

February 16-17, 2017

Consultant Selection and IGE Development for Federal Lands- FHWA



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Federal Highway Administration Structure

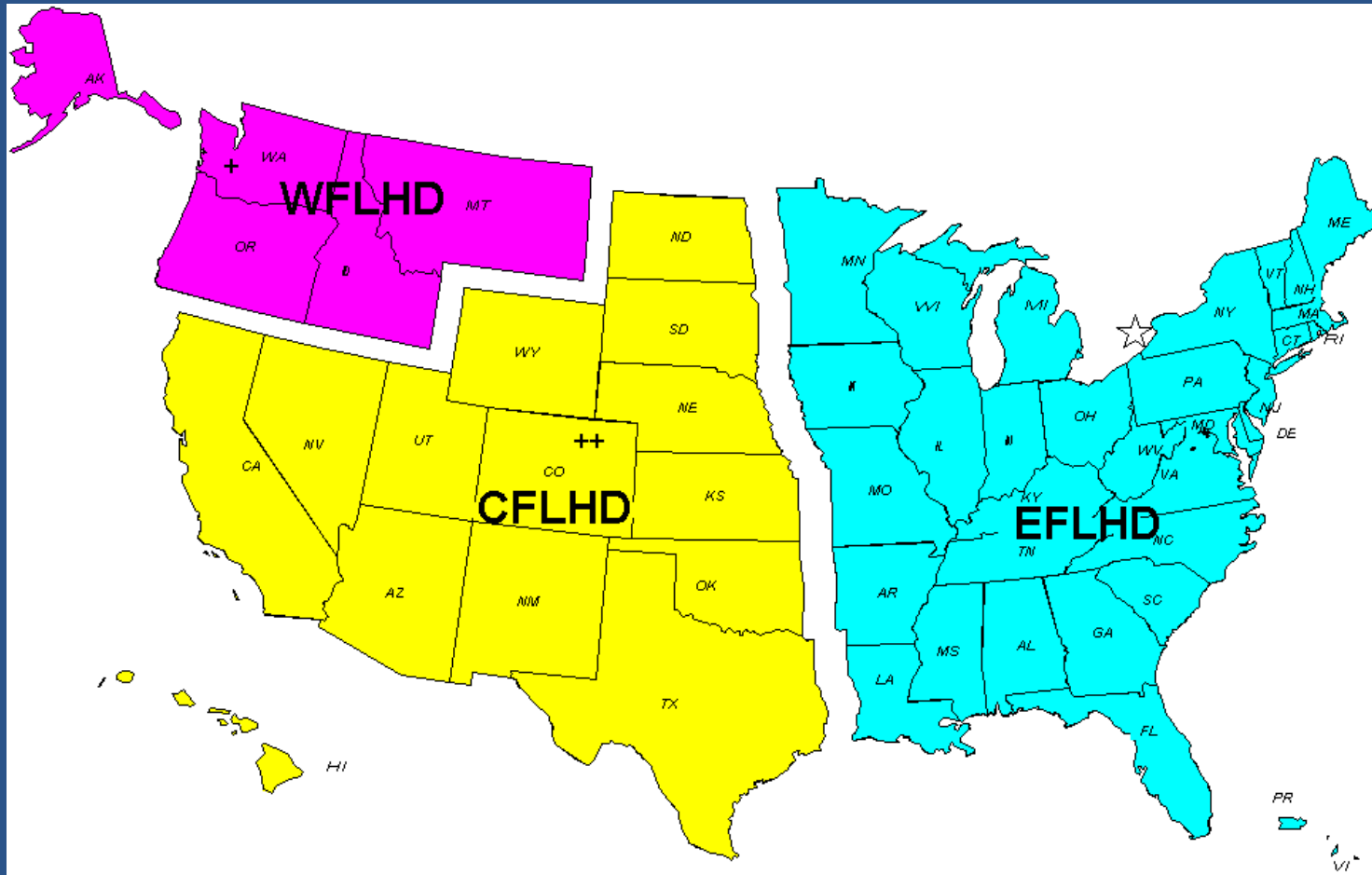
Federal-aid Program

- Headquarters
- Resource Centers (4)
- 52 Division Offices
- State Administered, federally assisted
- \$39+ Billion/yr
- 2300 employees

