



PUBLIC WORKS PROCUREMENT

***A Study of State Public Works Processes and
Recommendations for Reform***

December 14, 2012

**Submitted to:
Senate Ways & Means Committee and
House Capital Budget Committee**

EXECUTIVE SUMMARY

This report provides recommendations for reform of the state's public works procurement processes, as directed by proviso in the 2012 Supplemental Capital Budget (ESB 6074, Sec. 1022). The issues and opportunities highlighted in this report are drawn from more than 40 interviews, and an advisory team comprised of key industry participants, including public agency owners, contractors, public and private sector labor representatives, public construction law experts, and architects.

The scope of the study was limited to public works procurement by state agencies. Transportation-related public works procurement is guided by a separate statute and therefore was excluded from this study.

Industry stakeholders reported that, in general, the state's public works procurement processes are working appropriately and are not in need of a major overhaul. There are however areas for improvement, and emerging opportunities that the state should consider. These areas of improvement opportunities are the focus of this report.

The most often-raised concern is that the state's Alternative Public Works statute will expire in 2013, unless it is reauthorized by the Legislature. We recommend the statute's reauthorization, which will allow state agencies to continue to use important public works procurement tools – General Contractor/Construction Manager (GC/CM), Design/Build, and Job Order Contracting. The Capital Projects Advisory Review Board, whose members represent all facets of public works contracting, will be recommending well-vetted minor updates to the Alternative Public Works statute and we support these as well.

In addition, we are recommending that the Legislature authorize the use of electronic bidding and signatures, and authorize the Director of the Department of Enterprise Services to debar contractors for criminal or illegal acts. The Legislature approved similar measures for the state's goods and services procurement last year.

Acronyms used in this report

- **A/E**: Architect/Engineer
- **CO**: Change Order
- **COP**: Change Order Proposal
- **CPARB**: Capital Projects Advisory Review Board
- **D/B**: Design/Build
- **D/B/B**: Design/Bid/Build
- **DES**: Department of Enterprise Services
- **DFW**: Department of Fish and Wildlife
- **FA**: Field Authorization
- **GC/CM**: General Contractor / Construction Manager
- **JLARC**: Joint Legislative Audit and Review Committee
- **JOC**: Job Order Contracting
- **M/W/V**: Minority-, Women-, Veteran-owned Business
- **O&M**: Operation and Maintenance
- **OMWBE**: Office of Minority- and Women-Owned Business Enterprises
- **RCW**: Revised Code of Washington
- **RFQ**: Request for Qualifications
- **QBS**: Qualifications-Based Selection
- **UPB**: Unit Price Book
- **UW**: University of Washington

Most of the issues raised in this study do not require statutory fixes. These issues do suggest, however, that our state public works procurement processes will benefit from a renewed focus on applying best practices, providing thorough and frequent staff training, and ensuring full public transparency.

Specific areas of focus called out in the report include:

- As the state develops enhanced training standards and programs for its staff, qualifications-based selection (the selection process for licensed architects and engineers) should be made part of the basic curriculum.
- State construction office management leaders should be actively monitoring projects and staff to ensure that proper procurement standards and practices are being met, such as during bid solicitations and change orders.
- The project closeout process, in particular, needs further review to determine whether modifications to our current procedures and processes meet our needs in today's complex construction environment. We recommend a multidisciplinary task force be established to review the existing process and make recommendations for improvement.

This study has provided an important opportunity to bring together public and private partners to discuss ways to improve the state's public works processes. DES will continue to play a leading role in convening industry participants to share information and best practices to ensure the state is investing wisely in our public facilities.

INTRODUCTION

This report responds to the following proviso included in the 2012 Supplemental Capital Budget:

ENGROSSED SENATE BILL 6074, Sec. 1022

Up to \$75,000 is for the department of enterprise services to conduct a review of the state's current public works procurement processes and provide a report by December 15, 2012, to the appropriate committees of the legislature and the governor with procurement reform recommendations. For recommendations that require a statutory change, the report should include draft legislation needed to accomplish the report's recommendations. The director may contract with a private entity for assistance to conduct the study. The capital projects advisory review board will provide advice and assistance as required by the director.

The report will include historical data on (1) the use of change orders; (2) the use of job order contracting; (3) how are competitive public works contracts advertised; and (4) contract closeout procedures. State agencies that will participate include one research university, one natural resource agency, and one general government agency.

METHODOLOGY

The Department of Enterprise Services (DES) staff conducted preliminary interviews with more than 40 key stakeholders, including representatives from all segments of the state's public works procurement process were conducted, to identify potential areas of reform. In general, those interviewed felt that the system is working satisfactorily, that Washington has well-settled construction law that most participants understand and feel is fair. Stakeholders did identify several areas where opportunities exist or specific issues need attention.

An advisory team was created to advise DES on the development of recommendations for reform. This team met six times to discuss issues and possible reform ideas. In addition, subcommittees met to discuss specific topics throughout the course of the study. Members of the advisory team helped to develop alternatives, and reviewed and provided feedback on issue papers and draft versions of this report.

Advisory Team members included:

Dan Absher, Absher Construction	Craig McDaniel, WA St Dept of Transportation
Van Collins, Associated General Contractors	Dave Myers, Building Trades Council
Mary Ellen Combo, Office of the Attorney General	Alan Nygaard, University of Washington
Nancy Deakins, Dept of Enterprise Services	Bill Phillips, Dept of Enterprise Services
Glenn Gerth, Dept of Fish and Wildlife	Linneth Riley-Hall, Sound Transit
Neil Hartman, Building Trades Council	Eric Smith, University of Washington
Jim King, Independent Business Association	Walter Schacht, AIA, Schacht Aslani Architects
Ed Kommers, Mechanical Contractors Association	Linda Sullivan-Colglazier, Office of the Attorney General
Jeanine Livingston, WA Federation of St Employees	Olivia Yang, Washington State University
Bob Maruska, Chair, CPARB, Port of Seattle	

The scope of this study was limited to **public works procurement** by **state agencies** subject to Ch. 39.04 RCW.¹ This report addresses:

- All general government construction, primarily building construction. Most general government construction is carried out through DES, the state's statutory construction office. Key DES customers include the departments of Social and Health Services, Corrections, the Military, and the state's community colleges.
- The departments of Natural Resources, Fish and Wildlife, and the Parks and Recreation Commission. These three natural resource agencies have construction authority independent of DES.
- The state's four-year higher education institutions.

The study does not address state level transportation-related public works procurement which is governed by Ch. 47.28 RCW. The report **does not** address public works procurement issues facing other municipalities or other special districts.

The proviso requires that participating state agencies include one research university, one natural resource agency, and one general government agency. To that end, historic data reviewed in this study is provided by the University of Washington, the Department of Fish and Wildlife, and DES. A brief overview of these three construction offices is provided below.

The Department of Enterprise Services (DES): DES serves as the state's general government construction management office. As such, it is responsible for the design and construction of all public works projects for state government, except transportation-related projects, non-office construction completed by the departments of Natural Resources, Fish and Wildlife, and the Parks and Recreation Commission (these three natural resource agencies have independent construction authority for operational projects – see RCW 43.19.450), and our state's four-year universities and colleges.

In the past five years, DES has completed 1,417 public works construction contracts, totaling \$1.77 billion. About half of these construction contracts fell within the \$100,000 to \$1,000,000 range. DES has been granted authority to use all available forms of public works procurement methods, including GC/CM, Design/Build, and Job Order Contracting (JOC), in addition to the traditional design/bid/build and Small Works Roster. DES has on occasion delegated some limited degree of construction management authority to the Military Department and several community colleges.

