### University of Alabama System Board Rule 415 (2/2005) Board Submittal Checklist Criteria

## <u>\* Board Submittal Checklist No. 1</u> <u>Capital Project – Stage I Submittal /1</u> <u>(General Information Package)</u>

Campus:	The University of Alabama
Project Name:	Math and Science Education Building Renovation*
UA Project #:	034-19-2011
Meeting Date:	April 11-12, 2019

1. Completed Board Submittal Checklist No.1

- 2. Transmittal Letter to Chancellor from Campus President requesting the project be placed on the agendas for the forthcoming Physical Properties Committee and Board of Trustees (or Executive Committee) meetings
- 3. Proposed Board Resolution requesting approval of Stage I Submittal by UA Board of Trustees
- 4. Campus correspondence/photos providing supporting project information
- 5. Completed Executive Summary Proposed Capital Project /2
- 6. Completed Supplemental Project Information Worksheet Attachment "K", Board Rule 415
- 7. Campus map(s) showing Project site
- 8. Business Plan

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\*Formerly the Biology Building Renovation project as listed in Tab 1 of the 2018 Annual Consolidated Capital Projects and Facilities Report.

Prepared by: Approved by:

- /1 Reference Tab 3F Board Rule 415 Instructional Guide
- /2 Reference Tab 3E Board Rule 415 Instructional Guide
- \* Basic documents required for this Board Submittal Package. Include other supporting materials, correspondence, etc., as may be required to fully describe or illustrate project being submitted for approval to Physical Properties Committee and Board of Trustees.

### RESOLUTION

### MATH AND SCIENCE EDUCATION BUILDING RENOVATION

WHEREAS, in accordance with Board Rule 415, The University of Alabama ("University") is requesting approval of a Stage I submittal for the Math and Science Education Building (formerly the Biology Building) Renovation project ("Project") located at 411 Hackberry Lane; and

WHEREAS, the Project will revitalize existing underutilized space near the academic core of campus as well as address the current space challenges that the Department of Physics and Astronomy, Geography, Geology and the New College are experiencing as the programs are currently spread out between Gallalee Hall, Farrah Hall and Smith Hall; and

WHEREAS, the Project will replace space for the Math Technology and Learning Center which will be lost as a result of the demolition of the Tutwiler Annex; and

WHEREAS, the Project will consist of renovation of the 90,095 gross square foot main building that will include asbestos abatement, upgraded mechanical, life safety and security systems and improvements to the 5,540 gsf auditorium; and

WHEREAS, the Project location and program have been reviewed and are consistent with the University Campus Master Plan, University Design Standards and the principles contained therein; and

WHEREAS, the Project will be funded from Office of Academic Affairs Reserves in the amount of \$3,000,000 and from 2019 Future General Revenue Bonds in the amount of \$29,500,000 and the Project will address approximately \$13,500,000 in campus deferred maintenance liability; and

WHEREAS, the preliminary budget for the Project is as stipulated below:

BUDGET:	P	RELIMINARY
Package A – Early Demolition	\$	642,253
Package B – Building Construction	\$	23,077,925
Landscaping	\$	200,000
Furniture, Fixtures and Equipment	\$	2,457,553
Security/Access Control	\$	250,000

Telecommunication/Data	\$ 619,036
Contingency* (10%)	\$ 2,392,018
UA Project Management Fee** (3%)	\$ 789,366
Architect/Engineering Fee – Programming	\$ 112,700
Architect/Engineer Fee*** (6.75%)	\$ 1,601,112
Commissioning	\$ 90,000
Expenses (Geotech, Construction Materials Testing and	\$ 100,000
Special Inspections)	
Other Fees and Services (Testing, Advertising, Printing)	\$ 168,037
TOTAL PROJECT COST	\$ 32,500,000

\*Contingency is based on 10% of the costs of construction and landscaping.

\*\*UA Project Management Fee is based on 3% of the costs of construction, landscaping and contingency.

\*\*\*Architect/Engineer Fee is based on 5.4% of the costs of construction plus a 25% renovation factor.

