

Session 66

Doug Cox

Jacobs Civil Inc

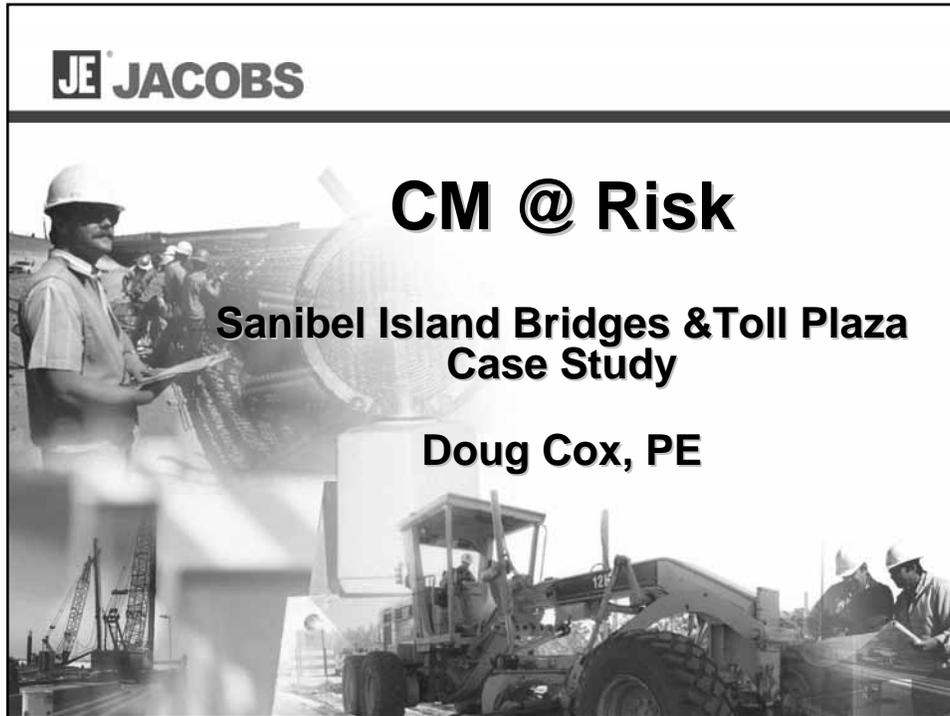
CM@Risk Case Study

Topic Description

Sanibel Island Bridges and Toll Plaza- Jacobs is the Construction Manager for Lee County under a CM& Risk with a GMP for building the \$129M project. The project is currently 50% complete and consists of 3 bridges and a new toll plaza, and is scheduled to be completed in the Spring, 2007. This project is the first CM@ Risk transportation project in the state.

Speaker Biography

Doug Cox has a BSCE, with over 30 years of experience. Doug is currently Director of Construction for Jacobs in the SE Region over all Design Build & CM@ Risk Transportation projects. Doug is a licensed Engineer in several states, and has built mega construction projects around the world.

