

Practices for Developing Transparent Best Value Selection Procedures

DETAILS

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NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM

NCHRP SYNTHESIS 471

**Practices for Developing
Transparent Best Value
Selection Procedures**

A Synthesis of Highway Practice

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FOREWORD

Highway administrators, engineers, and researchers often face problems for which information already exists, either in documented form or as undocumented experience and practice. This information may be fragmented, scattered, and unevaluated. As a consequence, full knowledge of what has been learned about a problem may not be brought to bear on its solution. Costly research findings may go unused, valuable experience may be overlooked, and due consideration may not be given to recommended practices for solving or alleviating the problem.

There is information on nearly every subject of concern to highway administrators and engineers. Much of it derives from research or from the work of practitioners faced with problems in their day-to-day work. To provide a systematic means for assembling and evaluating such useful information and to make it available to the entire highway community, the American Association of State Highway and Transportation Officials—through the mechanism of the National Cooperative Highway Research Program—authorized the Transportation Research Board to undertake a continuing study. This study, NCHRP Project 20-05, “Synthesis of Information Related to Highway Problems,” searches out and synthesizes useful knowledge from all available sources and prepares concise, documented reports on specific topics. Reports from this endeavor constitute an NCHRP report series, *Synthesis of Highway Practice*.

This synthesis series reports on current knowledge and practice, in a compact format, without the detailed directions usually found in handbooks or design manuals. Each report in the series provides a compendium of the best knowledge available on those measures found to be the most successful in resolving specific problems.

PREFACE

*By Jo Allen Gause
Senior Program Officer
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This synthesis examines practices related to the best value bid approach to procuring highway construction services. Best value procurement is a process to select the most advantageous offer by evaluating factors in addition to price. These factors may include schedule, technical merit, management solutions, and past performance. The report documents practices that enhance objectivity, fairness, and transparency of the selection process.

Information used in this study was gathered through a literature review, a survey of state departments of transportation (DOTs), analyses of DOT requests for qualifications (RFQs)/requests for proposals (RFPs), and follow-up interviews for case examples.

Keith R. Molenaar, University of Colorado Boulder, and Daniel Tran, University of Kansas, Lawrence, collected and synthesized the information and wrote the report. The members of the topic panel are acknowledged on the preceding page. This synthesis is an immediately useful document that records the practices that were acceptable with the limitations of the knowledge available at the time of its preparation. As progress in research and practice continues, new knowledge will be added to that now at hand.

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PRACTICES FOR DEVELOPING TRANSPARENT BEST VALUE SELECTION PROCEDURES

SUMMARY State departments of transportation (DOTs) have historically used a low-bid approach to procure construction services. Under the low-bid approach, price is the sole competitive factor. Non-price factors such as qualifications, experience, technical approaches, and innovative solutions are not considered. Although the low-bid approach is inherently transparent, it does not always offer the best performance during and after construction. To improve project quality and performance, a number of DOTs are increasingly using best value procurement to deliver their transportation projects.

In essence, best value procurement is a process to select the most advantageous offer by evaluating factors in addition to price. Price is always a consideration in best value procurement and it is usually the most important factor (i.e., has the greatest weight). The best value method allows for the consideration of additional factors such as schedule, technical merit, management solutions, and/or past performance. The selection factors can vary by project in order to optimize the probability of achieving unique project goals.

Although the inclusion of non-price selection factors can increase the probability of achieving project goals, these factors can raise concerns of transparency. Low-bid procurement is inherently transparent; it requires only the evaluation of price. In best value procurement, evaluators rate non-price factors. In some cases, the process requires the evaluators to exercise engineering judgment in an evaluation rating. It is the rating of non-price factors and the process of evaluating them with price that creates issues with transparency.

The goal of this synthesis is to document the state of practice for developing transparent best value selection procedures. The report identifies methods that enhance the objectivity, fairness, and transparency of the evaluation process. The study methodology consisted of four main steps: (1) literature review; (2) survey of DOTs; (3) content analyses of requests for qualifications (RFQs) and requests for proposals (RFPs), state guidelines, and manuals; and (4) case examples. Following a rigorous literature review, a web-based survey was developed and distributed to the members of the AASHTO Subcommittee on Construction and the AASHTO Subcommittee on Design in all 50 states, the District of Columbia, and Puerto Rico. Forty-six DOTs responded to the survey (an 88% response rate). Thirty-five of the 46 respondents reported that they are currently implementing or considering best value procurement. The content analysis included an analysis of RFQs and RFPs, and guidelines and manuals from the aforementioned 35 DOTs to find relevant information relating to fairness and transparency in best value selection. Finally, structured interviews with seven best value selection-experienced DOTs provide case examples of best value implementation and lessons learned. The four-step methodology provides for a comprehensive state-of-practice summary and a robust set of defensible conclusions.

Synthesis results indicate that transparent best value selection procedures require clear, comprehensive, and well-documented practices in both pre- and post-proposal submission activities. Specifically, this synthesis documents the following.

1. **Best value methods that promote transparency:** Best value procurement procedures consist of (1) evaluation criteria, (2) evaluation rating systems, and (3) award algorithms.

A wide variety of evaluation criteria were found in the literature and in practice. Using the minimum number of criteria to achieve project goals promotes transparency. The literature also describes multiple categories of rating systems and award algorithms. The study found that the *adjusted bid*, *adjusted score*, and *weighted criteria* award algorithms used in combination with *direct point* evaluation rating methods provide for the most transparency. The transparency stems from the concept that these algorithms most closely resemble low-bid procurement.

2. **Evaluation criteria clarity and transparency:** Clear, easy to understand, and project-specific evaluation criteria yield the most transparency. Evaluation criteria change with project goals and constraints. Technical solutions, management solutions, past performance, and price provide categories for a variety of evaluation criteria. Evaluation criteria that are quantitative provide the most transparency. Although some agencies employ adjectival ratings (i.e., the use of words or colors as opposed to numbers on the ratings), these methods were primarily found on only complex design-build (D-B) projects where direct point scoring was not feasible. Conveying the weights of evaluation criteria directly in the RFP was found to increase transparency. Indeed, 83% of states responding to the survey questionnaire convey an evaluation point range or weighting in their RFPs.
3. **Evaluation committee composition and conduct:** To maintain transparency, evaluation committees contain a balance of technical members with no personal interest, either actual or perceived, in the outcome of the evaluation process. Agencies can establish best value evaluation committees on a project-by-project basis, depending on project goals and evaluation requirements. Forty percent of states include non-agency members to support transparency of the technical evaluation process. The outside agency members can include contractor and/or engineering association representatives, private sector subject matter experts, and/or public sector partners. Some projects require selection committee sequestration during the evaluation. All states require that committee members sign agreements of confidentiality. While the evaluations are not a public meeting, the practice of treating evaluation discussions and written comments as public meetings was found to promote transparency. This practice also prepares the committee for any potential protests or requests through freedom of information acts.
4. **Completeness of evaluation comments and debriefings:** Thorough documentation of evaluation comments provides for a fair and transparent best value selection process. These comments are specific, concise, and tied to scoring. Detailed evaluation comments substantiate ratings and assist in debriefings. Timely and detailed debriefings help to clarify the basis for award, the selection process, strengths and weaknesses of proposals, and the rationale behind the decision. Ninety-eight percent of the agencies studied in this synthesis conduct debriefings orally and/or in writing. Almost half (46%) allow unsuccessful proposers to view the proposal of the winning proposer. Such practices help proposers understand the best value process and provide the learning for continuous improvement and competitiveness on future offers.
5. **Communications to promote transparency:** Clear communications were found to support transparency. Pre-proposal conferences and debriefings align industry goals with agency goals and demonstrate transparency in the process. The pre-proposal conference helps to clarify any potential ambiguities in the solicitation documents including the technical aspects from an RFP. Appointment of a single point of agency contact for the evaluation process was found to increase transparency and clarity.
6. **Collaboration with industry in best value programs:** Industry participation in program development and performance management increases transparency. Two-thirds of the agencies using best value procurement work with industry to develop their programs and one-half meet regularly to evaluate their programs.

Although this synthesis focuses on transparency in best value procurement, the synthesis statement and the subsequent fact finding provide more generally for common practices

and lessons learned that are included throughout the report. The most significant are summarized here.

1. **Best value procurement and project delivery:** This study found that best value procurement is used with a variety of project delivery methods. Of the agencies responding to the synthesis questionnaire, 100% use or can use best value for D-B contractor selection. Several DOTs are also employing best value procurement concepts in traditional design-bid-build (D-B-B) delivery, construction manager/general contractor delivery, and indefinite delivery/indefinite quantity contracts. Various forms of best value procurement are also in use on public-private-partnership (P3) projects; however, these projects were outside the scope of this synthesis.
2. **Importance of best value evaluations plans:** Clear and comprehensive evaluation plans are a key to best value procurement success. Fair and objective processes are defined prior to procurement and adhered to during selection. As previously stated, clear and comprehensive best value evaluation plans are required by the courts to withstand any potential protests. Evaluation plans with clear processes and a definable set of standards help enhance fairness and transparency.
3. **Training in best value procurement processes:** Training promotes transparency, consistency, and fairness in the best value process. Training is often required because technical experts may not be versed in best value procurement processes. When evaluators are subject to transparency questions, both internally and externally, it is best to understand their roles and responsibilities in the entire best value evaluation process.
4. **Lessons learned from best value protests:** Of the 35 agencies responding to the question on best value protests, 24 had not experienced a protest. Nine of the 11 agencies with best value protests provided brief descriptions. Most protests related to a perception of improper proposal evaluation (i.e., a dispute with the technical scoring of the proposal). In all cases where the agency followed its predetermined procurement procedures the outcome was favorable to the agency. This report also provides detailed descriptions of four protests in Appendix D. Again, the most consistent theme in all of the protests is that DOTs are required to clearly plan their evaluations and follow their plans during the process to avoid and/or withstand protests.

The synthesis discovered a number of gaps in the research that provide opportunities for future study. The intent of the following questions is to draw attention to these gaps and promote discussion on potential future research. The Conclusions (chapter five) provide more detail on these opportunities.

1. Are streamlined best value methods for D-B-B projects feasible and how might they impact overall project performance?
2. How can agencies minimize industry best value proposal costs and still meet their objectives for finding competitive solutions?
3. How does the sharing of competitor's proposals, during debriefing or through open records requests, impact industry competitiveness and intellectual property rights?
4. What are the most effective practices for writing best value evaluation plans?
5. What is the current state of practice for best value on P3 projects and what are the characteristics of an optimal method?

CHAPTER ONE

INTRODUCTION**BACKGROUND**

Best value procurement is a process used to select the most advantageous offer by evaluating and comparing factors in addition to cost. Transportation agencies are increasingly using best value selection procedures to deliver transportation projects. Although low-bid procurement processes are simple and transparent, they do not allow agencies to evaluate additional factors that may add value to the agencies and stakeholders. Construction time and technical approaches are examples of factors that can add value. Time can be evaluated similarly to cost by quantitatively comparing construction durations. Evaluation of technical approaches requires engineering judgment. The construction and consulting industries have expressed concerns regarding the transparency and fairness of a process that is based on non-price evaluation factors such as technical approach, innovative solutions, qualifications, and experience. Agencies would like to provide the best value to the traveling public. They also want to work with their industry partners to develop transparent procedures that treat all proposers fairly. This synthesis provides information on effective practices that support transparent best value selection procedures.

SYNTHESIS GOALS AND OBJECTIVES

The overarching goal of this synthesis was to summarize and document the state of practice in developing transparent best value selection procedures, which was achieved by accomplishing the following objectives:

- Identifying selection methodologies that support transparency and achieving the contracting agency's goals of selecting the proposal that represents the best value.
- Identifying proposal evaluation criteria and request for qualifications (RFQs)/request for proposals (RFPs) requirements that support transparency.
- Identifying procedures that minimize the overall industry cost of developing proposals, yet still maintain transparency and a fair best value approach.
- Documenting procedures, make-up, and structure of the evaluation committee to ensure that it is knowledgeable, fair, and objective.
- Documenting debriefing procedures, including what information is shared and when.
- Identifying industry outreach efforts that were used successfully by transportation agencies in implementing best value procurement of highway projects.

- Reviewing and synthesizing the history of best value award protests and their outcomes.
- Reviewing and synthesizing existing best value enabling legislation.

The goal for a best value selection is to choose the most advantageous offer by evaluating and comparing factors as well as cost. Previous research has shown that when used correctly, best value procurement provides sizable benefits in terms of cost saving, improved quality, and schedule reduction (Gransberg and Ellicott 1996; Abdelrahman et al. 2008; FHWA 2012; Yu and Wang 2012). This synthesis report provides state-of-practice information to help transportation agencies develop effective approaches to manage the best value solicitation. It provides agencies with the information to implement their evaluation and award processes in a fair, equitable, and transparent manner.

SYNTHESIS METHODOLOGY

This report is derived from the following four independent sources of information:

- Literature review;
- Survey of state departments of transportation (DOTs) using a web-based questionnaire;
- Content analysis of RFQs and RFPs for best value transportation projects; and
- Case examples of best value projects.

A comprehensive literature review of related best value documents was conducted. The goal of this effort was twofold. Current academic literature, industry publications, state DOT websites, and government reports were searched to find the most current trends and best practices in best value procurement. In addition, the team searched for archival information to describe the origins of best value procurement and how it has evolved into the current state of practice.

From the literature review and topic panel input, a questionnaire was developed and a survey of state DOTs conducted. The survey questionnaire was distributed in web-based and paper-based forms to the members of the AASHTO Subcommittee on Construction and the AASHTO Subcommittee on Design in all 50 states, the District of Columbia, and Puerto Rico. After two follow-up requests, responses were received from 46 U.S. state DOTs, an 88% response rate.

To better understand how states are implementing best value procedures, a content analysis was conducted of the DOT best value guidelines, manuals, and RFQs and RFPs from 35 state DOTs. A content analysis is defined as a technique for making valid inferences by objectively and systematically identifying specified characteristics of a message, written or visual, using a set of procedures (Holsti 1969; Neuendorf 2002).

Finally, the case example projects were selected based on the literature review and survey responses indicating an agency's willingness to participate in case examples. As a result, seven case examples from different states were conducted to furnish specific information related to a transparent and fair best value approach. The case example method described by Yin (2009) was used to furnish a rigorous methodology for collecting the data from the case study projects. Yin's three principals were followed in the process of data collection:

1. Use of multiple sources,
2. Creation of a database, and
3. Maintaining a chain of evidence.

During the effort, the team was careful to remember that single sources provide limited data based on "one specific source" and can create difficulty when drawing results, in addition to a lack of "trustworthiness and accuracy" (Yin 2009). Multiple sources help alleviate lack of trust, increase viability, and frequently provide supplementary realms of thought and research that strengthen results (Yin 2009).

SYNTHESIS ORGANIZATION

This report is composed of five chapters. The first chapter introduces the subject area and covers scope, objectives, and study methodology. Chapter two provides a brief overview of best value procurement methods for highway construction projects. This chapter provides a foundation to understanding chapters three and four. Chapter three presents current practices of best value procurement procedure, summarizing the findings from the survey and a review of agency documents and guidelines with regard to best value selection processes. Chapter three focuses on documenting effective practices that support the transparent best value selection procedure. Chapter four covers issues regarding evaluation criteria and selection methodologies that support transparency and achieve a contracting agency's goals of selecting best value proposals. This chapter presents seven best value project case examples. Finally, chapter five summarizes the information presented in the previous chapters and offers conclusions and future research with regard to implementation of best value approaches.

The appendices provide important supplemental information. Appendix A contains the relevant components of the survey questionnaire; Appendix B includes a list of case example questions; Appendix C provides a summary of various state statutes that may allow DOTs to implement best value procurement for transportation projects; and Appendix D summarizes four best value award protests from the Oregon, Utah, California, and Minnesota DOTs and their outcomes.

CHAPTER TWO

OVERVIEW OF BEST VALUE PROCUREMENT

INTRODUCTION

This chapter documents the important findings from the literature review on best value procurement methods. Its purpose is to establish background and context for the findings in this synthesis. Key definitions set a baseline vocabulary for the report. A discussion of process transparency provides context for issues and concerns that have been cited by previous researchers and the industry at large. The chapter concludes with a detailed discussion of best value concepts including best value parameters, evaluation criteria, rating systems, and award algorithms.

KEY DEFINITIONS

State DOTs have used low-bid procurement for well over 100 years, and a low-bid vocabulary is understandably engrained in their procurement processes. The use of best value procurement requires additional procurement terms to support the process. This synthesis offers the following key definitions to support the best value process; note, however, that individual state definitions may vary (even in the context of the case examples presented in this synthesis).

Best value procurement: A procurement process where price and other key factors are considered in the evaluation and selection process to enhance long-term performance and value of construction (Scott et al. 2006).

Construction manager/general contractor (CM/GC): A project delivery method in which a construction manager is selected to provide input during project design and then becomes at risk for the final cost and time of construction (Gransberg and Shane 2010).

Design-bid-build (D-B-B): The traditional project delivery method in which the agency designs the project, solicits bids, and awards the construction contract to the lowest responsive bidder to build the project (AASHTO 2008).

Design-build (D-B): A project delivery method that combines the design and construction phases of project delivery under a single contract (AASHTO 2008).

Prequalification process: The agency's process for determining whether a firm is fundamentally qualified to compete for a project. This should not be confused with short listing or best value procurement (CFR 2011).

Request for proposals (RFP): The document that describes the procurement process, forms the basis for the final

proposals, and may potentially become an element in the contract (CFR 2011).

Request for qualifications (RFQ): The document issued by the owner in the first phase of a two-phase selection process (CFR 2011).

Short listing: The narrowing of the field of offerors through the selection of the most qualified offerors who have responded to an RFQ (CFR 2011).

Solicitation: A public notification of an owner's need for information qualifications or proposals related to identified services (CFR 2011).

OVERVIEW OF BEST VALUE PROCUREMENT

Public clients use best value procurement when they aim to achieve the maximum outcome for their projects as opposed to the lowest price (Zhang 2006). Best value procurements can include price, schedule, technical and managerial merit, financial health, and past performance (Scott et al. 2006). Because the system provides a balance between price and qualitative considerations, it can optimize the benefits of fixed-price sealed bidding and sole source selection. The inclusion of key factors in evaluation criteria that match the specific needs of a particular project can raise the likelihood of meeting project performance goals (Abdelrahman et al. 2008).

Best value procurement is one of many procurement options. It is not ideal for every project, but it can provide benefits on appropriate projects. Project goals and project characteristics can determine if the use of best value will be advantageous. Goals that align well with best value procurement include the shortening of project duration, creating opportunities for innovation, and selecting the most qualified team. Appropriate project characteristics include opportunities for innovation, the amount of design required to develop a competitive industry proposal, agency experience with the process, and market capability. The 1996 version of the Federal Acquisitions Regulations (FAR) stated that best value procurement should be selected when there is a need for innovation and new technology or when a specific type of experience is required to obtain the desired outcome (FAR 1996). In addition, this approach can support the selection of a contractor when external factors such as traffic disruption or innovative environmental protection are at issue for project success.

The best value procurement evaluation plan is a key element in the process. It describes the specific project needs

and the method for rating proposals. It also describes the method for including price as one of several evaluation factors. It provides a project-specific approach to describing the best value evaluation criteria, weighting systems, and award algorithms. The evaluation criteria require measurable added value to the project (Molenaar and Johnson 2003). The weighting systems and award algorithms can become complex and the complexity of the evaluation process can become a challenge in best value selection (Gransberg and Senadheera 1999).

TRANSPARENCY IN BEST VALUE PROCUREMENT

Although best value procurement is widely used by public clients across multiple sectors, there are concerns with transparency in the system. These concerns are amplified in the transportation sector because, for most of its history, the U.S. highway system was constructed by the lowest bidder. Low-bid procurement is inherently transparent, requiring only the evaluation of price. Bids are sealed and then opened in a public forum. Best value procurement requires the evaluation of both price and non-price factors. Price factors are still sealed and often opened in a public forum. Non-price factors are scored by technical evaluators. In some cases, these evaluators must exercise engineering judgment to arrive at an evaluation rating, which can create issues with transparency. These ratings are then combined with prices to arrive at a best value award recommendation. It is the scoring of non-price factors and the process of trading them off with price that creates issues with transparency.

Later in this report there is discussion on how agencies promote transparency in best value procurements. Transparency in the overall selection process, evaluation of non-price factors, scoring of proposals, conducting cost-technical tradeoffs, composition of the technical committee, debriefing unsuccessful proposers, industry outreach, and other items are reviewed.

BEST VALUE CONCEPTS

Figure 1 presents best value procurement at an operational level. The overall process includes four distinct concepts: (1) best value parameters, (2) evaluation criteria, (3) evaluation rating systems, and (4) award algorithms.

Transparency in best value selection can be achieved by rigorously analyzing these four concepts. The project goals drive the selection of best value parameters that form an evaluation plan. The best value parameters provide for measurable evaluation criteria. These evaluation criteria, at some level, provide proposers with details on the agency goals. Best value award algorithms describe the process for selecting the best proposal. Transparency can be lost or gained at any one of these four points in the process.

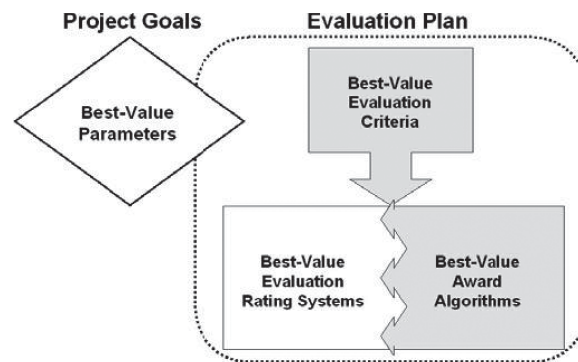


FIGURE 1 Best value concepts (Source: Scott et al. 2006).

Best Value Parameters

Defining key parameters is one of the steps necessary for obtaining transparency in the best value selection process. *NCHRP Report 651* indicates that best value parameters must be well-defined and defensible to the public and the industry. These parameters determine evaluation criteria that add value to a project and support transparent and fair procurement systems (Scott et al. 2006). Some projects require only a few parameters (e.g., cost and time), whereas others require more parameters to ensure the optimal selection. *NCHRP Report 651* concludes that “the owner should customize the parameters for the needs of the given project rather than strive to find a one-size-fits-all standard system” (Scott et al. 2006). The following paragraphs discuss three main best value parameters; cost, time, and qualifications and performance.

Cost

By definition, cost (i.e., price) is always a parameter in the best value award decision. Price is traded off with non-price parameters to determine the best value. Transparency in the cost parameter is necessary for transparency and objectivity in the overall best value selection.

Time

Best value time parameters encourage the proposing of a schedule that meets the project goals. When time-related project goals and best value parameters are transparent, proposers will tend to make choices in cost-time tradeoffs that optimize value to the owner. Similar to cost parameters, time parameters can enhance transparency and objectivity because they are a quantifiable measure (e.g., overall project schedule, time of a closure, and meeting a major milestone).

Qualifications and Performance

The use of best value qualification parameters assist in selecting the most appropriate team. State agencies often use experience and past performance criteria to determine which

team has the greatest likelihood of success. However, it is important that this process not be confused with basic project prequalification. The main advantage of qualifications parameters is the ability to invite proposers who have a proven track record of successfully completing a specific type of work. One of the primary concerns with qualifications parameters is the possibility of creating favoritism (Scott et al. 2006). To minimize these concerns and ensure the best value selection is transparent to industry, Parvin (2000) states that the owner should carefully develop qualifications parameters based on the project's specific requirements.

Evaluation Criteria

Establishing evaluation criteria is an important step in best value procurement. Evaluation criteria vary on a project-by-project basis. Depending on specific project goals, objectives, and characteristics, the owner will develop a clear evaluation plan to ensure the selection process is transparent and fair. Cost is typically the most important criteria used in all types of best value evaluation plans. Projects with high road user costs typically include schedule criteria. For qualifications parameters, best value evaluation criteria often include past performance, qualifications of key personnel, and sub-contracting plans. Montana DOT points out that "it is highly important that selection criteria be well defined in order that the most objective, fair, equitable, and competitive determination is made for award" (MDT 2005). Georgia DOT (GDOT) highlights the importance of evaluation criteria to obtain a transparent best value selection in stating that evaluation criteria should:

- Be clear, defensible, and easy for the proposers and public to understand;

- Not overlap scoring criteria in the statements of qualification (SOQ), especially with respect to key personnel that have already been evaluated in the SOQ;
- Focus on items that bring measurable value to the project;
- Be tailored to the individual project; and
- Avoid or minimize recycling criteria from project to project (GDOT 2014).

