ATTACHMENT A PROPOSAL COVER SHEET

RFP# 25134; Oregon Department of Transportation

This Proposal is for: PE/Design Services ☐, (OR) Both PE/Design and CA/CEI Services ☒

Legal Name of Firm as provided to IRS: Parametrix, Inc; a Washington Corporation;
DBA Name (if different than legal name): N/A

☒ Corporation ☐ Professional Corporation ☐ Ltd. Liability Company ☐ Partnership or Joint Venture
☐ Limited Partnership ☐ Ltd. Liability Partnership ☐ Sole Proprietorship ☐ Other _____
Mailing Address: 700 N.E. Multnomah, Suite 1000, Portland, OR 97232

Type name of primary Contact for this Proposal: Brian Bierwagen
Email address bbierwagen@parametrix.com
Telephone 503-416-6105 Fax 503-233-4825
Type name of person(s) authorized to sign Contract/Price Agreement: Richard Roché

"PASS/FAIL" - PROPOSAL SUBMISSION CHECKLIST (for Proposer use)

☒ Submission Deadline Date and Time met
☒ Proposal Does Not Include Conditional Language about Terms and Conditions

"REQUIRED" ITEMS – PROPOSAL SUBMISSION CHECKLIST (for Proposer use)

☒ Proposal Cover Sheet Included and authorized original signature obtained
☒ Minimum Qualifications met and indicated on Proposal Cover Sheet
☒ Proposal Format and Page Length Requirements met
☒ Correct number of Proposals included along with CD for electronic submittals
☒ Reference Questionnaire forms
☒ Subcontractor/Supplier Solicitation and Utilization Form, completed and signed
☒ Checked off appropriate Conflict of Interest Disclosure certification on Proposal Coversheet (and included COI Disclosure Form(s) if there are required disclosures).

RESPONSES TO MINIMUM QUALIFICATIONS (See RFP Section 1.5.2)

➢ Registered Professional Engineer

Proposers must provide information below for at least one Registered Civil Engineer intending to perform civil engineering services under the Contract/Price Agreement.

Name	Registration Number	Jurisdiction of Registration
Brian Bierwagen, PE, PMP	16405PE	Oregon
Dan McIntier, PE	74106PE	Oregon

➢ Registered Professional Land Surveyor (PLS)

Proposers must provide information below for at least one PLS intending to perform surveying services under the Contract/Price Agreement.

Name	Registration Number	Jurisdiction of Registration
Kathleen Cassou, PLS	72342PLS	Washington
Dave Mills, PLS, Dave Mills Consulting	01915PLS	Oregon

CERTIFICATIONS. By signature below, the undersigned Authorized Representative on behalf of Proposer certifies that:

1. Agency shall not be liable for: a) any claims or be subject to any defenses asserted by Proposer based upon, resulting from, or related to, Proposer's failure to comprehend all requirements of the RFP; or b) any expenses incurred by Proposer in either preparing and submitting its Proposal, or in

participating in the proposal evaluation/selection or Contract/Price Agreement negotiation process, if any.

2. Neither the Proposer, a major partner or a major shareholder, (defined as a partner or shareholder owning 10% or more of your firm), a major subcontractor (defined as receiving 10% or more of the total Contract/Price Agreement amount), nor any principal officer of a Proposer, major partner, a major shareholder or major subcontractor:

a) is presently debarred, suspended, disqualified, proposed for debarment or declared ineligible for the award of contracts by any federal agency or agency of the State of Oregon, and is not listed on GSA's Excluded Parties List System which is available at **http://epls.gov.**

b) has, within the last 3-year period, been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract; violation of federal or state antitrust statutes relating to the submission of bids or Proposals; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property? {A "principal officer of a Proposer, major partner or major subcontractor," means an officer, director, owner, or partner and any person having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions)}.

3. Proposer has made all required **Conflict of Interest (COI) disclosures**, if any.
The ODOT COI Guidelines and COI Disclosure Form are available at the following link: **http://www.oregon.gov/ODOT/CS/OPO/AE.shtml#Forms** (under "Misc. Procurement Related Forms")

(Check one of the following two certifications as applicable)

☐ Proposer understands and has provided to all Associates (which includes subcontractors) the COI Guidelines and COI Disclosure Form. Proposer and, to the best of the undersigned's information, knowledge and belief**,** Proposer's Associates (as defined in the COI Guidelines) are in conformance with the COI Guidelines, have no employees that were employed by ODOT within the last one-year period, and have no conflicts of interest or other disclosures required per the COI Guidelines. The response to each question on the COI Disclosure Form was "no".

☒ Proposer understands and has provided to all Associates (which includes subcontractors) the COI Guidelines and COI Disclosure Form. Proposer and, to the best of the undersigned's information, knowledge and belief, all Associates (as defined in the COI Guidelines) have provided on the COI Disclosure Form(s) submitted with this Proposal all disclosures required per the ODOT COI Guidelines.

4. Proposer has available (and can furnish to Agency upon request) the appropriate financial, material, equipment, facility and personnel resources and expertise, or ability to obtain the resources and expertise, necessary to indicate the capability of the Proposer to meet all contractual responsibilities.

5. Proposer recognizes this is a public document open to public inspection. Any portion(s) of the Proposal that Proposer considers exempt from disclosure under Oregon Public Records Law is/are clearly designated in the Proposal and listed on a separate sheet attached to this Proposal Cover Sheet with justification and citation to the authority relied upon.

6. Proposer does not discriminate in its employment practices with regard to race, creed, age, religious affiliation, sex, disability, sexual orientation or national origin. Nor has Proposer or will Proposer discriminate against a subcontractor in the awarding of a subcontract because the subcontractor is:

- a minority, women or emerging small business enterprise certified under ORS 200.055, or
- a business enterprise that is owned or controlled by or that employs a disabled veteran, as defined in ORS 408.225.

7. Proposer has an operating policy supporting equal employment opportunity. If proposing firm has 50 or more people, Proposer also has a formal equal opportunity program.

- Does Proposing firm have 50 or more employees? ☒ **Yes,** ☐ **No.**
- Does Proposing firm have a formal equal employment opportunity program? ☒ **Yes,** ☐ **No**

Agency is an equal-employment-opportunity employer and values diversity in its work force. Agency requires its Contractors to have an operating policy as an equal employment opportunity employer. Firms of 50 people or less do not need to have a formal equal employment opportunity program, but shall have an operating policy supporting equal employment opportunity. Firms of 50 people or more shall also have a formal equal employment opportunity program.

8. The Proposal submitted is in response to the specific language contained in the RFP, and Proposer has made no assumptions based upon either (a) verbal or written statements not contained in the RFP, or (b) any previously-issued RFP, if any.

9. Proposer, acting through its authorized representative, has read and understands the RFP instructions, specifications, and terms and conditions contained within the RFP (including the sample contract) and all Addenda, if any. Failure to provide information required by the RFP may ultimately result in rejection of the Proposal.

10. Proposer agrees to and shall comply with, all requirements, specifications and terms and conditions contained within the RFP (including the sample contract) and all Addenda, if any.

11. Proposer and Proposer's employees and agents are not included on the list entitled "Specially Designated Nationals and Blocked Persons" maintained by the Office of Foreign Assets Control of the United States Department of the Treasury and currently found at http://www.treas.gov/offices/enforcement/ofac/sdn/t11sdn.pdf.

12. All contents of the Proposal (including any other forms or documentation, if required under this RFP) and this Proposal Cover Sheet, are truthful and accurate and have been prepared independently from all other Proposers, and without collusion, fraud, or other dishonesty. **False Claims.** Proposer understands that any statement or representation it makes, in response to this solicitation, if determined to be false or fraudulent, a misrepresentation, or inaccurate because of the omission of material information could result in a "claim" {as defined by the Oregon False Claims Act, ORS 180.750(1)}, made under the resulting PA/WOC being a "false claim" {ORS 180.750(2)} subject to the Oregon False Claims Act, ORS 180.750 to 180.785, and to any liabilities or penalties associated with the making of a false claim under that Act.

13. The signatory of this Proposal Cover Sheet is a duly authorized representative of the Proposer, has been authorized by Proposer to make all representations, attestations, and certifications contained in the Proposal document and to execute this Proposal document on behalf of Proposer.

[Note: Any alterations or erasures to the proposal shall be initialed in ink by the undersigned authorized representative.]

_____ Date 12/10/12
Authorized Signature

Richard Roché, Office Principal
(Print Name and Title)

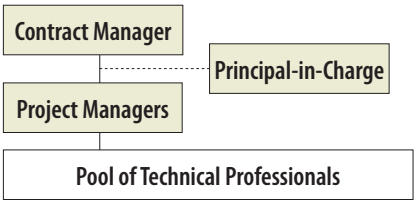
2.2.1 Proposer's Project Management for PE-Design Services

The Parametrix team offers:

- ODOT and local agency experience
- Understanding of ODOT/FHWA procedures
- In-house multidisciplinary services
- Experience managing projects at all scales
- Specialty expertise from DBE and MWESB partners
- Statewide coverage

Figure 1: Management Structure

Project management structure



How our structure aids delivery

PROJECT DEVELOPMENT

- Contract manager (Brian Bierwagen) proposes PM and team to ODOT/LPA.
- PM works with Brian and ODOT/LPA to prepare work order contract.
- PM communicates assignments and prepares project management plan.

PE-DESIGN PHASE

Project Manager

- Monitor schedule and budget.
- Communicate regularly with ODOT/LPA.
- Coordinates all project resources including subconsultants.

Contract Manager

- Oversees quality control process throughout delivery.
- Ensures team resources are available and consistent for efficient, high-quality delivery.

PREPARE FOR CA/CEI PHASE

- Construction project manager provides constructability reviews.
- Construction team assigned during PE for continuity.

A. Proposer's Management and Organizational Structure

Management Structure and Chain of Command

Describe Proposer's management and organizational structure and how that structure aids the delivery of project Services – including chain of command.

Our team structure and chain of command are simple and direct. Our contract manager, Brian Bierwagen, PE, PMP, will serve as ODOT's and the local agency's primary point of contact for this contract. He will be ultimately responsible for cost-effective, quality project delivery for all work order contracts. Throughout the contract, Brian will meet with ODOT or the local public agency (LPA) to identify areas of improvement.

Brian is the Oregon transportation division manager for Parametrix, giving him the authority and resources to address ODOT/LPA needs under the contract. As work orders are advertised, Brian will assign the highest-qualified work order project manager and team to propose to ODOT/LPA. He will also serve as a project manager when his experience is best suited to a given project.

All of our project managers are Parametrix employees, supporting our team's commitment to quality and on-time delivery. The project manager will work with ODOT's consultant project manager or local agency liaison to prepare the scope and budget, and will manage the project through PE. Project managers will also involve a construction project manager early on to ensure constructible designs.