WHEREAS, officials at The University of Alabama have determined that the Board will incur certain costs in connection with the acquisition, construction and installation of the Project prior to the issuance of the Bonds, and the Board intends to allocate a portion of the proceeds of the Bonds to reimburse the Board for certain of the costs incurred in connection with the acquisition, construction and installation of the Project paid prior to the issuance of the Bonds; and

NOW, THEREFORE, BE IT RESOLVED by The Board of Trustees of The University of Alabama that The University of Alabama does hereby declare that it intends to allocate a portion of the proceeds of the Bonds to reimburse the Board for expenses incurred after the date that is no more than sixty days prior to the date of the adoption of this resolution, but prior to the issuance of the Bonds in connection with the acquisition, construction, and installment of the Project. This portion of this resolution is being adopted pursuant to the requirements of Treasury regulations Section 1.150-2(e)

### NOW, BE IT FURTHER RESOLVED that:

- 1. The Stage I submittal package for the Project is hereby approved.
- 2. The preliminary budget for the Project as stipulated above is hereby approved.



Division of Finance and Operations Vice President

# MEMO

March 8, 2019

То:	Stuart R. Bell
From:	Matthew M. Fajack
Subject:	Board Item – Action: Stage I submittal:
	Math and Science Education Building Renovation
	UA Project #034-19-2011

Pursuant to Board Rule 415, The University of Alabama ("University") is requesting approval from The Board of Trustees of The University of Alabama ("Board") of a Stage I submittal for the Math and Science Education Building (Biology Building) Renovation project ("Project") located at 411 Hackberry Lane, with a total projected budget amount of \$32,500,000.

The Biology Building was constructed in 1971 and Biological Sciences resided there for 38 years. In 2009, the Biological Sciences Departmental main offices, teaching laboratories, and most of the faculty residing in the building relocated to the new Science and Engineering building (SEC) located across the street.

The proposed Project will consist of renovation of the 90,095 gross square foot (gsf) main building as well as improvements to the adjacent 5,540 gsf auditorium. Renovation of the main building will consist of new roofing, asbestos abatement and upgraded mechanical, life safety and security systems-a comprehensive renovation. All windows will be replaced, and the openings reworked to be more consistent with campus architecture. The programming will provide classroom space and graduate assistant offices, individual study areas, student work areas and other support areas. Additionally, the Project will revitalize existing underutilized space near the academic core of campus by repurposing space for the relocation of the Math Technology Learning Center (MTLC) currently located in the Annex of Tutwiler Residence Hall, that will be demolished for the New Tutwiler Residence Hall.

Improvements to the auditorium will include new roofing, upgraded mechanical systems, restroom upgrades and exterior improvements, as well as the addition of two canopies at

WHERE LEGENDS ARE MADE

Math and Science Education Building Renovation March 8, 2019 Page 2

the secondary egress points to help address water intrusion issues at the two lower level stair access points.

The Project will be funded from Office of Academic Affairs Reserves in the amount of \$3,000,000 and from 2019 Future General Revenue Bonds in the amount of \$29,500,000 for a total Project budget of \$32,500,000. The Project will address approximately \$13,500,000 in deferred maintenance liabilities

This Project location and program have been reviewed and are consistent with the Campus Master Plan, University Design Standards, and the principles contained therein. I have attached a Resolution, Executive Summary, Attachment K, Project Summary, and Location map for your review. Subject to your approval, I recommend this item be forwarded to the Chancellor for inclusion as an Action Item on the agenda of the Physical Properties Committee at the Board of Trustees meeting scheduled for April 11 – 12, 2019.

MMF/ccj

pc w/atchmts: Michael Rodgers Michael Lanier Tim Leopard Sommer Coleman Tony Smith

### EXECUTIVE SUMMARY PROPOSED CAPITAL PROJECT

	<b>BOARD OF TRUSTEES SUE</b>	3MITTAL			
Me	eeting Date: April 11 –	12, 2019			
CAMPUS:	The University of Alabama, Tuscal	oosa, Alabama			
PROJECT NAME:	Math and Science Education Buil	ding Renovation (formerly ]	Biology	Building)	
PROJECT LOCATION:	300 Hackberry Lane				
ARCHITECT:	To be determined				
THIS SUBMITTAL:	F	PREVIOUS APPROVALS:			
🔀 Stage I					
Stage II	_				
	_				
	_				
Stage IV					
PROJECT TYPE	SPACE CATEGOR	IES PERCENTAGE		GSF	
Building Construction	Classroom Facilities	39%		41,224	
Building Renovation	Classroom Laborate	ory 16%		9,780	
Building Addition	Offices	4%		4,114	
Equipment	Common Space/Cir	culation 22%		22,041	
	Building Support	13%		12,936	
	Auditorium	6%		5,540	
	TOTAL	100%		95,635	
BUDGET			Pr	eliminary	
Package A – Early Demolition			\$	642,253	
Package B – Renovation			\$	23,077,925	
Landscaping			\$	200,000	
Furniture, Fixtures and Equipm	nent		\$	2,457,553	
Security/Access Control			\$	250,000	
Telecommunication/Data			\$	619,036	
Contingency* (10%)			\$	2,392,018	
UA Project Management Fee**	(3%)		\$	789,366	
Architect/Engineer Fees - Progr	ramming		\$	112,700	
Architect/Engineer Fee*** (6.75	%)		\$	1,601,112	
Commissioning			\$	90,000	
Expenses (Geotech, Constructio	n materials Testing and Special Inspec	ctions)	\$	100,000	
Other Fees and Services (Testing, Advertising, Printing)\$168,037					

