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Facilities & Operations

December 11, 2014

Agenda Item: Capital Budget Amendments

Review   X Review + Action   Action    Discussion

☐ This is a report required by Board policy.

Presenters: Pamela Wheelock, Vice President, University Services
Suzanne Smith, Assistant Vice President, Capital Planning and Project Management

Purpose & Key Points

In accordance with Board of Regents Policy: Reservation and Delegation of Authority, review and approve amendments to the FY 2015 Capital Budget for the following projects:

- Steam Line Replacement – Duluth Campus
- Bee Discovery and Pollinator Center – Landscape Arboretum
- Parking Lot Removal and Site Improvements – Rochester Campus

For each project, the project data sheets in the docket address the basis for the request, project scope, cost estimate, funding, and schedule, and include a site map.

Background Information

Steam Line Replacement – The existing steam line buried between the UMD Heating Plant and Sports and Health Center, one of three main campus steam distribution lines, is failing. The outer envelope has cracked, allowing heat to escape and ground water to infiltrate the piping bundle.

Bee Discovery and Pollinator Center – The proposed facility program connects new knowledge to real-world challenges for Minnesota’s response to honeybee colony collapse and diminishing habitat for native pollinators.

Parking Lot Removal and Site Improvements – University of Minnesota Rochester purchased the Broadway Parcel lot on the site of the future Rochester Campus. In partnership with the City of Rochester, UMR has committed to improving the 1.5-acre site by creating a low-maintenance native prairie landscape solution.
President’s Recommendation

The President recommends approval of an amendment to the FY 2015 Capital Budget for the projects listed below and of the appropriate administrative officers proceeding with the design and construction for these projects:

- *Steam Line Replacement – Duluth Campus*
- *Bee Discovery and Pollinator Center – Landscape Arboretum*
- *Parking Lot Removal and Site Improvements – Rochester Campus*
1. Basis for Request:

The existing steam line buried between the UMD Heating Plant and Sports and Health Center, one of three main campus steam distribution lines, is failing. The outer envelope has cracked, allowing heat to escape and ground water to infiltrate the piping bundle. As a result, the escaping heat significantly damages the surrounding soil as groundwater heats to steam. The project scope has been expanded and market conditions have changed since last approved. A capital budget amendment is needed at this time in order for construction to begin in spring 2015.

2. Change in Project Since Approved:

The identification of poor soil conditions, the addition of a third steam line expansion loop, replacement of the existing condensate line, and the increased market value of construction have contributed to the project cost increase.

3. Master Plan:

This project is in compliance with the UMD Utility Master Plan and the 2013 Master Plan Update.

4. Environmental Issues:

There are no known issues.

5. Cost Estimate:

<p>| | | |</p>
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7. Capital Budget Approvals:

This project was approved in the FY2015 Capital Improvement Budget.
8. Annual Operating and Maintenance Cost and Source of Revenue:
Not applicable.

9. Time Schedule:
Design complete  
Construction start  
Construction complete
October 2014  
May 2015  
September 2015

10. Project Team:
Engineer of Record: Dunham and Associates Engineering  
Contractor: TBD

11. Recommendation:
The above described project scope of work, cost, funding, and schedule is appropriate:

Andrea Schokker  11/25/14
for: Lendley Black, Chancellor – University of Minnesota Duluth

Andrea Schokker  Executive Vice Chancellor

Richard Pfutzenreuter  Vice President and Chief Financial Officer

Pamela Wheelock, Vice President – University Services
UMD Steam Line Replacement
Duluth Campus

Site Location Map
Steam Line Replacement
Heating Plant to Sports and Health Center
Duluth Campus

Board of Regents Facilities and Operations Committee
December 11, 2014
Project Rationale

- Existing steam line is failing
- Meets UMD Strategic Goal 6
  - Enhance UMD’s infrastructure; technologies; and information, financial, and human resources to support the campus in a sustainable manner.
Project Scope:

- Original scope
  - Replace existing steam line
- Added scope
  - New condensate line
  - Replace unsuitable soil
  - Additional expansion loops
Project Description

• **Budget**
  - Approved Budget $1,300,000
  - Amendment Requested $800,000
  Total Project Budget $2,100,000

• **Cost Estimate**
  - Construction $1,760,000
  - Non-construction $340,000
  Total Project Cost $2,100,000

• **Capital Funding:**
  - UMD Facilities Management $2,100,000
  Total Project Funding $2,100,000
Project Description

• Anticipated Completion:
  – September 2015

• Architect:
  – Architect of Record:
    Dunham and Associates, Minneapolis MN

• Project Delivery Method:
  – Lump Sum Construction
    Contractor To Be Determined
Bee Discovery and Pollinator Center  
University of Minnesota Landscape Arboretum  
Project No. 22-888-13-1595

1. Basis for Request:  
The threat to the survival of the honey bee and wild bee species demands solutions from the best scientific minds for bee research and the expansion of the scale and scope of teaching and outreach efforts to address these critical issues. The Bee Discovery and Pollinator Center will showcase the importance of Bee Health and Biodiversity and create a public education facility to provide year-round learning opportunities for children and adults. The project will provide a central focus and make it possible for University experts to bring their research to the public in a landscape context that emphasizes the interrelationship of bees with the environment and with human culture. A capital budget amendment is requested so the project may proceed.

2. Scope of Project:  
The project is located on the east side of the Landscape Arboretum at the Red Barn Farm Garden site. Access to this site is from the recently completed Eastern Drive and 82nd Street. The Bee Discovery and Pollinator Center includes new construction of 6,700 square feet with specialty spaces for central exhibits, teaching/gathering, honey extraction, and greeter stations. The associated 4,500 square feet of outside spaces will provide for Apiary live demonstration and pollinator garden and outdoors exhibitions. The project will also extend utilities from Highway 11.

3. Master Plan:  
The project is in compliance with the Landscape Arboretum 2013 Master Plan.

4. Environmental Issues:  
There are no known issues.

5. Cost Estimate:  
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<td>Total Project Funds</td>
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7. Capital Budget Approvals:
This project was not included in the FY2015 Capital Budget as fundraising was still under way. Therefore, a Capital Budget Amendment is requested so the project may proceed.

8. Annual Operating and Maintenance Cost:
It is anticipated that annual costs will be approximately $61,000.

9. Time Schedule:
Design complete                                      June 2015
Construction complete                                December 2015

10. Project Team:
Architect:                                           Meyer, Scherer & Rockcastle
Construction Manager at Risk:                       TBD

11. Recommendation:
The above described project scope of work, cost, funding, and schedule is appropriate:

Bhan Buhr, Dean - College of Food, Agricultural, and Natural Resource Sciences  

Richard Pfutzenreuter, Vice President and Chief Financial Officer

Pamela Wheelock, Vice President - University Services
Site Map

Bee Discovery and Pollinator Center
University of Minnesota Landscape Arboretum
Bee and Pollinator Center
Project Rationale

- Landscape Arboretum Master Plan
- In concert with improvements at St. Paul Campus
- Create a public education facility
  - Formal and informal year-round learning
  - Agricultural and ecological importance of bees
  - Bee health and biodiversity
• **Bee and Pollinator Facility includes:**
  - 6,700 GSF of new construction
    - space for teaching/gathering
    - central exhibits
    - honey extraction
  - 4,500 SF of exterior area
    - Apiary live demonstrations
    - pollinator gardens
    - outdoor exhibitions
Project Description

- **Cost Estimate**
  - Construction $5,350,000
  - Non-construction $1,031,000
  Total Project Cost $6,382,000

- **Capital Funding:**
  - MN Landscape Arboretum Foundation $6,382,000
  Total Approved Project Budget $6,382,000
Project Description

- Anticipated Completion:  
  - December 2015

- Estimated Annual Operating Costs:  
  - $61,000

- Architect:  
  - Meyer, Scherer, & Rockcastle Ltd.

- Project Delivery Method:  
  - Construction Manager at Risk
    - Construction Manager TBD
Predesign Conceptual Floor Plan
UMR Parking Lot Removal with Site Improvements
Rochester Campus
Project No. 06-600-13-2095

1. Basis for Request:
University of Minnesota Rochester has purchased two lots (the Broadway Parcel) on the site of the future Rochester Campus, south of downtown Rochester. The Broadway Parcel will form the northeast boundary of the future campus. The existing site is a vacant and unattractive parking lot. In partnership with the City of Rochester, UMR has committed to improving the site. A capital budget amendment is needed at this time in order for construction to begin in spring 2015.

2. Scope of Project:
The project site is a 1.5 acre vacant parking lot and is located at the corner of 6th Street SW and Broadway South, south of downtown Rochester. The project will replace the existing parking lot with prairie grasses, shrubs, trees, and an ornamental fence.

3. Master Plan:
The project is in compliance with the Rochester Campus 2014 Master Plan.

4. Environmental Issues:
Minimal excavation is required for planting.

5. Cost Estimate:

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6. Capital Funding:

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<td>University of Minnesota Rochester</td>
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<td>Total Project Funds</td>
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*Project costs will be funded initially by University of Minnesota Rochester; upon project completion, City of Rochester will reimburse $555,000 through sales tax revenues.
7. Capital Budget Approvals:
   This project was not included in the FY2015 Capital Improvement Budget. Therefore, a capital budget amendment is requested so the project may proceed.

8. Annual Operating and Maintenance Cost and Source of Revenue:
   It is anticipated that annual costs will be approximately $6,000.