NCHRP Report 451 provides a list of examples of evaluation criteria categorized into four main areas: (1) technical solutions, (2) management solutions, (3) past performance, and (4) price (Anderson and Russell 2001). Table 1 summarizes the sub-criteria and content from these four main areas.

Similarly, Table 2 provides a list of best value evaluation criteria from *NCHRP Report 651* (Scott et al. 2006). It should be noted that these evaluation criteria were based on the state of practice in the early 2000s. This synthesis will update current practices regarding evaluation criteria.

Best Value Evaluation Rating Systems

Evaluation rating systems are a tool to support the transparency and fairness of the best value selection process. Parvin (2000) indicates that the owner should clearly state the weight assigned to each item in the evaluation criteria and ensure that they are used by the evaluation team.

There are a wide variety of best value evaluation rating systems from which agencies can choose. Some systems are simple and easy to use, making them reasonably transparent. Others are more complex and subjective, making them less transparent, but more appropriate for qualitative criteria. *NCHRP Report 561* defines four categories of evaluation rating systems, including

TABLE 1
EXAMPLE BEST VALUE EVALUATION CRITERIA

Evaluation Criteria	Contents/Sub-criteria
Technical Solutions	<ul style="list-style-type: none"> • Technical expertise <ul style="list-style-type: none"> – Construction methods related to the project – Expertise with using relevant materials – Past project examples • Personnel qualifications and availability • Compatibility of the construction contractor with the agency
Management Solutions	<ul style="list-style-type: none"> • Organization/management plan <ul style="list-style-type: none"> – Proposed project organization – Responsibilities and expertise of key personnel • Relevant experience/past performance <ul style="list-style-type: none"> – Example of past projects with similar size, type, scope, and complexity • Proposed schedule/work plan <ul style="list-style-type: none"> – Proposed plan for project completion – Proposed schedule for project completion
Past Performance	<ul style="list-style-type: none"> • History of customer satisfaction • History of timely delivery • History of conforming to specifications • Standards of workmanship • History of adherence to schedule • Safety record • Past management of subcontractors

Source: Anderson and Russell (2001).

TABLE 2
EXAMPLE BEST VALUE EVALUATION CRITERIA

Evaluation Criteria	Includes	Remarks
Initial Capital Cost	Construction and procurement costs (also includes design costs in a D-B project)	Sometimes called the “Bid” price
Schedule	Time to build project (also includes design time in a D-B project)	Sets contract performance period
Prequalification	Financial and corporate information as well as bonding requirements	Typically a routine government form used for all contracting opportunities.
Past Project Performance	Project experience on past projects that are similar to the project at hand. Also might include past history of claims and litigation.	Preference is given to offerors with the most relevant experience.
Key Personnel Experience and Qualifications	Qualifications of key personnel	Licenses, registrations, and past project experience of individuals
Subcontractor Information	Subcontracting plan including small business utilization	Often requires that goals for participation by certain types of firms be met.
Project Management Plans	Plans for logistics, material management, equipment, traffic control, etc.	Often related to schedule constraints
Safety Record and/or Plan	Corporate safety record and plans for specific safety hazards	Often uses the Workmen’s Compensation Insurance Modifier as a metric to measure safety record.
Quality Management Plans	Typical QA/QC program submitted prior to award	May include design QC if bid alternates or D-B is used.
Proposed Design Alternate	Owner allows contractor to propose an alternate material or technology for a given feature of work.	Bid is submitted with and without alternates. Owner makes decision of which alternates will be accepted prior to award.
Technical Proposal Responsiveness	Proposals are considered responsive if they receive a minimum technical score.	Requires that a measurable standard be developed for each evaluation criteria.
Environmental Considerations	Plans to prevent and/or mitigate pollution during construction	Many are required by law and/or regulation.

Source: Scott et al. (2006).

QA/QC = quality assurance/quality control.

(1) satisficing, (2) modified satisficing, (3) adjectival rating, and (4) direct point scoring (Scott et al. 2006). The following discussion is also based on *NCHRP Report 561*.

Satisficing Evaluation Rating System

The satisficing evaluation rating system is the simplest form of the four methods. Minimum standards are set in the evaluation plan for every evaluation criterion, and each proposal is rated against these minimum standards. Agencies must include definitions for fatal deficiencies and their consequences to support transparency. Industry often refers to satisficing as “go/no-go.”

Modified Satisficing

Modified satisficing can represent the degree of responsiveness in a proposal. Modified satisficing includes criteria ratings to

allow the evaluator an opportunity across a variety of degrees of assessments. This method of rating system allows for those proposals that are nearly responsive but with minor deficiencies to stay in competition and also rewards the proposals that exceed the published criteria. Red-Amber-Green systems are the simplest forms of modified satisficing. Green can denote that the proposal is fully responsive to criteria, amber that the proposal has minor deficiencies, and red that the proposal is non-responsive because of the fatal deficiency.

Adjectival Rating

This rating system is an extension of the modified satisficing. Adjectival rating systems use a precisely defined set of terms to evaluate criteria in each proposal. The three elements of adjectival rating systems are (1) definitions, (2) performance indicators, and (3) differentiators. Clear definitions enhance transparency in the selection process. Performance indicators

help evaluators determine the appropriate rating (e.g., high, moderate, or low). Differentiators further distinguish between the proposal ratings.

Direct Point Scoring

Direct point scoring systems can be the most complex system. Points are assigned to the evaluation criteria in the proposals. The direct point system is used by many DOTs. The flexibility of the scale on which the proposal is scored or rated is the greatest advantage of this method. The weaknesses of this method are the “false sense of accuracy” that can be provided by numerical ratings of qualitative criteria and the effects of a lack of consistency when assigning scores across best value criteria categories.

Best Value Award Algorithms

Best value algorithms are the steps taken by the owners to combine best value parameters, evaluation rating systems, and evaluation criteria to make a final award recommendation. *NCHRP Report 561* distills seven best value award algorithms from the research analysis (Scott et al. 2006). Table 3 provides a summary of these methods.

Meets Technical Criteria—Low Bid

Price is the most important criteria in this award algorithm. The technical proposals are evaluated before receiving any cost proposals. The technical proposals that met the minimum proposed requirements are then taken forward and the price

proposals for those are opened. The contract is then awarded to the proposer with the lowest price.

Adjusted Bid

Numerical scoring of the proposals is required in this type of algorithm. Technical proposals are scored first and the price proposals are opened. The project price is adjusted by the technical score. This adjusted bid is used only for awarding the project. The project is awarded to the proposer with the lowest adjusted bid. The contract price is based on the amount listed in the price proposal.

Adjusted Score

The adjusted score algorithm is very similar to the adjusted bid algorithm. The price proposals are opened after the technical proposals are scored. The technical score of the proposal and the estimated total project price were multiplied and the result divided by the price proposal submitted by the proposer to calculate the adjusted score of the proposal. The project is awarded to the proposer with the highest adjusted score.

Weighted Criteria

The technical proposal and the price proposal are evaluated individually in the weighted criteria award algorithm. The technical evaluation factors and the price are assigned weights depending on their importance. The total score of the proposal is calculated by the sum of these evaluations and the project is awarded to the proposal with the highest score.

TABLE 3
BEST VALUE AWARD ALGORITHMS

Best Value Award Algorithm	Algorithm	Variables
Meets Technical Criteria—Low Bid	If $T > T_{\min}$, Award to P_{\min} If $T < T_{\min}$, Non-Responsive	T = Technical Score P = Project Price
Adjusted Bid	$AB = P/T$ Award AB_{\min}	AB = Adjusted Bid
Adjusted Score	$AS = (T \times EE)/P$ Award AS_{\max}	AS = Adjusted Score EE = Engineer’s Estimate
Weighted Criteria	$TS = W1S1 + W2S2 + \dots + WiSi + W(i+1)PS$ Award TS_{\max}	TS = Total Score Wi = Weight of Factor 1 Si = Score of Factor 1 PS = Price Score
Quantitative Cost—Technical Tradeoff	$T_{\text{Increment}} = [(T_j/T_i) - 1] \times 100\%$ $P_{\text{Increment}} = [(P_j/P_i) - 1] \times 100\%$ If $T_{\text{Increment}} > P_{\text{Increment}}$, Award Proposal _{<i>j</i>} , If $T_{\text{Increment}} < P_{\text{Increment}}$, Do Not Award Proposal _{<i>j</i>} , Repeat with Proposal _{<i>j+1</i>} Repeat Process until $T_{\text{Increment}} > P_{\text{Increment}}$	T = Technical Score P = Project Price
Qualitative Cost—Technical Tradeoff	Similar to above, only no quantitative analysis of difference. Award to proposal that has best value in proposed scope.	Evaluation panel reaches consensus as to which proposal is the best.
Fixed Price—Best Proposal	Award T_{\max} , Fixed P	T = Technical Score P = Project Price

Source: Scott et al. (2006).

Quantitative Cost—Technical Tradeoff

The technical and price proposals are scored in increments and then the difference between these incremental advantages is observed. The score (technical or price) increment is calculated by dividing the highest score by the next highest score minus one and then multiplied by 100. The project is awarded to the proposer with the lowest price, unless the higher priced proposal can properly be justified to add more technical value to the project.

Qualitative Cost—Technical Tradeoff

This algorithm relies on the judgment of the selection committee to determine the relative advantages of the proposals after a review of evaluation ratings and prices. The selection committee must document its rational decision based on analyzing the differences. To support transparency the decision must (1) be consistent with the solicitation evaluation factors and sub-factors, (2) be based on a comparative analysis of the

proposals, and (3) represent the selection committee's rational and independent judgment.

Fixed Price—Best Proposal

This award algorithm relies on a maximum price or a fixed price of the project that is defined by the owner. Each proposer must submit a technical proposal with an agreement to perform the work within the price constraints. The project is awarded to the best technical proposal.

SUMMARY

The literature review results presented in this chapter document industry practices and provides key definitions for use throughout the synthesis. The best value parameters, evaluation criteria, rating systems, and award algorithms describe the published work at the time of this synthesis. The concepts in this chapter set the basis for the survey and case example protocols applied in this report.

CHAPTER THREE

CURRENT PRACTICES IN BEST VALUE PROCUREMENT**INTRODUCTION**

This chapter presents current practices for best value procurement for transportation. The information is derived from a national survey of highway agencies and a review of their guidelines and process documents. After presenting an overview of best value application for context, the chapter focuses on transparency in the best value process.

APPLICATION OF BEST VALUE PROCUREMENT IN HIGHWAY AGENCIES

Of 46 agency responses to the national survey, 30 agencies (65%) have or are currently implementing best value procurement in some capacity, five (11%) are considering best value procurement, and 11 (24%) have not used best value selection. Figure 2 shows the percentage of agencies currently implementing or considering best value procurement.

Best value implementation is relatively recent. The survey results indicated that 13 DOTs began using best value procurement before 2005, whereas 22 DOTs began using or considering best value after 2005. The survey also attempted to discover the percentage of the average annual construction projects that were awarded by using best value. The results of this question are summarized in Table 4.

Table 4 indicates that nine DOTs use best value procurement for less than 1% of projects annually by number in their construction program; 13 DOTs reported a range of from 1% to 5%; five DOTs reported a range of 5% to 10%; two DOTs reported a range of 10% to 20%; and three DOTs use best value for more than 20% of the projects in their construction program. The final three DOTs reported the number, but not the percentage, of best value projects in their agencies. Virginia DOT indicated that they have awarded 51 best value projects valued at more than \$1.1 billion. Oregon and Washington State DOTs reported that they have delivered 15 and 28 projects, respectively, using best value procurement.

BEST VALUE PROCUREMENT AND PROJECT DELIVERY METHODS

The project delivery systems contain four primary components: (1) level of design completion, (2) project delivery method, (3) procurement procedure, and (4) payment provision (Gransberg and Shane 2014). For highway design

and construction projects, the fundamental project delivery methods are D-B-B, D-B, and CM/GC. The primary procurement procedures are low bid, best value, qualification-based selection, and sole source selection. Job order contracting is a combination of a project delivery method and a procurement method. In job order contracting, the agency awards a contract that provides for an indefinite quantity of design, construction, and/or maintenance services for a specified time. It was included in this study because it can use best value selection.

Thirty-five agencies provided responses for best value use with the various delivery methods. All 35 agencies (100%) use or can use best value with D-B project delivery. Nineteen agencies (54%) use or can use best value for D-B-B project delivery. Nine agencies (26%) use or can use best value in conjunction with CM/GC project delivery. Twelve agencies (34%) use or can use best value with the job order contracting method. Figure 3 presents these findings. It is important to note that this question asks if agencies use or *are considering the use of* best value with each delivery method. For example, the reader should not interpret the data as 19 agencies are using best value with D-B-B. Similarly, at the time data collection, one agency stated that they were considering the use of job order contracting but did not yet have the authority to use it.

Best Value Application with D-B Project Delivery Method

Since 100% of responding agencies can use best value with D-B project delivery, a better understanding of the process was needed. Sixty D-B-related documents from 45 state DOTs, including D-B manuals, guidelines, and RFPs/RFQs were reviewed. This section summarizes the best value selection process on D-B projects as it relates to transparency.

The best value selection process for D-B projects typically includes two phases. In the first phase, the agency prepares a RFQ that conveys the minimum and desired qualifications for D-B proposer teams. D-B proposer teams submit SOQs. According to the criteria specified in the SOQ, a technical review committee (TRC) evaluates the SOQs and selects a short list of the D-B proposer teams. Both Minnesota and Georgia DOTs require that the number of D-B proposer teams in the short list cannot exceed five (MnDOT 2011; GDOT 2014). Virginia DOT often shortlists three D-B proposer teams (VDOT 2011).

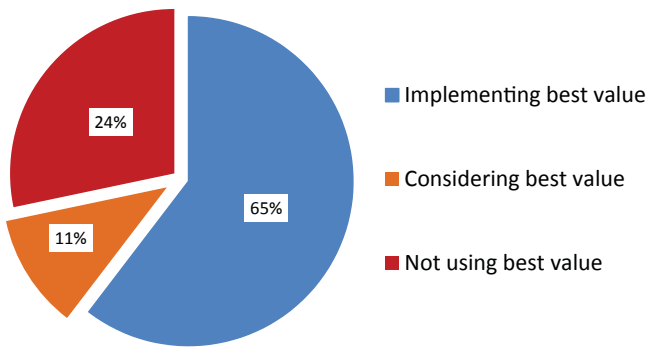


FIGURE 2 Current practices of best value procurement.

In the second phase, the short-listed teams submit technical and price proposals. The TRC evaluates the technical proposals before opening the price proposals (ODOT 2006; MnDOT 2011; GDOT 2014). The project is awarded based on a combination of technical and price proposals. The price proposal is kept sealed until the technical scoring is complete so that the price cannot influence the technical scoring. Maintaining this separation is a key to transparency.

Best Value Application with D-B-B Project Delivery

As shown in Figure 3, the national survey also explored why agencies do not use best value on D-B-B projects. Sixteen agencies responded to this question. The primary reasons for not considering or implementing best value with the D-B-B method were:

- Traditional procurement methods are adequate (eight responses);
- There are legal or regulatory prohibitions against some methods (13 responses); and
- There is inadequate staff to oversee (two responses).

TABLE 4
BEST VALUE PROJECTS IN
CONSTRUCTION PROGRAM

Percentage of Best Value Projects	Number of DOTs
<1%	9
1%–5%	13
5%–10%	5
10%–20%	2
>20%	3

Nineteen agencies reported that they use, or are able to use, best value with D-B-B delivery. To investigate these agencies further, a search for relevant information from these 19 agencies’ websites was undertaken. The search found that Michigan, Minnesota, and New York have guidance relating to best value for D-B-B delivery. This section focuses on the best value criteria these states use to better understand the transparency of the process.

Minnesota DOT (MnDOT) has published a comprehensive manual for best value procurement on D-B-B projects. The following is an excerpt from this manual:

This manual introduces a streamlined approach to best value procurement that can be applied to a variety of projects. Both small and large scale projects can benefit from the use of best value procurement. The approach is intended for projects that have been advanced through the final design stage by the Owner. The process uses pass-fail criteria based on what will most benefit the project and selects the low bid from the proposals meeting the criteria. It is designed to balance the ability to evaluate best value with the additional effort required for proposal preparation and evaluation (MnDOT 2013).

The New York DOT (NYSDOT) used best value procurement with D-B-B on the Patroon Island Bridge Project. The

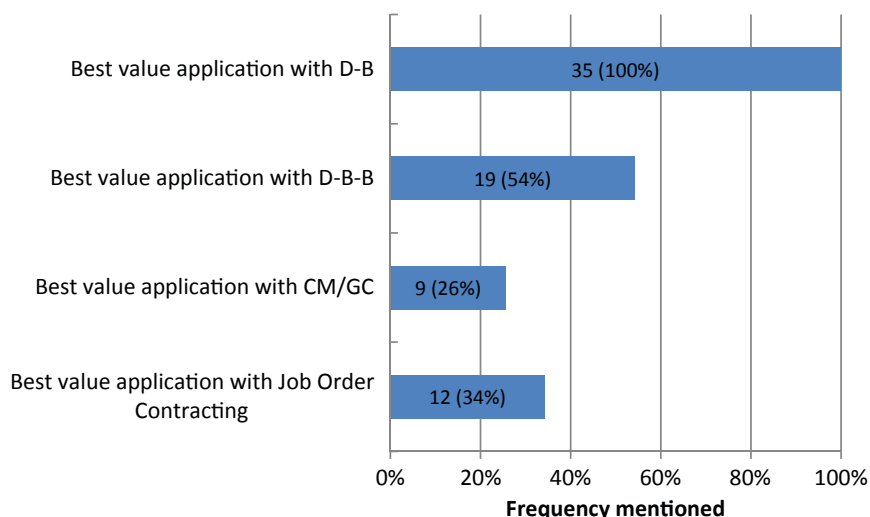


FIGURE 3 Best value procurement and project delivery methods (n = 35).
Note: This question asks if agencies use or are considering the use of best value with each delivery method.

best value process for this project involved evaluations for both cost and a set of best value criteria. The best value criteria included impact to the traveling public, speed of construction, and a proposer's ability to perform the work.

Michigan DOT (MDOT) employed a special provision for bidding using a best value approach with D-B-B on the M-39 (Southfield Freeway) project. In this project, Michigan DOT included "Quality of Life" as the main criteria for the best value approach. Specifically, the main components include criteria such as air quality, noise, restricting construction truck traffic on neighborhood streets, maintaining utilities to homes during construction, avoiding damage to adjacent property from vibration, local contractor and workforce participation concerns, safety and mobility concerns, and schedule concerns (MDOT 2012).

Best Value Application with CM/GC Project Delivery Method

As seen in Figure 3, nine state DOTs are using best value for CM/GC. The survey also found that nine are not using best value for CM/GC and 17 do not currently use the delivery method. The main reasons given by nine DOTs that do not use best value procurement with CM/GC delivery method were:

- Traditional procurement methods are adequate (five responses).
- There are legal or regulatory prohibitions against it (one response).
- Agency expertise is not available (two responses).

Specifically, California DOT indicated that they use a qualification-based selection process for CM/GC projects. Delaware DOT noted that CM/GC is in the beginning stages of consideration. Minnesota DOT shared its viewpoints on using best value procurement for CM/GC projects;

It depends how you are defining "best value selection" in the context of CM/GC. The Professional-Technical contract awarded to the CM/GC contractor is certainly value-based; the cost component is very small. The award of the final construction contract is negotiated and, in the unlikely event a price can't be arrived at, it would probably be let as a low bid project. Note that we are just beginning our CM/GC program.

NCHRP Synthesis 402: Construction Manager-at-Risk Project Delivery for Highway Programs clarifies these responses. It identifies three fundamental models for selecting a CM/GC contractor as following:

1. Qualification-based selection: one-step response to a RFQ only;
2. Best value selection: one-step response to a RFP only; and
3. Best value selection: two-step response to a RFQ and a RFP (Gransberg and Shane 2010).

It should be noted that when price is considered in Models 2 and 3, the weight assigned to the price factor versus other factors is the salient determiner of the best value contract (Gransberg and Shane 2014). By studying 36 CM/GC projects in 14 state DOTs, Gransberg and Shane (2014) found that when selecting best value procurement strategies for CM/GC projects non-price factors are more important than price factors and should carry a greater weight in the evaluation process.

Best Value Application with Job Order Indefinite Delivery/Indefinite Quantity Contracting

The survey results indicated that 12 agencies (of the 35 that responded to this question) use or can use best value procurement with Indefinite Delivery/Indefinite Quantity (IDIQ) contracting (Figure 3). Eleven agencies indicated that they do not use best value with IDIQ contracting and 12 other agencies noted that they do not use IDIQ. The primary reasons of the 11 agencies that do not use best value procurement with IDIQ contracts were:

- Traditional procurement methods are adequate (four responses).
- There are legal or regulatory prohibitions against some methods (four responses).
- Agency expertise is not available (three responses).

IDIQ contracts use D-B-B and D-B delivery. The discussions of best value from the previous sections apply to IDIQ. The research did not uncover any additional information relating to IDIQ and best value transparency.

EVALUATION CRITERIA AND TRANSPARENCY

Communication of evaluation criteria is essential for transparency. Figure 4 presents the methods agencies use to convey evaluation criteria and weights in the best value solicitation process.

Of the 35 agency responses, 29 agencies (83%) indicated that they use a point range to express the importance of evaluation criteria in the solicitation process. Six agencies (17%) convey evaluation criteria by listing their order of importance. It is noted that four agencies from the aforementioned 29 reported that they can also use the order of importance method in their solicitation process.

EVALUATION TEAMS AND TRANSPARENCY

In general, the best value evaluation teams include individuals who are knowledgeable in both the technical and programmatic aspects of a project. The technical experts can evaluate the proposals with regard to the physical, engineering, or scientific requirements. Programmatic evaluators can

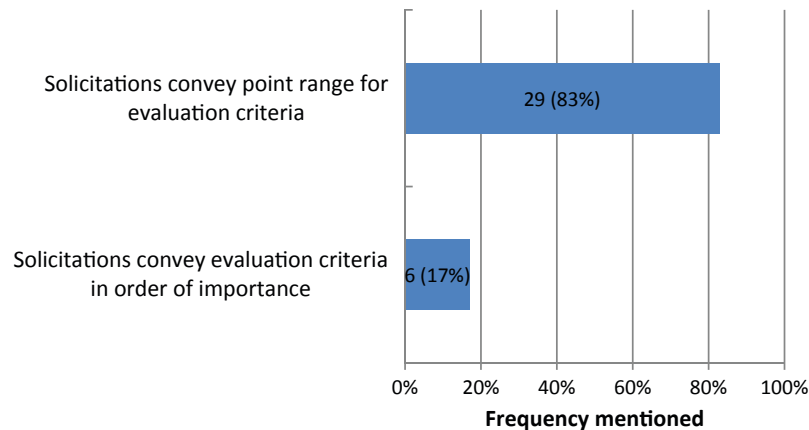


FIGURE 4 Evaluation criteria and weight in best value solicitations ($n = 35$).

assure the various stakeholders that the proposal fulfils the larger public objectives (Hilger 2009). *NCHRP Report 451* notes that transparent evaluation committees have competent professionals of strong moral and ethical character, with no direct personal interest in the outcome of the proposal evaluation process (Anderson and Russell 2001). Specifically, professionals in the evaluation committee often include one member each from:

- The project engineering and design team,
- Contract administration,
- Project management, and
- Outside of the agency.

Structure of Evaluation Committee

The survey asked about non-agency personnel on best value evaluation committees. The inclusion of non-agency personnel on a committee can increase transparency. Fourteen of 35 agencies include non-agency personnel on the committee. The 14 responses have a few common themes.

- Contractor and/or engineering association representatives: these members add objectivity by representing the professional contracting or construction organizations to which they belong. They represent their organization, but have no ties to the project or proposing teams.
- Private sector subject matter experts: these members add technical expertise to the committee. They have expertise in the field, but no ties to the project.
- Funding and/or public sector partners: these members are stakeholders who are affected by the project. They may be federal, state, or local partners.

The agencies' also provided some common practices for transparency in their responses. The common themes are summarized in the following:

- Various state DOTs mentioned that selection panel composition is project-specific. They can include addi-

tional technical or programmatic expertise if needed for a specific project.

- Construction projects often impact local stakeholders. Inclusion of local agency representatives on the selection committee can increase evaluation transparency and help align local stakeholder values with overall project goals.
- Although various states include professional contractor and/or engineering representatives on the evaluation committees to increase transparency, they differ on whether these individuals participate in scoring the evaluation. In some cases the professionals score the proposals, but in others they only provide input to the scoring members.

