Design-Build Suitability Assessment

[Project Name]

P.I. No.:
County:
Date:

[Insert Location Map, if available]

Design-Build Suitability Ranking Summary:

Opportunities	Relative Importance	Weighted Total
Project Delivery Schedule	##%	
Innovation	##%	
Level of Design	##%	
Project Delivery Cost	##%	
Quality	##%	
Staff Experience	##%	
Marketplace Conditions, Competition and Design Build Team	##%	
Total		

Design-Build Suitability Range/Assessment		
Risks properly assigned and/or mitigated	**Excellent**	80-100
Some mitigation necessary to ensure successful delivery	**Good**	60-80
Design-Build delivery is risky; another delivery method may be more suitable	**Mediocre**	40-60
Another delivery method is suitable	**Poor**	Below 40

Notes and recommendations:

- Based on the above score, Design-Build could be a(n) *[Insert Assessment]* candidate to achieve GDOT delivery goals. Critical activities for Design-Build procurement/implementation include:
    - [ ]
- As part of the RFP package, GDOT should consider providing [*modify as needed*]:
    - Minimum scope requirements
        - Lane closure restrictions, detour plan and liquidated damages
        - Performance and prescriptive scope requirements
        - Other requirements
    - Approved concept report
    - Approved environmental document
    - Survey database and survey control package
    - Costing Plans/Bridge Layouts
    - Some level of geotech data
    - Approved pavement design
    - Utility MOUs
    - Other
- Which selection method(s) would likely achieve Department's goals for this project:
    - [One Phase Low Bid, Two Phase Low Bid or Best Value selection method]

1. General Project Information

Project information	
Status	Concept – [*brief description of status*] Environmental – [*brief description of status*] ROW – [*brief description of status*] Utilities – [*brief description of status*] Geotechnical – [*brief description of status*] Preliminary Plans – [*brief description of status*] Pavement Design Approval – [*brief description of status*] Bridge Layout(s) – [*brief description of status*] Other – [*brief description of any other items and their status*]
Funding	PE (FY [__]) – [$_____] ROW (FY [__]) – [$_____] UTIL (FY [__]) – [$_____] CST (FY [__]) – [$_____]
Estimated delivery costs and proposed authorization year necessary to delivery the Design-Build project	PE (FY [__]) – [$_____] ROW (FY [__]) – [$_____] UTIL (FY [__]) – [$_____] CST (FY [__]) – [$_____] *Note: PE may be able to be reduced since final design would be shifted to CST phase for Design-Build. CST phase should include costs for design complete, utility relocation costs, mitigation costs, third party costs, E&I, Stipulated Fee and risk contingency, etc… Utility phase costs would only be for those items not anticipated to be included in the Design-Build contract, but are reimbursable.*
Project of Division Interest (PoDI)	Yes/No (Is the project specific oversight agreement available?)
Major Features of Work	

Major Milestones	• Pre-let:
	  ○ [_____]
	• Post-let:
	  ○ [_____]

Project Stakeholders	[_____]
Major Risks Summary/ Brief mitigation summary	Environmental document – [_____] R/W – [_____] Utilities – [_____] Permitting – [_____] Stream Buffer Variance – [_____] MS4 – [_____] NPDES – [_____] Other – [_____]

2. Specify Project Goals

Primary Delivery Goals	[_____]
Secondary Delivery Goals	[_____]

3. Design-Build "Deal-Breaker" Issues (If any responses are "No" then project not suitable)

a. Legal & Statutory Requirements: Considering the project characteristics (type and size), does Georgia current regulation allow for the use of Design Build contracting?

- [*Yes/No*]

b. Agency Resources and Experience: Considering available GDOT resources and/or GDOT's access to Design Build consultants, can this project be effectively managed as a Design Build contract?

- [*Yes/No*]

c. Project Funded: Considering GDOT's funding resources, can this project receive funding in foreseeable future, in order to be delivered using a Design Build contract?

- [*Yes/No*]

d. Leadership Support: Does GDOT's leadership support the utilization of Design Build contracting for this project?

- [*Yes/No*]

e. Design Build Marketplace Conditions: Considering available Design Build expertise in Georgia, and GDOT's potential access to qualified Design Build Teams, can this project be delivered using a Design Build contract?

