Alternative Project Delivery Peer Exchange

Final Report
May 2022

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Institute for Transportation

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16. Abstract

The design-build (DB) and construction manager/general contractor (CM/GC) project delivery methods were identified as "proven, yet underutilized innovations" in the first round of the Federal Highway Administration (FHWA) Every Day Counts (EDC) initiative.

Prior to this designation, many state departments of transportation (DOTs) were employing the DB method and some were using CM/GC to successfully complete transportation projects as well as achieving identified benefits. These DOTs have developed skill sets among employees, methods for identifying projects that would most benefit from utilizing various project delivery methods, and lessons learned.

To gain better and more knowledge, a peer exchange was hosted in December 2021. In addition, materials were collected from DOTs across the nation. This report summarizes the peer exchange and the materials gathered.

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ALTERNATIVE PROJECT DELIVERY PEER EXCHANGE

Final Report
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- Iowa DOT (lead state)
- Colorado DOT (CDOT)
- Delaware DOT (DelDOT)
- Minnesota DOT (MnDOT)
- Missouri DOT (MoDOT)
- Montana DOT (MDT)
- Nebraska DOT (NDOT)
- Federal Highway Administration (FHWA)
- Innovative Contracting & Engineering
- PARSONS

EXECUTIVE SUMMARY

Design-build (DB) and construction manager/general contractor (CM/GC) project delivery methods were identified as "proven, yet underutilized innovations" in the first round of the Federal Highway Administration (FHWA) Every Day Counts (EDC) initiative. Prior to this designation, many state departments of transportation (DOTs) were employing DB and some were using CM/GC to successfully complete transportation projects as well as achieving identified benefits.

Since originally being included in the EDC initiative, these alternatives to traditional design-bid-build (DBB) project delivery have continued to see increased utilization across the country in DOTs. These DOTs have developed skill sets among employees, methods for identifying projects that would most benefit from utilizing various project delivery methods, and lessons learned.

While Iowa does not currently have approval to use methods other than DBB, interest existed in learning more so that, in the future, if approval is provided, other methods may be utilized without starting from scratch. Particular interest included the identified benefit of reduced project schedules to keep highways and bridges open and unconstrained to the traveling public.

To support Iowa's knowledge acquisition, a peer exchange was hosted in December 2021. The peer exchange included speakers from industry, the FHWA, and DOTs with experience in alternative project delivery. The peer exchange was a one-day event. During the morning, experienced users of alternative delivery presented information on their experiences. Time was allowed for panel question and answer sessions. The afternoon focused on discussion. Participants were asked to participate in discussions on three different topics in break-out discussion rooms.

In addition to the peer exchange, information was collected and provided to the Iowa DOT from various DOTs across the nation—with some that participated in the peer exchange and others that were not represented at the peer exchange. Types of information provided in this report include information on projects, legislation, procurement, risk, specifications, and other relevant documents that can be accessed.

LIST OF ACRONYMS, ABBREVIATIONS, AND INITIALISMS

ACM	alternative contracting method
ACS	American Community Survey
ADM	alternative delivery method
ADOT	Arizona DOT
ADP	alternative delivery program
AGC	associated general contractor
APD	alternative project delivery
ARDOT	Arkansas DOT
Caltrans	California DOT
CAP	Connecting Arkansas Program
CDOT	Colorado DOT
CEI	construction engineering and inspection
CFR	Code of Federal Regulations
CMAR	construction manager at risk
CMAT	Construction Management and Technology (program at Iowa State University's Institute for Transportation
CM/GC	construction manager/general contractor
DB	design-build
DBB	design-bid-build
DBIA	Design-Build Institute of America
DelDOT	Delaware DOT
DOT	department of transportation
EDC	Every Day Counts
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GMP	guaranteed maximum price
ICE	independent cost estimator
ICE	Innovative Contracting & Engineering (company or organization)
InTrans	Institute for Transportation
IQ	indefinite quantity
JOC	job order contract or contracting
LaDOTD	Louisiana Department of Transportation and Development
LTA	Louisiana Transportation Authority
MassDOT	Massachusetts DOT
MBTA	Massachusetts Bay Transportation Authority
MCCA	Military Construction Cooperative Agreement
MDT	Montana DOT
MDOT	Michigan DOT
MnDOT	Minnesota DOT
MoDOT	Missouri DOT
NCHRP	National Cooperative Highway Research Program
NDOT	Nebraska DOT
NYSDOT	New York State DOT

OPCC	opinion of probable construction cost
P3 or PPP	public-private-partnership
PDB	progressive design-build
PDPM	Project Development Procedure Manual
PennDOT	Pennsylvania DOT
PS&E	plans, specifications, and estimate
PUC	Public Utilities Commission
RFP	request for proposal
RFQ	request for qualifications
ROW	right-of-way
SHOPP	State Highway Operation and Protection Program
SOQ	statement of qualifications
STIP	Statewide Transportation Improvement Plan
TDOT	Tennessee DOT
TxDOT	Texas DOT
UDOT	Utah DOT
UTA	Utah Transit Authority
WSDOT	Washington State DOT

INTRODUCTION

Given the increased use of alternative project delivery methods by other departments of transportation (DOTs), Iowa DOT staff expressed an interest in learning more about these other project delivery methods.

Design-bid-build (DBB) is currently the only delivery method that the Iowa DOT is legislatively permitted to use for delivering projects to the traveling public. However, successes and benefits have been identified in utilizing other project delivery methods on certain projects. Iowa DOT staff members realized that, at some time, it may be pertinent to utilize an alternative delivery method. For this reason, the Iowa DOT set forth the following two objectives:

- Position the Iowa DOT to successfully utilize alternative project delivery methods should the method be approved
- Develop the process and specifications for implementation

The scope of this work was comprised of the following tasks:

- Hold peer exchange
- Document peer exchange
- Develop a report on alternative project delivery processes and specifications based on the peer exchange

In December 2021, a peer exchange was hosted in Ames, Iowa, at the Gateway Hotel (agenda in Appendix A). In addition to representatives from Iowa, representatives from six other DOTs participated.

- Colorado DOT (CDOT)
- Delaware DOT (DelDOT)
- Minnesota DOT (MnDOT)
- Missouri DOT (MoDOT)
- Montana DOT (MDT)
- Nebraska DOT (NDOT)

Each of these DOTs, with the exception of Nebraska, presented information on their experiences utilizing alternative project delivery methods.

In addition to DOT participation, the Federal Highway Administration (FHWA) presented project delivery from a national level. FHWA representatives from Iowa also participated.

Not wanting to limit the knowledge capture to only the owner's perspective, industry representatives were also asked to participate. Innovative Contracting & Engineering (ICE) presented the perspective of the independent cost estimator.

PARSONS presented information about their design experience on a project utilizing alternative delivery in Minnesota.

A total of 46 individuals participated during the course of the one-day peer exchange. A list of participants is in included in Appendix B.

In addition to the peer exchange, materials were gathered from 16 state DOTs across the nation. The materials include information regarding the experience of DOT use of alternative delivery methods. The materials included information on specific projects, legislative information, specifications, procurement guides, project delivery guides, and information specific to the various alternative project delivery methods. This information was also shared with the Iowa DOT via an electronic folder with a table of contents.

The remainder of this report includes detailed notes taken during the peer exchange and a summary of the additional materials gathered regarding alternative project delivery methods. A brief news article about the exchange is available at https://intrans.iastate.edu/news/intrans-hosts-peer-exchange-on-project-delivery-methods/.

