

STATE OF COLORADO



COLORADO
Department of Transportation
Division of Engineering Support

Engineering Contracts Unit

Maggie Molinas, Contracting Officer
4201 East Arkansas Avenue Suite 200
Denver, Colorado 80222

DATE: October 30, 2017
TO: Paul Jesaitis, R1 Transportation Director
FROM: Maggie Molinas, Contracting Officer,
On Behalf of Carrie DeJiacomo, Region 1 Program Engineer
SUBJECT: Request for CDOT R1 I-25 South Gap project CM/GC Delivery and Advertisement
PROJECT # NHPP 0252-450 (21102)
LOCATION: I-25 Monument to Castle Rock

Pursuant to MAP 21 and CDOT's established process for the procurement of Construction Manager/General Contractor (CMGC) contracts, the Region 1 South Program is requesting to use the CMGC method of project delivery on the I-25 South Gap project.

On October 20, 2017, CDOT Region 1 and 2, the FHWA, specialty unit representatives and representatives for El Paso and Douglas Counties met with a third party facilitator and conducted a review for the I-25 South Gap Project. Risks were identified, categorized, assessed, and listed. Design Bid Build, Design Build, and Construction Manager/General Contractor delivery methods were discussed in references to the goals and risks for the I-25 South Gap to determine the best project delivery method. The merits of each delivery method were discussed and each method was evaluated under the five primary factors of Complexity & Innovation, Delivery Schedule, Cost, Level of Design and Risk Assessment. The secondary factors of Staff Experience/Availability (owner), Level of Oversight & Control, and Competition & Contractor Experience were also discussed and were given pass/fail ratings by the project team.

CMGC was selected as the most appropriate procurement process to deliver the project based on three primary factors of Complexity & Innovation, Delivery Schedule and Risk Assessment. CMGC was evaluated to be an appropriate delivery method under the primary factors of Cost and Level of Design. CMGC also passed a review of the secondary factors for Staff Experience/Availability, Level of Oversight and Control, and Competition and Contractor Experience.

CMGC contracting is an approved delivery process under FHWA MAP-21 rules and regulations.

I CONCUR:



Paul Jesaitis, Region 1 Transportation Director

10/31/2017

(Date)

Attachments: R1 Project Delivery Selection Matrix

Cc: Richard Zamora, Deputy Director
Jerad Esquibel, Director of Project Support
Carrie DeJiacomo, Program Engineer
Jody Allen, Project Manager
Maggie Molinas, Contracting Officer
Nabil Haddad, Innovative Contracts Manager

Project Delivery Selection Workshop Summary

Workshop Summary	
Project Name:	I-25 South Gap Project: Monument to Castle Rock
Workshop Date:	October 20, 2017, 9 a.m. – 4 p.m.
Workshop Location:	CH2M – 9191 S Jamaica St., Englewood
Facilitator:	Keith Molenaar, University of Colorado, Boulder
Delivery Method Selected:	Construction Manager/General Contractor (CM/GC)

Workshop Participants	
Name	Email
Jody Allen, CDOT R1 Project Manager	jody.allen@state.co.us
Chuck Attardo, CDOT R1 Environmental	chuck.attardo@state.co.us
Shane Binder, Apex Design – Traffic & ITS	shane.binder@apexdesignnpc.com
Shaun Cutting, FHWA Program Delivery Team Leader	shaun.cutting@dot.gov
Scott Dalton, CDOT R2 representative	scott.dalton@state.co.us
Carrie DeJiacomo-Wiedner, CDOT R1 Program Eng	Carrie.dejiacomo@state.co.us
Emeka Ezekwemba, FHWA Area Engineer	nnaemeka.ezekwemba@dot.gov
Art Griffith, Douglas County Capital Projects Manager	agriffit@douglas.co.us
Jennifer Irvine, El Paso County – County Engineer	jenniferirvine@elpasoco.com
Roman Jauregui, CDOT R1 Resident Engineer	roman.jauregui@state.co.us
Randy Jensen, FHWA Program Delivery	randy.jensen@dot.gov
Paul Jesaitis, CDOT R1 Transp. Director	Paul.Jesaitis@state.co.us
Matt Nork, CH2M - Structures	Matthew.Nork@ch2m.com
Michelle Pinkerton, CH2M Engineering Project Mngr	michelle.pinkerton@ch2m.com
Carlos Sala, CH2M – Roadway Design	carlos.sala@ch2m.com
David Singer, CDOT Environmental	david.singer@state.co.us
Troy Slocum, CH2M - Hydraulics	troy.slocum@ch2m.com
Jacob Southard, CDOT R1 Design Engineer	Jacob.southard@state.co.us
Scott Throm, CDOT R1 – ROW & Survey	scott.throm@state.co.us
Mandy Whorton, CH2M Project Manager	mandy.whorton@ch2m.com
George Woolley, CH2M	george.woolley@ch2m.com
Richard Zamora, CDOT R1 Deputy Program Delivery	Richard.zamora@state.co.us

