



Rock Island Dam

Powerhouse #2 – Turbine Rehabilitation Project



State of Washington
Capital Projects Advisory Review Board (CPARB)
Project Review Committee (PRC)

Application for Progressive D/B Project Delivery Approval

Submitted by
Chelan County
Public Utility District No. 1

August 20, 2018



PUBLIC UTILITY DISTRICT NO. 1 of CHELAN COUNTY

P.O. Box 1231, Wenatchee, WA 98807-1231 • 327 N. Wenatchee Ave., Wenatchee, WA 98801
(509) 663-8121 • Toll free 1-888-663-8121 • www.chelanpud.org

August 20, 2018

**Project Review Committee
c/o State of Washington Department of Enterprise Services
Engineering & Architectural Services
P.O. Box 41476
Olympia, Washington 98504-1476
Attention: Talia Baker, Administrative Support**

Dear PRC members:

Please find attached our application for approval to utilize Progressive Design/Build (D/B) contracting for the Public Utility District No. 1 of Chelan County's Rock Island Powerhouse No. 2 Unit Rehabilitation project. We believe that the highly technical and specialized nature of the work under this project lends itself perfectly to the delivery method.

This project will be the first project that the Public Utility District No. 1 of Chelan County (District) has elected to deliver using the D/B delivery method. Our decision to request approval to use the D/B delivery method is the result of significant internal discussion/evaluation and outreach to professionals and public agencies who have utilized this project delivery method. Feedback received has been very encouraging.

Although this would be our first time utilizing the D/B delivery method, the District engineering and maintenance staff who will be engaged in this project have extensive experience in successfully managing projects like this that are of a highly technical and specialized nature. To bolster our team, bring expertise in the D/B delivery method, and help guide us through the process, the District has retained the services of Parametrix as our D/B Procurement Manager and D/B Project Advisors (Jim Dugan and John Palewicz) for the duration of the project. In addition, the District will be contracting for external legal counsel with Perkins Coie (Graehm Wallace) to support our D/B team and counsel us in the statutory and contractual requirements for this delivery method. We will draw upon the experience, knowledge and mentorship of our D/B consultant team to guide us and help ensure the success of D/B delivery on this project.

We are excited about the potential to construct this project using the D/B delivery method. We look forward to your review of our application and the opportunity to present our project to the PRC. Should you have any questions, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read 'J. Sagerser', with a long horizontal flourish extending to the right.

John T. Sagerser
Manager - Rock Island Engineering & Project Management
Public Utility District No. 1 of Chelan County

State of Washington
Capital Projects Advisory Review Board (CPARB)
PROJECT REVIEW COMMITTEE (PRC)

APPLICATION FOR PROJECT APPROVAL
To Use the Design-Build (DB)
Alternative Contracting Procedure

The CPARB PRC will only consider complete applications: Incomplete applications may result in delay of action on your application. Responses to sections 1-7 and 9 should not exceed 20 pages (*font size 11 or larger*). Provide no more than six sketches, diagrams or drawings under Section 8.

Identification of Applicant

- a) Legal name of Public Body (your organization): **Public Utility District No. 1 of Chelan County**
- b) Address: **327 N. Wenatchee Ave, Wenatchee WA 98801**
- c) Contact Person Name: **John Sagerser** Title: **Manager – RI Dam Engineering & PM**
- d) Phone Number: **(509) 663-8121** E-mail: john.sagerser@chelanpud.org

1. Brief Description of Proposed Project

- a) Name of Project: **Rock Island Dam – Powerhouse #2 Rehabilitation**
- b) County of Project Location: **Chelan and Douglas**
- c) Please describe the project in no more than two short paragraphs. (*See Attachment A for an example.*)

This application is for approval to utilize a hybrid Progressive Design Build approach as the project delivery method. The selection process would include the following three phases: 1.) Design/Builder qualifications; 2.) Conceptual design/planning/budgeting; and 3.) Cost factors.

The project will rehabilitate all hydro turbine-generator units in Rock Island Powerhouse Two (PH2), as well as the associated balance of plant (BOP) equipment and systems. Rock Island PH2 has eight bulb turbines each rated at 51 megawatts. The bulb turbine design is unique for the Public Utility District No. 1 of Chelan County (District) and rare in North America. Bulb turbines are designed for low head, high flow installations. They are very efficient and have high fish survival rates. The turbine-generator units were installed as part of the original construction in the 1970s and have exceeded their 40-year useful life. Recent condition indicators show that the units are beginning to fail and that forced outages due to failure should be expected over the next 12 years.

Rehabilitation includes refurbishment of most major components, replacement of some due to known poor condition and limited remaining life, and procurement of some new components to mitigate schedule impacts from finding unrepairable items during the construction outage. Components to be replaced include, but are not limited to, the generator, generator cooling system, and turbine discharge ring. Refurbished components will sandblasted, inspected and evaluated for reuse and remaining life, and re-machined to original dimensions and tolerances. The rehabilitation work is anticipated to ensure an additional 40 years of reliable and efficient power generation capability for the units.

The replacement of key components (such as the generator) and procurement of other key components (such as the turbine shaft) will help minimize impacts to power generation during the rehabilitation work. The rehabilitation work on the first unit will begin in 2021, and is anticipated to take 16-18 months. Rehabilitation of subsequent units is expected to take less time (12-16 months), and could potentially overlap rehabilitation of previous units. Therefore, it is anticipated that the last unit should complete rehabilitation in 2029. The anticipated value for engineering and rehabilitation of the eight turbine-generator units and balance of plant systems at Rock Island Powerhouse Two is \$352,000,000.

2. Projected Total Cost for the Project:

A. Project Budget

Costs for Professional Services (A/E, Legal, etc.)	\$ 6,000,000
Contractor Design	\$ 10,000,000
Contractor Manufacturing and Mobilization	\$ 26,000,000
Develop Site Machining and Fabrication Capabilities	\$ 12,000,000
Unit Installation	\$240,000,000
Balance of Plant Systems	\$ 39,000,000
<u>District Administration and Project Management</u>	<u>\$ 19,000,000</u>
Total	\$352,000,000

(Note: All design and construction costs identified above include 8.2% sales tax and a combined 25% contingency for design, construction, escalation and inflation.)

