

# Joint Transportation Committee

## Long-Range Finances Report Appendices Washington State Department of Transportation Ferries Division Financing Study II



**Prepared For:**  
Joint Transportation Committee  
Washington State Legislature

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**APPENDIX I.**  
**JTC FERRY FINANCE STUDY II RECOMMENDATIONS**

## Joint Transportation Committee Ferries Finance II Studies Recommendations

Area	Recommendation	Ferries Scenario A	Recommended – Long Range Finances Report (if different from Scenario A)
<b>Auto-Passenger Vessel Preservation and Replacement Final Report – January 10, 2008</b>			
<b>Vessel Condition</b>	1. For the Steel Electrics and the <i>Rhododendron</i> : a. Replace the active vessels expeditiously. b. Expedite Steel Electric and <i>Rhododendron</i> replacement procurement process.	1. Steel Electrics and <i>Rhododendron</i> replaced with Island Home vessels.	
	2. Consider rebuild of the <i>Hyak</i> .	2. <i>Hyak</i> rebuild in 2009-11 biennium.	
	3. Reduce drydock and other planned out of service times. a. Review shipyard contracts. b. Conduct preservation work while vessels are underway.		3. Recommends focus on reducing out of service time.
	4. Maintenance and preservation: a. Institute a bilge and void maintenance program. b. Institute a visual inspection/audio gauging steel preservation program for older vessels. c. Institute an integrated coating program. d. Consider standardized cabin maintenance materials. e. Provide preservation funding for inactive vessels or retire them out of the fleet.	a. Bilge and void maintenance program funded. b. Visual inspection/audio gauging funded. c. Integrated coating program development funded. d. Standardized materials already implemented. e. Preservation of reserve vessels in 16-year financial plan.	

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<b><i>Vessel Replacement</i></b>	1. Develop a consistent and legislatively reviewed vessel rebuild/replacement plan.	1. Replacement plan included.	1. Modified plan to reflect retirement schedule.
	2. Relate increases in vessel capacity to ridership forecast, level of service standard, operational changes, and terminal design standards.	2. Proposed increases in vessel capacity based on new ridership forecast, vehicle level of service standard, operational changes & preliminary terminal design standards.	2. Vessel capacity increases delayed until existing vessel retirements.
	3. Consider alternatives to new vessel construction to increase capacity.	3. Operational and pricing strategies proposed to maximize use of existing assets.	
	4. Prioritize and commit vessel replacement funding.	4. Proposes building 9 new vessels in 16-year plan.	5. Proposes building 5 new vessels in 16-year plan.
	5. Use route-based planning.	5. Terminal & vessel plans integrated by route.	
	6. Gauge community reaction to vessel capacity changes.	6. Ferries conducted meetings and outreach in every community served to gauge reactions to Scenario A & B.	
<b><i>Capital Financing</i></b>	1. Implement ESHB 2358: <ul style="list-style-type: none"> <li>a. Use revised definition of capital.</li> <li>b. Use revised definitions of improvement and preservation.</li> </ul>	a. Uses revised definition of capital. <ul style="list-style-type: none"> <li>b. Uses revised definitions of improvement and preservation.</li> </ul>	a. Eagle Harbor improvement project for superfund site monitoring and vessel indirect expenses for stability analysis support for operations recommended as more appropriate operations.

Area	Recommendation	Ferries Scenario A	Recommended – Long Range Finances Report (if different from Scenario A)
	<ul style="list-style-type: none"> <li>c. Allocate systemwide and administrative capital costs to vessel projects.</li> <li>d. LCCM and asset management program.</li> </ul>	<ul style="list-style-type: none"> <li>c. Allocates systemwide and administrative capital costs to vessel projects.</li> <li>d. LCCM used.</li> </ul>	<ul style="list-style-type: none"> <li>d. Recommends asset management program in terminal controls be shared with vessels.</li> </ul>
	<p>2. Vessel preservation funding:</p> <ul style="list-style-type: none"> <li>a. Improve preservation program management.</li> <li>b. Tie vessel preservation funding to the vessel replacement plan.</li> <li>c. Prioritize vessel preservation over vessel improvement funding.</li> <li>d. Consider increasing preservation funding.</li> <li>e. Do not reduce preservation funding to pay for new vessels.</li> </ul>	<ul style="list-style-type: none"> <li>b. Vessel preservation funding tied to replacement plan.</li> <li>c. Vessel preservation prioritized over improvement funding.</li> <li>e. Preservation funding not reduced to pay for new vessels.</li> </ul>	<ul style="list-style-type: none"> <li>a. Recommends project controls group of Terminal Engineering be shared with vessels.</li> <li>a. Recommends focus on out of service time.</li> <li>a. Recommends constructability review of preservation projects and reduction in funding due to constructability issue.</li> <li>d. Recommends increasing topside painting funding to minimize out of service time.</li> <li>e. Recommends extended preservation of vessels that would remain in the fleet under</li> </ul>

Area	Recommendation	Ferries Scenario A	Recommended – Long Range Finances Report (if different from Scenario A)
			the recommended fleet plan.
	3. The vessel emergency repair budget should not be used for planned maintenance and inspections of inactive vessels.	3. Emergency repair budget does not include planned maintenance & inspections of reserve, inactive vessels.	
	4. Increase vessel replacement funding.	4. Requests funding for 9 new vessels.	4. Recommends funding for 5 new vessels based on retirement schedule.
	5. Prioritize vessel funding over terminal improvement funding.	5. Reduction in terminal relocations & expansions from previous plan	5. Recommends \$225.9 million reduction in terminal improvements in 16-year plan.
<i>Maintenance and Repair Operating Finance</i>	1. Consider internal realignment to increase maintenance and preservation division management.	1. Merged vessel engineering and preservation and maintenance divisions.	
	2. Reduce planned out of service credit drydocking time.		2. Recommends focus on out-of service time.
	3. Consider implementation of State Auditor’s recommendations on Eagle Harbor double shifts.	3. Ferries response indicates double shift too expensive based on staff overtime, travel, and other costs.	3. Recommends Ferries re-consider and include an evaluation of the impact on out of service time of a double shift.
	4. Review 2007-09 biennium repair budget.	4. 16-year operating budget includes adjustment to repair budget.	
<b>Capital Program Staffing and Administration Cost Final Report – April 10, 2008</b>			
<i>Staffing Levels and Vacancies</i>	1. Current capital position vacancies should not be filled until the Draft Long-Range Plan is complete and decisions on staffing can be informed by the Plan.  2. Future vacancies in capital staff positions should not be	1. 2008 legislature (ESHB 2878) required Ferries to maintain staffing at or below Jan. 1, 2008 levels until completion of plan.	

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	filled until the completion of the Long-Range Plan, unless absolutely critical to project delivery.		
<i>Administrative Work Order</i>	1. Ferries should distinguish administrative work order charges to projects from direct staff charges to projects in order to facilitate legislative and management understanding of capital project costs.	1. Cost allocation methodology implemented. Shows administrative and indirect costs separately.	
	2. Terminal Engineering should review its structure and anticipated ongoing charges to the administrative work order.		2. Recommends reductions in Terminal Engineering indirect costs and sharing Project Controls with vessel engineering.
	3. Ferries should review staff authorized to charge to the administrative work order and fully implement the established procedures for authorizing such charges.		
<i>Project Work Orders</i>	1. Ferries should review staffing in its engineering divisions to ensure core competency in, and a focus on, terminal and vessel preservation, with staffing sufficient to implement the preservation program proposed in the upcoming Long-Range Plan.	1. Ferries realigned vessel divisions as part of an effort to ensure proper focus on preservation.	
	2. Ferries should clearly distinguish responsibility for terminal improvement projects, and for vessel construction and systemwide vessel improvement projects, from its preservation responsibility in order to ensure a focus on preservation.		2. Recommends consideration of third party management of terminal projects over \$50 million and of new vessel construction projects.
<i>Operations Construction Support Capital Charges</i>	1. Ferries should evaluate operating budget staff charges to the terminal operations construction support project to determine whether they are appropriate capital program expenses.		
<i>Other Operating Staff Capital Charges</i>	1. Ferries should review and determine whether charges to the capital program from information agents, vessel engineering crews, vessel deck crews, and terminal		



<b>Area</b>	<b>Recommendation</b>	<b>Ferries Scenario A</b>	<b>Recommended – Long Range Finances Report (if different from Scenario A)</b>
	staff are appropriate capital charges, and whether these charges should be separately identified in project budgets.		
	2. Ferries should develop and implement a policy on charges by information desk, terminal, vessel deck, and vessel engineering staff to the capital program.		
<b><i>Use of On-Site Consultants</i></b>	1. Terminal Engineering should continue to review and, where appropriate, reduce expenditures on on-site consultants.	1. Terminal Engineering has continued to reduce use of on-site consultants.	1. Recommends further reductions in terminal indirect consultant costs.
	2. The use of on-site consultants should be based on Ferries' decisions on the delivery method for, and scheduling of, preservation and terminal improvement/new vessel construction, and vessel systemwide improvement projects.		2. Recommends examining third party management of terminal construction projects over \$50 million and vessel construction.
<b><i>Scheduling System Cost</i></b>	1. WSDOT should review the cost-benefits of continued use of the Primavera scheduling system for Ferries.	1. Funding for Primavera & implementation of WSDOT Project Management and Reporting System (PMRS).	1. Recommends not funding PMRS & Primavera based on consultants' assessment they are not appropriate for the scale of project typically done by Ferries as compared to highway projects.
<b><i>Identifying Administrative Expenses</i></b>	1. Ferries should separately identify the capital administration services and charges for review by the legislature.	1. Ferries separately identified administration, vessel indirect, and terminal indirect costs.	
<b><i>Organization Chart</i></b>	1. Ferries should develop and present to the legislature an organization chart that shows only funded positions and denotes which legislatively adopted budget the chart represents.	1. Organization chart not included.	
<b><i>Baselines and Performance</i></b>	1. Ferries should develop baseline information and performance measures for the percentage of the	1. Not done.	1. Percentages calculated.

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<i>Measures</i>	capital program and individual capital project budgets that should be devoted to capital staffing and administration expenses.		
<b>Management and Support Operating Costs Final Report – July 8, 2008</b>			
<i><b>Ferries Non-Labor Management and Support Costs</b></i>	1. OFM, WSDOT and Ferries should review the marine insurance program to determine whether it is cost-effective versus being self-insured, including the Ferries terminal property, hull and machinery, war risk, and liability coverages.	1. No changes in marine insurance program.	1. Modified costs of insurance program to reflect changing fleet. 2. Alternative presented to eliminate property coverages.
	2. If OFM, WSDOT and Ferries conclude that it is cost-effective to continue to retain commercial insurance, the coverages and deductibles should be reviewed. Consideration should be given to optional deductible limits above the current \$1 million.		
	3. Ferries should ensure that it has a full understanding of the coverages provided if it continues to procure commercial insurance. Ferries should also ensure that, as it implements the administrative cost allocation requirements of ESHB 2358, consideration is given to the insurer’s requirements to distinguish direct labor from administrative overhead costs that are allocated to capital projects. This will facilitate Ferries’ claims management.		
	4. Ferries, WSDOT, and OFM should review Ferries’ temporary employment expenditures and determine which, if any, of the temporary positions should be created as permanent positions, with particular attention to those used to meet new workload requirements.		
	5. Ferries should consider accepting only Visa and MasterCard, which have lower merchant discount fees.	5. Change not implemented. Ferries determined there were not extra merchant	5. Recommends adjusted credit card fee budget in 16-year plan to reflect revenues.

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	6. Ferries should review its use of long-term on-site consultants.	fees. 6. Operations use of long-term on-site consultants reduced partially through creation of positions.	
<b>WSDOT Management and Support (Other State Support)</b>	1. The legislature and WSDOT should develop a consistent policy on expenses to be charged from the Motor Vehicle Account to the Puget Sound Ferry Operations Account. The policy should specifically address whether administrative indirect charges, such as WSDOT Executive Management, are to be charged to the Ferry Operations Account.	1. Expenses from WSDOT divisions assumed to be charged to the Puget Sound Ferry Operations Account.	1. Recommends acceptance of Governor’s budget proposal to no longer charge the Puget Sound Ferry Operations Account for WSDOT Executive Management (Program S) and Information Technology Services (Program C) costs.
	2. If the policy is to include Motor Vehicle Account administrative indirect expenses in charges to the Puget Sound Ferry Operations Account, such charges should be distinguished from costs incurred in the direct delivery of ferry services.		
	3. The legislature and WSDOT should develop a consistent policy on expenses to be charged directly to the Ferries operating budget.	3. Reflects move of payroll function to WSDOT with no charge back to the Puget Sound Ferry Operations Account or Program X.	
	4. WSDOT should review the consistency of its practice in charging for Office of Equal Opportunity (OEO) officers. The Ferries Executive Management budget should not be charged for the expense of an OEO officer unless other WSDOT budgets are also charged for such expenses.	4. OEO officer continues to be charged to Program X.	
	5. WSDOT should continue the practice adopted in the 2007-09 biennium of not charging sub-program C1	5. Program C1 charges not included.	5. Recommends no Program C charges to the Puget Sound

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	Information Technology Administration expenses to the Puget Sound Ferry Operations Account.		Ferry Operations Account.
	6. WSDOT should make a determination of whether Information Technology (Program C) expenses should continue to be charged to the Puget Sound Ferry Operations Account, as part of its policy review of charges from the Motor Vehicle Account to the Puget Sound Ferry Operations Account.	6. Program C charges included.	6. Recommends no Program C charges to the Puget Sound Ferry Operations Account.
	7. Ferries should not include risk management administration fees in its calculation of farebox recovery because the charge is no longer allocated between WSDOT and Ferries.	7. Not included in farebox recovery calculation.	
	8. In addition to reviewing the Marine Insurance Program, WSDOT, OFM, and Ferries should review the range of costs incurred by the State in providing insurance, risk management services and claims defense to determine what, if any, costs could be reduced.	8. No changes made.	
<b>Management Communication and Oversight</b>	1. Ferries and the legislature should develop a policy on what costs are to be included in farebox recovery. The consultants recommend that all costs charged to the Puget Sound Ferries Operations Account be included in farebox recovery, as this methodology would tie most directly to the level of fares needed to meet the legislatively adopted 16-year financial plan.		1. Recommends inclusion of all costs charged to the Puget Sound Ferry Operations Account, unless specifically excluded by legislative direction, and only costs charged to the Puget Sound Ferry Operations Account. This would exclude Program U (WSDOT Risk Management Services) costs from the calculation of farebox recovery.
	2. The legislature should clarify its intent in excluding security costs from the calculation of farebox recovery		2. Senate adopted and House Transportation Committee

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	so that WSDOT expenses can be properly included or excluded based on that direction.		adopted transportation funding bills (as of 4-7-09) do not contain language excluding security costs from the calculation of farebox recovery.
	3. In order to provide consistent communication with the legislature, Ferries should use a uniform definition of Ferries management and support costs based on costs included in the calculation of farebox recovery.	3. Management and support costs same as used in 2007 route statements.	
	4. Ferries should provide a biennium farebox recovery calculation to align with the State's budget periods.	4. Biennium calculation of farebox recovery included.	
<b>Non-Labor, Non-Fuel Operating Costs Final Report – July 8, 2008</b>			
<i>Terminal Operations</i>	1. Ferries should enter into a competitive process for terminal agent services as the contracts expire to ensure that it is receiving the best combination of service and value	1. Ferries concurred with recommendation at Friday Harbor, Lopez, and Orcas. Noted unique circumstances may affect contracts at Sidney and Shaw.	
<b>Auto-Vessel Sizing and Timing Final Report – April 2009</b>			
<i>Fleet Preservation</i>	1. Ferries should reduce average planned out of service time from seven weeks per vessel per year to six weeks. This can be achieved by consolidating Eagle Harbor work with other shipyard work, focusing on reducing time spent on topside painting, designing vessels with aluminum superstructures and other features that reduce required maintenance, and requesting the Coast Guard to allow underwater inspection in lieu of dry docking.	1. Island Home vessels are built with aluminum superstructures and Ferries has included funding for aluminum superstructures in new 144-auto vessels.	1. Recommends 30% increase in topside painting budgets to allow overtime and expedited service.

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	<p>2. The legislature should recognize that in order to reduce out of service time and reduce the fleet size, the per-vessel expenditure on maintenance and preservation may increase, and therefore, it will be necessary to provide adequate maintenance and preservation funding for each vessel in the fleet in order to minimize service disruption.</p>		<p>1. Reduced overall preservation funding due to need for constructability review. Review of Ferries’ preservation expenses found that preservation budget is consistently under spent. Recommends 30% increase in topside painting budgets and increased funding for rebuild of <i>Hyak</i> motor.</p>
	<p>3. Assuming a six-week annual maintenance period, Ferries should plan on a 21-vessel fleet to provide the baseline 2030 service hours. This size fleet will provide adequate maintenance relief and 46 weeks of crewed vessel emergency response capacity. Additional vessel acquisitions could then be used to expand service, not to deliver the baseline service.</p>	<p>3. Ferries plans on a 22 vessel fleet by 2030 to deliver baseline service. (An additional vessel is planned to break up the Fauntleroy-Vashon-Southworth Triangle route.)</p>	<p>3. Within 16-year financial plan period, recommended fleet has 22 vessels to deliver the baseline service.</p>
	<p>4. Ferries should implement a system to use vessels that are in maintenance for emergency response.</p>	<p>4. Ferries did not concur with recommendation.</p>	
<p><b><i>Fleet Composition</i></b></p>	<p>1. Ferries should plan on the consultant active vessel deployments by route for the delivery of the baseline service in 2030.</p>	<p>1. Ferries’ Scenario A plans for larger vessels on some routes than recommended deployment.</p>	<p>1. Recommends modified deployment plan during 16-year plan, with smaller vessels on the Interisland, Fauntleroy-Vashon-Southworth Triangle, Mukilteo, and Bremerton routes.</p>
	<p>2. Ferries should plan for a 21-vessel fleet composed of: five jumbo (188-202 auto), six large (144-auto), five medium (124-auto), one mid size (90-auto), and four small (64-auto) vessels for the delivery of the baseline services.</p>	<p>2. Ferries Scenario A plans for a 23-vessel fleet with 22 vessels for the baseline service and a vessel added to provide direct rather than</p>	<p>2. Recommended fleet does not provide direct service on the triangle route. During the 16-year plan period, assumes a 22-vessel fleet composed of five</p>

Area	Recommendation	Ferries Scenario A	Recommended – Long Range Finances Report (if different from Scenario A)
		triangle service on the Fauntleroy-Vashon-Southworth Triangle route.	jumbo (188-202 auto), four large (144-auto), five medium (124-auto), three mid size (87 & 90-auto), and five small (34 & 64-auto) vessels for the delivery of the baseline services.
<b>Fuel Conservation</b>	1. Ferries should analyze the potential for slowing vessel speeds an average of 0.5 to 1.0 knots in order to reduce fuel consumption. This analysis should include a route-by-route review, including the impact on the number of sailings.	1. Ferries included savings by slowing vessels 0.75 knots outside the summer season.	1. Recommends slowing vessels by an average of 0.5 knots in summer and 0.75 knots the rest of the year.
	2. Ferries should assess the feasibility of slowing at-dock RPMs from 60 to 30 in order to conserve fuel.	1. Ferries determined this is not feasible.	1. Recommends positive restraint study focus on operational or low cost capital solutions to conserve fuel during dockings.
	3. As part of the pre-design process for constructing 144-auto vessels in the 2021-2030 time period (four (4) vessels in the baseline fleet or six (6) in the recommended fleet), Ferries should provide the legislature with a cost-benefit analysis of an aluminum superstructure and other design modifications that might increase fuel efficiency.	1. Ferries requested funding for aluminum superstructures on 144-auto vessels.	
<b>Vessel Acquisition</b>	1. Ferries should acquire vessels in two waves: 2009–2012: 4 new 64-auto vessels; and 2020-2030: 6 new 144-auto vessels	1. Scenario A acquires 3 Island Home vessels then immediately begins construction of 6 new 144-auto vessels before the recommended time frame.	1. Recommends acquiring 4 new 64-auto vessels in the 2009-12 time period and the first of six new 144-auto vessels starting in the 2023-25 biennium.
	2. The legislature should consider opening vessel construction to national competition by determining the appropriate balance between Ferries’ new vessel		

Area	Recommendation	Ferries Scenario A	Recommended – Long Range Finances Report (if different from Scenario A)
	construction costs, the potential for federal funding, and the policy goals of the State.		
<i>Service</i>	1. Ferries should consider additional sailings and/or modifications to vessel service hours as ways to improve service before considering adding vessels to the fleet to improve service.	1. Not done in Scenario A.	1. Identify alternatives for Port Townsend, San Juans, and Sidney routes to match existing service with smaller fleet or improve service without adding vessels.