Project Delivery Description

Project Attributes
Project Name: I-25 South Gap Project
Location: I-25, Monument to Castle Rock (MP 161 to MP 179)
Estimated Budget: \$350M
Estimated Project Delivery Period: Contractor NTP no later than early November 2018
Required Delivery Date (if applicable): Project is estimated to require two construction seasons to complete.
Source(s) of Project Funding: State Funds: Potential SB267, tolling revenue, FASTER Safety (for early actions) Federal funds: INFRA Grant application, HPTE RAMP Development Funds (for NEPA and Prelim. Design) Local funds: Douglas County, Nov 2017 TABOR Ballot Measure for El Paso County, Nov 2017 Ballot Measure for Pikes Peak Rural Transportation Authority (PPRTA)
Project Corridor: I-25 between Monument and Castle Rock
Anticipated Major Features of Work – pavement, bridge, sound barriers, etc.: Widening and overlay with possible sections of pavement reconstruction, bridge reconstruction or widening, retaining walls, culvert extensions or replacement, concrete barrier, guardrail, installation of ITS and tolling elements, lighting, traffic signs and permanent pavement markings, deer fence, wildlife crossings, improvements of ramp tie-ins to I-25 to current standards.
Major Schedule Milestones: EA – April 2018, NEPA decision – May 2018; Contractor NTP early November 2018
Major Project Stakeholders: CDOT, HPTE, FHWA, Douglas County, El Paso County, Town of Larkspur, Town of Castle Rock, Colorado Springs, Town of Monument, PPACG, DRCOG, PPRTA
Major General Obstacles: Securing funding, accelerated project schedule
Major Obstacles with Right of Way, Utilities, and/or Environmental Approvals: UPRR approval should the I-25 Structures over the UPRR tracks be widened or replaced. Need to stay within right-of-way to manage environmental permitting/agreements for Section 4(f), Section 106, Section 404, Section 7, and SB 40.
Major Obstacles during Construction Phase: Minimize temporary pavement while maintaining four lanes of traffic during construction. Lack of alternate routes for short term full closures. Utility impacts still unknown.
Safety Issues: Existing high number of vehicle crashes along this corridor. Crash types includes rear-end collisions due to speed differentials and congestion, wildlife collisions, fixed object collisions with barrier adjacent to travel lanes, and injuries and fatalities due to substandard shoulder widths.
Sustainable Design and Construction Requirements: TBD

Project Delivery Goals

Project-Specific Goals

Goal #1:

Minimize project delivery time. This includes the acceleration of the start time of design and construction while minimizing the overall project delivery duration. Execute construction contract by early November 2018 or sooner.

Goal #2:

Maximize the project scope and improvements within the project budget (\$350M) and schedule

Goal #3:

Maximize capacity, improve safety, and provide a reliable trip for the traveling public.

Goal #4:

Minimize inconvenience to the traveling public during construction.

Goal #5:

Construct an environmentally responsible project.