B. Funding Status

Please describe the funding status for the whole project. *Note: If funding is not available, please explain how and when funding is anticipated*

The project scope, schedule, and budget was presented to the District’s Board of Commissioners in November 2017. Their overall support and approval for the project was shown by approval of the 2018 capital funds associated with the project. The District currently plans to fund the project with cash reserves until approximately 2024 when it is expected that external debt would be issued to fund the remainder of the project. The District currently has a bond rating of AA+/Stable, which is in the top five public utilities in the US, so its ability to fund the project using external debt is high.

3. Anticipated Project Design and Construction Schedule

Please provide (See Attachment B for an example schedule.):

The anticipated project design and construction schedule, including:

- a) Procurement;
- b) Hiring consultants if not already hired; and
- c) Employing staff or hiring consultants to manage the project if not already employed or hired.

The District entered into a service agreement for engineering services related to rehabilitation work at Rock Island Powerhouse One and Two with Stantec Consulting Services, Inc. in February 2018. The District has also hired two project managers, two construction managers, and a mechanical engineer in the last six months in order to support the ongoing rehabilitation work at Rock Island. An electrical engineering position is also advertised and currently budgeted to support the work at Rock Island.

The following is the anticipated schedule for the procurement, preconstruction, design and construction related to this project. The dates indicated are preliminary and may be adjusted after the Project team has evaluated project scheduling. Refer to Exhibit A for graphical representation of anticipated construction schedule of turbine/generator rehabilitation work.

Task	Start	Finish
Procurement & Preconstruction Service Phase		
PRC Application	July 1, 2018	August 20, 2018
PRC Presentation		September 27, 2018
Publication of RFQ for Design/Build Services		October 12, 2018
Project Information Meeting (Date subject to change.)	October 29, 2018 1:00pm	October 29, 2018 2:30pm
Deadline for Submittal of Questions/Comments regarding RFQ		November 1, 2018, 1:00pm

Final RFQ Addendum Issued		November 5, 2018
RFQ Submittal Deadline		November 12, 2018 3:00pm
Open and Review/Score Submittals Received	November 12, 2018	November 19, 2018
Identify Finalists & Issue RFP & Proprietary Meeting Notifications (Note that the RFP process will include 30% design as part of the procurement process.)		November 21, 2018
Proprietary Meeting #1	December 3, 2018 Time TBD	December 3, 2018 Time TBD
Proprietary Meeting #2	December 17, 2018 Time TBD	December 17, 2018 Time TBD
Proprietary Meeting #3	January 14, 2019 Time TBD	January 14, 2019 Time TBD
Final Deadline for Submittal of Questions/Comments regarding RFP		March 1, 2018 3:00pm
Final RFP Addendum Issued		March 8, 2019
RFP Submittal Deadline (Proposals & Cost Factors)		March 15, 2019 2:00pm
Open & Review Proposals (Cost Factors not reviewed)	March 18, 2019	March 22, 2019
Design/Builder Interviews	March 25, 2019 Time TBD	March 25, 2019 Time TBD
Open Cost Factors & Score Proposals		March 25, 2019
Notify Design/Builders of Scoring and Most-Qualified Design/Builder		March 27, 2019
Design/Build Contract Negotiation	April 1, 2019	April 26, 2019
Board of Commissioners Approval of Design/Build Contract		May 2019
Execute Design/Build Agreement with Preconstruction Services		May 2019
Preconstruction Phase Services	May 2019	TBD
GMP Negotiation	TBD	TBD
Commissioner's Approval of GMP		TBD
GMP Amendment Executed		TBD
<u>Design Phase</u>		
30% Design (Note that the procurement process includes 30% Design.)	November 2018	March 2019
Proprietary Meetings	TBD	TBD
Owner 30% Design Review/Approval (Drawings, Cut-Sheets, Cost Estimate)	November 2018	March 2019
60% Design	April 2019	August 2019
Owner 60% Design Review/Approval (Drawings, Cut-Sheets/Specs, Cost Estimate, Schedule)	April 2019	August 2019
Negotiate GMP Master Agreement	TBD	TBD
Execute GMP Master Agreement	TBD	TBD
90% Design	September 2019	December 2019
Owner 90% Design Review/Approval (Drawings, Cut-Sheets/Specs, Cost Estimate, Schedule)	September 2019	December 2019
100% Design		January 2020
Notify Federal Energy Regulation Commission of the Project		February 2020
Receive Response from the Federal Energy Regulation Commission		March 2020

Manufacturing	February 2020	May 2021
Site Set-up and Mobilization	August 2020	August 2021
<u>Bidding & Construction Phase</u>		
Turbine/Generator Unit #1		
Bidding/Pricing	August 2021	August 2021
Construction Outage	September 2021	January 2023
Commissioning & Operational Testing	December 2022	January 2023
Substantial Completion		January 2023
Final Completion & Closeout	January 2023	December 2023
Turbine/Generator Unit #2		
Bidding/Pricing	December 2022	December 2022
Execute GMP Amendment		December 2022
Construction Outage	January 2023	March 2024
Commissioning & Operational Testing	February 2024	March 2024
Substantial Completion		March 2024
Final Completion & Closeout	March 2024	February 2025
Turbine/Generator Unit #3		
Bidding/Pricing	November 2023	November 2023
Execute GMP Amendment		November 2023
Construction Outage	December 2023	January 2025
Commissioning & Operational Testing	December 2024	January 2025
Substantial Completion		January 2025
Final Completion & Closeout	January 2025	December 2025
Turbine/Generator Unit #4		
Bidding/Pricing	September 2024	September 2024
Execute GMP Amendment		September 2024
Construction Outage	October 2024	October 2025
Commissioning & Operational Testing	September 2025	October 2025
Substantial Completion		October 2025
Final Completion & Closeout	November 2025	October 2026
Turbine/Generator Unit #5		
Bidding/Pricing	July 2025	July 2025
Execute GMP Amendment		July 2025
Construction Outage	August 2025	August 2026
Commissioning & Operational Testing	July 2026	August 2026
Substantial Completion		August 2026
Final Completion & Closeout	August 2026	July 2027
Turbine/Generator Unit #6		
Bidding/Pricing	May 2026	May 2026
Execute GMP Amendment		May 2026
Construction Outage	June 2026	June 2027
Commissioning & Operational Testing	May 2027	June 2027
Substantial Completion		June 2027
Final Completion & Closeout	June 2027	May 2028

