Petruzzelli, Lynda TRAN:EX

From: Storm, Ed TRAN:EX
Sent: Monday, August 8, 2005 3:47 PM
To: Merston, Nancy TRAN:EX
Subject: Bridge between Thetis and Kuper Islands

Nancy,

This is further to our earlier discussion about the BCFS proposal to: (1) upgrade the Kuper Island in-water ferry terminal facilities now; (2) build a bridge between Kuper and Thetis Islands and consolidate ferry service at Thetis; and (3) move the upgraded in-water facilities to Alert Bay in a few years when the bridge is built and the terminal at Alert Bay needs to be upgraded. I'm trying to determine the effect of different options on MoT.

First, how will the Ferry Commissioner determine the price cap for the Thetis-Kuper route for the next performance term? Presumably, he'll need to forecast costs, volumes, and revenues over the term, possibly based on information submitted under Section 40(1) of the Coastal Ferry Act. Will he include an estimate of service fee revenue (which won't be known) in the initial price cap determined under Subsection 40(2)(c)? Sections 40(3) and 40(4) seem to imply that he won't, in which case the initial determination would be the price cap without any subsidy. This, in turn, implies the service fee will be set to ensure the price cap in the first year of the new term is politically acceptable (as subsequent years are based on CPI with productivity adjustments). Is this correct?

If MoT builds the bridge:

- MoT would pay the capital cost of the new bridge out of its budget, with some ongoing maintenance and rehabilitation costs.
- BCFS would transfer Kuper's in-water facilities to Alert Bay and decommission any land-based facilities (which would be near the end of their life).
- The initial price cap determined for the route under Subsection 40(2)(c) would be lower because: (i) BCFS would have no assets at Kuper to be financed / amortized; and (ii) changing from a 3-port to a 2-port operation would result in efficiencies and could increase demand/revenue as more trips could be made at the same cost.
- Given Section 38(1)(f)–greater reliance on user pay–is it correct to assume MoT's service fees would be reduced?
- If so, MoT would effectively be financing the cost of the bridge through lower service fees.

If BCFS builds the bridge:

- BCFS would have to get agreement from the Ferry Commissioner under Section 41(3)(c) that the bridge is a reasonable investment.
- BCFS would pay (and finance) the capital cost of the new bridge (which could be built by MoT) as well as pay for ongoing maintenance and rehabilitation.
- BCFS would transfer Kuper's in-water facilities to Alert Bay and decommission any land-based facilities.
- The initial price cap determined for the route would be: (i) increased by the financing and amortisation costs of the new bridge; offset by (ii) the removal of terminal assets at Kuper plus operating efficiencies/service improvements. Presumably, the cost of the bridge would be less than the value of the in-water terminal facilities transferred to Alert Bay.
- Again, if net costs are reduced (although perhaps not by as much as if MoT were to build and pay for the bridge), would MoT pay a lower annual service fee?

I've put these questions in writing to help clarify my thoughts, but would be happy to discuss them over the phone or face-to-face.

Thanks,

Ed Storm

Petruzzelli, Lynda TRAN:EX

From: Baskin, Kevin TRAN:EX
Sent: Monday, August 29, 2005 12:34 PM
To: Writing Services, Transportation TRAN:EX
Cc: Storm, Ed TRAN:EX; Blasetti, Frank TRAN:EX; Miller, Kathie TRAN:EX; Merston, Nancy TRAN:EX; Weaver, Sandra TRAN:EX
Subject: RE: Islands Trust BN - UBCM - BN 138324

Lois,

Attached is draft BN as requested. Information was received from Nancy Merston and Ed Storm. I have also attached the April 1 2003 letter from Minister Reid and the BN 138296 which are referred to my BN.

Let me know if you need more.


138324 Islands Trust BN Draft....


BN #138296 - BC Ferries Kuper-...


Islands Trust.doc

-----Original Message-----
From: Blasetti, Frank TRAN:EX [mailto:Frank.Blasetti@gov.bc.ca]
Sent: Monday, August 29, 2005 8:08 AM
To: Baskin, Kevin TRAN:EX
Cc: Storm, Ed TRAN:EX
Subject: FW: Islands Trust BNs - UBCM - Gabriola fixed link

Kevin: As mentioned, s22 Ed Storm in Partnerships will be able to work with you on this topic. Elaine

-----Original Message-----
From: Baskin, Kevin TRAN:EX
Sent: Friday, August 26, 2005 4:33 PM
To: Blasetti, Frank TRAN:EX
Subject: FW: Islands Trust BNs - UBCM - Gabriola fixed link

Frank,

I have been asked to put together a briefing note on the issue of bridges to and between islands. The info I have so far is below. Is Partnerships Dept having discussions on such bridges as indicated by Nancy Merston below?

-----Original Message-----
From: Miller, Kathie TRAN:EX
Sent: Friday, August 26, 2005 11:34 AM
To: Baskin, Kevin TRAN:EX
Subject: FW: Islands Trust BNs - UBCM - Gabriola fixed link

Here Kevin is some information from Nancy Merston, our Director Marine Branch.

Kathie Miller
Assistant Deputy Minister
Transportation Planning and Policy
Ministry of Transportation
Tel: (250) 387-5062
New e-mail address Kathie.Miller@gov.bc.ca
Fax: (250) 387-6431

-----Original Message-----
From: Merston, Nancy TRAN:EX
Sent: Friday, August 26, 2005 10:53 AM
To: Miller, Kathie TRAN:EX
Subject: RE: Islands Trust BNs - UBCM - Gabriola fixed link

Hi Kathie,

The only bridge discussion on-going with BCFS at this time (that I'm aware of) is through Partnerships Dept and it's a bridge between Thetis and Kuper Island (they have kept me in the loop on this one). I can't speak to the engineering cost estimates for Gabriola, but I believe the response should be as indicated in Judith Reid's letter.

As an FYI, in 2004/05, BCFS was paid $2.549 M for the Gabriola route, and allocated $0.686 of the Federal/Provincial Marine agreement. They made $3.3M in tariff revenue. This route made about $1.2M for them last year.

Another FYI, the Island's Trust has included BC Ferries as one of their topics for discussion with the Minister (you I believe are taking this meeting) and I received further clarification from them on that issue:

- They are advocating for the importance of ferry services to the islands
- They wish to stress the need for adequate funding from the province for ferry services
- They wish to seek info on the 2nd performance term.

I am preparing the note on this one.

Nancy

-----Original Message-----
From: Miller, Kathie TRAN:EX
Sent: Friday, August 26, 2005 10:21 AM
To: Merston, Nancy TRAN:EX
Subject: FW: Islands Trust BNs - UBCM
Importance: High

Nancy,
In your discussions with BCFS, has the bridge connection to Gabriola (replacing ferry) got any traction or would the response we made on the same topic remain the same as the April 1, 2003 letter signed by Judith Reid (see attachment)? The reason I ask is because Kevin Baskin is preparing a BN for the Minister's meeting with the Islands Trust at UBCM

Kathie Miller
Assistant Deputy Minister
Transportation Planning and Policy
Ministry of Transportation
Tel: (250) 387-5062
New e-mail address Kathie.Miller@gov.bc.ca
Fax: (250) 387-6431

-----Original Message-----
From: Baskin, Kevin TRAN:EX
Sent: Friday, August 26, 2005 10:11 AM
To: Miller, Kathie TRAN:EX
Subject: FW: Islands Trust BNs - UBCM
Importance: High

Kathie, As discussed are you aware of any ongoing studies etc into bridges to and between islands?

-----Original Message-----
From: Writing Services, Transportation TRAN:EX
Sent: Friday, August 26, 2005 9:32 AM
To: Baskin, Kevin TRAN:EX; Weaver, Sandra TRAN:EX
Subject: RE: Islands Trust BNs - UBCM
Importance: High

Kevin,

Thanks for contacting Islands Trust directly on this. Can you please provide a BN for UBCM? (I've attached the form) I've also attached the last letter to Islands Trust regarding a fixed link and Gabriola as history for you. It was approved by Engineering based on standard language. Perhaps you can provide an update if there is one on the studies.

Thanks,
Lois

<< File: 138324 Islands Trust BN Draft.doc >> << File: Islands Trust.doc >>

-----Original Message-----
From: Baskin, Kevin TRAN:EX
Sent: Thursday, August 25, 2005 5:00 PM
To: Writing Services, Transportation TRAN:EX
Subject: FW: Islands Trust BNs - UBCM

-----Original Message-----
From: Baskin, Kevin TRAN:EX
Sent: Thursday, August 25, 2005 4:58 PM
To: Weaver, Sandra TRAN:EX
Subject: Islands Trust BNs - UBCM

Sandra,

I talked to Linda Adams of Islands Trust (phone 250-405-5160) regarding the issue "Islands Trust policy regarding bridges to and between islands".

She indicated that the Islands Trust just want to make the Minister aware of their concern about the potential for bridges between islands and from the mainland to islands. Their policy is that they are not in favour of bridges and want the Minister to know this.

She was not looking for any technical information.

I am not aware of any MoT policy or plans for bridges between islands or to islands. Other sources of information about policy or plans for such bridges would likely be:

- HQ planning section
- Regional planning section

BC Ferries

April 1, 2003

Reference: 111013

David Essig, Chair
Islands Trust Council
1627 Fort Street, Suite 200
Victoria BC V8R 1H8

Dear David Essig:

Re: Fixed Link to Gabriola Island

I am writing in response to your letter of March 4, 2003, regarding the possibility of a fixed link to Gabriola Island.

The provincial government recently re-examined the potential costs involved in constructing bridges to replace some existing ferry routes. We found that a fixed link to Gabriola Island could make financial sense in the future. Rough estimates suggest that the bridge could cost between $45 million and $50 million and that current ferry tolls and the existing subsidy may come close to recouping this cost. However, the provincial government is not currently contemplating construction of the bridge as sufficient capital resources are not available. We are not planning to study this concept further at this time.

I recognize that many people on the Gulf Islands have concerns about the social and environmental effects a fixed link could have. Let me assure you island communities would be consulted should we begin to develop the idea of a fixed link in more depth.

Thank you for taking the time to write.

Sincerely,

ORIGINAL SIGNED BY

Judith Reid
Minister

Copy to: Honourable George Abbott
Minister of Community, Aboriginal and Women's Services

Mike Hunter
MLA, Nanaimo

MINISTRY OF TRANSPORTATION
BRIEFING NOTE

Cliff #: 138296
Date: August 22, 2005

REGION:	South Coast
MoT DISTRICT:	Vancouver Island
ELECTORAL DISTRICT:	Cowichan - Ladysmith
MUNICIPALITY / REGIONAL DISTRICT:	Cowichan Valley Regional District

I. PREPARED FOR: ADM for Decision

II. ISSUE:

BC Ferry Services (BCFS) has proposed a bridge be built between Thetis and Kuper Islands (Appendix) as an alternative to retaining the terminal on Kuper. They claim this would: (a) let BCFS consolidate ferry service at Thetis to save costs and improve operations; and (b) reduce MoT service fees. BCFS has asked MoT to join in studying the bridge option, leading to a possible partnership to build the bridge.

III. BACKGROUND:

Thetis Island, which has a year-round population of about 350, was settled in the late 1800's and is privately owned. Its roads are under MoT jurisdiction. Kuper Island, which has about 380 residents, is primarily a reserve of the Penelakut First Nation. Its roads are private.

Thetis and Kuper are separated by a narrow and shallow channel. In the late 1890's, a one-lane wooden bridge was built to connect the islands at the channel's narrowest point. It was used by Thetis residents to access a post office on Kuper and by Kuper residents to access services on Thetis. In 1905, the channel was dredged to provide passage for small boats.

In 1947, the federal government re-dredged the channel and removed the bridge, which was reportedly in poor condition, to provide clearance and make the channel navigable by larger boats. The post office had been shifted to Thetis in the 1930's, so bridge traffic had declined.

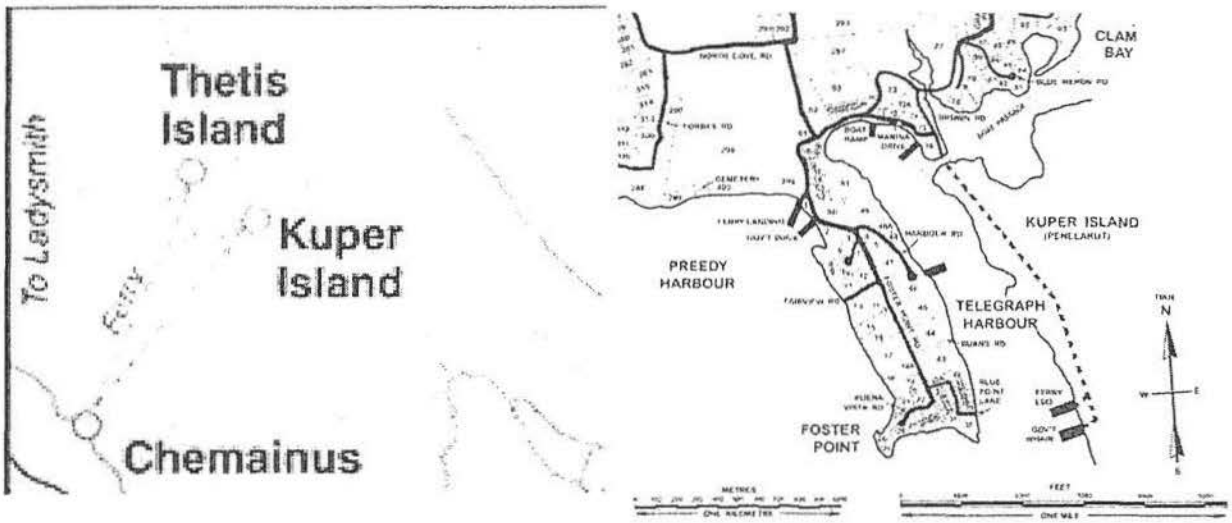
In 1959, the Province started ferry service to Thetis. Soon after, Kuper residents requested access to the ferry via a bridge to Thetis. In 1964, due to the cost of a bridge, the Province extended the Thetis ferry service to collect foot passengers at Kuper, using an existing wharf. This could not take vehicles, forcing Kuper residents with vehicles to park in Chemainus.

In 1966, the Penelakut again asked the Province to re-build the bridge, to give vehicle access between Kuper and Vancouver Island using the Thetis ferry. They offered to pay 50% of the cost. Based on a federal opinion that any bridge should give a 50' vertical and 100' horizontal clearance over the channel, its cost was estimated to be greater than building a ferry terminal and vehicle ramp at Kuper. In the mid 1970's, a vehicle dock and ramp were constructed and Kuper Island gained vehicular ferry service.

In 2003, BCFS took over operation of coastal ferry services, including the Thetis-Kuper route.

Pages 8 through 9 redacted for the following reasons:
- -
s13

Map of Thetis and Kuper Islands[1, 2]



Photograph of Kuper – Thetis Bridge (From BC Archives)[3]

[1] http://www.vancouverisland.com/001maps/gulfislferryr.html
[2] http://thetisisland.net/maps.html
[3] http://www.bcarchives.gov.bc.ca/sn-4C7AEF3/cgi-bin/text2html/.visual/img_txt/dir_79/e_03896.txt

Ministry of Transportation Briefing Note
Union of British Columbia Municipalities Convention 2005

MUNICIPALITY / REGIONAL DISTRICT:	Islands Trust
Attendees:	Chair David Essig, Vice Chairs Kim Benson, Gisele Rudischer, Tony Law and Linda Adams CAO
Topic for Discussion:	Islands Trust policy regarding bridges to and between Islands

ISSUE: Islands Trust wishes to meet with the Minister to reiterate their policy that Islands Trust are not in favour of bridges to and between islands.

BACKGROUND:

A letter was sent to David Essig, Chair of Islands Trust Council from Minister Judith Reid dated April 1, 2003 (See attached). This letter stated that the provincial government had recently re-examined the potential costs involved in constructing bridges to replace some existing ferry services. It was found that a fixed link to Gabriola Island could make financial sense in the future. The letter stated that the bridge would cost in the order of $50 million. The letter stated that the provincial government was not currently contemplating construction of the bridge because sufficient capital resources were not available and that no further study would be done at that time. No further study has been done since that time.

BC Ferry Services (BCFS) is currently contemplating a bridge between Thetis and Kuper Islands as an alternative to retaining the ferry terminal on Kuper Island. BCFS has asked the Ministry of Transportation (MoT) to provide assistance to them in studying this option. BCFS will take the lead in the review with MoT providing some support work. More background is contained in BN #138296.

RECOMMENDED RESPONSE:

s13

Petruzzelli, Lynda TRAN:EX

From: Storm, Ed TRAN:EX
Sent: Wednesday, August 31, 2005 8:48 AM
To: Baskin, Kevin TRAN:EX
Subject: FW: Islands Trust

Kevin: FYI

Ed

-----Original Message-----
From: Anderson, Steve BCF:EX [mailto:Steve.Anderson@bcferries.com]
Sent: August 30, 2005 7:04 PM
To: Storm, Ed TRAN:EX
Cc: Anderson, Brian R BCF:EX; Cousins, Erinn J BCF:EX; Ridout, Christy L BCF:EX
Subject: RE: Islands Trust

Hi Ed,

I don't think that's exactly the statement BC Ferries would make.

I will defer "official" comment to Brian and/or Christy since s22 but in general, it's my impression that we've identified that a bridge "may" be more economical and provide for a more efficient two port route, but it's my understanding that BC Ferries would only pursue the option if it were supported by the stakeholders and proven to be a more economical alternative to the triangle route. In general, the bridge has only come into discussion as a result of "due diligence" w.r.t. alternative service.

The Penelakut have indicated that they would like to improve access to education, healthcare, and employment. If a bridge is considered to improve access by providing more frequent sailing opportunities for both Thetis and Kuper, and is supported by the communities, then it may warrant further investigation. We haven't had any consultation yet.

BC Ferries recognizes that a bridge is contradictory to the Islands Trust moratorium on bridges to/from or between islands. BC Ferries did bring the issue up to Islands Trust and they indicated that this may be a situation where their policy is in conflict with the well being of the island residents and an exception could be considered if supported locally. At that meeting, it was identified that the bridge could be considered in the short-term instead of rebuilding Kuper, medium-term instead of rebuilding Alert Bay (Kuper to be relocated) or not at all. It's simply an option that's been identified.

First and foremost, it is BC Ferries objective to meet its contractual obligations. The bridge option is an alternative that that has been identified as a potential way to improve the ferry service. What BC Ferries didn't want to do was ignore an alternative that could be considered if supported by all parties.

The Bridge report you refer to was conducted by MOT. I left a copy in planning with Erinn Cousins and I'll ask her for it. Thetis and Kuper were not considered in that analysis.

Thanks again for all the info regarding the history of the bridge between Thetis and Kuper that was decommissioned.

Steve Anderson
Manager, Fleet Deployment and Scheduling
British Columbia Ferry Services Inc.
Phone: (250) s17
Fax: (250)
steve.anderson@bcferries.com
www.bcferries.com

-----Original Message-----
From: Storm, Ed TRAN:EX
Sent: August 30, 2005 12:12 PM
To: Anderson, Brian R BCF:EX
Cc: Anderson, Steve BCF:EX
Subject: Islands Trust

The Islands Trust has asked to speak with Minister Falcon at the upcoming Union of British Columbia Municipalities Convention to reiterate their concerns about fixed links to and between the Gulf Islands.

The Minister's briefing note will indicate that BCFS is contemplating a bridge between Thetis and Kuper Islands as an alternative to retaining the ferry terminal on Kuper Island—to save capital costs and to gain operational / service improvements—and that BCFS has asked MoT to assist in studying this option. It will also indicate that MoT is not currently studying any other bridges to or between islands.

Earlier correspondence between MoT and the Islands Trust, in April 2003, indicates that several years ago, perhaps in 2002 or early 2003, the costs of replacing some ferry routes with bridges was studied. Apparently, the study indicated a fixed link to Gabriola Island might make sense in future.

Do you know if this study was done by BC Ferries? If yes, could you provide a copy? I'm trying to see if any mention of this also should be included in the Minister's briefing note.

Thanks,

U. E. (Ed) Storm
Manager, Project Development
Ministry of Transportation
Partnerships Department
Tel: (250) 356-1566 Fax: (250) 356-2112
Email: Ed.Storm@gov.bc.ca

Petruzzelli, Lynda TRAN:EX

From: Storm, Ed TRAN:EX
Sent: Wednesday, January 4, 2006 11:25 AM
To: 'Christy.Ridout@bcferries.com'
Subject: Re: Bridge between Thetis and Kuper Islands

Christy,

Thanks for your response. I'll close the file for now and wait for your word should interest in the bridge option increase in the future.

Thanks also for agreeing to dig out a copy of the MoT bridge option report. It's something we should have, but with so many changes in the past few years, some reports have been misplaced.

Regards,

Ed

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Ridout, Christy <Christy.Ridout@bcferries.com>
To: Storm, Ed TRAN:EX <Ed.Storm@gov.bc.ca>
Sent: Wed Jan 04 10:05:58 2006
Subject: FW: Bridge between Thetis and Kuper Islands

Hello Ed,

With s16 I have taken over the Master Planning for both Thetis and Kuper Islands.

I was able to discuss the bridge option with the Penelakut Chief and Council in November, stressing that BCF was not pushing this option but that we would facilitate initial discussions between the Band and MoT if this was felt to be in the Penelakut people's best interests.

s16

s16 s13, s16

s13, s16

s13 s16

s16

I won't be pursuing this option at this time, and will instead be pushing forward with long-term planning for the ferry terminal on Kuper Island. The marine works are being replaced this February. It may be possible to approach the bridge issue at a later date, but I would consider it safe to close your file for the time being.

Brian Anderson advises a copy of the MoT report studying various bridge options in the Gulf Islands is available, but off-site. It will take a few days to retrieve a copy, but once I have it, I will send it on to you.

Cheers,

Christy Ridout
Business Planner, Strategic Planning
British Columbia Ferry Services Inc.
Ph. (250) s17
Fax (250)
Christy.Ridout@bcferries.com

-----Original Message-----
From: Storm, Ed TRAN:EX [mailto:Ed.Storm@gov.bc.ca]
Sent: January 03, 2006 4:49 PM
To: Anderson, Brian
Subject: Bridge between Thetis and Kuper Islands

Brian,

About 6 months ago, Steve Anderson and I spoke several times about a bridge between Thetis and Kuper Islands and about the possibility that it might have benefits for Kuper Island residents and allow BC Ferries to obtain operating efficiencies. At that time, as I recall, he said BC Ferries might raise the possibility of a bridge with the Penelakut while discussing interim arrangements during the Kuper ferry dock up-grading, to find out if they have any interest.

I understand you've taken over from Steve and wonder if such discussions have occurred and if BC Ferries is still interested in examining the feasibility of a bridge? If so, would you need information from MoT during the upcoming year, or can I close the file?

In another matter, our Chief Bridge Engineer has been trying to find a copy of a study done by MoT in 2002 or 2003 relating to the costs of replacing some ferry routes with bridges, including to Gabriola Island. I understand you might have a copy in your department - if so, could I get a copy please?

Regards,

U. E. (Ed) Storm

Manager, Partnership & Project Development

Partnerships Department

Ministry of Transportation

Tel: (250) 356-1566 Fax: (250) 356-2112

Email: Ed.Storm@gov.bc.ca

Page 016 to/à Page 100

Withheld pursuant to/removed as

Copyright

[Click here and type address]

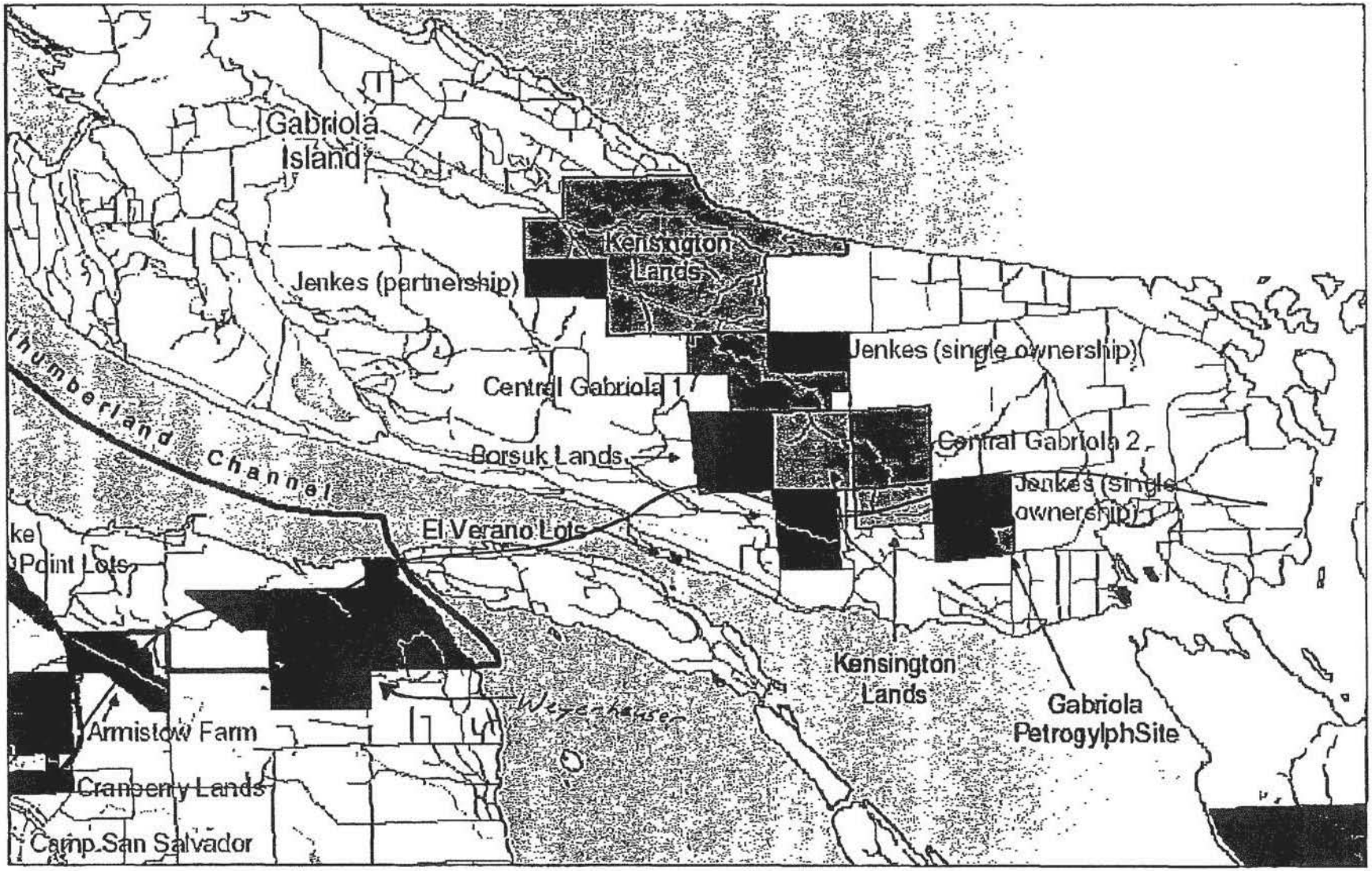
facsimile transmittal

To:	Gary Farnden, Bridge Rehab & Standard Engineer	**Fax:**	(250) 387-7735
From:	Dave Edgar, P.Eng., Sr. Transportation Planning Engineer, Vancouver Island District	**Date:**	2004-02-09
Re:	Proposed Highway Corridor to Gabriola Island	**Pages:**	11
CC:	[Click here and type name]		

☐ Urgent ☐ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

Notes: As discussed this morning.

Proposed Highway Corridor from Vancouver Island to Gabriola Island



DRAFT

Reference: #004150/91

Mr. s22

Your recent letter to the Honourable Moe Sihota has been forwarded to my office. Thank you for your interest in transportation issues concerning access to Vancouver Island.

My staff in the Vancouver Island Region have reviewed your suggestion to construct highway access onto Gabriola Island for access to a major B.C. Ferry terminal site. It would require a major highway connection from the south end of Gabriola Island to the Vancouver Island Highway, south of Nanaimo.

Present access to Gabriola Island is by a B.C. Ferry route operating between the Island and Nanaimo. A majority of Gabriola Island residents, as well as other interested groups, are strongly opposed to bridge construction. This would be a controversial proposal with a number of complex technical, social, and environmental issues.

B.C. Ferries is presently proposing to relocate their existing ferry terminals in Nanaimo at Departure Bay and Nanaimo Harbour to consolidated terminal at Duke Point. The proposed Duke Point terminal will resolve the issue of outgrown terminal and vehicle staging capacity in Nanaimo.

Very preliminary estimates indicate construction costs to provide highway access to the south end of Gabriola Island to serve a major ferry crossing to the lower mainland would require high standards at substantial costs, in the order of $60 - $80 million range, exclusive of right-of-way and terminal costs.

An overall analysis to consider the merits of this proposal, including the use of Iona Point on the mainland, should primarily be considered by the B.C. Ferry Corporation with input from the Ministry of Transportation & Highways. I note that the Honourable Moe Sihota has also referred a copy of your letter to the Minister of Finance and Corporate Relations, responsible for the B.C. Ferry Corporation.

I hope this provides the information is helpful.

December 10, 1991

Prepared by: H. Devos, P.Eng.
Transportation Planning Engineer
Vancouver Island Region

Approved by: T. Pollock, P.Eng.
Regional Manager, Planning
Vancouver Island Region

MINISTRY OF TRANSPORTATION & HIGHWAYS

BRIEFING NOTE

REGION

6 - Vancouver Island

COMMUNITY

1. Nanaimo
2. Gabriola Island

TOPIC

Access to Gabriola Island

ELECTORAL DISTRICT

Nanaimo

ISSUE

1. Relocation of Gabriola Island Ferry services to Duke Point.
2. Desirability of providing bridge access to replace the ferry service.

BACKGROUND

Access to Gabriola Island is by a subsidized B.C. Ferry route operating between the Island and downtown Nanaimo. Some segments of the public have proposed that a bridge to Gabriola Island be constructed with financing that utilizes the ferry subsidy, plus a bridge toll. A majority of Gabriola Island residents, as well as other interested groups, are strongly opposed to bridge construction. The Vancouver Island/Coast Transportation Task Force and the Minister have indicated the issue would be studied. This would be a controversial project which has a number of complex technical, social and environmental issues.

It has also been proposed that a site on Gabriola Island could be used as the Vancouver Island ferry terminal, shortening the ferry trip between Vancouver Island and the Lower Mainland to 1 hour. This concept would require a major highway connection from Gabriola Island to the Vancouver Island Highway, south of Nanaimo.

B.C. Ferries are also proposing to relocate their existing ferry terminals in Nanaimo at Departure Bay and Nanaimo Harbour to a consolidated terminal at Duke Point. This will marginally shorten the Gabriola ferry crossing distance; but, will also mean that Gabriola ferry foot passengers will no longer disembark in downtown Nanaimo.

BCFC is not promoting replacement of the Gabriola ferry service with a bridge and is opposed to considering it as a factor in relocation of the service to Duke Point.

The proposed Duke Point terminal will resolve the issue of outgrown terminal and vehicle staging capacity in Nanaimo. A future mid-island terminal, such as at Crofton or Yellow Point, now becomes a longer-term, future, issue.

..... Page 2.

Topographical features suggest only one economical site for a bridge to Gabriola Island; from the Cedar area on Vancouver Island spanning Dodds Narrow to Mudge Island and across False Narrows to Gabriola Island.

Providing access to Gabriola Island for local traffic, a relatively low standard and low cost road-bridge facility would suffice. Very preliminary estimates indicate construction costs, exclusive of right-of-way, in the $20 - $25 Million range. However, a highway and bridge to serve a major ferry crossing to the Lower Mainland would require high standards at substantially higher costs. It is unlikely a low standard package could be provided with economical upgrading to the higher standard.

MINISTRY POSITION

A study to examine the merits of a bridge crossing to Gabriola Island is of low priority. Its initiation has been deferred indefinitely pending completion of site and access studies regarding the proposed Duke-Point Ferry Terminal.

PREPARED BY

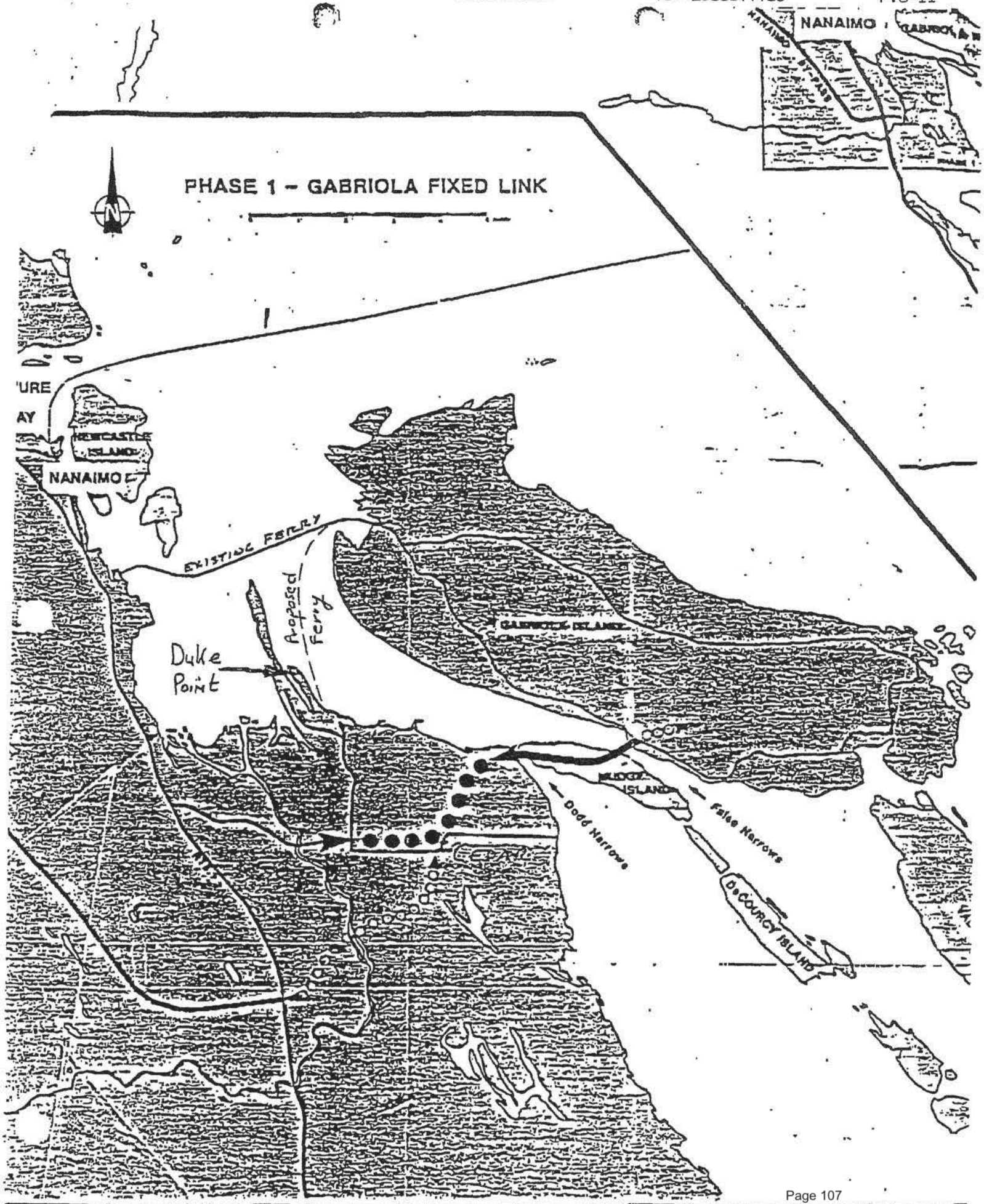
H. Devos, P.Eng.
Transportation Planning Engineer
Vancouver Island Region

DATE SUBMITTED

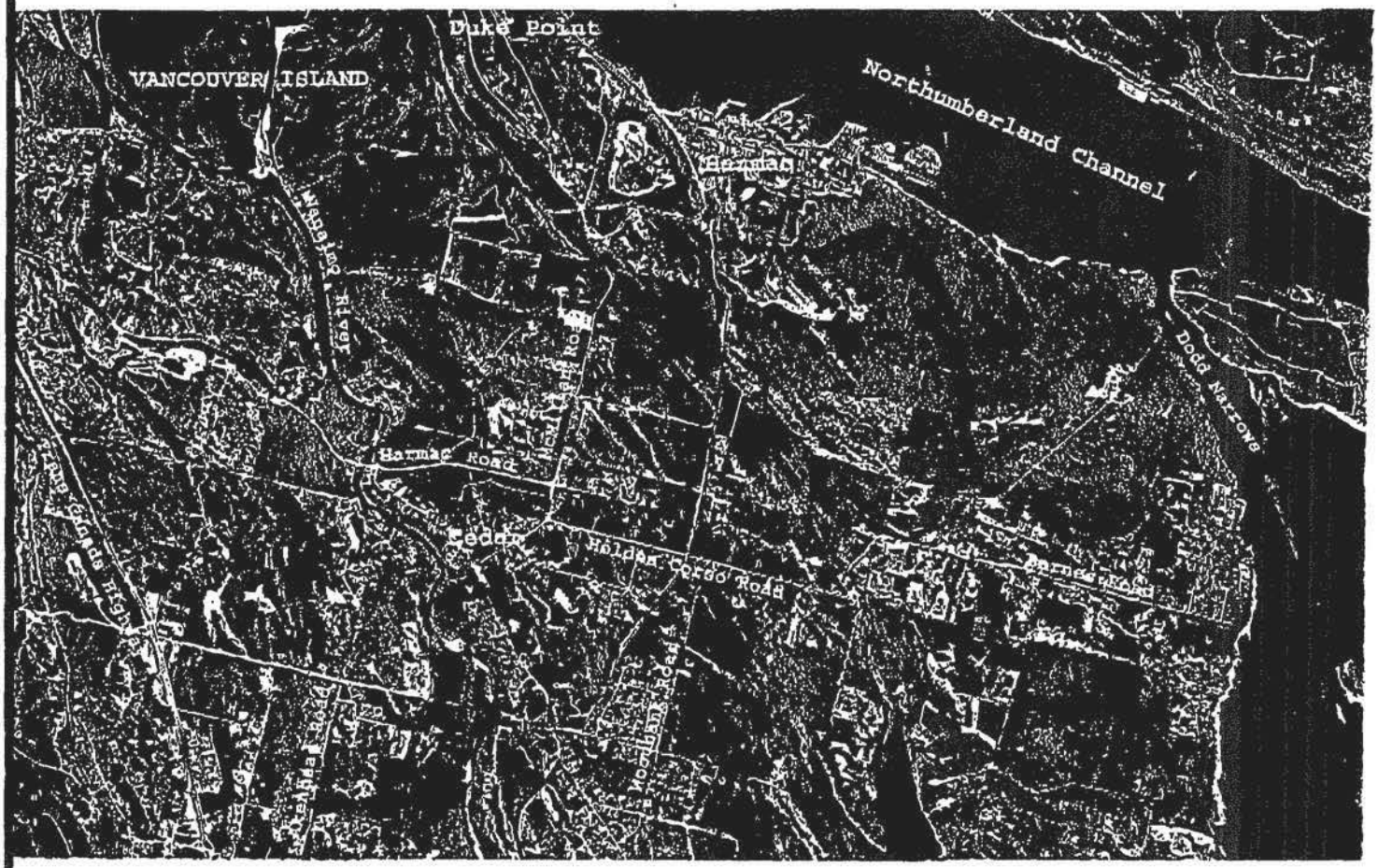
April 11, 1991.

DATE REVISED

June 24, 1991

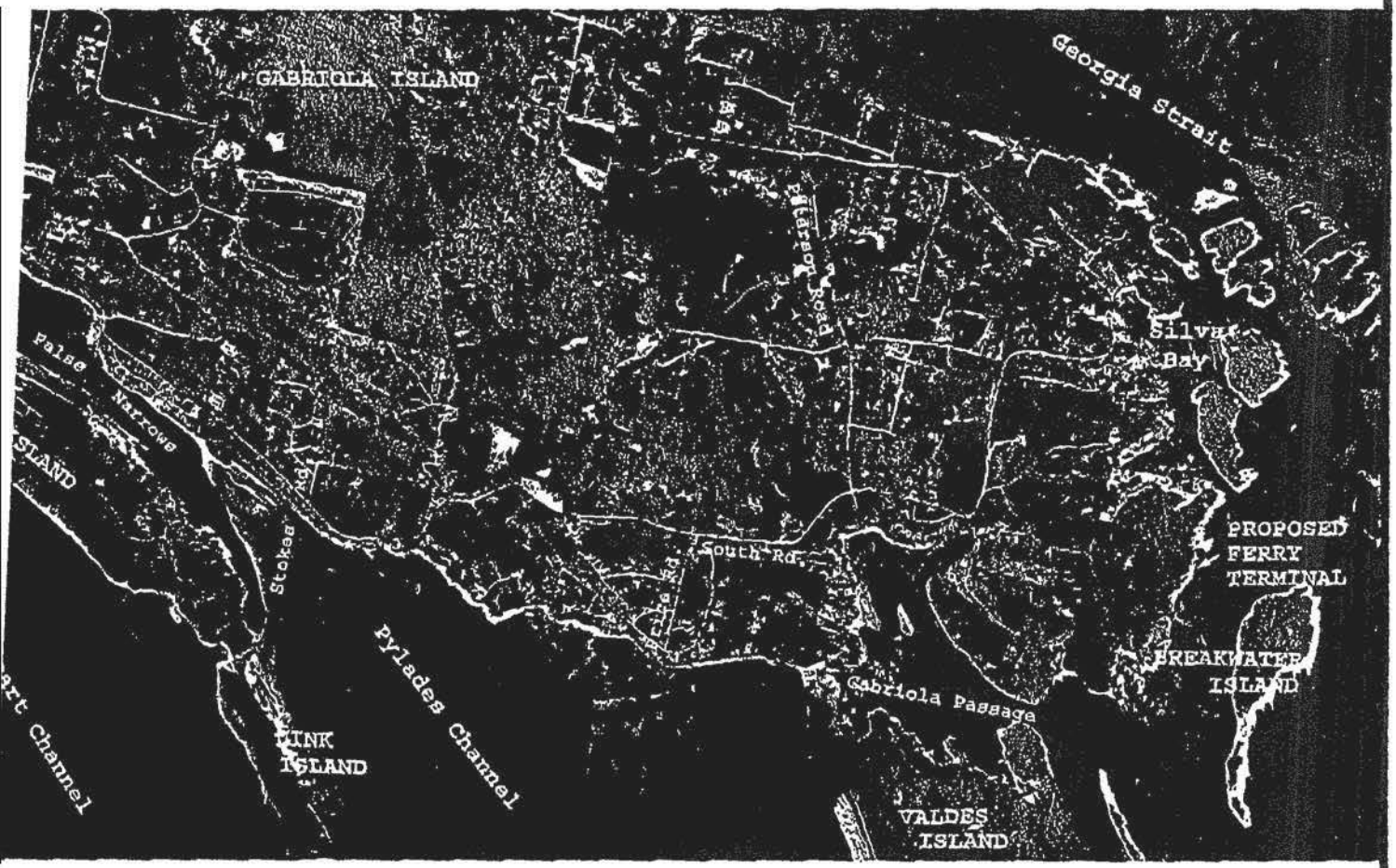

PHASE 1 – GABRIOLA FIXED LINK
NANAIMO
NANAIMO
NEWCASTLE ISLAND
EXISTING FERRY
Proposed Ferry
Duke Point
GABRIOLA ISLAND
MUDGE ISLAND
Dodd Narrows
False Narrows
DeCOURCY ISLAND

GABRIOLA ISLAND CORRIDO



Prepared for
Ministry of Transportation and Highways
Province of British Columbia

ROUTE FEASIBILITY STUDY



McElhanney

402 01013 August 1993

EXECUTIVE SUMMARY

The British Columbia Ferry Corporation (BCFC) in conjunction with the Ministry of Transportation and Highways (MTH) and the Crown Corporations Secretariat (CCS) are conducting a Mid Island Transportation Study to review ferry and highway operations between Vancouver Island and the Mainland. Alternative terminal sites and ferry routing options are being examined. One possible terminal location is at the south end of Gabriola Island. This site would reduce ferry crossing times and increase capacity for both the Horseshoe Bay and the Tsawwassen ferry routes. This report examines the feasibility of constructing a highway to this potential Gabriola Ferry Terminal.

The Ministry of Transportation and Highways engaged McElhanney Engineering Services and their subconsultants (The Economic Planning Group; Norecol Dames and Moore Inc.; Talisman Land Resource Consultants; Ward Consulting Group; and Thurber Engineering Ltd) to conduct the study, a route level technical evaluation. The work was supervised by a project team of Ministry personnel through the Nanaimo Regional Planning Office to review and direct the consultants' activities.

From the Trans Canada Highway (TCH) to the proposed terminal site is 17 kilometres. The corridor examined is two to three kilometres wide. The study area contains blocks of Agricultural Land Reserve (ALR), rural residential subdivisions, sensitive fish and wildlife habitat, waterways, forests, views and landscapes. All of these features and resources are highly valued and to be protected.

A process for route selection was conducted. Initially the resources of the area were mapped by specialists onto a common set of map overlays. This brought information from diverse sources together for comparison. All reasonable alternative routes were then plotted (see Figure 5.4.1). A preliminary screening was conducted to identify the most promising alternatives. Then a matrix evaluation was conducted using a weighted scoring system. A preferred route is recommended based upon a logical comparison of screened alternatives (see Figure 6.2-1).

The latter part of the study evaluates geometric, socio-community, and environmental features along the recommended route to determine its feasibility, configuration, cost, and impacts.

Significant Findings

1) A staged implementation is proposed. Initially a two lane highway with appropriate auxiliary lanes for truck hill-climbing, intersection capacity and platoon dispersion. Allowance is made for future widening to a four lane expressway with twinned bridges.

2) Intersections are proposed at TCH and Peterson Road on Gabriola Island. In addition a half diamond interchange is proposed at Holden Creek for access to the Duke Point Industrial Park.

3) A 20 metre navigation clearance is proposed for Dodd Narrows. A full navigation clearance is not proposed for False Narrows due to its low utilization, limited depths, cost and aesthetic concerns.

4) The estimated two lane highway construction cost is $126 million, excluding property cost and environmental contingency. This includes design contingencies, property, engineering, and construction management (see Table 9.2-1). Some escalation can be expected due to: inflation, ALR requirements, fisheries and wildlife impact avoidance, and the needs of local governments and major land owners. Section 9 provides more detail on the estimate and cost escalation risk.

5) Appendices E, F, G, H, and I contain the initial property, land use, geotechnical and environmental impacts/issues to address in subsequent design stages. Areas likely to require considerable investigation and design include:

- the intertidal zone at False Narrows;
- the alienation of portions of the ALR and minimizing impacts on farm operations;
- the future land use plans of the Island Trust and Regional District;
- the boat clearance at False Narrows;
- the conflict with the proposed Weldwood subdivision;
- neighbourhood impacts at: the Nanaimo River (see Duke Point Report), McMillan Road, Mudge Island, Mussel Heights/Oyster Way, and Degnen Bay;
- the potential pressure to provide highway access to Mudge Island;
- the archaeological impacts of the route;

- impacts on agricultural lands;
- the integration of the bridges and excavations with the natural land forms; and
- other issues that will arise from public consultation and preliminary design processes.

6) The recommended route is technically feasible. The drawings in Appendices B, and C show a conceptual location and configuration of the Highway alignment and the affected sideroads.

Brett, Peter TRAN:EX

From: Brett, Peter TRAN:EX
Sent: Thursday, March 28, 2002 7:04 AM
To: Gabitous, Jason L TRAN:EX
Cc: Weaver, Sandra TRAN:EX
Subject: FW: s22 96394 - information request

Importance: High

I did a very preliminary study in 1988 for Deputy Minister Flitton for a bridges from Vancouver Island to Gabriola Island via Mudge Island. The costs in 1988 dollars were:

- Dodds Narrows Bridge - $7.4M
- False Narrows Bridge - $9.0M

Planning Branch also did some work at that time. Contact Jim Hester for information he can provide notes.

-----Original Message-----
From: Brett, Peter TRAN:EX
Sent: Wednesday, March 20, 2002 3:03 PM
To: Weaver, Sandra TRAN:EX
Cc: Gabitous, Jason L TRAN:EX
Subject: RE s22 96394 - information request
Importance: High

Having received this on 19th there is absolutely no chance that I will respond by 21st. I will attempt to provide an answer next week!

-----Original Message-----
From: Weaver, Sandra TRAN:EX
Sent: Tuesday, March 19, 2002 3:33 PM
To: Brett, Peter TRAN:EX
Subject: FW: s22 96394 - information request
Importance: High

Peter:
Could you provide Writing Services with bullets/notes, etc in order that a minister's response can be finalized. If you require more detail with respect to the request, contact Jason Gabitous direct.

They are asking for a quick turnaround. Thanks

Sandra

-----Original Message-----
From: Gabitous, Jason L TRAN:EX
Sent: Tuesday, March 19, 2002 2:07 PM
To: Weaver, Sandra TRAN:EX
Subject: RE s22 96394 - information request

I have seen that batch, but this person only wants to know how much a bridge from Vancouver Island to Gabriola Island would cost.

-----Original Message-----
From: Weaver, Sandra TRAN:EX
Sent: Tuesday, March 19, 2002 1:39 PM
To: Writing Services, Transportation TRAN:EX
Subject: RE: s22 96394 - information request

<< Message: FW: 94807-Fixed Link batch for approval >>

Do you aware of this?

-----Original Message-----
From: Writing Services, Transportation TRAN:EX
Sent: Tuesday, March 19, 2002 12:06 PM
To: Weaver, Sandra TRAN:EX
Subject: s22 96394 - information request

Hi Sandra,

This person wants information on constructing a bridge from Gabriola to Vancouver Island.

Have we studied this in the past? If so what did we find out?
How much would this cost?

This is due in the minister's office on the 21st so if you could get this back to me quickly I would appreciate it. Thanks, Jason

Brett, Peter TRAN:EX

From: Orr, Kelly TRAN:EX
Sent: Friday, April 12, 2002 11:26 AM
To: Brett, Peter TRAN:EX
Subject: RE: costs re building bridge: s22 96394

Excellent Peter...thanks for the update to John. We will see if he needs anything further.

Kelly A. Orr
Executive Assistant
Highways Department, Ministry of Transportation
Tel: 250-387-3260 Fax: 250-387-6431
e-mail: kelly.orr@gems8.gov.bc.ca

-----Original Message-----
From: Brett, Peter TRAN:EX
Sent: Friday, April 12, 2002 11:22 AM
To: Orr, Kelly TRAN:EX
Cc: Weaver, Sandra TRAN:EX; Dyble, John TRAN:EX
Subject: RE: costs re building bridge: s22 96394

Kelly:

The recent BC Ferries study had no input from this office, although I was contacted by Ernie Wolski a few months ago and we talked about "bridges to the islands" in general terms. Therefore, I suspect Ernie prepared the latest estimates.

Some comments on my 1988 estimate of $16.4M ($7.4M + $9.0M) for Dodds & False Narrows Bridges:

Convert to 2002 dollars assuming 5% & 10% Construction Cost Indices:

- 5% $16.4M x 1.97 = $32.3M
- 10% $16.4M x 3.79 = $62.2M

Very similar to current BC Ferry estimate of $45 - $50M!

Extrapolating estimates that are 14 years out of date is a very questionable excercise. However, my numbers do appear to be in the right "ball park".

Peter

John: FYI

-----Original Message-----
From: Orr, Kelly TRAN:EX
Sent: Friday, April 12, 2002 9:10 AM
To: Brett, Peter TRAN:EX
Cc: Weaver, Sandra TRAN:EX
Subject: FW: costs re building bridge: s22 96394
Importance: High

Sandra: Thank you for this. I'll forward to Writing Services for changes when it goes over from here unless you've already done so (I still have the package here).

Peter: John Dyble had a question re: "BC Ferries and Ministry of Transportation recently completed a summary review of the potential costs involved in constructing bridges to replace some existing ferry routes" part of the letter. Question: Who is heading up this review? Who is involved?

Just off the top of my head I know Engineering did a presentation on fixed links using Powerpoint recently with summarized the various options and studies over the past several years. Is this what the letter refers too? Is

Brett, Peter TRAN:EX

From: Brett, Peter TRAN:EX
Sent: Friday, April 12, 2002 11:22 AM
To: Orr, Kelly TRAN:EX
Cc: Weaver, Sandra TRAN:EX; Dyble, John TRAN:EX
Subject: RE: costs re building bridge: s22 96394

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Some comments on my 1988 estimate of $16.4M ($7.4M + $9.0M) for Dodds & False Narrows Bridges:

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Very similar to current BC Ferry estimate of $45 - $50M!

Extrapolating estimates that are 14 years out of date is a very questionable excercise. However, my numbers do appear to be in the right "ball park".

Peter

John: FYI

-----Original Message-----
From: Orr, Kelly TRAN:EX
Sent: Friday, April 12, 2002 9:10 AM
To: Brett, Peter TRAN:EX
Cc: Weaver, Sandra TRAN:EX
Subject: FW: costs re building bridge s22 96394
Importance: High

Sandra: Thank you for this. I'll forward to Writing Services for changes when it goes over from here unless you've already done so (I still have the package here).

Peter: John Dyble had a question re: "BC Ferries and Ministry of Transportation recently completed a summary review of the potential costs involved in constructing bridges to replace some existing ferry routes" part of the letter. Question: Who is heading up this review? Who is involved?

Just off the top of my head I know Engineering did a presentation on fixed links using Powerpoint recently with summarized the various options and studies over the past several years. Is this what the letter refers too? Is there a formal report.

Thanks.

Kelly A. Orr
Executive Assistant
Highways Department, Ministry of Transportation
Tel: 250-387-3260 Fax: 250-387-6431
e-mail: kelly.orr@gems8.gov.bc.ca

-----Original Message-----
From: Weaver, Sandra TRAN:EX
Sent: Tuesday, April 09, 2002 4:21 PM
To: Orr, Kelly TRAN:EX
Subject: costs re building bridge s22 96394

Importance: High

Kelly:
it looks like Peter Brett's estimates have been replaced with figures provided by BC Ferries
(re your phone call to me earlier today).

-----Original Message-----
From: Writing Services, Transportation TRAN:EX
Sent: Friday, April 05, 2002 10:02 AM
To: Weaver, Sandra TRAN:EX
Subject: s22 96394 - FYI

Hi Sandra,

BC Ferries has suddenly come up with some cost estimates for fixed links and has revised this letter (see below). Here is the revised letter for your files.
<< File: 96394.doc >>

Thanks,

Jason Gabitous
Writing Services

-----Original Message-----
From: Sharpe, Tara K BCFC:EX
Sent: Thursday, April 04, 2002 1:56 PM
To: Transportation WritingServices
Subject: BCFC -- 96394 s22

Hi Sara.

Mark has made some minor changes to the second and third paragraphs (as highlighted).

However, the dollar figures in the last full paragraph are wrong. Mark brought this to my attention, based on a confidential **DRAFT** document of January 25, 2002, prepared by our planning branch and the Ministry, and entitled "*Preliminary Financial Analysis of Bridge and Ferry Costs on Eight Selected Routes.*" This document has the latest estimated fixed link figures.

So I've reworked that paragraph accordingly and Mark has given final approval.

As attached, it is ready for signature.

<< File: s22 l2102.doc >>

Thanks, Sara.

T

Tara Sharpe
Officer, Customer Communications & Correspondence
BCFC Corporate Communications
Direct line: (250) s17
email: Tara.Sharpe@bcferries.com

FEB 2004.

DISCUSSION MIKE KENT RE ENVIRONMENTAL ISSUES GABRIOLA FIXED LINK

MAJOR ISSUES IS VERY SIGNIFICANT ARCHAEOLOGICAL MIDDENS ON GABRIOLA ISLAND IN AREA ~~WHICH~~ WHICH IS MOST LIKELY BRIDGE LANDING. VERY HIGH COST RISK AND OR STRONG ~~OPPOSITION~~ 1ST NATIONS OUTRIGHT OPPOSITION.

NORMAL BUT SIGNIFICANT ISSUE IS FORESHORE BRIDGE PIER SITES.

From: Pool, Joyce TRAN:EX
Sent: Tuesday, December 17, 2002 2:43 PM
To: Gabriel, Bernice TRAN:EX
Cc: Coffey, Samantha TRAN:EX
Subject: RE: PRIORITY 103530

Information provided by Peter Wightman as requested for Dan Doyle:

we do not currently have a route suitable for a future bridge / ferry link on gabriola.

preliminary future hwy alignment has been identified from hwy 19 (duke point hwy) on vancouver island, to mudge island and thence to and a 'gabriola island to the mainland' ferry terminal at the east end of gabriola.

during recent snuneymuxw treaty agreement in principle (aip) discussions, the route from hwy 19 across vancouver island to the mudge island crossing site (dodd narrows), was identified as to be aquired through proposed treaty settlement lands (tsl). that will occur between aip and final treaty.

bc ferries was consulted regarding the need to protect through tsl on gabriola island, to the proposed future ferry terminal. as the terminal was not planned for the foreseeable future, it was decided to NOT similarly protect an alignment through tsl on gabriola. treaty language will include an expropriation mechanism.

south road is the existing mot route linking the proposed bridge landing site to the proposed ferry terminal location. it is not a suitable alignment for upgrading to numbered route status, should the bridge and ferry proposals proceed.

Peter Wightman
Operations Manager
Courtenay Area Office
Phone: (250) 334 6954
Fax: (250) 334-1291
Email: Peter.Wightman@Gems8.Gov.Bc.Ca

-----Original Message-----
From: Gabriel, Bernice TRAN:EX
Sent: Tuesday, December 17, 2002 12:27 PM
To: Pool, Joyce TRAN:EX
Subject: FW: PRIORITY 103530

Joyce,

HQ is looking for the status on this one? Dan has a note embedded in Cliff that needs to be answered.

Thanks.

Bernice

-----Original Message-----
From: Coffey, Samantha TRAN:EX
Sent: Tuesday, December 17, 2002 11:45 AM
To: Gabriel, Bernice TRAN:EX
Subject: PRIORITY 103530

Hi Bernice,

Can't email through cliff for some reason...

Would you please advise on the status of this one. A response to Dan's question was requested for this morning.

Thx.
Sam

==========
LOG ID: 103530
WRITTEN: Aug 2, 2002
RECEIVED: Aug 8, 2002
DUE: 00/00/00
INTERIM: 00/00/00
RESPONSE: 00/00/00
CLOSED: Dec 6, 2002
LOG TYPE: Information
ACTION: Approval
BATCH:
SIGN BY: Dan Doyle
FILE: 50520-20/GAB 05/02

Mike Proudfoot

EMAIL:
SUBJECT: Transportation Review
: Proposed Municipal Incorporation - Gabriola Island
NOTE: Directed to Tim Zurowski, re: Proposed Incorporation of Gabriola Island
ADDRESSEE:
TONE:
MLA:
ISSUE: Corporate Policy
DEPARTMENT: Transportation Planning
ELECT DIST:

ACTION: Approval — DUE: Nov 1, 2002
SENT BY: TTP-Trans Policy — SENT: Oct 30, 2002
SENT TO: TTP-Trans Policy — RCVD:

ACTION: Approval — DUE: Nov 1, 2002
SENT BY: TTP-Trans Policy — SENT: Oct 30, 2002
SENT TO: TADM-Trans Plan ADM — RCVD: Nov 7, 2002

ACTION: Approval — DUE: Nov 15, 2002
SENT BY: TADM-Trans Plan ADM — SENT: Nov 13, 2002
SENT TO: DM-Deputy Minister — RCVD: Nov 13, 2002

ACTION: Attention — DUE: Nov 22, 2002
SENT BY: DM-Deputy Minister — SENT: Nov 15, 2002
SENT TO: HADM-Highways — RCVD:

ACTION: Approval — DUE: Dec 6, 2002
SENT BY: HADM-Highways — SENT: Dec 4, 2002
SENT TO: DM-Deputy Minister — RCVD: Dec 4, 2002

*** THIS REFERRAL IS 9 DAYS OVERDUE. ***
ACTION: Attention — DUE: Dec 8, 2002
SENT BY: HADM-Highways — SENT: Dec 6, 2002
SENT TO: HSRD-South Coast — RCVD:

Sam Coffey
Executive Clerk
Highways Department
Tel. 250-387-3260
<< OLE Object: Microsoft Clip Gallery >>

OFFICE OF DAN DOYLE, DEPUTY MINISTER
MINISTRY OF TRANSPORTATION

Jake

do we have a provincial Route in this Island that would be useful for future Ferry Terminal / Budeys

DEC 0 5 2002

Mike Proudfoot

Please answer

Thanks

Pat.

ASSISTANT DEPUTY MINISTER
HIGHWAYS DEPARTMENT
RECEIVED
DEC - 5 2002
NOTED 10:35:30
TRANSPORTATION

BRITISH COLUMBIA
Ministry of Transportation

Confidential

Transportation Policy Branch
Telephone: 387-7585
Facsimile: 356-0897

Proposed Municipal Incorporation
Gabriola Island
Routing and Approval Sheet

Subject:	Package prepared by:
Proposed Incorporation of Gabriola Island Cliff # 103530 MoT # 05/02	Tim Zurowski, Policy Analyst 387-7689

Routing	Approval Signature	Date
Melanie Courchene, Director Transportation Policy	MCourchene	NOV. 6/02
Kathie Miller Assistant Deputy Minister Transportation Planning & Policy Department	KR Miller	NOV 12/02
John Dyble, Assistant Deputy Minister Highways Department	JD	Dec 4/02
Dan Doyle, Deputy Minister	DD	Dec 5 2002

DEPUTY MINISTER RECEIVED DEC 04 2002 NOTED Transportation

DEPUTY MINISTER RECEIVED NOV 13 2002 NOTED Transportation

After DM approves, please return package to Transportation Policy Branch for response to Ministry of Community, Aboriginal & Women's Services.

MINISTRY OF TRANSPORTATION
BRIEFING NOTE

BN #: 103530

REGION: South Coast

MoT DISTRICT: Vancouver Island

ELECTORAL DISTRICT: Nanaimo

MUNICIPALITY / REGIONAL DISTRICT: Regional District of Nanaimo

I. PREPARED FOR: Deputy Minister for **Approval**

II. ISSUE:

The Ministry of Transportation (MoT) assistance package for the proposed incorporation of Gabriola Island.

III. BACKGROUND:

Gabriola Island is undertaking a study to look into the possible incorporation of the whole island. The Ministry of Community, Aboriginal and Women's Services (MCAWS) is the lead agency regarding this proposal, and has requested MoT's comments and assistance towards this restructure. The district manager for Vancouver Island has provided comments and recommendations (copy of August 2, 2002 memo attached) regarding classification of highways, road and bridge maintenance costs, any rehabilitation currently scheduled or planned for the area and location of ministry holdings.

IV. DISCUSSION:

MoT has no grant programs to offer in support of municipal restructuring or new incorporation requests. However, there is the usual ministry five-year road and bridge maintenance assistance package that may be offered.

<u>Road Maintenance</u>
The ministry's private maintenance contractor would continue with routine maintenance, in accordance with the contract specifications, for a period of five years from the effective incorporation date. After the five-year transitional period, maintenance of the roads will fully become a municipal responsibility.

The annual road and bridge maintenance costs for the island are $244,827. The annual road maintenance costs are based on the current maintenance contract unit prices by summer/winter class of road, and do not include administration fees or indexing for inflation. There are no provisions for extraordinary expenses.

Capital Rehabilitation
Since the Capital Rehabilitation Program for Newly Incorporated Territories was eliminated in 1996, MoT will not be offering any financial assistance for rehabilitation works. The district manager advises that there are no rehabilitation works planned for this fiscal or next.

Arterial highway Classification
There are no routes on the island that would warrant classification as Arterial highway.

Other

- There are six roads on the island identified as Section 4 roads totalling 9.10 km. Under the Highway Act, Section 4 roads are public roads. Under the Local Government Act, all public roads are the responsibility of the municipality. It is ministry practice that all Section 4 roads and issues become the responsibility of the municipality once incorporation takes place. It should be noted that three of the Section 4 roads are within properties that are under current treaty negotiations. MoT claims a 66 foot road width through the properties. If the properties are transferred to Canada for the use and benefit of the First Nation as part of the ratified treaty, the First Nation can hold the lands in fee simple, or have them become Indian Reserve land. In either case, the roads should be excluded from any land transfer as part of the treaty settlement. If the Island is incorporated, then the roads would become the jurisdiction of the municipality and allow residents continued certainty of access through the transferred properties.

- There are two gravel reserves and one maintenance yard located on the island. These parcels could be considered for transfer to the new municipality, should they be interested. Details of the transfers would be worked out after incorporation.

- Because responsibility and control of highways are transferred through devolution, the financial impact is the same as if the highway was sold to a third party. However, since the municipalities are not buying the highways from the province, there is a loss on disposition, equivalent to the net book value of the asset or the market value, whichever is greater. In effect, the province has provided an "in kind" grant to the municipality, equal to the value of the road.

  The Ministry of Transportation has limited flexibility to accommodate these devolutions in its budget. Each devolution would need to be considered on a case-by-case basis and the timing carefully controlled to ensure that there is no negative impact on the province's bottom line. The road and bridge capital asset write-off values for Gabriola Island are estimated at $8,336,230.

V. CONSULTATIONS:

Discussions have taken place with MoT, MCAWS, the Gabriola Incorporation Committee, Transportation Policy Branch, the District Manager, the Senior Manager, Properties & Business Management and Finance & Administration.

VI. RECOMMENDATIONS/SUMMARY:

That MCAWS be advised of MoT's offer as outlined below, and that the offer is valid for a period of one year and subject to Treasury Board approval.

1. MoT's maintenance contractor will continue with routine road maintenance, in accordance with the contract specifications, for a period of five years from the effective incorporation date.

2. No capital rehabilitation will be provided.

3. No routes warrant classification as Arterial highway.

4. All Section 4 roads will become a municipal responsibility.

5. The two gravel reserves may be transferred to the municipality. Details for any transfers will be worked out after incorporation.

If the offer as outlined above is approved, Transportation Policy Branch will respond to MCAWS detailing MoT's formal offer.

Dec 5 2002

APPROVED / NOT APPROVED **DATE**
Dan Doyle
Deputy Minister

Attachments (1)

Prepared By: Tim Zurowski
Drafter's Title: Policy Analyst

Phone: (250) 387-7689
Date Prepared: October 25, 2002

Reviewed By: Melanie Courchene
Director, Transportation Policy

BRITISH COLUMBIA

Ministry of Transportation South Coast Region **MEMORANDUM**

Tim Zurowski
Policy Analyst
Ministry of Transportation

August 2, 2002
6475 Metral Drive
Nanaimo BC V9T 2L9
Telephone: (250) 390-6100
File: 50520-20/GAB
05/02

Re: **Proposed Incorporation of Gabriola Island**

Reference your letter of June 19, 2002. We offer the following comments:

Road Maintenance

- List of all public roads and their length, see attachments
- There are no bridges on Gabriola Island
- Summer and winter class , see attachments
- Summer cost $149,908.50
- Winter cost $94,918.90
- Total annual cost $244,827.40

Regarding continued road and bridge maintenance, either approach (providing services for five years or cash payment for the residual period beyond the expiry of the current contract) would be manageable. In light of the September 2003 expiry of the current contract, an alternative may be for MOT to provide maintenance services for a period that would allow the new municipality to prepare to assume this responsibility (say two years) with a cash payment for the balance of the five year term.

Our preference would be to promote the earliest reasonable transfer to reduce MOT's administrative role.

Capital Rehabilitation

There are no capital rehabilitation projects planned for this fiscal or next fiscal.

Arterial Highways

No arterial highways exist on Gabriola Island, or would satisfy the criteria for classified highway status.

.../2

Other Questions

1. Section 4 Roads are highlighted on the attached map in yellow.
   Any section 4 roads involved in treaty negotiations have been requested to receive a minimum 20-meter dedication.

   North Rd (parts of totaling) 4.4 km
   South Rd (parts of totaling) 2.3 km
   Tait Rd (parts of totaling) 0.800 km
   Elgie Rd 0.400 km
   McConvey Rd (parts of totaling) 0.800 km
   Wharf Rd (parts of totaling) 0.400 km, adjacent property does not agree with section 4 status.

2. There are two gravel reserves on Gabriola Island – Degen Pit and Barrett Pit. They are highlighted in green on the attached map. The maintenance yard is highlighted in pink on the attached map. These parcels could be considered for transfer to the new municipality.

Please let me know if you require any additional information.

Mike Proudfoot
for: District Manager, Transportation
Vancouver Island District

Attachment

cc: Dave Edgar, Sr. Transportation Planning Engineer – South Coast Region (Nanaimo)
Sean O'Sullivan, Transportation Planning Engineer – Vancouver Island District
Richard Crossley, Area Manager, Roads – Vancouver Island District

1100053 FIXED.

F Fixed link

Proposal to construct a Fixed Link to replace the Gabriola Island ferry

Through Public Private Participation to raise capital for the Building, Owning and Operation of the replacement transportation system.

An incorporated, registered Society of Gabriola Island residents will manage the proposal, and return on investment will be provided by a user toll system.

This proposal should be seen in the context of present realities and historical positions. Vancouver Island in particular and British Columbia in general are in the process of developing a new economy. The old resource economy based on Forestry, Fishing and Mining is under pressure from concerns regarding Environmental Social and International factors. The new economy based on Manufacturing, Tourism, Aquaculture require a new approach to infrastuctural support, in particular, access to markets through Transportation systems. The coastal barge transportation was effective for the old economy, but the new economy requires a more sophisticated approach. The requirement for a new transportation system was recognized as necessary by the NDP in the late 1960's; the issue of bridges to Gabriola Island was debated in the House at that time. The first two community plans for Gabriola under the Islands Trust recognized the significance of transportation improvements to the Provincial economy and incorporated standards of construction for the road and bridge construction in the community plans. Of the estimated 5500 residents living on Gabriola Island, 5000 moved there well aware of the possibility of Transportation changes.

Factors relating to Social Change for residents on Gabriola Island:

1. Native Land Claim. The Nanaimo Band is claiming 1/3 of Gabriola and have no intention of participating in our local government.
2. Governance Review. Residents of Gabriola have retained the services of a consultant through a government grant to review the possibility of Municipal Status.
3. Groundwater. Drinking water from wells is to a large degree, contaminated, and several studies are under way to determine the extent. The RDN, Malaspina College and the Gabriola Groundwater Management Society are involved in these studies.
4. BC Ferries. Capacity, scheduling of Dangerous Goods, Ambulance service, roadside lineup parking, terminal parking are all currant problems.

Mathieson, Ron TRAN:EX

From: Galbraith, Elaine TRAN:EX
Sent: Thursday, April 04, 2002 2:21 PM
To: Galbraith, Elaine TRAN:EX; Mathieson, Ron TRAN:EX
Subject: RE: Bridge to Gabriola

Additional attendees as just advised by Jeremy Baker:

The Group will be *"Gabriola Island Transportation Authority"*

Jeremy Baker - s22
Bill Smith - s22
Graham Mules -
Bob McLelland - s22
Vincent Iameo -

-----Original Message-----
From: Galbraith, Elaine TRAN:EX
Sent: Thursday, April 04, 2002 9:26 AM
To: Mathieson, Ron TRAN:EX
Cc: Galbraith, Elaine TRAN:EX
Subject: RE: Bridge to Gabriola

Ron - although BC Ferries still have not confirmed who will attend the mtg is now tentatively scheduled for

4pm on Tuesday April 16th
Location is Ministry office - Oak Room, 3rd Floor, 6475 Metral Drive, Nanaimo.

Attendees: Jeremy Baker, Frank Blasetti, Ron Mathieson & a BC Ferries person

You previously asked "why 4pm?" The reason for 4pm is that s22
s22

I'll let you know who will be attending on behalf of BC Ferries

Regards, Elaine.

-----Original Message-----
From: Mathieson, Ron TRAN:EX
Sent: Wednesday, April 03, 2002 9:17 AM
To: Galbraith, Elaine TRAN:EX
Subject: RE: Bridge to Gabriola

Any confirmation on the meeting?

Ron

-----Original Message-----
From: Galbraith, Elaine TRAN:EX
Sent: Monday, March 25, 2002 9:09 AM
To: Mathieson, Ron TRAN:EX
Subject: FW: Bridge to Gabriola

Ron;

Frank has asked me to arrange this meeting for him once he knows who the participants will be (I am still waiting to find out who the BC Ferries person will be).

Frank has advised me to arrange the meeting; in Nanaimo, after 4pm, and not before April 8th.

Please could you let me know if there are any days April 8th - end of April that you would not want this meeting to happen. (It won't be a Monday and I'll try to avoid Fridays too).

Regards, Elaine.

-----Original Message-----
From: Nyland, Dirk TRAN:EX
Sent: Monday, March 25, 2002 8:02 AM
To: Blasetti, Frank TRAN:EX
Cc: Dyble, John TRAN:EX; Mathieson, Ron TRAN:EX; Brett, Peter TRAN:EX; Buckle, Jon TRAN:EX
Subject: RE: Bridge to Gabriola

Frank;
Per Jon's request, Ron Mathieson will be available to assist with this assignment. Please advise meeting date(s) and anticipated lenght of assignment.

I suggest you contact Ron directly regarding meeting dates/times.

Dirk

Dirk Nyland P.Eng.,
Chief Engineer,
British Columbia Ministry of Transportation
Victoria

phone: (250) 387-2310 FAX: (250) 387-3736
cell: (250) 812-6645
mailto:dirk.nyland@gems2.gov.bc.ca
www.gov.bc.ca/tran

-----Original Message-----
From: Buckle, Jon TRAN:EX
Sent: Sunday, March 24, 2002 4:28 PM
To: Nyland, Dirk TRAN:EX
Cc: Dyble, John TRAN:EX
Subject: Bridge to Gabriola
Importance: High

Dirk:
Frank Blasetti needs one of your bridge experts (Ron Mathieson perhaps?) to attend a meeting regarding a proposal to construct bridge access to Gabriola Is....via Dodds narrows etc. They are looking at a 3p that would offset the ferry operating costs with a toll bridge.
The assignment would involve reviewing some reports and attending one or more meetings.
This is considered a very high priority as it comes from the premier's office.
Please advise Frank who will be assigned.
thx...Jon for John

Lan: 02-02

This is all I have on Gabriola. How is the paper review progressing?

