

# 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  
Continuing  
Education  
Provider

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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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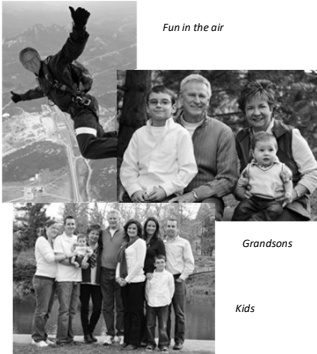
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**APPA Institute**  
Design Project Management



*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
  - Emory University - 5- 1/2 Years
    - AVP PDC
  - University of Colorado -3 Years
    - AVC Facilities
    - 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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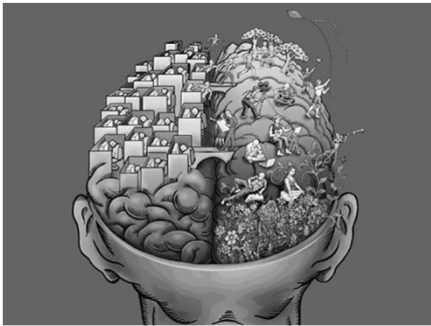
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**Revenge of the Right Brain!**

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**What are your Goals?**

**My Goals:**

- Understand the Design Process
- Manage the Design Process

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**Architectural Education**




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

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	<b>APPA Institute</b> Design Project Management	<b>Design Process</b>
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**Part 1-Design Process**

- Design Process
- Project Schedules
- Project Deliverables
- Designing For Value



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How do you get ideas?

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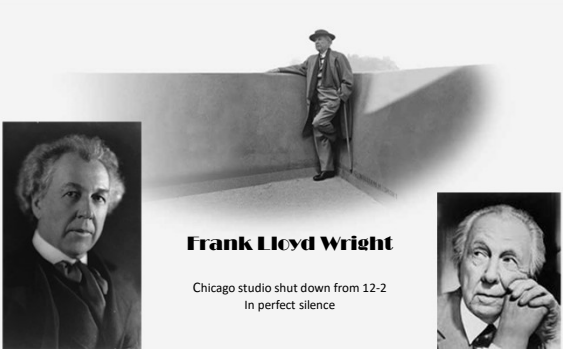
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**Frank Lloyd Wright**

Chicago studio shut down from 12-2  
In perfect silence

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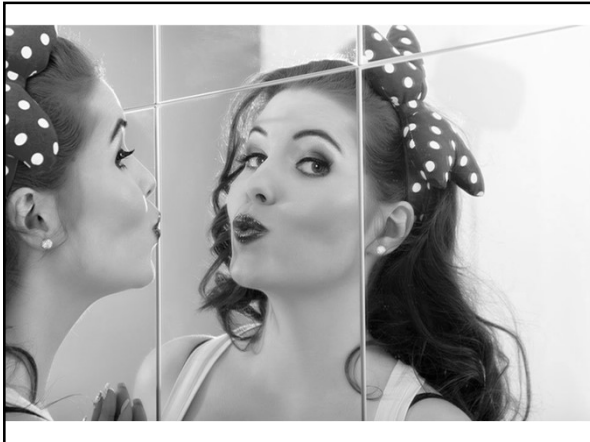
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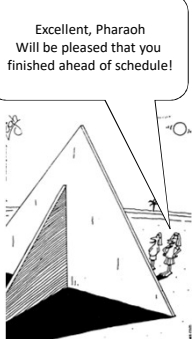
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 <b>APPA Institute</b> Design Project Management	<b>Design Process</b>
<p><b><u>What is Design ?</u></b></p> <p><b>Moments of Inspiration</b> <b>Periods of Hard Work</b> <b>Continuous Activity</b></p>	<p>Excellent, Pharaoh Will be pleased that you finished ahead of schedule!</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> </ul> <div style="display: flex; justify-content: space-between; align-items: center;">  </div> <p style="text-align: center; font-size: small;">Early Art Critic</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> <div style="display: flex; justify-content: space-between; align-items: center;">  </div> <p style="text-align: center; font-size: small;">Early Art Critic</p>		

