

## 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: CH2M HILL, Inc. a Florida Corporation**

Corporation  Professional Corporation  Ltd. Liability Company  Partnership or Joint Venture  
 Limited Partnership  Ltd. Liability Partnership  Sole Proprietorship  Other \_\_\_\_\_

Mailing Address 2020 SW 4<sup>th</sup> Avenue, Suite 300  
Portland, Or 97201

Type name of primary Contact for this Proposal Dave Simmons

Email address Dave.simmons@ch2m.com

Telephone 503-872-4444 Fax 503-736-2000

Type name of person(s) authorized to sign Contract/Price Agreement: Dave Simmons, John Willis, David Knowles

### "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
Steve Katko	64429PE	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
John Thatcher	2681	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:
    - o a minority, women or emerging small business enterprise certified under ORS 200.055, or
    - o a business enterprise that is owned or controlled by or that employs a disabled veteran, as

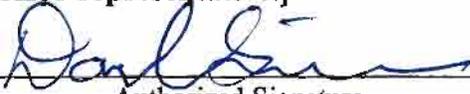
defined in ORS 408.225.

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.
- o Does Proposing firm have 50 or more employees?  Yes,  No.
  - o 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.]**

  
Authorized Signature

Date 12/11/12

Dave Simmons, Vice President  
(Print Name and Title)

### 2.2.1. Proposer’s Project Management of PE-Design Services

These are some of the benefits the CH2M HILL team provides ODOT/Local public agencies (LPAs) on full-service A&E price agreements:

**We do it the ODOT way.** Our team members bring decades of experience delivering projects using ODOT processes and standards. We will make sure it’s done the way ODOT expects, with no need for “hand-holding” on ODOT’s part. We won’t just sign a contract, we will proactively manage to protect ODOT interests and provide the most value for the budget.

**A full-service roster of local staff located to serve ODOT in all 5 ODOT regions.** Our staff is located in strategically located offices (Portland, Corvallis, Bend, and Boise, Idaho) to cover all 5 regions. What you see is what you get—the staff shown in Exhibit 2 are the people who will deliver ODOT’s projects. And because we provide a full range of services in house, with many staff in each technical discipline, we can quickly scale up or down to meet ODOT’s needs.

**We are committed to delivering the most value for ODOT budgets.** With limited funds, ODOT needs consultants who can deliver exceptional value for the budget. Our culture is to innovate to save money and optimize value, based, in part, on our experience delivering design-build projects, where innovation has bottom-line implications.

#### A. Management and Organizational Structure

CH2M HILL management structure empowers project managers to take ownership of projects. By that, we mean our firm instills a high level of responsibility in project managers to plan and gain endorsement of their work, develop staffing plans to schedule staff availability, manage budgets and schedules to be cost effective, and continuously manage change to maintain high client satisfaction with no surprises. Our project managers are committed to establishing a solid understanding of what is needed, a sense of where ODOT is heading, and anticipating what ODOT/LPA concerns will be for each task order.

Our flat management structure encourages ownership with fewer layers of management. This provides quicker access to needed resources/staff for projects, quicker turnaround on scopes/amendments, and provides project managers with instant access to weekly tracking of project financials. It also provides ODOT with a single point of contact.

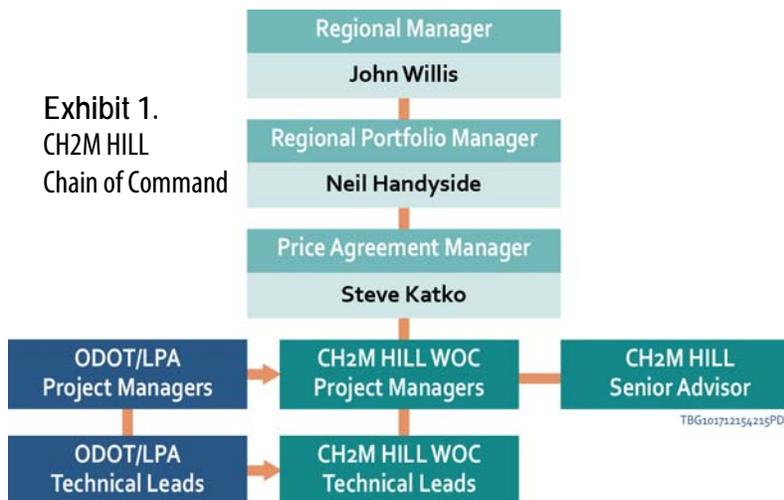
Organizationally, we manage staff regionally as one group. Our region includes staff in Oregon, Washington, Idaho, Alaska, and Hawaii. This regional approach aids project delivery by making it easy to optimize the use of production staff to meet peak project demands. Even though staff may be assigned to other projects, they are kept from being overcommitted through our established regionwide workload monitoring process. This approach also helps us quickly locate and provide technical experts when more complex issues arise on projects. For example, we sometimes call in our senior bridge designer, John Hinman, from Boise, Idaho, to help assess whether to replace or retrofit an existing bridge. We apply John’s regional expertise to determine the best solution for a local project.

As shown in Exhibit 1, CH2M HILL’s chain of command at the project level looks like this: the project manager has primary responsibility for client interaction and to deliver the project, typically relying on task leads for key disciplines or technical components. CH2M HILL has 7 experienced transportation project managers to serve ODOT/LPAs throughout Oregon and many more in the Northwest region. We are a team-based organization, with task leads and technical staff accustomed to delivering results for their project managers. For more complex projects, a senior advisor may also provide project support. The role of a CH2M HILL senior advisor is to engage in measured, discrete tasks when called upon. Senior advisors provide management support to the project manager, act as a sounding board for ODOT/LPA and CH2M HILL project managers before an idea is presented to the broader team or outside stakeholders, and serve ODOT/LPA project

managers as a channel for feedback on the performance of our project managers and the makeup of our project teams. The **Darlene Hooley Pedestrian Bridge at Gibbs** project was a complex project that required contract amendments and changes in the team mid-way through the design process. At critical points, Senior Advisor Dave Simmons accompanied Project Manager Gary Conner to meetings with the City of Portland and had one-on-one

conversations with upper-level city management. Dave’s involvement helped ensure that CH2M HILL understood and responded to the city’s needs, providing added assurance of project management quality control.

Moving up from the project level, our chain of command is straightforward and allows a few key staff to monitor performance and quality. At the level just above our project managers, Portfolio Manager Neil Handyside’s areas of responsibilities include: providing assurances of project manager’s scoped deliverables, staffing support through his network across the region, and



being a resource for project managers looking for unique technical skills. He is responsible to our organization and to our clients for performance on contracts. This position aids project delivery by providing project managers a safety net, ensuring that budgets are tracked against the established scope of work and deadlines met. Neil is also responsible for reviewing regional workload projections for contracted work, staffing plans, and workload forecasts for projects we intend to pursue. This allows CH2M HILL to program resources ahead of time to meet the needs of work order contracts (WOCs).

On our **Sellwood Bridge Replacement Final Design** for Multnomah County, the deliverable schedule was continually in flux because of changing feedback from the contractor, due to the CMGC delivery method. One milestone date was eliminated and another moved such that it coincided with several other project delivery dates. Our traffic signal folks had small, but significant roles in each of these projects, which were now “stacked” on top of each other. Neil worked with project managers at a regional level and called upon traffic staff, in other offices, that did not have upcoming deliverables to assist with the production of the Sellwood design. The milestone date was met.

Neil, in turn, reports to John Willis, Regional Manager. Based in Portland, John has the ultimate responsibility for CH2M HILL’s project performance. He aids project delivery by providing consultation to Neil and project managers to assign the right staff to projects and accelerate projects to achieve optimum performance. John also leads risk management activities for projects, and is accountable for establishing our health, safety, and environment culture, which is to deliver all projects with zero incidents. These individuals set the standards for and monitor our team’s performance, and regularly solicit feedback from clients to improve performance.

### CH2M HILL Team Organization

As shown in Exhibit 2, CH2M HILL has assembled a full-service team that is available to meet the technical needs of ODOT’s WOCs in all 5 Regions. Steve Katko will serve as the contract manager for the price agreement (PA). Steve will be ODOT’s point of contact for the PA and during the mini-solicitation process. When a mini-solicitation is issued by ODOT, Steve will work with our portfolio manager, Neil Handyside, and our seasoned group of project managers to review the solicitation and assign the best suited project manager, one who understands each element of the work and how it fits with the schedule. Steve, Neil, and our project manager will assemble the right sized team of highly skilled engineers and technicians. While CH2M HILL can field an internal team to self-perform a majority of the work needed under this contract, we will always evaluate each discipline to optimize task efficiencies through staffing. In some instances, this may include assigning WOC subtasks to our subcontractors, as outlined in the next section of our proposal.

Once a WOC is executed, our project manager will move forward with the project and become the point of contact for ODOT’s/LPA’s project manager while Steve will continue to serve as point of contact for ODOT’s PA manager.

### How Subcontractors Will Be Selected for Specific WOCs

CH2M HILL’s subcontractors will be selected for specific WOC based on any of the following.

**Project Needs:** When a project is identified, we will begin by asking ourselves and ODOT/LPA what the critical issues for success are and what key characteristics are desired from a consultant team. A chartering session with agency staff provides an opportunity for this type of collaborative input and also informs how a project team will operate. Chartering sessions are scaled based on the size of WOC and may simply be a line-item agenda topic at a project scoping meeting with ODOT/LA staff, allowing for participation without a large time commitment. Based on this input, the CH2M HILL project manager in conjunction with contract manager, Steve Katko, may augment the team developed during the mini-solicitation, including subcontractors, to support efficient delivery of the scope.

Efficiencies will be gained by using subcontractors located in close proximity to project sites where they are best suited to provide insight on local community issues. For example, although CH2M HILL has an experienced in-

house public involvement lead in Kristin Hull, we have added the firm Cogito to enhance our understanding of issues in the mid-Willamette Valley. Similarly, we have added Keller and Associates to assist with work in Region 5.

**Expertise:** In some cases, even when CH2M HILL can provide internal staff, a subcontractor with more expertise or an established relationship with a project stakeholder may be the right fit for the job. We will select the team members *best* capable of responding to and expediting WOC delivery—whether from our own firm or our subcontractors. An example of this practice in action was our decision to use Angelo Planning Group (APG) to provide land use permitting support on the recent Sellwood Bridge Replacement Final Design. While CH2M HILL has its own land use capabilities, APG had more seasoned staff to take on this complex, fast-paced project, so the CH2M HILL project manager chose to engage APG to deliver the task.

**Availability:** Readily available staff is key to successful project delivery. CH2M HILL managers look for team members who have the availability to maintain an active presence on a project, including additional work that could be added to a WOC. In many cases, this means bringing in a subcontractor team member.

