

Project Delivery Selection Matrix (PDSM) Workshop 22838/22969 I-25: Speer & 23rd Bridge and Interchange Project

Workshop Date: Thursday, June 11

Workshop Location: Colorado Department of Transportation (CDOT) Headquarters, Conference Room 261

Facilitator: Casey Valentinelli

Delivery Method Selected: Construction Manager/General Contractor (CM/GC) selected via PDSM Workshop; final approval is pending

Table 1, List of Workshop Participants:

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Project Overview

Project Description

Project Name: I-25: Speer & 23rd Bridge and Interchange Project

Location: Central Denver

Estimated Budget: \$160M (30% Construction Cost Estimate)

Estimated Project Delivery Period:

- 30% Design - Q4 2025 through Q2 2026
- National Environmental Policy Act (NEPA) Completion - Q4 2025 through Q4 2026
- Final Design - Q3 2026 through Q3 2028
- Preliminary Right of Way (ROW) Acquisition - Q1 2028 through Q1 2029
- Construction - Q2 2029 through Q4 2034

Required Delivery Date (if applicable): N/A

Source(s) of Project Funding: Bridge and Tunnel Enterprise (BTE), State Strategic Funds, and possibly a Better Utilizing Investments to Leverage Development (BUILD) grant.

Project Corridor: I-25 (interchanges at Speer Boulevard and 23rd Avenue)

Major Features of Work: Interchange/ramp reconfiguration (including new diverging diamond interchange), bridge replacements, underpass, retaining walls, signalized intersections, bike/ped facility improvements, stormwater drainage system, signs, and pavement.

Major Schedule Milestones: Field Inspection Review (FIR) - April 2026; Final Office Review (FOR) - late 2028 (approx.); Begin Construction - early 2029 (approx.)

Major Project Stakeholders: City and County of Denver, area businesses (i.e. Children's Museum, Aquarium, Recreational Equipment, Inc. (REI), Meow Wolf), bike & pedestrian community and advocates, Denver Broncos, Ball Arena, Brewmaster's House, nearby residents (including apartments adjacent to the project), and Denver Police/Fire Department.

Major General Obstacles: Very tight construction constraints, balancing the needs of all stakeholders, safety and operations, minimizing bridge overbuild, funding constraints, project location risk, and schedule sensitive work.

Major Obstacles with ROW, Utilities, and/or Environmental Approvals: For ROW there are proposed permanent impacts to parking for two businesses (Children's Museum, Aquarium), permanent acquisitions from three parcels, and temporary easements/permanent easements at various parcels. All proposed ROW impacts are to property owners who are visible and important community resources that have political sway. The expectation is that parking impacts will need to be mitigated for the entirety of construction. Minor utility impacts in the project area but there is a major Intelligent Transportation Systems (ITS) and Network Services fiber backbone relocation. The project is in an urban area where utility density is very high. For environmental, the project is a Categorical Exclusion. There has been a Section 106 adverse effect determination for replacement of the historic bridges and a Section 4(f) de minimis impact finding for temporary impacts to parking at the Brewmaster's House during construction. There are also temporary impacts to a recreation property.

Major Obstacles during Construction Phase: Very tight constraints, safety critical work, phasing challenges, highly restrictive lane closure strategy, impacts to travelling public (i.e. detours), impacts to adjacent stakeholders (i.e. temporary access changes), coordination to minimize impacts to area events (i.e. concerts, sports), impact to I-25 needs to be minimized, and limited staging areas.

Safety Issues: Safety critical work including deep excavations, structure demolition and construction, constraints because of urban setting combined with high traffic volumes, high volume of bikes and peds on the corridor, unhoused populations, contamination from nearby landfill, and construction over I-25.

Sustainable Design and Construction Requirements: N/A

Project Goals

- Minimize the impact to the local stakeholders and the traveling public. The project consists of construction over the most traveled interstate in Colorado and the reconstruction of the main bridge accessing downtown Denver. Project duration and phasing should be considered to minimize the impacts to the traveling public as much as possible. Additionally, the project will impact local businesses who are important community resources in the region. Impacts to local businesses must be minimized as much as possible. Local events will include but are not limited to concerts, professional sporting events, and cultural events. Examples of these are Broncos games, Rockies games, Avalanche games, Nuggets games, concerts at Ball Arena, and other events in the Denver urban core. The project will not be allowed to have adverse impacts on these events.
- Maximize safety for the workers and traveling public. This project location is one of the most traveled locations in all of Colorado. I-25 in this location sees some of the highest Annual Average Daily Traffic (AADT) in the State. Speer Blvd is a highly traveled roadway and is the main arterial for downtown Denver. 23rd Ave is the highest traveled bike lane that is not a regional trail in Denver. This results in heavy construction in an area that sees high volumes of vulnerable road users. Safety will be critical to this project. The safety of the workers and the various modes of numerous members of the traveling public will be very important and is thus a goal.
- Allow for funding flexibility. The project is funded through BTE and the Region's strategic funds. These funds will not arrive in a lump sum and will instead be spread out across multiple years. The project will need to be able to be delivered in a way that allows for a funding stream to arrive across multiple years.
- Minimize public relations risk. The project will have extremely high visibility due to the location and the impacts. The public needs to be well informed about project duration, schedule, and impacts. Any impact and duration communicated to the public needs to be realized during construction. Local businesses and communities will need to be communicated with constantly and made aware of impacts before construction even starts. Impacts to the local businesses and communities shall not exceed what is dictated before construction begins.

