

# **CAPITAL PROJECT GUIDELINES**

**For Ann Arbor Campus  
General Fund Academic & Administrative Units**



**Office of the Provost  
& Executive Vice President for Academic Affairs**

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## CONTENTS

<b>About the Capital Projects Process .....</b>	<b>2</b>
Important Notes Before Exploring a Capital Project .....	2
For Questions & Additional Information .....	2
<b>Study/Project Request Process for Small &amp; Moderate Projects (Up to \$5M) .....</b>	<b>3</b>
Small Projects (less than \$2M) .....	3
Moderate Projects (between \$2M-\$5M).....	3
<b>Study/Project Request Process for Major Projects (Over \$5M) .....</b>	<b>3</b>
Annual Submission Deadline: September 15th .....	4
Process Overview & Timing .....	4
Instructions for New Submissions .....	4
Instructions for Updating Previous Submissions.....	5
Provost’s Capital Projects Review Committee .....	5
Facility Tours .....	6
Prioritization of Capital Needs.....	6
<b>Project Funding &amp; Timing .....</b>	<b>6</b>
Project Funding Principles & Plans .....	7
Finance & Capital Projects Committee Discussions .....	7
Funding Plan Review .....	8
<b>Initiating a Programming Study with Architecture, Engineering &amp; Construction (AEC).....</b>	<b>9</b>
<b>Institutional Support &amp; Approvals.....</b>	<b>9</b>
Presidential Support.....	9
Board of Regents Approvals .....	9
<b>Appendix A – Funding Sources.....</b>	<b>11</b>
<b>Appendix B – Architecture, Engineering and Construction (AEC) Overview.....</b>	<b>13</b>
AEC’s Role .....	13
Working with AEC in the Design Phases & Beyond .....	14
Project Cost Considerations & Variables .....	14

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## ABOUT THE CAPITAL PROJECTS PROCESS

The process of renovating existing buildings and constructing new buildings at the University of Michigan (U-M) is complex and ongoing. A new research lab may be required to recruit a world-renowned faculty member; a significant change in pedagogy or research technology may require redesigning any number of teaching or research facilities; new programs may require additional space; or a building may have reached the end of its useful life and need to be replaced. All of these needs are important to the university mission and can drive the need for a major renovation, a building addition, or a new building (what we refer to as a ‘capital project’).

These guidelines provide a consistent, transparent process for schools, colleges, public goods, administrative, and other General Fund units on the Ann Arbor campus to submit their capital project needs to the Provost’s Office for consideration. These guidelines do not apply to Michigan Medicine, Athletics, Housing, Logistics, Transportation, and Parking (LTP), or the UM-Dearborn or UM-Flint campuses.

### Important Notes Before Exploring a Capital Project

Before exploring a capital project need, it is important to keep the following items in mind.

- The process for requesting a capital project differs depending on the anticipated cost of the project, whether it’s a small project (estimated to cost less than \$2M), a moderate project (estimated to cost between \$2M-\$5M), or a major project (estimated to cost over \$5M). Instructions for each project type are included in this document.
- A project may only proceed when all project funding is identified and the provost, chief financial officer (CFO), and president agree to the estimated cost, the funding source(s), and timing.
- Self-funding a study or project does not guarantee it will be approved to proceed.
- All capital project work, including programming studies, conceptual designs, cost estimates, etc., must be coordinated through and managed by Architecture, Engineering, and Construction (AEC). (Refer to SPG 507.04.) Units are not permitted to procure external consultants on their own.
- AEC will not provide cost estimates or start capital project program and site studies without first ensuring that the Provost’s Office is aware of and supports proceeding with the study.
- The Provost’s Office is often actively involved in the capital project planning process as a member of the facility planning committee. The Provost’s Office representative’s role is to ensure the project meets institutional needs. This is particularly the case on major projects where central funding is used or when the project will house more than one unit.
- Many units express interest in having renderings (images) of capital projects to share with prospective donors for fundraising purposes. Renderings may only be shared with prospective donors with prior approval from the Associate Vice President for Facilities and Operations or the CFO. All renderings must be provided by AEC. This protects the interests of the university and ensures that images are not shared publicly before the Board of Regents approve the schematic design for the project.
- All projects over \$3M require formal Board of Regents’ approval. U-M Facilities & Operations manages the Regents’ approval process, in partnership with AEC.