Brett, Peter TRAN:EX

From: Brett, Peter TRAN:EX
Sent: Thursday, March 28, 2002 7:04 AM
To: Gabitous, Jason L TRAN:EX
Cc: Weaver, Sandra TRAN:EX
Subject: FW: s22 96394 - information request

Importance: High

I did a very preliminary study in 1988 for Deputy Minister Flitton for a bridges from Vancouver Island to Gabriola Island via Mudge Island. The costs in 1988 dollars were:

- Dodds Narrows Bridge - $7.4M
- False Narrows Bridge - $9.0M

Planning Branch also did some work at that time. Contact Jim Hester for information he can provide notes.

-----Original Message-----
From: Brett, Peter TRAN:EX
Sent: Wednesday, March 20, 2002 3:03 PM
To: Weaver, Sandra TRAN:EX
Cc: Gabitous, Jason L TRAN:EX
Subject: RE: s22 96394 - information request
Importance: High

Having received this on 19th there is absolutely no chance that I will respond by 21st. I will attempt to provide an answer next week!

-----Original Message-----
From: Weaver, Sandra TRAN:EX
Sent: Tuesday, March 19, 2002 3:33 PM
To: Brett, Peter TRAN:EX
Subject: FW: s22 96394 - information request
Importance: High

Peter:
Could you provide Writing Services with bullets/notes, etc in order that a minister's response can be finalized. If you require more detail with respect to the request, contact Jason Gabitous direct.

They are asking for a quick turnaround. Thanks

Sandra

-----Original Message-----
From: Gabitous, Jason L TRAN:EX
Sent: Tuesday, March 19, 2002 2:07 PM
To: Weaver, Sandra TRAN:EX
Subject: RE: s22 96394 - information request

I have seen that batch, but this person only wants to know how much a bridge from Vancouver Island to Gabriola Island would cost.

-----Original Message-----
From: Weaver, Sandra TRAN:EX
Sent: Tuesday, March 19, 2002 1:39 PM
To: Writing Services, Transportation TRAN:EX
Subject: RE: s22 96394 - information request

<< Message: FW: 94807-Fixed Link batch for approval >>

Do you aware of this?

Nyland, Dirk TRAN:EX

From: Buckle, Jon TRAN:EX
Sent: Sunday, March 24, 2002 4:28 PM
To: Nyland, Dirk TRAN:EX
Cc: Dyble, John TRAN:EX
Subject: Bridge to Gabriola

Importance: High

Dirk:
Frank Blasetti needs one of your bridge experts (Ron Mathieson perhaps?) to attend a meeting regarding a proposal to construct bridge access to Gabriola Is....via Dodds narrows etc. They are looking at a 3p that would offset the ferry operating costs with a toll bridge.
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Please advise Frank who will be assigned.
thx...Jon for John

ROUTE (19)

CONCEPTUAL PLAN (4)

NANAIMO - GABRIOLA ISLAND

AREA

CONNECT TO EXISTING RD - (2LN RD) = 2200 Lm — NEW

WEST APP.	=	20 Lm	250 Lm
DODD NARROWS	=	200 Lm	
EAST APP	=	30 Lm	

MUDGE ISLAND RDS = 2100 — UPGRADE

WEST APP.		50 Lm	400 Lm
FALSE NARROWS - 2LN BRIDGE		300 Lm	
EAST APP.		50	

GABRIOLA ISLAND ROAD = 150 Lm — NOW

T.L = 5102 Lm.

File: L:\estimates\data\Base\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-19
E.Wolski Consulting BC Ferries
(2002 Dollars) Island Connections
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land
Contingency 20.0% 20.0%
Division/Site Route-19
Road Type 2
Length 5100 L.M.

2 In Rd.& Suspension Br.
Nanaimo - Gabriola Island Route-19
2
5100
MR

2 In Rd.& Suspens
0
Nanaimo SITE C/L
Route-19
2
5100
Cost/LM

Road Types
1. 2In Frontage
2. 2In Acc Rds
3. 4In Acc Rds
4.R4L-4L EXP R/B
5.R2/3L-4L EXP R/B
6.Retr.4L-4LEX R/B
7.R4L-4LEX R/B E/S
8. New 4L EXP R/B
% of T
% of TC

9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 46,411,844
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

SUMMARY BY ACTIVITY LEVEL

		Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values	Diff.	Previous Estimate				
2000	PROJECT MANAGEMENT					-1511634	0	1,511,634	296	3.3%	3.3%
2500	PLANNING					0	0	0	0	0.0%	0.0%
3000	PRELIMINARY DESIGN					-175503	0	175,503	34	0.4%	0.4%
3500	DETAILED DESIGN					-2697874	0	2,697,874	529	5.8%	5.8%
	Total Engineering					-2873377	0	2,873,377	563	6.2%	6.2%
4000	LAND ACQUISITION					-3751250	0	3,751,250	736	8.1%	8.1%
5000	GRADE CONSTRUCTION					-3810533	0	3,810,533	747	8.2%	8.2%
5200	ROAD SIDE CONSTRUCTION					0	0	0	0	0.0%	0.0%
5300	OTHER CONSTRUCTION					-1153600	0	1,153,600	226	2.5%	2.5%
5500	STRUCTURAL CONSTRUCTION					-21752570	0	21,752,570	4265	46.9%	46.9%
6000	PAVING CONSTRUCTION					-664459	0	664,459	130	1.4%	1.4%
6500	OPERATIONAL CONSTRUCTION					-246749	0	246,749	48	0.5%	0.5%
6700	UTILITY CONSTRUCTION					-153000	0	153,000	30	0.3%	0.3%
6800	RESIDENT ENGINEERING					-2759365	0	2,759,365	541	5.9%	5.9%
	Total Construction					-30540276	0	30,540,276	5988	65.8%	65.8%
9700	CONTINGENCY					-7735307	0	7,735,307	1517	16.7%	16.7%
	SUB-TOTAL					-46411844	0	46,411,844	9100	100.0%	100.0%
9800	MANAGEMENT RESERVE					0	0	0	0	0.0%	0.0%
	TOTAL					-46411844	0	46,411,844	9100	100.0%	100.0%
9900	ESCALATION					0	0	0	0		0.0%
	TOTAL COST					-46411844	0	46,411,844	9100		100.0%
	Constr. Less Resident Eng.					-27780912	0	27,780,912	5447		

ENG. & PM	5,262,012	1032
LAND	4,501,500	883
CONST.	36,648,332	7186
MAN. RES.	0	0
ESC.	0	0
TOTAL	46,411,844	9100

Route-19 **Assumptions**

1 Existing Right-Of -Way m

2 New Addition Right-Of -Way partial taking Yes m

	Shoulder	Lane	Lane	Median	Lane	Lane	Shoulder
Existing Rd	-	-	-	-	-	-	-
Pvmt Width	0.0						
New Rd.	2.00	-	3.70	-	3.70	-	2.00
Pvmt Width	11.4						

	Bridges		Width(m)	Length(m)
3.1	Dodds Narrows		12.0	250.0
3.2	False Narrows		12.0	400.0
3.3		0	0.0	0.0
3.4		0	0.0	0.0
3.5		0	0.0	0.0

	Tunnels	Length(m)	Width(m)	Height(m)
4.1	2InSt.w-x	0	12.0	8.27
4.2	x-Pass.TI	0	3.0	3.16
4.3	shaft	0	2.0	Diameter
4.4	snowshedlength (lm)	0		

NOTES:

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Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

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Contingency 20.0% 20.0%
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Road Type 2
Length 5100 L.M.

2 In Rd.& Suspension Br.
Nanaimo - Gabriola Island Route-19
2
5100
MR

2 In Rd.& Suspens 0
Nanaimo SITE C/L Route-19 5100

2 Road Types
1. 2In Frontage
2. 2In Acc Rds
3. 4In Acc Rds
4.R4L-4L EXP R/B
5.R2/3L-4L EXP R/B
6.Retr.4L-4LEX R/B
7.R4L-4LEX R/B E/S
8. New 4L EXP R/B
9. R-E4L-4L D/M
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13.INST.R/B-EX.RD
14.AS IS 15. Misc. 46,411,844
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

Blk Est. # 6.1 / Version Dec.4./01	DESCRIPTION	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values		
2500	PLANNING						
2521	Consultant - transport. planning study	0.00	LM	0		0	0
2531	Consultant - corridor study	0.00	LM	0		0	0
2541	Consultant - functional plan. study	0.00	LM	0		0	0
2502	Consultant - general	0.0%		0		0	0
	Consultant sub-total					0	0
2510	Ministry - project ident.	0.00	LM	0		0	0
2520	Ministry - transport. planning study	0.00	LM	0		0	0
2530	Ministry - corridor study	0.00	LM	0		0	0
2540	Ministry - functional study	0.00	LM	0	0	0	0
2501	Ministry - general	0.0%		0		0	0
	Ministry Sub-total			0		0	0
2599	Planning Contingency	20.0%		0		0	0
	TOTAL PLANNING					0	0
3000	PRELIMINARY DESIGN						
3013	Consultant - aerial base plan	0.00	LM	0		0	0
3014	Consultant - mapping & prel.	10.00	LM	51000		51,000	10
3015	Consultant - control survey	0.00	LM	0		0	0
3021	Consultant - environmental impact	3.00	LM	15300		15,300	3
3031	Consultant - funct.-road field survey	8.00	LM	40800		40,800	8
3041	Consultant - functional design	5.00	LM	25500	0	25,500	5
3051	Consultant - funct. des. structural	0.00	LM	0	26103	26,103	5
3061	Consultant - geotechnical design	3.00	LM	15300		15,300	3
3071	Consultant - right-of-way research	0.00	LM	0	1500	1,500	0
3002	Consultant - general	0.0%		0		0	0
	Consultant sub-total					175,503	34
3010	Ministry - aerial base plan	0.00	LM	0		0	0
3011	Ministry - mapping	0.00	LM	0		0	0
3012	Ministry - control survey	0.00	LM	0		0	0
3020	Ministry - environmental impact	0.00	LM	0		0	0
3030	Ministry - funct.-road field survey	0.00	LM	0		0	0
3040	Ministry - functional design	0.00	LM	0		0	0
3050	Ministry - funct. des. structural	0.00	LM	0		0	0
3060	Ministry - geotechnical design	0.00	LM	0		0	0
3070	Ministry - right-of-way research	0.00	LM	0		0	0
3001	Ministry - general	0.0%		0		0	0
	Ministry Sub-total					0	0
3099	Preliminary design Contingency	20.0%		35101		35,101	7
	TOTAL PRELIMINARY DESIGN					210,604	41

Description	No.	Units	Quantity	Rate	Total
					-

Description

Description	No.	Units	Quantity	Rate	Total
					-

Description

Structural 0.10%

$/Prop. $ 150

Description	No.	Units	Quantity	Rate	Total
					-

Description

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Division/Site Route-19
Road Type 2
Length 5100 L.M.

		2 In Rd.& Suspension Br.	2 In Rd.& Suspens
			0
		Nanaimo - Gabriola Island Route-19	Nanaimo SITE C/L Route-19
		2	2
		5100	5100
		MR	

	DESCRIPTION	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values		
6700	UTILITIES						
6710	Util. Prov. - Hydro	10.00	lm	5100	0	51,000	10
6711	Util. Prov. - Telephone	20.00	lm	5100	0	102,000	20
	Util. Prov. sub-total					153,000	30
6712	Util.Others - pipelines	0.00	lm	0		0	0
6713	Util.Others - telecommunication	0.00	lm	0		0	0
6714	Util.Others - storm & sewer inspect.	0.0%		0		0	0
6715	Util.Others - waterworks inspect.	0.0%		0		0	0
6716	Util.Others - engineering services	0.00	LM	0		0	0
6717	Util.Others - parks/recreation-prel.	0.00	LM	0		0	0
6718	Util.Others - transit	0.00	LM	0		0	0
6719	Util.Others - tr-ops/signs & detours	0.00	LM	0		0	0
6701	Util.Others - general	0.0%		0		0	0
	Util.Others sub-total					0	0
6799	Util.Others Contingency	20.0%		30600	0	30,600	6
	TOTAL UTILITIES					183,600	36
5000	GRADE CONSTRUCTION	U. Price	Unit	Quantity	Lump Sum		
5032	Grade Cons - water	225.00	lm	0	0	0	0
5033	Grade Cons - sanitary	150.00	lm	0	0	0	0
5034	Grade Cons - storm	175.00	lm	0		0	0
5031	Grade Cons - mobilization	3.0%		0		0	0
5039	Grade Cons - utility contingency	20.0%		0		0	0
	Grade Const. Utilities Sub-total					0	0
5010	Grade Cons - site prep./clear,grubbing	8,000	ha	13.45	0	107,622	21
5020	Grade Cons - road grade/exc,placing,fill	13.88	m3	163248	0	2,265,154	444
5030	Grade Cons - drainage/pipe,cul.	0.00	LM	0	39598	39,598	8
5040	Grade Cons - muiltiplate	10000	lm	0		0	0
5050	Grade Cons -SGSB/produce,place,comp	18.00	m3	33795		608,304	119
5051	Grade Cons -CBC/produce,place,comp	20.00	m3	21067		421,349	83
5060	Grade Cons - grade finishing landscaping	0.00	m2	83798		0	0
5061	Grade Cons - grade finishing hydro seed.	0.40	m2	83798		33,519	7
5062	Grade Cons - grade finishing fencing	60.00	lm	0		0	0
5063	Grade Cons - noise barriers	110.00	m2	0		0	0
5064	Grade Cons - passing lanes	0.00	lm	0		0	0
5090	Grade Cons - sidewalks,curb & gutter	60.00	lm	0	0	0	0
5005	Grade Cons -detours c/w ex,bf,paving	40000	NO	0.5	204000	224,000	44
5001	Grade Cons - mobilization	3.0%		110986		110,986	22
5099	Grade Cons - Contingency	20.0%		762107		762,107	149
	Grade Construction Sub-total					4,572,640	897
	GRADE CONSTRUCTION COSTS					4,572,640	897
3510	Grade Eng. - detailed design	7.00%		320085		320,085	63
3519	Grade Eng. - detailed design/Contingency	20.0%		64017		64,017	13
6810	Grade Eng. - general const. supervision	4.60%		210341		210,341	41
6811	Grade Eng. - quality assurance	3.20%		146324		146,324	29
6812	Grade Eng. - surveying	2.00%		91453		91,453	18
6819	Grade Eng. - Residency Contingency	20.0%		89624		89,624	18
	Grade Engineering Sub-total					921,844	181
	Total Grade Const. & Eng. Costs					5,494,484	1077

2 In Rd.& Road Types
1. 2In Frontage
2. 2In Acc Rds
3. 4In Acc Rds
4.R4L-4L EXP R/B
5.R2/3L-4L EXP R/B
6.Retr.4L-4LEX R/B
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8. New 4L EXP R/B
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10.N 4L EXP D/M
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14.AS IS 15. Misc. 46,411,844
20.I/C Str.&Ramps
21. Bridges
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Description	No.	Units	Quantity	Rate	Total
					-

Description

	(m3)	(unit $)	($)	
Fill	0			
Rock	103444	18.00	1861997	70%
O.M.	44333	7.00	310333	
Strip.	15471	6.00	92824	0.100
Borrow	0	12.00	0	
Misc./LS	0	4.00	0	Surplus Mtl
Total	163248	13.88	2265154	

	Spec 2 In Rd.& Road	Spec upgrade Road	PI/PL 60.5 Ditch Width	Ditch Width	Neat vol.cal 0
pl to pl	30.00	30.50	2.0	2.0	Spec. Resurface Road ONLY
*no./lane	2	2	Col L Vol.	Col. M Vol.	0
*lane wid	3.7	3.7	120,261	42,987	0.0
*med	0.0	0.0	Pmt W=	22.8	0.0
*shldrs tot	4.0	4.0	CBC. slope	CBC. slope	0.0
c.b.c.(w)	12.5	12.5	2.5	2.5	A.C. (mm) 0
sgsb (w)	14.7	14.7			A.B.C. (mm) 0
SGSBslope :1	2.5	2.5			0
*depth(d)	2.500	1.000	15%		Appl. rate 1.75
*road (l)	2350	2100			
*no.cul./kil	5.0	0.0	$ 500		
cul.(l)	15.80	15.80	$ 150		
*sgsb (d)	0.45	0.45	15%		
*cbc (d)	0.33	0.33	15%		
*Add.ROW	-11.68	3.82			
X-m3/lm	51.18	20.47			

C&G $/LM	$40.00	Exp-100kmp	Exp- 80kmp	Coll-80kmp
Decel.(T-lm)		520	440	260
Accel.(T-lm)		950	630	80
Left T.(T-lm)		716	596	456
TOTAL		2186	1666	796

Gravel 2.0Tonnes/m3

Drainage	No.	Units	Quantity	Rate	Total
Box Cul.	0	lm	45	3500	-
Head Walls	0	ea.	2	5000	-

Drainage

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Contingency 20.0% 20.0%
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Length 5100 L.M.

2 In Rd.& Suspension Br.
Nanaimo - Gabriola Island Route-19
2 5100 MR

2 In Rd.& Road Types
Suspens 1. 2In Frontage
0 2. 2In Acc Rds
Nanaimo 3. 4In Acc Rds
SITE C/L 4.R4L-4L EXP R/B
Route-19 5.R2/3L-4L EXP R/B
2 6.Retr.4L-4LEX R/B
5100 7.R4L-4LEX R/B E/S
8. New 4L EXP R/B

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20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

	DESCRIPTION	Unit Price	Unit	Quantity / Cost-Quant. PerSection	Lump Sum Values			
5500	STRUCTURAL CONSTRUCTION	Unit Price	Unit	Quantity	Lump Sum			
5522	Struct.Cons - water	225.00	lm	0		0	0	
5523	Struct.Cons - sanitary	150.00	lm	0		0	0	
5524	Struct.Cons - storm	175.00	lm	0		0	0	
5521	Struct.Cons - mobilization	3.0%		0		0	0	
5599	Struct.Cons - utility contingency	20.0%		0		0	0	
	Structural Const. Utilities Sub-total					0	0	
5510	Struct.Cons - tunnel site preparation	0.00	lm	0	0	0	0	
5511	Struct.Cons - tunnel construction	-	lm	0		0	0	
5512	Struct.Cons - snow shed site prep.	0.00	lm	0		0	0	
5513	Struct.Cons - snow shed site const.	-	lm	0		0	0	
					Demolition			
5514	Struct.Cons - bridge site preparation	1	LS	1729000	0	1,729,000	339	
5515	Struct.Cons - bridge piers	1	LS	5750000		5,750,000	1127	
5516	Struct.Cons - bridge abutments	1	LS	320000		320,000	63	
5517	Struct.Cons - bridge superstructure	1	LS	11220000		11,220,000	2200	
5518	Struct.Cons - retain. wall site prep.	1	LS			0	0	
5519	Struct.Cons - retaining wall const.	525	m2	4000		2,100,000	412	
5501	Struct.Cons - mobilization	3.0%		633570		633,570	124	
5529	Struct.Cons - Contingency	20.0%		4350514		4,350,514	853	
	Structural Construction Sub-total					26,103,084	5118	
	STRUCTURAL CONSTRUCTION COSTS					26,103,084	5118	
3520	Struct. Eng. - detailed design	5.00%		1305154		1,305,154	256	
3529	Struct. Eng. - detailed design/Contingency	20.0%		261031		261,031	51	
6820	Struct. Eng. - general const. supervision	4.50%		1174639		1,174,639	230	
6821	Struct. Eng. - quality assurance	3.00%		783093		783,093	154	
6822	Struct. Eng. - surveying	0.50%		130515		130,515	26	
6829	Struct. Eng. - Residency Contingency	20.0%		417649		417,649	82	
	Structural Engineering Sub-total					4,072,081	798	
	Total Structural & Eng. Costs					30,175,165	5917	
6000	PAVING CONSTRUCTION				SM./OIL			
6020	Paving Con - machine paving asphalt	45.00	t	12784	88778	645,106	126	
6030	Paving Con - machine paving concrete	0.00	m2			0	0	
6040	Paving Con - hot reprofiling	0.00	m2	50730		0	0	
6050	Paving Con - shoulder paving	0.00	t	5126		0	0	
6060	Paving Con - pavement finishing	75.00	m2	0		0	0	
6070	Paving Con - seal coating	0.00				0	0	
6001	Paving Con - mobilization	3.0%		19353		19,353	4	
6010	Paving Con - pavement design	0.0%		0		0	0	
6099	Paving Con - Contingency	20.0%		132892		132,892	26	
	PAVING CONSTRUCTION COSTS					797,351	156	
3560	Paving Eng - detailed design	7.00%		55815		55,815	11	
3569	Paving Eng - detailed design/Contingency	20.0%		11163		11,163	2	
6860	Paving Eng - general const. supervision	3.00%		23921		23,921	5	
6861	Paving Eng - quality assurance	5.00%		39868		39,868	8	
6862	Paving Eng - surveying	1.00%		7974		7,974	2	
6869	Paving Eng - Residency Contingency	20.0%		14352		14,352	3	
	Paving Engineering Sub-total					153,091	30	
	Total Paving Const. & Eng. Costs					950,442	186	

Brdge	Site $	Piers $	Abut. $	abut. extra length (lm)	
1	644,200	1,750,000	192,000	4	10%
2	1,084,800	4,000,000	128,000	4	10%
3	-	-	-		0%
4	-	-	-		0%
5	-	-	-		0%

	Pier/Ht	Pier No.	P/$/VLM	Abut/$/HLM
1	250	2	3500	6000
2	40	4	25000	4000
3				
4				
5				

	(W)	(L)	($/m2)	Net Cost
DECK #1	12.00	250.00	1500.00	7298786
DECK #2	12.00	400.00	1400.00	12290784
DECK #3				0
DECK #4				0
DECK #5				0

		Gross/m2	Net/m2	
1	Dodds Narrows	2919.51	2432.93	
2	False Narrows	3072.70	2560.58	
3		#DIV/0!	#DIV/0!	Tnnl $/m -Net
4		#DIV/0!	#DIV/0!	-
5		#DIV/0!	#DIV/0!	Tnnl $/m -Gross
				-

	2InSt.w-x 1-D-Shape	x-Pass.Tl 2-D-Shape	shaft 1-Circle	Radius-1-D	7.267
Tunnel L=	0	-	0	Per.S&Rf	24.32
Tun. H1	5.100	2.550	Radius	m2/rkac	6.25
C.Pt. H4	1.00	1.00	1.00	Tnnl height	8.27
Tun.W	12.00	3.00	Wall Tk.	Radius-2-D	2.157
RFLT.	0.250	0.250	0.250	Per.S&Rf	8.42
WLT.	0.250	0.250	SOBT	m2/rkac	6.25
BST.	0.500	0.200	0.100	Tnnl height	3.16
TOBT	0.100	0.100	Exc.-m3	-	-
SOBT	0.100	0.100	Obk-m3	-	-
BOBT	0.100	0.100	Liner-m3	-	-

Items	Quantity	rate	Total $	Avg.$/ tot-lm	1-Circle
Exc.-m3	0	100	0	#DIV/0!	0
Obk-m3	0	2625	0	#DIV/0!	0
Rk anch-Ea	0	1125	0	#DIV/0!	0
Misc.-lm	0	2500	0	#DIV/0!	0
Liner-m3	0	1050	0	#DIV/0!	10.00
Drainage-lm	0	550	0	#DIV/0!	%
Lighting-m	0	900	0	#DIV/0!	5%
Mech-m	0	2100	0	#DIV/0!	15%
Misc.-lm	0	1000	0	#DIV/0!	3%
1Tonne=16.67m2/25mm			0	#DIV/0!	snowshed

60kg=1m2/25mm 1.5L =1M2 (P) .25L =1M2 (T)

asphalt	(T)=mm		length (lm)	0.0
A.C.	100	100	Roof	1.0
A.B.C.	0	0	21.00	0.05
$Oil/Litre	$0.55	5%	0.80 $ 800.00	-
Appl. rate	1.75	1.75	Walls	2.0
Pavement Removal		(See 1155)	0.80 $ 1,100.00	8.00
m3	$/m3	Total	Base	1.0
1050	$20.00	21000	0.60 $ 600.00	15.00
Milling			Exc.-m3	1.0
m3	$/m3	Total	20.00 $ 60.00	15.00
0	$80.00	0	Drainage $ 400.00	-
			Electrical $ 1,500.00	-
			Mech. $ 950.00	-
			Misc. $ 300.00	-
			#DIV/0!	-

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E.Wolski Consulting BC Ferries
(2002 Dollars) Island Connections
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land
Contingency 20.0% 20.0%
Division/Site Route-19
Road Type 2
Length 5100 L.M.

2 In Rd.& Suspension Br.
Nanaimo - Gabriola Island Route-19
2
5100
MR

2 In Rd.& Road Types
Suspens 1. 2In Frontage
0 2. 2In Acc Rds
Nanaimo 3. 4In Acc Rds
SITE C/LN 4.R4L-4L EXP R/B
Route-19 5.R2/3L-4L EXP R/B
2 6.Retr.4L-4LEX R/B
5100 7.R4L-4LEX R/B E/S
8. New 4L EXP R/B
9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 46,411,844
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

Pole Sp. (lm) No. of Sides Length
13 55 1 650

	DESCRIPTION	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values		
6500	OPERATIONAL CONSTRUCTION						
6510	Operat.Con - lighting	5500.00	Ea	12		66,000	13
6520	Operat.Con - signals	-	Ea	0	0	0	0
6530	Operat.Con - signing	2.00	LM	10200		10,200	2
6540	Operat.Con - guard rail	70.00	lm	2000	0	140,000	27
6550	Operat.Con - pavement markings	1.75	lm	13350	0	23,363	5
6501	Operat.Con - mobilization	3.0%		7187		7,187	1
6599	Operat.Con - contingency	20.0%		49350		49,350	10
	OPERATIONAL CONSTRUCTION COSTS					296,099	58
3540	Operat. Eng - detailed design	7.00%		20727		20,727	4
3549	Operat. Eng - detailed design/Contingency	20.0%		4145		4,145	1
6840	Operat. Eng - general const. supervision	6.00%		17766		17,766	3
6841	Operat. Eng - quality assurance	2.00%		5922		5,922	1
6842	Operat. Eng - surveying	1.00%		2961		2,961	1
6849	Operat. Eng - Residency Contingency	20.0%		5330		5,330	1
	Operational Enginering Sub-total					56,851	11
	Total Operational Const. & Eng. Costs					352,950	69

	ROAD SIDE CONSTRUCTION	Unit Price	Unit	Quantity	Lump Sum		
5203	RoadSide C - water	225.00	lm	0		0	0
5204	RoadSide C - sanitary	150.00	lm	0		0	0
5205	RoadSide C - storm	175.00	lm	0		0	0
5202	RoadSide C - mobilization	3.0%		0		0	0
5209	RoadSide C - Utility Contingency	20.0%		0		0	0
	Road Side Const. Utilities Sub-total					0	0
5210	RoadSide C - weighscales	-	ea	0	0	0	0
5220	RoadSide C - safety rest areas	-	ea	0	0	0	0
5230	RoadSide C - tourist rest & view areas	40000	ea	0	0	0	0
5201	RoadSide C - mobilization	3.0%		0		0	0
5299	RoadSide C - Contingency	20.0%		0		0	0
	Road Side Construction Sub-total			0		0	0
	ROAD SIDE CONSTRUCTION COSTS					0	0
3550	RoadSide E - detailed design	10.00%		0		0	0
3559	RoadSide E - detailed design/Contingency	20.0%		0		0	0
6850	RoadSide E - general const. supervision	6.00%		0		0	0
6851	RoadSide E - quality assurance	2.00%		0		0	0
6852	RoadSide E - surveying	1.00%		0		0	0
6859	RoadSide E - Residency Contingency	20.0%		0		0	0
	Road Side Engineering Sub-total					0	0
	Total Road Side Const. & Eng. Costs					0	0

	OTHER CONSTRUCTION	Unit Price	Unit	Quantity	Lump Sum		
5303	Other Cons - water	225.00	lm	0		0	0
5304	Other Cons - sanitary	150.00	lm	0		0	0
5305	Other Cons - storm	175.00	lm	0		0	0
5302	Other Cons - mobilization	3.0%		0		0	0
5309	Other Cons - utility contingency	20.0%		0		0	0
	Other Const. Utilities Sub-total					0	0
5310	Other Cons - railroads main & spur lines	-	lm	0		0	0
5320	Other Cons - railroad crossings	-	ea	0		0	0
5330	Other Cons - marine work	-	ea	0		0	0
5340	Other Cons - environmental mitigations	280,000	ea	4		1,120,000	220
5301	Other Cons - mobilization	3.0%		33600		33,600	7
5399	Other Cons - Contingency	20.0%		230720		230,720	45
	Other Construction Sub-total					1,384,320	271
	OTHER CONSTRUCTION COSTS					1,384,320	271
3570	Other Eng. - detailed design	7.00%		96902	0	96,902	19
3579	Other Eng. - detailed design/Contingency	20.0%		19380		19,380	4
6870	Other Eng. - general const. supervision	3.00%		41530	0	41,530	8
6871	Other Eng. - quality assurance	3.00%		41530		41,530	8
6872	Other Eng. - surveying	3.00%		41530		41,530	8
6879	Other Eng. - Residency Contingency	20.0%		24918		24,918	5
	Other Engineering Sub-total					265,789	52
	Total Other Const. & Eng. Costs					1,650,109	324

Earthworks (see grading)

Signals

LP $/lm $ 1.00 Refl. Sp. 20.00
Ext. Lines 1.0 Refl.$/ea $ 15.00

Weighscale	No.	Units	Quantity	Rate	Total
Buildings	0	m2	60	2,800.00	-
Pit & Apron	0	m2	120	400.00	-
S&I W/S	0	ea	1	80,000.00	-
Parking Lot	0	m2	9000	40.00	-
Road Const.	0	lm	1,500	400.00	-
light/signs	0	ls	1	50,000.00	-

Weighscale

Safety Rest Area	No.	Units	Quantity	Rate	Total
Class A&B		SAFETY REST AREAS			
Buildings	0	m2	100	3,000.00	-
Class C					-
Site/toilets	0	ea	2	12,500.00	-
Parking Lot	0	m2	2500	40.00	-
Road Const.	0	lm	800	350.00	-
Furnishings	0	ls	-	10,000.00	-
Landscaping	0	ls	1	5,000.00	-
light/signs	0	ls	-	50,000.00	-

SAFETY REST AREAS

Description	No.	Units	Quantity	Rate	Total
	0		0	-	-
	0		0	-	-
	0		0	-	-
	0		0	-	-

Description

Railway	No.	Units	Quantity	Rate	Total
Removal	0	tklm	1.00	21.00	-
Track Cnst.	0	tklm	1.00	320.00	-
Ballast	0	m3	1.13	35.00	-
Sub-ballast	0	m3	0.95	25.00	-
Resurfacing	0	tklm	1.00	10.00	-
Tie-ins	0	ea	1.00	2800.00	-
Turnout # 9	0	ea	1.00	35000.00	-
Others	0	ls	1.00	0.00	-
	0				-
	0	lm	1	0.00	-

Railway

R/rd X-ing	No.	Units	Quantity	Rate	Total
Planks	0	tklm	45	1750.00	-
Sig./gates	0	each	1	200,000	-
				-	-
				-	-

R/rd X-ing

Description	No.	Units	Quantity	Rate	Total
				-	-
				-	-
				-	-
				-	-
				-	-
				-	-
				-	-

Description

Environment	No.	Units	Quantity	Rate	Total
Mitigation	4	ls	4	50,000	800,000
Ponds	4	ea	2	40,000	320,000
				-	-
				-	-
				-	-
				-	-

Environmental 1,120,000

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(2002 Dollars) Island Connections
ACTIVITY
CODE EST.DATE Jan. 16, 2002
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Blk Est. # 6.1 R2 DATE:
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Man. Reserve	0.0%	Land	2 ln Rd.&	2 ln Rd.&	Road Types
Contingency	20.0%	20.0%	Suspension Br.	Suspens	1. 2ln Frontage
Division/Site	Route-19			0	2. 2ln Acc Rds
Road Type	2		Nanaimo -	Nanaimo	3. 4ln Acc Rds
Length	5100 L.M.		Gabriola Island	SITE C/L	4.R4L-4L EXP R/B
	========		Route-19	Route-19	5.R2/3L-4L EXP R/B
			2	2	6.Retr.4L-4LEX R/B
			5100	5100	7.R4L-4LEX R/B E/S
			MR	-------	8. New 4L EXP R/B

Road Types (cont.): 9. R-E4L-4L D/M; 10.N 4L EXP D/M; 11.N 4L EXP D/E/M; 12.N2L;F4LEXP D/M; 13.INST.R/B-EX.RD; 14.AS IS; 15. Misc.; 20.I/C Str.&Ramps; 21. Bridges; 22. Grade Sep. — 46,411,844

Code	Description	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values		
3500	DETAILED DESIGN						
	from 3510,3520,3540,3550,3570					2,158,419	423
3530	Geotech. E - detailed design	0.45%		149191	750000	899,191	176
3539	Geotech. E - Contingency	20.0%		179838		179,838	35
	TOTAL DETAILED DESIGN COSTS					3,237,448	635
6800	RESIDENT ENGINEERING						
	from 6810,6820,6840,6850,6860,6870					3,311,238	
	TOTAL RESIDENT ENG. COSTS					3,311,238	649
						0	
						0	0
	PART 1 SUMMARY						
	CONSTRUCTION					27,780,912	5447
	ENGINEERING & SUPERVISION					5,632,741	1104
	CONTRACTUAL CONTINGENCY					6,682,731	1310
						0	0
	CONSTRUCTION COST TOTAL	DIVISION/SITE		Route-19		40,096,384	7862
2000	PROJECT MANAGEMENT						
2060	Project Mar - office costs wages	2.00%		801928		801,928	157
2062	Project Mar - office costs - expenses	0.00%		0		0	0
2063	Project Mar - printing costs	0.00%		0		0	0
2061	Project Mar - general	0.00%		0		0	0
	Project Manager Sub-total					801,928	157
2010	Ministry - office costs wages	0.50%		200482		200,482	39
2012	Ministry - office costs - expenses	0.50%		200482		200,482	39
2030	Ministry - printing costs	0.00%		0		0	0
2011	Ministry - general	0.00%		0		0	0
	Ministry Sub-total					400,964	79
2070	Public Rel. - wages & expenses	0.35%		140337		140,337	28
2072	Public Rel. - adv., media, displays	0.35%		140337		140,337	28
2073	Public Rel. - opening ceremonies	0.01%		4010	0	4,010	1
2071	Public Rel. - general	0.00%		0		0	0
	Public Relations Sub-total					284,684	56
2040	Legal Costs - lawyers fees	0.01%		4010		4,010	1
2041	Legal Costs - general	0.00%		0		0	0
	Legal Costs Sub-total					4,010	1
2080	Insurance - const./ liability, E&O	0.05%		20048		20,048	4
2081	Insurance - general	0.00%		0		0	0
	Legal Costs Sub-total					20,048	4
2099	Project Management Contingency	20.0%		302327		302,327	59
	TOTAL PROJECT MANAGEMENT COSTS					1,813,960	356
4000	LAND	$/Building		# buildings	LS	10	
4010	Land(Code -Mrkt,ROW,Serv,Imp.V,Ease.(	250,000	Res	10	0	2,905,000	570
	Acquisition Sub-total	2,000,000	Com	0	0	2,905,000	570
4020	Land(Code -Bus.,5%,Mrg.P,Rel$,P/Tax,E	10.00%		290500	0	290,500	57
4030	Land(Code -Owners(LS,Apprsl,Rprt,Lgl,In	7.00%		203350	0	203,350	40
4040	Land(Code -Demolition	0.00%		0	100000	100,000	20
4050	Land(Code -Pro.Man,P.Tax,Util,Security	1.00%		29050	0	29,050	6
4060	Land(Code -Not Used						
4070	Land(Code -Not Used						
4080	Land(Code -Acq.F,M/Sal,TrvlV,Cntr.S,Apr	7.00%		203350	0	203,350	40
4090	Land(Code -Surveys	0.00%		0	20000	20,000	4
	Associated costs-sub-total			726250		846,250	166
4099	Land Contingency Sub-total	20.0%		750250	0	750,250	147
	TOTAL LAND COSTS					4,501,500	883

Bridge	Tunnel	Special
2	1	1
-	-	750,000

Description	No.	Units	Quantity	Rate	Total
				-	-

3.77%

1 Hectare = 10,000 Square Meters
1 Hectare = 2.471 Acres
1 Acre = 43,560 square feet

	Planned ROW	13.5	
10.00%	Req. ROW	13.5	
7.00%	Cost/Ha	30,000	107,637
3.44%	Cost/M2	3.00	10.76
1.00%	Cost /Acre	12,141	43,560
	Cost /Ft2	0.28 $	1.00
29.13%			
7.00%	Demo./unit	$ 10,000	
0.69%	Survey /unit	$ 2,000	

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Man. Reserve	0.0%
Contingency	20.0%
Division/Site	Route-19
Road Type	2
Length	5100 L.M.
Land	20.0%

2 In Rd.& Suspension Br.	2 In Rd.& Suspens
	0
Nanaimo - Gabriola Island	Nanaimo SITE C/L
Route-19	Route-19
2	2
5100	5100
MR	

Road Types
1. 2In Frontage
2. 2In Acc Rds
3. 4In Acc Rds
4. R4L-4L EXP R/B
5. R2/3L-4L EXP R/B
6. Retr.4L-4LEX R/B
7. R4L-4LEX R/B E/S
8. New 4L EXP R/B
9. R-E4L-4L D/M
10. N 4L EXP D/M
11. N 4L EXP D/E/M
12. N2L;F4LEXP D/M
13. INST.R/B-EX.RD
14. AS IS
15. Misc. 46,411,844
20. I/C Str.&Ramps
21. Bridges
22. Grade Sep.

CODE	DESCRIPTION	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values	MR		Description	No.	Units	Quantity	Rate	Total
9800	MANAGEMENT RESERVE												
	MAN. RES. - planning	0.0%		0		0	0					-	-
	MAN. RES. - preliminary design	0.0%		210604		0	0					-	-
	MAN. RES. - utility construction	0.0%		183600		0	0					-	-
	MAN. RES. - grade construction	0.0%		4572640		0	0					-	-
	MAN. RES. - structural construction	0.0%		26103084		0	0					-	-
	MAN. RES. - paving construction	0.0%		797351		0	0					-	-
	MAN. RES. - operation construction	0.0%		296099		0	0					-	-
	MAN. RES. - roadside construction	0.0%		0		0	0					-	-
	MAN. RES. - other construction	0.0%		1384320		0	0					-	-
	MAN. RES. - project management	0.0%		1813960		0	0					-	-
	MAN. RES. - land	0.0%		4501500		0	0					-	-
	MAN. RES. - detailed eng.	0.0%		3237448		0	0					-	-
	MAN. RES. - residency eng.	0.0%		3311238		0	0					-	-
	MAN. RES. - Contingency	0.0%		0		0	0					-	-
	TOTAL MANAGEMENT RESERVE			46411844		0	0					-	-
	TOTAL LESS ESCALATION			0	46411844								

Description

CODE	FISCAL YEAR	PROJECTED ESCALATION	COMPLETE	$ DONE		MR		Description	No.	Units	Quantity	Rate	Total
9900	ESCALATION											-	-
	2002-2003	0.5750%	5.00%	0		0	0					-	-
	2003 - 2004	0.6250%	10.00%	0		0	0					-	-
	2004-2005	1.0000%	35.00%	0		0	0					-	-
	2005-2006	1.0000%	45.00%	0		0	0					-	-
	2006-2007	1.0000%	5.00%	0		0	0					-	-
	2007-2008	1.0000%	0.00%	0		0	0					-	-
	2008-2009	1.0000%	0.00%	0		0	0					-	-
	2009-2010	1.0000%	0.00%	0		0	0					-	-
	2010-2011	1.0000%	0.00%	0		0	0					-	-
	TOTAL ESCALATION		100.00%	0		0	0					-	-
	PART 2 SUMMARY NON-CONSTRUCTION COSTS											-	-
	Non-Construction					5,262,884	1032					-	-
	Non-Const. Contingency					1,052,577	206					-	-
	TOTAL NON-CONSTRUCTION COSTS					6,315,460	1238					-	-
Route-19	TOTAL FOR ROAD TYPE	2				46,411,844	9100						-

Description

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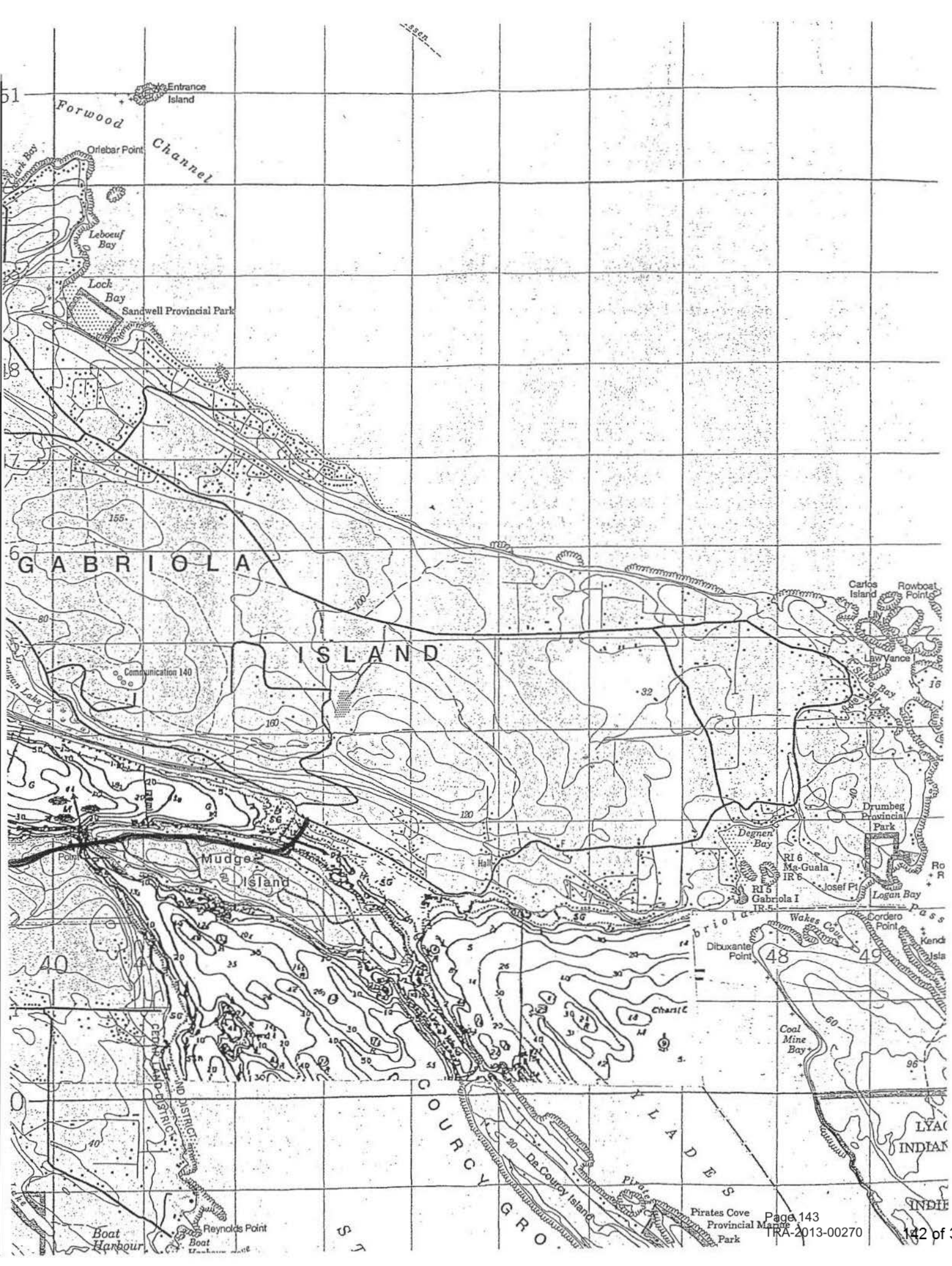
Horswell Bluff
Inskip Rock
Jesse Island
Brandon Islands
Departure Bay
Departure Bay
Nares Point
Tyne Point
McKay Point
Angle Point
Nanaimo
Shaft Point
Pimbury Point
Abandoned
NEWCASTLE I
NEWCASTLE ISLAND PROVINCIAL MARINE PARK
Newcastle
Newcastle I Passage
Marina
Protection Island
Nanaimo Harbour
McKay Channel
Tinson Point
Pilot Bay
Gabriola
Lumber Yard
Hall
Mobile Home Park
NORTHUMBERLAND CHANNEL
Buttertubs Marsh Bird Sanctuary
NANAIMO
Hospital
Water
Lumber Yard
Sawmill
Plant
Nanaimo Town Indian Reserve 1
Réserve indienne Nanaimo Town 1
Chase River
Water Treatment Plant
Petroglyph Provincial Park
Mobile Home Park
Stockett
City Limits
Shopping Centre
Medical Centre
Chase River
NANAIMO LAND DISTRICT
CRANBERRY LAND DISTRICT
HAREWOOD PLAINS
Pulp/Paper Mill
Water
Harmac
Sawmill
Tree Nursery
DV
RI 3 NANAIMO RIVER IR 3
RI 4 NANAIMO RIVER IR 4
RI 2 NANAIMO RIVER IR 2
Dump
Cedar
Communication
York L.
Starks
Trans-Canada Highway
ESQUIMALT AND NANAIMO
VANCOUVER
Cinnabar Valley
Richard Lake
Abandoned
Extension
Overton L
Harewood Lake
Whisky Lake
South Wellington
Morden Colliery Provincial Historic Park
29
30
31
32
33
34
35
39


Entrance Island
Forwood Channel
Orlebar Point
Leboeuf Bay
Lock Bay
Sandwell Provincial Park
GABRIOLA ISLAND
Communication 140
Carlos Island
Rowboat Point
Law Vance
Silva Bay
Drumbeg Provincial Park
Degnen Bay
RI 6 Ma-Guala IR 6
RI 5 Gabriola I IR 5
Josef Pt
Logan Bay
Wakes Cove
Cordero Point
Dibuxante Point
Mudge Island
Coal Mine Bay
DE COURCY GROUP
De Courcy Island
Pirates Cove Provincial Marine Park
Reynolds Point
Boat Harbour

MINISTRY OF TRANSPORTATION
BRIEFING NOTE

BN #:120774

REGION: South Coast

MoT DISTRICT: Vancouver Island

SEE ALSO 2000-53/CE-FIXED LINK ACROSS GEORGIA STRAIT

ELECTORAL DISTRICT:

MUNICIPALITY / REGIONAL DISTRICT:

I. PREPARED FOR INFORMATION

II. ISSUE:

Road and bridge fixed link between Vancouver Island and Gabriola Island via Mudge Island.

III. BACKGROUND:

A fixed link between Vancouver Island and Gabriola Island has been considered a number of times over the past four decades. Most often it has been considered as part of a larger project to improve transportation between Vancouver Island and the Lower Mainland either with a fixed link between Gabriola or a shorter ferry trip between Gabriola Island and Iona Island

IV. DISCUSSION:

Engineering

Bridge crossings linking Vancouver Island to Mudge Island over Dodds Narrows and from Mudge Island to Gabriola Island over False Narrows are technically feasible. Preliminary studies have been undertaken a number of times over several decades.

Bridge studies have been of a preliminary nature. Shipping clearances have not been determined.

Road connection studies have mostly been for the four-lane mainland ferry link options rather than a local link.

Economics

Most studies of bridges to Gabriola originate as part of larger studies connecting the Lower Mainland. A 2002 BC Ferries report studied eight short ferry routes and found the Nanaimo-Gabriola route was the only route where a fixed link might be more financially viable than a continued ferry link. The Net Present Value (NPV) over 40 years of maintaining a ferry was $65 million versus the NPV of road and bridge construction and rehabilitation of $50 million.

Land Issues

Briefing note (cliff # 120936) is being prepared by John Shaw, Manager, Right-of-Ways, Properties and Business Management Branch.

Environmental Issues

s13, s16

Social Issues

One document mentions contaminated drinking water wells on Gabriola Island.

Emergency transportation response is currently handled (at least in part) by call out of ferry crew after hours. This has been a concern in some correspondence.

One letter from a Gabriola resident reports there is strong difference of opinion amongst Gabriola residents as to whether a bridge link is desirable with a split along commuter, retired population lines. In 1988 an adhoc group called the Gabriola Island Bridge Club Committee lobbied Government with a petition for a bridge link. In the same year the Gulf Islands Committee wrote to the Minister with 173 letters enclosed opposing a bridge to Mudge and Gabriola with a short link Ferry to the Lower Mainland.

PLANNING BRANCH FILES

TIM ZURBUWSKI & PLANNING BR FILES.

A group of Gabriola Island Residents is working with the Ministry of Community, Aboriginal and Women's Services (CAWS) to investigate the possibility of incorporation.

PLANNING BRANCH.

A 1988 Briefing Note considered that replacement of a ferry with a bridge might be opposed by foot and bicycle commuters from North Gabriola who currently have ferry service directly to downtown Nanaimo.

Correspondence

The ministry has responded to 12 public inquires over the last two years regarding a bridge link to Gabriola.

In addition to general public enquiries, correspondence has also been received by the Mayor of Nanaimo regarding land issues, one commercial campground, the Islands Trust, and a group called the "Gabriola Transportation Authority".

Responses from the ministry generally state that the project may be economically attractive and technically possible, but the $45 to 50 million capital funding is not available. Furthermore, the ministry would be interested in proposals for a privately funded project.

V. CONSULTATIONS:

n/a

VII. SUMMARY:

A link from Vancouver Island to Gabriola is feasible, but required capital funding of at least $50 million and significant local consultation.

Prepared By:	Gary Farnden	**Phone:**	(250) 387-7728
Drafter's Title:	Bridge Rehab and Standards Engineer	**Date Prepared:**	February 10, 2004
Reviewed By:	Dirk Nyland		
Reviewer's Title:	Chief Engineer		
Revised By:			
Reviser's Title:		**Date Revised:**	February 11, 2004

Wolski, Ernie TRAN:EX

From: Tindall, Karen D BCFC:EX
Sent: Tuesday, April 16, 2002 1:22 PM
To: Wolski, Ernie TRAN:EX
Subject: RE: Gulf Island bridges report?

Thanks. I will pass this information on to the Writing Services Branch to ensure they use the word 'Conceptual' rather than Preliminary. Your job sounds challenging to say the least.

Karen

-----Original Message-----
From: Wolski, Ernie TRAN:EX
Sent: April, 16, 2002 1:12 PM
To: Tindall, Karen D BCFC:EX
Subject: RE: Gulf Island bridges report?

Although I do conceptual estimates all the time, there are many items that cause costs to escalate. Here are some of the items that are required to complete an estimate. They are Engineering, Land, Construction, Project Management,and Contingency. Until a Preliminary study is done to establish a route all of the above elements of an estimate can vary. Use the words Conceptual rather than Preliminary. Conceptual means an idea with no design, while a Preliminary means that someone has done some design to establish a route or alignment. Usually when a Preliminary Design is completed a scope for the project is completed, such as design speed, pavement and road cross-section is defined, properties required in total or in part can be defined. All of these items help to define the scope which in-turn help define the items for estimating. Just to make things worse, after all that, the costs can still escalate because on doing more engineering, the geo-technical requirements can force the route to be realigned causing costs to increase.
Ernest

-----Original Message-----
From: Tindall, Karen D BCFC:EX
Sent: Tuesday, April 16, 2002 11:59 AM
To: Wolski, Ernie TRAN:EX
Subject: RE: Gulf Island bridges report?

It helps immensely. We will ensure that any response that goes out has the caveat that these are rough/very preliminary numbers based on concept.

Karen

-----Original Message-----
From: Wolski, Ernie TRAN:EX
Sent: April, 16, 2002 11:44 AM
To: Tindall, Karen D BCFC:EX
Subject: RE: Gulf Island bridges report?

I would like to caution people about the numbers provided. These numbers were very conceptual, no drawings, etc. I made up the route and priced out a concept. This included roads and bridges required for the crossing, not only bridge costs. Hope this helps.
Ernest.

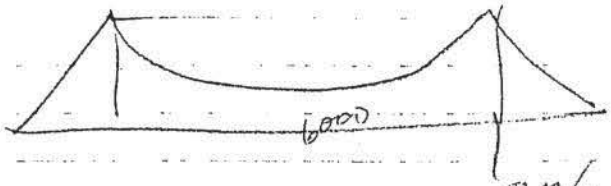
-----Original Message-----
From: Tindall, Karen D BCFC:EX
Sent: Tuesday, April 16, 2002 11:38 AM
To: Wolski, Ernie TRAN:EX
Subject: RE: Gulf Island bridges report?

Thanks Ernie.

-----Original Message-----
From: Wolski, Ernie TRAN:EX
Sent: April, 16, 2002 11:38 AM
To: Tindall, Karen D BCFC:EX
Cc: Wolting, Sara TRAN:EX; Parkes, Lois TRAN:EX; Writing Services, Transportation TRAN:EX; Sharpe, Tara K BCFC:EX
Subject: RE: Gulf Island bridges report?

SPAN 2300

① Route ④

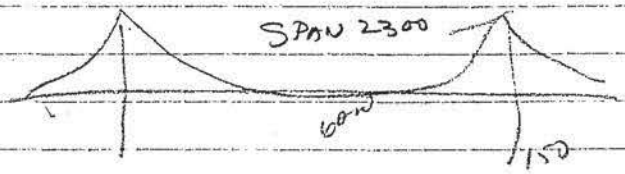


L = 2900
S = 2300
P.H (A) = 300 (300)
P.H (B) = -80
A.B = 150,000,000 EA

② Route ⑥

L = 2100
S = 1600
PH A +200
PH B = -20
AB = 90 M EA

③ Route 8

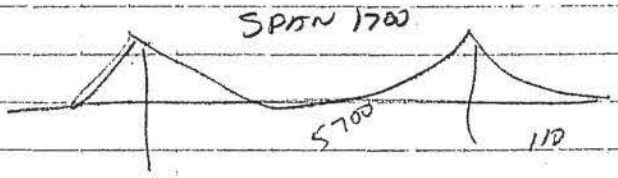


L = 3680
S = 2300
PH-A = +300
PH B = -60

④ Route ⑲ Normoc Bridge

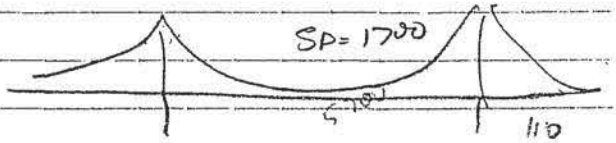
1(B) 150, ~~000~~ M EA

⑤ Route ㉑



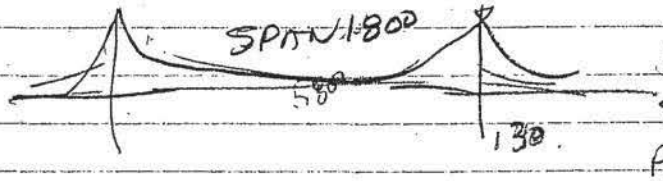
L = 2750
S = 1700
PH A = +250
PH B = -20

⑥ Route ㉓



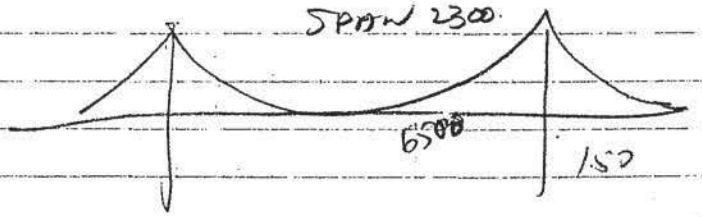
L = 2000
S = 1700
PH A +250
PH B = -20

⑦ Route ㉕



L = 2600
S = 1800
PH A = +275
PH B = -20

⑧ Route ㉖



L = 3500
SP = 2300
PH A +300
PH B = -60

Apr, 2002

PRINTING DATE: 1/16/02
Estimated by Ernest Wolski

BC FERRIES

File: E:\data\data\ERNIEW\PROJECTS\BC FERRIES\[ISLAND XING.xls]SUMOFROUTES
E.Wolski Consulting
(2002 Dollars)
ACTIVITY CODE
Conceptual Est.
Blk Est. # 6.1
Version Dec.4./01

BC Ferries
Island Connections
0
EST.DATE Jan. 16, 2002

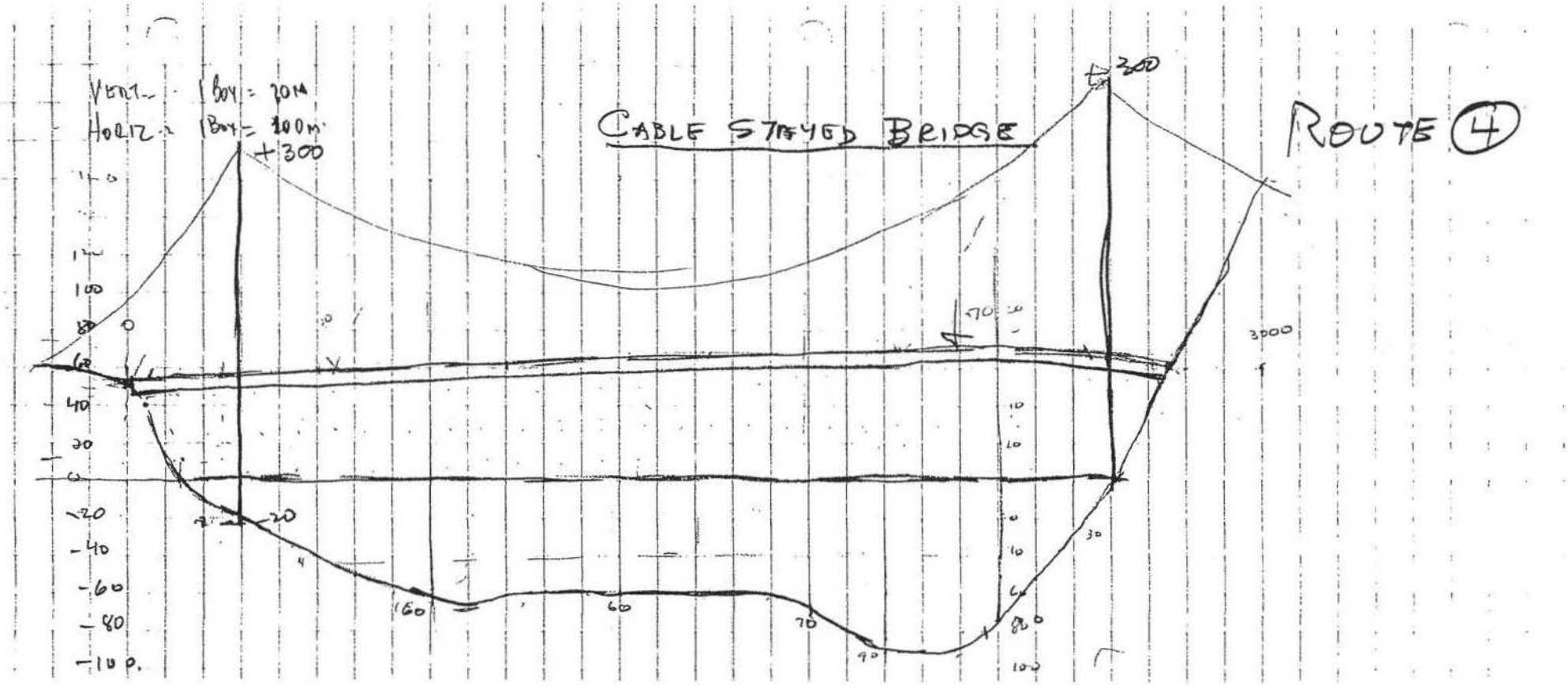
Divison\site	2 In Rd.& Suspension Br. 0 Swartz Bay - Fulford Route-4	2 In Rd.& Suspension Br. 0 Vewuvius- Crofton Route-6	2 In Rd.& Suspension Br. 0 Horseshoe Bay- Bowen Island Route-8	2 In Rd.& Suspension Br. 0 Nanaimo - Gabriola Island Route-19	2 In Rd.& Suspension Br. 0 Buckley Bay- Denman Island Route-21	2 In Rd.& Suspension Br. 0 Denman Island- Hornby Island Route-22	2 In Rd.& Suspension Br. 0 Campbell River- Quadra Island Route-23	2 In Rd.& Suspension Br. 0 Skidegate - Aliford Bay Route-26		BC Ferries Island X-ings Option Study
Road Type	2	2	2	2	2	2	2	2	MR	35510
DESCRIPTION \Length	6400	6600	4560	5100	2750	2300	3600	4200	OR	0
	MR	MR	MR	MR	MR	MR	MR	MR	TR	35510
ENG & PM	122.534	80.619	150.863	5.262	92.579	83.528	103.306	151.751		790.442
LAND	2.044	1.197	6.101	4.502	0.721	0.717	0.800	6.080		22.160
CONST.	103.348	69.881	123.912	10.545	75.783	68.315	85.302	124.234		661.320
BRIDGES-R/W	1154.048	748.321	1431.278	26.103	881.297	794.130	983.702	1440.453		7459.332
MANAGEMENT RESERVE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000
ESCALATION	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000
TOTAL (Millions)	1,381.974	900.018	1,712.154	46.412	1,050.380	946.690	1,173.110	1,722.518		8,933.254

Route #	Description
4	Swartz Bay to Fulford (Saltspring)
6	Vesuvius to Crofton
21	Buckley Bay to Denman Island
22	Denman Is to Hornby Island
23	Campbell R to Quadra Island
26	Alliford Bay to Lardis (Graham Is) (Moresby Is)
8	Horseshoe Bay to Bowen Is
19	Nanaimo to Gabriola

Page 150 to/à Page 157

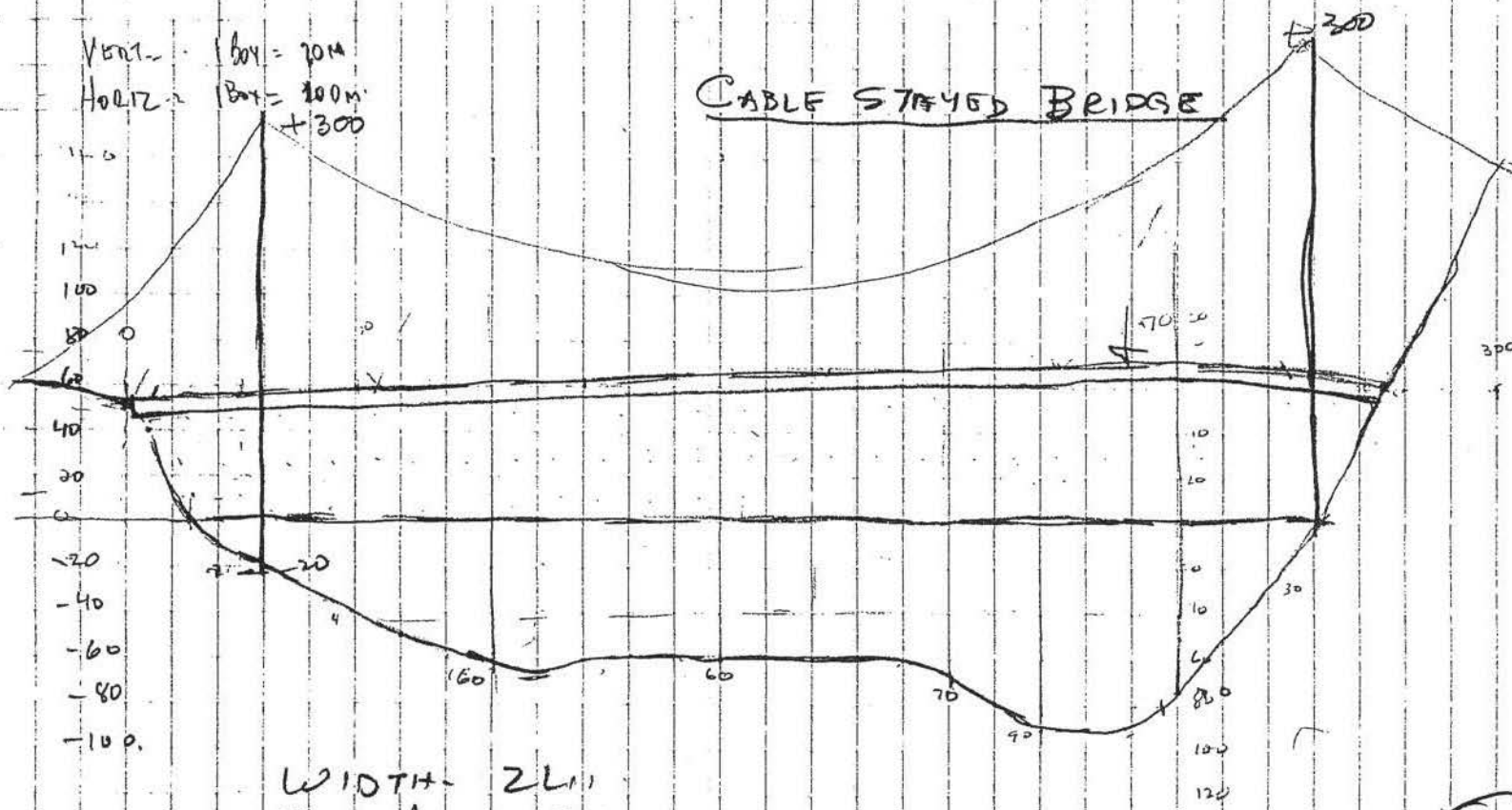
Withheld pursuant to/removed as

Copyright


VERT. - 1 Box = 20M
HORIZ. - 1 Box = 100M
CABLE STAYED BRIDGE
ROUTE (4)
+300
300
3000

CABLE STAYED BRIDGE

ROUTE (4)



WIDTH - 2 LN
SOUTH APP. = 50 LM
BRIDGE DECK = 2600 LM. SPAN 2300 LM
NORTH AP. = 50 LM
T.L. = 2900 LM

PLUS - 3.5 KILOMETRES OF 2 LANE RD.

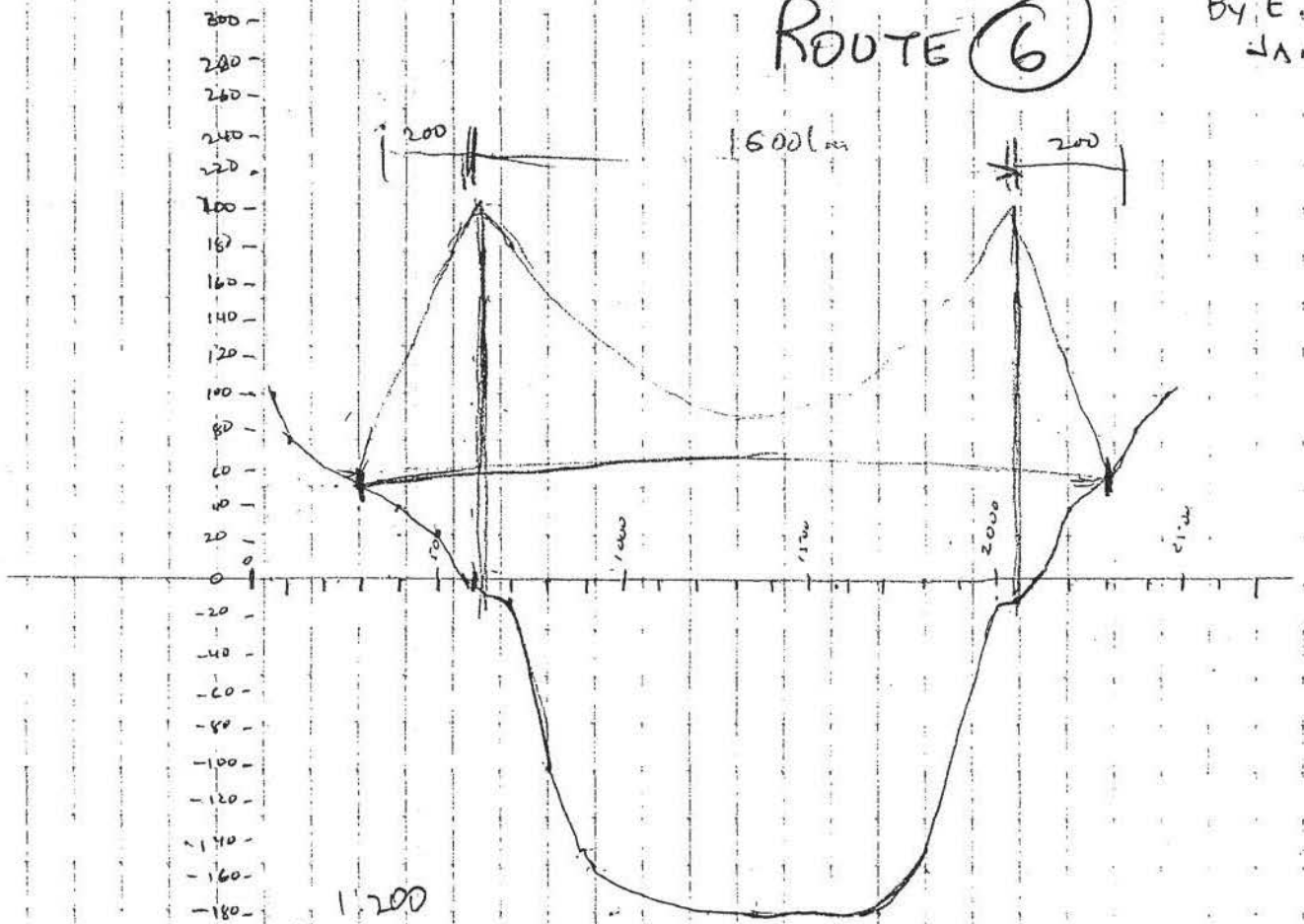
2500 LM - 60 - 70 - 300

(1)
CONCEPTUAL
SWARTZ BAY - FULFORD
BY E. WOLSKI
JAN. 2/2002

SUSPENSION BRIDGE

ROUTE (6)

By E. WOLSKI
JAN 2/2002

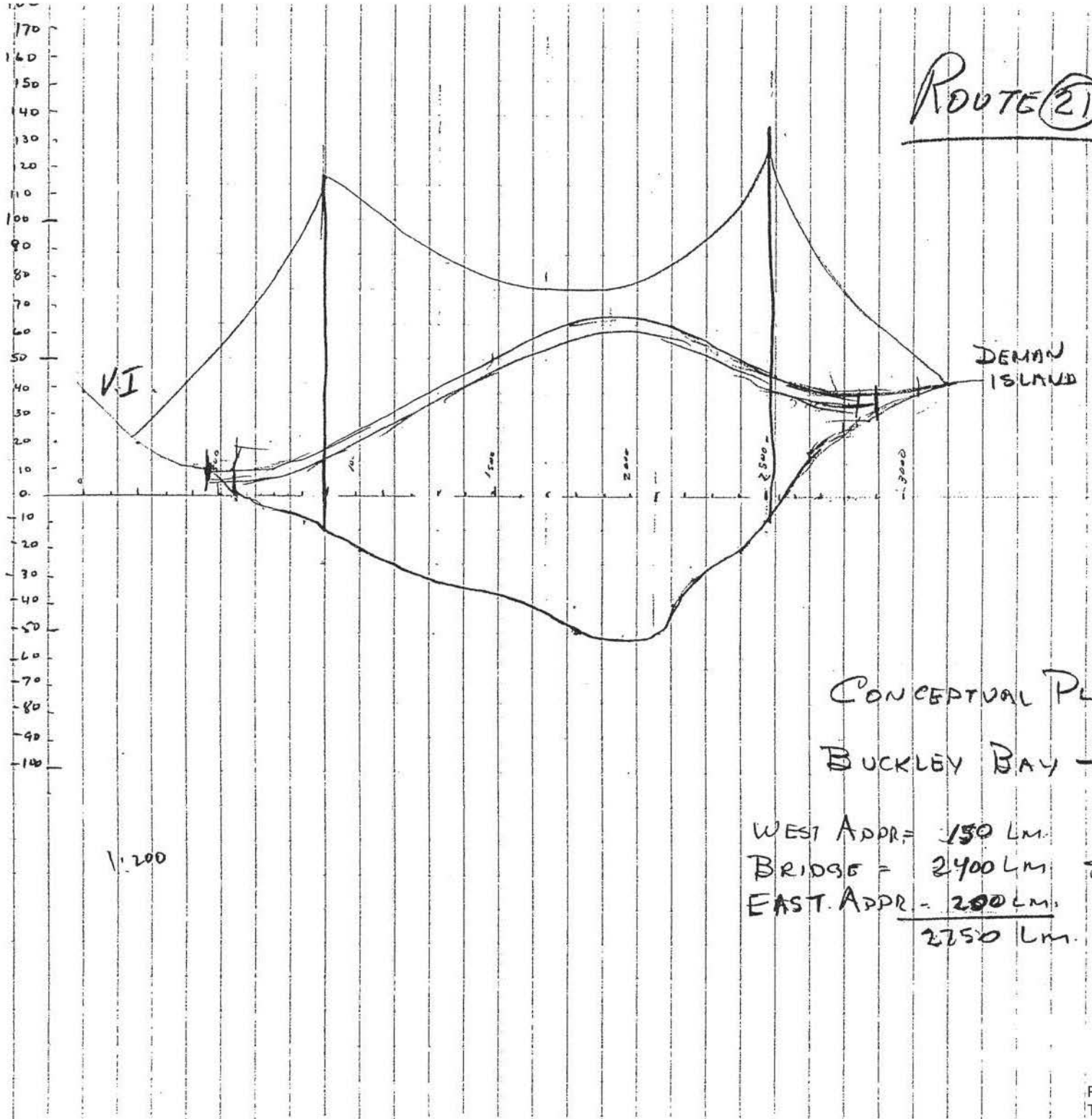


ROADS

WEST SIDE
— 2LN R_D = L = 3,000Lm

EAST SIDE
— 2LN R_D L = 1500Lm
+ BRIDGE

CONCEPTUAL PLAN (2)
VESUVIUS — CROPTON
WEST APP = 50 Lm.
BRIDGE = 2000Lm SPAN 1600
EAST APP = 50 Lm.
T.L = 2100 Lm

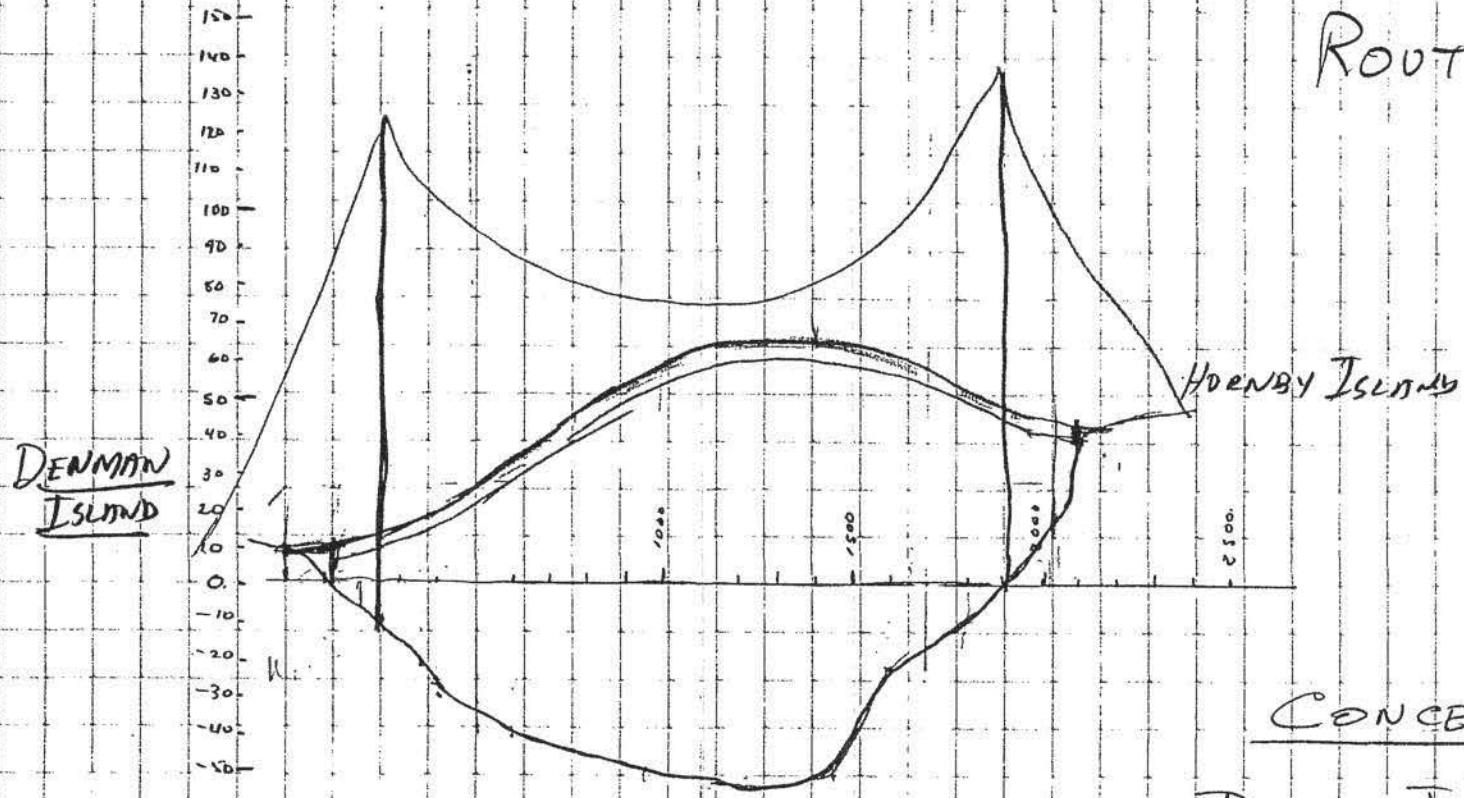


CONCEPTUAL PLAN (5)

BUCKLEY BAY - DENMAN ISLAND

WEST APPR = 150 LM.
BRIDGE = 2400 LM. SPAN 1700 LM
EAST APPR. = 200 LM.
2250 LM.