The Department of Fish and Wildlife (DFW): DFW's Capital and Asset Management Program provides engineering and construction services to all department programs. The department has 83 hatcheries, 33 wildlife areas covering nearly a million acres, more than 700 recreational access areas, and associated regional and district offices. Project types include fish hatchery

¹ State agencies may also be subject to other public works procurement statutes as well. For example, the colleges and universities are also governed by Ch. 28B.10 RCW.

rearing ponds and intakes; wildlife area buildings, dams, bridges, and roads; access area parking and boat launches; and construction and renovation of regional and district offices.

In the past five years, DFW closed 72 construction contracts, two-thirds of which were for small projects less than \$100,000. The vast majority of these contracts (54) were let to contractors from the Small Works Roster. DFW has not been granted statutory authority to use JOC. And, DFW has not been certified to use the GC/CM or Design/Build approaches, however under RCW 39.10.280 they may apply to the state's Project Review Board for authority use either of these procedures for a specific project.

The University of Washington (UW): The UW has a dedicated construction office, providing public works contracting services to the University. Construction contracts closed in the past five years total approximately \$1 billion, and about 20 percent of those were paid with state-authorized UW debt or with state funds. The remaining construction contracts were financed through other funding sources including federal funds, hospital revenues, student housing, intercollegiate athletics, research, and donated funds. The UW construction office is authorized to use all forms of traditional and alternative public works procurement processes. UW has been granted authority to use all available forms of public works procurement methods, including GC/CM, Design/Build, and JOC, in addition to the traditional design/bid/build and Small Works Roster. Unlike DES and DFW, the UW does have a statutory requirement to competitively bid all public works projects where the cost is estimated to exceed \$90,000 (if multiple trades are expected to be involved) or \$45,000 (if only a single trade is involved.) Projects falling under those bid thresholds may be completed using in-house staff or may be competitively bid.

The table on the following page summarizes the DES, UW, and DFW construction contracts that have been closed in the last five years.

CLOSED CONSTRUCTION CONTRACTS IN PAST FIVE YEARS

	DES		UW		DFW	
Total Projects	1417		501		72	
Under \$100K	514	36.3%	178	35.5%	48	66.7%
\$100K to \$1 Million	702	49.5%	263	52.5%	22	30.6%
Over \$1 Million	201	14.2%	60	12.0%	2	2.8%
Contracts with Under-runs	155	10.9%	17	3.4%	6	8.3%
Contracts with No Change Orders	53	3.7%	93	18.6%	18	25.0%
Contracts with Change Orders totalling 0-9.9% of initial contract	549	38.7%	168	33.5%	18	25.0%
Contracts with Change Orders Exceeding 10% of initial contract	660	46.6%	223	44.5%	30	41.7%
Emergency	73	5.2%	7	1.4%	9	12.5%
Limited PW			23	4.6%	16	22.2%
Small Works Roster	114	8.0%	22	4.4%	38	52.8%
JOC Work Orders	353	24.9%	233	46.5%		
Design-Bid-Build	671	47.4%	165	32.9%	9	12.5%
Design-Build	3	0.2%	1	0.2%		
GC/CM	15	1.1%	27	5.4%		
Energy	183	12.9%	12	2.4%		
Change Order	1	0.1%				
Sole Source	2	0.1%				
None	2	0.1%				
Critical Patient Care Roster & CC			11	2.2%		

LAYOUT OF THIS REPORT: The issues identified and corresponding recommendations will be presented in the order of the procurement process, not necessarily in their order of priority:

1. Project definition
2. Project design
3. Bidding
4. Construction management
5. Project closeout

PROJECT DEFINITION

TRADITIONAL DESIGN/BID/BUILD OR ALTERNATIVE PROCUREMENT APPROACH? In its broadest sense, the state's public works procurement process begins at project conception and ends at project closeout. The first step in a public works procurement process is for the owner agency to identify a need and begin to work with the Construction team to define the project. It is at this point that the decision will be made to proceed as a traditional low-bid procurement using the design/bid/build (D/B/B), or whether some alternative method will be used (General Contractor/Construction Manager, Design/Build, Small Works, Limited Works, etc.) This decision will influence the rest of the procurement process.

The traditional D/B/B approach is designed to get the best price for a construction project. The owner or owner's representative works with an architect/engineer to design the project. That design package is publically advertised, inviting bids from any interested responsible contractor. On bid opening day the construction contract is awarded to the lowest responsive, responsible bidder. This approach is favored by both the contracting and the design communities because it provides for open competition which should result in the best price to the public agency. Court decisions have stated the purposes for competitive bidding are to benefit the taxpayers and also to provide a fair forum for bidders.

This process works well for relatively well understood and thoroughly designed projects, which comprise the majority of public works projects. However, if there are critical time frames that need to be met, or the project is particularly complex because of unknown risks or variables, a public owner may prefer to use one of several alternative public works procurement approaches currently authorized in Ch. 39.10 RCW – The Alternative Public Works statute. The Design/Build (D/B) approach, and the General Contractor/Construction Manager (GC/CM) methodologies allow the contractor to be hired earlier in the design phase to allow for better collaboration and other efficiencies. These processes, which are used extensively in other states and in the private sector, take advantage of the contractor's expertise during the design phase, and may allow for some construction to get under way before the project is fully designed.

Job Order Contracting (JOC), another alternative procurement method authorized in Ch. 39.10 RCW, is aimed at creating other types of efficiencies in construction contracting, and is discussed in the next section.

The Joint Legislative Audit and Review Committee (JLARC) recently completed a sunset review of the Alternative Public Works Statutes, finding that these alternative procurement methods provide benefits to public owners and the citizens of Washington. The proposed final report recommends that the Alternative Public Works Statutes be reauthorized.²

² "Alternative Public Works Procedures Sunset Review: Legislature Should Continue Authority to Use Alternative Procedures," JLARC proposed final report, December 5, 2012.

ISSUE: The Alternative Public Works statute will expire in 2013 without legislative reauthorization. The tools made available in this statute – GC/CM, Design/Build, Job Order Contracting – have become standard tools across the nation to overcome specific deficiencies in the D/B/B model that become problematic on certain types of projects. The Joint Legislative Audit and Review Committee (JLARC) staff has completed a sunset review of this Chapter and has recommended that the statute be reauthorized. JLARC also recommends that the Capital Projects Advisory Review Board (CPARB) make a few minor modifications to the Job Order Contracting (JOC) reporting methodology. CPARB is also fully supporting reauthorization. In addition, CPARB has conducted an in-depth review of the statute and is recommending minor modifications that will improve the state’s ability to use these alternative procurement methodologies.

RECOMMENDATION: We concur with JLARC, and support reauthorization of chapter 39.10 RCW. We also support the modifications recommended by the members of CPARB.

ISSUE: Other alternative procurement methods continue to emerge in the public and private sectors and may represent positive innovations that could reduce cost and/or improve the quality of public works projects. Two that have been mentioned in the course of this study are “Best Value” and “Integrated Project Delivery.” Although neither of these approaches are widespread in the industry at this time, if a state agency wanted to use one of these (or another approach not currently on the state’s radar) a statutory change would be required.

RECOMMENDATION: We are not recommending authorization of new alternative delivery methods at this time. In the future, however, when there is sufficient evidence that new alternative delivery methods may be effective, we believe the framework we have in place now through CPARB for evaluating innovative approaches has proven successful – start with a small number of discrete pilot projects; thoroughly evaluate the outcomes; modify as needed; and expand to other agencies/projects as warranted.

