

# Joint Transportation Committee

## Systemwide Capital Projects Final Report Washington State Department of Transportation Ferries Division Financing Study II



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

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**Joint Transportation Committee**

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## Executive Summary

The 2007 Legislature directed:

- The Joint Transportation Committee (JTC) to review the Washington State Department of Transportation (WSDOT) Ferries Division (Ferries) systemwide capital projects;
- Ferries to allocate systemwide and administrative program costs to specific capital projects using a cost allocation plan developed by the department (ESHB 2358 §9(3)); and
- The JTC to review Ferries' proposed cost allocation plan (ESHB 1094 §225(8)(d) and §205(1)(b)(iv)).

These directions are an effort by the legislature to improve the transparency of systemwide and administrative costs in the capital program and to ensure that costs are fully allocated for economic analysis purposes.

This study reports on the above efforts and will inform the legislatively directed long-range funding study being conducted by the Washington State Transportation Commission (WSTC) and the Joint Legislative Review and Audit Committee (JLARC) audit of the cost allocation methodology for FY 09 (ESHB 2358 §15 (3)).

### **A. Scope of Report**

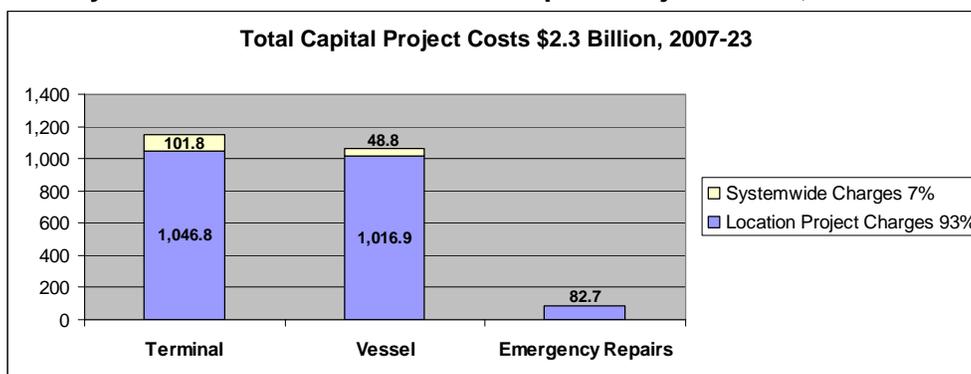
This study includes the review of Ferries' systemwide capital projects mandated by the Legislature. It also evaluates Ferries' proposed methodology for a cost allocation system.

The Ferries' capital budget is divided into a terminal program, a vessel program, and emergency repairs. This report looks at those projects identified as systemwide projects in the terminal and vessel capital programs. The remaining capital budget is spent on individual terminal, vessel, or emergency repair projects, identified as location project charges in the figure below. In the 2007-23 16-year financial plan, systemwide projects are \$150.6 million or 7 percent of the \$2.3 billion capital project plan,<sup>1</sup> as shown below.

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<sup>1</sup> The 2007-23 financial capital project budget does not include \$65.6 million in savings from staff vacancies and decreased on-site consultant use included in the financial plan.

## Systemwide Costs within Total Capital Project Costs, 2007-23



**Sources.** The consultants reviewed the 2005-07 biennium actual expenses, the first six months of the 2007-09 biennium expenses, and the budget and financial plan from the 2008 legislative session. The consultants also reviewed the *Ferries Implementation of ESHB 2358 Laws of 2007 Relating to a Capital Cost Allocation Plan July 23, 2007* and *WSDOT Ferries Division Proposed WSF Capital Cost Allocation System April 15, 2008*.

### **B. Systemwide Projects**

This report's review of systemwide projects provides a baseline for evaluation of Ferries' cost allocation methodology.

**Types of systemwide projects.** Systemwide projects fall into two categories:

- Projects that are spent directly at individual terminal or vessel locations; and
- System support projects that are not attributable to individual locations.

In the 2007-23 16-year financial plan, 40 percent or \$60.9 million of systemwide project planned expenditures are for location projects and 60 percent or \$89.7 million are for support projects.

**Recommendations that affect the systemwide projects.** Recommendations from previous JTC ferry financing studies affecting systemwide projects include:

- Implementing the provisions of ESHB 2358, particularly the provisions on defining what is a capital expense;
- Reviewing the asset management system being developed for terminals for application to vessels;
- Reviewing charges by operating staff to the terminal operations construction support project; and
- Reviewing the Terminal Engineering Division's use of the Primavera scheduling system and on-site consultants.

WSDOT has provided a status report on the implementation of these recommendations in this report.

### **C. Cost Allocation Methodology**

**Ferries' proposed cost allocation methodology.** Ferries proposes to implement the provisions of ESHB 2358 and to distribute systemwide and administrative costs by:

- Establishing an improvement and a preservation project for each vessel and terminal;
- Eliminating systemwide projects;
- Budgeting costs now included in systemwide location projects in vessel and terminal preservation or improvement projects—\$60.9 million in the 2007-23 financial plan;
- Allocating costs now included in systemwide support projects to vessel and terminal preservation or improvement projects—\$89.7 million in the 2007-23 financial plan – and identifying those costs as “indirect costs”;
- Allocating administrative costs now captured in an administrative work order<sup>2</sup> to vessel and terminal preservation or improvement projects and identifying those costs as “administrative costs”;
- Zero-basing (i.e. justifying the entire budget without assuming a base budget) and separately identifying in decision packages (as defined by the Office of Financial Management budget instructions) administrative and indirect cost budgets for the biennium and for the 16-year financial plan;
- Basing project level indirect and administrative cost budgets on the size of the biennial project budget and separately identifying these costs within project budgets;
- Allocating actual indirect and administrative costs to projects based on the biennial project budget;
- Monitoring and reporting at the project and the program level indirect and administrative budgets and expenses; and
- Recommending benchmark indirect and administrative costs for OFM approval.<sup>3</sup>

**Consultant findings on cost allocation methodology.** The consultants believe that the general cost allocation methodology proposed by WSDOT/Ferries is reasonable and meets legislative requirements. When it is implemented, the cost allocation methodology will meet the Legislature’s desire for more transparency with regard to administrative and indirect costs. It will also provide a better basis for economic analysis and should allow for improved Ferries management of its capital program and expenses.

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<sup>2</sup> Ferries administrative work order expenses are reviewed in the *Capital Program Staffing and Administration WSDOT Ferries Division Financing Study II Final Report*, April 2008.

<sup>3</sup> Benchmarking or establishing performance measures for administrative costs based on a percentage of total capital costs was a recommendation of the *Capital Program Staffing and Administration WSDOT Ferries Division Financing Study II Final Report*, April 2008.

## **Section I. Purpose and Scope of Review**

### ***A. Purpose***

The 2007 Legislature directed the JTC to review WSDOT/Ferries' systemwide capital projects (ESHB 1094 §205(1)(b)(iii)).

ESHB 2358 adopted by the legislature in 2007 directs Ferries to allocate "systemwide and administrative capital program costs to specific capital projects using a cost allocation plan developed by the department. Systemwide and administrative costs shall be identifiable" (ESHB 2358 §9(3)). The legislature also directed Ferries to develop a cost allocation plan based on the legislative direction in ESHB 2358 and directed the JTC to review the proposed plan (ESHB 1094 §225(8) (d) and §205(1) (b) (iv)).

The Legislature's goal is to improve the transparency of systemwide and administrative costs in the capital program and to ensure that costs are fully allocated for economic analysis purposes.

