



Washington State Ferries

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**Seattle Multimodal Terminal
at Colman Dock
Project**

**REQUEST FOR FINAL PROPOSALS
for
GENERAL CONTRACTOR/
CONSTRUCTION MANAGER SERVICES**

Division 00 52 55

**Attachment A
Scope of Work for Preconstruction
Services**

DATE ISSUED: INDUSTRY DRAFT#2

PROPOSALS DUE: TBD

20	GENERAL	1
21	BASIC SERVICES	2
22	TASK 1 – PROJECT MANAGEMENT	2
23	Task 1.1 Project Management	2
24	Task 1.2 Construction Plan	3
25	Task 1.3 Environmental Compliance Plan (ECP).....	5
26	Task 1.4 Subcontract Packaging Plan	5
27	Task 1.5 DBE Program Compliance	6
28	Task 1.6 Monthly Progress Reports	7
29	TASK 2 – MEETINGS	8
30	Task 2.1 Kickoff Meeting.....	8
31	Task 2.2 GC/CM Project Team Meetings.....	8
32	Task 2.3 Special Meetings and Subject Specific Review Meetings.....	9
33	Task 2.4 Partnering During Preconstruction.....	10
34	Task 2.5 Regular Constructability / Design Review Progress Meetings.....	10
35	Task 2.6 Environmental and Tribal Team Progress Meetings.....	11
36	TASK 3 – CONSTRUCTION COST ESTIMATES (30-60-90%)	12
37	Task 3.1 Estimating Methodology Report.....	12
38	Task 3.2 Construction Cost Estimate	12
39	TASK 4 – SCHEDULE DEVELOPMENT	15
40	Task 4.1 Master Summary CPM Schedule	16
41	Task 4.2 Scheduling Support for Evaluation of Alternatives.....	16
42	Task 4.3 MACC Negotiation Construction Contract CPM Schedule	17
43	TASK 5 – PROJECT REVIEW	17
44	Task 5.1 Constructability Reviews and Value Engineering	17
45	Task 5.2 Maintenance of Operations	18
46	Task 5.3 Environmental Reviews	19
47	Task 5.4 Risk Management.....	19
48	Task 5.5 Sustainability Practices Plan (SPP)	20
49	TASK 6 – MECHANICAL/ELECTRICAL/PLUMBING (MEP)	
50	SUBCONTRACTS	21
51	Task 6.1 Early MEP subs qualification and selection	21
52	Task 6.2 MEP Subcontractor Management and Coordination	22
53	Task 6.3 Mechanical Preconstruction Services.....	23
54	Task 6.4 Electrical Preconstruction Services	23
55	TASK 7 – BUILDING INFORMATION MODELING	24
56	Task 7.1 Building Information Modeling (BIM).....	24
57	TASK 8 – Supplemental Task RESOURCES	26
58	Task 8.1 Supplemental Task-Specific Staffing Resources	26

1 **GENERAL**

2 15 business days after notification that it has been selected for Preconstruction Services, the
3 GC/CM shall submit a Preconstruction Work Plan in the format of Attachment D of the
4 Instructions to Proposers, 00 21 16.

5 Each of the tasks in this Scope of Work shall be listed in the Preconstruction Work Plan. The
6 GC/CM shall enter the number of hours required to complete each task, multiply the hours
7 required by the hourly rates provided in its response to the Request for Proposal, extend the
8 total to create a fee for each task and add total the fees for each task to arrive at a total estimate
9 for Preconstruction Services. The Total Preconstruction Fee should not exceed the allowance for
10 preconstruction services stated in paragraph 9 of the Instructions to Proposers, 00 21 16.

11 It is anticipated that the preconstruction services tasks defined as Basic Services within the Scope
12 of Work (SOW) will be performed over an estimated 24 month period. A substantial part of the
13 preconstruction services will be performed during the remaining design completion phases from
14 30% to 100% and coordinated with the design phases. Preconstruction services tasks may be
15 performed while MACC negotiations are in progress.

16 **The first task, which must be completed within 20 business days after Notice to Proceed (NTP)**
17 **with Preconstruction Services is the completion of TASK 3.2 - Baseline Construction Cost**
18 **Estimate utilizing the 30% design package provided by WSF. It is imperative that this task be**
19 **completed in a timely manner to ensure that design can proceed without delay.**

20 The GC/CM will work collaboratively with WSF's design, permitting and construction
21 management staff as a member of the project team to perform the tasks identified in this Scope
22 of Work and to review significant aspects of the Project. The GC/CM shall be responsive to
23 requests for information, and technical reviews, provide input as needed and attend meetings as
24 requested by WSF, and provide reports to document outcomes and findings.

25 At any time prior to execution of a GC/CM Construction Contract, the GC/CM may be requested
26 to perform supplemental services beyond those identified in the Basic Services below. These
27 Supplemental Services may be requested pursuant to a Change Order negotiated in advance of
28 the Work being performed.

29 Unless noted otherwise, allow 10 Business Days (account for government holidays) for WSF to
30 review deliverables and provide review comments.

31 **Note: A Construction Management and Contracting Plan (CMACP) is required for MACC**
32 **Negotiations per RCW 39.10.370 (7). The GC/CM will not be reimbursed for preparation of this**
33 **plan, schedules, estimates, or for MACC Negotiations.**

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1 BASIC SERVICES

TASK 1 – PROJECT MANAGEMENT

Task 1.1 Project Management

Description	Provide overall project management services for the GC/CM Consultant’s preconstruction services; ensure coordination of all efforts with WSF Project Team including: the Construction Management Consultant (CMC), and others as appropriate.
Duration	From Notice to Proceed for Preconstruction Services (NTP) through completion of MACC negotiations and execution of GC/CM Construction Contract (total estimated duration as described in the General section above).
Purpose	<p>Manage the preconstruction efforts and tasks of the GC/CM team and ensure coordination with WSF’s design schedule to maximize the benefits of the GC/CM delivery system and to coordinate with WSF and other project participants during the preconstruction phase.</p> <p>A major deliverable under this task is the Preconstruction Task Schedule. This schedule shall be a detailed schedule identifying and showing the timing and sequence of all tasks required under this Scope of Work. The GC/CM shall fully coordinate its Preconstruction Task Schedule with WSF’s design and permitting schedule and shall submit deliverables, attend meetings and otherwise execute its tasks as coordinated with the same. The intent of the Preconstruction Task Schedule is to coordinate the GC/CM’s tasks with the overall project schedule and process in a manner that maximizes the benefit of the GC/CM delivery system to the Project through the GC/CM’s contribution of knowledge and expertise to improving the design and constructability of the Project.</p>
Deliverables	<ul style="list-style-type: none">• Draft Preconstruction Task Schedule – Submit detailed schedule of Preconstruction Tasks within 10 business days of NTP. Allow 10 business days for WSF to review and provide comments. The schedule shall be in a form acceptable to WSF, shall be presented in bar chart format, and shall include, at a minimum, Task ID number, description, duration, sequence, and budget. This schedule is subject to WSF’s approval.• Draft Preconstruction Task Schedule Presentation Meeting – held 5 business days following submission of the Draft Preconstruction Task Schedule. GC/CM shall administer and chair the meeting, with a focus on presentation of the schedule and soliciting initial comments from project team.• Final Preconstruction Task Schedule – Submit final schedule within 10 business days from receipt of WSF review comments on draft schedule.