Project Delivery Constraints

General Constraints
Source of Funding: <ul style="list-style-type: none">Source of Funding have been identified, but not secured.
Schedule constraints: <ul style="list-style-type: none">Extremely compressed NEPA and Design schedule.Have executed construction contract by early November 2018.
Federal, state, and local laws: <ul style="list-style-type: none">NEPA and associated environmental requirements
Third party agreements with railroads, ROW, etc.: <ul style="list-style-type: none">UPRRPrivate party and land owner agreements for wildlife crossingsRight-of-way/easement agreements with applicable local agencies, Douglas County Open Space, Conservation Fund, and Douglas County Land Conservancy.
Project Delivery Specific Constraints
Project delivery constraint #1: Accelerated schedule
Project delivery constraint #2: NEPA/Environmental requirements- Section 106 Consultation Process and preparation of an EA
Project delivery constraint #3: Adverse weather conditions during construction.
Project delivery constraint #4: Maintaining two lanes of traffic during construction in each direction during peak travel times.
Project delivery constraint #5: \$350 Million Budget
Project delivery constraint #6: Stay within Right of Way

Project Risks

Identified Project Risks
Project Risk: Meeting the aggressive design schedule.
Project Risk: Obtaining railroad agreements in a timely manner. This could impact construction schedule.
Project Risk: Meeting accelerated NEPA schedule.
Project Risk: Work-window restrictions (i.e. environmental restrictions, weather shut-down).
Project Risk: Section 106, Section 404 permitting, Section 4(f), Section 7, and EA approvals.
Project Risk: Condition of existing pavement (mill and overlay or reconstruct) and structures (repair or replacement?).
Project Risk: Determining appropriate tie-ins of express lanes of the project to existing general purpose lanes on both ends of the project.
Project Risk: Meeting or upgrading existing roadway geometrics to current design standards.
Project Risk: Political/Jurisdictional wants and needs and aligning them with the overall project goals.
Project Risk: If required, acquiring Right of Way as needed in a timely manner. Full acquisitions could be started before NEPA is complete, but partial acquisitions cannot be started until NEPA approval.
Project Risk: Coordination with open space owners adjacent to the project.
Project Risk: Water quality type and location of facilities within existing ROW.
Project Risk: Floodplain/Floodway impacts triggering the CLOMR/LOMR process.
Project Risk: Incorporating the project into the DRCOG and PPACG Transportation Improvement Program (TIP).
Project Risk: Conflict with Department of Defense fiber optic cable.
Project Risk: Public acceptance of an Express Lane.

Project Delivery Selection Summary

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

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 Summary Conclusions and Comments

After completing the project delivery selection matrix during the workshop, CMGC was determined by all workshop participants to be the most appropriate delivery method to meet project goals. There was strong discussion of the project goals with the focus of a construction contract by November 2018, which played in strongly in the ratings. While there was discussion about the ratings for the selection factors, the majority of participants agreed on each of the ratings for the various delivery methods. The decision that CMGC was the preferred method was unanimous.

Project Complexity & Innovation:

The project is large in scope but not complex. For all delivery methods, the simplicity of the roadway design and compressed schedule do not lend the project to significant design innovation. Pavement unknowns are the most complex aspect of the job with the highest potential to create issues in design and construction due to the significant costs in pavement, desire to limit reconstruction areas, and the limited geotechnical information available at the time of the workshop. CMGC was determined to take best advantage of design innovation since it allows CDOT more control in refining design alternatives, including multiple pavement and wall designs, before bidding. CMGC also provides opportunity to maximize innovation in construction phasing and constructability by taking advantage of contractor input, potentially identifying early packages, providing more cost certainty with design alternatives, and coordinating better with operations, maintenance, ITS, and traffic incident management. Lastly, although not part of the decision selection, CMGC is an innovative contracting method nationally, and CDOT is one of the leaders in the country in completing CMGC projects which provides an advantage for INFRA funding application.

Project Delivery Schedule:

CMGC provides the quickest opportunity to get a contractor on board, and to potentially get an early package under construction by November 2018. The ability to have multiple construction packages provides a number of other potential advantages in phasing of complex elements and/or the delivery of immediate travel and safety benefits. The CMGC contracting schedule is the most realistic of the delivery methods. While feasible for both DBB and DB, the design schedule (DBB) and procurement schedule (DB) would be the fastest ever completed by CDOT with little to no float. Because the construction contract execution was the primary schedule goal, CMGC was the most appropriate to mitigate delays in high risk areas by offering early construction packages; however, the participants were somewhat split about the best delivery method if the overall project completion was a goal. Some felt that construction could be completed quicker with DBB due to the contractor having complete plans; others felt that because DB has historically resulted in schedule savings, the project would be completed sooner with the DB method.

