East Carolina University

Comprehensive Master Plan

Space Capacity Analysis

Work Paper on Methodology and Data

March 15, 2010

Prepared by:

EVA KLEIN & ASSOCIATES
Strategies for the Global Knowledge Economy

503 Seneca Road
Great Falls, Virginia 22066

SmithGroup | JJR
324 Blackwell Street, Suite 1104
Durham, North Carolina 27701

EKA

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INTRODUCTION

Eva Klein & Associates (EKA) provides this work paper to describe the *Space Capacity Analysis,* one of several assessments of capital facilities needs being conducted by the Smith Group (SG) team, to develop a vetted and prioritized *Capital Projects Plan* for East Carolina University's *Comprehensive Master Plan*.

DEFINITION OF THE SPACE CAPACITY ANALYSIS

Space Capacity Analysis (SCA) is designed to answer the question: *How much space, of certain space types, based on space standards or guidelines applied to use/user metrics, does ECU require?*

As a methodology, an SCA is not useful for all campus space types. It is most directly useful for:

- Classrooms
- Class Laboratories
- Open Laboratories
- Research Laboratories
- Office Facilities
- Study Facilities (including Library).

The above-listed space types are discussed further below under the heading *"Space Types Included."*

Some space requirements are highly driven by program characteristics or they are one-of-a-kind facilities. These are not assessed by the SCA, and must be evaluated in a *Special Purpose Facilities Assessment*. Then, together, findings from the (1) *Facility Condition and Functionality Assessments,* the (2) *Special Purpose Facilities Assessment*, and the (3) *Space Capacity Analysis* constitute the key elements for determining capital project needs—both additions of new space and reconfiguration or changes of use type for existing space.

The SCA basically compares space requirements to space availability. *Planning standards*—expressed as space allowances, utilization targets (for Classrooms and Class Laboratories), and other use or user metrics—are employed to measure quantities of space required. Available square footage is drawn from the University's *Space Inventory* records. Available space and required space then are compared, by type. This is done both based on current "capacity" and on projections of future "capacity" at the Master Plan end year, 2025. Space needs measured in Net Assignable Square Feet (NASF) are subsequently translated into Gross Square Feet (GSF) for purposes of sizing facilities projects.

SCOPE AND TASKS

This SCA is listed as Task 3B.1 in the *Master Plan* scope of work. Its scope and tasks are summarized as follows and stated in full in Exhibit 1.

3B.1-a	Space Capacity Analysis—Data and Analysis
3B.1-b	Preliminary Capital Projects (based on SCA)
3B.1-c	Review meeting with ECU
3B.1-d	*Deliverable:* Space-driven capital projects (with SG-provided cost estimates)

In the SCA deliverable, the capital needs defined will be expressed in terms of needed NASF (or NASF converted into GSF) of space, by space types. The needs will not necessarily, at this stage, be expressed as specific buildings, additions, projects, or space assigned to specific users.

Space Types Included

Room Use Codes (referred to as "FICM" or "PEFIC" *Room Use Codes*) are found in the *Postsecondary Education Facilities Inventory and Classification Manual, 2006,* National Center for Education Statistics. Those *Room Use Codes* covered in this SCA are highlighted below in **Boldface**; those excluded are shown in Gray.

Note: While a benchmark estimate of the total amount of 700 Support Services Facilities space requirements will be provided in the SCA, in reality, the individual facility needs within that category must be determined by programmatic requirements identified in the *Special Facilities Needs Assessment* and are not part of the SCA. For this reason, the 700 *Room Use Codes* are shown in Gray. See discussion of 700 series space in the discussion of *Space Planning Standards* below.

100 Classroom Facilities
110 Classroom
115 Classroom Service

200 Laboratory Facilities
210 Class Laboratories
215 Class Laboratories Service
220 Open Laboratory
225 Open Laboratory Service
250 Research/Non-Class Laboratory
255 Research/Non-Class Laboratory Service

300 Office Facilities
310 Office
315 Office Service
350 Conference Room
355 Conference Room Service

400 Study Facilities
410 Study Room
420 Stack
430 Open-Stack Study Room
440 Processing Room
455 Study Service

500 Special Use Facilities
510 Armory
515 Armory Service
520 Athletic or Physical Education
523 Athletic Facilities Spectator Seating
525 Athletic or Physical Education Service
530 Media Production
535 Media Production Service
540 Clinic
545 Clinic Service
550 Demonstration
555 Demonstration Service
560 Field Building
570 Animal Quarters
575 Animal Quarters Service
580 Greenhouse
585 Greenhouse Service
590 Other (All Purpose)

600 General Use Facilities
610 Assembly
615 Assembly Service
620 Exhibition
625 Exhibition Service
630 Food Facility
635 Food Facility Service
640 Day Care
645 Day Care Service
650 Lounge
655 Lounge Service
660 Merchandising
665 Merchandising Service
670 Recreation
675 Recreation Service
680 Meeting Room
685 Meeting Room Service

700 Support Services Facilities
710 Central Computer or Telecommunications
715 Central Computer or Telecommunications Service
720 Shop
725 Shop Service
730 Central Storage
735 Central Storage Service
740 Vehicle Storage
745 Vehicle Storage Service
750 Central Service
755 Central Service Support
760 Hazardous Material
765 Hazardous Material Service

(more, next page)

800 Health Care Facilities
810 Patient Bedroom
815 Patient Bedroom Service
820 Patient Bath
830 Nurse Station
835 Nurse Station Service
840 Surgery
845 Surgery Service
850 Treatment/Examination
855 Treatment/Examination Service
860 Diagnostic Service Laboratory
865 Diagnostic Service Laboratory Support
870 Central Supplies
880 Public Waiting
890 Staff On-Call Facility
895 Staff On-Call Facility Service

900 Residential Facilities
910 Sleep/Study Without Toilet or Bath
919 Toilet or Bath
920 Sleep/Study With Toilet or Bath
935 Sleep/Study Service
950 Apartment
955 Apartment Service
970 House

000 Unclassified Facilities
050 Inactive Area
060 Alteration or Conversion Area
070 Unfinished Area

Special Purpose Facilities Needs

As earlier noted, capital project needs pertaining to several of the above space types are not defined by the SCA methodology, and thus not included in this assessment. Rather, they will be identified by other SG team firms as part of *Special Purpose Facilities Needs Assessments*. Brief descriptions and assignments for identification of those needs within the team are summarized as follows.

Special Purpose Facilities Assessment: Team Responsibilities by Space Types			
Space Type		Team Firm	Comments
Room Use Codes & Sub-Codes	Description		
520/523/525	Athletic or Physical Education; Athletic Facilities Spectator Seating; and Athletic or Physical Education Service	Brailsford & Dunlavey	Analysis takes into account both academic program requirements and student/campus life/athletic program requirements. Actual building projects also may include 610/615 Assembly space needs and 670/675 Recreation space needs, etc.
530/535	Food Service Facilities	Brailsford & Dunlavey	May be stand-alone or incorporated into other facilities, e.g. Residential or Student Union
500 (all except 520/523/525--Athletics/Phys Educ)	Specialized facilities that support or are integral to academic programs	Smith Group	These could be highly diverse, program-driven, special use facilities. Examples: Performing Arts Center; Animal Holding Facility; Media Production
600 (all)	Student Activities; and Campus Life Facilities	Brailsford & Dunlavey	There is some connection between the Recreation portion of this series and the 520 Athletic space.
700 (all)	Campus Support and Operations Facilities	Smith Group	Specific facility requirements will be based on consultations with ECU Facilities leadership
800 (all)	Health Care Facilities (Clinical)	Smith Group	Will include all clinical requirements; with respect to clinical research, will be coordinated with SCA analysis of research lab requirements
900 (all)	Residential Facilities	Brailsford & Dunlavey	Actual residential building projects may include other space types, such as 410-Study Rooms; 530/535-Food Services; 570/575-Recreation etc.

Policy Framework

ECU Draft Space Policy

ECU's draft space policy is awaiting review by the Chancellor. When the policy is formally adopted, it will be the source for internal ECU policy on space allocation and assignment. At present, the EKA team is using the draft policy as guidance on the potential policy direction ECU will adopt. In addition, EKA understands that all Classrooms (110) are scheduled centrally by the University Registrar.

UNC Board of Governors

The UNC Board of Governors adopted policy on *Space Planning Standards* for four space types in 1998, pursuant to a study by EKA. This policy is still in effect as far as we know, and provides the basis for the *Space Planning Standards* EKA proposes to use for ECU.

Then, in 1999, in connection with early stages of the *Capital Equity and Adequacy Study and 10-Year Capital Plan*, when it was found that additional space guidelines were needed, EKA produced such additional guidelines, published in a study work paper—*Additional Space Guidelines*, 1999. To our knowledge, these additional guidelines do not have formal status as "policy," as do the 1998 *Space Planning Standards*. However, these *Additional Space Guidelines* were used in EKA's study, and thus were factors in determination of the project needs identified in 1999-2000, that then became projects in the six-year Bond Program.

