Valdosta State University fulfills its mission by focusing on **inclusion** in all aspects of the educational experience.

VALDOSTA STATE UNIVERSITY™

VSU CAMPUS MASTER PLAN

PROGRESS REPORT

November 18, 2014

Prepared by:

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LORD AECK SARGENT

DOBER LIDSKY MATHEY
CREATING CAMPUS SOLUTIONS

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VALDOSTA STATE UNIVERSITY

EXECUTIVE SUMMARY

The Valdosta State University Master Planning process may be understood in five phases:

- Establishment of Assumptions
- Assessment and Analysis
- Identification of Needs
- Exploration of Alternatives
- Completion of Campus Plan

The first phase of the process began in early 2014 with a review of the University's Strategic Plan and former Master Plans and initial campus meetings to establish the fundamental assumptions of the campus Master Plan. Chief among these is that the University is not anticipating an enrollment increase, and that the plan is therefore directed to the more effective use and improvement (where necessary) of existing resources to better serve the needs of the University, its faculty, staff, and students.

The second phase began last spring with a series of interviews with faculty, staff, and students and tours of existing facilities to identify priorities and areas of concern. Over the course of the summer, information on the use and utilization of existing facilities was gathered. One area of concern voiced repeatedly during interviews and meetings was the spread-out nature of the campus and the dispersion of certain academic departments or colleges over a large geographic area. This concern, coupled with the goal to improve space allocation for efficiency and effectiveness led the University and the Master Planning Team to concur that gathering information on departmental use was worth the additional time required in order to better understand and address this issue. In addition, using Building Information Modeling (BIM) software, the team converted existing drawings of campus buildings into a digital model of the campus capable of accurately diagramming this information. Having gathered the necessary data, the team spent the early part of the fall analyzing and mapping this data. In addition, analytical diagrams at a campus scale were developed to identify major issues and opportunities.

On November 4, 2014, the Master Planning Team returned to campus to present a summary of the findings of the first two phases for the purpose of soliciting responses from University stakeholders. Through the activities of phase two and the responses received from stakeholders, the Team can effectively establish the campus needs, which is the final phase of the process prior to developing alternatives. However, it should be noted that phases three and four are somewhat reiterative, additional needs may be identified as alternatives are developed, and further possibilities explored.

The amount and detail of the data gathered, analyzed, and mapped is such that only a broad overview could be provided in the span of time available to meet with University stakeholders. The main points discussed included:

- The apparently significant underutilization of centrally-scheduled classrooms. Conversion of "surplus" classroom space to other uses could result in the opportunity for space re-allocation to advance strategic initiatives.
- The previously mentioned dispersion of colleges, departments and functions suggesting the need to reallocate space to better create more effective adjacencies.
- The geographic "sprawl" of the campus that tends not only to separate campus users but also renders the campus less cohesive and physically interconnected. Opportunities for strengthening a consistent campus image and techniques for reconnecting campus sectors were discussed.

In order to provide stakeholders with the opportunity to digest this information in greater detail, potentially each with an eye to specific areas of individual concern the Master Planning Team has developed the following report. This report should be understood as a draft; though the Team has worked diligently to develop as complete and accurate of a portrait of the campus as possible, we readily acknowledge that there will be gaps in the data we have. It is our sincere hope that the process of review will allow us to identify any such errors or omissions of consequence, so that we may proceed with the best information possible.

Reviewers are asked to forward any comments to Ray Sable, Director of Physical Plant and Facilities Planning, no later than December 1, 2014.

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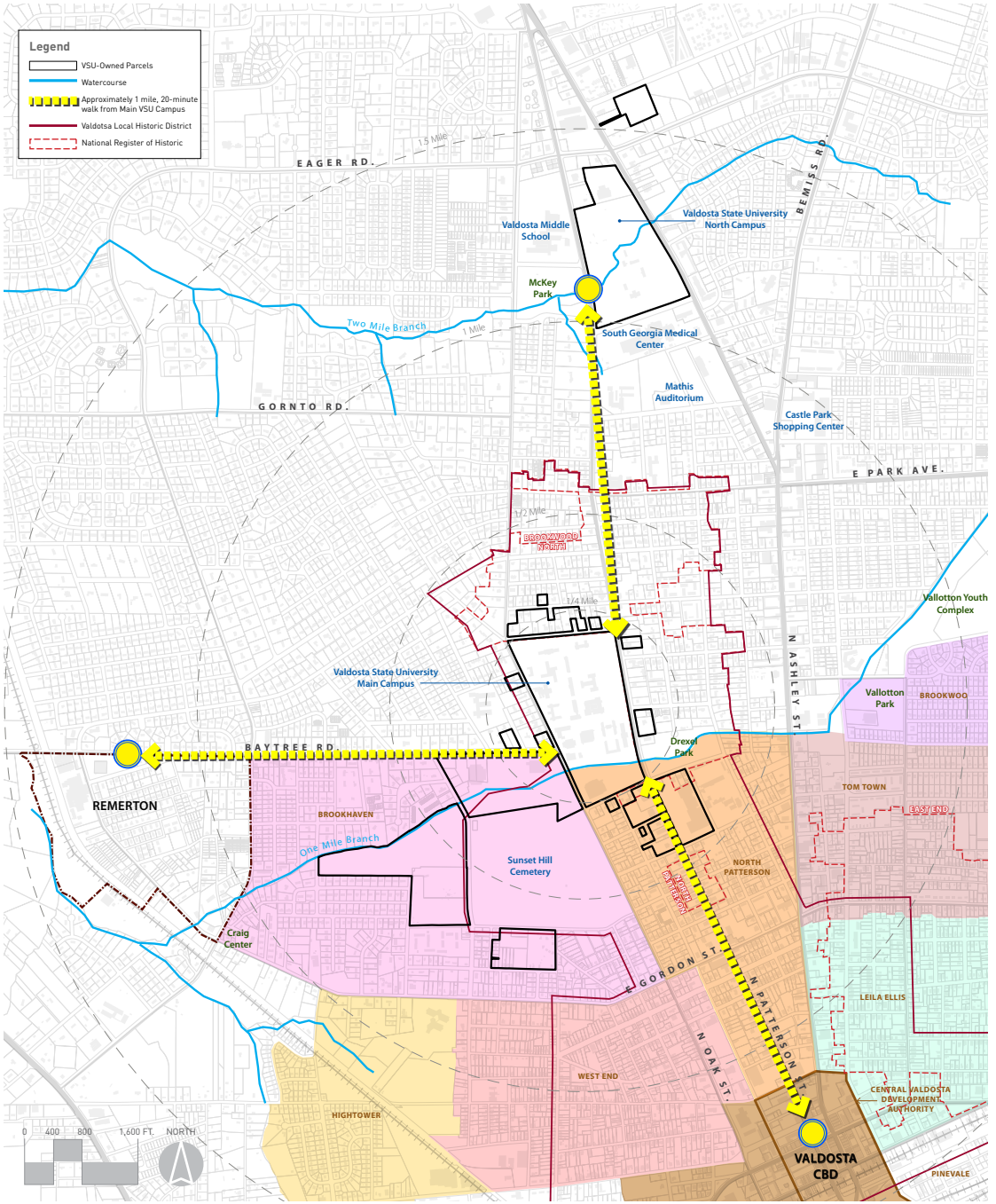
CHAPTER ONE
Context / Urban Design Assessment

NEIGHBORHOOD CONTEXT

The gradual evolution of both the City and the University has created a quilted pattern of historic residential neighborhoods, vibrant commercial districts, and idyllic campus settings.

North Campus, which primarily serves the Colleges of Business Administration and Nursing and Health Sciences and includes the VSU baseball and softball fields and the former Ashley Cinema, is situated adjacent to the South Georgia Medical Center and just south of the Five Points commercial district.

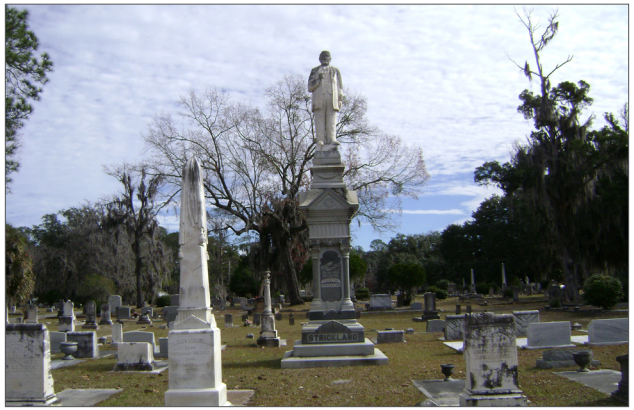
To the south, the campus extends towards downtown along North Patterson Street with several smaller buildings on the west side of the street and the University Center on the east. These facilities house a wide variety of meeting rooms, administrative spaces, and instructional spaces. The University Center also sits across the street from Drexel Park and the Bazemore-Hyder Stadium, home to the Blazer football team.

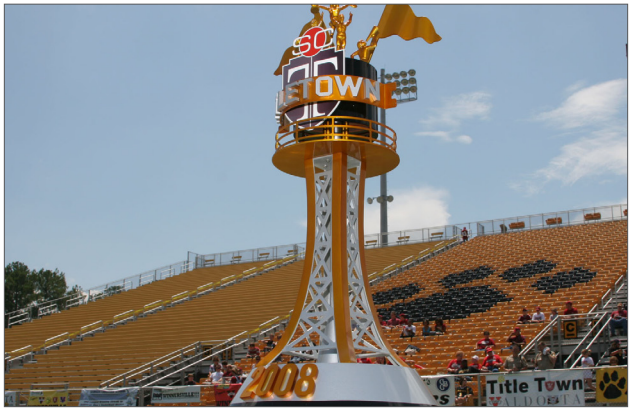


To the west, the College of Education and Human Services and Physical Education Complex extend the campus along Baytree Road, acting as a gateway for most visitors arriving from interstate highway seventy-five. The network of sidewalks in the vicinity of the One Mile Branch offers a tenuous connection to student housing and recreation facilities on Sustella Avenue that are otherwise separated from the main campus by the Sunset Hill Cemetery.

At the center of it all, roughly equidistant from Valdosta's historic downtown, the Five Points commercial district, and the popular entertainment district of Remerton, is the historic Main Campus, which serves as the heart of the campus at the heart of the community. It is surrounded by the Valdosta Historic District, which is subject to design guidelines covering the any new construction or property modifications and includes two places on the National Register of Historic Places: the Sunset Hill Cemetery and the Brookwood North neighborhood. In addition, the North Patterson and Brookhaven neighborhoods have both been designated as revitalization areas by the U.S. Department of Housing and Urban Development (HUD), with plans for general infrastructure projects such as curb-and-gutter and sidewalk replacement. The crown jewel of the VSU campus, the Main Campus is remarkable for its architectural character, well maintained landscape and grounds, pedestrian-friendly environment, and is home to most of the core curriculum and functions of the University.

One of the critical challenges of the master plan is to strengthen the ties that bind this colorful patchwork of memorable places together into a more cohesive whole.



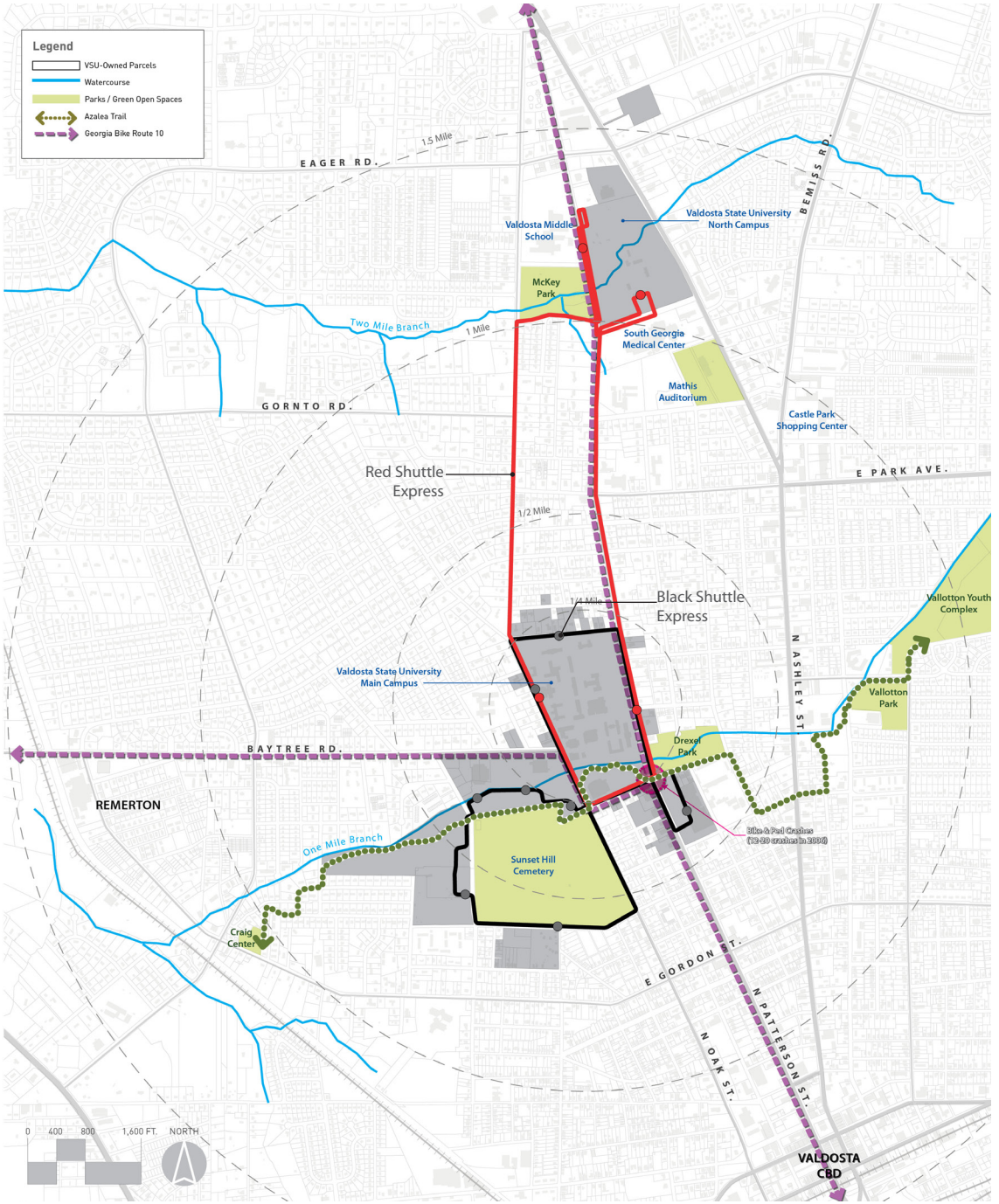


LOCAL MOBILITY & CONNECTIVITY

The Blazer shuttle system is the only regular transit service in the city and provides a critical link between the disparate precincts of the VSU campus. There are two shuttle bus routes – a black route that circulates around the periphery of Main Campus, and a red route that connects Main Campus to North Campus. The shuttles run from 7:30 AM to 11:00 PM Monday through Friday. In addition, a night shuttle operates between Main Campus and Centennial Hall during off-hours, seven days a week. VSU also provides a shuttle service to the Valdosta mall every Thursday. Shuttles run with a headway of approximately 10-15 minutes.

There are two designated bicycle routes through VSU – one along Patterson connecting Downtown to North Campus / Five Points; and one along Brookwood, Oak and Baytree connecting Main Campus with Remerton and the Valdosta Mall. In addition, the Azalea Trail is a multiuse bike-ped facility that links the Craig Community Center with sports fields at Woodlawn Park. While the signed routes are part of a statewide bike network, they are not striped or otherwise marked which could lead to right-of-way confusion between bikers and motorists.

The on- and off-campus sidewalk network is extensive, although limited retail amenities near the campus earns it a walkscore of 65 (out of a possible 100 – i.e. most errands require a car). The closest grocery – a small IGA - is about 0.5 mile east of campus along the Azalea Trail; the nearest full-sized grocery is another mile to the north along Ashley. The closest regional retail centers are at least 1.5 miles from main campus.



What's Nearby

Walk Score - 65 (somewhat walkable) some errands can be accomplished on foot.
Nearby services - restaurants, coffee shop, bars, groceries, parks, schools, shopping, entertainment and errands

Coffee:
Starbucks .06mi

Bars:
Ashley St Station .7mi

Groceries:
La jalisco .5mi

Parks:
Drexel Park .1mi

Schools:
S.L. Mason Elementary School .9mi

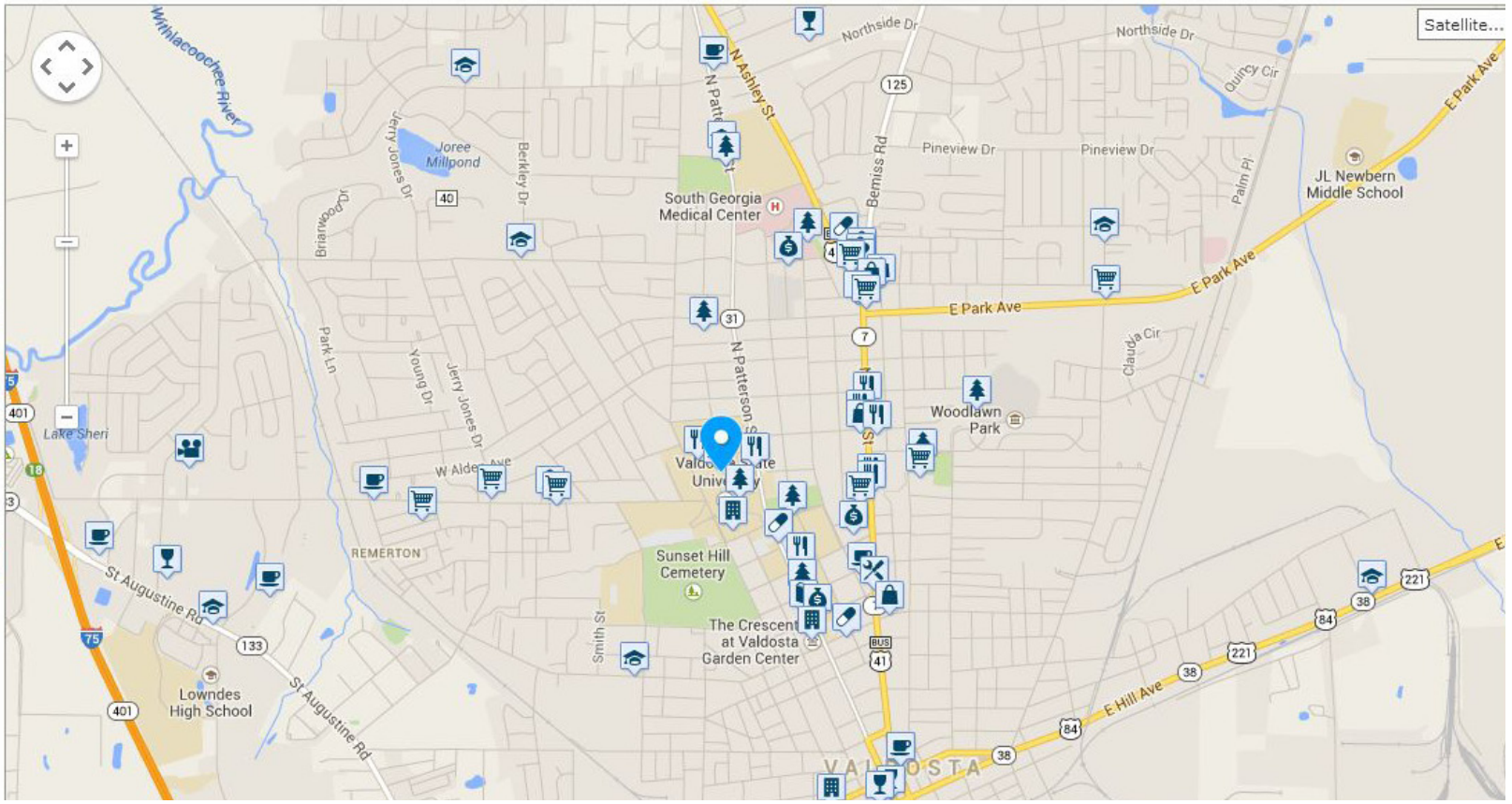
Shopping:
Factory Showroom .5mi

Entertainment:
Fine Arts Gallery .3mi

Errands:
Anthony W. Hunter, RPH .4mi

Search Nearby:

Where do you commute? Go



VSU CAMPUS ASSESSMENT

HISTORIC EVOLUTION

As part of the 2006 Campus Historic Preservation Plan, Lord Aeck Sargent had surveyed 51 buildings on Main and North campus. The following table represents the distribution of their construction during the historic periods of campus development.

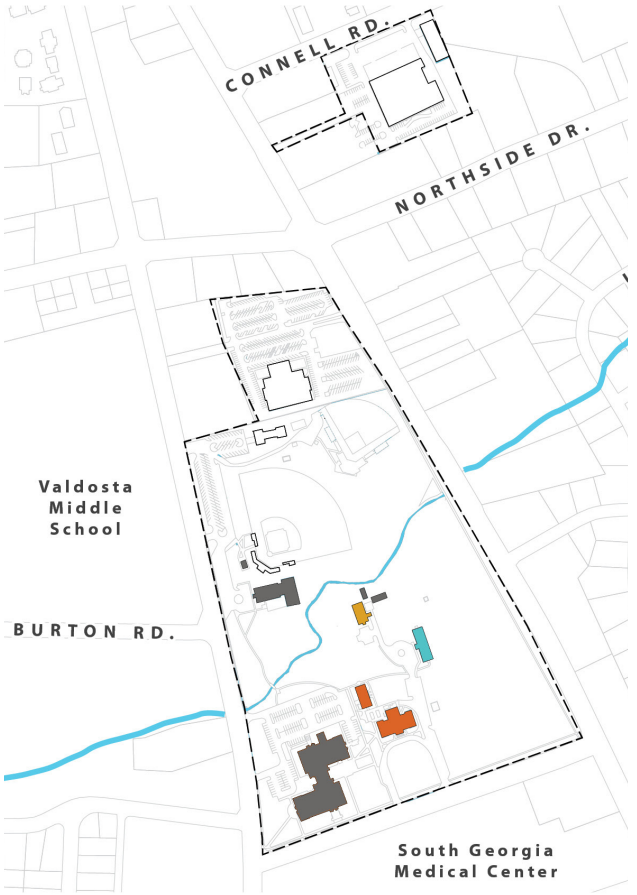
Development Period	% of Surveyed Buildings
1900 - 1921	20%
1922 - 1934	15%
1935 - 1941	14%
1942 - 1949	14%
1950 - 1965	31%
1966 - 1969	6%

West Hall and Ashley Hall are the oldest buildings (1917 and 1921 respectively) existing on campus built in Spanish Colonial Revival architecture style. Between 1935 and 1949, Powell Hall, Reade Hall, Pine Hall, Pound Hall and few others were built in the same style. Considering the complete building inventory on both campuses, more than half of the campus was constructed between World War II and the turn of the century. After receiving University status in 1993, VSU grew with significant off-campus expansion at University Center in 1995 and new Bailey Science Center in 2001 on-campus. VSU continued to grow to accommodate future student growth by adding four new residence halls and two new parking decks. The original Student Union built in 1966 was too small for the growing VSU population, hence it was demolished in 2008 and new Student Union opened in 2010. In April 2014, VSU celebrated the ribbon cutting of the newest Health Sciences and Business Administration building on North Campus.