### For Questions & Additional Information

For questions about the capital projects process, please email [space.utilization@umich.edu](mailto:space.utilization@umich.edu).

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## STUDY/PROJECT REQUEST PROCESS FOR SMALL & MODERATE PROJECTS (UP TO \$5M)

This section provides instructions and information for submitting requests for small and moderate capital project studies and projects up to \$5M.

### Small Projects (less than \$2M)

In general, units may proceed with planning and initiating capital projects estimated to cost less than \$2M without provost approval. We always appreciate being informed of these needs before they begin, however.

### Moderate Projects (between \$2M-\$5M)

Requests for capital projects estimated between \$2M and \$5M (including studies for these projects) must be approved by the provost (and in some cases, the president may need to weigh in) before they can proceed.

#### Process

The following process ensures that each study/capital project request provides similar information and that we have supporting documentation in place for future reference, if needed:

1. The unit submits a brief narrative (**no more than five pages**) to the Provost's Office ([space.utilization@umich.edu](mailto:space.utilization@umich.edu)) that describes:
  - a. Why the study/capital project is needed and needed at this time.
  - b. The purpose and scope of the study/project.
  - c. The anticipated impact to the unit if the study/project is not pursued at this time.
  - d. The desired project.
  - e. How the desired project will be funded, if approved to proceed.
2. The senior vice provost for academic and budgetary affairs considers the unit's request and financial position and makes a recommendation to the provost.
3. The provost decides whether or not to support the request.
4. If the provost supports the request, the provost informs the president of the request.
5. The associate vice provost for academic and budgetary affairs notifies the unit and Architecture, Engineering, and Construction (AEC) of the provost's decision.

#### Estimated Timing for Decisions

It may take a few weeks or up to approximately two months to receive a decision on the study/project request, depending on if there are follow-up questions about the submission that need to be answered by the unit and/or how soon the request can be discussed with the president.

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## STUDY/PROJECT REQUEST PROCESS FOR MAJOR PROJECTS (OVER \$5M)

Capital projects estimated over \$5M (including studies for these projects) are considered major projects and are required to follow the provost's annual capital projects process. This enables the provost to review and prioritize these major project needs collectively with the broader institutional impact in mind.

## Annual Submission Deadline: September 15th

Units interested in submitting their capital needs to the Provost's Office for consideration must submit a formal statement of need by September 15th. This is a firm deadline and enables the Provost's Capital Projects Review Committee and provost to review all campus needs collectively to determine institutional priorities.

## Process Overview & Timing

A project may only proceed when all project funding is identified and the president, provost, and chief financial officer (CFO) agree to the estimated cost, the funding source(s), and timing.

Process Phase	General Time Frame
1 Units submit capital needs to the Provost's Office.	Sept. 15 <sup>th</sup> <i>(annual submission deadline)</i>
2 The Provost's Capital Projects Review Committee reviews new and existing capital project needs and makes recommendations on priorities to the provost. The provost decides the institutional priorities.	Oct – Dec
3 The senior vice provost for academic and budgetary affairs informs units of the status of their submissions.	Dec – Jan
4 The senior vice provost for academic and budgetary affairs shares the academic capital project priorities with the Finance & Capital Projects Committee and discusses unit funding plans and next steps for high priority needs. Based on the outcome of this discussion, the senior vice provost for academic and budgetary affairs informs units with needs that are deemed a high priority of next steps.	Feb – varies
5 Units that receive provost approval to explore their capital needs further begin a programming study with AEC, depending on the timing defined by the Provost's Office.	Varies

## Instructions for New Submissions

To ensure that each capital project submission provides similar information, we ask that you:

1. Submit your statement of need and any supporting facility photos electronically to **space.utilization@umich.edu** on or before September 15th.
2. Limit the length of your statement of need to **no more than 15 pages (excluding photos)**. You can use any document layout or format that you choose.
3. Ensure that your submission addresses the following items and includes specific examples to help explain the context of your unit's overall need.