ROUTE (22)



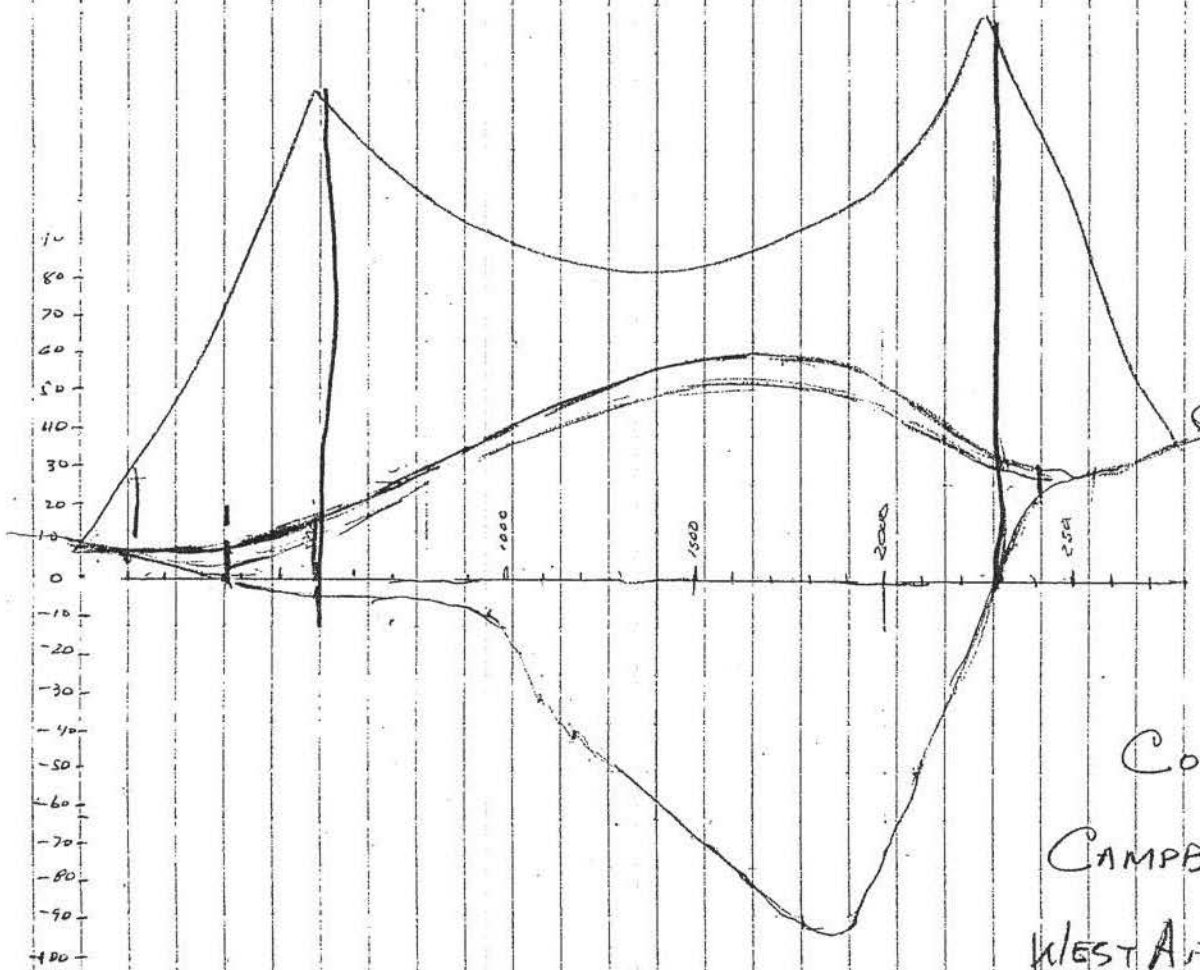
1:200

CONCEPTUAL PLAN (6)

DENMAN ISLAND – HORNBY ISLAND

DENMAN APPROACH = 200 Lm
BRIDGE = 2000 Lm SPAN 1700 Lm
HORNBY ISLAND = 100 Lm
T.L = 2300 m

ROUTE (23)

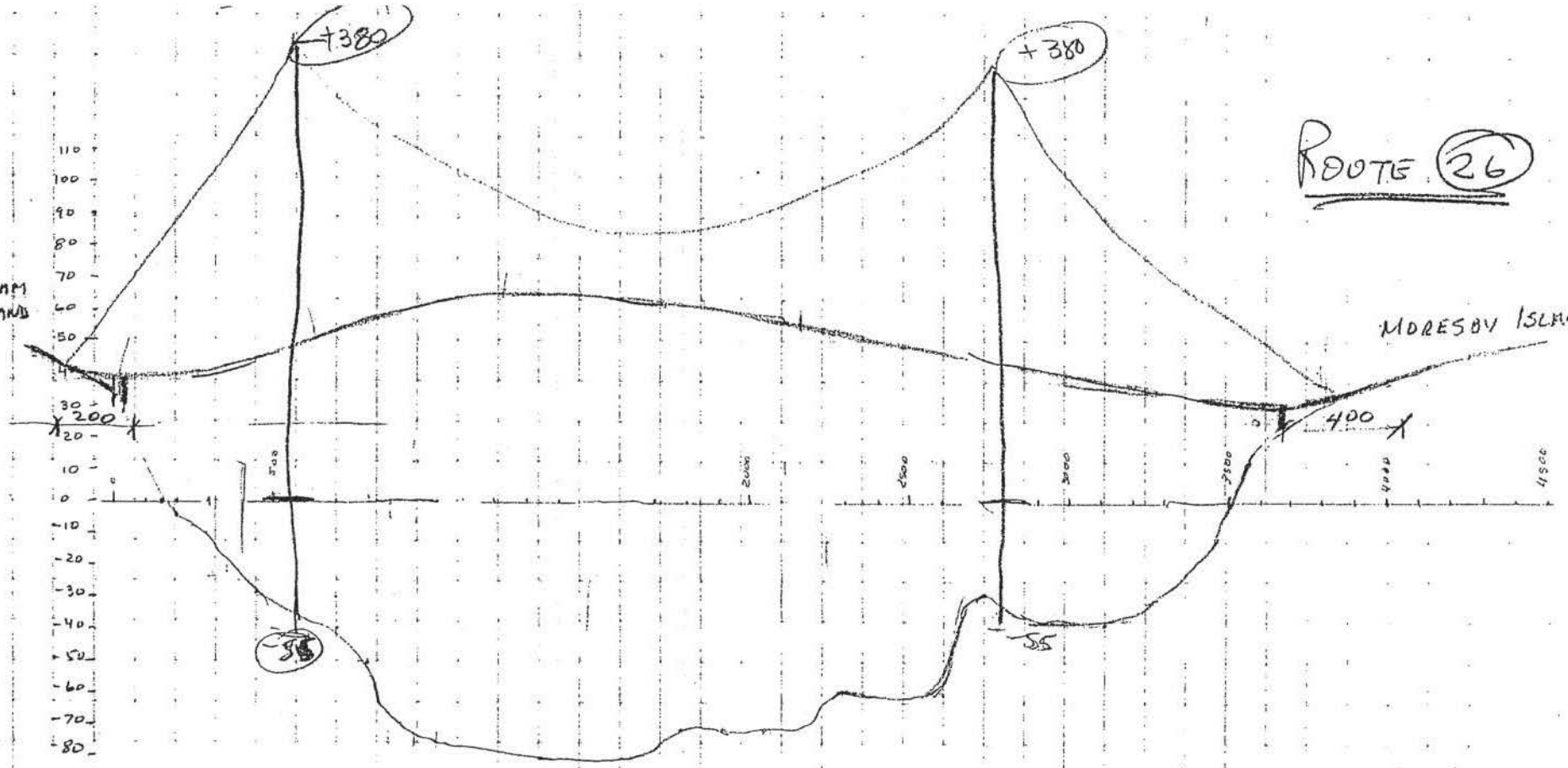


1:200

CONCEPTUAL PLAN (1)

CAMPBELL RIVER - QUADRA ISLAND

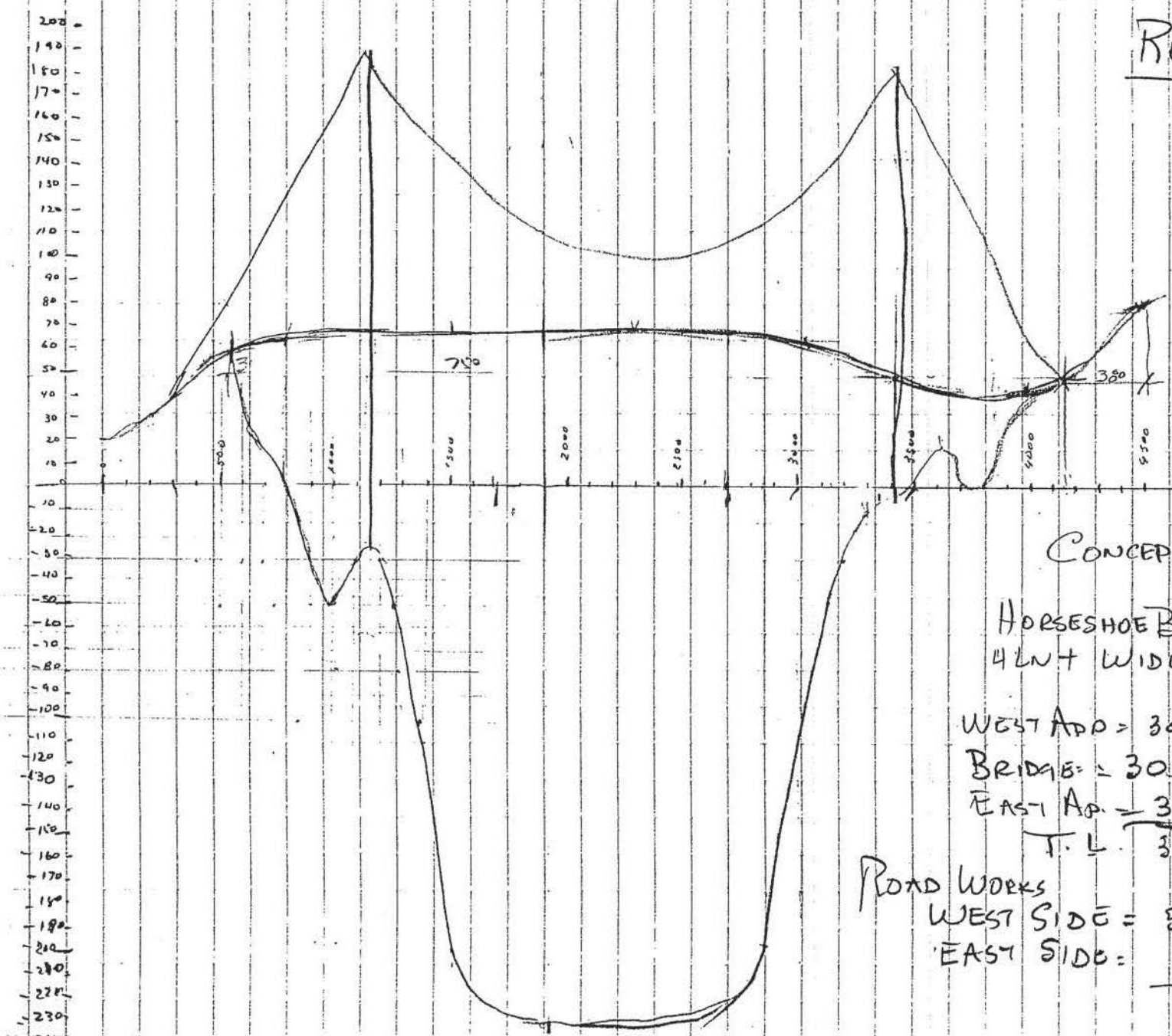
W/EST APPROACH	300 Lm.	
BRIDGE.	2150 Lm.	SPAN = 180
EAST APPR.	150 Lm.	
QUADRA ISLAND	2600 Lm.	
2 LN ROAD	1000 Lm.	
	3600 Lm.	



CONCEPTUAL PLAN B
ALLIFORD BAY – LANDIN.

GRAHAM ISLAND ADD = 200 Lm
BRIDGE 3,600 Lm SPAN: 2300'
MORESBY ISLAND ADD = 400 Lm
T.L. 4,200 Lm.

ROUTE (8)



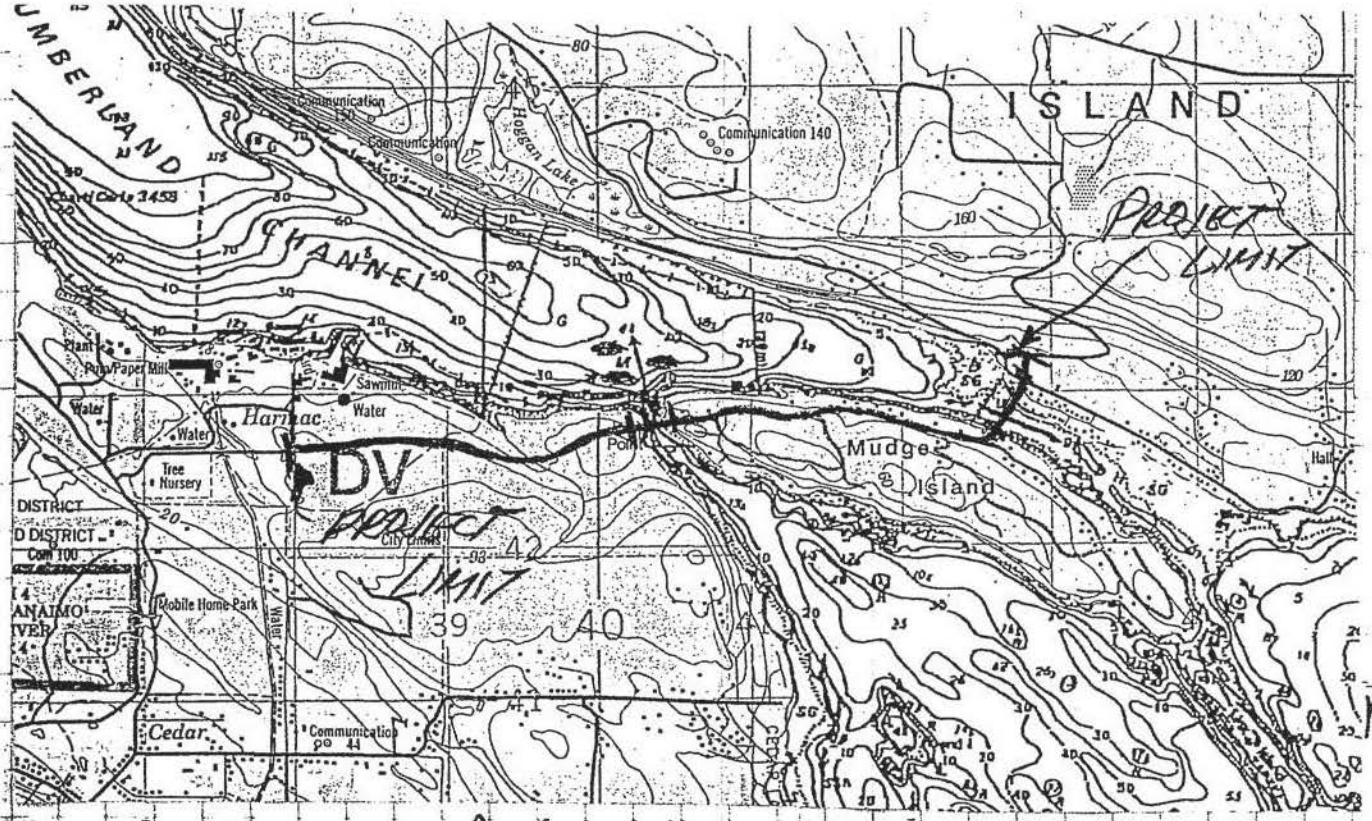
SUSPENSION BRIDGE

CONCEPTUAL PLAN (3)

HORSESHOE BAY – BOWEN ISLAND
4 LN + WIDE OF BRIDGE REQ'D FOR SPAN.

WEST APP = 300 Lm
BRIDGE = 3010 Lm SPAN 2300 Lm.
EAST APP. = 370 Lm
T. L. 3680 Lm

ROAD WORKS
WEST SIDE = 500 Lm. - 2 LN.
EAST SIDE = 380 Lm. - 2 LN.
880



ROUTE (19)

JAN 16 / 2002

BY E. WOLSKI

CONCEPTUAL PLAN (4)

NANAIMO - GABRIOLA ISLAND

(AREA)

CONNECT TO EXISTING RD - (2LN RD) = 2200 Lm — NEW

WEST APP.	=	20 Lm	250 Lm
DODD NARROWS	=	200 Lm	
EAST APP	=	30 Lm.	

MUDGE ISLAND RDS: = 2100 — UPGRADE

WEST APP.	50 Lm	400 Lm.
FALSE NARROWS - 2LN BRIDGE	300 Lm.	
EAST APP.	50	

GABRIOLA ISLAND ROAD = 150 Lm — NOW

T.L = 5100 Lm.

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-26
E.Wolski Consulting BC Ferries
(2002 Dollars) Island Connections
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land
Contingency 5.0% 5.0%
Division/Site Route-26
Road Type 2
Length 4200 L.M.

2 ln Rd.& Suspension Br.
Skidegate - Aliford Bay
Route-26
2
4200
MR

2 ln Rd.& Road Types
Suspens 1. 2ln Frontage
0 2. 2ln Acc Rds
Skidegat 3. 4ln Acc Rds
SITE C/LN 4.R4L-4L EXP R/B
Route-26 5.R2/3L-4L EXP R/B
2 6.Retr.4L-4LEX R/B
4200 7.R4L-4LEX R/B E/S
8. New 4L EXP R/B

9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 1,722,517,445
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

SUMMARY BY ACTIVITY LEVEL

		Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values	Previous Estimate Diff.		Cost/LM	% of T	% of TC
2000	PROJECT MANAGEMENT			-62245714	0		62,245,714	14820	3.6%	3.6%
2500	PLANNING			0	0		0	0	0.0%	0.0%
3000	PRELIMINARY DESIGN			-1563753	0		1,563,753	372	0.1%	0.1%
3500	DETAILED DESIGN			-80715244	0		80,715,244	19218	4.7%	4.7%
	Total Engineering			-82278997	0		82,278,997	19590	4.8%	4.8%
4000	LAND ACQUISITION			-5790000	0		5,790,000	1379	0.3%	0.3%
5000	GRADE CONSTRUCTION			-1161841	0		1,161,841	277	0.1%	0.1%
5200	ROAD SIDE CONSTRUCTION			0	0		0	0	0.0%	0.0%
5300	OTHER CONSTRUCTION			-865200	0		865,200	206	0.1%	0.1%
5500	STRUCTURAL CONSTRUCTION			-1371860255	0		1,371,860,255	326633	79.6%	79.6%
6000	PAVING CONSTRUCTION			-77797	0		77,797	19	0.0%	0.0%
6500	OPERATIONAL CONSTRUCTION			-586637	0		586,637	140	0.0%	0.0%
6700	UTILITY CONSTRUCTION			-126000	0		126,000	30	0.0%	0.0%
6800	RESIDENT ENGINEERING			-115500365	0		115,500,365	27500	6.7%	6.7%
	Total Construction			-1490178094	0		1,490,178,094	354804	86.5%	86.5%
9700	CONTINGENCY			-82024640	0		82,024,640	19530	4.8%	4.8%
	SUB-TOTAL			-1722517445	0		1,722,517,445	410123	100.0%	100.0%
9800	MANAGEMENT RESERVE			0	0		0	0	0.0%	0.0%
	TOTAL			-1722517445	0		1,722,517,445	410123	100.0%	100.0%
9900	ESCALATION			0	0		0	0		0.0%
	TOTAL COST			-1722517445	0		1,722,517,445	410123		100.0%
	Constr. Less Resident Eng.			-1374677729	0		1,374,677,729	327304		

ENG. & PM	151,750,946	36131
LAND	6,079,500	1448
CONST.	1,564,686,998	372545
MAN. RES.	0	0
ESC.	0	0
TOTAL	1,722,517,445	410123

Route-26

Assumptions

1 Existing Right-Of-Way m

2 New Addition Right-Of-Way partial taking Yes m

	Shoulder	Lane	Lane	Median	Lane	Lane	Shoulder
Existing Rd	-	-	-	-	-	-	-
Pvmt Width	0.0						
New Rd.	2.00	-	3.70	-	3.70	-	2.00
Pvmt Width	11.4						

	Bridges		Width(m)	Length(m)
3.1	Sup/br. Span 2300lm		35.0	3600.0
3.2		0	0.0	0.0
3.3		0	0.0	0.0
3.4		0	0.0	0.0
3.5		0	0.0	0.0

	Tunnels	Length(m)	Width(m)	Height(m)
4.1	2lnSt.w-x	0	12.0	8.27
4.2	x-Pass.Tl	0	3.0	3.16
4.3	shaft	0	2.0	Diameter
4.4	snowshedlength (lm)	0		

NOTES:

$Cost/m^2 = \frac{1,371,860,255}{35 \times 3600} = \$10,500/m^2$

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-26
E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
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Version Dec.4./01

Man. Reserve 0.0% Land
Contingency 5.0% 5.0%
Division/Site Route-26
Road Type 2
Length 4200 L.M.

2 In Rd.& Suspension Br.
Skidegate - Aliford Bay Route-26
2
4200
MR

2 In Rd.& Suspens
0
Skidegat
SITE C/L
Route-2
2
4200

9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 1,722,517,445
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

1. 2In Frontage
2. 2In Acc Rds
3. 4In Acc Rds
4.R4L-4L EXP R/B
5.R2/3L-4L EXP R/B
6.Retr.4L-4LEX R/B
7.R4L-4LEX R/B E/S
8. New 4L EXP R/B

Blk Est. # 6.1 Version Dec.4./01	DESCRIPTION	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values		
2500	PLANNING						
2521	Consultant - transport. planning study	0.00	LM	0		0	0
2531	Consultant - corridor study	0.00	LM	0		0	0
2541	Consultant - functional plan. study	0.00	LM	0		0	0
2502	Consultant - general	0.0%		0		0	0
	Consultant sub-total					0	0
2510	Ministry - project ident.	0.00	LM	0		0	0
2520	Ministry - transport. planning study	0.00	LM	0		0	0
2530	Ministry - corridor study	0.00	LM	0		0	0
2540	Ministry - functional study	0.00	LM	0	0	0	0
2501	Ministry - general	0.0%		0		0	0
	Ministry Sub-total			0		0	0
2599	Planning Contingency	5.0%		0		0	0
	TOTAL PLANNING					0	0
3000	PRELIMINARY DESIGN						
3013	Consultant - aerial base plan	0.00	LM	0		0	0
3014	Consultant - mapping & prel.	10.00	LM	42000		42,000	10
3015	Consultant - control survey	0.00	LM	0		0	0
3021	Consultant - environmental impact	3.00	LM	12600		12,600	3
3031	Consultant - funct.-road field survey	8.00	LM	33600		33,600	8
3041	Consultant - functional design	5.00	LM	21000	0	21,000	5
3051	Consultant - funct. des. structural	0.00	LM	0	1440453	1,440,453	343
3061	Consultant - geotechnical design	3.00	LM	12600		12,600	3
3071	Consultant - right-of-way research	0.00	LM	0	1500	1,500	0
3002	Consultant - general	0.0%		0		0	0
	Consultant sub-total					1,563,753	372
3010	Ministry - aerial base plan	0.00	LM	0		0	0
3011	Ministry - mapping	0.00	LM	0		0	0
3012	Ministry - control survey	0.00	LM	0		0	0
3020	Ministry - environmental impact	0.00	LM	0		0	0
3030	Ministry - funct.-road field survey	0.00	LM	0		0	0
3040	Ministry - functional design	0.00	LM	0		0	0
3050	Ministry - funct. des. structural	0.00	LM	0		0	0
3060	Ministry - geotechnical design	0.00	LM	0		0	0
3070	Ministry - right-of-way research	0.00	LM	0		0	0
3001	Ministry - general	0.0%		0		0	0
	Ministry Sub-total					0	0
3099	Preliminary design Contingency	5.0%		78188		78,188	19
	TOTAL PRELIMINARY DESIGN					1,641,941	391

Description	No.	Units	Quantity	Rate	Total
					-

Description

Description	No.	Units	Quantity	Rate	Total
					-

Description

Structural 0.10%

$/Prop. $ 150

Description	No.	Units	Quantity	Rate	Total
					-

Description

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-26
E.Wolski Consulting BC Ferries
(2002 Dollars) Island Connections
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve		0.0%	Land	2 In Rd.&	2 In Rd.&	Road Types		9. R-E4L-4L D/M	
Contingency		5.0%	5.0%	Suspension Br.	Suspens	1. 2In Frontage		10.N 4L EXP D/M	
Division/Site		Route-26			0	2. 2In Acc Rds		11.N 4L EXP D/E/M	
Road Type		2		Skidegate -	Skidegat	3. 4In Acc Rds		12.N2L;F4LEXP D/M	
Length		4200	L.M.	Aliford Bay	SITE C/LI	4.R4L-4L EXP R/B		13.INST.R/B-EX.RD	
		========		Route-26	Route-26	5.R2/3L-4L EXP R/B		14.AS IS 15. Misc.	1,722,517,445
		Cost-Quant.	Lump Sum	2	2	6.Retr.4L-4LEX R/B		20.I/C Str.&Ramps	
Unit Price	Unit	PerSection	Values	4200	4200	7.R4L-4LEX R/B E/S		21. Bridges	
				MR		8. New 4L EXP R/B		22. Grade Sep.	

	DESCRIPTION	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values		
6700	UTILITIES						
6710	Util. Prov. - Hydro	10.00	lm	4200	0	42,000	10
6711	Util. Prov. - Telephone	20.00	lm	4200	0	84,000	20
	Util. Prov. sub-total					126,000	30
6712	Util.Others - pipelines	0.00	lm	0		0	0
6713	Util.Others - telecommunication	0.00	lm	0		0	0
6714	Util.Others - storm & sewer inspect.	0.0%		0		0	0
6715	Util.Others - waterworks inspect.	0.0%		0		0	0
6716	Util.Others - engineering services	0.00	LM	0		0	0
6717	Util.Others - parks/recreation-prel.	0.00	LM	0		0	0
6718	Util.Others - transit	0.00	LM	0		0	0
6719	Util.Others - tr-ops/signs & detours	0.00	LM	0		0	0
6701	Util.Others - general	0.0%		0		0	0
	Util.Others sub-total					0	0
6799	Util.Others Contingency	5.0%		6300	0	6,300	2
	TOTAL UTILITIES					132,300	32
5000	GRADE CONSTRUCTION	U. Price	Unit	Quantity	Lump Sum		
5032	Grade Cont - water	225.00	lm	0	0	0	0
5033	Grade Cont - sanitary	150.00	lm	0	0	0	0
5034	Grade Cont - storm	175.00	lm	0		0	0
5031	Grade Cont - mobilization	3.0%		0		0	0
5039	Grade Cont - utility contingency	5.0%		0		0	0
	Grade Const. Utilities Sub-total					0	0
5010	Grade Cont - site prep./clear,grubbing	8,000	ha	1.80	0	14,398	3
5020	Grade Cont - road grade/exc,placing,fill	15.48	m3	24564	0	380,200	91
5030	Grade Cont - drainage/pipe,cul.	0.00	LM	0	10110	10,110	2
5040	Grade Cont - muiltiplate	10000	lm	0		0	0
5050	Grade Cont -SGSB/produce,place,comp	18.00	m3	4557		82,019	20
5051	Grade Cont -CBC/produce,place,comp	20.00	m3	2841		56,811	14
5060	Grade Cont - grade finishing landscaping	0.00	m2	11157		0	0
5061	Grade Cont - grade finishing hydro seed.	0.40	m2	11157		4,463	1
5062	Grade Cont - grade finishing fencing	60.00	lm	0		0	0
5063	Grade Cont - noise barriers	110.00	m2	0		0	0
5064	Grade Cont - passing lanes	0.00	lm	0		0	0
5090	Grade Cont - sidewalks,curb & gutter	60.00	lm	0	0	0	0
5005	Grade Cont -detours c/w ex,bf,paving	40000	NO	4.0	420000	580,000	138
5001	Grade Cont - mobilization	3.0%		33840		33,840	8
5099	Grade Cont - Contingency	5.0%		58092		58,092	14
	Grade Construction Sub-total					1,219,933	290
	GRADE CONSTRUCTION COSTS					1,219,933	290
3510	Grade Eng. - detailed design	7.00%		85395		85,395	20
3519	Grade Eng. - detailed design/Contingency	5.0%		4270		4,270	1
6810	Grade Eng. - general const. supervision	4.60%		56117		56,117	13
6811	Grade Eng. - quality assurance	3.20%		39038		39,038	9
6812	Grade Eng. - surveying	2.00%		24399		24,399	6
6819	Grade Eng. - Residency Contingency	5.0%		5978		5,978	1
	Grade Engineering Sub-total					215,196	51
	Total Grade Const. & Eng. Costs					1,435,129	342

Description	No.	Units	Quantity	Rate	Total
					-
					-
					-
					-
					-
					-
					-
					-
					-
					-

Description -

	(m3)	(unit $)	($)		
Fill	0				
Rock	19120	18.00	344163	85%	
O.M.	3374	7.00	23619		
Strip.	2070	6.00	12418	0.100	
Borrow	0	12.00	0		
Misc./LS	0	4.00	0	Surplus Mtl	Neat vol.cal
Total	24564	15.48	380200		0

	Spec	Spec	Pl/PL		Spec.
	2 In Rd.&		30.0		Resurface
	Road	Road	Ditch Width	Ditch Width	Road
pl to pl	30.00	0.00	2.0	0.0	ONLY
*no./lane	2	0	Col L Vol.	Col. M Vol.	0
*lane wid	3.7	0.0	24,564	-	0.0
*med	0.0	0.0	Pmt W=	11.4	0.0
*shldrs tot	4.0	0.0	CBC. slope	CBC. slope	0.0
c.b.c.(w)	12.5	0.0	2.5	0.0	A.C. (mm)
sgsb (w)	14.7	0.0			0
SGSBslope :1	2.5	0.0			A.B.C. (mm)
*depth(d)	2.000	0.000	15%		0
*road (l)	600	0			0
*no.cul./kil	5.0	0.0	$ 500		Appl. rate
cul.(l)	15.80	0.00	$ 150		1.75
*sgsb (d)	0.45	0.00	15%		
*cbc (d)	0.33	0.00	15%		
*Add.ROW	-6.68	0.00			
X-m3/lm	40.94	0.00			

C&G $/LM	$40.00	Exp-100kmp	Exp- 80kmp	Coll-80kmp
Decel.(T-lm)		520	440	260
Accel.(T-lm)		950	630	80
Left T.(T-lm)		716	596	456
TOTAL		2186	1666	796

Gravel 2.0Tonnes/m3

Drainage	No.	Units	Quantity	Rate	Total
Box Cul.	0	lm	45	3500	-
Head Walls	0	ea.	2	5000	-
					-
					-
					-
					-
					-
					-
					-

Drainage -

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-26
E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est: # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land
Contingency 5.0% 5.0%
Division/Site
Road Type
Length 2 4200 L.M.

2 In Rd.& Suspension Br. 2
Skidegate - Aliford Bay Route-26 4200 MR

2 In Rd.& Suspens 0 Skidegat 3. 4In Acc Rds SITE C/L 4.R4L-4L EXP R/B Route-26 5.R2/3L-4L EXP R/B 2 6.Retr.4L-4LEX R/B 4200 7.R4L-4LEX R/B E/S 8. New 4L EXP R/B

1. 2In Frontage
2. 2In Acc Rds
9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 1,722,517,445
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

Blk Est: # 6.1 Version Dec.4./01	DESCRIPTION	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values			
5500	STRUCTURAL CONSTRUCTION	Unit Price	Unit	Quantity	Lump Sum			
5522	Struct.Cons - water	225.00	lm	0		0	0	
5523	Struct.Cons - sanitary	150.00	lm	0		0	0	
5524	Struct.Cons - storm	175.00	lm	0		0	0	
5521	Struct.Cons - mobilization	3.0%		0		0	0	
5599	Struct.Cons - utility contingency	5.0%		0		0	0	
	Structural Const. Utilities Sub-total					0	0	
5510	Struct.Cons - tunnel site preparation	0.00	lm	0	0	0	0	
5511	Struct.Cons - tunnel construction	-	lm	0		0	0	
5512	Struct.Cons - snow shed site prep.	0.00	lm	0		0	0	
5513	Struct.Cons - snow shed site const.	-	lm	0		0	0	
					Demolition			
5514	Struct.Cons - bridge site preparation	1	LS	13187160	0	13,187,160	3140	
5515	Struct.Cons - bridge piers	1	LS	237000000		237,000,000	56429	
5516	Struct.Cons - bridge abutments	1	LS	300516000		300,516,000	71551	
5517	Struct.Cons - bridge superstructure	1	LS	781200000		781,200,000	186000	
5518	Struct.Cons - retain. wall site prep.	1	LS			0	0	
5519	Struct.Cons - retaining wall const.	525	m2	0		0	0	
5501	Struct.Cons - mobilization	3.0%		39957095		39,957,095	9514	
5529	Struct.Cons - Contingency	5.0%		68593013		68,593,013	16332	
	Structural Construction Sub-total					1,440,453,268	342965	
	STRUCTURAL CONSTRUCTION COSTS					1,440,453,268	342965	
3520	Struct. Eng. - detailed design	5.00%		72022663		72,022,663	17148	
3529	Struct. Eng. - detailed design/Contingency	5.0%		3601133		3,601,133	857	
6820	Struct. Eng. - general const. supervision	4.50%		64820397		64,820,397	15433	
6821	Struct. Eng. - quality assurance	3.00%		43213598		43,213,598	10289	
6822	Struct. Eng. - surveying	0.50%		7202266		7,202,266	1715	
6829	Struct. Eng. - Residency Contingency	5.0%		5761813		5,761,813	1372	
	Structural Engineering Sub-total					196,621,871	46815	
	Total Structural & Eng. Costs					1,637,075,139	389780	
6000	PAVING CONSTRUCTION				SM./OIL			
6020	Paving Con - machine paving asphalt	40.00	t	1724	11970	75,531	18	
6030	Paving Con - machine paving concrete	0.00	m2			0	0	
6040	Paving Con - hot reprofiling	0.00	m2	6840		0	0	
6050	Paving Con - shoulder paving	0.00	t	691		0	0	
6060	Paving Con - pavement finishing	75.00	m2	0		0	0	
6070	Paving Con - seal coating	0.00				0	0	
6001	Paving Con - mobilization	3.0%		2266		2,266	1	
6010	Paving Con - pavement design	0.0%		0		0	0	
6099	Paving Con - Contingency	5.0%		3890		3,890	1	
	PAVING CONSTRUCTION COSTS					81,686	19	
3560	Paving Eng - detailed design	7.00%		5718		5,718	1	
3569	Paving Eng - detailed design/Contingency	5.0%		286		286	0	
6860	Paving Eng - general const. supervision	3.00%		2451		2,451	1	
6861	Paving Eng - quality assurance	5.00%		4084		4,084	1	
6862	Paving Eng - surveying	1.00%		817		817	0	
6869	Paving Eng - Residency Contingency	5.0%		368		368	0	
	Paving Engineering Sub-total					13,723	3	
	Total Paving Const. & Eng. Costs					95,410	23	

	Brdge	Site $	Piers $	Abut. $	abut. extra length (lm)	
	1	13,187,160	237,000,000	#########	8	1%
	2	-	-	-		0%
	3	-	-	-		0%
	4	-	-	-		0%
	5	-	-	-		0%

	Pier/Ht	Pier No.	P/$/VLM	Abut/$/HLM
1	300	2	95000	6000
2	0		0	

	(W)	(L)	($/m2)	Net Cost
DECK #1	35.00	3600.00	6200.00	1371860255
DECK #2				0
DECK #3				0
DECK #4				0
DECK #5				0

	Gross/m2	Net/m2	
1 Sup/br. Span 2300lm	11432.17	10887.78	
2	#DIV/0!	#DIV/0!	
3	#DIV/0!	#DIV/0!	Tnnl $/lm -Net
4	#DIV/0!	#DIV/0!	-
5	#DIV/0!	#DIV/0!	Tnnl $/lm -Gross

	2InSt.w-x 1-D-Shape	x-Pass.Tl 2-D-Shape	shaft 1-Circle	Radius-1-D	7.267
Tunnel L=	0	-	0	Per.S&Rf	24.32
Tun. H1	5.100	2.550	Radius	m2/rkac	6.25
C.Pt. H4	1.00	1.00	1.00	Tnnl height	8.27
Tun.W	12.00	3.00	Wall Tk.	Radius-2-D	2.157
RFLT.	0.250	0.250	0.250	Per.S&Rf	8.42
WLT.	0.250	0.250	SOBT	m2/rkac	6.25
BST.	0.500	0.200	0.100	Tnnl height	3.16
TOBT	0.100	0.100	Exc.-m3	-	-
SOBT	0.100	0.100	Obk-m3	-	-
BOBT	0.100	0.100	Liner-m3	-	-

Items	Quantity	rate	Total $	Avg.$/ tot-lm	1-Circle
Exc.-m3	0	100	0	#DIV/0!	0
Obk-m3	0	2625	0	#DIV/0!	0
Rk anch-Ea	0	1125	0	#DIV/0!	0
Misc.-lm	0	2500	0	#DIV/0!	0
Liner-m3	0	1050	0	#DIV/0!	10.00
Drainage-lm	0	550	0	#DIV/0!	%
Lighting-m	0	900	0	#DIV/0!	5%
Mech-m	0	2100	0	#DIV/0!	15%
Misc.-lm	0	1000	0	#DIV/0!	3%
1Tonne=16.67m2/25mm			0	#DIV/0!	snowshed

60kg=1m2/25mm 1.5L =1M2 (P) .25L =1M2 (T)

asphalt	(T)=mm			length (lm)	
A.C.	100	0		Roof	1.0
A.B.C.	0	0	0.80		21.00 0.05
$Oil/Litre	$0.55	5%	Walls	$ 800.00	2.0 8.00
Appl. rate	1.75	1.75	0.80	$ 1,100.00	1.0 -
Pavement Removal		(See I155)	Base	$ 600.00	1.0 15.00
m3	$/m3	Total	0.60		
0	$20.00	0	Exc.-m3		1.0 15.00
Milling			20.00	$ 60.00	-
m3	$/m3	Total	Drainage	$ 400.00	-
0	$80.00	0	Electrical	$ 1,500.00	-
			Mech.	$ 950.00	-
			Misc.	$ 300.00	-
				#DIV/0!	-

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-26
E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est: # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land
Contingency 5.0% 5.0%
Division/Site Route-26
Road Type 2
Length 4200 L.M.

2 In Rd.& Suspension Br.
Skidegate - Alford Bay Route-26
2
4200
MR

2 In Rd.& Suspens
0
Skidegat
SITE C/L
Route-26
2
4200
Pole

1. 2In Frontage
2. 2In Acc Rds
3. 4In Acc Rds
4.R4L-4L EXP R/B
5.R2/3L-4L EXP R/B
6.Retr.4L-4LEX R/B
7.R4L-4LEX R/B E/S
8. New 4L EXP R/B
Sp. (lm) 55 No. of Sides 1 Length 4200

9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 1,722,517,445
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

	DESCRIPTION	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values		
6500	OPERATIONAL CONSTRUCTION						
6510	Operat.Con - lighting	5500.00	Ea	76		418,000	100
6520	Operat.Con - signals	-	Ea	0	0	0	0
6530	Operat.Con - signing	2.00	LM	8400		8,400	2
6540	Operat.Con - guard rail	70.00	lm	2000	0	140,000	33
6550	Operat.Con - pavement markings	1.75	lm	1800	0	3,150	1
6501	Operat.Con - mobilization	3.0%		17087		17,087	4
6599	Operat.Con - contingency	5.0%		29332		29,332	7
	OPERATIONAL CONSTRUCTION COSTS					615,968	147
3540	Operat. Eng - detailed design	7.00%		43118		43,118	10
3549	Operat. Eng - detailed design/Contingency	5.0%		2156		2,156	1
6840	Operat. Eng - general const. supervision	6.00%		36958		36,958	9
6841	Operat. Eng - quality assurance	2.00%		12319		12,319	3
6842	Operat. Eng - surveying	1.00%		6160		6,160	1
6849	Operat. Eng - Residency Contingency	5.0%		2772		2,772	1
	Operational Enginering Sub-total					103,483	25
	Total Operational Const. & Eng. Costs					719,451	171
5200	ROAD SIDE CONSTRUCTION	Unit Price	Unit	Quantity	Lump Sum		
5203	RoadSide C - water	225.00	lm	0		0	0
5204	RoadSide C - sanitary	150.00	lm	0		0	0
5205	RoadSide C - storm	175.00	lm	0		0	0
5202	RoadSide C - mobilization	3.0%		0		0	0
5209	RoadSide C - Utility Contingency	5.0%		0		0	0
	Road Side Const. Utilities Sub-total					0	0
5210	RoadSide C - weighscales	-	ea	0	0	0	0
5220	RoadSide C - safety rest areas	-	ea	0	0	0	0
5230	RoadSide C - tourist rest & view areas	40000	ea	0	0	0	0
5201	RoadSide C - mobilization	3.0%		0		0	0
5299	RoadSide C - Contingency	5.0%		0		0	0
	Road Side Construction Sub-total			0		0	0
	ROAD SIDE CONSTRUCTION COSTS					0	0
3550	RoadSide E - detailed design	10.00%		0		0	0
3559	RoadSide E - detailed design/Contingency	5.0%		0		0	0
6850	RoadSide E - general const. supervision	6.00%		0		0	0
6851	RoadSide E - quality assurance	2.00%		0		0	0
6852	RoadSide E - surveying	1.00%		0		0	0
6859	RoadSide E - Residency Contingency	5.0%		0		0	0
	Road Side Engineering Sub-total					0	0
	Total Road Side Const. & Eng. Costs					0	0
5300	OTHER CONSTRUCTION	Unit Price	Unit	Quantity	Lump Sum		
5303	Other Cons - water	225.00	lm	0		0	0
5304	Other Cons - sanitary	150.00	lm	0		0	0
5305	Other Cons - storm	175.00	lm	0		0	0
5302	Other Cons - mobilization	3.0%		0		0	0
5309	Other Cons - utility contingency	5.0%		0		0	0
	Other Const. Utilities Sub-total					0	0
5310	Other Cons - railroads main & spur lines	-	lm	0		0	0
5320	Other Cons - railroad crossings	-	ea	0		0	0
5330	Other Cons - marine work	-	ea	0		0	0
5340	Other Cons - environmental mitigations	280,000	ea	3		840,000	200
5301	Other Cons - mobilization	3.0%		25200		25,200	6
5399	Other Cons - Contingency	5.0%		43260		43,260	10
	Other Construction Sub-total					908,460	216
	OTHER CONSTRUCTION COSTS					908,460	216
3570	Other Eng. - detailed design	7.00%		63592	0	63,592	15
3579	Other Eng. - detailed design/Contingency	5.0%		3180		3,180	1
6870	Other Eng. - general const. supervision	3.00%		27254	0	27,254	6
6871	Other Eng. - quality assurance	3.00%		27254		27,254	6
6872	Other Eng. - surveying	3.00%		27254		27,254	6
6879	Other Eng. - Residency Contingency	5.0%		4088		4,088	1
	Other Engineering Sub-total					152,621	36
	Total Other Const. & Eng. Costs					1,061,081	253

Earthworks (see grading)

Signals

Signals	No.	Units	Quantity	Rate	Total
Controller	0	ea	1	25,000.00	-
Sig. pol,base	0	ea	4	15,000.00	-
Wiring U/G	0	ls	1	10,000.00	-

LP $/lm $ 1.00 Refl. Sp. 20.00
Ext. Lines 1.0 Refl.$/ea $ 15.00

Weighscale

Weighscale	No.	Units	Quantity	Rate	Total
Buildings	0	m2	60	2,800.00	-
Pit & Apron	0	m2	120	400.00	-
S&I W/S	0	ea	1	80,000.00	-
Parking Lot	0	m2	9000	40.00	-
Road Const.	0	lm	1,500	400.00	-
light/signs	0	ls	1	50,000.00	-

SAFETY REST AREAS

Safety Rest Area	No.	Units	Quantity	Rate	Total
Class A&B					
Buildings	0	m2	100	3,000.00	-
Class C					
Site/toilets	0	ea	2	12,500.00	-
Parking Lot	0	m2	2500	40.00	-
Road Const.	0	lm	800	350.00	-
Furnishings	0	ls	-	10,000.00	-
Landscaping	0	ls	1	5,000.00	-
light/signs	0	ls	-	50,000.00	-

Description

Description	No.	Units	Quantity	Rate	Total
	0		0	-	-
	0		0	-	-
	0		0	-	-
	0		0	-	-

Railway

Railway	No.	Units	Quantity	Rate	Total
Removal	0	tklm	1.00	21.00	-
Track Cnst.	0	tklm	1.00	320.00	-
Ballast	0	m3	1.13	35.00	-
Sub-ballast	0	m3	0.96	25.00	-
Resurfacing	0	tklm	1.00	10.00	-
Tie-ins	0	ea	1.00	2800.00	-
Turnout # 9	0	ea	1.00	35000.00	-
Others	0	ls	1.00	0.00	-
	0				-
	0	lm	1	0.00	-

R/rd X-ing

R/rd X-ing	No.	Units	Quantity	Rate	Total
Planks	0	tklm	45	1750.00	-
Sig./gates	0	each	1	200,000	-

R/rd X-ing

Description	No.	Units	Quantity	Rate	Total

Description

Environment	No.	Units	Quantity	Rate	Total
Mitigation	3	ls	4	50,000	600,000
Ponds	3	ea	2	40,000	240,000

Environmental 840,000

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-26
E.Wolski Consulting BC Ferries
(2002 Dollars) Island Connections
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land
Contingency 5.0% 5.0%
Division/Site Route-26
Road Type 2
Length 4200 L.M.

2 In Rd.& Suspension Br.
Skidegate - Aliford Bay
Route-26
2
4200
MR

2 In Rd.& Suspens
0
Skidegat
SITE C/L
Route-2
2
4200

1 Road Types
1. 2In Frontage
2. 2In Acc Rds
3. 4In Acc Rds
4.R4L-4L EXP R/B
5.R2/3L-4L EXP R/B
6.Retr.4L-4LEX R/B
7.R4L-4LEX R/B E/S
8. New 4L EXP R/B
1 Bridge
- -

9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 1,722,517,445
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.
1 Tunnel
- -
1 Special
2,000,000

		Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values			
3500	DETAILED DESIGN from 3510,3520,3540,3550,3570					75,831,511	18055	
3530	Geotech. E - detailed design	0.45%		6494757	2000000	8,494,757	2023	
3539	Geotech. E - Contingency	5.0%		424738		424,738	101	
	TOTAL DETAILED DESIGN COSTS					84,751,006	20179	
6800	RESIDENT ENGINEERING from 6810,6820,6840,6850,6860,6870					121,275,383		
	TOTAL RESIDENT ENG. COSTS					121,275,383	28875	
						0		
						0	0	
	PART 1 SUMMARY CONSTRUCTION					1,374,677,729	327304	
	ENGINEERING & SUPERVISION					197,779,362	47090	
	CONTRACTUAL CONTINGENCY					78,622,855	18720	
						0	0	
	CONSTRUCTION COST TOTAL	DIVISION/SITE		Route-26		1,651,079,945	393114	
2000	PROJECT MANAGEMENT							
2060	Project Mar - office costs wages	2.00%		33021599		33,021,599	7862	
2062	Project Mar - office costs - expenses	0.00%		0		0	0	
2063	Project Mar - printing costs	0.00%		0		0	0	
2061	Project Mar - general	0.00%		0		0	0	
	Project Manager Sub-total					33,021,599	7862	
2010	Ministry - office costs wages	0.50%		8255400		8,255,400	1966	
2012	Ministry - office costs - expenses	0.50%		8255400		8,255,400	1966	
2030	Ministry - printing costs	0.00%		0		0	0	
2011	Ministry - general	0.00%		0		0	0	
	Ministry Sub-total					16,510,799	3931	
2070	Public Rel. - wages & expenses	0.35%		5778780		5,778,780	1376	
2072	Public Rel. - adv., media, displays	0.35%		5778780		5,778,780	1376	
2073	Public Rel. - opening ceremonies	0.01%		165108	0	165,108	39	
2071	Public Rel. - general	0.00%		0		0	0	
	Public Relations Sub-total					11,722,668	2791	
2040	Legal Costs - lawyers fees	0.01%		165108		165,108	39	
2041	Legal Costs - general	0.00%		0		0	0	
	Legal Costs Sub-total					165,108	39	
2080	Insurance - const./ liability, E&O	0.05%		825540		825,540	197	
2081	Insurance - general	0.00%		0		0	0	
	Legal Costs Sub-total					825,540	197	
2099	Project Management Contingency	5.0%		3112286		3,112,286	741	
	TOTAL PROJECT MANAGEMENT COSTS					65,358,000	15561	
4000	LAND	$/Building		# buildings	LS	10		
4010	Land(Code -Mrkt,ROW,Serv,Imp.V,Ease.	450,000	Res	10	0	4,536,000	1080	
	Acquisition Sub-total	2,000,000	Con	0	0	4,536,000	1080	
4020	Land(Code -Bus.,5%,Mrg.P,Rel$,P/Tax,E	10.00%		453600	0	453,600	108	
4030	Land(Code -Owners(LS,Apprsl,Rprt,Lgl,Ir	7.00%		317520	0	317,520	76	
4040	Land(Code -Demolition	0.00%		0	100000	100,000	24	
4050	Land(Code -Pro.Man,P.Tax,Util,Security	1.00%		45360	0	45,360	11	
4060	Land(Code -Not Used							
4070	Land(Code -Not Used							
4080	Land(Code -Acq.F,M/Sal,TrvlV,Cntr.S,Ap	7.00%		317520	0	317,520	76	
4090	Land(Code -Surveys	0.00%		0	20000	20,000	5	
	Associated costs-sub-total			1134000		1,254,000	299	
4099	-Land Contingency Sub-total	5.0%		289500	0	289,500	69	
	TOTAL LAND COSTS					6,079,500	1448	

Description	No.	Units	Quantity	Rate	Total
					-

3.77%

1 Hectare = 10,000 Square Meters
1 Hectare = 2.471 Acres
1 Acre = 43,560 square feet

	Planned ROW		1.8	
10.00%	Req. ROW		1.8	
7.00%	Cost/Ha		20,000	107,637
2.20%	Cost/M2		2.00	10.76
1.00%	Cost /Acre		8,094	43,560
	Cost /Ft2		0.19	$ 1.00
27.65%				
7.00%	Demo./unit	$	10,000	
0.44%	Survey /unit	$	2,000	

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-26
E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land 5.0%
Contingency 5.0%
Division/Site Route-26
Road Type 2
Length 4200 L.M.

2 In Rd.& Suspension Br.
Skidegate - Aliford Bay
Route-26
2
4200
MR

2 In Rd.& Suspens
0
Skidegat
SITE C/L
Route-26
2
4200

8 Road Types
1. 2In Frontage
2. 2In Acc Rds
3. 4In Acc Rds
4.R4L-4L EXP R/B
5.R2/3L-4L EXP R/B
6.Retr.4L-4LEX R/B
7.R4L-4LEX R/B E/S
8. New 4L EXP R/B

9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 1,722,517,445
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

	DESCRIPTION	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values		
9800	MANAGEMENT RESERVE						
	MAN. RES. - planning	0.0%		0		0	0
	MAN. RES. - preliminary design	0.0%		1641941		0	0
	MAN. RES. - utility construction	0.0%		132300		0	0
	MAN. RES. - grade construction	0.0%		1219933		0	0
	MAN. RES. - structural construction	0.0%		1440453268		0	0
	MAN. RES. - paving construction	0.0%		81686		0	0
	MAN. RES. - operation construction	0.0%		615968		0	0
	MAN. RES. - roadside construction	0.0%		0		0	0
	MAN. RES. - other construction	0.0%		908460		0	0
	MAN. RES. - project management	0.0%		65358000		0	0
	MAN. RES. - land	0.0%		6079500		0	0
	MAN. RES. - detailed eng.	0.0%		84751006		0	0
	MAN. RES. - residency eng.	0.0%		121275383		0	0
	MAN. RES. - Contingency	0.0%		0		0	0
	TOTAL MANAGEMENT RESERVE			1722517445		0	0
	TOTAL LESS ESCALATION			0	##########		
	FISCAL						
9900	ESCALATION						
	YEAR PROJECTED ESCALATION	COMPLETE		$ DONE			
	2002-2003 0.5750%	5.00%		0		0	0
	2003 - 2004 0.6250%	10.00%		0		0	0
	2004-2005 1.0000%	35.00%		0		0	0
	2005-2006 1.0000%	45.00%		0		0	0
	2006-2007 1.0000%	5.00%		0		0	0
	2007-2008 1.0000%	0.00%		0		0	0
	2008-2009 1.0000%	0.00%		0		0	0
	2009-2010 1.0000%	0.00%		0		0	0
	2010-2011 1.0000%	0.00%		0		0	0
	TOTAL ESCALATION	100.00%		0		0	0
	PART 2 SUMMARY NON-CONSTRUCTION COSTS						
	Non-Construction					68,035,714	16199
	Non-Const. Contingency					3,401,786	810
	TOTAL NON-CONSTRUCTION COSTS					71,437,500	17009
	Route-26 TOTAL FOR ROAD TYPE	2				1,722,517,445	410123

Description	No.	Units	Quantity	Rate	Total
				-	-
				-	-
				-	-
				-	-
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				-	-
				-	-
Description					-
Description	No.	Units	Quantity	Rate	Total
				-	-
				-	-
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				-	-
Description					-

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-23	Man. Reserve 0.0%	Land 5.0%	2 ln Rd.& Suspension Br.	2 ln Rd.8 Suspens	Road Types: 1. 2ln Frontage; 2. 2ln Acc Rds; 3. 4ln Acc Rds; 4.R4L-4L EXP R/B; 5.R2/3L-4L EXP R/B; 6.Retr.4L-4LEX R/B; 7.R4L-4LEX R/B E/S; 8. New 4L EXP R/B; 9. R-E4L-4L D/M; 10.N 4L EXP D/M; 11.N 4L EXP D/E/M; 12.N2L;F4LEXP D/M; 13.INST.R/B-EX.RD; 14.AS IS; 15. Misc.; 20.I/C Str.&Ramps; 21. Bridges; 22. Grade Sep.
E.Wolski Consulting BC Ferries	Contingency 5.0%			0	
(2002 Dollars) Island Connections	Division/Site Route-23		Campbell River-Quadra Island	Campbel SITE C/LI	
ACTIVITY CODE — EST.DATE Jan. 16, 2002	Road Type 2		Route-23	Route-23	
Conceptual Est. R1 DATE:	Length 3600 L.M.		2	2	
Blk Est. # 6.1 R2 DATE:	========		3600	3600	1,173,109,954
Version Dec.4./01 DESCRIPTION	Unit Price — Unit — Cost-Quant. PerSection	Lump Sum Values	MR		

SUMMARY BY ACTIVITY LEVEL

Code	Description	Diff.	Previous Estimate	MR	Cost/LM	% of T	% of TC
2000	PROJECT MANAGEMENT	-42513216	0	42,513,216	11809	3.6%	3.6%
2500	PLANNING	0	0	0	0	0.0%	0.0%
3000	PRELIMINARY DESIGN	-1088402	0	1,088,402	302	0.1%	0.1%
3500	DETAILED DESIGN	-54785213	0	54,785,213	15218	4.7%	4.7%
	Total Engineering	-55873615	0	55,873,615	15520	4.8%	4.8%
4000	LAND ACQUISITION	-761500	0	761,500	212	0.1%	0.1%
5000	GRADE CONSTRUCTION	-1093988	0	1,093,988	304	0.1%	0.1%
5200	ROAD SIDE CONSTRUCTION	0	0	0	0	0.0%	0.0%
5300	OTHER CONSTRUCTION	-576800	0	576,800	160	0.0%	0.0%
5500	STRUCTURAL CONSTRUCTION	-936858810	0	936,858,810	260239	79.9%	79.9%
6000	PAVING CONSTRUCTION	-129661	0	129,661	36	0.0%	0.0%
6500	OPERATIONAL CONSTRUCTION	-417099	0	417,099	116	0.0%	0.0%
6700	UTILITY CONSTRUCTION	-108000	0	108,000	30	0.0%	0.0%
6800	RESIDENT ENGINEERING	-78914888	0	78,914,888	21921	6.7%	6.7%
	Total Construction	-1018099245	0	1,018,099,245	282805	86.8%	86.8%
9700	CONTINGENCY	-55862379	0	55,862,379	15517	4.8%	4.8%
	SUB-TOTAL	-1173109954	0	1,173,109,954	325864	100.0%	100.0%
9800	MANAGEMENT RESERVE	0	0	0	0	0.0%	0.0%
	TOTAL	-1173109954	0	1,173,109,954	325864	100.0%	100.0%
9900	ESCALATION	0	0	0	0		0.0%
	TOTAL COST	-1173109954	0	1,173,109,954	325864		100.0%
	Constr. Less Resident Eng.	-939184357	0	939,184,357	260885		

ENG. & PM	103,306,172	28696
LAND	799,575	222
CONST.	1,069,004,207	296946
MAN. RES.	0	0
ESC.	0	0
TOTAL	1,173,109,954	325864

177301719
990083319
183

Route-23 **Assumptions**

1 Existing Right-Of-Way m

	Shoulder	Lane	Lane	Median	Lane	Lane	Shoulder
Existing Rd	-	-	-	-	-	-	-
Pvmt Width	0.0						

2 New Addition Right-Of-Way partial taking Yes m

	Shoulder	Lane	Lane	Median	Lane	Lane	Shoulder
New Rd.	2.00	-	3.70	-	3.70	-	2.00
Pvmt Width	11.4						

	Bridges		Width(m)	Length(m)
3.1	Sup/br. Span 1800lm		35.0	2600.0
3.2		0	0.0	0.0
3.3		0	0.0	0.0
3.4		0	0.0	0.0
3.5		0	0.0	0.0

4	Tunnels	Length(m)	Width(m)	Height(m)
4.1	2lnSt.w-x	0	12.0	8.27
4.2	x-Pass.Tl	0	3.0	3.16
4.3	shaft	0	2.0	Diameter
4.4	snowshedlength (lm)	0		

NOTES:

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-23
E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land
Contingency 5.0% 5.0%
Division/Site Route-23
Road Type 2
Length 3600 L.M.

2 In Rd.& Suspension Br.
Campbell River-Quadra Island Route-23
2
3600
MR

2 In Rd.& Road Types
Suspens 1. 2In Frontage
0 2. 2In Acc Rds
Campbel 3. 4In Acc Rds
SITE C/L 4.R4L-4L EXP R/B
Route-23 5.R2/3L-4L EXP R/B
2 6.Retr.4L-4LEX R/B
3600 7.R4L-4LEX R/B E/S
8. New 4L EXP R/B

9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 1,173,109,954
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

		DESCRIPTION	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values	2 In Rd.& Suspension Br.	2 In Rd.& Suspens
2500		PLANNING						
2521	Consultant	- transport. planning study	0.00	LM	0		0	0
2531	Consultant	- corridor study	0.00	LM	0		0	0
2541	Consultant	- functional plan. study	0.00	LM	0		0	0
2502	Consultant	- general	0.0%		0		0	0
	Consultant sub-total						0	0
2510	Ministry	- project ident.	0.00	LM	0		0	0
2520	Ministry	- transport. planning study	0.00	LM	0		0	0
2530	Ministry	- corridor study	0.00	LM	0		0	0
2540	Ministry	- functional study	0.00	LM	0	0	0	0
2501	Ministry	- general	0.0%		0		0	0
	Ministry Sub-total				0		0	0
2599	Planning Contingency		5.0%		0		0	0
	TOTAL PLANNING						0	0
3000		PRELIMINARY DESIGN						
3013	Consultant	- aerial base plan	0.00	LM	0		0	0
3014	Consultant	- mapping & prel.	10.00	LM	36000		36,000	10
3015	Consultant	- control survey	0.00	LM	0		0	0
3021	Consultant	- environmental impact	3.00	LM	10800		10,800	3
3031	Consultant	- funct.-road field survey	8.00	LM	28800		28,800	8
3041	Consultant	- functional design	5.00	LM	18000	0	18,000	5
3051	Consultant	- funct. des. structural	0.00	LM	0	983702	983,702	273
3061	Consultant	- geotechnical design	3.00	LM	10800		10,800	3
3071	Consultant	- right-of-way research	0.00	LM	0	300	300	0
3002	Consultant	- general	0.0%		0		0	0
	Consultant sub-total						1,088,402	302
3010	Ministry	- aerial base plan	0.00	LM	0		0	0
3011	Ministry	- mapping	0.00	LM	0		0	0
3012	Ministry	- control survey	0.00	LM	0		0	0
3020	Ministry	- environmental impact	0.00	LM	0		0	0
3030	Ministry	- funct.-road field survey	0.00	LM	0		0	0
3040	Ministry	- functional design	0.00	LM	0		0	0
3050	Ministry	- funct. des. structural	0.00	LM	0		0	0
3060	Ministry	- geotechnical design	0.00	LM	0		0	0
3070	Ministry	- right-of-way research	0.00	LM	0		0	0
3001	Ministry	- general	0.0%		0		0	0
	Ministry Sub-total						0	0
3099	Preliminary design Contingency		5.0%		54420		54,420	15
	TOTAL PRELIMINARY DESIGN						1,142,822	317

Description	No.	Units	Quantity	Rate	Total
					-

Description

Description	No.	Units	Quantity	Rate	Total
					-

Description

Description	No.	Units	Quantity	Rate	Total
Structural	0.10%				-
$/Prop.	$ 150				

Description	No.	Units	Quantity	Rate	Total
					-

Description

File:	C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-23		Man. Reserve		0.0%	Land	2 ln Rd.&	2 ln Rd.&
E.Wolski Consulting	BC Ferries		Contingency		5.0%	5.0%	Suspension Br.	Suspens
(2002 Dollars)	Island Connections		Division/Site		Route-23			0
ACTIVITY			Road Type		2		Campbell River-	Campbel
CODE	EST.DATE Jan. 16, 2002		Length		3600	L.M.	Quadra Island	SITE C/LI
Conceptual Est.	R1 DATE:				========		Route-23	Route-2:
Blk Est. # 6.1	R2 DATE:		Unit		Cost-Quant.	Lump Sum	2	2
Version Dec.4./01		DESCRIPTION	Price	Unit	PerSection	Values	3600	3600
							MR	
6700	UTILITIES							
6710	Util. Prov.	- Hydro	10.00	lm	3600	0	36,000	10
6711	Util. Prov.	- Telephone	20.00	lm	3600	0	72,000	20
	Util. Prov.	sub-total					108,000	30
6712	Util.Others	- pipelines	0.00	lm	0		0	0
6713	Util.Others	- telecommunication	0.00	lm	0		0	0
6714	Util.Others	- storm & sewer inspect.	0.0%		0		0	0
6715	Util.Others	- waterworks inspect.	0.0%		0		0	0
6716	Util.Others	- engineering services	0.00	LM	0		0	0
6717	Util.Others	- parks/recreation-prel.	0.00	LM	0		0	0
6718	Util.Others	- transit	0.00	LM	0		0	0
6719	Util.Others	- tr-ops/signs & detours	0.00	LM	0		0	0
6701	Util.Others	- general	0.0%		0		0	0
	Util.Others	sub-total					0	0
6799	Util.Others Contingency		5.0%		5400	0	5,400	2
	TOTAL UTILITIES						113,400	32
5000	GRADE CONSTRUCTION		U. Price	Unit	Quantity	Lump Sum		
5032	Grade Cons	- water	225.00	lm	0	0	0	0
5033	Grade Cons	- sanitary	150.00	lm	0	0	0	0
5034	Grade Cons	- storm	175.00	lm	0		0	0
5031	Grade Cons	- mobilization	3.0%		0		0	0
5039	Grade Cons	- utility contingency	5.0%		0		0	0
	Grade Const. Utilities Sub-total						0	0
5010	Grade Cons	- site prep./clear,grubbing	8,000	ha	3.00	0	23,996	7
5020	Grade Cons	- road grade/exc,placing,fill	15.37	m3	36340	0	558,457	155
5030	Grade Cons	- drainage/pipe,cul.	0.00	LM	0	16850	16,850	5
5040	Grade Cons	- muiltiplate	10000	lm	0		0	0
5050	Grade Cons	-SGSB/produce,place,comp	18.00	m3	7594		136,698	38
5051	Grade Cons	-CBC/produce,place,comp	20.00	m3	4734		94,685	26
5060	Grade Cons	- grade finishing landscaping	0.00	m2	18595		0	0
5061	Grade Cons	- grade finishing hydro seed.	0.40	m2	18595		7,438	2
5062	Grade Cons	- grade finishing fencing	60.00	lm	0		0	0
5063	Grade Cons	- noise barriers	110.00	m2	0		0	0
5064	Grade Cons	- passing lanes	0.00	lm	0		0	0
5090	Grade Cons	- sidewalks,curb & gutter	60.00	lm	0	0	0	0
5005	Grade Cons	-detours c/w ex,bf,paving	40000	NO	2.0	144000	224,000	62
5001	Grade Cons	- mobilization	3.0%		31864		31,864	9
5099	Grade Cons	- Contingency	5.0%		54699		54,699	15
	Grade Construction Sub-total						1,148,687	319
	GRADE CONSTRUCTION COSTS						1,148,687	319
3510	Grade Eng.	- detailed design	7.00%		80408		80,408	22
3519	Grade Eng.	- detailed design/Contingency	5.0%		4020		4,020	1
6810	Grade Eng.	- general const. supervision	4.60%		52840		52,840	15
6811	Grade Eng.	- quality assurance	3.20%		36758		36,758	10
6812	Grade Eng.	- surveying	2.00%		22974		22,974	6
6819	Grade Eng.	- Residency Contingency	5.0%		5629		5,629	2
	Grade Engineering Sub-total						202,628	56
	Total Grade Const. & Eng. Costs						1,351,316	375

Road Types	9. R-E4L-4L D/M
1. 2ln Frontage	10.N 4L EXP D/M
2. 2ln Acc Rds	11.N 4L EXP D/E/M
3. 4ln Acc Rds	12.N2L;F4LEXP D/M
4.R4L-4L EXP R/B	13.INST.R/B-EX.RD
5.R2/3L-4L EXP R/B	14.AS IS 15. Misc. 1,173,109,954
6.Retr.4L-4LEX R/B	20.I/C Str.&Ramps
7.R4L-4LEX R/B E/S	21. Bridges
8. New 4L EXP R/B	22. Grade Sep.

Description	No.	Units	Quantity	Rate	Total
					-
					-
					-
					-
					-
					-
					-
					-
					-
					-
Description					-

	(m3)	(unit $)	($)		
Fill	0				
Rock	27957	18.00	503226	85%	
O.M.	4934	7.00	34535		
Strip.	3449	6.00	20697	0.100	
Borrow	0	12.00	0		
Misc./LS	0	4.00	0	Surplus Mtl	Neat vol.cal 0
Total	36340	15.37	558457		
	Spec	Spec	Pl/PL		Spec.
	2 ln Rd.&		30.0		Resurface
	Road	Road	Ditch Width	Ditch Width	Road
pl to pl	30.00	0.00		0.0	ONLY
*no./lane	2	0	Col L Vol.	Col. M Vol.	0
*lane wid	3.7	0.0	36,340	-	0.0
*med	0.0	0.0	Pmt W=	11.4	0.0
*shldrs tot	4.0	0.0	CBC. slope	CBC. slope	0.0
c.b.c.(w)	12.5	0.0	2.5	0.0	A.C. (mm)
sgsb (w)	14.7	0.0			0
SGSBslope :1	2.5	0.0			A.B.C. (mm)
*depth(d)	2.000	0.000	15%		0
*road (l)	1000	0			0
*no.cul./kil	5.0	0.0	$ 500		Appl. rate
cul.(l)	15.80	0.00	$ 150		1.75
*sgsb (d)	0.45	0.00	15%		
*cbc (d)	0.33	0.00	15%		
*Add.ROW	-4.68	0.00			
X-m3/lm	36.34	0.00			

C&G $/LM	$40.00	Exp-100kmp	Exp- 80kmp	Coll-80kmp
	Decel.(T-lm)	520	440	260
	Accel.(T-lm)	950	630	80
	Left T.(T-lm)	716	596	456
	TOTAL	2186	1666	796

Gravel 2.0Tonnes/m3

Drainage	No.	Units	Quantity	Rate	Total
Box Cul.	0	lm	45	3500	-
Head Walls	0	ea.	2	5000	-
					-
					-
					-
					-
					-
					-
					-
					-
Drainage					-

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-23
E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land
Contingency 5.0% 5.0%
Division/Site Route-23
Road Type 2
Length 3600 L.M.