Washington Department of Transportation – Ferries Division

Comment responses shall be documented and provided to WSF with final schedule. Allow 10 business days for WSF to review and approve.

- Draft Project Management Plan (PMP) within 30-Days of NTP (Allow 10 business days for WSF comments after submission).

Project Management Plan (PMP) shall briefly and concisely describe how GC/CM will manage the following. These items shall be addressed in the order below:

1. Project communication and interface with WSF (Terminal Engineering and Operations) and the rest of the project team.
 2. Documentation.
 3. Invoicing procedures and Preconstruction Services Budget tracking.
 4. Tracking of Value Engineering (VE) and constructability recommendations and their cost/schedule impacts.
 5. Methodology and timing for development of construction cost estimate and schedule, including all updates.
 6. Preconstruction services schedule of activities.
 7. Staffing, roles and responsibilities, and project organization chart.
 8. Construction planning.
 9. Subcontract Packaging Plan and Procurement.
 10. Environmental compliance.
 11. DBE goal compliance.
 12. Monthly reporting and invoicing.
 13. Project progress and team meetings.
 14. Partnering.
 15. Risk management.
 16. Building Information Modeling (BIM).
 17. Quality Control and Assurance.
- Other items as appropriate.
 - Final PMP within 60-Days of NTP (Allow 10 business days for WSF's approval after submission).

Task 1.2 Construction Plan

Description In coordination with WSF's project team develop a construction plan that addresses issues relating to how the construction will be managed. Environmental compliance addressed under Task 1.3 Environmental Compliance Plan. Specific issues shall be addressed in the order below to be addressed include but are not limited to:

1. Maintenance of Operations.
2. Site safety and security.
3. Site phasing plans.

DRAFT 00 52 55 Agreement for Preconstruction Services Attachment A Scope of Work for Preconstruction Services

Washington Department of Transportation – Ferries Division

4. Contract Interfaces with WSF's other Contractors.
5. Interface with adjacent projects outside WSF boundary.
6. Quality Control and Assurance.
7. Cost management and tracking.
8. Schedule control, updating, and reporting.
9. Traffic control for all modes.
10. Site staging including construction offices, laydown and work areas, temporary facilities and utilities.
11. Hoisting plan showing GC/CM provided equipment to service all project needs.
12. Inspections of critical shop fabrications.
13. Opportunities for off-site prefabrication of portions of the work.

Purpose Provide direction for managing critical elements of the work through the construction phase. Develop information for negotiation of costs for items identified as Negotiated Support Services as part of the MACC. Develop information that will provide the basis for early submittals required in the Contract Documents.

- Deliverables**
- Initial Construction Plan
 - 90% Construction Plan (Based on 90% Design).
 - 90% Construction Plan Presentation Meeting – hold within 10 business days following submission of the 90% Construction Plan. Attendees will include project partners and stakeholders. GC/CM shall administer and chair the meeting, with a focus on presentation of the 90% Construction Plan and soliciting final comments from WSF.
 - 90% List of Anticipated Construction Work Plans – Coordinate submission with WSF's design schedule.
 - 100% Construction Plan (Based on 100% Design). **(GC/CM Contract Requirement)**
 - Updates – As required, including incorporation of any comments provided to the Final Construction Plan submittal.
 - Parking Plan for construction parking satisfying the requirements of Section 1-07.16(5) – Construction Staging and Parking of Division 00 72 00 General Requirements for Heavy Civil GC/CM Contracts.
 - Submittal Schedule/Log based on 100% Design and Construction Plan.

Task 1.3 Environmental Compliance Plan (ECP)

Description	<p>In coordination with WSF’s project team develop an ECP that addresses how the project will conduct environmental documentation and compliance, and implement environmental and tribal commitments. Specific areas to be addressed shall be addressed in the order below include but are not limited to:</p> <ol style="list-style-type: none">1. Environmental team roles and responsibilities.2. Preconstruction and construction environmental team communication plan.3. Preconstruction environmental and tribal commitment review and implementation tracking.4. Construction environmental and tribal commitment tracking.5. Environmental and permit documentation coordination.6. Preparation and documentation for compliance monitoring plans.7. Construction barging plan.8. Vessel coordination program implementation.
Purpose	<p>Provide direction for managing WSF and GC/CM interaction for environmental documentation and compliance processes.</p>
Deliverables	<ul style="list-style-type: none">• Preconstruction ECP – Following review of the commitments provided by WSF at the start of preconstruction, submit a Preconstruction ECP including environmental and tribal commitment tracking form.• Construction ECP – prior to end of MACC negotiations, submit a Construction ECP, including environmental and tribal commitment tracking form and incorporating commitments resulting from NEPA Reevaluation and permit conditions.• Monthly environmental and tribal commitment tracking summary of design implementation through 100% preconstruction.

Task 1.4 Subcontract Packaging Plan

Description	<p>Develop a breakdown of the work into the Subcontract Packages that will be bid by the GC/CM and identify any packages that the GC/CM intends to bid on as self-performed. Include the scope of work, schedule, delivery method, estimated value of each bid package and, subcontract bidder responsibility criteria for each contract package. If pre-bid eligibility of subcontractors is recommended, this should be included, along with pre-bid eligibility requirements and a schedule to ensure sufficient time to establish such eligibility criteria and conduct the qualification process.</p> <p>Conduct a half-day workshop with WSF, design team, and others as necessary to review and agree on subcontract packaging approach.</p>
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Washington Department of Transportation – Ferries Division

Comply with the Equal Employment Opportunity (EEO) and apprentice utilization requirements.

