

**WELCOME TO
SAO COLLEGE 2010**

Craig Weise, AIA, CCM, LEED AP
State Architect

OhioDAS State Architect's Office
General Services Division

Welcome

- Audience participation
- Audience demographics
- Half-day format & agenda
- Continuing Education credits

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Continuing Education

The State Architect's Office is a Registered Provider with The American Institute of Architects Continuing Education Systems. Credit earned on completion of this program will be reported to CES Records for AIA members. Certificates of Completion for non-AIA members available on request.

This program is registered with the AIA/CES for continuing professional education. As such, it does not include content that may be deemed or construed to be an approval or endorsement by the AIA of any material of construction or any method or manner of handling, using, distributing, or dealing in any material or product. Questions related to specific materials, methods, and services will be addressed at the conclusion of this presentation.

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Credit earned for completing this program will automatically be submitted to the CSI CEN. Completion certificates can be obtained by contacting the Provider directly.

This logo and statement identify Provider programs registered with the CSI CEN and are limited to the educational program content.

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The Changing Faces of SAO



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Announcements

**Construction Reform Demonstration Projects
Construction Manager at Risk Delivery Method**

- Ohio State University – ProjectOne (\$658M)
- University of Toledo – Center for Biosphere Restoration Research (\$7.9M)
- Central State University – Emery Hall Restoration (\$1.7M)

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Announcements

DAS Directive – Specification Standards (effective 8/1/10)

- Bidding documents must allow for competition (at least 3 products)
- AE must submit a waiver if less than 3 products meet specifications
- Sole source use is permitted, but limited (in the public's interest)
- Sole source scope should be as small as necessary to achieve intended benefit
- Vendor assistance in writing specifications should be limited
- AE shall inform Contracting Authority if vendor intends to bid/perform work
- Contracting Authority reserves right to not approve a contract if a conflict of interest is determined

Agenda

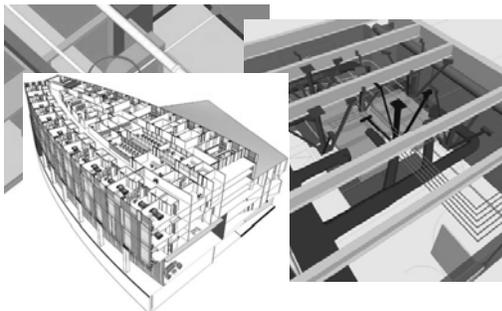
- 12:00 – 12:30 p.m. Registration/Networking
- 12:30 – 12:40 p.m. Welcome and Announcements
- 12:40 – 1:30 p.m. BIM Protocol Overview
- 1:30 – 2:20 p.m. OAKS CI Panel
- 2:20 – 2:30 p.m. Break
- 2:30 – 3:20 p.m. Featured Speaker
- 3:20 – 4:10 p.m. Document Updates
- 4:10 – 5:00 p.m. Consultant List Process

Housekeeping Topics...

- Cell phones on silent
- Please complete the survey
- Continuing Education Certificates
- Mid-afternoon break
- Restroom locations
- Coffee/vending location

Ohio's Building Information Modeling (BIM) Protocol

What is BIM?



Ohio's interest in BIM

- Improve Document Quality
- Reduce change orders due to conflicts and coordination issues
- Data source for future facilities planning

Protocol Process

1. Review existing guidelines and standards from other entities (Indiana University, GSA, Wisconsin, etc.)
2. Fact Finding
 - Evaluate current State of Ohio project design and construction processes
 - Survey Ohio construction industry
 - Interview State agencies and institutions

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Protocol Process

3. Develop draft document
4. Present draft document and feedback
 - State Agency/Higher Education BIM Forum
 - General Public

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Status of BIM in Ohio

- General awareness throughout the state
- Varied level of understanding and participation

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Status of BIM in Ohio

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Status of BIM in Ohio

Benefits of BIM (Owners)

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Ohio's BIM Protocol

Made up of 3 parts

- Statement of Purpose (what, why, how)
- Protocol (Requirements for BIM)
- Implementation (How to use the protocol)

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Ohio's BIM Protocol

What the BIM Protocol is NOT:

- A list of must haves and wishes
- A requirement for every State funded project
- A change in the contract method
- An elimination of 2-D drawings and documents

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Ohio's BIM Protocol

The Protocol's place in the design and construction process



Fabricator BIM Standards

Contractor BIM Standards

A/E BIM Standards

Owner BIM Standards

SAO BIM Protocol

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Ohio's BIM Protocol

Key provisions of the BIM Protocol:

- Modeling Requirements
- Model Management
- Selection Process Factors
- Compensation Expectations
- Implementation
- Deliverables

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Ohio's BIM Protocol

Modeling Requirements:

- Construction projects > \$4 million
- Projects with MEP > 35% of total
- Adjustment or waiver by owner

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Ohio's BIM Protocol

Model Management:

- Architect will typically be the model manager
- Owner may determine other (CM)
- BIM Execution Plan
- Owner "owns" the model

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Ohio's BIM Protocol

Selection Process Factors:

- No BIM no change
- RFQ will state BIM requirements
- No change to standard evaluation forms
- Evaluation based on processes described
- Selection process encourages participation

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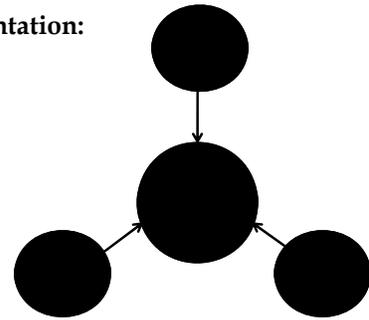
Ohio's BIM Protocol

Compensation Expectations:

- No extra cost for good design
- Modeling process part of basic service
- Additional data may have a cost impact
- Need to review Owner expectations
- Schedule for A/E payment

Ohio's BIM Protocol

Implementation:



Ohio's BIM Protocol

Requirements for model use during design and construction:

- Programming
- Energy modeling
- Coordination
- Visualization

Requirements for model use by the Owner

- Capital planning support
- Energy management systems
- Facilities management

Ohio's BIM Protocol

I: space and volume illustration, adjacencies, and site positioning.

II: sufficient level of detail to support document and system review, clash detection and coordination, and support as-built documentation

III: support a detailed model development of systems critical to building occupancy and management.

IV: support preconstruction logistical, scheduling, and estimating efforts.

Ohio's BIM Protocol

Level 100: Overall building massing indicative of area, height, volume, location and orientation.

Level 200: Generalized systems or assemblies with approximate quantities, size, shape, location and orientation.

Level 300: Specific assemblies accurate in terms of quantity, size, shape, location and orientation.

Level 400: Specific assemblies accurate in terms of quantity, size, shape, location and orientation with complete fabrication, assembly and detailing information.

Ohio's BIM Protocol

Building System	Model Category			
	I	II	III	IV
Substructure	0	300	300	400
Structure	100	300	300	400
Enclosure	100	300	300	400
Interior	100	300	300	400
Conveying Systems	100	200	300	400
Plumbing	100	200	300	400
HVAC	100	200	300	400
Fire Protection	0	100	300	400
Electrical	100	200	300	400
Equip/Furnishings	100	200	300	400
Special Construction	100	200	300	300
Site work	0	100	100	200
Site Improvements	100	200	200	300
Site Utilities	100	200	300	300

Ohio's BIM Protocol

Deliverables:

- Deliverables will support current 2D requirements
- Level of detail at time of submissions should support 2D design stage requirements

Ohio's BIM Protocol

Questions?

PAPERLESS PROJECT MANAGEMENT WITH OAKS CAPITAL IMPROVEMENTS

Questions and answers with a distinguished panel
of experienced OAKS CI Experts

moderated by Steve Mayo, PMP
OAKS CI Project Manager

*Q. Is there a quicker way to retrieve my user
name and password?*

*Q. I am attempting to upload a document into
document manager but I keep getting an error
message, how do I fix it ?*

*Q. I am attempting to submit a record , but I keep
getting the error message "No known users"
what do I do?*

Q. I am attempting to respond to a Submittal but don't know how?

Q. I am creating my Prevailing Wage Report record, how many weeks should be included in each record?

Q. I am having a lot a problems with the system, how do get a refresher?

www.ohio.gov/sao
Sao Training Calendar

Q. How do I prepare a pencil copy of my Contractor Pay Request

Q. A record came back to me for update, how do I fix line items?

Q. I submitted a record and need to know the status?

Q. I created a change order, how do I add line items?

Q. My project team is having a lot of problems in the system, how do we get help?

*Q. Where do I find the Contract SOV excel file and how do I import it into my record?
www.ohio.gov/sao*

Q. I am attempting to create my SOV record in OAKS CI and cant find my contract?

Q. I am attempting to import my SOV file into my record and keep getting an error message, what could be wrong?

QUESTIONS?

SHORT BREAK

Please return in ten minutes or less...

FEATURED SPEAKERS

ZEN AND THE ART OF CONTRACT DOCUMENTS

*Recent modifications to the State of Ohio Standard
Requirements for Public Facility Construction*

Lane J. Beougher, AIA, FCSI, LEED AP BD&C
SAO Program Services Manager

Learning Objectives

- ▣ At the end of this session, participants will be able to:
 - Explain the significant changes in the 2010 Edition of the State's Contract Documents and earlier revisions
 - Discuss the different types of contracts and understand which documents to use for each project
 - Identify how to obtain and use the State's Contract Documents
 - Create an integrated Project Manual using the State's Contract Documents

Changes in the 2010 Edition of the State's Contract Documents

You must take care not to make mistakes. But when they happen, learn from them. Use your mistakes as a springboard into new areas of discovery; accidents can hold the key to innovation.

- P. T. Sudo

139 Comments Addressed

- ▣ The Attorney General's Office requested suggestions from its clients (Institutions of Higher Education) and received 139 distinct comments.
- ▣ SAO staff participated in a series of conference calls with the Business Counsel Section and the Construction Litigation Group over 3 months to determine a consensus response to each.

EDGE Reporting

- ▣ Quarterly EDGE Participation Reports were based on agency requirements and were not consistently enforced.
- GC 1.11.2 The Contractor shall provide an EDGE Participation Report with each Contractor Payment Request.
- ▣ This can be with either our Excel-based form or through OAKS CI.

OAKS CI Integration

- ▣ To begin to provide an OAKS CI option and guidance, each business process has been introduced in appropriate locations in agreements and conditions.
- GC 2.2.2.4 If the Project is administered using OAKS CI, the Contractor shall submit RFIs to the A/E through the OAKS CI "Request for Interpretations" business process.

OAKS CI Forms

- ▣ Specific language permits OAKS CI Web forms, reports, and custom print documents.
- GC 5.1.5.3 If the Project is administered using OAKS CI, the Contractor shall utilize the Web-based forms and reports within the applicable business process. OAKS CI is sponsored by the Department, and such Web-based forms and reports are acceptable to the Department in lieu of its paper forms.

Withhold payment for failure to timely approve schedule

- ▣ Previous language stated penalty was reassignment of scheduling responsibility. Concept of withholding payment is now enforceable in the contract.
- GC 4.3.9.2 Failure to timely approve a Construction Progress Schedule may result in withholding payment in accordance with subparagraph 9.6.2.

Withhold payment until Schedule of Values approved

- ▣ Previous language was not specific on SOV approval process and penalty
- GC 9.1.3 The A/E may return the Schedule of Values to the Contractor for re-submittal if it does not meet the requirements or contains insufficient items or details of the Work, or approve the Schedule of Values if the A/E determines that it conforms to this paragraph 9.1.
- GC 9.1.4 No payment shall be made until the A/E has approved the Contractor's Schedule of Values.

Retainage and Escrow clarified

- ▣ Previous language based on a longstanding misinterpretation of statute re: \$15,000 threshold for retainage v. escrow account.
- GC 9.5.1 If the total Contract Sum is \$15,000 or more, when the Contract is 50 percent complete, as evidenced by payments in the amount of at least 50 percent of the Contract Sum to the Contractor, all funds retained for the faithful performance of the Work, in accordance with subparagraph 9.3.1, shall be deposited in an escrow account with a bank in the state in accordance with the terms and conditions provided in an escrow agreement executed by the Contractor, the Contracting Authority, and the applicable bank.

Bid Information Release

- ▣ Previous language did not instruct how to dispose of Bid Information after Contract Completion.

GC 10.8.2.3 If the Contractor escrowed its Bid Information, the Contracting Authority shall instruct the bonded storage facility to return the sealed container directly to the Contractor.

Coming soon...