JOB ORDER CONTRACTING: Washington, like 47 other states and the federal government, has authorized the use of Job Order Contracting (JOC) in public works procurement. The JOC method is a convenient way for public agencies to get commonly encountered small- to medium-sized public works projects completed quickly and easily. The JOC procedure allows specified public bodies to establish job order contracts with a construction contractor who will be “on call” for a variety of projects during the contract period. The JOC procedure was described in a recent JLARC report as follows:

Under the JOC method, a public body selects a contractor based on qualifications in response to a request for qualifications and an identified price book for labor and materials to be supplied under the JOC. The public body evaluates contractor qualifications and selects the most qualified finalists who submit final proposals and a

percentage bid for managing each project. This bid is known as the contractor's coefficient and is a markup or markdown of the prices included in the identified price book that the public body plans to use. Once the JOC is in place, the public body can call upon the JOC contractor as needed for small projects, also known as work orders. The JOC contractor develops a scope of work, any plans and specifications needed to meet permit requirements, and identifies subcontractors to perform the work. The price for labor, materials and equipment is determined using the price book identified in the request for qualifications, and the contractor's overhead costs are calculated using the contractor's coefficient. Each work order is submitted to the owner for review and approval.

State agencies authorized to use this procedure include: DES, state research universities, regional universities, The Evergreen State College, and the state ferry system. (Several non-state public entities are authorized to use the JOC method as well.)

- Each agency is allowed to have **no more than two Job Order Contracts** in effect at any given time, except DES which may have up to four contracts in effect at any given time.
- Each contract **may not exceed \$4 million per year**, for a maximum of three years. (The initial **contract period may span no more than two years** and may include an option of extending or renewing for one additional year.)
- Individual **work orders may not exceed \$350,000**. The price of a given work order is determined by the unit price book (UPB) that is agreed to in the initial contract. (A UPB provides preset costs for specific construction tasks. DES uses the R.S. Means unit price book, which is an industry standard, although others are widely used as well, and some public agencies construct their own UPB.)
- At least **90% of the work completed under a specific work order must be subcontracted**.

A summary of DES and UW JOC contracts is provided on the following page.

State public works staff report that JOC is an important tool for completing a wide array of small- and medium-sized public works projects. Although agencies recognize that this process does not reduce costs, they cite several other advantages, particularly the quicker response times and simplified procurement process.

**SUMMARY OF DES AND UW JOB ORDER CONTRACTING
2007 to Present**

AGENCY / CONTRACTOR	Contract #	Contract Start Date	Contract End Date	\$ Total of Work Orders completed	# Work Orders (WO)
Department of Enterprise Services					
Centennial Contractors Enterprises, Inc.	2007-055-1	Jan-07	Nov-09	\$10,186,194	173
Global Contractors, LLC	2007-055-2	Mar-07	Aug-09	\$7,654,442	90
Yi & Associates	2008-042-1	Oct-07	Jun-10	\$11,309,192	162
Burton Construction, Inc.	2008-042-2	Oct-07	Dec-10	\$7,952,789	116
Centennial Contractors Enterprises, Inc.	2010-006-1	Jan-10	Jan-13	\$6,330,042	79
**Berschauer Phillips	2010-201-1	Jun-10	Jun-13	\$6,754,395	112
**Construct, Inc.	2010-201-2	Dec-10	Dec-13	\$7,849,508	98
**Burton Construction, Inc.	2011-070-1	Jan-11	Jan-14	\$7,666,947	93
University of Washington					
Burton Construction, Inc.	201882-1	Jun-07	Jun-09	\$8,290,855	92
Centennial Contractors Enterprises, Inc.	201882-2	Feb-07	Sep-09	\$9,275,017	94
Centennial Contractors Enterprises, Inc. **	202936	May-09	Open	\$4,780,700	37
** Contracts are still active and number of work orders and contract values will increase.					

Obtaining the best price possible on each individual work order requires a sophisticated knowledge of the UPB and its components. For example, any project requires that myriad decisions be made about quality and quantity of inputs – materials, labor, etc. The UPB may include several prices for a particular scope of work, depending on the unique needs of the specific project. Without a thorough understanding of the range of possibilities from which the contractor selected to submit a bid, a public manager may not negotiate the most appropriate components. As a result, a project could end up with high-end materials, when mid-range is perfectly acceptable. The ongoing relationship at the core of a JOC contract has the potential to mitigate against this type of up-bidding. But to ensure that the public is getting an appropriate price, project managers are routinely trained in the content and estimating methodology of the UPB. **This type of training is critical and should be continued.**

ISSUE: The statute authorizing the use of JOC expires on June 30, 2013, unless reauthorized by the Legislature.

RECOMMENDATION: We support the JLARC recommendations to reauthorize the alternative works statute to allow the continued use of JOC. We also support modifications recommended by CPARB.

PROJECT DESIGN

Depending on the size and complexity of the work to be completed, the project may be designed by in-house architects or engineers or the public owner will contract for these professional services. The architect or engineering firm (A/E) becomes part of the owner's team and often takes on the responsibilities not only of designing the project to satisfy the owner's needs, but also then is responsible for supporting the procurement process for construction contractor selection, overseeing the project as the owner's representative, incorporating changes if needed throughout the project, and coordinating the project closeout.

In Washington, as in 35 or more other states and the federal government, A/E professionals are selected using qualifications-based selection (QBS). (See Ch. 39.80 RCW.) The public agency puts out a Request for Qualifications (RFQ), and selects the most qualified A/E firm for the project, without regard to price. Once the most qualified candidate is selected, that firm and the owner agency negotiate the price for the design services. The main advantage of the qualifications-based selection is that the design professional and the client work in a collaborative spirit to maximize the quality, value, cost effectiveness and usefulness of the final product.

While this selection process is a well-established industry standard, owners that do public works projects less frequently are often confused by the QBS approach, as it feels inconsistent with our competitive bidding environment which generally focuses specifically on selecting the lowest responsive, responsible bidder.

ISSUE: A/E firms are concerned that some public agencies do not comply with current statutory consultant selection requirements. Some agencies request that consultants submit fee proposals together with qualifications and make cost a component of their evaluation. In other instances, an agency may use a personal services solicitation method for a project that should be contracted using QBS.

RECOMMENDATION: Appropriate statutes and policies are currently in place. This is primarily a training issue. As the state develops comprehensive training standards and programs for its staff, qualifications-based selection should be made part of the basic curriculum.

BIDDING

ADVERTISING THE PROJECT: Once the project has been designed and the architectural drawings are complete, the project is put out to bid. The statutory advertising requirements such as length of time the ad must run, and the type of newspaper in which it must be published (statewide, local) varies depending on the agency and type of project. DES, the UW, and DFW are not statutorily required to adhere to any specific timing or form of advertising for D/B/B projects. Generally, however, projects are advertised for one to two weeks in a state-wide industry paper like the Daily Journal of Commerce, and perhaps in a local newspaper as well. In addition, most agencies post bid opportunities to their own websites. As more low-cost bid aggregation sites appear on the Web, some public agencies (particularly those with smaller projects) are wondering whether the cost of print media advertising should be phased out in favor of lower-cost web-based alternatives.

Contractors, however, are interested in having a single source of information about all public works bid opportunities. If each public agency uses its own selected method of advertising, the contractor either must routinely check multiple outlets, which can require significant staff time or run a significant risk of missing bid opportunities.

ISSUE: Some public agencies feel that the cost of advertising in print media is too high today, particularly given the low-cost Web-based alternatives available.

ISSUE: Contractors want a single Web-based location where they can go to find all the public bidding opportunities available.

These two issues are interrelated, but do not suggest a single recommendation. And it is unclear today what solution(s) will emerge as an industry standard, facilitated by new technologies. The newspaper industry is aware of this evolution and is working to develop a solution that allows them to continue to maintain the revenues generated from this form of advertising. The daily and weekly newspaper associations, which together represent virtually all of the newspaper outlets in the state, are jointly developing a statewide aggregate website for all public bidding advertisements and notices. The proposed approach is that agencies will continue to advertise in print media, as they always have, and pay for that advertising. Then, at no additional cost to the agency or interested contractors, all Washington public bidding opportunities would be uploaded to a single aggregate website. The newspaper associations are committed to providing this added service at no additional cost at this time, and to work with owners and contractors to provide added functionality as warranted (although perhaps at additional cost.)

