

The National Academies of Sciences, Engineering, and Medicine

Training on Post-Award Contract Administration for Highway Projects Delivered using D-B and CM-GC

Based on NCHRP Research Report 939 Volumes 1, 2, and 3

Session 1 of 8: August 16, 2022

Agenda

- 10:00-10:20 am Welcome and Background
- 10:20-10:30 am Phases and Strategies
- 10:30-10:55 am Tools
- 10:55-11:00 am Q and A
- 11:00-11:45 am Peer Exchange: Panel Discussion
- 11:45-12:00 pm Wrap-up

Note: All times are in Pacific Daylight Time (PDT)

Welcome

Hello and why we're here today

- ACMs have **accelerated the delivery** of highway projects.
- D-B and CM-GC contracting requires **procedural and cultural changes** by agency staff, designers, and contractors.
- Existing DOT ACM manuals and national research efforts have focused on the **early project phases**, mostly pre-award.
- NCHRP recently funded new research to address the need for national guidance on **ACM contract administration post-award**.
- NCHRP is providing agencies with this opportunity to receive **training on D-B and CM-GC project administration** and use of the new guidebooks.

Note: This session is a little different than others, to set the context

Timeline of Significant U.S. ACM Initiatives

1987

- Statute authorized FDOT to experiment with D-B

1988

- Transportation Research Board (TRB) Task Force A2T51-Innovative Contracting Practices established

1990

- Special Experimental Project No. 14 (SEP-14)-Innovative Contracting encouraged states to test innovative contracting approaches such as D-B and CM-GC

1996

- 1996 Federal Acquisitions Reform Act (Clinger-Cohen Act) allowed D-B to be used by federal agencies

1998

- Transportation Equity Act for the Twenty First Century (TEA-21) Section 1307(c) identified areas needing development for the implementation of D-B

2002

- Federal Regulation Design-Build Contracting Final Rule 23CFR636 allowed D-B

2005

- Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) Section 1503 broadened the use of D-B

2011-12

- Every Day Counts (EDC) 1 Innovations included D-B and CM-GC

2012

- Moving Ahead for Progress in the 21st Century Act (MAP-21) Sections 1303 & 1304 promoted innovative technologies and practices including D-B and CM-GC

2013-14

- Every Day Counts (EDC) 2 Innovations included D-B and CM-GC

2017

- Federal Regulation CM-GC Contracting Final Rule 23CFR630 and 635 allowed CM-GC

2015-20

- NCHRP 08-104 and NCHRP Guidebooks 939 published

2022

- This agency training!

[Welcome](#)

[Background](#)

[Phases](#)

[Strategies](#)

[Tools](#)

[Peer Exchange](#)

Overall Learning Objectives

1. Navigate and interpret the information in the D-B and CM-GC Guidebooks that is relevant to your project.
2. Select and implement appropriate tools for various types of D-B and CM-GC projects for all phases of contract administration.

Today's Learning Objectives

- **Background** - Describe the D-B and CM-GC methods and contract administration guides
- **Phases** - Explain the ACM contract administration phases, with a focus on the alignment phase
- **Strategies** - Explain the overarching ACM contract administration strategies, with a focus on alignment
- **Tools** - Provide examples of contract administration tools focused on the alignment phase
- **Peer exchange** - Discuss alignment practices and tools in DOTs

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and 100+ of
our closest
friends

Welcome

Background

Phases

Strategies

Tools

Peer Exchange

Acknowledgements

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Central Federal Lands Highway Division

Colorado Department of Transportation

Connecticut Department of Transportation

E-470 Public Highway Authority

Federal Highway Administration, Central Federal Lands Highway Division

Florida Department of Transportation

Georgia Department of Transportation

Hawaii Department of Transportation

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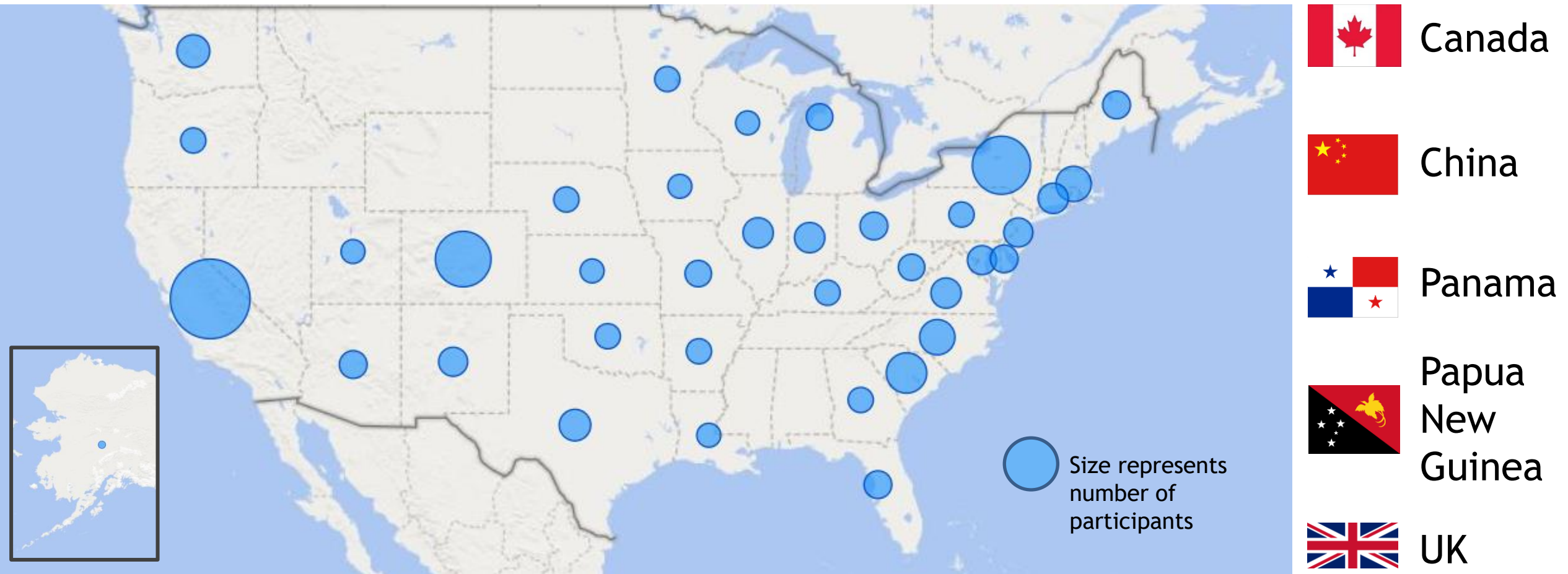
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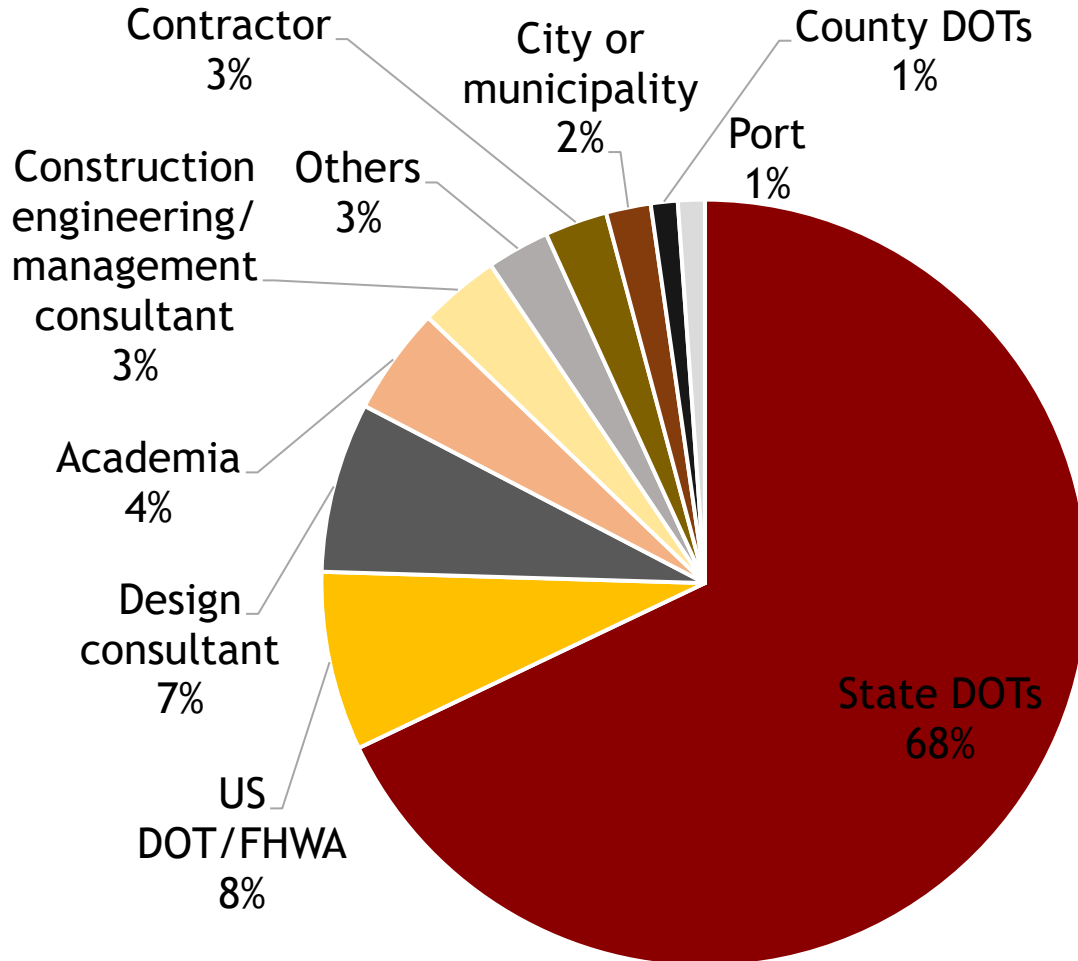
Washington State Department of Transportation