\*Contingency is based on 10% of the costs of construction and landscaping.

TOTAL PROJECT COST

\*\*UA Project Management Fee is based on 3% of the costs of construction, landscaping and contingency.

\*\*\*Architect/Engineer Fee is based on 5.4% of the costs of construction plus a 25% renovation factor.

EXECUTIVE SUMMARY— Math and Science Education Building Renovation

32,500,000

\$

ESTIMATED ANNUAL OPERATING AND MAINTENANCE (O&M) COSTS:	
(Utilities, Housekeeping, Maintenance, Insurance, Other)	
95,635 gsf x \$6.89/gsf	\$ 625,089*
TOTAL ESTIMATED ANNUAL O&M COSTS:	\$ 625,089*
FUNDING SOURCE:	
Capital Outlay:	
Office of Academic Affairs Reserves	\$ 3,000,000
2019 Future General Revenue Bonds	\$ 29,500,000
O&M Costs:	\$ N/A*

\* The Biology Building is an existing Educational and General facility and, as such, ongoing O&M costs are already included in the annual operating budget. The cost above reflects the incremental increase for more intense energy utilization in the renovated space.

#### NEW EQUIPMENT REQUIRED:

#### **RELATIONSHIP & ENHANCEMENT OF CAMPUS PROGRAMS:**

The Math and Science Education Building Renovation project ("Project") will address space-bound situations in the sciences departments, such as Physics and Astronomy, Geography, and others. Enrollment growth has forced the department of Physics to reduce the amount of laboratory time in its Introductory Physics courses by more than half. Even with the reduction in lab time they are nearly at saturation level with no room for class/lab expansion without decreasing the amount of faculty/graduate student office space. Physics and Astronomy and Geography have little or no room for growth in faculty offices or research space.

An experiential learning coordination and collaboration space comprised of seminar rooms, classroom, and "maker space" on the 1st floor will be used by the students, advisors, and directors associated with The University of Alabama's ("University") experiential learning programs including undergraduate research, service learning, study abroad programs, and internship programs. In addition, the eTech group will remain on the 1st floor, since they provide technical hardware and software support for the teaching technologies used in the teaching labs on all four floors of the proposed renovated building.

Relocating the Mathematics Technology Learning Center (MTLC) is necessitated by the demolition of Tutwiler, where it is currently located. The MTLC serves 10,000 students per week, nearly 1/3 of the undergraduate student body; such a large number of students cannot be accommodated by existing classroom and computer lab facilities outside the MTLC. The proposed project will allow a relocated MTLC to continue to deliver superior computer-lab-based pedagogy to the 10,000 students per week currently enrolled, as well as allow the MTLC enrollment to grow through increased capacity and through the expansion of the use of the MTLC computer labs in additional courses (Calculus, Linear Algebra, and Differential Equations). The expansion of the use of computer labs in these additional courses will greatly improve their pedagogy. The benefit of the MTLC's computer-based approach is shown in the histogram below, which compares the student passing fraction in MATH 100 when taught in the traditional lecture-based format (in 1999) to the greatly improved passing rate after MATH 100 was taught in the MTLC, starting in 2000. The passing fraction in the traditional lecture-based MTLC mode, the passing fraction has risen to 50-80%.

ATTACHMENT NO. 1 Project: Math and Science Education Building Renovation BOT Submittal: Stage I Meeting Date: April 11 - 12, 2019

## **Project Summary**

### MATH AND SCIENCE EDUCATION BUILDING RENOVATION

The Biology Building was constructed in 1971, and Biological Sciences resided there for 38 years until, in 2009, the Biological Sciences Departmental main offices and teaching laboratories, along with the majority of the building's faculty, relocated across the street to the new Science and Engineering building (SEC). This project proposes to renovate the building for other academic uses as follows.

