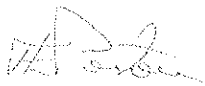


MICHIGAN STATE
U N I V E R S I T Y

January 18, 2012

MEMORANDUM

To: Trustee Finance Committee

From: Fred L. Poston 

Subject: **Project Approval - Authorization to Proceed**
Steam Distribution - West Circle Steam Loop and Eustace-Cole
Hall to Mason Hall

RECOMMENDATION

BE IT RESOLVED that the Trustee Finance Committee recommends that the Board of Trustees authorize the Administration to proceed with the project entitled Steam Distribution - West Circle Steam Loop and Eustace-Cole Hall to Mason Hall, and to approve a budget of \$21,500,000.

BACKGROUND

Program Need:

The north campus arch-style steam tunnels are 87-102 years old and have significantly deteriorated. The structural anchors, pipe supports, and steam equipment within these tunnels are also severely deteriorated and require replacement or repair for safe and reliable operation of the steam distribution system.

Description of the Project:

This project is combining both the West Circle Steam Loop and the Eustace-Cole Hall to Mason Hall steam distribution projects. The project area is located on north campus, along West Circle Drive (from Landon Hall to Eustace-Cole Hall) and East Circle Drive (from Eustace-Cole Hall to Mason Hall), in the North Academic District. This project is the first of a four-phase program to replace the deteriorating north campus arch steam tunnels, and will include installation of a new steam distribution loop, repair of structural anchors, pipe supports, and steam equipment within these tunnels, increased line capacity for high-pressure steam and converting the condensate return from a vacuum system to a pressure return.

During this construction, all the buildings in the zone of influence will be converted to high-pressure steam and pressure-condensate return lines, improving energy efficiency. The deteriorated cast-iron water main will be replaced to increase fire-flow capacity and reliability. Additional communication and electrical duct will be



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installed according to master plans. West Circle Drive will be replaced with two traffic lanes and one bike lane (one-way traffic); East Circle Drive from the east side of Berkey Hall to West Circle Drive will be replaced with two traffic lanes and two bike lanes (connecting to the existing profile in front of the Art Museum), providing appropriate vehicular, pedestrian, and bicyclist safety improvements. The intersection of Beal Street and West Circle will be reconfigured to provide a safer environment and ten on-street parking spaces will be removed north of Adams field to alleviate pedestrian/vehicular visibility issues in this area.

The Architect/Engineer is Fishbeck, Thompson, Carr, & Huber Inc. The Construction Manager is Granger Construction.

Based on an assessment of the factors stated in the Project Planning and Approval process concerning Project Labor Agreements (PLA), the Vice President for Finance and Operations and Treasurer has determined that a PLA would not be required for this project.

Communication Feedback:

The campus community was given opportunities to provide feedback during the planning phase; concerns have been addressed in the project design.

The Office of Campus Planning and Administration has reviewed this project and found it to be consistent with the Campus Master Plan and Planning Principles. The Campus Infrastructure Planning Work Group also supports the recommendation to proceed with the project.

As construction proceeds, the schedule and phasing will be reviewed with the campus community.

