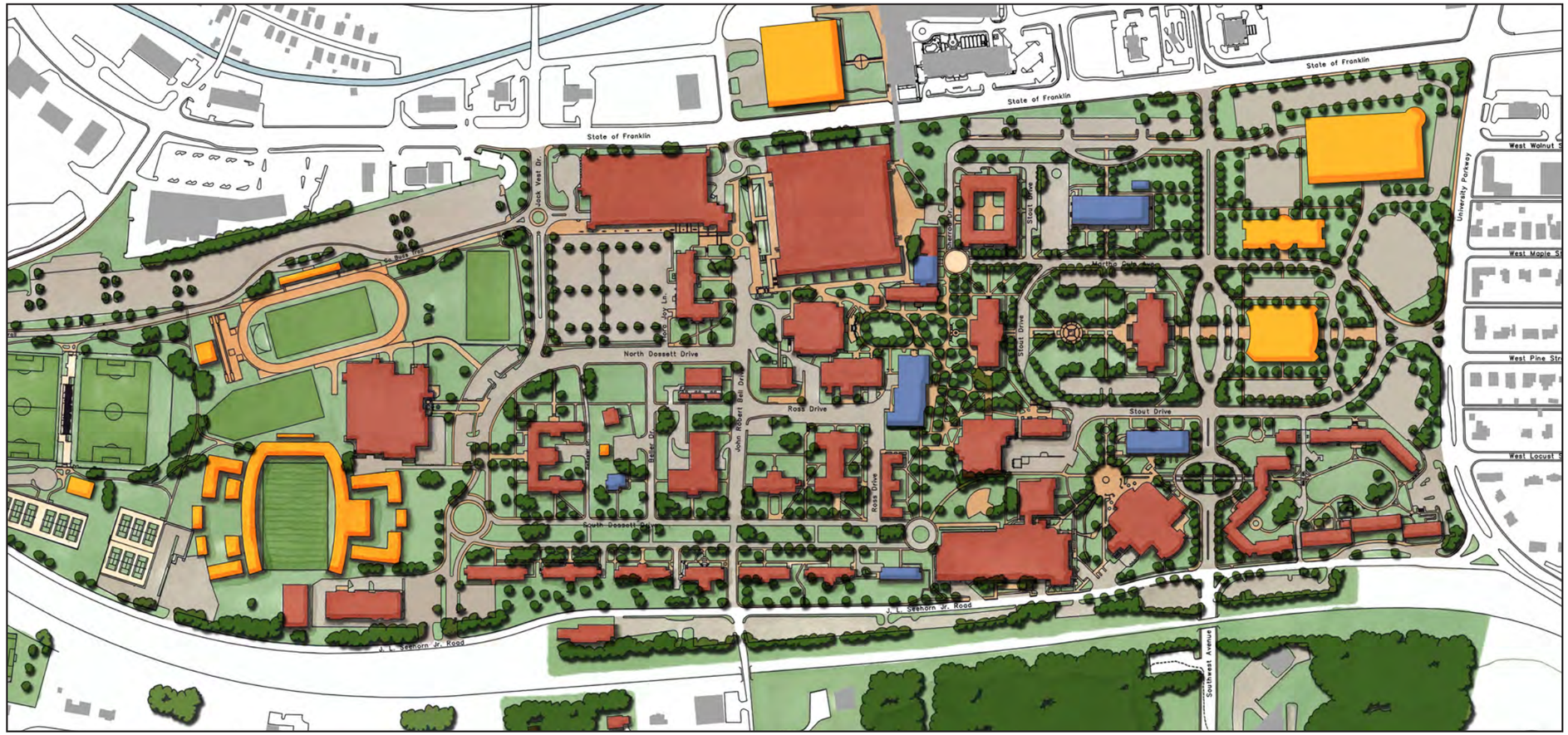
EAST TENNESSEE STATE UNIVERSITY

Prepared For:
East Tennessee State University and The Tennessee Board of Regents
SBC Project No. 166/005-02-05B



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Comprehensive Facilities Planning & Woolpert Design

CAMPUS MASTER PLAN UPDATE 2014

CAMPUS MASTER PLAN UPDATE 2014

EXCELLENCE

COMMITMENT

PEOPLE

OUR VISION

To become the best regional university in the nation.

OUR MISSION (ABBREVIATED)

Educate students to become responsible, enlightened, and productive citizens; Conduct scholarship that improves the human condition; Serve business, education, government, health care systems, and community; and Enhance the cultural environment of the region.

OUR VALUES

***ETSU** pursues its mission through a student-centered community of learning reflecting high standards and promoting a balance of liberal arts and professional preparation, continuous improvement, and based on core values where:*

***PEOPLE** come first, are treated with dignity and respect, and are encouraged to achieve their full potential;*

***RELATIONSHIPS** are built on honesty, integrity, and trust;*

***DIVERSITY** of people and thought is respected;*

***EXCELLENCE** is achieved through teamwork, leadership, creativity, and a strong work ethic;*

***EFFICIENCY** is achieved through wise use of human and financial resources; and*

***COMMITMENT** to intellectual achievement is embraced.*

EFFICIENCY

Sidney D. Gilbreath
First President

PRESIDENT'S FOREWORD

For more than 100 years, East Tennessee State University has been positively impacting hundreds of thousands of lives through our students, alumni, and all those whom we serve. Without question, higher education, the workforce, and the general world we live in continue to change at a rapid pace. ETSU is committed to moving forward with those changes and positioning itself and our community for success. In the last two years, we have submitted numerous proposals for new programs to be delivered on campus, online, at satellite campuses, and through hybrid methods. We have added new athletic programs, buildings, and spaces for both academic and athletic purposes, and invested in the maintenance and improvement of our infrastructure.

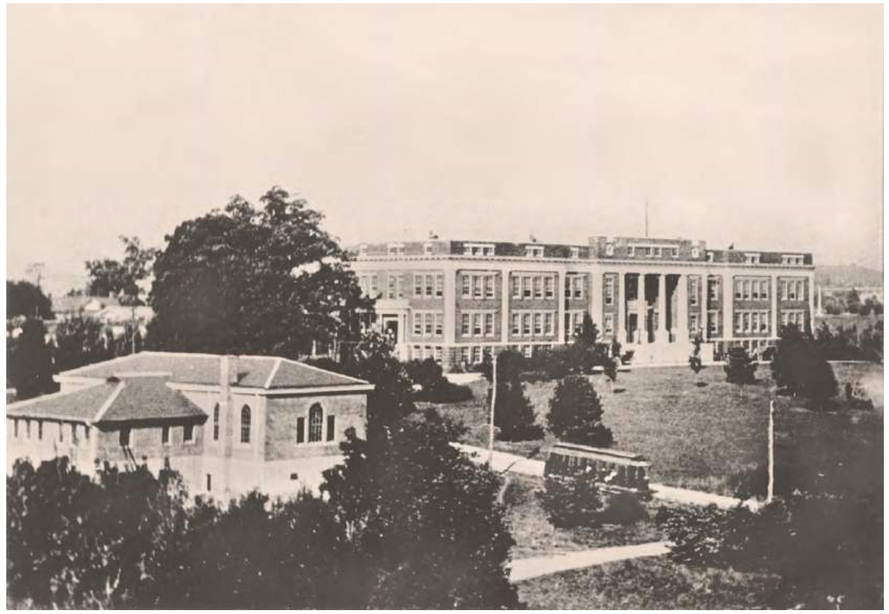
This master plan reflects the themes, ideas, and concepts expressed through a collaborative effort among faculty, staff, students, consultants, and the Tennessee Board of Regents to create the most desirable environment possible at ETSU. Two of the major concepts expressed during the planning process were engagement and the university experience. Engagement involves a dynamic campus that encourages interaction between our students, faculty, staff, alumni, community leaders, patrons, and others with whom our path crosses through our numerous service programs. Enhancing the university experience requires spaces that go well beyond the basic classroom. We must create and showcase areas to gather, perform, interact, exhibit, eat, play, learn, and grow.

I am truly grateful for the commitment, talent, and hard work of so many people who have helped create the vision that unfolds in the following pages. I am confident that, with this forethought and planning, ETSU will continue to adapt to the ever-changing environment in which we find ourselves, and that we can look to our future with great optimism.

Dr. Brian Noland, President

RELATIONSHIPS

DIVERSITY



CAMPUS MASTER PLAN HISTORY

Date	Partner Firm	Master Plan
2014	Comprehensive Facilities Planning Woolpert Design	Campus Master Plan Update
2013	Fisher + Associates	Fine Arts Center Update
2010	Fisher + Associates	Campus Master Plan Update
2010	Comprehensive Facilities Planning	Academic Facilities Master Plan
2010	Facility Systems Consultants, LLC	Carbon Reduction Plan
2007	Desman, Inc.	Parking & Access Study
2006	Carl Walker, Inc.	Campus Parking Study
2005	ETSU Graduate Students	Campus Parking Study
2004	Heery International, Inc.	Athletic & Physical Education Master Plan Revision
2003	Heery International, Inc. McCarty Holsaple McCarty, Inc.	Athletic & Physical Education Master Plan
2003	McCarty Holsaple McCarty, Inc. Fisher + Associates	Campus Master Plan Update
2003	McCarty Holsaple McCarty, Inc. EDAW / Fisher + Associates	University Innovation Park Master Plan
2002	Anderson Strickler, LLC	Comprehensive Plan for Living and Resident Life
1999	David Leonard Associates West, Welch, Reed	Campus Master Plan Update
1992	Sasaki Associates, Inc.	Campus Master Plan

EXECUTIVE SUMMARY

The Master Plan Update study area is comprised of two closely related sites, the Main Campus and the Division of Health Sciences primarily situated on the Mountain Home Veterans Administration Campus (see pages 06 and 32).

The 204 acre Main Campus is generally defined by State of Franklin Road to the north, University parkway to the east, J.L. Seehorn Jr. Road to the south and South Greenwood Drive to the west. The Main Campus study area also includes approximately 148 acres of outlying University-owned land to the south of J.L. Seehorn Jr. Road. The University occupies a total of approximately 64 buildings on the Main Campus.

The James H. Quillen College of Medicine, Physical Therapy Program and Audiology labs, and the College of Pharmacy, are located on the 250-acre VA Mountain Home Campus, in a group of buildings on a site generally defined by West Main and Lamont Street to the north, the VA Administration and a new nursing home and domiciliary facilities to the east, the Southern Railroad to the south and the Johnson City Medical Center to the west. The University's Medical School currently occupies 10 of the buildings on the site. A 35 year enhanced use lease agreement between the Veterans Administration and ETSU Medical School increased the Division of Health Sciences presence on the VA Mountain Home Campus with full occupancy of 31 acres and ten buildings. This lease was signed on December 17, 1998.

In addition to the University complex comprised of the Main Campus and VA Mountain Home Campus, the University also maintains six other campuses in the region: ETSU at Kingsport Downtown, Kingsport University Center, Marshall T. Nave Center in Elizabethton, ETSU at Sevierville, ETSU at Valleybrook, and ETSU at Strawberry Plains. The ETSU Clinical Education Facility is located on State of Franklin Road west of the Main Campus. Other clinical Education facilities are located in the Kingsport Family Practice Center, Kingsport Internal Medicine, Johnson City Family Practice and the Bristol Family Practice Center. Other clinical education facilities are located at twelve clinics throughout East Tennessee. The East Tennessee State University and General Shale Brick Natural History Museum and Visitor Center located in Gray, Tennessee opened in August 2007.

An Academic Facilities Master Plan was a primary focus of the 2010 master plan update. The detailed academic facility data developed in this master plan will be used to support renovation and new construction requests over the next decade. Program space planning will also benefit from this information. This effort was the first time an actual academic facilities space plan has been completed at ETSU.

Since the 2010 Master Plan Update, opportunities and needs have led to changes on the campus which differ from the plan or were not contemplated by it. This update documents those changes, identifies changes in academic facilities space needs and describes new development opportunities. The goal is to have the master plan continue to guide program space planning and construction over the next decade, based on up to date demands and opportunities.

The primary areas of focus for the 2014 Master Plan Update are as follows:

- Main Campus Master Plan
- Fine Arts Center Master Plan
- Athletic Master Plan
- Acquisition and Disposition Plan
- Housing Master Plan
- Parking & Access Study
- Academic Facilities Master Plan

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EXISTING MAIN CAMPUS PLAN

MAIN CAMPUS

The Main Campus is a well-defined compact and linear form, determined in part by its physical location between a mountain ridge and stream valley. Development decisions over a nearly 100 year period have resulted in the siting of a majority of the buildings in a rectilinear layout that generally parallels the adjacent ridge line of Buffalo Mountain. The University's character is enhanced by a series of homogeneous buildings similar in mass, height and material. The majority of buildings are designed in a Neo-Georgian style, distinguished by brick walls, gable or flat roofs and similar sized window openings. The Charles C. Sherrod Library carries forth the Classical format of the campus in a contemporary manner consistent with the scale and dignity of function. The University Center, Memorial Center and Parking Services building introduced unique building forms and materials to the campus fabric that are not consistent with the context of the original campus.

The campus area between Gilbreath and John Robert Bell Drive is the most densely developed sector of the University, containing principal academic and administrative buildings as well as remnants of the original principal campus open spaces including the Great Lawn east of Gilbreath Hall. East of Gilbreath Drive, the campus is characterized by large surface parking lots and a variety of land uses. The campus area west of South Dossett Drive contains a somewhat looser arrangement of buildings, as well as large parking lots and sport fields.

Campus edges are generally defined by the street perimeters, but there is little clear distinction between the University and the community, particularly along the northeastern edge. The construction of State of Franklin Road increased the number of well used entrances to the campus, reducing the significance of the existing "main entrance" on University Parkway.

MAIN CAMPUS INDEX

002 University School
003 DM Brown Hall
004 Alexander Modular
005 Mathes Hall
006 Ernest C Ball Hall
007 Mini-dome
008 Warf-Pickel Hall
009 Brooks Gym
010 Gilbreath Hall
011 Campus Center Building
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044 Equipment Storage Building
045 Chemical Storage Bldg
060 Burgin E Dossett Hall
062 Art Annex
063 Ticket Booth
064 Ticket Booth
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090 920 West Maple Street
091 Reece Museum
092 D.P. Culp Center
094 Softball Stadium
095 Soccer Fields East & West
096 902 West Maple
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101 Disc Golf Course
102 University Woods Pavillion
103 University Woods
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127 Carter Hall
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150 Seehorn House
151 Bond House
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155 916 West Maple
156 914 West Maple
157 918 West Maple
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178 Building 178
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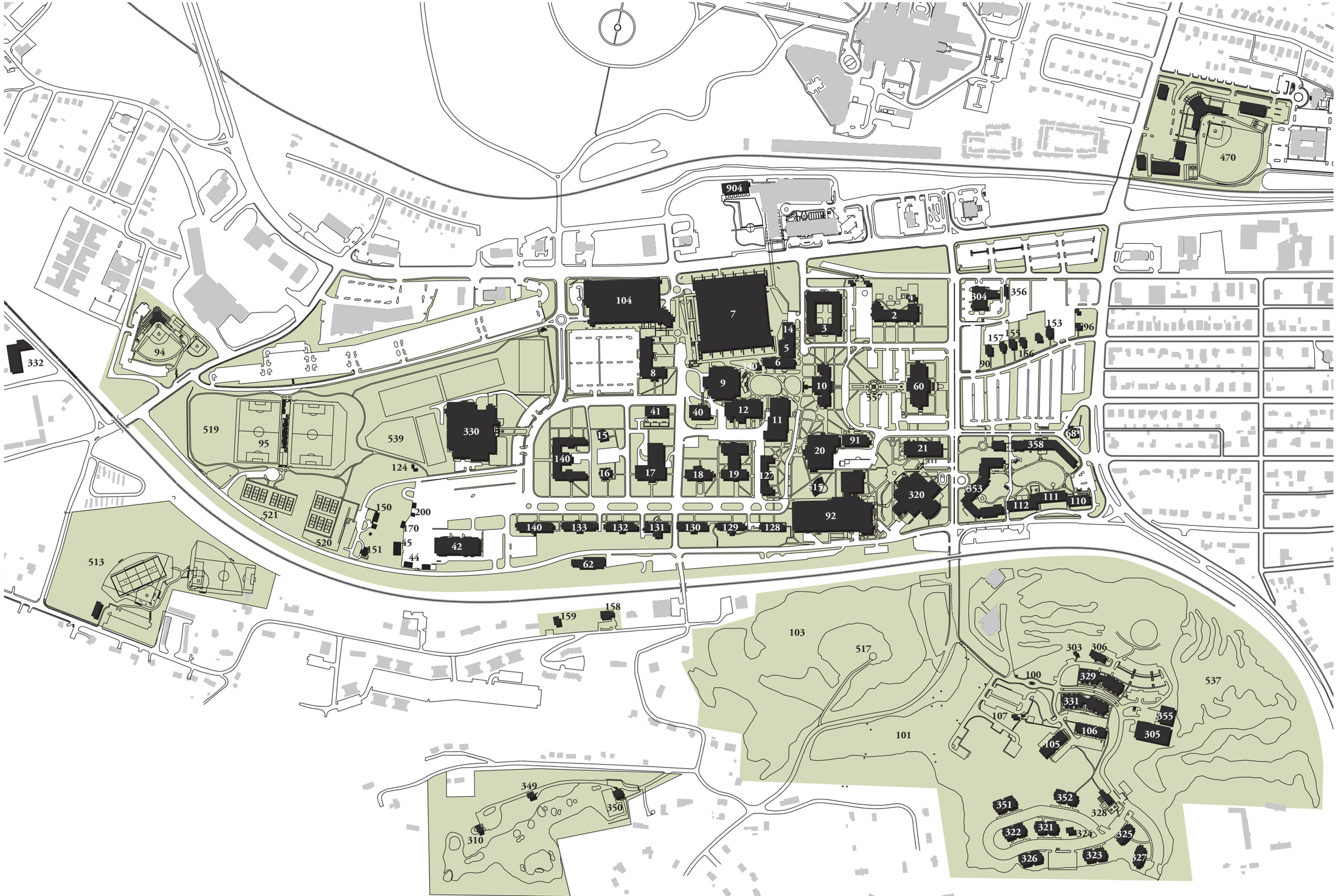
517 Water Tank
519 Outdoor Track
520 West Tennis Courts Complex
521 East Tennis Court Complex
537 Bike Course
539 Basler Challenge Course
904 Digital Media Center
557 ETSU Foundation Carillon & Alumni Plaza
558 Downtown Day Clinic



EXISTING MAIN CAMPUS PLAN

CONCEPTUAL MASTER PLAN FRAMEWORK

CONCEPTUAL MASTER PLAN FRAMEWORK

East Tennessee State University is comprised of the main campus and College of Medicine campus on a portion of the Mountain Home Veterans Administration campus and multiple remote locations. The focus of this Master Plan is the main campus, which, while compact still has several options for significant future growth. This Master Plan Update identifies development opportunities to reinforce the established patterns of strong academic core, athletics complex and residential sectors.

Most of the opportunities lie in the eastern third of the main campus, where the preexisting street grid and a number of residential structures remain. This end of the campus offers opportunities for two to four future academic buildings, with footprints of up to 40,000 SF. This area is also a good potential location for a future parking garage, with potential for commercial/retail space, which could be added as enrollment increases demand. New buildings can be located to terminate and frame the east end of the historic campus core, expanding and strengthening that important center of the campus.

With over 1,700 feet of frontage on University Parkway, the east end of campus is well suited for development of a main ceremonial campus gateway and entrance focused on the central east-west axis of the Academic Core, with the Burgin Dossett Administration building at its center. The combination of main entrance and large potential building site east of Gilbreath between Martha Culp Avenue and Stout Drive creates the opportunity for a large academic building with potential to also serve as a community interface. The frontage along State of Franklin Road has been dramatically enhanced with the addition of a new parking garage east of Jack Vest Drive. The office building on the west end of the structure, facing what has become a major campus Gateway and entrance suggests how the addition of retail space along State of Franklin Road may be incorporated into any future garages yo benefit both the community and the University.

The north edge of the campus can be further strengthened by adding more landscape and safety features to define the edge of the campus and accent its gateways, as well as control the pedestrian traffic crossing State of Franklin Road. As new residential and commercial development emerges along State of Franklin, it will become more important to manage pedestrian/traffic interface. The potential for a future Fine Arts, or other university and community joint use building adjacent to the Millennium Center, can add a valuable interface with the community, while intensifying the need to identify and control the campus edge and safe crossing points. The enhancement of the campus north edge suggests opportunity to integrate the commercial property west of Jack Vest Drive extending to S. Greenwood Drive, into the campus area, either through partnering or acquisition. Such integration would create a strong gateway opportunity at the intersection of S. Greenwood Drive with State of Franklin.

The western edge of the campus is the least well defined perimeter, devoted primarily to Athletics and Intramural recreation. The athletics zone of the campus, while also compact seems to meet current and projected needs. A major program addition in this update is a football stadium in the southeast corner of the Athletics zone, at the terminus of S. Dossett Drive. This facility added to the Track & Field complex proposed in the 2010 Master Plan will significantly intensify and enhance the Athletic facilities. The result will also be a realignment of future parking.

While most of the major housing additions have been completed, this update proposes the addition of a Greek Village in the area of the former married student housing. It also identifies the need to upgrade older dormitory style residence halls in the future. An assessment of the potentially available land, yields seven parcels of the campus that offer specific furture opportunities. Each zone has unique characteristics that suggest specific future use. Scale, in the list to follow, refers to potential size of the building.

Zone **Program Opportunity**

1 Core Anchor
- Fine Arts Classroom Building (Option A)
- Future Academic building
- Parking Garage

Scale - Up to 40,000 GSF floor; 4 floors;160,000 GSF total

2 Gateway Corner
- Parking Garage, with potential retail
- Future Academic Building

Scale - Up to 40,000 GSF/floor; 3 floors; 120,000 GSF total, plus garage retail

3 State of Franklin Community Site
- Fine Arts Classroom Building (Option B)
- Future Academic Building

Scale - Up to 45,000 GSF/floor;3 floors; 140,000 GSF total

4 Track & Field
- New Track with full field areas
- Multi-use building serving track, football and tennis
- Nine lane track with concourse lockers and press box

5 Football Stadium

Scale - Up to 30,000 seats with hospitality areas

6 Greek Village
- Sorority/Fraternity Space

7 Recreation
- Extension of Recreation Fields

Redevelopment Zones: Repurpose, Redevelop or Replace

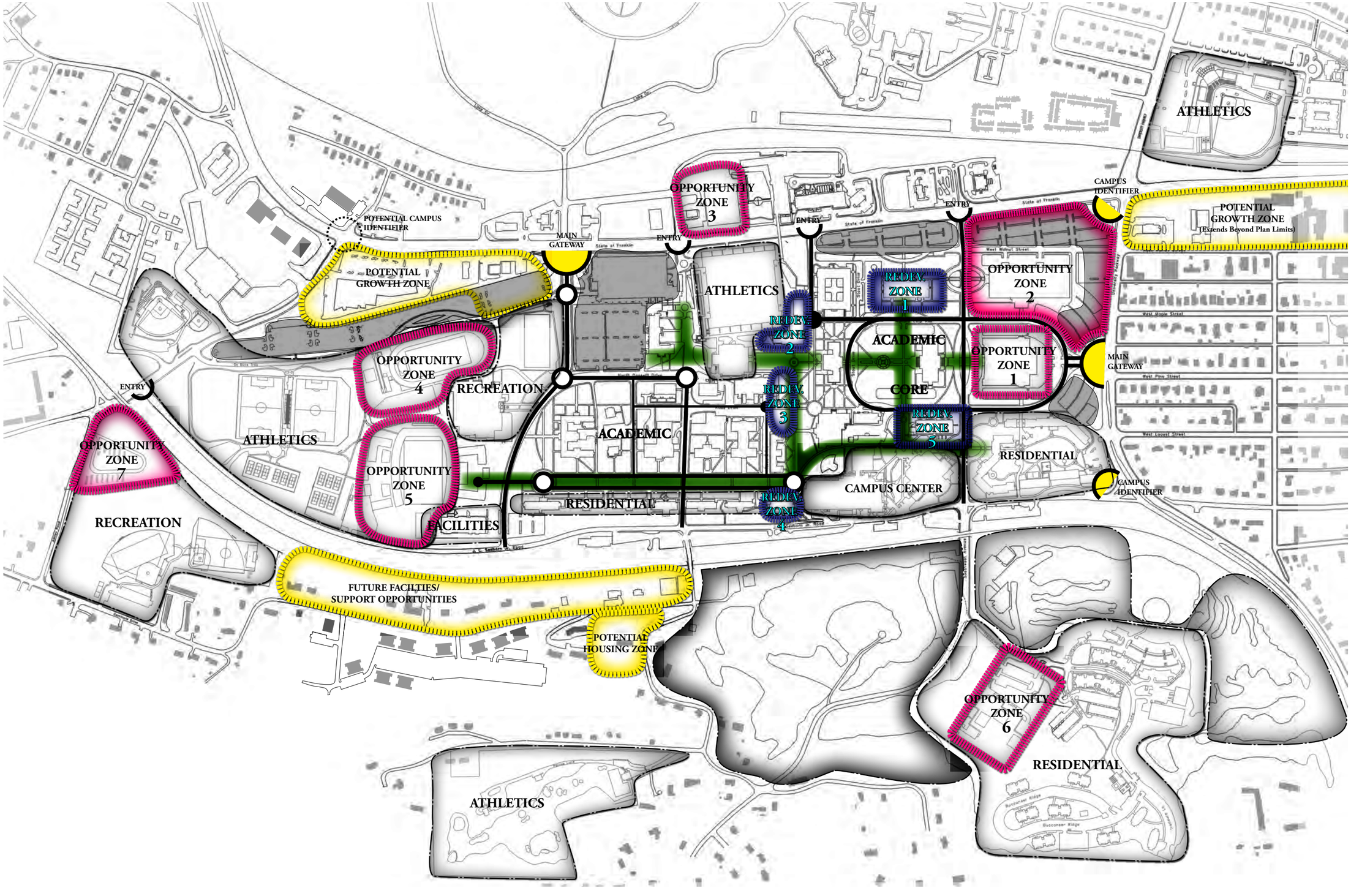
1. University School Site
2. Mathes and Ernest C. Ball Hall Site
3. Campus Center Building Site
4. Ross Hall
5. Rogers - Stout Hall

Redevelopment Zones 1 - 4 are identified as the most likely locations for replacement of existing campus buildings. Alexander Hall would be difficult to repurpose at such time as the University High School relocates to Innovation Park. The site could be a good location for a future Math/Science building or Humanities building. Campus Center (redevelopment site 3) could be replaced by an academic building when needs of that program reach a point where a new building can be justified.

The possibilities for growth identify where future programs and facilities, as they are currently envisioned, could be located. However, it will be important to retain flexibility to adjust to timing of each program and facility. The overall conceptual framework is intended to set general parameters for each development opportunity location so that optimum functionality of the overall campus can be maintained as incremental improvements are made, while the long term form and functionality of the campus remain as the primary guide to physical structure.

The central core of the campus can be further strengthened by creating more green pedestrian corridors and quadrangles linking the major academic, athletic and residential areas. This central greening is complemented by moving parking and most vehicular circulation to the perimeter. The green core connects the historic campus core with Memorial Hall, and extends south to Stone Hall and the green along South Dossett Drive that links the residence halls with the new football stadium.

* Note: See page 24 for campus street names



CONCEPTUAL MASTER PLAN FRAMEWORK

MAIN CAMPUS MASTER PLAN

The following plan illustrates the proposed changes and improvements for the ETSU Main Campus. Detailed descriptions of specific areas of study follow.

JOHNSON CITY FAMILY PRACTICE

The current location of the Johnson City Family practice on the Main ETSU Campus is problematic for patient access which is essential for the physician training programs. The COM plans to relocate the JC Family Practice to the university owned property west of campus previously identified as Innovation Park. This location is an excellent match for this function as it is adjacent to many other medical service providers.

DP CULP RENOVATION

The DP Culp Student Center has plans for renovation to upgrade and reallocate space for student activities, functions, access and other associated functions. As part of the process, some administrative functions located in the DP Culp Student Center will be moved to Stone Hall. Stone Hall is currently a dormitory but will be renovated to provide office and related space for administrative functions. The central location of Stone Hall makes this relocation of services an excellent choice.

SHERROD LIBRARY

Rapid changes in pedagogy, student learning habits, and the delivery of library collections and services necessitate a renovation of the existing Sherrod Library building. Book stack spaces will be compressed to allow a redesign for a flexible mix of collaborative, individual, and technology-enhanced study spaces. Changes in library offices will similarly free up floor space for student and faculty use and facilitate collaboration with and among library workers. New spaces would also allow space for dedicated faculty collaboration and teaching and learning support.

FINE ARTS CLASSROOM BUILDING

Siting of the proposed Fine Arts Classroom Building is one of the focal points of the 2014 Master Plan Update. Two sites are currently under consideration. Two site options were proposed in the 2010 Master Plan Update, and a third was introduced in a master plan update in 2013 that focused on the space needs, building massing and siting of the Fine Arts building. This update further assesses updated space needs and the viability of a new site Option B, with the deletion of the old Option B.

Option A locates the Fine Arts building as the focal point of the east ceremonial entry into the core of the campus, on the historic axis with Gilbreath and Burgin Dossett Halls. A west building entrance on the axis facing the historic core links the campus to the educational spaces within the Fine Arts Classroom Building.

Option B locates the Fine Arts Classroom Building north of State of Franklin Road, adjacent to the Millennium Centre and Carnegie Hotel, leaving property on the existing campus available for other uses. This site offers added opportunities for public/private partnership to include a variety of performance venues beyond those normally associated with the academic programs.

ATHLETICS

The recommended Athletic improvements reinforce the ambitious effort by ETSU to build athletic facilities that will set the foundations for future excellence. Further development of the Soccer Complex and Tennis Center, as well as the proposed Football Stadium and Track & Field Facility, take advantage of the underutilized western third of the existing campus plan. The siting of these facilities takes advantage of the existing topography to enhance their presence and reduce construction costs. Design also resolves drainage issues, which have plagued this end of campus. The Proposed Football stadium straddles a valley on the southwest end of the campus, with spectator seating build largely on hillsides, thereby reducing structural costs. The complex includes a maximum build out of 30,000 seats along with premium sky boxes, concessions and hospitality areas and a field house.

HOUSING

Previously planned housing upgrades and expansions were completed by the end of 2013 yielding a total bed count of approximately 3,100. Building plans for future housing include a Greek Village and recevelopment of west side campus housing.

UNIVERSITY SCHOOL

ETSU is seeking opportunities to enhance University School programs for the school and for the region, which could involve a new building either on campus or in a suitable location off campus.

VEHICULAR / PEDESTRIAN CIRCULATION / PARKING

The master plan reinforces the goal of shifting traffic from the interior of the campus and moving parking into parking garages and lots on the periphery, allowing the university to restore the main quadrangle between Burgin Dossett and Gilbreath Halls to a pedestrian area. The plan also proposes to reduce traffic and parking along Gilbreath Drive while enhancing its aesthetic character with elements that tie the eastern third of campus with the historic core. The development of parking on the edges of campus will allow for limited vehicular traffic in the pedestrian oriented core of the main campus. This study has been developed in conjunction with the 2007 Parking & Access study by Desman Inc.

WILSON-WALLIS RENOVATION

The renovation of existing laboratory space in Wilson-Wallis Hall will accommodate the increased demand for high-tech laboratory equipment for the increased student population generated by a new joint baccalaureate engineering program. Also with the addition of new faculty members existing areas will be renovated to create needed office space. These renovations will be critical to the successful launch of the new program and maintaining current and future ABET accreditation.

BROWN HALL RENOVATION

Complete a major renovation of Brown Hall to upgrade outdated instructional spaces and to address future needs for the Departments of Biology, Chemistry, Physics and Astronomy, Mathematics and the lab animal facility space.

LAMB HALL ADDITION

Complete the construction of a new addition to Lamb Hall to its west that will accommodate the needs of the College of Public Health and the College of Clinical and Rehabilitative Sciences. The new facility will be a first phase to provide modern instructional research facilities, while a second phase will renovate and reorganize the existing space within Lamb Hall for both colleges.

SAM WILSON HALL RENOVATIONS

Programs housed in Sam Wilson Hall have an increased need for new technology mirroring that of the business community today. Existing space will need substantial renovation in order to meet the instructional needs of students and faculty. Also, increased offerings of online and distance education courses have increased the use of technology in the classrooms. The building will need substantial updating to meet future needs.

ENGINEERING, DESIGN AND INNOVATION CENTER

The Tennessee Higher Education Master Plan calls for increased graduates in the Science-Technology-Engineering-Mathematics (STEM) fields. In the Fall of 2015 ETSU's College of Business and Technology plans to implement the first engineering program in its history. A new and modern classroom and laboratory facility will be imperative for the long term success of attracting world class engineering faculty and students and serving ETSU regional constituents. As the University develops depth in engineering, design and innovation, it will generate a significant need for classroom and laboratory facilities to expand and enhance the degree programs offered. In the short-term, ETSU will renovate and repurpose space to accommodate students. However, to provide students with classroom and laboratory space that is expected of an excellent engineering program, a new building will need to be constructed. The space needs assessment, completed in 2010, does not include any requirements for the new engineering program. An interim solution is to renovate Wilson-Wallis, with the long term plan, addition of a new building. The new building will have an academic focus on engineering, design, and innovation.

SUSTAINABILITY CENTER

The Sustainability Center will be an interdisciplinary, interactive learning laboratory that demonstrates sustainable building techniques. It will also provide dedicated office and meeting space for sustainability related programs and education. The program allows flexibility in site location. It could be by Wilson-Wallis, where it can engage engineering and a range of academic programs to drive participation. Among other options is the edge of the woods near the proposed Greek Village.

MAIN CAMPUS INDEX

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537 Bike Course
539 Basler Challenge Course
557 ETSU Foundation Carillon & Alumni Plaza
904 Digital Media Center

FUTURE BUILDINGS

F1 Future Parking Garage
F2 Fine Arts Classroom Building Option A or Future Academic Building
F3 Future Academic Building
F4 Fine Arts Classroom Building Option B
F5 Football Stadium
F6 Baseball Stadium Commercial Development
F7 Track & Field Facility
F8 Multi-Use Athletic Facility
F9 Indoor Tennis Facility
F10 Greek Village
F11 University High School
F12 Data Center

VA Campus

LEGEND

- Existing Building
- Future Building
- Existing Building - Major Renovation, Repurpose, or Replace

ACADEMIC FACILITIES MASTER PLAN

Overview

The Academic Space Master Plan developed in 2010 involved the collection and analysis of data on a departmental level for most units housed on the Johnson City Campus and a few of the outlying sites. The comparative space data has been updated from the 2010 study while the space needs estimates remain unchanged. Major additions to the University's physical facilities resources such as the Valleybrook facility and the Fossil Site Annex have been incorporated, while other modifications to the space inventory like the development of the Center for Academic Achievement in the Sherrod Library are now reflected in the comparative data. Residence halls, non-university operations and most satellite operations were excluded from this study. The space need requirements, including the square footage amounts of each room type were determined by the discipline, equipment used in the area, utilization rates (i.e., station area, station occupancy ratios, and room utilization rates), number of persons occupying the space, etc. The results derived from the space needs calculations were then compared to the current assigned space to determine surpluses or deficiencies by space type. This analysis is critical in establishing capital project priorities and addressing the planning requirements established by the Tennessee Board of Regents.

Space Needs Overview

The following tables present space needs summaries for the University by division and college and by major space type category.

Space Needs Summary by Division

Table 1 summarizes the future calculated space needs as compared with the existing inventory of space by major division and college grouping.

Space Needs Summary by Space Type

Table 2 summarizes the future calculated space needs as compared with the existing inventory of space by major room type grouping.

Key Findings

The Academic Space Master Plan scope includes an assessment of all of the departments located on the Johnson City campus along with three Family Practice clinics, Valleybrook, Gray Fossil Site and the Nave Center facility. The total current space assigned to the departments included in the assessment exceeded 1.715 million assignable square feet. The assessment developed formula-based space needs calculations for each department. The future space need was also developed for a timeframe extending to the year 2020 based on an overall enrollment growth rate of approximately 25%. To accommodate this growth the future space requirement was determined to be just over 2.014 million assignable square feet for a net aggregate shortfall of 298,705 assignable square feet (17.4% more than the current inventory).

Even with major additions to its space inventory since 2010, the College of Arts and Sciences has the largest overall future need (deficit) followed by the College of Medicine. Based on the projected enrollments, all of the academic colleges have a space shortfalls to meet their future needs. Office space was identified as the space type with the greatest shortfall. A part of this deficit is the result of using uniform planning modules and comparing with existing facilities which may be larger than the planning criteria; inclusion of student worker and adjunct faculty that have not historically been assigned office space; and uniformly allocating office support space among all departments.

Instructional and research lab space are the next greatest needs (deficits) identified even though the inventory ad-

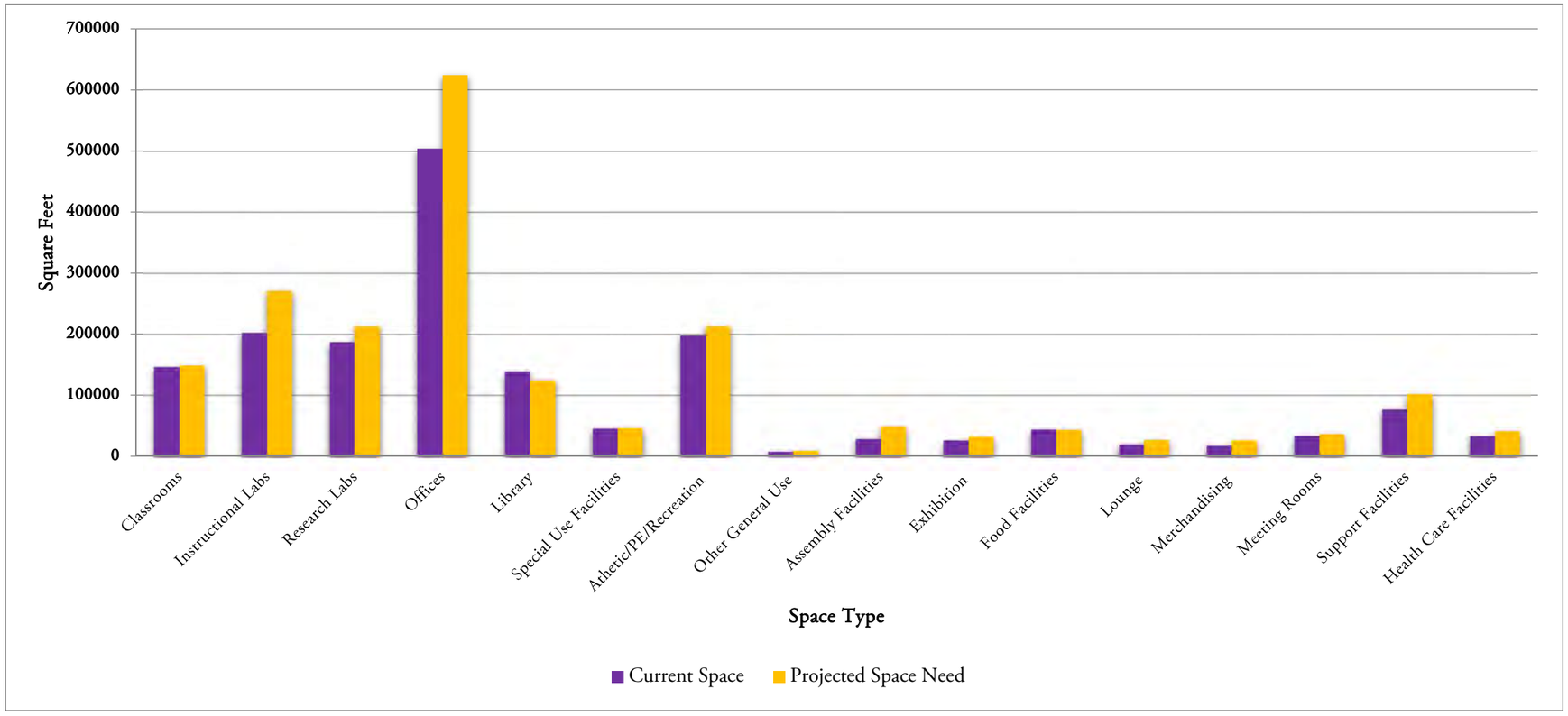
Table 1

	Space Type	Current Space	Projected Space Need	Difference from Current Space	THEC Calculated Need
100	Classrooms	147,193	149,133	-1,940	106,052
210	Instructional Labs*	203,360	272,496	-69,136	228,822
250	Research Labs	187,618	214,142	-26,524	137,506
300	Offices	504,595	625,493	-120,898	366,483
400	Library	139,597	124,712	14,885	100,646
500	Special Use Facilities	45,828	46,402	-574	0
520	Athetic/PE/Recreation	198,954	213,888	-14,934	196,898
600	Other General Use	7,969	9,193	-1,224	0
610	Assembly Facilities	28,818	49,267	-20,449	0
620	Exhibition	26,037	32,223	-6,186	0
630	Food Facilities	44,499	43,393	1,106	0
650	Lounge	19,834	27,203	-7,369	0
660	Merchandising	17,367	25,938	-8,571	0
680	Meeting Rooms	33,528	36,957	-3,429	0
700	Support Facilities	77,086	102,443	-25,357	0
800	Health Care Facilities	33,392	41,498	-8,106	0
	Totals	**1,715,675**	**2,014,380**	**-298,705**	**1,136,407**

*** Includes open labs.**

Table 2

Division	Current Space - 2014	Projected Space Need	Difference from Current Space
Health Affairs	2,957	3,500	-543
College of Clinical & Rehab Health Sciences	38,090	56,612	-18,522
College of Nursing	34,669	40,914	-6,245
College of Pharmacy	21,950	43,427	-21,477
College of Public Health	42,093	53,347	-11,254
James H. Quillen College of Medicine	266,264	310,314	-44,050
Provost/Academic Affairs	153,070	126,753	26,317
College of Arts and Sciences	290,617	416,302	-125,685
College of Business and Technology	82,006	98,001	-15,995
College of Education	68,011	103,634	-35,623
Enrollment Services	16,429	23,662	-7,233
Research and Sponsored Programs	6,608	3,970	2,638
School of Continuing Studies	10,115	14,304	-4,189
Student Affairs	136,629	129,675	6,954
Finance and Administration	61,854	53,330	8,524
President	153,485	162,498	-9,013
University Advancement	7,006	9,678	-2,672
Campuswide Space	323,822	364,459	-40,637
Totals	**1,715,675**	**2,014,380**	**-298,705**



ditions reduced the research space deficit by 55% and the instructional lab needs were reduced by about 13.5%.

The University's existing classroom space is now slightly deficient to meet the projected demand. Also, with the repurposing of a significant amount of space in the Sherrod Library to develop the Center for Academic Achievement the calculations show there is still adequate capacity to accommodate the projected needs of the library. Several student service-related space categories continue to indicate future shortfalls such as in student lounge, merchandising and meeting space. Space release in the Culp Center from projects like the new Welcome Center will be repurposed to meet some of these needs. Detailed space needs are presented in Appendix A.

A future deficit of about 7.5% for athletic activity space assigned to Intercollegiate Athletics was identified, and may increase after the needs for the reinstated football program are determined, along with the new athletic programs to be identified. Campus recreation space should be sufficient to meet future needs. Campus support space (i.e., storage, physical plant shops) also indicated a deficit.

MIGRATION PLAN

An implementation or migration plan was also developed as part of the 2010 assessment to present a series of steps necessary to achieve the space needs identified from this study. A number of the original phase have been implemented, while in the interim additional future moves have been identified. Key aspects of the recommended/revised migration plan are highlighted below.

Construct a new Arts facility to house the future needs of the Department of Music, the Theatre and Dance programs in the Department of Communications and Performance and the Bluegrass program from Appalachian Studies. A new art gallery will also be included.

Academic functions of the Department of Art and Design and other programs will backfill the spaces vacated by programs moving to the Fine Arts Building.

A new Humanities Building will be constructed to accommodate the needs of the departments of English and several of the humanities and social science units currently located in Rogers-Stout Hall. Psychology and Political Science will expand in Rogers - Stout Hall, and Psychology will be consolidated with the exception of the Lucille Clement clinic space.

Future expansion will be needed at the Digital Media Center.

A renovation/remodeling of Stone Hall will convert the building to administrative office space for functions currently housed in the Culp Center. The relocation of the Advisement Resources and Career Center from Culp will release space to be repurposed for various student service functions such as student study/lounge space and meeting rooms. Additionally, space released in Culp by the relocation of the Welcome Center will be repurposed into a Multicultural Center. An optional reuse of Stone Hall may be to relocate administrative functions out of Burgin Dossett Hall, such as the Bursar and Financial Aid, to create a one-stop shop operation. This will permit the expansion of other administrative operations currently housed in Burgin Dossett.

The development of the east quadrant of the main campus for the location of a new academic facility will displace the functions currently housed in several former residences along Maple Street. These structures will be demolished to make way for this future construction. The Cross Disciplinary Studies and Continuing Studies will be relocated to vacated space in the Campus Center. The Transfer Articulation and Internal Audit functions will move to the Parking Deck facility. Government Relations will be placed in Burgin Dossett Hall. And the Alumni Affairs operations will move to either vacated Campus Center space or a former residence acquire in a future property acquisition.

FINE ARTS CENTER

The Fine Arts Master Plan proposes two possible sites for the 130,000 SF Fine Arts Classroom Building which would include a major performance hall, a smaller recital hall, two theatre spaces, rehearsal and practice rooms, exhibit space and classrooms. The building would house the university's music, theater, dance and bluegrass programs and an art gallery, as well as venues for public ETSU performances, touring groups, productions and community arts, providing cultural enrichment for the surrounding region.

The project would allow the university to consolidate its music, theatre, dance and bluegrass programs, currently housed in various buildings, into one facility. Instrumental and vocal music programs are in Mathes Hall. The theatre program is spread out in various locations, primarily using the 250 seat Bud Frank Theater in Gilbreath Hall, for performances as well as the Veterans Affairs Medical Center Memorial Hall Theater at Mountain Home. Bluegrass is currently located in Memorial Hall and Roy S. Nicks Hall.

ETSU offers major programs at the graduate and undergraduate level in music (Bachelor of Music in music education or performance) and undergraduate concentrations in theatre through the Department of Communication and Performance (programs in theatre and in dance). As a result of a comprehensive assessment of the general education core mandated by THEC, all ETSU students must now take at least one course in Fine Arts, increasing the emphasis on courses in music, theatre, and dance. Thus, academic programs to be served by this facility include undergraduate and graduate courses in music; undergraduate courses in theatre; general education courses in music, theatre and dance; and specialized workshops in directing, acting, lighting, and courses in bluegrass.

The university experience is greatly enriched by exposure to ideas and opportunities outside of the classroom, by exposure to new and different disciplines and perspectives. To the degree that circulation on campus brings students past and through buildings housing the full spectrum of programs, campus experience is enriched. A building that consolidated the arts in one location, can be a significant asset to the campus and community.

Two sites are proposed as the possible location for this facility:

Option A places the new Fine Arts Classroom Building on the main historical axis with Burgin Dossett and Gilbreath Halls to provide a symmetrical façade and focus for the new ceremonial entrance from University Parkway. The major performance hall main lobby would be oriented to University Parkway while the educational facilities lobby would be oriented to the main campus facing Burgin Dossett Hall. Interior corridors would link the two lobbies and provide circulation to all programmed spaces.

While from a long term campus planning perspective, this site places the Fine Arts building and programs very well into the core for the campus, it is hampered in the near term time frame proposed for the building by cost and timing of acquiring land and building parking. The outparcels remaining west of University Parkway must be acquired and programs located in buildings on West Maple must be relocated before the Fine Arts Building can be built.

Option A Pros

- The site is prominent at the main campus entry, which is a major community interface.
- A Fine Arts Classroom Building can form a prominent anchor at the east end of the core.
- The arts programs would be the core of the campus, exposed to much of the campus community.

Option A Cons

- The building cannot be built without acquiring the property and relocating the programs in the Maple Avenue buildings, prior to beginning construction.
- Site area, located within the loop road, limits future expansion, without existing adjacent buildings to accept overflow
- It will be necessary to build parking on land surrounding the site to adequately serve the building.

Option B locates the Fine Arts Classroom Building north of State of Franklin Road, adjacent to the Millennium Centre and Carnegie Hotel, leaving property on the main campus available for other uses. This site offers added opportunities for public/private partnership to include a variety of performance venues beyond those normally associated with the academic programs.

This site can accommodate a building of the size suggested by the program space needs. While the property carries with it several constraints, including crossing of State of Franklin Road, and room for expansion and storm water management. Geotechnical data suggests that there is no identifiable foundation construction cost premium for site Option B.

Stormwater management space on site Option B is extremely limited. However, Johnson City is discussing possibly providing land for off-site detention, which could eliminate the cost of underground detention which would be more costly than traditional surface treatment. Cost for off-site treatment can be expected to be minor, in the range of $20,000 to $50,000, assuming property can be provided by the city.

Traffic speed and volume on State of Franklin Road present safety and traffic flow challenges to pedestrian crossing. City traffic data and anticipated pedestrian volumes indicate that Site Option B should meet all warrants for a traffic signal. Johnson City has committed funds necessary to provide a traffic signal. A traffic signal could be a mid-block crossing for pedestrians, only stopping traffic when a pedestrian actuates the signal. A signal could also be located at West Harris Drive. Also, the topography north side of State of Franklin Road is steep enough to require special measures to meet ADA requirements.

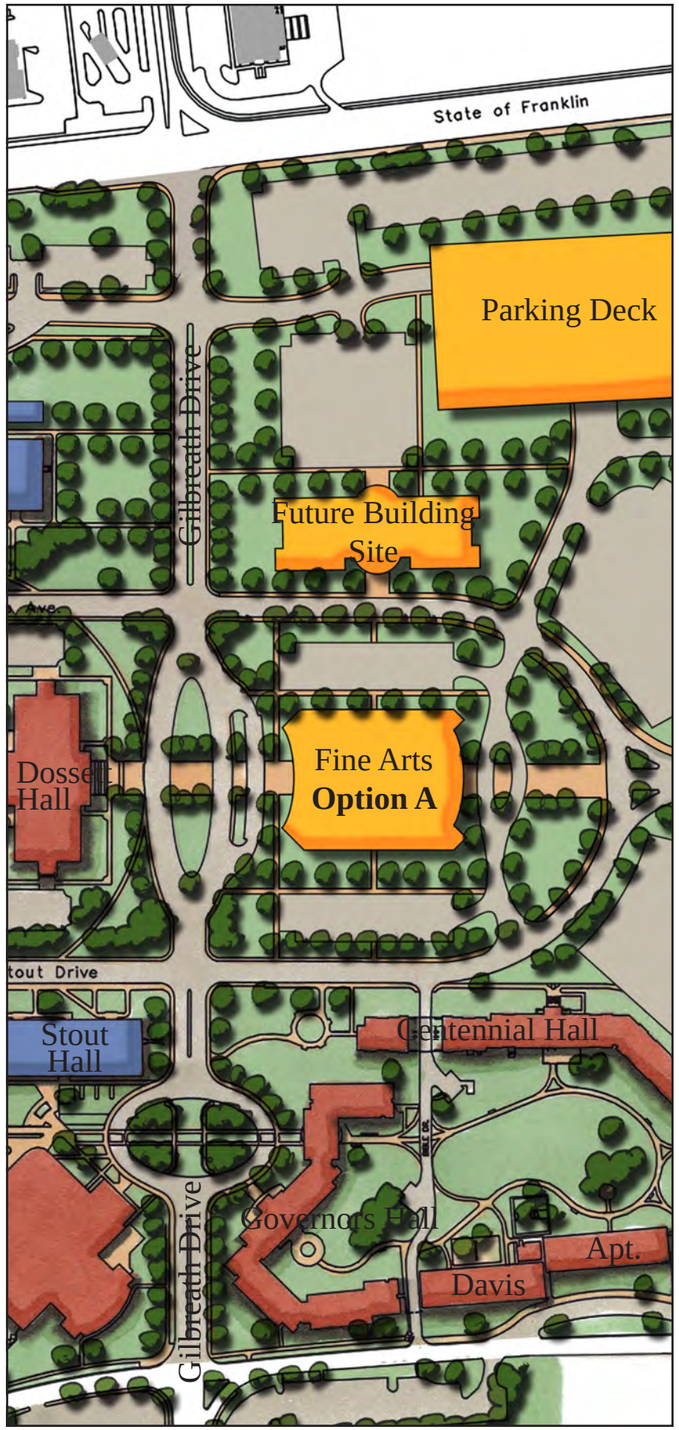
Option B Pros

- Highly visible site, on a major thoroughfare, providing a physical and symbolic connection with the community.
- Programs at the Fine Arts Classroom Building can benefit from the Millennium Centre and adjacent hotel.
- It is close to two parking garages providing adequate parking without new construction.
- It leaves space on the main campus for other academic uses.
- Adequate land can be made available in a timely manner.

