



Office of the Chief Financial Officer and Treasurer

July 8, 2021

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

Dear Governor Holcomb:

At its meeting on July 7, 2021, the Purdue University Board of Trustees approved the planning, financing, construction and award of construction contracts for the Wade Utility Plant Chiller 7 Replacement and System Improvements project.

This project will replace steam chiller 7, which is at the end of its expected service life, with a higher capacity electric chiller at the Wade Utility Plant on the West Lafayette campus. The project will also modify the existing mechanical and plumbing systems in the Northwest Chiller Plant to increase capacity.

Steam chiller 7 is more than 30 years old and the oldest chiller operating at the Wade Utility Plant. This project will allow the University to more reliably meet campus chilled water demand. This project was near-term priority project five on the 2021-2031 Ten Year Capital Project Plan.

The estimated total project cost is \$12,000,000, funded by Operating 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 dark ink that reads 'James S. Almond'.

James S. Almond  
Senior Vice President and Assistant Treasurer

Attachments

- c: Alexa Deaton, Chief Financial Officer, Indiana Commission for Higher Education
- Jasmine Williams, Director of Finance, Indiana Commission for Higher Education
- Zachary Jackson, Director, Indiana State Budget Agency
- Andy Cummings, Assistant Director, Indiana State Budget
- Kathleen Thomason, Comptroller, Purdue University
- Anne Hazlett, Senior Director, Government Relations, Purdue University

## PROJECT COST SUMMARY

### Wade Utility Plant Chiller 7 Replacement and System Improvements

<b>Institution:</b> <input type="text" value="Purdue University"/>	<b>Budget Agency Project No.:</b> <input type="text" value="B-1-22-2-01"/>
<b>Campus:</b> <input type="text" value="West Lafayette"/>	<b>Institutional Priority:</b> <input type="text" value="N/A"/>
<b>Previously approved by General Assembly:</b> <input type="text" value="No"/>	<b>Previously recommended by CHE:</b> <input type="text" value="No"/>
<b>Part of the Institution's Long-term Capital Plan:</b> <input type="text" value="Yes"/>	

<b>Project Size:</b> <input type="text" value="N/A"/> GSF (1) <input type="text" value="N/A"/> ASF (2) <input type="text" value="N/A"/> ASF/GSF
<b>Net change in overall campus space:</b> <input type="text" value="N/A"/> GSF <input type="text" value="N/A"/> ASF

<b>Total cost of the project (3):</b>	<input type="text" value="\$ 12,000,000"/>	<b>Cost per ASF/GSF:</b>	<input type="text" value="N/A"/> GSF
<b>Total cost of the demolition:</b>	<input type="text" value="\$ -"/>		<input type="text" value="N/A"/> ASF
<b>Funding Source(s) for project (4):</b>	Amount	Type	
	<input type="text" value="\$ 12,000,000"/>	<input type="text" value="Operating Funds"/>	
	<input type="text" value=""/>	<input type="text" value=""/>	
	<input type="text" value=""/>	<input type="text" value=""/>	
<b>Estimated annual debt payment (6):</b>	<input type="text" value="N/A"/>		
<b>Are all funds for the project secured:</b>	<input type="text" value="Yes"/>		

**Project Funding:**  
 This project is funded by Operating Funds, and all the funds are secured.

**Project Cost Justification**  
 Since the project is utilities based, there is not an ASF or GSF associated with the work. This project scope and cost are similar to the project listed in the comparable project section.

<b>Estimated annual change in cost of building operations based on the project:</b>	<input type="text" value="\$ (68,000)"/>
<b>Estimated annual repair and rehabilitation investment (5):</b>	<input type="text" value="\$ 180,000"/>

(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

## Wade Utility Plant Chiller 7 Replacement and System Improvements

**Institution:** Purdue University  
**Campus:** West Lafayette

**Budget Agency Project No.:** B-1-22-2-01  
**Institutional Priority:** N/A

### Description of Project

This project will replace the University's existing 3,000 ton steam chiller 7 with a higher capacity 5,000 ton electric chiller at the Wade Utility Plant on the West Lafayette campus. The chiller capacity will increase by approximately 67% due to this equipment replacement. Included in this project is the purchase and installation of the electric chiller and the demolition of the existing steam chiller and associated structures and connections. The project also will modify the mechanical and plumbing systems in the Northwest Chiller Plant to increase capacity by 1,500 tons.

### Need and Purpose of the Program

Steam chiller 7 was installed in 1988 and is the oldest chiller at the Wade Utility Plant. At more than 30 years old, it has reached the end of its expected service life and is running inefficiently as a result. Additionally, chiller 7 uses a refrigerant that is costly to replenish and will no longer be produced in the future. The new electric chiller, chiller 14, will be more energy efficient and use a more readily available, environmentally friendly refrigerant.