This approach addresses the contractors' interest in a single location for all bidding opportunities, but it does not reduce cost to the agency owners.

RECOMMENDATION: Make no modification to the existing advertising statutes at this time, and carefully monitor the development of the statewide aggregate website for advertisements.

The advertising process used for any particular project will depend in large part on the type of project inviting bids. The following chart describes the various options available:

PROJECT TYPE	ADVERTISING METHOD
<p>Low-bid (traditional)</p>	<p>Publish notice calling for sealed bids. Statutes vary by project size and type of public owner. Notice typically must be published in a newspaper of general circulation most likely to bring responsive bids. Such notice is typically required at least two weeks in advance. No specific statutory requirement exists for advertising general government construction undertaken by DES.</p>
<p>Small Works Roster (less than \$300K)</p> <p>RCW 39.04.155(1)</p>	<p>Establishing the roster and annual call for contractors: A small works roster lists contractors who have requested placement on the roster and who have met the licensing requirements. A public owner intending to use a small works roster must annually publish a notice of the existence of the roster, and invite names of contractors interested in being included.</p> <p>Soliciting bids on specific work: Request for bids must be sent either to all interested contractors on the roster, or the agency can solicit bids from at least five contractors as long as they “equitably distribute” bid opportunities among all contractors over time. No formal “advertisement” is required, but if request for bids is distributed to less than all of the contractors on the roster, the agency must send notice to all contractors on the roster. (Electronic, faxed, or telephone quotes are allowed.)</p>
<p>Limited Public Works (less than \$35K)</p>	<p>An owner must solicit at least three bids or notify all contractors on the roster. No formal “advertisement” required, but notice must be sent to all contractors on the roster. (Electronic, faxed or telephone quotes are allowed.)</p>
<p>Public Works Projects below a bid limit (e.g., for the UW, this applies to projects less than \$90K if multiple trades are involved, or \$45K if a single trade is involved)</p>	<p>No formal “advertisement” is required, but owners should obtain three or more bids. (Electronic, faxed, or telephone quotes allowed.)</p>

To test whether these requirements are being met, a random sample of construction projects was selected for DES, DFW, and the University of Washington. The files for each of the selected projects were reviewed to verify that appropriate advertising procedures were followed.

The results are provided below:

AGENCY	# OF FILES REVIEWED	APPROPRIATE ADVERTISING PROCEDURES VERIFIED
DES	22	Yes
DFW	5	Yes
UW	12	Yes

ISSUE: Concerns have been raised that, on some small projects, agencies may use the added flexibility allowed (i.e., gathering quotes by telephone, rather than requiring written bid submissions) to manipulate the process in order to hire a preferred contractor. Owners and contractors agree that manipulating the bid process to select a preferred contractor is inappropriate and not in keeping with the statutes and competitive bidding environment in Washington.

RECOMMENDATION: No statutory change is needed; however state agency management should be actively monitoring staff to ensure that proper procurement standards and practices are being met.

ENSURING CONTRACTOR QUALIFICATION: Public owners want to know that the contractor awarded a construction project is qualified and capable of satisfactorily completing the work. Awarding a project contract to a firm that can demonstrate its qualifications, experience and reliability greatly reduces the state’s risk of increased costs and potential for poor quality.

The most common way to ensure a bidder is qualified is to incorporate “responsibility” criteria in the bidding process. RCW 39.04.350 sets forth mandatory responsibility criteria that any contractor must meet in order to be awarded a bid; and it authorizes state and local entities to establish supplemental responsibility criteria for a particular project. In early 2012, the Capital Projects Advisory Review Board (CPARB) published suggested guidelines to assist public agencies in developing and implementing the mandatory and supplementary responsibility criteria. **Agencies should ensure their contracting staff are trained in and using supplementary responsibility criteria, where appropriate, to limit the public’s risk of a failed or subpar project.**

Responsibility criteria are limited, however, because they are applied “post-bid” – that is, any contractor may submit a bid on a project and it is only after the bid is awarded, and the determination made, that the contractor satisfies the responsibility criteria.

The disadvantage of relying on responsibility criteria is that once an apparently successful bidder has been selected, the low bidder has invested considerable time in putting together a bid and will have a sense of entitlement to the contract. It is not likely they will accept a finding of non-responsibility and simply walk away. Finding that the bidder does not meet the responsibility criteria may lead to a legal challenge and at a minimum will slow down the project.

Rejecting a bid due to a responsibility issue may also be challenged due to the perception of preferential treatment. Depending on the outcome of the challenge, the entire bidding process may have to be repeated. The impact to the project can be costly and frustrating to all parties.

A solution to the problems associated with the traditional procedure is to move the responsibility determination from after bid opening to before bid opening – by prequalifying bidders. Express statutory authority for prequalification has been provided in a few state public works procurement settings:

- Any contractor wishing to bid on a WSDOT highway project is required to be prequalified based on financial soundness, availability and quality of staff and administration, necessary experience, and sufficient capacity to meet a specified performance schedule.
- The Small Works Roster serves as a prequalified contractor list, as only contractors who meet the small works criteria are allowed to be on the list, and only those contractors on the list are eligible to bid on small works projects.
- The University of Washington has recently been given authority to create critical patient care or specialized medical research facilities rosters to ensure these life-saving facilities are constructed by contractors with the necessary specialized expertise.

Prequalification has several advantages, including:

1. The prequalification process can occur concurrently with completing the construction documents, thus saving time. Agencies get to bid opening just as fast with prequalification and lose no time after bidding with responsibility determinations.
2. An over-all saving in bidding costs. Prospective subcontractors only need to submit bids to pre-qualified primes, and only pre-qualified primes need to assemble bids. Over time, this should reduce everyone's overhead and lead to lower bids.
3. Contractors that fail to pre-qualify find this out before they have become invested in the project. Thus, having no investment in the project, they may be less likely to protest than if they are found to be non-responsible after collecting sub-bids and submitting a bid. Under the traditional procedure, there is a certain amount of stigma attached to being found non-responsible after being identified as the low bidder at a public bid opening. On the other hand, a contractor who is not pre-qualified does not have to reveal that fact to anyone.

There are disadvantages to prequalification as well:

- Since a performance-based prequalification system would require the contractor to complete time-consuming paperwork, some well-qualified contractors may feel that it is not worth the extra time and energy and shift their work efforts to the private sector. Some members of the contracting community are concerned this could result in higher contract prices and lower participation from the more experienced contractors.
- Contractors are concerned that expansion in the use of prequalification lists limits the pool of bidders and works against getting the lowest, most competitive pricing. And, smaller firms or firms expanding into new areas worry they will be left out because they cannot demonstrate a sufficient amount of previous experience.
- Prequalification criteria may introduce unacceptable subjectivity that will work to inappropriately exclude otherwise qualified contractors.
- Prequalification criteria may increase project costs if otherwise qualified contractors are eliminated from the bidding process.

We are not putting forth a recommendation at this time. State construction offices would like added flexibility to pre-qualify contractors on certain projects. However, the contracting community is opposed to such an expansion at this time. Discussions are continuing and if agreement can be reached, a recommendation may be forthcoming.

DEBARMENT: Under extreme circumstances, usually related to illegal conduct, a public owner may want to prevent a contractor from bidding on all contracts for a specified period of time. We are fortunate in Washington to have a contractor community that generally would not warrant the need to impose a suspension or debarment.