SELECTION METHODOLOGIES AND TRANSPARENCY

Chapter two provided a summary of the evaluation process and algorithms from the literature. Two elements of the process can enhance or detract from transparency in the process: (1) interviewing proposers/communication and (2) debriefings. Based on responses to the survey, agency guidance documents corresponding to the responses were reviewed. This section summarizes the findings in this area.

Interviewing Proposers

Of 35 responses, 23 agencies (66%) reported that they conduct interviews as part of their best value projects, with two of these agencies stating that they always conduct interviews. Twelve agencies (34%) reported that they have not conducted interviews with proposers as part of the selection process. Figure 5 illustrates the survey results with regard to interviewing proposers in best value procurement.

As seen in Figure 5, more agencies conduct some level of interviews. However, agencies most frequently stated that they only conduct interviews on select projects, and commented that they let the project characteristics dictate whether an interview is needed. For example, interviews may not be

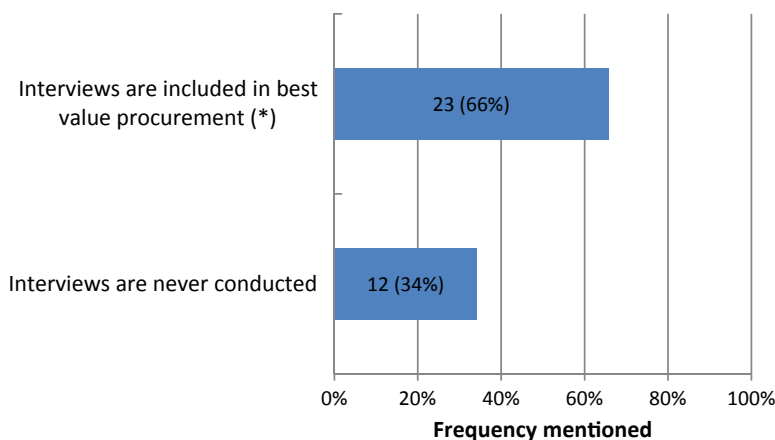


FIGURE 5 Interview proposers in best value procurement selection ($n = 35$).
 (*)Only two DOTs always conducted interviews.

required for D-B-B projects with minimal selection criteria. However, interviews, and sometimes presentations, may be required with large D-B projects that have complex technical or aesthetic features. Of the agencies that are not conducting interviews, one noted that they have pre-proposal meetings, which can add to the transparency of the process.

Debriefing

Subjectivity can exist in best value procurement, but debriefing promotes transparency (FHWA 2012). The primary purpose of debriefings is to provide feedback to unsuccessful proposers. State DOTs may conduct debriefings in person, with individual or group meetings, in writing, or over the phone.

The survey asked the respondents to specify how they conduct debriefings in the best value selection process. Figure 6 illustrates the result from the survey. Eleven agencies (31%) conduct debriefings in writing, 26 (74%) conduct

debriefings orally, and two (6%) noted that best value proposers do not receive a debriefing. In addition, 16 agencies (46%) indicated that they allow proposers to review the winning proposals. Five agencies (14%) have specific procedures to conduct best value debriefings. For example, South Carolina DOT has a standard practice on debriefings that includes two phases: (1) RFQ debriefings for non-shortlisted teams will occur after the shortlisted teams are named, and (2) debriefings for shortlisted teams will only occur after a D-B contract has been executed.

Georgia DOT noted that they include various staff in the debriefing meeting, such as representatives from Procurement, Legal, Construction, or other disciplines as needed. GDOT also includes FHWA for federal oversight projects in the debriefing meeting.

GDOT will prepare a summary of the requesting proposer's relevant evaluation information and will provide the information in writing to the requesting Proposer within thirty (30) calendar days

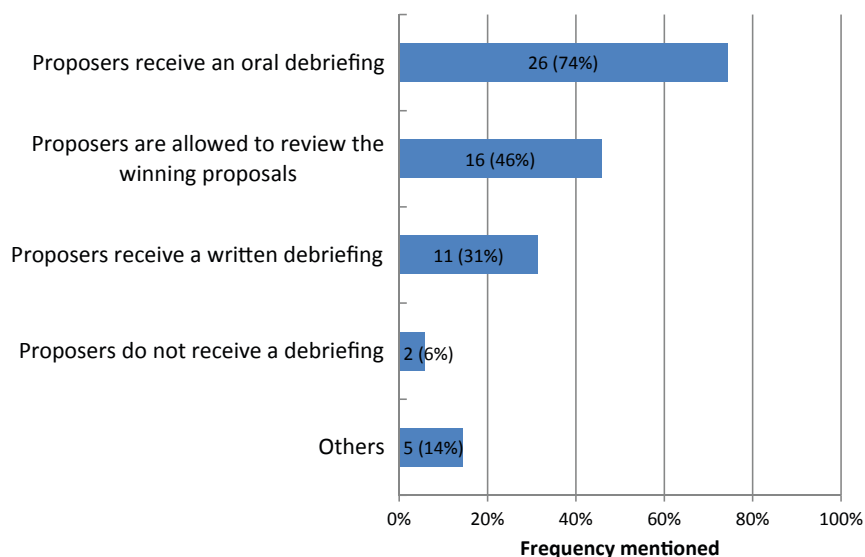


FIGURE 6 Debriefings in best value procurement procedures ($n = 35$).

after GDOT's issuance of the Project's Notice to Proceed. . . . The debriefing meeting will be held at GDOT, will be approximately one hour in length, and will be an informal discussion between GDOT and the proposer. *The contents of another proposer's SOQ, technical proposal or price proposal will not be discussed* (GDOT 2014, italics added).

At the New Hampshire DOT (NHDOT), the debriefing may include “a summary of the rationale for the selection decision and contract award” and

- Be limited to discussion of the unsuccessful proposer's proposal and may not include specific discussion of a competing proposal;
- Be factual and consistent with the evaluation of the unsuccessful proposer's proposal; and
- Provide information on areas in which the unsuccessful proposer's technical proposal had weaknesses or deficiencies (NHDOT 2011).

Arizona DOT (ADOT) has a debriefing procedure for best value selection with CM/GC projects as stated here.

To date the Department has made only *the winning firm's SOQ available for viewing* during the debriefings. The Department has reviewed this policy and will continue to provide only the winning firm's SOQ for viewing. The firm receiving a debriefing will also receive *a comparison of their scores to the winning firm's scores and a compilation of comments made by the Selection Team on their SOQ and interview* (ADOT 2013, SEP 14, italics added).

INDUSTRY OUTREACH EFFORTS

Industry outreach plays a role in developing and implementing best value approaches. To investigate the industry outreach impact on best value selection, the survey asked respondents to describe their industry outreach efforts for best value procurement procedures. Figure 7 presents the survey results. Twenty-three agencies (66%) indicated that they worked with industry to develop their best value procurement procedures.

Seventeen agencies (49%) reported that they have regular meetings with industry representatives to evaluate their best value approach. Only five agencies (14%) reported that they did not solicit industry input for their best value procurement procedures. Three agencies (9%) indicated that they do not have documented procedures for industry outreach efforts, but are in the process of developing industry acceptance for best value projects.

Florida DOT (FDOT) indicated that it conducts workshops to help industry and department staff understands D-B best value process.

Periodic workshops are conducted with industry officials to discuss their design build procedure. Discussions with the industry often occur during every phase of the procurement process including pre-submittal and post-submittal (FDOT 2012).

MDOT reported that it does not have documented industry outreach procedures, but coordinates with the industry when best value approaches are developed. Kansas DOT stated that it worked closely with the contracting industry as legislation was considered and developed. It also worked with industry in the development of rules, manuals, and procedures for best value procurement. NYSDOT pointed out that it meets with industry to develop its best value approach for D-B projects; however, the D-B legislation was passed with little outreach.

MnDOT noted that “early coordination with the contracting industry will allow the industry to prepare for best value procurement and increase competition on the project” (MnDOT 2013). In addition, the MnDOT D-B Industry Outreach Report specifies that forming an industry Associated General Contractors of America/American Council of Engineering Companies (AGC/ACEC) outreach is an essential task to improve the alternative contracting program (MnDOT 2012).

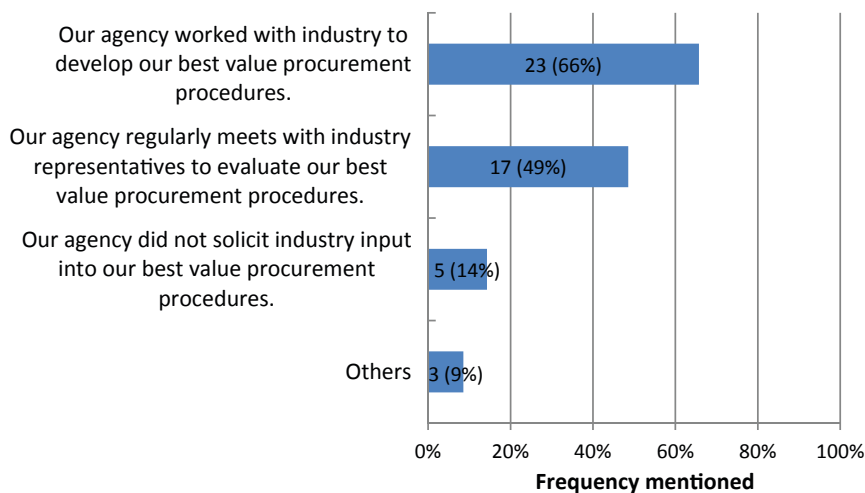


FIGURE 7 Industry outreach efforts for best value procurement ($n = 35$).

TRAINING

Figure 8 illustrates the results of the survey with regard to training for best value procurement selection. Fourteen of 35 agencies (40%) provide general best value process training to agency personnel. Ten states (29%) provide training for every best value project and six (17%) reported that they provide training for some projects based on the project characteristics. It can be noted that some states provide both general and project-specific training. Seven states (20%) mentioned that they do not provide training for best value procurement selection.

The three DOTs specified in “others” use different methods in training. For example, one DOT has more targeted training to address specific areas of proposal evaluations. One provides brief project-specific training, but did not state that they have such training for each project. The third reported that it provides manuals to the evaluation committee for each project.

The literature review noted the importance of training on how evaluation team members document the evaluations. Proper documentation enhances the transparency and fairness of the best value approach. Each evaluation committee member should document the reason(s) for each evaluation score and ensure that the identity of the proposer does not influence the comments in any way (Anderson and Russell 2001).

BEST VALUE ENABLING LEGISLATION

This section summarizes the results from the national survey and provides some amplification of the results from the literature. Appendix C contains a state-by-state summary of best value legislation. Note that this report does not comment on the appropriateness or the adequacy of the best value legislation. Agencies are not encouraged to use the information

in this synthesis, or Appendix C in particular, as their sole source of information in developing legislation. However, the examples serve as an effective starting point for developing legislation.

To document current practices, the survey asked the state agencies to identify if they have legislation or regulations for best value procurement. Of 35 responses to this question, 24 reported that they have best value legislation, while 11 that they do not. In addition, 15 agencies provided web links to their legislation. Appendix C provides a list of general best value legislations that may allow DOTs in various states to use best value procurement for transportation projects. [It is important to note that the information presented in this section and Appendix C is an overview of best value legislation that may apply for the highway or other industry.]

In 2007, Minnesota enacted a law that enables public agencies to select proposers based on best value. It can be noted that this best value legislation does not affect D-B contracts. Some highlights from this legislation follow:

- Price must be one of the evaluation criteria when procuring construction contracts.
- Other evaluation criteria may include, but are not limited to, quality performance, timeliness of performance, customer satisfaction, on-budget performance, ability to minimize change orders, ability to prepare plans, technical capacity, qualifications, and ability to assess and minimize risks.
- Best value determination must be based on the evaluation criteria detailed in the solicitation document. If criteria other than price are used, the solicitation document must clearly state the relative importance of price and other factors.
- Any personnel administering procurement procedures for a user of best value procurement, or any consultant

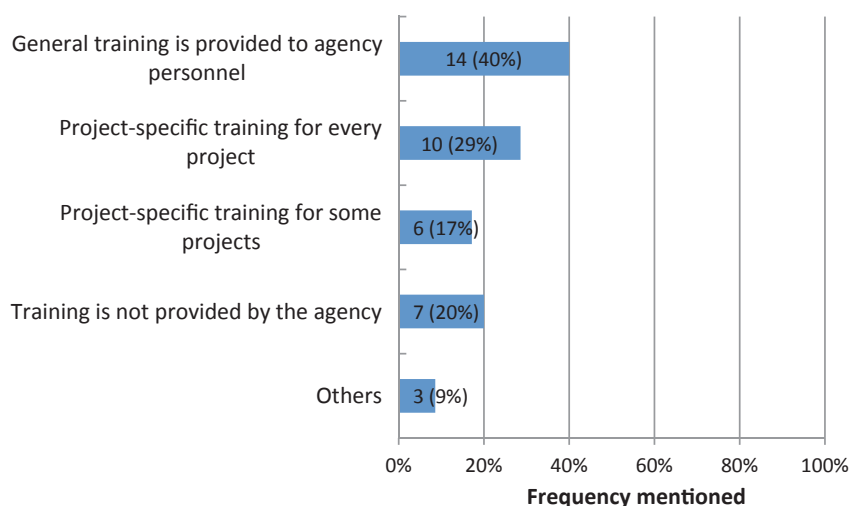


FIGURE 8 Training for best value procurement selection ($n = 35$).

retained by a local unit of government to prepare or evaluate solicitation documents must be trained, either by the department or through other training, in the RFP process used for best value contracting for construction projects. Application of this manual cannot be substituted for the required training (MnDOT 2013).

To improve the transparency and fairness of the evaluation process, Montana DOT legislation requires the state agency to document in writing the reasons for selecting the proposer. Montana DOT's legislation (MCA § 18-2-501-503) dictates the following selection criteria:

- History and experience with projects similar to the project under consideration;
- Financial health;
- Staff or workforce that is proposed to be committed to the project;
- Approach to the project;
- Project costs; and
- Any additional criteria or factors that reflect the project's characteristics, complexities, or goals.

In 2001, Oregon enacted legislation that allows for state use of best value procurement. The legislation states that the intent of best value procurement is to enable vendors to offer, and a state agency to select, the most appropriate solution to meet the business objectives identified in a solicitation and to keep all parties focused on the desired outcome of procurement (2001 c.97 §2). This statute also includes the following main evaluation factors for best value procurement:

- The total cost of ownership, including the cost of acquiring, operating, maintaining, and supporting a product or service over its projected lifetime;
- The technical merit of the vendor's proposal; and
- The probability of the vendor performing the requirements stated in the solicitation on time, with high quality, and in a manner that accomplishes the stated business objectives.

Under Chapter 5517, Ohio reports that the director of transportation may establish a program to expedite the construction of special projects by combining the design and construction elements of a highway or bridge project into a single contract. The director may use a *value-based selection process* that combines technical qualifications and competitive bidding elements.

Under Assembly Bill No. 401, California statutes allow Caltrans to utilize D-B either with best value or low-bid procurement for up to ten projects on the state highway system. The bill would extend the use of D-B to regional transportation agencies, and extend the period of time for which Caltrans may use D-B. Highlights of California State Assem-

bly Bill No. 401 related to best value selection for D-B projects include:

- Competitive proposals that must be evaluated by using only the criteria and selection procedures specifically identified in RFP.
- The minimum factors that must be weighted including:
 1. Price,
 2. Technical design and construction expertise, and
 3. Life-cycle costs over 15 years or more.
- The transportation entity that may hold discussions or negotiations with responsive bidders using the process stated in the RFP.
- The result of evaluation process that must include the top three responsive bidders, with sequential ranks based on a determination of value provided.
- The award of the contract that should be made to the responsible proposal that has offered the best value to the public.
- Upon issuance of a contract award, the transportation entity must publicly announce the award that identifies the proposer to whom the award is made. Along with the award notice, a written decision supporting the transportation entity's contract award that states the basis of the award is required. The notice of the award should include the transportation entity's second- and third-ranked D-B entities.
- A written decision that supports the transportation entity's contract and the contract file must provide sufficient information to satisfy an external audit.

BEST VALUE AWARD PROTESTS

This section summarizes the results from the national survey and discussions with states regarding best value award protests. Appendix D contains a summary of four best value protests and their outcomes.

The survey asked agencies to identify if they have had any protests lodged on best value projects; 24 answered "no" and 11 "yes." Nine of the 11 agencies with best value protests provided brief descriptions. All of these were resolved favorably to the agencies. Most protests related to a perception of improper proposal evaluation (i.e., a dispute with the technical scoring of the proposal). In all cases, the agency followed its predetermined procurement procedures. The disputes were resolved through discussions by a claims review board or in court. One other protest was related to the legitimacy of the process under state procurement regulations. It was determined that the process was allowed.

FDOT shared a series of D-B protests and their resolutions. One team protested not being shortlisted. FDOT resolved the issue by discussing the circumstances with the D-B team, which subsequently withdrew its protest. A second protest related to

the scoring of an Expanded Letter of Interest (ELOI). FDOT resolved this by changing the process for scoring ELOIs, posting those scores, and allowing D-B teams to self-select whether to pursue the technical proposal phase based on their ELOI results. The last protest related to the proposal evaluator review process. Because FDOT guidelines allow them to utilize evaluators to review specific sections of technical proposals rather than the entire proposal this protest was rejected.

In addition to best value protests collected from the survey, Appendix D summarizes four such protests and their outcomes based on the case example interviews with the Oregon, Utah, California, and Minnesota DOTs.

SUMMARY

This chapter describes the current use of best value procurement through the summary of a national survey of highway agencies and a review of their guidelines and process documents. These data provided a rich description of issues that

impact process transparency. The survey found that more than three-quarters of the responding DOTs use, or are considering the use of, best value procurement. The majority of these agencies use best value on less than 5% of their programs, whereas three of the agencies use it on more than 20% of their programs. Of the states that use D-B project delivery, 100% can use best value procurement. To promote transparency, all states share the evaluation criteria weighting; either explicitly or they provide an order of importance. Evaluation committees contain a balance of technical members with no personal interest, either actual or perceived, in the outcome of the evaluation process. Forty percent of states include non-agency members to support the transparency of the technical evaluation process on a project-by-project basis. Debriefings are conducted by 94% of the states. Two-thirds of the agencies using best value procurement work with industry to develop their programs, and one-half meet regularly for program evaluation. Enabling legislation varies from state to state; however, it was found to have a significant influence on the process and transparency in best value selection. These findings provided a basis for selecting states for case examples, which are discussed in chapter four.

CHAPTER FOUR

BEST VALUE CASE EXAMPLES THAT SUPPORT TRANSPARENCY**INTRODUCTION**

This chapter builds on the best value literature review and state-of-practice survey from the previous chapter. The primary objective of this chapter is to document the case examples and experiences of the agencies found to have the most effective best value experience. After explaining the selection processes for the case examples, this chapter provides readers with details to assist in developing fair, objective, and transparent best value procurement procedures.

SELECTION OF CASE EXAMPLES

The data from the national survey and literature review were used to select the state DOTs appropriate for further study. The following selection criteria were used:

1. Years of experience using best value procurement;
2. Use of best value procurement with different project delivery methods, including D-B-B, D-B, and CM/GC;
3. The number of best value projects;
4. Comprehensiveness and availability of best value process documentation; and
5. Willingness of agency personnel to participate in the study as determined by the survey response.

Based on these criteria, 11 DOTs were invited to participate in the case example portion of the study. Participation required a structured interview, documentation, and reviewing the final analysis for accuracy. Seven DOTs agreed to participate; California, Florida, Michigan, Minnesota, New York, Oregon, and Utah.

A structured interview protocol was used during data collection. Each DOT was interviewed using the same questions. The general question categories were:

1. Proposal evaluation criteria,
2. Selection methodology and award algorithm,
3. Structure of evaluation committee,
4. Debriefing procedures,
5. Industry outreach efforts, and
6. Lessons learned.

Appendix B provides the complete list of protocol questions, and this chapter presents the findings in the same general order as the protocol.

CALIFORNIA DEPARTMENT OF TRANSPORTATION**Overview**

With the passage of its D-B legislation in 2009, Caltrans began using best value procurement. Its thoroughly documented process builds on other state procedures. Similar to other DOTs, Caltrans uses a two-step procedure for best value procurement selection:

- Step 1: RFQ/SOQ Evaluation—Prequalification of proposers; and
- Step 2: RFP/Proposals Evaluation—Selection of the final proposer.

In the first step, RFQs are issued to receive information in the form of SOQs from the interested proposers, which allows the agency to determine the proposers who are qualified to successfully deliver the project. In the second step, Caltrans issues RFPs to the pre-qualified proposers requesting them to submit proposals. After completing the evaluation, a proposal offering the best value is awarded. It can be noted that Caltrans' initial authority required prequalification, but did not allow shortlisting. Their new authority (AB 401) does allow shortlisting.

Evaluation Criteria/Award Algorithms

In the RFP, Caltrans lists the evaluation criteria. Caltrans uses both pass/fail and technical evaluation factors. Table 5 summarizes a typical list of RFP evaluation criteria. Table 6 presents the adjectival rating guidelines for the technical factors.

The TRC evaluates the technical proposals against the technical factors and subfactors contained in the RFP. The strengths and weaknesses of each proposal are assessed and documented by the TRC. It can be noted that proposals are only evaluated against the technical factors and are not compared with each other. After independently reviewing the proposals, the TRC meets to discuss the proposals to determine an adjectival rating ("Poor" to "Excellent") for each category and subcategory contained in the RFP through consensus rating. The adjectival ratings are converted into a technical score based on adjectival conversion factors and weightings. Price proposals are evaluated only after technical proposal evaluation.

The lowest price is assigned the maximum points available for price. The points for the other proposals are assigned on a prorated basis using the lowest price.

TABLE 5
BEST VALUE EVALUATION CRITERIA

Type of Factor	Evaluation Factors
Pass/Fail	Legal Financial
Technical/Quality	Management/Administration Evaluation Criteria Environmental Compliance and Public Outreach Plans Responsiveness to RFP and Design Concept Transportation Management Plan and Safety

Source: Caltrans (2012b).

After completing the evaluations of the technical proposals and price proposals, Caltrans performs the final best value calculation to determine the “Final Total Proposal Value” (FTPV) using the formula shown here. The contract is awarded to the proposer with the lowest FTPV.

$$\text{FTPV (\$)} = \text{Proposal Price Value} + \text{Qualitative Value}$$

$$\text{Qualitative Value (QV)} = \text{Technical Score Value (in \$)}^*$$

$$^*(\text{Maximum Technical Points} - \text{Technical Score Factor of Proposer})$$

Where:

$$\text{Technical Score Value (in \$)} = \frac{\text{Lowest Proposal Price Value}}{\text{Maximum Price Points}}$$

$$\text{Technical Score Factor of Proposer} = \frac{\text{Maximum Technical Points}^*}{\text{Technical Score of Proposer/Highest Technical Score}}$$

$$^*(\text{Technical Score of Proposer/Highest Technical Score})$$

To increase the transparency and fairness of the evaluation process, Caltrans uses the following strategies:

- It provides a detailed description of the technical evaluation factors, the objectives and requirements for each evaluation factor, their relative weights, and the information to be submitted in the RFP.
- The rating result of individual evaluation factors is determined by a consensus of the TRC members.
- Price is only considered after completion of the proposal evaluation process.
- The adjectival conversion factors are sealed until the technical reviewers have completed evaluating all proposals.

Evaluation Committee

Caltrans uses two main committees to evaluate technical proposals: (1) TRC (with its technical subcommittees), and (2) the process oversight committee. The TRC chairperson is the point of contact for the evaluators and is responsible for the proposal evaluation scoring and documentation of the evaluation process. The primary duty of the TRC and technical subcommittee is to review the RFP and evaluation manual and assess the proposals. First, the technical subcommittee submits to the TRC its suggestions on the strengths and

TABLE 6
RATING GUIDELINE

Rating	SOQ Rating Guidelines	Proposal Rating Guidelines
Excellent	SOQ indicates significant strengths with few minor weaknesses, if any.	<ul style="list-style-type: none"> • The technical proposal demonstrates an approach with unique or innovative methods of approaching the proposed work with an outstanding level of quality. • The technical proposal contains many significant strengths and few minor weaknesses, if any.
Very Good	SOQ contains a few minor weaknesses that are outweighed by the strengths.	<ul style="list-style-type: none"> • The technical proposal demonstrates an approach offering unique or innovative methods of approaching the proposed work. • The technical proposal contains much strength that outweighs the weaknesses. • Weaknesses, if any, are very minor and can be readily corrected.
Good	SOQ contains weaknesses that are balanced by strengths.	<ul style="list-style-type: none"> • The technical proposal demonstrates an approach that offers an acceptable level of quality. • The technical proposal contains strengths that are balanced by the weaknesses. • Weaknesses are minor and can be corrected.
Fair	SOQ contains weaknesses that are not offset by strengths. Weaknesses could adversely affect successful project performance.	<ul style="list-style-type: none"> • The technical proposal demonstrates an approach that marginally meets the RFP requirements/objectives. • The weaknesses are not offset by the strengths. • There are a significant number of weaknesses and very few strengths.
Poor	SOQ contains significant weaknesses with very minor strengths, if any.	<ul style="list-style-type: none"> • The technical proposal demonstrates an approach that contains significant weaknesses/deficiencies and/or unacceptable quality. • The technical proposal fails to meet the stated RFP requirements/objectives and/or lacked essential information and is conflicting and/or unproductive. • There are a significant number of weaknesses and very few strengths, if any.