The equipment replacement and the increase in capacity at both the Wade Utility Plant and the Northwest Chiller Plant will allow the University to more reliably meet current West Lafayette chilled water demand.

This project was near-term priority project #5 on Purdue's 2021-2031 Ten Year Capital Project Plan.

### Space Utilization

Since this is a utilities project, there will be no significant space impact.

### Comparable Projects

Wade Utility Chiller No. 6 Replacement and Temporary Chilled Water Capacity Infrastructure (2013) included the removal and replacement of an aging chiller with two new electric-driven chillers and infrastructure to provide a location for temporary chilled water capacity on the West Lafayette campus.

- \$10,000,000

### Background Materials

**CAPITAL PROJECT REQUEST FORM**  
**INDIANA PUBLIC POSTSECONDARY EDUCATION**  
**INSTITUTION CAMPUS SPACE DETAILS FOR Wade Utility Plant Chiller 7 Replacement and System Improvements**

(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)	337,078	-	-	337,078			337,078
Class Lab (210,215,220,225,230,235)	756,939	82,254	11,900	851,093			851,093
Non-class Lab (250 & 255)	1,632,439	(17,963)	42,679	1,657,155			1,657,155
Office Facilities (300)	2,390,722	29,971	32,181	2,452,874			2,452,874
Study Facilities (400)	351,400	7,003	-	358,403			358,403
Special Use Facilities (500)	1,226,926	-	-	1,226,926			1,226,926
General Use Facilities (600)	990,326	2,808	12,685	1,005,819			1,005,819
Support Facilities (700)	2,844,705	121	(57)	2,844,769			2,844,769
Health Care Facilities (800)	113,929	89,901	-	203,830			203,830
Resident Facilities (900)	2,701,558	-	-	2,701,558			2,701,558
Unclassified (000)	30,507	-	-	30,507			30,507
<b>B. OTHER FACILITIES</b> (Please list major categories)							
<b>TOTAL SPACE</b>	<b>13,376,528</b>	<b>194,095</b>	<b>99,388</b>	<b>13,670,011</b>			<b>13,670,011</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:

- Vet Med Teaching Hospital

**CAPITAL PROJECT COST DETAILS**  
**Wade Utility Plant Chiller 7 Replacement and System Improvements**

<b>Institution:</b>	Purdue University	<b>Budget Agency Project No.:</b>	B-1-22-2-01
<b>Campus:</b>	West Lafayette	<b>Institutional Priority:</b>	N/A

**ANTICIPATED CONSTRUCTION SCHEDULE**

	Month	Year
<b>Bid Date</b>	May	2022
<b>Start Construction</b>	August	2022
<b>Occupancy (End Date)</b>	April	2023

**ESTIMATED CONSTRUCTION COST FOR PROJECT**

	Cost Basis (1)	Estimated Escalation Factors (2)	Project Cost
<b><u>Planning Costs</u></b>			
a. Engineering	\$ 1,000,000		\$ 1,000,000
b. Architectural	\$ 50,000		\$ 50,000
c. Consulting	\$ 125,000		\$ 125,000
<b><u>Construction</u></b>			
a. Structure	\$ 285,000		\$ 285,000
b. Mechanical (HVAC, plumbing, etc.)	\$ 1,777,000		\$ 1,777,000
c. Electrical	\$ 2,415,000		\$ 2,415,000
<b><u>Movable Equipment</u></b>			\$ -
<b><u>Fixed Equipment</u></b>	\$ 4,832,000		\$ 4,832,000
<b><u>Site Development/Land Acquisition</u></b>			\$ -
<b><u>Other (PM fees, printing, travel, testing)</u></b>	\$ 1,516,000		\$ 1,516,000
<b>TOTAL ESTIMATED PROJECT COST</b>	<b>\$ 12,000,000</b>	<b>\$ -</b>	<b>\$ 12,000,000</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**  
**Wade Utility Plant Chiller 7 Replacement and System Improvements**

<b>Institution:</b>	Purdue University	<b>Budget Agency Project No.:</b>	B-1-22-2-01
<b>Campus:</b>	West Lafayette	<b>Institutional Priority:</b>	N/A

<b>ANNUAL OPERATING COST/SAVINGS (1)</b>		<b>GSF OF AREA AFFECTED BY PROJECT</b>		
	<b>Cost per GSF</b>	<b>Total Operating Cost</b>	<b>Personal Services</b>	<b>Supplies and Expenses</b>
1. Operations		\$ -		
2. Maintenance		\$ (25,000)		
3. Fuel		\$ -		
4. Utilities		\$ -		
5. Other		\$ (43,000)		
<b>TOTAL ESTIMATED OPERATIONAL COST/SAVINGS</b>	N/A	\$ (68,000)	N/A	N/A

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

This project will result in operating savings due to the chiller's increased efficiency and the reduction in required maintenance.

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