Option B Cons

- This site requires acquisition of additional land.
- Students and patrons must cross State of Franklin Road.
- Site area limits future expansion, without adjacent buildings to accept overflow
- The arts programs would be less a part of the activity of the center of the campus.

The different site options should be weighed in the context of timing and availability of land, the overall campus master plan, program requirements, community relationships and anticipated capital and operations budgets to arrive at the best site for the center. Site Option A has good value for most potential academic, and possibly, administrative buildings. Site Option B appears to have less potential for other academic or administrative functions, other than Fine Arts and possibly administration.



OPTION A

OPTION B

ATHLETIC FACILITIES MASTER PLAN

OVERVIEW

East Tennessee State University has embarked on an ambitious plan to build athletic facilities that will set the foundation for future excellence. This plan will allow all athletic teams the opportunity to play on campus, will upgrade current on-campus facilities to a NCAA Division I level, and will guarantee that all teams have excellent facilities to entertain fans, recruit top student athletes and compete at national levels. Future projects consist of Phase 2 of the Baseball Stadium, indoor tennis, an outdoor Track Complex, enhancement of the Softball Stadium with a hospitality area/ press box, and a new football stadium with ancillary buildings. The culmination of the Athletic Master Plan will be a convocation center that will house the basketball program

WARREN-GREENE GOLF CENTER

The Warren-Greene Golf Center provides a place for the ETSU men's and women's golf teams to develop and enhance their skills. The exterior practice area was designed by world renowned golf architect Tom Fazio. On a 14-acre site, it includes six target greens, two bent-grass greens (one for putting and one for short-game work), two tee areas, and four bunkers. The accompanying 3,000 sq. ft., two-story clubhouse, contains coaches offices, meeting rooms, the Hal Morrison Hall of Fame room, players' lounge, two indoor hitting bays, and an observation deck. Contingent on private funding, The Center will be expanded by approximately 2,000 sf to include a golf specific fitness center, indoor putting and chipping, assistant coaching offices and storage.

BASEBALL STADIUM

Baseball at East Tennessee State University has seen its share of success. The new Baseball Stadium was designed to maximize fan experience while providing both the Johnson City Cardinals and the Buccaneers with the field and lighting to meet minor league standards. Facilities including dugouts, clubhouses and practice facilities are also designed to meet minor league requirements. Bullpens and hitting tunnels will be easily accessible from the dugouts and clubhouses.

The stadium architecture is designed to unite the architecture of the university and the urban connection to downtown Johnson City. Permanent seating for approximately 3,000, with options to expand, meets the minimum standards for minor league requirements. Luxury boxes are available for both ETSU and the Johnson City Cardinals. Phase two of the stadium remains to be built. The design calls for expanded seating, enhanced locker rooms/clubhouse, enhanced parking areas, possible office space, and various retail opportunities such as team stores, restaurants, and hotel to enhance activities for ETSU fans.

MEMORIAL HALL

Women's Volleyball and Women's Basketball will begin utilizing Brooks Gymnasium. Functions related to these sport programs will require renovations in various phases to include performance space, locker room upgrades, coach's offices, practice space, and upgrades to spaces related to the fan and spectator experience.

CONVOCATION CENTER & MEN'S BASKETBALL

ETSU is currently partnering with the City of Johnson City to enhance event space and the spectator experience at Freedom Hall Civic Center, a city owned facility. Work to upgrade the facility will be completed in phases and will include renovations or alterations to lighting, sound, locker rooms, marketing and branding spaces, hospitality areas, and performance space enhancements such as seating, banners, flooring, etc.

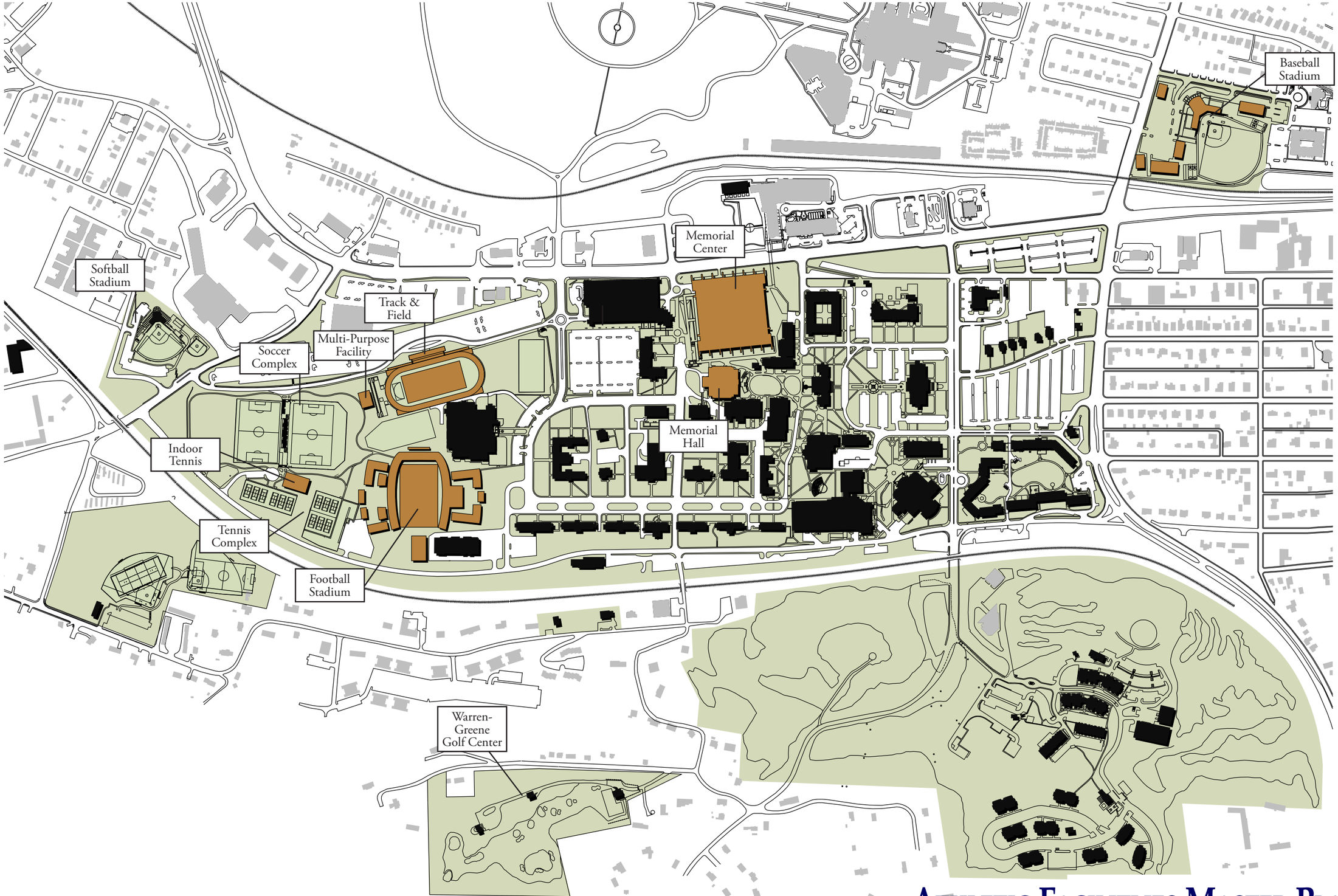
The long-term goal for ETSU and the Men's Basketball program is to raise funds to complete a new Convocation Center on campus or at an adjacent property near campus.

MULTI-PURPOSE FACILITY

The new Multi-Purpose Facility will serve the functions for various sports including football, soccer, new programs and adjacent athletic facilities on the southwest portion of campus. The facility will include locker space, training, strength and conditioning space, offices, and other functions to support student-athletes.

ADDED PROGRAMS

Locker rooms, offices, support spaces, and necessary training facilities will be added to accomodate several new women's programs in athletics.


Baseball Stadium
Memorial Center
Softball Stadium
Track & Field
Multi-Purpose Facility
Soccer Complex
Memorial Hall
Indoor Tennis
Tennis Complex
Football Stadium
Warren-Greene Golf Center

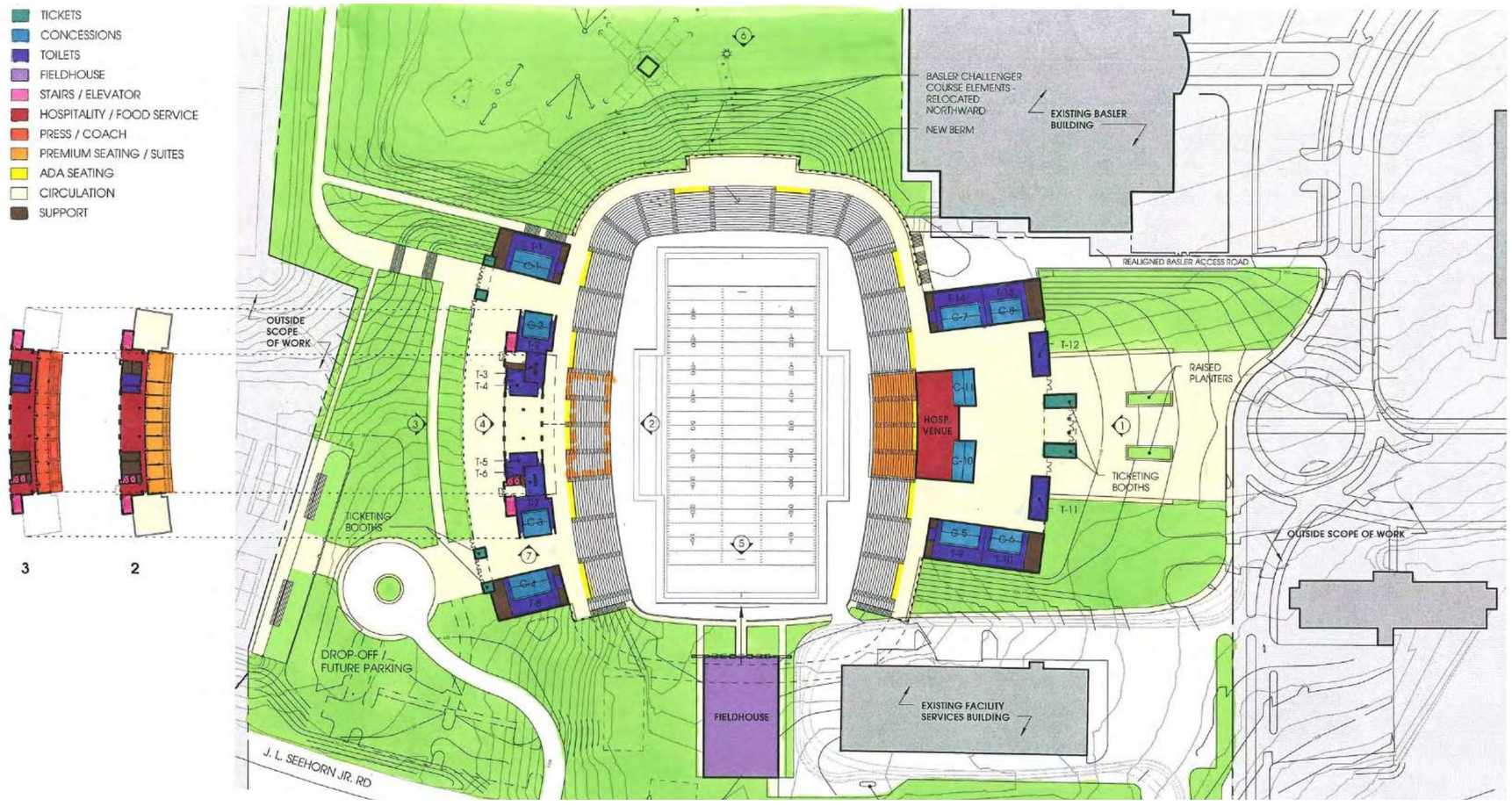
ATHLETIC FACILITIES MASTER PLAN

FOOTBALL STADIUM

The decision to establish football creates the need for a football stadium. The new football stadium will be designed to fit in to the southwestern portion of the campus along J. L. Seehorn Jr. Drive, between the new tennis complex and N. Dossett Drive. It will provide full spectator amenities including premium suites, hospitality and food service and concessions. The design takes advantage of the sloping land form of the site to support the stands, build on grade, with premium suites and press above. The complex also includes a fieldhouse which opens directly onto the south end of the field.

The stadium is designed to be built in phases. The first phase is designed to seat between 6,500 and 10,000, and the capacity to expand to 30,000 seats in future phases. Sky box premium suites and hospitality areas along with north end grandstands will be added in future phases. During the first phase, at least portions of the Basler Ropes Course will be relocated north to accommodate the stadium.

The suites level, on the west side, one level above concourse with restrooms and concessions, will include a President's box and eight corporate boxes, and hospitality area, with outdoor terraces at each end. Above the suites will be the press level with a hospitality area and space for writing, radio and TV. A larger public hospitality area will occupy a portion of the concourse level on the east side of the stadium, adjacent to a large plaza. The complex will be designed to be flexible for future expansion.



TENNIS CENTER

Contingent on private funding or a business model that will raise new revenues, a new indoor tennis center to complement existing outdoor courts will provide a training and competitive venue for the ETSU men's and women's tennis programs. In addition, it will give the local tennis community a club for instruction, social and league play, and tournaments. Twelve outdoor lighted courts accommodate simultaneous team matches for the Bucs and Lady Bucs during the day or at night as well as provide adequate courts to host invitational, conference, and regional events. Six indoor courts give both the college teams and club members the opportunity for year-round practice, uninterrupted by inclement weather.

The indoor tennis center will house a hall of fame lobby and club pro shop, team and member locker rooms, and coaches' offices on the lower level and a spectator gallery on the upper level leading to an outdoor viewing balcony.

Access to the center is provided by an entrance from Seehorn Drive with designated parking on the South of the pedestrian plaza leading from the soccer and track complexes from the North.

Another option that ETSU may implement is to include many of the indoor tennis functions as part of a renovation to the Memorial Center.

TRACK & FIELD

The track and field facility will become the home of one of East Tennessee State University's most heralded programs. The track and cross country teams have produced more Champions and All-Americans than any other program, including an Olympic Gold Medalist.

The facility will be a track and field specific venue. It will consist of nine lanes, two long jump pits, two triple jump pits, steeple chase, pole vault pits, and throw areas.

The amenities of the track venue will include a concourse with concessions and restrooms, press box and officials lounge over looking the track. The track and soccer building will provide storage, locker rooms, training room, equipment room, coaches' offices and meeting rooms at track level.

ETSU plans to add several new athletic programs, adding necessary locker rooms, offices, support spaces, and necessary training facilities.

HOUSING MASTER PLAN

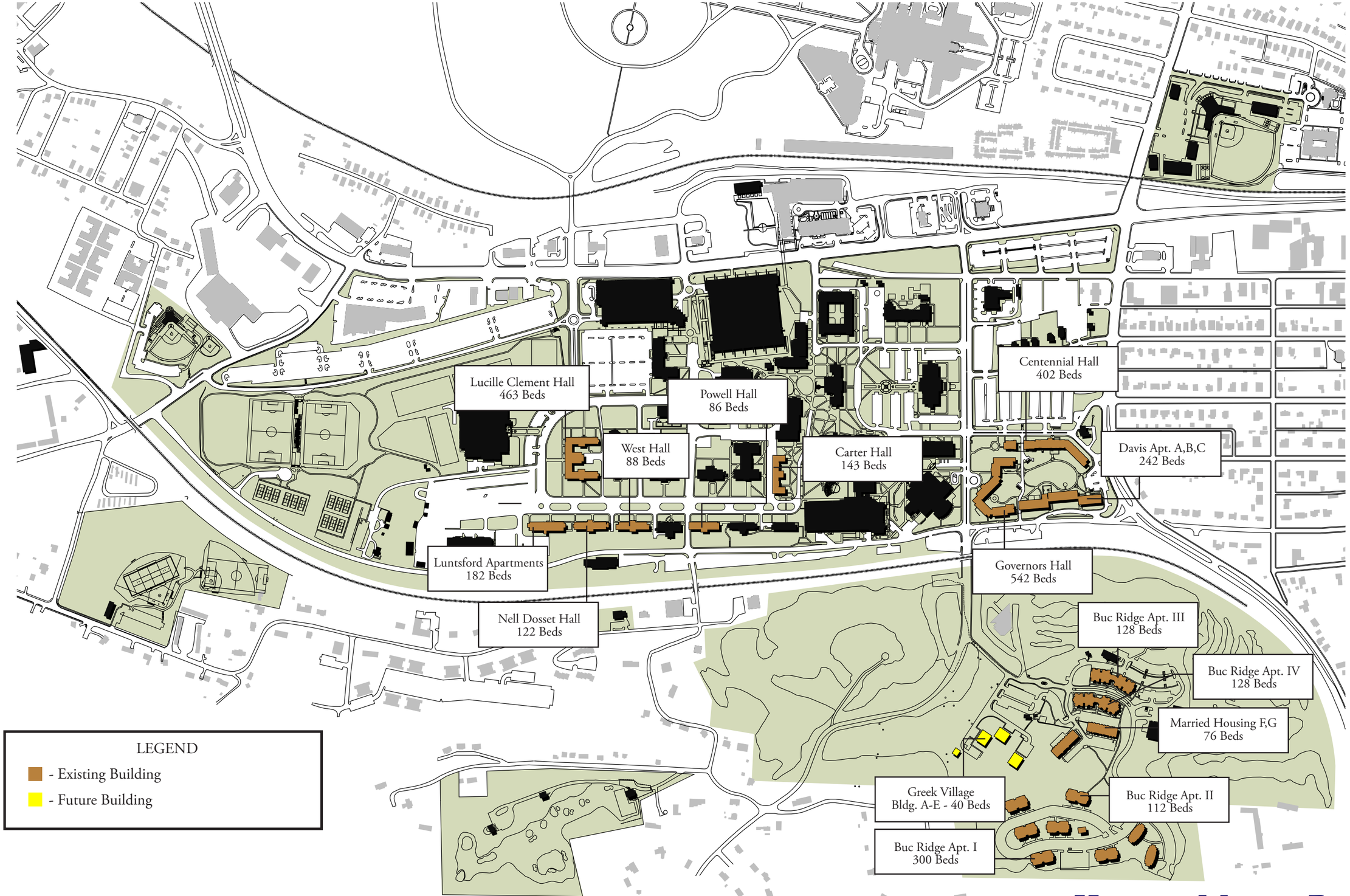
RESIDENTIAL

The Housing Master Plan is a campus-wide focus to evaluate the aging campus residence halls and provide recommendations regarding their future use. In December 2002, ETSU completed a comprehensive plan for housing and residence life conducted by Anderson Strickler, LLC., laid out an economic model of renovation and new construction over a period of 7-8 years ending in the year 2014. The result of this plan is 3,138 beds with improved configurations.

The Housing Master Plan reinforces the existing self-contained east and west residential complexes in close proximity to common and academic facilities. Governors Hall and Centennial Hall work in concert with the Mack Davis Apartments to create an outdoor courtyard for student activities.

Over the next 5-10 year period, a review of residential facilities on the west end of campus should be conducted in order to identify buildings that may need to be replaced or repurposed. The review will allow for decisions related to construction of residential facilities that offer enhanced amenities, including apartment and suite style living, which will provide an updated residential corridor to academic, campus recreation, and athletic facilities. Land adjacent to the current Buc Ridge apartment area has been identified as a site for the potential construction of on-campus Greek Housing and meeting space facilities. It maintains proximity to existing campus apartment facilities and provides accessibility to campus. An alternate plan for the ETSU Sororities includes the renovation of existing apartments to provide chapter and meeting space.

Centennial Hall Rendering


Lucille Clement Hall
463 Beds
Powell Hall
86 Beds
West Hall
88 Beds
Carter Hall
143 Beds
Centennial Hall
402 Beds
Davis Apt. A,B,C
242 Beds
Luntsford Apartments
182 Beds
Nell Dosset Hall
122 Beds
Governors Hall
542 Beds
Buc Ridge Apt. III
128 Beds
Buc Ridge Apt. IV
128 Beds
Married Housing F,G
76 Beds
Greek Village
Bldg. A-E - 40 Beds
Buc Ridge Apt. II
112 Beds
Buc Ridge Apt. I
300 Beds
LEGEND
- Existing Building
- Future Building

VEHICULAR & PEDESTRIAN CIRCULATION

NEW CEREMONIAL ENTRANCES

In addition to the major internal open spaces, campus edges and entrances along University Parkway and State of Franklin Road will be given clear and unified definition through new landscape treatment. The Plan seeks to re-establish a formal, clearly defined entry off University Parkway. A reduction in the number of existing entrances off University Parkway will improve internal circulation and help clarify the main east entrance to the campus.

VEHICULAR CIRCULATION

Future actions will continue to reduce vehicular circulation in the historic core of the Campus, providing visitors the opportunity to experience the historic heart of the Campus by car while allowing access by faculty and staff.

Removal of parking and the development of traffic calming elements along Stout Drive will discourage through traffic and unite the eastern third of the campus with the historic core.

The new ceremonial entrance along University Parkway would provide visitors, faculty, staff and students access to the historic loop road that would provide access to most activities within the historic core and eastern third of the campus.

A new vehicular drop-off has been designed north of the University School which should help reduce the conflicting traffic patterns and congestion caused by the drop-off and picking up of students.

The principal campus access point on Stout Drive (from either West Locust Street or West Pine Street) affords east-west access to/from the center of campus, but otherwise, efficient east-west access routes are limited to the northern and southern edges of the central campus (i.e., West Walnut Street and Boundary Road, respectively).

The central campus is otherwise provided with an array of one and two-directional roadways whose principal functions are to provide access to parking areas. Their directional orientations prove inefficient from cross-campus vehicle movement, and disrupt to some degree on-campus pedestrian circulation. Sherrod Drive has in part been closed to vehicle movement in order to address its pedestrian impacts. The resulting "pedestrian mall" of approximately 800 feet in length has effectively created a vehicle-free linear zone in the core of the campus.

The University maintains a shuttle service from several on-campus parking lots to the academic core. The service is free to all members of the campus population and should be supported and enhanced to further reduce traffic on campus.

In addition to the intra-campus shuttle services, on-campus transit services are also provided by the Johnson City Transit System, which operates five extensive routes from downtown Johnson City. The most extensive route serves the ETSU campus, providing service between the campus and the downtown and other points in the vicinity of Johnson City. ETSU's contract with the Johnson City Transit Authority provides for student to travel without fee.

PEDESTRIAN CIRCULATION

Enhancements of the pedestrian walkway system will strengthen the east-west movement of pedestrians across campus from the new Ceremonial Entrance on the eastern edge of campus to the Basler Center for Physical Activity building on the western side of campus.

In the summer of 2013, a new quadrangle was built in the academic core. Future phases will link the core to the recreation district.

The corridor from Gilbreath south to Stone will become a pedestrian and bicycle zone, linking the new quad with south Dossett drive, which, will retain limited vehicular traffic while becoming much more of a linear green with reduced paving and more lawn and trees. South Dossett will terminate at a major gateway into the new football stadium. This corridor is extended east, through the amphitheater green, north of Sherrod Library and across Gilbreath Drive into the residential quad between Governors hall and Centennial Hall.

The last primary component of the central green connector is the section of John Robert Bell Drive north of North Dossett Drive. This road is closed to become pedestrian plaza and green, with only the access to the new parking garage remaining vehicular.

The central green connectors will be broken on occasion by roads, but the crossings are limited. The walkways should be designed to support service and emergency vehicles to maintain access throughout the center of campus, but pavement, landscape and lighting will be park-like and clearly pedestrian and bicycle scaled.

A focal point of the central campus green is the amphitheater at D. P. Culp University Center. The walkway through the green should be widened and the area upgraded to enhance it as an outdoor gathering and events place, supporting the proposed changes in Culp.

CAMPUS EDGES AND SAFETY

Over time, W. State of Franklin Road had grown into a major, five lane thoroughfare, while development of the ETSU campus has intensified along its southern edge. New housing and commercial expansion north of State of Franklin, and the opportunity for the University to step over the road into the greater community raise the need to better identify the campus edge and gateways, and limit pedestrian crossings to the safety of controlled well marked intersections.

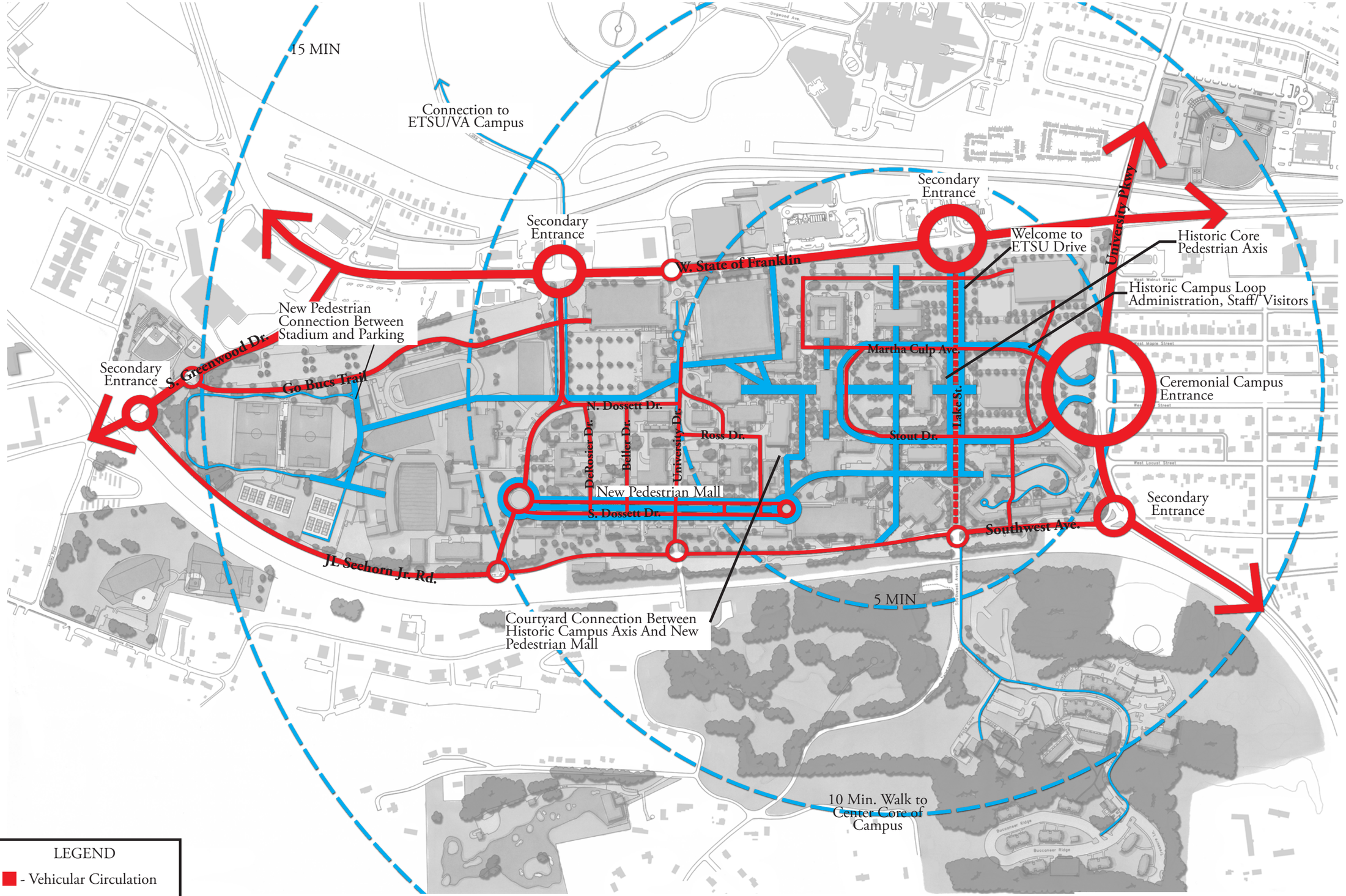
This challenge brings with it the opportunity to create a distinctive edge treatment , such as a decorative iron fencing and tree planting system that will clearly identify the campus as a special feature in the community. Boundary fencing, combined with accentuated gateways and identification signs, and where appropriate marquis, can provide more focus on campus entries and points of interface planned channeling of pedestrian circulation towards the controlled crossings and can reduce crossing hazards, while reinforcing links between the campus and community.

SERVICE

Buildings are serviced from a variety of internal roadways and service lanes. Boundary Road services a majority of the facilities in Culp Center and the Sherrod Library. Stout Drive is a service access to the Culp Center Auditorium, Nicks Hall, Reece museum and a portion of Burgin-Dossett Hall. Brown and Alexander Halls are served from adjacent parking lots. Sherrod Drive is the service access for the building row composed of Ball, Mathes, Burleson, Gilbreath Hall, and Memorial Center east. Ross Drive serves Wilson, Carter, and Lamb Halls. John Robert Bell Drive is the service access for Memorial Center, Memorial Hall, the Power Plant and a portion of Warf-Pickel Hall.

Dossett Drive north and south serves the remaining buildings by providing either direct access to Hutcheson Hall and Bond Building or forming service lanes for all the dormitories and Warf-Pickel, Clack, Wilson-Wallis, Earnest House and Clement Hall.

The Department of Transportation is in the process of implementing a new road project that will connect the North side of the VA campus to West Market Street. This new road will improve access to the Health Sciences campus.



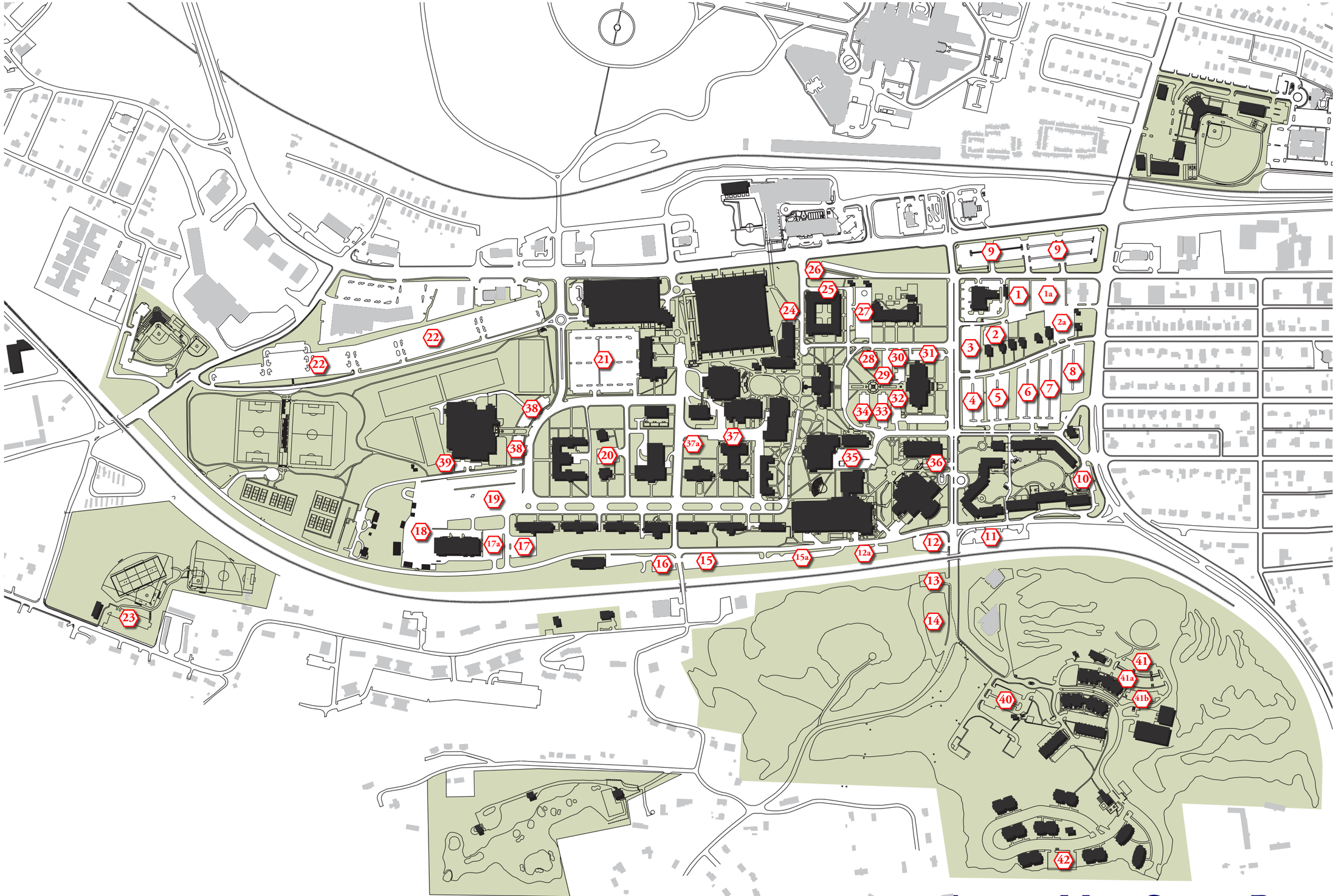
VEHICULAR & PEDESTRIAN CIRCULATION

EXISTING MAIN CAMPUS PARKING PLAN

PARKING

Parking is currently accommodated throughout the campus in surface lots. According to the latest space information compiled by ETSU, the main campus is presently provided with a total of 8,205 spaces, on street and in over forty lots and one parking garage. These spaces are defined by the following user types: Faculty/Staff, Student, Undesignated, Carpool, Center for Physical Activity and Time Restricted Parking.

ETSU MAIN CAMPUS													
On Street		Open	Faculty/Staff	Student	Carpool	Visitor	Metered	Reserved	Disability	Loading	Service	Total	Motorcycle
	On Street Total	517	291	423	0	0	7	85	91	35	20	1,469	16
Lot Number		Open	Faculty/Staff	Student	Carpool	Visitor	Metered	Reserved	Disability	Loading	Service	Totals	Motorcycle
	Lot 1			78								78	2
	1A	84										84	2
	2		45						3			48	
	2A	68						3	1	3		75	3
	3		96									96	
	4			77	31							108	
	5			111								111	
	6			129				2		2		133	
	7		18	143					5			166	4
	8			116								116	
	9			401					4			405	
	10			37				5	4			46	3
	11			73				3	1			77	1
	12		64									64	
	12A						19					19	
	13			33								33	
	14			119								119	
	15	152										152	
	15A	74										74	
	16	77						2	2	1		82	1
	17	45							2	1	1	49	
	17A		32								12	44	
	18	166							1		34	201	8
	19			459								459	2
	20		25					2	4			31	
	21		262	217				12	14		1	506	
	22	1,082						5	14			1,101	2
	23											0	
	24		3					1	3			7	
	25		23					1	5	1		30	
	26		18									18	13
	27		61						4	1	1	67	
	28		22									22	
	29		41									41	
	30		37					1				38	
	31		29					5		5	1	40	
	32		53						12	8		73	6
	33		45									45	
	34		40									40	
	35		37				9	4	9		4	63	10
	36								9		1	10	
	37		49					2	3			54	
	37A		8									8	19
	38	64							4			68	6
	39		11									11	
	40			75								75	
	40A			34								34	2
	41		3	42								45	2
	41A			77					7			84	
	41B			22					5			27	
	42			35					10		1	46	
	43			12								12	
	43A			22					1			23	
	43B			29					2			31	4
	44			47								47	4
	Parking Garage			1,171				6	23			1,200	
	Off-Street (Lots) Total	1,812	1,022	3,559	31	0	28	54	152	22	56	6,736	94
Main Campus Total On & Off Street		2,329	1,313	3,982	31	0	35	139	243	57	76	8,205	110
	Child Care Center Total	46	0	0	0	0	0	9	3	0	0	58	0
	VA Campus On-Street Total	0	124	0	0	0	0	17	9	0	5	155	2
	VA Campus Off-Street Total	548	52	0	0	0	0	10	15	0	0	625	2
ETSU VA Campus Total On & Off Street		548	176	0	0	0	0	27	24	0	5	780	4
TOTAL		2,923	1,489	3,982	31	0	35	175	270	57	81	9,043	114



EXISTING MAIN CAMPUS PARKING

MAIN CAMPUS PARKING MASTER PLAN

PARKING

The long-range goal is to remove parking from the academic core to perimeter locations and provide more green space around the historic core of the campus enhancing the pedestrian and aesthetic qualities of the campus.

The proposed parking plan is a function of long-term growth and displacement. New parking should be staged according to improvements within the core.

Reduction of parking in areas between Gilbreath and Burgin Dossett Halls would enhance the aesthetics of this area while still providing some visitor, staff and faculty parking.

Construction of a new smaller parking garage on the eastern third of campus, along with the new development of surface lots around the new ceremonial entrance, would provide for residential and event parking on the this side of the campus

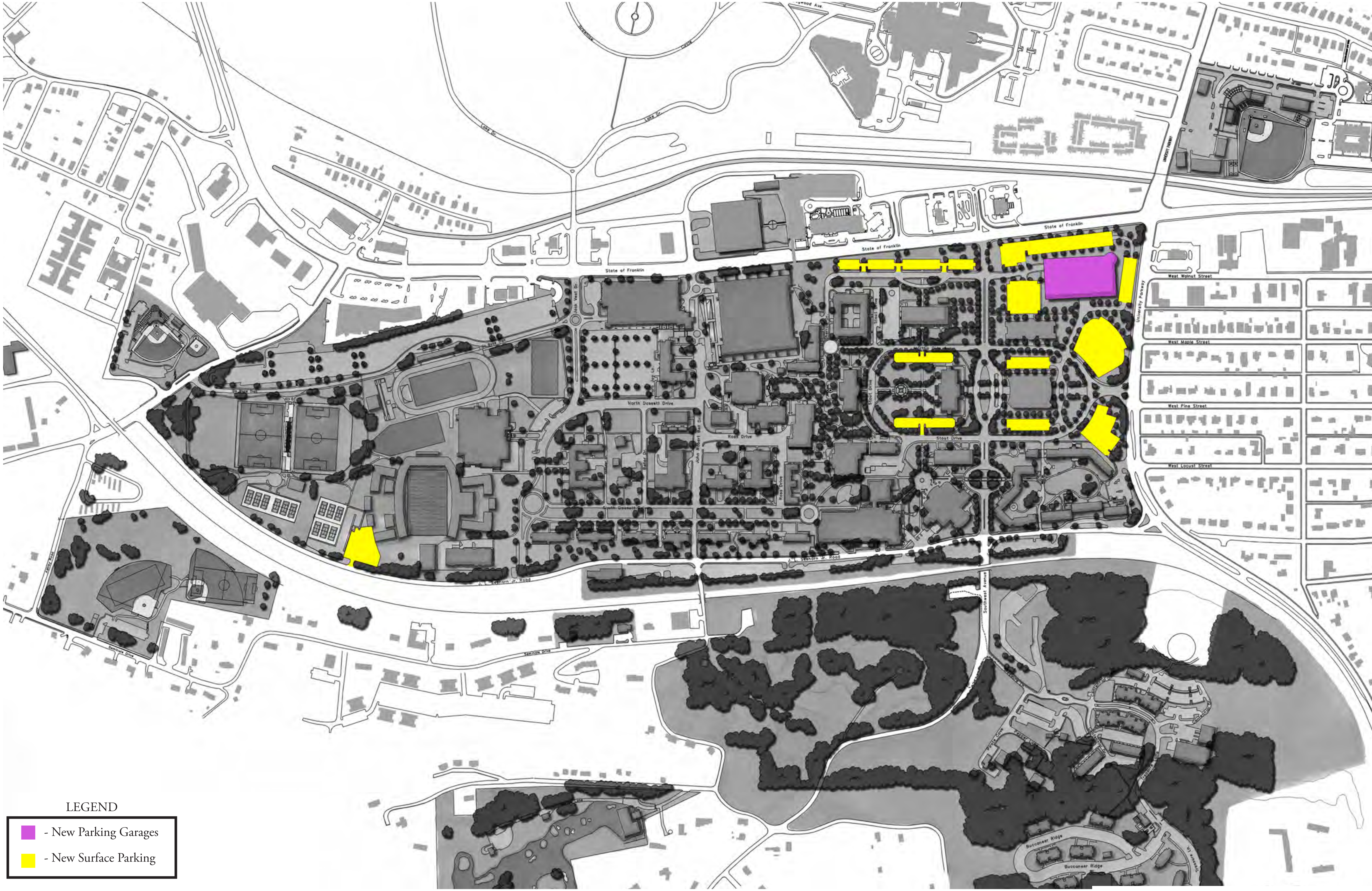
It is proposed that parking for faculty and staff continue to be located within a 5-minute walk of the academic core. Student parking would be accommodated in peripheral locations with resident storage parking located most distant from the campus core.

Parking garages are recommended as a land-conserving, land-use strategy necessary for University expansion. Without garages, land requirements for 3,000 surface parking spaces would be 20-24 acres. Garages also enhance the campus image by reducing the visibility of parked cars and by increasing the amount of parking near the central campus.

As remote parking lots are developed, it is critical that they be lighted, fenced and equipped with emergency phones. It is recommended that the existing shuttle service be extended and expanded to provide additional hours of service to students parking in these peripheral lots.

As enrollment increases or other factors increase parking demand, the northeast corner of the campus can accommodate a parking garage to meet demand. The exact location will depend upon placement of any future academic buildings at that end of the Core Campus. Placing a parking garage along the State of Franklin frontage, offers the opportunity to incorporate retail space into the first floor fronting State of franklin. This space could house services valuable to the campus community, while supplementing parking revenue.

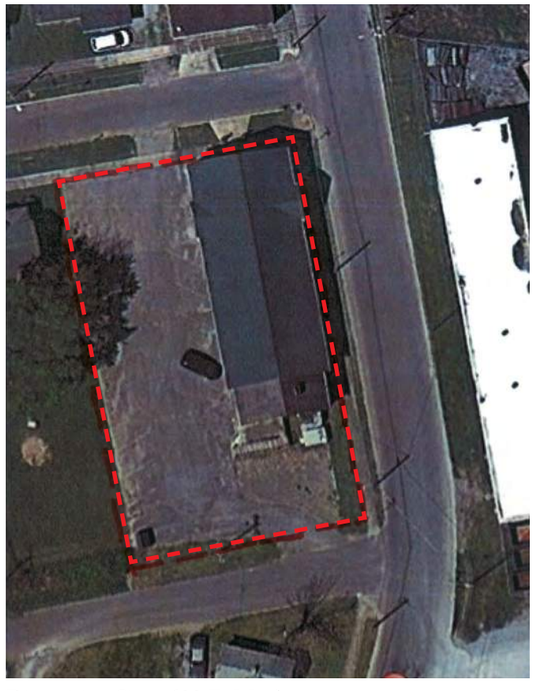
The new Football Stadium will displace parking lots 18 and 19, a total of 680 spaces.



Main Campus Parking Master Plan

ACQUISITION & DISPOSITION PLAN

Gray Fossil Acquisition Site - Sulphur Springs, TN


Disposition Site - 600 E. Maple

ACQUISITIONS AND DISPOSITION

In view of the long-term, consideration should be given towards the acquisition of adjacent properties which may become available. As areas around the campus continue to grow and development increases, the opportunities to add acreage to the campus in a contiguous manner will become greatly diminished. The physical growth of ETSU's Main Campus is already limited by its geographical position. Bounded to the North by commercial property and the railroad; to the south by the railroad; to the east by the tree streets neighborhood and to the west by commercial and residential properties; acquisitions of large contiguous tracks are unlikely.

The following drawing provides updated information on an existing campus map for potential acquisitions and possible dispositions of property by ETSU. Acquisitions of one residential properties within the east side of campus would allow for the development of the ceremonial entrance, Fine Arts Center and New Parking Garage on the east side of campus.

Property Acquisition

Acquisition of the residential properties along Seminole Drive would allow for the expansion of the university's southern boundary.

ETSU is interested in acquiring three commercial parcels on the north side of W. State of Franklin Road at the corner of Harris Drive W. adjacent to the Centre at Millenium Park as one potential site for development of a new Fine Arts building. Land uses would consist of the building, vehicular drop-off and pedestrian plaza; parking would be provided off site, most likely in the parking garage south of W. State of Franklin Road. The parcels are 14.00, a portion of which lies within the Brush Creek flood plain, 14.03, and a portion of 14.08 comprizing the plaza; excluding the plaza they total 4.3 acres.

ETSU is also interested in acquiring a 14 acre tract adjacent to the fossil site for parking and use as a picnic area/park. The property also has potential as a future dig site on one small area within the tract.

An additional 2 acre tract adjacent to the west boundary of the dig site has been identified for acquisition due to the potential expansion of the existing dig site.

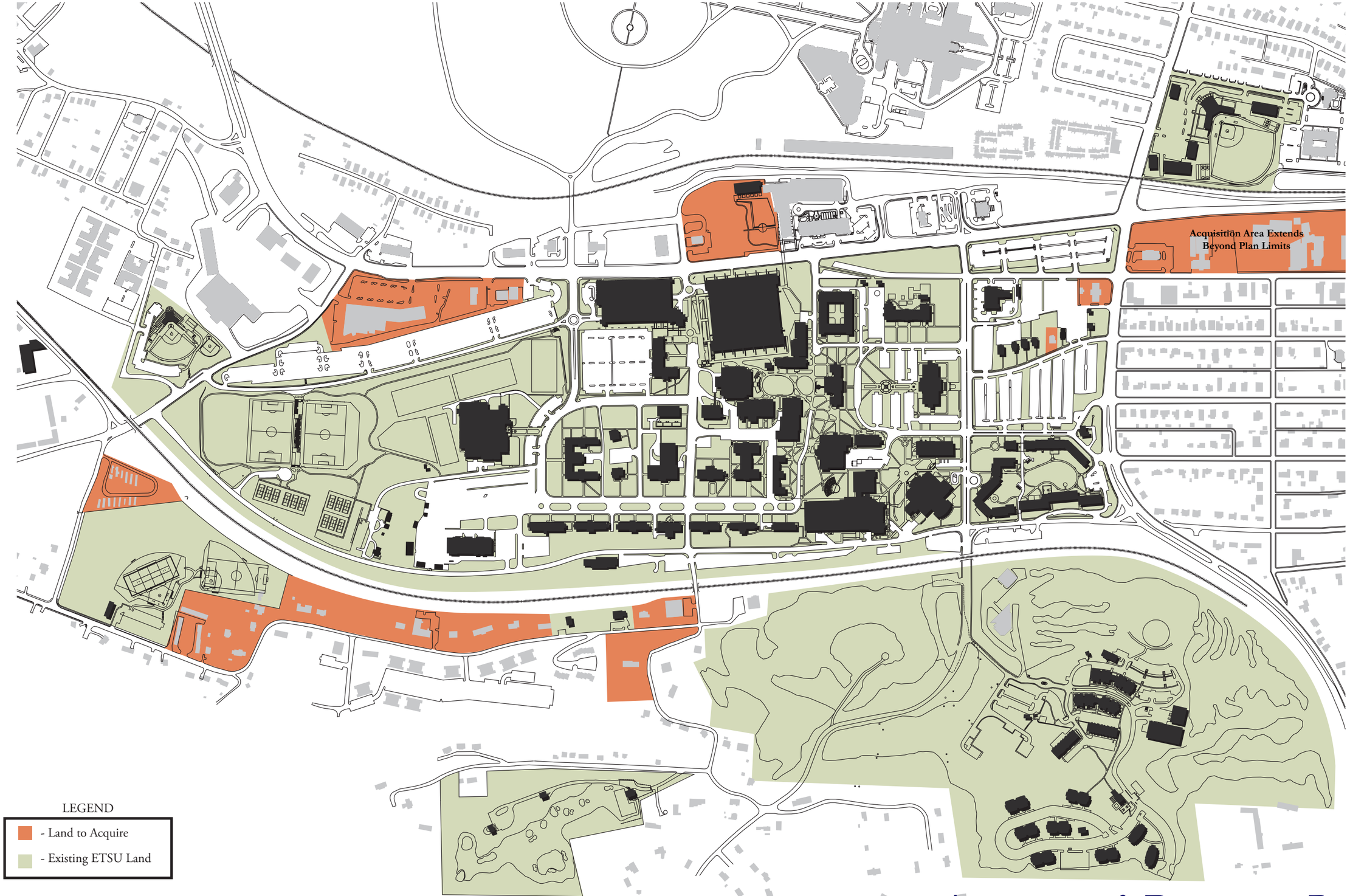
ETSU is interested in acquiring the commercial properties on the north side of Walnut Street, extending eastbound approximately 750' for future campus expansion.

ETSU is interested in acquiring strategic parcels in downtown Johnson City that would support the University's programs and operations.

Property Disposition

Disposition of property at 600 East Main Street, Johnson City, Tennessee due to its remote location from the university campus and poor condition would be an opportunity to sell this property for money to be used for other university needs.

Disposition of currently owned property at the corner of Sevier Street and Ashe Street due to its remote location from the university campus and its lack of utility for university use would be an opportunity to sell this property for money to be used for other university needs.



Acquisition & Disposition Plan

EXISTING ETSU / VA CAMPUS

MOUNTAIN HOME VETERANS ADMINISTRATION CAMPUS EXISTING / LEASE PLAN

The following plan illustrates the existing Veterans Administration Mountain Home Campus. Through the signing of a 35 year enhanced use lease with the Veterans Administration which includes 31 acres, ETSU has been able to provide a home for the James H Quillen College of Medicine which includes the following existing historical structures; Buildings No. 1, 2, 4, 6, 7, 52, 60, 119 and 178. The construction of new facilities on the leased grounds includes the COM Student Center (Building 212).

Mountain Home VA Campus
V = VA Controlled Buildings

1	ETSU Medical School
2	ETSU Medical School / Physical Therapy / Speech & Audiology Research / Pharmacy
V3	VA Office / Education
4	ETSU Medical School Library
V5	VA Research Lab
6	Forensics
7	Pharmacy
V8	Aud. / Sph. AMM. SVC./ Fical
V10	Bandstand
V13	Chapel
V15	Hospital Guest House
V16	Single Quarters
V17	Carnegie Library
V19	Single Quarters
V20	Human Resource Management
V34	Museum / ETSU Labs / Bookstore / Eng. Shops / Canteen
V35	Memorial Hall Theatre
V36	Morgue
V37	Psych. Bldg.
V39	Duplex Quarters
V40	Resident Engineer
V41	Eng. Admin. Offices
V42	Eng. Planning / Design
V43	(Vacant)
V44	Single Quarters
V45	Single Quarters
V46	Single Quarters
V47	Single Quarters
52	Psychiatry
V53	U.S. Post Office
60	ETSU
V69	Hospital Admin. Bldg.
V77	Clinical Support Bldg.
V83	4-Car Garage
V85	2-Car Garage
V96	Flagpole
V98	3-Car Garage
V99	2-Car Garage
V103	Water Meter Valve House
V107	Water Tank
V108	Eng. Boiler Plant / Incinerator
V115	Main Electrical Switchgear
V116	Emer. Gen. Bldg.
V117	Nat'l Cemetery Admin.
119	ETSU Med. School Lab Bldg.
V120	Emer. Gen Bldg. 1,4,119
V160	Domiciliary / Primary Care
V161	Emer. Gen. Bldg. 160
V162	NHCU
178	ETSU Medical School Admin. / Basic Sciences
V200	Hospital
V201	Eng. Maint.
V204	Out-Patient Clinic / ER
V205	Laundry / Warehouse
V206	Grounds Keeping Facility
V207	MRI
V208	Esg. Co-Gen. Emergy. Ctr.
V209	ESG Thermal Stor. Tank
212	C.O.M. Student Center

EXISTING HEALTH SCIENCES CENTER/VA CAMPUS

MASTER PLAN - ETSU / VA CAMPUS

MOUNTAIN HOME CAMPUS

Existing and proposed facilities for the James H. Quillen College of Medicine, Physical Therapy, and Pharmacy School occupy a portion of the Mountain Home Veterans Administration campus. The Mountain Home site, designed by James Freedlander in 1903, is significant for several reasons. The site was an early example of well planned government funded medical facility. The home was established as one of nine facilities to serve disabled union veterans of the Civil War. The continuity of use and character from founding to present is a rare and valued asset.