- [*Yes/No*]

4. SWOT Analysis

a. SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis is used to determine the appropriateness of Design Build with respect to specific factors. These factors are given scores based on the importance of each factor. SWOT analysis addresses the following issues:

- **S**trengths: Characteristics of Design Build that give it an advantage with respect to the issue under consideration;
- **W**eaknesses (or Limitations): Characteristics of Design Build that create disadvantages with respect to the issue under consideration;
- **O**pportunities: Chances to improve performance (e.g. achieve GDOT's project goals; greater benefits; higher efficiencies) under a Design Build contract;
- **T**hreats: Elements that could result in for GDOT with Design Build contracting.

b. Strengths and Weakness are scored on a 1-10 scale with Strengths receiving a positive score and Weaknesses a negative score.

c. Opportunities and Threats are scored on a 1-5 scale with Opportunities receiving a positive score and Threats a negative score.

d. The 4 scores are totaled, 15 points are added, and its sum is divided by 30 (range of -15 to 15) to determine the strength of Design-Build delivery for that factor.

Refer to GDOT's Design-Build webpage regarding the Design-Build research which led to the development of the SWOT analysis.

5. **Project Delivery Schedule (##%)** is the overall project schedule from planning through design phase, construction phase and open to traffic.

Strengths (scale 0 to 10)	Weaknesses (scale 0 to -10)
○ The single point of responsibility (i.e., one contract) reduces the procurement time ○ Project delivery can be shortened due to concurrent design and construction processes ○ The contractor's input into the design process helps the Design-Build (DB) team establish a more realistic project schedule ○ The project schedule will be contractually established in DB proposals before detailed design plans are established ○ The collaboration and coordination between the designer and the contractor helps the DB team secure a project schedule before detailed design completion ○ It reduces the chances of project delays caused by disputes between GDOT and the DB Team	○ The Request for Proposal (RFP) development process can become lengthy due to the time required to define technical requirements and expectations ○ Establishing Quality Assurance Programs for design and construction that are understood and accepted by all stakeholders is time-consuming ○ GDOT and other stakeholders need to understand and commit to an expeditious review of design
#	-#
Opportunities (scale 0 to 5)	**Threats (scale 0 to -5)**
○ It enables GDOT to maximize the use of available funds ○ It enables GDOT to issue RFQ and RFP, award the contract and issue NTP with preliminary design prior to conclusion of NEPA ○ It enables GDOT to allow the DB team to proceed to final design and construction for any portion of the project for which NEPA is complete ○ It enables GDOT to shift the schedule risk to the DB team ○ It enables GDOT to fast-track projects that are behind schedule in the PDP ○ It enables the contractor to work closely with the designer to procure long-lead items early in the design process ○ It enables the contractor to start work on early construction activities, such as construction mobilization, before the detailed design completion ○ It enables the contractor to start delivery of the project in multiple phases ○ It enables the contractor to start construction on portion of the project prior to final Right-of-Way (ROW), and utilities agreements ○ If authorized, GDOT can utilize an A-plus-B contracting method to include the project delivery schedule in selection of the DB team ○ It enables use of expedited construction process which minimizes impact on the public ○ GDOT may use the DB team's expertise in ROW acquisition and utility coordination services to expedite project delivery	○ Undefined events or conditions found after procurement, but during design, can impact schedule ○ The DB team's internal conflicts can adversely impact the project delivery schedule ○ By defining the project scope with clear definitions, requirements and expectations may delay project procurement ○ Development of a comprehensive risk management plans (risk identification, assessment, allocation and mitigation) may delay project procurement
#	-#

b) Innovation (##%) is the application of [new] methods, techniques and technologies in order to overcome project complexities, expedite the project delivery, reduce project costs and/or enhance quality.

