Project Delivery Selection Workshop Summary (Volume 24 Issue1)
Updated: January 2024

Workshop Summary	
Project Name:	US50 Safety/Operational Highway Improvements for Freight and Transit (25781)
Workshop Date:	09/24/2025 & 10/2/2025
Workshop Location:	CDOT R2 HQ – 5615 Wills Blvd. – Big Sandy Conference Room and Virtual Google Meet
Facilitator:	Cassey Vallentinelli
Delivery Method Selected:	CMGC

Workshop Participants	
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Project Description

The following items should be considered in describing the specific project. Other items can be added to the bottom of the form if they influence the project delivery decision. Relevant documents can be added as appendices to the final summary report.

Project Attributes
Project Name: US 50 SHIFT Passing Lanes
Location: US50B Pueblo to Kansas State Line (MP 345.5 – 460.5)
Estimated Budget: $72,500,000
Estimated Project Delivery Period: Spring 2026 to Winter 2029
Required Delivery Date (if applicable): FHWA Obligation Deadline for Final PS&E package submission 05/01/2028; Final Grant Obligation deadline 9/30/2028, must be in construction within 18 months of executed grant agreement
Source(s) of Project Funding: Regional Priority Program (RPP), 10 Year (10Y), Rural Grant Funds
Project Corridor: US50B High Plains Freight Corridor (National Highway Freight Network)
Major Features of Work – pavement, bridge, sound barriers, etc.: Roadway widening: Embankment, Pavement, Guardrail, Drainage Features, Signing & Striping
Major Schedule Milestones: Design & Engineering (Spring 2026 – Fall 2027), RUDEM Clearances (Spring 2028), Begin Construction (Summer 2027), End Construction (Fall 2029), Final Package Required by May 2028
Major Project Stakeholders: Pueblo Area Council of Government, Southeast Transportation Planning Region, FHWA
Major General Obstacles: Budget, Right of Way, Irrigation Ditches, Railroad, Accesses, Permanent Structures, Utilities
Major Obstacles with Right of Way, Utilities, and/or Environmental Approvals: Passing Lanes preferred in locations where CDOT has sufficient ROW, avoiding permanent acquisition. If we do need permanent acquisition, the duration of acquiring ROW will be a major obstacle. Utilities between highway and railroad tracks will be difficult to relocate, similarly the design will most likely avoid relocating irrigation ditches. In terms of Environmental Clearance, with such a large range of project limits, there's a greater chance of construction stipulations for various endangered species of animals, and wetlands. Historic ditches, farmlands and buildings could also pose construction stipulations. There are a lot of homes along US50B, so that could trigger some noise studies. At grade crossings of railroad could restrict locations and length of passing lanes. Existing Accel/Decel lanes could restrict passing lane locations as well.

Major Obstacles during Construction Phase: Phasing of the construction activities will be critical, so the traveling public isn't significantly impacted by the project. Passing lane locations are in stretches of two-way head-to-head highway conditions; shoulders will be width restricted. Narrowing the existing pavement will be needed to provide ample workspace for tie-ins. This is a Heavy freight route, so large trucks and oversized loads will need to be accommodated. The irrigation season will impact the construction schedule. Distance between project locations will need to be considered. Long detour routes.
Safety Issues: Heavy Truck traffic and slow-moving farm equipment. Narrow shoulders and maintaining the many accesses within the project limits are both challenges relative to safety during construction.
Sustainable Design and Construction Requirements:

Project Goals

An understanding of project goals is essential to selecting an appropriate project delivery method. Therefore, project goals should be set prior to using the project delivery selection matrix. Typically, the project goals can be defined in three to five items and need to be reviewed here. Example goals are provided below, but the report should include project-specific goals. These goals should remain consistent over the life of the project.

Project-Specific Goals
Goal #1: Maximize the project scope and corridor improvements within the project budget and schedule (consider structures, resurfacing, intersection improvements)
Goal #2: Passing lane locations meet optimal length requirement with tapers (meet or exceed design standards requirements)
Goal #3: Minimize ROW impacts
Goal #4: Passing lane locations meet Grant commitments and maximize safety within those segments
Goal #5: Minimize inconvenience to traveling public; no full closures

Project Constraints

There are potential aspects of a project that can eliminate the need to evaluate one or more of the possible delivery methods. A list of general constraints can be found below the table and should be referred to after completing this worksheet. The first section below is for general constraints and the second section is for constraints specifically tied to project delivery selection.

