CONSTRUCTION PLANNING AND PROGRESS MEETING
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April 2018

Twitter hashtag #msuconstruction
PLEASE LET US KNOW HOW WE’RE DOING

• We want your thoughts and suggestions about the online version of Construction Junction, and what we might do to improve.

• Please leave any comments or suggestions in the feedback box on the Construction Junction webpage located at: http://ipf.msu.edu/construction/construction-junction/index.html.
MSU Board of Trustees updates

New projects
• T.B. Simon Power Plant – distribution bus reliability and expansion

Project updates
• Wilson Road extension
• Interdisciplinary Science and Technology – construct original building
• Business College Complex – Addition No. 2 – Pavilion

Summer construction roundup
• Roads and parking lots
• Classroom renovations
• Construction projects
Step 2: Authorization to proceed

- Music Building – Addition No. 3
- IM Sports-East – renovations and resurface indoor track
- Food Science – Fruit and Vegetable Laboratory renovation

Step 3 – Bid and contract award

- Olin Health Center – student health
Step 2: Authorization to proceed

- Science, Technology, Engineering and Mathematics – construct original building
- T.B. Simon Power Plant – distribution bus reliability and expansion

Step 3 – Bid and contract award

- Water Distribution - Campus Water System Improvements
T.B. Simon Power Plant – distribution bus reliability and expansion (CP18033)
Why?

- MSU distributes two medium voltage power circuits to all buildings on campus from the T.B. Simon Power Plant. They are distributed as “circuit pairs” with each building preferred to a particular circuit, and the second circuit serving as a back-up in the event of a failure of the preferred circuit.
- The Power Plant has one remaining available distribution “circuit pair” for future power use on campus.
- Projected growth over the next two years will utilize this last “circuit pair”, rendering the plant incapable of serving future campus loads.
- This project will add two spare breakers to bus no. 1, which will combine with two existing spare breakers on bus no. 5 to create two additional “circuit pairs” for future use.
Why? (cont.)

• There are five instances where two substation transformers within the Power Plant are powered by a single circuit breaker.
• The substations serve Power Plant house service loads such as boilers, turbines, and lighting.
• A failure of one transformer on a particular substation trips the circuit breaker and causes the loss of power to a transformer on a second substation. This is what happened on July 23, 2017 with the loss of transformer T-2B, resulting in the loss of all cooling related campus steam production.
• This project will add five circuit breakers to distribution bus nos. 1, 2 and 3, and isolate future outages of this type to only the substation of origin.
Project scope

- Install new “two-high” spare breaker cabinet on the east end of bus no. 1, which will allow the two new breakers to be paired up with two existing spare breakers on bus no. 5.
- Increase power plant reliability by installing five additional circuit breakers in existing switchgear to allow five plant service transformers to have dedicated feeder breakers (transformers in question currently share a feeder breaker with other transformers). Breakers will be added to bus nos. 1, 2 and 3. The process to add additional breakers entails removing existing single breaker cabinet sections and replacing with cabinets containing two breakers (known as “two-high” cabinets).
- The project will be executed in two phases spanning 2019-2020.
- Phase one will include expansion of bus nos. 1 and 2 in 2019
- Phase two will expand bus no. 3 in 2020.
Impacts
• No campus outages are expected, nor is it anticipated to adversely affect Power Plant operations.

Schedule
• Equipment purchase – September 2018
• Phase one construction – June through August 2019
• Phase two construction – June through August 2020
Distribution Bus No. 1

Distribution Bus No. 2

Distribution Bus No. 3

Distribution Bus No. 6 – “Two-high” breaker arrangement example
Project representative:
Ken Beach
kbeach@ipf.msu.edu
(517) 355-6493
Wilson Road extension (CP11349)

Project location
Project milestones (a list of accomplishments/project phases completed during the past month)

- Existing pavement demolition
- Storm sewer and water main installation along Fee Road and its adjacent parking lots
- Triangular-shaped parking lot at the southern end of the Vet Med Fields has been constructed up through the aggregate base (this area will be utilized as a staging area for further construction)

Impact updates (a list of any pedestrian, traffic, building occupant, facility impacts expected in the coming month)