Strengths (scale 0 to 10)	**Weaknesses (scale 0 to -10)**
o The collaboration between the designer and the contractor helps the Design-Build team identify and optimize innovative designs and construction methods or techniques o The single point of responsibility and early team integration enable the DB team to smoothly and effectively implement innovative solutions o Constructability reviews and Value Engineering (VE) are inherent in process o Best Value procurement provide opportunity for DB teams to showcase innovation through Technical Proposal and ATCs	o It requires desired solutions to complex projects to be well-defined through technical requirements and expectations o Qualitative aspects of design (e.g. aesthetics) are difficult to define and evaluation in low bid contracting o Cost and time constraints on the designer inhibits innovation o For simple and less complex projects, the projects of innovation are limited
#	-#
Opportunities (scale 0 to 5)	**Threats (scale 0 to -5)**
o It enables GDOT to effectively deliver complex projects such as projects with a number of primary features tightly interrelated and/or closely located, projects with construction staging issues o It enables GDOT to benefit from both cost-saving and quality-improving innovative solutions o It enables GDOT to use innovative design and construction methods or techniques, in order to minimize the negative impact on the public o It enables GDOT to capitalize on the DB Team's access to unconventional mechanisms for the public outreach and engaging the people and other stakeholders in the project	o Innovation can be limited if the contractor does not allow the designer to have a legitimate seat at the table with the owner (i.e., the contractor relegates the designer to a back office design role only) o Some innovative solutions may not be implementable with the time and budget limits on the project o Prescriptive NEPA documents may limit GDOT's flexibility for accepting innovative design solutions o The DB team may enhance innovation only from the cost standpoint and not necessarily from the quality standpoint o Quality Assurance/Quality Control programs for innovative designs and construction methods or techniques are difficult to define in RFPs o There is a risk that innovative solutions do not perform as anticipated and therefore, delay the project delivery o Innovation may be limited to the capability and comfort of the DB team selected for the project
#	-#

c) Level of Design (##%) is the percentage of design completion at the time of delivery procurement.

Strengths (scale 0 to 10)	Weaknesses (scale 0 to -10)
o It does not require complete design plans before awarding the project to the Design-Build team. The contractor involvement in early design enhances constructability. o The detailed design specifications are not required, in order to communicate the design to potential Design-Build teams (e.g., 10-30% complete design is often satisfactory to procure the DB projects) o The contractor involvement in the early design enhances constructability (e.g., the collaboration and coordination between the designer and the contractor enhances the opportunity to improve the constructability) o The Design-Build team accepts the liability for design errors/omission o The continuous execution of design and construction enhances the control and oversight over the final product	o The definitions, requirements and expectations (including the project scope and performance expectations) should be clearly defined in the RFP since they will be the basis for the contract o If design is too far advanced, it will limit the advantages of Design-Build o It is imperative to establish Quality Assurance Programs for design and construction that are understand and accepted by all stakeholders
#	-#
Opportunities (scale 0 to 5)	**Threats (scale 0 to -5)**
o It enables GDOT to transfer design risks to the DB team o Flexibility in the project scope and incomplete design plans allow the DB team to develop of innovative designs o It enables GDOT to advance the design only to the level necessary for defining the contract requirements and allocating the risks o Not fully-developed design plans permit the utilization of ATCs proposed by the DB team o The continuous execution of design and construction enhances the control and oversight over the project o The collaboration and coordination between the designer and the contractor enhances the opportunity to reduce the number of changes orders o The collaboration and coordination between the designer the contractor reduces the possibility of errors and omissions	o GDOT's requirements and expectations may not be met if they are not adequately defined in the RFP o By relinquishing the control over design details, GDOT may not be able to achieve some of its quality objectives o It can reduce the design standardization across GDOT's projects o There is a risk that the design plans are "defective" and cause a delay in the project delivery
#	-#

d) Project Delivery Cost (##%) is the overall project cost from planning through design phase, construction phase and open to traffic.

