

# Advanced Design Project Management



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## 1 - AIA Continuing Education Credit



AIA  
Continuing  
Education  
Provider

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Credit(s) earned on completion of this course will be reported to American Institute of Architects (AIA) Continuing Education Session (CES) for AIA members.

Certificates of Completion for both AIA members and non-AIA members are available upon request.

This course is registered with AIA CES for continuing professional education. As such, it does not include content that may be deemed or construed to be an approval or endorsement by the AIA of any material of construction or any method or manner of handling, using, distributing, or dealing in any material or product.

Questions related to specific materials, methods, and services will be addressed at the conclusion of this presentation.

AIA  
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### Course Description

#### Design Project Management

This class will focus on basic effective fundamental procedures for managing the project design process.

Topics include how to understand and administer the design process, how to interview, select and hire a design consultant, how to get the best from your architect/engineer, how to work and communicate with your campus client, effective communication strategies, what to look for in design reviews, and the importance of program and budget conformance.

Review successful processes for value engineering, effective team management, communication, and basic project manager skills.



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### Learning Objectives

1. Learn the basic fundamental procedures for managing project designs.
2. Learn how to understand and administer the design process.
3. Learn how to get the best architect/engineer.
4. Learn how to interview, select and hire a design consultant.



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This concludes The American Institute of Architects Continuing Education Systems Course



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**APPA Institute**  
Design Project Management




Fun in the air

Grandsons

Kids

- Licensed Architect
  - Colorado
  - Georgia
  - North Carolina
  - Louisiana
- Private Practice 15 years
- Higher Education 27+ Years
  - Duke University - 6 Years
    - Director Facilities Design Office
    - Assistant Dean Facilities
  - University of Colorado -13 Years
    - Director PDC
    - Campus Architect
    - AVC FM
  - Emory University – 5- 1/2 Years
    - AVP PDC
  - University of Colorado -3 Years
    - VC Administration




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**APPA Institute**

## Resources Available

- Design Guidelines
- Construction Standards
- Project Checklist
- Project Management Service Levels
- Consultant Information Packet
- Quest for Quality Guidelines
- A/E Quality Assurance Program
- A/E Fee Guidelines
- A/E Agreement
- Review Reminders
- A/E Performance Evaluations

<http://www.colorado.edu/facilitiesmanagement/appa/>

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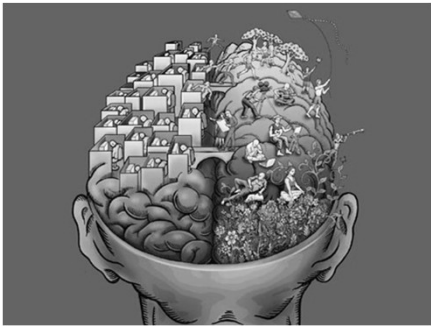
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Revenge of the Right Brain!

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**What are your Goals?**

**My Goals:**

- Understand the Design Process
- Manage the Design Process

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**DESIGN PROJECT MANAGEMENT**

**Project**

- Traditional Project
- Design / Bid / Build
- Major Project

**Seminar**

- Programming Complete
- Project Approved
- Project Funded
- Process Ends @ Bidding



***Seminar Assumptions***

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**Architectural Education**



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	APPA Institute Design Project Management	
<h1><u>Overview</u></h1> <p>Design Process Project Team Design Process Tools Managing the Process</p>		 <p>Deferred Maintenance or Capital Renewal?</p>

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	APPA Institute Design Project Management	Design Process
<h2><u>Part 1-Design Process</u></h2> <ul style="list-style-type: none"><li>• Design Process</li><li>• Project Schedules</li><li>• Project Deliverables</li><li>• Designing For Value</li></ul>		

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 <p>How do you get ideas?</p>
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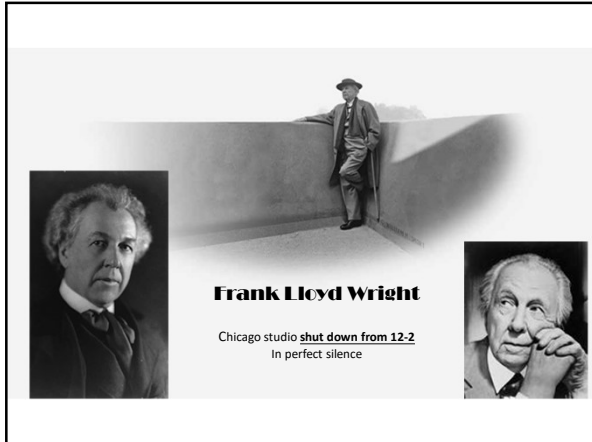
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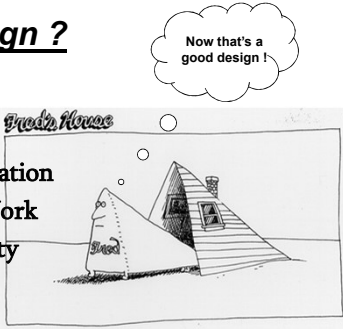
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	<b>APPA Institute</b> Design Project Management	<b>Design Process</b>
<p><b><u>What is Design ?</u></b></p> <p>Moments of Inspiration                  Periods of Hard Work                  Continuous Activity</p> 		

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	<b>APPA Institute</b> Design Project Management	<b>Design Process</b>
<p><b><u>Influences on Design</u></b></p> <ul style="list-style-type: none"> <li>• Program</li> <li>• Codes / Regulations</li> <li>• Site / Context</li> <li>• Technology</li> <li>• Cost / Schedule</li> <li>• Client</li> </ul> 		

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	<b>APPA Institute</b> Design Project Management	
<p><b><u>Design Process</u></b></p> <ul style="list-style-type: none"> <li>• <b><u>Analysis</u></b> <ul style="list-style-type: none"> <li>Program</li> <li>Site</li> <li>Code</li> </ul> </li> <li>• <b><u>Synthesis</u></b> <ul style="list-style-type: none"> <li>Goals</li> <li>Alternatives</li> </ul> </li> <li>Scheduling</li> <li>Cost</li> <li>Constructability</li> <li>Concept</li> </ul> 		

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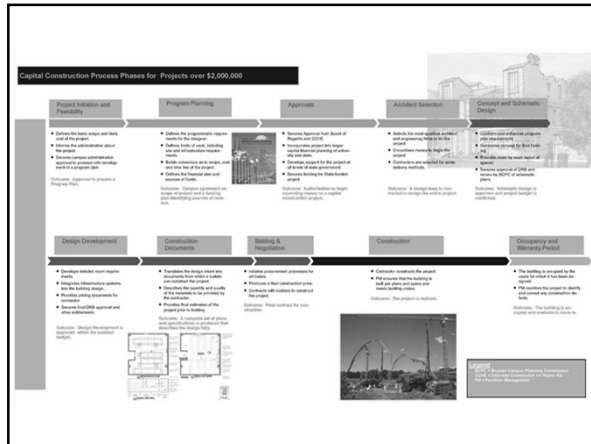
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	<b>APPA Institute Design Project Management</b>	<b>Deliverables</b>
<p><b><u>Design Phases / Deliverables</u></b></p> <ul style="list-style-type: none"> <li>• <b><u>Schematic Design</u></b> Plans / Elevations Sections / \$ Estimate Outline Specs Design Summary / Analysis</li> <li>• <b><u>Design Development</u></b> Expanded SD Set</li> <li>• <b><u>Construction Documents</u></b> Detailed Plans</li> </ul> <div data-bbox="495 976 755 1228"> <p>Prairie Dog Developers</p> </div>		

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	<b>APPA Institute Design Project Management</b>	<b>Communication</b>
<p><b><u>Design</u></b></p> <ul style="list-style-type: none"> <li>• All Project Phases</li> </ul> <p><b><u>Communicate</u></b></p> <ul style="list-style-type: none"> <li>• <b><u>Client</u></b> <ul style="list-style-type: none"> <li>• Programming</li> </ul> </li> <li>• <b><u>Professionals</u></b> <ul style="list-style-type: none"> <li>• Schematic Design</li> <li>• Design Development</li> </ul> </li> </ul> <div data-bbox="511 1606 755 1732"> </div>		

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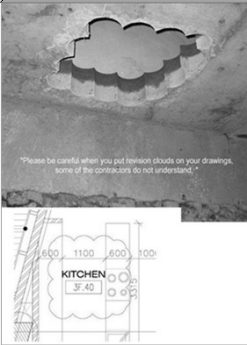
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	<b>APPA Institute</b> <b>Design Project Management</b>	<b>Communication</b>
<p align="center"><b><u>Design</u></b></p> <ul style="list-style-type: none"> <li>• All Project Phases</li> </ul> <p align="center"><b><u>Communicate</u></b></p> <ul style="list-style-type: none"> <li>• <b>Client</b> <ul style="list-style-type: none"> <li>• Programming</li> </ul> </li> <li>• <b>Professionals</b> <ul style="list-style-type: none"> <li>• Schematic Design</li> <li>• Design Development</li> </ul> </li> <li>• <b>Contractor</b> <ul style="list-style-type: none"> <li>• Contract Documents</li> <li>• Construction</li> </ul> </li> </ul>		 <p align="center">Revision #46 dated 1/5/11</p>