37 U.S. States Plus 5 Different Countries

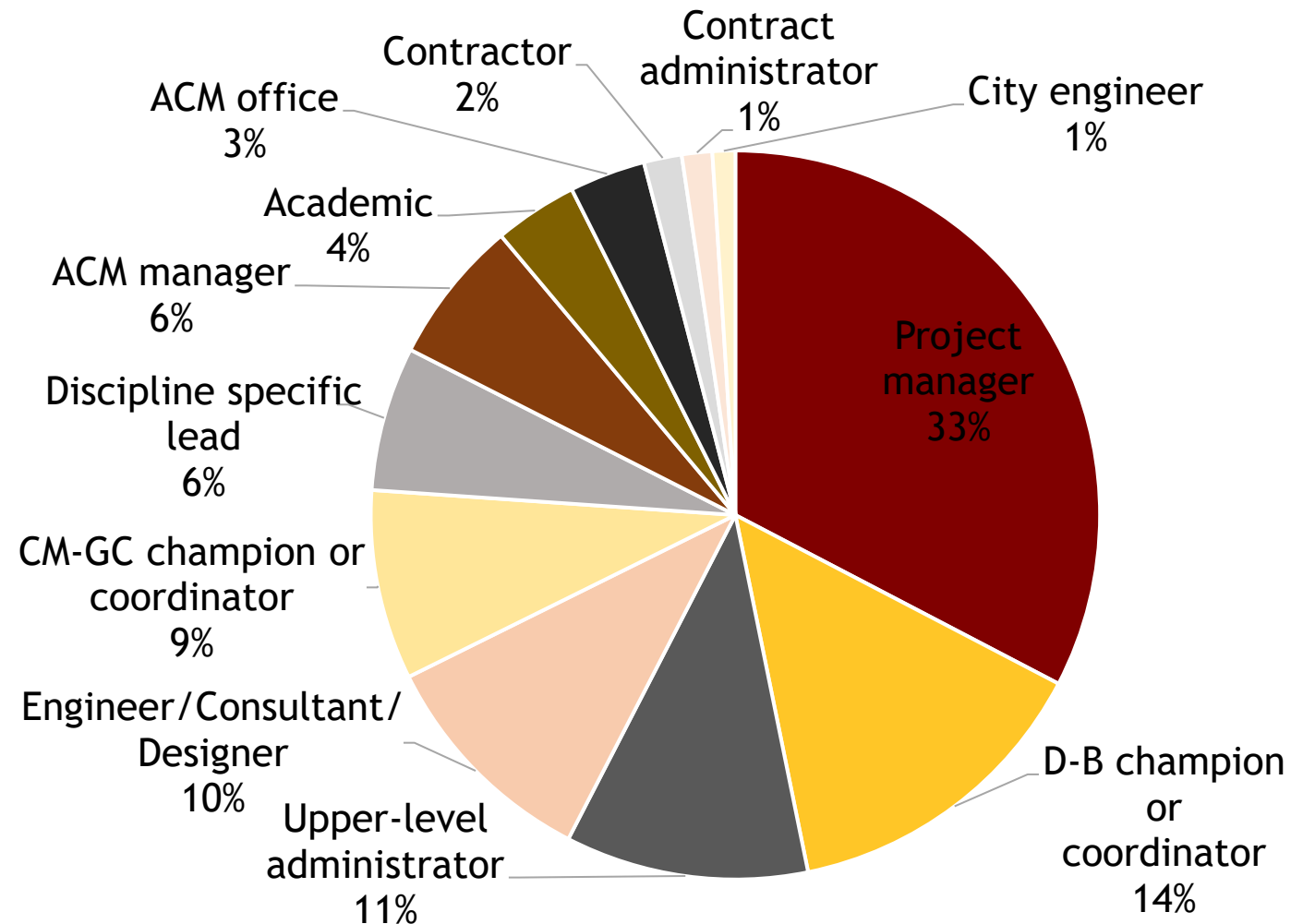


270 Participants

Employer type



Employment role



Welcome

Background

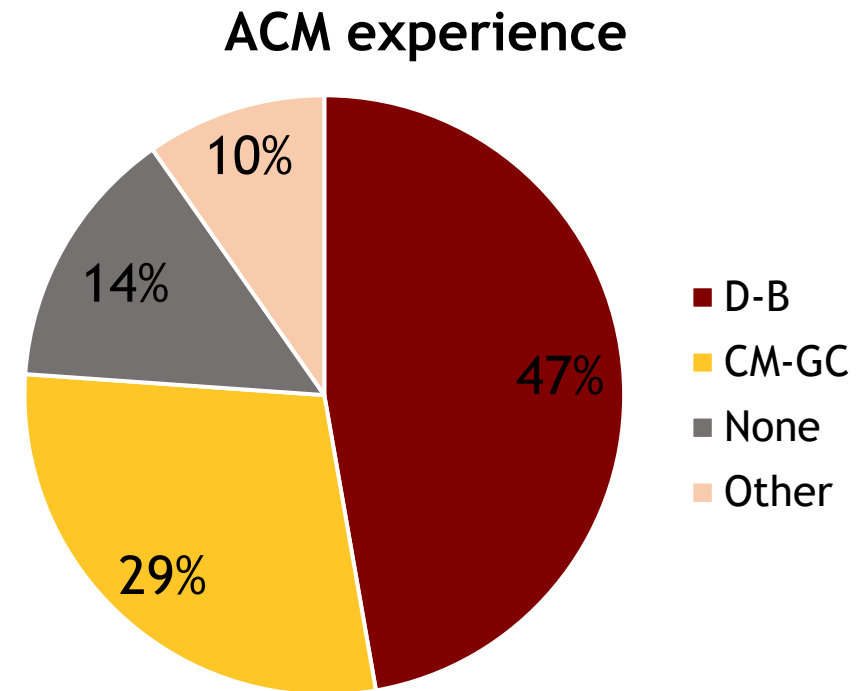
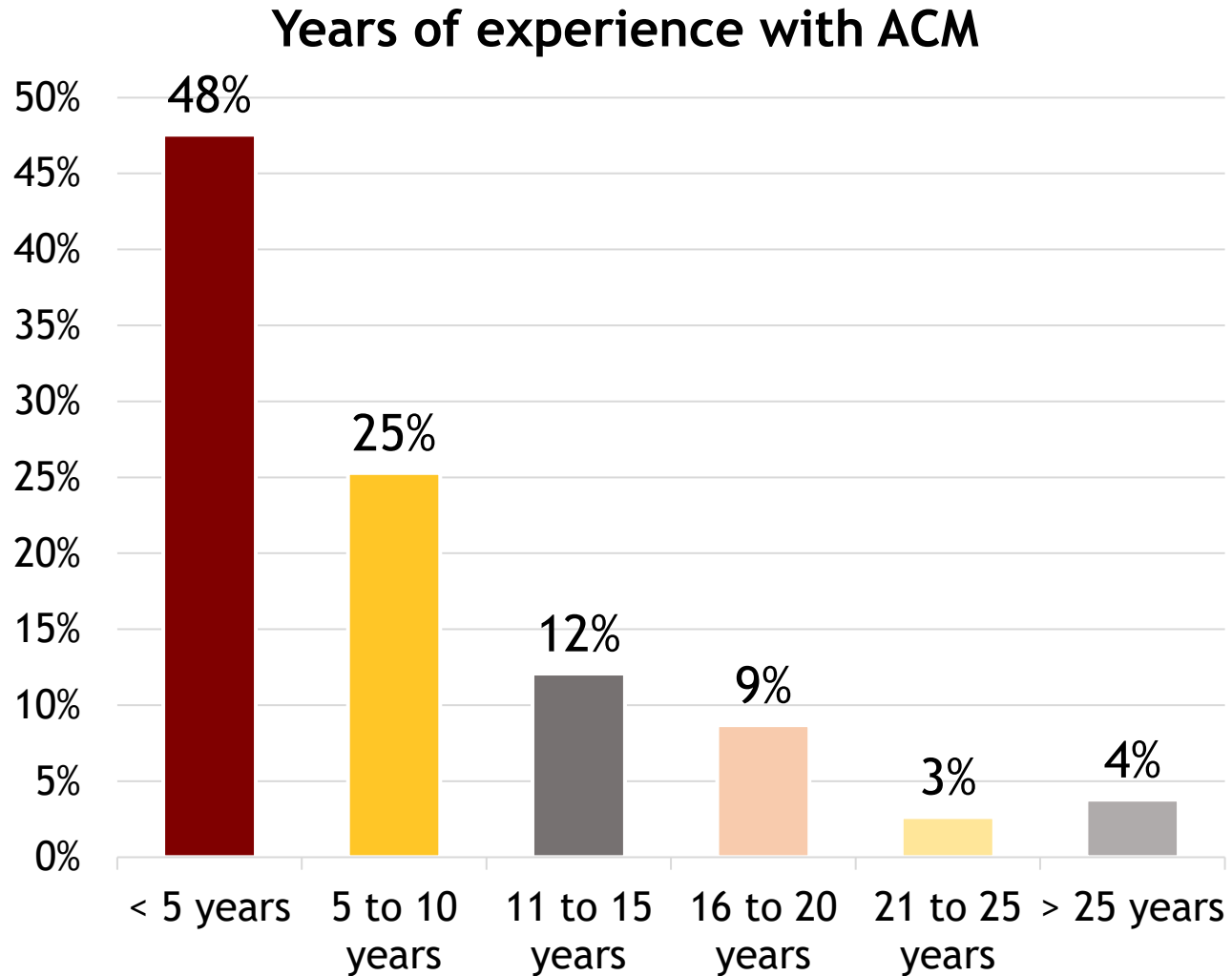
Phases