Project Constraints

General Constraints

Funding: Funding types are assumed to arrive over multiple years instead of a lump sum at the beginning of the project. This project is a high priority for grant funds so additional funding may be identified in the future with time constraints.

Schedule: As mentioned above the funding is highly likely to drive the schedule. Additionally, the project will have impacts to local businesses and events. Some of these impacts may not be allowed during certain times of the year. For example, full closure of I-25 or either bridge may not be allowed during a Broncos gameday. Due to the limiting of impacts to I-25, local businesses, events, and communities; the schedule will be a constraint. These constraints will be further flushed out as design progresses.

Utilities: Impacts to utilities are expected. The biggest impact identified right now is the need to move an entire ITS backbone. Work before construction will need to be done to ensure utilities do not impact the schedule or become a large risk.

Right-of-Way: Impacts to prominent local businesses will occur. These impacts must be minimized in size and duration. Additionally, these impacts are a schedule risk for the design phase and can impede the start of construction.

Construction: The construction site is very constrained and will make constructability difficult. The construction phasing will also need to minimize the impacts to I-25, Speer Blvd, and 23rd Ave. Access on all three of the aforementioned roadways will need to be maintained. Bicycles and pedestrian infrastructure on both 23rd Ave and Speer Blvd will need to be maintained.

NEPA: NEPA shall be followed and schedule and delivery risks associated with NEPA will need to be avoided.

Project Delivery Specific Constraints

Project delivery constraint #1: Delivery of the project must meet the funding criteria set by BTE and the 10-year plan.

Project delivery constraint #2: Highly restrictive limits on allowable disruptions to I-25, 23rd Ave, and Speer Blvd during construction.

Project delivery constraint #3: Right-of-way impacts need to be minimized as much as possible. The Right-of-way process is a risk that can slow down the project delivery.

Project delivery constraint #4: Construction risk is high in this area and constructability will be challenging. This creates a challenging delivery of assumed MHTs, phasing plans, project specifications, and public information.

Project Risks

- ROW - Acquisitions required at Children's Museum (extra complications because of existing ROW encroachments and potentially large Temporary Easement (TE) area which will impact parking and on-site circulation for the Children's Museum), Aquarium, Historic Brewmaster's House, Riverside Church, and 2510 W 23rd Ave.
- Organizational/Political/Public Information - High potential for public or political friction because of the project location and assumed project scope. Local opposition is highly likely and can occur from local neighborhoods, businesses, organizations, government officials, and other stakeholders.
- Construction - Complex phasing, high risk bridge demolition, difficulty managing traffic, difficulty managing bikes and pedestrians, tight work areas, limited construction hours, and numerous traffic switches.
- Utilities - Construction is in an urban setting with numerous utilities. ITS backbone relocation will be needed. Due to age of infrastructure in the area, it is highly likely that there are still unknown utilities in the project area.
- Third-party involvement - Coordination with Denver and other stakeholders (i.e. Children's Museum, Aquarium, Denver Broncos, Ball Arena, and Bike & Pedestrian Community/Advocates)
- Funding - Not all construction funds have been identified, and the construction funds that have been identified will be available across multiple years.

Project Delivery Selection Matrix Primary Factor Assessment

1) Project Complexity and Innovation

The degree to which a project involves complex technical challenges and the potential for applying innovative design approaches or construction methods to address them.

DESIGN-BID-BUILD allows the Owner to fully develop and resolve complex design issues prior to construction procurement. Innovation is primarily driven by the Owner and designer, with opportunities through traditional processes such as value engineering (VE) and contractor bid alternatives.