Source: Caltrans (2012a).

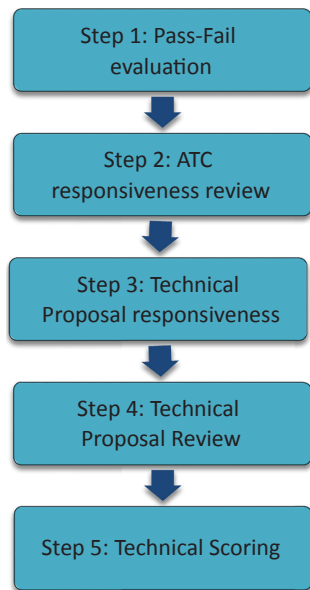


FIGURE 9 Evaluation steps (Source: Caltrans 2012b).

weaknesses of the proposals. Next, the TRC evaluates the strengths and weaknesses and assigns an adjectival rating to each technical criterion. The score given by the TRC is the final score of the technical proposal.

The process oversight committee consists of the non-voting group of observers who perform pass/fail evaluation of the proposals and observe the deliberations of the TRC. Figure 9 outlines the main steps of the technical proposal evaluation process.

The roles and responsibilities of the evaluation committee members are as follows:

Technical Review Committee (TRC)

- Review RFP and evaluation manual;
- Individually review and assess proposals;
- Review consensus strengths and weakness reports from technical subcommittees;
- Forward clarification requests to TRC chair; and
- Determine TRC consensus score, which will become the official final technical proposal score for each proposal.

Technical Subcommittee

- Review RFP and evaluation manual;
- Individually review and assess proposals;
- Record strengths and weaknesses on worksheets provided;
- Forward clarification requests to TRC chair; and
- Participate in consensus meetings.

Process Oversight Committee

- Provides a non-voting group of observers;
- Performs pass/fail evaluation;
- Opens the price proposal at the public bid opening; and
- Submits price proposal information to TRC chair.

Caltrans requires that the Evaluation Committee maintain and manage the fairness and integrity of the entire evaluation process; for example,

- Each member must execute a confidentiality agreement form, conflict of interest agreement form, and conflict of interest statement;
- Each member must have no contact with proposers during the process;
- No member may disclose the contents of proposals or proceedings; and
- Proposals and evaluation materials must be kept in a safe and secure location.

Training

Caltrans mandates the training for evaluation committee members before the review and scoring of proposals. The members of the committee are required to sign a confidentiality and conflict of interest statement before the training; normally a two-hour session. Caltrans requires that each member of the evaluation committee participate in the training session for a given project.

During the training session, the overview of best value procurement and the rules and roles of the evaluation process are explained in detail. Further, the training session provides a step-by-step description on how to rate evaluation criteria from the pass/fail to technical factors of the proposals.

Debriefings

Upon request, Caltrans conducts debriefings for the unsuccessful proposers. The debriefing process occurs in person approximately 90% of the time. For the remaining 10% it is conducted by phone, primarily when the proposers are not from the area. Caltrans tries to include members from the TRC in the debriefing meetings to help explain how a criterion was rated and the reasoning behind each rating. It is important to note that Caltrans does not discuss other proposals during the debriefings.

The debriefing meeting also outlines the strengths and weaknesses of the proposals based on the evaluators' comments from the technical proposal evaluation process. Caltrans asks proposers to submit their feedback on the evaluation process in order to continually improve the process with regard to transparency and objectivity.

Lessons Learned

The Caltrans agency representative for this study provided the following lessons learned for developing and maintaining a transparent best value process:

- Evaluation criteria should be made as clear as possible to the proposers to ensure the success of the best value procurement process.
- The TRC must reach a consensus as a whole. It does not use averages of individual scores. The technical scoring committee can use a “+” and “-” system in order to reach the consensus.
- The agency ensures that the RFP is well-defined, as they believe that this sets the project up for success.
- Clear communication between parties during the entire evaluation process is essential to obtain transparency in best value selection.
- Each project needs to maintain a single point of contact between the proposers and the agency in order to be consistent in responses.

FLORIDA DEPARTMENT OF TRANSPORTATION

Overview

FDOT uses best value procurement primarily for Adjusted Score Design-Build (ASDB) projects. ASDB is defined as follows:

[T]he contract award is based on the lowest adjusted score, which is determined by dividing the price proposal by the combined *Expanded Letters of Interest* score and technical proposal score. Under the ASDB procurement, a two phase process is used which combines the evaluation scores of the *Expanded Letters of Interest* (phase I) and the technical proposal (phase II). A maximum of 20 points may be awarded for the Phase I *Expanded Letter of Interest*, which would be added to the maximum of 80 points awarded for the Phase II technical proposal submittal (FDOT 2012).

Evaluation Criteria/Award Algorithms

FDOT selects best value projects based on two phases: Phase I—Evaluation of Expanded Letters of Interest (ELOI), and Phase II—Evaluation of Technical and Price Proposals. Typically, FDOT uses a standard set of criteria for both phases. However, for any given project, this standard set of evaluation criteria may need to be modified to meet the facility needs. To be successful, FDOT recommends that proposal evaluators participate in the development of evaluation criteria.

FDOT judges the relative ability of each submitting company or entity to perform the required services based on qualification information and the ELOI. Unless otherwise noted in the specific D-B advertisement, the criteria for evaluating the Phase I submittals will include:

1. D-B firm name and prequalification.
2. Past performance evaluations, D-B project experience, organization, and staffing (0–7 total points):
 - Contractor grades
 - Professional consultant grades
 - Performance history with other states or agencies, if none with the department
 - D-B project experience of the contractor and professional consultant
 - Similar types of work experience
 - Environmental record
 - Contractor experience modification rating (current year)
 - D-B firm organization
 - D-B firm staffing plan
 - D-B firm coordination plan.
3. D-B project requirements and critical issues (0–13 total points):
 - Understanding of D-B project requirements
 - Identification of critical issues
 - Outline for addressing critical issues.

To eliminate potential bias that may occur during the evaluation of ELOI, FDOT uses the following strategies:

- Evaluate each responsive ELOI and compile information (i.e., data, comments, etc.) to support the ELOI scores;
- Check all evaluation categories to ensure minimum qualifications are met for the category; and
- Document strengths and weaknesses of each proposer.

It can be noted that when the ELOI evaluation process is completed, proposal evaluators must attend the selection committee meeting to confirm their evaluations and scorings. Once all proposers’ scores are calculated, FDOT will provide a notification to each proposer regarding their ELOI’s score and the scores of all responsive proposers. Within 48 hours of receiving this information, proposers must declare their intent to participate in Phase II of the procurement process; the evaluation of price and technical proposals.

During Phase II, FDOT provides a template including a score for each item in the Technical Proposal (Table 7). The maximum number of points for the technical proposal is 80. FDOT notes that deviations from these items and established ranges must be approved by the Central Office. Also, for a particular project, the “Credit will be given for” under each item should be tailored to meet the facility’s needs.

FDOT also recognizes that the evaluation of ELOI and technical proposals involves subjectivity. As a result, to reach unbiased and objective results (in addition to these strategies), FDOT clearly states the roles of the evaluators as follows:

- Review RFP and advertisement to have full understanding of the project and proposer’s expectations;

TABLE 7
AN EXAMPLE OF TECHNICAL AND PRICE PROPOSAL EVALUATION IN FDOT

RFP Section	Example																				
Technical Proposal	<p>1. Design (25–40 points) Credit will be given for the quality and suitability of the following elements:</p> <ul style="list-style-type: none"> • Structures design • Roadway design and safety • Drainage design • Design coordination plan minimizing design changes • Geotechnical investigation plan • Geotechnical load test program • Minimizing impacts to adjacent properties and structures through design • Traffic control plan design • Incident management plan • Aesthetics • Utility coordination and design <p>2. Construction (25–40 points) Credit will be given for the quality and suitability of the following elements:</p> <ul style="list-style-type: none"> • Safety • Structures construction • Roadway construction • Drainage construction • Construction coordination plan minimizing construction changes • Minimizing impacts to adjacent properties and structures through construction • Implementation of the environmental design and erosion/sediment control plan • Implementation of the maintenance of traffic plan • Implementation of the incident management plan • Utility coordination and construction <p>3. Innovation (0–10 points) Credit will be given for introducing and implementing innovative design approaches and construction techniques that address the following elements:</p> <ul style="list-style-type: none"> • Minimize or eliminate utility relocations • Materials • Workmanship • Enhance design and construction aspects related to future expansion of the transportation facility <p>4. Value Added (5–10 points) Credit will be given for the following value added features:</p> <ul style="list-style-type: none"> • Broadening the extent of the value added features of this RFP while maintaining existing threshold requirements • Exceeding minimum material requirements to enhance durability of project components • Providing additional value added project features proposed by the D-B firm <p>The following value added features have been identified by the department as being applicable to this project. The D-B firm may propose to broaden the extent of these value added features.</p> <table border="1"> <thead> <tr> <th>Value Added Feature</th> <th>Minimum Value Added Period</th> </tr> </thead> <tbody> <tr> <td>Value Added Asphalt</td> <td>3 years</td> </tr> <tr> <td>Value Added Concrete Pavement</td> <td>5 years</td> </tr> <tr> <td>Value Added Bridge Components</td> <td>5 years</td> </tr> <tr> <td>Value Added Lighting</td> <td>3 years</td> </tr> </tbody> </table>	Value Added Feature	Minimum Value Added Period	Value Added Asphalt	3 years	Value Added Concrete Pavement	5 years	Value Added Bridge Components	5 years	Value Added Lighting	3 years										
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Value Added Bridge Components	5 years																				
Value Added Lighting	3 years																				
Price Proposal	<p>A Price Proposal guaranty in an amount of not less than five percent (5%) of the total bid amount shall accompany each Proposer's Price Proposal. The final selection formula that the selection committee shall use in adjusted score follows:</p> $\frac{BPP + (PCT * TVC)}{TS} = \text{Adjusted Score}$ <p><i>BPP</i> = Bid Price Proposal <i>PCT</i> = Proposed Contract Time <i>TVC</i> = Time Value Costs (\$_____ per day) <i>TS</i> = Technical Score (Combined Scores from ELOI and Technical Proposal)</p> <p>The final scoring would come out something like the example below:</p> <table border="1"> <thead> <tr> <th>Firm</th> <th>ELOI Score</th> <th>Technical Score</th> <th>Price</th> <th>Adjusted Score</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>20</td> <td>70</td> <td>\$6.7 million</td> <td>74,444</td> </tr> <tr> <td>B</td> <td>18</td> <td>62</td> <td>\$6.5 million</td> <td>81,250</td> </tr> <tr> <td>C</td> <td>19</td> <td>51</td> <td>\$6.3 million</td> <td>90,000</td> </tr> </tbody> </table>	Firm	ELOI Score	Technical Score	Price	Adjusted Score	A	20	70	\$6.7 million	74,444	B	18	62	\$6.5 million	81,250	C	19	51	\$6.3 million	90,000
Firm	ELOI Score	Technical Score	Price	Adjusted Score																	
A	20	70	\$6.7 million	74,444																	
B	18	62	\$6.5 million	81,250																	
C	19	51	\$6.3 million	90,000																	

Source: FDOT (2012).

- Evaluate ELOIs based on the scoring criteria provided in the advertisement;
- Evaluate technical proposal based on the rating criteria provided in the RFP;
- Provide comments to defend scores—the score must be substantiated by comments;
- Comments are to be concise and identify the strengths and weaknesses of the proposal;
- Scoring by evaluators does not need to be the same across all evaluators; however, each evaluator should be consistent across each team with respect to scoring;
- Perform evaluations independently;
- Develop good understanding of the evaluation criterion for each phase; and
- Attend meetings and make site visits.

Evaluation Committee

FDOT divides its evaluation committee into two groups. The first group includes the technical review committee, which evaluates each proposal using direct point scoring and ranks all proposal scores. To maintain a transparent process, the technical review committee provides extensive comments and the rationale behind its ratings. During the evaluation process, individual TRC members independently evaluate the proposals except where they may independently need to solicit advice from an expert, such as for the structural design of a bridge. Such independence helps FDOT arrive at a fair selection.

The second group includes the best value selection committee. Based on the results from the first group, this group uses the adjusted score algorithm to identify the lowest adjusted score proposal. FDOT requires that in the Central Office the selection committee include the appropriate assistant secretary or their designee (who will serve as chairperson), the appropriate director, and the appropriate office head or as appointed by the chairperson. The manager of the contractual services office serves as a non-voting member and as recording secretary at all meetings. In the district, the selection committee contains the district secretary (who serves as chairperson), the appropriate director, and the appropriate office head or as appointed by the district secretary. A representative from the contracting unit serves as a non-voting member and as the recording secretary at all meetings. It can be noted that by including non-voting members as the recording secretary, FDOT enhances the objectivity of the evaluation process.

Industry Outreach

In the interview FDOT indicated that it is important to have a strong connection with the industry to implement a best value approach. FDOT has worked closely with industry to develop guidelines and standard requirements for best value selection. Through this process, the agency learns from industry's viewpoints and correspondingly industry can further understand the agency's expectations. This process indirectly

improves the transparency and objectivity of the best value approach. Moreover, FDOT is willing to provide contractors and design firms with the “ins and outs” of the best value selection process to make sure that they completely understand what is required.

Training

FDOT provides a number of workshops related to best value selection. Proposal evaluator training is one of the sessions designed to help the department establish a transparent best value approach. The main goal of this training is to convey the standards for evaluating ELOI and technical proposals. The training provides detailed information for participants with regard to two-phase ASDB/best value procurement, ELOI requirements, ELOI evaluation criteria, guidelines for ELOI evaluation, technical proposal evaluation criteria, guidelines for technical evaluation, and industry feedback on best value procurement.

Procurement Meeting and Debriefings

FDOT conducts various procurement meetings and debriefings to foster transparency in best value selection. These meetings are briefly described in the following sections.

Pre-bid Meetings

FDOT conducts pre-bid meetings to discuss project details and clarify any concerns. This is a public meeting. The main objectives of this meeting are to provide a setting for all parties to discuss the proposed project goals and objectives, clarify evaluation criteria, and review other relevant issues. The outcomes of this meeting will help to finalize the RFP. FDOT notes that all proposers receive the same information from the pre-bid meeting in a timely manner. At the end of this meeting, the contracting unit and the project manager update evaluation criteria if needed. FDOT communicates any criteria changes to each member of the proposal evaluators and proposers in a timely fashion.

One-on-One Alternative Technical Concept Meetings

After the pre-bid meeting, one-on-one meetings can be used to discuss proposers' ideas for Alternative Technical Concepts (ATCs). During these meetings, the proposer has an opportunity to bring up different ideas for the project, which the department can accept, request more information on, or deny. All information that is discussed regarding ATCs is kept confidential.

Page-Turn Meetings

In the “page-turn” meeting, FDOT meets with each proposer formally for 30 minutes after the technical proposals have

been submitted. FHWA is invited to sit in on federal-aided oversight projects. The goal of the page-turn meeting is for the D-B firm to guide the TRC through the technical proposal, highlighting sections that the D-B firm wishes to emphasize. The page-turn meeting occurs between the date the technical proposal is due and the question and answer session, in accordance with the schedule of events section of the RFP. The department terminates the page-turn meeting promptly at the end of the allotted time. An audiotape or videotape record of all or part of the page-turn meeting is maintained and becomes part of the contract documents. The page-turn meeting does not constitute discussions or negotiations. An unmodified aerial or map of the project limits provided by the D-B firm is acceptable for reference during this meeting. The unmodified aerial or map may not be left with the department upon conclusion of the page-turn meeting. Use of other visual aids, electronic presentations, handouts, etc., during the page-turn meeting is expressly prohibited. At the end of the 30 minutes, the TRC is allowed 5 minutes to ask questions pertaining to information highlighted by D-B firm. Participation in the page-turn meeting shall be limited to five D-B firm representatives. D-B firms desiring to opt out of the page-turn meeting may do so by submitting a request to the department.

The page-turn meeting is the best opportunity for proposers to describe their proposal process and ideas to the evaluators. From the comments and feedback that the state has received regarding the best value selection process, this meeting is the most important to the industry and they believe that FDOT should continue it.

Question and Answer Meetings

FDOT may meet with each proposer, formally, for a question and answer (Q&A) session. FHWA is invited to sit in on federal-aided oversight projects. The purpose of the Q&A session is to seek clarification and ask questions as it relates to the technical proposal. The department may terminate the Q&A session promptly at the end of the allotted time. The department may audiotape or videotape all or part of the Q&A session. All such recordings will become part of the contract documents. The Q&A session does constitute “discussions” or negotiations. Proposers are not permitted to ask questions of the department except to clarify a question posed by the department. No supplemental materials, handouts, etc., are allowed to be presented in the Q&A session. No additional time is allowed to research answers.

Within one week of the Q&A session, the D-B firm submits to the department a written clarification letter summarizing the answers provided during the session. The questions, answers, and written clarification letter become part of the contract documents and are considered by the department as part of the technical proposal. The D-B firm shall not include information in the clarification letter not discussed during the Q&A session. The department provides some (not necessarily all)

proposed questions to each D-B firm as they relate to their technical proposal approximately 24 hours before the scheduled Q&A session.

Debriefings

Debriefings are important for developing transparent best value approaches. In its debriefing meetings, FDOT discusses how and why a proposal received a certain score. Because of the Sunshine law in Florida, all proposal information may be discussed unless something in the proposal or ATC in the proposal is deemed proprietary. FDOT stated it has never had a protest that has gone to court because the process and how the score is arrived at is explained with all proposers during the debriefing meetings.

Lessons Learned

The FDOT agency representative for this study provided the following lessons learned for developing and maintaining a transparent best value process.

- The department must ensure that the advertisement and RFP are clear and concise.
- The TRC needs to be well trained so that they have a comprehensive understanding of the way the technical proposal will be scored and how to provide candid comments associated with their scores.
- The department should conduct various procurement meetings (i.e., pre-bid, one-on-one, page-turn, and Q&A meetings) and debriefings as public meetings to foster transparency.
- FDOT provides open access to pre-bid questions and posts responses on a website for all proposers’ reviews.
- The agency conducts D-B training workshops and solicits feedback from internal and external parties involved.
- Communication is a key to obtaining transparency during the best value evaluation process.

MICHIGAN DEPARTMENT OF TRANSPORTATION

Overview

MDOT uses either a one-step or two-step best value procurement process. In the one-step approach, all proposers submit technical qualifications and other required criteria before or simultaneously with their price proposals. In the two-step approach, a RFQ is issued in the first step in order to short-list the proposers. Proposers respond to the RFQ by submitting a SOQ for their team. After the short-listing phase, all proposers are equal and the criteria used for the RFQ are not included in the second step (the final technical proposal evaluation and scoring). During the interview with MDOT, the agency project manager emphasized that they only use best value on appropriate D-B and D-B-B projects that tangibly benefit from selection by non-price factors.

Evaluation Criteria/Award Algorithms

MDOT indicated in the interview that establishing a well-defined list of evaluation criteria is one of its most important factors in achieving a fair and transparent best value selection. MDOT does not have a standard template for best value projects; instead, it conducts best value selection on a project-by-project basis. To enhance the fairness of the evaluation process, MDOT *Guide* (2013) notes that “When developing the list of items to be evaluated and scored, the selection team should focus on *project specific needs* that can be *objectively defined, evaluated, and scored*. However, some subjectivity may be used as long as a *consistent approach* to scoring is documented by the selection team” (MDOT 2013, italics added).

For a given project, the selection team develops evaluation criteria for the technical portion of the evaluation. The technical criteria can be a single term (e.g., aesthetic of a bridge or the approach to maintaining traffic) or multiple terms (e.g., contractor’s qualification, innovations, understanding of the project). The following sections summarize evaluation criteria and award algorithms for the M-21 over I-75 Bridge Replacement Project.

Evaluation Criteria Used for M-21 over I-75 Bridge Replacement Project

For this project it was imperative to minimize the impacts on public mobility while still keeping safety in mind. This led to the technical score of the proposals for this project having a 50% weight on the mobility; 60% of which was based on user delay cost and 40% on the proposer’s traffic management plan. In addition, clearly defined evaluation criteria and their

weights were included in the RFP for transparency. Table 8 summarizes the evaluation criteria, along with their descriptions and weight for the M-21 over I-75 Bridge Replacement Project (MDOT 2008).

Award Algorithms Used for M-21 over I-75 Bridge Replacement Project

This best value contract was awarded based on three rounds of evaluation. First, MDOT conducted an initial review of the technical proposals for responsiveness. Second, MDOT conducted a pass/fail evaluation. The minimum technical proposal required to be responsive is 40 points. The proposals were evaluated based on the following pass/fail criteria:

- The major participants and key personnel shall not have changed since the submission of its SOQ.
- The terms, conditions, ideas, concepts, and techniques of the proposal comply with all governmental rules.
- Proposer information, certifications, and documents are complete, accurate, and responsive.

Third, MDOT evaluated the technical proposals based on direct point scoring, with a scale of 100 points (Table 8). Finally, the best value contract is awarded based on a composite score using the following formula:

$$\text{Final Best Value Score} = ((30\% * \text{Proposal Price}) + (70\% * (\text{Proposal Price}/(\text{Technical evaluation score}) * 0.01))$$

TABLE 8
EVALUATION CRITERIA FOR M-21 OVER I-75 BRIDGE REPLACEMENT PROJECT

Evaluation Criteria	Maximum Points	Descriptions
Mobility	50	MDOT’s goal is to minimize impact to the traveling public while getting the work completed as quickly and safely as possible. Scoring will be greatest to those Proposers who provide a mobility plan that minimizes impact to the traveling public while ensuring a fast, efficient, and high-quality construction. MDOT will review and score mobility based on two parts: Part 1 (30 points) for user delay costs and Part 2 (20 points) for the traffic management plan.
Progress Schedule	20	The scoring represents MDOT’s goal to provide a project that is substantially completed with the shortest construction schedule.
Quality Assurance/Quality Control (QA/QC)	15	Provide a QA/QC plan that addresses both design and construction activities. This document should address how errors are minimized, what process is used to oversee work, and shows authority for QA/QC reviewers when to change or stop work.
Project Communications	10	Provide a communication plan that outlines both internal communication of the design/build team and your proposal for communication with MDOT, the firm performing design assistance, and the firm performing the construction engineering.
Aesthetics	5	Provide an explanation of how the proposal addresses a structure that has positive aesthetics and why.

Source: MDOT (2008).

Evaluation Committee

The MDOT best value evaluation committee often includes a project manager, construction engineer, and other personnel related to the project. The committee specifically includes a member of a statewide Central Selection Review Team to help mitigate biases and ensure a defensible evaluation process. Although MDOT does not use an oversight committee for the whole process, the presence of a Central Selection Review Team member helps to increase the transparency and fairness of the evaluation process. The evaluators are kept in isolation until they finish rating each technical proposal.

To maintain transparency, a MDOT project manager is the sole agency contact person for receiving clarification requests and other communications about the project, the RFP, and the proposal submittal. Also, MDOT does not accept any oral requests (in person or by phone) for clarification. Proposers are not allowed to discuss the RFQ or RFP with other MDOT staff members or MDOT consultants involved in the project before the contract is awarded. MDOT staff members or MDOT consultants must notify the MDOT project manager if proposers discussed the project with them during the procurement phase.

Procurement Meeting and Debriefings

MDOT conducts both procurement meetings and debriefings to enhance the fairness and transparency of the selection process. For example, MDOT required a mandatory pre-bid meeting on the M-21 project that was open to all proposers. In this meeting, MDOT answered general questions related to the project and the best value selection. For specific questions, the proposers were required to submit requests for clarification and the responses were then distributed to all the proposers. This process provided each team with the same information.

Debriefings are conducted within 60 days of awarding a contract. The debriefing can be by phone, but it is typically conducted in person. In the debriefing meetings, the proposers are provided with information from the evaluation process regarding their scores, and the strengths and weaknesses of their proposals. It should be noted that the debriefing may not include point-by-point comparisons of evaluation criteria between proposers. However, the Freedom of Information Act in Michigan allows the proposers to request all information received by MDOT after the project has been awarded. It provides for certain information received by a state agency to be disclosed to the public. Debriefings cannot reveal any information exempt from release under the Freedom of Information Act.

