Financial Administrator
Development Program

Understanding MSU Construction

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Infrastructure Planning and Facilities (IPF)
Planning, Design and Construction (PDC)

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Mission:

IPF strives to be the most high-performing, innovative, leading-edge facilities organization in the nation, with a focus on quality, customer satisfaction and value in all we do.
Infrastructure Planning and Facilities

- 716 Full-Time Employees
- 336 Students
- 333 On Call/Part Time/Temp
- 6 Unions
- $270M design and construction (on average)

<table>
<thead>
<tr>
<th>Business Units in IPF</th>
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<tbody>
<tr>
<td>1. Building Services</td>
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<tr>
<td>2. Communications</td>
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<tr>
<td>3. Facility for Rare Isotope Beams Civil Infrastructure</td>
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<td>4. Human Resources</td>
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<td>5. Landscape Services</td>
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<tr>
<td>6. Occupational Safety and Compliance</td>
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<tr>
<td>7. Planning, Design and Construction</td>
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<td>8. Power and Water</td>
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<td>9. Support Services</td>
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<tr>
<td>10. Surplus and Recycling</td>
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<td>11. Sustainability</td>
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<td>12. Telecommunication Systems</td>
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<td>13. Transportation Services</td>
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Planning, Design and Construction (PDC) where projects begin
Facility for Rare Isotope Beams (FRIB)

- Conventional Facilities (civil infrastructure)
- $750 Million
- Permanent: $150-180M
- Complete 2022
Self-Performed by IPF Staff

Various budgets

(example: various projects with limited trade work)

Purchase Order

Below $250,000

(example: office renovation)

Project Types

Minor

$250,000 to $999,000

(example: lab renovation)

Major – Board of Trustees

$1,000,000 and above

(example: New Building)
Project considerations

• Energy considerations and implementations
• Master Planning
• Construction Standards and Life Cycle costs
• Hazardous material assessment and abatement
• Life Safety and code requirements
• Accessibility and barrier free considerations
• Duration of design or construction
• Funding sources/requirements
Items contributing to the total project budget

- Feasibility studies
- Professional Services (consultants)
- Construction Contract
- PDC Professional Services
- Other project costs (keying, landscaping, security systems)
- Art on Campus
- Contingencies
- Movable Furnishings and equipment
MSU Design & Construction Payment Volume
Sources of Project Funding

- Bonded Debt Service
- Departmental
- Donors
- Energy
- General Fund
- Grants
- Preventative Maintenance
- State or Federal Funding
Major Project Delivery Phases

Time line:
- 1 month
- 6 - 18 months
- 1 - 2 years
- 1 year warranty

Phases:
- Preliminary Cost Assessment (PCA) → Design → Bidding & Construction → Close-Out
MSU Board of Trustee and CIPWG Approval Process

**BOT Step 1**  
Authorization to Plan

- Funding Plan Identified
- Consultants identified
- FPSM approval or auxiliary approval granted

**BOT Step 2**  
Authorization to Proceed

- Funding Source Identified and funding available – Project specific account established
- Donor(s) identified
- CM delivery authorized

**BOT Step 3**  
Authorization to Award Contract

- Funding transferred to Project account
- **General Contract** delivery authorized

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CIPWG 1 - 2 months prior to BOT1

CIPWG 1

Interim CIPWG

CIPWG 2 - 2 months prior to BOT2

CIPWG 2

BOT1

BOT2
Capital Project Delivery Guide
4 steps of Project Initiation

Step 1 – Initiate the project

• Obtain departmental leadership/committee approval

• Academic spaces are subject to approval by Facilities Planning and Space Management within the Office of Planning and Budgets; $20K and over.

• Initiate a **PCA (Preliminary cost assessment)** using the online service request

• Provide sufficient information to clearly explain your program needs

• Collaborate with IPF on potential solutions and options

• Obtain required authorization should you decide to proceed
Step 2 – Design and Bidding

• Provide clear vision of your goals and expectations for the project
• Come with a clear decision-making hierarchy
• Approve project program requirements prior to the start of schematic design
• Secure the necessary funding
• Provide signed approval of the construction documents prior to bidding
Step 3 - Construction

- Attend construction progress meetings
- Quickly communicate perceived issues or problems during construction
- Have clear decision making hierarchy
- Update your department (and dean, as appropriate) regarding the project status
Step 4 – Closeout and transition

- Attend training meeting for customer orientation with new equipment.
- Participate in walk-throughs to ensure that deficiencies (punch list items), warranty and operational issues are understood and addressed.
- 3, 6 and 10 month walk-throughs.
Operations & Maintenance
Over the Life of a Building

<table>
<thead>
<tr>
<th>Initial Capital Cost of the Building</th>
<th>1x</th>
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<tbody>
<tr>
<td>Operations and Maintenance</td>
<td>5x</td>
</tr>
<tr>
<td>Value of business and human performance conducted within the space</td>
<td>200x</td>
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Butterfield Hall Renovation

- 99,743 (3842 in new space) square feet
- $15.88 million
- $159 / square foot
Kellogg Center
Alterations to Room 61, 62 and Corniche Room

- 1200 square feet
- $399K
- $332 / square foot
Duffy Daugherty Football Building - Renovate Locker Room and Training Room

- 12,000 square feet
- $5.944 million
- $495 / square foot
Spartan Stadium – North End Zone Addition

- 51,779 square feet
- $24 million
- $473 /square foot
Bio-Engineering

- 130,000 square feet
- $69.8 million
- $537 / square foot
QUESTIONS and ANSWERS