	6	0	0	3	0	90	90	87
Apartment	Holy C	HAC	4	0	0	105	8	1	0	3	0	117	0	0	105	8	1	0	3	0	117	116	113
Apartment	Holy D	HAD	4	0	0	93	8	0	0	3	0	104	0	0	93	8	0	0	3	0	104	104	101
Apartment	Holy E	HAE	4	0	0	85	8	1	4	3	0	101	0	0	85	8	1	4	3	0	101	100	93
Apartment	Holy F	HAF	4	0	0	108	8	0	0	4	0	120	0	0	108	8	0	0	4	0	120	120	116
Apartment	Holy G	HAG	4	0	0	104	6	1	0	4	0	115	0	0	104	6	1	0	4	0	115	114	110
Holy-Kenova Totals				87	0	722	48	5	7	30	0	986	174	0	722	48	5	7	30	0	986	981	944
Apartment	Magnolia A	MAA	3	0	0	67	0	0	0	2	0	69	0	0	67	0	0	0	2	0	69	69	67
Apartment	Magnolia B	MAB	3	0	0	67	0	0	0	2	0	69	0	0	67	0	0	0	2	0	69	69	67
Apartment	Magnolia C	MAC	4	0	0	80	0	1	0	2	0	83	0	0	80	0	1	0	2	0	83	82	80
Apartment	Magnolia D	MAD	4	0	0	83	0	0	0	2	0	85	0	0	83	0	0	0	2	0	85	85	83
Apartment	Magnolia E	MAE	4	0	0	83	0	0	0	2	0	85	0	0	83	0	0	0	2	0	85	85	83
Apartment	Magnolia F	MAF	4	0	0	72	0	0	0	2	0	78	0	0	72	0	0	0	2	0	78	74	72
Apartment	Magnolia G	MAG	3	0	0	10	0	2	0	0	0	12	0	0	10	0	2	0	0	0	12	10	10
Suite	Juniper	RJH	7	192	12	0	0	0	0	12	0	420	384	24	0	0	0	0	12	0	420	420	408
Suite	Poplar	RPH	7	264	18	0	0	2	4	18	0	632	572	36	0	0	2	4	18	0	632	630	608
Magnolia Totals				478	30	462	0	5	4	42	4	1533	956	60	462	0	5	4	42	4	1533	1524	1478
Greek House	Greek Villa A	GVA	3	14	0	0	0	0	1	0	0	30	28	0	0	1	0	0	1	0	30	28	28
Greek House	Greek Villa B	GVB	3	14	0	0	0	0	0	1	0	29	28	0	0	0	1	0	0	1	29	29	28
Greek House	Greek Villa C	GVC	3	14	0	0	0	0	0	1	0	29	28	0	0	0	0	1	0	0	29	29	28
Greek House	Greek Villa D	GVD	3	13	0	0	0	0	0	1	0	27	26	0	0	0	0	1	0	0	27	27	26
Greek House	Greek Villa E	GVE	2	10	0	0	0	0	0	1	0	21	20	0	0	0	0	1	0	0	21	21	20
Greek House	Greek Villa F	GVF	2	9	0	0	0	0	0	1	0	19	18	0	0	0	0	1	0	0	19	19	18
Greek House	Greek Villa G	GVG	3	13	0	0	0	0	0	1	0	27	26	0	0	0	0	1	0	0	27	27	26
Greek House	Greek Villa H	GVB	3	13	0	0	0	0	0	1	0	27	26	0	0	0	0	1	0	0	27	27	26
Greek House	Greek Villa I	GVI	2	10	0	0	0	0	0	1	0	21	20	0	0	0	0	1	0	0	21	21	20
Greek House	Greek Villa J	GVI	2	9	0	0	0	0	0	1	0	19	18	0	0	0	0	1	0	0	19	19	18
Greek House	Greek Villa K	GVK	2	10	0	0	0	0	0	1	0	21	20	0	0	0	0	1	0	0	21	21	20
Greek House	Greek Villa L	GVL	2	9	0	0	0	0	0	1	0	19	18	0	0	0	0	1	0	0	19	19	18
Greek House	Greek Villa M	GVM	3	14	0	0	0	0	0	1	0	29	28	0	0	0	0	1	0	0	29	29	28
Greek House	Greek Villa N	GVN	3	14	0	0	0	0	0	1	0	29	28	0	0	0	0	1	0	0	29	29	28
Suite	OPB - RCB2	RCB	1	14	1	0	0	0	0	1	0	31	28	2	0	0	0	0	1	0	31	31	30
Greek Village Totals				164	0	0	0	1	0	15	0	378	360	2	0	0	1	0	15	0	378	346	362
Totals:				1571	39	1838	56	22	57	163	4	5390	3170	80	1838	56	22	57	163	4	5390	5333	5144
Total Revenue Spaces:																							

Provided by USF Housing and Residential Education

(b) University controlled facilities off-campus.
The University does not control any off-campus facilities.

(c) Students housed in non-University controlled facilities on-campus (fraternities, sororities, etc...).
Fraternities & Sororities are located in University controlled facilities, included in table above. (d)
Assess the number of students to be housed in non-University controlled facilities off-campus. .
Off campus there is one Fraternity house currently unoccupied with 20 spaces and another organization with 12 spaces available.

The number of students housed in the area is illustrated in the dot density map Figure 6.1.

Available occupancy information provided below for major apartments in the vicinity of campus (source: Brailsford & Dunlavy). Additionally, a new complex of 600 beds is in planning across Bruce B. Downs Boulevard.

University of South Florida
Off-Campus Analysis
Unit-Type / Rent / Square Feet

COMMUNITY	ADDRESS	CITY	ZIP	MILES TO MSC	NO. OF UNITS	OCCUPANCY
The Venue at North Campus	13702 N 42nd St	Tampa	33613	0.6	N/A	N/A
4050 Lofts	4050 Rocky Circle	Tampa	33613	0.7	N/A	N/A
Union Park on Fletcher	3900 East Fletcher Avenue	Tampa	33613	0.7	84	100%
Avalon Heights	13508 Avalon Heights Blvd	Tampa	33613	0.8	212	100%
Monticello	4201 Monticello Gardens Place	Tampa	33613	0.8	132	94%
ONSC	5005 Excellence Blvd	Tampa	33617	0.8	N/A	N/A
The Pointe	3424 Jefferson Commons Drive	Tampa	33613	1.1	N/A	93%
Cambridge Woods	14138 Monterey Pines Drive	Tampa	33613	1.1	275	97%
Willow Brooke	14414 Holliston Drive	Tampa	33613	1.1	248	100%
42 North	14502 Valor Circle	Tampa	33617	1.2	127	100%
Malibu USF	11711 N. 50th Street	Tampa	33617	1.2	52	100%
The Province	10921 N. McKinley Drive	Tampa	33612	1.3	N/A	98%
Fairway Oaks	4512 Blue Tee Court	Tampa	33613	1.3	235	96%
Oak Ramble	14627 Granada Dr	Tampa	33613	1.4	256	97%
Hidden Palms	14555 Bruce B. Downs Blvd	Tampa	33613	1.4	256	98%
Campus Club	5651 East Fletcher Avenue	Tampa	33617	1.5	N/A	100%
The Flats at 4200	4202 Fletcher Avenue	Tampa	33613	1.7	314	N/A
College Court	5610 Graduate Circle	Tempe Terrace	33617	1.7	92	97%
Lakeview Oaks	14201 Cyber Place	Tampa	33613	1.8	252	96%
Ashford Place	10610 N 30th St	Tampa	33612	2.0	N/A	N/A
Reflections Apartments	14525 Prism Circle	Tampa	33613	2.0	198	100%
Arbiterly Place	5100 Live Oaks Blvd	Tampa	33647	2.7	770	99%
Campus Lodge	15115 Livingston Ave	Lutz	33559	2.8	312	98%
Boardwalk at Morris Bridge	80 Boardwalk Trail Drive	Tempe Terrace	33637	3.8	144	90%

University of South Florida
Off-Campus Analysis
Amenity Offerings

Apartment	Distance to Campus	Swimming Pool	Fitness Center	Dishwasher	Patio/Balcony	BBQ/Cooking Area	Private Bathrooms	Pet-friendly (includes)	Walk in Linen	Furnished Units Available	Closet	Business Ctr/Comp Lab	Campus Transit Service	On-Site Management	Individual Leases	Pet Friendly	Stackable/Keypad Coors	Roommate Matching	Basketball Courts	Laundry Facility	Compld Access	Study Rooms	Tennis Courts	Flexible Lease Terms	Storage
The Venue at North Campus	0.6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
4050 Lofts	0.7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Union Park on Fletcher	0.7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Avalon Heights	0.8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Monticello	0.8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
ONSC	1.1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
The Pointe	1.1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Cambridge Woods	1.1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Willow Brooke	1.2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
42 North	1.2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Malibu USF	1.3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
The Province	1.3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Fairway Oaks	1.4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Oak Ramble	1.4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Hidden Palms	1.5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Campus Club	1.7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
The Flats at 4200	1.7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
College Court	1.8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Lakeview Oaks	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Ashford Place	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Reflections Apartments	2.7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Arbiterly Place	2.8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Campus Lodge	3.8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Off-Campus Total		23	22	21	20	20	18	17	16	15	15	13	13	12	12	12	11	9	9	7	7	7	6	5	3

(e) Historically significant housing on-campus.

There are no historically significant housing facilities on the Tampa campus.

(f) Potential on-campus sites where additional housing facilities may be created.

The Fig 6-2 depicts the current housing development areas.

Student Support Services

Marshall Student Center

The Marshall Student Center is a vibrant gathering place that strengthens a person’s connectivity to USF, cultivates a sense of community, and hosts campus traditions by providing exceptional facilities, event services and student employment opportunities.

The Marshall Student Center houses a variety of student services and activities, including:

- A variety of food and dining locations
- Student meeting rooms
- Student Government
- Ballroom
- Retail
- Student organizations
- Oval Theater
- Student lounges
- Computer lab
- Outdoor amphitheater
- Orientation
- Special events
- Multi-cultural affairs

Current square footage: 235,000 square feet

Current annual users:

- 2.25 million points of traffic
- 15,000 annual events (approx.)

Additional square footage anticipated to be needed in the next 10 years:

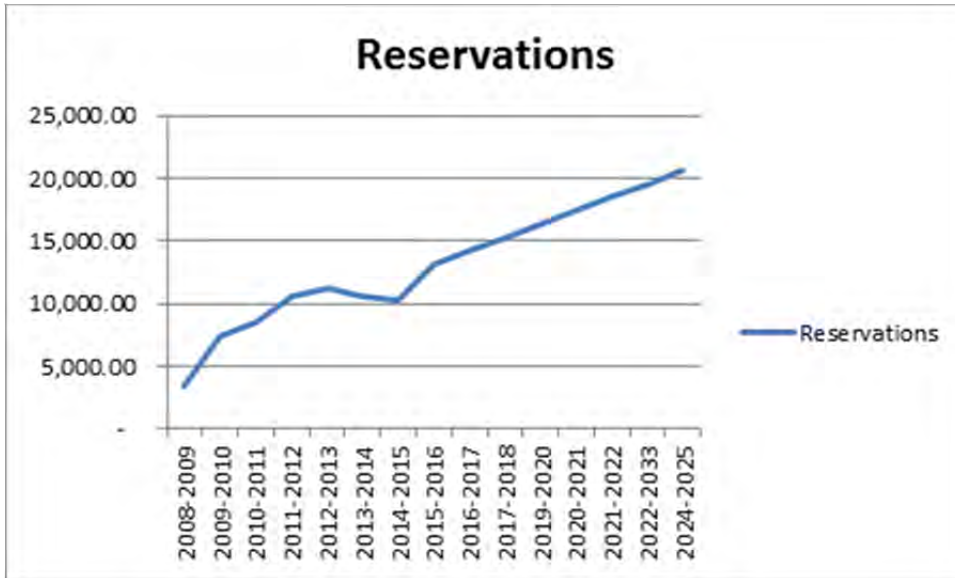
Within the next 2-3 years - 30,000 square feet of growth to accommodate retail, mission central offices, student lounge space and larger meeting rooms. This 3 story expansion is expected to occur over the existing loading dock area.

At the end of ten years – We should consider a larger venue that can accommodate 4000-5000 students in an assemble format. Something between the Ballroom and the Sun Dome which becomes cost prohibitive for our event planners.

Increased number of users in the next 10 years:

Annual traffic is difficult to estimate as it will depend on enrollment.

Event load – anticipated numbers after calendar year 2014-2015



Career Services is currently housed in the SVC building and is planned to move into the Marshall Center Expansion in the near future to be more central to students and expand services to them.

- Current gross square footage: 5,810 sq ft (main offices) + 906 sq ft (interview suites)= TOTAL 6,716 gross sq ft
- Current number of annual users/student contacts = approximately 10,000 (9,890)
- Amount of square footage needed in the next 10 years= 9,750 gross sq ft (size of anticipated floor in MSC expansion)
- Anticipated number of future users is difficult to estimate (minimum of 20,000 if internships increase significantly)

Student Wellness

Student Wellness includes services such as: Wellness Education, Campus Recreation (included in the Recreation & Open Space Element) Center for Victim Advocacy & Violence Prevention, USF Office of Outreach & Support, USF Counseling Center, and Student Health Services Healthy Campus.

Current Square Footage:

15,000 sq. ft. main clinic
 3,000 square feet in Annex (basement of bookstore)
 700 square feet for pharmacy in MSC
 18,700 total sq. ft.

Current encounters/numbers served annually:

Clinical visits: 29,000
 Clinical users: 12,200
 Immunization Compliance Office (ICO): 17,617
 Insurance Compliance Office (ISO estimated): 25,300
 Pharmacy transactions: 36,940
 Pharmacy prescriptions: 17,031

Interim Plan:

- Request Health Fee funding for additional physician and nurse in 2015-2016.
- Request use of Health Fee reserves for internal renovation to create additional exam rooms at an approximate cost of \$220,000.
- Rent space for Call Center staff, requiring approximately 400 square feet.

Predicted number of users/visits annually in 10 years:

Clinical visits: 36,000

ICO: 18,000

ISO: 40,000 (It is anticipated that insurance will be a requirement for enrollment)

Pharmacy prescriptions: 19,000

Square footage needs predicted in 10 years: 53,000 GSF

Campus Ministries

The Religious and Spiritual Life at USF is a network of member faith communities committed to an agreed upon set of ethical standards. They provide access to programs, services, and activities that encourage a campus atmosphere of healthy religious and spiritual expression. This is accomplished through meetings, resources allocation, and collaboration between member organizations and the Division of Student Affairs.

The RSL is a forum for the sharing of information and viewpoints helpful for the common task of the spiritual development of students at USF. As such, it shall serve as an official point of contact between the campus religious communities and the Division of Student Affairs.

There are four campus ministry facilities on USF Sycamore Drive, including:

- Baptist Collegiate Ministries
- Episcopal Chapel Center
- Hillel Jewish Student Center
- Wesley Foundation at USF

The Catholic Student Center is located just across 50th Street off campus.

<http://campusministries.usf.edu/page.asp?id=80>

Veterans Services

1. Current SQ FT: 3600
2. Annual users:
 - a. Full Time Staff: 7 USF / 1 VA
 - b. Part-Time Staff (OPS): 9
 - c. VA Work-Study: 30
 - d. Students Supported: 1800-2000 annually
3. Additional SQ FT needed: 2000
4. Projected Additional Users:
 - a. Full-Time Staff: 3 Coordinators / 1 Admin Assistant (Certifying Official)
 - b. Part-Time Staff: 3
 - c. VA Work-Study: 5
 - d. Additional Students Supported: 700 annually

Food Service:

USF Dining, currently through the nationally known food service provider, ARAMARK, serves more than 40,000 students and 10,000 Staff and Faculty daily across 25 dining venues. From the most popular quick service retail brands (i.e. Panda Express, Pollo Tropical, Moe’s Southwest Grill, Subway, and Starbucks), to 3 full scale dining halls, (Juniper, FCC at Argos and Champion’s Choice) a large variety of dining options are provided for USF students. In addition, operations also include in-house full service catering, 2 full service restaurants (Beef O’ Brady’s and Top of the Palms), 4 convenience stores, and service to 10,000 fans at USF’s Sun Dome.

USF Dining serves over 4 Million meals annually. This includes meal plan programs for over 5,000 student participants and 685 Faculty and Staff participants. Over 20,000 meals are served on a typical operating day on campus.

USF Dining’s goal is to provide the USF Community with convenient, safe and connective environments where customers eat, learn, connect, and relax. Many options are offered to suit specific needs, from International cuisine to Allergen friendly offerings. USF Dining strives to provide quality and a variety of options which are continually updated to satisfy the ever changing preferences of students, staff and faculty.

The USF Dining program is broad and robust. Daily events are hosted that reinforce our mission to: Deliver Experiences that Enrich and Nourish Lives. In doing so, the USF Community is enhanced and better connected. The meal offerings and brand selection is customer centric with an enhanced focus on health, wellness, and nutrition. USF Dining is consistently ranked in the Top 5 institutions nationwide for Most Vegan Friendly campus. The *Healthy for Life* program is hosted at USF, which provides students with resources such as a resident dietitian, nutritional information and tracking, healthy picks suggestions for each meal, and seasonal menus that focus on fresh in-season ingredients.

Out of 750 associates employed by USF Dining, 51% of are student employees. USF Dining aligns with the campus’ master plan and brings innovative dining spaces to the future of USF. Subject matter experts from around the country are brought in to develop and bring the latest dining trends to our dining program at USF. In-depth and thorough analysis is conducted to gain consumer insights into the campus community. Some of the studies include demographic mix, traffic flow studies, energy efficiency, water conservation, and competitive analysis. In the near future, the Andros re-development project will include a new dining facility and prove to be a cornerstone of innovation and growth for the USF Dining program.

USF Dining Sustainability Practices

USF has adopted Green Thread™. This program was launched by Aramark in 2008, and encompasses a range of environmental stewardship programs. Green Thread™ allows Aramark to efficiently customize an environmental strategy that educates and engages students and staff in environmental practices that help to improve their community.

Some specific initiatives that are a part of the Green Thread program:

- Re-Usable To-Go Containers in all Residential Dining Halls – over 100,000 reusable to-go box meals served per year average.
- Sustainable Purchasing – Partner with local providers for dairy, bread, produce, and seafood vendors. Through our main distributors, we use ‘local purchasing availability guides’ that highlight and incentivize local farm purchases.

- Recycle 100% of used cooking oil into biodiesel product conversion.
- Work closely with student organizations who have received the 'student green energy fund' to convert campus cooking oil to biodiesel products on-site. This biodiesel fuel will be used to supplement Hart Line and USF fleet demands.
- Discontinued the use of trays in order to conserve the water required for washing
- Green Cleaning policy - Daily Green cleaning products used, rated by Green Seal.
- Styrofoam Free Initiative – began a 2 year phased program to eliminate Styrofoam from USF Dining Operation by 2015.
- Composter/Pulper added to Fresh Food Company – creating ability to create usable compost at busiest dining hall on campus.
- Equipment Replacement Agenda – All new equipment purchases at USF are specified to be Energy Star Certified – reducing electric (and other) consumption
- Every Day is Earth Day information sessions and activities surrounding "Earth Month".
- Information sessions hosted by USF Dining on key focus areas surrounding waste, environmental impact, and sustainable dining habits.



BLDG	ROOM	DEPARTMENT NAME	TYPE	SQ FT
BSN		BOARS HEAD CAFÉ & JAVA CITY	TOTAL	1,765
BKS	EST.	BARNES & NOBLE	TOTAL	3,300
CPR		SUBWAY	TOTAL	1,573
DIN		JAMBA JUICE	TOTAL	568
DIN		CHAMPION'S CHOICE		10,276
ENB		COLL ENGINEERING EXPRESS	TOTAL	330
FSB		POLLO TROPICAL	TOTAL	2,577
JPH		SMOKEHOUSE	TOTAL	552
JPH		P. O. D.	TOTAL	485
JPH		STARBUCKS	TOTAL	711
JPH		JUNIPER DINING	TOTAL	17,329
LIB		STARBUCKS	TOTAL	1,638
MSC		FOOD COURT	TOTAL	16,411
MSC		EINSTEINS	TOTAL	2,633
MSC		JAMBA JUICE	TOTAL	589
MSC		BEEF O'BRADY'S	TOTAL	5,495
MSC		ON TOP OF THE PALMS	TOTAL	3,742
RAN		ANDROS DINING	TOTAL	20,406
RAN		P. O. D. AND BEN & JERRY'S	TOTAL	1,044
RAR		FRESH FOOD COMPANY	TOTAL	12,541
			TOTAL TAMPA	103,965
USF HEALTH				
MDH		CAMILLE'S SIDEWALK CAFÉ		3,554
NEC		TAREK'S CAFÉ		1,201
			TOTAL USF HEALTH	4,755
Provided by FPC			Total Campus	108,720

Links to Sustainability Tracking, Assessment & Rating System (STARS) report:

<https://stars.aashe.org/institutions/university-of-south-florida-fl/report/2014-01-14/>

See:

- Dining Services
 - [OP-6: Food and Beverage Purchasing](#)
 - Tier 2 Credits
 - [OP-T2-3: Trayless Dining](#)
 - [OP-T2-4: Vegan Dining](#)
 - [OP-T2-5: Trans-Fats](#)
 - [OP-T2-6: Guidelines for Franchisees](#)
 - [OP-T2-7: Pre-Consumer Food Waste Composting](#)
 - [OP-T2-8: PostConsumer Food Waste Composting](#)
 - [OP-T2-9: Food Donation](#)
 - [OP-T2-10: Recycled Content Napkins](#)
 - [OP-T2-11: Reusable Container Discounts](#)
 - [OP-T2-12: Reusable To-Go Containers](#)

Bookstore

The USF Bookstore is operated by Barnes & Noble College Booksellers, the industry leader in campus bookstores. With our focus on higher education and commitments to students, faculty, technology, and innovation, we promise to deliver unsurpassed service to the USF campus community and the next generation of educational content.

Whether renting or buying, new, used, or digital textbooks, the USF Bookstore offers the most purchasing options for students in the most convenient place at competitive prices. Through our cost-saving purchase options and our cash for books buyback program, for the 2013-2014 academic year, the USF Bookstore saved students over \$2.1 million dollars. In this same academic year, rental availability grew to 67% and digital textbook availability grew to 32%. The growth of these areas creates savings for USF Students.

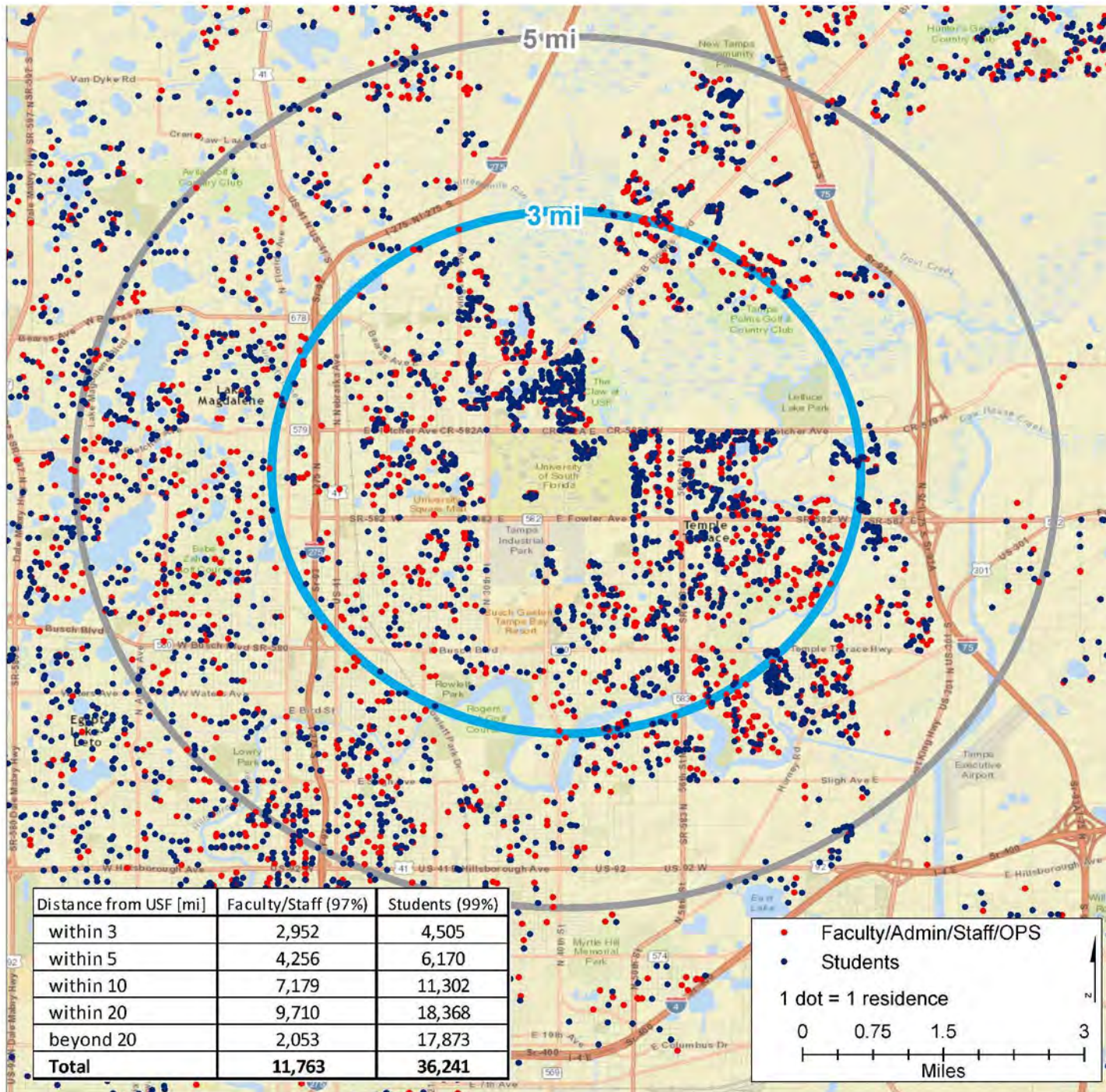
Additionally, during the back-to-school period, over 90% of the booksellers in the bookstore are student workers. USF Bookstore a leader on campus in both textbook affordability and on-campus employment – two areas critical student success at USF.

The USF Bookstore also strives to connect with faculty on-campus as well. Collecting information for more than 5,000 courses offered each semester isn't easy, but through our new, enhanced faculty resource, *Faculty Enlight*, faculty are able to easily research and adopt the books they need for their courses in one place. *Faculty Enlight* allows faculty to know upfront the estimated student price and if their text selection will be available for rent, or digitally. With direct, easy access to this information, faculty can choose texts for their courses that will help lower the cost for their students. Additionally, the site allows faculty to see and write reviews of textbooks, see what other institutions are using a particular book, find previous year's orders for a particular course and much more.

Barnes & Noble College is committed to USF, most recently illustrated by an extensive remodel of the entire bookstore. With our promise to deliver unsurpassed service, we completed the entire project while never closing the bookstore. The total gross square footage of the Bookstore building is 55,000 gsf. With the renovation, the café was relocated to the main level, which increased the seating capacity by more than 100, and now serves as a hub of student activity with the Marshall Student Center next door. In 2012, Barnes & Noble invested in new registers for the USF Bookstore, which cut our typical transaction time in half. This investment in technology helped reduce lines in the store year-round, but was particularly significant during the back-to-school period where the bookstore services approximately 5,000 customers a day who typically wait less than 10-minutes to checkout.

The USF Bookstore, with Barnes & Noble College, is committed to bringing the latest innovations to the USF campus community. With our recently enhanced research department, we are continually surveying our campuses' students, faculty, staff and administrators to bring USF what's next in campus retail.

- Student Residence
- Staff Residence



Element 6
Housing

Figure 6.1
Student and Staff
Off-Campus Residences

Date
12/03/2015



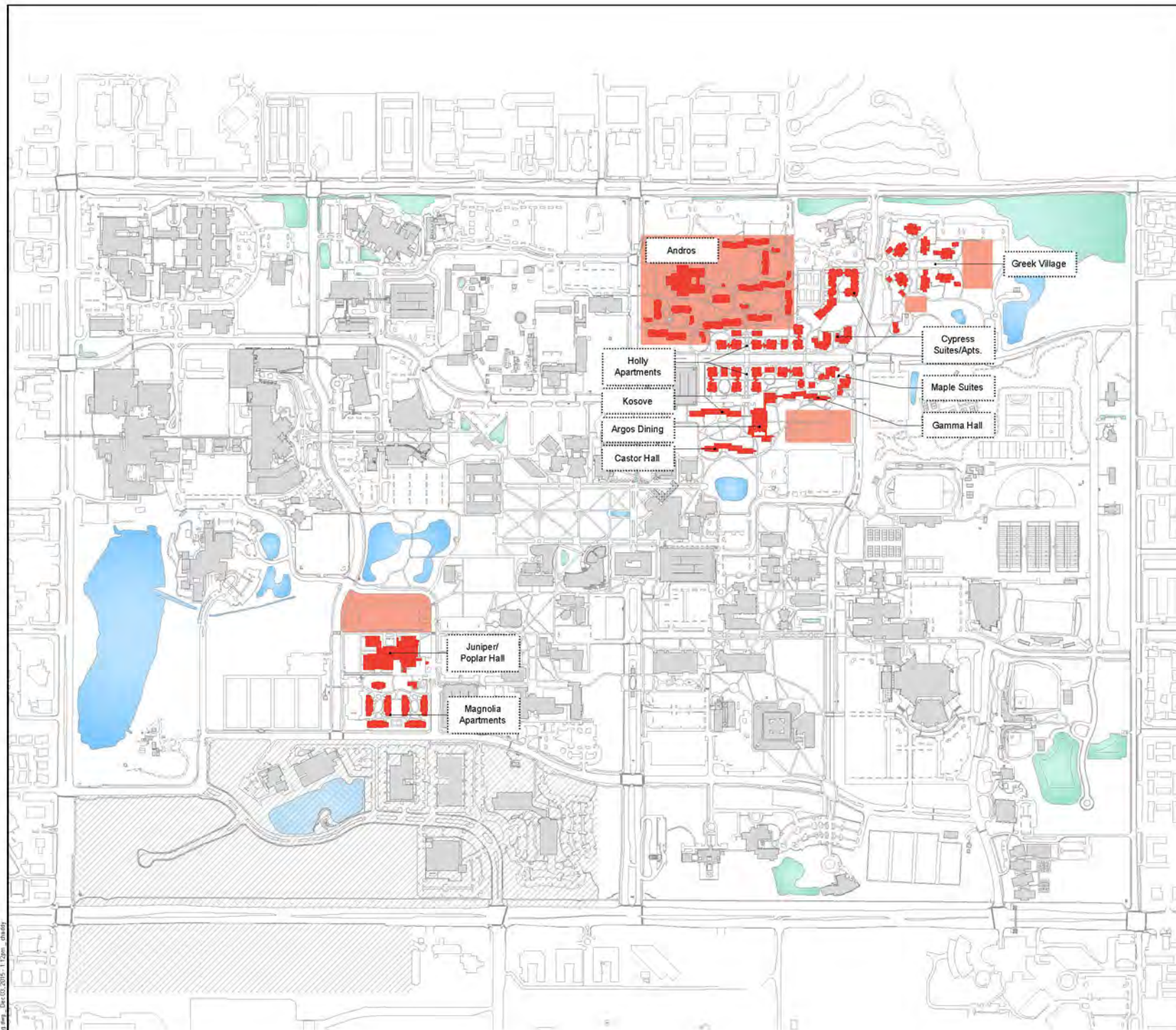
- Existing Housing
- Potential Housing Development Site

Area Not Included in Campus Master Plan

Element 6
Housing

Figure 6.2
Campus Housing

Date
12/03/2015



Element 7:

Infrastructure and Utilities

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Element 7 General Infrastructure

General Infrastructure

- 7.1 Stormwater Management
- 7.2 Potable Water
- 7.3 Sanitary Sewer
- 7.4 Solid Waste
- 7.5 Steam and Hot Water
- 7.6 Chilled Water
- 7.7 Electrical Power and Other Fuels
- 7.8 Communications

This element ensures the provision of adequate capacity for the general utilities infrastructure required to meet the future needs of the University. The General Infrastructure Element includes Stormwater Management, Potable Water, Sanitary Sewer, Solid Waste, Steam/Hot Water, Chilled Water, Electrical Power and Other Fuels, and Communications.

7.1 Stormwater Management

Stormwater management plays a key role in the overall management of water resources, and negating the negative impacts of development. With the continual straining of resources such as the availability of potable water, stormwater management not only mitigates environmental concerns it also controls flooding and enhances the replenishment of groundwater reserves that are essential to the long-term sustainability of the University. The planning, analysis, and design of stormwater management systems will need to meet the regulations set forth by the Southwest Florida Water Management District (SWFWMD). These regulations are set in place to ensure that minimum surface water quality, quantity and flood preventative objectives are achieved.

There are a number of best management practices (BMPs) to meet these stormwater standards. Traditional BMPs include wet detention and dry retention ponds. The new trend for BMPs is to minimize impacts from development by including Low Impact Development (LID) techniques. The overall goal of LID techniques is to minimize development impacts by mimicking pre-development hydrology, and promoting the infiltration of storm water to recharge the surficial aquifer. The inclusion of three overall approaches, BMPs, will be evaluated for use: (1) supplement water for irrigation by capturing and reusing storm water); (2) enhancements to further improve water quality; (3) and mimicking “pre-development” hydrology.