PEER EXCHANGE NOTES

Speaker Charlie Purcell – Iowa DOT

- The Iowa DOT currently uses the traditional project delivery method, DBB.
- The goal of this peer exchange gathering is to explore other alternative methods and especially construction manager/general contractor (CM/GC).
- The Iowa DOT has a great relationship and partnership with Iowa's contractors.
- "We see the value of alternative methods, but we want our partners with us."
- What we are interested to know in this peer exchange:
  - How do you initiate your alternative delivery methods?
  - Do you face resistance? If yes, how you come over it?
  - What are the lessons learned?
  - How did you do the legislation changes?

Speaker David Unkefer – FHWA

- "Project Delivery Methods 101" presentation, and through this presentation, the main points included, but were not limited to the following
  - Alternative contracting methods (ACMs): great tool under the right organization, shorten the project delivery, and reduce the risk.
  - Most states are doing 1–5% only of ACM; most states are not using ACM, and, if they do, it is just a portion (low use).
  - Example of state using ACM is California DOT (Caltrans). Caltrans was able to save $87M/4 years while using design-build (DB) and $291M/6 years while using CM/GC.
  - ACMs save about 40–60% of schedule time.
  - Independent cost estimators (ICEs) play a vital role on CM/GC projects, for which they assure that everything is going right.
  - The total risk could be agency risk as in DBB and indefinite quantity (IQ) contracts, or private risk as in DB and public-private-partnership (P3 or PPP) contracts.
  - Unkefer also mentioned the common issues for ACMs, which include staffing (the needs of good team), risk evaluation/management, etc.
  - He also discussed the process of choosing the appropriate project delivery methods.
  - He concluded that he recommends that the CM/GC project delivery method be used based on its role on the project delivery cost, schedule, and risk mitigation.

Speaker Robert Magliola – PARSONS

- Both CM/GC and DB are used in bridge projects
- The benefits of CM/GC in complex projects include best construction practices, construction innovations, and ideas to reduce the risk.
- There are always risks on any projects, but in CM/GC, risks hold under the contractor bid. Also, mentioned that, with CM/GC, the owner still controls the CM/GC.

Speaker Dan Bender – Innovative Contracting & Engineering (ICE Perspective)

- Discussed the role of ICE in the alternative's delivery methods and ACMs.
- The ICE roles include, but are not limited to, the following: ICE does constructive review, early budget, risk management, and cost control.

Panel Q&A with Ukefer, Magliola, and Bender

- *Q1: How long is the time to obtain legal approval of CM/GC, and when it considered late?*
  - **A1**: The time depends on different factors that include CM/GC process; selecting qualifies contractor and expertise and cost negotiation with them (if the Iowa DOT allows negotiation with parties), taking into consideration the possibility that contractors may not interested in the project.
  - **A2**: 95% of CM/GC is owners' perspectives; hiring the ICE will lead to low-bid price even if it is 10%, since ICEs have contractors' perspective.
  - **A3**: In order to obtain the goal of CM/GC, you have to look for expertise with contractors, not only the one with the low bid. The owner may pay them extra money to bring them up, because, at the end, they will take the risk of the project. Qualification based on experience or cost. Other qualifications may lead to win the bid even if the contractor has a higher bid cost. It is important to mention that the specifications and requirements of different DOTs will define the role of contractors.
  - **A4**: When the DOT gets the authority to do CM/GC; then, the DOT can later ask for the request for proposal (RFP) to be specified on the project requirements (cost, time, or any special condition for the project).
- *Q2: In the presentation, it was mentioned that, in CM/GC, contractor bid is open book, and the ICE work is confidential for a little time; then, everything becomes open. Explain this please.*
  - **A (from ICE):** Every project has different assumptions and different pricing, and the process of developing the cost estimate is blind. The contractor and the designer only see the items, quantities, and unit price. Contractor and designer are open, but ICE is closed and blinded.
- *Q3: When hiring a subcontractor and in terms of risk, what do we choose, fair market price or low-bid price?*
  - **A (from ICE):** Choosing between the prices is under the agreement of both the owner and contractor, and the ICE only supports their work. The owner should not pick the low-price bid, but if the low bid is not picked, an explanation of why is needed.
- *Q4: How to go through risks and unknown risks?*
  - **A1 (from ICE):** The ICE works with both designer and contractor to mitigate the risks in the first bid in order to capture all the risks under the risk register in the final bid. Commonly, the price will be for the project, and they have costs for risks like guaranteed maximum price (GMP); after register all risks, the needed risks cost will be added to the final bid in order to mitigate the risk.
  - **A2:** In the DB contract, the owner should think how to mitigate risk or assign to the contractor. Otherwise, a bunch of money will be paid, and, if a risk is included in the risk register, the owner will pay specifically in this risk as a fair price.

- *Q5: How does the owner mitigate risk for the contractor? What is the process?*
  - **A:** It is a combination between a good understanding and the mitigation processes such as workshops and open discussions between the owner, contractor, and designer.

Speaker Jason Hastings – Delaware DOT (Newer User)

- Presented Delaware experience in CM/GC; through this presentation, the main points included, but were not limited to, the following:
  - How to obtain CM/GC legislative authority?
  - The CM/GC initiation process, which includes develop internal committee, federal approval, DelDOT approval.
  - CM/GC project experience at DelDOT, projects' costs, and lessons learned.
  - Stated that CM/GC is excellent in transportation projects.

Speaker John Pavsek – Montana DOT (Newer User)

- Through this presentation, the main points included, but were not limited to, the following:
  - Both CM/GC and DB enhance project performance
  - Selection process for the project delivery method
  - Issues faced in implementing ACMs
  - DB procurement process
  - CM/GC procurement process
  - DB is recommended especially in the process of identifying and mitigating risks
  - CM/GC is recommended for more highly complex projects
  - Lessons-learned for both DB and CM/GC

Panel Q&A Hastings and Pavsek

- *Q: In initiating ACM and since you started with small projects, will you do this again? And what you could change?*
  - **A:** It is good to start on something small, even though the benefits in small projects not the same as a larger project. What we could change is to apply what we apply now to gain the benefit of ACM. It is important to affirm that the ICE is a big key in ACMs.

Speakers Stacy Smith and Glenn Konersmann – Missouri DOT (Established User)

- Through this presentation, speakers discussed, but were not limited to, the following:
  - MoDOT does not implement CM/GC
  - Project delivery selection by Missouri
  - Use of checklist
  - Use of DB in larger and smaller projects: project's goals by using DB and what is the benefit of DB

- As a result of losing personnel due to low salaries in both Montana and Missouri, the need for using DB is increased

Speaker Matt Pacheo – Colorado DOT (Established User)

- Through this presentation, the speaker discussed, but was not limited to, the following:
  - Steps to be successful in CM/GC (keys to make your decision successful)
  - How to start/choose your project delivery method
  - Spearin Doctrine document that both contractor and consultant are well-known to, but the owner mainly doesn't know about it
  - How Spearin does change with each project delivery method
  - As an owner, how do you manage CM/GC?

Speakers Peter Davich and Kevin Hagness – Minnesota DOT (Established User)

- The speakers represent a DB manager and CM/GC manager. Through this presentation, speakers discussed, but were not limited to, the following:
  - Minnesota has used alternative delivery methods for 25 years
  - Staff organization for alternative delivery
  - How they assign people to evaluate the projects (evaluator)
  - How to initiate DB program
  - Award types of DB
  - DB lesson learned
  - How to initiate CM/GC program
  - Characteristics of the CM/GC projects are: unique, complex, and higher risk
  - GMGC legislations
  - GMGC takeaways/lesson learned

Panel Q&A (For Speakers from CDOT, MnDOT, and MoDOT)

- *Q1: What is your experience in hiring CM/GC?*
  - **A1 (Minnesota):** As an owner, you need to hire CM/GC early before the final design. The earlier the decision you make, the earlier way you can shape your project.
  - **A2 (Colorado):** Hire CM/GC earlier, by when the design is 5%.
  - **A3 (Missouri):** As an owner, focus on performance matrix more than the cost.
- *Q2: How you gain benefits from the use of one-to-one conversations in CM/GC?*
  - **A (Minnesota):** By explaining previous CM/GC issues and their reasons of occurrence. Using one-to-one conversation is considered as the starting point of the understanding of the values obtained from CM/GC.