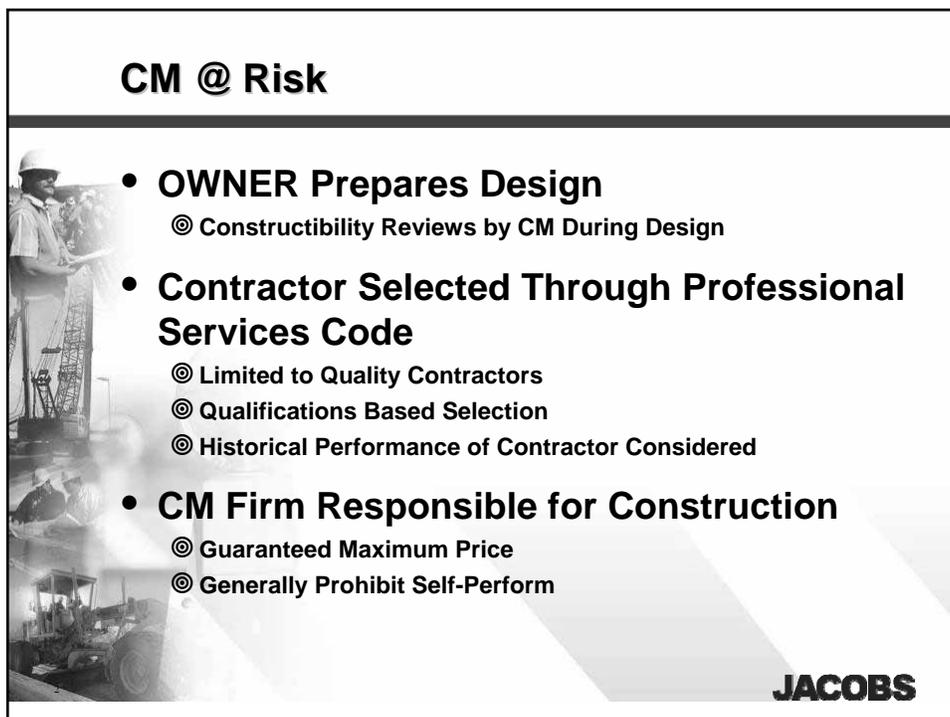


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CM @ Risk

Sanibel Island Bridges & Toll Plaza Case Study

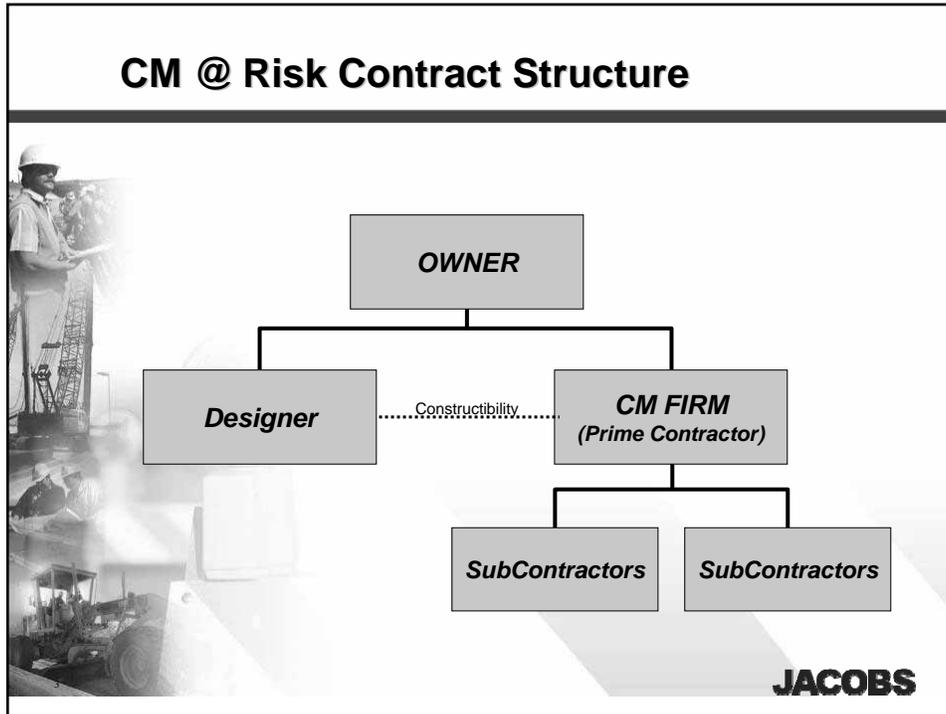
Doug Cox, PE



CM @ Risk

- **OWNER Prepares Design**
 - Ⓞ Constructibility Reviews by CM During Design
- **Contractor Selected Through Professional Services Code**
 - Ⓞ Limited to Quality Contractors
 - Ⓞ Qualifications Based Selection
 - Ⓞ Historical Performance of Contractor Considered
- **CM Firm Responsible for Construction**
 - Ⓞ Guaranteed Maximum Price
 - Ⓞ Generally Prohibit Self-Perform

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- ### Advantages of CM @ Risk
- **Time**
 - ⊙ Eliminate Bidding & Contract Execution Time
 - ⊙ Bidding Prior to Completion of Design
 - ⊙ Flexibility to Re-Bid or BAFO
 - **Cost**
 - ⊙ Approximately Same Costs (Assignment of Risk)
 - ⊙ Requires CM Fee
 - ⊙ Claims Reduced
 - **Risk**
 - ⊙ Construction Contract Between CM & Contractor
 - ⊙ Shifted from Owner to CM Firm
 - **Innovation**
 - ⊙ Excellent Use of Contractor & Designer Linkage
 - **Technical**
 - ⊙ Qualifications Based Selection
 - ⊙ Address Non-Traditional Aspects
 - ⊙ Allows for Significant Changes During Construction

CM @ Risk Process



- Owner hires designer
- Owner hires CM firm
- CM Firm provides construction input (cost, constructability, schedule, etc) throughout design development
- CM Firm is asked by Owner to give GMP
- Construction is added by Task Order
- May not ever have a Task Order