West Hall, 1917

University Center, 1960

Hugh C. Bailey Science Center, 1998



Georgia Hall, 1969 and 2009

Building Age

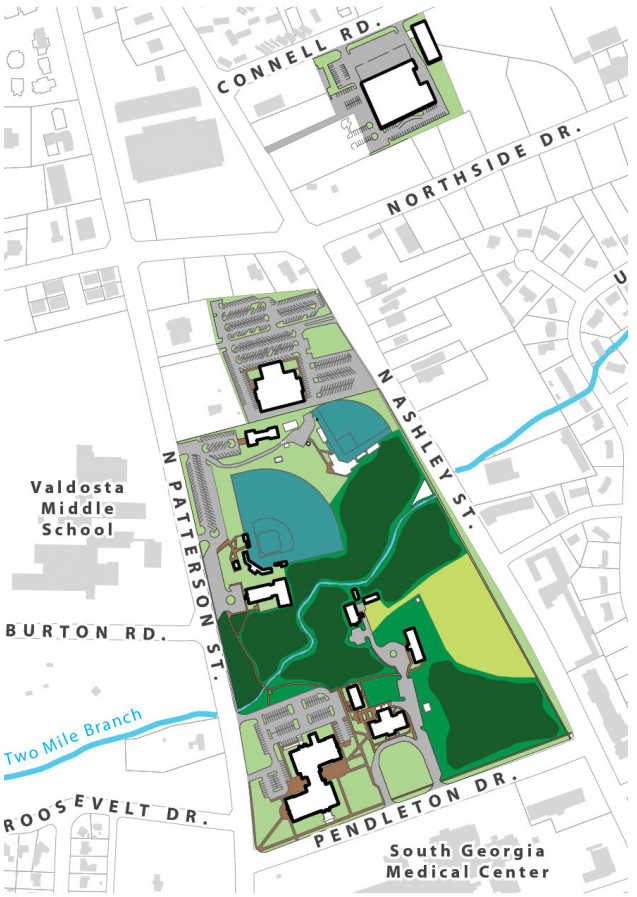
- 1900 - 1921
- 1922 - 1934
- 1935 - 1941
- 1942 - 1949
- 1950 - 1965
- 1966 - 1969
- 1970 - 1978
- 1979 - present

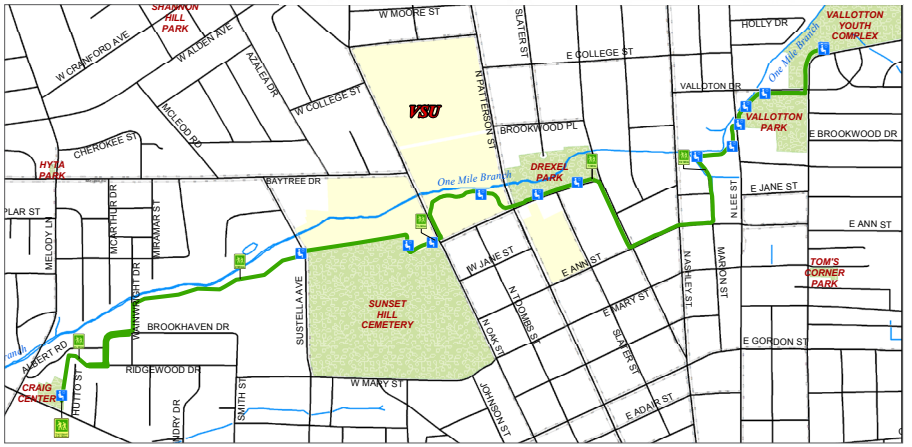
LANDSCAPE ASSESSMENT

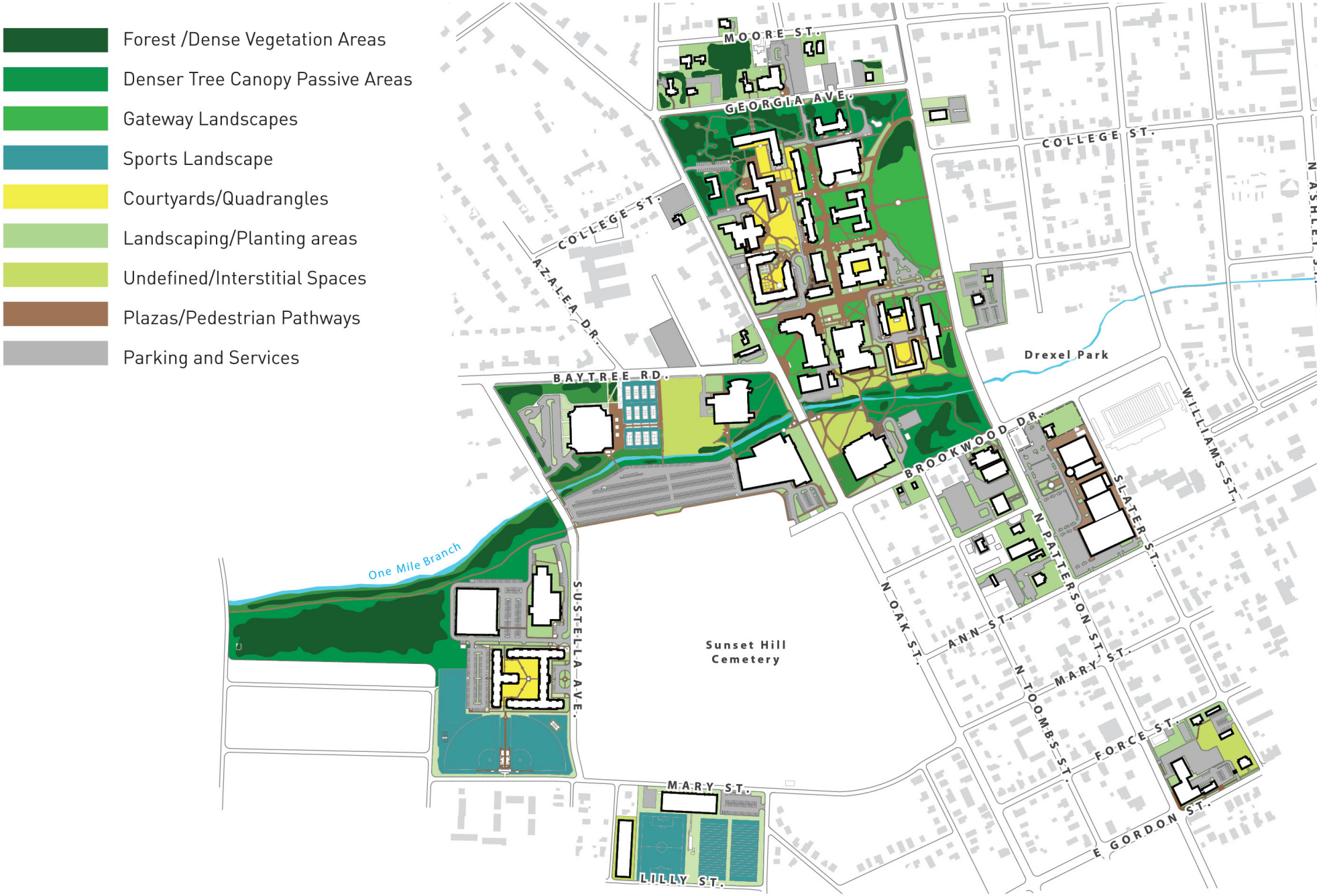
The landscape assessment takes a closer look at the existing spaces connecting the built environment and their organizing patterns. These spaces not only weave the campus together, but also serve as major gathering spaces and are utilized to create an important identity for the university. The assessment also observes transition of the landscape elements from wider campus networks, including the street connections, Azalea and Camellia trails, to the surrounding neighborhoods. The landscape areas / open spaces were carefully assessed considering the surrounding building uses/development types, main function of the space and the integrated relationship between the outside and the inside of the buildings. Based on this information the spaces were then subdivided in to multiple categories.

Main Campus:
The main campus is more diverse than the north campus. The landscape elements vary from unusable forest areas, grand entrance and gateways, passives areas to courtyards and quadrangle framed by the main buildings on campus.

North Campus:
The north campus has a higher concentration of the forest areas located by the Two Mile Branch Creek and also has a lot of areas dedicated to the sports function.






Forest /Dense Vegetation Areas
Denser Tree Canopy Passive Areas
Gateway Landscapes
Sports Landscape
Courtyards/Quadrangles
Landscaping/Planting areas
Undefined/Interstitial Spaces
Plazas/Pedestrian Pathways
Parking and Services
MOORE ST.
GEORGIA AVE.
COLLEGE ST.
COLLEGE ST.
AZALEA DR.
BAYTREE RD.
Drexel Park
BROOKWOOD DR.
WILLIAMS ST.
SLATER ST.
N PATTERSON ST.
N OAK ST.
ANN ST.
MARY ST.
N TOOMBS ST.
FORCE ST.
E GORDON ST.
One Mile Branch
SUSTELLA AVE.
Sunset Hill Cemetery
MARY ST.
LILLY ST.

Forest /Dense Vegetation Areas

These are unmanaged areas with dense natural and organically growing vegetation. These areas are located mostly along the creeks and are critical for habitat and environmental functions

Denser Tree Canopy Passive Areas

These areas can be distinguished by the dense tree canopy but are actively used by the students and staff members as passive recreational areas.

Sports Landscape

These highlights the areas dedicated to the sports function within the campus.

Courtyards/Quadrangles

These areas serves as the hub and of the campus and are defined by the buildings and other landscape elements framing the area.

Gateway Landscapes

These areas are significant in establishing the campus identify and can be distinguished by their grand size, location, and their relationship to major buildings or landmarks.

Plazas/Pedestrian Pathways

These are the main pedestrian spines running through the campus and are responsible for establishing the pedestrian environment for the campus.

Landscaping/Planting areas

These highlights the landscaped areas between street edges and the building facades, and are also responsible for creating a proper transition to the surrounding neighborhood.

Undefined/Interstitial Spaces

These highlights the areas which are mostly residues for the adjacent spaces and don't have any primarily identified function.

PEDESTRIAN - BIKE CONNECTION

Main Campus:

It is well connected by paved pathways and sidewalks between the academic buildings, residence hall, open space/plazas and satellite campus sites. Blazer Boulevard pedestrian mall is the major spine with heavy pedestrian movement, contributing in creating an urban plaza character to the campus. All the streets surrounding the campus have a comprehensive sidewalk network with plenty of mid-block crosswalks and signalized intersections providing pedestrian crossing opportunities. In addition to several pedestrian bridges over One Mile Branch, the pedestrian overpass on Oak Street was also constructed to strengthen the east-west connection between the campuses. On campus periphery at certain locations, the pedestrian crossings are unsafe due to the conflicts created by vehicular movements on high traffic corridors and discontinuous sidewalk network. Georgia Bike Route 10 abuts VSU campus along N Patterson Street, W Brookwood Drive, N Oak Street and Baytree Road. The designated bike route provides an opportunity for regional connection (including downtown, North Campus and Remerton); however, the bike facilities (sharrows and bike lanes) are missing.

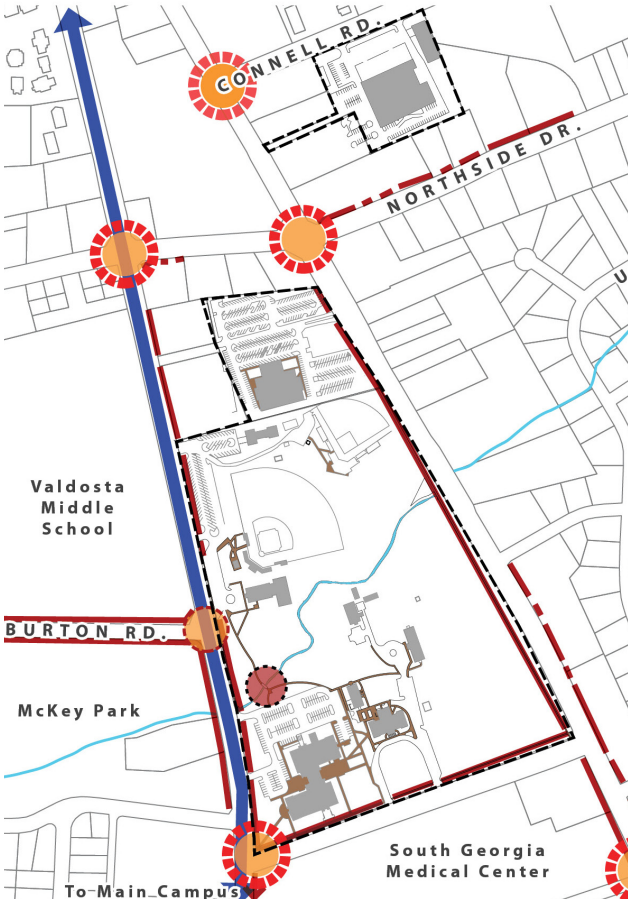
North Campus:

On-campus pedestrian connectivity is well established, but externally the campus feels isolated from the main campus even though the distance is only one mile. Future dedicated bike lane on Georgia Bike Route 10 or Oak Street could provide better connection in addition to VSU Shuttle service.

Blazer Boulevard Pedestrian Mall

Pedestrian overpass on Oak Street

Pedestrian crossing on heavy traffic intersection - Baytree and Oak

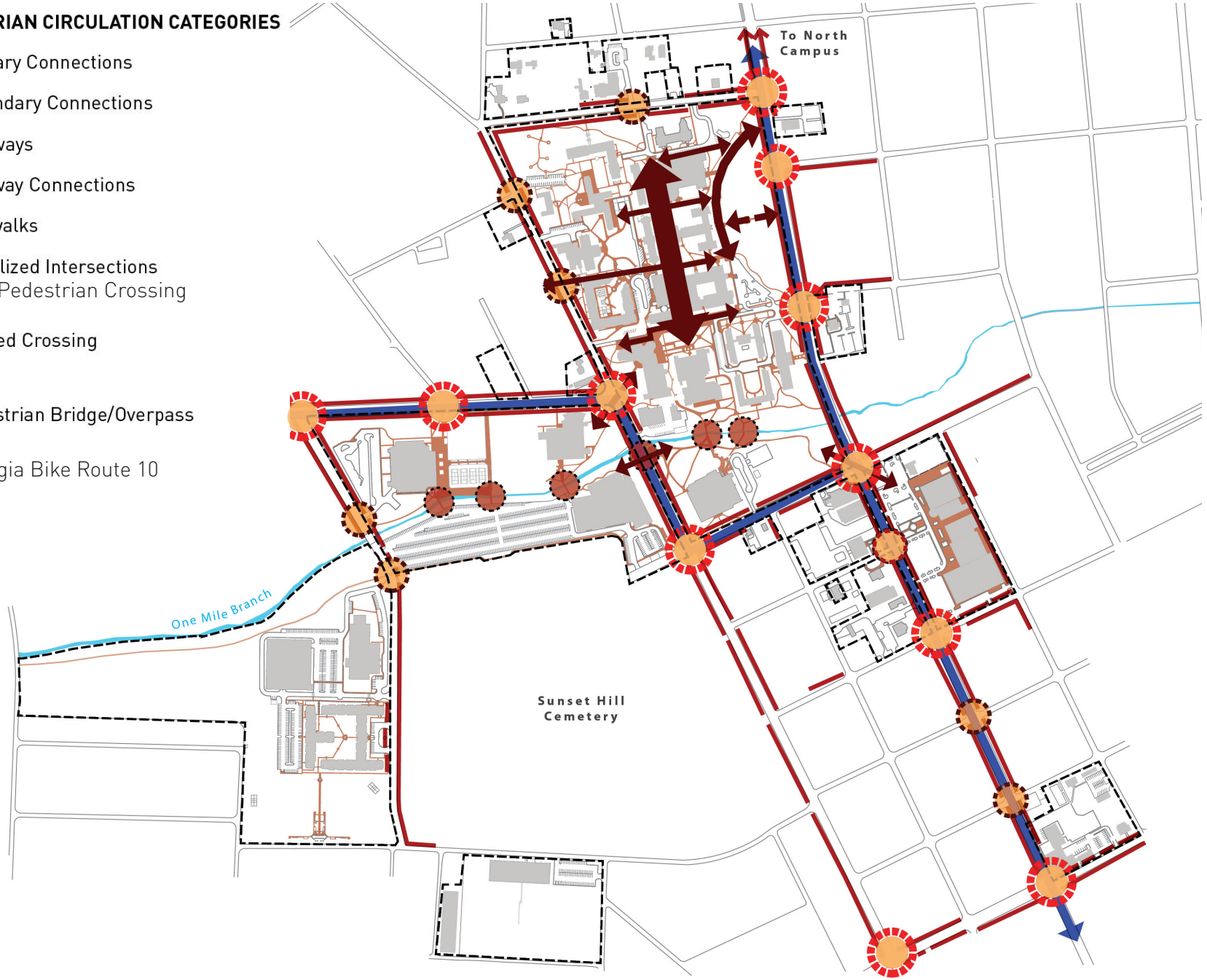


Missing sidewalk south of West Circle on N Patterson Street

Lack of pedestrian connection through the parking lot at University Center

CAMPUS USE PEDESTRIAN CIRCULATION CATEGORIES

- Primary Connections
- Secondary Connections
- Pathways
- Gateway Connections
- Sidewalks
- Signalized Intersections with Pedestrian Crossing
- Marked Crossing
- Pedestrian Bridge/Overpass
- Georgia Bike Route 10



VEHICULAR CIRCULATION

Main Campus:
It is surrounded by major traffic thoroughfares - North Patterson on east, Brookwood on south, North Oak and Baytree on west. Per GDOT traffic count data, North Patterson and Baytree carry higher volume of traffic. Portions of North Oak and Brookwood on the southwest corner of main campus have lower intensity of traffic; however, when the traffic is combined with the other busy corridors, there is greater traffic impact on the intersections. Such higher volume of traffic creates conflicts with pedestrian movement resulting into unsafe walking environment. From site observations and using preliminary traffic data, it is noticed that the most critical intersections are Baytree and North Oak, and North Patterson and Brookwood. Further study may be required to make future recommendations related to intersection improvements.

The signal lights are placed at regular intervals around the campus; however, the campus has too many vehicular entry points / curb cuts on the major roads, especially near University Center, Georgia Avenue and North Oak Street. These curb cuts create conflict between the vehicular and pedestrian movement. In order to create safe pedestrian environment, a few curb cuts should be closed where feasible. North Oak Street has more curb cuts compared to North Patterson, but it has lower traffic volume. North Oak Street has the potential to become student-oriented pedestrian friendly corridor with bike facilities.

North Campus:
This campus is also surrounded by high volume traffic corridors creating a larger disconnect from main campus. The curb cuts on North Oak Street also contribute to unsafe pedestrian condition.

Image Placeholder

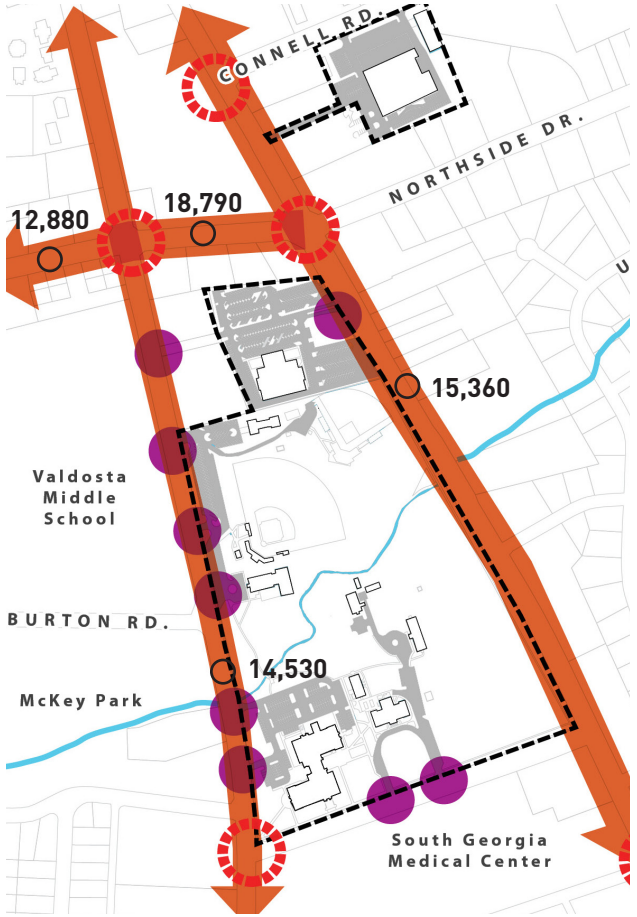


Image Placeholder


Traffic Count
One-way Street
Surface Parking
Parking Deck
Signalized Intersection
Curb cuts
Source: GDOT traffic count data, 2013
14,050
17,840
7,180
12,900
13,330
10,010
9,430
One Mile Branch
Sunset Hill Cemetery
9,150
6,070

PARKING

Parking at VSU is divided into three categories regulated by permits – resident student facilities serving West Campus; commuter student facilities around the Oak Street Lot and University Center; and faculty parking in a variety of locations across campus. In addition, North Campus is served primarily by the commuter lot at the Billy Grant Baseball Field and by the lot at the Ashley Cinema. There are a total of 5,769 spaces on campus with 70% dedicated to students.

A parking utilization survey was conducted in October of 2014 for the entire campus. The survey recorded the number of spaces available over the course of one week, every hour from 8:00 AM to 10:00 PM between Monday and Thursday, and Friday from 8:00 AM to 3:00 PM. Five categories of parking were included (student, timed, reserved, staff and ADA accessible). The accompanying illustrations show the approximate intensity of use in two-hour increments for each primary parking facility in the survey.

The parking utilization rate is higher during the morning than in the evening, attributing it to the commuter traffic. The employee parking utilization rates is highest during 12-4pm. On the main campus the highest utilization is achieved during 12-4pm, whereas in the north campus, overall utilization is better and the highest rates are achieved almost throughout the day, from 10am – 6pm. The parking allocated for the resident overnight parking has high utilization throughout.