The simple and well ordered plan located hospital, patient and staff residences and support facilities on a broad southeast oriented plateau providing views over Brush Creek to the valley enclosing Buffalo Mountain ridge. The natural amenities of stream and mountain were complemented with extensive plantings and gardens. These amenities remain today as memorable qualities, readily recognized by visitors and residents as the Mountain Home park-like setting.

The consistent building style of French Renaissance-inspired ornamentation, uniform massing and rectilinear layout were significant factors contributing to the Mountain Home Campus character. Buildings are sited on extensive lawns at a consistent distance from the principal streets.

The significant factors of historic purpose, natural setting, and campus environment are the basic values which guide the proposed expansion of the enhanced lease agreement that has provided for ten buildings and 31 acres under the administration of the Medical School.

Plans to renovate Building 60 on the VA Campus will convert this current warehouse building, which at the turn of the 20th Century served as the stable for the horse drawn fire wagons, into the home of Interprofessional Education for the Academic Health Sciences Center. Centrally located with Medicine, Pharmacy, Physical Therapy and Audiology within walking distance to the building, it will incorporate shared space for learning commons and research collaboration, a state of the art simulation center, offices, a mock pharmacy, small group rooms, conference and meeting rooms, as well as a 90 seat classroom. This building will support the development of interprofessional education curricula for all of the health science and related programs at the University.

LEGEND

V = VA Controlled Buildings
VN = VA Campus Proposed New ETSU Bldg.
IN = Innovation Park Proposed New Bldg.

1	ETSU Medical School
2	ETSU Medical School / Physical Therapy
V3	VA Office / Education
4	ETSU Medical School Library
V5	VA Research Lab
6	ETSU Forensics
7	ETSU College of Pharmacy
V8	Aud. / Sph. AMM. SVC./ Fical
V10	Bandstand
V13	Chapel
V15	Hospital Guest House (Leased)
V16	Single Quarters (Leased)
V17	Carnegie Library
V19	Single Quarters
V20	Human Resource Management
V24	New Student Center
V34	Museum / ETSU Labs / Bookstore / Eng. Shops / Canteen
V35	Memorial Hall Theatre
V36	Morgue
V37	Psych. Bldg.
V39	Duplex Quarters
V40	Resident Engineer
V41	Eng. Admin. Offices
V42	Eng. Planning / Design
V43	(Vacant)
V44	Single Quarters
V45	Single Quarters
V46	Single Quarters
V47	Single Quarters
52	Psychiatry
V53	U.S. Post Office
INF1	Johnson City Family Practice Ctr.
080	Clinical Education Building
081	Cardiology CEB Building
60	ETSU
V69	Hospital Admin. Bldg.
V77	Clinical Support Bldg.
80	Palma Robinson CEBI / ETSU Physcians & Associates
V83	4-Car Garage
V85	2-Car Garage
V96	Flagpole
V98	3-Car Garage
V99	2-Car Garage
V103	Water Meter Valve House
V107	Water Tank
V108	Eng. Boiler Plant / Incinerator
V115	Main Electrical Switchgear
V116	Emer. Gen. Bldg.
V117	National Cemetery Admin.
119	ETSU Med. School Lab Bldg.
V120	Emer. Gen Bldg. 1,4,119
V160	Domiciliary Primary Care
V161	Emer. Gen. Bldg. 160
V162	NHCU
178	ETSU Research Bldg.
V200	Hospital
V201	Eng. Maint.
V204	Out-Patient Clinic / ER
V205	Laundry / Warehouse
V206	Grounds Keeping Facility
V207	MRI
V208	Esg. Co-Gen. Emergy. Ctr.
V209	ESG Thermal Stor. Tank
212	C.O.M. Student Center
341	Innovation Lab

East Tennessee State University
Main Campus

REMOTE FACILITIES

MARSHALL T. NAVE CENTER, ELIZABETHTON

Marshall T. Nave Center, Elizabethton, TN, (formerly known as the Marshall T. Nave Paramedical Center) became part of ETSU in1977 when the paramedical programs offered there became part of the ETSU School of Continuing Education. Eventually these programs were transferred to the College of Public and Allied Health. In the mid-1990's the associate degree and certificate programs were transferred to Northeast State Community College and the remaining programs were converted to baccalaureate offerings. Today, the College of Clinical and Rehabilitative Health Sciences houses programs in Allied Health Leadership, Cardiopulmonary Science, Radiography, and Master of Science in Allied Health at the 25000 sq. ft. facility that includes offices, classrooms, and laboratory teaching facilities. The Department of Audiology and Speech Language Pathology operates The Nave Language Center –Autism Spectrum Disorder Clinic at the Nave Center. This is a program available for preschoolers through elementary school children with Autism spectrum disorder and related communication and social pragmatic disorders.

ETSU AT KINGSPORT ALLANDALE, MCCUNE-WELCH HALL

McCune-Welch Hall is located at 1501 University Boulevard, Kingsport, Tennessee—approximately twenty-nine miles from campus. With 48,934 square feet of space, the building has seventeen general purpose classrooms, three laboratories, two computer labs, two smart classrooms, and three ITV classrooms. There are thirteen faculty and staff office spaces, two conference rooms, two student lounge areas, a bookstore, a tutoring lab, exercise room, and gym. In addition, the Center for Applied Technology at Elizabethton rents an office and two classrooms to offer its Certified Nursing Program. McCune-Welch Hall opened on July 1, 1971. Course offerings currently focus on lower-division, general education and pre-professional courses.

ETSU AT KINGSPORT DOWNTOWN

ETSU at Kingsport Downtown is located at 300 Clinchfield Avenue, Suite 460, Kingsport, Tennessee—approximately twenty-six miles from campus. With 4,990 square feet of space, the site has four smart classrooms (including one with ITV capabilities), two offices, and a reception area. ETSU at Kingsport Downtown opened in Fall Semester 2013, offering both upper-division and graduate courses and programs.

ETSU AT THE SEVIER CENTER

ETSU at the Sevier Center is located at 713 Middle Creek Road, Sevierville, Tennessee—approximately 100 miles from campus. The site is shared by Academic Affairs and the Quillen College of Medicine. With 13,000 total square feet of space, the Academic Affairs side has two ITV classrooms, one small classroom, three small meeting rooms, four office spaces, and a reception area. The QCOM side has twelve sleeping rooms, three offices, one conference room, one kitchen, and one laundry. The housing facilities are used by other students from the Academic Health Sciences in Nursing, Pharmacy, Public Health and Clinical and Rehabilitative Health Sciences as needed for their clinical activities in Sevierville. . ETSU at the Sevier Center started housing QCOM students in Fall Semester 2012, and classes were offered in Fall Semester 2013. Both upper-division and graduate programs are offered.

ETSU AT STRAWBERRY PLAINS, KNOXVILLE

ETSU will open an off-campus site on the Pellissippi State Community College's Strawberry Plains campus in Spring 2015. This site is approximately 95 miles from campus. The start-up plan calls for limited graduate class offerings in Spring 2015, opening an office, and hiring a coordinator. Additional undergraduate and graduate programs are planned for build out in Fall 2015 and subsequently.

OFFICES AT NORTHEAST STATE COMMUNITY COLLEGE

ETSU plans to have offices at the Northeast State Community College main campus in Blountville and at the Northeast State Community College Downtown Johnson City campus in 2015. The NeSCC main campus is approximately twenty miles from campus. The NeSCC Downtown Johnson City campus is approximately two miles from campus. It is not expected that ETSU will pay rent for the offices, but plans are not yet finalized. ETSU has discussed offering classes at the NeSCC Downtown Johnson City campus, but nothing has been projected. The NeSCC Downtown Johnson City Campus is expected to open in late Spring Semester 2015.

ESTU AT VALLEYBROOK, GRAY

The Valleybrook site is 144 acres, located 13 miles northwest of the ETSU campus, in Gray. The site has 72,000 Sq. ft. of quality research and office space, including 14 fully equipped laboratories, service bay for lab services and supplies and safety features such as eye wash stations, emergency showers, etc. In addition, there are 24,500 sq. ft. of warehouse and storage facilities.

Marshall T. Nave Center, Elizabethton

ETSU at Kingsport Downtown

ETSU at Strawberry Plains, Knoxville

ETSU at Kingsport Allendale - McCune-Welch Hall

ETSU at Sevier

ETSU Offices at Northeast State Community College

ETSU at Valleybrook

CAMPUS MASTER PLAN SUMMARY

FUTURE CAMPUS DEVELOPMENT

The history of the physical development of any university campus usually includes growth periods, which can be traced to the expansion and formation of the character and order of its place. ETSU has had such periods of growth and expansion and is currently in the mist of one such growth period. Good planning and design are essential to capitalizing on the opportunities, which are presented during these times to heal decisions of the past and to further enhance the sense of character and place for the future. The face of ETSU is changing quickly and dramatically.

ACADEMIC

- D.P. Culp University Center Renovation Complete 2016
- Fine Arts Classroom Building expected in 3 years
- Repurpose Mathes Hall following construction of Fine Arts Classroom Building
- Math Science Academic Building in 15 - 25 years
- Wilson-Wallis Hall laboratory renovations in 3 - 5 year
- Sam Wilson Hall College of Business renovation in 3 - 5 years
- Repurposing of Stone Hall
- Addition of a Sustainability Center in 3 - 4 years
- New Humanities Building planned in 8 - 10 years
  Lamb Hall addition in 5 - 7 years

RESIDENTIAL HOUSING

- Renovations to many of the campus traditional dormitory style housing facilities, constructed between 1950 - 1970, in 5 - 10 years.
- Develop a new Greek Village

ATHLETIC

- Football Stadium Construction Planned for Fall 2016
- Baseball Complex Phase 2, planned for Spring 2016
- Renovations of Brooks Gymnasium for Women's Basketball, Volleyball, and other Athletics uses planned in 2-3 years
- Indoor tennis facility
- A multi-purpose facility serving soccer, football and tennis
- Enhancements of Freedom Hall Civic Center as an interim step to building a Convocation Center
- Additions to Warren-Greene Golf Facility planned in 2-3 years
- Track & Field Complex planned in 10 years
- ETSU plans to add several women's athletic programs and necessary facilities

ACADEMIC HEALTH SCIENCE CENTER

- Renovate building 60 for Interprofessional Education
- Relocation of the Johnson City Family Practice

MASTER PLAN OBJECTIVES

The ETSU Master Plan conceives of the Main Campus and Mountain Home Campus as an integrated academic/research complex, supporting the University's increasingly pivotal role in bringing cultural and educational resources to the City of Johnson City, Tennessee as well as the eastern Tennessee region. The overall objective is to link the campuses by consolidating academic programs, by improving vehicular and pedestrian connections, by upgrading the State of Franklin "seam" with landscape and safety improvements, and by fostering high quality, compatible land uses in the outbuildings between the two campuses. Given the program for new building areas and the assessment of existing conditions, a series of design and development objectives were established for the Master Plan. The objectives describe the intention of the Master Plan, and follows:

- Establish a flexible framework for growth that allows for incremental expansion or consolidation of University uses within defined areas.

- Maintain an efficient use of land resources within the campus core.

- Respect the historical character of the Mountain Home Campus during the relocation and expansion of the Health Sciences programs.

- Reinforce the University's setting in the Appalachian Mountain by providing vistas to the mountains and restoring forest and stream presence into the campus environment.

- Reinforce and extend the existing open space structure as exemplified by Dossett Hall, Campus Center quadrangle and Brown courtyard.

- Enhance the campus to engage students and enrich student experience, and/or make the campus an engaging experience for students.

- Respect the simple formality of material, limited ornamentation, and uniform building height on campus.

- Respect and reinforce principal campus open spaces through selected building infill and landscape planting.

- Restore the Great Lawn and Amphitheatre garden into the central campus.

- Extend the pedestrian mall concept for the entire length of South Dossett Drive.

- Mitigate the negative visual character of large parking lots at the principal east and west campus entrances.

- Establish a clear sense of entry and arrival to the campus.
- Locate community service and cultural facilities such that they are readily accessible to the community and the campus.

- Provide for easily defined campus bounds that identify the institution within the greater community.

- Establish greater physical and cultural links between the campus and the community

- Develop a long-term strategy for building renovation, demolition and property acquisition.

OTHER OPPORTUNITIES

- City/ETSU Partnership
- Commercial

EAST TENNESSEE STATE UNIVERSITY

CAMPUS WIDE MASTER PLAN UPDATE - SEPTEMBER 2014

Prepared by:
FISHER+ASSOCIATES
Architecture/Planning

MAIN CAMPUS INDEX

EXISTING BUILDINGS

002	University School
003	DM Brown Hall
004	Alexander Modular
005	Mathes Hall
006	Ernest C Ball Hall
007	Mini-dome
008	Warf-Pickel Hall
009	Brooks Gym
010	Gilbreath Hall
011	Campus Center Building
012	Sam Wilson Hall
014	Burleson Hall
015	Lyle House
016	Ada Earnest House
017	Wilson-Wallis Hall
018	Hutcheson Hall
019	John P. Lamb Hall
020	Roy S. Nicks Hall
021	Rogers-Stout Hall
025	Greenhouse
040	Power Plant
041	John Clack Chiller Plant
042	Wilbur Bond Building
044	Equipment Storage Building
045	Chemical Storage Bldg
060	Burgin E Dossett Hall
062	Art Annex
063	Ticket Booth
064	Ticket Booth
068	Parking Services Building
090	920 West Maple Street
091	Reece Museum
092	D.P. Culp Center
094	Softball Stadium
095	Soccer Fields East & West
096	902 West Maple
100	Buc-Ridge Security Building
101	Disc Golf Course
102	University Woods Pavillion
103	University Woods
104	Parking Garage
105	Married Student Housing T
106	Married Student Housing U
107	Wash House
110	Davis Apartments A
111	Davis Apartments B
112	Davis Apartments C
119	Building 119
120	Building 120
124	Yellow Bike Repair Building
125	Veterans Dwarf Conifer Gardens
127	Carter Hall
128	Stone Hall
129	Yoakley Hall
130	Powell Hall
131	Ross Hall
132	West Hall
133	Nell J Dossett Hall
134	Lucille Clement Hall
140	Luntsford Apartments
150	Seehorn House
151	Bond House
158	1110 Seminole Drive
159	1118 Seminole Drive
166	2213 N Greenwood Dr
170	Facilities Management Storage Building
178	Building 178
200	Recycling Center
201	Shelbridge Main House
202	Shelbridge Second
203	Shelbridge Greenhouse
205	Shelbridge Garden House
208	Shelbridge Smokehouse
209	Shelbridge Poolhouse
210	Shelbridge Bathhouse
231	Maple & Ashe
303	Telecomm Building
304	Johnson City Family Practice
305	Central Receiving
306	WETS FM Radio Station
307	Veterans Memorial
310	Astronomy Observatory
320	Sherrod Library
321	Buc Ridge Apartments I & J
322	Buc Ridge Apartments G & H
323	Buc Ridge Apartments C & D
324	Buc Ridge Apartments K
325	Buc Ridge Apartments A
326	Buc Ridge Apartments E & F
327	Buc Ridge Apartments B
328	Buc Ridge Clubhouse
329	Buc Ridge Apartments P-Q
330	Center for Physical Activity
331	Buc Ridge Apartments R-S
332	Child Study Center
340	The Treehouse
349	Maintenance Bldg
350	Warren-Greene Golf Complex
351	Buc Ridge Apartments L-M
352	Buc Ridge Apartments N-O
353	Governors Hall
355	Surplus Warehouse
356	Johnson City Family Practice
358	Centennial Hall
470	Thomas Baseball Stadium
513	Intramural Field House
515	Amphitheater
516	Campus Center Quadrangle
517	Water Tank
519	Outdoor Track
520	West Tennis Courts Complex
521	East Tennis Court Complex
537	Bike Course
539	Basler Challenge Course
557	ETSU Foundation Carillon & Alumni Plaza
904	Digital Media Center

FUTURE BUILDINGS

F1	Future Parking Garage
F2	Fine Arts Classroom Building Option A or Future Academic Building
F3	Future Academic Building
F4	Fine Arts Classroom Building Option B
F5	Football Stadium
F6	Baseball Stadium Commercial
F7	Track & Field Facility
F8	Multi-Use Athletic Facility
F9	Indoor Tennis Facility
F10	Greek Village
F11	University High School
F12	Data Center

VA LEGEND

1	ETSU Medical School
2	ETSU Medical School / Physical Therapy
V3	VA Office / Education
4	ETSU Medical School Library
V5	VA Research Lab
6	ETSU Forensics
7	ETSU College of Pharmacy
V8	Aud. / Sph. AMM. SVC./ Fical
V10	Bandstand
V13	Chapel
V15	Hospital Guest House (Leased)
V16	Single Quarters (Leased)
V17	Carnegie Library
V19	Single Quarters
V20	Human Resource Management
V24	New Student Center
V34	Museum / ETSU Labs / Bookstore / Eng. Shops / Canteen
V35	Memorial Hall Theatre
V36	Morgue
V37	Psych. Bldg.
V39	Duplex Quarters
V40	Resident Engineer
V41	Eng. Admin. Offices
V42	Eng. Planning / Design
V43	(Vacant)
V44	Single Quarters
V45	Single Quarters
V46	Single Quarters
V47	Single Quarters
52	Psychiatry
V53	U.S. Post Office
60	ETSU
V69	Hospital Admin. Bldg.
V77	Clinical Support Bldg.
80	Palma Robinson CEBI / ETSU Physcians & Associates
V83	4-Car Garage
V85	2-Car Garage
V96	Flagpole
V98	3-Car Garage
V99	2-Car Garage
V103	Water Meter Valve House
V107	Water Tank
V108	Eng. Boiler Plant / Incinerator
V115	Main Electrical Switchgear
V116	Emer. Gen. Bldg.
V117	National Cemetery Admin.
119	ETSU Med. School Lab Bldg.
V120	Emer. Gen Bldg. 1,4,119
V160	Domiciliary Primary Care
V161	Emer. Gen. Bldg. 160
V162	NHCU
178	ETSU Research Bldg.
V200	Hospital
V201	Eng. Maint.
V204	Out-Patient Clinic / ER
V205	Laundry / Warehouse
V206	Grounds Keeping Facility
V207	MRI
V208	Esg. Co-Gen. Emergy. Ctr.
V209	ESG Thermal Stor. Tank
212	C.O.M. Student Center
341	Innovation Lab
INF1	Johnson City Family Practice Ctr.
080	Clinical Education Building
081	Cardiology CEB Building

APPENDIX A

Appendix A

Academic Space Master Plan

RESULTS AND SUMMARY FINDINGS – 2014 UPDATE

Comprehensive Facilities Planning, Inc. ◆ Columbus, OH ◆

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Academic Space Master Plan

Comprehensive Facilities Planning, Inc. (CFP) was retained by East Tennessee State University to conduct a space needs assessment of its academic and administrative facilities for the Academic Space Master Plan project. This project involved the collection and analysis of data on a departmental level for most units housed on the Johnson City Campus. Residence halls, non-university operations and satellite operations were excluded from this study.

This study was a critical step in identifying departmental space deficiencies or surpluses, to provide the University with information to make informed decisions establish capital planning priorities and address the requirements established by the Tennessee Board of Regents.

Tasks

The following tasks were undertaken in the development of the Academic Space Master Plan:

- Space guidelines were developed based on the culture of the institution and the THEC space planning guidelines.
- Assessments were made on the physical condition and functional capabilities of existing instructional facilities. This entails the collection of survey data to review the existing classrooms and instructional lab conditions in comparison to model criteria.
- Future space needs were modeled based on projected enrollments using past enrollment trends and college assessments for the next ten years.
- Tools necessary to develop a comprehensive planning approach to assist the University in setting capital project priorities were provided.
- Base data to inform long term decision making concerning the reprogramming and/or construction of new space, and the renovation and appropriate utilization of existing space were provided.
- Recommendations for optimal space use and allocation were developed.

Space Needs Calculation Methodology

The following steps were involved in the space needs analysis:

- Review and confirm existing space utilization.
- Develop appropriate space guidelines for each academic department and administrative units incorporating the THEC space planning criteria.
- Evaluate existing facilities to determine space deficiencies and surpluses.

- Provide the process tools and methodology for the ongoing prioritization of major capital and renovation investment projects.

The methodology used included measuring the quantitative space needs that may impact the delivery of services. This formula-based, quantitative process calculates space needs based on a series of interactive work steps. Data and programmatic information from various user groups were gathered, analyzed, and documented. The data and assumptions developed from these initial steps were verified and adjusted to customize the space needs model for each department, including space criteria (modules) for the type of space being analyzed.

The space need requirements, including the square footage amounts of each room type were determined by the discipline, equipment used in the area, utilization rates (i.e., station area, station occupancy ratios, and room utilization rates), number of persons occupying the space, etc. The results derived from the space needs calculations were then compared to the current assigned space to determine surpluses or deficiencies of space.

General planning assumptions applied in the analysis are presented in the following section. Summaries of the calculated space needs are presented in subsequent sections of this report. Detailed space needs reports for each department have been produced as a separate document and are available for review through the Department of Facilities Management, Planning and Construction.

General Planning Assumptions

The following planning assumptions provide guiding principles, which were critical in the formulation of the results of this study.

1. Basic data used in this study was provided by the Provost and Facilities Management offices (space inventory); Human Resources (personnel); and Registrar (class schedule and modified credit hour data - excluding "off-campus" activity). Fall 2008 was used as the baseline for development of the space needs this study. This data was reviewed and verified by each of the departments in the University. The comparative space inventory data has been updated to reflect conditions as of the Fall 2013 term, including but not limited to, the addition of the Valleybrook facilities, Lamb Hall renovation and the Gray Fossil site addition.
2. This study was limited to space assigned to the administrative and academic units located on the Johnson City campus. Building support facilities (e.g., mechanical rooms, corridors, etc.) residence halls and non-university operations including the Tennessee Department of Education, US Post Office, Innovation Lab and Veterans Administration were not part of the scope of this study.
3. Clinical treatment facilities in this assessment were defined to include only facilities that have a primary instructional mission/purpose as contrasted to those clinics that are patient-based. Therefore, the clinical programs meeting these criteria that were included in this assessment include the Dental Hygiene Clinic, Speech and Audiology

Clinic, Falls Prevention Clinic and the Family Medicine clinics located in Johnson City, Bristol and Kingsport. Any other clinical treatment space located on the Johnson City or any other University sites were exempted from the scope.

4. The primary focus of this analysis was on the quantity of space by type and use. A quality assessment for classrooms and teaching labs was also conducted as these facilities were surveyed by the University to identify those that are physically or functionally deficient. The results of this survey will be used to provide basic data for the University to target improvement funding.
5. The space needs calculations were based on nationally recognized space planning guidelines, the Tennessee Higher Education Commission (THEC) Space Allocation Guidelines (July 2009), and the applied experience of the CFP consultants. These previously published THEC guidelines and criteria were not updated with the 2013 revised guidelines nor were the calculated needs modified for this update. Because the THEC guidelines are generic for assessing a total campus, a blending of these criteria with factors the consultants believe are more appropriate were used in the modeling process. These guidelines were modified further to fit the culture and operations of ETSU and each academic department.
6. The planning period for this study is ten years to the year 2020.
7. Office space needs were developed by identifying all personnel requiring office space, private or shared, and applying a uniform set of office module guidelines prescribed by THEC to the appropriate position type. The office space planning modules included in this modeling process are shown in the following table.

Position Type	Sq. Ft. Module
President	350
Vice President	240
Dean	180
Assoc./Asst Administrator	150
Director/Chair	150
Asst Director	130
Faculty	150
Instructors, Lecturers & Visiting Faculty	100
Clinical Faculty	150
Studio Faculty	225-250
Adjunct Faculty	100
Professional Staff	130
Clerical Staff	120
Technical Staff	100
Graduate Assistants	60
Graduate Research Assistants	40
Post Docs	100
Personnel without Office	0
Student Worker	60

The office space needs were further developed for this assessment to incorporate the following assumptions/factors:

- Office space was not provided for inactive emeriti faculty.
- With the exception of the Family Medicine clinics included in this study, resident physicians were assumed to be provided space off campus (hospital or clinical facilities) and were not included in the space needs calculations.
- Temporary workers whose position types were not specified were included in the office calculation by allocating the clerical office module for each.
- Associate or Assistant Deans that also have a faculty appointment within an academic department were provided with an administrative office in addition to their faculty office.
- The space inventory for rooms that were identified as open landscape or having modular offices, or an office that provides access to a suite of offices, was modified to recognize these rooms as providing interior circulation space in addition to being used for office functions. A proration factor of 30% was applied in most cases to estimate this circulation space component in order to provide a more accurate comparison for the office needs.

8. Research laboratory space needs were based on the number of personnel engaged in research that require specialized lab facilities. Information regarding current research activity was provided by each department to identify personnel engaged in research and by type of research (i.e. lab-based vs. office-based vs. clinic-based). This data was used to apply a discipline-specific research space allocation or module to develop the research space calculation. The research space modules prescribed by THEC were used, which vary by discipline and position-type. Only those personnel identified as conducting their research in a laboratory facility were included in a separate research lab calculation. Personnel identified as conducting their research only in offices were not provided any additional space above the typical office space needs calculation.
9. Additional assumptions and factors used in developing the research space requirement include the following:
   - Unless otherwise specified by the respective college, the projected research space needs assume the same proportionate ratio of personnel conducting lab-based research as currently identified by the departments.
   - For departments that primarily conduct office-based research but have a need for collaborative or group space to conduct research activities, one or more project rooms were provided.
10. Certain laboratory space is classified as "special use" labs that may not be assigned to a specific faculty or researcher. These are typically shared spaces that are functionally unique usually because of specialized equipment. Unless otherwise noted, these existing spaces were assumed to be sufficient and displayed as they currently exist.
11. In accordance with the THEC guidelines, a factor of 30% of the calculated office need was applied to determine office service space needs for all departments. This factor assumes to address needs for office service space (files, work areas, etc.), conferencing space and office lounge space. Supplemental office support space above the normal office service allocation was provided for departments requiring waiting rooms, processing areas, and specific storage/file needs. Offices requiring waiting areas typically are departments that include operations dealing with the public and students

such as senior administrative and student service offices. In addition, departments that have unique (i.e., long-term) storage space needs that may exceed the typical office service allocation may have been provided with a supplemental allocation to address this need.

12. For space planning purposes full time equivalent student counts were calculated using a conversion factor of 15 credit hours per undergraduate student and 12 credit hours per graduate student.
13. Classroom space needs were analyzed by applying a uniform set of utilization goals across the University. Classrooms that were determined to be assigned to a specific department because of scheduling requirements or location have been classified separately. The following THEC utilization goals were used in developing the classroom space needs: 30 Weekly Room Hours for scheduled use for an instructional week of 8 AM to 5 PM - Monday through Friday; and 60% station occupancy in scheduled rooms. A larger average station size of 20 assignable square feet was used as contrasted with the THEC guideline of 17.7 assignable square feet per student station. It was assumed the larger station size provides more flexibility in the learning environment and is more suitable to modern instructional practices. These factors are modeling averages that may vary as related to existing usage patterns and conditions.
14. Instructional laboratory needs were included for individual academic programs within each department as required. Lab calculations/formulas were modified to reflect the current instructional requirements by program area. Programs that did not generate sufficient student credit hours to calculate a functional lab facility were provided with a minimum lab need as it was assumed delivery of the instructional program requires the provision of a functional lab space. THEC station sizes were applied where applicable.
15. Unless specified by the respective division or college, faculty and staffing personnel projections included in the study were based upon the projected enrollments. Projected personnel counts were reviewed by the Provost's Office, Vice President for Health Affairs, Deans and other senior administrators. Projected staffing for all academic departments generating student credit hours were assumed to increase proportionately to the projected enrollments for the respective department, unless otherwise specified by the college. Staffing for certain non-academic departments that are student service oriented and are sensitive to overall campus enrollment growth were projected using a campus-wide enrollment growth factor. Staffing needs for other departments were reviewed on a case-by-case basis. These projections are assumed to be realistic expectations and achievable future staffing levels.
16. Current space allocations for certain types of space needs were assumed to be sufficient and were reviewed on a case by case basis. Typically these types of spaces include: departmental libraries; student lounges assigned to administrative units; training rooms; testing rooms and interview rooms.
17. Enrollment Assumptions: The Fall 2008 semester term served as the base year for student enrollments. Future enrollment projection factors were initially developed after a reviewing enrollment trend data provided by the University for the past ten years (1999 - 2008). These factors were reviewed and modified as necessary by the respective colleges. The projected space needs therefore have been developed using the following ten-year growth factors as shown below applied to the current student credit hour

distribution by department, unless otherwise noted. Note: current student credit hour data does not include web-based courses but does include hybrid courses. The following table summarizes the projected enrollment data by department and college. See the Appendix for more detailed enrollment data.

Projected Student Data Summary:

College/Department	Student Enrollment Projection Factors: Undergrad	Student Enrollment Projection Factors: Graduate	Projected Enrollment Variances: Student Credit Hours	Projected Enrollment Variances: FTE
Arts and Sciences				
Appalachian Studies	100.0%	100.0%	654	44
Art and Design	11.0%	5.0%	397	27
Biological Sciences	23.0%	105.0%	1,644	117
Chemistry	32.0%	50.0%	1,395	95
Communication	62.0%	50.0%	4,209	281
Crim Justice & Criminology	0.0%	37.0%	58	5
English	17.0%	9.0%	1,599	107
Foreign Languages	8.0%	67.0%	209	14
Geosciences	18.0%	35.0%	478	32
History	17.0%	10.0%	1,440	97
Mathematics	7.0%	28.0%	705	48
Music	2.0%	0.0%	2,746	183
Philosophy & Humanities	0.0%	44.0%	1	0
Physics and Astronomy	73.0%	495.0%	2,129	142
Political Science	12.0%	129.0%	240	16
Psychology	40.0%	10.0%	1,899	127
Social Work	3.0%	3.0%	62	4
Sociology & Anthropology	31.0%	35.0%	1,715	115
Arts and Sciences Summary	**UG SCH**	**Grad SCH**	**Total SCH**	**Total FTE**
Arts & Sciences Totals	**96,049**	**4,422**	**100,471**	**6,772**
Total Differences	**20,582**	**999**	**21,581**	**1,455**
Percentage Differences	**27.3%**	**29.2%**	**27.4%**	**27.4%**
Business and Technology				
Accountancy	12.0%	10.0%	327	22
Computer & Info Science	22.0%	29.0%	1,674	114
Economics & Finance	25.0%	0.0%	1,084	72
Eng. Tech, Surv & Dig Media	0.0%	0.0%	0	0
Management & Marketing	9.0%	0.0%	564	38
Military Science	0.0%	0.0%	0	0
Business & Technology Summary:	**UG SCH**	**Grad SCH**	**Total SCH**	**Total FTE**
Business & Technology Totals	**28,950**	**2,127**	**31,077**	**2,107**
Total Differences	**3,494**	**154**	**3,648**	**246**
Percentage Differences	**13.7%**	**7.8%**	**13.3%**	**13.2%**
Clinical & Rehab Health Science				
Allied Health	0.0%	572.0%	778	65
Communicative Disorders	50.0%	24.0%	368	28
Dental Hygiene	0.0%	0.0%	0	0
Physical Therapy	0.0%	33.0%	434	36
Clinical & Rehab Summary:	**UG SCH**	**Grad SCH**	**Total SCH**	**Total FTE**
Clinical & Rehab Totals	**2,915**	**3,823**	**6,737**	**513**
Total Differences	**139**	**1,441**	**1,579**	**129**
Percentage Differences	**5.0%**	**60.5%**	**30.6%**	**33.7%**
Education				

	Student Enrollment Projection Factors		Projected Enrollment Variances	
Curriculum & Instruction	20.0%	20.0%	758	53
Educ. Lead. & Policy Analysis	0.0%	20.0%	140	12
Human Develop & Learning	50.0%	30.0%	2,359	164
Kines, Leisure & Sport Sci.	80.0%	50.0%	3,130	213
Education Summary:	**UG SCH**	**Grad SCH**	**Total SCH**	**Total FTE**
Education Totals	**15,935**	**4,335**	**20,270**	**1,424**
Total Differences	**5,414**	**973**	**6,387**	**442**
Percentage Differences	**51.5%**	**28.9%**	**46.0%**	**45.0%**
Nursing	5.0%	30.0%		
Nursing Summary:	**UG SCH**	**Grad SCH**	**Total SCH**	**Total FTE**
Percentage Differences	**7,392**	**1,182**	**8,574**	**591**
Public Health(2)				
Environmental Health	14.0%	55.0%	76	6
Health Sciences	14.0%	0.0%	524	35
Former Public Health Depts.	0.0%	105.0%	1,055	88
Public Health Summary:	**UG SCH**	**Grad SCH**	**Total SCH**	**Total FTE**
Public Health Totals	**6,745**	**2,184**	**8,929**	**632**
Total Differences	**569**	**1,087**	**1,656**	**129**
Percentage Differences	**9.2%**	**99.1%**	**22.8%**	**25.5%**
Medicine				Total FTE
Total Differences				48
Percentage Differences				20.0%
Pharmacy **No Projected Change**				
Continuing Studies				
Cross Disciplinary Studies	18.0%	35.0%	1,975	163
College Summary:	**UG SCH**	**Grad SCH**	**Total SCH**	**Total FTE**
Total Differences	**301**	**42**	**344**	**24**
Percentage Differences	**18.0%**	**35.0%**	**19.1%**	**19.4%**
	UG SCH	**Grad SCH**	**Total SCH**	**Total FTE**
University Totals	**159,961**	**18,236**	**178,197**	**12,712**
Total Differences	**30,851**	**4,969**	**35,820**	**2,519**
Percentage Differences	**23.9%**	**37.5%**	**25.2%**	**24.7%**

Basic Data

The space needs modeling methodology used in this assessment is a data-driven process that utilizes four basic data files that are maintained by the University. These four databases are the space inventory, personnel, schedule of classes (class file) and student credit hours. These files were compiled into an aggregate relational database and appropriately mapped or linked to generate the formula-based space needs model. A brief overview of the process used in collecting, verifying and modifying these files follows:

Space Inventory: the space inventory used in this update was modified from the University's Fall 2013 file maintained by Facilities Management.

Personnel Data: a basic personnel database was provided through the University's Human Resources department. This data was supplemented with other positions not typically reported to Human Resources including authorized, open positions; non-university personnel; student employees; and graduate assistants. The data was reviewed and verified for accuracy. The verified data was then mapped to relate to the appropriate space department. Projected personnel were developed from enrollment based projections as well as input received from senior administration. A summary of the projected personnel data by position type used in this model is presented in the table below.

Table 1: Personnel Summary

Position Description	Projected Personnel
President	1
Vice President	4
Athletic Director	1
Dean	12
Assoc./Asst Administrator	62
Vice Provost	6
Director/Chair	166
Assoc/Asst Director	63
Faculty	807
Co-Inv	9
Instructors, Lecturers, Visiting Faculty	154
Adjunct Faculty	369
Co-Funded Faculty	40
Studio Faculty	24
Clinical Faculty	8
Professional Staff	465
Research Staff	56
Trainees	4
Clerical Staff	602
Technician	140
Graduate Assistants	468
Graduate Research Assistants	331

Position Description	Projected Personnel
Post Docs	27
Peer Tutors	10
Personnel without Office	685
Totals	**4,512**

Schedule of Classes: the Fall 2008 schedule of classes (class file) was obtained from the Registrar's office. This data presents all courses taught for the fall semester by course, location and meeting times, and was used to create a current baseline of instructional patterns and utilization.

Student Credit Hours: this data file was provided through the Registrar's Office. This data identified the number of student credit hours generated for the Fall 2008 semester by course and level and was used to generate the calculation of classrooms and other instructional spaces.

Space Needs Summary Overview

The following table present overall space needs summaries for the University by division and college and by major space type category. A similar set of summary tables are presented in the next section for the academic colleges and administrative divisions.

Space Needs Summary - Total University

Table 2 summarizes the projected calculated space needs as compared with the existing inventory of space by major division and college grouping:

Table 2: Space Needs by Division

Division	Current Space - 2014	Projected Space Need	Diff from Current Space
Health Affairs	2,957	3,500	-543
College of Clinical & Rehab Health Sciences	38,090	56,612	-18,522
College of Nursing	34,669	40,914	-6,245
College of Pharmacy	21,950	43,427	-21,477
College of Public Health	42,093	53,347	-11,254
James H. Quillen College of Medicine	266,264	310,314	-44,050
Provost/Academic Affairs	153,070	126,753	26,317
College of Arts and Sciences	290,617	416,302	-125,685
College of Business and Technology	82,006	98,001	-15,995
College of Education	68,011	103,634	-35,623
Enrollment Services	16,429	23,662	-7,233
Research and Sponsored Programs	6,608	3,970	2,638
School of Continuing Studies	10,115	14,304	-4,189
Student Affairs	136,629	129,675	6,954
Finance and Administration	61,854	53,330	8,524
President	153,485	162,498	-9,013
University Advancement	7,006	9,678	-2,672
Campus Wide Space	323,822	364,459	-40,637
Totals	**1,715,675**	**2,014,380**	**-298,705**

Summary Findings:

- The total updated comparative space data included in this assessment is 1.715 million assignable square feet.
- The projected calculated net need indicates a deficiency of 298,705 square feet or 17.4% more than the current space. Even though the College of Arts and Sciences had the largest net increase to its space inventory it still has the greatest aggregate need (deficit).
- All of the academic colleges have a net aggregate space need (deficit) of some extent for the future projections.

- Special space needs calculations for the University School and Fall Prevention Clinic were developed that are not incorporated into the University totals. The projected needs for the University School include the consolidation of all programs within a single facility as well as growth in the student enrollment.
- The current square feet figure in Table 2 above for Campus Wide Space includes 21,432 square feet of space that is unassigned and available for reassignment/repurposing to address other unmet needs of the campus.

Space Needs by Space Type - Total University

Table 3 summarizes the projected calculated space needs as compared with the existing inventory of space by major room type grouping:

Table 3: Space Needs by Room Type

	Space Type	Current Space	Projected Space Need	Diff from Current Space
100	Classrooms	147,193	149,133	-1,940
210	Instructional Labs	203,360	272,496	-69,136
250	Research Labs	187,618	214,142	-26,524
300	Offices	504,595	625,493	-120,898
400	Library	139,597	124,712	14,885
500	Special Use Facilities	45,828	46,402	-574
520	Athletic/PE/Recreation	198,954	213,888	-14,934
600	Other General Use	7,969	9,193	-1,224
610	Assembly Facilities	28,818	49,267	-20,449
620	Exhibition	26,037	32,223	-6,186
630	Food Facilities	44,499	43,393	1,106
650	Lounge	19,834	27,203	-7,369
660	Merchandising	17,367	25,938	-8,571
680	Meeting Rooms	33,528	36,957	-3,429
700	Support Facilities	77,086	102,443	-25,357
800	Health Care Facilities	33,392	41,498	-8,106
	Totals	**1,715,675**	**2,014,380**	**-298,705**

Summary Findings:

- The room type category with the greatest projected space need (deficit) is offices followed by instructional labs and research labs.
- In both current and projected instructional and research lab needs, the College of Arts and Sciences has the greatest need (deficit) followed by the Colleges of Medicine and Pharmacy. The College of Pharmacy's future research lab need accounts for the most significant portion of the overall increase of the projected research lab deficit.

- By achieving classroom utilization rates recommended by the THEC criteria, the existing classroom supply is slightly deficient to meet the projected instructional demand.
- Even with recent repurposing of space, the Library space has sufficient capacity to accommodate any foreseeable future growth.
- The assembly space need (deficit) for the entire campus is about 20,500 square feet. The primary deficiency being addressed is for performance facilities in the Music and Theatre programs. Should the existing performance space for Theatre be replaced in the future, approximately 20,000 square feet for the two programs will need to be provided. If the current space is retained than only about 12,000 additional assignable square feet would be needed.
- The campus support space (i.e., storage, shops) is deficient by 25,357 assignable square feet.

College Space Summaries

This section presents the summary findings and results of the space needs assessment for the academic colleges. The aggregate departmental results are displayed in the first table of each section, followed by a summary of the needs by major room type category in the second table.

Provost/VP for Academic Affairs

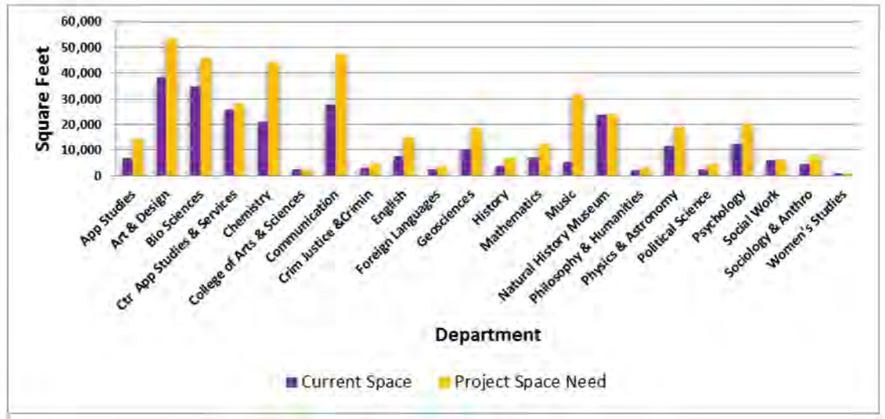
College of Arts and Sciences

Table 4 summarizes the projected space needs as compared with the current space inventory for the departments within the College of Arts and Sciences:

Table 4: Space Needs by Department - College of Arts & Sciences

Department	Current Space	Project Space Need	Diff from Current Space
Appalachian Studies	6,816	14,369	-7,553
Art and Design	49,522	53,491	-3,969
Biological Sciences	34,611	45,905	-11,294
Ctr Appalachian Studies & Services	25,931	28,036	-2,105
Chemistry	21,180	44,148	-22,968
College of Arts and Sciences	2,320	2,473	-153
Communication & Performance	27,771	47,305	-19,534
Criminal Justice and Criminology	2,742	4,834	-2,092
English	7,774	15,141	-7,367
Foreign Languages	2,400	3,651	-1,251
Geosciences	13,439	18,797	-5,358
History	3,520	7,410	-3,890
Mathematics	7,135	12,193	-5,058
Music	5,295	31,713	-26,418
Natural History Museum	34,343	23,974	10,369
Philosophy and Humanities	2,074	3,022	-948
Physics and Astronomy	11,493	19,098	-7,605

Political Science	2,372	4,605	-2,233
Psychology	12,422	20,333	-7,911
Social Work	6,241	6,572	-331
Sociology and Anthropology	10,356	8,492	1,864
Women's Studies	860	741	119
Totals	290,617	416,302	-125,685



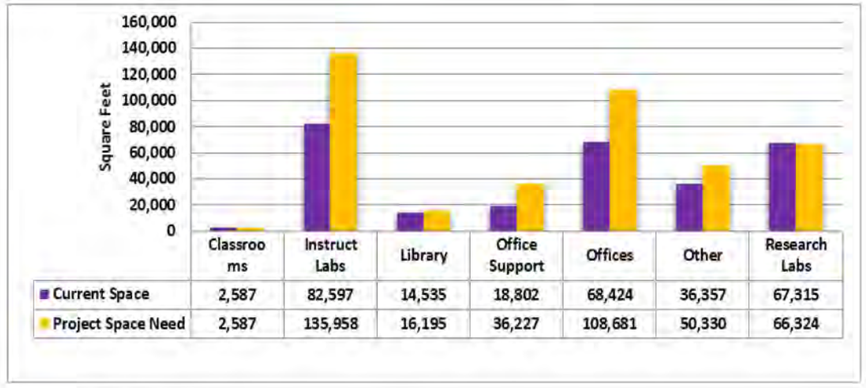
Summary Findings:

- Based on projected enrollments, the deficit will be about 125,685 assignable square feet or 43.2% more than their current assigned space.
- Approximately two-thirds of the need (deficit) for this College is concentrated into two groups of departments: Performing and Fine Arts and the Sciences.
- The performing and fine arts departments (Art and Design, Music and Communications and Performance (Theater and Dance), have a projected net deficit of about 40% of the college's overall need. If the Appalachian Studies department is included in this grouping the deficit would increase to 44%.
- The science departments (Biology, Chemistry, Geosciences and Physics and Astronomy) have a future net deficit totaling about 32% of the college's overall need (deficit).
- Three college departments are directly impacted by the overall future enrollment increase of 25% growth for the University. These departments, English, History and Mathematics have a combined current net deficit of about 11,500 assignable square feet, which increases to 16,300 in the future.
- Most of the other humanities and social science departments, with the exception of Social Work, have relatively significant space deficits.

A college summary of the needs by room type is presented in Table 5 below:

Table 5: Space Needs by Space Type - College of Arts and Sciences

Room Type	Current Space	Project Space Need	Diff from Current Space
Classrooms	2,587	2,587	0
Instructional Labs	82,597	135,958	-53,361
Library	14,535	16,195	-1,660
Office Support	18,802	36,227	-17,425
Offices	68,424	108,681	-40,257
Other	36,357	50,330	-13,973
Research Labs	67,315	66,324	991
Totals	**290,617**	**416,302**	**-125,685**



Summary Findings:

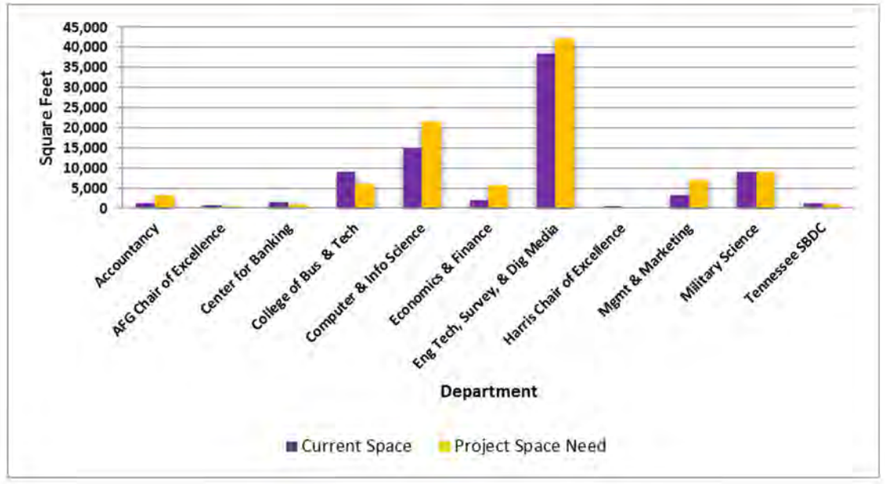
- Instructional laboratory space has the greatest need (deficit) within this college, at 34.2% of the total deficit. The departments of Chemistry, Art and Design and Communications are the top areas with the largest needs.
- Office space (including office support) is the area of the next greatest need (deficit) for the college. About 32% of the current deficit is in office space. Music, English and Appalachian Studies are the top three departments with the largest needs.
- The performing/fine arts and sciences departments make up over 90% of the projected instructional lab deficit and over 42% of the office need.
- The Library space includes the archives area in the Center for Appalachian Studies and Services, and will have a modest future shortfall.
- Over 70% of the future need in the "Other" category is based on the addition of large performance facilities for Music and Theatre/Dance.
- Although the net overall difference in research labs is negligible, there are still future research space needs in Biology, Chemistry, Physics and Psychology.

College of Business and Technology

Table 6 summarizes the projected space needs as compared with the current space inventory for the departments within the College of Business and Technology:

Table 6: Space Needs by Department - Business & Technology

Department	Current Space	Project Space Need	Diff from Current Space
Accountancy	1,270	3,350	-2,080
AFG Chair of Excellence	615	455	160
Center for Banking	1,465	1,037	428
College of Business & Technology	9,110	5,905	3,205
Computer and Information Science	14,994	21,625	-6,631
Economics and Finance	2,105	5,820	-3,715
Engin Tech, Surveying & Digital Media	38,455	42,299	-3,844
Harris Chair of Excellence	445	247	198
Management & Marketing	3,354	7,087	-3,733
Military Science	8,945	9,070	-125
Tennessee Small Business Dev Ctr	1,248	1,106	142
Totals	**82,006**	**98,001**	**-15,995**



Summary Findings:

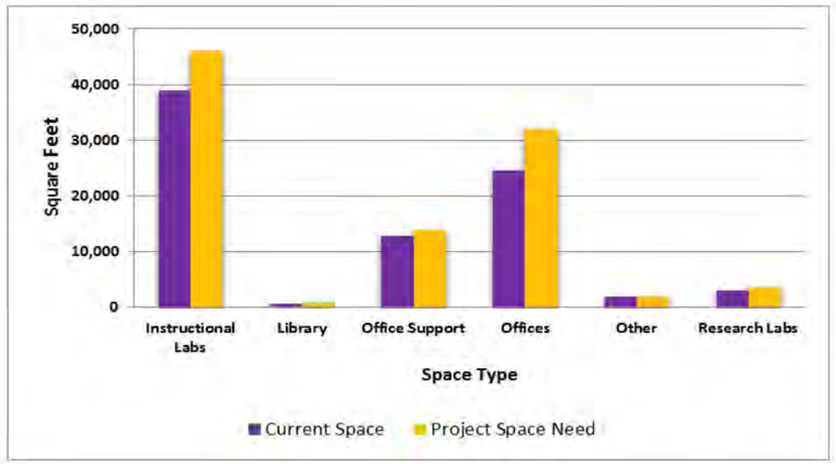
- The College of Business and Technology's future calculated need (deficit) is just under 16,000 assignable square feet or 19.5% more than their current space.
- Computer and Information Science, Engineering Technology and Management and Marketing are the three departments with the greatest needs (deficits).

- The calculated surplus indicated for the Dean's Office is essentially offset by some of the departmental needs, as certain types of space such as conference rooms are centrally assigned to the Dean; however the need is reported within each department.

Room Type	Current Space	Project Space Need	Diff from Current Space
Instructional Labs	38,920	45,956	-7,036
Library	736	811	-75
Office Support	12,842	13,940	-1,098
Offices	24,672	31,959	-7,287
Other	1,872	1,872	0
Research Labs	2,964	3,464	-500
Totals	**82,006**	**98,001**	**-15,995**

A college summary of the needs by room type is presented below in Table 7:

Table 7: Space Needs by Space Type- College of Business and Technology



Summary Findings:

- Offices (including support) and instructional labs virtually make up the entire deficit in this College.
- The aggregate projected office need (deficit) is 8,385 assignable square feet with most this need being strictly offices.

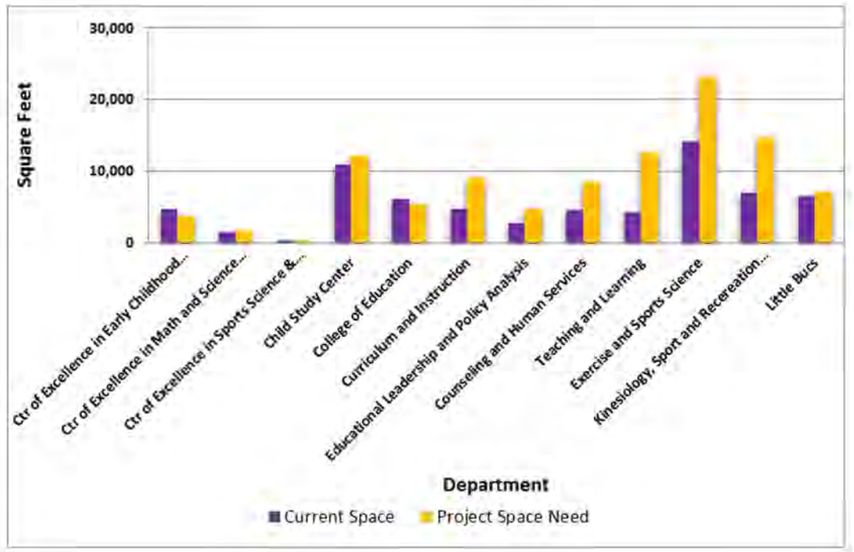
- Approximately two-thirds of the future office need is in faculty offices followed by graduate student offices. Management and Marketing and Economics and Finance have the greatest office needs.
- The instructional lab need is concentrated in the Computer and Information Science and Engineering Technology departments. *Note: the lab needs do not reflect any future needs for the proposed Engineering program, which will be addressed within the College's current space allocation. Also, the space needs for the proposed Engineering Design and Innovation Center facility are yet to be determined and are not contained herein.*

College of Education

Table 8 summarizes the projected space needs as compared with the current space inventory for the departments within the College of Education. A special assessment of the University School space needs was also conducted and the summary results are presented independent of the rest of the College.