Federal Lands Program

- Headquarters
- Resource Centers (4)
- 3 FLH Divisions
- Plan, design, build
- Direct federal contracting
- Administered with FLMAs
- \$1+ Billion/yr
- 650 employees

Federal Lands Service Areas



Federal Lands Service

- Project Delivery (Project Management, Planning, Highway, NEPA, Geotech, Hydraulics, Surveys, Bridge, etc.)
- Contracting and Procurement
- Construction Engineering Management & support
- Technology Deployment

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A/E Selection Process

<https://flh.fhwa.dot.gov/business/ae/process/>

- At Western Federal Lands
 - 5 YR IDIQ Contracts
 - 6 Full Service A/E Teams Pre-Qualified
 - Pre-Negotiated Labor/OH/Profit Rates

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IGE- Independent Gov't Estimates

- Required for all Contracts/Agreements
 - Reimbursable Agreements/PO/RASP/ & A/E Task Orders

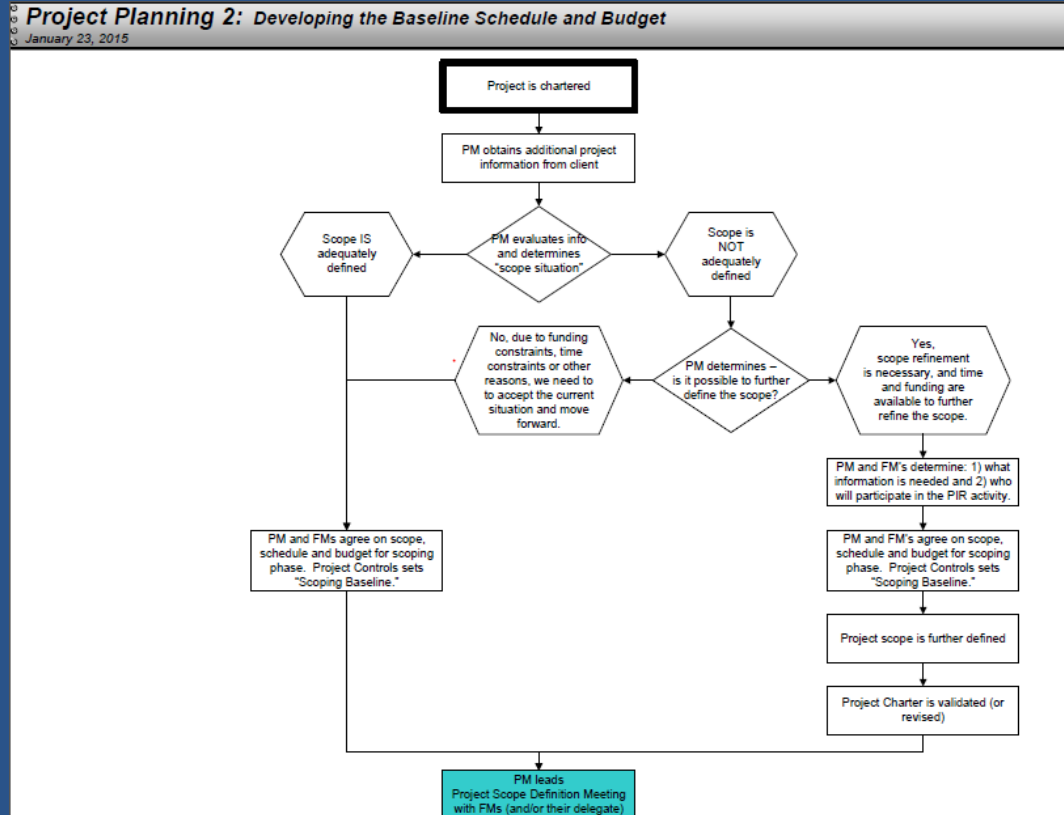
Process Flow:

SOW → WBS → IGE Development

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WFL Project Kick-Off Stage Process(excerpt from WFL Project Source Documentation)

<http://wflnet.wfl.fhwa.dot.gov/help/primavera>



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Central Federal Lands example portions of a Scoping Doc