## **APPENDIX II. SCENARIO B SUMMARY**

Ferries' *Revised Draft Long-Range Plan* Scenario B is a service plan that could be implemented if the State were not able to provide new revenues and Ferries needed to operate a reduced marine highway system. Scenario B would close the Sidney route and reduce service significantly on several domestic routes. Service would be provided with a 17-vessel fleet, six fewer than Scenario A. Scenario B also envisioned a partnership with local governments to provide passenger-only ferry service to fill in the gaps in traditional auto-passenger ferry service provided by the State.

### ***Operating Program***

Scenario B significantly reduces the scope of Ferries operations beginning in the 2009-11 biennium, with further reductions in the 2011-13 biennium. Cuts were focused on routes that were generally poor financial performers or proposed service reductions were for low productivity periods. Total service hours were reduced by 17 percent.

#### ***2009-11 Biennium***

- *Close Sidney route in September 2009.* Provide San Juan domestic service with two Super (144-auto) vessels and the 90-auto *Sealth* in the fall, winter and spring, and three Super class vessels and the *Sealth* in the shoulder and summer seasons.
- *Downsize the Point Defiance-Tahlequah route* by substituting the *Hiyu* (34-auto) and retiring the *Rhododendron* (48-auto).
- *Keep Port Townsend-Keystone* as a one-boat operation, which is the level of service provided since the 2007 retirement of the Steel Electric class vessels.

#### ***2011-13 Biennium***

- *Reduce Seattle-Bremerton* to one boat, which would be a medium size vessel (124-auto) all year except the summer when a jumbo size vessel would be deployed (188-auto).
- *Reduce Edmonds-Kingston service.* Eliminate weekday night service between mid-October and mid-May.
- *Reduce service for Fauntleroy-Vashon-Southworth Triangle Route* to two medium (124-auto) vessels.

### ***Capital Program***

Capital needs are reduced from Scenario A levels by retiring some vessels early and not replacing them. Instead of acquiring three (3) small vessels and six (6) large vessels over the 16-year plan, Ferries would acquire three (3) small vessels and one (1) large vessel. Ferries also proposed a \$92.2 million reduction of the \$376.0 million in terminal improvements proposed in Scenario A, including reductions in dwell time improvements, transit-related projects, and walkway improvements.

### ***Funding Implications***

Scenario B budgets a 16-year operating surplus of \$109 million, compared to a \$222 million operating deficit in Scenario A. This is accomplished by focusing on routes with higher farebox recovery rates. Ferries estimated farebox revenues would be reduced by 6 percent while expenses would be cut by 14 percent.

**APPENDIX III.  
JTC POLICY GROUP 2008 STATUS REPORT**



**JOINT TRANSPORTATION COMMITTEE POLICY GROUP  
FERRY SYSTEM REVIEW PHASE II  
STATUS REPORT  
December 2008**

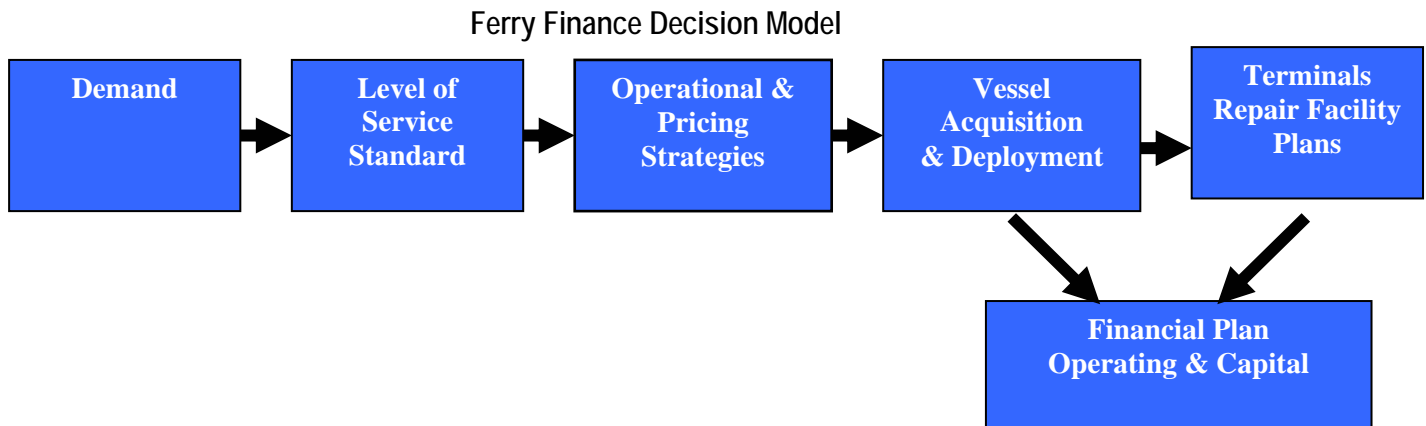
Beginning in 2006, the Joint Transportation Committee (JTC) began an extensive review and evaluation of the Washington State Ferry System (WSF). The ferry system has been described as unsustainable because of the gap between currently allocated funds and what is required to preserve the system in its current form. The JTC Ferry Study goal is to provide the Legislature with the information it needs to plot a course for the future of the ferry system.

**I. Background**

Phase I of the JTC ferry financing study was conducted during the 2006 interim. The legislature directed the JTC to evaluate WSF’s operating and capital programs, including: ridership, revenue, and cost forecasts; and capital project scoping, prioritization, and cost estimating (Chapter 370, Laws of 2006 (SSB 6241)). WSF had just released its 2006 *Draft Long-Range Strategic Plan* as the phase 1 study was being undertaken.

Phase I evaluated the 2006 WSF *Draft Long-Range Plan* and found that there was not sufficient reliable data to evaluate and craft a long-range plan. The study raised fundamental questions about WSF’s assumptions on future ridership, customer needs, planned terminal improvements, terminal preservation costs, and operating costs. The information necessary to address those questions was not available at the time of the phase I study. Accordingly, the legislature directed further analysis.

The JTC study proposed a ferry financing decision model as a framework for legislative ferry investment decisions. Under the model, ridership demand, level of service standards, and pricing and operational strategies are the basis for long-range vessel and terminal capital and operating financial decisions:



Utilizing the ferry finance decision model required gathering and analyzing new data and modifying assumptions, which led to phase II of the JTC ferry study.

## **JTC Ferry System Review – Phase II**

ESHB 2358 (2007) and related budget provisos identified and funded phase II of the JTC ferry study. Based on the recommendations of phase I of the study, the Legislature directed WSF to adopt adaptive management practices<sup>1</sup> in its operating and capital programs in order to keep costs as low as possible while continuously improving the quality and timeliness of service. The legislation required coordinated actions by WSF, the Washington State Transportation Commission (WSTC), the Office of Financial Management (OFM), and the JTC to conduct a comprehensive analysis of the Washington State Ferry System. This work informed the revised *Draft Ferries Long-Range Plan* issued December 2008.

The JTC, pursuant to budget provisos, appointed a Policy Workgroup to oversee implementation of ESHB 2358 (see attached list of members). The Policy Workgroup met regularly during the 2007 and 2008 interims to review and provide direction to the study.

### ***II. Summary***

All tasks assigned in ESHB 2358 and associated budget provisos have either been completed or are underway.

- Demand Analysis: In order to develop a long-range plan, WSF needed better information about riders and projected future demand.
  - Customer Survey: The WSTC's customer survey has provided the first comprehensive view of Ferries' customers – enhancing understanding of ridership patterns and of customer satisfaction, concerns, and likely response to new initiatives.
  - Ridership Forecast: WSF and its technical team have developed a revised and greatly improved ridership forecast. This improvement allows a higher level of confidence when assessing the system's future needs.
- Level of Service: Phase I of the study identified a risk of overbuilding the system in response to a level of service standard focused on peak traffic periods. WSF has proposed revising the level of service measure to capture demand system-wide rather than just during peak period service. This provides a more reliable measure of future service needs.
- Operating and Pricing Strategies: WSF's capacity issues are driven by vehicle capacity during peak sailings. Phase I of the JTC study recommended using operating and pricing strategies to ease the strain on peak vehicle capacity by increasing walk-on use of ferries and shifting vehicle demand to non-peak sailings. WSF's *2008 Draft Long-Range Plan* proposes the following strategies:

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<sup>1</sup> Adaptive management means a systematic process for continually improving management policies and practices by learning from the outcomes of operational programs (ESHB 2358, Section 3 (1)).

- Increasing walk-ons: WSF proposes to increase walk-ons by: (1) improving coordination with transit; and (2) increasing walk-on fares at half the rate of vehicle fares.
- Leveling Vehicle Demand: WSF recommends using vehicle reservations to level peak vehicle demand. The fare would be pre-paid when reserved, with no additional charge for the reservation.
- Vessel Acquisition and Deployment: The JTC's studies recommended WSF prioritize vessel preservation and acquisition over terminal improvements. WSF's revised *Draft Long-Range Plan* reflects that shift by including a 22-year plan for retiring, acquiring, and deploying vessels and reducing proposed investments in terminal expansions.
- Terminal Plans: The 2006 Legislature placed the extensive terminal improvement projects included in WSF's 2006 long-range plan on hold. The lower ridership projections and demand management strategies developed under phase II of the JTC ferry study have allowed WSF to reduce the scope of its terminal projects. Of three originally proposed terminal re-locations, only moving the Mukilteo terminal remains in the plan. Better data and more reliable assumptions from the study have allowed a reduction in the scope of the Anacortes, Bainbridge, Port Townsend, and Seattle terminal projects.
- Cost Analysis: Phase II of the JTC study required a comprehensive review of WSF's operating and capital program costs. This review produced a series of cost reduction recommendations. WSF and the Washington State Department of Transportation (WSDOT) have largely concurred with these recommendations. The recommendations range from reducing capital staffing and administration costs to reducing vessel insurance costs, modifying vessel deployment to decrease operating costs, and increasing vessel fuel efficiency.

WSDOT and WSF leadership have come a long way in rethinking their understanding of ferry riders, how WSF provides service to the state, and implementing the adaptive management practices required by ESHB 2358. Without this work, WSF and the Legislature would face an even more daunting task planning the future of the ferry system in the current economic climate.

### ***III. Implementing the Ferry Finance Decision Model***

In phase II of the JTC Ferry Study, WSF, the JTC, and the WSTC gathered and analyzed the data necessary to implement the ferry finance decision model.

#### **Step1. Demand**

Understanding user needs and projecting future ridership is the critical first step in ferry planning. To improve understanding of WSF's key markets and customers, the Legislature required the WSTC to conduct a customer survey, to be repeated every two years. WSF was directed to work with the JTC to improve its ridership projections.

### ***Why is this important?***

#### **Survey**

The customer survey conducted by the WSTC:

1. Contradicts some prior assumptions about ferry customers (that the vast majority are commuters) and the cause of recent declines in ridership (that rising fares was the primary cause of people no longer riding ferries).
2. Provides a basis for gauging potential reactions to operational and pricing strategies before they are implemented.
3. Provides a foundation for adaptive management practices, the essence of which is to consistently monitor the impact of changes on customer behavior and satisfaction and adapt as needed.

#### **Improved Ridership Projection:**

1. The revised ridership forecast shows projected ridership increasing at almost half the rate of the prior forecast. The prior model projected a 68 percent increase by 2030. The revised model projects a 36 percent increase.
2. The ridership projection provides a more realistic basis for planning service and capital investments. For example, expected passenger and vehicle ridership is the basis for determining the size of vessels, terminals, and vehicle holding areas.
3. WSF can set a reasonable ridership goal that can be monitored. If WSF's ridership varies from the projections, ongoing customer survey information will help identify the causes and provide a basis for management and legislative response.

### ***Market Survey – Methodology & Results***

“Accurate user and market information is vital in order to find ways to maximize the ferry systems’ current capacity and to make the most efficient use of citizens’ tax dollars” (ESHB 2358, Section 1). Prior to the enactment of ESHB 2358, the state had limited information on WSF’s riders and markets.

WSTC’s customer survey provides a robust source for in-depth information on rider characteristics and needs. The survey included focus groups, a quantitative survey of 13,000 riders on-board Washington State ferries, a general customer area and infrequent rider telephone survey of 1,200 Puget Sound residents, and a freight customer survey. In addition, two online surveys were completed to understand ferry customers’ response to potential pricing and operational strategies.

In November 2008 the WSTC issued its’ final market survey report. The extensive survey findings provide the most complete and comprehensive understanding of ferry riders to date. Significant findings include:

- *WSF’s regular riders are :*
  - Somewhat older (median age 51) than the general population in the ferry-served communities (median age 45)



- Generally more affluent (median household income \$80,703) than the general population in ferry-served communities (median household income \$58,159).
- Diverse, with occasional riders (less than seven one-way trips a month) accounting for 44 percent of all riders; regular riders (seven to 24 one-way trips per month) totaling 28 percent; and frequent riders (25 or more one-way trips per month) representing 28 percent.
- *Most ferry system trips are non-commute trips* (70 percent of year-round trips). Commuters are an important part of WSF’s ridership, but they are not the majority.
- *Riders have some flexibility in their schedules.* Sixty percent (60%) of respondents said they could take an earlier or later boat, including 8 percent of peak period drivers who said they could shift out of the peak period.
- *Riders are mostly satisfied with Washington State Ferries*, with 68 percent satisfied or very satisfied, 12 percent neutral, and 20 percent either dissatisfied or very dissatisfied.
- *Most riders believe that Washington State Ferries is a good value* (56 percent), with 30 percent neutral and 14 percent saying that ferries are a poor value.
- *Reductions in ferry use are driven more by changes in life circumstances than by fare increases.* Despite the fact that fares have risen by an average of 62 percent between 2000 and 2006, a relatively small percentage of people in the general customer survey cited price as the primary reason for reducing their ridership.
  - Of the riders surveyed who had not ridden a ferry in the last three months:
    - Fifty-three percent had not changed their ridership.
    - Four percent had increased their ridership.
    - Twelve percent had stopped riding completely. One hundred percent of these riders stated the primary reason they stopped riding is because they no longer do what they used to do and thus no longer need to ride. Seventeen percent of them cited fares as a secondary reason for stopping.
    - Thirty-one percent say they are riding less but have not stopped entirely. Of this 31 percent, 59 percent said the primary reason for their reduced ridership was that they no longer have a need to ride the ferry and 38 percent said the fares are too high.
- *Most Puget Sound residents use the ferry system.* Ninety-one percent of Puget Sound residents have used the ferry system. This includes 90 percent of East Sound residents, 98 percent of West Sound residents, and 100 percent of Island residents.
- *Most people think the ferry system is important.* Ninety-five percent of all Puget Sound residents responded that ferries are either very important (70 percent) or somewhat important (25 percent). More residents share that view in ferry-dependent communities (98 percent of West Sound residents, and 100 percent of Island residents) than in the East Sound non ferry-dependent communities (95 percent).

***Revised ridership projection:***

Phase I of the JTC study identified the lack of clarity caused by WSF's use of two different forecasting models, one for capital planning and one for short-term revenue forecasts, which had widely varying results.

Pursuant to ESHB 2358, WSF worked with a technical team, including a JTC representative, to develop a revised forecasting model. The new model cuts forecasted growth almost in half. Instead of the 68 percent growth projection used in WSF's 2006 plan, the improved forecast projects a 36 percent growth in overall system ridership between 2006 and 2030.

**Step 2. Vehicle Level of Service Standard**

The vehicle level of service standard set by WSF triggers requests to the Legislature for increased vessel and terminal capacity. Under the 2006 planning process, when the level of service falls below the standard, WSF requests funding for capacity increases to meet the standard. The system's vehicle capacity is the primary limitation on level of service, and hence the primary driver to increase vessel or terminal capacity.

The Legislature required WSF to review the basis for measuring vehicular level of service, which since 1994 has been based on a boat-wait measure (i.e., the number of boats a customer would miss due to capacity constraints before being able to board). WSF focused planning on the delivery of weekday peak period service (3PM to 7PM) when vehicles could not get on the first available ferry.

To more accurately reflect overall demand, WSF has revised its vehicle level of service standard to focus on the capacity of the system throughout the day and the year. The revised measurement is proposed to be the percentage of sailings throughout the day filled to capacity seasonally (spring, summer, and winter).

***Why is this important?***

Focusing on the delivery of service throughout the day, season and year will result in a more cost-efficient balance of peak and non-peak service and more cost-efficient capital investments.

**Step 3. Operational and Pricing Strategies**

In an effort to get the most out of existing capacity, ESHB 2358 directs WSF to adopt adaptive management practices in its operating and capital programs, a critical component of which is to review operational and pricing strategies that might level peak vehicle demand and shift ridership from vehicles to walk-on. The primary recommendation from this effort is to adopt a reservation system, though the legislation recognizes that strategies may vary between routes and travel sheds.