Purpose	<p>Determine construction subcontract packaging.</p> <p>Develop alternative packaging configurations and evaluation factors.</p> <p>Determine early procurement packages.</p> <p>Recommend preferred approach to Construction Subcontract Packaging.</p> <p>Ensure that subcontractors meet the EEO and apprentice utilization requirements.</p>
Deliverables	<ul style="list-style-type: none">• Subcontract Packaging half-day Workshop with WSF and design team (including materials) – Hold within 60-Days of NTP. It is anticipated that approximately 10 people will attend this workshop.• Initial Subcontract Packaging plan• 90% Subcontract Packaging Plan (based on 90% design) documenting alternatives, analysis, recommendations, and subcontract bid package schedule identifying the planned sequence and timing of all subcontract bid packages. Submit Subcontract Packaging Plan within 10 business days of Subcontract Packaging Workshop.• Subcontract Packaging Presentation half day Meeting – Hold within 10 business Days of submission of 90% Subcontract Packaging Plan. GC/CM shall administer and chair the meeting, soliciting comments and input for integration into the Final Subcontract Packaging Plan.• Final Subcontract Packaging Plan – Submit with the CMACP submitted for MACC Negotiations as required by RCW 39.10.370(7). (GC/CM Contract Requirement)

Task 1.5 DBE Program Compliance

Description	<p>Subcontracting Plan shall be developed to maximize the participation of DBE firms on the project. The scope will include the development of a plan that complies with 49 Code of Federal Regulations (CFR) and Appendix A and to achieve the specific contract DBE participation goal of 12% in coordination with WSDOT OEO and WSF. The plan will provide details of the subcontract packaging approach, outreach programs, documentation of good faith efforts, and compliance at all subcontracting tiers as appropriate.</p>
Purpose	<p>Ensure that subcontracting opportunities within each subcontract bid package are clearly identified, that these opportunities will attract a high level of competition from qualified local subcontractors, and that WSDOT goals and USDOT regulations and procedural requirements for DBE participation in the project will be met.</p>

DRAFT 00 52 55 Agreement for Preconstruction Services Attachment A Scope of Work for Preconstruction Services

Washington Department of Transportation – Ferries Division

- Deliverables
- Outreach Plan (comply with 49 CFR and Appendix A).
 - Participate in a minimum of 3 off-site outreach events planned and coordinated in conjunction with WSDOT OEO and WSF outreach team.
 - 30% Draft Outreach Plan: submit within 10 business days of first subcontracting plan.
 - Draft Outreach Plan Presentation Meeting – Hold within 10 business days of submitting 90% Outreach Plan. GC/CM shall administer and chair the meeting, with a focus on presentation of the 90% Outreach Plan and soliciting comments and input for integration into the Final Outreach Plan.
 - Final Outreach Plan will be submitted with the CMACP submitted for MACC Negotiations in accordance with RCW 39.10.370 (7). **(GC/CM Contract Requirement)**

Task 1.6 Monthly Progress Reports

- Description Prepare Monthly Progress Reports to be submitted with monthly invoice in accordance with the Contract Documents.
- Purpose Ensure clear and consistent reporting of progress throughout the Preconstruction Services phase.
- Deliverables Monthly Progress Report, to include at a minimum the following elements and shall be addressed in the order below:
1. Executive Summary, including a description of the month’s activities.
 2. Preconstruction Services Agreement status (budget and schedule).
 3. Identification of potential high-risk issues.
 4. Status of Preconstruction deliverables achieved to-date and completed during the reporting period.
 5. Current Preconstruction Services Schedule status.
 6. Preconstruction Services 6-week look-ahead schedule.
 7. Current Preconstruction Services Cost vs. Budget status.
 8. Current Construction Project Schedule status.
 9. Current Construction Project Budget (TCC).
 10. Current Subcontract Packaging Plan.
 11. DBE Program status and highlights.
 12. Status of Subcontract Procurements.
 13. Status of MACC negotiations.
- The detailed Monthly Progress Report shall accompany each monthly invoice. Prior to this, by the 10th of every month, Contractor shall also provide a

Washington Department of Transportation – Ferries Division

shorter status update of scheduled activities and expended budget through the end of the previous month to the design project manager.

TASK 2 – MEETINGS

Task 2.1 Kickoff Meeting

Frequency	General kickoff meeting to be held within 10 business days of NTP. All subsequent discipline specific kickoff meetings to be held within 20 business days of NTP.
Duration	<ul style="list-style-type: none">• Up to a Half Day meeting for general Kickoff purposes, design team presentation, project schedule.• Up to two hours meeting for Safety.• Up to two hours meeting for Quality.• Up to a Half Day meeting for Diversity/Outreach.• Up to a Half Day meeting for Building Information Modeling (BIM).• Up to a Half Day meeting for Environmental Compliance and Permitting.• Up to a Half Day meeting for LEED.
Attendees	Project Executive, Project Manager, Superintendent, Cost Estimator, Scheduler, and other key personnel of the GC/CM team as identified in contract documents and approved by WSF.
Purpose	To introduce key project personnel, introduction of design by the design team, familiarize personnel with the project and to explain roles and responsibilities of each team member. Develop Meeting schedule and review project schedule.
Deliverables	Minutes of meeting within 2 business days of completion of meeting including: <ul style="list-style-type: none">• Key personnel Roster with names, phone numbers, role during Preconstruction Services, e-mail address.• Meeting Schedule.• Project Timeline.

Task 2.2 GC/CM Project Team Meetings

Frequency	The GC/CM shall lead a Monthly Project Team Meetings held with WSF and others as deemed appropriate by WSF, beginning at NTP and continuing through MACC negotiations and execution of GC/CM Construction Contract (estimated 24 meetings).
Duration	Not to exceed 2 hours.

DRAFT 00 52 55 Agreement for Preconstruction Services Attachment A Scope of Work for Preconstruction Services

Washington Department of Transportation – Ferries Division

Attendees	Project Manager, Cost Estimator, Scheduler, Superintendent, and others as determined by the GC/CM and as approved by WSF.
Purpose	Provide monthly update of required Deliverables; distribute constructability Issue Log, VE Log, Risk Register; Discuss design progress and Project issues. Determine follow-up actions to be taken by each party.
Deliverables	Meeting Agendas – including: <ul style="list-style-type: none">• Updated Preconstruction Services Schedule.• Constructability Issue Log.• VE Log.• Risk Register.• Interface Control Document (ICD) Status.• Cost comparison analysis. Meeting Minutes – within 2 business days of completion of meeting including: <ul style="list-style-type: none">• Current Action Items Log.

Task 2.3 Special Meetings and Subject Specific Review Meetings

Description	Conduct individual meetings on project issues and workshops to review specific elements of the work with discipline specialists and to develop ideas and recommendations for project improvements. Elements of the work that may be addressed in these meetings include: construction methods, construction schedule development, maintenance of traffic, non-construction temporary parking plans, architectural finishes, long lead procurements, building envelope, public art elements, vertical transportation, mechanical and electrical systems, BIM, LEED, prefabrication of architectural components of the terminal building or entry building, other related WSF contracts, and other issues as necessary.
Attendees	Project Manager, others as appropriate for the subject matter.
Frequency	Workshops – Anticipate 8 workshops, each having durations of half days (average) to be completed and coordinated with WSF and the design schedule. Individual Meetings – To be held on an “as-needed” basis as requested by either WSF or GC/CM Consultant. Assume 12 meetings, not to exceed 2 hours each.
Purpose	To discuss specific issues, ideas, or recommendations for the benefit of the project and/or to review and formulate approaches and ideas to improve the delivery of specific elements of the work. These are intended to be discipline-specific and involve a small group of subject-matter experts.