*Description of your current facility challenges:*

- What is driving this capital project need at this time? (e.g., changes in programming, pedagogy, or research; enrollment growth; recruitment/retention issues; ability to compete with peer institutions)

- How are your existing facilities affecting your unit’s ability to meet its core mission?
- How has your unit worked around your facility challenges to date? (e.g., condensed use of existing space, repurposed space to other uses, used another unit’s space, leased space)
- What are the challenges of continuing to address the problem in the same manner?
- How will your unit continue to operate if this capital need is not addressed at this time?

*Supplemental information:*

- Please share any supplemental information that supports your narrative. Examples include:
    - Trends in student enrollments, faculty headcounts, patient visits (if applicable), or visitors (for public goods, if applicable) over the past few years
    - Trends in research expenditures (or other measures of research productivity) over the past few years
    - Relevant comparisons between your unit and peer institutions (e.g., enrollments, faculty, square footage, research expenditures)
    - Faculty or student recruitment or retention issues that are directly related to the limitations of your current facilities
4. Desired solution (*no more than ½ page*) - Please share your unit’s vision for what facility solution(s) would best address your needs.
  5. Funding plan (*no more than ½ page*) - Please share your thoughts on how you envision your study and capital project need being funded. Does your unit have reserves that could be applied toward a capital project? Are you anticipating any type of fundraising to support this need? Would this project require some level of central funding?
  6. Photos - You may include up to 20 photos of your existing facilities to help describe the challenges you face. Please insert the photos at the end of your submission (in the same Word or .pdf file) and include a brief description of each photo, including the building and room number.

### **Instructions for Updating Previous Submissions**

If your unit submitted a capital project need in a prior year and the need has not yet been addressed, you do not need to resubmit the need each year. The Provost’s Capital Projects Review Committee revisits both new and existing needs during the annual review process. If significant changes have occurred since your last submission, we encourage you to submit a brief summary of the changes by the Sept. 15th deadline.

### **Provost’s Capital Projects Review Committee**

After receiving all capital need submissions, the Provost’s Capital Projects Review Committee and provost review each new capital need carefully to determine institutional priorities. This includes reviewing needs that were submitted in previous years but haven’t yet been addressed. The committee serves in an advisory role to the provost and is comprised of the following members:

- Senior Vice Provost for Academic and Budgetary Affairs
- Associate Vice Provost for Academic and Budgetary Affairs (responsible for capital planning)
- Vice President for Research
- Two deans representing a large and small unit

## Facility Tours

As part of the review process, the Provost's Capital Projects Review Committee typically requests on-site tours of the unit buildings that have capital needs. The tours are invaluable in providing committee members with a first-hand view of a unit's facility challenges and enabling members to ask questions about the facility and the unit's programs to help them better understand the unit's situation. When possible, facility tours are arranged during the summer months, prior to the September 15th deadline.

## Prioritization of Capital Needs

The Provost's Capital Projects Review Committee reviews and discusses each capital need individually, considering how the unit's facility challenges are affecting its core academic and research mission; its faculty, student, and staff success; its ability to compete with peer institutions; the urgency to address the need at this time; and more. The committee then prioritizes all new and existing needs, identifies opportunities for units to partner on potential solutions, and recommends priorities to the provost for consideration.

The provost also reviews each capital need and makes the final decision on institutional priorities, and if appropriate, seeks input from the president and/or CFO. The senior vice provost for academic and budgetary affairs typically communicates the provost's decision to units on behalf of the provost.

New capital needs are prioritized against existing needs (i.e., those that were submitted in previous years, but have not yet been addressed) and are placed into one of four categories:

*High priority* Capital project needs in this category will move forward as funding becomes available. In particular, they are candidates for central resources, although the availability of external funds from the requesting unit is also a factor in determining timing. The fact that a need is in this category does not mean that it will be pursued immediately. Typically, there are more high priority projects than there are currently available resources.

*Priority* Capital project needs in this category are important to the institution's goals, but are less likely to receive central funds. Thus, these needs typically require the unit to pursue external funding sources for at least a substantial portion of the cost.

*Lower priority* Capital project needs in this category are consistent with institutional goals, but are not a high enough priority to qualify for central funding at the present time. They will only move forward if the unit is able to secure external funding.

*Not a priority* Capital project needs in this category will not be implemented.