***Why is this important?***

1. Encouraging customers to walk on will use existing system capacity more fully.

2. WSF is asking its vehicle customers to interact with the system in a new way – by coming to the terminal near the time of departure instead of coming in advance (sometimes hours in advance) during peak periods to get on a sailing. The on-time arrival of vehicles to the terminal means that there will be less space required to hold vehicles at or near the terminal and less congestion on area roads.
3. A reservation system should increase the use of off-peak sailings. Customers will know in advance which sailing they can get on and can plan accordingly. This will allow WSF to expand service by increasing the service hours of existing vessels to times that, absent a reservation system, might not be filled.

### ***Review of Operational and Pricing Strategies***

WSF reviewed potential operational and pricing strategies including all those specifically identified in ESHB 2358. The review included presentations to, and input from, the JTC Ferry Policy Workgroup, Ferry Advisory Committees, members of the public at regular public meetings and through the WSF web site, and local officials. WSF relied on this input and the results of the customer survey to assess rider response to various operational and pricing strategies. Out of all the strategies reviewed, two types were selected:

- ***Strategies to Increase Walk-On Use of Ferries***
  - ***Transit enhancements.*** WSF proposes encouraging riders to walk on the ferry by increasing the connection between ferries and local transit. Three gaps in transit coverage dominated riders’ decision to drive on rather than walk on the ferry: (1) availability of transit and/or parking at the terminal (30 percent); (2) the amount of time to take the total trip walking on compared to driving on (25 percent); and (3) the availability of transit to get from the ferry to their final destination (18 percent).
  - ***Fare incentives for foot passengers.*** WSF proposes to encourage walk-on ridership by growing fares over time at half the rate for passengers as for vehicle drivers. While the customer survey did not specifically address this proposal, it did find that increasing vehicle fares by 20 percent while maintaining walk-on fares could potentially increase walk-on ridership by 15 percent.
- ***Strategies to Level Peak Vehicle Demand and Encourage Use of Available Vehicle Capacity on Non-Peak Sailings***
  - ***Vehicle reservations.*** WSF proposes to implement a vehicle reservation system – expanding and updating the reservation system now used on the Sidney and Port Townsend routes and for freight on the Anacortes-San Juans route. The survey tested riders’ opinion on reservation policies. Customer responses indicate that the reservation system should be dynamic and inform people how much capacity is reserved (70 percent of respondents); should penalize people that do not arrive on time (66 percent); and that frequent riders should be able to book a full week’s travel at a time (56 percent).

- **No charge for vehicle reservations.** WSF proposes that no additional charge be imposed for making a reservation to discourage people from lining up for stand-by capacity to avoid the fee.

#### **Step 4. Vessel Acquisition and Deployment**

Vessel acquisition and deployment are driven by the level of ridership anticipated as modified by operating and pricing strategies. The Legislature directed the JTC to review vessel preservation costs and to make recommendations regarding the most efficient timing and sizing of future vessel acquisitions beyond those authorized by the 2007-09 biennium budget.

#### ***Why is this important?***

1. Improving vessel preservation and replacing aging vessels is critical to WSF's ability to provide stable service.
2. Vessel acquisition represents a significant portion of WSF's capital plan. Less out of service time means acquiring fewer vessels, saving significant acquisition costs.
3. WSF's 2006 plan called for standardization of the fleet with all new vessels carrying 144 autos, which resulted in the need for major terminal renovations and replacements. The new plan calls for building boats within current terminal capacities.
4. Basing deployment decisions on the percentage of auto capacity used, percentage of sailings in which the auto capacity is sold out or fully reserved (proposed vehicle level of service), and the variable costs per auto carried will help reduce WSF's operating costs.

#### ***Changes in Vessel Acquisition, Preservation, and Deployment.***

WSF has adopted a number of the JTC study recommendations to change fleet management strategies.

- ***Focus on Vessel Preservation.*** The 2007 emergency retirement of four Steel Electric class vessels due to hull steel deterioration highlighted the need to focus on vessel preservation. The retirement led to Coast Guard inspections and subsequent repairs to other vessels. The JTC consultant's report *Auto-Passenger Vessel Repair and Replacement Final Report* recommended that WSF develop and maintain a vessel rebuild and replacement plan as part of its capital plan, and implement an improved vessel maintenance and preservation program. The 2008 legislature adopted SSB 6932 directing WSF to implement those recommendations.
- ***Planning for Vessel Acquisition.*** The consultant's draft *Vessel Sizing and Timing Report* incorporated the revised ridership projections, and made the following draft recommendations:

- **Fleet size.** WSF should plan on a 21-vessel fleet to deliver the baseline 2030 service hours<sup>2</sup> with the existing deployment configuration. This is the same service hours and deployment planned in WSF's 2008 *Draft Long-Range Plan*.
- **Reduce out of service time.** In order to deliver the baseline service hours with a 21-vessel fleet, WSF should reduce average out of service time per vessel from seven weeks per year to six. Reducing out of service time would require revisions in WSF's approach to vessel preservation and maintenance.
- **New vessel acquisitions.** For the baseline service and deployment, WSF should plan to acquire 10 new vessels between 2006 and 2030, including four 64-auto Island Home vessels in the 2009-2012 time period and six new 144-auto vessels in the 2020-2030 time period.
- **Open vessel acquisition to national competition.** The legislature should consider revisions to the procurement statutes to allow national competition for the construction of new vessels for WSF. Current law requires that vessels be built in the State of Washington, which has resulted in WSF's receiving only one bid on each of two vessel construction bids let in 2008.
- **Vessel Deployment Decisions.** Deployment of vessels among routes is the most financially significant operational decision made by WSF. Nearly 60 percent of WSF's total operating costs are attributable to vessel operations. Of the vessel operating costs, approximately 50 percent are variable costs for deck labor and fuel that will change by where and for how long a vessel is deployed. The JTC's *Vessel Sizing and Timing Draft Report* included the following cost-saving deployment recommendations:
  - **Deploy smaller vessels on some routes.** The consultants recommended deploying smaller vessels on the Pt. Defiance, Interisland, Sidney, and Bremerton routes.
  - **Deploy smaller vessels on the less utilized evening sailings.** The consultants recommended deploying a smaller vessel from the Bremerton route to the evening Bainbridge sailings. The study also recommended using the smaller vessels assigned to the Kingston, Mukilteo and Triangle routes in the evenings.

SSB 6932 passed in the 2008 legislative session requires WSF to include a vessel deployment plan in their capital plan.
- **WSF's Draft Long-Range Plan Alternative A Incorporates Some Cost-Saving Recommendations.** WSF's Draft Long-Range Plan Alternative A incorporates some of the JTC's cost-saving recommendations. WSF proposes:
  - A 22-vessel fleet for the delivery of the baseline service, with 10 new procurements (three Island Homes and seven 144s). By contrast, WSF's 2006 plan called for the acquisition of 14 new vessels.

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<sup>2</sup> Baseline service hours are 114,728 hours across Ferries' nine auto-passenger routes.

- Later retirement of a renovated Super Class vessel (*Hyak*) than had previously been planned.

### **Step 5. Terminal and Repair Facility Plans**

WSF terminal needs are determined by ridership, implementation of pricing and operational strategies, and the size of vessels planned for the routes. Budget provisos and ESHB 2358 directed WSF to: (1) review and update its terminal life cycle cost model (LCCM); and (2) to develop pre-design studies for terminal preservation projects over \$5 million and for all terminal improvement projects before the legislature appropriates project design and construction funds.

#### ***Why is this important?***

1. The revised terminal life cycle cost model provides a reliable basis for planning and legislative understanding of terminal preservation needs.
2. The reduction in terminal expansions and relocations represents a significant savings to WSF's capital program. Smaller terminals will also have lower future operating costs.
3. Pre-design studies allow OFM and the legislature to have more information about projects before committing to design and construction funding. The major terminal projects in WSF's *Draft Long-Range Plan* will be subject to the pre-design process, which will allow the legislature to have fuller information on the projects before appropriating design and construction funding. This will be particularly important for new initiatives, such as a reservation system, where the costs can be more fully vetted through the pre-design study process.

#### ***Changes in Terminal Plans Resulting from JTC Study.***

Implementation of JTC terminal planning recommendations has resulted in significant savings in WSF's proposed terminal program.

- ***Need for major terminal expansions and multi-modal terminals reduced.*** The 2007-09 transportation budget placed WSF's major terminal projects on hold, pending the outcome of ESHB 2358 planning. Major terminal expansions placed on hold include Anacortes, Bainbridge, Port Townsend, and Seattle. Plans to relocate terminals at Keystone, Mukilteo, and Edmonds were also placed on hold. WSF's 2008 *Draft Long-Range Plan* reduces the scope of all of these projects and, in some cases, eliminates the project. The only terminal relocation included in the 2008 *Draft Long-Range Plan* is at Mukilteo. The Bainbridge, Anacortes, Port Townsend and Seattle projects have been reduced in scope.
- ***Terminal life cycle cost model update*** has been completed. The update of the LCCM included a review of the standard life cycles of structures, condition updates of all inventory elements, and the deletion of items that do not have a standard service life. The financial result of the review is a \$106 million reduction in needed terminal preservation projects over the 2007-23 16-year financial plan.

- **Pre-design studies** have been completed and presented to the legislature for the Orcas Island and Vashon Island dolphin replacement projects. The JTC consultant reviewed the pre-design studies and concurred with the conclusion of each study.

## Step 6. Financial Plan

WSF's financial plan is a product of improved planning and strategies, cost analysis and reduction, and projections of future funding. The improvements in the ridership forecast, operating and pricing strategies, and terminal and vessel plans driven by the JTC study lowered projections of costly future enhancements. In addition to the improvements in planning and strategies, the JTC conducted a series of detailed cost reviews with resulting cost reduction recommendations to ensure WSF is being run efficiently. Finally, the Legislature directed an examination of strategies to secure more stable funding for WSF. Those strategies included a public/private partnership study, and the WSTC study of ways in which future financing might be provided for WSF.

### *Why is this important?*

1. Understanding ridership and operating costs will allow the legislature to set a reasonable target for needed fare revenue when adopting WSF's operations budget.
2. Focusing on WSF's capital staffing, administration, and indirect project costs will help ensure cost-effective delivery of WSF's capital program.
3. Distributing indirect and administrative costs to terminal and vessel capital projects will enable the legislature to understand the total cost of these projects.
4. Ensuring the right balance between capital and operating budget expenses based on cost-benefit analysis will enable WSF to be more strategic in its spending.
5. Reliable estimating of the magnitude of the gap in WSF's capital and operating funding will allow decision makers to determine the system's long-term direction.

**Operating Budget Reviews.** The JTC has reviewed WSF's operating costs in five studies that have looked at the full range of WSF's costs including labor, fuel, and other costs.<sup>3</sup> Key findings of the reviews are:

- **Operating labor costs are difficult for WSF's management to contain.** Labor accounts for 59 percent of all of WSF's operating costs. Labor costs for vessel operations, terminal operations, and maintenance are largely subject to labor agreements and Coast Guard requirements, which make it difficult for management to contain these costs. The *Draft Vessel Sizing and Timing Report* shows that utilizing smaller vessels on routes as appropriate can reduce labor costs.

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<sup>3</sup> The five studies are: (1) *Washington State Ferries Financing Study Final Report, Technical Appendix 5: Operating Budget Review*, December 2006; (2) *Auto-Passenger Vessel Preservation and Replacement Final Report*, January 2008; (3) *Management and Support Costs Final Report*, July 2008; (4) *Non-Labor, Non-Fuel Operating Cost Final Report*, July 2008; and (5) *Vessel Sizing and Timing Draft Report*, November 2008.

- ***Fuel costs can be reduced.*** Fuel accounts for 21 percent of WSF’s operating costs. While WSF cannot control the price it pays for fuel, there are ways in which fuel can be conserved to reduce operating costs. The JTC’s *Vessel Sizing and Timing Draft Report* reviews fuel conservation efforts already underway at Ferries, and recommends that WSF reduce the speed of vessels and modify docking procedures to further reduce fuel consumption. Reducing speed and modifying docking procedures may require modifications to the existing schedule. Using smaller, more fuel efficient vessels as appropriate on routes will also reduce fuel costs.
- ***Operations management and support labor costs are reasonable.*** WSF’s operating management and support positions account for 10 percent of Ferries’ operations FTEs (full time equivalent positions) and 9 percent of Ferries’ operations labor costs. This a reasonable level of administrative expense for the complexity of WSF’s operation.
- ***Management and support operations non-labor expenses can be reduced.*** The JTC’s reports on management and support made 19 recommendations for operating costs reviews, which WSDOT largely concurs with. The reviews are now underway, with the greatest potential savings from a review of WSF’s marine insurance program.
- ***Fares reflect WSF’s operating costs.*** ESHB 2358 provides new policies for setting ferry fares, including that fares should generate the amount of revenue required by WSF’s legislatively adopted operations budget (ESHB 2358, Section 5). The legislation also states that WSF’s operating costs need to be as low as possible. Ferries 2008 *Draft Long-Range Plan* proposes a fuel charge to help stabilize funding during periods of fuel price volatility.
- ***Higher ridership offsets costs.*** WSF has a high fixed cost of operation with little or no marginal cost from additional riders. The greater the ridership the less each rider must pay to cover WSF’s projected operating cost.

***Capital Costs Review.*** The JTC reviewed WSF’s capital staffing and administrative expenses costs in two studies<sup>4</sup>. Key findings and results of the reviews are:

- ***Capital program staffing costs should be reviewed and reduced.***
  - ***Capital staffing should be based on the final Long-Range Plan.*** In the 2008 session the legislature directed WSF to maintain capital staffing levels at or below the level of staffing on January 1, 2008 (Section 309, (11)).
  - ***Capital program staff should focus on preservation.*** In the 2008 session, the legislature directed WSF to review its capital engineering divisions to ensure core competency in, and a focus on, terminal and vessel preservation, with staffing sufficient to implement the preservation program in the capital plan (Section 309, (11)).

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<sup>4</sup> The two studies are: (1) *Capital Program Staffing and Administration Cost Final Report*, April 2008; and (2) *Systemwide Capital Projects Final Report*, July 2008.



- ***Capital staff charges to administration should be reviewed and reduced.*** The JTC's *Capital Program Staffing and Administration Final Report*, April 2008 found that 23 percent of WSF capital staff charges were to administrative overhead. The charges were not consistent with WSF's internal policy, with many more staff than authorized charging to administration.
- ***Use of on-site consultants should be reviewed and reduced.*** The JTC's *Capital Program Staffing and Administration Final Report*, April 2008, found that WSF spent \$12.2 million or 7 percent of all capital expenses on on-site consultants in the 2005-07 biennium. Most of the expense for on-site consultants was in the Terminal Engineering division. Terminal Engineering has substantially reduced the costs for on-site consultants in the 2007-09 biennium.
- ***Capital program non-staffing administrative costs are generally reasonable.*** The JTC study found that non-staffing costs for community relations, legal affairs, accounting, and other administrative costs were generally reasonable. The exception was costs attributed to implementation of a capital program scheduling system. In the 2008 session the legislature directed WSF to review the costs and benefits of continued use of the primavera scheduling system in state ferries marine division and include that review with its 2009-2011 budget submittal.
- ***Allocation of indirect and administrative costs to capital projects.*** ESHB 2358 requires WSF to distribute indirect and administrative systemwide project costs to terminal and vessels projects. WSF has proposed and the JTC has reviewed and approved a method of allocating indirect and administrative costs to these projects.

***Cost-benefit analysis: right balance between capital investments and operating costs.***

The JTC reports have recommended that WSF consistently undertake a cost-benefit analysis of its actions and consider the total implications for the capital and operations budget. For example, the JTC study found that WSF has done a good job of holding down capital preservation costs on its vessels by breaking up work so that some work is done during expensive drydock periods and other work is done later. While these actions reduce the per-vessel preservation and maintenance budget, they increase the amount of out of service time required for vessels, which leads to the need for additional vessels in the system.

***Long-term financing.*** The WSTC has issued a preliminary *Long-Term Ferry Funding Study Preliminary Report*, November 2008. This report is based on WSF's September 2008 assessment of funding needed to provide baseline service. The *Long-Term Funding Study* will be updated in February 2009 to reflect WSF's December 2008 *Draft Long-Range Plan*. The JTC will review WSF's costs included in the 2008 *Draft Long-Range Plan* and report to the Transportation Committees by March 2009.

**FERRY FINANCE DECISION MODEL: STATUS ESHB 2358 PLANNING**



**MEMBERS**  
**STATE FERRY SYSTEM REVIEW – PHASE II**  
**POLICY WORKGROUP**

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## APPENDIX IV. TERMINAL COST REVIEW

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### Anacortes Tie-Up Slip Preservation M03352

Budget Scenario A:	13,158,000	Recommended YOE \$	8,977,081	Change	-4,180,919	-32%				
Ferries Estimate (In 2008 \$) SUMMARY (Basis for Capital Cost Summary Table) w/Markups			Ferries Guideline % Multipliers			WSDOT Guideline % Multipliers			Recalculation % Multipliers	
Construction	\$	5,380,316	\$	4,891,196	\$	4,891,196	\$	4,891,196	\$	4,891,196
Mobilization	10.00%	included above	10.00%	\$ 489,120	9.00%	\$ 440,208	8.00%	\$ 391,296		
Construction (Including Mobilization)	\$	5,380,316	\$	5,380,316	\$	5,331,404	\$	5,282,492		
Design Allowance	40.00%	\$ 2,152,126	25.00%	\$ 1,345,079	25.00%	\$ 1,332,851	20.00%	\$ 1,056,498		
<b>Subtotal</b>	<b>\$</b>	<b>7,532,442</b>	<b>\$</b>	<b>6,725,395</b>	<b>\$</b>	<b>6,664,255</b>	<b>\$</b>	<b>6,338,990</b>		
Sales Tax	8.00%	\$ 602,595	9.00%	\$ 605,286	9.00%	\$ 599,783	9.00%	\$ 570,509		
<b>Subtotal</b>	<b>\$</b>	<b>8,135,038</b>	<b>\$</b>	<b>7,330,681</b>	<b>\$</b>	<b>7,264,038</b>	<b>\$</b>	<b>6,909,500</b>		
Construction Engineering	11.00%	\$ 894,854	11.00%	\$ 806,375	8.00%	\$ 581,123	8.00%	\$ 507,119		
Construction Contingency	5.00%	\$ 406,752	4.00%	\$ 293,227	4.00%	\$ 290,562	4.00%	\$ 253,560		
Operations Construction Support		\$ 7,500		\$ -		\$ -		\$ -		
<b>Construction Total</b>	<b>\$</b>	<b>9,444,144</b>	<b>\$</b>	<b>8,430,283</b>	<b>\$</b>	<b>8,135,723</b>	<b>\$</b>	<b>7,670,178</b>		
Design Engineering	25.00%	\$ 2,361,036	22.00%	\$ 1,854,662	11.00%	\$ 894,929	11.00%	\$ 697,289		
OPS Design Support		\$ 14,500		\$ 14,500		\$ 14,500	(direct const only)	\$ -		
<b>Design Total</b>	<b>\$</b>	<b>2,375,536</b>	<b>\$</b>	<b>1,869,162</b>	<b>\$</b>	<b>909,429</b>	<b>\$</b>	<b>697,289</b>		
Pre-Design Study (part of Design engineering above)		\$ -		\$ -		\$ -		\$ -		
Other (ROW, etc)		\$ -		\$ -		\$ -		\$ 14,500		
Below the Line Items		\$ -		\$ -		\$ -		\$ -		
Additional Operations Costs (during Construction)		\$ -		\$ -		\$ -		\$ -		
OPS Design Support		\$ -		\$ -		\$ -		\$ 14,500		
Escalation Factor	0.00%		0.00%		0.00%		0.00%			
Escalation to Const. Midpoint		\$ -		\$ -		\$ -		\$ -		
<b>Total</b>	<b>\$</b>	<b>11,819,680</b>	<b>\$</b>	<b>10,299,445</b>	<b>\$</b>	<b>9,045,152</b>	<b>\$</b>	<b>8,381,967</b>		
<b>Total (rounded)</b>	<b>\$</b>	<b>11,820,000</b>	<b>\$</b>	<b>10,299,000</b>	<b>\$</b>	<b>9,045,000</b>	<b>\$</b>	<b>8,382,000</b>		
<b>Cost Reduction</b>			<b>\$</b>	<b>(1,521,000)</b>	<b>\$</b>	<b>(2,775,000)</b>	<b>\$</b>	<b>(3,438,000)</b>		
<b>% Reduction</b>				<b>-12.87%</b>		<b>-23.48%</b>		<b>-33.38%</b>		