DRAFT 00 52 55 Agreement for Preconstruction Services Attachment A Scope of Work for Preconstruction Services

Washington Department of Transportation – Ferries Division

Deliverables A report for each workshop explaining recommendations for implementation of the work elements evaluated, including cost and schedule savings, risk mitigations, “ripple” effects on other work elements, and operational impacts. Meeting minutes within 2 business days of completion of meeting including recommendations and action items.

Task 2.4 Partnering During Preconstruction

Description In conjunction with WSF, plan a Partnering meeting for Preconstruction Services, which includes WSF, design team, CMC, interfacing contract participants as appropriate, and third parties (City of Seattle, Tribes, WSDOT, etc.).

Participate in the selection and briefing of a partnering facilitator, development of the meeting agenda, and setting of the meeting venue and logistics.

Prepare a list of the names of the attendees from the GC/CM team who will participate in the meeting

Based on meeting outcomes, develop a Partnering Plan for the Preconstruction Phase of the project.

Frequency Assume 1/2 day meeting at start of preconstruction services.

Attendees Project Executive, Project Manager, Superintendent, Cost Estimator, Scheduler, and other key personnel of the GC/CM team as identified in contract documents and approved by WSF.

Purpose To foster open and productive communication among the project participants (WSF, design and permitting team, CMC, GC/CM team, others as appropriate).

Deliverables Recommendations with respect to purpose and objectives for the Partnering efforts, including a “Mission Statement” for the project. Participate in developing meeting agenda, lists of participants and meeting minutes. Participation in developing a Preconstruction phase Partnering Plan. WSF will reimburse the direct cost for the Partnering Facilitator and Facilities only if previously approved by WSF.

Task 2.5 Regular Constructability / Design Review Progress Meetings

Description Attend regular design progress meeting and design discipline meetings each month to stay apprised of design progress and provide input to the design process and address constructability and design issues.

Frequency GC/CM shall attend up to two of these meetings each month along with WSF and others deemed appropriate by WSF, beginning at NTP and continuing through and including review of the 90% design completion.

Duration Estimated meeting duration is 2 hours.

DRAFT 00 52 55 Agreement for Preconstruction Services Attachment A Scope of Work for Preconstruction Services

Washington Department of Transportation – Ferries Division

Attendees	Project Manager, Cost Estimator, Scheduler, others as determined by the GC/CM and approved by WSF.
Purpose	<p>To provide a regular collaborative forum for the GC/CM to actively engage WSF, design team and CMC on subjects including but not limited to VE, contract interface, design review and progress, and design and constructability issues. Determine follow-up actions to be taken by each party. Provide periodic updates and review of required Deliverables; Distribute Constructability Log, VE Log, Interface Control Document (ICD) Status.</p> <p>The GC/CM shall develop a Constructability Log that identifies proposed changes together with drawings, specifications and/or interfaces with other contract designs that will require modification as a result of the proposed change(s) and observations. This initial report will serve as the Constructability Log to track issues constructability issues throughout the life of each design phase.</p>
Deliverables	Constructability Log – Updated regularly for the meetings required in this Task. The Constructability Log will track issues including but not limited to design issues, clarifications, constructability issues, value engineering, conflicts, etc. that are identified by the GC/CM Consultant. This log will be used as a tool to track the status of these issues throughout the Preconstruction process.

Task 2.6 Environmental and Tribal Team Progress Meetings

Description	Attend regular environmental and tribal team progress meeting each month to stay apprised of progress and provide input to the process and address constructability and design issues.
Frequency	GC/CM shall attend one meeting each month along with WSF and others deemed appropriate by WSF, beginning at NTP and continuing through and including review of the 90% design completion.
Duration	Estimated meeting duration is 2 hours.
Attendees	Project Manager, Cost Estimator, Scheduler, others as determined by the GC/CM and approved by WSF.
Purpose	A standing environmental team can track how required environmental processes and permit applications occur within the project schedule, and assist the coordination of design and construction method changes that are compliant with project commitments. Sometimes that can mean negotiating a change to the commitment when further studies demonstrate specific possibilities or constraints.

Washington Department of Transportation – Ferries Division

Deliverables Environmental and Tribal Issues Log – Updated regularly for the meetings required in this Task. This log will be used as a tool to track the status of these issues throughout the Preconstruction process.

TASK 3 – CONSTRUCTION COST ESTIMATES (30-60-90%)

Task 3.1 Estimating Methodology Report

Description Prepare a report documenting the approach that will be used in preparing cost estimates for the project.

Purpose Provide a report for the development of the Baseline, Alternatives and Construction Cost Estimates, including the types of information required that were not included in the Contract Documents, other sources of information, recommended level of detail, format of reports, estimating software and descriptions of the estimating process.

The methodology report shall describe how costs will be developed consistently for each element of the estimate and provide a checklist to track completeness of estimate submittals.

The GC/CM shall coordinate its estimating format with WSF's Independent Cost Estimating team to ensure uniformity and consistency to facilitate review of all cost estimates performed by the GC/CM Consultant.

Deliverables

- Draft Estimating Methodology Report within 10 business days of NTP (allow 10 business days for WSF comments after submission).
- Final Estimating Methodology Report within 20 business days of NTP with the Baseline Construction Cost Estimate.

Task 3.2 Construction Cost Estimate

Description Prepare a detailed Construction Cost Estimate based on the design documents provided by WSF. The GC/CM contractor should outline the format for the construction cost estimate and how it is broken down so the estimates can easily be compared to the design team estimate. Design documents to be at a 30% level of completion and will be provided when the Notice to Proceed with Preconstruction Services is issued.

Upon completion of the estimate, the GC/CM and the Design Team shall reconcile their estimates and present to WSF one estimate of the construction cost based upon mutually agreed assumptions including the date of commencement of construction, duration of construction, escalation factors and design contingency percentages and Negotiated Support Services Costs.

The estimate will be in conformance with the Estimating Methodology agreed to in discussions with WSF and the Design Team at a level of detail acceptable to WSF.

DRAFT 00 52 55 Agreement for Preconstruction Services Attachment A Scope of Work for Preconstruction Services

Washington Department of Transportation – Ferries Division

The estimate shall be tied to the GC/CM Consultant’s construction schedule to properly account for inflation and be updated to include WSF and other Reviewer’s document review comments to achieve a total reconciliation for the phase. In the event that the reconciled estimate is higher than the WSF Budget for the Total Contract Cost (TCC), the GC/CM shall present to WSF a list of VE cost savings equal to or greater than the amount the estimate exceeds the budget.

The GC/CM shall work with WSF and the Design Team through a Value Engineering Process to evaluate alternative design options for cost savings and define a scope that is within budget.

Estimate shall also include cost information for items identified as Negotiated Support Services as part of the MACC.

The estimate will be in conformance with the Estimating Methodology Report and at a level of detail acceptable to WSF.