- ▣ Reversal of Builder's Risk Insurance policy:
 - Our position on Owner-provided Builder's Risk has resulted in an estimated savings of approximately \$500,000 per year since 2007.
 - However, the \$100,000 deductible in the State's master property policy concerns the Agencies.
 - Beginning October 1, 2010, the Lead Contractor, Construction Manager, or Contractor (Single-Prime) will be required to provide this coverage for the total project value with a \$25,000 deductible.
 - The Contractor's insurance will be primary and the State's property policy will be excess.

Coming soon...

- ▣ Unbonded Contractor Program
 - EDGE-certified Contractors will be able to submit bids for small contracts under a five-tiered program that waives the bonding requirement.
 - Depending on the tier, the contract will be subject to 12 or 15 percent retainage.
 - The Department of Development will be filing rules and posting guidelines in the coming months to implement the program.
 - Our documents will be adjusted to accommodate the legal revisions.

Previous changes worth repeating

Put off for one day and 10 days will pass.

– Korean Proverb

Alternates – Add/Deduct

IB 2.9.1.3: Failure to indicate a negative number by circling "DEDUCT," preceding the number by a minus sign, or enclosing the number in parentheses will indicate the Bidder's intent to increase the Base Bid by the amount entered in the applicable blank.

Multiple Combined Bids

BF Item 5. Combined Bid

- Any Bidder submitting a Combined Bid is encouraged, but not required, to also bid the Items separately. If the Bidder is submitting multiple Combined Bids, it must submit each combination of Items on a separate Bid Form as a separate Bid.

Withdrawal after Bid Opening

IB 4.2.1.2: No Bid may be withdrawn under subparagraph 4.2.1 which would result in awarding a Contract involving the same item on another Bid to the same Bidder.

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EDGE Program – Supporting Documentation Required

IB 6.1.2.1: The Bidder shall provide evidence acceptable to the Contracting Authority of the Bidder's participation in the EDGE Program by contracting with EDGE-certified Business Enterprise(s) for the Project, by requesting a waiver or partial waiver of the advertised EDGE Program participation goal for the Project on the Bidder's company letterhead including full documentation of the Bidder's good faith effort to contract with EDGE-certified Business Enterprise(s) for this Project, or both.

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Revised Schedule Consultant Acquisition

GC 4.2.3.1 Within 3 days after issuance of the Notice to Proceed, the Lead Contractor shall submit to the Contracting Authority a list of 3 qualified and independent consulting firms that the Lead Contractor recommends to be the Schedule Manager. The Contracting Authority shall have the opportunity to object to any of the recommended firms to serve as the Schedule Manager. The Lead Contractor shall select and engage one of the firms with which the Contracting Authority has no objection.

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Which contract documents do I use?

In activity there should be calmness, and in calmness there should be activity.

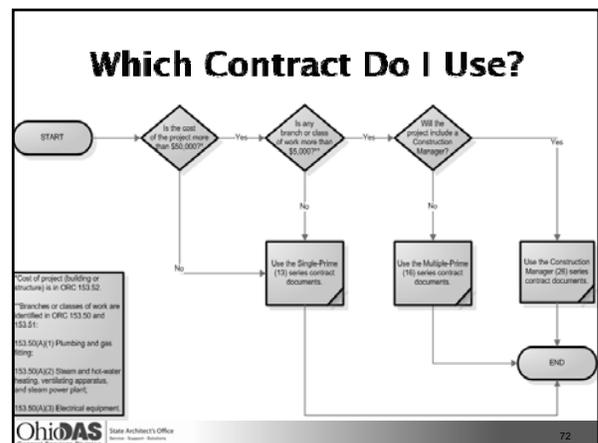
– Daisetsu Suzuki

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Document Series Matrix

Document Series	Single-Prime	Multiple-Prime (Lead)	Construction Manager
Table of Contents		M140-01-00 01 10-TC	
Solicitation		M140-01-00 10 00-NB	
Instructions to Bidders		M140-01-00 21 13-IB	
Bid Form	M140-01-00 41 13-BF	M140-01-00 41 16-BF	M140-01-00 41 26-BF
Bid Security Form		M140-01-00 43 13-BS	
Bidder's Qualifications		M140-01-00 45 13-BQ	
Contract Form	M140-01-00 52 13-CF	M140-01-00 52 16-CF	M140-01-00 52 26-CF
Performance and Payment Bond Form		M140-01-00 61 13-PB	
Contracting Definitions		M140-01-00 71 00-CD	
General Conditions	M140-01-00 72 13-GC	M140-01-00 72 16-GC	M140-01-00 72 26-GC
Supplementary Conditions	M140-01-00 73 00.13-AGY	M140-01-00 73 00.16-AGY	M140-01-00 73 00.26-AGY
Wage Rate Requirements		M140-01-00 73 43-WR	

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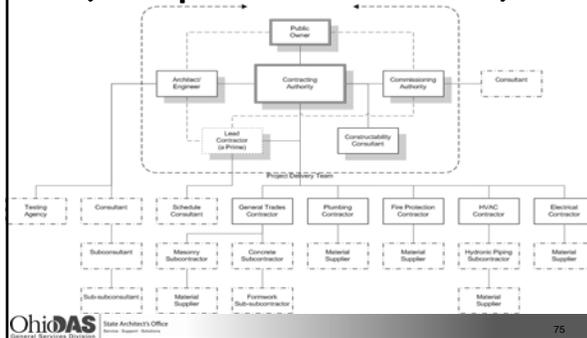
Standard Requirements

- ❑ 13 Stipulated Sum [Single-Prime Contract]
 - May be used only within statutory limits
 - Estimate for separate branch less than \$5,000
 - Does not apply if total [project] cost less than \$50,000
 - Avoid if phases overlap (becomes Multiple-Prime)
- ❑ 16 Stipulated Sum [Multiple-Prime Contract]
 - May be used when no CM
- ❑ 26 Construction Manager [Multiple-Prime Contract]
 - Must be used when a CM is engaged

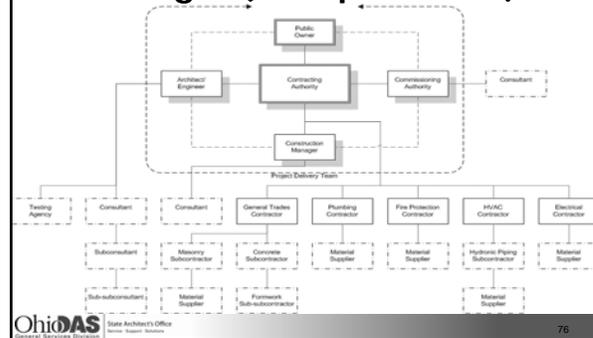
00 nn 13 - Stipulated Sum (Single-Prime Contract)



00 nn 16 - Stipulated Sum (Multiple-Prime Contract)



00 nn 26 - Construction Manager (Multiple-Prime)



Future Contracts? (OCR)

- ❑ 00 nn 13 - Stipulated Sum (Single-Prime Contract) General Contractor with Prequalified Bidders & Higher \$\$\$
- ❑ 00 nn 23 - Construction Manager (Single-Prime Contract) CM at Risk with Best Value Selection
- ❑ 00 nn 53 - Design-Build (Single-Prime Contract) with Best Value Selection and Criteria A/E as the agent of the Owner
- ❑ 00 nn 73 - Performance Contract (Energy Services H.B. 7 RFP)

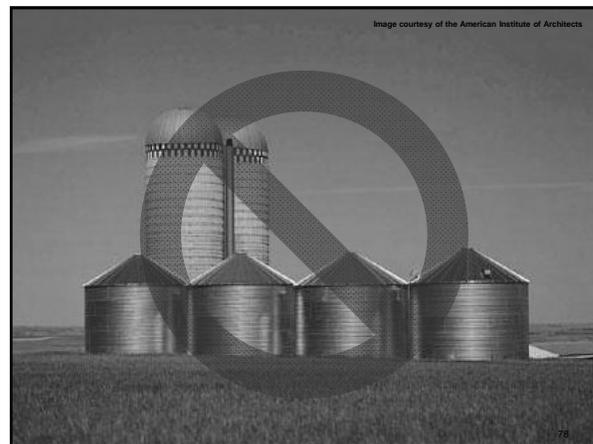


Image courtesy of the American Institute of Architects

How to get the State's Contract Documents

Zen is not some kind of excitement, but concentration on our usual everyday routine.
- Shunryu Suzuki

Where do I get the Documents?

- ▣ On the new SAO Web site of course!
- ▣ Visit our home page at <http://ohio.gov/sao>, click on "Standard Requirements" under "Documents" in the right side menu
- ▣ The documents are absolutely free!

Ohio.gov Department of Administrative Services

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General Services - State Architect's Office
State Architect's Office

About SAO
The State Architect's Office (SAO) oversees the design and construction of facilities for state agencies, boards, commissions and institutions of higher education.

The office has one other service unit: Energy Services. This section provides state clients with certain energy engineering design as well as energy auditing and consulting opportunities for the cost-effective, efficient use of energy resources for state government facilities and operations.

Performance Evaluation
SAO is committed to continuous improvement in the performance of services we provide our customer agencies and institutions; the processes and procedures we establish; and the standard documents we develop. Click the link above to evaluate SAO's performance. We appreciate your feedback.

SAO Training Calendar
SAO offers - April 2010

Leadership Team

State Architect
Craig Wines, AIA, CCM, LEED AP
614.644.7963
Craig.Wines@das.state.oh.us

Executive Assistant to the State Architect
Candice McClure
614.644.7963
Candice.McClure@das.state.oh.us

Project Services/Agency Segment
Crystal Casan, LEED AP
614.752.5554
Crystal.Casan@das.state.oh.us

Program Services
Lara Bruggier, AIA, FCSI, LEED AP BD-C
614.752.6011
Lara.Bruggier@das.state.oh.us

High Education Segment
Neil Throckmold, AIA, LEED AP
614.495.5429
Neil.Throckmold@das.state.oh.us

Energy Services
William Ramsey, AIA, LEED AP
614.644.7963
William.Ramsey@das.state.oh.us

Capital Planning Services
William Ramsey, AIA, LEED AP
614.495.5429

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General Services - State Architect's Office - List of Standard Requirements Documents
Standard Requirements for Public Facility Construction

This index will be updated as new or revised documents become available. New and revised documents are shown in red for approximately three months following the issue date. Many of the same documents are used in each project type.

Page last updated: June 2, 2010

Multiple Prime | Construction Manager | Single Prime | Miscellaneous | Supplementary Documents

Reference Documents

Format	Number	Title	Date
PDF	MF40-01-00-01-1A	Instructions to the Architect/Engineer	08/10
PDF	MF40-01-00-01-01	Version Control Document	08/10
PDF	MF40-01	Consolidated Document	08/10

Multiple Prime Project

This version of the Standard Requirements should be used for most projects.

Format	Number	Title	Date
Word	MF40-01-00-01-10-7C	Table of Contents	08/10
Word	MF40-01-00-10-00-1B	Solicitation (Notice to Bidders)	08/10
PDF	MF40-01-00-21-13-01	Request for Proposals (RFP)	08/10
Word	MF40-01-00-41-16-01	Bid Form - Stipulated Sum (Multiple Prime Contract)	08/10
PDF	MF40-01-00-43-13-01	Bid Security Form	08/10
PDF	MF40-01-00-43-13-02	Bidder's Qualifications	08/10
PDF	MF40-01-00-43-39-0A	EDGC Affidavit	08/10

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PDF	MF40-01-00-43-13-02	Bidder's Qualifications	08/10
PDF	MF40-01-00-43-39-0A	EDGC Affidavit	08/10
PDF	MF40-01-00-52-13-01	Contract Form - Stipulated Sum (Single Prime Contract)	08/10
PDF	MF40-01-00-52-13-02	Contract Form - Stipulated Sum (Multiple Prime Contract)	08/10
PDF	MF40-01-00-61-13-01	Performance and Payment Bond Form	08/10
PDF	MF40-01-00-71-00-0D	Compacting Definition	08/10
PDF	MF40-01-00-72-13-02	General Conditions - Stipulated Sum (Multiple Prime Contract)	08/10
PDF	MF40-01-00-73-43-01R	Wage Rate Requirements	08/10

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PDF	MF40-01-00-71-00-0D	Compacting Definition	08/10
PDF	MF40-01-00-72-13-02	General Conditions - Stipulated Sum (Multiple Prime Contract)	08/10
PDF	MF40-01-00-73-43-01R	Wage Rate Requirements	08/10

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How to create an integrated Project Manual using the State's Contract Documents

Quality is found in the relationship of the object with the observer.