The *North Carolina Space Inventory and Utilization Study* (42nd Edition, 2008—from DAVE files) and the related *North Carolina Space Inventory and Utilization Manual* (Sixth Edition, 2009) provide a wealth of information, including definitions, methodology, and actual data on campus space inventories and utilization for all North Carolina institutions. In addition to detailed utilization statistics, the *Study* reports two other capacity measures:

- Capacity/Enrollment Ratio
- Square Feet of Academic Facilities per FTE.

(See the *Study* for definitions of the data elements—Table 1, page 9 and Table 2, pages 15-16.)

The *Space Planning Standards* referred to above also are provided in the *Study*, Table 11.

EKA

SPACE PLANNING STANDARDS FOR ECU'S SPACE CAPACITY ANALYSIS

In development of *Space Planning Standards* for ECU's *Space Capacity Analysis*, EKA drew upon several sources and references, as well as our experience as consultants, including:

- *UNC Space Planning Standards*—existing policy
- *Space Planning Standards* /Guidelines used in other recent EKA *Space Capacity Analysis* studies
- *Space Planning Standards*/Guidelines used in a 2005 study for UNC Wilmington (Paulien & Associates)
- Our general knowledge of trends in these studies and policies
- Future expectations for the capital funding environment and possible future policy considerations that give impetus to increasing effectiveness, efficiency, and productivity of space use.

The following proposed *Space Planning Standards* are for the space types included in EKA's work. They are derived from the above combined sources. They are designed to meet or exceed efficiency levels required by the formally adopted UNC *Space Planning Standards*, where applicable.

100 CLASSROOM FACILITIES

110/115 CLASSROOM AND CLASSROOM SERVICE

The UNC *Space Planning and Utilization Standard* for Classrooms was adopted in 1998. As is typical practice, the elements of space allowance and utilization generate a ***Space Factor***, which is derived from a per-***Student Station*** space allowance and two utilization factors, ***Station Occupancy Ratio*** and ***Average Weekly Room Hours***, as follows:

$$\text{Space Factor} = \frac{\text{NASF per Student Station}}{\text{Station Occupancy Ratio X Average Weekly Room Hours}}$$

The *Space Factor* then is multiplied by ***Weekly Student Contact Hours***, to generate the required NASF of Classroom space.

The formal UNC *Space Planning Standard* for Classrooms generates a ***Space Factor*** of 0.79, as follows:

$$\frac{18 \text{ NASF}}{65\% \text{ X } 35 \text{ Hrs}} = 0.79$$

Space requirements for 110/115 Classrooms will be calculated on an institution-wide basis—not college by college, as Classroom space is a shared resource. Finally, we propose to count only those ***Weekly Student Contact Hours*** that are identified by ECU as "on campus" or "face-to-face" instruction.

200 LABORATORY FACILITIES

210/215 CLASS LABORATORIES AND CLASS LABORATORY SERVICE

The UNC *Space Planning and Utilization Standard* for Class Laboratories was adopted in 1998. As with Classrooms, the elements of a per ***Student Station*** space allowance and two utilization factors, ***Station Occupancy Ratio*** and ***Average Weekly Room Hours***, generate a ***Space Factor***, which then is multiplied by ***Weekly Student Contact Hours*** of scheduled Laboratory sections, as follows:

$$\text{Space Factor} = \frac{\text{NASF per Student Station}}{\text{Station Occupancy Ratio X Average Weekly Room Hours}}$$

Class Laboratories differ from Classrooms in that there is a series of ***Student Station*** space allowances applied to different disciplines, and therefore, a series of ***Space Factors***, which then are multiplied by ***Weekly Student Contact Hours*** for each discipline (or groups of disciplines).

The UNC *Space Planning Standard* provides the following two Class Laboratory utilization factors:

Station Occupancy Ratio = 75%

Average Weekly Room Hours = 20 Hours

Three per-student station ***Space Allowances*** are applied, based on levels of "intensity" of space required. For example, a theater or health science lab space is "intensive" in space use. An instructional technology lab is less so. These ***Student Station*** space allowances for ECU vary slightly from those in the 1998 UNC *Space Planning Standards*. Together, the ***Student Station*** space allowance and utilization factors generate the following three ***Space Factors***:

Space Factors for Class Laboratories		
Station Occupancy Ratio (SOR)	75%	
Average Weekly Room Hours (WRH)	20 Hours	
Intensity Category	NASF Per Station (Allowance)	Space Factor
Intensive	70	4.67
Moderately Intensive	50	3.33
Non-Intensive	25	1.67

Finally, we propose to count only those ***Weekly Student Contact Hours*** that are identified by ECU as "on campus" or "face-to-face" instruction in Class Labs.

The *UNC Space Planning Standard* for Class Laboratories also provides groupings of disciplines for four intensity categories. To reflect that, in today's learning environments, much work that was on physical equipment now is done by simulation, we propose the following three ***Space Factors*** and groups of disciplines for Class Labs.

The table at right provides an alignment of ECU Colleges/Schools with the Class Lab allowances. It requires review, to determine that ECU's 210 laboratory spaces (and course sections) can be coded by these categories.

Groupings of ECU Disciplines/Departments by Levels of Class Laboratory "Intensity" and Space Factors				
Proposed Class Lab Category	ECU College	ECU Depts	Proposed Space	
			Average NASF per Station	Space Factor
Intensive				
	Arts & Sciences	Biology; Chemistry, Geological Sciences; Physics	70	4.67
	Technology & Computer Science	Engineering; Technology Systems; Computer Science; Construction Management	70	4.67
	Medicine	Medicine	70	4.67
	Allied Health	Clin Lab Science; Occupational Therapy; Physical Therapy; Physician Asst Studies; Communication Sciences & Disorders; Rehabilitation Studies; Health Services & Info Mgmt; Biostatistics(?)	70	4.67
	Nursing	Nursing	70	4.67
	Health & Human Performance	Health Educ & Promotion; Exercise & Sports Science; Recreation & Leisure Studies; Military Programs	70	4.67
	Fine Arts & Communication	Art & Design; Music; Theater; Dance; Communications	70	4.67
Moderately Intensive				
	Education	Curriculum & Instruction; Bus & Info Tech Educ; Math, Sci & Instruc Tech Educ; Education Leadership; Library Science	50	3.33
	Human Ecology	Child Devpt & Family Relations; Nutrition & Dietetics; Hospitality Mgmt; Social Work; Criminal Justice; Interior Design & Merchandising	50	3.33
	Arts & Sciences	Anthropology; Psychology	50	3.33
Non-Intensive				
	Business	Marketing & Supply Chain Mgmt; MIS; Acctg; Finance; Management	25	1.67
	Arts & Sciences	Foreign Lang & Lit; English; Philosophy; Mathematics; Geography; Economics; Political Science; Sociology; History	25	1.67

220/225 Open Laboratory and Open Laboratory Service

These are lab rooms that are NOT scheduled for instructional sessions but, rather, used on a drop-in or sign-up basis. Examples are language labs, music practice rooms, and technology labs for certain disciplines. It is necessary to distinguish between 220 Open Labs and 410 Study Rooms. Whether or not it has technology capabilities, a room is a 410 Study Room if it is *not specific to a discipline*, and it is a 220 Open Laboratory if it is equipped in a way that makes it *specific to a discipline*. It is our understanding that this is exactly how ECU's rooms are coded.

In 1998, EKA and the UNC Task Force that developed the UNC *Space Planning Standards* did not propose a *Space Allowance* for 220 Open Laboratory. However, the following year, in connection with the *Capital Equity and Adequacy Study,* additional space guidelines were developed. Among these, a *Space Planning Standard* for 220 Open Laboratories was created in a highly complex formula that involved derivation of *Converted FTEs* by discipline. However, we do not believe that that complex formula would be best for ECU's *Space Capacity Analysis.*

We are aware that some consultants and public systems establish standards for 220 space based on a simple *Space Allowance* per FTE student—often in the range of 4 to 10 NASF per FTE. UNC Wilmington's consultant used 4 NASF per FTE. EKA has used 4 or 4.5 NASF per FTE in other recent work. We therefore propose for ECU a space allowance of 4.5 NASF per FTE student for 220 Open Laboratory Space. Open Laboratory Service space (space coded as 225) is included in this NASF allowance.

Often, this Open Laboratory requirement is calculated on an institution-wide basis, without relating the space needs to colleges. In this case, we will examine Open Laboratory space needs by college. Thus, we have requested that ECU provide student credit hours (and calculated FTEs) by college/school.