### Bremerton Slip 2 Wingwall Replacement M03508A

Budget Scenario A	4,330,000	Recommended YOES	2,880,450	Change	-1,449,550	-33%
Ferries Estimate ( in 2008 \$)		Ferries Guideline % Multipliers		WSDOT Guideline % Multipliers		Recalculation % Multipliers
SUMMARY (Basis for Capital Cost Summary Table) w/Markups						
Construction	\$ 2,050,950		\$ 1,864,500		\$ 1,864,500	\$ 1,518,500
Mobilization	10.00% included above		9.00% \$ 167,805		9.00% \$ 167,805	8.00% \$ 121,480
Construction (Including Mobilization)	\$ 2,050,950		\$ 2,032,305		\$ 2,032,305	\$ 1,639,980
Design Allowance	15.00% \$ 307,643		20.00% \$ 406,461		20.00% \$ 406,461	20.00% \$ 327,996
<b>Subtotal</b>	<b>\$ 2,358,593</b>		<b>\$ 2,438,766</b>		<b>\$ 2,438,766</b>	<b>\$ 1,967,976</b>
Sales Tax	8.60% \$ 202,839		8.60% \$ 209,734		8.60% \$ 209,734	8.60% \$ 169,246
<b>Subtotal</b>	<b>\$ 2,561,431</b>		<b>\$ 2,648,500</b>		<b>\$ 2,648,500</b>	<b>\$ 2,137,222</b>
Construction Engineering	13.00% \$ 332,986		10.00% \$ 264,850		10.00% \$ 264,850	8.00% \$ 157,438
Construction Contingency	5.00% \$ 128,072		4.00% \$ 105,940		4.00% \$ 105,940	4.00% \$ 78,719
Operations Construction Support	\$ 154,000		\$ 154,000		\$ 154,000	\$ -
<b>Construction Total</b>	<b>\$ 3,176,489</b>		<b>\$ 3,173,290</b>		<b>\$ 3,173,290</b>	<b>\$ 2,373,379</b>
Design Engineering	26.00% \$ 825,887		26.00% \$ 825,055		12.00% \$ 380,795	12.00% \$ 236,157
OPS Design Support	\$ 12,000		\$ 12,000		\$ 12,000	(direct const only) \$ -
<b>Design Total</b>	<b>\$ 837,887</b>		<b>\$ 837,055</b>		<b>\$ 392,795</b>	<b>\$ 236,157</b>
Pre-Design Study (part of Design engineering above)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other (ROW, etc)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 166,000
OPS Construction Support		\$ -	\$ -	\$ -	\$ -	\$ 154,000
Additional Operations Costs (during Construction)		\$ -	\$ -	\$ -	\$ -	\$ -
OPS Design Support		\$ -	\$ -	\$ -	\$ -	\$ 12,000
Escalation Factor	0.00%		0.00%		0.00%	0.00%
Escalation to Const. Midpoint	\$ -		\$ -		\$ -	\$ -
<b>Total</b>	<b>\$ 4,014,376</b>		<b>\$ 4,010,345</b>		<b>\$ 3,566,085</b>	<b>\$ 2,775,536</b>
Total (rounded)	\$ 4,014,000		\$ 410,000		\$ 3,566,000	\$ 2,775,000
Cost Reduction			\$ (3,604,000)		\$ (448,000)	\$ (1,239,000)
% Reduction			-89.79%		-11.16%	-30.87%

Adjustments Ferries Base Cost Estimate	
Ferries Estimate	
Delete duplication of piling purchase	1 Is \$ (346,000)
Adjusted Base estimate	\$ (346,000)

## Fauntleroy Terminal Replacement M03912A

Scenario A Budget	66,723,000	Recommended YOES	46,489,802	Change	-20,233,198	-30%	
Ferries Estimate (In 2008 \$)		Ferries Guideline % Multipliers		WSDOT Guideline % Multipliers		Recalculation % Multipliers	
SUMMARY (Basis for Capital Cost Summary Table) w/Markups							
Construction	\$ 28,383,160	\$ 25,802,873	\$ 25,802,873	\$ 21,975,673			
Mobilization	10.00% included above	10.00% \$ 2,580,287	8.50% \$ 2,193,244	8.00% \$ 1,758,054			
Construction (Including Mobilization)	\$ 28,383,160	\$ 28,383,160	\$ 27,996,117	\$ 23,733,727			
Design Allowance	24.00% \$ 6,811,958	24.00% \$ 6,811,958	24.00% \$ 6,719,068	20.00% \$ 4,746,745			
<b>Subtotal</b>	<b>\$ 35,195,118</b>	<b>\$ 35,195,118</b>	<b>\$ 34,715,185</b>	<b>\$ 28,480,472</b>			
Sales Tax	9.00% \$ 3,167,561	9.00% \$ 3,167,561	9.00% \$ 3,124,367	9.50% \$ 2,705,645			
<b>Subtotal</b>	<b>\$ 38,362,679</b>	<b>\$ 38,362,679</b>	<b>\$ 37,839,552</b>	<b>\$ 31,186,117</b>			
Construction Engineering	10.00% \$ 3,836,268	10.00% \$ 3,836,268	8.00% \$ 3,027,164	8.00% \$ 2,278,438			
Construction Contingency	5.00% \$ 1,918,134	4.00% \$ 1,534,507	4.00% \$ 1,513,582	4.00% \$ 1,139,219			
Operations Construction Support	\$ -	\$ -	\$ -	\$ -			
<b>Construction Total</b>	<b>\$ 44,117,081</b>	<b>\$ 43,733,454</b>	<b>\$ 42,380,298</b>	<b>\$ 34,603,773</b>			
Design Engineering	16.00% \$ 7,058,733	16.00% \$ 6,997,353	11.00% \$ 4,661,833	11.00% \$ 3,132,852			
OPS Design Support	\$ 50,500	\$ 50,500	\$ 50,500	\$ - (direct const only)			
<b>Design Total</b>	<b>\$ 7,109,233</b>	<b>\$ 7,047,853</b>	<b>\$ 4,712,333</b>	<b>\$ 3,132,852</b>			
Pre-Design Study (part of Design engineering above)	\$ -	\$ -	\$ -	\$ -			
Other (ROW, etc)	\$ 2,267,500	\$ 2,267,500	\$ 2,267,500	\$ 2,318,000			
Below the Line Items	\$ 467,500	\$ 467,500	\$ 467,500	\$ 467,500			
Additional Operations Costs (during Constructio	\$ 1,800,000	\$ 1,800,000	\$ 1,800,000	\$ 1,800,000			
OPS Design Support	\$ -	\$ -	\$ -	\$ 50,500			
Escalation Factor	0.00%	0.00%	0.00%	0.00%			
Escalation to Const. Midpoint	\$ -	\$ -	\$ -	\$ -			
<b>Total</b>	<b>\$ 53,493,814</b>	<b>\$ 53,048,807</b>	<b>\$ 49,360,131</b>	<b>\$ 40,054,625</b>			
<b>Total (rounded)</b>	<b>\$ 53,494,000</b>	<b>\$ 53,049,000</b>	<b>\$ 49,360,000</b>	<b>\$ 40,055,000</b>			
<b>Cost Reduction</b>		<b>(445,000)</b>	<b>(4,134,000)</b>	<b>(13,439,000)</b>			
<b>% Reduction</b>		<b>-0.83%</b>	<b>-7.73%</b>	<b>-27.23%</b>			

Adjustments Ferries Base Cost Estimate				
Ferries Estimate				
Trestle Area Construction	sf	(51,000)	\$	350.00 \$ (17,850,000)
Building Trestle Area Construction	sf	(3,200)	\$	300.00 \$ (960,000)
Building Electrical	sf	(3,045)	\$	160.00 \$ (487,200)
Corrected to Inspection Report				
Trestle Area Construction	sf	41,000	\$	350.00 \$ 14,350,000
Building Trestle Area Construction	sf	3,200	\$	350.00 \$ 1,120,000
Building electrical is part of the Means cost/sf for building construction used for the base building estimate.				
Base Estimate reduction			\$	(3,827,200)
Ferries Estimate			\$	25,802,873
Adjusted Base estimate			\$	21,975,673



### Friday Harbor Timber Trestle Replacement M04012A

Scenario A Budget	15,041,000	Recommended YOE \$	11,050,000	Change	-3,991,000	-27%				
Ferries Estimate (In 2008 \$)			Ferries Guideline Percentage Multipliers			WSDOT Guideline Percentage Multipliers			Recalculation Percentage Multipliers	
SUMMARY (Basis for Capital Cost Summary Table) w/Markups										
Construction	\$	6,466,548	\$	5,878,680	\$	5,878,680	\$	5,878,680	\$	5,878,680
Mobilization	10.00%	included above	10.00%	\$ 587,868	9.50%	\$ 558,475	8.00%	\$ 470,294	8.00%	\$ 470,294
Construction (Including Mobilization)	\$	6,466,548	\$	6,466,548	\$	6,437,155	\$	6,348,974	\$	6,348,974
Design Allowance	30.00%	\$ 1,939,964	30.00%	\$ 1,939,964	30.00%	\$ 1,931,146	30.00%	\$ 1,904,692	30.00%	\$ 1,904,692
<b>Subtotal</b>	<b>\$</b>	<b>8,406,512</b>	<b>\$</b>	<b>8,406,512</b>	<b>\$</b>	<b>8,368,301</b>	<b>\$</b>	<b>8,253,667</b>	<b>\$</b>	<b>8,253,667</b>
Sales Tax	7.70%	\$ 647,301	7.80%	\$ 655,708	7.80%	\$ 652,727	7.80%	\$ 643,786	7.80%	\$ 643,786
<b>Subtotal</b>	<b>\$</b>	<b>9,053,814</b>	<b>\$</b>	<b>9,062,220</b>	<b>\$</b>	<b>9,021,028</b>	<b>\$</b>	<b>8,897,453</b>	<b>\$</b>	<b>8,897,453</b>
Construction Engineering	11.00%	\$ 995,920	11.00%	\$ 996,844	8.00%	\$ 721,682	8.00%	\$ 660,293	8.00%	\$ 660,293
Per diem for on site staff		\$ 86,000		\$ 86,000		\$ 86,000		\$ 86,000		\$ 86,000
Construction Contingency	5.00%	\$ 452,691	4.00%	\$ 362,489	4.00%	\$ 360,841	4.00%	\$ 330,147	4.00%	\$ 330,147
Operations Construction Support										
OPS Construction Support		\$ 10,000		\$ 10,000		\$ 10,000		\$ 10,000		\$ 10,000
Additional Operational Costs		\$ 105,000		\$ 105,000		\$ 105,000		\$ -		\$ -
Public Outreach and Coordination		\$ 25,000		\$ 25,000		\$ 25,000		\$ -		\$ -
<b>Construction Total</b>	<b>\$</b>	<b>10,728,424</b>	<b>\$</b>	<b>10,507,553</b>	<b>\$</b>	<b>10,189,552</b>	<b>\$</b>	<b>9,973,893</b>	<b>\$</b>	<b>9,973,893</b>
Design Engineering	22.00%	\$ 2,360,253	22.00%	\$ 2,311,662	11.00%	\$ 1,120,851	11.00%	\$ 907,903	11.00%	\$ 907,903
OPS Design Support		\$ 8,000		\$ 8,000		\$ 8,000		\$ -		\$ -
<b>Design Total</b>	<b>\$</b>	<b>2,368,253</b>	<b>\$</b>	<b>2,319,662</b>	<b>\$</b>	<b>1,128,851</b>	<b>\$</b>	<b>907,903</b>	<b>\$</b>	<b>907,903</b>
Pre-Design Study (part of Design engineering above)	\$	115,000	\$	115,000	\$	115,000	\$	115,000	\$	115,000
Other (ROW, etc)		\$ 20,000		\$ 20,000		\$ 20,000		\$ 20,000		\$ 168,000
ROW	\$	20,000	\$	20,000	\$	20,000	\$	20,000	\$	20,000
Operations Construction Support		\$ -		\$ -		\$ -		\$ 10,000		\$ 10,000
Additional Operations Costs (during Construction)		\$ -		\$ -		\$ -		\$ 105,000		\$ 105,000
OPS Design Support		\$ -		\$ -		\$ -		\$ 8,000		\$ 8,000
Public Outreach and Coordination		\$ -		\$ -		\$ -		\$ 25,000		\$ 25,000
Escalation Factor	0.00%		0.00%		0.00%		0.00%		0.00%	
Escalation to Const. Midpoint		\$ -		\$ -		\$ -		\$ -		\$ -
<b>Total</b>	<b>\$</b>	<b>13,116,677</b>	<b>\$</b>	<b>12,847,215</b>	<b>\$</b>	<b>11,338,403</b>	<b>\$</b>	<b>11,049,796</b>	<b>\$</b>	<b>11,049,796</b>
Total (rounded)	\$	13,117,000	\$	12,847,000	\$	11,338,000	\$	11,050,000	\$	11,050,000
Cost Reduction			\$	(270,000)	\$	(1,779,000)	\$	(2,067,000)		(2,067,000)
% Reduction				-2.06%		-13.56%		-16.09%		-16.09%

### Keystone Shore Power & Security Improvement

Scenario A Budget 265,000		Recommended YOE \$ 250,880	Change -14,120	-5%
Ferries Estimate (In 2008 \$)		Ferries Guideline % Multipliers	WSDOT Guideline % Multipliers	Recalculation % Multipliers
SUMMARY (Basis for Capital Cost Summary Table) w/Markups				
Construction	\$ 156,200	\$ 131,027	\$ 131,027	\$ 131,027
Mobilization	10.00% included above	10.00% \$ 13,103	8.00% \$ 10,482	6.00% \$ 7,862
Construction (Including Mobilization)	\$ 156,200	\$ 144,130	\$ 141,509	\$ 138,889
Design Allowance	15.00% \$ 23,430	15.00% \$ 21,619	15.00% \$ 21,226	15.00% \$ 20,833
Subtotal	\$ 179,630	\$ 165,749	\$ 162,736	\$ 159,722
Sales Tax	8.40% \$ 15,089	8.40% \$ 13,923	8.40% \$ 13,670	8.40% \$ 13,417
Subtotal	\$ 194,719	\$ 179,672	\$ 176,405	\$ 173,139
Construction Engineering	22.00% \$ 42,838	22.00% \$ 39,528	21.00% \$ 37,045	12.00% \$ 19,167
Construction Contingency	5.00% \$ 9,736	4.00% \$ 7,187	4.00% \$ 7,056	4.00% \$ 6,389
Operations Construction Support				
OPS Construction Support	\$ -	\$ 7,500	\$ 7,500	\$ -
Additional Operational Costs	\$ -	\$ -	\$ -	\$ -
Construction Total	\$ 247,293	\$ 233,887	\$ 228,007	\$ 198,694
Design Engineering	29.00% \$ 71,715	29.00% \$ 67,827	30.00% \$ 68,402	16.00% \$ 25,556
OPS Design Support	\$ -	\$ -	\$ -	(direct const only)
Design Total	\$ 71,715	\$ 67,827	\$ 68,402	\$ 25,556
Pre-Design Study (part of Design engineering above)		\$ -	\$ -	\$ -
Other (ROW, etc)	\$ -	\$ -	\$ -	\$ -
Operations Construction Support	\$ -	\$ -	\$ -	\$ -
Additional Operations Costs (during Construction)		\$ -	\$ -	\$ -
OPS Design Support				\$ -
Escalation Factor	0.00%	0.00%	0.00%	0.00%
Escalation to Const. Midpoint	\$ -	\$ -	\$ -	\$ -
<b>Total</b>	<b>\$ 319,008</b>	<b>\$ 301,714</b>	<b>\$ 296,409</b>	<b>\$ 224,250</b>
<b>Total (rounded)</b>	<b>\$ 319,000</b>	<b>\$ 302,000</b>	<b>\$ 296,000</b>	<b>\$ 224,000</b>
<b>Cost Reduction</b>		<b>\$ (17,000)</b>	<b>\$ (23,000)</b>	<b>\$ (95,000)</b>
<b>% Reduction</b>		<b>-5.33%</b>	<b>-7.21%</b>	<b>-31.46%</b>

