



Exhibit B to the Six-Year Transportation Improvement Plan

# WHATCOM COUNTY 2010-2023 FOURTEEN-YEAR FERRY CAPITAL PROGRAM

## Overview

This program provides a blueprint for the effective, efficient, and continuing operation of the Whatcom County Ferry System. Capital improvements are scheduled based on 83 years of experience operating and maintaining the system, while complying with applicable regulations.

Inevitably, priorities and available funds for the ferry system will change over the fourteen years projected in this program. Therefore, the intention of the program is to be a guide indicating long-range improvements and anticipated revenues and expenditures. Strict adherence is not required.

Enacted in 1975, Revised Code of Washington (**RCW**) **36.54.015** states “The legislative authority of every county operating ferries shall prepare, with the advice and assistance of the county engineer, a fourteen year long range capital improvement plan embracing all major elements of the ferry system. Such plan shall include a listing of each major element of the system showing its estimated current value, its estimated replacement cost, and its amortization period.”

**Table 1: Ferry System Current and Replacement Values – 2009** meets applicable requirements, showing the current value, replacement cost, and amortization periods for the vessels and facilities. The current value of the M/V Whatcom Chief is the book value, calculated from the depreciated original construction cost and any depreciated improvements/major repairs. The facilities’ current value is book value; original cost less depreciation plus depreciated improvements.

**RCW 36.81.121** (1) states “...the legislative authority of each county, after one or more public hearings thereon, shall prepare and adopt a comprehensive transportation program for the ensuing six calendar years....and for those counties operating ferries shall also include a separate section showing proposed capital expenditures for ferries, docks, and related facilities. Copies of the program shall be filed with the county road administration board and the secretary of transportation not more than thirty days after its adoption by the legislative authority...” Subsection (2) requires expanded information on how a county will spend all its money on the various facets of the transportation program. This RCW Section was enacted in 1961. The capital expenditure portion of Subsection (1) is satisfied by:

**Table 2: Projected Revenues** defines the known and/or anticipated sources of operating and capital project funding for the 14-Year Plan.

**Table 3: Projected Expenditures** includes all other expenditures on the system that meet Subsection (2) requirements. Operational expenditures are delineated between vessel and non-vessel costs. U.S. Coast Guard regulations currently require the ferries to be dry-docked every two years, however to extend the life,

improve reliability and protect our capital investment Whatcom County schedules dry-docking every year for its vessel. The landings are inspected regularly as required by the National Bridge Inspection Standards administered through the Washington State Department of Transportation. The inspection report helps identify and schedule major maintenance and replacement of these facilities.

This RCW section also provides the reporting requirement and timing of program submission, as well as establishing the annual update requirement.

Additionally, the Federal Highway Administration requires all agencies within a Metropolitan Planning Organization to develop and annually update the long range Transportation Improvement Plans and their Biennial Element. Whatcom County updates this 14-Year plan each year and incorporates the results into the Six-Year Transportation Improvement Program.

## **Major Project Analysis**

The only major upgrade planned for the vessel itself is in 2010. Pending sufficient grant funding (est. \$850,000), a complete replacement of the current wheelhouse is planned to improve control operations with modern equipment, improve access and compliance with ADA, and to improve safety of vehicle loading/unloading operations.

Gooseberry Point dock improvements include \$250,000 for structural steel painting/sealing in 2010. There is an additional \$100,000 included in 2011 for associated dock components that have significant deterioration concerns.

Lummi Island dock improvements include \$250,000 for structural steel painting/sealing in 2010.

## **Major Maintenance/Reconstruction**

### Pile, dolphin & fender work:

Major pile dolphin and fender work replacement is scheduled as funding and operational periods allow.

### Vessel dry-docking:

US Coast Guard regulations require periodic inspections of all ferry vessels. In addition to yearly certifications, each vessel is required to be dry-docked every two years, with an underwater hull survey required as part of the annual certification between dry dockings. Whatcom County schedules dry-docking every year. The engine overhaul, vessel painting, hull repairs, and other major and minor repairs occur during dry-docking. Propulsion engine overhauls occur every third year. Generator engines are overhauled on a six-year cycle. Engines are replaced every seventh overhaul. Every three to five years, a vessel survey is conducted to assess the vessel's overall condition, establish the fair market

value, estimate replacement cost, and provide a detailed hull strength assessment. This survey is used in part to determine the requirements for hull plating and framing replacement, and is also a requirement of the current insurance carrier.

## **Minor Maintenance**

General minor maintenance is continual on the ferry, landings, aprons, and waiting facilities. The costs and extent of the work is unpredictable and frequently, problems must be repaired immediately upon detection. Routine maintenance such as building painting and roof cleaning is more predictable and scheduled in advance.

## **History of the Ferry System**

The ferry system is the only link for the majority of Lummi Island residents and vehicles to the mainland at Gooseberry Point. Total annual passenger use is stable with vehicle trips of 122,195 and 216,838 total passengers during 2008. Following is a brief chronology outlining the history of the Whatcom County Ferry System.