Lessons Learned

The agency representative for this study provided the following lessons learned for developing and maintaining a transparent best value process.

- A list of evaluation criteria must be well-defined.
- Evaluation criteria and award algorithms are to be developed on a project-by-project basis.
- The MDOT project manager serves as a single point of contact for clarification requests and other communications with proposers during best value selection.
- Procurement meetings and debriefings will help enhance the fairness and transparency of the selection process.
- The Freedom of Information Act in Michigan fosters transparency in best value selection.

MINNESOTA DEPARTMENT OF TRANSPORTATION

Overview

MnDOT has used best value procurement for both D-B and D-B-B projects. In 2013, MnDOT published a best value manual for D-B-B projects to increase the consistent use of best value selection (MnDOT 2013). In 2011, MnDOT published a manual for D-B projects, which also enhances consistency in best value selection (MnDOT 2011). Both of these manuals are heavily referenced in the descriptions of the process that follow.

Evaluation Criteria/Award Algorithms

Evaluation criteria are determined differently for D-B-B and D-B projects. The D-B-B best value manual recommends the following five main categories of best value evaluation criteria:

1. *Qualifications of personnel*: Depending on project characteristics, personnel with specific licensure, training, or certifications may add more value to the project. These criteria can be evaluated by using qualitative scores or “pass/fail” ratings.
2. *Experience of personnel on similar projects (pass/fail criteria)*: Personnel with experience on similar projects are required to be successful.
3. *Experience of contractor on similar projects (pass/fail criteria)*: Contractors with experience on the projects of a similar size, type, or complexity may benefit the project.
4. *Availability of key personnel, equipment, or materials (pass/fail criteria)*: The availability of which will be critical to successfully completing the project. Contractor will indicate availability of these items in the proposal.
5. *Ability to meet completion date*: Establish pass/fail criteria related to project completion requirements and request contractor completion dates (MnDOT 2013).

To enhance transparency, MnDOT requires that after an award all technical proposals be filed and all technical and cost proposals be both open to public inspection as required or permitted by the Minnesota Government Data Practices Act. These documents will be available for viewing and the

TABLE 9
RFQ EVALUATION CRITERIA

Type of Factor	RFQ Evaluation Factors
Pass/Fail	Legal Financial
Technical/Quality	Submitter organization and experience Key personnel experience Project management approach Project understanding

Source: MnDOT (2011).

results posted publicly in accordance with MnDOT standards (MnDOT 2013).

Different from the D-B-B best value process, D-B best value criteria and selection methodologies are always presented in the RFQ and RFP for a given project. Price is not considered and evaluated in step 1 of the procurement process (SOQ evaluation). Table 9 summarizes a typical list of criteria for RFQ.

It can be noted that MnDOT does not provide a standard set of RFP criteria; instead, MnDOT develops technical evaluation criteria on a project-by-project basis. To enhance the fairness and transparency in the evaluation process, MnDOT indicates that the evaluation criteria should:

- Be clear, defensible, and easy for the proposers and public to understand;
- Not overlap scoring criteria in the SOQ, especially with respect to key personnel who have already been evaluated in the SOQ;
- Focus on items that bring measurable value to the project;
- Be tailored to the individual project (void/minimize recycling criteria from project to project); and
- Be appropriately balanced versus the weight of the price proposal.

Although the evaluation criteria are different between the RFQ and RFP, MnDOT uses a five-point adjectival scoring system to rate both SOQs and proposals. Table 10 presents the evaluation guideline for these adjectival ratings.

Each technical proposal receives a maximum score of 100 points: 50 points for responsive criteria and 50 points for technical merits. The adjusted score is determined by dividing the proposal price by the technical proposal score. The price proposals will be reviewed for responsiveness after the calculation of adjusted scores. Table 11 illustrates an example of the evaluation process.

To enhance the transparency and fairness of the evaluation process, MnDOT uses the following strategies:

- The agency does not offer scorers any unique instruction that is not accessible or visible to the proposers.

- The agency provides a detailed description of the technical evaluation factors, the objectives and requirements for each evaluation factor, the relative weights of the evaluation factors, and the information to be submitted in their RFQs and RFPs. The scoring criteria must speak for themselves, without any interpretation from those who created them.
- TRC members will independently score each proposal by assigning a percentage based on the qualitative assessment rankings by multiplying the percentage with the maximum total points for each category.
- TRC chair, with assistance from the Process Oversight Committee (POC), will determine the average score for each technical proposal from all of the scores provided by the TRC members.
- The evaluation committee can use a clarification or communication process to resolve any ambiguities, errors, or omissions related to the criteria stated in RFQs and RFPs.
- The rating process must be documented on the worksheet for each evaluation factor.
- Evaluation teams and the selection committee must clearly document strengths, weaknesses, deficiencies, and risks associated with each factor in the worksheet.

Evaluation Committee

There are minor differences in the structure of the evaluation and selection committees between D-B best value and D-B-B best value projects. For D-B-B best value projects, the evaluation committee is comprised of the TRC, POC, and Technical Advisors (TAs). The evaluation committee of D-B best value projects has a technical subcommittee in addition to TRC, POC, and TAs. Minnesota State Statute 161.3420 requires that the TRC be comprised of at least five members, one of whom shall be the Associated General Contractors (AGC) representative (MnDOT 2011). Figure 10 shows the structure of the evaluation committee of the D-B project best value selection process.

It can be noted that the Commissioner of Transportation is responsible for appointing the evaluation committee members. The roles and responsibilities of the evaluation committee members are as described in the following sections.

Process Oversight Committee (POC)

- A group of non-scoring observers (i.e., a program manager, FHWA representative, or a representative from the protest official's office), who are appointed to observe the evaluation process and provide support to TRC and TAs, if necessary.
- POC may submit a written report and/or specific questions to the TRC chair to be used during any oral presentations.

TABLE 10
QUALITATIVE RATING GUIDE

Rate	SOQ Description	Proposal Description	Score
Excellent (E)	<ul style="list-style-type: none"> • Submitter has exceptional qualifications. • SOQ supports an extremely strong expectation of successful project performance. • SOQ indicates significant strengths with few minor weaknesses, if any. • SOQ contains an outstanding level of quality. 	<ul style="list-style-type: none"> • Proposal demonstrates an approach with unique or innovative methods of approaching the proposed work with an exceptional level of quality. • Proposal contains many significant strengths and few minor weaknesses, if any. • There is very little risk that the Proposer would fail to satisfy the requirements of the D-B contract. 	90–100%
Very Good (VG)	<ul style="list-style-type: none"> • Submitter has strong qualifications. • SOQ supports a very good expectation of successful project performance. • SOQ contains a few minor weaknesses that are outweighed by the strengths. 	<ul style="list-style-type: none"> • Proposal demonstrates an approach offering unique or innovative methods of approaching the proposed work. • Proposal contains many strengths that outweigh the weaknesses. • There is little risk that the Proposer would fail to satisfy the requirements of the D-B contract. Weaknesses, if any, are very minor and can be readily corrected. 	75–89%
Adequate (A)	<ul style="list-style-type: none"> • Submitter has sufficient qualifications. • SOQ supports an adequate expectation of successful project performance. • SOQ contains weaknesses that are balanced by strengths. 	<ul style="list-style-type: none"> • Proposal demonstrates an approach that offers an adequate level of quality. • Proposal contains strengths that are balanced by the weaknesses. • There is some probability of risk that the Proposer may fail to satisfy some of the requirements of the D-B contract. Weaknesses are minor and can be corrected. 	51–74%
Fair (F)	<ul style="list-style-type: none"> • Submitter has limited qualifications. • SOQ supports a fair expectation of successful project performance. • SOQ contains weaknesses that are not offset by strengths. Weaknesses could adversely affect successful project performance. 	<ul style="list-style-type: none"> • Proposal demonstrates an approach that marginally meets RFP requirements and/or objectives. • Proposal contains weaknesses that are not offset by the strengths. • There are questions about the likelihood of success and there is a risk that the Proposer may fail to satisfy the requirements of the D-B contract. 	25–50%
Poor (P)	<ul style="list-style-type: none"> • Submitter has little or no qualifications. • SOQ supports a weak expectation of successful project performance. • SOQ contains significant weaknesses with very minor strengths, if any. 	<ul style="list-style-type: none"> • Proposal demonstrates an approach that does not meet the stated RFP requirements and/or objectives, lacked essential information, is conflicting, is unproductive, and/or increases MnDOT's risk. • Proposal contains many significant weaknesses and very minor strengths, if any. • There is not a reasonable likelihood of success and a high risk that the Proposer would fail. 	0–24%

Source: MnDOT (2011).

TABLE 11
EXAMPLE OF EVALUATION PROCESS

Proposer	Technical Score	Price (\$)	Adjusted Score (price/technical score)
A	85.00	6,808,808.00	80103.62
B	82.61	7,496,356.00	90743.93
C	93.40	7,218,533.00	77286.22
D	89.72	6,406,360.00	71403.92

Source: TH 2 Crookston Slope Stability Project (MnDOT 2014).

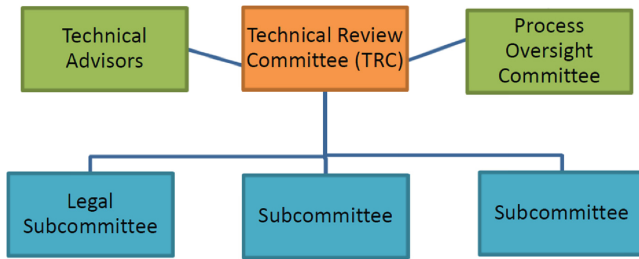


FIGURE 10 Evaluation committee structure
(Source: MnDOT 2011).

Technical Advisors (TAs)

- TAs (i.e., members of the core project team) serve as advisors to the TRC and provide their input to the TRC members during the evaluation process.
- These members do not score the proposals.

Technical Review Committee (TRC)

- TRC usually includes five members who perform the evaluation and scoring of the proposals. There is a chair for this committee who is the head of the evaluation process.
- Each TRC member performs an independent review of each submitted technical proposal. All TRC members have an equal weight in scoring the proposals.
- TRC chair serves as a point of contact if a TRC member, Technical Subcommittee (TS) member, or TA has questions relative to the evaluation process.
- Submits written requests for clarification to proposers if the evaluation team determines that a proposal contains unclear information or otherwise needs clarification.

Technical Subcommittee (TS)

- TS members include individuals with expertise in specific fields relative to the technical scoring criteria.
- TS members serve as advisors to TRC members during the evaluation process. They sometimes come to the evaluation meetings and make presentations.
- TS members often submit their strength and weakness assessments to the TRC chair for distribution to the TRC members for consideration when completing the scoring matrices.

With regard to the fairness and transparency of the selection process, MnDOT requires the evaluation committee to maintain and manage the integrity of the entire evaluation process. The evaluation committee typically performs the following tasks:

- All personnel sign certifications of confidentiality and non-disclosure, and statements concerning conflicts of interest.

- The deliberations of all teams and committees and the knowledge of individual participants in the evaluation process must be held in the strictest confidence.
- All information provided by the proposers or generated by the evaluation must be safeguarded.
- No information regarding the contents of the proposals; the deliberations by the TRC, TS, or TA; recommendations to the Commissioner of Transportation; or other information relating to the evaluation process is to be released or be publicly disclosed without the authorization of the TRC chair.
- The TRC chair is responsible for all communication outside the proposal evaluation and TRC.

Training

MnDOT conducts training for the technical evaluation committees before they are allowed to proceed to the evaluation process. Training is based on the MnDOT manual developed by the Office of Construction and Innovative Contracting. The training session often involves reviewing the evaluation manual and obtaining lessons learned from past evaluation processes or relevant case protests. The full TRC teams (i.e., the FHWA on the POC, AGC representative, etc.) are invited to the launch. The contractors and consultant are not invited to the training session.

Training is intended to provide guidance to the evaluation committees to ensure it is done in a fair and transparent manner. During the training sessions, the evaluation committee is updated on any changes in best value legislation and how to adapt these changes into the evaluation process. An overview of the best value procurement process is presented to all committee members to ensure that all evaluators fully understand best value concepts and the evaluation process. The evaluation committee members are also trained to determine what is appropriate and inappropriate when rating the evaluation criteria and how to avoid the bias that may occur during the evaluation process.

Debriefings

MnDOT conducts oral debriefings if they receive a request from the unsuccessful proposers. The objective of the debriefings is to provide feedback on their SOQ and proposals. The debriefings for technical proposals are conducted within 60 days after the contract is awarded. If there is a protest over the award of the contract, MnDOT will delay the debriefing process. Debriefings can be conducted in person or by phone with the proposers. Different from other DOTs, MnDOT encourages a local AGC member, who is a part of technical evaluation, to conduct debriefings with the unsuccessful proposers. One of the most important parts of the debriefings is to provide comments on strengths and weaknesses of both the SOQs and technical proposals that are made during the evaluation process. In addition, MnDOT explains all evaluator's comments in detail to the proposers.

MnDOT notes that the debriefings may not include point-by-point comparisons of the debriefed proposer's proposal with other proposals. To ensure the evaluation process is fair and transparent, the score breakdown of SOQs and the technical proposal and evaluators' comments are placed on a public website. MnDOT keeps the proposals in electronic format so that they can easily search for relevant information with regard to transparency in the evaluation process.

Lessons Learned

The MnDOT agency representative for this study provided the following lessons learned for developing and maintaining a transparent best value process:

- It is important that the evaluation criteria be written as clearly and fully as possible, and be balanced appropriately versus cost. There is no hidden information in the evaluation manual.
- Evaluators must respect the process, read the proposals thoroughly, and make appropriate decisions.
- It may appear appropriate to include members of local partners on TRCs for projects in which they are very involved; however, it is important to be cautious. Such individuals may not be willing or able to submit to the process and may score based on the interests of their county or town instead of following the manual.
- It is suggested that the interview and classification process be implemented appropriately. Interviewing is very useful for obtaining transparency because it helps clear up any misconceptions. If scorers note misconceptions, it degrades industry acceptance of the process. Interviews are time-intensive for all involved; therefore, it may make sense to aggressively use the classification process instead.
- In making all scoring comments public, the evaluators must record the comments that reflect their opinion. Any comments that are no longer relevant to their beliefs must be corrected after listening to the roundtable discussion.
- It is suggested that non-proposing contractors view the proceedings (under confidentiality, of course).
- The value of a point should be emphasized and used during the evaluation process even for adjectival rating

systems. The evaluators should not round their scores. For example, some individuals like to score 85, 90, and 95 only. When points are worth \$2.5 million, this scoring process can be a problem.

NEW YORK STATE DEPARTMENT OF TRANSPORTATION

Overview

For the last three years, NYSDOT has utilized best value procurement in both D-B-B and D-B projects. This process is conducted in one step, but involves two parts. The first part contains traditional construction plans, proposals, bid items, and quantities. The second part includes a description of the technical evaluation factors, their relative weights, and the weighting of price versus technical evaluation factors. For D-B projects, a two-step best value selection approach is used. In the first step, NYSDOT uses a two-way feedback clarification process between proposers, project management team, evaluation team, and selection committee to resolve ambiguities, errors, omissions, errors, or a mistake in an SOQ. In step 2, NYSDOT uses a communication process among project management team, evaluation team, and selection committee to resolve ambiguities and uncertainties caused by RFQs and RFPs during the evaluation process. For each best value project, NYSDOT prepares in advance a procurement management plan that outlines the factors, evaluation teams, and a selection process.

Evaluation Criteria/Award Algorithms

D-B evaluation criteria are established in both the RFQ and RFP for a given project. Price is only considered and evaluated in the second step. NYSDOT indicated that, for some projects, the price component may account for 50% of the adjusted price award algorithm. For other projects, when the budget is more important, the price can reach up to 80% of the adjusted price algorithm. NYSDOT uses pass/fail and quality evaluation factors in both the RFQ and RFP. Table 12 summarizes a typical list of pass/fail and quality RFQ and RFP evaluation factors. The guidelines to evaluate quality factors are presented in Table 13.

TABLE 12
BEST VALUE EVALUATION CRITERIA

Type of Factor	RFQ Evaluation Factors	RFP Evaluation Factors
Pass/Fail	Legal	Legal
	Financial	Financial
	SOQ responsiveness	Proposal responsiveness
Technical/Quality	Experience	Experience and qualifications
	Past performance	Management approach
	Capacity	Technical solutions
	Project understanding	Project support

Source: NYSDOT (2011).

TABLE 13
EVALUATION GUIDELINES

Rating	SOQ Rating Guidelines	Proposal Rating Guidelines
Exceptional	The Proposer has provided information relative to its qualifications that is considered to significantly exceed stated objectives/requirements in a beneficial way and indicates a consistently outstanding level of quality. There are essentially no weaknesses.	The Proposer has demonstrated an approach that is considered to significantly exceed stated criteria in a way that is beneficial to the department. This rating indicates a consistently outstanding level of quality, with very little or no risk that this Proposer would fail to meet the requirements of the solicitation. There are essentially no weaknesses.
Good	The Proposer has presented information relative to its qualifications that is considered to exceed stated objectives/requirements and offers a generally better than acceptable quality. Weaknesses, if any, are very minor.	The Proposer has demonstrated an approach that is considered to exceed stated criteria. This rating indicates a generally better than acceptable quality, with little risk that this Proposer would fail to meet the requirements of the solicitation. Weaknesses, if any, are very minor.
Acceptable	The Proposer has presented information relative to its qualifications, which is considered to meet the stated objectives/requirements, and has an acceptable level of quality. Weaknesses are minor and can be corrected.	The Proposer has demonstrated an approach that is considered to meet the stated criteria. This rating indicates an acceptable level of quality. The Proposal demonstrates a reasonable probability of success. Weaknesses are minor and can be readily corrected.
Potential to Become Acceptable	N/A	The Proposer has demonstrated an approach that fails to meet stated criteria as there are weaknesses and/or deficiencies, but they are susceptible to correction through discussions. The response is considered marginal in terms of the basic content and/or amount of information provided for evaluation, but overall the Proposer is capable of providing an acceptable or better Proposal.
Unacceptable	The SOQ fails to meet the stated objectives and/or requirements and/or lacks essential information and is conflicting and/or unproductive. Weaknesses/deficiencies are so major and/or extensive that a major revision to the SOQ would be necessary and/or are not correctable.	The Proposer has demonstrated an approach that indicates significant weaknesses/deficiencies and/or unacceptable quality. The Proposal fails to meet the stated criteria and/or lacks essential information and is conflicting and/or unproductive. There is no reasonable likelihood of success; weaknesses/deficiencies are so major and/or extensive that a major revision to the Proposal would be necessary.

Source: NYSDOT (2011).
N/A = not applicable.

To enhance the transparency and fairness of the evaluation process, NYSDOT uses the following strategies:

- NYSDOT provides a detailed description of the quality evaluation factors, the objectives and requirements for each quality evaluation factor, the relative weights of the quality evaluation factors, and the information to be submitted in their RFQs and RFPs.
- The result of rating individual evaluation factors must be arrived at through consensus of the members of evaluation teams and the selection committee as applicable.
- Price is only evaluated in the RFP/proposals evaluation process.
- Evaluation teams and the selection committee can use the clarification or communication process to resolve any ambiguities, errors, and omissions related to these criteria stated in RFQs and RFPs.
- SOQ ratings do not carry over to the RFP/proposals evaluation process.
- The rating process must be documented on the worksheet for each evaluation factor.

- Evaluation teams and the selection committee must clearly document strengths, weaknesses, deficiencies, and risks associated with each factor in the worksheet.
- Narratives are required for each qualitative/descriptive rating.

NYSDOT indicated that “after the evaluation is complete, the selection committee will prepare a written evaluation narrative to accompany the qualitative/descriptive rating of each proposal. The narrative will include strengths, weaknesses, and deficiencies for each proposal and will fully support the qualitative/descriptive rating assigned” (NYSDOT 2011).

One example of a D-B best value project is the Tappan Zee Hudson River crossing project. This project defines “best value” as “the greatest overall benefit, under the specified selection criteria, obtained through the tradeoff between price and technical benefits” (New York State Thruway Authority 2012). The RFP of this project indicated that technical merits and price were given approximately equal weighting for best value evaluation.

TABLE 14
EVALUATION FACTORS

Factor	Sub-factor
Design and Construction Solution	Construction approach
	Service life of the crossing
	Maximize the public investment
	Bridge, structures, and aesthetic design concepts
	Geotechnical
	Roadway design concept
	New York State Thruway Authority operations and security
Management Approach	Schedule
	Organization and general management
	Design management
	Construction management
Key Personnel and Experience	Key personnel
	Experience of the firms
	Past performance
Environmental compliance	
Public outreach and coordination with stakeholders	

Source: New York State Thruway Authority (2012).

TABLE 15
BEST VALUE EVALUATION CRITERIA

Exceptional -	Good -	Acceptable -	Unacceptable
Exceptional	Good	Acceptable	
Exceptional +	Good +	Acceptable +	

Source: New York State Thruway Authority (2012).

Table 14 summarizes quality and technical factors defined in the RFP. These factors and their sub-factors were rated by using ten level adjectival ratings as shown in Table 15. This project received three proposals. The technical factors were evaluated by a nationally recognized team of subject-matter experts. The leaders of the technical review teams, the Authority's Value Assessment Team, summarized the strengths and weaknesses of each evaluation factor submitted to the selection committee.

As described earlier, all materials that could reveal a proposer's identity were removed. The three proposers were coded

using nicknames: Catskills, Oneida, and Niagara. Table 16 presents the results of technical rankings and price proposal evaluations. The project was awarded to Niagara, which combines a low price and an acceptable technical proposal.

To provide more transparency in the selection process, the scoring committee conducted a best value tradeoff comparison between Niagara and Oneida (Catskills was eliminated from the process because it was lower in technical ranking and higher in price than those of Oneida). Tables 17 and 18 respectively summarize the superior elements of each proposal.

In contrast with the D-B best value procedure, NYSDOT has recently employed the best value approach for the traditional D-B-B delivery method. As summarized in the introduction to this section, the D-B-B best value process involves two parts. The first part contains traditional construction plans, proposal, bid items, and quantities. The second part includes a description of the technical evaluation factors, their relative weights, and the weighting of price versus technical evaluation

TABLE 16
RESULT OF TECHNICAL RANKINGS AND PRICE PROPOSAL EVALUATION

		Catskills	Oneida	Niagara
Technical Ranking *		2	1	3
Proposal Prices (millions)	Contract Amount	\$4,059	\$3,990	\$3,142
	Difference above Low Bid	\$917	\$848	-
	Net Present Value **	\$3,837	\$3,705	\$2,959
	Difference above Low NPV	\$878	\$746	-
Best-Value Proposal				✓

*Rankings shown were determined prior to extensive communications and discussions with the three proposers.

**In accordance with the RFP, the price evaluation is based on Net Present Value (NPV) of each proposer's bid amount distributed over the duration of the contract.

Source: New York State Thruway Authority (2012).

TABLE 17
NIAGARA'S PROPOSAL ADVANTAGES OVER ONEIDA

Element	Aspects of Superior Solution
CONSTRUCTION APPROACH	Construction schedule is more favorable
MAXIMIZING PUBLIC INVESTMENT	Extra piles for Potential Future Loading in approach spans are better positioned
BRIDGE DESIGN	<ul style="list-style-type: none"> • Main span deck has a redundant load path (longitudinal trusses) for resiliency under extreme events • Approach span decks are more readily replaceable
BRIDGE AESTHETICS	<p>The aesthetic approach has potential for greater flexibility to respond to stakeholder input on visual-quality issues. This approach is a good solution that can be improved upon as the design is further developed, within the firm fixed price. Additional improvements would be possible at additional cost as an enhancement option.</p> <ul style="list-style-type: none"> • The designer has treated the whole crossing as a continuous element, with a consistent aesthetic concept throughout the approach and main spans • The structure is all steel end to end, has a 10" full deck, open and airy aesthetics, and a lower approach on the Rockland side
OPERATIONS	<ul style="list-style-type: none"> • Bridge inspection and maintenance access plan is better • Plan for temporary facilities is superior
ENVIRONMENTAL	Dredging plan significantly reduces size of dredge prism, amount of spoils for disposal, and impact on riverbed habitats
EXPERIENCE OF THE FIRM	Past project experience is more directly relevant to this type of construction

Source: New York State Thruway Authority (2012).

factors. The evaluation criteria and selection methodologies for D-B-B best value are established by a project-by-project basis after approval through Special Experimental Program (SEP) 14. Figure 11 illustrates an example of best value evaluation for D-B-B projects.