Project Development Process (Group Discussion)

- In the CM/GC process, owners have the contractor on board, providing their construction expertise during the design. They are also providing their expertise on how the task can be performed by minimizing risk. When the contractor is involved during the design process, the estimated cost can accurately be predicted due to their feedback. It becomes easy to make the decision. Furthermore, the involvement of an ICE can help with delivering a smooth alternative project delivery (APD) method. ICE provides a benchmark for fair pricing. They develop their cost estimate in the blind using different estimates, giving the owner a true cost.
- When using the DB and the CM/GC procedures, there is the component of qualification-based selection of a contractor. The owner must clearly state the expertise required of the contractor based on the project's specific needs, which is written in the RFP. Therefore, the contractor must demonstrate their expertise in fulfilling the requirements or passing competency in accomplishing that task.
- In the CM/GC method, the contractor does not give their final price until the final plans are done, as there are 100% plans done in the CM/GC process.

Q1: What helped in developing guidelines?

- Contracts; commitments that helped to key into the guidelines helped in how they run the alternative delivery program (ADP).

Q2: How to promote an adequate use of the APD method?

- To change the current culture, there is a need to first raise awareness. Current users of the program have to be salespersons for the program. According to one of the participants, we have to be intentional about the APD. It is important to create training opportunities for others to learn, such as getting hold of local American Community Survey (ACS) and Military Construction Cooperative Agreement (MCCA) and setting up workshops with the intent to teach them on contract methods. One of the ways to grow with the industry is by making the training available to contractors and getting support from local contractors. For example, smaller contractors may have no experience in submitting qualifications documents for RFPs. They should also know what the federal highway standards say about preference for contractors. It takes more than the right answer (tell why, how, and because of the answer we are going with a particular option or method). The terms you use are important and the understanding of how you are doing it. For example, innovative contract delivery instead of alternative project delivery might construe a different meaning.
- We should learn to build a story and sell it to our people. The organization is not militaristic as designers. There are many diverse thoughts and ideas, and it is important to manage the resistance to change. Also, companies should encourage partnership and know that it is definitely not business as usual but requires change management. There would be resistance that stops embracing the new culture, but what goes on around it squeezes them out. For instance, comparing the four years design to six months delivery, they believe the new delivery method may be disadvantaged due to compromise in quality (their thoughts). Hence, the need for quality control in construction, which should be the same as DBB.

- One of the companies present affirms that during CM/GC, they conduct internal training for their team, and a lot of outreach. The outreach was constant, meetings with associated general contractors (AGCs) (3–4 times annually). Although the meetings are not strictly focused on ADP, the company tries to table it and keep the dialog open to hearing the comments and feedback. Encourage the process but do not say you are here to take over the process. Present your tool to them and hope that they touch and then build on/off that.
- Furthermore, support from leadership is essential, and every generation should be curious about changes. For example, the third-generation guys do not see the disadvantages in DBB. The participants who contributed to agreed that they have not experienced any negativity in embracing the program, and there was good support from the leaders. The organization cannot have a large group of officials dedicated to the ADP, but they had to get consultants.

Q3: What have you learned from APD that could be applied to DBB?

- The time it takes to complete the project is shorter in APD. Participants emphasized the need to be open-minded and use good decision-making. This would help to retain and encourage valuable team members. DBB needs to be open and allow value in building things. Organizations should be sure to incorporate value in every step of the project by reviewing permits or plans.
- DBB should be more of a construction-centric focus than a design-centric focus. Organizations should learn to bring in ICEs or seek help whenever they need to, especially when they are trying to explore a new field. More importantly, they should make sure they understand the job and know how to do the job and understand how to estimate risk. This would help to solve the major issue of underestimating the cost. Finally, DBB should be intentional about maintaining the relationship between design and construction staff as well as using peer exchanges for networking opportunities.

Challenges – Contractor/Consultant Resource Limitations, Env and ROW, Certs, Utility Relocation, etc. (Group Discussion)

Q: What are the challenges in the process?

- One participant mentioned challenges with environmental staff going out to evaluate the environmental process. Clear the right-of-way (ROW) whether you think you'll use it or not. Also, another participant stated that the company tries to stay away from buying ROW with DBB. It was advised that companies should try to buy ROW ahead of time or come up with scoring to do this. The scoring process involves the part of whoever can get the least ROW. The team score is carried from qualifications to final. Another mentioned that they look for one person on the team with DB experience. Once they get qualified, it shows that they can get the job done. In addition, they should understand the confidentiality of everything the contractor tells them. DOTs must understand that they should not let it slip at all. More than two participants acknowledged that there should be confidentiality keeping the scores confidential such that they cannot be said out of the department, so that it does not have an adverse impact on the bidding process. For example, if confidentiality is breached, the

company with the highest score may increase its bid or cost. The scoring, according to him, takes 14 days on the internal review.

- Other participant's view (MnDOT):

DB	CM/GC
Quality control is different: some contractors can do a quality design, and some cannot. There should be no quality oversight.	Do not ask questions that you would be efficient in what you are talking about.
Guaranteeing things: some folks like that and some folks hate that.	Scoring: having a system for effective scoring (e.g., evaluating the values/say something you can make a commitment about).
Do not use ADP in the wrong way.	
Challenge of choosing teams (based on qualifications or same old).	

- Resource limitation for owners starting DBB for the first time. The issue with Iowa is that APD has been around for a long time. Therefore, the Iowa DOT should hire consultants for their first DB project. They should ensure that the person hired knows how it is done and how procurement is used. They advised that the DOT should not start small and at the same time should not make their first project too big because the first project needs to be a success and hiring an external consultant does not eradicate the need for a program manager.
- In conclusion, APD should be treated as a screwdriver rather than a hammer. Both are relevant and good, but neither is appropriate for every project. They reiterated the essentiality of training contractors, finding a balance, and figuring out what the organization's values are.

Risk Mitigation (Group Discussion)

Addressing/Accounting for Risk in APD

- In using these alternative delivery methods, the owner, as much as possible, should try to take off or reduce the risk on the contractor as much as possible. If that is not done, the contractor uses the medium to throw much money into risk uncertainty. The idea is that the owner and contractor need to work together as a team to identify the project risk and either decide whether it is best to price it in the estimate or design it out so that it can be of no more risk.
- When we assign risk to a contractor, the owner writes a technical requirement stating that this is what we need the contractor to provide, not necessarily to solve or mitigate that risk, but the owner writes the contract in such a way that the risk is assigned to them. Specifically, the risk to be assigned to the contractor should be stated clearly in the technical requirement.
- The risk register is a risk management tool that acts as a repository for all risks, clearly identifying the risks and actions to manage as the project advances through design and

construction. The risk register should have an assigned monetary contingency, to be established early and updated often.

Advantages of CM/GC in Mitigating Risk in APD

- The advantage of the CM/GC process is the ability for the contractor to work with the engineer and owner to establish a risk register for construction items on the project.
- Another advantage of the CM/GC method is that, if a risk is identified and documented in the risk register during the design and planning stages and is not triggered during the construction process, the risk is eliminated. However, if the risk is identified in the DBB during the contractor's bid process and is not triggered during the construction period, the owner is still responsible for it.

Q: Is the risk in APD considered an opportunity or threat, and how do we convince people will believe in an opportunity with it?

- It could be both an opportunity and a threat. Sometimes you have to remind people that while there is a risk of a threat, there is also the possibility of an opportunity. It is now unknown and could work either way. It is critical to think about bringing as much value to you as possible at the end of the process as you go through the process of fostering innovations.
- In order to approach this new or alternative procedure, it should be done with a collaborative approach to delivering an effective project result, and this involves the team being on the same page through this new process.