- Robert M. Pirsig



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Design and Specification Guidelines

- ❑ Buy Ohio [O.R.C. 153.012]
- ❑ Domestic steel [O.R.C. 153.011]
- ❑ Specify institutional grade materials
- ❑ Match existing materials
- ❑ Hazardous materials abatement
- ❑ Sole source specifications [Contracting Authority authorization in writing]
- ❑ Vendor assisted specifications [Contracting Authority must waive bidding prohibition]



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Project Manual Development

- ❑ Use the current *State of Ohio Standard Requirements for Public Facility Construction* 2010 Edition [June 2010]
- ❑ Approved Supplementary Instructions and Supplementary Conditions
- ❑ Prevailing wage rates
- ❑ A/E's technical specifications
- ❑ Organized using latest edition of *MasterFormat*
 - 50 Divisions / 6- and 8-digit Section numbers
 - 2010 Update includes Division 46 - Water and Wastewater Equipment



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Standard Requirements

Table 0207.J.2 in the SAO Manual

- ❑ A/E must modify (.doc)
 - 00 01 10 - Table of Contents
 - 00 10 00 - Solicitation
 - 00 41 nn - Bid Form [nn = 13, 16, or 26]
- ❑ A/E may modify (.doc)
 - 01 21 00 - Allowances
 - 01 32 16 - Construction Progress Schedule



89

Standard Requirements

- ❑ A/E must not modify (.pdf)
 - 00 21 13 - Instructions to Bidders
 - 00 22 00 - approved Supplementary Instructions
 - 00 43 13 - Bid Security Form
 - 00 45 13 - Bidder's Qualifications
 - 00 45 39 - EDGE Affidavit
 - 00 52 nn - Contract Form
 - 00 61 13 - Performance and Payment Bond
 - 00 71 00 - Contracting Definitions
 - 00 72 nn - General Conditions
 - 00 73 00 - approved Supplementary Conditions
 - 00 73 43 - Wage Rate Requirements



90

Supplementary Conditions

- ☐ Institution-wide policies and working conditions [smoking, noise / dust / vibration control, parking, etc.]
- ☐ Must be approved by SAO [technical] and Attorney General [legal] with electronic signature of DAS Director
- ☐ Must be reviewed and renewed every two years
- ☐ May revise annually for re-approval

Table of Contents

- ☐ Select which version of contract [13, 16, or 26] is being used and delete the other two.
- ☐ Add the General Requirements and technical specification sections and mark unused Subgroups and Divisions as "Not Used."
- ☐ Delete the notes in yellow boxes.

Solicitation

- ☐ A/E to prepare and include:
 - Project number & name
 - A/E contact information
 - Location, date, & time of Bid Opening
 - Location, date, & time of Pre-Bid Meeting
 - Domestic Steel notice per O.R.C.
 - Location where Contract Documents are available for purchase at cost
 - Estimate for each base bid and alternate
 - EDGE participation goal
- ☐ Distribute the contract documents to all listed plan rooms [add, but don't delete]

Bid Form

- ☐ Use the appropriate contract version [13, 16, 26] for the project
- ☐ Edit the following:
 - The location where bids are to be received
 - The project information
 - The time for completion

Bid Form

- ☐ Carefully coordinate the Allowances, Unit Prices, and Alternates for each trade or Bid Package and delete unused items
 - Insert information where identified with square brackets [Insert] and delete the brackets
- ☐ Coordinate the Bid Packages in the Combined Bid
- ☐ Delete the notes in yellow boxes

General Requirements

- 01 11 00 - Summary of Work
 - Assign trade contractors to:
 - General description of Project
 - Scope of Work [specify Sections included]
 - Phasing issues
 - Construction time
 - Eliminate gaps between trades
 - Claims avoidance
- 01 50 00 - Temporary Facilities and Controls
 - Tailor to Project / Eliminate unnecessary items

General Requirements

01 21 00 – Allowances

- Define and publish in Contract Documents
- Allowances are assigned to specific contractors
- Typical Allowances include:
 - Partnering facilitation services
 - Schedule consultant services
- Don't forget to reconcile Allowances at the end of the Project

General Requirements

01 22 00 – Unit Prices

- Must be authorized by the Contracting Authority
- Unit prices are a form of allowance based on the quantity of units
 - The quantity and price per unit must be entered on Bid Form by the Contractor
 - Prices are held for the duration of the Project
 - If actual quantity more than 20% above or below the estimate, price may be negotiated

General Requirements

01 23 00 - Alternates

- Must be approved by the Contracting Authority
- Each Alternate must be well defined and delineated on the drawings
 - Alternate Number [G-1, P-1, H-2, E-5]
 - Name [describe what it accomplishes]
 - Responsible trade contractor
 - Coordinate Alternates with multiple trades

General Requirements

01 23 00 – Alternates

- Define each Alternate in appropriate specification section
- Published Bid estimates must include:
 - Name
 - Number
 - Contractor responsibility
 - Base Bid estimate for each trade
 - Alternate estimates for each trade

General Requirements

01 32 16 - Construction Progress Schedule

- Use SAO template and tailor to the Project-specific requirements [complexity]
- Work breakdown structure must be meaningful and allow PM to manage
- Consider issuing a target schedule for the first 120 days of construction with the Contract Documents

CD Stage Deliverables

- A/E must submit progress documents at:
 - 50% complete
 - 85 or 90% complete
- Obtain Plan Approval (or Partial Plan Approval) prior to advertising for bids
- Submit 100% complete documents ready to bid
- Project Manager is last line of defense for quality documents and should verify use of current and appropriate version of the Standard Requirements, Supplementary Instructions, and Supplementary Conditions

Questions?

If one's words are not better than silence,
one should keep silent.

- Kwai Chang Caine
(line from *Kung Fu* pilot)

SAO CONSULTANT LIST

Crystal Canan,
SAO Project Services Manager

Design Services Procurement

▣ Qualifications Based Selection Process

- ▣ Announcement
- ▣ Short List
- ▣ Interview
- ▣ Selection
- ▣ Negotiation

Design Services Procurement

▣ Exceptions

- ▣ Fees < \$25,000
- ▣ Emergency

Design Services Procurement

▣ Ohio Register

"Information of Interest for the Architectural, Engineering and Construction and Industry"

- Website address

<http://ci.oaks.ohio.gov/Services/OhioRegisterRFQs/CurrentRFQs/tabid/67/Default.aspx>

- Updated Frequently
- SAO and "Local Administration" Postings

Design Services Procurement

Requests for Qualifications (RFQs) Page last updated: July 14, 2010, 2:00 p.m.

Requests for Qualifications (RFQs) are published on an individual, ongoing basis, with varying deadlines for submissions. Agencies and institutions of higher education will require DAS to publish their RFQs as-needed using their own project-specific deadline for responses.

RFQs are listed in the order of when responses are due.

Those wishing to subscribe to receive e-mail notifications of when an RFQ is posted to the site may do so by clicking here. Please note: Subscriptions to voluntary and posting construction are not available. In addition, this notification is sent out as a "bulk e-mail" which may be interrupted by your company's spam blocker. If you signed up for notifications but are not receiving them, please contact your company's IT department for more information.

Current RFQs:

Published Date	Due Date	Project No.	Agency/Institution	Project Name	Primary Service	Project Cost (Est.)	SEA
06/30/2010	07/21/2010	DIRC-090091	Ohio Dept. of Transportation & Construction	Roof Replacement 2010 - Lebanon Correctional, Eastern Correctional Institution, Lebanon, OH	Architecture	\$4,516,562	☑
06/22/2010	07/23/2010	DNR-090096	Ohio Department of Natural Resources	Lake Alma State Park Comprehensive Improvements, Lake Alma State Park, Venetia County, OH	Civil Engineering	\$750,000	NA
06/22/2010	07/23/2010	DNR-100043 & DNR-100046	Ohio Department of Natural Resources	Statewide Water and Wastewater System Upgrades - Phase III	Civil Engineering	\$6,000,000	NA
07/01/2010	07/16/2010	OSU-081060	The Ohio State University	Steam & Compressed Distribution System Upgrades Phase 2, Columbus, OH	Mechanical (Steam Systems)	\$17,100,000	NA
07/01/2010	07/16/2010	OSU-090465	The Ohio State University	Hoveler - Kutzman Steam Upgrades, Columbus, OH	Mechanical (Steam Systems)	\$1,982,507	NA
07/01/2010	07/16/2010	OSU-100736	The Ohio State University	Pomeroy - History of Art Renovation, Columbus, OH	Architectural	\$400,000	NA

RFQs

SAO Consultant List Program

- ▣ Built for Speed
 - 5 - 15 days
- ▣ Small projects
- ▣ Special expertise

Design Services Procurement

- ▣ Consultant List Program
 - ▣ Two year cycle
 - ▣ Other Institution with Consultant List Programs:
 - Ohio State University
 - Ohio Department of Natural Resources
 - Kent State
 - Bowling Green

SAO Consultant List Program

- ▣ Categories of Submittals
 - ▣ Architectural & Landscape Architect
 - ▣ Engineering
 - ▣ Energy
 - ▣ Constructability

SAO Consultant List Program

- ▣ General Criteria
 - ▣ \$25,000 - \$75,000
 - ▣ \$250,000 maximum over 2 year term
 - ▣ Individual Firms, not Joint Ventures

SAO Consultant List Program

- ▣ FY'08-09 Statistics
 - ▣ Number of Firms responding to RFQ 280
 - ▣ Firms received agreements 71
 - ▣ Total funds awarded \$4,565,125

SAO Consultant List Program

- ▣ FY10-11 Statistics

	Constructability	Energy	Architects	Engineers
Number of Firms Responded	49	45	265	136
Firms Awarded Agreements	3	13	30	26
Total Funds Awarded	\$72,296.00	\$680,344.36	\$2,476,164.64	\$696,598.78

**SAO Consultant List
FY12-13 Schedule**

- ▣ ARCHITECT & LANDSCAPE ARCHITECT
 - ▣ Publication
 - Release Date October 27, 2010
 - Due Date December 1, 2010
 - ▣ Shortlist
 - January 7, 2011
 - ▣ Interviews
 - January 31 through February 2, 2011

**SAO Consultant List
FY12-13 Schedule**

- ▣ ENGINEERING & SURVEYING
 - ▣ Publication
 - Release Date November 10, 2010
 - Due Date December 15, 2010
 - ▣ Shortlist
 - January 28, 2011
 - ▣ Interviews
 - February 23 through February 25, 2011

**SAO Consultant List
FY12-13 Schedule**

- ▣ ENERGY & COMMISSIONING
 - ▣ Publication
 - Release Date January 18, 2011
 - Due Date February 17, 2011
 - ▣ Shortlist
 - March 11, 2011
 - ▣ Interviews
 - March 29 through April 1, 2011

**SAO Consultant List
FY12-13 Schedule**

- ▣ CONSTRUCTABILITY & SCHEDULING
 - ▣ Publication
 - Release Date February 8, 2011
 - Due Date March 10, 2011
 - ▣ Shortlist
 - April 8, 2011
 - ▣ Interviews
 - April 25 through April 27, 2011

**SAO Consultant List
FY12-13 Schedule**

- ▣ FACILITATION & CLAIMS ANALYSIS
 - ▣ Publication
 - Release Date February 21, 2011
 - Due Date March 10, 2011
 - ▣ Shortlist
 - April 22, 2011
 - ▣ Interviews
 - May 11 through May 13, 2011

SAO Consultant List Process

- ▣ Statement of Qualifications
- ▣ SOQ-330
- ▣ Download Current Form
- ▣ Going Paperless

The image shows a screenshot of the 'STATEMENT OF QUALIFICATIONS' form (SOQ-330). The form includes fields for 'FIRM NAME', 'FIRM ADDRESS', and 'FIRM PHONE NUMBER'. Below these fields is a table with columns for 'FIRM TYPE', 'FIRM ADDRESS', and 'FIRM PHONE NUMBER'. A red circle highlights the 'Download Current Form' link at the bottom of the form.

If you have questions you may
email Shelby Banton.
shelby.banton@das.state.oh.us

Thank you!