### Keystone Wingwall Preservation M04112

Scenario A Budget 4,759,000		Recommended YOY \$ 2,705,000		Change -2,054,000		-44%	
Ferries Estimate (in 2008 \$)		Ferries Guideline % Multipliers		WSDOT Guideline % Multipliers		Recalculation % Multipliers	
SUMMARY (Basis for Capital Cost Summary Table) w/Markups							
Construction	\$ 2,357,355	\$ 2,143,050	\$ 2,143,050	\$ 1,563,050		\$ 1,563,050	
Mobilization	10.00% included above	9.00% \$ 192,875	9.00% \$ 192,875	8.00% \$ 125,044		\$ 125,044	
Construction (Including Mobilization)	\$ 2,357,355	\$ 2,335,925	\$ 2,335,925	\$ 1,688,094		\$ 1,688,094	
Design Allowance	20.00% \$ 471,471	20.00% \$ 467,185	20.00% \$ 467,185	20.00% \$ 337,619		\$ 337,619	
<b>Subtotal</b>	<b>\$ 2,828,826</b>	<b>\$ 2,803,109</b>	<b>\$ 2,803,109</b>	<b>\$ 2,025,713</b>		<b>\$ 2,025,713</b>	
Sales Tax	8.40% \$ 237,621	8.40% \$ 235,461	8.40% \$ 235,461	8.40% \$ 170,160		\$ 170,160	
<b>Subtotal</b>	<b>\$ 3,066,447</b>	<b>\$ 3,038,571</b>	<b>\$ 3,038,571</b>	<b>\$ 2,195,873</b>		<b>\$ 2,195,873</b>	
Construction Engineering	13.00% \$ 398,638	10.00% \$ 303,857	10.00% \$ 303,857	8.00% \$ 162,057		\$ 162,057	
Construction Contingency	5.00% \$ 153,322	4.00% \$ 121,543	4.00% \$ 121,543	4.00% \$ 81,029		\$ 81,029	
Operations Construction Support	\$ 23,000	\$ 23,000	\$ 23,000	\$ -		\$ -	
<b>Construction Total</b>	<b>\$ 3,641,408</b>	<b>\$ 3,486,970</b>	<b>\$ 3,486,970</b>	<b>\$ 2,438,958</b>		<b>\$ 2,438,958</b>	
Design Engineering	26.00% \$ 946,766	26.00% \$ 906,612	12.00% \$ 418,436	12.00% \$ 243,086		\$ 243,086	
OPS Design Support	\$ -	\$ -	\$ -	(direct const only) \$ -		\$ -	
<b>Design Total</b>	<b>\$ 946,766</b>	<b>\$ 906,612</b>	<b>\$ 418,436</b>	<b>\$ 243,086</b>		<b>\$ 243,086</b>	
Pre-Design Study (part of Design engineering above)	\$ -	\$ -	\$ -	\$ -		\$ -	
Other (ROW, etc)	\$ -	\$ -	\$ -	\$ 23,000		\$ 23,000	
OPS Construction Support	\$ -	\$ -	\$ -	\$ -		\$ -	
Additional Operations Costs (during Construction)	\$ -	\$ -	\$ -	\$ -		\$ -	
OPS Design Support	\$ -	\$ -	\$ -	\$ -		\$ -	
Escalation Factor	0.00%	0.00%	0.00%	0.00%		0.00%	
Escalation to Const. Midpoint	\$ -	\$ -	\$ -	\$ -		\$ -	
<b>Total</b>	<b>\$ 4,588,174</b>	<b>\$ 4,393,583</b>	<b>\$ 3,905,407</b>	<b>\$ 2,705,044</b>		<b>\$ 2,705,044</b>	
Total (rounded)	\$ 4,588,000	\$ 4,394,000	\$ 3,905,000	\$ 2,705,000		\$ 2,705,000	
Cost Reduction		\$ (194,000)	\$ (683,000)	\$ (1,883,000)		\$ (1,883,000)	
% Reduction		-4.23%	-14.89%	-42.85%		-42.85%	

Suggested Adjustments Ferries Base Cost Estimate			
Ferries Estimate			
Reduce demolition costs to reflect correct Inflation Factor application	1	Is	\$ (100,000)
Delete duplication of piling purchase	1	Is	\$ (480,000)
			\$ -
<b>Adjusted Base estimate</b>			<b>\$ (580,000)</b>

### Lopez Wingwall MO4312A

Scenario A Budget 9,010,000		Recommended YOE \$ 6,999,589		Change	-2,010,411	-22%	
Ferries Estimate (In 2008 \$)		Ferries Guideline % Multipliers		% Multipliers		Recalculation % Multipliers	
SUMMARY (Basis for Capital Cost Summary Table) w/Markups							
Construction	\$ 5,084,750	\$ 4,622,500		\$ 4,622,500		\$ 3,929,125	
Mobilization	10.00% included above	9.50% \$ 439,138		9.00% \$ 416,025		9.00% \$ 353,621	
Construction (Including Mobilization)	\$ 5,084,750	\$ 5,061,638		\$ 5,038,525		\$ 4,282,746	
Design Allowance	15.00% \$ 762,713	20.00% \$ 1,012,328		20.00% \$ 1,007,705		20.00% \$ 856,549	
<b>Subtotal</b>	<b>\$ 5,847,463</b>	<b>\$ 6,073,965</b>		<b>\$ 6,046,230</b>		<b>\$ 5,139,296</b>	
Sales Tax	7.70% \$ 450,255	7.80% \$ 473,769		7.80% \$ 471,606		7.80% \$ 400,865	
<b>Subtotal</b>	<b>\$ 6,297,717</b>	<b>\$ 6,547,734</b>		<b>\$ 6,517,836</b>		<b>\$ 5,540,161</b>	
Construction Engineering	10.00% \$ 629,772	10.00% \$ 654,773		10.00% \$ 651,784		8.00% \$ 411,144	
Construction Contingency	5.00% \$ 314,886	4.00% \$ 261,909		4.00% \$ 260,713		4.00% \$ 205,572	
Operations Construction Support	\$ 10,000	\$ 10,000		\$ 10,000		\$ -	
<b>Construction Total</b>	<b>\$ 7,252,375</b>	<b>\$ 7,474,417</b>		<b>\$ 7,440,333</b>		<b>\$ 6,156,876</b>	
Design Engineering	16.00% \$ 1,160,380	16.00% \$ 1,195,907		12.00% \$ 892,840		12.00% \$ 616,715	
OPS Design Support	\$ 12,000	\$ 12,000		\$ 12,000		\$ -	(direct const only)
<b>Design Total</b>	<b>\$ 1,172,380</b>	<b>\$ 1,207,907</b>		<b>\$ 904,840</b>		<b>\$ 616,715</b>	
Pre-Design Study (part of Design engineering above)	\$ 55,000 \$ -	\$ 55,000 \$ -		\$ 55,000 \$ -		\$ 55,000 \$ -	
Other (ROW, etc)	\$ -	\$ -		\$ -		\$ 22,000	
OPS Construction Support	\$ -	\$ -		\$ -		\$ 10,000	
Additional Operations Costs (during Construction)		\$ -		\$ -		\$ -	
OPS Design Support						\$ 12,000	
Escalation Factor	0.00%	0.00%		0.00%		0.00%	
Escalation to Const. Midpoint	\$ -	\$ -		\$ -		\$ -	
<b>Total</b>	<b>\$ 8,424,755</b>	<b>\$ 8,682,324</b>		<b>\$ 8,345,173</b>		<b>\$ 6,795,591</b>	
<b>Total (rounded)</b>	<b>\$ 8,425,000</b>	<b>\$ 8,682,000</b>		<b>\$ 8,345,000</b>		<b>\$ 6,796,000</b>	
<b>Cost Reduction</b>		<b>\$ 257,000</b>		<b>\$ (80,000)</b>		<b>\$ (1,629,000)</b>	
<b>% Reduction</b>		<b>3.05%</b>		<b>-0.95%</b>		<b>-18.76%</b>	

Suggested Adjustments Ferries Base Cost Estimate		
Ferries Estimate		
Estimate 15% buried Contingency in base estimate due to inflating of estimated or historical costs	-15%	\$ (693,375)
		\$ -
<b>Adjusted Base estimate</b>		<b>\$ (693,375)</b>

### Mukilteo Terminal Relocation (No Bow Loading)

Scenario A Budget	138,030,000	Recommended YOY \$	91,757,000	Change	-46,273,000		
Ferries Estimate (in YOY \$)		Ferries Guideline % Multipliers		WSDOT Guideline % Multipliers		Ferries Guideline % Multipliers	
SUMMARY (Basis for Capital Cost Summary Table) w/Markups							
Construction	\$ 41,539,302	\$ 41,539,302	\$ 41,539,302	\$ 41,539,302	\$ 41,548,902	\$ 41,548,902	\$ 41,548,902
Mobilization	9.00% \$ 3,738,537	9.00% \$ 3,738,537	9.00% \$ 3,738,537	8.50% \$ 3,530,841	9.00% \$ 3,739,401	9.00% \$ 3,739,401	9.00% \$ 3,739,401
Construction (Including Mobilization)	\$ 45,277,839	\$ 45,277,839	\$ 45,277,839	\$ 45,070,143	\$ 45,288,303	\$ 45,288,303	\$ 45,288,303
Design Allowance	30.00% \$ 13,583,352	30.00% \$ 13,583,352	30.00% \$ 13,583,352	30.00% \$ 13,521,043	30.00% \$ 13,586,491	30.00% \$ 13,586,491	30.00% \$ 13,586,491
<b>Subtotal</b>	<b>\$ 58,861,191</b>	<b>\$ 58,861,191</b>	<b>\$ 58,861,191</b>	<b>\$ 58,591,185</b>	<b>\$ 58,874,794</b>	<b>\$ 58,874,794</b>	<b>\$ 58,874,794</b>
Sales Tax	8.90% \$ 5,238,646	8.90% \$ 5,238,646	8.90% \$ 5,238,646	8.90% \$ 5,214,616	8.90% \$ 5,239,857	8.90% \$ 5,239,857	8.90% \$ 5,239,857
<b>Subtotal</b>	<b>\$ 64,099,837</b>	<b>\$ 64,099,837</b>	<b>\$ 64,099,837</b>	<b>\$ 63,805,801</b>	<b>\$ 64,114,651</b>	<b>\$ 64,114,651</b>	<b>\$ 64,114,651</b>
Construction Engineering	15.00% \$ 9,614,976	10.00% \$ 6,409,984	10.00% \$ 6,409,984	14.00% \$ 8,932,812	10.00% \$ 6,411,465	10.00% \$ 6,411,465	10.00% \$ 6,411,465
Construction Contingency	4.00% \$ 2,563,993	4.00% \$ 2,563,993	4.00% \$ 2,563,993	4.00% \$ 2,552,232	4.00% \$ 2,564,586	4.00% \$ 2,564,586	4.00% \$ 2,564,586
Other Construction (Below the Line Items)	\$ 514,560	\$ 514,560	\$ 514,560	\$ 514,560	\$ 514,560	\$ 514,560	\$ 514,560
Agreements (Utilities)	\$ 38,802	\$ 38,802	\$ 38,802	\$ 38,802	\$ 38,802	\$ 38,802	\$ 38,802
State Force Work & Equipment	\$ 168,750	\$ 168,750	\$ 168,750	\$ 168,750	\$ 168,750	\$ 168,750	\$ 168,750
Traffic Control (State Force)	\$ 307,008	\$ 307,008	\$ 307,008	\$ 307,008	\$ 307,008	\$ 307,008	\$ 307,008
Operation shutdown Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Construction Total</b>	<b>\$ 76,793,366</b>	<b>\$ 73,588,374</b>	<b>\$ 73,588,374</b>	<b>\$ 75,805,405</b>	<b>\$ 73,605,262</b>	<b>\$ 73,605,262</b>	<b>\$ 73,605,262</b>
Design Engineering	25.00% \$ 19,198,341	16.00% \$ 11,774,140	16.00% \$ 11,774,140	11.00% \$ 8,338,595	16.00% \$ 11,776,842	16.00% \$ 11,776,842	16.00% \$ 11,776,842
Other Design - Tribal Mitigation	\$ 7,500,000	\$ 7,500,000	\$ 7,500,000	\$ 7,500,000	\$ 7,500,000	\$ 7,500,000	\$ 7,500,000
<b>Design Total</b>	<b>\$ 26,698,341</b>	<b>\$ 19,274,140</b>	<b>\$ 19,274,140</b>	<b>\$ 15,838,595</b>	<b>\$ 19,276,842</b>	<b>\$ 19,276,842</b>	<b>\$ 19,276,842</b>
Pre-Design Study (part of Design engineering above) note: \$988,800 shown in estimate summary, not in total	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other (ROW, etc)	\$ 2,737,000	\$ 1,433,000	\$ 1,433,000	\$ 1,433,000	\$ 1,433,000	\$ 1,433,000	\$ 1,433,000
Property Purchase	\$ 2,737,000	\$ 1,433,000	\$ 1,433,000	\$ 1,433,000	\$ 1,433,000	\$ 1,433,000	\$ 1,433,000
Tribal Mitigation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Port of Everett Agreement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Operation shutdown Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Escalation Factor	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Escalation to Const. Midpoint	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total</b>	<b>\$ 106,228,000</b>	<b>\$ 106,228,707</b>	<b>\$ 94,296,000</b>	<b>\$ 94,295,514</b>	<b>\$ 93,077,000</b>	<b>\$ 93,077,000</b>	<b>\$ 94,315,104</b>
<b>Total (rounded)</b>	<b>\$ 106,228,000</b>	<b>\$ 106,228,707</b>	<b>\$ 94,296,000</b>	<b>\$ 94,295,514</b>	<b>\$ 93,077,000</b>	<b>\$ 93,077,000</b>	<b>\$ 94,315,104</b>
<b>Cost Reduction</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ (11,932,000)</b>	<b>\$ (13,151,000)</b>	<b>\$ (13,271,000)</b>	<b>\$ (13,271,000)</b>	<b>\$ (13,271,000)</b>
<b>% Reduction</b>	<b>0.00%</b>	<b>0.00%</b>	<b>-11.23%</b>	<b>-12.38%</b>	<b>-24.30%</b>	<b>-24.30%</b>	<b>-24.30%</b>

Suggested Adjustments Ferries Base Cost Estimate							
Ferries Estimate							
Building Base Construction Costs seem excessive							
Passenger Building	sf	1,600	\$ (329.00)	\$ (526,400)			
Passenger Building Foundation	sf	1,600	\$ (213.00)	\$ (340,800)			
Maintenance Building	sf	1,600	\$ (220.00)	\$ (352,000)			
Suggested Reductions							
Passenger Building (sf cost as Fauntleroy							
Ferries estimate)	sf	1,600	\$ 126.00	\$ 201,600			
Passenger Building Pile foundation	sf	1,600	\$ 100.00	\$ 160,000			
Maintenance building	sf	1,600	\$ 126.00	\$ 201,600			
Base Estimate reduction			\$	9,600			
Ferries Estimate			\$	41,539,302			
Adjusted Base estimate			\$	41,548,902			

### Orcas Dolphin Preservation M04512A

Scenario B Budget		1,411,000	Recommended YOE \$	1,234,751	Change -176,249	-12%	
Ferries Estimate (In 2008 \$)		Ferries Guideline % Multipliers		WSDOT Guideline % Multipliers		Recalculation % Multipliers	
SUMMARY (Basis for Capital Cost Summary Table) w/Markups							
Construction		\$	695,785	\$	632,532	\$	632,532
Mobilization	10.00%	included above		10.00%	\$	9.00%	\$
Construction (Including Mobilization)		\$	695,785	\$	695,785	\$	689,460
Design Allowance	15.00%	\$	104,368	20.00%	\$	20.00%	\$
<b>Subtotal</b>		<b>\$</b>	<b>800,153</b>	<b>\$</b>	<b>834,942</b>	<b>\$</b>	<b>827,352</b>
Sales Tax	7.70%	\$	61,612	7.80%	\$	7.80%	\$
<b>Subtotal</b>		<b>\$</b>	<b>861,765</b>	<b>\$</b>	<b>900,067</b>	<b>\$</b>	<b>891,885</b>
Construction Engineering	13.00%	\$	112,029	10.00%	\$	16.00%	\$
Construction Contingency	5.00%	\$	43,088	4.00%	\$	4.00%	\$
Operations Construction Support							
OPS Construction Support		\$	7,500	\$	5,000	\$	5,000
Additional Operational Costs		\$	-	\$	-	\$	-
<b>Construction Total</b>		<b>\$</b>	<b>1,024,382</b>	<b>\$</b>	<b>1,031,077</b>	<b>\$</b>	<b>1,075,262</b>
Design Engineering	26.00%	\$	266,339	29.00%	\$	13.00%	\$
OPS Design Support		\$	17,500	\$	12,000	\$	12,000
<b>Design Total</b>		<b>\$</b>	<b>283,839</b>	<b>\$</b>	<b>311,012</b>	<b>\$</b>	<b>151,784</b>
Pre-Design Study (part of Design engineering above)		\$	-	\$	-	\$	-
Other (ROW, etc)		\$	-	\$	-	\$	-
Operations Construction Support		\$	-	\$	-	\$	5,000
Additional Operations Costs (during Construction)		\$	-	\$	-	\$	-
OPS Design Support						\$	12,000
Escalation Factor	0.00%			0.00%		0.00%	
Escalation to Const. Midpoint		\$	-	\$	-	\$	-
<b>Total</b>		<b>\$</b>	<b>1,308,221</b>	<b>\$</b>	<b>1,342,089</b>	<b>\$</b>	<b>1,227,046</b>
Total (rounded)		\$	1,309,000	\$	1,342,000	\$	1,146,000
Cost Reduction				\$	33,000	\$	(82,000)
% Reduction					2.52%		-12.15%

### Orcas Trestle Replacement M04511A

	Scenario A Budget	4,886,000	Recommended YOE \$	3,376,802	Change -1,509,198	-31%
<b>Ferries Estimate</b> (In 2008 \$) SUMMARY (Basis for Capital Cost Summary Table) w/Markups						
Construction		\$	1,839,398	\$	1,672,180	\$ 1,672,180
Mobilization	10.00%		included above	10.00%	\$ 167,218	9.00% \$ 150,496
Construction (Including Mobilization)		\$	1,839,398	\$	1,839,398	\$ 1,822,676
Design Allowance	30.00%	\$	551,819	20.00%	\$ 367,880	20.00% \$ 364,535
<b>Subtotal</b>		<b>\$</b>	<b>2,391,217</b>	<b>\$</b>	<b>2,207,278</b>	<b>\$ 2,187,211</b>
Sales Tax	7.70%	\$	184,124	7.80%	\$ 172,168	7.80% \$ 170,602
<b>Subtotal</b>		<b>\$</b>	<b>2,575,341</b>	<b>\$</b>	<b>2,379,445</b>	<b>\$ 2,357,814</b>
Construction Engineering	23.00%	\$	592,328	23.00%	\$ 547,272	14.00% \$ 306,210
Construction Contingency	5.00%	\$	128,767	4.00%	\$ 95,178	4.00% \$ 87,488
Operations Construction Support						
OPS Construction Support		\$	7,500	\$	7,500	\$ -
Additional Operational Costs		\$	-	\$	-	\$ -
<b>Construction Total</b>		<b>\$</b>	<b>3,303,937</b>	<b>\$</b>	<b>3,029,395</b>	<b>\$ 2,751,512</b>
Design Engineering	28.00%	\$	925,102	26.00%	\$ 787,643	12.00% \$ 262,465
OPS Design Support		\$	17,500	\$	17,500	(direct const only) \$ -
<b>Design Total</b>		<b>\$</b>	<b>942,602</b>	<b>\$</b>	<b>805,143</b>	<b>\$ 262,465</b>
Pre-Design Study (part of Design engineering above)				\$ -		\$ -
Other (ROW, etc)		\$	-	\$ -		\$ 25,000
Operations Construction Support		\$	-	\$ -		\$ 7,500
Additional Operations Costs (during Construction)		\$	-	\$ -		\$ -
OPS Design Support						\$ 17,500
Escalation Factor	0.00%			0.00%		0.00%
Escalation to Const. Midpoint		\$	-	\$ -		\$ -
<b>Total</b>		<b>\$</b>	<b>4,246,539</b>	<b>\$</b>	<b>3,834,538</b>	<b>\$ 3,038,977</b>
Total (rounded)		\$	4,250,000	\$	3,835,000	\$ 3,039,000
Cost Reduction				\$	(415,000)	\$ (1,211,000)
% Reduction					-9.76%	-31.58%