Strategies

Tools

Peer Exchange

ACM Experience of Participants



What You Will Need for this Workshop

- Zoom (preferably the latest version)
- Please make sure your name is correct on Zoom (so that you can receive CEUs)
- If more than one person is attending through your Zoom account
 - Please share all of your names in a direct chat with *Hala*
 - When answering polls, consider the input of everyone

What You Will Need for this Workshop

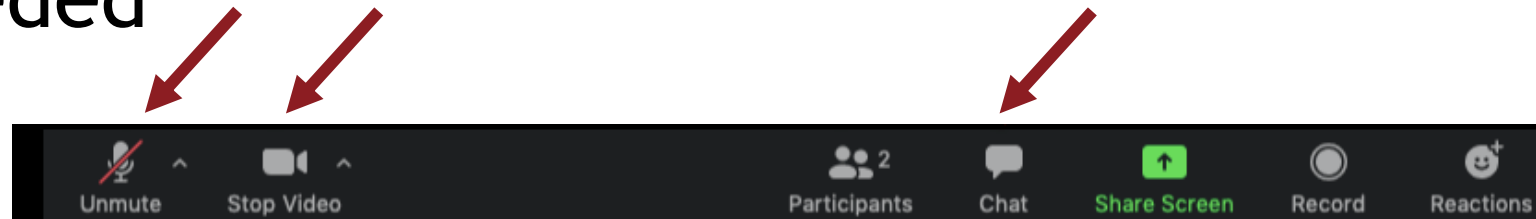
- Zoom (preferably the latest version)
- Guidebooks for Post-Award Contract Administration for Highway Projects Delivered Using Alternative Contracting Methods,
 - [*Volume 1: D-B Delivery*](#)
 - [*Volume 2: CM-GC Delivery*](#)
- An eye to apply what you learn to D-B and CM-GC projects in your DOT
- Your enthusiasm for peer-exchange

Rules of Engagement

- Adult education is more **informal**; challenge yourself
- Ask questions; share your experience; don't just attend; **participate!**
- An opportunity to take your organization to the next level
- Relax, stand up and stretch, be **comfortable**
- **Learn from each other** as much as from presenters
- Evaluation after the presentation (+/delta)
- This is YOUR class

Rules of Engagement

- No formal break; please take one if/as needed
- Kindly keep your video off and stay on mute
- Use the chat feature as needed
- Actively engage with your peers during the second half of the session
- Ask for help if needed



Today's Learning Objectives

- **Background** - Describe the D-B and CM-GC methods and contract administration guides
- **Phases** - Explain the ACM contract administration phases, with a focus on the alignment phase
- **Strategies** - Explain the overarching ACM contract administration strategies, with a focus on alignment
- **Tools** - Provide examples of contract administration tools focused on the alignment phase
- **Peer exchange** - Discuss alignment practices and tools in DOTs

Background

NCHRP RESEARCH REPORT 939

Guidebooks for Post-Award
Contract Administration
for Highway Projects
Delivered Using Alternative
Contracting Methods

Volume 1: Design–Build Delivery

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Subscriber Categories
Administration and Management • Construction • Design

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Key Acronyms and Definitions

- **Alternative Contracting Method (ACM)**

The traditional contracting method is Design-Bid-Build (D-B-B). ACMs in this training include Design-Build (D-B), Construction Manager/General Contractor (CM-GC).

Highlights

- Not D-B-B
- Possibility for qualifications or best-value procurement
- Early contractor engagement

Reference: National Academies of Sciences, Engineering, and Medicine 2020. Guidebooks for Post-Award Contract Administration for Highway Projects Delivered Using Alternative Contracting Methods, Volume 1: Design Build Delivery. Washington, DC: The National Academies Press.
<https://doi.org/10.17226/25686>.

Key Acronyms and Definitions

- **Design-Build (D-B)**

A project delivery system in which both the design (some portion thereof) and the construction of the project are simultaneously awarded to a single entity.

Highlights

- D-B is the most common ACM
- The first D-B project at the state level was in 1987

Reference: National Academies of Sciences, Engineering, and Medicine 2020. Guidebooks for Post-Award Contract Administration for Highway Projects Delivered Using Alternative Contracting Methods, Volume 1: Design Build Delivery. Washington, DC: The National Academies Press.
<https://doi.org/10.17226/25686>.

Key Acronyms and Definitions

- **Construction Manager-General Contractor (CM-GC)**
A contract between an owner and a construction manager who will be at risk for the final cost and time of construction. In this agreement, the owner authorizes the construction manager to provide input during project design.

Highlights

- CM-GC is the newest ACM to be broadly used for highways
- MAP-21 fully authorizes the use of CM-GC

Reference: National Academies of Sciences, Engineering, and Medicine 2020. Guidebooks for Post-Award Contract Administration for Highway Projects Delivered Using Alternative Contracting Methods, Volume 1: Design Build Delivery. Washington, DC: The National Academies Press.
<https://doi.org/10.17226/25686>.