Lindsay Yamane, our principal-in-charge, will support Brian by conducting periodic project assessments to ensure that our work meets ODOT's needs. Lindsay has served in this role on the Newberg Dundee Bypass project for both the completion of the FEIS and PS&E for Phase 1, by meeting with ODOT's Region 2 area manager.

Selection and Management of Subcontractors

Describe how subcontractors will be selected for specific WOC assignments, utilized and managed to complete the projects.

Parametrix will perform the majority of expected tasks in-house. However, we will select and utilize subconsultants based on the following:

- ***Successful project completion.*** We will select our team based on experience and a history of success with ODOT/LPA and Parametrix.
- ***DBE partners.*** We will maximize the expertise of our DBE and MWESB partners, providing opportunities for meaningful involvement.
- ***Location/Cost.*** Projects with lengthy field work may make a local subconsultant the most cost-effective candidate for specific tasks.

Subconsultants will be an integral part of the project team and will be required to follow Parametrix quality control procedures.

2.2.1 Proposer's Project Management for PE-Design Services, continued

Organization Chart

Include a list or org chart showing key staff of the prime and all subconsultants and their proposed role/discipline for PE-Design Services.

Figure 2
Boldface indicates Parametrix staff

Italics indicate subconsultants

ODOT/Local Agency

PRINCIPAL-IN-CHARGE/QA MANAGER
Lindsay Yamane, PE, PMP

CONTRACT MANAGER
Brian Bierwagen, PE, PMP

PRELIMINARY ENGINEERING WORK ORDER PROJECT MANAGERS

Brian Bierwagen, PE, PMP	**Bill Ciz**	**Dan McIntier, PE**
Mike Pyszka, PE	**Bob Murray, PE, SE**	**Lindsay Yamane, PE, PMP**

BENEFITS OF OUR TEAM

All work order managers are Parametrix employees, along with the majority of discipline leads, maximizing efficient delivery. Subconsultants add specialty disciplines and strengthen our ability to cost-effectively cover the state.

Preliminary Engineering

Civil/Roadway
Jim Phillips, PE
Mike Pyszka, PE
Todd Johnson, PE
Kevin House, PE
Steve Metz, PE
*Tina Adams, PE (Casso)**
Jerry Swain(TYLI)
D. Scott Souders, PE (ZCS)

Traffic Analysis/Operations
Bill Ciz
Ryan Abbotts, AICP
John Perlic, PE
Brian Woodburn, PE
Julia Kuhn, PE (KAI)
Wade Scarsborough, PE (KAI)
John Bosket, PE (DKS)

Traffic Design/ITS
Cindy Clark, PE
Ryan Jahns, PE
Jim Peters, PE (DKS)
Ed Fischer, PE (TTS)
Brian Copeland, PE (DKS)
Charles Radosta, PE (KAI)

Bridge and Structures Design
Dan McIntier, PE
Bob Murray, PE, SE
Steve Aisaka, PE, SE, JD
Shane Brown, PE
Mike Pyszka, PE
Joe Merth, PE
Scott Nettelton, PE (TYLI)
Paul Kluvers, PE, SE (CZE)

Utilities
Tom Nielsen, PE
Jim Phillips, PE
*Tina Adams, PE (Casso)**
Paul Knox, PE (CZE)

Survey and Mapping
Dave Mills, PLS (DMC)
Kathleen Cassou, PLS
Cory Woodruff, PLS (SEF)
Gene Wobbe, PLS (WAI)

Geotechnical/Testing
*Rajiv Ali, PE (RO)**
Scott M. Schlechter, PE, GE (GRI)
*Bill Nickels, PE (FEI)**
George Saunders, GE (GD)
Park Piao (S&W)
Scott Wallace, RG, CRWE (WG)

Stormwater/Hydraulics
Doug Gates, PE
Ryan Retzlaff, PE
Jeff Coop, PE
Bob Carpenter, PE
Hans Hadley, PE (WC)

Right-of-Way
Leslie Finnigan (UFS)
Roger Hanna (HMA)
*Rod Bliss (ELS)**
David Feinauer (ROWA)

Bike/Pedestrian
Gregg Everhart, RLA
Jenny Bailey
Yammie Ho, PE
Ed Fischer, PE (TTS)

Landscape Architecture/ Erosion Control
Gregg Everhart, RLA
Jens Swenson, RLA
*Ben Ngan, RLA (NN)**

Public Involvement
Derek Chisholm, AICP
Sara Morrissey
*Stacy Thomas, (JLA)**
Ellen Teninty (CP)

Funding
Marty Andersen (TYLI)
Bill Ciz

Environmental/Natural Resources

NEPA Compliance
Randy Reeve
Bill Ciz
Jeff Heilman
Kevin Halsey, JD
Greg Graham
Emily Moshofsky

Permitting/ESA
Randy Reeve
Bill Hall
Michael Zenthoefer
Beth Bowers
Colin MacLaren, PWS

Wetlands
Colin MacLaren, PWS
Beth Bowers

Environmental/Land Use
Bill Ciz
Emily Moshofsky
Jen Hughes
Derek Chisholm, AICP

Archaeology/Cultural
Derek Chisholm, AICP
Emily Moshofsky
Bill Roulette, MA, RPA (AAR)
Jo Reese (AINW)

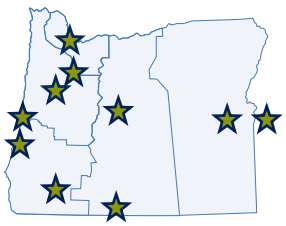
Air/Noise
Jessica Stark (SLR)
Martha Moore (SLR)
Brian Woodburn

Hazardous Materials
Rick Wadsworth, PE
John Howland, RG

Socioeconomics
Derek Chisholm, AICP
Emily Moshofsky

Sustainability
Ann Radil

Locations of team offices



Subconsultants and Roles

- Applied Archaeological Research (AAR) *Archaeology/Cultural*
- Archaeological Investigations NW (AINW) *Archaeology/Cultural*
- * Casso Consulting (Casso) *Civil/Roadway*
- * Cogito Partners (CP) *Public Involvement*
- * Cooper Zietz Engineers, Inc. *Structures/Utilities*
- * Epic Land Solutions (ELS) *Right-of-Way*
- * Dave Mills Consulting (DMC) *Survey/Mapping*
- DKS Associates (DKS) *Traffic*
- Foundation Engineering, Inc. (FEI) *Geotechnical*
- GeoDesign (GD) *Geotechnical*
- GRI *Geotechnical*
- Hanna McEldowney & Associates (HMA) *Right-of-Way*
- * Jeanne Lawson Associates (JLA) *Public Involvement*
- Kittelson & Associates (KA) *Traffic*
- * Nevue Ngan (NN) *Landscape*
- * Rhino One (RO) *Geotechnical*
- Right-of-way Associates (ROWA) *Right-of-Way*
- Shannon & Wilson (S&W) *Geotechnical*
- SLR International (SLR) *Noise/Air*
- Stuntzer Engineering & Forestry (SEF) *Survey/Mapping*
- Traffic and Transportation Solutions (TTS) *Traffic; Bike/Pedestrian*
- TY Lin (TYLI) *Civil/Road/Bridge*
- Universal Field Services (UFS) *Right-of-Way*
- Wallace Group (WG) *Geotechnical*
- West Consultants (WC) *Hydraulics*
- Wobbe & Associates Inc. (WAI) *Survey/Mapping*
- ZCS Engineering, Inc. (ZCS) *Civil/Road*

*** Indicates DBE/MWESB Firms**

B. Meeting Project Schedules

Describe Proposer's methods of coordinating and expediting all elements of projects to meet delivery schedules without sacrificing quality.

Meeting Delivery Schedules

With input from ODOT or the local agency, the Parametrix project manager will follow these steps to ensure quality, on-time delivery:

❶ ***Identify Project and Budget Goals.*** Hold a pre-scoping meeting with ODOT and the local agency project manager to identify concerns regarding schedule, budget, stakeholder impacts, and how to best approach regulatory agencies. Our project manager will then break each task into a detailed and comprehensive schedule to effectively coordinate delivery milestones with the team.

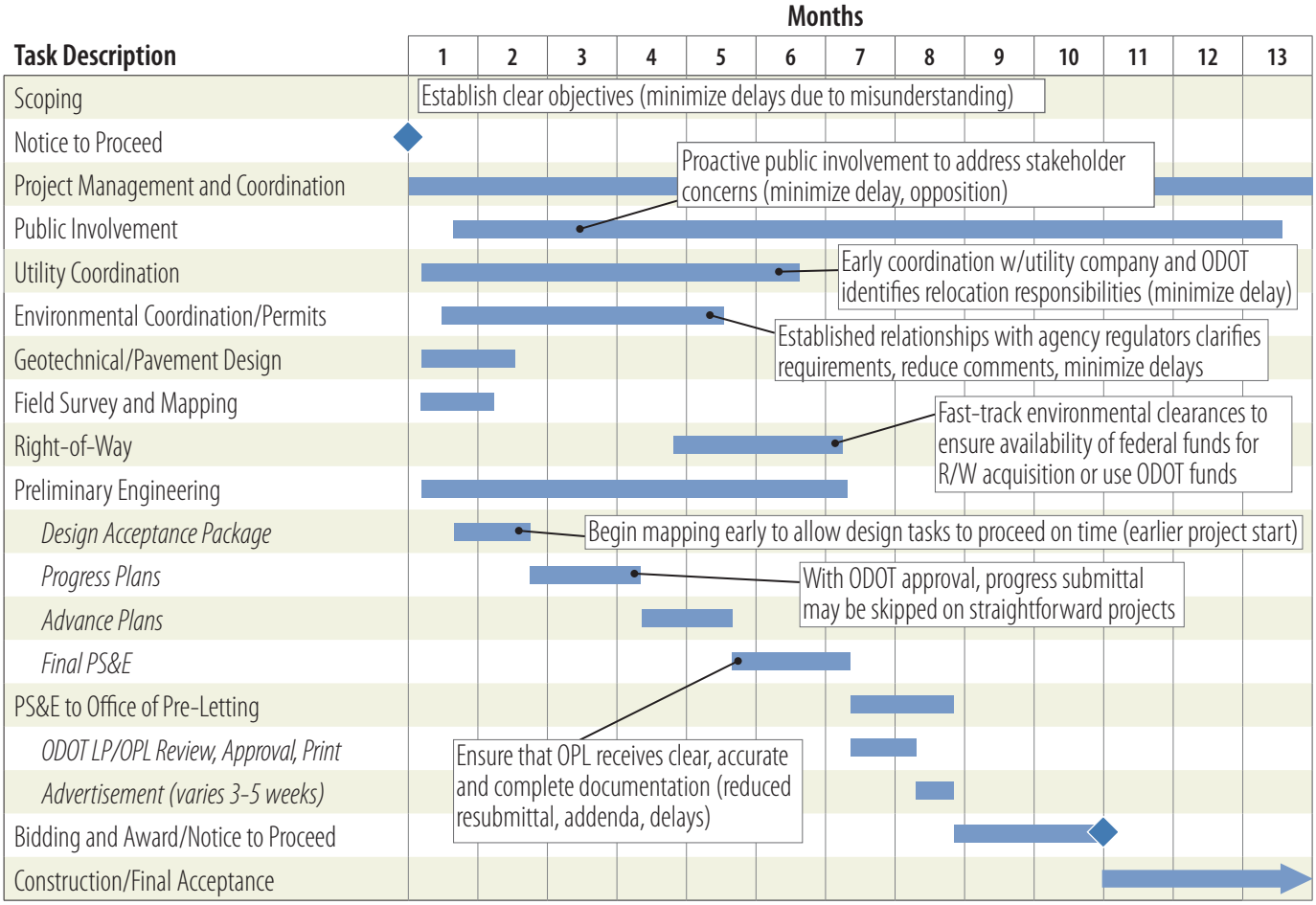
- ***Expedites delivery by*** identifying critical tasks that can be completed concurrently, setting and communicating review and delivery dates, and agreeing on appropriate levels of effort.
- ***Improves quality by*** providing a shared understanding on critical issues and outcomes.