General Constraints
Source of Funding: RPP ($12,000,000), FY19-26 10Y ($15,000,000), FY27-30 10Y ($5,000,000) Rural Grant funds ($ 40,500,000) – **Total $ 72,500,000**
Schedule constraints: FHWA Obligation Deadline 9/30/28 (Final PS&E to FHWA May 2028); Begin construction no later than 18 months from grant agreement (GA) execution
Federal, state, and local laws: NEPA Requirements, Rural Grant Obligations
Third party agreements with railroads, ROW, etc.: Ditch/Irrigation Companies, Railroad, ROW (Temp. Easements anticipated – avoid permanent acquisition)
Project Financing
Does your project have any funding gaps that would require Financing*? No
Project Delivery Specific Constraints
Project delivery constraint #1: Meeting Obligation deadlines in Grant Agreement (Construction within 18 month of GA execution and May 2028 for Final PS&E)
Project delivery constraint #2: Insufficient internal staff to complete pre-construction and/or construction phases to meet statutory obligations
Project delivery constraint #3: NEPA/Environmental requirements – Cat/Ex anticipated for all locations
Project delivery constraint #4: ROW and Utility Clearances
Project delivery constraint #5: Maximum of three PS&E packages (3 projects)

Project Risks

Identified Project Risks
Project Risk: Schedule for grant funds obligation (18 month to construction deadline)
Project Risk: Passing lane final location selection effort and timeline with unknown site conditions
Project Risk: Ditch, Utilities, and RR Coordination timelines and requirements
Project Risk: Phasing and project length/large distance between locations
Project Risk: Design and Construction staffing availability

Project Delivery Selection Summary

Determine the factors that should be considered in the project delivery selection, discuss the opportunities and obstacles related to each factor, and document the discussion on the following pages. Then complete the summary below.

PROJECT DELIVERY METHOD OPPORTUNITY/OBSTACLE SUMMARY			
	DBB	**CM/GC**	**DB**
Primary Selection Factors			
1. Project Complexity & Innovation	++	++	++
2. Project Delivery Schedule	+	++	+++
3. Project Cost Considerations	++	+++	++
4. Level of Design	++	++	+++
5. Risk Assessment	N/A	+++	++
Secondary Selection Factors			
6. Staff Experience/Availability (Agency)	N/A	++	++
7.Level of Oversight and Control	N/A	+++	++
8. Competition and Contractor Experience	N/A	+++	++

Rating Key

+++	Most appropriate delivery method
++	Appropriate delivery method
+	Least appropriate delivery method
X	Fatal Flaw (discontinue evaluation of this method)
NA	Factor not applicable or not relevant to the selection

Project Delivery Selection Matrix
Primary Factors

1) Project Complexity and Innovation

Project complexity and innovation is the potential applicability of new designs or processes to resolve complex technical issues.

DESIGN-BID-BUILD - Allows Agency to fully resolve complex design issues and qualitatively evaluate designs before procurement of the general contractor. Innovation is provided by Agency/Consultant expertise and through traditional agency directed processes such as VE studies and contractor bid alternatives.

Opportunities	Obstacles	Rating
Design will be completed to typical standards due to limited complexity of passing lane design scope.	There are limited opportunities for design innovation based on overall project scope	++
Region 2 has in-house experience for project design, construction, safety, and operations	Does not allow for constructability input from Contractor prior to advertisement	
Allows for Full design control to reduce possible ROW. Best to achieve goals 2 and 3.	Planning will be for worst case scenarios due to unknown construction risks.	
In house ROW allows control of schedule and budget	Standard project packaging and clearance timelines does not allow for scheduling innovation.	
Multiple packages can be completed depending on location complexity	Cost sharing will be required for VE in construction.	
As standard with DBB, there is an opportunity for Value Engineering (VE) in Construction if the Contractor suggests. .	There could be the possibility of unnecessary ROW and Environmental clearance due to over-designing and completing the design of each location separately.	
	Multiple contractors may have overlapping scope and locations if advertised and awarded in multiple packages	
	Scope Creep is possible due to multiple projects and multiple designers.	