CH2M HILL has had success in this regard with 3D Infusion, who provided CAD resources to hit peak production milestones for both the Sellwood Bridge

*Our chain of command supports efficient project delivery, while providing strong quality control and instant access to full-service technical resources*

Exhibit 2.  
CH2M HILL Design  
Team Organization



- Subconsultants**
1. 3D Infusion, DBE
  2. Alta Planning + Design
  3. Angelo Planning, DBE
  4. Atlas
  5. Cameron McArthur
  6. Cogita, WBE
  7. Cornforth Consultants

8. DKS
9. Emerio Design, DBE
10. Epic Land Solutions, DBE
11. ESA, DBE
12. HHPR
13. Hanna, McEldowney and Associates, ESB

14. Haregu Namarium, DBE
15. Howell Consulting, WBE
16. JLA Public Involvement, DBE
17. Keller Associates, Inc.
18. Kittleson
19. Lois Cohen, DBE
20. Marianne Zarkin, DBE

21. MEC, ESB
22. MMA, DBE
23. PBS Engineering and Environmental Inc.
24. PSI
25. RhinoOne, DBE
26. STI, ESB

27. TY Lin
28. Universal Field Serv
29. Walker Macy
30. West Consultants
31. ZCS Eng

Replacement Final Design and TriMet **Portland to Milwaukie Light Rail Transit, West Segment** projects.

**DBE Consideration:** CH2M HILL is committed to meeting DBE goals and has a history of exceeding them. CH2M HILL is actively involved in the DBE community, with a role on the OAME Advisory Committee and participation in the Port of Portland's Mentor Protégé Program. We constantly look for opportunities to put DBE subcontractors on projects where everyone will benefit. We have a proven history of introducing new DBE firms to agencies, including helping them grow both technically and managerially. On our recently completed Portland to Milwaukie Light Rail, West Segment project we had a 21% DBE utilization, including the successful integration of Marianne Zarkin, a new DBE landscape architecture firm that CH2M HILL had mentored through the Port of Portland's Mentor Protégé Program (Marianne is included on our proposed team shown in Exhibit 2).

The subcontractors included on our team have proven track records with CH2M HILL. For this contract, we will work with each of our subcontractors on scope development to help them provide the right technical focus and budget to complete tasks. While subcontractors have responsible charge of their piece of work, we serve as mentors to help them navigate ODOT processes and standards. In many cases, CH2M HILL has additional resources that can be called upon to support a subcontractor should one falter, ensuring that the project continues to run smoothly. One of the advantages of CH2M HILL's full-service capabilities is having the flexibility to self-perform most of the work or to bring in subcontractors to bolster the team.

### How Subcontractors Are Managed and Utilized

We value the contributions that subcontractors bring to a team and often engage them to supplement voids in our expertise or resources. In many cases, they bring a different perspective on how to creatively solve problems. One such example is the **Franklin Boulevard** project, where CH2M HILL included Greg Tung, Freedman Tung + Bottomly (FTB) on our team. We knew that the City of Springfield was interested in exploring a range of modern boulevard designs aimed at economic revitalization. Based on our past work with FTB, we knew that they had extensive experience in designing and implementing boulevard design, including multiway boulevards. At the end of the day, our recommended plan included a menu of boulevard designs informed by Greg's national experience.

Once a project is underway, we manage subcontractors as we do our own

staff: they are full-fledged members of the team, with the same opportunities to provide input and the same responsibilities to perform according to the terms of our agreement with the client. From project startup, subcontractors are integrated into team charting meetings; asked to endorse the work that they and others will do; and given project instructions prepared by CH2M HILL that contain the scope, schedule, team contacts, quality control plans, health and safety plans, and other critical information that enable a subconsultant to succeed. Project updates, meeting notes, and schedule updates are also disseminated to subconsultants in timely manner. While task leads may communicate these items to subcontractors, our project managers are ultimately responsible for subconsultants' preparation of constructible plans that are cost efficient. Our strict communication protocols relieve ODOT's technical staff from inundation of fundamental questions that can be filtered by the prime contractor. Regularly scheduled meetings with team members ensure that all parts of the project are delivered on or ahead of schedule and within budget.

In some cases, subconsultants are co-located in our offices to expedite delivery. On the Sellwood Bridge Replacement Final Design project, Rajiv Ali from RhinoOne, was given a workstation in our Portland office to work face-to-face with CH2M HILL geotechnical engineers on foundations. This provided us the opportunity to provide instant feedback and facilitate design coordination between temporary foundations for detours and adjacent permanent foundations for the main span. The practice of pairing a subcontractor with a related prime task lead allows us to provide close management and opportunities for mentorship.

Even though we expect top performance from our subconsultants, CH2M HILL assumes responsibility for the successful delivery of all project elements.

### B. Methods for Coordinating and Expediting All Elements to Meet Schedule without Sacrificing Quality

Regardless of the project scope, size, or complexity, there are common practices that move projects forward by coordinating and expediting elements while ensuring high quality.

CH2M HILL has invested significant time and energy in training project managers to value, learn, and apply these practices. That is the basis of CH2M HILL's Project Delivery System (PDS), which is what our project managers use to deliver successful, well-coordinated, and fast-paced projects (Exhibit 3).

*"My firm had never had the opportunity to work on a large public transportation development project prior to being asked to join CH2M HILL's Portland-Milwaukie Light Rail team.*

*In their winning proposal, CH2M HILL pledged to provide my firm continued mentoring to ensure our successful completion of the project. The staff at CH2M HILL delivered on this pledge as they provided me and my staff support on tasks pertinent to a large federally funded project, including contract management, quality assurance procedures, and file management."*

**—Marianne Zarkin, Marianne Zarkin Landscape Architects (DBE)**

The CH2M HILL PDS consists of the following:

**Charter the Team:** At the project start, our project managers gather the team to review roles, duties, scope, desired outcomes, and schedule. This creates a high performance team that is primed for successful coordination and high quality deliverables. Chartering establishes a working environment in which staff are fully engaged and have clearly defined objectives and processes. Communication protocols are defined to eliminate superfluous communications with ODOT/LPA staff for information or direction.

**Develop the Workplan:** Our project managers develop well-crafted workplans to help staff understand how their part of the work impacts and connects with their teammates' parts. Our workplans include a definition of the project, details of the work breakdown structure, and description of the team roles and responsibilities. By establishing and implementing clear workplans, project managers set the expectation that each team member will actively participate, coordinate efforts, and work together as a team.

Critical path tasks stand out during scoping, budgeting, and interdisciplinary consultation. We pay great attention to long-lead items such as archaeological concurrence, wetland delineation concurrence, Endangered Species Act (ESA) consultation, and other federal processes; and to early-start items such as geotechnical drilling and right-of-way acquisition. We know that we can jump-start critical path tasks by changing the order in which they are traditionally done. For example, environmental approvals increasingly are based on stormwater management and erosion and sediment control plans, so we plan to advance those design elements early. Also, it is beneficial to incorporate a constructability review to define the project site. Schedule glitches can arise when detours, staging, borrow pits, construction accesses, and in-water work methods are not accounted for.

Because environmental considerations have the greatest potential to upset workplans, our project managers consult with our environmental team during this time to identify environmental requirements. On projects where environmental issues are identified, we prepare an Environmental Plan (E-Plan) to capture environmental compliance requirements and to estimate scope and budget for environmental support. Essentially, E-plans serve as the building blocks of the Environmental Review Process (PR-1) or Environmental Management System (EW-1) of Greenroads™ for projects with sustainability certification goals.

E-Plans summarize federal, state, and local requirements and often assign responsibility (owner, CH2M HILL, subcontractor, or program representative) for completing compliance tasks. The intent is to have a checklist of

requirements that can be coordinated during design and tracked into construction. Environmental compliance plans have been used successfully by CH2M HILL design-build projects to achieve 100% environmental compliance without environmentally-driven delays.

**Gain Endorsement:** Our project managers work to gain endorsement of the charter and workplan by the entire team, including ODOT/LPAs, which leads to a higher level of commitment and validation. It begins to build trust and respect in the team and project manager, allowing the project manager to get staff to endorse what is best for the project, including expedited schedules.

**Implement the Workplan:** All projects involve change. Scope, time, personnel changes have the potential to present challenges to project delivery goals. CH2M HILL project managers control and manage change to eliminate confusion or miscommunication and to optimize coordination. We do this through proactive

monitoring. Project managers and task leads conduct regularly scheduled team meetings and unscheduled check-ins with individual members / subcontractors, especially near milestone submittals; and prepare workload forecasts to ensure staff availability. These staff touchpoints result in issue logs, action item checklists, and inputs to schedule updates and workload forecasts that ensure coordination amongst the team happens, design elements are aggressively advanced, and potential mistakes are anticipated and fixed before they become problems.

**Close Out the Project:** Our project managers actively plan the project close-out, which eliminates "completion of design with addendums" mentality. All design elements are completed on time.

**Example: Applying the Project Delivery System**

One recent example of the implementation of CH2M HILL's PDS to increase coordination and expedite design elements to meet schedule is The Dalles **Riverfront Trail** project. This project involves the design of a multi-use path along the Columbia River, a design and construction contract administered by ODOT Region 4. The team, including key technical leads, city staff, ODOT's agency project manager, ODOT technical staff, and a key stakeholder, the North Wasco County Parks and Recreation Director, was chartered at project startup to establish a common set of expectations. The project was planned and endorsed by all parties, which allowed the design to move forward with clear focus. With endorsed ownership of expectations by all parties, when changes did occur, there was active participation from all parties to work toward resolution. We are currently in change management mode on this project. Unanticipated right-of-way costs (a private property owner was no longer willing to donate an easement) have necessitated significant changes to the path alignment and project scope. As soon as this

Exhibit 3. CH2M HILL's Proven Method for Coordinated, On-time Delivery



TBG101712154215PDX

*We look for ways to speed project delivery during workplan development by, for example, changing the order in which critical path tasks are traditionally done, when it benefits the project to do so*

issue came up, CH2M HILL consulted with ODOT and the city to develop a plan to keep the project moving forward while making needed scope, schedule, and budget adjustments.

### Approach to Making Adjustments to Schedule or Staffing to Meet Schedule

While any consultant can say they'll be available at a moment's notice, we have a process for delivering on that promise.

#### Adjusting Schedule

**Prepare Baseline Schedule:** Using Microsoft Project, we prepare a detailed, realistic schedule that clearly shows key milestones and dependencies among tasks. Building a realistic project schedule from the start is fundamental to satisfying the schedule completion date and getting a project to the Office of Project Letting. This means making sure that the schedule reflects sufficient durations for DAP preparation, right-of-way negotiations, preliminary/advanced/final plans preparation, design exception approvals, letters of public interest findings (if needed), agency and FHWA (if needed) reviews, regulatory approvals, land use actions, utility notifications, and other critical path items. A realistic schedule includes flexibility afforded by ample timeframes and contingencies for accelerating project elements to address unforeseen changes such as tiering regulatory decisions, advancing (phasing) design development, and adjusting specifications to fit programmatic approvals. For example, our **Tillamook US 101/OR 6** project involved advancing design and construction elements to fulfill expectations for early NEPA and ESA decisions, and flexibility to accommodate shifts from an EA to a Categorical Exclusion and from an individual biological opinion (BO) to a FHWA programmatic BO. All the while, we collaborated with agency discipline experts to assess risks and endorse the rewards of schedule shifts without slippage of the completion date.

**Regularly Update Schedule:** By updating the schedule regularly, we "cast forward" early in the process to see when a schedule milestone is at risk of slipping early. Without this, it is easy to think everything is okay, only to discover later that there is no way to meet the next milestone.