The estimate shall also be summarized in a format consistent with the “Form of Construction Cost Estimate – Summary” included in the Agreement for General Contractor / Construction Manager Services as Attachment C.

The GC/CM shall develop a Basis of Understanding document to define the Negotiated Support Services. The purpose of this document is to allow for a common understanding of the Negotiated Support Services scope. WSF will provide a suggested format for this document. This document will be included as Attachment B to the Agreement for GC/CM Services.

Purpose To develop a detailed and complete Construction Cost Estimate for the Work. This will provide information for WSF, the design team and CMC to assist in evaluating alternative designs, equipment, materials or other variations in implementation of the project and will provide the basis of the scope of work for the 60% and 90% Design Submission.

- Deliverables**
- 30% Baseline Construction Cost Estimate (Based on 30% design).
 - 30% Baseline Construction Cost Estimate Presentation Meeting – hold 5 business days following submission of the 30% Design Baseline Construction Cost Estimate. GC/CM shall administer and chair the meeting, with a focus on presentation of the 30% Baseline Construction Cost Estimate and review of the Value Engineering options and alternative design concepts that could be incorporated into the project to maintain budget entering the 60% Design Phase.
 - Basis of Understanding for Negotiated Support Services.
 - 60% Detailed Construction Cost Estimate (Based on 60% design) within 15 business days after receipt of 60% design.
 - 60% Detailed Construction Cost Estimate Presentation Meeting – hold 5 business days following submission of the 60% Construction Cost

Washington Department of Transportation – Ferries Division

Estimate. GC/CM shall administer and chair the meeting, with a focus on presentation of the 60% Construction Cost Estimate and soliciting comments and input for integration into the Final Baseline Construction Cost Estimate.

- Updated Basis of Understanding to define Negotiated Support Services – Submit with 60% Construction Cost Estimate. Allow 10 business days for WSF review and comment.
- 90% Detailed Construction Cost Estimate within 15 business days after receipt of 90% Design Documents from WSF. **(GC/CM Contract Requirement)**
- 90% Detailed Construction Cost Estimate Presentation Meeting – hold 5 business days following submission of the 90% Design Baseline Construction Cost Estimate. GC/CM shall administer and chair the meeting, with a focus on presentation of the 90% Detailed Construction Cost Estimate and soliciting comments and input for integration into the Final Baseline Construction Cost Estimate.
- Draft Basis of Understanding to define Negotiated Support Services – Submit with 90% Construction Cost Estimate. Allow 10 business days for WSF review and comment. **(GC/CM Contract Requirement)**

Task 3.4 Estimating Support for Evaluation of Alternatives

Description	<p>Develop Construction Cost estimates for alternative concepts, designs, approaches, or means and methods as necessary to evaluate ideas proposed as part of Project Reviews (Task 5) or through other discussions and proposals.</p> <p>Cost estimates are to include any impacts to interfacing contracts and be at the same level of detail and format as established in the Baseline Construction Cost Estimate.</p>
Purpose	<p>To inform the decision-making process on the acceptance of alternatives based on the cost savings that would result from inclusion of changes into the project.</p>
Deliverables	<p>Detailed Alternative Construction Cost Estimates – Allow for up to 5 alternative concepts and comparison of alternatives to baseline costs for the same item using a combination of narrative and tables to clearly demonstrate cost differences. (GC/CM Contract Requirement)</p>

Task 3.5 Final Construction Cost Estimate

Description	<p>Prepare a Final Construction Cost Estimate for the Entire Work for MACC Negotiations as a Part of the Construction Management and Contracting Plan required by RCW 39.10.370(7). Update of Baseline Construction Cost Estimate to incorporate adopted changes resulting from various project reviews and other WSF accepted changes. Incorporate any new information on labor rates, productivity, pricing of materials and equipment, overhead costs and escalation to produce a complete final cost estimate of all the work to be included as the partial basis of negotiations of the MACC.</p> <p>Prepare Final Cost Estimate narrative that explains all estimating assumptions, methodologies used, sources of cost data and productivity rates, and any notable issues encountered in preparation of the Construction Cost Estimate.</p>
Frequency	<p>One time effort following completion of project reviews and prior to the start of MACC negotiations.</p>
Purpose	<p>To produce a complete, accurate and timely estimate of costs for the GC/CM Construction Contract. This estimate will be used as the basis for MACC negotiations.</p>
Deliverables	<p>Final detailed Final Construction Cost Estimate in conformance with the requirements set forth in the Cost Estimating Methodology Report – following evaluation and finalization of alternatives and prior to MACC negotiations. The Final Construction Cost Estimate shall be submitted at least 20 business days prior to the expected commencement of MACC Negotiations.</p>

TASK 4 – SCHEDULE DEVELOPMENT

All schedules shall be developed using Primavera Project Management P6 Professional R8.3, or later. They shall use Work Breakdown Structure (WBS) as the primary means of organization. Level of detail will be commensurate with that reflected in the GC/CM cost estimates as described in Task 3, Construction Cost Estimates, herein. Activities will be coded to identify the entity responsible for the work. Each schedule submittal shall be accompanied by a narrative report describing the assumptions made in developing the schedule, coordination required with other entities and risks associated with the schedule. If, in the opinion of WSF, the schedule is determined to be impractical or not in compliance with the contract documents, revise the schedule and resubmit within 5 business days.

Task 4.1 Master Summary CPM Schedule

Description	<p>Develop an Initial Master Schedule via Critical Path Method (CPM) as set forth above and further described below.</p> <p>The schedule shall be based on the Task included in this Scope of Work and the 30% design documents provided by WSF at NTP.</p>
Purpose	<p>To incorporate all project design, permitting, preconstruction and construction phase activities into one schedule. Included in this schedule shall be key dates for early and customary subcontract bidding/procurement and anticipated construction activities. At a minimum, the schedule shall also identify all phasing, long-lead procurement items, including submittals.</p> <p>Mobilization, demobilization, and submission of required documentation.</p>
Deliverables	<ul style="list-style-type: none">• 30% Initial Master CPM Schedule – Deliver within 30-days of receipt of 90% Design review package.• 30% Initial Master CPM Schedule Presentation Meeting – Hold 10 business days following submission of the 30% Initial Master CPM Schedule. GC/CM shall administer and chair the meeting, with a focus on presentation of the 30% Initial Master CPM Schedule and soliciting comments and input for integration into the 60% Master CPM Schedule.• 60% Master CPM Schedule – Deliver within 21-days of receipt of 60% Design review package.• 60% Master Summary CPM Schedule Presentation Meeting – Hold 5 business days following submission of the 60% Initial Master CPM Schedule. GC/CM shall administer and chair the meeting, with a focus on presentation of the 60% Master CPM Schedule and soliciting comments and input for integration into the 90% Master CPM Schedule.• 90% Master CPM Schedule – Deliver within 21-days of receipt of 60% Design review package.• 90% Master CPM Schedule Presentation Meeting – Hold 5 business days following submission of the 90% Initial Master CPM Schedule. GC/CM shall administer and chair the meeting, with a focus on presentation of the 90% Master Summary CPM Schedule and soliciting comments and input for integration into the MACC Negotiation Construction Contract CPM Schedule.