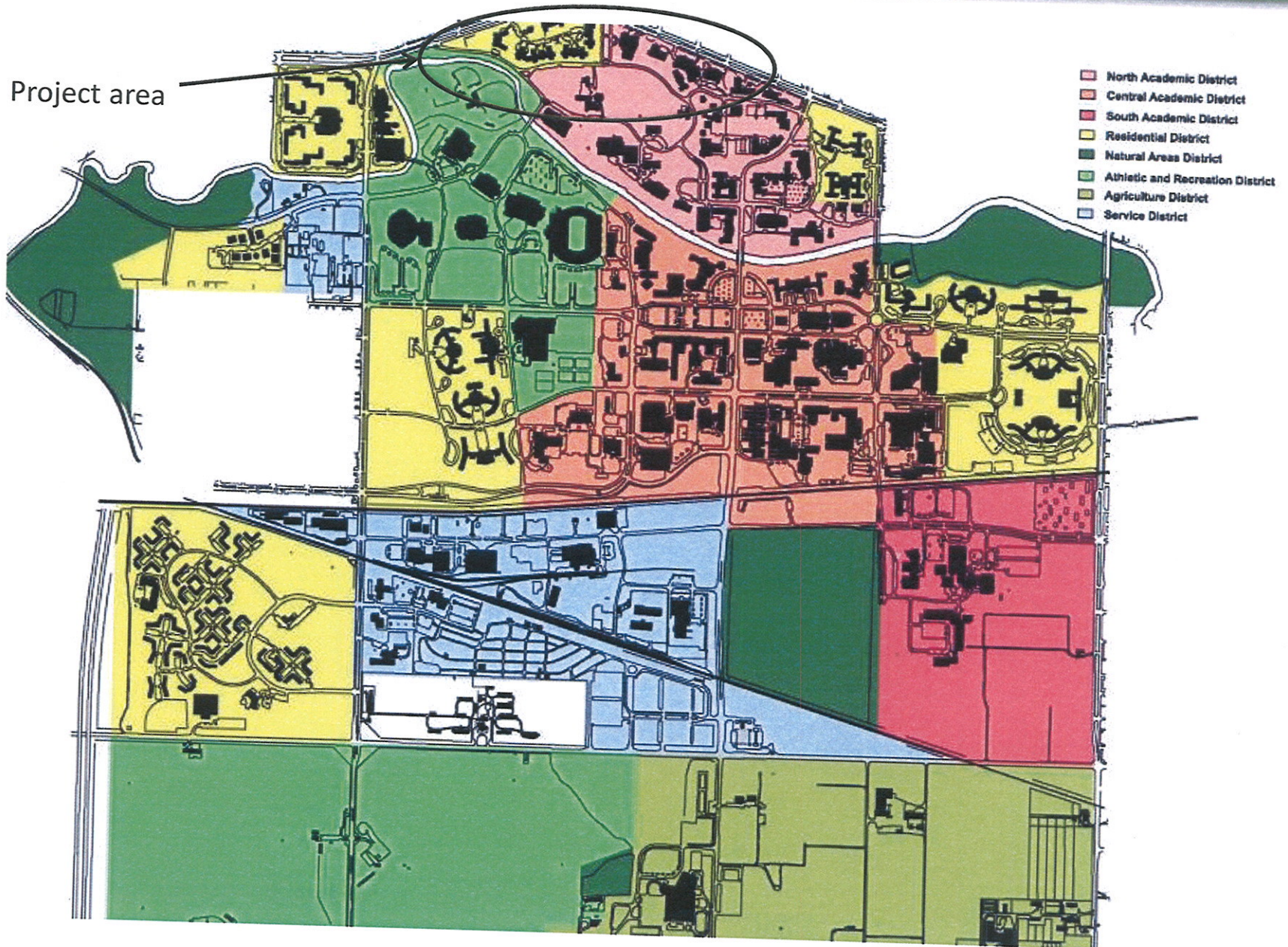
Project Cost and Timetable:

The budget for this Construction Manager project is \$21,500,000. The source of funds for this project is tax-exempt financing with debt repayment from the General Fund - Just-In-Time.