### Point Defiance Terminal Preservation M04611A

Scenario A	5,766,000	Recommended YOE \$	4,094,000	Change	-1,672,000	-29%	
Ferries Estimate (In 2008 \$)			Ferries Guideline % Multipliers			WSDOT Guideline % Multipliers	Recalculation % Multipliers
SUMMARY (Basis for Capital Cost Summary Table) w/Markups							
Construction		\$ 2,388,200		\$ 2,171,091		\$ 2,171,091	\$ 2,108,899
Mobilization	10.00%	included above	10.00%	\$ 217,109	9.50%	\$ 206,254	9.00% \$ 189,801
Construction (Including Mobilization)		\$ 2,388,200		\$ 2,388,200		\$ 2,377,345	\$ 2,298,700
Design Allowance	30.00%	\$ 716,460	20.00%	\$ 477,640	20.00%	\$ 475,469	20.00% \$ 459,740
<b>Subtotal</b>		<b>\$ 3,104,660</b>		<b>\$ 2,865,840</b>		<b>\$ 2,852,813</b>	<b>\$ 2,758,440</b>
Sales Tax	8.80%	\$ 273,210	9.30%	\$ 266,523	9.30%	\$ 265,312	9.30% \$ 256,535
<b>Subtotal</b>		<b>\$ 3,377,870</b>		<b>\$ 3,132,363</b>		<b>\$ 3,118,125</b>	<b>\$ 3,014,975</b>
Construction Engineering	11.00%	\$ 371,566	11.00%	\$ 344,560	12.00%	\$ 374,175	11.00% \$ 303,428
Construction Contingency	5.00%	\$ 168,894	4.00%	\$ 125,295	4.00%	\$ 124,725	4.00% \$ 110,338
Operations Construction Support							
OPS Construction Support		\$ 25,000		\$ 25,000		\$ 25,000	\$ -
Additional Operational Costs		\$ 300,000		\$ 300,000		\$ 300,000	\$ -
<b>Construction Total</b>		<b>\$ 4,243,329</b>		<b>\$ 3,927,218</b>		<b>\$ 3,942,025</b>	<b>\$ 3,428,741</b>
Design Engineering	22.00%	\$ 933,532	22.00%	\$ 863,988	12.00%	\$ 473,043	12.00% \$ 331,013
OPS Design Support		\$ 9,500		\$ 9,500		\$ 9,500	(direct const only) \$ -
<b>Design Total</b>		<b>\$ 943,032</b>		<b>\$ 873,488</b>		<b>\$ 482,543</b>	<b>\$ 331,013</b>
Pre-Design Study (part of Design engineering above)	\$ 60,000		\$ 60,000		\$ 60,000		\$ 55,000 \$ -
Other (ROW, etc)		\$ -		\$ -		\$ -	\$ 334,500
Operations Construction Support							\$ 25,000
Additional Operations Costs (during Construction)							\$ 300,000
OPS Design Support							\$ 9,500
Escalation Factor	0.00%		0.00%		0.00%		0.00%
Escalation to Const. Midpoint		\$ -		\$ -		\$ -	\$ -
<b>Total</b>		<b>\$ 5,186,362</b>		<b>\$ 4,800,705</b>		<b>\$ 4,424,568</b>	<b>\$ 4,094,253</b>
<b>Total (rounded)</b>	\$ 5,186,000		\$ 4,801,000		\$ 4,425,000		\$ 4,094,000
<b>Cost Reduction</b>			\$ (385,000)		\$ (761,000)		\$ (1,092,000)
<b>% Reduction</b>			-7.42%		-14.67%		-24.68%

Suggested Adjustments Ferries Base Cost Estimate			
Ferries Estimate			
	-80%		
Reduct building electrical cost by 80%	\$ 77,740	\$	(62,192)
Adjusted Base estimate		\$	(62,192)



### Port Townsend Dolphin Preservation Slip 1 M04722A

Scenario A	4,241,000	Recommended YOE \$	3,645,000	Change -596,000	-14%
Ferries Estimate (In 2008 \$)			Ferries Guideline % Multipliers	WSDOT Guideline % Multipliers	Recalculation % Multipliers
SUMMARY (Basis for Capital Cost Summary Table) w/Markups					
Construction	\$	2,320,275	\$	2,109,341	\$ 2,109,341
Mobilization	10.00%	included above	10.00%	\$ 210,934	9.00% \$ 189,841
Construction (Including Mobilization)	\$	2,320,275	\$	2,320,275	\$ 2,278,088
Design Allowance	15.00%	\$ 348,041	20.00%	\$ 464,055	20.00% \$ 455,618
<b>Subtotal</b>	<b>\$</b>	<b>2,668,316</b>	<b>\$</b>	<b>2,784,330</b>	<b>\$ 2,759,018</b>
Sales Tax	8.40%	\$ 224,139	8.40%	\$ 233,884	8.40% \$ 229,631
<b>Subtotal</b>	<b>\$</b>	<b>2,892,455</b>	<b>\$</b>	<b>3,018,214</b>	<b>\$ 2,990,775</b>
Construction Engineering	10.00%	\$ 289,245	13.00%	\$ 392,368	8.00% \$ 239,262
Construction Contingency	5.00%	\$ 144,623	4.00%	\$ 120,729	4.00% \$ 119,631
Operations Construction Support					
OPS Construction Support	\$	12,500	\$	12,500	\$ -
Additional Operational Costs	\$	-	\$	-	\$ -
<b>Construction Total</b>	<b>\$</b>	<b>3,338,823</b>	<b>\$</b>	<b>3,543,810</b>	<b>\$ 3,362,168</b>
Design Engineering	16.00%	\$ 534,212	26.00%	\$ 921,391	12.00% \$ 403,460
OPS Design Support	\$	13,500	\$	13,500	\$ 13,500 (direct const only)
<b>Design Total</b>	<b>\$</b>	<b>547,712</b>	<b>\$</b>	<b>934,891</b>	<b>\$ 416,960</b>
Pre-Design Study (part of Design engineering above)			\$ -		\$ -
Other (ROW, etc)	\$	-	\$ -		\$ 26,000
Operations Construction Support	\$	-	\$ -		\$ 12,500
Additional Operations Costs (during Construction)			\$ -		\$ -
OPS Design Support					\$ 13,500
Escalation Factor	0.00%		0.00%		0.00%
Escalation to Const. Midpoint	\$	-	\$ -		\$ -
<b>Total</b>	<b>\$</b>	<b>3,886,535</b>	<b>\$</b>	<b>4,478,701</b>	<b>\$ 3,779,129</b>
<b>Total (rounded)</b>	<b>\$</b>	<b>3,887,000</b>	<b>\$</b>	<b>4,479,000</b>	<b>\$ 3,779,000</b>
<b>Cost Reduction</b>			<b>\$</b>	<b>592,000</b>	<b>\$ (108,000)</b>
<b>% Reduction</b>				<b>15.23%</b>	<b>-2.78%</b>
					<b>\$ (242,000)</b>
					<b>-5.40%</b>

### Port Townsend Dolphin Preservation Slip 2 M04735A

Scenario A Budget 3,718,000		Recommended YOE \$ 3,155,040		Change -562,960		-14%	
Ferries Estimate (in 2008 \$)		Ferries Guideline % Multipliers		WSDOT Guideline % Multipliers		Recalculation % Multipliers	
SUMMARY (Basis for Capital Cost Summary Table) w/Markups							
Construction	\$ 1,789,458	\$ 1,626,780	\$ 1,626,780	\$ 1,626,780	\$ 1,626,780	\$ 1,626,780	\$ 1,626,780
Mobilization	10.00% included above	10.00% \$ 162,678	9.00% \$ 146,410	8.00% \$ 130,142	8.00% \$ 130,142	8.00% \$ 130,142	8.00% \$ 130,142
Construction (Including Mobilization)	\$ 1,789,458	\$ 1,789,458	\$ 1,773,190	\$ 1,773,190	\$ 1,756,922	\$ 1,756,922	\$ 1,756,922
Design Allowance	15.00% \$ 268,419	20.00% \$ 357,892	20.00% \$ 354,638	20.00% \$ 354,638	20.00% \$ 351,384	20.00% \$ 351,384	20.00% \$ 351,384
<b>Subtotal</b>	<b>\$ 2,057,877</b>	<b>\$ 2,147,350</b>	<b>\$ 2,127,828</b>	<b>\$ 2,127,828</b>	<b>\$ 2,108,307</b>	<b>\$ 2,108,307</b>	<b>\$ 2,108,307</b>
Sales Tax	8.40% \$ 172,862	8.40% \$ 180,377	8.40% \$ 178,738	8.40% \$ 178,738	8.40% \$ 177,098	8.40% \$ 177,098	8.40% \$ 177,098
<b>Subtotal</b>	<b>\$ 2,230,738</b>	<b>\$ 2,327,727</b>	<b>\$ 2,306,566</b>	<b>\$ 2,306,566</b>	<b>\$ 2,285,405</b>	<b>\$ 2,285,405</b>	<b>\$ 2,285,405</b>
Construction Engineering	10.00% \$ 223,074	13.00% \$ 302,605	8.00% \$ 184,525	8.00% \$ 184,525	8.00% \$ 168,665	8.00% \$ 168,665	8.00% \$ 168,665
Construction Contingency	5.00% \$ 111,537	4.00% \$ 93,109	4.00% \$ 92,263	4.00% \$ 92,263	4.00% \$ 84,332	4.00% \$ 84,332	4.00% \$ 84,332
Operations Construction Support							
OPS Construction Support	\$ 12,500	\$ 12,500	\$ 12,500	\$ 12,500	\$ -	\$ -	\$ -
Additional Operational Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Construction Total</b>	<b>\$ 2,577,849</b>	<b>\$ 2,735,941</b>	<b>\$ 2,595,854</b>	<b>\$ 2,595,854</b>	<b>\$ 2,538,401</b>	<b>\$ 2,538,401</b>	<b>\$ 2,538,401</b>
Design Engineering	16.00% \$ 412,456	26.00% \$ 711,345	12.00% \$ 311,502	12.00% \$ 311,502	12.00% \$ 252,997	12.00% \$ 252,997	12.00% \$ 252,997
OPS Design Support	\$ 13,500	\$ 13,500	\$ 13,500	\$ 13,500	(direct const only)	(direct const only)	(direct const only)
<b>Design Total</b>	<b>\$ 425,956</b>	<b>\$ 724,845</b>	<b>\$ 325,002</b>	<b>\$ 325,002</b>	<b>\$ 252,997</b>	<b>\$ 252,997</b>	<b>\$ 252,997</b>
Pre-Design Study (part of Design engineering above)		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other (ROW, etc)	\$ -	\$ -	\$ -	\$ -	\$ 26,000	\$ 26,000	\$ 26,000
Operations Construction Support	\$ -	\$ -	\$ -	\$ -	\$ 12,500	\$ 12,500	\$ 12,500
Additional Operations Costs (during Construction)		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
OPS Design Support					\$ 13,500	\$ 13,500	\$ 13,500
Escalation Factor	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Escalation to Const. Midpoint	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total</b>	<b>\$ 3,003,805</b>	<b>\$ 3,460,785</b>	<b>\$ 2,920,856</b>	<b>\$ 2,920,856</b>	<b>\$ 2,817,398</b>	<b>\$ 2,817,398</b>	<b>\$ 2,817,398</b>
<b>Total (rounded)</b>	<b>\$ 3,004,000</b>	<b>\$ 3,461,000</b>	<b>\$ 2,921,000</b>	<b>\$ 2,921,000</b>	<b>\$ 2,817,000</b>	<b>\$ 2,817,000</b>	<b>\$ 2,817,000</b>
<b>Cost Reduction</b>		<b>\$ 457,000</b>	<b>\$ (83,000)</b>	<b>\$ (83,000)</b>	<b>\$ (187,000)</b>	<b>\$ (187,000)</b>	<b>\$ (187,000)</b>
<b>% Reduction</b>		<b>15.21%</b>	<b>-2.76%</b>	<b>-2.76%</b>	<b>-5.40%</b>	<b>-5.40%</b>	<b>-5.40%</b>

### Port Townsend Slip 1 Preservation M04731A

Scenario A Budget 11,753,000		Recommended YOE \$ 8,686,699		Change -3,066,301		-26%	
Ferries Estimate (In 2008 \$)		Ferries Guideline % Multipliers		WSDOT Guideline % Multipliers		Recalculation % Multipliers	
SUMMARY (Basis for Capital Cost Summary Table) w/Markups							
Construction	\$ 5,849,690	\$ 5,317,900	\$ 5,317,900	\$ 4,834,450			
Mobilization	10.00% included above	9.50% \$ 505,201	9.00% \$ 478,611	9.00% \$ 435,101			
Construction (Including Mobilization)	\$ 5,849,690	\$ 5,823,101	\$ 5,796,511	\$ 5,269,551			
Design Allowance	20.00% \$ 1,169,938	20.00% \$ 1,164,620	20.00% \$ 1,159,302	20.00% \$ 1,053,910			
Subtotal	\$ 7,019,628	\$ 6,987,721	\$ 6,955,813	\$ 6,323,461			
Sales Tax	8.60% \$ 603,688	8.60% \$ 600,944	8.60% \$ 598,200	9.00% \$ 569,111			
Subtotal	\$ 7,623,316	\$ 7,588,665	\$ 7,554,013	\$ 6,892,572			
Construction Engineering	13.00% \$ 991,031	13.00% \$ 986,526	10.00% \$ 755,401	8.00% \$ 505,877			
Construction Contingency	5.00% \$ 381,166	4.00% \$ 303,547	4.00% \$ 302,161	4.00% \$ 252,938			
Operations Construction Support	\$ 7,500	\$ 7,500	\$ 7,500	\$ -			
Construction Total	\$ 9,003,013	\$ 8,886,238	\$ 8,619,075	\$ 7,651,387			
Design Engineering	22.00% \$ 1,980,663	22.00% \$ 1,954,972	12.00% \$ 1,034,289	12.00% \$ 758,815			
OPS Design Support	\$ 25,000	\$ 25,000	\$ 25,000	\$ -	(direct const only)		
Design Total	\$ 2,005,663	\$ 1,979,972	\$ 1,059,289	\$ 758,815			
Pre-Design Study (in Design engineering)	\$ 210,000	\$ -	\$ 210,000	\$ -	\$ 119,000		
Other (ROW, etc)	\$ -	\$ -	\$ -	\$ 37,500			
OPS Construction Support	\$ -	\$ -	\$ -	\$ -			
Additional Operations Costs (during Construction)	\$ -	\$ -	\$ -	\$ -			
OPS Design Support	\$ -	\$ -	\$ -	\$ 37,500			
Escalation Factor	0.00%	0.00%	0.00%	0.00%			
Escalation to Const. Midpoint	\$ -	\$ -	\$ -	\$ -			
<b>Total</b>	<b>\$ 11,008,676</b>	<b>\$ 10,866,210</b>	<b>\$ 9,678,364</b>	<b>\$ 8,447,703</b>			
Total (rounded)	\$ 11,009,000	\$ 10,866,000	\$ 9,678,000	\$ 8,448,000			
Cost Reduction		\$ (143,000)	\$ (1,331,000)	\$ (2,418,000)			
% Reduction		-1.30%	-12.09%	-22.25%			

Suggested Adjustments Ferries Base Cost Estimate			
Ferries Estimate			
Delete 1 Standard Vehicle Transfer Span			
Drilled shaft	-1 ea	\$ 570,450	\$ (570,450)
Add Potable Water Lines per Seattle	1 ea	\$ 51,000	\$ 51,000
Add Sewer Lines	1 ea	\$ 36,000	\$ 36,000
Adjusted Base estimate			\$ (483,450)

**Port Townsend Slip 2 Transfer Span Preservation M04732A**

Scenario A Budget 14,396,000		Recommended YOE \$ 10,760,335		Change		-3,635,665	
Ferries Estimate (in 2008 \$)		Ferries Guideline % Multipliers		WSDOT Guideline % Multipliers		Recalculation Methodology	
SUMMARY (Basis for Capital Cost Summary Table) w/Markups							
Construction	\$ 6,399,875	\$ 5,818,068	\$ 5,818,068	\$ 5,818,068	\$ 5,334,618		
Mobilization	10.00% included above	9.50% \$ 552,716	9.00% \$ 523,626	9.00% \$ 523,626	9.00% \$ 480,116		
Construction (Including Mobilization)	\$ 6,399,875	\$ 6,370,785	\$ 6,341,694	\$ 6,341,694	\$ 5,814,734		
Design Allowance	20.00% \$ 1,279,975	20.00% \$ 1,274,157	20.00% \$ 1,268,339	20.00% \$ 1,268,339	20.00% \$ 1,162,947		
<b>Subtotal</b>	<b>\$ 7,679,850</b>	<b>\$ 7,644,942</b>	<b>\$ 7,610,033</b>	<b>\$ 7,610,033</b>	<b>\$ 6,977,681</b>		
Sales Tax	8.60% \$ 660,467	8.60% \$ 657,465	8.60% \$ 654,463	8.60% \$ 654,463	9.00% \$ 627,991		
<b>Subtotal</b>	<b>\$ 8,340,317</b>	<b>\$ 8,302,407</b>	<b>\$ 8,264,496</b>	<b>\$ 8,264,496</b>	<b>\$ 7,605,672</b>		
Construction Engineering	13.00% \$ 1,084,241	13.00% \$ 1,079,313	10.00% \$ 826,450	10.00% \$ 826,450	8.00% \$ 558,214		
Construction Contingency	5.00% \$ 417,016	4.00% \$ 332,096	4.00% \$ 330,580	4.00% \$ 330,580	4.00% \$ 279,107		
Operations Construction Support	\$ 7,500	\$ 7,500	\$ 7,500	\$ 7,500	\$ -		
<b>Construction Total</b>	<b>\$ 9,849,074</b>	<b>\$ 9,721,316</b>	<b>\$ 9,429,025</b>	<b>\$ 9,429,025</b>	<b>\$ 8,442,994</b>		
Design Engineering	22.00% \$ 2,166,796	22.00% \$ 2,138,689	12.00% \$ 1,131,483	12.00% \$ 1,131,483	12.00% \$ 837,322		
OPS Design Support	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	(direct const only)		
<b>Design Total</b>	<b>\$ 2,191,796</b>	<b>\$ 2,163,689</b>	<b>\$ 1,156,483</b>	<b>\$ 1,156,483</b>	<b>\$ 837,322</b>		
Pre-Design Study (in Design engineering)	\$ 210,000 \$ -	\$ 210,000 \$ -	\$ 210,000 \$ -	\$ 210,000 \$ -	\$ 119,000 \$ -		
Other (ROW, etc)	\$ -	\$ -	\$ -	\$ -	\$ 32,500		
OPS Construction Support		\$ -	\$ -	\$ -	\$ 7,500		
Additional Operations Costs (during Construction)		\$ -	\$ -	\$ -	\$ -		
OPS Design Support					\$ 25,000		
Escalation Factor	0.00%	0.00%	0.00%	0.00%	0.00%		
Escalation to Const. Midpoint	\$ -	\$ -	\$ -	\$ -	\$ -		
<b>Total</b>	<b>\$ 12,040,870</b>	<b>\$ 11,885,005</b>	<b>\$ 10,585,509</b>	<b>\$ 10,585,509</b>	<b>\$ 9,312,815</b>		
Total (rounded)	\$ 12,041,000	\$ 11,885,000	\$ 10,586,000	\$ 10,586,000	\$ 9,313,000		
Cost Reduction		\$ (156,000)	\$ (1,455,000)	\$ (1,455,000)	\$ (2,728,000)		
% Reduction		-1.30%	-12.08%	-12.08%	-22.95%		