9. Time Schedule:
   Design complete          October 2014
   Construction start    May 2015
   Construction complete October 2015

10. Project Team:
    Engineer of Record: Barr Engineering
        Contractor: TBD

11. Recommendation:
    The above described project scope of work, cost, funding, and schedule is appropriate:

    Stephen Lehmkuhle, Chancellor - University of Minnesota Rochester

    Richard Pfutzenreuter, Vice President and Chief Financial Officer

    Pamela Wheelock, Vice President - University Services
UMR Parking Lot Removal with Site Improvements
University of Minnesota Rochester

Site Location Map
Parking Lot Removal with Site Improvements
Rochester Campus

Board of Regents Facilities and Operations Committee
December 11, 2014
Location Map

Project Site

Campuses
- Regional Extension Offices
- Research & Outreach Centers
- Extension County Offices
Project Rationale

• In line with the UMR Master Plan Principles
• In line with the UMR Urban Design Guidelines Master Plan
  – Urban Density
  – Public Realm
  – Quality of Place
• Initial Improvements
  – First stage for future development
Project Description

- The 1.5 acre site
- Prairie landscape replaces existing parking lots
Project Description

- **Cost Estimate:**
  - Construction $453,000
  - Non-construction $132,000
  Total Project Cost $585,000

- **Capital Funding:**
  - City of Rochester* $555,000
  - University of Minnesota, Rochester $30,000
  Total Approved Project Budget $585,000
Project Description

• Anticipated Completion:
  – October 2015

• Estimated Annual Operating Costs:
  – $6,000

• Engineer of Record:
  – Barr Engineering

• Project Delivery Method:
  – Design Bid Build
Agenda Item: Capital Budget Amendment: Combined Heat and Power Plant Project, Twin Cities Campus

☐ Review  ☐ Review + Action  X Action  ☐ Discussion

This is a report required by Board policy.

Presenters: Pamela Wheelock, Vice President, University Services

Purpose & Key Points

In accordance with Board of Regents Policy: Reservation and Delegation of Authority, review the FY 2015 Capital Budget Amendment for the following project:

• Combined Heat and Power Plant Project, Twin Cities Campus

The project data sheet in the docket addresses the basis for request, project scope, cost estimate, funding, and schedule for this project. A map locating the project on the Twin Cities campus is also included.

Due to the construction of new University buildings requiring steam service, and aging boiler equipment on the Minneapolis portion of the Twin Cities campus, the University is at risk of a shortage of firm boiler capacity relative to wintertime peak steam demand. The Minneapolis portion of the Twin Cities campus also is at risk with 100% of its steam being generated in a single site and at a distance from campus; new steam boiler equipment that will provide the additional required steam capacity in a second facility is needed.

The project consists of installing combined heat and power generation equipment in the Old Main building and providing space for a possible future package boiler and a future chilled water plant to create a multi-function utility facility. In addition, a connection will be made to the Xcel Gopher electrical substation to allow an outlet for any excess power generated at the CHP plant and reliable standby power from Xcel to campus. The combined heat and power equipment solution was chosen because the added benefit of electrical generation for use on campus provides a financial hedge for increasing electrical rates and represents the best long-term, sustainable solution from an energy use standpoint by reducing the carbon footprint of the University.

Since the October 9, 2014 meeting, the following has occurred:

• The hazardous material abatement and demolition has been completed.
• Approval was received from the railroad to conduct soil borings at the Gopher duct bank crossing location, and the boring was completed.
• The environmental assessment worksheet public comment period closed on November 26 and the air permit public comment period closed on December 1.

Background Information

Combined Heat and Power Plant project funding to initiate design, in the amount of $18,000,000, was included in the FY 2013 Capital Budget approved by the Board in June 2012. A capital budget amendment in the amount of $77,881,000 was approved by the Board in February 2013, concurrent to schematic design and equipment selection and procurement. A capital budget amendment in the amount of $17,100,000 is being presented for approval in December 2014. This amendment will address known issues with the project site, demolition, facility structure, and building systems, and replenish the project contingency.

The cost increases are due to schedule delays in the air permit process; construction market cost escalation; additional complexity to deliver electricity to the campus; and unforeseen conditions. Should unspent contingency funds not be sufficient to fully fund the investments needed to reliably distribute electrical services throughout the campus, any remaining needs will be addressed in the annual capital budget process. Construction will begin upon the receipt of the permit.

President’s Recommendation

The President recommends approval of the capital budget amendment for the project listed below and of the appropriate administrative officers proceeding with construction following approval of the MPCA air permit:

• Combined Heat and Power Plant Project, Twin Cities Campus
1. Basis for Request:

This project advances all three principles of University Energy Management: Reliability, Sustainability, and Cost Effectiveness.

Reliability:
Due to both the growth of new University buildings requiring steam service and aging boiler equipment on the Twin Cities Minneapolis campus, the University is at risk for a shortage in firm boiler capacity relative to wintertime peak steam demand. The Minneapolis campus also is at risk for 100% of its steam being generated in a single site and at a distance from campus. New steam boiler equipment that will provide the additional required steam capacity needs to be added to the Minneapolis campus at a second site. In addition, the project will produce significant electricity to help protect core portions of campus operations from loss of electrical service. The project is designed to meet future utility needs by preparing space and distribution for additional steam and chilled water service at minimal future cost (effectively just purchasing and installing the boiler or chillers.)

Sustainability:
Combined heat and power technologies are recognized internationally as a ‘green’ technology because each unit of energy is used more than once - to both produce electricity and to provide steam for the campus that can be used to either heat the campus or run steam-driven chillers. Both the State of Minnesota and the Federal government have strongly advocated for the expanded use of this technology for environmental reasons. The operation of this plant will significantly reduce the campus carbon footprint.

Cost Effective:
Combined heat and power technologies were also selected because of their cost saving capacity. By utilizing each unit of energy multiple times the University will be able to significantly reduce the amount of electricity it needs to purchase. This creates savings sufficient to lower overall campus utility costs even after paying for 100% of the project debt service and incremental operating costs. This project also provides the University a hedge against increasing electrical rates which are already being requested.

When presented to the Board of Regents in February 2013, the expected operating savings were $2 million annually when compared to the FY 2014 budgeted utility rates, and increasing as the debt is paid off. This savings is significantly larger when considering the alternative – adding a traditional peak boiler would only add cost to meet the University reliability needs. Over the expected 30 years of useful life for this equipment the Combined Heat and Power is projected to cost approximately $170 million less than if the University had proceeded with a traditional boiler.

Though this capital budget amendment will increase debt service payments, the University has been experiencing higher electrical rates than originally anticipated. Projected utility savings will still be close to $2 million in FY17 when the Old Main Plant becomes operational while also providing a financial hedge against further increasing electrical rates.

Capital Budget Metrics addressed by this project:
Ensure research productivity and impact by:
- Providing research facilities that will allow competitive responses to unique research opportunities aligned with strategic priorities
Protecting public assets and investment by:
- Implementing campus master plans and advancing the University’s sustainability goals
- Leveraging facility investment to advance the academic mission and priorities
• Making infrastructure investments that ensure reliability over the long term, lower energy and operating costs, and advance environmental stewardship

Recognize current extraordinary financial realities by:
• Honoring projects that have an identified source of payment for debt costs
• Leveraging state capital funding opportunities in conjunction with University resources to complete critical projects that serve to improve infrastructure and benefit common good

2. Scope of Project:

The project is the renovation of the Old Main Heating Plant (Old Main) located at 1180 Main Street SE adjacent to the Mississippi river in the Knoll area. Originally constructed in 1912, Old Main has undergone several renovations/additions over the years. It houses seven coal and gas fired boilers, the last of which was shut down for steam production in 2000. Since that time the building’s disrepair has accelerated. The building currently houses a steam pipe fitter workshop area and provides key access points to the deep steam tunnels.

The project consists of installing combined heat and power generation equipment in the building and providing space planned for a future package boiler and future chilled water plant equipment to create a multi-function Old Main utility facility. The combined heat and power equipment represents a two-stage configuration. First, a new natural gas fired turbine will generate electricity for use on the Minneapolis campus. Second, a new heat recovery steam generator will recover heat from the combustion gases that are discharged from the turbine to generate the required steam capacity. The combined heat and power equipment solution was chosen because the added benefit of electrical generation for use on campus provides both a financial hedge against increasing electrical rates and represents the best long-term sustainable solution from an energy use standpoint by reducing the carbon footprint of the University.

The plant has also been designed with space allocated for future installation of a packaged boiler as well as two steam turbine-driven chillers, representing an investment in future needs of the campus.

A significant portion of the project budget is devoted to hazardous materials abatement for both Old Main and the adjacent incinerator building, which has been demolished as part of this project. The existing boilers and piping contain significant amounts of asbestos. The building exterior walls are in relatively good shape and will be refurbished where required. The building roof profile will be simplified by removal of the multiple penthouses and a new roof will be installed.

This project is unique in nature. Essentially the project is engineered from the inside out; the process systems and equipment are designed to be housed in an existing building shell. Further, this project lacks program choices to reduce project scope, as typical projects do, in order to reduce costs. The uncertainty of MPCA permitting has further complicated this project. Alternatives were considered (reverting to a traditional boiler or building a new facility in a different site) but were rejected due to their significant costs beyond those of this project and extending the schedule. Though ‘first cost’ is always a concern, in this case the operating cost and lifecycle costs have a much larger impact to the institution financially so that in spite of the cost increase, this project continues to be a good financial and operating solution for the University.

3. Status Update:

Since the October 9, 2014 Regents meeting the following items have occurred. The hazardous material abatement and demolition in the Old Main Building has been completed. The approval was received from the railroad to conduct soil borings at the Gopher duct bank crossing location and the boring was completed. The soil borings will allow for completion of the design documents and permit application. In addition, the environmental assessment worksheet public comment period closed on November 26 and the air permit public comment period closes on December 1, concurrent with the docket submittal.
deadline. We will have an update at the Regents meeting. The University will be working with the Minnesota Pollution Control Agency to address any comments received.