❷ ***Create and Communicate a Plan.*** To accelerate the contracting process, the Parametrix project manager will prepare the scope and budget using standard ODOT WOC templates and task numbering for quick approval by the ODOT Procurement Office and Department of Justice.

- ***Expedites delivery by*** submitting a standard WOC, shortening review time and reducing OPO/DOJ comments. Also, the comprehensive language reduces task omissions. We reduce potential risk by including contingency tasks, and accelerate schedules by negotiating shortened design/environmental review times.

Figure 3: Typical Schedule—Opportunities for Risk Avoidance

This schedule for a typical project highlights strategies for avoiding or mitigating schedule risks. None of the strategies is intended to be comprehensive; the intent is to show our understanding of how to avoid issues before they arise.



2.2.1 Proposer's Project Management for PE-Design Services, continued

- ***Improves quality by*** reducing edits and review cycles. Because of our WOC template experience, we understand where input is needed and which edits are acceptable.

❸ ***Execute the Plan.*** Parametrix project managers will proactively monitor the status of each task, comparing it to the approved project management plan (PMP) in order to meet each delivery deadline.

- ***Expedites delivery by*** communicating and engaging responsible team members, stakeholders, and agency staff when decisions are needed and delivery milestones are approaching.
- ***Improves quality by*** sticking to a delivery plan which reduces design and delivery errors.

Adjusting Schedules or Staffing

Describe Proposer's flexibility and approach to making adjustments to schedules or staffing in order to meet a schedule.

❹ ***Adjust the Plan.*** Project changes require quick attention to stay on schedule and budget. Parametrix holds weekly team status meetings with subconsultants, technical leads, ODOT, and the LPA, when appropriate. Our locally experienced, multidisiplinary staff will collaborate with agency staff to develop mitigation opportunities, quantify the impact, and develop a recommended solution.

- ***Expedites delivery by*** identifying potential changes and mitigation strategies early enough to maintain the schedule. Contingency tasks will be used, if available, to address changes without impacting schedule.
- ***Improves quality by*** requiring Parametrix employees and subconsultants to follow the change management plan, which is part of the PMP.

When a project requires additional staffing to meet an evolving schedule, the Parametrix project manager can call on our more than 350 staff. Our 24 subconsultants from across the state also provide depth in a variety of specialty disciplines.

Figure 4: Typical Reasons for Schedule Adjustments—Examples of Successful Approaches

Reason for Adjustment	Parametrix Approach	Examples of Successful Outcomes
ROW acquisition delays	• Hold early proactive agency meetings to obtain shortened reviews and early environmental permits. • Low-cost changes from homeowner's requests (e.g., revised plant species, written agreements).	• Early ROW NTP on the Fishhawk Creek Bridge project. • On both Canaan Road and the Fishhawk Creek Bridge, listened to homeowners and explained challenges, resulting in uncontested agreements.
Resource agency requirements	• Negotiate with agencies on recommended solutions that meet the intent of regulators while allowing the project to proceed.	• On the Roy Creek Culvert Replacement and Fishhawk projects, Parametrix met with agencies early in design to propose alternate environmental protections that kept the projects on schedule.
QC process	• Conduct senior engineer and construction reviews during early design phases.	• On the Roy Creek project, this approach avoided rework, shortened agency review time, and lessened construction impacts.
Local agency matching funds	• Adjust production and staff until LPA receives matching funds.	• On the Fishhawk and Hudson Park Bridge projects, we maintained design budget and lessened restart costs when the projects were delayed due to funding.
Team changes	• Documenting project allows new staff efficiency by team and client.	• This approach enabled rapid startup due to documented decisions and project history on the Hudson and Fishhawk projects.
Bidding climate	• Strategically selected bid date.	• For the Apiary Road and Columbia Boulevard projects, we were ready to bid in the fall, resulting in more competitive bidding.
Changed site condition	• Continuation of design staff through construction.	• Staff continuity enabled redesign of foundation from piles to footings in 24 hours on the Columbia County Bridge Replacements.

C. Proposer's Quality Control Procedures

Delivering Quality Products

Provide a concise summary of Proposer's Quality Control procedures and policies for PE-Design.

Quality delivery is our primary goal for every client and every project. Our quality control procedures and policies are outlined in ***Figure 5***. As the figure shows, quality delivery begins with clear lines of responsibility. It also depends on a clear set of procedures, shared and understood by all participants.

Parametrix tailors a contract-specific quality management plan for each project, based on our experience delivering projects under ODOT contracts. The plan describes the processes, procedures, and documentation required by our quality program. The quality plan is part of the PMP, ensuring that all professionals responsible for work products understand our commitment to quality. The plan provides:

- ***Clear, defined, and written quality procedures*** with assigned team responsibilities for each project based on past experiences and lessons learned.
- ***Documents and instructions*** to ensure consistent completion of review checklists and forms at critical review phases: 30%, 60% In-Progress, 90% Advance PS&E, Final PS&E, and Final Bid Documents.
- ***List of project contract requirements*** for reference throughout project, including the schedule, WOC (scope), BOC (budget), design standards and references, communication protocols, and a contact list.

Figure 5: Quality Control Procedures

CONTRACT LEVEL

Contract Manager Brian Bierwagen is responsible for Quality Delivery of all Projects under this contract.

Quality Assurance

- Provide tools for quality project delivery (software, forms, processes)
- Maintains high level of staff training in up-to-the minute industry-wide best practices
- Ensures staff are trained in ODOT and FHWA procedures
- Verify and document that plan has been followed, quality is acceptable, and reviews are complete

PROJECT LEVEL

Quality Control

1. ESTABLISH EXPECTATIONS

Responsibility: Parametrix Project Manager
*Lindsay Yamane, Quality Assurance Manager**

- Meet with ODOT and Local Agency Staff to define expectations
- Communicate quality expectations among team members
- Establish a shared commitment with every team member

2. CONDUCT INDEPENDENT REVIEWS

Responsibility: Parametrix Project Managers *(oversees process)*
Technical Discipline Experts
(10+ years experience in field)

- Schedule and budget internal/external QC reviews of all deliverables
- Perform independent senior reviews per current ODOT office practice and at scheduled intervals
- Hold comment resolution meetings to identify appropriate solutions

3. PERFORM CROSS-DISCIPLINE, ENVIRONMENTAL COMPLIANCE, AND CONSTRUCTABILITY REVIEWS

Responsibility: Parametrix Project Manager *(oversees process)*
Technical Discipline Experts
(10+ years experience in field)
Construction Project Manager

4. DOCUMENT QUALITY REVIEWS

Responsibility: Parametrix Project Manager
*Lindsay Yamane, Quality Assurance Manager**

- Adhere to ODOT and Parametrix guidelines for preparing QC documentation
- Prepare reviewer checklist for each technical discipline signed by the designer, checker, and backchecker
- Document that comment responses are complete and edits incorporated into deliverables and reviewed

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**Footnote to Figure 5:*

As principal-in-charge and quality assurance manager, Lindsay Yamane will support Brian by providing independent quality audits to ensure that the quality management plan is being followed and by reinforcing quality expectations.

D. Evaluating Construction Budgets

Providing Early Construction Estimates: Building on a History of Success

Describe how and when you would determine that a client's total construction budget was insufficient to meet the objectives of a given project and the approach you would use to demonstrate that to the client as early as possible during the PE-Design phase.

Parametrix has developed on-target construction budgets for ODOT since 1996 (even longer for local agencies). We understand the local bid climate and will use that experience early in the design process to evaluate construction budgets.

Figure 6 shows the Parametrix track record producing the final engineer's estimate on our last 8 Oregon local agency projects compared to contractor bids. Parametrix's estimated costs were continuously between the high and low bidders, providing solid cost estimates that ODOT or the local agency can use for project budgeting and decision making.

Immediately after NTP, we will check the project prospectus to determine that the cost estimate is adequate to meet all the project design objectives. Since minimal quantity information is available at this point, we will use typical unit costs for major items like bridges, walls, utilities, or roadways. We will estimate construction costs using all-inclusive linear or two-dimensional unit costs. For items less costly or more difficult to estimate quantities, we will apply typical percentages to estimate a cost, and then apply a contingency to the entire estimate.

If our project cost estimate check is not within a reasonable range of the prospectus estimate, we will immediately contact the ODOT or local agency PM to discuss these findings and determine a course of action.

We will perform the next cost estimate evaluation after selection and refinement of the alternatives. Parametrix will use a standard cost estimating template for items where quantities have been developed, and use unit costs or typical percentages for other items. Again, if our alternative cost estimates are not within a reasonable range of the project prospectus estimate, we will immediately contact ODOT/LPA to discuss findings and determine a course of action.

By performing the cost evaluations highlighted above, Parametrix and ODOT/LPA will resolve project cost issues prior to the DAP by either reducing or removing project elements or adjusting project limits.