We understand that there are students who enroll in both on-campus and online courses. Many of these live at ECU or nearby and may be users of Open Laboratories. For this reason, we propose to count the 100% of the on-campus FTEs and 50% of the DE FTEs, in projecting Open Laboratory requirements.

The formula is:

> Required Open Laboratory Space = FTE Students X 4.5 NASF
>
> Where FTE Students = 100% of On-Campus FTEs + 50% of DE FTEs (by College)

250/255 Research/Non-Class Laboratory and Research/Non-Class Laboratory Service

Using the UNC *Space Planning Standard*, the Research/Non-Class Laboratory space requirements should be based on a *Space Allowance* per dollar amounts of *organized* research for those research activities that require laboratory space. *Organized research* means research projects or programs that are either funded by external agencies or funded internally with organized objectives for outcomes, for example by Faculty Senate research grants. Research expenditures are defined as those expenditures that are categorized in the accounting system as UNC Chart of Accounts Purpose Code 110 (which also is the IPEDS reporting code), as follows:

> *110 Organized Research: This activity includes research efforts of a specified scope conducted for the primary purpose of achieving identified research outcomes, whether commissioned and sponsored by external agencies or separately sponsored within the institution. It includes individual research, project research, sponsored research, research institutes, and research centers. Also, it includes research project personnel but excludes research administrators and related support personnel….It excludes departmental research that is not separately budgeted….*

For current research space requirements, a three-year average of 110 research expenditures (2007-2009) will be used. Grants will be sorted by those requiring laboratory space and those not requiring laboratory space.

The Research Laboratory *Space Allowances* are differentiated by three categories of "intensity" for groups of disciplines. All three *Space Allowances* are per $1 million of organized 110 Research Expenditures.

Level of Intensity	NASF per $1 Million of 110 Research Expenditures
Intensive	9,000
Moderately Intensive	6,000
Non-Intensive	4,000

The following table organizes ECU Colleges and Departments into the three levels of Research Laboratory *Space Allowances.* This table requires review, when grant data EKA has requested are available, to determine if the categories can be matched to funding.

Groupings of ECU Disciplines/Departments by Levels of Research Laboratory "Intensity" and Space Allowances			
Proposed Research Lab Category	ECU College	ECU Depts	Proposed Space Planning Standard Average NASF per $1M Organized Research
Intensive			**9,000**
	Technology & Computer Science	Engineering; Technology Systems	
	Fine Arts & Communication	Theater & Dance; Art & Design; Music	
	Health & Human Performance	Health Educ & Promotion; Exercise & Sports Science; Recreation & Leisure Studies; Military Programs	
	Arts & Sciences	Biology; Chemistry; Geological Sciences; Physics	
	Medicine	Medicine	
	Allied Health	Clin Lab Science; Occupational Therapy; Physical Therapy; Physician Asst Studies	
	Nursing	Nursing	
	Human Ecology	Interior Design & Merchandising	
Moderately Intensive			**6,000**
	Technology & Computer Science	Computer Science; Construction Management	
	Education	Curriculum & Instruction; Bus & Info Tech Educ; Math, Sci & Instruc Tech Educ	
	Human Ecology	Child Devpt & Family Relations; Nutrition & Dietetics; Hospitality Mgmt	
	Arts & Sciences	Anthropology; Psychology	
	Allied Health	Communication Sciences & Disorders; Rehabilitation Studies	
Non-Intensive			**4,000**
	Business	Marketing & Supply Chain Mgmt; MIS; Acctg; Finance; Management	
	Arts & Sciences	Foreign Lang & Lit; English; Philosophy; Mathematics; Geography; Economics; Political Science; Sociology; History	
	Allied Health	Health Services & Info Mgmt; Biostatistics(?)	
	Human Ecology	Social Work; Criminal Justice	
	Education	Educ Leadership; Library Science	
	Fine Arts & Communication	Communication	

EKA

300 Office Facilities

310 Offices

We propose to use the UNC *Space Planning Standards* for generating Office Facilities requirements for ECU's SCA. Those standards for 310 Office (which are the actually assigned offices or work stations) are as follows.

- 225 NASF for Administrative FTEs
- 120 NASF for Faculty FTEs
- 160 NASF for Professional FTEs
- 90 NASF for Technical/Clerical FTEs
- 60 NASF for Graduate Assistants
- 25 NASF for Temporary Student Employees.

Personnel categories that typically do not require office space, for example, food service workers, custodians, groundskeepers, and skilled craftspeople, are not included in the FTEs.

Graduate Assistant FTEs are calculated as 50% of Headcount (based on the assumption that Graduate Assistants work 20 hours per week). Temporary Student Employees are converted into FTEs by a formula that begins with the expenditures in budget line item 60521 (formerly 1450), divided by an average hourly rate, to generate the number of hours worked. Hours worked are normalized to FTEs based on a full-time work week/year. These are categories of employees who normally are not assigned permanent offices, but whose presence creates a demand for work space in office areas.

315 Office Service and 350/355 Conference Rooms and Conference Room Service

An allowance of 50 NASF per FTE is added to the total space requirement for actual offices generated by the first four categories of personnel above, to account for space requirements for 315 Office Service; 350 Conference Room; and 355 Conference Room Service.

400 Study Facilities

Evaluating space requirements for libraries is complicated in the current technology environment. It also is the case that "study" space, once primarily in libraries, is now a much more widely-distributed space resource. For ECU's SCA, we propose to use the UNC *Space Planning Standard* for Study Space, modified to recognize the increasing dispersion of 410 Study Rooms throughout the campuses. The UNC *Planning Standards* for 420 and 430 Stack (Collection) Space and for 440 and 455 Library Service Space are used for ECU.

410 Study Rooms

It is recognized that much of ECU's NASF of Study Space will be in the University's libraries, and some will be in colleges and other buildings. In the Main Campus, 21 percent of 410 Study rooms, at present, are not in Joyner Library.

On West (Health Sciences) Campus, former Library space now is not in use, as Laupus Library moved from Brody to the Health Sciences Building.

Current Distribution of Study Room Space (410) and Open Stack/Study Room Space (430) in NASF			
East Campus			
	Joyner	Elsewhere	Total
410	13,387	16,456	29,843
430	117,896	5,323	123,219
Estimation of all "Study" Space (410 + 50% of 430)			
410	13,387	16,456	29,843
430	58,948	2,662	61,610
Total Study	72,335	19,118	91,453
% in Joyner vs. Elsewhere	79%	21%	100%

Study space will be calculated campus-wide, for Main and Health Sciences campuses respectively, based on the following user/use assumptions.

Study Space (410 + 50% of 430 Open Stack Space): Space Allowance and User Metrics	
Study/Reading Station Size	25 NASF
Student Users (at one time)	20% of Student FTEs
Faculty Users (at one time)	8% of Faculty FTEs

These standards, articulated for UNC in 1998, were consistent with practices in other state systems at that time—both with respect to the 25 NASF space allowance and with respect to the percentages of student and faculty users that are assumed to be using study space in the library *at any given time of day.* Effectively, this standard says that 25 percent of the student population and 8 percent of the faculty are using study space at all hours when the libraries and study areas are available for such use.

With the increasing use of online tools—both for accessing library materials and for study and research, and with increasing use of personal computers, these metrics for student and faculty users likely are very generous.

The formula is:

Required Study Space = 25 NASF X (.20 Student FTEs + .08 Faculty FTEs)

We will do this separately for East and West Campuses.

For calculating the actual amount of Study Space presently on campus, we will use a total of:

- All space coded as 410 (no matter where on campus)
- One-half of space in the Libraries coded as 430 Open Stack.

420 Closed Stacks and 430 Open Stacks (Collection Space)

We propose to use the UNC *Space Planning Standard* for collection space. That standard is 0.08 NASF per Physical Bound Volume Equivalent (PBVE) of collection materials. PBVEs are calculated based on conversion formulas, as follows:

Calculation of Physical Bound Volume Equivalents (PBVEs)		
1. Bound Volumes		
Standard Volume	1.0 : 1	1.00
Reference	0.67 : 1	1.50
Law and Medical Science	0.67 : 1	1.50
2. Documents or Pamphlets (Unbound)	8.0 : 1	0.13
3. Serial Volumes (Bound and Unbound)	0.4 : 1	2.50
4. Microfilm, Microfiche		
Microform	5.0 : 1	0.20
Microfiche	80.0 : 1	0.01
5. CD-ROM, etc.		
Compact Disks	4.0 : 1	0.25
Floppy Disks	15.0 : 1	0.07
Magnetic Tape (VHS Tapes)	1.0 : 1	1.00
6. A-V Holdings	1.0 : 1	1.00
7. Slides	40.0 : 1	0.05
8. Maps	8.0 : 1	0.13
9. Printed Music	2.0 : 1	0.50
10. 16mm Film	1.0 : 1	1.00
11. Models (Anatomical)	TBD	TBD
TOTAL PBVE		

All of 420 Stack Space and one-half of 430 Open Stack space are considered stack or collection space.