4. Master Plan:

This project is consistent with following March 2009 Twin Cities Campus Master Plan Guiding Principles:

- Five: Steward historic building and landscapes
- Nine: Optimize the use of campus land and facilities and apply best practices
- Ten: Develop a campus that is environmentally and operationally sustainable

5. Environmental Issues:

Hazardous materials, which include a significant amount of asbestos, will be abated as a part of the project work and budget.

6. Cost Estimate:

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<td>CHPP Equipment / Systems</td>
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(*) Does not include potential electrical distribution increase of up to $5,600,000 to be funded either through unspent contingency or addressed in a future annual capital budget.

7. Capital Funding:

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8. Capital Budget Approvals:

The FY2013 capital budget approved by the Board of Regents in June 2012 included $18,000,000 for this project.

A capital budget amendment in the amount of $77,881,000 funded by issuing University debt was approved by the Board of Regents in February 2013, concurrent to the schematic design and the selection and procurement of the equipment.

The capital budget amendment requested at this time, in the amount of $17,100,000, is planned to be funded by issuing University debt. Should unspent contingency funds not be sufficient to fully fund
the investments needed to reliably distribute electrical services throughout the campus, any remaining needs will be addressed in the annual capital budget process.

9. Annual Operating and Maintenance Cost and Source of Revenue:

The operation and maintenance cost for this project are built into the business plan and utility rates for the campus. This project is projected to have a net overall annual savings to the University from its baseline utility costs.

10. Time Schedule:

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<td>Anticipated Completion Construction</td>
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11. Architect and Construction Manager:

This project will be delivered using the Construction Manager at Risk Project Delivery Method.

Architect: Jacobs Engineering Group, Inc., Fort Worth, Texas
Construction Manager: Adolfson & Peterson Construction, Minneapolis

12. Recommendation:

The above described project scope of work, cost, funding, and schedule is appropriate:

Richard Pfutzenreuter, Vice President and Chief Financial Officer

Pamela Wheelock, Vice President for University Services
Combined Heat and Power (CHP) Capital Budget Amendment

Board of Regents Facilities and Operations Committee
December 11, 2014
Combined Heat and Power Project

• A 25 megawatt combustion turbine with heat recovery steam generator to meet current and projected steam needs (until 2028)
• Prepares space for a future chilled water plant and second boiler
• Address the unresolved issues in Old Main
Combined Heat and Power Plant
Advances Energy Principles

• Reliability
  – Solves projected shortage of ‘firm’ steam capacity by 2016
  – Eliminates risk to research, teaching, and operations caused by having 100% of steam for Minneapolis campus coming through a single tunnel from single off-campus site

• Cost-effective
  – Reduces overall University cost
  – Hedges against purchased electrical cost increases
  – Provides site for next efficient chilled water plant

• Sustainability
  – Reduces carbon footprint by 10-15%
Energy Plant is a Different Type of Project

- First cost is minimal compared to significant operating savings
- Uncertain external agency permit process impacted schedule
- Project is engineered inside out – process systems and equipment within a building shell
- Requires significant campus infrastructure upgrades
- Early equipment procurement necessary due to long lead time, informed design, and permit
- Lacks program choices to reduce scope/cost
Capital Budget Challenge

• Significant budget increases due to
  – Unforeseen conditions on site
  – Construction market cost increases
  – Additional complexity to deliver electricity to campus
  – Delay costs due to permit process
Capital Budget Approach

• Capital budget amendment for $17.1 million to cover most of these known issues and replenish contingency
  – Total project cost $113,000,000

• Potential additional $5.6 million for electrical distribution funded by unspent contingency and/or future annual capital budget process
Status Update

- Environmental assessment and air permit comment period complete
  - Next step is MPCA and the University responding to comments
- Hazardous material abatement completed
- Soil borings at the railroad crossing are complete
  - Next step is negotiating the crossing
- Xcel Energy has completed their design for interconnection
Approval of Capital Budget Amendment

- Additional $17.1 million
- Total project budget will be $113 million upon approval
Facilities & Operations

Agenda Item:  Schematic Design

☐ Review  X Review + Action  ☐ Action  ☐ Discussion

☐ This is a report required by Board policy.

Presenters:  Pamela Wheelock, Vice President, University Services
Suzanne Smith, Assistant Vice President, Capital Planning and Project Management
Fred Wood, Chancellor, Crookston
Steven Crouch, Dean, College of Science and Engineering
Brian Buhr, Dean, College of Food, Agriculture, and Natural Resource Sciences

Purpose & Key Points

In accordance with Board of Regents Policy: Reservation and Delegation of Authority, review and approve the schematic design for the following projects:

- Wellness Center – Crookston Campus
- Tate Science and Teaching Renovation – Twin Cities Campus
- Aquatic Invasive Species Lab – Twin Cities Campus

The project data sheet included in the docket materials addresses the basis for request, project scope, cost estimate, funding, and schedule and includes a map for each of these projects.

Background Information

Wellness Center – This project, located on the University of Minnesota Crookston campus, is planned to meet the growing needs of non-athletes and changing trends in recreation. The facility is approximately 37,726 square feet.

Tate Science and Teaching Renovation – The Tate Lab of Physics has been home to the School of Physics and Astronomy since the building was constructed in 1926. The school’s research laboratories were recently relocated to the new Physics and Nanotechnology building. The remaining Theoretical Physicists and the Department of Earth Sciences, currently located in six different buildings, will occupy the renovated Tate.

Aquatic Invasive Species Lab – The Minnesota Aquatic Invasive Species Research Center (MAISRC) currently uses 10,170 SF for a holding facility located in the Engineering and Fisheries Building on the St. Paul Campus. This project will create a modern research environment to maximize the state’s ability to respond to current and future threats to Minnesota’s waters.
President’s Recommendation

The President recommends approval of schematic design for the projects listed below and of the appropriate administrative officers proceeding with the completion of the design and construction for these projects:

- Wellness Center – Crookston Campus
- Tate Science and Teaching Renovation – Twin Cities Campus
- Aquatic Invasive Species Lab – Twin Cities Campus
Wellness Center
Crookston Campus
Project No. 05-861-13-1139

1. Basis for Request:
   The existing University of Minnesota Crookston (UMC) Sports Complex was originally constructed in 1930 and expanded in 1982. Although a series of renovations were undertaken to increase fitness space since the 1982 expansion, the space is substandard compared to the level of modern collegiate standards. In addition, the general student population has only minimal access to the current recreation and fitness facilities due to heavy usage by the athletic teams. The new Wellness Center is planned to meet the growing needs of non-athletes and changing trends in recreation and will enhance recreational programs and modernize the fitness environment.

2. Scope of Project:
   The project, located on the Crookston Campus, will construct a new 37,726 square feet (sf) Wellness Center building. The major activity areas include a two-court gymnasium, running track, classroom, fitness/cardio area, general locker rooms, and a multipurpose room for group exercise. The new Wellness Center is located adjacent to the existing UMC Sports Complex and connected by an enclosed walkway.

3. Master Plan or Precinct/District Plan:
   The project is in compliance with the UMC Master Plan 2010 Update.

4. Environmental Issues:
   There are no known environmental issues associated the Wellness Center project.

5. Cost Estimate:
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<tbody>
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6. Capital Funding:
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<tr>
<td>Total Project Funds</td>
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7. Capital Budget Approvals:
   This project was approved in the FY2015 Annual Capital Budget at the June 2014 Regents meeting.
8. **Annual Operating and Maintenance Cost and Source of Revenue:**
   The new facility annual costs are anticipated to be approximately $230,000

9. **Time Schedule:**
   - Design completion: April 2015
   - Construction completion: June 2016

10. **Project Team:**
    - Architect: JLG Architects - Alexandria, MN
    - Construction Manager at Risk: JE Dunn Construction - Minneapolis, MN

11. **Recommendation:**
    The above described project scope of work, cost, funding, and schedule is appropriate:

    Fred E. Wood, Chancellor - University of Minnesota Crookston

    Richard Pfitzenreiter, Vice President and Chief Financial Officer

    Pamela Wheelock, Vice President - University Services
Location Map

WELLNESS CENTER
Project Rationale

- The Sports Complex is overall in poor condition
- Limited options available in the surrounding Crookston area
- Addresses access for all students
- Critical for recruitment and retention
- Will serve as a laboratory for related majors
- Participation is beneficial to education and student success
New 37,700 GSF Wellness Center includes:

- Multipurpose group exercise room
- Fitness/cardio areas
- Two-court gymnasium
- Suspended running track
- Classroom
- General locker rooms
Project Description

• Cost Estimate
  – Construction $12,700,000
  – Non-construction 2,300,000
  Total Project Cost $15,000,000

• Capital Funding:
  – 2014 Legislative Appropriation $10,000,000
  – University Debt 5,000,000
  Total Project Funding $15,000,000
Project Description

- Anticipated Completion:
  - June 2016

- Estimated Annual Operating and Maintenance Costs
  - $156,000

- Architect:
  - JLG Architects

- Project Delivery Method:
  - Construction Manager at Risk
    JE Dunn Construction
Site Plan
Building Exterior
1. Basis for Request:

The Tate Lab of Physics has been home to the School of Physics and Astronomy since the building was constructed in 1926. Their research laboratories were recently relocated to the new Physics and Nanotechnology building. The remaining Theoretical Physicists and the Department of Earth Sciences, currently located in six different buildings, will occupy the renovated Tate. The facilities required for research in technology driven fields, such as Physics and Earth Sciences, do not exist in a building designed eighty years ago. The existing laboratories are old and inflexible; mechanical, electrical, and computer data systems are outmoded and past their useful lifespan. Physics and Earth Sciences are at a competitive disadvantage in recruiting and retaining the highest quality faculty and graduate students, and attracting support for cutting edge research.