### **YEAR/EVENT**

- 1926 Lummi Shore Road from Bellingham was completed and a ferry, the Central, owned by Whatcom County and large enough to hold six small Model-T Fords started making scheduled runs between Lummi Island and Gooseberry Point.
- 1929 The slightly larger Chief Kwina replaces the Central.
- 1950 Gooseberry Point terminal built.
- 1962 The M/V Whatcom Chief begins service.
- 1978 Lummi Island terminal is relocated.
- 1982 New lift mechanism installed on transfer span at Lummi Island.  
Gooseberry Point pier refurbished
- 1987 Gooseberry Point Transfer span, wing walls and dolphins replaced
- 1997 Major refurbishment of Gooseberry point landing accomplished
- 2002 20-Year Plan Phase 1 Process and report completed.
- 2005 Major Status Report on Ferry System
- 2006 Lummi Island Dock preservation project (Bearing Seats Rebuild).  
Major corrosion repair to vessel hull.  
Completed design package for a 35-car replacement vessel.  
Completed design package for urgent electrical/structural terminal repairs.  
First Rate Increase in 5 years.
- 2008 Rate Increase
- 2009 Rate adjustment

**TABLE 1. FERRY SYSTEM CURRENT AND REPLACEMENT VALUES - 2009  
VESSELS**

Current Statistics	<i>M/V Whatcom Chief</i>	
LENGTH (ft)	94	
BEAM (ft)	44	
DISPLACEMENT (tons)	78	
YEAR BUILT	1962	
CAPACITY -- Passengers	100	
CAPACITY -- Cars	20	
CURRENT INSURED VALUE - 2009	\$970,000	
<b>TOTAL CURRENT VALUE - 2009<sup>(1)</sup></b>		<b>\$970,000</b>
Replacement Statistics		
YEAR	2010	
CAPACITY -- Passengers	100	
CAPACITY -- Cars	20	
REPLACEMENT VALUE - 2009 <sup>(2)</sup>	\$3,750,000	
<b>TOTAL - REPLACEMENT VALUE - 2009</b>		<b>\$3,750,000</b>

**FACILITIES**

LOCATION	YEAR BUILT	REPLACE MENT YEAR	CURRENT BOOK VALUE <sup>(4)</sup>	REPLACEMENT VALUE - 2009 <sup>(5)</sup>
<b>Lummi Island Landing</b>				
Transfer Span	1982	2022	\$195,000	\$1,990,000
Dock	1978	2018	\$23,000	\$360,000
Dolphins/Wingwall <sup>(3)</sup>	1978	2018	\$485,000	\$1,750,000
Parking Lots	2005	2045	\$50,000	\$85,000
Passenger Waiting/Office	1978	2018	\$10,000	\$25,000
<b>Subtotal - Lummi Island Landing</b>			<b>\$763,000</b>	<b>\$4,210,000</b>
<b>Gooseberry Point Landing</b>				
Transfer Span	1987	2027	\$445,000	\$2,200,000
Dock	1997	2037	\$87,000	\$590,000
Dolphins/Wingwall <sup>(3)</sup>	1997	2037	\$640,000	\$1,750,000
<b>Subtotal - Gooseberry Point Landing</b>			<b>\$1,172,000</b>	<b>\$4,540,000</b>
<b>TOTAL FACILITIES VALUE</b>			<b>\$1,935,000</b>	<b>\$8,750,000</b>
<b>TOTAL VESSEL &amp; FACILITIES VALUE</b>			<b>\$2,905,000</b>	<b>\$12,500,000</b>

NOTES:

- (1) Depreciated Columbia Sentinel Engineers (2008) Value plus Depreciated Improvements
- (2) Appreciated Columbia Sentinel Engineers (2008) Replacement Value
- (3) Replace with Steel Pilings
- (4) Estimated using a 40-year life and straightline depreciation (including depreciated improvements)
- (5) Replacement value based on cost estimates by Art Anderson Associates (2007)