440 and 455 Library Service Space

We also propose to use the UNC *Space Planning Standard* for Library Service Space. It is projected at 15 percent of Study/Reading and Stack/Collection space in the Libraries.

700 Support Services Facilities

As earlier noted, needs for the facilities in this *Room Use Code* series must be determined programmatically and will be developed by SG, with ECU's facilities management leadership. To provide a normative "test" or benchmark for 700 space in the aggregate, it is possible to calculate a total projected requirement of 700 space, based on a selected percentage of all other campus space. We will do so, as an adjunct analysis to the SG team's work on this category of facilities.

The sub-codes within the 700 series are:

- 710/715 Central Computer or Telecommunications
- 720/725 Shop and Service
- 730/735 Central Storage and Service
- 740/745 Vehicle Storage and Service
- 750/755 Central Service and Support
- 760/765 Hazardous Materials and Service

For this SCA, a space planning guideline of 4 percent of all campus NASF, excluding the 700 series space, is applied to predict aggregate footage needs for Campus Support services—for all the above sub-codes. Also excluded is physical plant or campus operations office space, as these are included in 300 Office Facilities.

Data Sources and Pending Data Requests

In accordance with its purposes, Task 3-A—*Strategic Review* provided the opportunity for ECU to compile and consider, and for EKA to organize and analyze, many data elements required for various parts of the *Master Plan* analyses. Some data elements required for this SCA remained to be acquired. In some cases, additional data requests for the SCA were to update files that were included in the *Strategic Review*. In other cases, the SCA requires data to be organized differently or provided at a greater level of detail than for the *Strategic Review*.

Since early February, EKA has been working with various ECU personnel to request these additional data. Most has been received and a few requests are pending as of this date. Although it is a moving target, the following table is an attempt to summarize data requirements in hand and required, with comments, and organized by types of data and by "Baseline or Current" and "Projected to 2025."

Space Capacity Analysis: Summary of Data in Hand and Current/Pending Data Requests to ECU			
Type of Data	**Source**	**Acquired or Required (A or R)**	**Comments**
Space Data—Baseline or Current			
Space Data—NASF of 110, 200 Series, 300 series and 400 series space data sorted by College/School & by Major administrative divisions	ECU	A	Request to K. Higdon for Fall 2009 and sorted by colleges and administrative divisions. Received 2/24/10. May need review with K. Higdon.
Space Data—Other *Room Use Codes*		A	NASF of all space (except 700 series) is used to approximate or benchmark the requirement for 700 series space. Updated Fall 2009 data received from K. Higdon.
"Pipeline" Space	ECU	R	Need data from ECU on capital projects underway or planned/committed thatwill add or subtract space, or change space use types, in order to adjust the current inventory for such known changes. Working with K. Higdon. (See Exhibit 3—template for these pipeline project data.)
Students and Instructional Load Data—Baseline or Current			
Headcount (Census) Data, Sorted by UG, Graduate, First Professional for Fall 2009 (and recent years)	ECU	A	The Headcount data are used only indirectly as the baseline for future projections of growth. They are not used directly in any of the SCA formulas.
Student FTE Data, Sorted by East and West Campus, by FTF vs. DE, by Colleges and Schools, and by levels.	ECU	A	Received from C. McCann, 2-17-10.
Student Credit Hours (SCH) by 2-digit CIP and Colleges and by Delivery Method for Fall 2008	ECU	A	Reports SCH Delivery method by "Campus" and "Online" with small number categorized as "Missing"
Weekly Student Contact Hours of Instruction (WSCH), sorted by College/Dept—excluding DE	ECU	R	This is the quantity multiplied by the *Space Factor* to project classroom and class laboratory space requirements. Request to C. McCann for Fall 2009. In process. Emails exchanged with C. McCann and A. Bunch re: how to count certain sections for which no room is assigned.
Students and Instructional Load Data—Projected to 2025			
Headcount (Census) Data, sorted by UG, Graduate, First Professional projected to Fall 2025	ECU	A	The Headcount data are used only indirectly as the baseline for future projections of growth. They are not used directly in any of the SCA formulas.

Space Capacity Analysis: Summary of Data in Hand and Current/Pending Data Requests to ECU			
Type of Data	**Source**	**Acquired or Required (A or R)**	**Comments**
Student FTE Data, sorted by East and West Campus, by College/School, and by FTF vs. DE, projected to 2025	Projected from 2009 based on ECU growth rates	A	To be projected based on FTE data by College/School for 2009 (using growth rate assumptions provided by ECU in HC and Student Credit Hours reports).
Student Credit Hours (SCH) by 2-digit CIP and Colleges and by Delivery Method for Fall 2025	ECU	A	Extends SCH Delivery method by "Campus" and "Online" on same basis as the Fall 2008 distribution. Confirm with ECU that ECU does not want to change the delivery method mix for future periods.
Weekly Student Contact Hours of Instruction (WSCH) for Fall 2025	Projected from 2009 based on ECU growth rates	R	Per above, we have requested to C. McCann for Fall 2009. In process. The 2025 WSCH will be projected based on the Fall 2009—using growth rate assumptions in Headcounts and SCH files from ECU.
Personnel (Faculty and Staff)—Baseline or Current			
Headcount EPA Faculty and Non-Faculty; SPA Staff; and CSS Staff, sorted by East and West Campuses, October 2009	ECU	A	Provided the basis for current baseline and projections to 2025, expressed in numbers of Full-time, Part-time, etc. Does not provide FTEs and does not break out staff by categories required for the Office Facilities Analysis.
FTE Faculty and FTE Staff (in designated categories—shown at right), sorted by East and West Campuses, and by colleges/schools and admin divisions for Fall 2009 (or current)	ECU	A (Faculty & Staff) A (Graduate Assistants & R Temporary Student Employees)	Sort required by the following for East and West Campuses—ALL in FTEs: • Administrative • Instructional (Faculty) • Professional Technical & Clerical • Graduate Assistants • Temporary Student Employees Service/maintenance/custodial personnel counts (people to whom offices are not assigned) are not needed. (See Exhibit 4A, 4B, and 4C—templates for personnel FTEs.) Data received on 2/23/10 for faculty and staff from K. Traynor. Graduate Assistants data received from B. Lojacono. Temp Student Employee data request pending to S. Stubbins. Need to reconfirm categorization into administrative units for personnel with parallel categorization of space in space inventory reports.
Personnel (Faculty and Staff)—Projected to 2025			
FTE Faculty and FTE Staff counts (in designated categories), sorted by East and West Campuses, and by colleges/schools and administrative divisions for Fall 2025	ECU	A	Headcount projections provided by ECU will be used to derive percentage increases for Faculty and Staff FTEs.
Library Collection Space—Current and Projected (requires volume counts and assumptions for collection growth)			
Current counts of bound volumes and other materials, sorted into CEFPI categories of Physical Bound Volume Equivalents (PBVEs), by East and West Campus central libraries	ECU	A	Requests were submitted to (and data provided by): Joyner Library (L. Boyer, E. Cook) Laupus Library (D. Spencer, S. Simpson, P. Greenstein)

Space Capacity Analysis: Summary of Data in Hand and Current/Pending Data Requests to ECU			
Type of Data	**Source**	**Acquired or Required (A or R)**	**Comments**
Collection growth assumptions for East and West campuses	ECU	A	Same as above. (See Exhibit 5—template for Library PBVE counts and collection growth projections.)
Research—2008 or 2009 Baseline or Current			
Funded organized research expenditures (UNC Chart of Accounts Purpose Code 110) by college/school for last 3 fiscal years, sorted by East and West Campus, college/school, and department and divided into research requiring laboratory and not requiring laboratory.	ECU	R	We have total grants and contracts by college, but not research-only by college. Need a list grant by grant sorted by Lab vs. non-Lab. Request to P. Gemperline for Main Campus data (not Health Sciences at present). In process. SG is making similar request to Health Sciences via N. Benson. (See Exhibit 6A and 6B—templates for research grant data sort.)
Research—Projected to 2025			
Projected research expenditures by college/school sorted by East and West Campus and also sorted by level of "intensity" of space required, A, B, and C.	ECU	A/R?	ECU has provided research growth projections, at three hypothetical levels. We will use the mid-level projection, which is 9 percent annually, to project research growth to 2025. To discuss with ECU: Does ECU want us to project this same growth rate evenly across all colleges/disciplines? Or does ECU wish to develop and provide differential growth rates?
Target ratio of research expenditures per NASF of dedicated research space	ECU	A	ECU provided the target ratio: $350 per NASF. Data are available on average $ of research expenditures per NASF for 5 years ending June 2008, which averaged $113 (for all colleges)
Support Space			
No data needed.		A	Will be calculated based on NASF of all other campus space, as percentage. If specific support facilities are required, they should be identified as capital projects in the *Special Purposes Facilities* assessment by SG.