2. Scope of Project:

This project will be accomplished through a combination of renovation and new construction totaling 230,049 gross square feet for the School of Physics and Astronomy and the Department of Earth Sciences. The facility will consist of research labs, teaching labs, classrooms, offices, and support space. The exterior of the building will be rehabilitated and hazardous materials will be abated. The existing mechanical, plumbing, and electrical systems will be replaced with modernized systems. The new addition will provide a prominent accessible entry off of Church Street.

3. Master Plan or Precinct/District Plan:

The project is consistent with the 2009 Twin Cities Master Plan.

4. Environmental Issues:

Hazardous materials (asbestos, lead, mercury) will be abated.

5. Cost Estimate:

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6. Capital Funding:

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<tr>
<td>Total Capital Funding</td>
<td>$92,500,000</td>
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</table>
7. Capital Budget Approvals:
The project was approved in the FY2015 Annual Capital Budget at the June 2014 Regents meeting.

8. Annual Operating and Maintenance Cost and Source of Revenue:
The renovated facility annual costs are anticipating a reduction of approximately 10% through improved systems and sustainability efforts.

9. Time Schedule:

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<thead>
<tr>
<th>Event</th>
<th>Date</th>
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<tr>
<td>Design complete</td>
<td>December 2015</td>
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<tr>
<td>Abatement start</td>
<td>June 2015</td>
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<tr>
<td>Construction complete</td>
<td>May 2017</td>
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10. Project Team:

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<th>Role</th>
<th>Name</th>
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<td>Architect</td>
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<td>Construction Manager at Risk</td>
<td>JE Dunn Construction</td>
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11. Recommendation:
The above described project scope of work, cost, funding, and schedule is appropriate:

Steven Crouch, Dean - College of Science and Engineering

Richard Pfutzenreuter, Vice President and Chief Financial Officer

Pamela Wheelock, Vice President - University Services
Tate Science and Teaching Renovation
Twin Cities Campus
Site Location Map

Tate Science and Teaching Renovation

North
Tate Science and Teaching Renovation
Twin Cities Campus

Board of Regents Facilities and Operations Committee
December 11, 2014
Location Map

Tate Science and Teaching Renovation
Project Rationale

- Competitive disadvantage due to existing building condition
  - Building constructed in 1926
  - Laboratories are old and inflexible
  - Systems require upgrade
  - Code deficiencies

- Co-location
  - Consolidation of Earth Sciences Department
  - School of Physics and Astronomy
• School of Physics and Astronomy and Department of Earth Science 230,000 GSF facility
  – Renovation 151,500 GSF
  – New Construction of 78,500
• Project includes:
  – Teaching and Research Labs
  – Classrooms
  – Offices and support space
  – Abatement and Code Improvements
  – Systems modernized
  – Exterior rehabilitation
Project Description

• Anticipated Completion:
  – May 2017

• Estimated Annual Operating Costs:
  – Anticipated 10 – 15% reduction

• Architect:
  – Alliiance

• Project Delivery Method:
  – Construction Manager at Risk:
    • JE Dunn Construction
Project Finances

• Project Cost
  – Construction Cost $80,230,000
  – Non-Construction Cost 12,270,000
  Total Project Cost $92,500,000

• Capital Funding
  – 2014 Legislative Appropriation $56,700,000
  – University Debt 33,550,000
  – College of Science and Engineering 2,250,000
  Total Capital Funding $92,500,000
Site Plan

Current

Future
Floor Plans

Color Legend
- Office
- Research Lab
- Teaching Lab
- Flexible Learning Lab
- Classroom
- Hallway
- Stair/Elevator
- Core, MEP, Support
Floor Plans

Color Legend
- Office
- Research Lab
- Teaching Lab
- Flexible Learning Lab
- Classroom
- Hallway
- Stair/Elevator
- Core, MEP, Support

Level 2
1. **Basis for Request:**

   The Minnesota Aquatic Invasive Species Research Center (MAISRC) requires a modern research environment to maximize the state's ability to respond to current and future threats to Minnesota's waters. This type of research and holding facility will be the only one in the state of Minnesota where a multitude of aquatic invasive species will be studied in a concerted and cross-disciplinary fashion.

2. **Scope of Project:**

   The Aquatic Invasive Species Lab Renovation project will renovate 10,170 square feet for the MAISRC program in the existing Engineering and Fisheries Laboratory building located on the St. Paul campus. The project consists of aquatic holding and effluent treatment, biological lab/research facilities, office and support space, upgrades to the building systems, as well as ADA and code upgrades. A winter storage facility for boat/trailer storage and equipment is also included.

3. **Master Plan:**

   The project is consistent with the 2009 Twin Cities Master Plan.

4. **Environmental Issues:**

   Hazardous materials (asbestos) will be abated.

5. **Cost Estimate:**

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6. **Capital Funding:**

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<td>1,738,000</td>
</tr>
<tr>
<td>Total Capital Funding</td>
<td>$7,200,000</td>
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</tbody>
</table>

7. **Capital Budget Approvals:**

   The project was approved in the FY 2015 Annual Capital Budget at the June 2014 Regents meeting.
8. Annual Operating and Maintenance Cost and Source of Revenue:
   It is anticipated there will be no significant change in operating costs for the building.

9. Time Schedule:
   
   Design complete
   Construction complete

   April 2015
   November 2015

10. Project Team:
   
   Architect:
   Burns & McDonnell, Minneapolis
   Construction Manager at Risk:
   TBD

11. Recommendation:
   The above described project scope of work, cost, funding, and schedule is appropriate:

   Brian Buhr, Dean - College of Food, Agricultural, and Natural Resource Sciences
   11/25/14

   Richard Pfitzenreuter, Vice President and Chief Financial Officer
   12/12/14

   Pamela Wheelock, Vice President for University Services
Aquatic Invasive Species Lab Renovation
Twin Cities Campus

Site Location Map
Aquatic Invasive Species Lab Renovation
Twin Cities, St. Paul Campus

Board of Regents Facilities and Operations Committee
December 11, 2014
Project Rationale

- Unique facility to study aquatic invasive threatening Minnesota’s waters
- Create a modern research environment
- Position MAISRC for the future
Project Description

- Renovation of 10,170 GSF
  - Aquatic Holding Facilities including Effluent Treatment
  - Biological Laboratory/Research Facilities
  - Office and support space
- Equipment storage

Existing Holding Facility
**Project Description**

- **Cost Estimate**
  - Construction $5,562,000
  - Non-construction $1,638,000
  - Total Project Cost $7,200,000

- **Capital Funding:**
  - 2014 Legislative Appropriation $4,667,000
  - Department Funds 795,000
  - University Debt $1,738,000
  - Total Project Budget $7,200,000
Project Description

- Anticipated Completion:
  - November 2015

- Estimated Annual Operating Costs:
  - No change

- Architect:
  - Burns & McDonnell

- Project Delivery Method:
  - Construction Manager at Risk
    - Contractor TBD
Building Interior - AIS Lab

Aquatic Plants

Fish Holding Tanks

Effluent Treatment
Facilities & Operations  December 11, 2014

**Agenda Item:** Optimizing the University’s Physical Assets: Systemwide Campus Infrastructure

- **Review**
- **Review + Action**
- **Action**
- **X** Discussion

*This is a report required by Board policy.*

**Presenters:**
- Michael Berthelsen, Associate Vice President, Facilities Management
- Jerome Malmquist, Director of Energy Management, Facilities Management

**Purpose & Key Points**

Delivery of the University’s core missions of teaching, research, and outreach is dependent on more than 400 buildings encompassing over 29 million gross square feet of space across five campuses. In turn, each of these facilities is dependent on an extensive campus infrastructure to guarantee their operation. Without the services provided by campus infrastructure, the work of University faculty, students, and staff can be disrupted, putting investments by the state, granting agencies, donors, and tuition payers in jeopardy. Through a variety of technologies and service models, University employees and partners ensure that cost-effective, reliable, and sustainable infrastructure services such as electricity, chilled water, steam, hot water, potable water, and stormwater management are provided on each campus.

Providing adequate infrastructure requires significant and continuous financial investment for planning, installation, maintenance, and replacement. As the campuses age and grow, and demands placed on infrastructure increase, continued and consistent investment in the underlying infrastructure becomes even more essential. Along these lines, during the past year the University has begun or advanced several large projects related to infrastructure, including:

- Development, design, and installation of an electrical utility master plan for the Crookston campus.
- Replacement of the emissions control system for the biomass gasifier at the Morris campus.
- Adding chilled water capacity at the Duluth campus.
- Demolition and abatement of material at the Old Main Heating Plant as part of the Combined Heat and Power Plant project on the Twin Cities campus.