Q: What happens when an unknown risk happens, and you haven't planned for it? How do you deal with that?

- Unless an unforeseen condition occurs, the situation is not critical. It is important to note that no method completely protects the owner from unforeseen circumstances with alternative delivery. For an owner to protect themselves against these unforeseen conditions, hopefully, the owner should have a reserve that is not included in the budget. When a probabilistic estimate is done, the owner should be able to come up with a GMP and the total budget, which includes unknowns and known risks. Also, the major risk that should occur should be based on the preconstruction, schedule impact, and cost impact, as all other risks should be taken care of before construction.

Q: In the workshop, how do you resolve who will take what risk when trying to assign risk to the different parties?

- Generally, the contractor takes all the risks and there is an opportunity for the owner to take some of the risks.
- When trying to allocate the risk, it is assigned to the parties that are fairly able to manage it, and this is usually clear to everyone involved, and there is often no resistance seen to that.

But during the design development, more focus is on collectively identifying and assessing the risk.

- There can be instances whereby the owner would not allocate risk to the contractor because the owner might not want to compromise with the price, even if the contractor is better at managing the risk.
- National Cooperative Highway Research Program (NCHRP) Report 658 is a guidebook on risk analysis that is useful.

Materials Provided by Peer Exchange Speakers

A link to the materials provided by the speakers for the project delivery peer exchange was given to the Iowa DOT.

NOTES ON OTHER REFERENCES

The purpose of this chapter is to include information about current project delivery methods used in many DOTs across the US and it includes notes from the following states, in alphabetical order: Arizona, Arkansas, California, Colorado, Delaware, Louisiana, Massachusetts, Michigan, Minnesota, Missouri, Montana, New York, Pennsylvania, Tennessee, Texas, and Utah.

This chapter also includes information about alternative delivery methods obtained from the Design-Build Institute of America (DBIA) and the FHWA in addition to some related scientific research papers at the end of it.

Arizona DOT (ADOT)

- **Website:** https://azdot.gov/
- **Projects:**
  - The most frequent funding sources are the FHWA, the Federal Transit Administration (FTA), the Federal Aviation Administration (FAA), the State of Arizona, and local governments (e.g., the City of Phoenix). Project types include:
    - ADOT Construction Projects
    - ADOT Architectural, Design, and Engineering Projects
    - ADOT Goods and Services Projects
    - Local public agencies and other bidding opportunities
    - https://azdot.gov/business/adot-business-coach-demand/learning-about-bidding-opportunities/adot-construction-projects
- **Delivery Methods Used:**
  - DBB (traditional method)
  - DB (alternative method)
  - CM/GC (alternative method)
  - P3 (alternative method)
- **Contract Types Used:**
  - ADOT Architectural, Design, and Engineering Projects
    - Project-specific contracts
    - On-call contracts
    - Supplemental services contracts
  - ADOT Goods and Services Projects
    - Project-specific contracts
    - On-call contracts
    - Supplemental services contracts
    - Material only contracts
- **ADOT's Folder Contents:**
  - **General:** includes form of ADOT alternative delivery contract (DB or CM/GC)
  - **Standard Specifications:** includes 2021 edition of Arizona standard and supplemental specifications for road and bridge construction
  - **DB** includes:

    - ADOT DB Lesson Learned report–process improvement review
    - ADOT Design-Build Guidelines & Legislations: includes DB procurement and administration guide; the purpose of this document is to establish and explain the department's process for procuring and administering both the design and construction of a highway facility with a single contract. The process should clearly communicate all known information to the design-builder regarding site conditions, environmental issues, regulatory concerns, community and political interests, right-of-way (ROW) constraints, utility conditions, and other design and construction issues to keep the risk transfer to the design-builder to a minimum, thereby producing the most economical project. The purpose of the process is to provide a substantial fiscal benefit or accelerated delivery schedule for transportation projects.
- **CM/GC** includes ADOT CM/GC guideline and legislations; the purpose of this document is to explain the department's process for procuring and administering both the design and construction of a highway facility through the construction manager at risk (CMAR) method of procurement. The CMAR contractor and the designer work collaboratively, while each has a direct contractual responsibility to ADOT. This method provides for concurrent execution of design and construction, which optimizes the potential for an earlier completion schedule. CMAR procurement also reduces ADOT's risk through agreement of a GMP during the design due to the CMAR contractor's participation in reviewing contract documents. Designer-contractor disputes are reduced through conducting constructability reviews as the design progresses. Project quality, cost, and construction time have the potential to be improved with this project delivery method.

Arkansas DOT (ARDOT)

- **Website:** https://www.ardot.gov/
- **Projects:**
    - The Connecting Arkansas Program (CAP) is the largest highway construction program ever undertaken by ARDOT. Thirty-six projects in 19 corridors across Arkansas are included in the CAP, which improves transportation connections to the four corners of Arkansas, increases capacity by widening highways, improves traveler safety, eases congestion, and supports Arkansas' job growth and economy
    - Other scheduled, current, and completed projects: https://connectingarkansasprogram.com/status#.YWAhE9rMLIU
- **Delivery Methods Used:**
    - DBB (traditional method)
    - DB (alternative method)
        - DB projects will be procured using a two-step procurement process consisting of a request for qualifications (RFQ) followed by a RFP. Example: 30 Crossing DB projects.
    - CM/GC (alternative method)
        - CM/GC services will be procured using a one-step procurement process consisting of a RFP

- **ARDOT's Folder Contents:**
  - General: Final ARDOT 2020 legislative council report
  - Standard Specifications: includes edition 2014 of Arkansas standard specification for highway construction
  - DB includes:
    - ARDOT DB Guideline and Procedure: The purpose of this document is to describe general department processes for efficiently and effectively procuring and administering design and construction services for a transportation facility utilizing the DB method. When implemented for the project, the DB method would be supported by an approved set of DB procedures to supplement or replace certain department DBB procedures on the project. The DB methodology is NOT intended to totally replace the DBB methodology but to offer an alternative method of project delivery to the department and is intended to be limited to special projects as determined by the department.
    - DB Legislation for ARDOT: includes rules of ARDOT procedures and regulations for the procurement of qualification-based, DB services and for administering DB contracts, DB finance services, and an agreement for concession
  - CM/GC: includes CM/GC Services Contract Agreement for ARDOT and CM/GC Legislation for ARDOT

California DOT (Caltrans)

- **Website:** https://dot.ca.gov/
- **Projects:** https://dot.ca.gov/programs/asset-management/caltrans-project-portal
- **Delivery Methods Used:**
  - DBB (traditional method)
  - DB (alternative method) https://dot.ca.gov/programs/design/design-build-program
  - CM/GC (alternative method) https://catc.ca.gov/programs/construction-manager-general-contractor
  - P3 (alternative method) https://catc.ca.gov/programs/public-private-partnerships
- **Project Development Process:**
  - State Highway Operation and Protection Program (SHOPP) project development begins with the identification of individual transportation needs. These needs are bundled together into conceptual projects between 7 and 10 years before construction. Projects move from the conceptual stage to formal project planning 5–6 years before planned construction. Projects in the conceptual phase or formal project planning are in the process of determining scope, costs, and schedule. Formal project planning is the optimal time for stakeholder engagement because the scope of the project is being developed at this time. Upon completion of formal project planning, projects are ready for programming and fiscal commitment by the California Transportation Commission.
  - The project development procedure manual (PDPM) can be found electronically on the following website: https://dot.ca.gov/programs/design/manual-project-development-procedures-manual-pdpm
- **Legislation:** https://dot.ca.gov/programs/asset-management/asset-management-regulations-guidelines

