



Office of the Chief Financial Officer and Treasurer

December 22, 2022

The Honorable Eric J. Holcomb  
Governor of the State of Indiana  
Statehouse  
Indianapolis, IN 46204

Dear Governor Holcomb:

At its meeting on December 2, 2022, the Purdue University Board of Trustees approved the planning, financing, construction and award of construction contracts for the Mechanical Engineering Building Renovation on the West Lafayette campus.

This project will renovate approximately 41,000 GSF of existing space on multiple floors of the building. New collaboration space will be added on the ground and first floors, and improved instructional labs and classrooms will be relocated nearby.

This project builds upon the College of Engineering master plan to accommodate enrollment growth through the renovation of multiple facilities over time. The renovation is in alignment with University space administration strategies, and it will result in increased space efficiency and flexibility while accommodating more students per assigned square foot (ASF) within the existing building footprint.

The estimated total project cost is \$25,000,000 and is funded by Gift Funds.

Subject to review by the Commission for Higher Education and recommendation by the State Budget Committee and the Budget Agency, we request your approval to proceed with this project. Attached are the completed forms that the Commission has prescribed for its review of such projects. We will be happy to answer any questions you or your staff may have or to provide any additional information that is needed.

Sincerely,

A handwritten signature in black ink, appearing to read 'Eva Nodine', written in a cursive style.

Eva Nodine  
Vice President and Deputy Chief Financial Officer

Attachments

c: Seth Hinshaw, Chief Financial Officer, Indiana Commission for Higher Education  
Zachary Jackson, Director, Indiana State Budget Agency  
Jasmine Williams, Assistant Director, Indiana State Budget  
Kathleen Thomason, Comptroller, Purdue University  
Anne Hazlett, Senior Director, Government Relations, Purdue University

**PROJECT COST SUMMARY**  
**Mechanical Engineering Building Renovation**

<b>Institution:</b>	Purdue University	<b>Budget Agency Project No.:</b>	B-1-23-2-14
<b>Campus:</b>	West Lafayette	<b>Institutional Priority:</b>	N/A
<b>Previously approved by General Assembly:</b>	No	<b>Previously recommended by CHE:</b>	No
<b>Part of the Institution's Long-term Capital Plan:</b>	Yes		

<b>Project Size:</b>	41,000 GSF (1)	21,562 ASF (2)	0.53 ASF/GSF
<b>Net change in overall campus space:</b>	0 GSF	-3,113 ASF	

<b>Total cost of the project (3):</b>	\$ 25,000,000	<b>Cost per ASF/GSF:</b>	\$ 609.76 GSF
<b>Total cost of the demolition:</b>	\$ -		\$ 1,159.45 ASF
<b>Funding Source(s) for project (4):</b>	Amount	Type	
	\$ 25,000,000	Gift Funds	
<b>Estimated annual debt payment (6):</b>	\$0		
<b>Are all funds for the project secured:</b>	No		

**Project Funding:**  
The renovation is being fully funded by Gift Funds.

**Project Cost Justification**  
This project's scope and cost are described more in the Capital Project Details section.

<b>Estimated annual change in cost of building operations based on the project:</b>	\$ (39,881)
<b>Estimated annual repair and rehabilitation investment (5):</b>	\$ 375,000

(1) Gross Square Feet (GSF)- Sum of all area within the exterior envelope of the structure.  
(2) Assignable Square Feet (ASF)- Amount of space that can be used by people or programs within the interior walls of a structure. Assignable square feet is the sum of the 10 major assignable space use categories: classrooms, laboratories, offices, study facilities, special use facilities, general use facilities, support facilities, health care facilities, residential facilities and unclassified facilities. For information on assignable space use categories, see Space-Room Codes tab.  
(3) Projects should include all costs associated with the project (structure, A&E, infrastructure, consulting, FF&E, etc.)  
(4) Be consistent in the naming of funds to be used for projects. If bonding, note Bonding Authority Year (1965, 1929, 1927, etc.)  
(5) Estimate the amount of funding the institution would need to set aside annually to address R&R needs for the project. CHE suggests 1.5% of total construction cost  
(6) If issuing debt, determine annual payment based on 20 years at 4.75% interest rate  
- If project is a lease-purchase or lease, adjust accordingly. Note the total cost of the lease in the project cost, and annual payments in project description

**PROJECT DETAILED DESCRIPTION - ADDITIONAL INFORMATION**  
**Mechanical Engineering Building Renovation**

<b>Institution:</b>	Purdue University	<b>Budget Agency Project No.:</b>	B-1-23-2-14
<b>Campus:</b>	West Lafayette	<b>Institutional Priority:</b>	N/A

**Description of Project**

This project will renovate approximately 41,000 GSF total on the ground, first, second and third floors in the Mechanical Engineering Building on the West Lafayette campus. Improved instructional spaces inclusive of labs and classrooms will be relocated to the ground and first floors with new collaboration space nearby. A new elevator will be installed to increase access, and a new stairway will connect the Mechanical Engineering Building to the Gatewood addition. Mechanical, electrical and plumbing systems will be upgraded.