The proposed Math and Science Education Building Renovation project ("Project"), located at 411 Hackberry Lane, will involve the renovation of the 90,095 gross square foot (gsf) main building as well as improvements to the adjacent 5,540 gsf Auditorium. The renovation of the main building will include asbestos abatement, interior demolition, upgraded mechanical, life safety and security systems, new elevators, and new classroom AV and network infrastructure. Limited work will be performed on the exterior of the building, which will include the replacement of all windows and reworking the openings to be more consistent with campus architecture, roofing and the demolition of the greenhouse. The building is connected to the Central Thermal Energy System.

The Project will accommodate necessary space to support the relocation of the Math Technology Learning Center (MLTC) along with introductory laboratories for the currently space-bound Departments of Physics and Astronomy, Geography, Geology, and New College.

Specifically, the proposed Project will revitalize existing space in the academic core of campus by repurposing the 3<sup>rd</sup> and 4<sup>th</sup> floor to support the relocation of the MTLC that is currently located in the Annex of Tutwiler Residence Hall, which is scheduled for demolition in 2020 as part of the New Tutwiler Residence Hall project. The existing MTLC is fully utilized with teaching and testing being conducted in the same location and currently they are not able to accommodate tutoring and classes during testing periods. The course work in the MTLC is conducted using the Emporium pedagogy, and this Project will support additional courses being offered in this format, which has proven to be effective for both learning and cost. By utilizing two floors, it will provide individual spaces where both teaching and testing can occur at the same time. The geometry of the building is ideally suited for the MTLC as the radial layout allows the instructors and proctors to be centrally located and provides optimal fields of view and sightlines.

The Project will also assist The University of Alabama ("University") with addressing the current space challenges that the Departments of Physics and Astronomy, Geography, Geology, and New College are experiencing. These programs are currently spread out between Gallelee Hall, Farrah Hall and Smith Hall and this Project will consolidate these programs on the 1<sup>st</sup> and 2<sup>nd</sup> floor of the renovated facility, which will ultimately free up over 11,000 square feet of space for other program needs. The renovated facility will also support introductory labs with goals to create more elevated learning environments. New spaces allocated for the Physics Department will accommodate the "studio" format, which integrates lectures and labs for a more efficient and valuable academic experience. Additionally, the Geography Department will improve its pedagogy by adding sinks in their new labs for the first time. Special consideration has been given to the flexibility of these spaces to allow for other programs within the University to utilize them upon availability.

The building will be purposefully designed to facilitate student flow due the projected high volume of students that will be coming through the building at class changes. This will be achieved by providing wide corridors, queuing areas, multiple access points to the building from adjacent major corridors in the area, adequate wayfinding, and stair modifications to allow for free flow while still maintaining fire code requirements.

This project will eliminate approximately \$13,500,000 in campus deferred maintenance liabilities. The building is ideal for adaptive reuse given adequate floor to floor heights and the existing heavy structural frame and envelope. Adaptive reuse over new construction will yield the University significant savings over new construction.

### Attachment K to Board Rule 415

### Supplemental Project Information Worksheet Annual Capital Development Plan

### FY: 2019 - 2020

Project Name/Category:	Math and Science Education Building
	300 Hackberry Lane
Campus:	The University of Alabama

### 1. Will this Project increase the current space inventory on campus or replace existing space?

increase space inventory	% increase		GSF
replace space inventory	% replacement		GSF
$\bigotimes$ renovation of existing space only		95,635	GSF

## 2. If this Project will replace existing space inventory, how will vacated space be utilized or assigned after this Project is completed?

### Comments:

The Math and Science Education Building project ("Project"), formerly the Biology Building, will entail the relocation of the Departments of Physics and Astronomy, Geography Introductory teaching labs, and the Department of Geology that will result in approximately 11,450 square feet (sf) of vacated space in Gallalee, Farrah, and Smith Halls to be used by other programs for classrooms, as well as for the gradual future growth in faculty offices and research labs.