CMGC - Allows independent selection of designer and contractor based on qualifications and other factors to jointly address complex innovative designs through three party collaboration of Agency, designer, and Contractor. Allows for a qualitative (non-price oriented) design but requires agreement on CAP.

Opportunities	Obstacles	Rating
There is an opportunity for contractor input for permitting and constructability prior to advertisement	There will be increased complexity and coordination between CDOT, the designer, and the Contractor	++
There can be flexibility in design based on location risks identified by the design team	The project has a low level of complexity for designing the passing lanes and minimal innovation is expected	
Early contractor involvement can optimize design and specialty unit needs (ROW, Enviro)		
Allows CDOT to retain control over design while having still getting the Contractor's input		
Existing in-house experience can be utilized		
The Contractor can work with designers to develop the construction packages.		
Allows for a single Contractor over multiple project sites reducing the risks related to projects overlapping.		

DESIGN-BUILD - Incorporates design-builder input into design process through best value selection and contractor proposed Alternate Technical Concepts (ATCs) – which are a cost-oriented approach to providing complex and innovative designs. Requires that desired solutions to complex projects be well defined through contract requirements.

Opportunities	Obstacles	Rating
Allows for Contractor input on innovative constructability and permitting opportunities	May result in more innovation than needed or not get what is expected due to limited experience writing the technical requirements.	++
Could result in improved scope of passing lanes based on innovative design and budgeting	The project is assumed to have a simple design that may not lead to innovation.	
Environmental impacts and Permitting is related to the actual construction activities and can be innovative in meeting permitting requirements. Allows for the opportunity to reduce permitting needs.		
There is an opportunity to use unsuccessful Contractors ideas if they accept the stipend		
The Contractor and design team work together to identify possible opportunities for unseen innovation.		
One contract to minimize challenges of coordination between design and construction.		
Allows for more flexibility in project sequencing and phasing		
Allows for a single Contractor over multiple project sites reducing the risks related to projects overlapping.		

2) Delivery Schedule

Delivery schedule is the overall project schedule from scoping through design, construction and opening to the public. Assess time considerations for starting the project or receiving dedicated funding and assess project completion importance.

DESIGN-BID-BUILD - Requires time to perform sequential design and procurement, but if design time is available has the shortest procurement time after the design is complete.

Opportunities	Obstacles	Rating
Only the items needed to complete project advertisement will be completed (such as utility relocates)	Utility coordination and relocation are required prior to advertisement and can negatively affect advertisement schedule.	+
May require multiple designers to complete within the timeline. Design can begin sooner due to current AC funding approval.	Meeting grant deadlines may be challenging with linear delivery. Additional time and resources would be required.	
Minimal onboarding needed to get started.	The ability to stagger the construction package could be limited (due to schedule and staffing) which may cause issues with inconveniencing the traveling public	
	Project schedule and phasing for multiple construction projects have a lot of unknown risks.	
	Takes the longest to get a construction project started	

CMGC - Quickly gets contractor under contract and under construction to meet funding obligations before completing design. Parallel process of development of contract requirements, design, procurements, and construction can accelerate project schedule. However, schedule can be slowed down by coordinating design-related issues between the CM and designer and by the process of reaching a reasonable CAP.

Opportunities	Obstacles	Rating
Quickest method to get a construction project started allowing the project to meet the 18 month construction deadline for the grant.	Unknown construction completion dates.	++
The Contractor can help understand the schedule and priorities. Also they can have input in design	Price negotiation process timeframe could affect schedule. (up to three rounds of negotiation should be planned for but may not be required)	

DESIGN-BUILD - Ability to get project under construction before completing design. Parallel process of design and construction can accelerate project delivery schedule; however, procurement time can be lengthy due to the time necessary to develop an adequate RFP, evaluate proposals and provide for a fair, transparent selection process.