Suggested Adjustments Ferries Base Cost Estimate			
Ferries Estimate			
Delete 1 Standard Vehicle Transfer Span Drilled shaft	-1	\$ 570,450	\$ (570,450)
Add Potable Water Lines per Seattle	1	\$ 51,000	\$ 51,000
Add Sewer Lines	1	\$ 36,000	\$ 36,000
		\$ -	\$ -
<b>Adjusted Base estimate</b>			<b>\$ (483,450)</b>

### Seattle Slip 3 Transfer Span Preservation M04839A

Scenario A 13,939,000		Recommended YOE \$	11,048,093	Change -2,890,907	-21%			
Ferries Estimate (in 2008 \$)		Ferries Guideline % Multipliers		WSDOT Guideline % Multipliers		Recalculation % Multipliers		
SUMMARY (Basis for Capital Cost Summary Table) w/Markups								
Construction	\$	6,887,540	\$	6,261,400	\$	6,261,400	\$	6,109,400
Mobilization	10.00%	included above	9.50%	\$	9.00%	\$	9.00%	\$
Construction (Including Mobilization)	\$	6,887,540	\$	6,856,233	\$	6,824,926	\$	6,659,246
Design Allowance	20.00%	\$	20.00%	\$	20.00%	\$	20.00%	\$
		1,377,508		1,371,247		1,364,985		1,331,849
<b>Subtotal</b>	<b>\$</b>	<b>8,265,048</b>	<b>\$</b>	<b>8,227,480</b>	<b>\$</b>	<b>8,189,911</b>	<b>\$</b>	<b>7,991,095</b>
Sales Tax	9.00%	\$	9.50%	\$	9.50%	\$	9.50%	\$
		743,854		781,611		778,042		759,154
<b>Subtotal</b>	<b>\$</b>	<b>9,008,902</b>	<b>\$</b>	<b>9,009,090</b>	<b>\$</b>	<b>8,967,953</b>	<b>\$</b>	<b>8,750,249</b>
Construction Engineering	13.00%	\$	13.00%	\$	10.00%	\$	8.00%	\$
		1,171,157		1,171,182		896,795		639,288
Construction Contingency	5.00%	\$	4.00%	\$	4.00%	\$	4.00%	\$
		450,445		360,364		358,718		319,644
Operations Construction Support		\$		\$		\$		\$
		-		-		-		-
<b>Construction Total</b>	<b>\$</b>	<b>10,630,505</b>	<b>\$</b>	<b>10,540,635</b>	<b>\$</b>	<b>10,223,466</b>	<b>\$</b>	<b>9,709,181</b>
Design Engineering	22.00%	\$	22.00%	\$	12.00%	\$	12.00%	\$
		2,338,711		2,318,940		1,226,816		958,931
OPS Design Support		\$		\$		\$		\$
		37,500		37,500		37,500		37,500
								(direct const only)
<b>Design Total</b>	<b>\$</b>	<b>2,376,211</b>	<b>\$</b>	<b>2,356,440</b>	<b>\$</b>	<b>1,264,316</b>	<b>\$</b>	<b>958,931</b>
Pre-Design Study (in Design engineering)	\$	119,000	\$	119,000	\$	119,000	\$	119,000
		\$		\$		\$		\$
Other (ROW, etc)		-		-		-		37,500
Below the Line Items	\$	-	\$	-	\$	-	\$	-
Additional Operations Costs (during Construction)		\$		\$		\$		\$
		-		-		-		-
OPS Design Support		\$		\$		\$		\$
		-		-		-		37,500
Escalation Factor	0.00%		0.00%		0.00%		0.00%	
Escalation to Const. Midpoint		\$		\$		\$		\$
		-		-		-		-
<b>Total</b>	<b>\$</b>	<b>13,006,716</b>	<b>\$</b>	<b>12,897,075</b>	<b>\$</b>	<b>11,487,782</b>	<b>\$</b>	<b>10,705,612</b>
Total (rounded)	\$	13,007,000	\$	12,897,000	\$	11,488,000	\$	10,706,000
Cost Reduction			\$	(110,000)	\$	(1,519,000)	\$	(2,301,000)
% Reduction				-0.85%		-11.68%		-17.84%

Suggested Adjustments Ferries Base Cost Estimate			
Ferries Estimate			
The Structural estimate utilizes the "Engineer's Estimate" which is appropriate, not the highest unit cost/item as has been in many Ferries estimates.			
The Mechanical system estimates however, appear to use the worst case scenario from the Backup (+10% est.)			
The Electrical system estimates however, appear to use the worst case scenario from the Backup (+ 10% est.)			
Estimate of buried "contingency"	Is	-2.43%	\$ (152,000)
			\$ -
Adjusted Base estimate			\$ (152,000)

### Seattle Slip 2 Overhead Loading Preservation M04842A

Scenario A Budget 2,974,000		Recommended YOE \$ 2,226,825		Change -747,175		-25%	
Ferries Estimate (in 2008 \$)		Ferries Guideline % Multipliers		WSDOT Guideline % Multipliers		Recalculation % Multipliers	
<b>SUMMARY (Basis for Capital Cost Summary Table) w/Markups</b>							
Construction	\$ 14,175,700		\$ 12,887,000		\$ 12,887,000		\$ 11,468,475
Mobilization	10.00% included above		9.50% \$ 1,224,265		9.50% \$ 1,224,265		8.00% \$ 917,478
Construction (Including Mobilization)	\$ 14,175,700		\$ 14,111,265		\$ 14,111,265		\$ 12,385,953
Design Allowance	20.00% \$ 2,835,140		20.00% \$ 2,822,253		20.00% \$ 2,822,253		20.00% \$ 2,477,191
<b>Subtotal</b>	<b>\$ 17,010,840</b>		<b>\$ 16,933,518</b>		<b>\$ 16,933,518</b>		<b>\$ 14,863,144</b>
Sales Tax	9.00% \$ 1,530,976		9.50% \$ 1,608,684		9.50% \$ 1,608,684		9.50% \$ 1,411,999
<b>Subtotal</b>	<b>\$ 18,541,816</b>		<b>\$ 18,542,202</b>		<b>\$ 18,542,202</b>		<b>\$ 16,275,142</b>
Construction Engineering	13.00% \$ 2,410,436		12.00% \$ 2,225,064		8.00% \$ 1,483,376		8.00% \$ 1,189,051
Construction Contingency	5.00% \$ 927,091		4.00% \$ 741,688		4.00% \$ 741,688		4.00% \$ 594,526
Operations Construction Support	\$ 7,500		\$ 7,500		\$ -		\$ -
<b>Construction Total</b>	<b>\$ 21,886,842</b>		<b>\$ 21,516,455</b>		<b>\$ 20,767,266</b>		<b>\$ 18,058,719</b>
Design Engineering	20.00% \$ 4,377,368		22.00% \$ 4,733,620		11.00% \$ 2,284,399		11.00% \$ 1,634,946
OPS Design Support	\$ 37,500		\$ 37,500		\$ 14,500		(direct const only)
<b>Design Total</b>	<b>\$ 4,414,868</b>		<b>\$ 4,771,120</b>		<b>\$ 2,298,899</b>		<b>\$ 1,634,946</b>
Pre-Design Study (part of Design engineering above)	\$ 220,000 \$ -		\$ 220,000 \$ -		\$ 220,000 \$ -		\$ 220,000 \$ -
Other (ROW, etc)	\$ -		\$ -		\$ -		\$ -
Below the Line Items	\$ -		\$ -		\$ -		\$ -
Additional Operations Costs (during Construction)	\$ -		\$ -		\$ -		\$ -
OPS Design Support	\$ -		\$ -		\$ -		\$ -
Escalation Factor	0.00%		0.00%		0.00%		0.00%
Escalation to Const. Midpoint	\$ -		\$ -		\$ -		\$ -
<b>Total</b>	<b>\$ 26,301,711</b>		<b>\$ 26,287,575</b>		<b>\$ 23,066,166</b>		<b>\$ 19,693,665</b>
<b>Total (rounded)</b>	<b>\$ 26,302,000</b>		<b>\$ 26,288,000</b>		<b>\$ 23,066,000</b>		<b>\$ 19,694,000</b>
<b>Cost Reduction</b>			<b>\$ (14,000)</b>		<b>\$ (3,236,000)</b>		<b>\$ (6,608,000)</b>
<b>% Reduction</b>			<b>-0.05%</b>		<b>-12.30%</b>		<b>-28.65%</b>

<b>Suggested Adjustments Ferries Base Cost Estimate</b>	
Ferries Estimate	
The estimate contains many "Contingencies" and uses the absolute highest number as they have developed the costs.	
Estimate of buried "contingency" of 7.5%	Is -7.50% \$ (966,525)
Reduce the Drilled piling count between OHL 2 and 3 from 6 in the current two estimates, to 5 if both projects are done.	
Ferries Estimate	\$ (452,000)
<b>Adjusted Base estimate</b>	<b>\$ (1,418,525)</b>

**Seattle Slip 3 Overhead Loading Preservation M04843A**

Scenario A 28,579,000		Recommended YOE \$	21,411,498	Change -7,167,502	-25%				
Ferries Estimate (in 2008 \$)		Ferries Guideline % Multipliers		Recalculation % Multipliers					
SUMMARY (Basis for Capital Cost Summary Table) w/Markups									
Construction		\$	14,327,500	\$	13,025,000	\$	12,048,125		
Mobilization	10.00%	included above		9.50%	\$	1,237,375	8.00%	\$	963,850
Construction (Including Mobilization)		\$	14,327,500	\$	14,262,375	\$	13,011,975		
Design Allowance	20.00%	\$	2,865,500	20.00%	\$	2,852,475	20.00%	\$	2,602,395
Subtotal		\$	17,193,000	\$	17,114,850	\$	15,614,370		
Sales Tax	9.00%	\$	1,547,370	9.50%	\$	1,625,911	9.50%	\$	1,483,365
Subtotal		\$	18,740,370	\$	18,740,761	\$	17,097,735		
Construction Engineering	13.00%	\$	2,436,248	12.00%	\$	2,248,891	8.00%	\$	1,249,150
Construction Contingency	5.00%	\$	937,019	4.00%	\$	749,630	4.00%	\$	624,575
Operations Construction Support		\$	7,500	\$	7,500	\$	-		
Construction Total		\$	22,121,137	\$	21,746,782	\$	18,971,460		
Design Engineering	20.00%	\$	4,424,227	22.00%	\$	4,784,292	11.00%	\$	1,717,581
OPS Design Support		\$	37,500	\$	37,500	(direct const only)			
Design Total		\$	4,461,727	\$	4,821,792	\$	1,717,581		
Pre-Design Study (part of Design engineering above)	\$	230,000	\$	-	\$	230,000	\$	-	
Other (ROW, etc)		\$	-	\$	-	\$	-		
Below the Line Items	\$	-	\$	-	\$	-	\$	-	
Additional Operations Costs (during Construction)		\$	-	\$	-	\$	7,500		
OPS Design Support		\$	-	\$	-	\$	37,500		
Escalation Factor	0.00%			0.00%			0.00%		
Escalation to Const. Midpoint		\$	-	\$	-	\$	-		
<b>Total</b>		\$	26,582,864	\$	26,568,575	\$	20,689,040		
<b>Total (rounded)</b>	\$	26,583,000	\$	26,569,000	\$	20,689,000			
<b>Cost Reduction</b>			\$	(14,000)	\$	(5,894,000)			
<b>% Reduction</b>				-0.05%		-25.25%			

Suggested Adjustments Ferries Base Cost Estimate	
Ferries Estimate	
The estimate contains many "Contingencies" and uses the absolute highest number as they have developed the costs.	
Estimate of buried "contingency" of 7.5% minimum	Is -7.50% \$ (976,875)
Reduce the Drilled piling count between OHL 2 and 3 from 6 in the current two estimates, to 5 if both projects are done.	
Reduction taken in Slip 2 OHL Preservation Recalc.	\$ -
<b>Adjusted Base estimate</b>	<b>\$ (976,875)</b>

### Seattle Slip 2 Extension M04854A

Scenario B 4,998,000		Recommended YOE \$	3,617,430	Change -1,380,570	-28%		
Ferries Estimate (in 2008 \$)		Ferries Guideline % Multipliers		WSDOT Guideline % Multipliers		Recalculation % Multipliers	
SUMMARY (Basis for Capital Cost Summary Table) w/Markups							
Construction		\$ 2,501,840		\$ 2,274,400		\$ 2,274,400	\$ 1,984,400
Mobilization	10.00%	included above		\$ 216,068		\$ 181,952	\$ 158,752
Construction (Including Mobilization)		\$ 2,501,840		\$ 2,490,468		\$ 2,456,352	\$ 2,143,152
Design Allowance	20.00%	\$ 500,368	20.00%	\$ 498,094	20.00%	\$ 491,270	\$ 428,630
<b>Subtotal</b>		<b>\$ 3,002,208</b>		<b>\$ 2,988,562</b>		<b>\$ 2,947,622</b>	<b>\$ 2,571,782</b>
Sales Tax	9.00%	\$ 270,199	9.50%	\$ 283,913	9.50%	\$ 280,024	\$ 244,319
<b>Subtotal</b>		<b>\$ 3,272,407</b>		<b>\$ 3,272,475</b>		<b>\$ 3,227,647</b>	<b>\$ 2,816,102</b>
Construction Engineering	13.00%	\$ 425,413	13.00%	\$ 425,422	12.00%	\$ 387,318	\$ 257,178
Construction Contingency	5.00%	\$ 163,620	4.00%	\$ 130,899	4.00%	\$ 129,106	\$ 102,871
Operations Construction Support		\$ -		\$ -		\$ -	\$ -
<b>Construction Total</b>		<b>\$ 3,861,440</b>		<b>\$ 3,828,796</b>		<b>\$ 3,744,070</b>	<b>\$ 3,176,151</b>
Design Engineering	20.00%	\$ 772,288	22.00%	\$ 842,335	12.00%	\$ 449,288	\$ 308,614
OPS Design Support		\$ -		\$ -		\$ -	(direct const only)
<b>Design Total</b>		<b>\$ 772,288</b>		<b>\$ 842,335</b>		<b>\$ 449,288</b>	<b>\$ 308,614</b>
Pre-Design Study (in Design engineering)	\$ 119,000	\$ -	\$ 119,000	\$ -	\$ 119,000	\$ -	\$ 119,000
Other (ROW, etc)		\$ -		\$ -		\$ -	\$ -
Below the Line Items		\$ -		\$ -		\$ -	\$ -
Additional Operations Costs (during Construction)		\$ -		\$ -		\$ -	\$ -
OPS Design Support		\$ -		\$ -		\$ -	\$ -
Escalation Factor	0.00%		0.00%		0.00%		0.00%
Escalation to Const. Midpoint		\$ -		\$ -		\$ -	\$ -
<b>Total</b>		<b>\$ 4,633,728</b>		<b>\$ 4,671,131</b>		<b>\$ 4,193,358</b>	<b>\$ 3,484,765</b>
<b>Total (rounded)</b>	\$ 4,640,000		\$ 4,671,000		\$ 4,193,000		\$ 3,485,000
<b>Cost Reduction</b>			\$ 31,000		\$ (447,000)		\$ (1,155,000)
<b>% Reduction</b>			0.67%		-9.63%		-24.73%

Suggested Adjustments Ferries Base Cost Estimate	
Ferries Estimate	
The Bridge Seat Estimate utilizes the more expensive Bridge Seat construction type, and adda 5% to the Engineer's Estimate. Using the same methodology to the less expensive construction type would reduce this by \$90k +/-	
\$	(90,000)
The Mechanical Upgrade carries a 24% contingency in the base cost, prior to the 20% design allowance	
\$	(200,000)
The seismic Restraint and OHL mechanical system repairs seem reasonable from the backup	
Adjusted Base estimate	\$ (290,000)



### Seattle Terminal Building & Trestle M04841A/M04846A

Budget Scenario A		216,617,000	Recommended YOE \$	140,082,000	Change -76,535,000	-35%
Ferries Estimate		Ferries Guidelines		WSDOT Guideline		Recalculation
(in YOE \$)		% Multipliers		% Multipliers		% Multipliers
SUMMARY (Basis for Capital Cost Summary Table) w/Markups						
Construction		\$	94,758,400	\$	86,144,000	\$ 86,144,000
Mobilization	10.00%	included above		10.00%	\$ 8,614,400	7.00% \$ 6,030,080
Construction (Including Mobilization)		\$	94,758,400	\$	94,758,400	\$ 92,174,080
Design Contingency	20.00%	\$	18,951,680	20.00%	\$ 18,951,680	20.00% \$ 18,434,816
<b>Subtotal</b>		<b>\$</b>	<b>113,710,080</b>	<b>\$</b>	<b>113,710,080</b>	<b>\$ 110,608,896</b>
Sales Tax	9.00%	\$	10,233,907	9.50%	\$ 10,802,458	9.50% \$ 10,507,845
<b>Subtotal</b>		<b>\$</b>	<b>123,943,987</b>	<b>\$</b>	<b>124,512,538</b>	<b>\$ 121,116,741</b>
Construction Engineering	10.00%	\$	12,394,399	10.00%	\$ 12,451,254	8.00% \$ 9,689,339
Construction Contingency	5.00%	\$	6,197,199	4.00%	\$ 4,980,502	4.00% \$ 4,844,670
Operations Construction Support		\$	25,000		\$ -	\$ -
<b>Construction Total</b>		<b>\$</b>	<b>142,560,585</b>	<b>\$</b>	<b>141,944,293</b>	<b>\$ 135,650,750</b>
Design Engineering	10.00%	\$	14,256,059	16.00%	\$ 22,711,087	11.00% \$ 14,921,583
OPS Design Support		\$	49,500		\$ 49,500	\$ 49,500 (direct const only)
<b>Design Total</b>		<b>\$</b>	<b>14,305,559</b>	<b>\$</b>	<b>22,760,587</b>	<b>\$ 14,971,083</b>
Pre-Design Study (part of Design engineering above)		\$	-	\$	-	\$ -
note: \$715,000 shown in estimate summary, not in total						
Other (ROW, etc)		\$	-	\$	-	\$ 74,500
Below the Line Items		\$	-	\$	-	\$ -
Additional Operations Costs (during Construction)		\$	-	\$	-	\$ -
OPS Construction Support		\$	-	\$	-	\$ 25,000
OPS Design Support		\$	-	\$	-	\$ 49,500
Escalation Factor	0.00%			0.00%		0.00%
Escalation to Const. Midpoint		\$	-	\$	-	\$ -
<b>Total</b>		<b>\$</b>	<b>156,866,144</b>	<b>\$</b>	<b>164,704,880</b>	<b>\$ 150,621,833</b>
<b>Total (rounded)</b>	<b>\$</b>	<b>156,870,000</b>	<b>\$</b>	<b>164,705,000</b>	<b>\$</b>	<b>150,622,000</b>
<b>Cost Reduction</b>		<b>\$</b>	<b>7,835,000</b>	<b>\$</b>	<b>(6,248,000)</b>	<b>\$ 146,631,000</b>
<b>% Reduction</b>			<b>4.99%</b>		<b>-3.98%</b>	<b>(10,239,000)</b>
					<b>-6.80%</b>	