Evaluation Committee

There are slight differences in the structure of the evaluation/selection committee between D-B and D-B-B best value projects. For D-B projects, NYSDOT uses its own manual, which outlines the best value selection process. To achieve transparency and fairness of best value selection, NYSDOT requires the procurement management team, evaluation team, selection committee, and all individual participants to maintain and manage the integrity of the entire evaluation process. Examples of this requirement include:

- All personnel involved in the evaluation process must sign certifications of confidentiality and non-disclosure, and statements concerning conflicts of interest.
- The deliberations of all teams and committees and the knowledge of individual participants in the evaluation process must be held in the strictest confidence.
- All information provided by the proposers or generated by the evaluation must be safeguarded.

- The procurement management team set rules, guidelines, and procedures for the safeguarding of all information.
- During the evaluation and selection process only the chairperson of the selection committee can approve the release of any information.

Similar to other agencies, NYSDOT separates the evaluation of price and technical proposals. In addition, as mentioned previously, NYSDOT assigns a nickname to each proposal before evaluating the technical proposals so that the firms' identities are removed. This eliminates any favoritism or bias that may occur during the evaluation process. Finally, NYSDOT may use observers to enhance the transparency and fairness of the best evaluation. Observers will be designated in writing and held to the same standards of confidentiality, integrity, and no conflict as members of the evaluation teams and the selection committee.

Training

The NYSDOT D-B procedures manual includes a training module (NYSDOT 2011). The training module focuses on an overview of the D-B process, as well as best value procurement selection. The objectives of training are to make sure all evaluators fully understand project goals and objectives, the evaluation process, best value criteria, and how to conduct

TABLE 18
ONEIDA'S PROPOSAL ADVANTAGES OVER NIAGARA

Element	Aspects of Superior Solution
SERVICE LIFE	Overall service life is potentially superior: <ul style="list-style-type: none"> • Integral deck design for the approach spans gives more confidence in achieving service-life target • Higher quality protective coating for structural steel at main span • Extensive use of pre-cast concrete elements • Stiffer structure provides better deflection performance • Additional deck thickness/increase in concrete cover at approach and main span
MAXIMIZING PUBLIC INVESTMENT	Features of Potential Future Loading options on the main span: <ul style="list-style-type: none"> • Relatively simple addition of cable strands • Continuation of gap between structures into Rockland • Lower future main-span costs • Highway deck supports LRT; provides more flexibility
BRIDGE AESTHETICS	Oneida has proposed larger belvederes
GEOTECHNICAL	<ul style="list-style-type: none"> • More robust foundations and towers for initial construction • Foundation solution is preferable and more conservative
ROADWAY DESIGN	Overall geometry of Shared Use Path and in Westchester is superior
OPERATIONS	Plan for Facilities and Westchester work zone is superior
MANAGEMENT	Commitment to contractor-controlled insurance plan
PUBLIC OUTREACH	Plan is more creative, innovative and comprehensive

Source: New York State Thruway Authority (2012).
LRT = light-rail transit.

Sprain Brook Parkway Best Value Selection Scoring Criteria

70% - 30%									
Price		70.0%							
Quality Based	30.0%	Description	Weight - 1	Weight - 1 x Technical	Description	Weight - 2	Final Weight of Tech&Cost	Quality Ranking Points	Quality Ranking Points
		Schedule and Approach	60.0%	18.0%	Schedule Overall Duration	33.3%	6.0%	20.0%	20
			Schedule Stage 2 Duration		33.3%	6.0%	20.0%	20	
	Construction Approach		33.3%		6.0%	20.0%	20		
	Past Experience and Performance	40.0%	12.0%	Bridge Construction	50.0%	6.0%	20.0%	20	
				Work in High Volume	33.0%	4.0%	13.2%	13	
				Safety Record	17.0%	2.0%	6.8%	7	
		100.0%	30.0%		30.0%		100%	100	

Note 1. Cost score shown is derived by dividing the Contractor's bid into the lowest responsible bid and uses a 100 point score.
Note 2. Any bidder that does not receive at least 70 Quality Based ranking points out of 100 will be disqualified.

FIGURE 11 Examples of evaluation criteria/award algorithms for D-B-B best value (Source: Foglietta 2012).

the evaluation. Project-specific training is provided to those involved in the procurement process in advance of reviewing the SOQs and RFP responses. These training sessions help the evaluators clarify any uncertainty and ambiguity before evaluating proposals. In addition, the agency, in cooperation with FHWA [as part of the Every Day Counts (EDC) initiatives] has conducted statewide training of design and construction staff from all 11 regional offices.

Debriefings

Debriefing is a key component in keeping the process transparent, and helps the proposers understand their strengths and weaknesses as well as the rationale behind why their proposals were not selected for an award. It is viewed as a learning process for the proposers to be better prepared when participating in future projects. NYSDOT uses one-on-one meetings for debriefings with all proposers including both selected and unsuccessful proposers. These debriefing meetings are done in person, often with the selection committee present, only after the contract has been awarded. This is not the only time that one-on-one meetings are used during the evaluation process. The proposers passing all pass/fail evaluation factors are invited to interview or make presentations regarding their proposals to the selection committee. To avoid potential biases caused by presentations or interviews, NYSDOT clearly states that if any issues or questions that relate to the specifics of the project arise they must be formally put into a question. This process allows NYSDOT to address the question with a clarification that goes out to all proposers. Also, the agency needs to make sure that no proposer can have any inside information regarding the evaluation process. Figure 12 presents an excerpt of the debriefing procedure from the Instruction to Proposers for the Tappan Zee Hudson River Crossing Project.

Lessons Learned

The NYSDOT agency representative for this study provided the following lessons learned for developing and maintaining a transparent best value process.

- Too many factors or sub-factors dilute the selection criteria. It is better to focus on fewer criteria that are the most important for the project. This will improve transparency by better communicating what is most important to the owner.
- The agency needs to provide the time necessary for a complete and accurate RFP. The agency needs to make sure that the RFP is well-defined and comprehensive. Too many addendums to an issued RFP creates confusion for all parties.
- Formally publishing all questions submitted by proposers along with responses improves transparency, a procedure that can be done without disclosing which team submitted the questions.
- One-on-one meetings are very beneficial for communicating owner intent and improving transparency on the project. Even though the discussions may be “unofficial,” they may result in formal questions being submitted and addendums being issued.
- Although it is policy not to disclose individual scores, sharing all technical scores and prices will significantly support transparency and fairness of best value selection (the industry is in favor of this consideration).

OREGON DEPARTMENT OF TRANSPORTATION

Overview

Oregon DOT (ODOT) has been implementing best value procurement procedures for both D-B and CM/GC delivery methods. Under the D-B delivery method, ODOT employs a two-step procurement to select best value projects.

- Step 1: RFQ and submittal of SOQ. Department short-lists the proposers after evaluating the SOQs. In this step, ODOT evaluates both the pass/fail factors and the technical and quality factors listed in the RFQ against the evaluation criteria to shortlist the proposers to submit final proposals. Typically three firms are shortlisted for any particular project to submit proposals.

Debriefing of Unsuccessful Proposers

Unsuccessful Proposers shall be debriefed upon their written request submitted to the Agencies' Designated Representative within a reasonable time. Debriefings shall be provided at the earliest feasible time after a proposal is selected for award. The debriefing shall be conducted by a procurement official familiar with the rationale for the selection decision and contract award.

Debriefing shall:

- Be limited to discussion of the unsuccessful proposer's proposal and may not include specific discussion of a competing proposal;
- Be factual and consistent with the evaluation of the unsuccessful proposer's proposal; and
- Provide information on areas in which the unsuccessful proposer's technical proposal had weaknesses or deficiencies.

Debriefing may not include discussion or dissemination of the thoughts, notes, or rankings of individual members of the selection committee, but may include a summary of the rationale for the selection decision and contract award.

FIGURE 12 Debriefing process for best value selection, NYSDOT (Source: NYSDOT 2012).

TABLE 19
D-B BEST VALUE EVALUATION CRITERIA

Type of Factor	RFQ Evaluation Factors	RFP Evaluation Factors
Pass/Fail	Legal	Legal
	Financial	Disadvantaged business enterprise
Technical/Quality	Experience	Proposer's organization and expertise
	Past performance	Project controls and management
	Backlog/capacity	Technical solutions
	Project understanding	Context sensitive and sustainable solutions
	Completion and Connectivity	Diversity plan outline

Source: ODOT (2006).

- Step 2: RFP and submittal of proposals. The department evaluates the proposals and selects the final one. In step 2, ODOT evaluates the quality of the proposal based on the pass/fail and technical and quality factors before reviewing the price proposal. Failure to achieve a “pass” rating on a pass/fail element may result in the proposal being declared non-responsive. Technical proposals determined to be non-responsive will not be considered further during the evaluation process of technical and quality factors. Price proposals are evaluated for price realism and reasonableness (ODOT 2006).

Under the CM/GC delivery method, ODOT follows a one-step procedure, utilizing only a RFP. Because there is no pre-qualification process, the RFP is released as a public document and is open to all proposers to submit proposals (ODOT 2008).

Evaluation Criteria/Award Algorithms

ODOT's best value process for D-B includes a list of evaluation criteria in the RFQ and RFP to proposers. The evaluation criteria consist of both pass/fail and technical and quality evaluation factors. Table 19 summarizes a typical list of pass/fail and technical and quality evaluation factors stated in the RFQ and RFP.

ODOT uses a direct scoring method to rate technical and quality factors for both SOQs and proposals. Table 20 presents a sample result from the SOQ evaluation process. The

percentage rating guidelines used to evaluate technical and quality factors for RFP are presented in Table 21.

The ODOT D-B manual specifies that the evaluation committee will complete a worksheet indicating strengths, weaknesses, and deficiencies of each proposal for all the technical and quality factors along with its comments to support the evaluation process and percentage ratings assigned for each factor. In addition, a proposer, who does not achieve “Pass” rating in “Pass/Fail” evaluation criteria or receives a quality score of less than “21%” for any technical and quality evaluation sub-factors, or a quality score of less than “41%” for any technical and quality evaluation factor, will not be eligible for selection (ODOT 2006).

The price proposals are opened after the final consensus scores for the technical and quality proposals are developed by the selection official. The price proposals are reviewed for price, realism, and reasonableness. The final score of the proposals is obtained from the best value selection formula developed by the agency representatives. The D-B best value formula is as follows:

$$\text{Total Score} = (\text{Quality weight}) * Q_f + (\text{Price weight}) * P_f$$

Where:

$$Q_f (\text{Quality Factor}) = \frac{\text{Proposer's Total Quality Score}}{\text{Highest Proposal Quality Score, and}}$$

$$P_f (\text{Price Factor}) = \frac{\text{Lowest Proposal Price}}{\text{Proposer's Price amount.}}$$

TABLE 20
SOQ EVALUATION SCORING CONSENSUS SUMMARY

Factor	Points Available	A	B	C	D
Experience	30	18	20	23	18
Past Performance	30	15	16	17	16
Backlog/Capacity	20	8	17	20	13
Project Understanding	30	26	19	23	15
Completion & Connectivity	10	8	7	8	5
Total	120	75	79	91	67

Source: ODOT (2006).

TABLE 21
GUIDELINES FOR TECHNICAL/QUALITY FACTOR EVALUATION IN RFPs

Rate	Criteria for Percentage Range
81%–100%	The Proposer has demonstrated an approach that is considered to significantly exceed stated criteria in a way that is beneficial to the Agency. This rating indicates a consistently outstanding level of quality, with very little or no risk that this Proposer would fail to meet the requirements of the solicitation. There are essentially no weaknesses.
61%–80%	The Proposer has demonstrated an approach that is considered to exceed stated criteria. This rating indicates a generally better than acceptable quality, with little risk that this Proposer would fail to meet the requirements of the solicitation. Weaknesses, if any, are very minor.
41%–60%	The Proposer has demonstrated an approach that is considered to meet the stated criteria. This rating indicates an acceptable level of quality. The Proposal demonstrates a reasonable probability of success. Weaknesses are minor.
21%–40%	The Proposer has demonstrated an approach that fails to meet stated criteria, as there are weaknesses and/or deficiencies. The response is considered marginal in terms of the basic content and/or amount of information provided for evaluation. Modification would be required for the Proposal to be acceptable.
0%–20%	The Proposer has demonstrated an approach that indicates significant weaknesses/deficiencies. The Proposal fails to meet the stated criteria and/or lacks essential information and is conflicting and/or unproductive. There is little reasonable likelihood of success; weaknesses/deficiencies are so major and/or extensive that a major revision to the Proposal would be necessary.

Source: ODOT (2006).

The quality and price weights are determined by the project development team during the development of the RFP, and were mentioned in the RFPs issued to the proposers. Table 22 illustrates an example of a best value selection scoring process.

For CM/GC projects, the best value selection process includes the evaluation of two components: a project proposal and a price proposal. The project proposal is evaluated based on five categories. Table 23 illustrates an example of these five categories of CM/GC best value evaluation criteria.

The CM/GC best value formula is calculated as follows:

$$\text{Total Score} = (\text{Project Proposal Weight} * \text{Pf-1}) + (\text{Price Proposal Weight} * \text{Pf-2})$$

Where:

$$\text{Pf-1 (Project Proposal Factor)} = \frac{\text{Proposer's Project Proposal Score}}{\text{Highest Project Proposal Score}}; \text{ and}$$

$$\text{Pf-2 (Price Proposal Factor)} = \frac{\text{Lowest CM/GC Fee Percentage}}{\text{Proposer's CM/GC Fee Percentage}}$$

Table 24 shows an example of the best value selection scoring process.

Evaluation Committee

There are slight differences in the structure of the evaluation/selection committee between CM/GC and D-B best value projects. For CM/GC projects, the proposal evaluation team is made up of six to eight ODOT employees. Facilitators are the staff members of the ODOT Office of Procurement who have extensive CM/GC experience in contracting, evaluation, and selection. ODOT uses a CMGC manual to promote a standard set of procedures for the evaluation process (ODOT 2008).

For D-B projects, the evaluation committee is often comprised of a facilitator, technical evaluation support personnel

TABLE 22
EXAMPLE OF SCORING PROCESS

PROPOSER A: Quality Proposal Score = 1850 Price Proposal = \$45,259,600	PROPOSER B: Quality Proposal Score = 1900 Price Proposal = \$44,900,000	PROPOSER C: Quality Proposal Score = 1950 Price Proposal = \$49,259,450
Quality Proposal Score: (1850/1950 = 0.9487) x 60% = 0.5692	Quality Proposal Score: (1900/1950 = 0.9744) x 60% = 0.5846	Quality Proposal Score: (1950/1950 = 1.0000) x 60% = 0.6000
Price Proposal Score: (\$44,900,000/\$45,259,600 = 0.9921) x 40% = 0.3968	Price Proposal Score: (\$44,900,000/\$44,900,000 = 0.3968) x 40% = 0.4000	Price Proposal Score: (\$44,900,000/\$49,259,450 = 0.9116) x 40% = 0.3646
TOTAL SCORE: 0.5692 + 0.3968 = 0.9660	TOTAL SCORE [Best Value]: 0.5846 + 0.4000 = 0.9846	TOTAL SCORE: 0.6000 + 0.3646 = 0.9646

Source: ODOT (2006).

TABLE 23
CM/GC BEST VALUE EVALUATION CRITERIA

Category	Evaluation Factors	Total Points Available
I	Legal requirements	Pass/Fail
II	Proposers organization and key personnel expertise	1,400
III	CM/GC roles and responsibilities/goals	600
IV	Project approach	1,000
V	Diversity plan outline	Pass/Fail

Source: I-5 Willamette River Bridge (ODOT 2008).

(TESP), scoring team with a chairperson, selection official, and observer. ODOT developed evaluation and selection plans that help committees maintain transparency and objectivity during the evaluation process. The roles and responsibilities of each evaluation committee member are briefly summarized here from the ODOT *Design-Build Manual* (ODOT 2006).

Facilitator

The facilitator is responsible for controlling and maintaining the integrity of the entire evaluation and selection process according to the evaluation plan. The facilitator works under the guidance and direction of the scoring team chairperson. Typically, the facilitator performs the following tasks:

- Retains confidentiality with regard to the evaluation process and is responsible for managing and monitoring the entire process for confidentiality, integrity, and procurement sensitivity.
- Provides training for the evaluation and selection process participants before the start of evaluations.
- Provides guidance and assistance for the evaluation and selection process participants throughout the entire evaluation and scoring process.
- Maintains a complete file of the proposal evaluation and selection process including all individual and consensus worksheets, communication activities for clarifications, summary of scores, recommendations from the scoring

team, and approval of the proposal quality scores by the selection official.

Technical Evaluation Support Personnel (TESP)

TESP evaluates the proposals and provides comments on the strengths and weaknesses of the proposals based on the evaluation criteria issued in the RFP. TESP members are generally from ODOT's Technical Services staff (headquarters or regions) or from ODOT consultants who are familiar with the alternative delivery methods or have played a technical role in the RFP preparation. It should be noted that TESP members do not "score" the proposals, but they do provide technical assessment of the proposals. The typical roles and responsibilities of TESP members include the following:

- Individually, review the proposals and evaluate the specific response categories and subcategories, including any innovative solution sections assigned to them. Notably, consultation with other TESP members evaluating related quality response categories and subcategories is allowed and encouraged. However, consultation should be strictly limited to the specific coordination item or issue in question.
- Prepare concise questions to the proposers to clarify any problems in the proposals that may occur during the evaluation process.
- Provide briefings and oral presentations concerning evaluation comments to the scoring teams.

TABLE 24
AN EXAMPLE OF CM/GC SCORING PROCESS

SCORING EXAMPLE:

PROPOSER A: Project Proposal Score = 1850 CM/GC Fee % = 4.5000%	PROPOSER B: Project Proposal Score = 1900 CM/GC Fee % = 3.5000%	PROPOSER C: Project Proposal Score = 1950 CM/GC Fee % = 5.5000%
Project Proposal Score: (1850/1950 = 0.9487) x 85% = 0.8064	Project Proposal Score: (1900/1950 = 0.9744) x 85% = 0.8282	Project Proposal Score: (1950/1950 = 1.0000) x 85% = 0.8500
Price Proposal Score: (3.5000/4.5000 = 0.7778) x 15% = 0.1167	Price Proposal Score: (3.5000/3.5000 = 1.0000) x 15% = 0.1500	Price Proposal Score: (3.5000/5.5000 = 0.6363) x 15% = 0.0955
TOTAL SCORE: 0.8064 + 0.1167 = 0.9231	TOTAL SCORE [Best Value]: 0.8282 + 0.1500 = 0.9782	TOTAL SCORE: 0.8500 + 0.0955 = 0.9455

Source: I-5 Willamette River Bridge (ODOT 2008).

Scoring Team

The members of the scoring team are ODOT employees who have previous experience with similar projects (understand comprehensively the project's evaluation categories and sub-categories) or are familiar with the evaluation process in the best value selection. This team consists of a group of five or more individuals and a chairperson. The scoring team is responsible for evaluating and scoring the proposals based on criteria stated in the RFP. Specifically, the team performs the following tasks:

- Reviews the proposals and evaluates all response categories and subcategories and innovative solution sections and assigns scores. It is important to note that scores are not to be shared among scoring team members.
- Evaluates categories and subcategories and innovative solution sections. This evaluation process must be completed in accordance with the objectives and requirements and scoring guidelines contained in the RFP.
- The chairperson approves the initial and substitute assignments of members to the scoring team, the TESP, and the facilitator.
- The chairperson coordinates and ensures timely completion of the evaluation and re-evaluation processes among scoring team members.
- The chairperson provides a briefing and/or oral presentation concerning pass/fail ratings and technical and quality scores to the selection official, seeking approval of the final proposal scores.

Selection Official

The selection official is responsible for reviewing the results and the recommendation of the scoring team. If the process is clear and transparent, the selection official shall approve the final assigned scores for the proposers. It is noted that evaluators may remand specific category and subcategory and innovative solution bonus point scores back to the scoring team for re-evaluating and rescore prior to approval.

Observers

Observers are appointed by the scoring team chairperson or selection official to make sure that the procedures of evaluation are being followed and the process is fair and transparent.

To achieve transparency and fairness of the evaluation process, ODOT requires the facilitator, TESP, scoring team, selection official, and observer to maintain and manage the integrity of the entire evaluation process. Examples of this requirement include:

- All personnel involved in the evaluation process must sign certifications of confidentiality and non-disclosure, and statements concerning conflicts of interest.

- During the evaluation and selection process, only the selection official can approve the release of any information.
- All information provided by the proposers or generated by the evaluation must be safeguarded.
- Evaluation teams need to submit a written request to the facilitator requesting a clarification from the proposer with regard to proposals who acts as a media between evaluation committee and proposers. The facilitator keeps a copy of all communications and responses as part of the official record of the evaluation and selection process.

Training

ODOT mandates training for the evaluation committee before it evaluates the proposals. The evaluation and selection plan, training materials, and evaluation worksheets are provided for the training sessions. Evaluators receive the same training and guidance on the evaluation process. Training generally includes two 3- to 4-hour sessions:

- The first session consists of the larger TESP or evaluation and selection team members and provides the basics in reviewing, evaluating, and scoring a proposal.
- The second session consists of the smaller group of personnel tasked with either evaluating or scoring all the proposals (scoring team), or reviewing and confirming the evaluation and selection team scoring results (selection committee).

During the training, the evaluation personnel are also provided with the project scope, project schedule, evaluation and selection schedule, roles and responsibilities of each party, and objectives of the selection process. Technical evaluators are educated on what to look for and how to rate each item during the evaluation process.

Debriefings

ODOT conducts debriefings with unsuccessful proposers if requested. Typically, ODOT conducts debriefings with an individual proposer in person within the first 20 days after the contract is awarded. To improve the transparency and fairness of the selection process, ODOT allows the unsuccessful proposers to review the winning proposal and the scoring results of all other proposers.

Lessons Learned

The ODOT agency representative for this study provided the following lessons learned for developing and maintaining a transparent best value process:

- The agency provides a detailed description of the technical and quality evaluation factors, the objectives and

TABLE 25
BEST VALUE EVALUATION CRITERIA

Type of Factor	RFQ Evaluation Factors	RFP Evaluation Factors
Pass/Fail	Cover letter Acknowledgement of receipt Legal Financial SOQ responsiveness	Legal Financial Proposal responsiveness
Technical/Quality	Experience of firms Past performance Demonstrated capacity Organization and key managers	Maintenance of traffic Third party coordination Roadway and drainage design Structures and geotechnical design Right-of-way Public involvement Project management Project controls

Source: UDOT (2012).

requirements for each technical and quality evaluation factor, and the relative weights of the technical and quality evaluation factors.

- Evaluation teams and selection committees use a clarification or communication process to resolve any ambiguities, errors, and omissions related to these criteria stated in the RFQ/RFP.
- Evaluation committees clearly document strengths, weaknesses, deficiencies, and risks associated with each factor in the evaluation worksheets.
- In-depth training for all evaluation and scoring team members is a requirement to ensure consistent and standardized scoring of proposals.
- The result of rating evaluation factors must be arrived at a consensus of the committee members.
- Dissemination of the same information to all proposers in a timely manner helps foster transparency of best value selection. All records of the procurement and evaluation and selection process will become part of the public record.

UTAH DEPARTMENT OF TRANSPORTATION

Overview

Utah DOT (UDOT) uses best value procurement for D-B projects. Similar to other DOTs, UDOT has been using a two-step procedure. In the first step, UDOT evaluates both pass/fail and technical factors listed in the RFQ to shortlist the proposers to submit final proposals. In the second step, UDOT evaluates technical proposals before reviewing the price proposal. Failure to achieve a “pass” rating on a pass/fail element may result in the proposal being declared non-responsive. Technical proposals determined to be non-responsive will not be considered further during the evaluation process. Price proposals are evaluated based on proposal price, price accuracy, completeness, and reasonableness (UDOT 2012).

Evaluation Criteria/Award Algorithms

Evaluation criteria are mentioned in both the RFQ and RFP. Table 25 summarizes a typical list of pass/fail and technical and quality evaluation factors in the RFQ and RFP. Table 26 shows the relative importance of technical factors considered during the evaluation process. The guidelines to evaluate quality and technical factors are presented in Table 27.

UDOT performs a risk analysis to determine the overall added values of each proposal. A risk analysis often is conducted in the following five key areas:

1. Maintenance of traffic,
2. Utilities,
3. Geotechnical,
4. Right-of-way, and
5. Schedule.

The determination of a best value award is based on the following:

- Base build price (within the limits of construction funding);
- Option proposal price(s) (within the limits of construction funding);

TABLE 26
RELATIVE IMPORTANCE OF TECHNICAL FACTORS

Technical Factors	Relative Importance
Maintenance of Traffic	Critical
Third Party Coordination	Critical
Roadway and Drainage Design	Significant
Structural and Geotechnical Design	Significant
Right-of-Way	Significant
Public Involvement	Important
Project Management	Important
Project Controls	Important

Source: UDOT (2012).