2 In Rd.& Suspension Br.
Campbell River-Quadra Island Route-23
2
3600
MR

2 In Rd.& Suspens
0
Campbel
SITE C/L
Route-23
2
3600

9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 1,173,109,954
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

Road Types
1. 2In Frontage
2. 2In Acc Rds
3. 4In Acc Rds
4.R4L-4L EXP R/B
5.R2/3L-4L EXP R/B
6.Retr.4L-4LEX R/B
7.R4L-4LEX R/B E/S
8. New 4L EXP R/B

	DESCRIPTION	Unit Price	Unit	Quantity	Lump Sum Values			
5500	STRUCTURAL CONSTRUCTION	Unit Price	Unit	Quantity	Lump Sum			
5522	Struct.Cons - water	225.00	lm	0		0	0	
5523	Struct.Cons - sanitary	150.00	lm	0		0	0	
5524	Struct.Cons - storm	175.00	lm	0		0	0	
5521	Struct.Cons - mobilization	3.0%		0		0	0	
5599	Struct.Cons - utility contingency	5.0%		0		0	0	
	Structural Const. Utilities Sub-total					0	0	
5510	Struct.Cons - tunnel site preparation	0.00	lm	0	0	0	0	
5511	Struct.Cons - tunnel construction	-	lm	0		0	0	
5512	Struct.Cons - snow shed site prep.	0.00	lm	0		0	0	
5513	Struct.Cons - snow shed site const.	-	lm	0		0	0	
					Demolition			
5514	Struct.Cons - bridge site preparation	1	LS	9005660	0	9,005,660	2502	
5515	Struct.Cons - bridge piers	1	LS	112250000		112,250,000	31181	
5516	Struct.Cons - bridge abutments	1	LS	260516000		260,516,000	72366	
5517	Struct.Cons - bridge superstructure	1	LS	527800000		527,800,000	146611	
5518	Struct.Cons - retain. wall site prep.	1	LS			0	0	
5519	Struct.Cons - retaining wall const.	525	m2	0		0	0	
5501	Struct.Cons - mobilization	3.0%		27287150		27,287,150	7580	
5529	Struct.Cons - Contingency	5.0%		46842940		46,842,940	13012	
	Structural Construction Sub-total					983,701,750	273250	
	STRUCTURAL CONSTRUCTION COSTS					983,701,750	273250	
3520	Struct. Eng. - detailed design	5.00%		49185088		49,185,088	13663	
3529	Struct. Eng. - detailed design/Contingency	5.0%		2459254		2,459,254	683	
6820	Struct. Eng. - general const. supervision	4.50%		44266579		44,266,579	12296	
6821	Struct. Eng. - quality assurance	3.00%		29511053		29,511,053	8198	
6822	Struct. Eng. - surveying	0.50%		4918509		4,918,509	1366	
6829	Struct. Eng. - Residency Contingency	5.0%		3934807		3,934,807	1093	
	Structural Engineering Sub-total					134,275,289	37299	
	Total Structural & Eng. Costs					1,117,977,039	310549	
6000	PAVING CONSTRUCTION				SM./OIL			
6020	Paving Con - machine paving asphalt	40.00	t	2873	19950	125,885	35	
6030	Paving Con - machine paving concrete	0.00	m2			0	0	
6040	Paving Con - hot reprofiling	0.00	m2	11400		0	0	
6050	Paving Con - shoulder paving	0.00	t	1152		0	0	
6060	Paving Con - pavement finishing	75.00	m2	0		0	0	
6070	Paving Con - seal coating	0.00				0	0	
6001	Paving Con - mobilization	3.0%		3777		3,777	1	
6010	Paving Con - pavement design	0.0%		0		0	0	
6099	Paving Con - Contingency	5.0%		6483		6,483	2	
	PAVING CONSTRUCTION COSTS					136,144	38	
3560	Paving Eng - detailed design	7.00%		9530		9,530	3	
3569	Paving Eng - detailed design/Contingency	5.0%		477		477	0	
6860	Paving Eng - general const. supervision	3.00%		4084		4,084	1	
6861	Paving Eng - quality assurance	5.00%		6807		6,807	2	
6862	Paving Eng - surveying	1.00%		1361		1,361	0	
6869	Paving Eng - Residency Contingency	5.0%		613		613	0	
	Paving Engineering Sub-total					22,872	6	
	Total Paving Const. & Eng. Costs					159,016	44	

Brdge	Site $	Piers $	Abut. $	abut. extra length (lm)	
1	9,005,660	112,250,000	#########	8	1%
2	-	-	-		0%
3	-	-	-		0%
4	-	-	-		0%
5	-	-	-		0%

	Pier/Ht	Pier No.	P/$/VLM	Abut/$/HLM
1	275	2	95000	6000
2				
3				
4				
5				

	(W)	(L)	($/m2)	Net Cost
DECK #1	35.00	2600.00	5800.00	936858810
DECK #2				0
DECK #3				0
DECK #4				0
DECK #5				0

		Gross/m2	Net/m2
1	Sup/br. Span 1800lm	10809.91	10295.15
2		#DIV/0!	#DIV/0!
3		#DIV/0!	#DIV/0!
4		#DIV/0!	#DIV/0!
5		#DIV/0!	#DIV/0!

Tnnl $/lm -Net -
Tnnl $/lm -Gross -

	2InSt.w-x 1-D-Shape	x-Pass.Tl 2-D-Shape
Tunnel L=	0	-
Tun. H1	5.100	2.550
C.Pt. H4	1.00	1.00
Tun.W	12.00	3.00
RFLT.	0.250	0.250
WLT.	0.250	0.250
BST.	0.500	0.200
TOBT	0.100	0.100
SOBT	0.100	0.100
BOBT	0.100	0.100

shaft	1-Circle	
	0	Radius-1-D 7.267
Radius	1.00	Per.S&Rf 24.32
Wall Tk.	0.250	m2/rkac 6.25
SOBT	0.100	Tnnl height 8.27
Exc.-m3		Radius-2-D 2.157
Obk-m3		Per.S&Rf 8.42
Liner-m3		m2/rkac 6.25
		Tnnl height 3.16

Items	Quantity	rate	Total $	Avg.$/ tot-lm	1-Circle
Exc.-m3	0	100	0	#DIV/0!	0
Obk-m3	0	2625	0	#DIV/0!	0
Rk anch-Ea	0	1125	0	#DIV/0!	0
Misc.-lm	0	2500	0	#DIV/0!	0
Liner-m3	0	1050	0	#DIV/0!	10.00
Drainage-lm	0	550	0	#DIV/0!	%
Lighting-m	0	900	0	#DIV/0!	5%
Mech-m	0	2100	0	#DIV/0!	15%
Misc.-lm	0	1000	0	#DIV/0!	3%
1Tonne=16.67m2/25mm			0	#DIV/0!	snowshed

60kg=1m2/25mm 1.5L =1M2 (P)
asphalt (T)=mm .25L =1M2 (T)
A.C. 100 0
A.B.C. 0 0
$Oil/Litre $0.55 5%
Appl. rate 1.75 1.75
Pavement Removal (See I155)

m3	$/m3	Total
0	$20.00	0

Milling

m3	$/m3	Total
0	$80.00	0

		length (lm)	0.0
		Roof	1.0
	21.00		0.05
0.80	$ 800.00		-
Walls	2.0		8.00
0.80	$ 1,100.00		-
Base	1.0		15.00
0.60	$ 600.00		-
Exc.-m3	1.0		15.00
20.00	$ 60.00		-
Drainage	$ 400.00		-
Electrical	$ 1,500.00		-
Mech.	$ 950.00		-
Misc.	$ 300.00		-
	#DIV/0!		-

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E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land
Contingency 5.0% 5.0%
Division/Site Route-23
Road Type 2
Length 3600 L.M.

2 In Rd.& Suspension Br.
Campbell River-Quadra Island Route-23
2
3600
MR

2 In Rd.& Road Types
Suspens 1. 2In Frontage
0 2. 2In Acc Rds
Campbel 3. 4In Acc Rds
SITE C/L 4.R4L-4L EXP R/B
Route-23 5.R2/3L-4L EXP R/B
2 6.Retr.4L-4LEX R/B
3600 7.R4L-4LEX R/B E/S
8. New 4L EXP R/B
Pole Sp. (lm) No. of Sides Length
99 55 1 3600

9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 1,173,109,954
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

		Unit Price	Unit	Quantity PerSection	Lump Sum Values		
6500	OPERATIONAL CONSTRUCTION						
6510	Operat.Con - lighting	5500.00	Ea	65		357,500	99
6520	Operat.Con - signals	-	Ea	0	0	0	0
6530	Operat.Con - signing	2.00	LM	7200		7,200	2
6540	Operat.Con - guard rail	70.00	lm	500	0	35,000	10
6550	Operat.Con - pavement markings	1.75	lm	3000	0	5,250	1
6501	Operat.Con - mobilization	3.0%		12149		12,149	3
6599	Operat.Con - contingency	5.0%		20855		20,855	6
	OPERATIONAL CONSTRUCTION COSTS					437,953	122
3540	Operat. Eng - detailed design	7.00%		30657		30,657	9
3549	Operat. Eng - detailed design/Contingency	5.0%		1533		1,533	0
6840	Operat. Eng - general const. supervision	6.00%		26277		26,277	7
6841	Operat. Eng - quality assurance	2.00%		8759		8,759	2
6842	Operat. Eng - surveying	1.00%		4380		4,380	1
6849	Operat. Eng - Residency Contingency	5.0%		1971		1,971	1
	Operational Enginering Sub-total					73,576	20
	Total Operational Const. & Eng. Costs					511,530	142
5200	ROAD SIDE CONSTRUCTION	Unit Price	Unit	Quantity	Lump Sum		
5203	RoadSide C - water	225.00	lm	0		0	0
5204	RoadSide C - sanitary	150.00	lm	0		0	0
5205	RoadSide C - storm	175.00	lm	0		0	0
5202	RoadSide C - mobilization	3.0%		0		0	0
5209	RoadSide C - Utility Contingency	5.0%		0		0	0
	Road Side Const. Utilities Sub-total					0	0
5210	RoadSide C - weighscales	-	ea	0	0	0	0
5220	RoadSide C - safety rest areas	-	ea	0	0	0	0
5230	RoadSide C - tourist rest & view areas	40000	ea	0	0	0	0
5201	RoadSide C - mobilization	3.0%		0		0	0
5299	RoadSide C - Contingency	5.0%		0		0	0
	Road Side Construction Sub-total			0		0	0
	ROAD SIDE CONSTRUCTION COSTS					0	0
3550	RoadSide E - detailed design	10.00%		0		0	0
3559	RoadSide E - detailed design/Contingency	5.0%		0		0	0
6850	RoadSide E - general const. supervision	6.00%		0		0	0
6851	RoadSide E - quality assurance	2.00%		0		0	0
6852	RoadSide E - surveying	1.00%		0		0	0
6859	RoadSide E - Residency Contingency	5.0%		0		0	0
	Road Side Engineering Sub-total					0	0
	Total Road Side Const. & Eng. Costs					0	0
5300	OTHER CONSTRUCTION	Unit Price	Unit	Quantity	Lump Sum		
5303	Other Cons - water	225.00	lm	0		0	0
5304	Other Cons - sanitary	150.00	lm	0		0	0
5305	Other Cons - storm	175.00	lm	0		0	0
5302	Other Cons - mobilization	3.0%		0		0	0
5309	Other Cons - utility contingency	5.0%		0		0	0
	Other Const. Utilities Sub-total					0	0
5310	Other Cons - railroads main & spur lines	-	lm	0		0	0
5320	Other Cons - railroad crossings	-	ea	0		0	0
5330	Other Cons - marine work	-	ea	0		0	0
5340	Other Cons - environmental mitigations	280,000	ea	2		560,000	156
5301	Other Cons - mobilization	3.0%		16800		16,800	5
5399	Other Cons - Contingency	5.0%		28840		28,840	8
	Other Construction Sub-total					605,640	168
	OTHER CONSTRUCTION COSTS					605,640	168
3570	Other Eng. - detailed design	7.00%		42395	0	42,395	12
3579	Other Eng. - detailed design/Contingency	5.0%		2120		2,120	1
6870	Other Eng. - general const. supervision	3.00%		18169	0	18,169	5
6871	Other Eng. - quality assurance	3.00%		18169		18,169	5
6872	Other Eng. - surveying	3.00%		18169		18,169	5
6879	Other Eng. - Residency Contingency	5.0%		2725		2,725	1
	Other Engineering Sub-total					101,748	28
	Total Other Const. & Eng. Costs					707,387	196

Earthworks (see grading)

Signals

LP $/lm $ 1.00 Refl. Sp. 20.00
Ext. Lines 1.0 Refl.$/ea $ 15.00

Weighscale	No.	Units	Quantity	Rate	Total
Buildings	0	m2	60	2,800.00	-
Pit & Apron	0	m2	120	400.00	-
S&I W/S	0	ea	1	80,000.00	-
Parking Lot	0	m2	9000	40.00	-
Road Const.	0	lm	1,500	400.00	-
light/signs	0	ls	1	50,000.00	-

Weighscale

Safety Rest Area	No.	Units	Quantity	Rate	Total
Class A&B		SAFETY REST AREAS			
Buildings	0	m2	100	3,000.00	-
Class C					
Site/toilets	0	ea	2	12,500.00	-
Parking Lot	0	m2	2500	40.00	-
Road Const.	0	lm	800	350.00	-
Furnishings	0	ls	-	10,000.00	-
Landscaping	0	ls	1	5,000.00	-
light/signs	0	ls	-	50,000.00	-

SAFETY REST AREAS

Description	No.	Units	Quantity	Rate	Total
	0		0	-	-
	0		0	-	-
	0		0	-	-
	0		0	-	-

Description

Railway	No.	Units	Quantity	Rate	Total
Removal	0	tklm	1.00	21.00	-
Track Cnst.	0	tklm	1.00	320.00	-
Ballast	0	m3	1.13	35.00	-
Sub-ballast	0	m3	0.96	25.00	-
Resurfacing	0	tklm	1.00	10.00	-
Tie-ins	0	ea	1.00	2800.00	-
Turnout # 9	0	ea	1.00	35000.00	-
Others	0	ls	1.00	0.00	-
	0				-
	0	lm	1	0.00	-

Railway

R/rd X-ing	No.	Units	Quantity	Rate	Total
Planks	0	tklm	45	1750.00	-
Sig./gates	0	each	1	200,000	-
				-	-
				-	-

R/rd X-ing

Description	No.	Units	Quantity	Rate	Total
				-	-
				-	-
				-	-
				-	-
				-	-
				-	-

Description

Environment	No.	Units	Quantity	Rate	Total
Mitigation	2	ls	4	50,000	400,000
Ponds	2	ea	2	40,000	160,000
				-	-
				-	-
				-	-
				-	-

Environmental 560,000

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-23
E.Wolski Consulting (2002 Dollars) **BC Ferries Island Connections**
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land 5.0%
Contingency 5.0%
Division/Site Route-23
Road Type 2
Length 3600 L.M.

		Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values	2 In Rd.& Suspension Br.	2 In Rd.& Suspens
						Campbell River-Quadra Island Route-23	Campbel SITE C/L Route-23
						2	2
						3600	3600
						MR	
3500	DETAILED DESIGN from 3510,3520,3540,3550,3570					51,815,481	14393
3530	Geotech. E - detailed design	0.45%		4437136	1000000	5,437,136	1510
3539	Geotech. E - Contingency	5.0%		271857		271,857	76
	TOTAL DETAILED DESIGN COSTS					57,524,474	15979
6800	RESIDENT ENGINEERING from 6810,6820,6840,6850,6860,6870					82,860,632	
	TOTAL RESIDENT ENG. COSTS					82,860,632	23017
						0	
						0	0
	PART 1 SUMMARY						
	CONSTRUCTION					939,184,357	260885
	ENGINEERING & SUPERVISION					134,788,503	37441
	CONTRACTUAL CONTINGENCY					53,698,643	14916
						0	0
	CONSTRUCTION COST TOTAL	DIVISION/SITE		Route-23		1,127,671,503	313242
2000	PROJECT MANAGEMENT						
2060	Project Mar - office costs wages	2.00%		22553430		22,553,430	6265
2062	Project Mar - office costs - expenses	0.00%		0		0	0
2063	Project Mar - printing costs	0.00%		0		0	0
2061	Project Mar - general	0.00%		0		0	0
	Project Manager Sub-total					22,553,430	6265
2010	Ministry - office costs wages	0.50%		5638358		5,638,358	1566
2012	Ministry - office costs - expenses	0.50%		5638358		5,638,358	1566
2030	Ministry - printing costs	0.00%		0		0	0
2011	Ministry - general	0.00%		0		0	0
	Ministry Sub-total					11,276,715	3132
2070	Public Rel. - wages & expenses	0.35%		3946850		3,946,850	1096
2072	Public Rel. - adv., media, displays	0.35%		3946850		3,946,850	1096
2073	Public Rel. - opening ceremonies	0.01%		112767	0	112,767	31
2071	Public Rel. - general	0.00%		0		0	0
	Public Relations Sub-total					8,006,468	2224
2040	Legal Costs - lawyers fees	0.01%		112767		112,767	31
2041	Legal Costs - general	0.00%		0		0	0
	Legal Costs Sub-total					112,767	31
2080	Insurance - const./ liability, E&O	0.05%		563836		563,836	157
2081	Insurance - general	0.00%		0		0	0
	Legal Costs Sub-total					563,836	157
2099	Project Management Contingency	5.0%		2125661		2,125,661	590
	TOTAL PROJECT MANAGEMENT COSTS					44,638,876	12400
4000	LAND	$/Building		# buildings	LS	2	
4010	Land(Code -Mrkt,ROW,Serv,Imp.V,Ease.	250,000	Res	2	0	590,000	164
	Acquisition Sub-total	2,000,000	Com	0	0	590,000	164
4020	Land(Code -Bus.,5%,Mrg.P,Rel$,P/Tax,E	10.00%		59000	0	59,000	16
4030	Land(Code -Owners(LS,Apprsl,Rprt,Lgl,Ir	7.00%		41300	0	41,300	11
4040	Land(Code -Demolition	0.00%		0	20000	20,000	6
4050	Land(Code -Pro.Man,P.Tax,Util,Security	1.00%		5900	0	5,900	2
4060	Land(Code -Not Used						
4070	Land(Code -Not Used						
4080	Land(Code -Acq.F,M/Sal,TrvlV,Cntr.S,Ap	7.00%		41300	0	41,300	11
4090	Land(Code -Surveys	0.00%		0	4000	4,000	1
	Associated costs-sub-total			147500		171,500	48
4099	Land Contingency Sub-total	5.0%		38075	0	38,075	11
	TOTAL LAND COSTS					799,575	222

8 Road Types
1. 2In Frontage
2. 2In Acc Rds
3. 4In Acc Rds
4. R4L-4L EXP R/B
5. R2/3L-4L EXP R/B
6. Retr.4L-4LEX R/B
7. R4L-4LEX R/B E/S
8. New 4L EXP R/B

9. R-E4L-4L D/M
10. N 4L EXP D/M
11. N 4L EXP D/E/M
12. N2L;F4LEXP D/M
13. INST.R/B-EX.RD
14. AS IS 15. Misc. 1,173,109,954
20. I/C Str.&Ramps
21. Bridges
22. Grade Sep.

1 Bridge	1 Tunnel	1 Special
-	-	1,000,000

Description	No.	Units	Quantity	Rate	Total
					-

3.77%

1 Hectare = 10,000 Square Meters
1 Hectare = 2.471 Acres
1 Acre = 43,560 square feet

		Planned ROW	3.0		
10.00%	Req. ROW		3.0		
7.00%	Cost/Ha		30,000		107,637
3.39%	Cost/M2		3.00		10.76
1.00%	Cost /Acre		12,141		43,560
	Cost /Ft2		0.28	$	1.00
29.07%					
7.00%	Demo./unit	$	10,000		
0.68%	Survey /unit	$	2,000		

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E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY
CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est; # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve	0.0%
Contingency	5.0%
Division/Site	Route-23
Road Type	2
Length	3600 L.M.
Land	5.0%

Road Types: 1. 2ln Frontage; 2. 2ln Acc Rds; 3. 4ln Acc Rds; 4.R4L-4L EXP R/B; 5.R2/3L-4L EXP R/B; 6.Retr.4L-4LEX R/B; 7.R4L-4LEX R/B E/S; 8. New 4L EXP R/B; 9. R-E4L-4L D/M; 10.N 4L EXP D/M; 11.N 4L EXP D/E/M; 12.N2L;F4LEXP D/M; 13.INST.R/B-EX.RD; 14.AS IS; 15. Misc. 1,173,109,954; 20.I/C Str.&Ramps; 21. Bridges; 22. Grade Sep.

CODE	DESCRIPTION	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values	2 ln Rd.& Suspension Br. Campbell River-Quadra Island Route-23 2 3600 MR	2 ln Rd.& Suspens 0 Campbel SITE C/LI Route-23 2 3600	Description	No.	Units	Quantity	Rate	Total
9800	MANAGEMENT RESERVE												
	MAN. RES. - planning	0.0%		0		0	0					-	-
	MAN. RES. - preliminary design	0.0%		1142822		0	0					-	-
	MAN. RES. - utility construction	0.0%		113400		0	0					-	-
	MAN. RES. - grade construction	0.0%		1148687		0	0					-	-
	MAN. RES. - structural construction	0.0%		983701750		0	0					-	-
	MAN. RES. - paving construction	0.0%		136144		0	0					-	-
	MAN. RES. - operation construction	0.0%		437953		0	0					-	-
	MAN. RES. - roadside construction	0.0%		0		0	0					-	-
	MAN. RES. - other construction	0.0%		605640		0	0					-	-
	MAN. RES. - project management	0.0%		44638876		0	0					-	-
	MAN. RES. - land	0.0%		799575		0	0					-	-
	MAN. RES. - detailed eng.	0.0%		57524474		0	0					-	-
	MAN. RES. - residency eng.	0.0%		82860632		0	0					-	-
	MAN. RES. - Contingency	0.0%		0		0	0					-	-
	TOTAL MANAGEMENT RESERVE			1173109954		0	0					-	-
										Description			-
	TOTAL LESS ESCALATION			0	##########			Description	No.	Units	Quantity	Rate	Total
	FISCAL											-	-
9900	ESCALATION											-	-
	YEAR PROJECTED ESCALATION	COMPLETE		$ DONE								-	-
	2002-2003 0.5750%	5.00%		0		0	0					-	-
	2003 - 2004 0.6250%	10.00%		0		0	0					-	-
	2004-2005 1.0000%	35.00%		0		0	0					-	-
	2005-2006 1.0000%	45.00%		0		0	0					-	-
	2006-2007 1.0000%	5.00%		0		0	0					-	-
	2007-2008 1.0000%	0.00%		0		0	0					-	-
	2008-2009 1.0000%	0.00%		0		0	0					-	-
	2009-2010 1.0000%	0.00%		0		0	0					-	-
	2010-2011 1.0000%	0.00%		0		0	0					-	-
	TOTAL ESCALATION	100.00%		0		0	0					-	-
	PART 2 SUMMARY NON-CONSTRUCTION COSTS											-	-
	Non-Construction					43,274,716	12021					-	-
	Non-Const. Contingency					2,163,736	601					-	-
	TOTAL NON-CONSTRUCTION COSTS					45,438,451	12622					-	-
Route-23	**TOTAL FOR ROAD TYPE**	2				1,173,109,954	325864			Description			-

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E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land
Contingency 5.0% 5.0%
Division/Site Route-22
Road Type 2
Length 2300 L.M.

2 In Rd.& Suspension Br.
Denman Island-Hornby Island Route-22
2
2300
MR

2 In Rd.& Road Types
Suspens 1. 2In Frontage
0 2. 2In Acc Rds
Denman 3. 4In Acc Rds
SITE C/LN 4.R4L-4L EXP R/B
Route-22 5.R2/3L-4L EXP R/B
2 6.Retr.4L-4LEX R/B
2300 7.R4L-4LEX R/B E/S
8. New 4L EXP R/B

9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 946,689,791
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

SUMMARY BY ACTIVITY LEVEL

	DESCRIPTION	Unit Price	Unit	Cost-Quant. PerSection	Diff.	Lump Sum Values	Previous Estimate		Cost/LM	% of T	% of TC
2000	PROJECT MANAGEMENT			-34305207		0	34,305,207		14915	3.6%	3.6%
2500	PLANNING			0		0	0		0	0.0%	0.0%
3000	PRELIMINARY DESIGN			-861130		0	861,130		374	0.1%	0.1%
3500	DETAILED DESIGN			-44384321		0	44,384,321		19298	4.7%	4.7%
	Total Engineering			-45245451		0	45,245,451		19672	4.8%	4.8%
4000	LAND ACQUISITION			-682750		0	682,750		297	0.1%	0.1%
5000	GRADE CONSTRUCTION			-436140		0	436,140		190	0.0%	0.0%
5200	ROAD SIDE CONSTRUCTION			0		0	0		0	0.0%	0.0%
5300	OTHER CONSTRUCTION			-576800		0	576,800		251	0.1%	0.1%
5500	STRUCTURAL CONSTRUCTION			-756314745		0	756,314,745		328832	79.9%	79.9%
6000	PAVING CONSTRUCTION			-38898		0	38,898		17	0.0%	0.0%
6500	OPERATIONAL CONSTRUCTION			-280340		0	280,340		122	0.0%	0.0%
6700	UTILITY CONSTRUCTION			-69000		0	69,000		30	0.0%	0.0%
6800	RESIDENT ENGINEERING			-63659993		0	63,659,993		27678	6.7%	6.7%
	Total Construction			-821375917		0	821,375,917		357120	86.8%	86.8%
9700	CONTINGENCY			-45080466		0	45,080,466		19600	4.8%	4.8%
	SUB-TOTAL			-946689791		0	946,689,791		411604	100.0%	100.0%
9800	MANAGEMENT RESERVE			0		0	0		0	0.0%	0.0%
	TOTAL			-946689791		0	946,689,791		411604	100.0%	100.0%
9900	ESCALATION			0		0	0				0.0%
	TOTAL COST			-946689791		0	946,689,791		411604		100.0%
	Constr. Less Resident Eng.			-757715924		0	757,715,924		329442		
					ENG. & PM		83,528,191		36317		
					LAND		716,888		312		
					CONST.		862,444,713		374976		
					MAN. RES.		0		0		
					ESC.		0		0		
					TOTAL		946,689,791		411604		

Route-22 **Assumptions**

1 Existing Right-Of-Way m

2 New Addition Right-Of-Way partial taking Yes m

	Shoulder	Lane	Lane	Median	Lane	Lane	Shoulder
Existing Rd	-	-	-	-	-	-	-
Pvmt Width	0.0						
New Rd.	2.00	-	3.70	-	3.70	-	2.00
Pvmt Width	11.4						

	Bridges		Width(m)	Length(m)
3.1	Sup/br. Span 1700lm		35.0	2000.0
3.2		0	0.0	0.0
3.3		0	0.0	0.0
3.4		0	0.0	0.0
3.5		0	0.0	0.0

	Tunnels	Length(m)	Width(m)	Height(m)
4.1	2lnSt.w-x	0	12.0	8.27
4.2	x-Pass.Tl	0	3.0	3.16
4.3	shaft	0	2.0	Diameter
4.4	snowshedlength (lm)	0		

NOTES:

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-22
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(2002 Dollars) **Island Connections**
ACTIVITY CODE EST.DATE Jan. 16, 2002
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Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve	0.0%	Land
Contingency	5.0%	5.0%
Division/Site	Route-22	
Road Type	2	
Length	2300	L.M.

2 In Rd.& Suspension Br.	2 In Rd.& Suspens
	0
Denman Island-Hornby Island Route-22	Denman SITE C/L Route-22
2	2
2300	2300
MR	

1. 2In Frontage
2. 2In Acc Rds
3. 4In Acc Rds
4.R4L-4L EXP R/B
5.R2/3L-4L EXP R/B
6.Retr.4L-4LEX R/B
7.R4L-4LEX R/B E/S
8. New 4L EXP R/B
9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS
15. Misc. 946,689,791
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

2500	PLANNING								
2521	Consultant	- transport. planning study	0.00	LM	0		0	0	
2531	Consultant	- corridor study	0.00	LM	0		0	0	
2541	Consultant	- functional plan. study	0.00	LM	0		0	0	
2502	Consultant	- general	0.0%		0		0	0	
	Consultant sub-total						0	0	
2510	Ministry	- project ident.	0.00	LM	0		0	0	
2520	Ministry	- transport. planning study	0.00	LM	0		0	0	
2530	Ministry	- corridor study	0.00	LM	0		0	0	
2540	Ministry	- functional study	0.00	LM	0	0	0	0	
2501	Ministry	- general	0.0%		0		0	0	
	Ministry Sub-total				0		0	0	
2599	Planning Contingency		5.0%		0		0	0	
	TOTAL PLANNING						0	0	
3000	PRELIMINARY DESIGN								
3013	Consultant	- aerial base plan	0.00	LM	0		0	0	
3014	Consultant	- mapping & prel.	10.00	LM	23000		23,000	10	
3015	Consultant	- control survey	0.00	LM	0		0	0	
3021	Consultant	- environmental impact	3.00	LM	6900		6,900	3	
3031	Consultant	- funct.-road field survey	8.00	LM	18400		18,400	8	
3041	Consultant	- functional design	5.00	LM	11500	0	11,500	5	
3051	Consultant	- funct. des. structural	0.00	LM	0	794130	794,130	345	
3061	Consultant	- geotechnical design	3.00	LM	6900		6,900	3	
3071	Consultant	- right-of-way research	0.00	LM	0	300	300	0	
3002	Consultant	- general	0.0%		0		0	0	
	Consultant sub-total						861,130	374	
3010	Ministry	- aerial base plan	0.00	LM	0		0	0	
3011	Ministry	- mapping	0.00	LM	0		0	0	
3012	Ministry	- control survey	0.00	LM	0		0	0	
3020	Ministry	- environmental impact	0.00	LM	0		0	0	
3030	Ministry	- funct.-road field survey	0.00	LM	0		0	0	
3040	Ministry	- functional design	0.00	LM	0		0	0	
3050	Ministry	- funct. des. structural	0.00	LM	0		0	0	
3060	Ministry	- geotechnical design	0.00	LM	0		0	0	
3070	Ministry	- right-of-way research	0.00	LM	0		0	0	
3001	Ministry	- general	0.0%		0		0	0	
	Ministry Sub-total						0	0	
3099	Preliminary design Contingency		5.0%		43057		43,057	19	
	TOTAL PRELIMINARY DESIGN						904,187	393	

Description	No.	Units	Quantity	Rate	Total
					-

Description -

Description	No.	Units	Quantity	Rate	Total
					-

Description -

Structural 0.10%

$/Prop. $ 150

Description	No.	Units	Quantity	Rate	Total
					-

Description -

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E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Bik Est: # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land
Contingency 5.0% 5.0%
Division/Site
Road Type Route-22
Length 2
2300 L.M.

2 In Rd.& Suspension Br.
Denman Island-Hornby Island Route-22

2 In Rd.& Suspens
0
Denman
SITE C/L
Route-22

		DESCRIPTION	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values	2	2	
							2300	2300	
							MR		
6700	UTILITIES								
6710	Util. Prov.	- Hydro	10.00	lm	2300	0	23,000	10	
6711	Util. Prov.	- Telephone	20.00	lm	2300	0	46,000	20	
	Util. Prov.	sub-total					69,000	30	
6712	Util.Others	- pipelines	0.00	lm	0		0	0	
6713	Util.Others	- telecommunication	0.00	lm	0		0	0	
6714	Util.Others	- storm & sewer inspect.	0.0%		0		0	0	
6715	Util.Others	- waterworks inspect.	0.0%		0		0	0	
6716	Util.Others	- engineering services	0.00	LM	0		0	0	
6717	Util.Others	- parks/recreation-prel.	0.00	LM	0		0	0	
6718	Util.Others	- transit	0.00	LM	0		0	0	
6719	Util.Others	- tr-ops/signs & detours	0.00	LM	0		0	0	
6701	Util.Others	- general	0.0%		0		0	0	
	Util.Others	sub-total					0	0	
6799	Util.Others	Contingency	5.0%		3450	0	3,450	2	
	TOTAL UTILITIES						72,450	32	
5000	GRADE CONSTRUCTION		U. Price	Unit	Quantity	Lump Sum			
5032	Grade Cons	- water	225.00	lm	0	0	0	0	
5033	Grade Cons	- sanitary	150.00	lm	0	0	0	0	
5034	Grade Cons	- storm	175.00	lm	0		0	0	
5031	Grade Cons	- mobilization	3.0%		0		0	0	
5039	Grade Cons	- utility contingency	5.0%		0		0	0	
	Grade Const.	Utilities Sub-total					0	0	
5010	Grade Cons	- site prep./clear,grubbing	8,000	ha	0.90	0	7,199	3	
5020	Grade Cons	- road grade/exc,placing,fill	15.37	m3	10902	0	167,537	73	
5030	Grade Cons	- drainage/pipe,cul.	0.00	LM	0	5055	5,055	2	
5040	Grade Cons	- muiltiplate	10000	lm	0		0	0	
5050	Grade Cons	-SGSB/produce,place,comp	18.00	m3	2278		41,009	18	
5051	Grade Cons	-CBC/produce,place,comp	20.00	m3	1420		28,406	12	
5060	Grade Cons	- grade finishing landscaping	0.00	m2	5579		0	0	
5061	Grade Cons	- grade finishing hydro seed.	0.40	m2	5579		2,231	1	
5062	Grade Cons	- grade finishing fencing	60.00	lm	0		0	0	
5063	Grade Cons	- noise barriers	110.00	m2	0		0	0	
5064	Grade Cons	- passing lanes	0.00	lm	0		0	0	
5090	Grade Cons	- sidewalks,curb & gutter	60.00	lm	0	0	0	0	
5005	Grade Cons	-detours c/w ex,bf,paving	40000	NO	2.0	92000	172,000	75	
5001	Grade Cons	- mobilization	3.0%		12703		12,703	6	
5099	Grade Cons	- Contingency	5.0%		21807		21,807	9	
	Grade Construction	Sub-total					457,947	199	
	GRADE CONSTRUCTION COSTS						457,947	199	
3510	Grade Eng.	- detailed design	7.00%		32056		32,056	14	
3519	Grade Eng.	- detailed design/Contingency	5.0%		1603		1,603	1	
6810	Grade Eng.	- general const. supervision	4.60%		21066		21,066	9	
6811	Grade Eng.	- quality assurance	3.20%		14654		14,654	6	
6812	Grade Eng.	- surveying	2.00%		9159		9,159	4	
6819	Grade Eng.	- Residency Contingency	5.0%		2244		2,244	1	
	Grade Engineering	Sub-total					80,782	35	
	Total Grade Const. & Eng. Costs						538,729	234	

2 In Rd.& Suspens
0
Denman
SITE C/L
Route-22

1. 2In Frontage
2. 2In Acc Rds
3. 4In Acc Rds
4.R4L-4L EXP R/B
5.R2/3L-4L EXP R/B
6.Retr.4L-4LEX R/B
7.R4L-4LEX R/B E/S
8. New 4L EXP R/B

9. R-E4L-4L D/M
10.N 4L EXP D/M.
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 946,689,791
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

Description	No.	Units	Quantity	Rate	Total
					-
					-
					-
					-
					-
					-
					-
					-
					-
					-
Description					-

	(m3)	(unit $)	($)		
Fill	0				
Rock	8387	18.00	150968	85%	
O.M.	1480	7.00	10361		
Strip.	1035	6.00	6209	0.100	
Borrow	0	12.00	0		
Misc./LS	0	4.00	0	Surplus Mtl	
Total	10902	15.37	167537		

	Spec 2 In Rd.& Road	Spec Road	Pl/PL Ditch Width	Ditch Width	
			30.0		
pl to pl	30.00	0.00		0.0	
*no./lane	2	0	Col L Vol.	Col. M Vol.	
*lane wid	3.7	0.0	10,902	-	
*med	0.0	0.0	Pmt W=	11.4	
*shldrs tot	4.0	0.0	CBC. slope	CBC. slope	
c.b.c.(w)	12.5	0.0	2.5	0.0	
sgsb (w)	14.7	0.0			
SGSBslope :1	2.5	0.0			
*depth(d)	2.000	0.000	15%		
*road (l)	300	0			
*no.cul./kil	5.0	0.0	$ 500		
cul.(l)	15.80	0.00	$ 150		
*sgsb (d)	0.45	0.00	15%		
*cbc (d)	0.33	0.00	15%		
*Add.ROW	-4.68	0.00			
X-m3/lm	36.34	0.00			

Neat vol.cal
0
Spec Resurface
Road ONLY
0
0.0
0.0
0.0
A.C. (mm)
0
A.B.C. (mm)
0
0
Appl. rate
1.75

C&G $/LM	$40.00	Exp-100kmp	Exp- 80kmp	Coll-80kmp
Decel.(T-lm)		520	440	260
Accel.(T-lm)		950	630	80
Left T.(T-lm)		716	596	456
TOTAL		2186	1666	796

Gravel 2.0Tonnes/m3

Drainage	No.	Units	Quantity	Rate	Total
Box Cul.	0	lm	45	3500	-
Head Walls	0	ea.	2	5000	-
					-
					-
					-
					-
					-
					-
					-
					-
Drainage					-

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-22
E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land
Contingency 5.0% 5.0%
Division/Site Route-22
Road Type 2
Length 2300 L.M.

2 In Rd.& Suspension Br.
Denman Island-Hornby Island Route-22
2
2300
MR

2 In Rd.& Road Types
Suspens 1. 2In Frontage
0 2. 2In Acc Rds
Denman 3. 4In Acc Rds
SITE C/L 4.R4L-4L EXP R/B
Route-22 5.R2/3L-4L EXP R/B
2 6.Retr.4L-4LEX R/B
2300 7.R4L-4LEX R/B E/S
8. New 4L EXP R/B

9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 946,689,791
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

	DESCRIPTION	Unit Price	Unit	Quantity	Lump Sum Values			
5500	STRUCTURAL CONSTRUCTION							
5522	Struct.Cons - water	225.00	lm	0		0	0	0%
5523	Struct.Cons - sanitary	150.00	lm	0		0	0	0%
5524	Struct.Cons - storm	175.00	lm	0		0	0	0%
5521	Struct.Cons - mobilization	3.0%		0		0	0	0%
5599	Struct.Cons - utility contingency	5.0%		0		0	0	
	Structural Const. Utilities Sub-total					0	0	
5510	Struct.Cons - tunnel site preparation	0.00	lm	0	0	0	0	
5511	Struct.Cons - tunnel construction	-	lm	0		0	0	
5512	Struct.Cons - snow shed site prep.	0.00	lm	0		0	0	
5513	Struct.Cons - snow shed site const.	-	lm	0		0	0	
					Demolition			
5514	Struct.Cons - bridge site preparation	1	LS	7270160	0	7,270,160	3161	
5515	Struct.Cons - bridge piers	1	LS	107500000		107,500,000	46739	
5516	Struct.Cons - bridge abutments	1	LS	220516000		220,516,000	95877	
5517	Struct.Cons - bridge superstructure	1	LS	399000000		399,000,000	173478	
5518	Struct.Cons - retain. wall site prep.	1	LS			0	0	
5519	Struct.Cons - retaining wall const.	525	m2	0		0	0	
5501	Struct.Cons - mobilization	3.0%		22028585		22,028,585	9578	
5529	Struct.Cons - Contingency	5.0%		37815737		37,815,737	16442	
	Structural Construction Sub-total					794,130,482	345274	
	STRUCTURAL CONSTRUCTION COSTS					794,130,482	345274	
3520	Struct. Eng. - detailed design	5.00%		39706524		39,706,524	17264	
3529	Struct. Eng. - detailed design/Contingency	5.0%		1985326		1,985,326	863	
6820	Struct. Eng. - general const. supervision	4.50%		35735872		35,735,872	15537	
6821	Struct. Eng. - quality assurance	3.00%		23823914		23,823,914	10358	
6822	Struct. Eng. - surveying	0.50%		3970652		3,970,652	1726	
6829	Struct. Eng. - Residency Contingency	5.0%		3176522		3,176,522	1381	
	Structural Engineering Sub-total					108,398,811	47130	
	Total Structural & Eng. Costs					902,529,293	392404	
6000	PAVING CONSTRUCTION				SM./OIL			
6020	Paving Con - machine paving asphalt	40.00	t	862	5985	37,765	16	
6030	Paving Con - machine paving concrete	0.00	m2			0	0	
6040	Paving Con - hot reprofiling	0.00	m2	3420		0	0	
6050	Paving Con - shoulder paving	0.00	t	346		0	0	
6060	Paving Con - pavement finishing	75.00	m2	0		0	0	
6070	Paving Con - seal coating	0.00				0	0	
6001	Paving Con - mobilization	3.0%		1133		1,133	0	
6010	Paving Con - pavement design	0.0%		0		0	0	
6099	Paving Con - Contingency	5.0%		1945		1,945	1	
	PAVING CONSTRUCTION COSTS					40,843	18	
3560	Paving Eng - detailed design	7.00%		2859		2,859	1	
3569	Paving Eng - detailed design/Contingency	5.0%		143		143	0	
6860	Paving Eng - general const. supervision	3.00%		1225		1,225	1	
6861	Paving Eng - quality assurance	5.00%		2042		2,042	1	
6862	Paving Eng - surveying	1.00%		408		408	0	
6869	Paving Eng - Residency Contingency	5.0%		184		184	0	
	Paving Engineering Sub-total					6,862	3	
	Total Paving Const. & Eng. Costs					47,705	21	

	Brdge	Site $	Piers $	Abut. $	abut. extra length (lm)	
	1	7,270,160	107,500,000	#########	8	1%
	2	-	-	-		0%
	3	-	-	-		0%
	4	-	-	-		0%
	5	-	-	-		0%

	Pier/Ht	Pier No.	P/$/VLM	Abut/$/HLM
1	250	2	95000	6000
2				
3				
4				
5				

	(W)	(L)	($/m2)	Net Cost
DECK #1	35.00	2000.00	5700.00	756314745
DECK #2				0
DECK #3				0
DECK #4				0
DECK #5				0

		Gross/m2	Net/m2	
1	Sup/br. Span 1700lm	11344.72	10804.50	
2		#DIV/0!	#DIV/0!	
3		#DIV/0!	#DIV/0!	Tnnl $/lm -Net
4		#DIV/0!	#DIV/0!	-
5		#DIV/0!	#DIV/0!	Tnnl $/lm -Gross
				-

	2InSt.w-x 1-D-Shape	x-Pass.Tl 2-D-Shape	shaft 1-Circle		
Tunnel L=	0	-	0	Radius-1-D	7.267
Tun. H1	5.100	2.550	Radius	Per.S&Rf	24.32
C.PL H4	1.00	1.00	1.00	m2/rkac	6.25
Tun.W	12.00	3.00	Wall Tk.	Tnnl height	8.27
RFLT.	0.250	0.250	0.250	Radius-2-D	2.157
WLT.	0.250	0.250	SOBT	Per.S&Rf	8.42
BST.	0.500	0.200	0.100	m2/rkac	6.25
TOBT	0.100	0.100	Exc.-m3	Tnnl height	3.16
SOBT	0.100	0.100	Obk-m3	-	-
BOBT	0.100	0.100	Liner-m3	-	-

Items	Quantity	rate	Total $	Avg.$/ tot-lm	1-Circle
Exc.-m3	0	100	0	#DIV/0!	0
Obk-m3	0	2625	0	#DIV/0!	0
Rk anch-Ea	0	1125	0	#DIV/0!	0
Misc.-lm	0	2500	0	#DIV/0!	0
Liner-m3	0	1050	0	#DIV/0!	10.00
Drainage-lm	0	550	0	#DIV/0!	%
Lighting-m	0	900	0	#DIV/0!	5%
Mech-m	0	2100	0	#DIV/0!	15%
Misc.-lm	0	1000	0	#DIV/0!	3%
1Tonne=16.67m2/25mm			0	#DIV/0!	snowshed

60kg=1m2/25mm 1.5L =1M2 (P)

asphalt	(T)=mm	.25L =1M2 (T)
A.C.	100	0
A.B.C.	0	0
$Oil/Litre	$0.55	5%
Appl. rate	1.75	1.75

Pavement Removal (See I155)

m3	$/m3	Total
0	$20.00	0

Milling

m3	$/m3	Total
0	$80.00	0

			length (lm) 0.0
			Roof 1.0
		21.00	0.05
0.80	$	800.00	-
Walls		2.0	8.00
0.80	$	1,100.00	-
Base		1.0	15.00
0.60	$	600.00	-
Exc.-m3		1.0	15.00
20.00	$	60.00	-
Drainage	$	400.00	-
Electrical	$	1,500.00	-
Mech.	$	950.00	-
Misc.	$	300.00	-
		#DIV/0!	-

C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND
File: XING.xls]ROUTE-22
E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY
CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land
Contingency 5.0% 5.0%
Division/Site
Road Type Route-22 2
Length 2300 L.M.

2 In Rd.& Suspension Br.
Denman Island-Hornby Island Route-22
2
2300
MR

2 In Rd.& Road Types
Suspens 1. 2In Frontage
0 2. 2In Acc Rds
Denman 3. 4In Acc Rds
SITE C/L 4.R4L-4L EXP R/B
Route-22 5.R2/3L-4L EXP R/B
2 6.Retr.4L-4LEX R/B
2300 7.R4L-4LEX R/B E/S
8. New 4L EXP R/B
Pole Sp. (lm) No. of Sides Length
100 55 1 2300

9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 946,689,791
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

	DESCRIPTION	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values		
6500	OPERATIONAL CONSTRUCTION						
6510	Operat.Con - lighting	5500.00	Ea	42		231,000	100
6520	Operat.Con - signals	-	Ea	0	0	0	0
6530	Operat.Con - signing	2.00	LM	4600		4,600	2
6540	Operat.Con - guard rail	70.00	lm	500	0	35,000	15
6550	Operat.Con - pavement markings	1.75	lm	900	0	1,575	1
6501	Operat.Con - mobilization	3.0%		8165		8,165	4
6599	Operat.Con - contingency	5.0%		14017		14,017	6
	OPERATIONAL CONSTRUCTION COSTS					294,357	128
3540	Operat. Eng - detailed design	7.00%		20605		20,605	9
3549	Operat. Eng - detailed design/Contingency	5.0%		1030		1,030	0
6840	Operat. Eng - general const. supervision	6.00%		17661		17,661	8
6841	Operat. Eng - quality assurance	2.00%		5887		5,887	3
6842	Operat. Eng - surveying	1.00%		2944		2,944	1
6849	Operat. Eng - Residency Contingency	5.0%		1325		1,325	1
	Operational Enginering Sub-total					49,452	22
	Total Operational Const. & Eng. Costs					343,809	149
5200	ROAD SIDE CONSTRUCTION	Unit Price	Unit	Quantity	Lump Sum		
5203	RoadSide C - water	225.00	lm	0		0	0
5204	RoadSide C - sanitary	150.00	lm	0		0	0
5205	RoadSide C - storm	175.00	lm	0		0	0
5202	RoadSide C - mobilization	3.0%		0		0	0
5209	RoadSide C - Utility Contingency	5.0%		0		0	0
	Road Side Const. Utilities Sub-total					0	0
5210	RoadSide C - weighscales	-	ea	0	0	0	0
5220	RoadSide C - safety rest areas	-	ea	0	0	0	0
5230	RoadSide C - tourist rest & view areas	40000	ea	0	0	0	0
5201	RoadSide C - mobilization	3.0%		0		0	0
5299	RoadSide C - Contingency	5.0%		0		0	0
	Road Side Construction Sub-total			0		0	0
	ROAD SIDE CONSTRUCTION COSTS					0	0
3550	RoadSide E - detailed design	10.00%		0		0	0
3559	RoadSide E - detailed design/Contingency	5.0%		0		0	0
6850	RoadSide E - general const. supervision	6.00%		0		0	0
6851	RoadSide E - quality assurance	2.00%		0		0	0
6852	RoadSide E - surveying	1.00%		0		0	0
6859	RoadSide E - Residency Contingency	5.0%		0		0	0
	Road Side Engineering Sub-total					0	0
	Total Road Side Const. & Eng. Costs					0	0
5300	OTHER CONSTRUCTION	Unit Price	Unit	Quantity	Lump Sum		
5303	Other Cons - water	225.00	lm	0		0	0
5304	Other Cons - sanitary	150.00	lm	0		0	0
5305	Other Cons - storm	175.00	lm	0		0	0
5302	Other Cons - mobilization	3.0%		0		0	0
5309	Other Cons - utility contingency	5.0%		0		0	0
	Other Const. Utilities Sub-total					0	0
5310	Other Cons - railroads main & spur lines	-	lm	0		0	0
5320	Other Cons - railroad crossings	-	ea	0		0	0
5330	Other Cons - marine work	-	ea	0		0	0
5340	Other Cons - environmental mitigations	280,000	ea	2		560,000	243
5301	Other Cons - mobilization	3.0%		16800		16,800	7
5399	Other Cons - Contingency	5.0%		28840		28,840	13
	Other Construction Sub-total					605,640	263
	OTHER CONSTRUCTION COSTS					605,640	263
3570	Other Eng. - detailed design	7.00%		42395	0	42,395	18
3579	Other Eng. - detailed design/Contingency	5.0%		2120		2,120	1
6870	Other Eng. - general const. supervision	3.00%		18169	0	18,169	8
6871	Other Eng. - quality assurance	3.00%		18169		18,169	8
6872	Other Eng. - surveying	3.00%		18169		18,169	8
6879	Other Eng. - Residency Contingency	5.0%		2725		2,725	1
	Other Engineering Sub-total					101,748	44
	Total Other Const. & Eng. Costs					707,387	308

Signals

LP $/lm	$ 1.00	Refl. Sp.	20.00			
Ext. Lines	1.0	Refl.$/ea	$ 15.00			
Weighscale	No.	Units	Quantity	Rate	Total	
Buildings	0	m2	60	2,800.00	-	
Pit & Apron	0	m2	120	400.00	-	
S&I W/S	0	ea	1	80,000.00	-	
Parking Lot	0	m2	9000	40.00	-	
Road Const.	0	lm	1,500	400.00	-	
light/signs	0	ls	1	50,000.00	-	

Weighscale

Safety Rest Area	No.	Units	Quantity	Rate	Total
Class A&B		SAFETY REST AREAS			
Buildings	0	m2	100	3,000.00	-
Class C					
Site/toilets	0	ea	2	12,500.00	-
Parking Lot	0	m2	2500	40.00	-
Road Const.	0	lm	800	350.00	-
Furnishings	0	ls	-	10,000.00	-
Landscaping	0	ls	1	5,000.00	-
light/signs	0	ls	-	50,000.00	-

SAFETY REST AREAS

Description	No.	Units	Quantity	Rate	Total
	0		0	-	-
	0		0	-	-
	0		0	-	-
	0		0	-	-

Description

Railway	No.	Units	Quantity	Rate	Total
Removal	0	tklm	1.00	21.00	-
Track Cnst.	0	tklm	1.00	320.00	-
Ballast	0	m3	1.13	35.00	-
Sub-ballast	0	m3	0.96	25.00	-
Resurfacing	0	tklm	1.00	10.00	-
Tie-ins	0	ea	1.00	2800.00	-
Turnout # 9	0	ea	1.00	35000.00	-
Others	0	ls	1.00	0.00	-
	0				-
Earthworks (see grading)	0	lm	1	0.00	-

Railway

R/rd X-ing	No.	Units	Quantity	Rate	Total
Planks	0	tklm	45	1750.00	-
Sig./gates	0	each	1	200,000	-

R/rd X-ing

Description	No.	Units	Quantity	Rate	Total

Description

Environment	No.	Units	Quantity	Rate	Total
Mitigation	2	ls	4	50,000	400,000
Ponds	2	ea	2	40,000	160,000

Environmental 560,000

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-22		Man. Reserve	0.0%	Land		2 ln Rd.&	2 ln Rd.&
E.Wolski Consulting	BC Ferries	Contingency	5.0%	5.0%		Suspension Br.	Suspens
(2002 Dollars)	Island Connections	Division/Site	Route-22				0
ACTIVITY		Road Type	2			Denman Island-	Denman
CODE	EST.DATE Jan. 16, 2002	Length	2300	L.M.		Hornby Island	SITE C/L
Conceptual Est.	R1 DATE:		========			Route-22	Route-22
Blk Est. # 6.1	R2 DATE:	Unit		Cost-Quant.	Lump Sum	2	2
Version Dec.4./01	DESCRIPTION	Price	Unit	PerSection	Values	2300	2300
						MR	
3500	DETAILED DESIGN						
	from 3510,3520,3540,3550,3570					41,794,661	18172
3530	Geotech. E - detailed design	0.45%		3579882	1000000	4,579,882	1991
3539	Geotech. E - Contingency	5.0%		228994		228,994	100
	TOTAL DETAILED DESIGN COSTS					46,603,537	20262
6800	RESIDENT ENGINEERING						
	from 6810,6820,6840,6850,6860,6870					66,842,993	
	TOTAL RESIDENT ENG. COSTS					66,842,993	29062
						0	
						0	0
	PART 1 SUMMARY						
	CONSTRUCTION					757,715,924	329442
	ENGINEERING & SUPERVISION					108,905,445	47350
	CONTRACTUAL CONTINGENCY					43,331,068	18840
						0	0
	CONSTRUCTION COST TOTAL	DIVISION/SITE		Route-22		909,952,437	395631
2000	PROJECT MANAGEMENT						
2060	Project Mar - office costs wages	2.00%		18199049		18,199,049	7913
2062	Project Mar - office costs - expenses	0.00%		0		0	0
2063	Project Mar - printing costs	0.00%		0		0	0
2061	Project Mar - general	0.00%		0		0	0
	Project Manager Sub-total					18,199,049	7913
2010	Ministry - office costs wages	0.50%		4549762		4,549,762	1978
2012	Ministry - office costs - expenses	0.50%		4549762		4,549,762	1978
2030	Ministry - printing costs	0.00%		0		0	0
2011	Ministry - general	0.00%		0		0	0
	Ministry Sub-total					9,099,524	3956
2070	Public Rel. - wages & expenses	0.35%		3184834		3,184,834	1385
2072	Public Rel. - adv., media, displays	0.35%		3184834		3,184,834	1385
2073	Public Rel. - opening ceremonies	0.01%		90995	0	90,995	40
2071	Public Rel. - general	0.00%		0		0	0
	Public Relations Sub-total					6,460,662	2809
2040	Legal Costs - lawyers fees	0.01%		90995		90,995	40
2041	Legal Costs - general	0.00%		0		0	0
	Legal Costs Sub-total					90,995	40
2080	Insurance - const./ liability, E&O	0.05%		454976		454,976	198
2081	Insurance - general	0.00%		0		0	0
	Legal Costs Sub-total					454,976	198
2099	Project Management Contingency	5.0%		1715260		1,715,260	746
	TOTAL PROJECT MANAGEMENT COSTS					36,020,467	15661
4000	LAND	$/Building		# buildings	LS	2	
4010	Land(Code -Mrkt,ROW,Serv,Imp.V,Ease.	250,000	Res	2	0	527,000	229
	Acquisition Sub-total	2,000,000	Con	0	0	527,000	229
4020	Land(Code -Bus.,5%,Mrg.P,Rel$,P/Tax,E	10.00%		52700	0	52,700	23
4030	Land(Code -Owners(LS,Apprsl,Rprt,Lgl,Ir	7.00%		36890	0	36,890	16
4040	Land(Code -Demolition	0.00%		0	20000	20,000	9
4050	Land(Code -Pro.Man,P.Tax,Util,Security	1.00%		5270	0	5,270	2
4060	Land(Code -Not Used						
4070	Land(Code -Not Used						
4080	Land(Code -Acq.F,M/Sal,TrvlV,Cntr.S,Ap	7.00%		36890	0	36,890	16
4090	Land(Code -Surveys	0.00%		0	4000	4,000	2
	Associated costs-sub-total			131750		155,750	68
4099	Land Contingency Sub-total	5.0%		34138	0	34,138	15
	TOTAL LAND COSTS					716,888	312

8 Road Types
1. 2ln Frontage
2. 2ln Acc Rds
3. 4ln Acc Rds
4. R4L-4L EXP R/B
5. R2/3L-4L EXP R/B
6. Retr.4L-4LEX R/B
7. R4L-4LEX R/B E/S
8. New 4L EXP R/B
9. R-E4L-4L D/M
10. N 4L EXP D/M
11. N 4L EXP D/E/M
12. N2L;F4LEXP D/M
13. INST.R/B-EX.RD
14. AS IS
15. Misc.
20. I/C Str.&Ramps
21. Bridges
22. Grade Sep.

946,689,791

Bridge	Tunnel	Special
1	1	1
-	-	1,000,000

Description	No.	Units	Quantity	Rate	Total
				-	-

Description

Description	No.	Units	Quantity	Rate	Total
				-	-

Description

Description	No.	Units	Quantity	Rate	Total
				-	-

Description

Description	No.	Units	Quantity	Rate	Total
				-	-

Description

Description	No.	Units	Quantity	Rate	Total
				-	-

Description

3.77%

1 Hectare = 10,000 Square Meters
1 Hectare = 2.471 Acres
1 Acre = 43,560 square feet

	Planned ROW	0.9	
10.00%	Req. ROW	0.9	
7.00%	Cost/Ha	30,000	107,637
3.80%	Cost/M2	3.00	10.76
1.00%	Cost /Acre	12,141	43,560
	Cost /Ft2	0.28	$ 1.00
29.55%			
7.00%	Demo./unit	$ 10,000	
0.76%	Survey /unit	$ 2,000	

Description	No.	Units	Quantity	Rate	Total
				-	-

Description

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-22
E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land 5.0%
Contingency 5.0%
Division/Site Route-22
Road Type 2
Length 2300 L.M.

2 In Rd.& Suspension Br.
Denman Island-Hornby Island Route-22
2
2300
MR

2 In Rd.& Suspens
0
Denman
Route-22

2 Road Types
1. 2In Frontage
2. 2In Acc Rds
3. 4In Acc Rds
4.R4L-4L EXP R/B
5.R2/3L-4L EXP R/B
6.Retr.4L-4LEX R/B
7.R4L-4LEX R/B E/S
8. New 4L EXP R/B
9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 946,689,791
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

	DESCRIPTION	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values			Description No. Units Quantity Rate Total
9800	MANAGEMENT RESERVE							
	MAN. RES. - planning	0.0%		0		0	0	-
	MAN. RES. - preliminary design	0.0%		904187		0	0	-
	MAN. RES. - utility construction	0.0%		72450		0	0	-
	MAN. RES. - grade construction	0.0%		457947		0	0	-
	MAN. RES. - structural construction	0.0%		794130482		0	0	-
	MAN. RES. - paving construction	0.0%		40843		0	0	-
	MAN. RES. - operation construction	0.0%		294357		0	0	-
	MAN. RES. - roadside construction	0.0%		0		0	0	-
	MAN. RES. - other construction	0.0%		605640		0	0	-
	MAN. RES. - project management	0.0%		36020467		0	0	-
	MAN. RES. - land	0.0%		716888		0	0	-
	MAN. RES. - detailed eng.	0.0%		46603537		0	0	-
	MAN. RES. - residency eng.	0.0%		66842993		0	0	-
	MAN. RES. - Contingency	0.0%		0		0	0	-
	TOTAL MANAGEMENT RESERVE			946689791		0	0	-
								Description -
	TOTAL LESS ESCALATION			0	946689791			Description No. Units Quantity Rate Total
	FISCAL							-
9900	ESCALATION							-
	YEAR PROJECTED ESCALATION	COMPLETE		$ DONE				-
	2002-2003 0.5750%	5.00%		0		0	0	-
	2003 - 2004 0.6250%	10.00%		0		0	0	-
	2004-2005 1.0000%	35.00%		0		0	0	-
	2005-2006 1.0000%	45.00%		0		0	0	-
	2006-2007 1.0000%	5.00%		0		0	0	-
	2007-2008 1.0000%	0.00%		0		0	0	-
	2008-2009 1.0000%	0.00%		0		0	0	-
	2009-2010 1.0000%	0.00%		0		0	0	-
	2010-2011 1.0000%	0.00%		0		0	0	-
	TOTAL ESCALATION	100.00%		0		0	0	-
								-
	PART 2 SUMMARY NON-CONSTRUCTION COSTS							-
	Non-Construction					34,987,957	15212	-
	Non-Const. Contingency					1,749,398	761	-
								-
	TOTAL NON-CONSTRUCTION COSTS					36,737,355	15973	-
	Route-22 TOTAL FOR ROAD TYPE	**2**				946,689,791	411604	Description -

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-21
E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land
Contingency 5.0% 5.0%
Division/Site
Road Type 2
Length 2750 L.M.

2 In Rd.& Suspension Br.
Buckley Bay-Denman Island Route-21
2
2750
MR

2 In Rd.& Road Types
Suspens 1. 2In Frontage
0 2. 2In Acc Rds
Buckley I 3. 4In Acc Rds
SITE C/LN 4.R4L-4L EXP R/B
Route-21 5.R2/3L-4L EXP R/B
2 6.Retr.4L-4LEX R/B
2750 7.R4L-4LEX R/B E/S
8. New 4L EXP R/B

9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 1,050,379,908
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

SUMMARY BY ACTIVITY LEVEL

		Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values	Previous Estimate Diff.		Cost/LM	% of T	% of TC
2000	PROJECT MANAGEMENT			-38065331	0		38,065,331	13842	3.6%	3.6%
2500	PLANNING			0	0		0	0	0.0%	0.0%
3000	PRELIMINARY DESIGN			-961347	0		961,347	350	0.1%	0.1%
3500	DETAILED DESIGN			-49143881	0		49,143,881	17871	4.7%	4.7%
	Total Engineering			-50105228	0		50,105,228	18220	4.8%	4.8%
4000	LAND ACQUISITION			-686500	0		686,500	250	0.1%	0.1%
5000	GRADE CONSTRUCTION			-497844	0		497,844	181	0.0%	0.0%
5200	ROAD SIDE CONSTRUCTION			0	0		0	0	0.0%	0.0%
5300	OTHER CONSTRUCTION			-576800	0		576,800	210	0.1%	0.1%
5500	STRUCTURAL CONSTRUCTION			-839330685	0		839,330,685	305211	79.9%	79.9%
6000	PAVING CONSTRUCTION			-45381	0		45,381	17	0.0%	0.0%
6500	OPERATIONAL CONSTRUCTION			-326858	0		326,858	119	0.0%	0.0%
6700	UTILITY CONSTRUCTION			-82500	0		82,500	30	0.0%	0.0%
6800	RESIDENT ENGINEERING			-70644690	0		70,644,690	25689	6.7%	6.7%
	Total Construction			-911504757	0		911,504,757	331456	86.8%	86.8%
9700	CONTINGENCY			-50018091	0		50,018,091	18188	4.8%	4.8%
	SUB-TOTAL			-1050379908	0		1,050,379,908	381956	100.0%	100.0%
9800	MANAGEMENT RESERVE			0	0		0	0	0.0%	0.0%
	TOTAL			-1050379908	0		1,050,379,908	381956	100.0%	100.0%
9900	ESCALATION			0	0		0	0		0.0%
	TOTAL COST			-1050379908	0		1,050,379,908	381956		100.0%
	Constr. Less Resident Eng.			-840860068	0		840,860,068	305767		

ENG. & PM	92,579,087	33665
LAND	720,825	262
CONST.	957,079,995	348029
MAN. RES.	0	0
ESC.	0	0
TOTAL	1,050,379,908	381956

Route-21 **Assumptions**

1 Existing Right-Of -Way m

2 New Addition Right-Of -Way partial taking Yes m

	Shoulder	Lane	Lane	Median	Lane	Lane	Shoulder
Existing Rd	-	-	-	-	-	-	-
Pvmt Width	0.0						
New Rd.	2.00	-	3.70	-	3.70	-	2.00
Pvmt Width	11.4						

	Bridges		Width(m)	Length(m)
3.1	Sup/br. Span 1700lm		35.0	2400.0
3.2		0	0.0	0.0
3.3		0	0.0	0.0
3.4		0	0.0	0.0
3.5		0	0.0	0.0

	Tunnels	Length(m)	Width(m)	Height(m)
4.1	2lnSt.w-x	0	12.0	8.27
4.2	x-Pass.Tl	0	3.0	3.16
4.3	shaft	0	2.0	Diameter
4.4	snowshedlength (lm)	0		

NOTES:

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-21
E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Bik Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land
Contingency 5.0% 5.0%
Division/Site
Road Type 2
Length 2750 L.M.

2 In Rd.& Suspension Br.
Buckley Bay-Denman Island Route-21
2
2750
MR

2 In Rd.& Suspens
0
Buckley I
SITE C/L
Route-21
2
2750

Road Types
1. 2In Frontage
2. 2In Acc Rds
3. 4In Acc Rds
4.R4L-4L EXP R/B
5.R2/3L-4L EXP R/B
6.Retr.4L-4LEX R/B
7.R4L-4LEX R/B E/S
8. New 4L EXP R/B
9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 1,050,379,908
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

		DESCRIPTION	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values		
2500	PLANNING							
2521	Consultant	- transport. planning study	0.00	LM	0		0	0
2531	Consultant	- corridor study	0.00	LM	0		0	0
2541	Consultant	- functional plan. study	0.00	LM	0		0	0
2502	Consultant	- general	0.0%		0		0	0
	Consultant sub-total						0	0
2510	Ministry	- project ident.	0.00	LM	0		0	0
2520	Ministry	- transport. planning study	0.00	LM	0		0	0
2530	Ministry	- corridor study	0.00	LM	0		0	0
2540	Ministry	- functional study	0.00	LM	0	0	0	0
2501	Ministry	- general	0.0%		0		0	0
	Ministry Sub-total				0		0	0
2599	Planning Contingency		5.0%		0		0	0
	TOTAL PLANNING						0	0
3000	PRELIMINARY DESIGN							
3013	Consultant	- aerial base plan	0.00	LM	0		0	0
3014	Consultant	- mapping & prel.	10.00	LM	27500		27,500	10
3015	Consultant	- control survey	0.00	LM	0		0	0
3021	Consultant	- environmental impact	3.00	LM	8250		8,250	3
3031	Consultant	- funct.-road field survey	8.00	LM	22000		22,000	8
3041	Consultant	- functional design	5.00	LM	13750	0	13,750	5
3051	Consultant	- funct. des. structural	0.00	LM	0	881297	881,297	320
3061	Consultant	- geotechnical design	3.00	LM	8250		8,250	3
3071	Consultant	- right-of-way research	0.00	LM	0	300	300	0
3002	Consultant	- general	0.0%		0		0	0
	Consultant sub-total						961,347	350
3010	Ministry	- aerial base plan	0.00	LM	0		0	0
3011	Ministry	- mapping	0.00	LM	0		0	0
3012	Ministry	- control survey	0.00	LM	0		0	0
3020	Ministry	- environmental impact	0.00	LM	0		0	0
3030	Ministry	- funct.-road field survey	0.00	LM	0		0	0
3040	Ministry	- functional design	0.00	LM	0		0	0
3050	Ministry	- funct. des. structural	0.00	LM	0		0	0
3060	Ministry	- geotechnical design	0.00	LM	0		0	0
3070	Ministry	- right-of-way research	0.00	LM	0		0	0
3001	Ministry	- general	0.0%		0		0	0
	Ministry Sub-total						0	0
3099	Preliminary design Contingency		5.0%		48067		48,067	17
	TOTAL PRELIMINARY DESIGN						1,009,415	367

Description	No.	Units	Quantity	Rate	Total
					-

Description -

Description	No.	Units	Quantity	Rate	Total
					-

Description -

Structural 0.10%

$/Prop. $ 150

Description	No.	Units	Quantity	Rate	Total
					-

Description -

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-21
E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land
Contingency 5.0% 5.0%
Division/Site
Road Type 2
Length 2750 L.M. .

2 In Rd.& Suspension Br.
Buckley Bay-Denman Island Route-21

2 In Rd.& Suspens
0
Buckley I
SITE C/L
Route-21
2
2750

Road Types
1. 2In Frontage
2. 2In Acc Rds
3. 4In Acc Rds
4.R4L-4L EXP R/B
5.R2/3L-4L EXP R/B
6.Retr.4L-4LEX R/B
7.R4L-4LEX R/B E/S
8. New 4L EXP R/B
9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 1,050,379,908
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

	DESCRIPTION	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values	MR	
6700	UTILITIES						
6710	Util. Prov. - Hydro	10.00	lm	2750	0	27,500	10
6711	Util. Prov. - Telephone	20.00	lm	2750	0	55,000	20
	Util. Prov. sub-total					82,500	30
6712	Util.Others - pipelines	0.00	lm	0		0	0
6713	Util.Others - telecommunication	0.00	lm	0		0	0
6714	Util.Others - storm & sewer inspect.	0.0%		0		0	0
6715	Util.Others - waterworks inspect.	0.0%		0		0	0
6716	Util.Others - engineering services	0.00	LM	0		0	0
6717	Util.Others - parks/recreation-prel.	0.00	LM	0		0	0
6718	Util.Others - transit	0.00	LM	0		0	0
6719	Util.Others - tr-ops/signs & detours	0.00	LM	0		0	0
6701	Util.Others - general	0.0%		0		0	0
	Util.Others sub-total					0	0
6799	Util.Others Contingency	5.0%		4125	0	4,125	2
	TOTAL UTILITIES					86,625	32
5000	GRADE CONSTRUCTION	U. Price	Unit	Quantity	Lump Sum		
5032	Grade Cons - water	225.00	lm	0	0	0	0
5033	Grade Cons - sanitary	150.00	lm	0	0	0	0
5034	Grade Cons - storm	175.00	lm	0		0	0
5031	Grade Cons - mobilization	3.0%		0		0	0
5039	Grade Cons - utility contingency	5.0%		0		0	0
	Grade Const. Utilities Sub-total					0	0
5010	Grade Cons - site prep./clear,grubbing	8,000	ha	1.05	0	8,399	3
5020	Grade Cons - road grade/exc,placing,fill	15.37	m3	12719	0	195,460	71
5030	Grade Cons - drainage/pipe,cul.	0.00	LM	0	5898	5,898	2
5040	Grade Cons - muiltiplate	10000	lm	0		0	0
5050	Grade Cons -SGSB/produce,place,comp	18.00	m3	2658		47,844	17
5051	Grade Cons -CBC/produce,place,comp	20.00	m3	1657		33,140	12
5060	Grade Cons - grade finishing landscaping	0.00	m2	6508		0	0
5061	Grade Cons - grade finishing hydro seed.	0.40	m2	6508		2,603	1
5062	Grade Cons - grade finishing fencing	60.00	lm	0		0	0
5063	Grade Cons - noise barriers	110.00	m2	0		0	0
5064	Grade Cons - passing lanes	0.00	lm	0		0	0
5090	Grade Cons - sidewalks,curb & gutter	60.00	lm	0	0	0	0
5005	Grade Cons -detours c/w ex,bf,paving	40000	NO	2.0	110000	190,000	69
5001	Grade Cons - mobilization	3.0%		14500		14,500	5
5099	Grade Cons - Contingency	5.0%		24892		24,892	9
	Grade Construction Sub-total					522,736	190
	GRADE CONSTRUCTION COSTS					522,736	190
3510	Grade Eng. - detailed design	7.00%		36592		36,592	13
3519	Grade Eng. - detailed design/Contingency	5.0%		1830		1,830	1
6810	Grade Eng. - general const. supervision	4.60%		24046		24,046	9
6811	Grade Eng. - quality assurance	3.20%		16728		16,728	6
6812	Grade Eng. - surveying	2.00%		10455		10,455	4
6819	Grade Eng. - Residency Contingency	5.0%		2561		2,561	1
	Grade Engineering Sub-total					92,211	34
	Total Grade Const. & Eng. Costs					614,947	224

Description	No.	Units	Quantity	Rate	Total
					-
					-
					-
					-
					-
					-
					-
					-
					-
					-

Description

	(m3)	(unit $)	($)		
Fill	0				
Rock	9785	18.00	176129	85%	
O.M.	1727	7.00	12087		
Strip.	1207	6.00	7244	0.100	
Borrow	0	12.00	0		
Misc./LS	0	4.00	0	Surplus Mtl	Neat vol.cal
Total	12719	15.37	195460		0

	Spec 2 In Rd.&	Spec	PI/PL		Spec. Resurface
	Road	Road	Ditch Width	Ditch Width	Road ONLY
pl to pl	30.00	0.00		0.0	
*no./lane	2	0	Col L Vol.	Col. M Vol.	0
*lane wid	3.7	0.0	12,719	-	0.0
*med	0.0	0.0	Pmt W=	11.4	0.0
*shldrs tot	4.0	0.0	CBC. slope	CBC. slope	0.0
c.b.c.(w)	12.5	0.0	2.5	0.0	A.C. (mm)
sgsb (w)	14.7	0.0			0
SGSBslope :1	2.5	0.0			A.B.C. (mm)
*depth(d)	2.000	0.000	15%		0
*road (l)	350	0			0
*no.cul./kil	5.0	0.0	$ 500		Appl. rate
cul.(l)	15.80	0.00	$ 150		1.75
*sgsb (d)	0.45	0.00	15%		
*cbc (d)	0.33	0.00	15%		
*Add.ROW	-4.68	0.00			
X-m3/lm	36.34	0.00			

C&G $/LM	$40.00	Exp-100kmp	Exp- 80kmp	Coll-80kmp
Decel.(T-lm)		520	440	260
Accel.(T-lm)		950	630	80
Left T.(T-lm)		716	596	456
TOTAL		2186	1666	796

Gravel 2.0Tonnes/m3

Drainage	No.	Units	Quantity	Rate	Total
Box Cul.	0	lm	45	3500	-
Head Walls	0	ea.	2	5000	-
					-
					-
					-
					-
					-
					-
					-
					-

Drainage

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-21
E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land
Contingency 5.0% 5.0%
Division/Site Route-21
Road Type 2
Length 2750 L.M.

	DESCRIPTION	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values	2 In Rd.& Suspension Br.	2 In Rd.& Suspens	Brdge	Site $	Piers $	Abut. $	abut. extra length (lm)	
						Buckley Bay-Denman Island Route-21	Buckley I SITE C/L Route-21	1	8,068,160	107,500,000	##########	8	1%
						0	0	2	-	-	-		0%
						2750	2750	3	-	-	-		0%
						MR		4	-	-	-		0%
								5	-	-	-		0%

8 Road Types
1. 2ln Frontage
2. 2ln Acc Rds
3. 4ln Acc Rds
4.R4L-4L EXP R/B
5.R2/3L-4L EXP R/B
6.Retr.4L-4LEX R/B
7.R4L-4LEX R/B E/S
8. New 4L EXP R/B

9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 1,050,379,908
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

	Pier/Ht	Pier No.	P/$/VLM	Abut/$/HLM
1	250	2	95000	6000
2				
3				
4				
5				

35 x 2400 x 5700 = 478,800,000

	(W)	(L)	($/m2)	Net Cost
DECK #1	35.00	2400.00	5700.00	839330685
DECK #2				0
DECK #3				0
DECK #4				0
DECK #5				0

881,297,219 / (35 x 2400) =

839,330,685 / (35 x 2400) =

	Gross/m2	Net/m2
1 Sup/br. Span 1700lm	10491.63	9992.03
2	#DIV/0!	#DIV/0!
3	#DIV/0!	#DIV/0!
4	#DIV/0!	#DIV/0!
5	#DIV/0!	#DIV/0!