Rating Key: +++: Most appropriate delivery method; ++: Appropriate Delivery Method; +: Least appropriate delivery method; NA: Factor not applicable or not relevant to the selection

Opportunities
• CDOT staff is most familiar with traditional Design-Bid-Build. • Allows for CDOT to have full control of the design which is important because of the numerous Stakeholders that CDOT has established working relationships with. • Greater overall project certainty and coordination/consensus with City and County of Denver on the development of their assets. • ROW acquisition can be completed before going to advertisement, but CDOT owns the risk associated with ROW restrictions during construction. • Ensures environmental clearance and resolution of complex 4(f) and 6(f) challenges before advertisement.
Obstacles
• Low bid selection prohibits qualifications-based selection for this complex and high-profile project. • Highly complex (phasing, staging, temporary access, traffic control, constructability, etc.) with no contractor feedback or input. • Relying on utility companies as third parties to complete relocations during construction can lead to risk of delays, claims, disputes. Introduces greater risk of unforeseen or unplanned relocations. Utilities can't be relocated prior to construction due to unknown means/methods. • Loss of contractor innovation during preconstruction. • No opportunities for the contractor to coordinate with stakeholders during preconstruction and help to communicate the complexity and the reasons for certain decisions.
Rating
++



CM/GC supports collaboration among the Owner, designer, and contractor during preconstruction to address complex technical challenges. Innovation is facilitated through early contractor involvement and iterative design development.

Rating Key: +++: Most appropriate delivery method; ++: Appropriate Delivery Method; +: Least appropriate delivery method; NA: Factor not applicable or not relevant to the selection

Opportunities
Allows for best-value selection of contractor instead of low-bid procurement which could be extremely beneficial for such a complex and high-profile project.
Contractor feedback and input on phasing, staging, traffic control, constructability, and ROW. This will be valuable considering the project complexity and the impacts to important community resources and property owners.
Greater flexibility to deliver the project in packages and to align the packages with the funding schedule. Opportunity to receive contractor input about logical packages
More accurate cost estimating because of assistance from an Independent Cost Estimator, which is especially important on a complex project.
Contractor has opportunity to determine means and methods and potential innovations during design (including avoidance or mitigation of 4(f)/6(f)), which could be beneficial considering the complexity.
Contractor can gain early understanding of stakeholder concerns and work with CDOT to determine the best way to address them during construction (i.e. construction sequence or means/methods that helps to limit impacts to stakeholders).
Allows for early coordination between Contractor, CDOT, and private utility companies so that utility relocations can be discussed collaboratively, or so that productive negotiations can occur with all parties at the table.
ROW risks and responsibilities can be collectively identified, minimized, and allocated between CDOT, the Designer, and the Contractor. Contractor may have equipment, process, or phasing elements which could minimize ROW and TE impacts on owners.
Strong coordination and early planning that can help to limit public or political friction during construction
Public Information can be communicated earlier.
Obstacles
CDOT staff is less familiar with CM/GC
Increased complexity from a project management and administration standpoint because of the coordination required between CDOT, designer, and contractor
Loss of negotiation leverage if a CM/GC team is being sold to the public and garnering their trust. All trust may be eroded if Construction Agreed Price (CAP) negotiation of a severable package fails and we must go to hard bid.
Rating
+++



DESIGN-BUILD integrates design and construction, enabling innovation through proposer-driven solutions, including Alternate Technical Concepts (ATCs). Effective use requires clearly defined project requirements and performance outcomes.

Rating Key: +++: Most appropriate delivery method; ++: Appropriate Delivery Method; +: Least appropriate delivery method; NA: Factor not applicable or not relevant to the selection

Opportunities
- Allows for best-value selection of contractor instead of low-bid procurement which could be extremely beneficial for such a high-profile project. - Concurrent design and construction creates expedited process. - Contractor owns risks associated with design, phasing, and constructability. - Allows for greater flexibility and adaptability in project sequencing and phasing. - Option for CDOT to request Additional Requested Elements and Alternative Technical Concepts. - Contractor has opportunity to determine means and methods and potential innovations during design (including avoidance or mitigation of 4(f)/6(f)), which could be beneficial considering the complexity.
Obstacles
- Minimal CDOT control of the design. - CDOT staff is less familiar with Design-Build delivery method. - Could create utility coordination and/or relocation issues. - Can cause significant delays because of greater risk of unforeseen issues that arise after construction has already begun. - May introduce scenarios where construction out-paces design which could lead contractor to decide to proceed with work that is at-risk because plans are still incomplete and technically not “for construction” yet. - Less certainty in terms of cost estimating. - More dynamic project overall may create scenario in which it is more challenging to coordinate with stakeholders and to keep the public up-to-date. - Uncertainty regarding ROW needs. - Complex 4(f) & 6(f) challenges may remain present even after construction has begun.
Rating
+



2) Delivery Schedule

The total project timeline from scoping through design, construction, and opening to the public. Consider both timing constraints for starting the project (or securing funding) and the importance of meeting overall completion deadlines.

DESIGN-BID-BUILD follows a sequential design and procurement process. While design must be completed before construction procurement, the procurement phase is relatively short once design is finalized.