TABLE 27
EVALUATION GUIDELINES

Rating	SOQ Rating Guidelines	Proposal Rating Guidelines
Exceptional	The proposer has provided information relative to its qualifications that is considered to significantly exceed stated objectives/requirements in a beneficial way and indicates a consistently outstanding level of quality. There are essentially no weaknesses.	The proposer has demonstrated an approach that is considered to significantly exceed stated criteria in a way that is beneficial to the department. This rating indicates a consistently outstanding level of quality, with very little or no risk that this proposer would fail to meet the requirements of the solicitation. There are essentially no weaknesses.
Good	The proposer has presented information relative to its qualifications that is considered to exceed stated objectives/requirements and offers a generally better than acceptable quality. Weaknesses, if any, are very minor.	The proposer has demonstrated an approach that is considered to exceed stated criteria. This rating indicates a generally better than acceptable quality, with little risk that this proposer would fail to meet the requirements of the solicitation. Weaknesses, if any, are very minor.
Acceptable	The proposer has presented information relative to its qualifications that is considered to meet the stated objectives/requirements and has an acceptable level of quality. Weaknesses are minor and can be corrected.	The proposer has demonstrated an approach that is considered to meet the stated criteria. This rating indicates an acceptable level of quality. The proposal demonstrates a reasonable probability of success. Weaknesses are minor and can be readily corrected.
Unacceptable	The SOQ fails to meet the stated objectives and/or requirements and/or lacks essential information and is conflicting and/or unproductive. Weaknesses/deficiencies are so major and/or extensive that a major revision to the SOQ would be necessary and/or are not correctable.	The proposer has demonstrated an approach that indicates significant weaknesses/deficiencies and/or unacceptable quality. The proposal fails to meet the stated criteria and/or lacks essential information and is conflicting and/or unproductive. Weaknesses/deficiencies are so major and/or extensive that a major revision to the proposal would be necessary.

Source: UDOT (2012).

- Time (proposer's number of days for the substantial completion dates of the RFP);
- Technical merit;
- The risk analysis of the added value elements; and
- The best technical score.

UDOT notes that a proposal price carries the most weight in the best value selection process. The department has established a maximum limit to price proposals for best value selection. Each proposal within approximately 10% of the lowest price proposal will be evaluated for possible best value selection. To maintain fairness in the price proposal process, UDOT notes that proposals with prices that exceed this maximum limit are unlikely to be awarded.

Evaluation Committee

To establish a fair and uniform best value approach, UDOT uses three committees to evaluate proposals: (1) analysis committee, (2) evaluation committee, and (3) selection committee. The analysis committee members consist of technical experts. The analysis committee analyzes and evaluates the proposals based on the goals, including:

- Finding the facts within the proposals;
- Identifying the added values, risks, strengths, and weaknesses; and
- Identifying any deficiencies.

The evaluation committee typically consists of three to five members. The project manager or project director is a chair of this committee. The evaluation committee evaluates technical proposals, reviews ratings for technical factors, and assigns blinded aliases (blinded technical information) for each proposal. This committee must ensure that the evaluation process is based on RFP evaluation criteria. Although the evaluation committee chair offers one-on-one meetings to each proposer, any communication after these meetings must follow the processes outlined in the RFP. The number of meetings may vary depending on the size and complexity of the project.

The selection committee consists of three UDOT senior leaders. This committee meets with the evaluation committee early in the process to discuss the project goals and objectives. The selection committee evaluates and assigns an overall rating to technical proposals with the cost value of any price limit boundaries for technical enhancements. The selection committee also needs to approve updates to goals and evaluation criteria throughout the development of the project. The selection committee then reviews blinded technical information from the evaluation committee combined with blinded price proposals to make a determination of best value.

Training

UDOT conducts training for the analysis and evaluation committee before the technical proposal evaluation process. The

agency believes that providing training for the analysis and evaluation committee members improves the consistency and fairness. The purpose of training is to ensure that the process is followed as outlined in the RFP, *Instructions to Proposers*, and *Evaluation and Selection Manual*. UDOT also notes that one of the roles and responsibilities of the evaluation committee is to train the analysis committee(s). In addition, the evaluation committee members need to (1) sign a confidentiality form and conflict of interest statement and (2) limit the communication about the proposal with others during the evaluation process. The main points of the training are to focus on the roles and responsibilities of committee members so that each member can understand and comfortably perform his or her jobs.

Debriefings

UDOT conducts debriefings with both successful and unsuccessful proposers if requested. Debriefings often include a summary of the rationale for the selection decision and highlight key points such as strengths, weaknesses, risks, innovations, or enhancements. The unsuccessful proposers are provided with a review of the comments about the strengths and weaknesses of their proposals made by the evaluation committee. The unsuccessful proposers also are allowed to review the winning proposals. A procurement official familiar with the rationale for the selection decision explains the evaluation process and how the score was established. The procurement official is also responsible for clarifying any ambiguity related to the evaluation process as well as answering any questions from proposers. Finally, UDOT maintains the proposals for the public record for up to a year.

Lessons Learned

The UDOT agency representative for this study provided the following lessons learned for developing and maintaining a transparent best value process:

- UDOT provides a detailed description of the technical evaluation factors, the objectives and requirements for each evaluation factor, the relative importance of the technical evaluation factors, and the information to be submitted in its RFQs and RFPs.
- Proposers correspond with the department regarding the RFP only through the department's designated point of

contact. Any communication determined to be improper may result in disqualification.

- Evaluation teams must clearly document strengths, weaknesses, deficiencies, and risks associated with each criterion.
- All personnel involved in the evaluation process must sign certifications of confidentiality and non-disclosure, and statements concerning conflicts of interest.
- Consultant services make sure that all the proposals are blinded and marked with some aliases before forwarding them to the analysis committee for evaluation.
- Differences of opinion between committees, and/or selection committee and the selection official, are addressed through consensus. Each side agrees on the resolution before moving to the next step in the process.
- Process witnesses are appointed to ensure there is no bias toward any proposer and check whether the analysis and evaluation committee's ratings align with the project goals and evaluation criteria.

SUMMARY

This chapter documents case examples and experience from the agencies that were found to have the greatest best value experience. The agencies use a wide variety of evaluation criteria and select these criteria to align with unique project goals. The study found that agencies use the *adjusted bid*, *adjusted score*, and *weighted criteria* award algorithms in combination with *direct point* evaluation rating methods to support transparency. The transparency stems from the concept that these algorithms most closely resemble low-bid procurement. However, other award algorithms and rating methods are in use on a project-by-project basis. For example, some agencies prefer to use adjectival ratings on complex D-B evaluations. The agencies provide project-based and/or programmatic training for best value procurement. Timely and comprehensive debriefings are common with these experienced agencies. These agencies provide examples of effective practices for industry outreach and continuous improvement of their best value processes. The most common lessons learned focused on clarity of evaluation criteria, well-defined RFPs and evaluation plans, in-depth evaluator training, thorough debriefings, and open communications through a single point of contact.

CHAPTER FIVE

CONCLUSIONS AND FUTURE RESEARCH**INTRODUCTION**

The goal of this synthesis is to document the state of practice in best value selection methodologies that support transparency. The literature review, national survey, content analysis, and case studies provide conclusions and gaps in knowledge for best value procurement. The conclusions were validated through two or more methods (e.g., the literature review and survey). Findings that were discovered by one method but not validated by a second method were reported in the synthesis, but are not included as conclusions. Although many of the following conclusions can be considered effective practices, they are not considered to be best practices or recommendations. The gaps in knowledge found in this study provide ideas for future research.

CONCLUSIONS

As discussed in chapter two and detailed throughout the synthesis, transparency issues primarily arise in best value procurement as a result of the evaluation of non-price factors; the evaluation of price is transparent. Price proposals are sealed prior to receipt by the agency and opened in a public forum; there is no subjectivity in their evaluation. However, individuals or committees evaluate non-price factors in best value selections. In some cases, these evaluators are required to exercise engineering judgment to arrive at an evaluation rating. Agencies combine these non-price ratings with prices to arrive at a best value award recommendation. It is the evaluation of non-price factors and the process of trading them off with price that creates issues with transparency.

States most frequently using only a few of the available award algorithms and rating methods promote transparency in the best value process. These procedures have the following characteristics:

- Most commonly *adjusted bid*, *adjusted score*, and *weighted criteria* award algorithms;
- Applying *direct point* scoring methods;
- Clearly defining the weights, or relative weights, of evaluation criteria;
- Sealing price proposals until technical scoring is complete; and
- Opening price proposals and technical scores in a public forum.

Evaluation criteria change with project goals and constraints. The following characteristics were found to promote transparency in evaluation criteria:

- Evaluation criteria that are clear, easy to understand, and project-specific;
- Evaluation criteria that define how the agency will score them; and
- Approaches that contain the minimal number of evaluation criteria to succinctly align the procurement with stated project goals.

Clear communications were found to promote transparency. Agencies hold pre-proposal meetings to clarify both the project goals and the best value selection process. They also define a single point of contact for the process to promote transparency and consistency.

Agencies can achieve transparency with evaluation committees that contain a balance of technical members with no personal interest, either actual or perceived, in the outcome of the evaluation process. The use of non-agency personnel as participating members on the committee was found in practice; however, this approach varied on a state-by-state and project-by-project basis.

Some states sequester their selection committees during the evaluation. Evaluator agreements of confidentiality during and after the selection process were found in all cases. All discussions and comments can be treated as public meetings. This practice promotes transparency and prepares for any potential protest.

Writing detailed evaluation comments to substantiate ratings during the process and in debriefings was found to be an effective practice. These comments are specific, concise, and tied to scoring. Timely and detailed debriefings help to clarify the basis for an award, the selection process, strengths and weaknesses of proposals, and rationale behind the decision. These meetings help proposers improve future offers. The practice of sharing competitor's evaluations varied from state to state and was often tied to open records acts.

The literature review, industry survey, and case examples demonstrated that industry participation in program development and performance management increases transparency. Two-thirds of the agencies using best value procurement work

with industry to develop their programs and one-half meet regularly to evaluate their programs.

Best value legislation can dictate much of the process and its transparency. Some best value legislation is specific to the highway sector, while other legislation is more general for all state construction projects. Much of the legislation reviewed in this study was tied to design-build (D-B) project delivery.

FUTURE RESEARCH

This report found several gaps in knowledge surrounding the use of best value procurement. To promote effective use, this synthesis offers the following topics for future research.

There has been limited amount of investigation on the use of best value procurement for traditional design-bid-build (D-B-B) delivery. Several departments of transportation indicated that the use of best value for D-B-B projects brings significant benefits to their agencies. Non-complex projects, in particular, have the potential for using streamlined best value processes. The evaluation criteria and award algorithms need not be as complex as those found on large D-B projects. To encourage the use of effective best value procurement on D-B-B projects, research could determine how to streamline best value procurement, allocate the risks equitably for the agency and contractors, and quantify the project performance between D-B-B low-bid and best value projects. The results could provide guidance, policies, and perhaps model legislation for streamlined D-B-B best value processes.

Industry incurs cost when preparing best value proposals. On non-complex projects with few evaluation factors, these costs can be marginally more than the cost of preparing a D-B-B bid. On complex D-B projects, however, the costs

of developing designs and proposals can be significant. This study found literature relating to stipends that offset best value preparation costs, but it did not find definitive research or direction on how agencies can minimize the cost to industry while still achieving competition and innovation on best value proposals.

States took different approaches to sharing best value ratings from competing teams during debriefings. Some states will not share the evaluations of other teams' proposals. Some states make the entire proposal and/or complete evaluation available to all proposers. It is frequently the freedom of information acts and similar legislation that dictate this choice to share this information. The impacts of these processes on transparency and intellectual property are unknown. Study of this topic could help to promote a more competitive procurement process.

The literature review, review of legislation, and review of best value protests provides strong evidence that best value evaluation plans are a key to successful best value procurements. However, research has not been conducted to test the effectiveness of different approaches to writing evaluation plans. Research into evaluation planning could help to improve the process.

The study scope did not allow for an exploration of best value on public-private partnership (P3) projects. P3 projects have a unique set of goals and constraints. Proposing entities are often involved at the earliest stages of project development. A synthesis of the state of practices could help to develop optimal best value methods for P3 projects. The results could provide guidance, policies, and perhaps model legislation. At a minimum, this research could help to provide more national consistency in P3 procurements.

GLOSSARY

AGC	Associated General Contractors of America
ATC	Alternative Technical Concepts
ADOT	Arizona Department of Transportation
CMAR	Construction manager at-risk
Caltrans	California Department of Transportation
CM/GC	Construction manager/general contractor
D-B	Design-build
D-B-B	Design-bid-build
DOT	Department of transportation
ELOI	Expanded Letter of Interest
FDOT	Florida Department of Transportation
GDOT	Georgia Department of Transportation
IDIQ	Indefinite Delivery/Indefinite Quantity
MnDOT	Minnesota Department of Transportation
MDOT	Michigan Department of Transportation
NHDOT	New Hampshire Department of Transportation
NYSDOT	New York State Department of Transportation
ODOT	Oregon Department of Transportation
PPP or P3	Public-private partnerships
QBS	Qualification-based selection
RFP	Request for proposal
RFQ	Request for qualifications
SOQ	Statements of qualifications
TRC	Technical review committee
UDOT	Utah Department of Transportation
VDOT	Virginia Department of Transportation
WSDOT	Washington Department of Transportation

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APPENDIX A

National Survey Questionnaire

DEFINITIONS

Best Value Procurement: A procurement process where price and other key factors are considered in the evaluation and selection process to minimize impacts and enhance the long-term performance and value of construction.

Design-bid-build (D-B-B): A project delivery method where the design is completed before the construction contract is advertised.

Design-build (D-B): A project delivery method where both the design and the construction of the project are simultaneously awarded to a single entity.

Construction manager/general contractor (CM/GC or CM-at-Risk): A project delivery method where an agency engages a construction manager during the design process

to provide input on scheduling, pricing, phasing, and other input that helps design a more constructible project. The agency and the construction manager then agree upon a price for the construction of the project and execute a construction contract or the project can be put out to the market for competitive procurement.

Job Order Contracting (JOC): A procurement procedure in which the owner awards a contract that provides for an indefinite quantity of design, construction, and/or maintenance services for a specified duration of time.

Best Value Evaluation Criteria: Factors, other than price, that are considered in best value procurements.

Best Value Evaluation Rating System: Process to assess evaluation criteria against which the proposal can be measured.

QUESTIONNAIRE

1. Responding Agency Information

Agency:

Name:

Title:

Office/Bureau:

Phone:

e-mail:

2. Is your agency currently implementing or considering best value procurements?

Yes, currently implementing best value procurements

Yes, currently considering best value procurements

No, click here to complete the questionnaire

3. What group/section do you work in?

Design group/section

Construction group/section

Operations group/section

Alternative project delivery group/section

Contracts/procurement group/section

Other, please specify:

4. Is your agency currently implementing or considering best value selection on the following project delivery methods?

Delivery Method	Best Value Application
D-B-B	<input type="checkbox"/> Yes <input type="checkbox"/> No
D-B	<input type="checkbox"/> Yes <input type="checkbox"/> No
	<input type="checkbox"/> D-B is not currently used by agency

CM/GC or CM-at-Risk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> CM/GC is not currently used by agency
Job Order Contracting	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Job order contracting is not currently used by agency

Other relevant delivery methods, please specify:

5. If the answer to Question 4 is “No” for any project delivery methods, complete the following table for each respective delivery method with a “No” answer.

Delivery Method	Best Value Application
D-B-B	<input type="checkbox"/> Traditional procurement methods are adequate <input type="checkbox"/> Legal or regulatory prohibitions against some methods <input type="checkbox"/> Agency expertise not available <input type="checkbox"/> Lack of staffing to oversee best value selection <input type="checkbox"/> Not currently in use, but could be applied in the future <input type="checkbox"/> Other, please specify:
D-B	<input type="checkbox"/> Traditional procurement methods are adequate <input type="checkbox"/> Legal or regulatory prohibitions against some methods <input type="checkbox"/> Agency expertise not available <input type="checkbox"/> Lack of staffing to oversee best value selection <input type="checkbox"/> Not currently in use, but could be applied in the future <input type="checkbox"/> Other, please specify:
CM/GC or CM-at-Risk	<input type="checkbox"/> Traditional procurement methods are adequate <input type="checkbox"/> Legal or regulatory prohibitions against some methods <input type="checkbox"/> Agency expertise not available <input type="checkbox"/> Lack of staffing to oversee best value selection <input type="checkbox"/> Not currently in use, but could be applied in the future <input type="checkbox"/> Other, please specify:

Job Order Contracting	<input type="checkbox"/> Traditional procurement methods are adequate <input type="checkbox"/> Legal or regulatory prohibitions against some methods <input type="checkbox"/> Agency expertise not available <input type="checkbox"/> Lack of staffing to oversee best value selection <input type="checkbox"/> Not currently in use, but could be applied in the future <input type="checkbox"/> Other, please specify:
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6. In approximately what year did your agency begin using best value procurement?
7. Approximately what percentage of your average annual construction program, *in terms of number of projects*, is awarded using best value?
- <1%
- 1%–5%
- 5%–10%
- 10%–20%
- >20%
- Other, please specify the number of best value projects your agency has awarded:
8. Which statement(s) best describe your industry outreach efforts with best value procurement?
- Our agency did not solicit industry input into our best value procurement procedures.
- Our agency worked with industry to develop our best value procurement procedures.
- Our agency regularly meets with industry representatives to evaluate our best value procurement procedures.
- Industry representatives participate in best value selection committees.
- Other, please specify:
9. Most commonly, how does your agency convey evaluation criteria and weight in solicitations?
- Solicitations do not convey evaluation criteria weight
- Solicitations convey evaluation criteria in order of importance

- Solicitations convey point range for evaluation criteria
- Other, please specify:

10. Does your agency interview proposers as part the selection process?

- Interviews are always conducted
- Interviews are included in selected best value procurements
- Interviews are never conducted
- Other, please specify:

11. Are stipends provided to unsuccessful proposers on best value procurements?

- Stipends are provided on *all* best value procurements
- Stipends are provided on *selected* best value procurements
- Stipends are not provided
- Other, please specify:

12. How does your agency conduct debriefing for unsuccessful proposers (check all that apply)?

- Proposers receive a written debriefing
- Proposers receive an oral debriefing
- Proposers are allowed to review the winning proposals
- Proposers do not receive a debriefing
- Other, please specify:

13. Do your best value evaluation committees include personnel who are not agency employees?

- Yes
- No

If “Yes,” please describe the title and role of these personnel.

14. Does your agency provide training for evaluation committees on best value procurement selection?

- General training is provided to agency personnel
- Project-specific training for *every* project

- Project-specific training for *some* projects
- Training is not provided by the agency
- Other, please specify:

15. Does your agency have state legislation and regulation for best value procurements?

- Yes
- No

If “Yes,” can you provide a web link to the legislation?

16. Have you ever had a protest on a best value selection?

- Yes
- No

If “Yes,” can you provide a brief description of the nature of the protest(s) and resolution?

17. Would you be willing to discuss your best value process with the research team in a structured interview?

- Yes
- No

If “No,” can you refer us to someone else in your agency?

Contact name:

Phone number:

E-mail address:

18. Do you have any other information that you would like to share with the research team that might add value to this study?

- Yes

Please use this space to add information

- No

[Click here to complete the questionnaire](#)

APPENDIX B

Case Example Questionnaire

The goal of this synthesis is to capture the various ways in which transportation agencies and other public engineering agencies are developing selection methodologies that support transparency and fairness of best value procurements. The objectives of the case examples are to: (1) supplement and validate the *findings from the survey*; (2) identify *selection methodologies* that support transparent best value award; (3) identify *examples of success factors* on developing transparent best value selection procedures; and (4) obtain *specific process examples* including:

- Evaluation criteria;
- RFP project or template examples;
- Evaluation training or procedures examples;
- Process flow charts; and/or
- Agency checklist that supports a fair best value approach.

A. Proposal Evaluation Criteria

1. When evaluating best value selection, what criteria do you use?
 - a. *Does your agency have a standard set of criteria or a template with potential criteria?*
 - b. *Please explain if/how each criterion contributes to transparency of the selection process?*
 - c. *Please review this standard checklist if a written list is not available.*
 - *Price (initial capital cost)*
 - *Life Cycle*
 - *Technical Proposal Responsiveness*
 - *Project Schedule Evaluation*
 - *Past Project Performance*
 - *Key Personnel Experience and Qualification*
 - *Project Management Plan*
 - *Safety Record and/or Plan*
 - *Quality Management Plan*
 - *Subcontractor's Information*
 - *Environmental Considerations*
2. Does your agency evaluate alternative designs in best value selection?
 - a. *If yes, what criteria are used?*
 - b. *What processes are in place to ensure transparent selection?*
3. How does your agency share these evaluation criteria with the proposers?
 - a. *Are they explicit or implicated in the RFP/RFQ?*
 - b. *Are they provided with weights or an order of importance?*

B. Selection Methodologies

1. Does your agency have a manual or document that specifically describes the best value selection procedures?
 - a. *Is there a standard procedures document?*
 - b. *Is it adjusted for each project selection?*
2. Does your agency meet with proposing contractors during the procurement process?
 - a. *Are these meetings mandatory?*
 - b. *Are the meetings open to all proposers at once or individually?*
 - c. *If they are individual meetings, how does the agency determine what is private and what is confidential?*
3. When scoring best value criteria, what methods do you use?
 - a. *Direct point scoring?*
 - b. *Adjectival scoring?*
 - c. *Is the method conveyed in the RFP?*

4. When awarding best value projects, what selection algorithms do you use? Please explain how this algorithm contributes to transparency of the selection process.
 - a. Use these algorithms as a checklist for review.
 - *Meets Technical Criteria-Low Bid*
 - *Fixed Price—Best Proposal*
 - *Adjusted Bid*
 - *Adjusted Score*
 - *Weighted Criteria*
 - *Quantitative Cost Technical Tradeoff*
 - *Qualitative Cost Technical Tradeoff*

C. Evaluation Committee Structure

1. How does your agency organize its best value selection committee to ensure transparent and objective selection?
 - a. *Does your organization use a non-voting facilitator to clarify the proposal?*
 - b. *Does your agency use a contractor representative?*
2. Does your agency require training for best value selection process?
 - a. *Is the training formalized in your agency?*
 - b. *Can you provide us with an example?*
3. Are evaluators isolated during the technical scoring process?
4. Does your organization have an oversight committee to supervise entire best value process?

D. Debriefing Procedures

1. How does your agency conduct debriefing for unsuccessful proposers?
 - a. *Is it done in person, over the phone, in writing?*
 - b. *Is it done with each individual proposer or as a group?*
 - c. *When is the review conducted?*
2. Do you have written procedures for what to share with unsuccessful proposers?
 - a. *Can unsuccessful proposers see the proposals from other firms?*
 - b. *Can you share any written guidance on what is confidential and when information can be shared?*

E. Industry Outreach Efforts

1. How does your agency work with industry to conduct best value procurements?
 - a. *Did you work with industry to develop the initial procedures?*
 - b. *Do you continue to work with industry to review/refine the procedures?*
2. How does your agency minimize the overall industry cost of developing proposal, but still maintain transparent and a fair best value approach?

F. Lessons Learned

1. What lessons learned would you share with other agencies to help promote transparency in best value selection?
2. Has your agency ever been involved in a best value selection protest?
 - a. *What was the outcome?*
 - b. *Is this public record and can we obtain a copy of the findings?*

APPENDIX C

Best Value Enabling Legislation

This appendix provides a summary of various state statutes that may allow DOTs to implement best value procurement for transportation projects. It is important to note that transportation agencies are not encouraged to use this appendix as their sole source of information in developing or implementing best value procurement.