- (a) **Inventory and assess all public and private facilities and natural features which provide stormwater management for the campus, including natural and man-made stormwater systems.**

1. Facility Capacity Analysis by geographic service area, indicating capacity surpluses and deficiencies.

Figure 7.1-1 *Stormwater Management Plan* shows the existing campus, and the key components that comprise the stormwater management plan. USF Tampa Campus is divided north-south about its center into two major drainage basins, East and West. The stormwater systems in each consists of a network of drainage pipes, culverts, swales and ditches that convey stormwater runoff to the treatment ponds and discharge points of each basin. Water within the East Basin works its way into the wetland system in the northeast quadrant of campus and eventually north of Fletcher Ave. into the Cypress Creek water shed of the Hillsborough River. Water within the West Basin travels to Lake Behnke located along the western edge of the campus. Controlled overflow from this system then discharges westward into Hillsborough County’s Duck Pond system that eventually makes its way to the lower Hillsborough River.

Under the current Master Environmental Resource Permit (ERP) with SWFWMD, the University’s Stormwater Management Plan tracks the treatment and attenuation capacity of each basin’s stormwater system in terms of developable area (impervious coverages). A review of the capacities at the time of this Master Plan update reveals that there is approx. 29 acres of impervious development available for the West Basin and 19.5 acres of impervious development available in the East Basin. These capacities are more than adequate to permit the construction activities proposed in this next 10 yr. planning period.

2. Analyze the general performance of existing stormwater management facilities, evaluating current level of service, conditions, and impact of facility upon adjacent natural resources.

Localized flooding does occur on campus. In a previous stormwater master plan report prepared by TEK Science and Engineering, the performance of the stormwater drainage network was analyzed. Utilizing AdicPR stormwater modeling, the report confirmed that minor flooding in certain localized areas can be expected due to inlet and pipe capacity issues. Figure 7.2-2 *Stormwater Problem Areas*, reflects the findings of this analysis.

Such areas include south of Fletcher Avenue to the north and east of Andros Center which sees flooding during seasonal heavy storm events. Natural buildup of vegetative growth and accumulated debris at the inlets of pipe culverts within the Fletcher Avenue right-of-way, restrictions to stormwater flow in Campus culverts in that area, and the restrictions of a County owned control structure at Maple Drive all contribute to this condition. With proper pro-active maintenance, USF grounds crews have been able to alleviate the flooding within this and other areas of the campus. Funding requests to help address stormwater conveyance improvements and flood control ponds about the campus have been included in the Capital Improvements Listings.

3. Proportional capacity of shared facilities between the University and local governments that are required to meet existing university needs, including capacity allocation.

In the southwest of the West Drainage Basin, Lake Behnke’s discharge control structure serves to hold back the needed collection volume within the lake to help prevent downstream flooding of City, County and private properties. A set of culverts, (three - 14”x23”) connected to the control structure allow for downstream discharge into the City/County Duck Pond stormwater system.

In a cooperative interest, the City of Tampa and Hillsborough County requested the University to modify its lake’s control structure to provide more storage and delay the peak discharge into the City/County receiving stormwater system. In exchange, the City lifted their 100year pre-post storage criteria on the University’s West Basin discharge. Now, discharge is limited by the 25year/24hour criteria. This added considerable capacity to the University’s West Basin’s developable area credit account. The City’s criteria only apply to the Campus’ West Basin.

The East Basin discharge is limited by the SWFWMD’s criteria which is the same 25 year/24 hour criteria mentioned above with modification for Impaired Water Body Rules as applicable to the Hillsborough River Basin. Under these permit criteria, the East Basin stormwater management system has enough buildable area capacity to meet the proposed 10 yr. Master Plan.

4. General performance of natural stormwater management and hydrologic features, showing these features on a map.

USF-Tampa Campus has a distinctive component to its stormwater management system. As identified in Figure 7.1-3, the campus has defined a greenway connecting the northeast wetlands to the southwest Lake Behnke. Within this greenway, the proposed Master Plan limits construction, parking areas are to be removed, and stormwater collection ponds are to be interconnected and utilized as outdoor environmental and collegiate enhancements. This series of ponds and swales for the collection and treatment of runoff referred to as a “treatment train” is one of the BMPs utilized to improved water quality prior to discharging from the University and entering into downstream receiving systems and wetland habitat.

It should be noted that organizations in favor of low-impact development report estimates that a single tree removes 800 gallons of water from a traditional stormwater collection system annually. With a significant

emphasis on campus-wide tree planting initiatives, a noteworthy amount of rainfall will not make it to the ground and become a source of flooding and pollutant latent run-off.

(b) Problems and opportunities for stormwater management facility expansion or replacement to meet the projected needs of the university.

As campus populations increase, buildings such as dormitories, classroom facilities, and auxiliary service facilities will be needed (See Element 4, *Future Land Use*, and Element 6, *Housing*). Increased stormwater regulations can be expected to increase the efficiency requirements of traditional wet retention/detention ponds, thereby requiring more traditional pond area for stormwater treatment. As a counter measure where needed, underground infiltration systems can be utilized in high-density low water table areas of campus because of their effective treatment of stormwater. Generally, underground stormwater collection and infiltration systems require less space than traditional retention/detention ponds.

Currently as proposed in the Master Plan Land Use Element, expansion of the stormwater management system is to occur within the designated Green Way. Removal of surface parking (landholdings for other future uses) within this area will provide the space as needed to expand or relocate the stormwater management facilities.

Another measure to reduce the need to expand the stormwater management facilities is that USF-Tampa requires all campus buildings to be certified LEED Silver under the U.S. Green Building Council’s (USGBC) designation for Leadership in Energy and Environmental Design. Stormwater reuse is a key element within LEED. Rather than a new building contributing to the added total run-off, future buildings will harvest and reuse the stormwater from rainfall events.

(c) Existing regulations and programs which govern land use and development of natural drainage features, including an analysis of the strengths and deficiencies of those programs and regulations in maintaining the function of stormwater management features.

As mentioned above, the campus falls under the existing rules set forth by the SWFWMD. These rules focus on standards for water quality and water quantity. However, it should be noted that the stormwater rules are currently being updated by the Florida Department of Environmental Protection (FDEP). The new rules will provide more stringent standards for water quality and are anticipated to be adopted by the State of Florida in the near future. The impaired water body rules have already been implemented. Specifically, these new rules will address the reduction of nutrient discharge to receiving waters, the addition of new LID BMPs, and the unification of all of the Water Management Districts methods to calculate and address water quality. The FDEP has prepared a Draft Rule and Draft Applicant’s Handbook which provide the framework for the new standards and approaches for water quality. The draft information can be found at: <http://www.dep.state.fl.us/water/wetlands/erp/rules/stormwater/index.htm>

Internal to the USF-Tampa Campus, there exists a single known location where existing regulations govern/prevent, the development of drainage features. Within the region of the H. Lee Moffitt Cancer Center, southeast of the above-ground fuel storage tank, there was an identified petroleum spill. Proper protocols were followed for identifying and remediating the spill. November of 2008, Hillsborough County Environmental Protection Commission accepted a proposal for no further *action*, with controls, for this petroleum spill area. The report and corresponding legal description of the spill location are included in Appendix E, [Resolution of Petroleum Discharge at the H. Lee Moffitt Cancer Center](#).

The following restrictions apply to this “restricted area”:

There shall be no use of groundwater;

There shall be no drilling for water nor shall any wells be installed other than monitoring wells pre-approved by the Florida Department of Environmental Protection Division of Waste Management;

There shall be no stormwater swales, stormwater detention or retention facilities or stormwater ditches; and

For any dewatering activities, a plan must be in place to address and ensure the appropriate handling, treatment, and disposal of any extracted groundwater that may be contaminated.

Sources:

The following is a list of sources reviewed for information to support the General Infrastructure and Utilities Element – Stormwater Management data collection and analysis.

2015 Evaluation and Appraisal Report update

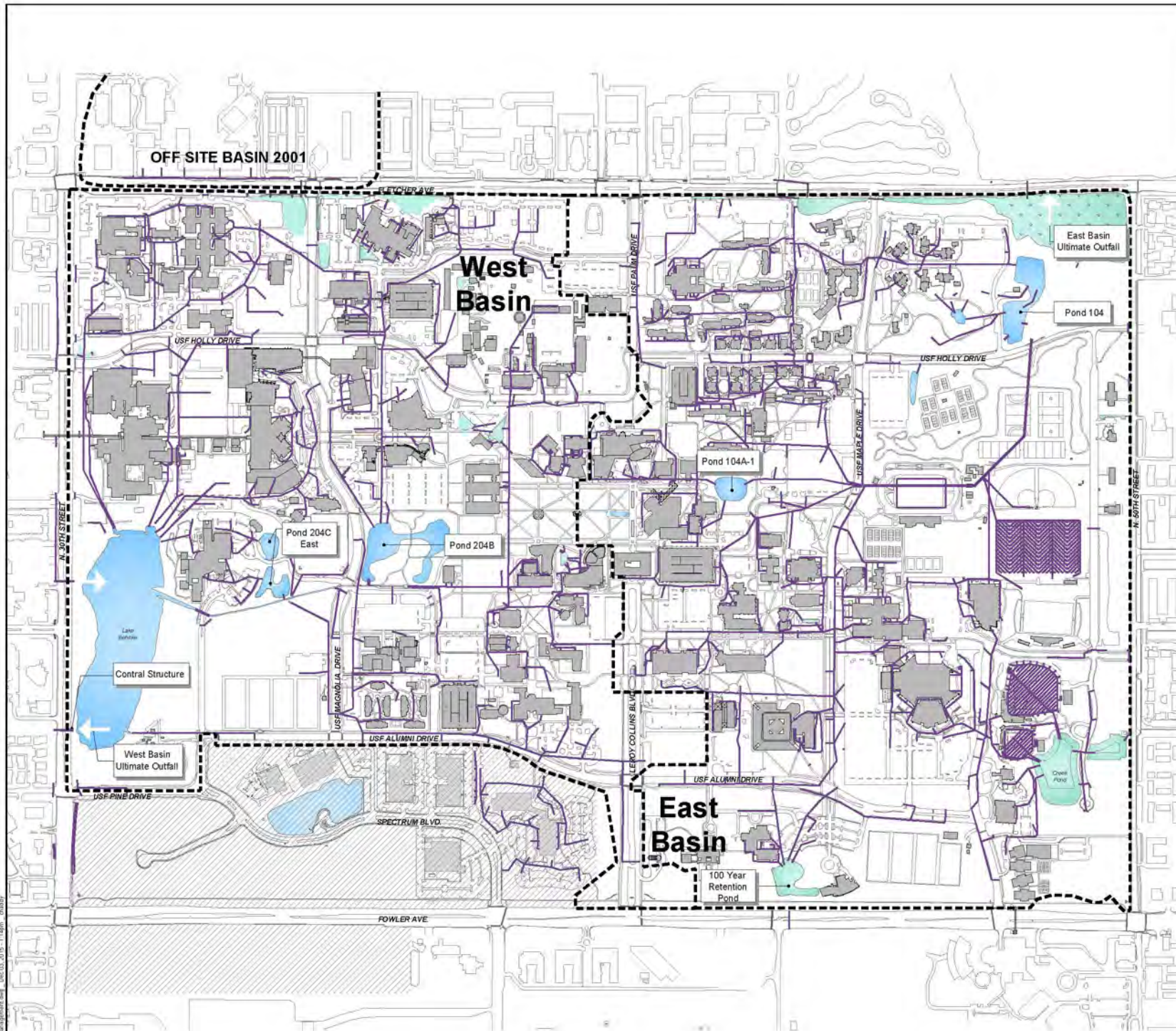
FDEP website, (www.dep.state.fl.us/water/wetlands/erp/rules/stormwater/index.htm)

SWFWMD regulations


Stormwater Basin Credits, USF FPC (VDW), July/2015

Master Plan Stormwater Report prepared by TEK Science and Engineering

USF-Tampa FPC utility maps, USF FPC (AL)



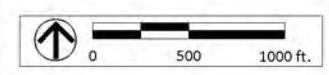
-  Stormwater Pipes
-  Stormwater Collection Areas
-  Wetland Area
-  Stormbasin

 Area Not Included in Campus Master Plan

Element 7
Infrastructure

Figure 7.1-1
Stormwater Management Plan

Date
12/03/2015



- 100 Year/24 Hour
- ◆ 25 Year/24 Hour
- ▲ 3 Year/24 Hour
- Possible Structure Flooding
- Stormwater Pipes
- ▨ Area Not Included in Campus Master Plan

Notes

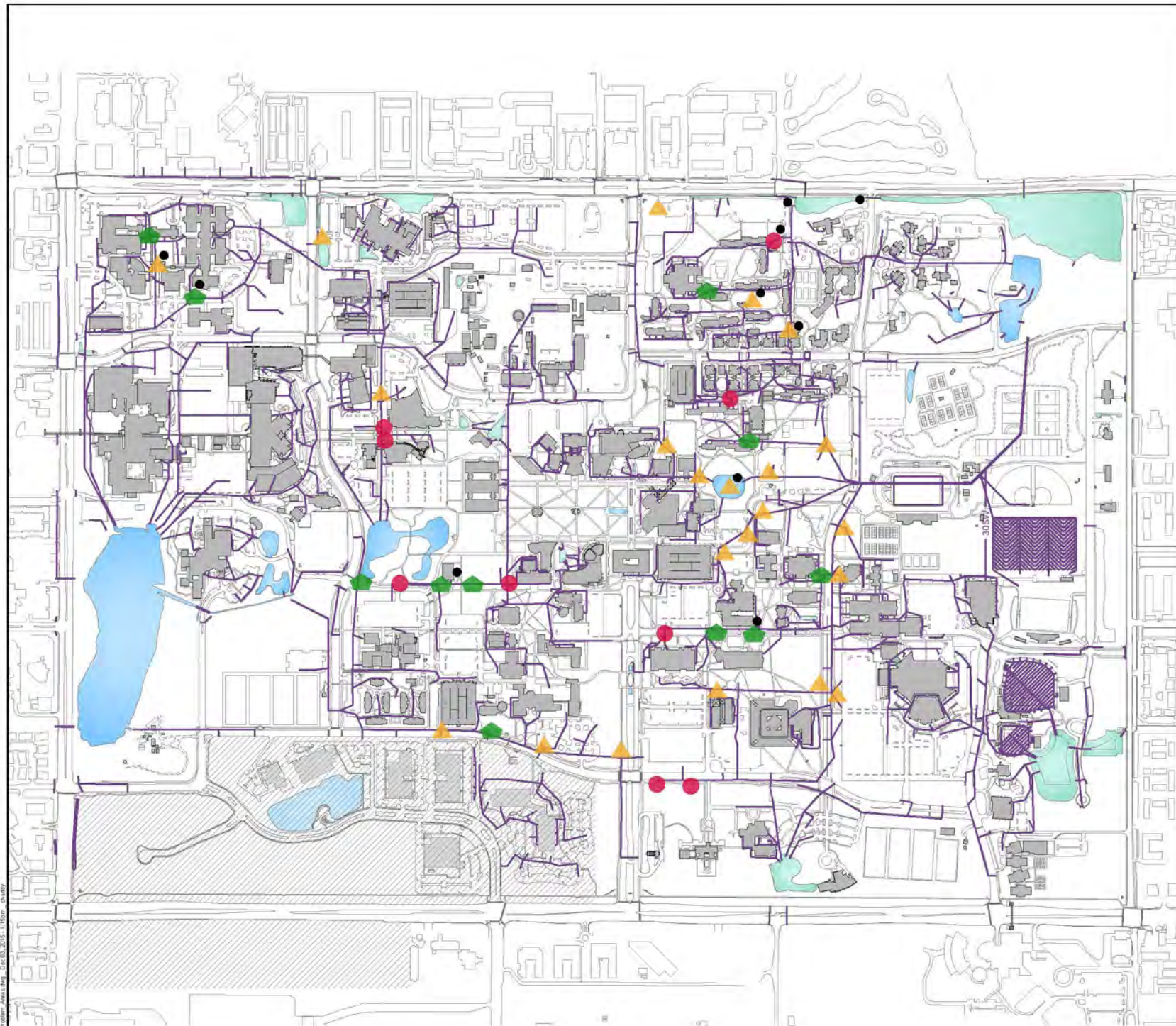
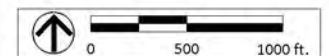
Possible Structure Flooding



Node	Bldg.
104A	0024 RBC
242	0050 HAC
256	0063 RQF
286	0060 RMU
380	0066 EDU
63	0091 LSA
642	0129 MHA

Element 7
Infrastructure

Figure 7.1-2
Stormwater Problem Areas


Date
12/03/2015



-  Permeable Area
-  Greenway

Notes

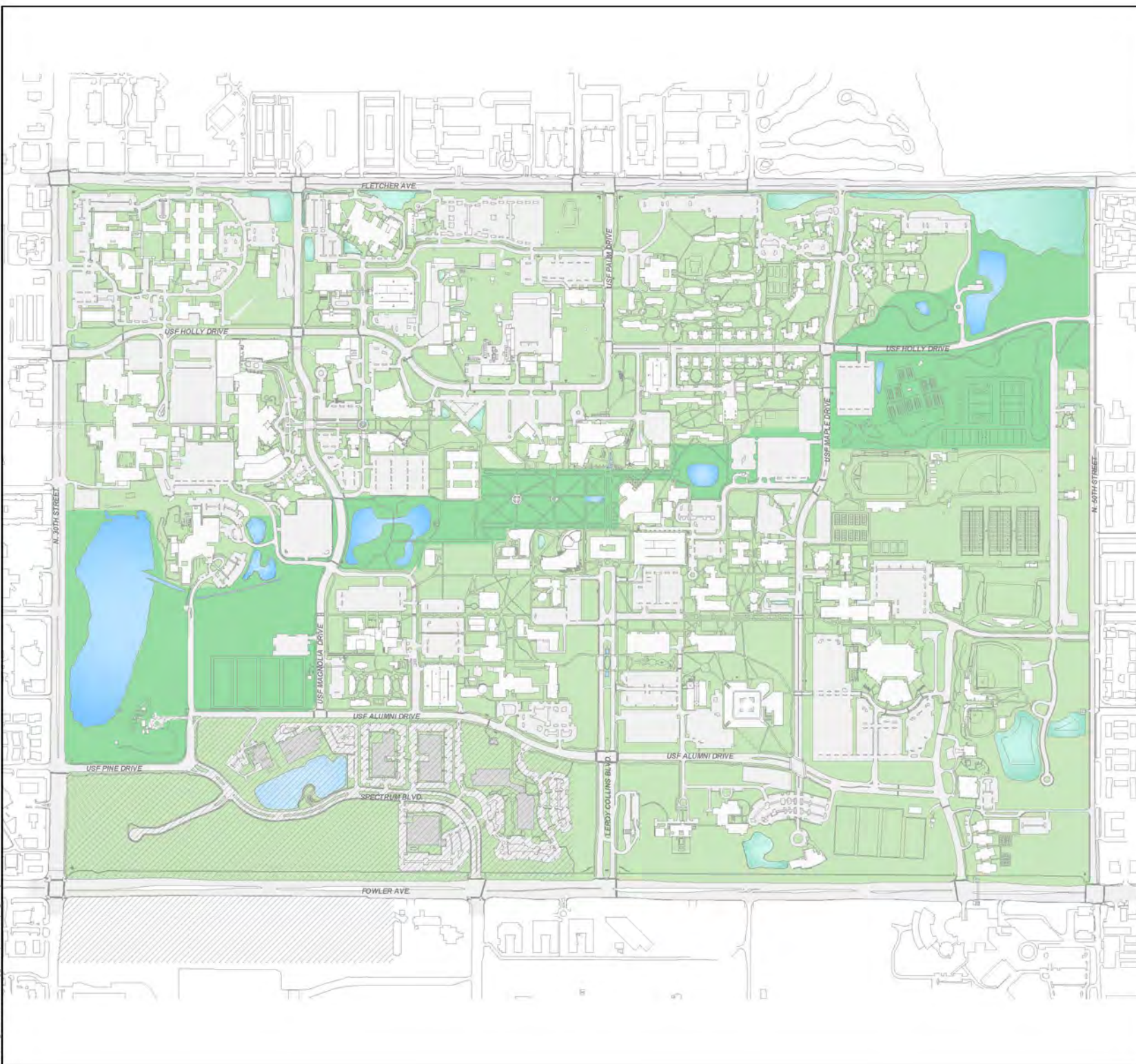
The USF Campus contains approximately 60% pervious surface, to 40% impervious surface.

-  Area Not Included in Campus Master Plan

Element 7
General Infrastructure

Figure 7.1-3
Permeable Surface

Date
12/03/2015



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7.2 Potable Water

Minimizing potable water consumption is critical for long-term sustainable growth on campus. State and federal regulations continue to grow more restrictive regarding the use of wells to withdraw water for open space irrigation. Likewise, obtaining permits to increase the amount of groundwater withdrawal will become more restrictive.

(a) Inventory and assess all public and private facilities (including main distribution lines) which provide potable water to the campus. Assessment should include:

1. Review of Facility Capacity by geographic service area, indicating capacity surpluses and deficiencies.

The potable water infrastructure adequately supplies the campus with a safe, reliable drinking and fire protection water supply. The Campus has its own well system which is permitted through state agencies to supply water for drinking, fire protection, chilled and hot water generation and irrigation throughout the academic core. The most current campus potable water system map is shown as Figure 7.2-1, *Potable Water Plan*. The campus irrigation system is shown in Figure 7.2-2, *Irrigation Plan*. For the Campus core potable and fire protection needs, Facilities maintains its own water tower to ensure adequate water pressure throughout a separate distribution system. These pressures meet fire protection and safe drinking water standards (F.A.C. Rules 62-4.540 and 62-555). The City of Tampa provides potable/fire water to the perimeter areas of campus for the buildings within the medical center, northwest FMHI area, Greek Housing in the northeast of campus, the religious organizations along 50th Street, and Moffitt Hospital. The City of Tampa does not provide irrigation or mechanical water supply to these areas other than to the Moffitt Research Facility.

As part of the ongoing efforts by USF Facilities staff to maintain compliance with the Water Management District, USF FPC renewed the University’s Water Use Permit, filing in 2010. The SWFWMD issued the new permit for the 10 year period of 2011 to 2021. As a baseline bench mark, the previous 3-year avg. water use of 1,786,419 GPD was determined. Building on this with the anticipated growth during the next 10-year permit cycle, an average day allotment of 2,364,300 GPD was justified and permitted.

2. General performance of existing potable water facilities, evaluating current level of service, conditions, and impact of facility upon adjacent natural resources.

The existing main campus potable and fire protection water supply consists of five Floridian Aquifer withdrawal wells (wells 5, 7, 17, 23, 29) that supplies water to the water tower serving the Academic Core, Central and SE Plants. The capacity of this system is permitted with the FDEP/HCHD as 3.2 MGD. With the largest well out of service, the system still has the capacity to exceed a recorded peak day demand of 1.84 MGD.

Well 30 supplies water exclusively to the NW Chiller Plant which serves the cooling needs for the Medical Center and the NW FMHI complex. This well currently meets the load for this area. As the load may increase in the future, the plant is set up such that it can receive augmented water from wells 19 and 21 as well as the potable system. Well 20 supplies water to the SE Chiller Plant, and water for irrigation. This well currently meets the demand of its area.

The existing water distribution system is planned for expansion to cover the northwest region of campus, formerly known as the FMHI complex. This area is currently serviced by the City of Tampa. Low water main pressures have required USF-Tampa to initiate incorporation of this region into its revised Water Use Permit coverage and severing its service connection with the City. This change is acknowledged in the Development Agreement USF has with the City of Tampa and is provided for within the USF-Tampa 2011 Water Use Permit with SWFWMD. Other facilities served by the City are either multi-level booster pumps or single story for which City pressures are adequate.

As part of the Water Use Permitting process with SWFWMD, regional impact from pumpage of the University’s wells in conjunction with other regional withdrawals was analyzed and reviewed with the permitting staff. The District’s DWRM model enhanced with the FTMR focused refinement was used to assess the impacts on the

Surficial Aquifer, Floridian Aquifer and Hillsborough River. It was shown that the University’s requested permitted amounts had a negligible effect.

3. Proportional capacity of shared facilities between the University and local governments that are required to meet existing university needs, including capacity allocation.

Currently, the USF Tampa Campus utilizes groundwater for the majority of its potable and irrigation needs, with the City of Tampa only supplying water to the buildings within the medical center, northwest FMHI area, Greek Housing, Religious Organizations, and Moffitt Hospital. As previously mentioned, with the removal of the northwest FMHI complex from the City’s water system and placing it on the University’s, capacity of City of Tampa’s regional system will be freed up to better serve the other University facilities and neighboring community establishments.

4. Underground hydrology of the campus, including its potential as a potable water source.

USF Tampa Campus utilizes the Floridian Groundwater Aquifer as its source for potable water, fire protection and irrigation needs. Overall, the north central region of the campus has the best water supply meaning the water has the lowest hardness and requires the least amount of chemical treatment. Wells from this region serve as the main source for potable water on campus. The southern and southeastern regions of campus have been found to contain very hard water with sulfur content and have been deemed undesirable for a potable groundwater source. Research of other areas of campus is planned for locating an alternative backup well source for potable and fire protection needs.

(b) Problems and opportunities for potable water facility expansion or replacement to meet the projected needs of the University.

Currently, there are no expected problems with meeting the needs of the campus, from the perspective of system expansion. Within close proximity to the campus water tower, the well-field in the central north portion of campus serves as the main source for potable and fire protection water. By designating this area as a No-Build Zone to protect it as a well-field, a source for meeting the largest need for water can be most economically met. USF FPC intends to add additional wells within a portion of campus greenway to reduce the overall groundwater withdrawal at each existing well, thereby extending the lifetime of each as well as provide redundant capability to meet campus needs.

(c) Existing regulations and programs which govern land use to protect potable water supply and delivery facilities.

The Department of Environmental Protection has regulations in place to safeguard public drinking water supply. The following table comes from DEP Rule Chapter 62-532.

Table 7.2-1 Drinking Water Supply Wells Serving Public Water Systems

Rule	Installation	Setback (in feet)
Reuse of Reclaimed Water and Land Application 62-610.421(3)	Slow Rate Land Application Restricted Public Access	500 (a)
62-610.521(2)	Rapid Rate Land Application	500 (b)
62-610.621(2)	Overland Flow Systems	500
62-610.621(4)	Transmission Facilities Conveying Reclaimed Water to Restricted Public Access Slow Rate Land Application Systems, Rapid Rate Land Application System, or Overland Flow Systems	100
62-610.471(1)	Public Access, Residential Irrigation, or Edible Crop Slow-rate Land Application Systems	75
62-610.471(3)	Transmission Facilities Conveying Reclaimed Water to Public Access, Residential Irrigation, or Edible Crop Slow-rate Land Application Systems	75
Domestic Wastewater Residuals 62-640.700(4) (b)	Domestic Wastewater Residuals Land Application Areas	500
Phosphogypsum Management 62-673.340(2) (d)	Phosphogypsum Stack Systems	500 (c)
Petroleum Storage Systems 62-761.500(1) (a)	Aboveground or Underground Storage Tanks	100
Solid Waste Management Facilities 62-701.300(2) (b)	Solid Waste Disposal Facilities	500
62-701.300(12) (c)	Yard Trash Disposal	200
62-701.300(13)	Storage or Treatment of Solid Waste in Tanks	100
Permitting and Construction of Public Water Systems 64E-8.002(2)(b)2	Onsite Sewage Disposal Systems	200 (d), 100 (e)
Public Water Systems 62.555.312 (4)	Sanitary Hazard as defined in 62-550 for drinking water supply wells serving public water systems	100
Feedlot and Dairy Wastewater Treatment and Management Requirements 62-670.500(6) (a)	Dairy Farm Waste- Unlined Storage and Treatment, or High Intensity Areas	300
62-670.500(6) (b)	Dairy Farm Waste- Land Application	200

(d) Existing and future uses and opportunities for the use of reclaimed water on the campus and identify the source and entity having operational responsibility for the provision of reclaimed water on or near campus.

As identified, the campus wells that have a reoccurring overuse of their water allotment are some of the irrigation wells. As part of the future plans to reduce groundwater withdrawal for non-potable uses, the opportunity to utilize reuse and reclaimed water is desirable.

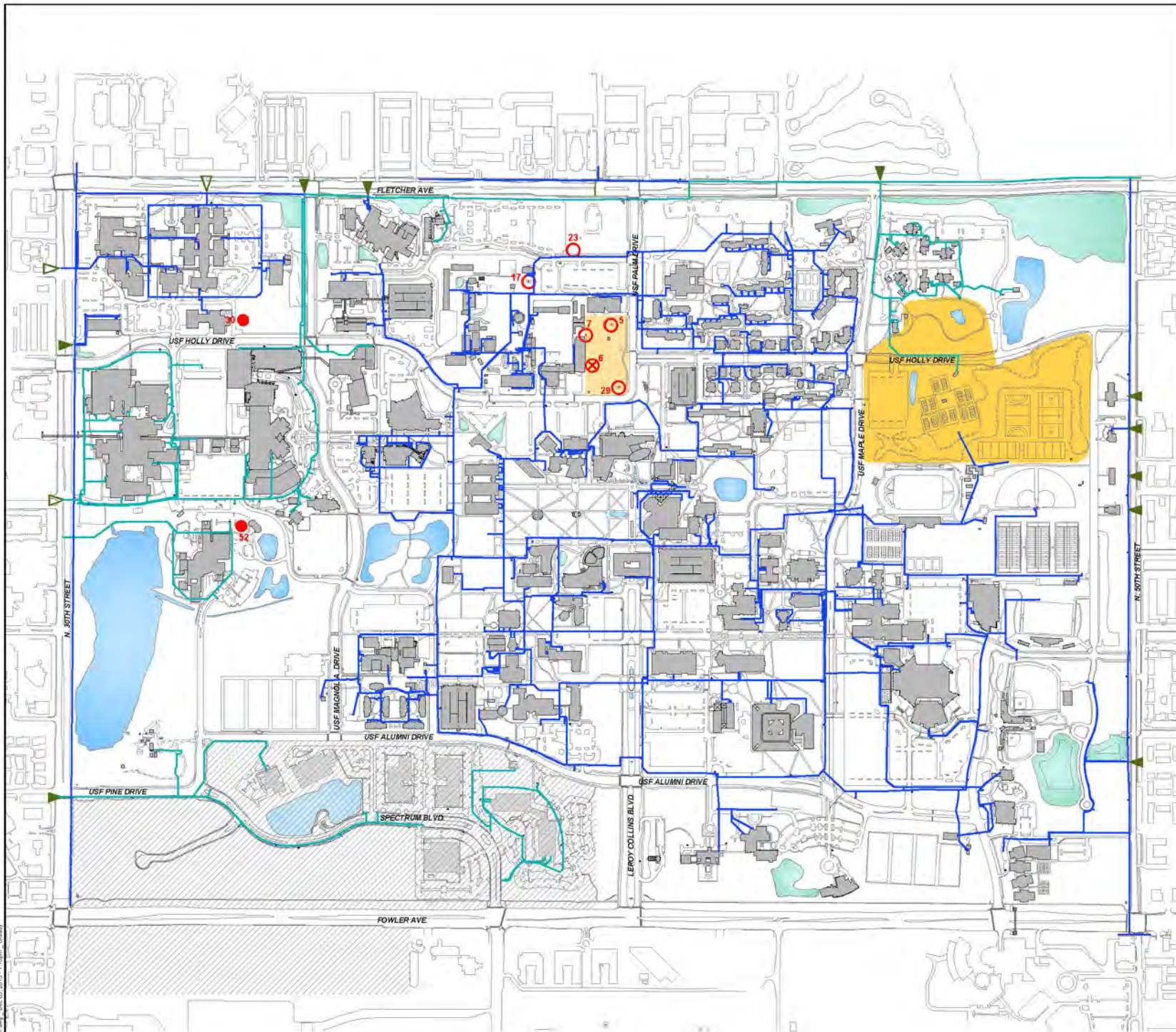
Opportunities for creating a reuse supply on campus exist. USF-Tampa has already begun utilizing reuse cisterns for the collection of condensate and stormwater to offset current potable and non-potable demand. These cisterns are operated and maintained by the Campus Grounds Department who oversees the operation and maintenance of the irrigation systems. Currently, the University has rooftop collection for the Patel Center, condensate collection at the Marshall Student Center, and both rooftop and condensate collection at the Library.

The USF-Tampa Campus falls within the extents of the City of Tampa 180 overlay district. Therefore, the City of Tampa currently holds the rights to provide reclaimed water to the campus. However, the City of Tampa’s reclaimed water distribution lines remain too far away to feasibly extend reclaimed water to the USF-Tampa Campus.

Sources:

The following is a list of sources reviewed for information to support the General Infrastructure and Utilities Element – Potable Water data collection and analysis.