**Steer Projects Based on an Updated Schedule:** Corrective actions can vary from one project to another. Ideally, there are tradeoffs and decisions in which clients participate. Must the original schedule be met, period? Is there flexibility that would allow more efficient use of resources? These are questions we will work through with ODOT/LPA project managers, when necessary.

**Meet Schedule:** When a schedule changes or the scope of work changes but the schedule does not, there are consequences. Our staff is accustomed to juggling multiple assignments at once and thrives on working in a busy environment. Our staff is conditioned to recognize that peak production times may require longer work days. But we also recognize that working longer hours is not always the answer to efficient project delivery. Our workload management and forecasting tools—combined with our large

staff pool and culture of flexibility and responsiveness—allow us to successfully respond to changing conditions to meet schedule while maintaining quality.

#### Adjusting Staffing

Project managers and our portfolio manager provide staff availability through regularly scheduled workload checks to evaluate staff needs among multiple projects and offices. We are thus able to quickly shift resources to accommodate the evolving needs of multiple projects and schedules. When we are awarded a new project, it is immediately added to the workload tool to keep staffing needs at the forefront. With our flexible culture and plentiful staff resources—both at CH2M HILL and our teaming partners—we have staff available to begin work on new projects immediately. Once a project is underway, the depth of our resources also allows us to add staff on short notice. Because CH2M HILL offices operate as a single unified company—and not as competing profit centers—sharing work across offices is easy and fast.

#### C. Quality Control Procedures and Policies

CH2M HILL is committed to quality. We have proactive quality control policies and detailed procedures to check each milestones conformance to established requirements. Every employee is empowered and responsible for the quality of their own work or the work they supervise. CH2M HILL's policy is to apply an effective, efficient, and auditable quality management system to all project work. For every project, all staff—internal and external—implements the policies, philosophies, and practices described in the project-specific Quality Management Plan (QMP). The QMP is given to each staff and defines scope of work, responsibilities of staff, the quality control (QC) procedures for each type of document, file naming conventions, and CADD standards and control.

A summary of CH2M HILL's QC procedures is as follows:

**Plan the Work.** The QMP is distributed to the design team. The design team is trained in the content of these documents, and documents are updated as needed throughout design.

**Prepare Design Documents.** The design team prepares design documents using the established design criteria for the project and appropriate interdisciplinary coordination (through weekly meetings, written communications, and telephone conversations).

**Check and Review Documents.** Design documents are checked in accordance with the design QC procedures, which are spelled out in the project-specific QMP. Interdisciplinary coordination reviews are performed as well as constructability reviews, depending on project complexity. All comments are provided in writing and summarized using a review comment summary and resolution form.

**Make Revisions.** Comments are evaluated and incorporated into the documents, as appropriate. Responses to comments and final disposition of comments are recorded on the review form. Final comment resolution reflects agreement between the designer and the reviewer.

**Audit and Certify.** Our project QC leads audit and certify that the procedures outlined in the QMP are followed for all deliverables and supporting technical documents used to make project decisions.

There are iterations of each of these activities depending on the type of design document being produced.

The best way to produce quality work for the least cost is to do the work right the first time, for this reason, CH2M HILL employs a number of best practices to help our staff accomplish this goal. One example is the use of checklists by our bridge group. We have developed—and periodically update—checklists for drawings and calculations for typical structure types and elements. When our CADD technicians begin to develop a bridge plan and elevation drawing, they reference the checklist that we developed for that drawing type based on the ODOT standards, found in the *Bridge Design and Drafting Manual*. The completed checklist then accompanies the drawing as it moves through the quality process. This helps ensure that standard items (such as a north arrow, stream flow line, or a general note) are not inadvertently omitted.

A significant potential source for quality control issues is in the management of CADD files. CH2M HILL uses ProjectWise for the control of CADD files. It is, in effect, a file librarian, allowing users to “check in” or “check out” CADD files to a local computer. In order to modify CADD files, the files must be checked out from the file server. Part of the check-out procedure includes the automatic copying of the drawing file to the local workstation. ProjectWise has built-in protection to prevent more than one person at a time from accessing any file in “write” mode. Once a file is checked out, it cannot be changed by another user until it has been checked back in. This can even be used externally with subcontractors, as we did with the recently completed **Portland to Milwaukie Light Rail, West Segment** project, where we had 9 subcontractors sharing and working on producing 668 sheets within 12 months. The project is currently in construction, delivered with exceptional quality.

#### D. Approach to Managing Insufficient Construction Budgets

The first signs that a project may have insufficient construction budget are generally apparent during the project scoping, which would involve CH2M HILL and ODOT/LPAs. The review of the project prospectus reveals the assumptions that went into the initial estimated construction budget. These assumptions—breakouts of roadway, structures, signals, and illumination

dollars, and the number of right-of-way acquisitions and easements—can be helpful indicators of a budget shortfall. For example, if a project prospectus includes right-of-way acquisition for roadway widening to only one side, but the scope includes developing alternative widening schemes that involve widening to both sides, a budget shortfall may develop with the right-of-way acquisition.

Part of CH2M HILL’s scoping exercise at project startup is to validate the size of the project and do a quick cost-per-lane-mile estimate using an estimating calculator developed by our local transportation group and based on the most update historic bidding information. This tool goes beyond the typical bid items and includes many of the activities that have the potential to create budget pitfalls. It is these areas that can be easily missed by consultants and aren’t always apparent in typical roadway projects. This includes the potential for environmental issues such as contaminated soils, nesting season restrictions for endangered animals that can limit construction windows, in-water work restrictions, land use permitting delays, and archaeology impacts.

*Project scoping includes a quick cost-per-lane-mile estimate using an estimating calculator developed by CH2M HILL’s local transportation group, based on the most update historic bidding information. This tool goes beyond the typical bid items to include activities that have the potential to create budget pitfalls. It is these areas that can be easily missed by consultants and aren’t always apparent in typical roadway projects.*

Along with the estimating tool, it is important to conduct a scoping site visit that includes the right people to help ODOT/LPAs identify potential budget-jeopardizing issues. This includes involving CH2M HILL’s seasoned environmental team and ODOT/LPA representatives to identify and begin crafting solutions to minimize or eliminate impacts not previously identified or explored. For example, a field visit and follow-up investigation for our **Riverfront Trail** project in The Dalles identified previously unknown jurisdictional wetlands, Columbia River

archaeological resources, and hazardous materials contamination along the trail alignment. Early detection enabled timely revision of the statement of work, workplan reordering, and reallocation of available resources, including assistance by ODOT Environmental.

The next opportunity to determine the accuracy of a construction budget is during geotechnical and contaminated soil investigations. If no previous geotechnical reports or Level I Environmental Site Assessments have been done, the costs associated with uncovering issues related to these activities can stress a project budget. It is important to perform these tasks as early as possible, ideally before any milestone Engineer’s Estimate is prepared so that it can capture these costs.

During the preliminary phase for the **US97/Murphy Road: Brookwood Boulevard to Parrell Road** project in Bend, prior to DAP, ODOT desired that a proposed flyover ramp, which would have replaced a signalized intersection south of the proposed US97 overcrossing, be replaced with an interchange. In order to stay within the construction budget, CH2M HILL worked with ODOT and the City to develop a layout for the interchange that could be

constructed in phases, with the initial phase constructed as part of the Murphy Road overcrossing project within the established budget. The initial phase of the new interchange provides a single-lane bridge over US97 for a southbound on-ramp to US97 and provides a northbound US97 off-ramp, with a retaining wall and eliminates the signalized intersection. The retaining wall is designed to be incorporated into the bridge abutment when a future project widens the bridge to a 4-lane roadway with sidewalks on each side, providing a full access interchange and local access to the area west of US97.

Before distributing an updated Engineer's Estimate that would exceed the available construction budget, our project manager will first sit down with the ODOT/LPA project manager to go over the numbers and the basis behind them. During a one-on-one meeting, the CH2M HILL project manager and the ODOT/LPA project manager will lay out the process for addressing the issue prior to releasing the estimate. We will not blindside or surprise the ODOT/LPA project manager by having them discover it on their own during scheduled milestone reviews. Once project managers are informed and a collaborative process is prepared, the larger team is made aware of the budget challenges and asked to participate in workable solutions to mitigate.

On the **Riverfront Trail** project, our first draft cost estimate in advance of the draft DAP revealed that the project, as conceived at that point, was significantly over budget. Rather than simply moving forward with design and allowing the problem to come out in the DAP review process, we notified ODOT and the City and quickly agreed on a revised process to allow for developing and approving changes while bringing the project back within budget, prior to completing the DAP process. This approach minimized the schedule impact and effort required by the design team, and ODOT and City staff to bring the project back within the budget.

## 2.2.2

### Proposer's Cost Effectiveness for PE-Design

#### A. Ensuring Cost-effective Tasks and Deliverables

With ODOT/LPAs facing limited construction funds, but many project needs, CH2M HILL understands that all tasks and deliverables need to be completed in the most cost-effective manner possible. Our team members are trained in and certified to use ODOT's estimating software "Project" (formerly Trans\*port Estimator), so ODOT can rest assured that estimate files will be done correctly. Our experience on past ODOT projects will translate into easy navigation once the files reach the office of pre-letting. This provides assurance that the bid package will get to the bid letting date on time. We will use the process outlined below to ensure cost-effective project delivery under this contract.

*Our team members are trained in ODOT's estimating software "Project" (formerly Trans\*port Estimator), so ODOT can rest assured that estimate files will be done correctly and be easy to navigate once the files reach the office of pre-letting. This provides assurance that the bid package will get to the bid letting date on time.*

**Preparing Clear and Thorough Budgets** – To start with, our budgets are established by experienced project managers and discipline leads who have extensive experience delivering multi-disciplined projects. Budgeted hours are clearly linked to scope tasks and a deliverable outcome. Drawing on our experience with other projects, we establish realistic budgets that are not over-inflated to hide internal contingencies or under-inflated due to inexperience in an area. Our project managers routinely work with ODOT/LPA project managers to review the scope and budget for completeness and clarity of the tasks to be performed. At the end of our scoping/budgeting process, all parties have a clear understanding of the full scope of work and buy off on the level of effort required.

As part of the scoping, we work with ODOT/LA to identify tasks that can be removed from the non-contingency budget and set up as contingency tasks to help separate tasks that cannot be deemed necessary at the time of initial scoping. Setting up these contingency tasks saves on management hours by eliminating WOC amendments and also preserves budgets separate from other tasks. An example of a project where we applied this approach is the The Dalles **Riverfront Trail** project. Because the extent of cultural resources within the project footprint was not clear prior to beginning design work and cultural resource investigation, only preliminary research and documentation was included in the non-contingency contract scope of work. Follow-on subsurface investigations were included as contingency items. That way, the budget would only be spent if necessary and after authorization by ODOT.

**Utilizing Our Deep Staffing Bench** – CH2M HILL has competent staff at a variety of levels in all disciplines and a culture of task delegation. Senior staff set direction for junior staff to perform. We can leverage our senior staff to more efficiently use their time on tasks and have our junior staff perform the more transactional activities such as the day-to-day, onsite monitoring of geotechnical drilling exploration.