Vacated Space Location	Square Feet	Occupancy	Proposed Future Use
Farrah Hall	4,256	151	Classrooms and Faculty/Staff Offices
Gallalee Hall	4,335	204	Classrooms
Smith Hall	2,858	100	Classrooms
Tutwiler Hall	17,273	464	Space to be demolished

The Project also includes the relocation of the Mathematics Technology Learning Center (MTLC), currently located in Tutwiler Hall. The 17,273 square feet (sf) of space currently occupied by the MTLC is scheduled for demolition and therefore is not included in the above calculation of vacated space.

## 3. Is the proposed Project location consistent with the Campus Master Plan and University Design Standards and the principles contained therein?

Yes Yes

No, A Campus Master Plan Amendment Is Required

If Campus Master Plan amendment required, explain:

The campus master plan indicates a building at this location. Renovation versus new construction is proposed due to the substantial cost savings. The existing building structure has high floor to

floors and a heavy structure conducive to adaptive reuse.

4. Provide information on classification of new space provided by this Project and latest utilization data on similar type space on campus.

	Proposed New Space/Facilities				
	Classification	Number (Spaces/Rooms)	<b>Capacity</b> (Persons)	Area (GSF)	Existing Space Utilization Data (See Notations)
100	Classroom Facilities				
	110 Classroom	3	142	3,654	
200	Laboratory Facilities				
	210 Class Laboratory	15	1,273	39,953	
	215 Class Laboratory Service	8		1,093	
	220 Open Laboratory	1	12	584	
300	Office Facilities				
	310 Office	12	23	2,363	
	350 Conference Room	2	28	668	
400	Study Facilities				
500	Special Use Facilities				
600	General Use Facilities				
	610 Assembly	4	230	2,957	
	650 Lounge	2	30	846	
	680 Meeting Room	3	45	1,104	
700	Support Facilities				
	710 Central Computer or Telecommunications	4	12	1,833	
	715 Central Computer or Telecommunications Service	3		381	
	750 Central Service	9		4,733	
800	Health Care Facilities				
900	Residential Facilities				
000	Unclassified Facilities				

### **Comments/Notations:**

The Project is not providing new space for the math lab as it is replacing space which will be lost from the demolition of the Tutwiler Annex. The Math lab and the introductory science labs serve 10-25 times more students each semester than the number of majors in these departments. Math competency is an essential requirement of the University's Core Curriculum. Introductory Physics courses are required of Engineering students and pre-med students. Introductory Geography and Geology courses are popular electives in the Natural Sciences component of the Core Curriculum. All of these factors cause the service enrollment in Math and introductory science courses to be vastly larger than the number of majors in these departments.

Currently, normal class and tutoring activities are suspended during semester testing periods due to the lack of space to accommodate both proctored testing and classes. There will be adequate space in the renovated facility to alleviate this issue.

Data reported on latest fiscal year data available. Utilization factor based on Scheduled Operating Hours at each Campus – outlined below in notations.

## 5. How will this Project enhance existing/new programs and undergraduate/graduate enrollments?

Estimated new Funds from Tuition/Programs

### Comments:

Being underprepared in math poses obstacles to retention and overall student success as measured by degree completion (Hodara, 2013; U.S. Department of Education, 2012). This is especially evident for students transferring from 2-year colleges and for students matriculating into 4-year institutions who desire to pursue STEM degree programs that require advanced college-level math (Bailey et al., 2010; CAPSEE, 2013; Gleason, 2010). Courses designed in the format of the MTLC design improve student retention by decreasing failure/withdrawal rates in math courses and increasing course-completion rates when students were provided academic support services in a MTLC-design format (Twigg, 2005).

\$ 160,100 Yr.

Relocating the MTLC is necessitated by the demolition of Tutwiler, where it is currently located.

The MTLC serves 10,000 students per week, nearly 1/3 of the undergraduate student body; such a large number of students cannot be accommodated by existing classroom and computer lab facilities outside the MTLC. The proposed Project will allow a relocated Mathematics Technology Learning Center to continue to deliver superior computer-lab-based pedagogy to the 10,000 students per week currently enrolled, as well as allow the MTLC enrollment to grow through increased capacity and through the expansion of the use of the MTLC computer labs in additional courses (Calculus, Linear Algebra, and Differential Equations). The expansion of the use of computer labs in these additional courses will greatly improve their pedagogy. The benefit of the MTLC's computer-based approach is shown in the histogram below, which compares the student passing fraction in MATH 100 when taught in the traditional lecture-based format (in 1999) to the greatly improved passing rate after MATH 100 was taught in the MTLC, starting in 2000. The

passing fraction in the traditional lecture-based classes was roughly 40%, while in the computerbased MTLC mode, the passing fraction has risen to 50-80%.