Table 8: Space Needs by Department - College of Education

Department	Current Space	Project Space Need	Diff from Current Space
Ctr of Excellence in Early Childhood Education	4,725	3,767	958
CTR of Excellence in Math and Science Education	1,510	1,820	-310
Ctr of Excellence in Sports Science & Coaching	400	351	49
Child Study Center	10,989	12,191	-1,202
College of Education	6,105	5,441	664
Curriculum and Instruction	4,770	9,047	-4,277
Educational Leadership and Policy Analysis	2,820	4,756	-1,936
Counseling and Human Services	4,595	8,609	-4,014
Teaching and Learning	4,310	12,633	-8,323
Exercise and Sports Science	14,162	23,045	-8,883
Kinesiology, Sport and Recreation Management	7,031	14,777	-7,746
Little Bucs	6,594	7,198	-604
Totals	**68,011**	**103,634**	**-35,623**
University School	**31,639**	**81,270**	**-49,631**



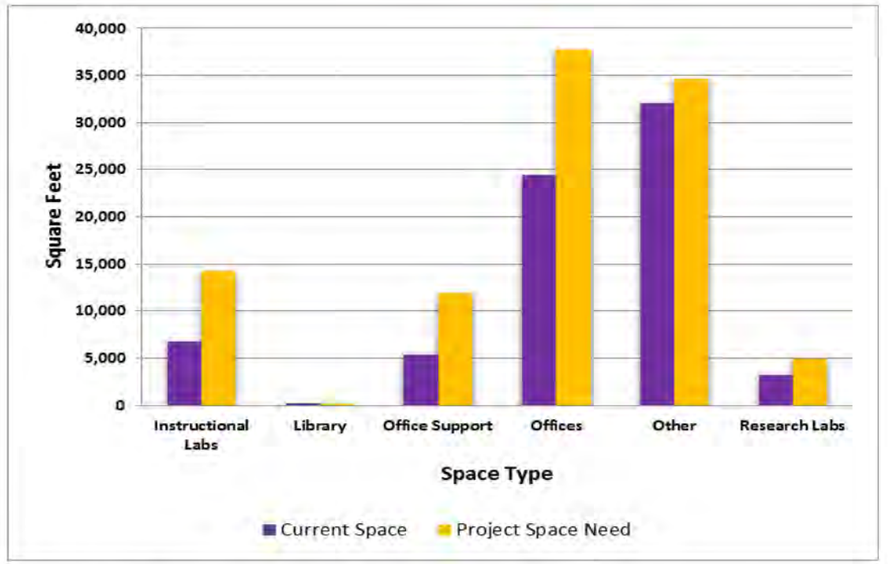
Summary Findings:

- The College of Education's projected net calculated need (deficit) is 35,623 assignable square feet or 52.3% more than their current space.
- Two departments identified in the 2010 study have subsequently been subdivided into four departments. Human Development and Learning is now Counseling and Human Services and Teaching and Learning. Kinesiology, Leisure and Sports Sciences is now Exercise Science and Kinesiology, Sport and Recreation Management. The proration of both space and need has been estimated based on input received from the College.
- All of the academic departments show some level of need (deficit). The centers and the college office however have sufficient space. Exercise Science and Teaching and Learning have the greatest future needs, followed by Kinesiology, Sport and Recreation Management.
- A separate assessment of the University School was conducted, and the results are not included with the College totals. The results of this assessment indicate a future need (deficit) exceeding 49,600 assignable square feet that assumes increasing the current enrollment. A new facility or major addition would therefore be required to accommodate the space needs, which would also consolidate all of its current operations and moving them out of other University facilities. The detailed space needs calculation for the University School is included in the Appendices to this section.

A college summary of the needs by room type is presented in Table 9 below:

Table 9: Space Needs by Space Type - College of Education

Room Type	Current Space	Project Space Need	Diff from Current Space
Instructional Labs	6,790	14,236	-7,446
Library	185	185	0
Office Support	5,407	11,914	-6,507
Offices	24,398	37,714	-13,316
Other	27,966	34,634	-6,668
Research Labs	3,265	4,950	-1,685
Totals	**68,011**	**103,634**	**-35,623**



Summary Findings:

- Office space (including support) is the greatest area of need (deficit) in both the current and projected scenarios, followed by instructional labs. The future office space need (deficit) is almost 63% of the total deficit.
- Most of the office deficit is in student offices (graduate and student workers), with a deficit of over 7,900 assignable square feet in faculty offices.
- A calculated need (deficit) for student worker office space of 1,230 assignable square feet was also identified. All or part of this need may be currently met by a surplus identified in the staff office category.

- Exercise Science has the greatest need (deficit) in the instructional lab space type category.
- Exercise Science has the only research lab need for the College.

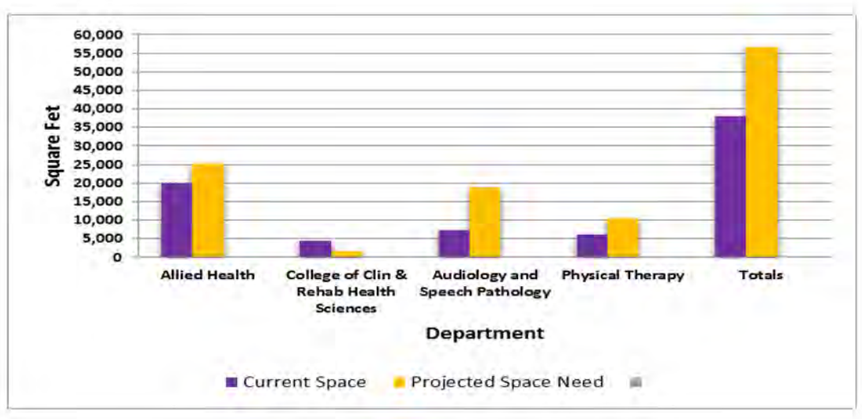
Health Affairs

Clinical and Rehabilitation Health Sciences

Table 10 summarizes projected space needs as compared with the current space inventory for the departments within the College of Clinical and Rehabilitation Health Sciences.

Table 10: Space Needs by Department - College of Clinical & Rehab Health Sciences

Department	Current Space	Projected Space Need	Diff from Current Space
Allied Health	20,009	25,301	-5,292
College of Clinical & Rehab Health Sciences	4,585	1,719	2,866
Audiology and Speech Pathology	7,256	18,948	-11,692
Physical Therapy	6,240	10,645	-4,405
Totals	**38,090**	**56,612**	**-18,522**



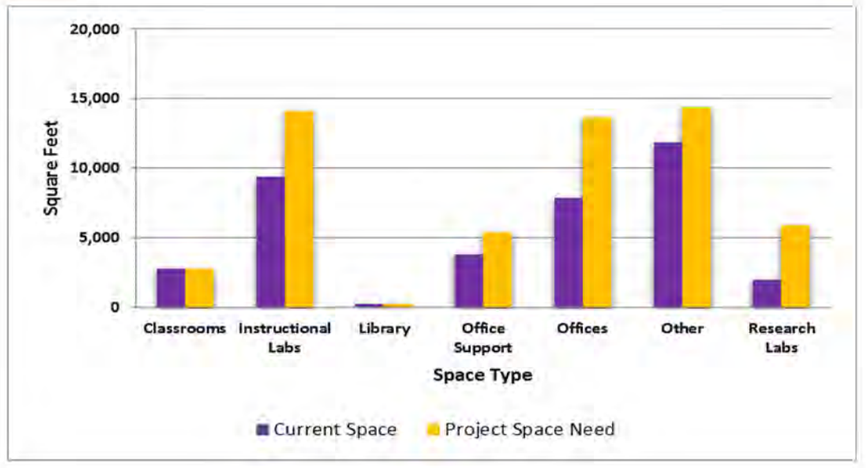
Summary Findings:

- The College of Clinical and Rehabilitative Science future calculated need (deficit) is just over 18,500 assignable square feet or 48.6 % more than their current space.
- Audiology and Speech Pathology has the greatest future square feet need of any of the departments, with Physical Therapy and Allied Health showing the next greatest needs. Physical Therapy shows the most substantial future need based on a percentage of current space.

A college summary of the needs by room type is presented in Table 11 below:

Table 11: Space Needs by Space Type - College of Clinical & Rehab Health Sciences

Space Type	Current Space	Projected Space Need	Diff from Current Space
Classrooms	2,817	2,817	0
Instructional Labs	9,420	14,115	-4,695
Library	261	261	0
Office Support	3,819	5,402	-1,583
Offices	7,909	13,671	-5,762
Other	11,884	14,434	-2,550
Research Labs	1,980	5,911	-3,931
Totals	**38,090**	**56,612**	**-18,522**



Summary Findings:

- Classroom space located in the Nave Center is assigned to Allied Health and because of its remote location it is not counted as part of the University's classroom pool. This space is considered to be sufficient to address any future enrollment growth.
- Offices and lab space (both instructional and research) are the areas of greatest need.
- All of the academic departments have a modest need for additional instructional lab space, with Physical Therapy having the most. Allied Health will likely need to add another lab to meet future requirements.
- All of the academic departments have a need for additional research lab space, with Audiology and Speech Pathology having the greatest deficit.
- A further breakdown of the office need indicates most of the current need (deficit) is in graduate offices. The need (deficit) for faculty offices will become the primary office type required in the future (primarily for adjuncts) followed by graduate offices.
- Most of the office shortfall is in the Department of Allied Health.
- The deficit in the "Other" category is due to a significant increase in clinical space required for Audiology and Speech Pathology (approximately another 4,500 assignable square feet). Also a separate clinical space is included for Physical Therapy at the Nave Center.

Nursing

The following table summarizes the projected space needs as compared with the current space inventory for the programs within the College of Nursing:

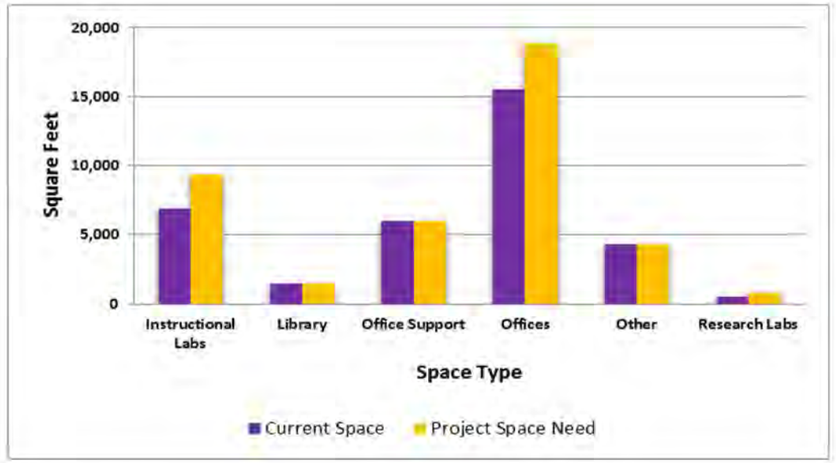
Table 12: Space Needs - College of Nursing

Department	Current Space	Project Space Need	Diff from Current Space
College of Nursing	34,669	40,914	-6,245

A college summary of the needs by room type is presented in Table 13 below:

Table 13: Space Needs by Space Type - College of Nursing

Space Type	Current Space	Project Space Need	Diff from Current Space
Instructional Labs	6,870	9,385	-2,515
Library	1,470	1,470	0
Office Support	5,999	6,028	-29
Offices	15,515	18,909	-3,394
Other	4,325	4,325	0
Research Labs	490	798	-308
Totals	**34,669**	**40,914**	**-6,245**



Summary Findings:

- For this analysis the programs within the College have been combined.
- The College of Nursing's projected net calculated need (deficit) is 6,245 assignable square feet or 18 % more than their current space.
- The greatest need (deficit) by room type is for offices. A need for more faculty office space is indicated, along with more graduate student offices. Additional staff office space was also identified as a possible need.
- A need (deficit) for instructional labs is indicated. This future instructional lab need includes an additional skills lab along with several more simulation labs.

Pharmacy

Table 14 summarizes the projected space needs as compared with the current space inventory for the programs within the College of Pharmacy:

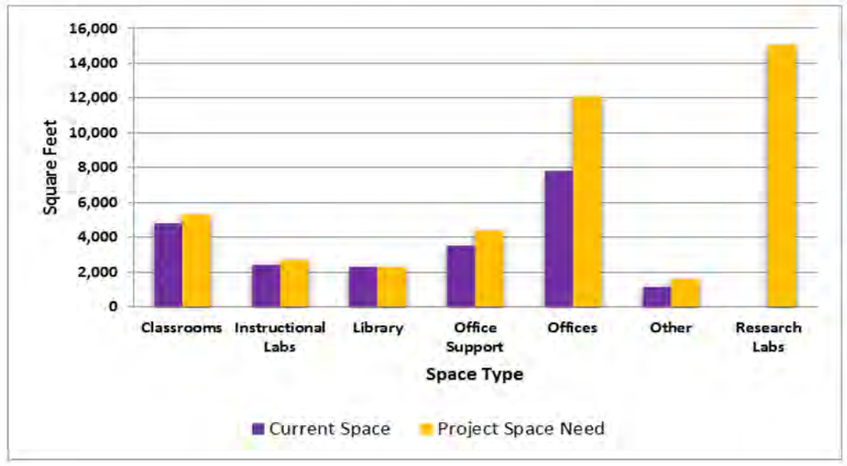
Table 14: Space Needs - College of Pharmacy

Department	Current Space	Projected Space Need	Diff from Current Space
College of Pharmacy	21,950	43,427	-21,477

A college summary of the needs by room type is presented in Table 15 below:

Table 15: Space Needs by Space Type - College of Pharmacy

Space Type	Current Space	Project Space Need	Diff from Current Space
Classrooms	4,805	5,300	-495
Instructional Labs	2,440	2,730	-290
Library	2,285	2,285	0
Office Support	3,500	4,367	-867
Offices	7,785	12,090	-4,305
Other	1,135	1,615	-480
Research Labs	0	15,040	-15,040
Totals	**21,950**	**43,427**	**-21,477**



Summary Findings:

- For this analysis the programs within the College have been combined.
- The College of Pharmacy's projected need (deficit) is 21,477 assignable square feet or 97.8% more than their current space.
- The greatest current need (deficit) is for research laboratories. Note: the College currently uses research labs assigned to other colleges.
- Modest expansions to their classroom and teaching lab facilities would better accommodate the existing enrollment.

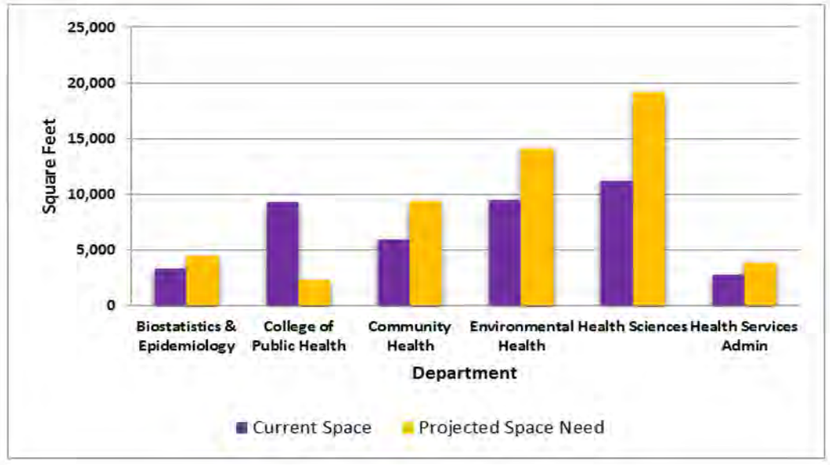
- The projected space needs were developed based on a growth model developed by the College to address accreditation requirements and to meet other future facility and staffing expectations. The projected needs provide office space for growth in staffing as well as research space. THEC guidelines have been applied as applicable to correspond with the proposed program.
- The increase in the future office space need is due to both the proposed staffing additions as well as providing on-campus office space for existing "co-funded" faculty.

Public Health

Table 16 summarizes the projected space needs as compared with the current space inventory for the departments within the College of Public Health:

Table 16: Space Needs by Department - College of Public Health

Department	Current Space	Projected Space Need	Diff from Current Space
Biostatistics and Epidemiology	3,325	4,510	-1,185
College of Public Health	9,340	2,302	7,038
Community Health	5,922	9,353	-3,431
Environmental Health	9,482	14,120	-4,638
Health Sciences	11,233	19,221	-7,988
Health Services Administration	2,791	3,841	-1,050
Totals	**42,093**	**53,347**	**-11,254**



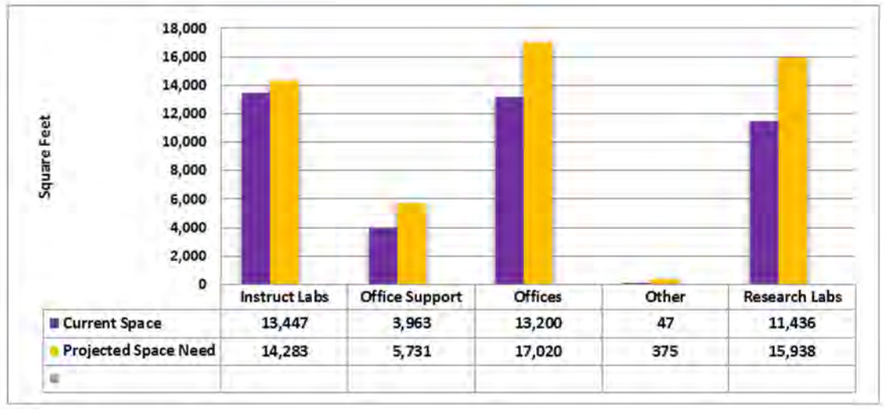
Summary Findings:

- The College of Public Health's future calculated need (deficit) is 11,254 assignable square feet or 26.7 % more than their current space.
- The results for all of the academic departments, identifies a projected need (deficit).
- The Department of Health Sciences has the greatest need followed by Environmental Health in terms of aggregate square feet needs.

A college summary of the needs by room type is presented in Table 17 below:

Table 17: Space Needs by Room Type - College of Public Health

Space Type	Current Space	Projected Space Need	Diff from Current Space
Instructional Labs	13,447	14,283	-836
Office Support	3,963	5,731	-1,768
Offices	13,200	17,020	-3,820
Other	47	375	-328
Research Labs	11,436	15,938	-4,502
Totals	**42,093**	**53,347**	**-11,254**



Summary Findings:

- The College will have a space shortage in every space type category.
- Offices and research space indicate having the greatest current needs (deficits). Instructional labs will have a modest deficit.
- All of the academic departments have a need for additional research space. The three former Department of Public Health programs have needs for collaborative, group research space (project rooms) which are recognized. Health Sciences and Environmental Health have the greatest current research lab space needs. This order is reversed in the future.
- Health Sciences and Health Service Administration are the two departments with the greatest current office space need (deficits). Health Sciences will have the greatest aggregate need in the future. All of the departments, including the Dean's office, will have some level of an office shortfall in the future.
- The office space need consists of student worker offices, some administrative space, graduate student offices and faculty offices. A significant portion of the faculty office needs are related to adjuncts.

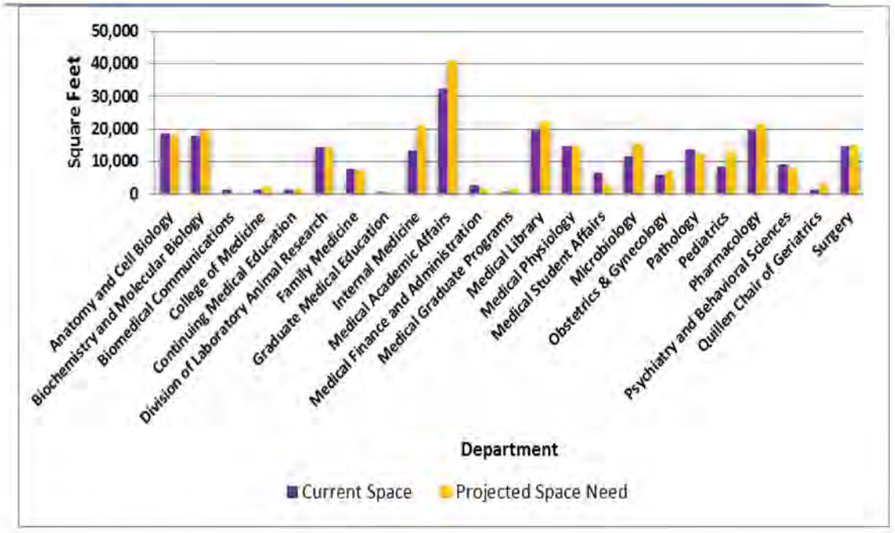
James H. Quillen College of Medicine

Table 18 summarizes the projected space needs as compared with the current space inventory for the departments within the James H. Quillen College of Medicine. The table is subdivided between the College departments located on the Johnson City VA Campus and three clinical facilities that are off-site but are included in the assessment. This separation of operations is intended to present a more accurate needs profile for the VA Campus.

Table 18: Space Needs by Department - College of Medicine

Department	Current Space	Projected Space Need	Diff from Current Space
Anatomy and Cell Biology	18,588	17,810	778
Biochemistry and Molecular Biology	17,859	19,566	-1,707
Biomedical Communications	1,206	0	1,206
College of Medicine	1,516	2,488	-972
Continuing Medical Education	1,496	1,846	-350
Division of Laboratory Animal Research	14,570	14,347	223
Family Medicine	7,711	7,412	299
Graduate Medical Education	801	689	112
Internal Medicine	13,413	21,157	-7,744
Medical Academic Affairs	32,405	40,903	-8,498
Medical Finance and Administration	2,896	1,703	1,193
Medical Graduate Programs	732	1,543	-811
Medical Library	19,774	22,595	-2,821
Medical Physiology	14,650	14,638	12
Medical Student Affairs	6,677	2,855	3,822
Microbiology	11,457	15,445	-3,988
Obstetrics & Gynecology	5,990	7,050	-1,060
Pathology	13,712	12,368	1,344
Pediatrics	8,295	12,833	-4,538
Pharmacology	19,555	21,335	-1,780
Psychiatry and Behavioral Sciences	9,025	7,825	1,201
Quillen Chair of Geriatrics	1,340	3,125	-1,785
Surgery	14,897	15,083	-186
Totals-VA Campus	**238,565**	**264,615**	**-26,050**
Family Medicine - Bristol Clinic	12,422	17,227	-4,805
Family Medicine - Johnson City Clinic	8,095	15,973	-7,878
Family Medicine - Kingsport Clinic	7,182	12,500	-5,318

Department	Current Space	Projected Space Need	Diff from Current Space
Totals- Off Site Clinics	27,699	45,700	-18,001
Totals	266,264	310,314	-44,050



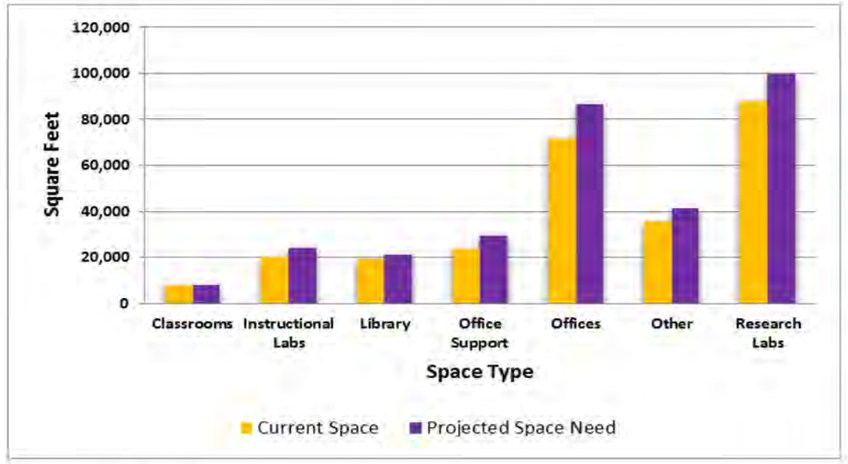
Summary Findings:

- The College of Medicine's projected need (deficit) is 44,050 assignable square feet or 16.5 % more than their current space. Note: the Biomedical Communications program has been added since the original study and a calculated need was not developed for this unit.
- The three Family Medicine clinical facilities have a combined future deficit of r 18,000 assignable square feet (about 65% more than current*). Note: the existing space for the Kingsport facility still reflects the old building which is being utilized in the interim until the new building is ready for use.*
- For analysis purposes all of the instructional space for the College has been assigned to the Medical Academic Affairs department. Because of this consolidation of these assignments Medical Academic Affairs has the greatest space need (deficit) of all of the units in the College. Internal Medicine and Pediatrics are the two academic departments showing the greatest current and future needs.

A college summary of the needs by room type is presented in Table 19 below:

Table 19: Space Needs by Room Type - College of Medicine

Space Type	Current Space	Projected Space Need	Diff from Current Space
Classrooms	7,929	7,929	0
Instructional Labs	20,155	23,989	-3,834
Library	19,372	21,105	-1,733
Office Support	23,827	29,505	-5,678
Offices	71,522	86,783	-15,261
Other	35,586	41,149	-5,563
Research Labs	87,873	99,854	-11,981
Totals	**266,264**	**310,314**	**-44,050**



Summary Findings:

- The greatest need (deficit) by space type in this College is for offices followed by research labs.
- On the VA Campus the departments of Internal Medicine and Pediatrics have the greatest needs (deficits) for offices, both current and projected. The three Family Medicine clinics have an aggregate need (deficit) doubling their current assigned office space.
- The VA Campus departments have a significant shortfall in faculty of 35% in the long term. Some additional staff offices are also needed. The VA Campus departments also have a calculated office support space need that more than doubles the current space. The opposite is the case for the Family Medicine clinics, where there is a significant need for staff offices and a more modest need for faculty offices. The office support needs for the clinics is also sizable.

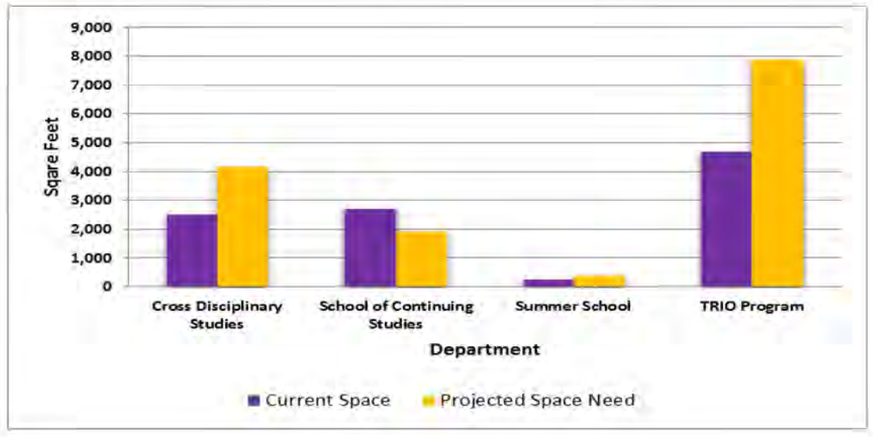
- Research space for the college will be deficient by 13.6%. Of the thirteen departments that have research space six have sufficient space and seven have needs (deficits) ranging from several hundred to several thousand square feet. Internal Medicine, Pediatrics and Biochemistry all indicated needs.
- The College has about a 19% shortfall for instructional lab space. Additional simulation labs are recognized within this need as well as a number of project rooms for collaborative work and study among the students. These project rooms are assumed to meet the stated requirement for student study space.
- The deficit identified under the "other" space category relates to the clinical space needs for the three Family Practice clinics. There is a current need (deficit) is at the Johnson City facility, while future deficits are identified at all three. The clinical deficit is about 50% greater than the current space assigned.

School of Continuing Studies

Table 20 summarizes the projected space needs as compared with the current space inventory for the departments within the School of Continuing Studies:

Table 20: Space Needs - School of Continuing Studies

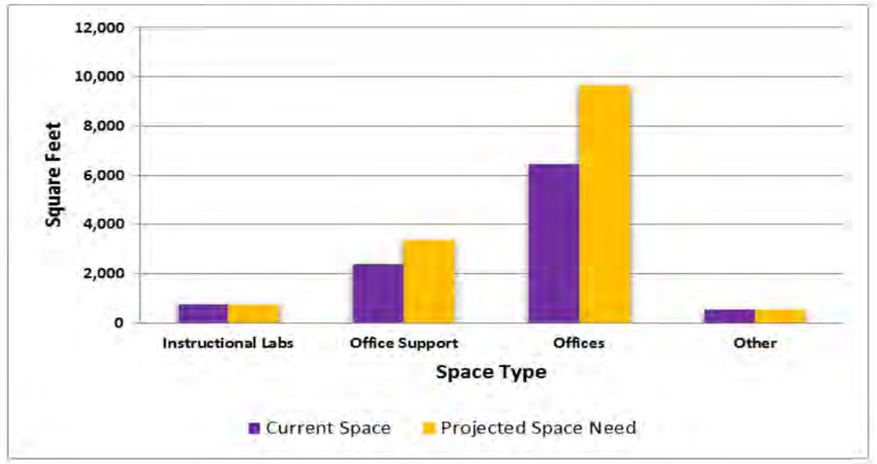
Department	Current Space	Projected Space Need	Diff from Current Space
Cross Disciplinary Studies	2,493	4,157	-1,664
School of Continuing Studies	2,687	1,907	780
Summer School	250	364	-114
TRIO Program	4,685	7,876	-3,191
Totals	**10,115**	**14,304**	**-4,189**



A summary of the needs by room type is presented in Table 21 below:

Table 21: Space Needs by Space Type - School of Continuing Studies

Space Type	Current Space	Projected Space Need	Diff from Current Space
Instructional Labs	740	740	0
Office Support	2,376	3,366	-990
Offices	6,454	9,653	-3,199
Other	545	545	0
Totals	**10,115**	**14,304**	**-4,189**



Summary Findings:

- The School of Continuing Studies' projected need (deficit) is almost 4,200 square feet or 41.4 % more than their current space.
- The TRIO Program and Cross Disciplinary Studies departments have almost all of the identified deficits.
- Based on office type, 60% of the projected deficit is in student worker office space and unmet needs for graduate student offices. There is a need to double the administrative office space.

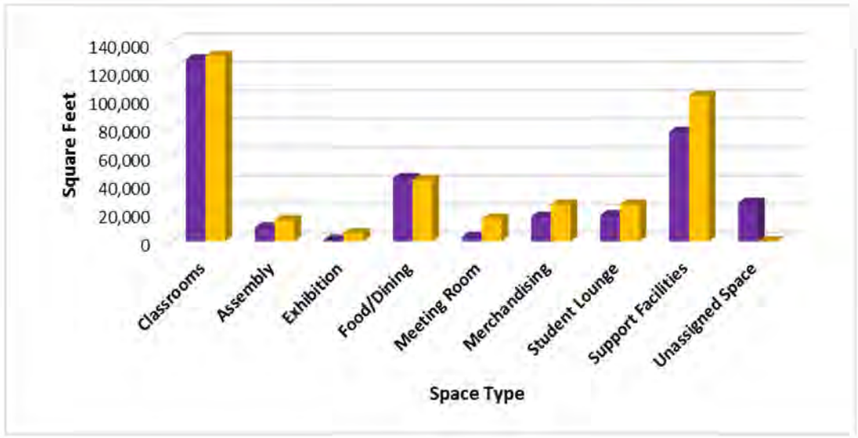
Campus-Wide Space

Certain types of space on campus are generic in their use and typically are shared by various University users. These types of space are considered to be University resources and not necessarily assigned to a specific department. These "campus-wide" spaces have therefore been assigned and identified in a separate category for analysis and modeling purposes for this study.

A summary of the Campus-Wide needs by major room type is presented in Table 22 below:

Table 22: Space Needs - Campus-Wide

Space Type	Current Space	Project Space Need	Diff from Current Space
Classrooms	128,118	130,500	-2,382
Assembly	9,775	14,969	-5,194
Exhibition	1,093	5,819	-4,726
Food/Dining	44,499	43,393	1,106
Meeting Room	3,304	15,960	-12,656
Merchandising	17,367	25,938	-8,571
Student Lounge	18,438	25,938	-7,500
Support Facilities	77,086	102,443	-25,357
Unassigned Space	27,103	0	27,103
Totals	**326,783**	**364,958**	**-38,175**



Summary Findings:

- Within the aggregated campus-wide category the net need (deficit) is 41,137 square feet, or 12.7% more than the currently assigned space.
- The support facilities category generates the greatest need (deficit) has a future deficit of almost 26,488 assignable square feet. This space type grouping encompasses such areas as general storage, shops, waste storage and vehicular storage. Meeting room space is the next area of greatest needs. All of the categories indicate some level of deficiency.
- Classroom space located on the Johnson City main campus has been grouped in this category irrespective of who schedules the rooms. Classrooms assigned to the Colleges of Medicine and Pharmacy as well as those located at the Nave Center and Natural History Museum have been assigned directly to those units and are not included in this summary. The calculated needs assume the University can achieve the utilization criteria specified by the THEC space guidelines. Therefore, based on the calculated square footage, a modest deficit is indicated.
- Most of the other categories relate to student life spaces. The most significant deficiencies impacting student life are in student lounges and meeting room space.
- The current square feet figure includes over 27,000 square feet of space. This space has been classified as unassigned and available for reassignment/repurposing to address other unmet needs of the campus.

Academic and Administrative Support Departments

The following section presents summary data by division for the academic and administrative support departments for the University.

Provost/Academic Affairs

Provost/Academic Affairs

Table 23 summarizes the projected space needs as compared with the current space inventory for the departments within the Provost's Office and other academic support direct reports.

Table 23: Space Needs by Department - Provost

Department	Current Space	Projected Space Need	Diff from Current Space
Academic Affairs	37,957	11,575	26,382
Academic Technology Support	7,151	8,304	-1,153
Faculty Senate	460	440	20
Honors College	8,899	8,074	825
Office of Planning & Assessment	1,530	1,459	71
School of Graduate Studies	3,620	3,078	542
Sherrod Library	93,453	93,822	-369
Totals	**153,070**	**126,753**	**26,317**

A summary of the needs by room type is presented in Table 24 below:

Table 24: Space Needs by Space Type - Provost

Space Type	Current Space	Projected Space Need	Diff from Current Space
Instructional Labs	16,824	3,240	13,584
Library	92,726	81,702	11,024
Office Support	9,683	9,093	590
Offices	22,198	22,160	38
Other	9,776	8,694	1,082
Research Labs	1,863	1,863	0
Totals	**153,070**	**126,753**	**26,317**

Summary Findings:

- The Academic Technology Support department is the only unit indicating a significant net space need (deficit). The need is for additional office and office support space.

Enrollment Services

Table 25 summarizes the projected space needs as compared with the current space inventory for the departments within the Enrollment Services group:

Table 25: Space Needs by Department - Enrollment Services

Department	Current Space	Projected Space Need	Diff from Current Space
Admissions	6,409	10,667	-4,258
Financial Aid Office	4,745	6,724	-1,979
Registrar	5,275	6,271	-996
Totals	**16,429**	**23,662**	**-7,233**

A summary of the needs by room type is presented in Table 27 below:

Table 26: Space Needs by Space Type - Enrollment Services

Space Type	Current Space	Projected Space Need	Diff from Current Space
Office Support	6,177	9,069	-2,892
Offices	10,252	13,432	-3,180
Other	0	1,160	-1,160
Totals	**16,429**	**23,662**	**-7,233**

Summary Findings:

- The Enrollment Services departments' projected calculated need (deficit) is 7,233 assignable square feet or 44 % more than their current space.
- All of the departments indicate some level of a space shortage.
- All of the office types indicate a deficit in the future. Student worker and graduate student offices have the greatest need (deficit). The office service category also has a calculated future deficit of 2,892 assignable square feet.

Research and Sponsored Programs

Table 27 summarizes the projected space needs as compared with the current space inventory for the departments within the Research and Sponsored Programs group:

Table 27: Space Needs by Department - Research and Sponsored Programs

Department	Current Space	Projected Space Need	Diff from Current Space
Center for Community Outreach	2,465	1,885	580
Office of Research and Sponsored Programs Admin	4,143	2,085	2,058
Totals	**6,608**	**3,970**	**2,638**

A summary of the needs by room type is presented in Table 28 below:

Table 28: Space Needs by Space Type - Research and Sponsored Programs

Space Type	Current Space	Projected Space Need	Diff from Current Space
Office Support	2,519	1,120	1,399
Offices	4,089	2,850	1,239
Totals	**6,608**	**3,970**	**2,638**

Summary Findings:

- The two departments in this grouping appear to be adequately housed.

Student Affairs

Table 29 summarizes the projected space needs as compared with the current space inventory for the departments within the Student Affairs group:

Table 29: Space Needs by Department - Student Affairs

Department	Current Space	Projected Space Need	Diff from Current Space
Advisement Resources, Career Ctr.	11,255	11,486	-231
Campus ID Services	700	897	-197
Campus Recreation	75,302	71,919	3,383
Counseling Center	2,775	4,144	-1,369
Disability Services	3,334	3,524	-190
East Tennessean Newspaper	961	1,163	-202
Housing and Residence Life	3,100	2,936	164
Student Affairs Division	2,773	2,844	-71
Student Org Resource Center	11,391	8,865	2,526
University Center	25,038	21,897	3,141
Totals	**136,629**	**129,675**	**6,954**

A summary of the needs by room type is presented in Table 30 below:

Table 30: Space Needs by Space Type - Student Affairs

Space Type	Current Space	Projected Space Need	Diff from Current Space
Instructional Labs	165	165	0
Library	320	320	0
Office Support	13,736	13,159	577
Offices	22,503	25,889	-3,386
Other	99,905	90,132	9,773
Totals	**136,629**	**129,665**	**6,964**

Summary Findings:

- The Counseling Center has the only significant space deficit (need) primarily in office space including support space.
- The Student Organization Resource Center in their existing space includes an area of the Culp Center previously occupied by the Welcome Center, and is scheduled to be developed into a multicultural center. No corresponding need for this center is included with this analysis.
- Campus recreation space appears to be sufficient. This is reflected in the department total and is a part of the "Other" category.
- Meeting room space is also identified as contributing to the surplus in the "Other" category. Although the aggregate square feet of meeting room space assigned to the University Center is sufficient, the number of meeting rooms appears to be inadequate to meet the demand.

Finance and Administration

Table 31 summarizes the projected space needs as compared with the current space inventory for the departments within the Finance and Administration division:

Table 31: Space Needs by Department - Finance and Administration

Department	Current Space	Projected Space Need	Diff from Current Space
Budget and Financial Planning	891	944	-53
Facilities Management	16,677	7,735	8,942
Finance and Administration	751	796	-45
Financial Services	9,857	8,071	1,786
Human Resources	4,958	4,744	214
Information Technology	22,318	25,284	-2,966
Parking and Transportation Services	1,641	751	890
Procurement and Contract Services	2,541	2,691	-150
Public Safety	2,220	2,314	-94
Totals	**61,854**	**53,330**	**8,524**

A summary of the needs by room type is presented in Table 32 below:

Table 32: Space Needs by Space Type - Finance and Administration

Space Type	Current Space	Projected Space Need	Diff from Current Space
Instructional Labs	8,890	10,700	-1,810
Office Support	15,191	14,792	399
Offices	31,898	25,058	6,840
Other	5,875	2,780	3,095
Totals	**61,854**	**53,330**	**8,524**

Summary Findings:

- The Office of Information Technology has the greatest need (deficit). The needs for this department are mostly in the office and office support categories with some future need identified for additional campus open computer labs.
- The needs (deficits) identified for the other departments in this division are for more office service/support space.

Health Affairs

Table 33 summarizes the projected space needs as compared with the current space inventory for the departments within the Health Affairs administrative group:

Table 33: Space Needs by Department - Health Affairs

Department	Current Space	Projected Space Need	Diff from Current Space
Health Affairs	1,140	1,584	-444
Rural and Community Health	1,817	959	858
Totals	**2,957**	**2,543**	**414**
Falls Prevention Center	**331**	**1,750**	**-1,419**

Table 34: Space Needs by Space Type - Health Affairs

Space Type	Current Space	Projected Space Need	Diff from Current Space
Office Support	1,202	955	247
Offices	1,755	1,588	167
Totals	**2,957**	**2,543**	**414**

Summary Findings:

- The Department of Health Affairs requires a few more additional offices. The other department is adequately housed.
- A separate needs assessment was completed for the Fall Prevention Center. Additional clinical space will be required for this operation in the future.

President

Table 35 summarizes the projected space needs as compared with the current space inventory for the departments reporting to the President's Office:

Table 35: Space Needs by Department - President

Department	Current Space	Projected Space Need	Diff from Current Space
Intercollegiate Athletics	142,318	150,020	-7,702
Internal Audit	1,475	862	613
Office of Equity and Diversity	614	520	94
Office of University Counsel	910	958	-48
President's Office	3,190	2,888	302
University Relations	2,686	3,557	-871
University Relations/WETS	2,292	3,343	-1,051
Women's Resource Center	0	351	-351
Totals	**153,485**	**162,498**	**-9,013**

A summary of the needs by room type is presented Table 36 below:

Table 36: Space Needs by Room Type - President

Space Type	Current Space	Projected Space Need	Diff from Current Space
Library	378	378	0
Office Support	6,130	7,209	-1,079
Offices	19,015	15,712	3,303
Other	127,962	139,200	-11,238
Totals	**153,485**	**162,498**	**-9,013**

Summary Findings:

- Intercollegiate Athletics, University Relations and University Relations/WETS are the departments in this division with space needs (deficits) identified. The deficit under the "Other" space type category relates to athletic space requirements for Intercollegiate Athletics. The needs for the other departments are for additional office and office support space.
- Five of the eight departments have office support shortfalls.

University Advancement

Table 37 summarizes the projected space needs as compared with the current space inventory for the departments within University Advancement:

Table 37: Space Needs by Department - University Advancement

Department	Current Space	Projected Space Need	Diff from Current Space
University Advancement	7,006	9,678	-2,672

A summary of the needs by room type is presented in Table 38 below:

Table 38: Space Needs by Space Type - University Advancement

Space Type	Current Space	Projected Space Need	Diff from Current Space
Office Support	2,448	2,828	-380
Offices	4,320	6,250	-1,930
Other	238	600	-362
Totals	**7,006**	**9,678**	**-2,672**

Summary Findings:

- For assessment purposes the offices within this division have been combined.
- A shortfall of just over 38% compared with their current assigned space will occur if projected staffing levels are achieved.

Recommended Migration Plan

An implementation or migration plan was developed as part of this assessment to present a scenario of steps necessary to achieve the projected space needs identified from this study. The steps outlined in this plan for achieving the future space requirement for the University are based on the following assumptions:

- The projected calculated space needs can be addressed through new construction, facility renovations and the reuse/backfilling of vacated areas created from the relocation of departments. It is assumed funding to implement one or more of these solutions will be available during the planning period.
- Capital projects that are at some stage of planning will be implemented. These include a new Fine Arts Building and the Lamb Hall Addition.
- Construct one or two new academic facilities located in or near the eastern quadrant of the campus.
- At least one existing, older residence hall will be available for reuse/repurposing to administrative office uses.
- To the most feasible extent possible, consolidate academic colleges/departments that are currently located in multiple facilities.
- Eliminate the use of the houses located along Maple Street.

Key concepts of the recommended migration plan are highlighted below.

- Construct a new Fine Arts facility to house the future needs of the Department of Music, the Division of Theatre and Dance of the Department of Communications and Performance and the Appalachian Studies/Bluegrass program. A new art gallery will also be included along with classrooms.
- The Department of Art and Design will backfill the spaces vacated in Burleson Hall and Mathes Hall to meet their future needs and to consolidate the program into a contiguous three facility complex along with the Art Annex.
- Construct a new Humanities Building to accommodate the needs of English, presently housed in Burleson Hall, and humanities and social science units currently located in Rogers-Stout Hall. Psychology and Political Science will expand in Rogers - Stout Hall. Psychology will be consolidated with the exception of the Lucille Clement clinic space.
- Repurpose Stone Hall (former residence hall) for administrative offices and relocate functions like the Advising Resource Center out of the Culp Center. *Note: current space assigned to the Advising Resource Center in the Culp Center is roughly equivalent to the available assignable square feet in Stone Hall. The space released in Culp will be backfilled by student services space needs such as lounges and meeting rooms.*
- Should a new academic building be located in the eastern quadrant several of the former residences along Maple Street will be removed, thereby requiring new

quarters for the functions that are displaced. The School of Continuing Studies and its related academic programs and services will be relocated to vacated space in the Campus Center; Transfer Articulation and Internal Audit will move to the Parking Deck; Government Relations to Burgin Dossett and Alumni Affairs to the Campus Center or another former residence.

- Use surplus space in the Sherrod Library to house the campus open computer labs relocated from the Culp Center. The released space in Culp will be repurposed to meet student services needs.
- Space released on the VA Campus will be reorganized to meet the additional research and office space needs of other College of Medicine departments.
- Space released in the Culp Center will be repurposed for student center related functions such as a multicultural center, meeting rooms, lounges or food services.

Details of major components of the migration plan are presented in the Appendix.

Conclusions and Recommendations

Conclusions:

The Academic Space Master Plan scope included an assessment of all of the departments located on the Johnson City campus along with three Family Practice clinics and the Nave Center facility. The total current space assigned to these departments included in the assessment exceeded 1.65 million assignable square feet.

The assessment developed formula-based space needs calculations for each department. The future space need developed along a projected ten year timeframe out to the year 2020 was based on an overall enrollment growth rate of approximately 25%. To accommodate this growth the future space requirement was determined to be just over 2.01 million assignable square feet for a net aggregate shortfall of about 298,705 assignable square feet (17% more than the current inventory).

The College of Arts and Sciences has the largest overall need (deficit) followed by the College of Medicine. All of the academic colleges will have a space shortfall to meet their future needs.

Office space was identified as the space type with the greatest need (deficit). A part of this deficit is the result of using uniform planning modules and comparing with existing facilities which may be larger than the planning criteria; inclusion of student worker and adjunct faculty offices that have not historically been assigned; and uniformly allocating office support space among all departments.

Instructional and research lab space are the next greatest needs (deficits) identified. The combined calculated future deficits in these space categories exceed all other types.

Based on the calculated square footage using the THEC guidelines, the University's existing classroom space will have a small future deficit is indicated if the model station size is achieved.

A future deficit of about 7.5% for athletic activity space assigned to Intercollegiate Athletics was identified. Campus recreation space should be sufficient to meet future needs.

With the exception of the support facilities space type, most of the other major space type categories indicate shortfalls which mostly relate to student life spaces. The most significant deficiencies impacting student life are in student lounges and meeting room space.

Recommendations

Periodic updates of the space needs should include review and modifications to the data and formats used in the process. The current study required significant supplementation and manipulation of some of the data to generate the model. Updating the space needs will require similar efforts unless improved database coordination and formatting is achieved. Improvements to the basic data reporting include:

- Developing a class file that requires the reporting of all scheduled instructional activity in University-owned space.
- Consolidating the reporting from all colleges by course of all student credit hours by term and course designation.
- Creating a comprehensive personnel database that includes not only all full time employees, but also non-university staff, student employees and graduate assistants.

In order to achieve the classroom utilization goals prescribed by THEC a review of the current processes used in scheduling classrooms should be undertaken. Consideration during these deliberations should be for the creation of a more centralized scheduling process including a priority scheduling preference for departments with historical use of certain rooms. Consideration should also be given for creating a Classroom Advisory Committee that would continually assess the availability, use and quality of the classrooms, and provide recommendations for the management of the classroom resources. This Committee should be charged with assisting in improving and maintaining existing classrooms in satisfactory condition to meet current instructional methodologies, and should also be involved in assisting with the planning and location of classrooms developed either through new construction or renovations.

As new research labs are developed either through new construction or renovation, flexibility should be designed into each lab to permit rapid adaptation of space to new project requirements and to allow for future space reallocations among researchers. The University may consider future designs to include multi-disciplinary layouts to promote more collaboration among departments.

Research grant data should be maintained to be used for periodically assessing faculty productivity and incorporated into a process of space reallocation that may be implemented within individual colleges. Grant timeframes (beginning and ending dates) should be tracked in order to determine annualized productivity statistics. This database would be incorporated into a formalized evaluation process that may include the establishment of a Research Space Advisory Committee, which would continually assess the assignment, availability, use and quality of research laboratory space, and provide recommendations for the realignment and management of the research space resources. This Committee should be charged with assessing departmental research productivity and determine an appropriate methodology of linking space needs/assignments with research production.

Appendices

Enrollment Projection Details

Detailed enrollment projections were developed during the original space needs assessment and were used in developing the projected space needs shown in this study. The projected space needs therefore incorporated the factors shown in Table 40 below are reproduced for reference.