Today in Washington, a contractor may be debarred for violations or infractions of prevailing wage law (Ch. 39.12 RCW), contractor registration law (Ch. 18.27 RCW), or industrial insurance law (Ch. 51.48 RCW). Beginning January 1, 2013, the Director of DES has statutory authority to debar goods and services contractors for several criminal or unlawful acts (e.g., conviction for fraud, embezzlement, repeated violation of the federal labor relations act, egregious violations of contract provisions.) Contractors are concerned that, if the state has the authority to debar contractors for very poor performance, a contractor may be inappropriately debarred in cases where the crux of the problem is simply a soured relationship with an owner. If authorized, debarment authority should be limited to proven criminal or otherwise unlawful acts.³

RECOMMENDATION: We recommend that Legislature authorize the Director of DES to debar public works contractors for criminal or otherwise illegal conduct, but not to include

³ Federal agencies have authority to debar or suspend contractors for a variety of wrongdoing, including fraud or criminal offenses, violations of federal or state antitrust laws, embezzlement theft, forgery, etc. [See *the Federal Acquisition Regulation*]. Several states, including Massachusetts, Virginia, and North Carolina, have similar authority.

debarment authority for egregious violations of contractor provisions unless they rise to the level of an illegal act. This debarment authority should extend to all state public works procurement, except transportation, which has debarment authority under a separate statutory authority. DES must be required to put in place appropriate rules, an appeal process, and other necessary procedures prior to exercising this authority.⁴

ELECTRONIC BIDDING: Electronic Bidding is the electronic transfer of proposal bid data between owners and bidders. Electronic bidding can either supplement or replace traditional paper bid documents. A number of states have started using electronic bidding in public works procurement (particularly in the transportation arena) because it has the potential to significantly reduce the time and cost of document-intensive communications and to ensure compliance through a centralized, transparent and auditable procurement system. Some of the potential advantages of electronic bidding to the contractor include:

- Elimination of the need to travel to submit a bid.
- Continuous bid submittal 24/7.
- Easy access to bid information.
- Faster processing of bid documents.
- Time savings in bid preparation.
- Ability to make last minute changes.
- Reduction of calculation errors.
- Overall streamlining of bid process.

In 2012, the legislature authorized DES to conduct electronic bidding and use electronic signatures for goods and services procurement effective January 1, 2013. (See RCW 39.26.090 and 39.26.120)

RECOMMENDATION: We recommend this authority to conduct competitive solicitations using electronic or Web-based solicitations, bids and signatures be extended to all state entities that carry out public works contracting. This recommendation would require statutory changes.

⁴ Proposed language for statutory authority is provided in Appendix B.

Authorizing (not requiring) electronic bidding and electronic signatures is only one part of the equation, however. E-Government relies on secure communication between two or more trusting parties.

Traditional hand-written, or “wet,” signatures on physical documents worked well during the era of hand written/drawn documents. A wet signature’s purpose is not to prove identity, but rather to show agreement or consent. Wet signatures are not always binding unless witnessed. The task of creating drawings and documents has moved to computers to increase productivity and accuracy in nearly all facets of business. Electronic documents are routinely transmitted during bidding processes and among internal units. Management, storage, and retrieval of documents with wet signatures have become increasingly problematic. Signed documents that are physically stored require a great deal of space and are often difficult to track and recall.

Documents that are signed and scanned and then stored again electronically lose the original document electronic format; scanning is also a time consuming process. Electronic signatures can be used to speed workflow, support repudiation processes and can significantly help support sound document management practices.

Under Washington law today, however, only a “digital” signature is considered presumptively valid (see RCW 19.34.360).

RECOMMENDATION: We recommend that, for the purposes of state public works procurement and practices, electronic bidding and electronic signatures be authorized and deemed presumptively valid and enforceable.⁵

EXPANDING BID OPPORTUNITIES FOR MINORITY-, WOMEN-, AND VETERAN-OWNED BUSINESSES: Creating expanded opportunities for Minority-, Women- and Veteran-owned (M/W/V) businesses to participate in public works projects has been a long-standing challenge in the public construction sector. Since the passage of I-200 in 1998, agencies have struggled to implement effective programs aimed at increasing participation of minority- and women-owned businesses without the authority to use racial and gender-based goals. Today, participation rates by these businesses are very low in state public works projects. Given the current environment in which we have record numbers of veterans returning to civilian work after serving their country, state policy extends the following recommendations to include veterans as well.

Policymakers and the construction industry continue to look for ways to improve access and competitiveness for these firms. The ultimate goal, of course, is to eliminate unequal obstacles and barriers when competing for state contracts, and to assist these M/W/V firms to mature and grow so that they can become competitive, successful, active participants in public works.

⁵ Recommended language for statutory amendment is provided in Appendix B.

While several recommendations for specific activities have been identified for possible implementation, these will likely not prove successful without commitment and leadership from the Governor, the Legislature and the chief executives of the agencies. That commitment is demonstrated by instituting performance measures both at the agency level and the individual staff level – and those measures must be tied to meaningful accountability measures.

RECOMMENDATION: Major state construction offices such as at DES, the UW, and WSU should maintain robust M/W/V contracting outreach programs.⁶

⁶ A subcommittee was convened to develop recommendations for increasing participation of M/W/V businesses. The results of that effort, including suggested components for enhanced M/W/V outreach are provided in Appendix C.

CONSTRUCTION MANAGEMENT

During the course of a construction project, modifications to the existing contract are accomplished through the change order process. If immediate approval of a change is required to protect property, for health or safety reasons, or to maintain project schedule, a field authorization (FA) is issued. All other changes usually occur through the development and approval of a change order proposal (COP). Then, one or more FA and/or COP may be combined into a single change order that is submitted as the actual contract modification.

Change orders are a fact of life in the construction process. The Municipal Research and Services Center, an independent non-profit that provides assistance to local governments on many issues, including public works, provides the following guidance for appropriate uses of change orders⁷:

- Unforeseen conditions
- Design errors or omissions
- Design changes requested by owner
- Increased quantities
- Upgrading materials
- Potential work identified in advertisement
- Natural progression of original project
- Compensation for delays (unusual weather or owner-caused delays)
- Force majeure
- Environmental related regulatory changes
- Safety or environmental issues
- Emergency work
- Additive, deductive, or alternate work
- Negotiated claim settlement
- Deletion of work

⁷ "Construction Change Orders," a presentation by Michael E. Purdy, found at <http://www.mrsc.org/subjects/pubworks/sourcebook/documents/app%20h3%20-%20change%20orders%20-%20mike%20purdy.pdf>.

Although there are many legitimate reasons for change orders, they present a vexing problem in public works projects. Because change orders are, by definition, adjustments to existing contracts and not competitively bid, it is difficult for the owner or the contractor to prove that the price of a change order is the best price. And, when work is accomplished through a change order, other contractors do not have the opportunity to vie for the work. Therefore, close monitoring of the change order process is warranted.

Two issues are frequently raised as possible areas for misuse of change orders:

MAKING UP FOR LOW-BALL BIDS: Most public works construction projects in Washington are awarded through the low-bid process – the project is advertised, contractors submit sealed bids based on the specifications outlined in the advertisement, and the contractor that submits the lowest bid is awarded the contract (assuming that contractor’s bid is responsive the contractor is deemed “responsible.”) There is an ongoing concern that some contractors may try to circumvent the competitive process by submitting an extremely low bid (a “low ball” bid) to get the contract, expecting to submit excessive change orders to recoup what would have been profit built into a sound, legitimate bid. At the end of the day, this practice may not necessarily end up costing the state more on a specific project (the price may end up being about the same as it would have been had it been legitimately bid), but it raises concerns that the true competitive bidding environment was artificially circumvented.

Some in the industry have suggested attacking this concern during the bidding process, i.e., throwing out the lowest bid and awarding to the second lowest bidder. Some states around the country have tried to discourage this practice through statute, policy and/or contract provision.

For example:

- In 2004 Illinois adopted the Public Works Contract Change Order Act which requires rebidding of a change order that increases the original contract price by 50 percent.
- In Indiana, change orders shall not “increase the scope of the project beyond 20 percent of the amount of the original contract.”
- In Nevada, the State Public Works Board, which oversees public works contracts cannot approve change orders that exceed in the aggregate 10 percent of the total awarded contract price.