- **Caltrans's Folder Contents:**
  - General includes:
    - 2021 Caltrans Electronic Bidding Guide: the electronic bidding guide provides guidance for first-time and returning bidders to complete and submit their bids on Caltrans major highway construction projects using electronic bidding software
    - Caltrans Alternative Procurement Guide: the purpose of this guide is to provide the department with a framework of alternative methods for contracting and procurement of work for capital projects. This guide provides project staff with the tools necessary for methods for effective use of alternative project delivery, procurement, and contract management, as well as project selection for use of appropriate alternative procurement methods. This guide is intended as a reference for all department staff contributing to the development of capital projects, including project engineers, resident engineers, project managers, and contract administrators. This guide provides alternative project development practices and construction management methods that may generate expedited project delivery, enhanced cost control, and improved quality, and allow use of innovative materials, methods, and processes.
    - Standard Specifications: includes 2018 edition of standard specifications for road and bridge construction
    - DB: includes Caltrans Design-Build Policy Guidance for project authorization under the DB demonstration program, Resolution G-09-09.
    - CM/GC: includes Caltrans CM/GC Project Procedures; these procedures were approved in April 2018 by the California Division of FHWA for use by Caltrans on Federal-aid projects as required by the Code of Federal Regulations (CFR) and were revised in July 2021.
    - P3: includes P3 policy for P3 projects. The purpose of this guidance is to set forth the Commission's policy for carrying out its role in implementing P3 projects in order to assist and advise the department, regional transportation entities, and private entities that may be contemplating the development of P3 agreements.

Colorado DOT (CDOT)

- **Website:** https://www.codot.gov/
- **Projects:** https://www.codot.gov/projects and https://cdot.dbesystem.com/
- **Delivery Methods Used:** https://www.codot.gov/business/designsupport/adp-db-cmgc
  - DBB (traditional method)
  - DB (alternative method)
  - CM/GC (alternative method)
- **CDOT's Folder Contents:**
  - General includes:
    - CDOT Guidebook for Selecting Alternative Contracting Method for Roadway Projects. The guidebook provides an exhaustive and comprehensive list of the contracting strategies in use today by state transportation agencies across the US. The guidebook includes delivery methods, procurement procedures, and payment provisions that have been used extensively as well as other methods that have been used less frequently but provide exceptional results in specific cases.

        - Project Development Process Framework
        - CDOT Legislation
        - CDOT Project Delivery Method Selection Matrix
        - CDOT 2020 Transportation System Handbook: Infrastructure, Organization, Planning & Funding: provides an overview of the state's transportation infrastructure, highlights the state agencies involved in transportation issues, including the Transportation Planning Regions and Metropolitan Planning Organizations, the Statewide Transportation Advisory Committee, the Transportation Commission, CDOT, the Public Utilities Commission (PUC), and the General Assembly, provides an overview of transportation planning in Colorado, including short-and long-term planning and project prioritization, and discusses the state's transportation funding system, which is primarily supported through the Highway Users Tax Fund, federal funds, the General Fund, and local funding.
    - Standard Specifications: includes 2021 edition standard specifications for road and bridge construction and the main significant changes in 2021 specification books
    - DB includes:
        - CDOT Design-Build Contract Regulations: the purpose is to implement the provisions of Part 14 of Article 1 of Title 43, C.R.S., by establishing procedures and requirements for CDOT to procure DB contracts for transportation
        - CDOT Design-Build Manual (2016): it consists of introduction and state of the practice, initial project development, goal setting and delivery method selection, risk management, project organizational structure and design development, DB procurement process, evaluation of statements of qualifications and proposals, request for proposal, implementation, and streamlined DB.
    - CM/GC includes:
        - CDOT CM/GC Approval Process
        - CM/GC Legislations Summary
        - CM/GC Manual & Legislation: consists of CM/GC current practice, project selection, and CM/GC procurement, preconstruction phase, CAP proposals and the contracting process, and CM/GC construction phase

Delaware DOT (DelDOT)

- **Website:** https://deldot.gov/
- **Projects:**
    - DelDOT has a variety of projects that include projects under studies, planning $ design, advertising/bid/award, under construction, and completed projects. https://deldot.gov/projects/
- **Delivery Methods Used:**
    - DBB (traditional method)
    - DB (alternative method)
    - CM/GC (alternative method)
    - Other delivery methods sometimes considered include:
        - Progressive Design Build

    - CMAR
    - P3
- **DelDOT's Folder Contents:**
    - General includes:
        - DelDOT standard and regulations for subdivision streets and state highways
        - DelDOT project delivery selection process: This document provides a formal approach for selecting project delivery methods for highway projects. The primary objectives of this tool are to present a structured approach to assist DelDOT in making project delivery decision, determine if there is a dominant or optimal choice of a delivery method for a project, and provide documentation of the selection decision.
        - Standard Specifications: includes 2021 edition of Delaware standard specification for road and bridge construction

Louisiana Department of Transportation and Development (LaDOTD)

- **Website:** http://www.dotd.la.gov/Pages/default.aspx
- **Projects:**
    - LaDOTD announces 23 infrastructure projects selected for the Transportation Alternatives Program with $19.6 million federal funding for these projects. The 23 projects selected are in the New Orleans, Lafayette, Monroe, Lake Charles, Baton Rouge, and Hammond areas.
    - LaDOTD projects (completed and not completed): http://wwwapps.dotd.la.gov/administration/public_info/projects/
- **Delivery Methods Used:**
    - DBB method
    - DB method
    - CMAR method
    - PPP/P3: A P3 is a contractual relationship between the Louisiana Transportation Authority (LTA) and one or more private entities that requires the private party to plan, design, finance, construct, operate, and maintain a transportation facility for a concession
- **LaDOTD's Folder Contents:**
    - General: includes LaDOTD alternative project delivery that contains Louisiana's DB projects, DB challenges and successes, DB resources and opportunities, CM/GC, P3, and future alternative delivery in Louisiana
    - Standard Specifications: includes 2016 edition standard specifications for road and bridges manual
    - DB: includes LaDOTD Design-Build Manual; the DB procedures and practices identified in this DB manual are based on state and federal laws and regulations, as well as best practices recognized nationally in the DB industry and lessons learned locally on previous DB projects that the LaDOTD has executed. It is the intent of the LaDOTD that DB projects are developed in accordance with this DB manual.

Massachusetts DOT (MassDOT)

- **Website:** https://www.mass.gov/orgs/massachusetts-department-of-transportation
- **Projects:** https://www.mass.gov/topics/massdot-highlighted-projects-studies
- **Delivery Methods Used:**
  - DBB (traditional method)
  - DB (alternative method)
  - CM/GC (alternative method)
- **MassDOT's Folder Contents:**
  - CM/GC includes: 2012MassDOT CM/GC Manual; the purpose of CM/GC Procurement Manual is to detail the Massachusetts Bay Transportation Authority (MBTA) process for procuring and administering the Green Line Extension (GLX) Project through the utilization of the CM/GC project delivery method. Even though CM/GC is used by many states, this document communicates the key aspects of the MBTA's version of CM/GC to the construction industry, the design community, the Office of Inspector General, the Office of Attorney General, the MassDOT/MBTA Board, and the FTA.