Rating Key: +++: Most appropriate delivery method; ++: Appropriate Delivery Method; +: Least appropriate delivery method; NA: Factor not applicable or not relevant to the selection

Opportunities
- Provides the benefit of fully clearing project (ROW, Environmental, Utilities) prior to starting construction. - CDOT staff is very familiar with traditional Design-Bid-Build delivery schedule. - More simple contracting so shorter procurement. - More certainty about ROW and time to achieve possession.
Obstacles
- Relying on utility companies as third parties to complete relocations during construction can lead to risk of delays. - Less opportunity to accelerate any aspect of the project (i.e. long lead time procurement) because of linear nature. - Project team must make assumptions on construction timelines for a complex project without contractor input. - Delayed advertisement could limit control of construction sequencing and critical path. - Lack of contractor input on ROW needs or possible mitigation/minimization/avoidance.
Rating
++



CM/GC allows early contractor involvement, enabling construction to begin before design is fully complete. Parallel design and construction processes can accelerate the schedule, but coordination between the Construction Manager and designer and the process of reaching an acceptable Construction Agreed Price (CAP) may introduce delays.

Rating Key: +++: Most appropriate delivery method; ++: Appropriate Delivery Method; +: Least appropriate delivery method; NA: Factor not applicable or not relevant to the selection

Opportunities
Provides opportunity to deliver project in multiple packages, which can accelerate the project and help to align construction schedule and funding schedule.
Provides opportunity for Long Lead-Time Procurement (i.e. utilities, wall panels, signal poles, etc.) prior to design being completed which can accelerate the project.
Contractor participation in preconstruction provides them with a better understanding of the project and site conditions (complicated because of I-25 setting in urban env.) which can reduce the chance that they'll have challenges or issues arise that they weren't expecting, which could cause delays.
Early utility coordination and negotiations (i.e. Zayo fiber) which allows for more time to work on this challenging aspect.
Contractor feedback and input on phasing, staging, traffic control, constructability, ROW, etc. will allow for greater overall innovation which can lead to greater schedule certainty or shorten the construction schedule.
Ability to collectively identify and minimize ROW risks and responsibilities (Children's Museum, Aquarium, Brewmaster's House) can help avoid unnecessary delays in the acquisition process.
Earlier construction start potential which could help to move traffic to new bridges and remove deteriorating and low clearance bridges from CDOT infrastructure sooner.
Obstacles
General coordination between CDOT, designer, and contractor may add time to process. Additionally, CAP negotiations could become tedious and add time. Risk that you can't get a package out. Political changes could introduce challenges for the owner to deal with while managing designer/contractor for multiple packages.
Rating
+++



DESIGN-BUILD integrates design and construction under a single entity, allowing construction to start before design completion. Parallel design and construction can accelerate overall delivery, procurement is relatively long due to the time needed to develop the Request for Proposal (RFP) and evaluate proposals.

Rating Key: +++: Most appropriate delivery method; ++: Appropriate Delivery Method; +: Least appropriate delivery method; NA: Factor not applicable or not relevant to the selection

Opportunities
- Design-Build team owns risks associated with schedule. - Single contract for design and construction accelerates the project because construction can commence before completing the design. - Concurrent design and construction allows for better adaptation of design if any unexpected site conditions arise. It's a priority for the Design-Build to resolve problems which is beneficial to the schedule.
Obstacles
- This delivery method often provides the quickest path to completing construction, but that is not necessarily helpful on this project considering the funding schedule. - Could create utility coordination and/or relocation issues (especially considering complex utilities in Denver) which could result in serious impacts to schedule. This is especially true because of the risk management challenges faced by either the contractor or by CDOT. Contractors may feel uncomfortable accepting these risks without serious contingencies. In-house risk management is an option but CDOT is ill-equipped to handle risk of utilities in Denver. - Complicates efforts of trying to coordinate work activities so that they align well with local events (i.e. concerts and sports). Also makes it more challenging to avoid and/or minimize impacts to area businesses because there is less flexibility to try to accommodate their peak hours or seasons. This is due to the fact that it is difficult to define technical criteria in the project books before the Design-Build firm is identified with so much variability in events and business visitation. - Lack of input from contractor on ROW needs in general, and lack of input on opportunities for optimizing, mitigating, minimizing, or avoiding ROW takes altogether. This input could make the ROW process more efficient and beneficial to the schedule.
Rating
++



3) Project Cost Considerations

Includes estimating, controlling, and managing project costs within budget constraints. Consider the accuracy of early cost estimates, flexibility to adjust scope to meet budget, and the potential for cost risk throughout design and construction.

DESIGN-BID-BUILD Competitive bidding can provide low-cost construction for a fully defined scope. Cost accuracy is limited until design is complete, and the contractor's lack of design responsibility increases the likelihood of change orders.