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	<b>APPA Institute</b> Design Project Management			
<p><b><u>Design Process</u></b></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> <li>• <b><u>Analysis</u></b></li> <li>Program</li> <li>Site</li> <li>Code</li> </ul> <ul style="list-style-type: none"> <li>• <b><u>Synthesis</u></b></li> <li>Goals</li> <li>Alternatives</li> </ul> </td> <td style="width: 50%; vertical-align: top; padding-left: 20px;"> <ul style="list-style-type: none"> <li>Scheduling</li> <li>Cost</li> <li>Constructability</li> <li>Concept</li> </ul> </td> </tr> </table> <div style="display: flex; justify-content: space-between; align-items: center; margin-top: 10px;">  </div>			<ul style="list-style-type: none"> <li>• <b><u>Analysis</u></b></li> <li>Program</li> <li>Site</li> <li>Code</li> </ul> <ul style="list-style-type: none"> <li>• <b><u>Synthesis</u></b></li> <li>Goals</li> <li>Alternatives</li> </ul>	<ul style="list-style-type: none"> <li>Scheduling</li> <li>Cost</li> <li>Constructability</li> <li>Concept</li> </ul>
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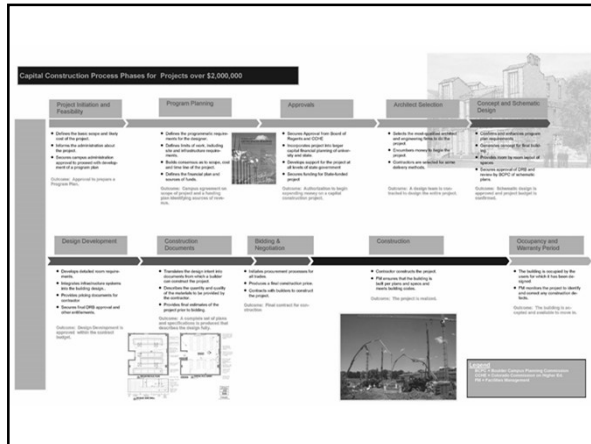
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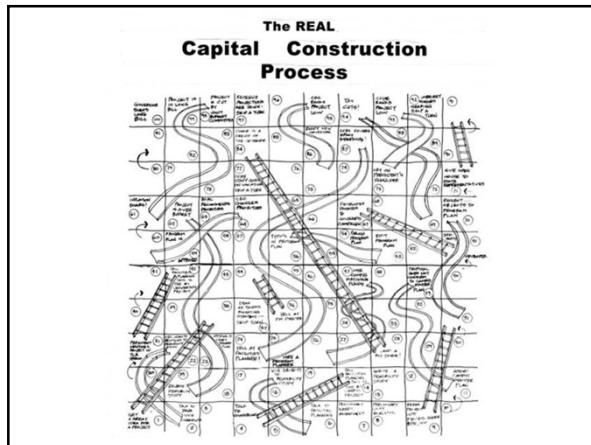
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	<p><b>APPA Institute</b> Design Project Management</p>	<p><b>Deliverables</b></p>
<p><b><u>Design Phases / Deliverables</u></b></p> <ul style="list-style-type: none"> <li>• <b>Schematic Design</b> Plans / Elevations Sections / \$ Estimate Outline Specs Design Summary / Analysis</li> <li>• <b>Design Development</b> Expanded SD Set</li> <li>• <b>Construction Documents</b> Detailed Plans</li> </ul> <div data-bbox="500 1554 755 1827"> <p>Just follow these plans...</p> <p>Prairie Dog Developers</p> </div>		

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	<b>APPA Institute</b> <b>Design Project Management</b>	<b>Communication</b>
<p style="text-align: center;"><b><u>Design</u></b></p> <ul style="list-style-type: none"> <li>• All Project Phases</li> </ul> <p style="text-align: center;"><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> <li>• <b><u>Contractor</u></b> <ul style="list-style-type: none"> <li>• Contract Documents</li> <li>• Construction</li> </ul> </li> </ul>		

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	<b>APPA Institute</b> <b>Design Project Management</b>	<b>Schedules</b>
<p style="text-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>		

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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          Logistics          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          LOGS          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          Logistics          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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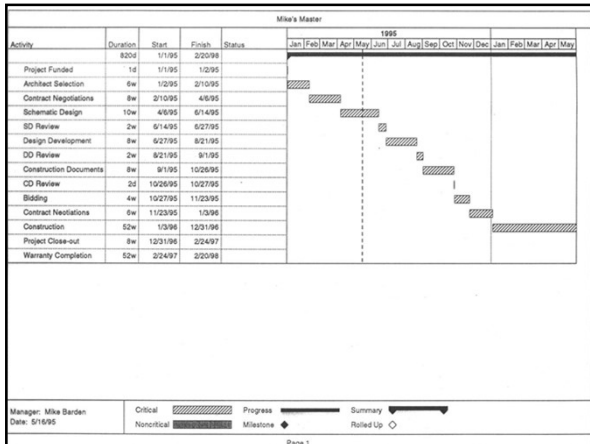
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**APPA Institute**  
Design Project Management