Project Cost Considerations:

CMGC provides the most cost certainty of the project delivery methods with the CAP. However, CAP negotiations have sometimes resulted in negotiated costs being higher than anticipated, and the lack of competition on pricing creates budget concerns, particularly in later packages when construction is underway. However, because the project is not complex, there are limited alternative elements for which price innovation could distinguish bids, regardless of delivery method.

Level of Design:

The conceptual nature of the current design lends itself to any delivery method.

Risk Assessment:

CMGC shares risks between CDOT and the contractor, which was determined the most appropriate with the pavement risks. Other risks related to schedule – for contracting and pre-construction activities – and stakeholder agreements were best managed with CMGC due to the aggressive schedule assumptions in the DBB and DB schedules.

Secondary Selection Factors:

CDOT has completed 11 CMGC projects, has established guidance and best practices, and has adequate resources available to manage the project. There are also sufficient resources in the local contractor community to respond to the CMGC procurement. It was noted that CMGC requires a strong project manager that can coordinate design and construction teams, facilitate cooperation, and build and maintain teamwork. This is particularly important with the accelerated schedule, as both the procurement process and contractor input have the potential to delay design progress. CMGC offers a good balance between oversight and risk sharing.

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
Analyze multiple wall and pavement designs before bidding.	The simplicity of roadway design and compressed schedule does not lend itself to innovative design.	+
Provides additional opportunity to refine design alternatives.	Minimal contractor input to maintenance of traffic and phasing.	
Provides additional opportunity to prioritize design refinements.	Length of project creates risk associated with pavement and geotechnical issues that the agency may not manage.	
Provides opportunity to coordinate design with stakeholders and their projects in the corridor.	Minimal contractor input into constructability.	
Minimizes risk of environmental reevaluation.	Decreased ability to work with the contractor for innovative environmental mitigation.	
Simplicity lends itself to efficient design processes.		
Ability to finalize key design elements in coordination with key stakeholders.		
Provides better opportunity to coordinate with operations, maintenance, ITS, and traffic incident management for potentially innovative solutions.		
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
Analyze multiple wall and pavement designs before bidding.	The simplicity of roadway design and compressed schedule does not lend itself to innovative design.	++
Provides additional opportunity to refine design alternatives.	Length of project creates risk associated with pavement and geotechnical issues that the agency may not manage.	
Provides additional opportunity to prioritize design refinements.	Increased size and complexity of project teams create potential for inefficiency, increased complexity of decision making, and/or loss of innovation.	
Provides opportunity to coordinate design with stakeholders and their projects in the corridor.	Contractor could influence less innovative solution due to preferred methods and means.	
Minimizes risk of environmental reevaluation.		
Simplicity lends itself to efficient design processes.		
Ability to finalize key design elements in coordination with key stakeholders.		
Provides better opportunity to coordinate with operations, maintenance, ITS, and traffic incident management for potentially innovative solutions.		
Earlier opportunity for contractor to provide input on constructability, pavement, and other design issues.		
Ability to optimize phasing and maintenance of traffic.		
Innovative phasing supports other projects goals such as improving safety and environmental mitigation.		

Maximize contractor input into constructability.		
Ability to work with the contractor for innovative environmental mitigation.		
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
Contractor assumes risk of design and could provide more innovative solutions, particularly with respect to pavement design.	The simplicity of roadway design and compressed schedule does not lend itself to innovative design.	-
Increased opportunity for phasing and maintenance of traffic.	Potential loss of innovation in partnership with stakeholders.	
Increased opportunity for constructability.	Loss of control of project outcomes in terms of innovation for maintenance, operations, and permitting.	
Increased opportunity for intimacy of design and packaging	Loss of control of project design elements around maintenance, water quality, traffic operations, ITS, and traffic incident management.	
Flexibility to provide critical project elements sooner.	Project constraints do not lend themselves to innovative design.	
Ability to incentivize contract for contractor-based environmental solutions and mitigations.		
Greater ability to have innovative solutions to minimize inconvenience to travelling public.		
Ability to compete innovative solutions during the procurement process.		