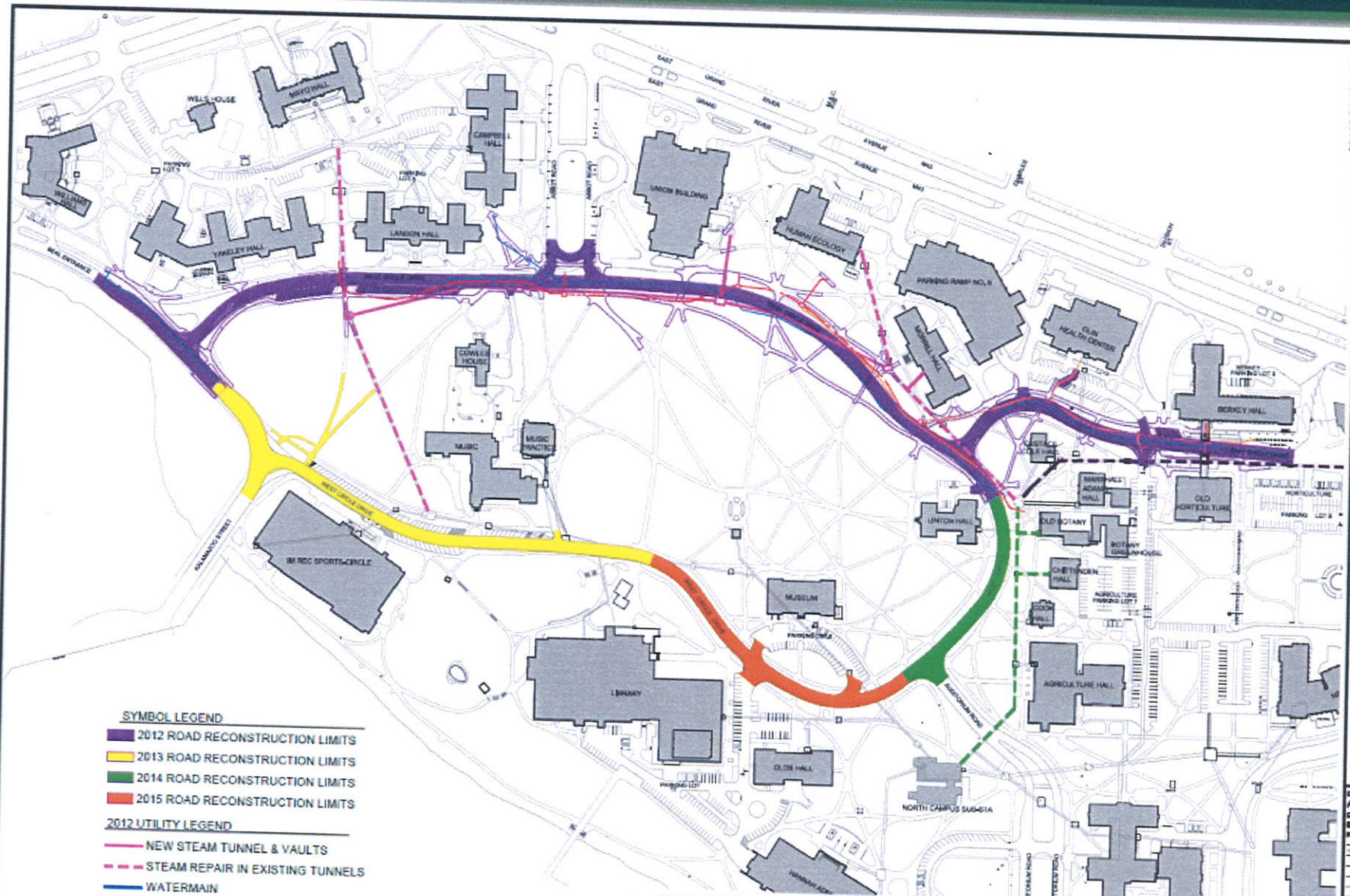
Construction is planned to begin in February 2012, with substantial completion in December 2012, and final completion by December 2013.

cc: R. Flinn, M. Haas, J. Kacos, G. Klein, B. Kranz, B. Latta, K. Lindahl, M. McCabe, J. Mumma, R. Nestle, D. Quinney, L. Adams, K. Neils

Project Approval – Authorization to Proceed
Steam Distribution – West Circle Steam Loop and Eustace-Cole to Mason Hall



Project Approval – Authorization to Proceed Steam Distribution – West Circle Steam Loop and Eustace-Cole to Mason Hall