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## PROJECT FUNDING & TIMING

The speed at which a capital project proceeds is often tied to funding availability. Capital projects cannot move forward until all funding has been identified, so this is often the point where the process can slow down (sometimes quite a bit).

*NOTE: For detailed information on capital project funding and financing options refer to “Appendix A – Funding Sources & Financing Options,” later in this document.*

## **Project Funding Principles & Plans**

With all capital projects, units are responsible for creating a funding plan that covers the entire cost of the capital project (including temporary relocation during the project) and recurring operating costs (utilities, maintenance, etc.) of the new building or additional space. Each unit must ensure that funding required by their plan is available and can be committed in support of the project before a project is approved to proceed.

In most cases, capital projects are funded using the unit’s fund balances that are available for use (i.e., unrestricted funds), gifts, or grants.

As your unit considers its funding plan, it is important to keep the following key funding principles and assumptions in mind:

- Every proposed capital project must have a funding plan to support the design, construction, and operating costs, as well as the costs associated with any interim moves, associated with the project from the unit’s own financial resources.
- Given the unpredictable economic climate, central funding may or may not be available to subsidize capital projects.
- Any commitments from non-unit funds must be approved in writing.
- Any central funding used for the project will be reimbursed first if the funding sources for the project exceed the final cost of the project.
- All gift agreements, grant agreements, and contracts that provide funding for a capital project must be signed and executed by the funding individual/entity and by U-M.
- When signed gift agreements include gifts that are paid over time (through installment payments or a bequest), the unit is responsible for covering this funding to allow the project to proceed, either by using unit reserves or by requesting central ‘bridge funding’. If the provost, CFO, and treasurer agree that central funding will be used to bridge the gift, the unit may be required to pay interest on the bridge funding (loan). The interest expense must be included as a cost in the unit’s funding plan.

## **Finance & Capital Projects Committee Discussions**

The senior vice provost for academic and budgetary affairs informs the Finance & Capital Projects Committee of the provost’s high priority capital project needs and discusses project scope, the unit’s funding plan, the availability and feasibility of central funding (if needed), fundraising feasibility, consideration for State of Michigan capital outlay submission, and more.

Once the senior vice provost for academic and budgetary affairs and the Finance & Capital Projects Committee agree that a capital project need has all funding in place and the scope, budget, and funding align, the project may proceed.

The Finance & Capital Projects Committee representatives include:

*Office of the Provost &  
Exec. Vice President for  
Academic Affairs*

- Provost
- Senior Vice Provost for Academic and Budgetary Affairs
- Assoc. Vice Provost for Academic and Budgetary Affairs (responsible for capital planning)

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<i>Office of the Exec. Vice President &amp; Chief Financial Officer</i>	<ul style="list-style-type: none"> <li>▪ Chief Financial Officer</li> <li>▪ Treasurer</li> <li>▪ Director of Capital Planning</li> <li>▪ Assoc. Vice President for Facilities and Operations</li> <li>▪ Director, Assoc. Directors, and Asst. Director of Architecture, Engineering and Construction</li> </ul>
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<i>Office of the Vice President &amp; Secretary of the University</i>	<ul style="list-style-type: none"> <li>▪ Secretary of the University</li> </ul>
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<i>Office of the Vice President for Development</i>	<ul style="list-style-type: none"> <li>▪ Vice President for Development</li> <li>▪ Assoc. Vice President for Development</li> </ul>
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<i>Office of the Vice President for Government Relations</i>	<ul style="list-style-type: none"> <li>▪ Vice President for Government Relations</li> </ul>
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## **Funding Plan Review**

The Provost's Office partners with the Office of Budget and Planning (OBP), the Treasurer's Office, and the Office of University Development (OUD) to ensure that a unit's funding plan is sound and fundraising opportunities are feasible.

### ***OBP Review***

OBP validates the unit's proposed use of unit reserves for the project by reviewing the unit's current and forecasted budget, available unrestricted funds, anticipated growth, other anticipated major expenses, and more.