Figure 6: Parametrix Estimate Compared to Bids

For our last 8 Oregon local agency projects

PROJECT	CLIENT	LOW BID	PARAMETRIX ESTIMATE	HIGH BID
Canaan Rd.	Columbia Co.*	$334,098	$391,424	$465,725
Scappoose-Vernonia Rd.	Columbia Co.*	$577,249	$705,879	$958,958
Roy Creek	Tillamook Co.	$653,336	$809,338	$926,525
Slab Creek	Tillamook Co.	$196,573	$209,741	$218,343
Tanner Creek Culvert	Washington Co.	$248,490	$312,832	$421,630
Apiary Rd.	Columbia Co.*	$641,511	$681,781	$833,833
Columbia Blvd.	St. Helens*	$165,767	$218,897	$220,113
Clackamas River Bridge	Clackamas Co.	$8,849,060	$10,088,367	$10,418,673

**Completed through the ODOT LPA contract*

2.2.2 Proposer's Cost Effectiveness for PE-Design

A. Controlling Costs

■ Specific Cost-Saving Efforts

Describe the specific efforts Proposer makes to ensure tasks and deliverables are completed in the most cost-effective manner.

Because Parametrix provides multidisciplinary services in-house, we offer value-added, economical solutions for each deliverable. We incorporate the following specific actions to ensure cost effectiveness, from planning through construction, with a focus on three primary activities.

❶ Planning for Successful Delivery

Identify the critical project needs. Use our multidisciplinary experience to identify ODOT's and the LA's preferences, risks, and constraints then develop a delivery plan for a successful, cost-effective final product.

Select the right team. Choose professionals with an appropriate level of experience who understand the design requirements and delivery expectations.

Develop a detailed schedule. Identify critical task linkages, review periods, and environmental requirements then manage the schedule to minimize costly project delays.

Establish team buy-in. Confirm responsibilities to deliver each task on-budget. Select the most qualified technical staff from our multidisciplinary team to prepare the project scope, building early ownership for delivery of that plan.

❷ Designing for Cost Savings

Deliver a design to fit the need. Consider what is practical to meet project and client expectations.

Consider future costs. Suggest design enhancements that could reduce future maintenance and lifecycle costs.

Deliver the appropriate level of effort. Continually monitor that the planned level of effort will be delivered to stay within the budget.

Well-defined and well-communicated expectations keep delivery costs under control.

❸ Communicating Expectations

Monitor progress and provide direction. Assure quality and review costs by communicating delivery plan expectations in weekly status meetings and periodic personal check-ins.

Employ a multidisciplinary approach. Ensure cross-discipline communication to maintain efficient progress which reduces time and cost.

Communicate using technology. Meet critical delivery deadlines and avoid costly delays by sharing project delivery reminders through project websites, emails, and conference calls.

Accountability and a clear project understanding are better achieved with continual personal communication.

■ Managing Expenses

Explain how Proposer ensures all travel, lodging, and per diem expenses are as low as possible.

While delivering the ODOT OTIA bridges environmental baseline reports for hundreds of bridges across Oregon, we developed cost-effective methods to perform work in multiple locations simultaneously while containing travel costs.

Travel only when needed. Assign work to qualified staff located in offices close to a project and use phone/video conferencing when possible.

Work with employees and subconsultants near the site. Our selected subconsultants are in close proximity to each region for survey and mapping to minimize costly travel and lodging expenses.

Share costs between projects. Minimize travel costs by combining travel and sharing expenses for multiple project meetings.

Avoid overnight stays. If travel is needed, complete the trip within a single day, eliminating lodging costs and minimizing per diem expenses.

2.2.2 Proposer's Cost Effectiveness for PE-Design, continued

Plan ahead, and ask for government rates. Rates are usually better when trips are scheduled in advance. We are a certified government contractor and are approved to get government rates.

Reduce the number of site visits through careful planning. We reduce the need for travel by using cameras and checklists to collect a comprehensive set of data and by double-checking data to avoid return site visits.

MINIMIZING SITE VISITS

EXAMPLE: CITY OF PENDLETON TSP

Parametrix successfully completed a project for the City of Pendleton with a minimum number of site visits because our team carefully documented site conditions using a video camera.

EXAMPLE: ODOT TGM CONTRACT

For our Transportation and Growth Management contract with ODOT, we developed a site checklist of all data needed for each project so staff did not have to return to the site.

Carpool to minimize travel costs and provide built-in project meeting time. Since project teams often travel together, trips provide productive, focused work time.

Provide our staff with the tools needed to be productive in the field. GPS units and laptops are available to staff for check out for site visits. Company laptops are configured so employees can work remotely with access to all of the same features available on their desktops.

B. Developing Estimates

■ Developing the Estimate for Services

Describe the specific methods, tools, and processes Proposer uses to develop the estimate for Services.

Parametrix uses a multistep approach to estimate services, beginning with a definable work breakdown structure. Each task is then more easily understandable and the effort more accurately definable. Project managers use the approach defined below to create an accurate estimate by drawing on the successful experience of each technical lead with similar tasks.

- Based on experience with similar projects, we first ***estimate the required work hours needed*** to complete each task. We compare the estimated hours to past projects to confirm the estimate is realistic, then we calculate a cost estimate. To ensure efficiency and cost minimization, we then adjust the estimate based on answers to questions such as: Which person provides the greatest value for the required work? Can another team member do this work more efficiently? Are there opportunities to adjust the schedule to avoid requiring more staff or overtime?
- Because comparing costs based on different estimating approaches helps to refine and confirm the estimate, we also ***estimate the cost using a typical cost per sheet*** or hours per sheet. This estimate is based on historical data for each type of sheet or discipline to be used. The type and number of sheets is estimated using past ODOT or local agency projects as a guide and the ODOT Plans Preparation, Roadway Design, or Bridge Engineering Manuals as references. These costs or hours are entered into a spreadsheet that is later used as backup information to prepare ODOT's Breakdown of Costs budget sheet for each work order contract.
- As a higher level check on how reasonable the total design or construction services fee is, a third estimate is to calculate a lump sum PE and CE cost based on a ***percentage of total construction costs***.

■ Ensuring Fairness

How does Proposer ensure that estimates for Services are fair and reasonable to both the government and Proposer?

To ensure fairness, Parametrix rates are calculated in accordance with Federal Acquisition Regulations (FAR) as audited by WSDOT. We also compare level of effort to other similar projects to determine that proposed work is in line with industry standards, and select the most cost-effective staff that are qualified to perform the required work. Finally, we incorporate contingency tasks to allow flexibility, but only use contingency dollars as needed and approved by ODOT or the LPA.

2.2.3 Project Team & Qualifications for PE-Design Services

A. Experience of Project Managers with Interdisciplinary Teams

Describe experience (which may include experience while working for the Proposing firm or while working for other firms) of Project Manager(s) with similar interdisciplinary teams.

Figure 7

Each individual in this table is a Parametrix employee, reflecting our ability to manage multidiscipline projects in-house. To offer the most appropriate, cost-effective experience, the managers shown offer a range of experience, from mega-project management to addressing the needs of local agencies for smaller projects.

PROJECTS MANAGED	DISCIPLINES MANAGED																
	Project Management	Survey and Mapping	Geotechnical Investigations	Hydraulics/Stormwater	Preliminary Design	Hazardous Materials	Env. Analysis/Documentation	Cultural/Historic/Archaeological	Public Involvement	Permitting	Right-of-way	Final PS&E	Traffic Control/Signing	Utility Coordination	Landscape Architecture	Bidding Assistance	Construction Services
■ BRIAN BIERWAGEN, PE, PMP | Contract/Project Manager* Brian has spent his entire 30-year career working on public agency transportation projects. He is the transportation division manager in Oregon. He has managed multidiscipline project teams throughout preliminary engineering and construction.																	
I-5: Creek & County - Central Point (Bundle 302)	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦		♦	♦	♦	♦	♦	
Port Westward Roadway Improvements	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦
I-205: Willamette River - Pacific Highway (I-5)	♦			♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦		
Scappoose-Vernonia Slide Repair	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦
Canaan Road Safety Project	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦
■ BILL CIZ | Project Manager* Bill's 35 years of experience encompass planning to project development, operations, and construction. He worked for ODOT for many years and thoroughly understands local, state, and federal policies, procedures, and standards for all types of transportation projects.																	
Newberg Dundee Bypass	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦		♦	♦		♦	♦	♦
Regions 2 and 4 Variable Message Signs	♦	♦	♦		♦					♦		♦	♦			♦	♦
US-26: Zoo-Sylvan Climbing Lane†	♦	♦							♦	♦			♦	♦			♦
■ DAN MCINTIER, PE | Project Manager/Structures Task Lead* Dan has 29 years of experience providing project management and structural design for various bridges, transportation facilities, and other complex structures. He has managed projects in all five regions.																	
Roy Creek Culvert Replacement	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦		♦	♦	♦	♦	♦	♦
Fishhawk Creek Bridge Replacement	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦		
Bundle 304 Bridge Replacements	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦		♦	♦	♦	♦	♦	♦
Bundles 204 and 213 Bridge Repairs	♦	♦	♦	♦	♦	♦	♦	♦		♦	♦	♦	♦	♦		♦	♦
Hudson Park Bridge Replacement	♦	♦	♦	♦	♦	♦	♦	♦		♦		♦	♦	♦	♦		

** This individual is also included in our key staff form, enclosed with this proposal.*
† Project completed while employed by ODOT.

2.2.3 Project Team & Qualifications for PE-Design Services, continued

Figure 7, continued

PROJECTS MANAGED	DISCIPLINES MANAGED: Project Management	Survey and Mapping	Geotechnical Investigations	Hydraulics/Stormwater	Preliminary Design	Hazardous Materials	Env. Analysis/Documentation	Cultural/Historic/Archaeological	Public Involvement	Permitting	Right-of-way	Final PS&E	Traffic Control/Signing	Utility Coordination	Landscape Architecture	Bidding Assistance	Construction Services
■ LINDSAY YAMANE, PE, PMP | Project Manager Lindsay is a program and project manager with 29 years of project development, design, delivery, and construction experience associated with large, complex transportation projects including highway corridors, bridges, and interchanges. His particular expertise is guiding multidiscipline teams in executing simultaneous work activities from environmental documentation to final PS&E and construction administration.																	
SR 520 Bridge Replacement and HOV Program	♦	♦	♦	♦	♦	♦	♦	♦	♦		♦		♦	♦	♦	♦	
Monterey Ave/I-205 Overcrossing, Stevens-Otty Rd	♦	♦	♦		♦				♦	♦	♦		♦	♦			
Tillamook River/Bewley Creek Rd Bridge	♦	♦	♦	♦	♦		♦		♦	♦	♦	♦	♦	♦		♦	♦
Tenmile Creek Bridge/Hilltop Drive, Coos County	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦
Hillsboro LRT Extension, Early Structures Contract	♦	♦	♦	♦	♦	♦	♦		♦	♦	♦	♦	♦	♦		♦	♦
■ BOB MURRAY, PE, SE | Project Manager Bob has more than 35 years of professional experience on every aspect of structural and bridge-related projects. He has managed the design and construction of over 60 local agency bridges in his career.																	
Stavis Bay Bridge Replacement	♦	♦	♦	♦	♦		♦		♦	♦		♦	♦	♦	♦	♦	♦
Zig Zag River Bridge	♦		♦	♦	♦					♦		♦	♦				♦
Seabeck Creek Bridge	♦	♦	♦	♦	♦		♦			♦		♦					♦
Barker Creek Bridge	♦	♦	♦	♦	♦		♦			♦		♦	♦				♦
Steele Creek Bridge	♦	♦	♦	♦	♦		♦			♦	♦	♦	♦	♦		♦	♦
■ MIKE PYSZKA, PE | Project Manager Mike has 14 years of experience managing transportation projects, beginning his career working for a local agency (Clackamas County). His current work includes managing multiple disciplines for the replacement of a bridge across the Clackamas River.																	
Clackamas River-Springwater Road Bridge	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦		♦
Columbia County OTIA III Bridges	♦	♦	♦	♦	♦		♦			♦	♦	♦	♦	♦	♦	♦	♦
Port of Cascade Locks Marine Park Access Plan	♦	♦			♦			♦	♦								
Mirror Lake Restoration	♦	♦		♦								♦				♦	♦
I-5 Solar Array	♦				♦					♦		♦	♦				♦

■ RANDY REEVE | Environmental Task Lead*

Randy has 31 years of experience, including negotiations with agencies to lift in-water work and other restrictions in exchange for measures which often better protect the environment, while reducing costs. He provides practical solutions for environmental permitting and construction. His management services will be best suited to projects that require addressing significant environmental issues.