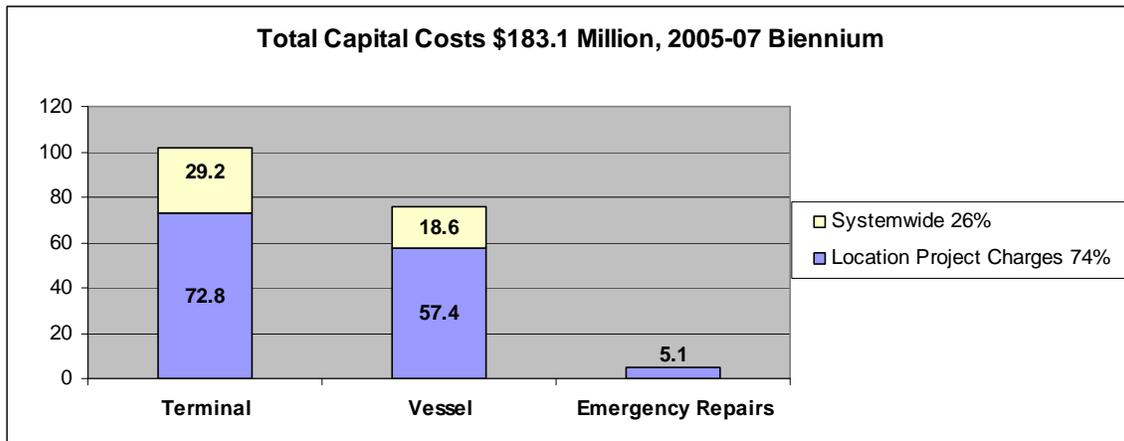
This study will provide information on systemwide projects for use in the long-range financing studies being conducted, at the legislature's direction, by the JTC and the Washington State Transportation Commission (ESHB 1094 §206(2) and §205 (1)(c)(ii)).

The study will also form a basis for an audit, required by the legislature, of the implementation of the cost allocation methodology based on FY 09 expenditures by the Joint Legislative Audit and Review Committee (JLARC) (ESHB 2358 §15). It is important that the audit be based on a shared understanding of the cost allocation methodology between the legislature and WSDOT/Ferries.

### ***B. Scope of Report***

The Ferries' capital budget is divided into a terminal program, a vessel program, and emergency repairs. This report looks at those projects identified as systemwide projects in the terminal and vessel capital programs. In the 2005-07 biennium, these systemwide projects accounted for \$47.8 million or 26 percent of the \$183.1 million in capital expenditures during the biennium. The remaining capital budget was spent on individual terminal, vessel, or emergency repairs projects, identified as location project charges in the figure below.

**Figure 1.  
Systemwide Costs within Total Capital Costs, 2005-07 Biennium**

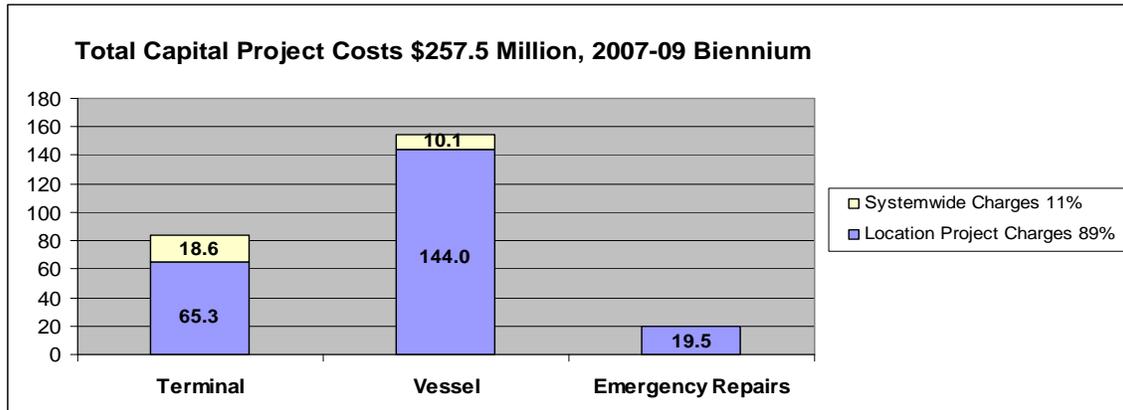


In the 2007-09 biennium capital budget, systemwide projects are \$28.7 million or 11 percent of the total capital project budget of \$257.5 million (excluding \$4.4 million in savings from staff vacancies and decreased on-site consultant use), and in the 2007-23 financial plan they are \$150.6 million or 7 percent of a total capital project budget of \$2.3 billion (excluding \$65.6 million in savings from staff vacancies and decreased on-site consultant use).

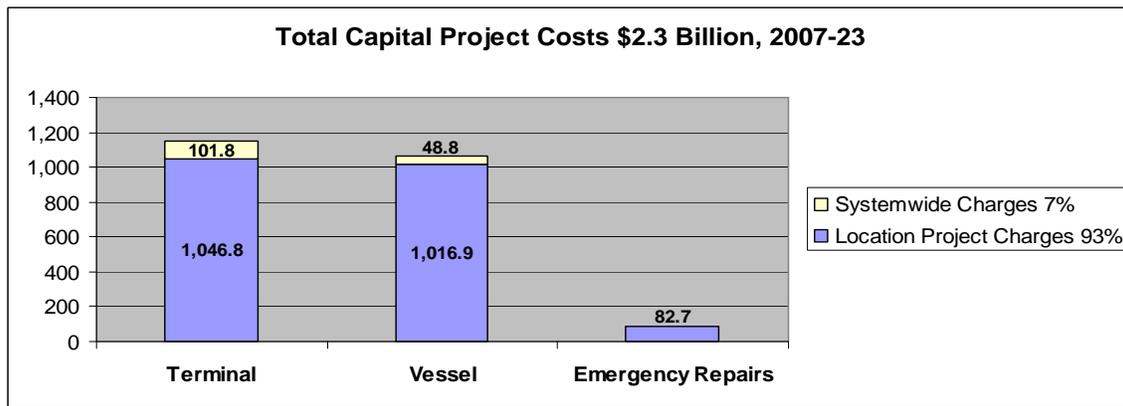
The 2007-09 biennium capital budget and associated 2007-23 16-year financial plan reduce the percentage of the capital program attributable to systemwide projects. This reduction is the result of:

- Increases in the capital budget for new vessel construction and emergency repairs;
- Distribution of one large terminal systemwide project, “catch-up preservation”, to individual terminal projects;
- Phasing out of federal grant supported projects for physical security infrastructure improvements; and
- Elimination of some small systemwide projects.

**Figure 2.**  
**Systemwide Costs as Percentage of Project Capital Costs, 2007-09 Biennium**



**Figure 3.**  
**Systemwide Costs as Percentage of Project Capital Costs, 2007-23**



**C. Sources and Methods**

Ferries has cooperated fully in the development of this report. The information that the consultants analyzed for this report includes Ferries’ capital program expenditures data (CPED) construction variance reports for the 2005-07 and 2007-09 biennia.

In addition, the consultants reviewed the 2008 capital project list from the Transportation Executive Information System (TEIS); *Ferries Implementation of ESHB 2358 Laws of 2007 Relating to a Capital Cost Allocation Plan*, July 23, 2007; and *WSDOT Ferries Division Proposed WSF Capital Cost Allocation System* April 15, 2008.

The consultants also used information received for three prior reports: (i) *Washington State Ferries Financing Study Final Report*, January 2007, *Appendix 3 Capital Program Prioritization and Terminal and Repair Facility Capital Projects Review*; (ii) *Auto-Passenger Vessel Preservation and Replacement Final Report of WSDOT Ferries Division Financing Study II*, January 2008; and (iii) *Capital Program Staffing and Administration Cost Final Report of WSDOT Ferries Division Financing Study II*, April 2008.

## Section II. Systemwide Projects

This section reviews Ferries' 13 vessel systemwide projects and 22 terminal systemwide projects included in the 2007-23 16-year plan, and:

- Identifies which projects are work at individual terminals or vessels (location systemwide projects) and which are systemwide support projects, with costs that are not attributable to individual terminals or vessels; and
- Summarizes recommendations from previous ferry financing studies regarding systemwide projects.

### A. Overview

In the 2005-07 biennium there were 18 vessel systemwide projects and 27 terminal systemwide projects with total expenditures for the biennium of \$47.8 million. In the 2007-09 biennium there are 13 vessel systemwide projects and 22 terminal systemwide projects with budgets of \$28.7 million for the biennium and planned expenditures of \$150.6 million in the 2007-23 16-year financial plan. See the table below for a list of the systemwide projects and costs.