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	<b>APPA Institute</b> <b>Design Project Management</b>	<b>Schedules</b>
<p align="center"><b><u>Project Schedules</u></b></p> <ul style="list-style-type: none"> <li>• A/E Selection</li> <li>• Contract Negotiations</li> <li>• Schematic Design</li> <li>• Design Development</li> <li>• Construction Documents</li> <li>• Bidding / Contract Award</li> <li>• Construction</li> <li>• Close Out</li> <li>• Warranty Period</li> </ul>		 <p align="center">At this rate...you'll never finish on time</p>

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<p><b>DESIGN PRODUCTION SCHEDULE</b></p> <p>Example of Typical Design Production Schedule          (Originally Prepared for The Logan School - Partial Schedule Only)</p> <p>→ <b>Week of February 27</b></p> <p><b>Consultant Coordination Meeting:</b>          MCA          Coordinate meeting          Consultants          Advise of what information required to develop preliminary budget, design          Advise of Survey, Testing, or existing conditions information needed from Owner          Provide first pass square footage cost information          Review Diagram Options</p> <p><b>Building Committee Meeting:</b>          Information, Overview, Roles          Logos          Authorize commencement of Civil Engineering          Review and approve Schedule          Information to be provided by Owner (Identify items and schedule: asbestos, survey, hazardous material          tests, easements, other items?)          MCA          Agenda and presentation materials</p> <p>→ <b>Week of March 6</b></p> <p><b>Building Committee Meeting:</b>          Diagrams of overall design solutions          Cost C-113 based on Square Footage Costs          Logos          Decision on selection and approval of diagram          Review first pass square footage costs          MCA          Agenda and presentation materials</p> <p><b>Begin Regulatory Agency Meetings:</b>          EPA/DOH          Denver Building (Architectural, Mechanical, Electrical)          Denver Fire Department          Commission for Disabled          Logos          Representative may want to attend          MCA          Set up and conduct meetings with regulatory agencies          Consultants          Mechanical, Electrical, Civil meet of regulatory agencies as required</p> <p><b>Site Visits:</b>          Review of existing conditions in portion of the building to be renovated          Structural - squash court wall</p>	
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	<b>APPA Institute</b> Design Project Management	<b>Design for Value</b>
<b><u>Designing For Value</u></b> <ul style="list-style-type: none"><li>• Maintainability</li></ul>		

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	<b>APPA Institute</b> Design Project Management	<b>Design for Value</b>
<b><u>Designing For Value</u></b> <ul style="list-style-type: none"><li>• Maintainability</li><li>• Life Cycle Cost</li><li>• Value Engineering</li></ul> 		

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I call it "Value Shifting"

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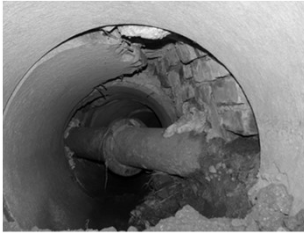
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 <b>APPA Institute</b> Design Project Management	<b>Design for Value</b>
<b>Value Management Approach</b>	
<ul style="list-style-type: none"> <li>• <b>Tier 1</b> <ul style="list-style-type: none"> <li>• Gypsum Board</li> <li>• Lighting Package</li> <li>• Direct Purchase</li> </ul> </li> <li>• <b>Tier 2</b> <ul style="list-style-type: none"> <li>• Relocate Plumbing</li> </ul> </li> <li>• <b>Tier 3</b> <ul style="list-style-type: none"> <li>• Scope Reductions</li> </ul> </li> </ul>	 <p style="font-size: small;">"Tell you what skeeter; It's about quittin' time and family feud is almost on. Just ram that thing right through it. It's 10 foot underground, ain't nobody ever going to see it." ~ Utility Contractor, circa 1976</p>

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 <b>APPA Institute</b> Design Project Management	<b>Design for Value</b>
<b>Designing For Value</b>	
<ul style="list-style-type: none"> <li>• Maintainability</li> <li>• Life Cycle Cost</li> <li>• Value Engineering</li> <li>• Present Value</li> </ul>	<p style="font-size: small;">Ned Beally, of Beally Construction Co., helps his children with a Lego® Mindstorms® robotics project.</p>  <p style="font-size: small;">Oh big surprise. Another announcement of cost overruns and delays.</p>

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	APPA Institute Design Project Management	Project Team
<p><b><u>Part 2</u></b> <b><u>The Project Team</u></b></p> <ul style="list-style-type: none"><li>• Assembling The Team</li><li>• Selecting The Team</li><li>• Team Members &amp; Roles</li></ul>  <p>Wildlife Day Shifts</p>		

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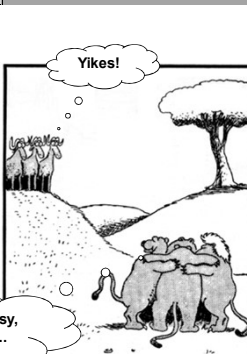
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	APPA Institute Design Project Management	Project Team
<p><b><u>Assembling</u></b> <b><u>The Team</u></b></p> <ul style="list-style-type: none"><li>• Owner</li><li>• Consultants</li><li>• Construction Team</li><li>• Supporting Cast</li></ul>  <p>This should be easy, here's the plan....</p> <p>Yikes!</p>		

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	APPA Institute Design Project Management	Project Team
<p><b><u>The Project Team</u></b></p> <p><b><u>Owners</u></b></p> <ul style="list-style-type: none"><li>• Client</li><li>• User</li><li>• Committees</li><li>• Facilities Management</li><li>• Others</li></ul>  <p>We need a planning committee to create a task force to develop a team to determine the next step.</p>		

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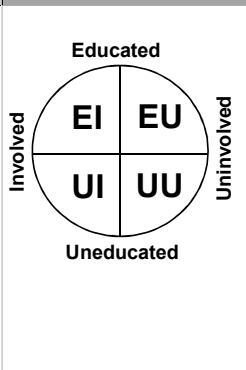
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	<b>APPA Institute</b> Design Project Management	<b>Project Team</b>
<p align="center"><b><u>Owners</u></b></p> <ul style="list-style-type: none"> <li>• <b><u>Experienced</u></b>                      Educated / Involved                      Educated / Uninvolved</li> <li>• <b><u>Inexperienced</u></b>                      Uneducated / Involved                      Uneducated / Uninvolved</li> </ul>		

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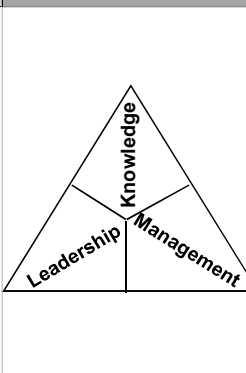
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	<b>APPA Institute</b> Design Project Management	<b>Consultants</b>
<p align="center"><b><u>What is a Consultant ?</u></b></p> <ul style="list-style-type: none"> <li>• <b><u>Professional Advice</u></b>                      Knowledge / Expertise  <b>Leadership</b> (transformational)                     <ul style="list-style-type: none"> <li>• Doing the Right Thing</li> <li>• Inspiring</li> </ul> <b>Management</b> (transactional)                     <ul style="list-style-type: none"> <li>• Doing Things Right</li> <li>• Day to Day Activities</li> </ul> </li> </ul>		

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	<b>APPA Institute</b> Design Project Management	<b>Design Team</b>
<p align="center"><b><u>The Design Team</u></b></p> <ul style="list-style-type: none"> <li>• <b><u>Designers</u></b>                      Architect - Usually Prime</li> </ul>		

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 <b>APPA Institute</b> Design Project Management	<b>Design Team</b>
<h2><u>The Design Team</u></h2> <h3><u>TEN Deadly Sins</u></h3> <ol style="list-style-type: none"><li>1. Team Changes</li><li>2. Multiple Contacts</li><li>3. Schedule Delays</li><li>4. Over Design</li><li>5. Negative Approach</li><li>6. Low Quality Product</li><li>7. Slow Response</li><li>8. Slow Review</li><li>9. Weak Leadership</li><li>10. Close Out</li></ol> 	

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 <b>APPA Institute</b> Design Project Management	<b>Design Team</b>
<h2><u>What You Should Do</u></h2> <ul style="list-style-type: none"><li>• Have a Clear Decision Making Process</li><li>• Develop a Complete Program</li><li>• Establish an Adequate Budget</li><li>• Establish a Realistic Schedule</li><li>• Communicate Effectively</li><li>• Hire a Compatible Firm</li><li>• Guard Against Scope Creep</li><li>• Deliver Bad News Promptly</li><li>• Expect to Pay Reasonable Fees</li></ul> 	

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 <b>APPA Institute</b> Design Project Management	<b>Design Team</b>
<h2><u>What You Should Not Do</u></h2> <ul style="list-style-type: none"><li>• Do Not Rely on Clairvoyance</li><li>• Do Not Make Impossible Promises</li><li>• Do Not Accept Sloppy Work</li><li>• Do Not Expect Perfection</li><li>• Do Not Expect Added Scope for Free</li></ul> 	