2015 Evaluation and Appraisal Report update
FDEP website, (www.dep.state.fl.us/water/wetlands/erp/rules/stormwater/index.htm)
Irrigation_Areas_Campus, USF FPC 2015
SWFWMD regulations
Status of Update of Infrastructure Plans xlsx, USF FPC
USF Campus Development Agreement, April 2007
USF-Tampa FPC utility maps, USF FPC
USF MP well-locations and map, USF FPC
Water Consumption Data for 2014, USF Physical Plant
2010 Water Use Permit Renewal Application, Permit No. 20001960.016
2011-2021 Issued Water Use Permit, No. 20001960.017



- City Supplied Water Mains
- Potable Water Mains
- Water Well
- Abandoned Water Well
- Irrigation Well
- Existing Wellfield
- Future Wellfield Site
- City of Tampa Water Connection
- City Backup Service
- Area Not Included in Campus Master Plan

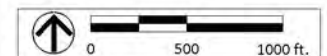
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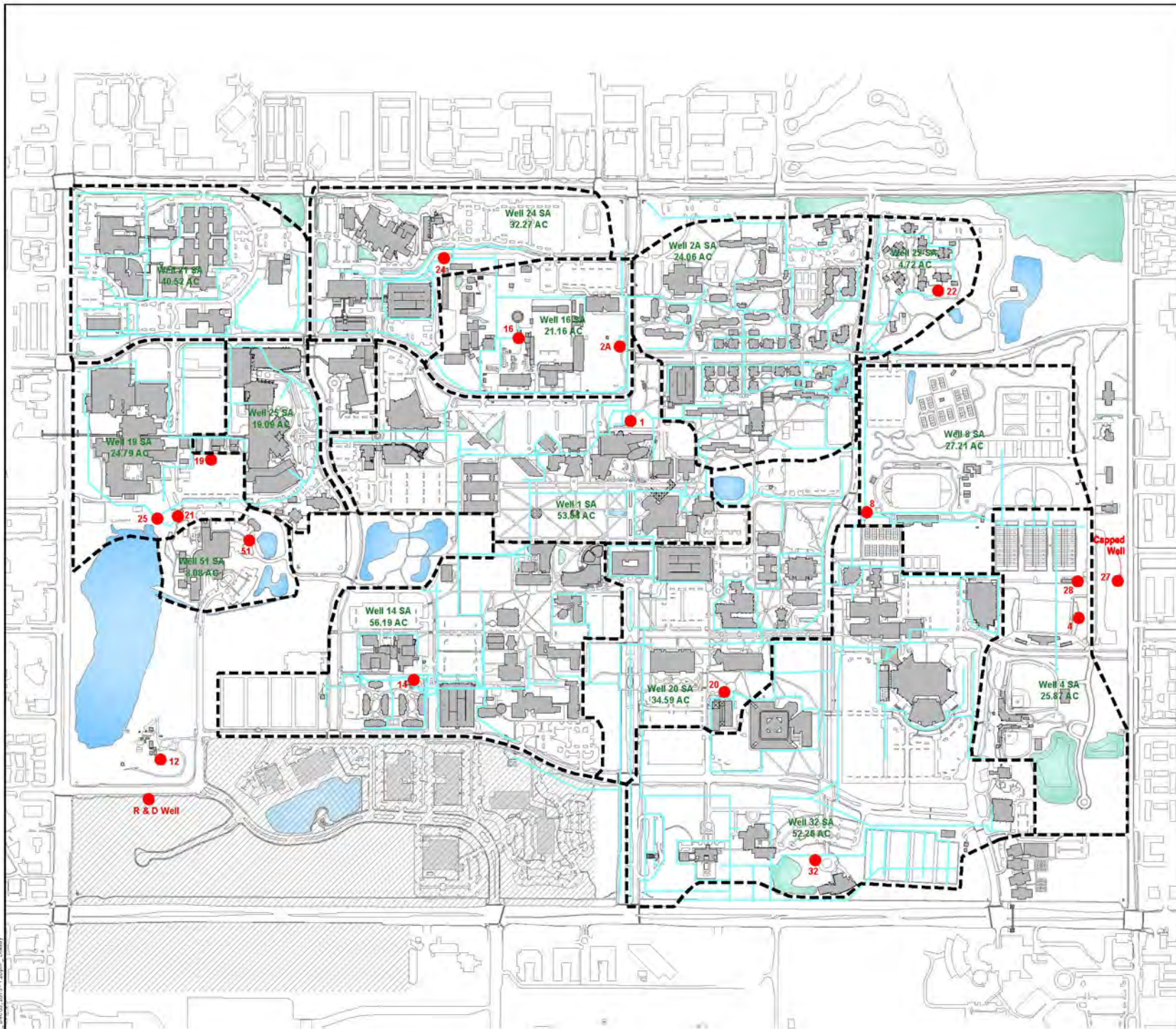
Well numbers 05, 07, 17, 23, 29, 52 also supply water to the mechanical water system.

Element 7
General Infrastructure

Figure 7.2-1
Potable Water Plan

Date
12/03/2015





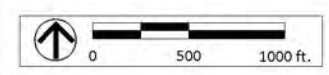
- Irrigation Mains
- Irrigation Well
- Well Irrigation Zones
- Well # SA Well's Service Area

Area Not Included in Campus Master Plan

Element 7
General Infrastructure

Figure 7.2-2
Irrigation Plan

Date
12/03/2015



7.3 Sanitary Sewer

The wastewater collection and transmission systems on the University grounds consists of approximately 5.0 miles of gravity sewers, 3.5 miles of force mains and (18) pump stations. Of the (18) pump stations, (14) are maintained by USF, (3) by Moffitt and (1) by Hillsborough County Schools. Based on topographical constraints and other factors, the collection systems are divided into 14 discrete service areas. The extent of these and the collection/transmission systems are shown in Figure 7.3-1 *Sanitary Sewer Plan*. The wastewater collected by this system is transmitted to the City of Tampa’s sanitary sewer systems along Bruce B. Downs Blvd., Fletcher Avenue and 50th Street. The City’s collection system then conveys this wastewater flow to its Howard F. Curren (Hookers Point) Advanced Wastewater Treatment Plant located at Maritime Blvd. for treatment.

(a) Inventory and assess all public and private facilities (including main collection lines) which provide sanitary sewer services to the campus. Assessment should include:

1. Facility Capacity Analysis by geographic service area, indicating capacity surpluses and deficiencies.
 Currently, all sanitary waste generated on campus is pumped off-site to the Howard F. Curren Advanced Wastewater Treatment Plant, operated by the City of Tampa. This treatment plant has the capacity to treat 96 million gallons per day (MGD). Within this total capacity, the standing 2007 USF Tampa Campus Development Agreement with the City allocates 3.63 MGD to the University. The total campus wastewater flow for 2014 based on City of Tampa sewer and water bills averaged 715,000 GPD. With a projected 10 yr. increase of 154,000 GPD, a total of 869,000 GPD is well within the City’s allotment and capability to provide service for the present and future planned growth.

2. General performance of existing sanitary sewer facilities, evaluating current level of service, conditions, and impact of facility upon adjacent natural resources.
 In 2007, TEK Science and Engineering, Inc. submitted a Wastewater Master Plan to USF FPC. The study delineates the 14 service areas within the Tampa Campus, as seen in Figure 7.3. Excluded are the Shriners’ hospital and the Alzheimer’s Center. Both are directly metered to the City of Tampa, and are not maintained by USF.

Conveyance Off Campus:

There are two service areas, 12 and 13, that utilize gravity sewer mains to discharge sewage to the City of Tampa. Capacity or level of service issues neither exist nor are expected with these two systems. The remaining service areas use lift stations/pump stations to connect to the City of Tampa wastewater collection system. An updated review of Table 7.3-1 (taken from the previous master planning TEK report), summarizes the adequacy of the pumping system serving each of the other service areas. Based upon a calculated 10yr. wastewater flow increase of 21.5% over 2014 data, the table identifies two the pump stations as not having the capacity to serve the anticipated growth. These are the stations for service areas SA 2 and SA 8 (the eastern academic core and Medical Center respectively).

Table 7.3-1 Adequacy of Existing Service Area Systems for Future Flow Capacity

Service Area	Adequate	Service Area	Adequate
SA 1	YES	SA 8	NO
SA 2	NO	SA 9	YES
SA 3	YES	SA 10	YES
SA 4	YES	SA 11	YES
SA 5	YES	SA 12	YES
SA 6	YES	SA 13	YES
SA 7	YES		

Source: Re-review of the USF Tampa Campus Wastewater Master Plan, Feb. 2007, TEK Science and Engineering, Inc. in conjunction with staff review of 2014 flow data disaggregated among the service areas and existing and future square footages.

Collection System:

An SSES study was performed by Hartman & Assoc. in 1997 that assessed the performance and condition of the existing main campus sanitary gravity sewer lines. It identified pipe sections within the system that were reaching capacity. Based upon these report findings, sanitary utility adjustments were put into action per the 2005 Master Plan. The objective was to alleviate, through re-direction, a portion of the sanitary sewer effluent directly to the City of Tampa’s sewage force-main systems. Previously, lift stations 2 and 3 discharged to lift station 1. This configuration, commonly called “daisy-chaining,” placed a large liability on lift station 1 and its service area’s collection system. By re-routing lift stations 2 and 3 north to Fletcher Avenue per the 2005 Mater Plan, the burden on Service Area 1’s lift station and collection system was significantly lessened. A subsequent review of the previously identified pipe sections with capacity issues were found to no longer be problematic in handling the current and 10yr. projected flows.

3. Proportional capacity of shared facilities between the University and local governments that are required to meet existing University needs, including capacity allocation.

Hooker Point Advanced Wastewater Treatment Plant operates and maintains the City of Tampa's 96 million gallon advanced wastewater treatment plant and 211 pumping stations. Of that total, 3.63 MGD are allocated for the USF-Tampa Campus, which equates to 2524GPM.

Hooker Point Advanced Wastewater Treatment Plant’s level of service is reported in Table 7.3-2, Maximum Concentrations for Discharged Treated Water. The values reported in the table equate to the plant’s daily processing limit of 4,003lbs of Biochemical Oxygen Demand (BOD), 4,003 pounds of SS, and 2,402 pounds of Nitrogen (N). Based on the University’s service allotment, the maximum contributing portion from USF Tampa Campus would be approximately 3.8%. When considering the University’s current and estimated Master Plan flows, the estimated actual contribution would be approximately 1%.

Table 7.3-2 Maximum Concentration for Discharged Treated Water

Biochemical Oxygen Demand (BOD)	0.000042 pounds/gallon/day
Suspended Solid (SS)	0.000042 pounds/gallon/day
Total Nitrogen (N)	0.000025 pounds/gallon/day

Source: 2007 Campus Development Agreement

(b) Problems and opportunities for sanitary sewer facility expansion or replacement to meet projected needs of the University.

With the development of the 2015 Campus Master Plan Update, capacity analyses were performed for specific portions of the existing gravity mains and the receiving lift stations. As shown in Table 7.3-1, the existing campus lift stations have adequate capacity for an increase in future sewage demand, except for Service Areas 2 and 8. Analysis of Service Area 2 shows its pump station has capacity for the current flows it is receiving. However, depending on the direction of the proposed Andros Housing redevelopment initiative, its rated capacity could be exceeded by the 10 yr. projected growth. The review of the pump stations in Service Area 8 shows that their capacities are theoretically exceeded for current and future flows. Pump upgrades are recommended and are identified in capital improvement listings.

(c) Existing regulations and programs which govern land use and development of sanitary sewer facilities, including an analysis of the strengths and deficiencies of those programs and regulations in maintaining the functions of sanitary sewer collection.

As a university, USF Tampa Campus has the right to construct, operate, and maintain a privately owned wastewater collection and transmission system. University Facilities staff are required to submit FDEP Form 62-604.300(8)(a) Notification/Application for Constructing a Domestic Wastewater Collection/Transmission System,

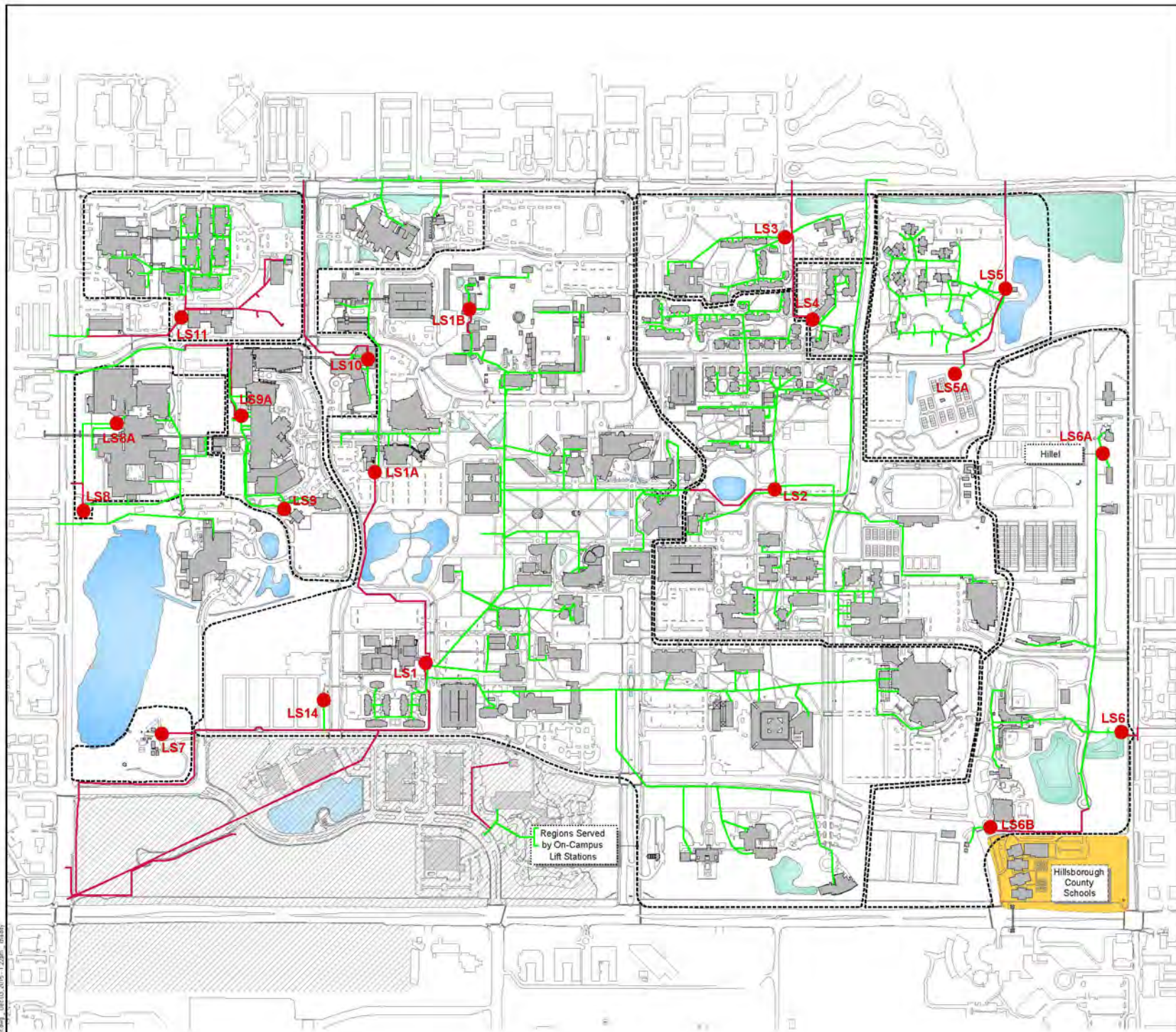
along with designs and supporting calculations per Florida Department of Environmental Protection (FDEP) requirements. The local Hillsborough County Environmental Protection Commission (HCEPC) administers this program for the FDEP. The effluent amount must be approved by the wastewater facility serving the collection/transmission systems, in this case the City of Tampa, prior to submittal to FDEP/HCEPC.

USF does not intend to operate its own wastewater treatment facility due to the burdensome state and federal regulations for operation. The liability associated with the operation of such a facility, as well as the land required not being available without displacing other uses defined in the Master Plan is not advisable. However, based upon future campus growth, the campus may continue to improve and expand its collection and transmission system within the campus as needed.

Sources:

The following is a list of sources reviewed for information to support the General Infrastructure and Utilities Element – Sanitary Sewer data collection and analysis.

- 2015 Evaluation and Appraisal Report update
- Sanitary and Water Service Distribution , USF FPC (VDW), updated June/2015
- USF Campus Development Agreement, April 2007
- USF-Tampa FPC spreadsheets, USF FPC
- USF-Tampa FPC utility maps, USF FPC (AL)
- USF-Tampa Campus Wastewater Master Plan by TEK, Feb. 2007
- USF-Tampa Campus Hartman Wastewater Study, 1997



- Service Area Boundary
- Sanitary Sewer - Force Main
- Sanitary Sewer - Gravity Main
- Lift Station
- Hillsborough County School Site

▨ Area Not Included in Campus Master Plan

Element 7
General Infrastructure

Figure 7.3
Sanitary Sewer Plan

Date
12/03/2015



7.4 Solid Waste

Solid Waste on the USF-Tampa campus is collected and processed by the City of Tampa and Hillsborough County. Private collection companies are contracted for the collection and removal of medical waste and hazardous waste. As an effort to extend the lifetime of the county landfill, USF strives to reduce construction, maintenance, and student waste through minimization and recycling.

Private recycling companies are utilized for certain categories of recycled materials. Internal to campus, Physical Plant operates its own collection of recyclable materials. With the recently formed Office of Sustainability, efforts to minimize waste and increase recycling have also increased. In 2010, USF students participated in a program called, "Recyclemania." Over ten weeks, students competed against other universities in specific categories, where they placed second in Florida for waste minimization. Results showed that USF students produced 20.8 pounds/student over the 10 weeks; that is less than 0.3 pounds of waste a day.

USF-Tampa first began its recycling program in 1994. Now, USF Physical Plant operates two full-time recycling trucks, and recycles the following: mixed paper, aluminum cans, glass and plastic, mixed metals, yard debris, fluorescent bulbs, fixture ballasts, electronics equipment, and concrete waste.

(a) Public and private facilities which provide solid waste collection, storage and disposal services to the campus.

1. A facility capacity analysis by geographic service area, indicating capacity surpluses and deficiencies

Hillsborough County Solid Waste Management Department operates the Hillsborough County Integrated Solid Waste Management System which provides for the collection, transportation, and disposition of the solid waste generated or brought into the System service area. This service area is well defined by State legislation as the unincorporated area of the County as of June 1983. USF Tampa Campus is part of this service area.

The campus' Community Recycling Site is on the east side of campus, along the west edge of Sycamore Drive, south of the religious centers, as shown in Figure 7.4-1, *Solid Waste Plan*.

The City of Tampa and Hillsborough County are able to maintain the current level of service for the foreseeable future. Solid Waste is processed at the Faulkenburg Road Facility in Hillsborough County, where it is separated into burnable and non-burnable solid waste. Non-burnable, non-recyclable solid waste goes to the landfill.

USF Physical Plant operates two full-time recycling trucks, running on-campus routes daily. The collection and storage of paper, aluminum cans, glass and plastic occurs on the east side of campus near the religious centers. This area is referred to as the Community Recycling Site, since these collection bins are accessible to the public. Earnings from these and other, recycled materials serve to fund this recycling program.

2. General performance of existing solid waste facilities,

The 2007 Campus Development Agreement states that Hillsborough County will be responsible for solid waste disposal at a level of service of 6.5 pounds/capita/day. Solid waste generated within the campus will be collected by USF.

3. Proportional capacity of any facilities shared between the University and the host and/or affected local governments.

The 2007 Campus Development Agreement states that Hillsborough County will be responsible for solid waste disposal at a level of service of 6.5 pounds/capita/day. Solid waste generated within the campus will be collected by USF.

(b) Problems and opportunities for solid waste facility expansion or replacement to meet projected needs of the University.

There are no identifiable needs for solid waste facility expansion or replacement. The Campus Development Agreement between the USF Board of Trustees and the City states both parties are in agreement that no off-campus solid waste improvements are needed to maintain the City’s adopted level of service standards for solid waste.

(c) Existing regulations and programs which govern land use and development of solid waste facilities

Florida Administrative Code, Chapter 62-701 addresses the regulations for Solid Waste Management Facilities. In January of 2010, FDEP issued revisions to the current regulations. In general, these regulations define a solid waste facility, its prohibitions, design guidelines, operational requirements, closure and long-term care procedures.

Established within the guidelines, FDEP mandates that recyclable waste be removed from waste stream prior to deposit in the landfill. Other requirements, such as prohibition to divert whole tires to landfills, are also in place as an attempt to extend the landfill lifetime. Yard debris is collected using separate systems so that organic plant matter is not deposited into landfills.

The regulations for operating a landfill are extensive. In the region of Hillsborough County, the Solid Waste Management Division has awarded Waste Management Corporation a “lifetime-of-landfill” contract to collect, process, and dispose of the solid waste for this county and surrounding counties. Separate contracts with other companies are in place for recycling and incineration processes.

(d) Inventory and assess opportunities for the reduction, recycling and re-use of solid waste

USF Physical Plant reports 40 percent of campus waste is recycled, by weight. Additionally, more than 94 percent of all new construction waste is recycled, through traditional recycling processes. With increasing recycling efforts from USF students, waste minimization and recycling efforts continue to improve on the USF-Tampa campus.

USF-Tampa has contracted the services of Republic Waste Services, in partnership with Frito-Lay, to collect and recycle all cardboard from the USF Bookstore, operated by Barnes & Noble.

In another effort by USF Dining and ARAMARK, students can now use reusable food containers in lieu of Styrofoam food containers. USF Dining also uses corn-based recyclable utensils in place of plastic, keeping used utensils out of the landfill.

Plant waste/yard debris may be utilized in the near future as fuel for creating a bio-fuel called SYNGAS.

(e) Existing agreements for the collection, storage and disposal of University-generated solid waste.

Solid Waste generated at USF is be processed at the Faulkenburg Road Facility in Hillsborough County. Burnable waste is incinerated at the Faulkenburg incinerator. Non-burnable solid waste is taken by Kimmins Recycling to their facility at 7th Avenue and 34th Street in Tampa. Non-burnable, non-recyclable solid waste is placed within the Hillsborough County landfill. This process does not apply to the medical facilities on the USF campus, which have their own medical waste collection and disposal program. Recycling performance may be limited, due to the fact that the management of the campus recycling is divided into three separate groups: housing, auxiliary services, and physical plant.

Links to Sustainability Tracking, Assessment & Rating System (STARS) report:
<https://stars.aashe.org/institutions/university-of-south-florida-fl/report/2014-01-14/>

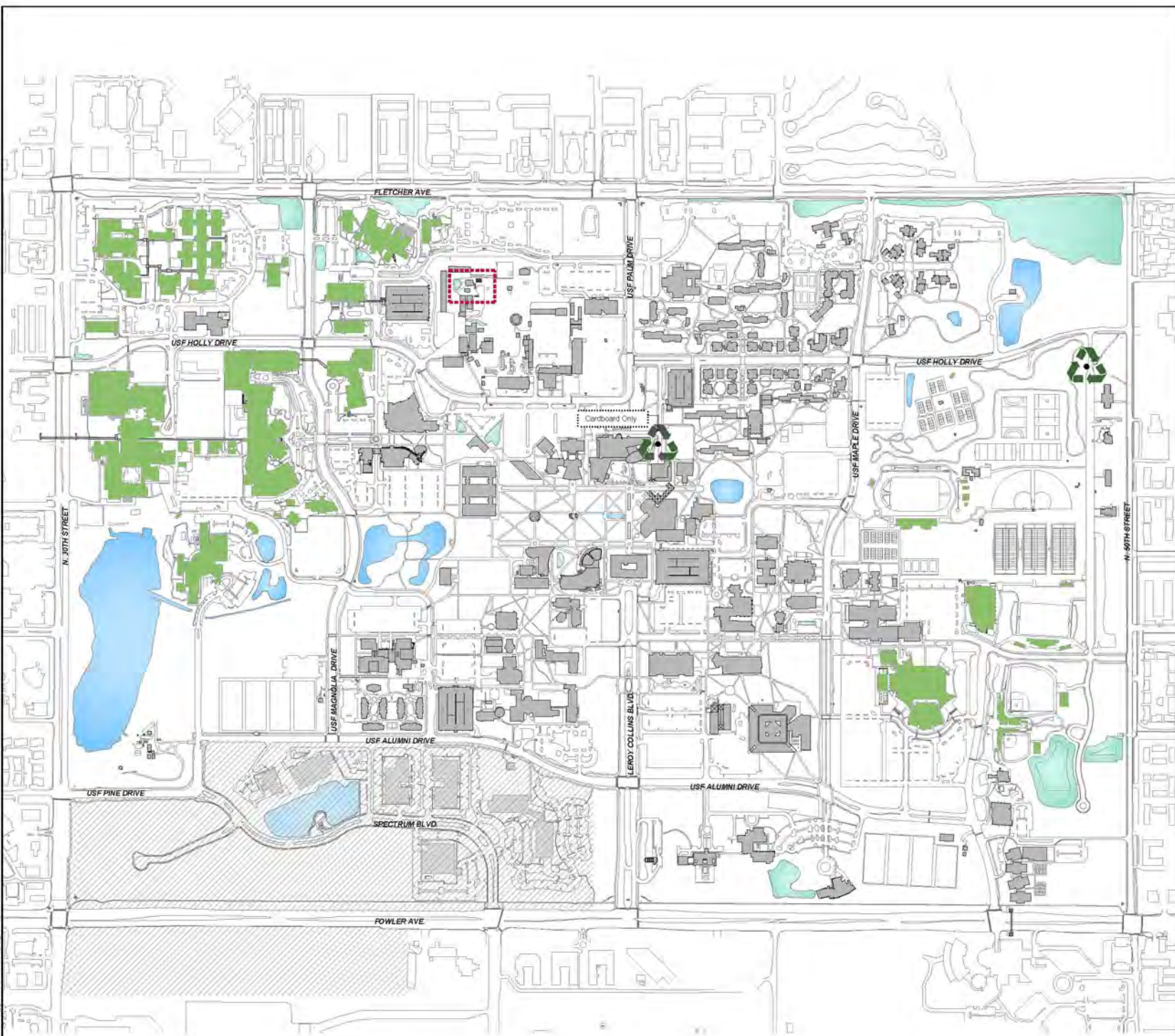
See:

- Waste
 - [OP-17: Waste Reduction](#)
 - [OP-18: Waste Diversion](#)
 - [OP-19: Construction and Demolition Waste Diversion](#)
 - [OP-20: Electronic Waste Recycling Program](#)
 - [OP-21: Hazardous Waste Management](#)
 - Tier 2 Credits
 - [OP-T2-38: Materials Exchange](#)
 - [OP-T2-39: Limiting Printing](#)
 - [OP-T2-40: Materials Online](#)
 - [OP-T2-41: Chemical Reuse Inventory](#)
 - [OP-T2-42: Move-In Waste Reduction](#)
 - [OP-T2-43: Move-Out Waste Reduction](#)


Sources:

The following is a list of sources reviewed for information to support the General Infrastructure and Utilities Element – Solid Waste data collection and analysis.

- USF Campus Development Agreement, April 2007
- USF FPC sustainability website, (<http://usfweb2.usf.edu/FacilitiesPlan/FPC/SACS/sustainhome.html>)
- USF News website, (<http://usfweb3.usf.edu/absolutenm/templates/?a=2266&z=113>)
- USF Office of Sustainability website, (<http://www.usf.edu/sustainability>)
- USF Physical Plant sustainability website, (<http://www.pplant.usf.edu/index.php/additional-information/sustainability-initiatives>)
- USF Physical Plant recycling website, (<http://www.pplant.usf.edu/pdf/USFPPlantRecyclingPresentation.pdf>)
- USF-Tampa FPC spreadsheets, USF FPC
- USF-Tampa FPC utility maps, USF FPC (AL)



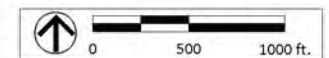
-  Facilities Under Separate Waste Contract
-  Recycling Storage
Cardboard, Newspaper,
Glass, Plastic, Cans
-  Hazardous Waste
Storage Area

 Area Not Included in
Campus Master Plan

Element 7
General Infrastructure

Figure 7.4
Waste Management Plan

Date
12/03/2015



7.5 Steam/Hot Water

This chapter is not a required element of the Master Plan; however, it has been included to facilitate utilities infrastructure planning in support of the future growth plans for the campus. Additionally, energy production and consumption are significant factors in the carbon footprint of the campus and as such provide one of the greatest opportunities for reducing the campus’s greenhouse gas emissions (GHGE) in support of the College and University Presidents Climate Commitment.

Inventory and Assessment of Existing Conditions

Steam is generated on the USF Campus at the main Central Plant (CPT). Steam heats water in the campus closed loop which is distributed to the buildings for heating and reheat.

The main Central Plant (CPT) includes three 45,000 lbs/hour saturated steam boilers which have the capability to produce 135,000 lbs/hour of steam at 175 pounds per square inch gauge (psig) and 377 degrees Fahrenheit (°F), however as shown in Table 7.5-1 **Boilers – Main Plant (CPT)**, the plant typically produces saturated steam between 120 psig and 350°F - 160 psig and 370°F. The Boiler plant design capacity is 107,784. The maximum plant capacity with all three boilers operating at full capacity is 147,660MBH. The steam is then routed through heat exchanges that convert it to heating hot water (ranging from 140°F to 160°F) which is then pumped through the campus distribution piping system to the building level. The capacity which can be delivered to each building on campus is limited by the Central Plants hot water pumping capacity and combination of main and branch underground distribution piping installed to serve them. These limitations must be evaluated on a case by case basis due the complexity of this campus distribution system.

As the University facilities continue to grow, the heating demand will also grow. The current demand load varies throughout the year and the maximum demand has been observed to be approximately 62,865 MBH. The anticipated future connected load within the next ten years is anticipated to be approximately 135,000 MBH of heating demand. This growth is shown to exceed the Central Plants capacity and additional hydronic heating capacity will be needed to serve this growth. Since it is not practical to significantly expand the Central Plant/distribution system capacity, another source of heating will be required to serve these demands. This capacity will need to be provided from either a centralized or a decentralized hydronic heating source.

There are several buildings on campus which do not receive hot water from the central plant and are either heated by decentralized hydronic heating or electric duct heating. The northwest portion of campus (Health and Medical facilities), the Greek Park (new dormitory facilities located on the Northeast side of campus), MDT building (old Psychiatric facility) and the Patel Center for Global Solutions) are electric heat. Decentralized heating hot water occurs at facilities such as Children’s Medical Services (CMS), the Sun Dome facilities (SUN), and Juniper-Poplar Residence Hall (JPH).

Table 7.5-1 Boilers – Main Central Plant (CPT)

Boiler No.	Steam Output	Gas Burner	Oil	Burner	Age	Notes
5	45,000 lb/hr @ 175 psig, 377 F	61,000 cfh @ 4"	3,300 lb/hr	#6	18	
6	45,000 lb/hr @ 175 psig, 377 F	61,000 cfh @ 4"	3,300 lb/hr	#6	13	
7	45,000 lb/hr @ 175 psig, 377 F	61,000 cfh @ 4"	3,300 lb/hr	#6	4	Replaced Boiler 3
Total Capacity		135,000	lb/hr @ 175 psig			

There are specific buildings that have heating needs served by other means, including electric heat and decentralized hydronic heating (or distributed boilers). Areas that are primarily served by electric reheat are the

Currently there are no cogeneration facilities at the University; however, the University has kept this option open. Potential opportunities for cogeneration at the University are further described below in *Future uses/opportunities for increased efficiency*.

Problems and opportunities for expansion/replacement

Several areas in existing underground heating hot water piping have been identified with leaks. The leaking heating hot water piping affects the capacity of the heating hot water system. As new infrastructure modifications are required, the existing failed conduit piping systems should be replaced.



Existing regulations/programs which govern sub-element and assessment


The Steam/Hot Water sub-element is not a required sub-element. Inclusion and evaluation of this sub-element is in support of other required sub-elements.

Future uses/opportunities for increased efficiency

Opportunities for increased efficiencies exist in converting existing electric resistance heating districts to district heating systems. Consideration should be given to adding a satellite district heating plant providing flexibility and service to the southeast quadrant. The existing heating hot water distribution system is known to have areas of leaking pipe; these areas should be repaired or replaced and make-up water meters dedicated to the heating hot water system should be installed. Installation of dedicated make-up water meters will allow for improved monitoring of system leakage rates to be used for performance monitoring and system repair/replacement evaluations for use in prioritizing infrastructure projects.

The University should continue to study the feasibility of cogeneration with expanded consideration given to operating the existing boiler plant at or near maximum operating pressure and utilizing backpressure turbo-generators to reduce the pressure to the hot water converter operating pressure. This approach could allow the University to diversify the fuel mix for improved cost and reduced carbon emissions, furthering the sustainability efforts of the University. Additionally, high pressure steam could be utilized to generate chilled water through a steam turbine driven chiller providing additional fuel mix flexibility and cost control ability.