EXHIBITS

EXHIBIT 1—SCOPE OF WORK FOR SPACE CAPACITY ANALYSIS

The following is reproduced from the SG contract (EKA subcontract) as background information.

Task 3B.1 Space Capacity Analysis—Quantitative Space Needs (EKA)

Purposes: The purpose of EKA's Task 3B.1 is to assess ECU's space capacity/expansion needs for a to-be-defined future period, based on Space Planning Standards / Space Capacity Analysis (SCA) methodologies. EKA's SCA will be for core Academic/Research and Administrative/Support space types only, including FICM (PEFIC) codes 100, 200, 300, 400, and 700. Other space categories, including all student service, housing, athletics, and clinical facilities (e.g. PEFIC codes 500, 600, 800, 900 are within the scope of other team firms.

Question to SG: Please confirm or reconfirm—is EKA responsible for Space Capacity for the academic and administrative space on the Health Sciences Campus? Perhaps Salmons?

Subtasks:

3B.1-a. **Space Capacity Data and Analysis.** Collect and organize Space Inventory and user / use metrics (enrollments, personnel, library, research, etc.). Review any existing space capacity analyses that have been developed internally by ECU. Determine Space Planning Standards to apply. Then, provide an updated SCA analysis for the above PEFIC codes, based on current and projected user statistics—as derived from Task 3A, and for a defined future period (e.g. 10 or 20 years). Includes telcon communications with ECU as this analysis proceeds and coordination with B&D, KSA, et al, who are deriving additional capacity projects.

3B.1-b. **Preliminary Capital Projects to Meet Projected Space Capacity Needs.** From the Space Capacity Analysis, develop an initial set of proposed capital projects to meet projected capacity needs, stated as new space to be built, by space type. These may or may not be stated by academic unit. For example, examples of preliminary capital project statements might be:

Example 1: 40,000 GSF, 110/115 General Classroom space

or

Example 2: 40,000 GSF, 210/215 Class Laboratory space for Biology/Chemistry.

3B.1-c. **Review Meeting for Discussion of Space Capacity Needs.** Present the SCA findings and preliminary capital projects to meet capacity needs to ECU's master planning committee or leadership and the SG team. Discuss, review and refine.

3B.1-d. ***Deliverable:*** **Space Capacity Analysis and Space-Driven Capital Projects.** Based on reviews and input, produce a refined statement of capital projects (needs) based on capacity (for the PEFIC codes for which EKA is responsible). SG will provide the cost estimates for these projects. These findings then will become part of the data to be incorporated into the comprehensive *Capital Projects Plan*.

EXHIBIT 2—DEFINITIONS OF ROOM USE CODES (FROM PEFIC MANUAL, 2006)

100 CLASSROOM FACILITIES

General. This category aggregates classroom facilities as an institution-wide resource, even though these areas may fall under different levels of organizational control. The term "classroom" includes not only general purpose classrooms, but also lecture halls, recitation rooms, seminar rooms, and other spaces used primarily for scheduled nonlaboratory instruction. Total classroom facilities include any support rooms that serve the classroom activity (e.g., Codes 110 and 115 as defined below). A classroom may contain various types of instructional aids or equipment (e.g., multimedia or telecommunications equipment) as long as they do not tie the room to instruction in a specific subject or discipline. For treatment of such space, see Laboratory Facilities (Code 200 series).

Institutions may use extension codes to distinguish control over classroom areas, discipline use, type of instruction, contained equipment, or other classroom variables (e.g., Codes 120 and 125, Departmental Classroom and Departmental Classroom Service). These extension codes should be capable of aggregation to total Classroom Facilities (100) as needed.

110 Classroom

Definition. A room or space used primarily for instruction classes and that is not tied to a specific subject or discipline by equipment in the room or the configuration of the space.

Description. Includes rooms or spaces generally used for scheduled instruction that require no special, restrictive equipment or configuration. These spaces may be called lecture rooms, lecture-demonstration rooms, seminar rooms, and general purpose classrooms. A classroom may be equipped with tablet armchairs (fixed to the floor, joined in groups, or flexible in arrangement), tables and chairs (as in a seminar room), or similar types of seating. These spaces may contain multimedia or telecommunications equipment. A classroom may be furnished with special equipment (e.g., globes, pianos, maps, computers, network connections) appropriate to a specific area of study, if this equipment does not render the space unsuitable for use by classes in other areas of study.

Limitations. This category does not include Conference Rooms (350), Meeting Rooms (680), Auditoria (610), or Class Laboratories (210). Conference spaces and meeting spaces are distinguished from seminar spaces according to primary use; spaces with chairs and tables that are used primarily for meetings (as opposed to classes) are conference spaces or meeting rooms (see Codes 350 and 680 for distinction). Auditoria are distinguished from lecture rooms based on primary use. A large room with seating oriented toward some focal point, and which is used for dramatic or musical productions, is an Assembly (610) facility (e.g., an auditorium normally used for purposes other than scheduled classes). A class laboratory is distinguished from a classroom based on equipment in the space and by its restrictive use. If a space is restricted to a single or closely related group of disciplines by special equipment or its configuration, it may be logically considered as a laboratory (see Code 200 series). The evolution of computers and instrumentation altered the restrictive nature of some equipment to a specific discipline or application.

115 Classroom Service

Definition. A space that directly serves one or more classrooms as an extension of the activities in that space.

Description. Includes projection rooms, telecommunications control booths, preparation rooms, coat rooms, closets, storage areas, etc., if they serve classrooms.

Limitations. Does not include projection rooms, coat rooms, preparation rooms, closets, or storage areas if such spaces serve laboratories, conference rooms, meeting rooms, assembly facilities, etc. A projection booth in an auditorium (not used primarily for scheduled classes) is classified as Assembly Service (615).

200 LABORATORY FACILITIES

General. A laboratory is a facility characterized by special purpose equipment or a specific space configuration that limits instructional or research activities to a particular discipline or a closely related group of disciplines. These activities may be individual or group in nature, with or without supervision. Laboratories may be found in all fields of study including letters, humanities, natural sciences, social sciences, vocational and technical disciplines, etc.

The nature of laboratory experiences has changed in many disciplines with the introduction of computer simulation in combination with, or as replacement of, the old "wet lab" experience in both natural and social sciences. Curricular intent should be considered as well as the physical structure of the space.

Laboratory facilities can be subdivided into three categories: class, open, and research/nonclass laboratory. A class laboratory is used for scheduled instruction. An open laboratory supports instruction but is not formally scheduled. A research/nonclass laboratory is used for research, experimentation, observation, research training, or structured creative activity that supports extension of a field of knowledge. Institutions may wish to further distinguish various types of class, open, and research/nonclass laboratories through the use of extension or special codes.

Note: Within comprehensive research universities, it is difficult to draw precise lines between instruction and research activities. At institutions with medical and health science programs, it is even more complicated because of the difficulty in distinguishing between patient care and instruction or research activities. The problem of joint activities makes the classification of space more difficult.

The complexity of "research" and how it may affect space use classification decisions needs discussion at the institutional level. In general, there are four categories of research/nonclass activities: externally budgeted or funded projects or centers; separately organized centers or projects that are funded from institutional resources; departmental research activities that are neither separately budgeted or organized; and creative and intellectual activities of faculty in some disciplines that are the equivalent of departmental research (e.g., visual and performing arts are common examples). When this complexity exists, institutions may elect to use standard space use codes for laboratories, office space, etc., and rely upon the actual activities of the faculty and staff housed within the space to determine the distinction between instruction and research. The space inventory data elements include a designation of function as a separate code for each space. If combined with financial and activity information, the combination of function and space use code can accurately represent allocations of space for research more effectively and accurately than reliance upon only the space use code.

210 Class Laboratory

Definition. A space used primarily for formally or regularly scheduled instruction (including associated mandatory, but non-credit-earning laboratories) that require special purpose equipment or a specific space configuration for student participation, experimentation, observation, or practice in an academic discipline. A space is considered to be scheduled if the activities generate weekly student contact hours (WSCHs), the activities fulfill course requirements, and/or there is a formal convener present.

Description. A class laboratory is designed for or furnished with equipment to serve the needs of a particular discipline for group instruction in formally or regularly scheduled classes. This special equipment normally limits or precludes the space's use by other disciplines. Included in this category are spaces generally called teaching laboratories, instructional shops, computer laboratories, drafting rooms, band rooms, choral rooms, (group) music practice rooms, language laboratories, (group) studios, theater stage areas used primarily for instruction, instructional health laboratories, and similar specially designed or equipped rooms, if they are used primarily for group instruction in formally or regularly scheduled classes. Computer rooms used primarily to instruct students in the use of computers are classified as class laboratories if that instruction is conducted primarily in formally or regularly scheduled classes.