Strengths (scale 0 to 10)	**Weaknesses (scale 0 to -10)**
○ The collaboration between the designer and the contractor helps the DB team identify and optimize cost-efficient solutions to project goals ○ The project cost is contractually established in DB proposals before detailed design plans are completed ○ The collaboration between the designer and the contractor involvement in early design and constructability reviews moderate the cost ○ The single point of responsibility and early team integration create the potential for lower average cost growth ○ The single point of responsibility (i.e., one contract) reduces GDOT's procurement cost	○ It is difficult to accurately estimate the lump sum cost when detailed design plans are not complete ○ The DB team may use high contingency when detailed design plans are not 100% complete ○ If design is too far advanced, there is limited potential for cost savings ○ The project delivery cost increases when stipends are paid to the shortlisted Design-Build teams
#	**-#**
Opportunities (scale 0 to 5)	**Threats (scale 0 to -5)**
○ The single point of responsibility (i.e., one contract) enables GDOT to reduce the contract administration costs ○ Risk transfer for constructability related to cost increases to the DB team	○ Poor risk allocation can result in high contingencies ○ The DB team's internal conflicts can adversely impact the project delivery cost ○ Increased proposal cost may limit the number of Design-Build teams participating in the bidding process ○ The limited number of qualified DB teams in the market place can limit the potential for receiving price competitive proposals ○ Cost savings from innovative design and construction methods or technique may not be transferred to GDOT ○ Not selecting the lowest bidder without properly communicating assessment criteria and proposal evaluation process may result in negative outcomes, such as bid protest, public outcry and industry resistance
#	**-#**

e) Quality (##%) is the ability of the delivered project to meet or exceed GDOT's requirements and performance expectations.

Design Build	
Strengths (scale 0 to 10)	**Weaknesses (scale 0 to -10)**
○ It provides GDOT with the capability to go beyond their normal level of quality in transportation projects ○ It reduces construction engineer and inspection costs to GDOT since these quality control activities and risks are transferred to the Design-Build Team ○ Quality Control System is enhanced through the continuous involvement of designer throughout the projects ○ While Quality Control is the Design-Build team's responsibility, Quality acceptance remains GDOT's responsibility	○ It requires developing extensive systems for design acceptance/approval and construction acceptance (verification) ○ It requires establishing, understand and accepting a Design Quality Assurance Program and a Construction Quality Assurance Program by all stakeholders ○ It strikes at the foundation of the traditional Quality Assurance/Quality Control roles through the combination of engineering and construction
#	-#
Opportunities (scale 0 to 5)	**Threats (scale 0 to -5)**
○ It provides an opportunity for GDOT to maintain the same or higher level of quality while reducing the overall project cost and duration ○ It provide an opportunity for GDOT to evaluate Quality Control Systems for the design and construction, which are described by the Design-Build Teams in their proposals ○ Ability to shortlist allows the Department to only accept bids from more qualified DB teams with a history of high quality performance	○ Contractor may drive designer to reduce costs at risk of quality ○ The Design-Build team may enhance innovation only from the cost standpoint and not necessarily from the quality standpoint ○ Quality Assurance Programs and Quality Control Systems for the design and construction are difficult to define in the RFP ○ Quality Assurance will become problematic if the Design-Build team is assigned the responsibility to perform any acceptance and verification function ○ By relinquishing the control over design details, GDOT may not be able to achieve its quality objectives ○ Checks and balances in design and construction Quality Assurance Programs may not be performed adequately
#	-#

f) Staff Experience (##%)

Strengths (scale 0 to 10)	Weaknesses (scale 0 to -10)
o The single point of responsibility reduces GDOT's administrative burden on GDOT staff	o It requires the commitment of GDOT management and technical resources and expertise at critical points in the process (i.e., RFP development, design review, etc.) o It requires the concurrent commitment of design and construction resources to administer the procurement and oversee the implementation of the project o It may require changing roles of the current GDOT staff o It may require additional training of the current GDOT staff o It may require additional consultant support o It may require additional staff with Design-Build oversight experience o It may require experience staff for risk management (identification, assessment, allocation and mitigation)
#	-#
Opportunities (scale 0 to 5)	**Threats (scale 0 to -5)**
o It provides GDOT an opportunity to grow by learning/refining the DB delivery process o It enables GDOT to collaborate with the DB industry to delivery projects, which require specialty skills for design or construction that may not be available inside GDOT	o It requires GDOT willingness to accept the required culture shift for Design-Build project delivery systems o GDOT may have to dedicate considerable staff resources during the procurement phase o If GDOT staff have limited experiences in similar projects, there will be challenges to administer the procurement and oversee the implementation of the project
#	-#

g) Marketplace Conditions, Competition and Design Build Team Experience (##%)