**Design for Value**

***Designing For Value***

- Maintainability

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	<b>APPA Institute</b> Design Project Management	<b>Design for Value</b>
<p><b><u>Designing For Value</u></b></p> <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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	<b>APPA Institute</b> Design Project Management	<b>Design for Value</b>
<p style="text-align: center;"><b><u>Value Management Approach</u></b></p> <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> <div style="display: flex; align-items: center;"><div style="margin-left: 20px;"><p><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</small></p></div></div>		

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	<b>APPA Institute</b> Design Project Management	<b>Design for Value</b>
<p><b><u>Designing For Value</u></b></p> <ul style="list-style-type: none"><li>• Maintainability</li><li>• Life Cycle Cost</li><li>• Value Engineering</li><li>• Present Value</li></ul> <div style="display: flex; align-items: center;"><div style="margin-left: 20px;"><p><small>Ned Beally, of Beally Construction Co., helps his children with a Lego® Mindstorms™ robotics project.</small></p></div></div>		

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	APPA Institute Design Project Management	Project Team
<p style="text-align: center;"><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 style="text-align: center;">Wildlife Day Shifts</p>

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	APPA Institute Design Project Management	Project Team
<p style="text-align: center;"><b><u>Project Team</u></b></p> <ul style="list-style-type: none"> <li>• Owner</li> <li>• Consultants</li> <li>• Design Team</li> <li>• Construction Team</li> <li>• Supporting Cast</li> </ul>		

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	APPA Institute Design Project Management	Project Team
<p style="text-align: center;"><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>		

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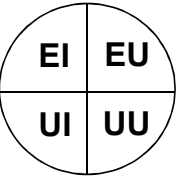
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	APPA Institute Design Project Management	<b>Project Team</b>
<p style="text-align: center;"><b><u>Owners</u></b></p> <ul style="list-style-type: none"> <li>• <b><u>Experienced</u></b> Educated / Involved Educated / Uninvolved</li> <li>• <b><u>Inexperienced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

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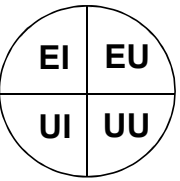
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	APPA Institute Design Project Management	<b>Project Team</b>
<p style="text-align: center;"><b><u>Owners</u></b></p> <ul style="list-style-type: none"> <li>• <b><u>Experienced</u></b> Educated / Involved Educated / Uninvolved</li> <li>• <b><u>Inexperienced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

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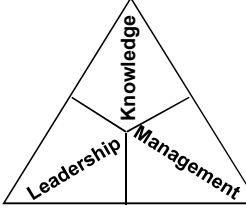
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	APPA Institute Design Project Management	<b>Consultants</b>
<p style="text-align: center;"><b><u>What is a Consultant ?</u></b></p> <ul style="list-style-type: none"> <li>• <b><u>Professional Advice</u></b> Knowledge / Expertise <b>Leadership</b>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

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

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	APPA Institute Design Project Management	Design Team
<p style="text-align: center;"><b><u>The Design Team</u></b></p> <p><b><u>TEN Deadly Sins</u></b></p> <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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	APPA Institute Design Project Management	Design Team
<p style="text-align: center;"><b>What You <u>Should</u> Do</b></p> <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>
<p style="text-align: center;"><b>What You <u>Should Not Do</u></b></p> <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 style="text-align: center;"><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 style="text-align: center;"><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 style="text-align: center;"><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 style="text-align: center;"><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 style="text-align: center;"><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> <ul style="list-style-type: none"> <li>Planner</li> <li>Landscape Architect</li> <li>Interior Designer</li> <li>Graphic Designer</li> </ul> </li> </ul>		

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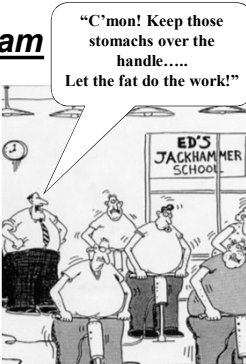
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	APPA Institute Design Project Management	<b>Construction Team</b>
<p><b><u>The Construction Team</u></b></p> <ul style="list-style-type: none"> <li>• <b><u>Contractor</u></b> <ul style="list-style-type: none"> <li>• GC - avg. &lt; 10 employees</li>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