- SYMBOL LEGEND**
- 2012 ROAD RECONSTRUCTION LIMITS
 - 2013 ROAD RECONSTRUCTION LIMITS
 - 2014 ROAD RECONSTRUCTION LIMITS
 - 2015 ROAD RECONSTRUCTION LIMITS
- 2012 UTILITY LEGEND**
- NEW STEAM TUNNEL & VAULTS
 - STEAM REPAIR IN EXISTING TUNNELS
 - WATERMAIN
 - COMMUNICATION
 - ELECTRICAL

CONSTRUCTION PHASES
WEST CIRCLE DRIVE
SCALE: 1"=100'

Finbeck, Thompson, Carr & Huber
11/15/11 11/15/11 11/15/11 11/15/11 11/15/11

MICHIGAN STATE
UNIVERSITY
PHYSICAL PLANT DIVISION
ENGINEERING AND ARCHITECTURAL SERVICES



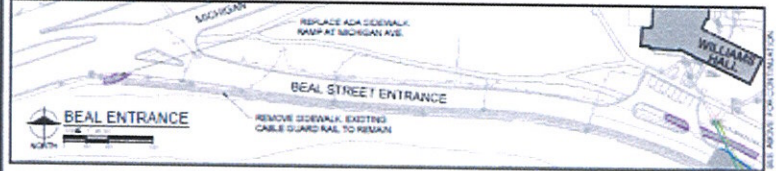
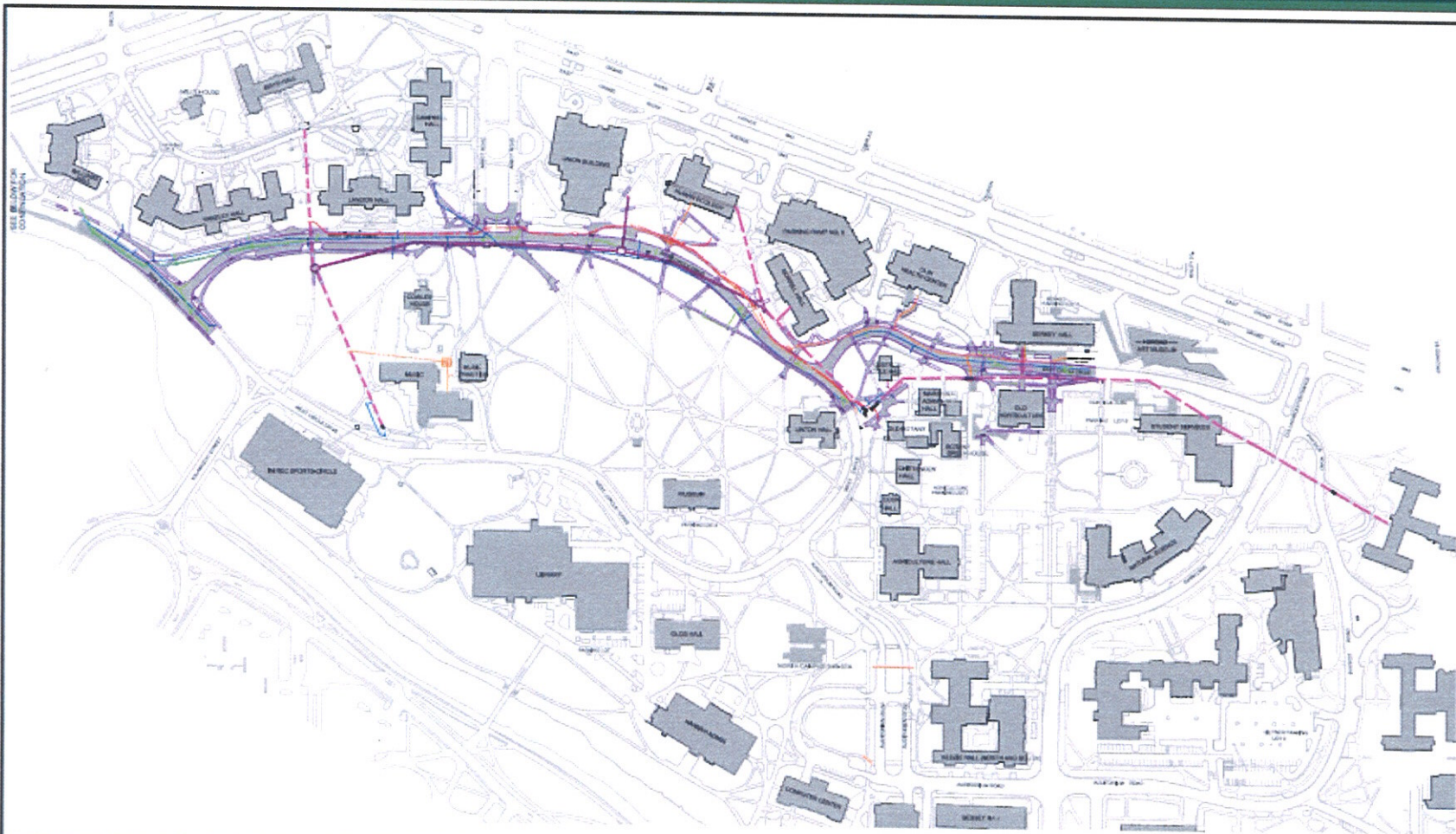
finch
ARCHITECTURAL
ENGINEERING
PLANNING