Turbine/Generator Unit #7		
Bidding/Pricing	March 2027	March 2027
Execute GMP Amendment		March 2027
Construction Outage	April 2027	April 2028
Commissioning & Operational Testing	March 2028	April 2028
Substantial Completion		April 2028
Final Completion & Closeout	April 2028	March 2028
Turbine/Generator Unit #8		
Bidding/Pricing	December 2027	December 2027
Execute GMP Amendment		December 2027
Construction Outage	January 2028	January 2029
Commissioning & Operational Testing	December 2028	January 2029
Substantial Completion		January 2029
Final Completion & Closeout	January 2029	December 2029

4. Explain why the DB Contracting Procedure is Appropriate for this Project

Please provide a detailed explanation of why use of the contracting procedure is appropriate for the proposed project. Please address the following, as appropriate:

- If the construction activities are highly specialized and a DB approach is critical in developing the construction methodology (1) What are these highly specialized activities, and (2) Why is DB critical in the development of them?

The project will entail system engineering and design and the subsequent removal, rehabilitation and reinstallation of eight hydro-electric turbine/generator units. Each of the turbines develop 71,600 horsepower and drives the generators at 85.7 RPM. Each unit has power generation capacity of 51 megawatts and weighs as much as 400 tons. The turbines were built and installed in in the 1970s and have not been disassembled since originally installed. The generators were removed and reinstalled in the late 1980's due to a warranty issue.

The work to rehabilitate the power generation units of this size and type is highly specialized and highly technical in nature. Many components need to be replaced. Therefore, the company performing the work must have the ability to design and manufacture those components as well as remove and reinstall them. The company must also have the ability to assess components for their suitability to be refurbished and reused. This requires the detailed knowledge and understanding of the design of each component during disassembly.

The reassembly of the components into a functioning turbine-generator set also requires this detailed and intimate knowledge of hydro units. The components are very large (approximately 7 meters in diameter, weighing several tons) and operate with minimal clearances and tolerances (often measured in the thousands of inches) between rotating and stationary components. Failure to achieve these tight tolerances can impact efficiency, megawatt output, maintenance intervals, and overall effective life of the units.

- If the project provides opportunity for greater innovation and efficiencies between designer and builder, describe these opportunities for innovation and efficiencies.

There are a limited number of companies qualified to perform work of this type and magnitude. The work is highly technical and it is imperative the engineering and rehabilitation work is performed by a very highly qualified team of professionals, specializing in hydro-electric power generation facilities. The progressive design/build delivery method allows the Owner to solicit proposals from multiple teams and choose only experienced and qualified teams to progress in the procurement process, ultimately selecting the most highly qualified design/builder for the work.

It also allows the District to collaborate with the contractor to incorporate their unique knowledge, experience, and solutions into the design phase of project. The progressive design/build method allows the contractors to apply intellectual property and innovative solutions that set them apart from the competition with limited concern that those solutions will be required of every potential bidder.

- If significant savings in project delivery time would be realized, explain how DB can achieve time savings on this project.

In addition to the technical nature of the rehabilitation work, it will be imperative that the contractor is involved in scheduling and phasing of the work. This dam is an essential power generation facility, provides a substantial amount of power to the grid, and is an integral part of the District's habitat conservation plans. The power generation capacity of Rock Island Powerhouse No. 2 is approximately equal to the average power needs for all of Chelan County. It is crucial that disruptions of power generation capability be minimized during the rehabilitation process.

5. Public Benefit

In addition to the above information, please provide information on how use of the DB contracting procedure will serve the public interest. For example, your description must address, but is not limited to:

- How this contracting method provides a substantial fiscal benefit; or
- How the use of the traditional method of awarding contracts in a lump sum (*the "design-bid-build method"*) is not practical for meeting desired quality standards or delivery schedules.

Because of the highly technical nature of the work, the scale of the equipment being worked on and the critical scheduling phasing involved, the design-bid-build delivery method, where the project is awarded to the lowest bidder, regardless of qualifications and experience isn't practical. The contractor for this type of unique and specialized work needs to be chosen based on their expertise, experience and qualifications. Similarly, the design phase of the design/build method leads to better conversations, a better understanding, and uses the contractor's experience to produce more consistent pricing and performance to the District's advantage.

In addition, equipment and component condition and suitability for reuse will not be fully known until the units are removed from service and disassembled. The traditional design-bid-build method makes it difficult to manage this substantial cost and schedule risk. The traditional method either transfers the risk to the contractor (who estimates high), or keeps it with the District (who is then at the mercy of the contractor when changed conditions occur). The design-build method allows the District and the contractor to collaborate upfront, and takes advantage of the contractor's substantial hydro knowledge to minimize the risk and associated cost and schedule for all parties.

6. Public Body Qualifications

Please provide:

- A description of your organization's qualifications to use the DB contracting procedure.