**This individual is also included in our key staff form, enclosed with this proposal.*

B. Parametrix Service Types

■ Qualifications and Experience

Describe the types of Services Proposer (prime consultant's firm) has qualifications and experience to self-perform.

Qualifications

Parametrix is a full-service engineering, planning, and environmental science firm with approximately 350 employee-owners based in Oregon, Washington, and Boise, Idaho (serving Region 5), with additional staff located in other western states.

The location and number of Parametrix staff provide both quick response times and local knowledge for projects across Oregon. Our services in a broad range of disciplines provide coverage for the needs of the projects expected under this contract, as outlined in the STIP.

Figure 8

This table lists the services that Parametrix is qualified to self-perform, including the approximate number of Parametrix staff who are qualified to provide these services.

PROJECT SERVICES/TYPES	PARAMETRIX STAFFING LEVELS
Project Management*	25
Preliminary Design/Final PS&E†	53
Bridge and Structures Design	10
Hydraulic Studies†	16
Survey and Mapping	19
Hazardous Materials	22
Env. Analysis/Documentation	31
Cultural/Historic/Archaeological	14
Public Involvement	18
Permitting	25
Traffic	17
Landscape Architecture	5
Bicycle/Pedestrian/Trails	16
Construction Services	20

* Total does not include PMs for other disciplines (e.g. planning).
† Totals do not include engineers/designers who primarily serve water or wastewater clients.

Experience Serving ODOT and Local Agencies

Parametrix has completed dozens of work orders or projects for ODOT in the last 10 years, ranging in size from mega-projects like the ***Newberg Dundee Bypass*** and the ***Statewide Bridge Delivery Program*** to small culvert replacements for LPAs. Many of these projects were completed under on-call contracts with ODOT. This level of experience with ODOT means that we can efficiently complete full service and local agency projects within ODOT guidelines.

Parametrix ***experience with ODOT and city or county governments*** in Oregon includes a total of ***323*** separate projects. This does not include any work we have completed as part of a larger consultant team—it includes ***only work contracted directly with these agencies***.

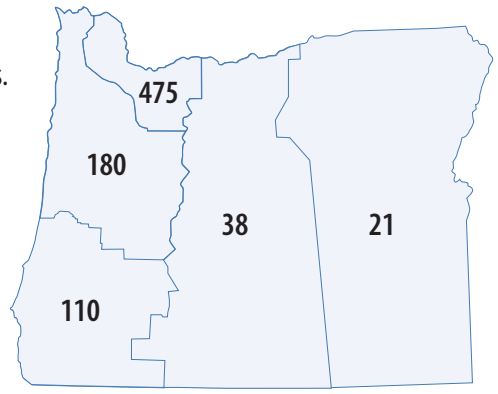
SUCCESSFUL WORK WITH LOCAL AGENCIES

COLUMBIA COUNTY

An example of our successful work with local agencies is our long-term relationship with Columbia County. Our proposed manager for this contract, Brian Bierwagen, has been completing projects for the County for more than 12 years, including work on more than a dozen separate work orders. Work has included a wide variety of multidiscipline tasks such as public involvement, trail planning, environmental permitting, roadway and bridge design, signal design, utilities, stormwater, and construction services.

Figure 9: Statewide Coverage: All Client Types

Parametrix has established relationships with clients throughout Oregon, from Brookings in the southwest corner to Pendleton and Ontario in the east. The map below shows ***total*** numbers of projects completed across the state, including projects for all clients and work as part of other consultant teams.

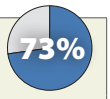


2.2.3 Project Team & Qualifications for PE-Design Services, continued

Examples of Multidiscipline Projects

Provide 2 or 3 examples of multi-discipline (i.e., full-service) transportation design projects started in the last 5 years where Proposer was responsible for 51% or more (based on cost) of the PE-Design phase work under the contract.

PROJECT 1: Fishhawk Road Bridge | Location: Columbia County

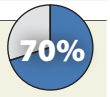


Tasks that were self-performed:

- *Environmental Field Studies:* Wetlands, T&E species, hazmat
- *Environmental Permitting:* Negotiated exemption to SLOPES IV for cost saving
- *Traffic Control:* Stage construction to access secluded properties
- *Bridge Design:* Designed 2 stages using existing bridge
- *Hydraulics:* Studied lake impacts from creek crossing
- *Stormwater:* Required latest DEQ standards
- *Roadway:* Designed to facilitate residential neighborhood
- *Public Involvement:* Used neighborhood meetings to inform stakeholders

Year started: 2010	***Total contract dollar amount:*** $322,832	***Percentage of the contract dollars that were not subcontracted:*** 73%	***Key Staff:*** Brian Bierwagen (PM), Dan McIntier (PM), Jim Phillips, Doug Gates, Mike Pyszka, Randy Reeve, Vince Shevham

PROJECT 2: Roy Creek Culvert Replacement | Location: Tillamook County

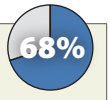


Tasks that were self-performed:

- *Environmental Field Studies:* Wetlands, T&E species, & haz mat
- *Environmental Permitting:* Worked directly with agencies for permits
- *Traffic Control:* Designed two stages to maintain roadway access
- *Bridge Design:* Sequenced for two-stage construction
- *Hydraulics:* Studied creek to river characteristics
- *Stormwater:* Required latest DEQ standards
- *Roadway:* Designed to facilitate residential and business users

Year started: 2011	***Total contract dollar amount:*** $88,829	***Percentage of the contract dollars that were not subcontracted:*** 70%	***Key Staff:*** Dan McIntier (PM), Jim Phillips, Doug Gates, Randy Reeve, Vince Shevham

PROJECT 3: Canaan Road Safety Project | Location: Columbia County



Tasks that were self-performed:

- *Environmental Field Studies:* Wetlands, T&E species, & haz mat
- *Environmental Permitting:* Worked directly with agencies for permits
- *Traffic Control:* Phase construction with flagging to maintain through traffic
- *Stormwater:* Provided treatment/conveyance design to reduce grading
- *Guardrail:* Evaluated design requirements to minimize costs
- *Roadway:* Design exception allowed to match existing and reduce cost

Year started: 2011	***Total contract dollar amount:*** $155,366	***Percentage of the contract dollars that were not subcontracted:*** 68%	***Key Staff:*** Brian Bierwagen (PM), Jim Phillips, Doug Gates, Randy Reeve, Vince Shevham

C. Key Staff Resumes

Using the Key Staff Resumes form, provide the requested information for the proposed Key Staff.

Our key staff resumes are enclosed with our proposal as requested in the RFP.

2.2.5 References for PE-Design Services

Provide references for the 4 most recent, relevant projects that were completed by the Proposer through final bid-ready PS&E in the last 5 years.

Our project reference forms are enclosed with our proposal as requested in the RFP.

2.2.6 Proposer's Project Management for CA/CEI Services

A. Proposer's Management and Organizational Structure

Management Structure and Chain of Command

Describe Proposer's management and organizational structure, and how that structure aids the delivery of project Services - including chain of command.

Contract manager Brian Bierwagen will be the primary point of contact for our flexible, ODOT-experienced multidisciplinary team, with a record of successful, timely delivery of all construction phases.

- ***Early commitment to success.*** Brian will work with the team early in the PE phase to identify the best-qualified construction project manager (CPM), certified inspector(s), and QCCS. This construction team will provide constructability reviews during design, while building an understanding of and commitment to the project.
- ***Full Service Team.*** Construction management is a cornerstone of our business. Each of our CPMs has over 20 years of experience, including constructing projects for LPAs and DOTs—a majority of them for ODOT. Our organizational chart demonstrates comprehensive coverage in construction management, inspection, documentation, environmental compliance, testing, and quality assurance.
- ***Strengthened by Subconsultants.*** Our team adds subconsultants in critical roles—such as providing CZE's expertise as Quality Control Managers, Construction Manager, and Inspectors—providing flexibility to cover the state, address specific project requirements, or meet disadvantaged business goals.

Figure 10 illustrates how our chain of command facilitates completion of quality checks and documentation per the ODOT Construction Manual. It also shows how the CPM is supported to monitor and document the contractor's operations.

Selection and Management of Subcontractors

Describe how subcontractors will be selected for specific WOC assignments, utilized and managed to complete the projects.

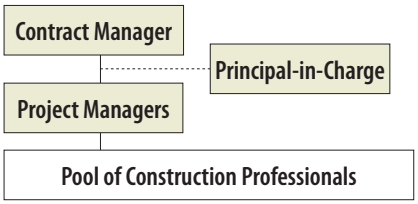
Parametrix has selected subconsultants we trust to deliver high quality and meet contract requirements. We will consider the following guidelines while selecting teams to meet specific project requirements:

- ***Technical expertise,*** including the required ODOT certifications.
- ***Similar experience with ODOT***, including knowledge of ODOT and/or LAG manual requirements.
- ***Availability*** to deliver the project on schedule and within budget.
- ***Proximity to the project.*** For tasks that require daily travel to the site, we have selected team members to cover all 5 ODOT regions.
- ***DBE partners.*** We will maximize the expertise of our DBE and MWESB partners, providing opportunities for meaningful involvement.

Subconsultants will be an integral part of the project team and will be required to follow Parametrix quality control procedures.

