



GREEN

INTELLIGENT BUILDINGS

CONFERENCE

**BROUGHT
TO YOU BY**



COMMISSIONING NEW GREEN INTELLIGENT BUILDINGS

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LEED® AP, CCP, CxA

President

Questions & Solutions Engineering, Inc.



Presentation Overview

- General Commissioning Introduction
- LEED Commissioning



New Construction Commissioning

- Nearing 20 Years of Application
- Encompassing many Markets
 - Museums
 - Higher education
 - Healthcare
 - Government
 - Commercial



New Construction Commissioning

- Improve Building Turnover Process from Contractor to Operator
- Verify System Performance
- Reduce Contractor & Designer Call-Backs
- Long Term Proper Operation
- Energy Conservation



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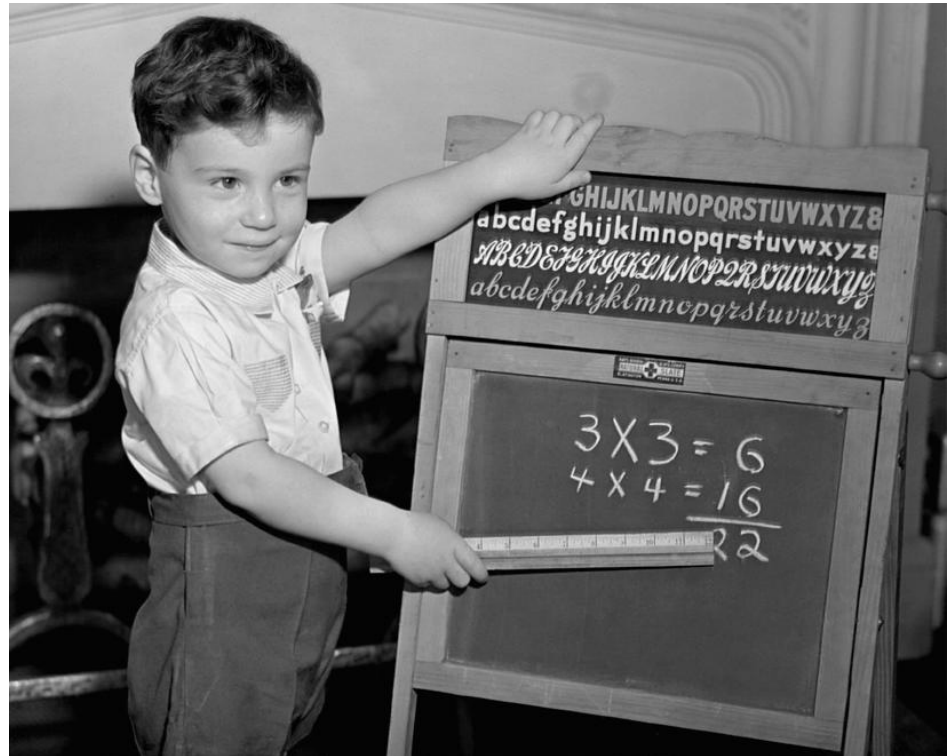
New Construction Commissioning

- HVAC
- Electrical Power
- Life Safety
- Lighting Controls
- Plumbing
- Building Envelope



New Construction Commissioning

- Documentation
- Testing
- Training



LEED for New Construction

- LEED New Construction & Major Renovations
- LEED Core & Shell
- LEED Commercial Interiors
- LEED Schools
- LEED Healthcare
- LEED Retail



LEED Commissioning

- Fundamental Commissioning
 - Energy & Atmosphere Prerequisite 1
- Enhanced Commissioning
 - Energy & Atmosphere Credit 3



LEED Commissioning

- Systems to be Commissioned
 - HVAC systems & associated controls
 - Lighting & daylighting controls
 - Domestic hot water systems
 - Renewable energy systems (wind, solar, etc.)



LEED Fundamental Commissioning

- Commissioning plan
- Owner's project requirements document
- Basis of design document
- Commissioning specification
- Installation verification
- Performance verification
- Commissioning report



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LEED Enhanced Commissioning

- All fundamental commissioning requirements
- 50% CD design review & backcheck
- Shop drawing review
- Systems manual
- Training verification
- 10 month operations review



Who Performs Commissioning?

- Fundamental Commissioning
 - 3rd Party Professional or Owner
 - Design Firm; separate team
 - Construction Firm; separate team
- Enhanced Commissioning
 - 3rd Party Professional or Owner



Questions?



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