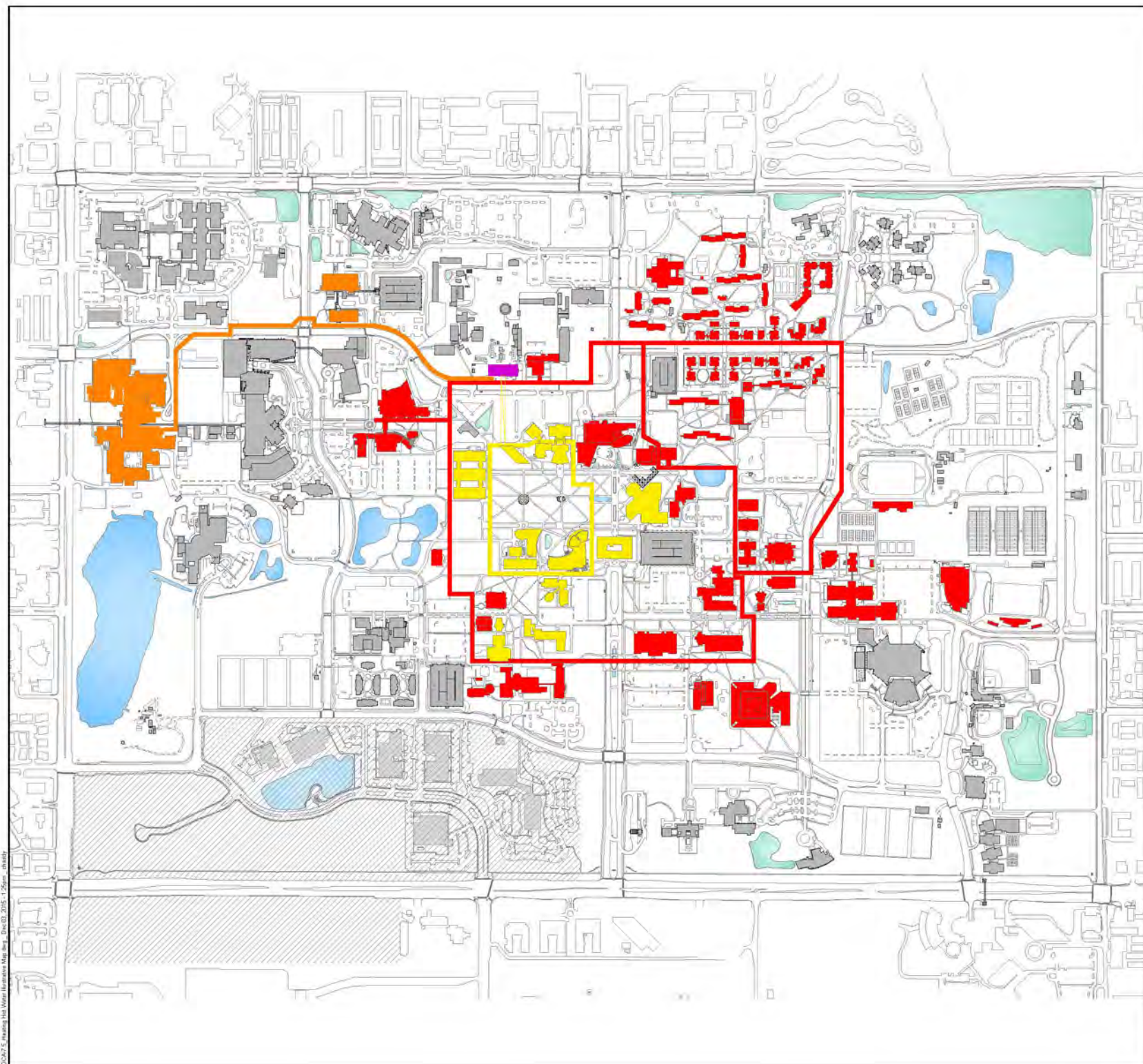
-  District Plants
-  Central Hot Water Loop
-  East/West Hot Water Loop
-  Medical Hot Water Loop

 Area Not Included in
Campus Master Plan

Element 7
General Infrastructure

Figure 7.5
Heating Hot Water Plan

Date
12/03/2015



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7.6 Chilled Water

This chapter is not a required element of the Master Plan; however, it has been included to facilitate utilities infrastructure planning in support of the future growth plans for the campus. Additionally, energy production and consumption are significant factors in the carbon footprint of the campus and as such provide one of the greatest opportunities for reducing the campus’s greenhouse gas emissions (GHGE) in support of the College and University Presidents Climate Commitment.

Inventory and assessment of existing conditions

Currently, there are three main chilled water generation plants on the USF Campus, the main central plant (CPT), the Northwest Central Plant (formerly the FMHI plant at MHB) and the Southeast Chiller Plant (SEC). Additionally, there is distributed cooling available at the MDT building, ALZ Building and JPH residential facility. In 2013 the University removed the chilled water generation equipment at the MDU, MDT and CPH facilities as part of an effort to eliminate equipment on campus with CFC refrigerants

The main central plant (CPT) is capable of producing 11,500 tons of chilled water at 45°F via the six chillers. Averaging a temperature differential of 13°F, this equates to 21,231 gpm. This chiller plant was converted to variable primary flow and operates at a system temperature differential of 13°F -15°F to minimize pipe velocity and maximize plant efficiency.

Table 7.6-1 Chillers – Central Plant (CPT)

Chiller	Type	Refrigerant Type	Rated Tons	GPM	Delta T Deg. F	Age	Notes
3	York/Centri.	R-11	800	1371	14	21	Targeted for Replacement
9	Trane/Centri.	R-11	1500	2657	14	21	Targeted for Replacement
10	Carrier/Centri.	R-22	2300	4246	13	21	Replaced CH-1,2 (1994)
11	Carrier/Centri.	R-22	2300	4246	13	17	Replaced CH-4 (1995)
12	York/Centri.	R-134A	2300	4246	13	15	Replaced Ch-7 (2000)
14	Trane/Centri.	R-123	2300	3680	15	12	Replaced Ch-6 (2005)
Total Capacity			11,500	Tons			

The main central plant has similar capacity in cooling towers, but the desire is to eventually replace towers with increased capacity to match chillers. Manifolding has been upgraded and new controls added so the chillers and cooling towers can be operated interchangeably.

Also of note is the age of the cooling towers. According to ASHRAE HVAC Applications, the estimated service life of a cooling tower is only 20 years. Most of the cooling towers exceed this age limit.

Table 7.6-2 Cooling Towers – Central Plant (CPT)

No.	Pump GPM	Pump		No. of Fans	HP/ Fan	Nom. Ton Cap.	Age	Notes	
		TDH (ft)	Pump HP						
3	2200	70	50	2	30	750	47		
4	4000	60	75	2	30	1300	49	Refurnished in 2007	
5	9850	70	200	4	40	3300	47		
6	3600	62	75	2	40	1200	39	Pump Housing Rebuilt	
7	10500	76	250	4	40	3500	21		
8	11040	80	350	4	75	4600	17	Targeted to be replaced	
Total Capacity		41,190	GPM			14,650	Nom Tons		

The Northwest Plant includes four 1750-ton chillers, and associated pumps, and cooling towers, etc. in a primary-secondary flow arrangement. This plant will need to be converted to a variable primary flow system arrangement to provide a more efficient and reliable operation to serve the Health and Medical facilities in the Northwest quadrant of campus.

Table 7.6-3 Chillers – Northwest Plant (NWP)

Chiller	Type	Refrigerant	Tons	GPM	Temp. Diff.		Age	Notes
					Deg. F			
1	Centrifugal	R-123	1750	3231	10		15	Trane Chiller
2	Centrifugal	R-123	1750	3231	10		11	Trane Chiller
3	Centrifugal	R-123	1750	3231	10		11	Trane Chiller
5	Centrifugal	R-123	1750	3231	13		6	Trane Chiller
Total Capacity			7,000	Tons				

Table 7.6-4 Cooling Towers – Northwest Plant (NWP)

Cooling Tower No.	Pump GPM	CWR		Fan No.	HP/ Fan	Tons	Age	Notes
		(deg. F)	(deg. F)					
1	5250	95	85	1		1500	15	NWP; Marley # 82525-6
3	5250	95	85	1		1500	11	NW Plant; Marley # 82525-6
5	5250	95	85	1		1500	11	NW Plant; Marley # 82525-6
2A-2B	5250	85	85	2		1750	6	NW Plant; BAC
4A-4B	5250	95	85	2		1750	6	NW Plant; BAC
Total Capacity	25,446	GPM				7602	Nom Tons	

The Southeast Chiller Plant supports future growth of the campus in the southeast quadrant as well as to provide supplemental capacity of the main plant (CPT). This chiller plant operates in a variable primary flow configuration and with a 13°F system temperature differential minimizing pipe velocity and maximizing plant efficiency. The currently installed capacity of 6,900 tons will need to be increased to 11,500 tons capacity to serve the anticipated campus growth within 10 years.

Table 7.6-5 Chillers – Southeast Chiller Plant (SEC)

Chiller	Type	Refrigeran		GPM	Temp.	Age	Notes
		t	Tons		Diff. Deg.		
					F		
1	Centrifugal	R-123	2300	4246	13	7	
2	Centrifugal	R-123	2300	4246	13	7	
3	Centrifugal	R-123	2300	4246	13	5	
Total Capacity			6,900	Tons			

Table 7.6-6 Cooling Towers – Southeast Chiller Plant (SEC)

Clg. Tower No.	Pump GPM	CWR	CWS	Fan No.	HP/Fan	Tons	Age	Notes
		(deg. F)	(deg. F)					
1A – 1B	6900	95	85	2	100	2300	7	BAC 31301C-2
2A – 2B	6900	95	85	2	100	2300	7	BAC 31301C-2
3A – 3B	6900	95	85	2	100	2300	5	BAC 31301C-2
Total Capacity		13,800	GPM			4,600	Nom Tons	

Problems and opportunities for expansion/replacement

Several areas in existing underground chilled water piping have been identified as leaking. The leaking chilled water piping affects the capacity of the chilled water system. As new infrastructure modifications are required, the existing failed conduit piping systems should be replaced.

Several existing chillers utilize non-environmentally friendly refrigerants and will need to be replaced in support of Campus goals for U.S. Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) certification.

Existing regulations/programs which govern sub-element and assessment


The Chilled Water sub-element is not a required sub-element. Inclusion and evaluation of this sub-element is in support of other required sub-elements.

Future uses/opportunities for increased efficiency

Opportunities for increased efficiencies exist in replacing aging, inefficient chillers. The existing chilled water distribution system is known to have areas of leaking pipe, these areas should be repaired/replaced and make-up water meters installed dedicated to the chilled water system. Installation of dedicated make-up water meters will allow for improved monitoring of system leakage rates to be used for performance monitoring and system repair/replacement evaluations for use in prioritizing infrastructure projects.

Cooling towers utilize a significant amount of make-up water for blow down and evaporation. Water use on campus is limited by the water use permit with projected use approaching the limits of the permit. Installation of dedicated make-up water meters for cooling towers and cooling tower blow down will improve monitoring and evaluation of the system's performance. Additionally, efforts to capture and reuse cooling tower blow down should continue with consideration given to alternative water treatment methods that may reduce blow down frequency and water treatment chemical usage.

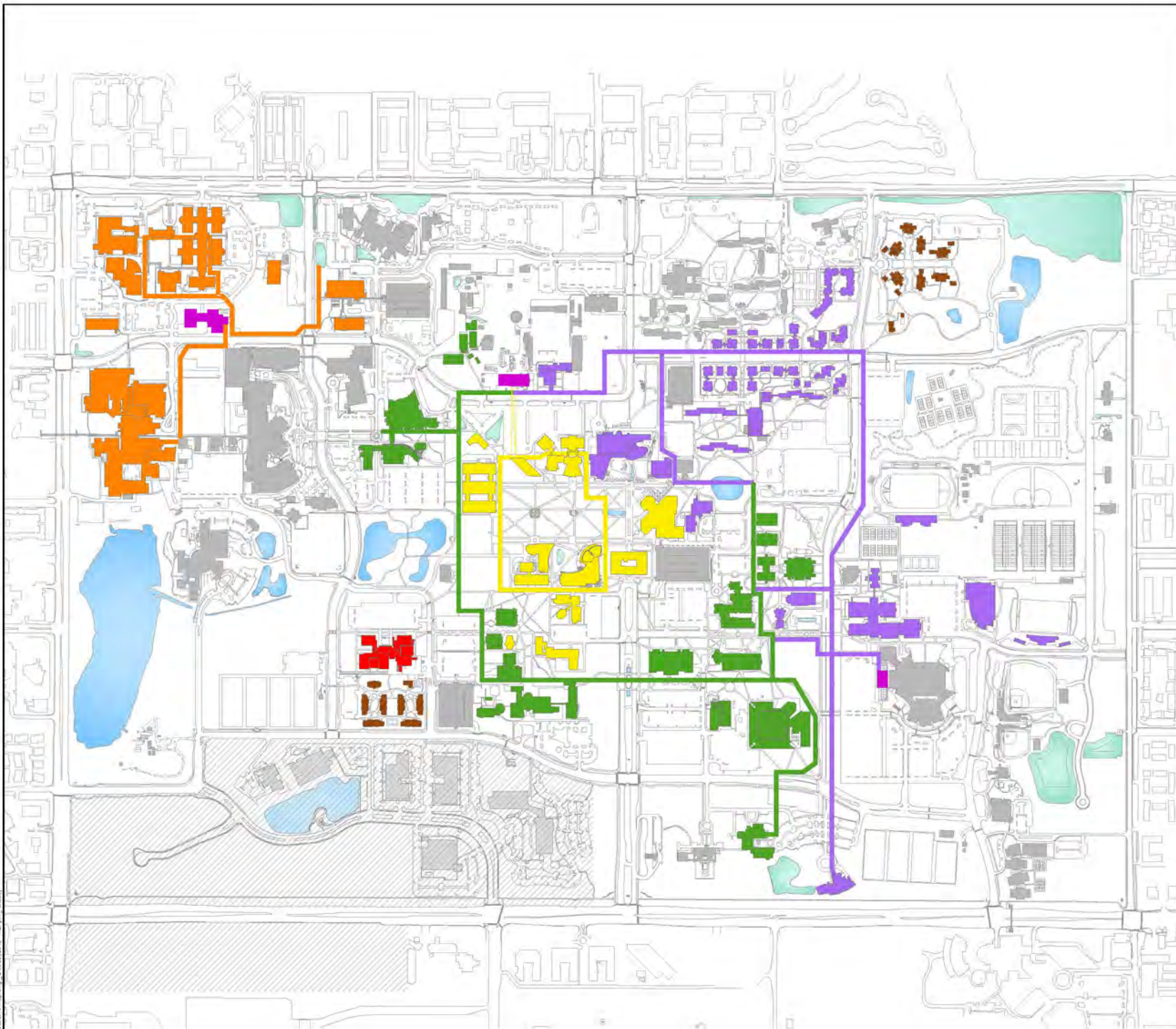
-  District Plants
-  14" Chilled Water Loop
-  18" Chilled Water Loop
-  24" Chilled Water Loop
-  Northwest Loop
-  Dedicated Air Cooled Chiller
-  DX System

 Area Not Included in
Campus Master Plan

Element 7
General Infrastructure

Figure 7.6
Chilled Water Plan

Date
12/03/2015



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7.7 Electrical Power and Other Fuels

This chapter is not a required element of the Master Plan Update; however, it has been included to facilitate utilities infrastructure planning in support of future growth on campus.

Inventory and Assessment of Existing Campus Electrical Services

The campus electrical service is provided from a combination of Tampa Electric Company (TECO) primary metered services served at 13.2 kV and secondary metered services. Multiple TECO substations serve the campus from differing geographic campus entrances reducing the possibility of total campus power failure, blackout, from a single substation failure. TECO/USF Substation serves the core campus, 27th Street Substation serves the northwest campus, and 46th Street Substation serves the south campus.

TECO/USF Substation

The majority of the core campus electrical service is provided from a 69 kV primary - 13.2 kV secondary substation located on the southwest corner of Fletcher Avenue and North Palm intersection accessible from Laurel Drive. The substation is divided into two sections: the north side containing TECO primary equipment and the south side containing USF primary equipment.

TECO provides service to the substation via two overhead 69 kV circuits: circuit number 66028 and circuit number 66029. The 69 kV circuits are stepped down to 13.2 kV via two 37 MVA transformers. TECO serves the USF Substation section and neighboring communities along and north of Fletcher from their section of the substation; therefore, the substation is not dedicated to the campus. However, the majority of the electrical load connected to the substation is from the core campus.

TECO’s primary and secondary distribution system is a selective system with manual switchover via tie circuit breakers. The selective system allows restoring or maintaining service to the campus in the event of catastrophic transformer or bus failure. The substation capacity is indicated in the table below:

Table 7.7-1 TECO Substation Capacity

TECO Circuit No.	Feeder Capacity	Transformer Capacity	Substation Peak Demand	Percent Load
66028	37 MVA	37 MVA	22.6 MVA	61%
66029	37 MVA	37 MVA	27.4 MVA	74%

The substation cannot support the core campus and neighboring communities on one transformer during peak load conditions without load shedding by TECO.

Four TECO 13.2 kV feeders serve the USF Substation section with available switching between the feeders. In the event of cable failure, the load can be switched to another feeder providing redundancy. USF Substation primary distribution system consists of four USF feeders arranged in loop configurations. Each feeder loop is split into A and B feeders as follows: F131A, F131B; F132A, F132B; F133A, F133B; and F134A, F134B. The intent is to limit the load on each feeder to 50% of its capacity to allow switching load from a failed feeder to another feeder without requiring load shedding and minimizing power interruptions.

The existing load on each feeder is indicated in the following table:

Table 7.7-2 USF Substation Service Feeders Capacities

USF Feeder	Rated Capacity	Peak Demand Load	Remaining Capacity	Percent Load
F131	440A	275A	165A	63%
F132	440A	205A	235A	47%
F133	440A	171A	269A	39%
F134	440A	175A	265A	40%

The peak demand load is intermittent maximum recorded load occurring only under peak campus occupant load and peak central chiller plant operation. The percent load allows switching between feeders providing redundancy and minimizing prolonged power interruptions due to failures. Feeder F131 is the highest loaded feeder due to serving majority of the Central Chiller Plant. Careful load monitoring and possibly load shedding are required when combining this feeder load with other feeders. The load added to the TECO/USF Substation feeders will be managed during the next 10-year campus growth to limit the load on each feeder to 50% of its capacity. Planning consideration will include serving perimeter campus growth from existing perimeter primary meter services and continue implementing energy saving electrical systems such as energy efficient lighting, motors, and chillers.

A TECO feeder originating from TECO/USF Substation enters the northwest area of campus at Magnolia Drive that once served the northwest FHMI area and Northwest Chiller Plant (NWCP). The load on this feeder was moved to a new TECO/USF Bruce B Downs (BDD) feeder provided on the west side of NWCP in 2010. Magnolia Drive primary meter service is located at the northeast corner NWCP. The primary meter service is a potential backup to the NWCP in the event of BBD feeder failure. The feeder has limited spare capacity and cannot accommodate the entire load of NWCP, so coordination with TECO and load shedding are required before any NWCP loads can be switched to the Magnolia Drive feeder. There are no plans to increase the capacity of this feeder to accommodate growth on the northwest corner of the campus. BBD feeder and possibly a future TECO feeder depending on load growth in the NWCP will serve the northwest corner of campus.

27th Street Substation

27th Street Substation feeder enters the campus from Bruce B Downs Boulevard at Holly Drive. The feeder serves a campus primary meter service at the west side of the Northwest Chiller Plant. The service serves the northwest area of campus including the Northwest Chiller Plant. The feeder is not dedicated to the campus as neighboring community loads are connected to the circuit. TECO is able to reduce the amount of neighboring community loads or change the feeder to a dedicated campus feeder if required to accommodate future growth. The University will monitor the campus load and coordinate with TECO to ensure adequate capacity is available, or increase the capacity to accommodate the northwest campus growth. A new northwest feeder is not anticipated to accommodate the Five-Year Capital Improvement Plan.

46th Street Substation

Four 46th Street Substation feeders enter the south side of campus: from 50th Street at Elm Drive, from Fowler Avenue south of Alumni Center, from Fowler Avenue at Leroy Collins and Alumni Drive intersection, and from Magnolia Drive at Juniper-Poplar Hall. Each feeder entrance serves a campus primary meter service.

Elm Drive primary meter service serves the Athletics area of campus. The 50th Street feeder is via overhead TECO cables serving neighboring communities east of the campus. The feeder has limited capacity. There is minimal campus growth planned around Elm Drive, so there are no plans to increase this service capacity.

The Fowler Avenue feeder enters the campus at two locations: primary meter service south of Alumni Drive serving the southeast area of campus including the Southwest Chiller Plant, and the primary meter service at Alumni Drive and Leroy Collins intersection added in 2014 serving the southwest area of campus. The TECO feeder to these services is a dedicated feeder from the 46th Street substation. The feeder has capacity to accommodate future growth in the Five-Year Capital Improvement Plan on the south side of campus.

Magnolia Drive primary meter service at Juniper-Popular Hall is served from a TECO temporary feeder part of the Moffitt Cancer Center Emergency Relay service. The service serves Magnolia Drive intramural fields (MFC), Juniper-Popular Hall (JPH) including JPH chiller plant and the Beard Parking Garage (BDG). JPH and BDG load will move to the Leroy Collins feeder in 2015. Residential Housing expressed concern over the lack of redundancy for their largest housing facility JPH, so TECO agreed the Magnolia Drive temporary feeder may remain to continue serving MFC and provide a backup feeder for JPH. There are no plans to add load onto this feeder.

Secondary Metered Electrical Services

Secondary metered electrical services are provided for some athletic facilities and auxiliary buildings around the perimeter of the campus where extending primary meter services are cost prohibitive.

Problems and Opportunities for Expansion/Replacement

Services and Feeders Redundancy

There are six primary meter services for the campus. TECO/USF substation serves a majority of the core campus, and peripheral services serve campus perimeter loads. Presently there is no service and feeder redundancy between four of the six primary meter services. The lack of redundancy exposes portions of the campus to prolong power interruptions resulting from catastrophic TECO transformer or gear failures, distribution line failures, or failures caused by forces outside the campus. Redundant services and feeders provide the University options for switching critical campus loads from a failed service or feeder to an alternate source in emergency situations improving reliability. Coordination with TECO and possibly load shedding of noncritical facilities are required before any switching.

Redundancy via feeders ties is planned for the following areas of campus.

Planned Redundant Services / Feeders Ties

Campus Quadrant	Redundant Services (Tie Between Feeders)
Northwest	USF Substation Feeders F131 & F134 and BBD Feeder
Northeast and Southeast	USF Substation Feeders F132 & F134 and Fowler Feeder South of Alumni Drive

The Fowler Avenue TECO feeder serving the south campus is a radial feeder from the 46th Street Substation. The University is coordinating with TECO to provide a redundant feeder from TECO’s McKinley Substation improving service redundancy and reliability to the south side of campus.

Campus Feeders Monitoring

There is no monitoring of campus feeders. Therefore, there is no historical load profile for determining historical peak load useful in campus planning, or real-time monitoring of existing load while switching between feeders. The Master Plan infrastructure improvements include providing campus feeders monitoring on all primary meter service feeders that report back to the Physical Plant Department (PPD) via BACnet. Feeder monitoring will provide real-time and historical load profiles for the campus feeders to assist in master planning, investigation during power failures, and preventive maintenance.

The Five-Year Capital Improvement Plan buildings locations require relocating some existing electrical infrastructure. The CIP Utilities Costs include relocating and improving electrical infrastructure to serve the CIP buildings.

Existing Regulations/Programs Which Govern Sub-Element and Assessment

The electrical power and other fuels sub-element is not a required sub-element. Inclusion and evaluation of this sub-element is in support of other required sub-elements.

Future Uses/Opportunities for Increased Efficiency

Energy conservation opportunities should be evaluated to reduce the load on existing feeders thus recovering additional spare capacity for future growth.

Utilize energy usage index for each building to determine buildings that may have the most opportunity to reduce energy consumption. Once these buildings are identified, an energy analysis can be conducted to determine the scope of energy conservation measures that will alleviate load on existing feeders and reduce energy consumption and cost. The energy reduction measures should be conducted on buildings served by feeders accommodating the Five-Year Capital Improvement Plan.

USF/TECO Substation Feeders

- F-131A
- F-131B
- F-132A
- F-132B
- F-133A
- F-133B
- F-134A
- F-134B
- Not in Scope

TECO Primary Services

- BBD
- Magnolia
- 50th Street
- Fowler
- F136A
- F136B

TECO Secondary Services

- Standard Secondary Service

Areas Not Included in Campus Master Plan

Element 7
General Infrastructure

Figure 7.7
Electrical Illustrative Map
Current Distribution

Date
12/03/2015



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7.8 Communications

This chapter is not a required element of the Master Plan Update; however, it has been included to facilitate utilities infrastructure planning in support of the future growth plans for the campus. Additionally, energy production and consumption are significant factors in the carbon footprint of the campus and as such provide one of the greatest opportunities for reducing the campus’s greenhouse gas emissions (GHGE) in support of the College and University Presidents Climate Commitment.

Inventory and Assessment of Existing Conditions

Existing and projected major telecommunications corridors are positioned principally along primary circulation patterns and seams between development sites so as to minimize disruption by new construction.

1. Campus data communications infrastructure

Major campus cabling infrastructure is provided through seven nodes located in buildings: MHB, PCD, AOC, MPB, ENB, SVC and EDU. (See Table 7.8-1 Campus Data Communication Infrastructure.) These nodes provide service to the cluster of buildings physically adjacent to and surrounding them. These nodes are connected to the outside world for MAN/WAN access through four service provider (utilities) in various combinations for redundancy from physically diverse locations around campus.

Table 7.8-1 Campus Data Communication Infrastructure

Network Node	Service Provider	Data Center/Server Centers
MHB		MDC
PCD		
AOC	Verizon & Time Warner	
MPB		
ENB	Verizon & Time Warner	
EDU		
	Verizon, Level 3 & Brighthouse	SVC

Existing campus outside plant cabling infrastructure contains four main media types:

- Legacy copper cabling (traditional telephone infrastructure)
- Multimode optical fiber cabling
- Singlemode optical fiber cabling

Please refer to campus infrastructure communications cabling map for routing of the optical fiber media.

2. Data Center/Server Centers

There are currently two main data center/server centers on campus: ENB and SVC. The old ENB data center has been phased out and has been replaced by a commercial, third party data center located off campus for security and redundancy.

The current data center on campus is located in the SVC building and occupies 5,000 sq ft of space. Power is redundant with dual 350kw UPS (uninterruptible power supplies) and one 350kw diesel generator. Current cooling capacity is 80 tons with redundancy being provided up to 90 tons through three 30 ton chillers. While efforts have

been made to upgrade the infrastructure, this data center is still vulnerable to a variety of threats and a new data center should be established in order to provide the high-availability housing for critical systems at USF.

Problems and Opportunities for Expansion/Replacement

Existing buildings are currently being provided with telephone service from the on-campus Avaya Communications Manager. The Avaya system provides traditional telephone service to buildings which do not have the new network infrastructure and VoIP to buildings which have an infrastructure which can support it. As new buildings come online and as older facilities are refurbished, telephone service is migrating to Voice over Internet Protocol with optical fiber connectivity.

The newer buildings are being provided with voice and data services through optical fiber connectivity. Limited amounts of copper cable are still provided for analog services such as fire alarm and security services.

Buildings currently being planned for migration to singlemode optical fiber include: Sun Dome, OPM, UPB, and Botanical Gardens.

Existing Regulations/Programs Which Govern Sub-element and Assessment

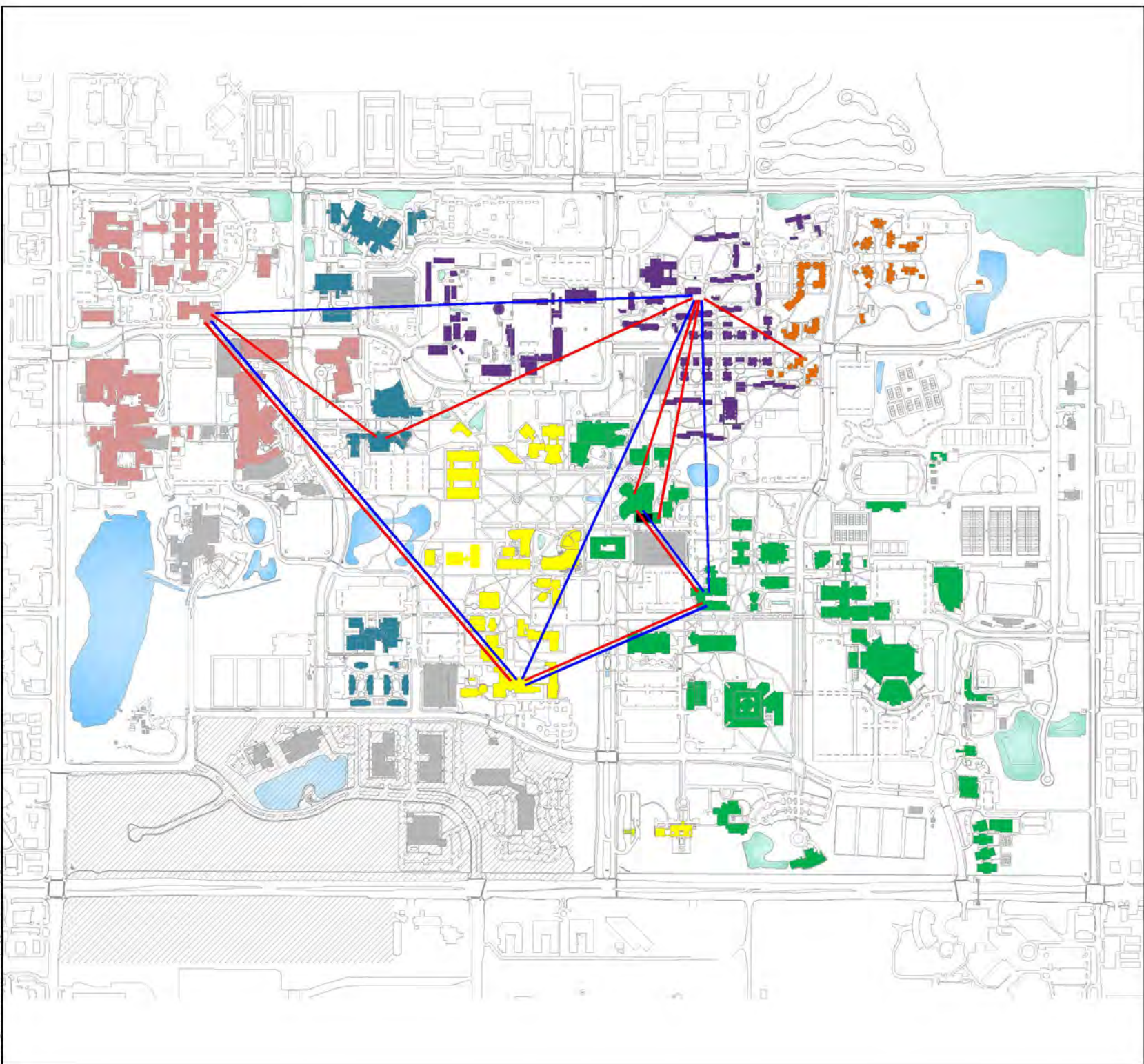
The communications sub-element is not a required sub-element. Inclusion and evaluation of this sub-element is in support of other required sub-elements.

Future Uses/Opportunities for Increased Efficiency

As more bandwidth capabilities are required for greater data carrying capacity, the nodes are migrating from multimode to singlemode optical fiber connectivity.

The future communications needs of the campus will continue to converge onto the IP data infrastructure. BAS requirements for energy management and conservation are already moving to this platform. Other applications such as video transport, imaging, cell signal boosting (DAS) and data storage will require ever more bandwidth and additional fiber capacity to keep up with growth.

As new campus buildings come online, the data network will continually expand from the current network nodes to accommodate them. No new network nodes are planned for the next five years.



- SVC
- MHB
- PCD
- AOC
- MPB
- ENB
- EDU

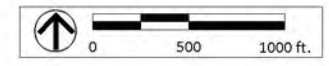
- Single Mode Fiber
- Multi Mode Fiber




Area Not Included in Campus Master Plan

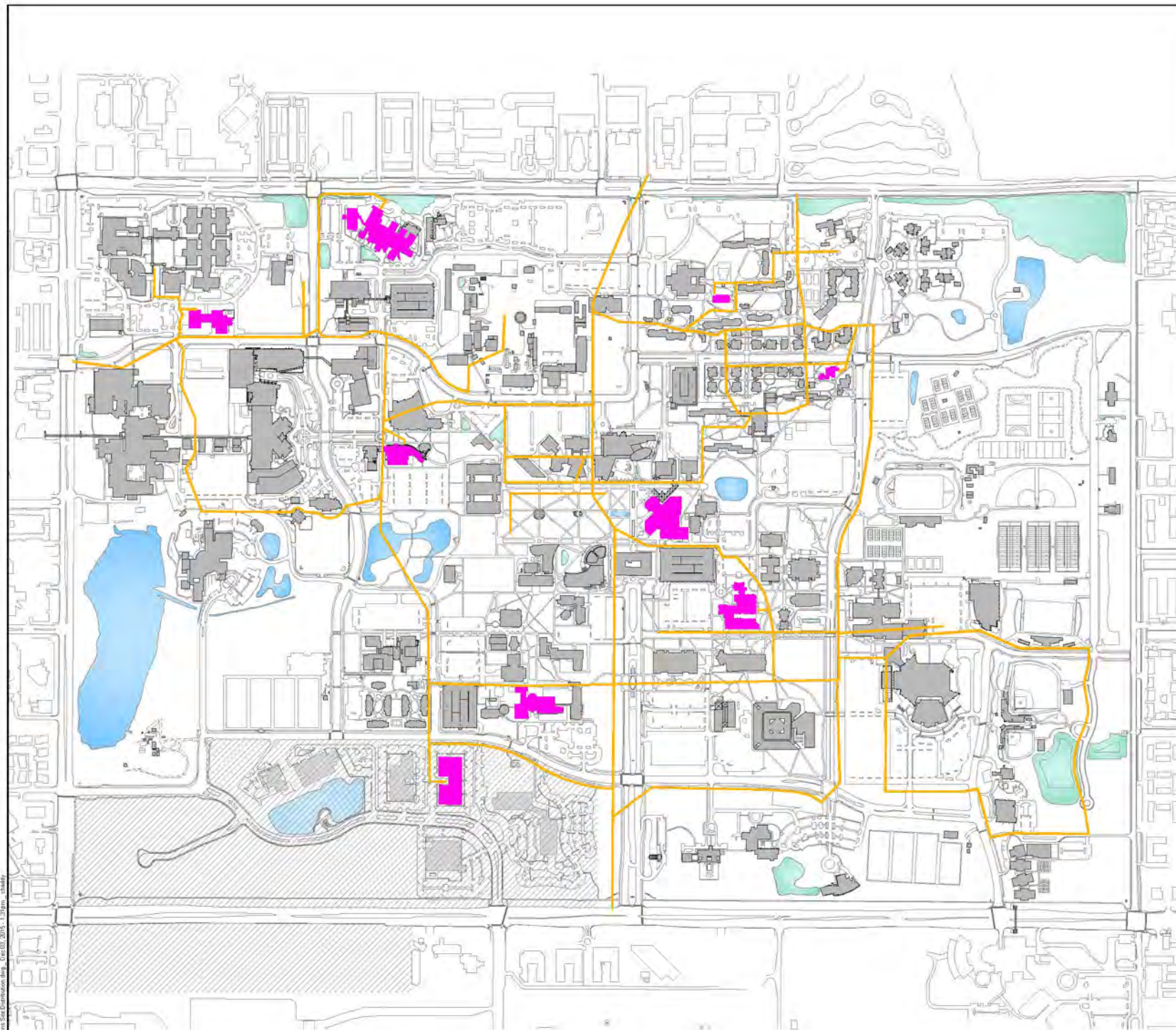
Element 7
General Infrastructure

Figure 7-8.1
Communications
Illustrative Map

Date
12/03/2015



-  Network Operation Center
-  Communication Conduit
-  Area Not Included in Campus Master Plan



Element 7
General Infrastructure

Figure 7.8-2
Communications Site
Distribution

Date
12/03/2015



Element 8:

Conservation

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Element 8 Conservation

This element ensures the conservation, protection and wise use of all natural ecosystems and natural resources on the University campus and in the planning study area.