The District has done a thorough job of assembling a team of full time PUD employees augmented with consultants that have significant D/B experience to procure, implement and manage this project. The Project Director, PM/CM and Internal Legal Counsel are employees of the PUD. Parametrix is currently under contract with a Master PM/CM Agreement to augment District staff as needed and when needed. Jim Dugan of Parametrix has more than 20 years of D/B project experience between 1978 and 1998 while employed by The Austin Company. Graehm Wallace of Perkins Coie LLP is our external D/B legal counsel and will assist with the development of the procurement documents, the contract and to provide D/B legal consultation throughout the project. Finally, and primarily due to this being our first D/B project, we have retained Mr. John Palewicz, former UW Seattle Capital Projects Director, as our external D/B Advisor to provide current and long term oversight and counsel.

The District has a long and successful history of planning and executing large capital projects, including previous generating unit rehabilitation projects, similar to this project, on time and within budget. Please refer to Section 7 of this application for a summary of recent District construction experience.

Although this will be the first time that the District has utilized the Design/Build (D/B) delivery method, their on-staff project team members are highly knowledgeable in the technical and logistical requirements of rehabilitating hydro-electric power generation units. They are excited about the opportunity to deliver this project utilizing Progressive D/B, allowing them to engage the manufacturers, contractors and PUD in a collaborative design and construction process on this very unique and technically challenging project.

- A project organizational chart, showing all existing or planned staff and consultant roles.

Note: The organizational chart must show the level of involvement and main responsibilities anticipated for each position throughout the project (for example, full-time project manager). If acronyms are used, a key should be provided. (See Attachment C for an example.)

Refer to Exhibit B for project organizational chart.

- Staff and consultant short biographies that demonstrate experience with DB contracting and projects (not complete résumés).

Brett Bickford – Program Manager (CCPUD)

Brett is a registered professional civil engineer and has 30 years' experience in heavy industrial design, construction and project management. Brett has been the design manager or project manager for many one-of-a kind multi-million dollar projects around the world including offshore pipelines and platforms for oil and gas production and the Rocky Reach Hydroelectric Project Juvenile Fish Bypass system which was constructed 24/7 in one year for \$110 million. Brett was the Rock Island Powerhouse one \$150 million rehabilitation program manager for Chelan PUD from 2004 to 2014. Since 2015, Brett has been the Director of the Engineering and Project Management Department which is responsible for evaluation, design and construction of a majority of the capital and large maintenance projects valued at \$50-\$80 million annually. Brett excels in project development and contract administration.

John Sagerser – Project Manager (CCPUD)

John has 28 years of experience in the generation of electrical energy. John is a leader with a proven record of building the teams and partnerships necessary to deliver projects that are successful for all parties involved. He has served as an electrical engineer, project manager, and engineering manager for steam and hydro generating facilities. While working for the District, John served as the project manager for the rehabilitation of the turbine-generator units and balance of plant equipment at the Lake Chelan Dam. John has also recently served as the engineering manager and project manager for the rehabilitation work at Rock Island Powerhouse One.

Chuck Boss – Construction Manager (CCPUD)

Chuck earned his Bachelor's degree in Industrial Engineering from CWU. He has over 20 years of experience in heavy industrial construction, 12 of which he served in the Hydro industry. He has been a Construction Manager for three rehabilitation projects and numerous maintenance outages at the Rock Island Dam. Chuck is a Certified Welding Inspector through the American Welding Society, a CIP level 2 through the National Association of Corrosion Engineers, and holds a Certificate in Safety Management through the American Society of Safety Engineers. Chuck currently serves as a construction manager for the rehabilitation work at Rock Island Powerhouse One.

Katie Yount – Internal Legal Counsel (CCPUD)

Katie has been a practicing attorney for 20 years. Katie has been with the District since 2015, and is currently working on the District's Rock Island and Rocky Reach Hydroelectric Support Facility Improvements Project using GC/CM. Prior to working for the District, Katie was in private

practice focusing primarily on family and employment law.

Jim Dugan – Design/Build Program Advisor (Parametrix)

Jim has 40 years of experience managing the planning, design, engineering, and construction of industrial, commercial, and institutional projects in both public and private markets. With formal training in civil engineering and project management, he provides his clients with project management and leadership skills needed to plan, hire, and manage design and construction consultants and contractors consistent with program requirements, budget restrictions, and schedule requirements, as well as work collaboratively with all agencies having jurisdiction. Jim is skilled at alternate project delivery, long-range strategic planning and scheduling, budget forecasting and compliance to the plan, public speaking/presentations and collaboration with stakeholders, and conflict resolution and claims mitigation. While working for The Austin Company (1978-1998), Jim had significant Design-Build experience managing the design, engineering, and construction of commercial and industrial projects ranging from 23,000 to 3 million square feet, and from \$1 million to \$300 million. Jim’s D/B experience with Austin took him to Korea, Malaysia, Australia, Mexico, Canada and all major cities within the USA.

Jim is highly experienced in alternative project delivery utilizing both GC/CM and Design/Build. He has served as a member of the Project Management team for a number of public agency Owners and projects. In 2016, Jim was appointed to a 3-year term on the States Project Review Committee (PRC) where he, along with colleagues from the construction industry and public agencies, volunteer their time to review applications, hear presentations and make recommendations on public entities wishing to utilize alternative construction delivery methods of GC/CM and Design/Build on publicly funded projects.

Project	Project Value	Role	Timeframe
Hunt Middle School, Tacoma Public Schools	\$48M	D/B Advisor	2018 - current
Boze Elementary School, Tacoma Public Schools	\$32.5M	D/B Advisor	2018 - current
Willapa Elementary School New Gym, Willapa School District	\$1.7M	D/B Advisor	2017 - current
Multiple large D/B projects worldwide as a contractor (The Austin Company).	Varies (\$1M-300M)	Project Mgr.	1978-1998

John Palewicz, AIA, DBIA, LEED – Outside Design/Build Advisor

Mr. Palewicz was at the University of Washington Capital Planning and Development office for 21 years, primarily as a Director for Major Projects where he managed or directed 24 GC/CM and DB projects with a total project cost of over \$1 Billion. Design-build projects include Husky Stadium, Husky Baseball Ballpark, West Campus Utility Plant and the Global Innovation Exchange (GIX).