In Washington, state agency staff do not see this type of activity occurring and owners participating on this study’s advisory team were strenuously opposed to adopting the types of statutory or policy limits on change orders noted above. They believe that even if a contractor has low-balled a bid, an agency’s change order review and approval processes would stymie a contractor’s attempt to make up profits through increased change orders.

The data collected from DES and DFW tend to support this view. Of the projects reviewed, only one appeared to have been awarded to an extraordinarily low bidder (10 percent or more lower than the next bidder). In the one instance, the change orders were significant (close to 200 percent of the project cost), although the final price paid to the contractor was still less than the bid of the next lowest bidder.

USING CHANGE ORDERS TO EXPAND THE SCOPE OF A PROJECT: Another ongoing concern is that the change order process may be used by owner agencies to expand the scope of an existing contract to include work that should in fact be separately bid. A major change in the scope of a project that deviates from the intent of the original concept and general scope of work as approved is known as a “cardinal” change, and is not consistent with the intent of competitive bidding laws.

Examples of cardinal changes include:

- Work planned as a separate project.
- A project at different location.
- Work of a different nature.
- Work not reasonably anticipated.
- Work that changes the basic character of project.
- Work that could be bid as a separate project.
- An undeclared and unrelated emergency.

The data examined for this study do not provide strong support for this criticism, but do reveal areas where the change order process should be more carefully monitored and managed. In talking with other states’ construction offices, there seems to be general agreement in the industry that change orders totaling up to 10 percent of the original contract price are not unreasonable and, in fact should be expected depending on the type of project. Both DES and DFW had a significant number of construction contracts that had change orders totaling more than 10 percent of the original contract price.

- Of DES’ 1,417 contracts closed in the past five years, 660 (or 46.6 percent) had change orders that totaled more than 10 percent of the original contract amount.
- Of DFW’s 72 contracts closed in the past five years, 30 (or 41.7 percent) had change orders that totaled more than 10 percent of the original contract amount.

- Of the University of Washington's 501 contracts closed in the past five years, 223 (or 44.5 percent) had change orders that totaled more than 10 percent of the original contract amount.

A contract that has change orders exceeding 10 percent of the original contract price does not, in itself, mean there is a problem on that particular project. But when a high percentage of contracts fall in this category, it suggests that more management attention to the root causes may be warranted. To better understand what types of issues are driving these change orders, a randomly selected sample of contracts were examined. The samples on the following page were selected from among the pool of construction contracts with change orders that exceed 10% of the original contract price.

DEPT OF ENTERPRISE SERVICES -- CHANGE ORDER SUMMARIES FOR SELECTED CONTRACTS

PROJ #	PROJ TYPE	INIT CONTRACT AMOUNT	CO % OF CONTRACT	Regulatory Chg		Agency Request		Latent Condition		Error		Omission		Value Engineering	
10-201-1-24	JOC	\$ 17,478	17.2%			\$3,100	17.7%								
11-070	JOC	\$ 18,483	48.2%					\$8,908	48.2%						
03-198	D/B/B (or SW?)	\$ 31,014	44.6%			\$10,939	35.3%	\$2,891	9.3%						
10-305	D/B/B	\$ 49,412	13.8%					\$6,812	13.8%						
09-215	Small Works	\$ 55,400	20.8%	\$2,280	4.1%			\$8,652	15.6%			\$587	1.1%		
08-076	JOC	\$ 64,736	15.5%					\$10,028	15.5%						
10-201-1-4	JOC	\$ 86,629	17.2%			\$14,927	17.2%								
10-175	D/B/B	\$ 101,995	76.5%			\$1,956	1.9%	\$64,266	63.0%					\$11,841	11.6%
03-143	D/B/B	\$ 122,599	13.4%			\$10,084	8.2%	\$6,344	5.2%						
06-313	JOC	\$ 169,277	37.0%			\$62,666	37.0%								
05-219	D/B/B	\$ 172,944	15.1%			\$10,424	6.0%	\$9,449	5.5%					\$6,265	3.6%
09-022	D/B/B	\$ 185,695	15.2%	\$4,971	2.7%	\$11,686	6.3%	\$12,002	6.5%					(\$445)	-0.2%
00-050	D/B/B	\$ 1,151,942	22.4%	\$99,999	8.7%	\$167,447	14.5%	\$85,591	7.4%			\$2,125	0.2%	(\$96,593)	-8.4%
03-185	D/B/B	\$ 1,545,000	28.7%	\$392,705	25.4%	\$25,149	1.6%	\$11,900	0.8%			\$13,616	0.9%		
00-159	D/B/B	\$ 1,615,654	15.9%	\$4,968	0.3%	\$102,295	6.3%	\$23,602	1.5%	\$11,856	0.7%	\$22,880	1.4%	\$90,870	5.6%
08-411	D/B/B	\$ 2,045,600	12.9%	\$68,997	3.4%	\$58,135	2.8%	\$103,056	5.0%	\$10,485	0.5%	\$23,026	1.1%	\$866	0.0%
04-100	D/B/B	\$ 15,490,000	24.6%	\$140,406	0.9%	\$1,876,271	12.1%	\$1,423,052	9.2%	\$12,524	0.1%	\$494,440	3.2%	(\$131,831)	-0.9%

UNIVERSITY OF WASHINGTON -- CHANGE ORDER SUMMARIES FOR SELECTED CONTRACTS

PROJ #	PROJ TYPE	INIT CONTRACT AMOUNT	CO % OF CONTRACT	Coordination/Mitigation		Scope Changes		Unknown Site Conditions		Design Error / Omission		Design/ Regul / Value Eng	
202688	JOC	\$13,522	15.5%	\$2,091	15.5%								
202943	D/B/B	\$32,610	27.6%	\$1,615	5.0%	\$7,377	22.6%						
202971	JOC	\$55,687	26.0%	\$11,600	20.8%	\$2,859	5.1%						
201131	D/B/B	\$901,600	10.0%	\$7,760	0.9%	\$28,439	3.2%	\$53,964	6.0%				
201278	D/B/B	\$151,000	16.4%	\$1,660	1.1%			\$23,133	15.3%				
203234	Small Works	\$161,439	14.5%	\$3,939	2.4%	\$11,602	7.2%	\$7,847	4.9%				
202989	D/B/B	\$377,008	58.0%	\$20,414	5.4%	\$132,229	35.1%	\$17,536	4.7%	\$51,810	13.7%	(\$3,221)	-0.9%
200350	D/B/B	\$1,735,527	14.7%	\$104,548	6.0%	-\$2,799	-0.2%	\$53,493	3.1%	\$35,780	2.1%	\$64,664	3.7%
200639	D/B/B	\$1,116,205	22.4%	\$20,101	1.8%	\$179,155	16.1%	\$33,902	3.0%	\$9,941	0.9%	\$6,422	0.6%

DEPT OF FISH & WILDLIFE -- CHANGE ORDER SUMMARIES FOR SELECTED CONTRACTS

PROJ #	PROJ TYPE	INIT CONTRACT AMOUNT	CO % OF CONTRACT	Regulatory Chg		Agency Request		Latent Condition		Error		Omission		Value Engineering	
09-1358	Limited PW	\$ 18,400	192.4%			\$1,793	9.7%							\$33,610	182.7%
09-1354	Small Works	\$ 38,450	17.4%	\$6,717	17.5%										
09-1229	Small Works	\$ 127,000	10.0%	\$250	0.2%			\$380	0.3%					\$11,916	9.4%
09-1525	D/B/B	\$ 1,688,018	18.2%	\$48,022	2.8%	\$288	0.0%	\$228,838	13.6%	\$1,263	0.1%	\$6,356	0.4%	\$22,897	1.4%

DES data reveal that a significant proportion of the changes are attributable to either regulatory changes, or agency requests. Some possible reasons for the amount of change orders could include:

- **Bidding without permits** – It appears several projects were bid in advance of receiving construction permits and comments back from the permitting authority. This directly influences delay-related costs and added scope to projects based on incorporating changes directed by the permitting agency. Construction offices should have a permit in hand before bidding projects.
- **Inadequate investigation of current conditions** - Several remodel project changes appear to be a result of inadequate investigation of current conditions. While it is hard to see concealed conditions there were changes associated with areas that should have been known and reflected in bid documents.
- **Incomplete or inadequate planning** – Some of the smaller projects might have benefitted from a more thorough review by the owner and project manager during the schematic and design development stages of the project.