Table 39: Detailed Enrollment Projection Data

	Current				Projection Factors		Projected				Dept Differences	
College/Department	UG SCH	Grad SCH	Total SCH	FTE	UG	Grad	UG SCH	Grad SCH	Total SCH	FTE	SCH	FTE
Arts and Sciences												
Appalachian Studies(1)	626	28	654	44	100.0%	100.0%	1,252	56	1,308	88	**654**	**44**
Art and Design	3,433	188	3,621	245	11.0%	5.0%	3,821	197	4,018	271	**397**	**27**
Biological Sciences	5,274	402	5,676	385	23.0%	105.0%	6,498	822	7,320	502	**1,644**	**117**
Chemistry	4,078	205	4,283	289	32.0%	50.0%	5,371	308	5,678	384	**1,395**	**95**
Communication	6,667	98	6,765	453	62.0%	50.0%	10,827	147	10,974	734	**4,209**	**281**
Criminal Justice & Crimin.	1,959	155	2,114	144	0.0%	37.0%	1,959	213	2,172	148	**58**	**5**
English	9,300	319	9,619	647	17.0%	9.0%	10,872	347	11,218	754	**1,599**	**107**
Foreign Languages	2,202	39	2,241	150	8.0%	67.0%	2,385	65	2,450	164	**209**	**14**
Geosciences	2,453	105	2,558	172	18.0%	35.0%	2,895	142	3,036	205	**478**	**32**
History	8,190	478	8,668	586	17.0%	10.0%	9,582	526	10,108	683	**1,440**	**97**
Mathematics	8,892	228	9,120	612	7.0%	28.0%	9,532	293	9,825	660	**705**	**48**
Music	2,757	11	2,768	185	2.0%	0.0%	5,514	0	5,514	368	**2,746**	**183**
Philosophy & Humanities	3,489	3	3,492	233	0.0%	44.0%	3,489	4	3,493	233	**1**	**0**
Physics and Astronomy	2,888	3	2,891	193	73.0%	495.0%	5,002	18	5,020	335	**2,129**	**142**
Political Science	1,936	6	1,942	130	12.0%	129.0%	2,168	14	2,182	146	**240**	**16**
Psychology	4,668	319	4,987	338	40.0%	10.0%	6,535	351	6,886	465	**1,899**	**127**
Social Work	1,398	653	2,051	148	3.0%	3.0%	1,440	673	2,113	152	**62**	**4**
Sociology & Anthropology	5,257	183	5,440	366	31.0%	35.0%	6,908	247	7,155	481	**1,715**	**115**
Arts & Sciences Totals	**75,467**	**3,423**	**78,890**	**5,316**			**96,049**	**4,422**	**100,471**	**6,772**		
Total Differences							**20,582**	**999**	**21,581**	**1,455**		
Percentage Differences							**27.3%**	**29.2%**	**27.4%**	**27.4%**		
Business and Technology												
Accountancy	2,580	251	2,831	193	12.0%	10.0%	2,882	276	3,158	215	**327**	**22**
Computer & Info Science	6,926	452	7,378	499	22.0%	29.0%	8,470	581	9,052	613	**1,674**	**114**
Economics & Finance	4,335	75	4,410	295	25.0%	0.0%	5,419	75	5,494	368	**1,084**	**72**
Eng. Tech, Surv. & Dig. Media	4,963	296	5,259	356	0.0%	0.0%	4,963	296	5,259	356	**0**	**0**
Management & Marketing	6,265	899	7,164	493	9.0%	0.0%	6,829	899	7,728	530	**564**	**38**
Military Science	387	0	387	26	0.0%	0.0%	387	0	387	26	**0**	**0**
Business & Technology Totals	**25,456**	**1,973**	**27,429**	**1,861**			**28,950**	**2,127**	**31,077**	**2,107**		
Total Differences							**3,494**	**154**	**3,648**	**246**		
Percentage Differences							**13.7%**	**7.8%**	**13.3%**	**13.2%**		
Clinical & Rehab Health Sci.												
Allied Health	1,750	136	1,886	128	0.0%	572.0%	1,750	914	2,664	193	**778**	**65**
Communicative Disorders	277	944	1,221	97	50.0%	24.0%	416	1,173	1,589	125	**368**	**28**
Dental Hygiene	749	0	749	50	0.0%	0.0%	749	0	749	50	**0**	**0**
Physical Therapy	0	1,302	1,302	109	0.0%	33.0%	0	1,736	1,736	145	**434**	**36**
Clinical & Rehab Totals	**2,776**	**2,382**	**5,158**	**384**			**2,915**	**3,823**	**6,737**	**513**		
Total Differences							**139**	**1,441**	**1,579**	**129**		
Percentage Differences							**5.0%**	**60.5%**	**30.6%**	**33.7%**		
Education												
Curriculum & Instruction	3,067	724	3,791	265	20.0%	20.0%	3,680	869	4,549	318	**758**	**53**
Educ. Lead. & Policy Analysis	0	699	699	58	0.0%	20.0%	0	839	839	70	**140**	**12**
Human Develop & Learning	3,875	1,406	5,281	376	50.0%	30.0%	5,813	1,828	7,640	540	**2,359**	**164**
Kines, Leisure & Sport Sci.	3,579	533	4,112	283	80.0%	50.0%	6,442	800	7,242	496	**3,130**	**213**
Education Totals	**10,521**	**3,362**	**13,883**	**982**			**15,935**	**4,335**	**20,270**	**1,424**		
Total Differences							**5,414**	**973**	**6,387**	**442**		
Percentage Differences							**51.5%**	**28.9%**	**46.0%**	**45.0%**		

	Current				Projection Factors		Projected				Dept Differences	
Nursing	**7,040**	**909**	**7,949**	**545**	**5.0%**	**30.0%**	**7,392**	**1,182**	**8,574**	**591**		
Total Differences							**352**	**273**	**625**	**46**		
Percentage Differences							**5.0%**	**30.0%**	**7.9%**	**8.5%**		
Public Health(2)												
Environmental Health	330	58	388	27	14.0%	55.0%	375	90	464	32	**76**	**6**
Health Sciences	3,743	34	3,777	252	14.0%	0.0%	4,267	34	4,301	287	**524**	**35**
Former Public Health Depts.	2,103	1,005	3,108	224	0.0%	105.0%	2,103	2,060	4,163	312	**1,055**	**88**
Public Health Totals	**6,176**	**1,097**	**7,273**	**503**			**6,745**	**2,184**	**8,929**	**632**		
Total Differences							**569**	**1,087**	**1,656**	**129**		
Percentage Differences							**9.2%**	**99.1%**	**22.8%**	**25.5%**		

	UG SCH	Grad SCH	Total SCH	FTE	UG	Grad	UG SCH	Grad SCH	Total SCH	FTE		
Medicine(1)				**240**						**288**		
Total Differences										**48**		
Percentage Differences										**20.0%**		
Pharmacy(3)				**240**						**240**		
Continuing Studies												
Cross Disciplinary Studies	**1,674**	**121**	**1,795**	**122**	**18.0%**	**35.0%**	**1,975**	**163**	**2,139**	**145**		
Total Differences							**301**	**42**	**344**	**24**		
Percentage Differences							**18.0%**	**35.0%**	**19.1%**	**19.4%**		
University Totals	**129,110**	**13,267**	**142,377**	**10,193**			**159,961**	**18,236**	**178,197**	**12,712**		
Total Differences							**30,851**	**4,969**	**35,820**	**2,519**		
Percentage Differences							**23.9%**	**37.5%**	**25.2%**	**24.7%**		

(1) No enrollment trend data available to develop a projection factor. Enrollment growth based on information received from the college.
(2) Recent reorganization separated this group into three separate departments. No trend data available for the new departments/programs.
(3) Class size for Pharmacy set at 80. Only the first three years of the program are indicated here as the fourth year students are off campus.

University School Detailed Space Needs Calculations

Table 40: University School Space Needs Calculations

	Current Need			Projected Need			
Room Type	**No. of Rooms**	**ASF per Room**	**Total ASF**	**No. of Rooms**	**ASF per Room**	**Total ASF**	**Comments**
Classrooms							
Elementary							
K	1	1,200	1,200	2	1,200	2,400	Enrollments are
1	1	950	950	2	950	1,900	expected to
2	1	950	950	2	950	1,900	double for grades
3	1	950	950	2	950	1,900	K thru 6
4	1	950	950	2	950	1,900	
5	1	950	950	2	950	1,900	
6	1	950	950	2	950	1,900	
Science CR	1	1,200	1,200	1	1,200	1,200	
Middle School							
Core CRs	3	950	2,850	4	950	3,800	For projected need
Science CR	1	1,200	1,200	1	1,200	1,200	another class
Tech CR	1	720	720	1	720	720	will be added
High School							
Core CRs	10	800	8,000	11	800	8,800	CR service rooms are
Science CR	1	1,000	1,000	1	1,000	1,000	included in ASF per rm.
CR Need Totals			**21,870**			**30,520**	
Current CR ASF			**13,070**				
Laboratories							
Art (K-8)	1	1,200	1,200	1	1,200	1,200	
Art (HS)	1	1,300	1,300	1	1,300	1,300	
Art Storage	2	200	400	2	200	400	
Music - choral	1	1,000	1,000	1	1,000	1,000	Music labs could be
Music - Instruments	1	1,500	1,500	1	1,500	1,500	shared by all classes
Music Practice Rooms	2	80	160	2	80	160	
Music Storage	1	400	400	1	400	400	
Biology	1	1,200	1,200	1	1,200	1,200	Science labs are HS
Chemistry	1	1,400	1,400	1	1,400	1,400	
Physical Science			0	1	1,200	1,200	
Computer	1	900	900	1	900	900	
Tech	1	900	900	1	900	900	
Prep / Storage	1	250	250	2	250	500	
Lab Need Totals			**10,610**			**12,060**	
Current Lab ASF			**4,555**				
Offices							

	Current Need			Projected Need			
Principal	1	250	250	1	250	250	
Asst Principal	1	200	200	1	200	200	
Reception	1	400	400	1	400	400	
Teachers	3	180	540	3	180	540	Floating / Itinerant
Guidance	1	300	300	1	300	300	
Counselors	3	150	450	3	150	450	
Staff	7	150	1,050	8	150	1,200	(a)
Conference Rms	2	280	560	2	280	560	
Teacher's Lounge	1	400	400	1	400	400	
Workroom	1	300	300	1	300	300	
Office Service			668			690	Incls storage & toilet
Office Need Totals			**5,118**			**5,290**	
Current Office ASF			**4,445**				
Media Center / Study							
Main Room RLV	1	2,000	2,000	1	2,500	2,500	
Support	1	1,250	1,250	1	1,500	1,500	
Media Need Totals			**3,250**			**4,000**	
Current Media ASF			**2,965**				
Physical Education							
Gym	1	10,000	10,000	1	10,000	10,000	Incls retractable seating
Multi-purpose	1	1,600	1,600	1	1,600	1,600	
Lockers	2	1,200	2,400	2	1,200	2,400	
Support	1	1,000	1,000	1	1,250	1,250	Laundry, storage, etc.
PE Need Totals			**15,000**			**15,250**	
Current PE ASF			**4,370**				
Food Service							
Dining	1	2,625	2,625	1	3,750	3,750	Assumes 3 seatings
Kitchen	1	1,600	1,600	1	1,600	1,600	Incls storage & service
Staff Lunch Room	1	300	300	1	400	400	
PE Need Totals			**4,525**			**5,750**	
Current PE ASF			**2,234**				
Auditorium							
Seating	1	4,250	4,250	1	4,250	4,250	Add 1,000 ASF stage
Stage	1	2,500	2,500	1	2,500	2,500	to one end of gym if
Support	1	500	500	1	500	500	auditorium Is not required
Aud Need Totals			**7,250**			**7,250**	

		Current Need			Projected Need	
Current Aud ASF			**0**			
Medical						
Exam area	1	150	150	1	150	150
Storage	1	100	100	1	100	100
Toilet	1	50	50	1	50	50
Med Need Totals			**300**			**300**
Current Med ASF			**0**			
Custodial / Maintenance						
Workshop	1	200	200	1	200	200
Receiving/ Supply	1	250	250	1	250	250
Storage	1	400	400	1	400	400
CM Need Totals			**850**			**850**
Current CM ASF			**0**			
Total Need ASF			**68,773**			**81,270**
Current ASF			**31,639**			

(a) Includes offices for Nurse, custodian, etc.

The space needs were based on the review and analysis of the guidelines and standards in use by Georgia, Massachusetts, Missouri, and North Carolina

Migration Plan Details

The following tables present details of the recommended steps for addressing the University's future space needs developed through this assessment. These steps are presented in phases that are intended to relate possible space assignments upon the completion of an initiating project. For example, in Phase I the initiating project of constructing a humanities facility will release or vacate space in existing facilities after the current occupants move into the new building. These vacated facilities will then have other departments identified to move into this "back fill" space that will address their future space needs. The phases identified below therefore are not intended to suggest any related time sequencing but instead to identify possible realignments/reassignments of space after an initiating project is completed.

Table 41: Phase 1 Migration Plan: Initiated by Construction of New Humanities Building

A. Construct New Humanities Building	Square Feet
Estimated Assignable Space Need	50,500
Proposed Occupants:	
Sociology	8,500
English	15,100
Criminal Justice and Criminology	4,800
History	7,400
Philosophy and Humanities	3,000
Classrooms	7,200

Notes:

1. Provides English with projected needs in consolidated location
2. Relocates three departments out of Rogers Stout for expansion/consolidation of Psychology and Political Science

B. Related Backfill Facilities	Released Space - ASF	Occupant(s) Being Relocated	Proposed Backfill Occupants		
			Art	Psych	Political Science
Burleson Hall	13,100	English	13,100		
Rogers - Stout Hall	11,112	Crim/Hist/Phil/Socio		8,350	2,300

B. Related Backfill Facilities	Released Space - ASF	Occupant(s) Being Relocated	Proposed Backfill Occupants			
			TRIO	Univ. Ctr. - Student Services	HDAL	Athletics
Campus Center	4,210	Psychology/SOAA/Art	2,410		1,800	
Memorial Hall	1,900	Art				1,900
Culp Center	2,380	TRIO		2,380		

Notes:

1. 1118 Seminole Drive space is replaced. Released space in Burleson Hall includes repurposing about 6,000 ASF of classroom space to move Art out of Memorial Hall, Campus Center and 1118 Seminole Drive.
2. Provides space for expansion/consolidation of Psychology and Political Science in Rogers-Stout Hall.
3. Consolidates the TRIO program in the Campus Center.
5. Provides space within Culp Center for student services functions.
6. Provides for part of projected need for Human Development in the Campus Center.
7. Provides Athletics with some additional space in Memorial Hall.

Table 42: Phase 2 Migration Plan - Initiated by Construction of New Fine Arts Building

A. Construct Fine Arts Building	Calculated Square Feet Needs	Instructional Labs	Research Labs	Offices	Other	Performance Space
Proposed Bldg. Occupants:						
Music	31,700	11,500	0	15,700	500	4,000
Theatre	45,300	10,500	0	2,500	0	32,300
Art Gallery	4,000	0	0	0	4,000	0
Classrooms	6,000	0	0	0	6,000	0
Assignable Square Feet	87,000					
Estimated Gross Sq. Feet	130,000					

Notes:

1. Relocates and provides expansion space for Music to meet projected needs with performance space.
2. Consolidates all of Theatre and Dance and provides new performance space for Theatre.
3. Classroom space replaces Burleson Hall classrooms that will be repurposed for Art & Design studios.

B. Related Backfill Facilities	Released Space - ASF	Occupant(s) Being Relocated	Proposed Backfill Occupants					
			Art	Continuing Studies	Cross Discpl Studies	KLSS	Athletics	Comp. Science
Campus Center	6,000	Communication (Theatre)/UKN		2,000	4,000			
Memorial Hall	7,985	Communication (theatre)				6,834	1,150	
Gilbreath Hall	5,050	Communication (theatre)						5,050
Mathes Hall	4,985	Music	4,985					

Notes:

1 . Relocates Cross Disciplinary Studies and Continuing Studies to Campus Center. Existing houses that are now used for Continuing Studies and Cross Disciplinary Studies will be demolished.
2. Provides additional space for Art in Mathes Hall.
3. Provides for part of the additional needs for Kinesiology in Memorial Hall.
4. Provides additional space for expanding Computer Science in Gilbreath.
5. Provides Athletics with some additional space in Memorial Hall.

THEC Space Guidelines Comparison

The space needs calculations included in the Academic Space Master Plan were based on nationally recognized space planning guidelines, the Tennessee Higher Education Commission (THEC) Space Allocation Guidelines (July 2009/Revised 2013), and the applied experience of the CFP consultants. The THEC guidelines and criteria were used as they may apply to departmental space needs for an existing campus. Because the THEC guidelines are generic for assessing a total campus, a blending of these criteria with factors the consultants believe are more appropriate were used in the master plan modeling process. These guidelines were modified further to fit the culture and operations of ETSU and each academic department.

The following table presents a comparison of the Current Space analyzed in this assessment to the calculated needs based strictly on the THEC space guidelines Revised 2013, and the projected calculated space needs developed as part of the Academic Space Master Plan.

Table 43: THEC Space Needs Comparison

Space Type	Current Space	THEC Space Needs - 2013	Academic Master Plan – Projected Need
Classrooms	147,193	106,052	149,133
Instructional Labs	203,360	228,822	272,496
Research Labs	187,618	137,506	214,142
Offices	504,595	366,483	625,493
Library	139,597	100,646	124,712
Physical Ed/Recreation	198,954	196,898	213,888

* Includes open labs

APPENDIX B

APPENDIX B

The 2010 ETSU Campus Master Plan included an in-depth study of parking and access needs along with a financial model for implementing recommended changes to meet those current and projected needs. While portions of the 2010 Campus Master Plan have been implemented, including key parking and access recommendations, much of the 2008 Desman Associates Parking & Access Study remains valid and valuable to guide further implementation. The 2014 Campus Master Plan Update proposes some changes to specific elements of the Desman recommendations for locations and capacities. Those changes are described in the report, but the recommendations for the remainder of the model will continue to guide parking and access plans and operations. For those reasons, the original 2008 Parking & Access Study is included in this Appendix in its entirety.

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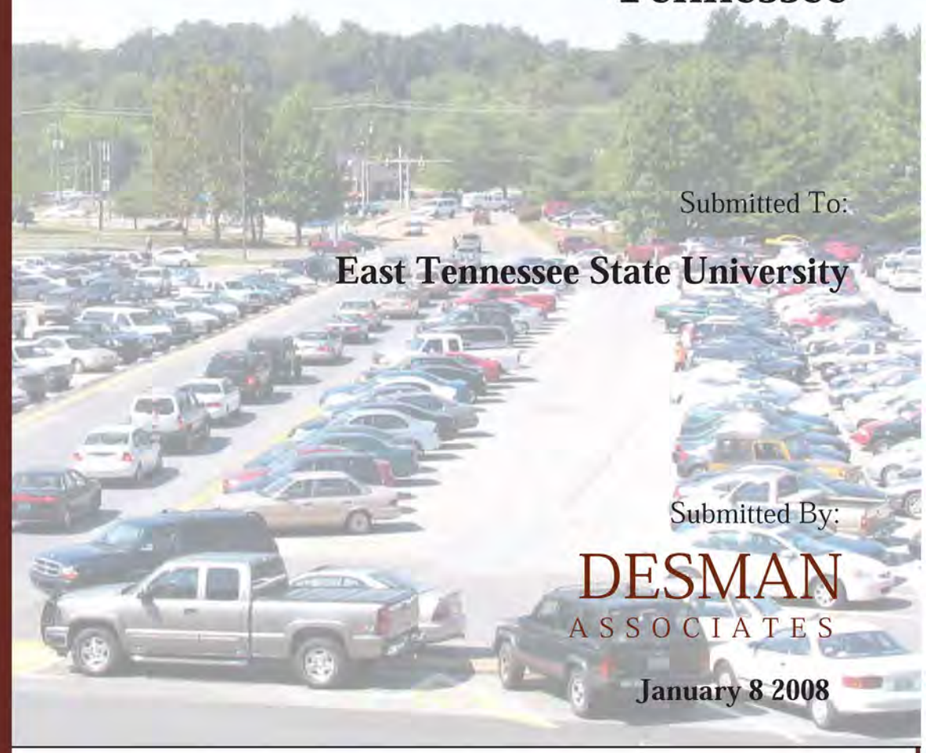
CONSULTANTS
ARCHITECTS
ENGINEERS

ETSU Parking & Access Study
East Tennessee State University
Tennessee



Submitted To:

East Tennessee State University

Submitted By:

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January 8 2008

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I. INTRODUCTION

Colleges and universities across the country have begun to realize the physical and financial stress that parking and parking related services place on their institutions. On average, it costs $18,000 per structured space and $2,500 per surface space to build new parking spaces. This cost excludes land and other soft costs associated with development. In addition, it costs approximately $500 per structured space and $100 per surface space annually to manage and maintain parking spaces. User fees required to fund these development and management costs can equate to $100 per parker per month depending on the volume and turnover of parkers and the ratio of structured to surface spaces. Such rates are uncommon on most college campuses. As an alternative, campus administrators must either forego required operations and maintenance costs, leading to poor management practices and deteriorating parking facilities, utilize general funds, thereby draining its academic budget, or some combination of the two.

East Tennessee State University (ETSU), located in Johnson City, Tennessee, is a state-supported, co-educational institution. ETSU has a student population of over 12,000, including undergraduate, graduate, medical students and medical residents from over 40 states and 60 foreign countries. Nearly 2,500 students reside in resident halls, university apartments, efficiencies, and married student housing. There are some 1,700 full-time faculty and staff and approximately 500 adjunct faculty and part-time employees. As a result, a large volume of students, faculty, and staff must travel to the campus each day. Access is supported by just over 6,700 parking spaces and Johnson City Transit bus and shuttle services.

Most recently, ETSU experienced its largest spring 2006 and fall 2007 enrollment. This increase included 500 new dorm rooms with the completion of Governor's Hall. The recently completed and approved Main Campus Master Plan identified a number of proposed changes and improvements that could increase the stress on the already strained parking and access infrastructure. Projects of note include a fine arts center, additional and renovated housing, and improvements to athletic facilities. The Master Plan also recommends shifting traffic from the interior of the campus by relocating parking from core surface lots to parking structures and lots on the periphery. Such a shift from core surface lots to peripheral parking structures would only increase ETSU's parking and shuttle debt service and operating costs.

DESMAN Associates was contracted by East Tennessee State University to evaluate existing and future parking supply, demand, and operational conditions at its Main Campus in Johnson City, Tennessee. The study area is defined by State of Franklin Road to the north, University Parkway to the east, Boundary Road to the south, and South Greenwood Drive to the west. The study area also includes the Buccaneer Ridge and Pirate Cove Apartments to the south. Exhibit A identifies the study area boundaries. The study is to create a ten-year future parking adequacy model based on current conditions, anticipated population changes, campus development projects, projected transit changes,

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and the approved campus master plan. Once these conditions are quantified, the study is to evaluate alternative measures and costs to mitigate any projected parking shortfalls, including but not limited to:

- Parking policy and pricing
- Allocation and assignment of parking
- Parking enforcement and adjudication
- Modification to current shuttle operations
- Location and capacity of additional parking facilities (if warranted)
- Parking/Shuttle mission statement and "Plan of Action"
- Funding alternatives to support necessary improvements

Once an approved action plan is identified and approved, the report presents a financial model that illustrates changes in expenses to implement future programs, necessary system upgrades, and parking system changes that respect the parameters of parking within an auxiliary service perspective. That is to say that the parking and shuttle program will need to be financially self-supporting.

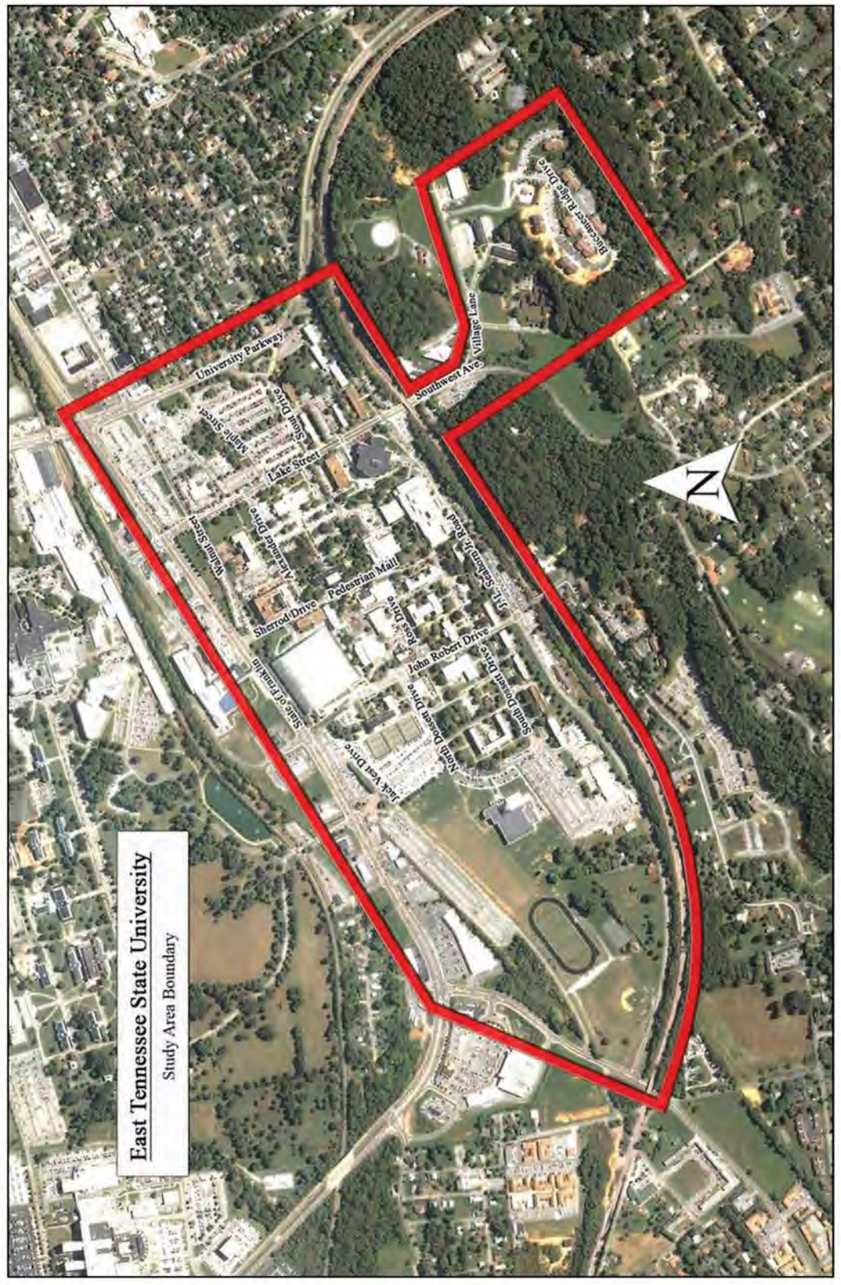

Exhibit A: **Study Area Boundary**

II. METHODOLOGY

A study of parking is realistically a study of people, their trip purpose, their expectations, and the factors behind the choices they make. It has been noted in the Master Plan and during various conversations with faculty, staff, and students that ETSU is a commuter campus where single occupant vehicle travel (SOV) is the norm and transit/shuttle use is uncommon. As a result, the growth of the institution is dependent to a significant degree on the provision of adequate parking. The study must quantify trip mode choices (drive, carpool, shuttle, etc.), the cost of providing parking and shuttle services, the alternatives to driving that may be available, and the financial feasibility to developing additional, aka structured, parking facilities.

This report and the technical work that supports it have been subdivided into six sections.

- **Assessment of Existing and Future Supply and Demand Conditions**
- **Review of Current Parking Operations**
- **Physical and Operational Recommendations**
- **Space Allocation Strategies and Financial Accountability**

The first two sections present an assessment of existing and future parking conditions to include parking occupancy and vehicle turnover surveys, a review of parking operations, management, enforcement policies and procedures, parking rates, fees, and fines for violations, and ADA parking space compliance. A key product of these first sections is the development of parking demand ratios that accurately predict the demand for parking for faculty, staff, resident students, commuting students, and visitors as the institution grows.

The later two sections will examine a broad range of traditional parking improvements, including but not limited to user group space allocation, the establishment of a parking and transportation services department, visitor parking management programs, and the location and size of a future parking structure. These improvements must be developed and maintained within a business management model where the costs are offset by user fees and other financing strategies.

III. ASSESSMENT OF EXISTING & FUTURE SUPPLY & DEMAND CONDITIONS

A. Current Parking Inventory

Based on information obtained from ETSU related to the current parking inventory and confirmation of this information during the September 17th through 20th field surveys, parking spaces on campus are allocated/assigned/restricted to a variety of user groups and activities, including students, faculty/staff, service vehicles, visitors, and those individuals who are handicapped (ADA accessible spaces). Faculty/staff and student allocated spaces are identified through a combination of lot signage and payment markings; blue for faculty/staff and gold for students. Those individuals who wish to bring a vehicle to campus are required to obtain an appropriate permit. There are a number of handicapped, metered, and service vehicle spaces throughout the campus. The campus also provides a number of spaces that are available to any user group. These are defined as "open" spaces.

Table 1 presents a complete inventory of parking by lot and by restriction, Graph 1 provides a summary of the spaces for each user group, and Exhibit B illustrates their location and assignment through color coding. Parking is available in sixty different surface lots ranging in size from 7 spaces (Lot 24) to 711 spaces (Lot 22a) and along eleven different streets. Of the 6,726 total spaces on campus and at Buccaneer Ridge, 3,182 (47.3%) are allocated to students, 1,149 (17.1%) are allocated to faculty and staff, and 2,089 (31.1%) are open. Handicapped (143), metered (19), service vehicles/loading (26), reserved (89), and visitor (6) constitute the remaining 4.5% of the total. The total includes 463 spaces that are off-campus in Buccaneer Ridge but excludes the surface parking lot (Lot 9) that is behind Governor's Hall, which is currently being used for construction staging.

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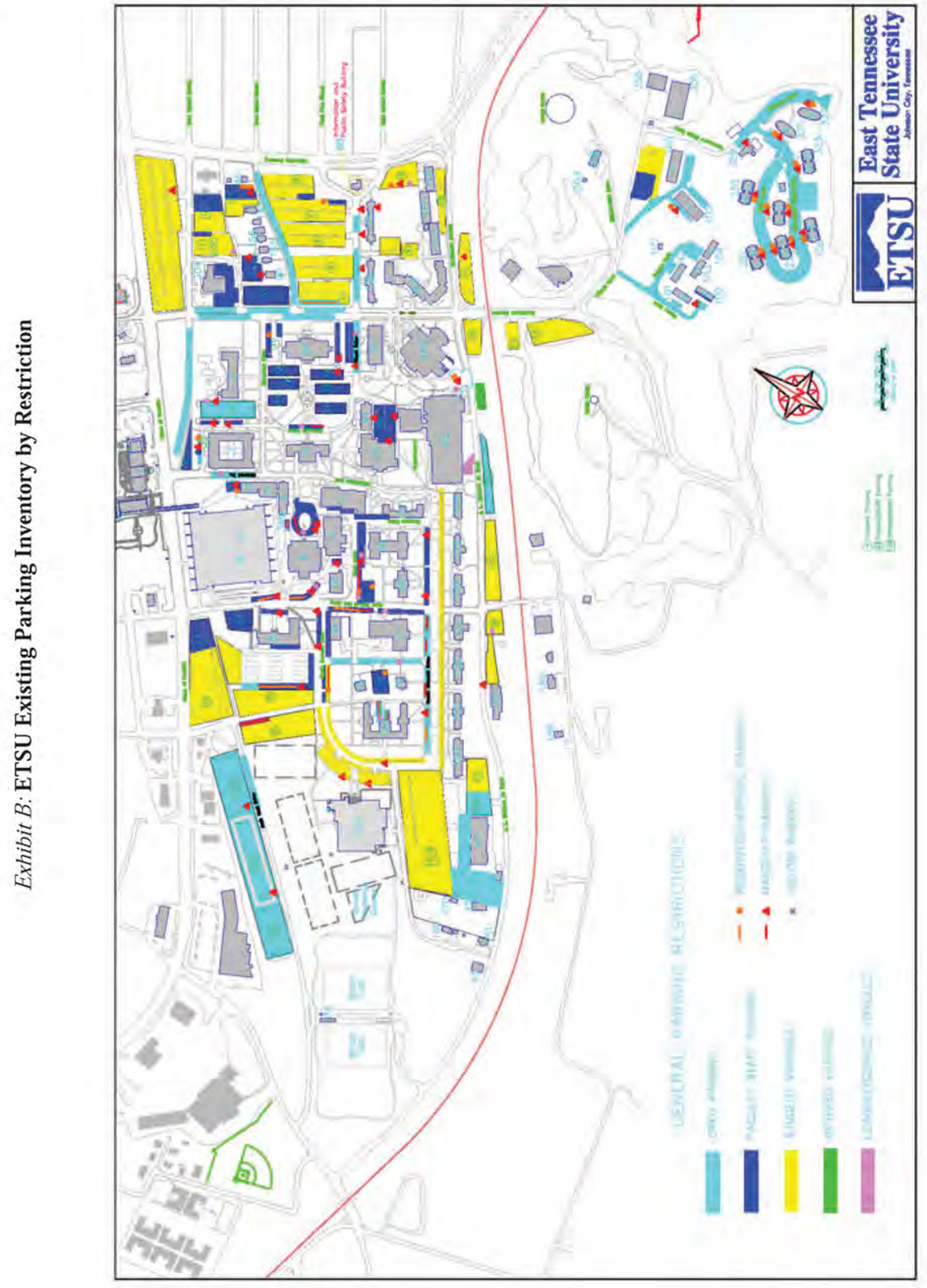
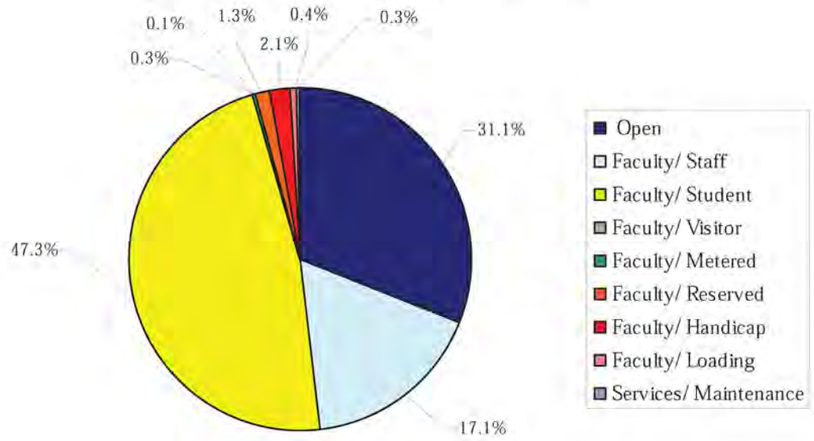


Exhibit B: **ETSU Existing Parking Inventory by Restriction**

Table 1:
Current Parking Inventory by User Group

On Street	Open	Faculty/Staff	Student	Visitor	Metered	Reserved	Handicap	Loading	Services/ Maintenance	Total
John Robert Bell Drive		72				11	5	3	4	95
Jack Vest Drive	46									46
Sherrod Drive								1	3	4
Unknown Street (1)	19								1	20
Lake Street	125									125
Maple Street	30									30
Stout Drive	27						2	1	2	32
Gilbreath Drive		32					6	1		39
Walnut Drive	64									64
North Dosset Drive		41	99			2	6			148
South Dosset Drive	43	32	86			7	15	7		190
On Street Subtotal	**354**	**177**	**185**	**0**		**20**	**34**	**13**	**10**	**793**
Off Street										**0**
Lot 1		11	64					2		77
Lot 1a		42	42							84
Lot 2		53					3			56
Lot 2a		37	37			6	1			81
Lot 3		96								96
Lot 4			105							105
Lot 5			137							137
Lot 6			142							142
Lot 7		12	152			3				167
Lot 8		10	90							100
Lot 10			113			5	2	1		121
Lot 11			78				1			79
Lot 12			65							65
Lot 12a					19					19
Lot 13			33							33
Lot 14			122							122
Lot 15			125							125
Lot 15a	65									65
Lot 16			81				2	1		84
Lot 17			69							69
Lot 17a	43									43
Lot 18/19	211		408							619
Lot 20		29				3				32
Lot 21		11	495				30			536
Lot 22		63	127							190
Lot 22a	709						2			711
Lot 23		50								50
Lot 24		3				1	3			7
Lot 25	25	1				1	4			31
Lot 26		21								21
Lot 27	53						4	1		58
Lot 28		22								22
Lot 29		43								43
Lot 30		39								39
Lot 31		35		3		2				40
Lot 32		72					1			73
Lot 33		50								50
Lot 34		45								45
Lot 35		39		3			4			46
Foundry Lot			398				4			402
Ross Drive		96				4	8	4	2	114
Memorial Hall Circle (#9)		12					11	1	2	26
Basler Lot A			36				2			38
Basler Lot B			29				2			31
Culp Center Lot A	3					3	4	1		11
Culp Center Lot B						3		3	3	9
Clement Hall (#134)	10							1	1	12
Tennis Courts	4	14				26	3			47
Warf-Pickel Hall (#8)	8								3	11
Hutcheson Hall (#18)		17				1				18
Pirate Cove	69						2			71
Residences "F/G"	72	49	49			1	3			174
Buccaner Ridge	463					10	13			486
Off Street Subotal	**1,735**	**972**	**2,997**	**6**	**19**	**69**	**109**	**15**	**11**	**5,933**
ETSU System Total	**2,089**	**1,149**	**3,182**	**6**	**19**	**89**	**143**	**28**	**21**	**6,726**
Allocation Percentage	*31.1%*	*17.1%*	*47.3%*	*0.1%*	*0.3%*	*1.3%*	*2.1%*	*0.4%*	*0.3%*	

Graph 1:
Percentage Breakdown of Spaces by Assignment/Restriction

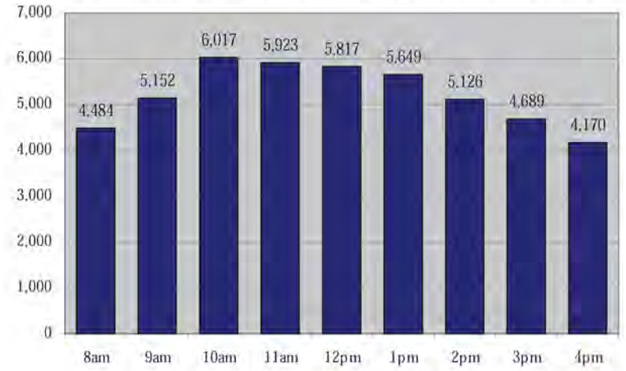


While there is no rule of thumb regarding the percentage of spaces that should be allocated to different user groups on a university campus, there are some unique conditions at ETSU that present themselves. First, ETSU has only 6 visitor designated spaces. Three of these spaces are designated for Reece Museum visitors. Visitors are instructed to go to the Information and Public Safety Building to obtain a visitor pass, permitting them to park in any space. Second, the campus has only 19 metered spaces (in Lot 12a behind Culp Center). Metered spaces are effective in meeting short-term parkers and visitors needs and the revenue that is generated for the parking system can be significant. Third, the University has an abundance of open parking spaces. Open spaces are generally used for overflow parking when the spaces that are assigned (but not reserved) to specific user groups reach capacity. For example, if a faculty member were unable to find a space in a faculty allocated lot, he or she would be able to use a space in an open lot. These open lots are typically found on the periphery of a campus. Recommendations regarding a more effective and efficient space allocation and assignment program will be presented in an upcoming section.

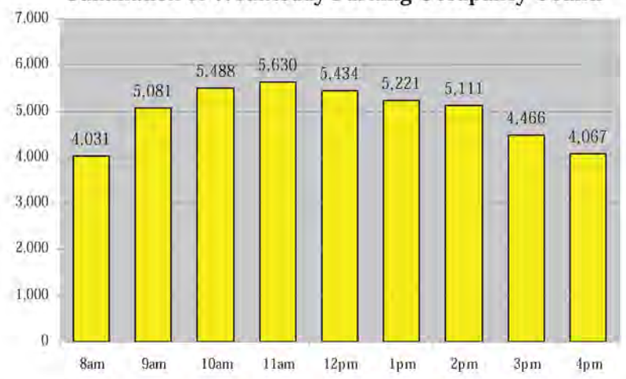
B. Current Parking Occupancy

To determine the utilization of and ultimately the parking demand generated by each of the University's user groups, hourly parking occupancy counts were conducted between the hours of 8 AM and 4 PM on Tuesday, September 18th and Wednesday, September 19th. While detailed lot by lot hourly survey results are included in Appendix Table A1 (Tuesday) and A2 (Wednesday) Graphs 2a and 2b summarize the overall results of the survey for each day.

Graph 2a:
Summation of Tuesday Parking Occupancy Counts



Graph 2b:
Summation of Wednesday Parking Occupancy Counts



Each survey day exhibited a similar parking accumulation pattern. However, the Tuesday survey revealed significantly higher peak period volume. Tuesday's peak reached 6,017 occupied spaces at 10 AM while Wednesday's peak (11 AM) reached 5,630 spaces. Naturally, parking accumulation patterns and peak volumes are driven by enrollment and class schedules. Parking patterns will be compared to staffing and enrollment/schedule patterns later in this report.

More meaningful examinations of parking utilization focuses on peak utilization and parking accumulation patterns by space restriction/user group, an interpretation of the parking system's practical capacity, and peak surplus and deficit conditions by lot and by restriction/user group. Note that the following Tables and Exhibits differentiate between core campus and off-campus utilization.

Tables 2a and 2b breakdown the occupancy surveys by location (core vs. off-campus) and by parking restriction/user group allocation for each survey day respectively. On Tuesday, the core campus on-street utilization nearly reached 100% occupancy while off-street achieved 94% occupancy. Of the 5,995 core campus spaces, only 300 were unoccupied during the peak period. Off-campus parking, which includes Pirates Cove and Buccaneer's Ridge, had low levels of utilization throughout the day (between 41% and 49% occupancy). The consistency of utilization in these three off-campus residences suggests that students are not utilizing their cars to get to campus in large numbers. On Wednesday, the core campus on-street utilization reached nearly 100% while off-street occupancy dropped to 88%. During the peak Wednesday period as many as 656 parking spaces were unoccupied. Off-campus parking occupancy patterns on Wednesday were practically identical to Tuesday's occupancy.

Table 2a:
Tuesday Parking Occupancy by Location and Restriction/User Group

Core Campus	Inventory	8am	9am	10am	11am	12pm	1pm	2pm	3pm	4pm
On Street										
Open	354	324	350	357	354	348	344	338	316	299
Faculty/Staff	177	132	166	180	178	175	172	170	167	163
Student	185	159	171	181	181	179	178	179	176	176
Visitor	0	0	0	0	0	0	0	0	0	0
Reserved	20	15	19	20	20	20	19	19	19	19
Handicap	34	27	31	33	33	33	32	33	31	31
Loading	13	10	12	13	13	13	13	13	12	12
Services	10	7	9	10	10	9	9	8	8	7
On-Street Subtotal	**793**	**674**	**758**	**794**	**789**	**777**	**767**	**760**	**729**	**707**
Off-Street										
Open	1,131	345	548	970	895	864	800	628	528	439
Faculty/Staff	923	679	831	907	895	864	862	820	784	679
Student	2,948	2,280	2,529	2,829	2,872	2,825	2,725	2,433	2,173	1,893
Visitor	6	6	6	6	6	7	6	6	6	5
Metered	19	8	19	20	19	19	18	18	17	14
Reserved	58	48	53	55	55	53	53	51	46	44
Handicap	91	77	83	95	93	90	90	86	79	78
Loading	15	13	13	14	14	14	14	15	13	13
Services	11	6	6	6	6	6	7	7	5	6
Off-Street Subtotal	**5,202**	**3,462**	**4,088**	**4,902**	**4,855**	**4,742**	**4,575**	**4,064**	**3,651**	**3,171**
Core Campus Total	**5,995**	**4,136**	**4,846**	**5,696**	**5,644**	**5,519**	**5,342**	**4,824**	**4,380**	**3,878**
Occupancy Percentage		*69%*	*81%*	***95%***	*94%*	*92%*	*89%*	*80%*	*73%*	*65%*
Off-Campus										
Open	604	316	285	303	259	276	286	283	288	270
Faculty/Staff	49	12	13	11	13	14	12	12	12	11
Student	49	12	13	11	13	13	12	11	12	11
Visitor	0	0	0	0	0	0	0	0	0	0
Reserved	11	6	5	6	5	5	5	5	5	5
Handicap	18	10	9	10	8	9	9	9	9	9
Loading	0	0	0	0	0	0	0	0	0	0
Services	0	0	0	0	0	0	0	0	0	0
Off Off-Campus Total	**731**	**356**	**325**	**341**	**298**	**317**	**324**	**320**	**326**	**306**
Occupancy Percentage		*49%*	*44%*	***47%***	*41%*	*43%*	*44%*	*44%*	*45%*	*42%*
Total	**6,726**	**4,492**	**5,171**	**6,037**	**5,942**	**5,836**	**5,666**	**5,144**	**4,706**	**4,184**
		67%	*77%*	***90%***	*88%*	*87%*	*84%*	*76%*	*70%*	*62%*

Table 2b:

Wednesday Parking Occupancy by Location and Restriction/User Group

Core Campus	Inventory	8am	9am	10am	11am	12pm	1pm	2pm	3pm	4pm
On Street										
Open	354	340	352	355	356	350	341	344	308	288
Faculty/Staff	177	136	168	176	176	168	168	168	168	164
Student	185	151	172	179	179	178	175	180	175	175
Visitor	0	0	0	0	0	0	0	0	0	0
Reserved	20	15	19	20	20	20	19	19	19	19
Handicap	34	29	32	33	33	32	32	32	31	31
Loading	13	11	12	13	13	13	12	12	12	11
Services	10	7	9	10	10	9	9	8	8	7
On-Street Subtotal	**793**	**689**	**764**	**786**	**787**	**770**	**756**	**763**	**721**	**695**
Off-Street										
Open	1,131	278	444	633	723	658	565	552	444	407
Faculty/Staff	923	611	833	879	874	824	816	828	770	725
Student	2,948	1,963	2,546	2,697	2,761	2,711	2,613	2,500	2,077	1,834
Visitor	6	5	6	6	6	5	6	6	6	6
Metered	19	10	14	19	19	19	18	18	17	17
Reserved	58	43	53	55	56	55	53	53	47	43
Handicap	91	67	83	91	93	91	89	86	77	74
Loading	15	13	13	14	14	13	14	14	13	13
Services	11	6	5	6	6	5	6	7	6	6
Off-Street Subtotal	**5,202**	**2,996**	**3,997**	**4,400**	**4,552**	**4,381**	**4,180**	**4,064**	**3,457**	**3,125**
Core Campus Total	**5,995**	**3,685**	**4,761**	**5,186**	**5,339**	**5,151**	**4,936**	**4,827**	**4,178**	**3,820**
Occupancy Percentage		*61%*	*79%*	*87%*	***89%***	*86%*	*82%*	*81%*	*70%*	*64%*

Off-Campus	Inventory	8am	9am	10am	11am	12pm	1pm	2pm	3pm	4pm
Open	604	318	295	281	270	264	265	268	270	231
Faculty/Staff	49	11	12	13	13	12	12	10	11	11
Student	49	11	12	13	13	12	12	10	11	11
Visitor	0	0	0	0	0	0	0	0	0	0
Reserved	11	6	5	5	5	5	5	5	5	4
Handicap	18	10	10	9	9	9	9	9	9	8
Loading	0	0	0	0	0	0	0	0	0	0
Services	0	0	0	0	0	0	0	0	0	0
Off-Campus Total	**731**	**356**	**334**	**321**	**310**	**302**	**303**	**302**	**306**	**265**
Occupancy Percentage		*49%*	*46%*	*44%*	***42%***	*41%*	*41%*	*41%*	*42%*	*36%*
Total	**6,726**	**4,041**	**5,095**	5,507	**5,649**	**5,453**	**5,239**	**5,129**	**4,484**	**4,085**
		60%	*76%*	*82%*	***84%***	*81%*	*78%*	*76%*	*67%*	*61%*

Before discussing parking surplus and deficit figures, the concept of "practical capacity" should be presented. Practical capacity refers to the operational efficiency of a parking facility. A parking facility is perceived by its users to be at full operational capacity when occupancy levels reach 90-95%. Once this level is exceeded, potential parkers find it difficult to locate an available space. As a result, those individuals must continue to search for an available space, creating traffic flow problems and increasing the potential for vehicle/vehicle and vehicle/pedestrian conflicts. The effective and efficient turnover of convenient parking spaces is most successful when the supply of spaces exceeds the peak demand for those spaces by 5-10%. For the purpose of this study DESMAN used a 95% practical capacity for ETSU faculty/staff facilities and a 90% practical capacity for students and visitors. The more stringent definition of practical capacity for students (90%) acknowledges the fact that student spaces, primarily those used by commuting students, turn over much more during the course of the day and therefore generate more significant search and circulation volumes. The analysis presented in Tables 3a (Tuesday) and 3b (Wednesday) illustrates the existing practical surplus and deficit conditions for the ETSU campus and its parking facilities while Exhibit C1 and C2 summarize the peak parking occupancy conditions for each lot. For purposes of clarity, parking facilities are grouped into four main occupancy categories and color coded to reflect their level of occupancy. For example, parking lots which were utilized more than 96% are identified in red, while those utilized less than 80% are identified in blue.

It would appear that faculty/staff parking facilities experienced a practical deficit of 42 spaces during the peak Tuesday period. Student parking, which includes residents and commuters, experienced a peak shortfall of 190 spaces. With the exception of open, reserved, and service vehicle spaces, all other core campus user groups and restrictions exhibited a peak practical deficit on Tuesday. Overall, the core campus parking system experienced a 237 space practical deficit on Tuesday. While parking deficits did persist in those same areas on Wednesday there were on the whole less significant. Furthermore, the practical surplus that did exist in open lots on Tuesday increased from 10 to 258 spaces on Wednesday. As a result, the core campus enjoyed a 120 space practical surplus on Wednesday.

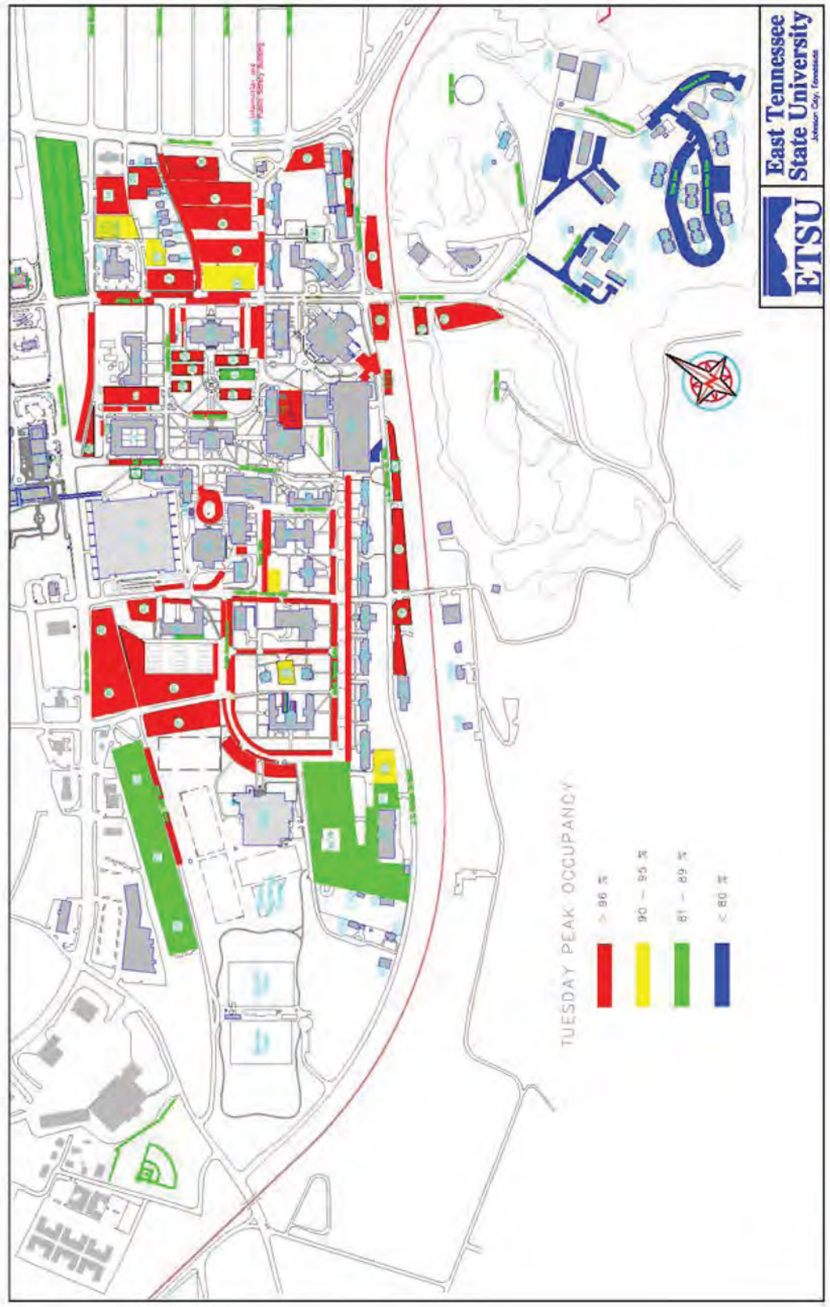


Exhibit C1: **ETSU Peak Parking Occupancy on Tuesday**

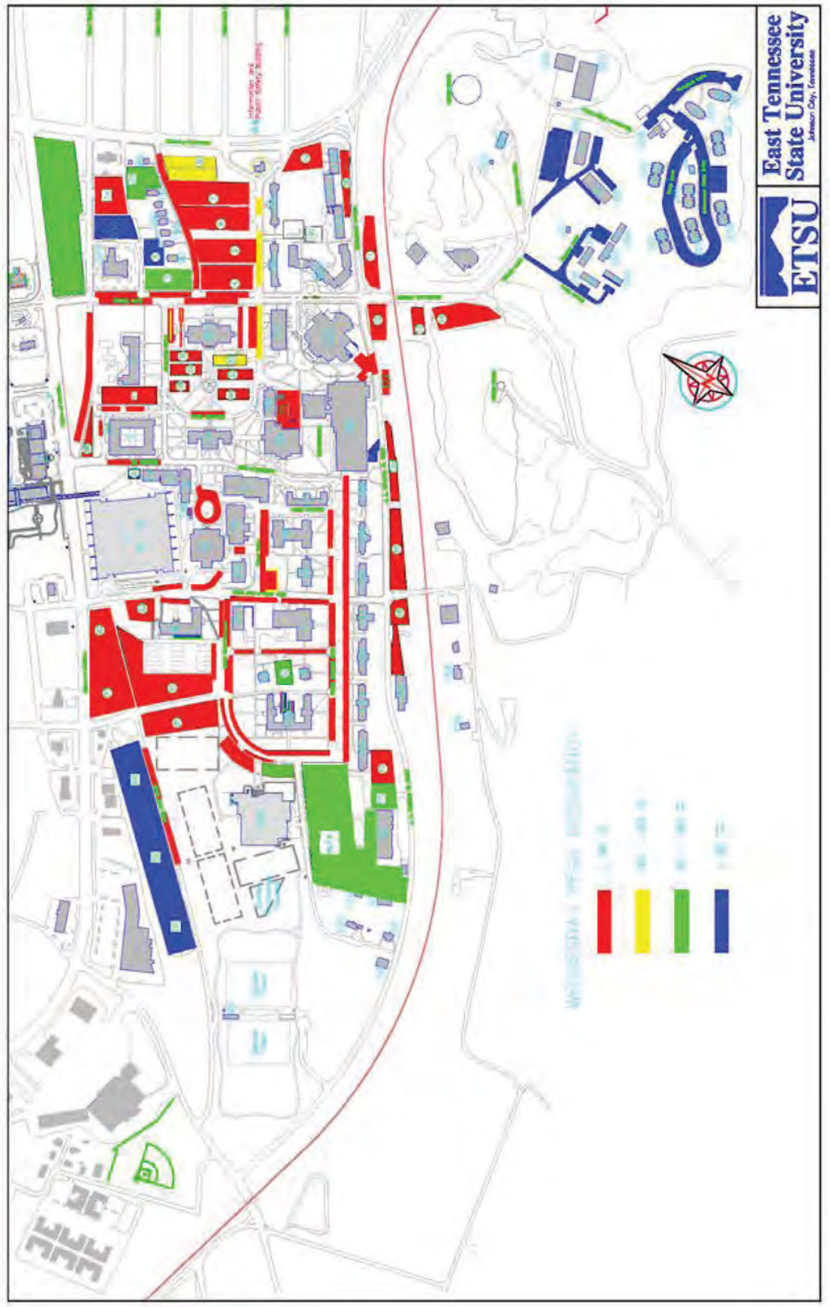


Exhibit C2: **ETSU Peak Parking Occupancy on Wednesday**

Table 3a:
Tuesday Practical Parking Surplus or Deficit by Restriction/User Group

	Inventory	Practical Capacity [1]	Peak Occupancy [2]	Practical Surplus/Deficit
Core Campus				
Open	1,485	1,337	1,327	10
Faculty/Staff	1,100	1,045	1,087	-42
Student	3,133	2,820	3,010	-190
Visitor	6	5	6	-1
Metered	19	17	20	-3
Reserved	78	78	75	3
Handicap	125	113	128	-15
Loading	28	25	27	-2
Services	21	19	16	3
Core Campus Subtotal	**5,995**	**5,459**	**5,696**	**-237**
Off-Campus				
Open	604	544	303	241
Faculty/Staff	49	47	11	36
Student	49	44	11	33
Visitor	0	0	0	0
Reserved	11	11	6	5
Handicap	18	16	10	6
Loading	0	0	0	0
Services	0	0	0	0
Off-Campus Subtotal	**731**	**662**	**341**	**321**
Total	**6,726**	**6,121**	**6,037**	**84**

(1) Practical capacity reflects operational efficiency and is established at 90% occupancy for open, student, visitor, handicap, loading, and service spaces, 95% for faculty/staff spaces, and 100% for reserved spaces (i.e., no adjustment).
(2) Tuesday September 18th peak occupancy occurred at 10 am.