### ***Treasurer's Office Review***

The Treasurer's Office consults on financing principles and options to ensure a viable funding plan. This office assists in determining prevailing rates, terms and principles in the established debt policy for the university. The treasurer considers the following information when reviewing a unit's capital project funding plan:

- Does the project leverage external funds, such as a gift or grant?
- Is the funding plan feasible?
- Are the assumptions conservative or aggressive?
- Are the assumptions based on one good year or is there a historical pattern that supports the assumptions?
- Is there a strategy for incremental costs like staffing, maintenance, utilities, moving, storage, temporary space, and interest?
- How strapped will the unit be to support unexpected program initiatives or operating expenses that arise after the capital project is approved?
- Does the unit have unrestricted fund balances that can be applied to the capital project?

- If a project is approved for the use of university debt financing, does the proposing unit have the financial capacity to pay the debt service, as well as any new net operating costs from the renovation, construction, or asset acquisition (for major technology or equipment)?
- Is the funding plan sufficient to cover the life cycle repair and improvement costs of the new or expanded facility?

#### **Office of University Development Review**

ODU provides consulting on fundraising objectives and reviews the final fundraising plan to ensure its viability. ODU considers the following information when reviewing a unit's capital project funding plan:

- Are the fundraising expectations realistic?
- Has a proper fundraising feasibility analysis been conducted?
- Does this fundraising need conflict with other fundraising priorities?
- Has the appropriate donor coordination taken place?

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### **INITIATING A PROGRAMMING STUDY WITH ARCHITECTURE, ENGINEERING & CONSTRUCTION (AEC)**

Once a project/study has been approved to proceed, the unit may begin working with AEC to officially explore the capital project further and begin program studies and conceptual designs, as a starting point. It is important to note that:

- All capital projects must be coordinated through and managed by AEC. Per SPG 507.04, units are not permitted to procure architectural firms, general contractors, or other consultants on their own.
- AEC will not provide cost estimates or start capital project program and site studies without first ensuring that the Provost's Office is aware of and supports proceeding with the study.

*NOTE: For more information on AEC's role in the capital projects process, refer to "Appendix B – AEC Overview" later in this document.*

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### **INSTITUTIONAL SUPPORT & APPROVALS**

Before a capital project can officially begin, the president must support the project and the Board of Regents must approve the project.

#### **Presidential Support**

The President is informed of and weighs in on major capital project needs that are being explored, and in partnership with the provost and CFO, determines projects to submit to the Board of Regents for consideration and approval.

#### **Board of Regents Approvals**

All capital projects over \$500k require Board of Regents approval. The type of approval varies depending on if the project is small to mid-sized (\$500k-\$3M) or a major project (\$3M and higher). AEC manages the Board of Regents approval process.

- Approvals for small to mid-sized (\$500k-\$3M)  
Projects in this range are submitted quarterly as part of a monthly project status / informational update to the Regents. These projects are presented to the Regents to request one approval (Approval to Proceed with the Project) for all phases, including construction bids.
- Approvals for major projects (\$3M and higher)  
All new construction and renovation projects estimated at \$3M and higher require formal Board of Regents approval. The projects are formally submitted to the Regents in two separate steps:
  1. *Approval of Project and Authorization to Appoint an Architect* – This is when the university asks for approval to begin the project (before schematic design) and to appoint the recommended architect (design professional) to the project.
  2. *Approval of Schematic Design and Authorization to Proceed with Construction* – After the schematic design work is complete, the university asks the Regents to approve the schematic design and to approve proceeding with construction, assuming the construction bids are within the approved project budget.

AEC prepares all materials for the Board of Regents approvals. The Executive Vice President and Chief Financial Officer submits the request for approval to the Board of Regents on behalf of the University.

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## APPENDIX A – FUNDING SOURCES

The following sources or combination of sources are typically used to fund capital projects, depending on availability:

*Unit reserves, gifts, & grants*

Typically, there are more high priority capital needs than there are currently available central funding resources, so units are expected to contribute to capital projects as much as possible. This includes using unit reserves (if available) and securing external funding (gifts or grants) to support their capital need.

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*Central resources*

Given the unpredictable economic climate, central resources are often limited and may or may not be available for a capital project. If central resources are available, the Provost’s Office and Treasurer’s Office will work with the unit to ensure that the funding is committed.

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*Capital renewal funding*

The provost manages a capital renewal fund that was established specifically to renovate and reprogram existing buildings to address major infrastructure needs and to renew and extend its useful life. The provost may choose to apply capital renewal funding toward projects that meet these criteria.