5500	STRUCTURAL CONSTRUCTION	Unit Price	Unit	Quantity	Lump Sum								
5522	Struct.Cons - water	225.00	lm	0		0	0						
5523	Struct.Cons - sanitary	150.00	lm	0		0	0						
5524	Struct.Cons - storm	175.00	lm	0		0	0						
5521	Struct.Cons - mobilization	3.0%		0		0	0						
5599	Struct.Cons - utility contingency	5.0%		0		0	0						
	Structural Const. Utilities Sub-total					0	0						
5510	Struct.Cons - tunnel site preparation	0.00	lm	0	0	0	0						
5511	Struct.Cons - tunnel construction	-	lm	0		0	0						
5512	Struct.Cons - snow shed site prep.	0.00	lm	0		0	0						
5513	Struct.Cons - snow shed site const.	-	lm	0		0	0						
					Demolition								
5514	Struct.Cons - bridge site preparation	1	LS	8068160	0	8,068,160	2934						
5515	Struct.Cons - bridge piers	1	LS	107500000		107,500,000	39091						
5516	Struct.Cons - bridge abutments	1	LS	220516000		220,516,000	80188						
5517	Struct.Cons - bridge superstructure	1	LS	478800000		478,800,000	174109						
5518	Struct.Cons - retain. wall site prep.	1	LS			0	0						
5519	Struct.Cons - retaining wall const.	525	m2	0		0	0						
5501	Struct.Cons - mobilization	3.0%		24446525		24,446,525	8890						
5529	Struct.Cons - Contingency	5.0%		41966534		41,966,534	15261						
	Structural Construction Sub-total					881,297,219	320472						
	STRUCTURAL CONSTRUCTION COSTS					881,297,219	320472						
3520	Struct. Eng. - detailed design	5.00%		44064861		44,064,861	16024						
3529	Struct. Eng. - detailed design/Contingency	5.0%		2203243		2,203,243	801						
6820	Struct. Eng. - general const. supervision	4.50%		39658375		39,658,375	14421						
6821	Struct. Eng. - quality assurance	3.00%		26438917		26,438,917	9614						
6822	Struct. Eng. - surveying	0.50%		4406486		4,406,486	1602						
6829	Struct. Eng. - Residency Contingency	5.0%		3525189		3,525,189	1282						
	Structural Engineering Sub-total					120,297,070	43744						
	Total Structural & Eng. Costs					1,001,594,289	364216						
6000	PAVING CONSTRUCTION				SM./OIL								
6020	Paving Con - machine paving asphalt	40.00	t	1005	6983	44,060	16						
6030	Paving Con - machine paving concrete	0.00	m2			0	0						
6040	Paving Con - hot reprofiling	0.00	m2	3990		0	0						
6050	Paving Con - shoulder paving	0.00	t	403		0	0						
6060	Paving Con - pavement finishing	75.00	m2	0		0	0						
6070	Paving Con - seal coating	0.00				0	0						
6001	Paving Con - mobilization	3.0%		1322		1,322	0						
6010	Paving Con - pavement design	0.0%		0		0	0						
6099	Paving Con - Contingency	5.0%		2269		2,269	1						
	PAVING CONSTRUCTION COSTS					47,650	17						
3560	Paving Eng - detailed design	7.00%		3336		3,336	1						
3569	Paving Eng - detailed design/Contingency	5.0%		167		167	0						
6860	Paving Eng - general const. supervision	3.00%		1430		1,430	1						
6861	Paving Eng - quality assurance	5.00%		2383		2,383	1						
6862	Paving Eng - surveying	1.00%		477		477	0						
6869	Paving Eng - Residency Contingency	5.0%		214		214	0						
	Paving Engineering Sub-total					8,005	3						
	Total Paving Const. & Eng. Costs					55,656	20						

	2lnSt.w-x 1-D-Shape	x-Pass.Tl 2-D-Shape	shaft 1-Circle	Radius-1-D	7.287
Tunnel L=	0	-	0	Per.S&Rf	24.32
Tun. H1	5.100	2.550	Radius	m2/rkac	6.25
C.Pt. H4	1.00	1.00	1.00	Tnnl height	8.27
Tun.W	12.00	3.00	Wall Tk.	Radius-2-D	2.157
RFLT.	0.250	0.250	0.250	Per.S&Rf	8.42
WLT.	0.250	0.250	SOBT	m2/rkac	6.25
BST.	0.500	0.200	0.100	Tnnl height	3.16
TOBT	0.100	0.100	Exc.-m3	-	-
SOBT	0.100	0.100	Obk-m3	-	-
BOBT	0.100	0.100	Liner-m3	-	-

Tnnl $/lm -Net -
Tnnl $/lm -Gross -

Items	Quantity	rate	Total $	Avg.$/ tot-lm	1-Circle
Exc.-m3	0	100	0	#DIV/0!	0
Obk-m3	0	2625	0	#DIV/0!	0
Rk anch-Ea	0	1125	0	#DIV/0!	0
Misc.-lm	0	2500	0	#DIV/0!	0
Liner-m3	0	1050	0	#DIV/0!	10.00
Drainage-lm	0	550	0	#DIV/0!	%
Lighting-m	0	900	0	#DIV/0!	5%
Mech-m	0	2100	0	#DIV/0!	15%
Misc.-lm	0	1000	0	#DIV/0!	3%
1Tonne=16.67m2/25mm			0	#DIV/0!	snowshed

60kg=1m2/25mm 1.5L =1M2 (P)
asphalt (T)=mm .25L =1M2 (T)

	A.C.	100	0		length (lm)	0.0
	A.B.C.	0	0		Roof	1.0
$Oil/Litre		$0.55	5%	0.80	21.00	0.05
Appl. rate		1.75	1.75	$	800.00	-
Pavement Removal			(See I155)	Walls	2.0	8.00
m3	$/m3		Total	0.80	$ 1,100.00	-
0	$20.00		0	Base	1.0	15.00
Milling				0.60	$ 600.00	-
m3	$/m3		Total	Exc.-m3	1.0	15.00
0	$80.00		0	20.00	$ 60.00	-
				Drainage	$ 400.00	-
				Electrical	$ 1,500.00	-
				Mech.	$ 950.00	-
				Misc.	$ 300.00	-
					#DIV/0!	-

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-21
E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est: # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land
Contingency 5.0% 5.0%
Division/Site Route-21
Road Type 2
Length 2750 L.M.

	DESCRIPTION	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values	2 In Rd.& Suspension Br.	2 In Rd.& Suspens
						Buckley Bay-Denman Island Route-21	Buckley SITE C/L Route-21
						2	2
						2750	2750
						MR	
6500	OPERATIONAL CONSTRUCTION						
6510	Operat.Con - lighting	5500.00	Ea	50		275,000	100
6520	Operat.Con - signals	-	Ea	0	0	0	0
6530	Operat.Con - signing	2.00	LM	5500		5,500	2
6540	Operat.Con - guard rail	70.00	lm	500	0	35,000	13
6550	Operat.Con - pavement markings	1.75	lm	1050	0	1,838	1
6501	Operat.Con - mobilization	3.0%		9520		9,520	3
6599	Operat.Con - contingency	5.0%		16343		16,343	6
	OPERATIONAL CONSTRUCTION COSTS					343,201	125
3540	Operat. Eng - detailed design	7.00%		24024		24,024	9
3549	Operat. Eng - detailed design/Contingency	5.0%		1201		1,201	0
6840	Operat. Eng - general const. supervision	6.00%		20592		20,592	7
6841	Operat. Eng - quality assurance	2.00%		6864		6,864	2
6842	Operat. Eng - surveying	1.00%		3432		3,432	1
6849	Operat. Eng - Residency Contingency	5.0%		1544		1,544	1
	Operational Enginering Sub-total					57,658	21
	Total Operational Const. & Eng. Costs					400,858	146
5200	ROAD SIDE CONSTRUCTION	Unit Price	Unit	Quantity	Lump Sum		
5203	RoadSide C - water	225.00	lm	0		0	0
5204	RoadSide C - sanitary	150.00	lm	0		0	0
5205	RoadSide C - storm	175.00	lm	0		0	0
5202	RoadSide C - mobilization	3.0%		0		0	0
5209	RoadSide C - Utility Contingency	5.0%		0		0	0
	Road Side Const. Utilities Sub-total					0	0
5210	RoadSide C - weighscales	-	ea	0	0	0	0
5220	RoadSide C - safety rest areas	-	ea	0	0	0	0
5230	RoadSide C - tourist rest & view areas	40000	ea	0	0	0	0
5201	RoadSide C - mobilization	3.0%		0		0	0
5299	RoadSide C - Contingency	5.0%		0		0	0
	Road Side Construction Sub-total			0		0	0
	ROAD SIDE CONSTRUCTION COSTS					0	0
3550	RoadSide E - detailed design	10.00%		0		0	0
3559	RoadSide E - detailed design/Contingency	5.0%		0		0	0
6850	RoadSide E - general const. supervision	6.00%		0		0	0
6851	RoadSide E - quality assurance	2.00%		0		0	0
6852	RoadSide E - surveying	1.00%		0		0	0
6859	RoadSide E - Residency Contingency	5.0%		0		0	0
	Road Side Engineering Sub-total					0	0
	Total Road Side Const. & Eng. Costs					0	0
5300	OTHER CONSTRUCTION	Unit Price	Unit	Quantity	Lump Sum		
5303	Other Cons - water	225.00	lm	0		0	0
5304	Other Cons - sanitary	150.00	lm	0		0	0
5305	Other Cons - storm	175.00	lm	0		0	0
5302	Other Cons - mobilization	3.0%		0		0	0
5309	Other Cons - utility contingency	5.0%		0		0	0
	Other Const. Utilities Sub-total					0	0
5310	Other Cons - railroads main & spur lines	-	lm	0		0	0
5320	Other Cons - railroad crossings	-	ea	0		0	0
5330	Other Cons - marine work	-	ea	0		0	0
5340	Other Cons - environmental mitigations	280,000	ea	2		560,000	204
5301	Other Cons - mobilization	3.0%		16800		16,800	6
5399	Other Cons - Contingency	5.0%		28840		28,840	10
	Other Construction Sub-total					605,640	220
	OTHER CONSTRUCTION COSTS					605,640	220
3570	Other Eng. - detailed design	7.00%		42395	0	42,395	15
3579	Other Eng. - detailed design/Contingency	5.0%		2120		2,120	1
6870	Other Eng. - general const. supervision	3.00%		18169	0	18,169	7
6871	Other Eng. - quality assurance	3.00%		18169		18,169	7
6872	Other Eng. - surveying	3.00%		18169		18,169	7
6879	Other Eng. - Residency Contingency	5.0%		2725		2,725	1
	Other Engineering Sub-total					101,748	37
	Total Other Const. & Eng. Costs					707,387	257

Road Types
1. 2ln Frontage
2. 2ln Acc Rds
3. 4ln Acc Rds
4. R4L-4L EXP R/B
5. R2/3L-4L EXP R/B
6. Retr.4L-4LEX R/B
7. R4L-4LEX R/B E/S
8. New 4L EXP R/B
9. R-E4L-4L D/M
10. N 4L EXP D/M
11. N 4L EXP D/E/M
12. N2L;F4LEXP D/M
13. INST.R/B-EX.RD
14. AS IS 15. Misc. 1,050,379,908
20. I/C Str.&Ramps
21. Bridges
22. Grade Sep.

Pole Sp. (lm) 55 No. of Sides 1 Length 2750

Signals	No.	Units	Quantity	Rate	Total
Controller	0	ea	1	25,000.00	-
Sig, pol,base	0	ea	4	15,000.00	-
Wiring U/G	0	ls	1	10,000.00	-
					-
					-
					-
Signals					-

LP $/lm $ 1.00 Refl. Sp. 20.00
Ext. Lines 1.0 Refl.$/ea $ 15.00

Weighscale	No.	Units	Quantity	Rate	Total
Buildings	0	m2	60	2,800.00	-
Pit & Apron	0	m2	120	400.00	-
S&I W/S	0	ea	1	80,000.00	-
Parking Lot	0	m2	9000	40.00	-
Road Const.	0	lm	1,500	400.00	-
light/signs	0	ls	1	50,000.00	-
					-
Weighscale					-

Safety Rest Area	No.	Units	Quantity	Rate	Total
Class A&B		SAFETY REST AREAS			
Buildings	0	m2	100	3,000.00	-
Class C					-
Site/toilets	0	ea	2	12,500.00	-
Parking Lot	0	m2	2500	40.00	-
Road Const.	0	lm	800	350.00	-
Furnishings	0	ls	-	10,000.00	-
Landscaping	0	ls	1	5,000.00	-
light/signs	0	ls	-	50,000.00	-
					-
SAFETY REST AREAS					-

Description	No.	Units	Quantity	Rate	Total
	0		0	-	-
	0		0	-	-
	0		0	-	-
	0		0	-	-
Description					-

Railway	No.	Units	Quantity	Rate	Total
Removal	0	tklm-	1.00	21.00	-
Track Cnst.	0	tklm	1.00	320.00	-
Ballast	0	m3	1.13	35.00	-
Sub-ballast	0	m3	0.96	25.00	-
Resurfacing	0	tklm	1.00	10.00	-
Tie-ins	0	ea	1.00	2800.00	-
Turnout # 9	0	ea	1.00	35000.00	-
Others	0	ls	1.00	0.00	-
	0				-
Earthworks (see grading)	0	lm	1	0.00	-
Railway					-

R/rd X-ing	No.	Units	Quantity	Rate	Total
Planks	0	tklm	45	1750.00	-
Sig./gates	0	each	1	200,000	-
					-
					-
R/rd X-ing					-

Description	No.	Units	Quantity	Rate	Total
					-
					-
					-
					-
					-
					-
Description					-

Environment	No.	Units	Quantity	Rate	Total
Mitigation	2	ls	4	50,000	400,000
Ponds	2	ea	2	40,000	160,000
					-
					-
					-
					-
Environmental					560,000

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E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land
Contingency 5.0% 5.0%
Division/Site Route-21
Road Type 2
Length 2750 L.M.

			Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values	2 In Rd.& Suspension Br.	2 In Rd.& Suspens
							Buckley Bay-Denman Island Route-21	Buckley I SITE C/L Route-21
							2	2
							2750	2750
							MR	
3500	DETAILED DESIGN							
		from 3510,3520,3540,3550,3570					46,379,767	16865
3530	Geotech. E	- detailed design	0.45%		3972674	1000000	4,972,674	1808
3539	Geotech. E	- Contingency	5.0%		248634		248,634	90
	TOTAL DETAILED DESIGN COSTS						51,601,075	18764
6800	RESIDENT ENGINEERING							
		from 6810,6820,6840,6850,6860,6870					74,176,924	
	TOTAL RESIDENT ENG. COSTS						74,176,924	26973
							0	
							0	0
	PART 1 SUMMARY							
		CONSTRUCTION					840,860,068	305767
		ENGINEERING & SUPERVISION					120,749,918	43909
		CONTRACTUAL CONTINGENCY					48,080,499	17484
							0	0
	CONSTRUCTION COST TOTAL		DIVISION/SITE		Route-21		1,009,690,485	367160
2000	PROJECT MANAGEMENT							
2060	Project Mar	- office costs wages	2.00%		20193810		20,193,810	7343
2062	Project Mar	- office costs - expenses	0.00%		0		0	0
2063	Project Mar	- printing costs	0.00%		0		0	0
2061	Project Mar	- general	0.00%		0		0	0
	Project Manager Sub-total						20,193,810	7343
2010	Ministry	- office costs wages	0.50%		5048452		5,048,452	1836
2012	Ministry	- office costs - expenses	0.50%		5048452		5,048,452	1836
2030	Ministry	- printing costs	0.00%		0		0	0
2011	Ministry	- general	0.00%		0		0	0
	Ministry Sub-total						10,096,905	3672
2070	Public Rel.	- wages & expenses	0.35%		3533917		3,533,917	1285
2072	Public Rel.	- adv., media, displays	0.35%		3533917		3,533,917	1285
2073	Public Rel.	- opening ceremonies	0.01%		100969	0	100,969	37
2071	Public Rel.	- general	0.00%		0		0	0
	Public Relations Sub-total						7,168,802	2607
2040	Legal Costs	- lawyers fees	0.01%		100969		100,969	37
2041	Legal Costs	- general	0.00%		0		0	0
	Legal Costs Sub-total						100,969	37
2080	Insurance	- const./ liability, E&O	0.05%		504845		504,845	184
2081	Insurance	- general	0.00%		0		0	0
	Legal Costs Sub-total						504,845	184
2099	Project Management Contingency		5.0%		1903267		1,903,267	692
	TOTAL PROJECT MANAGEMENT COSTS						39,968,598	14534
4000	LAND		$/Building		# buildings	LS	2	
4010	Land(Code	-Mrkt,ROW,Serv,Imp.V,Ease.	250,000	Res	2	0	530,000	193
	Acquisition Sub-total		2,000,000	Con	0	0	530,000	193
4020	Land(Code	-Bus.,5%,Mrg.P,Rel$,P/Tax,E	10.00%		53000	0	53,000	19
4030	Land(Code	-Owners(LS,Apprsl,Rprt,Lgl,Ir	7.00%		37100	0	37,100	13
4040	Land(Code	-Demolition	0.00%		0	20000	20,000	7
4050	Land(Code	-Pro.Man,P.Tax,Util,Security	1.00%		5300	0	5,300	2
4060	Land(Code	-Not Used						
4070	Land(Code	-Not Used						
4080	Land(Code	-Acq.F,M/Sal,TrvlV,Cntr.S,Ap	7.00%		37100	0	37,100	13
4090	Land(Code	-Surveys	0.00%		0	4000	4,000	1
	Associated costs-sub-total				132500		156,500	57
4099	Land Contingency Sub-total		5.0%		34325	0	34,325	12
	TOTAL LAND COSTS						720,825	262

							Buckley I 3. 4In Acc Rds	12.N2L;F4LEXP D/M
							SITE C/L 4.R4L-4L EXP R/B	13.INST.R/B-EX.RD
							Route-21 5.R2/3L-4L EXP R/B	14.AS IS 15. Misc. 1,050,379,908
							2 6.Retr.4L-4LEX R/B	20.I/C Str.&Ramps
							2750 7.R4L-4LEX R/B E/S	21. Bridges
							---------- 8. New 4L EXP R/B	22. Grade Sep.
							1 1	1
							16865 Bridge Tunnel	Special
							1808 - -	1,000,000
							90	

1. 2In Frontage
2. 2In Acc Rds
3. 4In Acc Rds
4. R4L-4L EXP R/B
5. R2/3L-4L EXP R/B
6. Retr.4L-4LEX R/B
7. R4L-4LEX R/B E/S
8. New 4L EXP R/B
9. R-E4L-4L D/M
10. N 4L EXP D/M
11. N 4L EXP D/E/M

Description	No.	Units	Quantity	Rate	Total
					-
					-
					-
					-
					-
					-
Description					-
Description	No.	Units	Quantity	Rate	Total
					-
					-
					-
					-
					-
					-
Description					-
Description	No.	Units	Quantity	Rate	Total
					-
					-
					-
					-
					-
					-
Description					-
Description	No.	Units	Quantity	Rate	Total
					-
					-
					-
					-
					-
					-
Description					-
					-
3.77%					

1 Hectare = 10,000 Square Meters
1 Hectare = 2.471 Acres
1 Acre = 43,560 square feet

		Planned ROW .	1.0		
10.00%	Req. ROW		1.0		
7.00%	Cost/Ha		30,000		107,637
3.77%	Cost/M2		3.00		10.76
1.00%	Cost /Acre		12,141		43,560
	Cost /Ft2		0.28	$	1.00
29.53%					
7.00%	Demo./unit	$	10,000		
0.75%	Survey /unit	$	2,000		

Description	No.	Units	Quantity	Rate	Total
					-
					-
					-
					-
					-
Description					-

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-21
E.Wolski Consulting **BC Ferries**
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ACTIVITY CODE EST.DATE Jan. 16, 2002
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Man. Reserve 0.0% Land 5.0%
Contingency 5.0%
Division/Site Route-21
Road Type 2
Length 2750 L.M.

2 In Rd.& Suspension Br.
Buckley Bay-Denman Island Route-21
2
2750
MR

2 In Rd.& Suspens
0
Buckley I
SITE C/L
Route-21

8 Road Types
1. 2In Frontage
2. 2In Acc Rds
3. 4In Acc Rds
4.R4L-4L EXP R/B
5.R2/3L-4L EXP R/B
6.Retr.4L-4LEX R/B
7.R4L-4LEX R/B E/S
8. New 4L EXP R/B

9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 1,050,379,908
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

	DESCRIPTION	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values			Description	No.	Units	Quantity	Rate	Total
9800	MANAGEMENT RESERVE												
	MAN. RES. - planning	0.0%		0		0	0					-	-
	MAN. RES. - preliminary design	0.0%		1009415		0	0					-	-
	MAN. RES. - utility construction	0.0%		86625		0	0					-	-
	MAN. RES. - grade construction	0.0%		522736		0	0					-	-
	MAN. RES. - structural construction	0.0%		881297219		0	0					-	-
	MAN. RES. - paving construction	0.0%		47650		0	0					-	-
	MAN. RES. - operation construction	0.0%		343201		0	0					-	-
	MAN. RES. - roadside construction	0.0%		0		0	0					-	-
	MAN. RES. - other construction	0.0%		605640		0	0					-	-
	MAN. RES. - project management	0.0%		39968598		0	0					-	-
	MAN. RES. - land	0.0%		720825		0	0					-	-
	MAN. RES. - detailed eng.	0.0%		51601075		0	0					-	-
	MAN. RES. - residency eng.	0.0%		74176924		0	0					-	-
	MAN. RES. - Contingency	0.0%		0		0	0					-	-
	TOTAL MANAGEMENT RESERVE			1050379908		0	0					-	-
								Description					-
	TOTAL LESS ESCALATION			0	##########			Description	No.	Units	Quantity	Rate	Total
	FISCAL											-	-
9900	ESCALATION											-	-
	YEAR PROJECTED ESCALATION	COMPLETE		$ DONE								-	-
	2002-2003 0.5750%	5.00%		0		0	0					-	-
	2003 - 2004 0.6250%	10.00%		0		0	0					-	-
	2004-2005 1.0000%	35.00%		0		0	0					-	-
	2005-2006 1.0000%	45.00%		0		0	0					-	-
	2006-2007 1.0000%	5.00%		0		0	0					-	-
	2007-2008 1.0000%	0.00%		0		0	0					-	-
	2008-2009 1.0000%	0.00%		0		0	0					-	-
	2009-2010 1.0000%	0.00%		0		0	0					-	-
	2010-2011 1.0000%	0.00%		0		0	0					-	-
	TOTAL ESCALATION	100.00%		0		0	0					-	-
												-	-
	PART 2 SUMMARY NON-CONSTRUCTION COSTS											-	-
	Non-Construction					38,751,831	14092					-	-
	Non-Const. Contingency					1,937,592	705					-	-
	TOTAL NON-CONSTRUCTION COSTS					40,689,423	14796					-	-
												-	-
	Route-21 TOTAL FOR ROAD TYPE	2				1,050,379,908	381956	Description					-

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-19
E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land
Contingency 20.0% 20.0%
Division/Site
Road Type 2
Length 5100 L.M.

2 In Rd.& Suspension Br.
Nanaimo - Gabriola Island Route-19
2
5100
MR

2 In Rd.& Suspens 0
Nanaimc SITE C/L Route-19
2
5100
Cost/LM

2 Road Types
1. 2In Frontage
2. 2In Acc.Rds
3. 4In Acc Rds
4.R4L-4L EXP R/B
5.R2/3L-4L EXP R/B
6.Retr.4L-4LEX R/B
7.R4L-4LEX R/B E/S
8. New 4L EXP R/B

9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 46,411,844
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

SUMMARY BY ACTIVITY LEVEL

		Unit Price	Unit	Cost-Quant. PerSection Diff.	Lump Sum Values Previous Estimate		% of T	% of TC
2000	PROJECT MANAGEMENT			-1511634	0	1,511,634	3.3%	3.3%
2500	PLANNING			0	0	0	0.0%	0.0%
3000	PRELIMINARY DESIGN			-175503	0	175,503	0.4%	0.4%
3500	DETAILED DESIGN			-2697874	0	2,697,874	5.8%	5.8%
	Total Engineering			-2873377	0	2,873,377	6.2%	6.2%
4000	LAND ACQUISITION			-3751250	0	3,751,250	8.1%	8.1%
5000	GRADE CONSTRUCTION			-3810533	0	3,810,533	8.2%	8.2%
5200	ROAD SIDE CONSTRUCTION			0	0	0	0.0%	0.0%
5300	OTHER CONSTRUCTION			-1153600	0	1,153,600	2.5%	2.5%
5500	STRUCTURAL CONSTRUCTION			-21752570	0	21,752,570	46.9%	46.9%
6000	PAVING CONSTRUCTION			-664459	0	664,459	1.4%	1.4%
6500	OPERATIONAL CONSTRUCTION			-246749	0	246,749	0.5%	0.5%
6700	UTILITY CONSTRUCTION			-153000	0	153,000	0.3%	0.3%
6800	RESIDENT ENGINEERING			-2759365	0	2,759,365	5.9%	5.9%
	Total Construction			-30540276	0	30,540,276	65.8%	65.8%
9700	CONTINGENCY			-7735307	0	7,735,307	16.7%	16.7%
	SUB-TOTAL			-46411844	0	46,411,844	100.0%	100.0%
9800	MANAGEMENT RESERVE			0	0	0	0.0%	0.0%
	TOTAL			-46411844	0	46,411,844	100.0%	100.0%
9900	ESCALATION			0	0	0		0.0%
	TOTAL COST			-46411844	0	46,411,844		100.0%
	Constr. Less Resident Eng.			-27760912	0	27,780,912	5447	

ENG. & PM	5,262,012	1032
LAND	4,501,500	883
CONST.	36,648,332	7186
MAN. RES.	0	0
ESC.	0	0
TOTAL	46,411,844	9100

Route-19 **Assumptions**

1 Existing Right-Of -Way m

2 New Addition Right-Of -Way partial taking Yes m

	Shoulder	Lane	Lane	Median	Lane	Lane	Shoulder
Existing Rd	-	-	-	-	-	-	-
Pvmt Width	0.0						
New Rd.	2.00	-	3.70	-	3.70	-	2.00
Pvmt Width	11.4						

	Bridges		Width(m)	Length(m)
3.1	Dodds Narrows		12.0	250.0
3.2	False Narrows		12.0	400.0
3.3		0	0.0	0.0
3.4		0	0.0	0.0
3.5		0	0.0	0.0

	Tunnels	Length(m)	Width(m)	Height(m)
4.1	2InSt.w-x	0	12.0	8.27
4.2	x-Pass.Tl	0	3.0	3.16
4.3	shaft	0	2.0	Diameter
4.4	snowshedlength (lm)	0		

NOTES:

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E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY
CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve	0.0%
Contingency	20.0%
Land	20.0%
Division/Site	Route-19
Road Type	2
Length	5100 L.M.

2 ln Rd.& Suspension Br.	2 ln Rd.& Suspens
	0
Nanaimo - Gabriola Island	Nanaimo SITE C/L
Route-19	Route-19
2	2
5100	5100
MR	

Road Types
1. 2ln Frontage
2. 2ln Acc Rds
3. 4ln Acc Rds
4. R4L-4L EXP R/B
5. R2/3L-4L EXP R/B
6. Retr.4L-4LEX R/B
7. R4L-4LEX R/B E/S
8. New 4L EXP R/B
9. R-E4L-4L D/M
10. N 4L EXP D/M
11. N 4L EXP D/E/M
12. N2L;F4LEXP D/M
13. INST.R/B-EX.RD
14. AS IS
15. Misc.
20. I/C Str.&Ramps
21. Bridges
22. Grade Sep.

46,411,844

Code	DESCRIPTION	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values	2 ln Rd.& Suspension Br.	2 ln Rd.& Suspens
2500	PLANNING						
2521	Consultant - transport. planning study	0.00	LM	0		0	0
2531	Consultant - corridor study	0.00	LM	0		0	0
2541	Consultant - functional plan. study	0.00	LM	0		0	0
2502	Consultant - general	0.0%		0		0	0
	Consultant sub-total					0	0
2510	Ministry - project ident.	0.00	LM	0		0	0
2520	Ministry - transport. planning study	0.00	LM	0		0	0
2530	Ministry - corridor study	0.00	LM	0		0	0
2540	Ministry - functional study	0.00	LM	0	0	0	0
2501	Ministry - general	0.0%		0		0	0
	Ministry Sub-total			0		0	0
2599	Planning Contingency	20.0%		0		0	0
	TOTAL PLANNING					0	0
3000	PRELIMINARY DESIGN						
3013	Consultant - aerial base plan	0.00	LM	0		0	0
3014	Consultant - mapping & prel.	10.00	LM	51000		51,000	10
3015	Consultant - control survey	0.00	LM	0		0	0
3021	Consultant - environmental impact	3.00	LM	15300		15,300	3
3031	Consultant - funct.-road field survey	8.00	LM	40800		40,800	8
3041	Consultant - functional design	5.00	LM	25500	0	25,500	5
3051	Consultant - funct. des. structural	0.00	LM	0	26103	26,103	5
3061	Consultant - geotechnical design	3.00	LM	15300		15,300	3
3071	Consultant - right-of-way research	0.00	LM	0	1500	1,500	0
3002	Consultant - general	0.0%		0		0	0
	Consultant sub-total					175,503	34
3010	Ministry - aerial base plan	0.00	LM	0		0	0
3011	Ministry - mapping	0.00	LM	0		0	0
3012	Ministry - control survey	0.00	LM	0		0	0
3020	Ministry - environmental impact	0.00	LM	0		0	0
3030	Ministry - funct.-road field survey	0.00	LM	0		0	0
3040	Ministry - functional design	0.00	LM	0		0	0
3050	Ministry - funct. des. structural	0.00	LM	0		0	0
3060	Ministry - geotechnical design	0.00	LM	0		0	0
3070	Ministry - right-of-way research	0.00	LM	0		0	0
3001	Ministry - general	0.0%		0		0	0
	Ministry Sub-total					0	0
3099	Preliminary design Contingency	20.0%		35101		35,101	7
	TOTAL PRELIMINARY DESIGN					210,604	41

Description	No.	Units	Quantity	Rate	Total
					-
					-
					-
					-
					-
					-
					-
					-
					-
					-

Description

Description	No.	Units	Quantity	Rate	Total
					-
					-
					-
					-
					-
					-
					-
					-
					-
					-
					-

Description

Structural 0.10%
$/Prop. $ 150

Description	No.	Units	Quantity	Rate	Total
					-
					-
					-
					-
					-
					-
					-
					-
					-
					-
					-
					-
					-
					-
					-
					-
					-

Description

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E.Wolski Consulting BC Ferries
(2002 Dollars) Island Connections
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land
Contingency 20.0% 20.0%
Division/Site
Road Type Route-19
Length 2
5100 L.M.

2 In Rd.& Suspension Br.
Nanaimo - Gabriola Island Route-19
2
5100
MR

2 In Rd.& Suspens
0 Nanaimc
Nanaimc
SITE C/L
Route-1
2
5100

9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 46,411,844
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

1. 2In Frontage
2. 2In Acc Rds
3. 4In Acc Rds
4.R4L-4L EXP R/B
5.R2/3L-4L EXP R/B
6.Retr.4L-4LEX R/B
7.R4L-4LEX R/B E/S
8. New 4L EXP R/B

		Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values		
6700	UTILITIES						
6710	Util. Prov. - Hydro	10.00	lm	5100	0	51,000	10
6711	Util. Prov. - Telephone	20.00	lm	5100	0	102,000	20
	Util. Prov. sub-total					153,000	30
6712	Util.Others - pipelines	0.00	lm	0		0	0
6713	Util.Others - telecommunication	0.00	lm	0		0	0
6714	Util.Others - storm & sewer inspect.	0.0%		0		0	0
6715	Util.Others - waterworks inspect.	0.0%		0		0	0
6716	Util.Others - engineering services	0.00	LM	0		0	0
6717	Util.Others - parks/recreation-prel.	0.00	LM	0		0	0
6718	Util.Others - transit	0.00	LM	0		0	0
6719	Util.Others - tr-ops/signs & detours	0.00	LM	0		0	0
6701	Util.Others - general	0.0%		0		0	0
	Util.Others sub-total					0	0
6799	Util.Others Contingency	20.0%		30600	0	30,600	6
	TOTAL UTILITIES					183,600	36
5000	GRADE CONSTRUCTION	U. Price	Unit	Quantity	Lump Sum		
5032	Grade Cons - water	225.00	lm	0	0	0	0
5033	Grade Cons - sanitary	150.00	lm	0	0	0	0
5034	Grade Cons - storm	175.00	lm	0		0	0
5031	Grade Cons - mobilization	3.0%		0		0	0
5039	Grade Cons - utility contingency	20.0%		0		0	0
	Grade Const. Utilities Sub-total					0	0
5010	Grade Cons - site prep./clear,grubbing	8,000	ha	13.45	0	107,622	21
5020	Grade Cons - road grade/exc,placing,fill	13.88	m3	163248	0	2,265,154	444
5030	Grade Cons - drainage/pipe,cul.	0.00	LM	0	39598	39,598	8
5040	Grade Cons - muiltiplate	10000	lm	0		0	0
5050	Grade Cons -SGSB/produce,place,comp	18.00	m3	33795		608,304	119
5051	Grade Cons -CBC/produce,place,comp	20.00	m3	21067		421,349	83
5060	Grade Cons - grade finishing landscaping	0.00	m2	83798		0	0
5061	Grade Cons - grade finishing hydro seed.	0.40	m2	83798		33,519	7
5062	Grade Cons - grade finishing fencing	60.00	lm	0		0	0
5063	Grade Cons - noise barriers	110.00	m2	0		0	0
5064	Grade Cons - passing lanes	0.00	lm	0		0	0
5090	Grade Cons - sidewalks,curb & gutter	60.00	lm	0	0	0	0
5005	Grade Cons -detours c/w ex,bf,paving	40000	NO	0.5	204000	224,000	44
5001	Grade Cons - mobilization	3.0%		110986		110,986	22
5099	Grade Cons - Contingency	20.0%		762107		762,107	149
	Grade Construction Sub-total					4,572,640	897
	GRADE CONSTRUCTION COSTS					4,572,640	897
3510	Grade Eng. - detailed design	7.00%		320085		320,085	63
3519	Grade Eng. - detailed design/Contingency	20.0%		64017		64,017	13
6810	Grade Eng. - general const. supervision	4.60%		210341		210,341	41
6811	Grade Eng. - quality assurance	3.20%		146324		146,324	29
6812	Grade Eng. - surveying	2.00%		91453		91,453	18
6819	Grade Eng. - Residency Contingency	20.0%		89624		89,624	18
	Grade Engineering Sub-total					921,844	181
	Total Grade Const. & Eng. Costs					5,494,484	1077

Description	No.	Units	Quantity	Rate	Total
					-
					-
					-
					-
					-
					-
					-
					-
					-
					-
Description					-

	(m3)	(unit $)	($)		
Fill	0				
Rock	103444	18.00	1861997	70%	
O.M.	44333	7.00	310333		
Strip.	15471	6.00	92824	0.100	
Borrow	0	12.00	0		
Misc./LS	0	4.00	0	Surplus Mtl	Neat vol.cal 0
Total	163248	13.88	2265154		Spec. Resurface Road ONLY 0

	Spec 2 In Rd.& Road	Spec upgrade Road	PI/PL 60.5 Ditch Width	Ditch Width
pl to pl	30.00	30.50	2.0	2.0
*no./lane	2	2	Col L Vol.	Col. M Vol.
*lane wid	3.7	3.7	120,261	42,987
*med	0.0	0.0	Pmt W=	22.8
*shldrs tot	4.0	4.0	CBC. slope	CBC. slope
c.b.c.(w)	12.5	12.5	2.5	2.5
sgsb (w)	14.7	14.7		
SGSBslope :1	2.5	2.5		
*depth(d)	2.500	1.000	15%	
*road (l)	2350	2100		
*no.cul./kil	5.0	0.0	$ 500	
cul.(l)	15.80	15.80	$ 150	
*sgsb (d)	0.45	0.45	15%	
*cbc (d)	0.33	0.33	15%	
*Add.ROW	-11.68	3.82		
X-m3/lm	51.18	20.47		

Neat vol.cal 0
Spec. Resurface Road ONLY 0.0
A.C. (mm) 0
A.B.C. (mm) 0
0
Appl. rate 1.75

C&G $/LM	$40.00	Exp-100kmp	Exp- 80kmp	Coll-80kmp
Decel.(T-lm)		520	440	260
Accel.(T-lm)		950	630	80
Left T.(T-lm)		716	596	456
TOTAL		2186	1666	796

Gravel 2.0Tonnes/m3

Drainage	No.	Units	Quantity	Rate	Total
Box Cul.	0	lm	45	3500	-
Head Walls	0	ea.	2	5000	-
					-
					-
					-
					-
					-
					-
					-
					-
Drainage					-

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ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Bik Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land
Contingency 20.0% 20.0%
Division/Site Route-19
Road Type 2
Length 5100 L.M.

2 In Rd.& Suspension Br.
Nanaimo - Gabriola Island Route-19
2
5100
MR

2 In Rd.& Road Types
Suspens 1. 2In Frontage
0 2. 2In Acc Rds
Nanaimc 3. 4In Acc Rds
SITE C/LI 4.R4L-4L EXP R/B
Route-19 5.R2/3L-4L EXP R/B
2 6.Retr.4L-4LEX R/B
5100 7.R4L-4LEX R/B E/S
8. New 4L EXP R/B

9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 46,411,844
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

		Unit Price	Unit	Quantity	Lump Sum			
5500	STRUCTURAL CONSTRUCTION							
5522	Struct.Cons - water	225.00	lm	0		0	0	
5523	Struct.Cons - sanitary	150.00	lm	0		0	0	
5524	Struct.Cons - storm	175.00	lm	0		0	0	
5521	Struct.Cons - mobilization	3.0%		0		0	0	
5599	Struct.Cons - utility contingency	20.0%		0		0	0	
	Structural Const. Utilities Sub-total					0	0	
5510	Struct.Cons - tunnel site preparation	0.00	lm	0	0	0	0	
5511	Struct.Cons - tunnel construction	-	lm	0		0	0	
5512	Struct.Cons - snow shed site prep.	0.00	lm	0		0	0	
5513	Struct.Cons - snow shed site const.	-	lm	0		0	0	
					Demolition			
5514	Struct.Cons - bridge site preparation	1	LS	1729000	0	1,729,000	339	
5515	Struct.Cons - bridge piers	1	LS	5750000		5,750,000	1127	
5516	Struct.Cons - bridge abutments	1	LS	320000		320,000	63	
5517	Struct.Cons - bridge superstructure	1	LS	11220000		11,220,000	2200	
5518	Struct.Cons - retain. wall site prep.	1	LS			0	0	
5519	Struct.Cons - retaining wall const.	525	m2	4000		2,100,000	412	
5501	Struct.Cons - mobilization	3.0%		633570		633,570	124	
5529	Struct.Cons - Contingency	20.0%		4350514		4,350,514	853	
	Structural Construction Sub-total					26,103,084	5118	
	STRUCTURAL CONSTRUCTION COSTS					26,103,084	5118	
3520	Struct. Eng. - detailed design	5.00%		1305154		1,305,154	256	
3529	Struct. Eng. - detailed design/Contingency	20.0%		261031		261,031	51	
6820	Struct. Eng. - general const. supervision	4.50%		1174639		1,174,639	230	
6821	Struct. Eng. - quality assurance	3.00%		783093		783,093	154	
6822	Struct. Eng. - surveying	0.50%		130515		130,515	26	
6829	Struct. Eng. - Residency Contingency	20.0%		417649		417,649	82	
	Structural Engineering Sub-total					4,072,081	798	
	Total Structural & Eng. Costs					30,175,165	5917	
6000	PAVING CONSTRUCTION				SM./OIL			
6020	Paving Con - machine paving asphalt	45.00	t	12784	88776	645,106	126	
6030	Paving Con - machine paving concrete	0.00	m2			0	0	
6040	Paving Con - hot reprofiling	0.00	m2	50730		0	0	
6050	Paving Con - shoulder paving	0.00	t	5126		0	0	
6060	Paving Con - pavement finishing	75.00	m2	0		0	0	
6070	Paving Con - seal coating	0.00				0	0	
6001	Paving Con - mobilization	3.0%		19353		19,353	4	
6010	Paving Con - pavement design	0.0%		0		0	0	
6099	Paving Con - Contingency	20.0%		132892		132,892	26	
	PAVING CONSTRUCTION COSTS					797,351	156	
3560	Paving Eng - detailed design	7.00%		55815		55,815	11	
3569	Paving Eng - detailed design/Contingency	20.0%		11163		11,163	2	
6860	Paving Eng - general const. supervision	3.00%		23921		23,921	5	
6861	Paving Eng - quality assurance	5.00%		39868		39,868	8	
6862	Paving Eng - surveying	1.00%		7974		7,974	2	
6869	Paving Eng - Residency Contingency	20.0%		14352		14,352	3	
	Paving Engineering Sub-total					153,091	30	
	Total Paving Const. & Eng. Costs					950,442	186	

Brdge	Site $	Piers $	Abut. $	abut. extra length (lm)	
1	644,200	1,750,000	192,000	4	10%
2	1,084,800	4,000,000	128,000	4	10%
3	-	-	-		0%
4	-	-	-		0%
5	-	-	-		0%

	Pier/Ht	Pier No.	P/$/VLM	Abut/$/HLM
1	250	2	3500	6000
2	40	4	25000	4000
3				
4				
5				

	(W)	(L)	($/m2)	Net Cost
DECK #1	12.00	250.00	1500.00	7298786
DECK #2	12.00	400.00	1400.00	12290784
DECK #3				0
DECK #4				0
DECK #5				0

		Gross/m2	Net/m2	
1	Dodds Narrows	2919.51	2432.93	
2	False Narrows	3072.70	2560.58	
3		#DIV/0!	#DIV/0!	Tnnl $/lm -Net
4		#DIV/0!	#DIV/0!	-
5		#DIV/0!	#DIV/0!	Tnnl $/lm -Gross
				-

	2InSt.w-x 1-D-Shape	x-Pass.Tl 2-D-Shape	shaft 1-Circle	
Tunnel L=	0	-	0	Radius-1-D 7.267
Tun. H1	5.100	2.550	Radius	Per.S&Rf 24.32
C.Pt. H4	1.00	1.00	1.00	m2/rkac 6.25
Tun.W	12.00	3.00	Wall Tk.	Tnnl height 8.27
RFLT.	0.250	0.250	0.250	Radius-2-D 2.157
WLT.	0.250	0.250	SOBT	Per.S&Rf 8.42
BST.	0.500	0.200	0.100	m2/rkac 6.25
TOBT	0.100	0.100	Exc.-m3	Tnnl height 3.16
SOBT	0.100	0.100	Obk-m3	- -
BOBT	0.100	0.100	Liner-m3	- -

Items	Quantity	rate	Total $	Avg.$/ tot-lm	1-Circle
Exc.-m3	0	100	0	#DIV/0!	0
Obk-m3	0	2625	0	#DIV/0!	0
Rk anch-Ea	0	1125	0	#DIV/0!	0
Misc.-lm	0	2500	0	#DIV/0!	0
Liner-m3	0	1050	0	#DIV/0!	10.00
Drainage-lm	0	550	0	#DIV/0!	%
Lighting-m	0	900	0	#DIV/0!	5%
Mech-m	0	2100	0	#DIV/0!	15%
Misc.-lm	0	1000	0	#DIV/0!	3%
1Tonne=16.67m2/25mm			0	#DIV/0!	snowshed

60kg=1m2/25mm		1.5L =1M2 (P)		length (lm) 0.0
asphalt	(T)=mm	.25L =1M2 (T)		Roof 1.0
A.C.	100	100		21.00 0.05
A.B.C.	0	0	0.80	$ 800.00 -
$Oil/Litre	$0.55	5%	Walls	2.0 8.00
Appl. rate	1.75	1.75	0.80	$ 1,100.00 -
Pavement Removal		(See I155)	Base	1.0 15.00
m3	$/m3	Total	0.60	$ 600.00 -
1050	$20.00	21000	Exc.-m3	1.0 15.00
Milling			20.00	$ 60.00 -
m3	$/m3	Total	Drainage	$ 400.00 -
0	$80.00	0	Electrical	$ 1,500.00 -
			Mech.	$ 950.00 -
			Misc.	$ 300.00 -
				#DIV/0! -

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-19
E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. - R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land
Contingency 20.0% 20.0%
Division/Site Route-19
Road Type 2
Length 5100 L.M.

	DESCRIPTION	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values	2 In Rd.& Suspension Br.	2 In Rd.& Suspens	Road Types
						Nanaimo - Gabriola Island Route-19	Nanaimc SITE C/L Route-19	1. 2In Frontage 2. 2In Acc Rds 3. 4In Acc Rds 4.R4L-4L EXP R/B 5.R2/3L-4L EXP R/B 6.Retr.4L-4LEX R/B 7.R4L-4LEX R/B E/S 8. New 4L EXP R/B
						2	2	9. R-E4L-4L D/M 10.N 4L EXP D/M 11.N 4L EXP D/E/M 12.N2L;F4LEXP D/M 13.INST.R/B-EX.RD 14.AS IS 15. Misc. 46,411,844 20.I/C Str.&Ramps 21. Bridges 22. Grade Sep.
						5100	5100	
						MR		
							Pole	Sp. (lm) 55 No. of Sides 1 Length 650
6500	OPERATIONAL CONSTRUCTION							
6510	Operat.Con - lighting	5500.00	Ea	12		66,000	13	
6520	Operat.Con - signals	-	Ea	0	0	0	0	
6530	Operat.Con - signing	2.00	LM	10200		10,200	2	
6540	Operat.Con - guard rail	70.00	lm	2000	0	140,000	27	
6550	Operat.Con - pavement markings	1.75	lm	13350	0	23,363	5	
6501	Operat.Con - mobilization	3.0%		7187		7,187	1	
6599	Operat.Con - contingency	20.0%		49350		49,350	10	
	OPERATIONAL CONSTRUCTION COSTS					296,099	58	
3540	Operat. Eng - detailed design	7.00%		20727		20,727	4	
3549	Operat. Eng - detailed design/Contingency	20.0%		4145		4,145	1	
6840	Operat. Eng - general const. supervision	6.00%		17766		17,766	3	
6841	Operat. Eng - quality assurance	2.00%		5922		5,922	1	
6842	Operat. Eng - surveying	1.00%		2961		2,961	1	
6849	Operat. Eng - Residency Contingency	20.0%		5330		5,330	1	
	Operational Enginering Sub-total					56,851	11	
	Total Operational Const. & Eng. Costs					352,950	69	
		Unit Price	Unit	Quantity	Lump Sum			
5200	ROAD SIDE CONSTRUCTION							
5203	RoadSide C - water	225.00	lm	0		0	0	
5204	RoadSide C - sanitary	150.00	lm	0		0	0	
5205	RoadSide C - storm	175.00	lm	0		0	0	
5202	RoadSide C - mobilization	3.0%		0		0	0	
5209	RoadSide C - Utility Contingency	20.0%		0		0	0	
	Road Side Const. Utilities Sub-total					0	0	
5210	RoadSide C - weighscales	-	ea	0	0	0	0	
5220	RoadSide C - safety rest areas	-	ea	0	0	0	0	
5230	RoadSide C - tourist rest & view areas	40000	ea	0	0	0	0	
5201	RoadSide C - mobilization	3.0%		0		0	0	
5299	RoadSide C - Contingency	20.0%		0		0	0	
	Road Side Construction Sub-total			0		0	0	
	ROAD SIDE CONSTRUCTION COSTS					0	0	
3550	RoadSide E - detailed design	10.00%		0		0	0	
3559	RoadSide E - detailed design/Contingency	20.0%		0		0	0	
6850	RoadSide E - general const. supervision	6.00%		0		0	0	
6851	RoadSide E - quality assurance	2.00%		0		0	0	
6852	RoadSide E - surveying	1.00%		0		0	0	
6859	RoadSide E - Residency Contingency	20.0%		0		0	0	
	Road Side Engineering Sub-total					0	0	
	Total Road Side Const. & Eng. Costs					0	0	
		Unit Price	Unit	Quantity	Lump Sum			
5300	OTHER CONSTRUCTION							
5303	Other Cons - water	225.00	lm	0		0	0	
5304	Other Cons - sanitary	150.00	lm	0		0	0	
5305	Other Cons - storm	175.00	lm	0		0	0	
5302	Other Cons - mobilization	3.0%		0		0	0	
5309	Other Cons - utility contingency	20.0%		0		0	0	
	Other Const. Utilities Sub-total					0	0	
5310	Other Cons - railroads main & spur lines	-	lm	0		0	0	
5320	Other Cons - railroad crossings	-	ea	0		0	0	
5330	Other Cons - marine work	-	ea	0		0	0	
5340	Other Cons - environmental mitigations	280,000	ea	4		1,120,000	220	
5301	Other Cons - mobilization	3.0%		33600		33,600	7	
5399	Other Cons - Contingency	20.0%		230720		230,720	45	
	Other Construction Sub-total					1,384,320	271	
	OTHER CONSTRUCTION COSTS					1,384,320	271	
3570	Other Eng. - detailed design	7.00%		96902	0	96,902	19	
3579	Other Eng. - detailed design/Contingency	20.0%		19380		19,380	4	
6870	Other Eng. - general const. supervision	3.00%		41530	0	41,530	8	
6871	Other Eng. - quality assurance	3.00%		41530		41,530	8	
6872	Other Eng. - surveying	3.00%		41530		41,530	8	
6879	Other Eng. - Residency Contingency	20.0%		24918		24,918	5	
	Other Engineering Sub-total					265,789	52	
	Total Other Const. & Eng. Costs					1,650,109	324	

Signals

LP $/lm $ 1.00 Refl. Sp. 20.00
Ext. Lines 1.0 Refl.$/ea $ 15.00

Weighscale	No.	Units	Quantity	Rate	Total
Buildings	0	m2	60	2,800.00	-
Pit & Apron	0	m2	120	400.00	-
S&I W/S	0	ea	1	80,000.00	-
Parking Lot	0	m2	9000	40.00	-
Road Const.	0	lm	1,500	400.00	-
light/signs	0	ls	1	50,000.00	-

Weighscale

Safety Rest Area	No.	Units	Quantity	Rate	Total
Class A&B		SAFETY REST AREAS			
Buildings	0	m2	100	3,000.00	-
Class C					
Site/toilets	0	ea	2	12,500.00	-
Parking Lot	0	m2	2500	40.00	-
Road Const.	0	lm	800	350.00	-
Furnishings	0	ls	-	10,000.00	-
Landscaping	0	ls	1	5,000.00	-
light/signs	0	ls	-	50,000.00	-

SAFETY REST AREAS

Description	No.	Units	Quantity	Rate	Total
	0		0	-	-
	0		0	-	-
	0		0	-	-
	0		0	-	-

Description

Railway	No.	Units	Quantity	Rate	Total
Removal	0	tklm	1.00	21.00	-
Track Cnst.	0	tklm	1.00	320.00	-
Ballast	0	m3	1.13	35.00	-
Sub-ballast	0	m3	0.96	25.00	-
Resurfacing	0	tklm	1.00	10.00	-
Tie-ins	0	ea	1.00	2800.00	-
Turnout # 9	0	ea	1.00	35000.00	-
Others	0	ls	1.00	0.00	-
	0				-
Earthworks (see grading)	0	lm	1	0.00	-

Railway

R/rd X-ing	No.	Units	Quantity	Rate	Total
Planks	0	tklm	45	1750.00	-
Sig./gates	0	each	1	200,000	-
				-	-
				-	-

R/rd X-ing

Description	No.	Units	Quantity	Rate	Total
				-	-
				-	-
				-	-
				-	-
				-	-
				-	-

Description

Environment	No.	Units	Quantity	Rate	Total
Mitigation	4	ls	4	50,000	800,000
Ponds	4	ea	2	40,000	320,000
				-	-
				-	-
				-	-
				-	-

Environmental 1,120,000

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E.Wolski Consulting BC Ferries
(2002 Dollars) Island Connections
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve	0.0%
Contingency	20.0%
Division/Site	Route-19
Road Type	2
Length	5100 L.M.

Land 20.0%

2 ln Rd.& Suspension Br. / Nanaimo - Gabriola Island / Route-19 / 2 / 5100 / MR

2 ln Rd.& Suspens / 0 / Nanaimo / SITE C/L / Route-19 / 2 / 5100

Road Types
1. 2ln Frontage
2. 2ln Acc Rds
3. 4ln Acc Rds
4. R4L-4L EXP R/B
5. R2/3L-4L EXP R/B
6. Retr.4L-4LEX R/B
7. R4L-4LEX R/B E/S
8. New 4L EXP R/B
9. R-E4L-4L D/M
10. N 4L EXP D/M
11. N 4L EXP D/E/M
12. N2L;F4LEXP D/M
13. INST.R/B-EX.RD
14. AS IS
15. Misc.
20. I/C Str.&Ramps
21. Bridges
22. Grade Sep.

46,411,844

	2	1	1
	Bridge	Tunnel	Special
	-	-	750,000

CODE	DESCRIPTION	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values	Route-19	MR
3500	DETAILED DESIGN						
	from 3510,3520,3540,3550,3570					2,158,419	423
3530	Geotech. E - detailed design	0.45%		149191	750000	899,191	176
3539	Geotech. E - Contingency	20.0%		179838		179,838	35
	TOTAL DETAILED DESIGN COSTS					3,237,448	635
6800	RESIDENT ENGINEERING						
	from 6810,6820,6840,6850,6860,6870					3,311,238	
	TOTAL RESIDENT ENG. COSTS					3,311,238	649
						0	
						0	0
	PART 1 SUMMARY						
	CONSTRUCTION					27,780,912	5447
	ENGINEERING & SUPERVISION					5,632,741	1104
	CONTRACTUAL CONTINGENCY					6,682,731	1310
						0	0
	CONSTRUCTION COST TOTAL	DIVISION/SITE		Route-19		40,096,384	7862
2000	PROJECT MANAGEMENT						
2060	Project Mar - office costs wages	2.00%		801928		801,928	157
2062	Project Mar - office costs - expenses	0.00%		0		0	0
2063	Project Mar - printing costs	0.00%		0		0	0
2061	Project Mar - general	0.00%		0		0	0
	Project Manager Sub-total					801,928	157
2010	Ministry - office costs wages	0.50%		200482		200,482	39
2012	Ministry - office costs - expenses	0.50%		200482		200,482	39
2030	Ministry - printing costs	0.00%		0		0	0
2011	Ministry - general	0.00%		0		0	0
	Ministry Sub-total					400,964	79
2070	Public Rel. - wages & expenses	0.35%		140337		140,337	28
2072	Public Rel. - adv., media, displays	0.35%		140337		140,337	28
2073	Public Rel. - opening ceremonies	0.01%		4010	0	4,010	1
2071	Public Rel. - general	0.00%		0		0	0
	Public Relations Sub-total					284,684	56
2040	Legal Costs - lawyers fees	0.01%		4010		4,010	1
2041	Legal Costs - general	0.00%		0		0	0
	Legal Costs Sub-total					4,010	1
2080	Insurance - const./ liability, E&O	0.05%		20048		20,048	4
2081	Insurance - general	0.00%		0		0	0
	Legal Costs Sub-total					20,048	4
2099	Project Management Contingency	20.0%		302327		302,327	59
	TOTAL PROJECT MANAGEMENT COSTS					1,813,960	356
4000	LAND	$/Building		# buildings	LS	10	.
4010	Land(Code -Mrkt,ROW,Serv,Imp.V,Ease.	250,000	Res	10	0	2,905,000	570
	Acquisition Sub-total	2,000,000	Con	0	0	2,905,000	570
4020	Land(Code -Bus.,5%,Mrg.P,Rel$,P/Tax,E	10.00%		290500	0	290,500	57
4030	Land(Code -Owners(LS,Apprsl,Rprt,Lgl,Ir	7.00%		203350	0	203,350	40
4040	Land(Code -Demolition	0.00%		0	100000	100,000	20
4050	Land(Code -Pro.Man,P.Tax,Util,Security	1.00%		29050	0	29,050	6
4060	Land(Code -Not Used						
4070	Land(Code -Not Used						
4080	Land(Code -Acq.F,M/Sal,TrvlV,Cntr.S,Ap	7.00%		203350	0	203,350	40
4090	Land(Code -Surveys	0.00%		0	20000	20,000	4
	Associated costs-sub-total			726250		846,250	166
4099	Land Contingency Sub-total	20.0%		750250	0	750,250	147
	TOTAL LAND COSTS					4,501,500	883

Description	No.	Units	Quantity	Rate	Total
				-	-

3.77%

1 Hectare = 10,000 Square Meters
1 Hectare = 2.471 Acres
1 Acre = 43,560 square feet

	Planned ROW	13.5	
10.00%	Req. ROW	13.5	
7.00%	Cost/Ha	30,000	107,637
3.44%	Cost/M2	3.00	10.76
1.00%	Cost /Acre	12,141	43,560
	Cost /Ft2	0.28 $	1.00
29.13%			
7.00%	Demo./unit	$ 10,000	
0.69%	Survey /unit	$ 2,000	

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-19
E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY
CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est: # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve	0.0%	Land
Contingency	20.0%	20.0%
Division/Site	Route-19	
Road Type	2	
Length	5100	L.M.

2 ln Rd.& Suspension Br.	2 ln Rd.& Suspens
	0
Nanaimo - Gabriola Island	Nanaimo SITE C/L
Route-19	Route-19
2	2
5100	5100
MR	

Road Types: 1. 2ln Frontage; 2. 2ln Acc Rds; 3. 4ln Acc Rds; 4.R4L-4L EXP R/B; 5.R2/3L-4L EXP R/B; 6.Retr.4L-4LEX R/B; 7.R4L-4LEX R/B E/S; 8. New 4L EXP R/B; 9. R-E4L-4L D/M; 10.N 4L EXP D/M; 11.N 4L EXP D/E/M; 12.N2L;F4LEXP D/M; 13.INST.R/B-EX.RD; 14.AS IS; 15. Misc.; 20.I/C Str.&Ramps; 21. Bridges; 22. Grade Sep.

46,411,844

Code	Description	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values	MR		Description	No.	Units	Quantity	Rate	Total
9800	MANAGEMENT RESERVE												
	MAN. RES. - planning	0.0%		0		0	0					-	-
	MAN. RES. - preliminary design	0.0%		210604		0	0					-	-
	MAN. RES. - utility construction	0.0%		183600		0	0					-	-
	MAN. RES. - grade construction	0.0%		4572640		0	0					-	-
	MAN. RES. - structural construction	0.0%		26103084		0	0					-	-
	MAN. RES. - paving construction	0.0%		797351		0	0					-	-
	MAN. RES. - operation construction	0.0%		296099		0	0					-	-
	MAN. RES. - roadside construction	0.0%		0		0	0					-	-
	MAN. RES. - other construction	0.0%		1384320		0	0					-	-
	MAN. RES. - project management	0.0%		1813960		0	0					-	-
	MAN. RES. - land	0.0%		4501500		0	0					-	-
	MAN. RES. - detailed eng.	0.0%		3237448		0	0					-	-
	MAN. RES. - residency eng.	0.0%		3311238		0	0					-	-
	MAN. RES. - Contingency	0.0%		0		0	0					-	-
	TOTAL MANAGEMENT RESERVE			46411844		0	0					-	-
								Description					-
	TOTAL LESS ESCALATION			0	46411844			Description	No.	Units	Quantity	Rate	Total
	FISCAL											-	-
9900	ESCALATION											-	-
	YEAR PROJECTED ESCALATION	COMPLETE		$ DONE								-	-
	2002-2003 0.5750%	5.00%		0		0	0					-	-
	2003 - 2004 0.6250%	10.00%		0		0	0					-	-
	2004-2005 1.0000%	35.00%		0		0	0					-	-
	2005-2006 1.0000%	45.00%		0		0	0					-	-
	2006-2007 1.0000%	5.00%		0		0	0					-	-
	2007-2008 1.0000%	0.00%		0		0	0					-	-
	2008-2009 1.0000%	0.00%		0		0	0					-	-
	2009-2010 1.0000%	0.00%		0		0	0					-	-
	2010-2011 1.0000%	0.00%		0		0	0					-	-
	TOTAL ESCALATION	100.00%		0		0	0					-	-
	PART 2 SUMMARY NON-CONSTRUCTION COSTS											-	-
	Non-Construction					5,262,884	1032					-	-
	Non-Const. Contingency					1,052,577	206					-	-
	TOTAL NON-CONSTRUCTION COSTS					6,315,460	1238					-	-
Route-19	**TOTAL FOR ROAD TYPE**	2				46,411,844	9100	Description					-

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-8
E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land
Contingency 5.0% 5.0%
Division/Site Route-8
Road Type 2
Length 4560 L.M.

2 In Rd.& Suspension Br.
Horseshoe Bay-Bowen Island Route-8
2
4560
MR

2 In Rd.& Road Types
Suspens 1. 2In Frontage
0 2. 2In Acc Rds
Horseshi 3. 4In Acc Rds
SITE C/LI 4.R4L-4L EXP R/B
Route-8 5.R2/3L-4L EXP R/B
2 6.Retr.4L-4LEX R/B
4560 7.R4L-4LEX R/B E/S
8. New 4L EXP R/B

9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 1,712,153,394
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

	DESCRIPTION	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values	Previous Estimate	Diff.	Cost/LM	% of T	% of TC
	SUMMARY BY ACTIVITY LEVEL									
2000	PROJECT MANAGEMENT					0	-61869106	13568	3.6%	3.6%
2500	PLANNING					0	0	0	0.0%	0.0%
3000	PRELIMINARY DESIGN					0	-1565018	343	0.1%	0.1%
3500	DETAILED DESIGN					0	-80244806	17598	4.7%	4.7%
	Total Engineering					0	-81809824	17941	4.8%	4.8%
4000	LAND ACQUISITION					0	-5810000	1274	0.3%	0.3%
5000	GRADE CONSTRUCTION					0	-1462326	321	0.1%	0.1%
5200	ROAD SIDE CONSTRUCTION					0	0	0	0.0%	0.0%
5300	OTHER CONSTRUCTION					0	-865200	190	0.1%	0.1%
5500	STRUCTURAL CONSTRUCTION					0	-1363121735	298930	79.6%	79.6%
6000	PAVING CONSTRUCTION					0	-114102	25	0.0%	0.0%
6500	OPERATIONAL CONSTRUCTION					0	-628547	138	0.0%	0.0%
6700	UTILITY CONSTRUCTION					0	-136800	30	0.0%	0.0%
6800	RESIDENT ENGINEERING					0	-114804641	25176	6.7%	6.7%
	Total Construction					0	-1481133351	324810	86.5%	86.5%
9700	CONTINGENCY					0	-81531114	17880	4.8%	4.8%
	SUB-TOTAL					0	-1712153394	375472	100.0%	100.0%
9800	MANAGEMENT RESERVE					0	0	0	0.0%	0.0%
	TOTAL					0	-1712153394	375472	100.0%	100.0%
9900	ESCALATION					0	0	0		0.0%
	TOTAL COST					0	-1712153394	375472		100.0%
	Constr. Less Resident Eng.					0	-1366328710	299633		

ENG. & PM	150,862,876	33084
LAND	6,100,500	1338
CONST.	1,555,190,018	341050
MAN. RES.	0	0
ESC.	0	0
TOTAL	1,712,153,394	375472

Route-8 **Assumptions**

1 Existing Right-Of -Way m

2 New Addition Right-Of -Way partial taking Yes m

	Shoulder	Lane	Lane	Median	Lane	Lane	Shoulder
Existing Rd	-	-	-	-	-	-	-
Pvmt Width	0.0						
New Rd.	2.00	-	3.70	-	3.70	-	2.00
Pvmt Width	11.4						

NOTES:

	Bridges		Width(m)	Length(m)
3.1	Sup/br. Span 2300lm		35.0	3680.0
3.2		0	0.0	0.0
3.3		0	0.0	0.0
3.4		0	0.0	0.0
3.5		0	0.0	0.0

	Tunnels	Length(m)	Width(m)	Height(m)
4.1	2lnSt.w-x	0	12.0	8.27
4.2	x-Pass.Tl	0	3.0	3.16
4.3	shaft	0	2.0	Diameter
4.4	snowshedlength (lm)	0		

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-8
E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land
Contingency 5.0% 5.0%
Division/Site Route-8
Road Type 2
Length 4560 L.M.

2 In Rd.& Suspension Br.
Horseshoe Bay-Bowen Island Route-8
2
4560
MR

2 In Rd.& Suspens
0
Horseshi SITE C/L
Route-8
2
4560

Road Types
1. 2In Frontage
2. 2In Acc Rds
3. 4In Acc Rds
4.R4L-4L EXP R/B
5.R2/3L-4L EXP R/B
6.Retr.4L-4LEX R/B
7.R4L-4LEX R/B E/S
8. New 4L EXP R/B
9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 1,712,153,394
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

2500	PLANNING											
2521	Consultant	- transport. planning study	0.00	LM	0		0	0				
2531	Consultant	- corridor study	0.00	LM	0		0	0				
2541	Consultant	- functional plan. study	0.00	LM	0		0	0				
2502	Consultant	- general	0.0%		0		0	0				
	Consultant sub-total						0	0				
2510	Ministry	- project ident.	0.00	LM	0		0	0				
2520	Ministry	- transport. planning study	0.00	LM	0		0	0				
2530	Ministry	- corridor study	0.00	LM	0		0	0				
2540	Ministry	- functional study	0.00	LM	0	0	0	0				
2501	Ministry	- general	0.0%		0		0	0				
	Ministry Sub-total				0		0	0				
2599	Planning Contingency		5.0%		0		0	0				
	TOTAL PLANNING						0	0				
3000	PRELIMINARY DESIGN											
3013	Consultant	- aerial base plan	0.00	LM	0		0	0				
3014	Consultant	- mapping & prel.	10.00	LM	45600		45,600	10				
3015	Consultant	- control survey	0.00	LM	0		0	0				
3021	Consultant	- environmental impact	3.00	LM	13680		13,680	3				
3031	Consultant	- funct.-road field survey	8.00	LM	36480		36,480	8				
3041	Consultant	- functional design	5.00	LM	22800	0	22,800	5				
3051	Consultant	- funct. des. structural	0.00	LM	0	1431278	1,431,278	314	Structural	0.10%		
3061	Consultant	- geotechnical design	3.00	LM	13680		13,680	3				
3071	Consultant	- right-of-way research	0.00	LM	0	1500	1,500	0	$/Prop.	$ 150		
3002	Consultant	- general	0.0%		0		0	0				
	Consultant sub-total						1,565,018	343				
3010	Ministry	- aerial base plan	0.00	LM	0		0	0				
3011	Ministry	- mapping	0.00	LM	0		0	0				
3012	Ministry	- control survey	0.00	LM	0		0	0				
3020	Ministry	- environmental impact	0.00	LM	0		0	0				
3030	Ministry	- funct.-road field survey	0.00	LM	0		0	0				
3040	Ministry	- functional design	0.00	LM	0		0	0				
3050	Ministry	- funct. des. structural	0.00	LM	0		0	0				
3060	Ministry	- geotechnical design	0.00	LM	0		0	0				
3070	Ministry	- right-of-way research	0.00	LM	0		0	0				
3001	Ministry	- general	0.0%		0		0	0				
	Ministry Sub-total						0	0				
3099	Preliminary design Contingency		5.0%		78251		78,251	17				
	TOTAL PRELIMINARY DESIGN						1,643,269	360				

Description	No.	Units	Quantity	Rate	Total
					-

Description

Description	No.	Units	Quantity	Rate	Total
					-

Description

Description	No.	Units	Quantity	Rate	Total
					-

Description

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-8
E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land
Contingency 5.0% 5.0%
Division/Site Route-8
Road Type 2
Length 4560 L.M.

						2 ln Rd.& Suspension Br.	2 ln Rd.& Suspens	Road Types
							0	1. 2ln Frontage
						Horseshoe Bay-	Horsesh	2. 2ln Acc Rds
						Bowen Island	SITE C/L	3. 4ln Acc Rds
						Route-8	Route-8	4.R4L-4L EXP R/B
						2	2	5.R2/3L-4L EXP R/B
						4560	4560	6.Retr.4L-4LEX R/B
						MR		7.R4L-4LEX R/B E/S
								8. New 4L EXP R/B

9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 1,712,153,394
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

		Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values			
6700	UTILITIES							
6710	Util. Prov. - Hydro	10.00	lm	4560	0	45,600	10	
6711	Util. Prov. - Telephone	20.00	lm	4560	0	91,200	20	
	Util. Prov. sub-total					136,800	30	
6712	Util.Others - pipelines	0.00	lm	0		0	0	
6713	Util.Others - telecommunication	0.00	lm	0		0	0	
6714	Util.Others - storm & sewer inspect.	0.0%		0		0	0	
6715	Util.Others - waterworks inspect.	0.0%		0		0	0	
6716	Util.Others - engineering services	0.00	LM	0		0	0	
6717	Util.Others - parks/recreation-prel.	0.00	LM	0		0	0	
6718	Util.Others - transit	0.00	LM	0		0	0	
6719	Util.Others - tr-ops/signs & detours	0.00	LM	0		0	0	
6701	Util.Others - general	0.0%		0		0	0	
	Util.Others sub-total					0	0	
6799	Util.Others Contingency	5.0%		6840	0	6,840	2	
	TOTAL UTILITIES					143,640	32	
5000	GRADE CONSTRUCTION	U. Price	Unit	Quantity	Lump Sum			
5032	Grade Cons - water	225.00	lm	0	0	0	0	
5033	Grade Cons - sanitary	150.00	lm	0	0	0	0	
5034	Grade Cons - storm	175.00	lm	0		0	0	
5031	Grade Cons - mobilization	3.0%		0		0	0	
5039	Grade Cons - utility contingency	5.0%		0		0	0	
	Grade Const. Utilities Sub-total					0	0	
5010	Grade Cons - site prep./clear,grubbing	8,000	ha	2.64	0	21,116	5	
5020	Grade Cons - road grade/exc,placing,fill	15.48	m3	36027	0	557,627	122	
5030	Grade Cons - drainage/pipe,cul.	0.00	LM	0	14828	14,828	3	
5040	Grade Cons - multiplate	10000	lm	0		0	0	
5050	Grade Cons -SGSB/produce,place,comp	18.00	m3	6683		120,294	26	
5051	Grade Cons -CBC/produce,place,comp	20.00	m3	4166		83,323	18	
5060	Grade Cons - grade finishing landscaping	0.00	m2	16364		0	0	
5061	Grade Cons - grade finishing hydro seed.	0.40	m2	16364		6,545	1	
5062	Grade Cons - grade finishing fencing	60.00	lm	0		0	0	
5063	Grade Cons - noise barriers	110.00	m2	0		0	0	
5064	Grade Cons - passing lanes	0.00	lm	0		0	0	
5090	Grade Cons - sidewalks,curb & gutter	60.00	lm	0	0	0	0	
5005	Grade Cons -detours c/w ex,bf,paving	40000	NO	4.0	456000	616,000	135	
5001	Grade Cons - mobilization	3.0%		42592		42,592	9	
5099	Grade Cons - Contingency	5.0%		73116		73,116	16	
	Grade Construction Sub-total					1,535,443	337	
	GRADE CONSTRUCTION COSTS					1,535,443	337	
3510	Grade Eng. - detailed design	7.00%		107481		107,481	24	
3519	Grade Eng. - detailed design/Contingency	5.0%		5374		5,374	1	
6810	Grade Eng. - general const. supervision	4.60%		70630		70,630	15	
6811	Grade Eng. - quality assurance	3.20%		49134		49,134	11	
6812	Grade Eng. - surveying	2.00%		30709		30,709	7	
6819	Grade Eng. - Residency Contingency	5.0%		7524		7,524	2	
	Grade Engineering Sub-total					270,852	59	
	Total Grade Const. & Eng. Costs					1,806,295	396	

Description	No.	Units	Quantity	Rate	Total
					-
					-
					-
					-
					-
					-
					-
					-
					-
Description					-

	(m3)	(unit $)	($)		
Fill	0				
Rock	28043	18.00	504773	85%	
O.M.	4949	7.00	34641		
Strip.	3035	6.00	18213	0.100	
Borrow	0	12.00	0		
Misc./LS	0	4.00	0	Surplus Mtl	Neat vol.cal 0
Total	36027	15.48	557627		

	Spec 2 ln Rd.& Road	Spec Road	Pl/PL 30.0 Ditch Width	Ditch Width	Spec. Resurface Road ONLY
pl to pl	30.00	0.00	2.0	0.0	
*no./lane	2	0	Col L Vol.	Col. M Vol.	0
*lane wid	3.7	0.0	36,027	-	0.0
*med	0.0	0.0	Pmt W=	11.4	0.0
*shldrs tot	4.0	0.0	CBC. slope	CBC. slope	0.0
c.b.c.(w)	12.5	0.0	2.5	0.0	A.C. (mm) 0
sgsb (w)	14.7	0.0			
SGSBslope :1	2.5	0.0			A.B.C. (mm) 0
*depth(d)	2.000	0.000	15%		0
*road (l)	880	0			Appl. rate 1.75
*no.cul./kil	5.0	0.0	$ 500		
cul.(l)	15.80	0.00	$ 150		
*sgsb (d)	0.45	0.00	15%		
*cbc (d)	0.33	0.00	15%		
*Add.ROW	-6.68	0.00			
X-m3/lm	40.94	0.00			

C&G $/LM	$40.00	Exp-100kmp	Exp- 80kmp	Coll-80kmp
Decel.(T-lm)		520	440	260
Accel.(T-lm)		950	630	80
Left T.(T-lm)		716	596	456
TOTAL		2186	1666	796

Gravel 2.0Tonnes/m3

Drainage	No.	Units	Quantity	Rate	Total
Box Cul.	0	lm	45	3500	-
Head Walls	0	ea.	2	5000	-
					-
					-
					-
					-
					-
					-
					-
					-
Drainage					-

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-8	Man. Reserve 0.0%	Land 5.0%	2 ln Rd.& Suspension Br.	2 ln Rd.& Suspens	Road Types	9. R-E4L-4L D/M
E.Wolski Consulting **BC Ferries**	Contingency 5.0%				1. 2ln Frontage	10.N 4L EXP D/M
(2002 Dollars) **Island Connections**	Division/Site Route-8			0	2. 2ln Acc Rds	11.N 4L EXP D/E/M
ACTIVITY	Road Type 2		Horseshoe Bay-	Horsesh	3. 4ln Acc Rds	12.N2L;F4LEXP D/M
CODE EST.DATE Jan. 16, 2002	Length 4560 L.M.		Bowen Island	SITE C/LN	4.R4L-4L EXP R/B	13.INST.R/B-EX.RD
Conceptual Est. R1 DATE:	========		Route-8	Route-8	5.R2/3L-4L EXP R/B	14.AS IS 15. Misc. 1,712,153,394
Blk Est. # 6.1 R2 DATE:	Unit Price / Unit / Cost-Quant. PerSection	Lump Sum Values	2	2	6.Retr.4L-4LEX R/B	20.I/C Str.&Ramps
Version Dec.4./01 DESCRIPTION			4560	4560	7.R4L-4LEX R/B E/S	21. Bridges
			MR		8. New 4L EXP R/B	22. Grade Sep.