Key Acronyms and Definitions

Design-Build (D-B)

- ACM
- Single contract for design and construction

Construction Manager-General Contractor (CM-GC)

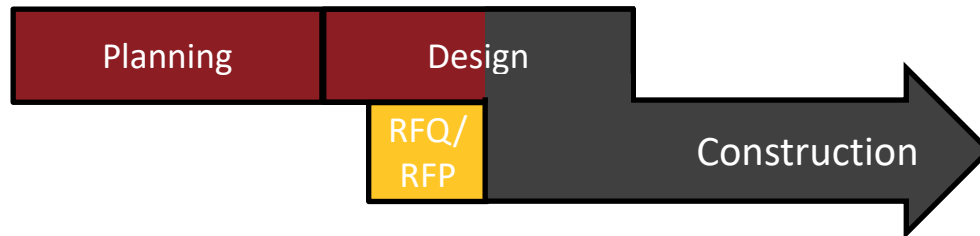
- ACM
- Separate contracts for design and construction

Commonly Used Delivery Methods

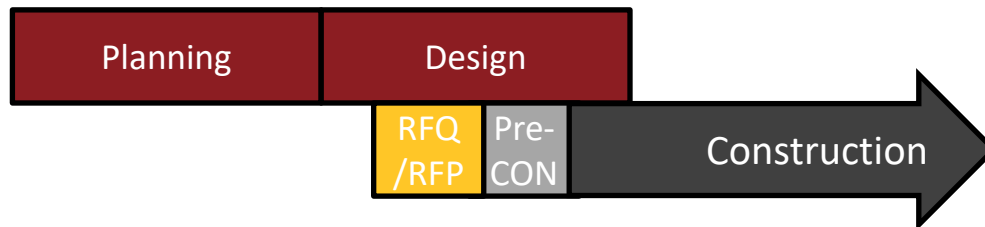
Traditional Method



D-B



CM-GC



States with D-B and CM-GC Legislation

	AL	AK	AZ	AR	CA	CO	CT	DC	DE	FL	GA	HI	ID	IL
D-B	•	•	•	•	•	•	•	•	•	•	•	•	•	•
CM/GC		•	•		•	•	•			•			•	
	IN	IA	KS	KY	LA	ME	MD	MA	MI	MN	MS	MO	MT	NE
D-B	•	•	•	•	•	•	•	•	•	•	•	•	•	•
CM/GC					•				•	•		•		•
	NV	NH	NJ	NM	NY	NC	ND	OH	OK	OR	PA	RI	SC	SD
D-B	•	•	•	•	•	•	•	•	•	•	•	•	•	•
CM/GC	•			•						•		•		
	TN	TX	UT	VT	VA	WA	WV	WI	WY					
D-B	•	•	•	•	•	•	•	•	•					
CM/GC	•		•			•								

Optional assignment: Look up and read the legislation in your state.

States with D-B and CM-GC Legislation

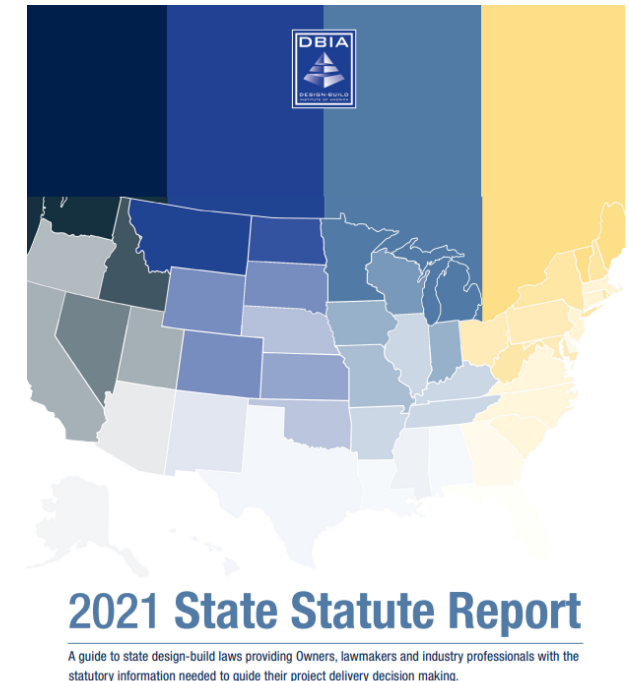
Optional: Look up & read the legislation in your state for D-B and CM-GC. Note key features.

A list of D-B and CM-GC legislation can be found in Appendix A of [Guidebook Volume 3: Research Overview](#).

Table A.1. Alternative Contracting Methods state legislation [as of December 2016]

State	Design-Build Legislation	CM-GC Legislation
AL	SB 92; Al. Code § 23-1-40 and § 23-2-145	
AK	§ 36.30.200; 2 AAC 12.943; 2 AAC 12.933	AS 36.30.308
AZ	A.R.S. § 28-7363 to 28-7365; § 28-7703; § 34-602; § 41-2582; § 28-7363 -65	ARS § 28-7366; § 34-603

Also, see the [DBIA State Statute Report](#).



Example: D-B Legislation in AZ & CT

Arizona

- Justify use of D-B in writing
- No contracts to operate facility
- Single project
- Allowed up to Dec. 31, 2025
- DOT obtains ROW and environmental approval
- Railroad must agree to a D-B

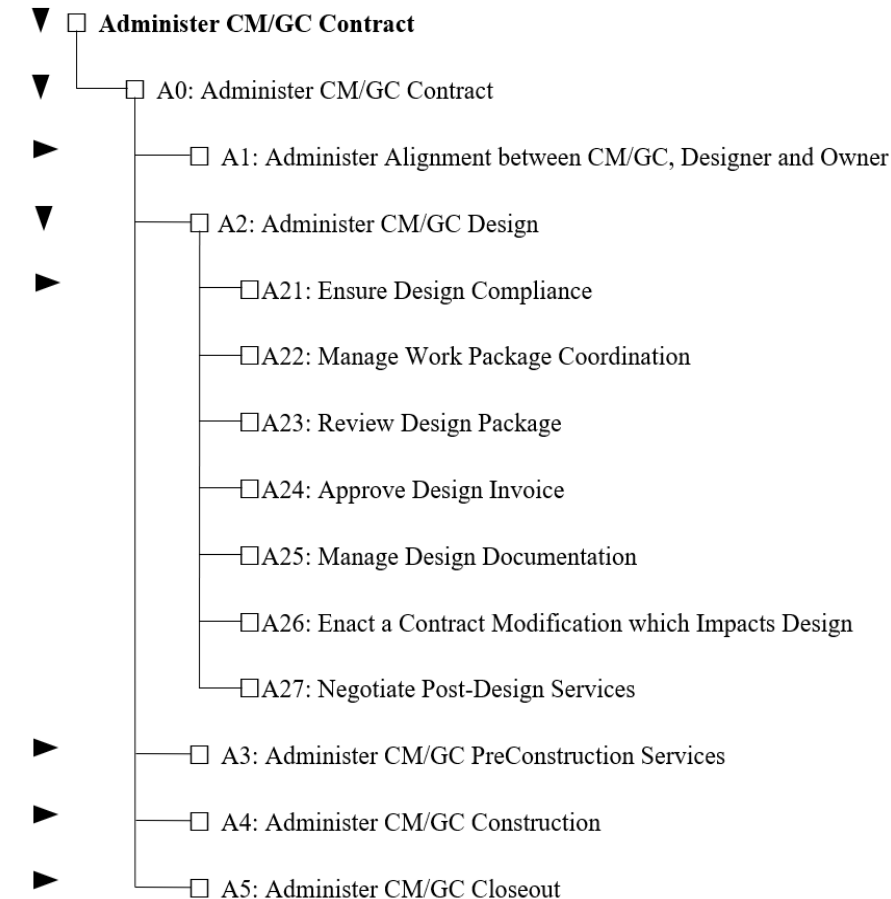
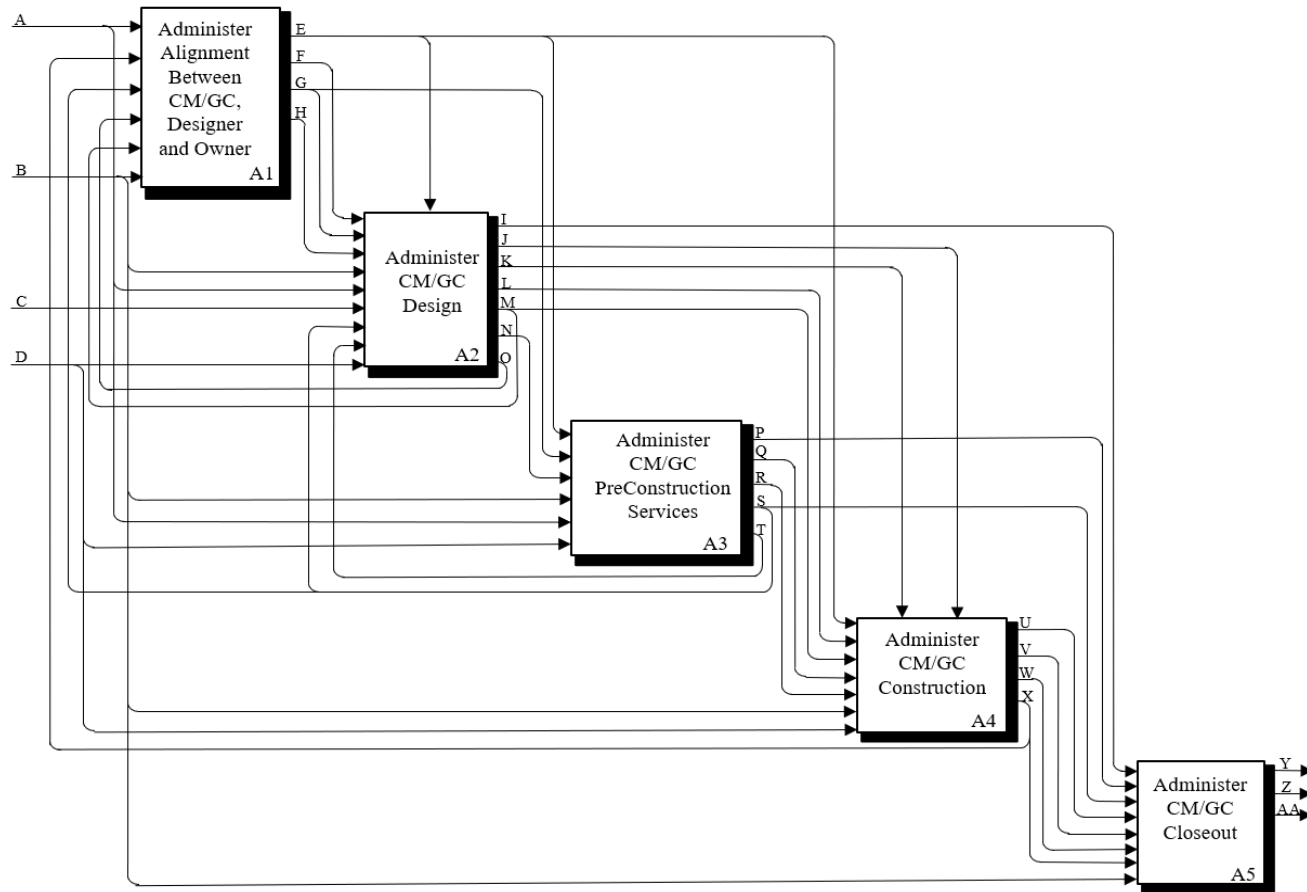
Connecticut