More than 3,500 ASF of faculty, staff and graduate student office space will be eliminated through relocation of some staff to other buildings within the College of Engineering footprint and the application of Purdue's "Future of Work" office space guidelines to remaining office space. The number of individual offices is being reduced, and open office concepts will be utilized instead – allowing the addition of new class lab and student study space in the building.

**Need and Purpose of the Program**

A number of existing research labs will be moved out of the building, allowing new collaboration space and improved classrooms and labs. This project builds upon the College of Engineering master plan to accommodate enrollment growth through the renovation of multiple facilities over time. The renovation is in alignment with University space administration strategies, and it will result in increased space efficiency and flexibility while accommodating more students per assigned square foot (ASF) within the existing building footprint.

Individual spaces have had minor renovations through the years, but the east wing of the building where renovations will occur was built in various phases in the 1920s-1940s. Classrooms will be moved to the lower floors to help support current teaching and learning styles. Renovations will also provide increased access to the Gatewood addition and add grad student offices.

The most recent mechanical, electrical and plumbing (MEP) update was the replacement of a small air handler unit in 2009. The rest of the units are over 20 years old and nearing the end of their expected lives. The improved systems will serve the areas being renovated and some adjacent classrooms, labs and offices.

**Space Utilization**

The project is composed of the following space types in order of largest ASF to smallest: Class lab, classroom, office and study space. Some of the building's existing ASF will be repurposed, resulting in net campus gains of class lab and study space; the project also results in net campus reductions of research, office, classroom and support space.

As part of the proposed renovations, some existing assignable space will be converted to new non-assignable spaces, including public restrooms, public circulation such as a new elevator, and building equipment space, thereby resulting in a net loss of 3,113 assignable SF.

**Comparable Projects**

Max W & Maileen Brown Family Hall Renovation, 2022

- \* \$14,573,000
- \* 32,000 GSF
- \* \$455/GSF

\* This project will renovate or create several instructional labs, lab support spaces, computational research labs, classrooms offices and a collaboration area.

Although being approved within a short time of each other and having relatively similar scopes, this project's cost per square foot is higher than the comparable due to the following scope items contributing to the cost but not the overall project square footage:

- \* Addition of an elevator; glass windows and storefront are being added to some areas on the ground floor; and mechanical work will be completed that supplies rooms not being renovated.

**Background Materials**

**CAPITAL PROJECT REQUEST FORM**  
**INDIANA PUBLIC POSTSECONDARY EDUCATION**  
**INSTITUTION CAMPUS SPACE DETAILS FOR Mechanical Engineering Building Renovation**

(INSERT PROJECT TITLE AND SBA No.)	Current Campus Totals			Subtotal Current and Future Space	Capital Request		Net Future Space
	Current Space in Use	Space Under Construction (1)	Space Planned and Funded (1)		Space to be Terminated (1)	New Space in Capital Request (2)	
<b>A. OVERALL SPACE IN ASF</b>							
Classroom (110 & 115)	336,764	-	(2,532)	334,232	(226)		334,006
Class Lab (210,215,220,225,230,235)	832,343	4,425	(20,888)	815,879		3,125	819,004
Non-class Lab (250 & 255)	1,639,592	33,985	26,438	1,700,015	(3,581)		1,696,434
Office Facilities (300)	2,365,783	(7,138)	(36,354)	2,322,291	(3,546)		2,318,745
Study Facilities (400)	395,282	8,166	47,729	451,177		1,197	452,374
Special Use Facilities (500)	1,219,827	-	12,399	1,232,226			1,232,226
General Use Facilities (600)	1,016,703	3,135	(28,660)	991,178			991,178
Support Facilities (700)	2,920,430	(726)	(536)	2,919,168	(82)		2,919,086
Health Care Facilities (800)	217,475	-	-	217,475			217,475
Resident Facilities (900)	2,774,611	-	-	2,774,611			2,774,611
Unclassified (000)	15,134	-	-	15,134			15,134
<b>B. OTHER FACILITIES</b>							
(Please list major categories)							
<b>TOTAL SPACE</b>	<b>13,733,943</b>	<b>41,847</b>	<b>(2,404)</b>	<b>13,773,386</b>	<b>(7,435)</b>	<b>4,322</b>	<b>13,770,273</b>

Notes:

