



# Capital Project Delivery Guide for Customers

Infrastructure Planning  
and Facilities

For additional information please call  
Planning, Design and Construction  
at **517-355-3372**.



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**Welcome** to the Customer Guide to **Capital Project Delivery** at Michigan State University. This guide describes the planning, design and construction phases for new and renovated campus facilities.

This guide will help you better understand the processes involved as we partner with you to progress from initial planning through occupancy of the completed space.

As the project progresses, whether it involves only a cost assessment for budgeting or complete design and construction services, there will be continuous communication with you, the customer. This will include site visits, meetings, email and other types of communication throughout the duration of the project.

## OUR MISSION:

At Infrastructure Planning and Facilities (IPF), our **Mission** is to deliver services and facilities that help Spartans change the world. Our **Vision** is to be the highest performing, leading-edge facilities organization in the nation. Our **Values** are people, partner, and stewardship.





# PLANNING

## Getting Started

To begin a capital project, you, the customer, need to first obtain departmental leadership and/or other committee approval. Obtaining approval will depend on your department's specific requirements.

Project requests submitted for academic space projects are subject to approval by Institutional Space Planning and Management within the provost's office. Service requests for non-academic projects only require departmental approval. Once you have project approval, the next step is to [submit an online Service Request to IPF](#). This document triggers a preliminary cost assessment (PCA) for a project.

The PCA is a conceptual cost evaluation without the benefit of drawings or detailed investigation. It helps MSU administrators make initial plans, but it's not intended to be used as a final budget.

If more information is required before moving to the design phase or seeking approval from the Board of Trustees, IPF and the customer may arrange for a more detailed study. The PCA is provided at no cost to you. However, if a further detailed study is required, the customer is responsible for those additional costs.

## Project Funding

- A plant fund account is established by IPF for any project having a budget of \$250,000 or above, as mandated by university policy.

- Once the plant fund account is established, a transfer of funds from the funding source(s) is initiated by IPF Support Services, which then monitors and reconciles the account monthly for the duration of the project.

- Some potential funding sources include federal, grant, donor, departmental, capital renewal maintenance and energy funds.

- Actual project expenditures to the billing account may be viewed by customers in Enterprise Business Systems (EBS) as well as on the monthly IPF customer statement.

- When the project is completed, any excess funds are returned to the funding sources. Once the transfer is complete, the plant fund account is closed.



## Customer Request

Prior to requesting new construction or renovation services from Infrastructure Planning and Facilities, refer to Institutional Space Planning and Management [Policies and Procedures in the Manual of Business Procedures](#), to determine what steps you need to take within your department. There will be two required budget-related items.

1 - Estimate (Yes/No): If you are requesting a cost estimate, select "Yes" and a preliminary cost assessment will be provided prior to any services.

2 - Account Number: If you indicated you wish to receive an estimate, there will not be any charges applied to your account number until you give authorization.







# PLANNING

## Planning and Project Funding

- The programmatic needs of the project drive the feasibility of academic space requests. These may include functional requirements, space characteristics, room lists, square-footage needs, building-efficiency data, adjacency requirements and occupancy projections.
- The PCA will include a review of nonprogrammatic costs. These costs may include applicable building codes, safety, barrier-free access, security and fire protection.
- A review of energy planning, conservation goals and sustainability measures will be done and includes items such as recycling and water conservation, environmental impacts on zoning, infrastructure capacity, just-in-time maintenance needs, hazardous-material remediation, and site and landscape needs.
- Additionally, effects on traffic and parking will be examined to ensure compliance with the university's [land use planning principles](#) and infrastructure strategy.

## What You Can Expect

- We promptly respond when we receive your request.
- We thoroughly research existing conditions affecting the scope of your project.
- We bring proven expertise in applicable codes and university policies affecting the scope of your project.
- We are your trusted advisor to help you achieve your facility objectives.

## What IPF Expects

- You initiate a service-request form to begin the process using the [online service-request form](#).
- You provide sufficient information to clearly explain needs.
- You collaborate with us on potential solutions and options.
- You obtain required authorization should the project proceed.
- You obtain final approval from ISPM for those projects with budgets exceeding \$20,000.



Developing the PCA requires investigating the existing facility. This includes review of the capital renewal maintenance list as well as minor demolition for inspections.

The PCA also includes identification of work coordination opportunities that may benefit the university long term. The Office of the Executive Vice President for Administration will be consulted to provide guidance.