Agency requests: Based on a review of the data provided in the project file and systems, these change orders appear to be integrally tied to the projects being reviewed, and not an inappropriate expansion of scope. However, the summary data suggests that management review of projects with especially high agency request change orders is warranted. Again, getting a clearer understanding of the root cause of these requests, and putting processes in place to reduce the costs associated with change orders, would provide greater certainty around project costs.

Many of these issues are revealed only when project staff and management can analyze data across projects, not just change orders related to a specific project. Management practices that periodically review trend data can help identify emerging issues or potential weaknesses, and adjust practices accordingly. That kind of analysis, however, requires readily available reliable data. Gathering data for this review was difficult in part because the data systems used to track projects and expenditures are inflexible and outdated. Both DES and DFW had to manually gather the change order data to allow for analysis across projects. Future investment in these systems will be needed.

RECOMMENDATION: State construction offices should continue to implement industry best practices related to change order management, including periodic review of change orders across the agency's portfolio of projects.

PROJECT CLOSEOUT

There are at least three phases of project closeout:

Substantial Completion: Substantial completion is the stage in the project when the construction is sufficiently complete that the owner can fully occupy the work for its intended purpose. It marks the beginning of the typically one-year warranty period, and establishes completion for the purposes of liquidated damages. Once a project has reached this point, operating and maintenance manuals (O&M manuals) should have been submitted and training complete, commissioning of the building should be substantially complete and the only remaining work should be incidental corrective “punch list” work.

Final Completion/Final Acceptance: Final completion means the work is fully and finally completed in accordance with the contract, and that all other contract requirements have been met. All the punch list items should be completed, and claims resolved. According to DES policies, the recommended time between substantial completion and final completion is 30 days, although many issues can come up that would delay final completion beyond that period.

Final Acceptance initiates the statutory 45-day lien period. Contract retainage cannot be paid to the contractor until that period has expired, claims have been resolved and letters of release have been received from the Employment Security Department, the Department of Labor and Industries and the Department of Revenue.

Warranty Period: The Warranty Period generally begins on the date of substantial completion and extends for a minimum of one full year. Any deficiencies arising during this period must be corrected by the contractor. Prior to the expiration of the warranty period, a walkthrough should be scheduled to identify any issues to be corrected.

Concerns have been raised that state construction staff may be closing out public projects with contract work left incomplete, or with work that is complete but subpar. Although the data examined for this study does not directly lend support to this concern, the project close-out process deserves further examination. First, the final completion of several of the projects reviewed for this study extended well beyond the recommended 30 days. This is not evidence of incomplete or sub-par work, but when a project is extended more than 30 days after substantial completion a number of problems can occur. For example, the contractor’s team often disperses, which can make it difficult to get punch list items completed.

Commissioning, O&M manuals, and training are often provided after substantial completion. It is challenging for the owner’s facilities staff to operate an occupied building that is not fully commissioned, especially when they do not have the knowledge to deal with a new building’s systems. As a result, the owner’s staff may adjust mechanical and electrical systems to meet day-to-day needs while the contractor and commissioning agent are still in the process of fine-tuning systems to achieve a fully commissioned facility. Mechanical and electrical systems that do not operate properly have an effect on user comfort and performance, and may create a

negative impression of the building this is difficult to change, even after the systems operate properly.

The result of these delays may have a cost impact in terms of the owner's project management and administrative costs, as well as the architect's and engineer's costs. Second, and perhaps more importantly, the existing protocols for project closeout do not take into account the challenges and costs of getting contemporary facilities to be fully functional.

Building systems are increasing in complexity due to a range of technical issues from program needs, code requirements, information technology and sustainable design. The result is that facilities take significantly more time and effort to resolve issues and allow them to operate smoothly.

Existing project closeout protocols are based on the assumption that if the building is designed and constructed correctly, the owner, contractor, and A/E team can walk away from a fully operational building at the time of final completion. However, many projects require additional design, construction and commissioning to meet their operating goals; not because a party is at fault, but because each project is its own prototype and needs to be refined to be completely functional. The project owner would benefit from revised protocols that require the appropriate time and funding be reserved for use in this final step. Owners typically do not retain contingency funds to deal with the cost of work completed after final acceptance.

ISSUE: The project close-out process needs to be reviewed to determine whether modifications to our current procedures and processes meet our needs in today's complex construction environment.

RECOMMENDATION: A multi-disciplinary task force, comprised of agency project managers, facilities staff, contractors, labor and industries staff, architects and engineers should be tasked with reviewing the existing close-out process and make recommendations regarding improvements to procedures, incentives, and project budgeting.

OTHER ISSUES

BEST PRACTICES, TRAINING AND TRANSPARENCY: Most of the issues raised in this study do not require statutory fixes. In fact, throughout the preliminary interviews and the work of the advisory team, most participants felt the current system works pretty well and does not require significant reform.

The concerns raised, however, do suggest that our state public works procurement processes will benefit from a renewed focus on:

- Applying industry best practices;
- Providing thorough and frequent staff training; and
- Ensuring full public transparency of public works projects from conception through project close-out.

DES, as the state's construction office, should take the lead in convening all state construction teams and industry partners to regularly share information, and use the insights gained to develop and disseminate to all state agencies technical advisories that provide guidelines for state construction that adhere to industry best practices.

Staff training is critical for ensuring that project managers, contract staff, etc. stay abreast of industry trends, and remain current on state construction policies and procedures. As a result of recent legislation, Washington's goods and services contracting staff will be required to maintain certification in state contracting processes. The state's construction office should consider teaming with that effort to develop a specific curriculum and certification process for state construction staff, as a means of ensuring the state continues to invest in maintaining a well-qualified staff.

Finally, providing public transparency throughout the construction contracting process would help to increase confidence that state construction projects are well managed. Agencies investigating replacement project management systems that can deliver better management data, should also prioritize the system's ability to provide greater public insight into the process.

CONSOLIDATING PUBLIC WORKS STATUTES: Contractors have expressed some concern that while public works procurement is governed by Ch. 39.04 RCW, most jurisdictions have additional statutes that modify, replace, or add to the basic statute. And, agency general conditions (the contractual framework for a construction project) vary across jurisdictions and even among departments within a single jurisdiction. Some contractors would like to see more consistency across state agencies, and across jurisdictions. This issue is beyond the scope of this study, and therefore no recommendations are provided here. In the future, the Legislature may want to convene, and provide staff support for a **multijurisdictional team to develop recommendations for proposed consolidating statutes and model general conditions, policies and procedures.**

APPENDIX A: PROPOSED STATUTORY LANGUAGE – DEBARMENT

(To be added to chapter 39.04 RCW)

Authority to debar

- (1) The director of the department of enterprise services has the authority to debar a contractor, individual, or other entity in accordance with this section.
- (2) The director of the department of enterprise services shall provide notice to the contractor of the director's intent to debar with the specific reason for the debarment. The department must establish the debarment process by rule.
- (3) After reasonable notice to the contractor and reasonable opportunity for that contractor to be heard, the director has the authority to debar a contractor for cause from consideration for award of contracts. The debarment must be for a period of not more than three years.
- (4) The director may debar a contractor based on a finding of one or more of the following causes:
 - (a) Conviction for commission of a criminal offense as an incident to obtaining or attempting to obtain a public or private contract or subcontract, or in the performance of such contract or subcontract;
 - (b) Conviction under state or federal statutes of embezzlement, theft, forgery, bribery, falsification or destruction of records, receiving stolen property, or any other offense indicating a lack of business integrity or business honesty that currently, seriously, and directly affects responsibility as a state contractor;
 - (c) Conviction under state or federal antitrust statutes arising out of the submission of bids or proposals;
 - (d) Two or more violations within the previous five years of the federal labor relations act as determined by the national labor relations board or court of competent jurisdiction.
- (5) The director must issue a written decision to debar. The decision must:
 - (a) State the reasons for the action taken; and
 - (b) Inform the debarred contractor of the contractor's rights to judicial or administrative review.
- (6) For the purposes of this section "debar" means to prohibit a contractor, individual, or other entity from submitting a bid, having a bid considered, or entering into a state public works contract pursuant to RCW 39.04 or RCW 39.10 during a specified period of time as set forth in a debarment order.