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	APPA Institute Design Project Management	<b>Project Team</b>
<p><b><u>The Project Team</u></b></p> <ul style="list-style-type: none"> <li>• <b><u>Supporting Cast</u></b> <ul style="list-style-type: none"> <li>Finance Accounting</li> <li>Insurance / Risk Mgt.</li> <li>Regulators</li> <li>Legal</li> <li>Others</li> </ul> </li> </ul> 		

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	<b>APPA Institute</b> Design Project Management	<b>Process Tools</b>
<div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"> <p style="text-align: center;"><b><u>Part - 3</u></b></p> <p style="text-align: center;"><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> </div> <div style="width: 35%; text-align: center;">  </div> </div>		

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	<b>APPA Institute</b> Design Project Management	<b>Communication</b>
<div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"> <p style="text-align: center;"><b><u>Communication</u></b></p> <ul style="list-style-type: none"> <li>• <b><u>Talking</u></b></li> <li>• <b><u>Listening</u></b></li> </ul> </div> <div style="width: 35%;"> <p>Effective communication =</p> <p><b>80%+</b> of project problems</p> <div style="display: flex; flex-direction: column; align-items: center;">   </div> </div> </div>		

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	<b>APPA Institute</b> Design Project Management	<b>Communication</b>
<div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"> <p style="text-align: center;"><b><u>Communication</u></b></p> <ul style="list-style-type: none"> <li>• <b><u>Talking</u></b></li> <li>• <b><u>Listening</u></b> <i>(what not to do)</i></li> </ul> <p style="margin-left: 20px;">                     Mind Reader                      Rehearser                      Filterer                      Dreamer                      Comparer                      Derailer                      Placator                 </p> </div> <div style="width: 35%;"> <p style="text-align: center;"><b><u>What we say to dogs</u></b></p>  <p style="text-align: center;"><b><u>What they hear</u></b></p>  </div> </div>		

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Oh no!  
It's from Connie!  
She's written me a John Deer letter.

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

😊

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

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

**In fact....**

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	<b>APPA Institute</b> Design Project Management	<b>Communication</b>
<div style="display: flex; justify-content: space-between;"> <div style="width: 65%;"> <ul style="list-style-type: none"> <li>• <b><u>Talking</u></b></li> <li>• <b><u>Listening</u></b></li> <li>• <b><u>Writing</u></b> <ul style="list-style-type: none"> <li>• <b>Email Etiquette (Netiquette)</b> <ul style="list-style-type: none"> <li>• Use "<b>reply all</b>" judiciously</li> <li>• <b>Refrain From Using !!!!!</b></li> <li>• <b>Avd txt msg'ng abrev</b></li> <li>• <b>Don't use Wallpaper</b></li> <li>• <b>AVOID ALL UPPER CASE</b></li> <li>• <b>Clear &amp; Concise</b></li> <li>• <b>Think Before Sending</b></li> <li>• <b>Answer Promptly</b></li> <li>• <b>Avoid Unnecessary Attachments</b></li> </ul> </li> </ul> </li> </ul> </div> <div style="width: 30%; text-align: center;"> <p>TECHNOLOGY ADVANCES For A Good Time Email SUB@abc.com PEOPLE SAY THE SAME</p> </div> </div>		

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	APPA Institute Design Project Management	Communication
<ul style="list-style-type: none"><li>• <u>Talking</u></li><li>• <u>Listening</u></li><li>• <u>Writing</u></li><li>• <u>Meetings</u></li></ul> <p>Where minutes are taken and hours are lost</p> <p><b><u>Communication</u></b></p>		
		Mark Bristol UNC

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	APPA Institute Design Project Management	Communication
<ul style="list-style-type: none"><li>• <u>Talking</u></li><li>• <u>Listening</u></li><li>• <u>Writing</u></li><li>• <u>Meetings</u></li></ul> <p><b><u>Communication</u></b></p> <p>Alternatives Prepare Agenda / Send Ahead Start / Finish on Time Short 'n Sweet Prepare Confirm</p>		

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	APPA Institute Design Project Management	Fees
<p><b><u>Negotiations &amp; Fees</u></b></p> <ul style="list-style-type: none"><li>• Fee Types</li><li>• Fee Structure</li><li>• Negotiating</li></ul>		

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**Consultant's Information Packet**

**Table of Contents**

- Cover Letter
- Communicating
- Project Contact List
- Capital Construction Process
- Reviews of Architectural Plans and Specifications
- Academic Calendars
- Other Materials
  - Campus Master Plan
  - Campus Parking Map
  - Campus Visitor Map
  - Body & Soul: Architectural Style at the University of Colorado at Boulder

**Cover Letter:**  
The Consultant's Information Packet is available to help designers understand the process and procedures of the University of Colorado at Boulder.