Appendix A provides a detailed description of expenses in the 2005-07 biennium for each systemwide vessel project.<sup>4</sup> Appendix B provides similar information for the terminal systemwide projects.<sup>5</sup>

**Table 1.**  
**Systemwide Capital Projects**  
(\$ millions)

PIN	Project Title	\$ Actual	\$ Budget	\$ Financial Plan
		05-07	07-09	07-23
<b>Vessel Systemwide Projects</b>				
955560K	Communication/Navigation/Life Saving	3.3	3.1	27.3
955540H	Vessel Planning/Design	1.0	1.0	8.9
985550B	Vessel Projects	1.6	0.5	5.1
955570B	Vessel Physical Security Infrastructure	7.2	2.8	2.8
955560M	Vessel Communications (IT)	1.6	0.5	1.6
999976V	Vessel Work Orders by Auditor	0.1	0.1	0.8
955570D	Vessel Physical Security Planning	0.3	0.6	0.6
955540L	Vessel Environmental Studies	0.1	0.3	0.5
955570C	Vessel Safety Mgmt Enhancements	0.1	0.4	0.4

<sup>4</sup> Appendix A includes an excerpt from the *Auto-Passenger Vessel Preservation and Replacement Final Report*, March 2008, pp. 50-53, discussing systemwide vessel projects, along with information on systemwide support projects reviewed in the *Capital Program Staffing and Administration Final Report* April 2008, with regard to the terminal operations construction support and other systemwide projects with administrative expenses.

<sup>5</sup> Appendix B includes information on systemwide support projects reviewed in the *Capital Program Staffing and Administration Final Report* April 2008, with regard to the terminal operations construction support project.

PIN	Project Title	\$ Actual	\$ Budget	\$ Financial Plan
		05-07	07-09	07-23
999976W	Vessel Noise Control (Abatement)	0.5	0.3	0.3
955540M	Vessel Electrical Special Projects	0.2	0.2	0.2
955540I	Vessel Life Cycle Cost Model Update	0.1	0.2	0.2
955560N	Wireless Over Water	0.5	0.1	0.1
955540K	Vessel As-built Drawings Updates	0.6	0.0	0.0
985550E	Vessel Contracts Using CAPS	0.5	0.0	0.0
955570A	Accessibility Modifications	0.5	0.0	0.0
955560L	Wireless Connections	0.2	0.0	0.0
955560P	Wireless/Ferry Customers	0.1	0.0	0.0
<b>Sub-total Vessels</b>		<b>18.6</b>	<b>10.1</b>	<b>48.8</b>
<b>Terminal Systemwide Projects</b>				
989930I	Terminal Project Controls*		2.6	24.7
989930H	Terminal Regulatory Compliance*		2.0	18.8
977731A	Planning and Special Studies	1.5	1.8	15.5
966620E	Operations Construction Support	1.7	1.4	13.3
989920X	Misc. Terminal Projects*	5.7	0.8	8.1
989930B	Terminal Physical Security Infrastructure	4.8	4.5	4.5
999940C	Terminal Planning/Design	0.1	0.3	3.4
966640F	Terminal Design Standards	0.3	0.2	2.3
977740A	Capital Program Dev. for WSF Business Initiatives	0.1	0.3	2.2
966640Q	Point of Sale Repl/Regional Fare	4.4	1.8	1.8
966640I	Revenue Control System	0.4	0.2	1.4
966620D	ADA Support	0.1	0.1	0.9
999976T	Terminal Work Orders by Auditors	0.2	0.1	0.9
966640D	Aerial Photos	0.0	0.1	0.8
989930D	SMS Enhancements	0.1	0.8	0.8
989930G	Terminal Physical Security Planning	0.1	0.6	0.6
966620C	Terminal Toxic Waste Disposal	0.0	0.1	0.5
999920A	Steel Piling Inventory Account	0.1	0.1	0.5
989920K	Movable Bridge Modifications	0.1	0.4	0.4
966650C	Terminal Communications IT	0.0	0.2	0.2
966650A	Terminal Phone System Replacement	0.2	0.1	0.1
989930A	Server Infrastructure	0.2	0.1	0.1
966650B	WSF Staff Relocation	0.3	0.0	0.0
989930E	Emergency Management Communications	0.2	0.0	0.0
900030C	Sidney Terminal Cruise Ship	0.1	0.0	0.0
989930J	WSDOT Project Controls Terminals	0.1	0.0	0.0
989930F	Customer Travel Inquiry	0.1	0.0	0.0
999940D	Catch-Up Preservation	8.1	0.0	0.0
989920M	X5 Terminal Reimbursable Contracts Using CAPS	0.2	0.0	0.0
<b>Sub-total Terminals</b>		<b>29.2</b>	<b>18.6</b>	<b>101.8</b>
<b>Total Systemwide Projects</b>		<b>47.8</b>	<b>28.7</b>	<b>150.6</b>
* In the 2007-09 biennium, the miscellaneous terminal projects PIN was divided into three PINs: miscellaneous terminal projects, project controls, and regulatory compliance.				

## **B. Systemwide Project Description**

Systemwide projects fall into two categories:

- *Location projects:* Projects that are spent directly at individual terminal or vessel locations; and
- *Support projects:* Projects that are not directly attributable to individual vessels or terminals.

### **1. Location Systemwide Projects**

Systemwide projects have been used by Ferries to track specialized investments. Location systemwide projects incur costs that are directly attributable to individual vessels or terminals, but are accumulated into a separate project. For example, physical security infrastructure projects occur at individual terminals and vessels but are managed as a single project. In the 2007-23 16-year financial plan, as shown in Table 2 below, \$60.9 million or 40 percent of the planned systemwide expenditures are for location projects.

### **2. Systemwide Support Projects**

Systemwide support projects incur costs that are not directly attributable to individual vessels or terminals. As shown in Table 2 below, in the 2007-23 16-year financial plan, \$89.7 million or 60 percent of the planned systemwide expenditures are for support projects.

**Table 2.**  
**Systemwide Projects – Location and Support**  
(\$ millions)

		\$ Plan	%	Description of Expenditures 2005-07 Biennium and 2007-09 Biennium (through 12/31/07)
PIN	Project Title	07-23		
<b>VESSEL SYSTEMWIDE PROJECTS</b>				
	<b>Location Vessel Projects</b>			
955560K	Communication/Navigation/Life Saving	27.3		Radar purchase and install, navigation equipment, radio systems, satellite compass systems
985550B	Vessel Projects	5.1		Purchase of spare parts, fuel monitoring studies, miscellaneous work by state employees on vessels
955570B	Vessel Physical Security Infrastructure	2.8		Vessel security improvements, integrated terminal and vessel security improvements. Federal funds.
955560M	Vessel Communications (IT)	1.6		Installation of local area networks and cell phone support for vessels
999976W	Vessel Noise Control (Abatement)	0.3		Noise abatement on vessels
955560N	Wireless Over Water	0.1		Acquisition of high speed video data
	<b>Sub-total Vessel Systemwide Location Projects</b>	<b>37.2</b>	<b>76% of Vessel Systemwide Project Costs</b>	
	<b>Vessel Systemwide Support Projects</b>			
955540H	Vessel Planning/Design	8.9		Vessel engineering planning and management, fuel conservation studies, autocad education, cavitation study
999976V	Vessel Work Orders by Auditor	0.8		Ferries internal auditors, response to external auditors, and payment for audited underpayment settlements
955570D	Vessel Physical Security Planning	0.6		Ferry Partnership Program, Ferries security plan development, monitoring equipment
955540L	Vessel Environmental Studies	0.5		Fuel heating oil study, engine use study, vessel catalytic converter use study
955570C	Vessel Safety Mgmt Enhancements	0.4		Consultant environmental program manager
955540M	Vessel Electrical Special Projects	0.2		Vessel line drawings and vessel antenna inventory and optimization program
955540I	Vessel Life Cycle Cost Model Update	0.2		Staff for vessel life cycle cost model
	<b>Sub-total Vessel Systemwide Support Projects</b>	<b>11.6</b>	<b>24% of Vessel Systemwide Project Costs</b>	
	<b>Sub-total Vessels</b>	<b>48.8</b>		
<b>TERMINAL SYSTEMWIDE PROJECTS</b>				
	<b>Location Terminal Projects</b>			
966620E	Operations Construction Support	13.3		Project manager, on-site consultants, terminal labor for project design and construction support, EFS support
989930B	Terminal Physical Security Infrastructure	4.5		Terminal security improvements, integrated terminal and vessel security
966640Q	Point of Sale Replacement/Regional Fare	1.8		New EFS (Electronic Fare System), terminal generators, regional fare collection project, post EFS structure work
966640I	Revenue Control System	1.4		Physical security infrastructure at terminals, point of sale system enhancements
966620D	ADA (Americans with Disabilities Act) Support	0.9		ADA portion of terminal restroom project
999920A	Steel Piling Inventory Account	0.5		Pipe procurement