Code	Description	Unit Price	Unit	Quantity	Lump Sum	Route-8	MR
5500	STRUCTURAL CONSTRUCTION						
5522	Struct.Cons - water	225.00	lm	0		0	0
5523	Struct.Cons - sanitary	150.00	lm	0		0	0
5524	Struct.Cons - storm	175.00	lm	0		0	0
5521	Struct.Cons - mobilization	3.0%		0		0	0
5599	Struct.Cons - utility contingency	5.0%		0		0	0
	Structural Const. Utilities Sub-total					0	0
5510	Struct.Cons - tunnel site preparation	0.00	lm	0	0	0	0
5511	Struct.Cons - tunnel construction	-	lm	0		0	0
5512	Struct.Cons - snow shed site prep.	0.00	lm	0		0	0
5513	Struct.Cons - snow shed site const.	-	lm	0		0	0
					Demolition		
5514	Struct.Cons - bridge site preparation	1	LS	13103160	0	13,103,160	2874
5515	Struct.Cons - bridge piers	1	LS	237000000		237,000,000	51974
5516	Struct.Cons - bridge abutments	1	LS	300516000		300,516,000	65903
5517	Struct.Cons - bridge superstructure	1	LS	772800000		772,800,000	169474
5518	Struct.Cons - retain. wall site prep.	1	LS			0	0
5519	Struct.Cons - retaining wall const.	525	m2	0		0	0
5501	Struct.Cons - mobilization	3.0%		39702575		39,702,575	8707
5529	Struct.Cons - Contingency	5.0%		68156087		68,156,087	14947
	Structural Construction Sub-total					1,431,277,822	313877
	STRUCTURAL CONSTRUCTION COSTS					1,431,277,822	313877
3520	Struct. Eng. - detailed design	5.00%		71563891		71,563,891	15694
3529	Struct. Eng. - detailed design/Contingency	5.0%		3578195		3,578,195	785
6820	Struct. Eng. - general const. supervision	4.50%		64407502		64,407,502	14124
6821	Struct. Eng. - quality assurance	3.00%		42938335		42,938,335	9416
6822	Struct. Eng. - surveying	0.50%		7156389		7,156,389	1569
6829	Struct. Eng. - Residency Contingency	5.0%		5725111		5,725,111	1256
	Structural Engineering Sub-total					195,369,423	42844
	Total Structural & Eng. Costs					1,626,647,244	356721

Code	Description	Unit Price	Unit	Quantity	SM./OIL	Route-8	MR
6000	PAVING CONSTRUCTION						
6020	Paving Con - machine paving asphalt	40.00	t	2528	17556	110,778	24
6030	Paving Con - machine paving concrete	0.00	m2			0	0
6040	Paving Con - hot reprofiling	0.00	m2	10032		0	0
6050	Paving Con - shoulder paving	0.00	t	1014		0	0
6060	Paving Con - pavement finishing	75.00	m2	0		0	0
6070	Paving Con - seal coating	0.00				0	0
6001	Paving Con - mobilization	3.0%		3323		3,323	1
6010	Paving Con - pavement design	0.0%		0		0	0
6099	Paving Con - Contingency	5.0%		5705		5,705	1
	PAVING CONSTRUCTION COSTS					119,807	26
3560	Paving Eng - detailed design	7.00%		8386		8,386	2
3569	Paving Eng - detailed design/Contingency	5.0%		419		419	0
6860	Paving Eng - general const. supervision	3.00%		3594		3,594	1
6861	Paving Eng - quality assurance	5.00%		5990		5,990	1
6862	Paving Eng - surveying	1.00%		1198		1,198	0
6869	Paving Eng - Residency Contingency	5.0%		539		539	0
	Paving Engineering Sub-total					20,128	4
	Total Paving Const. & Eng. Costs					139,934	31

Brdge	Site $	Piers $	Abut. $	abut. extra length (lm)	
1	13,103,160	237,000,000	########	8	1%
2	-	-	-		0%
3	-	-	-		0%
4	-	-	-		0%
5	-	-	-		0%
	Pier/Ht	Pier No.	P/$/VLM	Abut/$/HLM	
1	300	2	95000	6000	
2	0		0		
3					
4					
5					
	(W)	(L)	($/m2)	Net Cost	
DECK #1	35.00	3680.00	6000.00	1363121735	
DECK #2				0	
DECK #3				0	
DECK #4				0	
DECK #5				0	
			Gross/m2	Net/m2	
1	Sup/br. Span 2300lm		11112.41	10583.24	
2			#DIV/0!	#DIV/0!	Tnnl $/lm -Net
3			#DIV/0!	#DIV/0!	-
4			#DIV/0!	#DIV/0!	Tnnl $/lm -Gross
5			#DIV/0!	#DIV/0!	-

	2lnSt.w-x 1-D-Shape	x-Pass.Tl 2-D-Shape	shaft 1-Circle			
Tunnel L=	0	-	0	Radius-1-D	Per.S&Rf	7.267 / 24.32
Tun. H1	5.100	2.550	Radius		m2/rkac	6.25
C.Pt. H4	1.00	1.00	1.00		Tnnl height	8.27
Tun.W	12.00	3.00	Wall Tk.	Radius-2-D		2.157
RFLT.	0.250	0.250	0.250		Per.S&Rf	8.42
WLT.	0.250	0.250	SOBT		m2/rkac	6.25
BST.	0.500	0.200	0.100		Tnnl height	3.16
TOBT	0.100	0.100	Exc.-m3		-	-
SOBT	0.100	0.100	Obk-m3		-	-
BOBT	0.100	0.100	Liner-m3		-	-

Items	Quantity	rate	Total $	Avg.$/ tot-lm	1-Circle
Exc.-m3	0	100	0	#DIV/0!	0
Obk-m3	0	2625	0	#DIV/0!	0
Rk anch-Ea	0	1125	0	#DIV/0!	0
Misc.-lm	0	2500	0	#DIV/0!	0
Liner-m3	0	1050	0	#DIV/0!	10.00
Drainage-lm	0	550	0	#DIV/0!	%
Lighting-m	0	900	0	#DIV/0!	5%
Mech-m	0	2100	0	#DIV/0!	15%
Misc.-lm	0	1000	0	#DIV/0!	3%
1Tonne=16.67m2/25mm			0	#DIV/0!	snowshed

60kg=1m2/25mm		1.5L =1M2 (P)		length (lm)	0.0
asphalt	(T)=mm	.25L =1M2 (T)		Roof	1.0
A.C.	100	0		$ 21.00	0.05
A.B.C.	0	0	0.80	$ 800.00	-
$Oil/Litre	$0.55	5%	Walls	2.0	8.00
Appl. rate	1.75	1.75	0.80	$ 1,100.00	-
Pavement Removal		(See I155)	Base	1.0	15.00
m3	$/m3	Total	0.60	$ 600.00	-
0	$20.00	0	Exc.-m3	1.0	15.00
Milling			20.00	$ 60.00	-
m3	$/m3	Total	Drainage	$ 400.00	-
0	$80.00	0	Electrical	$ 1,500.00	-
			Mech.	$ 950.00	-
			Misc.	$ 300.00	-
				#DIV/0!	-

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-8
E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land 5.0%
Contingency 5.0%
Division/Site Route-8
Road Type 2
Length 4560 L.M.

2 In Rd.& Suspension Br.
Horseshoe Bay-Bowen Island Route-8
2
4560
MR

2 In Rd.& Suspens
0
Horseshi
SITE C/L
Route-8
2
4560
Pole

2 Road Types
1. 2In Frontage
2. 2In Acc Rds
3. 4In Acc Rds
4.R4L-4L EXP R/B
5.R2/3L-4L EXP R/B
6.Retr.4L-4LEX R/B
7.R4L-4LEX R/B E/S
8. New 4L EXP R/B
Sp. (lm) 55 No. of Sides 1 Length 4560

9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 1,712,153,394
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

Blk Est. # 6.1 Version Dec.4./01	DESCRIPTION	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values			
6500	OPERATIONAL CONSTRUCTION							
6510	Operat.Con - lighting	5500.00	Ea	83		456,500	100	
6520	Operat.Con - signals	-	Ea	0	0	0	0	
6530	Operat.Con - signing	2.00	LM	9120		9,120	2	
6540	Operat.Con - guard rail	70.00	lm	2000	0	140,000	31	
6550	Operat.Con - pavement markings	1.75	lm	2640	0	4,620	1	
6501	Operat.Con - mobilization	3.0%		18307		18,307	4	
6599	Operat.Con - contingency	5.0%		31427		31,427	7	
	OPERATIONAL CONSTRUCTION COSTS					659,975	145	
3540	Operat. Eng - detailed design	7.00%		46198		46,198	10	
3549	Operat. Eng - detailed design/Contingency	5.0%		2310		2,310	1	
6840	Operat. Eng - general const. supervision	6.00%		39598		39,598	9	
6841	Operat. Eng - quality assurance	2.00%		13199		13,199	3	
6842	Operat. Eng - surveying	1.00%		6600		6,600	1	
6849	Operat. Eng - Residency Contingency	5.0%		2970		2,970	1	
	Operational Enginering Sub-total					110,876	24	
	Total Operational Const. & Eng. Costs					770,850	169	
5200	ROAD SIDE CONSTRUCTION	Unit Price	Unit	Quantity	Lump Sum			
5203	RoadSide C - water	225.00	lm	0		0	0	
5204	RoadSide C - sanitary	150.00	lm	0		0	0	
5205	RoadSide C - storm	175.00	lm	0		0	0	
5202	RoadSide C - mobilization	3.0%		0		0	0	
5209	RoadSide C - Utility Contingency	5.0%		0		0	0	
	Road Side Const. Utilities Sub-total					0	0	
5210	RoadSide C - weighscales	-	ea	0	0	0	0	
5220	RoadSide C - safety rest areas	-	ea	0	0	0	0	
5230	RoadSide C - tourist rest & view areas	40000	ea	0	0	0	0	
5201	RoadSide C - mobilization	3.0%		0		0	0	
5299	RoadSide C - Contingency	5.0%		0		0	0	
	Road Side Construction Sub-total			0		0	0	
	ROAD SIDE CONSTRUCTION COSTS					0	0	
3550	RoadSide E - detailed design	10.00%		0		0	0	
3559	RoadSide E - detailed design/Contingency	5.0%		0		0	0	
6850	RoadSide E - general const. supervision	6.00%		0		0	0	
6851	RoadSide E - quality assurance	2.00%		0		0	0	
6852	RoadSide E - surveying	1.00%		0		0	0	
6859	RoadSide E - Residency Contingency	5.0%		0		0	0	
	Road Side Engineering Sub-total					0	0	
	Total Road Side Const. & Eng. Costs					0	0	
5300	OTHER CONSTRUCTION	Unit Price	Unit	Quantity	Lump Sum			
5303	Other Cons - water	225.00	lm	0		0	0	
5304	Other Cons - sanitary	150.00	lm	0		0	0	
5305	Other Cons - storm	175.00	lm	0		0	0	
5302	Other Cons - mobilization	3.0%		0		0	0	
5309	Other Cons - utility contingency	5.0%		0		0	0	
	Other Const. Utilities Sub-total					0	0	
5310	Other Cons - railroads main & spur lines	-	lm	0		0	0	
5320	Other Cons - railroad crossings	-	ea	0		0	0	
5330	Other Cons - marine work	-	ea	0		0	0	
5340	Other Cons - environmental mitigations	280,000	ea	3		840,000	184	
5301	Other Cons - mobilization	3.0%		25200		25,200	6	
5399	Other Cons - Contingency	5.0%		43260		43,260	9	
	Other Construction Sub-total					908,460	199	
	OTHER CONSTRUCTION COSTS					908,460	199	
3570	Other Eng. - detailed design	7.00%		63592	0	63,592	14	
3579	Other Eng. - detailed design/Contingency	5.0%		3180		3,180	1	
6870	Other Eng. - general const. supervision	3.00%		27254	0	27,254	6	
6871	Other Eng. - quality assurance	3.00%		27254		27,254	6	
6872	Other Eng. - surveying	3.00%		27254		27,254	6	
6879	Other Eng. - Residency Contingency	5.0%		4088		4,088	1	
	Other Engineering Sub-total					152,621	33	
	Total Other Const. & Eng. Costs					1,061,081	233	

Signals

LP $/lm $ 1.00 Refl. Sp. 20.00
Ext. Lines 1.0 Refl.$/ea $ 15.00

Weighscale	No.	Units	Quantity	Rate	Total
Buildings	0	m2	60	2,800.00	-
Pit & Apron	0	m2	120	400.00	-
S&I W/S	0	ea	1	80,000.00	-
Parking Lot	0	m2	9000	40.00	-
Road Const.	0	lm	1,500	400.00	-
light/signs	0	ls	1	50,000.00	-

Weighscale

Safety Rest Area	No.	Units	Quantity	Rate	Total
Class A&B		SAFETY REST AREAS			
Buildings	0	m2	100	3,000.00	-
Class C					-
Site/toilets	0	ea	2	12,500.00	-
Parking Lot	0	m2	2500	40.00	-
Road Const.	0	lm	800	350.00	-
Furnishings	0	ls	-	10,000.00	-
Landscaping	0	ls	1	5,000.00	-
light/signs	0	ls	-	50,000.00	-

SAFETY REST AREAS

Description	No.	Units	Quantity	Rate	Total
	0		0	-	-
	0		0	-	-
	0		0	-	-
	0		0	-	-

Description

Railway	No.	Units	Quantity	Rate	Total
Removal	0	tklm	1.00	21.00	-
Track Cnst.	0	tklm	1.00	320.00	-
Ballast	0	m3	1.13	35.00	-
Sub-ballast	0	m3	0.96	25.00	-
Resurfacing	0	tklm	1.00	10.00	-
Tie-ins	0	ea	1.00	2800.00	-
Turnout # 9	0	ea	1.00	35000.00	-
Others	0	ls	1.00	0.00	-
	0				-
Earthworks (see grading)	0	lm	1	0.00	-

Railway

R/rd X-ing	No.	Units	Quantity	Rate	Total
Planks	0	tklm	45	1750.00	-
Sig./gates	0	each	1	200,000	-
				-	-
				-	-

R/rd X-ing

Description	No.	Units	Quantity	Rate	Total
				-	-
				-	-
				-	-
				-	-
				-	-
				-	-

Description

Environment	No.	Units	Quantity	Rate	Total
Mitigation	3	ls	4	50,000	600,000
Ponds	3	ea	2	40,000	240,000
				-	-
				-	-
				-	-
				-	-

Environmental 840,000

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ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land 5.0%
Contingency 5.0%
Division/Site Route-8
Road Type 2
Length 4560 L.M.

		Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values	2 ln Rd.& Suspension Br.	2 ln Rd.& Suspens
3500	DETAILED DESIGN from 3510,3520,3540,3550,3570					75,379,026	16530
3530	Geotech. E - detailed design	0.45%		6455257	2000000	8,455,257	1854
3539	Geotech. E - Contingency	5.0%		422763		422,763	93
	TOTAL DETAILED DESIGN COSTS					84,257,046	18477
6800	RESIDENT ENGINEERING from 6810,6820,6840,6850,6860,6870					120,544,873	
	TOTAL RESIDENT ENG. COSTS					120,544,873	26435
						0	
						0	0
	PART 1 SUMMARY CONSTRUCTION					1,366,328,710	299633
	ENGINEERING & SUPERVISION					196,614,464	43117
	CONTRACTUAL CONTINGENCY					78,147,159	17138
						0	0
	CONSTRUCTION COST TOTAL	DIVISION/SITE		Route-8		1,641,090,333	359888
2000	PROJECT MANAGEMENT						
2060	Project Mar - office costs wages	2.00%		32821807		32,821,807	7198
2062	Project Mar - office costs - expenses	0.00%		0		0	0
2063	Project Mar - printing costs	0.00%		0		0	0
2061	Project Mar - general	0.00%		0		0	0
	Project Manager Sub-total					32,821,807	7198
2010	Ministry - office costs wages	0.50%		8205452		8,205,452	1799
2012	Ministry - office costs - expenses	0.50%		8205452		8,205,452	1799
2030	Ministry - printing costs	0.00%		0		0	0
2011	Ministry - general	0.00%		0		0	0
	Ministry Sub-total					16,410,903	3599
2070	Public Rel. - wages & expenses	0.35%		5743816		5,743,816	1260
2072	Public Rel. - adv., media, displays	0.35%		5743816		5,743,816	1260
2073	Public Rel. - opening ceremonies	0.01%		164109	0	164,109	36
2071	Public Rel. - general	0.00%		0		0	0
	Public Relations Sub-total					11,651,741	2555
2040	Legal Costs - lawyers fees	0.01%		164109		164,109	36
2041	Legal Costs - general	0.00%		0		0	0
	Legal Costs Sub-total					164,109	36
2080	Insurance - const./ liability, E&O	0.05%		820545		820,545	180
2081	Insurance - general	0.00%		0		0	0
	Legal Costs Sub-total					820,545	180
2099	Project Management Contingency	5.0%		3093455		3,093,455	678
	TOTAL PROJECT MANAGEMENT COSTS					64,962,561	14246
4000	LAND	$/Building		# buildings	LS	10	
4010	Land(Code -Mrkt,ROW,Serv,Imp.V,Ease.	450,000	Res	10	0	4,552,000	998
	Acquisition Sub-total	2,000,000	Con	0	0	4,552,000	998
4020	Land(Code -Bus.,5%,Mrg.P,Rel$,P/Tax,E	10.00%		455200	0	455,200	100
4030	Land(Code -Owners(LS,Apprsl,Rprt,Lgl,Ir	7.00%		318640	0	318,640	70
4040	Land(Code -Demolition	0.00%		0	100000	100,000	22
4050	Land(Code -Pro.Man,P.Tax,Util,Security	1.00%		45520	0	45,520	10
4060	Land(Code -Not Used						
4070	Land(Code -Not Used						
4080	Land(Code -Acq.F,M/Sal,TrvlV,Cntr.S,Ap	7.00%		318640	0	318,640	70
4090	Land(Code -Surveys	0.00%		0	20000	20,000	4
	Associated costs-sub-total			1138000		1,258,000	276
4099	Land Contingency Sub-total	5.0%		290500	0	290,500	64
	TOTAL LAND COSTS					6,100,500	1338

2 ln Rd.8 Road Types
1. 2ln Frontage
2. 2ln Acc Rds
3. 4ln Acc Rds
4. R4L-4L EXP R/B
5. R2/3L-4L EXP R/B
6. Retr.4L-4LEX R/B
7. R4L-4LEX R/B E/S
8. New 4L EXP R/B

Horseshoe Bay-Bowen Island Route-8 2 4560 MR
Horsesh SITE C/L Route-8 2 4560

1 1 1
Bridge Tunnel Special
- - 2,000,000

9. R-E4L-4L D/M
10. N 4L EXP D/M
11. N 4L EXP D/E/M
12. N2L;F4LEXP D/M
13. INST.R/B-EX.RD
14. AS IS 15. Misc. 1,712,153,394
20. I/C Str.&Ramps
21. Bridges
22. Grade Sep.

Description	No.	Units	Quantity	Rate	Total
					-

Description	No.	Units	Quantity	Rate	Total
					-

Description	No.	Units	Quantity	Rate	Total
					-

Description	No.	Units	Quantity	Rate	Total
					-

Description	No.	Units	Quantity	Rate	Total
					-

3.77%

1 Hectare = 10,000 Square Meters
1 Hectare = 2.471 Acres
1 Acre = 43,560 square feet

	Planned ROW	2.6		
10.00%	Req. ROW	2.6		
7.00%	Cost/Ha	20,000		107,637
2.20%	Cost/M2	2.00		10.76
1.00%	Cost /Acre	8,094		43,560
	Cost /Ft2	0.19	$	1.00
27.64%				
7.00%	Demo./unit	$ 10,000		
0.44%	Survey /unit	$ 2,000		

Description	No.	Units	Quantity	Rate	Total
					-

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E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est: # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land
Contingency 5.0% 5.0%
Division/Site Route-8
Road Type 2
Length 4560 L.M.

2 In Rd.& Suspension Br.
Horseshoe Bay-Bowen Island Route-8
2
4560
MR

2 In Rd.& Suspens
0
Horsesh
SITE C/L
Route-8
2
4560

Road Types
1. 2In Frontage
2. 2In Acc Rds
3. 4In Acc Rds
4.R4L-4L EXP R/B
5.R2/3L-4L EXP R/B
6.Retr.4L-4LEX R/B
7.R4L-4LEX R/B E/S
8. New 4L EXP R/B
9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 1,712,153,394
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

Description	No.	Units	Quantity	Rate	Total
				-	-

Description	No.	Units	Quantity	Rate	Total
				-	-

	DESCRIPTION	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values		
9800	MANAGEMENT RESERVE						
	MAN. RES. - planning	0.0%		0		0	0
	MAN. RES. - preliminary design	0.0%		1643269		0	0
	MAN. RES. - utility construction	0.0%		143640		0	0
	MAN. RES. - grade construction	0.0%		1535443		0	0
	MAN. RES. - structural construction	0.0%		1431277822		0	0
	MAN. RES. - paving construction	0.0%		119807		0	0
	MAN. RES. - operation construction	0.0%		659975		0	0
	MAN. RES. - roadside construction	0.0%		0		0	0
	MAN. RES. - other construction	0.0%		908460		0	0
	MAN. RES. - project management	0.0%		64962561		0	0
	MAN. RES. - land	0.0%		6100500		0	0
	MAN. RES. - detailed eng.	0.0%		84257046		0	0
	MAN. RES. - residency eng.	0.0%		120544873		0	0
	MAN. RES. - Contingency	0.0%		0		0	0
	TOTAL MANAGEMENT RESERVE			1712153394		0	0
	TOTAL LESS ESCALATION FISCAL			0	##########		
9900	ESCALATION						
	YEAR PROJECTED ESCALATION	COMPLETE		$ DONE			
	2002-2003 0.5750%	5.00%		0		0	0
	2003 - 2004 0.6250%	10.00%		0		0	0
	2004-2005 1.0000%	35.00%		0		0	0
	2005-2006 1.0000%	45.00%		0		0	0
	2006-2007 1.0000%	5.00%		0		0	0
	2007-2008 1.0000%	0.00%		0		0	0
	2008-2009 1.0000%	0.00%		0		0	0
	2009-2010 1.0000%	0.00%		0		0	0
	2010-2011 1.0000%	0.00%		0		0	0
	TOTAL ESCALATION	100.00%		0		0	0
	PART 2 SUMMARY NON-CONSTRUCTION COSTS						
	Non-Construction					67,679,106	14842
	Non-Const. Contingency					3,383,955	742
	TOTAL NON-CONSTRUCTION COSTS					71,063,061	15584
	Route-8 TOTAL FOR ROAD TYPE	2				1,712,153,394	375472

Description	No.	Units	Quantity	Rate	Total
				-	-

Description	No.	Units	Quantity	Rate	Total
				-	-

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-6
E.Wolski Consulting BC Ferries
(2002 Dollars) Island Connections
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
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Man. Reserve 0.0% Land
Contingency 5.0% 5.0%
Division/Site Route-6
Road Type 2
Length 6600 L.M.

2 In Rd.& Suspension Br.
Vewuvius-Crofton Route-6
2
6600
MR

2 In Rd.& Road Types
Suspens 1. 2In Frontage
0 2. 2In Acc Rds
Vewuviu: 3. 4In Acc Rds
SITE C/LI 4.R4L-4L EXP R/B
Route-6 5.R2/3L-4L EXP R/B
2 6.Retr.4L-4LEX R/B
6600 7.R4L-4LEX R/B E/S
8. New 4L EXP R/B

9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 900,018,458
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

SUMMARY BY ACTIVITY LEVEL

		Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values	Previous Estimate Diff.		Cost/LM	% of T	% of TC
2000	PROJECT MANAGEMENT			-32595275	0		32,595,275	4939	3.6%	3.6%
2500	PLANNING			0	0		0	0	0.0%	0.0%
3000	PRELIMINARY DESIGN			-940021	0		940,021	142	0.1%	0.1%
3500	DETAILED DESIGN			-43244882	0		43,244,882	6552	4.8%	4.8%
	Total Engineering			-44184903	0		44,184,903	6695	4.9%	4.9%
4000	LAND ACQUISITION			-1140250	0		1,140,250	173	0.1%	0.1%
5000	GRADE CONSTRUCTION			-4069318	0		4,069,318	617	0.5%	0.5%
5200	ROAD SIDE CONSTRUCTION			0	0		0	0	0.0%	0.0%
5300	OTHER CONSTRUCTION			-865200	0		865,200	131	0.1%	0.1%
5500	STRUCTURAL CONSTRUCTION			-712686252	0		712,686,262	107983	79.2%	79.2%
6000	PAVING CONSTRUCTION			-567267	0		567,267	86	0.1%	0.1%
6500	OPERATIONAL CONSTRUCTION			-396724	0		396,724	60	0.0%	0.0%
6700	UTILITY CONSTRUCTION			-198000	0		198,000	30	0.0%	0.0%
6800	RESIDENT ENGINEERING			-60457237	0		60,457,237	9160	6.7%	6.7%
	Total Construction			-779240008	0		779,240,008	118067	86.6%	86.6%
9700	CONTINGENCY			-42858022	0		42,858,022	6494	4.8%	4.8%
	SUB-TOTAL			-900018458	0		900,018,458	136366	100.0%	100.0%
9800	MANAGEMENT RESERVE			0	0		0	0	0.0%	0.0%
	TOTAL			-900018458	0		900,018,458	136366	100.0%	100.0%
9900	ESCALATION			0	0		0	0		0.0%
	TOTAL COST			-900018458	0		900,018,458	136366		100.0%
	Constr. Less Resident Eng.			-718782771	0		718,782,771	108906		

ENG. & PM	80,619,187	12215
LAND	1,197,263	181
CONST.	818,202,009	123970
MAN. RES.	0	0
ESC.	0	0
TOTAL	900,018,458	136366

Route-6 **Assumptions**

1 Existing Right-Of -Way m

	Shoulder	Lane	Lane	Median	Lane	Lane	Shoulder
Existing Rd	-	-	-	-	-	-	-
Pvmt Width	0.0						

2 New Addition Right-Of -Way partial taking Yes m

	Shoulder	Lane	Lane	Median	Lane	Lane	Shoulder
New Rd.	2.00	-	3.70	-	3.70	-	2.00
Pvmt Width	11.4						

	Bridges		Width(m)	Length(m)
3.1	Sup/br. Span 1600lm		35.0	2100.0
3.2	Bridge on east side		12.0	125.0
3.3		0	0.0	0.0
3.4		0	0.0	0.0
3.5		0	0.0	0.0

	Tunnels	Length(m)	Width(m)	Height(m)
4.1	2lnSt.w-x	0	12.0	8.27
4.2	x-Pass.Tl	0	3.0	3.16
4.3	shaft	0	2.0	Diameter
4.4	snowshedlength (lm)	0		

NOTES:

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Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land
Contingency 5.0% 5.0%
Division/Site Route-6
Road Type 2
Length 6600 L.M.

2 In Rd.& Suspension Br.
Vewuvius-Crofton Route-6
2
6600
MR

2 In Rd.& Suspens
0
Vewuviu
SITE C/L
Route-6
2
6600

9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 900,018,458
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

Road Types
1. 2In Frontage
2. 2In Acc Rds
3. 4In Acc Rds
4.R4L-4L EXP R/B
5.R2/3L-4L EXP R/B
6.Retr.4L-4LEX R/B
7.R4L-4LEX R/B E/S
8. New 4L EXP R/B

	DESCRIPTION	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values		
2500	PLANNING						
2521	Consultant - transport. planning study	0.00	LM	0		0	0
2531	Consultant - corridor study	0.00	LM	0		0	0
2541	Consultant - functional plan. study	0.00	LM	0		0	0
2502	Consultant - general	0.0%		0		0	0
	Consultant sub-total					0	0
2510	Ministry - project ident.	0.00	LM	0		0	0
2520	Ministry - transport. planning study	0.00	LM	0		0	0
2530	Ministry - corridor study	0.00	LM	0		0	0
2540	Ministry - functional study	0.00	LM	0	0	0	0
2501	Ministry - general	0.0%		0		0	0
	Ministry Sub-total			0		0	0
2599	Planning Contingency	5.0%		0		0	0
	TOTAL PLANNING					0	0
3000	PRELIMINARY DESIGN						
3013	Consultant - aerial base plan	0.00	LM	0		0	0
3014	Consultant - mapping & prel.	10.00	LM	66000		66,000	10
3015	Consultant - control survey	0.00	LM	0		0	0
3021	Consultant - environmental impact	3.00	LM	19800		19,800	3
3031	Consultant - funct.-road field survey	8.00	LM	52800		52,800	8
3041	Consultant - functional design	5.00	LM	33000	0	33,000	5
3051	Consultant - funct. des. structural	0.00	LM	0	748321	748,321	113
3061	Consultant - geotechnical design	3.00	LM	19800		19,800	3
3071	Consultant - right-of-way research	0.00	LM	0	300	300	0
3002	Consultant - general	0.0%		0		0	0
	Consultant sub-total					940,021	142
3010	Ministry - aerial base plan	0.00	LM	0		0	0
3011	Ministry - mapping	0.00	LM	0		0	0
3012	Ministry - control survey	0.00	LM	0		0	0
3020	Ministry - environmental impact	0.00	LM	0		0	0
3030	Ministry - funct.-road field survey	0.00	LM	0		0	0
3040	Ministry - functional design	0.00	LM	0		0	0
3050	Ministry - funct. des. structural	0.00	LM	0		0	0
3060	Ministry - geotechnical design	0.00	LM	0		0	0
3070	Ministry - right-of-way research	0.00	LM	0		0	0
3001	Ministry - general	0.0%		0		0	0
	Ministry Sub-total					0	0
3099	Preliminary design Contingency	5.0%		47001		47,001	7
	TOTAL PRELIMINARY DESIGN					987,022	150

Description	No.	Units	Quantity	Rate	Total
					-

Description

Description	No.	Units	Quantity	Rate	Total
					-

Description

Structural 0.10%

$/Prop. $ 150

Description	No.	Units	Quantity	Rate	Total
					-

Description

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-6
E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land
Contingency 5.0% 5.0%
Division/Site Route-6
Road Type 2
Length 6600 L.M.

		DESCRIPTION	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values	2 In Rd.& Suspension Br. Vewuvius-Crofton Route-6 2 6600 MR	2 In Rd.& Suspens Vewuviu SITE C/L Route-6
6700	UTILITIES							
6710	Util. Prov.	- Hydro	10.00	lm	6600	0	66,000	10
6711	Util. Prov.	- Telephone	20.00	lm	6600	0	132,000	20
	Util. Prov.	sub-total					198,000	30
6712	Util.Others	- pipelines	0.00	lm	0		0	0
6713	Util.Others	- telecommunication	0.00	lm	0		0	0
6714	Util.Others	- storm & sewer inspect.	0.0%		0		0	0
6715	Util.Others	- waterworks inspect.	0.0%		0		0	0
6716	Util.Others	- engineering services	0.00	LM	0		0	0
6717	Util.Others	- parks/recreation-prel.	0.00	LM	0		0	0
6718	Util.Others	- transit	0.00	LM	0		0	0
6719	Util.Others	- tr-ops/signs & detours	0.00	LM	0		0	0
6701	Util.Others	- general	0.0%		0		0	0
	Util.Others	sub-total					0	0
6799	Util.Others	Contingency	5.0%		9900	0	9,900	2
	TOTAL UTILITIES						207,900	32
5000	GRADE CONSTRUCTION		U. Price	Unit	Quantity	Lump Sum		
5032	Grade Cons	- water	225.00	lm	0	0	0	0
5033	Grade Cons	- sanitary	150.00	lm	0	0	0	0
5034	Grade Cons	- storm	175.00	lm	0		0	0
5031	Grade Cons	- mobilization	3.0%		0		0	0
5039	Grade Cons	- utility contingency	5.0%		0		0	0
	Grade Const.	Utilities Sub-total					0	0
5010	Grade Cons	- site prep./clear,grubbing	8,000	ha	13.12	0	104,983	16
5020	Grade Cons	- road grade/exc,placing,fill	15.37	m3	158988	0	2,443,251	370
5030	Grade Cons	- drainage/pipe,cul.	0.00	LM	0	73719	73,719	11
5040	Grade Cons	- muiltiplate	10000	lm	0		0	0
5050	Grade Cons	-SGSB/produce,place,comp	18.00	m3	33225		598,052	91
5051	Grade Cons	-CBC/produce,place,comp	20.00	m3	20712		414,248	63
5060	Grade Cons	- grade finishing landscaping	0.00	m2	81353		0	0
5061	Grade Cons	- grade finishing hydro seed.	0.40	m2	81353		32,541	5
5062	Grade Cons	- grade finishing fencing	60.00	lm	0		0	0
5063	Grade Cons	- noise barriers	110.00	m2	0		0	0
5064	Grade Cons	- passing lanes	0.00	lm	0		0	0
5090	Grade Cons	- sidewalks,curb & gutter	60.00	lm	0	0	0	0
5005	Grade Cons	-detours c/w ex,bf,paving	40000	NO	0.5	264000	284,000	43
5001	Grade Cons	- mobilization	3.0%		118524		118,524	18
5099	Grade Cons	- Contingency	5.0%		203466		203,466	31
	Grade Construction	Sub-total					4,272,784	647
	GRADE CONSTRUCTION COSTS						4,272,784	647
3510	Grade Eng.	- detailed design	7.00%		299095		299,095	45
3519	Grade Eng.	- detailed design/Contingency	5.0%		14955		14,955	2
6810	Grade Eng.	- general const. supervision	4.60%		196548		196,548	30
6811	Grade Eng.	- quality assurance	3.20%		136729		136,729	21
6812	Grade Eng.	- surveying	2.00%		85456		85,456	13
6819	Grade Eng.	- Residency Contingency	5.0%		20937		20,937	3
	Grade Engineering	Sub-total					753,719	114
	Total Grade Const. & Eng. Costs						5,026,503	762

2 In Rd.& Suspens	9. R-E4L-4L D/M							
0	1. 2ln Frontage	10.N 4L EXP D/M						
Vewuviu	2. 2ln Acc Rds	11.N 4L EXP D/E/M						
SITE C/L	3. 4ln Acc Rds	12.N2L;F4LEXP D/M						
Route-6	4.R4L-4L EXP R/B	13.INST.R/B-EX.RD						
2	5.R2/3L-4L EXP R/B	14.AS IS	15. Misc.	900,018,458				
6600	6.Retr.4L-4LEX R/B	20.I/C Str.&Ramps						
	7.R4L-4LEX R/B E/S	21. Bridges						
	8. New 4L EXP R/B	22. Grade Sep.						

Description	No.	Units	Quantity	Rate	Total
					-
					-
					-
					-
					-
					-
					-
					-
					-
					-
Description					-

	(m3)	(unit $)	($)		
Fill	0				
Rock	122312	18.00	2201613	85%	
O.M.	21584	7.00	151091		
Strip.	15091	6.00	90547	0.100	
Borrow	0	12.00	0		
Misc./LS	0	4.00	0	Surplus Mtl	Neat vol.cal 0
Total	158988	15.37	2443251		Spec. Resurface Road ONLY 0
	Spec	Spec	Pl/PL		0.0
	2 In Rd.&		30.0		0.0
	Road	Road	Ditch Width	Ditch Width	0.0
pl to pl	30.00	0.00		0.0	A.C. (mm) 0
*no./lane	2	0	Col L Vol.	Col. M Vol.	A.B.C. (mm) 0
*lane wid	3.7	0.0	158,988	-	0
*med	0.0	0.0	Pmt W=	11.4	Appl. rate 1.75
*shldrs tot	4.0	0.0	CBC. slope	CBC. slope	
c.b.c.(w)	12.5	0.0	2.5	0.0	
sgsb (w)	14.7	0.0			
SGSBslope :1	2.5	0.0			
*depth(d)	2.000	0.000	15%		
*road (l)	4375	0			
*no.cul./kil	5.0	0.0	$ 500		
cul.(l)	15.80	0.00	$ 150		
*sgsb (d)	0.45	0.00	15%		
*cbc (d)	0.33	0.00	15%		
*Add.ROW	-4.68	0.00			
X-m3/lm	36.34	0.00			

C&G $/LM	$40.00	Exp-100kmp	Exp- 80kmp	Coll-80kmp
Decel.(T-lm)		520	440	260
Accel.(T-lm)		950	630	80
Left T.(T-lm)		716	596	456
TOTAL		2186	1666	796

Gravel 2.0Tonnes/m3

Drainage	No.	Units	Quantity	Rate	Total
Box Cul.	0	lm	45	3500	-
Head Walls	0	ea.	2	5000	-
					-
					-
					-
					-
					-
					-
					-
Drainage					-

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-6
E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land
Contingency 5.0% 5.0%
Division/Site Route-6
Road Type 2
Length 6600 L.M.

	DESCRIPTION	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values	2 In Rd.& Suspension Br.	2 In Rd.& Suspens
						Vewuvius-Crofton Route-6	Vewuviu SITE C/L
						2	2
						6600	6600
						MR	
5500	STRUCTURAL CONSTRUCTION	Unit Price	Unit	Quantity	Lump Sum		
5522	Struct.Cons - water	225.00	lm	0		0	0
5523	Struct.Cons - sanitary	150.00	lm	0		0	0
5524	Struct.Cons - storm	175.00	lm	0		0	0
5521	Struct.Cons - mobilization	3.0%		0		0	0
5599	Struct.Cons - utility contingency	5.0%		0		0	0
	Structural Const. Utilities Sub-total					0	0
5510	Struct.Cons - tunnel site preparation	0.00	lm	0	0	0	0
5511	Struct.Cons - tunnel construction	-	lm	0		0	0
5512	Struct.Cons - snow shed site prep.	0.00	lm	0		0	0
5513	Struct.Cons - snow shed site const.	-	lm	0		0	0
					Demolition		
5514	Struct.Cons - bridge site preparation	1	LS	7039910	0	7,039,910	1067
5515	Struct.Cons - bridge piers	1	LS	98480000		98,480,000	14921
5516	Struct.Cons - bridge abutments	1	LS	180696000		180,696,000	27378
5517	Struct.Cons - bridge superstructure	1	LS	405712500		405,712,500	61472
5518	Struct.Cons - retain. wall site prep.	1	LS			0	0
5519	Struct.Cons - retaining wall const.	525	m2	0		0	0
5501	Struct.Cons - mobilization	3.0%		20757852		20,757,852	3145
5529	Struct.Cons - Contingency	5.0%		35634313		35,634,313	5399
	Structural Construction Sub-total					748,320,575	113382
	STRUCTURAL CONSTRUCTION COSTS					748,320,575	113382
3520	Struct. Eng. - detailed design	5.00%		37416029		37,416,029	5669
3529	Struct. Eng. - detailed design/Contingency	5.0%		1870801		1,870,801	283
6820	Struct. Eng. - general const. supervision	4.50%		33674426		33,674,426	5102
6821	Struct. Eng. - quality assurance	3.00%		22449617		22,449,617	3401
6822	Struct. Eng. - surveying	0.50%		3741603		3,741,603	567
6829	Struct. Eng. - Residency Contingency	5.0%		2993282		2,993,282	454
	Structural Engineering Sub-total					102,145,759	15477
	Total Structural & Eng. Costs					850,466,334	128859
6000	PAVING CONSTRUCTION				SM./OIL		
6020	Paving Con - machine paving asphalt	40.00	t	12569	87281	550,745	83
6030	Paving Con - machine paving concrete	0.00	m2			0	0
6040	Paving Con - hot reprofiling	0.00	m2	49875		0	0
6050	Paving Con - shoulder paving	0.00	t	5040		0	0
6060	Paving Con - pavement finishing	75.00	m2	0		0	0
6070	Paving Con - seal coating	0.00				0	0
6001	Paving Con - mobilization	3.0%		16522		16,522	3
6010	Paving Con - pavement design	0.0%		0		0	0
6099	Paving Con - Contingency	5.0%		28363		28,363	4
	PAVING CONSTRUCTION COSTS					595,630	90
3560	Paving Eng - detailed design	7.00%		41694		41,694	6
3569	Paving Eng - detailed design/Contingency	5.0%		2085		2,085	0
6860	Paving Eng - general const. supervision	3.00%		17869		17,869	3
6861	Paving Eng - quality assurance	5.00%		29782		29,782	5
6862	Paving Eng - surveying	1.00%		5956		5,956	1
6869	Paving Eng - Residency Contingency	5.0%		2680		2,680	0
	Paving Engineering Sub-total					100,066	15
	Total Paving Const. & Eng. Costs					695,696	105

2 In Rd.& Road Types
1. 2In Frontage
2. 2In Acc Rds
3. 4In Acc Rds
4.R4L-4L EXP R/B
5.R2/3L-4L EXP R/B
6.Retr.4L-4LEX R/B
7.R4L-4LEX R/B E/S
8. New 4L EXP R/B
9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 900,018,458
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

Brdge	Site $	Piers $	Abut. $	abut. extra length (lm)	
1	6,827,660	98,000,000	#########	8	1%
2	212,250	480,000	180,000	8	10%
3	-	-	-		0%
4	-	-	-		0%
5	-	-	-		0%

	Pier/Ht	Pier No.	P/$/VLM	Abut/$/HLM
1	200	2	95000	6000
2	20	2	12000	4500
3				
4				
5				

	(W)	(L)	($/m2)	Net Cost
DECK #1	35.00	2100.00	5500.00	710281470
DECK #2	12.00	125.00	975.00	2404793
DECK #3				0
DECK #4				0
DECK #5				0

		Gross/m2	Net/m2	
1	Sup/br. Span 1600lm	10146.88	9663.69	
2	Bridge on east side	1683.35	1603.20	
3		#DIV/0!	#DIV/0!	Tnnl $/lm -Net
4		#DIV/0!	#DIV/0!	-
5		#DIV/0!	#DIV/0!	Tnnl $/lm -Gross
				-

	2InSt.w-x 1-D-Shape	x-Pass.Tl 2-D-Shape	shaft 1-Circle	Radius-1-D	7.267
Tunnel L=	0	-	0	Per.S&Rf	24.32
Tun. H1	5.100	2.550	Radius	m2/rkac	6.25
C.Pt. H4	1.00	1.00	1.00	Tnnl height	8.27
Tun.W	12.00	3.00	Wall Tk.	Radius-2-D	2.157
RFLT.	0.250	0.250	0.250	Per.S&Rf	8.42
WLT.	0.250	0.250	SOBT	m2/rkac	6.25
BST.	0.500	0.200	0.100	Tnnl height	3.16
TOBT	0.100	0.100	Exc.-m3	-	-
SOBT	0.100	0.100	Obk-m3	-	-
BOBT	0.100	0.100	Liner-m3	-	-

Items	Quantity	rate	Total $	Avg.$/ tot-lm	1-Circle
Exc.-m3	0	100	0	#DIV/0!	0
Obk-m3	0	2625	0	#DIV/0!	0
Rk anch-Ea	0	1125	0	#DIV/0!	0
Misc.-lm	0	2500	0	#DIV/0!	0
Liner-m3	0	1050	0	#DIV/0!	10.00
Drainage-lm	0	550	0	#DIV/0!	%
Lighting-m	0	900	0	#DIV/0!	5%
Mech-m	0	2100	0	#DIV/0!	15%
Misc.-lm	0	1000	0	#DIV/0!	3%
1Tonne=16.67m2/25mm			0	#DIV/0!	snowshed

60kg=1m2/25mm 1.5L =1M2 (P)
asphalt (T)=mm .25L =1M2 (T)

	A.C.	100	0		length (lm) 0.0
	A.B.C.	0	0		Roof 1.0
$Oil/Litre	$0.55	5%		21.00	0.05
Appl. rate	1.75	1.75	0.80	$ 800.00	-
Pavement Removal		(See I155)	Walls	2.0	8.00
m3	$/m3	Total	0.80	$ 1,100.00	-
0	$20.00	0	Base	1.0	15.00
Milling			0.60	$ 600.00	-
m3	$/m3	Total	Exc.-m3	1.0	15.00
0	$80.00	0	20.00	$ 60.00	-
			Drainage	$ 400.00	-
			Electrical	$ 1,500.00	-
			Mech.	$ 950.00	-
			Misc.	$ 300.00	-
				#DIV/0!	-

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-6
E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY
CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01.

Man. Reserve	0.0%
Contingency	5.0%
Division/Site	Route-6
Road Type	2
Length	6600 L.M.
Land	5.0%

2 ln Rd.& Suspension Br. — Vewuvius-Crofton Route-6 — 2 — 6600 — MR

2 ln Rd.& Suspens — 0 — Vewuviu — SITE C/LI — Route-6 — 2 — 6600

Road Types: 1. 2ln Frontage; 2. 2ln Acc Rds; 3. 4ln Acc Rds; 4.R4L-4L EXP R/B; 5.R2/3L-4L EXP R/B; 6.Retr.4L-4LEX R/B; 7.R4L-4LEX R/B E/S; 8. New 4L EXP R/B; 9. R-E4L-4L D/M; 10.N 4L EXP D/M; 11.N 4L EXP D/E/M; 12.N2L;F4LEXP D/M; 13.INST.R/B-EX.RD; 14.AS IS; 15. Misc.; 20.I/C Str.&Ramps; 21. Bridges; 22. Grade Sep.

900,018,458

Code	Description	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values	MR	
6500	OPERATIONAL CONSTRUCTION						
6510	Operat.Con - lighting	5500.00	Ea	38		209,000	32
6520	Operat.Con - signals	-	Ea	0	0	0	0
6530	Operat.Con - signing	2.00	LM	13200		13,200	2
6540	Operat.Con - guard rail	70.00	lm	2000	0	140,000	21
6550	Operat.Con - pavement markings	1.75	lm	13125	0	22,969	3
6501	Operat.Con - mobilization	3.0%		11555		11,555	2
6599	Operat.Con - contingency	5.0%		19836		19,836	3
	OPERATIONAL CONSTRUCTION COSTS					416,560	63
3540	Operat. Eng - detailed design	7.00%		29159		29,159	4
3549	Operat. Eng - detailed design/Contingency	5.0%		1458		1,458	0
6840	Operat. Eng - general const. supervision	6.00%		24994		24,994	4
6841	Operat. Eng - quality assurance	2.00%		8331		8,331	1
6842	Operat. Eng - surveying	1.00%		4166		4,166	1
6849	Operat. Eng - Residency Contingency	5.0%		1875		1,875	0
	Operational Enginering Sub-total					69,982	11
	Total Operational Const. & Eng. Costs					486,542	74
5200	ROAD SIDE CONSTRUCTION	Unit Price	Unit	Quantity	Lump Sum		
5203	RoadSide C - water	225.00	lm	0		0	0
5204	RoadSide C - sanitary	150.00	lm	0		0	0
5205	RoadSide C - storm	175.00	lm	0		0	0
5202	RoadSide C - mobilization	3.0%		0		0	0
5209	RoadSide C - Utility Contingency	5.0%		0		0	0
	Road Side Const. Utilities Sub-total					0	0
5210	RoadSide C - weighscales	-	ea	0	0	0	0
5220	RoadSide C - safety rest areas	-	ea	0	0	0	0
5230	RoadSide C - tourist rest & view areas	40000	ea	0	0	0	0
5201	RoadSide C - mobilization	3.0%		0		0	0
5299	RoadSide C - Contingency	5.0%		0		0	0
	Road Side Construction Sub-total			0		0	0
	ROAD SIDE CONSTRUCTION COSTS					0	0
3550	RoadSide E - detailed design	10.00%		0		0	0
3559	RoadSide E - detailed design/Contingency	5.0%		0		0	0
6850	RoadSide E - general const. supervision	6.00%		0		0	0
6851	RoadSide E - quality assurance	2.00%		0		0	0
6852	RoadSide E - surveying	1.00%		0		0	0
6859	RoadSide E - Residency Contingency	5.0%		0		0	0
	Road Side Engineering Sub-total					0	
	Total Road Side Const. & Eng. Costs					0	0
5300	OTHER CONSTRUCTION	Unit Price	Unit	Quantity	Lump Sum		
5303	Other Cons - water	225.00	lm	0		0	0
5304	Other Cons - sanitary	150.00	lm	0		0	0
5305	Other Cons - storm	175.00	lm	0		0	0
5302	Other Cons - mobilization	3.0%		0		0	0
5309	Other Cons - utility contingency	5.0%		0		0	0
	Other Const. Utilities Sub-total					0	0
5310	Other Cons - railroads main & spur lines	-	lm	0		0	0
5320	Other Cons - railroad crossings	-	ea	0		0	0
5330	Other Cons - marine work	-	ea	0		0	0
5340	Other Cons - environmental mitigations	280,000	ea	3		840,000	127
5301	Other Cons - mobilization	3.0%		25200		25,200	4
5399	Other Cons - Contingency	5.0%		43260		43,260	7
	Other Construction Sub-total					908,460	138
	OTHER CONSTRUCTION COSTS					908,460	138
3570	Other Eng. - detailed design	7.00%		63592	0	63,592	10
3579	Other Eng. - detailed design/Contingency	5.0%		3180		3,180	0
6870	Other Eng. - general const. supervision	3.00%		27254	0	27,254	4
6871	Other Eng. - quality assurance	3.00%		27254		27,254	4
6872	Other Eng. - surveying	3.00%		27254		27,254	4
6879	Other Eng. - Residency Contingency	5.0%		4088		4,088	1
	Other Engineering Sub-total					152,621	23
	Total Other Const. & Eng. Costs					1,061,081	161

Pole Sp. (lm) 55 — No. of Sides 1 — Length 2100

Signals	No.	Units	Quantity	Rate	Total
Controller	0	ea	1	25,000.00	-
Sig, pol,base	0	ea	4	15,000.00	-
Wiring U/G	0	ls	1	10,000.00	-
Signals					-

LP \$/lm \$ 1.00 — Refl. Sp. 20.00
Ext. Lines 1.0 — Refl.\$/ea \$ 15.00

Weighscale	No.	Units	Quantity	Rate	Total
Buildings	0	m2	60	2,800.00	-
Pit & Apron	0	m2	120	400.00	-
S&I W/S	0	ea	1	80,000.00	-
Parking Lot	0	m2	9000	40.00	-
Road Const.	0	lm	1,500	400.00	-
light/signs	0	ls	1	50,000.00	-
Weighscale					-

Safety Rest Area	No.	Units	Quantity	Rate	Total
Class A&B		SAFETY REST AREAS			
Buildings	0	m2	100	3,000.00	-
Class C					-
Site/toilets	0	ea	2	12,500.00	-
Parking Lot	0	m2	2500	40.00	-
Road Const.	0	lm	800	350.00	-
Furnishings	0	ls	-	10,000.00	-
Landscaping	0	ls	1	5,000.00	-
light/signs	0	ls	-	50,000.00	-
SAFETY REST AREAS					-

Description	No.	Units	Quantity	Rate	Total
	0		0	-	-
	0		0	-	-
	0		0	-	-
	0		0	-	-
Description					-

Railway	No.	Units	Quantity	Rate	Total
Removal	0	tklm	1.00	21.00	-
Track Cnst.	0	tklm	1.00	320.00	-
Ballast	0	m3	1.13	35.00	-
Sub-ballast	0	m3	0.96	25.00	-
Resurfacing	0	tklm	1.00	10.00	-
Tie-ins	0	ea	1.00	2800.00	-
Turnout # 9	0	ea	1.00	35000.00	-
Others	0	ls	1.00	0.00	-
	0				-
Earthworks (see grading)	0	lm	1	0.00	-
Railway					-

R/rd X-ing	No.	Units	Quantity	Rate	Total
Planks	0	tklm	45	1750.00	-
Sig./gates	0	each	1	200,000	-
				-	-
				-	-
R/rd X-ing					-

Description	No.	Units	Quantity	Rate	Total
				-	-
				-	-
				-	-
				-	-
				-	-
				-	-
				-	-
Description					-

Environment	No.	Units	Quantity	Rate	Total
Mitigation	3	ls	4	50,000	600,000
Ponds	3	ea	2	40,000	240,000
				-	-
				-	-
				-	-
				-	-
				-	-
Environmental					840,000

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-6
E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve	0.0%
Contingency	5.0%
Land	5.0%
Division/Site	Route-6
Road Type	2
Length	6600 L.M.

Road Types: 1. 2ln Frontage; 2. 2ln Acc Rds; 3. 4ln Acc Rds; 4.R4L-4L EXP R/B; 5.R2/3L-4L EXP R/B; 6.Retr.4L-4LEX R/B; 7.R4L-4LEX R/B E/S; 8. New 4L EXP R/B; 9. R-E4L-4L D/M; 10.N 4L EXP D/M; 11.N 4L EXP D/E/M; 12.N2L;F4LEXP D/M; 13.INST.R/B-EX.RD; 14.AS IS; 15. Misc.; 20.I/C Str.&Ramps; 21. Bridges; 22. Grade Sep.

900,018,458

Bridge	Tunnel	Special
2	1	1
-	-	2,000,000

CODE	DESCRIPTION	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values	2 ln Rd.& Suspension Br. Vewuvius-Crofton Route-6 2 6600 MR	2 ln Rd.& Suspens 0 Vewuviu SITE C/L Route-6 2 6600
3500	DETAILED DESIGN						
	from 3510,3520,3540,3550,3570					39,742,048	6022
3530	Geotech. E - detailed design	0.45%		3395313	2000000	5,395,313	817
3539	Geotech. E - Contingency	5.0%		269766		269,766	41
	TOTAL DETAILED DESIGN COSTS					45,407,126	6880
6800	RESIDENT ENGINEERING						
	from 6810,6820,6840,6850,6860,6870					63,480,099	
	TOTAL RESIDENT ENG. COSTS					63,480,099	9618
						0	
						0	0
	PART 1 SUMMARY						
	CONSTRUCTION					718,782,771	108906
	ENGINEERING & SUPERVISION					104,642,140	15855
	CONTRACTUAL CONTINGENCY					41,171,246	6238
						0	0
	CONSTRUCTION COST TOTAL	DIVISION/SITE		Route-6		864,596,157	130999
2000	PROJECT MANAGEMENT						
2060	Project Mar - office costs wages	2.00%		17291923		17,291,923	2620
2062	Project Mar - office costs - expenses	0.00%		0		0	0
2063	Project Mar - printing costs	0.00%		0		0	0
2061	Project Mar - general	0.00%		0		0	0
	Project Manager Sub-total					17,291,923	2620
2010	Ministry - office costs wages	0.50%		4322981		4,322,981	655
2012	Ministry - office costs - expenses	0.50%		4322981		4,322,981	655
2030	Ministry - printing costs	0.00%		0		0	0
2011	Ministry - general	0.00%		0		0	0
	Ministry Sub-total					8,645,962	1310
2070	Public Rel. - wages & expenses	0.35%		3026087		3,026,087	458
2072	Public Rel. - adv., media, displays	0.35%		3026087		3,026,087	458
2073	Public Rel. - opening ceremonies	0.01%		86460	0	86,460	13
2071	Public Rel. - general	0.00%		0		0	0
	Public Relations Sub-total					6,138,633	930
2040	Legal Costs - lawyers fees	0.01%		86460		86,460	13
2041	Legal Costs - general	0.00%		0		0	0
	Legal Costs Sub-total					86,460	13
2080	Insurance - const./ liability, E&O	0.05%		432298		432,298	65
2081	Insurance - general	0.00%		0		0	0
	Legal Costs Sub-total					432,298	65
2099	Project Management Contingency	5.0%		1629764		1,629,764	247
	TOTAL PROJECT MANAGEMENT COSTS					34,225,039	5186
4000	LAND	$/Building		# buildings	LS	2	
4010	Land(Code -Mrkt,ROW,Serv,Imp.V,Ease.	250,000	Res	2	0	893,000	135
	Acquisition Sub-total	2,000,000	Con	0	0	893,000	135
4020	Land(Code -Bus.,5%,Mrg.P,Rel$,P/Tax,E	10.00%		89300	0	89,300	14
4030	Land(Code -Owners(LS,Apprsl,Rprt,Lgl,Ir	7.00%		62510	0	62,510	9
4040	Land(Code -Demolition	0.00%		0	20000	20,000	3
4050	Land(Code -Pro.Man,P.Tax,Util,Security	1.00%		8930	0	8,930	1
4060	Land(Code -Not Used						
4070	Land(Code -Not Used						
4080	Land(Code -Acq.F,M/Sal,TrvlV,Cntr.S,Ap	7.00%		62510	0	62,510	9
4090	Land(Code -Surveys	0.00%		0	4000	4,000	1
	Associated costs-sub-total			223250		247,250	37
4099	Land Contingency Sub-total	5.0%		57013	0	57,013	9
	TOTAL LAND COSTS					1,197,263	181

Description	No.	Units	Quantity	Rate	Total
				-	-

3.77%

1 Hectare = 10,000 Square Meters
1 Hectare = 2.471 Acres
1 Acre = 43,560 square feet

	Planned ROW	13.1		
10.00%	Req. ROW	13.1		
7.00%	Cost/Ha	30,000		107,637
2.24%	Cost/M2	3.00		10.76
1.00%	Cost /Acre	12,141		43,560
	Cost /Ft2	0.28	$	1.00
27.69%				
7.00%	Demo./unit	$	10,000	
0.45%	Survey /unit	$	2,000	

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E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est: # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land
Contingency 5.0% 5.0%
Division/Site Route-6
Road Type 2
Length 6600 L.M.

2 In Rd.& Suspension Br.
Vewuvius-Crofton Route-6
2
6600
MR

2 In Rd.& Suspens
0
Vewuviu
SITE C/L
Route-6
2
6600

Road Types
1. 2In Frontage
2. 2In Acc Rds
3. 4In Acc Rds
4.R4L-4L EXP R/B
5.R2/3L-4L EXP R/B
6.Retr.4L-4LEX R/B
7.R4L-4LEX R/B E/S
8. New 4L EXP R/B
9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 900,018,458
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

	DESCRIPTION	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values		
9800	MANAGEMENT RESERVE						
	MAN. RES. - planning	0.0%		0		0	0
	MAN. RES. - preliminary design	0.0%		987022		0	0
	MAN. RES. - utility construction	0.0%		207900		0	0
	MAN. RES. - grade construction	0.0%		4272784		0	0
	MAN. RES. - structural construction	0.0%		748320575		0	0
	MAN. RES. - paving construction	0.0%		595630		0	0
	MAN. RES. - operation construction	0.0%		416560		0	0
	MAN. RES. - roadside construction	0.0%		0		0	0
	MAN. RES. - other construction	0.0%		908460		0	0
	MAN. RES. - project management	0.0%		34225039		0	0
	MAN. RES. - land	0.0%		1197263		0	0
	MAN. RES. - detailed eng.	0.0%		45407126		0	0
	MAN. RES. - residency eng.	0.0%		63480099		0	0
	MAN. RES. - Contingency	0.0%		0		0	0
	TOTAL MANAGEMENT RESERVE			900018458		0	0
	TOTAL LESS ESCALATION FISCAL			0	900018458		
9900	ESCALATION						

YEAR	PROJECTED ESCALATION	COMPLETE	$ DONE			
2002-2003	0.5750%	5.00%	0		0	0
2003 - 2004	0.6250%	10.00%	0		0	0
2004-2005	1.0000%	35.00%	0		0	0
2005-2006	1.0000%	45.00%	0		0	0
2006-2007	1.0000%	5.00%	0		0	0
2007-2008	1.0000%	0.00%	0		0	0
2008-2009	1.0000%	0.00%	0		0	0
2009-2010	1.0000%	0.00%	0		0	0
2010-2011	1.0000%	0.00%	0		0	0
	TOTAL ESCALATION	100.00%	0		0	0
	PART 2 SUMMARY NON-CONSTRUCTION COSTS					
	Non-Construction				33,735,525	5111
	Non-Const. Contingency				1,686,776	256
	TOTAL NON-CONSTRUCTION COSTS				35,422,301	5367
Route-6	**TOTAL FOR ROAD TYPE**	2			900,018,458	136366

Description	No.	Units	Quantity	Rate	Total
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Description					-

Description	No.	Units	Quantity	Rate	Total
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Description					-

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-4
E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land
Contingency 5.0% 5.0%
Division/Site Route-4
Road Type 2
Length 6400 L.M.

2 In Rd.& Suspension Br.
Swartz Bay - Fulford Route-4
2
6400
MR

2 In Rd.& Suspens 0
Swartz B SITE C/L Route-4 2
6400

1. 2In Frontage
2. 2In Acc Rds
3. 4In Acc Rds
4.R4L-4L EXP R/B
5.R2/3L-4L EXP R/B
6.Retr.4L-4LEX R/B
7.R4L-4LEX R/B E/S
8. New 4L EXP R/B

9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 1,381,973,734
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

	DESCRIPTION	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values	Cost/LM	% of T	% of TC
	SUMMARY BY ACTIVITY LEVEL			Diff.	Previous Estimate			
2000	PROJECT MANAGEMENT			-50042409	0	7819	3.6%	3.6%
2500	PLANNING			0	0	0	0.0%	0.0%
3000	PRELIMINARY DESIGN			-1340548	0	209	0.1%	0.1%
3500	DETAILED DESIGN			-65315888	0	10206	4.7%	4.7%
	Total Engineering			-66656437	0	10415	4.8%	4.8%
4000	LAND ACQUISITION			-1947000	0	304	0.1%	0.1%
5000	GRADE CONSTRUCTION			-3576850	0	559	0.3%	0.3%
5200	ROAD SIDE CONSTRUCTION			0	0	0	0.0%	0.0%
5300	OTHER CONSTRUCTION			-865200	0	135	0.1%	0.1%
5500	STRUCTURAL CONSTRUCTION			-1099093595	0	171733	79.5%	79.5%
6000	PAVING CONSTRUCTION			-453814	0	71	0.0%	0.0%
6500	OPERATIONAL CONSTRUCTION			-476555	0	74	0.0%	0.0%
6700	UTILITY CONSTRUCTION			-192000	0	30	0.0%	0.0%
6800	RESIDENT ENGINEERING			-92861601	0	14510	6.7%	6.7%
	Total Construction			-1197519615	0	187112	86.7%	86.7%
9700	CONTINGENCY			-65808273	0	10283	4.8%	4.8%
	SUB-TOTAL			-1381973734	0	215933	100.0%	100.0%
9800	MANAGEMENT RESERVE			0	0	0	0.0%	0.0%
	TOTAL			-1381973734	0	215933	100.0%	100.0%
9900	ESCALATION			0	0	0	0.0%	
	TOTAL COST			-1381973734	0	215933		100.0%
	Constr. Less Resident Eng.			-1104658014	0	172603		

ENG. & PM	122,533,788	19146
LAND	2,044,350	319
CONST.	1,257,395,596	196468
MAN. RES.	0	0
ESC.	0	0
TOTAL	1,381,973,734	215933

Route-4 **Assumptions**

1 Existing Right-Of -Way m

2 New Addition Right-Of -Way partial taking Yes m

	Shoulder	Lane	Lane	Median	Lane	Lane	Shoulder
Existing Rd	-	-	-	-	-	-	-
Pvmt Width	0.0						
New Rd.	2.00	-	3.70	-	3.70	-	2.00
Pvmt Width	11.4						

	Bridges		Width(m)	Length(m)
3.1	Sup/br. Span 2300lm		35.0	2900.0
3.2		0	0.0	0.0
3.3		0	0.0	0.0
3.4		0	0.0	0.0
3.5		0	0.0	0.0

4	Tunnels	Length(m)	Width(m)	Height(m)
4.1	2lnSt.w-x	0	12.0	8.27
4.2	x-Pass.Tl	0	3.0	3.16
4.3	shaft	0	2.0	Diameter
4.4	snowshedlength (lm)	0		

NOTES:

$$\text{Cost}/m^2 = \frac{1,099,093,595}{35 \times 2900}$$

$$= \$10,828/m^2$$

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E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est: # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land
Contingency 5.0% 5.0%
Division/Site Route-4
Road Type 2
Length 6400 L.M.

2 In Rd.& Suspension Br.
Swartz Bay - Fulford Route-4
2
6400
MR

2 In Rd.& Suspens 0
Swartz B
SITE C/L
Route-4 2
6400

2 In Rd.8 Road Types
1. 2In Frontage
2. 2In Acc Rds
3. 4In Acc Rds
4.R4L-4L EXP R/B
5.R2/3L-4L EXP R/B
6.Retr.4L-4LEX R/B
7.R4L-4LEX R/B E/S
8. New 4L EXP R/B
9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 1,381,973,734
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

	DESCRIPTION	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values		
2500	PLANNING						
2521	Consultant - transport. planning study	0.00	LM	0		0	0
2531	Consultant - corridor study	0.00	LM	0		0	0
2541	Consultant - functional plan. study	0.00	LM	0		0	0
2502	Consultant - general	0.0%		0		0	0
	Consultant sub-total					0	0
2510	Ministry - project ident.	0.00	LM	0		0	0
2520	Ministry - transport. planning study	0.00	LM	0		0	0
2530	Ministry - corridor study	0.00	LM	0		0	0
2540	Ministry - functional study	0.00	LM	0	0	0	0
2501	Ministry - general	0.0%		0		0	0
	Ministry Sub-total			0		0	0
2599	Planning Contingency	5.0%		0		0	0
	TOTAL PLANNING					0	0
3000	PRELIMINARY DESIGN						
3013	Consultant - aerial base plan	0.00	LM	0		0	0
3014	Consultant - mapping & prel.	10.00	LM	64000		64,000	10
3015	Consultant - control survey	0.00	LM	0		0	0
3021	Consultant - environmental impact	3.00	LM	19200		19,200	3
3031	Consultant - funct.-road field survey	8.00	LM	51200		51,200	8
3041	Consultant - functional design	5.00	LM	32000	0	32,000	5
3051	Consultant - funct. des. structural	0.00	LM	0	1154048	1,154,048	180
3061	Consultant - geotechnical design	3.00	LM	19200		19,200	3
3071	Consultant - right-of-way research	0.00	LM	0	900	900	0
3002	Consultant - general	0.0%		0		0	0
	Consultant sub-total					1,340,548	209
3010	Ministry - aerial base plan	0.00	LM	0		0	0
3011	Ministry - mapping	0.00	LM	0		0	0
3012	Ministry - control survey	0.00	LM	0		0	0
3020	Ministry - environmental impact	0.00	LM	0		0	0
3030	Ministry - funct.-road field survey	0.00	LM	0		0	0
3040	Ministry - functional design	0.00	LM	0		0	0
3050	Ministry - funct. des. structural	0.00	LM	0		0	0
3060	Ministry - geotechnical design	0.00	LM	0		0	0
3070	Ministry - right-of-way research	0.00	LM	0		0	0
3001	Ministry - general	0.0%		0		0	0
	Ministry Sub-total					0	0
3099	Preliminary design Contingency	5.0%		67027		67,027	10
	TOTAL PRELIMINARY DESIGN					1,407,576	220

Description	No.	Units	Quantity	Rate	Total
					-

Description -

Description	No.	Units	Quantity	Rate	Total
					-

Description -

Structural 0.10%

$/Prop. $ 150

Description	No.	Units	Quantity	Rate	Total
					-

Description -

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-4
E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man: Reserve 0.0% Land
Contingency 5.0% 5.0%
Division/Site Route-4
Road Type 2
Length 6400 L.M.

2 In Rd.& Suspension Br.
Swartz Bay - Fulford Route-4

2 In Rd.& Suspens
0
Swartz B
SITE C/L
Route-4

9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 1,381,973,734
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

Road Types
1. 2In Frontage
2. 2In Acc Rds
3. 4In Acc Rds
4.R4L-4L EXP R/B
5.R2/3L-4L EXP R/B
6.Retr.4L-4LEX R/B
7.R4L-4LEX R/B E/S
8. New 4L EXP R/B

		Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values	MR	
6700	UTILITIES						
6710	Util. Prov. - Hydro	10.00	lm	6400	0	64,000	10
6711	Util. Prov. - Telephone	20.00	lm	6400	0	128,000	20
	Util. Prov. sub-total					192,000	30
6712	Util.Others - pipelines	0.00	lm	0		0	0
6713	Util.Others - telecommunication	0.00	lm	0		0	0
6714	Util.Others - storm & sewer inspect.	0.0%		0		0	0
6715	Util.Others - waterworks inspect.	0.0%		0		0	0
6716	Util.Others - engineering services	0.00	LM	0		0	0
6717	Util.Others - parks/recreation-prel.	0.00	LM	0		0	0
6718	Util.Others - transit	0.00	LM	0		0	0
6719	Util.Others - tr-ops/signs & detours	0.00	LM	0		0	0
6701	Util.Others - general	0.0%		0		0	0
	Util.Others sub-total					0	0
6799	Util.Others Contingency	5.0%		9600	0	9,600	2
	TOTAL UTILITIES					201,600	32
5000	GRADE CONSTRUCTION	U. Price	Unit	Quantity	Lump Sum		
5032	Grade Cons - water	225.00	lm	0	0	0	0
5033	Grade Cons - sanitary	150.00	lm	0	0	0	0
5034	Grade Cons - storm	175.00	lm	0		0	0
5031	Grade Cons - mobilization	3.0%		0		0	0
5039	Grade Cons - utility contingency	5.0%		0		0	0
	Grade Const. Utilities Sub-total					0	0
5010	Grade Cons - site prep./clear,grubbing	8,000	ha	10.50	0	83,986	13
5020	Grade Cons - road grade/exc,placing,fill	15.48	m3	143290	0	2,217,836	347
5030	Grade Cons - drainage/pipe,cul.	0.00	LM	0	58975	58,975	9
5040	Grade Cons - muiltiplate	10000	lm	0		0	0
5050	Grade Cons -SGSB/produce,place,comp	18.00	m3	26580		478,442	75
5051	Grade Cons -CBC/produce,place,comp	20.00	m3	16570		331,398	52
5060	Grade Cons - grade finishing landscaping	0.00	m2	65083		0	0
5061	Grade Cons - grade finishing hydro seed.	0.40	m2	65083		26,033	4
5062	Grade Cons - grade finishing fencing	60.00	lm	0		0	0
5063	Grade Cons - noise barriers	110.00	m2	0		0	0
5064	Grade Cons - passing lanes	0.00	lm	0		0	0
5090	Grade Cons - sidewalks,curb & gutter	60.00	lm	0	0	0	0
5005	Grade Cons -detours c/w ex,bf,paving	40000	NO	0.5	256000	276,000	43
5001	Grade Cons - mobilization	3.0%		104180		104,180	16
5099	Grade Cons - Contingency	5.0%		178843		178,843	28
	Grade Construction Sub-total					3,755,693	587
	GRADE CONSTRUCTION COSTS					3,755,693	587
3510	Grade Eng. - detailed design	7.00%		262898		262,898	41
3519	Grade Eng. - detailed design/Contingency	5.0%		13145		13,145	2
6810	Grade Eng. - general const. supervision	4.60%		172762		172,762	27
6811	Grade Eng. - quality assurance	3.20%		120182		120,182	19
6812	Grade Eng. - surveying	2.00%		75114		75,114	12
6819	Grade Eng. - Residency Contingency	5.0%		18403		18,403	3
	Grade Engineering Sub-total					662,504	104
	Total Grade Const. & Eng. Costs					4,418,197	690

Description

	(m3)	(unit $)	($)		
Fill	0				
Rock	111534	18.00	2007620	85%	
O.M.	19683	7.00	137778		
Strip.	12073	6.00	72438	0.100	
Borrow	0	12.00	0		
Misc./LS	0	4.00	0	Surplus Mtl	
Total	143290	15.48	2217836		

	Spec 2 In Rd.& Road	Spec Road	PI/PL Ditch Width	Ditch Width
			30.0	
pl to pl	30.00	0.00	2.0	0.0
*no./lane	2	0	Col L Vol.	Col. M Vol.
*lane wid	3.7	0.0	143,290	-
*med	0.0	0.0	Pmt W=	11.4
*shldrs tot	4.0	0.0	CBC. slope	CBC. slope
c.b.c.(w)	12.5	0.0	2.5	0.0
sgsb (w)	14.7	0.0		
SGSBslope :1	2.5	0.0		
*depth(d)	2.000	0.000	15%	
*road (l)	3500	0		
*no.cul./kil	5.0	0.0	$ 500	
cul.(l)	15.80	0.00	$ 150	
*sgsb (d)	0.45	0.00	15%	
*cbc (d)	0.33	0.00	15%	
*Add.ROW	-6.68	0.00		
X-m3/lm	40.94	0.00		

C&G $/LM	$40.00	Exp-100kmp	Exp- 80kmp	Coll-80kmp
Decel.(T-lm)		520	440	260
Accel.(T-lm)		950	630	80
Left T.(T-lm)		716	596	456
TOTAL		2186	1666	796

Neat vol.cal
0
Spec. Resurface Road ONLY
0
0.0
0.0
A.C. (mm)
0
A.B.C. (mm)
0
0
Appl. rate
1.75

Gravel 2.0Tonnes/m3

Drainage

Drainage	No.	Units	Quantity	Rate	Total
Box Cul.	0	lm	45	3500	-
Head Walls	0	ea.	2	5000	-

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(2002 Dollars) **Island Connections**
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land
Contingency 5.0% 5.0%
Division/Site Route-4
Road Type 2
Length 6400 L.M.