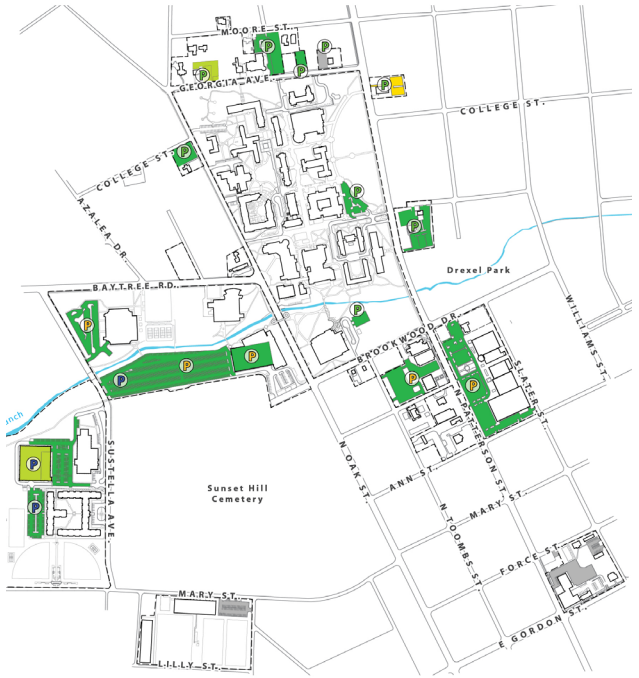
Parking Utilization Rates

- 0 - 20 %
- 20 - 40 %
- 40 - 60 %
- 60 - 80 %
- 80 - 100 %
- Information not available

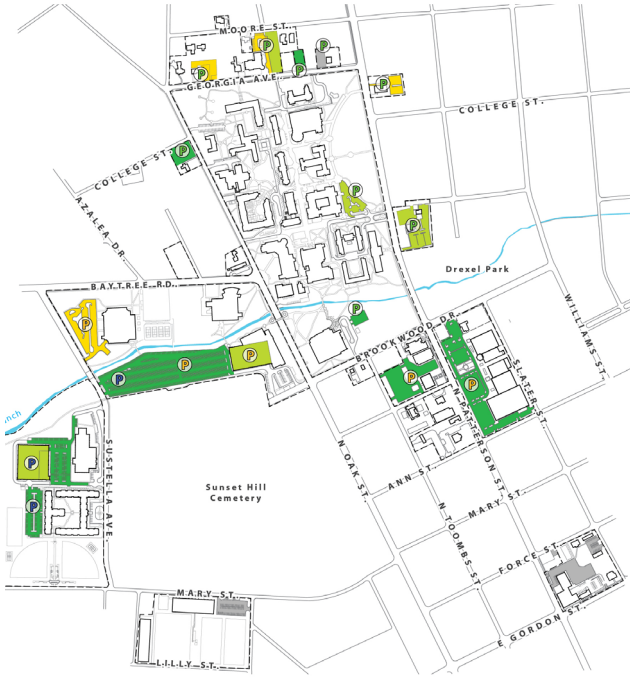
Parking Lot Categories

- Employee Parking
- Resident Overnight Parking
- Commuter Student Parking

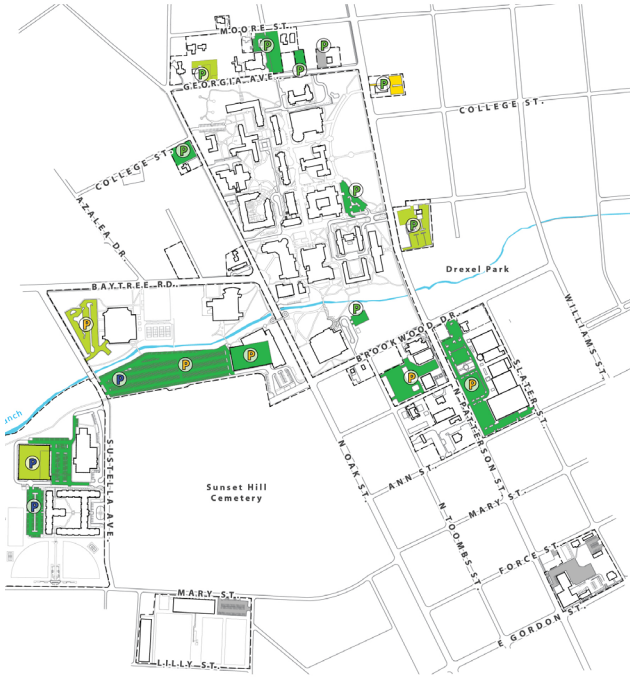
Parking Utilization 12 pm - 2 pm



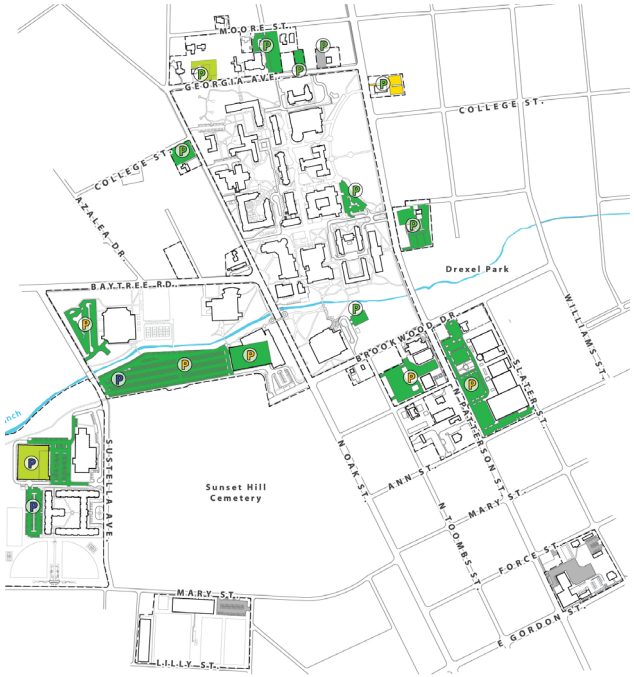
Parking Utilization 8 am - 10 am



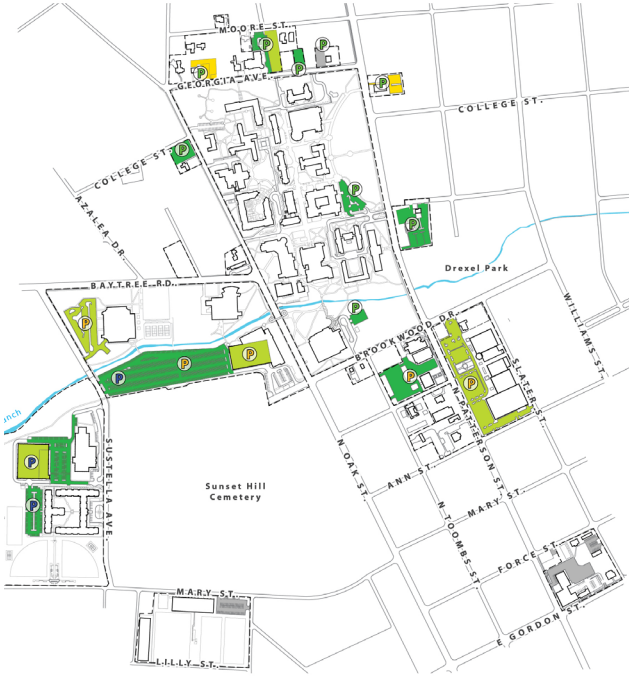
Parking Utilization 10 am - 12 pm



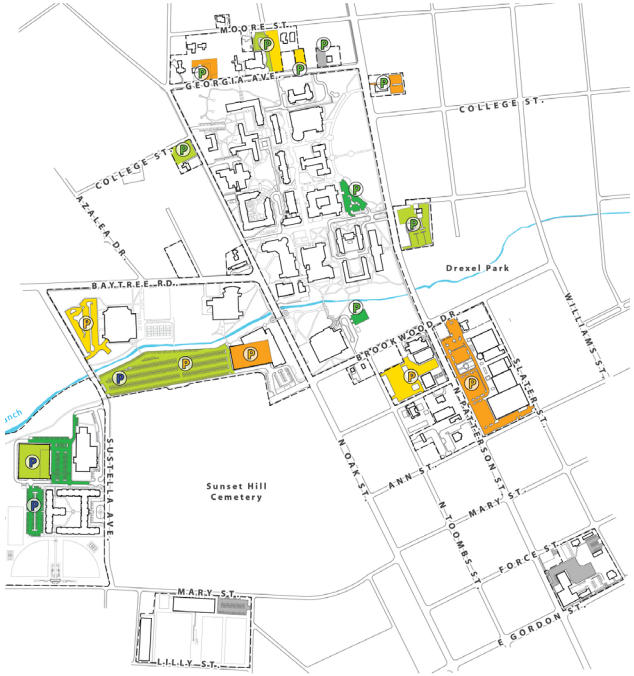
Parking Utilization 2 pm - 4 pm



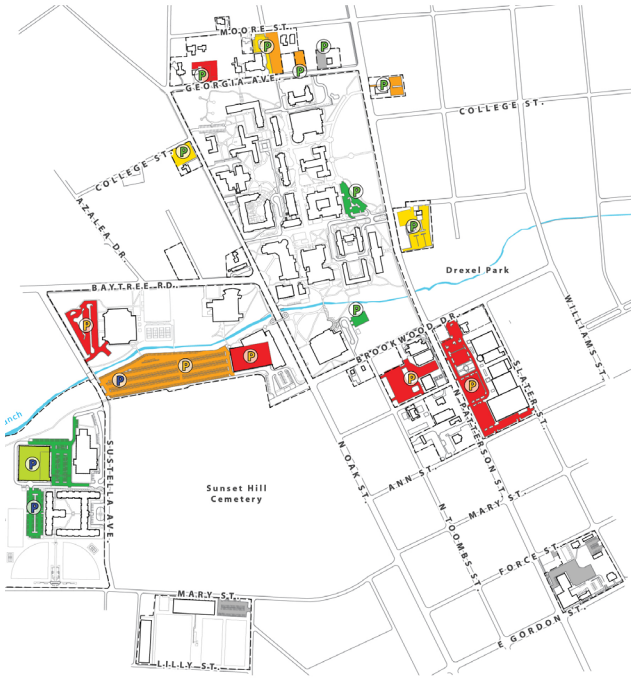
Parking Utilization 4 pm - 6 pm



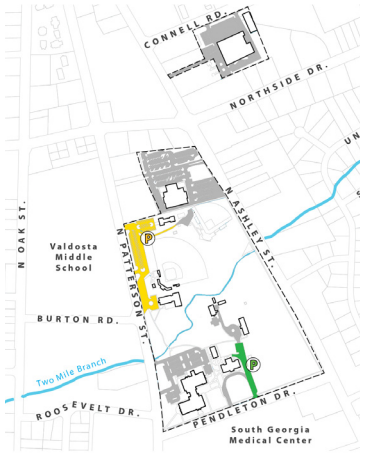
Parking Utilization 6 pm - 8 pm



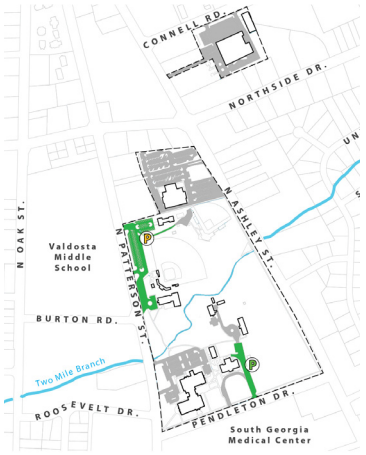
Parking Utilization 8 pm - 9 pm



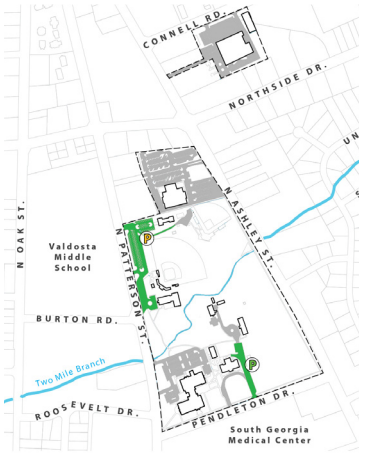
Parking Utilization 8 am - 10 am



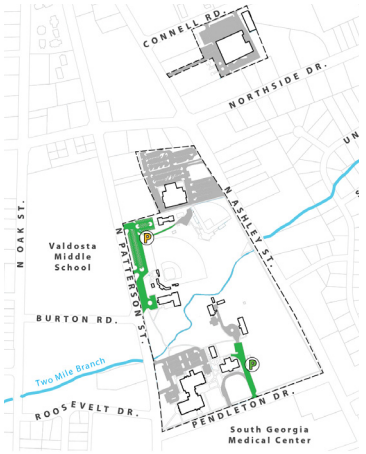
Parking Utilization 10 am - 12 pm



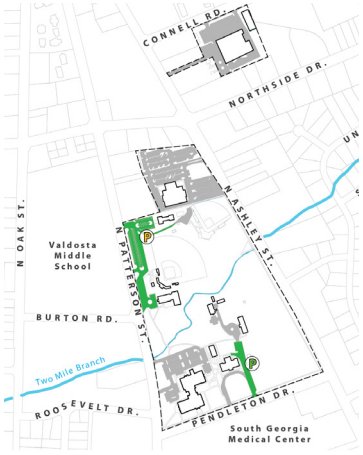
Parking Utilization 12 pm - 2 pm



Parking Utilization 2 pm - 4 pm

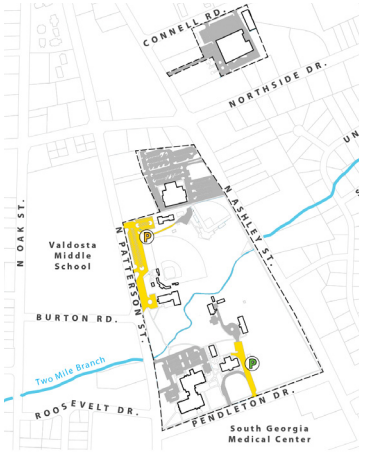


Parking Utilization 4 pm - 6 pm



Parking Utilization 6 pm - 8 pm

Parking Utilization 8 pm - 9 pm



Source: Parking Study, October 2014

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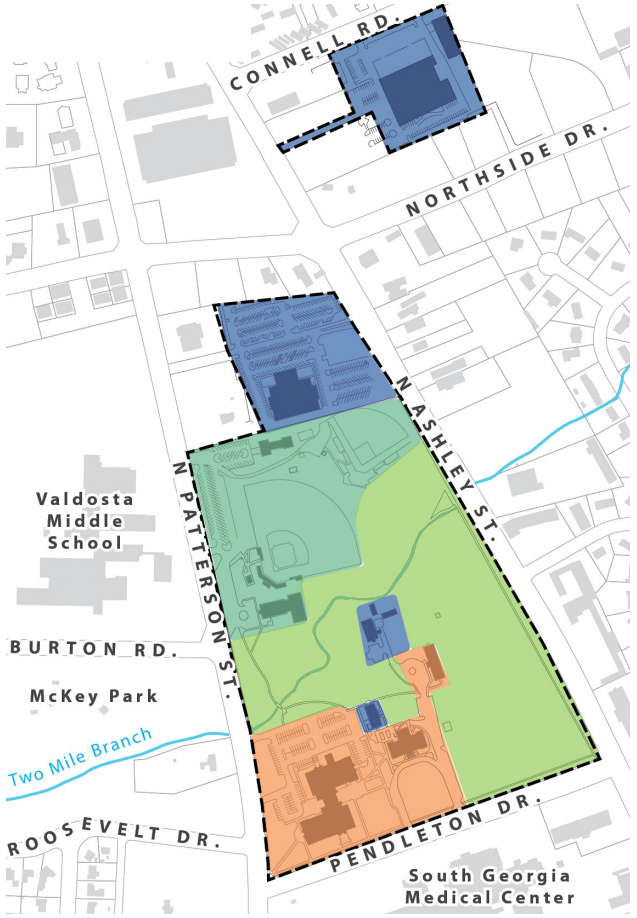
LAND USE DISTRICTS

The Land Use Districts illustrate the evolution of the campus and also the existing land use patterns within the campus. The broader campus land-use categories that were identified include:

- Academic (classroom, lab, and science center)
- Support Services (office, administration, general use, student support services, and maintenance)
- Residential (student housing)
- Athletic
- Parking (dedicated surface lots and parking decks)
- Landscape (stand alone, not a part of a particular building/district)

Main campus:
The main campus consists of all the different categories identified. The main area bounded by Oak Street, Georgia Avenue, North Patterson Street and West Brookwood Drive is the most diverse area and has the different uses intermingled with each other, creating a vibrant synergy at the center. The supportive services are mostly located along the major roads – Oak Street, North Patterson Street and Georgia Avenue for ease of accessibility. The campus area west of Oak Street is mostly dedicated for the commuter student parking, sports facilities and some student housing.

North Campus:
Though not as intermingled as the main campus, the north campus has almost all the categories, except for residential.



CAMPUS USE PATTERN CATEGORIES

- Academic (classrooms and science center)
- Support Services (office, administration, general use, student support services, and maintenance)
- Residential (student housing)
- Athletic
- Parking (dedicated surface lots and parking decks)
- Landscape (stand alone, not part of a particular building/district)

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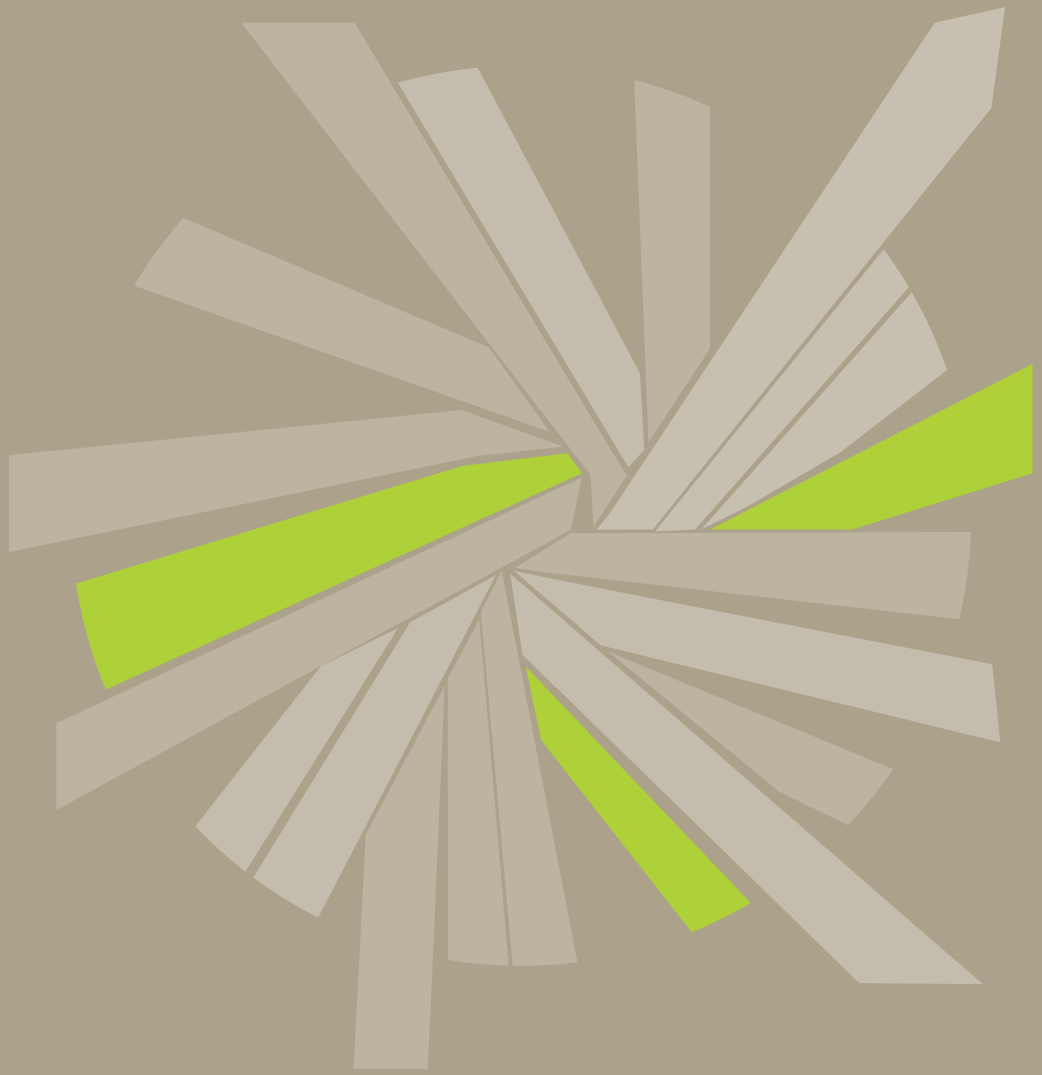


CHAPTER TWO
Campus Space Overview

Valdosta State University (VSU) in collaboration with the University System of Georgia (USG) is conducting a campus master plan update. This update is based on several core assumptions:

- The plan must be closely linked with VSU's and USG's strategic planning.
- VSU's enrollment is projected through 2022 to be relatively flat at around 12,000 total headcount students.
- State funding for new construction is projected to be limited in the plan's time horizon as the USG implements its strategic plan that emphasizes quality, access and efficiency.
- Optimizing VSU's space resources to best facilitate its strategic goals is a high priority.

Accordingly, one of the most important planning tools for this effort is the space inventory required of its campuses by the USG for system-wide reporting and maintained in Banner by VSU's Office of Physical Plant and Facilities Planning. This database records essential information for two critical views (Buildings and Rooms) of VSU's facilities. DLM was provided several snapshots of this data, most recently by VSU on 18 June 2014, with the data representing facilities in use as of the Spring of 2014. The USG-required data was significantly enhanced over the summer with the assistance of the Office of the University Architect through the addition of data on the departmental assignment of each space. The comments below are a summary of the current scale, distribution, and characteristics of the buildings and space on the VSU campus.

BUILDINGS

The first view of VSU's facilities provides information regarding the collection of buildings that support the university. This information focuses on data such as:

- Building size (Gross Square Feet or GSF, and Number of Floors),
- Building age (Date of Initial Construction, Most Recent Renovation and Percent of Building Renovated),
- Building use (Primary Use, Percent Instruction/ Auxiliary/Other)
- Building condition
- Building value (Initial Construction Cost, Replacement Cost)

(See Appendix 2.1 – VSU Building Inventory)

In the Spring of 2014, VSU recorded 91 buildings totaling 2,694,906 GSF. These buildings have a combined replacement value of $473,578,805. The distribution of building uses is plotted on Figure 2.1.

VSU's buildings have been built from 1900 to 2013 with the average building age being 45 years old. See Figure 2.2

Because the VSU campus is distributed across two geographic locations in the city, it is useful to look at the distribution of square footage between Main and North campuses. See Figure 2.3

One way to infer whether VSU has sufficient space in the aggregate to support its mission is to compare space provision at the University to that at a range of similar institutions. The "peer" group shown in the graph below was selected from the DLM database from those institutions of similar enrollment for which we have equivalent space data. Two measures are shown: the Gross Square Feet of non-residential space per FTE faculty member and per FTE student. Removing residential space from the comparison eliminates the impact of the institutions' choice on what percentage of their students they house.

When we look at this comparison in terms of the FTE faculty, while VSU (the red bar) is in the lower half of the peer group, it is between the mean (green bar) and the median (blue bar), indicating that the University has roughly the average of the peers. When we use FTE students as the denominator, the University's relative position declines to the lower third of the peers, suggesting that VSU's faculty to student ratio is lower than many of the institutions in this group, and that it certainly does not have excess space in relation to the peers. A more meaningful peer analysis could be conducted that would focus on VSU stated peer group.

Generally, the data from the building inventory give a useful overview of VSU's facility characteristics but all fields should be reviewed and updated where necessary to provide a more up-to-date and accurate picture.