		\$ Plan	%	Description of Expenditures 2005-07 Biennium and 2007-09 Biennium (through 12/31/07)
PIN	Project Title	07-23		
966620C	Terminal Toxic Waste Disposal	0.5		No expenditures in 2005-07 biennium or through Dec. 31, 2007 for 2007-09
989920K	Movable Bridge Modifications	0.4		Infrared remote controls, bridge modifications at terminals
966650C	Terminal Communications IT	0.2		No expenditures in 2005-07 biennium or through Dec. 31, 2007 for 2007-09
989930A	Server Infrastructure	0.1		HVAC terminal upgrades for servers
966650A	Terminal Phone System Replacement	0.1		Construction
	<b>Sub-total Terminal Systemwide Location Projects</b>	<b>23.7</b>		<b>23% of Terminal Systemwide Project Costs</b>
	<b>Terminal Systemwide Support Projects</b>			
989930I	Terminal Project Controls	24.7		Life cycle cost model update, asset management, project controls staff and consultants
989920X	Misc. Terminal Projects*	8.1		Primavera scheduling, library, property management consultants, engineering studies
989930D	SMS (Security Management System) Enhancements	0.8		Lead SMS coordinator
977731A	Planning and Special Studies	15.5		Grants management, long-range plan, travel demand model and survey, ridership forecasts
989930G	Terminal Physical Security Planning	0.6		Ferry Partnership program, security assessments and plan, ferry passenger partnership program
999976T	Terminal Work Orders by Auditors	0.9		Ferries internal auditors, response to external auditors, and payment for audited underpayment settlements
966640F	Terminal Design Standards	2.3		Development of terminal design standards, Ferries finance legislation response
999940C	Terminal Planning/Design	3.4		Derelict vessels removal, maintenance facility, optic network upgrade, vessel positive restraint study
977740A	Capital Program Dev. for WSF Business Initiatives	2.2		Concessions consultant, property appraisals
989930H	Terminal Regulatory Compliance	18.8		Basemap updates, environmental permitting, structural, mechanical and electrical inspections, scour monitoring
966640D	Aerial Photos	0.8		Aerial photos
	<b>Sub-total Terminal Systemwide Support Projects</b>	<b>78.1</b>		<b>77% of Terminal Systemwide Project Costs</b>
	<b>Sub-Total Terminals</b>	<b>101.8</b>		
	<b>Total Systemwide Projects</b>	<b>150.6</b>		
	<b>Total Location Projects</b>	<b>60.9</b>	<b>40%</b>	
	<b>Total Systemwide Support Projects</b>	<b>89.7</b>	<b>60%</b>	
*Ferries identifies this project as a terminal location project. Based on the expenses in the 2007-09 biennium this project has been identified by the consultants as a support project.				

## **C. Summary of Systemwide Project Recommendations from Previous Studies**

This section reviews the recommendations that have been made in previous Ferry Financing studies that relate to systemwide projects.

### **1. Vessel Systemwide Projects**

The *Auto-Passenger Vessel Preservation and Replacement Final Report, Ferries Division of Washington State Department of Transportation Financing Study II*, January 2008 included findings and recommendations related to vessel systemwide projects.

#### **a. Implement the Provisions of ESHB 2358**

Noting that the capital expenditures in the 2007-23 16-year plan predate the adoption of ESHB 2358, the *Vessel Preservation and Replacement* report recommended that some of the systemwide expenditures be reviewed for compliance with the legislation. ESHB 2358 requires that capital funds be spent only on capital items as defined by OFM. Questions raised in the report that relate to the definition of capital include:

- *Systemwide Vessel Project (985550B)*: Should purchase of spare parts be a capital expense?
- *Vessel Physical Security Planning (955570D)*: Should the ferry partnership program expenses be a capital expense?
- *Vessel Environmental Studies (955540L)*: Should the costs of a consultant environmental program manger be a capital expense?

**WSDOT Response:** All activities in the capital program will be reviewed during the 07-09 biennium and each future biennia to ensure compliance with the Office of Financial Management definitions for capital expenditures.

#### **b. Asset Management**

The Terminal Project Controls project (989930I) includes funding for the development of an asset management system for terminals. The *Vessel Preservation and Replacement Final Report* recommended considering the extension of the asset management system, if one is recommended by Ferries, to vessels.

**WSDOT Response:** The Department will assess the asset management system application as appropriate for vessels and route planning.

## **2. Terminal Systemwide Projects**

### **a. Implement the Provisions of ESHB 2358**

As discussed in the *Washington State Ferries Financing Study Final Report*, January 2007, *Appendix 3 Capital Program Prioritization and Terminal and Repair Facility*

*Capital Projects Review*, Ferries' terminal capital program should be revised to comply with the requirements of ESHB 2358. Questions about whether systemwide project expenses are capital expenses as defined by OFM include:

- *Terminal Steel Piling Inventory Account (999920A)*: Should the piling inventory be a capital expense?
- *Terminal Regulatory Compliance (989930H)*: Should scour monitoring be a capital expense?
- *Terminal Physical Security Planning (989930G)*: Should the ferry partnership program expenses be a capital expense?
- *Safety Management System (SMS) Enhancements (989930D)*: Should the cost of a lead SMS coordinator be a capital expense?

**WSDOT Response:** All activities in the capital program will be reviewed during the 07-09 biennium and each future biennia to ensure compliance with the Office of Financial Management definitions for capital expenditures.

#### ***b. Staffing and Administration***

The *Capital Program Staffing and Administration Cost Final Report, Ferries Division of Washington State Department of Transportation Financing Study II*, April 2008, included findings and recommendations that relate to terminal systemwide projects. These include:

- *Operations Construction Support (966620E)*: Evaluate Ferries' operating budget staff charges to the project to determine whether they are appropriate capital program expenses.

**WSDOT Response:** As identified within the April, 2008 JTC Capital Program Staffing and Administration Report, we concur with the recommendation. Based on the previous report recommendation, the department evaluated the operating budget staff charges to the Terminal Operations Construction Support budget and determined that they are appropriate capital program expenses. From its inception, the intent of the Terminal Operations Construction Support budget included constructability support during design as well as field support during construction of terminal projects. This is critical in order to minimize the likelihood and magnitude of construction change orders. The operations staff in question contributed information during planning, design and construction based on their intimate operations knowledge. These contributions have proven essential in ensuring that terminal designers and construction inspectors understand the operational challenges and impacts, and have provided adequate direction and mitigation within the project contracts.

- *Miscellaneous Terminal Projects (989920X)*: Review the cost-benefits of continued use of the Primavera scheduling system for Ferries.

**WSDOT Response:** During the 07/09 biennium the Department will perform a cost-benefit analysis of the continued use of the Primavera scheduling system for Ferries.

- *On-site Consultants:* For Terminal Engineering, review the use of on-site consultants to assess potential cost reductions. Systemwide projects that included significant on-site consultant use in the 2005-07 biennium and that continued in the first six months of the 2007-09 biennium are:
  - Operations Construction Support (966620E)

**WSDOT Response:** The two primary consultant staff working under the Operations Construction Support budget are retired WSF operations staff with over 60 years of combined experience. They have extensive detailed systemwide knowledge of WSF operations that is invaluable. Currently WSF Terminal Engineering has two state employees working side by side with the ex-WSF consultants in order to train and mentor them to be able to ultimately replace the majority of the consultant need. However, the two WSF employees are still inexperienced enough that eliminating the consultant support would likely result in reduced quality within the planning, design and construction management efforts they are responsible for.