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Program Advancement



- Framework for building shelf
- Allows corridor segmentation
- Multiple construction projects (Sanibel had 5 different Task Orders for project components)
- Fast implementation

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CM @ Risk Implementation



- **Modify Design Project Scope**
- **Amend Work Program/CIP to add CM Phase**
 - ⊙ Cost of CM Fee during design
 - \$250,000 to \$500,000
 - Based on Actual Work Assigned
- **Procure CM Services**
 - ⊙ Phase 1 Constructibility reviews during design
 - ⊙ Subsequent phases included in scope, subject to authorization
 - ⊙ Program subsequent phases based on fund availability and priorities

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CM @ Risk Advantages



- **Provides ability to advance some or all of construction phase**
- **Provides quality-based selection for contractor**
- **Creates framework for design and construction innovation**

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Sanibel Island Bridges – Case Study



- Lee County planned conventional Design-Bid-Build
- PD&E indicated 2 conventional bridges “B&C” could last 10-12 years
- PD&E indicated Bascule Bridge “A” could be renovated and last 15 years
- Lee County hired two designers in July 02:
 - 1) Replace Bridges “B&C”
 - 2) Renovate Bridge “A”
- December 02 – First Span Bridge “B” fell in water
- Lee County re-evaluated all three bridges and found major deterioration – needed replacing ASAP
- Lee County advertised for CM @ Risk – February 03

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Sanibel Island Bridges – Case Study



- Lee County announced replacing all three bridges:
 - ⊙ Bridge “A” – 65’ High Rise
 - ⊙ Bridges B & C – Same type as current
 - ⊙ Hired Jacobs as CM Firm to expedite construction
 - ⊙ Modified Bridge “A” contract
 - From: Modify Bascule Bridge
 - To: Replace with new 65’ High Rise Bridge
- Jacobs issued Task Order
 - ⊙ Constructability Review of plans
 - ⊙ Pre-Qualify / Short List contractors
- Sanibel Island filed law suit to stop High Rise Bridge construction (Permits not issued by Coast Guard)
- Jacobs advertised Bridge “B” & Bridge “C” @90% plans. Received Bids.

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Sanibel Island Bridges – Case Study



- Jacobs submitted GMP to Lee County w/10% Contingency (Owner Owns)
- Issued Phase I Contract for Bridge “B” w/Permit Application Drawing
- Drove several “Test Piles” while waiting on Permits
- Gained 7-12 months on schedule
- Gambled on Permits being issued as submitted
- Requested several BAFO from Contractor to lower cost due to high bids

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Sanibel Island Bridges



- **CM @ Risk**
 - Ⓞ Phased construction of three bridges
 - Ⓞ BAFO after contractors bids provided
 - Ⓞ Modified program based on finances available
 - Ⓞ Staged permit approvals



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Sanibel Island Bridges



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Sanibel Island Bridges



Sanibel Island Bridges



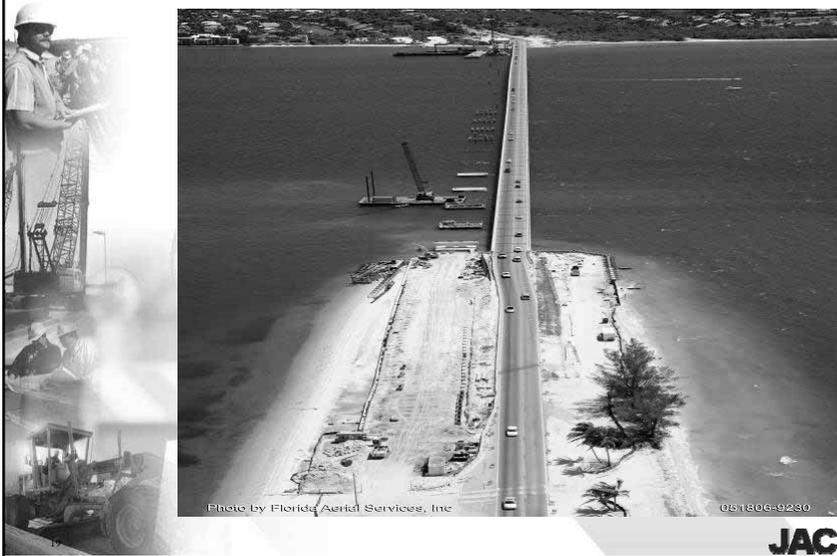
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