**Knowing Decision Making Process** – When an issue arises that moves beyond a simple technical solution, CH2M HILL has the expertise to create a fair and transparent decision-making process to quickly and efficiently reach a decision that leaves stakeholders, community members, and agencies satisfied with the outcome. During the **Tillamook US 101/**

**OR 6** project, the team had three options for widening the 10-foot travel lanes on US 101. To get to consensus quickly, CH2M HILL facilitated a decision-making process with business owners in downtown Tillamook and ODOT to set goals for the downtown, rank each of the three options, and select a design option that would best meet the downtown community's goals. The resulting option—one that narrowed the sidewalks on both sides of US 101 and maintained parking—is strongly supported by the City, the downtown business community, and ODOT.

**Communicating and Adding Oversight on Key Tasks** – To be efficient, it is imperative to keep all disciplines and subcontractors from going down a wrong path. CH2M HILL project managers provide clear direction to the team on a regular basis through scheduled project meetings, over-the-shoulder reviews of work progress, timely distribution of client meeting minutes, and other check-ins with team members to eliminate confusion and costly misdirection.

CH2M HILL also understands that some smaller, emerging subcontractors that are not experienced with ODOT processes may need additional oversight to complete tasks in an efficient manner. We do not rely on ODOT staff to do this for us. We play an active role in helping all our team members efficiently perform to the highest levels.

**Budget Tracking** – Other ways that CH2M HILL project managers provide cost-effective delivery is to conduct regular monitoring of project financials using robust project accounting tools (Oracle Financial Tools). All project time and expense charging is recorded and uploaded by Monday of the following week. This provides project managers with up-to-date project information on a weekly basis regarding who is charging to projects and the ratio of percentage complete to budget spent. Project managers are also required to prepare monthly “estimates to completion” for projects so that project/budget issues can be identified early.

For project-related travel, we minimize costs by first working with the agency project manager to agree on the appropriate number of meetings, field time, etc. that require travel expenses so there are no surprises. CH2M HILL also has corporate agreements with most major hotel chains as well as government contractor designation, which means our staff get the most competitive rates for lodging. The same is true for most car rental companies that service the state. Per diem costs and mileage are minimized by aligning federal and ODOT rates. CH2M HILL also keeps travel costs low by using our local staff and resources in our offices in Portland, Corvallis, Bend, and Boise, Idaho, to reach any project location within Oregon. With this spread of offices, we can staff projects within close proximity of a project and thereby reduce travel costs.

All travel expenses are itemized in ODOT’s Breakdown of Costs (BOC) budget spreadsheet at the start of the project.

*CH2M HILL keeps travel costs low by using our local staff and resources in our Portland, Corvallis, Bend, and Boise, Idaho, offices to reach any project location within Oregon. With this spread of offices, we can staff projects within close proximity of a project and reduce travel costs.*

## B. Methods, Tools, and Processes for Developing Estimates for Services

Over our years of project delivery, CH2M HILL has developed and honed tools to aid project managers in appropriately staffing and pricing projects. These tools are used to check that the right level staff is used on projects and that estimates for services are accurate and fair. One such tool we use is *Pricer*. *Pricer* allows project managers and accounting staff to develop a work breakdown or task structure that aligns with the scope of work. Staff are then designated for each task and assigned a level of effort. The resulting estimate allows project and task managers to see the level of staff that are designated so they can make sure the right staff are in place (not too senior or too junior). Because the tool is directly connected to the firm’s accounting and staffing software, it is updated regularly and automatically so that staff classifications and rates are up to date and accurate.

As a project manager makes adjustments using the *Pricer* tool, he/she compares the cost of each task to historic projects of similar complexity that CH2M HILL has completed. We also conduct this review on budgets provided by subcontractors. In addition, when work requires certain types of services

such as geotechnical drilling, hazardous materials exploration, and lab testing, CH2M HILL seeks multiple bids to provide cost competitiveness. In some cases, CH2M HILL can self perform those services at our Corvallis-based materials laboratory, which saves project management and subcontracting time. We also look at traditional industry standard percentage benchmarks for tasks and overall budgets, such as percentage of design fees used for project management. All of these actions serve as a

check on reasonableness of the level of effort required for a project.

Once we have completed adjusting the mix of staff, hours, expenses, and subcontractors to match the scope, we enter the information into ODOT’s BOC budget spreadsheet. This spreadsheet, along with the scope of work, is submitted for review by senior level staff, including our Portfolio Manager and Regional Manager discussed Section 2.2.1. Our review process, “Review and Approval Workflow,” is an internal web-based application that electronically documents the initiation, submission, review, and approval of a CH2M HILL binding document. By approving the scope of work and estimate developed by the project manager, our senior management ensures the contract is fair to both ODOT/LPAs and CH2M HILL.

### 2.2.3. Project Team and Qualifications for PE-Design Services

#### A. Project Manager Experience with Interdisciplinary Teams

CH2M HILL has **7 local transportation project managers who, among them, are currently delivering projects in all five ODOT regions** and are available to deliver projects under this contract. As a large firm with deep resources, we can also draw on additional project managers in our Boise and Seattle offices, if needed. All of our project managers have expertise with applying our project delivery tools and have experience managing interdisciplinary teams to deliver projects on time and on budget. Every CH2M HILL project manager is trained in our Project Delivery System (PDS) and can provide strong leadership to achieve ODOT and the local agency's satisfaction and deliver sound financial performance.

Our contract manager—and one of our proposed WOC project managers—is **Steve Katko, P.E.**, Steve brings more than 16 years of experience in transportation project delivery, having managed the Portland to Milwaukie Light Rail Transit, West Segment, Preliminary Design and, currently, the roadway design for the Sellwood Bridge Replacement Final Design project, now under construction. He also managed multidisciplinary teams to deliver the Airport Way Rehabilitation and Widening project for the Port of Portland, and—for the City of Tualatin—the SW 124th Avenue/SW Myslon Street to SW Tualatin-Sherwood Road and SW Boones Ferry Road Downtown Enhancement projects.

Our proposed project managers, **Steve Katko, P.E., Dave Simmons, P.E., and Gary Conner, P.E., S.E., Bonnie Scheeland, P.E., Don Wagner, P.E., Kim Nokes, P.E., and Darren Hippenstiel, P.E.**, bring decades of experience leading interdisciplinary teams to deliver transportation designs in Oregon, as described below.

**Dave Simmons, P.E.**, brings 24 years of experience, including 22 years of success delivering ODOT/LPA/federal aid projects, both large and small, optimizing the use of available funding while providing work products consistent with ODOT requirements. He is adept at leading multi-discipline teams to ensure the right project elements are implemented, risk to budget/schedule is minimized, and payback in terms of safety improvements are maximized. He knows how to leverage teams to “test” the practicality of designs by focusing initial targeted investments on only those design elements that need additional engineering detail and regulatory consultation to validate/update the cost-benefit ratio. He then “flips the switch” for full production on only those designs that provide the best benefit-cost ratio. Dave's track record of project management, engineering, and stakeholder involvement delivering ODOT plans, specifications and estimates for local agencies includes the Scholls Ferry Road/River Road Intersection, US97/Murphy Road: Brookwood Boulevard to Parrell Road, and Martin Cornelius-Schefflin Road projects. On the US97/Murphy Road project, Dave has worked collaboratively with the City of Bend and ODOT to manage

change within a fixed budget and schedule. Client-driven changes, as well as the discovery of new right-of-way constraints and property/access needs have pushed the project budget to a point where project cuts may be needed. Following the DAP and the 60% design milestones, Dave and his team developed a solution to split the project into two bid packages. This will allow the majority of the project to be bid, deferring construction of those elements where ODOT right-of-way staff needs additional time to acquire property to a later bid package. A two-phased construction approach, which Dave has used successfully on other local agency projects, has provided the City and ODOT time to compile project costs to date for the first phase of construction and the project right-of-way costs. Based on a review of remaining funds, the project team will then determine the scope for a second construction bid package, minimizing budget risks while maximizing the scope of elements that can be constructed, within the same overall construction duration, which maintains commitments made to the Oregon Legislature (this project utilizes Jobs and Transportation Act funds).

**Gary Conner, P.E., S.E.**, has been managing multi-disciplinary teams for 15 years, including experience with 8 CH2M HILL design-build teams (2 with ODOT), managing multidiscipline design teams and interfacing with construction and owner staff. Among his successful projects are the City of The Dalles' Riverfront Trail, Union Street Undercrossing, and Reservoir Road Bridge projects as well as the I-5: Beltline & Gateway project. One of the most challenging projects that Gary has managed is the Darlene Hooley Pedestrian Bridge at Gibbs project, for which he was the project manager and design lead for the final design phase. Challenges included a small site with multiple utilities and aerial tram tower, and 14 lanes of interstate freeway and ramps (which required 13 different detour schemes over the course of construction); an additional significant challenge was the fixed budget that did not allow for all features desired by all stakeholders from the start, which required numerous and difficult cost-saving decisions. Gary managed internal disciplines and four subconsultants, coordinated with the project artist, and facilitated a decision-making process that included a stakeholder group, public open houses, and presentations to City of Portland Design Commission. This project required the ability to bring together a diverse design team to meet unique requirements. The combination of building and transportation components required careful coordination of design requirements and design codes. Resolution of these issues required collaboration with ODOT specifications writers, because it was an ODOT construction contract, as well as with the City of Portland, because they would own and maintain the facility. This work resulted in an iconic, aesthetically pleasing bridge that has been widely praised by citizens and City officials alike.

**Bonnie Scheeland, P.E.**, is a project manager with 27 years of experience delivering transportation projects in Oregon, including experience working for ODOT as a construction surveyor. For the Roy Rogers Road project, Bonnie coordinated special geotechnical inspections for the construction across a major peat bog; for The Dalles Union Street Undercrossing, she managed a

multi-discipline trail and major bridge construction project, with particular environmental emphasis and multiple stakeholders.

**Don Wagner, P.E.**, is a senior project manager and structural engineer with 38 years of experience in the design and construction of bridge and highway structures. He has managed all aspects of bridge design, including steel plate and box girder; steel arch; reinforced, prestressed and post-tensioned concrete; and timber bridges. Don was the project manager for ODOT's I-405 Fremont Bridge Deck Wearing Surface Replacement project, as well as for the Wimer Covered Timber Bridge Replacement and Thompson Creek Road Bridge Replacements for Jackson County.

**Kim Nokes, P.E.**, is a senior project manager, based in Boise, Idaho, with more than 25 years of transportation engineering experience in planning, design, management, and construction of interstate freeways, urban arterials, and rural highways projects. He brings extensive experience in project planning, scope development and fee preparation for large and small projects. His project experience includes work in Eastern Oregon and ODOT Region 5. He is currently managing the East Idaho Avenue Railroad Underpass project for ODOT Region 5/City of Ontario.

**Darren Hippenstiel, P.E.**, has worked on all phases of project development, conceptual planning through construction, with a focus on low impact sustainable design solutions such as those provided for the Anderson Road Improvements/Green Street project (Damascus), for which he was the project manager. He also managed the Royer Road Corridor Prioritization project in Damascus and Leveton Drive Extension for the City of Tualatin.