	DESCRIPTION	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values	2 In Rd.& Suspension Br.	
						Swartz Bay - Fulford	
						Route-4	
						2	
						6400	
						MR	
5500	STRUCTURAL CONSTRUCTION	Unit Price	Unit	Quantity	Lump Sum		
5522	Struct.Cons - water	225.00	lm	0		0	0
5523	Struct.Cons - sanitary	150.00	lm	0		0	0
5524	Struct.Cons - storm	175.00	lm	0		0	0
5521	Struct.Cons - mobilization	3.0%		0		0	0
5599	Struct.Cons - utility contingency	5.0%		0		0	0
	Structural Const. Utilities Sub-total					0	0
5510	Struct.Cons - tunnel site preparation	0.00	lm	0	0	0	0
5511	Struct.Cons - tunnel construction	-	lm	0		0	0
5512	Struct.Cons - snow shed site prep.	0.00	lm	0		0	0
5513	Struct.Cons - snow shed site const.	-	lm	0		0	0
					Demolition		
5514	Struct.Cons - bridge site preparation	1	LS	10565160	0	10,565,160	1651
5515	Struct.Cons - bridge piers	1	LS	147000000		147,000,000	22969
5516	Struct.Cons - bridge abutments	1	LS	300516000		300,516,000	46956
5517	Struct.Cons - bridge superstructure	1	LS	609000000		609,000,000	95156
5518	Struct.Cons - retain. wall site prep.	1	LS			0	0
5519	Struct.Cons - retaining wall const.	525	m2	0		0	0
5501	Struct.Cons - mobilization	3.0%		32012435		32,012,435	5002
5529	Struct.Cons - Contingency	5.0%		54954680		54,954,680	8587
	Structural Construction Sub-total					1,154,048,275	180320
	STRUCTURAL CONSTRUCTION COSTS					1,154,048,275	180320
3520	Struct. Eng. - detailed design	5.00%		57702414		57,702,414	9016
3529	Struct. Eng. - detailed design/Contingency	5.0%		2885121		2,885,121	451
6820	Struct. Eng. - general const. supervision	4.50%		51932172		51,932,172	8114
6821	Struct. Eng. - quality assurance	3.00%		34621448		34,621,448	5410
6822	Struct. Eng. - surveying	0.50%		5770241		5,770,241	902
6829	Struct. Eng. - Residency Contingency	5.0%		4616193		4,616,193	721
	Structural Engineering Sub-total					157,527,589	24614
	Total Structural & Eng. Costs					1,311,575,864	204934
6000	PAVING CONSTRUCTION				SM./OIL		
6020	Paving Con - machine paving asphalt	40.00	t	10055	69825	440,596	69
6030	Paving Con - machine paving concrete	0.00	m2			0	0
6040	Paving Con - hot reprofiling	0.00	m2	39900		0	0
6050	Paving Con - shoulder paving	0.00	t	4032		0	0
6060	Paving Con - pavement finishing	75.00	m2	0		0	0
6070	Paving Con - seal coating	0.00				0	0
6001	Paving Con - mobilization	3.0%		13218		13,218	2
6010	Paving Con - pavement design	0.0%		0		0	0
6099	Paving Con - Contingency	5.0%		22691		22,691	4
	PAVING CONSTRUCTION COSTS					476,504	74
3560	Paving Eng - detailed design	7.00%		33355		33,355	5
3569	Paving Eng - detailed design/Contingency	5.0%		1668		1,668	0
6860	Paving Eng - general const. supervision	3.00%		14295		14,295	2
6861	Paving Eng - quality assurance	5.00%		23825		23,825	4
6862	Paving Eng - surveying	1.00%		4765		4,765	1
6869	Paving Eng - Residency Contingency	5.0%		2144		2,144	0
	Paving Engineering Sub-total					80,053	13
	Total Paving Const. & Eng. Costs					556,557	87

2 In Rd.& Suspens
0
Swartz B
SITE C/L
Route-4
2
6400
6400

2 In Rd.& Road Types
1. 2In Frontage
2. 2In Acc Rds
3. 4In Acc Rds
4.R4L-4L EXP R/B
5.R2/3L-4L EXP R/B
6.Retr.4L-4LEX R/B
7.R4L-4LEX R/B E/S
8. New 4L EXP R/B

9. R-E4L-4L D/M
10.N 4L EXP D/M
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12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 1,381,973,734
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

Brdge	Site $	Piers $	Abut. $	abut. extra length (lm)	
1	10,565,160	147,000,000	#########	8	1%
2	-	-	-		0%
3	-	-	-		0%
4	-	-	-		0%
5	-	-	-		0%

	Pier/Ht	Pier No.	P/$/VLM	Abut/$/HLM
1	300	2	95000	6000
2	0		0	
3				
4				
5				

	(W)	(L)	($/m2)	Net Cost
DECK #1	35.00	2900.00	6000.00	1099093595
DECK #2				0
DECK #3				0
DECK #4				0
DECK #5				0

		Gross/m2	Net/m2	
1	Sup/br. Span 2300lm	11369.93	10828.51	
2		#DIV/0!	#DIV/0!	
3		#DIV/0!	#DIV/0!	Tnnl $/lm -Net
4		#DIV/0!	#DIV/0!	-
5		#DIV/0!	#DIV/0!	Tnnl $/lm -Gross
				-

	2InSt.w-x 1-D-Shape	x-Pass.Tl 2-D-Shape	shaft 1-Circle	
Tunnel L=	0	-	0	Radius-1-D 7.267
Tun. H1	5.100	2.550	Radius	Per.S&Rf 24.32
C.Pl. H4	1.00	1.00	1.00	m2/rkac 6.25
Tun.W	12.00	3.00	Wall Tk.	Tnnl height 8.27
RFLT.	0.250	0.250	0.250	Radius-2-D 2.157
WLT.	0.250	0.250	SOBT	Per.S&Rf 8.42
BST.	0.500	0.200	0.100	m2/rkac 6.25
TOBT	0.100	0.100	Exc.-m3	Tnnl height 3.16
SOBT	0.100	0.100	Obk-m3	- -
BOBT	0.100	0.100	Liner-m3	- -

Items	Quantity	rate	Total $	Avg.$/ tot-lm	1-Circle
Exc.-m3	0	100	0	#DIV/0!	0
Obk-m3	0	2625	0	#DIV/0!	0
Rk anch-Ea	0	1125	0	#DIV/0!	0
Misc.-lm	0	2500	0	#DIV/0!	0
Liner-m3	0	1050	0	#DIV/0!	10.00
Drainage-lm	0	550	0	#DIV/0!	%
Lighting-m	0	900	0	#DIV/0!	5%
Mech-m	0	2100	0	#DIV/0!	15%
Misc.-lm	0	1000	0	#DIV/0!	3%
1Tonne=16.67m2/25mm			0	#DIV/0!	snowshed

60kg=1m2/25mm 1.5L =1M2 (P)
asphalt (T)=mm .25L =1M2 (T)

				length (lm)	
A.C.	100	0		Roof	1.0
A.B.C.	0	0	0.80	21.00	0.05
$Oil/Litre	$0.55	5%		$ 800.00	-
Appl. rate	1.75	1.75	Walls	2.0	8.00
Pavement Removal		(See I155)	0.80	$ 1,100.00	-
m3	$/m3	Total	Base	1.0	15.00
0	$20.00	0	0.60	$ 600.00	-
Milling			Exc.-m3	1.0	15.00
m3	$/m3	Total	20.00	$ 60.00	-
0	$80.00	0	Drainage	$ 400.00	-
			Electrical	$ 1,500.00	-
			Mech.	$ 950.00	-
			Misc.	$ 300.00	-
				#DIV/0!	-

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Contingency 5.0% 5.0%
Division/Site Route-4
Road Type 2
Length 6400 L.M.

2 In Rd.& Suspension Br.
Swartz Bay - Fulford Route-4
2
6400
MR

2 In Rd.& Road Types
Suspens 1. 2In Frontage
0 2. 2In Acc Rds
Swartz B 3. 4In Acc Rds
SITE C/LI 4.R4L-4L EXP R/B
Route-4 5.R2/3L-4L EXP R/B
2 6.Retr.4L-4LEX R/B
6400 7.R4L-4LEX R/B E/S
8. New 4L EXP R/B

9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 1,381,973,734
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

	DESCRIPTION	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values		
6500	OPERATIONAL CONSTRUCTION						
6510	Operat.Con - lighting	5500.00	Ea	53		291,500	46
6520	Operat.Con - signals	-	Ea	0	0	0	0
6530	Operat.Con - signing	2.00	LM	12800		12,800	2
6540	Operat.Con - guard rail	70.00	lm	2000	0	140,000	22
6550	Operat.Con - pavement markings	1.75	lm	10500	0	18,375	3
6501	Operat.Con - mobilization	3.0%		13880		13,880	2
6599	Operat.Con - contingency	5.0%		23828		23,828	4
	OPERATIONAL CONSTRUCTION COSTS					500,383	78
3540	Operat. Enç - detailed design	7.00%		35027		35,027	5
3549	Operat. Enç - detailed design/Contingency	5.0%		1751		1,751	0
6840	Operat. Enç - general const. supervision	6.00%		30023		30,023	5
6841	Operat. Enç - quality assurance	2.00%		10008		10,008	2
6842	Operat. Enç - surveying	1.00%		5004		5,004	1
6849	Operat. Enç - Residency Contingency	5.0%		2252		2,252	0
	Operational Enginering Sub-total					84,064	13
	Total Operational Const. & Eng. Costs					584,447	91
	ROAD SIDE CONSTRUCTION	Unit Price	Unit	Quantity	Lump Sum		
5203	RoadSide C - water	225.00	lm	0		0	0
5204	RoadSide C - sanitary	150.00	lm	0		0	0
5205	RoadSide C - storm	175.00	lm	0		0	0
5202	RoadSide C - mobilization	3.0%		0		0	0
5209	RoadSide C - Utility Contingency	5.0%		0		0	0
	Road Side Const. Utilities Sub-total					0	0
5210	RoadSide C - weighscales	-	ea	0	0	0	0
5220	RoadSide C - safety rest areas	-	ea	0	0	0	0
5230	RoadSide C - tourist rest & view areas	40000	ea	0	0	0	0
5201	RoadSide C - mobilization	3.0%		0		0	0
5299	RoadSide C - Contingency	5.0%		0		0	0
	Road Side Construction Sub-total			0		0	0
	ROAD SIDE CONSTRUCTION COSTS					0	0
3550	RoadSide E - detailed design	10.00%		0		0	0
3559	RoadSide E - detailed design/Contingency	5.0%		0		0	0
6850	RoadSide E - general const. supervision	6.00%		0		0	0
6851	RoadSide E - quality assurance	2.00%		0		0	0
6852	RoadSide E - surveying	1.00%		0		0	0
6859	RoadSide E - Residency Contingency	5.0%		0		0	0
	Road Side Engineering Sub-total					0	0
	Total Road Side Const. & Eng. Costs					0	0
	OTHER CONSTRUCTION	Unit Price	Unit	Quantity	Lump Sum		
5303	Other Cons - water	225.00	lm	0		0	0
5304	Other Cons - sanitary	150.00	lm	0		0	0
5305	Other Cons - storm	175.00	lm	0		0	0
5302	Other Cons - mobilization	3.0%		0		0	0
5309	Other Cons - utility contingency	5.0%		0		0	0
	Other Const. Utilities Sub-total					0	0
5310	Other Cons - railroads main & spur lines	-	lm	0		0	0
5320	Other Cons - railroad crossings	-	ea	0		0	0
5330	Other Cons - marine work	-	ea	0		0	0
5340	Other Cons - environmental mitigations	280,000	ea	3		840,000	131
5301	Other Cons - mobilization	3.0%		25200		25,200	4
5399	Other Cons - Contingency	5.0%		43260		43,260	7
	Other Construction Sub-total					908,460	142
	OTHER CONSTRUCTION COSTS					908,460	142
3570	Other Eng. - detailed design	7.00%		63592	0	63,592	10
3579	Other Eng. - detailed design/Contingency	5.0%		3180		3,180	0
6870	Other Eng. - general const. supervision	3.00%		27254	0	27,254	4
6871	Other Eng. - quality assurance	3.00%		27254		27,254	4
6872	Other Eng. - surveying	3.00%		27254		27,254	4
6879	Other Eng. - Residency Contingency	5.0%		4088		4,088	1
	Other Engineering Sub-total					152,621	24
	Total Other Const. & Eng. Costs					1,061,081	166

Pole Sp. (lm) No. of Sides Length
46 55 1 2900

Earthworks (see grading)

Signals

Signals	No.	Units	Quantity	Rate	Total
Controller	0	ea	1	25,000.00	-
Sig, pol,base	0	ea	4	15,000.00	-
Wiring U/G	0	ls	1	10,000.00	-
					-
					-
					-
					-
Signals					-

LP $/lm $ 1.00 Refl. Sp. 20.00
Ext. Lines 1.0 Refl.$/ea $ 15.00

Weighscale

Weighscale	No.	Units	Quantity	Rate	Total
Buildings	0	m2	60	2,800.00	-
Pit & Apron	0	m2	120	400.00	-
S&I W/S	0	ea	1	80,000.00	-
Parking Lot	0	m2	9000	40.00	-
Road Const.	0	lm	1,500	400.00	-
light/signs	0	ls	1	50,000.00	-
					-
Weighscale					-

SAFETY REST AREAS

Safety Rest Area	No.	Units	Quantity	Rate	Total
Class A&B		SAFETY REST AREAS			
Buildings	0	m2	100	3,000.00	-
Class C					-
Site/toilets	0	ea	2	12,500.00	-
Parking Lot	0	m2	2500	40.00	-
Road Const.	0	lm	800	350.00	-
Furnishings	0	ls	-	10,000.00	-
Landscaping	0	ls	1	5,000.00	-
light/signs	0	ls	-	50,000.00	-
					-
SAFETY REST AREAS					-

Description

Description	No.	Units	Quantity	Rate	Total
	0		0	-	-
	0		0	-	-
	0		0	-	-
	0		0	-	-
Description					-

Railway

Railway	No.	Units	Quantity	Rate	Total
Removal	0	tklm	1.00	21.00	-
Track Cnst.	0	tklm	1.00	320.00	-
Ballast	0	m3	1.13	35.00	-
Sub-ballast	0	m3	0.96	25.00	-
Resurfacing	0	tklm	1.00	10.00	-
Tie-ins	0	ea	1.00	2800.00	-
Turnout # 9	0	ea	1.00	35000.00	-
Others	0	ls	1.00	0.00	-
	0				-
	0	lm	1	0.00	-
Railway					-

R/rd X-ing

R/rd X-ing	No.	Units	Quantity	Rate	Total
Planks	0	tklm	45	1750.00	-
Sig./gates	0	each	1	200,000	-
				-	-
				-	-
R/rd X-ing					-

Description

Description	No.	Units	Quantity	Rate	Total
				-	-
				-	-
				-	-
				-	-
				-	-
				-	-
Description					-

Environmental

Environment	No.	Units	Quantity	Rate	Total
Mitigation	3	ls	4	50,000	600,000
Ponds	3	ea	2	40,000	240,000
				-	-
				-	-
				-	-
				-	-
Environmental					840,000

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-4
E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% Land
Contingency 5.0% 5.0%
Division/Site Route-4
Road Type 2
Length 6400 L.M.

2 In Rd.& Suspension Br.
Swartz Bay - Fulford Route-4
2
6400
MR

2 In Rd.& Suspens
0
Swartz B
SITE C/L
Route-4
2
6400

Road Types
1. 2In Frontage
2. 2In Acc Rds
3. 4In Acc Rds
4.R4L-4L EXP R/B
5.R2/3L-4L EXP R/B
6.Retr.4L-4LEX R/B
7.R4L-4LEX R/B E/S
8. New 4L EXP R/B
9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 1,381,973,734
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

1 1 1
Bridge Tunnel Special
- - 2,000,000

	DESCRIPTION	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values		
3500	DETAILED DESIGN from 3510,3520,3540,3550,3570					61,002,151	9532
3530	Geotech. E - detailed design	0.45%		5218602	2000000	7,218,602	1128
3539	Geotech. E - Contingency	5.0%		360930		360,930	56
	TOTAL DETAILED DESIGN COSTS					68,581,683	10716
6800	RESIDENT ENGINEERING from 6810,6820,6840,6850,6860,6870					97,504,681	
	TOTAL RESIDENT ENG. COSTS					97,504,681	15235
						0	
						0	0
	PART 1 SUMMARY						
	CONSTRUCTION					1,104,658,014	172603
	ENGINEERING & SUPERVISION					159,518,038	24925
	CONTRACTUAL CONTINGENCY					63,208,803	9876
						0	0
	CONSTRUCTION COST TOTAL	DIVISION/SITE		Route-4		1,327,384,854	207404
2000	PROJECT MANAGEMENT						
2060	Project Mar - office costs wages	2.00%		26547697		26,547,697	4148
2062	Project Mar - office costs - expenses	0.00%		0		0	0
2063	Project Mar - printing costs	0.00%		0		0	0
2061	Project Mar - general	0.00%		0		0	0
	Project Manager Sub-total					26,547,697	4148
2010	Ministry - office costs wages	0.50%		6636924		6,636,924	1037
2012	Ministry - office costs - expenses	0.50%		6636924		6,636,924	1037
2030	Ministry - printing costs	0.00%		0		0	0
2011	Ministry - general	0.00%		0		0	0
	Ministry Sub-total					13,273,849	2074
2070	Public Rel. - wages & expenses	0.35%		4645847		4,645,847	726
2072	Public Rel. - adv., media, displays	0.35%		4645847		4,645,847	726
2073	Public Rel. - opening ceremonies	0.01%		132738	0	132,738	21
2071	Public Rel. - general	0.00%		0		0	0
	Public Relations Sub-total					9,424,432	1473
2040	Legal Costs - lawyers fees	0.01%		132738		132,738	21
2041	Legal Costs - general	0.00%		0		0	0
	Legal Costs Sub-total					132,738	21
2080	Insurance - const./ liability, E&O	0.05%		663692		663,692	104
2081	Insurance - general	0.00%		0		0	0
	Legal Costs Sub-total					663,692	104
2099	Project Management Contingency	5.0%		2502120		2,502,120	391
	TOTAL PROJECT MANAGEMENT COSTS					52,544,529	8210
4000	LAND	$/Building		# buildings	LS	6	
4010	Land(Code -Mrkt,ROW,Serv,Imp.V,Ease.	250,000	Res	6	0	1,500,000	234
	Acquisition Sub-total	2,000,000	Con	0	0	1,500,000	234
4020	Land(Code -Bus.,5%,Mrg.P,Rel$,P/Tax,E	10.00%		150000	0	150,000	23
4030	Land(Code -Owners(LS,Apprsl,Rprt,Lgl,Ir	7.00%		105000	0	105,000	16
4040	Land(Code -Demolition	0.00%		0	60000	60,000	9
4050	Land(Code -Pro.Man,P.Tax,Util,Security	1.00%		15000	0	15,000	2
4060	Land(Code -Not Used						
4070	Land(Code -Not Used						
4080	Land(Code -Acq.F,M/Sal,TrvlV,Cntr.S,Ap	7.00%		105000	0	105,000	16
4090	Land(Code -Surveys	0.00%		0	12000	12,000	2
	Associated costs-sub-total			375000		447,000	70
4099	Land Contingency Sub-total	5.0%		97350	0	97,350	15
	TOTAL LAND COSTS					2,044,350	319

Description	No.	Units	Quantity	Rate	Total
					-

3.77%

1 Hectare = 10,000 Square Meters
1 Hectare = 2.471 Acres
1 Acre = 43,560 square feet

	Planned ROW	10.5		
10.00%	Req. ROW	10.5		
7.00%	Cost/Ha	0	107,637	
4.00%	Cost/M2	0.00	10.76	
1.00%	Cost /Acre	0	43,560	
	Cost /Ft2	0.00	$ 1.00	
29.80%				
7.00%	Demo./unit	$ 10,000		
0.80%	Survey /unit	$ 2,000		

File: C:\ERNEST\DATA\PROJECTS\BC FERRIES\[ISLAND XING.xls]ROUTE-4
E.Wolski Consulting **BC Ferries**
(2002 Dollars) **Island Connections**
ACTIVITY CODE EST.DATE Jan. 16, 2002
Conceptual Est. R1 DATE:
Blk Est. # 6.1 R2 DATE:
Version Dec.4./01

Man. Reserve 0.0% | Contingency 5.0% | Division/Site Route-4 | Road Type 2 | Length 6400 L.M.
Land 5.0%

	DESCRIPTION	Unit Price	Unit	Cost-Quant. PerSection	Lump Sum Values	2 In Rd.& Suspension Br. Swartz Bay - Fulford Route-4 MR	2 In Rd.& Suspens Swartz B SITE C/L Route-4
9800	MANAGEMENT RESERVE						
	MAN. RES. - planning	0.0%		0		0	0
	MAN. RES. - preliminary design	0.0%		1407576		0	0
	MAN. RES. - utility construction	0.0%		201600		0	0
	MAN. RES. - grade construction	0.0%		3755693		0	0
	MAN. RES. - structural construction	0.0%		1154048275		0	0
	MAN. RES. - paving construction	0.0%		476504		0	0
	MAN. RES. - operation construction	0.0%		500383		0	0
	MAN. RES. - roadside construction	0.0%		0		0	0
	MAN. RES. - other construction	0.0%		908460		0	0
	MAN. RES. - project management	0.0%		52544529		0	0
	MAN. RES. - land	0.0%		2044350		0	0
	MAN. RES. - detailed eng.	0.0%		68581683		0	0
	MAN. RES. - residency eng.	0.0%		97504681		0	0
	MAN. RES. - Contingency	0.0%		0		0	0
	TOTAL MANAGEMENT RESERVE			1381973734		0	0
	TOTAL LESS ESCALATION			0	##########		
	FISCAL						
9900	ESCALATION						
	YEAR PROJECTED ESCALATION	COMPLETE		$ DONE			
	2002-2003 0.5750%	5.00%		0		0	0
	2003 - 2004 0.6250%	10.00%		0		0	0
	2004-2005 1.0000%	35.00%		0		0	0
	2005-2006 1.0000%	45.00%		0		0	0
	2006-2007 1.0000%	5.00%		0		0	0
	2007-2008 1.0000%	0.00%		0		0	0
	2008-2009 1.0000%	0.00%		0		0	0
	2009-2010 1.0000%	0.00%		0		0	0
	2010-2011 1.0000%	0.00%		0		0	0
	TOTAL ESCALATION	100.00%		0		0	0
	PART 2 SUMMARY NON-CONSTRUCTION COSTS						
	Non-Construction					51,989,409	8123
	Non-Const. Contingency					2,599,470	406
	TOTAL NON-CONSTRUCTION COSTS					54,588,879	8530
	Route-4 TOTAL FOR ROAD TYPE	2				1,381,973,734	215933

2 In Rd.& Road Types
0 1. 2In Frontage
2. 2In Acc Rds
3. 4In Acc Rds
4.R4L-4L EXP R/B
5.R2/3L-4L EXP R/B
6.Retr.4L-4LEX R/B
7.R4L-4LEX R/B E/S
8. New 4L EXP R/B
9. R-E4L-4L D/M
10.N 4L EXP D/M
11.N 4L EXP D/E/M
12.N2L;F4LEXP D/M
13.INST.R/B-EX.RD
14.AS IS 15. Misc. 1,381,973,734
20.I/C Str.&Ramps
21. Bridges
22. Grade Sep.

Description	No.	Units	Quantity	Rate	Total
				-	-
				-	-
				-	-
				-	-
				-	-
				-	-
				-	-
				-	-
				-	-
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				-	-
Description					-
Description	No.	Units	Quantity	Rate	Total
				-	-
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				-	-
Description					-

	Denman Island Cost Estimate				2011-010-05				
					IFS				
Item	Description	Length	Width	Unit Price	Amount (Millions)	Comments			
1	0.28 km of hwy between Hwy 19A and bridge	0.28		$5.25M/km	$1.5	Increased value from 2002 fixed link study by 50%	S Abut to S Bent # 1		290 m
2	Bridge to Denman Island	2190	14	$7000/m²	$214.6	Increased unit price from 2002 fixed link study by 50%	S. Bent to S Tower		280 m
	Sub-total				**$216.1**		Main Span		1140 m
							N. Tower to N Anch.		290 m
13	Contingiencies (30% of sub-total)				$64.8	Reduced the contingency amount from 35% in the 2002 study as a floating bridge in not included in this scenario			
14	Soft Costs (35% of sub-total)				$75.6	Used same % as 2002 study			
15	Property Acquisition				$5.0	Rough guess			
	Total Cost Estimate				**$361.5**				
	Ernie Wolski conceptual estimate for BC Ferries in 2002 gave a cost of $1,050 M based on a 2400 m x 35 m bridge and a project 2750 m long								
	A bridge crossing at the Tsable River aluvial fan would be shorter								
	Reduce Wolski's estimate to account for a shorter bridge and project and a two lane structure and approach road								
	= $1050M x 2191 x 14/(2400 x 35) =				$383	in 2002 $			
	Increase using CPI				$61	CPI has increased approximately 16% between 2001 & 2011			
				Use a value of	$445	say $500M			

Google Earth
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Fly To
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Directions
Fly to e.g., New York, NY
Places
Add Content
My Places
Sightseeing
Select this folder and click on the 'Play' button below, to start the to
South Tower
North Anchorage
North Tower
South Bent 1
South Abutment
Suspension Bridge
South Anchorage
Interchange at Hwy 19A
Temporary Places
Layers
Primary Database
Borders and Labels
Places
Photos
Roads
3D Buildings
Ocean
Street View
Weather
Gallery
Global Awareness
More
Terrain

Sturrock, Ian F TRAN:EX

From: Timmermans, Levi TRAN:EX
Sent: Thursday, February 9, 2012 4:03 PM
To: Sturrock, Ian F TRAN:EX
Subject: RE: Coastal Ferries - replacing ferry routes with bridges?

Ian, fyi, and after taking a look at the report a ballpark cost for the 8 bridges would site at $13.5B.

From: Sturrock, Ian F TRAN:EX
Sent: Thursday, February 9, 2012 12:03 PM
To: Timmermans, Levi TRAN:EX
Cc: Baskin, Kevin TRAN:EX; Nyland, Dirk TRAN:EX
Subject: RE: Coastal Ferries - replacing ferry routes with bridges?

Levi,

Bridge Section has done some very preliminary cost studies on the two bridges that would be needed to cross over Dodd Narrows and False Narrows to connect Gabriola Island and Vancouver Island. An estimate done in 1988 puts the cost of four lane bridges at Dodd and False Narrows at $7.4 M and $9.0 M respectively. These costs did not include any roadwork needed to connect the bridges into the existing road network.

In 2002 BC Ferries commissioned Ernie Wolski to do a conceptual study into replacing eight short ferry routes to some of the Gulf Islands with bridges. The Gabriola Island Ferry was one of the routes considered. Road and bridge construction costs to replace this ferry was estimated at $50 M in 2002 dollars. We do not have the full or final version of this BC Ferries report.

Please give me a call to discuss in more detail.

Regards,

Ian Sturrock

Bridge Design & Construction Standards Engineer
Engineering Branch, BC Ministry of Transportation & Infrastructure
Phone: 250-356-9862

From: Nyland, Dirk TRAN:EX
Sent: Thursday, February 9, 2012 9:42 AM
To: Baskin, Kevin TRAN:EX
Cc: Sturrock, Ian F TRAN:EX
Subject: Fwd: Coastal Ferries - replacing ferry routes with bridges?

Kevin/Ian
Per below, do we have anything to offer or pass on?

Thx
Dirk

Dirk Nyland PEng,
Chief Engineer
BCMoTI

Phone: 250-387-2310
Cell: 250-812-6645

Begin forwarded message:

From: "Timmermans, Levi TRAN:EX" <Levi.Timmermans@gov.bc.ca>
Date: 9 February, 2012 9:17:13 AM PST
To: "Nyland, Dirk TRAN:EX" <Dirk.Nyland@gov.bc.ca>, "Fabick, Valerie L TRAN:EX" <Valerie.Fabick@gov.bc.ca>
Subject: Coastal Ferries - replacing ferry routes with bridges?

Dirk/Val,
As part of the Ministry's response to the recent BC Ferry Commissioner's review, we are preparing a Cabinet Submission and as part of that work one of the key questions is related to the costs for replacing existing ferry routes with bridges; for example replacing the Gabriola Island ferry to Nanaimo with a bridge. Several other routes would also be considered but in short do you know of such analysis and or can direct me to an individual in our Ministry who might have some information.

I am working under a very short timeframe so any feedback is very much appreciated.

Thanks!
Levi

Levi Timmermans, PMP
Manager, Coastal Ferries
Ministry of Transportation & Infrastructure
ph: 250-356-0738 fax: 250-356-2112

Pages 228 through 232 redacted for the following reasons:
- -
s13

	Short Link Cost Estimate				Aug-11	
					IFS	
Item	Description	Length	Width	Unit Price	Amount (Millions)	Comments
1	Interchange at Duke Point Hwy			$35M	$35	Increased value from 2002 study by 50%
2	Hwy From Duke Point to Dodds Narrows Bridge	7.3 km		$5.25M/km	$38	Increased unit price from 2002 study by 50%
3	Dodds Narrows Bridge	240 m	26 m	$7000/m²	$44	Major bridge unit price used from C & M Branch
4	Mudge Isand Highway	2.5 km		$5.25M/km	$13	Increased unit price from 2002 study by 50%
5	False Narrows Bridge	720 m	26 m	$7000/m²	$131	Major bridge unit price used from C & M Branch
6	Gabriola Island Highway	7.5		$5.25M/km	$39	Increased unit price from 2002 study by 50%
7	Interchange to Gabriola Island Road			$35M	$35	Increased value from 2002 study by 50%
8	New Gabriola Ferry Terminal			$675	$675	Very rough guess would be $675M
9	New Iona Ferry Terminal			$675	$675	Very rough guess would be $675M based on increasing cost for man-made island in 2002 study by 1.5X
10	Hwy from Iona Term. to Grant McConachie Way	10 km		$5.25M/km	$53	Increased unit price from 2002 study by 50%
11	Iona Wetlands Bridge	120 m	26 m	$4000/m²	$12	Minor bridge unit price used from C & M Branch
12	New Interchange at Grant McConachie Way			$50M	$50	More complicated interchange due to separate roadways at G. McConichie Way
	Sub-total				**$1,800**	
13	Contingiencies (30% of sub-total)				$540	Reduced the contingency amount from 35% in the 2002 study as a floating bridge in not included in this scenario
14	Soft Costs (35% of sub-total)				$630	Used same % as 2002 study
15	Property Acquisition				$450	Increased value from 2002 study by 50%
	Total Cost Estimate				**$3,420**	

Sturrock, Ian F TRAN:EX

From: s22
Sent: Thursday, September 29, 2011 10:49 PM
To: Transportation, Minister TRAN:EX
Cc: Coons.MLA, Gary E LASS:EX; Dix.MLA, Adrian LASS:EX; christy.clark.mla@leg.bc.ca
Subject: Denman Island Cable Ferry - opposed - and had more than enough

Dear Mr. Lekstrom,

After living on Denman Island for almost 14 years and having watched our island community and those of other coastal communities around us get thrashed by B.C. Ferries, I have to say "Enough is enough."

Now we are going into "untested waters" with B.C. Ferries going ahead (I hear it's a "done deal") with a cable ferry from Buckley Bay on Vancouver Island to Denman Island. B.C Ferries spent much money in the past few years already rebuilding docks on both sides and now they are going ahead with this….I have many concerns with this ferry as does the rest of the community…..these concerns were aired at the meeting of the Commissioner yesterday from what I was told. I couldn't attend the meeting; it was held at 3:00 in the afternoon when so many of us were at work.

At this point, I would like to agree with another proposal put forward by someone at one of the meetings …. **JUST BUILD A BRIDGE!** Be done with it. Enough with B.C. Ferries. They are going to farm out the ferry to (yet another) alternative service provider in any case. There is no accountability to the people B.C. Ferries is intended to serve.

In the end, do we want ONE province or TWO? The way the ferries have been going, we might as well have two….there seems to be no recognition of the fact that we have a huge coastline in this province with lots of water between….this is part of our highway! Do we value rural communities? Do we want services to be in place for those people who want to visit rural communities?

Please just consider building a bridge….for the money it is going to cost, get rid of our pariah – B.C. Ferries. We got rid of Mr. Hahn…..now, get rid of B.C. Ferries from our community altogether…OR TAKE IT BACK fully under government folds and serve the communities as you have done Whistler (Sea-to-Sky Highway, no tolls) and many other mainland communities.

Sincerely,

s22

Pages 235 through 243 redacted for the following reasons:
- -
s13

Sturrock, Ian F TRAN:EX

From: Sturrock, Ian F TRAN:EX
Sent: Tuesday, October 16, 2012 11:58 AM
To: s22
Subject: RE: 213190 - Web Reply Direct - Fixed Link between Vancouver and the Mainland

s22

The ministry and ferry operator have undertaken a number of preliminary studies pertaining to the use of bridges as replacements for ferry routes between some of the Gulf Islands. However, building such infrastructure is much more complicated than just determining financial feasibility and even that is not certain in these economic times. Critical issues such as land use, First Nations interests and environmental, social and economic impacts also have to be considered.

That said, the ministry is committed to reviewing all strategies, including any future opportunities to replace some ferry routes with fixed links, to support the Province's long-term vision to connect coastal communities in an affordable, efficient and sustainable manner.

You may be aware that Ferry Commissioner Gordon Macatee recently completed a review of the Coastal Ferry Act and released a report with his recommendations on how to sustain ferry services. In light of his review, which found some ships operating with 70 per cent of their deck space empty, the ministry has committed to a public engagement process with coastal communities. We want to hear suggestions from citizens and local governments about strategies to best balance the needs of ferry users with the interests of B.C. taxpayers and the ferry operator.

More information about the engagement process will be made public as soon as it is available, and, if you are interested, I encourage you to participate and share your ideas.

Thank you again for taking the time to write.

Sincerely,

Ian Sturrock

Bridge Design & Construction Standards Engineer
Engineering Branch, BC Ministry of Transportation & Infrastructure
Phone: 250-356-9862

From: s22
Sent: Monday, October 15, 2012 10:03 PM
To: Sturrock, Ian F TRAN:EX
Subject: Re: 213190 - Web Reply Direct - Fixed Link between Vancouver and the Mainland

Since the Georgia Straight is the problem, why not build a bridge connecting Vancouver Island to the gulf Islands and Galiano Island and leave the Georgia

Straight crossing for later. Move the Swartz Bay ferry terminal
to Galiano Island. Shorten the Ferry travel distance by travelling from Galiano Island
to Tsawassen; the 20 Km distance accross the Georgia Straight. Thus saving money
on fuel and time.

From: "Sturrock, Ian F TRAN:EX" <Ian.Sturrock@gov.bc.ca>
To: s22
Sent: Friday, October 12, 2012 2:57 PM
Subject: 213190 - Web Reply Direct - Fixed Link between Vancouver and the Mainland

Thank you for your message of October 3, 2012, enquiring about the feasibility of a fixed link between the Lower Mainland and Vancouver Island.

Over the years, many British Columbians have suggested that a bridge be constructed across the Georgia Strait. Through a number of preliminary studies, the ministry has explored the possibility of an underground tunnel, a submerged floating tunnel and a floating bridge and found that all of these possibilities present significant engineering, environmental and financial challenges. The most striking technical challenge for any potential crossing is presented by the Georgia Strait itself. Waters with depths up to 365 metres and thick, soft bottom sediment in the Strait make anchoring any fixed link structure extremely difficult. Also, the area is vulnerable to earthquakes, extreme wave conditions and underwater landslides.

Our current understanding of the seismic and hydraulic challenges of bridge building has placed the estimated cost of a fixed link from Vancouver Island to the Lower Mainland at approximately $12 billion. The shortest fixed link option for crossings for the Strait of Georgia considered was 20 kilometres, and went from the end of the Tsawwassen Causeway to Galiano Island. However, a number of additional bridges would be needed to span between several of the Gulf Islands to Vancouver Island to complete this option for a fixed link. In the case of a bored tunnel, such a structure would be more than 50 kilometres in length. While funding a project of this magnitude is currently not feasible, you can be sure the ministry will continue to monitor developments in this field.

If you are interested in finding out more about fixed link concepts and the potential for a link between the mainland and Vancouver Island, you may want to visit the ministry's webpage at http://www.th.gov.bc.ca/publications/reports_and_studies/fixed_link/fixed_link.htm

Regards,

Ian Sturrock

Bridge Design & Construction Standards Engineer
Engineering Branch, BC Ministry of Transportation & Infrastructure
Phone: 250-356-9862

Submitted by s22 () on Wednesday, October 3, 2012 at 11:10:19

message: I have a solution for reducing the rising cost of B.C. Ferries!
Build a fixed bridge connecting Vancouver Island and the Gulf Islands to the Mainland of B.C.
A fixed bridge!
A fixed bridge can be paid for with a toll collection booth. A toll collection booth collecting a toll from people using the bridge. After twenty years of paying the bridge off with a toll, the bridge will be paid for and we'll be going accross for free!

reply: yes

email2: s22

email_address_confirm: s22

carbonCopy: Y

Send Message: Send Message

Fattore, Miranda J TRAN:EX

From: Transportation, Minister TRAN:EX
Sent: Wednesday, June 23, 2010 4:06 PM
To: s22
Cc: 'Ferries (Customer.Relations@bcferries.com)'; Baskin, Kevin TRAN:EX
Subject: 186332 - Fixed Link to Gabriola Island
Attachments: economic development; bc ferries third quarter financial report of yet more losses.

s22

186332 - Fixed Link to Gabriola Island

Dear s22

Thank you for your recent e-mails regarding your ongoing interest in a fixed link to Gabriola Island.

As I've mentioned in previous correspondence, the ministry has determined that the Nanaimo Gabriola crossing is the only route where a fixed link could potentially be more financially viable than continued ferry service. However, building a fixed link is much more complicated than determining financial feasibility, and even that is not certain in these economic times. Critical issues like land use, First Nations interests and environmental, social and economic impact have to be considered. Additionally, as you have noted, there remains a lack of public consensus in favour of such a project.

If you have any further questions that you would like to direct to the Ministry of Transportation and Infrastructure, please don't hesitate to contact Kevin Baskin, Chief Bridge Engineer. He would be pleased to assist you at 250 387 7737 or by e-mail at Kevin.Baskin@gov.bc.ca.

BC Ferries does its best to keep rates affordable for British Columbians and the company welcomes suggestions to improve the efficiency and effectiveness of its service. For this reason, I have taken the liberty of forwarding a copy of your correspondence to David Hahn, President and CEO of BC Ferries, so that he is aware of your recommendations.

Thank you again for taking the time to write.

Sincerely,

Shirley Bond
Minister

Copy to David Hahn, President and CEO
BC Ferries

Kevin Baskin, Chief Bridge Engineer

From: s22
Sent: Wednesday, February 24, 2010 8:21 AM
To: Transportation, Minister TRAN:EX
Subject: Lets get B.C. moving

Honorable Shirley Bond, Minister.
February 23, 2010-02-24

Thank you for following up my request for information regarding the construction costs of two bridges to replace the Gabriola Island Ferry. Your figure, $54 million, appears to be close according to very preliminary information provided by SureSpanStructures. However it is still not clear if that figure involves a single stage substructure suitable for the needs of Gabriola Island or a two stage substructure suitable for an eventual shorter link to the Mainland, either via Gabriola or Valdes.

Is it fair for me to list the assets and expenses that would be relieved if the Gabriola Ferry were to be used elsewhere and the terminal space in Nanaimo sold for development. You are, no doubt, aware of the Large Cruise Ship Facility being developed next to the B.C. Ferry parking lot for Gabriola Island. This is being constructed with Federal funds and stimulated by the limitations of Vancouver Harbour access for large ships. At the same time, the adjacent down-town Mall is being re-designed for cruise ship accessibility and at the same time brings the Casino (which is being enlarged) within walking distance from the new cruise ship Facility.

A brief look at the value of the Gabriola Ferry parking lot, according to Realtors, would be $ 10 million. The present upgrade of the Gabriola Ferry, valued at roughly $15 million makes the asset value of the ferry at last $25 million. We would not need the crew or fuel cost or future maintenance. Say $10 million for all three, for a total of $45 million. Cost to build two bridges- $9 million. May be my math is wonky; please get one of your accountants set me straight. For bridges, we get 24 hour service to enhance work opportunities, to increase access to educational opportunities, to gain better access to health requirements, possible improved water supplies and liquid waste disposal. Not the least, Real Estate values and investment would increase, thus benefiting the local economy.

We only need a few more supporters before the bridge customers on Gabriola Island, outnumber the naysayers.

Could a meeting between your Ministry, the financial department of B.C. Ferries and select members of the Gabriola Community be scheduled, in order to progress to the next stage in infrastructure planning?

Yours sincerely, s22 Lets get B.C. moving!

MINISTRY OF TRANSPORTATION AND HIGHWAYS

BRIEFING NOTE

REGION

South Coast

COMMUNITY

Vancouver Island/Lower Mainland

TOPIC

Georgia Straight Crossing

ELECTORAL DISTRICT

Richmond Centre/Naniamo

ISSUE

Update on consultation with Georgia Straight Crossing Consortia

BACKGROUND

Pre-feasibility technical studies were conducted in 1980 by Willis Cunliffe Tait & Co. Ltd, Parsons Brinckerhoff, Inc. and Fenco to detmine potential solutions for fixed link across Georgia Straight. An unsolicited update to the pre-feasibility study was conducted by Willis Cunliffe Tait & Co in 1985. In response to renewed interest in the project, the Ministry investigated the work done todate and developed a presentation for the Minister to advise regarding the technical challenges of the project. The Ministry met with members of a consortia in April 2002 to discuss their concept and this was followed up with a meeting in Delcan's office in June 2002 to review their work in more detail.

DISCUSSION

A meeting was held with John Cross (JATAX Enterprises) and Steve Russell (Delcan) to discuss the work that they have done. Differing from the route options presented in the 1980 report, the proposed crossing extends from the north end of Gabriola Island to the north end of Iona Spit off Iona Island in Richmond. The Georgia Straight crossing length is now 27.5km long (extended by 3.5km) over water depths up to 350 mtres. The western connection assumes a roadway along the Iona Spit, across environmentally sensitive wetlands to Lulu Island, along the north side of Vancouver Airport and then across the Middle Arm of the Fraser River to connect into Highway 99. The eastern connection assumes a landing on Thatcher Roack to Gabriola Island, a crossing of False Narrows onto Mudge Island with another crossing over Dodds Narrows with a highway connection to the Duke Point Highway.

The consortia has assumed that a corridor can be protected with a connection to Highway 99 and the Airport Authority will allow an arterial roadway on the perifery of the airport. Feasibility of a floating pontoon in this regime is questionable and requires a dynamic analysis to confirm the force levels in the pontoon sections. Environmental mitigation has not been considered to any great extent and extensive public consultation will be required to advance the project. A comparative analysis of the Delcan cost estimate has been completed and indicates costs in the order of $9.5B. In order to quantify the larger cost elements, technical feasibility and construction logistics must be confirmed.

Delcan advised that Doug Buchannan from Davis & Co. has recently joined with SNC Lavalin as their P3 advisor. Delcan indicated that they will be discussing this project further with SNC Lavalin and possibly pool their resources to conduct further studies.

MINISTRY POSITION

Continue to monitor work being done by consortia and respond as required.

PREPARED BY
R. W. Mathieson
Senior Bridge Projects Engineer

DATE SUBMITTED
July 10, 2002

cc. D. Nyland, Chief Engineer
P. Brett, Chief Bridge Engineer

MINISTRY OF TRANSPORTATION
BRIEFING NOTE

BN #:120774

REGION: South Coast

MoT DISTRICT: Vancouver Island

ELECTORAL DISTRICT:

MUNICIPALITY /
REGIONAL DISTRICT:

I. PREPARED FOR INFORMATION

II. ISSUE:

Road and bridge fixed link between Vancouver Island and Gabriola Island via Mudge Island.

III. BACKGROUND:

A fixed link between Vancouver Island and Gabriola Island has been considered a number of times over the past four decades. Most often it has been considered as part of a larger project to improve transportation between Vancouver Island and the Lower Mainland either with a fixed link between Gabriola or a shorter ferry trip between Gabriola Island and Iona Island

IV. DISCUSSION:

Engineering

Bridge crossings linking Vancouver Island to Mudge Island over Dodds Narrows and from Mudge Island to Gabriola Island over False Narrows are technically feasible. Preliminary studies have been undertaken a number of times over several decades.

Bridge studies have been of a preliminary nature. Shipping clearances have not been determined.

Road connection studies have mostly been for the four-lane mainland ferry link options rather than a local link.

Economics

Most studies of bridges to Gabriola originate as part of larger studies connecting the Lower Mainland. A 2002 BC Ferries report studied eight short ferry routes and found the Nanaimo-Gabriola route was the only route where a fixed link might be more financially viable than a continued ferry link. The Net Present Value (NPV) over 40 years of maintaining a ferry was $65 million versus the NPV of road and bridge construction and rehabilitation of $50 million.

Land Issues

Briefing note (cliff # 120936) is being prepared by John Shaw, Manager, Right-of-Ways, Properties and Business Management Branch.

Environmental Issues

s13, s16

Social Issues

One document mentions contaminated drinking water wells on Gabriola Island.

Emergency transportation response is currently handled (at least in part) by call out of ferry crew after hours. This has been a concern in some correspondence.

One letter from a Gabriola resident reports there is strong difference of opinion amongst Gabriola residents as to whether a bridge link is desirable with a split along commuter, retired population lines. In 1988 an adhoc group called the Gabriola Island Bridge Club Committee lobbied Government with a petition for a bridge link. In the same year the Gulf Islands Committee wrote to the Minister with 173 letters enclosed opposing a bridge to Mudge and Gabriola with a short link Ferry to the Lower Mainland.

A group of Gabriola Island Residents is working with the Ministry of Community, Aboriginal and Women's Services (CAWS) to investigate the possibility of incorporation.

A 1988 Briefing Note considered that replacement of a ferry with a bridge might be opposed by foot and bicycle commuters from North Gabriola who currently have ferry service directly to downtown Nanaimo.

Correspondence

The ministry has responded to 12 public inquires over the last two years regarding a bridge link to Gabriola.

In addition to general public enquiries, correspondence has also been received by the Mayor of Nanaimo regarding land issues, one commercial campground, the Islands Trust, and a group called the “Gabriola Transportation Authority”.

Responses from the ministry generally state that the project may be economically attractive and technically possible, but the $45 to 50 million capital funding is not available. Furthermore, the ministry would be interested in proposals for a privately funded project.

V. CONSULTATIONS:

n/a

VII. SUMMARY:

A link from Vancouver Island to Gabriola is feasible, but required capital funding of at least $50 million and significant local consultation.

Prepared By:	Gary Farnden	**Phone:**	(250) 387-7728
Drafter’s Title:	Bridge Rehab and Standards Engineer	**Date Prepared:**	February 10, 2004
Reviewed By:	Dirk Nyland		
Reviewer’s Title:	Chief Engineer		
Revised By:			
Reviser’s Title:		**Date Revised:**	February 11, 2004

November 3, 2011

Reference: 197790

s22

Dear s22

Re: Shortened or Fixed Links

Premier Christy Clark shared with me your letters regarding shortened ferry routes across Georgia Strait using bridges to some of the Gulf Islands, and fixed links across the Georgia Strait. I understand Chief Operating Officer Dave Byng has been in touch with you to apologize for the delay and to advise you that a response would be forthcoming.

Regarding the shortened ferry routes, prior to the development of the Duke Point Ferry Terminal in the early 1990s, BC Ferries undertook several studies of alternative routes across the Georgia Strait. This included investigations into potential terminal sites at two locations on Gabriola Island and four locations in Richmond.

I recognize your support for the construction of fixed links in the Gulf Islands. You may be interested to know a previous study indicated that the Nanaimo−Gabriola Island crossing would be the only route where a fixed link could potentially be more financially viable than continued ferry service. However, building a fixed link is much more complicated than determining financial feasibility. Critical issues like land use, First Nations interests and environmental, social and economic impact have to be considered. Additionally, as you noted, there remains a lack of public consensus in favour of such a project.

.../2

I understand these issues are important to you and recognize the efforts you have made to complete your report. I have taken the liberty of sharing your suggestions with the ministry's Chief Engineer, Dirk Nyland and BC Ferries' President and CEO, David Hahn, for their review and assessment.

Thank you for taking the time to write.

Sincerely,

Original Signed By:

Blair Lekstrom
Minister

Copy to: Premier Christy Clark

Dirk Nyland, Chief Engineer
Engineering, Highways Department

David Hahn, President and CEO
BC Ferries

Fattore, Miranda J TRAN:EX

Sent: Friday, November 9, 2007 4:06 PM
To: Baskin, Kevin TRAN:EX; Finlayson, Daryl W TRAN:EX
Subject: FW: 160973 – Fixed Link and Paving Material

For info Thanks Mike

-----Original Message-----
From: Transportation, Minister TRAN:EX
Sent: Tuesday, November 6, 2007 3:44 PM
To: s22
Cc: OfficeofthePremier, Office PREM:EX; Edgar, David D TRAN:EX; Oliver, Mike F TRAN:EX
Subject: 160973 – Fixed Link and Paving Material

s22
160973 – Fixed Link Not Responsive

Dear Fred:

Premier Gordon Campbell has asked me to respond on his behalf to your e-mail of September 23, 2007, regarding a possible fixed link to Salt Spring Island and Not Responsive

Not Responsive

In 2002 BC Ferries looked at some options for bridges to various Gulf Islands. The Salt Spring options (Swartz Bay-Ganges and Crofton-Vesuvius) were not cost effective, partly a result of the extreme technical challenge the depth of the channels poses. It should be noted that these crossings would be longer than the one you suggest from Bird's Eye Cove. The land side connections to your suggested crossing location might also be difficult, as existing road connections are limited.

Also, while a bridge would in some ways address the environmental impact of operating a ferry, the bridge and the accompanying road construction could potentially have a negative environmental affect as well; a bridge would lead to increased traffic to and from Salt Spring, resulting in an increase in vehicle emissions. Furthermore, there could be significant opposition from Salt Spring and North Cowichan residents.

That said, I'm grateful for your suggestion, as it highlights the importance of considering all alternatives for improving air quality and the efficiency of our transportation system. If you have any questions or concerns about this issue, Dave Edgar, Transportation Engineer, would be happy to help you. You can reach him at 250 751-3276 or by e-mail at David.Edgar@gov.bc.ca.

Not Responsive

Thank you again for taking the time to write.

Best regards,

Kevin Falcon
Minister

Copy to: Premier Gordon Campbell

Dave Edgar, Transportation Engineer

Mike Oliver, Chief Geotechnical
Material and Pavement Engineer

From: s22
Sent: Sunday, September 23, 2007 9:40 PM
To: OfficeofthePremier, Office PREM:EX
Subject: 160973 Conserve Energy

Dear Mr. Premier Gordon Campbell,
I just want to put some of my thoughts forward to you reagarding our province's plans on going Green .
I would like to see the following thoughts given some serious concideration:
1 - why not build a bridge to Salt Spring Island from Birds Eye Cove its not much more than a stones throw across the channel? That would help cut the operating cost of at least 2 ferries going to Salt Spring, think about how much fossel fuel that alone would save us tax payers and the pollution created by using fossel fuel plus the cost of replacing the ferries as well as maintenance. We should also look at other islands that can be connected easly to Vancouver Island.
2 - the government and municipalities should call for more recycled asphalt to be used in repairing our roads & highways.
3 - I see in Europe they are using a product called Warm Asphalt and it saves energy by using less fossel fuel for heat and saves electricty because the liquid does not have to be heated when stored. I would like to see the government explore the use of this product and help BC go Green.
Thanks for listening,
s22

Fattore, Miranda J TRAN:EX

Sent: Thursday, July 5, 2012 10:21 AM
To: Baskin, Kevin TRAN:EX; Sturrock, Ian F TRAN:EX
Subject: FW: 203796 – BC Ferries

FYI Nothing to do - we provided input/approval in late May.

-----Original Message-----
From: Transportation, Minister TRAN:EX
Sent: Thursday, July 5, 2012 10:15 AM
To: s22
Subject: 203796 – BC Ferries

s22

203796 – BC Ferries

Dear Correspondent:

I am writing in response to your e-mail of May 10, 2012, regarding BC Ferries.

Affordable, efficient ferry service to our coastal and island communities is very important, and I can assure you the provincial government remains committed to finding solutions to best balance the needs of ferry users with the interests of B.C. taxpayers and the ferry operator to ensure the sustainability of our coastal ferry system. You may be aware that BC Ferry Commissioner Gordon Macatee completed a review of the Coastal Ferry Act and released a report with his recommendations earlier this year. In response, the government has amended the Coastal Ferry Act to help reduce the pressure on fares.

The amendments give the Commissioner more flexibility to determine the amount of revenue needed to sustain operations and support ongoing investment, as well as additional responsibility to oversee the costs of providing the ferry service. Also, in addition to the more than $150 million in annual provincial funding, the government will increase its financial contribution to BC Ferries by $79.5 million over the next four years. While the commissioner is responsible for setting the final price caps, the amended legislation and additional funding are intended to enable the price cap increases to decline over time. In turn, we expect BC Ferries to look for greater efficiencies and innovative ideas that will reduce operating costs.

With respect to your suggestion for fixed links to connect island and coastal communities, the ministry has undertaken a number of preliminary studies for different fixed link options, including many of the routes you suggest, and have found that all of these possibilities present significant engineering, environmental and financial challenges. For example, to build a highway linking the Sunshine Coast and the Lower Mainland, the costs of such a route would be extraordinary due to the engineering and construction involved with extensive tunnelling and spanning of the mountainous terrain.

If you are interested in finding out more about fixed links, you may want to visit the ministry's web page at http://www.th.gov.bc.ca/publications/reports_and_studies/fixed_link/fixed_link.htm.

While fixed links may not be appropriate to replace some ferry routes, the ministry is committed to reviewing all strategies to ensure that coastal communities are connected in an affordable, efficient and sustainable manner. In the future, there may be some opportunities to replace some ferry routes with fixed links.

Thank you again for taking the time to write.

Sincerely,

Blair Lekstrom
Minister

--Original Message--
From: s22
Date: 5/10/2012 9:50:28 AM
To: EnquiryBC@gov.bc.ca
Cc: lcsocosystest@gov.bc.ca
Subject: Program or service related

Below is the result of your feedback form at
(https://extranet.gov.bc.ca/forms/gov/contact/index.html).

It was submitted by s22 ()
on Thursday, May 10, 2012 at 09:50:13
---

related: Transportation and Motor Vehicles

message: Please explain how you can justify no toll roads to anyplace BC but if there is water attached well SORRY. This province has a COASTLINE! You can see it from your lofty tower in Victoria. The mess you've made will only be fixed if you attach all roads to all Cities. Mr. Hahn made a mess so clean it up and go the distance - no fees on ferries until all roads are tolled. Also build bridges where economically feasible and shorten some runs. Here's a general idea - Earls cove, change to "bridge" to Nelson island; Saltspring,Denman or Hornby "Bridge", Mayne to Gabriola, Pender. Cut road into Gisbsons. Study road into Powell River, Possible bridges to Van isl from Powell River. Lets develop BC and not send it to the dark ages.

reply: yes

email2: s22

email_address_confirm: s22

carbonCopy: Y

Send Message: Send Message

Fattore, Miranda J TRAN:EX

Sent: Wednesday, August 31, 2005 8:48 AM
To: Baskin, Kevin TRAN:EX
Subject: FW: Islands Trust

Kevin: FYI

Ed

-----Original Message-----
From: Anderson, Steve BCF:EX [mailto:Steve.Anderson@bcferries.com]
Sent: August 30, 2005 7:04 PM
To: Storm, Ed TRAN:EX
Cc: Anderson, Brian R BCF:EX; Cousins, Erinn J BCF:EX; Ridout, Christy L BCF:EX
Subject: RE: Islands Trust

Hi Ed,

I don't think that's exactly the statement BC Ferries would make.

I will defer "official" comment to Brian and/or Christy since s22 but in general, it's my impression that we've identified that a bridge "may" be more economical and provide for a more efficient two port route, but it's my understanding that BC Ferries would only pursue the option if it were supported by the stakeholders and proven to be a more economical alternative to the triangle route. In general, the bridge has only come into discussion as a result of "due diligence" w.r.t. alternative service.

The Penelakut have indicated that they would like to improve access to education, healthcare, and employment. If a bridge is considered to improve access by providing more frequent sailing opportunities for both Thetis and Kuper, and is supported by the communities, then it may warrant further investigation. We haven't had any consultation yet.

BC Ferries recognizes that a bridge is contradictory to the Islands Trust moratorium on bridges to/from or between islands. BC Ferries did bring the issue up to Islands Trust and they indicated that this may be a situation where their policy is in conflict with the well being of the island residents and an exception could be considered if supported locally. At that meeting, it was identified that the bridge could be considered in the short-term instead of rebuilding Kuper, medium-term instead of rebuilding Alert Bay (Kuper to be relocated) or not at all. It's simply an option that's been identified.

First and foremost, it is BC Ferries objective to meet its contractual obligations. The bridge option is an alternative that that has been identified as a potential way to improve the ferry service. What BC Ferries didn't want to do was ignore an alternative that could be considered if supported by all parties.

The Bridge report you refer to was conducted by MOT. I left a copy in planning with Erinn Cousins and I'll ask her for it. Thetis and Kuper were not considered in that analysis.

Thanks again for all the info regarding the history of the bridge between Thetis and Kuper that was decommissioned.

Steve Anderson
Manager, Fleet Deployment and Scheduling
British Columbia Ferry Services Inc.
Phone: (250)
Fax: (250) s17
steve.anderson@bcferries.com
www.bcferries.com

-----Original Message-----
From: Storm, Ed TRAN:EX
Sent: August 30, 2005 12:12 PM
To: Anderson, Brian R BCF:EX

Cc: Anderson, Steve BCF:EX
Subject: Islands Trust

The Islands Trust has asked to speak with Minister Falcon at the upcoming Union of British Columbia Municipalities Convention to reiterate their concerns about fixed links to and between the Gulf Islands.

The Minister's briefing note will indicate that BCFS is contemplating a bridge between Thetis and Kuper Islands as an alternative to retaining the ferry terminal on Kuper Island—to save capital costs and to gain operational / service improvements—and that BCFS has asked MoT to assist in studying this option. It will also indicate that MoT is not currently studying any other bridges to or between islands.

Earlier correspondence between MoT and the Islands Trust, in April 2003, indicates that several years ago, perhaps in 2002 or early 2003, the costs of replacing some ferry routes with bridges was studied. Apparently, the study indicated a fixed link to Gabriola Island might make sense in future.

Do you know if this study was done by BC Ferries? If yes, could you provide a copy? I'm trying to see if any mention of this also should be included in the Minister's briefing note.

Thanks,

U. E. (Ed) Storm
Manager, Project Development
Ministry of Transportation
Partnerships Department
Tel: (250) 356-1566 Fax: (250) 356-2112
Email: Ed.Storm@gov.bc.ca

Pages 262 through 263 redacted for the following reasons:
- -
s13

s22

204089 - BC Ferries

Dear s22

Thank you for your e-mail of May 20, 2012, regarding BC Ferries.

Affordable, efficient ferry service to our coastal and island communities is extremely important, and I appreciate you taking the time to share with me your thoughtful suggestions for improving our ferry system.

I can assure you the provincial government remains committed to finding solutions to best balance the needs of ferry users with the interests of B.C. taxpayers and the ferry operator to ensure the sustainability of our coastal ferry system. You may be aware that BC Ferry Commissioner Gordon Macatee completed a review of the Coastal Ferry Act and released a report with his recommendations in late January 2012. In response, the government has amended the Coastal Ferry Act to help reduce the pressure on fares.

The amendments give the Commissioner more flexibility to determine the amount of revenue needed to sustain operations and support ongoing investment, as well as additional responsibility to oversee the costs of providing the ferry service. As well, in addition to the more than $150 million in annual provincial funding, the government will increase its financial contribution to BC Ferries by $79.5 million over the next four years. While the commissioner is responsible for setting the final price caps, the amended legislation and additional funding are intended to enable the price cap increases to decline over time. In turn, we expect BC Ferries to look for greater efficiencies and innovative ideas that will reduce operating costs, as you suggest.

With respect to your suggestion for a fixed link to connect Salt Spring Island with the Malahat Highway on Vancouver Island, the ministry has undertaken a number of preliminary studies for different fixed link options, and have found that all of these possibilities present significant engineering, environmental and financial challenges. Crossings at the current ferry and road network connections between Salt Spring Island and Vancouver Island would require a sophisticated bridge, such as a suspension bridge with main span crossing lengths rivalling some of the longest bridges in the world. A longer main span would be required as the water depths at the crossing locations exceed the depths at which caisson-type pier structures can be constructed. While the crossing distances through Samson Narrows are much shorter, the

topography on either side create challenges for road construction in areas where there is minimal road access.

While fixed links may not be appropriate to replace some ferry routes, the ministry is committed to reviewing all strategies to ensure that coastal communities are connected in an affordable, efficient and sustainable manner. In the future, there may be some opportunities to replace some ferry routes with fixed links.

It is important to note that BC Ferries has embarked upon the largest vessel revitalization program in the company's history, and that over $1 billion has been invested in new and improved vessels since 2003. While I understand BC Ferries has been exploring options for the replacement of the Queen of Nanaimo, no decisions have been made to change vessel type, reconfigure the route or alter service at this time.

You may also be interested to know that BC Ferries has proposed upgrades to the Fulford Harbour ferry terminal, which would include improvements to the road leading to the terminal. While BC Ferries has shared its plans for potential road upgrades with the ministry for review and input, no final decisions have been made with respect to this project. You can be sure ministry staff will keep your comments in mind as potential upgrades to the ferry terminal are reviewed. In the meantime, as BC Ferries is responsible for any changes or enhancements to the design of ferry terminals, as well as the replacement of vessels and route changes, I have taken the liberty of sharing your comments with BC Ferries' President and CEO, Mike Corrigan, to ensure he is aware of your concerns.

Regarding your comments about safety rules on the vessel that services Fulford Harbour, while all of BC Ferries' vessels operate in full compliance with Transport Canada's regulations, the ministry has no jurisdiction over these matters. As such, I have forwarded your e-mail to the Honourable Denis Lebel, Federal Minister of Transport, Infrastructure and Communities, for his information.

Regarding your question about tolls on the Coquihalla Highway, in 2003, our government made a commitment that any new infrastructure financed by toll revenue should have its tolls removed upon recovery of construction costs. The Coquihalla Highway cost $848 million to build, and, as of September 26, 2008, the toll plaza had collected $845 million in tolls. Full tolling provincial guidelines are available on the ministry's web site at the following link: http://www.th.gov.bc.ca/publications/reports_and_studies/tolling/index.htm.

Thank you again for taking the time to write.

Sincerely,

Blair Lekstrom

Minister

Copy to: The Honourable Denis Lebel
Minister of Transport, Infrastructure and Communities

Mike Corrigan, President and CEO
BC Ferries

s22

213178 – Coastal Ferry Service and Fixed Links

Dear s22

Thank you for your e-mail of October 2, 2012, suggesting that ferry services between smaller Gulf Islands be replaced with bridges.

Over the years, many British Columbians have suggested options for the construction of fixed links between Gulf Islands as a means to improve coastal community sustainability. The ministry has undertaken a number of preliminary studies pertaining to such links, and determined the Nanaimo−Gabriola crossing was the only route where a fixed link could potentially be more financially viable than continued ferry service. However, building a fixed link is much more complicated than determining financial feasibility and even that is not certain in these economic times. Critical issues like land use, First Nations interests and environmental, social and economic impacts also have to be considered.

That said, the ministry is committed to reviewing all strategies, including any future opportunities to replace some ferry routes with fixed links, to support the Province's long-term vision to connect coastal communities in an affordable, efficient and sustainable manner.

To find out more about fixed link concepts and the potential for a link between the mainland and Vancouver Island, if you have not already done so, you may want to visit the ministry's web page at http://www.th.gov.bc.ca/publications/reports_and_studies/fixed_link/fixed_link.htm.

You may be aware that Ferry Commissioner Gordon Macatee recently completed a review of the Coastal Ferry Act and released a report with his recommendations on how to sustain ferry services. In light of his review, which found some ships operating with 70 per cent of their deck space empty, the ministry has committed to a public engagement process with coastal communities. We want to hear suggestions from citizens and local governments about strategies to best balance the needs of ferry users with the interests of B.C. taxpayers and the ferry operator.

More information about the engagement process will be made public as soon as it is available, and, if you are interested, I encourage you to participate and share your ideas.

Thank you again for taking the time to write.

Sincerely,

Mary Polak
Minister

194570 & 204322 Gabriola link; 205697 engagement; 205351 review

MUNICIPALITY / REGIONAL DISTRICT:	**Islands Trust**
Attendees:	**Chair David Essig, Vice Chairs Kim Benson, Gisele Rudischer, Tony Law and Linda Adams CAO**
Topic for Discussion:	**Islands Trust policy regarding bridges to and between Islands**

ISSUE: Islands Trust wishes to meet with the Minister to reiterate their policy that Islands Trust are not in favour of bridges to and between islands.

BACKGROUND:

A letter was sent to David Essig, Chair of Islands Trust Council from Minister Judith Reid dated April 1, 2003 (See attached). This letter stated that the provincial government had recently re-examined the potential costs involved in constructing bridges to replace some existing ferry services. It was found that a fixed link to Gabriola Island could make financial sense in the future. The letter stated that the bridge would cost in the order of $50 million. The letter stated that the provincial government was not currently contemplating construction of the bridge because sufficient capital resources were not available and that no further study would be done at that time. No further study has been done since that time.

BC Ferry Services (BCFS) is currently contemplating a bridge between Thetis and Kuper Islands as an alternative to retaining the ferry terminal on Kuper Island. BCFS has asked the Ministry of Transportation (MoT) to provide assistance to them in studying this option. BCFS will take the lead in the review with MoT providing some support work. More background is contained in BN #138296.

RECOMMENDED RESPONSE:

s13

MINISTRY OF TRANSPORTATION
BRIEFING NOTE

Cliff #: 138296
Date: August 22, 2005

REGION:	South Coast
MoT DISTRICT:	Vancouver Island
ELECTORAL DISTRICT:	Cowichan - Ladysmith
MUNICIPALITY / REGIONAL DISTRICT:	Cowichan Valley Regional District

I. PREPARED FOR: ADM for Decision

II. ISSUE:

BC Ferry Services (BCFS) has proposed a bridge be built between Thetis and Kuper Islands (Appendix) as an alternative to retaining the terminal on Kuper. They claim this would: (a) let BCFS consolidate ferry service at Thetis to save costs and improve operations; and (b) reduce MoT service fees. BCFS has asked MoT to join in studying the bridge option, leading to a possible partnership to build the bridge.

III. BACKGROUND:

Thetis Island, which has a year-round population of about 350, was settled in the late 1800's and is privately owned. Its roads are under MoT jurisdiction. Kuper Island, which has about 380 residents, is primarily a reserve of the Penelakut First Nation. Its roads are private.

Thetis and Kuper are separated by a narrow and shallow channel. In the late 1890's, a one-lane wooden bridge was built to connect the islands at the channel's narrowest point. It was used by Thetis residents to access a post office on Kuper and by Kuper residents to access services on Thetis. In 1905, the channel was dredged to provide passage for small boats.

In 1947, the federal government re-dredged the channel and removed the bridge, which was reportedly in poor condition, to provide clearance and make the channel navigable by larger boats. The post office had been shifted to Thetis in the 1930's, so bridge traffic had declined.

In 1959, the Province started ferry service to Thetis. Soon after, Kuper residents requested access to the ferry via a bridge to Thetis. In 1964, due to the cost of a bridge, the Province extended the Thetis ferry service to collect foot passengers at Kuper, using an existing wharf. This could not take vehicles, forcing Kuper residents with vehicles to park in Chemainus.

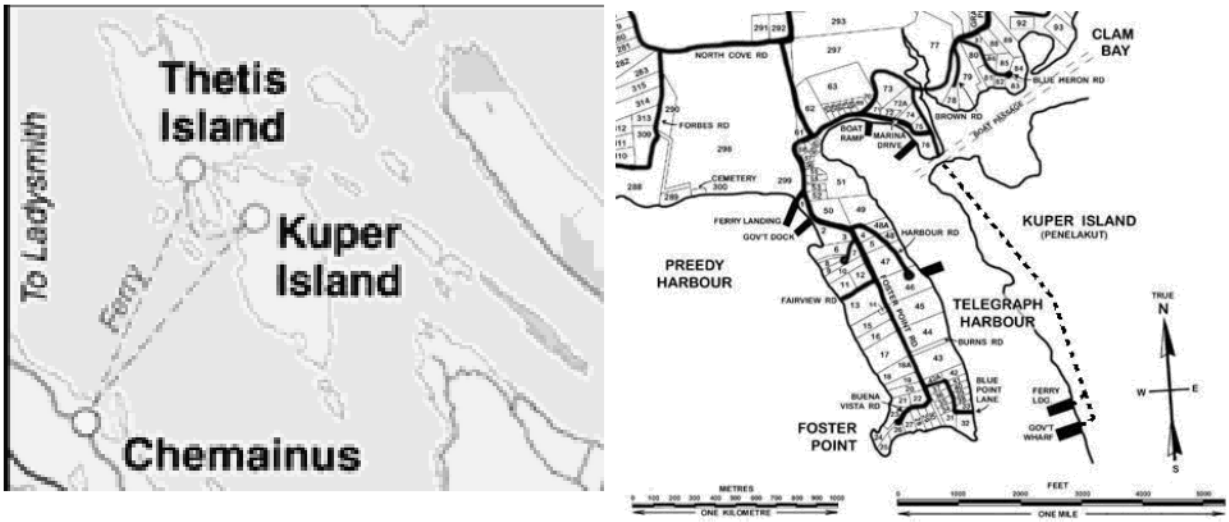
In 1966, the Penelakut again asked the Province to re-build the bridge, to give vehicle access between Kuper and Vancouver Island using the Thetis ferry. They offered to pay 50% of the cost. Based on a federal opinion that any bridge should give a 50' vertical and 100' horizontal clearance over the channel, its cost was estimated to be greater than building a ferry terminal and vehicle ramp at Kuper. In the mid 1970's, a vehicle dock and ramp were constructed and Kuper Island gained vehicular ferry service.

In 2003, BCFS took over operation of coastal ferry services, including the Thetis-Kuper route.

Pages 271 through 272 redacted for the following reasons:
- -
s13

Prepared By:	Ed Storm	**Phone:** (250)-356-1566
Drafter's Title:	Manager, Partnership and Project Development	**Date Prepared:** August 22, 2005

Map of Thetis and Kuper Islands [1, 2]



Photograph of Kuper – Thetis Bridge (From BC Archives) [3]

[1] http://www.vancouverisland.com/001maps/gulfislfery.html
[2] http://thetisisland.net/maps.html
[3] http://www.bcarchives.gov.bc.ca/sn-4C7AEF3/cgi-bin/text2html/.visual/img_txt/dir_79/e_03896.txt

April 1, 2003

Reference: 111013

David Essig, Chair
Islands Trust Council
1627 Fort Street, Suite 200
Victoria BC V8R 1H8

Dear David Essig:

Re: Fixed Link to Gabriola Island

I am writing in response to your letter of March 4, 2003, regarding the possibility of a fixed link to Gabriola Island.

The provincial government recently re-examined the potential costs involved in constructing bridges to replace some existing ferry routes. We found that a fixed link to Gabriola Island could make financial sense in the future. Rough estimates suggest that the bridge could cost between $45 million and $50 million and that current ferry tolls and the existing subsidy may come close to recouping this cost. However, the provincial government is not currently contemplating construction of the bridge as sufficient capital resources are not available. We are not planning to study this concept further at this time.

I recognize that many people on the Gulf Islands have concerns about the social and environmental effects a fixed link could have. Let me assure you island communities would be consulted should we begin to develop the idea of a fixed link in more depth.

Thank you for taking the time to write.

Sincerely,

ORIGINAL SIGNED BY

Judith Reid
Minister

Copy to: Honourable George Abbott
Minister of Community, Aboriginal and Women's Services

Mike Hunter
MLA, Nanaimo

DENMAN ISLAND RESIDENTS' ASSOCIATION

Box 17
Denman Island, B.C.
V0R 1T0

November 18, 2008

The Honourable Kevin Falcon, Minister
Transportation & Infrastructure
P.O. Box 9055
Victoria, B.C. V8W 9E2

The Right Honourable Gordon Campbell
Premier of British Columbia
P.O. Box 9041
Victoria, B.C. V8W 9E1

Dear Sirs:

The Denman Island Residents Association wishes to express its gratitude to you and your government for your recent actions in facilitating an interim reduction in BC Ferries' fares for users of that company's minor routes. We are also grateful for your intercession leading to an interim cancellation of planned service cuts on some of those routes.

Your intercession in these two instances has gone some way to alleviating what was rapidly becoming an untenable situation for many residents of coastal communities served by BC Ferries. Unfortunately, an interim solution is not going to be enough. It is our hope that you will now undertake to permanently safeguard the continued existence of these small communities by finding a way to adequately subsidize these vulnerable routes.

Could you please assure us that your government is now committed to the continued viability of the Gulf Islands and other small coastal communities?

Yours sincerely,

Roxanna Mandryk

Roxanna Mandryk
Chair

Pages 276 through 279 redacted for the following reasons:
- -
s13

Parkinson, Carolyn TRAN:EX

From: Transportation, Minister TRAN:EX
Sent: Monday, February 9, 2009 2:36 PM
Subject: 169449 – BC Ferries

169449 - BC Ferries

Thank you for your recent correspondence expressing your concerns about the cost of ferry travel. Please accept my apologies for the lateness of this reply.

Our island and coastal communities are an irreplaceable part of British Columbia, and I know the health of our province depends on an affordable ferry service. As you know, there has been a significant change in market conditions since you wrote. BC Ferries has responded by taking the steps necessary to remove all fuel charges.

As part of Premier Campbell's Ten Point Economic Plan, the provincial government will increase funding through our contract with BC Ferries to help protect and stimulate British Columbia's economy. The 33 per cent reduction in ferry fares during December and January combined with the restoration of full service on the Sunshine Coast and major routes is expected to bring commercial, economic and social benefits to all British Columbians.

Currently, taxpayers contribute more than $130 million a year to guarantee service levels in British Columbia, almost half of which goes to support ferry service for the Islands Trust area. No other small communities in British Columbia enjoy this sustained, annual level of funding for their transportation infrastructure, and I'm proud that we're helping to protect the unique communities and lifestyles on our islands and coasts.

Our government continues to support ferries in other ways as well. An additional $20 million is provided for seniors, students, the disabled and those travelling for medical reasons, and the recently announced fare reduction and service restoration will cost another $20 million. Last year, our government made the decision to use a federal import duty rebate, at almost $14 million, to assist with fuel costs on the minor routes and the Horseshoe Bay/Langdale route. We also contributed an additional $7 million to assist with fuel costs on routes outside the Lower Mainland. This level of provincial taxpayer support is twenty five times what it was a decade ago.