The Departments of Physics and Astronomy and Geography are currently space-bound in Gallalee and Farrah Halls. Enrollment growth has forced the department of Physics to reduce the amount of laboratory time in its Introductory Physics courses by more than half. Even with the reduction in lab time they are nearly at saturation level with no room for class/lab expansion without decreasing the amount of faculty/graduate student office space. Physics and Astronomy and Geography have little or no room for growth in faculty offices or research space.

An experiential learning coordination space comprised of seminar rooms, classroom, and "maker space" on the 1st floor will be used by the students, advisors, and directors associated with The University of Alabama's ("University") experiential learning programs including undergraduate research, service learning, study abroad programs, and internship programs. In addition, the eTech group will remain on the 1st floor, since they provide technical hardware and software support for the teaching technologies used in the teaching labs on all four floors of the proposed renovated building.

6. Has a facility user group been established to provide input for planning, programming, and design purposes? Xes In-Progress

If yes, list key members of user group:

Math Lab:

David Cruz-Uribe, Head of Mathematics James Gleason, Mathematics Education Nathaniel Jackson, Director of Mathematics Camille Steiner, Mathematics Instructor Dr. Robert Olin, Dean, College of Arts and Sciences Raymond White, Senior Associate Dean, College of Arts and Sciences

Introductory Science Labs:

Dr. Robert Olin, Dean, College of Arts and Sciences Raymond White, III, Associate Dean, Physics and Astronomy Fred Andrus, Chair of Geological Sciences Dr. Julia Cherry, Professor, New College and Biological Sciences Patrick LeClair, Chair of Physics and Astronomy Douglas Sherman, Chair of Geography

7.	Source(s)	of funding fo	or Total P	Project De	velopment	Costs.
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Source(s)	New Funds (FY 2019-2020)	Reserves	Status /7
Tuition			
Student Fees			
Investment Income			
Auxiliary Income			
• External			
• Internal			
Education Sales/Services			
• External			
• Internal			
Direct Grants			
Gifts			
Bonds	29,500,000		Pending
Existing Net Assets			
Other – OAA Reserves	3,000,000		Pending
Totals	32,500,000		Pending

/7 Approved, allocated, pending

### Comments:

This Project will be funded from 2019 Future General Revenue Bonds in the amount of \$29,500,000 and Office of Academic Affairs Reserves in the amount of \$3,000,000 for a total Project budget of \$32,500,00.

Operations and Maintenance (O&M) Annual Costs Projections				
Expense	FY 2018 Base Data /8	First Full /YR Occupancy FY 2020	Successive Five (5) Year Projections /9	
Maintenance				
Elevator Service				
Building Repairs				
Building Services				
Electric, Natural Gas, Steam				
Chilled Water				
Water and Sewer				
Insurance				
Safety Support				
Operations Staff Support Funding				
Other				
Totals	N/A	N/A	N/A	

Estimate of operations and maintenance (O&M) costs for the initial occupancy year and projections for succeeding five (5) year period.

/8 Latest Fiscal Year Data used as Base Year for Projections

/9 Combined Costs for next Five (5) Years of Occupancy

### Comments:

8.

The Biology Building is an existing Educational and General facility and, as such, O&M costs are already funded from the University's annual operating budget. There is no incremental increase in O & M cost anticipated with this Project.

Source(s)	<b>Occupancy Yr.</b> /9 (FY 2020)	Future Years /10	Status /7
Tuition			
Student Fees			
Investment Income			
Auxiliary Income			
• External			
• Internal			
Educational Sales & Services			
• External			
• Internal			
Direct Grant(s)			
Reallocated Funds /11			
Gifts			
Other			
Total/YR	N/A	N/A	N/A

9. Source of funds for projected ongoing operations and maintenance (O&M) costs for this project.

/9 Initial Full Yr of Occupancy

/10 Next Five (5) Yrs Occupancy

/11 Funds Reallocated from other sources

/7 Approved, allocated, pending

### Comments:

The Biology Building is an existing Educational and General facility and, as such, O&M costs are already funded. Ongoing O&M costs are funded from the University's annual operating budget.

## 10. Are development expenditures for this Project being used to reduce the current deferred maintenance/facilities renewal liabilities for the Campus?