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 <b>APPA Institute</b> Design Project Management	
<p><b>Architect Expects</b></p> <ul style="list-style-type: none"> <li>• Clear Direction</li> <li>• Instantaneous Decisions</li> <li>• Tightly Defined Scope</li> <li>• Comfortable Budgets</li> <li>• Fair Treatment</li> <li>• Profitable Fees</li> <li>• Quality Design Expectations</li> </ul> <p><b>You Expect</b></p> <ul style="list-style-type: none"> <li>• Exceptional Service</li> <li>• Adherence to Budgets</li> <li>• Meeting Schedule Milestones</li> <li>• Comprehensive Services</li> <li>• Complete Drawings</li> <li>• Cost Effective Design</li> </ul>	<p><b>Architect May Get</b></p> <ul style="list-style-type: none"> <li>• Ambiguity</li> <li>• Extensive Collaboration</li> <li>• Scope Creep</li> <li>• Inadequate Budgets</li> <li>• Unreasonable Contracts</li> <li>• Gift Opportunities</li> <li>• Low Design Expectations</li> </ul> <p><b>You May Get</b></p> <ul style="list-style-type: none"> <li>• Nonchalance</li> <li>• Budget Busters</li> <li>• Delays</li> <li>• Requests for Additional Fees</li> <li>• Errors &amp; Omissions</li> <li>• Extravagance</li> </ul>

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 <b>APPA Institute</b> Design Project Management		<b>Design Team</b>
<p><b><u>The Design Team</u></b></p> <ul style="list-style-type: none"> <li>• <b>Designers</b></li> <li>• <b>Architect - Usually Prime</b></li> <li>• <b>Engineers</b> 25% to 65% of Cost</li> <li>• <b>Others</b> Planner Commissioning Agent Landscape Architect Interior Designer</li> </ul>		

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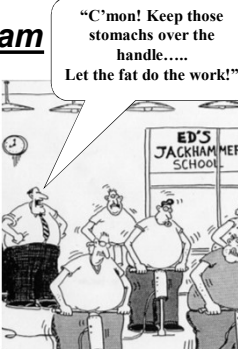
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 <b>APPA Institute</b> Design Project Management		<b>Construction Team</b>
<p><b><u>The Construction Team</u></b></p> <ul style="list-style-type: none"> <li>• <b>Contractor</b> <ul style="list-style-type: none"> <li>• GC - avg. &lt; 10 employees</li> <li>• Design Build</li> <li>• Construction Manager</li> </ul> </li> <li>• <b>Subcontractors</b></li> <li>• <b>Suppliers</b></li> <li>• <b>Laborers</b></li> </ul>		

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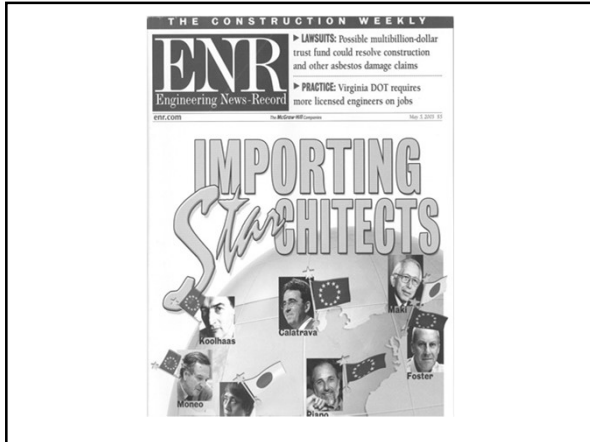
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	<b>APPA Institute</b> Design Project Management	<b>Team Selection</b>
<p><b><u>Selecting the Consultants</u></b></p> <ul style="list-style-type: none"> <li>• Owner Selects</li> <li>• Prime Selects Subs</li> <li>• Combination</li> </ul>		<p>You want 'um large or small ant hill?</p> <p><b>Competition in nature</b></p>

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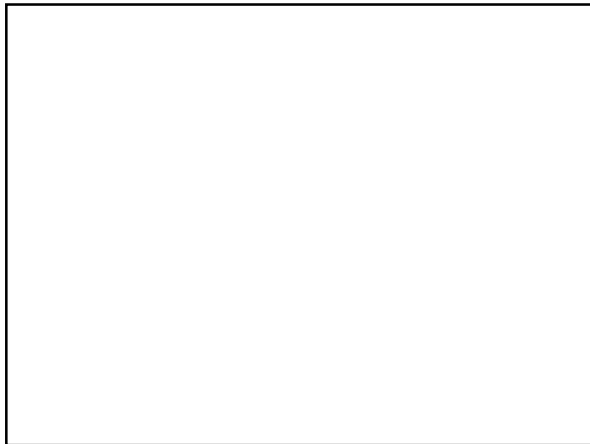
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	<b>APPA Institute</b> Design Project Management	<b>Process Tools</b>
<p align="center"><b><u>Part - 3</u></b>  <b><u>Design Process Tools</u></b></p>		
<ul style="list-style-type: none"> <li>• <b>Communication</b></li> <li>• <b>Negotiations &amp; Fees</b></li> <li>• <b>Design Process Tools</b></li> </ul>		

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	<b>APPA Institute</b> Design Project Management	<b>Communication</b>
<b><u>Communication</u></b>		
<ul style="list-style-type: none"> <li>• <b><u>Talking</u></b></li> <li>• <b><u>Listening</u></b></li> </ul>	Effective communication = <b>80%+</b> of project problems	

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<b>Body Language</b> 55% <b><u>How</u> we say it</b> 38% <b><u>What</u> we say</b> 7%		

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**People Only Hear Every 3<sup>rd</sup> Word**

**People Only Retain Every 5<sup>th</sup> Word...**

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APPA Institute Design Project Management

Communication

- Talking
- Listening
- Writing

**Communication**

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APPA Institute Design Project Management

Communication

- Talking
- Listening
- Writing
- Meetings

Where minutes are taken and hours are lost

**Communication**

Mark Bristol  
UNC

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**APPA Institute**  
Design Project Management

**Communication**

- Talking
- Listening
- Writing
- Meetings
  - Alternatives
  - Prepare Agenda / Send Ahead
  - Start / Finish on Time
  - Short 'n Sweet
  - Prepare
  - Confirm

**Communication**

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**APPA Institute**  
Design Project Management

**Fees**

**Negotiations & Fees**

- Fee Structure
- Negotiating

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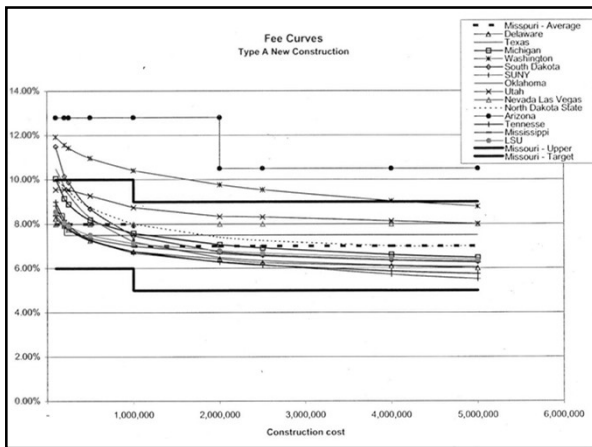
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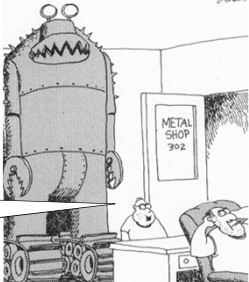

**APPA Institute**  
 Design Project Management

**Negotiations**

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## 3 Types of Negotiations

- Soft
- Hard
- Principled



My project is ready for grading, Mr. Bignose. Hey, I'm talking to you squidbrain!

