CONSPECTUS®

CONSTRUCTION SPECIFICATION WRITING STUDY SESSION

Presented by:

Conspectus, Inc.

WHO IS CONSPECTUS?

Conspectus, Inc. is a national specification consultancy, employing 16 specifiers, providing high quality, industry-leading specifications and related consulting services on thousands of projects for some of the most prestigious design and engineering firms, government agencies, and private entities domestically and internationally.

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KNOWLEDGE AREAS

Domains:

1	~~9/03~~	~~Planning, Development & Organization~~
4	~~9/10~~	~~Research~~
2	~~09/17~~	~~Procurement~~
6	~~09/24~~	~~Production, Part 1~~
6	~~10/01~~	~~Production, Part 2~~
5	**10/08**	**Coordination**
3	10/15	Analysis & Evaluation

ITEMS TO NOTE

GENERAL FYI

- No CDT ® certification - highly advisable to **also read Project Delivery Practice Guide (PDPG).**
- Yes CDT ® certification - brush up on the PDPG.
- Exam is based on CSI® **Construction Specifications Practice Guide (CSPG)** content and may not always reflect the real world; we will note items which may not align.
- Those who wrote the CSPG are not the same as the exam writers; study guides have divided the source material - **read the entire book.**
- We encourage interaction in the chat and will also provide time for Q&A at the end of each session.

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AIA Continuing Education Provider

AIA Continuing Education

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Construction Specification Writing Session 3:

Planning, Development, and Organization

AIA LO1

Collect, track, and coordinate specification information, verifying they will meet the necessary guidelines for the project and provide optimal health, safety, and welfare of building occupants.

AIA LO2

Coordinate A/E team proposed choices to align with project, code, and sustainability requirements and coordinate specification information across project team disciplines.

AIA LO3

Obtain and verify owner procurement and contract requirements, as well as any available project information to be compiled in the project manual. Evaluate the specifications to confirm alignment across contract documents.

AIA LO4

Evaluate and verify compatibility of products, materials, and alternates with the project scope and with each other. Incompatible products discovered during construction can cause delays, add cost, and require changes resulting in reduction of other project scope; adversely impacting end users.

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DOMAIN 2:

COORDINATION

COMPETENCIES

2A Collect, track, and coordinate specification information.

2B Coordinate A/E team proposed choices to align with project requirements.

2C Coordinate specification information with project team (e.g., owner, contractor, designer, product representatives).

2D Obtain and verify owner procurement and contract requirements.

2E Evaluate and verify the compatibility of products and materials.

2F Coordinate the specifications across project team disciplines.

2G Evaluate specifications to confirm alignment with contract documents.

2H Compile available project information into the project manual.

2I Coordinate with project team to specify alternates.

COORDINATION

“ . . . construction projects are unique and involve a myriad of interrelated activities and work packages. . . The coordination process must be applied as an essential function in project management to efficiently oversee a building project.”

-CSPG

COORDINATION
COMPETENCY 2A

LEARNING OBJECTIVES

LO1 Establish effective project coordination policies.

LO2 Create a project coordination checklist.

LO3 Enforce the use of consistent terminology and abbreviations throughout the construction documents.

Collect, track, and coordinate specification information.

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Project Coordination Policies

Good coordination policies, including establishing effective intra-office and inter-team communication procedures, are essential.

- As the project design stage begins, a meeting should be held to address the project's coordination procedures.
  - Attendees should include architect, engineer, consultants, drafters, modelers, and specifier.
  - A preliminary project description or outline specifications should be developed as a Checklist.
  - Additional meetings should be held as the design progresses.

Preliminary Coordination

This effort should involve coordinating the following information:

- Within the project manual.
- Within the drawings of each separate discipline.
- Between the drawings of separate disciplines.
- Within the specifications of each separate discipline.
- Between the specifications of separate disciplines.
- Between the project manual and drawings.

Preliminary Coordination Cont.