- May include property acquisition and permitting
- Agency inspections (not by consultants) after Jan. 2019
- May require a labor agreement

Guidebook Development

- State-of-practice reviews
 - Review of 31 transportation agencies ACM manuals
- Process model development
 - Modeled D-B and CM-GC contract administration process to aid in data collection
- Project case studies
 - 19 D-B projects were studied, ranging from \$2M to \$600M of total project cost
 - 11 CM-GC projects, ranging from \$10M to \$156M

Model and Compare DBB, CM-GC, and D-B Contract Administration Functions



Guidebook Development

- Tool effectiveness evaluation and calibration
 - 28 D-B tools were identified
 - 32 CM-GC tools were identified
 - Their effectiveness was calibrated for project size, complexity, and phase
- Guidebook development and testing
 - NCHRP panel reviews, and interviews with agencies were conducted for testing

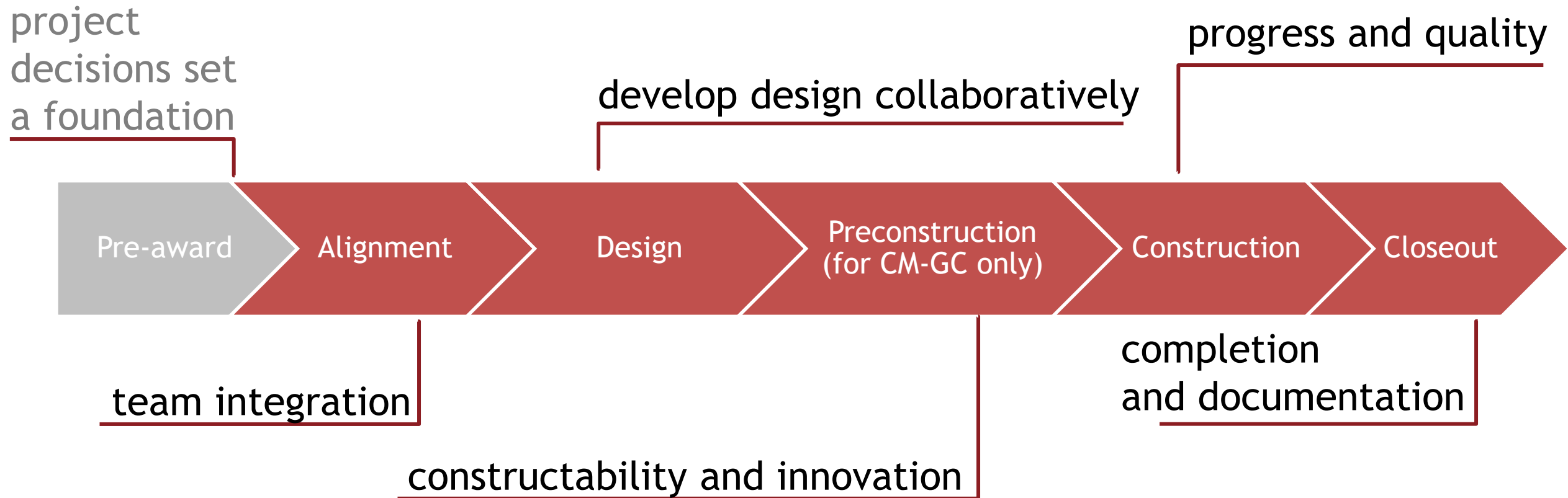
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Phases

Contract Administration Phases

The guidebooks describe the following phases of D-B and CM-GC contract administration



Pre-Award Phase Administration

- Pre-award phase helps establish a foundation for the administration of the D-B or CM-GC contract
- Key procurement decisions discussed include:
 - Project goals and Project delivery selection
 - D-B or CM-GC procurement
 - Engineering consultant and Independent cost estimator procurement (for CM-GC)
 - Alternative Technical Concepts (ATCs)
 - Betterments

Pre-Award	Alignment	Design	Preconstruction	Construction	Closeout
-----------	-----------	--------	-----------------	--------------	----------

Pre-Award Phase Administration

Existing Guidance:

- AASHTO Guide for Design-Build Procurement (2008)
- NCHRP Project 10-85 A Guidebook for Construction Manager-at-Risk Contracting for Highway Projects (2013)

References: [1] *AASHTO Guide for Design-Build Procurement*, Washington, D.C., 2008b. [2] Gransberg, D. D., J. Shane, J. Schirholz, S. Anderson, A. Hessami, C. Lopez del Puerto, K. Strong, D. Pittenger, and J. McMinimee. *NCHRP Project 10-85: A Guidebook for Construction Manager-at-Risk Contracting for Highway Projects*. Transportation Research Board of the National Academies, Washington, D.C., 2013.

Pre-Award	Alignment	Design	Preconstruction	Construction	Closeout
-----------	-----------	--------	-----------------	--------------	----------

Alignment Phase Administration

- Alignment phase helps establish team integration and group cohesion
- **Key activities include:**
 - Conduct kickoff meeting
 - Administer team alignment meetings
 - Align project plans

Note: the first two sessions focus on Alignment; future sessions will cover the remaining phases.

Pre-Award	Alignment	Design	Preconstruction	Construction	Closeout
-----------	-----------	--------	-----------------	--------------	----------

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Strategies

Definitions



A strategy is a plan of action for accomplishing specific goals. In these guidebooks, strategies address goals relating to ACM contract administration, such as team alignment, construction quality, or construction efficiency.



A tool is used to perform an operation. In these guidebooks, a tool is a tactic or process—such as checklists, spreadsheets, guidelines, and structured meetings—relating to ACM contract administration.

Overarching Contract Administration Strategies for D-B



Alignment Strategy



Scope Strategy



Design Quality Strategy



Construction Quality Strategy



Construction Efficiency Strategy

Overarching Contract Administration Strategies for CM-GC



Alignment Strategy



Scope Strategy



Preconstruction Services Quality Strategy



Construction Quality Strategy



Construction Efficiency Strategy

Alignment Strategy

- Definition
 - Establishes clear project goals to create productive relationships within the agency, and between the agency and D-B or CM-GC team members
- Example tools within this strategy:
 - **Roles and Responsibilities** -- *A table or list describing roles and responsibilities of project participants and their necessary actions*
 - **Co-location of key personnel** -- *Requires key project team members to be located at the same facility during the project. This increases efficiency and communication.*



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Tools

28 D-B Tools

	Contract administration phase			
	Alignment	Design	Construction	Closeout
Tools for D-B contract administration				
1 Kickoff meeting	✓			
2 Roles and responsibilities	✓			
3 Confidential One-on-one meeting	✓			
4 Glossary of terms	✓			
5 Co-Location of key personnel	✓	✓		
6 Regulatory agency partnering	✓	✓		
7 External stakeholder coordination plan	✓	✓		
8 D-B specific partnering	✓	✓	✓	✓
9 Continuity of team members	✓	✓	✓	✓
10 FHWA involvement overview	✓	✓	✓	✓
11 Permit commitment database	✓	✓	✓	✓
12 Plan standards		✓		
13 Deviations from agency standards		✓		
14 Discipline task force		✓		