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
Simplicity of design and construction elements lends itself to an accelerated design and procurement schedule.	One contract package provides a schedule risk for meeting the project goal of executing contract by November 2018.	+
No design procurement requirement.	Lack of appropriate amount of time for contractor teaming and bid development.	
Increased certainty and control of design schedule.	Cannot move into final design until NEPA is complete.	
Increased design information to support permitting.	Lack of time for constructability reviews.	
Reduces number and complexity of environmental reevaluations.	Lack of schedule flexibility to accommodate change prior to procurement of construction contract.	
Opportunity to get work in place sooner because plans will be complete.	Design needs to be complete prior to contractor procurement.	
Smaller project team with streamlined communications and decision making could shorten schedule.		
Scalable to available funding in regards to November 2018 contract procurement.		
Increased opportunity for earlier construction completion because the full plans are available.		
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
Quick contractor procurement.	No CAP by November 2018.	++
A smaller work package could be obtained by November 2018.	Potential to have to rebid the project due to failure to reach agreed upon price.	
Tailor design to fast construction (phasing, constructability, means & methods, materials).		
Opportunity to have multiple construction packages to mitigate delays in high risk areas.		
Scalable to available funding in regards to November 2018 contract procurement.		
Flexibility to start construction sooner than November 2018.		
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
Contractor on board prior to NEPA.	Lack of procurement time to development and award RFP prior to November 2018.	+
Contractor could have faster overall delivery schedule.	Longer to complete final design after contract award.	
Tailor design to fast construction (phasing, constructability, means & methods, materials).	Compressed design schedule due to contractor wanting to start work earlier.	
Competing schedules could result in faster delivery.		

Opportunity to have multiple construction releases to mitigate delays in high risk areas.	
Can compete traffic control and maintenance of traffic.	

3) 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
		+
CMGC - Can utilize a lower level of design prior to procurement of the CMGC and then joint 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
Early enough to get contractor input		+
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
Current level of design is low.	Getting to right level of geotechnical and survey.	+

4) 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
Better quantity estimates and cost estimates	Risk premium due to short advertisement schedule.	+
Competitive bidding environment.	Potential for high bids and potential to re-advertise.	
Simplicity of project will provide a good bidding environment.	Greater contingency for unforeseen conditions.	
	Difficult to maximize scope.	
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
Flexibility in scope is easier to accommodate.	Uncertainty of CAP negotiation and agreement on price.	+
Cost certainty is high.	Not a competitive bid. Loss of benefit of competitive, sealed bid.	
Opportunity for shared risk pool.	Disconnect between design and price so scope is not achieved.	
	Later design packages can be difficult to negotiate.	
	Cost premium not warranted given project simplicity.	
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
Can use ATC/ARE processes to maximize scope.	Not having enough alternative elements to make fixed price/best value procurement.	+
Cost certainty through potential fixed price procurement.	Lack of level of definition of performance specifications could increase cost or misalign scope.	
Can benefit from competitive design and construction.		

5) Risk Assessment of Delivery Methods

Risk is an uncertain event or condition that, if it occurs, has an effect on 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
	Accelerated schedule difficult to get to RFP.	-
	Owner retains majority of risk.	
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
Highest probability of hitting November 2018 construction advertisement date.		+
Opportunity for sharing risk		
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
Transfer of risk	Overhead of DB is not worth the innovation that might be gained.	-
	Accelerated schedule difficult to get to RFP.	
	Low quality if performance specifications are not adequately defined.	
	May be challenging to define CDOT long-term operations and maintenance goals due to the compressed 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

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
Project team has experience in CMGC.	Taking resources to develop RFP and secure contractor quickly.	Pass

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

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
CMGC - Most control by Agency over both the design, and construction, and control over a collaborative agency/designer/contractor project team		
Opportunities	Obstacles	Rating
Owner control in delivering project within tight timeline with input from CMGC.	Securing contracts for CMGC and ICE.	Pass
Tailor design to fast construction (phasing, constructability, means & methods, materials).		
Opportunity to have multiple construction packages to mitigate delays in high risk areas.		
Minimizes risk of environmental reevaluation.		
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

8) Competition and Contractor Experience

Competition and availability refers to the level of competition, experience and availability in the market place 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
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
Qualifications based selection allows for selection of high quality contractor.	Not a competitive bid. Loss of benefit of competitive, sealed bid.	Pass
Cost certainty is high.		
Qualified designers already secured.		
DESIGN-BUILD - Allows for a balance of price and non-price factors in the selection process. Medium level of marketplace experience.		
Opportunities	Obstacles	Rating