WSF suggests that the phased reduction in consultant support within this budget be allowed to occur gradually through the 2007-09 biennium and into the 2009-11 biennium. The consultant support will be particularly important during the Anacortes Terminal Building project, which is currently anticipated to be under construction during the 2009-11 biennium.

- Terminal Design Standards (966640F)

**WSDOT Response:** WSF has already taken steps to reduce the amount of consultant work under this budget. It is anticipated that through the remainder of the 2007-09 biennium, much of the remaining work will be accomplished by WSF Terminal Engineering staff, with continued consultant support in providing independent review and validation and in areas where subject matter expert input not available within current WSF staff is required.

- Miscellaneous Terminal Projects (989920X)

**WSDOT Response:** WSF has already taken steps to significantly reduce the amount of consultant work under this budget. It is anticipated that through the remainder of the 2007-09 biennium, the majority of the work will be accomplished by WSF Terminal Engineering staff, with consultant support only in areas where subject matter expert input not available within current WSF staff is required.

- Terminal Project Controls (989930I)

**WSDOT Response:** WSF has already taken steps to significantly reduce the amount of consultant work under this budget. However, since this budget includes support by long-term consultants who have become integral in supporting many areas of Terminal Engineering project controls (life cycle cost model, work and task order management, budget and change management), a carefully managed transition plan will be required. Once the transition is complete, and WSF staff has been trained on the new and updated system elements, we expect that the consultant support required will be minimal based on case-by-case specific needs.

## **Section III. Cost Allocation Plan**

In response to the directive in ESHB 2358 to allocate, but separately identify, systemwide and administrative capital program costs to specific capital projects, WSDOT and Ferries have developed a capital cost allocation plan (*Ferries Implementation of ESHB 2358, Laws of 2007 Relating to a Capital Cost Allocation Plan, July 23, 2007 and WSDOT Ferries Division Proposed WSF Capital Cost Allocation System April 15, 2008*).

This section reviews the WSDOT/Ferries cost allocation plan. The consultants find that the general cost allocation plan is reasonable and conforms to legislative direction.

### **A. Project List – Planned Approach**

Ferries plans to change its project list to conform to the requirements of ESHB 2358. The legislation's two key requirements for structuring the Ferries' project list are:

1. Conform to Office of Financial Management (OFM) definitions of improvement and preservation when identifying projects as either improvement or preservation (ESHB 2358 §3); and
2. Distribute, but separately identify, systemwide and administrative costs (ESHB 2358 §9(3)).

To meet these requirements, Ferries plans to present a capital project list that:

1. Establishes an improvement project and a preservation project for each terminal and each vessel (in past biennia Ferries has had only one project for each vessel, but has had separate improvement and preservation projects for some of its terminals); and
2. Eliminates the systemwide projects and distributes the costs currently in these projects to the individual terminal and vessel improvement and preservation projects.

### **B. Allocation of Systemwide Project Costs**

Ferries is proposing to budget the location systemwide project costs in the appropriate terminal or vessel improvement project, and to use a cost allocation methodology to allocate the systemwide support project costs.

#### **1. Systemwide Location Projects**

The location systemwide projects will have their costs directly budgeted in the appropriate terminal or vessel preservation or improvement project. As shown in Table 2, above, the total amount that these location projects will add to the vessel and terminal improvement and preservation budgets is \$60.9 million, which represents 40 percent of all systemwide project costs included in the 2007-23 16-year financial plan.

**2. Systemwide Project Support Projects**

The systemwide project support projects will be distributed to the terminal and vessel preservation and improvement projects based on the proposed cost allocation methodology. As shown in Table 2, above, the support project costs to be allocated total \$89.7 million, and represent 60 percent of all systemwide costs included in the 2007-23 16-year financial plan. Ferries will identify these costs as “indirect costs”.

**C. Administrative Costs**

ESHB 2358 requires that Ferries allocate both systemwide costs and administrative costs to projects. Administrative costs collected in an administrative work order<sup>6</sup> are currently allocated by Ferries to projects, with some of these costs allocated to systemwide projects. These costs will be identified as “administrative costs”.

**D. Cost Allocation Methodology for Indirect Costs and Administrative Costs**

Indirect and administrative costs will be distributed to groupings of projects. Ferries has identified the following nine potential project groupings.

**Table 3.  
Potential Cost Allocation Groupings**

	All	Preservation	Improvement
All	1) All projects	2) All preservation projects	3) All improvement projects
Terminal	4) All terminal projects	5) Terminal preservation projects	6) Terminal improvement projects
Vessel	7) All vessel projects	8) Vessel preservation projects	9) Vessel improvement projects

Figure 4 below shows how Ferries plans to allocate the indirect costs - currently systemwide support projects. Of the \$89.7 million total planned systemwide support projects in the 2007-23 16-year financial plan, Ferries plans to allocate \$11.6 million to vessel projects and \$78.1 million to terminal projects. Future reviewers should keep this change in mind when comparing costs to those in prior years.

<sup>6</sup> See *Capital Program Staffing and Administration Cost, WSDOT Ferries Division Financing Study II Final Report*, April 2008, for a review of administrative work order costs.

**Figure 4.  
Proposed Allocation of Systemwide Support to Project Groupings,  
2007-23 Plan**

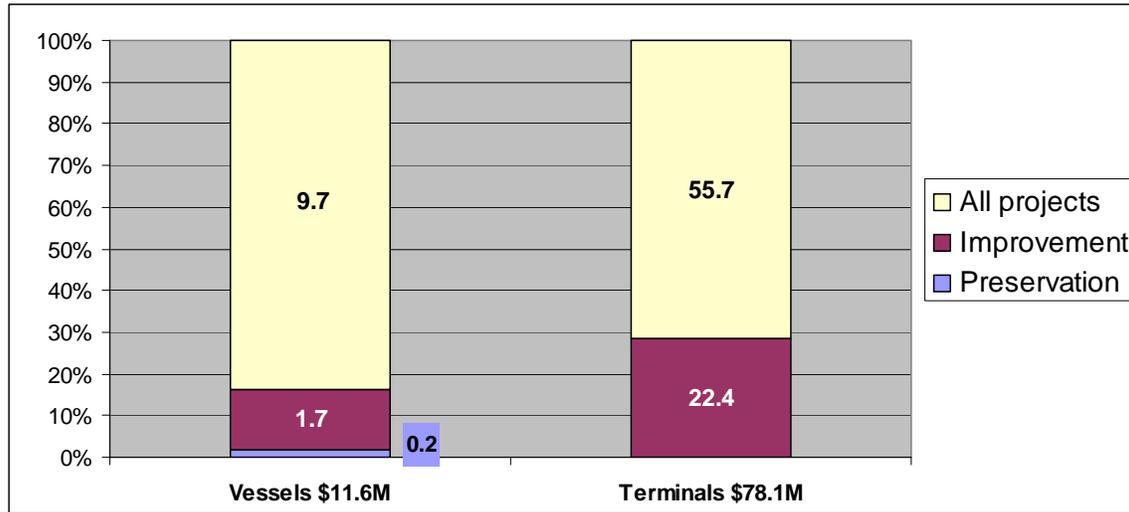


Table 4 below shows the detail of the proposed allocation of indirect costs from current systemwide support projects.