- Continued vehicular and pedestrian detours in place around project site (see phasing maps)
Construction phasing (March 16 – April 30)
Construction phasing (May 1 – May 18)
Completed project plan
Looking northwest along Fee Road
Progress on storm sewer installation in front of Fee Hall
View of triangular-shaped parking lot at south end of Vet Med Fields
Construction representative:
Andy Linebaugh
alinebau@ipf.msu.edu
(517) 432-7103
Project milestones *(accomplishments/project phases completed during the past month)*

- Glass curtain wall is nearing completion
- Rough-ins are ongoing
- Drywall has begun

Impact updates *(pedestrian, traffic, building occupant, facility impacts expected in the coming month)*

- Construction traffic will continue to be heavy on Service Road
Monumental stair installation begins
Science casework mock up for approval
Curtain wall installation
Electrical distribution equipment
Project webcam

https://app.oxblue.com/open/RockfordCon/InterdisciplinaryScience
Construction representative:
Carol Cool
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(517) 353-8619
Business College Complex – Addition No. 2 – Pavilion (CP14217)
Project milestones *(accomplishments/project phases completed during the past month)*

- Steel erection is complete
- Roofing installation is in progress
- Elevator shafts have been installed

Impact updates *(pedestrian, traffic, building occupant, facility impacts expected in the coming month)*

- Sidewalks traveling north and south between Shaw Hall and Business College complex remain closed.
Entrance from Shaw Lane
North elevation
Elevator shaft construction in the western portion
Site logistics plan
Project webcam

https://app.oxblue.com/open/MSU/EliBroadPavilion
Construction representative: Tony Rhodes
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(517) 432-7104
Roads and parking lots
Milling and repaving

Summer roadway and parking lot asphalt maintenance
Why?

- The asphalt conditions are to a point where safety is becoming a concern, and the pavement conditions will not last through another snow season with snow plowing.

Timeline

- Work will begin sometime early May, and last through July
Impacts

• There will be delays, but the goal is to maintain traffic flows.
• Access into parking lots adjacent to roadway resurfacing will be temporarily closed during paving operations only. Once the asphalt cools to vehicle traffic temperatures, we will reopen.
• IPF will do its best to coordinate contractor schedules to line up the equipment needed for the weekend work to minimize the inconvenience to the campus community.
• If inclement weather delays work, the areas that aren’t able to get paved will be reopened to traffic on the following Monday, allowing cars to drive on the milled asphalt. Crews will then return after 5 p.m. during the week (weather depending) to pave the remaining areas to limit the impact to the community.
Summer roadway and parking lot asphalt maintenance

Summer 2018 roadway milling and repaving (May through July)

- Northbound Abbot Road - westernmost lane
- Collingwood entrance - both north and southbound
- Red Cedar Road between Chestnut Road and Wells Hall
- Westbound Shaw Lane
- Holden Hall east and west parking loops
- Eastbound Shaw Lane - southernmost lane
- Westbound Shaw Lane - southernmost lane
- Westbound Shaw Lane

Michigan State University
Parking lot restriping
Why?

- The majority of parking areas on campus are striped on a three-year rotation.

Timeline

- Painting is scheduled in two-week time periods to allow for striping to take place in smaller sections and to also allow for weather delays.
- Parking areas that are being painted are generally shut down for two to three hours, but may take longer due to adverse weather conditions which can cause the paint to dry slower.
**Impacts**

- Painting crews begin work at 5 a.m., and spaces are left available whenever possible.
- Campus visitors and employees are asked to refrain from moving cones or parking in spaces that are being painted or that have been recently painted, so as not to inhibit the painting crew.
Parking lot striping – May 29 through August 3 (all season)

Ramp #3 (Wharton)
Lot 91 (Service Rd.)
Lot 83 (Service Rd.)
Parking lot striping – May 29 through June 8

Lot 31 (Hubbard Hall)
Lot 29 (Hubbard/Akers)
Lot 20 (Holmes Hall)
Lot 41 (Planetarium)
Summer roadway and parking lot asphalt maintenance