These and other infrastructure projects are integral to the goal of optimizing the University’s physical assets. By building and maintaining effective, reliable, and adaptable infrastructure, the institution supports current and future functions of buildings and the programs they support. The presentation will update the committee on efforts to maintain and enhance infrastructure services at the University, and provide a foundation of knowledge to support future decisions and actions.
Background Information

A brief history of related presentations include:

- February 2014: Report on Sustainability, Energy Management, and Utilities to the Facilities and Operations Committee
- February 2013: Report on Energy Management and Utilities to the Facilities and Operations Committee
Optimizing the University’s Physical Assets: System-wide Campus Infrastructure

Board of Regents Facilities and Operations Committee
December 11, 2014
Infrastructure Components

- Utility Production and Procurement
- Utility Distribution
- Building Systems
Infrastructure Makes It Possible

- 15,635 Degrees Awarded
- $849 Million in R&D
- Thousands of people supported through clinics and extension services
Guiding Principles

- Sustainable
- Cost Effective
- Reliable
Strategic Discussion Topics

- Critical infrastructure reaching the end of its useful life
- Opportunities to leverage expertise and resources across the system
- Partnership with adjacent communities
- Engagement with regulators and legislators on policy and law
- Utilize climate action plan to inform priorities and work plans
- When and why to utilize District Utility approaches
Underground Utilities
CURRENT PROJECTS
Crookston

- Electrical Master Plan Complete
- Converting from 4.16 kV system to a 12.47 kV distribution system
- Phase 1 beginning in 2015
- Supports reliability
Duluth

- Connect new 1000 ton chiller to existing system
- Will complete campus chilled water infrastructure
- One of three chiller pods on campus
- Work completed by UMD facilities management
- Supports cost effectiveness and reliability
Duluth

- Replace 870’ of existing steam line
- Existing steam line is failing
- Replace existing condensate line
- Remove and replace unsuitable soils
- Project scheduled for summer 2015
- Supports reliability
• Replacing gasifier emissions control systems
• Commissioning summer 2015; Operation fall 2015
• Supports reliability, cost effectiveness, and sustainability
- 20 KW solar PV array using Made-in-Minnesota incentive program
- Panels from tenK Solar in Bloomington, MN
- Supports cost effectiveness and sustainability
Twin Cities

- Combined Heat and Power to supply steam and electricity to campus
- Anticipated to begin operation in 2016
- Supports cost effectiveness, reliability, and sustainability
Electricity

- >20% of distribution cabling is nearing the end of reliable service life
- Strategic replacement of old systems is highly recommended in order to maintain system reliability
Commonwealth Terrace

- Complex electrical distribution has experienced a series of cable failures
- A design to replace the system is currently underway
Electric Feeder Capacity

- 4th Street and Fulton switch stations do not have any available feeders or breakers ready to support new facilities
- A third station in the northeast area of Minneapolis campus would address capacity needs
Twin Cities - Utilities Infrastructure Renewal

Steam

• Rehabilitate Minneapolis steam shafts that are in poor condition
• Shafts are required to provide a connection between tunnels and the surface
• 2 of 12 shafts have been renewed
Chilled Water

- A number of production chillers and cooling towers are near/past their reliable service life span
- Strategic equipment replacement is required to maintain reliable services
Twin Cities - Utilities Infrastructure Renewal

Stormwater

- Two Mississippi River stormwater outfalls owned by the University are greatly degraded and require renewal
- Rehabilitation project is currently in design
Twin Cities - Building Automation Systems

- Building Automation Systems (BAS) consist of over 700,000 control points
- Many systems have reached the end of their useful life and require upgrade/retrofits
- BAS infrastructure upgrades will increase reliability, occupant comfort, and energy efficiency
- A systemic funding mechanism must be identified
District Energy

• Advancing the Master Plan
• Potential district heating and cooling supplied by near area established system operators
MANAGING DEMAND
Recommissioning Program

Phase 1
- Inspect, analyze and repair building systems
- Return buildings to “Like New” designed performance specifications

Phase 2
- Identify Energy Conservation Opportunities (ECOs)
- Design and implement ECOs that meet predetermined ROI goals. (Typically < 5 years)

Goals
- Reduce Energy Consumption
- Reduce Carbon Footprint
- Improve Comfort and Functionality of the building
Energy Conservation Efforts

Biological Sciences Building

- Constructed late 1960’s, Occupied 1969
  - 207,000 gross sq ft
  - Constant volume ventilation
  - Laboratory, Classroom, and Office Space (60%, 20%, 20%)

- Recommissioning efforts from Spring 2013 through Summer 2014.
  - Reduced ventilation rates
  - Installed occupancy sensors
  - Reduced re-heat temperatures
  - Some conversion to 2-speed fume hoods

46% Energy Reduction
36% Reduction in Carbon Emissions
Over $400,000 Annual Cost Avoidance
Twin Cities: Conservation Works

• Steam consumption intensity decreasing
  – Minneapolis Campus: -3.6%/Fiscal Year
  – St. Paul Campus: -5.9%/Fiscal Year
Twin Cities: Conservation Works

- Electric Consumption Intensity Decreasing
  - East Bank Campus: -6.0%/Fiscal Year
  - West Bank Campus: -9.7%/Fiscal Year
  - St. Paul Campus: -6.3%/Fiscal Year
Strategic Discussion Topics

• Critical infrastructure reaching the end of its useful life
• Opportunities to leverage expertise and resources across the system
• Partnership with adjacent communities
• Engagement with regulators and legislators on policy and law
• Utilize climate action plan to inform priorities and work plans
• When and why to utilize District Utility approaches
Facilities & Operations

Agenda Item: Real Estate Transactions

☐ Review  x Review + Action  ☐ Action  ☐ Discussion

☐ This is a report required by Board policy.

Presenters: Pamela Wheelock, Vice President, University Services
Susan Carlson Weinberg, Director of Real Estate

Purpose & Key Points

In accordance with Board of Regents Policy: Reservation and Delegation of Authority, review and approve the following real estate transactions:

A. Sale of 51.72 Acres, Carver County (Landscape Arboretum)

Peachtree Arboretum, LLC, will be purchasing the subject property for the sum of $1,702,500.

B. Purchase of Block 31, Regents Addition, Hennepin County (Twin Cities Campus)

The University will purchase the subject property for the sum of $25,800,000. The transaction will include a $1,000,000 broker fee paid by the University and an $800,000 donation to the University by the seller, for a net to the University of $26,000,000.

Additional details of these transactions and their financial impact are described in the docket materials.

Background Information

Board of Regents Policy: Reservation and Delegation of Authority states that “The Board reserves to itself authority to approve the purchase or sale of real property with a value greater than $1,250,000, or larger than ten (10) acres,” and “leases of real property, easements, and other interests in real property if the initial term amount to be paid by or to the University exceeds $1,250,000, consistent with Board policies.”

In December, 2012, the Board of Regents was advised of the plan to offer for sale two parcels at the Landscape Arboretum, the subject 51.72 acres and a second parcel totaling 18.13 acres, to help fund the purchase of 78.13 acres for expansion of the Landscape Arboretum that was being negotiated at that time. In March 2013, the Board of Regents approved the purchase of the 78.13 acres and that purchase was completed on November 1, 2013. In May 2014, the Board of Regents approved the sale of the 18.13 acres, and that sale was completed on October 20, 2014.
**President’s Recommendation**

The President recommends approval of the following Real Estate Transactions:

A. Sale of 51.72 Acres, Carver County (Landscape Arboretum)

B. Purchase of Block 31, Regents Addition, Hennepin County (Twin Cities Campus)
Real Estate Transactions

Board of Regents Facilities and Operations Committee
December 11, 2014
Sale of 51.72 Acres
Carver County

This map is intended to be used for planning purposes only and should not be relied upon where a survey is required.
Purchase of Block 31
Minneapolis, MN
SALE OF 51.72 ACRES IN CARVER COUNTY
(LANDSCAPE ARBORETUM)

1. Recommended Action

The President recommends that the appropriate administrative officers receive authorization to execute the appropriate documents for the sale of 51.72 acres of land in Carver County to Peachtree Arboretum, LLC.

2. Location and Description of the Property

The subject property is located south of West 82nd Street in Chaska, along the southerly border of the Landscape Arboretum (see attached map). The property consists of 51.72 acres of vacant land.

The legal description of the property:
Parts of Sections 17 and 18, Township 116, Range 23, Carver County, Minnesota;
Except minerals and mineral rights.

3. Basis for Request

The subject property (along with an 18.13 acre parcel located west of Bavaria Road) was identified for sale in late 2012 in conjunction with identifying funding sources for the planned purchase of 78.13 acres for expansion of the Landscape Arboretum. The 51.72 acre parcel was then offered for sale in the spring of 2013 to the City of Chaska, Carver County and the State of Minnesota. None of those governmental entities indicated an interest in purchasing the property, and it was then offered for sale to the public by Invitation to Bid. Since no acceptable bids were received, the property was then listed for sale with a local real estate broker.

As a result of the sale listing for the 51.72 acres, Peachtree Arboretum, LLC submitted an offer to purchase the property for residential development. The extensive negotiations with Peachtree resulted in a final sale price of $1,702,500.

Peachtree Arboretum, LLC is a Delaware limited liability company. (The individual partners in Peachtree Arboretum, LLC have extensive successful residential development experience.)
4. Details of Transaction

The sale price will be $1,702,500, with one half of the purchase price ($851,250) paid in cash at closing, and the balance of the purchase price ($851,250) paid on a three-year contract for deed with an interest rate of 3.25%.

The closing date is 12 months following purchase agreement execution, but can be extended up to one year in 6-month increments with additional earnest money deposits by the buyer. The initial earnest money deposit paid by the buyer at purchase agreement execution will be $60,000 and goes hard 6 months after payment. If the buyer opts to extend the closing date twice, additional earnest money deposits of $80,000 and $110,000, respectively, will be due; each additional earnest money deposit goes hard 60 days after payment.