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Types of Negotiation

	Soft Negotiation	Hard Negotiation	Principled
<b>The Goal</b>	Reaching and Agreement	Winning	Mutually: A Wise Outcome
<b>Participants</b>	Friends	Adversaries	Problem Solvers
<b>About the Relationships</b>	Make concessions to cultivate the relationship	Demand concessions as a condition of it	Separate people from the problem
<b>Trust of Others</b>	You do	You do not	Proceed independent of trust
<b>Your position</b>	You change readily	You dig in and hold	Focus on interests, not on positions; explore interests
<b>Your bottom line</b>	You disclose	You hide and mislead about	Avoid having a bottom line
<b>To reach agreement</b>	You accept one-sided losses	You demand one-sided gains	Invent options for mutual gain
<b>You insist on</b>	Agreement	Your position	Insist on using objective criteria; yield only to principle
<b>Contest of Wills</b>	You try to avoid	You try to win	
<b>Pressure</b>	You yield to	You apply	
<b>The Architect's Fear</b>	I'll probably lose	I'll endanger the relationship	

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**APPA Institute**  
 Design Project Management

**Tool Kit**

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## Design Process Tool Kit




**Project Manager Multi-Tasking**

<http://www.colorado.edu/facilitiesmanagement/appa/>

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	<b>APPA Institute</b> Design Project Management	<b>Tool Kit</b>
<p style="text-align: center;">• <b>Consultant Instructions</b></p> <div style="text-align: center;">  </div>		

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	<b>Consultant's Information Packet</b>	
<p><b>Table of Contents</b></p> <ul style="list-style-type: none"> <li>• Cover Letter</li> <li>• Communicating</li> <li>• Project Contact List</li> <li>• Capital Construction Process</li> <li>• Reviews of Architectural Plans and Specifications</li> <li>• Academic Calendars</li> <li>• Other Materials             <ul style="list-style-type: none"> <li>• Campus Master Plan</li> <li>• Campus Parking Map</li> <li>• Campus Visitor Map</li> <li>• Body &amp; Soul: Architectural Style at the University of Colorado at Boulder</li> </ul> </li> </ul> <p><b>Cover Letter:</b> The Consultant's Information Packet is available to help designers understand the process and procedures of the University of Colorado at Boulder.</p> <p>Please review this material before the kick-off meeting so that we may answer any questions you may have. Be sure as you start this project, that you have a complete and current copy of the UCB (University of Colorado at Boulder) Standards. These have been put together to assist you, sharing with you our experience and needs. These standards are frequently updated and it is important that you use the most up-to-date version in preparing plans and specifications. Also, let us share a couple of key thoughts about your project team and project management on campus.</p>		

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	<b>APPA Institute</b> Design Project Management	<b>Tool Kit</b>
<ul style="list-style-type: none"> <li>• <b>Consultant Instructions</b></li> <li>• <b>Design Guidelines</b></li> </ul>		

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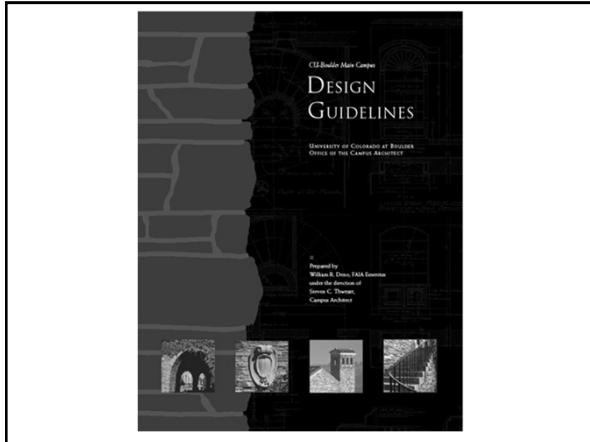
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	<b>APPAs Institute</b> <b>Design Project Management</b>	<b>Tool Kit</b>
<ul style="list-style-type: none"> <li>• <b>Consultant Instructions</b></li> <li>• <b>Design Guidelines</b></li> <li>• <b>Construction Standards</b></li> </ul>		

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**Building & Construction Standards**  
**Version updated July 2012**

These standards are for use only by the University of Colorado at Boulder (UCB), its consultants and contractors. They are to be used as a guideline for UCB building and construction projects. Consultants shall provide project-specific documents and specifications based on code and engineering analyses.

**Note:** All projects initiated after July 1st of any given year shall use the most current edition of the standards. All projects already underway (with a signed agreement) prior to July 1st shall continue to use the edition of the standards in use at the time of project initiation.

Consultants and contractors **must** familiarize themselves with the standards and all appendices prior to design and construction of UCB projects.

**Adopted Codes and Standards**

Please visit the following links for the latest State adopted codes and standards. Additionally, please ensure compliance with the City of Boulder amendments to the International Fire Code (IFC).

- 1 Approved State Building Codes
- 2 Adopted Codes and Standards
- -Code Review System/Format for UCB Projects

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	<b>APPA Institute</b> Design Project Management	<b>Tool Kit</b>
<ul style="list-style-type: none"><li>• Consultant Instructions</li><li>• Design Guidelines</li><li>• Construction Standards</li><li>• Planning Template</li></ul>		

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<p><b>CU Budget Planning Tool</b></p> <p><a href="http://www.colorado.edu/facilitiesmanagement/appa/">http://www.colorado.edu/facilitiesmanagement/appa/</a></p>
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	<b>APPA Institute</b> Design Project Management	<b>Tool Kit</b>
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## Facilities Management

University of Colorado at Boulder

*Planning, Design & Construction*  
Project Management Service Options

1. Minimum service level:

In this service option, the client can provide the project management and coordination services for their project with the following minimum involvement from Facilities Management:

- Contracts & procurement,
- Construction permitting,
- Inspections,
- Change order processing (the client can negotiate change order costs),
- Environmental site assessment and abatement requirements through EH&S,
- Projects must adhere to the UCB construction standards with deviations specifically approved by the Executive Director of FM and FM must have the ability to verify compliance,
- Utility outages,
- Code compliance including project reviews by code officials (Authorities Having Jurisdiction).

2. Intermediate service level:

In this service option, FM must provide the minimum levels of services as outlined in service option 1 and the client can negotiate with FM for the level of services for the following:

- Project budgeting and estimating,

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	<b>APPA Institute</b> <b>Design Project Management</b>	<b>Tool Kit</b>
<ul style="list-style-type: none"> <li>Consultant Instructions</li> <li>Design Guidelines</li> <li>Construction Standards</li> <li>Planning Template</li> <li>Service Levels</li> <li>Outage Notices</li> </ul>		

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SCHEDULED WORK ACTIVITY AND SIDEWALK /VEHICULAR OUTAGE AT West Pleasant Street

To: Linda Fry -Hale Sciences Proctor

From: Gil Fike, Project Manager

Building: Hale, McKenna, and Old Main Buildings

Start Date: Wednesday, August 14, and Thursday August 15, 2002

Duration: Full Time  
Pedestrian Walkway and Vehicular Traffic Interruptions 8/14/02 to 8/16/02

Reason:  
Contractor will excavate and install the new water line in the lawn area west of Hale Science Building. The traffic lane will be reduced to onelane and could experience minor delays during work activities and equipment crossings.  
Barricades and routing signs will be in place. The parking spaces west of the Hale will be out of service. The service drive to Hale will be kept open and in service.

See the attached work activity sketch work area description. Machinery noise may occur during the work activity.

Contact: Gil Fike at 2-1431 for any questions.

**Customer Impact:**  
This project will change the flow of pedestrian traffic For the period specified.

**Attached Map**

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	<b>APPA Institute</b> Design Project Management	<b>Tool Kit</b>
<p><b><u>Design Reviews</u></b></p> <p>Aesthetics                  Systems Concepts                  Maintainability                  Value Engineering                  Budget                  Schedule                  Approvals</p>		<p><b>Schematic Design</b></p> <p>"Orifice Building"</p> 

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<p style="text-align: center;">Review Reminders for the Client</p> <p><b>Program Plan Review:</b></p> <ol style="list-style-type: none"> <li>1. Are client needs identified and met?</li> <li>2. Is this affordable?</li> <li>3. Will the schedule allow the facility to be delivered on a timely basis?</li> <li>4. Have others in the department(s) or college reviewed this as needed?</li> <li>5. Is the plan convincing for reviewers (up through CCHE)?</li> </ol> <p><b>Schematic Design Review:</b></p> <ol style="list-style-type: none"> <li>1. Does the layout work?</li> <li>2. Are aesthetics OK?</li> <li>3. Is it in budget?</li> <li>4. Are systems (e.g., heating / cooling) meeting user needs?</li> <li>5. Have others in the department(s) or college reviewed this as needed?</li> </ol>
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	<b>APP A Institute</b> Design Project Management	Plan Reviews
<ul style="list-style-type: none"> <li>• <b>Plan Review Coordinator</b> <ul style="list-style-type: none"> <li>• Part time retiree</li> </ul> </li> <li>• <b>Email request for plan review</b></li> <li>• <b>Log the request</b></li> <li>• <b>Establish due date</b></li> <li>• <b>Check for required information</b></li> <li>• <b>Reviewers log-in each morning to check for new notices</b></li> <li>• <b>Plan review room w/30" HD monitor (all electronic)</b></li> <li>• <b>PRC checks deadlines</b></li> <li>• <b>Emails comments to PM's</b></li> <li>• <b>3-5 day turnaround</b></li> </ul>		<p style="text-align: center;"><i>Current Process</i></p> 

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	<b>APP A Institute</b> Design Project Management	Tool Kit
<ul style="list-style-type: none"> <li>• <b>Consultant Instructions</b></li> <li>• <b>Design Guidelines</b></li> <li>• <b>Construction Standards</b></li> <li>• <b>Planning Template</b></li> <li>• <b>Service Levels</b></li> <li>• <b>Outage Notices</b></li> <li>• <b>Design Reviews</b></li> <li>• <b>Project Checklists</b></li> </ul>		