Parking lot striping – June 11 through June 22

Lot 21 (McDonel Hall)
Lot 22 (Owen Hall)
Lot 23 (Owen Hall)
Lot 24 (VanHoosen Hall)
Lot 25 (Owen student)
Lot 28 (Akers Hall)
Lot 34 (Wharton)
Parking lot striping – June 25 through July 6

Lot 26 (Small Vet/Oncology)
Lot 35 (Shaw Hall east)
Lot 36 (Shaw Hall west)
Lot 100 (Clinical Center)
IM Sports – East
Life Science loop
Summer roadway and parking lot asphalt maintenance

Parking lot striping – July 9 through July 20

Lot 44 (Farrall/BPS)
Lot 53 (Food Safety)
Lot 97 (Engineering Research)
Munn Ice Arena loop
Summer roadway and parking lot asphalt maintenance

Parking lot striping – July 23 through Aug. 3

Lot 46 (Plant Biology)
Lot 204 (Vet Diagnostic Lab)
Observatory
Project manager:
Matthew Fehrenbach
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(517) 355-7750
Classroom Renovations
Summer 2018 classroom renovations/remodels

Technology-related modifications
- Biomedical Physical Science – 1415
- Business College – N021, N022, N100 and N130
- Chemistry – 136
- Engineering – 1202, 1300, 2205 and 3400
- Olds Hall – 11

Painting and whiteboard replacement
- Communication Arts and Sciences – 171, 173 and 175
- Holmes Hall – W9 (whiteboards only)

Complete renovations
- Case Hall – 335A, 335B and 336
- Communication Arts and Sciences – 151, 155, 161 and 165
- Engineering – 2243, 2245 and 2250
- Holmes Hall – W5
- Music Practice – 102
Project representative:
Dan Klann
klann@ipf.msu.edu
(517) 353-3113
Scheduled summer construction projects
**Project scope**

- Conversion of room 161 into an indoor artificial turf center for club sports, intramural sports, student use, and other campus activities to include: installation of a new artificial turf flooring system, replacement of existing doors and installation of nine additional egress doors to accommodate campus/emergency operations; installation of ceiling circulation fans, fire suppression system, and upgrade of existing HVAC units; installation of a lacrosse practice throwing wall and netting system; installation of a motorized roll-up curtain wall in the middle of the room; installation of an LED lighting system including emergency lighting; painting of walls and ceiling; and miscellaneous architectural, mechanical and electrical items

**Impacts**

- Construction will be staged off of the northeast side of the building and will have minimal impact on motorized circulation, parking, pedestrian traffic, bicycle circulation and barrier-free access

**Schedule**

- Construction start: March 19
- Ready for use: Aug. 17

**Construction representative:**

Jason Van Zee  
[ivanzee@ipf.msu.edu](mailto:ivanzee@ipf.msu.edu)  
(517) 432-2675
Project scope

- Upgrade of the arena for adaptive sports, club sports, intramural sports, student use and other campus activities to include: installation of a new arena floor to support adaptive sports, roller blading, soccer, ROTC and other programs; installation of new dashboards and a netting system; installation of ceiling circulation fans; installation of LED lighting systems, including emergency lighting; painting as required; removal/abatement of ACM floor tile and miscellaneous mechanical piping; upgrade of east restrooms to current codes; and miscellaneous architectural, mechanical, and electrical items

Impacts

- Construction will be staged off of the southeast side of the building and will have minimal impact on motorized circulation, parking, pedestrian traffic, bicycle circulation and barrier-free access

Schedule

- Construction start: May 7
- Ready for use: Aug. 17

Construction representative:
Jason Van Zee
ivanzee@ipf.msu.edu
(517) 432-2675
Project scope

- Replacement of 278 windows with new, fixed aluminum windows
- Abatement of PCB caulking
- Restoration of finish surface of plaster at windows as required
- Replacement of interior stone sills where broken
- Installation of new window blinds