- (the full document can be found at the following web site:
<https://flh.fhwa.dot.gov/resources/pm/cfl/PPCGuide/index.htm>)

| A. PROJECT SUMMARY | | |
|---|---|--|
| Description | Comment | |
| General project description and nature of work | [summarize the transportation needs and deficiencies identified during the planning and programming phase. present the project's goal. summarize the intended scope of work. determine, if necessary, the need to identify and evaluate alternatives with engineering analyses; otherwise state that identification and evaluation of alternatives are not needed.] | |
| Major issues and concerns | [provide narrative describing issues and concerns (risks) associated with, or potentially affected by, the Scope of Work that must be addressed in this project] | |
| Relevant project history | [provide narrative: including when project was programmed, recent projects, emergency event requiring project, etc..] | |
| ATTACH LOCATION AND PROJECT MAP HERE OR IN APPENDICES | | |
| B. ROUTE IDENTIFICATION & EXISTING CONDITIONS | | |
| COPY AND INCLUDE THE FOLLOWING TABLE FOR EACH ROAD THAT IS PART OF PROJECT: | | |
| Description | Response | Comment |
| Road Name and Route ID Number: | | |
| GPS Coordinates Start | | |
| GPS Coordinates End | | |
| Length | | |
| Functional Classification | Urban Minor Arterial | [if other, describe] |
| Posted Speed | Select Posted Speed | [describe if speed changes through length of route] |
| Terrain | Select Terrain | [describe if terrain changes through length of route] |
| Existing Number of Lanes (each direction) | Select # of Lanes | [describe if the # of lanes changes] |
| Existing Travel Way Width | | [describe if the width varies] |
| Existing Shoulder Width | | [describe if the width varies] |
| Existing Shoulder Type | Select Shoulder Type | [describe if the shoulder type changes through length of route] |
| Existing Bench Width | | [describe if the width varies] |
| Clear Zone/Roadside Hazards | | [describe existing clear zone and roadside hazards] |
| Major Intersection Roads | ADD ROW (LAYOUT>INSERT BELOW) FOR EACH INTERSECTING ROAD | [provide any data regarding intersection road (ADT, purpose, etc..)] |
| Current ADT | | [provide date and source of data] |
| Seasonal ADT | | [provide date and source of data] |
| % Buses | | [provide date and source of data] |
| % Trucks | | [provide date and source of data] |

| I. HYDROLOGY/HYDRAULICS | | |
|--|----------|---|
| Description | Response | Comment |
| Specific state or local design standards/requirements | Yes/No | [if yes, describe (design floods, roadway overtopping, backwater, freeboard, analytical methods as waterway crossings)] |
| Condition or performance problems with minor drainage structures? | Yes/No | [if yes, describe] |
| Existing major culvert structures (over 48" rise) being retained? | Yes/No | [if yes, describe type, size, location, condition, etc... provide photos, including upstream and downstream] |
| Exist/Proposed LWCS? | Yes/No | [if yes, describe] |
| Existing bridge/open bottom structure on project? | Yes/No | [if yes, describe if evaluated for scour susceptibility] |
| Proposed major structure? (Culvert>48" or bridge) | Yes/No | [if yes, describe proposed type, size, location and provide photos, including upstream and downstream] |
| Proposed open bottom structures? | Yes/No | [if yes, describe] |
| Proposed geotechnical walls located within or adjacent to channels? | Yes/No | [if yes, describe] |
| Fish passage concerns? | Yes/No | [if yes, describe] |
| Channel migration concerns? | Yes/No | [if yes, describe] |
| Within designated FEMA floodplain? | Yes/No | [if yes, describe] |
| Channel degradation or aggradation concerns? | Yes/No | [if yes, describe] |
| Scour, erosion, deposition of sediment or debris, abrasion or corrosion of structure material at culvert inlets or outlets | Yes/No | [if yes, describe] |
| Describe channel bed and bank material | | Describe (rock, non-cohesive, gravel, silt, sand, clay etc.) provide photos and if sampling and testing is needed to accurately define character. |
| Within 100 miles of West coastline? | Yes/No | [if yes, describe] |
| Description | Response | Comment |
| Potential Major Impacts to Cost or Schedule | Yes/No | [describe any potential for major impacts to cost or schedule based on proposed scope of work] |
| Constructability Concerns | Yes/No | [describe any constructability concerns for project] |
| Summary of Preliminary Hydraulic Design | | |

