cts group
construction technology services

Value Management within Design-Build Procurement

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Presentation Outline

- Value Management in Design-Build
  - Value Management
  - Design-Build
  - Phases
  - Goals
- Constructability
- Implementation Options (Timing)
- Forming the VM Team
- Partnering
- Risk

Definitions

Value Management

Process of determining BEST VALUE

Design-Build

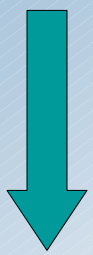
A procurement protocol:

-Construction prior to design completion

Why Use VM?

Benefits of VM do not change with procurement

(Standard DBB vs. Design-Build)



Capital Cost

Life Cycle Cost

Design Time

Decision Time

Quality

Value

Profitability

Ideas

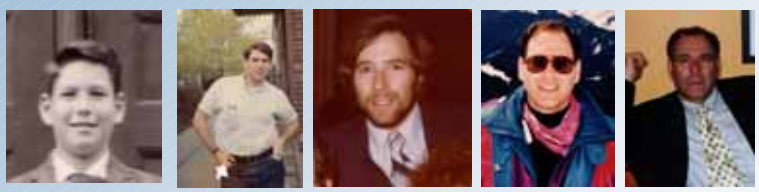
"Think Out of the Box"

- Six Phases of VM:
  1. Information
  2. Function Analysis
  3. Creative
  4. Analysis
  5. Evaluation
  6. Presentation
  7. **(Implementation)**

"Boxes: In & Out"

VM Standard	VM in Design-Build
Six (6) Phases of VM	Two (2) Phases of VM in DB
1. Information	1. Idea Phase
2. Function Analysis	
3. Creative	
4. Analysis	
5. Evaluation	2. Evaluation/Selection (per5)
6. Presentation	

Things Do Change



10 20 30 40 50

Similar Goals

Goal	VM	Design-Build
Reduces Owner Risk	✓	✓
Craft Project	✓	✓
Constructability	✓	✓
Partnering	✓	✓
Quality	✓	✓
Reduce Schedule	✓	✓
Alternatives	✓	✓

Compatible Goals

Goal	VM	Design-Build
Challenge Criteria	✓	✗
Challenge Scope	✓	✗
Life Cycle Considerations	✓	✗
Early Knowledge of Cost	✗	✓
Singular Responsibility	✗	✓
Construction Cost Reduction	*	✓

*not a goal, but often a result

Applying VM in Design-Build

- All goals become project goals

Constructability

- One aspect VM and Design-Build
- Does not Define or Take the Place of Either

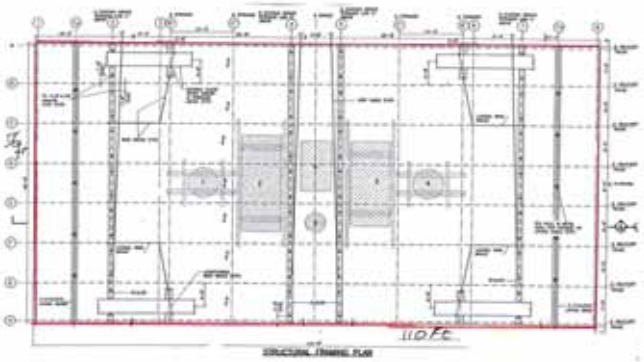
- What is Constructability?

  How to : design: construct
  - feasible
  - better
  - best

Example: Verazzano Platform

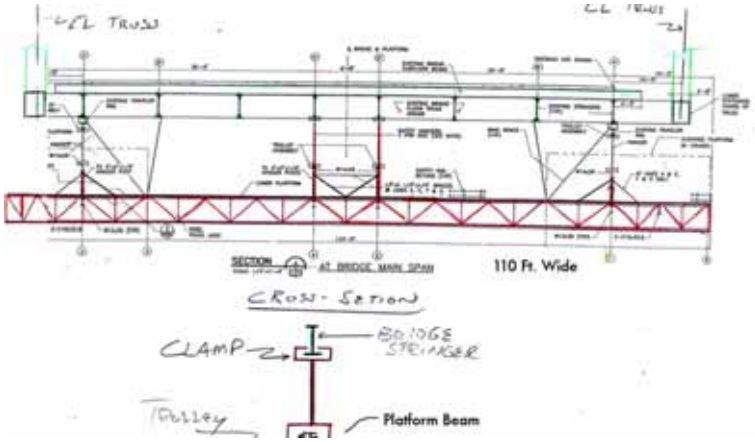
Drawing 1

Elevation—Platform Plan



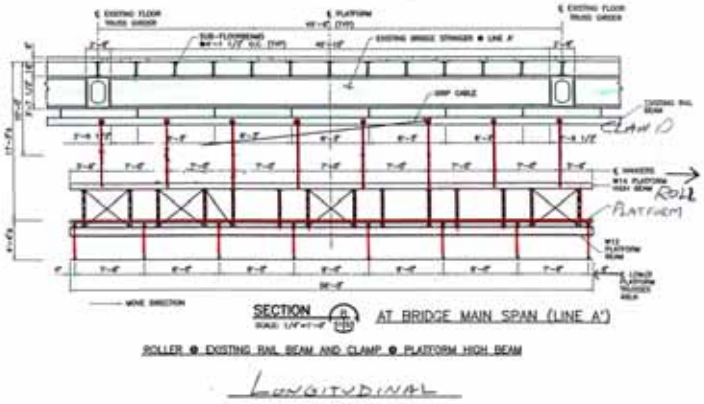
Drawing 2

Cross Section: Bridge and Platform



Drawing 3

Longitudinal Section



Video

QuickTime™ and a
YUV420 codec decompressor
are needed to see this picture.

VM Study Implementation (Timing) Options

Comparison with Procurement Type

Stage	Design Status	Standard (DBB)	Design-Build
Scoping	0-5% Design Completion	✓	✓
Design Preparation	20-30%	✓	✓
Post DB Selection*	30%	NA	✓

*After Design-Builder Selection — Prior to NTP (Notice to Proceed)

Forming the VM Team

	Prior to DB Selection	Post DB Selection
Facilitator	✓	✓
Technical Experts	✓	✓
Owner Representatives	✓	✓
A/E Representatives	✓	✓
Design-Build Team	✗	✓

VM in Design-Build

- After D-B Selection — Prior to NTP
- D-B Team: **included in** the VM process
- D-B Team: not delayed (prior to NTP)
- D-B Team: challenge scope
- D-B Team: participate- sharing in savings
- D-B Team: participate- "veto power"

Partnering

- Design Builder and Owner
  - Melding of project goals and interests
  - Establishes a **project team**
  - Sharing of risks
  - Establishes consensus
  - Owner cannot "force" D-B Team into adopting any VM recommendation

Risk

- VM during RFP identifies
  -Project/**Owner Risk**
- VM after RFP identifies
  -Project/team risk **(owner & design-builder risk)**

Project Cost Savings

- Real/hard dollar bid
- Quantification of cost change after the VM study
- Sharing of Savings between Owner and Design-Builder
  -Similar to a VECP (Value Engineering Change Proposal)

Summary

- VM: unaffected by procurement method
- Optimize Project Quality
- Optimize Design-Builder Ingenuity
- Opportunity to Revise Scope
- Sharing of Risk
- Satisfaction of Owner needs