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*Debt financing*

The university has limited debt capacity and approval of external financing requires a rigorous funding plan (operating forecast and capital plan) that demonstrates the university unit’s capacity to pay the debt service. Approval of the use of debt capacity is made by the CFO in consultation with the treasurer. In any given period, the university may have a greater or lesser debt capacity depending on the capital projects in progress, market conditions, and the relationship of new capital activity to the university’s competitiveness and overall financial condition.

Key principles of debt financing include:

- The Treasurer’s Office is responsible for obtaining the most cost-effective financing possible by strategies that include the pooling of overall capital needs and issuing various forms of debt to meet these aggregate needs.
- The Treasurer’s Office manages the actual payments of each debt issue to assure an event of default will not occur.
- Units that are approved to use debt financing to support a capital project are assigned an internal payment schedule with fixed interest rates to decrease volatility in budgeting for debt. Adjustments are made periodically to credit or assess units for any variations between the budgeted interest rate and the actual interest rate. Over the course of the financing, units will pay the actual cost of the debt.

*NOTES: Only the treasurer is allowed to secure debt financing on behalf of the university. For more information, refer to SPG 519.01.*

*For more information on debt financing, refer to “General Guidelines for Debt Financing” on the Treasurer’s Office website at [www.finance.umich.edu/treasury/debt](http://www.finance.umich.edu/treasury/debt)*

*Central Interest Earnings for Deferred Maintenance & Infrastructure Projects*

Central interest earnings are used from time to time to fund deferred maintenance and infrastructure projects. Approval of this funding source is made through the Finance & Capital Projects Committee with agreement from the provost and CFO.

Facilities and Operations maintains an inventory of condition assessments for all assets owned by the University. A deferred maintenance plan related to those assessments is prepared and monitored by Facilities and Operations. Projects are prioritized based on numerous factors related to risk, the assets' importance for academic, research, or student life, and other factors. The CFO determines annually how much of the central interest earnings can be applied to deferred maintenance and the Finance & Capital Projects Committee reviews these plans. Units should consult with staff from Facilities and Operations if they have questions about the deferred maintenance needs in their facilities and how they will or will not relate to new capital activity.

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*State of Michigan capital outlay*

Each year, the State of Michigan requires state agencies, universities, and community colleges to submit five-year capital master plans to the Department of Management and Budget and the Joint Capital Outlay Subcommittee. Each plan must include prioritized capital project requests, special maintenance needs, and other information about their facilities. Plans are typically submitted each October.

Although the State of Michigan requests annual submissions of capital project needs, State funding is not always available to support these needs. Funding amounts, availability, and timing vary from year-to-year, and are directly related to the State budget situation. In addition, when the State of Michigan provides capital outlay funding to the University, it requires the University to contribute funding to the capital project(s) as well. Due to the unpredictable nature of the State of Michigan Capital Outlay program and requirement for universities to match State capital outlay funds, the University depends on other primary sources of funding to fund its capital projects.

At U-M, the Provost's Office, in consultation with the Vice President for Government Relations and Associate Vice President for Facilities and Operations, identifies projects for State of Michigan Capital Outlay consideration based on priority to the institution and priority to the State of Michigan. Typically, only one project is submitted for consideration.

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## APPENDIX B – ARCHITECTURE, ENGINEERING AND CONSTRUCTION (AEC) OVERVIEW

U-M Architecture, Engineering and Construction (AEC) is responsible for managing the design and construction activities for all University of Michigan capital projects on the Ann Arbor, Dearborn, and Flint campuses. Primary project management responsibilities include selection of all consultants and construction contractors, and leadership throughout all stages of design and construction.

### AEC's Role

As specified in SPG 507.04, the Executive Director of AEC approves all requests for architectural and related engineering services on behalf of the University. Units are not allowed to procure architectural firms, general contractors, or other consultants on their own and must also go through AEC for all program studies, site studies, preliminary cost estimates, etc. after first receiving Provost's Office approval to begin these preliminary studies.

AEC provides comprehensive planning and management for capital projects, as described below.