Rating Key: +++: Most appropriate delivery method; ++: Appropriate Delivery Method; +: Least appropriate delivery method; NA: Factor not applicable or not relevant to the selection

Opportunities
- Fosters good price competition amongst contractors. - ROW acquisitions complete before construction begins so reduced risk of unexpected price escalation. - Upfront cost is reduced.
Obstacles
- Greater chance of plan or spec misunderstandings which could lead to Contract Modification Orders or claims. - No external estimating assistance or feedback could lead to estimating errors. - Since this will be a multi-year project there are greater risks associated with market volatility and inflation. - Reduced opportunity for innovation or contractor input on means/methods that might produce cost savings. - CDOT must rely on historical cost data rather than real-time conditions that apply to the project's unique complexity, location, and scope. - Contaminated materials (there is a historic landfill adjacent to the project site) may not be fully identified until construction. CDOT would own the risk of costly mitigation (i.e. dewatering) of contamination.
Rating
++



CM/GC Early collaboration with the contractor can reduce risk-based pricing. Negotiated Construction Agreed Price proposals (CAPs) are non-competitive and can introduce price risk. Provides flexibility to design within a defined budget.

Rating Key: +++: Most appropriate delivery method; ++: Appropriate Delivery Method; +: Least appropriate delivery method; NA: Factor not applicable or not relevant to the selection

Opportunities	
• Contractor has detailed understanding and input of plans and specs when project begins which would minimize Contract Modification Orders or claims.	
• Use of an Independent Cost Estimator can lead to greater cost accuracy.	
• Opportunity to resolve utility coordination/relocations early and limit costly re-design because of unexpected utility conflicts.	
• Greater flexibility to design to a specific budget, especially when working package by package.	
• Easier to align project flow with funding schedule.	
• Risk Contingency Pool provides a known ceiling because of the agreed-to-payment specification but also has potential savings if certain risks are never encountered.	
• The end-product likely achieves the greatest possible value.	
• Input from Construction Manager on feasible Maintenance of Traffic (MOT), and opportunity to develop MOT plans well in advance which would provide cost savings.	
Obstacles	
• CAP negotiations could be challenging and draw out delivery schedule and incur costs on such a complex project.	
• No competitive bidding and Construction Manager may be skilled at negotiating certain unit costs to their advantage.	
• May face price escalation risk if multiple packages are spread across multiple years.	
Rating	
+++	



DESIGN-BUILD allows collaboration and the use of Alternate Technical Concepts (ATCs) to achieve cost-efficient solutions. Costs are established early through the design-build proposal, and variable scope can be used to meet a fixed budget. Poor risk allocation can lead to higher contingencies.

Rating Key: +++: Most appropriate delivery method; ++: Appropriate Delivery Method; +: Least appropriate delivery method; NA: Factor not applicable or not relevant to the selection

Opportunities
• Design-Build team carries risk of market volatility • Allows a variable scope to match a fixed budget, and therefore the ability to maximize scope based on the available budget. • Innovation opportunities remain present throughout construction, which means that potential cost savings do too.
Obstacles
• Added design support (owner's rep) which is costly. • Design-Build team risk ownership and contingency is likely to be reflected in overall cost. • Changes that may become necessary to technical requirements due to potential changes at multiple levels of state and local government, or changes to design preferences of local stakeholders, could lead to cost overruns. • Extremely costly errors could occur since certain project elements could be partially or fully constructed while design is still ongoing.
Rating
+



4) Level of Design

The extent of design completion at the time of project delivery procurement, desired risk allocation, and the ability to incorporate contractor input.

DESIGN-BID-BUILD requires 100% design completion prior to construction procurement.

Design-Bid-Build is considered an appropriate delivery method. At the time of the PDSM workshop, the level of design is 30% and will not advance any further until the delivery method is finalized and procurement for final design is completed. Therefore, CDOT could proceed without issue on this traditional delivery method and complete construction plans prior to letting the project for bids to the construction industry.

CM/GC is most effective when procured during early to intermediate design (30%-60%). Advancing design too close to completion reduces the value of contractor input and collaboration.

CM/GC is considered an appropriate delivery method. At the time of the PDSM workshop, the level of design is 30% and will not advance any further until the delivery method is finalized and procurement for final design is completed. Therefore, CDOT can still achieve a significant amount of value from contractor input and collaboration during intermediate and final design (30%-100%).

DESIGN-BUILD is most effective when procured at a conceptual level of design (typically $\leq 30\%$), advanced only to define contract requirements and properly allocate risk.

Design-Build is considered an appropriate delivery method. At the time of the PDSM workshop, the level of design is 30% and will not advance any further until the delivery method is finalized and procurement for final design is completed. Therefore, CDOT can still properly allocate risk and develop the desired outcomes through the definition of contract requirements. A selected Design-Build team could take the preliminary design and prepare the final design without issue.



5) Risk Assessment

The selected delivery method should align with the project's risk profile and support effective identification, management, and allocation of risk.

DESIGN-BID-BUILD is appropriate for projects with well-defined scope and limited uncertainty. The Owner retains design and third-party risks. Projects with significant unknowns or unresolved risks may experience increased change orders and claims.