5. Use of Proceeds

The net proceeds from the sale of the subject 51.72 acres (along with the net proceeds from the sale of the 18.13 acres, which sale closed October 20, 2014) will pay off a $1,312,500 internal loan issued to the Landscape Arboretum for part of the purchase price for the 78.13 acres acquired in November, 2013 for expansion of the Landscape Arboretum. The balance of the net proceeds from the sale of the subject 51.72 acres will be deposited to the Real Estate Acquisition Account for future purchases of real estate or other capital assets by the Landscape Arboretum consistent with the University’s strategic planning.

6. Recommendations

The above-described real estate transaction is appropriate:

Karen Hanson, Senior Vice President for Academic Affairs and Provost

Richard H. Pfutzenreuter III, Vice President and CFO

Pamela Wheelock, Vice President for University Services
Sale of 51.72 Acres
Carver County

This map is intended to be used for planning purposes only and should not be relied upon where a survey is required.

Base Data: Real Estate Office MNDNR, MNDOT, Carver County
November 21, 2014
PURCHASE OF BLOCK 31, REGENTS ADDITION, HENNEPIN COUNTY (TWIN CITIES CAMPUS)

1. Recommended Action

The President recommends that the appropriate administrative officers receive authorization to purchase Block 31, Regents Addition, Hennepin County, Minnesota.

2. Location and Description of the Property

The subject property consists of 14 separate tax parcels totaling 2.29 acres bounded by Huron Boulevard SE, Essex Street SE, Erie Street SE, and Fulton Street SE. The subject property is the block located directly east of Block 12 of Baker's Addition where the new Ambulatory Care Center is being constructed.

The legal description of the property is Block 31, Regents Addition, Hennepin County, Minnesota.

3. Basis for Request

The subject property is included within the master plan boundary of the Twin Cities-Minneapolis-East Bank Campus, and designated for future campus expansion.

CPM Development, the seller of the subject property, approached the University offering the sale of the entire block after purchasing 3 of the 14 parcels and executing purchase agreements or purchase options for all remaining parcels in the block, with closing to occur when the property can be conveyed in vacant condition.

4. Details of Transaction

The purchase price for subject property will be $25,800,000. The transaction will include a $1,000,000 broker fee paid by the University and an $800,000 donation to the University by the seller, for a net to the University of $26,000,000.

The transaction will involve two closings. The first closing will occur on or before January 9, 2015 and will cover the property at 1014, 1018 and 1022 Essex Street SE. The portion of the purchase price attributed to these 3 properties, which were acquired by CPM Development for development of an extended-stay hotel, for which all required approvals by the City of Minneapolis were granted, is $6,607,200. The closing on the balance of Block 31 is expected to
occur on or before September 1, 2015 and will cover the property at 1000 and 1010 Essex Street SE, 509, 513, 521, and 523 Erie Street SE, 1001 and 1007 Fulton Street SE, and 514, 520 and 524 Huron Boulevard SE. The portion of the purchase price attributed to these 11 properties totals $19,192,800.

5. Use of Properties

The properties on Block 31 will remain vacant until the University determines the appropriate use or uses of the land.

6. Environmental

The University will complete Phase I environmental site assessments of the property to confirm the property is in acceptable environmental condition prior to the two closings.

7. Source of Funding

The University will issue debt to purchase the subject property.

8. Recommendations

The above-described real estate transaction is appropriate:

Karen Hanson, Senior Vice President for Academic Affairs and Provost

Richard H. Pfutzenreuter III, Vice President and CFO

Pamela Wheelock, Vice President for University Services

[Signatures]
Purchase of Block 31
Minneapolis, MN

This map is intended to be used for planning purposes only and should not be relied upon where a survey is required.

Base Data: Real Estate Office
Hennepin County
12/1/2014
Facilities & Operations

December 11, 2014

Agenda Item: Consent Report

☐ Review  ☑ Review + Action  ☐ Action  ☐ Discussion

☐ This is a report required by Board policy.

Presenters: Pamela Wheelock, Vice President, University Services

Purpose & Key Points

Facilities Management recommends replacement of the chiller at Eastcliff. The 20-ton, air-cooled chiller, circa 1984, provides chilled water for air-conditioning at the facility. This chiller is at the end of its lifecycle and was identified as needing replacement during a Facility Condition Assessment conducted in July 2014.

Unlike the current chiller, the new unit will include multiple, phased compressors so it can operate more efficiently by meeting only the demand required, which will reduce utility costs. This setup will also provide greater reliability – if one compressor fails or needs maintenance, the house will continue to have air conditioning. Proceeding with the project now will guarantee the new chiller is installed and operating by summer 2015. The cost to procure and install the new chiller has been estimated at $40,000 plus project administration and permitting costs. The project will be funded with Facilities Management’s budgeted Repair and Replacement funds approved by the Board of Regents in the annual capital budget.

The Eastcliff Technical Advisory Committee and Eastcliff Advisory Board reviewed the project and unanimously recommend its approval.

Background Information

Eastcliff serves as home to the University of Minnesota president and as the ceremonial center of the University. It is one of Minnesota’s great architectural treasures and is on the National Register of Historic Places. Each year, it hosts around 150 events and welcomes 7,500 visitors, including public tours, local and international dignitaries, students, faculty, and even a community book club.

Eastcliff (so-named for its location high above the eastern banks of the Mississippi River) was built in 1922 as the private home of lumber baron Edward Brooks and his family. The home was designed by Clarence Johnston, the most sought-after residential architect in St. Paul at the time. Johnston also served as Minnesota’s state architect for 30 years. The estate’s design included a 10,000 square foot Colonial Revival style home, extensive gardens, walkways, and a summer house. When the Brooks Family donated the two-acre estate to the University of Minnesota in 1958, Eastcliff became a public treasure to be enjoyed by the people of Minnesota.
Agenda Item: Information Items

☐ Review  ☐ Review + Action  ☐ Action  ☒ Discussion

☒ This is a report required by Board policy.

Presenters: Pamela Wheelock, Vice President, University Services

Purpose & Key Points

To update the Board of Regents regarding the following information items:

A. Lease for 15,726 Rentable Square Feet of Office and Laboratory/Warehouse Space at 2609 Territorial Road, St. Paul, Commencing December 1, 2014 for College of Science and Engineering/Minnesota Geological Survey (Twin Cities Campus)

Emergency approval on October 17, 2014 of Lease for 15,726 Rentable Square Feet of Office and Laboratory/Warehouse Space at 2609 Territorial Road, St. Paul, Commencing December 1, 2014 (College of Science and Engineering/Minnesota Geological Survey)

In accordance with Board of Regents Policy: Board Operations and Agenda Guidelines, the President requested emergency action for the approval the above-described lease. The emergency approval was requested to allow execution of the lease, required by the landlord to commence construction of leasehold improvements, allowing the lease to commence December 1, 2014 and the Minnesota Geological Survey to relocate to 2609 Territorial Road between fall and spring semesters.

B. Planned Sale of 2642 University Avenue, Saint Paul (Twin Cities Campus)

The University is planning to offer for sale the property at 2642 University Avenue in Saint Paul. The building at 2642 University Avenue is in need of substantial upgrades. The Westgate Station of the Green Line LRT is located at the building’s front door, and substantial development is occurring in the area. The building will be vacated by the end of January 2015.

Additional details of these transactions and their financial impact are described in the docket materials.


This report includes projects in process that have been approved in the Capital Improvement Budget and for which the Board of Regents are required to approve the Schematic Design. The
report highlights progress performed and challenges encountered in delivering the project scope of work within the approved budget and schedule.

The Capital Planning and Project Management Semi-Annual Project Report is presented in the summer and in the winter to provide performance information prior to the consideration of the Annual Capital Improvement Budget and the Six-Year Capital Plan

**Background Information**

Information items are intended to provide the Board of Regents with information needed for them to provide their oversight responsibilities.
October 17, 2014

To: President Eric Kaler

From: Sarah Dirksen, Deputy Director

Re: Emergency Approval

By email on October 17, 2014, Chair Beeson, Vice Chair Johnson, and Facilities & Operations Committee Chair Allen each reviewed and approved the request from you for emergency approval of the following action (as described in the attached letter):

Lease for 15,726 Rentable Square Feet of Office and Laboratory/Warehouse Space at 2609 Territorial Road, St. Paul, Commencing December 1, 2014 (College of Science and Engineering/Minnesota Geological Survey).

I understand that this information will be reported to the Board of Regents at the December 2014 meetings, as required by Board Policy.

c: Richard Pfuntenreuter, Vice President
Pamela Wheelock, Vice President
Susan Carlson Weinberg, Director of Real Estate
October 16, 2014

The Honorable Richard Beeson
The Honorable Dean Johnson

The Honorable Clyde Allen
The Honorable Thomas Devine

Dear Members of the Board:

Board of Regents Policy: *Board Operations and Agenda Guidelines* allow for an emergency procedure if an emergency situation exists as defined in the Guidelines. Specifically, in Section II, Subd. 10, the policy reads as follows:

Upon the recommendation of the president, the Board chair, vice chair, and the respective committee chair may act on behalf of the Board when delay for Board approval poses a significant health, safety, or financial risk to the University. Any such emergency approvals will be brought to the next meeting of the Board, consistent with Board policy.

I am recommending use of this emergency process for Board approval of the following item, to prevent delay that could pose a financial risk to the institution: 104-month lease for Minnesota Geological Survey – Review/Action:

Lease for 15,726 Rentable Square Feet of Office and Laboratory/Warehouse Space at 2609 Territorial Road, St. Paul, Commencing December 1, 2014 (College of Science and Engineering/Minnesota Geological Survey)

Upon Board approval of this transaction, the University will be able to execute the lease which will allow the landlord for the property at 2609 Territorial Road to begin the leasehold improvements to prepare the premises for occupancy by the Minnesota Geological Survey. This will allow the lease to commence December 1, 2014, and the Minnesota Geological Survey to relocate to 2609 Territorial Road between fall and spring semesters.