Table 3b:
Wednesday Practical Parking Surplus or Deficit by Restriction/User Group

	Inventory	Practical Capacity [1]	Peak Occupancy [2]	Practical Surplus/Deficit
Core Campus				
Open	1,485	1,337	1,079	258
Faculty/Staff	1,100	1,045	1,050	-5
Student	3,133	2,820	2,940	-120
Visitor	6	5	6	-1
Metered	19	17	19	-2
Reserved	78	78	76	2
Handicap	125	113	126	-13
Loading	28	25	27	-2
Services	21	19	16	3
Core Campus Subtotal	**5,995**	**5,459**	**5,339**	**120**
Off-Campus				
Open	604	544	270	274
Faculty/Staff	49	47	13	34
Student	49	44	13	31
Visitor	0	0	0	0
Reserved	11	11	5	6
Handicap	18	16	9	7
Loading	0	0	0	0
Services	0	0	0	0
Off-Campus Total	**731**	**662**	**310**	**352**
Total	**6,726**	**6,121**	**5,649**	**472**

(1) Practical capacity reflects operational efficiency and is established at 90% occupancy for open, student, visitor, handicap, loading, and service spaces, 95% for faculty/staff spaces, and 100% for reserved spaces (i.e., no adjustment).
(2) Wednesday September 19th peak occupancy occurred at 11 am.

Based on the parking occupancy surveys and excluding the surplus of parking spaces in Pirate Cove and Buccaneer Ridge, ETSU is experiencing a practical parking shortfall on Tuesdays. Though an overall surplus of spaces does exist on Wednesday this surplus is located in three peripheral facilities, Lot 22a, also referred to as the Landing Strip, Lot 18/19 near the Physical Plant, and Lot 1, commonly referred to as the Foundry Lot. It can be presumed that the off-campus parking surplus could be used to satisfy some or all of these practical deficits. The majority of those spaces are scattered throughout two garden style apartment complexes and it would be difficult to share these residential spaces with individuals destined for core campus activities. However, there is a concentration of parking spaces in a lot in front of the "F & G" buildings. These 97 spaces are practically vacant with the exception of three tractor trailer hitches. Even if these spaces were made available through space allocation/assignment and shuttle service strategies they would be unable to satisfy the Tuesday core campus deficit.

As noted previously, a study of parking is a study of people, their trip purposes, and their expectations regarding service levels. Unfortunately, because of the undefined nature of nearly one-third of ETSU's parking inventory (open spaces) it is difficult to clearly

identity the utilization that is associated with specific user groups. This understanding is a critical element when developing recommendations to meet existing and future parking needs. Table 4 attempts to identify specific user groups' utilization based mainly on the assumption that 10% of faculty and staff parkers use core campus open spaces (90% are students) and that 40% of handicapped spaces are used by faculty/staff (60% students). The accuracy of this assumption and analysis will ultimately be verified or rejected through a modeling of current parking demand using fall 2007 enrollment and employment figures and travel demographics. It is important to note that this estimate of utilization by user group includes spaces (and resident students) in the off-campus lots.

Table 4:
Estimate of Peak Parking Utilization by Major User Groups

User Group	Peak Utilization Tuesday	Wednesday
Faculty/Staff	1363	1302
Resident/Commuting Student	4,605	4,279
Service Vehicle	16	16
Other (1)	53	52
Total	**6,037**	**5,649**

(1) Includes visitors, vendors, contractors, and loading/unloading zone uses

C. Parking Turnover and Duration

A vehicle turnover and duration survey was completed on Thursday, September 20th in an effort to gain a better understanding of the characteristics of faculty, staff, student, and visitor parking. Several areas of the campus were selected:

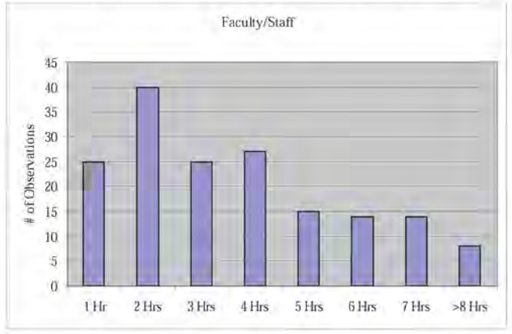
- Lot 3 (Faculty/Staff) – located northeast of Dossett Hall
- Lot 4 (Student) – located east of Dossett Hall
- Lot 11 (Student) – located south of Governor's Hall
- Lot 12 (Student) – located south of Sherrod Library
- Lot 12a (Open/Metered) – located south of Culp Center
- Services Area – serving Culp Center
- Lot 13 (Student) – located south of rail tracks
- Lot 21 (Students) – located just east of athletic fields
- Lots A & B (Student) – located east of Basler Center

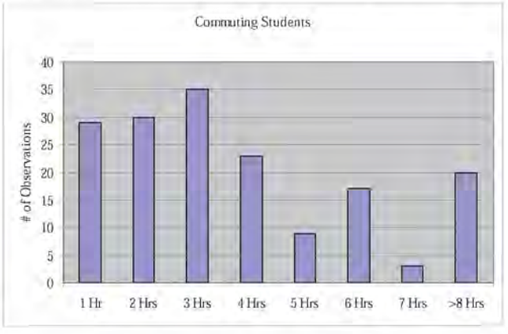
Table 5 and Graphs 3a through 3f summarize the findings from these surveys.

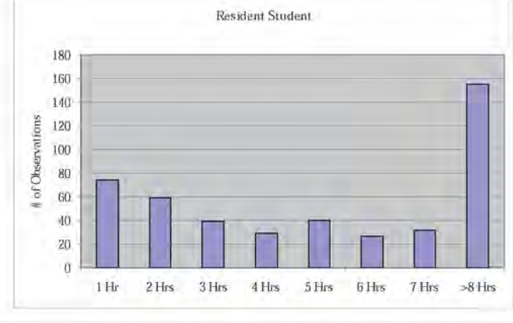
Table 5:
Summary of Sample Vehicle to Space Turnover and Duration Surveys

User Group/Location	Inventory	Total Vehicle Utilization	Vehicles/ Space/Day	Length (Hours)
Faculty/Staff				
Lot 3	97	168	1.7	3.6
Resident Student				
Lot 4	116	211	1.8	4.1
Lot 11	82	102	1.2	6.1
Lot 12	64	95	1.5	5.3
Lot 13	35	47	1.3	5.6
Subtotal	297	455	1.5	4.9
Commuting Students				
Lot 21	98	166	1.7	3.7
Basler Center				
Lot A&B	70	243	3.5	2.1
Metered/Visitor				
Lot 12a	19	60	3.2	2.2
Services Area	13	29	2.2	3.2
Total	**891**	**1,576**	**1.8**	**4.1**

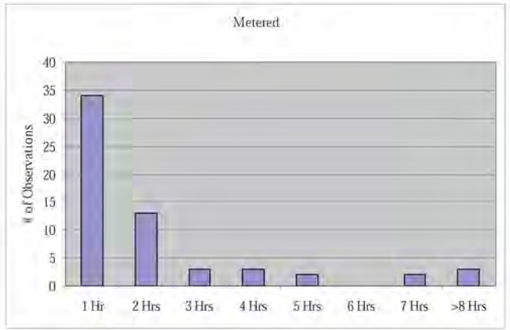
Graphs 3a – 3c:
Summation of Duration of Stay Surveys (Faculty/Staff, Commuting & Resident Students)

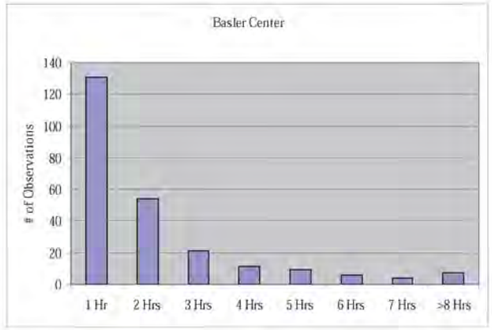


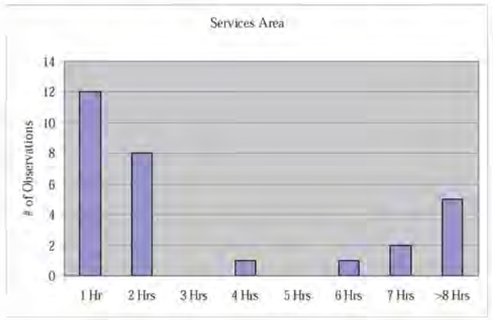




Graphs 3d – 3f:
Summation of Duration of Stay Surveys (Metered, Basler Center & Service Spaces)







While the results for resident students (1.5 vehicles per space/4.9 hour duration), commuting students (1.7 vehicles per space/3.7 hour duration), and metered spaces (3.2 vehicles per space/2.2 hour duration) were rather straightforward and as anticipated the results for faculty/staff, Basler Center, and Service Area spaces were not. The vehicle per space turnover rate for faculty/staff (1.7 vehicles per space) was higher than anticipated and the average length of stay (3.6 hours) was much lower. In fact, the characteristics for parking in faculty/staff Lot 13 was strikingly similar to commuting student characteristics. A closer examination of the data reveals that of the 168 different parkers that used this lot from 8 AM to 4 PM, 65 (39%) parked for less than two hours.

It could very well be that short-term parkers (visitors and commuting students) are using that faculty/staff lot in large numbers.

The Basler Center results show a very short duration of stay and a high vehicle per space turnover rate. The results are indicative of a health club, were the average duration of stay is less than 2 hours.

In summary, the surveys revealed a large number of vehicles remained parked for long periods of time in service vehicle spaces. While it is understood that some construction and contractor activity is occurring near the Culp Center, these service spaces should not be used for long-term parking and the turnover rate should be much higher.

D. Pedestrian Questionnaires

Pedestrian surveys were conducted on Tuesday, September 18th and Wednesday September 19th to gather pedestrian information. Ultimately, the study required sufficient information on mode choices to model the existing and future parking demand by user group and by building.

Referred to as "point of access" questionnaires, survey personnel were stationed at high traffic volume areas throughout the campus in an effort to get a representative sample of all campus user groups. The survey form had the following five questions:

1. What is the purpose of your trip?
2. How long will you be here today?
3. How did you arrive?
4. If self parked where did you park?
5. What is your residential zip code (origin/destination data)?

In total, 510 individuals were interviewed, including but not limited to, 46 faculty/staff, 350 commuting students, and 101 resident students. As the study will need to develop peak parking demand ratios for each user group, this section of the report focuses on the travel characteristics for each group, with particular interest in the auto use percentage of the two larger parking groups, commuting students and faculty/staff. According to the surveys, 96% of commuting students and 95% of faculty/staff arrive to campus via the automobile. The persons per auto occupancy rate is also quite low as only 9 out of every 100 commuter student vehicles and 5 out of every 100 faculty/staff vehicles have a passenger (rideshare/carpool). As it relates to resident student auto use, the results may be misleading as 20% of respondents that indicated they either drove or were a passenger may include students who were confused by the question. Nonetheless, even if the true percentage was slightly lower there should be no reason why a resident student would need a vehicle to get to class.

Table 6:
Travel Mode Characteristics for various Campus Parking User Groups

User Group	# of Responses	Drove Own Car	Passenger in Car	Bus or Shuttle	Bike or Walk	Persons per Vehicle
Resident Student	101	18%	2%	3%	77%	1.11
Commuting Student	350	86%	8%	1%	5%	1.09
Faculty/Staff	46	91%	4%	2%	2%	1.05
Event Visitor	2	100%	0%	0%	0%	1.00
Business Visitor	7	86%	0%	0%	14%	1.00
Other	4	50%	50%	0%	0%	2.00
Campus Total	**510**	**73%**	**7%**	**1%**	**19%**	---

There are a number of reasons why auto use percentages are so high and person per auto occupancy is so low. One of the strongest indicators of single occupancy vehicle (SOV) dependence is the distribution of commuting students and faculty/staff throughout the region. Exhibit D1 illustrates the results of the residential zip code question for commuting students while Exhibit D2 illustrates the results for faculty and staff. Note that each exhibit includes the current routing coverage of Johnson City Transit's regional service.

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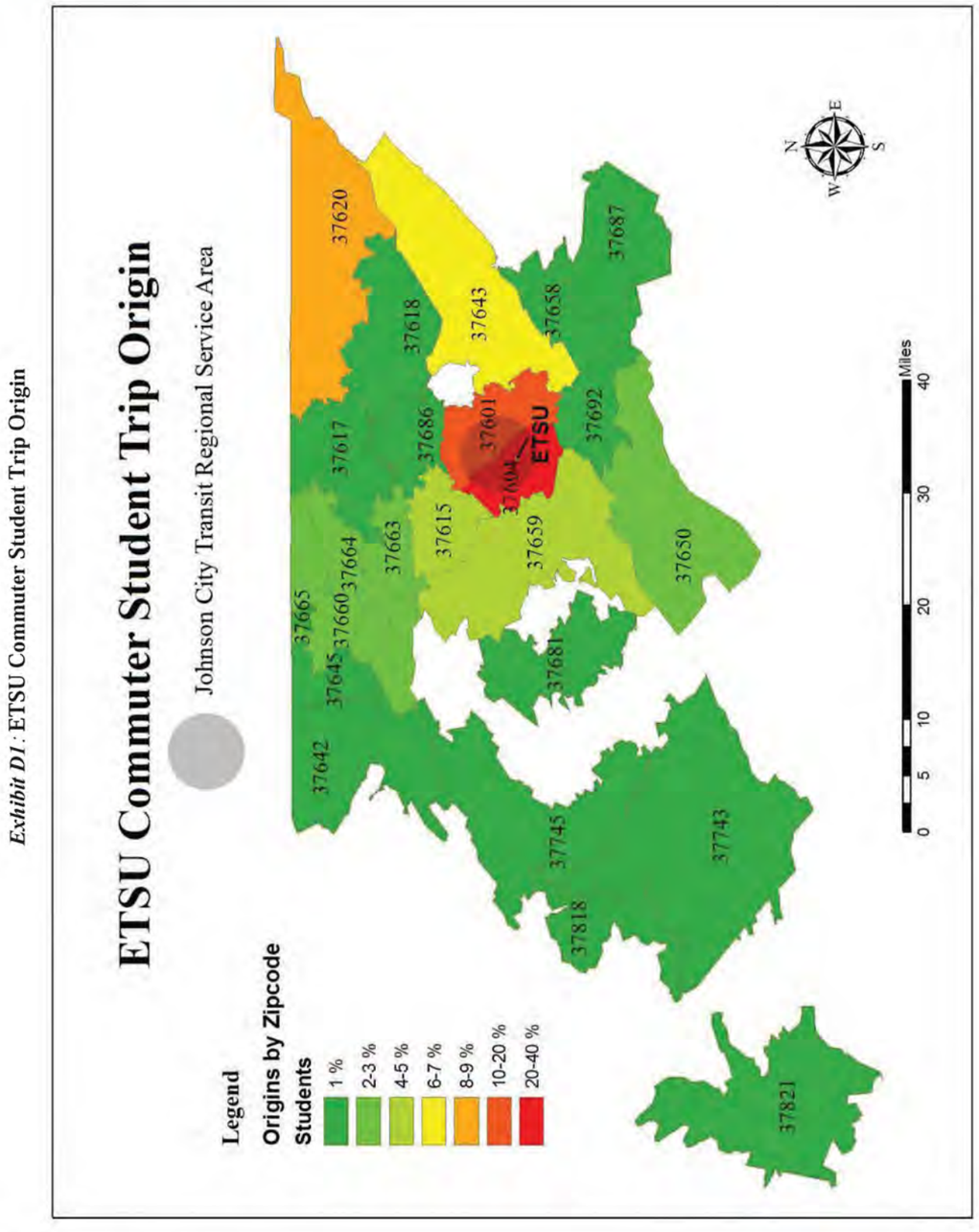

Exhibit D1: ETSU Commuter Student Trip Origin

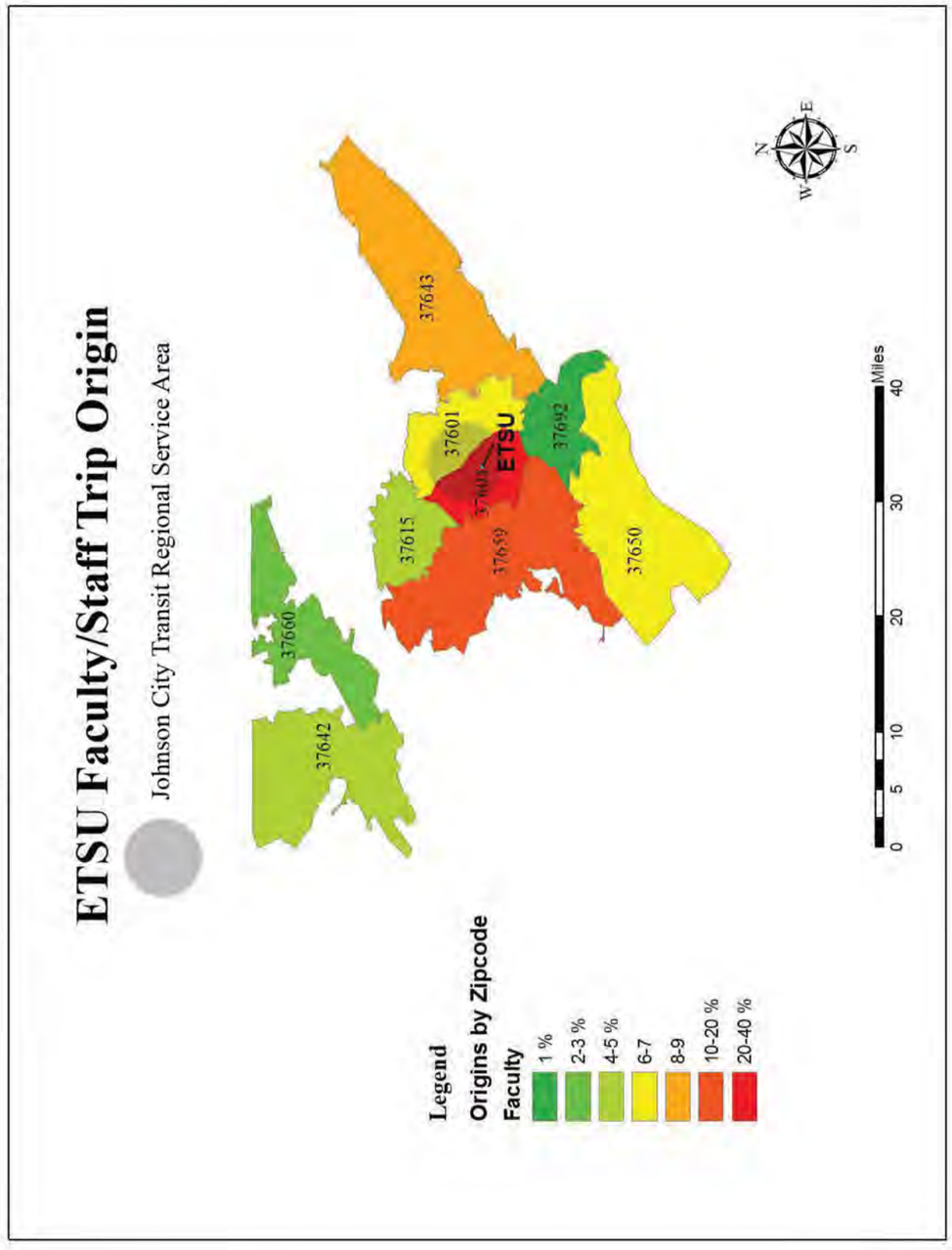

Exhibit D2: ETSU Faculty/Staff Trip Origin

E. Stakeholder Interviews

In addition to the parking occupancy and turnover surveys and pedestrian questionnaires, interviews were conducted with key campus stakeholders over the course of two days. Representative groups included the Dean's Group, Faculty Senate, Staff Senate, Student government, Johnson City Transit, the University School, and personnel from the Housing, Athletics, Disability Services, and Commuting Student Services Departments. Interviews were open ended in terms of the issues that were discussed. Unlike the surveys and questionnaires, however; the purpose of the interviews was to capture perspective and insight. The following paraphrases the comments that were received:

- *There is enough parking overall but it's not in the right locations.*
- *University School student pick-up and drop-off is causing significant traffic problems.*
- *Faculty and staff are willing to consider a parking space allocation/assignment system that is based on variable fees.*
- *Not enough enforcement officers.*
- *Prohibiting freshmen residents from having a car on campus would really hurt enrollment*
- *This is a "commuter campus"*
- *ADA spaces by Culp Center and Library are not in compliance with design requirements*
- *The main JCT transit stop is off campus by McDonalds.*
- *It is very difficult to drive a vehicle from one side of campus to another.*
- *Students don't pay enough for parking.*
- *Visitor parking is so bad that some event planners stopped scheduling events on campus.*
- *Carpool program is small but steady. There are some 350 students in the program.*
- *Parking is a growing challenge at night. Some parking rules, regulations, and enforcement should continue past 5 PM.*
- *An evening campus escort program does exist but it's largely unknown.*
- *Employees stay parked in the metered spaces behind Culp Center by feeding the meters.*
- *Open parking is being "taken over" for Governor's Hall dorm students.*
- *Employees don't pay much for parking.*
- *It's impossible to move from one side of campus to another to attend meetings.*
- *We support eliminating core parking lots and building peripheral parking garages*
- *Some faculty and staff would be willing to pay $300 per year for convenient parking.*
- *Though students rejected a $300 per semester increase in tuition for an athletic fee they might support a $50 per semester increase for parking if more spaces are provided.*

As a result of this input, it appears that all user groups recognize that parking is a problem and that increased fees for parking will be required but that any increase would only be acceptable if there is measurable improvement in the system.

F. Population-based Parking Demand Estimates

Occupancy counts, questionnaires, and stakeholder interviews do not reveal the true demand for parking by user group and they cannot capture the number of students who may be parking in faculty, staff, or visitor spaces or vice versa. Therefore, some mechanism was required that could be used to estimate current and future parking demand by user group. Furthermore, the growth on a campus is most accurately defined by population data, i.e., student enrollment and staffing projections. To this end the following section summarizes the extensive population data that ETSU's Office of Institutional Research had made available and how that data was used to estimate peak hour parking demand by user group. While this section focuses on overall student, faculty, and staff volumes, later sections of this study will examine population volumes by location/building in an effort to better understand where the need for additional parking is the greatest. Also note that the analysis focuses on a peak Tuesday condition. It has already been established that Tuesday, as opposed to Wednesday, represents the peak or worse case condition. Therefore, all population data is based on Tuesday enrollment and class scheduling.

The first column of Table 7 summarizes the fall 2007 full-time and part-time faculty and staff, commuting student enrollment, and resident housing volumes. The source data for this information is included in Appendix Table B (enrollment), C (student housing), and D (employees). Table 7 also includes adjustments to those fall figures that reflect the volume of individuals that are on campus on a typical Tuesday and the volume that are present at 10 AM, the peak period for parking activity.
For example, there are 1,131 full-time staff. Not all are on campus on a particular Tuesday and not all of that Tuesday population is on campus at 10 AM. Some may be on sick leave, vacation, traveling on business, or have an off-site meeting on that day or that particular hour. It is estimated that of the total fall staff population only 960 are on campus at 10 AM on any given Tuesday. Overall, it is also estimated that during the peak hour of a peak day there are 1,520 full and part-time faculty and staff, 3,300 commuting students, and 2,274 resident students on campus. The resident number includes those students who live off of the core campus in Pirates Cove and Buccaneer's Ridge. Note that the population data does not include visitors, vendors, or contractors. Estimates for these "other" parkers will be tabulated separately.

Table 7:
Annual, Estimated Average Daily (Tuesday), and Peak Period Campus Population Data

Population Group	Total Fall 2007 (1)	Estimated Average Daily	Present During Peak Period
Full-Time Employees			
Full-Time Faculty (2)	574	400	360
Full-Time Staff (3)	1,131	1,070	960
Full-Time Employee Subtotal	**1,705**	**1,470**	**1,320**
Non-Full Time Employees (4)			
Adjunct Faculty	277	110	100
Hourly Staff/Technicians	258	100	90
Seasonal/Monthly	40	16	10
Non-Full Time Subtotal	**535**	**226**	**200**
Students			
Commuting Students (5)	9,882	5,930	3,300
Resident Students	2,274	2,274	2,274
Student Subtotal	**12,156**	**8,204**	**5,574**

(1) Source: Office of Institutional Research
(3) Presumes that 30% of all full-time faculty not on campus due to vacation, sick leave, off-campus business, or class schedules
(3) Presumes that 5% of all full-time staff not on campus due to vacation, sick leave, or off-campus business
(4) Presumes that 60% of all non-full time faculty/staff not on campus due to vacation, sick leave, off-campus business, or work schedule
(5) Presumes that 40% of all commuting students not on campus due to illness or work schedule. Number of commuting students on campus during peak Tuesday period is based on enrollment data.

The auto utilization and persons per auto findings from the pedestrian questionnaires are then applied to the peak period population estimates to calculate the peak weekday parking demand by user group (see Table 8). The results suggest that the total peak demand for parking equals 6,030, with the largest use group being commuting students (2,940 parked vehicles).

Table 8:
Population-based Estimate of Peak Weekday Parking Demand

Population Group	Present During Peak Period	Auto Utilization Percentages (1)	Persons per Auto Ratios (1)	Estimate of Parked Vehicles during Peak Period
Full-Time Employees				
Full-Time Faculty	380	96%	1.02	360
Full-Time Staff	970	96%	1.05	890
Full-Time Employee Subtotal	**1,350**	---	---	**1,250**
Non-Full Time Employees				
Adjunct Faculty	130	96%	1.02	120
Hourly Staff/Technicians	120	96%	1.05	110
Seasonal/Monthly	20	96%	1.05	20
Non-Full Time Subtotal	**270**	---	---	**250**
Students				
Commuting Students	3,300	98%	1.10	2,940
Resident Students	2,274	70%	1.00	1,590
Student Subtotal	**5,574**	---	---	**4,530**
Total Faculty, Staff & Students	**7,194**	---	---	**6,030**

(1) Findings from the point of access questionnaires

To determine the validity of these figures, population-based demand estimates were compared to the utilization/observation based estimates. Table 9 compares these figures. It would appear that the population-based figure overestimates true parking demand by 72 spaces. However, this may capture the fact that some faculty, staff, and students are not parking in ETSU provided lots. As such, the population-based estimates are deemed sufficiently accurate and the peak parking demand ratios summarized on Table 10 will be used to model the current parking demand by building/location to identify the areas on campus where the demand is greatest.

Table 9

Comparison of Utilization-based to Population-based Peak Parking Demand Estimates

User Group	Tuesday Peak Estimates		Diviation
	Utilization-based	Population-based	
Faculty/Staff	1,496	1,510	14
Resident/Commuting Student	4,472	4,530	58
Service Vehicle (1)	16	16	n.c.
Other (1)	53	53	n.c.
Total	**6,037**	**6,109**	**72**

(1) As population-based estimates for service vehicle and other user groups are unavailable the analysis simply carries forward the utilization based estimates (nc = not calculated)

Table 10:

Peak Weekday Parking Demand Ratios for each ETSU User Group

User Group	Peak Parking Demand Ratio
Full-time Faculty	0.59
Full-time Staff	0.81
Adjunct Faculty	0.43
Hourly/Seasonal Staff	0.44
Commuting Students	0.32
Resident Student	0.60
Service Vehicle	n.a.
Other (Visitors, Vendors, etc.)	n.a.

Exhibit E illustrates summarizes the peak weekday population that is on-campus by building, noting in pie charts and scale the combination and volume of faculty/staff, resident student, and commuting student demand. This analysis is valuable as it identifies where people would like to park presuming there is enough parking around their destination. The exhibit and analysis may be a bit misleading as the volume of people that are out of class but visiting Culp Center, Sherrod Library, and Basler Center are underreported. While there are large population/parking demand generators throughout the campus, there is a significant concentration around the Bell Tower (Brown Hall, Nicks Hall, and Rodgers-Stout Hall). This concentration is even more

significant when the parking activity associated with Culp Center and Sherrod Library is considered.

G. Projected Enrollment, Staffing, and Future Parking Demand

The number of future resident students as illustrated on Table 11 is based on the Master Plan projection of dormitory construction and redevelopment. As the Campus Master Plan did not have information regarding future commuting student volumes, past enrollment was used to project future commuting students (see Table 12). Between the fall of 2002 and 2006 commuter student enrollment has grown 2.3%. For purposes of this study a more conservative rate of 2.0% was used for future commuting student projections. The number of future faculty and staff was also not available so a more conservative rate of 1% annual growth rate was applied.

Table 11:

Schedule of Dormitory Demolition and Construction per 2006 Master Plan Update

Building Name/Location	Fall 07	Fall 08	Fall 09	Fall 10	Fall 11
Mack Davis A, B, C	242	242	242	242	242
Cooper	170				
Carter	0	143	143	143	143
McCord	172				
Stone	84				
Panhellenic	66				
Lucille Clement	463	463	463	463	463
Luntsford	182	182	182	182	182
Powell	86	86	86	86	
West	88	88	88	88	
Nell Dossett	122	122	122	122	
Governors Hall	542	542	542	542	542
New Student Apts. Phase I		110	110	110	110
New Student Apts. Phase II			270	270	270
Married Housing F & G	76	76	76	76	
Married Housing A, B, C, D, & E	40	40	40	40	
West Campus Hall					300
Total Beds	**2,333**	**2,094**	**2,364**	**2,364**	**2,252**

Denotes housing not yet built or slated for removal.

Table 12:

Past Fall Commuting Student Enrollment and Average Annual Growth

Student Group	2002	2003	2004	2005	2006	Avg. Annual Growth Rate
Undergraduates						
Freshmen (2)	2,600	2,622	2,544	2,659	2,842	2.3%
Sophomores	1,761	1,820	1,862	1,773	1,997	3.4%
Juniors	1,884	1,900	1,941	1,978	1,972	1.2%
Seniors	2,753	2,879	3,008	3,076	3,084	3.0%
Undergrad Specials	338	329	317	284	309	-2.1%
Undergrade Subtotal	**9,336**	**9,550**	**9,672**	**9,770**	**10,204**	**2.3%**
Graduates (3)	**1,795**	**1,845**	**1,963**	**1,886**	**1,952**	**2.2%**
Total Enrollment	**11,131**	**11,395**	**11,635**	**11,656**	**12,156**	**2.3%**

(1) Source: ETSU Fact Book - includes full-time and part-time students
(2) Freshmen include first-time freshmen and other freshmen.
(3) Graduates include graduate specials, masters, education specialists, and doctoral.

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Exhibit E: **Volume of Faculty/Staff, Resident Student, and Commuting Student Demand by Building**

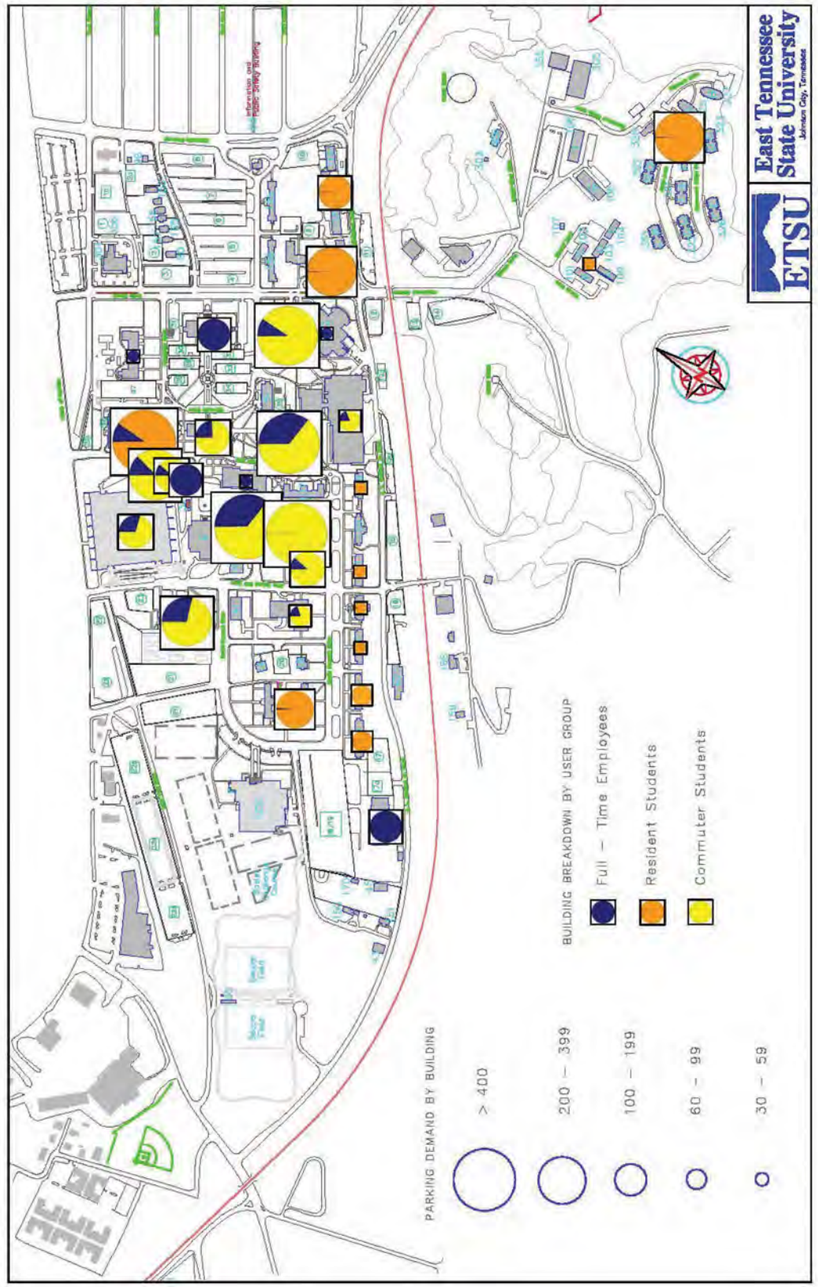

Table 13 calculates the peak parking demand by user group through the fall of 2016. With a rebounding on dormitory units between 2008 and 2009 parking demand will grow from 6,109 spaces currently to 6,325. With a steady increase in commuting student enrollment, that parking demand will increase from 3,170 currently to 3,788 by the fall of 2016 (or by 618 spaces). Overall, parking demand at ETSU will grow by 758 spaces to 6,867. That figure does not include the need to provide some operational flexibility (i.e., practical capacity).

Table 13:
Estimate of Future Peak Parking Demand by User Group

User Group	Population Based Peak Demand (2007)	Annual Growth Rate	2008	2009	2010	2011	2012	2013	2014	2015	2016
Faculty	460	1.0%	465	470	475	480	485	490	495	500	505
Staff	1,050	1.0%	1,061	1,072	1,083	1,094	1,105	1,116	1,127	1,138	1,149
Commuting Students	3,170	2.0%	3,233	3,298	3,364	3,431	3,500	3,570	3,641	3,714	3,788
Resident Student (1)	1,360	n.a.	1,252	1,414	1,414	1,347	1,347	1,347	1,347	1,347	1,347
Service Vehicle	16	1.0%	16	16	16	16	16	16	16	16	16
Other (2)	53	2.0%	54	55	56	57	58	59	60	61	62
Total	**6,109**	---	**6,081**	**6,325**	**6,408**	**6,425**	**6,511**	**6,598**	**6,686**	**6,776**	**6,867**
Net Increase			***-28***	***216***	***299***	***316***	***402***	***489***	***577***	***667***	***758***

(1) Increase in resident student parking demand is related to increase in residential units on campus.
(2) Increases in other (visitors, vendors, contractors, etc.) demand is related to growth of commuter student population.

H. Future Parking Supply and Practical Surplus or Deficit

Exhibit F and the figures in Table 14 summarize the impact on the existing parking supply associated with development activity as anticipated by the Master Plan. Three projects in the Master Plan will have an impact on existing parking; Apartment Phase I and II in fall 2008, the Fine Arts Center in fall 2011, and the Basketball/Convocation Center project in fall 2016. The number of existing parking spaces to be displaced and the number of new spaces to be provided have been estimated. Though a number of parking structures are referenced in the Master Plan, this analysis does not make any assumptions regarding the location and capacity of parking structures.

Exhibit F: **2006 Master Plan Update and Impact on Parking**

Table 14:
Master Plan Project, Phasing, Parking to be Displaced and Parking to be Replaced

Master Plan	Phasing	Lots to be Impacted	Parking to be Displaced					Parking to be Replaced	Net Loss
			Faculty/ Staff	Student	Open	Other	Total Displaced		
Apartment Phase I	Fall 2008	Lot 10	8	113	0	0	**121**	**0**	**121**
Apartment Phase II	Fall 2008	none	0	0	0	0	**0**	**0**	**0**
Fine Arts Center	Fall 2011	Lot 2 - 8	221	663	30	0	**914**	**250**	**664**
Basketball/Convocation Complex	Fall 2016	Lot 21	23	513	0	0	**536**	**150**	**386**
	---	---	**252**	**1,289**	**30**	**0**	**1,571**	**400**	**1,171**

With the introduction of Apartment Phase I and II by the fall of 2008 the 121 spaces in Lot 10 will be lost. No new parking is anticipated. By the fall of 2011 Lots 2 through 8 will be lost, impacting 663 student, 221 faculty/staff, and 30 open spaces. It is estimated that as many as 250 replacement spaces will be created. Though the date of construction for the a Basketball/Convocation Center is as yet undefined, the analysis assumes that 536 existing spaces in Lot 21 will be lost with 150 replacement spaces provided. Overall, while it is anticipated that approximately 400 replacement parking spaces would be developed, this number does not offset the 252 faculty/staff, 1,289 student, and 30 open spaces that would be lost. Note that this parking impact analysis does not include the potential loss of parking spaces associated with green space recommendations, most notably at South Dossett Drive (190 student spaces) and the Bell Tower (230 faculty/staff spaces).

Table 15 illustrates the anticipated practical parking capacity between fall of 2008 and fall of 2016. There are two critical periods for the parking supply; fall of 2011 and fall of 2016. In concert with the development of the fine arts center and the basketball/convocation center the practical supply of parking drops from 6,117 to 5,492 in fall 2010 and from 5,492 to 5,148 in fall 2016.

Table 15:
Current and Future Practical Parking Capacity by User Group

User Group	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Faculty/Staff (95%)	1,627	1,620	1,620	1,620	1,457	1,457	1,457	1,457	1,457	1,454
Commuting Students (90%)	3,111	3,040	3,040	3,040	2,723	2,723	2,723	2,723	2,723	2,489
Resident Student (95%)	1,423	1,390	1,390	1,390	1,245	1,245	1,245	1,245	1,245	1,138
Service Vehicle (90%)	44	44	44	44	44	44	44	44	44	44
Other (90%)	23	23	23	23	23	23	23	23	23	23
Total	**6,228**	**6,117**	**6,117**	**6,117**	**5,492**	**5,492**	**5,492**	**5,492**	**5,492**	**5,148**
Net Loss		*-111*	*-111*	*-111*	*-736*	*-736*	*-736*	*-736*	*-736*	*-1,080*

I. Future Practical Surplus or Deficit

Table 16 layers the estimates of future peak parking demand against the anticipated practical capacity of parking spaces once certain impacts associated with the Master Plan have been quantified. In addition to the user group summaries, Table 16 includes both a total and core campus surplus or deficit figures. This reflects the fact that most of the parking spaces in Pirate Cove and Buccaneer Ridge are not designed to service the larger campus' needs. Given the garden apartment layout of parking in these two areas it would be difficult to manage them for faculty, staff, commuter student parking or shuttle use. However, there is a 98 space surface lot at the base of Buccaneer Ridge Drive that could be used for commuter student or core campus resident student parking. It is large enough to be manageable and convenient to current Bucshot shuttle operations. Excluding those less manageable off-campus spaces, ETSU will experience a practical parking deficit of 187 by fall 2008. That deficit will grow to 1,019 spaces by fall 2011. The parking deficit will grow by approximately 90 spaces per year between 2011 and 2015. With the development of the Basketball/Convocation Center this deficit will increase to 1,942 spaces. If certain green space programs proceed, thus eliminating more core surface parking, that deficit could grow by another 420 spaces.

Table 16:
Future Practical Parking Surplus or Deficit by User Group

User Group	Fall 08	Fall 09	Fall 10	Fall 11	Fall 12	Fall 13	Fall 14	Fall 15	Fall 16
Faculty/Staff	94	78	62	-117	-133	-149	-165	-181	-200
Commuting Students	-193	-258	-324	-708	-777	-847	-918	-991	-1,299
Resident Student	138	-24	-24	-102	-102	-102	-102	-102	-209
Service Vehicle	28	28	28	28	28	28	28	28	28
Other	-31	-32	-33	-34	-35	-36	-37	-38	-39
Total	**36**	**-208**	**-291**	**-933**	**-1,019**	**-1,106**	**-1,194**	**-1,284**	**-1,719**
Less off-campus surplus(1)	***-223***	***-223***	***-223***	***-223***	***-223***	***-223***	***-223***	***-223***	***-223***
Core campus Deficit	**-187**	**-431**	**-514**	**-1,156**	**-1,242**	**-1,329**	**-1,417**	**-1,507**	**-1,942**

(1) Currently, there are some 321 unoccupied parking spaces off campus. However, only 98 of those spaces (in large lot in front of Building F) would be useful in meeting core campus needs

This summary greatly over-simplifies the parking stress that exists and will exist in the future. Commuting students, who already experience a parking deficit, would be most significantly impacted. By fall 2011, commuting students will have a shortfall of 708 spaces. That deficit will grow by approximately 70 spaces per year to nearly 1,300 spaces by fall of 2016.

J. Impact of Off-Campus Residential Development

Until this time the analysis has assessed the growth in commuter student enrollment, on-campus housing, and staffing. Some of the growth associated with commuter student enrollment, which is the largest single generator of parking demand, may be satisfied in a less than traditional way. As noted in the zip code analysis, commuting students are distributed over a large area. Regardless of the value of Johnson City Transit services, the vast majority of these commuters cannot take advantage of the system. Therefore, commuter students' auto use percentage will remain in the mid to upper 90 percentile. The development of more student-based market housing within close proximity to ETSU would change this percentage.

ETSU and Milestone Development are committed to creation of The University Edge Apartments, a 198-unit apartment complex at the intersection of W. State of Franklin Road., Watergate Avenue., and Love Street. Just six tenths of a mile from the core of the campus, this project would house 570 students in a combination of 2, 3, and 4-bedroom units and include 509 parking spaces on site. The complex would be served by a dedicated shuttle service (presumably through Johnson City Transit), and have a well developed bike and pedestrian pathway to the campus. The development anticipates that the apartment complex would capture those existing/future commuting students who live farther off-campus but would prefer the campus experience of living close by. The development is to be completed and ready for students by fall 2009.

This project will have an immediate and significant impact on parking demand on the campus. These 570 commuting students would have generated a need for 182 parking spaces based on the 0.32 students to peak parking demand ratio. Therefore, with the completion of the project, the campus core practical deficits referenced on Table 16 could drop from 431 and 514 in fall 2009 and 2010 to 249 and 332 respectively. These practical deficits would be much easier to manage. However, there is some debate if such a reduction would materialize and the market demographics of the tenants might not, in fact, have an effect on residential distribution patterns (i.e., living at home with mom and dad) or auto utilization. Regardless of the impact that The University Edge Apartments will have, the projected parking deficit that will materialize by fall 2010 would require the construction of a parking structure.

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IV REVIEW OF CURRENT OPERATIONS

A. Current Parking & Shuttle Operations

As an in-depth examination of current parking and shuttle management polices and procedures was completed in December 2006, this section simply highlights the key elements of ETSU's current operations.

As noted previously, parking spaces on campus are allocated to three main user groups: faculty/staff (marked dark blue), students (yellow), and visitors (light blue). With the exception of spaces reserved for resident advisors, there is no differentiation between commuter spaces or resident spaces. Whether they bring a vehicle to campus or not, all ETSU students pay as part of their tuition a $15 per semester fee that is allocated to the campus parking program. Faculty/staff pay $50 per year. Open spaces are available to anyone with a valid parking permit. As of October, 12,856 student permits and 1,589 faculty/staff permits have been issued for the 2007/08 academic year. With the exception of the general faculty/staff and student lot designations, permit holders were not assigned or dedicated to specific lots but were allowed to hunt for the most convenient space. While this makes the initial distribution of parking permits much easier, it has a negative impact on day to day traffic and circulation.

Visitors are instructed to obtain a temporary visitor permit from the Department of Public Safety, which is located off University Parkway at Stout Drive. Daytime event patrons are also required to obtain a visitor pass.

ETSU, through Adult, Commuter & Transfer Services (A.C.T.S.), does support a car and vanpool program. Commuting students who are registered for classes and who complete an application form will receive at no charge a parking permit. The permit allows them to park in either Lot 4, across from Dossett Hall, or in Lot 21, next to the tennis courts. However, this program seems to apply only to students. A.C.T.S. states that the program has 350 students, equating to 3 to 4 students per vehicle.

ETSU's parking and shuttle operations are not centralized. The planning, financing, maintenance, permitting, revenue collection, and enforcement of parking and shuttle services fall under various departments, including but not limited to public safety, physical plant, admissions, and A.C.T.S.. The University has formed a campus parking committee and faculty, staff, and administrators to propose changes to current parking policies.

Two parking enforcement officers are managed through the Department of Public Safety and utilize handheld parking citation issuance devices. Most parking restrictions are lifted after 5 PM. As referenced in the December 2006 study, 27% of the tickets issued are for illegal parking in faculty/staff reserved spaces.

The University operates a free shuttle system for students, faculty, staff, and visitors, linking parking lots located on the perimeter of the campus, including off-campus housing at Evergreen Terrance and Buccaneer Ridge, with main academic and administration buildings. Operation hours are scheduled during peak class periods. This intra-campus shuttle service is contracted through Johnson City Transit at a current cost of $36,000 per year. The average daily ridership for the Bucshot's' Gold and Blue routes is approximately 300 riders. Exhibit G illustrates the routing for these two services. The campus is also served by JCT's fix route system. This system is also free of charge to ETSU faculty, staff, and students and has six routes operating within a six mile radius of the University. JCT does not record ETSU ridership nor does ETSU provide funding for this service.

There are no space designations for on-campus special events at the Culp Center, the Memorial Center, or any of the other event venues. Given the limited number of parking spaces in and around the Culp Center and its conference center, the schedule of non-university oriented events at this location must occur during non-peak hours.

B. Current Parking Rates and Fines for Violations

The 2006 study also examined current parking rates and the fine structure for parking violations so this section will be brief. As noted earlier, faculty and staff pay $50 per year and are permitted to park in dark blue faculty/staff lots or in open facilities. The University does not presently offer a pre-tax cafeteria plan for employees who wish to lessen the impact on parking fees. All students pay a $42 access fee per semester of which $15 is allocated to the campus parking program.