Task 4.2 Scheduling Support for Evaluation of Alternatives

Description	<p>Develop Construction Fragnet Schedules for alternative concepts, designs, approaches, or means and methods as necessary to evaluate ideas proposed as part of VE, Schedule Presentation Meetings and/or constructability reviews or through other discussions and proposals.</p>
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Washington Department of Transportation – Ferries Division

	Construction Fragnet Schedules shall be developed as described above using CPM Scheduling Best Practices and to a level of detail suitable to its purpose.
Purpose	To inform the decision-making process on the acceptance of alternatives based on the schedule impacts that would result from inclusion of changes into the project.
Deliverables	Detailed Construction Fragnet Schedules – Allow for up to 5 alternative concepts and comparison of alternatives to baseline schedules for the same item using a combination of narrative and tables to clearly demonstrate time differences.

Task 4.3 MACC Negotiation Construction Contract CPM Schedule

Description	<p>Develop a MACC Negotiation Construction Contract Critical Path Method (CPM) schedule in accordance with the requirements established in Task 4 above. At a minimum this schedule will be based on the 100% design documents and incorporate adopted changes resulting from various project reviews and other WSF accepted changes.</p> <p>In addition to the above requirements the MACC Negotiations Construction Contract CPM Schedule will be designed to coordinate with and support the development of the Preliminary Baseline CPM Schedule as described in the Construction Contract Specifications.</p>
Purpose	To produce a complete, accurate and timely representation of the schedule for the GC/CM MACC negotiations.
Deliverables	<p>MACC Negotiation Construction Contract CPM Schedule including schedule changes resulting from the various reviews performed during Preconstruction Services. Submit 20 business days Prior to commencing GC/CM MACC negotiations. (GC/CM Contract Requirement)</p> <p>In addition to the above-required narrative report, this submittal shall include a technical memorandum and narrative justifying any variations from the 90% design documents.</p>

TASK 5 – PROJECT REVIEW

Task 5.1 Constructability Reviews and Value Engineering

Description	<p>Following presentation of design by design team, perform constructability reviews and value engineering of the 30%, 60% and 90% design completion packages; develop and provide a Constructability Log (See task 2.5) for each major design package review.</p> <p>The GC/CM shall address all major components of the design. For each VE alternative recommended, the GC/CM shall submit a report that includes an analysis of the impacts to cost and schedule, to Operations, and environmental commitments.</p>
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Washington Department of Transportation – Ferries Division

The GC/CM shall participate in the design comment review and resolution processes as required for the 30%, 60% and 90% design completion packages.

Compile Constructability Logs into a comprehensive Final VE, Constructability and Risk Mitigation Recommendation Report.

Constructability reviews and value engineering shall be coordinated with the project design schedule to maximize the GC/CM Consultant’s and EC/CM and MC/CM Consultant’s input to the design process.

Purpose To review and provide recommendations on the construction documents with issues such as phasing of the work, substitution requests, staging, temporary work, new construction techniques or methods for executing the work, value engineering suggestions that could lead to cost reductions or increased long-term value, and identifying where the contract documents are not consistent or complete; to review and ensure good building practice is being incorporated into the documents and design elements are buildable as drawn and specified; and to identify whether project sequencing is viable.

- Deliverables**
- Attend design presentation meetings.
 - Attend meetings with WSF and its design team to review constructability and value engineering items.
 - Develop initial Constructability Logs to be used to identify items above and further developed under Task 2.5 for the project 30%, 60% and 90% design completion packages.
 - Final VE, Constructability and Risk Mitigation Recommendation Report.

Task 5.2 Maintenance of Operations

Description Following NTP, the GC/CM shall review and gain a working knowledge of the operational requirements of the facility, including the Passenger-only Ferry (POF) facility. The GC/CM shall incorporate these operational requirements into the phasing, sequencing, and scheduling of the project construction. All constructability reviews and VE opportunities with a potential to impact Operations shall be presented to WSF operation staff for input.

Purpose To minimize impact to the operation of the facility, including the POF facility.

- Deliverables**
- Attend up to 5 meetings with WSF and Water Taxi staff.
 - 90% Draft Maintenance of Operations Report detailing minimum vehicle holding capacity and maintenance of traffic plans for all modes at each phase of the project.
 - Final Maintenance of Operations Plan.

Task 5.3 Environmental Reviews

Description	<p>Support WSF Environmental team leading the environmental permitting and NEPA reevaluation processes by providing necessary construction information, including but not limited to: means and methods of construction, temporary structures, phasing of the project, barging plans, BMP's.</p> <p>Solicit and incorporate input of WSF Environmental team on constructability issues and VE opportunities.</p> <p>Receive regular updates on environmental commitments to be addressed in the ECP described in Task 1.3.</p>
Purpose	<p>Facilitate permitting and environmental review processes in order to support the schedule objectives of the project.</p> <p>Support an integrated approach to environmental and tribal commitment compliance.</p>
Deliverables	<ul style="list-style-type: none">• Attend regular environmental coordination meetings as required, assume one per month.• Attend with WSF, meetings with permitting and regulatory agencies as required.• Attend meetings with WSF Environmental team to review constructability and value engineering items.

Task 5.4 Risk Management

Description	<p>GCCM shall schedule and participate in a multi-disciplinary workshop with the Project Team to develop and provide input on risk allocation/mitigation of project risks and to discuss risk allocation and risk contingencies. The Risk Allocation Workshop will be a half-day workshop to analyze and discuss risk allocation and mitigation.</p> <p>Compile the Draft into a comprehensive Final VE, Constructability and Risk Mitigation Recommendation Report.</p> <p>Assist in evaluating design costs and schedule impacts related to each proposed change (completed in Tasks 3.3 and 4.2).</p>
Attendees	<p>Project Manager, Superintendent, Cost Estimator, others as determined by the GC/CM, and approved by WSF.</p>
Purpose	<p>To review and provide recommendations on the construction documents with respect to risk allocation and mitigation.</p> <p>The Risk Register will be reviewed and updated jointly by WSF and the GC/CM on a quarterly basis.</p>

DRAFT 00 52 55 Agreement for Preconstruction Services Attachment A Scope of Work for Preconstruction Services

Washington Department of Transportation – Ferries Division

- Deliverables
- Independent Risk Register.
 - Quarterly Updated Risk Register – within 5 business days of Quarterly update meeting.
 - Draft Risk Allocation and Mitigation Recommendation Report – within 5 business days of Workshop.
 - Final Risk Allocation and Mitigation Recommendations Report – Submit 30 business days before the 90% design completion package is scheduled for submittal by the design team for review by WSF. GC/CM shall coordinate submittal with WSF’s design schedule.