Rating Key: +++: Most appropriate delivery method; ++: Appropriate Delivery Method; +: Least appropriate delivery method; NA: Factor not applicable or not relevant to the selection

Opportunities
• ROW risk can be mitigated, clearance will be achieved before construction begins. • CDOT can work through stakeholder involvement and Third party coordination before advertisement.
Obstacles
• Complexity of the project could increase Contract Modification Orders and claims/disputes. • CDOT retains design risk on a highly complex project where design errors could be extremely costly and also where safety will be a significant challenge. • Unknown utility risks due to dense urban location. CDOT solely owns this risk. • Contaminated material risks (historic landfill). • No opportunity for contractor input on phasing, Maintenance of Traffic (Speer is gateway arterial volumes crossing I-25 with poor redundancy), constructability, etc. CDOT solely owns this risk. • Risk of unsuccessful stakeholder negotiations.
Rating
+



CM/GC is appropriate for projects with moderate to high complexity or risk that would benefit from early contractor involvement. Enables collaborative risk identification and allocation during preconstruction. Best when risks are not fully defined and can be mitigated through iterative design and construction input.

Rating Key: +++: Most appropriate delivery method; ++: Appropriate Delivery Method; +: Least appropriate delivery method; NA: Factor not applicable or not relevant to the selection

Opportunities
• Opportunity to utilize industry expertise to mitigate the risks of complex phasing, high risk bridge demolition, difficulty managing traffic, difficulty managing bikes and pedestrians, tight work areas, limited construction hours, and numerous traffic switches. • Allows for a proactive approach to managing/owning and sharing risks instead of a reactive one. • Independent Cost Estimator assistance with pricing risk • Optimizing ROW needs with contractor input • Early partnering between CDOT, designer, contractor can help to identify the better ways to limit impacts to stakeholders that are important community resources (Children's Museum, Aquarium, Brewmaster's House) and the public. Avoid public and political friction • CDOT shares utility risk with contractor. Allows for early utility package that could accelerate construction
Obstacles
• Multiple party coordination (CDOT, designer, contractor) • Risk of unsuccessful CAP negotiations adding time to project delivery • Risk of unsuccessful stakeholder negotiations
Rating
+++

DESIGN-BUILD is appropriate for projects where risks can be clearly defined and allocated through performance-based requirements. Transfers significant risk to the design-builder but requires well-developed project criteria.

N/A - Risk Assessment was not evaluated for Design-Build because it was determined to be the least appropriate delivery method when evaluating Primary Factors 1-4.

Project Delivery Selection Matrix Secondary Factors

6) Staff Experience and Availability

Consider whether sufficient staff resources and experience are available to effectively procure, administer, and oversee the project.

DESIGN-BID-BUILD requires staff experienced with traditional delivery to oversee design and construction phases available throughout the project.

N/A - Staff Experience and Availability was not evaluated for Design-Bid-Build because CM/GC was determined to be the most appropriate delivery method when evaluating Primary Factors 1-5.

CM/GC requires staff with strong project management and collaborative process experience. Active Owner involvement is needed to coordinate between designer and contractor, effectively manage risk, and facilitate CAP negotiations.

Region 1 Central Program possesses the staff resources and experience necessary to successfully administer a CM/GC project. Within the project team and program management, there are personnel with extensive design, construction, maintenance of traffic, utility coordination, ROW, and stakeholder management experience. In addition, CDOT has successfully delivered other CM/GC projects and so the project team can draw upon internal subject matter experts, established CM/GC procedures, and lessons learned from prior projects. These resources provide confidence that the agency can effectively manage the collaborative processes, risk management activities, and CAP negotiations associated with CM/GC delivery.

DESIGN-BUILD requires Owner resources for procurement and oversight during design and construction. Staff should have experience developing RFQs/RFPs and managing performance-based contracts or retain an owner's rep with these skills.

N/A - Staff Experience and Availability was not evaluated for Design-Build because CM/GC was determined to be the most appropriate delivery method when evaluating Primary Factors 1-5.

7) Level of Owner Oversight and Control

The degree to which the Owner retains control over design decisions, construction activities, and overall project execution. Consider how much control is desired versus how much responsibility can be delegated.

DESIGN-BID-BUILD The Owner manages separate contracts and retains decision-making authority throughout.

N/A - Level of Owner Oversight and Control was not evaluated for Design-Bid-Build because CM/GC was determined to be the most appropriate delivery method when evaluating Primary Factors 1-5.

CM/GC maintains a high level of Owner control over both design and construction while incorporating contractor input.

The project team has already established important relationships with project stakeholders and remains accountable for commitments made to those stakeholders throughout project development and construction. CM/GC allows CDOT to retain control of project scope, design decisions, stakeholder commitments, public messaging, and overall project direction while still benefiting from contractor input. This balance of collaboration and owner control is particularly important for a high-profile urban project where public perception and stakeholder trust will play a critical role in project success.