**WEST CIRCLE STEAM LOOP
CONSTRUCTION PHASES
SCHEMATIC**

DESIGN	DATE
APPROVED	DATE
DRAWN	DATE
SCALE	ALL SHEETS
REVISIONS	
NO.	DESCRIPTION

CAPITAL PROJ. NO.
010103
SHEET
1
1 of 1

Project Approval – Authorization to Proceed Steam Distribution – West Circle Steam Loop and Eustace-Cole to Mason Hall



- SYMBOL LEGEND
- ROAD RECONSTRUCTION LIMITS
 - REMOVE TREE/PLANT MATERIAL
 - STEAM VAULT & CRAWL TUNNEL
 - REVISE STEAM & CONDENSATE PIPING IN EXISTING TUNNELS AND VAULTS
 - COMMUNICATION VAULT & DUCT BANK
 - ELECTRICAL VAULT & DUCT BANK
 - WATERMAIN
 - STORM SEWER
 - SANITARY SEWER
 - EARTH RETENTION - SHEET PILING

figh
Planning, Survey, Civil, & Heavy
Engineering, Construction & Maintenance, and Utility Services
1200 S. ZEEB DRIVE, EAST LANSING, MI 48824

MICHIGAN STATE UNIVERSITY
PHYSICAL PLANT DIVISION
HEATING AND AIR CONDITIONING SYSTEMS

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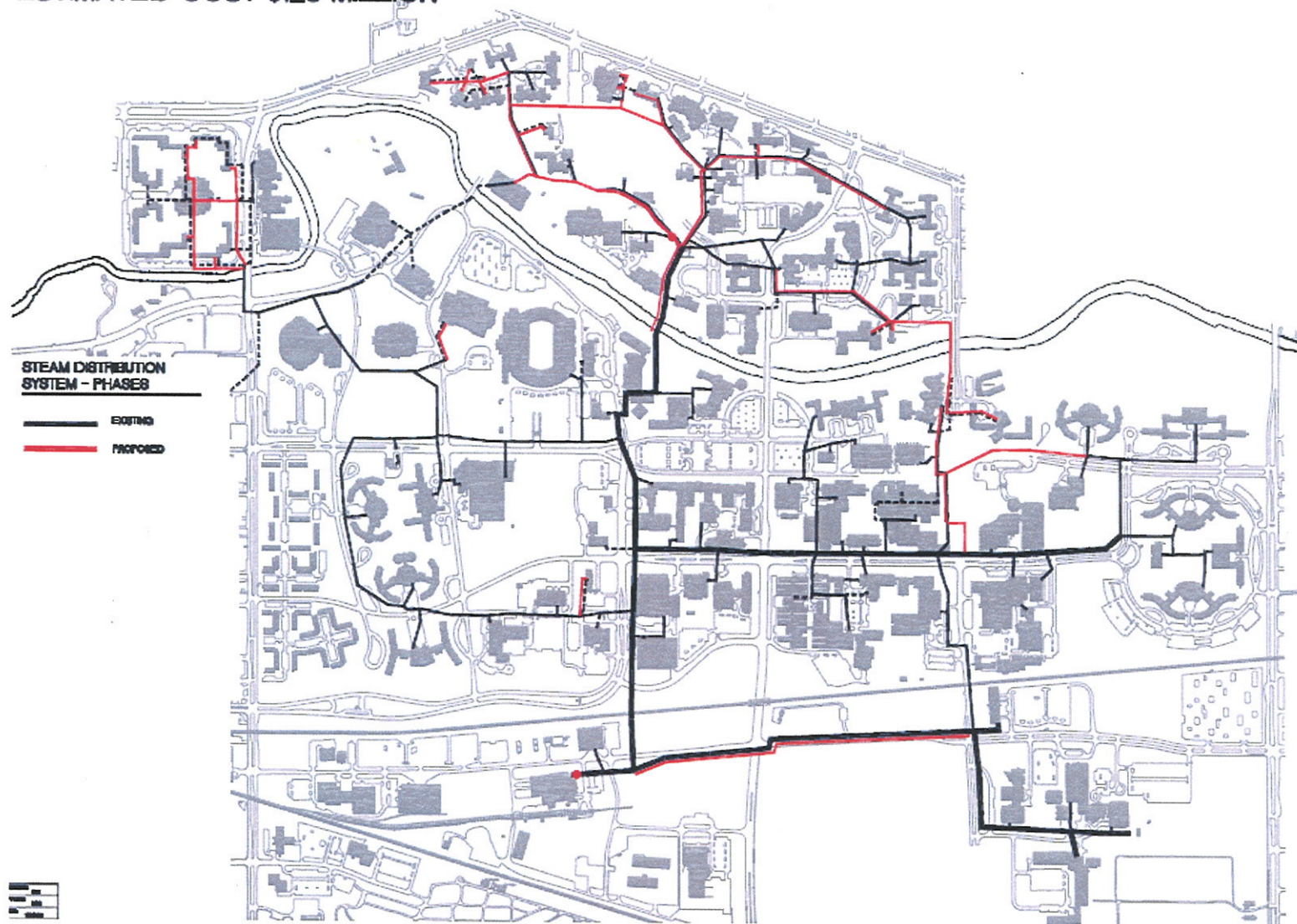
STEAM DISTRIBUTION AND ROAD RECONSTRUCTION WEST CIRCLE LOOP 2012

DRAWN	
APPROVED	
CITY	
SCALE	
REVISIONS	
CAPITAL PROJECT NO.	
RECORD ID NO.	
SHEET	
1	
1 OF 8	

WEST CIRCLE STEAM LOOP 2012
UTILITY & ROAD RECONSTRUCTION LIMITS
1/24/12

Project Approval – Authorization to Proceed
Steam Distribution – West Circle Steam Loop and Eustace-Cole to Mason Hall

PROPOSED (2012-2020)
ESTIMATED COST \$123 MILLION



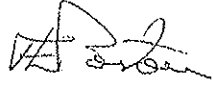
Background Information

MICHIGAN STATE
UNIVERSITY

August 31, 2011

MEMORANDUM

To: Trustee Finance Committee

From: Fred L. Poston 

Subject: **Authorization to Plan**
Steam Distribution - West Circle Steam Loop



RECOMMENDATION

BE IT RESOLVED that the Trustee Finance Committee recommends that the Board of Trustees authorize the Administration to plan for the project entitled Steam Distribution - West Circle Steam Loop.

BACKGROUND

Program Need:

The north campus arch-style steam tunnels are 87-102 years old and have significantly deteriorated. The structural anchors, pipe supports, and steam equipment within these tunnels are also severely deteriorated and require replacement or repair for safe and reliable operation of the steam distribution system.