	Contract administration phase			
	Alignment	Design	Construction	Closeout
Tools for D-B contract administration				
15 Independent party design review		✓		
16 Cost savings matrix		✓		
17 In-progress design workshops		✓		
18 Over-the-shoulder reviews		✓		
19 Scope validation period		✓	✓	
20 Public announcements		✓	✓	✓
21 Delegation of authority		✓	✓	✓
22 Contractor controlled QC testing			✓	
23 Contractor involvement in establishing QC Standards			✓	
24 Incentive/disincentive program for superior quality			✓	
25 Real-time electronic QM information			✓	
26 Dual construction engineering inspector roles			✓	
27 Witness and hold points			✓	
28 Payment checklist			✓	✓

32 CM-GC Tools

	Contract administration phases				
	Alignment	Design	Preconstruction	Construction	Closeout
Tools for CM/GC contract administration					
1 Kickoff meeting	✓				
2 Roles and responsibilities	✓				
3 Glossary of terms	✓				
4 External stakeholder coordination plan	✓	✓			
5 Regulatory agency partnering	✓	✓	✓		
6 Co-location of key personnel	✓	✓	✓		
7 CM/GC management fee table	✓		✓	✓	✓
8 CM/GC specific partnering	✓	✓	✓	✓	✓
9 Continuity of team members	✓	✓	✓	✓	✓
10 FHWA involvement overview	✓	✓	✓	✓	✓
11 Permit commitment database	✓	✓	✓	✓	✓
12 Discipline task force		✓			
13 Independent party design review		✓			
14 Plan standards		✓	✓		
15 In-progress design workshops		✓	✓		
16 Deviations from agency standards		✓	✓		

	Contract administration phases				
	Alignment	Design	Preconstruction	Construction	Closeout
Tools for CM/GC contract administration					
17 Over-the-shoulder reviews		✓	✓		
18 Open-book estimating		✓	✓	✓	
19 Public announcements		✓	✓	✓	✓
20 Delegation of authority		✓	✓	✓	✓
21 Cost comparison spreadsheet			✓		
22 Cost modeling approach			✓		
23 CM/GC bid validation			✓		
24 Independent Cost Estimator (ICE)			✓		
25 Cost savings matrix			✓		
26 Opinion of probable construction cost (OPCC) process			✓		
27 Risk pools			✓	✓	
28 Contractor-controlled QC testing				✓	
29 Contractor involvement in establishing QC standards				✓	
30 Real-time electronic QM information				✓	
31 Dual CEI roles				✓	
34 Witness and hold points				✓	
32 Payment checklist				✓	✓

Context informs your decision.

- Applicable phases
- Project complexity
- Project size

	Contract administration phase				Project complexity			Project size		
	Alignment	Design	Construction	Closeout	Non-complex	Moderately complex	Complex	≤ \$10 M	\$10 M - \$50 M	> \$50M
Tools for D-B contract administration										
Phase 1: Administer Alignment between Design-Builder and Agency										
1 Kickoff meeting	✓				●	●	●	●	●	●
2 Roles and responsibilities	✓				◐	●	●	●	●	●
3 Confidential one-on-one meeting	✓				◐	●	●	◐	●	●
4 Glossary of terms	✓				●	●	●	●	●	●
5 Co-location of key personnel	✓	✓			○	◐	●	○	◐	●
6 Regulatory agency partnering	✓	✓			○	●	●	◐	●	●
7 External stakeholder coordination plan	✓	✓			◐	●	●	◐	●	●
8 D-B specific partnering	✓	✓	✓	✓	◐	●	●	◐	●	●
9 Continuity of team members	✓	✓	✓	✓	◐	●	●	◐	●	●
10 FHWA involvement overview	✓	✓	✓	✓	●	●	●	●	●	●
11 Permit commitment database	✓	✓	✓	✓	◐	●	●	●	●	●
19 Scope validation period	✓	✓			●	●	●	●	●	●

● = Recommended; ◐ = Consider Case-by-Case; ○ = Not Recommended

Participant Poll

Instructions: Select the tools you have used for contract administration with D-B or CM-GC projects.

Part 1:

- ☐ Kickoff meeting
- ☐ Roles and responsibilities
- ☐ Confidential One-on-one meeting
- ☐ Glossary of terms
- ☐ Co-Location of key personnel
- ☐ Regulatory agency partnering
- ☐ External stakeholder coordination plan
- ☐ D-B or CM-GC specific partnering
- ☐ Continuity of team members
- ☐ *None of the above*

Part 2:

- ☐ FHWA involvement overview
- ☐ Permit commitment database
- ☐ Plan standards
- ☐ Deviations from agency standards
- ☐ Discipline task force
- ☐ Independent party design review
- ☐ Cost savings matrix
- ☐ In-progress design workshops
- ☐ Over-the-shoulder reviews
- ☐ *None of the above*

Part 3:

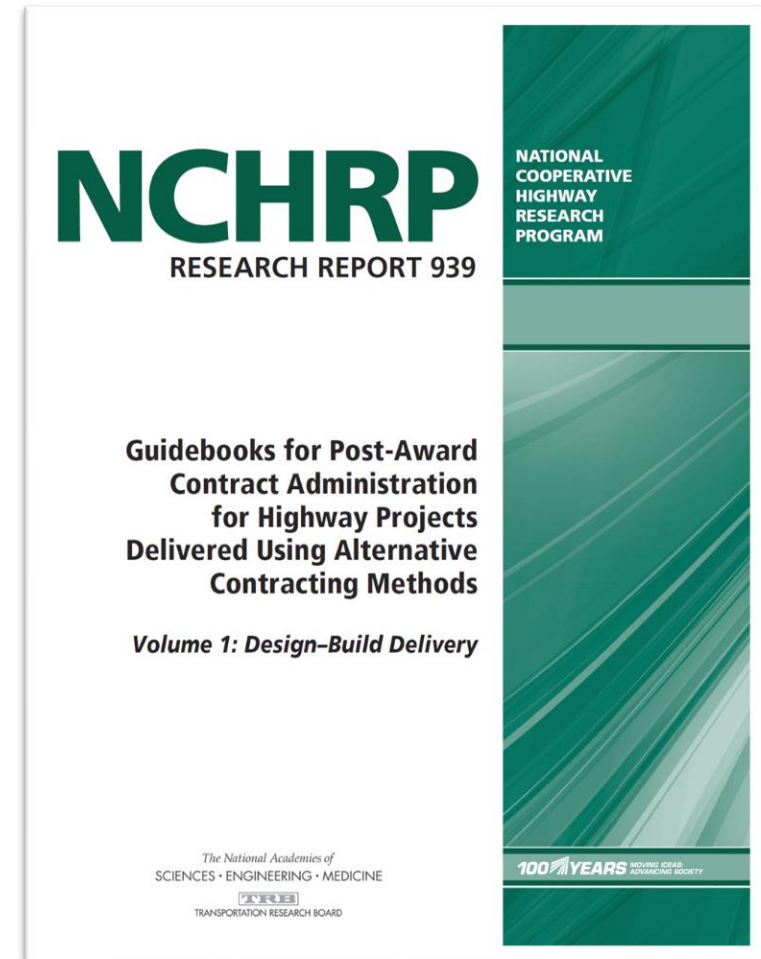
- ☐ Scope validation period
- ☐ Public announcements
- ☐ Delegation of authority
- ☐ Contractor controlled QC testing
- ☐ Contractor involvement in establishing QC Standards
- ☐ Incentive/disincentive program for superior quality
- ☐ Real-time electronic QM information
- ☐ Dual construction engineering inspector roles
- ☐ Witness and hold points
- ☐ *None of the above*

Part 4:

- ☐ Payment checklist
- ☐ CM-GC management fee table
- ☐ Open-book estimating spreadsheet
- ☐ Cost comparison spreadsheet
- ☐ Cost modeling approach
- ☐ CM-GC bid validation
- ☐ Independent Cost Estimator (ICE)
- ☐ Opinion of probable construction cost (OPCC) process
- ☐ Risk pools
- ☐ *None of the above*

Formatting of Tool Descriptions

- Each tool explains:
 - What is it?
 - Why use it?
 - When to use it?
 - How to use it?
 - Examples of use



Tool #1: Kickoff Meeting

1 Kickoff Meeting

This meeting introduces the project participants to the project and to each other. Aspects relevant to a D-B project are discussed, including roles and responsibilities, quality management processes, review processes, schedule, schedule of values, and payment processes.