ETSU's fines for parking violations are structured as follows:

$10.00 fines – Wrong permit for lot/zone
Improper displace of permit
Parked in a malfunctioning or expired meter
Time loading zone violations
Parked outside of the stall lines
$20.00 fines - No valid permit or non valid license plate
Parking in a service vehicle stall
Parked in a carpool stall
Parked in a reserved parking stall/area
$35.00 fines - Failure to register vehicle/false registration information
$50.00 fines - Parked on sidewalk, safety zone, obstructing
Chronic violator (repeat violations)
$75.00 fine - No parking area, red curb/fir lane
$100.00 fines -Altered, stolen, counterfeit permit, unauthorized use
Parked in a Disable parking stall

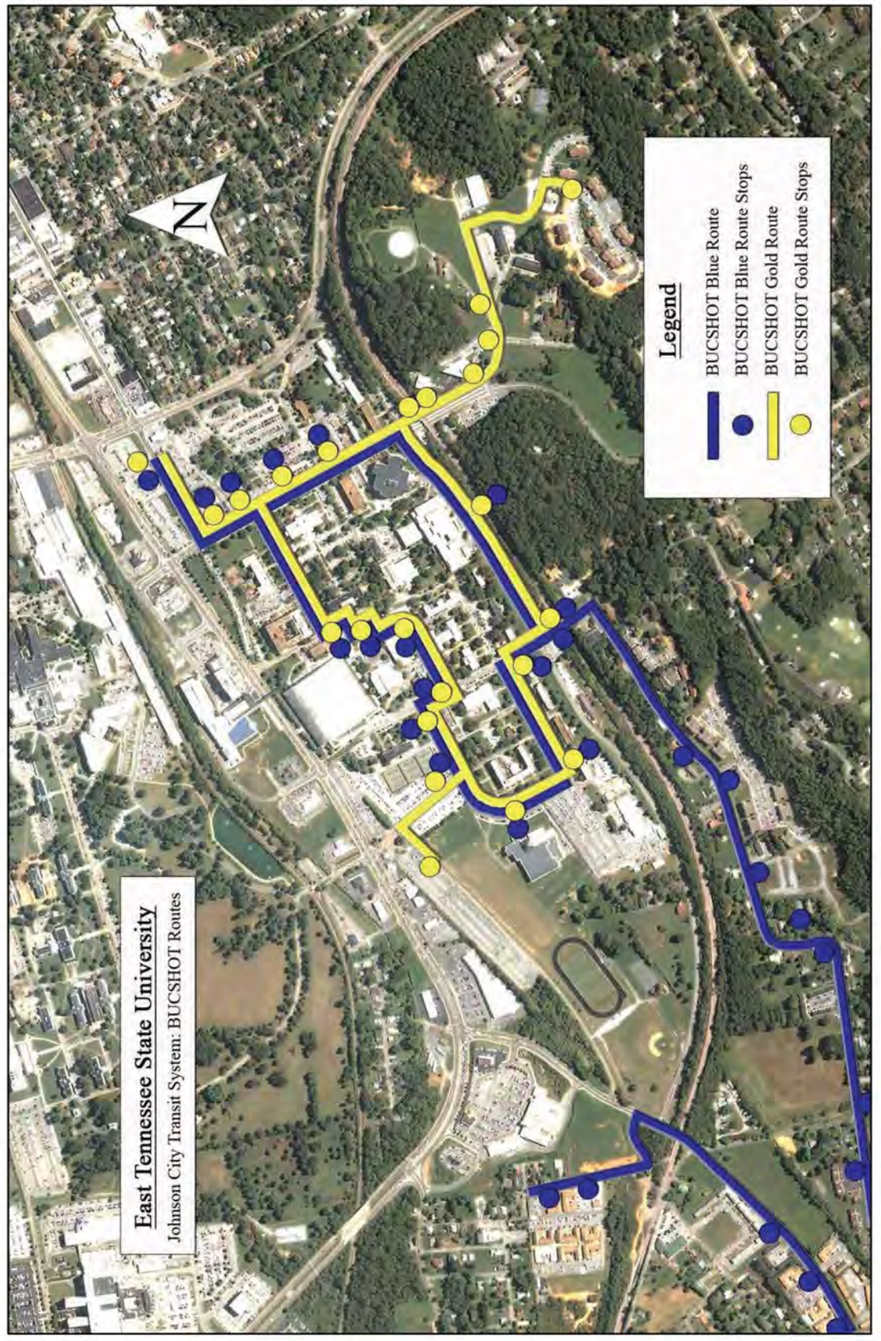

Exhibit G: **Johnson City Transit System – BUCSHOT Routes**

It should be noted that the December 2006 study also examined parking rates at some peer institutions, including East Kentucky University, University of Arkansas at Little Rock, and Appalachian State University. Appendix Exhibit E revisits this information. However, the parking rates that are appropriate for ETSU should not be based on comparisons to other universities but on the true cost to ETSU to provide effective and efficient parking and transportation services.

C. Current Parking Enforcement & Appeals

Two Parking Enforcement Officers (PEO's) are employed by the Department of Public Safety and are assigned to the campus. These PEO's are not sworn officers. PEO's utilize handheld parking ticket issuance devices, which are linked to a centralized management software system. The 2006 study noted that there is currently relatively low enforcement activity based on the number of citations issued and based on input received during interviews. Though no detailed evaluation of citations was performed, this study supports the previous assessment based simply on field observations conducted during the course of this study. While the PEO's were observed issuing parking citations during the course of the September parking surveys there were numerous observations of violations that were not ticketed, including parking outside of stalls, failure to displace a parking permit or visitor pass, and illegal parking in a handicapped space. For example, a motorcycle was parked in a handicapped space in front of Gilbreath Hall for nearly two hours without receiving a ticket.

Any person who receives a parking citation can appeal that citation by completing and submitting an appeals form at the Business Office. The appeal is then reviewed by the Parking, Traffic and Security Committee, and if approved is forwarded to the Traffic Appeals Court for disposition. The Parking, Traffic and Security Committee consist of four faculty, four staff, and four student members. Faculty and staff members serve a term of three years. The Committee meets approximately once a month.

D. Current Parking Revenues and Costs

Currently (October 2007), ETSU has 12,856 student permits and 1,589 faculty/staff permits in circulation. That compares to 13,153 student and 1,796 faculty/staff permits issued for the whole of the 2006/2007 academic year. Being in circulation suggests that the University does not maintain an exact count of permits issued or track those permits that are no longer valid. For the past academic calendar year, permit revenue resulting from student sales was $387,683 and $76,981 from faculty and staff. The fees from parking fines during this same period equaled $299,776. In total, the revenue from parking operations equaled $764,440, which equals to $113 per space per year.

To date, ETSU does not formally account for the financial cost to plan, development, maintain, and operate its parking system. As noted previously, various departments are involved in different aspects of parking functions and these departments do not track their parking related expenses. This is not an uncommon practice for universities that have not

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created a central parking or transportation department. As a result, and for purposes of this analysis, some estimated costs have been calculated. However, with the creation of an auxiliary department that will be responsible for the planning, management, and financing of parking and transportation related services these costs must be quantified. An upcoming section of the report will present the debt service and operating costs for the existing system and all recommended improvements.

V - PHYSICAL AND OPERATIONAL RECOMMENDATIONS

The previous sections of this report identified the current stress on ETSU's parking system and the need for additional parking spaces in the future. They also reviewed the University's current parking and shuttle operations, noting some deficiency's from a parking industry perspective. This section of the report will address the physical and operational improvements that should be made to meet the growing parking needs and expectations of the campus' faculty, staff, students, and visitors. Improvements to be presented in this section include:

- An opportunity to increase the capacity of existing parking lots
- Location, capacity, and cost to develop peripheral surface lots
- Location, capacity, and cost to develop parking structures
- A review of handicapped accessible (ADA) space requirements
- Route, schedule, and cost of an intra-campus "express" shuttle
- Staff, role, and responsibility of a ETSU Parking & Transportation Services Department

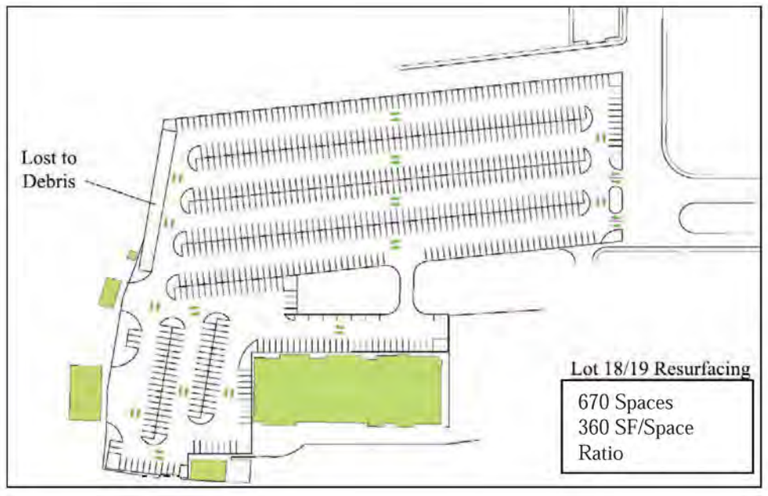
Given that the parking and shuttle services must function within the context of an auxiliary service, where revenues must equate operating expenses, this section of the report will also combine the capital and operating costs of all of previous recommendations into a financial model. The key to that model will be the development of a fair and effective parking space assignment and allocation strategy and the fee structure required to support the parking and shuttle program.

A. Opportunity to Increase Capacity of Existing Lots

With few exceptions, the current campus parking system consists of a number of small to medium sized surface lots and curbside spaces. As a result,, there is little opportunity to increase the number of existing spaces through re-striping. However, there are four lots of significant scale that merited a more detailed examination; Lot 1 ("Foundry"), Lot 22a ("Airstrip"), Lot 21 (near the Tennis Courts), and Lot 18/19 (by the Bond Building). An initial redesign analysis suggested that Lots 1, 22a, and 21 had already maximized their capacity. Though alternative parking stall and drive aisle options could be explored, none would succeed in increasing parking capacity. However, Lot 18/19, which by its very code appears to be two separate lots united by layout and adjacency, did possess some capacity potential. As noted on the Exhibit H1, Lot 18/19 has at present 619 spaces. Accounting for the fact that the Facility Services stores fleet vehicles, equipment, and material on the western edge of this lot, a redesign (see Exhibit H2) could achieve a space count of 670 spaces, an increase of 51 spaces. Compared to the cost of a new surface or structured parking facility, the cost differential to remove paint and re-stripe this lot would be insignificant.

Exhibit H1
Existing Lot 18/19

Exhibit H2
Redesigned Lot 18/19



B. Location, Capacity, and Cost of Peripheral Surface Lots

Knowing the immediate pressure for new parking spaces, the University had prior to this study identified two locations that could potentially support the development of new surface parking facilities. The maps on Exhibits I1, I2 and J1, J2 identify respectively the location and relative footprint of a Greenwood/Jack Vest Drive (Site A) and Southwest Avenue/Village Lane (Site B) surface lot. Based on a preliminary layout, its is anticipated that 480 spaces can be developed on Site A at a cost of $2 million while the Site B lot could accommodate as many as 320 spaces at a cost of $1.54 million. Presuming the development of a parking structure on the campus in FY2010 as has been discussed by ETSU administrators, it is unlikely that the University will require two new parking lots in the immediate future. Based on its relative proximity to Sherrod Library, and Governor's Hall, it is recommended that a parking lot at Site B be developed by fall of 2009.

Exhibit I1 – **Site A Surface Lot Location/Footprint**

Exhibit I2 – **Site A Parking Layout**

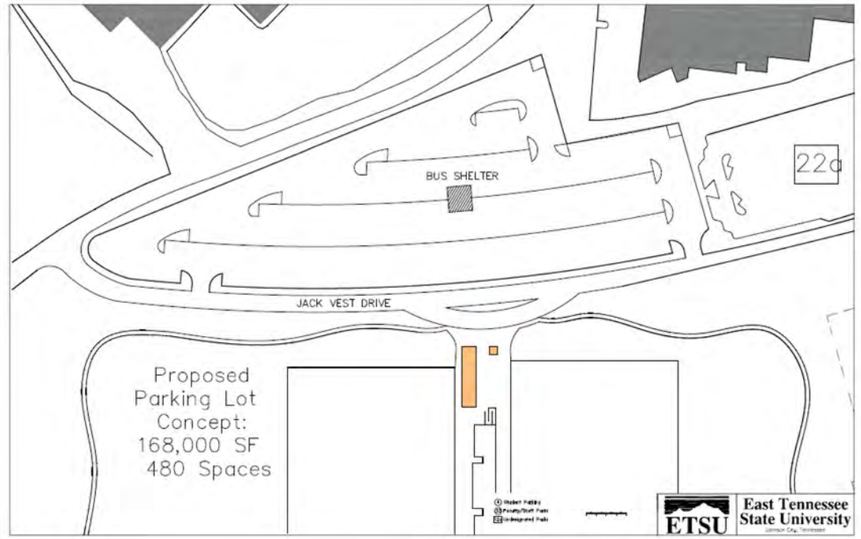
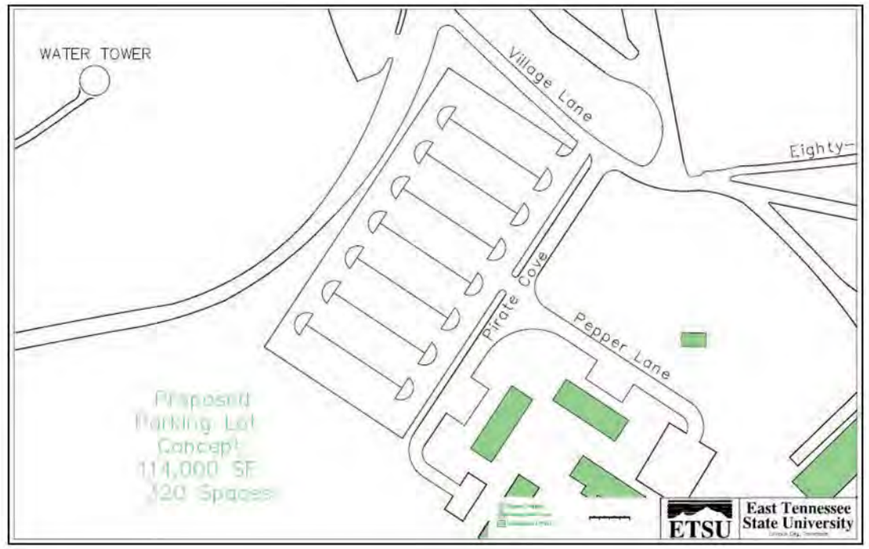


Exhibit J1 – **Site B Surface Lot Location/Footprint**

Exhibit J1 – **Site B Surface Lot Location/Footprint**

Exhibit J2 – **Site B Parking Layout**



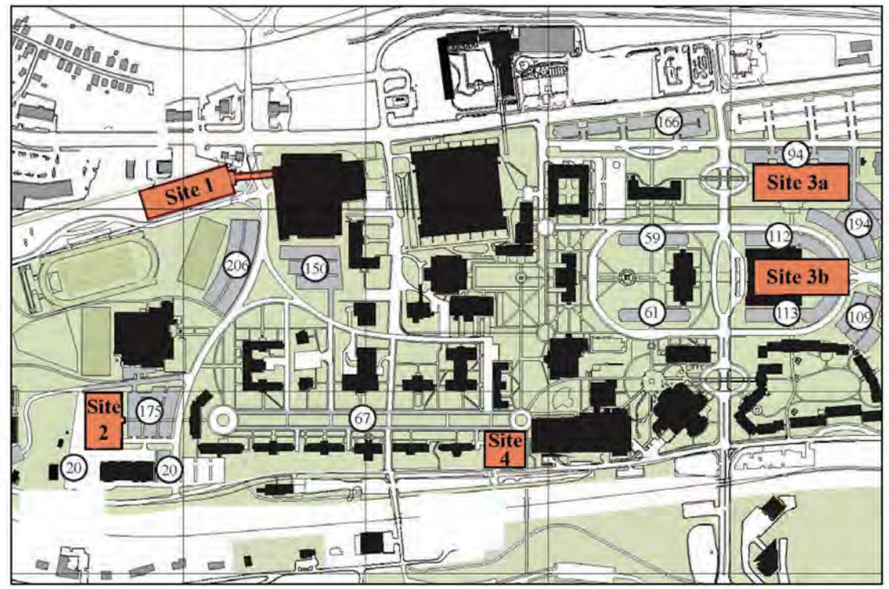
C. Location, Capacity, and Cost of Parking Structures

The recently completed campus master plan identifies four sites for structured parking:

- Site 1 – Lot 22a ("Airstrip")
- Site 2 – Lot 18/19
- Site 3a - Block bound by Maple St., Lake St., Walnut St., and University Pkwy
- Site 4 – Stone Hall

The University wished to examine another opportunity related to the site of a proposed Performing Arts Center in the block bound by Stout Drive., Lake Street, Maple Street, and University Parkway, referred here as Site 3b. Exhibit K illustrates the location and development footprint for these five options.

Exhibit K
ETSU Master Plan / Structured Parking Opportunities



A parking functional design or concept was developed for each site noting the location; vehicular entry/exit points, ramping, directional flow, and parking count and are located in the Appendix (Exhibit F1 through F5). Additionally, construction cost estimates were developed based on the total building area and current standards for per square foot construction costs ($45 per square foot). Table 17 summarizes the space count, design efficiency, total and per space construction cost for each facility, including the two surface lot concepts. Note that the number of existing parking spaces that would be displaced by new construction was included in the calculations.

Table 17

Structured Parking Capacity and Construction Cost Comparisons

	Garage Concepts			Surface Concepts	
	Site 1	Site 2	Site 4	Site A	Site B
Number of Spaces to be Developed	995	425	445	480	320
Number of Spaces to be Displaced	240	150	0	0	0
Number of Spaces to be Gained	**755**	**275**	**445**	**480**	**320**
Total Garage Plate (Sq.ft.)	318,100	144,000	168,100	168,000	114,000
Sq.ft. per Space Efficiency	320	339	378	350	356
Sq.ft. Construction Cost	$45.00	$45.00	$45.00	$10.00	$10.00
Subtotal Construction Cost	$14,314,500	$6,480,000	$7,564,500	$1,680,000	$1,140,000
General Conditions (8%)	$1,145,200	$518,400	$605,200	$134,400	$91,200
Profit & Overhead (10%)	$1,546,000	$699,800	$817,000	$181,400	$123,100
Total Construction Cost	**$17,005,700**	**$7,698,200**	**$8,986,700**	**$1,995,800**	**$1,354,300**
Construction Cost Per Space	**$17,091**	**$18,113**	**$20,195**	**$4,158**	**$4,232**
Cost per Space Gained	***$22,524***	***$27,993***	***$20,195***	***$4,158***	***$4,232***

	Garage Concepts			Surface Concepts	
	Site 3a (1)	Site 3b (1)	Site 4	Site A	Site B
Number of Spaces to be Developed	1175	1175	445	480	320
Number of Spaces to be Displaced	180	430	0	0	0
Number of Spaces to be Gained	**995**	**745**	**445**	**480**	**320**
Total Garage Plate (Sq.ft.)	354,300	354,300	168,100	168,000	114,000
Sq.ft. per Space Efficiency	302	302	378	350	356
Sq.ft. Construction Cost	$45.00	$45.00	$45.00	$10.00	$10.00
Subtotal Construction Cost	$15,943,500	$15,943,500	$7,564,500	$1,680,000	$1,140,000
General Conditions (8%)	$1,275,500	$1,275,500	$605,200	$134,400	$91,200
Profit & Overhead (10%)	$1,721,900	$1,721,900	$817,000	$181,400	$123,100
Total Construction Cost	**$18,940,900**	**$18,940,900**	**$8,986,700**	**$1,995,800**	**$1,354,300**
Construction Cost Per Space	**$16,120**	**$16,120**	**$20,195**	**$4,158**	**$4,232**
Cost per Space Gained	***$19,036***	***$25,424***	***$20,195***	***$4,158***	***$4,232***

(1) Per Master Plan illustration number of spaces to be displaced includes 200 surface spaces to be replaced.

In reference to the estimate of future parking deficits (Table 16) and the location of current parking demand by building (Exhibit E) it is recommended that ETSU develop a parking structure on Site 3A by the year 2010 to address both the anticipated parking shortfall and to meet access goals of the to be adjacent Performing Arts Center. Beyond 2010, it is recommended that a second structure, when required, be developed on Site 4 given its adjacency to the Culp Center (a large parking demand generator) and its proximity to core residential and academic functions. For purposes of the financial model, a 2016 construction schedule has been established or Site 4.

D. ADA Space Compliance

The determination of ADA space compliance examines parking from multiple perspectives, including number, location, design, and accessibility. Though there are statistical measures to determine if a university has provided the legally required number of handicapped accessible parking spaces, a more meaningful determination of need and compliance is derived from a discussion with the campus ADA Coordinator and a tour of the campus. It is understood that those with disabilities can park in any available space. Considering this, the ADA Coordinator stated that there are a sufficient number of spaces for lift/transfer vehicles. However, the ADA Coordinator also stated that the volume of individuals with less significant disabilities is growing; consuming spaces originally used by those with more sever disabilities.

From a statistical standpoint, and using a strict reading of the requirements, the number of accessible parking spaces required shall be calculated separately for each parking facility. Table 18 presents the required minimum number of accessible spaces from the Knoxville County, Tennessee legislation. Note that the number of van-accessible and wide access aisle spaces is also referenced. Given that ETSU has 10 different on-street parking facilities/areas and 52 surface lots, and presuming that each and every lot must have an accessible parking space, the Table suggests that the campus must have 230 accessible spaces. At present, the campus has 143.

Table 18
Accessible Parking Space Requirements per Facility Size

Total Number of Parking Spaces Provided (per lot)	Total Minimum Number of Accessible Parking Spaces (60" & 96" aisles)	Van-Accessible Parking Spaces with min. 96" wide access aisle	Accessible Parking Spaces with min. 60" wide access aisle
1 to 25	**1**	1	0
26 to 50	**2**	1	1
51 to 75	**3**	1	2
76 to 100	**4**	1	3
101 to 150	**5**	1	4
151 to 200	**6**	1	5
201 to 300	**7**	1	6
301 to 400	**8**	1	7
401 to 500	**9**	2	7
501 to 550	**11**	2	9
551--600	**12**	2	10
601--650	**13**	2	11
651--700	**14**	2	12
701--750	**15**	2	13
751--800	**16**	2	14
801--850	**17**	3	14
851--900	**18**	3	15
901--950	**19**	3	16
951--1000	**20**	3	17
1001--1100	**21**	3	18
1101--1200	**22**	3	19
1201--1300	**23**	3	20
1301--1400	**24**	3	21
1401--1500	**25**	4	21

However, the campus ADA Coordinator did not state that there was a significant shortage of accessible spaces as would be suggested by an 87-space difference between the spaces required (230) and the spaces provided (143). Therefore, it may be unnecessary to create an additional 87 accessible and van accessible spaces. The true need for accessible and van-accessible parking space lies in the number of ADA accessible permits that are approved and submitted to Public Safety for review. The University's current approach to permitting handicapped individuals to park in any available and legal space may be sufficient in this regard. It is recommended, however, that an ETSU parking and transportation administrator work continuously with the State and campus ADA coordinators to monitor and update accessibility requirements, including increasing the number and type of spaces, their location, and enforcement of the parking regulations.

E. Route, Schedule, and Cost of an Intra-Campus "Express" Shuttle

Given the construction of a parking lot on Village Lane near the apartments at Pirate Cove (Site B), the relative remoteness of existing Lot 22a, and the increased importance of distributing parking demand throughout the campus, it is recommended that ETSU develop an intra-campus shuttle to augment Johnson City Transit's existing Bucshot service. It is accepted that the Bucshot service is quite valuable particularly when considering its current low cost ($36,000 year). However, this service is ineffective in servicing individuals who are required to park in peripheral facilities given the shuttles' lengthy headways (30 minutes) and number of stops. The relative inconvenience in parking in Lot 22a and a potential lot at Site B must be muted by a shuttle service dedicated to those parkers. Exhibit L illustrates the routing and shuttle stop locations for this "express" service (noted in red) while Table 19 illustrates the operating schedule and cost. This cost ($288,000 in current dollars) is based on industry standards for per hour operation through a third-party lease. It is not based on ETSU's purchase of shuttle vehicles and/or self-operation. It is also based on 18 hours per day of service during a typical weekday and 12 hours of service on a weekend day in an effort to be of service to resident students who are required or choose to park in these more peripheral facilities and require off-hour access to their vehicles. Note that Johnson City Transit may be in a position to offer this service at a somewhat reduced cost.

Exhibit L
Routing and Stops for ETSU "Express" Shuttle

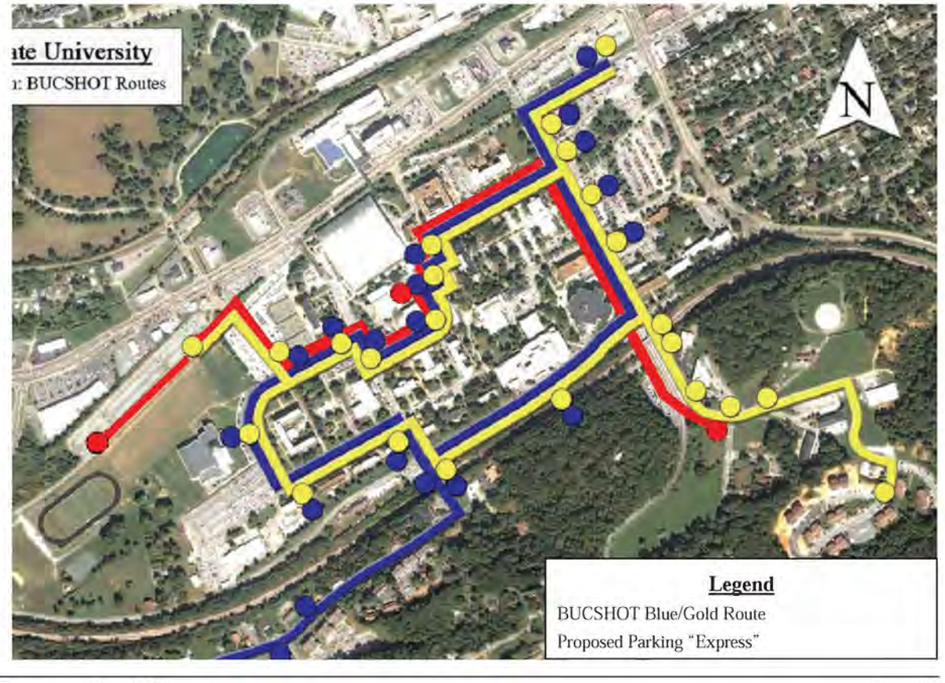


Table 19
Hours of Operation and Cost of ETSU "Express" Shuttle

	Hours of Operation	Number of Buses	Headway in Min.	Circuit Time in Minutes	Operating Cost (2)
Fall, Winter, Spring Schedule (8 mo.)					
Weekday Operations (1)	6,400	2	8 to 10	20 to 22	**$256,000**
Weekend Operations (2)	800	1	16 to 20	20 to 22	**$32,000**
Summer Schedule (4 mo.)					
Weekday Operations	0	0	0	0	**$0**
Weekend Operations	0	0	0	0	**$0**
Total	**7,200**	---	---	---	**$288,000**

Note:
(1) One bus operates 18 hours per day (6 AM to 12 PM) and one bus operates 8 hours (8 AM to 4 PM)
(2) One bus operates 12 hours per day (10 AM to 10 PM).
(3) Assumes a $40 per hour operating cost

F. Creation of a Parking & Transportation Services Department

As referenced earlier, there is no single individual on campus that is solely in charge of managing ETSU's parking resources. Additionally, there is no single individual that can be characterized as a parking professional who maintains the level of operational and planning experience required to deal with the growing parking concerns of the University. A majority of progressive university campus parking systems have a dedicated full-time parking administrator on staff. Without a clear direction of what the goals and objectives of the Parking System are, and the lack of an individual or department to own the responsibility of managing parking resources, the parking system is absent of direction or mission and ongoing attention and the delivery of parking services is fragmented. Parking management should not be a part-time endeavor; it must be a full-time and proactive responsibility. Anticipating this, ETSU has begun the creation of a parking management function as an auxiliary service. This will permit the University to track and record all parking related costs and revenues within a single organization. It would also require the parking management function to be financially self-supporting. Therefore, the cost of current parking/shuttle operations and all related improvements to be discussed in the report must be quantified and compared against current and/or anticipated parking revenues.

The newly created Parking and Transportation Auxiliary Services Department would necessitate the hiring of an experienced parking and shuttle administrator to head up this new office and required support staff. Ideally, the person selected to fill this post would have a minimum of 5 years of progressively responsible parking experience at a similar sized institution. To operate effectively, the Parking/Shuttle Administrator position should have no other responsibilities than parking/shuttle management. Related office staff should consist of a Parking/Shuttle Supervisor and two part-time account clerks to sell permits during the first few weeks of an academic semester. In effect, and only

during peak vehicle registration periods, personnel from other administrative offices would be temporarily shifted to help process the volume of registrations that would be anticipated. An upcoming recommendation regarding a third-party contract for web-based permit issuance will discuss how the cost and management of permit distribution would be transferred from the parking office (and its part-time labor) to a firm that specializes in such service. Field personnel should include three full-time parking enforcement staff members responsible for issuing parking citations. This would centralize parking enforcement under the Parking and Transportation Services Department and allow Public Safety to focus on their core responsibilities.

Typical responsibilities and support personnel requirements of a centralized parking program include (but are not limited to):

- Oversees the daily operation of all divisions of the "Parking System"
- Oversees the daily management and coordination of all "Parking System" activities related to parking and related transportation operations, property maintenance, and financial reporting
- Responsible for the direct oversight of the account clerk and parking enforcement staff
- Responsible for short-term and long-term planning of parking
- Responsible for developing departmental and division budgets and assuring compliance with adopted budget
- Responsible for direct interaction with members of the parking public including faculty, staff, students, vendors, and visitors
- Responsible for the input on parking related construction projects
- Responsible for the timely completion of employee performance reviews

Sample job classifications for the administrator and supervisor position are included in the Appendix (Exhibit G1 and G2).

Operational expenses associated with the staffing and operations, including capital expenses, are presented in Table 20. Salary and benefits are the single most significant annual operating cost and are based on presumed salary of $60,000 per year for the parking administrator, $40,000 per year for the supervisor, and $30,000 per year for full-time parking enforcement officers. Capital costs for fleet vehicles, parking meters, and additional handheld ticket issuance devices are included in the departments' debt service calculations as a separate line item.

Table 20:

Parking & Transportation Services Department Annual Operating Budget

	Annual Expenses	One-Time Capital Expense
Salaries (1)	$220,000	----
Benefits (32%)	$70,400	----
Overtime (5%)	$11,000	----
2 Cushman Style Enforcement Vehicles	----	$50,000
Parking Meters	----	$71,400
Fuel	$10,000	----
Hangtag/Permit Cost	$20,000	----
Handheld Ticket Issuance System	----	$75,000
4 Computers	----	$15,000
Uniforms	$2,000	----
Misc. Office Supplies	$2,500	----
Total	**$335,900**	**$211,400**

(1) Presumes one parking/transportation administrator ($60,000 salary), one parking coordinator ($40,000), and three full-time parking enforcement officers ($30,000 each).

G. Summary of ESTU Parking & Shuttle System Costs

As noted in the introduction to this section, the Parking & Transportation Service Department must function within the context of an auxiliary service, where at a minimum revenues must equal operating expenses. To date, the cost of issuing permits, enforcing regulations, maintaining surface lots, funding and expanding shuttle operations, increasing safety and security within the lots and garage(s), and building new surface and structured parking facilities has not been quantified. As these annual costs include salaries, material, and debt service payments, they need to be projected out over the length of the program. For purposes of this study, cost and revenue projections extend 10 years out to FY2017 (Table 21).

It is estimated that ETSU's parking and shuttle system will cost the University $1,299,000 in FY2008 presuming the development and maintenance of a new parking lot on Site B (cost figures highlighted in green). With the development of the University's first parking structure in FY2010 (see blue highlighted costs), the total system costs will increase to approximately $3,202,000. Per year increases in material maintenance, salaries, and other expenses will cause the system costs to increase to $3,507,000 by FY 2015. With the development of ETSU's second parking structure, system costs will increase to roughly $4.5 million by FY2017.

It could be argued that certain expenses could be deferred for a number of years, thereby saving the University in the short-term. Additionally, some of the smaller scale improvements to shuttle operations or permit issuance could be delayed. The recommendations that have been presented cannot be perceived as a menu of recommendations to choose from. Instead, they are links in the management, maintenance, and development chain that holds the system together. Their costs cannot be broken down, diminished, or deferred without negatively impacting operations and the long-term goals of parking and circulation for the campus.

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Table 21:

Summary of Parking & Transportation Services Department System Costs

	10-Year Operations, Maintenance and Development Cost Estimates										
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Current/Projected Maintenance Costs (1)										
Non-Metered Surface Parking	$340,700	$341,300	$341,300	$302,600	$302,600	$302,600	$302,600	$302,600	$283,100	-$5,800
Metered Surface Parking	$8,330	$8,660	$9,010	$9,370	$9,740	$10,130	$10,540	$10,960	$11,400	$11,860
New Surface Parking (Site B)	$16,000	$16,600	$17,300	$18,000	$18,700	$19,400	$20,200	$21,000	$21,800	$22,700
New Structured Parking (Site 3a & Site 4)	$0	$0	$0	$176,250	$185,060	$194,310	$204,030	$214,230	$291,690	$303,358
Total Maintenance Costs	**$365,030**	**$366,560**	**$367,610**	**$506,220**	**$516,100**	**$526,440**	**$537,370**	**$548,790**	**$607,990**	**$332,118**
Permit/Violations Appeal Web Hosting	**$120,000**	**$123,600**	**$127,300**	**$131,100**	**$135,000**	**$139,100**	**$143,300**	**$147,600**	**$152,000**	**$156,600**
Recommended Operations Cost (2)										
Salaries/Benefits/Overtime	$301,400	$316,470	$332,290	$348,900	$366,350	$384,670	$403,900	$424,100	$445,310	$467,580
Capital Items (3)	$30,000	$30,000	$30,000	$30,000	$30,000	$0	$0	$0	$0	$0
Fuel	$10,000	$10,500	$11,030	$11,580	$12,160	$12,770	$13,410	$14,080	$14,780	$15,520
Hangtags/Permits	$20,000	$21,000	$22,050	$23,150	$24,310	$25,530	$26,810	$28,150	$29,560	$31,040
Uniforms	$2,000	$2,100	$2,210	$2,320	$2,440	$2,560	$2,690	$2,820	$2,960	$3,110
Misc. Office Supplies	$2,500	$2,630	$2,760	$2,900	$3,050	$3,200	$3,360	$3,530	$3,710	$3,900
Total Operating Costs	**$365,900**	**$382,700**	**$400,340**	**$418,850**	**$438,310**	**$428,730**	**$450,170**	**$472,680**	**$496,320**	**$521,150**
Total Maintenance & Operating Costs	**$850,930**	**$872,860**	**$895,250**	**$1,056,170**	**$1,089,410**	**$1,094,270**	**$1,130,840**	**$1,169,070**	**$1,256,310**	**$1,009,868**
Shuttle Program										
JCT BusShot Shuttle	$37,400	$37,400	$37,400	$44,900	$44,900	$44,900	$53,900	$53,900	$53,900	$64,700
Intra-Campus Shuttle Program	$288,000	$299,500	$311,500	$324,000	$337,000	$350,500	$364,500	$379,100	$394,300	$410,100
Total Shuttle Program	**$325,400**	**$336,900**	**$348,900**	**$368,900**	**$381,900**	**$395,400**	**$418,400**	**$433,000**	**$448,200**	**$474,800**
Structured Parking Development Program										
Site B Debt Service Payment	$122,924	$122,924	$122,924	$122,924	$122,924	$122,924	$122,924	$122,924	$122,924	$122,924
Site #3a Debt Services Payment	$0	$0	$0	$1,834,872	$1,834,872	$1,834,872	$1,834,872	$1,834,872	$1,834,872	$1,834,872
Site #4 Debt Service Payment	$0	$0	$0	$0	$0	$0	$0	$1,061,984	$1,061,984	$1,061,984
Total Structured Parking Debt Service	$122,924	$122,924	$122,924	$1,957,797	$1,957,797	$1,957,797	$1,957,797	$3,019,781	$3,019,781	$3,019,781
Total System Costs	**$1,299,254**	**$1,332,684**	**$3,201,947**	**$3,382,867**	**$3,429,107**	**$3,447,467**	**$3,507,037**	**$4,621,851**	**$4,724,291**	**$4,504,449**

Footnotes:
(1) Cost based on $150 per space per year for structured parking, $75 per year for metered parking, and $50 per year for non-metered surface parking.
(2) Operating costs anticipated to increase 4% per year.
(3) Reflects annual payment for non-recurring Capital Items for 3 enforcement vehicles, handheld ticket issuance system, and computers.

VI SPACE ALLOCATION STRATEGIES & FINANCIAL ACCOUNTABILITY

With the determination of costs associated with the Parking and Transportation Services Department and the various surface, structured, and shuttle improvements that are recommended, the next section of the study identifies the parking revenues required to offset these costs. Apart from a significant one-time capital contribution by the University from the current parking fund, there are but two general revenue sources that could support the parking and shuttle program; user fees and fines assessed through parking enforcement. While the University currently collected roughly $239,000 in fines, the most significant of these sources, user fees, is dependent both on the permit and meter rate that would be charged and the type of space allocation system that would be employed. Furthermore, and presuming that the system costs are a given, the rate that must be charged to offset system costs is dependent on the number of spaces that are allocated to different user groups and the number of permits that might be issued/sold. Before space allocation, assignment and rate alternatives can be explored; discussion of how permits will be issued is required.

A. Third-Party Web-Based Permit Issuance and Violations Appeal System

A key to a successful space allocation and assignment program regardless of the particular strategy that is employed is permit issuance. It is anticipated that there will be over 12,000 requests for parking permits each year, with the vast majority occurring in the weeks leading up to the start of each academic year. Such a volume would typically place great stress on a University's parking office under the presumption that permit sales occur at a cashier's window. As an alternative, it is recommended that ETSU and its Parking and Transportation Department utilize a third-party web-based permit issuance and violations appeal system. Under this system, a contractor would develop a webpage that is linked to University and its Banner reporting system and manage the day to day issuance of permits, collection of revenues, initial violations appeals, and fine revenue collection. There are four (4) main issues the contract would address:

1) Online Permit sales and delivery by a third party
2) Point of Sale for parking permits sold locally
3) Online parking citation processing/ adjudication
4) Handheld citation writers

The goal of this third-party contract is to purchase, implement, and maintain a system that will achieve the following:

- Increase revenue collections
- Reduce overall workload through automation and use of technology
- Identify repeat offenders, scofflaws, and VIPs to field officers
- Assist in better managing communications with customers
- Improve and enhance parking permit sales

- Reduce office traffic by allowing customers to apply for, as well as purchase, permits via the Internet
- Reduce office traffic by allowing customers to access account information and pay citations via the Internet
- Reduce office traffic by allowing customers to appeal citations via the Internet
- Help the University obtain useful reports for system analysis, problem resolution, overall efficiency, etc.
- Enhance the University's public and professional image to our customers
- Save time by incorporating a relational database that contains permits, properties, citations, vehicles, and customers (i.e. permit holders, persons responsible for citations, etc.)
- Provide a better system for tracking: vehicles that have been booted/towed or have been approved for boot/tow, the status/location of booted/towed vehicles, as well as the fine accrual while in impound
- Provide a platform for integration with other parking and financial accounting systems via an open database platform

While this program would considerably reduce time consuming data entry and tracking functions, allowing Parking & Transportation staff to focus on planning, management, financial accountability and customer service, it would come at a significant annual costs. Based on a similar application for a large community college system in Maryland, it is estimated that the third-party web based permit issuance and violations appeal system would cost $120,000 for the first year. It is anticipated that the service provider and the University will build into the contract escalators for annual cost increases.

B. Basics of Parking Space Allocation and Assignment

Under on current parking operations, a campus parking permit holder could circulate between any number of parking lots that are allocated to their use. This dramatically increases traffic volumes on campus and the level of frustration experienced by the would-be parker. Additionally, this approach provides the temptation to some individuals to park illegally in a space designated for a different user group (faculty/staff only parking for example) or for a different purpose (service vehicle only parking) if those spaces were unoccupied. By both allocating a parking facility to a specific group and assigning an individual parker to that location, ETSU can reduce traffic volumes, minimize confusion and frustration, and reduce but not eliminate the temptation to park illegally.

Using the modeling of current parking demand by user group and by building as a foundation (refer back to Exhibit E), the study examined the opportunity to improve the allocation of existing parking spaces and reduce vehicle circulation patterns and volumes. While there are any number of ways that the 67 different surface lots and on-street parking areas can be allocated, there are only two principles that can be referenced when determining a fair and effective space allocation and assignment program. The first relates to parking duration and suggests that the shorter the duration of stay the shorter

the acceptable walking distance. On a university campus duration can be defined by user group where visitors and short-term parkers should be assigned the most convenient spaces possible, Faculty and staff would then be assigned the second tier of most convenient spaces, followed by commuting students, and finally resident students. The second principle relates to proximity and value. Simply put, spaces that are closer to ones destination are perceived as more valuable regardless of the trip purpose. As opposed to the user-based approach to space allocation/assignment where the user has little choice in location or fee, the value-based approach allows any parker to choose their parking location based on the fee they are willing to pay. The space allocation and financial analysis that follows will track the revenue requirements associated with both the user-based and value-based allocation strategies.

It should be noted that no parking assignment or allocation system is flawless. Paraphrasing Abraham Lincoln, and with regards to parking, "you can satisfy some of the people all of the time, and all of the people some of the time, but you can not satisfy all of the people all of the time." On a campus where a parking space next to an academic/administrative building or a resident hall cannot be guaranteed because of the sheer demand for parking and the desire to preserve open or green space, a reasonable parking assignment and allocation program is one that inconveniences all user groups to some extent. Therefore, from an egalitarian perspective, a fair parking program tries to balance inconveniences equitably. That might suggest that those that are willing to pay for convenience will be inconvenienced by higher parking fees while those that are unwilling to pay for convenience will be inconvenienced by greater walking/shuttle distances.

C. User-based Space Allocation/Assignment

Exhibit M illustrates a user-based parking space allocation program. In comparison to the current allocation of spaces there are many changes in this program but three are quite significant. First, the number of open parking spaces has been dramatically reduced. Many open space lots would be reassigned to faculty/staff and students. Only Lot 22a near the athletic fields and Lot 14 just south of the railroad tracks on Southwest Avenue would be available to any permit holder ("Open"). It is assumed that a new surface lot near Pirate Cove (Lot B) would also be designated as an open lot while a new parking structure between Maple Street and Walnut would service a mix of faculty, staff and commuting students. The second dramatic change is the segregation of commuter and resident student spaces. Currently, the two groups share student designated spaces. Third, the number of metered parking spaces would increase from 19 to 111 under this program. These 2-hour metered spaces could serve visitors and those students and staff who need quick and short-term access to the campus and would be concentrated around Sherrod Library, Culp Center, and Dossett Hall. Note that the 2-hour duration would have to be strictly enforced (no long-term parking or meter feeding). While not a change in the number of allocated spaces, it is recommended that the resident student spaces that would remain on South Dossett Drive and by the Davis Apartments be identified as

premium spaces. Upper classmen would get the first opportunity to purchase a permit to park in these more valuable lots.

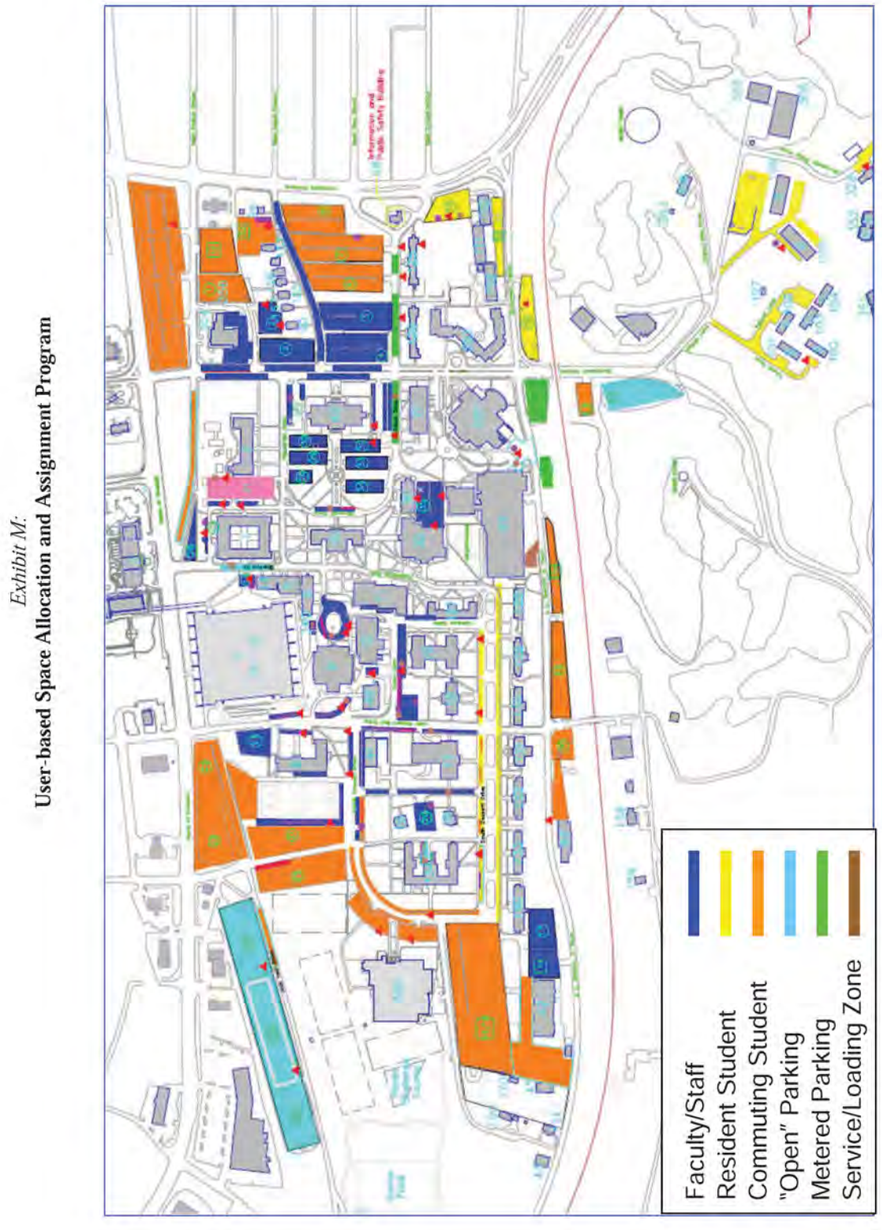

Exhibit M:
User-based Space Allocation and Assignment Program

The parking use/ownership characteristics that were obtained through pedestrian questionnaires (see Table 6) were used to estimate the number of parking permits that would be purchased each year by the different user groups. For example, it is estimated that 100 full-time faculty who are employed on the ETSU campus will purchase 90 faculty/staff parking permits. The pedestrian questionnaires and faculty/staff population data also provided some insight into the number of permits that would be issued per user group. For example, it is understood that not all faculty are on campus as the same time. Statistics suggest that only 60% of the total faculty population is on campus during the peak period of parking activity (10AM-1PM) on a typical day. Therefore, the number of permits issued to faculty could be greater than the number of spaces that are allocated and assigned to them. Such oversell ratios apply to lesser and greater degree to all campus user groups and are also illustrated on Table 22.

However, even under the best managed conditions there will be those rare occasions when there will be more parkers than parking spaces in a particular lot or for a particular user group at a particular moment in time. The Parking and Transportation Department must maximize the utilization of each and every lot by issuing a maximum number of permits. Otherwise, certain lots would appear under utilized and would entice individuals not assigned to those spaces to use them illegally. As recourse, all parking permit holders would know through the registration process that if their assigned parking lot or location was full they would be required to park in one of the various "open" lots. This further supports the need for an express shuttle from these peripheral locations. The persons per auto and permit oversell ratios on Table 22 will be applied to both the user-based allocation and the value-based allocation strategies.

Table 22:
Population to Persons per Auto/Permit Request and Permit to Space Oversell Ratios

Population Group	Persons to Auto Ratio	Permit to Space Oversell Ratio
Full-Time Employees		
Full-Time Faculty	0.90	1.80
Full-Time Staff	0.90	1.60
Non-Full Time Employees		
Adjunct Faculty	0.95	n.a.
Hourly Staff/Technicians	0.95	n.a.
Seasonal/Monthly	0.95	n.a.
Students		
Commuting Students	0.87	2.20
Resident Students	0.60	1.40

By applying the persons per auto and permit to space oversell rates to projections of future populations, Table 23 estimates the number of parking permits that would be issued/sold each year through 2017. It is important to recognize the fact that with changes in parking permit rates there may be some reduction in auto utilization and parking demand. That change, though desirable in the long-term as it reduces the need to

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build additional parking facilities, is impossible to accurately predict at this time. Nonetheless, the analysis of rates and revenues required to offset system costs should anticipate some loss of revenue potential. Therefore, the rate/revenue calculations to be presented must net a slight revenue surplus so as to account for a possible reduction in parking demand over time.

Table 23:
Estimated Number of Permits Issued/Sold under the User-Based Space Allocation Program

Population Group	Fall 2008 Population	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Full-Time Employees											
Full-Time Faculty	574	520	530	540	550	560	570	580	590	600	610
Full-Time Staff	1,131	1,030	1,040	1,050	1,060	1,070	1,080	1,090	1,090	1,100	1,110
Full-Time Employee Subtotal	**1,705**	**1,550**	**1,570**	**1,590**	**1,610**	**1,630**	**1,650**	**1,670**	**1,680**	**1,700**	**1,720**
Non-Full Time Employees											
Adjunct Faculty	277	250	250	250	250	250	250	250	250	250	250
Hourly Staff/Technicians	258	240	240	240	240	240	240	240	240	240	240
Seasonal/Monthly	40	40	40	40	40	40	40	40	40	40	40
Non-Full Time Subtotal	**535**	**530**	**530**	**530**	**530**	**530**	**530**	**530**	**530**	**530**	**530**
Students											
Commuting Students	9,882	8,800	8,970	9,150	9,340	9,520	9,710	9,910	10,110	10,310	10,520
Resident Students	2,274	1,260	1,420	1,420	1,350	1,350	1,350	1,350	1,350	1,350	1,350
Student Subtotal	**12,156**	**10,060**	**10,390**	**10,570**	**10,690**	**10,870**	**11,060**	**11,260**	**11,460**	**11,660**	**11,870**
Total Permits	----	**12,140**	**12,490**	**12,690**	**12,830**	**13,030**	**13,240**	**13,460**	**13,670**	**13,890**	**14,120**

An elaborate financial model was developed to determine the required annual parking permit rate for each user group. The model is based on full-time employee and resident student rates being equal in cost with commuting student rates being slightly lower. The logic behind this strategy is based on the fact that employees may be more financially self-sufficient than commuting students and would be able to pay a higher fee. The resident student rate is based on the fact that resident students, who generally park "24/7" utilize the parking service much more than any other group and should pay a higher fee. The model is also based on 20% fee increases every four years which is representative of cost of living increases over that period of time. Under these conditions full-time employees and resident students could purchase annual parking permits at $280 and commuting students would be asked to pay $190. Table 24 projects the rates and rate increases through 2017.

Table 24:
Annual Permit and Metered Parking Fees Required to Meet System Operating Cost Under the User-Based Allocation Program

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Full-Time Employees										
Full-Time Faculty	$280	$280	$280	$280	$340	$340	$340	$340	$410	$410
Full-Time Staff	$280	$280	$280	$280	$340	$340	$340	$340	$410	$410
Non-Full Time Employees										
Adjunct Faculty	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Hourly Staff/Technicians	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Seasonal/Monthly	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Students										
Commuting Students	$190	$190	$190	$190	$230	$230	$230	$230	$280	$280
Resident Students	$280	$280	$280	$280	$340	$340	$340	$340	$410	$410
Metered Spaces (per hour)	$0.50	$0.50	$0.75	$0.75	$0.75	$0.75	$1.00	$1.00	$1.00	$1.00

It is understood that not all faculty, staff or students will need an annual parking permit. Therefore, the Parking & Transportation Services Department will need to establish rates for semester, monthly, and weekly parking permits, all issued through the web-based registration program or via walk-ups to the Parking & Transportation Services Department.

Finally, Table 25 compares the system operating expenses to the system operating revenues. Note that the revenues include projections for meter utilization and fees associated with fines for parking violations. With regards to fines from violations, it is strongly recommended that the University not become dependant on these dollars as this line item can vary greatly from year to year.. As parking enforcement efforts become more stringent and patrols more regular, these dollars should decrease as a result of a greater number of users adhering to posted policies. However, for purposes of this analysis the current 2006/2007 fine revenue of $239,000 was used as a baseline with no future revenue increases being anticipated.

A critical element in the financial analysis is the generation of surplus or cumulative revenue during the initial years of the parking strategy and transportation program. As noted in the operating surplus or deficit row the Parking & Transportation Services Department will operate at a deficit for six of the ten years projected in this model. However, the revenues that would be generated in 2008 and 2009 represent the foundation upon which future improvements can be financed without the need for more aggressive (every two years) and significant rate increases.