### **\$ 13,500,000** ~42 % of Total Development Costs

### Comments:

This Project will address current deferred maintenance liabilities. The items being addressed are: HVAC system replacement, roofing, windows, fire protection, electrical re-work in rooms, light replacement, replace plumbing fixtures, finishes replacement and abatement.

## 11. What other development alternatives were considered in the planning process for this Project? /13

### Comments:

Other development alternatives considered included utilization of space in other buildings; however, space in the existing Biology Building is the most suitable in order to meet the programs' objectives and needs as this Project will utilize vacated space in an existing building and will consolidate multiple programs within the core of campus. This Project, and its outcome, has been determined to be the most practical and cost-effective option.

Construction of a new building to relocate the Mathematics Technology Learning Center (MTLC) was considered. Relocating the MTLC is necessitated by the demolition of Tutwiler, where it is currently located. The MTLC serves 10,000 students per week, nearly 1/3 of the undergraduate student body; such a large number of students cannot be accommodated by existing classroom and computer lab facilities outside the MTLC. Several new building sizes were investigated: 1) a new building to house just the MTLC; 2) a new building to house the MTLC and the Mathematics Department; and 3) a new building to house the MTLC and introductory science lab classes for several science departments (Physics & Astronomy, Geology, Geography, Chemistry).

After investigating several options involving new construction, it was decided that renovating an existing underutilized building (the Biology building) would save approximately \$15,000,000 in construction costs.

/13 Renovation vs. new construction, adaptive reuse of underutilized buildings, etc.

## 12. Explain how the project will promote adequacy of campus facilities in relation to the University's Mission and scope of programs and/or services:

### Comments:

This Project is essential to help support the service load of the Math department in support of majors from other Colleges. The Math lab and the introductory science labs serve 10-25 times more students each semester than the number of majors in these departments. Math competency is an essential requirement of the University's Core Curriculum. Introductory Physics courses are required of Engineering students and pre-med students. Introductory Geography and Geology courses are popular electives in the Natural Sciences component of the Core Curriculum. All of these factors cause the service enrollment in Math and introductory science courses to be vastly larger than the number of majors in these departments.

The proposed Project will allow a relocated Mathematics Technology Learning Center to continue to serve the 10,000 students per week currently enrolled, as well as allow the MTLC enrollment to grow through increased capacity and through the expansion of the use of the MTLC computer labs in additional courses (Calculus, Linear Algebra, and Differential Equations). The expansion of the use of computer labs in these additional courses will greatly improve their pedagogy.

The proposed Project will improve the pedagogy of introductory Physics labs by allowing a much larger fraction of sections to be offered in the "studio" format, as well as improve the pedagogy of introductory Geography labs, by allowing them to use "wet labs" for the first time. Moving the Introductory science labs for Physics, Astronomy, Geography, and Geology to a renovated Biology building will also allow these programs to grow their enrollments through increased enrollment capacity and increased course offerings (given the new availability of "wet labs" in Geography, for example). This move would allow 11,450 square feet of space in Gallalee, Farrah, and Smith Halls to be used as classrooms by other programs. A subset of this vacated space will also allow for the gradual growth of faculty in departments housed in Farrah and Gallalee Halls.

### 13. How does the project correlate to the University's strategic goals?

### Comments:

The proposed renovation of the Biology building addresses Goal #1 of the Strategic Plan: "Provide a premier undergraduate and graduate education that offers a global perspective and is characterized by outstanding teaching, high-quality scholarship and distinctive curricular and cocurricular programs."

More specifically, the proposed renovation addresses multiple objectives of Goal #1:

• "Develop a comprehensive enrollment management plan that serves as a foundation for quality undergraduate education."

- "Provide support services that ensure a premier academic experience for all our students."
- "Promote an educational environment that values contributions from all levels of teaching faculty."

## 14. What would be the immediate impact on campus programs and enrollment if this project is not approved?

### Comments:

The most dramatic impact involves the Mathematics Technology Learning Center (MLTC), currently housed in Tutwiler Hall, which is scheduled for demolition. The MTLC serves over 10,000 students per week, or 1/3 of the total undergraduate population. If the MTLC is not relocated to the Math and Science Building an alternate space to serve the 10,000 students per week.

In addition, if the Introductory science lab courses cannot move to the Math and Science building, Physics will have to address increasing enrollments by decreasing the number of faculty/graduate offices in Gallalee to expand teaching labs.

## LOCATION MAP