Limitations. Does not include Classrooms (110). Does not include informally scheduled or unscheduled laboratories (see Open Laboratory-220). This category does not include spaces generally defined as Research/Nonclass Laboratories (250). It does not include gymnasia, pools, drill halls, laboratory schools, demonstration houses, and similar facilities that are included under Special Use Facilities (Code 500 series). Computer rooms in libraries or used primarily for study should be classified as Study Rooms (410).

215 Class Laboratory Service

Definition. A space that directly serves one or more class laboratories as an extension of the activities in those spaces.

Description. Includes any space that directly serves a class laboratory. Included are projection rooms, telecommunications control booths, coat rooms, preparation rooms, closets, material storage (including temporary hazardous materials storage), balance rooms, cold rooms, stock rooms, dark rooms, equipment issue rooms, etc., if they serve class laboratories.

Limitations. Does not include service spaces that support a Classroom (see 115), Open Laboratory (see 225), or a Research/Nonclass Laboratory (see 255). Animal Facilities (570), Greenhouse (580), and Central Service (750) facilities are categorized separately.

220 Open Laboratory

Definition. A laboratory used primarily for individual or group instruction that is informally scheduled, unscheduled, or open.

Description. An open laboratory is designed for or furnished with equipment that serves the needs of a particular discipline or discipline group for individual or group instruction where 1) use of the space is not formally or regularly scheduled, or 2) access is limited to specific groups of students. Included in this category are spaces generally called music practice rooms, language laboratories used for individualized instruction, studios for individualized instruction, special laboratories or learning laboratories (e.g., speech, hearing, law, psychology, and health-related professions) if discipline restricted, individual laboratories, and computer laboratories involving specialized restrictive software or where access is limited to specific categories of students. For example, a computer laboratory with only engineering or CAD software or a computer-based writing laboratory available only to English Composition students would be classified as an open laboratory because of the restricted usage of the space for a particular discipline or discipline

group. Spaces containing computer equipment that is not restricted to a specific discipline or discipline group are classified as Study Rooms (410) unless the primary intent is to function as a site for structured learning or group activities rather than individual knowledge acquisition.

Limitations. Laboratories with formally or regularly scheduled classes are classified as a Class Laboratory (210). This category also does not include spaces defined as Research/Nonclass Laboratory (250). A space that contains equipment (e.g., microcomputers), which does not restrict use to a specific discipline or discipline group and which is typically used at a student's convenience, should be classified as a Study Room (410).

225 Open Laboratory Service

Definition. A space that directly serves one or more open laboratories as an extension of the activities in those spaces.

Description. Includes only those spaces that directly serve an open laboratory. Included are projection rooms, telecommunications control booths, coat rooms, preparation rooms, closets, material storage (including **temporary** hazardous materials storage), balance rooms, cold rooms, stock rooms, dark rooms, equipment issue rooms, and similar facilities, if they serve open laboratories.

Limitations. Does not include service spaces that support a Classroom (see 115), Class Laboratory (see 215), or Research/Nonclass Laboratory (see 255). Animal Facilities (570), Greenhouse (580), and Central Service (750) facilities are categorized separately.

250 Research/Nonclass Laboratory

Definition. A space used for laboratory experimentation, research, or training in research methods; professional research and observation; or structured creative activity within a specific program or for sponsored research (whether sponsored with federal, state, private, or institutional funds).

Description. A research/nonclass laboratory is designed or equipped for faculty, staff, and students for the conduct of research and controlled or structured creative activities. These activities are generally confined to faculty, staff, and assigned graduate students and are applicable to any academic discipline. Activities may include experimentation, application, observation, composition, or research training in a structured environment directed by one or more faculty or principal investigators. These activities do not include practice or independent study projects and activities that, although delivering "new knowledge" to a student, are not intended for a broader academic (or sponsoring) community (e.g., a presentation or publication). This category includes laboratories that are used for experiments, testing, or "dry runs" in support of instructional, research, or 52 public service activities. Nonclass public service laboratories that promote new knowledge in academic fields (e.g., animal diagnostic laboratories, cooperative extension laboratories) are included in this category.

Limitations. Student **practice** activity rooms should be classified under Open Laboratory (220). A combination office/music or art studio or combination office/research laboratory should be coded according to its primary use if only a single space use code can be applied. Determination also should be made whether the "studio" or "research lab" component involves developing new knowledge (or extending the application or distribution of existing knowledge) for a broader academic or sponsoring community (and not merely for the practitioner), or the activity is merely practice or learning within the applied instructional process. Primary use should be the determining criterion in either case. Does not include testing or monitoring facilities (e.g., seed sampling, water or environmental testing rooms) that are part of an institution's Central Service (750) system. Also does not include the often unstructured, spontaneous or improvisational creative activities of learning and practice within the performing arts that take place in (scheduled) Class Laboratories (210) or, if not specifically scheduled, (practice) Open Laboratories (220). Such performing arts (and other science and nonscience) activities, which are controlled or structured to the extent that they are intended to produce a specific research or experimental outcome (e.g., a new or advanced technique), are included in the Research/Nonclass Laboratory (250) category.

255 Research/Nonclass Laboratory Service

Definition. A space that directly serves one or more research/nonclass laboratories as an extension of the activities in those spaces.

Description. Includes only those spaces that directly serve a research/nonclass laboratory. Included are projection rooms, telecommunications control booths, coat rooms, preparation rooms, closets, material storage, balance rooms, cold rooms, stock rooms, dark rooms, equipment issue rooms, temporary hazardous materials storage areas, and similar facilities, if they serve research/nonclass laboratories.

Limitations. Does not include service spaces that support a Classrooms (see 115), Class Laboratory (see 215), or Open Laboratory (see 225). Animal Facilities (570), Greenhouse (580), and Central Service (750) facilities are categorized separately.

300 Office Facilities

General. Office facilities are individual, multiperson, or workstation spaces specifically assigned to academic, administrative, and service functions of a college or university. While some institutions may wish to classify all office space as Office (310), others may wish to differentiate academic, administrative, staff, secretarial, clerical, or student assistant offices, etc., by applying additional codes.

310 Office

Definition. A space housing faculty, staff, or students working at one or more desks, tables, or workstations.

Description. An office is typically assigned to one or more persons as a station or work area. It may be equipped with desks, chairs, tables, bookcases, filing cabinets, computer workstations, microcomputers, or other office equipment. Included are faculty, administrative, clerical, graduate and teaching assistant, and student offices.

Limitations. Any other spaces, such as glass shops, printing shops, study rooms, classrooms, research/nonclass laboratories, etc., that incidentally contain desk space for a technician or staff member are classified according to the primary use of the space, rather than as an office. Office areas do not need to have clearly visible physical boundaries; examples include open reception areas and library staff areas that would not otherwise be classified as Processing Rooms (440). In such cases, logical physical boundaries (phantom walls) may be assigned to calculate square footage. An office is differentiated from Office Service (315) by the latter's use as a casual or intermittent workstation or service room. For example, a space with a computer intermittently used by one or more people having a separately assigned office should be coded as Office Service (315). A combination office, studio, or research/nonclass laboratory should be coded according to its primary use if multiple space use codes with prorations are not used. A receptionist room that includes a waiting area should be coded as Office (310).

315 Office Service

Definition. A space that directly serves an office or group of offices as an extension of the activities in those spaces.

Description. Includes file rooms, break rooms, kitchenettes serving office areas, copy and fax rooms, vaults, closets, private rest rooms not available to the public, records rooms, office supply rooms, first aid rooms serving office areas, student counseling rooms and testing (assessment, nonhealth, non-discipline-related) rooms, and open and private (restricted/nonpublic) circulation areas.

Limitations. Waiting, interview, and testing spaces are included as Office Service if they serve a specific office or office area and not a classroom laboratory or clinic. A student counseling (nonhealth) testing room should be coded as Office Service (315). A receptionist room that includes a waiting area should be coded as Office (310). Lounges that serve specific office areas and that are not generally available to the public should be coded as Office Service (315). Centralized mail rooms, shipping or receiving areas, and duplicating or printing shops that serve more than one building (or department or school, etc.) or that are campus-wide in scope should be classified Central Service (750). Does not include Unit Storage (780).

350 Conference Room

Definition. A space serving an office complex and used primarily for staff meetings and departmental activities.