DESIGN-BUILD transfers significant responsibility for design and construction to the design-builder. Clearly defined requirements are necessary to ensure desired outcomes.

N/A - Level of Owner Oversight and Control was not evaluated for Design-Build because CM/GC was determined to be the most appropriate delivery method when evaluating Primary Factors 1-5.

8) Competition and Contractor Experience

Consider the availability, qualifications, competitiveness, and capacity of the contractor market, as well as experience with the delivery method.

DESIGN-BID-BUILD is widely understood, with broad contractor participation and experience. Typically results in a high level of competition, with contractor selection based on low bid.

N/A - Level of Owner Oversight and Control was not evaluated for Design-Bid-Build because CM/GC was determined to be the most appropriate delivery method when evaluating Primary Factors 1-5.

CM/GC uses a qualifications-based selection process to identify a contractor early. Pricing is negotiated through the CAP, which may reduce competitive pricing pressure.

Colorado has a strong and competitive contractor market with demonstrated CM/GC experience on complex transportation projects. Multiple qualified contractors are expected to have the experience, capacity, and technical expertise necessary to successfully deliver a project of this scale and complexity. The qualifications-based procurement process associated with CM/GC will allow CDOT to select a contractor based on demonstrated experience, technical approach, and team capabilities rather than solely on low bid, which is considered advantageous for a project with significant risk and stakeholder sensitivity.

DESIGN-BUILD Uses a best-value selection process that balances price and non-price factors. Requires a market with sufficient experience in design-build delivery and the ability to develop responsive proposals.

N/A - Level of Owner Oversight and Control was not evaluated for Design-Build because CM/GC was determined to be the most appropriate delivery method when evaluating Primary Factors 1-5.

Project Delivery Selection Summary

Review all factor ratings across all delivery methods and use the collective results to identify which Delivery Method best positions the project to achieve its goals.

Primary Factors

Rating Key: +++: Most appropriate delivery method; ++: Appropriate Delivery Method; +: Least appropriate delivery method; NA: Factor not applicable or not relevant to the selection

	Design-Bid-Build	CM/GC	Design-Build
Project Complexity & Innovation	++	+++	+
Project Delivery Schedule	++	+++	++
Project Cost Considerations	++	+++	+
Level of Design	++	++	++
Risk Assessment	+	+++	NA

Secondary Factors

Rating Key: P: Pass; F: Fail; NA: Factor not applicable or not relevant to the selection

	Design-Bid-Build	CM/GC	Design-Build
Staff Experience/Availability (Owner)	NA	P	NA
Level of Oversight and Control	NA	P	NA
Competition and Contractor Experience	NA	P	NA

Project Delivery Selection Summary Conclusions and Comments

Based on a comprehensive evaluation of the primary and secondary project delivery selection factors, the Project Delivery Selection Matrix (PDSM) workshop panel determined that the Construction Manager/General Contractor (CM/GC) delivery method is the most appropriate delivery method for the I-25: Speer & 23rd Bridge and Interchange Project. The CM/GC delivery method allows for great team collaboration opportunities between CDOT, the CM/GC Services Contractor, and the Design Consultant team. It also comes with advantages such as risk-sharing, flexibility to implement design and construction packages based on available funding streams, and opportunities for early, thorough, and productive coordination with stakeholders. Leveraging all these advantages and doing so with a well-rounded team that has vast industry-related expertise and varied perspectives will be a key to the success of this project. That is especially true when considering the project's unique combination of complexity, safety-critical features, intense stakeholder sensitivity, and an incremental funding profile. Ultimately, CM/GC is expected to be the most appropriate method to successfully deliver this project while maximizing value and simultaneously minimizing impacts and safety risks to the public in the process.

The I-25: Speer & 23rd Bridge and Interchange Project is located in central Denver, one of the most heavily traveled areas in Colorado. The urban setting, the numerous stakeholders who reside, work, and conduct business in the area, and the high vehicle, bicycle, and pedestrian volumes that travel through the project area daily contribute to an overall high level of complexity. In addition to the overall complexity, the project faces notable obstacles that include but are not limited to very tight construction constraints, complicated phasing requirements, various elements of safety-critical work, high potential for impacts to the traveling public and adjacent stakeholders, a highly restrictive lane closure strategy, funding constraints, and high density of utilities, right-of-way (ROW), and environmental resources. All these obstacles were important considerations in making the determination that CM/GC is the preferred delivery method. These characteristics collectively favor a delivery method that emphasizes collaboration, flexibility, and proactive risk management.