Figure 10: Management Structure

Project management structure/ chain of command



How our structure aids delivery: roles and responsibilities

CONTRACT MANAGER
Brian Bierwagen, PE, PMP
- Serve as primary point of contact
- Select project specific teams
- Prepare WOC/BOC with construction team

PRINCIPAL-IN-CHARGE
Lindsay Yamane, PE, PMP
- Client check-ins to ensure satisfaction
- Senior oversight supporting issues resolution and negotiations

QUALITY CONTROL MANAGER
Fred Cooper, PE (Cooper Zietz)
- Oversees Construction QC program
- Confirms QA testing is completed
- Performs internal QA audits

CONSTRUCTION PROJECT MANAGER
See Figure 11 for List of Names
- Leads construction team
- Construction administration
- Day to day project oversight
- Responsible for project delivery/quality
- Constructability reviews during PE phase

PROJECT CONTROLS
See Figure 11 for List of Names
- Quality/quantity documentation
- Progress estimates and payments
- Coordinate RFIs & submittals
- Schedules QCCS review of documentation

CONSTRUCTION INSPECTOR
See Figure 11 for List of Names
- Field construction oversight
- Material certifications/quality documentation
- Quality/quantity documentation
- Environmental compliance

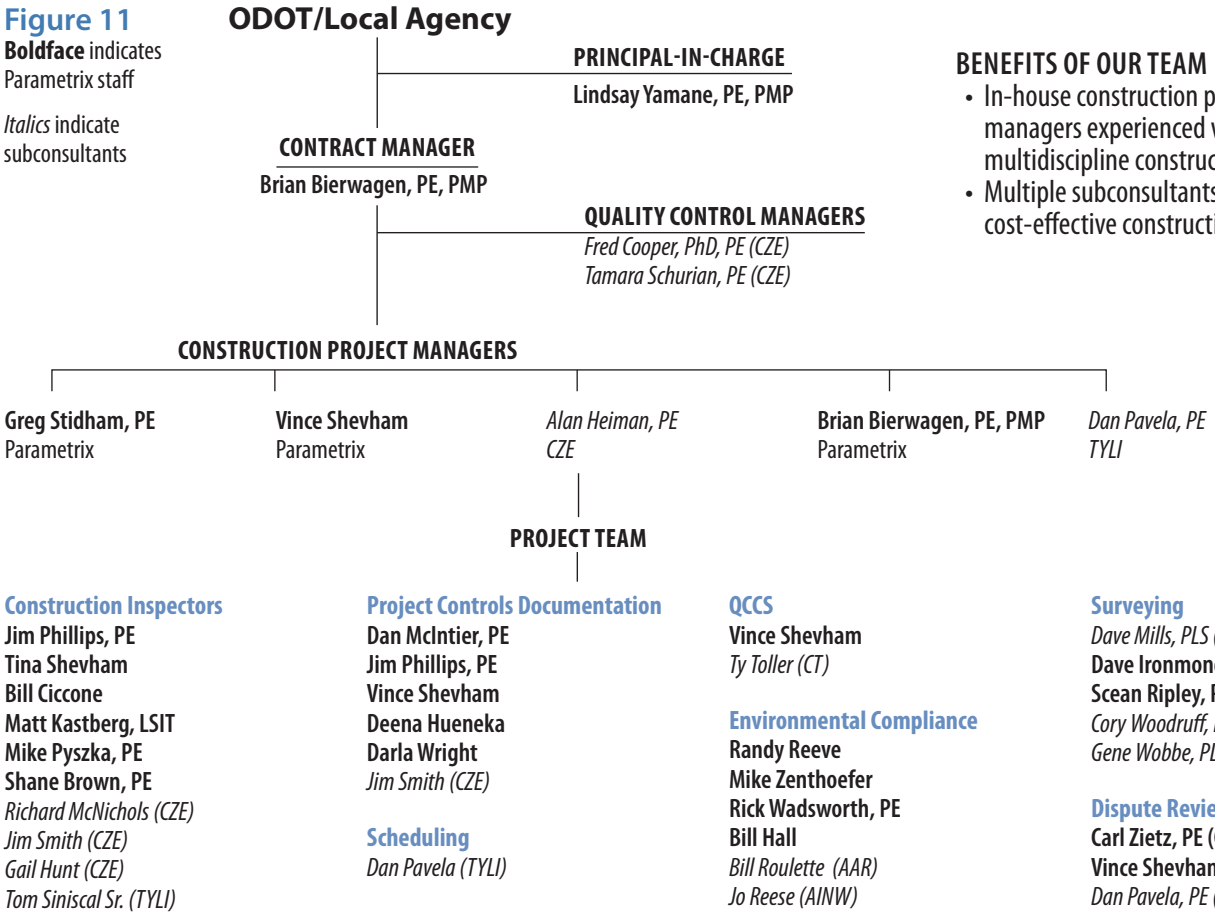
2.2.6 Proposer's Project Management for CA/CEI Services continued

Organization Chart

Include a list or org chart showing key staff of the prime and all subconsultants and their proposed role/discipline for CA/CEI Services.

Figure 11
Boldface indicates Parametrix staff

Italics indicate subconsultants



BENEFITS OF OUR TEAM

- In-house construction project managers experienced with multidiscipline construction in Oregon.
- Multiple subconsultants to provide cost-effective construction services.

Construction Inspectors
Jim Phillips, PE
Tina Shevham
Bill Ciccone
Matt Kastberg, LSIT
Mike Pyszka, PE
Shane Brown, PE
Richard McNichols (CZE)
Jim Smith (CZE)
Gail Hunt (CZE)
Tom Siniscal Sr. (TYLI)

Project Controls Documentation
Dan McIntier, PE
Jim Phillips, PE
Vince Shevham
Deena Hueneka
Darla Wright
Jim Smith (CZE)

Scheduling
Dan Pavela (TYLI)

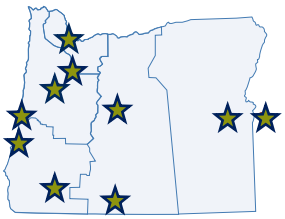
QCCS
Vince Shevham
Ty Toller (CT)

Environmental Compliance
Randy Reeve
Mike Zenthoefer
Rick Wadsworth, PE
Bill Hall
Bill Roulette (AAR)
Jo Reese (AINW)

Surveying
Dave Mills, PLS (DMC)
Dave Ironmonger, PLS
Scean Ripley, PLS
Cory Woodruff, PLS (SEF)
Gene Wobbe, PLS (WAI)

Dispute Review/Resolution
Carl Zietz, PE (CZE)
Vince Shevham
Dan Pavela, PE (TYLI)

Locations of team offices



Subconsultants and Roles

- Applied Archaeological Research (AAR) *Archaeology/Cultural*
- Archaeological Investigations NW (AINW) *Archaeology/Cultural*
- Carlson Testing (CT) *QA & Inspection*
- * Casso Consulting (Casso) *Civil/Roadway*
- * Cogito Partners (CP) *Public Involvement*
- * Cooper Zietz Engineers, Inc. *(CZ) Construction Management*
- * Dave Mills Consulting (DMC) *Survey/Mapping*
- DKS Associates (DKS) *Traffic*
- Foundation Engineering, Inc. (FEI) *Geotechnical*
- GeoDesign (GD) *Geotechnical*
- GRI *Geotechnical*
- * Jeanne Lawson Associates (JLA) *Public Involvement*
- Kittelson & Associates (KA) *Traffic*
- * Nevue Ngan (NN) *Landscape*
- * Rhino One (RO) *Geotechnical*
- Shannon & Wilson (S&W) *Geotechnical*
- SLR International (SLR) *Noise/Air*
- Stuntzer Engineering & Forestry (SEF) *Survey/Mapping*
- Traffic and Transportation Solutions (TTS) *Traffic*
- TY Lin (TYLI) *Civil/Rd/Bridge*
- Wallace Group (WG) *Geotechnical*
- Wobbe & Associates Inc. (WAI) *Survey/Mapping*
- ZCS Engineering, Inc. (ZCS) *Civil/Rd*

*** Indicates DBE/MWESB Firms**

Note: Not all of these subconsultants are listed in this organization chart for construction phase services. However, they are part of our team for PE, and we will add their skills as needed during construction.

B. Meeting Project Schedules

Expediting Schedules

Describe Proposer's methods of coordinating and expediting all elements of projects to meet delivery schedules without sacrificing quality.

Our role during CA/CEI is to provide daily coordination of the Contractor and their subs. The responsibility of the CPM is to insure that QC testing and inspection is completed as required in the ODOT Construction Manual and specifications, and that nonconformances are addressed in a timely manner. The CPM can expedite the contractor's delivery schedules by providing the following:

- ***Early communication of goals and expectations.*** Conduct pre-construction meeting with Contractor(s), Agency staff, utilities, and stakeholders. Provide a detailed discussion on submittal requirements, schedule constraints, environmental regulations, and overall contractor responsibilities.

COMMUNICATING GOALS AND EXPECTATIONS

DOCUMENTATION AIDS COMMUNICATION

Prior to the pre-construction meeting, Parametrix provides project-specific printed copies of time-dependent submittals for labor, materials, subcontractor forms, monitoring reports, and QA/QC requirements for each bid item. This supplements the *Responsibility for Completion & Distribution of ODOT Required Forms* spreadsheet to document and outline delivery schedule, responsibilities, and expectations.

- ***Continuous monitoring.*** Conduct weekly construction safety and progress meetings. Require updated 3-week look-ahead schedule along with overall project schedule to identify inspection and survey resource needs, and head off material discrepancies before placement.
- ***Provide and support experienced, available, and responsive, certified ODOT Inspectors.*** Our team includes certified staff (see ***Figure 12***) with experience in each ODOT Region. Our experienced certified inspectors understand construction methods and ODOT inspection and documentation requirements. They can communicate procedures to the contractor to expedite the schedule and improve quality.
- ***Identify schedule inefficiencies for Contractor's consideration.*** Experienced construction schedulers will provide contractor schedule reviews to evaluate where durations may be excessive or inadequate to feasibly stay on schedule. If a project schedule is at risk, Parametrix has experience with a wide variety of project scheduling tools, including Primavera Project Planner and MS Project to assist in identifying and suggesting schedule efficiency opportunities.

In the last 2 years alone, Parametrix has provided CA/CEI services on more than 10 transportation projects in Oregon. On many of the smaller rural projects, low bid contractors, utilities, and agencies, may not have the experience constructing projects under the ODOT LAG Manual requirements.

Flexibility in Schedule Management

Describe Proposer's flexibility and approach to making adjustments to schedules or staffing in order to meet a schedule.

Parametrix has selected a team of subconsultants with the resources, certifications, and experience for providing CA/CEI in all ODOT Regions for example Cooper Zietz provides CEI services throughout Oregon and our other inspection subs statewide have the certified inspectors and surveyors available for local assignments. In addition to these subconsultants, Parametrix can draw on a pool of more than 20 additional construction managers, inspectors, and engineers available from our other northwest offices.