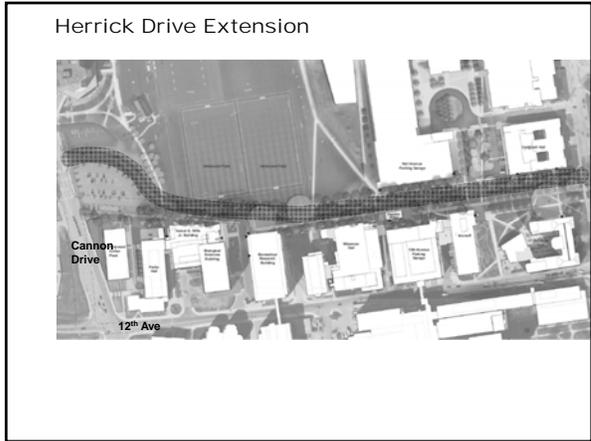
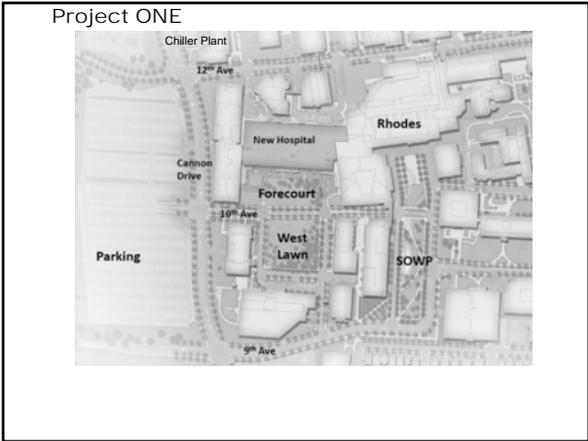
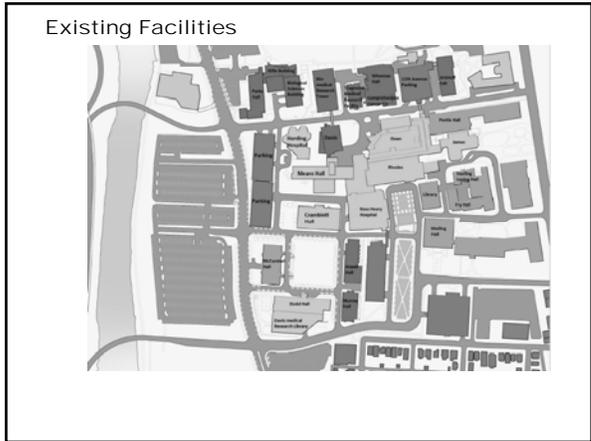
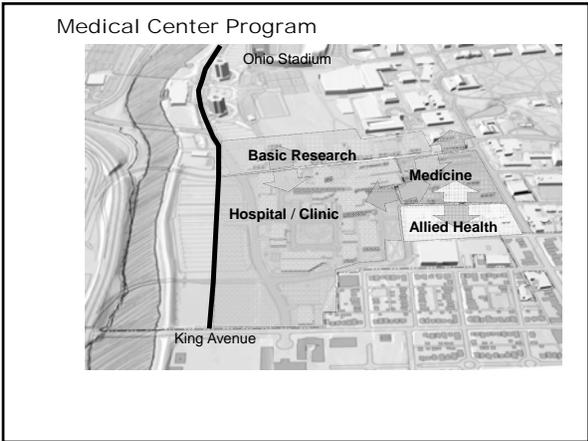
State Architect's Office
4200 Surface Road
Columbus, OH 43228-1395
v: 614.466.4761
f: 614.644.7982
e: StateArchOff@das.state.oh.us
<http://ohio.gov/sao>

The Ohio State University

Project ONE

Construction Reform
Demonstration Project

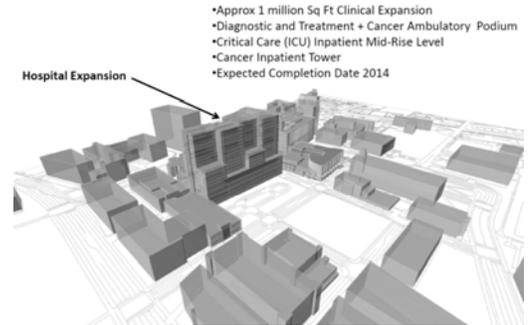
August 26, 2010



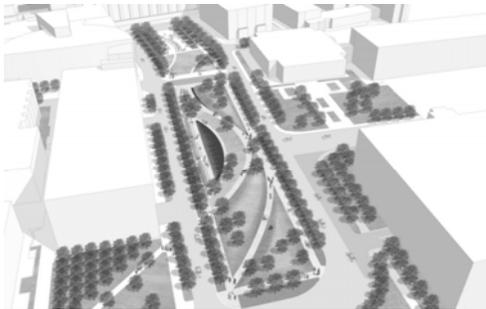
Project ONE Phases

- **Cancer and Critical Care Tower**
- **Infrastructure and Roadways**
- **Rhodes Hall, Doan Hall, James Cancer Hospital Upgrades**
- **Landscaping and Spirit of Women Park**
- **Cramblett Demolition**

- **South Campus Central Chiller Plant**



Spirit of Women Park



Spirit of Women Park



Perspective - Spirit of Women Tribute

Current Budget

Core Phases Current Construction Budget

Design	\$80,400,000
Construction	\$532,700,000
Contingency	\$45,200,000

Scopes of work currently include the following phases:

- Cancer and Critical Care Tower
- Infrastructure and Roadways
- Rhodes, Doan & James
(mechanical, electrical and plumbing system upgrades)
- Demolition and Site Development
- Central Chilled Water Plant

ProjectONE Construction Reform Budget	\$658,300,000
--	----------------------

Project Procurement / Delivery

- **“Demonstration Project” under House Bill 318, section 8 (HB318)**
- **Utilizing the following:**
 - CM at Risk
 - Design Assist
- **Challenges:**
 - Some project scopes had been initiated already
 - Many A/E contracts were already in place

Construction Manager at Risk

- **Single contract between the Construction Manager and the University**
 - Trade subcontracts held by the CM
- **No substantial change in A/E role(s)**
 - Same quality expectations and authority
- **Guaranteed Maximum Price (GMP)**
 - Agreed upon Initial GMP (iGMP) as a budget target before GMP is negotiated
 - Each phase is negotiated as a separate GMP amendment
 - If negotiation is unsuccessful, the University can choose to continue under a traditional CM Agent scenario

Design Assist (Pre-construction)

- **Specific scopes / trades identified:**
 - HVAC / Mechanical
 - Electrical
 - Plumbing / Medical Gases
 - Pneumatic Tube System
 - Precast Concrete
 - Curtainwall
- **Partnership with A/E**
 - Quality and delivery method with input from trades
 - Joint responsibility for achieving the iGMP

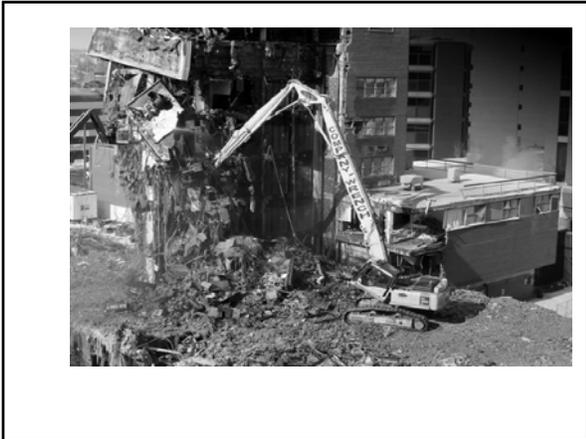
Design Assist (Construction)

- **Final cost estimate developed by CM**
- **If within allowable variance from iGMP the trade contractor(s) will continue into construction...**
- **...otherwise, the University can choose to finalize the documents and bid**

Schedule Summary

Cancer & Critical Care Tower									
Design									
Construction									
Infrastructure & Roadways									
Design									
Construction									
Cramblett Hall Demolition									
Design									
Construction									
Rhodes, Dean, James & Cramblett									
Design									
Construction									
Landscape and Spirit of Women Park									
Design									
Construction									
South Campus Central Chiller Plant									
Design									
Construction									



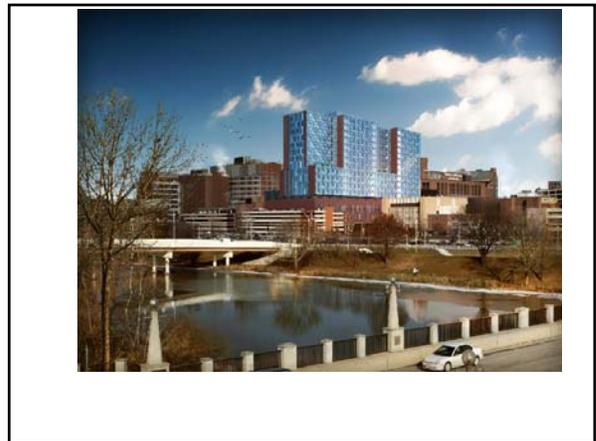


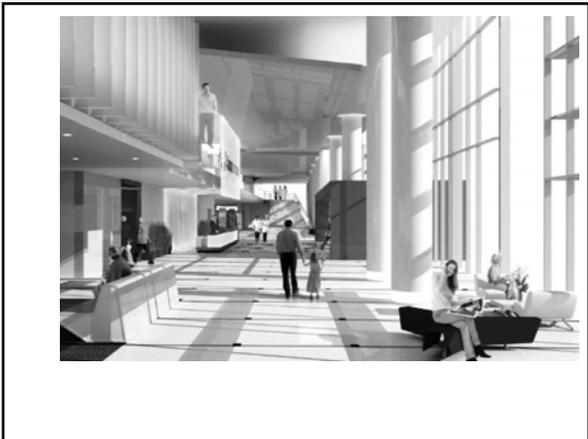
Current Status / Progress

- Cancer and Critical Care Tower
 - Site prep work underway
 - Design Assist packages being procured now
- Infrastructure and Roadways
 - Initial construction underway with remaining roadway and chilled water distribution work to commence in early 2011
- Rhodes, Doan and James (m.e.p. system upgrades)
 - Preliminary building system "prep" work underway
 - Phased renovation work (10-20 rooms at a time) starting in mid-2011

Current Status / Progress

- Demolition and Site Development
 - Means Hall Demolition complete
 - Cramblett Hall Demolition commencing design
- Central Chilled Water Plant
 - Design Development with Design Assist packages being procured now





**Medical Sciences Building
 Rehabilitation**

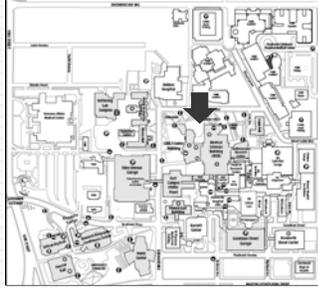


Project Managers: Dennis Funke, Dale MacNeaux

University of Cincinnati
 Planning + Design + Construction
 August 12, 2010

SAO College Presentation

- Medical Science Building (MSB)
 - Located on the Medical Campus at the corner of Eden Avenue and Albert Sabin Way.



- Original construction of MSB was completed in 1974.
- Type of Construction: Concrete Frame
- Stories: 14
- Gross Building Area: 815,364 sq. ft.



- MSB houses:
 - College of Medicine
 - Portion of the Dean's Suite
 - Classrooms
 - Library
 - Bookstore
 - Student study areas
 - Medical Departments
 - Research labs
 - Offices for researchers

- Project was established and the program was developed in the late 1990's when MSB was approx. 25 years old.
 - After many years of deferred maintenance.
 - Many aspects of original building no longer met code.
- A collaboration amongst:
 - Academic Health Center Provost's Office
 - University Architect's office (Planning and Construction Management)
 - Design Team (Associate Architect/Engineer)
 - User Groups
 - UC departments (EH&S, Radiation Safety, Public Safety, Fire Safety, Facilities Management, UCit)

- Rehabilitate the infrastructure of a 25-year-old building (mechanical, electrical, and plumbing systems).
- Bring the building up to current code.
- New infrastructure should allow for renovations to occur without major disruptions to other parts of the building.

- How do you renovate such a large building?
- What do you do with faculty, staff and students during the renovation?

- In conjunction with the MSB Rehabilitation Project, and as a part of the Program of Requirements, the University decided to build a new research building, the Center for Academic Research Excellence (CARE), which was constructed on the site of the former MSB Garage.



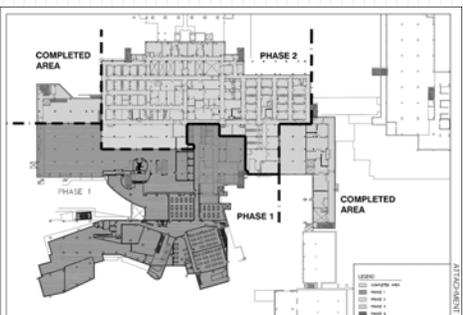
- CARE would be constructed first and would serve as “swing” space while MSB was being renovated.



- CARE was constructed in conjunction with MSB Phase 1.
 - CARE was completed in July 2008.
 - CARE is a 12-story research facility constructed on a concrete frame.
 - CARE is attached to MSB via a 9-story atrium.
 - Floors are interconnected with glass bridges.
 - CARE will provide approx. 250,000+ sq. ft. of research swing space while MSB is being renovated.