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.

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

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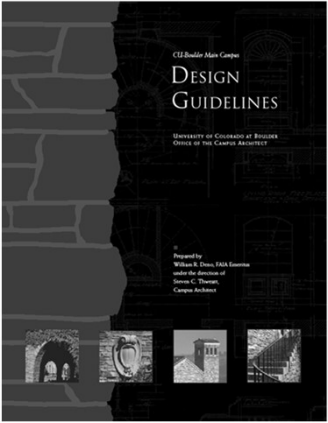
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	<b>APPA Institute</b> Design Project Management	<b>Tool Kit</b>
<ul style="list-style-type: none"> <li>• Consultant Instructions</li> <li>• Design Guidelines</li> <li>• Construction Standards</li> <li>• Planning Template</li> <li>• Service Levels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

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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><b>"Orifice Building"</b></p> 

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<p>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	<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> <li>• Design Reviews</li> <li>• Project Checklists</li> </ul>	

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 <b>Facilities Management</b> University of Colorado at Boulder	
Department of Facilities Management Office of Planning, Design & Construction  <small>1540 30<sup>th</sup> Street, UCB 453, Boulder, Colorado 80309-0453          Phone: (303) 492-5511          FAX: (303) 492-4082</small>	
<b>Project Task Checklist</b>	
<input type="checkbox"/> Client initiates Work Order.	
<input type="checkbox"/> Assistant Director receives Work Order from Facilities Management (FM) scheduling system.	
<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.	
<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>	
<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.	
<input type="checkbox"/> Environmental Site Assessment Report is done by Environmental Health and Safety (EH & S). 2	

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 <b>APP A 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> <li>• Service Levels</li> <li>• Outage Notices</li> <li>• Design Reviews</li> <li>• Project Checklists</li> <li>• Feedback &amp; Evaluations</li> </ul>	

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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><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></ul>	

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 <p>You are cordially invited to a key party-- <b>Project Management &amp; Construction</b> will officially turn over the</p> <p><b>Turman Residence Hall</b></p> <p>to Facilities Management <b>Monday, August 13, 2007, 1:00 pm</b> <b>Turman Residence Hall</b> <b>First Floor Lobby</b> <b>640 Means Drive</b></p> 	 
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  <p><b>Let the Party Begin</b></p>	<p><b>Signing the Close-out Documents</b></p>  
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	APP A 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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<div style="text-align: center;">  <p><b>Lessons Learned - Math and Science Center</b> January 9, 2003</p> <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 style="padding-left: 20px;">a. General departmental layout</p> </div>	
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	APP A 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> <li>• Move in Brochure</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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	<b>APPA Institute</b> Design Project Management	<b>Project Management</b>
<div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"> <h2 style="text-decoration: underline;">Part 4 -Managing The Process</h2> <ul style="list-style-type: none"> <li>• Project Management</li> <li>• Project Managers</li> <li>• Project Budgeting</li> </ul> </div> <div style="width: 35%; text-align: center;"> </div> </div>		

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	<b>APPA Institute</b> Design Project Management	<b>Project Management</b>
<div style="text-align: center;"> <h2 style="text-decoration: underline;">What Is It ?</h2> <p><i>“The balancing of design, schedule and budget to meet the clients expectations”</i></p> </div>		

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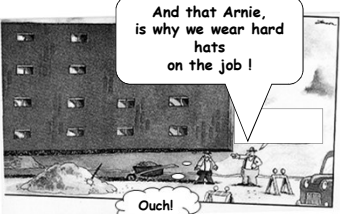
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	<b>APPA Institute</b> Design Project Management	<b>Project Management</b>
<h2><u>Who Are They?</u></h2>		
<ul style="list-style-type: none"> <li>• Design Team</li> <li>• Owner</li> <li>• Contractor</li> </ul>		

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	<b>APPA Institute</b> Design Project Management	<b>Traits of the Owner's PM</b>
<h2><u>Traits of a Good PM</u></h2>		
<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>		

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	<b>APPA Institute</b> Design Project Management	<b>PM Pitfalls</b>
<h2><u>PM Pitfalls</u></h2>		
<ul style="list-style-type: none"> <li>• Delegation Errors                         <ul style="list-style-type: none"> <li>• No One Can do Better</li> <li>• It's 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>		