Table 25:
Annual Permit and Metered Parking Fees Required to Meet System Operating Cost
Under the User-Based Allocation Program

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Operating Costs										
Total Maintenance Costs	$365,030	$366,560	$367,610	$506,220	$516,100	$526,440	$537,370	$548,790	$607,990	$332,118
Permit/Violations Appeal Web Hosting	$120,000	$123,600	$127,300	$131,100	$135,000	$139,100	$143,300	$147,600	$152,000	$156,600
Parking Department Operating Costs	$365,900	$382,700	$400,340	$418,850	$438,310	$428,730	$450,170	$472,680	$496,320	$521,150
Total Operating Costs	**$850,930**	**$872,860**	**$895,250**	**$1,056,170**	**$1,089,410**	**$1,094,270**	**$1,130,840**	**$1,169,070**	**$1,256,310**	**$1,009,868**
Total Shuttle Operating Costs	**$325,400**	**$336,900**	**$348,900**	**$368,900**	**$381,900**	**$395,400**	**$418,400**	**$433,000**	**$448,200**	**$474,800**
Debt Service Payments for Construction	**$122,924**	**$122,924**	**$1,957,797**	**$1,957,797**	**$1,957,797**	**$1,957,797**	**$1,957,797**	**$3,019,781**	**$3,019,781**	**$3,019,781**
Total Debt Service & Operating Cost	**$1,299,254**	**$1,332,684**	**$3,201,947**	**$3,382,867**	**$3,429,107**	**$3,447,467**	**$3,507,037**	**$4,621,851**	**$4,724,291**	**$4,504,449**
User-Based Employee Salary Variable Rate										
Permits	$2,358,400	$2,426,850	$2,465,700	$2,492,550	$3,037,680	$3,086,700	$3,138,120	$3,189,540	$3,910,240	$3,975,230
Meters	$101,500	$101,500	$152,250	$152,250	$152,250	$152,250	$203,000	$203,000	$203,000	$203,000
Fines from Parking Violations	$239,000	$239,000	$239,000	$239,000	$239,000	$239,000	$239,000	$239,000	$239,000	$239,000
Total Parking Revenue	**$2,698,900**	**$2,767,350**	**$2,856,950**	**$2,883,800**	**$3,428,930**	**$3,477,950**	**$3,580,120**	**$3,631,540**	**$4,352,240**	**$4,417,230**
Operating Surplus or Deficit	$1,399,646	$1,434,666	-$344,997	-$499,067	-$177	$30,483	$73,083	-$990,311	-$372,051	-$87,219
Cumulative	***$1,399,646***	***$2,834,311***	***$2,489,314***	***$1,990,247***	***$1,990,070***	***$2,020,554***	***$2,093,637***	***$1,103,326***	***$731,275***	***$644,056***

D. Value-based Space Allocation/Assignment

An alternative to the user-based approach to space allocation, assignment, and rates is a value-based strategy. As noted in the introduction, the value-based approach simply sets relative value on the University's parking assets based on proximity to a theoretical campus core. An individual regardless of their user group status or salary could choose to purchase a parking permit in any of four different value zones; academic core, academic periphery, residential core, and economy parking. The academic core would have the greatest value and the economy lots would be the most economical. Under this program a tenured professor who is cost conscious may choose to request an economy parking permit while a commuting student who values convenience over price could choose to request an academic core permit. Exhibit N illustrates the allocation of existing ETSU lots under this program while Table 26 estimates the number of parking permits that could be sold/issued. It is important to note that the estimated number of permits sold/issued under the value-based and user-based program must be nearly identical for comparative purposes and that the reduction in permit sales associated with a reduction in parking demand must also be anticipated.

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Exhibit N:
Value-based Space Allocation and Assignment Program

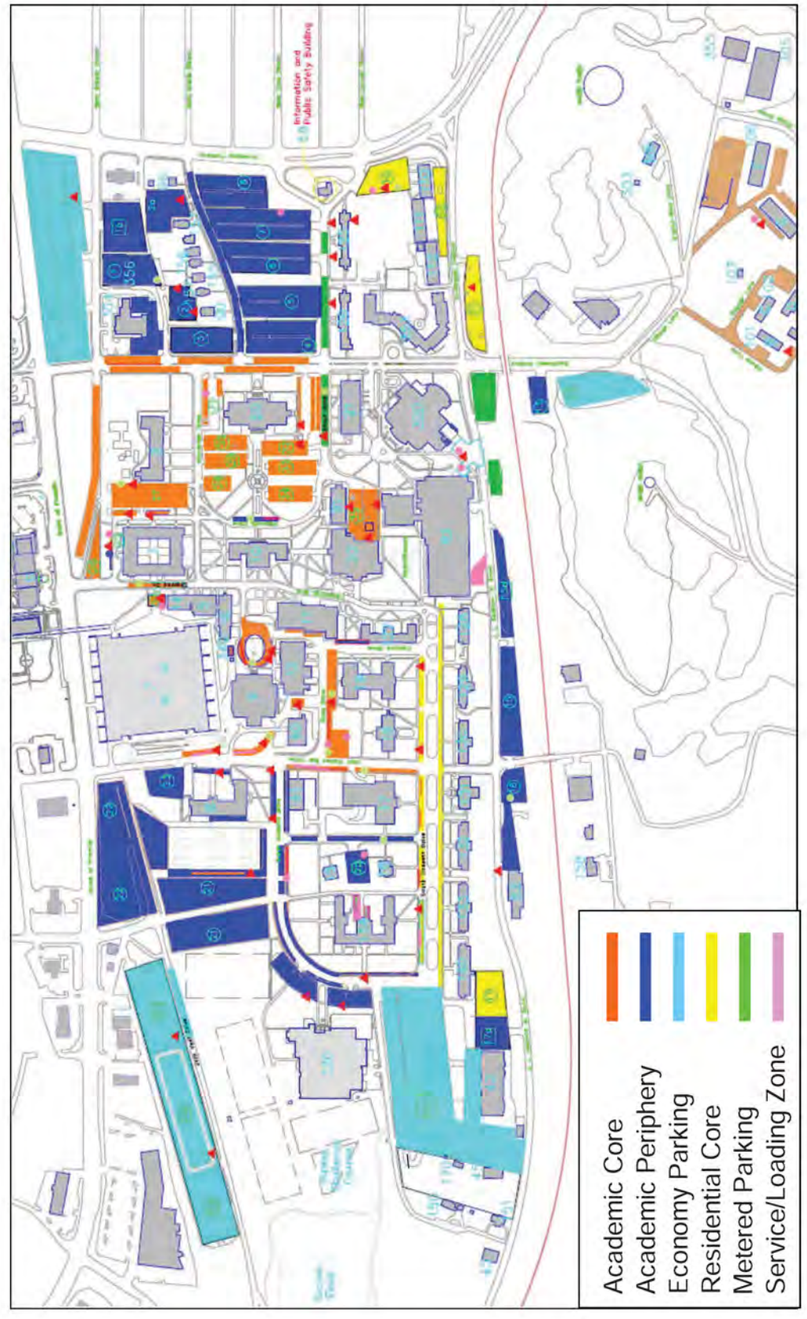

Table 26:
Number of Spaces, Oversell Rate, and Estimated Number of Permits Issued/Sold under the Value-Based Space Allocation Program

Allocation by Zone	# of Spaces	Anticipated Oversell Rate	# of Permits Issued 2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Academic Core	927	1.5	1,400	1,442	1,465	1,481	1,504	1,528	1,553	1,577	1,602	1,629
Academic Periphery	2,477	1.8	4,460	4,592	4,666	4,717	4,791	4,868	4,949	5,026	5,107	5,192
Residential Core	459	1.2	550	566	575	581	590	600	610	620	630	640
Economy Parking	1,984	2.4	4,840	4,984	5,064	5,120	5,200	5,284	5,372	5,456	5,544	5,636
Pirates Cove/Bucs Ridge	731	1.2	880	906	921	931	946	961	977	992	1,008	1,025
Service	32	na	0	0	0	0	0	0	0	0	0	0
Visitor/Metered	116	na	0	0	0	0	0	0	0	0	0	0
Total	**6,726**	---	**12,130**	**12,490**	**12,690**	**12,830**	**13,030**	**13,240**	**13,460**	**13,670**	**13,890**	**14,120**

While the rate increase assumption of 20% every four years for the value-based approach is the same as the user-based approach, the required rate structure is somewhat more complicated. The foundation of the value-based permit rate structure (see Table 27) is based on the desire to keep economy parking relatively close to today's faculty/staff annual rate of $50. That rate, in turn, dictated to a significant degree the rates that must be established for academic core, periphery and residential core permits. Note that parking permits for Pirate Cove/Bucs Ridge apartments are included in the revenue analysis but are tracked as a separate student fee. The value of academic core parking is set at $300 per year while academic periphery and residential cores are set at $200.

Table 27:
Annual Permit Parking Fees Required to Meet System Operating Cost under the Value-Based Space Allocation Program

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Academic Core	$300	$300	$300	$300	$360	$360	$360	$360	$410	$410
Academic Periphery	$200	$200	$200	$200	$240	$240	$240	$240	$280	$280
Residential Core	$200	$200	$200	$200	$240	$240	$240	$240	$280	$280
Economy Parking	$80	$80	$80	$80	$100	$100	$100	$100	$120	$120
Pirates Cove/Bucs Ridge	$80	$80	$80	$80	$100	$100	$100	$100	$120	$120
Metered Spaces (per hour)	$0.50	$0.50	$0.75	$0.75	$0.75	$0.75	$1.00	$1.00	$1.00	$1.00

Table 28 then compares the revenues that could be generated to the system operating expenses. As before, the key to the financial model is the generation of surplus parking revenue during the initial years of the program. Like the user-based allocation model, it is anticipated that operating revenues will have consumed the cumulative operating surplus sometime between 2017 and 2019.

With regards to parking pricing for a future 1,200 space parking structure it is anticipated that a mix of users and prices will be required. Daytime users would most likely include visitors and academic core permit holders on the grade level and academic periphery permit holders on the upper levels. Evening and weekend parkers would include visitors and event patrons. It is recommended that the structure include gate access and revenue control equipment for both permit ingress/egress and cash transactions.

There was some question regarding parking rates for those individual's with disabilities. Is it appropriate for individuals who require access to ADA standard spaces to be required to purchase parking permits for those more convenient spaces? Regardless of the circumstances of the user, parking spaces have an inherent value. Therefore, it would be expected that if a handicapped individual chooses to purchase a parking permit for an academic core or academic periphery space they would be required to pay the market rate for that spaces. Alternatively, if that individual chooses to purchase a permit in a more distant economy lot, that individual would be accommodated through the provision of an ADA accessible shuttle service.

Table 28:
Annual Permit and Metered Parking Fees Required to Meet System Operating Cost
Under the Value-Based Allocation Program

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Operating Costs										
Total Maintenance Costs	$365,030	$366,560	$367,610	$506,220	$516,100	$526,440	$537,370	$548,790	$607,990	$332,118
Permit/Violations Appeal Web Hosting	$120,000	$123,600	$127,300	$131,100	$135,000	$139,100	$143,300	$147,600	$152,000	$156,600
Parking Department Operating Costs	$365,900	$382,700	$400,340	$418,850	$438,310	$428,730	$450,170	$472,680	$496,320	$521,150
Total Operating Costs	**$850,930**	**$872,860**	**$895,250**	**$1,056,170**	**$1,089,410**	**$1,094,270**	**$1,130,840**	**$1,169,070**	**$1,256,310**	**$1,009,868**
Total Shuttle Operating Costs	**$325,400**	**$336,900**	**$348,900**	**$368,900**	**$381,900**	**$395,400**	**$418,400**	**$433,000**	**$448,200**	**$474,800**
Debt Service Payments for Construction	**$122,924**	**$122,924**	**$1,957,797**	**$1,957,797**	**$1,957,797**	**$1,957,797**	**$1,957,797**	**$3,019,781**	**$3,019,781**	**$3,019,781**
Total Debt Service & Operating Cost	**$1,299,254**	**$1,332,684**	**$3,201,947**	**$3,382,867**	**$3,429,107**	**$3,447,467**	**$3,507,037**	**$4,621,851**	**$4,724,291**	**$4,504,449**
Value-Based Approach										
Permits	$2,337,200	$2,406,600	$2,445,300	$2,472,060	$3,062,080	$3,111,400	$3,163,040	$3,212,360	$3,835,660	$3,899,490
Meters	$101,500	$101,500	$152,250	$152,250	$152,250	$152,250	$203,000	$203,000	$203,000	$203,000
Fines from Parking Violations	$239,000	$239,000	$239,000	$239,000	$239,000	$239,000	$239,000	$239,000	$239,000	$239,000
Total Parking Revenue	**$2,677,700**	**$2,747,100**	**$2,836,550**	**$2,863,310**	**$3,453,330**	**$3,502,650**	**$3,605,040**	**$3,654,360**	**$4,277,660**	**$4,341,490**
Operating Surplus or Deficit	$1,378,446	$1,414,416	-$365,397	-$519,557	$24,223	$55,183	$98,003	-$967,491	-$446,631	-$162,959
Cummulative	***$1,378,446***	***$2,792,861***	***$2,427,464***	***$1,907,907***	***$1,932,130***	***$1,987,314***	***$2,085,317***	***$1,117,826***	***$671,195***	***$508,236***

E. Allocation System Pros, Cons, and Recommendation

As noted throughout this section of the report, neither of these space allocation, assignment, and permit rate strategies is perfect. The user-based approach basically dictates what fee an individual must pay based on their relationship with the University. For example, an employee making $20,000 will be required to pay the same permit rate as an employee making $60,000. Though some consideration was given to faculty/staff permit rates being based on a sliding scale tied to their salary, most ETSU faculty/staff members that were interviewed on this topic found it overly complex to administer and problematic from a psychological standpoint. A common refrain was "why would someone pay more than someone else for the same level of service (parking convenience) just because they make more money". The value-based approach appears more economically logical. However, the laws of supply and demand are difficult to predict. Few may be willing to choice the higher priced academic core spaces, causing an imbalance in the distribution of parking permits and a shortfall in the revenue that is required to support the system. Under this program the Parking & Transportation Services Department will need to carefully monitor permit sales to ensure that there is an effective rate structure in place that will both distribute demand to the various lots and generate sufficient revenue.

Based on discussions with various groups during the course of the study it is recommended that the University employ the value-based approach to parking allocation and assignment. The element of choice seemed to be the most valuable characteristic of the value-based approach. It appears that a driver's relationship with their automobile is particularly strong in this area of the country. Student representatives were quite supportive of a parking fee increase only if the range of choices widened and the value of the service being provided improved. Faculty and staff representatives were sensitive to the true cost of the parking system but were equally sensitive to the fact that not all employees would be willing or able to pay the higher fixed employee rate. However, prior to the formal implementation of these value-based rates it is recommended that the University prepare and distribute a parking questionnaire related to what faculty, staff, and students perceive as the value of a parking space in a particular lot. This survey would provide the Parking & Transportation Services Department a relative sense of value and marketability of a required rate structure. Furthermore, the University must be cautioned that it cannot implement this program overnight. The formalization of the Parking & Transportation Services Department, the hiring of a department administrator and supervisor, and the procurement of the third-party, web-based permit/violations management contract can take between 12 and 18 months. This schedule would delay the University's ability to implement parking rate changes as recommended in the financial analysis.

F. Visitor and Event Parking Recommendations

The focus to this point has been on recommendations regarding parking faculty, staff, and student parking management and operations, future facility development, and finance. While those recommendations did include a vastly expanded parking meter program, one that could serve employees, students, and visitors, some additional guidance specific to visitor parking is still required. As noted in Section 2 – Current Parking Operations, visitors to the campus are directed through the University's website, signage, and personal conversation to the Information and Public Safety Building to obtain a temporary visitor permit (hangtag). The permit notes the date and duration of authorization and allows the individual to utilize any legal space on campus with the exception of handicapped accessible, service vehicle, or emergency spaces. This is a common practice on many university campuses.

Two alternatives that have been considered center on the creation and identification of visitor only designated spaces and/or lots. On some campuses a particular lot or lots are designated for visitor only parking. Often times these lots are controlled by gates, have a cashiers' booth, and are in a central location. Gated access control assists in preserving these spaces for visitors and a cashier collects parking revenue on exit and orients visitors to their ultimate destination. This approach is most effective when there is a central location where all visitors would like to go, where the volume of visitors each day is significant, and/or the stress on the parking supply is not great. Given the layout, form, and function of the ETSU campus, there does not appear to be a single location/lot where all visitor activity could be satisfied. With the exception of certain daytime special events, there does not appear to be a significant volume of visitors coming to the campus each day. It is envisioned that if the University were to create a visitor designated lot; say Lot 35 in front of Roy S. Nicks Hall, that lot would be underutilized for much of the day. Given the current and future shortfall of parking on the campus ETSU should not at this time reserve a core lot for visitor use.

The other alternative is to "sprinkle" visitor designated spaces throughout the campus. Two to four spaces in each of the various academic core and periphery lots could be reserved for visitor parking. They could be placed along side existing service vehicle/loading spaces. However, the volume of visitors to the campus can vary significantly and the number of spaces that would be distributed throughout the campus may be more than visitor demand requires. As with the visitor lot alternative, it could be envisioned that the majority of these spaces would remain unoccupied.

It is therefore recommended that the University not designate either lots or spaces to visitor use. ETSU and its Parking and Transportation Department should continue to direct visitors to a central location or locations to obtain a temporary parking permit. Parking Department and Public Safety office personnel will act as a control point to deter non-visitors from abusing the visitor permit system. However, unlike the current program, visitors would be directed to non-premium parking locations, namely the academic core spaces as defined by the value-based allocation program. Visitors would

be directed through orientation material and informational signage to search for any available spaces in the academic periphery, residential core, or economy parking locations.

Resolving the impact of special event parking demand is much more problematic than visitor parking given the infrequency of event scheduling and fluctuation in the volume of event patrons that might be anticipated. As a general rule, the parking industry does not recommend building additional parking capacity on a university campus to satisfy daytime special event activity. The cost of parking development, maintenance and the value of land is too significant to dedicate to such activity even when considering the potential for event parking fees/revenue. Though dedicated event parking is not recommended, the Parking and Transportation Department must manage the event demand that is generated. Event patrons can be directed through the University's website or through direct mailings from the event organizer to park in a specific peripheral location where daytime parking demand may be lowest. The event patron could then use either the existing Bucshot Shuttle or the Express Shuttle that was recommended previously to get to their destination. For daytime events with significant attendance, the University could also add a dedicated shuttle to that location, thereby increasing the level of service event patrons would receive. This service combined with the five fold increase in the number of parking meters on campus should serve both visitor and event patron parking needs.

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Appendix

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Exhibit A1:

ETSU Tuesday Hourly Parking Occupancy by Lot

ETSU Parking	Inventory	8am	9am	10am	11am	12pm	1pm	2pm	3pm	4pm
On Street										
John Robert Bell Drive	95	58	88	97	95	91	88	86	89	89
Jack Vest Drive	46	46	46	46	44	42	41	40	35	35
Sherrod Drive	4	2	3	4	4	4	4	3	2	1
Unknown Street (1)	20	20	21	21	21	20	19	19	18	16
Lake Street	125	107	127	127	127	125	126	123	120	120
Maple Street	30	27	28	30	30	30	29	24	25	13
Stout Drive	32	30	30	31	30	30	30	29	30	29
Gilbreath Drive	39	30	37	41	41	41	41	40	35	30
Walnut Drive	64	64	66	67	68	67	66	68	54	53
North Dosset Drive	148	131	139	148	148	147	147	143	143	143
South Dosset Drive	190	159	173	182	181	180	176	185	178	178
On Street Subtotal	**793**	**674**	**758**	**794**	**789**	**777**	**767**	**760**	**729**	**707**
Off Street										
Lot 1	77	60	67	69	69	69	56	59	37	17
Lot 1a	84	11	53	84	84	80	75	41	37	15
Lot 2	56	10	18	51	48	49	45	43	46	40
Lot 2a	81	19	58	76	78	67	59	46	42	22
Lot 3	96	43	92	95	94	83	86	93	84	72
Lot 4	105	105	105	103	99	92	103	90	86	90
Lot 5	137	137	137	134	130	135	136	129	121	116
Lot 6	142	142	142	142	139	142	142	131	123	100
Lot 7	167	154	161	167	166	165	166	144	121	76
Lot 8	100	37	98	100	99	100	74	51	48	23
Lot 10	121	121	121	121	119	119	120	120	119	126
Lot 11	79	79	79	78	77	77	76	76	75	77
Lot 12	65	65	65	65	65	67	65	65	65	65
Lot 12a	19	8	19	20	19	19	18	18	17	14
Lot 13	33	33	33	33	35	35	34	34	34	32
Lot 14	122	122	126	126	126	125	114	103	87	63
Lot 15	125	125	126	126	126	129	127	127	120	110
Lot 15a	65	66	67	67	68	67	64	65	66	58
Lot 16	84	86	88	92	90	87	88	88	74	76
Lot 17	69	61	62	63	68	66	65	64	63	61
Lot 17a	43	32	38	35	36	38	39	34	38	30
Lot 18/19	619	316	377	533	585	580	569	496	389	345
Lot 20	32	14	30	30	31	30	28	27	23	28
Lot 21	536	503	518	526	516	501	500	483	421	409
Lot 22	190	201	201	201	188	187	187	167	160	150
Lot 22a	711	66	216	575	479	455	389	246	178	118
Lot 23	50	41	50	50	50	51	51	51	48	50
Lot 24	7	6	6	6	8	5	6	7	6	5
Lot 25	31	26	30	31	29	25	30	26	30	28
Lot 26	21	15	22	22	22	21	18	19	21	22
Lot 27	58	35	49	62	66	63	67	69	66	75
Lot 28	22	22	22	22	21	22	22	21	22	21
Lot 29	43	41	41	42	42	35	40	41	39	19
Lot 30	39	38	38	38	38	32	38	38	38	23
Lot 31	40	34	38	39	40	38	38	35	38	29
Lot 32	73	72	73	75	73	72	72	70	70	53
Lot 33	50	45	44	44	45	44	45	44	43	36
Lot 34	45	45	45	45	44	45	45	45	45	39
Lot 35	46	44	45	46	43	47	46	45	44	42
Foundry Lot	402	117	192	351	388	368	321	209	181	100
Ross Drive	114	92	100	112	111	112	114	108	98	111
Memorial Hall Circle (#9)	26	22	23	26	26	26	27	26	23	26
Basler Lot A	38	37	37	37	37	35	33	35	38	37
Basler Lot B	31	23	30	31	31	30	30	29	31	31
Culp Center Lot A	11	11	8	11	9	9	10	10	11	10
Culp Center Lot B	9	9	8	6	6	6	8	9	6	8
Clement Hall (#134)	12	1	1	2	2	2	2	3	3	2
Tennis Courts	47	44	45	46	45	45	44	42	37	35
Warf-Pickel Hall (#8)	11	7	8	9	9	9	9	8	7	6
Hutcheson Hall (#18)	18	11	17	17	17	17	17	16	15	16
Pirate Cove	71	29	33	34	35	34	33	34	32	32
Residences "F/G"	174	44	46	40	47	48	42	41	43	39
Buccaner Ridge	486	283	246	267	216	235	249	245	251	235
Off Street Subotal	**5,933**	**3,810**	**4,394**	**5,223**	**5,134**	**5,040**	**4,882**	**4,366**	**3,960**	**3,463**
ETSU System Total	**6,726**	**4,484**	**5,152**	**6,017**	**5,923**	**5,817**	**5,649**	**5,126**	**4,689**	**4,170**

Note: Survey excludes 95 spaces in Lot 9 which is currently being utilized for construction staging.

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Exhibit A2:

ETSU Wednesday Hourly Parking Occupancy by Lot

ETSU Parking	Inventory	8am	9am	10am	11am	12pm	1pm	2pm	3pm	4pm
On Street										
John Robert Bell Drive	95	58	88	97	95	91	88	86	89	89
Jack Vest Drive	46	44	45	46	45	45	46	44	41	29
Sherrod Drive	4	2	3	4	4	4	4	3	2	1
Unknown Street (1)	20	20	21	21	21	20	19	19	18	16
Lake Street	125	127	127	127	127	127	126	127	111	114
Maple Street	30	23	30	29	31	30	26	27	16	12
Stout Drive	32	30	31	31	30	30	30	30	28	26
Gilbreath Drive	39	39	39	38	39	34	38	38	36	32
Walnut Drive	64	65	65	66	68	64	61	62	60	57
North Dosset Drive	148	111	139	145	145	144	142	145	143	143
South Dosset Drive	190	170	176	182	182	181	176	182	177	176
On Street Subtotal	**793**	**689**	**764**	**786**	**787**	**770**	**756**	**763**	**721**	**695**
Off Street										
Lot 1	77	40	66	67	61	58	52	47	33	17
Lot 1a	84	5	82	84	83	78	62	57	44	19
Lot 2	56	7	16	23	42	25	20	24	20	15
Lot 2a	81	8	73	77	72	66	55	54	39	38
Lot 3	96	27	82	94	83	78	71	92	87	73
Lot 4	105	95	104	104	105	105	105	105	96	101
Lot 5	137	137	137	137	137	137	137	137	129	118
Lot 6	142	142	142	142	142	142	142	138	125	110
Lot 7	167	163	164	165	161	158	142	140	95	70
Lot 8	100	7	95	96	93	86	71	62	43	25
Lot 10	121	122	120	120	119	120	118	116	114	116
Lot 11	79	79	79	78	76	78	77	76	79	78
Lot 12	65	64	64	64	64	64	64	64	63	64
Lot 12a	19	10	14	19	19	19	18	18	17	17
Lot 13	33	33	34	34	35	34	34	34	34	29
Lot 14	122	123	121	123	117	118	111	105	77	59
Lot 15	125	125	126	125	125	125	122	120	115	105
Lot 15a	65	66	66	67	68	68	65	64	67	63
Lot 16	84	77	82	83	84	84	82	80	70	61
Lot 17	69	62	65	66	66	65	65	51	56	53
Lot 17a	43	31	35	33	36	34	32	35	36	27
Lot 18/19	619	269	332	366	498	497	497	496	389	364
Lot 20	32	16	20	27	26	24	25	28	31	22
Lot 21	536	385	509	529	529	525	522	512	426	373
Lot 22	190	116	201	204	199	198	197	195	142	129
Lot 22a	711	21	132	304	337	289	195	177	107	86
Lot 23	50	21	38	47	48	47	46	47	47	46
Lot 24	7	7	8	8	7	9	9	6	6	5
Lot 25	31	29	30	27	30	29	28	29	26	27
Lot 26	21	16	17	20	21	20	19	16	16	20
Lot 27	58	27	53	55	62	47	52	53	53	59
Lot 28	22	22	22	22	22	22	22	20	21	22
Lot 29	43	43	44	43	42	39	43	42	44	44
Lot 30	39	39	40	39	38	37	39	39	39	38
Lot 31	40	36	38	39	37	31	33	36	33	34
Lot 32	73	69	73	73	67	69	72	71	70	67
Lot 33	50	50	50	49	49	49	49	49	48	48
Lot 34	45	45	45	45	45	45	45	44	43	44
Lot 35	46	31	38	42	44	42	43	37	41	43
Foundry Lot	402	66	241	338	342	311	281	220	131	92
Ross Drive	114	112	116	118	119	110	120	121	112	115
Memorial Hall Circle (#9)	26	22	23	26	26	26	27	26	23	26
Basler Lot A	38	28	33	38	37	37	35	36	37	38
Basler Lot B	31	22	30	30	27	27	25	31	31	28
Culp Center Lot A	11	10	8	12	13	16	13	12	15	15
Culp Center Lot B	9	9	6	5	6	5	6	7	6	6
Clement Hall (#134)	12	1	2	3	3	2	3	4	3	3
Tennis Courts	47	34	44	46	46	45	45	45	37	33
Warf-Pickel Hall (#8)	11	5	6	8	8	7	10	11	8	7
Hutcheson Hall (#18)	18	12	17	17	17	15	16	17	15	15
Pirate Cove	71	34	40	43	42	38	33	34	29	25
Residences "F/G"	174	38	43	46	47	44	42	37	40	38
Buccaner Ridge	486	284	251	232	221	220	228	231	237	202
Off Street Subotal	**5,933**	**3,342**	**4,317**	**4,702**	**4,843**	**4,664**	**4,465**	**4,348**	**3,745**	**3,372**
ETSU System Total	**6,726**	**4,031**	**5,081**	**5,488**	**5,630**	**5,434**	**5,221**	**5,111**	**4,466**	**4,067**

Note: Survey excludes 95 spaces in Lot 9 which is currently being utilized for construction staging.

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Exhibit B:

Tuesday Fall 2007 Commuter Student Enrollment by Time of Day and Building

Location	8-8:15am	9:30-10am	11am	12:45-1pm	2:15pm	3-4 pm
Advanced Visualization Lab	25		33	13	18	
Art Annex		11	9		6	
Brown Hall	377	508	339	515	171	152
Burleson Hall	148	212	181	200	178	33
Ernest C. Ball Hall	119	69	138	94	141	
Gilbreath Hall	109	116	175	163	128	61
Hutcheson Hall	46	95	104	20	65	89
Lamb Hall	170	238	213	214	119	68
Mathes Hall	6	115	70	27	18	26
Memorial Center (Mini Dome)	136	131	184	207	84	79
Memorial Hall (Brooks Gym)	4	23	16	23	10	
Nicks Hall	114	291	72	93	67	51
Rogers-Stout	554	654	597	583	468	115
Sam Wilson Hall	391	486	307	409	255	190
Warf-Pickel Hall	159	281	225	168	148	188
Wilson-Wallis Hall	58	70	67	72	55	92
Yoakley Hall				1		
Total	**2,416**	**3,300**	**2,730**	**2,802**	**1,931**	**1,144**

Source: ETSU Office of Institutional Research

Exhibit C:

Fall 2007 Number of Resident Students by Resident Hall

Building Name/Location	# of Students
Core Campus Housing	
Carter Hall	21
Governors Hall	509
L. Clement Hall	440
Luntsford Apartments	166
N. Dossett Hall	113
New Apartments	407
Panhellenic Hall	65
Power Hall	79
Stone Hall	61
West Hall	83
Total Core Campus	**1,944**
Buc Village Apartments	
Apt A	6
Apt B	6
Apt C	6
Apt D	7
Apt E	7
Apt F	36
Apt G	29
Total Buc Village	**97**
Davis Apartments	
Apt A	64
Apt B	85
Apt C	84
Total Davis Apartments	**233**
Resident Student Total	**2,274**

Source: ETSU Office of Institutional Research

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Exhibit D:

Full-Time ETSU Main Campus Employees by Building

Building Name	Code	# of Employees
Alexander Hall	2	39
D.M.Brown Hall	3	55
Burleson Hall	4	33
Mathes Hall	5	15
Ernest C Ball Hall	6	17
Memorial Center	7	55
Warf-Picket Hall	8	114
Memorial Hall	9	5
Gilbreath Hall	10	38
College of Medicine	11	56
Sam Wilson Hall	12	78
Hillrise Hall	15	14
ADA Earnes House	16	11
Wilson-Wallis Hall	17	18
Hutcheson Hall	18	13
John P. Lamb Hall	19	74
Sherrod Library	20	45
Rogers-Stout Hall	21	71
Bond House	22	21
Seehorn House	23	73
Power Plant	40	4
Wilbur Bond Main	42	190
Burgin E. Dossett Hall	60	204
Art Annex	62	2
Security & Information	68	28
Golf Practice Facility	69	2
P.Robinson Clinical Education Ctr.	80	3
Reece Memorial Museum	91	3
Culp Student Center	92	69
Yoakley Hall	129	7
Panhellenic Hall	131	1
L Clement Hall	134	4
902 W. Maple	151	4
908 W. Maple	153	8
914 W. Maple	165	2
916 W. Maple	155	10
918 W. Maple	157	5
920 W. Maple	161	1
1110 Seminole	160	14
Roy S. Nicks Hall	180	163
Central Receiving	303	5
Warehouse	305	2
WETS-FM	306	9
Center for Physical Activity	330	7
Total	---	**1,592**

Source: ETSU Office of Institutional Research

Exhibit E:

Comparison of Parking Permit and Citation Fine Rates Between ETSU and Four Designated Peer Institutions

Permit Type	ETSU	East Kentucky University	University Arkansas Little Rock	East Carolina University	Appalachian State University
			Annual Permit Rates (Ranges)		
Student Parking	**$30**	30	Calculated as part of tuitiion	$72-$288	$204
Faculty/Staff Parking	**$50**	0	0	$72-$288	$204
Student Resident Parking	**N/A**	30	N/A	$72-$288	N/A
Evening Permits (after 4pm)	**N/A**	N/A	(free after 4pm)	N/A	$102
Motorcycle (designated MC spaces)	**N/A**	N/A	N/A	$25	N/A
Other	**N/A**	N/A	$120 (Reserved)	N/A	

Citation Violation Descrioption	ETSU	East Kentucky University	University Arkansas Little Rock	East Carolina University	Appalachian State University	Peer Average
No valid permit or no valid license plate	$20	$20	$25	$35	$28	$28
Wrong permit for lot/zone	$10	$20	$25	$20	$24	$24
No parking area, red curb/Fire lane	$75	$25	$25	$25	$31	$31
Parking in a Service Vehicle Stall	$20	$25	N/A	N/A	$28	$28
Improper Display of Permit	$10	$20	$10	$5	$10	$10
Parked on sidewalk, safety zone	$50	$25	$25	$25	$26	$26
Parked in a carpool stall	$20	N/A	N/A	N/A	N/A	N/A
Altered, stolen, counterfeit permit; anuathorized use	$100	$100	$100	$50	$88	$88
Failure to register vehicle/false registration info	$35	N/A	N/A	$35	$68	$68
Parked in a reserved parking stall/area	$20	$25	$25	$25	$31	$31
Parked in a disabled parking stall	$100	$60	$100	$250	$165	$165
Parked in a malfunctioning or expired meter	$10	$15	$10	$10	$11	$11
Time Loading Zone Violation	$10	N/A	$25	$10	$15	$15
Parked outside the stall lines	$10	N/A	N/A	$10	$10	$10
Chronic Violator (repeat violations)	$50	N/A	N/A	N/A	N/A	N/A

Source: Carl Walker - Preliminary Campus Parking Study, December 21, 2006

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Exhibit F1:

ETSU Master Plan / Structured Parking Site 1 Concepts

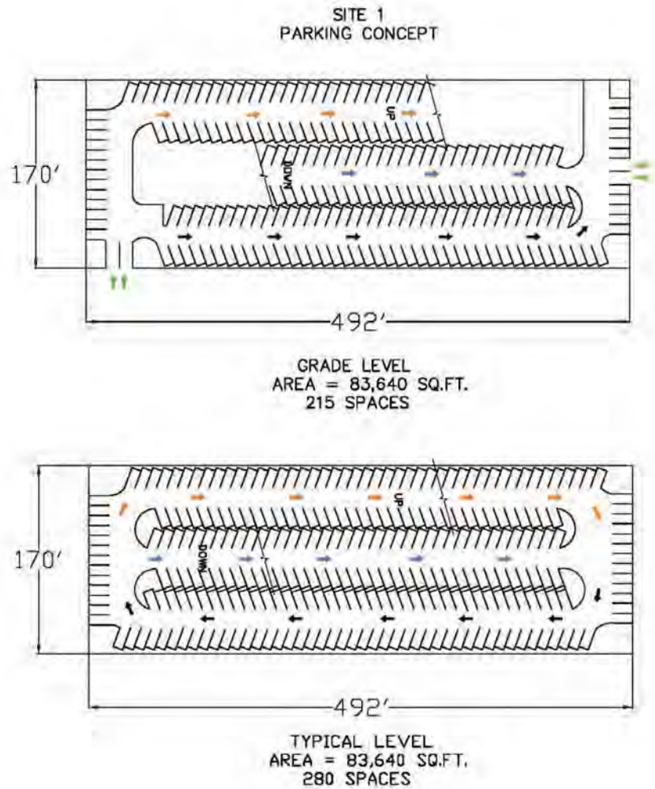
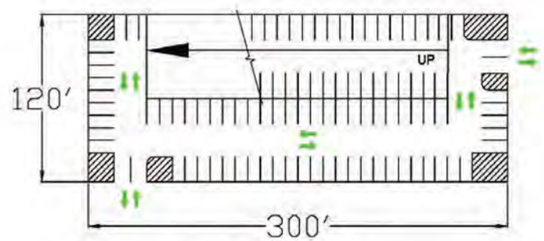
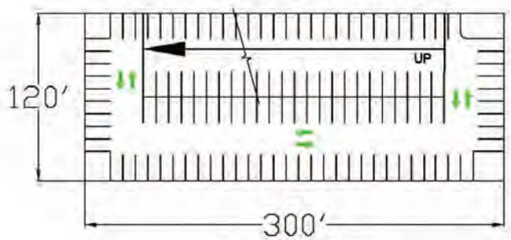


Exhibit F2:
ETSU Master Plan / Structured Parking Site 2 Concepts

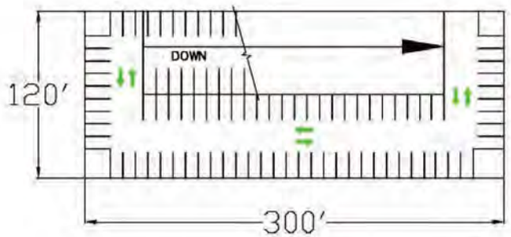
SITE 2
PARKING CONCEPT



GROUND LEVEL
AREA = 36,000 SQ.FT.
95 SPACES



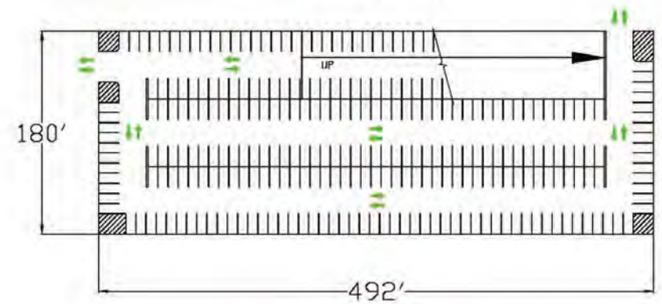
TYPICAL LEVEL
AREA = 36,000 SQ.FT.
120 SPACES



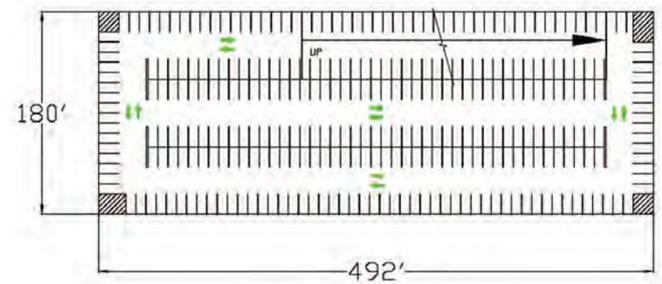
ROOF LEVEL
AREA = 36,000 SQ.FT.
90 SPACES

Exhibit F3:
ETSU Master Plan / Structured Parking Site 3a Concepts

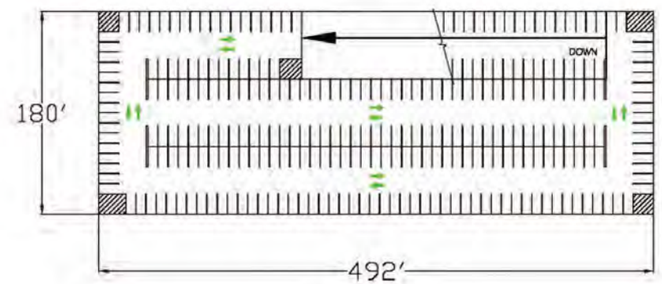
SITE 3A
PARKING CONCEPT



GRADE LEVEL
AREA = 88,560 SQ.FT.
275 SPACES



TYPICAL LEVEL
AREA = 88,560 SQ.FT.
310 SPACES



ROOF LEVEL
AREA = 88,560 SQ.FT.
280 SPACES

Exhibit F4:
ETSU Master Plan / Structured Parking Site 3b Concepts

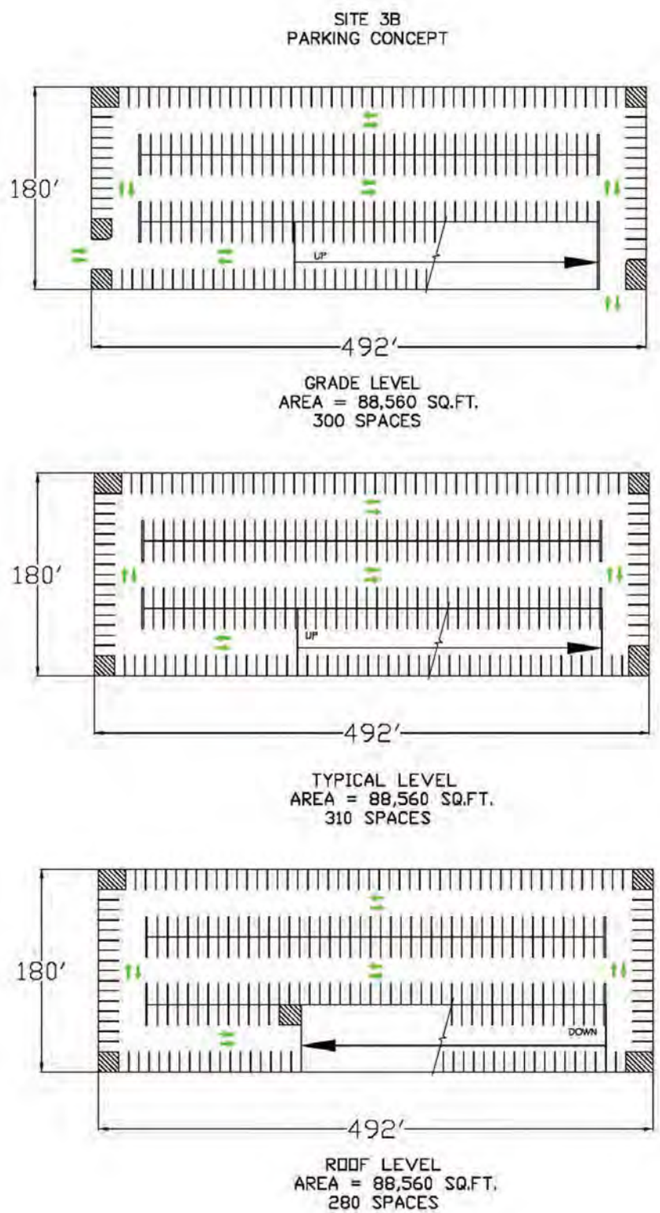


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Exhibit F5:
ETSU Master Plan / Structured Parking Site 4 Concepts

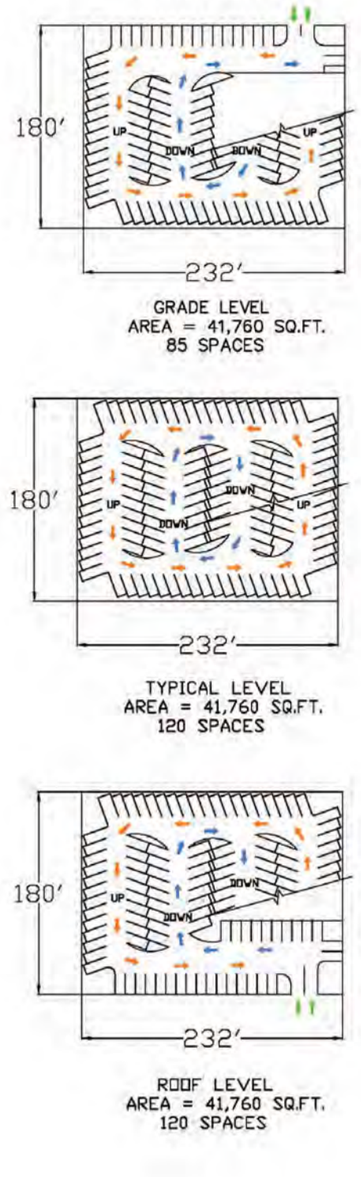

Exhibit G1:
Sample Job Classifications for Parking & Transportation Administrator

POSITION TITLE: Parking & Transportation Administrator

DEPARTMENT: Office of Facilities

DIVISION: Administration

SALARY RANGE: _____

GENERAL DESCRIPTION:

The Parking & Transportation Manager position is a mid-level management position responsible for the overall management of parking and transportation programs for the East Tennessee State University campus.

ESSENTIAL JOB FUNCTIONS

- Oversees all daily parking & transportation operations. Coordinates operational elements as necessary with the security department and internal parking & transportation staff
- Oversees all special event parking & transportation operations. Coordinates special events elements as necessary with the security department and internal parking & transportation staff
- Coordinates all parking &/or transportation related construction projects and impact of construction on parking and transportation with Facilities and capital project personnel
- Coordinates the administrative activities and assignments for parking & transportation
- Oversees all parking and transportation maintenance in cooperation with central facilities
- Provides parking and transportation related reports as required by College and/or supervisors
- Completes subordinate employee reviews as required by the college
- Develops and recommends department goals and objectives
- Provides leadership and structure for the parking & transportation program through planning and coordinating with both customers groups, peers and subordinates
- Ensures parking and transportation administrative records are properly maintained and directs the preparation of special reports and correspondence related to parking & transportation related activities and services
- Develops departmental budgets in conjunction with divisional management
- Responsible for monitoring all revenues and expenditures for attainment of financial plans and goals
- Recommends Parking & Transportation Fees and Fines

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POLICY MAKING AND/OR INTERPRETATION

- Plans, drafts and recommends to the Chief Facilities Officer new and revised policies and procedures for the administration of the parking and transportation system

PROGRAM DIRECTION & DEVELOPMENT

- Identifies , plans, implements and delivers activities and strategies for the efficient and effective operations of the parking and transportation program
- Develops and coordinates actions to achieve the departments strategic goals and objectives
- Communicates department's status and performance levels to the Chief Facilities Officer
- Develops, coordinates and /or implements training and quality assurance programs

SUPERVISION EXERCISED

- Monitors all staffing needs and/or recruiting efforts
- Supervises Parking & Transportation supervisor

LEVEL OF PUBLIC CONTACT

- Contact with Parking patrons on a daily basis
- Serves as liaison to other campus committees and governance organizations
- Coordinates parking and transportation services within the Facilities Department by communicating with other managers in the department
- College wide and campus Facilities department

REQUIRED SKILLS/EDUCATION/TRAINING/EXPERIENCE

- Bachelor's degree in Business Administration, Public Administration or some related field
- 3-5 years supervisory/managerial experience utilizing best practices and principles in the parking and transportation or similar industry
- Demonstrated ability to lead, direct and coordinate activities of a department
- Demonstrated ability to plan and supervise staff
- Excellent analytical, interpersonal, public relations and decision making skills
- Demonstrated ability to use and learn to utilize modern technology to include computer applications such as word processing, spreadsheets, creating presentations, and databases
- Demonstrated ability to create department budgets for both revenues and expenditures

East Tennessee State University Parking Study

PREFERED SKILLS/EDUCATION/TRAINING/EXPERIENCE

- Certified Administrator of Public Parking (CAPP) Certification
- Experience in using computerized parking and/or transportation management systems
- Demonstrated ability to develop strategic plans
- Demonstrated ability to develop capital budgets
- Experience directing the public bonding process for capital projects

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Exhibit G2:
Sample Job Classifications for Parking & Transportation Supervisor

POSITION TITLE: Parking & Transportation Supervisor

DEPARTMENT: Office of Facilities

DIVISION: Administration

SALARY RANGE: _____

GENERAL DESCRIPTION:

The Parking supervisor position is a supervisory position responsible for the overall operations management of parking and transportation programs for the East Tennessee State University campus. In addition the parking supervisor may have to perform the functions of the parking & transportation manager during the absence of the manager.

ESSENTIAL JOB FUNCTIONS

- Field Supervision all daily parking & transportation operations
- Supervises all special event parking & transportation operations
- Supervises all parking &/or transportation related construction projects and impact of construction on parking and transportation
- Supervises and coordinates/performs all parking and transportation maintenance
- Completes subordinate employee reviews as required by the college
- Develops and recommends internal department goals and objectives to the parking & transportation manager
- Assists in developing departmental budgets in conjunction with parking & transportation manager
- Responsible for daily/weekly/monthly reconciliation of all revenues and expenditures

PROGRAM DIRECTION & DEVELOPMENT

- Identifies , plans, implements and delivers activities and strategies for the efficient and effective operations of the parking and transportation program
- Develops and coordinates actions to achieve the departments strategic goals and objectives
- Communicates department's status and performance levels to the Parking & Transportation Manager
- Develops, coordinates and /or implements training and quality assurance programs

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SUPERVISION EXERCISED

- Monitors all staffing needs and/or recruiting efforts
- Develops field staff work schedules

LEVEL OF PUBLIC CONTACT

- Contact with Parking patrons on a daily basis, resolving complaints and conflicts that may arise
- Coordinates parking and transportation services within the Facilities Department by communicating with other managers in the department
- Direct supervision and coordination of subordinates in the field

REQUIRED SKILLS/EDUCATION/TRAINING/EXPERIENCE

- 1-3 years supervisory experience utilizing best practices and principles in the parking and transportation or a similar industry
- Demonstrated ability to supervise field activities of a department
- Excellent analytical, interpersonal, public relations and field decision making skills (ability to "think on one's feet")
- Demonstrated ability to use and/or learn to utilize modern technology to include computer applications such as word processing, spreadsheets, creating presentations, and databases

PREFERED SKILLS/EDUCATION/TRAINING/EXPERIENCE

- Associates degree in Business Administration, Public Administration or some related field
- Experience in using computerized parking and/or transportation management systems
- Demonstrated ability to reconcile daily revenues and expenditures
- Demonstrated ability to supervise a dynamic operation

APPENDIX C

The Campus Master Plan Update includes projects that have been identified to meet the needs of the university over the next 10 – 20 years. The following table summarizes budget line items for those projects, which are identified and described in the Master Plan Update.

PROJECT DESCRIPTION	COST	STATE REQUEST	OTHER
MAIN CAMPUS			
D. P. Culp Renovation	$15,000,000		$15,000,000
Sherrod Library Renovaton	$1,500,000		$1,500,000
Fine Arts Classroom Building	$39,200,000	$32,000,000	$7,200,000
Mathes Hall Backfill	$10,000,000	$8,000,000	$2,000,000
University School	$30,000,000		$30,000,000
Wilson-Wallis Renovation	$2,500,000		$2,500,000
Brown Hall Renovation	$20,000,000	$16,000,000	$4,000,000
Lamb Hall Addition	$20,000,000	$16,000,000	$4,000,000
Sam Wilson Hall Renovation	$3,500,000		$3,500,000
Engineering, Design & Innovation Center	$15,000,000		$15,000,000
Math/Science Academic Building	$75,000,000	$60,000,000	$15,000,000
Sustainability Center	$250,000		$250,000
New Humanities Building	$50,000,000	$40,000,000	$10,000,000
Stone Hall Renovation	$3,500,000		$3,500,000
ETSU/VA CAMPUS			
Building 60 Renovation-Simulation Center	$12,931,000		$12,931,000
Johnson City Family Practice	$7,750,000	$6,200,000	$1,550,000

PROJECT DESCRIPTION	COST	STATE REQUEST	OTHER
HOUSING			
Greek Village	$15,000,000		$15,000,000
Western Dorm Redevelopment	$40,000,000		$40,000,000
LAND ACQUISITION			
**Seminole Drive Residential Properties	$2,500,000		$2,500,000
3 Commercial Properties on State of Franklin	$1,700,000		$1,700,000
14 Acre Site adjacent to Fossil Site	$280,000		$280,000
2 Acre Site Adjacent to Dig Site	$100,000		$100,000
**Upper Class Apartments	$1,800,000		$1,800,000
**Commercial Properties north side of Walnut St.	$2,000,000		$2,000,000
Parcel Adjacent to Intramural Site	$375,000		$375,000
House on Maple Street	$300,000		$300,000
**BP Gas Station on University Parkway	$1,000,000		$1,000,000
**Commercial Properties northwest corner of campus	$4,446,000		$4,446,000
SUPPORT FACILITIES			
New Data Center	$2,705,000		$2,705,000

APPENDIX C

PROJECT DESCRIPTION	COST	STATE REQUEST	OTHER
CIRCULATION			
Circulation Improvements	$3,500,000		$3,500,000
Dropoff at University School	$500,000		$500,000
D. P. Culp Amphetheater Improvements	$2,500,000		$2,500,000
PARKING			
East End Parking Garage	$20,000,000		$20,000,000
Redevelop Parking Lots	$2,500,000		$2,500,000
ATHLETICS			
Football Stadium	$25,000,000		$25,000,000
Indoor Tennis Center	$2,000,000		$2,000,000
Track & Field Facility	$4,200,000		$4,200,000
Multi-purpose Facility	$3,500,000		$3,500,000
Baseball Stadium Phase 2 Commercial	$4,500,000		$4,500,000
Warren-Green Golf Center	$750,000		$750,000
Memorial Hall	$6,000,000		$6,000,000
Convocation Center & Athletic Facility	$50,000,000		$50,000,000
Future Added Programs			
GRAND TOTAL	**$503,287,000**	**$178,200,000**	**$325,087,000**

**Tax records

All construction costs are 2014 dollars without FF&E