**Table 4.  
Detail of Proposed Allocation of Systemwide Support Projects/Indirect Costs  
to Project Groupings**  
(\$ millions)

PIN	Project Title	\$ Plan 07-23		Distribution
<b>Vessel Systemwide Support Projects</b>				
955540M	Vessel Electrical Special Projects	0.2		Vessel improvement projects
955570C	Vessel Safety Mgmt Enhancements	0.4		Vessel improvement projects
955540L	Vessel Environmental Studies	0.5		Vessel improvement projects
955570D	Vessel Physical Security Planning	0.6		Vessel improvement projects
<b>Sub-total Distributed to Vessel Improvement Projects</b>		<b>1.7</b>	<b>15%</b>	<b>Of vessel allocated costs</b>
955540I	Vessel Life Cycle Cost Model Update	0.2		Vessel preservation projects
<b>Sub-total Distributed to Vessel Preservation Projects</b>		<b>0.2</b>	<b>1%</b>	<b>Of vessel allocated costs</b>
999976V	Vessel Work Orders by Auditor	0.8		All vessel projects
955540H	Vessel Planning/Design	8.9		All vessel projects
<b>Sub-total Distributed to All Vessel Projects</b>		<b>9.7</b>	<b>84%</b>	<b>Of vessel allocated costs</b>
<b>Sub-total Vessel Systemwide Support Projects</b>		<b>11.6</b>		
<b>Terminal Systemwide Support Projects</b>				
989930G	Terminal Physical Security Planning	0.6		Terminal improvement projects
989930D	SMS Enhancements	0.8		Terminal improvement projects
977740A	Capital Program Dev. for WSF Business Initiatives	2.2		Terminal improvement projects
989930H	Terminal Regulatory Compliance	18.8		Terminal improvement projects
<b>Sub-total Distributed to Terminal Improvement Projects</b>		<b>22.4</b>	<b>29%</b>	<b>Of terminal allocated costs</b>
966640D	Aerial Photos	0.8		All terminal projects

PIN	Project Title	\$ Plan 07-23	Distribution	
999976T	Terminal Work Orders by Auditors	0.9	All terminal projects	
966640F	Terminal Design Standards	2.3	All terminal projects	
999940C	Terminal Planning/Design	3.4	All terminal projects	
989920X	Misc. Terminal Projects*	8.1	All terminal projects	
977731A	Planning and Special Studies	15.5	All terminal projects	
989930I	Terminal Project Controls	24.7	All terminal projects	
<b>Sub-total Distributed to All Terminal Projects</b>		<b>55.7</b>	<b>71%</b>	<b>Of terminal allocated costs</b>
<i>Sub-total Terminal Systemwide Support Projects</i>		<i>78.1</i>		
<b>Total Systemwide Support Projects</b>		<b>89.7</b>		
*Ferries did not include this as a distributed project. The consultants have assumed that costs would be distributed across all terminal projects given the nature of the FY 07-09 expenses to date.				

### **E. Cost Allocation Method**

Ferries method of allocating administrative and indirect costs includes the following elements:

#### **1. Developing Zero-Based Administrative and Indirect Cost Budgets**

Ferries proposes to develop zero-based (i.e. justifying the entire budget without assuming a base budget) administrative and indirect cost budgets. These two budgets will be included in separate decision packages (as defined by OFM budget instructions) for the biennium. Ferries will also develop projected administrative and indirect cost budgets for the 16-year financial plan, with these budgets then being recalibrated with a zero-base approach each biennium.

#### **2. Developing Project Level Indirect and Administrative Cost Budgets**

Ferries will develop and separately identify project level indirect and administrative cost budgets. These budgets will be based on the size of the biennial project budget, which means that projects with higher budgets (i.e. vessel acquisition or projects going into construction) will have larger amounts of indirect and administrative costs.

#### **3. Allocating Actual Indirect and Administrative Expenses to Projects**

Ferries will allocate actual indirect and administrative expenses to projects based on the biennial project budget and without regard to how much the project actually expends during the biennium. This will provide project managers with the ability to manage their budgets with a clear expectation of indirect and administrative expenses to be anticipated. (If indirect and administrative expenses were distributed based on actual project expenses, project managers would experience more or less than anticipated administrative and indirect costs if other projects under or over spent.)

#### **4. Monitoring and Reporting Indirect and Administrative Expenses**

Ferries will monitor and report at the project and the program level indirect and administrative budgets and expenses. This will allow Ferries to understand and control administrative and indirect costs.

## **5. Develop Benchmarks or Performance Measures for Indirect and Administrative Costs**

Ferries will develop and recommend benchmark indirect and administrative costs for OFM approval. The *Capital Program Staffing and Administration Cost, WSDOT Ferries Division Financing Study II Final Report* April 2008 recommended the development of benchmarks for administrative costs as a percentage of the total capital budget.

### ***F. Consultant Findings on Cost Allocation Methodology***

The consultants believe that the general cost allocation methodology proposed by WSDOT/Ferries is an appropriate response to legislative direction. If implemented the cost allocation methodology will meet the Legislature's desire for more transparency with regard to administrative and indirect costs. It will also provide a better basis for economic analysis and should allow for improved Ferries management of its capital program and expenses.

## Appendix A. Vessel Systemwide Project Expenses, 2005-07 Biennium

This section is from the *Auto-Passenger Vessel Preservation and Replacement Final Report, Washington State Ferries Division of the Washington State Department of Transportation Financing Study II*, January 2008.

**Table A-1.  
2005-07 Vessel Systemwide Project Expenditures**  
(in \$ millions)

PIN	Project Title	\$ Exp. 05-07	% of Total	\$ Indiv. Vessel Exp.	% Indiv. Vessel Exp.	\$ System Vessel Exp.	% System Vessel Exp.
955570B	Vessel Physical Security Infrastructure	7.2	38%	5.6	78%	1.6	22%
955560K	Communication/Navigation/Life Saving	3.3	18%	1.1	33%	2.2	67%
955560M	Vessel Communications (IT)	1.6	9%	1.5	94%	0.1	6%
985550B	Vessel Projects	1.6	8%	1.3	81%	0.3	19%
955540H	Vessel Planning/Design	1.0	5%			1.0	100%
955540K	Vessel As-built Drawings Updates	0.6	4%			0.6	100%
955560N	Wireless Over Water	0.5	3%			0.5	100%
985550E	Vessel Contracts Using CAPS	0.5	3%	0.5	100%		
999976W	Vessel Noise Control (Abatement)	0.5	3%	0.5	100%		
955570A	Accessibility Modifications	0.5	2%	0.4	80%	0.1	20%
955570D	Vessel Physical Security Planning	0.3	2%			0.3	100%
955560L	Wireless Connections	0.2	1%			0.2	100%
955540M	Vessel Electrical Special Projects	0.2	1%			0.2	100%
955540I	Vessel Life Cycle Cost Model Update	0.1	1%			0.1	100%
955570C	Vessel Safety Mgmt Enhancements	0.1	1%			0.1	100%
955560P	Wireless/Ferry Customers	0.1	1%			0.1	100%
999976V	Vessel Work Orders by Auditor	0.1	0%			0.1	100%
955540L	Vessel Environmental Studies	0.1	0%			0.1	100%
<b>Total Vessel Systemwide</b>		<b>18.6</b>	<b>100%</b>	<b>11.0</b>	<b>59%</b>	<b>7.7</b>	<b>41%</b>

### 1. Individual Vessel Systemwide Projects (Location Projects)

Of the \$18.6 million Ferries spent on vessel related systemwide projects in the 2005-07 biennium, \$11.0 million or 59 percent was spent on individual vessels as shown in the table above. Projects that were primarily spent on individual vessels are:

- Vessel Physical Security Infrastructure:** This \$7.2 million security project is largely funded through federal grants. Seventy-eight percent (78%) of the project's expenditures was on direct vessel improvements, of which 37 percent was for Issaquah class vessels built in the 1980s, 22 percent for Super class vessels built in the 1960s, 17 percent for Evergreen State class vessels built in the 1950s, and 9 percent for the *Rhododendron* built in 1947. System expenditures were primarily for the purchase of a vessel access control and video monitoring system (\$0.5 million).