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	<b>APPA Institute</b> <b>Design Project Management</b>	<b>PM Pitfalls</b>
<div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"> <h2 style="text-decoration: underline;">PM Pitfalls</h2> <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> </div> <div style="width: 35%; text-align: center;">  </div> </div>		

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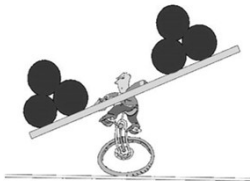
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	<b>APPA Institute</b> <b>Design Project Management</b>	<b>PM Tips</b>
<div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"> <h2 style="text-decoration: underline;">PM Tips</h2> <p>From the mouth of babe's...</p> </div> <div style="width: 35%; text-align: center;">  </div> </div>		

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<b>From:</b> <b>To:</b> <b>Subject:</b> <b>Date:</b>	Steven C. Thumalt Steven C. Thumalt Customer Service Best Practices Sunday, June 02, 2013 1:57:46 PM
<p>Paul,</p> <p>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:</p> <ul style="list-style-type: none"> <li>• <b>Clear, constant communication</b> – 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</li> <li>• <b>Follow Through</b> – 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.</li> <li>• <b>Lead by example</b> – 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.</li> <li>• <b>Positive Attitude</b> – Although the Client can be challenging, I have enjoyed working with him and I try to be positive about my work on this project.</li> <li>• <b>Tell it like it is</b> – 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 V&amp;T 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.</li> </ul> <p>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.</p> <p>Peter</p>	

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	<b>APPA Institute</b> Design Project Management	<b>PM Tips</b>		
<p><u>Managing Client Relations</u></p> <table border="0"> <tr> <td style="vertical-align: top;"> <p><i>Leadership</i></p> <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> </td> <td style="vertical-align: top;"> <p><i>Management</i></p> <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> </td> </tr> </table> <p style="border: 1px solid black; padding: 2px; display: inline-block;"><b>Most important – No Surprises!</b></p>			<p><i>Leadership</i></p> <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>	<p><i>Management</i></p> <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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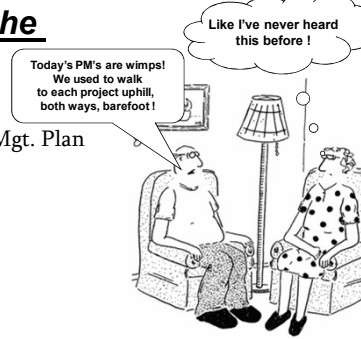
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	<b>APPA Institute</b> Design Project Management	<b>Managing the Project</b>
<p><u>Managing the Project</u></p> <p>Develop Project Mgt. Plan (PMP)</p> <ul style="list-style-type: none"> <li>• The 90/10 Rule</li> </ul> 		

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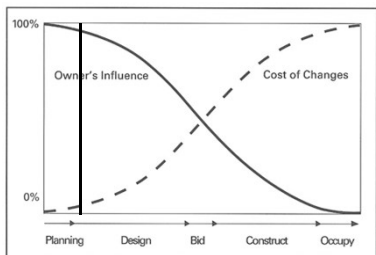
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	<b>APPA Institute</b> Design Project Management	<b>Keys to Success</b>
<p><b>The 90/10 Rule</b></p> 		

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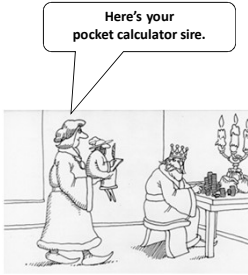
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	<b>APPA Institute</b> Design Project Management	<b>Budgeting</b>
<p><b><u>Project Budgeting</u></b></p> <ul style="list-style-type: none"> <li>• Cost Management Principles                     <ul style="list-style-type: none"> <li>• Realistic Expectations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

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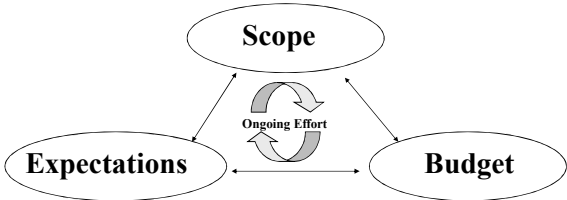
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	<b>APPA Institute</b> Design Project Management	<b>Budgeting</b>
<p><b><u>Alignment</u></b></p>  <p><i>Projects Need to <u>Start</u> Right to <u>Finish</u> Right</i></p>		

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