Lean Contracting Practices without an IPD Contract and the New ConsensusDocs 305 Lean Construction Addendum
ConsensusDocs 12+ Years

1 Goal
Improve the design and construction industry with Best Practice Contracts

12
Years publishes best practice contracts

100+
Standard contract documents.

40
Leading construction associations participating in the Coalition.

3,000+
Subscribers.

$1,000,000+
In donated free educational licenses.

$40+ Billion in Construction Contracts

ZERO Reported Cases
What is the ConsensusDocs 305?

Owner/Design Professional Contract

CD 305 Lean Construction Addendum

Owner/Constructor Contract
Ways to Contract for Lean Design + Construction

• Integrated Project Delivery (IPD) Agreement (a/k/a IFOA)
  • e.g., CD 300 (2016 edition)
• Custom-created IPD-ish design & construction agreements
• Vague references to Lean added to an owner’s standard contract
• Now with CD305, an industry standard form outside of IPD that addresses a wide spectrum of Lean practices
Addendum to What?

ConsensusDocs 305 can be used with:
  • ConsensusDocs 500 Agreement between Owner & CM
  • Other forms of CM at Risk contracts
  • Construction contracts under Design-Bid-Build
  • Owner contracts with Design Professional

• Not intended for Design-Build Prime Contracts, but …
  • ConsensusDocs 341 will be published this summer.
How is this Different than IPD?

IPD

Owner
Design Prof.
Key Design Consultants
Key Trades
CM/GC

CD 305

Owner
Design Prof.
Specialty Designers
CM/GC
Sub-contractors
CD305
Addendum vs. Silence

- Increase alignment among parties
- First collaborative act
- Parameters for Lean behavior and activities
- Some Lean methods will conflict with standard contract language, so Addendum overrides
- Allows enforcement of Lean requirements, but take care
Using the CD 305

• When?
  • O/A/C are committed to Lean, but one or more are not ready or able to enter an IPD Agreement
  • As early in the Project as the Owner will allow

• How?
  • Jointly negotiated, separately attached
  • Check-the-box
CD305 Check-the-Box Example 1

**Validation Phase**
- Joint Worksite Investigation (6.1)
- Evaluate Owner’s Program (6.2)
- Validation Study (6.3)

**Preconstruction Phase**
- ✔ Continuous Cost Modeling (6.4)
- ✔ Integrated Design/Target Value Design (6.5)
- ✔ Risk Identification/Management (6.6)

**Construction Phase**
(Always included; no check boxes)
CD305 Check-the-Box Example 2

Validation Phase
- Joint Worksite Investigation (6.1)
- Evaluate Owner’s Program (6.2)
- Validation Study (6.3)

Preconstruction Phase
- ✔ Continuous Cost Modeling (6.4)
- ✔ Integrated Design/Target Value Design (6.5)
- ✔ Risk Identification/Management (6.6)

Construction Phase
(Always included; no check boxes)
CD305 Check-the-Box Example 3

**Preconstruction Phase**
- Continuous Cost Modeling (6.4)
- Integrated Design/Target Value Design (6.5)
- Risk Identification/Management (6.6)

**Construction Phase**
(Always included; no check boxes)

**Validation Phase**
- Joint Worksite Investigation (6.1)
- Evaluate Owner’s Program (6.2)
- Validation Study (6.3)
What about Incentives?

• CD305 does not itself provide for incentive compensation

• Too much variability to standardize incentives

• CD305 does provide for Performance Improvement Program, which individual projects could use as a platform for incentive compensation

• Provide for incentives through amendment to Owner contracts
Reliable Promises 3.3

• Conditions of satisfaction must be clear
• Competent to perform
• Time estimated and reserved
• Performer sincere
• Performer accepts consequences
Core Group

Owner, Design Professional, Constructor

- Owner, Design Professional, and Constructor Reps, plus others invited
- Resolves problems through consensus decisions and best interests of the project
- Selects team
- Provides daily leadership for the project
- Manages budget and design process
- Implements production control
- Oversees personnel and team members.
Core Group - Key Attributes

• Candor and thick skin
• Enthusiasm for change and improvement
• Commitment to goals and principles
• Ability to decide and commit
• No hierarchy
• Shared accountability and responsibility.
Performance Improvement Program

• 15 performance metrics
• Periodic evaluations
• A focus on team members’ behaviors
• Clear standards for evaluating performance
• Feedback mechanism on improvements.
Implementing Team Leadership & Culture

- Aligning Personal, Team and Project Goals
- Focus on Clarity of Requests and Commitments
- Coaching
- Equip the Team for Rapid Learning
Aligning Personal, Team and Project Goals

IDENTITY

PURPOSE
Focus on Clarity of Requests and Commitments

- Preparing
  - Customer
  - Performer

- Negotiating
  - Conditions of Satisfaction
    - Request / Offer
    - Promise / Accept
    - (Decline / Counteroffer / Commit-to-commit)
    - (State of Mutual Commitment)

- Satisfying/Incorporating
  - Declare Satisfaction
  - Assert Completion

ConsensusDocs
BUILDING A BETTER WAY

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Coaching
Equip the Team for Rapid Learning

Where you are.