A registered architect, John was with NBBJ Architects for fifteen years prior to the UW. He served for six years, including Chair, on the Project Review Committee appointed by CPARB to review and approve alternative delivery for public projects and to certify public bodies to use GC/CM and Design-Build. He was a member of the CPARB Subcommittee developing Design-build Best Practices and is a presenter for the Associated General Contractors classes on Design-Build and GC/CM.

Project	Project Value	Role	Timeframe
Hunt Middle School, Tacoma Public Schools	\$48M	D/B Advisor	2018 - current
Boze Elementary School, Tacoma Public Schools	\$32.5M	D/B Advisor	2018 - current
Residence Hall, Western WA University	\$65M	D/B Advisor	2018 - current
Administrative Support Services Bldg., Western WA University	\$10M	D/B Advisor	2018 - current
Global Innovation Exchange. University of WA	\$18.6M	Owners Rep	2015-2017
West Campus Utility Plant, University of WA	\$44.2M	Project Dir.	2014-2017
Husky Baseball Park, University of WA	\$19.5	Project Dir.	2010-2014
Husky Football Stadium, University of WA	\$278M	Owners Rep	2008-2012

Graehm Wallace – Outside Legal Counsel (Perkins Coie, LLP)

Graehm Wallace is a partner in the Seattle office of the law firm Perkins Coie LLP. Graehm has provided legal assistance for numerous school districts including preparation of contract documents and providing legal counsel regarding compliance with RCW Chapter 39.10. For example, Graehm prepares alternate delivery contracts for the Spokane, Bellingham, Central Valley, Mead, and Port Townsend School Districts. Recently Graehm has worked with Parametrix on alternate delivery projects for clients in the Tacoma, Lake Stevens, Auburn, Central Kitsap, Mount Vernon and Bainbridge Island School Districts. Graehm has over twenty years legal counsel experience working in all areas of construction and has provided legal assistance to over 100 Washington school districts. His work has covered all aspects of contract drafting and negotiations. This includes preconstruction, architectural, engineering, construction-management, GC/CM, design-build, and bidding. Graehm has also provided legal advice during construction, claim prosecution and defense work. Graehm is recognized in The Best Lawyers in America for the practice area of Construction Law.

- Provide the ***experience and role on previous DB projects*** delivered under RCW 39.10 or equivalent experience for each staff member or consultant in key positions on the proposed project. (See Attachment D for an example. The applicant shall use the abbreviations as identified in the example in the attachment.)

See project D/B experience table under the Bios for Jim Dugan and John Palewicz above.

- The qualifications of the existing or planned project manager and consultants.
Note: For design-build projects, you must have personnel who are independent of the design-build team, knowledgeable in the design-build process, and able to oversee and administer the contract.

As highlighted in the biographies above, John Sagerser (planned project manager) has been project manager for rehabilitation of two other hydro facilities while with the District. He is backed by the team from Parametrix for design/build experience, and the team from Stantec for hydro rehabilitation experience. Design/build experience for the Parametrix team is highlighted in the biographies above as well. Stantec is a proven leader in the hydropower industry, consistently ranked by Engineer News Record (ENR) as a top firm. Dating back to 1920 they have developed and refurbished hydroelectric projects around the world, including many along the Columbia River. Stantec is well versed in the regulatory and agency requirements for licensing, permitting and constructing hydro plants, having prepared and assisted in the preparation of client applications for multi-level requirements for licenses and exemptions. Their long-term, continuous position in the industry delivers hydropower owners and developers leadership in the assessment of their facilities and in making decisions for using their energy resources to power communities.

Their experienced engineers are able to provide support for all elements of hydropower project development and refurbishment including:

- Conceptual project design
 - Preparing cost estimates
 - Sizing and selecting power-generating equipment
 - Evaluating transmission and interconnection requirements
 - Calculating expected energy
 - Developing conceptual powerhouse configurations
 - Preparation final designs for construction
 - Construction management services
- If the project manager is interim until your organization has employed staff or hired a consultant as the project manager indicate whether sufficient funds are available for this purpose and how long it is anticipated the interim project manager will serve.

Not applicable. Project Management will be provided by internal District staff with support from Parametrix.

- A brief summary of the construction experience of your organization's project management team that is relevant to the project.

The District began rehabilitation of its hydro generation equipment at Rocky Reach in the mid 1990's. As an organization, they have been actively involved in rehabilitation projects since. The District's engineering and project management team is well versed in hydro rehabilitation projects, with its Program Manager, Project Manager, and Construction Manager all serving in similar roles on hydro rehabilitation projects at Lake Chelan and Rock Island. Further, the District's support staff including Accounting, Finance, Procurement, and Legal are all versed in the specifics of managing large hydro rehabilitation projects.

John Sagerser Construction Experience

Project	Project Value	Delivery Method	Role	Timeframe
Rocky Reach Generator Rehabilitation	\$41.0 M	Bid	Program Manager	2004 - 2006
Lake Chelan Hydro Modernization	\$36 M	Negotiated	Project Manager	2006 - 2010
Rock Island Powerhouse 1 Rehabilitation – 3 rd Unit	\$19.7M	Bid	Project Manager	2015 - 2018

- A description of the controls your organization will have in place to ensure that the project is adequately managed.

This project will be managed through the District's Engineering and Project Management Department in coordination with Hydro Engineering, Permitting, Procurement, and Legal department support. The District performs over 300 projects annually and has built business processes to manage capital projects of this size and scope.

The District's overall organizational format will be overseen by the Director of Engineering and Project Management (DoEPM) who is responsible for execution of generation capital projects within the utility. From Pre-Construction through Construction, the DoEPM will ensure project support by necessary District departments. The District's Design/Build Advisor, Parametrix, will monitor procedure/process from D/B procurement through construction and will advise the District's internal PM/CM staff. During construction the DoEPM will have signature authority for necessary changes in the project scope through the use of Change Order Proposals. The COPs will be packaged into Change Orders in a timely manner. These Change Orders will require approval by the District's management with various levels of financial authority.