<b>Lummi Island Ferry 14-Year Capital Program</b>							
<b>Table 2. Expenditures 2010-2023 Page 1, All in 000's</b>							
	2010	2011	2012	2013	2014	2015	2016
<b>Operating Expenses</b>							
<b>Vessel Operations</b>							
Personnel	1,018	1,054	1,091	1,130	1,170	1,211	1,254
Fuel & Operating Supplies	349	419	507	615	750	772	795
Insurance	43	45	45	50	50	55	55
Other Operating Expenses(1)	569	586	603	621	640	659	679
Total Vessel Operations	1,979	2,104	2,246	2,416	2,610	2,697	2,783
<b>Other Operations</b>							
Administration	209	217	224	232	240	248	257
<b>Parking Lots</b>							
Lummi Island	10	11	11	12	12	12	13
Gooseberry Pt.	89	89	89	90	91	91	92
<b>Staging Areas</b>							
Lummi Island	13	13	13	14	14	14	15
Gooseberry Pt.	13	13	13	14	14	14	15
<b>Docks</b>							
Lummi Island	67	42	42	43	43	44	45
Gooseberry Pt.	67	42	42	43	43	44	45
<b>Total Operating Expenses</b>	<b>2,447</b>	<b>2,531</b>	<b>2,680</b>	<b>2,864</b>	<b>3,067</b>	<b>3,164</b>	<b>3,265</b>
<b>Capital Expenditures</b>							
Major Vessel Upgrades	850						
<b>Gooseberry Point</b>							
Docks	250	100					
Staging							
Parking	5						
<b>Lummi Island</b>							
Docks	250						
Staging							
Parking	5						
<b>Total Capital Program Costs</b>	<b>1,360</b>	<b>100</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Total Costs</b>	<b>3,807</b>	<b>2,631</b>	<b>2,680</b>	<b>2,864</b>	<b>3,067</b>	<b>3,164</b>	<b>3,265</b>

<b>Lummi Island Ferry 14-Year Capital Program</b>								
<b>Table 2. Expenditures 2010-2023 Page 2, all in 000's</b>								
	2017	2018	2019	2020	2021	2022	2023	
<b>Operating Expenses</b>								
<b>Vessel Operations</b>								
Personnel	1,299	1,338	1,378	1,419	1,462	1,506	1,551	
Fuel & Operating Supplies	819	844	878	913	913	949	987	
Insurance	55	57	58	60	62	64	66	
Other Operating Expenses(1)	699	720	742	764	787	810	835	
<b>Total Vessel Operations</b>	<b>2,872</b>	<b>2,959</b>	<b>3,056</b>	<b>3,156</b>	<b>3,224</b>	<b>3,329</b>	<b>3,439</b>	
<b>Other Operations</b>								
Administration	266	274	282	291	299	308	318	
<b>Parking Lots</b>								
Lummi Island	13	13	14	14	15	15	16	
Gooseberry Pt.	92	95	98	101	104	107	110	
<b>Staging Areas</b>								
Lummi Island	15	15	16	16	17	17	18	
Gooseberry Pt.	15	15	16	16	17	17	18	
<b>Docks</b>								
Lummi Island	45	46	48	49	51	52	54	
Gooseberry Pt.	45	46	48	49	51	52	54	
<b>Total Operating Expenses</b>	<b>3,363</b>	<b>3,464</b>	<b>3,577</b>	<b>3,693</b>	<b>3,776</b>	<b>3,899</b>	<b>4,025</b>	
<b>Capital Expenditures</b>								
<b>Major Vessel Upgrades</b>								
<b>Gooseberry Point</b>								
Docks								
Staging								
Parking								
<b>Lummi Island</b>								
Docks								
Staging								
Parking								
<b>Total Capital Program Costs</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	
<b>Total Costs</b>	<b>3,363</b>	<b>3,464</b>	<b>3,577</b>	<b>3,693</b>	<b>3,776</b>	<b>3,899</b>	<b>4,025</b>	

<b>Lummi Island Ferry 14-Year Capital Program</b>							
<b>Table 3. Revenues 2010-2023, All in 000's</b>							
	2010	2011	2012	2013	2014	2015	2016
Category							
Punch Card Fares (3)	1,006	1,043	1,109	1,190	1,279	1,322	1,366
Cash Fares (4)	252	261	277	297	320	330	342
(Memo 55% of Operating Cost) (1)	1,258	1,304	1,386	1,487	1,599	1,652	1,708
MVFT Deficit Subsidy	160	160	160	160	160	160	160
County Road Fund Subsidy	1,029	1,067	1,134	1,217	1,308	1,352	1,397
Total Revenues	2,447	2,531	2,680	2,864	3,067	3,164	3,265
Total Expenditures (2)	3,807	2,631	2,680	2,864	3,067	3,164	3,265
Net Unfunded	1,360	100	-	-	-	-	-
Category	2017	2018	2019	2020	2021	2022	2023
Punch Card Fares	1,405	1,450	1,499	1,550	1,587	1,641	1,696
Cash Fares	351	362	375	388	397	410	424
(Memo 55% of Operating Cost) (1)	1,756	1,812	1,874	1,938	1,983	2,051	2,120
MVFT Deficit Subsidy	170	170	170	170	170	170	170
County Road Fund Subsidy	1,437	1,482	1,533	1,585	1,623	1,678	1,735
Total Revenues	3,363	3,464	3,577	3,693	3,776	3,899	4,025
Total Expenditures (2)	3,363	3,464	3,577	3,693	3,776	3,899	4,025
Net Unfunded	-	-	-	-	-	-	-
Note 1: After Subtracting the MVFT Deficit Subsidy.							
Note 2: As Shown On Table 2.							
Note 3: Equal to 80% of Fares							
Note 4: Equal to 20% of Fares							