In addition to obvious graphical, dimensional, and typographical errors, documents should be carefully checked and compared to eliminate the following:

- Omissions.
- Overlaps and duplications between disciplines.
- Noncompliance with laws and regulations.
- Conflicts and discrepancies with locations of equipment and components.
- Incompatible materials and components.
- Difficult or impossible construction methods.
- Inconsistent terminology and abbreviations.
- Inconsistent units of measure.
- Incorrect or unspecified materials, components, or equipment.
- Errors in the extent of alternates.
- Errors in defining areas of construction phasing.
- Errors in defining limits of work.
- Errors in identifying work by the owner or work that is not in the contract.
- Errors in designating work of separate contracts or packages.
- Inaccurate or unnecessary cross-referencing.

Final Coordination

Final coordination should include the following:

- Verifying all previously noted inconsistencies, errors, and inaccuracies have been corrected.
- Verifying the construction documents are complete, with a final check of the project manual table of contents and drawing table of contents.
- Verifying consistency and completeness of all schedules.

Coordination Checklist

Checklists are recommended to ensure that necessary items are included in the specifications, that specified items are consistent with the drawings, and that drawings do not duplicate the specifications.

- Specialized forms may be used to address specific office problems, such as omissions, discrepancies, or duplications.
  - Drawings might have lists of materials, systems, and products by specification section.
    - Use checkmarks to delineate inclusion.
    - Add a comments column for coordination with other Work.
    - MasterFormat® as a practical coordination checklist.
  - List of product and equipment catalogues.
  - Project manual table of contents.

Terminology Coordination For Documentation

Use consistent terminology and abbreviations throughout the construction documents to avoid confusion among the various users.

- The use of inconsistent terminology and abbreviations may:
  - Create confusion.
  - Raise construction cost.
  - Cause delays.
  - Result in faulty construction.

TIPS! The conditions of the contract should only state that in a case of conflict between drawings and specifications, the A/E makes a documented interpretation. **Do not establish contract document precedence as they are complementary.**

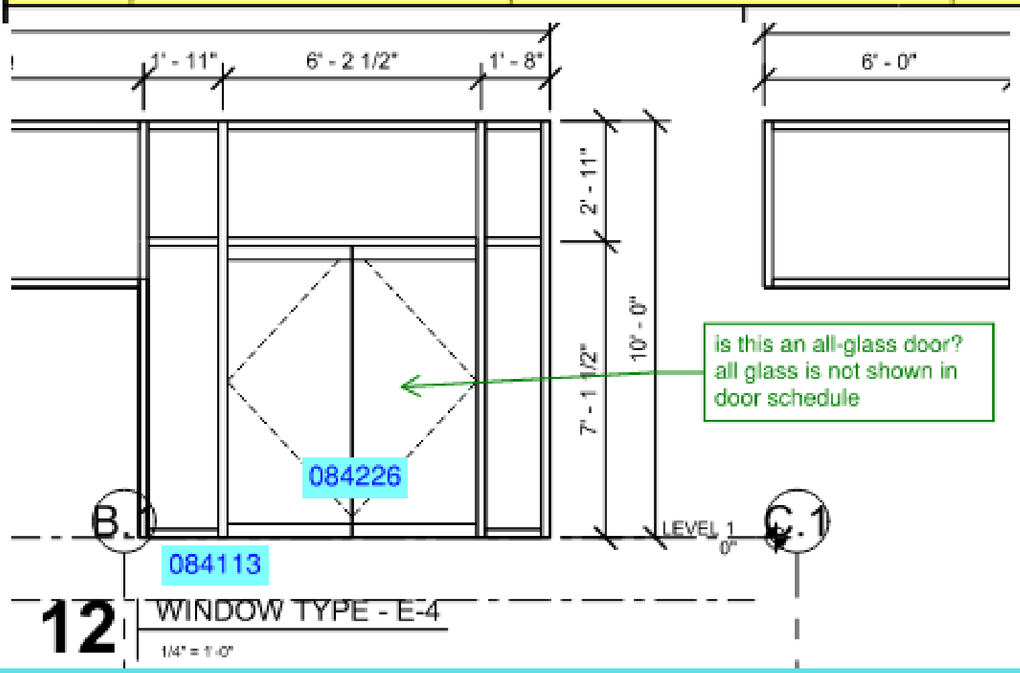
Windows? Storefront? Curtain Wall?