Michigan DOT (MDOT)

- **Website:** https://www.michigan.gov/mdot/
- **Projects:** https://www.michigan.gov/mdot/0,4616,7-151-9621---,00.html
  - MDOT has a significant number of bridge projects
- **Delivery Methods Used:**
  - DB (alternative method)
  - CM/GC (alternative method)
  - P3 (alternative method)
- **MDOT's Folder Contents:**
  - General: includes the official MDOT 2021 guide, which MDOT prepared to help answer questions and more, provide an overview of MDOT operations, and offer a resource on who to call for questions impacting your transportation needs. This updated guide has been reworked based on customer feedback to include the sections that are most beneficial toward the front. Also included is MDOT's Fast Facts publication that notes quick facts about transportation-related topics.
  - DB includes:
    - Innovative Contracting Project List 2021
    - Innovative Contracting Best Practices 2021: MDOT, in conjunction with the MDOT Research Administration, selected a team led by WSP Michigan, Inc. (WSP) to investigate innovative contracting best practices used throughout the country. The primary purpose of the research was to identify areas within MDOT's current innovative contracting program that could benefit from these best practices and determine potential enhancements to policies, procedures, practices, organizational structure, and other aspects of the program. These enhancements could help MDOT optimize its innovative contracting methods and maximize the benefits associated with DB, CM/GC, P3, and other delivery methods.

        - 2015 Innovative Construction Contracting Guide (CM/GC & DB Manual): this document contains fundamental information on various innovative construction contracting methods that may be used to enhance the implementation and delivery of MDOT construction projects. Innovative construction contracting methods are typically utilized to address specific project objectives that conventional contracting methods cannot, such as minimizing motorist delay or time to project completion.
    - CM/GC includes:
        - Innovative Contracting Project List 2021
        - Innovative Contracting Best Practices 2021
        - Innovative Construction Contracting Guide 2015 (CM/GC & DB Manual)
        - MDOT RFQ CM/GC Water Bridge Project
        - MDOT RFQ CM/GC Railroad Bridge Project

Minnesota DOT (MnDOT)

- **Website:** https://www.dot.state.mn.us/
- **Projects:**
    - The MnDOT 2021 construction projects are classified based on the project stage: studies, future construction, current construction, and recently completed projects (in 2021)
    - These projects are classified as state highway projects, transit projects, airport projects, port projects, and rail projects

Project Type	# of Projects	2021 Min. Project Cost ($)	2021 Max. Project Cost ($)
State highway	234	$2,000 (total $520,000)	$127,000,000 (total $275,840,000)
Transit	10	$20,000	$4.68 million
Airport	5	$3,700,000	$13,600,000
Port	5	$684,000	$4,376,859
Rail	31	$138,000	$497,000

- **Delivery Methods Used:**
    - DBB (most common)
    - DB (alternative method)
    - CM/GC (alternative method)

MnDOT delivers most projects utilizing the DBB delivery method, where plans are fully completed prior to letting with little or no input from contractors. However, MnDOT considers using alternative delivery methods for projects that have unique designs, unique budgetary constraints, time constraints, constructability challenges, significant grading, alternate bids, and other factors. The alternative methods are DB and CM/GC.

- **MnDOT's Folder Contents:**
- General: includes the 2019 project selection process legislation report, which contains: legislative request, summary of MnDOT project selection and policy, project development process, which also includes other state practices, consistency and transparency, implementation, and appendices of project selection policy, stakeholder consultation meetings, and stakeholder policy advisory
- If during scoping or other programming discussions, a project is identified to have factors that would make it a candidate for alternative delivery, it undergoes the Delivery Method Selection Process. This process consists of a half-day workshop that follows a template and involves a guided discussion between project staff, delivery method experts, and management.
- Standard Specifications: includes the latest MnDOT general specifications 2020edition, which is effective for most projects let on or after January 27, 2022; it consists of two volumes. The older MnDOT specifications editions are: 2000, 2005, 2012, 2014, 2016, and 2018.
- DB: includes the Approach to Managing Organizational Conflict of Interest – MnDOT Design-Build Program 2018. The approach applies to the firms that wish to be a part of DB team and includes general guidance only.
- CM/GC includes:
    - The modification of law and policy for MnDOT CM/GC by adding CM/GC subdivisions to both Section 2 and 9
    - Establishing CM/GC fixed-markup percentage (construction services fees), 2013
    - Progressive GMPs/Several Work Packages: includes the role of CM/GC in allowing MnDOT to break the project into several packages rather than waiting for all design project components to reach 100% before the beginning of construction. Also includes the approval process to use GMP bidding.
    - CM/GC Bid Validation Processes: includes prepare plan package, issue for bid, submit CM/GC bid and ICE to MnDOT, bid analysis and recommendation to accept bid, bid reconciliation, adjust cost model and schedule and resubmit pricing, reconciliation not possible, construction authorization and contract award, and approve contract and notice to proceed
    - CM/GC Interim Pricing (Opinion of Probable Construction Cost [OPCC]) Milestone Process: includes estimating instructions, prepare OPCC packages, hold design review workshop, hold risk workshop, preparation of OPCC and estimates, submit estimates and OPCC, preparation of variance report, pricing reconciliation meeting, adjust cost model, schedule, and pricing, and document OPCC, cost model, and schedule

Missouri DOT (MoDOT)

- **Website:** https://www.modot.org/
- **Projects:** Through the link: https://www.modot.org/search/projects
- **Delivery Methods Used:**
    - DBB (traditional method)
    - DB (alternative method)
- **Videos**: https://www.modot.org/modotagcmoacec-information

- **Legislation:** https://www.fhwa.dot.gov/construction/cqit/atc.cfm
- **MoDOT's Folder Contents:**
  - General: includes MoDOT uses Federal legislation (1 and 2)
  - Standard Specifications: includes 2021 edition of standard specifications for highway construction
  - DB includes:
    - MoDOT Design-Build Contract - Book 1
    - MoDOT Design-Build Performance Requirements - Book 2
    - MoDOT Design-Missouri Highways and Transportation Commission (example for RFP of a project)
    - MoDOT Design-Build

Montana DOT (MDT)

- **Website:** https://www.mdt.mt.gov/
- **Projects:**
  - Design and construction projects for a number of districts
  - Studies: corridor planning studies, environmental studies, feasibility studies
- **Delivery Methods Used:**
  - DBB (traditional method)
  - DB (alternative method)
  - CM/GC (alternative method)
  - Job order contracts (JOCs) (alternative method)
- **Legislation:** Alternative Project Delivery Legislation, laws and guidelines (the updates shown): https://leg.mt.gov/bills/2019/BillHtml/SB0307.htm
- **MDT's Folder Contents:**
  - Standard Specifications: includes the latest 2020 standard specifications for road and bridge construction
  - DB includes:
    - MDT Design-Build Guidelines: helps to establish the MDT process for procuring and administering the design, construction, and construction engineering and inspection (CEI) services within one contract
    - Alternative Contracting Project Selection & Startup Guidelines-MEMO: this memo provides guidance to project sponsors considering an alternative contracting delivery method including DB and CM/GC
    - DB Flow Chart
    - Progressive DB Delivery Process: this memo introduces a new construction delivery method referenced as progressive design-build (PDB). This memo includes discussion on the delivery method plus the construction delivery methods currently in use by MDT.
  - CM/GC includes:
    - MDT CM/GC Guidance Document 2021: The purpose of the CM/GC Procurement Guidance Document is to outline the MDT general process for procuring and administering transportation projects through utilization of the CM/GC project

delivery method. Even though CM/GC is used by many agencies, this document communicates the key aspects of MDT's version of CM/GC to the construction industry, the design community, and other stakeholders. The guidance document also provides a general CM/GC process outline for internal MDT staff.
    - CM/GC Legislation Updates for MDT: This document provides a brief overview on the status of MDT's CM/GC program implementation; it's an update to HB92
    - Alternative Contracting Project Selection & Startup Guidelines-MEMO: this memo provides guidance to project sponsors considering an alternative contracting delivery method including DB and CM/GC
    - Contractor's Guide to MDT - CM/GC Workshop 2020: includes fundamentals to CM/GC, risk identification and management, CM/GC contractor procurement process, lesson learned, etc.
    - Contractor's Guide to MDT CM/GC Program Delivery 2019: includes overview to CM/GC pilot program, process of selecting the construction manager, integration of CM/GC activities with design, elements of good statement of qualifications (SOQ) or technical proposal, etc.
- Job order contracting (JOC): includes special experimental project-used JOC type. JOC provides a way for MDT to quickly and easily deliver commonly limited in scope, repetitive in nature, and has a minimal design component, encountered construction projects