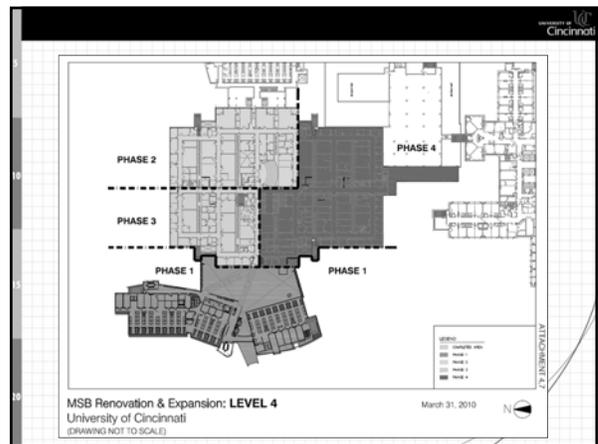
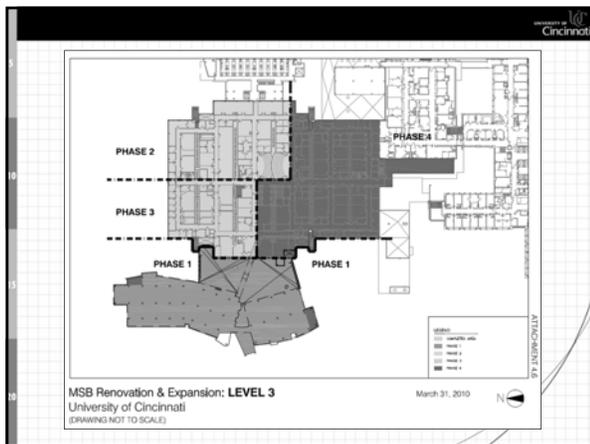
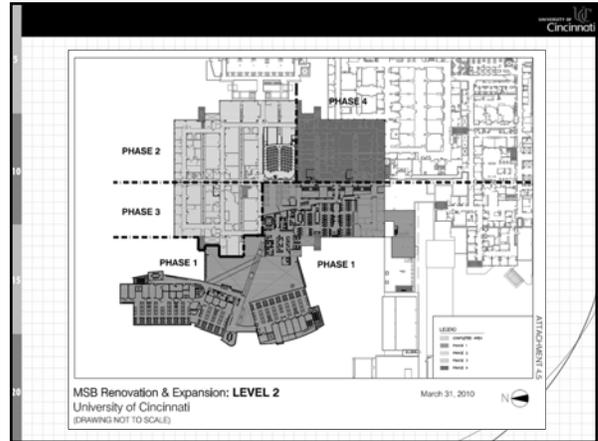
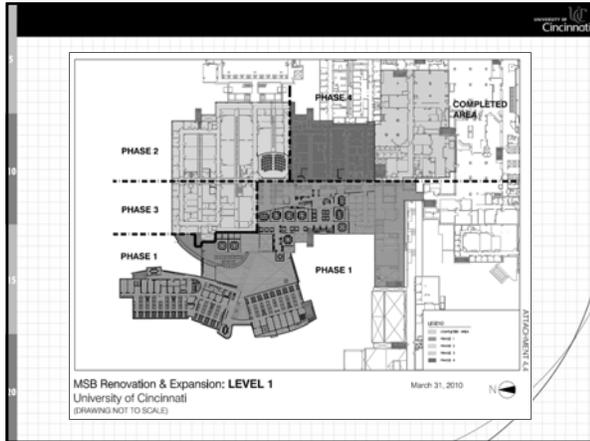
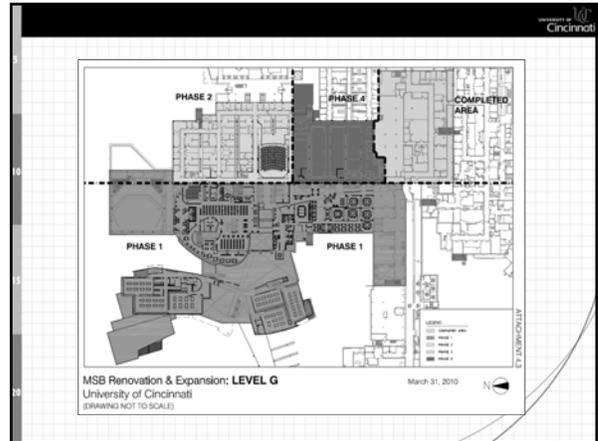
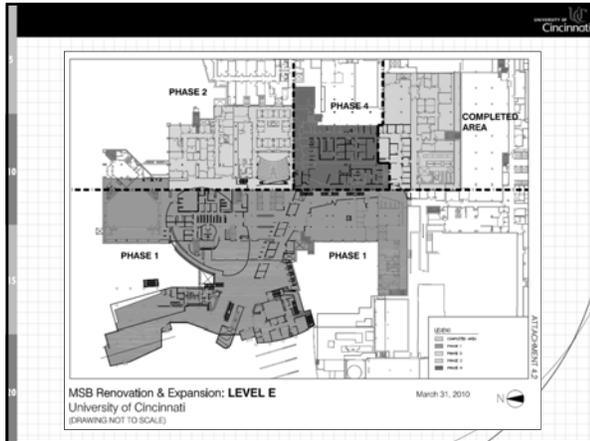


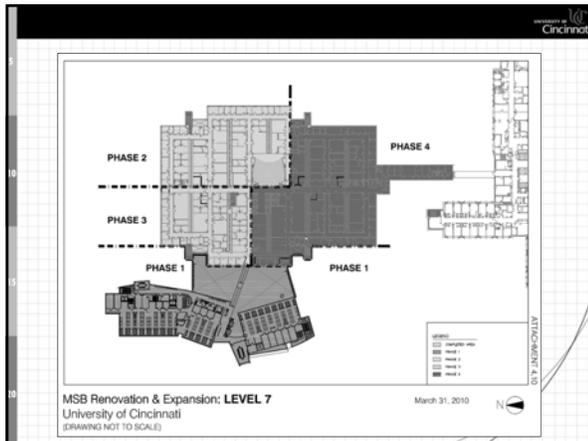
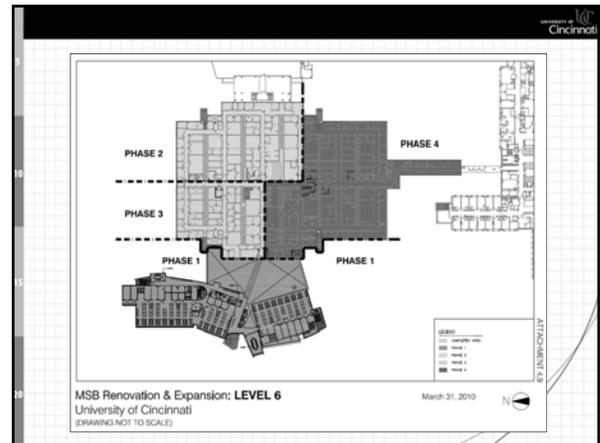
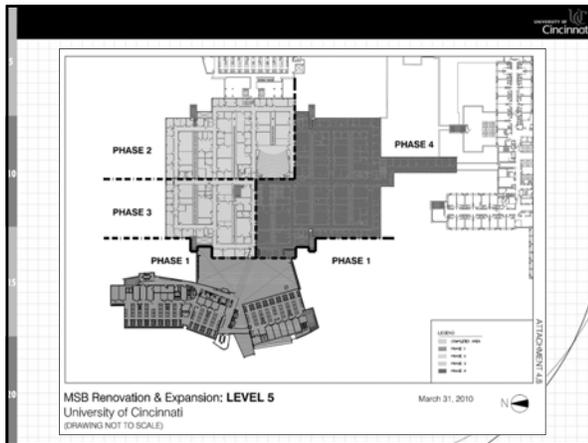

- It was decided that MSB would be renovated in five phases:
 - Phase 1 would consist of the College of Medicine student areas (library, bookstore, student study areas).
 - Phases 2-5 would consist of vertical renovations of the building by quadrant. (Recently revised to phases 2-4; NE quadrant, NW quadrant and SE/SW quadrants.)



MSB Renovation & Expansion: LEVEL R
 University of Cincinnati
 (DRAWING NOT TO SCALE)

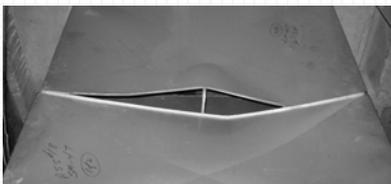
March 31, 2010





- Besides the main renovation of MSB, there are:
 - Departmental renovations
 - Move-related renovations
 - Grant-related renovations (stimulus-funded)

- Internal conditions needing correction:
 - No fire suppression system existed to meet current codes for high-rise buildings.
 - Restrooms did not meet current ADA requirements.
 - Fume hood ductwork is not reinforced and is failing due to high-static pressure.



- Internal conditions needing correction:
 - Maintaining negative air pressure in labs is difficult.
 - HVAC equipment nearing the end of its life expectancy.



- Internal conditions needing correction:
 - Cooling coils and drain pans are rusting away.
 - Existing HVAC systems lack flexibility for ease of shutdown, repairs and future modifications.



- Internal conditions needing correction:
 - Electrical equipment is outdated and does not meet current code clearances.



- Internal conditions needing correction:
 - Some electric wiring does not meet current codes.

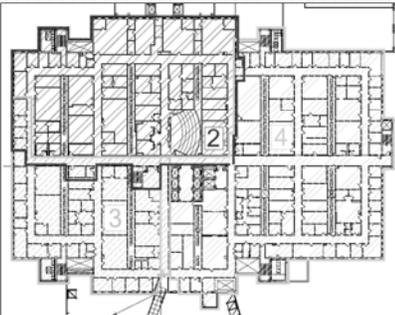


- The existing emergency generator is old and under-sized.
 - Currently handles only life-safety power.

- Phases 2 thru 4 focus mainly on these infrastructure upgrades:
 - Repair/replacement of most air handler systems served from the Penthouse.
 - Replacement/reinforcement of supply, return and general exhaust risers and horizontal duct runs.
 - Replacement of laboratory general exhaust fans.
 - Replacement of all fume hoods, fume hood exhaust fans, risers and ductwork.

- Phases 2 thru 4 focus mainly on these infrastructure upgrades:
 - Fire suppression system upgrades.
 - ADA upgrades in the public spaces.
 - Lighting/ceiling replacements.
 - Life safety upgrades.
 - Relocation of electrical circuits/panel boards.
 - Electrical system upgrades to meet NEC requirements.
 - Installation of a new, larger emergency generator.
 - Upgrades to tele/data systems.

- The project will be constructed in 4 phases.



- Phase = one or two building quadrants, plus half of the 7th floor and Penthouse.
- Phase 1 was completed in conjunction with the construction of CARE
 - Finished in July 2008 (approx. 185,000 sq. ft.)

- The remaining three phases of MSB are being bid as two separate projects:
 - North half of MSB (presently under construction)
 - Phase 2 – NE quadrant (approx. 260,000 sq. ft.)
 - March 2010 – August 2011
 - Phase 3 – NW quadrant (approx. 101,000 sq. ft.)
 - Scheduled for January 2012 - November 2012)
 - South half of MSB (presently in design)
 - Phase 4 – SE & SW quadrants (approx. 154,000 sq. ft.)
 - Work on Phase 4 is scheduled to bid in early 2013 with construction scheduled to be complete in January 2015.

- Phases 2 and 3 will be accessed from a buckhoist located in Levine Park.
 - Levine Park will be restored to its existing condition once Phase 3 is completed.




- Phase 4 will be accessed from a buckhoist located in the MSB dock well.