Description. A conference space is typically equipped with tables and chairs. Normally it is used by a specific organizational unit or office area, whereas Meeting Rooms (680) are used for general purposes such as community or campus group meetings not associated with a particular department. If a space is used for both conference and meeting space functions, then the space should be classified according to its principal use. A conference space is distinguished from facilities such as seminar rooms, lecture rooms, and Classrooms (110) because it is used primarily for activities other than scheduled classes. A conference space is intended primarily for formal gatherings, whereas a lounge is intended for relaxation and casual interaction. This category includes teleconference spaces.

Limitations. Does not include classrooms, seminar rooms, lecture rooms (see Classrooms-110), auditoria (see Assembly-610), departmental lounges (see Office Service-315), open lounges (see Lounge-650), and Meeting Rooms (680).

355 Conference Room Service

Definition. A space that directly serves one or more conference spaces as an extension of the activities in those spaces.

Description. Includes kitchenettes, storage spaces, telecommunications control booths, projection rooms, sound equipment rooms, etc., if they serve conference spaces.

Limitations. Excluded are service spaces that support meeting spaces (see Meeting Room Service-685) or offices (see Office Service-315).

400 Study Facilities

General. Study space is classified into five categories: study room, stack, open-stack study room, processing room, and study service. Offices used for library activities are coded as office facilities. A study space may contain equipment or materials that aid the study or learning process (e.g., computers, multimedia carrels, CD and DVD players, typewriters, records and tapes) and that do not restrict the space to a particular academic discipline or discipline group.

Whereas a Study Room (410) may appear in almost any type of building on campus (e.g., academic, residential, student service), Stacks (420), Open-Stack Study Rooms (430), and Processing Rooms (440) are typically located in central, branch, and departmental libraries. Identification of library space should be made through the use of functional categories, and departmental space through the combined use of academic discipline and functional categories.

410 Study Space

Definition. A room or area used by individuals to study at their convenience, the space not being restricted to a particular subject or discipline by contained equipment.

Description. Includes study or reading rooms located in libraries, residential facilities, academic or student service facilities, study carrel and booth areas, and similar spaces that are intended for general study purposes. Study stations may be grouped, as in a library reading room, or individualized, as in a carrel. Study stations may include computers, typewriters, microform readers, CD and DVD players, or other multimedia equipment. The category Study Space includes spaces commonly termed "learning labs" or "computer labs" if they are not restricted to specific disciplines by contained equipment or software. Study spaces are primarily used by students or staff for learning at their convenience, although access may be restricted by a controlling unit (e.g., departmental study room).

Limitations. Does not include Open Laboratories (220) that are restricted to a particular discipline or discipline group. This category also does not include Lounges (650) that are intended for relaxation and casual interaction.

420 Stack

Definition. A space used to house arranged collections of educational materials for use as a study resource.

Description. Stacks typically appear in central, branch, or departmental libraries and are characterized by accessible, arranged, and managed collections. Collections can include books, periodicals, journals, monographs, micromaterials, electronic storage media (e.g., tapes, disks, slides, etc.), musical scores, maps, and other educational materials.

Limitations. Does not include general storage areas for such materials that serve a particular room or area; such spaces would take the appropriate service code. Examples of these service spaces include tape storage rooms for language laboratories (see Open Laboratory Service-225), book storage rooms for classrooms (see Classroom Service-115), and music for general listening enjoyment (see Recreation Service-675). Also does not include collections of educational materials, regardless of form or type (i.e., from books to soils collections), that are for Exhibition (620) use rather than for study or reference.

430 Open-Stack Study Room

Definition. A combination study space and stack, generally without physical boundaries between the stack and study areas.

Description. Seating areas include those types of station and seating arrangements described under Study Room (410). The stack areas of these spaces may include any of the educational material collections described under Stack (420).

Limitations. Does not include Study Rooms (410) that have no stack areas. Those stack areas that have only a few incidental chairs or other seating, without a formally arranged study seating area, should be coded Stack (420). Institutions may wish to separate and code the seating or study areas (see Study Room-410) and Stack areas (see Stack-420) into separate space records. As with Stack (420) and Processing Rooms (440), Open-Stack Study Rooms (430) appear primarily in central, branch, and departmental libraries.

440 Processing Room

Definition. A room or area devoted to processes and operations in support of library functions.

Description. A processing room is intended for specific library operations that support the overall library mission. Included are card and microfiche areas, reference desk and circulation desk areas, bookbinding rooms, multimedia materials processing areas, interlibrary loan processing areas, and other areas with a specific process or operation in support of library functions.

Limitations. Areas that serve both as office stations and processing rooms should be coded according to primary use. Small incidental processing areas in larger stack or study areas should be included within the larger primary activity category (see Codes 410, 420, and 430). Does not include typical support spaces that serve study and other primary activity areas, such as storage rooms, copy rooms, closets, and other service type spaces (see Code 455). Acquisitions work areas with a primary office use should be classified as Office (310).

455 Study Service

Definition. A space that directly serves study spaces, stacks, open-stack study spaces, or processing rooms as a direct extension of the activities in those spaces.

Description. Includes storage spaces, copy rooms, closets, locker rooms, coat rooms, and other typical service areas that support a primary study facilities room (see Codes 410, 420, 430, and 440). With the increasing implementation of wireless technology, service areas are migrating into the primary study space and stacks. Campuses need to adopt a consistent approach to using either predominate use or "phantom walls" to allow for the separation of service space. An example would be space occupied by routers, servers, or battery-charging equipment on the open floor of a library or student center.

Limitations. Does not include Processing Rooms (440) that house specific library support processes and operations (e.g., bookbinding rooms, multimedia processing rooms).

EXHIBIT 3—TEMPLATE FOR PIPELINE SPACE DATA

Entered numbers are placeholders, to illustrate calculations.

ECU "Pipeline" Space expected to be Added to (or Subtracted from) Space Inventory--*Known* New Facilities or Major Renovation Projects and Estimate of Potential Additional Space that is Not Yet Planned as a Project

		School of Dentistry		Mamie Jenkins Renovation		East Campus Other Potential Space--No Actual Project		West Campus Other Potential Space--No Actual Project	
		1st Yr of Svc	Est. NASF	1st Yr of Svc	Est. NASF		Est. NASF		Est. NASF
FICM Code	Space Type	e.g. 2011		e.g. 2012					
110/115	Classroom		20,000		-10,000				
210/215	Class Laboratory		20,000						
220/225	Open Laboratory		20,000						
250/255	Research/Non-Class Laboratory		20,000						
310/315	Offices				-10,000				
350/355	Conference Rooms								
410	Study Rooms (Library or Elsewhere)								
420	Library Stack								
430	Library Open Stack								
440/455	Library Service								
500	Special Use								
600	General Use								
700	Support Facilities								
800	Clinical Facilities		20,000						
900	Residential Facilities								
	Total NASF per Project		100,000		-20,000				
	Total Potential Unplanned Space						Entry		Entry

ECU to fill in cells shaded in blue.

"Project" can be an ADD space (e.g. new bldg)

"Project" can be a CHANGE to space (e.g. renovation)

"Project" can be a DELETE space (e.g. demolition; removal from service)

Some hypothetical entries are shown in RED--as illustrations (not real data)

Add pairs of columns, as needed.

EKA

EXHIBIT 4A—TEMPLATE FOR FTE PERSONNEL COUNTS BY COLLEGE/SCHOOL AND ADMIN DIVISION

Exhibit 4A is for faculty and staff FTEs, Graduate Assistants, and Temporary Student Employees. Two additional templates are provided, as Exhibits 4B for counts of Graduate Assistants and 4C for a method to convert Temporary Student Employees into FTEs.

While offices normally are not "assigned" to Graduate Assistants or Temporary Student Employees, their presence creates a work area demand factor in office areas. So, the counts for them may be thought of as a "gross-up" of the total Office Facilities space requirement in Colleges, Schools, and Administrative Divisions.

FTE Personnel Counts for Space Capacity Analysis, by Campus (& Locations) and College: Fall 2009???										
	Faculty FTEs				"Officed" Staff FTEs					
	FT	PT/Other	FTE		Adminis trative	Profes sional	Technical & Clerical	Graduate Assistants	Temp Student Employees	Total "Officed" Staff
310 Office Space Allowance (ASF per FTE)			120		225	160	90	60	25	
315 Office Support + 350/355 Conference Rooms			50		50	50	50			
I. East Campus (Academic Affairs)										
A. Colleges/Schools										
Arts and Sciences (Harriot)										
Business										
Education										
Fine Arts & Communication										
Art & Design (Sch)										
Music (Sch)										
Theater & Dance (Sch)										
Communication (Sch)										
Health & Human Performance										
Human Ecology										
Social Work (Sch)										
Technology & Computer Science										
Academic Library Services										
Centers & Institutes (not in Colleges)										
B. Personnel by Division ("Officed")										
Office of the Chancellor										
Office of the Provost/Sr. VC for Acad & Stud Affairs										
Office of Vice Provost for Student Affairs										
Office of the VC for Research/Graduate Studies										
Office of the VC for Administration & Finance										
Office of the VC of University Advancement										
Totals--East Campus (Academic Affairs)										
II. West Campus (Health Affairs)										
A. Colleges/Schools										
Allied Health Sciences										
Dentistry										
Medicine (Brody)										
Nursing										
B. Administrative Personnel										
Office of the Vice Chancellor-Health Sciences										
Totals--West Campus (Health Affairs)										

Note: Karen Traynor (HR) edited the lines/rows in Section B in the faculty/staff data table she provided. She referred us to others for the data on Graduate Assistants and Temporary Student Employees.