Impacts

- Building to remain occupied during construction, except for brief scheduled phasing of individual rooms to complete the work
- Barrier-free entrance will have a temporary overhead structure constructed to allow continuous safe access during the north stairwell phase
- Temporary pedestrian walkway to be incorporated adjacent to existing path on north side of building during north stairwell phase
- Six parking spaces at south of building to be closed off for a limited phase of construction
- Loading Dock to remain accessible throughout the project

Schedule

- Construction start: May 2018
- Construction complete: October 2018

Construction representative:
Chris Barnes
cbarnes@ipf.msu.edu
(517) 355-1628
Project scope

- Replacement of existing overhead primary power lines with underground electrical distribution infrastructure
- Upgrading/updating the electrical services to key facilities
- Remedying known points of future electrical service failures
- Establishment of a single point of connection for future standby power support during Consumers Energy outages

Impacts

- Brief power interruptions for all Dairy Research Complex facilities while temporary power is connected to loads affected by remediation and replacement work. This will also include the Anaerobic Digester and Well House No. 18.
- Normal paths of travel in and around the Dairy Research Complex will be impacted periodically during construction.

Schedule

- Construction start: Fall 2018
- Ready for occupancy: May 2019

Project representative:
Ken Beach
kbeach@ipf.msu.edu
(517) 355-6493
Project scope
• Construction of a water treatment plant with an elevated storage tank

Impacts
• Increased construction traffic in area

Schedule
• Construction start: June 2018
• Ready for occupancy: December 2019

Project Representative:
Robert Nestle
rwnestle@ipf.msu.edu
(517) 355-3372
Project scope
• The experimental vault will provide approximately 31,000 gross square feet of new space, bound almost completely by other FRIB elements, and will feature: experimental vault for HRS, isotope harvesting laboratory, truck bay and 50-ton overhead crane
• The space will be divided into a depressed experimental vault and a two-level infill providing space for mechanical and electrical systems with circulation around the vault
• A new steam PRV station will be provided with high pressure steam fed from FRIB
• A new HRS chilled water system will be provided to service the required process water system and required airside cooling for the vault

Impacts
• Increased construction traffic in area

Schedule
• Construction start: March 2018
• Ready for use: August 2019
**Project scope**

- Creation of an addition encompassing roughly 14,400 gross square feet, including:
  - a mezzanine floor
  - 50-ton crane
  - two exterior overhead doors
- The building will be used to test and cool magnets utilizing:
  - helium test dewars
  - low conductivity cooling water
  - 200 kw power for superconducting magnet testing

**Impacts**

- Increased construction traffic in area

**Schedule**

- Construction start: March 2018
- Ready for use: July 2019

**Project representative**

Jessica Kolp  
kolp@frib.msu.edu  
(517) 908-7746
Project scope
• Replacement of 2,401 seats in the Great Hall
• Replacement of 585 seats in the Pasant Theater

Impacts
• The project will be coordinated around performance schedules to minimize disruption to facility operations.

Schedule
• Pasant Theatre phase begins: May 15
• Cobb Great Hall phase begins: July 31
• Project completion: Sept. 7

Project representative
Jessica Kolp
kolp@frib.msu.edu
(517) 908-7746
Project scope
• The renovation will include:
  o accessibility improvements to restrooms
  o installation of an elevator
  o internal alterations of offices and office support spaces
  o period-style lighting upgrades
  o heating, ventilation and air conditioning upgrades
  o technological upgrades

Impacts
• The building will be vacated during construction

Schedule
• Construction start: April 12
• Ready for occupancy: Dec. 6

Project representative:
Amr Abdel-Azim
amabelazim@ipf.msu.edu
(517) 432-0323
Project scope

• Restore the structural integrity of the masonry building envelope that has serious structural problems identified in a 2013 masonry investigation.
• Building windows will be replaced since the existing windows need to be removed to perform the masonry repairs.