Task 5.5 Sustainability Practices Plan (SPP)

- Description
- WSF is interested in promoting the following sustainable practices at its construction sites:
- Comprehensive energy and fuel conservation.
 - Water conservation.
 - Waste management and reduction plans.
 - Pollution prevention (improvements in air and water quality; reduction in pollutants and greenhouse gas emissions).
 - Alternative fuels and transportation plans.
 - Use of resource-efficient building materials (recycled content, durable and low-maintenance).
 - Sustainable purchasing and life cycle assessment for materials.

The GC/CM shall prepare and implement a Sustainable Practices Plan (SPP) that shall include the following and shall be addressed in the order below:

1. Identifies roles and responsibilities of key personnel in regard to sustainable practices.
2. Documents procedures adopting sustainable practices.
3. Establishes communications and monitoring procedures for documenting plan adherence.
4. Establishes, tracks and reports performance metrics for sustainable practices.
5. Coordinates contractor role in earning LEED credits.

The SPP will be updated quarterly during the construction phase and posted to WSF’s external website on the project’s public outreach page.

DRAFT 00 52 55 Agreement for Preconstruction Services Attachment A Scope of Work for Preconstruction Services

Washington Department of Transportation – Ferries Division

Purpose	<p>The purpose of integrating sustainability into construction practices is to:</p> <ul style="list-style-type: none">• Implement environmental stewardship and sustainable development.• Reduce environmental risks and liabilities.• Ensure regulatory compliance.• Improve environmental performance with a focus on reducing the:<ul style="list-style-type: none">○ Impacts of our natural resource use.○ Identify cost-effective solutions.• Enhance our public education and outreach.
Deliverables	<ul style="list-style-type: none">• Conduct a half-day workshop with WSF, design team, and others as necessary to review, identify opportunities for sustainable practices and reporting approach.• Sustainability Practices Plan half Day Workshop with Design team and WSF (including materials) – Hold within 90-Days of NTP.• Draft Sustainability Practices Plan (based on 90% design): document sustainability practices to be implemented on the project, recommended sustainability requirements to be incorporated in the design specifications, and tracking and reporting performance metrics. Submit Sustainability Practices Plan within 10 business days of Workshop.• Final Sustainable Practices Plan – Submit for the 90% design phase.• Support the A/E team in documentation of the LEED scorecard at 30-60-90% design to assess cost to achieve the Project’s sustainable goals, including but not limited to, providing a value based analysis of LEED points and identifying costs of achieving each LEED point compared to the scope of the work. Participate in one (1) LEED Eco-charette.

TASK 6 – MECHANICAL/ELECTRICAL/PLUMBING (MEP) SUBCONTRACTS

Task 6.1 Early MEP subs qualification and selection

Description	<p>The GC/CM will implement the EC/CM and MC/CM procurement process as defined by RCW 39.10.385 at WSF’s concurrence with implementation of the EC/CM and MC/CM procurement.</p> <p>The GC/CM shall prepare, submit, and, upon approval by WSF, award and execute Preconstruction services agreements for the MEP subcontracts in accordance with Section 00 72 00 General Conditions Article 2.05, Article 2.05.A.7 and RCW 39.10.385.</p> <p>Prepare a plan and schedule for the selection of the MEP subcontractors (MC/CM and EC/CM) and award of Preconstruction services agreement and subsequent construction contracts.</p>
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Washington Department of Transportation – Ferries Division

Process the advertisement and final determination report for use of alternative selection process for MEP subcontracts.

Prepare the RFP/RFFP bidding documents for Preconstruction services agreement(s) and construction contract(s).

Advertise process and manage the bidding, award and execution of the Preconstruction services agreements.

The MEP subcontractor(s) (MC/CM and EC/CM) Preconstruction Services agreement Statement of Work shall include participation in preparations of all applicable deliverables for Tasks 1 through 7 of the GC/CM Consultant’s Preconstruction Agreement or as later mutually agreed with WSF. Early Preconstruction services task input from MEP subcontractors may be solicited as part of the MC/CM and EC/CM selection process and selection criteria.

Purpose To select and execute agreements with MEP subcontractors to provide early MEP subcontractor Preconstruction services participation and resultant project quality, cost and schedule benefits to WSF.

- Deliverables**
- MEP Subcontracting plan and schedule for selection of MEP subcontractors – Within 10 business days of NTP.
 - Advertise and complete final determination report as per RCW 39.10.385 for use of alternative selection process for MEP subcontracts – Within 25 business days of NTP.
 - Issue MEP subcontracting bidding documents for WSF review and approval – Within 45 business Days of NTP.
 - Advertise and complete selection process, seek WSF review and approval, award, execute and issue NTP for Preconstruction services to MEP subcontractors – Within 50 business days of NTP.

Task 6.2 MEP Subcontractor Management and Coordination

Description The GC/CM shall manage, coordinate and incorporate MEP subcontractor’s participation and input for preparations of all applicable deliverables for Tasks 1 through 7 of the Prime GC/CM Consultant’s Preconstruction Agreement or as later mutually agreed with WSF :

- Early Preconstruction services task input from MEP subcontractors may be solicited as part of the MC/CM and EC/CM selection process and selection criteria.
- Post award and specific MEP subcontractor’s Preconstruction services deliverables shall be provided as subsections to Prime GC/CM deliverables for specific tasks including but not limited to 1.2, 1.4, 3.2, 3.4, 4.1, 4.3, 5.1, and 5.2.

Purpose To provide early MEP subcontractor Preconstruction services participation and resultant project quality, cost and schedule benefits to WSF.

Washington Department of Transportation – Ferries Division

Deliverables All MEP subcontractor’s participation and specific Preconstruction services task deliverables shall support the GC/CM Preconstruction services deliverables schedule herein.

Task 6.3 Mechanical Preconstruction Services

Description The GC/CM will implement the MC/CM procurement process as defined by RCW 39.10.385. The Mechanical subcontractor Preconstruction Services shall include participation in preparations of all applicable deliverables for Tasks 1 through 7 of the GC/CM Consultant’s Preconstruction Agreement including Project Management, attendance at regular Meetings, Estimating, Scheduling, Constructability and VE Reviews, and BIM Modeling.

Purpose Engage early Mechanical Preconstruction services participation to improve resultant project quality, cost and schedule benefits to WSF.

Deliverables All MC/CM subcontractor’s participation and specific Preconstruction services task deliverables shall support the GC/CM Preconstruction services deliverables schedule herein that includes but not limited to:

- Input to GC/CM Preconstruction Task Schedule.
- Input to GC/CM Construction Plan.
- Participate in GC/CM S/DBE Outreach Program.
- Attend Regular Project Meetings and Discipline Specific Meetings.
- 30-60-90% Baseline Mechanical Cost Estimate.
- Mechanical Alternative Cost Estimates.
- Final Mechanical Construction Cost Estimate.
- Input with GC/CM CPM Schedule at 90% and 100%.
- Provide Constructability Review of Mechanical Systems at 90%.
- Provide Value Engineering Review of Mechanical Systems.
- Provide Mechanical system BIM services in accordance with Task 7 – Building Information Modeling.