The District's internal Project Manager will directly represent the District through Pre-Construction/Design and during Construction. The Project Manager will manage the contractual obligations of the Design/Build Team and will oversee/manage the work of District staff assigned to the project. He will meet on a regular basis with District internal project staff to debrief on current project status and issues. He will update the Director and Executive Manager on a regular basis. The Board of Commissioners meetings, where pay applications are approved, will provide the opportunity to communicate at higher levels as needed.

The District's staff will be supplemented by consultants, Parametrix Inc., who specialize and excel in Project Management/Construction Management and D/B processes and procedures. Parametrix will provide D/B Advisory and PM/CM support roles from D/B procurement, preconstruction and construction. Parametrix will report directly to the Director of Engineering and Project Management and will work directly with the District staff and the Design/Builder to nurture a successful project, mentor District staff and provide advice, consultation and support as necessary. Parametrix will not manage/direct any of the parties and has no signature authority on this project without the District's authorization.

We believe that the roles and controls explained above will support the ability for timely, direct decisions to be made by the District and will ensure the ability to manage and quickly address

emerging issues in an expedient manner whether during the Pre-Construction/Design or Construction phase of the project.

Adherence to the established scope, phasing of the work, and budget will be paramount in the management and control of the project. Project engineering, design documents and construction cost estimates produced by the Design/Builder will be reviewed and confirmed against the project specifications, performance criteria and available project construction budget at the end of each design phase. Value analysis and Constructability review will be ongoing and will be an established agenda item in the regularly scheduled project coordination meetings. Market prices will be constantly monitored for impacts to the current estimates or the established Total Contract Cost. Once the final GMP/MACC is negotiated, the Design/Builder and the District Project Manager will regularly evaluate the construction documents to determine if there are any scope changes or market conditions that impact the agreed upon GMP/MACC. If deviations arise, changes will be made by the Design/Builder to bring the project back into alignment with the budget and the established GMP/MACC.

As part of the Pre-Construction Services, the Design/Builder will develop, with District input, a schedule for early procurement, early bid/work packages and phased construction, as applicable. They will also develop a subcontracting bid plan and schedule for bidding. Early and frequent meetings and/or correspondence with regulatory agencies, permitting agencies, and other authorities having jurisdiction prior to permit intakes will help ensure that factors that may affect the MACC will be brought to the forefront in a timely manner and mitigated.

- A brief description of your planned DB procurement process.

Our design-build procurement process will be based on a best value approach of qualitative factors and a pricing factor and the Progressive Design Build delivery model. As a Progressive D/B model, the project will be primarily weighted on qualifications (RFQ) and will be followed by a limited design process (30% Design), conceptual cost estimating and a minor price factor element (RFP).

Our procurement process will include the following:

- Market the project to highly qualified, technologically knowledgeable and experienced potential D/B candidates.
- Solicit and review/score/rank initial Statements of Qualifications and shortlist to the two or three most highly qualified D/B teams.
- Solicit Proposals, (written information, conceptual design solutions, conceptual cost estimating and price factors) from the shortlisted D/B candidates.
- Proprietary meetings with shortlisted D/B candidates.
- Receive and review Proposals (written information and conceptual design information only).
- Interview shortlisted D/B candidates.
- Review conceptual cost estimates and price factors and score/rank Proposals.
- Recommend award to the highest ranked D/B candidate.

The first phase will be to issue a Request for Qualifications (RFQ) with a project description, scoring criteria, weighting of scoring, proposed project budget, proposed project schedule and project technical requirements/information. The RFQ will also ask for specific qualifications, technical expertise and experience of the D/B team firms and the key, individual D/B team members within those firms. Submittals will be reviewed and scored by the Selection Committee with facilitation and input on D/B technical and process questions being provided to the Selection Committee by Parametrix, John Palewicz, and Perkins Coie as needed. The District would like to shortlist up to three Finalists to move to the RFP phase.

The second phase will be to provide the Request for Proposal (RFP) documents to the Finalists. The RFP will include:

- Request for the D/B's approach to project specific criteria
- Technical design (up to 30% design) and performance criteria
- Listing of engineering/design deliverables
- Price Factor Proposal Form
- Draft of proposed D/B Contract documents

A series of Design/Builder led proprietary meetings will be held with each firm during the Proposal development phase to allow the D/B teams to test their ideas, thoughts on project approach and project concepts with the District's Selection Committee for feedback and input. Following the proprietary meetings, the Proposals will be submitted for evaluation. Proposal information related to cost estimating and price factors will be submitted separately from the project approach and engineering/design information. The Selection Committee will review the project approach and engineering/design information portion of each of the submitted Proposals in preparation for D/B Team Interviews. Based on the project approach and engineering/design information, the Selection Committee will conduct interviews of each Design/Build Finalist. Following interviews, the cost estimate information and Price Factor Proposal Forms will be reviewed by the Selection Committee who will then evaluate, score and rank proposals received from the Finalists to determine the most highly qualified Design/Builder. Parametrix, Perkins-Coie, and the D/B Advisor will facilitate and provide technical consultation, as required, during this phase.

The most highly qualified Design/Builder will be invited to enter into negotiations for a Design/Build Agreement that will include Preconstruction Services. Per RCW 39.10.330, unsuccessful Finalists, who are not awarded a Design/Build Agreement will be paid an honorarium.

Qualitative factors, which may include but are not limited to: technical expertise, hydro-electric power generation engineering/design expertise, D/B expertise, past project experience/performance, project management plan, D/B team capacity, technical factors and other published criteria will be the primary criteria for evaluation and selection. Quantitative factors, which may include but are not limited to: conceptual design, cost estimates, Design/Builders fee and other published cost factors will be secondary criteria for evaluation and selection.