- **Vessel Communications (IT):** This \$3.3 million project is state funded. In the 2005-07 biennium, 94 percent of the expenses were for individual vessel information technology improvements including the installation of local area networks and cell phone support. Forty percent (40%) of the direct project expenses was for communications information technology in the Issaquah class vessels built in the 1980s; 27 percent for Super class vessels built in the 1960s; 13 percent for the Evergreen State class vessels built in the 1950s; and 13 percent for the *Rhododendron* built in 1947. Expenditures that were not for individual vessels were to support wireless connections fleetwide (\$129,000).
- **Vessel Projects:** This \$1.6 million project is state funded. In the 2005-07 biennium, 81 percent of the expenditure for this project was for direct vessel projects. The primary expenditures were to buy spare parts for the Issaquah class vessels built in the 1980s (\$723,000/54 percent), to support fuel monitoring studies (\$240,000/15 percent), and to support miscellaneous work by state employees on vessels (\$257,000/15 percent). System expenditures were for fleetwide engineering support (\$41,000).
- **Vessel Contracts Using CAPS:** This is a state funded project that is administrative in nature. It allows Ferries to use WSDOT's Contract Administration and Payment System (CAPS) to pay maintenance contractors. Maintenance contracts are initially set up in and paid by the Ferries Construction Program W. The Ferries Operating Program X (operating) reimburses Program W. In the 2005-07 biennium, \$0.5 million in maintenance projects were handled through this project involving 32 different maintenance work orders.
- **Vessel Noise Control (Abatement):** This is a state funded project. In the 2005-07 biennium all of the \$0.5 million in expenditures were on individual vessels. Ninety percent (90%) of the expenditures were for noise abatement on the Issaquah class vessels built in the 1980s.
- **Accessibility Modifications:** This is a state funded project. In the 2005-07 biennium 80 percent of the \$0.5 million in expenditures were on individual vessels. Ninety-nine percent (99%) of the direct expenditures was on Super class vessels built in the 1960s. Accessibility engineering accounted for the system expense in this PIN.

## **2. Systemwide Projects – System Support**

Of the \$18.6 million Ferries spent on vessel related systemwide projects in the 2005-07 biennium, \$7.7 million or 41 percent was spent on system support projects as shown in the table above. Projects that were primarily system support are:

- **Communication/Navigation/Life Saving:** This is a \$3.3 million state funded project, with \$15,000 provided in the 2005-07 biennium through a federal grant. In the 2005-07 biennium, 67 percent of the project expenditures were for system support. The largest system expenditures were for radar purchase and installation, and navigation equipment support (\$1.4 million/64 percent), and for the purchase

of radio systems, automatic identification systems, automatic draft indicating systems, and life saving equipment (\$0.8 million/36 percent). Individual vessels supported by this project were divided among the Evergreen State, Issaquah, and Jumbo Mark II classes.

- **Vessel Planning/Design:** This is a state funded project. In the 2005-07 biennium 100 percent of the \$1 million expended was for system support. Work included vessel engineering planning and management (\$0.6 million/60 percent), fuel conservation studies (\$0.2 million/20 percent), autocad tools education (\$0.1 million/10 percent), and Jumbo Mark II cavitation study (\$0.1 million/10 percent).
- **Vessel As-Built Drawings Updates:** This is a state funded project. In the 2005-07 biennium, 100 percent of the \$0.6 million expended was for system support work. As-built mechanical drawings (\$0.3 million/50 percent) and as-built hull drawings (\$0.3 million/50 percent) were the bulk of the work under this project.
- **Wireless Over Water and Wireless Connections:** The wireless connections project has both state and federal funding, and the wireless over water project is federally funded. The projects both support Ferries' acquisition of high speed video data for a total expenditure \$0.7 million in the 2005-07 biennium.
- **Vessel Physical Security Planning:** This is a state funded project. In the 2005-07 biennium, this project supported the ferry passenger partnership program (\$0.2 million/66 percent), a security education program for ferry passengers, and Ferries security assessments and plan development support (\$0.1 million/34 percent).
- **Vessel Electrical Special Projects:** This is a state funded project. In the 2005-07 biennium this project was used to develop vessel electrical line drawings (\$0.1 million/50 percent of expenses), and to support the vessel antenna inventory and optimization effort (\$0.1 million/50 percent).
- **Vessel Life-Cycle Cost Model Update:** This is a state funded project that was used in the 2005-07 biennium to fund Ferries' staff working on the vessel life-cycle cost model at a total cost of \$0.1 million.
- **Vessel Safety Management Enhancements:** This is a state funded project that was used in the 2005-07 biennium to fund a consultant environmental program manager at a total cost of \$0.1 million.
- **Wireless/Ferry Customers:** This project is funded by a private contractor to support wireless service for customers on board Ferries' vessels. Expenditures were for WI-FI design and engineering, and totaled \$0.1 million.
- **Vessel Work Orders by Auditor:** This project funds Ferries' internal vessel auditors, Ferries staff responding to inquiries from external auditors, and payment for audited underpayment settlements. In the 2005-07 biennium, Ferries spent \$53,000 responding to external audits conducted in 2006, and spent \$35,000 on internal vessel audits.

- **Vessel Environmental Studies:** This is a state funded project that was used in the 2005-07 biennium to fund a fuel oil heating study, an engine use study, and a vessel catalytic converter use study for a total cost of \$0.1 million.

## Appendix B. Terminal Systemwide Expenditures, 2005-07 Biennium

Appendix B provides a detailed description of expenses in the 2005-07 biennium for each systemwide terminal project. Unlike Appendix A, this detail was not in a prior report, but is provided here to be parallel to the information on vessels in Appendix A.

**Table B-1.  
2005-07 Terminal Systemwide Project Expenditures**  
(in \$ millions)

Project Title	\$ Exp. 05-07	% of Total	\$ Direct Terminal Exp.	% Direct Terminal Exp.	\$ Indirect Terminal Exp.	% Indirect Terminal Exp.
999940D Catch-Up Preservation 03 Nickel	8.1	28%	8.1	100%		
989920X Misc. Terminal Projects	5.7	20%	1.5	26%	4.2	74%
989930B Terminal Physical Security Infrastructure	4.8	16%	3.3	69%	1.5	31%
966640Q Point of Sale Repl/Regional Fare	4.3	15%	0.5	12%	3.8	88%
966620E Operations Construction Support	1.7	6%	1.2	71%	0.5	29%
977731A Planning and Special Studies	1.5	5%		0%	1.5	100%
966640I Revenue Control System	0.4	1%	0.2	50%	0.2	50%
966640F Terminal Design Standards	0.3	1%			0.3	100%
966650B WSF Staff Relocation	0.3	1%			0.3	100%
989930E Emergency Management Communications	0.2	1%			0.2	100%
989930A Server Infrastructure	0.2	1%	0.2	100%		
966650A Terminal Phone System Replacement	0.2	1%	0.2	100%		
999976T Terminal Work Orders by Auditors	0.2	1%			0.2	100%
989920M X5 Terminal Reimbursable Contracts Using Caps	0.2	1%	0.2	100%		
966620D ADA Support	0.1	0%	0.1	100%		
977740A Capital Program Dev. for WSF Business Initiatives	0.1	0%	0.1	100%		
989930F Customer Travel Inquiry	0.1	0%			0.1	100%
989920K Movable Bridge Modifications	0.1	0%	0.1	100%		
900030C Sidney Terminal Cruise Ship	0.1	0%	0.1	100%		
989930D SMS Enhancements	0.1	0%			0.1	100%
999920A Steel Piling Inventory Account	0.1	0%	0.1	100%		
989930G Terminal Physical Security Planning	0.1	0%			0.1	100%
999940C Terminal Planning/Design	0.1	0%	0.05	50%	0.05	50%
989930J WSDOT Project Controls Terminals	0.1	0%			0.1	100%
<b>Total Systemwide Terminals</b>	<b>29.2</b>	<b>100%</b>	<b>16.0</b>	<b>55%</b>	<b>13.2</b>	<b>45%</b>

### **1. Individual Terminal Systemwide Projects (Location Projects)**

Of the \$29.2 million Ferries spent on terminal systemwide projects in the 2005-07 biennium, \$16.0 million or 55 percent was spent on individual terminals as shown in the table above. Projects that were primarily spent on individual terminals are:

- **Catch-up Preservation:** This \$8.1 million security project is funded by the Nickel transportation funding package, and is intended to assist Ferries in

catching up with needed preservation. In the 2005-07 biennium the project included: Lopez dolphin replacement (\$4.8 million); Anacortes dolphin replacement (\$2.9 million); hydraulic controls at the Tahlequah terminal (\$0.2 million); Orcas dolphin replacement engineering (\$0.1 million); and Vashon dolphin replacement engineering (\$0.1 million).