- Construction: July 2004 – July 2008
- Design Team
 - Studios Architecture (Design Architect) – San Francisco, CA
 - Harley Ellis Devereaux – Southfield, MI
 - Affiliated Engineers, Inc. – Gainesville, FL
 - GPR Lab Planners – Purchase, NY
 - Hargreaves & Associates – New York, NY

- Contractors:

<ul style="list-style-type: none"> – General/Lead Dick Corporation, Pittsburgh, PA – Mechanical Peck Hannaford + Briggs, Cincinnati, OH – Testing & Balancing DeBra-Kuempel, Cincinnati, OH – Electrical Glenwood Electric, Cincinnati, OH 	<ul style="list-style-type: none"> – Intelligent Bldg Systems Johnson Controls, Cincinnati, OH – Plumbing Nelson Stark, Cincinnati, OH – Fire Protection Preferred Fire Protection, Cincinnati, OH – Pre-purchased Equipment Turner Logistics, Inc., Cincinnati, OH – Lab Control System Ingenuity IEQ, Chelsea, MI
--	---

- Construction: March 2010 – Dec 2012
- Design Team:
 - BHDP Architecture – Cincinnati, OH
 - CUH2A – Atlanta, GA
 - M-Engineering – Westerville, OH
- Contractors:
 - Messer Construction – Cincinnati, OH
 - Ingenuity IEQ – Chelsea, MI

Project Update

- Phase 2 & 3 work was bid in mid-December 2010.
- Phases 2 and 3 have been awarded to Messer Construction. (NTP was issued March 1, 2010)
 - Manages all other contractors, including Mechanical, Electrical, Plumbing, Fire Protection, Testing/Balancing.
 - Messer has significant prior experience...
 - Working on state projects
 - Working at UC
 - Working in occupied buildings
 - Working in a sensitive environment (Children's Hospital and University Hospital)

- Design: June 2010 – November 2012
- Design Team:
 - BHDP Architecture – Cincinnati, OH
 - CUH2A – Atlanta, GA
 - M-Engineering – Westerville, OH
- Contractors:
 - To be determined

Project Update

- Design team has begun construction documents for Phase 4.
- The majority of Phase 4 (SE quadrant) will be converted mainly into office space.

- Work within an occupied building...
 - Requires additional contract document detail
 - Lessons learned from previous phases of work are being incorporated into contract documents.
 - Multi-phase/multi-year project requires consultation with the plans examiner
 - All work on Phases 1-4 is being designed under OBC 2002.
 - MSB was identified as a "mega-structure," due to its interconnectivity with adjacent buildings (MSB Service, MSB Receiving, Cardio Vascular Research, Surgical Research, Mont Reid Pavilion, CARE and University Hospital)

- Attrition of design and construction team...
 - It is not an item that you plan for on a project, but on a multi-year/multi-phased project, you need to make sure that it doesn't lead to other project-related problems.
 - Attrition due to death, economy and personnel changing positions.
- Moving of labs to prepare for construction.

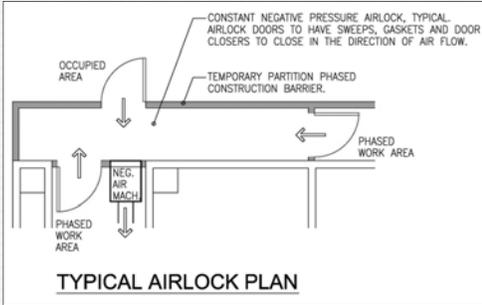
Construction/Engineering Controls/Air Monitoring

- Construction barriers will be erected.
- Construction zone will be maintained under negative pressure.



Construction/Engineering Controls/Air Monitoring

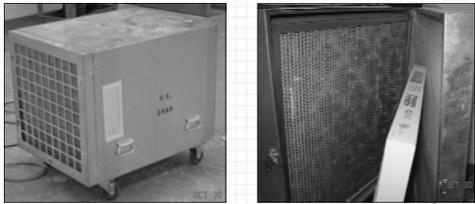
- Air locks will be constructed for required secondary egress.



Construction/Engineering Controls/Air Monitoring

Lessons learned from Phase 1 construction will be incorporated:

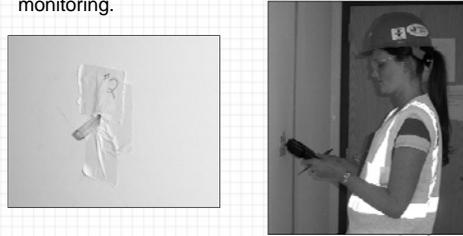
- Door closers/seals will be installed on all air lock doors.
- HEPA-filtered negative air machines will maintain negative air pressure in air locks.



Construction/Engineering Controls/Air Monitoring

- Lessons learned from Phase 1 construction will be incorporated:

- Any work outside construction working hours (6PM-6AM).
- Construction areas will have continuous pressure monitoring.



Construction/Engineering Controls/Air Monitoring

- Lessons learned from Phase 1 construction will be incorporated:

- During demolition construction areas will have continuous dust/particulate monitoring.
- Periodic dust and particulate monitoring will occur during construction.
- MSDS files for construction materials will be maintained in contractor's project office.

Communications

- Academic Health Center Public Relations is writing a story each quarter to update faculty, staff and students.
- A project e-mail address has been established to submit questions/concerns.
- Project overview presentations similar to this one have occurred.



Notifications are being sent out for:

- Temporary utility shutdowns



– Construction activities that are expected to cause noise/vibration

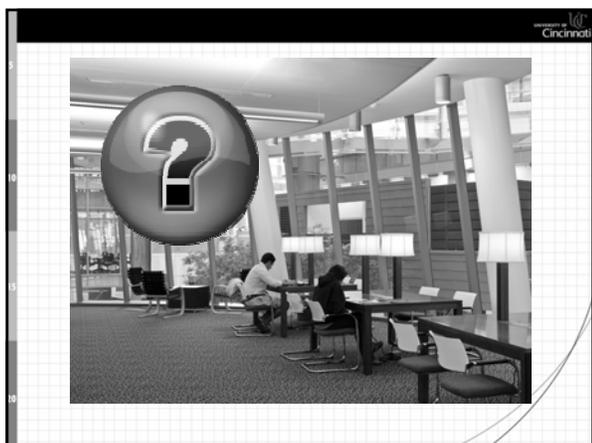
- Feedback from faculty, staff and students is welcomed.
 - Notification prior to special events.

- **Intelligent Building Systems Bid Package**
 - This package included all the low-voltage electrical systems (fire alarm, telephone, data, building automation system, security, lab controls system).
 - Intent was for most systems to share a structured cabling system.
 - Save installation time
 - Save project money

- The IBS package failed miserably in the University's eyes.
 - Scope of work was awarded to a controls contractor who had little knowledge of how to manage subcontractors.
 - None of the subcontractors would buy into the structured cabling system or would guarantee their work using it.
- Phases 2-4 have eliminated this separation of work.
 - Fire alarm, telephone, data and security are now in the electrical package.
 - Building automation system and lab control system are now in the mechanical package.

Proposed Project Schedule

Activity	Time Frame	Months
Bid MSB Phases 2 & 3	Dec 2009	
Vacate Phase 2 construction areas	Mar 2010	
Award MSB Phases 2 & 3	Dec 2009 – Feb 2010	
MSB Phase 2 construction	Mar 2010 – Aug 2011	(18 mo.)
Move back into Phase 2 and out of Phase 3	Sep 2011 – Dec 2011	(4 mo.)
MSB Phase 3 construction	Jan 2012 – Nov 2012	(11 mo.)
Move back into Phase 3 and out of Phase 4	Dec 2012 – May 2013	(6 mo.)
Bid MSB Phase 4	Feb 2013	
Award MSB Phase 4	Feb 2013 – May 2013	
MSB Phase 4 construction	Jun 2013 – Jan 2015	(19 mo.)





**ODOT'S VALUE BASED
DESIGN BUILD PROCUREMENT**

Presentation Revised 8/17/10

1

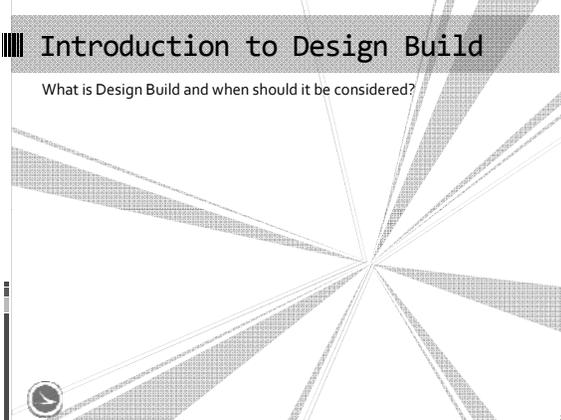
Outline of Today's Presentation

- Introduction to Design-Build (DB)
- Innerbelt Project Background
- Process to develop design-build contract documents for Central Viaduct (CV)
- DB contract document components
 - Selection Criteria
 - Contract Provisions
 - Project Scope

2

Introduction to Design Build

What is Design Build and when should it be considered?



3

What is Design-Build?

Design-Build is a project delivery process in which the design and construction phases of a project are combined in a single contract. The consultant designer and construction contractor function as a Design-Build Team, working concurrently on the design and construction phases of a project.

4

Comparison of Procurement Types

Higher degree of owner oversight

A Paradigm Shift

<p>Traditional Design-Bid-Build Procurement</p> <p>Design Work awarded 100% on Qualitative Selection Process</p> <p>Build/Construction Work awarded 100% on Quantitative Selection Process (lowest bid)</p>	<p>Low-bid Design-Build Procurement</p> <p>Design and Build/Construct awarded 100% on Quantitative Selection Process (lowest bid)</p>	<p>Best Value Design-Build Procurement</p> <p>Design and Build/Construction awarded on combined Qualitative and Quantitative Selection Process</p> <p>Scoring Includes:</p> <ul style="list-style-type: none"> • Design-Build Team Qualifications • Overall Project Cost • Time - Project Delivery and Impact to Traveling Public • Quality • Design Alternatives
--	--	---

Decreased daily owner control

5

The Paradigm Shift with Best Value Procurement

Change from Command and Control by Owner under Low-Bid Procurement to Autonomy, Mastery and Purpose¹ as intrinsic incentives of the Design-Builder under Best-Value Procurement

¹ Dan Pink's "Surprising Science of Motivation" TED Talks - 2009

6

Overall Agency Satisfaction by Project and Contract Type

Project/Contract Characteristic	Overall Sponsor Satisfaction*	
	Lower	Higher
Project Type	Road-Resurface/Renewal	Road-New/Widening and Rehabilitation/Reconstruction
Project Size	Smaller	Larger
Procurement Method	Low Bid	Best-Value
Percent of Design Complete at Award	Higher	Lower

* These results are based on an agency satisfaction rating and are statistically significant with a 95 percent confidence.
Source: Unpublished study of 69 SEP-14 Design-Build Projects (<http://construction.colorado.edu/Design-Build/>).

From AASHTO Guide for Design-Build Procurement - January 2008

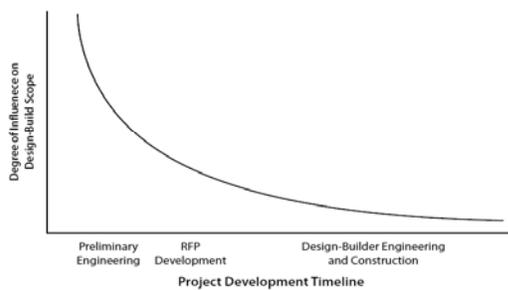
7

DB Designer calls the shots

- The design-builder's engineer (Designer of Record) who is responsible for all design decisions on the project and construction oversight (is the project being constructed as designed?)
- Designer of Record supplies appropriate professional liability coverage to project

8

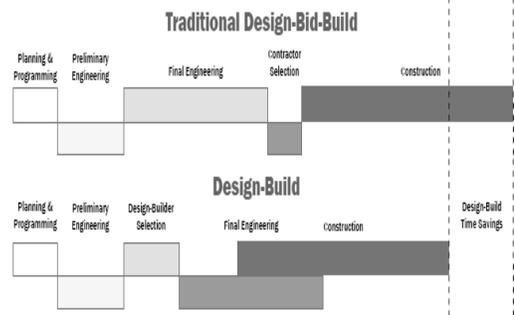
Owner influence on scope



From AASHTO Guide for Design-Build Procurement - January 2008

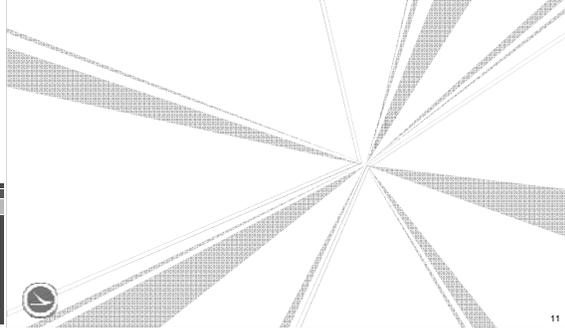
9

DB Schedule advantage



Innerbelt Project Background

Project Development and History of Corridor



11

Problems Requiring a Solution

The big three:

- Condition – 50 year old Interstate designed for 50 year life
- Congestion
- Crashes – Congestion and Geometrics

The puzzle comes together:

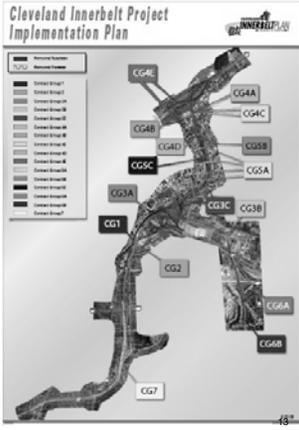
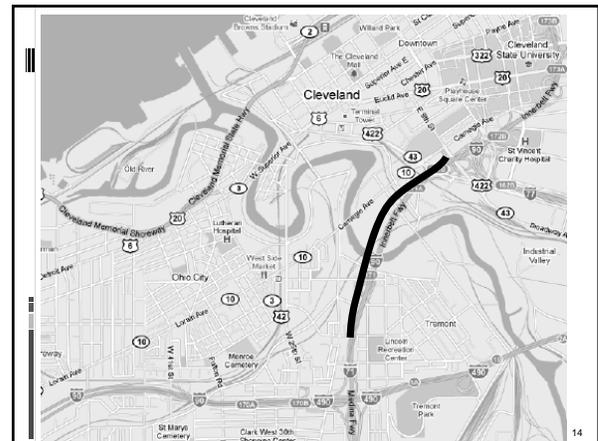
- Context – engaged stakeholders to develop plan → led to associated projects such as Quigley Road Connector, Lakefront and Opportunity Corridor

12

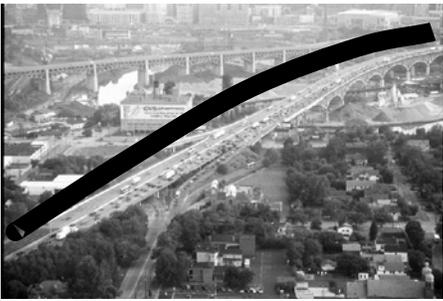
Big Solution

Resulted in a
\$3 Billion
Program of Projects

NEPA
Record of Decision
September 19, 2009

CCG1 (CV) Project Location



Concerns with existing bridge condition...