APPENDIX B: ELECTRONIC BIDDING / SIGNATURES

Public Works (to be added to chapter 39.04 RCW)

Any state agency authorized to conduct public works contracting and competitive bidding may do so electronically and may use or accept electronic signatures in these processes. Such signatures shall be deemed presumptively valid and enforceable. 'Electronic signature' means a signature in electronic form attached to or logically associated with an electronic record.

For the purposes of this section, 'state agency' means any state office or activity of the executive and judicial branches of state government, including state agencies, departments, offices, divisions, boards, commissions, institutions of higher education as defined in RCW 28B.10.016, and correctional and other types of institutions.

APPENDIX C: Expanding Minority-, Women-, Veteran-owned Business Opportunities

A small workgroup was convened to develop recommendations to address increasing participation by minority-, women-, and veteran-owned businesses. Below is a summary of the specific activities recommended by that workgroup. Special thanks to the following individuals for devoting their time and insights into the development of these recommendations: Frank Lemos, Dan Seydel, Bob Armstead, Chris Liu, Mick Matsuzawa, Jim King, Greg Bell, Craig McDaniel and Servando Patlan.

The state's major construction offices – DES, University of Washington, Washington State University, at a minimum – should ensure they have in place sound programs to increase bid opportunities for M/W/V businesses, and to improve the tools available to assist these businesses to become mature, successful participants in the public works arena. Programs could include some or all of the activities described below:

1. **We need to improve our collective understanding and knowledge of the bid opportunities available and the M/W/V businesses that can respond.** To do this we need to improve our access to information:
 - a. **Forecast of Future Bid Opportunities** - Small and disadvantaged businesses need to know what opportunities will become available over a specific time horizon to better help them plan their procurement efforts, and to target appropriate opportunities. Currently, there is no single source for such information. All state entities that conduct public works procurements should be required to post to their websites a rolling one-year work outlook, with a more specific six-month planning forecast so that smaller firms will have sufficient time to focus their efforts, and prepare to respond to bid opportunities. With adequate resources, the state's Office of Minority- and Women-owned Business Enterprises (OMWBE) can aggregate/coordinate these agency-specific forecasts into a state-level forecast and disseminate the information via the agency's website and other forms of social media.
 - b. **Market Analysis** – Our state agencies need a better understanding of the disadvantaged contractor and supplier community. WSDOT is just completing a \$1 million Disparity Study that could provide very useful data on the number of minority- and women-owned businesses available for transportation-related construction and engineering contracts. The study will also provide valuable information on Washington marketplace conditions in the areas of entry and advancement; business ownership; success of businesses; and access to capital, bonding, and insurance. WSDOT continues to analyze existing data related to the effects of Initiative 200. This can provide a sound start, but more will likely need to be done to identify and reach out to potential industry participants.
 - c. **Improve our use of new technologies** – We must improve our data systems to make this effort achievable given the limited staff resources we have available. Our current

systems do not support accurate reporting of contracted expenditures with minority or women-owned businesses, nor do they provide sound utilization data – that is the percentage of total construction contract dollars that minority- and women-owned businesses received on prime contracts and subcontracts. We must have access to better data in order to monitor our efforts and make corrections if our methods prove unsuccessful.

2. **Contract Unbundling:** Unbundling large contracts to make them smaller dollar bidding opportunities and therefore more accessible to small businesses would give these firms experience as a prime contractor. Federal rules encourage states to look at unbundling as a means of facilitating small, disadvantaged business participation, and have prompted development of best practices in other states that can be used as a model. Drawing on these best practices would be important to avoid creating other problems (e.g., conflicts from having too many contractors on a project.) When carefully carried out, it is possible to create opportunities for small contractors to get a bigger piece of the work. M/W/V firms also have the opportunity for prime contractor experience on small works roster projects, and limited public works. For small works roster contracts agencies have the ability to develop procedures to encourage small businesses as defined in RCW 39.04.155 to submit quotes.
3. Consider opportunities to assess the risk of construction contracts and **determine appropriate strategies to BOTH mitigate the risks, and encourage small business.** For example, it is not unusual for there to be contractor selection criteria that may discourage small business:
 - Number of years in business requirements work against start-up firms.
 - Firm size requirements work against sole proprietorships.
 - Number of years of state experience requirements work against firms with federal experience sufficient to meet state needs.
 - Insurance and bond requirements for the project risk (e.g., a \$3 million umbrella policy will cost \$6,000/year, while a \$1 million bond can cost \$50,000.)

While these requirements have been adopted to shift the public risk in projects, there may be other ways to address risk, without disadvantaging these small businesses. For example, some jurisdictions have found ways to use their own funds to mitigate project risk instead of requiring smaller firms to carry their own insurance or bonding. The City of Seattle found proposals from small businesses and diversity businesses were being rejected because they could not provide pollution liability insurance. The City of Seattle bought their own pollution liability insurance to cover their contractors and removed this requirement from their qualifications criteria so they could increase the number of proposals received from M/W/V businesses.

4. **Business Training Programs.** DES and/or OMWBE should be provided funds for staff to work with the community colleges and agencies to develop a training program for M/W/V businesses that focuses on the specific requirements of public works procurements. The goal of such a training program should focus on preparing these businesses to provide high-quality, competitive bids, and also to train the businesses how to identify and connect with large prime contractors to better avail themselves of sub-contractor opportunities.
5. **Additional training for agency employees.** Agency employees need uniform public works procurement training. Contracting is done at all levels by many different entities with different skill levels. A certification program for public works procurement employees whose authority to procure or contract exceeds certain levels (i.e., \$50,000 or more) should be considered.
6. **DES, the six four-year higher education institutions, and OMWBE should draw on the early successes of the City of Seattle and King County’s minority and women-owned business enterprise efforts to design effective outreach programs that do not rely on race and gender based preferences. Components of such a program might focus on:**
 - a. **Strengthening “responsible contractor” provisions, and public works contractual requirements.** To be considered a responsible bidder, contractors should be required to submit an M/W/V outreach plan when M/W/V participation can be improved through subcontract of feasible and commercially useful work. Successful bidders should be required to comply with their submitted outreach plan in the execution of the contract and during contract performance.
 - b. **Training public works procurement, contracting, and project staff** on policies, outreach opportunities, processes and tools to help achieve aspirational goals.
 - c. **Initiating meaningful performance metrics** against which employee and project success will be evaluated.
7. OMWBE and DES should be provided resources and encouraged to **implement a state enterprise-wide performance measurement** program to ensure that agencies understand the tools and methods available to them and are being held accountable to actively work toward reasonable participation opportunities while still achieving state business requirements. Boeing and others have initiated similar efforts and these models should be considered in the creation of a state performance plan.