➔ What Is It?

The kickoff meeting is the first team meeting. For a D-B project, it is an opportunity to introduce the agency's team and discipline specialists to the D-B team members. Other project stakeholders who may participate include FHWA (if it is a federally funded project) and representatives from other entities that are associated with the project, such as cities and counties, utility companies, and regulatory agencies. Discussion topics typically include a project overview with an emphasis on project challenges and constraints. Even when team members are experienced with D-B, it is important to review the changed roles and responsibilities associated with the D-B process to help align everyone's understanding. QM processes, review processes, time constraints, potential innovations, risks, and pricing may also be discussed.

➔ Why Use It?

The kickoff meeting provides an opportunity to create early team alignment around project goals and processes. It creates a time and a place for team members to discuss how they will execute the D-B project. The meeting is an opportunity to set up a project framework that assists the team in being successful. For example, the team can develop and communicate project processes, such as ensuring design quality. For federally funded projects, the team can discuss FHWA involvement. Regulatory constraints and permit requirements can also be reviewed.

Potential benefits include setting the stage for construction input in design to encourage constructability, innovation, and risk mitigation; flexibility during design and construction; developing a basis for a shared risk allocation; and facilitating the resolution of third-party issues (e.g., utilities and permits).



A kickoff meeting addresses the Alignment Strategy and the Scope Strategy. It helps establish clear project goals and create productive relationships within the agency and between the agency and D-B team members. The meeting allows project stakeholders to begin communication during the early stages of the project, developing effective lines of communication and working relationships early on. The meeting also helps ensure that the project scope—as described in the RFP—and responsibilities are understood and agreed upon by all parties. During the meeting, any discrepancies or areas of uncertainty can be identified and resolved.

Tool #1: Kickoff Meeting

When to Use It?

The kickoff meeting should take place a few weeks after the notice to proceed (NTP) of the D-B project. Even when project team members have worked on D-B projects, the kickoff meeting is valuable for generating a common understanding of *this* project's team so that team members are operating on a commonly agreed-upon process rather than assumptions. Kickoff meetings are recommended for projects of all sizes and complexities (Table A.2).

Table A.2. Recommended uses for kickoff meeting.

	Contract Administration Phase				Project Complexity			Project Size		
	Alignment	Design	Construction	Closeout	Noncomplex	Moderately Complex	Complex	≤ \$10 million	\$10 million–\$50 million	> \$50 million
1 Kickoff Meeting	✓				●	●	●	●	●	●

Note: ● = Recommended; ◐ = Consider case by case; ○ = Not recommended.

How to Use It?

The agency and D-B project manager plan the 1-day workshop together. Everyone involved in the project from the design, construction, and agency sides should be invited. Documents should be prepared in advance to present the scope of work, potential project issues, proposed schedule, proposed schedule of values, and documents for any other relevant tasks. A meeting summary should be prepared and distributed afterwards. A partnering meeting can be paired with the kickoff meeting or held separately.

Synthesis of Examples

The kickoff meeting brings together project team members from the agency, the D-B firm, consultants, and outside stakeholders, such as FHWA, the Army Corps of Engineers, U.S. Fish and Wildlife, local jurisdictions, and utility representatives. Agency personnel include the D-B program liaison, the project manager, resident engineer, field and office personnel, discipline reviewers, inspectors, and other project team members. Team members from the agency, consultants, and the D-B firm are expected to remain with the project through all project phases.

The facilitator of the kickoff meeting varies. It could be the agency's D-B program manager or project manager, or it could be co-led with the D-B project manager. The kickoff meeting may last 4 to 8 hours or longer, depending on project complexity. Typical items on the agenda for a kickoff meeting include the following:

- Provide introductions.
- Identify key participants in the delivery process, and discuss their roles and responsibilities.
- Introduce key elements of the scope and innovations.
- Provide project background information, such as current status; goals; right-of-way acquisition; available studies and reports; and unique issues, including environmental concerns or utility conflicts.
- Discuss the overall design and construction schedules, major activities, milestones, and phasing.
- Discuss the project budget, schedule of values, and payment processing.
- Discuss communications protocol, team meetings, change management processes, and issue resolution processes.
- Discuss design reviews.
- Discuss potential D-B risks and possible mitigation strategies.
- Discuss partnering meeting objectives, if combined with the kickoff meeting.

Tool #1: Kickoff Meeting

➔ Example

Georgia Department of Transportation (Georgia DOT) *Design-Build Manual*

Georgia DOT used the project kickoff meeting to establish a culture of partnering and to introduce project participants to one another and to the project. An outline of the agenda for a kickoff meeting is provided in Georgia DOT's D-B manual as follows:

The innovative delivery project manager is responsible for facilitating the post-award kickoff meeting. This partnering meeting plays an important role in the success of the project. Typical participants include the [innovative delivery project manager] and representatives from the D-B team, FHWA (for project of division interest projects) and [Georgia DOT's] District Construction Office. Other participants may include key stakeholders, as necessary, from the Office of Bridge Design, Office of Right-of-Way, Office of Utilities, Traffic Operations, Utilities, the local government, and any affected utility owners. This meeting is intended to:

- Provide introductions,
- Identify key participants in the delivery process,
- Discuss key elements of the scope,
- Provide any project background information,
- Discuss the overall schedule,
- Discuss anticipated submittals,
- Discuss the Schedule of Value and payment processing,
- Discuss communications protocol(s), and
- Discuss potential Design-Build risks and possible mitigation strategies.

➔ References

Georgia Department of Transportation. *Design-Build Manual*, Revision 4.2, October 3, 2016. <http://www.dot.ga.gov/PS/DesignManuals/DesignGuides>. Accessed Nov. 25, 2017.

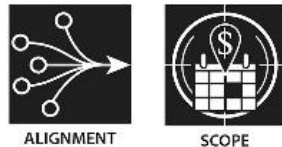
Tool #1

Kickoff Meeting

Kickoff Meeting

- What is it?
 - Introduce team members from the agency, designer and builder, relevant agencies, and other stakeholders
 - Discuss project challenges and constraints
 - Discuss how roles change from DBB
- Why use it?
 - Create team alignment around project goals and processes
 - Establish a project framework for processes

1 D-B
1 CM-GC



Kickoff Meeting

- When to use it?
 - Soon after NTP, even when team members have worked on past projects together

	Contract administration phase					Project complexity			Project size		
	Alignment	Design	Preconstruction	Construction	Closeout	Non-complex	Moderately complex	Complex	≤ \$10 M	\$10 M - \$50 M	> \$50 M
1 Kickoff meeting	✓					●	●	●	●	●	●

● = Recommended; ◐ = Consider Case-by-Case; ○ = Not Recommended

1 D-B
1 CM-GC

Kickoff Meeting

- How to use it?
 - Jointly planned by agency and D-B or CM-GC entity
 - Prepare documents to review scope of work, potential project issues, proposed schedule, etc.
 - Create a meeting summary for distribution

1 D-B
1 CM-GC

Kickoff Meeting

- Synthesis of Examples
 - Gathering team members and stakeholders
 - Facilitated by agency and/or consultant
 - Team members expected to remain through all project phases
 - Create a detailed agenda for a full day meeting

1 D-B
1 CM-GC

Kickoff Meeting

- Guidebook example
 - D-B, p.48
 - CM-GC, p.52-56

1 D-B
1 CM-GC

Kickoff Meeting

The innovative delivery project manager is responsible for facilitating the post-award kickoff meeting. This partnering meeting plays an important role in the success of the project. Typical participants include the [innovative delivery project manager] and representatives from the D-B team, FHWA (for project of division interest projects) and [Georgia DOT's] District Construction Office. Other participants may include key stakeholders, as necessary, from the Office of Bridge Design, Office of Right-of-Way, Office of Utilities, Traffic Operations, Utilities, the local government, and any affected utility owners. This meeting is intended to:

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- Discuss potential Design–Build risks and possible mitigation strategies.

1 D-B
1 CM-GC

Kickoff Meeting

Agency tip

At the beginning of the project, an emergency contact card with phone numbers of key contacts is created and supplied to the team. If there is an emergency on the job site, this gives everyone a quick phone tree to use to contact the right people in the right order.

Food for thought: Who would you put on the emergency contact card for one of your current projects?

1 D-B
1 CM-GC

Kickoff Meeting

Agency tip

At the start of the contract, the DOT office engineer pulls all “*contractor shall*” phrases from the contract, and categorizes them as Preconstruction, Construction, or Post construction. This checklist is used throughout the project to make sure all D-B tasks are completed.

Food for thought: Would you (the agency) share this list with the D-B? Why or why not?