...led to the following decisions:

- Repair existing bridge – construction underway
- Build new westbound bridge first and **build it soon - ARRA funding available** – CCG1
- Build new eastbound bridge in roughly the same location as existing bridge – future contract – CCG2

BHAG (Big Hairy Audacious Goal)¹

Go big or go home

Our goal was to develop and implement a completely new procurement process to Ohio on the largest single contract in the history of the Ohio Department of Transportation.

BHAGs focus efforts and drive decisions

BHAGs change the way you think and operate

¹ Big Hairy Audacious Goal ("BHAG") was coined by James Collins and Jerry Porras in *Building Your Company's Vision* - 1996

Scale of our BHAG

- 1st Value Based DB - CV (CCG1) budget is \$450 million
- 2nd Value Based DB - FRA-670 budget is \$290 million
- ODOT's Least-Cost (1-step) DB process since the late 1990s has awarded over 100 projects as of 7-2-2010 for more than \$400 million in aggregate
 - \$4 Million average
 - Largest award to date is \$45 Million



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More numbers for effect

- ODOT's Statewide Annual Construction Budgets:
 - Typically from \$1.4 to \$1.6 billion
 - With Stimulus (ARRA) funds at a \$2 billion program which will continue through fiscal year 2011
- District 12 Annual Construction Budget:
 - Typically from \$180 to \$220 million
 - Including the Innerbelt Bridge project and Stimulus funded projects, **nearly \$1 billion** during the coming construction season



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DB Package Development Process for CV

The path forward to hit our BHAG



21

CV Design-Build Timeline



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DB Development Team formation

"The star of the team is the team. 'We' supercedes 'me'." - John Wooden

- Shared Purpose and Direction and Motivating Goals- BHAG
- Mutual Support and Trust
- Authority to Decide or Act
- Reliance on Diverse Talents
- Commitment to Individual and Team Roles
- Multi-Directional Communication



From the "The Seven Characteristics of a High-Performing Team" by [Cynthia Clay](http://ezinearticles.com/?The-Seven-Characteristics-of-a-High-Performing-Team&id=413346), <http://ezinearticles.com/?The-Seven-Characteristics-of-a-High-Performing-Team&id=413346>

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DB Development Team Features

- **Included Planning, Design and Construction expertise**
- Included Owner, Consultant, Contractor, FHWA and Stakeholder representation
- Key staff engaged executive leadership as needed
- Contract Document preparation was the primary **focus** of core staff



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DB Development Committees

- Management Committee
 - Decision making body
 - Key members engage Executive Leadership and other stakeholders
- Technical Committees
 - Representatives on the Management Committee
 - Included City of Cleveland staff
- FHWA engaged at all times



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We have a team – now what?

Steps to develop DB contract documents¹

1. Define Project Goals
2. Plan for and allocate risks
3. Develop evaluation criteria
4. Write the RFQ/RFP/Contract Documents

Looks nice and orderly but the reality was that we started all steps (and more) concurrently

¹From AASHTO Guide for Design-Build Procurement - January 2008



26

Precedence was our guide

- Benchmarking Invaluable source of information throughout the development process
 - Interviews with other states
 - Example documents from other states
- AASHTO Guide for Design-Build Procurement - January 2008
- NCHRP Report 561 - Best-Value Procurement Methods for Highway Construction Projects
- CFR and ORC



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We better take a close look at this

- Expert Review
 - External – National Constructors Group
 - Internal (ODOT and Consultants)
 - Legal
 - Panel of experts evaluating key issues and risk areas
 - Subject matter experts called in on case by case basis
 - Risk management team
- Committee Review
- Industry Review



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Industry Review Benefits

- Informed and advised the DB document preparation team
- Kept industry informed of project status
 - Puts project on interested firms proposing schedule – helps compete for proposers
- Helped industry prepare for the advertisement
 - Bonding and insurance requirements
 - Teaming to address technical approach



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Project Goals are important

- Build on planning/program goals but these are project specific
- If all things are important then nothing is important – defined what is really important
- Defined goals early – got key decision makers on board with goals – stuck with the goals
- Goals guided **risk management** and preparation of project scope, **selection criteria** and contract provisions
- Published in CV Project Scope



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III Risk Management Tasks

From PMI's Practice Standard for Project Risk Management

- Identification – potential impacts to goals, scope, schedule or cost
- **Assessment/Analysis**
- Mitigation and Planning
- Allocation
- Monitor and Control

- Risk Register



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III Fun with Budgeting

- Use of conceptual estimates less accurate than detail design estimates
 - Less definition of known items
 - Greater chance of unknown items
- Accounted for professional services as part of construction costs
 - design and shop drawing review
 - Other construction phase services that are typically done by engineer or owner now part of DB scope (on CV this includes IQF)



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III No hard copies, please.

- Use of internet tools such as LiveMeeting and SharePoint for document preparation saved time and money
- Advertisement for RFP consisted of Pdfs posted at:
 ftp://ftp.dot.state.oh.us/pub/contracts/Cuy90RFP/



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III Some more numbers

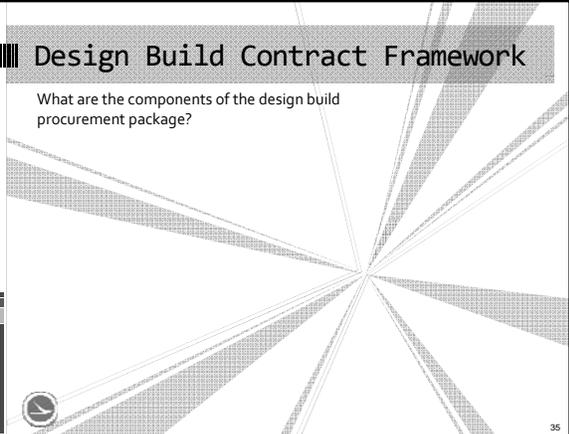
- Resulted in over 5000 pages of contract documents and 25,000 pages of reference material not including the electronic files (CADD, etc.)
- Hit all deadlines and procurement milestones to date – Technical and Price Proposal submitted as scheduled and in review right now



34

III Design Build Contract Framework

What are the components of the design build procurement package?




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III DB Contract Documents

- Selection Criteria (instructions to proposers)
- Proposal (General Conditions)
- Project Scope
 - Scope Appendices
 - Document Inventories
 - Project Provisions
 - Conceptual Plans
 - Other Contract Requirements and Reference Material



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Selection Criteria for CV

Selection Criteria document outlines requirements for SOQ, DBT Proposal and Interview

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Selection Criteria Development Considerations

- Clear and Transparent Scoring
- Weighted Criteria based on risks and goals
- Document, Document, Document
- Do not change after advertisement
- Defense against protests alleging an "Arbitrary and capricious" selection process

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What is the selection/bidding process on CV?

Shortlist teams from SOQ

Shortlisted DBTs submit detailed technical and price proposal incorporating approved ATCs

Award based on a combination of:

- Technical qualifications
- Competitive bidding

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Selection Process Schedule

	CUY-90	FRA-670
ODOT releases RFQ.	2/2/10	9/22/10
DBTs submit SOQs.	3/2/10	10/25/10
ODOT short-lists DBTs and releases RFP.	3/23/10	11/19/10
DBTs submit ATCs. ATCs are evaluated by ODOT.	3/23/10 to 6/25/10	11/19/10 to 3/10/11
DBTs submit Technical and Price Proposals.	8/5/10	4/15/11
ODOT announces Technical Proposal scores and opens price proposals.	9/9/10	5/8/11
ODOT awards contract.	9/17/10	5/17/11

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"Three is a magic number"

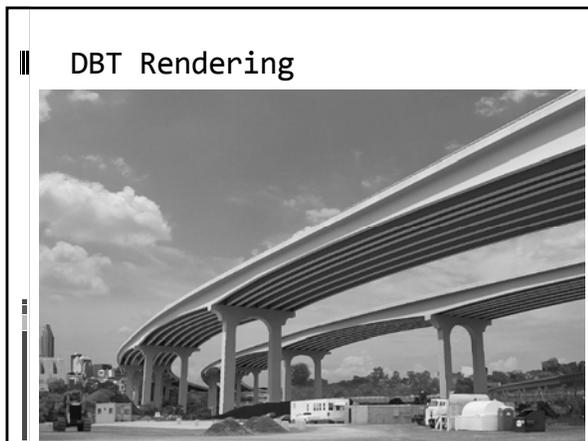
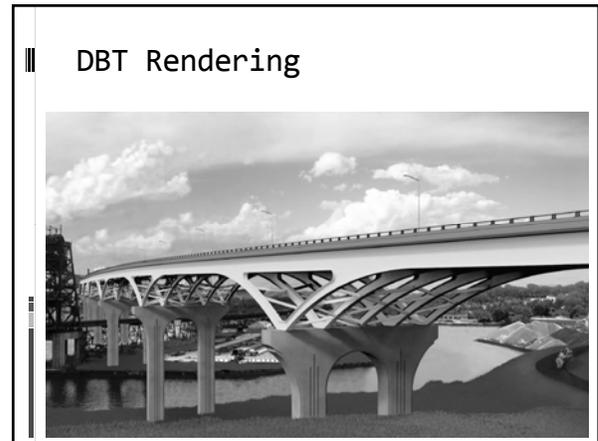
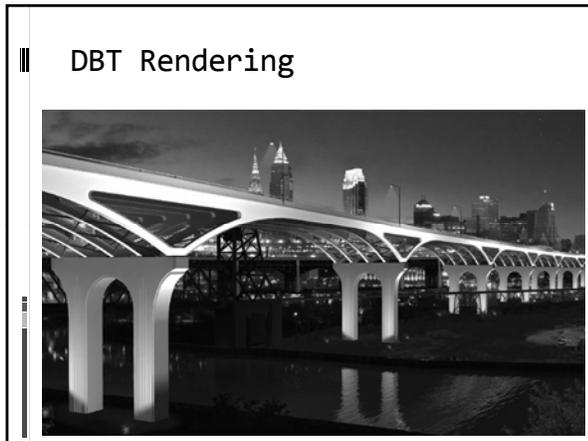
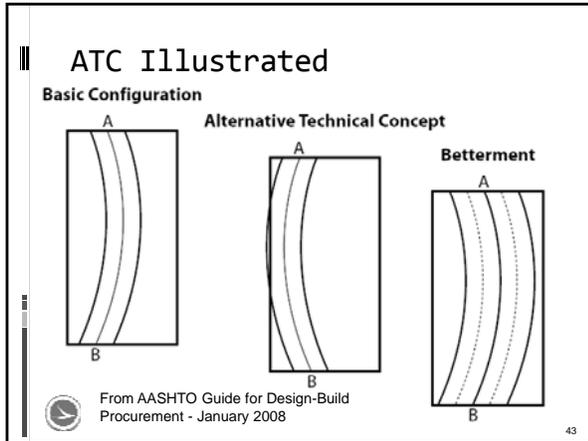
- Remember this song from "Schoolhouse Rock" when determining a shortlist
- The shortlisted DBTs for CV include:
 - Lane/Brayman, A Joint Venture, LLC with designer FIGG
 - Trumbull-Great Lakes-Ruhlin, A Joint Venture (TGR) with designer Parsons Transportation Group Inc.
 - Walsh Construction with designer HNTB Ohio Inc.