Inventory of Existing Natural and Environmental Resources

1. Wetlands, lakes, rivers, and other surface waters and bottom lands

The University has a total of 410 acres of wetlands, including wetlands within the USF Forest Preserve (386 acres), the wetland on the Northeast corner of the Main Campus (6 acres), and Lake Behnke (18 acres). Rainwater runoff is collected in the University’s 29 acres of stormwater collection areas and 18 acres of surface waters (see Figure 8.1, *USF Campus Open Space* and Figure 8.2, *Natural and Environmental Resources*).

2. Floodplains

USF Tampa campus has approximately 386 acres of floodplain areas within the USF Forest Preserve (see Figure 8.6, *Floodplains*). There are currently no floodplain areas on the USF Tampa main campus.

3. Known unique geological features (Springs, Sink Holes, etc.)

The only known geological features on the USF Tampa campus are sinkholes. USF monitors the campus for sinkholes and tracks the sizes and dates of identified sinkholes (see Figure 8.4, *Sinkhole Plan*). There are approximately 110 sinkholes on campus. The sinkholes that appear within Hillsborough County are directly related to the lowering of the surficial groundwater table. With such extensive karst limestone geography throughout the county, protecting and restoring the groundwater table is one means to prevent the likelihood of more sinkholes occurring on USF Tampa campus.

4. Existing mitigation sites

A small strip of approximately 0.35 acres was donated along Fletcher Avenue near the USF Riverfront Park as mitigation for the Fletcher Avenue widening project.

5. Existing naturalized vegetative communities, including nesting or feeding habitat

The primary natural vegetative community on campus property is the USF Forest Preserve north of Fletcher Avenue. It is outside the main campus superblock, but within the study area. The USF Forest Preserve is primarily wetland and sandhill habitat (see aerial below). It is home to a variety of plants and animals, many of whom are threatened or endangered and also several that are fire-dependent. Part of the area is routinely burned in order to conduct research on ecological succession. The Forest Preserve has two primary functions: research and teaching. It is managed by the College of Arts and Sciences.

Research: It is the setting for many research projects and conservation efforts. The Forest Preserve offers considerable value to research at USF by supporting a variety of types of research projects (ecology, biology, geology, archaeology, engineering, etc.).

Teaching: Besides its role as a research facility for scientists and other researchers, the Forest Preserve is a learning tool for USF students and teachers, and a valuable asset to the University community. It provides hands-on experience for USF students and teaches a better understanding of the web of relationships in this habitat. It is a central part of the ecology courses and students taking ecology classes have several Forest Preserve based labs. Other departments at USF use the Forest Preserve for teaching as well. For more information please use the links on the right of the first webpage below to explore specific information on courses and the materials used in the PCB 3043 Ecology course taught every semester.

An inventory of plants and animals that are found in the USF Forest Preserve are located on this website:

<http://facilities.cas.usf.edu/forestpreserve/studies/>

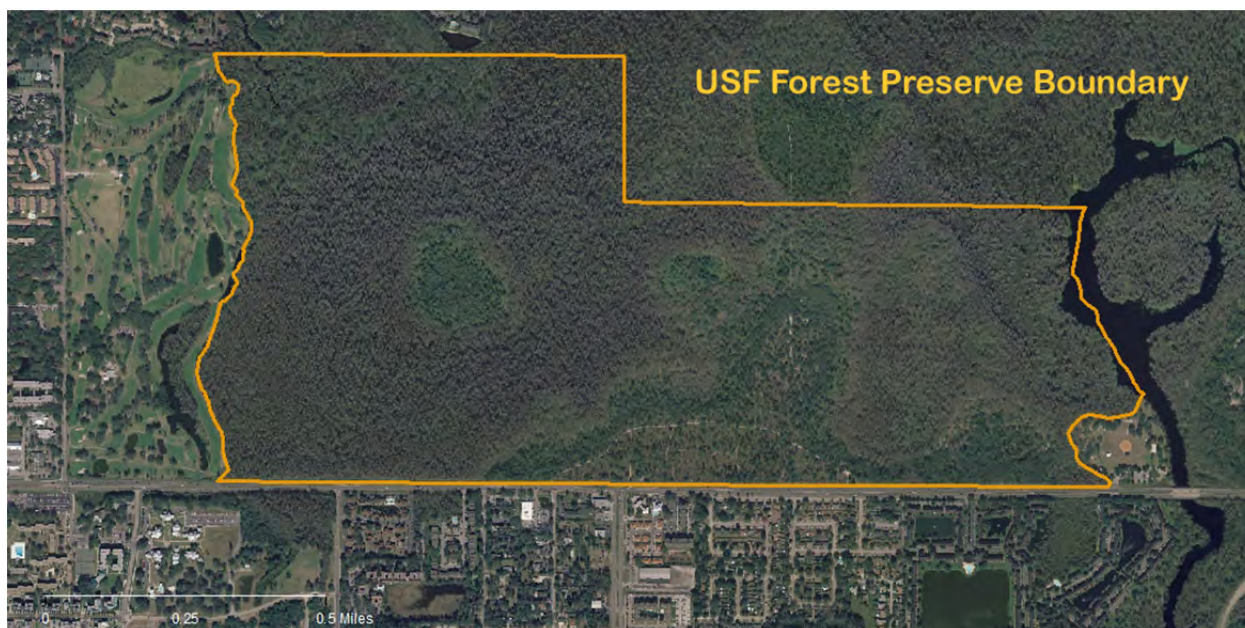
For more information see also:

<http://facilities.cas.usf.edu/forestpreserve/>

<http://facilities.cas.usf.edu/forestpreserve/data/ForestPreserve-WhitePaper.pdf>

The main academic campus has been largely developed with buildings, parking lots, and underground utilities. There are isolated pockets of minimally disturbed areas, the larger of these are:

- Hardwood hammock and wetland area at the corner of Fletcher Avenue and 50th Street
- USF Botanical Gardens and Lake Behnke, at Bruce B. Downs Boulevard and USF Pine Drive
- Greenway (as identified in Element 9, *Open Space and Recreation*)



6. Native Plants

Since 1995, the use of drought-tolerant, native plants has increased. The Patel Center for Global Solutions landscape design was the first project to fully commit to full xeric and natural plant materials. The University has been investigating and testing new varieties of drought-tolerant plants. The University also maintains a large number of trees on campus, providing a 228-acre extent of tree cover throughout the USF campus (see Figure 8.5, *Tree Cover*). However, the overall diversification of the trees and plant material on campus is generally limited with 8-10 tree types, with the vast majority of these being a Florida-native tree species, Live Oak, (*Quercus virginiana*). USF was designated as a National Arbor Day Tree Campus USA in 2011 and has continued to meet the requirements each year since. Since 2010 USF has planted over 2,500 trees, predominately Live Oak but also native Cypress and Pine.

7. Aquifers, Aquifer Recharge Areas, and Well-field Cones of Influence

USF Tampa Campus utilizes the Upper Floridian Aquifer as its source for potable water and irrigation needs. This aquifer is a safe and reliable source for meeting the drinking water needs on campus. The pumping of water from this aquifer does not impact the surficial aquifer. However, minimizing water withdrawal, mostly through eliminating withdrawal for irrigation, is a means to protect and extend the life of the Upper Floridian Aquifer. Recharge for the Upper Floridian Aquifer occurs further to the north of the state, in Citrus County.

Because shallow wells for irrigation are not used by USF Facilities, the lowering of the groundwater table through pumping is eliminated on campus. In addition, retaining stormwater on the campus maximizes water infiltration to recharge the surficial aquifer, thereby keeping the groundwater table elevated. These efforts protect the nearby wetland and upland buffer areas on campus and in the USF Forest Preserve north of the main campus. USF follows SWFWMD and EPA water conservation guidelines. The NPDES MSR4 permit from EPA/DEP is a pollution control abatement permit governed by best management practices. The permitted groundwater withdrawal is a fixed quantity controlled by SWFWMD.

8. Air

USF reports that Air Quality Emissions Reports and Permits with Hillsborough County EPC are not available for this document. The most recent USF Greenhouse Gas Report was submitted to the American College and University Presidents Climate Commitment (ACUPCC) in January 2014: <http://rs.acupcc.org/ghg/2854/>. The report shows net emissions of 686, 173 metric tons of CO2e per Full-Time Enrollment, 69.2 metric tons of CO2e Per 1000 Square Feet.

9. Energy

Due to the costs and associated greenhouse gas emissions, reducing the University’s dependence on fossil fuels is critical to this conservation element. The University has adopted a LEED Silver Certification for new buildings. It provides for energy efficient practices and objectives in building construction. USF has implemented numerous practices, including heat pipes for energy recovery, led/induction lighting replacements, replacement of aging chillers with those that operate more efficiently, elimination of chillers with CFCs to comply with the commitment for LEED certification, reflective roof replacements, planting trees to reduce the heat island effect, bio-diesel use in the campus shuttle buses, use of solar panels, etc. USF continues to be engaged in research activities to reduce energy consumption; examples: algae conversion to biofuel, development of solar films for windows, etc. Energy consumption-related information is included in Element 7 Infrastructure Sub-Elements.

10. Water see also 7. above

The majority of the campus water consumption is drawn from campus wells. Subleased properties are served by the City of Tampa. USF continues to reduce per capita water use. SWFWMD and EPA water conservation guidelines are in use. The campus water use is under the USF Water Use Permit. Water conservation efforts include low flow fixtures, reuse of roof runoff for flushing, stormwater reuse in irrigation, alternative use of condensate water in water features, etc. Xeriscape and efficient irrigation systems have also been implemented to reduce water consumption. See also Element 7 Infrastructure and Element 10 Intergovernmental Communication.

11. Materials

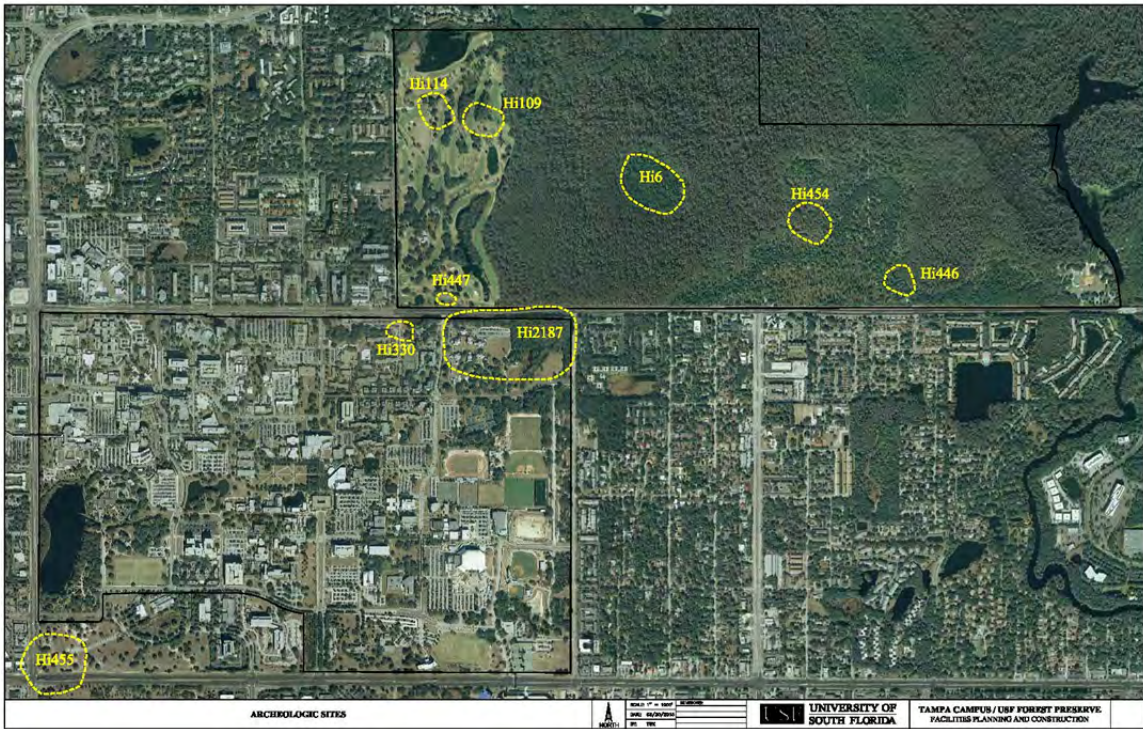
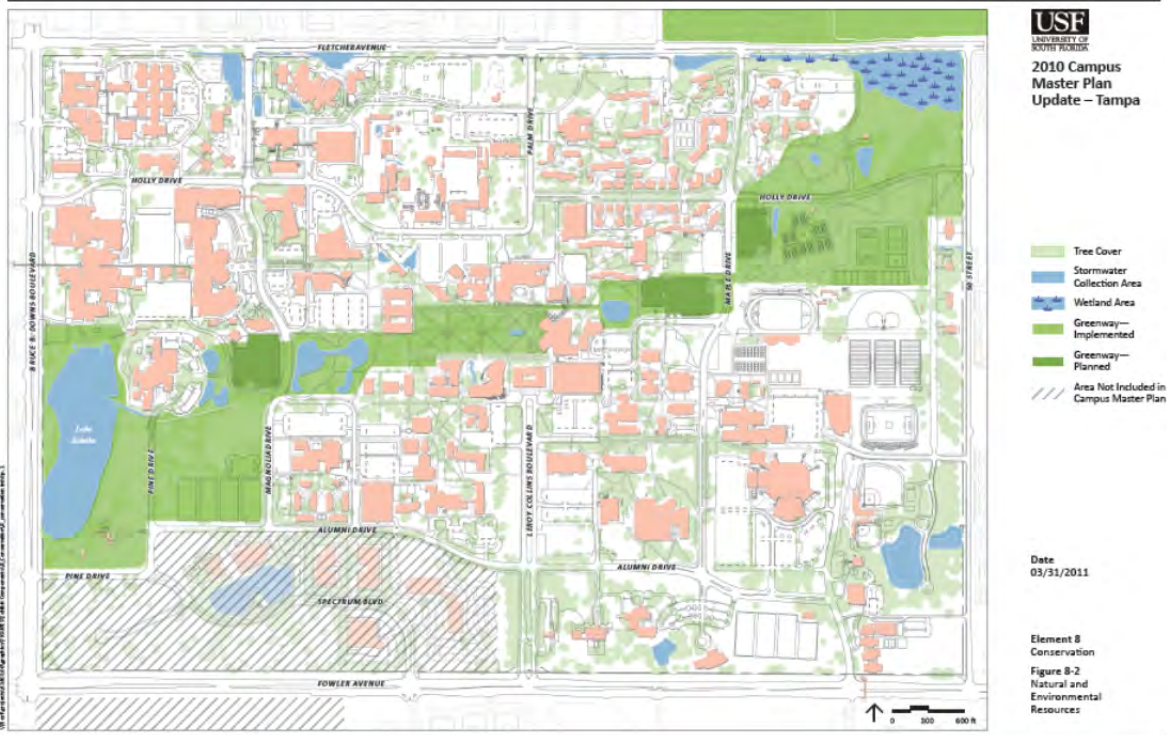
University use of materials (e.g. paper and other office supplies, construction materials) for construction and operations often constitutes an indirect use of natural resources. Minimization of materials is considered an aspect of this Conservation element. Information regarding University management of solid waste, including recycling, is addressed in Element 7 Infrastructure Sub-Elements.

Assessment of Existing and Natural Resources

Environmental Resources	Existing or potential commercial/recreational/conservation uses	Protection/restoration opportunities and methods	Assessment Information		Ecological functions and values
			Known University-generated pollution sources (rates, where available) or impacts	Pollution minimization strategies/techniques	
Surface Water (wetlands, lakes, ponds)	See Element 4, Future Land use	Protected through SW Florida Management District	Fertilizer use	Limit fertilizer use	Local Biodiversity Water Filtration
Floodplains	See Element 4, Future Land use	Policy not to develop in floodplains	Fertilizer use	Limit fertilizer use	NA
Existing Mitigation Sites	See Element 4, Future Land use	Protected as a mitigation area	NA	NA	Water Filtration
Naturalized Vegetative Communities	See Element 4, Future Land use	Protected through policy to protect the Greenway Planting of additional trees	Fertilizer use	Limit fertilizer use	Carbon sequestration Water filtration Local biodiversity
Native Plants	See Element 4, Future Land use	Investigating and testing different native plant varieties	NA	NA	Water conservation Water quality enhancement (through reduced fertilizer use) Greenhouse gas emissions reductions (through reduced fertilizer use) Local biodiversity
Geological Features	See Element 4, Future Land use	Water use reduction	Over-extraction of water	Implement a campus "water diet" Investigate use of reclaimed water for irrigation	NA
Aquifers, Aquifer Recharge Areas, and Well-field Cones of Influence	See Element 4, Future Land use	Protection of well-fields Water use reduction Aquifer recharge			NA
Air	NA	See Element 3, Transportation	Campus vehicular traffic	See Element 3, Transportation	Ecosystem health
Energy	See Element 7.7, General Infrastructure, Electrical Power and Other Fuels Sub-Element				
Materials	Element 7.4, General Infrastructure, Solid Waste Sub-Element				

NA Not Applicable

As identified in the USF Climate Action Plan, the University can continue to improve air, water, and open space quality by reducing traffic volume and idle time, increasing water storage and re-use, preserving open space for conservation, and erecting any new buildings compactly so as to consume less land. The Climate Action Plan is in the process of being updated: <http://rs.acupcc.org/cap/607/>



Links to Sustainability Tracking, Assessment & Rating System (STARS) report:

<https://stars.aashe.org/institutions/university-of-south-florida-fl/report/2014-01-14/>


See:

- Climate
 - [OP-4: Greenhouse Gas Emissions Inventory](#)
 - [OP-5: Greenhouse Gas Emissions Reduction](#)
 - Tier 2 Credits
 - [OP-T2-1: Air Travel Emissions](#)
 - [OP-T2-2: Local Offsets Program](#)
- Energy
 - [OP-7: Building Energy Consumption](#)
 - [OP-8: Clean and Renewable Energy](#)
 - Tier 2 Credits
 - [OP-T2-13: Timers for Temperature Control](#)
 - [OP-T2-14: Lighting Sensors](#)
 - [OP-T2-15: LED Lighting](#)
 - [OP-T2-16: Vending Machine Sensors](#)
 - [OP-T2-17: Energy Management System](#)
 - [OP-T2-18: Energy Metering](#)
- Grounds
 - [OP-9: Integrated Pest Management](#)
 - Tier 2 Credits
 - [OP-T2-19: Native Plants](#)
 - [OP-T2-20: Wildlife Habitat](#)
 - [OP-T2-21: Tree Campus USA](#)
 - [OP-T2-23: Landscape Waste Composting](#)
- Water
 - [OP-22: Water Consumption](#)
 - [OP-23: Stormwater Management](#)
 - Tier 2 Credits
 - [OP-T2-44: Waterless Urinals](#)
 - [OP-T2-45: Building Water Metering](#)
 - [OP-T2-46: Non-Potable Water Usage](#)
 - [OP-T2-47: Xeriscaping](#)
 - [OP-T2-48: Weather-Informed Irrigation](#)

See also Element 5 Transportation, Element 7 Infrastructure, Element 6 Housing and Student Support Services



-  USF Property Line
-  Greenway
-  Surrounding Open Space


 Area Not Included in Campus Master Plan

Element 8
Conservation

Figure 8.1
USF Campus Open Space

Date
12/03/2015

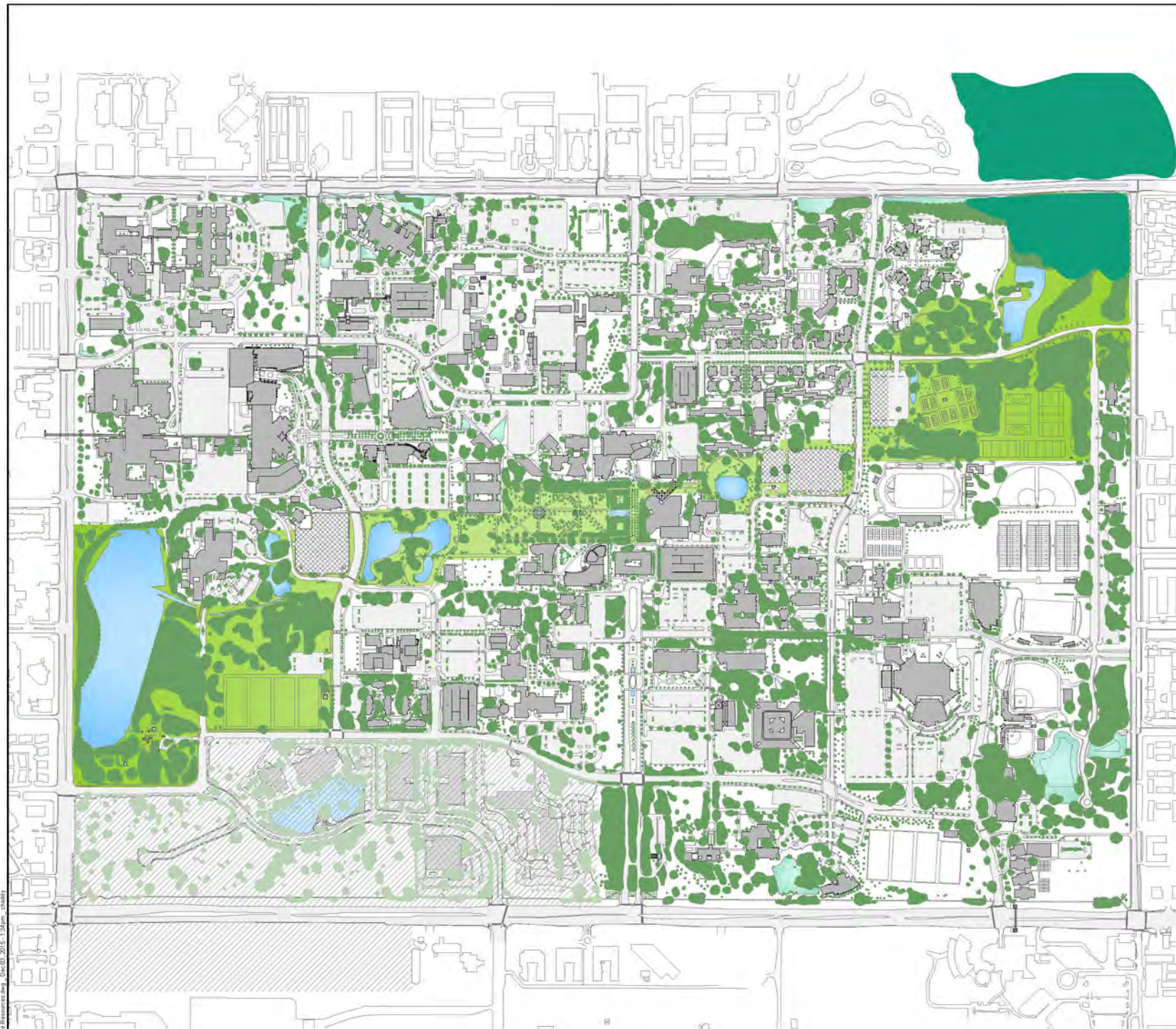
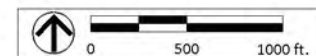
-  Tree Cover
-  Greenway - Existing
-  Parking to be Relocated
-  Wetland Area
-  Stormwater Collection Area

 Area Not Included in Campus Master Plan

Element 8
Conservation

Figure 8.2
Natural and
Environmental
Resources

Date
12/03/2015



— Campus Boundary



Notes

Acreage of the USF Forest Preserve Area (including the Claw Golf Course) is 721.4

Element 8
Conservation

Figure 8.3
USF Forest Preserve Area

Date
12/03/2015



Sinkhole Year Recorded

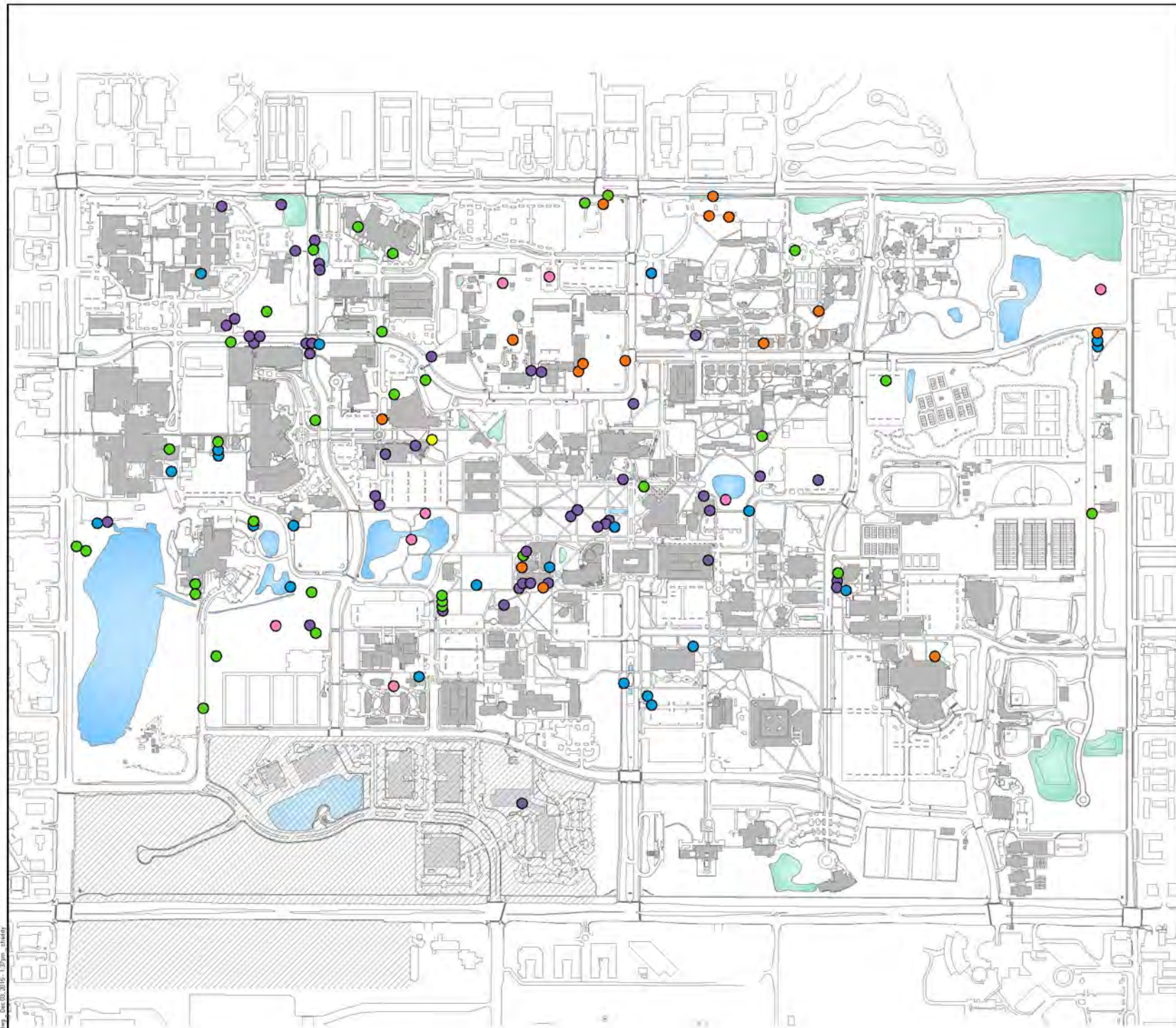
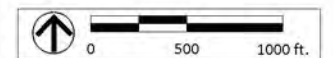
- → - 1965
- 1966 - 1975
- 1976 - 1985
- 1986 - 1995
- 1996 - 2005
- 2006 - →


▨ Area Not Included in
Campus Master Plan

Element 8
Conservation

Figure 8.4
Sinkhole Plan


Date
12/03/2015



 Tree Cover

Notes

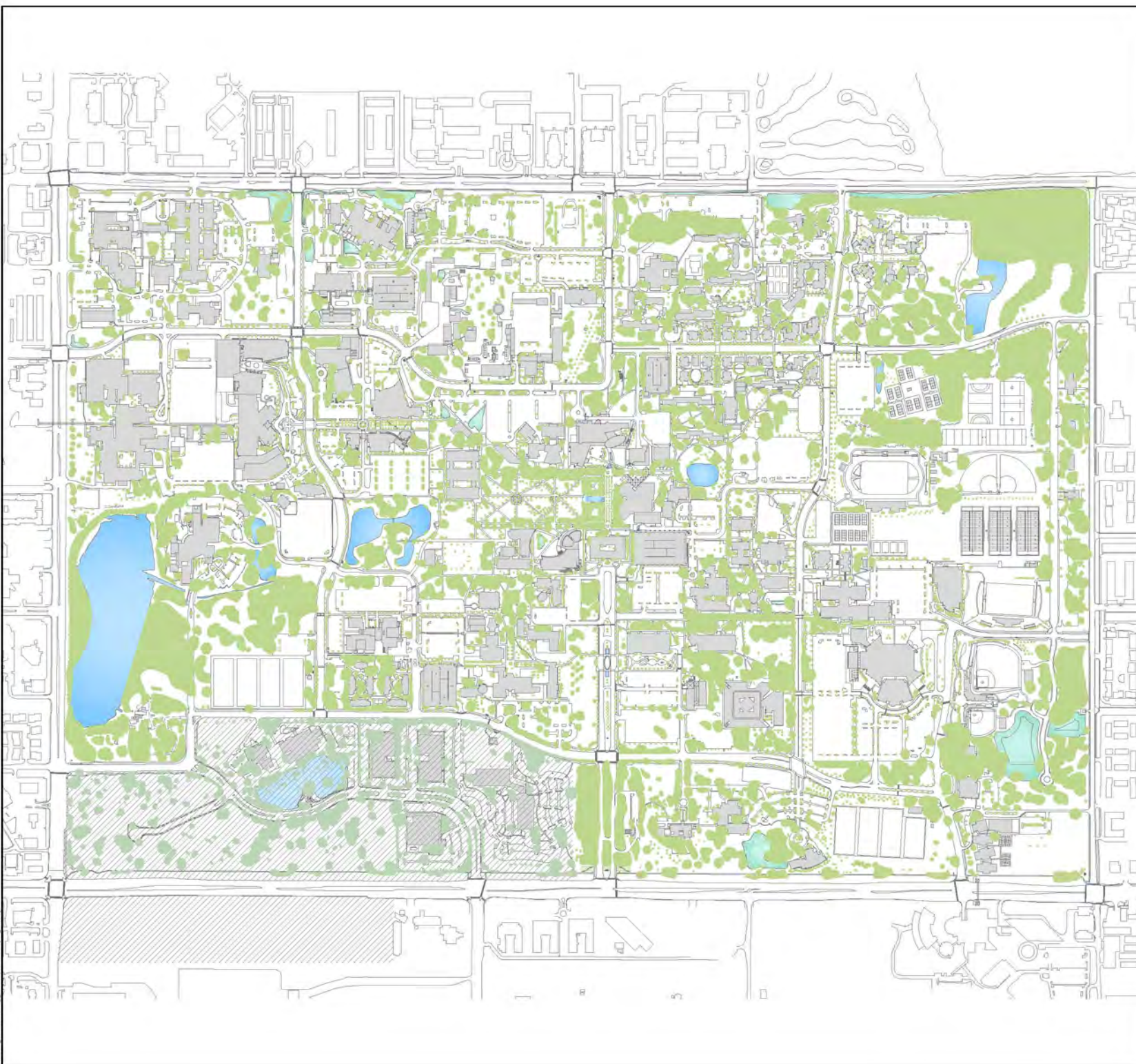
Approximate acreage of
the tree cover is: 228

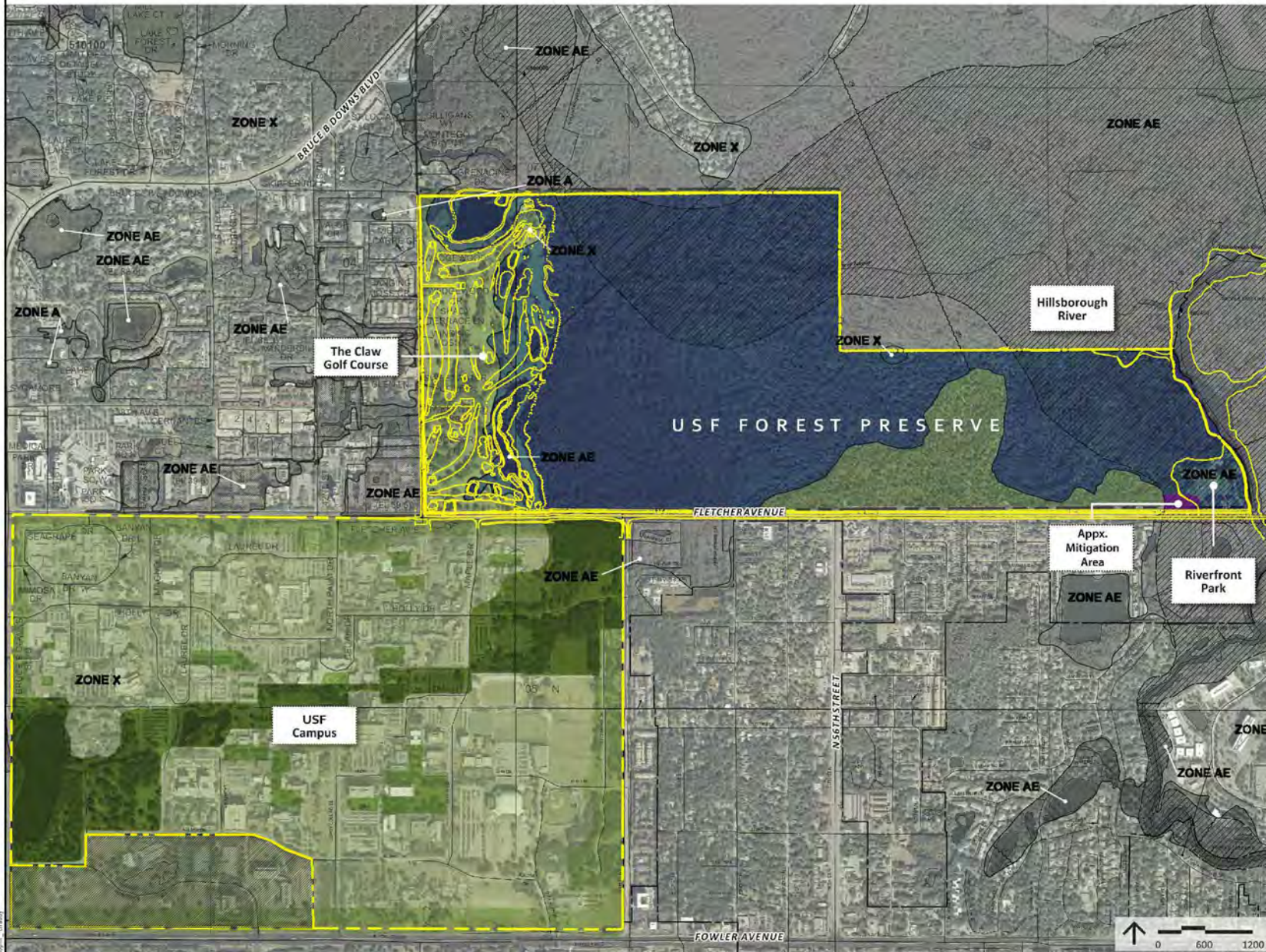
 Area Not Included in
Campus Master Plan

Element 8
Conservation

Figure 8.5
Tree Cover

Date
12/03/2015





- Campus Boundary
- Floodplain
- Floodplain within Forest Preserve Area

Notes
Acreage of floodplains is 386.

