

SUN-B04

Quality Control Matters Matter: Improving the Accuracy and Efficiency of Construction Documents

1.00 PDH, LA CES/HSW, AICP, FL, NY/HSW

Session Overview

Construction documents play a key role in communicating between designers and contractors. This presentation focuses on the quality control measures of construction documents, both drawings and specifications, and aims to improve the accuracy and efficiency of the overall construction which transforms great design ideas into an enjoyable physical space.

Learning Objective

1. Gain insight into current industry best practice to properly communicate the design intent to contractors.
2. Explore the computer aided design platforms that are better integrated for drawing production and specification, e.g. Revit keynote system, etc.
3. Learn tools and platforms of quality control to minimize the confusion in the field and to improve the overall construction quality.
4. Understand drawing and specification review process and avoid common mistakes.

Speakers

Xue Phyllis Zhou

Senior Associate, Sasaki Associates

Phyllis is a licensed landscape architect at Sasaki Associates with 10+ years of design experience. Having worked on a wide range of interdisciplinary projects, Phyllis values strategic thinking across a broad landscape focus, and also places great value on attention to intricate design details and technical innovation. She is an advocate of BIM and has provided various presentations on the topic of landscape architects using BIM at national and local conferences.

Glen A. Phillips, ASLA

Associate Principal, AECOM

Glen is an Associate Principal at AECOM within the west coast landscape design studio. He has over thirty years within the profession and has worked on a variety of projects domestically and internationally. Mr. Phillips provides a technical review of documentation prepared within the studio and is also responsible for providing a technical quality review of documentation prepared for other offices throughout the company.

Melvin Toddy, LEED

Senior Project Manager, The Boldt Company

Melvin is a Senior Project Manager. He has been with The Boldt Company for 3 years. Prior to joining Boldt, he worked previously as a Project Designer with HGA Architects and Engineers, NBBJ, Perkins + Will and HKS, Inc. Melvin has worked in the Building and Construction industry for over 20 years on numerous building types in 12 states. His technical expertise is in Health Care architecture.

Outline

A. Topic Introduction:

- a. Goals of construction documents delivery
- b. Importance of construction documents quality control
- c. Challenges of construction documents quality control
- d. Procedure to quality control at different practice
- e. Technology's role

B. Landscape Designer's Perspective:

- a. Technology and tools commonly used to coordinate between disciplines and to produce construction documents.
 - i. initial draft
 - ii. file management
 - iii. coordination
 - iv. clash detection
 - v. internal team check
- b. Improve accuracy
 - i. scope coverage
 - ii. clarity of legend and callouts in drawings
 - iii. product understanding and detailing
 - iv. cross reference among disciplines.
 - v. dispute between drawings and specifications
 - vi. spec numbering
- c. Improve efficiency with the aid of Revit
 - i. plans and sections
 - ii. detail drawings using keynote system
 - iii. specification list from keynote system

C. Technical Reviewer's Perspective

- a. Overall Project Management & Document Process
 - i. Organization of Information.
 - 1. Sharing of Information
 - 2. Standards
 - a. Drawings
 - b. Specifications
 - 3. Technical References and Standards
 - a. ASTM
 - 4. Building and Municipal Codes
- b. Limitations of Firms Resources for Production and Review
 - i. Small Firm to Large Disciplinary Firm (AIA Report)
- c. Review Process
 - i. Schedule review process at regular periods
 - 1. At major milestones versus continual review
 - 2. Establish a realistic timeframe to conduct a review
 - a. Single discipline review

- b. Multidisciplinary review
 - 3. Who is to provide the review
 - a. Prime Consultant
 - i. Technical Lead
 - ii. Project Manager
 - b. Subconsultant
 - i. Technical Lead
 - ii. Project Manager
 - c. Multidisciplinary Office / Team
 - i. Prime Consultant
 - ii. Subconsultant(s)
 - iii. Internal multidisciplinary teams
- ii. Goals of Review Process
 - 1. Identify Errors from Minor to Major
 - 2. Identify errors and missing items in Coordination
 - 3. Confirmation of following Standards of Drawings and Specifications
 - 4. Ability to Continually Track Issues
- iii. Methods of Review
 - 1. Hardcopy Old School
 - a. Advantages
 - b. Deficiencies
 - i. Can't be shared with other disciplines
 - 2. Digital Format
 - a. Advantage
 - b. Disadvantages
 - 3. Shared / Digital Format, e.g. Bluebeam.
 - a. Advantage
 - b. Disadvantages

D. Contractor's Perspective

- a. What does complete coordination look like?
- b. What are typical items missed? Errors and Omissions.
- c. Is there enough information to write a scope of work document for Landscape/ Irrigation/ Planting/ Metal & Woodwork sub./ Lighting Designer/ Electrical Designer/ Concrete paving/ Specialty paving/ Site Furnishing/ Custom Fabrications (non-catalog)/ Precast/ Architectural metals?
- d. Design Build vs. Design Bid Build vs. IFOA – What are the advantages and disadvantages of the project delivery as it relates to responsibility and active quality control participation
- e. Table of pros and cons – public vs. private sector.
- f. Which delivery type can reduce errors and omissions?
- g. Ease of management of scopes of work, i.e. administrative, collaboration
- h. Delivery by size, i.e. when is appropriate for my firm to chase an IFOA project.