Windows are scheduled AL-1 and AL-2 Neither is a window

084113

084413

EXTERIOR GLAZING SYSTEMS			
AL-1	KAWNEER 451 UT (OR EQUAL)	WINTER U-VALUE FIXED: OPERABLE:	THERMALLY BROKEN ALUMINUM STOREFRONT SYSTEM W/ PTD FINISH (STANDARD COLOR TO BE SELECTED BY ARCHITECT)
AL-2	KAWNEER 1600 (OR EQUAL)	WINTER U-VALUE FIXED: OPERABLE:	THERMALLY BROKEN ALUMINUM CURTAIN WALL SYSTEM W/ PTD FINISH (STANDARD COLOR TO BE SELECTED BY ARCHITECT)



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COORDINATION
COMPETENCY 2B

LEARNING OBJECTIVES

LO1 Interpret the owner's program to identify their specific project requirements.

LO2 Select products or systems that meet the owner's project requirements.

Coordinate A/E team proposed choices to align with project requirements.

Owner's Requirements: Program

The first thing the owner must do is to develop requirements for the facility.

- Project scope.
- Budget.
- Schedule.

Owner's Requirements: Products and Systems

The specifier must work with the prime A/E's design team to ensure the design's quality is adequately covered in the specifications.

- Regular reviews with the design team to discuss the project manual preparation, status of product decisions, review details of product decisions, and coordinate the terminology used.

COORDINATION
COMPETENCY 2C

LEARNING OBJECTIVES

LO1 Identify common methods for coordinating specification-related information between the specifier and the other members of the project team.

LO2 Communicate with the project team to ensure effective, efficient, and timely development of the project manual.

Coordinate specification information with project team (e.g., owner, contractor, designer, product representatives).

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Common Coordination Methods

Common methods include the following:

- Checklists.
- BIM clash detection.
- Cost management.
  - Typically conducted by the owner's internal project management team or a hired project management firm to determine amount of budget variance.
- Document review at specific stages of document development.
- Cloud-based collaboration tools.

Project Team Communications

Communicating with the project team effectively and in a timely manner ensures that the project manual can also be developed effectively, efficiently, and timely.

- The phased review of the project manual should also include coordination with the drawings.

COORDINATION

COMPETENCY 2D

LEARNING OBJECTIVES

LO1 Interpret the documents in Division 00 to verify the procedures for soliciting pricing for a project.

LO2 Interpret the documents in Division 00 to verify the contractual requirements for a project.

LO3 Identify discrepancies between Division 00 and applicable specification sections.

LO4 Revise Division 01 sections to conform to the procurement requirements.

Obtain and verify owner procurement and contract requirements.

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Division 00 – Solicitation

The project manual typically includes a copy of the solicitation.

- Solicitation instructions may contain guidance for preparing alternate bids or proposals and state considerations for evaluation and contract award.

Division 00 Requirements

The following is included or referenced in Division 00 of the project manual as Available Project Information by the owner.

- Geotechnical Report.

Division 00 Discrepancies

Sections should be checked and compared to eliminate omissions, overlaps, duplications, and inaccurate cross-referencing.

- Owner should review and coordinate their requirements.
- A/E should coordinate these documents with applicable specification sections, alternates, allowances, and unit prices related to the bid/proposal form.
- A/E should cross-reference to instructions for procurement.

Division 01 – Procurement

Verify if the contractor or owner is preparing the procurement requirements.

- Review the contract and conditions of the contract.
- Revise Division 01 sections to conform to the contract, conditions of the contract, and procurement requirements.

COORDINATION

COMPETENCY 2E

LEARNING OBJECTIVES

LO1 Identify incompatibilities between adjacent products and materials in specifications.

LO2 Select products and materials that are approved as part of a tested assembly.

LO3 Select products and materials that comply with prescriptive code requirements.

Evaluate and verify the compatibility of products and materials.

Product Incompatibilities

The specifier is to ensure products and materials are being used as intended and are compatible with adjacent products and materials.

- If products are not compatible and that is not discovered before construction, then a latent defect could be integrated into the building.