- Graduate Assistants, Bridget Lojacono, Graduate School
- Temp Student Employees (including work-study), Vickie Ogden, Student Employment Office (Scott Stubbins).

EXHIBIT 4B—TEMPLATE FOR COUNTS OF GRADUATE ASSISTANTS

Graduate Assistant Headcounts for Space Capacity Analysis, by Campus and College or Administrative Division	Number of Graduate Assistants
I. East Campus	
A. Graduate Assistants in Colleges/Schools	
Arts and Sciences (Harriot)	
Business	
Education	
Fine Arts & Communication	
Art & Design (Sch)	
Music (Sch)	
Theater & Dance (Sch)	
Communication (Sch)	
Health and Human Performance	
Human Ecology	
Social Work (Sch)	
Technology & Computer Science	
Academic Library Services	
Centers & Institutes (not in Colleges)	
B. Graduate Assistants in Administrative Divisions	
Chancellor's Division	
Academic Affairs Division	
Student Life Division	
Research/Graduate Studies Division	
Admin & Finance Division	
University Advancement Division	
Foundations Division	
Athletics Division	
Totals--East Campus	
II. West Campus (Health Affairs)	
A. Graduate Assistants in Colleges/Library	
Allied Health Sciences	
Dentistry	
Medicine (Brody)	
Nursing	
B. Health Sciences Library	
C. Health Sciences ECHI Inst.	
B. Graduate Assistants in Administrative Divisions	
Division of Health Sciences	
Totals--West Campus (Health Affairs)	
Grand Totals--All ECU	

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EXHIBIT 4C—BUDGET CALCULATION TO DERIVE FTES OF TEMPORARY STUDENT EMPLOYEES

The entered numbers are only placeholders only, to show formula calculation.

Calculation of FTEs for Temporary Student Employees and Work-Study Students					
		Temporary Student Employees			
		Object Code 60521 Expenditures (was 1450)	# of Hours Worked	FTEs by 2,080 Hours	50% of FTEs
Average Hourly Wage	$10				
		$1,000,000	100,000	48	24
I. East Campus (Academic Affairs)					
A. Colleges/Schools					
Arts and Sciences (Harriot)					
Business					
Education					
Fine Arts & Communication					
Art & Design (Sch)					
Music (Sch)					
Theater & Dance (Sch)					
Communication (Sch)					
Human Ecology					
Social Work (Sch)					
Technology & Computer Science					
Academic Library Services					
Centers & Institutes (not in Colleges)					
B. Personnel by Division ("Officed")					
Office of the Chancellor					
Office of the Provost/Sr. VC for Acad & Stud Affairs					
Office of Vice Provost for Student Affairs					
Office of the VC for Research/Graduate Studies					
Office of the VC for Administration & Finance					
Office of the VC of University Advancement					
Totals--East Campus (Academic Affairs)					
II. West Campus (Health Affairs)					
A. Colleges/Schools					
Allied Health Sciences					
Dentistry					
Medicine (Brody)					
Nursing					
B. Administrative Personnel					
Office of the Vice Chancellor-Health Sciences					
Totals--West Campus (Health Affairs)					
Grand Totals--All ECU "Officed" Staff					
Notes:					
1. Provide 60521 Object Code totals for the units indicated from ALL BUDGETS, i.e., E&G, auxiliaries, and trust funds.					
2. Please replace the hypothetical in B4 with your best estimate of an average hourly wage					

EXHIBIT 5—TEMPLATE FOR LIBRARY COLLECTION COUNTS, PBVE CONVERSION, AND COLLECTION GROWTH ASSUMPTIONS

Some numbers inserted are illustrations only.

Study (Library Collection) Space												
PBVE Counts--Current/Baseline and Projected to 2025												
V.3 on 2/24/10			East Campus--Joyner Library			East Campus--Music Library			West Campus--Laupus Library		
Volume Type	Conversion	Conversion	Current/Baseline		% Annual Growth of Collection Component	Current/Baseline		% Annual Growth of Collection Componen	Current/Baseline		% Annual Growth of Collection Component
			#	PBVE		#	PBVE		#	PBVE	
1. Bound Volumes											
Standard Volume	1.0 : 1	1.00		0			0			0	
Reference	0.67 : 1	1.50		0			0			0	
Law and Medical Science	0.67 : 1	1.50		0			0			0	
2. Documents or Pamphlets (Unbound)	8.0 : 1	0.13		0			0			0	
3. Serial Volumes (Bound and Unbound)	0.4 : 1	2.50		0			0			0	
4. Microfilm, Microfiche											
Microform	5.0 : 1	0.20		0			0			0	
Microfiche	80.0 : 1	0.01		0			0			0	
5. CD-ROM, etc.											
Compact Disks	4.0 : 1	0.25		0			0			0	
Floppy Disks	15.0 : 1	0.07		0			0			0	
Magnetic Tape (VHS Tapes)	1.0 : 1	1.00		0			0			0	
6. A-V Holdings	1.0 : 1	1.00		0			0			0	
7. Slides	40.0 : 1	0.05		0			0			0	
8. Maps	8.0 : 1	0.13		0			0			0	
9. Printed Music	2.0 : 1	0.50		0			0			0	
10. 16mm Film	1.0 : 1	1.00		0			0			0	
11. Models (Anatomical)				0			0			0	
12. Archives and Manuscripts				0			0			0	
TOTAL PBVE			Test #	1,000,000		Test #	1,000,000		Test #	650,000	
NASF Stack Space Required--Current/Baseline and Projected to 2025											
Projected net collection growth (% per year)	___%		East Campus--Joyner Library			East Campus--Music Library			West Campus--Laupus Library		
Total % net growth of collection from 2009 to 2025	___%		NASF Stack Space Required			NASF Stack Space Required			NASF Stack Space Required		
Space Allowance / Required Space	NASF per Volume		Current	2025		Current	2025		Current	2025	
	0.08	Test #s	80,000			80,000			52,000		
Notes:											
1. We will need to estimate average space required for anatomical models at Laupus.											
2. Joyner wants to record "Archives and Manuscripts" as a separate category. Added above.											

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EXHIBIT 6A AND 6B—TEMPLATES FOR SORT OF RESEARCH GRANTS BY COLLEGE/SCHOOL AND DEPARTMENT AND FOR IDENTIFICATION OF RESEARCH LABORATORY VS. NON-RESEARCH LABORATORY SPACE USE—MAIN CAMPUS AND HEALTH SCIENCES CAMPUS

Disaggregation of 110 Purpose Code Research Grant Expenditures--to Support Estimation of Specialized Research Laboratory Space

EAST Campus					Laboratory-Based Research (including Lab-Based Clinical Research)			Non Lab-Based Research			Comments/Notes
					2007	2008	2009	2007	2008	2009	
Grant Name or Identification	Lead Coll/Sch	Lead Dept	Other Coll/Sch	Other Depts							
Totals--Lab-Based & Non Lab-Based					$0	$0	$0	$0	$0	$0	

EKA's request to Paul Gemperline with the above was for Main Campus grant data only. Smith Group is using the following EKA template to request research grant sorting for Health Sciences.

East Carolina University
Disaggregation of 110 Purpose Code Research Grant Expenditures--to Support Estimation of Research Laboratory Space
Revised March 12, 2010 for Health Sciences

WEST Campus					Basic Sciences or OtherPrimarily Laboratory-Based Research			Clinical Research			Other Non Laboratory-Based Research			Comments/Notes (if any)
Grants--Last Three Years and By Which Units Performed					2007	2008	2009	2007	2008	2009	2007	2008	2009	
Grant Name or Identification	Lead Coll/Sch	Lead Dept	Other Coll/Sch	Othr Depts	Enter $ of 110 Expend. Each Year			Enter $ of 110 Expend. Each Year			Enter $ of 110 Expend. Each Year			
Totals--Lab-Based, Clinical, & Non Lab-Based					$0	$0	$0	$0	$0	$0				

Note: It is recognized that the Lab vs. Clinical vs. Other may not be "pure" distinctions. Some research may be mixed. Please enter in the columns based on the PRIMARY nature of the research work and type of space required--Laboratory or Non-Laboratory.

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