| V. TECHNOLOGY AND INNOVATION INITIATIVES | | |
|--|------------------------|---|
| Complete the following table and discuss Every Day Counts technology and Innovation initiatives (www.fhwa.dot.gov/everydaycounts/) that can be suitably deployed on this project. Provide justification for those EDC Initiatives that do not apply or were not considered | | |
| BRIDGES | | |
| http://www.fhwa.dot.gov/accelerating/innovation.cfm | | |
| Description | Applicable to Project? | Justification |
| Geosynthetic Reinforced Soil – Integrated Bridge System (EDC-1/2) | Yes/No | [potential use or justification why not applicable] |
| Prefabricated Bridge Elements and Systems (EDC-1/2) | Yes/No | [potential use or justification why not applicable] |
| Slide-In Bridge Construction (EDC-2) | Yes/No | [potential use or justification why not applicable] |
| Composite bridge decking for moveable bridges (Highways for Life) | Yes/No | [potential use or justification why not applicable] |
| Fully precast bridge bents for use in seismic regions (Highways for Life) | Yes/No | [potential use or justification why not applicable] |
| Full depth ultra-high performance concrete waffle bridge panels (Highways for Life) | Yes/No | [potential use or justification why not applicable] |
| CONSTRUCTION | | |
| http://www.fhwa.dot.gov/accelerating/innovation.cfm | | |
| Description | Applicable to Project? | Justification |
| Three-Dimensional Modeling (EDC-2) | Yes/No | [potential use or justification why not applicable] |
| Alternative Technical Concepts (EDC-2) | Yes/No | [potential use or justification why not applicable] |
| Construction Manager/General Contractor (EDC-1/2) | Yes/No | [potential use or justification why not applicable] |
| Design Build (EDC-1/2) | Yes/No | [potential use or justification why not applicable] |

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Scoping Report Output

- Functional Deliverables
 - WBS Activities are Deliverable Based

For Example:

- 404 Individual Permit is forecasted:

| 404 Individual permit | | 415 | 02-Dec-16 | 06-May-16 A | 16-Jul-18 | 23-Jun-18 | 15 | |
|-----------------------|---|-----|-----------|-------------|-----------|-----------|----|------------------------------------|
| 3855 | Contact USACE for early engagement | 5 | 02-Dec-16 | 06-May-16 A | 08-Dec-16 | 16-Nov-16 | 15 | M10, A1420 |
| 3865 | Prepare 404 Individual permit application | 5 | 09-Feb-18 | 17-Jan-18 | 15-Feb-18 | 23-Jan-18 | 17 | 3855, 1460 |
| 3875 | QA and submit 404 Individual permit applicati | 1 | 16-Feb-18 | 24-Jan-18 | 16-Feb-18 | 24-Jan-18 | 17 | 3865 |
| 3885 | 404 Individual Permit Completeness review (I | 30 | 17-Feb-18 | 25-Jan-18 | 18-Mar-18 | 23-Feb-18 | 23 | 3875 |
| 3895 | 404 Individual Permit Public Process (USACE) | 60 | 19-Mar-18 | 24-Feb-18 | 17-May-18 | 24-Apr-18 | 23 | 3885 |
| 3905 | Issue 404 Individual Permit (USACE) | 60 | 18-May-18 | 25-Apr-18 | 16-Jul-18 | 23-Jun-18 | 23 | 3895 |
| 1190 | Wetland delineation | 10 | 28-Jun-17 | 07-Jun-17 | 12-Jul-17 | 20-Jun-17 | 15 | 1180, 0600, 2030, 2040, 2050, 2050 |
| 1200 | Wetland delineation report | 10 | 13-Jul-17 | 21-Jun-17 | 26-Jul-17 | 05-Jul-17 | 15 | 1190, 0600 |