Element 8
Conservation

Figure 8.6
Floodplains

Date
12/03/2015

USF FOREST PRESERVE

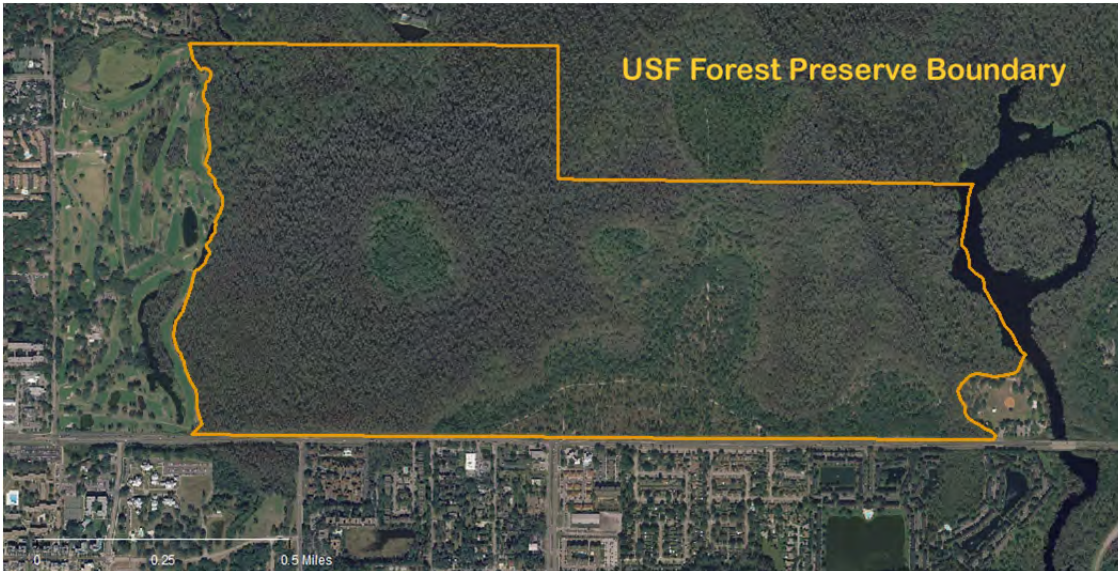
WHITE PAPER*

Gordon A. Fox, David Lewis, Earl D. McCoy, and Henry Mushinsky
Department of Integrative Biology

INTRODUCTION

The USF Forest Preserve (FP) is a major asset to the University. It is used extensively for student and faculty research. More than 70 research papers in the peer-reviewed literature have been focused on the FP, as have more than 20 M.S. theses and Ph.D. dissertations. USF researchers from the departments of Anthropology, Civil Engineering, Geography, Geology, and Integrative Biology have conducted research at the FP in the last 5 years. Undergraduate and graduate classes from Anthropology, Geography, Geology, and Integrative Biology have similarly made use of the FP.

The FP comprises roughly a square mile of land (Figure 1), located north of Fletcher Avenue, roughly between the Golf Course and Riverfront Park. It has been administered by the Biology (and subsequently, Integrative Biology) Department since 1960s, with the goals of conservation, teaching, and research. Starting



in the 1970s, a series of experimental burn plots were established, mainly along Fletcher, and controlled burns were conducted until 2005. Since then it has been difficult to meet the regulatory standards for prescribed fires, and they have not been conducted in the last few years. The FP has been protected for many years by being incorporated in the Master Plan.

HOW THE FP IS USED

TEACHING

The FP provides a resource unlike any other for courses. In the last several years, the FP has been used by these classes:

- Principles of ecology (PCB3043L)
- Population biology (PCB6462C)
- Statistical ecology (PCB6455)
- Wetland environments (EVR4027)
- Ecosystems of Florida (EVR4930)
- Soils in archaeological research (ANG 6115.001)
- Diversity and evolution of plants (BSC4933)
- Hydrogeology field methods (GLY4947L)
- Ecology of plants (BSC4933)
- Ecohydrology (GLY6824)
- Herpetology (BSC 5425)



Figure 1. Dr. Earl McCoy and students.

Moreover, numerous undergraduate students have participated in unstructured coursework, conducting research in the FP. In a typical year, some 15-20 students gain research experience through this route.

The FP has also provided an important resource for student research. A few examples of student research there within the last several years include:

- Maria del Pilar Lopera Blair (Ph.D. student, IB): gene flow and speciation in *Liatrix*.
- Neal Halstead. (M.S., IB): fire in an urban habitat island
- Dave Jennings (Ph.D. student, IB): competition between plants and animals
- Stephanie Butera (Honors thesis, Anthropology): decomposition processes and soil chemistry
- Additional research by Ph.D. students from University of California-Davis and Louisiana State University.

HOW THE FP IS USED

FACULTY RESEARCH

A considerable number of short- and long-term faculty research projects are conducted in the FP. One can get an impression of the breadth of these projects by considering the following, all of which have been conducted within the last several years.

- Dr. Erin Kimmerle (Anthropology): changes in experimental gravesites.
- Dr. Mark Ross (Civil & Environmental Engineering): hydrology of Florida sandhills.
- Dr. Ruiliang Pu (Geography): remote sensing to estimate environmental parameters.
- Dr. Jason Rohr (Integrative Biology): causes of amphibian decline
- Dr. Mark Rains (Geology): water availability to vegetation.
- Shawn Landry (Architecture): urban forests.



- Drs. Earl McCoy and Henry Mushinsky: studies of the gopher tortoise

Figure 3. Experimental grave site research.

Over the years, USF’s ability to attract externally funded research grants has been considerably strengthened by the FP. In some cases, the FP itself proved to be the location of funded research, such as in the 2002 NSF grant (for \$2.2 million) to E. D. McCoy and H. Mushinsky on “upper respiratory tract disease and environmentally threatened gopher tortoises.” In other cases, research at the FP provided the initial data to support the case for external grants.

Perhaps the most telling measure of the FP’s importance for research at USF is the list of more than 70 peer-reviewed publications based on research there.



Figure 4. The sandhill habitat has been the site of much student and faculty research.

HOW THE FP IS USED

SERVICE

In recent years, the FP committee, together with the Botanical Garden, has organized wildflower walks involving dozens of people from the community. Tampa Audubon Society conducted a segment of its Christmas Bird Count in the FP.

The FP directly abuts Riverfront Park. We have cooperated with the Campus Recreation department to develop a self-guided nature walk through the FP, to educate students.

THE FUTURE OF THE FP

The FP has, for several decades, been a resource of considerable value to USF as an outdoor classroom, and as the laboratory for many studies. We believe it is possible for the University to get more value from the FP in both of these respects, and in some others as well. The value of the FP in both of these senses stems from the fact that it is a stone’s throw from the main campus, yet is large and relatively wild, and has diverse habitats.

Two other aspects of the FP make it particularly valuable for research. First, it preserves the last remaining sizable patch of sandhill habitat in the area. Many species of animals and plants that depend on this kind of habitat and are present in the FP would otherwise be absent from a substantial area. Second, the FP is near the edge of a substantial “island” of undeveloped land that is surrounded by increasing urbanization. This presents numerous opportunities for research, teaching, and community outreach. This also means that the FP plays an important role in such ecosystem functions as CO₂ uptake and regulation of runoff, and thus its preservation may be increasingly important to the University.

Finally, the Department of Anthropology has special interest in some areas of the FP. These may be important in future research, but in any event the University has a legal obligation to protect the resource.

MANAGEMENT ISSUES & RECOMMENDATIONS

There are a number of management issues facing the FP and the University's ability to use it more effectively. Our central recommendations involve institutionalizing USF's support for the FP's mission. Here we outline the particular issues faced by the FP, and recommend ways in which they may be addressed.



Figure 5. The extensive wetlands in the FP are an important part of USF's interaction with the environment of Tampa Bay, and also provide opportunities for teaching and research.

PUBLIC FACE

At present the FP has no public face save some web pages on the IB Department's web site. There is a fence along Fletcher Ave., and the gates have faded signs telling the public that they may not trespass.

- **Recommendation 1:** Develop an attractive web site for the FP. A well-maintained website will prove useful for those interested in research or teaching there. It will also be an important avenue by which USF can publicize its preservation of this important resource.
- **Recommendation 2:** Install new signage. New signage along Fletcher Avenue and at trails that enter the FP from adjacent properties can be a low-cost way of simultaneously reducing trespassing and publicizing USF's mission.



Figure 6. We need to manage the FP's resources.

MANAGEMENT

Land management issues include physical maintenance of fencing and fire lanes, control of invasive species (including feral hogs as well as such plant pests as *Melaleuca* and cogongrass), and maintenance of signs.

Both trespassing and poaching occur in the FP with some regularity.

Much of the trespassing is benign, but it requires regular checking both because USF may face liability issues and because some trespassers may cause fires. Similarly, incidents

of poaching have occurred in the FP. Here the principle concern is the safety of those involved in teaching or research.

- **Recommendation 3:** Establish a Director of the FP as part of a faculty position. The Director's job would be to expand and coordinate research and teaching in the FP, seek external funding for the FP, and coordinate the use of the FP in public outreach work. We envision this as constituting a significant part of a faculty appointment.
- **Recommendation 4:** Hire a manager for the FP. At least initially, this can be a half-time position. The manager would report to the Director. The manager will, among other duties, coordinate and conduct much of the regular maintenance work, check many areas for signs of unauthorized use, supervise the maintenance of a database on permitted uses, and prepare and organized prescribed burning.
- **Recommendation 5:** Provide an annual budget for maintenance and management.

PRESCRIBED BURNING

Fire is a key feature of Florida ecosystems, and this is true in the FP. Many of the habitats in the FP are normally fire-dependent. Moreover, many species – especially the threatened gopher tortoises – depend strongly on frequent fire to maintain appropriate habitat. Without fire, the value of the FP to USF will decline. Moreover, without a fire program, the chance of wildfire – started by lightning strikes, cigarettes or sparks from passing vehicles, or by trespassers – greatly increases, and as fuel accumulates, the potential liability to the University increases as well.

Faculty in the IB Department have conducted prescribed fire in the sandhill portion of the FP, but in recent years regulations and lack of resources have made this quite difficult to do. Because the FP is in an urban setting, permits for prescribed fires can only be issued under a narrow range of weather conditions. However, burning also requires trained and licensed personnel, and proper equipment – none of which the IB Department nor the university have.

- **Recommendation 6:** Purchase appropriate equipment for maintaining fire lanes, or (more likely) contract with others to provide the equipment.
- **Recommendation 7:** Work with urban forestry professionals to inventory the biological resources of the FP and develop a burning plan.
- **Recommendation 8:** Contract with others to conduct the prescribed burning.

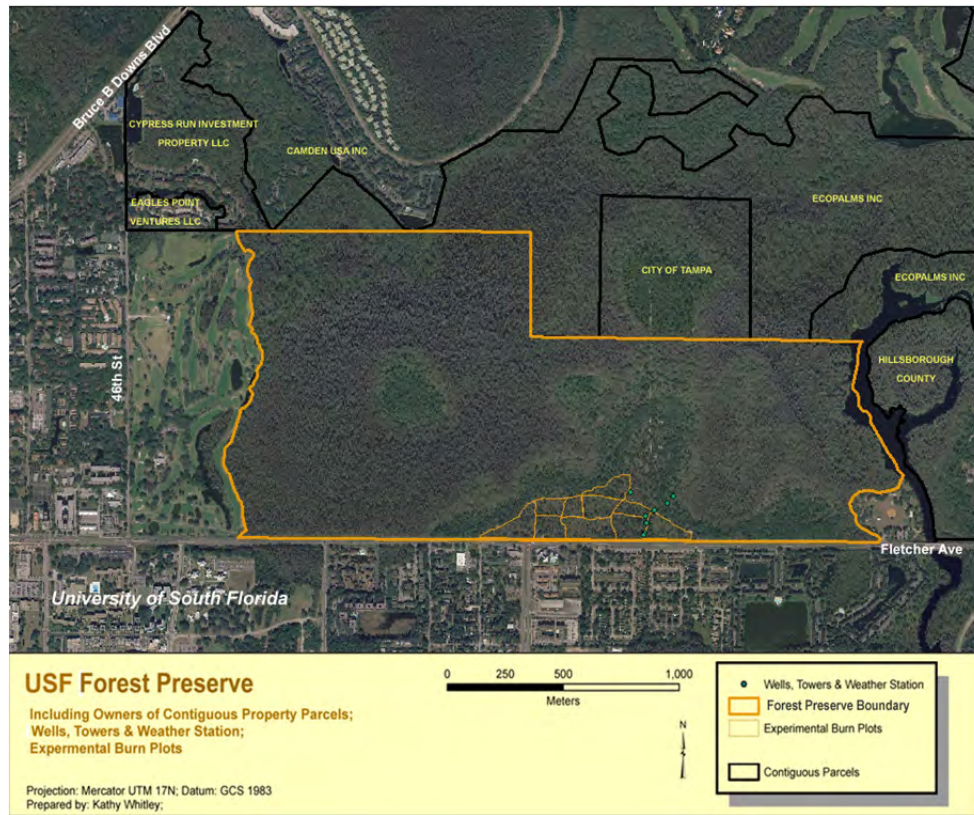


Figure 2. The FP has been one of USF's best-kept secrets. It's time to make it one of our best-known assets.

GROWING THE FP'S USE

Key to the success of the FP will be to develop new opportunities. These include interactions between departments to use the FP in new and creative ways, proposals for research grants, proposals for grants to the FP as an institution, development of small courses, public tours, and interactions with other universities and government agencies.

- **Recommendation 9:** Provide University resources and connections to the Director. The Director position needs to be meaningful. The University can provide important support in several ways, for example, by collaborating on fund-raising with the Director.
- **Recommendation 10:** Establish an Advisory Board. The board would be composed of representatives of those USF departments with a stake in the FP, as well as representatives from the community. The mission would be to support the Director's efforts to develop new opportunities.
- **Recommendation 11:** Seek membership in national organizations of research stations. Doing so will help establish USF's presence in organized environmental research, and will encourage cross-fertilization of ideas with other universities.



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Element 9:

Recreation and Open Space

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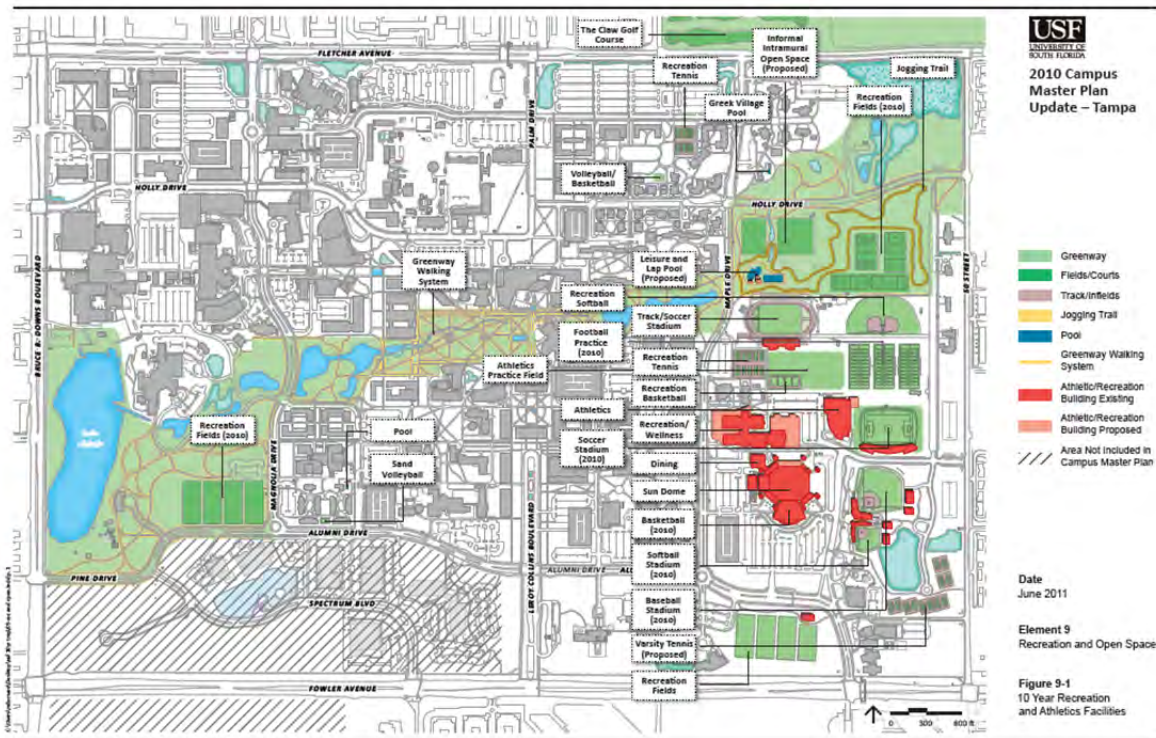
Element 9 Recreation and Open Space

This element ensures the provision of adequate and accessible recreation facilities and open space to meet the future needs of the University.

Existing conditions university-owned or managed recreational sites:

Recreation and Athletics

Campus recreation and open spaces are composed of dedicated recreation and athletic facilities and varied informal open spaces. Tables 9-1 and 9-2 present an inventory of existing recreation and athletic facilities.



Campus Recreation

Campus Recreation offers students programs and facilities including a 28,000 square-foot, fully-wired fitness center, group fitness classes, aquatics, intramural sports, club sports and outdoor recreation opportunities. Campus Recreation operates many fields and facilities across the campus as well as the Riverfront Park. <http://usfweb2.usf.edu/CampusRec/>

Table 9-1 Inventory and Usage of Existing Recreation Facilities

Facility Type	Number/Account	Estimated/ Projected* Usage	Acreage/ Square Footage
GYMNASIUM BUILDING			
Offices (REC 111)			3,650 sf
Maintenance (GYM 0030)			1,100 sf
Dance (GYM 005)		475/wk	2,717 sf

Outdoor Resource Center (GYM 007)			978 sf
Office (GYM 007)			126 sf
Athletic Training(GYM 008)			146 sf
ORC Equipment (GYM 013)			690 sf
Classroom (GYM 009)		100/wk	1,185 sf
Fitness (GYM 021)		5,698/wk	7,619 sf
Lower Gym (GYM 022) (multi-use arrangement)	Strength and conditioning, group fitness Mezzanine: Cardio fitness	972/wk	12,658 sf 9,000 sf
Equip. Checkout & Storage (GYM 023)			1,023 sf
Racquetball Courts (GYM 024, 026, 028, 030, 032, 034)	6 courts	569/wk	4,800 sf
Lower Aerobics (GYM 033)		722/wk	1,930 sf
Upper Gym (GYM 100) (multi-use arrangement)	1 center BB court 2 crosswise BB courts 3 volleyball/8 badminton courts	595/wk	13,928 sf
Mat Room (GYM 101)		345/wk	2,112 sf
Upper Aerobics (GYM 107)		887/wk	3,638 sf
Indoor Pool (GYM 108)	25 yards, 8 lanes	950/wk	11,105 sf w/deck
Men’s Student Locker/Showers	--lockers		2,919 sf
Women’s Student Locker/Showers	--lockers		2,302 sf
Men’s Staff Locker/Showers	--lockers		1,326 sf
Women’s Staff Locker/Showers	--lockers		1,042 sf
Magnolia Fitness Center	Strength and cardio equipment		
Argos Fitness Center	Strength and cardio equipment/ group fitness studio		
<u>CAMPUS RECREATION CENTER AND EXPANSION</u>			
Cycling Studio			
Weight Room			6,500 sf
Basketball Courts/Volleyball Courts	4 courts/6 courts		14,000 sf
Aerobics/Dance (REC 022B)			
OUTDOOR CAMPUS FACILITIES			
Andros Pool	25 yards, 6 lanes	1,100/wk	18,000 sf w/deck
Greek Village Pool			
Tennis Courts (lighted)	10 courts PE	850/wk	64,800 sf
	6 courts Andros	650/wk	38,400 sf
Intramural Football/Soccer Fields	4 fields Fowler		
	5 fields NE		
	4 fields SW		
Outdoor Basketball Courts	8 courts	1,000/wk	30,324 sf
	2 BB/VB Argos	300/wk	4,200 sf
	2 BB/VB Andros	300/wk	4,200 sf
Sand Volleyball Courts	1 court Argos	100/wk	1,800 sf
	1 court Andros	100/wk	1,800 sf
Softball Fields	2 fields		
Para Course Fitness Trail	1.4 mile loop, 18 exercise stations	650/wk	16.5 ac
Argos Picnic Area			.5 ac

Andros Picnic Area			.5 ac
RIVERFRONT PARK FACILITIES			
	Picnic Pavilion	500/wk	12.6 ac
	Boathouse		
	Softball Field		
	Sand VB Court		
	Restroom Bldg.		
	Kayak/Rope Shed		
	Ropes Course		
	Disc Golf Course		

Source: USF Recreation

Athletics

USF is a member of the American Athletic Conference, with 17 men's and women's varsity teams competing at the NCAA Division I level. New facilities for practice and competition, along with a completely renovated USF Sun Dome, put the University's athletic facilities on par with virtually every top program in the country. The following intercollegiate women's sports teams compete for USF: soccer, basketball, softball, volleyball, tennis, golf, cross country/track and field, and sailing. USF men's intercollegiate teams compete in: football, soccer, basketball, baseball, tennis, golf, and cross country/track and field. <http://www.gousfbulls.com/>

Table 9-2 Inventory and Usage of Existing Athletic Facilities

Facility Type	Number/Account	Estimated/Projected* Usage	Acreage/ Square Footage
SUN DOME	4 BB or 6 VB Courts	Summer camp only	25,000 sf
Arena – Level 2 (multi-use arrangement)			
Arena – Level 1 (multi-use arrangement)	1 BB or VB Court	540/wk (seasonal)	20,000 sf
Corral	1 BB or VB Court	200/wk (seasonal)	11,000 sf
	3 Offices	160/wk	
	Conference Room		
	Reception Area		
	3 Storage Rooms		
	Locker Room		
Sun Dome Service Level			
Sun Dome Administrative Suite	13 Offices/Reception	560/wk	
Men's Basketball Suite	Offices/Support	320/wk	
Women's Basketball Suite	Offices/Support	240/wk	
Sports Medicine Clinic	Treatment Area/Support	215/wk	
Strength and Conditioning	Weight Room and Storage	215/wk	
Men's Basketball Locker/Showers		75/wk	
Women's Basketball Locker/Showers		75/wk	
Visiting Basketball Team Locker Room	2 Locker Rooms		
Ticket Office	2 Offices Conference Room	160/wk	
Maintenance/Production	7 Offices Conference Room Support	320/wk	
Housekeeping	Office/Support	160/wk	
Concessions	2 Offices/Support	120/wk	
Meeting Rooms	2 Meeting Rooms	150/wk	
Performance Dressing Complex	6 Dressing Rooms	75/wk	

Laundry	Laundry/Support	28/wk	
<u>ATHLETIC TRAINING CENTER</u>			
Strength and Conditioning	3 Offices/Support Weight Room Cardio Room	2,400/wk	10,696 sf
Sports Medicine Clinic	4 Offices/Support 2 Exam/4 Treatment Therapy/Work Rooms	2,400/wk	6,133 sf
Equipment Room	2 Offices/Support Laundry	2,400/wk	4,859 sf
Big East Conference Room	Conference/Kitchen Support	150/wk	1,388 sf
Athletic Director’s Suite	13 Offices 2 Conference Rooms Kitchen/Support	1,040/wk	5,869 sf
External Affairs Suite	16 Offices 20 Work Stations 2 Conference Rooms Kitchen/Support	1,440/wk	5,951 sf
Olympic Sports Suite	15 Offices 10 Work Stations Conference Room Support	1,000/wk	4,372 sf
Academic Enrichment Center	6 Offices/Support Study Lounge	1,200/wk	7,518 sf
Football Suite	17 Offices 10 Meeting Rooms 3 Conference Rooms Kitchenette/Support	1,200/wk	10,790 sf
Men’s Staff Locker Room	24 Full, 12 Half	150/wk	550 sf
Women’s Staff Locker Room	15 Full/10 Half	100/wk	438 sf
Football Staff Locker Room	19 Lockers	95/wk	454 sf
Football Locker Room	116 Lockers	580/wk	6,073 sf
Baseball Locker Room	36 Lockers	180/wk	706 sf
Softball Locker Room	22 Lockers	110/wk	593 sf
Men’s Tennis Locker Room	12 Lockers	60/wk	269 sf
Women’s Tennis Locker Room	14 Lockers	70/wk	327 sf
Men’s Soccer Lockers Room	29 Lockers	145/wk	450 sf
Women’s Soccer Locker Room	33 Lockers	165/wk	480 sf
Men’s Track/XCC Locker Room	18 Full/12 Half	120/wk	269 sf
Women’s Track/XCC Locker Room	34 Full/42 Half	275/wk	638 sf
<u>SUN DOME MUMA BASKETBALL PRACTICE EXPANSION</u>			
Basketball Courts	2 full court	TBD	51,000 sf
Locker Rooms			
Support Offices			
<u>OUTDOOR FACILITIES</u>			
Varsity Tennis	12 Courts (no lights)	360/wk (seasonal)	3.6 ac
Soccer/Track Stadium	Soccer Fields (lights) 400 M Track	1,000/yr (seasonal) 1,200/wk (seasonal)	6.9 ac
Soccer Practice Field	1 Field (no lights)	360/wk	2.7 ac

		(seasonal)	
Soccer Stadium	Seats 1,000		
Baseball Stadium	1 Field (lights) Seats 1,500	800/wk (seasonal)	4.5 ac
Softball Stadium	1 Field (lights) Seats 750	480/wk (seasonal)	1.8 ac
Football Practice fields	3 Fields (lights)	3,000/wk (seasonal)	5.0 ac

Source: USF Department of Athletics

Currently, USF Athletics also uses the following off-campus facilities:

- USF Football competes in the Raymond James Stadium, Downtown Tampa.
- USF women’s and men’s Golf teams use the following “home” courses for practice and competition; Lake Jovita in Dade City, Innisbrook in Innisbrook, Saddlebrook in Wesley Chapel, and Tampa Palms, Hunter’s Green and The Claw, all in Tampa. The Claw, located on USF land immediately north of Fletcher Avenue from the core campus, includes an 18 hole course, club house and restaurant – all privately managed.
- USF Sailing sails out of USF St Petersburg Campus.

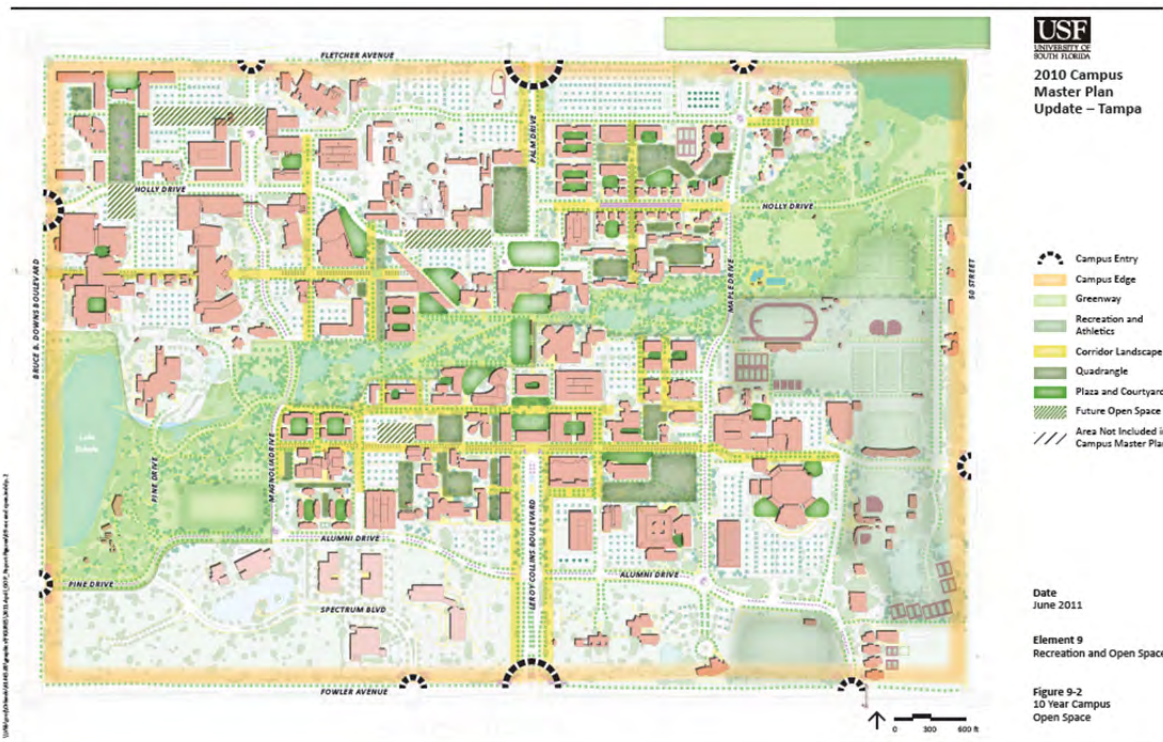
Main Campus Open Spaces

The framework for a system of interconnected campus open spaces has been promoted and developed through previous master plans. Within the main campus, the open space framework components include:

- perimeter landscape and gateways,
- pedestrian corridors,
- the Greenway,
- Central Quadrangle
- precinct quadrangles, and
- Courtyards and plazas.