Tested Assembly

The specifier should ensure the products requested coordinate with the indicated tested assemblies.

- Construction that relies on tested assemblies consist of specifically listed and approved products and materials.
  - Deviations generally not permitted.

Prescriptive Code Requirements

The specifier should ensure the products requested comply with prescriptive code requirements.

COORDINATION
COMPETENCY 2F

LEARNING OBJECTIVES

LO1 Review specification sections written by consultants and specialists to ensure consistent document formatting throughout the project manual.

LO2 Revise Division 01 sections based on applicable input from consultants and specialists.

LO3 Check specification sections written by consultants and specialists for accuracy.

Coordinate the specifications across project team disciplines.

Division 01 Revisions

Information regarding the type of project, contract, specifications formats, general conditions, and especially Division 01 requirements should be made available to consultants.

- Make available prior to consultants preparing their sections.
- Input from them for Division 01 sections should be requested at the same time.

Consultant Sections

Communication is the most crucial task in coordinating the project manual.

- Special coordination to ensure that the specifications are complete, compatible, consistent, and without duplications or omissions.
- Resist listing general notes on drawings regarding administrative matters and terms and conditions more appropriate for Division 01.

COORDINATION
COMPETENCY 2G

LEARNING OBJECTIVES

LO1 Check for consistency among the contract documents.

LO2 Compare the specifications and the drawings to identify overlaps and gaps.

Evaluate specifications to confirm alignment with contract documents.

Contract Document Consistency

The A/E should assume the responsibility for coordinating the flow and documentation of project information.

- Conduct regular review of specifications.
- Share design and product decisions early.

Contract Documents Omissions and Duplications

Design changes, errors, and omissions as a group are the primary cause of rework in construction.

- Specifications should not repeat drawing information.
- Drawings should not repeat specification information.

COORDINATION
COMPETENCY 2H

LEARNING OBJECTIVES

LO1 Identify the appropriate project team member to coordinate with when compiling the project manual.

Compile available project information into the project manual.

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Project Manual Compilation Coordination

Create a protocol that all product information relayed to the specifier comes from a specific individual or individuals, such as the project manager, project A/E, or both.

- Prime A/E should assume responsibility for the overall coordination of the specifications.

COORDINATION

COMPETENCY 2I

LEARNING OBJECTIVES

LO1 Reference Section 01 23 00 properly in specification sections affected by an alternate.

LO2 Prepare Section 01 23 00 properly to list all proposed alternate products and materials for a project.

Coordinate with project team to specify alternates.

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Section 012300

Alternates need to be coordinated with Section 012300 Alternates.

- Reference applicable specifications and drawings relevant to the base bid and each alternate.
- In each affected specification section, include paragraph stating such and reference Section 012300.
  - Coordinate this paragraph and reference with consultant sections.

Section 012300

The list of alternates should clearly describe for each alternate what the base bid includes and what the alternate includes.

- May include products and materials not already specified.
- Identify each alternate by designation and title. (Alternate No. 1 Lobby Finishes)
  - Distribute designations and titles to all consultants for consistent references to alternates in construction documents.

PROCUREMENT, CONTRACTING, AND GENERAL REQUIREMENTS

CONSTRUCTION BONDS AND INSURANCE

LEARNING OBJECTIVES

LO1 Construction Bonds and Insurance Overview.

LO2 Construction Bonds.

LO3 Construction Insurance.

Why do these vehicles of protections exist?

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Overview – Bonds

Critical terms used in bonding include the following:

- Principal.
- Surety.
- Obligee.
- Surety Bond.
- Indemnity agreement.
- Penal amount.
- Claimant.
- Lien.
- Contractor performing the work.
- Bonding company.
- Firm benefiting from the bond - Owner and others.
- 3-party agreement.
- Contractor agrees the surety will not suffer a loss.
- Amount the bond will cover, typically 100%.
- Party filing claim against the bond – Owner and others
- Subcontractor claim for security interest in the project.

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Overview – Bonds Cont.

Bonds provide a way of protecting the owner from a contractor's poor performance.