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 <b>Facilities Management</b> University of Colorado at Boulder Department of Facilities Management Office of Planning, Design & Construction 1540 30 <sup>th</sup> Street, UCB 453, Boulder, Colorado 80309-0453 Phone: (303) 492-3311 FAX: (303) 492-4082	
<p><b>Project Task Checklist</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Client initiates Work Order.</li> <li><input type="checkbox"/> Assistant Director receives Work Order from Facilities Management (FM) scheduling system.</li> <li><input type="checkbox"/> The Project Manager (PM) receives a file folder from Administrative Assistant. Include a Work Order Information Sheet, Work Order Questionnaire and Warranty Report.</li> <li><input type="checkbox"/> PM meets with Client to establish the scope of the project.                         <ul style="list-style-type: none"> <li>a. PM also talks with them about the recharge policy as referenced in the FM, Design and Construction website. (fm.Colorado.EDU/recharge_policy.html)</li> </ul> </li> <li><input type="checkbox"/> The Work Order Questionnaire is distributed by PM to Facilities Management and other University Agencies for review. 2 weeks allowed for review.</li> <li><input type="checkbox"/> Environmental Site Assessment Report is done by Environmental Health and Safety (EH &amp; S). 2</li> </ul>	

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	<p><b>Facilities Management</b> University of Colorado at Boulder</p> <p>Department of Facilities Management Office of Planning, Design &amp; Construction</p> <p>1540 30<sup>th</sup> Street, UCB 453, Boulder, Colorado 80309-0453 Phone: (303) 492-5511 FAX: (303) 492-4082</p> <p style="text-align: center;"><b><u>CONTRACTOR EVALUATION FORM</u></b></p> <p>CONTRACTOR: _____</p> <p>CONTACT PERSON: _____ PHONE #: _____</p> <p>As part of our ongoing commitment to provide better service to our customers, we need to insure that the services we purchase are of the best quality possible and that they are performed in a timely and professional manner.</p> <p>Please describe your experiences with the contractor named on this form (both positive and negative). The contractor may be given the opportunity to respond.</p> <p>Describe fully the experience (including dates and any documentation you might have):</p> <p>_____</p>
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	<p><b>Facilities Management</b> University of Colorado at Boulder</p> <p>Department of Facilities Management Office of Planning, Design &amp; Construction</p> <p>1540 30<sup>th</sup> Street, UCB 453, Boulder, Colorado 80309-0453 Phone: (303) 492-5511 FAX: (303) 492-4082</p> <p style="text-align: center;">[PROJECT TITLE] <b><u>Architect / Engineer Evaluation</u></b></p> <p>FIRM'S NAME: _____</p> <p><b><u>INSTRUCTIONS:</u></b></p> <ul style="list-style-type: none"> <li>• The performance of each A/E under contract to the University of Colorado at Boulder evaluated following the completion of the project.</li> <li>• The Office of Facilities Design and Construction (FD&amp;C) shall prepare all evaluat the attached Architect/Engineer Evaluation Forms. The A/E firm will be formally ev by the project team, including representatives from FD&amp;C, Facilities Planning, F, Engineering &amp; Utilities, Physical Plant Division, Facility User(s), and others , appropriate at the completion of each major project phase (preconstruction, consti</li> </ul>
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*Customer Satisfaction Survey*

**Facilities Management**  
University of Colorado at Boulder


Department of Facilities Management  
Office of Planning, Design & Construction

1400 SP, Suite 1110, 403, Boulder, Colorado 80309-0403  
Phone: (303) 492-5111  
Fax: (303) 492-4032

Web site: <http://fm.Colorado.EDU/>

Dear CU Faculty/Staff/Member:

We are striving to improve the quality our service and increasing customer satisfaction. To help us in doing this, please respond to each question as it is imperative that all answers reflect your experience with us.

Sincerely,  
  
Steve T. Linnett, AUA  
Director, Office of Planning, Design & Construction

Name of Project: \_\_\_\_\_  
Work Order: \_\_\_\_\_ Completion Date: \_\_\_\_\_ Project Manager: \_\_\_\_\_  
Responder / Project Responsibility: \_\_\_\_\_

- How do you feel about the scheduling of the work to complete this project?
  - Work was scheduled appropriately in advance.
  - Work had to begin without sufficient notice.
  - Scheduling caused avoidable disruption.
  - Does not apply.
- Was the work completed on a timely basis?
  - Response to work request was prompt and efficient.

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Planning, Design & Construction Performance Survey - Windows Internet Explorer

Planning, Design & Construction Performance Survey  
2. Planning, Design & Construction

2 / 3

The questions on this page are related to department performance. The following page will focus on the Project Manager's performance.

5. How did Planning Design & Construction department management perform?

	Unsatisfactory	Needs Improvement	Satisfactory	Very Good	Exceptional
Project staffed appropriately?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
PM assigned promptly?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Supported project adequately?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Responded in a timely manner?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Other (please specify):

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 **University of Colorado at Boulder**  
**Department of Housing**

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**Special Contract Conditions for Construction Projects in Occupied Students Housing**

**Purpose**  
 These Special Contract Conditions are required because this project involves construction within or adjacent to student residences. As such, the Contractor, all workers, subcontractors, deliverymen and anyone else coming on to the work site must be informed of the requirements to respect the students' privacy and right to the quiet enjoyment of their residence halls or apartments. The work must be completed in a manner that maintains the security of the residence halls or apartments, limits contact with the students, provides advance notice of any work that may adversely affect the residents, and limits communications about the project to those persons designated by the University.

**General Rules**

1. Contractor is required to comply with the University of Colorado's Sexual Harassment Policy, copy attached hereto and incorporated herein. Contractor's personnel must adhere to the University of Colorado policy and conduct themselves in a manner that does not constitute sexual harassment (as defined in the policy) as a result of interacting with and around the University of Colorado faculty, staff and students.  
 Contractor is also required to inform each subcontractor of the University's policy prohibiting sexual harassment.
2. No smoking in any residence hall or apartment building spaces. This includes living and dining spa restrooms, circulation areas, attics, mechanical rooms, basements and/or crawl spaces. Any smoking must be done outside the building and far enough away that smoke cannot enter windows or ventilation system.

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 **FAST TRACK**

June 7, 2006

TO: FM Project Managers

FROM: Bill Ward, Assistant Director, Facilities Management Design & Construction  
 Moe Tabrizi, Assistant Director, Facilities Management Engineering

SUBJECT: Double-time or Fast Track Projects

**Introduction:** Facilities Management leadership continues to receive campus client/customer feedback regarding time interval (length of time) to complete remodeling or new construction projects on campus. It is generally accepted that some delays are related to incomplete planning or incomplete input for required reviews and budget availability. However, due to the serial nature of our planning, design and construction process, adding all appropriate steps without unexpected delays would still amount to a long lead time. Many projects are not very time sensitive. However, there are a small number of projects that are very time sensitive AND there is only a small window of time that they can be implemented on campus without resulting great impact on the campus teaching and learning mission.

**Proposed Solution:** For a very small percent of the given client's projects and based on prior agreement with PD&C leadership, all known and published project planning, design, project reviews and implementation intervals would be shortened by a goal of 50% equally for all functions. Of course, this solution requires better than normal, more complete input from the client and more complete paperwork as input to the double-

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**Facilities Management**  
University of Colorado at Boulder

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Office of Design and Construction  
1540 39<sup>th</sup> Street, UCCB 453, Boulder, Colorado 80530-0453  
Phone: (303) 402-5111  
Fax: (303) 402-1146

CM-GC PROJECT COMPLETION CHECKLIST

The following is a guide to assist in the final closeout of a CM/GC project. The information is based on the Construction Manager and Architect/Engineer Agreements. Failure to include any items in this document does not alter the responsibility of the Construction Manager and Architect/Engineer to adhere to their Agreement they have with the University.

**NOTICE OF COMPLETION**  
Articles 16.1.1 (CM) & 1.8.28 (AE)

- The Construction Manager shall file a written notice to the Architect/Engineer that the Work, in the opinion of the Construction Manager, is complete under the terms of the Contract.
- The Construction Manager shall attach a list of items to be completed or corrected with this letter.
- The Architect/Engineer shall notify the Project Manager.