State	Best Value and Public Procurement Laws
AK	<i>Best value</i> or low bid may be used for D-B projects. (2 AAC 12.943).
AL	<i>Best value</i> is authorized by the Alabama Toll Road, Bridge and Tunnel Authority on D-B, design-build-own, design-build-own-operate, or design-build-own-operate-maintain contracts. (Al. Code § 23-2-145).
AZ	Design-build, construction-manager-at-risk, or job-order-contracts may be awarded using <i>best value</i> or qualifications based. (Ariz. Rev. Stat. § 41-2582). Award is to the lowest score when price is divided by technical score; time valued adjustments may be made to score. (Ariz. Rev. Stat. §§ 28-7363-28-7365).
CA	The department of transportation may use D-B for up to 10 projects on the state highway system; regional governments are authorized to use D-B on transportation projects until 2024, based on either best value or lowest responsible bid. (California AB-401).
CO	The department of transportation can use an adjusted score D-B contract or a low-bid process. (C.R.S. 43-1-1401).
CT	Award of the D-B contract based on a two-phase process: the recommendation by the selection panel then selection by the commissioner based on a combined score of qualifications and past performance of the proposer, technical merit of the proposal, and cost. (2012 CT PA 70 § 1).
DE	All provisions of the procurement statute may be waived to meet the critical needs in an emergency or where it is determined to be in the best interest of the Agency . (29 Del. C § 6963, 29 Del. C. § 6907).
FL	All state agencies are authorized to use D-B using the <i>best value</i> or qualification-based selection to award the contracts (FL § 287.055).
GA	Senate Bill 70 amends the D-B statute to allow for 2-phased best value procurements that can weigh both bid price and technical/qualitative considerations. (S.B.70/O.C.G.A. § 32-2).
ID	The department may select D-B firms and award contracts for D-B projects based on the best value method, lowest price, or fixed price. (Idaho Code § 40-904).
MA	State agencies are authorized to use D-B based on either a best value or low-bid basis for the construction, reconstruction, alteration, remodeling, or repair of any public works project in excess of \$5,000,000. (ALM GL 149 § 14, 20).
MD	Competitive sealed proposal process allows <i>Best value</i> selection; award must be advantageous to the state, considering price and other evaluation factors set forth in the RFP. (Md. Code Ann. § 13-103).
ME	The department may evaluate and select proposals on either a best value or low-bid basis. If <i>best value</i> is used, award should be submitted to the department in two components—technical and sealed price proposal. (23 M.R.S.A. § 4244).
MI	For projects funded in whole or part with state funds, the construction contract award shall be made to the responsive and responsible best value bidder. (MCL §§ 18.1241).
MN	The Minnesota bill authorizes the use of best value contracting for state and local projects. (S.F. No. 1278).

MT	A state agency can use alternative project delivery contracts. A two-phase proposal process is used; first phase involves evaluation of qualifications and second phase involves evaluation of technical and price proposals . (MCA § 18-2-501-503).
NC	The Board of Transportation may award contracts each fiscal year for construction of transportation projects on a D-B basis to provide the best value for the project in terms of time, quality, and cost. (NCGS 136-28.1, 11).
NY	The department of transportation can use a best value or a low-bid process. (N.Y. STF. LAW § 163).
OH	Ohio DOT is authorized to use D-B on projects totaling \$1 billion annually. They are authorized to use “ Best value ” on D-B projects and stipends. (HB 114).
OR	A contracting agency shall award a public contract for goods or services by competitive sealed bidding under ORS 279B.055 or competitive sealed proposals under ORS 279B.060. (OR Rev. Stat. § 279B.050). In public procurement, meaningful competition may be obtained by evaluation of performance factors and other aspects of service and product quality, as well as pricing, in arriving at best value . (OR Rev. Stat. § 279A.050).
PA	A public entity shall evaluate each proposal to determine which proposal has the best value for and is in the best interest of the public entity. (74 PA.C.S. § 9108f).
TX	Local governments may use best value D-B but qualifications-based selection is prohibited. May solicit proposals or accept unsolicited proposals; if an unsolicited proposal is received, DOT must request competing proposals and qualifications; selection is based on “ best value .” [Texas Gov’t Code Ann. §§ 2166.251-2166.2531 (state construction)].
VT	The Department of Transportation is authorized to use D-B using best value or low-bid selection. (19 V.S.A. § 10).

APPENDIX D

Best Value Protest Case Examples

This appendix summarizes four best value award protests and their outcomes from the Oregon, Utah, California, and Minnesota Departments of Transportation (DOTs). Although detailed descriptions for all case outcomes were not available at the time of publication, it is believed that all four cases provide excellent lessons learned.

PROTEST CASE 1: I-5 WILLAMETTE RIVER BRIDGE, OREGON DOT

Project Description

The I-5 Willamette River Bridge project involves replacing two (2) bridges on Interstate 5 (I-5) in Lane County, Oregon: the 1,800-foot bridge on I-5 over the Willamette River and the 100-foot bridge over the Canoe Canal. Interstate 5 runs generally north-south in the project area, forming the boundary between the cities of Eugene to the west and Springfield to the east. The project area was located within the urban growth boundary of both cities. The new bridge is constructed at the same location as the existing bridge, but requires roadway alignment adjustments in the immediate project area. The new bridge includes six (6) lanes of traffic to accommodate the 20-year design for future traffic needs.

The total project cost is approximately \$206 million while the construction cost is approximately \$154 million. The architectural and engineering contract was awarded in May 2008 and the CM/GC contract for pre-construction phase service was awarded in June 2008 using a best value procurement approach. The new targeted contract completion date for the project is January 31, 2015.

Procurement Law

Chapter 88 Oregon Laws states that:

An advertisement for bids shall be published at least once in at least one newspaper of general circulation in the area where the contract is to be performed and in as many additional issues and publications as the public contracting agency may determine. The Director of the Oregon Department of Administrative Services or a local contract review board, by rule or order, may authorize advertisements for bids to be published electronically instead of in a newspaper of general circulation if the director or board determines that electronic advertisements for bids are likely to be cost-effective. If the contract is for a public improvement with an estimated cost in excess of \$125,000, the advertisement for bids shall be published in at least one trade newspaper of general statewide circulation. The director or board may, by rule, require an advertisement for bids to be published more than once or in one or more additional publications (ORS 279.025).

Chapter 647 Oregon Laws indicates that:

Within 30 days after receipt of a prequalification application, the public contracting officer shall investigate the prospective bidder as necessary to determine if the prospective bidder is qualified. The determination shall be made in less than 30 days, if practical, if the prospective bidder requests an early decision to allow the bidder as much time as possible to prepare a bid on a contract that has been advertised (ORS 279.041).

Review Process

The evaluation of proposals is conducted in five (5) phases:

1. Evaluation of minimum proposal requirements;
2. Evaluation of the project and price proposals;
3. Initial ranking of proposals/notice of competitive range;
4. Mandatory interviews and final ranking; and
5. Contract negotiation, intent to award, and contract award.

Protest

On May 16, 2008, ODOT received a notice in which Kiewit Pacific Company (“Kiewit”) protests the Notice of Intent to award the project to Hamilton Construction Company (“Hamilton”). Kiewit’s protest against ODOT included the following claims:

1. Allowing a proposer to turn in a proposal without that proposer turning in a letter of interest;
2. Allowing two potential proposers to collaborate with each other after the letters of interest were submitted;
3. Failing to pursue clarifications in the interview process that affected scoring of the submitted proposals;
4. Changing the number of allowable interview participants to benefit only one of the proposer teams; and
5. Allowing prohibited communications between the agency and a proposer to change or clarify the RFP after the established February 29 cutoff date.

Outcomes

Protest Point No. 1

Kiewit claimed that ODOT allowed Hamilton in association with Slayden Construction Group (“Slayden”) to submit their proposal after individual letters of interest were submitted.

In response to Protest Point No. 1, ODOT stated that “Section 22.1(a) of the CM/GC Instructions to Proposers

recognizes that even at the time of the Proposal Due Date, the Proposer may not have completed formation of a legal Entity such as a partnership or joint venture.” In this case, the proposal submitted by Hamilton did not show intent to form a legal Entity with another firm. Rather, Hamilton proposed as a sole Entity with Slayden as a subcontractor to Hamilton.

Protest Point No. 2

Kiewit contended that communications between Hamilton and Slayden were prohibited in accordance with Section 3.4 of the CM/GC Instructions to Proposers.

In response to Protest Point No. 2, ODOT stated that Section 3.4 of the RFP is designed to promote a fair and equitable selection process. That section provides that no member of a proposer’s organization “may communicate with members of another Proposer’s organization to give, receive, or exchange information, or to communicate inducements, that constitute anti-competitive conduct in connection with this procurement.” On February 20, 2008, Slayden notified ODOT that Slayden would not be submitting a proposal but would be a Subcontractor of Hamilton on this CM/GC project. Based on the information available, ODOT has concluded that the communications between Hamilton and Slayden and with ODOT showed no evidence that their motives was to gain any advantage in the procurement process.

Protest Point No. 3

Kiewit claimed that ODOT did not address comments or justifications shown as “unclear” or “lacked details” on Kiewit’s proposal in the interview process.

In response to Protest Point No. 3, ODOT stated that the proposal evaluation committee developed seven interview questions to clarify information in the scoring process. The same questions were asked of each proposer. The purpose of the proposer interview is to confirm or modify the scoring of the proposals based on the process identified in the RFP. Based on the review of available information, ODOT has concluded that the Agency did not fail to seek additional clarification from Kiewit at the interview. In fact, some or all of the final comments provided on Kiewit’s Proposal evaluation consensus worksheets were completed after the interview process.

Protest Point No. 4

Kiewit contended that ODOT changed the number of participants allowed to participate in the interview from which they did not benefit. Kiewit also claims that increasing interview participants was not allowed based on Section 20.4 in RFP.

In response to Protest Point No. 4, ODOT stated that in response to the invitation to interview letter sent by the Agency on March 25, Hamilton confirmed to bring a total of six team members to the interview. Additionally, Section 20.4 of the RFP points out that: “The CM/GC’s Principal Participant, Project Manager and Construction Manager named in the Proposal must be present at the interview. In addition, the Proposer may bring two (2) additional members of its choice to the interview.” Hamilton’s proposal identified two Principals. As a result, ODOT determined that Hamilton’s request to bring six (6) team members to the interview did not violate the provisions of Section 20.4 of the RFP. Further, the Agency provided Kiewit the opportunity to identify any additional team members, but Kiewit did not respond to ODOT’s offer, therefore indicating to the Agency that they were satisfied with the participants allowed or required in the RFP. Oregon therefore has concluded that Hamilton gained no advantage, and Kiewit was not aggrieved by Hamilton having six (6) team members at the interview.

Protest Point No. 5

Kiewit claims that Hamilton’s request should have been submitted as part of the formal request for clarification process which closed on February 29, 2008.

In response to Protest Point No. 5, ODOT stated that Hamilton’s communication was received in response to the invitation to interview, which was not governed by the RFP time limitations. Further, Section 3.3 of the CM/GC Instructions to Proposers—Informal Communications, states that: “Information that the Agency issues to Proposers in writing responding to Proposer questions in contexts other than the formal request/protest process outlined in these Instructions to Proposers will not have the effect of changing any Contract term or Specification, but may be useful in interpreting the Contract.” As a result, ODOT made no change to any contract term or specification in responding to Hamilton’s informal communications.

In conclusion, based on the agency’s review and analysis of Kiewit’s protest and relevant documents, ODOT determined that they had exercised the contract award process properly and concluded that Kiewit’s protest is without merit and therefore is denied.

PROTEST CASE 2: I-15 UTAH COUNTRY CORRIDOR EXPANSION, UTAH DOT

Project Description

The I-15 Utah Country Corridor Expansion (“I-15 CORE project”) is one of the largest D-B road construction projects in Utah. The I-15 CORE project was initiated to alleviate traffic congestion and increase public mobility and safety. The

project mainly involved reconstructing 24 miles of freeway from Lehi to Spanish Fork, widening the freeway by two lanes in each direction, replacing the original asphalt with new 40-year concrete pavement, and rebuilding 63 bridges and 10 freeway interchanges.

The Utah DOT (UDOT) awarded the D-B contract to Provo River Constructors using the best value approach. The total project estimated cost is approximately \$1.725 billion. The estimated construction time period is 36 months.

Procurement Law

Under 2006 Utah Code, the DOT may award a D-B contract for any transportation project. Following the procedures and requirements of Title 63, Chapter 46a, and Utah Administrative Rulemaking Act, UDOT will make rules to establish requirements for the procurement of its D-B transportation project contracts. If permitted under its state law, UDOT may use a best value approach to award a contract.

Review Process

UDOT used a two-phase procurement process for the selection of a design-builder to deliver the project. UDOT short-listed the proposers based on SOQs they received in response to the RFQ. The RFP was issued as the second phase of the procurement process to the shortlisted proposers. UDOT evaluated the written technical proposal based on the pass/fail, technical factors, and a risk analysis profile of best value elements. The price proposals were evaluated based on the price factors mentioned in the RFP.

Protest

UDOT awarded the contract for the I-15 CORE project to Provo River Constructors (PRC). Flatiron/Skanska/Zachry (FSZ), a Joint Venture, filed a protest on December 22, 2009, concerning UDOT's evaluating of its proposal and the award of the contract to PRC. FSZ filed supplements to the protest on December 30, 2009, and January 5, 2010. FSZ claims that its proposal met or exceeded the criteria requested by UDOT and should have resulted in an award to FSZ. The evaluation teams of UDOT concurred and rated FSZ the highest of all the proposers. FSZ remained firm in this position and claimed that the Selection Recommendation Committee (SRC) violated the review criteria procedures. As a result, FSZ requested that UDOT terminate the contract awarded to PRC and award the contract to FSZ.

Outcomes

No legal action was filed in court. UDOT and FSZ agreed to settle all claims concerning the protest, procurement process, and award of the contract for the I-15 CORE project.

The major outcomes of this protest are briefly summarized here.

- UDOT paid to FSZ \$13 million for the costs incurred by FSZ in its pursuit of the I-15 CORE project as a full and final settlement of any and all claims concerning the protest, including a stipend for the release of claims and other covenants.
- Upon receipt of the payment, FSZ released and waived all claims of any type and nature related to this protest.
- FSZ agreed to not bring legal judicial or administrative proceedings of any type or nature against the state of Utah, UDOT, and their respective employees or agents.
- UDOT was entitled to use all ideas and technical solutions presented in FSZ's proposal without further compensation. Based on Section 7.5 of the instruction for proposers, UDOT may provide to the successful proposer (PRC) the FSZ proposal and include any of the FSZ technical solutions.
- UDOT and FSZ acknowledged that neither party was admitting any liability or wrongdoing. The agreement was entered into solely to resolve disputed claims and to avoid the inconvenience and expense of litigation.

PROTEST CASE 3: LA I-10/I-605, INTERCHANGE CONNECTOR, CALTRANS

Project Description

The project is located at the I-10/I-605 Interchange in Los Angeles County. The LA I-10/I-605, Interchange Connector project consists of designing and constructing a direct connector from southbound I-605 to eastbound I-10. It also includes reconstruction of the southbound I-605 to westbound I-10 connector ramp and Dalewood Street adjacent to the eastbound I-10 freeway. The estimated cost of this D-B best value project (in 2010 U.S. dollars) is \$61.8 million.

The scope of the project includes the following:

- Maintain traffic during construction;
- Provide positive drainage by means of accepted methods (i.e., curb and gutter, storm drain, ditches, culverts, and detention ponds);
- Provide construction surveying;
- Coordinate with other construction projects within the corridor to increase mobility;
- Coordinate with the local cities;
- Coordinate with department's public involvement management team, including development and implementation of a public information plan as part of the construction phase of this project;
- Obtain necessary environmental permits and authorizations, including noise permits from local agencies (if necessary), National Pollutant Discharge Elimination System (NPDES) permit, etc.; and
- Maintain the roadway and roadway facilities within the project limit during construction.

Procurement Law

Under the D-B Demonstration Program, a transportation entity may utilize the D-B method of procurement to design and construct projects on or adjacent to the state highway system, including related non-highway portions of the project, based on either best value or lowest responsible bid. A transportation entity shall prepare a set of documents setting forth the scope and estimated price of a project. Based on the documents prepared, the transportation entity shall prepare and issue a RFQ in order to prequalify the D-B entities whose proposals shall be evaluated for final selection. For those projects utilizing best value selection, competitive proposals shall be evaluated by using only the criteria and selection procedures specifically identified in the RFP. When the evaluation is complete, the top three responsive bidders shall be ranked sequentially based on a determination of value provided. Contract award shall be made to the responsible bidder whose proposal is determined by the transportation entity to have offered the best value to the public.

Review Process

The department used a two-phase procurement process for the selection of a design-builder to deliver the project. Caltrans prequalified the proposers based on SOQs they received in response to the RFQ issued by them as the first part of the procurement process. The RFP was issued as the second phase of the procurement process to the prequalified proposers. Caltrans evaluated the written technical proposal for responsiveness to the RFP requirements. The technical factors considered during the evaluation were project management plan, preliminary quality approach, environmental compliance plan, risk management plan, utility coordination, project schedule and construction phasing/sequencing plan, transportation management plan (TMP), and safety plan. The price proposals were evaluated after the completion of technical proposal evaluation. The contract was to be awarded to the responsive and responsible proposer offering a proposal meeting the high standards set by the department.

Protest

Caltrans awarded the I-10/I-605 project to MCM Construction after the evaluation of the proposals submitted by the proposers. MCM Construction's proposal was identified as providing the best value to the department. One of the unsuccessful proposers protested the department's decision to award the project to MCM Construction.

The unsuccessful proposer believed that the department was either unaware of or did not completely consider the geometric challenges present on this project. This proposer believed that if the department reviewed the submitted information they would find the following:

1. The apparent best value proposal directly contradicted the intent of RFP;

2. The apparent best value proposal would require multiple additional design exceptions;
3. The Master Design Submittal (MDS) submitted by the apparent best value proposal conflicts with the permanent striping on an adjacent contract; and
4. The MDS submitted by the apparent best value proposal had a lower design speed on the "SE-C" connector than Caltrans baseline model.

The protester also believed that they submitted a better MDS and they deserved a higher technical score on their proposal for the reasons mentioned here:

1. Their MDS considered all constraints at SE-C/I-10 merge, including conforming to the new lane alignment on I-10 as a result of this contract;
2. Their proposed geometry on SE-C connector with high design speed and greater sight distance than Caltrans baseline model; and
3. Minimized impacts to traffic on I-10 and I-605 during construction by incorporating innovative bridge design and construction techniques.

The unsuccessful proposer believed that if the department re-evaluated all the proposals again they would get a higher technical score and they would become the best value proposer, could save Caltrans in excess of \$1.6 million, and also provides high levels of safety, mobility, quality, environmental compliance, and schedule.

Outcomes

The protest was reviewed by the department's protest committee. After reviewing the protest and the information submitted in support of its protest, Caltrans determined that the unsuccessful proposer did not make a persuasive argument as to why the selection would be different based upon the information submitted.

PROTEST CASE 4: I 35E MnPASS D-B PROJECT, MnDOT

Project Description

The I 35E MnPass D-B Project is located in Ramsey County, Minnesota, between the cities of St. Paul and Little Canada. This project is the first MnPASS investment in the East Metro area and an essential link for people commuting between downtown St. Paul and the suburbs to the north. This \$98 million project involves extending I 35E a total of approximately 3.4 miles from Maryland Ave. to Little Canada Road. The scope of this D-B project primarily includes:

- Widening its current 6 lanes to 8 lanes;
- Removing the railroad bridge south of Arlington Ave.;
- Reconstruction of six interchanges;

- Replacement of nine bridges in the corridor; and
- Installation of Intelligent Transportation Systems (ITS).

Procurement Law

Minnesota Statutes states that in a D-B design and price-based selection process, selection must be based on best value, which includes an evaluation of price and design, and may include other criteria including, but not limited to, the proposer's experience as a constructor or primary designer. The commissioner will establish procedures for determining the appropriate content of each request for qualifications, and the weighted criteria and subcriteria to be used to evaluate the design-builders including, but not limited to, the proposer's experience as a constructor or primary designer, including capacity of key personnel, technical competence, capability to perform and the past performance of the proposer and its employees, its safety record and compliance with state and federal law, quality and past performance, and the procedures for evaluating qualifications in an open, competitive, and objective manner (2005 16C.33).

Review Process

The project began with the issuance of a RFQ on February 8, 2013. MnDOT shortlisted four proposers and issued an RFP on April 12, 2013. Based on the four proposals received, MnDOT conducted a very thorough and extensive evaluation process, reportedly involving over 1,200 hours. MnDOT employed a specific best value technical proposal evaluation manual (TPEM) for this project. The TPEM added a provision that requires an oral vote of the TRC on the responsiveness of each technical proposal.

Protest

MnDOT awarded this D-B project to Ames Construction Inc. The Department of Administration received protests from both C.S. McCrossan (CSM), Inc. and Lunda/Shafer joint venture (LSJV) on August 19, 2013. Both protests were issued according to the RFP's protest procedures. The Department of Administration reviewed all of the points raised in the protests. The review included an interview of a Federal Highway official who served on the Process Oversight Committee.

CSM Protest

The CSM protest was largely based on the argument that TRC made mistakes in scoring their proposal. Specifically,

1. CSM asserted that TRC did not follow the best value TPEM during the evaluation process.
2. CSM claimed that evaluators failed to follow the instruction in the TPEM because of overly vague comments.
3. CSM did not agree with the score they received.

Outcomes of CSM Protest

Through a discussion of the overall concept of best value, the protest official agreed to the following three points that are common to any best value procurement:

- Evaluations are inherently subjective;
- Those whose proposal did not receive the highest score will likely disagree with how the proposals were scored; and
- It is not appropriate to declare a process flawed without a clear demonstration that the decisions were arbitrary, capricious, or contrary to law.

Based on observations by the federal official charged with overseeing this particular process, significant hours were spent by the TRC. The official agreed that the evaluations were thorough and that scores were derived from intense and lengthy discussions on the merits of all major components of every proposal. After reviewing all aspects of the CSM protest no facts presented support a finding that the process was arbitrary, capricious, or contrary to law. Therefore, the CSM's protest was denied and the original determination by MnDOT was affirmed.

LSJV Protest

The LSJV protest primarily focused on the following two points:

1. LSJV claimed that there was a lack of clarification about how points would be awarded to the duration of traffic closures; and
2. LSJV contended that Ames' proposal did not meet the RFP requirements regarding width requirements on the TH 36 Bridge.

Outcomes of LSJV Protest

In response to Protest Point No. 1, MnDOT stated that closure duration is not the only criteria being scored in this section. In addition, MnDOT does have a Qualitative Rating Guide as part of its manual and could develop and communicate to vendors more information about how that Guide is expected to be applied. However, MnDOT agreed that while the given response did not equate to anything that would make the selection process arbitrary or capricious, clearly comments on the scoring would have provided greater transparency into the process.

In response to Protest Point No. 2, MnDOT acknowledged this deviation is true. However, MnDOT stated that all four proposals proposed to put four lanes of traffic on the unaltered bridge. The TRC members evaluated the merits of the proposals and determined that maintenance of four lanes of traffic was beneficial to the Project, and the "shortage"

of 10.5 inches was insignificant for safety purposes. Nevertheless, MnDOT has the ability to enforce the RFP. After studying the specific deviations raised in the LSJV protest, the Protest Official determined the TRC was within its legal authority when it accepted the deviations from the RFP requirements that are addressed in the LSJV protest.

In conclusion, the Protest Official has not found any of the arguments to merit a finding that the TRC's process was arbitrary, capricious, or contrary to law. However, the Protest Official recommends that MnDOT review and refine the language in its procurement documents to ensure consistency and clarity.

Abbreviations used without definitions in TRB publications:

A4A	Airlines for America
AAAE	American Association of Airport Executives
AASHO	American Association of State Highway Officials
AASHTO	American Association of State Highway and Transportation Officials
ACI-NA	Airports Council International-North America
ACRP	Airport Cooperative Research Program
ADA	Americans with Disabilities Act
APTA	American Public Transportation Association
ASCE	American Society of Civil Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
ATA	American Trucking Associations
CTAA	Community Transportation Association of America
CTBSSP	Commercial Truck and Bus Safety Synthesis Program
DHS	Department of Homeland Security
DOE	Department of Energy
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FMCSA	Federal Motor Carrier Safety Administration
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
HMCRP	Hazardous Materials Cooperative Research Program
IEEE	Institute of Electrical and Electronics Engineers
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
ITE	Institute of Transportation Engineers
MAP-21	Moving Ahead for Progress in the 21st Century Act (2012)
NASA	National Aeronautics and Space Administration
NASAO	National Association of State Aviation Officials
NCFRP	National Cooperative Freight Research Program
NCHRP	National Cooperative Highway Research Program
NHTSA	National Highway Traffic Safety Administration
NTSB	National Transportation Safety Board
PHMSA	Pipeline and Hazardous Materials Safety Administration
RITA	Research and Innovative Technology Administration
SAE	Society of Automotive Engineers
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (2005)
TCRP	Transit Cooperative Research Program
TEA-21	Transportation Equity Act for the 21st Century (1998)
TRB	Transportation Research Board
TSA	Transportation Security Administration
U.S.DOT	United States Department of Transportation