<i>Project programming</i>	Support and feasibility studies.
<i>Project initiation</i>	Development of an initial project budget, verification of funding requirements, development of a project schedule, leadership in selection of external architectural/engineering firms for the project's design, negotiation of contracts with design professionals, completion of appropriate reports for the Board of Regents and/or State of Michigan, etc.
<i>Design management</i>	Coordination with internal U-M departments (Plant Operations, Plant Utilities, Building Services, OSEH, Transportation, ITS, etc.), management of cost estimates preparation, facilitation of design reviews by external agencies, preparation of monthly status reports to users, etc.
<i>Construction management</i>	Preparation of detailed project schedules, necessary bid documents, and contracts; procurement of construction services; management of contractors and other construction professionals; coordination of project compliance; management of change directives; coordination with internal and external groups; monthly reporting; management of project budget and schedule; coordination with users on user-activation and move-in activities, etc.
<i>Other services</i>	<p><u>Cost benchmarking</u> - For many projects, AEC works with external firms to benchmark the estimated costs of a particular project against projects similar in size and scope at other institutions in the United States. The information is shared with the Provost's Office, unit, CFO and other groups that have a vested interest in sponsoring or supporting the project and ensures that the cost estimates are aligned with comparable benchmarks.</p> <p><u>Operating cost estimates</u> - AEC, in cooperation with Plant Operations and other resources, determines the approximate long-term operating cost estimates for each project. Factors that influence operating costs include the types and degree of energy efficient materials used in the project, the expected product life-cycle of materials and quality of products used, etc.</p>

## Working with AEC in the Design Phases & Beyond

AEC oversees all capital projects through multiple design phases, and unit involvement is critical to each phase to ensure that unit needs are met and are within the overall project scope and budget. AEC typically works with a facilities planning committee (FPC), comprised of unit leadership, faculty, and staff, as well as representatives from the Provost's Office and other central units.

The FPC works closely with AEC in the following phases of a planning and executing a capital project:

<i>Conceptual Design (CD) &amp; Schematic Design (SD)</i>	During this phase, the FPC, AEC project manager, and architects work closely to develop the general building program to better understand user requirements for the space, the spatial relationships within a building, and building site requirements. Project costs are estimated, and may result in changes to the project scope to fit within the project budget.
<i>Design Development (DD)</i>	During this phase, the FPC and user working groups visualize the spaces and their functions to help the AEC project manager and architects develop more detailed drawings, floor plans, and infrastructure needs (mechanical, plumbing, and electrical) for the building. Project costs are estimated again, and may result in changes to the project scope to fit within the project budget.
<i>Construction Documents</i>	During this phase, the architects develop the design further to produce actual construction drawings. Materials and finishes are also determined at this time. The result of this phase is a package that can be sent to an estimator and to contractors for bidding. Even at this phase, the project scope may need to change to fit within the project budget. Items to potentially change or eliminate will have been predetermined and prioritized throughout the entire design process, with close involvement from the FPC.
<i>Bid, Award, &amp; Construction</i>	Once construction documents are complete, AEC sends the project out for bid and awards the project to a general contractor. AEC continues to manage the project through completion, in partnership with the general contractor, who manages the detailed construction work and contractors involved in the project. AEC continues to work closely with the unit should any questions or issues arise during construction.

## Project Cost Considerations & Variables

Every capital project is different, and as a result, project costs can vary greatly. To ensure that project cost estimates reflect costs associated with our geographic area and other variables that are unique to each project, it is important that AEC provide initial cost estimates.

Some variables that can affect a cost estimate include:

- State laws
- Labor rates
- Project timing
- Fees
- Code requirements
- Expedited -“phased” or “fast-tracked” projects

- Unit-requested changes
- Leadership in Energy and Environmental Design (LEED) certification
- Quality of interior and exterior finishes
- Energy efficiency goals
- Infrastructure needs
- Project site needs
- Inclusion/exclusion of furniture and/or major equipment in the defined project

For example, if a project is scheduled during a time when several other construction projects are underway in our geographic area, the project is competing for labor, materials, and other resources, which can drive up the cost. Projects that are “phased” or “fast-tracked” to achieve an earlier completion date typically result in the need to pay additional costs due to overlaps in design and construction. Projects that have several user changes after the schematic design phase affect the budget and schedule and increases the overall cost of the project. Building code requirements may require specific work that must be adhered to and included in the project that may also add to the cost of a project.