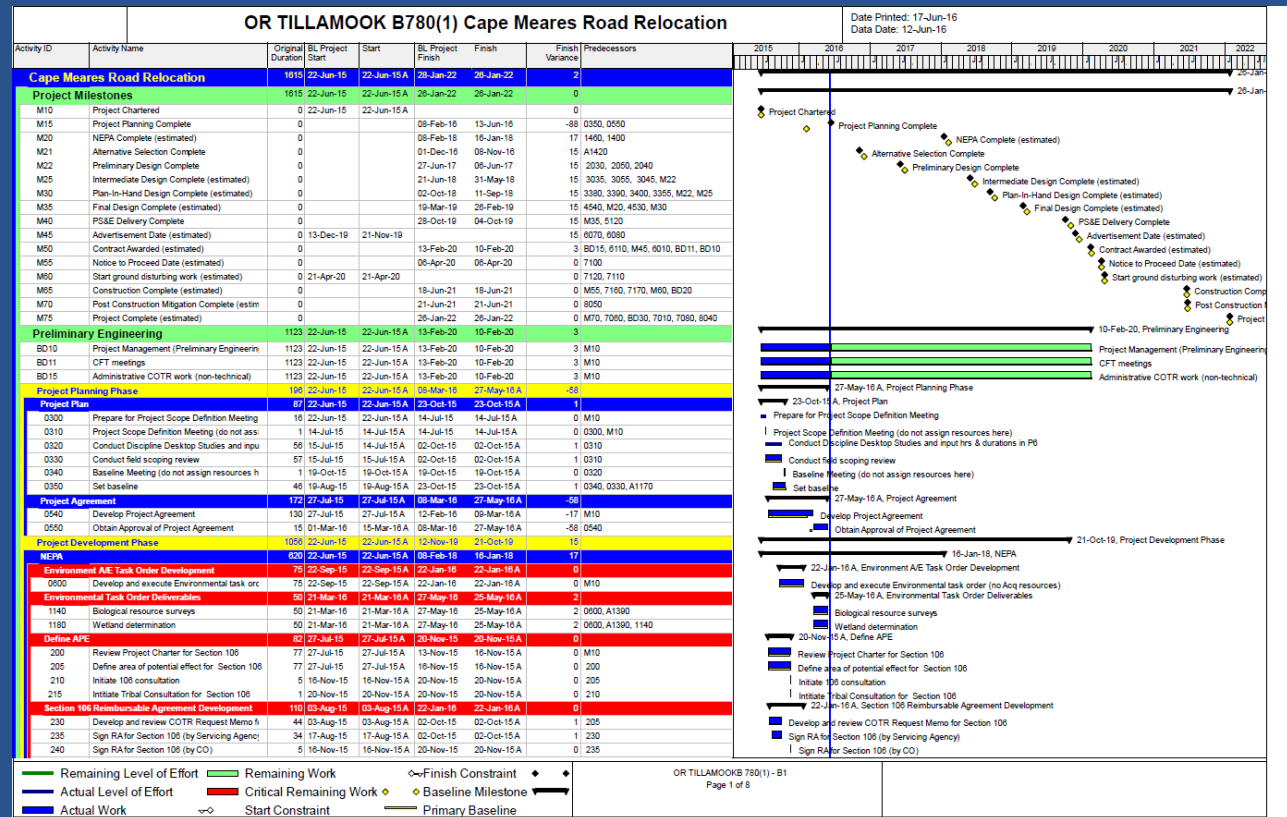
- Geotechnical Drilling is needed

| Initial Geotech Recommendation Memo | | 246 | 06-Oct-15 | 06-Oct-15 A | 01-Nov-16 | 11-Oct-16 | 15 | |
|-------------------------------------|--|-----|-----------|-------------|-----------|-------------|----|------------------------------------|
| 4200 | Issue geotech investigation RFQ and award | 20 | 06-Jul-16 | 14-Jun-16 | 02-Aug-16 | 12-Jul-16 | 15 | 4300, 4230, A1380 |
| 4210 | Review samples and prepare for Lab testing | 5 | 31-Aug-16 | 10-Aug-16 | 07-Sep-16 | 16-Aug-16 | 15 | 4260 |
| 4220 | Develop Geotech Investigation Plan | 64 | 06-Oct-15 | 06-Oct-15 A | 22-Jan-16 | 22-Jan-16 A | 0 | M10, 0330, A1470 |
| 4230 | Confirm (or obtain) environmental clearances | 68 | 25-Jan-16 | 25-Jan-16 A | 28-Apr-16 | 16-Mar-16 A | 32 | 4220 |
| 4240 | Apply for Permits for Geotechnical Investigati | 5 | 29-Apr-16 | 29-Feb-16 A | 05-May-16 | 17-Mar-16 A | 35 | 4230 |
| 4250 | Authorize permits | 36 | 06-May-16 | 26-Apr-16 A | 27-Jun-16 | 26-Apr-16 A | 43 | 4240 |
| 4260 | Perform geotech field investigation | 10 | 03-Aug-16 | 13-Jul-16 | 16-Aug-16 | 26-Jul-16 | 15 | 4250, 4200, A1390, A1380, 4230, A1 |
| 4270 | Test materials | 20 | 15-Sep-16 | 24-Aug-16 | 13-Oct-16 | 21-Sep-16 | 15 | 4210 |
| 4280 | Prepare Initial Geotech Recommendation Me | 10 | 14-Oct-16 | 22-Sep-16 | 27-Oct-16 | 05-Oct-16 | 15 | 4270 |
| 4290 | Perform QC review and finalize Initial Geotec | 3 | 28-Oct-16 | 06-Oct-16 | 01-Nov-16 | 11-Oct-16 | 15 | 4280 |
| 4300 | Prepare geotech investigation statement of w | 5 | 28-Jun-16 | 02-May-16 A | 05-Jul-16 | 13-Jun-16 | 15 | 4220, 4250, A1380 |

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SOW w/ a Schedule

Partial Schedule Example- OR TillamookB780(1) Cape Meares Road Relocation



| Task Order Item | Trip Location / Destination | Non Labor Hour Expenses | Rate | Quantity or People | Days | Nights | Amount | 1) Kake to Seal Point Road TFH70-05-D-00008 | | | | | |
|------------------|-----------------------------|--|-------------|--------------------|----------|----------|------------|--|--|--------------|---------------------|------------|-------------|
| - Phase A | Alaska | Air Fare | \$1,300.00 | 5 | | | \$6,500.00 | Engineer / Scientist | Senior Draftsperson | Draftsperson | Staff Admin Support | | |
| | | Air Charter | \$1,320.00 | 5 | | | \$6,600.00 | | | | | | |
| | | Air Charter | \$640.00 | 5 | | | \$3,200.00 | | | | | | |
| | | Rental Car | \$100.00 | 2 | 4 | | \$800.00 | | | | | | |
| 3 | | Survey | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 3.a | | Final survey controls | | | | | | | 4 | \$ | 296.08 | 4 | \$296.08 |