Figure 2.1 Primary Use by GSF

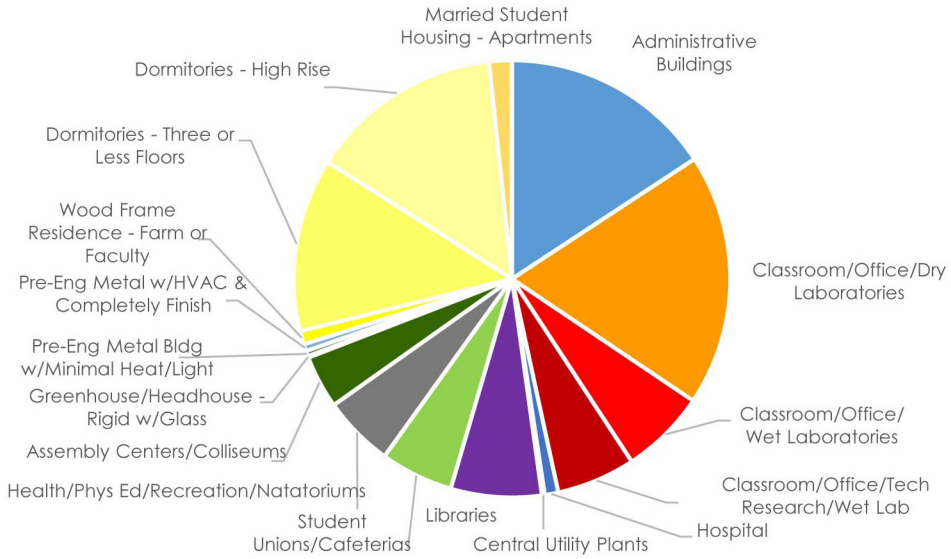


Figure 2.2 GSF by Era

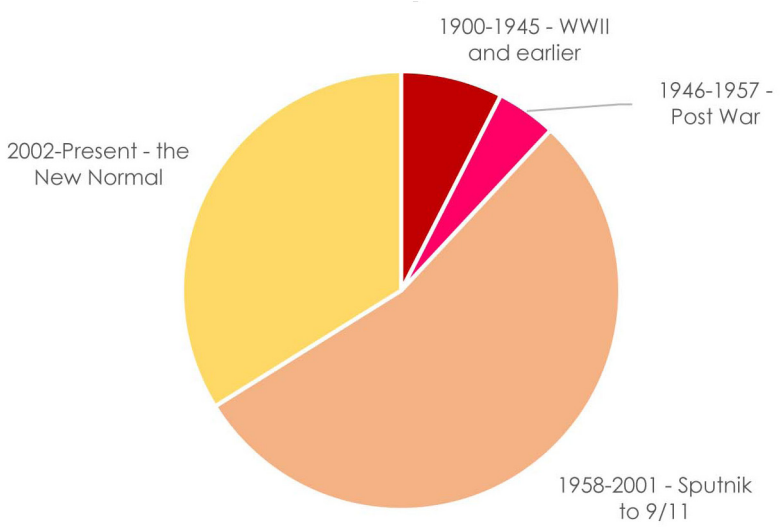
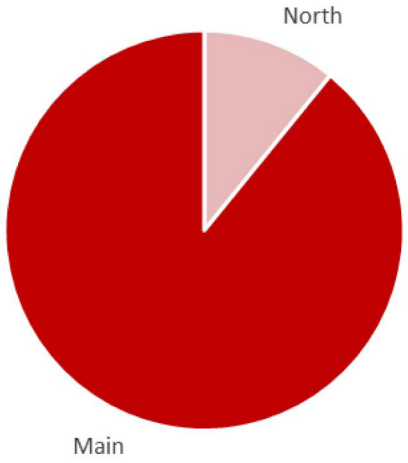


Figure 2.3 GSF by Campus



ROOMS

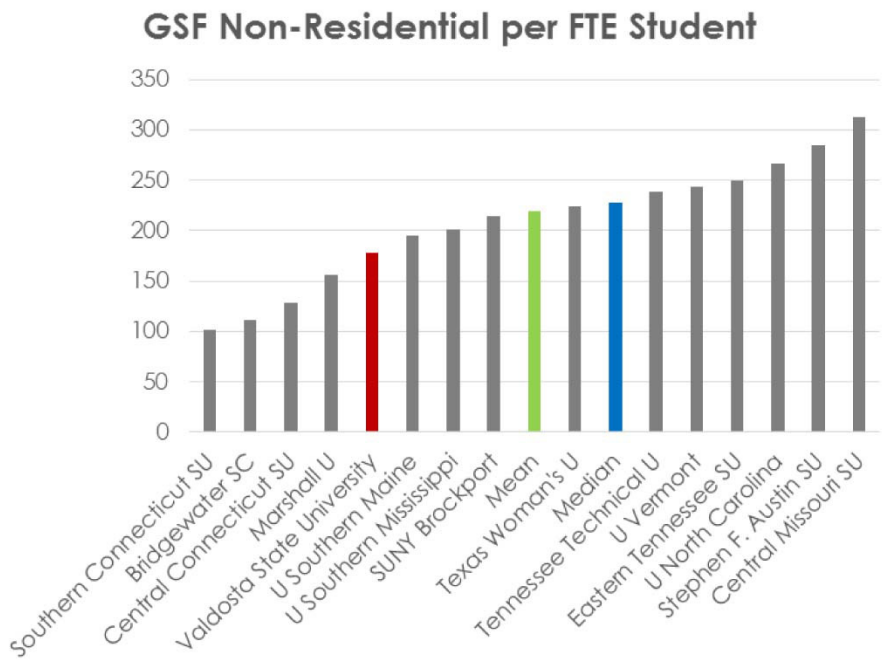
The second view of VSU's space inventory provides a wealth of data on each space within each building:

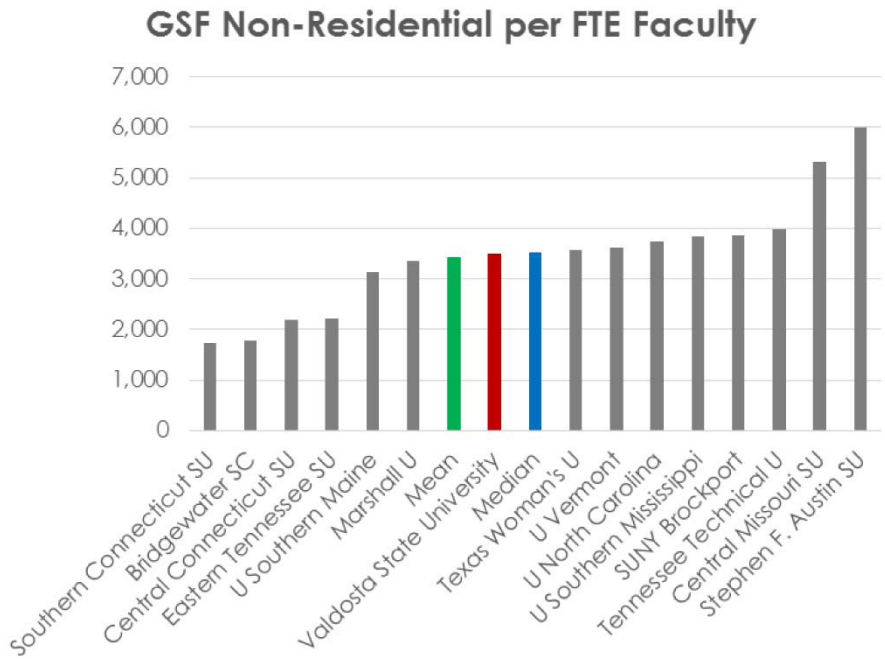
- Building Code/Name
- Room Number
- Room Area in Square Feet
- Room Use according to HEGIS/FICM taxonomy (e.g., classroom, lab/studio, office, etc.)
- Program Classification (e.g., General Academic Instruction, Libraries, Social and Cultural Development, General Administration, etc.)
- Classification of Instructional Programs or CIP code (e.g., Liberal Arts and Sciences, Education, Art/Art Studies, Nursing, Business/Commerce, etc.)
- Number of Stations or "seats"

(See Appendix 2.2 – VSU Room Inventory by Building, Floor and Room)

There are 9,868 spaces tracked in the room inventory in 90 of the 91 buildings in the University's portfolio. Only building 0002 - 2 Brookwood Cir. (2,200 GSF) has no spaces recorded in the room inventory. The nearly ten thousand spaces comprise 2,687,729 square feet of space.

These spaces are further identified as either assignable (available for university programs and functions) or non-assignable (not available for assignment to university functions – typically because they serve building support functions – circulation, mechanical, building service or structural). The non-assignable space in the inventory totals 2,797 spaces comprising 997,711 square feet. There are 7,071 assignable spaces comprising 1,697,195 square feet. It is this net assignable square footage (NASF) that will provide the focus for the majority of the space assessment analyses that follow. One of the most fundamental measures of facility efficiency is the ratio of NASF to GSF (often called the net-to-gross ratio, frequently expressed as N:G). In the aggregate, the campus N:G is 1,697,195 / 2,692,706 (Total GSF minus the building excluded from the room inventory) or 63%, very much what one would expect for such a varied inventory.



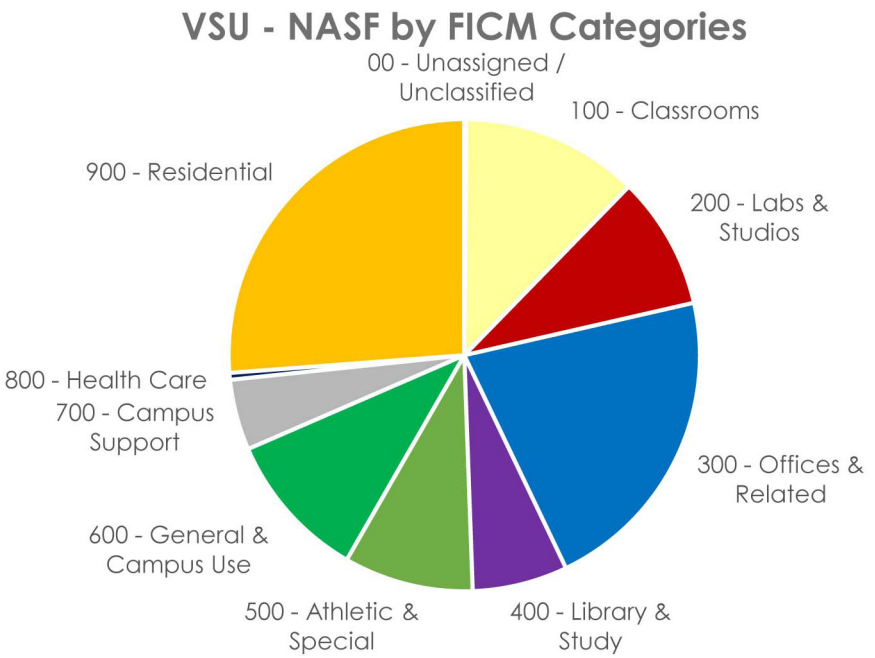


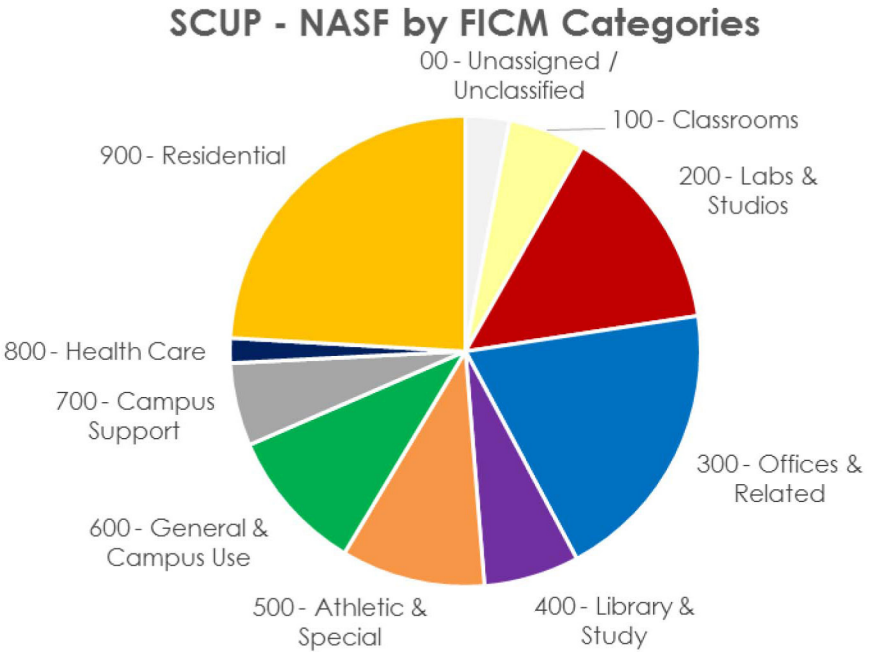
The assignable spaces are coded by use according to a taxonomy developed by the National Center for Education Statistics (NCES) as described in its Facilities Information Classification Manual (FICM). This taxonomy has been adapted by the USG for system-wide reporting as described in two core documents[1]. A summary of the classification of VSU's rooms in each building according to the major categories of this taxonomy is Attachment One. A graphic representation is shown on the side:

This distribution, is in general, consistent with that observed at other institutions similar in type and size as the graph below that displays data collected by the Society for College and University Planning (SCUP). This data reflects space use in 2006 (the last year data was collected) at 72 public 4-year universities with enrollments ranging between 10,000 and 24,999 headcount students.

The major differences between the distribution of space at VSU and the SCUP group are in the significantly larger percentage of residential, office and especially classroom space at VSU, with a smaller proportion of lab and studio space.

Much of the focus of the succeeding analyses will be on the non-residential space. This space, defined as all spaces in the 100 - 800 major FICM categories, totals 3,766 spaces comprising 1,246,077 NASF.





[1] "USG Room Use Codes and Descriptions - Fall 2012" and the more detailed USG Facilities Inventory Classification Manual – Room Use Code Supplement.

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CHAPTER THREE
Learning Space Utilization Analysis

This report analyzes utilization of centrally - scheduled learning spaces at Valdosta State University during the 2013-2014 Academic Year, focusing primarily on Fall 2013. The ultimate purpose of learning space analysis in space planning is to determine whether an institution has allocated rooms and square footage efficiently for use as scheduled classrooms, labs, and studios. While scheduling data allows for a fairly objective assessment of utilization, policy issues can also come into play such as scheduling practices, day vs. evening offerings, room ownership, and pedagogical issues including section sizes, furniture and furnishings and available instructional technology.

METHODOLOGY

Course schedule data was provided by the Office of Academic Affairs (OAA) for the 2013-2014 Academic Year. Each scheduled course section required a time, place, and enrollment, in order to be included in the analysis. Learning space inventory data came from the Office of Physical Plant and Facilities Planning.

There were important differences in Valdosta's learning space inventory between the Fall 2013 and Spring 2014 semesters, due to the addition of the new Health Science Building. Overall classroom utilization was higher during the Fall, however, and it is this higher demand for classroom time that Valdosta will need to plan for. Therefore the classroom analysis below refers to utilization during the Fall 2013 semester, except as noted. The projection of future needs will compare Fall 2013 utilization with Fall 2014 space inventory.

Lab and studio usage was nearly identical for the two terms, so for consistency, the lab and studio portion of the analysis is also primarily based on Fall 2013.

The bulk of the analysis is limited to Day session (8AM-4PM) usage. Evening usage is usually considered separately as it is typically not a driver in determining the optimum number or size of classrooms at the institution. Combining Day and Evening usage in an analysis usually serves to distract from the objective of determining optimal space allocation for learning spaces. When altering institutional scheduling practices, meeting times can usually be re-arranged more easily within the daytime timeframe than trying to move the scheduling of the sections between day and evening.

LEARNING SPACE CHARACTERISTICS

- Location: Building, and Room
- Type of space: Classroom or Lab/Studio
- Control: Departmental or Central
- Size: Net assignable square feet (NASF)
- Stations: in classrooms, number of seats; in labs maximum safe or practical capacity
- NASF per Station

Labs are distinguished from classrooms by the presence of specialized equipment. In the FICM room use classification system, classrooms are in the 100-series and labs are in the 200-series. Computer "classrooms" are generally considered labs, not classrooms. Other spaces scheduled for learning that are not classrooms or labs are not part of this study. The primary uses of these spaces may be as faculty offices, athletic facilities, theaters, and TV or radio studios, to name a few. Beyond identifying the type of lab ("Microbiology Lab" for example), inventorying and assessing learning technology and equipment were not part of this study.

MEASURES OF LEARNING SPACE UTILIZATION

- Number of sections scheduled per week
- Hours scheduled per week
- Station occupancy
- Contact hours = number of students x hours of scheduled use per week
- Classroom Metric: A measure developed by The University System of Georgia to evaluate classroom usage.

All of the above measures are limited to a Monday-Friday timeframe. Contact-hour and seat utilization calculations assume 100 percent class attendance.

LEARNING SPACE ASSESSMENT TABLES

This analysis refers to the following tables compiled as Appendixes at the end of this report. Each table is separated into classroom and lab utilization:

1. Summary of utilization by building
2. Detailed list of all learning spaces and their utilization organized by building
3. List of all learning spaces organized by space capacity (number of stations)
4. Summary of Table III by space capacity
5. List of all learning spaces ranked by usage hours per week
6. List of all learning spaces ranked by station utilization percent
7. Visual representation of utilization by day of week and time of day (Day and Evening shown together).

Part I of the analysis discusses classroom utilization, and Part II discusses laboratory and studio utilization.

CLASSROOM UTILIZATION ANALYSIS

Measures of classroom utilization include how intensively these spaces are being used, if they are the appropriate size for the scheduled class, and if the size is adequate for the number of students given the desired seating style. The "Classroom" category analyzed here also includes seminars, lecture halls, and those auditoria used regularly for lecture. In the Facilities Inventory, these rooms are identified by the 100-series FICM codes.

OVERALL CLASSROOM USAGE

During the Fall 2013 semester, Valdosta State scheduled 133 classrooms in 20 buildings. A summary of classroom utilization by building is shown in Appendix 3.1 - Table I. These classrooms occupied 115,427 NASF (Net Assignable Square Feet). That square footage was about 14% of Valdosta's total non-residential space inventory in Fall 2013. Even though this proportion does not seem large, classrooms represent large blocks of space that are more easily renovated to other uses than space types such as offices, that exist in smaller increments. There were 6,285 stations (seats), averaging 20.4 NASF per station. A summary by room seating capacity is shown in Appendix 3.4 - Table IV.

A key measure useful for understanding the teaching load in the learning space inventory is weekly student contact hours: the sum of the number of students enrolled in each class multiplied by the number of hours per week that class was scheduled. During the term, 926 course sections met in classrooms. Total weekly student contact hours were 74,391. For general reference, the weekly mean per section was:

- 35.1 students;
- 2.25 classroom hours;
- 80.3 student contact hours.

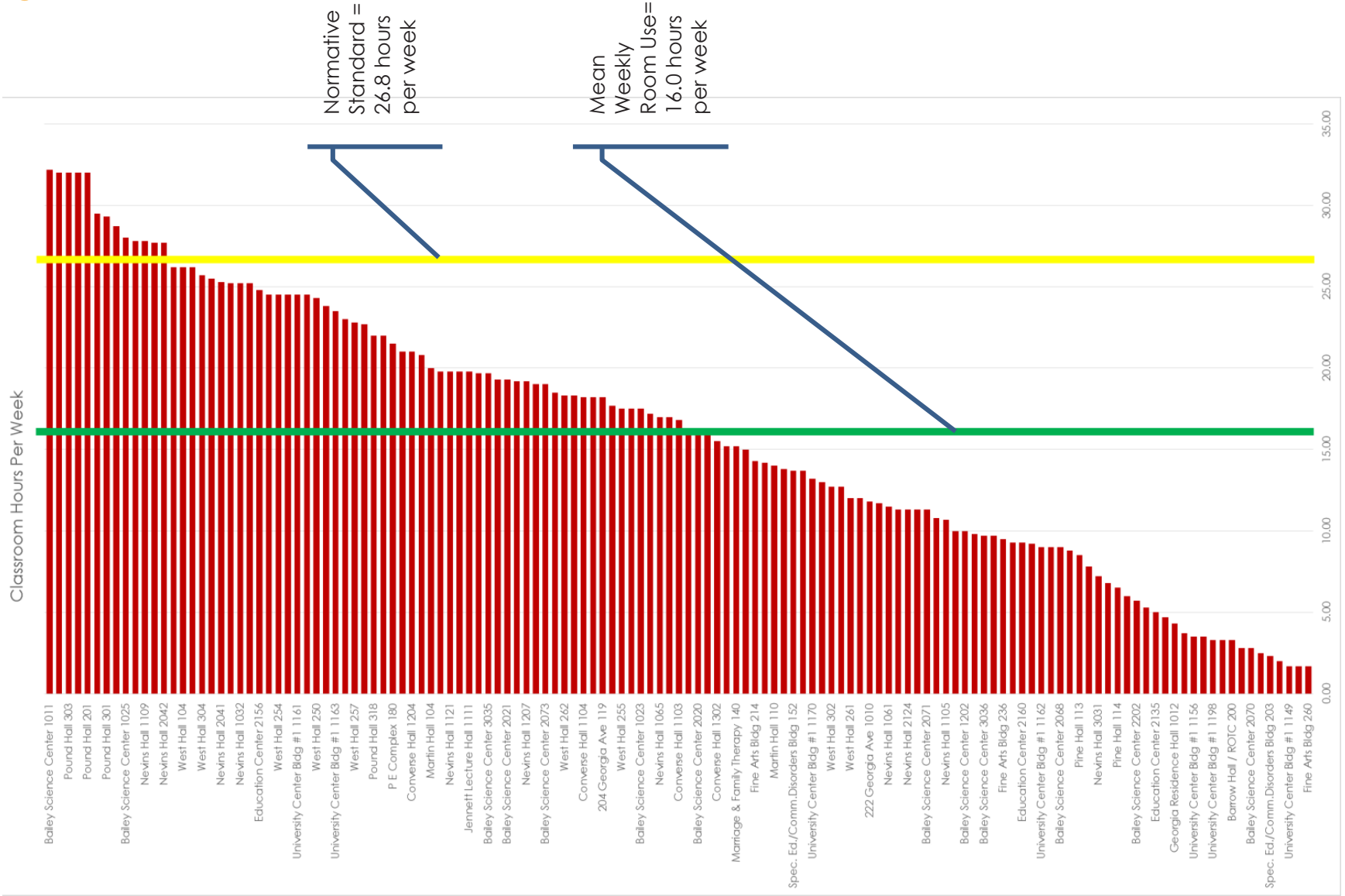
While the mean section size was 35 students, the median was 26 students. The difference is due to a significant number of very large sections that pull up the average. Eighteen sections had at least 150 students, with the largest section at 465 students.

Buildings with the highest classroom contact-hour totals were Bailey Science Center, Nevins Hall and West Hall. These three buildings accounted for about 52 percent of all classroom contact hours, and housed 65 of the total 133 classrooms, or 49 percent of the classroom inventory.

TIME UTILIZATION

A common guideline for classroom time utilization is 67 percent, or 26.8 hours per week assuming a typical 40-hour-per-week window of availability. If the mean hours of usage meet that guideline, the general implication is that the number of classrooms is appropriate. During the Fall 2013 semester, the academic term of those studied with the highest classroom usage, the average utilization was 16.0 hours per week. Only 13 of 133 classrooms were scheduled more than 26.8 hours per week, and 59 were scheduled fewer than 15 hours per week. Of those, 36 were scheduled fewer than 10 hours per week.