New York State DOT (NYSDOT)

- **Website:** https://www.dot.ny.gov/index
- **Projects:** https://www1.nyc.gov/html/dot/html/about/current-projects.shtml
- **Delivery Methods Used:**
    - DBB (traditional method)
    - DB (alternative method)
    - CM/GC (alternative method)
    - P3 (alternative method)
- **Legislation:** https://www.nysenate.gov/legislation/laws/HAY/10
- **Project Development Process:** https://www.dot.ny.gov/divisions/engineering/design/dqab/pdm
- **NYSDOT's Folder Contents:**
    - General:
        - How NYSDOT Initiated Alternative Delivery Methods? (1)
        - How NYSDOT Initiated Alternative Delivery Methods? (2)
    - Standard Specifications: includes 2019 edition of standard specifications and the modifications volumes of 1, 2, 3, and 4.
    - DB: includes NYSDOT Design-Build Procedures Manual; the purpose of this manual is to describe the DB planning, environmental process, preliminary engineering (PE), procurement, and project execution procedures to be followed; describes the roles and responsibilities of the participants in the DB process; also describes the format and content of DB procurement and contract documents; and the DB supplements and changes applicable to other department policies and procedures

Pennsylvania DOT (PennDOT)

- **Website:** https://www.penndot.gov/Pages/default.aspx
- **Projects:** Through the link: https://gis.penndot.gov/paprojects/PAProjects.aspx
- **Delivery Methods Used:**
  - DBB (traditional method)
  - DB (alternative method)
  - CM/GC (alternative method)
  - P3 (alternative method)
    - Major bridge projects under P3 contracts: https://www.penndot.gov/pages/all-news-details.aspx?newsid=819
- **PennDOT's Folder Contents:**
  - General:
    - Plans, Specifications, and Estimate (PS&E) Delivery Method Manual
    - PennDOT Alternative guide and Legislation
  - Standard Specifications: includes 2020 edition Standard Specifications
  - P3 includes:
    - P3 Capital Screening Process
    - P3 Implementation Manual & Guidelines: it provides guidance regarding Public Private Transportation Project (P3 Projector Transportation Project) development and implementation in the Commonwealth of Pennsylvania. The Public Private Transportation Partnership Board approves this manual for use by transportation agencies in the Commonwealth including PennDOT and other eligible public entities as well as any interested private entities.

Tennessee DOT (TDOT)

- **Website:** https://www.tn.gov/tdot.html
- **Projects:**
  - These projects are classified as divided by TDOT's four regions; Region 1 (Greeneville Bypass), Region 2, Region 3, and Region 4. Moreover, there are around 10 studies operated by TDOT.
  - The $126 million project in Region 2; US 27 Reconstruction in Downtown Chattanooga including widening the Olgiati Bridge over the Tennessee River is the most expensive project ever let by TDOT to date
- **Delivery Methods Used:** Alternative contracting often uses new, innovative practices to decrease project delivery time, reduce construction time, improve safety, and reduce costs
  - DBB (traditional method)
  - Low-bid (traditional method)
  - DB (alternative method)
  - CM/GC (alternative method)
- **TDOT's Folder Contents:**
  - Standard Specifications: includes the latest 2021 standard specifications for road and bridge construction

- DB includes:
  - Design-Build Standard Guidance (2017) that includes introduction to DB, DB management, post award submittals, public involvement process, roadway design procedure, ROW, utility and railroad procedures, and others
  - Design-Build Rules & Legislation: includes new rules added to establish procedures and criteria for the solicitation, selection, and award of DB contracts as authorized in Chapter 274 of the Public Acts of 2007
- CM/GC: includes CM/GC legislation rules added for TDOT

Texas DOT (TxDOT)

- **Website:** https://www.txdot.gov/
- **Projects:** https://www.txdot.gov/inside-txdot/projects.html
- **Delivery Methods Used:**
  - DBB (traditional method)
  - DB (alternative method)
- **TxDOT's Folder Contents:**
  - General:
    - TxDOT Highway Improvement Contracts & Project Delivery: discusses DBB project delivery and low-bid procurement methods, emergency construction and maintenance contracts, DB project delivery and procurement, and comprehensive development agreement
    - TxDOT Contracting & Purchasing
    - TxDOT Project Development Process: discusses project lifecycle overview, public involvement, and environmental review
  - Standard Specifications: includes 2014 edition standard specifications for construction and maintenance of highways, streets, and bridges
  - DB includes:
    - TxDOT Design-Build Support Tool & Legislation.
    - TxDOT Design-Build Manual & Guideline: this manual provides a broad high-level overview of the TxDOT DB procurement process. Also provides information intended to guide TxDOT personnel, proposers, consultants, and other involved parties through the alternative delivery procurement process.

Utah DOT (UDOT)

- **Website:** https://www.udot.utah.gov/connect/
- **Projects:**
  - Future Projects: https://www.udot.utah.gov/connect/projects/future-projects/
    - Planned projects: These projects have been assigned funding; however, they may be several years away. https://www.udot.utah.gov/connect/projects/future-projects/planned-projects/
    - Projects coming soon: Projects are found in various stages. From a contractor being awarded the project and construction just around the corner, to designers making

specific decisions about the project and construction still a ways off. https://www.udot.utah.gov/connect/projects/future-projects/projects-coming-soon/
    - Studies: Studies give UDOT the opportunity to determine a project's potential benefit or harm to the environment including cultural and natural resources. An important component of a study is public involvement. This allows UDOT to inform members of the community about transportation needs, possible solutions, and the benefits and impacts of those solutions. The study is also a means for UDOT to receive feedback from the community and to use this information in the decision-making process. https://www.udot.utah.gov/connect/projects/future-projects/studies/
  - Current Projects: https://www.udot.utah.gov/connect/projects/current-projects/
- **Specifications:**
  - 2022 Standard and Supplemental Specifications for Road and Bridge Construction https://drive.google.com/drive/folders/1hoh8kYt0Io13fRWgMg3f-pkn5WS4t6oO
- **Adjustments to Standard Specifications & Drawings Process:**
  - The only new changes that differ from the 2017 Standards and Supplementals are items that were approved at the June 25, 2020 Standards meeting. All items on the June agenda were approved, and the agenda for that meeting can be found here: https://drive.google.com/file/d/1l_BfWX7RCXGcYOQRL9jmAjzGCC0Zjfhy/view
- **Legislation:** https://www.udot.utah.gov/connect/about-us/legislative/
  - Delivery Methods Used & Legislation: https://www.udot.utah.gov/connect/business/construction/
- **Project Development Process:** The process begins with Utah's Transportation Vision, which involves collaboration with partnering agencies, for example cities, to establish a shared vision for transportation statewide.
  This vision is then used by UDOT, planning organizations, and the Utah Transit Authority (UTA) to develop Utah's Unified Transportation Plan. This process involves these partners working together to develop common goals as well as plan time horizons, performance measures, and financial assumptions. Everyone then agrees on which projects and needs to include in the Unified Plan, as well as timing, funding, and how to measure their effectiveness in meeting shared objectives.
  The Transportation Commission uses the Unified Plan to begin their prioritization process and assign funds. This results in the Statewide Transportation Improvement Plan (STIP). The STIP is a six-year plan of highway and transit projects throughout Utah, and UDOT uses this as a work plan for the projects.
- **Delivery Methods Used and Legislation:**
  - DBB delivery method
  - DB (alternative method)
  - CM/GC (alternative method)
  - UDOT utilizes alternative delivery methods such as DB and CM/GC on projects as a way to provide value by reducing time/costs and improving quality
- **UDOT's Folder Contents:**
  - General: includes the UDOT 2020 general consultant services (manual of instructions), which contains UDOT's authority to contract, doing business with UDOT, consultant selections, financial screening and insurance, contracting, and contract administration and monitoring