The PCA is expressed as an initial “order of magnitude” range and is based on anticipated costs at the time the project is planned.



# THE TEAM





The design phase begins when IPF receives authorization to plan for a renovation or new construction project. This phase of a major capital project (\$1 million and greater) includes four distinct milestones: program development, schematic design, design development, and construction documents. Projects \$5 million\*\* and greater or projects of any size that result in a footprint change require Board of Trustee (BOT) approval while projects under \$5 million require university stakeholder and IPF approval.

## 1. Program development/verification (feasibility)

This is a written description of the requirement for the project, developed by the project team in collaboration with you, the customer. This document includes project objectives and detailed information regarding all affected spaces, including size, relationships and technical aspects. The following approvals are required to move the project forward:

### Executive Stakeholder Review:

The Campus Infrastructure Planning Work Group (CIPWG) reviews major projects for consistency with the [Campus Land Use Plan](#). CIPWG also advises senior leadership on the project and recommendations are shared with MSU Board of Trustees (BOT) prior to BOT (step 1) project approval.

### Project Approval: BOT (step 1)

Authorizes planning, which generally results in continuing development of project design allowing design consultant and construction management firms to be hired to assist with the project

## 2. Schematic design

The schematic design determines the project's general scope and design features, including floor plans, adjacencies, materials, building massing, character, site and relationship to its surroundings.

## 3. Design development

This milestone defines the project to a greater level of detail, resulting in a clear, coordinated description of all aspects, such as systems and materials. The following approvals are required:

**Review:** Facilities Focus: To inform campus community about the project and gather feedback.

**Review:** CIPWG (step 2) reviews program development, schematic design, and makes recommendation to proceed to BOT.

**Project Approval:** BOT (step 2) gives authorization to proceed, commits to a scope, schedule and budget.

## 4. Construction documents

This step finalizes drawings and specifications for all project components. The objectives are to produce bid documents, solicit bids from construction contractors and obtain all necessary permits. The following is required for general contractor approval:

## MSU ADMINISTRATION

**\*\*MSU's Board of Trustees (BOT) has general supervision over the university and its funds. For projects having a budget of \$5 million and above, and projects of lesser value that involve a footprint change. BOT approvals are required at two points during the project's delivery.**

Prior to BOT approval, projects are reviewed by key MSU leadership and may require a presentation. All funding plans are approved by the Office of Planning and Budgets, the Vice President for Finance, and the Executive Vice President for Administration.



**DESIGN  
and  
BIDDING**

## Procuring Construction Contractors (Bidding)

The construction documents are used to solicit competitive bids from qualified contractors. The means of advertising the project for bidding will vary depending on the delivery method. For construction manager (CM) projects, the CM will obtain bids from trade specific subcontractors. For general contractor (GC) projects, IPF will obtain bids from the general contractor.

### WHAT YOU CAN EXPECT

- We work with you to develop well-defined project requirements in the construction plans and specifications.
- We provide clear and regular communication regarding the budget and schedule throughout the design phase.
- We meet agreed-upon schedule for completing design phase.
- We provide periodic reviews of potential risks that may affect budget and schedule.
- We thoroughly review the design, schedule and budget prior to issuing the project documents for bidding.
- We establish the final budget prior to bidding process.

## DESIGN and BIDDING



### WHAT IPF EXPECTS

- You provide a clear vision of your goals and expectations for the project.
- You will have a clear decision-making hierarchy.
- You approve project program and requirements prior to the start of schematic design.
- You secure necessary funding for the project.
- You give signed approval of construction documents prior to bidding.

## Final Budget components

- Services by other outside consultants or contractors
- Design, inspection, records and contract administration services.
- Construction and services by MSU
- Movable furnishings and equipment, including information technology
- Project development, including site investigation, state mandated fees and campus art (university policy)

# Construction



The budget at the start of construction is based on bids received on work to be performed by outside contractors, along with all other services required to deliver a complete project.

The construction phase begins with a pre-construction kick-off meeting, scheduled by the project manager upon receipt of a signed contract. This meeting includes discussions of project requirements and the roles and responsibilities of all team members.

Throughout the construction phase, project meetings will occur to review progress and potential project impacts and to make decisions. The contractor typically leads and documents these meetings.



## SAMPLES OF CHANGE MANAGEMENT ITEMS

- Allowance adjustments
- Code compliance
- Constructability
- Environmental issues
- Poor soils
- Hidden conditions

## CONTINGENCY DURING CONSTRUCTION

The budget includes a line item for contingencies; potential changes to the work scope that may become evident during construction.