Opportunities	Obstacles	Rating
Easiest to meet the grant obligation deadline.	More involvement for specialty units during development of the RFP documents and they must meet review deadlines after the contract is in place.	**+++**
A single contract is needed for design and construction.		
Less upfront CDOT project design effort is needed to get to 30% design.		
Can accelerate permitting due to the Contractor working closely with the environmental consultant.		

3) Project Cost Considerations

Project cost is the financial process related to meeting budget restrictions, early and precise cost estimation, and control of project costs.

DESIGN-BID-BUILD - Competitive bidding provides a low-cost construction for a fully defined scope of work. Costs accuracy limited until design is completed. More likelihood of cost change orders due to contractor having no design responsibility.

Opportunities	Obstacles	Rating
There are qualified Contractors that would promote bid competition	No control over bids or final project costs.	++
Allows the ability to select project locations to reduce cost from ROW, utilities, etc.	Total cost will not be known until all locations are designed.	
Existing in-house experience that can help with understanding costs for project locations.	Change order costs would need to be included in total project costs which are difficult to predict.	
Known cost for ROW needs.	Lowest bidder required, best value is not available.	
	Can be required to limit the project scope due to historical based cost estimates being more that actual costs.	
	Inflation may need to be included if multiple packages are completed over multiple years.	

CMGC - Agency/designer/contractor collaboration to reduce risk pricing can provide a low-cost project however, non-competitive negotiated CAP introduces price risk. Good flexibility to design to a budget.

Opportunities	Obstacles	Rating
Known cost for ROW needs.	Price risk with CAP.	+++
Can select project locations to reduce cost from ROW, utilities, etc.	Costs are negotiated but does not allow for the competitive bidding process.	
Contractor input can possibly reduce cost and should reduce change orders due to prior coordination and review.	Inflation may need to be included if multiple packages are completed over multiple years.	
Contractor input will help understand risks and associated costs.		

DESIGN-BUILD - Designer-builder collaboration and ATCs can provide a cost-efficient response to project goals. Costs are determined with design-build proposal, early in design process. Allows a variable scope bid to match a fixed budget. Poor risk allocation can result in high contingencies.

Opportunities	Obstacles	Rating
Potential to improve scope due to innovative cost and having a known max price.	Poor risk allocation can result in high contingencies.	++
Selection is the best value that meets goals and budget.	It is difficult to complete an accurate cost estimate with 30% design.	
Innovative ideas are developed at time of bid instead of VE during construction.		

4) Level of Design

Level of design is the percentage of design completion at the time of the project delivery procurement.

DESIGN-BID-BUILD - 100% design by Agency or contracted design team, with Agency having complete control over the design.

Opportunities	Obstacles	Rating
One passing lane is at 20% design.	No Contractor input on the design, phasing, locations, etc.	++
One full time and one part time CDOT designers are available; additional consultant design assistance will be needed.	No design or field data has been collected at the other locations so starting from a planning level at 11 locations.	
Allows for total control of the design	May have to break into packages to meet grant obligations. Scope and budget may be challenging and the designs may not be consistent due to multiple designers.	
	The 20% design may not be best location when looking at full scope	
	Will require hard deadlines for advertisement of the packages with limited flexibility for the advertisement dates due to the schedule restrictions.	
	Can be difficult to manage design decisions throughout multiple locations and maintain consistency with different designers.	

CMGC - Can utilize a lower level of design prior to procurement of the CMGC and then collaboration of Agency, designer, and CMGC in the further development of the design. Iterative nature of design process risks extending the project schedule.

Opportunities	Obstacles	Rating
Total design control but allows for Contractor input	The location with 20% design may not be best location when looking at the full scope of the project.	++
One passing lane is at 20% design.	No design or field data has been collected at the other locations so starting from a planning level at 11 locations.	
Helps to Minimize errors and omissions due to contractor input.	Can be difficult to manage design decisions throughout multiple locations and maintain consistency with different designers.	
The Contractor can assist with package determination and guide the design priority of the locations.		