| 4 | | Geotech/Materials | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 4.a | | Consolidated geotechnical report | | | | | | | 9 | \$ | 821.37 | 88 | \$12,909.15 |
| 4.b | | Final draft geotechnical design | | | | | | | 2 | \$ | 299.96 | | |
| 4.b.i | | Soft soil plans | | | | | | | 24 | \$ | 3,435.52 | | |
| 4.b.ii | | Soft soil SCRs | | | | | | | 20 | \$ | 3,165.04 | | |
| 4.b.iii | | Soft soil CPM construction | | | | | | | 20 | \$ | 3,165.04 | | |
| 4.c | | Final draft geotechnical design review | | | | | | | 13 | \$ | 2,022.22 | | |
| 5 | | Hydraulics | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 5.a | | Final hydraulic design | | | | | | | 40 | \$ | 3,075.68 | 40 | \$3,075.68 |
| 6 | | Right of Way and Utilities | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 6.a | | Verify R/W | | | | | | | 8 | \$ | 758.24 | 16 | \$1,516.48 |
| 6.b | | Verify R/W mitigation | | | | | | | 8 | \$ | 758.24 | | |
| 7 | | Plan Review | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 7.a | | Final design office review | | | | | | | 33 | \$ | 3,969.56 | 33 | \$3,969.56 |
| E. | | PS&E Sign-off Design Phase Design | 0 | 0 | 0 | 0 | 0 | | 244 | \$ | 22,398.67 | | |
| 1 | | Design | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 1.a | | Resolve Final design comments | | | | | | | 14 | \$ | 1,745.02 | 157 | \$14,950.73 |
| 1.b | | Sign-off quantity calculations | | | | | | | 12 | \$ | 971.28 | | |
| 1.c | | Sign-off engineer's estimate | | | | | | | 4 | \$ | 379.12 | | |
| 1.d | | Sign-off CPM construction schedule | | | | | | | 6 | \$ | 722.53 | | |
| 1.e | | Sign-off PS&E | | | | | | | 104 | \$ | 9,658.00 | | |
| 1.f | | Sign-off Electronic copy | | | | | | | 17 | \$ | 1,474.78 | | |
| 2 | | Design Narrative | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 2.a | | Design Narrative | | | | | | | 9 | \$ | 908.22 | 9 | \$908.22 |
| 3 | | PE Hold File | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 3.a | | PE Hold File | | | | | | | 78 | \$ | 6,539.72 | 78 | \$6,539.72 |
| | | Total Hours Per Personnel | 122 | 90 | 8 | 8 | 4 | 50 | 4 | 378 | 132 | 14 | 84 |
| | | Total Cost Per Personnel | \$12,890.52 | \$7,551.00 | \$500.40 | \$503.20 | \$151.00 | \$7,046.50 | \$654.96 | \$61,893.72 | \$21,613.68 | \$1,258.04 | \$6,013.56 |
| | | | | | | | | | Total Labor Hours | | 6801 | | |
| | | | | | | | | | Total Labor Cost | | \$722,477.00 | | |
| | | | | | | | | | Total Indirect Expenses and Travel Costs | | \$232,960.25 | | |
| | | | | | | | | | Total Estimate | | \$955,437.25 | | |
| | | Printing | \$500.00 | 1 | | | \$500.00 | | | | | | |