**Services That CH2M HILL Has Qualifications and Experience to Self Perform**

CH2M HILL has qualifications and experience to provide a full range of engineering services, including survey, bridge design and load rating, roadway design, underground infrastructure, geotechnical design, pavement design, hydraulics studies and design, stormwater drainage, signals and illumination, temporary traffic control, erosion control, signing and striping plans, traffic studies, right-of-way descriptions, and public involvement. The firm also provides complete environmental services, including permitting, wetland delineation and mitigation, cultural resource investigation, air and noise studies, NEPA documentation, aquatic and terrestrial biology, and social and environmental justice services. CH2M HILL can meet the requirement of 51% self-performance of any WOC assigned by ODOT involving any of these services.

**B. Examples of Multidiscipline Transportation Design Projects**

<b>Project Name:</b>	<b>Riverfront Trail Design</b>	<b>Scholls Ferry Road/ River Road Intersection</b>	<b>US 97/Murphy Road: Brookwood Boulevard to Parrell Road</b>
<b>Location:</b>	The Dalles, OR	Washington County, OR	City of Bend, OR
<b>Year Started:</b>	2012	2010	2010
<b>Total Contract:</b>	\$358,900	\$465,787	\$2.1 million
<b>Tasks Self-performed by Proposer:</b>	Project Management, Survey, Cultural Resource Investigation, Wetland and Biological Resources Assessment, Hazardous Materials Investigation, Water Resources Report, Utilities Coordination, Geotechnical Engineering, Roadway Engineering, Structural Engineering	Public Involvement, Survey, Pavement Design, Roadway Final Design and Plan Preparation, Utility Coordination, Article 7 Application, Bidding /Award, Construction Survey, Construction Administrative Support, Post-Construction Monumentation Survey, As-built Drawings	Project Management, Public and Stakeholder Involvement, Environmental Analysis, Traffic Analysis, Roadway Design, Pavement Design, Stormwater Design, Bridge/Retaining Wall Design, Geotechnical Investigation, Utility Coordination
<b>% of Contract Dollars That Went to Proposer for Services Not Subcontracted:</b>	95%	96%	93%

## Descriptions of Multidiscipline Transportation Design Project Examples

### The Dalles Riverfront Trail

The Dalles Riverfront Trail is a 10-mile-long, ADA-accessible multi-use path along the Columbia River. Project work involved the design of four path segments totaling 1.3 miles. The project traverses a variety of natural and manmade environments that present opportunities and challenges regarding environmental, wildlife, cultural resource, and transportation infrastructure resources along the alignment. Adjustments in path alignment, profile, and construction methods have been made to avoid wetlands, cultural resources, and obtain approval of affected Native American tribes. Fences will be strategically placed along the path to protect sensitive bird nesting areas. Path alignments and features are detailed to improve safety at roadway crossings. Currently being delivered on schedule and budget.

**Key Staff:** Gary Conner, Project Manager; Sharon Daleo, Design Engineer; Steve Mader Environmental; Pat Heins, Hazardous Materials; Travis Munson, Geotechnical; Rick Attanasio, Drainage and Water Resources; Robin McClintock, Cultural Resources; Joe Hurliman, Survey; Bonnie Scheeland, Quality Manager

### Scholls Ferry Road/River Road Intersection, Washington County, OR

CH2M HILL managed the functional planning, conceptual, preliminary, and final design of this arterial intersection project, which featured a multi-lane roundabout. The team conducted an alternatives analysis process involving close work with stakeholders to evaluate signalized and roundabout intersection forms to address congestion and safety concerns. The team identified right-of-way requirements and developed and refined cost

estimates throughout process. Final design documents were developed with County land use approvals obtained in less than 6 months. Delivered on schedule and budget.

**Key Staff:** Dave Simmons, Project Manager; Steve Mader, Environmental Task Lead; Andy Kutansky, Design Engineer; Rick Attanasio, Stormwater Lead

### US 97/Murphy Road: Brookwood Boulevard to Parrell Road, City of Bend, OR

CH2M HILL is managing the final design of this \$25 million improvement, including roundabout design, landscape design, and constructability review. The project involves a new alignment of Murphy Road over US 97 with interchange ramps serving local access and the design of a multiuse path for bicyclists and pedestrians. The design effort includes 2 roadway bridges over US 97 and 3 roundabout intersections, to be constructed using Portland Cement Concrete pavements. Preliminary design was delivered in May 2010 and the final design for the advanced plan milestone is underway. CH2M HILL also led project planning, including refinement of a preferred alternative and changes to the functional design of the interchange and nearby intersections. The project is a prime example of practical design; CH2M HILL was engaged upfront, helping ODOT decide how to apply the available funding to help make the best systematic improvements, setting priorities while also taking the local long range plan into account. Project is on schedule and budget.

**Key Staff:** Dave Simmons, Project Manager; Steve Mader, Environmental Senior Reviewer; Bill Adams, Design Manager/Roadway Engineer; Darren Hippenstiel, Pavement Design; Don Wagner, Bridge Task Lead; Rick Attanasio, Drainage Task Lead; Joe Hurliman, Survey Task Lead

### 2.2.6. Proposer's Project Management Services for CA/CEI Services

These are some of the benefits the CH2M HILL team provides ODOT and local public agencies (LPAs) on full-service A&E price agreements:

**We do it the ODOT way.** Our team members bring decades of experience delivering projects using ODOT processes and standards. We will make sure it's done the way ODOT expects, with no need for "hand-holding" on ODOT's part. We won't just sign a contract, we will proactively manage to protect ODOT interests and provide the most value for the budget.

**Safety is part of our corporate DNA.** Impeccable safety standards are our practice—based on a corporate directive—to optimize safety on every project, with a goal of "zero incidents." We will apply that approach to every ODOT project.

**A full-service roster of local staff located to serve ODOT in all 5 regions.** Our staff is located in strategically located offices (Portland, Corvallis, Bend, and Boise, Idaho) to cover all 5 regions. What you see is what you get—the staff shown in Exhibit 2 are the people who will deliver ODOT's projects. And because we provide a full range of services in house, with many staff in each technical discipline, we can quickly scale up or down to meet ODOT's needs.

**We are committed to delivering the most value for ODOT budgets.** With limited funds, ODOT needs consultants who can deliver exceptional value for the budget. Our culture is to innovate to save money and optimize value, based, in part, on our experience delivering design-build projects, where innovation has bottom-line implications.

### A. Management and Organizational Structure

CH2M HILL's organizational structure for CA/CEI services is tailored to align with ODOT's organizational structure. Our project manager will be the single point of contact with the ODOT/local public agency (LPA) project manager and will keep local agency liaison apprised of progress and problems. As shown in Exhibit 1, we have Quality Control Compliance Specialist (QCCS) staff, ODOT-certified inspectors, geotechnical engineers, and professional engineers on our full-service CA/CEI team. Our chain of command also mirrors ODOT's for conflict resolution and claims avoidance and management. We participate in ODOT's partnering process. This aids the delivery of our project services by keeping decisions about resources and technical staffing at the lowest practical level. Our chain of command is truly focused on customer service. The project manager reports financially every month with a well-considered "cost to complete" compared with budget for finishing the work. Any unexpected variances are directed to the project delivery team, which is independent of the project team. Through this process, ODOT/LPAs will be apprised of delivery and financial status early and often. Our principal in charge (PIC) oversees client satisfaction and acts as a chain of command sounding board for our clients.

A right-sized, well-informed team can make most of the decisions needed to deliver services. While we are a large organization, we regularly deliver small projects efficiently and effectively by designating small, focused teams with top-notch, accountable project managers. And, importantly, the team we propose for tasks is the team we use to deliver the project, barring any emergencies. Our teams are efficient and quality conscious. They have access to expert resources outside of the team and within our firm. Project managers are our key to success. CH2M HILL project managers are required to possess a wide range of communications and financial skills and are trained in our trademarked Project Delivery System (PDS). PDS provides tools and processes to make each project successful.

#### High Praise for Dale Wilson, CH2M HILL Construction Inspector:

*"I WANT TO PUT A SHOUT OUT FOR DALE! It is very rare that I see that all the issues from the previous DRR have been addressed. Dale's Q & Q docs are so organized & easy to check through that his reviews take half the time it takes for any of my other job reviews that are of the comparative size. His Test Summaries sheets are very thorough & you don't have to wonder what is filed in the books or where. Instead of waiting for me (like most others) to make him a list of missing docs(my DRR) he is proactive at getting the necessary documents before payment & having them filed in the Q & Q books.*

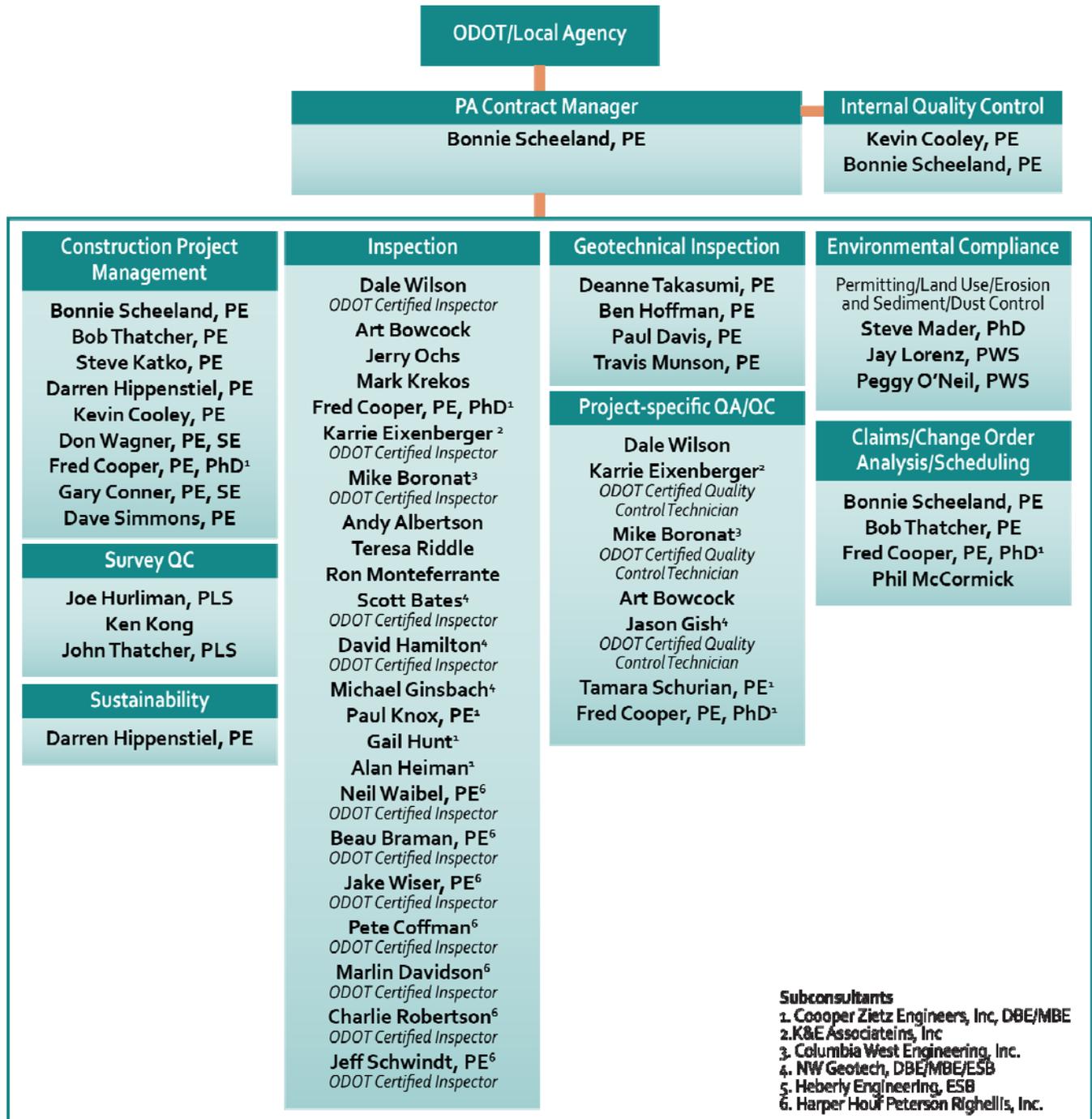
*Dale makes me a list of the documents that are missing...Wow! he's the first one that has EVER done my job for me!*