We anticipate requesting permission to advertise the D/B Request for Qualifications from the District's Board of Commissioners on October 1, 2018, and advertising no later than October 31, 2018. We intend to review/score submittals, develop a shortlist of Finalists and issue the Request for Proposals to the Finalists no later than November 30, 2018. We anticipate receipt of Proposals in March 2019, review/score Proposals and identify our "most qualified" D/B contractor in April 2019. Unsuccessful Design/Builders who are invited to participate in the RFP but are not chosen to sign a contract for the work will be paid a substantial honorarium that is commensurate with the level of effort (design, estimating, etc.) that is required by the RFP.

We will then go to the District's Board of Commissioners for permission to negotiate Preconstruction Services and the D/B Agreement terms with the most qualified D/B team. The intent will be to take the D/B contract to our Board for approval in April 2019. TPS intends to utilize Parametrix and John Palewicz, former Director of Capital Projects at the University of Washington, as external industry experts to participate with us in the D/B selection and contracting process. We will also use the services and advice of Graehm Wallace of Perkins Coie for legal issues, during procurement, contract negotiations and the course of the project.

- Verification that your organization has already developed (or provide your plan to develop) specific DB contract terms.

Graehm C. Wallace, JD, Perkins-Coie, will assist the District with preparation of the contract and terms and conditions. District Hydro Engineering, Engineering and Project Management and internal Legal staff members, Parametrix and Perkins Coie, will work together to prepare and tailor the RFQ and RFP documents to meet the needs of this project.

7. Public Body (your organization) Construction History:

Provide a matrix summary of your organization's construction activity for the past six years outlining project data in content and format per the attached sample provided: *(See Attachment E. The applicant shall use the abbreviations as identified in the example in the attachment.)*

- Project Number, Name, and Description
- Contracting method used
- Planned start and finish dates
- Actual start and finish dates
- Planned and actual budget amounts

- Reasons for budget or schedule overruns

Project Name	Contract Method	Plan Const. Start	Plan Const. Finish	Act. Const. Finish	Original Const. Budget	Actual Cost of Const.	Reasons for Budget or Schedule Overruns
Rock Island B1-B4 Generating Unit Modernization	D/B/B	Dec. 2014	Feb 2020	2017	\$41.8 M	\$46.3 M	Increase Project value
Lake Wenatchee Wastewater Treatment Facility Improvements	Bid	Aug. 2016	July 2017	2017	\$722K	\$763K	Increase Project Value
Headquarters Building Re-roof	Bid	Oct. 2016	July 2017	2017	\$268K	\$270K	Increase Project Value
Rocky Reach Dam Powerhouse Bridge Cranes Refurbishment	Bid	May 2016	Feb 2018	Current	\$4.4 M	\$5.4 M	Increase Project Value
Rocky Reach Dam Intake Gantry Crane Refurbishment	Bid	Oct 2015	Dec 2017	2017	\$4.5M	\$4.7M	Increase Project Value
Lincoln Rock State Park Cabin Loop and Group Camp	Bid	Feb 2015	Jan 2016	2016	\$2.5 M	\$2.5 M	
Entiat Park Revitalization	Bid	July 2013	May 2016	2016	\$6.1 M	\$6.2 M	Increase Project Value
Rock Island Powerhouse #1 Unit Rehabilitation	Bid	July 2006	November 2012	Current	\$122.1 M	\$135.2 M	Escalation, Increase Project Value
Rock Island B1-B4 Unit Rehabilitation	Bid	July 2018	January 2019	Current	\$47.2 M	\$47.2 M	

8. Preliminary Concepts, sketches or plans depicting the project

To assist the PRC with understanding your proposed project, please provide a combination of up to six concepts, drawings, sketches, diagrams, or plan/section documents which best depict your project. In electronic submissions these documents must be provided in a PDF or JPEG format for easy distribution. Some examples are included in attachments E1 thru E6. At a minimum, please try to include the following:

- A overview site plan (*indicating existing structure and new structures*)
- Plan or section views which show existing vs. renovation plans particularly for areas that will remain occupied during construction.

Note: applicant may utilize photos to further depict project issues during their presentation to the PRC

Refer to Exhibit C for aerial view of project site and Exhibit D for project scope information.

9. Resolution of Audit Findings On Previous Public Works Projects

If your organization had audit findings on any project identified in your response to Question 7, please specify the project, briefly state those findings, and describe how your organization resolved them.

The District has not had a finding related to a project from the State Auditor's Office in their annual accountability audit in the last six years.

Caution to Applicants

The definition of the project is at the applicant's discretion. The entire project, including all components, must meet the criteria of RCW 39.10.300 to be approved.

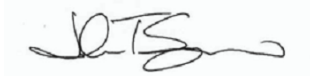
Signature of Authorized Representative

In submitting this application, you, as the authorized representative of your organization, understand that: (1) the PRC may request additional information about your organization, its construction history, and the proposed project; and (2) your organization is required to submit the information requested by the PRC. You agree to submit this information in a timely manner and understand that failure to do so shall render your application incomplete.

Should the PRC approve your request to use the DB contracting procedure, you also understand that: (1) your organization is required to participate in brief, state-sponsored surveys at the beginning and the end of your approved project; and (2) the data collected in these surveys will be used in a study by the state to evaluate the effectiveness of the DB process. You also agree that your organization will complete these surveys within the time required by CPARB.

I have carefully reviewed the information provided and attest that this is a complete, correct and true application.