Task 4.2 Project Plans and Task 4.4 Geotechnical Report

These two tasks comprise the bulk of the work to be performed under this modification and are linked in that the work on the Geotechnical Report supports development of the project plan details. These tasks are being evaluated together due to an apparent difference in the Consultants approach to the work. The proposed fee is higher for Task 4.1 but lower for Task 4.3. However, the overall fee for both tasks is very close to the IGE.

Objective: Clarify work to be completed by Senior Geotechnical Engineer and Project Geotechnical Engineer and clarify the consultant's role for completion of the work.

| Task 4.2 | Fee Proposal | IGE | Negotiation Objective |
|--------------|--------------|----------|-----------------------|
| Total Hours | 205 | 200 | 205 |
| Subtotal Fee | \$24,606 | \$19,393 | \$24,606 |
| | | | |
| Task 4.4 | Fee Proposal | IGE | Negotiation Objective |
| Total Hours | 220 | 254 | 220 |
| Subtotal Fee | \$29,485 | \$35,504 | \$29,485 |
| Total Fee | \$54,901 | \$54,897 | \$54,901 |

Date: Sometime

the subject fee proposal

E. The Consultant has hours; the major differences technical Engineer and Project perform tasks that the IGE s and by the consultant.

ical Engineer and Project ompletion of the work.

E of 94 hours. Clarify what oted below. Accept all other

v 9 hours each for Sr. Engineer.

llow 4 hours each for Project t any review hours to tasks

v time for two meetings 'Engineer, and Project

Federal Lands: Top Items for a Successful Task Order?

Schedule

- Allow time for negotiation before the First Deliverable, meeting, or trip is required.

Document performance

- If you are not happy with a firm's performance, you need to DOCUMENT it with a performance evaluation. This notifies future COR's or issues that affect future task order considerations.

Deliverables and Completion Dates

- Deliverable dates should be specific, not seasonal. Allow time for reviews and third party decisions.

Have Proper Discussions

- Ensure SOW and Explanation of Deliverables are clearly defined.
- Discussing extra work or asking for items outside the SOW is improper.
- Discussing the task order with a A/E firm w/o prior CO approval is improper.