- Three basic bond types:
  - Bid bonds.
  - Performance bonds.
  - Payment bonds.
- All three typically required on public projects.
- Bond cost included in contractor's bid.

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Overview – Insurance

Insurance:

- Several insurance types:
  - See PDPG Table 2.2.
- All insurance coverages not required for every project.
- Insurance costs included in construction costs.

PDPG Table 2.2

TYPE OF INSURANCE	DESCRIPTION	RESPONSIBILITY TO ACQUIRE
Workers' Compensation	Employee protection by an employer for employment-related injuries	Owner, Architect, Consultants, Contractor, Subcontractors, Product Representatives, and any other company with employees involved with the project
General Liability	Business protection against claims involving bodily injury and property damage as a result of business services or operations	Owner, Architect, Consultants, Contractor, Subcontractors, Product Representatives, and any other company with employees involved with the project
Automobile	Protection to cover liability associated with the operation of owned and non-owned (rented or hired) automobiles	Owner, Architect, Consultants, Contractor, Subcontractors, Product Representatives, and any other company with employees involved with the project
Owner's Protective Liability	Additional coverage for general liability associated with the construction project	Owner, but may be obtained by Contractor for Owner if required by the construction contract
Builder's Risk (All-Risk)	Protection of buildings under construction for damages caused by all listed perils, that may include fire, windstorm, collapse, vandalism, and theft. Exclusions may include earthquake, flood, loss of use or occupancy, penalties for non-compliance or non-completion, normal wear and tear, latent defects, faulty workmanship or design	Owner, but may be obtained by Contractor for Owner if required by the construction contract
Builder's Risk (Named Peril)	Protection of buildings under construction for damages caused by a specific peril	Owner
Boiler and Machinery	Protection against loss from accidents or breakdowns involving boilers, pressure vessels, and other business-related equipment	Owner, but may be obtained by Contractor for Owner if required by the construction contract
Contractor's Tools and Equipment	Protection against lost, stolen, or damaged tools and equipment used by the contractor	Contractor
Business Interruption Insurance	Covers the loss of income that a business suffers following a disaster	Owner
Umbrella Excess Liability	Provides supplemental coverage that general liability and automobile policies will not cover	Any party that wants the added protection
Owner or Contractor Controlled Insurance	Provides coverage for virtually all liability and loss associated with a construction project	Owner or Contractor

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Construction Bonds

7.2.1 Purpose of Bonds
7.2.2 Rating of the Bonding Company
7.2.3 Obtaining Bond Information from the Owner
7.2.4 Advantages and Costs of Bonding
7.2.5 Bid Bond
7.2.6 Performance Bond
7.2.7 Payment Bond
7.2.8 Bond Forms

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Construction Insurance

7.3.1 Insurance for the Construction Contract

7.3.2 Liability Insurance

7.3.2.1 Workers' Compensation Insurance

7.3.2.2 General Liability

7.3.2.3 Commercial Automotive Insurance

7.3.2.4 Owner's and Contractor's Protective (OCP) Liability Insurance

7.3.2.5 Umbrella Excess Liability Insurance

7.3.3 Property Insurance

7.3.3.1 Builder's Risk Insurance

7.3.3.2 Equipment Breakdown Insurance

7.3.3.3 Contractor's General Property and Equipment Insurance

7.3.3.4 Loss-of-Use, Business Interruption, and Delayed Completion Insurance

7.3.3.6 Subrogation

7.3.4 Controlled Insurance Programs

7.3.5 The Additional Insured

7.3.6 Obtaining and Incorporating Insurance Information

7.3.7 Glossary of Insurance Terms

RECAP: RESEARCH

COMPETENCIES

2A Collect, track, and coordinate specification information.

2B Coordinate A/E team proposed choices to align with project requirements.

2C Coordinate specification information with project team (e.g., owner, contractor, designer, product representatives).

2D Obtain and verify owner procurement and contract requirements.

2E Evaluate and verify the compatibility of products and materials.

2F Coordinate the specifications across project team disciplines.

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2H Compile available project information into the project manual.

2I Coordinate with project team to specify alternates.

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QUESTIONS?

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THANKYOU

CONSTRUCTION SPECIFICATION WRITING

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