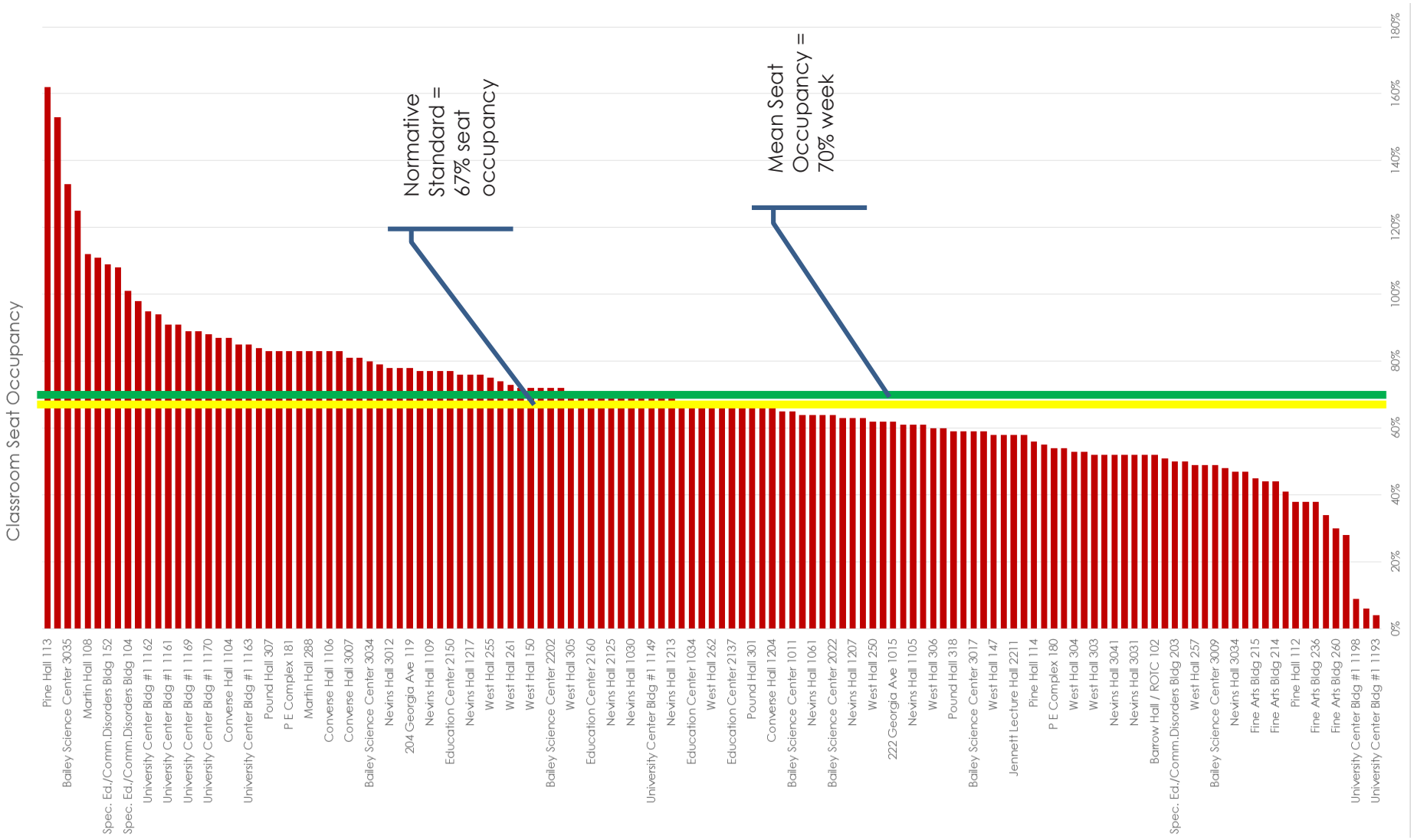
Figure 3.1 Classroom Hours Per Week



SEAT UTILIZATION

Another key measure of classroom utilization is the seat or station occupancy. A typical guideline for classroom occupancy is a mean of 67 percent. The mean classroom occupancy at Valdosta State was 69 percent, with 69 of 133 classrooms meeting the guideline. However, 19 classrooms had an occupancy of less than 50 percent. See Appendix 3.6 - Table VI.

Classroom Seat Occupancy



Nine classrooms had abnormally high (>100%) occupancy suggesting perhaps that some sections were split - meeting on alternate days - or possibly that some classroom station counts may not be accurate.

When the occupancy is too low or too high, there is a mismatch between the sizes of existing spaces ("size" in terms of number of stations) and the sections that are scheduled in them. Valdosta has classrooms in both situations. Low occupancy is usually a product of an insufficient number of small classrooms, necessitating the use of larger rooms for smaller sections; or the larger classroom may be more popular with instructors due to other factors such as available technology such as location or instructional technology available. Another factor that can contribute to low occupancy is student registration behavior: Do many students register for a class and then either fail to show, drop the course, or switch to a different section? If so, this necessitates the Office of Academic Affairs scheduling of rooms that are larger than the final registration numbers would seem to justify. High occupancy suggests the opposite, that classrooms are too small, that the technology is better in the smaller rooms, and/or that fewer students are dropping than anticipated.

SPACE PER SEAT

The space required per seat depends on the pedagogical goals, and the resulting style of classroom, the type of seating and the size of the space. For example, tablet arm chairs require about 16 to 18 NASF and table and chair seating requires about 22 NASF per seat for a medium-sized classroom. Auditoria should have at least 14 NASF per station. The mean at Valdosta State was 20.4 NASF per seat, but Appendix 3.4 - Table IV shows the variation by capacity category. All but two categories (H and I, comprising just 4 rooms) were within the DLM recommended minimum, and no category was above the maximum. On a room-by-room basis, 36 of 133 rooms were below the recommended minimum size, and 15 were above the recommended maximum. Therefore 51 of 133 classrooms were not within the recommended range, suggesting that a room-by-room assessment of the number of seats to be assigned to each room may be in order.

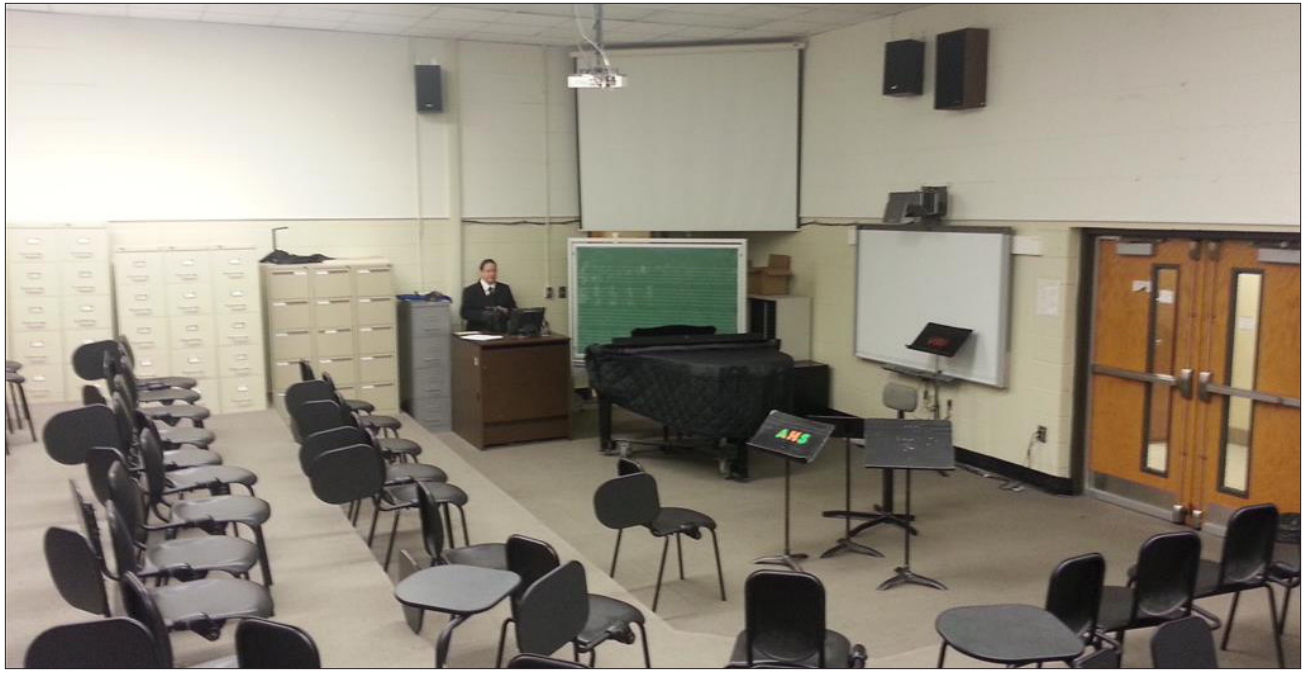
CLASSROOM UTILIZATION PEER COMPARISON

Below is a table that compares Valdosta's Fall 2013 daytime usage with other public institutions for which comparable data is available. Many of the measures for Valdosta are close to the peer averages, such as NASF per station, NASF per FTE, and Stations per FTE. But **one glaring difference is the number of hours per week that classrooms are scheduled.**

The peer mean is 25.5 hours, while Valdosta schedules only 16.0 hours per week.

Institution	FTE	Year	CRs	NASF	Stations	NASF / Sta	Sections	Hrs / Week	Mean Sec Size	Mean Sta Occ	Contact Hrs / Week	NASF / FTE	Sta / FTE	Contact Hrs / FTE
Austin Peay SU	7,353	2011	78	64,814	2,810	23.0	837	29.4	27.4	80%	66,059	8.8	0.38	8.98
Bowling Green SU	16,142	2012	191	162,930	9,343	18.7	1,897	24.4	30.4	62%	141,444	10.1	0.58	8.76
Clemson U	19,198	2012	188	161,083	9,540	19.1	2,239	28.3	33.2	61%	179,559	8.4	0.50	9.35
Eastern Connecticut SU	4,395	2013	53	43,524	2,140	22.0	475	24.2	25.9	72%	33,082	9.9	0.49	7.53
Fitchburg SU	4,421	2008	64	64,401	3,963	22.5	544	20.3	24.0	58%	30,718	14.6	0.90	6.95
Middle Tenn SU	19,709	2005	211	172,126	8,884	20.9	2,118	28.1	31.5	74%	188,765	8.7	0.45	9.58
U Mass Lowell (S. Campus)	4,664	2008	53	48,464	2,932	19.2	428	20.0	31.0	61%	33,705	10.4	0.63	7.23
Westfield SU	5,132	2011	67	62,180	2,981	21.0	759	29.0	25.4	61%	50,379	12.1	0.58	9.82
Means:	10,127	2010	113	97,440	5,324	20.8	1,162	25.5	28.6	66%	90,464	10.4	0.56	8.52
Medians:	6,242	2011	73	64,608	3,472	21.0	798	26.3	28.9	62%	58,219	10.0	0.54	8.87
Valdosta SU	10,743	2013	133	115,427	6,285	20.4	926	16.0	35.1	69%	74,391	10.7	0.59	6.92

What this table also reveals is that Valdosta schedules significantly (19% - 22%) fewer contact hours per FTE student in classrooms. This disparity could reveal gaps in the data received or might imply that a greater portion of academic activity is taking place in labs, studios, and other facilities, or occurs in unscheduled locations as is the case with independent study, or occurs off-campus as with many Education and Health Science courses.



TIME BLOCK ANALYSIS

Appendix 3.7 - Table VII graphically displays scheduled usage at different times of day through the week. The left set of blocks shows the percentage of rooms in use at a particular day and time, and the right set of blocks shows the percentage of total stations in use. For example, on Wednesday at 10:00 AM, 55 percent of classrooms (74 of 135 classrooms)[1] , and 43 percent of stations (2,738 of 6,368 stations), were in use[2].

The table is useful to show the days and times when there are opportunities to increase utilization. For Valdosta, no significant time bottlenecks are visible. Even at its busiest, Tuesday and Thursday mornings, at least 30 percent of the classroom inventory remains unscheduled.

Figure 3.3 HEGIS Category: 100 (Classrooms)

Classes in Session at:	135 Spaces Percent of Spaces Utilized					6368 Stations Percent of Stations Utilized				
	M%	T%	W%	R%	F%	M%	T%	W%	R%	F%
8:00:00 AM	16	28	18	26	13	13	23	15	19	12
8:30:00 AM	19	28	22	27	17	15	23	17	19	14
9:00:00 AM	46	30	50	27	41	32	22	36	19	33
9:30:00 AM	49	64	53	64	43	34	48	37	44	34
10:00:00 AM	48	66	55	68	39	38	52	43	52	29
11:00:00 AM	49	67	54	69	43	37	49	41	50	33
12:00:00 PM	37	55	37	56	24	26	41	26	42	18
1:00:00 PM	44	57	45	55	29	32	45	32	45	20
1:30:00 PM	43	50	44	47	29	31	40	31	40	20
2:00:00 PM	58	62	59	61	7	38	46	39	47	4
2:30:00 PM	59	63	60	62	2	39	46	39	47	1
3:00:00 PM	50	56	52	53	0	34	39	34	38	0
4:00:00 PM	39	43	41	44	2	31	31	33	34	0
4:10:00 PM	39	43	41	44	2	31	31	33	34	0
4:15:00 PM	39	44	41	45	2	31	32	33	34	0
7:00:00 PM	19	28	21	19	1	9	14	9	9	1
7:30:00 PM	19	27	21	19	1	8	13	9	8	1

Key:	135 Spaces	6368 Stations
	60% - 100%	36% - 100%
	40% - 60%	24% - 36%
	20% - 40%	12% - 24%
	0% - 20%	0% - 12%

[1] This table shows both day and evening utilization. Two classrooms are used in the evening that are not used in the day, thus the total of 135 classrooms rather than the 133 rooms referenced earlier in the report.

[2] Station counts are greater than stated earlier for the same reason cited in the footnote above. Since the chart shows only beginning times, these percentages are valid only for that particular moment.

FALL 2013 VS. SPRING 2014 UTILIZATION

At Valdosta State, overall classroom usage was higher in Fall 2013 than in Spring 2014, and this pattern is typical at most US institutions. Valdosta's classroom inventory increased significantly in the spring, however, with the opening of the new Health Science Building. That facility added 11 new scheduled classrooms, totaling 11,684 NASF and 695 stations, to Valdosta's inventory. The table below summarizes overall scheduled daytime classroom inventory and utilization for each of those semesters.

Given the larger inventory and lower contact hours, it is no surprise that scheduled hours per week decreased by an hour and a half. Mean section size was lower as well.

Term	CRs	NASF	Stations	Sections	Hrs / Week	Mean Sec Size	Mean Sta Occ	Contact Hrs / Week
Fall 2013, Day	133	115,427	6,258	926	16.0	35.1	69%	74,391
Spring 2014, Day	144	127,111	6,980	878	14.5	33.2	69%	70,225
Difference	11	11,684	695	-48	-1.5	-1.9	0%	-4,166

EVENING USAGE

Up to this point, the analysis has focused on Daytime (8AM-4PM) usage. Evening usage is usually considered separately as it is not typically a driver in determining the optimum number or size of classrooms. Valdosta's evening scheduling window is Monday through Thursday, 4PM to 10PM (24 available hours per week), with just a small number of sections running past 10 or meeting on Friday night.

The number of evening contact hours, both Fall and Spring, accounted for 18% of all contact hours during the 2013-2014 Academic Year.

Term, Session	CRs	NASF	Stations	Sections	Hrs / Week	Mean Sec Size	Mean Sta Occ	Contact Hrs / Week
Fall 2013, Eve	113	99,214	5,460	297	5.7	28.2	63%	17,011
Spring 2014, Eve	107	94,603	5,170	277	5.6	25.7	56%	14,629

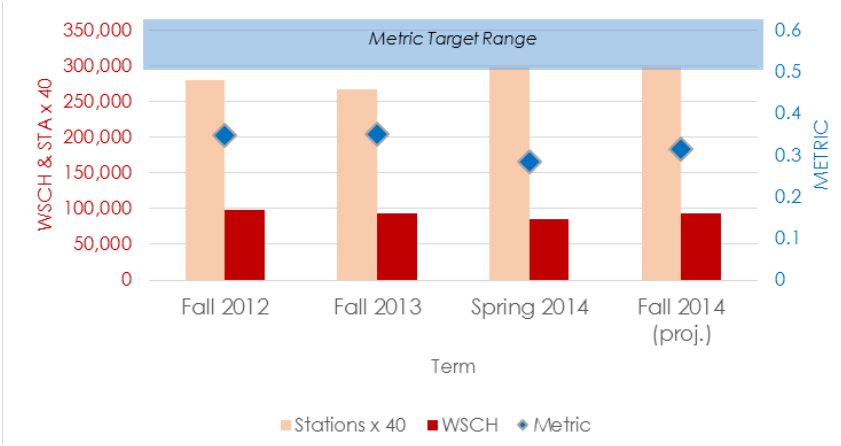
GEORGIA'S CLASSROOM METRIC

The University System of Georgia (USG) has adopted a single numeric metric and illustrative graphic display to assess classroom utilization at each of its constituent campuses. The metric is defined as WSCH/(station count x 40), where WSCH is weekly student contact hours, both day and evening and 40 represents a typical number of hours available for scheduling in a week.. USG has set a target range of 0.5 to 0.8 for this metric with the implication that if an institution's classroom metric is below 0.5, it likely has excess classrooms, and if the metric is nearing or greater than 0.8, it is quite likely that classrooms should be added. The table below reinforces the relatively low utilization of VSU's classroom pool and indicates the significant drop in utilization with the introduction of the new classrooms in the Health Sciences and Business Administration Building.

Term	Stations	CH	Metric
Fall 2012	7,013	97,849	0.348
Fall 2013	6,368	91,402	0.359
Spring 2014	7,078	84,854	0.300
Fall 2014 (proj.)	7,078	91,402	0.323

Since, as stated in the section above, Spring usage is lower than the Fall, the projected Fall 2014 metric, using Fall 2013 contact hours but Spring 2014 stations, is .314. (Please note that in the graph above, the scale on the left measures WSCH and the baseline Stations x 40 hrs values, while the scale to the right measures the value of the resulting metric.

Figure 3.4 USG Classroom Metric



UNSCHEDULED CLASSROOMS, 2013-2014

The following 51 spaces, classified as classrooms in the facility inventory, were not centrally scheduled during any term or session during the 2013-2014 Academic Year.

Building	Room	FICM	Room Type	Department	NASF	Sta.
201 W Brookwood	160	110	Off/Clas	Unscheduled Classroom	198	9
223 W. Moore Street	103	110	Classroo	Unscheduled Classroom	365	18
223 W. Moore Street	112	110	Classroo	Unscheduled Classroom	233	11
223 W. Moore Street	114	110	Classroo	Unscheduled Classroom	280	14
Athletics Building	1004	110	Class Rm	Athletics	1,000	50
Athletics Building	1006	110	Class Rm	Athletics	930	47
Athletics Building	1007	110	Class Rm	Athletics	796	40
Athletics Building	1008	110	Class Rm	Athletics	930	47
Athletics Building	1010	110	Class Rm	Athletics	863	43
Bailey Science Center	2045	110	Classrm	Biology	1,219	35
Bailey Science Center	2047	110	Classrm	Biology	1,101	30
Bailey Science Center	3026	111	Seminar	Unscheduled Classroom	637	25
Brown Residence Hall	01005	110	Meeting	Housing & Residence Life	332	16
Centennial Res Hall East	138	110	Class	Housing & Residence Life	698	34
Converse Hall	2105	110	CLASS RM	Psychology & Counseling	114	1
Converse Hall	2200	110	CLASS RM	Psychology & Counseling	331	12
Converse Hall	3200	110	CLASS RM	Psychology & Counseling	440	1

The following 51 spaces, classified as classrooms in the facility inventory, were not centrally scheduled during any term or session during the 2013-2014 Academic Year.

These spaces total an additional 32,000 NASF and provide another 1,260 student stations.

A quick scan of this list leads one to question the appropriateness of the room type coding for some of these spaces. For example, five spaces are smaller than 200 NASF, an unusually small space to fit the traditional classroom definition of a general-purpose teaching/learning space. Brown Residence Hall 1005 is described as a meeting room, Fine Arts 191A is Whitehead Auditorium, which may be occasionally used as a classroom, but that is not its primary use.