DESIGN-BUILD - Design advanced by Agency to the level necessary to precisely define contract requirements and properly allocate risk (typically 30% or less).		
Opportunities	**Obstacles**	**Rating**
Less design is required to get construction started.	Making sure the RFP documents clearly indicate what is expected but still allow for innovation.	**+++**
CDOT can complete design review; check-ins can be completed regularly to ensure the requirements are being met.		
Design priorities can easily be changed or modified based on design and construction progression		

5) Risk Assessment of Delivery Methods

Risk is an uncertain event or condition that, if it occurs, influences a project's objectives. Risk allocation is the assignment of unknown events or conditions to the party that can best manage them. An initial assessment of project risks is important to ensure the selection of the delivery method that can properly address them. An approach that focuses on a fair allocation of risk will be most successful.

DESIGN-BID-BUILD - Risk allocation for design-bid-build best is understood by the industry but requires that most design-related risks and third-party risks be resolved prior to procurement to avoid costly contractor contingency pricing, change orders, and potential claims.

Opportunities	Obstacles	Rating
		N/A

CMGC - Provides opportunity for Agency, designer, and contractor to collectively identify and minimize project risks, and allocate risk to appropriate party. Has potential to minimize contractor contingency pricing of risk but can lose the element of competition in pricing.

Opportunities	Obstacles	Rating
The Contractor helps with where to best allocate the project's risks.	Increases the risk of not meeting the final grant obligation timeline due to CAP negotiation timelines.	**+++**
Allows for the ability to mitigate risks in the design phase. Proactive vs reactive mentality.	Design coordination may take additional time needed to complete packages.	
More control over construction phasing risks.		

DESIGN-BUILD - Provides opportunity to properly allocate risks to the party best able to manage them, but requires risks allocated to design-builder to be well defined to minimize contractor contingency pricing of risks.

Opportunities	Obstacles	Rating
Design and project risk are mitigated by the Contractor.	Requirements of RFP may increase risk.	**++**
Alleviates the risk of not meeting the project schedule		

Project Delivery Selection Matrix
Secondary Factors

6) Staff Experience and Availability

Agency staff experience and availability as it relates to the project delivery methods in question.

DESIGN-BID-BUILD - Technical and management resources necessary to perform the design and plan development. Resource needs can be more spread out .		
Opportunities	**Obstacles**	**Rating**
		N/A

CMGC - Strong, committed Agency project management resources are important for success of the CMGC process. Resource needs are similar to DBB except Agency must coordinate CM's input with the project designer and be prepared for CAP negotiations.		
Opportunities	**Obstacles**	**Rating**
Opportunity for CDOT staff to learn about alternate delivery and gain new skills related to CMGC	Less risk assignment and cost negotiation experience for internal staff.	**++**
CDOT has control of ROW and reduces the ROW risk for contractors. Benefit's environmental clearances as well.	Design discussion challenges may occur with limited in house experience having the contractor input before construction.	
Internal staff have similar project experiences. One with design and construction experience on several passing lanes, one with design experience on a few passing lanes.	Only two designers are available internally for this project. May consider consultant help for full design. Limited availability of construction staff if project packages are not completed linearly.	
Smaller number of internal staff will be needed with consultant assistance	Additional training may be required for internal staff.	
Familiar process for design and construction.	Timeline for onboarding consultant on a project specific task order could take 4-6 months.	
Construction staff should have a similar experience over all the packages with the same Contractor on all packages.	Internal design requires all project management (PM) tasks to be completed along with design tasks requiring the internal staff to balance their time doing design, PM, and task order management.	

DESIGN-BUILD - Technical and management resources and expertise necessary to develop the RFQ and RFP and administrate the procurement. Concurrent need for both design and construction resources to oversee the implementation.

Opportunities	Obstacles	Rating
Opportunity for CDOT staff to learn about alternate delivery and gain new skills related to DB	Additional Training may be required for internal staff.	++
Less internal and external staff required. Needs full time director (RE level), design manager, and construction manager, with a consultant owners representative.	Only two employees are available internally for this project. May consider more consultant help.	
Less need for ROW staff effort due to it being oversight only.	Will need consultant assistance to draft the RFP documents due to limited design and project management experience.	
Removing the design element allows the CDOT team to focus on delivery and construction.	Less construction staff needed means alternate projects will be required to keep the staff busy.	
	Will require a large amount of agency coordination and technical resources at critical project points.	