**PUNCH LIST WALK**  
Articles 16.1.2 (CM) & 1.8.29 (AE)

- Within ten (10) days after receipt of the above mentioned letter the Architect/Engineer, the

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EMORY UNIVERSITY - CAMPUS SERVICES												
BUILDING ACCEPTANCE - OCCUPANCY APPROVAL CHECKLIST												
BUILDING LEGEND										PROJECT NAME		
Primary Responsibility Support Responsibility										FACILITIES MANAGEMENT / EDC PROJECT MANAGER FACILITIES MANAGEMENT / EDC PROJECT MANAGER COMMISSIONING COORDINATOR		
TEAM INVOLVEMENT												
	SP	PR	TR	CO	OP	CM	CON	VEN	AR	GC		
C-1												
C-1.1												
C-1.2												
C-2												
C-2.1												
C-2.2												
C-3												
C-4												
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C-6												
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C-9												
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	<b>APPA Institute</b> Design Project Management	<b>Tool Kit</b>
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 <p>You are cordially invited to a key party-- Project Management &amp; Construction will officially turn over the</p> <p>Turman Residence Hall</p> <p>to Facilities Management Monday, August 13, 2007, 1:00 pm Turman Residence Hall First Floor Lobby 640 Means Drive</p> 	 
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	<p>Signing the Close-out Documents</p>
<p>Let the Party Begin</p>	

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	APPA Institute Design Project Management	Tool Kit
<ul style="list-style-type: none"> <li>• Consultant Instructions</li> <li>• Design Guidelines</li> <li>• Construction Standards</li> <li>• Planning Template</li> <li>• Service Levels</li> <li>• Outage Notices</li> <li>• Design Reviews</li> <li>• Project Checklists</li> <li>• Feedback &amp; Evaluations</li> <li>• Housing Special Conditions</li> <li>• Double Time / Fast Track</li> <li>• Close Out Checklist</li> <li>• Key Party</li> <li>• Lessons Learned</li> </ul>		

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<b>Lessons Learned - Math and Science Center</b> January 9, 2003	
<p>1. <b>More user group education needed</b>– at the end of the building process, I knew the things I needed to know at the start of the process! Here are the types of user education/support that would have been useful during the building process:</p> <p>A. General introduction to the stages of the building process (programming, schematic design, design development, construction, etc). The introduction should include: role of user group at each stage (including the importance of user’s comments on plans); level of detail of the plans that emerges at each stage; processes and procedures for making changes to the plans; and the role of LEED in the design process.</p> <p>B. Although trips to other institutions may be useful, we should institute an on-campus training program for new user groups. We have some great new facilities on campus and we should use them effectively. For example, a tour of the Mathematics and Science Center (M&amp;SC) could illustrate:</p> <p>a. General departmental layout</p>	

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**Architect:**  
Architect: HOK + Henssler, Inc. (HOK)  
Atlanta

**Contractor:**  
Henssler Construction Company  
Atlanta

**Opening:**  
Fall 2019

**Completion:**  
March 2020

**see what's inside**



**Mixed Sources**  
FSC  
Certified to the standards of the Forest Stewardship Council (FSC)  
© 2019 Henssler and the Henssler Group. All rights reserved. For more information visit: www.henssler.com

**LEED-Green Building**  
The design team has carefully designed and coordinated all project goals and objectives for the building. The building was constructed in compliance with the LEED-Green Building rating system. The building is LEED-Green Building certified. The building is LEED-Green Building certified. The building is LEED-Green Building certified.

**LEED-Green Building**  
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A GUIDE FOR BUILDING OCCUPANTS



welcome to 36 eagle row



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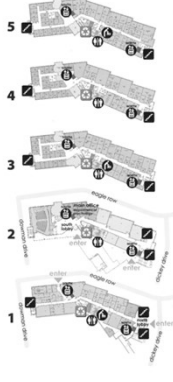
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5  
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3  
2  
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**plan legend**

- auditorium 200
- laboratories
- teaching space
- office space
- recycling bins
- aptn and south elevator
- restrooms
- stair-premise use stairs

**Getting to know the new building**

Overview: The north elevator should be used for access to the Psychological Center. The south elevator should be used for access to the Psychology Center. The building is LEED-Green Building certified. The building is LEED-Green Building certified. The building is LEED-Green Building certified.

Restrooms: The north restrooms should be used for access to the Psychological Center. The south restrooms should be used for access to the Psychology Center. The building is LEED-Green Building certified. The building is LEED-Green Building certified. The building is LEED-Green Building certified.

Stair-Premise Use Stairs: The north stairs should be used for access to the Psychological Center. The south stairs should be used for access to the Psychology Center. The building is LEED-Green Building certified. The building is LEED-Green Building certified. The building is LEED-Green Building certified.

**Getting to know the new building** (continued)

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welcome to 36 eagle row

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	<p><b>APPAM Institute</b> Design Project Management</p>	<p><b>Tool Kit</b></p>
<ul style="list-style-type: none"> <li>• Small Project Ideas</li> </ul>		

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University of Colorado @ Boulder  
Facilities Planning, Design & Construction  
**Small Projects Ideas**

In an effort to improve the overall delivery of small projects to our campus customers, the PD&C division is proposing a partnership with the College of Engineering and Applied Sciences to initiate a pilot program for small projects (under \$500K).

Some of the ideas are as follows:

1. We (Facman) should re-route small project requests from the Service Desk or web-based system to a "PM assistant". *(This refers more to a function than a position. Since we are under severe budgetary constraints, we want to find ways to help the project managers be efficient and cost effective.)* The PM assistant can make a quick assessment of the scope and expedite the assignment of the project to the appropriate project manager. PD&C should get the work order requests first rather than the service desk trying to guess what the scope may be. (Sometimes work orders are misdirected to the wrong shop due to the poor description work that is submitted, resulting in a delayed start.)
2. PD&C will initiate a "one-stop shopping" model for project requests to streamline the normal process. The designated projects liaison for Engineering (Skip Wichart) should have one individual to deal with when initiating a project. If Skip initiates all Engineering projects and has one contact to work with in PD&C, then the initiation of a project can be much simpler and quicker.
3. Initiate a project monitoring system for projects that measures:
  - o Response time,
  - o Schedule Performance, and
  - o Quality.

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	<b>APP A Institute</b> Design Project Management	<b>Tool Kit</b>
<ul style="list-style-type: none"> <li>• Small Project Ideas</li> <li>• Warranty Period</li> </ul> <p>"At the completion of a project, we structure our 1 year warranty period to include the Facilities management team having direct contact with the GC's superintendent to address any issues that arise.</p> <p>This removes having the project manager as a middle person, and the correction of problems occur in a more timely manner."</p> <p>Tom Clow University of New England</p>		

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	<b>APP A Institute</b> Design Project Management	<b>Tool Kit</b>
<ul style="list-style-type: none"> <li>• Small Project Ideas</li> <li>• Warranty Period</li> <li>• Hurt Feelings Report</li> </ul>		

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**HURT FEELINGS REPORT**  
For use of this form to file a grievance for hurt feelings

**DATA REQUIRED BY THE PRIVACY ACT OF 1974**

AUTHORITY: 5 USC 301, Department Regulations, 10 USC 3013  
 PRINCIPAL PURPOSE: To assist winners in documenting hurt feelings and to provide leaders with a list of people who require counseling and sympathy.  
 ROUTINE USES: For subordinate leader development MW RM22-102, Leaders & winners should use this form as  
 DISCLOSURE: Disclosure is voluntary, but repeated disclosure may result in a Walk to Wall Counseling.

**PART I - ADMINISTRATIVE DATA**

A. WRITER'S NAME (Last, First, MI) \_\_\_\_\_  
 B. POSITION \_\_\_\_\_  
 C. SOCIAL SECURITY NUMBER \_\_\_\_\_  
 D. DATE OF REPORT \_\_\_\_\_

E. ORGANIZATION \_\_\_\_\_  
 F. NAME & TITLE OF THE PERSON FILLING OUT THIS FORM \_\_\_\_\_

**PART II - INCIDENT REPORT**

A. DATE FEELINGS WERE HURT \_\_\_\_\_  
 B. TIME OF HURT/ILLNESS \_\_\_\_\_  
 C. LOCATION OF HURTFUL INCIDENT \_\_\_\_\_

D. WITNESSES OF HURT FEELINGS \_\_\_\_\_  
 E. NAME OF REAL MAN/WOMAN WHO HURT YOUR SENSITIVE FEELINGS \_\_\_\_\_

F. POSITION \_\_\_\_\_  
 G. ORGANIZATION (if different from 'above') \_\_\_\_\_

**E. INJURY (Mark all that apply)**

1. WHICH EAR WERE THE WORDS OF HURTFULNESS SPOKEN INTO?  Left  Right  Both  
 2. IS THERE PERMANENT FEELING DAMAGE?  YES  NO  MAYBE  
 3. DID YOU REQUIRE A "TISSUE" FOR TEARS?  YES  NO  MULTIPLE  
 4. HAS THIS RESULTED IN A TRAUMATIC BRAIN INJURY?  YES  NO  MAYBE

**F. REASON FOR FILING THIS REPORT (Mark all that apply)**

<input type="checkbox"/> I am thin skinned	<input type="checkbox"/> My boss needs to fix my problems	<input type="checkbox"/> Two beers is not enough. My hands should be in my pockets
<input type="checkbox"/> I am a wimp	<input type="checkbox"/> My feelings are easily hurt	<input type="checkbox"/> I was not offered a post brief
<input type="checkbox"/> I have woman/men-like hormones	<input type="checkbox"/> I didn't sign up for this	<input type="checkbox"/> Someone requested a post brief
<input type="checkbox"/> I am a crybaby	<input type="checkbox"/> I was told I am not a hero	<input type="checkbox"/> The weather is too cold
<input type="checkbox"/> I want my mommy		<input type="checkbox"/> All of the above and more

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 <b>APPA Institute</b> Design Project Management	<b>Tool Kit</b>
<ul style="list-style-type: none"> <li>Small Project Ideas</li> <li>Warranty Period</li> <li>Hurt Feelings Report</li> <li>MSU Faculty Readiness Program</li> </ul>	

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<b>Faculty Readiness Project</b>	
	
<p><b>FACULTY READINESS PROJECT</b>          Office of Planning and Budgets / Facilities Planning and Space Management          Infrastructure Planning and Facilities / Planning Design and Construction</p> <p style="font-size: small;">Tina Carter, IFF/PDC   Eric Bottman, OPR / PSM   Sam Hopper, IFF / PDC   Brian Miller, IFF/PDC   Monte Price, IFF / PDC   Alma Vandenberg, IFF/PDC  </p>	

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Faculty Readiness Project MICHIGAN STATE UNIVERSITY

### ALIGNING EFFORTS AT MICHIGAN STATE

- In response to **Bolder by Design** imperatives of introducing research opportunities and advancing our culture of high performance:
  - Improve time frame of project completion for incoming faculty.
  - Align project expectations with appropriate delivery method.