Building	Room	FICM	Room Type	Department	NASF	Sta.
Converse Hall	3212	110	CLASS RM	Psychology & Counseling	266	16
Education Center	1142	110	CLASSRM	Unscheduled Classroom	435	16
Education Center	1150	110	CLASSRM	ECE	554	16
Education Center	2141	110	CLASS RM	Unscheduled Classroom	382	19
Education Center	2145	110	CLASS RM	Unscheduled Classroom	585	12
Fine Arts Bldg	1164C	110	Class Rm	Music	206	3
Fine Arts Bldg	2263	110	Class Rm	Music	151	10
Health Science Building	1101	110	CLASS RM	Registrar Classroom	1,116	60
Health Science Building	2005	111	SEMINAR	Unscheduled Classroom	634	25
Health Science Building	2018	111	SEMINAR	Unscheduled Classroom	525	16
Health Science Building	2052	111	SEMINAR	Nursing	720	26
Health Science Building	2106	110	CLASS RM	Comm. Sci. & Disorders	1,462	40
Health Science Building	2124	111	SEMINAR	Comm. Sci./Excercise Phys.	380	16
Health Science Building	2204	111	SEMINAR	COE / CON	602	26
Health Science Building	2244	111	SEMINAR	COE / CON	601	26
Health Science Building	3050	110	CLASS RM	COBA	2,362	72
Health Science Building	4021	110	CLASS RM	COB / COE / CON	741	40
Health Science Building	4106	110	CLASS RM	Nursing	1,556	40
Marriage & Family Therapy	139	110	CLASS RM	Marriage & Family Therapy	134	4
Marriage & Family Therapy	152	110	CLASS RM	Marriage & Family Therapy	219	11
Mass Media Building	1102	110	Class Rm	Communication Arts	198	4
Mass Media Building	1206	110	Class Rm	Communication Arts	157	2
Nevins Hall	1034	110	Classroom	Unscheduled Classroom	277	
Odum Library	2619	110	CLASSRM	Library	1,184	23
Odum Library	3609	110	CLASSRM	Library	888	39
Patterson Residence Hall	01215	111	Seminar	Housing & Residence Life	748	37
Psychology Class Bldg.	106	110	Classrm	Extended Learning	508	32
Psychology Class Bldg.	108	110	Classrm	Extended Learning	515	32
Regional Education Center	222	110	CLASS RM	Extended Learning	591	22
Regional Education Center	240	110	CLASS RM	Extended Learning	425	34
Regional Education Center	243	110	CLASS RM	Extended Learning	540	22
Regional Education Center	246	110	CLASS RM	Extended Learning	585	20
Spec. Ed./Comm.Dis. Bldg	129	110	Class Rm	Communication Arts	859	42
University Center Bldg #1	1152A	110	Learn Lb	Centralized Advising	476	24
					32,049	**1,260**

CLASSROOM NEEDS ASSESSMENT AND PROJECTION

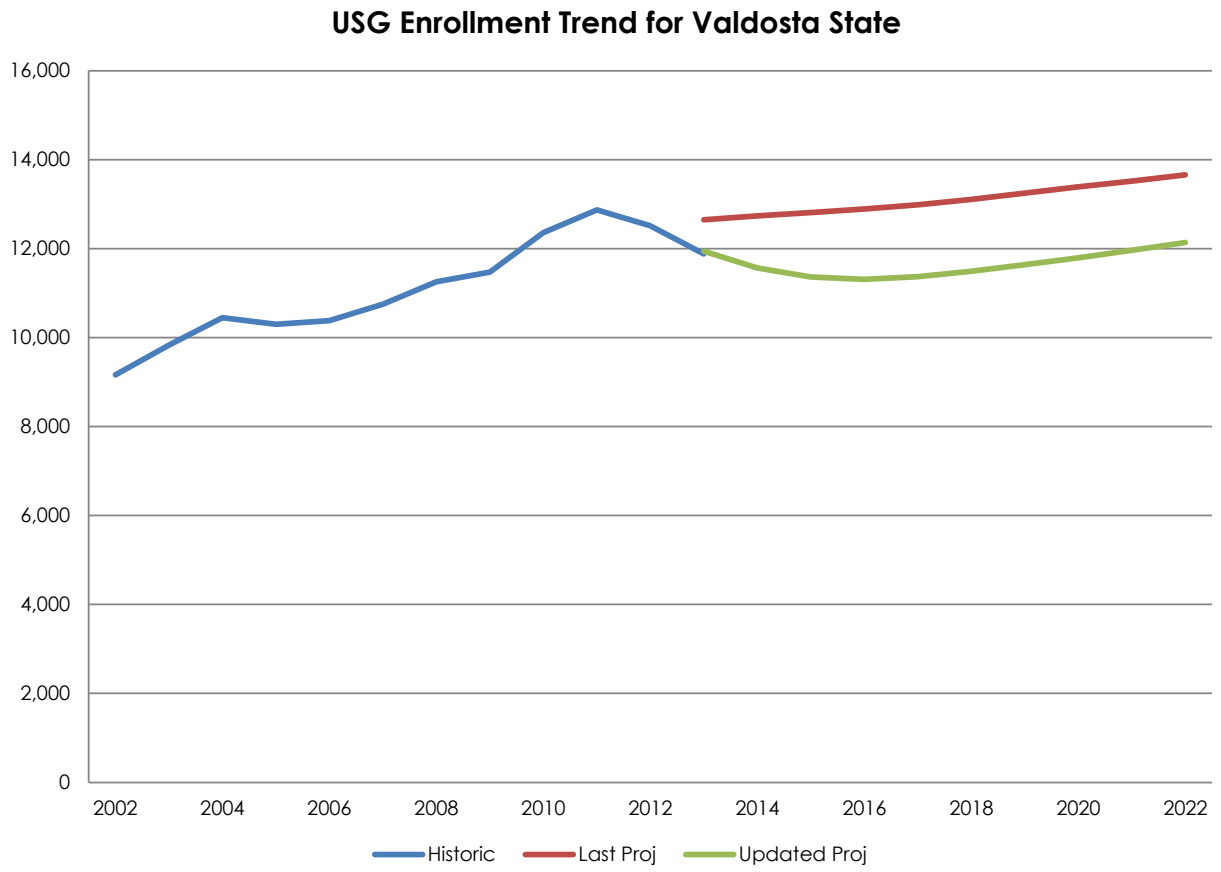
Needs assessment for classrooms can be influenced by several factors including:

- pedagogical shifts leading to preferences for different types of learning spaces,
- changing directives regarding section sizes,
- changing degree requirements,
- changing policies for room utilization targets,

but the major driver of classroom need is enrolment change. Based on data provided by USG, Valdosta's enrolment will be essentially flat over the planning period as shown in the graph, see figure 3.5.

From its current headcount of 11,885, VSU's enrolment is projected to dip to 11,310 in 2016 and climb back to 12,141 by 2022. Significantly, this updated projection is about 1,520 students fewer than the last System Office projection.

Figure 3.5 USG Enrollment Trend of Valdosta State



USG CLASSROOM METRIC

While the USG Classroom Metric was developed as a system-wide benchmarking tool, it is instructive to apply it to the VSU situation. To bring the metric from its Fall 2013 value of 0.35 to the low end of the target range at 0.5, VSU would either need to increase its enrollment to between 17,420 and 23,270, or decrease the number of classrooms to create a pool with just 4,660 stations, 2,000 fewer than in Fall 2013 and 2,760 fewer than are currently provided. This reduction could free approximately 60,445 NASF of space for other uses.

DLM CLASSROOM MODEL

The DLM Classroom Model is an interactive tool created in Microsoft Excel that can project the number of classrooms required under various scenarios. The Model generates the number of classrooms required by room capacity, based on one term from the Valdosta course schedule (in this case Fall 2013).

D-1 Projected Classroom Need, Day

This Model uses the Fall 2013 course schedule.

		=D^ +1		=INT((B x u) + (B^ x u)/2)-1		=from schedule x (1+E)	=(G+I^) / z	=(G+I^) - (H x z)	=(G+I^ - I) / H
A	B	C		D	E	G	H	I	J
Size Category	**Modeled CR Size**	**Corresponding Actual Section Size Range @ 67% Target Occupancy**			**Future CR Hour Growth**	**Weekly CR Hours in Range TOTAL**	**Required (Modeled) CRs @ 26.8 Hrs / Week**	**Remainder Hours to be Accommodated[1]**	**Projected Mean Utilization (Hrs / Wk)[2]**
B	**15**	1	to	12	**0.0%**	284	**11**	0.0	25.8
C	**25**	13	to	19	**0.0%**	298	**11**	3.2	26.8
D	**35**	20	to	25	**0.0%**	624	**23**	10.8	26.8
E	**45**	26	to	34	**0.0%**	477	**18**	5.4	26.8
F	**60**	35	to	45	**0.0%**	379	**14**	9.2	26.8
G	**80**	46	to	67	**0.0%**	64	**3**	0.0	24.4
H	**125**	68	to	116	**0.0%**	53	**2**	0.0	26.5
I	**225**	117	to	208	**0.0%**	47	**2**	0.0	23.5
J	**400**	209	to	400	**0.0%**	13	**1**	0.0	13.0
Totals and Mean:						**2,239**	**85**	**0.0**	**26.3**

Assumption Inputs:

u	**67%**	= Target Mean Station Occupancy
z	**26.8**	= Target Mean Usage Hours per Week (DAY)
	0.0%	= Future section size growth (changes distribution of CR sizes)

Make entries in shaded cells only:

blue	data inputs
salmon	planning inputs

[1] Any remainder hours for a particular size category are bumped up to the next larger category of CR.

[2] Projected Mean Utilization = Actual CR Hours / Required CRs. The average projected utilization of the modeled CRs will be close to the target utilization hours.

^ in formula row: value from the row above; Note *u* and *z* are the User Assumption Inputs on the lower left.

Note: It is often not possible to develop Section Size ranges that exactly meet the Target Mean Station Occ.

The user inputs are to be entered in the blue and pink shaded cells only. Those inputs are shown in the diagram above under "Assumption Inputs." The Model classroom sizes can also be set in Column B. Diagram 1 shows Page 1 of the Model as set for 67% target mean station occupancy and 28.6 hours per week. The Model shows that a total of 85 classrooms are required under this scenario.

The Model has a few additional features.

- The room sizes can be chosen by the user. The scenario shown in the diagram uses 15, 25, 35, 45, 60, 80, 125, 225, and 400 stations.
- Future section size growth can be input.
- Future CR-hour growth can be input individually for each classroom size (Column E).

Page 2 of the Model compares the required number of classrooms with the existing Valdosta classroom inventory.

Column O shows the difference between the number of existing and modeled classrooms for each capacity category. This column demonstrates whether there are mismatches in the size distribution of Valdosta's classroom inventory. Negative numbers indicate that the University has more classrooms in that category than it needs. For example, the Model shows that Valdosta has 5 too few in the A (15-station) category, but 23 classrooms too many in the D (35-station) category.

Recommended NASF per station for each capacity category can be changed in Column L. This model doesn't distinguish among various classroom types, lecture, seminar, etc., so the quantities entered here are only averages for each capacity category.

D-2 Projected Classroom Need, Day

			= B x H		= K x L		= K - N
A	B	H	K	L	M	N	O
Size Category	**Modeled CR Size**	**Required (Modeled) CRs**	**Modeled Number of Stations**	**Recom-mended NASF / Sta**	**Modeled NASF**	**Existing CRs**	**Required (Modeled) minus Existing**
B	**15**	**11**	165	25	4,125	**6**	**5**
C	**25**	**11**	275	25	6,875	**22**	**-11**
D	**35**	**23**	805	22	17,710	**46**	**-23**
E	**45**	**18**	810	18	14,580	**52**	**-34**
F	**60**	**14**	840	18	15,120	**16**	**-2**
G	**80**	**3**	240	17	4,080	**4**	**-1**
H	**125**	**2**	250	16	4,000	**3**	**-1**
I	**225**	**2**	450	14	6,300	**2**	**0**
J	**400**	**1**	400	12	4,800	**2**	**-1**
Totals:		**85**	**4,235**		**77,590**	**153**	**-68**
Existing:			**7,325**		**136,386**		
Additional Requirement:			**-3,090**		**-58,796**		

67%	= Target Mean Station Occupancy
26.8	= Target Mean Usage Hours per Week (DAY)
0.0%	= Future section size growth
18.3	= NASF per **modeled** station
18.6	= NASF per **existing** station

Existing CRs are based on the Spring 2014 inventory.

HOW THE MODEL WORKS

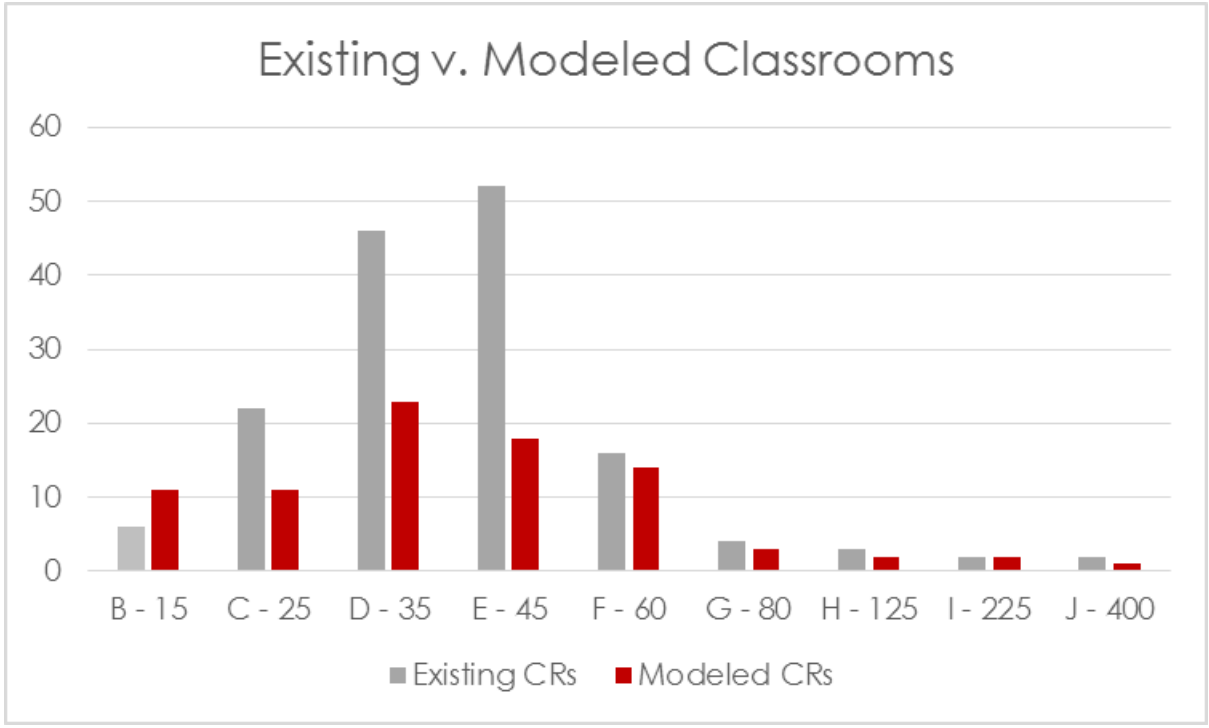
This model is based on classroom hours, not contact hours. Contact-hour models are unnecessarily complicated when usage is already distributed among the room sizes. The Model allocates actual scheduled classroom hours to each capacity category, based on the actual course section enrollments and the specified occupancy rate. For example, Category D, 35 stations, is based on the sum of classroom hours for course sections with enrollments between 20 and 25 students. That range is a result of the 67% mean occupancy rate entered by the user (35 stations times 67% is 23.5 stations, in the middle of the 20-25 range - the Model rounds fractions of students, seats, and rooms). In the example shown, there are 624 classroom hours in the D category. This demand generates 23 classrooms at 26.8 hours per room (624 divided by 26.8 equals 23.3, which rounds to 23 classrooms).

It is often not possible to develop Section Size ranges that exactly meet the Target Mean Station Occupancy, since the Model deals with whole classrooms and whole station, not fractions. That's why the average room hours for the modeled inventory is somewhat lower than the assumption of 26.8 (by 0.5 hours – see the bottom of column J). Likewise, hours per week are dependent on whole-classroom increments, so there are some in-between values that are not possible outcomes.

CLASSROOM MODEL FINDINGS AND IMPLICATIONS FOR PLANNING

The right size classroom modeling exercise to explore the general purpose classroom inventory that would provide the best match between Valdosta's current array of section sizes and utilization and allocation guidelines revealed the following observations and recommendations:

- Valdosta should have 68 fewer classrooms than the current inventory (85 needed vs. 153 existing)
- Right size classrooms should contain 3,090 fewer seats than the current inventory (4,235 needed vs. 7,325 existing)
- The right size classroom inventory would have 58,796 NASF less than the existing inventory (77,590 NASF needed vs. 136,386 NASF existing)
- The distribution of classroom sizes/seat capacities should change significantly to achieve greater efficiencies. The right size inventory should have:
  - 5 more classrooms than exist in the smallest classroom category (15 seats)
  - 68 fewer mid-sized classrooms (25-45 seats)
  - 5 fewer classrooms in the largest categories (60 seats or more)
- As planning and designs of renovations and any new space are advanced, opportunities should be sought to adjust the classroom inventory to more closely resemble that modeled, factoring in the likely impacts of any changes Valdosta may be considering regarding course delivery and pedagogy.



LABORATORY AND STUDIO UTILIZATION ANALYSIS

Rooms with specialized equipment are considered laboratories or studios, including computer "classrooms." These are the FICM 200-series rooms in the Facilities Inventory.

OVERALL LAB AND STUDIO USAGE

During the Fall 2013 semester, Valdosta State scheduled 78 labs and studios in 15 buildings. See Appendix 3.1 - Table I, page 2. The spaces occupy 82,023 NASF. There are 2,277 stations or seats, averaging 41.0 NASF per station. A summary by room seating capacity is shown in Appendix 3.4 - Table IV, page 2.

During the term, 405 course sections met in labs and studios during the day. Total student contact hours were 217,670. For general reference, the weekly mean per section was:

- 24.1 students;
- 2.41 room hours;
- 53.5 student contact hours.

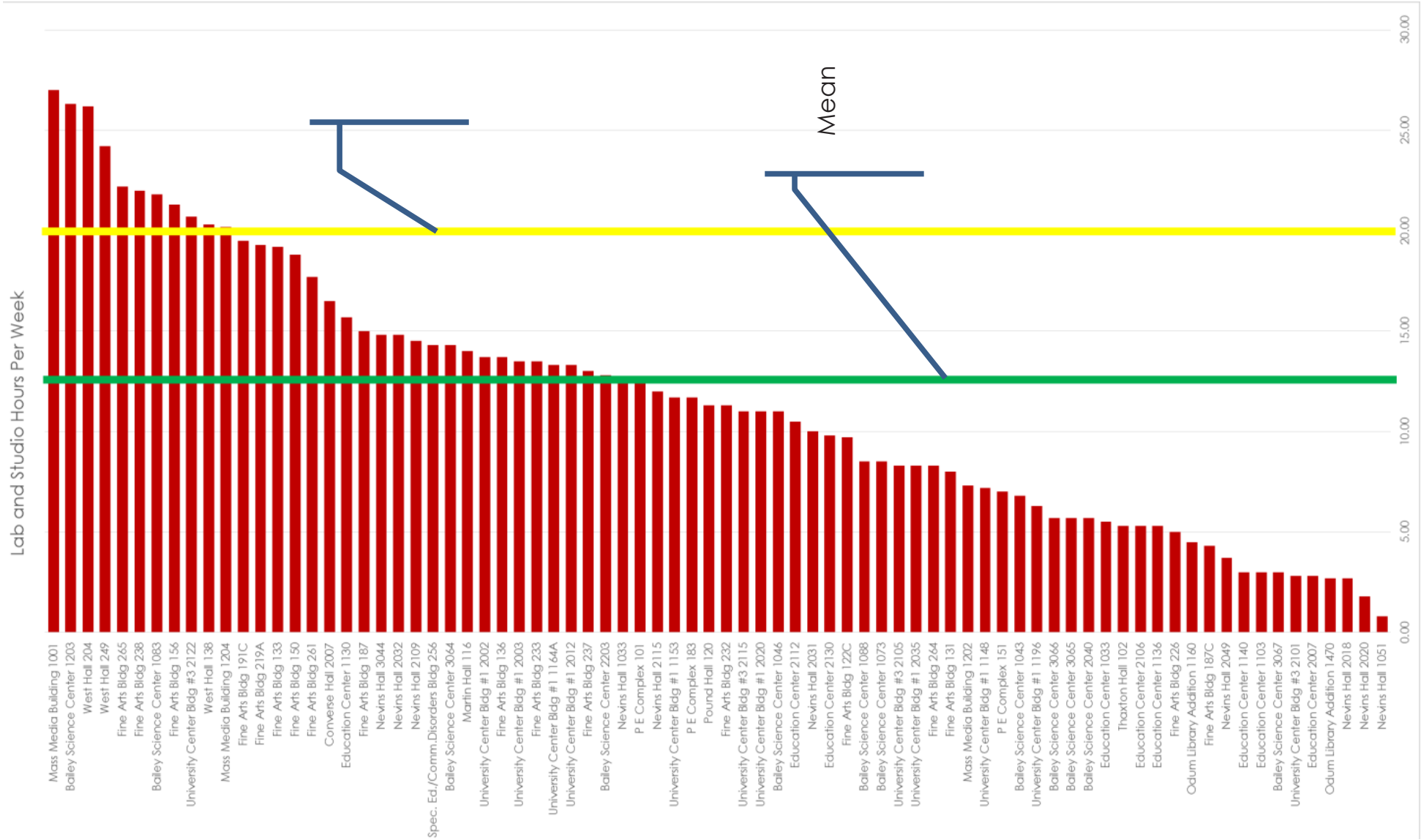
While the mean section size was 24.1 students, the median was 22 students. The difference is due to some especially large sections that pull up the average: Twenty four sections had at least 60 students, with 4 of those sections having more than 120 students.

Buildings with the highest lab/studio contact-hour totals were Bailey Science Center, Fine Arts Building, West Hall, and Nevins Hall. These four buildings accounted for about 68 percent of all lab/studio contact hours, and housed 46 of the total 78 rooms or about 59 percent of the lab/studio inventory.

TIME UTILIZATION

A common guideline for labs and studios is 50 percent time utilization, or 20 hours per week assuming a 40-hour week. If the mean hours of usage meet that guideline, the general implication is that the number of labs and studios is appropriate. During Fall 2013, the average utilization was 12.5 hours per week. Fifteen of 78 rooms were scheduled more than 20 hours per week, and 32 were scheduled 10 hours per week or fewer.

However, due to the need for specialized equipment, laboratories are not interchangeable in the manner that classrooms are. Even when taking the most draconian approach to space planning, it is difficult to reduce the number of labs required to fulfill programmatic requirements. A Microbiology lab requires different equipment from a Physiology lab, for example, and there is not enough space to house the equipment for both in the same lab. Some lab functions are mutually exclusive and therefore require separate spaces. A Studio Art space that generates dust would not be compatible with painting, for example.



In the Classroom section above, almost all rooms were scheduled by the Registrar. Labs and studios, however, are mostly departmentally controlled. The table below shows utilization by department.

Department	Number of Labs	Hrs per Week			Mean Section Size
		Mean	≥ 20	≤ 10	
Arts	17	12.5	2	5	14.0
Biology	10	15.6	4	4	33.8
Centralized Advising	1	11.7			20.1
Chemistry	4	7.2		3	19.0
COBA	1	11.3			32.0
COE Stem Center	1	14.0			27.0
COEHS Shared	7	5.8		6	21.8
Communication Arts	7	14.0	2	3	15.9
Communication Arts - Dance	1	27.0	1		17.3
Library	1	2.7		1	41.0
Math & Computer Science	2	13.3			25.5
Music	6	18.0	2	1	18.8
Physics, Astron & Geo	7	7.0		5	16.4
Political Science	1	24.2	1		24.2
Psychology & Counseling	1	16.5			25.4
Registrar	8	15.5	3	2	23.2
Sociology, Anthro & Crim Justice	2	6.8		2	19.0
Vacant	1	12.7			21.0

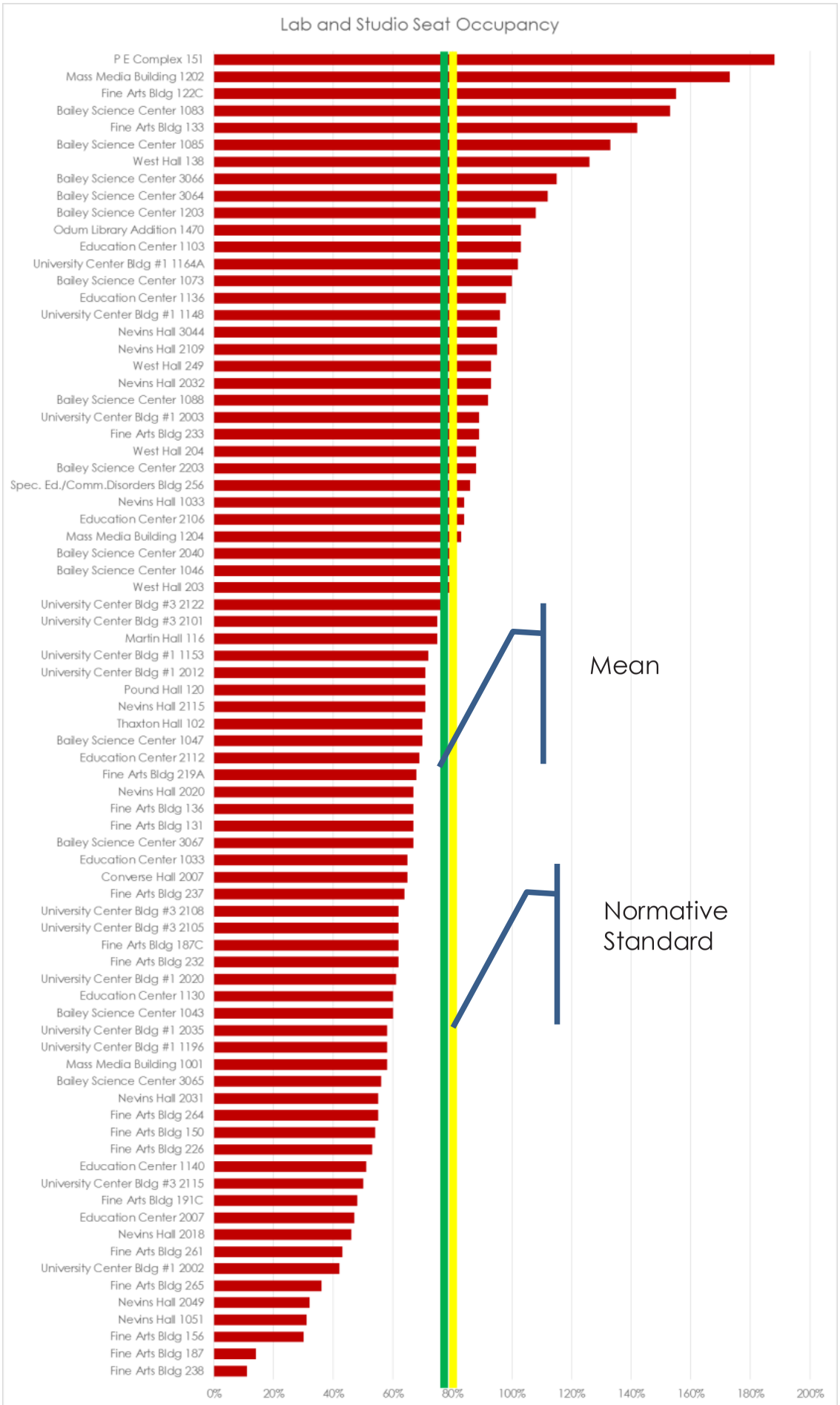
SEAT UTILIZATION

Lab and studio utilization can also be measured by the seat or station occupancy. The typical occupancy rate guideline for labs and studios is 80 percent. The mean room occupancy at Valdosta State was 77 percent, with 31 rooms of 78 meeting the guideline. Thirteen labs or studios had abnormally high (>100%) occupancy suggesting that either students are over-filling the room, or some room station counts may not be accurate. See Appendix 3.6 - Table VI.