- DB includes:
  - UDOT DB manual and guidelines: it is a manual of instruction that gives direction on how selection processes occur on best value DB projects. The phrase "best value" includes projects with technical and price components, including fixed price/best design [variable scope]. These processes may be similar to low-bid DB but not specific to those types of projects.
  - UDOT DB policy and procedures: it aims to establish a policy and procedure for advertising and awarding DB projects that provides uniformity and consistency throughout UDOT
- CM/GC: includes UDOT CM/GC manual & guidelines, which gives direction on how the selection process occurs on CM/GC projects. The UDOT Innovative Contracting team provides support in the CM/GC selection, design, and bid opening process. UDOT Consultant Services provides support in the CM/GC selection process, which includes assistance with the preparation and release of the RFP and coordination of schedules and tasks required to complete selection of a contractor. It documents the selection process to ensure consistency and objectivity in the selection of a contractor. In addition, this document provides guidance as to the development of project goals and defines team members' roles and responsibilities to assist in the procurement and advertising of a UDOT CM/GC project.

Design-Build Institute of America (DBIA)

- **Website:** https://dbia.org/
- **DBIA's Folder Contents:**
  - Legislative Guide for Innovative Delivery Method (Manual of Practice): this publication provides a road map for stakeholders in the design and construction industry interested in persuading legislative and regulatory bodies to approve innovative methods of project delivery, e.g., DB and CMAR. The organizational framework and principles found here are applicable to all public owners (state, county, city, town, DOT, universities, community colleges, K-12 schools, utility departments, etc.) interested in securing the use of innovative delivery for projects of any size and type. In addition to guidance on strategic planning for a successful legislative initiative, the reader is provided with definitions of key terms and processes, including selection processes, contract negotiations, and awards to facilitate understanding in these areas.
  - DBIA State Statute Report for DB Laws: This report includes legislation signed into law before September 2017. It was reviewed on a state-by-state basis by experienced attorneys within each of DBIA's 14 regions representing all 50 states, Washington DC, Puerto Rico, and the Virgin Islands. It is important to note that while this report outlines the existing statutes from across the country, it may not fully account for jurisdictions where DB is not expressly prohibited. DBIA's State Statute Report is provided as a resource to supplement, not replace, your own due-diligence as you determine whether DB is the correct project delivery method for your project.

FHWA

- **Website:** https://highways.dot.gov/
- **FHWA's Folder Contents:**
  - General FHWA factsheet for CM/GC
  - US.DOT-Federal Law Authorizes contracting use the CM/GC
  - CM/GC Federal Register rules and regulations

Other Important Resources

- DBIA: https://dbia.org/what-is-design-build/
- CM/GC Enabling Legislation:
  - Connecticut: https://www.cga.ct.gov/2012/ACT/PA/2012PA-00070-R00SB-00033-PA.htm
  - Nevada: https://www.leg.state.nv.us/NRS/NRS-338.html#NRS338Sec169
  - Washington: https://apps.leg.wa.gov/rcw/default.aspx?cite=39.10

Materials from DOTS on Alternative Project Delivery

The following is a link to materials that we have gathered from a number of DOTs regarding project delivery methods. This link also contains a folder with various research papers. https://iastate.box.com/s/6f852g69do3n64lk15kbxnjwubp4cq6x

APPENDIX A: PEER EXCHANGE AGENDA

ALTERNATIVE PROJECT DELIVERY PEER EXCHANGE

Thursday, December 9, 2021

Gateway Hotel and Conference Center
Ames, Iowa

AGENDA

Time	Topic	Speaker
8:00–8:10	Welcome	Charlie Purcell, Iowa DOT
8:10–8:40	Project Delivery Methods 101	David Unkefer, FHWA
8:40–9:00	Designer Perspective	Robert Magliola, PARSONS
9:00–9:20	ICE Perspective	Dan Bender, ICE
9:20–9:40	Panel Q&A	David Unkefer, Robert Magliola, Dan Bender
9:40–10:00	Break	
10:00–10:20	Newer User	Jason Hastings, Delaware DOT
10:20–10:40	Newer User	John Pavsek, Montana DOT
10:40–10:50	Panel Q&A	Jason Hasings and John Pavsek
10:50–11:10	Established User	Stacey Smith and Glenn Konersmann, Missouri DOT
11:10–11:30	Established User	Matt Pacheco, Colorado DOT
11:30–11:50	Established User	Peter Davich and Kevin Hagness, Minnesota DOT
11:50–12:00	Panel Q&A	Stacey Smith, Glenn Konersmann, Matt Pacheco, Peter Davich, Kevin Hagness
12:00–1:00	Lunch	
1:00–1:45	Group Discussion	Project development process (facilitators: Jim Nelson and Jennifer Shane)
1:45–2:05	Recap	Group facilitators
2:05–2:15	Break	
2:15–3:00	Group Discussion	Topic 1: Challenges – Contractor/Consultant resource limitations, Env and ROW, Certs, Utility relocation, etc. Facilitator – Brad Hofer Topic 2: Risk mitigation Facilitator – Jennifer Shane
3:00–3:20	Recap	Group facilitators
3:20–3:45	Closing Remarks	Troy Jerman, Iowa DOT
3:45	Adjourn	

APPENDIX B: ATTENDEE LIST

Last Name	First Name	Organization
Anderson	Stuart (Stu)	Iowa DOT
Bender	Daniel (Dan)	Innovative Contracting & Engineering
Bishop	Darwin	Iowa DOT
Cain	Michael	FHWA – Iowa
Claman	David	Iowa DOT
Cuva	Nikki	Iowa DOT
Davich	Peter	Minnesota DOT
Dillavou	Mitchell	Iowa DOT
Dunn	Mark	Iowa DOT
Fobian	Neal	Iowa DOT
Frame	Kyle	Iowa DOT
Goetz	Vanessa	Iowa DOT
Hagness	Kevin	Minnesota DOT
Hastings	Jason	Delaware DOT
Hauber	James	Iowa DOT
Hofer	Brad	Iowa DOT
Jerman	Troy	Iowa DOT
Jackson	Michael	Iowa DOT
Jia	Yanxiao (Yan)	Iowa DOT
Kasper	Edward	Iowa DOT
Keller	Kyle	Nebraska DOT
Kennerly	Michael	Iowa DOT
Konersmann	Glenn	Missouri DOT
Loesch	Micah	FHWA – Iowa
Magliola	Robert	PARSONS
Maifield	Deanna	Iowa DOT
Maifield	Steve	Iowa DOT
Merryman	Kevin	Iowa DOT
Mescher	Phil	Iowa DOT
Meyer	Ronald	Iowa DOT
Musgrove	Wes	Iowa DOT
Nelson	Jim	Iowa DOT
Nicholson	Kent	Iowa DOT
Pacheco	Matthew	Colorado DOT
Patel	Kevin	Iowa DOT
Pavsek	John	Montana DOT
Poole	Angie	Iowa DOT
Purcell	Charlie	Iowa DOT

Last Name	First Name	Organization
Reis	Tom	Iowa DOT
Schmitt	Madeline	Iowa DOT
Shane	Jennifer	Institute for Transportation at Iowa State University
Smith	Anastasia (Stacey)	Missouri DOT
Thede	Nathan	Iowa DOT
Unkefer	David	FHWA
Vortherms	Jeremey	Iowa DOT
Wilson	Andrew	FHWA – Iowa

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