Where you want to be.
Project Planning System

• Section 5.1
  • What is a Project Planning System
  • Weekly Planning Cycle
  • Daily Adjustments
  • Implied Practices
What is a Project Planning System

Source: Ballard, Tommelein. 2016 Benchmark for the Last Planner System®
Weekly Planning Cycle

Monday
SUPERS/FOREMEN Prepare Weekly Work Plan

Tuesday
New Constraints
OAC meeting
Outcome: Commitments have been made to remove constraints

Wednesday
GC Superintendents Review WWPs
Outcome: Areas of concern and questions for trades

Thursday
Weekly Coordination meeting
Outcome: Next week is coordinated
6-week LAP and constraint log distributed

Friday
GC: Weekly Work Plan for next week distributed

Daily Check-in Meeting to be done at the end of the shift – Foremen and Supers
Implied Practices

PPC Chart
Commitments, Reliability, Handoffs

Variance Chart
Baseline Industry Reliability 54%
Lean projects
Integrated Design & TVD

Preconstruction Phase

- Continuous Cost Modeling (6.4)
- Integrated Design/Target Value Design (6.5)
- Risk Identification/Management (6.6)

Expected Cost & Target Cost

Validation Phase

Allowable Cost

Contract Price

Construction Phase

Actual Cost
Continuous Cost Modeling

Preconstruction Phase: Constructor to:
  • Provide continuous cost modeling and analysis
  • Generate periodic cost model reports

Construction Phase: Constructor + Subcontractors to:
  • Provide cost information and estimates requested by Core Group

Core Group to:
  • Establish milestones for updating Project cost model
  • Direct actions if cost model exceeds Allowable Cost

Compare to lower design-assist option in CD 541.
Target Value Design

• Collaborative – DP still in charge and responsible, but must coord. + integrate with Team

• Value, Cost and Schedule and constructability are basic components of design (6.5.1)

• Written Protocols for Target costs [6.5.7.3 (a-h)]

• Add value w/ VAPs, TVD Clusters, A-3s (6.5.8)

• Design phases – planning/programming, design, detailing, and production planning

• Uses pull based design process to drive innovation
Target Value Design Processes

Document Review

• Examine Design Documents with reasonable care
• Advise Core Group of issues prompting additional contingency
• Suggest options for additional investigation

Target Value Pricing 6.5.7

• Establish Expected Cost and Target Cost early
• Target Cost only exceeded by express approval of Core Group.
Target Value Pricing

Continuing refinement of cost models

Cost analysis not to be deferred
• Byproduct of continuing TVD process
• Core Group jointly manages

Escalation addressed in:
• Estimates
• Expected Cost
• Target Cost

Expected Cost and Target Cost adjusted
• At Final Completion
• Reflecting difference between escalation allowance and actual escalation
Building Information Modeling (B.I.M.)

• BIM (verb) as a process not a software application

• Interconnected models and databases

• The power of BIM makes the payoff of lean greater –
  ➢ Provide continuous, immediate, and reliable information
  ➢ Regarding design, scope, schedule, and cost.
Design Model  Vs  As-Built
Design

As-Built
• Identify material risks in early workshops

• Create risk identification report

• Rank and focus on higher priority risks
  ➢ Likelihood of occurrence
  ➢ Time and cost impacts

• Develop Risk Management Plan with
  ➢ Contingency plans
  ➢ Assignment of primary responsibility
  ➢ Address roles of others in managing risk
Construction Phase Lean Features

Article 7

• 5S Plan
• Quality, Standardized Work, PDCA
• Material Flow
• Information Flow
5S Plan

- Sort
- Set in Order
- Shine/Sweep
- Standardize
- Sustain
Quality, Standardized Work, PDCA

Plan

What outcome or results do I expect from my actions?

Do

Did I get the results or outcome I expected?

Check/Study

Adjust based on new understanding

Act

Try it again

“Current best way”

If not why?
Material Flow
Information Flow
ConsensusDocs 541 Design Assist Addendum

- Addendum to prime agreements, consultant and subs
- Optional tools from CD 305:
  - BIM
  - Owner’s program evaluation
  - Value Analysis
  - Cost modeling
  - Optional risk analysis
  - Optional production planning
- Constructability (in 541 only)
- Manpower analysis, design-build packages early procurement packages, etc. (in 541 only)
- Design Coordination (in 541 only).
How do you Structure the ConsensusDocs 305 & 541?

Owner
Constructor
Key Design Consultants
Key Trades

Design Prof.
IPD
CD 300

CM/GC
Sub-contractors

Specialty Designers
CD 305
CD 541

Owner

Design Prof.

CD 305
CD 541
or both

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The Collabometer

“Collabometer”
Courtesy of Jack Mumma
Michigan State University
Design-Assist can help Prevent Against
Questions?

Lean Contracting w/o IPD & the New ConsensusDocs 305
Download a sample by registering at www.consensusdocs.org.