*Dale is very positive & eager to do a good job & to listen and take advice with things he is less familiar with... I get Dibbs on all of Dale's jobs!!!!*

*Thanks for doing such a great job Dale! You make my job very easy! :~)"*

**—Kari Gines, ODOT Region 1 Assurance Specialist**

Exhibit 1.  
CH2M HILL Project-level and Overall Team Organization



Using PDS, our project managers provide strong leadership to achieve ODOT/LPA satisfaction and promote sound financial performance, exceptional technical solutions, and superior client service, as illustrated in Exhibit 2. Our Career Development Framework sets out a path of measurable milestones at which our project managers must demonstrate competence in such subject areas as: financial acumen, team building, client service, change management, and other skills.

Our proposed project manager's, **Bonnie Scheeland, P.E.'s**, primary responsibilities to ODOT and local agencies will be to lead, manage, and administer the contract. This is where the business elements of the project will be established and contractual relationships will provide a stable framework within which individual work orders will be successfully executed: Key elements of the project manager tasks include:

- **Contract administration**—prime contract and subconsultant contract management and invoicing
- **Progress monitoring**—scope, schedule, budget, and reporting
- **Project management**—leadership, communication, and staff management
- **Quality control (QC)**—QC program management and technical reviews

### Chain of Command

The chain of command at the project level looks like this: the project manager has primary authority and responsibility to deliver the project. The project manager serves as the primary point of contact for ODOT/LPAs. CH2M HILL is fundamentally a team-based organization, structured with task leads and technical staff accustomed to delivering results for clients and project managers. Exhibit 3 shows how the functional roles of our team will interface with ODOT's Construction Section. Our construction project manager will have responsibility for the consultant team. The buck stops there for the accountability of administering the construction contractor's compliance with the contract documents. Our staff of professionals, including inspectors, subconsultants, surveyors, estimators, Engineers of Record (if applicable), quantity and quality documents specialists, and contractor payment documentation specialists report directly to our construction project manager. He/she is the point of contact for the ODOT/LPA project manager. Above our construction project managers, John Willis, our regional

Exhibit 2. CH2M HILL's Project Delivery System (PDS)



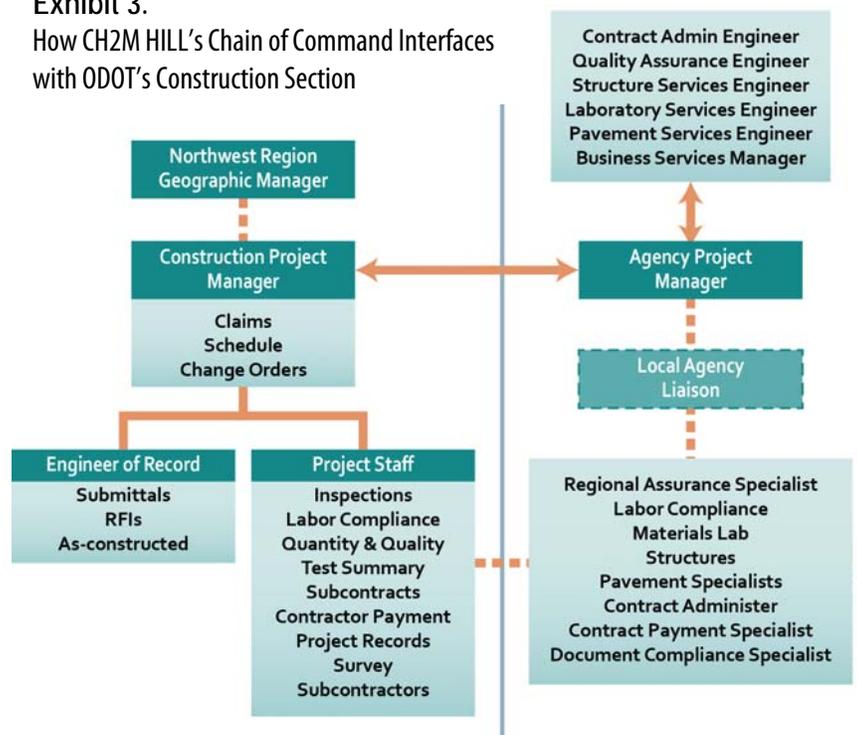
transportation manager, is available to listen to any concerns or questions that ODOT/LPA staff may have.

Our staff is structured to address and deal with the administration of the contract at the lowest possible level. We are familiar with the partnering approach and the associated conflict resolution processes. An example of that is our site inspector will coordinate directly with ODOT Structures

quality staff to invite them to our pre-pour meetings and to afford them the opportunity to attend deck pours. This model is followed for all technical services as appropriate. In short, our staff members are loyal to their teams, their clients, and their projects, as these are key measures of their success, career development, and employee and client satisfaction.

From the project manager, the next resource to ODOT/LPAs is the PIC, who likely only charges minimal time to a project, but who has a significant and strategic key oversight and advisory role. The PIC monitors performance and conducts periodic check-ins with clients and is a named resource whom ODOT/LPAs can call at any time to discuss aspects of the project delivery and the team. The PIC is also a mentoring resource to the project manager for questions or advice. This core model of PIC-project manager-task lead provides a simple chain of command that places clear responsibility and accountability at each level, assuring cost-effective delivery of each project. Moving up from the project level, our chain of command is similarly straightforward and allows management to monitor performance, quality and client satisfaction.

Exhibit 3. How CH2M HILL's Chain of Command Interfaces with ODOT's Construction Section



Construction Project Manager Bonnie Scheeland has also served as the operations manager for a major region of our transportation business, with responsibility to our organization and to our clients for project performance. John Willis, P.E., is the Northwest Region Geographic Manager. His responsibilities include all projects in the Northwest Region of the U.S. Exhibit 1 shows both the project level organization and our overall organizational management structure. Our geographic manager reports to our North American Business Manager. Both interrelated models are designed for effective, efficient, and quality client service and satisfaction.

Also based in Portland, John has regional responsibility for CH2M HILL's project performance and client service. John, in turn, reports to Chad Hunsaker, P.E., who oversees CH2M HILL's transportation business for North America. These individuals set the standards for and monitor our team performance, and regularly solicit feedback from clients to improve performance. Our manager's experience with ODOT and local agencies brings an extra level of understanding and accountability to our work on this contract.

### Approach to Projects

CH2M HILL's approach to the performance of work order contracts (WOC) will be focused, flexible, and responsive. The goal is to deliver projects that provide the greatest long-term value for Oregon and the use of public funds. We will focus efforts on achieving the outcomes listed under construction administration/construction engineering and inspection (CA/CEI) services in the RFP, applying the needed skills and knowledge to proceed with minimal ODOT oversight while maintaining appropriate levels of stakeholder collaboration. We will address key issues such as location, scope, size, complexity, and stakeholder diversity and factor them into key decisions regarding approach and methods. We begin every meeting, both internal and external, with a safety moment that focuses the team as a matter of doing business on a culture of safety and continuous improvement. We fully understand and know that in construction, time is money and quality is king/queen. Our management structure will be nimble and responsive to contractor questions and project concerns. One example of our ability to act quickly and responsively was the The Dalles **Union Street Undercrossing at I-84** project. During a normal excavation process by the construction contractor, cultural artifacts were discovered. We were able to immediately mobilize specialized archeologists to the site so the contractor could resume work with all relevant laws and best practices being observed.

*CH2M HILL's approach to the performance of work order contracts will be focused, flexible, and responsive. The goal is to deliver projects that provide the greatest long-term value for Oregon and the use of public funds.*

We will achieve project success through our organizational structure by:

- Understanding project needs and client preferences by our team and management and be aligned with ODOT policies and procedures

- Developing a clear, complete project scope work plan with the roles and responsibilities of all parties
- Proactively anticipating, tracking, and managing and communicating change and emerging project issues
- Following guiding principles shared by all team members and our clients
- Developing and implementing a clear management structure through our internal organization

This approach is shared by all our management staff, from project manager and up to our chief executive officer (CEO).

### Subcontractor Management

We will honor our commitments with our teaming partners and focus on DBE subcontractor involvement. Our subcontractors are selected, utilized, and managed based on the project services needs and cost effectiveness. Local subcontractor resources can provide the best value for ODOT/LPA subcontractor expertise, our DBE subcontracting plan, and best resource allocation. We could choose a subcontractor to achieve a significant cost/benefit to ODOT/LPAs as well as specialized expertise such as QCCS functions or specialty inspections. When the sub is qualified and in the project vicinity, it would be a natural fit.

Each subcontractor is provided a detailed scope of work, schedule, and deliverables document. We contract with our subconsultants through our professional procurement staff, and we manage them as an integral member of the project team, using project meetings, email, and written communications and appropriate communication methods for providing shop drawings, requests for information (RFIs), etc. CH2M HILL requires subcontractors to comply with the quality management requirements and structure of each project. We also evaluate the safety records of our subcontractors. Even as our subcontractors are in responsible charge of their piece of work, we serve as mentors to help them navigate federal aid, local agency, and ODOT processes and standards. We manage our subcontractors as full-fledged team members and keep the chain of command and communication protocols consistent with ODOT's/LPA's expectations.

One example of our approach to subcontractor utilization was evidenced by the **Darlene Hooley Pedestrian Bridge at Gibbs** project. We performed construction management on this local agency project and hired a DBE subcontractor to perform the role of the QCCS services. The subcontractor had responsible charge and autonomy in performing this most necessary and required function. Our onsite staff coordinated the most efficient scheduling of the subcontractor's work based on the construction contractor's project schedule. The result of this effort kept our team in absolute compliance with the semifinal documentation for the project and, therefore, reduced the

oversight and time for Regional Assurance Specialist (RAS) reviews and management.

## B. Methods of Coordinating and Expediting to Meet Schedule

### Coordinating and Expediting Project Delivery

The need to expedite project delivery for CA/CEI services is driven by the **construction contractor's schedule**. With our deep bench, we can staff projects to help make up schedule delays. The construction contractor may need to work long hours, nights, weekends, or double shifts to meet the project schedule. We have a strong track record of meeting project needs. An example is our delivery of the CA/CEI services for **East Vilas Road** in Medford. The construction contractor needed to accelerate the schedule, and we provided additional staff and worked longer hours to cover the critical, necessary inspection and documentation services. So our coordination is not only internal with our staff and subcontractors, but also with construction contractors' updated schedules.