Signature:



Name: John T. Sagerser

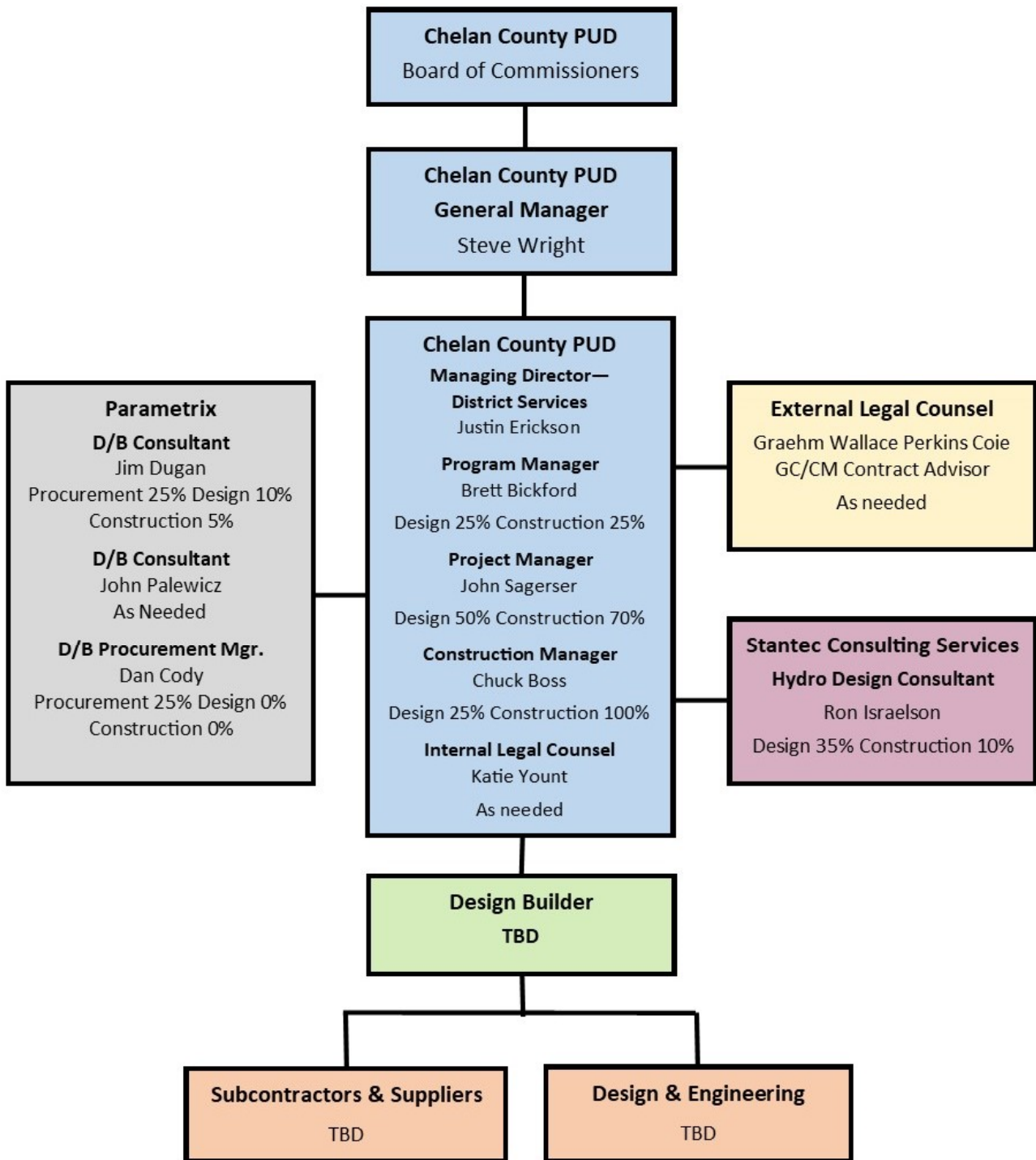
Title: Manager – Rock Island Dam Engineering & Project Management
Public Utility District No. 1 of Chelan County

Date: August 20, 2018

Exhibit A – Anticipated Construction Schedule

	2018				2019				2020				2021				2022				2023				2024				2025				2026				2027				2028				2029							
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4								
RFQ/RFP/Negotiation																																																				
Design																																																				
Manufacturing																																																				
Site Set-Up/Mobilization																																																				
U5 Outage																																																				
U7 Outage																																																				
U2 Outage																																																				
U4 Outage																																																				
U8 Outage																																																				
U3 Outage																																																				
U1 Outage																																																				
U6 Outage																																																				
Turnover & Closeout																																																				

Exhibit B – Project Organization Chart



**CHELAN COUNTY PUD
PROJECT ORGANIZATION CHART**

Exhibit C – Project Site Aerials





Scope Recommendation

- Rehabilitate major components that have > 40 years of remaining life if rehabbed (turbine runner, shafts, rotor, stator)
- Replace wear components (bushings, seals, fasteners, instrumentation, motors, pumps)
- Procure new one generator for first unit to accelerate overall schedule by approximately 2 years
- Procure some new components for schedule and cost risk mitigation

Proposed Wear Components to Replace

- All seals and wear elements
- High pressure bearing pumps
- Heat exchangers and oil filters
- Wicket gate pins
- Wicket gate link bearings
- Wicket gate bushings, thrust washers and wear elements
- Discharge ring
- Expansion joint to draft tube and associated hardware, gland rings, etc.
- Piston rings for runner blade position
- Turbine shaft bolt cover, instruments, and directional valves
- Turbine shaft coupling hardware
- Intermediate shaft coupling hardware
- Carbon seal segments and keeper rings
- Inflatable shaft seal
- All piping inside the bulb
- All wire and instrumentation inside the bulb
- Stator winding, core and clamping system
- Generator cooling fans
- Generator air coolers
- Generator air cooler and fan removal system
- Brake pads and seals
- Bulb heaters
- Fire detection
- Generator supports
- Generator shaft coupling hardware
- Blade restoring mechanism parts
- Exciter diodes and heat sinks
- Slip rings
- Generator humidifier
- All varistors



Risk Mitigation Components

Major components to purchase new to mitigate cost and schedule risk:

- Outer wicket gate ring
- Inner wicket gate ring
- Turbine guide bearing supports
- Turbine shaft
- Intermediate shaft
- Turbine hub cover
- Wicket gates for 1 unit (20)
- Stator frame
- Rotor poles for 1 Unit (72)

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