A primary advantage of the CM/GC delivery method is the opportunity for early and continuous collaboration between CDOT, the Design Consultant, and the CM/GC Services Contractor. This collaborative environment allows contractor expertise to be incorporated during design when key decisions regarding construction phasing, maintenance of traffic, constructability, utility coordination, ROW impacts, and stakeholder commitments are being developed. Rather than relying solely on assumptions regarding contractor means and methods, CDOT can benefit from real-world construction expertise throughout project development. This is expected to improve

construction efficiency, increase schedule certainty, enhance worker and public safety, and reduce impacts to motorists, bicyclists, pedestrians, businesses, and nearby communities.

The project's risks are also shared collectively and managed more easily with the CM/GC delivery method. Risks associated with utility relocations, ROW acquisitions, traffic management, stakeholder commitments, environmental constraints, and bridge construction over an active and extremely busy interstate can be collaboratively identified, evaluated, mitigated, and appropriately allocated during design. This proactive approach to risk management reduces the likelihood of costly redesigns, change orders, claims, and schedule delays during construction. The collaborative development of a shared risk pool, the use of an Independent Cost Estimators, and the negotiation of a Construction Agreed Price (CAP) further enhances informed decision-making and greater cost certainty.

Another important consideration is the project's anticipated incremental funding profile. Funding is expected to be delivered through multiple sources over several years rather than as a single upfront allocation. CM/GC offers flexibility to develop logical construction packages, advance early utility relocation or materials procurement work, and align project implementation with available funding. This is a useful approach to strategize the project delivery based on restrictive funding streams. This flexibility provides CDOT with additional tools to manage budget constraints while maintaining progress toward overall project goals.

The CM/GC delivery method also provides significant advantages related to stakeholder management and public relations. The project will directly affect prominent and highly visible stakeholders, including local businesses, cultural destinations, recreational users, emergency service providers, and event venues. Early contractor involvement provides additional opportunities to identify creative approaches for maintaining access, reducing temporary impacts, sequencing work around major events, and minimizing disruptions to the traveling public. Establishing relationships between stakeholders, CDOT, the Design Consultant, and the CM/GC Services Contractor early in project development is expected to improve communication, build trust, and support successful project implementation.

The workshop participants also determined that CDOT possesses the staff resources and experience necessary to successfully administer a CM/GC project. While traditional Design-Bid-Build delivery is more familiar to many staff members, the project team includes personnel with extensive design, construction, maintenance of traffic, utility coordination, ROW, and stakeholder management experience. In addition, CDOT has successfully delivered other CM/GC projects and can draw upon internal subject matter experts, established CM/GC procedures, and lessons learned from prior projects. These resources provide confidence that the agency can effectively manage the collaborative processes, risk management activities, and CAP negotiations associated with CM/GC delivery.

The level of owner oversight and control afforded by CM/GC was also viewed as a significant benefit. CDOT has already established important relationships with project stakeholders and remains accountable for commitments made to those stakeholders throughout project development and construction. CM/GC allows CDOT to retain control of project scope, design decisions, stakeholder commitments, public messaging, and overall project direction while still benefiting from contractor input. This balance of collaboration and owner control is particularly important for a high-profile urban project where public perception and stakeholder trust will play a critical role in project success.

The workshop participants further noted that Colorado has a strong and competitive contractor market with demonstrated CM/GC experience on complex transportation projects. Multiple qualified contractors are expected to have the experience, capacity, and technical expertise necessary to successfully deliver a project of this scale and complexity. The qualifications-based procurement process associated with CM/GC will allow CDOT to select a contractor based on demonstrated experience, technical approach, and team capabilities rather than solely on low bid, which is considered advantageous for a project with significant complexity, risk, and stakeholder sensitivity.

Although Design-Bid-Build was determined to be an appropriate delivery method based on the majority of the primary selection factors, it was not recommended because it limits contractor involvement during design and maintains a greater level of risks for all parties. The project's complexity, stakeholder sensitivity, and need for flexibility would reduce many of the traditional advantages associated with Design-Bid-Build and increase the potential for change orders, claims, schedule impacts, and missed opportunities for innovation.

Design-Build was also not recommended. While Design-Build offers opportunities for innovation and accelerated delivery, the project's success depends heavily on CDOT maintaining a high level of project control, extensive proactive stakeholder coordination, careful management of ROW and utility risks, and flexibility to align construction with a multi-year funding stream. The workshop participants determined that these project characteristics are better served through the collaborative framework of CM/GC. Additionally, the evolving nature of stakeholder commitments, utility coordination requirements, and funding availability would make it difficult to clearly define the project's technical criteria and requirements, and to appropriately allocate risk at the outset of a Design-Build procurement.

Based on the collective evaluation of all primary and secondary factors, CM/GC provides the best overall balance of collaboration, risk management, flexibility, owner control, stakeholder coordination, cost certainty, and schedule management. For these reasons, the workshop participants recommend CM/GC as the preferred delivery method for the I-25: Speer & 23rd Bridge and Interchange Project.