When the occupancy is low, there is a mismatch between the sizes of existing spaces and the sections that are scheduled in them — small course sections are meeting in large rooms. In some cases this can be the result of too many lab sections being scheduled for a particular course. But with upper-level labs or courses that are scheduled once per year or less, schedulers have less control over section sizes. These courses may be required for students, but the number of students who need to take them in a particular semester may be significantly smaller than the number of stations in the lab. Thus it may be difficult to achieve occupancy guideline targets when these labs are included in the data.

SPACE PER STATION

The required space per station for labs and studios varies widely, not only by discipline, but also within a discipline, depending on the types of labs, the program requirements, and program focus. The table below shows the NASF per station by department for labs and studios.


Lab and Studio Seat Occupancy
P E Complex 151
Mass Media Building 1202
Fine Arts Bldg 122C
Bailey Science Center 1083
Fine Arts Bldg 133
Bailey Science Center 1085
West Hall 138
Bailey Science Center 3066
Bailey Science Center 3064
Bailey Science Center 1203
Odum Library Addition 1470
Education Center 1103
University Center Bldg #1 1164A
Bailey Science Center 1073
Education Center 1136
University Center Bldg #1 1148
Nevins Hall 3044
Nevins Hall 2109
West Hall 249
Nevins Hall 2032
Bailey Science Center 1088
University Center Bldg #1 2003
Fine Arts Bldg 233
West Hall 204
Bailey Science Center 2203
Spec. Ed./Comm.Disorders Bldg 256
Nevins Hall 1033
Education Center 2106
Mass Media Building 1204
Bailey Science Center 2040
Bailey Science Center 1046
West Hall 203
University Center Bldg #3 2122
University Center Bldg #3 2101
Martin Hall 116
University Center Bldg #1 1153
University Center Bldg #1 2012
Pound Hall 120
Nevins Hall 2115
Thaxton Hall 102
Bailey Science Center 1047
Education Center 2112
Fine Arts Bldg 219A
Nevins Hall 2020
Fine Arts Bldg 136
Fine Arts Bldg 131
Bailey Science Center 3067
Education Center 1033
Converse Hall 2007
Fine Arts Bldg 237
University Center Bldg #3 2108
University Center Bldg #3 2105
Fine Arts Bldg 187C
Fine Arts Bldg 232
University Center Bldg #1 2020
Education Center 1130
Bailey Science Center 1043
University Center Bldg #1 2035
University Center Bldg #1 1196
Mass Media Building 1001
Bailey Science Center 3065
Nevins Hall 2031
Fine Arts Bldg 264
Fine Arts Bldg 150
Fine Arts Bldg 226
Education Center 1140
University Center Bldg #3 2115
Fine Arts Bldg 191C
Education Center 2007
Nevins Hall 2018
Fine Arts Bldg 261
University Center Bldg #1 2002
Fine Arts Bldg 265
Nevins Hall 2049
Nevins Hall 1051
Fine Arts Bldg 156
Fine Arts Bldg 187
Fine Arts Bldg 238
0%
20%
40%
60%
80%
100%
120%
140%
160%
180%
200%
Mean
Normative Standard

NASF PER STATION BY DEPARTMENT, LABS AND STUDIOS

All scheduled labs, Fall 2013 and Spring 2014, Day and Evening

Department	Number of Labs	Mean NASF/ Station
Arts	17	55.5
Biology	10	41.8
Centralized Advising	1	30.0
Chemistry	5	58.2
COBA / COE / CON	1	28.7
COBA	1	14.4
COE Stem Center	1	51.8
COEHS Shared	7	32.5
Communication Arts	8	48.2
Communication Arts - Dance	1	94.2
Library	1	20.3
Math & Computer Science	2	32.1
Music	6	25.5
Nursing	2	103.6
Physics, Astron & Geo	8	37.1
Political Science	1	24.0
Psychology & Counseling	1	32.1
Registrar	9	29.7
Sociology, Anthro & Crim Justice	2	31.8
Vacant	1	32.6
Totals:	85	42.9

TIME BLOCK ANALYSIS

See Appendix 3.7 - Table VII, page 2. Lab utilization was fairly consistent throughout the week, with Tuesday morning and Tuesday, Wednesday, and Thursday afternoons having the heaviest usage. Only during Tuesday morning and Thursday afternoon were more than 50 percent of the rooms scheduled. Friday afternoon had by far the lightest utilization.

HEGIS CATEGORY: 200 (Laboratories and Studios)

78 Spaces — **Percent of Spaces Utilized**

Classes in Session at:	M%	T%	W%	R%	F%
8:00:00 AM	17	15	23	18	13
8:30:00 AM	19	19	24	22	14
9:00:00 AM	32	19	36	21	26
9:30:00 AM	31	46	35	42	23
10:00:00 AM	41	53	49	45	32
11:00:00 AM	42	54	42	46	28
12:00:00 PM	26	44	27	40	17
1:00:00 PM	36	41	42	44	22
1:30:00 PM	35	36	41	38	21
2:00:00 PM	44	50	49	55	9
2:30:00 PM	44	50	49	55	9
3:00:00 PM	42	44	46	47	4
4:00:00 PM	32	33	33	29	4
4:10:00 PM	32	33	33	29	4
4:15:00 PM	32	32	33	28	4
7:00:00 PM	15	19	13	17	3
7:30:00 PM	15	18	13	17	3

2277 Stations — **Percent of Stations Utilized**

M%	T%	W%	R%	F%
11	9	22	10	9
14	10	23	12	11
26	13	32	13	19
25	36	31	31	16
30	44	32	33	22
32	45	33	33	28
19	36	21	29	14
28	27	36	32	16
26	23	35	28	14
31	39	39	43	6
31	39	39	43	6
26	33	35	36	7
28	22	31	18	7
28	22	31	18	7
28	22	31	18	7
9	18	8	13	1
9	17	8	13	1

Key:	60% - 100%	36% - 100%
	40% - 60%	24% - 36%
	20% - 40%	12% - 24%
	0% - 20%	0% - 12%

FALL 2013 VS. SPRING 2014

Whereas Fall 2013 classroom usage was significantly higher than Spring 2014, lab and studio usage was very close between those two terms. The difference in contact hours is about 3 percent, and Spring scheduled hours per week were about 12 minutes less per week.

Term	Labs	NASF	Stations	Sections	Hrs / Week	Mean Sec Size	Mean Sta Occ	Contact Hrs / Week
Fall 2013, Day	78	82,023	2,277	405	12.5	24.1	77%	21,670
Spring 2014, Day	60	80,288	2,171	391	12.3	24.2	79%	20,969
Difference	*-2*	*-1,735*	*-106*	*-14*	*-0.2*	*0.1*	*2%*	*-701*

EVENING LAB AND STUDIO USAGE

Up to this point, the lab and studio analysis has focused on Daytime (8AM-4PM) usage. Evening usage is usually considered separately as it is not a driver in determining the optimum number or size of labs or studios. Valdosta's evening scheduling window is Monday through Thursday, 4PM to 10PM (24 available hours per week), with just a small number of sections running past 10 or meeting on Friday night.

The number of evening contact hours, both Fall and Spring, accounted for 21% of all lab and studio contact hours during the 2013-2014 Academic Year.

Term	Labs	NASF	Stations	Sections	Hrs / Week	Mean Sec Size	Mean Sta Occ	Contact Hrs / Week
Fall 2013, Eve	48	56,021	1,531	117	5.6	24.3	79%	6,024
Spring 2014, Eve	60	66,543	1,797	117	4.6	20.8	70%	5,285

LAB/STUDIO NEEDS ASSESSMENT AND PROJECTION

For many of the reasons mentioned above, labs and studios, unlike classrooms, do not lend themselves as readily to a straightforward modeling approach to needs projection. In particular cases (possibly those departments with their labs averaging 10 hours and below, it would be prudent to verify low utilization spaces and, in collaboration with the departments, determine if reducing their lab/studio inventory would be feasible and advisable.

For additional information on lab and studio utilization by department, please see the Departmental Space Analysis section of this report.

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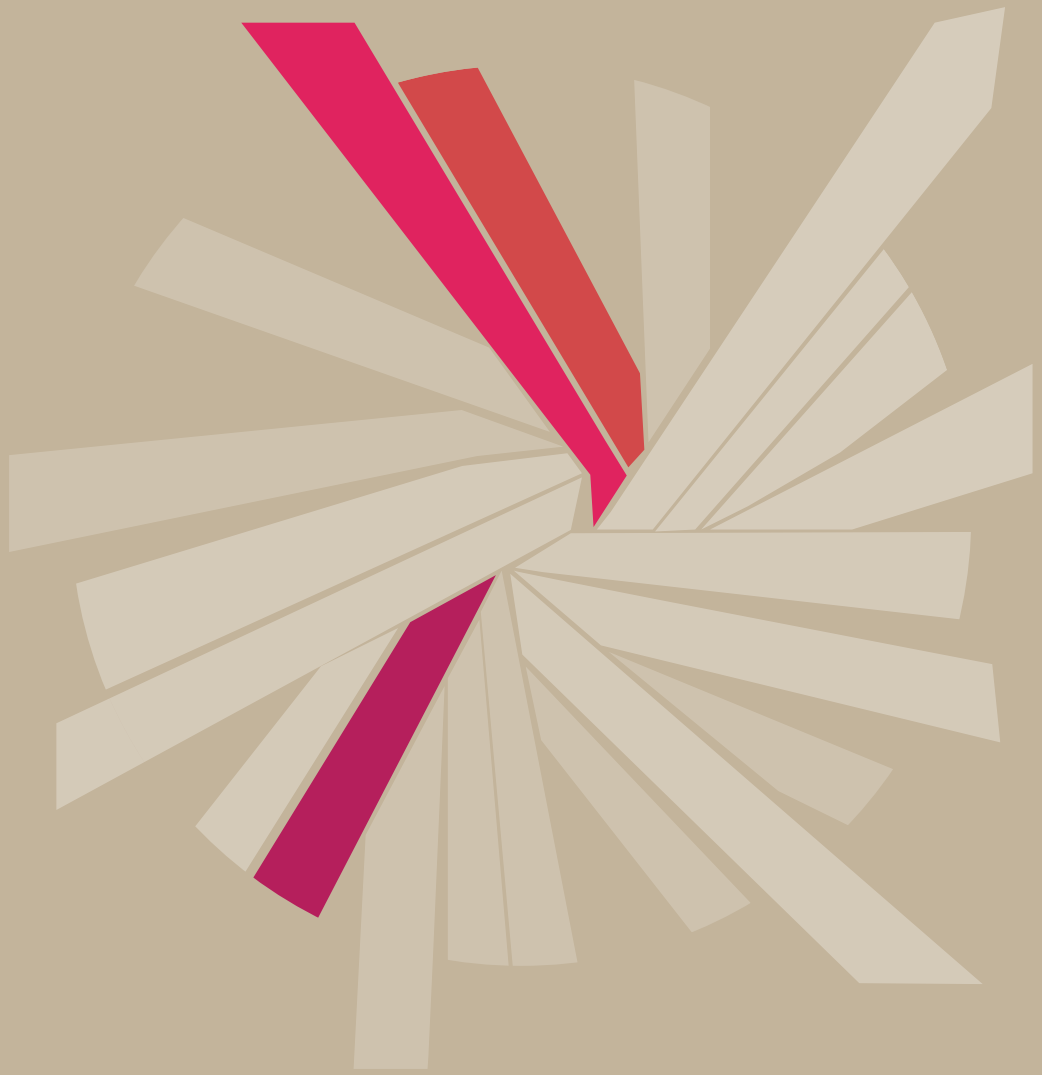


CHAPTER FOUR
Academic Department Space Assessment

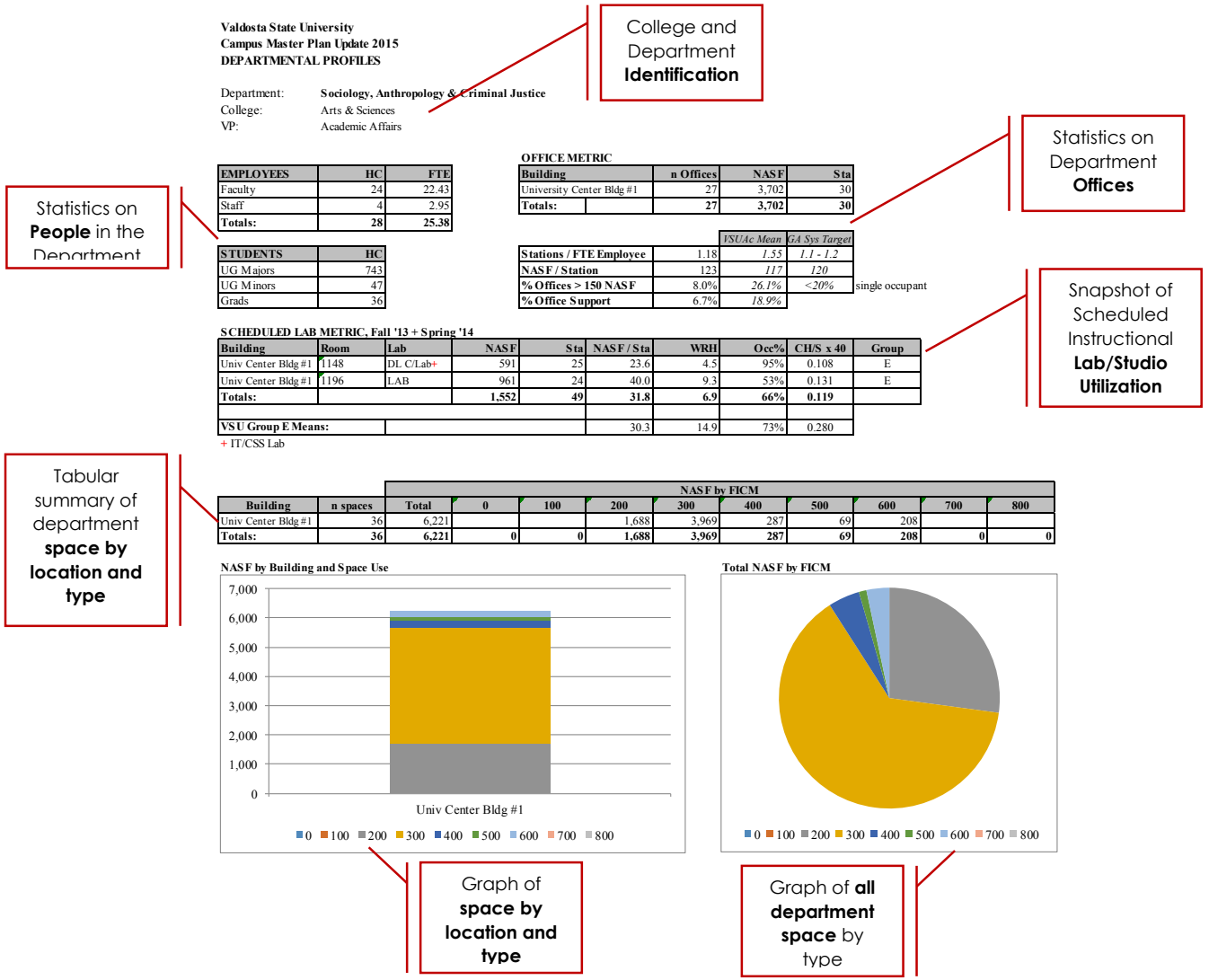
The consultant team participated in initial meetings with the Campus Master Plan Steering Committee and the Council of Deans. In those discussions, participants raised several issues regarding academic department space that should be addressed in the campus master planning. Some of the issues included:

- The unwanted dispersion of Colleges and departments to multiple buildings
- Improve classroom technology
- High tech in addition to not in lieu of low tech
- Improve certain spaces in the Fine Arts Building
- Impact of the planned development of One-Stop-Shop for Student Services in University Center

In order to understand these issues and assess the adequacy of current space allocation in a more fine-grained way, we have prepared space use profiles of each of VSU's academic departments. The sample profile below has been annotated to provide an overview of each of its facets.

Further description of each facet of the profile:
A. College and Department Identification – self-explanatory

B. Statistics on People in the Department – The number of faculty, staff and students, both Headcount (HC) and Full Time Equivalent (FTE), in the department in the fall of 2013 (Source: VSU OIR analysis of IPEDS ADP Data, 2014).



C. Statistics on Department Offices – The number of offices in each building the department has offices, net assignable square feet (NASF) of those offices and stations (seats) in the offices assigned to the department (Source: VSU Office of Physical Plant and Facilities Planning FIDM Room Table 6/08/2014 as updated through August 2014, or Space Inventory)
Calculations done on this data include: Stations per FTE Employee as compared to the USG target metric; Percentage of Offices larger than 150 NASF as compared to the USG target; Percent of office service space of all office space assigned to the department.

D. Scheduled Instructional Lab/Studio Utilization – Data taken from DLM Learning Space Analysis on lab and studio utilization. (Source: Course file from VSU Office of Academic Affairs and the Space Inventory).

As described in the Learning Space Analysis, specialized instructional lab and studio spaces are considered by multiple utilization methodologies to be well utilized if they are scheduled half of the time available for scheduling during the week, or roughly 20 hours. The Group identified in the rightmost column indicates a category of lab/ studio types based on NASF per student station. These categories are summarized as follows:

Teaching Lab and Studio Multipliers, with CIP Codes

Category A	**150 NASF / Station**	14.02 Aero & Aviation Automotive 46 Construction	14.17,15.06 Industrial Machinery and Equipment 14.19 Mechanical Engineering 15.0611 Metal, Shop, & Welding	14.31 Materials Science Power and Energy 51.24 Veterinary Medicine
Category B	**100 NASF / Station**	01 & 02 Agriculture 14.06 Ceramic 50.03 Dance 51.04 Dentistry 50.05 Dramatic Arts	Fisheries / Ichthyology ?Med Surgery 51.2306 Occupational Therapy 51.17 Optometry	51.2308 Physical Therapy Robotics 14.08 Structural Engineering TV / Film Production
Category C	**75 NASF / Station**	40.0502 Analytical Chemistry 26.04 Anatomy, Gross 04 Architecture Art, 2-D / Photography 40.0202 Astrophysics 26.02 Biochemistry 26.02 Biophysics 26.04 Cell Biology Chemical Engineering 14.08 Civil Engineering 15.13 CAD/CADD Tech + GIS	51.06 Dental Hygiene EMS 14.01 Engineering, General 01.10 Food Sci and Tech / Cul 26.08 Genetics (lab-based) 40.06 Geophysics and Seism. 26.04 Histology 21 Tech Ed / Industrial Arts 50.04 Interior Design + Textile 04.06 Landscape Architecture 26.05 Microbiology	26.1302 Marine Biology 26.02 Molecular Biology 50.09 Music Performance 30.24 Neurosciences 51.16 Nursing - P and RN 40.0504 Organic Chemistry 51.2 Pharmacy 10.03 Printing and Litho 42 Psychology (lab) Radio Production 51.0911 Radiology
Category D	**60 NASF / Station**	45.02 Anthro / Arch (lab) 40.0201 Astronomy 26.01 Biology, General 40.05 Chemistry, General 09.01 Communication 11.07 Computer Science	50.07 Drawing, Painting 26.13 Ecology / Enviro Sci 16 Foreign Languages 26.08 Genetics (lecture) 40.06 Geology 09.04 Journalism	26.07 Pathology 40.08 Physics, General 51.22 Public Health Zoology
Category E	**40 NASF / Station**	52.03 Accounting 05.01 Afro-American Studies 50.07 Art History and Appr. 45.06 Economics 13 Education	13.06 Educational Statistics and Research 52.08 Finance General Computer Labs 54 History 23&45 Hum. and Soc. Sci. 22 Law 27 Mathematics	50.09 Music History and Appreciation 45.10 Poli Sci and Govt. 42 Psychology (lecture) 45.11 Sociology 45.12 Urban Studies

If the NASF/ Station varies appreciably from these category levels, more investigation of these particular labs may be indicated.

E. Tabular Summary of Departmental Space – Space assigned to the department is grouped by FICM space category and displayed for each building the department occupies.

F. Graphs of Departmental Space – In the graph to the left, the section E table is displayed by building, color coded by FICM space type. To the right the graph shows the total departmental space color coded by FICM space type.