Impacts

• Project limits use of Hubbard Hall to one living wing for summer programs

Schedule

• Construction start: May 2018
• Construction end: July 2018

Construction representative:
Carol Cool
ccool@ipf.msu.edu
(517) 353-8619
Project scope

• Restore the weather-tight integrity of the building envelope by replacing the original windows and curtain wall systems
• Increase energy efficiency by replacing two original mechanical units in the sub-basement
• Mitigate water infiltration in the sub-basement

Impacts

• Project will require occupants to relocate away from the exterior windows during demolition and replacement
• Air flow may be diminished throughout the building while replacing the air handling units
• Construction equipment and vehicles will be kept to a minimum to reduce parking impact to building occupants

Schedule

• Construction start: April 2018
• Construction end: November 2018

Construction representative:
Carol Cool
ccool@ipf.msu.edu
(517) 353-8619
Project scope

- Renovations to suite 124 to provide a modern food processing instructional and research laboratory, including: entrance/workflow enhancements; upgraded HVAC; new walk-in coolers, freezers, locker rooms, and conference room; an interactive classroom; utilities for lab equipment; rework of fire alarms; access controls; and epoxy coating of walls and floors.

Impacts

- Typical noise, dust and vibration
- Temporary relocation of the basement Vivarium to Clinical Center C in March 2018
- During the flooring demolition in room 124, adjacent first-floor and basement spaces will be impacted
- The north parking lot may be impacted during construction.

Timeline

- Construction start: May 2018
- Ready for use: January 2019

Project Representative
Bryan Anderson
banderson@ipf.msu.edu
(517) 432-0583
Project Scope

- Complete remodel of the second level (lobby)
- Partial renovations to portions of levels three and four
- Window replacement to improve efficiency
- Improved wayfinding
- Improved security

Impacts

- Building occupancy will be maintained
- Temporary partitions to direct internal pedestrian traffic and allow continuous use of the elevator
- Significant construction fencing on the northeast corner of the building
- Temporary scheduled rerouting at building entrances
- Typical construction noise with dust control in place
- Necessary utility shutdowns will be coordinated and communicated in advance

Schedule

- Construction start: February 2018
- Construction complete: January 2019
Project scope
• Removal of existing conventional roof systems and installation of new IRMA-style inverted roof

Impacts
• Smells inside building – alleviated by installation of temporary charcoal filters in building fresh air intake
• Potential sidewalk closure for roofing setup areas

Schedule
• Construction start: May 2018
• Construction end: August 2018

Construction representative:
Ken Gottschalk
kigottsc@ipf.msu.edu
(517) 353-7234
Project scope
• Replacement of aging induction heating/cooling units throughout Wells Hall.

Impacts
• Each faculty office within “C” wing will need to be occupied for construction for a period of two to five days (actual time TBD), emphasizing the importance of coordination with the departments and schedule compliance by the contractor.

Schedule
• Construction start: April 2018
• Project completion: August 2019

Construction representative:
Todd Wilson
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(517) 432-4355
Project scope

• Construction of a 35,000 s.f., L-shaped addition to the southwest portion of the Music Building
• Renovation of 8,400 s.f. within the existing building to address usage changes as a result of the addition

Impacts

• The construction site will encompass portions of Adams Field through August 2019
• Pedestrian passage across Adams Field (from northeast to southwest) will be maintained throughout the project
• Surrounding roads and sidewalks will remain open

Schedule

• Construction start: TBD
• Ready for use: TBD
**Project scope**

- Renovation of the track and gymnasium to include: removal of the interior running track wall (room HW1) and installation of a handrail system to open the track area to the below gymnasium; replacement of the existing track running surface; removal of the block wall separating the two gymnasiums (rooms 110 and 112) and installation of a motorized roll-up curtain wall; installation of LED lighting system, including emergency lighting; painting of the gymnasium walls up to the roof deck and the track running structure; patching of the gymnasium floor and re-installation of the basketball backboard structural supports; tinting of the existing exterior windows around the running track; and miscellaneous architectural, mechanical, and electrical items.

**Impacts**

- Construction will be staged at the southeast side of the building and will have minimal impact on motorized circulation, parking, pedestrian traffic, bicycle circulation and barrier-free access.
- The staging will require the sidewalk along the east side of the Wharton Center parking ramp to be closed during construction; a pedestrian detour will be in place.

**Schedule**

- Construction start: TBD
- Ready for use: TBD

**Construction representative:**

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Construction Junctions continue monthly

Presentations will be available on the Construction Junction website around the seventh of each month.

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