Figure 12 on the following page shows the number of construction-phase staff available to our team, as well as the relevant certifications provided.

Schedule status and adjustments will be defined by an overall project schedule and confirmed or

adjusted at weekly coordination meetings with the prime contractor and subcontractors, local agency and utilities.

Each week the 3-week look-ahead schedule will identify inspector demands or QC testing requirements due to changes in field conditions, equipment, production, and requirements. With our teams depth of staff, additional resources are available and assigned as needed to cover the Contractor's planned work. By anticipating the Contractor's progress and their planned three-week schedule, nothing will be missed and a quality product will be installed.

Figure 13 highlights typical reasons for schedule delays during construction, and shows examples of ways that Parametrix has mitigated for these factors.

Figure 12: Construction Staff and Certifications

	Number of Construction Staff	General (CGI)	Bridge (CBCI)	Drilled Shaft (CDSI)	Env./ Erosion (CECI)	Pavement (HMAC)	Traffic Signal (CTSI)
Parametrix	20	♦	♦	♦	♦	♦	♦
Cooper Zietz	10	♦	♦	♦	♦		
TY Lin	5	♦	♦	♦	♦	♦	
Stuntzner	4	♦			♦		

Figure 13: Typical Reasons for Schedule Delays—Examples of Successful Approaches

What are some potential reasons for schedule delays?	What are the project impacts?	What are some strategies Parametrix has implemented to compensate for potential impacts?
The contractor delivery schedule includes excessive durations	Potential to miss regulatory in-water windows, material deliveries, or completion deadlines	• Prepare schedule and demonstrate potential efficiencies to contractor • Evaluate design modifications to accelerate schedule
Unforeseen conditions (e.g. geotechnical, utility, political)	Requires design revisions, cost adjustments	• Quickly meet with technical specialists to identify issues • Develop solutions/recommendations to ODOT/LA
Equipment, material, or staff not available	Schedule and quality impacts	• Identify design modifications using available acceptable resources
Weather delays	Construction delay, mitigation and/ or repair	• Site visit to identify impacts and mitigation strategies • Provide additional staff to accelerate schedule
Construction quality not acceptable	Delay due to removal, replacement, and/or evaluation	• Provide testing, inspection, documentation, and QCCS recommendations
Design changes	Cost and schedule impact during evaluation and design	• Quickly provide design evaluation and recommendations • Develop independent cost and schedule evaluation for comparison to contractor estimates

C. Proposer's Quality Control Procedures

■ Delivering Quality Products: Beginning with Defined Procedures and Policies

Provide a summary of Proposer's Quality Control procedures and policies for CA/CEI Services.

High-quality project delivery is our number one goal for every client and every project. To achieve this goal, Parametrix prepares a contract-specific quality management plan (QMP) that describes the processes, procedures, and documentation required by our quality assurance/quality control (QA/QC) program. The QMP is an integral part of our project management plan. Its purpose is to ensure that all technical and administrative professionals responsible for work products and deliverables understand our commitment to quality.

The QMP enables the team to:

- Understand the project, its goals, and our commitment to meeting our clients' needs for quality, scope, budget, and schedule.
- Apply technical guidelines, industry standards, and detailed QA/QC procedures for the effort.
- Respect, implement, and comply with the QA/QC process developed for the project.

To ensure that the QMP and the details of the QA/QC plan are followed, Parametrix assigns a quality manager as appropriate for each construction work order. To fill that role, we have selected ***Fred Cooper, PhD, PE,*** a senior construction manager, and ***Tamara Schurian, PE,*** a senior civil engineer and construction manager. Both Fred and Tamara are certified Quality Control Managers and are ready to fill this critical role.

Our Quality Control Program is based on the following guiding principals:

Identify and address discrepancies early

- Visit the project and the material sites, noting any concerns.
- Schedule time to prepare all documents, equipment, and tools.
- Meet with the construction manager and design staff to address questions, goals, and intent.

Proactively engage design and construction team

- Foster and maintain proactive communication with contractors.
- Obtain support from construction project manager, processional engineer of record, and technicians throughout construction.

Confirm construction meets bid documents

- Confirm acceptance of materials prior to placement.
- Conduct independent checks of all material quantities.
- Complete reports and documents daily.

Provide thorough and complete quality documentation

- Require weekly review and signing of all documents by inspectors and senior reviewers.
- Require internal review of work documents by senior staff and construction project manager prior to Region Assurance Specialist (RAS) audits.

Figure 14: Quality Control Procedures

Following is a summary of our QA/QC processes along with specific responsibilities for implementing the process.

CONTRACT OVERSIGHT

Responsibility: Contract Manager Brian Bierwagen will be the Oregon registered PE responsible for CA/CEI Services.

PROJECT LEVEL

PREPARATION OF BID DOCUMENTS

Responsibility: Construction Manager, Resident Engineer, Inspectors

- Review PS&E for constructability, consistency, completeness.
- Review quantities and specs.
- Compare scheduled versus historic production rates.
- Visit site and compare work zone limits to anticipated equipment and staging.
- Anticipate likely alternative contractor construction means and methods.
- Review plans and specs with field inspectors, highlight critical areas.

BID AND AWARD PERIOD

Responsibility: Construction Manager, Resident Engineer, Inspectors

- Evaluate unit bid prices and highlight unbalanced bids.
- Review contract documents for errors or evaluate the nature of the unbalancing.
- Evaluate contractor redesigns or work deletions.
- Issue contractor a list of required submittals, defined timelines, and submittal formats.
- Update ODOT Construction, Inspector, and Materials manuals.
- Set up quantity and quality documents for each bid item for each inspector.
- Conduct preconstruction meeting with contractor, agency, utilities, stakeholders.
  - » Collect and log precon submittals.
  - » Define lines of communication, team structure, and responsibilities.
  - » Emphasize project goals, regulations, and constraints.
  - » Define format and schedule of payment requests.
  - » Introduce field staff.
  - » Issue First Note.

CONSTRUCTION/FIELD INSPECTION

Responsibility: Construction Manager, QCCS, Lead Inspectors

- Proactively work with contractor and allocate QC staff to contractor's scheduled work.
- Confirm certifications of contractor's technicians.
- Evaluate construction layout and staking for controlling the work.
- Review TP & DT for performance and TCP adherence. Report daily.
- Review Erosion and Settlement Measures and report daily.
- Prepare Daily log contractor's personnel needs for anticipated work.
- Certified inspectors document (daily journal) all work and accepted materials installed.
- Complete installation sheets for all work; file with weigh tickets, material certs, photos, test summaries, etc.
- Immediately notify contractor of any non-compliance work or materials.

QUALITY ASSURANCE

Responsibility: Construction Manager, QCCS, Quality Manager

- Quality Assurance audits by Quality Manager and QCCS.
- Review documentation and coordinate with Regional Assurance Specialist (RAS).
- Coordinate field QA testing by ODOT Region.

CONSTRUCTION DOCUMENTATION

Responsibility: Construction Manager, Resident Engineer

- Log and track submittals. Return to contractor within defined periods.
- File daily field reports, material certs, and quantities, check for completeness and accuracy.
- Process Monthly Contractor payment.
- Verify labor audits and certified payrolls are in compliance to contract and EEO.
- Coordinate RFIs, field changes, POR approved redesigns, to technical expert for processing.
- Issue Second and Third Notes.

CONSTRUCTION CLOSEOUT

Responsibility: Construction Manager, Professional of Record

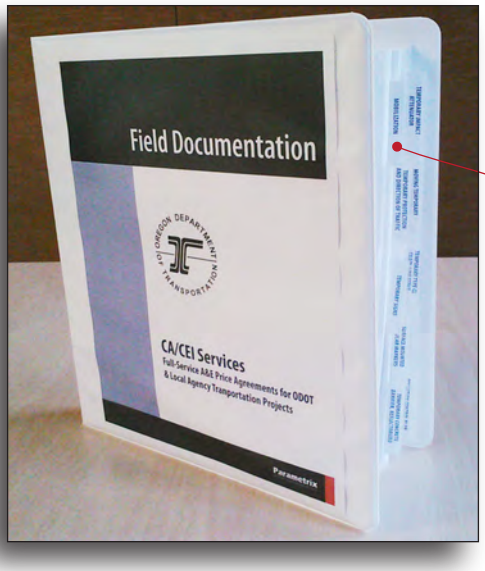
- Prepare As-Constructed Plans and prepare for final submittal.
- POR to complete load ratings, if applicable.
- Lessons learned with contractor, field staff, and design team.
- Provide final documentation to RAS.

2.2.6 Proposer's Project Management for CA/CEI Services continued

Figure 15: Example of Parametrix Field Documentation for a Typical ODOT/LPA Project

The Parametrix quality plan requires that prior to the start of construction/field inspection, field and office staff are provided with project binders, current "brown cover" specials and plans, approved contractor implementation plans, updated ODOT construction and testing manuals and instructions on project expectations, budget, and schedule.

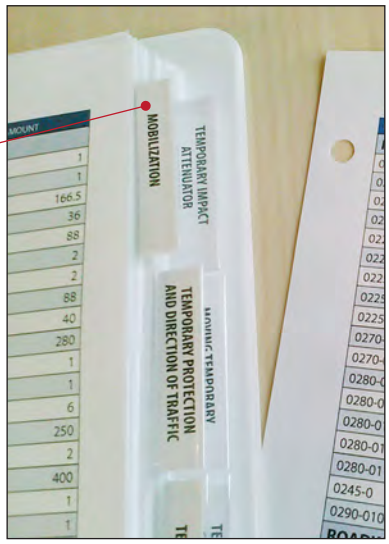
All work and materials will adhere to the ODOT Construction Manual supplemented with Parametrix QC processes/forms. All forms are completed and signed by responsible assignees.



Parametrix develops field binders, tabbed for each bid item for each inspector.

Each tab holds:

- installation sheets
- lists of material certs required/obtained
- applicable plans/ standards
- applicable specs
- QPL list
- nonfield test forms
- field test forms



Daily reports are filed chronologically with reference of installed bid items and embedded with daily photos. These documents are completed as the materials are installed into the project. These binders are checked randomly by the RE/CPM/PM.