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Faculty Readiness Project MICHIGAN STATE UNIVERSITY

### HOW WE GOT ORGANIZED

- Dedicated FRP team selected.
- Met with different campus departments to promote early collaboration during recruitment phase for new faculty.
- Work with MSU Contract Administrator to develop an RFQ and select a sole source contractor for a 3-year contract.




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Faculty Readiness Project MICHIGAN STATE UNIVERSITY

### HOW DOES THE FACULTY READINESS PROJECT (FRP) FIT?

IPF becomes involved as a **partner** in this recruitment process

Old Way	New Way
<ul style="list-style-type: none"> <li>Recruit</li> <li>Offer/Accept</li> <li>I'm Here </li> <li>Notify Facilities</li> <li>Design</li> <li>Construct</li> <li>Occupy</li> </ul>	<ul style="list-style-type: none"> <li>Recruit</li> <li>Notify Facilities</li> <li>Offer/Accept</li> <li>Design </li> <li>I'm Here</li> <li>Construct</li> <li>Occupy</li> </ul>

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Faculty Readiness Project

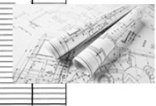
**MICHIGAN STATE UNIVERSITY**

### THE AH-HA MOMENT

- Department funded studies/preliminary designs help to define accurate scope and budget.
  - Can further expedite the renovations and project schedule.
- With FRP/IPF early involvement, the offer to the recruit can include the proper budget for the necessary renovations.
  - No time wasted waiting for additional funding.

Line of account	TRANS	CONSTRUCTION	RESEARCH
2000-2000-0000	0000	0000	0000
2000-2000-0001	0000	0000	0000
2000-2000-0002	0000	0000	0000
2000-2000-0003	0000	0000	0000
2000-2000-0004	0000	0000	0000
2000-2000-0005	0000	0000	0000
2000-2000-0006	0000	0000	0000
2000-2000-0007	0000	0000	0000
2000-2000-0008	0000	0000	0000
2000-2000-0009	0000	0000	0000
2000-2000-0010	0000	0000	0000
2000-2000-0011	0000	0000	0000
2000-2000-0012	0000	0000	0000
2000-2000-0013	0000	0000	0000
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2000-2000-0015	0000	0000	0000
2000-2000-0016	0000	0000	0000
2000-2000-0017	0000	0000	0000
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2000-2000-0020	0000	0000	0000
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2000-2000-0022	0000	0000	0000
2000-2000-0023	0000	0000	0000
2000-2000-0024	0000	0000	0000
2000-2000-0025	0000	0000	0000
2000-2000-0026	0000	0000	0000
2000-2000-0027	0000	0000	0000
2000-2000-0028	0000	0000	0000
2000-2000-0029	0000	0000	0000
2000-2000-0030	0000	0000	0000
2000-2000-0031	0000	0000	0000
2000-2000-0032	0000	0000	0000
2000-2000-0033	0000	0000	0000
2000-2000-0034	0000	0000	0000
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2000-2000-0036	0000	0000	0000
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2000-2000-0040	0000	0000	0000
2000-2000-0041	0000	0000	0000
2000-2000-0042	0000	0000	0000
2000-2000-0043	0000	0000	0000
2000-2000-0044	0000	0000	0000
2000-2000-0045	0000	0000	0000
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2000-2000-0047	0000	0000	0000
2000-2000-0048	0000	0000	0000
2000-2000-0049	0000	0000	0000
2000-2000-0050	0000	0000	0000
2000-2000-0051	0000	0000	0000
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2000-2000-0065	0000	0000	0000
2000-2000-0066	0000	0000	0000
2000-2000-0067	0000	0000	0000
2000-2000-0068	0000	0000	0000
2000-2000-0069	0000	0000	0000
2000-2000-0070	0000	0000	0000
2000-2000-0071	0000	0000	0000
2000-2000-0072	0000	0000	0000
2000-2000-0073	0000	0000	0000
2000-2000-0074	0000	0000	0000
2000-2000-0075	0000	0000	0000
2000-2000-0076	0000	0000	0000
2000-2000-0077	0000	0000	0000
2000-2000-0078	0000	0000	0000
2000-2000-0079	0000	0000	0000
2000-2000-0080	0000	0000	0000
2000-2000-0081	0000	0000	0000
2000-2000-0082	0000	0000	0000
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2000-2000-0086	0000	0000	0000
2000-2000-0087	0000	0000	0000
2000-2000-0088	0000	0000	0000
2000-2000-0089	0000	0000	0000
2000-2000-0090	0000	0000	0000
2000-2000-0091	0000	0000	0000
2000-2000-0092	0000	0000	0000
2000-2000-0093	0000	0000	0000
2000-2000-0094	0000	0000	0000
2000-2000-0095	0000	0000	0000
2000-2000-0096	0000	0000	0000
2000-2000-0097	0000	0000	0000
2000-2000-0098	0000	0000	0000
2000-2000-0099	0000	0000	0000
2000-2000-0100	0000	0000	0000

Project Name	Amount
Renovation Costs Lab	379,138
Renovation Costs Office	11,870



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Faculty Readiness Project


**MICHIGAN STATE UNIVERSITY**

### WHAT WE'VE DONE

- 2014: 5 projects occupied; \$368,600
- 2015: 15 projects occupied; \$1,783,900
- 2016: 8 projects occupied; \$2,924,900
- 2017: 18 project occupied; \$2,970,646
- 2018: 10 projects occupied; \$3,033,300

49 total projects since 2014

FACULTY READINESS PROJECTS															
Year	Count	Total Cost	Average Cost	Projects	Projects	Projects	Projects	Projects	Projects	Projects	Projects	Projects	Projects	Projects	Projects
2014	5	\$368,600	\$73,720	1	1	1	1	1							
2015	15	\$1,783,900	\$118,927	1	1	1	1	1	1	1	1	1	1	1	1
2016	8	\$2,924,900	\$365,613	1	1	1	1	1	1	1	1	1	1	1	1
2017	18	\$2,970,646	\$165,036	1	1	1	1	1	1	1	1	1	1	1	1
2018	10	\$3,033,300	\$303,330	1	1	1	1	1	1	1	1	1	1	1	1



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 <p><b>APPA Institute</b> Design Project Management</p>	<p><b>Tool Kit</b></p> <ul style="list-style-type: none"><li>• Small Project Ideas</li><li>• Warranty Period</li><li>• Hurt Feelings Report</li><li>• MSU Faculty Readiness Program</li><li>• MSU Capital Project Delivery Guide</li></ul>
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## 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 master 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, electronic 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.



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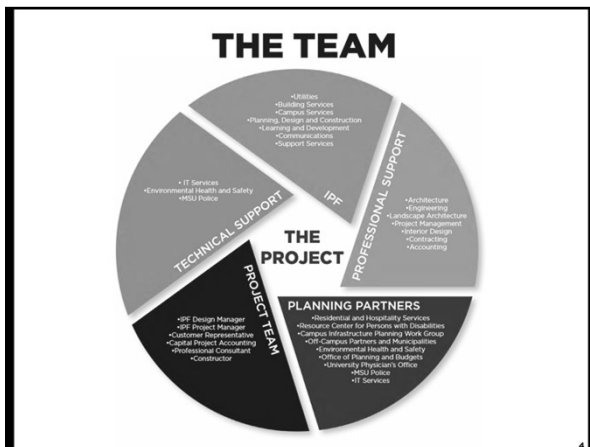
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The design phase begins when IPF receives authorization to plan for a renovation or new construction project. This phase of a major capital project (\$5 million and greater) includes four distinct milestones: program development, schematic design, design development, and construction documents.

### 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 (CIPWVG) reviews major projects for consistency with the Campus Master Plan. CIPWVG 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 in the development of 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:** CIPWVG (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.

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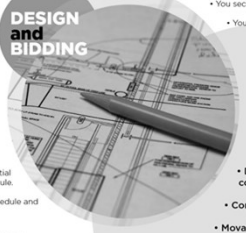
**Procuring Construction Contractors (Bidding)**

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**



**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)

**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.

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**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.