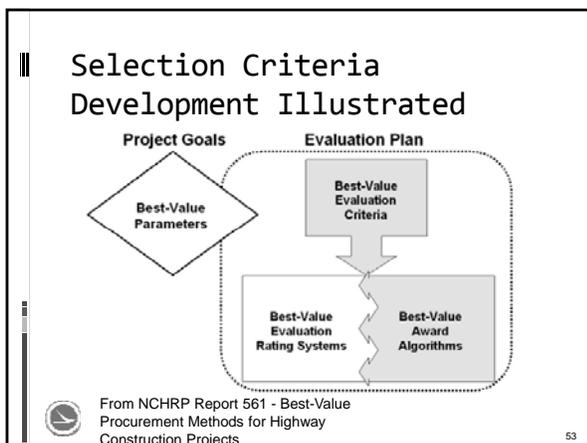
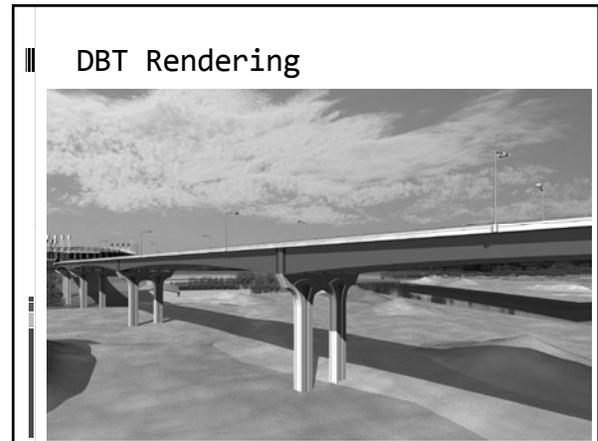
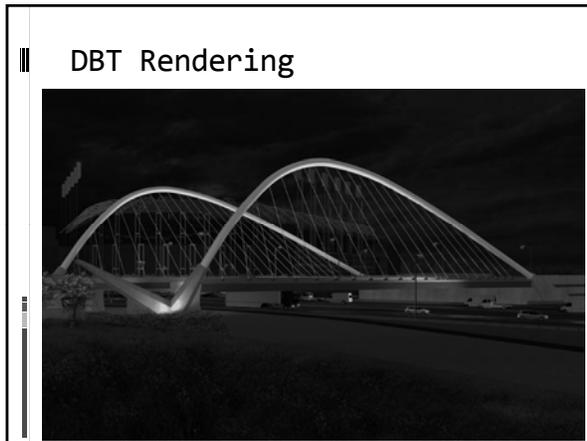
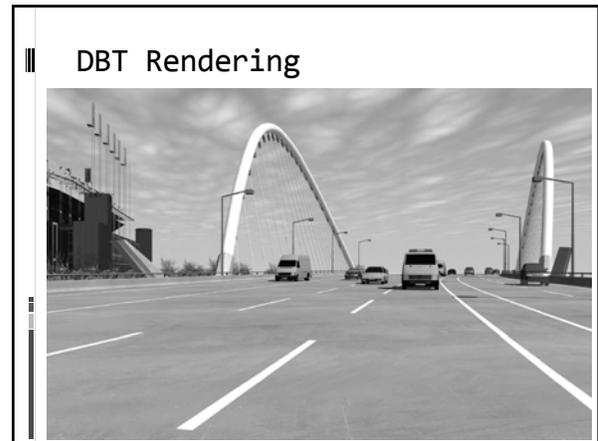
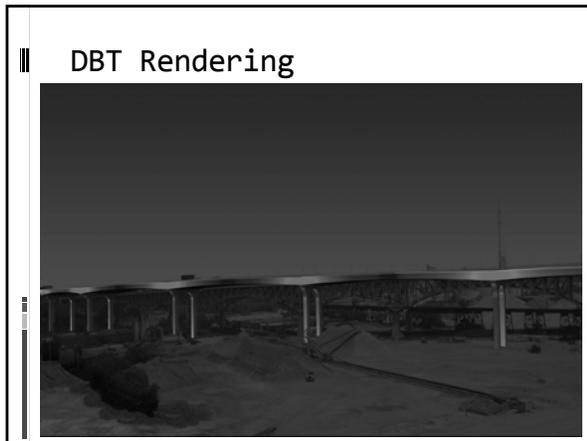
41

Alternative Technical Concepts (ATCs)

- Alternative Technical Concept: A proposed change to the Project Scope which provides a solution that is equal to or better than what is required by the scope as determined by the Department
- Allows for innovation, increased flexibility, time reductions and cost savings to ultimately obtain the best value for the public

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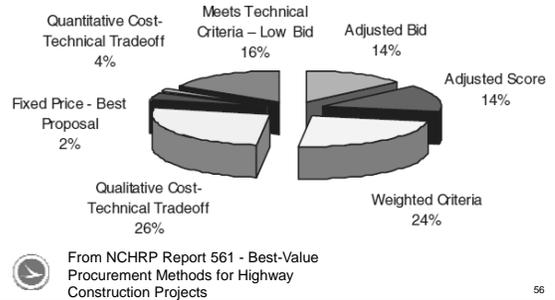
Technical Proposal Evaluation Criteria

Criteria	
Sustainability and Green Initiatives	
Design Management	
Proposed Design	
Construction Management	
Construction	
Quality Management	
Schedule	
Community Relations	
On the Job Training	
TOTAL	100 (Range 70-100)
I-90 Viaduct Bridge Aesthetics – Bonus Points	5
GRAND TOTAL	105

Technical Proposal Scoring

Score	Definition
Demonstrates an approach that is considered to significantly exceed the RFP requirements/objectives in a beneficial way (providing advantages, benefits, or added value to the Project) and that provides a consistently outstanding level of quality. Must have a significant strength and/or number of strengths and no weaknesses.	90-100
Demonstrates an approach that is considered to exceed the RFP requirements/objectives in a beneficial way (providing advantages, benefits, or added value to the Project) and offers a generally better than acceptable quality. Must have strengths and no significant weaknesses.	80-90
Demonstrates an approach that is considered to meet the RFP requirements/objectives and offers an acceptable level of quality. It has strengths even through minor and/or moderate weaknesses exist.	70-80
Demonstrates an approach which is marginally acceptable.	60-70
Demonstrates an approach that contains no strengths and minor and/or significant weaknesses.	<60

Award algorithms and use based on sampling



CV Scoring Formula

30% Technical and 70% Price

$$S_B = 100 [c (T_B / T_H) + (1 - c) (P_L / P_B)]$$

$$c = 0.30$$

P_B = Bidder's Price Proposal

P_L = Lowest Price Proposal (all bidders)

S_B = Bidders's Overall Score (Technical Proposal and Price Proposal)

T_B = Bidder's Technical Proposal Score

T_H = Highest Technical Proposal Score (all bidders)

Contract Provisions

DB contract is different and the DBB boiler plates (Proposal Notes and Section 100) were updated accordingly

Used Risk Register and Project Goals to guide development of Contract Provisions

Key differences in contract provisions for CV

- Lump sum v. unit price → paying from % completes (EV) as shown on a cost loaded schedule (schedule of values)
- Differing Site Conditions - first \$500k on the DBT
- **Order of Precedence – elements of DBT's Technical Proposal that exceed the contract requirements**
- Payment for preparation of responsive preliminary design concept – i.e. stipend

Stipend

- Payment for responsive proposal
- **Covers a portion of costs to prepare a responsive proposal**
- **Promotes innovation** to bring greater value to the owner
- Covers ownership of technical proposal ideas
- 0.2% to 0.25% of DB project budget

||| **Schedule implications for contract provisions**

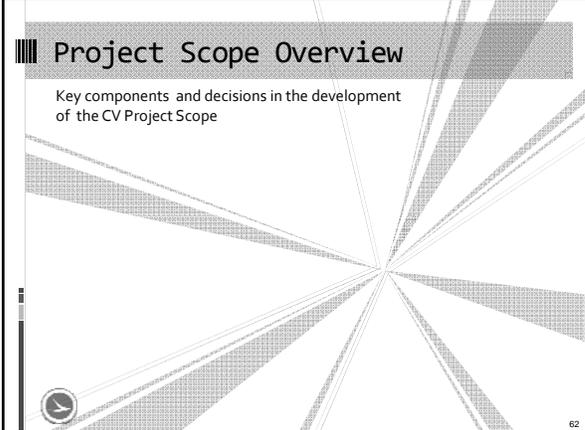
- Subcontractor scope and contracts by DBT cannot be finalized until design is further along
 - Progressive elaboration is the key concept here
 - Rolling reporting throughout project
 - Affects DBE reporting
 - Affects detail of schedule



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||| **Project Scope Overview**

Key components and decisions in the development of the CV Project Scope




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||| **Build a box, make it strong**

- Scope "builds the box"
- DBT must work within the box barring approved ATCs
- In some instances a certain level of pre-design was done to determine "the box" such as for Drainage and Maintenance of Traffic



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||| **A prescription for performance**

Performance specifications indicate the desired outcomes – how you get there is your responsibility

Prescriptive specifications tell you how to get to the desired outcome - the recipe is provided



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||| **All Project Scope Documents are not created equal**

- Contract Documents
- Basic Configuration (BC) – elements are contractual – NEPA and Planning Study Documents used to define BC
- Reference - DBT to use at own "risk"
- Appendices fall into categories above



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||| **Use at your own risk**

- All electronic files (primarily CAD) were provided to the DBTs from RFQ
- Electronic files supports BIM and IPD on the DBT → value to the owner by lower cost, less time drawing and more time innovating
- All files provided for use by DBT "at their own risk" → key statement to protect owner based on legal precedence



66

Bibliography

- A. AASHTO Guide for Design-Build Procurement - January 2008
- B. NCHRP Synthesis 376 - Quality Assurance in Design-Build Projects
- C. NCHRP Report 561 - Best-Value Procurement Methods for Highway Construction Projects
- D. Preparing for Design-Build Projects ASCE Press
- E. WSDOT Guides

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End of Presentation

Thank you – any questions?

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BACKGROUND AND SUPPLEMENTAL SLIDES

Legislative Authority

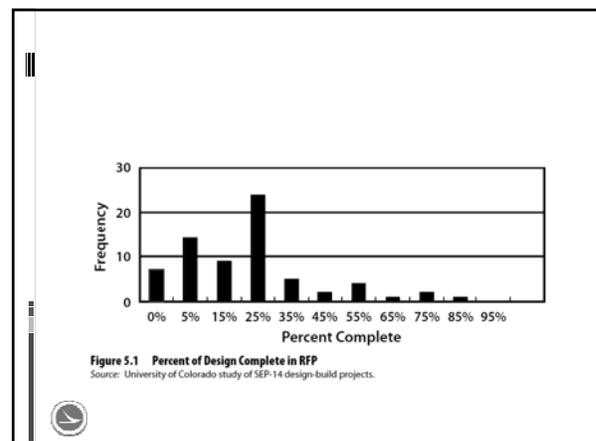
2009 H 2, § 756.35, eff. 4-1-09, reads:
Notwithstanding any provision of Chapter 5525. of the Revised Code, until **July 1, 2011**, the Director of Transportation may use a **value-based selection process, combining technical qualifications and competitive bidding elements**, including consideration for minority or disadvantaged businesses that may include joint ventures, when letting special projects that contain both design and construction elements of a highway or bridge project into a single contract.

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Legislative Authority (Continued)

5517.011 Combining design and construction elements of highway or bridge project into single contract.
On the effective date of this amendment and until July 1, 2011, the total dollar value of contracts made under this section shall not exceed **one billion dollars**. On and after July 1, 2011, for each biennium, the total dollar value of contracts made under this section shall not exceed two hundred fifty million dollars unless otherwise authorized by the general assembly.

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Technical Committees

- Aesthetics/Enhancements/Community Involvement
- Geotech/Pavements
- Letting Process/Construction
- MOT/Traffic Control/Lighting
- Roadway/Drainage/Environmental
- Right of Way/Utilities/Railroads
- Structures



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Technical Proposal Evaluation Criteria

Criteria	Points
Sustainability and Green Initiatives	5
Design Management	5
Proposed Design	30
Construction Management	10
Construction	15
Quality Management	10
Schedule	10
Community Relations	10
On the Job Training	5
TOTAL	100
I-90 Viaduct Bridge Aesthetics – Bonus Points	5
GRAND TOTAL	105

74