Strengths (scale 0 to 10)	**Weaknesses (scale 0 to -10)**
o Teaming of the designer and the contractor can result in added technical value	o In turbulent market conditions, early commitment to a price may increase the costs for GDOT o The need for Design-Build qualifications may limit the competition o It may be difficult for GDOT to find Design-Build teams with adequate experience with similar projects o GDOT heavily relies on the selected Design-Build team experience and expertise
#	-#
Opportunities (scale 0 to 5)	**Threats (scale 0 to -5)**
o Straight forward project can expand potential DB teams and increase participation o Best Value procurement enables GDOT to balance qualifications and cost in the Design-Build procurement	o The gap between owner experience and DB team experience can create conflict o The gap between the designer and the contractor experience can create internal conflict o The limited number of qualified Design-Build teams in the marketplace can limit the potential for receiving price competitive proposals o The use of the Low Bid selection method does not necessarily lead to the selection of the best DB team
#	-#

	Relative Importance			Total Score
Project Delivery Schedule	##%	**Strength (1-10)**	**Weakness (-1 to -10)**	##.#
		#	-#	
		Opportunities (1 to 5)	**Threats (-1 to -5)**	
		#	-#	
Innovation	##%	**Strength (1-10)**	**Weakness (-1 to -10)**	##.#
		#	-#	
		Opportunities (1 to 5)	**Threats (-1 to -5)**	
		#	-#	
Level of Design	##%	**Strength (1-10)**	**Weakness (-1 to -10)**	##.#
		#	-#	
		Opportunities (1 to 5)	**Threats (-1 to -5)**	
		#	-#	
Project Delivery Cost	##%	**Strength (1-10)**	**Weakness (-1 to -10)**	##.#
		#	-#	
		Opportunities (1 to 5)	**Threats (-1 to -5)**	
		#	-#	
Quality	##%	**Strength (1-10)**	**Weakness (-1 to -10)**	##.#
		#	-#	
		Opportunities (1 to 5)	**Threats (-1 to -5)**	
		#	-#	
Staff Experience	##%	**Strength (1-10)**	**Weakness (-1 to -10)**	##.#
		#	-#	
		Opportunities (1 to 5)	**Threats (-1 to -5)**	
		#	-#	
Marketplace Conditions, Competition and Design-Build team experience	##%	**Strength (1-10)**	**Weakness (-1 to -10)**	##.#
		#	-#	
		Opportunities (1 to 5)	**Threats (-1 to -5)**	
		#	-#	
	100			##.#

	Low Risk
	Moderate Risk
	High Risk

6. Initial Risk Identification and Allocation [NOTE… THE DATA SHOWN IN THIS EXAMPLE IS FOR INFORMATION ONLY. THE USER SHOULD MODIFY FOR EACH PROJECT AND SHOULD CONTINUE TO USE THIS RISK MATRIX DURING THE DEVELOPMENT OF THE RFP PACKAGE. THE USER SHOULD USE JUDGEMENT ON THE LEVEL OF DETAIL PROVIDED IN COMMENTS. THE INTENT IS TO ISOLATE PROJECT RISK'S AND DEVELOP A STRATEGY TO MITIGATE.]

Risks are present in any project. This project has been identified as a Good Candidate for Design-Build delivery. A Risk Allocation Matrix is provided below as a preliminary assignment of generic risks to the project. A more detailed risk analysis should be completed prior to Requests for Proposals to properly allocate all known risks at that time. The below template is intended to give a high level risk allocation assessment and is prepared as a guide to identify risks and opportunities to mitigate. It is based on the general assumption of Georgia's current lowest qualified bid requirement for Design-Build projects.

Scope Issues	GDOT	Shared	DB Team	Comments/Mitigation Strategy
Define project and scope	X			
Establish performance requirement	X			
Manage/communicate changes in scope	X			
Incorporate flexibility in project scope	X			

Environmental Issues	GDOT	Shared	DB Team	Comments/Mitigation Strategy
Define initial project environmental impacts	X			
Define parameters for impacts	X			
Conduct environmental investigation	X			
Acquire environmental permits			X	
Manage/implement environmental mitigation process			X	
Ensure environmental compliance	X			
Mitigate known hazardous waste			X	
Mitigate unknown/non-defined hazardous waste	X			

	Obtain environmental approvals – construction related	X			
	Mitigate wetlands / stream / habitat issues			X	
	Mitigate permanent noise issues				
	Address archaeological, cultural, historical discoveries	X			
	NEPA compliance			X	
	Stream Buffer Variance			X	
	MS4			X	