The construction contingency is a percentage of the project budget, typically 10 percent of the total project budget, encumbered to offset the cost associated with change management items. The amount varies, primarily based on the complexity and associated risks of each project. Occasionally a project may carry a more significant amount of risk, which may require more than a 10 percent contingency. This additional percentage will be carried until the risk is mitigated.

## WHAT YOU CAN EXPECT

- We coordinate scheduled pre-construction kick-off and regularly scheduled progress meetings.
- We regularly communicate project construction status to customer apart from scheduled progress meetings.
- We provide continuous project management.
- We minimize the impact of construction to the occupants.
- We ensure a clean and safe work site.
- We regularly inspect for quality assurance.
- We coordinate university and vendor provided services.
- We coordinate utility and other power-related shut-downs.
- We coordinate owner training of new equipment and systems.
- We transition to the close-out phase.

## WHAT IPF EXPECTS

- You attend construction progress meetings.
- You have a clear decision-making hierarchy.
- You quickly communicate perceived issues or problems during construction.
- You update your department, dean or executive management, as appropriate)
- You participate in owner system training.





# Closeout and Transition

Closeout and transition are the final phases in capital project delivery. They begin once substantial completion is achieved. Assessments, evaluations and lessons learned are facilitated by MSU's Infrastructure Planning and Facilities (IPF) Project Team during this phase. This provides the customer with an opportunity to provide feedback and suggest improvements in the planning and delivery processes.

## WHAT YOU CAN EXPECT

- We provide ongoing communication of project status.
- We manage project closeout activities; they are not linear and often overlap moving from construction to closeout/transition.
- Ensure all closeout tasks and contractually procured activities are completed.
- All expenditures are finalized and reconciled with MSU's financial system. Any unspent funds will be returned to the funding source.

## CLOSEOUT & TRANSITION STEPS

- Complete any outstanding work
- Project transitions to customer and IPF maintenance operations.
- Coordinate training programs for new equipment and systems
- Customer move-in
- Final payments are made
- Project assessments and lessons learned
- Final financial reconciliation

## WHAT IPF EXPECTS

- You attend customer training meetings, if new equipment is installed on the project.
- You participate in walk-throughs (at 3 months and 6 months) to ensure that the punch list, warranty and operational issues are understood and addressed.
- You participate in a walk-through ten months after substantial completion, to identify any outstanding items that need to be addressed prior to closing of one-year warranty.

## DELIVERABLES

- Certificate of Occupancy (Temporary Certificate, Final Occupancy, 100% Final Reports) if required.
- Final record drawings that reflect any changes during construction and electronically shared operating and maintenance documents to the customer.
- Building turn-over to customer and IPF maintenance operations.

# Project Planning Partners



The Project Planning Partners List is a resource for communicating with various individuals on- and off-campus involved in a capital project.

## MSU IT

This department reviews projects involving audio/visual equipment, telecommunications and networking infrastructure.

## MSU Police

This department reviews projects affecting fire/life safety, parking, roads, traffic design and building security systems.

## Off-Campus Partners

Various off-campus partners may provide input and review involving roads, or soil erosion and sedimentation, including the city of East Lansing, the city of Lansing, the state of Michigan and Ingham County.

## Student Life and Engagement (SLE)

Various departments in SLE may provide input and review, including the planning and projects office, the space coordination and review committee, information services and Culinary Services.

## Resource Center for Persons with Disabilities (RCPD)

Reviews projects affecting accessibility to maximize the ability and opportunity for full participation by people with disabilities.

## University Advancement

If your project may involve fundraising, contact your University Advancement partner early to discuss how to maximize your efforts. Call 517-884-1000.

## University Physician's Office (UPO)

Reviews projects involving food service and swimming pools.

## Campus Infrastructure Planning Work Group (CIPWG)

Reviews projects that modify the campus landscape character, affect campus infrastructure or require a zoning variance prior to Board of Trustee actions in compliance with the [Campus Land Use Plan](#).

## Environmental Health and Safety (EHS)

Reviews projects involving hazardous-materials compliance, lab equipment, ventilation systems and environmental waste management.

## Infrastructure Planning and Facilities (IPF)

Various departments at IPF may provide input and review, including building performance services, capital project accounting, custodial, landscape services, maintenance services, power and water, project services, safety, surplus and recycling, support services and transportation services.



# MICHIGAN STATE UNIVERSITY

## Infrastructure Planning and Facilities