Suggested Adjustments Ferries Base Cost Estimate			
Ferries Estimate			
Throughout the estimate, from the detailed backup to the summary sheet, there is a adder buried of up to 10%, with much being around 5%			
Estimate of buried "contingency" of 5%	Is	-5.00%	\$ (4,307,200)
Terminal Building is \$375/sf, before 10% adder. Basis picked in RS Means not necessarily appropriate.			
Very High end Building Construction should not exceed \$250/sf			
Building Area	sf	25,000	\$ (125.00) \$ (3,125,000)
Base Estimate reduction			\$ -
Ferries Estimate			\$ 86,144,000
Adjusted Base estimate			\$ 86,144,000

### Shaw Dolphin Preservation M04904A

Scenario A Budget 3,985,000		Recommended YOE \$	3,241,000	Change -744,000	-19%	
Ferries Estimate (In 2008 \$) SUMMARY (Basis for Capital Cost Summary Table) w/Markups		Ferries Guideline % Multipliers		WSDOT Guideline % Multipliers		Recalculation % Multipliers
Construction	\$ 2,076,250	\$ 1,887,500	\$ 1,887,500			\$ 1,887,500
Mobilization	10.00% included above	10.00% \$ 188,750	9.00% \$ 169,875			8.00% \$ 151,000
Construction (Including Mobilization)	\$ 2,076,250	\$ 2,076,250	\$ 2,057,375			\$ 2,038,500
Design Allowance	15.00% \$ 311,438	20.00% \$ 415,250	20.00% \$ 411,475			20.00% \$ 407,700
<b>Subtotal</b>	<b>\$ 2,387,688</b>	<b>\$ 2,491,500</b>	<b>\$ 2,468,850</b>			<b>\$ 2,446,200</b>
Sales Tax	7.70% \$ 183,852	7.80% \$ 194,337	7.80% \$ 192,570			7.80% \$ 190,804
<b>Subtotal</b>	<b>\$ 2,571,539</b>	<b>\$ 2,685,837</b>	<b>\$ 2,661,420</b>			<b>\$ 2,637,004</b>
Construction Engineering	13.00% \$ 334,300	13.00% \$ 349,159	8.00% \$ 212,914			8.00% \$ 195,696
Construction Contingency	5.00% \$ 128,577	4.00% \$ 107,433	4.00% \$ 106,457			4.00% \$ 97,848
Operations Construction Support						
OPS Construction Support	\$ 5,000	\$ 5,000	\$ 5,000			\$ -
Additional Operational Costs	\$ -	\$ -	\$ -			\$ -
<b>Construction Total</b>	<b>\$ 3,039,417</b>	<b>\$ 3,147,429</b>	<b>\$ 2,985,791</b>			<b>\$ 2,930,548</b>
Design Engineering	26.00% \$ 790,248	26.00% \$ 818,332	12.00% \$ 358,295			12.00% \$ 293,544
OPS Design Support	\$ 12,000	\$ 12,000	\$ 12,000			(direct const only)
<b>Design Total</b>	<b>\$ 802,248</b>	<b>\$ 830,332</b>	<b>\$ 370,295</b>			<b>\$ 293,544</b>
Pre-Design Study (part of Design engineering above)	\$ -	\$ -	\$ -			\$ -
Other (ROW, etc)	\$ -	\$ -	\$ -			\$ 17,000
Operations Construction Support	\$ -	\$ -	\$ -			\$ 5,000
Additional Operations Costs (during Construction)	\$ -	\$ -	\$ -			\$ -
OPS Design Support	\$ -	\$ -	\$ -			\$ 12,000
Escalation Factor	0.00%	0.00%	0.00%			0.00%
Escalation to Const. Midpoint	\$ -	\$ -	\$ -			\$ -
<b>Total</b>	<b>\$ 3,841,665</b>	<b>\$ 3,977,761</b>	<b>\$ 3,356,086</b>			<b>\$ 3,241,092</b>
Total (rounded)	\$ 3,842,000	\$ 3,978,000	\$ 3,356,000			\$ 3,241,000
Cost Reduction		\$ 136,000	\$ (486,000)			\$ (601,000)
% Reduction		3.54%	-12.65%			-15.11%

### Southworth Trestle Preservation M05104A

Scenario A Budget 10,852,000	Recommended YOY \$	20,057,176	Change 9,205,176	85%
Ferries Estimate (in 2008 \$) SUMMARY (Basis for Capital Cost Summary Table) w/Markups	Ferries Guideline % Multipliers	WSDOT Guideline % Multipliers	Recalculation % Multipliers	
Construction	\$ 11,109,360	\$ 10,099,418	\$ 10,099,418	\$ 10,099,418
Mobilization	10.00% included above	10.00% \$ 1,009,942	9.50% \$ 959,445	8.00% \$ 807,953
Construction (Including Mobilization)	\$ 11,109,360	\$ 11,109,360	\$ 11,058,863	\$ 10,907,372
Design Allowance	30.00% \$ 3,332,808	20.00% \$ 2,221,872	20.00% \$ 2,211,773	20.00% \$ 2,181,474
<b>Subtotal</b>	<b>\$ 14,442,168</b>	<b>\$ 13,331,232</b>	<b>\$ 13,270,635</b>	<b>\$ 13,088,846</b>
Sales Tax	8.60% \$ 1,242,026	8.60% \$ 1,146,486	8.60% \$ 1,141,275	8.60% \$ 1,125,641
<b>Subtotal</b>	<b>\$ 15,684,194</b>	<b>\$ 14,477,718</b>	<b>\$ 14,411,910</b>	<b>\$ 14,214,487</b>
Construction Engineering	11.00% \$ 1,725,261	11.00% \$ 1,592,549	8.00% \$ 1,152,953	8.00% \$ 1,047,108
Construction Contingency	5.00% \$ 784,210	4.00% \$ 579,109	4.00% \$ 576,476	4.00% \$ 523,554
Operations Construction Support				
OPS Construction Support	\$ 20,000	\$ 20,000	\$ 20,000	
Additional Operational Costs	\$ 180,000	\$ 180,000	\$ 180,000	\$ -
Art (0.5% of terminal Bldg Costs)	\$ 4,733	\$ 4,733	\$ 4,733	\$ 4,733
<b>Construction Total</b>	<b>\$ 18,398,399</b>	<b>\$ 16,649,376</b>	<b>\$ 16,141,339</b>	<b>\$ 15,785,148</b>
Design Engineering	22.00% \$ 4,047,648	22.00% \$ 3,662,863	11.00% \$ 1,775,547	11.00% \$ 1,439,773
OPS Design Support	\$ 27,500	\$ 27,500	\$ 27,500	(direct const only) \$ -
<b>Design Total</b>	<b>\$ 4,075,148</b>	<b>\$ 3,690,363</b>	<b>\$ 1,803,047</b>	<b>\$ 1,439,773</b>
Pre-Design Study (in Design engineering)	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000
Other (ROW, etc)	\$ -	\$ -	\$ -	\$ 250,500
Operations Construction Support	\$ -	\$ -	\$ -	\$ 20,000
Additional Operations Costs (during Construction)				\$ 180,000
OPS Design Support				\$ 50,500
Escalation Factor	0.00%	0.00%	0.00%	0.00%
Escalation to Const. Midpoint	\$ -	\$ -	\$ -	\$ -
<b>Total</b>	<b>\$ 22,473,546</b>	<b>\$ 20,339,738</b>	<b>\$ 17,944,387</b>	<b>\$ 17,475,421</b>
Total (rounded)	\$ 22,474,000	\$ 20,340,000	\$ 17,944,000	\$ 17,475,000
Cost Reduction		\$ (2,134,000)	\$ (4,530,000)	\$ (4,999,000)
% Reduction		-9.50%	-20.16%	-24.58%

### Tahlequah Trestle Replacement M05104A

Scenario A Budget 8,459,000		Recommended YOE \$ 5,407,000	Change -3,052,000 -36%	
Ferries Estimate (in 2008 \$) SUMMARY (Basis for Capital Cost Summary Table) w/Markups		Ferries Guideline % Multipliers	WSDOT Guideline % Multipliers	Recalculation % Multipliers
Construction	\$ 3,217,361	\$ 2,924,874	\$ 2,924,874	\$ 2,924,874
Mobilization	10.00% included above	10.00% \$ 292,487	9.50% \$ 277,863	9.00% \$ 263,239
Construction (Including Mobilization)	\$ 3,217,361	\$ 3,217,361	\$ 3,202,737	\$ 3,188,112
Design Allowance	30.00% \$ 965,208	20.00% \$ 643,472	20.00% \$ 640,547	20.00% \$ 637,622
<b>Subtotal</b>	<b>\$ 4,182,569</b>	<b>\$ 3,860,833</b>	<b>\$ 3,843,284</b>	<b>\$ 3,825,735</b>
Sales Tax	8.60% \$ 359,701	8.60% \$ 332,032	8.60% \$ 330,522	8.60% \$ 329,013
<b>Subtotal</b>	<b>\$ 4,542,270</b>	<b>\$ 4,192,865</b>	<b>\$ 4,173,806</b>	<b>\$ 4,154,748</b>
Construction Engineering	11.00% \$ 499,650	11.00% \$ 461,215	8.00% \$ 333,905	8.00% \$ 306,059
Construction Contingency	5.00% \$ 227,114	4.00% \$ 167,715	4.00% \$ 166,952	4.00% \$ 153,029
Operations Construction Support	\$ 25,000	\$ 25,000	\$ 25,000	\$ -
Additional Operational Costs	\$ 300,000	\$ 300,000	\$ 300,000	\$ -
<b>Construction Total</b>	<b>\$ 5,594,034</b>	<b>\$ 5,146,795</b>	<b>\$ 4,999,663</b>	<b>\$ 4,613,836</b>
Design Engineering	22.00% \$ 1,230,687	22.00% \$ 1,132,295	12.00% \$ 599,960	12.00% \$ 459,088
OPS Design Support	\$ 9,500	\$ 9,500	\$ 9,500	\$ 9,500 (direct const only)
<b>Design Total</b>	<b>\$ 1,240,187</b>	<b>\$ 1,141,795</b>	<b>\$ 609,460</b>	<b>\$ 459,088</b>
Pre-Design Study (part of Design engineering above)	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000
Other (ROW, etc)	\$ -	\$ -	\$ -	\$ 334,500
Operations Construction Support	\$ -	\$ -	\$ -	\$ 25,000
Additional Operations Costs (during Construction)	\$ -	\$ -	\$ -	\$ 300,000
OPS Design Support	\$ -	\$ -	\$ -	\$ 9,500
Escalation Factor	0.00%	0.00%	0.00%	0.00%
Escalation to Const. Midpoint	\$ -	\$ -	\$ -	\$ -
<b>Total</b>	<b>\$ 6,834,221</b>	<b>\$ 6,288,589</b>	<b>\$ 5,609,123</b>	<b>\$ 5,407,424</b>
Total (rounded)	\$ 6,834,000	\$ 6,289,000	\$ 5,609,000	\$ 5,407,000
Cost Reduction	\$ -	\$ (545,000)	\$ (1,225,000)	\$ (1,427,000)
% Reduction	\$ -	-7.97%	-17.93%	-22.69%

### Vashon Trestle Preservation M05204A

Scenario A Budget 52,526,000		Recommended YOY \$	41,022,422	Change -11,503,578	-22%			
Ferries Estimate (in 2008 \$)		Ferries Guideline % Multipliers		WSDOT Guideline % Multipliers		Recalculation % Multipliers		
SUMMARY (Basis for Capital Cost Summary Table) w/Markups								
Construction	\$	26,620,237	\$	24,200,215	\$	24,200,215	\$	22,023,322
Mobilization	10.00%	included above	10.00%	\$ 2,420,022	8.50%	\$ 2,057,018	8.00%	\$ 1,761,866
Construction (Including Mobilization)	\$	26,620,237	\$	26,620,237	\$	26,257,234	\$	23,785,187
Design Allowance	20.00%	\$ 5,324,047	20.00%	\$ 5,324,047	20.00%	\$ 5,251,447	20.00%	\$ 4,757,037
<b>Subtotal</b>	<b>\$</b>	<b>31,944,284</b>	<b>\$</b>	<b>31,944,284</b>	<b>\$</b>	<b>31,508,681</b>	<b>\$</b>	<b>28,542,225</b>
Sales Tax	8.60%	\$ 2,747,208	8.60%	\$ 2,747,208	8.60%	\$ 2,709,747	8.60%	\$ 2,454,631
<b>Subtotal</b>	<b>\$</b>	<b>34,691,493</b>	<b>\$</b>	<b>34,691,493</b>	<b>\$</b>	<b>34,218,427</b>	<b>\$</b>	<b>30,996,856</b>
Construction Engineering	11.00%	\$ 3,816,064	11.00%	\$ 3,816,064	8.00%	\$ 2,737,474	8.00%	\$ 2,283,378
Construction Contingency	5.00%	\$ 1,734,575	4.00%	\$ 1,387,660	4.00%	\$ 1,368,737	4.00%	\$ 1,141,689
Operations Construction Support								
OPS Construction Support		\$ 20,000		\$ 20,000		\$ 20,000		
Temp Buildings		\$ 252,000		\$ 252,000		\$ 252,000		\$ 252,000
Art (0.5% of terminal Bldg Costs)		\$ 16,086		\$ 16,086		\$ 16,086		\$ 34,353
<b>Construction Total</b>	<b>\$</b>	<b>40,530,218</b>	<b>\$</b>	<b>39,895,217</b>	<b>\$</b>	<b>38,324,638</b>	<b>\$</b>	<b>34,421,923</b>
Design Engineering	15.00%	\$ 6,079,533	16.00%	\$ 6,383,235	11.00%	\$ 4,215,710	11.00%	\$ 3,139,645
OPS Design Support		\$ 27,500		\$ 27,500		\$ 27,500		\$ 27,500
								(direct const only)
<b>Design Total</b>	<b>\$</b>	<b>6,107,033</b>	<b>\$</b>	<b>6,410,735</b>	<b>\$</b>	<b>4,243,210</b>	<b>\$</b>	<b>3,139,645</b>
Pre-Design Study (in Design eng.)	\$	250,000	\$	250,000	\$	250,000	\$	250,000
Other (ROW, etc)	\$	-	\$	-	\$	-	\$	47,500
Operations Construction Support	\$	-	\$	-	\$	-	\$	20,000
Additional Operations Costs (during Construction)								-
OPS Design Support								27,500
Escalation Factor	0.00%		0.00%		0.00%		0.00%	
Escalation to Const. Midpoint	\$	-	\$	-	\$	-	\$	-
<b>Total</b>	<b>\$</b>	<b>46,637,250</b>	<b>\$</b>	<b>46,305,951</b>	<b>\$</b>	<b>42,567,849</b>	<b>\$</b>	<b>37,609,068</b>
<b>Total (rounded)</b>	<b>\$</b>	<b>46,637,000</b>	<b>\$</b>	<b>46,306,000</b>	<b>\$</b>	<b>42,568,000</b>	<b>\$</b>	<b>37,609,000</b>
<b>Cost Reduction</b>			<b>\$</b>	<b>(331,000)</b>	<b>\$</b>	<b>(4,069,000)</b>	<b>\$</b>	<b>(9,028,000)</b>
<b>% Reduction</b>				<b>-0.71%</b>		<b>-8.72%</b>		<b>-21.21%</b>

Suggested Adjustments Ferries Base Cost Estimate				
Ferries Estimate				
Trestle Area Demolition	sf	(51,000)	\$	50.00 \$ (2,550,000)
Building Trestle Area Demolition	sf	(4,838)	\$	50.00 \$ (241,900)
Disposal of Creosote Timber	ton	(3,106)	\$	250.00 \$ (776,500)
Trestle Area Construction	sf	(51,000)	\$	315.00 \$ (16,065,000)
Building Trestle Area Construction	sf	(3,200)	\$	315.00 \$ (1,008,000)
Terminal Building Construction	sf	(2,664)	\$	59.00 \$ (157,176)
Per LCCM and Inspection Reports				
Trestle Area Demolition	sf	43,320	\$	50.00 \$ 2,166,000
Building Trestle Area Demolition	sf	4,940	\$	50.00 \$ 247,000
Disposal of Creosote Timber	ton	2,684	\$	250.00 \$ 671,118
Trestle Area Construction	sf	43,320	\$	315.00 \$ 13,645,800
Sidewalk and support	sf	4,940	\$	315.00 \$ 1,556,100
Terminal Building Construction	sf	2,664	\$	126.00 \$ 335,664
Base Estimate reduction				\$ (2,176,894)
Ferries Estimate				\$ 24,200,215
Adjusted Base estimate				\$ 22,023,322

### Security Improvement Projects

Terminal	WSF Scoping Document (2008 \$)	Scenario A (YOE \$)	Recommended (YOE \$)*
Anacortes	131,557	137,000	484,000
Bainbridge	131,557	137,000	44,000
Bremerton	131,557	137,000	43,000
Clinton	122,076	127,000	43,000
Edmonds	122,076	127,000	43,000
Fauntleroy	122,076	127,000	42,000
Friday Harbor	533,340	553,000	438,000
Keystone	487,117	505,000	427,000
Kingston	122,076	127,000	42,000
Lopez	48,593	51,000	25,000
Mukilteo	122,076	127,000	42,000
Orcas	48,593	51,000	26,000
Point Defiance	418,376	434,000	360,000
Port Townsend	555,859	576,000	31,000
Seattle	135,113	140,000	59,000
Shaw	48,593	51,000	25,000
Southworth	122,076	127,000	42,000
Tahlequah	137,483	142,000	175,000
Vashon	122,076	127,000	32,000
<b>Total</b>	<b>3,662,268</b>	<b>3,803,000</b>	<b>2,423,000</b>

\* Based on Ferries' revisions.