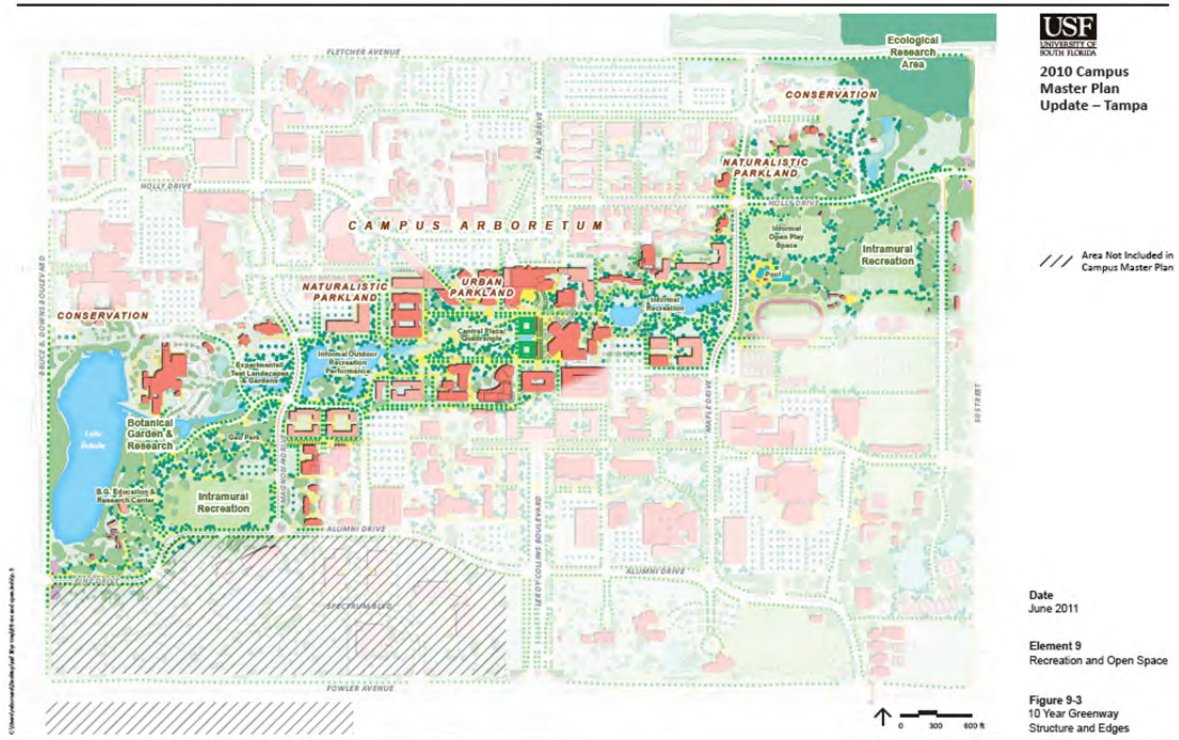
Both spatial and programmatic considerations are important in evaluating and planning for the campus open space framework.

Figure 9.2, *Open Space*, provides an overview of the open space framework components of the USF Tampa campus.



Perimeter landscape and campus gateways:

The landscape character of the campus perimeter is an important component of the public face of USF both as an institution and as part of the overall wayfinding of the USF-Tampa campus setting. The existing perimeter landscape is generally a “low level treatment” landscape of open lawn and live oak trees, with little active programmatic use or definition. As a large campus setting with almost five miles of campus edge, the perimeter landscape poses visual and maintenance concerns, as well as opportunities to shape a distinctive USF public identity that responds to the viewing speed of passing motorists. As a large distinct open space one passes through in entering campus, the perimeter landscape provides an opportunity to “layer” the entry, reinforce campus wayfinding, and establish greater cohesiveness of the overall campus open space framework. Within the context of the perimeter landscape, special gateway identification treatments further assist in establishing institutional identify and providing essential wayfinding cues. The Master Plan Update is being coordinated with signage and wayfinding design efforts and will address identification, hierarchy, and treatment of the gateways and campus edges.



Greenway:

The Greenway is intended as the dominant element of the campus open space system. The identified boundary includes a contiguous corridor of over 125-acres from Lake Behnke at Bruce B. Downs Boulevard on the southwest corner to the wetland area at Fletcher Avenue and 50th Street on the northeast and continues across Fletcher to include the Ecological Research Area to the northeast. The Greenway has been established as a “no-build” zone because of the ecological importance and the role it plays in establishing an open space counterpoint to the urban environment and in providing a sense of clarity and orientation to the campus. Integration of stormwater management in the overall Greenway design continues to be a desired objective and one that is fitting with the desire for a more sustainable, low impact approach to campus site design, including a desire to make resource management and natural processes such as water cycle a “visible” element of the campus environment.

Efforts have been made, beginning with the 1995 Campus Master Plan, to establish continuity of the open space for the length of the Greenway by strengthening the definition of the edges through building placement, such as the Natural and Environmental Sciences and Integrated Sciences Buildings at the south edge of the Central Quadrangle, and by prohibiting building within the Greenway. However, the discontinuity of the Greenway remains a challenge to establishing it as a visually strong, contiguous, organizing element. Continuity is impeded by the presence of two popular parking areas Lots 17 A and B near the Argos Complex and Lot 19 east of Shriners Hospital for Children and further reduced in impact by parking areas 5 and 35 (also near Argos) at its edges. The narrow “choke point” of the Greenway, located at its high point as it passes between Student Services Building and the Bookstore and Student Health Services, visually separates the Greenway into two distinct sections – east and west with minimal visual connection or even a “reminder” of its presence as it passes through this narrow link.

Programming for varied experiences along the length of the Greenway is consistent with the desire for creation of a diversity of landscapes ranging from conservation areas, to naturalistic parkland, to highly developed plazas. Program ideas cited in interviews and observed on campus include:

- Passive recreation, such as reading, sunbathing, socializing, observing wildlife, listening to and playing live music, and display of public art; and
- Active recreation, such as walking, biking, Frisbee and games of catch, team recreational sports, and performances.

Accommodating recreation and athletic fields while preserving the integrity of the Greenway is an ongoing concern.

Central Quadrangle:

The 15-acre Central Quadrangle is the largest of the campus’ discreet open spaces and the mid-point of Greenway activity. Buildings, including the Phyllis P. Marshall Center, Natural and Environmental Sciences and the Interdisciplinary Science Teaching and Research Facility help to define and constrain the edges of the expansive space and provide activity at the edges. Double rows of trees on walks at the north and south edges and dense planting with pool and fountain at MLK Plaza on the east end provide strong edges that invite pedestrians with shade and the cooling feel and sound of water. In contrast, the expansive lawn with formal ordered crossing walks is forbidding on hot days due to the lack of shade or varied groundplane. Two shade structures located within the Central Quadrangle along the east-west axis provide intermediate respite, but are isolated within the large open space and lack the landscape context massings of trees would provide to integrate the structures within the larger space. Consequently, the isolation not only discourages use of the shade structures, but the larger quadrangle as well. Plans for tree planting along the crossing quadrangle walks will make the crossing the quadrangle more comfortable. Additional planting – primarily trees – will continue to help to shape the interior of this expansive undefined space, create varied and more interesting spaces and use activity areas, and provide connection to the Greenway as it transitions east and west away from the Central Quadrangle.

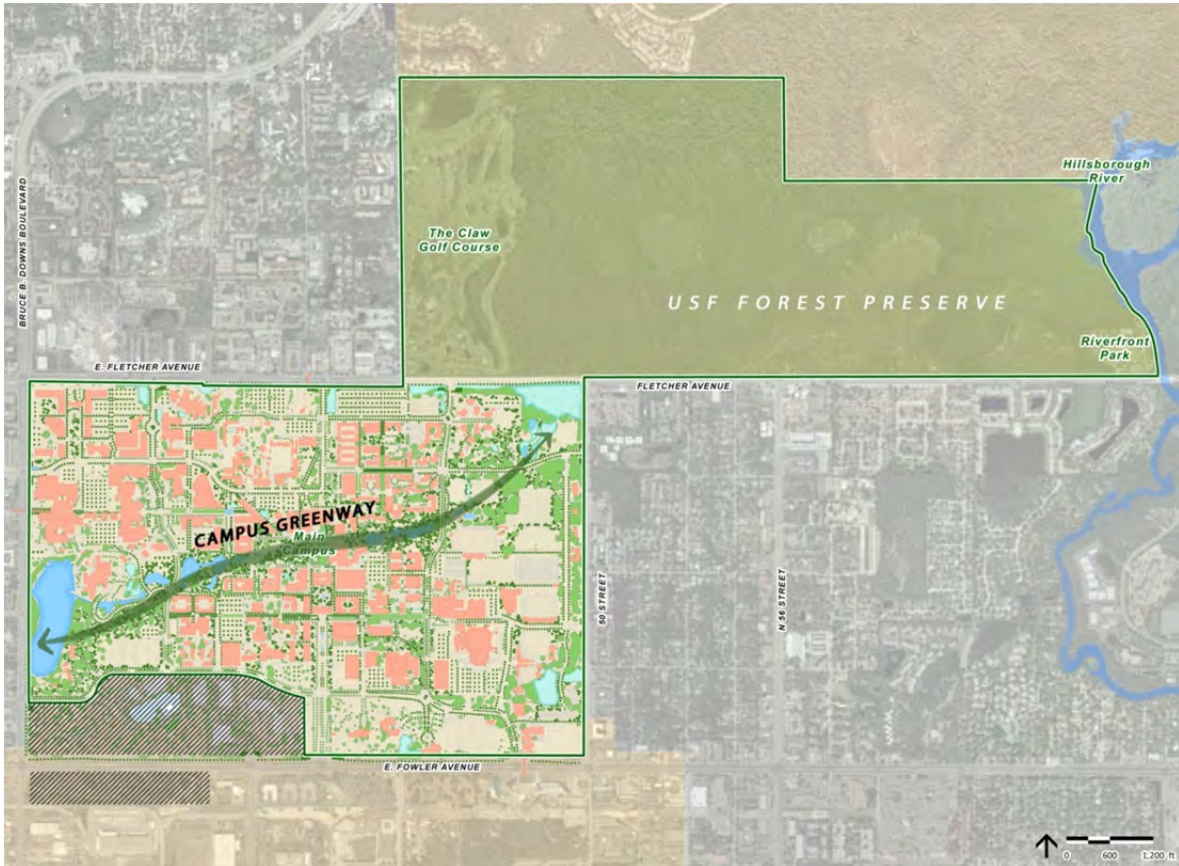
Programmatically, the space is active on the edges for reasons cited above (spill over from buildings, plazas, shade, and water) but much less used within. Attention to the Central Quadrangle space as a whole, with an emphasis on enhancing connections to the Greenway, especially as it transitions to the west, provides opportunity to activate the lower portion of the Center Quadrangle. The scale of the space, if shaded, provides a distinct opportunity as a setting for on-campus large group outdoor gatherings and events in mild weather.

Precinct Quadrangles:

Within campus precincts, quadrangles provide opportunity for larger scaled civic/community open spaces connecting individual buildings around the edges of the space into a community of facilities. Areas for quadrangles exist in all precincts, but generally lack strongly defined edges – neither through planting or architecture. Adjacent uses and programming of the quadrangles should be considered in planning for each precinct. Overlaying botanical data and public art locations will be useful in designing distinct quadrangles with institutional links to the larger campus (through campus arboretum or art collection for example).

Courtyards and Plazas:

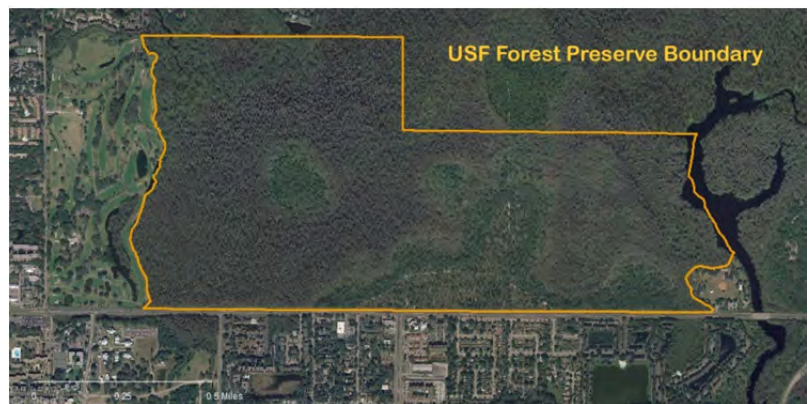
Courtyards, plazas and gardens, developed in high density areas of campus provide inviting, humane outdoor living spaces appropriate to the climate of west central Florida. As more intimate spaces, their direct relationship to adjacent building(s) provides an opportunity to extend interior activities and community to the outdoors, provide “owned space,” and establish distinct identity. The introduction of “owned space” or sites in which campus users feel comfortable or a sense of belonging are essential and best accomplished in these active and intimate spaces. Particularly important for a campus with a large commuting population, students need places to belong – as participants and/or observers – to come together with other community members or spend time comfortably in quiet. The Marshall Center amphitheater works well in this regard, as does the Sessums Mall outside Cooper Hall. Shade and amenities such as seating, tables, food and wireless access are critical to the success of these spaces.



In addition to core campus open space, USF Tampa has these additional recreational/open space facilities – extending the Greenway to the north- north east and forming a valuable part of USF’s open space framework:

USF Forest Preserve

The USF Forest Preserve, formerly known as the Ecological Research Area, is located north of Fletcher Avenue to the northeast of the campus proper. It consists of nearly one square mile of forest, mostly swamp/wetland. It was set aside by the University as a preserve for research and teaching, and is one of the largest urban forests in the country the area is administered by the Department of Biology. In addition to its use by the Department of Biology, it is also the site of research conducted by the Departments of Environmental Science and Policy, Geology, and Anthropology. Interest has been expressed to increase opportunities for general campus population access to the area as an eco-recreation site with controlled access through guided recreation/field trips such as hiking and kayaking. For additional information see Element 8 Conservation.



The Claw

The Claw, the USF Tampa golf course, is professionally managed by Billy Casper Golf, LLC (BCG). BCG is paid a monthly management fee and has the opportunity for profit sharing based on performance, as applicable. The course is State land and is leased to USF from the Board of Trustees of the Internal Improvement Trust Fund.

The Claw facilities are open to the public and include an 18 hole golf course, grass tee driving range, learning center, and putting/chipping green, as well as club house with golf shop and sports grill dining. The Chowdhari Golf Center, completed in 2013, replaced the existing facilities for the purposes of the golf team practice area. It contains locker rooms, coaches offices, conference room, and a covered practice area. The USF women’s and men’s Golf teams use the following “home” courses for practice and competition; Lake Jovita in Dade City, Innisbrook in Innisbrook, Saddlebrook in Wesley Chapel, and Tampa Palms, Hunter’s Green and The Claw, all in Tampa.



Riverfront Park

Located on the Hillsborough River and Fletcher Avenue at southeast corner of the Ecological Research Area, this 12.6 acre USF recreational park includes a picnic pavilion, boathouse, softball field, sand volleyball court, restroom facility, kayaks, canoes, rope course and disc golf. The park is managed by USF Campus Recreation and is the base site for a variety of USF Outdoor Recreation classes, events, and recreational

offerings. Access is limited to current USF students, staff and faculty. A current USF ID is required for all activities within the park. A small storage structure (size yet to be determined) may be needed in the future to support activities at the park. Figure 9.3, *Riverfront Park*, identifies park facilities and layout.



Projected Recreation and Open Space Needs

The National Intramural Recreational Sports Association (NIRSA) *Space Planning Guidelines for Campus Recreational Sport Facilities* identifies a level of service recommended for university recreation facilities. In applying these planning guidelines to USF-Tampa there are a number of considerations in defining the potential student population serviced by recreational facilities. The chart below identifies the recommended standard and presents varied student categories to arrive at a range of “needs”. As the University continues to increase the number of students living on campus and works to develop the campus into a 24-hour vibrant area, identifying recreational needs for a changing campus population is critical to planning for the campus as a whole. Identifying recreation facility needs will involve weighing a number of “sustainability” factors, including large area land use, water consumption, and the physical and social health of students/faculty and staff.

The Wellness Center, currently in planning stage and not yet funded, is planned to be approximately 250,000 gsf. It will include Student Health Services, Counseling Center, Victims Advocacy, Wellness Education and Promotion, among other student services. For greater detail a copy of the Wellness Center Feasibility Study can be requested from USF - Facilities, Planning and Construction.

Table 9-3 Projected Recreation Facility Needs

Recreation Facility (# of fields/courts per 1,000 students)	Planning Guide	Existing Facilities	2009 Total 25,073 FTE Field Needs	2020 Projected Total U/G 28,310 HC Field Needs	2020 Additional Field Program U – U/G
Total Outdoor fields (# of	0.94	23 acres	23.6 acres	26.6 acres	3.3 acres

acres)					
Football Fields	0.23	12 fields	5.8 fields	6.5 fields	1 field
Soccer Fields	0.20	combined	5.0 fields	5.7 fields	combined
Softball Fields	0.15	2 fields	3.8 fields	4.2 fields	2 fields
Tennis Courts	0.41	16 courts	10.3 courts	11.6 courts	-
Outdoor Basketball Courts	0.11	8 courts	2.8 courts	3.1 courts	-
Outdoor Volleyball Courts	0.12	3 courts	3.0 courts	3.4 courts	-
Leisure Pool (1 per 25,000)		2 pools	2 pools	2 pools	Issues of Design & Size

Privately-owned, state owned, or local government-owned recreational facilities and open spaces

The City of Tampa Comprehensive Master Plan, has a strong sustainability focus that places great value on the role city parks, open space, trails, and recreation facilities can play in creating a healthy urban environment. The City of Tampa Parks and Recreation Master Plan supports the findings and goals of the Comprehensive Plan. The Parks and Recreation Master Plan focuses on evaluating existing conditions, establishing planning principles, and soliciting community involvement. The Parks and Recreation Master Plan implementation is ongoing and is intended to address a Local Level of Service Guideline (LLOGS) to delineate planning districts and criteria for LLOS calculation and determination of amount and types of facilities each district should be provided in order to more effectively provide park and recreation services to residents in all areas.

In considering park and recreational resources accessible to the host /campus community, it is useful to establish a service radius related to the campus area for various types of facilities. The City of Tampa Parks and Recreation Master Plan has established a guide for facility types and service areas, as identified in Table 9-4, Classification Structure and Service Area Radius. Table 9-4 also identifies host facilities that fall within the service area of USF.

Definitions of Recreation Facility types:

- Major Park – park of 41-150 acres that serve a minimum radius of three miles, are located on major transportation routes and attract uses based on the availability of a major attraction or natural resource (zoo, lake, river, etc.)
- Neighborhood Park – park that serves the population of a neighborhood, serves a minimum radius of 1 mile and is generally accessible by bicycle or pedestrian way.
- Mini-Park – park subset to Neighborhood Park, but less than 2 acres in size and serving a half mile radius.
- Special Use Facility – includes athletic complexes and facilities for particular or dedicated activity, for example skateboard parks, softball, golf course, tennis, etc. and may be located within a Major or Neighborhood Park.
- Urban Relief Area – open space that offers beautification and aesthetic visual enhancement to the community.
- Resource Based Park – park subset of Urban Relief Area provides predominantly passive-based recreation opportunities such as a combination of open space, resource protection areas and unprogrammed park lands.
- Greenways and Trails - linear open space, such as wildlife protection and railway corridors.

Table 9-4 Classification Structure and Service Area Radius

Type of Recreation Facility/Resource	Typical size	Service Area	Identification of Facility(ies) Located within USF Campus Service Area
Major Parks	41-150 acres	3 miles	Lettuce Lake Regional Park

			Copeland Park Rowlett Park
Neighborhood Parks	2-40 acres	1 mile	Bonnie Brae Park Greco Softball Complex Takomah Trail Park
Mini-Parks	<2 acres	.5 miles	
Special Use Facilities	N/A	N/A	
Urban Relief	Varies	N/A	
Resource Based Parks	Varies	City-wide	
Greenways and Trails	Varies	City-wide	Tampa Bypass Canal Withlacoochee/Hillsborough Riverine Corridor “D” Brooker Creek River System Corridor “A”

Source: Modified from city of Tampa Parks and Recreation Master Plan Phase 1, March 28, 2007.
Special use facilities include sports fields and courts, dog parks, skate parks, cemeteries, marinas, etc.

The City of Temple Terrace has 312 acres of park space. The City’s recreational facilities include the Family Recreation Complex (25 acres) and Riverhills Park (34.5 acres) on the Hillsborough River. Hillsborough County provides district, neighborhood, and special parks, in addition to its regional park system. Total acreage of neighborhood, district, and special parks is approximately 21,335 acres, or approximately 38 acres per 1,000 unincorporated population and 24 acres per 1,000 total county population. The 240-acre Lettuce Lake Regional Park, located at 6920 Fletcher Avenue, immediately east of the University, is located directly on the Hillsborough River. The park offers boardwalks, a multi-level observation tower, trails, and a 2,000 square foot visitor center operated by the Tampa Audubon Society.

Southwest Florida Water Management District (SWFWMD) manages a number of regional recreation facilities offering boating, hiking, and nature study. In general, SWFWMD owns the land and cooperates with City, County, State and Federal agencies to furnish and encourage recreational use.

SWFWMD sites within Hillsborough County include:

- Tampa Bypass Canal 12 ½ mile long canal
- Withlacoochee/Hillsborough Riverine Corridor “D” 8,412 acres
- Brooker Creek River System Corridor “A” 705 acres

Areas targeted for acquisition by the SWFWMD in Hillsborough County include: Buckhorn Creek (146 acres), Lithia Springs (160 acres supplementing the existing County Park) and the Cone Ranch site (12,000 acres).

Planned future recreation and open space facilities

On-campus

The following University Recreation and Athletic Facilities are planned for construction in the 2015-2025 Campus Master Plan Update.

Recreation facilities scheduled to be constructed:

- Campus Recreation Center Expansion
- 3-4 Intramural fields
- Leisure Pool and satellite Campus Recreation Center at the redeveloped Andros area currently in planning.

Athletic facilities scheduled to be constructed:

- Varsity Tennis Clubhouse
- Baseball/Softball Clubhouse

The following on-campus facilities have been discussed:

- On-campus Football Stadium - The University may explore the physical, operational, and fiscal feasibility of pursuing development of a new stadium (to include football) on campus or on land near the campus. A new stadium on campus would enhance the USF experience for students and the community at large, and serve a variety of uses and activities. It could also become a gathering place for all-campus events.
- Future redevelopment of The Claw golf course and land it occupies.

Off-campus

Of particular note in the City of Tampa Parks and Recreation Master Plan is the need for improved linkages such as walks and bikeways between residents and park and recreational facilities. One of the most important issues/problems cited by residents is the ability to safely access facilities through adequate walks and trails, bikeways, and transit. This is a critical issue shared by the University and City of Tampa.

Another finding of the City of Tampa Parks and Recreation Master Plan with implications for the broader USF area community is the identification of “underserved” neighborhoods. The neighborhood of North Central Tampa, located immediately south of the campus, was identified as one of three areas of the City that are currently underserved by neighborhood park facilities, based upon the desired service area of a neighborhood park within 1 mile.



- Fields/Courts
- Track/Infields
- Jogging Trail
- Athletic/Recreation Buildings
- Pool

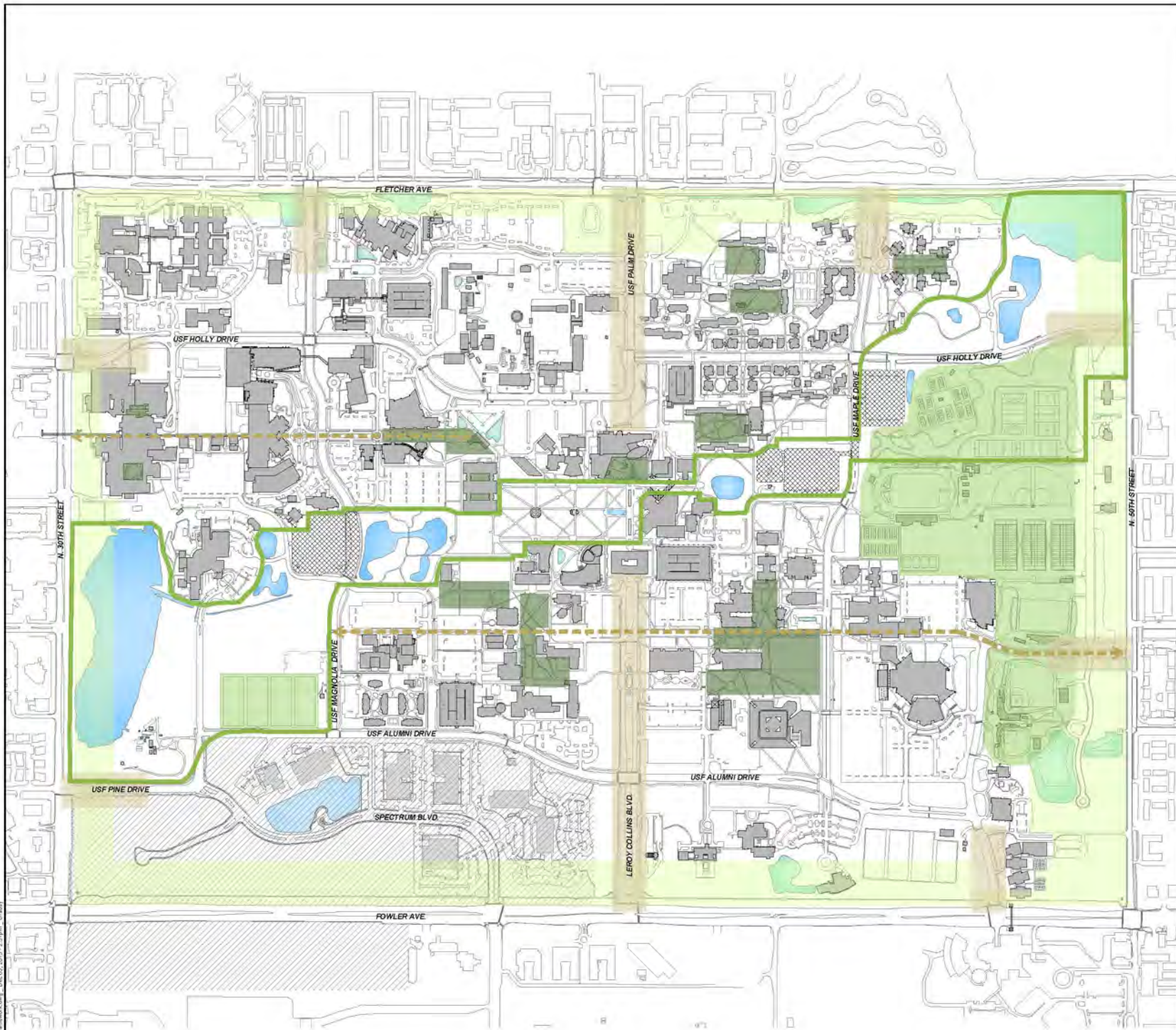
Area Not Included in Campus Master Plan

Element 9
Recreation and
Open Space


Figure 9.1
Athletic and
Recreation Facilities

Date
12/03/2015





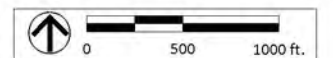
-  Greenway
-  Perimeter Open Space
-  Recreation/Athletics
-  Quadrangles/
Courtyards
-  Gateways
-  Gateways
-  Parking Area
within Greenway

 Area Not Included in
Campus Master Plan

Element 9
Recreation and
Open Space

Figure 9.2
Open Space

Date
12/03/2015



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Element 10:

Intergovernmental Coordination

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Element 10 Intergovernmental Coordination

This element identifies and resolves goals, objectives, policies and development proposed in campus master plans that may be incompatible with adjacent local governments, and regional and state agency plans. Intergovernmental coordination shall be utilized to the extent required to carry out the provisions of this Chapter.

Host and affected local governments, agencies, and utility companies with which the University coordinates or is regulated by:

Regional and State:

Florida Department of Community Affairs (DCA): DCA is the state's land planning and community development agency. Its role is to assist Florida's communities in meeting the needs of Florida's continually expanding population. The department ensures that new growth complies with the state's vital growth management laws, while also assisting established communities revitalize their older or traditional neighborhoods.

Division of State Lands/Land Management Advisory Council (LMAC): LMAC acquires and disposes of lands, as directed by the Board of Trustees of the Internal Improvement Trust Fund. Among other functions, the division administers and maintains the records of all lands held by the Board of Trustees and sets boundary lines for lands owned by the Board of Trustees. The LMAC provides oversight for approximately 11 million acres of state lands, including upland leases for state parks, educational facilities, forests, wildlife management areas, historic sites, vegetable farming, and mineral, oil, and gas exploration.

Florida Department of Transportation (FDOT) – District 7: FDOT is responsible for preparing plans to construct and maintain roadways within the State of Florida. The University is located within District 7, which encompasses Citrus, Hernando, Pasco, Hillsborough and Pinellas counties. The FDOT roads adjacent to campus are Fowler Avenue and Bruce B Downs Boulevard. The University is required to maintain transportation concurrency at the State and local levels and some of the roads influenced by the traffic generated by the USF-Tampa campus external to the University are governed by the FDOT.

Florida Department of Environmental Protection (FDEP): FDEP is the lead agency in the state government for environmental management and stewardship, responsible for protecting Florida's air, water, and land. The Department is divided into three primary areas: Regulatory Programs, Land and Recreation, and Planning and Management. Florida's environmental priorities include restoring America's Everglades, improving air quality, restoring and protecting the water quality of Florida springs, lakes, rivers and coastal waters, conserving environmentally-sensitive lands, and providing citizens and visitors with recreational opportunities, now and in the future. USF complies with the National Pollutant Discharge Elimination System (NPDES) requirements through its participation with the FDEP Municipal Separate Storm Sewer System (MS4) permitting program.

Southwest Florida Water Management District (SWFWMD): SWFWMD manages water and related natural resources to ensure their continued availability while maximizing environmental, economic and recreational benefits. Areas of responsibility include: water supply; natural systems; water quality and flood protection. The District encompasses all or part of 16 counties and contains 98 local governments spread over approximately 10,000 square miles. A 13-member board appointed by the Governor and confirmed by the Senate governs the District. USF submits through SWFWMD for its Environmental Resource Permits (ERP) for all campus development impacts, as well as maintains its Water Use Permit (WUP) which establishes limits for its groundwater water withdrawal.

Tampa Bay Regional Planning Council (TBRPC): TBRPC is an association of local governments and gubernatorial representatives, created to coordinate planning and provide an opportunity for sharing solutions among the 43 jurisdictions in the Tampa Bay region. The region’s four counties and numerous incorporated areas are required by law to exercise regional cooperation through membership on the Council. TBRPC is responsible for maintaining the Strategic Regional Policy Plan for the Tampa Bay Region, as well as for functions related to environmental management, water quality, emergency preparedness planning, protection and restoration of the Tampa Bay estuary, coastal zone management, housing and infrastructure analysis and review, local government comprehensive plan review, cross-acceptance, dispute, and review of transportation plans.

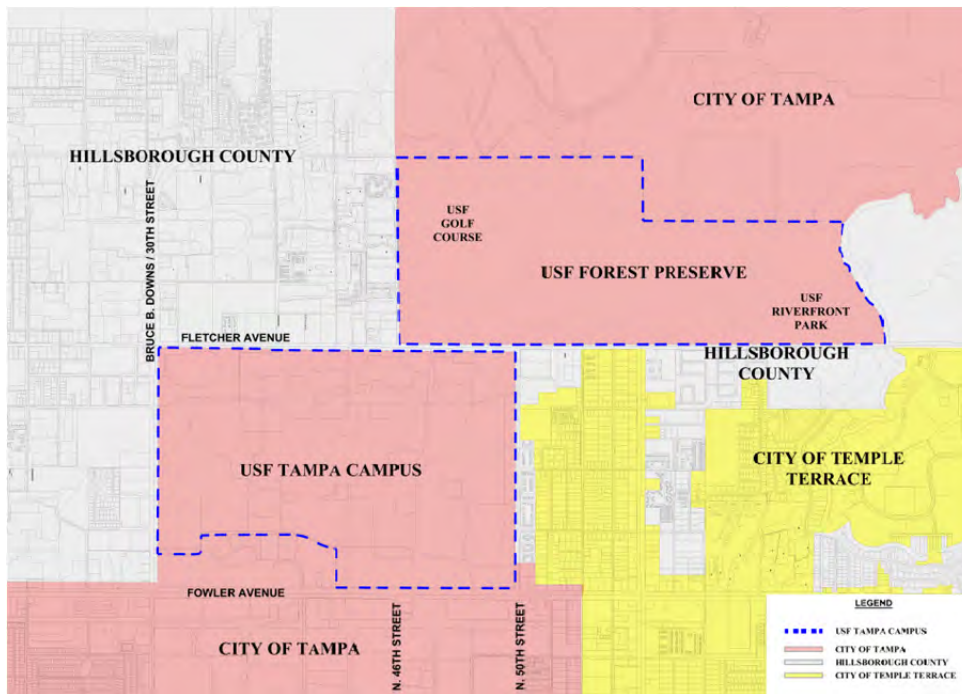
Tampa Bay Regional Transportation Authority (TBARTA): TBARTA was created by the Florida State Legislature in 2007 to develop and implement a Regional Transportation Master Plan for the seven county West Central Florida region consisting of Citrus, Hernando, Hillsborough, Manatee, Pasco, Pinellas, and Sarasota Counties. The agency consists of: a Governing board made up of elected officials and appointed members from across the region; a Citizens Advisory Committee (CAC) made up of citizen representatives appointed by the TBARTA Board; a Transit Management Committee (TMC) made up of the executive directors of the transit agencies in the region; and a Land Use Working Group (LUWG) made up of representatives from local government and regional land use planning agencies, environmental groups, the development community, transportation agencies, and the public. TBARTA’s purpose is to improve mobility and expand multimodal transportation options for passengers and freight throughout the seven-county region.

Tampa Bay Water (formerly West Coast Regional Water Supply Authority): Tampa Bay Water is a regional water supply authority that provides wholesale water to three cities and three counties in the Tampa Bay region. The authority is funded through the sale of water to member governments. Member governments share the cost of developing new supplies, share in environmental stewardship, share voting rights equitably among the three counties, and pay the same wholesale water rates.