Task 6.4 Electrical Preconstruction Services

Description The GC/CM will implement the EC/CM procurement process as defined by RCW 39.10.385. The Electrical subcontractor Preconstruction Services shall include participation in preparations of all applicable deliverables for Tasks 1 through 7 of the GC/CM Consultant’s Preconstruction Agreement including Project Management, attendance at regular Meetings, Estimating, Scheduling, Constructability and VE Reviews, and BIM Modeling.

Purpose Engage early Electrical Preconstruction services participation to improve resultant project quality, cost and schedule benefits to WSF.

Washington Department of Transportation – Ferries Division

- Deliverables All EC/CM subcontractor’s participation and specific Preconstruction services task deliverables shall support the GC/CM Preconstruction services deliverables schedule herein that includes but not limited to;
- Input to GC/CM Preconstruction Task Schedule.
 - Input to GC/CM Construction Plan.
 - Participate in GC/CM S/DBE Outreach Program.
 - Attend Regular Project Meetings and Discipline Specific Meetings.
 - 30-60-90% Baseline Electrical Cost Estimate.
 - Electrical Alternative Cost Estimates.
 - Final Electrical Construction Cost Estimate.
 - Input with GC/CM CPM Schedule at 90% and 100%.
 - Provide Constructability Review of Electrical Systems at 90%.
 - Provide Value Engineering Review of Electrical Systems.
 - Provide Electrical system BIM services in accordance with Task 7 – Building Information Modeling.

TASK 7 – BUILDING INFORMATION MODELING

Task 7.1 Building Information Modeling (BIM)

Description GC/CM shall utilize Building Information Modeling (BIM) technology to assist in the identification and resolution of construction and interface conflicts. The BIM submissions as described below shall include information progressed to and consistent with the stage of related design completion. Scope of effort shall include performing BIM on the various elements of the Work. The BIM model, built by the design team as part of the design process, will be made available to the GC/CM to perform their BIM scope of work.

General

- GC/CM to propose a BIM Execution Plan (BEP) to demonstrate use BIM on the project, with the underlying intent to achieve greater efficiencies in cost estimating, construction sequencing, project coordination and clash detection.
- BIM may be used for all foundations, buildings, overhead loading structures, transfer spans and site work or other areas as proposed in the plan provided by the GC/CM.
- The Level of development shall be based on the following descriptions:
 - 100 – Non-geometric date of line work, areas, volumes, zones, etc.
 - 200 – Generic elements shown in three dimensions.
 - 300 – Specific elements, confirmed 3D object geometry (Dimensions, capacities, connections).

Washington Department of Transportation – Ferries Division

- 400 – Shop drawings/fabrication.
- 500 – As-built.
- The Contractor must conduct and manage an adequate and thorough Clash Detection process during preconstruction so that interferences between components will be detected and resolved before construction. Contractor is solely responsible for the cost of remedying any clashes that could have been discovered during this Clash Detection process.
- The BIM reviews must be included in the Contractor’s construction meeting agenda.
- The BIM may be linked to Contractor’s digital critical path method (“CPM”) approved Master schedule and subsequent CPM schedule updates to allow simulation of the construction phasing and sequencing.
- Contractor may develop and organize the BIM to incorporate information necessary for submission to the US Green Building Council (USGBC) GBC for LEED. Contractor must review the reports required for the relevant environmental submission and structure the BIM to facilitate creating or exporting these reports.
- Within 20 business days after execution of the NTP, Contractor must prepare a BIM Execution Plan (BEP) confirming the intended uses of the BIM during the preconstruction and construction phases of the project, describing the communication paths, and the model structure.
- Contractor is responsible for selecting BIM software that is adequate for Contractor’s tasks. Moreover, Contractor must demonstrate that the software used by it and its subcontractors can exchange BIM information reliably and accurately and can read and export BIM information into open source file formats to the extent required for coordination with the design team and owner.

Architectural

- Scope may include as required: foundations, walls, ceilings, ADA accessibility and other architectural features that may interface and conflict with other building elements.

Structural

- Scope may include modeling as required of foundations, piles, buildings and transfer spans and overhead loading structures including but not limited to structural concrete, structural steel, reinforcing steel, and timber trestles as well as elements including but not limited to mezzanines, walkways and bridges. Models will be used for coordinating structural work with Mechanical, Plumbing, Electrical, and fire protection, equipment and furnishings, and special construction work.

Mechanical

- Perform BIM modeling on elements of the mechanical system as required including equipment, hydraulic lift systems, ductwork, piping, and equipment access zones. All ductwork and air handling equipment shall be modeled as required. Any piping associated with the mechanical equipment shall be modeled as required.

Plumbing

- Model all elements of plumbing systems as required including equipment, piping and access space. Equipment shall be modeled to its overall height, width, and depth. All piping associated with plumbing shall be modeled as required including equipment access zones.

Fire Protection

- All Fire Protection piping and equipment shall be modeled as required including equipment access zones.

Electrical

- General electrical gear will be modeled as required including main conduit feeder routings to ensure clear horizontal vertical space requirements out of and into Electrical rooms and to identify congested areas throughout the building. Model all conduit feeders associated with mechanical equipment. Model cable tray as required.

Equipment and Furnishings

- As required.

Special Construction

- As required.

Site Work

- Scope may include modeling all public access routes for compliance with ADA as required.

Purpose Utilization of advance modeling techniques and technologies to verify and optimize work sequencing, scheduling, and productivity, designer of record’s project design element locations, GC/CM and subcontractor’s field run locations, and building element clash detection.

TASK 8 – SUPPLEMENTAL TASK RESOURCES

Task 8.1 Supplemental Task-Specific Staffing Resources

Description The GC/CM shall make available additional staff as necessary to provide subject-matter expertise for the workshops and meetings described in the tasks above. As part of this task, WSF may request one or more of the Contractor’s personnel be present for any of the workshops and meetings described elsewhere in this Scope of Work.

DRAFT 00 52 55 Agreement for Preconstruction Services Attachment A Scope of Work for Preconstruction Services

Washington Department of Transportation – Ferries Division

Purpose	To ensure that resources are available as required to ensure adequate and accurate input into key subjects so as to best support the needs of the preconstruction process.
Frequency	As deemed necessary by WSF based on recommendations from the GC/CM Consultant.
Duration	As described in other Tasks.
Attendees	As proposed by the GC/CM and authorized by WSF. Expected utilization of this Task may include, for example, the Contractor’s Quality Control Manager, Safety and Security Manager, Inclusion Coordinator, Contract Manager, and/or others as deemed necessary by WSF.
Deliverables	As described in other Tasks.

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