General Description of the Project:

This project is the first phase of a four-phase program to replace the deteriorating north campus arch steam tunnels, and is anticipated to include installation of a new steam distribution loop around West Circle (from Landon Hall moving clockwise to a point east of Human Ecology). Repair and replacement of steam piping, supports, and equipment within some existing steam tunnels will also be included. This will increase the reliability of the steam system and provide a mechanism to remove arch steam tunnel segments with minimum impact to campus building operations. During this construction, all the buildings in the zone of influence will be converted to high-pressure steam and pressure-condensate return lines, improving energy efficiency. The deteriorated cast-iron water main will be replaced to increase fire-flow capacity and reliability. Additional communication and electrical duct will be installed according to master plans. West Circle Drive will be replaced with two traffic lanes and one bike lane; providing appropriate vehicular, pedestrian, and bicyclist safety improvements.



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The project is located on north campus, along West Circle Drive, between Beal Street and East Circle Drive (Eustace-Cole Hall) in the north academic district. This is a Just-In-Time maintenance project and is consistent with the Campus Master Plan and Planning Principles.

Based on an assessment of the factors stated in the Project Planning and Approval process concerning Project Labor Agreements (PLA), the Vice President for Finance and Operations and Treasurer has determined that a PLA would not be required for this project.

Communication Plan:

During the planning phase, the campus community will be given opportunities to provide feedback on the project as it is being designed. Input from the project planning team will be solicited during the design phase.

Preliminary Project Cost Information:

Based on cost experience for similar projects and current pricing information, the preliminary project cost estimate is \$18,500,000. This estimate may change as planning progresses and the project scope is further defined.

The source of funds for this project is expected to be a combination of the General Fund - Just-In-Time and tax-exempt financings with debt repayment from the General Fund.

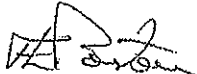
cc: D. Brower, R. Flinn, J. Kacos, G. Klein, B. Kranz, K. Lindahl, M. McCabe, J. Mumma, R. Nestle, D. Quinney, L. Adams, K. Neils

MICHIGAN STATE
U N I V E R S I T Y

August 31, 2011

MEMORANDUM



To: Trustee Finance Committee
From: Fred L. Poston 
Subject: **Authorization to Plan**
Steam Distribution - Eustace-Cole Hall to Mason Hall

RECOMMENDATION

BE IT RESOLVED that the Trustee Finance Committee recommends that the Board of Trustees authorize the Administration to plan for the project entitled Steam Distribution - Eustace-Cole Hall to Mason Hall.

BACKGROUND

Program Need:

The steam distribution system from Eustace-Cole Hall to Mason Hall is in need of repair. While some segments have been repaired in conjunction with other projects (notably East Circle Drive), significant sections require attention.

General Description of the Project:

The planning of this project is anticipated to include repair of structural anchors, pipe supports, and steam equipment within these tunnels; increasing line capacity for high-pressure steam and converting the condensate return from a vacuum system to pressure return.

The project will run from Eustace-Cole Hall and West Circle north of Old Horticulture and Student Services to Mason Hall. It is in the north academic and residential districts. This is a Just-In-Time maintenance project and is consistent with the Campus Master Plan and Planning Principles.

Based on an assessment of the factors stated in the Project Planning and Approval process concerning Project Labor Agreements (PLA), the Vice President for Finance and Operations and Treasurer has determined that a PLA would not be required for this project.



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Communication Plan:

During the planning phase, the campus community will be given opportunities to provide feedback on the project as it is being designed. Input from the project planning team will be solicited during the design phase.

Preliminary Project Cost Information:

Based on cost experience for similar projects and current pricing information, the preliminary project cost estimate is \$1,700,000. This estimate may change as planning progresses and the project scope is further defined.

The source of funds for this project is expected to be a combination of the General Fund - Just-In-Time and tax-exempt financings with debt repayment from the General Fund.

cc: D. Brower, R. Flinn, J. Kacos, G. Klein, B. Kranz, K. Lindahl, M. McCabe,
J. Mumma, R. Nestle, D. Quinney, L. Adams, K. Neils

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