Thank you for your attention to this request. Additional information regarding this item is enclosed.

Sincerely,

[Signature]

Eric W. Kaler
President

Enclosures

cc: Brian Steeves, Executive Director and Corporate Secretary, Board of Regents
    Richard H. Pfutzenreuter, III, Vice President and CFO
    Pamela Wheelock, Vice President, University Services
    Susan Carlson Weinberg, Director of Real Estate

*Driven to Discover*™

147 of 172
104-MONTH LEASE
AT 2609 TERRITORIAL ROAD, ST. PAUL, MINNESOTA
FOR COLLEGE OF SCIENCE AND ENGINEERING,
MINNESOTA GEOLOGICAL SURVEY
(TWIN CITIES CAMPUS)

1. Recommended Action

The President recommends that the appropriate administrative officers receive authorization to execute a 104-month lease with two successive five-year renewal options for 15,726 rentable square feet located at 2609 Territorial Road, St. Paul for occupancy by the College of Science and Engineering, Minnesota Geological Survey.

2. Description of Leased Premises

The leased premises will consist 15,726 rentable square feet (RSF) of space for office purposes (10,280 RSF) and laboratory/warehouse purposes (5,446 RSF) at the Westgate I Business Center Building located at 2609 Territorial Road, St. Paul (see attached map).

3. Basis for Request

The property at 2642 University Avenue is the only remaining property owned by the University in the Midway Area of St. Paul. The building, constructed in 1920, is in need of substantial upgrades (roof, original windows, original plumbing fixtures, obsolete electrical distribution panels, etc.). With the opening of the Green Line LRT Westgate Station at the front door of this building, and the substantial redevelopment occurring in the area, vacating the building and offering the property for sale is advisable.

The Minnesota Geological Survey (MGS) occupies the majority of the building space: 21,218 assignable square feet. Other current building occupants are the Weisman Art Museum (storage) and the Office of General Counsel (storage).

After determining that no on-campus space was available for the MGS, an extensive search and tour of nine possible locations near the Twin Cities Campus occurred. The subject location was selected as the most desirable due to its existing configuration including some office build-out that limited required leasehold improvements, close proximity of existing University telecommunications infrastructure and public transportation (bus routes and LRT), and price.
4. Details of Transaction

The subject lease for 15,726 RSF will commence approximately December 1, 2014 and continue for a 104-month initial term (through July 31, 2023), with two successive five-year renewal options thereafter (potentially through July 31, 2033). The Landlord is CSM Family Holdings, LLC. The lease costs will consist of base rent, CAM/Taxes (common area maintenance costs and property taxes), plus utilities, custodial services, and repairs and maintenance for the leased premises.

5. Lease Costs

The University will receive free base rent for the first 8 months. The first year that base rent will be paid for 12 months, base rent for the leased premises will be $6.34 per RSF, or $96,216. The costs of CAM/Taxes are estimated at $4.72 per RSF. The cost of separately-metered utilities, custodial services, and repairs and maintenance for the leased premises are estimated at $2.00 per RSF. The total lease cost for the first year rent is paid for 12 months is estimated at $13.06 per RSF ($197,546).

Base Rent will increase on December 1, 2015 and on each December 1 thereafter over the initial term by 2% each year. CAM/Taxes and utilities, custodial services, and repairs and maintenance costs are estimated to increase by 2% each year.

The total cost of the lease over the initial 104-months is estimated at $2.082 million.

The University will reimburse the landlord for leasehold improvements to renovate the premises for occupancy by the MGS at a maximum cost of $270,000. The project consists of conversion of a dock-height door to a drive-in door, new retaining wall, new asphalt ramp, a chain link fence to provide a secured parking area for two (2) University vehicles, construction of additional offices (1,554 RSF), ADA restrooms, a conference room, and new carpet and paint throughout the 10,280 RSF of office premises.

Additional one-time costs related to the relocation of the MGS to the subject leased space are estimated at $290,000, which includes move costs, lab/warehouse/office equipment, furniture, and fiber/low voltage work to bring University telecommunications infrastructure to the building.

6. Source of Funds

The College of Science and Engineering will fund the on-going costs related to this lease.

The University’s share of the leasehold improvement costs, $270,000, and the relocation costs of $290,000, will be paid from the proceeds from the future sale of the property at 2642 University Avenue.
7. Recommendations

The above-described real estate transaction is appropriate:

Karen Hanson, Senior Vice President and Provost

Richard H. Pfitzenmayer, III, Vice President and CFO

Pamela A. Wheelock, Vice President for University Services
Planned Sale
2642 University Avenue
St. Paul, MN
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EXECUTIVE SUMMARY

This Semi-Annual Project Report submitted by Capital Planning & Project Management includes projects in process that have been approved in the Capital Budget and for which the Regents are required to approve the Schematic Plans. Once a project is reported as complete it is removed from subsequent reports.

The projects in this report are organized by phase: Projects in Design, Projects in Construction, and Completed Projects. A total of 17 projects are listed, 9 in design, 3 in construction, and 5 have completed.

The full scope of work within Capital Planning & Project Management includes the following project activity:

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TOTAL ..................................................................................... 354
CPPM MEASURES & STRUCTURE

CPPM uses the following performance measures and accepts full accountability for the following:

- Meeting project scope expectations
- Delivering expected quality
- Delivering projects on schedule
- Delivering projects on budget
- Improving process productivity
- Limiting / eliminating legal liabilities
- Promoting targeted business participation
- Support University of Minnesota sustainability initiatives

CPPM Organization:

- CPPM is organized as follows:
  - Planning
  - Design
  - Project Delivery
Description: The Minnesota Aquatic Invasive Species Research Center (MAISRC) currently occupies 10,172 square feet for a holding facility located in the Engineering and Fisheries Building on the St. Paul Campus. The Engineering and Fisheries Building was originally constructed in 1911. Only minor improvements to portions of the building have occurred over the years. The Engineering and Fisheries Building is deficient in the areas that support research, biological isolation, and building security in controlling access to live invasive organisms. Specific inadequacies include: restricted water supply, poor water treatment systems, inadequate electrical systems, building security without an alarm system, and no ability to hold and study large or reproducing animals or pathogens because of lack of effluent treatment.

Project Team

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<tr>
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<tr>
<td>Project Executive</td>
<td>AVP Suzanne Smith</td>
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<tr>
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Project Information

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Project Status

Schematic Design pending Regents approval at the December 2014 meeting
The project is on schedule and within budget
Projects in Design

Bee Research Laboratory, UMTC

Description: A 10,700 square foot state-of-the-art academic research laboratory on the St. Paul Campus to facilitate groundbreaking work on bee health and biodiversity. The Bee Research Laboratory at the University of Minnesota will create laboratory space to advance its’ research activities, train the next generation of scientists, and serve as an outreach facility that fosters meaningful dialogue on food security and the health of both rural and urban agriculture.

Project Team

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Project Status

Selection of design team pending outcome at the State Design Selection Board
**Projects in Design**

**Bell Museum and Planetarium, UMTC**

*Description:* A new 62,500 square foot Bell museum and planetarium facility at the intersection of Larpenteur Avenue West and Cleveland Avenue North, on the St. Paul campus. The proposed facility will enhance the state’s reputation for innovative research, education, and public engagement focused on Minnesota’s natural environments. The project includes a new planetarium, permanent and traveling exhibits, classrooms, an interactive “Discovery Room”, relocation of the existing historic “Jaques Dioramas”, enhanced interactive exhibit design, and outdoor exhibit areas.

**Project Team**

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**Project Status**

Selection of design team pending outcome at the State Design Selection Board
Projects in Design

Chemical Sciences and Advanced Materials (CSAM) Building, UMD

Site for the new CSAM Building

Description: A new facility which will contain instructional laboratories for the Department of Chemistry and Biochemistry (50,000 sf), interdisciplinary teaching and research program for Material Science and Engineering (10,000 sf), a research center for Industrial/Academic partnerships (7,500 sf), and classrooms consisting of one large flexible learning space (150 seats), two active learning classrooms (50 seats each), and four additional classrooms (30 seats each). The spatial adjacencies will provide opportunities for new collaborations in research and teaching, greater scientific communication, a synergistic interface between industrial and academic entities, and an environment that strengthens student classroom and laboratory outcomes.

Project Team

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Project Status

Selection of design team pending outcome at the State Design Selection Board
Projects in Design

Combined Heat and Power Plant, UMTC

Description: This project installs new combined heat and power (CHP) equipment in the existing Old Main Utility Building. The CHP equipment represents a two stage configuration: a new natural gas fired turbine will generate electricity for use on the Minneapolis campus, and a new heat recovery steam boiler will recover heat from the combustion gases that are discharged from the turbine to generate the required steam capacity. The CHP equipment solution reduces the University’s carbon footprint and, from an energy use standpoint, represents the best long term sustainable solution. The plant will be designed with space allocation for the future installation of a packaged boiler as well as two future steam turbine-driven chillers.

