

Contact: John Nash

REGISTER OF IOWA STATE UNIVERSITY
CAPITAL IMPROVEMENT BUSINESS TRANSACTIONS

Action Requested: Recommend the Board approve the revised project description and budget (\$2,900,000: previously \$2,400,000) for the **Agricultural Engineering and Agronomy Farm-Vehicle Dynamometer Facility** (formerly the Sukup Hall-Vehicle Dynamometer Lab Remodeling) project with the understanding that approval would constitute final Board approval and authorization to proceed with construction.

The Board's Policy Manual 2.3/7/E/iii requires Board approval of all revised project descriptions and budgets greater than \$2,000,000 that increase more than 10%, or are \$500,000 and higher.

Executive Summary: A dynamometer is a large piece of equipment that tests an engine's power, force, and torque. Most dynamometers test smaller, on-road vehicles such as cars and trucks. The proposed dynamometer in this project would be capable of testing large agricultural (tractors, combines) and off-road vehicles, and be one of the very few in the world. The only other known dynamometer of this caliber is located in Frankfurt, Germany.

This project was originally scheduled to be constructed in Sukup Hall, which opened in Fall 2014, and only as funds became available. In June 2017, the Board approved the first revised budget for additional design and construction needed to accommodate the dynamometer within Sukup Hall and to utilize recently received private giving. In November 2017, the Board Office approved the second revised budget to move the project from Sukup Hall to a new, roomier stand-alone building on the ISU Agricultural Engineering and Agronomy Farm, seven miles west of Ames (see map on next page). This is the third revised budget, which would cover the cost of higher-than-expected dynamometer costs based on proposals received from dynamometer vendors. These proposals were based on updated design specifications that captured the current evolving market for large agricultural and off-road vehicles.

This project would help complete the vision of the ISU College of Agricultural and Biosystems Engineering's Vehicle Power System - Systems Laboratory.

Background:

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Project Description and Budget	\$ 600,000	Dec. 2015	Approved *
Program Statement		May 2017	Approved *
Schematic Design		Jun. 2017	Approved
Revised Project Description and Budget	2,200,000	Jun. 2017	Approved
Revised Project Description and Budget	2,400,000	Nov. 2017	Approved *
Revised Project Description and Budget	\$2,900,000	Apr. 2018	Requested

* Approved by Executive Director, consistent with Board policies.

Source of Funds

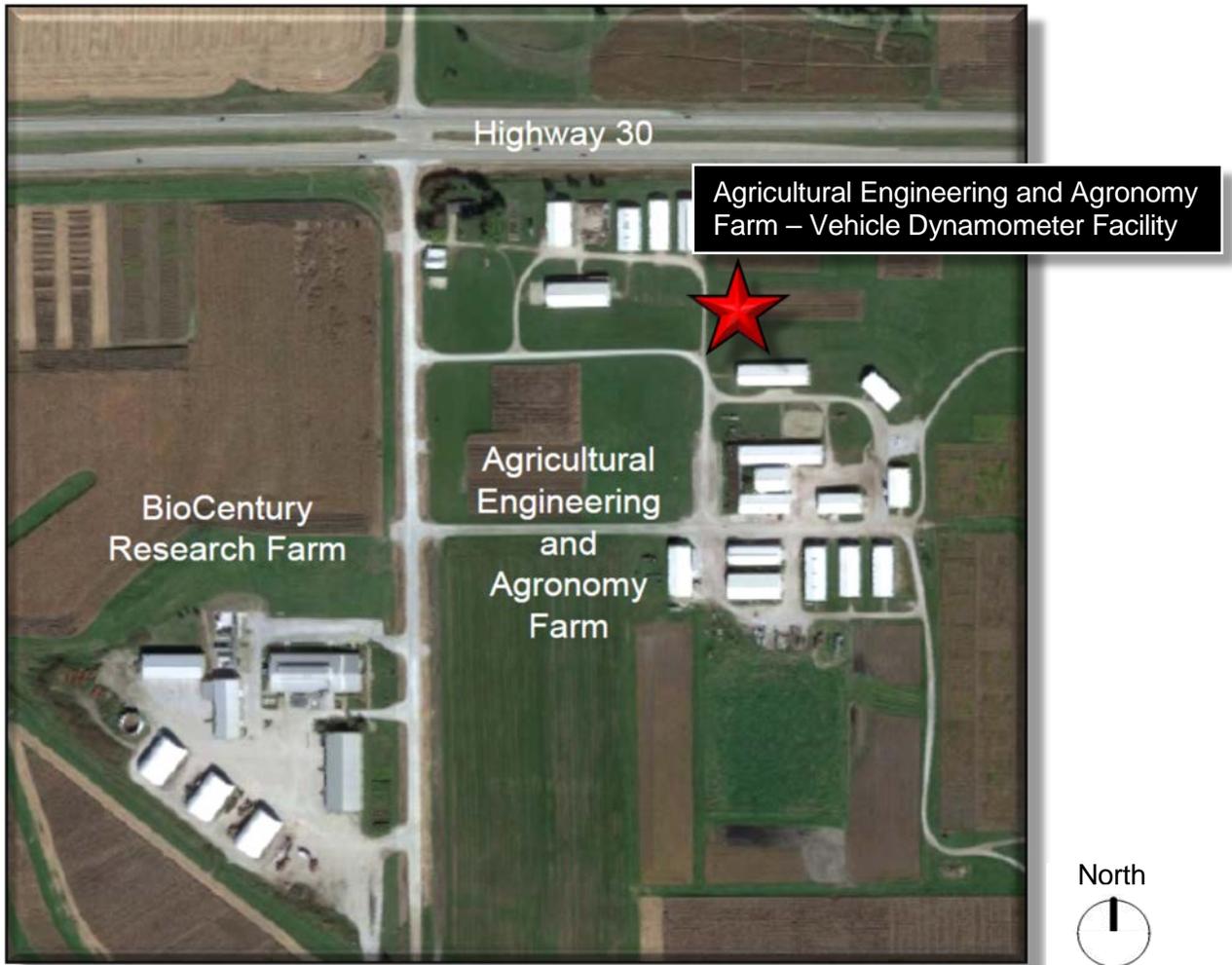
- Project: \$1,100,000 University Funds + \$1,800,000 Private Giving = **\$2,900,000**
- Operating & Maintenance: Department of Agricultural and Biosystems Engineering Funds

Revised Project Schedule

- June 2018 – November 2018: dynamometer building construction
- April 2018 – April 2019: dynamometer design, manufacture, and installation
- May 2019: Occupancy

Revised Budget

	Budget (Nov. 2017)	Revised Budget (Apr. 2018)
Construction	\$ 578,500	\$ 578,500
Planning, Design & Management	227,190	248,800
Furniture & Equipment	1,355,000	2,005,000
Contingency	\$239,310	67,700
Total Project Cost	\$2,400,000	\$2,900,000



Agricultural Engineering and Agronomy Farm – Vehicle Dynamometer Facility project