Design Issues		**GDOT**	**Shared**	**DB Team**	**Comments/Mitigation Strategy**
	Conduct preliminary surveys/develop base map	X			
	Conduct Geotech investigation - initial borings based on costing plans/original bridge layouts	X			
	Conduct Geotech investigation - initial borings based on proposal			X	
	Establish/define initial subsurface conditions			X	
	Perform initial project geotechnical analysis based on preliminary design			X	
	Develop proposal specific geotechnical analysis/report			X	
	Hydraulic Report				
	Ensure plan conformance with regulations/guidelines/RFP			X	

	Ensure plan accuracy			X	
	Establish design criteria	X			
	Lighting design				
	Ensure conformance to design criteria			X	
	Perform design review	X			
	Conduct design QC			X	
	Conduct design QA	X			
	Communicate changes in design criteria	X			
	Manage hazardous waste site/contaminated materials		X		
	Conform with changes in design criteria	X			
	Pavement design	X			

	Right of Way Issues	**GDOT**	**Shared**	**DB Team**	**Comments/Mitigation Strategy**
	Establish ROW Limits	X			
	Acquire ROW	X			

	Local Agency, Utility, Railroad, other Stakeholders Issues	**GDOT**	**Shared**	**DB Team**	**Comments/Mitigation Strategy**
	Establish initial utility locations (SUE QL-B / conditions/ MOU)	X			
	Identify initial utility impacts from preliminary design			X	
	Define required utility relocations from preliminary design			X	
	Relocation of utilities included in the contract			X	
	Modify agreement with private utility based on final design		X		
	Modify agreement with public utility based on final design		X		
	Mitigate damage to utilities under construction			X	
	Verify utility locations/conditions			X	
	Coordinate with utility relocation efforts during contract		X		

	Address utility owner/third party caused/related delays		X		
	Railroad coordination (pre-let)	X			
	Railroad coordination (post-let)			X	
	Prevent delays caused by utility/third party involvement issues			X	
	Prevent utility/third party delays resulting from proposal/modified design			X	
	Obtain third party agreements (fed, local, private, etc.)			X	
	Coordinate with third parties under agreement			X	
	Coordinate with other projects				
	Coordinate with adjacent property owners			X	
	Identify/obtain local agency impacts/permits/requirements			X	

Contracting and Procurement Issues	**GDOT**	**Shared**	**DB Team**	**Comments/Mitigation Strategy**
Address issues related to contract language (warranties, bonding, etc.)	X			
Prevent delays in ad/bid/award process (addenda, protests, etc.)	X			
Ensure competitive procurement	X			
Avoid delays in procurement of specialty materials or equipment			X	
Procure long lead equipment or items as soon as possible			X	
Ensure contractor's compliance with performance expectations	X			

Construction	**GDOT**	**Shared**	**DB Team**	**Comments/Mitigation Strategy**
Address traffic control and staging issues			X	
Acquire construction permits			X	
Ensure safety / conduct safety QA			X	
Establish/comply with traffic control requirements			X	
Address change orders / claim	X			
Plan/coordinate construction staging issues			X	

	Ensure construction quality/workmanship			X	
	Comply with project schedule			X	
	Control/ensure materials quality			X	
	Maintain materials documentation			X	
	Ensure material availability			X	
	Develop/comply final construction/materials QC/QA plan			X	
	Conduct construction/materials QA	X			
	Conduct construction QC			X	
	Conduct construction QA/procedural compliance auditing	X			
	Conduct construction IA testing/inspection	X			
	Perform construction staking			X	
	Carry out erosion control			X	
	Perform spill prevention			X	
	Prevent accidents within work zone / liability			X	
	Avoid third party damages			X	
	Manage traffic in construction zones			X	
	Prevent damage to utilities under construction			X	
	Avoid false work/rework			X	
	Develop shop drawings			X	
	Mitigate equipment failure/breakdown			X	
	Manage community relations		X		
	Ensure performance of defined mitigation measures			X	
	Provide warranty			X	
	Coordinate street/ramp closures		X		
	Develop construction staging plans			X	
	Comply with DBE requirements			X	
	Assume long term ownership/final responsibility	X			