- Space/Room codes based on Postsecondary Ed Facilities Inventory and Classification Manual (2006)

(1) Identify in a footnote the specific facilities that are included in the data in these columns. Do not include pending approval, non-submitted projects or non-funded projects

Space under construction includes:

- Hypersonics Building
- Schleman/Stewart Renovation
- Whistler Mechanical Project

Space planned and funded includes:

- Life Sciences Phenotyping Greenhouse Building
- Mackey Locker Rooms Renovation
- Ross-Ade Stadium Renovation
- Zucrow High Speed Propulsion Lab
- Northwest Chiller Plant System Improvements
- Vawter Hall Electrical Enhancements and Replacement
- Brown Family Hall Renovation
- PMU 2nd Floor Hospitality Renovation
- Libraries Study Space Renovation
- University Hall and Related Renovations

Space to be terminated as part of this project includes:

- Classroom
- Non-class (Research) Lab
- Office
- Support

(2) Space added as part of this project includes:

- Class Lab
- Study

**CAPITAL PROJECT COST DETAILS**  
**Mechanical Engineering Building Renovation**

<b>Institution:</b>	Purdue University	<b>Budget Agency Project No.:</b>	B-1-23-2-14
<b>Campus:</b>	West Lafayette	<b>Institutional Priority:</b>	N/A

**ANTICIPATED CONSTRUCTION SCHEDULE**

	<u>Month</u>	<u>Year</u>
<b>Bid Date</b>	January	2023
<b>Start Construction</b>	July	2023
<b>Occupancy (End Date)</b>	March	2025

**ESTIMATED CONSTRUCTION COST FOR PROJECT**

	<u>Cost Basis (1)</u>	<u>Estimated Escalation Factors (2)</u>	<u>Project Cost</u>
<b><u>Planning Costs</u></b>			
a. Engineering	\$ 630,000		N/A
b. Architectural	\$ 1,190,000		N/A
c. Consulting	\$ 280,000		N/A
<b><u>Construction</u></b>			
a. Structure	\$ 8,400,000		N/A
b. Mechanical (HVAC, plumbing, etc.)	\$ 7,500,000		N/A
c. Electrical	\$ 2,500,000		N/A
<b><u>Movable Equipment</u></b>	\$ 750,000		N/A
<b><u>Fixed Equipment</u></b>	\$ 750,000		N/A
<b><u>Site Development/Land Acquisition</u></b>	\$ -		N/A
<b><u>Other (PM fees, contingencies, printing)</u></b>	\$ 3,000,000		N/A
<b>TOTAL ESTIMATED PROJECT COST</b>	<b>\$ 25,000,000</b>	<b>\$ -</b>	<b>N/A</b>

(1) Cost Basis is based on current cost prevailing as of: (INSERT MONTH AND YEAR)

(2) Explain in the Description of Project Section of the "Cap Proj Details" schedule the reasoning for estimated escalation factors

**CAPITAL PROJECT OPERATING COST DETAILS**  
**Mechanical Engineering Building Renovation**

<b>Institution:</b>	<u>Purdue University</u>	<b>Budget Agency Project No.:</b>	<u>B-1-23-2-14</u>
<b>Campus:</b>	<u>West Lafayette</u>	<b>Institutional Priority:</b>	<u>N/A</u>

			<b>GSF OF AREA AFFECTED BY PROJECT</b>		<b>41,000</b>
<b>ANNUAL OPERATING COST/SAVINGS (1)</b>					
	Cost per GSF	Total Operating Cost	Personal Services	Supplies and Expenses	
1. Operations	\$ -	\$ -	\$ -	\$ -	\$ -
2. Maintenance	\$ (0.28)	\$ (11,289)	\$ (11,289)	\$ -	\$ -
3. Fuel	\$ -	\$ -	\$ -	\$ -	\$ -
4. Utilities	\$ (0.70)	\$ (28,592)	\$ -	\$ (28,592)	\$ (28,592)
5. Other	\$ -	\$ -	\$ -	\$ -	\$ -
<b>TOTAL ESTIMATED OPERATIONAL COST/SAVINGS</b>	<b>\$ (0.97)</b>	<b>\$ (39,881)</b>	<b>\$ (11,289)</b>	<b>\$ (28,592)</b>	

**Description of any unusual factors affecting operating and maintenance costs/savings.**

The total building has 228,000 GSF. By renovating the MEP systems within the 41,000 GSF scope area, the university projects reductions in maintenance and utilities to that portion of the building. The current building cost per GSF for maintenance is \$0.55/GSF and cost per GSF for utilities is \$2.79/GSF. With new MEP systems, maintenance could reduce by 50% and utilities by 25% for the renovated portion.

(1) Based on figures from "Individual Cap Proj Desc" schedule