At CH2M HILL, the foundation for delivering projects successfully is a clear and detailed scope, budget, and schedule, mutually agreed to at the beginning of the project and used as a baseline for performance monitoring. We discuss roles and responsibilities with our team prior to the Precon, ODOT's required Preconstruction Meeting, during an internal chartering meeting with our teams. Our scopes and schedules are based on the shop drawing and contractor submittal review periods, as stated in the *Oregon State Highway Construction Specifications*. More than just a series of due dates, our project schedules illustrate the sequencing and interdependencies of tasks and the overall consequences. Our delivery schedule is based primarily on the construction contractor's approved project schedule. We also include activities for project close out of semifinal documentation and as-constructed drawings. We also use this process to understand key schedule drivers, such as the contract completion date for construction. Our leverage in keeping the contract on schedule is directly related to the construction contractor's schedule. By carefully reviewing all of their schedule updates and schedule narrative reports, we can help identify project schedule impacts, bring them to ODOT's/LPA's attention, and suggest mitigations and solutions to help the construction contractor keep to their contractual obligations. We also can leverage our staff to accelerate submittal reviews, and work nights and weekends to meet the project schedule needs. Due to the timely notifications of any pending delays, ODOT/LPAs are kept informed and engaged in decision making for keeping the project on track. Our subcontractors are also chartered at the beginning of the project to help establish the understanding that they'll need to be available and responsive to the construction contractor's schedule, weather events, and other unforeseen possibilities.

### Adjusting Schedules and Level of Effort

While any consultant can say they'll be available on a moment's notice, we have a process to deliver on that promise. Our approach to adjusting schedules is:

- 1. Prepare Baseline Schedule:** Using Microsoft Project, we prepare a detailed project schedule that clearly shows key milestones and dependencies among tasks that is based on the contract milestones.
- 2. Regularly Update Schedule:** By updating the schedule regularly and tying it to the construction contractor's schedule, we can identify early on when a schedule milestone is at risk of slipping. Without this, it is easy to think everything is okay only to discover later that there is no way to meet the next milestone.
- 3. Steer and Influence Project Based on an Updated Schedules:** Corrective actions needed vary from one project to another. Ideally, there are tradeoffs and decisions in which the client can participate. For example, together we could ask: is there flexibility that would allow more efficient use of resources? Are there other solutions based on win/win for ODOT/local agency, the construction contractor, and stakeholders?
- 4. Meet Schedule:** When a schedule has changes or the scope of work changes but the schedule does not, there are consequences. Our staff and subconsultants are accustomed to juggling multiple assignments and thrive on working in a busy, results-focused work environment. But we also know that working harder is not always the answer to getting the work done.

Our workload management and forecasting tools—combined with our large staff pool and subcontractors and culture of flexibility and responsiveness—allow us to successfully respond to changing conditions to meet schedule. Our workload balancing tool helps our managers evaluate staff needs among multiple projects and offices. We are thus able to quickly shift resources to accommodate the evolving needs of multiple projects and schedules. When we are awarded a new project, it is immediately added to the workload tool to keep staffing needs at the forefront. With a flexible approach and plentiful staff resources—of CH2M HILL and our teaming partners—for this contract, we have staff available to begin work on new projects or supplement existing projects immediately. Once a project is underway, the depth of our team also allows us to add staff on short notice to meet changing needs. Our organizational structure is conducive to managing staff between offices, business groups, and divisions. We are not hindered by issues of internal profitability or internal profit-centered territorialism.

## C. Quality Control Procedures and Policies

### Construction Quality Procedures and Policies

Quality control within the realm of our CA/CEI duties is focused on administering the project in accordance with the contract documents, the *Manual of Field Tested and Non Field Tested Materials*, *The Construction Manual*, *The Inspector's Manual* and the *Standard Specifications for Highway Construction*. Our firm's overall commitment to quality management is documented in our *Quality Manual* as follows:

*"As CH2M HILL employees, we strive to consistently:*

*Provide value to our clients by delivering the product they want, safely, on schedule, and on budget – meeting their requirements and expectations*

*Understand and meet the needs of our internal customers*

*Achieve continual improvement of our quality management system"*

Construction quality begins with a culture of doing things right the first time, first and foremost, having every team member checking their own work, having a quality manager with real authority and having in place structured with policies and procedures that are trackable, auditable, and project specific. While CH2M HILL has a Quality Management System, signed by our firm's senior executives, we structure our construction quality management in full alignment with ODOT's expectations and policies and procedures. We access the tools and procedures through ODOT reference manuals. Every project, before it can be internally implemented at CH2M HILL, must have a quality manager and a project quality plan.

These processes are scaled to the size, complexity, and risks for any given project. On ODOT/LPA projects, an important structure for attaining quality control is the ODOT test summary format. ODOT has procedures in place and spelled out in the *Construction Manual*, and *Manuals of Field-tested and Non-field Tested Materials*. ODOT needs to know that it will get what is specified in the contract as quickly and efficiently as possible. Our construction quality procedures define that construction meets the ODOT-approved plans and specifications. Quality is stressed during construction operations and any changes to design drawings during construction are generated under the responsible charge of the Engineer of Record, checked and reviewed in accordance with the project quality plan. It is our policy that all documents, including letters, revised drawings, reports, and all communications—even some emails—be reviewed by a senior staff member. Through our Quality Management System, document compliance is subject to both internal and external audit. A particular example of effective quality management policies and procedures was the audits that were performed as part of the **Sellwood Bridge Rehabilitation Final Design** project. Our records were inspected against the provisions of the project quality plan and no non conformance reports (NCRs) were recorded. The audit recorded our compliance with our quality control/quality assurance policies and procedures. Another example is

*Our ability to serve projects out of local offices across the state, including Region 5, with offices in Portland, Corvallis, Bend, and Boise is a benefit to ODOT/LPAs in reduced mobilization time and cost and travel expenses.*

the regional assurance specialist (RAS) review of our **Darlene Hooley Pedestrian Bridge at Gibbs** project files. The files were found to be in **exceptional conformance** with ODOT policies and procedures. Dale Wilson's attention to detail, completeness and accuracy of Test Summary Documents have been noted by RASs throughout the state. He has worked in all 5 ODOT regions and is an ODOT-certified inspector.

Quality field engineers and technicians are trained to perform and document frontline quality inspections and documentation. Checklists for each operation are used by field staff to document that work is performed in conformance with quality standards and any nonconforming work that requires correction is communicated. These reports are collected by document control staff, then scanned and entered into the quality records for review by the quality manager, construction quality manager, construction project manager, and ODOT.

### 2.2.7. Proposer's Cost Effectiveness for CA/CEI Services

#### A. Ensuring Cost-effective Tasks and Deliverables

Our goal is to deliver every task and deliverable in the most cost-effective manner possible. We do this by beginning with a scoping meeting discussion with the client project manager and his/her support staff to discuss, listen, and understand what services will be needed. In this manner, we assure we can describe and understand deliverables and assign appropriate staff (not too junior or senior) for what is needed. Through this refinement process, we

also better understand the type of deliverables needed. After carefully listening to the client's needs, we raise clarifying questions and discuss the scope and project understanding. We then build a team of the right size and in the right location, leveraging staff in our local offices. We assign a task lead, senior staff (when appropriate), and more junior and mid-level when appropriate

Our ability to serve projects out of local offices across the state, including Region 5, with offices in Portland, Corvallis, Bend, and Boise is a benefit to ODOT/LPAs in reduced mobilization time and cost and travel expenses. We work from our Federal Acquisition Regulation- (FAR-) compliant rate tables, and negotiate with hotel chains and car rental agencies to attain preferred rates. We also choose our subcontractors to align with the project needs and their location to the work site to minimize expenses.

Our task leads carefully read the scope document, ask relevant questions of our project manager, build and price a team, and submit the proposal to our project manager who compiles a cost estimate using the ODOT Basis of Cost, (BOC) tool. The project manager then ground-truths and checks the estimate, looking for contingencies and risk costing that can be addressed through scope clarifications and assumptions. As an independent check of our pricing, we use an internal Pricer tool that checks current rates and classifications for all our staff. We also use current expense accounting in accordance with our

contracts. For our construction management services, we look at historical costs on previous work, ODOT delivery documents, the *Construction Manual*, *Oregon Standard Specifications for Construction*, *Manual of Field Tested and Non-field Tested Materials*, and, of course, the contract documents to help define the level of effort. After we have prepared our cost proposal, it is forwarded to ODOT and the local agency, (if applicable) for review, further discussion, if needed, and consensus and agreement. If necessary, the scope and pricing can be modified to meet the client needs. It is our fundamental practice to be transparent, involve task leads, and be fair. Our clients have an ability to make informed choices about exactly what they're buying and what we're providing.

One example of our ability to right size and, therefore, provide a cost-effective project team was the **Union Street Undercrossing at I-84** in The Dalles. The construction site was in an archeologically and environmentally sensitive footprint. To keep the project within the construction services budget, we tailored our inspection services to be strategic, for example, in advance of concrete pours, during traffic control implementations, during pile driving, etc. This targeted approach resulted in minimizing, but not compromising, quality on inspection services as well as making available the budget to provide archeologists and environmental scientists to deal with the field conditions during construction. Our CM/CEI services were delivered within budget.

We structure our approach to minimize travel, lodging, and per diem costs by first minimizing the amount of necessary travel and, secondly, by aligning our pricing with federal per diem rates and ODOT standards. During project delivery, our project managers have access to costs every Monday morning to compare costs to our delivery plan.

### B. Methods, Tools, and Processes for Developing Estimates for Services

Our methods, tools, and processes include the use of Basis of Cost (BOC) form to double check that any charges get correctly accounted. In addition our internal Pricer tool automatically plugs in the most current rates and classifications for all our staff. This provides an independent quality control of all our input data. Through our discussions with our client to refine the scope/budget and schedule, we are able to price within a budget as necessary. Because our task leads and client are integral to the pricing build-up process, everyone is on board, including the client. This is the best recipe for fair and reasonable treatment of all parties. The use of well-defined contingency items also keeps the lid on costs. An example of a well-used

contingency item to deal with an unforeseen event was on the **Darlene Hooley Pedestrian Bridge at Gibbs** project. A third-party auditor of the construction contractor needed our assistance in researching labor issues. While this work was not included in our executed scope of work, we did have a contingency item in place that ODOT was able to activate with an email. This afforded us to provide a timely response to another state agency and did not impact schedule, while still allowing us to stay within budget.

### 2.2.8. Project Team and Qualifications for CA/CEI Services

CH2M HILL staff have been delivering design and construction services on ODOT projects in all five ODOT regions for more than 30 years now, as demonstrated by Exhibit 4 and the bio summaries that follow.