- **Terminal Physical Security Infrastructure:** This \$4.8 million project is largely funded through federal grants. In the 2005-07 biennium, \$3.3 million or 69 percent of the expenses were for individual terminal physical security infrastructure improvements, including improvements to the Bainbridge/Seattle terminals (\$1.4 million), the Edmonds/Kingston terminals (\$1.0 million), the Mukilteo/Clinton terminals (\$0.5 million), the Anacortes terminal (\$0.3 million), and the Bremerton terminal (\$0.1 million). Thirty-one percent (31%) of the expenses (\$1.5 million) were for system support projects including smart video development and testing (\$0.5 million), integrated vessel and terminal physical security infrastructure (\$0.8 million), and systemwide terminal physical security (\$0.2 million).
- **Operations Construction Support:** This \$1.7 million project is state funded. In the 2005-07 biennium, \$1.2 million or 76 percent of the project expenses were for individual terminal projects including support for planning the Anacortes and Mukilteo projects (\$0.2 million), construction support for the electronic fare system project (\$0.5 million), the Bainbridge trestle preservation project (\$0.2 million), the Friday Harbor phase II project (\$0.1 million), the Kingston tollbooth project (\$0.1 million), and the Seattle re-entry project (\$0.1 million). The other \$0.5 million or 24 percent of the project expenses were for project support including: \$0.1 million for an operations planning manager and \$0.4 million for on-site consultant support.
- **Revenue Control System:** This \$0.4 million project is a state funded project. In the 2005-07 biennium, 50 percent of the expense or \$0.2 million was for physical security infrastructure improvements at the Bainbridge/Seattle, Edmonds-Kingston, and Anacortes terminals, and 50 percent or \$0.2 million was system support for enhancements to the point of sale (POS) system.
- **Server Infrastructure:** This \$0.2 million project is state funded. All of the expenses in the 2005-07 biennium were for improvements to HVAC (heating, ventilation and air conditioning) systems at the Anacortes, Mukilteo and Seattle terminals to properly support the terminals' servers.
- **Terminal Phone System Replacement:** This \$0.2 million project is state funded. In the 2005-07 biennium it was used for construction at various terminals.
- **X5 Terminal Reimbursable Contracts Using CAPS:** This is a state funded project that is administrative in nature. It allows Ferries to use WSDOT's Contract Administration and Payment System (CAPS) to pay maintenance contractors. Maintenance contracts are initially set up in and paid by the Ferries Construction Program. The Ferries Operating Program reimburses the

Capital Program. In the 2005-07 biennium, \$0.2 million in maintenance projects were handled through this project involving 14 different maintenance work orders.

- **Americans with Disabilities Act (ADA):** This project is state funded. In the 2005-07 biennium the project expenses were \$0.1 million, which was used to fund the ADA portion of a restroom project at the Seattle terminal.
- **Capital Program Development for Ferries Business Initiatives:** This project is state funded. In the 2005-07 biennium the project expenses were \$0.1 million, which was used to support concessions reviews and property appraisals for the Anacortes expansion project and the Seattle terminal.
- **Sidney Terminal Cruise Ship Dock Improvements:** This project is state funded. In the 2005-07 biennium the project expenses of \$0.1 million were for improvements to the Sidney terminal.
- **Steel Piling Inventory Account:** This project is state funded. In the 2005-07 biennium the project expenses of \$0.1 million were to procure and store pipe, including staff labor charges and on-site consultant project management expenses.
- **Moveable Bridge Modifications:** This project is state funded. In the 2005-07 biennium the project expenses of \$0.1 million were for infrared remote controls and other bridge modifications.
- **Terminal Planning/Design:** This is a state funded project. In the 2005-07 biennium 50 percent or \$0.05 million of the \$0.1 million in project expenses were for fiber optic network installation at the Anacortes and San Juan terminals, and 50 percent or \$0.05 million was for a systemwide study of a vessel positive restraint system.

## **2. Systemwide Projects – System Support**

- **Miscellaneous Terminal Projects:** This is a state funded project. (In the 2007-09 biennium this project was divided into three projects, miscellaneous terminal project, regulatory compliance, and project controls.) In the 2005-07 biennium, \$4.2 million or 74 percent of total project expenditures of \$5.7 million were for system support. System support expenses included: \$2.3 million for implementation of the Primavera scheduling system; \$0.6 million for environmental permitting; \$0.5 million for structural inspection by WSDOT's bridge inspectors and dive inspections; \$0.2 million for terminal engineering training in the 2003-05 biennium; \$0.2 million for scour monitoring; \$0.1 million for the terminal engineering library; \$0.1 million for systemwide basemap updates; \$0.1 million for on-site consultant support for property management services; and \$0.1 million for miscellaneous support from the Attorney General's office. Twenty-six percent (26%) of the project expenses or \$1.5 million were for individual terminal projects including: \$0.8 million for terminal hydraulic and controls upgrades at the Seattle, Pt. Defiance and Tahlequah terminals; \$0.6 million for mechanical and electrical inspection and preservation at the Edmonds,

and Bremerton terminals; and \$0.1 million for trestle truck loading verification and other small design efforts.

- **Point of Sale Replacement/Regional Fare:** This \$4.3 million project, partially funded through federal grants, supported the acquisition and implementation of an electronic fare system (EFS).<sup>7</sup> Eighty-eight (88) percent of the costs of the project in the 2005-07 biennium or \$3.8 million was for system support including: \$2.0 million for revenue collection system replacement costs associated with staff training, terminal support, EFS specialists, testers and team support; \$1.4 million to support the regional fare collection project; and \$0.4 million for EFS and smart card construction support and enclosures. Direct terminal expenses totaled \$0.5 million or 12 percent of the project expenses and included improvements at 13 terminals to accommodate EFS.
- **Planning and Special Studies:** This is a state funded project. All of the expenses of \$1.5 million in the 2005-07 biennium were system support expenses including: \$0.5 million for development of the long-range strategic plan; \$0.7 million for the 2006 origin and destination travel survey; \$0.2 million for travel modeling and planning analysis support; and \$0.1 million for grant planning, administration, and management.
- **Terminal Design Standards:** This is a state funded project. All of the expenses of \$0.3 million in the 2005-07 biennium were system support expenses primarily for on-site consultant support in the development of terminal design standards.
- **Ferries Staff Relocation:** This is a state funded project. All of the expenses of \$0.3 million in the 2005-07 biennium were system support expenses for furniture acquisition and storage for the headquarters move to a new leased space.
- **Emergency Management Communications:** This is a state funded project. All of the expenses of \$0.2 million in the 2005-07 biennium were system support expenses for emergency and security radio communication equipment.
- **Terminal Work Orders by Auditors:** This is a state funded project. This project funds Ferries' internal vessel auditors, Ferries staff responding to inquiries from external auditors, and payment for audited underpayment settlements. In the 2005-07 biennium, Ferries spent \$0.2 million responding to external audits conducted in 2006.
- **Customer Travel Inquiry:** This is a state funded project. The \$0.1 million expense in the 2005-07 biennium was to pay for software costs associated with the travel inquiry system.

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<sup>7</sup> There are associated costs in the terminal operations construction support project as discussed above. In addition, *The Washington State Ferries Financing Study Final Report, January 2007, Appendix 3 Capital Program Prioritization and Terminal and Repair Facility Capital Projects Review* found associated costs in individual terminal projects to support generators needed for the electronic fare system.

- **Safety Management System (SMS) Enhancements:** This is a state funded project. The \$0.1 million expense in the 2005-07 biennium was to pay for a SMS lead coordinator.
- **Terminal Physical Security Planning:** This is a state funded project. In the 2005-07 biennium the \$0.1 million expense was for the ferry passenger partnership program and for security assessments and plan development.
- **WSDOT Project Controls:** In the 2005-07 biennium Ferries was charged \$0.1 million for its share of the development of a new project scheduling system for WSDOT by the Statewide Program Management Group.