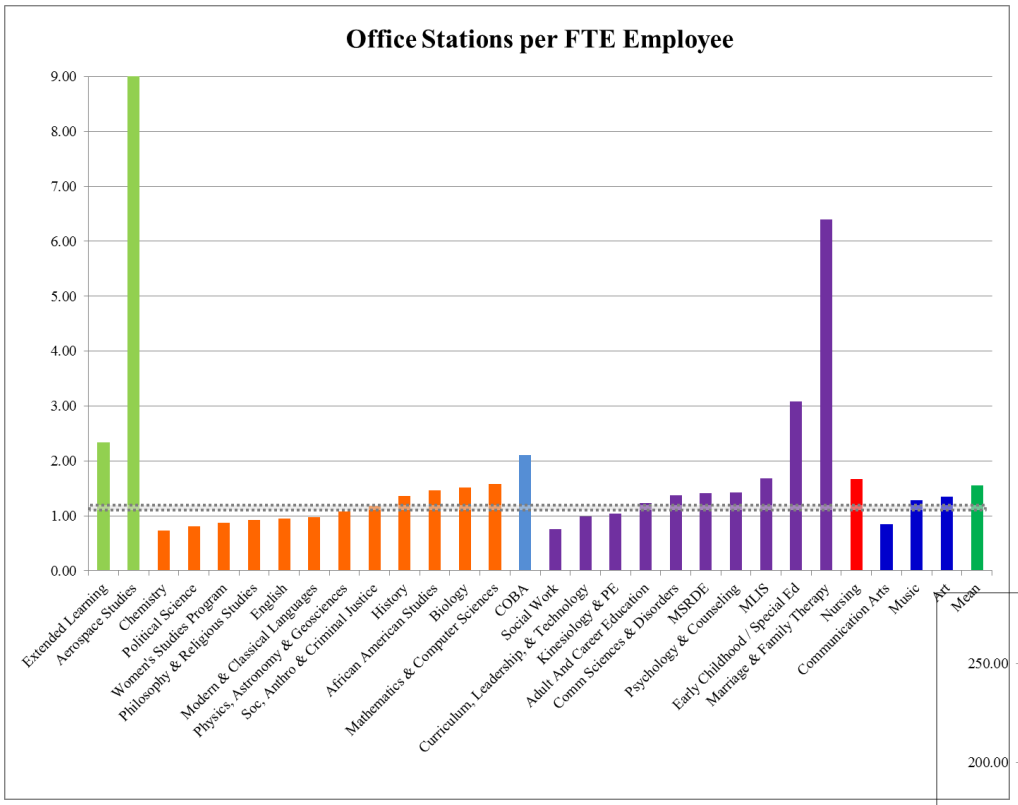
In order to more readily grasp the relative position of the departments for each of the metrics tracked, we have developed a series of graphs that display a summary of the data for each department. These graphs are color coded by College:

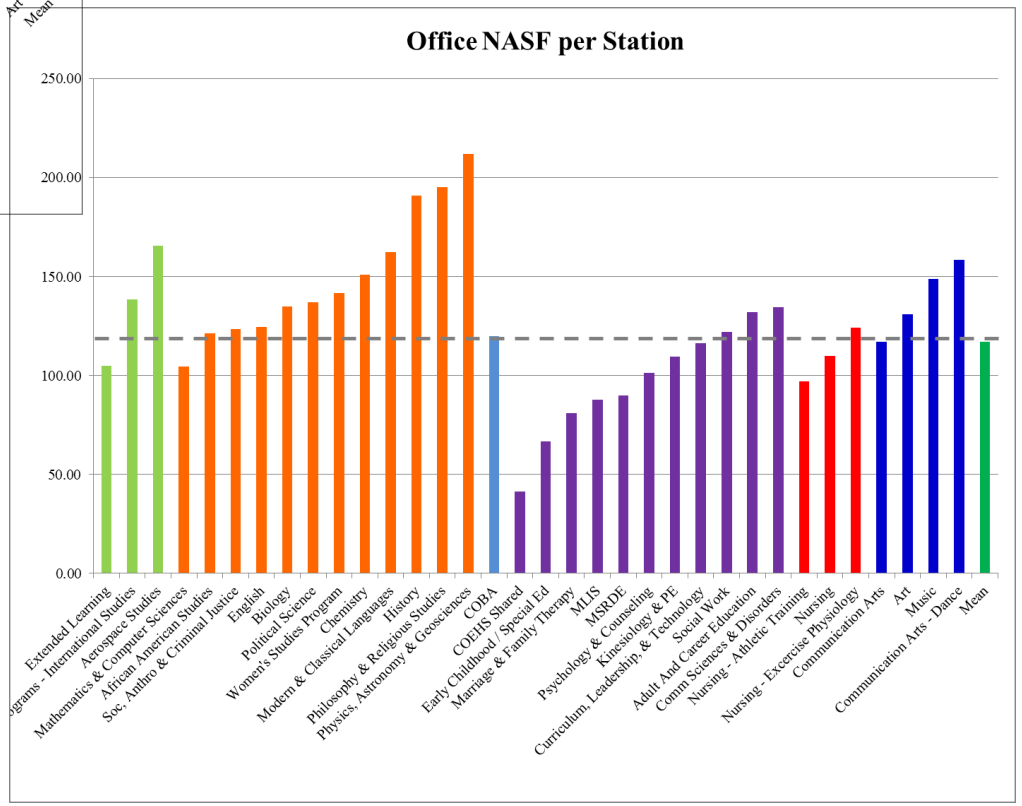
- Green = Divisions of Extended Learning & Aerospace Studies
- Orange = College of Arts & Sciences
- Light Blue = Langdale College of Business Administration
- Purple = Dewar College of Education
- Red = College of Nursing
- Blue = College of the Arts
- Green = Arithmetic Mean

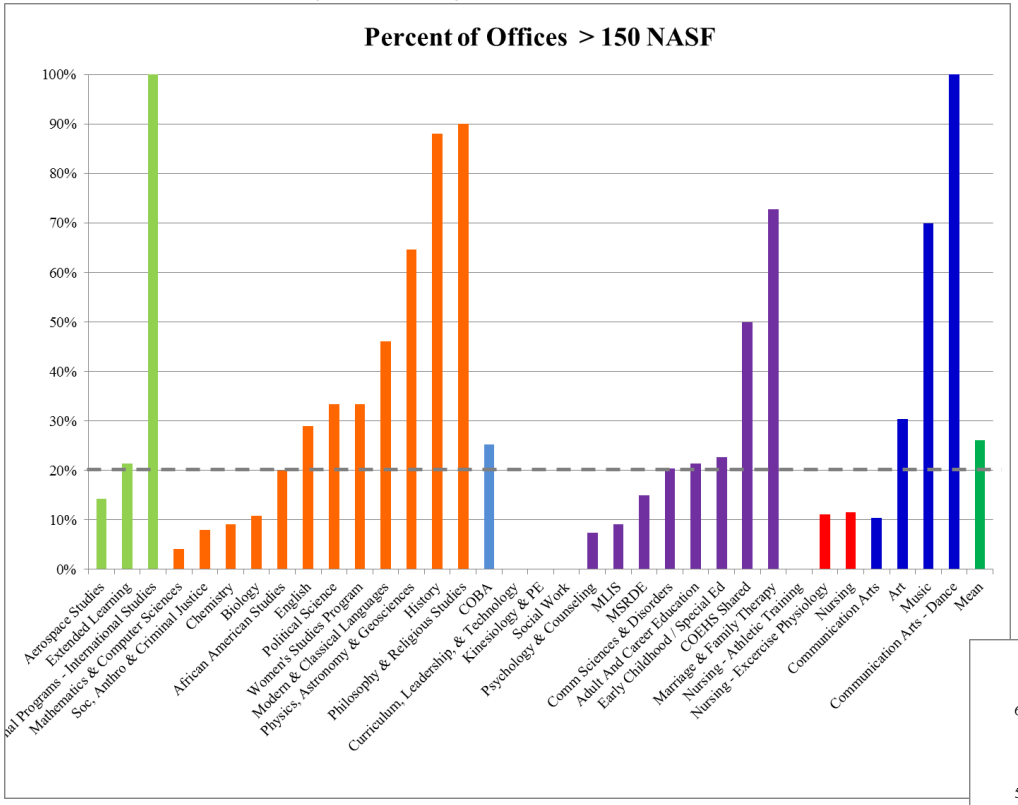
Where the USG has identified a target value or range for a metric, those are indicated on the graphs with a gray dashed line.

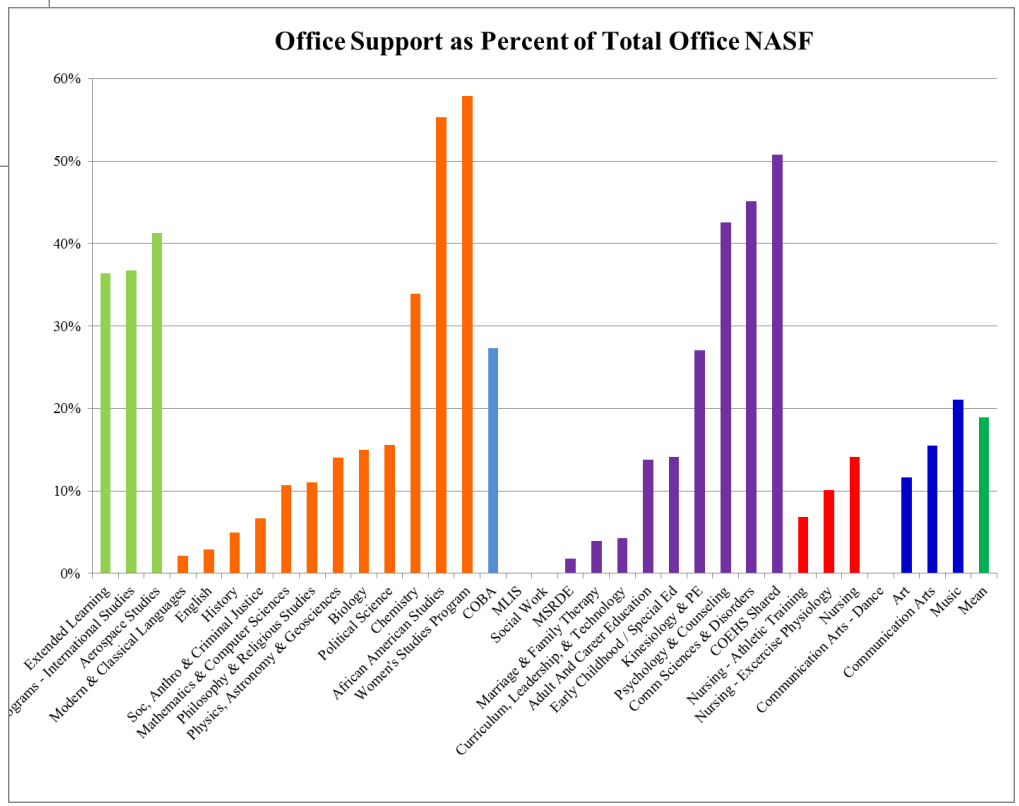
These summary graphs have been developed and should be read as an aid to reviewing the data underlying the analysis - to identify outlying values, or values that do not match what would be expected by those familiar with space allocation at VSU.

OFFICE SPACE MEASURES

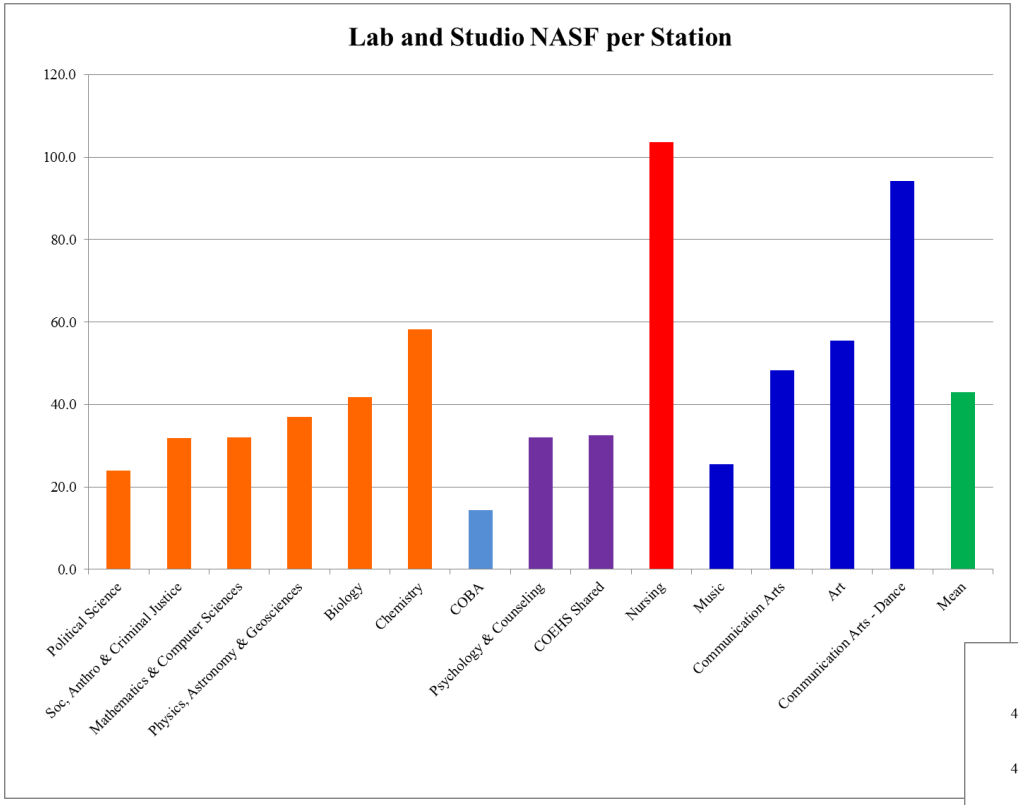


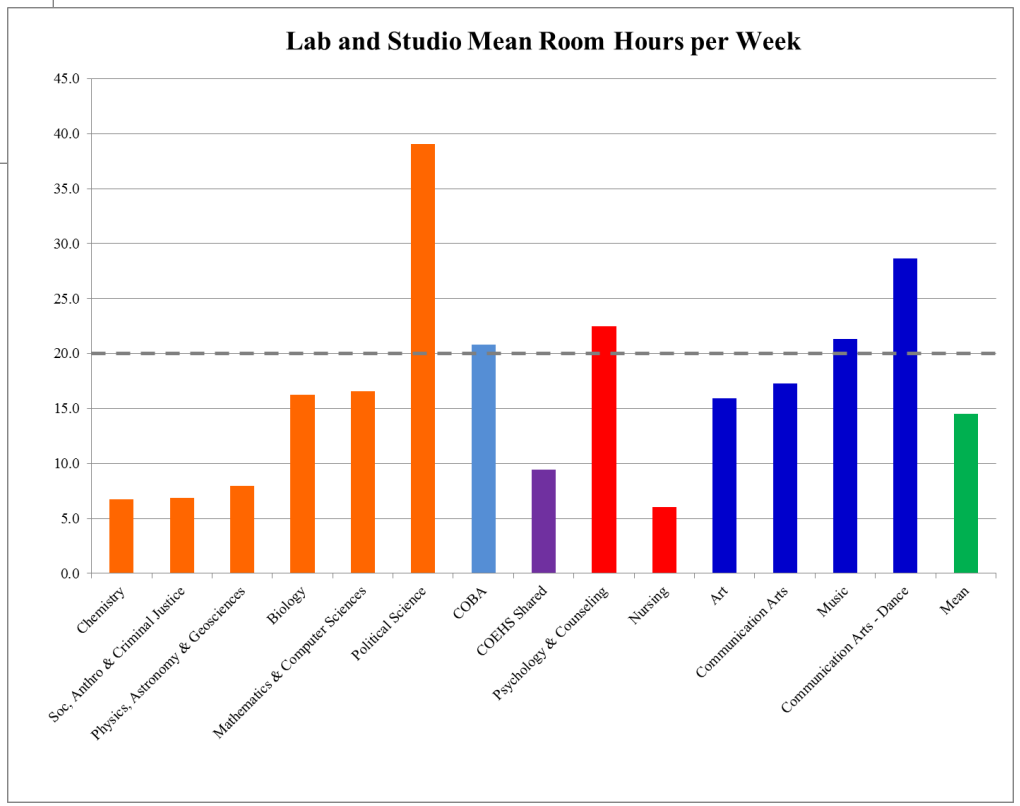


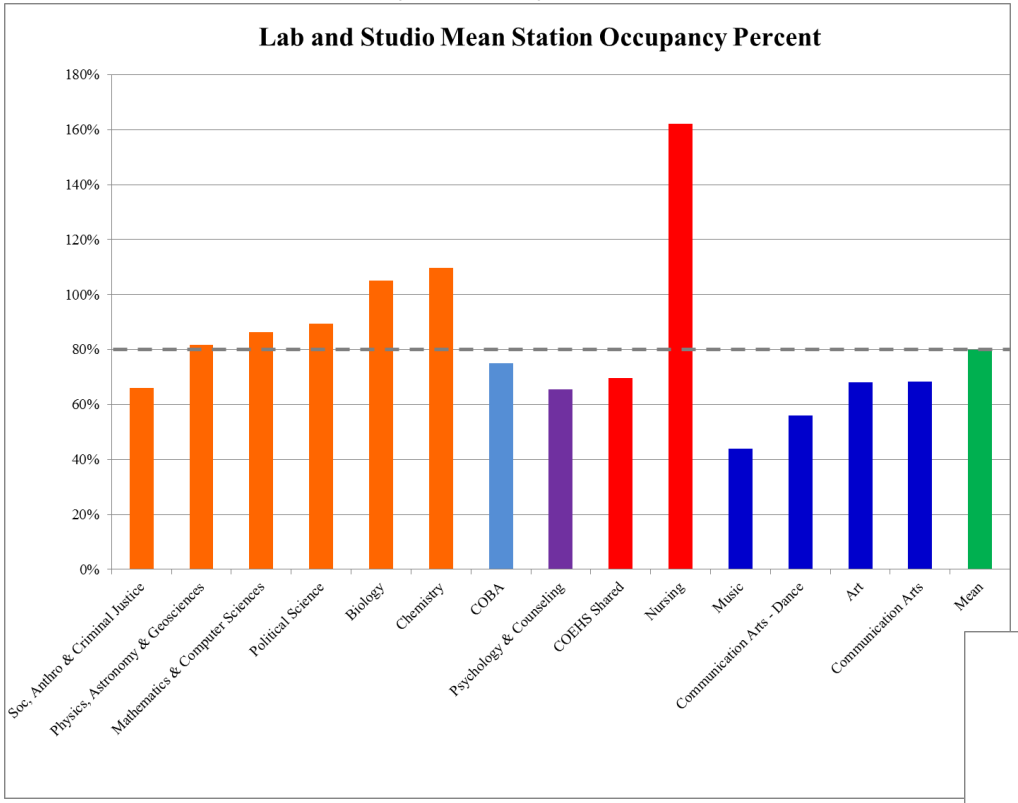

Percent of Offices > 150 NASF
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Aerospace Studies
Extended Learning
ial Programs - International Studies
Mathematics & Computer Sciences
Soc, Anthro & Criminal Justice
Chemistry
Biology
African American Studies
English
Political Science
Women's Studies Program
Modern & Classical Languages
Physics, Astronomy & Geosciences
History
Philosophy & Religious Studies
COBA
Curriculum, Leadership, & Technology
Kinesiology & PE
Social Work
Psychology & Counseling
MLIS
MSRDE
Comm Sciences & Disorders
Adult And Career Education
Early Childhood / Special Ed
COEHS Shared
Marriage & Family Therapy
Nursing - Athletic Training
Nursing - Excercise Physiology
Nursing
Communication Arts
Art
Music
Communication Arts - Dance
Mean

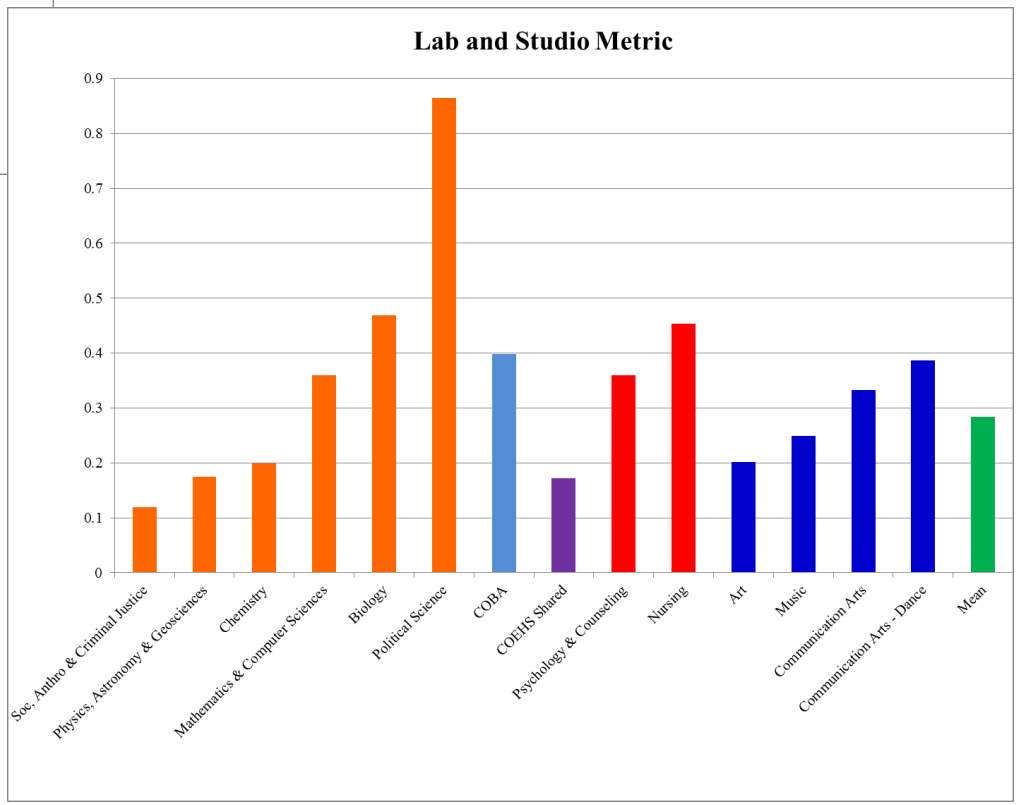

Office Support as Percent of Total Office NASF
60%
50%
40%
30%
20%
10%
0%
Extended Learning
ograms - International Studies
Aerospace Studies
Modern & Classical Languages
English
History
Soc, Anthro & Criminal Justice
Mathematics & Computer Sciences
Philosophy & Religious Studies
Physics, Astronomy & Geosciences
Biology
Political Science
Chemistry
African American Studies
Women's Studies Program
COBA
MLIS
Social Work
MSRDE
Marriage & Family Therapy
Curriculum, Leadership, & Technology
Adult And Career Education
Early Childhood / Special Ed
Kinesiology & PE
Psychology & Counseling
Comm Sciences & Disorders
COEHS Shared
Nursing - Athletic Training
Nursing - Excercise Physiology
Nursing
Communication Arts - Dance
Art
Communication Arts
Music
Mean

LAB & STUDIO SPACE MEASURES






Lab and Studio Mean Station Occupancy Percent
180%
160%
140%
120%
100%
80%
60%
40%
20%
0%
Soc, Anthro & Criminal Justice
Physics, Astronomy & Geosciences
Mathematics & Computer Sciences
Political Science
Biology
Chemistry
COBA
Psychology & Counseling
COEHS Shared
Nursing
Music
Communication Arts - Dance
Art
Communication Arts
Mean


Lab and Studio Metric
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Soc, Anthro & Criminal Justice
Physics, Astronomy & Geosciences
Chemistry
Mathematics & Computer Sciences
Biology
Political Science
COBA
COEHS Shared
Psychology & Counseling
Nursing
Art
Music
Communication Arts
Communication Arts - Dance
Mean

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APPENDICES

1. Campus Occupancy, Use and Utilization Diagrams
    - 1.1:Building Occupancy Mapping
    - 1.2: Building Use by Department Mapping
    - 1.3: Classroom Utilization Mapping
    - 1.4: Notes from Meetings and Interviews
2. Campus Space Overview
3. Learning Space Utilization
4. Academic Department Space Assessment