Full-Service A&E Price Agreements for ODOT & Local Agency Tranportation Projects

ITEM NUMBER	ITEM DESCRIPTION	UNIT	AMOUNT
MOBILIZATION AND TRAFFIC CONTROL			
0210-0100000A	MOBILIZATION	LS	1
0225-0100000A	TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LS	1
0225-0102000J	TEMPORARY SIGNS	SQFT	166.5
0225-0142000E	SURFACE MOUNTED TUBULAR MARKERS	EACH	36
0225-0126000F	TEMPORARY CONCRETE BARRIER, REFLECTORIZED	FOOT	88
0225-0133000E	TEMPORARY IMPACT ATTENUATOR	EACH	2
0225-0136000E	MOVING TEMPORARY IMPACT ATTENUATOR	EACH	2
0225-0132000F	MOVING TEMPORARY CONCRETE BARRIER	FOOT	88
0225-0168000T	FLAGGERS	HR	40
0270-0114000F	TEMPORARY TYPE CL CHAIN-LINK FENCE	FOOT	280
0270-0117000E	TEMPORARY GATES	EACH	1
0280-0100000A	EROSION CONTROL	LS	1
[illegible]	CHECK DAM	EACH	6

2.2.7 Proposer's Cost Effectiveness for CA/CEI Services

A. Controlling Costs

Specific Cost-Saving Efforts

Describe the specific efforts Proposer makes to ensure tasks and deliverables are completed in the most cost-effective manner.

Our actions to ensure cost-effective delivery on CA/CEI tasks focus on these primary activities:

- ***Use a subconsultant located close to the project.*** Our team has multiple subs, with ODOT/LA experience to cost effectively cover all 5 ODOT Regions. (See ***Figure 12***, showing subconsultants with ODOT-certified inspectors and geographic coverage.)
- ***Leverage our multidiscipline in-house staff.*** By using staff cross trained in multiple areas to inspect, document, or collect information in one trip we can save travel and labor costs.

LEVERAGING MULTIDISCIPLINE STAFF

Our environmental field staff can document compliance on multiple projects in areas like wetlands, water quality, or hazardous materials in one trip. We collect photos and use predefined checklists to collect all multidiscipline data in one trip.

- ***Cover multiple projects in one trip.*** Establishing long working relationships and consistently working with the same clients has benefits in that projects are likely located to allow field staff to collaborate and combine trips to save project costs.

COVERING MULTIPLE PROJECTS IN ONE TRIP

Recently, Vince Shevham covered field inspection duties for two separate Tillamook County construction projects on the same day (the Roy Creek bridge replacement project and the Slab Creek culvert replacement project).

Managing Expenses

Explain how Proposer ensures all travel, lodging, and per diem expenses are as low as possible.

Through our many multi-location statewide contracts, we have developed cost effective means of performing work in multiple locations simultaneously, while containing travel costs:

- ***Use historical data and experience to budget for potential costs*** associated with project location and opportunities to minimize these costs. In the past, areas where we have saved money included renting vehicles rather than paying mileage, or renting an apartment instead of paying nightly lodging in areas with multiple or long-term projects. If sites are secluded, using RVs located near the project site also saves travel costs.
- ***Plan ahead, and ask for government rates.*** Rates are usually better when trips are scheduled in advance. Also, we are a certified government contractor, qualified to receive government rates. We also ask if other, better rates might be available.
- ***Avoid overnight stays.*** If travel is needed, complete the trip within a single day; lodging costs are eliminated and per diem expenses are minimized.
- ***Travel only when necessary.*** It may be possible to eliminate travel in some cases by assigning certified ODOT inspectors or surveyors located in offices close to a project. Construction coordination meetings requiring technical experts, ODOT, or Agency staff may be accomplished using phone conferencing when possible or in a location to minimize travel.

B. Developing Estimates

Specific Tool used in Estimating

Describe the specific methods, tools, and processes Proposer uses to develop the estimate for Services.

The Parametrix team has nearly 20 years of experience in developing on-target project budgets for ODOT and local agencies. We will employ these same tools and approaches for this contract because they have proved successful in developing project budgets that are fair and reasonable, both for us and for ODOT.

Because we have negotiated more than 70 ODOT contracts since the late 1990s, we know how to work within ODOT systems and ensure that estimates meet the needs of both ODOT and Parametrix. We also understand that under this contract budget negotiations may take place with local agency staff in many cases.

- Based on experience from similar past construction projects, estimate the required work hours needed to complete a task. Likely a CA/CEI amendment will be prepared prior to bidding and without an understanding of the contractors approach. Using the approach and construction schedule prepared by the CPM and technical experts to support design of the project, an estimate of hours to complete each task will be prepared. These hours include field inspection to cover the hours the contractor will need monitoring, and office engineering and administration tasks. These work hours can then be assigned to the appropriate resource to estimate the cost.
- Comparing costs based on different estimating approaches will help refine and confirm the estimate. Estimating a typical cost or hours per task based on historical data for each type of task or discipline can be used. These costs or hours are entered into an Excel spreadsheet that is later used as backup information to prepare ODOT's Breakdown of Costs budget sheet for each work order contract.
- A third approach is based on a percentage of construction cost for CE/CAI. This estimate is a lump sum cost and is useful as a higher level check of the total construction services fee.
- Complete internal checks of the budget. The construction project manager completes a first draft of the budget with input from the construction field and technical staff. It is then reviewed by a senior technical person with project related experience and then approved by the project manager's division manager.

Methods to Ensure Fairness

How does Proposer ensure that estimates for Services are fair and reasonable to both the government and Proposer?

To ensure fairness, Parametrix rates are calculated in accordance with Federal Acquisition Regulations (FAR) as audited by WSDOT. We also compare level of effort to other similar projects to determine that proposed work is in line with industry standards, and select the most cost-effective staff that are qualified to perform the required work. Finally, we incorporate contingency tasks to allow flexibility, but only use contingency dollars as needed and approved by ODOT or the LPA.

2.2.8 Project Team and Qualification for CA/CEI Services

A. Experience of Project Managers

Describe experience (which may include experience while working for the Proposing firm or for other firms) of Project Manager(s) with CA/CEI Services on projects similar in nature and complexity to the projects described in this RFP.

■ BRIAN BIERWAGEN, PE, PMP | Contract/Construction Project Manager*

Brian has spent his 30-year career working on public agency transportation projects with federal funding. He has managed the construction of numerous highway, collector, and arterial streets, as well as bicycle/pedestrian facility projects, including structures, grading, paving, drainage, and signals and illumination.

Following is a selection of projects for which Brian has managed construction-phase services.

CA/CEI Services Managed

- Port Westward Roadway Improvements Phase 1B (Columbia County)
- Scappoose-Vernonia Slide MP8.0 (Columbia County)
- Canaan Road Safety Project (Columbia County)
- Columbia Boulevard Overlay (City of St. Helens)
- Apiary Road Overlay (Columbia County)

■ GREG STIDHAM, PE | Construction Project Manager*

Greg is a senior engineer whose 29-year career includes managing both design and construction projects. His experience includes managing overall construction, including general contracts and subcontracts. He has prepared project budgets and schedules, reports, and accurate and timely invoices. Greg grew up working in his father's construction company, and he has since worked for a large national construction contractor, a local municipality, and now as a private consultant.

Following is a selection of projects for which Greg has managed construction-phase services.

CA/CEI Services Managed

- 34th Street Culvert Replacement (Tulalip Tribes)
- 116th Street NE Widening (Tulalip Tribes)
- Quil Ceda Boulevard to I-5 Interchange Reconstruction (Tulalip Tribes)
- Cape Flattery Scenic Byway Construction Management Services (Makah Tribe)
- 27th Avenue NE Reconstruction (Tulalip Tribes)
- Bay St/Frederick Ave Construction (City of Port Orchard)

■ VINCE SHEVHAM, QCCS | Construction Project Manager*

For more than 20 years, Vince has been responsible for day-to-day construction operations of multiple projects including material quality control. His experience includes 9 years of employement with ODOT, managing construction while serving as the QCCS for ODOT Region 5. Following construction, he has experience analyzing contractor claims, determining levels of responsibility, and producing supporting documentation for arbitration and project closeout for FHWA requirements.

Following is a selection of projects for which Vince has provided construction-phase services, including management, inspection, and preparation of QA documentation to LA/ODOT requirements.

CA/CEI Services Managed

- Roy Creek Culvert Replacement (Tillamook County)
- Slab Creek Culvert Replacement (Tillamook County)
- North Ontario Interchange (ODOT)
- Grant County Bridges (ODOT)
- SW 4th Avenue Railroad Overpass (ODOT)
- Highway 86 Slide/Culvert Replacement (ODOT)
- Snake River Bridge (ODOT)

**More detail included in key staff resumes.*

2.2.8 Project Team and Qualification for CA/CEI Services continued

ALAN HEIMAN, PE (COOPER ZIETZ) | Construction Project Manager

Alan provides 35 years of experience in the construction of transportation infrastructure, including highway, roads, and bridges. His experience includes serving as the construction quality control manager for 13 bridge design/build projects for ODOT and as the project manager for two 400-foot long, six-lane cast-in-place concrete bridges across I-205. His experience also includes asphalt and concrete paving, piling, retaining walls, materials testing, traffic control, and erosion control/stormwater runoff control. Alan's management experience includes design and construction management, site supervision, permits and insurance, scheduling, payroll, quality control, and annual budgeting.

Following is a selection of projects for which Dan has managed construction-phase services.

CA/CEI Services Managed

- Highway 38 Bridge Replacement Design/Build: Elk Creek to Hardscrabble (ODOT)
- Willamette River Transit Bridge (TriMet)
- I-5: Clarks Branch to Tunnel Mill Race
- I-205/Sandy Boulevard and Glisan Street Overpasses

DAN PAVELA, PE (TY LIN) | Construction Project Manager

Dan has over 30 years of construction and engineering management experience. He provides scheduling and construction plan review, experience with steel and concrete conventional and segmental bridge construction, mass concrete design and inspection, and moveable bridge rehabilitation and construction. He attended the FHWA Certified Bridge Inspection School, and holds an IMSA traffic safety certification. His diverse background allows him to collaborate with both design engineers and contractors to mitigate in-field construction issues.

Following is a selection of projects for which Dan has managed construction-phase services.

CA/CEI Services Managed

- Construction Scheduling On-Call (ODOT)
- Sauvie Island Bridge Replacement (Multnomah County)
- Depot Street (Rogue River) Bridge Replacement (Jackson County)
- Abernethy Creek (Washington Street) Bridge Replacement (ODOT)
- Willamette River Transit Bridge (quality control manager) (TriMet)
- I-5: Willamette River Bridge (quality control manager) (ODOT)
- I-5: Elkhead Road to OR126: Knowles Creek (quality control manager) (ODOT)

B. Key Staff Resumes for CA/CEI Services

Complete "Key Staff Resumes for CA/CEI Services" forms.

Our key staff resumes are enclosed with our proposal as requested in the RFP.

2.2.10 References for CA/CEI Services

Provide references for the 4 most recent, relevant CA/CEI transportation projects with a total construction phase budget of at least $500,000 each that were completed in the last 5 years.

Our project reference forms are enclosed with our proposal as requested in the RFP.