Project Team

| Project Team |
|------------------|------------------|
| Project Executives | VP Pamela Wheelock  |
| | AVP Suzanne Smith  |
| Project Director   | Bruce Gritters    |
| Project Manager    | Roger Wegner      |
| Design Professional | Jacobs Engineering|
| Construction Manager at Risk | Adolfson & Peterson |

Project Information

| Budget (pending capital budget amendment) | $112,991,000 |
| Estimated start of construction | January 2015 |
| Estimated Substantial Completion | June 2016 |

Project Status

Capital Budget Amendment for $17,100,000, with potential additional resources that may be required at a future date, is pending Regents approval at the December 2014 meeting.
Air emissions permit pending 30 day comment period
Hazardous material abatement is complete
Combustion turbine and heat recovery steam generator are in fabrication
Description: The Gateway Corporation is upgrading the Scholars Walk Wall of Discovery Corridor, located on the north side of Keller Hall. This corridor is a vital east-west campus connection. The upgrade will provide additional opportunities to honor University discoveries as well as enhance the pedestrian experience by creating an expanded zone of interest related to University achievements while providing additional lighting for a safer environment.
Projects in Design

Tate Science and Teaching Renovation, UMTC

**Description:** This project will renovate the existing 229,500 square foot Tate Lab of Physics building for the School of Physics and Astronomy and the Department of Earth Sciences. The exterior will be rehabilitated, all existing hazardous materials will be abated, the interior will be reconfigured, and floors will be “re-stacked”. Mechanical, plumbing, and electrical systems will be removed and modern systems will be provided. A new addition on the east side facing Church Street will provide a prominent, accessible entry.

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<tr>
<td>The project is on schedule and within budget</td>
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Projects in Design

Wellness Center Building, UMC

Description: This project will construct a new 36,070 square feet Wellness Center building to address the recreational needs of the entire student population. The major activity areas include a two-court gymnasium with suspended running track, a classroom, fitness/cardio areas, general locker rooms, and a multipurpose room for group exercise. The new Wellness Center will be adjacent to the existing UMC Sports Complex and connected by an enclosed walkway.

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<tr>
<td>Prime Contractor</td>
<td>JE Dunn Construction</td>
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Project Information

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<tr>
<th>Description</th>
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<tr>
<td>Budget</td>
<td>$15,000,000</td>
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<tr>
<td>Estimated Design Completion</td>
<td>April 2015</td>
</tr>
<tr>
<td>Estimated Substantial Completion</td>
<td>June 2016</td>
</tr>
</tbody>
</table>

Project Status

Schematic Design pending Regents approval at the December 2014 meeting
The project is on schedule and within budget
Projects in Construction

Biomedical Facilities - Microbiology Research Facility, UMTC

Description: This project will construct the fourth and final building in the Biomedical Facilities Program. It is funded 75% by the Minnesota Legislature and 25% by the University of Minnesota. The four-story, 89,000 square foot Microbiology Research Facility will be located to the north of and connected to the Cancer and Cardiovascular Research Building on the ground and first floors. The facility will house laboratories, offices, and collaborative work spaces for the faculty, staff, and graduate students of the Department of Microbiology. The budget reflects the amount remaining in the original $292 million program.

Project Team

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Executives</td>
<td>VP Pamela Wheelock</td>
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<tr>
<td></td>
<td>AVP Suzanne Smith</td>
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<tr>
<td>Project Director</td>
<td>Rick Johnson</td>
</tr>
<tr>
<td>Project Manager</td>
<td>Pete Nickel</td>
</tr>
<tr>
<td>Design Professional</td>
<td>BWBR Architects</td>
</tr>
<tr>
<td>Construction Manager at Risk</td>
<td>M.A. Mortenson</td>
</tr>
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Project Information

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<tbody>
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<td>Budget</td>
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<tr>
<td>Schedule for Substantial Completion</td>
<td>December 2015</td>
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</table>

Project Status

Construction is in progress with interior mechanical and electrical and plumbing systems being installed
Project is on schedule and within budget
Projects in Construction

University of Minnesota Health Clinics and Surgery Center, UMTC

Description: University of Minnesota Health Clinics and Surgery Center, previously known as the Ambulatory Care Center, is located four blocks east of the University of Minnesota Medical Center - Fairview Hospital. The project will construct a five-story 332,000 square foot facility. Clinical spaces will actively support the incorporation of educational and research for transformative team-based care, which will enhance the patient experience and the training experience. The program also will include flexible education/conference spaces to train future healthcare professionals including medical residents and fellows, pharmacy students, nursing students, and other disciplines.

Project Team

<table>
<thead>
<tr>
<th>Project Executives</th>
<th>VP Pamela Wheelock</th>
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<tbody>
<tr>
<td></td>
<td>AVP Suzanne Smith</td>
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<tr>
<td>Project Director</td>
<td>Rick Johnson</td>
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<tr>
<td>Project Manager</td>
<td>Dennis Sachs</td>
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<td>Construction Manager at Risk</td>
<td>McGough Construction</td>
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<tr>
<td>Off-Site Utilities Design Professional</td>
<td>Affiliated Engineers</td>
</tr>
<tr>
<td>Off-Site Utilities Construction Manager at Risk</td>
<td>Adolfson &amp; Peterson</td>
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</tbody>
</table>

Project Information

| Budget                      | $165,323,000 |
| Schedule for Substantial Completion | October 2015 |

Project Status

Construction is in progress and anticipated to be fully enclosed February 2015 and interior mechanical and electrical and plumbing systems are being installed. Project is on schedule and within budget.
Description: The existing 144,733 square foot Mechanical Engineering building provides office, research, and classroom space for the Department of Mechanical Engineering. Originally constructed in 1948, the building needs to be modernized with a comprehensive replacement and upgrade to its central infrastructure systems. This project is funded with HEAPR dollars and constructed in phases based on available funds. Phase 1 is substantially complete. Phase 2 consists of the installation of new electrical and telecommunication rooms, replacement of horizontal ductwork, heating/cooling piping, plumbing, electrical, and telecommunication systems to all floors in the North Wing.

**Project Team**

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<thead>
<tr>
<th>Role</th>
<th>Name</th>
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<tbody>
<tr>
<td>Project Executive</td>
<td>AVP Suzanne Smith</td>
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<tr>
<td>Project Director</td>
<td>Bruce Gitters</td>
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<td>Project Manager</td>
<td>Trevor Dickie</td>
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<td>Design Professional</td>
<td>Alliance</td>
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<tr>
<td>Construction Manager at Risk</td>
<td>M.A. Mortenson</td>
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</tbody>
</table>

**Project Information**

| Phase 1 Budget                      | $10,500,000           |
| Phase 2 Budget                      | $22,000,000           |
| Future Total Budget for All Phases  | $44,355,000           |
| Estimated Phase 1 Substantial Completion | December 2014     |
| Estimated Phase 2 Substantial Completion | December 2015     |

**Project Status**

Phase 1 will be substantially complete at the end of December 2014
Phase 2 construction has been initiated
Project is on schedule and within budget
Description: This project renovated a portion of the existing structure and constructed an addition to Amundson Hall. The additional laboratory and office space allows the Department of Chemical Engineering and Materials Science to add faculty, grow undergraduate enrollment, and increase the number of doctoral students. The infrastructure upgrades included the replacement of the original exterior curtain wall and all windows, rebuilding of the electrical vault, replacement of the emergency generator, life-safety improvements, exterior lighting replacement, connection of the entire building to the District chilled water system, and provided a second domestic water service.

Project Team

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<tbody>
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<td>Bruce Gritters</td>
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<td>Project Manager</td>
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<td>Design Professional</td>
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Project Information

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<td>Schedule for Substantial Completion</td>
<td>October 2014</td>
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Project Status

Project completed on schedule and within budget
Completed Projects

Glensheen Water Damage and Cleanup, UMD

**Description:** The Glensheen Historic Estate experienced extensive damage due to severe storms on June 19-20, 2012. This project restored the landscape and built site features to their pre-storm condition. The project was funded with FEMA Public Assistance and insurance reimbursement. Repairs maximized salvaged material to comply with State Historic Preservation Office requirements.

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<tr>
<th>Project Status</th>
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<tbody>
<tr>
<td>Project completed on schedule and within budget</td>
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</tbody>
</table>
Completed Projects

Laboratory/Classroom Facility, Itasca Biological Station

Description: This project constructed an 11,800 square foot laboratory/classroom and demolished three obsolete, energy inefficient buildings. The new building is designed to meet Minnesota B3 requirements and anticipates achieving LEED Gold status through a substantial reduction in energy use.

<table>
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<tr>
<th>Project Team</th>
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<tbody>
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<td>Project received a Certificate of Occupancy in August 2014</td>
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<tr>
<td>The project was within budget</td>
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</tbody>
</table>
Completed Projects

**TCF Bank Stadium Renovations, UMTC**

![Existing TCF Stadium](image)

**Description:** The scope of the project was driven by the needs of the Minnesota Vikings. The stadium was designed originally to be operated through the end of November. Areas of the stadium required winterization to protect systems from potential freezing and damage to the building. The project scope included replacing the existing artificial turf, installation of a field heating system, winterization of numerous spaces throughout the building, build out of existing 8,000 square foot shelled space for storage needs, additional camera platforms and data wiring for NFL requirements, and temporary bleachers on the west plaza that accommodate approximately 1,750 seats.

**Project Team**

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<td>Rick Johnson</td>
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**Project Information**

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<td>Substantial Completion</td>
<td>August 2014</td>
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</table>

**Project Status**

The project was completed on schedule and within budget.
Completed Projects

**Williams Arena Roof Repair and Replacement, UMTC**

**Description:** Williams Arena was constructed in 1927. In 1948 the building was remodeled and the current aluminum roof system was installed on the barrel vault. The previous roofing system had been in place for 66 years and began to fail. The project provided a new aluminum roof system, approximately 119,000 square feet in area, and an anticipated 60-year life span. The project also provided a new built-up roof system for all flat roofs.

**Project Team**

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<td>Miller Dunwiddie</td>
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<td>M.A. Mortenson</td>
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**Project Information**

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**Project Status**

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