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**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.

**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.

**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

**DELIVERABLES**

- Certificate of Occupancy (Temporary Certificate, Final Occupancy, 100% Final Reports) if required.
- Final drawings that reflect any changes (record drawings), and operating and maintenance manuals to client.
- Building turn-over to customer and IPF maintenance operators.

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**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.**

**IT Services**  
This department reviews projects involving telecommunications, audio/visual, and infrastructure which includes networking, Wi-Fi.

**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.

**Residential and Hospitality Services (RHS)**  
Various departments in RHS 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 persons with disabilities.

**University Physician's Office (UPO)**  
Reviews projects involving food service and swimming pool facilities.

**Campus Infrastructure Planning Work Group (CIPWG)**  
In compliance with the Campus Master Plan, reviews projects that modify the campus landscape character, affect campus infrastructure or require a zoning variance prior to Board of Trustee actions.

**Environmental Health and Safety (EHS)**  
Reviews projects involving hazardous-materials compliance, laboratory 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, transportation services, and communications.

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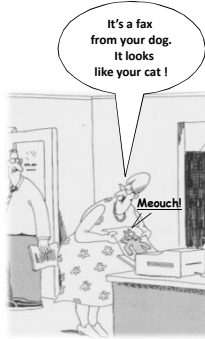
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	<b>APPA Institute</b> Design Project Management	<b>Project Management</b>
<p><b><u>Part 4 -Managing The Process</u></b></p> <ul style="list-style-type: none"> <li>• Project Management</li> <li>• Project Managers</li> <li>• Project Budgeting</li> </ul>		

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	<b>APPA Institute</b> Design Project Management	<b>Project Management</b>
<p><b><u>What Is It ?</u></b></p> <p><i>“The balancing of design, schedule and budget to meet the clients expectations”</i></p> 		

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	<b>APPA Institute</b> Design Project Management	<b>Project Management</b>
<div style="text-align: center;"> <h2><u>Who Are They?</u></h2> </div> <ul style="list-style-type: none"> <li>• Design Team</li> <li>• Owner</li> <li>• Contractor</li> </ul> <div style="display: flex; align-items: center;">  </div>		

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	<b>APPA Institute</b> Design Project Management	<b>Traits of the Owner's PM</b>
<div style="text-align: center;"> <h2><u>Traits of a Good PM</u></h2> </div> <ul style="list-style-type: none"> <li>• Organized</li> <li>• Broad Based</li> <li>• Good Communicator (listener)</li> <li>• Proactive</li> <li>• Leads by Example</li> <li>• Consistent</li> <li>• Follows Through</li> <li>• Holds People Accountable</li> <li>• Delegates Well</li> <li>• Patient &amp; Wise</li> </ul> <div style="display: flex; align-items: center;">  </div>		

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	<b>APPA Institute</b> Design Project Management	<b>PM Pitfalls</b>
<div style="text-align: center;"> <h2><u>PM Pitfalls</u></h2> </div> <ul style="list-style-type: none"> <li>• Delegation Errors           <ul style="list-style-type: none"> <li>• No One Can do Better</li> <li>• I Can Do It Faster</li> <li>• I Have to Fix it Anyway</li> <li>• It Takes too Long to Explain</li> <li>• I'll be Disappointed</li> <li>• I'm Not in Control</li> <li>• It Won't be Perfect</li> </ul> </li> </ul> <div style="display: flex; align-items: center;">  </div>		

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	<b>APPA Institute</b> Design Project Management	<b>PM Pitfalls</b>
<p><b><u>PM Pitfalls</u></b></p> <ul style="list-style-type: none"><li>• Delegation Errors</li><li>• Micro vs. Macro</li><li>• Analysis vs. Synthesis</li><li>• SOP vs. Flexibility</li><li>• PM vs. PM</li><li>• Image vs. Substance</li></ul> <p>Take this job and shove it!</p> 		

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Failure is not a way of life, it's a moment in time



Get over it

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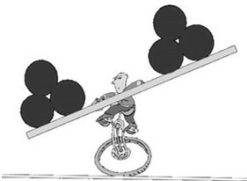
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	<b>APPA Institute</b> Design Project Management	<b>PM Tips</b>
<p><b><u>PM Tips</u></b></p> <p>From the mouth of babe's...</p> 		

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From: Steven C. Thomas  
 To: Steven C. Thomas  
 Subject: Customer Service Best Practices  
 Date: Sunday, June 02, 2013 1:57:46 PM

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Paul,

First, thank you for this nice email. I don't know that I have done anything special here, I have just tried to follow basic project management principals. Here are a few examples:

- **Clear, constant communication** – this has involved face to face communication and phone calls rather than just emails. I also did send the Client emails summarizing the project progress made every few days. He would then forward these onto his superior
- **Follow Through** – I try to say what I will do and do what I say. If I promise something to the Client, I try hard to follow up on my promise.
- **Lead by example** – When challenged by the Client to have a Change Order free Tower portion of the project, I asked the consultant to meet me in the space with his 100% documents. We discovered that there was a lot lacking in his drawings. Taking 100% drawings out to the field and reviewing them in the space to be renovated was something that I used to do when I was working as an architect on Campus.
- **Positive Attitude** – Although the Client can be challenging, I have enjoyed working with him and I try to be positive about my work on this project.
- **Tell it like it is** – I am not afraid to give my opinion to the Client. When I think he is making an error, I tell him. He decided to leave some of the VAT flooring rather than abate it and I told him I thought that was a mistake. We are going to have to have some tough discussions in the Tower portion of the project. From a building envelope view point, this space is a 60's mess. We shouldn't spend \$500K on the Conference Center if people are going to be too hot, or too cold in the space.

Although this project is far from over, hopefully we are off on the right foot with the Client. I hope this is what you were looking for.

Peter

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	<b>APP A Institute</b> Design Project Management	<b>PM Tips</b>
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Managing Client Relations

<i>Leadership</i>	<i>Management</i>
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<ol style="list-style-type: none"> <li>1. Know your client personally</li> <li>2. Understand your client</li> <li>3. Be a partner</li> <li>4. Foster Trust</li> <li>5. Demonstrate credibility</li> <li>6. Anticipate – don't react</li> </ol>	<ol style="list-style-type: none"> <li>1. Keep your files organized</li> <li>2. Respond to requests promptly</li> <li>3. Meet your commitments</li> <li>4. Issue regular progress reports</li> <li>5. Be persistent when you need input</li> </ol>
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**Most important – No Surprises!**

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	<b>APP A Institute</b> Design Project Management	<b>Managing the Project</b>
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Managing the Project

Develop Project Mgt. Plan (PMP)

- The 90/10 Rule

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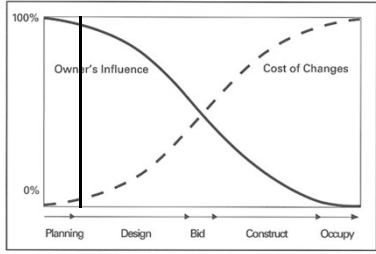
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	<b>APPA Institute</b> Design Project Management	<b>Keys to Success</b>
<h3>The 90/10 Rule</h3> 		

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	<b>APPA Institute</b> Design Project Management	<b>Keys to Success</b>
<ul style="list-style-type: none"><li>• PMP (Understand Project and Desired Outcomes)<ul style="list-style-type: none"><li>• Vision/Goals/Objectives / Critical Factors for Success</li><li>• Communication Plan</li><li>• Scope</li><li>• Schedule</li><li>• Financial Plan</li><li>• Quality Control Process</li><li>• Change Management Process</li></ul></li><li>• Involve Key Stakeholders</li><li>• Identify Constraints</li><li>• Assemble Team / Empower the Team</li><li>• Resolve Conflicts</li><li>• Encourage Risk Taking</li></ul>		

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	<b>APPA Institute</b> Design Project Management	<b>Budgeting</b>
<h3><u>Project Budgeting</u></h3> <ul style="list-style-type: none"><li>• Cost Management Principles<ul style="list-style-type: none"><li>• Realistic Expectations</li><li>• Cost Data</li><li>• Scope Control</li></ul></li></ul> 		

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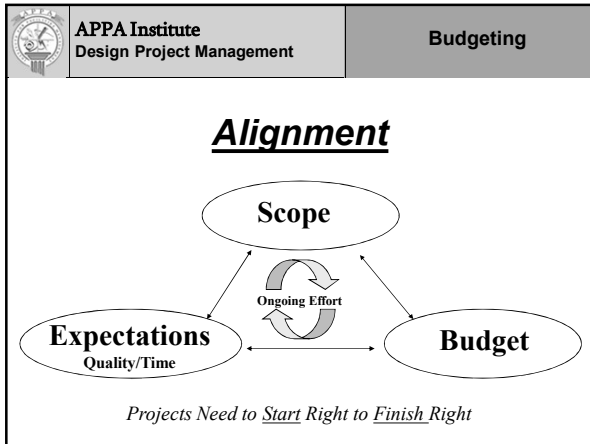
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