

# IOWA STATE UNIVERSITY

## Transportation, Infrastructure, and Capitals Subcommittee

**Warren Madden**

Senior Vice President for Business and Finance

**Jonathan Wickert**

Senior Vice President and Provost

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# Biorenewables Complex

- Agricultural and Biosystems Engineering Building
- Elings Hall, Sukup Hall and Atrium
- \$74M project (60.4M in State funding)
- Scheduled completion by 8/1/14



# ISU Biosciences Vision & Goals

Increase the capacity and enhance the capabilities of facilities to support research, teaching, and extension/outreach

## Program Profile

- Leadership in plant & animal science with focus on agricultural plant genomics
- Integration of instruction & research
- Undergraduate education distinguished through experiential learning
- Strong multi-disciplinary graduate programs
- Innovation & entrepreneurship to spur economic growth & support Iowa businesses
- Major driver of Iowa's bio-economy
- Environmental stewardship

## Planning Goals

- Create a doorway to biosciences
- Create new & improve existing research labs and supporting space
- Develop teaching space that attracts students & supports new teaching methods
- Enhance ability to pursue larger trans-disciplinary research grants
- Provide appropriate greenhouse space to support research & leadership position

# An Urgent Need in the Biosciences

## A capacity, quality, and capability issue

- Five consecutive years of record enrollment; 18,000 resident undergraduate students
- 6,000+ students studying biosciences fields; enrollment expected to increase 10-25% in five years
- STEM teaching best accomplished by hands-on, active learning
- Shortages of adequate space for students, researchers
- External research funding left unsought
- Fewer opportunities for collaboration



# An Urgent Need in the Biosciences

## An economic development issue

- State of Iowa, ISU are home to nation's largest biotechnology enterprise – cutting edge science based
- Sustained growth requires partnership with industry, training the biosciences workforce
- Employers want graduates with practical skills
- 2/3 of graduates stay in Iowa to pursue their career



# Biosciences Project Scope

- Addresses critical space needs in six departments
- Includes both remodeling, new construction
- Increases instructional and research space
- Demolition of outdated buildings



# Biosciences Project Scope

**\$80M budget includes \$52M from state appropriations,  
\$28M from private/institutional funds**

New Biosciences facilities will include:

- Advanced Teaching and Research Building
  - 100,000 GSF (basement + 3 floors; 4<sup>th</sup> floor shell space)
  - 12,000 GSF greenhouse
- New wing to Bessey Hall – 41,600 GSF
- Partial renovation of vacated space
- Demolition and site/utility upgrades

# Flexible Design Accommodates Growth

## Bessey Hall

- 42,000 SF addition
- Biology Teaching Hub
- Modular lab design to keep pace with changing technology and pedagogy



## Advanced Teaching and Research Building

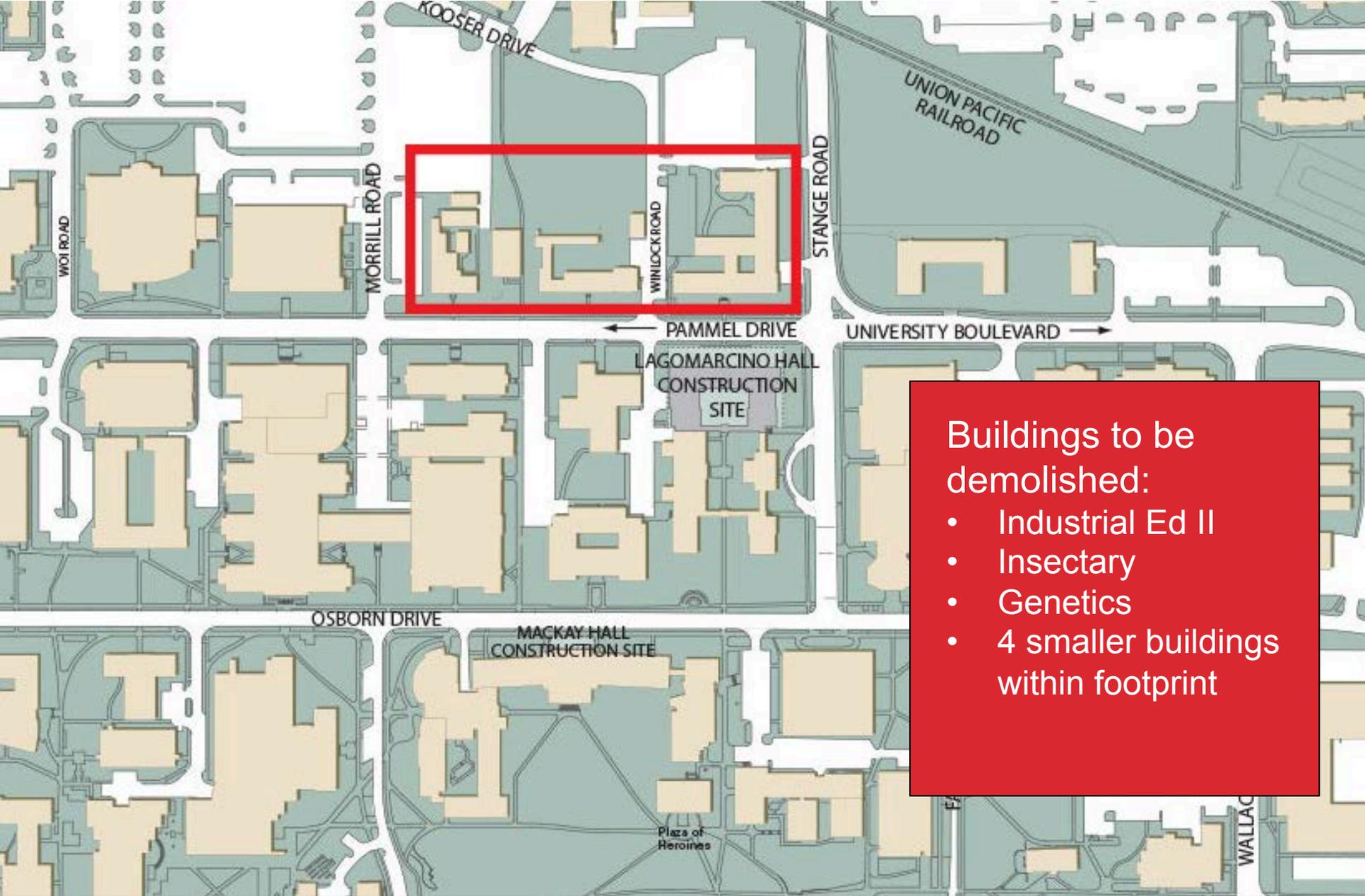
- Foster industry outreach to spur public/private partnerships, economic development
- One floor (21,000 SF) of shell space to accommodate future growth

# Eliminating Deferred Maintenance

- Demolition of up to seven outdated buildings including Industrial Education II, Genetics Building, and Insectary
- Phased renovation of retained existing space
- Repurposing selected existing spaces to reduce the cost of renovation
- Results will eliminate more than \$6M in deferred maintenance

# Stewardship of Facilities

- Commitment to efficient and sustainable operations
- Flexible modular design of new construction enables cost effective future repurposing
- Institutional data, expertise on what it takes to operate and maintain buildings
- Financial factors, including operating and utility costs, considered early in planning process



Buildings to be demolished:

- Industrial Ed II
- Insectary
- Genetics
- 4 smaller buildings within footprint



<http://alliance.isualum.org/initiatives/biosciences-building/>

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