1 D-B
1 CM-GC

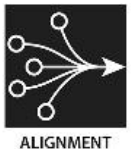
Tool #2

Roles & Responsibilities

Roles and Responsibilities

- What is it?
 - A list or table clearly defining roles and responsibilities
 - The responsible person performs the activity, the accountable person makes the decision, and the consulted person provides feedback, and the informed person receives updates
- Why use it?
 - Defines who is responsible for what
 - Ensures all tasks are accounted for

2 D-B
2 CM-GC



Roles and Responsibilities

- When to use it?
 - Include in the RFQ, RFP, preconstruction and construction contracts

	Contract administration phase					Project complexity			Project size		
	Alignment	Design	Preconstruction	Construction	Closeout	Non-complex	Moderately complex	Complex	≤ \$10 M	\$10 M - \$50 M	> \$50 M
2 Roles and responsibilities	✓					◐	●	●	●	●	●

● = Recommended; ◐ = Consider Case-by-Case; ○ = Not Recommended

2 D-B
2 CM-GC

Roles and Responsibilities

- How to use it?
 - Identify project tasks and project participants and designate responsibility for each task
 - Identify needed roles, such as
 - ACM champion
 - ACM document specialist
 - Technical reviewers

Roles and Responsibilities

- Synthesis of Examples
 - Identifying roles and responsibilities helps communicate expectations
 - Used in the RFP to clarify questions from consultants
 - Used by the agency for project control purposes

2 D-B
2 CM-GC

Roles and Responsibilities

- Guidebook example
 - D-B, p.51-54
 - CM-GC, p.59-61

2 D-B
2 CM-GC

Responsibility Matrix-Example

Item	Element / Task / Component / Subsystem Description	Design-Builder			WSDOT	Toll Vendor			Comment and Other Responsibility Notes
		Design	Procurement	Installation / Construction	All Phases	Design	Procurement	Installation / Construction	
1	Toll Gantry	P	P	P	S	S	N	S	Design-Builder shall design, furnish and install overhead structures. Toll Vendor will review and comment on all designs related to toll equipment

P = Primary responsibility - The identified party has the primary responsibility for completion of the item.

S = Support / Coordination - The identified party provides either support or coordination with the party responsible for primary completion of the item.

N = No Responsibility - The identified party has no action for the item.

I-405, NE 6th St. to I-5 Widening and Express Toll Lanes Project, WSDOT

Welcome

Background

Phases

Strategies

Tools

Peer Exchange

Roles and Responsibilities

Deliverable	Task	Responsible Party			
		Activity Leader	Designer	CMGC Contractor	ICE
		Project Manager			
Bid Item List	<ul style="list-style-type: none"> Generate a list of bid items 		X		
Reconciled Quantities	<ul style="list-style-type: none"> Perform Quantity Take-offs for bid items 		X	X	X
	<ul style="list-style-type: none"> Meet to Reconcile Quantities 	X	X	X	X
Estimating Assumptions Document	<ul style="list-style-type: none"> Document the basis for item pricing 		X	X	X
Opinion of Probable Construction Cost Estimate	<ul style="list-style-type: none"> Provide pricing for bid items 		X	X	X

2 D-B
2 CM-GC

Roles and Responsibilities

APPENDIX A: PRECONSTRUCTION ROLES AND RESPONSIBILITIES MATRIX

CONSTRUCTION MANAGEMENT SERVICES	REQUIRED OF CONTRACTOR	REQUIRED OF DESIGN CONSULTANT	REQUIRED OF CDOT/ OTHERS
PHASE: PRE-CONSTRUCTION			
<u>INITIAL PROJECT SCOPING MEETING (WORKSHOP)</u>			
A. CMGC AND PARTNERING INTRO SESSION			
B. PROJECT SITE VISIT AND INSPECTION			

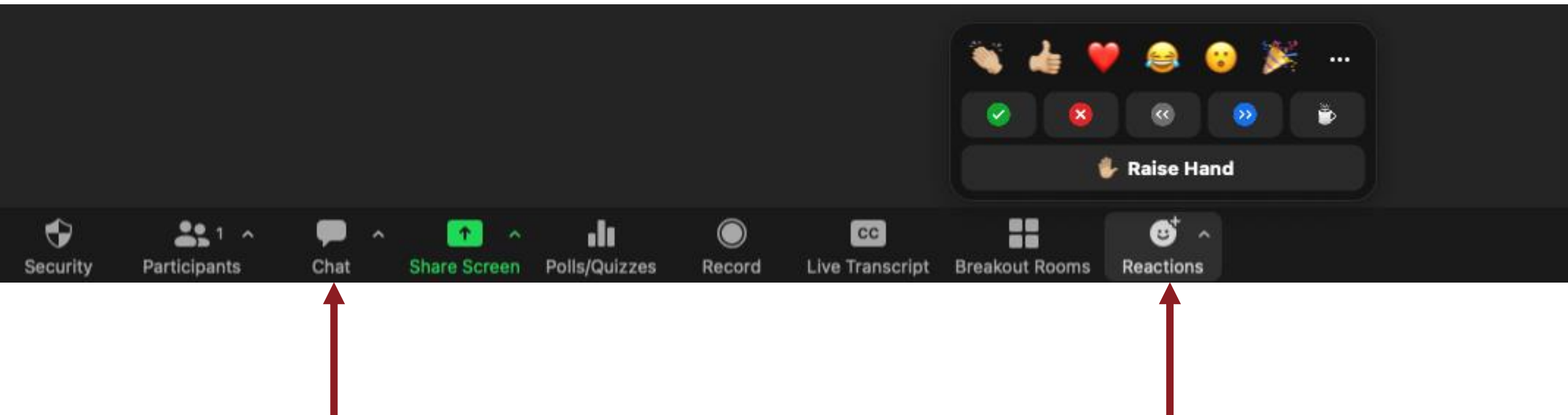
2 D-B
2 CM-GC

Today's Learning Objectives

- **Background** - Describe the D-B and CM-GC methods and contract administration guides
- **Phases** - Explain the ACM contract administration phases, with a focus on the alignment phase
- **Strategies** - Explain the overarching ACM contract administration strategies, with a focus on alignment
- **Tools** - Provide examples of contract administration tools focused on the alignment phase
- **Peer exchange** - Discuss alignment practices and tools in DOTs

Q and A

- Chat or raise your hand



Peer Exchange

Peer Exchange: Panel Discussion on Alignment Tools



Kevin Hagness,
CM/GC Program
Manager,
Minnesota DOT



David Simmons,
D-B Coordinator,
Missouri DOT



Eric Kahlig,
Administrator for
Alternative Project
Delivery, Ohio DOT

Wrap-up

Today's Learning Objectives

- **Background** - Describe the D-B and CM-GC methods and contract administration guides
- **Phases** - Explain the ACM contract administration phases, with a focus on the alignment phase
- **Strategies** - Explain the overarching ACM contract administration strategies, with a focus on alignment
- **Tools** - Provide examples of contract administration tools focused on the alignment phase
- **Peer exchange** - Discuss alignment practices and tools in DOTs

Key Takeaway Points

- **Tools and strategies are available** to help with all phases of D-B and CM-GC contract administration.
- Although **alignment** may not be a physical deliverable for a project, it **is necessary** for a well-run ACM project.
 - **The kickoff meeting** can highlight specific unique characteristics of a given D-B or CM-GC project to help promote alignment.
 - **Defining roles and responsibilities** can provide much needed clarity for all team members.

Tools Covered in Sessions 1 and 2

Session 1

- Kickoff meeting
- Roles and responsibilities

Session 2

- Confidential one-on-one meeting
- Glossary of terms
- Co-location
- Regulatory agency partnering
- CM-GC management fee table

Next: Session 2

- Thursday August 25, at 10:00 AM Pacific
- For preparation, preview the following 5 tools:
 - Confidential one-on-one meeting
 - Glossary of terms
 - Co-location
 - Regulatory agency partnering
 - CM-GC management fee table
- Optional: review the laws in your state related to D-B and CM-GC

Learning Assessment

1. T/F: The “Alignment” strategy is defined...
2. T/F: At least 28 D-B and 32 CM-GC tools...
3. T/F: Some of the same contract administration...
4. T/F: Holding a kickoff meeting and clearly...
5. Open feedback
 - a) What went well
 - b) What can be improved
 - c) A tool/experience you would like to share (optional)

OPEN DISCUSSION



The National Academies of Sciences, Engineering, and Medicine

Training on Post-Award Contract Administration for Highway Projects Delivered using D-B and CM-GC

Based on NCHRP Research Report 939 Volumes 1, 2, and 3

Session 1 of 8: August 16, 2022