#### A. Project Manager Experience with Interdisciplinary Teams

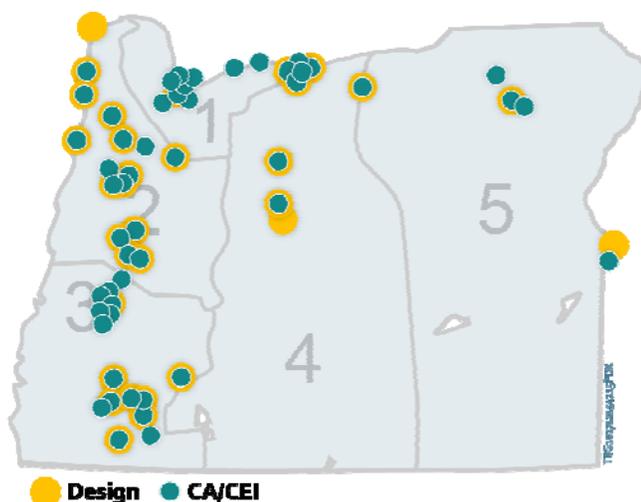
One of the strengths of the CH2M HILL team is our deep bench, including project managers. In addition to our primary project manager, Bonnie Scheeland, our team includes 9 additional construction project managers. Below, we provide summaries of qualifications for these key project managers: **Bonnie**

**Scheeland, Bob Thatcher, Dave Simmons, Steve Katko, and Darren Hippenstiel.**

**Bonnie Scheeland, P.E.**, our primary project manager, is a professional engineer in Oregon and has more than 27 years of experience working in all elements of construction management on similar projects as those described in the request for proposals. She is an Oregon-registered Professional Engineer and is in responsible charge of this CA/CEI team for services. Her CA/CEI career began as a construction surveyor for ODOT. This invaluable experience, literally from the ground up, provided the insights to understand, recognize, and ask relevant and important questions on complex bridge and wall construction sites. During her ODOT career, she also conducted materials testing, inspection, and ODOT document control and semi-final documentation on many projects.

During Bonnie's employment at Multnomah County, she was construction project manager as well as design and construction manager for major arterial construction and reconstruction projects. She has extensive experience with both developing and reviewing traffic control plans, as well as administering federal aid and multijurisdictional projects. One example project and outcome included the **207th Connector off I-84**. This was a

Exhibit 4. Our proposed Team Has Delivered CA/CEI and Design Projects in All 5 ODOT Regions



federal aid project involving close coordination with ODOT, local cities, and industry on a multimillion-dollar construction.

Since 1998, Bonnie has been a project manager, construction manager, and operations manager, playing a major part in developing quality management plans (QMPS) for major highway bridge projects throughout Oregon. Bonnie has provided scheduling advisory services to ODOT on major projects, including **Sunnybrook** and **Camelot**. By having the ability to focus exclusively on the construction contractor's schedule and monthly schedule updates, any delays were discovered immediately and afforded ODOT the ability to respond and/or mitigate quickly; administration of federal aid construction projects of similar size and character as described in the RFP.

Bonnie practices those same skills on the management of CE/CEI projects for ODOT and LPAs. She has worked on projects with multi-agencies railroads and the Portland Development Commission. On the \$9 million **Roy Rogers Road** project, Bonnie coordinated special geotechnical inspections for the construction across a major peat bog. On The Dalles **Union Street Undercrossing at I-84**, archeological, environmental agencies, U.S. Army Corps of Engineers coordinations were all necessary as well as inspection, management, and documentation in accordance with federal aid requirements and the *Construction Manual*.

One important take-away Bonnie has from her 27 years of experience is to know when to involve experts in decisions. When issues arise, it is prudent to engage the engineer of record, environmental compliance specialists, geotechnical engineers, surveyors, etc., to not only help with identifying the solutions to problems, but to bring their expertise and jurisdictional knowledge. One example of where Bonnie engaged experts to help keep the project moving and successful was The Dalles **Union Street Undercrossing at I-84**. CH2M HILL's environmental compliance specialist came out to the site to answer questions posed by NOAA Enforcement Officers regarding construction practices. Our specialist was able to explain the situation, propose mitigation that the local agency was already planning to implement, and allow the construction contractor and—most importantly—the project to proceed and stay on schedule.

**Bob Thatcher, P.E.:** Bob has more than 28 years experience on ODOT highway, arterial, and bridge construction. He has experience in project management of ODOT and local agency projects of similar size and complexity. He is proficient at quality control/quality assurance protocols, ODOT policies and procedures, and brings strengths in schedule analysis, claims mitigation and avoidance, and experience commensurate with the requirements of this RFP. He is a certified Construction Manager CMAA.

As a former ODOT project manager and inspector for 14 years, he was responsible for more than \$80 million dollars of constructed value projects. He learned the ODOT policies and procedures from the inside and is highly experienced in schedule analysis, claims analysis, and mitigation and change order preparation and analysis.

He has performed construction management on **I-5 Graves Creek Bridges**, **Maxwell Street Bridge**, and **Mary's River Bridge**, for example, among many, many other multidiscipline ODOT/LPA projects.

Jackson County's Mike Kuntz said of Bob: *"What I most appreciated about having Bob provide CE and inspection services for me is that Bob understands the art of proper inspection and ensures that the agency receives the quality project that is expected. With more and more emphasis on documentation (especially federal funded projects), more resources are being put into the time and effort required for documentation, often at the expense of quality inspection and quality of product. It is becoming harder and harder to find someone like Bob, with the skills and knowledge to really provide the project a local agency wants."*

**Dave Simmons, P.E.**, has 23 years of experience providing construction services on a range of multidiscipline construction projects, including **Scholls Ferry Road/River Road** Intersection for Washington County, a \$3 million rural arterial intersection safety project that includes a multi-lane roundabout. He also managed construction services for **Martin-Cornelius-Schefflin Corridor Road Improvements**, Washington County, and the **Boones Ferry Road Preservation** in Tualatin. **Steve Katko, P.E.**, has 16 years of providing construction service management on local agency, multidiscipline projects, including **SW 124<sup>th</sup> Avenue/SW Mylsony Street to SW Tualatin-Sherwood Road** project and **SW Boones Ferry Road and SW Tualatin-Sherwood Road Downtown Enhancement** project both for the City of Tualatin. He has also provided construction support services for the **Airport Way Widening** project for the Port of Portland and provided construction inspection on ODOT/LPA projects for Marion County and Yamhill County.

**Darren Hippenstiel, P.E.**, has served as both a construction manager and an inspector on multidiscipline projects including: the **Anderson Road Improvements/Green Street Project** for the City of Damascus, **North Ontario Interchange** for ODOT, and **Herman Road Final Design** for the City of Tualatin.

**Prospect Butt Falls Road:  
A Success Story Delivering Federal Aid  
CA/CEI Services**

*On the Prospect Butte Falls Road, our team provided CA/CEI services including geotechnical support dealing with a major slide on to be repaired using Mazama ash. This was a complex and extremely moisture sensitive, albeit, readily available fill source. We not only provided full inspection and Bonnie Scheeland's construction management services during construction, but also federal aid documentation and geotechnical, real-time evaluations of the fill material's behavior, with our recommendations for a successful outcome.*

## B. Key Staff Qualifications Summary

The CH2M HILL team includes a host of ODOT certified technicians and inspectors as well as professional engineers, as illustrated by Exhibits 5 and 6.

A summary of other key CA/CEI staff qualifications is provided below.

**Dale Wilson:** Dale has 24 years of ODOT/LPA inspection experience. He not only holds ODOT certifications in bridge construction, environmental compliance, traffic signals, and hot mixed asphalt concrete, his expertise with maintaining high quality test summaries has been a model for ODOT/LPA work, according to an ODOT R1 RAS (see Page 1 of this proposal). He has a professional approach to dealing with construction and documentation and has a reputation for making ODOT’s job easy. His skills are aligned with the requirements of this RFP.

**Karrie Eixenberger:** As an ODOT certified inspector, Karrie brings more than 15 years of inspection and 7 years as an ODOT/LPA QCCS for large, multidiscipline highway bridge projects statewide. She brings ODOT certifications in aggregate, embankment, asphalt, density, and bridge inspections. Her experience includes projects on I-5, in Newport, Oregon, and on Badger Mountain.

**Steve Mader, PhD:** Steve brings 31 years of experience in environmental task management. He has served as environmental compliance manager on 6 highway bridge design-build projects, where his work often resulted in

significant compliance awards, up to the maximum possible. His expertise and deep understanding of environmental compliance issues is a major asset to ODOT/local agency teams in delivering environmentally compliant projects.

**Mike Boronat:** Mike possesses ODOT certifications and is a QCCS who has worked on numerous ODOT transportation projects. He has managed or provided testing and inspection services for hundreds of road and bridge projects, ranging from rural street improvements to multi-million dollar highway and bridge projects.

**Phil McCormick:** Phil is a project controls specialist and construction manager with 14 years of experience on bid-build, design-build, and CM/GC projects ranging in size from \$400,000 to \$458 million. He is adept at developing and maintaining Critical Path Method (CPM) Schedules, and has experience setting up subcontracts, subcontractor management, and cost estimating and negotiating change orders. He has also managed project submittals, prepared monthly owner payment applications, has managed contract schedules and cost control, and has experience with design and constructability reviews.

Exhibit 5. ODOT-certified Technicians									
	Quality Control Compliance Specialist (QCCS)	Certified Aggregate Technician (CAgT)	Certified Asphalt Technician I (CATI)	Certified Embankment and Base Technician (CEBT)	Certified Density Technician (CDT)	Certified Mix Design Technician (CMDT)	Concrete Control Technician (CCT)	Concrete Strength Testing Technician (CSTT)	Quality Control Technician (QCT)
Scott Bates		■	■	■		■		■	■
Mike Boronat	■	■	■		■				■
Karrie Eixenberger	■	■	■	■	■		■		
Jason Gish		■	■	■	■				■
David Hamilton									■
Richard McNichols									■

Exhibit 6. ODOT-certified Inspectors and PEs										
	Certified General Construction Inspector (CGCI)	Certified Environmental Construction Inspector (CECI)	Certified Hot Mixed Asphalt Concrete Inspector (HMAC)	Traffic Control Supervisor/Technician (TCS/TCT)	Certified Bridge Construction Inspector (CBCI)	Certified Drilled Shaft Inspector (CDSI)	Certified Traffic Signal Inspector (CTSI)	Certified Structural Coating Inspector (CSCI)	Certified Maintenance Bridge Inspector (CMBI)	Oregon Registered Professional Engineer (PE)
Beau Braman	■	■	■							■
Pete Coffman	■	■	■							
Gary Conner										■
Kevin Cooley										■
Fred Cooper										■
Marlin Davidson	■	■	■							
Karrie Eixenberger	■				■					
David Hamilton					■					
Adam Heberly	■		■	■			■			
Alan Heiman					■	■				■
Scott Henderson		■								
Darren Hippenstiel										■
Gail Hunt	■		■		■	■				
Steve Katko										■
Richard McNichols	■				■	■				
Penny Painter		■	■							
Charlie Robertson	■	■	■							
Bonnie Scheeland										■
Tamara Schurian		■								■
Jeff Schwindt					■	■				
Dave Simmons										■
James Smith	■									
Bob Thatcher										■
Don Wagner										■
Neil Waibel	■	■	■	■	■	■	■	■	■	
Dale Wilson	■	■	■		■		■			
Jake Wiser	■	■	■							■