Tampa Bay Water responsibilities include:

- Planning, developing, producing and delivering a drinking water supply.
- Meeting the wholesale drinking water needs of Hillsborough County, Pasco County, Pinellas County, New Port Richey, St. Petersburg and Tampa (about 186 million gallons every day).
- Advocating for the protection of the public’s water resources. Tampa Bay Water is a non-profit, special district of the state created by interlocal agreement among member governments. Policies are established by a nine-member board of directors, with two elected commissioners from each member county and one elected representative from each member city.

Adjacent Municipalities: USF is located in the City of Tampa boundaries. Boundary roads Fletcher Ave, Bruce B Downs Blvd, and 50th ST ar Hillsborough County roads and Fowler Ave is Florida Department of Transportation (FDOT)



City of Tampa

Transportation Division: The Transportation Division of the City of Tampa focuses on transportation planning, project development and management, traffic engineering, right of way permitting, and mass transit initiatives, as well as the City's overall mobility needs. The Transportation Division reports directly to the Administrator of Public Works and Utilities Services for the City of Tampa.

Land Development Coordination (LDC): The LDC is part of the Growth Management and Development Services Department of the City of Tampa. LDC houses the Community Planning and Zoning Section, Subdivision/Development of Regional Impact (DRI) Section and Right-of-Way and Mapping Section and the Comprehensive Planning Section. The mission is to efficiently and fairly administer City Codes and Policies related to land development. The goal of the department is to be responsive to the public's need for accurate information related to the development of their property.

Tampa Police Department: The University context area located within the City of Tampa limits is served by the District Two Patrol Division. The District Two Patrol Division provides uniformed officer patrols, Street Anti-Crime squads, Quick Uniformed Attack on Drugs (Q.U.A.D.) squads, and property crime detectives. USF Police Department has a mutual aid agreement with the City of Tampa Police and Hillsborough County Sheriff Departments.

Fire Department: Tampa Fire Rescue provides essential services in the areas of fire prevention, fire protection, fire suppression, and emergency medical care for the seriously ill and injured. Tampa Fire Rescue also provides hazardous materials response, aircraft rescue, marine firefighting, and fire and life safety education to the public. The Fire Marshal's office, a division of Tampa Fire Rescue, investigates causes of fire, conducts building code reviews, and enforces fire and life safety codes.

Department of Growth Management and Development Services: The City of Tampa Department of Growth Management and Development Services is comprised of the following divisions: Administration, Historic Preservation and Urban Design, Construction Services, Housing & Community Development (HCD), Land Development Coordination (LDC), and Real Estate. The overall department function is to ensure safe and affordable housing and commercial structures that are compatible and compliant with applicable codes and ordinances. The Department is also home to the City's Green Officer, who guides the City in programs and services as they work toward becoming a more sustainable community – “A GREEN CITY.”

Water Department: The Tampa Water Department, a department under Public Works and Utility Services, treats and delivers drinking water to a service population of approximately 652,000 people in the Tampa Bay area, encompassing 211 square miles. It is one of the few in the Country that treats both ground and surface water for drinking purposes. The Department is responsible for city-wide water conservation efforts to help manage local water demands.

Solid Waste Department: The Department of Solid Waste & Environmental Program Management provides environmentally-safe, time-responsive, and cost-effective collection, disposal, and recycling services for over 82,000 residential and commercial customers. The department also oversees the City of Tampa’s environmental Programs. Approximately 360,000 tons of solid waste is processed annually at the McKay Bay Refuse-to-Energy Facility where it is converted to electrical energy.

Wastewater Department: The Wastewater Department collects, treats, and disposes of more than 50 million gallons of wastewater per day from over 98,000 customers in the City of Tampa and its immediate suburbs. Sanitary treatment requires the careful removal of pollutants and pathogens from wastewater in a manner consistent with federal, state, and local regulations so that the end product can be returned to the environment for natural recycling. The Wastewater Department has four primary divisions: Administration; Engineering; Advanced Wastewater Treatment Plant; and Wastewater Collection.

Tampa City Council: The Tampa City Council is a legislative branch of City Government and operates in accordance with the provisions of the 1974 Revised Charter of the City of Tampa. The City Council is responsible for enacting ordinances and resolutions that the Mayor of Tampa administers as chief executive officer. The USF Development Agreement is approved by the Tampa City Council after public hearings.

Public Works Department: The City of Tampa Public Works Department is composed of the following divisions: Clean City; Facility Management Division; Fleet Management Division; Parking Division; Stormwater Department; Right of Way Management Division. The Department of Public Works is dedicated to providing safe transportation mobility by maintaining all the Right of Way assets such as roads, sidewalk, traffic signals, traffic signs, pavement markings, street lights, special events, permit inspections and movable bridges.

Hillsborough County

Board of County Commissioners: The Board approves the County's operating and capital budgets and the County's capital improvement program. It may take action on any programs for the improvement of the county and the welfare of its residents. Under a Charter Ordinance that went into effect May 1985, County Commissioners are directed to perform legislative functions of government by developing policy for the management of Hillsborough County.

Planning and Growth Management Department: The Planning and Growth Management is a full service community development department responsible for conducting planning, zoning, development review, permitting, and inspections services. The Department serves the public under the direction of the Board of County Commissioners and the County Administrator. Basic services for planning and managing the County's growth are focused on planning for future additions of new residential subdivisions and commercial

development, meeting the provisions of the County's Land Development Code, planning for capital improvements, and ensuring development is built to lifesafety and codes construction standards.

Public Works Department: The Mission of the Public Works Department is to provide and manage safe, efficient, and environmentally sensitive transportation and storm water systems to satisfy diverse mobility needs and to provide flood protection to public and private lands.

Solid Waste Department: The Hillsborough County Solid Waste Management Department (SWMD) is responsible for the overall operation of the Hillsborough County Integrated Solid Waste Management System (System), which is responsible for collection, transportation, and disposal of all solid waste generated or brought into the System service area. In addition, based on inter-local agreements with the City of Tampa and Temple Terrace, the System also provides various services to these communities. To accomplish this mission, the SWMD provides a wide range of services which combine to make up the Integrated System. The SWMD's efforts are focused on quality customer service and on the continuous improvement of the effectiveness and efficiency of the services provided.

Emergency Management Operations: Emergency Management is responsible for planning and coordinating the evacuation and sheltering of county residents in the event of a natural or manmade disaster. Hillsborough County Emergency Management takes command of all jurisdictions. This agency is also responsible for planning, orchestrating and coordinating response actions and continuity of government in the aftermath of a major disaster. USF serves Emergency Management Operations as the primary Special Needs Shelter at the Sun Dome. Pizzo Elementary School located on USF campus property (corner of 50th St. and Fowler Ave.) is a general public emergency shelter. These are links to the USF emergency information and coordinating entities:

- <http://www.usf.edu/pdfs/USF-Emergency-Operations-Plan.pdf>
- <http://usfweb2.usf.edu/Adminsvc/publicsafety/>

Hillsborough Area Regional Transit Authority (HART): HART was created in October of 1979 to plan, finance, acquire, construct, operate, and maintain mass transit facilities and supply transportation assistance in Hillsborough County. HART provides the following services: Local Fixed Route and Express Bus Service; In-Town Trolleys; Vanpool & Guaranteed Ride Home Service; 100% Wheelchair/Bike Accessible Buses; Transportation Accessible Program (TAPS); Door-to-Door Paratransit Service; Travel Planning Assistance; Circulator Service in South County; Travel Training; Employer/Subscription Mini-Bus Service; and Bus Buddy Training. This provides a multimodal approach to allow the region to meet the transportation needs of citizens, reduce congestion on the Bay Area's roadways, improve air quality, and provide more sustainable options for traveling. HART has implemented Bus Rapid Transit on Fletcher from Telecom Park to Downtown Tampa. The cooperative U-Pass allows USF students to ride Hart Buses free. The HART Transfer Center is located near the USF Campus on 131st Street. The campus is served by several HART Routes. USF Parking and Transportation Services coordinates the USF Bull Runner shuttle with HART services on an as-needed basis. See Element 5 Transportation for more information.

Hillsborough County Planning Commission: The Planning Commission serves the citizens of Hillsborough County, City of Plant City, City of Temple Terrace, and the City of Tampa by providing a vision for improving the quality of life of county residents. The Planning Commission is an independent, consolidated planning agency, led by 10 citizen appointees from each of the 4 local jurisdictions. The Commissioners are tasked to promote and coordinate comprehensive long-range planning, growth-management, transportation, and environmental protection, through recommendations to the local jurisdictions.

Hillsborough Metropolitan Planning Organization (MPO): Mandated by federal and state law, the MPO is responsible for establishing priorities to meet short-term (next 5 years) and long-term multimodal transportation needs for Tampa, Temple Terrace, Plant City, and unincorporated Hillsborough County. USF is represented on the MPO Livable Roadways Committee.

Environmental Protection Commission (EPC) of Hillsborough County: The EPC of Hillsborough County was created in 1967 by special act of the Florida Legislature to control and regulate activities that are or may reasonably be expected to cause pollution or contamination of air, water, soil, and property, or cause excessive and unnecessary noise.

Hillsborough County Sherriff Department: USF Police Department has a mutual aid agreement with Hillsborough County Sheriff Department and the City of Tampa Police Department.

City of Temple Terrace

Temple Terrace City Council: The Temple Terrace City Council is the policy-making branch of the City of Temple Terrace and is comprised of the Mayor and City Council. These elected officials, together with a City Manager, govern the City and represent the citizens as they review activities and establish policies for implementation in the best interest of the health, safety and welfare of the community.

Community Development Department: The Community Development Department is primarily responsible for administrating, directing, coordinating, and supervising land development regulation functions and City operations involving site planning, permitting, inspections, geographical information systems and mapping. The department's work is divided into two programs:

Planning and Development and Building. Planning and Development is responsible for coordination and implementation of the City's land development regulation and review process. Key areas of responsibility include: Site plan review; Comprehensive plan changes; Rezoning; Variances; Business district redevelopment planning, including support staff to the City's Community Redevelopment Agency; and Maintenance of the City's Geographic Information System (GIS) database. The Building Division has two main functions: Regulation of building construction activities through permitting and inspection; and Enforcement of the non-criminal aspect of city codes with regard to private and public property.

Public Works Department: The Public Works Department consists of seven divisions: Sanitation, Sewer, Water, Streets, Facility Maintenance, Central Garage, and Central Warehouse under the supervision of Public Works Administration.

Fire Department: The Operations Division includes all emergency and non-emergency responses made by the department's fire and medical teams. The Operations Division oversees and maintains manpower, equipment, vehicles, training, and communications and protects lives and property in the City from all hazards. This is achieved by managing staffing, training, equipment and other apparatus to provide City residents with fire, paramedic medical treatment, and protection from threats to life and property. **Police Department:** The Police Department is the law enforcement branch of Temple Terrace municipal government. One of the primary objectives of the Police Department is to provide a safe, secure community environment for all residents, businesses, and visitors. The Department serves the community by protecting life and property, preserving peace and order, preventing and detecting crime, enforcing all laws and ordinances and promoting the safe, efficient use of the City's streets and highways.

Specific problems and needs:

USF deals with specific issues through scheduled meetings on an as needed basis. The majority of problems requiring coordination for resolution are related to adjacent roadway conditions of safety for pedestrians and bicyclists due to traffic congestion. For example, Hillsborough County quickly responded to USF's concern for pedestrian/bicycle safety on 50th Street by conducting a Safety Audit of conditions and then implemented the recommendations with concurrence of USF. Similarly, USF staff was also in coordination for the Fletcher Pedestrian Study and Safety Improvements, including a sidewalk the length of the north campus edge. These issues typically also have the involvement of the USF Center for Urban Transportation Research (CUTR), the New North Transportation Alliance (NNTA), and the MPO Livable Roadways Committee. Hillsborough County continues to work with USF for future off-campus pedestrian and bicycle

improvements on 42nd St., 46th ST., 56th St., and Bruce B Downs in addition to signal modifications for the proposed new campus road connections the Bruce B Downs and Fletcher at 46th ST.

Previous fair share payments made by the University to its host or affected local government as a result of existing Campus Development Agreement(s):

For the Development Agreement based on the 1995 Campus Master Plan, the City of Tampa received \$6,000,000 from the State of Florida Concurrency Trust Fund. Of that, \$3,000,000 was distributed to USF to implement an off-campus shuttle route to serve the many students living to the north of campus and thereby reduce off-campus traffic. From the Development Agreement based on the 2005 Plan, the City received \$5,273,305 from the State Concurrency payments and USF Parking and Transportation Services (PATS) received \$2,273,305 for the expansion of the Bull Runner shuttle with a new route to the south of Fowler Avenue. The current Agreement expires on December 31, 2025. The University is currently working with the City of Tampa to extend the current Agreement to 2025.

<http://www.usf.edu/administrative-services/facilities-planning/documents/master-dev-agreement.pdf>

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Element 11:

Capital Improvements

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Element 11 Capital Improvements

This element evaluates the need for public facilities as identified in other campus master plan elements; to estimate the cost of improvements for which the University has fiscal responsibility; to analyze the fiscal capability of the University to finance and construct improvements; to adopt financial policies to guide the funding of improvements; and to schedule the funding and construction of improvements in a manner necessary to ensure that capital improvements are provided when required based on needs identified in the other Campus Master Plan Elements. All development is contingent upon the availability of funding.

Funding mechanisms available for capital improvement financing:

1. Public Education Capital Outlay and Debt Service Trust Fund (PECO)

PECO is Florida's financing program for capital improvements at the state's public schools, community and state colleges and universities. PECO funds are used for construction, as well as the remodeling, renovation and repair of existing educational facilities.

2. Capital Improvement Trust Fund (CITF)

This source of funds is a student fee that each SUS institution collects. It is used for student support facilities.

3. Revenue bonds

Revenue bonds can be used by universities to fund capital improvement projects that are approved by the Board of Governors and, if required by Florida Statute, the State Legislature. They are backed by revenue authorized for such purposes such as student fees, revenues from sales and services of auxiliary enterprises or component units of the University, royalties and licensing fees, assets of University foundations or other University direct support organizations, or any other revenues permitted by law. Revenue bonds are used to fund facilities functionally related to the University operation or direct-support organization financing the capital outlay project.

4. Facilities Enhancement Challenge

This is a program that encourages gifts from private sources to specific projects that the University can justify as instructional or research-related. The State provides matching funds from general revenue or lottery funds. This fund was suspended indefinitely in 2011.

5. Grants and Donations

The University may receive grants or private donations from third-party sources specifically for facilities.

6. Auxiliary Enterprises

Auxiliary enterprises include activities that directly or indirectly provide a product or a service, or both, to the campus community and for which a charge is made. These are self-supporting enterprises and include activities such as housing, bookstores, student health services, continuing education programs, food services, college stores, operation of vending machines, specialty shops, day care centers, golf courses, student activities programs, data center operations, and intercollegiate athletics programs.

7. General Revenue and Lottery Funds

These funds must be appropriated by the legislature for a specific project.

8. Student Green Energy Fund

The USF Student Government passed a referendum expressing support for a Student Green Energy Fund at the University. The fund is designed to support projects that increase energy efficiency on

campuses. The fund for USF was approved by the BOT and BOG. Every three years, students will vote on this assessment. The fund is managed by the Office of Sustainability. Student project proposals are evaluated for funding based on established criteria, including return on investment, two times per year after an advertised call for proposals. Some of the recently funded projects include: installation of photovoltaic systems, LED retrofits, lighting sensors, Smart Parking Guidance System, and a campus Bike Share system, among others.

9. Revolving Loan Fund (RLF)

USF may have the opportunity to establish an RLF, a fund that can be used to finance projects that have a cost-savings component, often tied to energy efficiency. The money saved as a result of the project is then paid back into the fund to be made available for future projects. A revolving loan fund is an effective “paid from savings” approach that would allow the University to implement repairs and upgrades necessary to reduce energy and water use and associated costs. This fund would represent a new source of funding for USF and requires obtaining appropriate approvals.

10. Public-Private Partnerships

The University may have the opportunity to enter into an agreement with a private partner to construct additional facilities such as housing, dining, etc.

11. Power Purchase Agreements (PPA)

USF may have an opportunity to enter into PPA to help finance renewable energy generation projects. A PPA is a financial arrangement in which a third-party developer owns, operates, and maintains a renewable energy system, and a host customer agrees to site the system on its property purchase the system’s electric output from the electricity services provider for a predetermined period. Entering into a PPA would allow USF to receive stable, sometimes lower cost electricity, and avoid many of the traditional barriers to install renewable energy installations, such as high up-front capital costs; system performance risk; and complex design and permitting processes. The project feasibility will depend on type of project, campus site availability, cost savings to USF, special funding for purchased utilities if cost increases, reliability of power, and administrative approval.

Future capital improvements

The 5 year capital improvement plan includes funding requests from Public Education Capital Outlay (PECO) for future capital projects to be between 2016-2017 to 2020-2021.

STATE UNIVERSITY SYSTEM Five-Year Capital Improvement Plan (CIP-2) and Legislative Budget Request Fiscal Years 2016-17 through 2020-21													
University of South Florida System													
7/14/2015													
PECO-ELIGIBLE PROJECT REQUESTS													
Priority No	Project Title	2016-17	2017-18	2018-19	2019-20	2020-21	Academic or Other Programs to Benefit From Projects	Net Assignable Square Feet (NASF)	Gross Square Feet (GSF)	Project Cost	Project Cost Per GSF (Proj. Cost/Recommended Data/Rec. No.)	Educational Plant Survey Reference	Approved by Law - Include GAA reference
1	TPA-Utilities/Infrastructure/Capital Renewal/Roofs	\$ 10,000,000	\$ 11,000,000	\$ 11,000,000	\$ 11,500,000	\$ 11,500,000	All	Not Applicable	Not Applicable	55,000,000	Not Applicable	2.12 / #595	
2	STP-Campus/Infrastructure/Capital Renewal/Roofs	\$ 2,500,000	\$ 3,000,000	\$ 3,500,000	\$ 3,500,000	\$ 3,500,000	All	Not Applicable	Not Applicable	10,000,000	Not Applicable	2.12 / #595	
3	SM-Utilities/Infrastructure/Capital Renewal/Roofs	\$ 1,000,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	All	Not Applicable	Not Applicable	7,000,000	Not Applicable	2.12 / #595	
4	TPA-USF Health Heart Institute	\$ 15,755,000					Health	80,000	100,000	50,145,116	\$ 501	2.12 / #8 # 4.1	
5	TPA-USF Health Memorial College of Medicine Facility	\$ 20,000,000	\$ 20,000,000				Health	94,450	141,425	62,000,000	\$ 436	2.12/2004/34.4	
6	TPA-Interdisciplinary Science Teaching & Research Facility	\$ 9,031,204					Sciences	115,738	193,282	83,763,787	\$ 433	8.05/81.3.3	
7	TPA-Cybersecurity/Data Center	\$ 7,178,985	\$ 15,755,578	\$ 14,000,000			Multiple	25,505	38,500	38,534,963	\$ 950	TRD	
8	SM Academic STEM Facility	\$ 2,223,984	\$ 22,844,911	\$ 4,500,000			Multiple	91,724	20,000	20,000,000	\$ 200	TRD	
9	TPA Health College of Pharmacy	\$ 5,071,375	\$ 35,763,040	\$ 2,520,000			Health	65,333	102,000	43,354,415	\$ 425	TRD	
10	TPA-STEM (Engineering Expansion)	\$ 8,425,888	\$ 35,674,213	\$ 37,832,893			Multiple	104,979	173,215	62,032,794	\$ 230	2.12 / # 3.3	
11	TPA-STEM Learning Center	\$ 5,580,201	\$ 31,700,885	\$ 18,630,787			Multiple	85,900	133,440	55,911,673	\$ 419	2.12 / # 3.1	
12	TPA-Public Safety Building Phase I	\$ 4,454,555			\$ 19,171,220	\$ 8,063,740	All	40,000	60,000	31,689,515	\$ 528	2.12 / # 3.9	
13	STP-STEM Teaching/Research Facility			\$ 2,892,912	\$ 22,269,630	\$ 2,580,000	Multiple	45,300	97,895	27,022,242	\$ 269	TRD	
14	TPA-CMC Remodeling (PHV)			\$ 2,115,026	\$ 13,491,800	\$ 1,289,186	Multiple	49,734	81,765	16,898,072	\$ 207	2.12 / # 2.1	
15	TPA-USF Health Renovate/Reconfigure Medical Research Lab Facility			\$ 4,677,950	\$ 20,313,600	\$ 30,313,600	Health	126,950	126,950	55,345,150	\$ 436	2.12 / # 8 # 2.4	
16	TPA-USF Health Major Renovation/Remodeling/Addition Research Space			\$ 3,776,297	\$ 8,283,389	\$ 32,852,362	Health	44,200	75,998	44,912,046	\$ 261	2.12 / # 8 # 2.4	
17	TPA-USF Health Center of Excellence for Diabetes & Autoimmune Disorders			\$ 5,306,400	\$ 32,715,000	\$ 1,820,000	Health	64,200	95,300	30,844,400	\$ 414	TRD	
TOTAL		\$ 86,766,637	\$ 177,138,387	\$ 116,229,218	\$ 133,044,899	\$ 93,338,888							
CITF PROJECT REQUESTS													
Priority No	Project Title	Year 1	Year 2	Year 3	Year 4	Year 5	Academic or Other Programs to Benefit From Projects	Net Assignable Square Feet (NASF)	Gross Square Feet (GSF)	Project Cost	Project Cost Per GSF (Proj. Cost/Approval Date)	Committee Approval Date	
1	USF Tampa Phyllis P. Marshall Student Center (MSC) Expansions Phase I (Planning)	\$ 3,922,269					Student success	28,564	38,085	\$14,766,389	\$ 388	2/21/2013	
2	USF Health Student Union Annex Facility Phase IV	\$ 641,646					Student success	15,000	20,000	\$5,892,630	\$ 295	2/21/2013	
3	USF St. Petersburg Safety, Environmental and Co-Curricular/Wellness Upgrades Ph. I	\$ 544,141					Student success	0	0	\$2,253,827	\$ 211	2/1/2013	
4	USF Sarasota-Manatee Student Outdoor/Recreation Facilities Phase IV	\$ 202,552					Student success	0	0	\$887,048	\$887	5/14/2012	
TOTAL		\$ 5,310,708	\$ 0	\$ 0	\$ 0	\$ 0							

Off Campus
Remodeling
Complete

Projects from other funding sources may include:

- International facility for the INTO Program
- Marshall Student Center (MSC) Addition
- MSC Expansion/Student Success Building
- Student Housing and Support
- Campus Recreation Housing Annex
- USF Wellness Center
- Student Housing and Support
- Parking Structures
- Clubhouses for Tennis, Baseball, Softball
- Sidewalks, bikelanes
- Roads and Intersection Improvements
- Utility and Infrastructure Improvements

Operations and maintenance costs for existing facilities:

2014-2015:


PHYSICAL PLANT							
025000-000000	ADMINISTRATION PHY. PLANT	8.00	405,551	555,658		40,200	595,859
025002-000000	TECHNICAL DVCS PHY. PLANT	6.00	304,496	425,244	178,174	75,400	678,810
025004-000000	FAC ENHANCEMENT PHY. PLANT	6.00	329,562	427,308	65,000	22,260	814,568
025005-000000	MOVES PHY. PLANT					18,173	18,173
025008-000000	QUALITY ASSURANCE PHY. PLANT	1.00	51,035	70,453	12,000	500	82,993
025100-000000	UTILITIES PHY. PLANT	22.00	852,059	1,231,553	22,300	520,435	1,774,289
025100-PPFG01	UTILITIES PHY. PLANT BOILERS					43,420	43,420
025100-PPFG02	UTILITIES PHY. PLANT CHILLERS					194,440	194,440
025100-PPFG03	UTILITIES PHY. PLANT COOLING TOWERS					22,900	22,900
025100-PPFG04	UTILITIES PHY. PLANT PLUMBING					1,500	1,500
025100-PPFG05	UTILITIES PHY. PLANT LIFT STATIONS					2,300	2,300
025102-000000	ENGINEERING PHYSICAL PLANT				19,000	11,540	30,540
025300-000000	POST OFFICE PHY. PLANT	12.00	376,141	548,026	5,700	39,150	592,876
025400-000000	BUILDING DVCS PHY. PLANT	159.95	3,561,509	5,345,905	950,000	442,597	6,738,602
025500-000000	MAINTENANCE PHY. PLANT	49.00	1,815,125	2,631,825	96,000	805,300	3,544,125
025500-PPFG06	MAINTENANCE PHY. PLANT KEY SHOP					44,500	44,500
025500-PPFG07	MAINTENANCE PHY. PLANT HVAC					53,700	53,700
025500-PPFG08	MAINTENANCE PHY. PLANT ALARM SHOP					59,810	59,810
025503-000000	STORES PHY. PLANT	5.00	174,236	248,732	29,000	5,580	283,312
025600-000000	GROUNDS PHY. PLANT	36.00	1,085,764	1,624,125	228,000	281,376	2,133,602
025700-000000	VEHICLE PHY. PLANT	7.00	240,351	367,861		44,250	412,111
PHYSICAL PLANT TOTAL		311.95	9,205,948	13,476,692	1,605,174	2,730,531	17,822,397

Complete USF Operating Budgets by Year can be found on the website:

<http://usfweb2.usf.edu/bpa/opbudgets.htm>

For the most recent year, 2014-2015, the Tampa Campus information is found on pages 2-1 through 2-34 and for USF Health on pages 5-1 through 5-16.

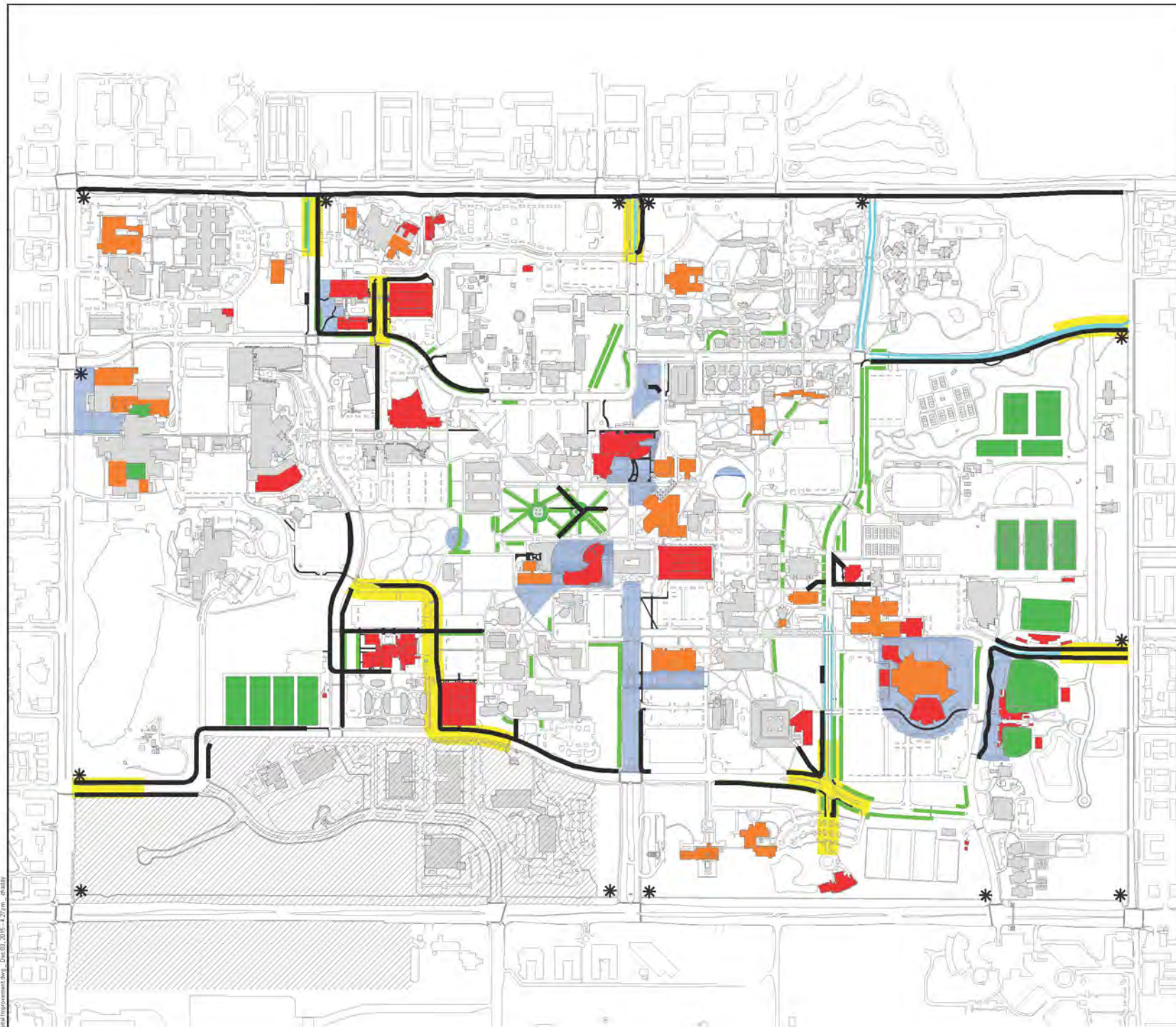
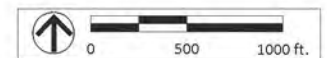
-  Renovated Building
-  New Building
-  New Park/Plaza
-  Field Improvement
-  Road Improvement
-  New Bike Lane
-  New Sidewalk
-  New Trees

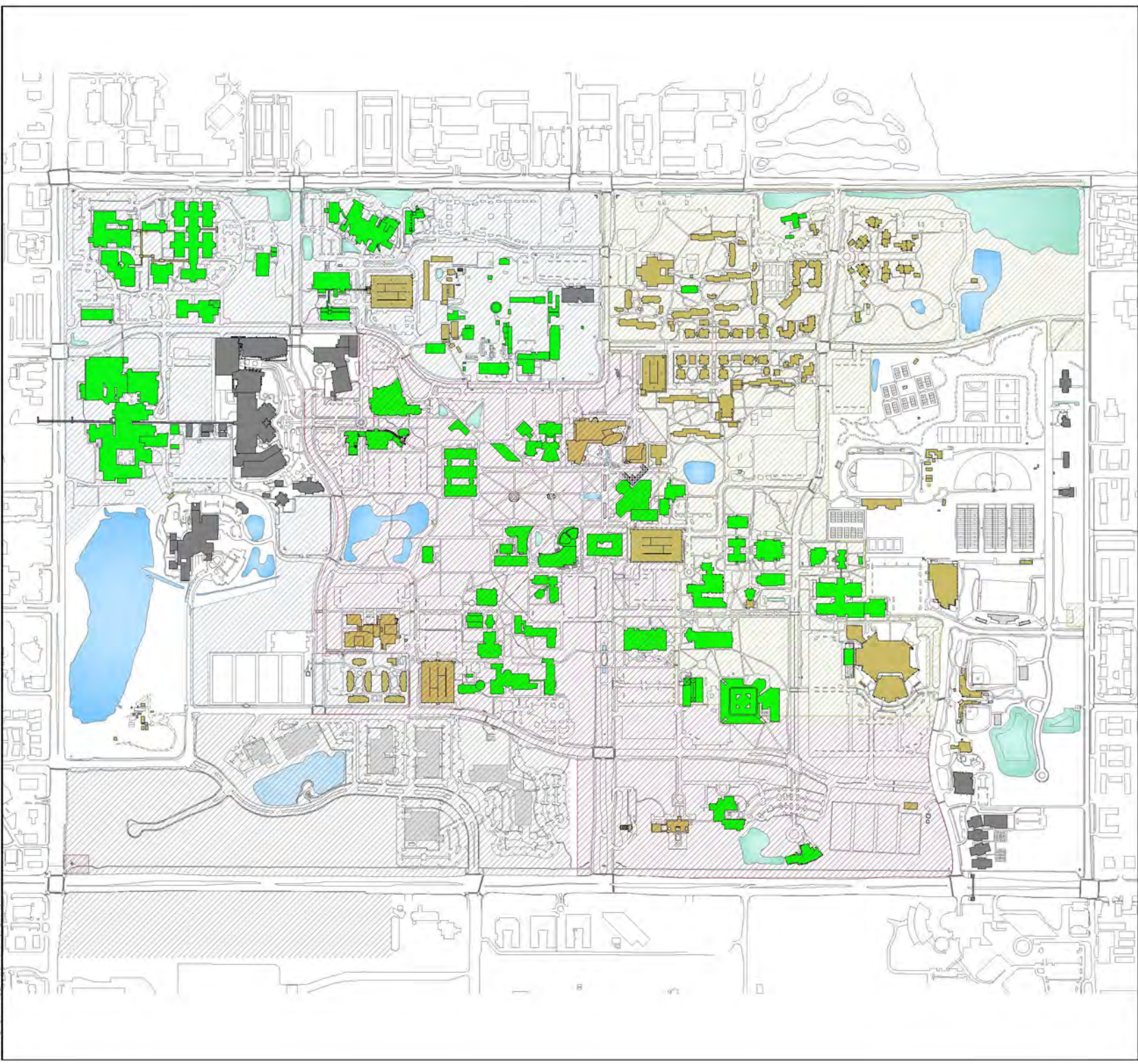
 Area Not Included in
Campus Master Plan




Element 11
Capital Improvements


Figure 11.1
2005-2015
Projects
Completed

Date
12/03/2015





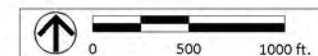
-  Non-PPD Buildings
-  PPD Buildings
-  Sub-Leases
-  Maintenance Core 1
-  Maintenance Core 2
-  Maintenance Core 3

 Area Not Included in
Campus Master Plan

Element 11
Capital Improvements

Figure 11.2
Building Maintenance
Responsibilities

Date
12/03/2015



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