7) Level of Oversight and Control

Level of oversight involves the amount of agency staff required to monitor the design or construction, and amount of agency control over the delivery process.

DESIGN-BID-BUILD - Full control over a linear design and construction process.		
Opportunities	**Obstacles**	**Rating**
		N/A
CMGC - Most control by Agency over both the design, and construction, and control over a collaborative agency/designer/contractor project team		
Opportunities	**Obstacles**	**Rating**
Full control of the design and ROW processes as well as construction quality. The team has strong knowledge of corridor and passing lane design/construction.	Full control and design means additional time required for staff.	**+++**
Shared risk management with CDOT and contractor.	Multiple consultant and contractor contracts require additional capacity and oversight from the project team.	
More opportunity to negotiate different tasks.	Higher level of cost oversight required. Requires vigilance from dedicated staff. Requires additional staff time/effort.	
Preconstruction services are provided by the construction manager, which will help design efficiency for limited in-house staff.	The internal staff does not have experience with CM/GC, but will have some in-house alternate delivery resources. Similar to DBB in design, so that experience should translate.	
Obtaining input from the Contractor to enhance constructability and innovation.		
ICE performed by an outside consultant so the project costs should be accurate.		

DESIGN-BUILD - Less control over the design (design desires must be written into the RFP contract requirements). Generally, less control over the construction process (design-builder often has QA responsibilities).

Opportunities	Obstacles	Rating
Obtaining input from the Contractor to enhance constructability and innovation.	Less design control could have unexpected results. Solid RPF documents are required.	++
Overall project planning and scheduling is established by one entity. May present some efficiency benefits once the firm is selected.	Less opportunity to change design after proposals are completed.	
Limitation on staff with DB oversight experience. Opportunity for staff to learn new skills.	The project team spends a lot of time/energy creating general guidelines about what needs to come out of the technical criteria, versus just controlling a manageable design and scope.	
	Less control over the construction quality if not properly written into the technical documents.	

8) Competition and Contractor Experience

Competition and availability refer to the level of competition, experience and availability in the marketplace and its capacity for the project.

DESIGN-BID-BUILD - High level of competition, but GC selection is based solely on low price. High level of marketplace experience.		
Opportunities	**Obstacles**	**Rating**
		N/A
CMGC - Allows for the selection of the single most qualified contractor, but CAP can limit price competition. Low level of marketplace experience.		
Opportunities	**Obstacles**	**Rating**
Multiple Contractors are interested in CMGC opportunities.	Only working with one Contractor so competition is limited.	**+++**
Multiple Consultants are interested in design help.	Teamwork and communication among the project team. Risk with getting good consultant partners.	
Increased opportunity for innovation due to the diversity of the project team. The addition of a contractor in design provides the appropriate level of diversity.		
Requires a strong project manager from the CDOT. The team lead has been identified who has the appropriate skills.		
Established internal relationships will assist with teamwork and communication among the project team.		

DESIGN-BUILD - Allows for a balance of price and non-price factors in the selection process. Medium level of marketplace experience.

Opportunities	Obstacles	Rating
Multiple consultants are interested in owners' representative help.	May not have as many Contractors interested.	++
Allows for a balance of qualifications and cost in the procurement process.	Level of complexity and limited innovation may make it challenging for Contractors to stand out in proposals.	
A two-phase process can promote strong teaming to obtain “Best Value.”	Increased opportunity for innovation due to the diversity of the project team. Design build may be more appropriate for high-innovation needs projects.	
Increased opportunity for innovation possibilities due to the diverse project team. Innovation is good, but depends on the cost/effort.	Less Contractor experience for ROW and required process.	
	Lack of competition due to a limited number of Contractors with experience in the project delivery method.	
	Need for DB qualifications can limit competition.	
	The gap between CDOT experience and Contractor experience with this delivery method can create conflict. Likely to materialize on this project, given agency inexperience of known staff for this project, and given we might get inexperienced proposers given the size of the contract money.	