Thank you for taking the time to write.

Best regards,

Kevin Falcon
Minister

-----Original Message-----
From: s22
Sent: Tuesday, July 15, 2008 8:12 AM
To: Falcon.MLA, Kevin
Subject: Ferries

Mr. Falcon:

I live on Hornby Island. I would like to add my voice to those who are bringing your attention to raising ferry costs. I would urge you to try to save to island culture that is under threat from these charges.

Respectfully,

s22

Pages 282 through 285 redacted for the following reasons:
- -
s13

Parkinson, Carolyn TRAN:EX

From: Transportation, Minister TRAN:EX
Sent: Wednesday, February 25, 2009 9:11 AM
To: s22
Subject: 172885 - BC Ferries and the Coquihalla Highway Tolls

s22

172885 - BC Ferries and the Coquihalla Highway Tolls

Dear s22

Thank you for your e mail of September 29, 2008, in which you express your concerns about the cost of ferry travel and suggest that Coquihalla Highway tolls could have been used to reduce these costs. Please accept my apologies for the lateness of my reply.

Our government made a commitment in 2003 that any new infrastructure financed by toll revenue should have its tolls removed upon recovery of construction costs. It made sense for us to apply this same principle to the existing Coquihalla Highway toll. The total capital cost of the Coquihalla Highway was $848 million. As of September 26, 2008, the toll plaza had collected about $845 million in tolls. The removal of the toll will ensure that trade and traffic continue to flow smoothly across British Columbia, strengthening our economy.

Our island and coastal communities are an irreplaceable part of British Columbia, and I know the health of our province depends on an affordable and reliable ferry service. As part of Premier Campbell's Ten Point Economic Plan, the provincial government increased funding through our contract with BC Ferries to help stimulate British Columbia's economy. The 33 per cent reduction in ferry fares during December and January combined with the restoration of full service on the Sunshine Coast and major routes has benefited many British Columbians.

Please be assured that our government's commitment to ferry service remains substantial at almost $175 million in annual funding through our contract with BC Ferries. To help put our support for ferries in context, it's worth noting that my ministry has invested about $600 million for the Sea-to-Sky Highway Improvement Project, which will provide good service for 25 years. During this same 25 year time period, we can anticipate, at current funding levels, several billion dollars of taxpayer support for our coastal ferry system.

Thank you for taking the time to write.

Best regards,

Kevin Falcon
Minister

From: s22
Sent: Monday, September 29, 2008 10:46 PM
To: Transportation, Minister TRAN:EX
Subject: Cocquihalla tolls

I am a supporter of your governments programs even the carbon tax, but I can't believe that your party eliminated the tolls on the Cocquihalla, while at the same time ferry fares have risen dramatically.

You could have used the toll money to offset increased ferry fares.

You just don't seem to get it- the ferry routes should be treated as part of the highway system for residents of Vancouver Island and the Gulf Islands.
Ferry fares should be eliminated entirely unless you want to put a toll on all BC highways to be fair.

s22

Parkinson, Carolyn TRAN:EX

From: Falcon.MLA, Kevin [Kevin.Falcon.MLA@leg.bc.ca]
Sent: Friday, October 24, 2008 9:49 AM
To: WEBMASTER TRAN:EX
Subject: 173642 FW: BC Ferries

Importance: High

Natasha Westover
Constituency Assistant to
Kevin Falcon, MLA
Ph. 604-576-3792
Fax 604-576-3797
Natasha.Westover@leg.bc.ca

From: s22
Sent: Wednesday, October 22, 2008 3:20 PM
To: Falcon.MLA, Kevin
Cc: Hagen.MLA, Stan; Gordon Campbell
Subject: BC Ferries
Importance: High

Dear Mr. Falcon,

I would like to express my concerns over the BC Ferries cuts in service. When I hear of this Government owned business cutting service to coastal communities while putting on extra sailings for hockey fans I am bothered. There was a meeting on the Sunshine Coast this week to express concern over reduction of service there. The people of the Sunshine Coast were not even consulted! I live on Denman Island & depend of BC Ferries to travel to other parts of the province. What guarantee can you give that my service will not be affected in the same way? I believe residents of these coastal & island communities should not be charged to use the ferries. We have a highway system that does not charge user fees. We on the Gulf Islands should travel freely about our province. Oil prices have gone down by half yet I do not see my fuel surcharge taken off my charges to get back home after an essential trip to Vancouver Island. The Government of BC owns BC Ferries and should not pretend by a 'shell game' it is not a Crown Corporation. Residents of the Gulf Island and coastal communities of BC deserve better than what we now have. I would appreciate hearing your Government's views on this issue. Too bad the Legislature is not sitting this Fall so my MLA could get answers for us.
Sincerely,

s22

Parkinson, Carolyn TRAN:EX

From: Transportation, Minister TRAN:EX
Sent: Wednesday, February 25, 2009 4:24 PM
To: s22
Cc: OfficeofthePremier, Office PREM:EX
Subject: 173642 - BC Ferries

Importance: High

s22

173642 - BC Ferries

Dear s22

Thank you for your e-mail of October 22, 2008, expressing your continued concerns about BC Ferries' fares and service reductions. Please accept my apologies for the lateness of my reply.

As part of Premier Campbell's Ten Point Economic Plan, the provincial government increased funding through our contract with BC Ferries to help stimulate British Columbia's economy. The 33 per cent reduction in ferry fares during December and January combined with the restoration of full service on the Sunshine Coast and major routes has benefited many British Columbians. Additionally, BC Ferries has taken the steps necessary to remove all fuel surcharges.

I recognize that you would like to see all fares removed from the coastal ferry system for residents and travellers. However, taxpayers have already contributed almost $175 million in funding through our contract with BC Ferries this fiscal year. This level of provincial taxpayer support for ferries is twenty five times what it was a decade ago.

You may be interested to know that our contract with BC Ferries guarantees that the number of annual round trips will remain the same but we've made it easier for BC Ferries to provide more service in the peak season when demand is greater. BC Ferries must provide the number of sailings it has been contracted for under the terms of the Coastal Ferry Contract.

Thank you again for taking the time to write.

Best regards,

Kevin Falcon
Minister

Copy to: Premier Gordon Campbell

From: s22
Sent: Wednesday, October 22, 2008 3:20 PM
To: Falcon.MLA, Kevin
Cc: Hagen.MLA, Stan; Gordon Campbell
Subject: BC Ferries
Importance: High

Dear Mr. Falcon,

I would like to express my concerns over the BC Ferries cuts in service. When I hear of this Government owned business cutting service to coastal communities while putting on extra sailings for hockey fans I am bothered. There was a meeting on the Sunshine Coast this week to express concern over reduction of service there. The people of the Sunshine Coast were not even consulted! I live on Denman Island & depend of BC Ferries to travel to other parts of the province. What guarantee can you give that my service will not be affected in the same way? I believe residents of these coastal & island communities should not be charged to use the ferries. We have a highway system that does not charge user fees. We on the Gulf Islands should travel freely about our province. Oil prices have gone down by half yet I do not see my fuel surcharge taken off my charges to get back home after an essential trip to Vancouver Island. The Government of BC owns BC Ferries and should not pretend by a 'shell game' it is not a Crown Corporation. Residents of the Gulf Island and coastal communities of BC deserve better than what we now have. I would appreciate hearing your Government's views on this issue. Too bad the Legislature is not sitting this Fall so my MLA could get answers for us.
Sincerely,

s22

Parkinson, Carolyn TRAN:EX

From: Falcon.MLA, Kevin [Kevin.Falcon.MLA@leg.bc.ca]
Sent: Monday, October 27, 2008 11:03 AM
To: WEBMASTER TRAN:EX
Subject: 173669 FW: BC FERRIES AND FUEL SURCHARGES

Natasha Westover
Constituency Assistant to
Kevin Falcon, MLA
Ph. 604-576-3792
Fax 604-576-3797
Natasha.Westover@leg.bc.ca

From: s22
Sent: Saturday, October 25, 2008 10:38 AM
To: Falcon.MLA, Kevin
Subject: BC FERRIES AND FUEL SURCHARGES

MR. FALCON

It is time to convey a message to David Hahn to reduce the ferry fares on all routes and ridiculous surcharges. Especially so, on Gulf Island routes, we are undergoing a lot of hardship just travelling to work and back.This ridiculous ferry pricing is opportunistic, is way out of line and has no bearing on the "real economy" or oil prices. We are not stupid to see how politicians manipulate world events and create WARS to support huge corporations. Those 15-20% of passengers who would normally travel on BC ferries for leisure are NO LONGER DOING IT. It is choices now.

Thjere was really no sudden big shortage of world's oil, but complete manipulation by huge corporations. Time to cut out this bullshit . We citizens
in Canada are affected, with no real increase of our salaries. BC Ferries should be completely in all areas DE-privitised, it was running just fine before.

s22

Parkinson, Carolyn TRAN:EX

From: Transportation, Minister TRAN:EX
Sent: Monday, January 26, 2009 3:00 PM
To: s22
Subject: 173669 - BC Ferries

s22

173669 - BC Ferries

Dear s22

Thank you for your e-mail of October 25, 2008, expressing your concerns about the cost of ferry travel and suggesting that BC Ferries be returned to a Crown corporation. Please accept my apologies for the lateness of my reply.

Our island and coastal communities are an irreplaceable part of British Columbia, and I know the health of Gabriola Island depends on an affordable and reliable ferry service. As part of Premier Campbell's Ten Point Economic Plan, the provincial government increased funding through our contract with BC Ferries to help stimulate British Columbia's economy. The 33 per cent reduction in ferry fares during December and January combined with the restoration of full service on the Sunshine Coast and major routes has benefited many British Columbians.

As well, BC Ferries has taken the steps necessary to remove all fuel surcharges. The independent BC Ferry Commission monitored BC Ferries to ensure that all funds collected through fuel surcharges were used to cover the rising cost of fuel only.

I recognize that you would like to see further reductions in the cost of ferry travel. However, taxpayers already contributed almost $175 million in funding through our contract with BC Ferries this fiscal year. This level of provincial taxpayer support for ferries is twenty five times what it was a decade ago.

After the fast ferries fiasco, British Columbians made it clear they wanted ferry service to be delivered in a fair, responsible manner. Our provincial government was left with a ferry corporation that was effectively bankrupt with an aged fleet (averaging 32 years), virtually no investment and a fractious labour relations climate. BC Ferries is now an independent company, operating on sound business principles.

Thank you again for taking the time to write.

Best regards,

Kevin Falcon
Minister

From: s22
Sent: Saturday, October 25, 2008 10:38 AM
To: Falcon.MLA, Kevin
Subject: BC FERRIES AND FUEL SURCHARGES

MR. FALCON

It is time to convey a message to David Hahn to reduce the ferry fares on all routes and ridiculous surcharges. Especially so, on Gulf Island routes, we are undergoing a lot of hardship just travelling to work and back.This ridiculous ferry pricing is opportunistic, is way out of line and has no bearing on the "real economy" or oil prices. We are not stupid to see how politicians manipulate world events and create WARS to support huge corporations. Those 15-20% of passengers who would normally travel on BC ferries for leisure are NO LONGER DOING IT. It is choices now.

Thjere was really no sudden big shortage of world's oil, but complete manipulation by huge corporations. Time to cut out this bullshit . We citizens in Canada are affected, with no real increase of our salaries. BC Ferries should be completely in all areas DE-privitised, it was running just fine before.

s22

Parkinson, Carolyn TRAN:EX

From: s22
Sent: Wednesday, October 29, 2008 2:22 PM
To: OfficeofthePremier, Office PREM:EX
Cc: s22
Subject: 173903 RE: Speech of October 22

Mr. Premier,

Thank you for your reply. Unfortunately it is only partially helpful as the questions are not answered entirely.

Question 1: Does the reduction apply to fares currently in effect or does it apply to what BCF calls "base rates"? Our "off Peak" rates, in effect during December and January, are already a significant reduction from "base rates".

Question 2: BCF categorizes fares for different services differently. Will the reduction apply to all categories or, for example, only to the fare for a person rather than to a person, their vehicle, their extra length, their over-height, their passengers and the cabin they must have because they are on their way to a hospital?

Question 3: Our ferry service for January was entirely cancelled and for February was partially cancelled at some time in September of 2008. Your speech said very clearly "ferry service levels for all routes, including the Sunshine Coast will be restored." The BCF press release states very clearly service will be restored only for the Tsawwassen-Swartz Bay, Horseshoe Bay-Departure Bay and Horseshoe Bay-Langdale routes. Which is correct?

Thank you for your consideration.
s22

> -----Original Message-----
> From: OfficeofthePremier, Office PREM:EX [mailto:Premier@gov.bc.ca]
> Sent: Wednesday, October 29, 2008 11:09 AM
> To: s22
> Subject: RE: Speech of October 22
>
> Thank you for your email.
>
> As you are aware, an announcement was made on October 22nd regarding a
> 10- step plan to improve the province's economic competitiveness and
> reduce costs for families and businesses during this time of global
> economic uncertainty.
>
> Step 8 is a 33 per cent reduction in ferry fares during December and
> January on all routes due to an investment by government of $20 million.
> In addition, the investment allows for the sailings previously
> cancelled by BC Ferries to be restored (as of October 25th). A copy
> of government's news release and the media advisory from BC Ferries
> are attached for your convenience.
>
> Thank you for your inquiry and we hope this information is helpful.
> Should you have further questions, please direct them to BC Ferries at
> customer.relations@bcferries.com.
> _____
>

> From: s22
> Sent: Friday, October 24, 2008 12:12 PM
> To: OfficeofthePremier, Office PREM:EX
> Subject: Speech of October 22
>
>
>
> Sir,
>
>
>
> In point eight of your speech of October 22 you outlined measures
> related to BC Ferries service. As residents of the Queen Charlotte
> Islands we rely on BC Ferries to a degree we have little confidence
> Ferry's management comprehends.
>
>
>
> Please clarify your outline by addressing these questions.
>
>
>
> 1) Will the 33% reduction in fares apply to the fares in place for
> the duration of the reduction? In explanation, we pay peak season
> rates and "off peak" season rates. In December and January the normal
> rate would be "Off Peak". Please clarify if the fare will be a 33%
> reduction of "Off Peak" rates.
>
> 2) Will the reduction apply to the entire fare package? This
> includes passenger fares, vehicle fares, the outrageous rate for cabin
> rentals, fuel surcharges and the entire realm of commercial rates.
>
> 3) You may or may not be aware our service has been entirely
> cancelled from January 4 to February 5 and significantly reduced from
> February 6 to February 21? You stated you "will restore ferry service
> levels for all routes". May we presume that includes us?
>
>
>
> Thank you for your consideration of these questions. As time is very
> short for those making reservations a reply by e-mail as soon as
> possible would be appreciated.
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> s22
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Parkinson, Carolyn TRAN:EX

From: Transportation, Minister TRAN:EX
Sent: Tuesday, January 27, 2009 2:07 PM
To: s22
Cc: OfficeofthePremier, Office PREM:EX
Subject: 173903 - BC Ferries

s22

173903 - BC Ferries

Dear s22

Premier Gordon Campbell has asked me to respond on his behalf to your e-mails of October 29 and November 5, 2008, regarding the fare reduction and service restoration for BC Ferries. Please accept my apologies for the lateness of my reply.

As part of Premier Campbell's Ten Point Economic Plan, the provincial government increased funding through our contract with BC Ferries to help stimulate British Columbia's economy. The 33 per cent reduction in ferry fares during December and January combined with the restoration of full service on the Sunshine Coast and major routes has benefited many British Columbians. As well, BC Ferries has taken the steps necessary to remove all fuel surcharges.

This discount applies to the off season rates normally in effect during January and February. Ancillary items such as cabin rentals and reservation fees are not considered fares and were not included in this discount. British Columbians travelling for medical reasons may be provided with assistance for some of their transportation costs, ferry travel included. For more information, please check out the Ministry of Health's Travel Assistance Program at http://www.health.gov.bc.ca/msp/mtapp/tap_patient.html#contact_mtapp.

Our government also provided funding to restore sailings on the Sunshine Coast and the major routes. However, the cancellation of regular service between Prince Rupert and Skidegate from January 4 to February 5 to allow for the completion of dock upgrades for the new ferry, the Northern Expedition, remained in effect. Because of this temporary service reduction, the 33 per cent fare reduction has been extended to February 28 for this route.

If you have any further questions regarding service reductions, please contact BC Ferries directly. Staff at BC Ferries can also advise you regarding any alternate service that may be in place for travellers during service reductions. Contact information for BC Ferries is available on their web site at http://www.bcferries.com/contact_us/ or you can send e mail to Customer.Service@bcferries.com.

Thank you again for taking the time to write.

Best regards,

Kevin Falcon
Minister

Copy to: Premier Gordon Campbell

-----Original Message-----
From: s22

Sent: Wednesday, November 5, 2008 12:14 PM
To: OfficeofthePremier, Office PREM:EX
Subject: RE: Speech of October 22

Mr. Premier,

My first three questions, attached below, have been referred to the Ministry of Transportation and I am satisfied there will be a prompt reply.

The purpose of the questions was to lead to this further question:

You have in effect announced a 33% fare reduction for a time period when people requiring the extremely expensive service between Skidegate and Prince Rupert cannot take advantage of it. Perhaps you were not aware our service has been entirely cancelled for the month of January and significantly reduced for February.

The optics of this are not great. Is there some way you might extend the benefit of a 33% reduction in fares to a time period when it might be applicable to this route?

Best of all would be to re-instate this most essential service.

Thank you for your consideration.

s22

> -----Original Message-----
> From: s22
> Sent: Wednesday, October 29, 2008 2:22 PM
> To: 'OfficeofthePremier, Office PREM:EX'
> Cc: s22
> Subject: RE: Speech of October 22
>
> Mr. Premier,
>
> Thank you for your reply. Unfortunately it is only partially helpful as the questions are not answered entirely.
>
> Question 1: Does the reduction apply to fares currently in effect or does it apply to what BCF calls "base rates"? Our "off Peak" rates, in effect during December and January, are already a significant reduction from "base rates".
>
> Question 2: BCF categorizes fares for different services differently. Will the reduction apply to all categories or, for example, only to the fare for a person rather than to a person, their vehicle, their extra length, their over-height, their passengers and the cabin they must have because they are on their way to a hospital?
>
> Question 3: Our ferry service for January was entirely cancelled and for February was partially cancelled at some time in September of 2008. Your speech said very clearly "ferry service levels for all routes, including the Sunshine Coast will be restored." The BCF press release states very clearly service will be restored only for the Tsawwassen-Swartz Bay, Horseshoe Bay-Departure Bay and Horseshoe Bay-Langdale routes. Which is correct?
>
> Thank you for your consideration.
> s22
>

> > -----Original Message-----
> > From: OfficeofthePremier, Office PREM:EX [mailto:Premier@gov.bc.ca]
> > Sent: Wednesday, October 29, 2008 11:09 AM
> > To: s22
> > Subject: RE: Speech of October 22
> >
> > Thank you for your email.
> >
> > As you are aware, an announcement was made on October 22nd regarding a 10- step plan to improve the province's economic competitiveness and reduce costs for families and businesses during this time of global economic uncertainty.
> >
> > Step 8 is a 33 per cent reduction in ferry fares during December and January on all routes due to an investment by government of $20 million. In addition, the investment allows for the sailings previously cancelled by BC Ferries to be restored (as of October 25th). A copy of government's news release and the media advisory from BC Ferries are attached for your convenience.
> >
> > Thank you for your inquiry and we hope this information is helpful. Should you have further questions, please direct them to BC Ferries at customer.relations@bcferries.com.
> > _____
> >
> > From: s22
> > Sent: Friday, October 24, 2008 12:12 PM
> > To: OfficeofthePremier, Office PREM:EX
> > Subject: Speech of October 22
> >
> > Sir,
> >
> > In point eight of your speech of October 22 you outlined measures related to BC Ferries service. As residents of the Queen Charlotte Islands we rely on BC Ferries to a degree we have little confidence Ferry's management comprehends.
> >
> > Please clarify your outline by addressing these questions.
> >
> > 1) Will the 33% reduction in fares apply to the fares in place for the duration of the reduction? In explanation, we pay peak season rates and "off peak" season rates. In December and January the normal rate would be "Off Peak". Please clarify if the fare will be a 33% reduction of "Off Peak" rates.
> >
> > 2) Will the reduction apply to the entire fare package? This includes passenger fares, vehicle fares, the outrageous rate for cabin rentals, fuel surcharges and the entire realm of commercial rates.
> >
> > 3) You may or may not be aware our service has been entirely cancelled from January 4 to February 5 and significantly reduced from February 6 to February 21? You stated you "will restore ferry service levels for all routes". May we presume that includes us?
> >
> > Thank you for your consideration of these questions. As time is very short for those making reservations a reply by e-mail as soon as possible would be appreciated.
> >
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> >
> > s22
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> >

SUNSHINE COAST REGIONAL DISTRICT

1975 Field Road
Sechelt
British Columbia
Canada V0N 3A1

Tel. 604.885.6800
Fax: 604.885.7909
Toll Free 1.800.687.5753
Web Site: www.scrd.bc.ca

October 28, 2008

Hon. Kevin Falcon
Minister of Transportation and Infrastructure
PO BOX 9055, STN PROV GOVT.
Victoria BC

Dear Minster:

Re: BC Ferries

Thank you for considering the people of the Sunshine Coast in reinstating the full ferry service. The locals that were affected by the Off Peak Fall/Winter Major Route Sailing Reductions ranged from those who needed to travel on business, sports teams, plus tourists and visitors to our community.

The response by the local people to the reduction of services is a precursor to the recognition that the ferry is our highway. We are concerned that after the 33 per cent reduction of ferry fares on all routes for December and January that the Sunshine Coast will see further reduction in services in 2009.

The SCRD believes that cutbacks to our ferry service severely affects our community. We thank you again for your consideration.

Yours truly,

SUNSHINE COAST REGIONAL DISTRICT

Ed Steeves
Chair

Cc: Premier Gordon Campbell

/sh

Pages 300 through 302 redacted for the following reasons:
- -
s13

January 17, 2002

Reference: 94788

s22

Dear s22

Re: B.C. Ferries

I am writing in response to your letter of December 19,2001, regarding possible changes to B.C. Ferries' service from Vancouver Island to Denman Island and your support of a bridge span as a long-term alternative to this route.

The inquiry into B.C. Ferries, led by financial consultant Fred Wright, has identified recommendations that can be implemented to improve the operations of B.C. Ferries. In addition to this inquiry, B.C. Ferries is currently engaged in a core review process. The core review will examine how B.C. Ferries' services are currently being delivered and how those services can best be maintained or improved without increasing costs to the provincial taxpayer.

Prior to any decisions being made about the future of our ferry system, I wish to thoroughly review the recommendations from the inquiry and from the core review process. Alternatives and opportunities will be thoroughly investigated. Any decisions regarding future initiatives will need to provide the best possible service to all British Columbians.

Your suggestions will be reviewed in light of any potential changes as we move towards revitalizing our important ferry service. As such, I have taken the liberty of forwarding your comments to Bob Lingwood, president and chief executive officer for B.C. Ferries, for his review.

.../2

Thank you for taking the time to write.

Sincerely,

ORIGINAL SIGNED BY

Judith Reid Minister

Copy to: Bob Lingwood, President and CEO
B.C. Ferries - copy of incoming attached.

bcc: Karen Tindall, Customer Relations Coordinator, BC Ferries

April 24, 2002

BACKGROUND for WB 4634 (94791)

Karen Tindall from B.C Ferries writes:

- This Waste Buster should come from the Ministry of Transportation, rather than B.C. Ferries, because the correspondent is concerned that the ministry is not commenting on the future of the Gulf Islands.

- This correspondent suggests several fixed links, but there is no mention of Gabriola in the submission. We should not mention the recent review of the Gabriola fixed link or the numbers.

- On top of the fixed link suggestions the writer is talking about costs to islanders, service to Long Harbour, integration with TransLink and creating a new terminal on Salt Spring. She suggests we use the Core Review wording by itself as there is no answer to these questions yet.

Pages 306 through 308 redacted for the following reasons:
- -
s13

GABRIOLA ISLAND Chamber of Commerce

P.O. Box 249, #3 – 575 North Road
Gabriola Island, B.C. V0R 1X0
Ph/FAX: 250-247-9332

1-888-284-9332
info@gabriolaisland.org
www.Gabriola*Island*.org

January 2nd, 2001

Funding Fixed Link
MR

Honourable Judith Reid, MLA
Minister of Transportation,
Government of British Columbia,
Room 306, Parliament Buildings,
Victoria, BC
V8V 1X4

Dear Minister,

We have recently corresponded with the Pacific Coastal Bridge Company Limited (PCB) who was trying to garner support for a bridge-ferry link proposal using Gabriola as the stepping-stone. As you will see by the copy of our letter (see attached) to PCB, the Gabriola Chamber does not support its proposal.

The fact that your administration may seriously consider the recommendations in Mr. Wright's review as a suitable option is most disturbing. Tourism is fast becoming the number one income producer in BC, and the Islands go a long way in support of this outcome. We sell our province as 'Beautiful BC' and we consider our Islands as the jewel in the crown. To link these Islands with a bridge would not only tarnish the crown, it would destroy it.

If the previous administration had not entered into the Fast Cat fiasco, there would be sufficient funds for ferry services. The Islands should not be held hostage because of its blunder. The Chamber supports the majority of the fiscal restraint programs initiated by the current provincial government; however, we strongly oppose any fixed links between the Islands. In the long term we believe it would hurt the province and destroy a way of life that is unique to the Islands.

We will be following the government's actions on this issue with a great deal of interest.

Sincerely,

J. P. Hugh Sproule,
President

CC's:-
Mike Hunter, MLA Nanaimo
John Winter, President, BC Chamber of Commerce
File

GABRIOLA ISLAND Chamber of Commerce

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info@gabriolaisland.org
www.Gabriolaisland.org

November 29th, 2001

Pacific Coast Bridge Systems Co., Ltd.,
Victoria, BC
By FAX (250) 475-1782

Attn: Mr. Jack Wallis, President

Dear Mr. Wallis,

SUBJECT:- Strait of Georgia Ferry Crossing Proposal

Further to my faxed letters dated November 10th and 16th, 2001, your letter of September 9th (forwarded to me by the Parksville Chamber President), and fax of November 15th, 2001 were read and discussed at our November 21st, 2001 AGM. I was instructed to contact you again.

The Chamber membership was appalled that your company would not consider us important enough to be placed on your proposals distribution list. Unknown to us, Mr. Jeremy Baker, (who is a strong bridge link proponent and a member of our Board) has been incorrect in stating that there is strong support for the project. Nor has he passed any of this information to us. No Chamber members present were aware of your proposal. Mr. Steve Wohlleben, another Gabriola Chamber Board member is a long-standing member of both the Route 19 Ferry Advisory Committee and the Coastal Communities Council. He knew nothing about this proposal.

Apart from Mr. Baker, there was absolutely no support for the idea from those present. The project was considered to be a non-starter. It would appear that your group is not aware of the following information:-

- The Nanaimo 1st Nations are currently in treaty negotiations for 1/3rd of Gabriola. Any service road built across Gabriola would touch some part of disputed lands. While a significant portion of Gabriola land is tied up in treaty negotiations, we suspect that the federal government would not consider allowing such a venture to proceed.
- You refer to the Horseshoe Bay expansion plans. The expansion is already well underway and is expected to be completed in 2002. It is unlikely that BC Ferries will spend any more money for new terminals.
- Lastly, you would need a significant amount of government money to attract private capital. The federal government will not contribute without the province's involvement, and that isn't likely to happen in view of the province's fiscal restraint program.

In addition to contacting you, I have been directed to contact the Minister, our MLA Mike Hunter and the BC Ferries Corporation.

Sincerely,

(Signed original on file)

J. P. Hugh Sproule,
President.

April 18, 2002

Reference: 95929
Your File: 0470-60

His Worship
Mayor Gary Korpan
City of Nanaimo
455 Wallace Street
Nanaimo BC V9R 5J6

Dear Mayor Korpan:

Re: Potential Land Use Conflict

I am writing in response to your letter of February 8, 2002, regarding potential land use conflicts with respect to a fixed link to Gabriola Island by way of Mudge Island. Please accept my apologies for the lateness of my reply.

Staff from my ministry and the Ministry of Attorney General Treaty Negotiations Office met recently to discuss this issue. It was agreed that there is a need for long-term protection of a corridor that would allow a fixed link to Gabriola Island. It was also agreed that this must be considered when determining the eventual form of a provincial component of treaty settlement lands.

The Province has not yet agreed to purchase the Weyerhauser lands as part of a treaty settlement. However, the above would need to be taken into account if that were to happen. Further to the route feasibility study completed by McElhanney Engineering Services Ltd. in 1993, my ministry will identify that the corridor be protected.

I appreciate your foresight and thank you for taking the time to write.

Sincerely,

ORIGINAL SIGNED BY

Judith Reid
Minister

.../2

Copy to: Keith Bespflug, Regional Director
South Coast Region
Ministry of Transportation - copy of incoming attached.

Mike Hunter
MLA, Nanaimo - copy of incoming attached.

Honourable Geoff Plant
Minister of Attorney General and
Minister Responsible for Treaty Negotiations
MLA, Richmond-Steveston - copy of incoming attached.

Bcc: Mike Proudfoot, District Manager, Transportation, Vancouver Island - copy of incoming attached.

Information provided by: Sara Wolting, Writer, Writing Services based on standard language
Revised: Per the Minister's direction March 5, 2002
Revised April 10/02: by ADM John Dyble, Mike Proudfoot, Peter Wightman per DM Dan Doyle as requested by the Minister March 27/02

June 20, 2002

Reference: 99430

s22

Dear s22

Re: Fixed Links

I am writing in response to your facsimile of May 21, 2002, regarding your suggestion to connect Vancouver Island, Salt Spring Island, Parker Island and Galiano Island with fixed links in order to provide a shorter ferry route to the mainland.

The concept you propose is intriguing and could result in operating cost savings for B.C. Ferries. However, any project along these lines would need to overcome significant impacts on the environment and local communities. As well, substantial capital funding would be required to construct the facilities and the necessary roadwork.

The provincial government is not currently contemplating such as a project as sufficient capital resources are not available. However, I am prepared to consider proposals from the private sector to build, finance and operate such facilities.

I have taken the liberty of forwarding your comments to Bob Lingwood, president and chief executive officer for B.C. Ferries, for his review.

Thank you for taking the time to write.

Sincerely,

SENT BY EMAIL

Judith Reid
Minister

Copy to: Bob Lingwood, President and CEO
B.C. Ferries – copy of incoming included

bcc: Frank Blasetti, ADM, Partnerships Department

Information provided and approved by: Standard based on 96800

01/28/1995 03:44 s22 PATHFINDER TELECOM PAGE 02

s22

RECEIVED
MINISTER'S OFFICE
MINISTER OF TRANSPORTATION
MAY 21 2002
99430
DRAFT REPLY ☒ FYI ☐ FILE ☐

BCFC
HR

Fax

To:	Judith Reid MLA	From:	s22
Fax:	250-356-2290	Pages:	3
Phone:	s22	Date:	05/21/02
Re:	Proposal for ferries	CC:	[Click here and type name]

☐ Urgent x For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

• Comments: Attached is a short proposal to start discussions. s22
s22 I just want to see this started.

Thank you

s22

Received in CO:	MAY 23 2002
Issue:	Funding / Fixed Link
Program Area:	
Copy to:	

Proposal for A New Route to Vancouver Island

s22

Overview:
Currently, it takes at a minimum 95 minutes to get to Vancouver Island. This is because the routes are from a populated area like Victoria (Swartz Bay), or Nanaimo. The minimum distance the ferry must travel is 39 Km, and the Duke point run is 61 Km. By shortening the ferry route to 19 Km, we can reduce the ferry time to about 45 min. crossing for the regular ferries, and even faster for the Fast-Cats.

The current distances to the island are:

- 48 Km - Horseshoe bay to Nanaimo
- 61 Km – Tsawassen to Duke Point
- 39 Km – Tsawassen to Victoria

I know this has been proposed before, but in that route different islands were used, and it also proposed a complete bridge solution. This would be a partial step, that could lead to a complete solution in the future. For now it would provide faster access to Vancouver Island. Saltspring and Galiano are two of the largest islands in the area, and can benefit from better access.

Proposed Route:

1. 1.5 Km of new highway starting from a point just South of Duncan, going to the Northern end of Cowichan Bay.
2. 0.5 Km of new bridge to Saltspring Island.
3. 2.2 Km of new highway across Saltspring, to a point closest to Parker Island.
4. 3.5 Km of floating bridge to Parker Island. This will close Trincomali channel to large marine traffic.
5. 2.4 Km of new highway across Parker Island, using a causeway to Galiano Island. The water here appears to be only 5 M deep at mean low tide.
6. 4.8 Km of new highway across Galiano Island to Salamanca Point. Here you would build a new ferry terminal.

Benefits:

- The time on ferry is shortened to about 45 minutes. Even with two of the Alberni class ships you could provide an hourly schedule.
- Fuel savings per crossing, and better equipment utilization. Each ferry on this route would be capable of transporting twice as many vehicles in the same amount of time.
- Duke Point could be shut down, and it's equipment moved to Galiano.
- Both Saltspring ferries could be shut down. I would recommend the Fulford docks be kept operational to provide backup service should the Malahat be closed.
- The Sturdes Bay ferry could be shut down.
- Any Hospitals on the two islands could be shut down, as they are now about 15 minutes from Duncan.
- The Mill bay ferry could be shut down, as backup could be provided when required via Fulford.

Funding suggestions:

- Leave the ferry rates the same as they are. The user then has the choice of taking one of the three routes at the same price.
- Take a percentage of the fares going via Galiano, and allocate to the cost of the bridges and highways.
- Place a small property tax on the residents of the Islands. While they will save on their current ferry costs, they will get the benefit of the bridges and highways, and better access to medical services.
- Fund the whole project as long term debt, maybe even as a private project.

Conclusions:

This proposal is designed to get people talking. A detailed evaluation should be done to determine the costs. We need only 4.0 Km of bridge, and about 11 Km of highway. When designing this system, we should plan for a three lane divided system, but build a two lane system. This will avoid a twenty some year discussion down the road on how to expand.

August 8, 2002

Reference: 102621

s22

Dear s22

Re: Bridge to Gabriola Island

I am writing in response to your letter of July 9, 2002, regarding emergency medical evacuations on Gabriola Island and the possibility of a bridge from Gabriola Island to Vancouver Island.

B.C. Ferries and the Ministry of Transportation recently re-examined the potential costs involved in constructing bridges to replace some existing ferry routes. They found that a fixed link to Gabriola Island may make financial sense in the future. Rough estimates suggest that the bridge could cost between $45 million and $50 million and that current ferry tolls and the existing subsidy may come close to recouping this cost.

The provincial government is not currently contemplating construction of the bridge as sufficient capital resources are not available. However, I am prepared to consider input from the private sector regarding the feasibility of constructing the bridge using a toll concession.

B.C. Ferries will continue to respond to emergency medical evacuations on Gabriola Island whenever possible. However, there is no guarantee that B.C. Ferries' crews will be available 100 per cent of the time, due to the fact that the vessel may be out of service or crew members may not be available. The corporation has informed the Gabriola Ambulance Service that employees will continue to try to respond to each and every call-out.

B.C. Ferries is working with the Gabriola Island Ferry Advisory Committee on this issue and is encouraging the community to develop a contingency plan as soon as possible. I understand that a meeting of Gabriola Island community leaders was held on July 12, 2002, to advance the development of such a plan.

.../2

I have taken the liberty of forwarding your comments to Bob Lingwood, president and chief executive officer for B.C. Ferries, for his review.

Thank you for taking the time to write.

Sincerely,

ORIGINAL SIGNED BY

Judith Reid
Minister

Copy to: Bob Lingwood, President and CEO
B.C. Ferries - copy of incoming attached.

Mike Hunter
MLA, Nanaimo - copy of incoming attached.

bcc: Karen Tindall, Customer Relations Coordinator, BC Ferries
Dirk Nyland, Chief Engineer, Engineering Branch

Information Provided by: Tim Mitchell, Senior Writer, Writing Services, from standard
Additional informaiton by: Tara Sharpe, B.C. Ferries

Jul 09 02 02:18p s22 p.1

RECEIVED
JUL 9 2002
102621

9 July 2002

From

s22

Received	JUL 1 1 2002
Copy to	

To: Judith Reid
Minister of Transportation
Province of British Columbia
Fax 250-356-2290

cc: Mike Hunter
MLA Nanaimo,
Fax 716-5270

Dear Ms Reid,

I have been following with interest the discussion on the Medical Emergency ferry service, that takes place after normal operating hours, from Gabriola Island to the Regional Hospital in Nanaimo. The ferry crew responds to the Ambulance Call-out and a skeleton crew, which must include one of the two ferry engineers that live on Gabriola Island, mans the ferry. As I understand it, one of the two engineers refuses to be called out and the remaining engineer is getting burned out responding to Emergency Calls. I have lived on Gabriola Island for over twenty years and this situation is the worst I have ever seen. I already have a number of friends who, as they advanced into old age have moved to the Vancouver Island, as they could picture themselves dying in the ambulance waiting for the ferry.

It has now come to "Build a bridge" time. This would solve the ambulance dilemma and this potential life or death disaster. Does someone have to die before something is done?.

A bridge would stop the perpetual upward spiral of ferry costs and subsidies, allow access to late night entertainment and dining in Nanaimo, such as the Port Theatre and dinner.

I think that the bridge should have a toll attached so that it would pay for itself, regardless how costly the toll was, it would still be more reasonable than the exorbitant rates charged by BC Ferry Corporation.

A bridge would bring Public Transportation and tourists. I personally cannot think of any negatives on the building of a bridge, only positives.

Is there a possibility of my dream of a bridge coming true?.

I remain, yours truly,

s22

Page 320 redacted for the following reason:
- - - - - - - - - - - - - - - - - - - -
s13

Page 1 of 1

Randall, Fraser TRAN:EX

Subject: FW: Inter Island Ferry

-----Original Message-----
From: Ann.Cameron@leg.bc.ca [mailto:Ann.Cameron@leg.bc.ca]
Sent: July 8, 2002 12:42 PM
To: Randall, Fraser TRAN:EX
Subject: FW: Inter Island Ferry alternatives

-----Original Message-----
From: s22
Sent: July 7, 2002 9:21 PM
To: Reid.MLA, Judith
Subject: Inter Island Ferry alternatives

Dear Mrs. Reid
This is my second letter to you that addresses the issue of bridging of the Gulf Islands to mitigated the costs of providing service to them and the Mainland. As previously mentioned I strongly suggest that Gabriola Island be connected by bridge to Vancouver Island using a pile supported causeway across False narrows to Mudge Island and either a cantilevered link or suspension bridge over Dodds narrows. By the way Dodds narrows is less than 100 feet across. False narrows is less than 10 meters deep.

Once in place this link could provide access to a new terminal in the proximity of Silva Bay on Gabriola. The new termial would be at least 1/2 hour closer to the Mainland on both the Horeshoe Bay and Tsawwassen runs with the added bonus of climinating the Gabriola connection completely.

I recently travelled extensively in the southern US and saw many examples of this kind of small island linking using pier supported highways and inter island bridging.

I believe the time is right to at least study this concept, to see if it makes economic sense in our environment.

Sincerly
s22

2002/07/10

Text Attachment: Log ID 109269

Incoming Wednesday, February 05, 2003 11:12 AM

-----Original Message-----
From s22
Sent: Wednesday, February 05, 2003 11:12 AM
To: WEBMASTER TRAN:EX
Subject: Ferry Improvements

Just read a newspaper article on the Fixed-Link idea. I have to agree with your assessment of the idea. It's a pipe dream. Now on the other hand have you considered building brides to any of the smaller islands that now have ferry service. I know many of these routes are money losers. Could you replace any of these routes with bridges. Most of the islands are separated only by a short bodies of water making building a bridge to them relatively cheap. I know the islanders will scream about the thought of bridges but what about the majority of us tax payers who are supporting these routes with our taxes. Give the islander a choice. Build a bridge to their island or raise the rates on these routes till they are making money or at least breaking even. The bridges could be toll bridges for the first while to help with the initial cost. Anyway just an idea that I wondered if anyone has seriously looked at.

s22

Text Attachment: Log ID 109269

Response Wednesday, February 26, 2003 8:39 AM

-----Original Message-----
From: WEBMASTER TRAN:EX
Sent: Wednesday, February 26, 2003 8:39 AM
To: s22
Subject: 109269 Fixed Link to Gulf Islands

Dear s22

Thank you for your e-mail of February 5, 2003, regarding your suggestion to build fixed links to connect the Gulf Islands with Vancouver Island.

A fixed link to Gabriola Island may make financial sense in the future. However, substantial capital funding would be required to construct the bridges and the necessary roadworks. As well, any project along these lines would need to overcome significant impacts on the environment and local communities. The provincial government is not currently contemplating such a project as it is not affordable. However, the government is prepared to consider proposals from the private sector to build, finance and operate such facilities.

The construction of fixed links to the other Gulf Islands would pose significant technical challenges. These crossings would require major bridge structures that would likely need to rely on suspension bridge technology. Such bridges would require long spans to accommodate ship passage. Long spans would also be necessary because deep water in this area would prevent the use of intermediate piers. Long span bridges are very expensive and can cost over $5,000 for every square metre of deck area.

As you may know, the taxpayer-supported Crown corporation of B.C. Ferries will be transformed on April 1, 2003, into an independent, regulated, self-financing company called BC Ferry Services. This new company will be responsible for the delivery of ferry services, independent of government, and it will be governed by an oversight body known as the British Columbia Ferry Authority. This new approach will help provide a customer-friendly and financially stable ferry service.

Corporate Writing Services
Ministry of Transportation

-----Original Message-----
From: s22
Sent: Wednesday, February 05, 2003 11:12 AM
To: WEBMASTER TRAN:EX
Subject: Ferry Improvements

Just read a newspaper article on the Fixed-Link idea. I have to agree with your assessment of the idea. It's a pipe dream. Now on the other hand have you considered building brides to any of the smaller islands that now have ferry service. I know many of these routes are money losers. Could you replace any of these routes with bridges. Most of the islands are separated only by a short bodies of water making building a bridge to them relatively cheap. I know the islanders will scream about the thought of bridges but what about the majority of us tax payers who are supporting these routes with our taxes. Give the islander a choice. Build a bridge to their island or raise the rates on these routes till they are making money or at least breaking even. The bridges could be toll bridges for the first while to help with the initial cost. Anyway just an idea that I wondered if anyone has seriously looked at.

s22

Reference: 109269 - web response

s22

Dear s22

Re: Fixed Link to Gulf Islands

Thank you for your e-mail of February 5, 2003, regarding your suggestion to build fixed links to connect the Gulf Islands with Vancouver Island.

A fixed link to Gabriola Island may make financial sense in the future. However, substantial capital funding would be required to construct the bridges and the necessary roadworks. As well, any project along these lines would need to overcome significant impacts on the environment and local communities. The provincial government is not currently contemplating such a project as it is not affordable. However, the government is prepared to consider proposals from the private sector to build, finance and operate such facilities.

The construction of fixed links to the other Gulf Islands would pose significant technical challenges. These crossings would require major bridge structures that would likely need to rely on suspension bridge technology. Such bridges would require long spans to accommodate ship passage. Long spans would also be necessary because deep water in this area would prevent the use of intermediate piers. Long span bridges are very expensive and can cost over $5,000 for every square metre of deck area.

As you may know, the taxpayer-supported Crown corporation of B.C. Ferries will be transformed on April 1, 2003, into an independent, regulated, self-financing company called BC Ferry Services. This new company will be responsible for the delivery of ferry services, independent of government, and it will be governed by an oversight body known as the British Columbia Ferry Authority. This new approach will help provide a customer-friendly and financially stable ferry service.

Thank you for taking the time to write.

Corporate Writing Services
Ministry of Transportation

Information provided by: Tim Mitchell, Senior Writer, Writing Services, using standard

March 5, 2003

Reference: 109442

s22

Dear s22

Re: Fixed Links to Gulf Islands

Thank you for your e-mail of February 8, 2003, regarding your suggestion to build fixed links to connect the Gulf Islands with Vancouver Island.

Fixed links to Gabriola and Valdes islands may make financial sense in the future. However, substantial capital funding would be required to construct the bridges and the necessary roadworks. As well, any project along these lines would need to overcome significant impacts on the environment and local communities. The provincial government is not currently contemplating such a project as it is not affordable. However, the government is prepared to consider proposals from the private sector to build, finance and operate such facilities.

As you may know, the taxpayer-supported Crown corporation of B.C. Ferries will be transformed on April 1, 2003, into an independent, regulated, self-financing company called BC Ferry Services. This new company will be responsible for the delivery of ferry services, independent of government, and it will be governed by an oversight body known as the British Columbia Ferry Authority. This new approach will help provide a customer-friendly and financially stable ferry service.

Thank you for taking the time to write.

Sincerely,

ORIGINAL SIGNED BY

Judith Reid
Minister

Drafted by Paul Lidgate, using standard language

Pages 326 through 327 redacted for the following reasons:
- -
s13

Text Attachment: Log ID 137135

incoming Monday, July 11, 2005 11:34 AM

-----Original Message-----
From: s22
Sent: Monday, July 11, 2005 11:34 AM
To: Transportation, Minister TRAN:EX
Subject: B.C.FERRIES / FIXED LINK TO VANCOUVER ISLAND

Minister Falcon ;

In light of recent problems with our aging Ferry fleet and an article that I saw in the Vancouver Sun a week ago about Dr. McGeer's plans for a bridge link to Vancouver Island , I have an idea that maybe could work and save the Province some money (less ferries and a much shorter route). I suggest having the one main terminal at Tswassen and a new terminal on Valdes Island with bridges to Gabriola , Mudge and then on to Vancouver Island .I don't know what the time and distance from Tswassen to Valdes would be but it would be a lot less than it is to Duke Point . Large Ferries could run 24 hours a day every hour . Transport trucks could go during the night at a disounted price and car traffic during the day. I know that Islanders on Gabriola would complain but if the Highway is built to minimize the environmental impact and could even be built below ground level.I think this idea has some good beneficial considerations. Yours Truly / s22

August 30, 2005

Reference: 137135

s22

Dear s22

Re: Fixed Link to Vancouver Island

Thank you for your e-mail of July 11, 2005, regarding your idea to reduce travel time and ferry costs across the Georgia Strait through construction of a new ferry terminal on Valdes Island and a series of bridges.

You may be interested to know an idea very similar to yours has received previous consideration by ministry engineers. Before construction of the Duke Point ferry terminal, we studied the possibility of building a major ferry terminal on Gabriola Island with a road and bridge link across Mudge Island. However, there was little local or regional support for a project of this magnitude, and the social and environmental concerns were significant.

While I appreciate your interest in saving taxpayers' dollars with a shorter ferry route, the cost savings that might be realized through such a highly ambitious construction project are questionable. A fixed link has its own costs, including not only construction, maintenance and rehabilitation of the structures and associated transportation infrastructure, but also the replacement costs at the end of service life. And even if a fixed link or a project similar to your idea is constructed some day, most of the existing ferry routes will still need to be maintained.

It is worth noting that BC Ferries, as an independent company, is now receiving an annual service fee to provide coastal ferry services. This is a pretty good deal for all British Columbians. In the meantime, however, please be assured that ministry staff continue to monitor all developments that might allow us to one day construct a fixed link between Vancouver Island and the Lower Mainland. To find out more about this, I would encourage you to visit our web site at http://www.th.gov.bc.ca/publications/reports_and_studies/fixed_link/fixed_link.htm.

Thank you again for taking the time to write.

Best regards,

Sent Via Email

Kevin Falcon
Minister

Information provided by: ML 117920 and ML 132981

Parkinson, Carolyn TRAN:EX

From: Transportation, Minister TRAN:EX
Sent: Wednesday, August 8, 2007 11:22 AM
To: s22
Subject: 159137 – Malahat Corridor Plan

Dear s22

Thank you for your e-mail of July 15, 2007, suggesting that the Ministry of Transportation construct bridges between Vancouver Island and Salt Spring Island. Transportation Minister Kevin Falcon is out of the country on a business trip, but I am pleased to reply on his behalf.

As you may be aware, this ministry has been working very hard during the past year to address the issue of traffic congestion on the Malahat. Through our Malahat Corridor Study, we've consulted with commuters, area residents, local governments, transportation experts and various stakeholders regarding this issue.

During this consultation process, we did give some consideration to the construction of a bridge across the Saanich Inlet. However, while no final decisions have yet been made regarding the plans for the Malahat, it's unlikely that any bridges will be built to Salt Spring Island. The cost is simply too prohibitive.

Minister Falcon will be receiving the consultant's final report on the Malahat Corridor Study later this year. Once he receives this report, he'll be making recommendations on the best option, or the best combination of options, to improve safety and the flow of traffic through the Malahat corridor. To find out more about the Malahat Corridor Study, I would encourage you to visit our ministry's web site at http://www.th.gov.bc.ca/malahat.

Thank you again for taking the time to write.

Best regards,

Peter Milburn
Chief Operating Officer

From: s22
Sent: July 15, 2007 1:08 PM
To: Transportation, Minister TRAN:EX
Subject: 159137

dear minister,

It may be time to consider building a bridge from the sannich peninsula to saltsring Island and thru to vancouver Island.
It would take the presure off the malahat and allow Tsawwassen to northern Vancouver Island ferry traffic a alternate travel route.
There is a point in time where the best interests of vancouver island has to rise higher than special interests.

for your consideration

s22

Parkinson, Carolyn TRAN:EX

From: Transportation, Minister TRAN:EX
Sent: Thursday, April 17, 2008 12:22 PM
To: s22
Subject: 164344 - Fixed Link to Gabriola Island

s22

164344 - Fixed Link to Gabriola Island

Dear s22

Thank you for your e-mail of January 28, 2008, regarding your continued interest in seeing a fixed link constructed between Vancouver and Gabriola islands via Mudge Island.

My ministry has no current plans for construction of a fixed link to Gabriola Island. However, a concept study has been conducted should such a crossing ever become a reality at some time in the future.

In the event a crossing to Gabriola Island does receive future consideration, extensive consultation would first have to take place with First Nations, local governments, environmental groups and area residents. Quality of life issues for island and coastal residents would need to be addressed, including the effects of construction and increased traffic on neighbourhoods, wildlife and environmentally sensitive areas. Capital costs, maintenance and property acquisition would also have to be taken into consideration. Presently, the lands along the proposed right of way to Gabriola Island through Mudge Island are all privately owned or held by the federal government.

Many British Columbians would welcome more transportation investment in their area, and we're working hard to provide a safe and efficient transportation network for everyone. At the end of the day, my ministry must decide which transportation projects benefit the most British Columbians. Presently, the existing ferry connection to Gabriola Island meets the current needs of travellers, and we expect it will continue to do so for many years.

My ministry has completed several studies regarding the construction of a fixed link to the Lower Mainland. I would encourage you to take a look at the results on our web site at http://www.th.gov.bc.ca/publications/reports_and_studies/fixed_link/fixed_link.htm.

Thank you again for taking the time to write.

Best regards,

Kevin Falcon
Minister

From: s22
Sent: Monday, January 28, 2008 5:31 PM
To: Transportation, Minister TRAN:EX
Subject: 164344 Highway link to Gabriola Island

Attn.the Hon Kevin Falconer
January 28, 2008

Dear Sir

When Judith Reed was Transportation Minister I sent her a letter in which I suggested that the government should proceed with a "short link" ferry crossing to the mainland via a highway link to Gabriola Island. She replied that it wasn't in the immediate plans but that the government maintains a right of way from Cedar, across Mudge Island to Gabriola Island.

Recenty, Cable Bay Golf Resorts, has proposed a subdivision and golf course for lands in Cedar adjacent to Mudge Island. They are now holding public meetings on the proposal but if their development goes ahead as now planned road access will be unavailable for a future highway crossing to Gabriola Island via Mudge Island.

As the population of Vancouver Island increases and fuel costs continue to rise planners will look to this route as a way to cut the ferry crossing distance to the mainland in half and at the same time double the number of sailings without building any more ferries.

My question to you is: Does the government have this vital right of way reserved for a future highway link to Gabriola Island via Mudge Island?

s22

Parkinson, Carolyn TRAN:EX

From: Falcon.MLA, Kevin [Kevin.Falcon.MLA@leg.bc.ca]
Sent: Monday, July 7, 2008 2:33 PM
To: WEBMASTER TRAN:EX
Subject: FW: Gabriola Island bridge

Natasha Westover
Constituency Assistant to
Kevin Falcon, MLA
Ph. 604-576-3792
Fax 604-576-3797
Natasha.Westover@leg.bc.ca

-----Original Message-----
From: s22
Sent: Saturday, July 05, 2008 9:27 AM
To: Falcon.MLA, Kevin
Cc: Gordon Campbell; Krog.MLA, Leonard
Subject: Gabriola Island bridge

To:
Hon Kevin Falcon, Minister of Transportation and Infrastructure Hon Gordon Campbell, Premier of British Columbia Leonard Krog, MLA

Once again we hear rumours that someone wants a bridge linking Gabriola with Vancouver Island. We hoped the notion had been laid to rest in 1993 when the decision was made to locate a major ferry terminal at Duke Point. But apparently we are to repeat the conversation and perhaps waste money on a survey.

Residents of Gabriola Island expect efficient service and reasonable fares.
We chose to live on an island, not in a suburb.
We do not want or need a bridge.

We feel it is more appropriate to address our concerns to you than to Mr. David Hahn.
Thank you for listening.

s22

Parkinson, Carolyn TRAN:EX

From: Transportation, Minister TRAN:EX
Sent: Friday, November 28, 2008 3:37 PM
To: s22
Cc: OfficeofthePremier, Office PREM:EX
Subject: 169641 - Fixed Links

s22

169641 - Fixed Links

Dear s22

Premier Gordon Campbell has asked me to respond on his behalf to your e-mail of July 30, 2008, requesting a fixed link connecting Vancouver Island with the mainland, via Mayne Island. Please accept my apologies for the lateness of my reply.

Over the years a number of proposals have been put forward for shortening or eliminating the ferry crossing to the Lower Mainland, including suggestions for tunnels and floating bridges across Georgia Straight. However, along with the significant engineering, environmental, social and financial challenges, preliminary estimates suggest that such a structure could cost upwards of $12 billion. Other factors that limit the effectiveness of such a plan include wave force, water depths and seafloor characteristics.

My ministry has conducted studies to determine the feasibility of a fixed link between Vancouver Island and the Mainland. You can find these on our web site at http://www.th.gov.bc.ca/Publications/reports_and_studies/fixed_link/fixed_link.htm.

In 2002 BC Ferries looked into the possibility of bridges to some of the Gulf Islands. While they did not look at Mayne Island specifically, they observed that in general the channels are too deep for conventional span bridges and would require cable-stayed or suspension span technology resulting in higher bridge costs. In addition, there has been significant opposition from Gulf Island residents and the Islands Trust has gone on record to voice its objection to any fixed link through the islands. I have enclosed a copy of this study for your review.

Thank you again for taking the time to write.

Best regards,

Kevin Falcon
Minister

Copy to: Premier Gordon Campbell

-----Original Message-----
From: OfficeofthePremier, Office PREM:EX
Sent: Thursday, August 7, 2008 3:58 PM
To: s22
Cc: Transportation, Minister TRAN:EX
Subject: RE: Views regarding our ferry system.

Thank you for your email regarding the possibility of short, fixed links between Vancouver Island and the Lower Mainland in lieu of a longer fixed link as recently considered in the Times Colonist article.

Your comments are appreciated and have been shared with the Honourable Kevin Falcon, Minister of Transportation and Infrastructure, for his review and future consideration as well.

Again, thank you for your interest and for taking the time to send your thoughts.

From: s22
Sent: Wednesday, July 30, 2008 10:23 PM
To: OfficeofthePremier, Office PREM:EX
Subject: Views regarding our ferry system.

Sir, I have been reading with concern and interest regarding the Ferry services to our islands and rising fuel costs. One idea came up recently in the Times Colonist regarding a bridge linking the Mainland and Vancouver Island, while this is a good idea, it is far from practical, the huge distance across the Georgia Strait - the huge costs involved - the shipping in the Strait - earthquakes - etc. An idea came to me that perhaps use our existing ferries from the Tsawassen Terminal to a new Termainal on Mayne Island, this would certainly remove the above problems, and apart from the new terminal, the infrastructure is already in place. Next step would be to build a series of smaller span bridges linking Mayne Island and Swartz Bay. This completely removes the need for ferries to all the smaller islands - halves the ferry fuel costs to Vancouver Island, completely removes the costs of building a huge bridge in a very busy seaway (Georgia Strait). In the original article in the Times Colonist the proposed bridge would end up in the Duncan area, this would increase the traffic on the already busy Malahat, in winter this is certainly not good news.

Sir, I wonder if some sort of study could be put in place to see if this idea is at all feasible.

s22

Parkinson, Carolyn TRAN:EX

From: s22
Sent: Sunday, December 20, 2009 12:25 PM
To: Transportation, Minister TRAN:EX
Subject: 185181 - Re: 183132 - Fixed Links from Vancouver Island

Thank you for your reply to my August letter. I must admit that I am concerned that more attention to the future prosperity of Vancouver Island is not on the forefront of your Government's short list of economic proposals for the post Olympic period. No doubt greater minds than mine are developing some economic plans for the next two years before we enter the inevitable pre-election period.

There is one thing I would like to ask of your Ministry, and that is, what would be the cost of a simple bridge system to replace the Gabriola Ferry? I specifically point out that is only a bridge system for Gabriola and therefore does not mean a big bridge to eventually handle the traffic from Vancouver. When we did the Attitude Survey with BC Ferries this summer, through V.I.U., we got a 35% positive response from residents in favour of a bridge system replacement, and that is up from 6% only three years before; this increase was in spite of the fact that no comparative toll figure was provided to compare with the Ferry fares.

Please note that a bridge system for Gabriola only, would not need any road work on Gabriola, only minor upgrading of the already existing road on Mudge and on the Vancouver Island side there are already two large developements going in: Cable Bay Resort Developments and Sandstone Properties (totalling over 3,000 new houses, commercial and Industrial buildings, so the road work would be close to the Gabriola Bridge.

If we were to do this proposal there are a number of assets tht would revert to your Government: The Gabriola Ferry itself, the Nanaimo parking lot, two float- away ferry Terminals, and the existing Ferry subsidy. Not to mention the improvements to traffic flow in Nanaimo.

I look forward to getting an estimate of the toll that would have to be levied for the construction of a replacement bridge for the Gabriola Ferry, so that we can do another Attitude Survey.

Yours sincerely, s22 Best wishes for the Xmas Season to yourself and Family.

----- Original Message -----
From: "Transportation, Minister TRAN:EX" <Minister.Transportation@gov.bc.ca>
Date: Friday, December 18, 2009 4:14 pm
Subject: 183132 - Fixed Links from Vancouver Island
To s22
Cc: "OfficeofthePremier, Office PREM:EX" <Premier@gov.bc.ca>, "Minister, FIN FIN:EX" <FIN.Minister@gov.bc.ca>, "Minister, STED STED:EX" <STED.Minister@gov.bc.ca>

> s22
>
> 183132 - Fixed Links from Vancouver Island
>
> Dear s22
>
> My colleague, the Honourable Colin Hansen, Minister of Finance
> and Deputy Premier forwarded to me your e-mail of August 12,
> 2009, so I could respond to your comments about fixed links

> replacing ferry service. Please accept my apologies for the
> lateness of this reply.
>
> You may be interested to know that my ministry looked into the
> feasibility of constructing bridges to some of the Gulf Islands.
> However, because most of the channels are too deep for
> conventional bridges, cable stayed or suspension span technology
> would generally be required, at a prohibitive cost to taxpayers.
> Capital costs, maintenance and property acquisition would also
> be very expensive, and there are a number of critical
> engineering, environmental and socio-economic issues that would
> have to be addressed. As well, extensive consultation with First
> Nations, local governments, environmental groups and area
> residents would be required.
>
> Some have suggested a bridge from the Lower Mainland to
> Vancouver Island in the past as well, but with the geological
> and engineering challenges, the costs outweigh the benefits. Our
> most recent estimates put the cost of one link from the Lower
> Mainland to Vancouver Island at upwards of $12 billion. In light
> of your interest, you may also wish to view the reports and
> analyses available on this topic on my ministry's web site at
> http://www.th.gov.bc.ca/publications/reports_and_studies/fixed_link/fixed_link.htm.
>
> BC Ferries' fares and core services are overseen by the
> independently appointed BC Ferry Commissioner. If you're
> interested in more detail about how ferry services are provided
> and regulated in British Columbia, you may want to visit the
> commissioner's web site at http://www.bcferrycommission.com.
>
> As you are likely aware, the provincial government recently
> ordered a review of BC Ferries' governance, financial
> performance, and the regulatory environment in which it
> operates. It has been six years since BC Ferries became an
> independent company, and the review was meant to help us ensure
> the financial and service expectations that came with this new
> model are being met.
>
> Now that the Comptroller General's report is complete, we are
> thoroughly reviewing the report's recommendations and I am
> discussing them with the BC Ferries' Board. Decisions regarding
> how government will proceed with the recommendations will be
> made in the near future.
>
> Thank you for taking the time to write.
>
> Sincerely,
>
>
> Shirley Bond
> Minister

>
> Copy to: Premier Gordon Campbell
>
> Honourable Colin Hansen
> Minister of Finance and
> Deputy Premier
> MLA, Vancouver-Quilchena
>
> Honourable Iain Black
> Minister of Small Business, Technology and Economic Development
> MLA, Port Moody-Coquitlam
>
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> From s22
> Sent: Wednesday, August 12, 2009 8:23 AM
> To: Minister, FIN FIN:EX
> Cc: OfficeofthePremier, Office PREM:EX
> Subject: Vancouver island economic development
>
> From the media I understand that there are difficulties with
> financing health care, B C Ferries and V.I. Municipalities tax
> base, because of various international conditions, and domestic
> slow-downs.
>
> I have been in touch with Davis Emerson, who is being paid by
> B.C. taxpayers to plan for future economic development. He has
> declined to respond to my suggestions.
>
> Vancouver Island, historically, has been a net producer for the
> Province; however it is rapidly declining in capacity to be
> contributor to the Provincial economy. It is fair to say that
> forestry will not be able to achieve its previous capacity again
> and fishing and mining will stay in decline for the foreseeable
> future. We need to diversify our economy and to do that we need
> an enhanced transportation system to get goods and services to
> Vancouver Island in the most cost efficient manner.
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> B.C. Ferries is demonstrating that it is unable to provide a
> cost efficient transportation system. In spite of deep discounts
> on fares and large expenditures of capital, the system is
> failing expectations. We hear over and over again that the cost
> of travelling to V.I. is getting prohibitively expensive.
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> We need shorter crossing times, replacing ferries with bridges
> where possible and a fundamentally new attitude to the economy
> of V.I. The Islands Trust is assuming that it owns the Gulf
> Islands, whereas the Islands in fact belong to the Province and
> the Nation. It is the New Democratic Party that created the
> Islands Trust in order to restrict overall development, but at
> the same time understood that Transportation issues were
> necessary for the future development of V.I. With that in mind

> the New Democrats planned for a shorter crossing and the
> replacement of ferries by bridges. (See Hansard for the debates)
>
> I am disappointed that health services are being restricted
> because of shortages of capital, also that the Liberal Party is
> suffering in the polls because of the new tax being imposed.
> Instead, the economic thrust should be on expanding the economy
> of Vancouver Island by a new approach to transportation
> choices. Has anyone in the Government added up the value of
> potential development of V.I. and the saving in costs for a new
> transportation system, that would supply goods and services to
> the Island.
>
> If you need help in planning a new economy for V.I. please give
> me a call. With your help, we could get this part of the
> Province productive again.
>
> We need to review the Islands Trust Mandate. The Islands Trust
> is living in the past; let's give the future a chance.
>
> Sincerely, s22
>

Parkinson, Carolyn TRAN:EX

From: Transportation, Minister TRAN:EX
Sent: Thursday, February 11, 2010 3:53 PM
To: s22
Subject: 185181 - Fixed Link to Gabriola

s22

185181 - Fixed Link to Gabriola

Dear s22

Thank you for your e-mail of December 20, 2009, regarding your continued interest in a Gulf Islands-based bridge system. Please accept my apologies for the lateness of this reply.

A fixed link between Vancouver Island and Gabriola Island has been considered a number of times over the past four decades. You may be interested to know a 2002 BC Ferries report studied eight short ferry routes and found the Nanaimo-Gabriola route was the only route where a fixed link might be more financially viable than a continued ferry link. That said, it would require significant investment and the 2004 cost estimate for such a bridge was in excess of $50 million.

The study focused on construction costs. Issues such as shipping clearances, land use and environmental, social and economic impact would need to be considered. Unfortunately, making an accurate estimation of a user toll is not possible without further research.

Thank you again for taking the time to write.

Sincerely,

Shirley Bond
Minister

From: s22
Sent: Sunday, December 20, 2009 12:25 PM
To: Transportation, Minister TRAN:EX
Subject: Re: 183132 - Fixed Links from Vancouver Island

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There is one thing I would like to ask of your Ministry, and that is, what would be the cost of a simple bridge system to replace the Gabriola Ferry? I specifically point out that is only a bridge system for Gabriola and therefore does not mean a big bridge to eventually handle the traffic from Vancouver. When we did the Attitude Survey with BC Ferries this summer, through V.I.U., we got a 35% positive response from residents in favour of a bridge system replacement, and that is up from 6% only three years before; this increase was in spite of the fact that no comparative toll figure was provided to compare with the Ferry fares.

Please note that a bridge system for Gabriola only, would not need any road work on Gabriola, only minor upgrading of the already existing road on Mudge and on the Vancouver Island side there are already two large developements going in: Cable Bay Resort Developments and Sandstone Properties

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I look forward to getting an estimate of the toll that would have to be levied for the construction of a replacement bridge for the Gabriola Ferry, so that we can do another Attitude Survey.

Yours sincerely, s22 Best wishes for the Xmas Season to yourself and Family.

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Cc: "OfficeofthePremier, Office PREM:EX" <Premier@gov.bc.ca>, "Minister, FIN FIN:EX" <FIN.Minister@gov.bc.ca>, "Minister, STED STED:EX" <STED.Minister@gov.bc.ca>

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Page 345 redacted for the following reason:
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s13

Parkinson, Carolyn TRAN:EX

From: s22
Sent: Sunday, May 2, 2010 1:12 AM
To: Transportation, Minister TRAN:EX
Subject: 187619 Being careful with money.

Greetings

BC Ferries has an old rust bucket that is 50 years old running back and forth between Van. and Gulf Islands!. In India, I was on an old
transportation steamer the same age. The Indian Govt. had ordered it scrapped as ships of that vintage pour out too much in the way
of fumes. Now BC Ferries is busy planning expensive terminals and not paying attention to the vessels they use. perhaps THEY NEED
some leadership from the Prov. Govt.

Should MOTH not be concerned about the environment? If so then:

Look at the new transportation ferries being tested for passengers.
Try one ferry going back and forth between Long Harbour and Vancouver taking all the Duncan traffic too thus taking cars off the overcrowded and dangerous Malahat. Direct route with smaller summer traffic louter Islands ferried to the big ship for more efficiency.
**Have a toll bridge built by private industry from Van. Isalnd to Salt Spring Island. What could be finer than to have in five years
electric cars going back and forth on a toll bridge. That beats a new terminal at Fulford, a ferry spewing diesel fumes and messing
up the environment as it could replace both crofton and victoria-Swartz Bay ferry!! What huge cost savings!!**

After all.....a poll in local newspaper said Salt Spring Islanders want a bridge. Now we are not even in the economic mix and sales of homes are lousy. Transportation costs are excessive and our hospital is losing all its services. We are overburdened with
bureaucracy, the Trust with little public input. We need a bit of growth, improved transportation and municipal government....but first we need more logical access.

**Why not a toll bridge now?????????????????????????????? THE NEED IS THERE!! NEEDED BY PEOPLE, NEEDED BY
THE ENVIRONMENT AND NEEDED BY BEC FERRIES!!**

s22

Parkinson, Carolyn TRAN:EX

From: Transportation, Minister TRAN:EX
Sent: Tuesday, July 13, 2010 2:15 PM
To: s22
Cc: 'customer.relations@bcferries.com'
Subject: 187619 – Toll Bridge

s22

187619 - Toll Bridge

Dear Correspondent:

Thank you for your e-mail of May 2, 2010, regarding BC Ferries and your proposal that we build a toll bridge between Salt Spring Island and Vancouver Island.

I appreciated the opportunity to review your suggestion for a toll bridge between Vancouver Island and Salt Spring. However, the ministry's position on this matter has not changed since you last corresponded with my predecessor, the Honourable Kevin Falcon. In light of the high cost of construction and the significant technical and engineering challenges of such a project, it is not something the ministry is pursuing.

With respect to your comments about BC Ferries' vessels, I understand BC Ferries has replaced seven vessels since 2003 and continues to move forward with a capital plan to replace many of its older vessels. As operational decisions for BC Ferries are made independently of government, I've shared your comments with David Hahn, President and CEO of BC Ferries.

Thank you again for taking the time to write.

Sincerely,

Shirley Bond
Minister

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BC Ferries

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s22

The correspondent has written on this topic four times since 2008. Responses are flagged in package.

July 13, 2010

s22

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Thank you again for taking the time to write.

Sincerely,

Sent via Email:

Shirley Bond
Minister

Copy to: David Hahn, President and CEO
BC Ferries
Customer.Relations@bcferries.com

Information provided by: Lynda Petruzzelli, Senior Manager, Coastal Ferries
ML 175523/183132

Parkinson, Carolyn TRAN:EX

From: Transportation, Minister TRAN:EX
Subject: economic development

From: s22
Sent: Wednesday, May 05, 2010 10:08 AM
To: Bond.MLA, Shirley
Subject: economic development

To Minister Shirley Bond,

May 5th. 2010

From s22 Gabriola Island

Good morning. Thank you for taking the time to respond to my earlier E-Mails.

I had previously asked what the cost would be, to replace the Gabriola Ferry with a fixed link. Your reply was $50 Million, but it was not clear if that cost was based on the existing estimate, updated and referring to bridges that would be suitable for the shortened Georgia Straight crossing or for small bridges for Gabriola only. To do a cost comparison with the Ferry service, we would need the cost of two small bridges.

Since the time of my last request B C Ferries, has gone out and spent $20 Million to refurbish the old Quinsam. This money is nearly half the cost of replacing the Ferry with bridges. The refurbished Ferry will last another 20 years before it rusts out again.

Please can you get someone to compare the relative costs of Bridges versus Ferry over 20 years, so I can go back and ask the population of Gabriola which they would prefer.

If the Ferry goes, the following assets would revert back to various Government interests: The Quinsam, Nanaimo waterfront parking lot (worth about $7 million), two terminals (which could be adapted for other locations) and the Gabriola parking lot.

The Nanaimo down-town roadways would be freed up from the Ferry traffic. Savings in running the bridge versus the ferry would include: maintenance costs, labour costs, travel time, Ferry fuel costs (you could have a toll discount for electric or hybrid vehicles on the bridges). This would be for GHG's.

Social advantages would include: Access to jobs (Gabriola has a growing problem of unemployment), access to educational opportunities, cheaper septic cost (the RDN is implementing Mandatory septic maintenance program), alternative supplies of water (lots of residents of Gabriola have no water in the summer, and last but not least, access to medical services would be enhanced and Tourism would benefit .

We only need another 15% in support for the Bridges: please refer to the B C Ferries Survey done by Vancouver Island University for the relevant statistics.

Let's get B C moving again.

Sincerely, s22

Parkinson, Carolyn TRAN:EX

From: s22
Sent: Thursday, March 17, 2011 11:33 AM
To: Transportation, Minister TRAN:EX
Subject: Attention -- Transportation services to Gulf Islands and Vancouver Island.

Attention Lynette.

Honourable Blair Lekstrom,

Minister of Transportation and Infrastructure,

Victoria.

March 17.

Minister,

The issue is B.C. Ferries and Alternative Service Provision, (ASP).

In the last Annual Report of B.C. Ferries has made it clear that many potential changes are being considered for the reduction of subsidized service, especially for the smaller Gulf Islands. The lower Gulf Islands have annual losses of 20 million dollars and Gabriola Is. has a nearly 2 million dollar loss. B.C. Ferries has just spent 17 million on refurbishing the Gabriola Ferry so that it will last a few more years.

The ASP is considering elimination of terminals and in some cases ferries. Also being considered is reduction of services. Gabriola Island is also being considered for the having the Ferry replaced by a fixed link.

The fixed link would not be done by the Corporation and would presumably come under the purview of your Ministry.

Having lived with my family, s22 on Gabriola Island for about 38 years I am well acquainted with the history of Transportation issues concerning Vancouver Island and I was responsible for getting David Hahn funding an attitude survey conducted in order to create a baseline of information on the subject from a local context.

We have a nucleus of interested persons who wish to pursue the ASP of replacing the existing ferry with a fixed link. This project could be stand alone or in the the context of a wider consideration of Transportation options.

Three of us are asking to come to Victoria and have, say, a half hour of the most appropriate persons time, to have a quick overview of the issue, to see if there is some common ground between us, your Ministry, and the plans that may be being considered for the future of Transportation to Vancouver Island and the Gulf Islands.

Please let us know the time and date that is most suitable for your staff member.

Congratulations on your choice of Premier Clarke to lead the Province.

Best regards, s22

NOTE s22 has written the ministry 9 times in the last year and half regarding his support for a fixed link to Gabriola Island. Minister Bond responded 3 times, Kirk Handrahan, Director, Marine Branch, phoned s22 and former Deputy Minister Peter Milburn replied by e-mail to confirm the ministry's position. s22 also wrote to various Ministers, including Minister Lekstrom at MEMR last May. The incoming is attached to package. MEMR did not respond.

s22

193865 - Fixed Link to Gabriola Island

Dear s22

Thank you for your e-mail of March 17, 2011, expressing your continued support for a fixed link to Gabriola Island.

I understand you have raised this issue with my predecessor, the Honourable Shirley Bond, and other Cabinet ministers over the past few years. Ministry staff also advise me that they have been in contact with you by phone and e-mail regarding this matter. Please allow me to take this opportunity to confirm for you there are no plans to replace ferry service to Gabriola Island with a fixed link, nor will any further consideration be given to such a proposal in the foreseeable future.

Please be assured that as the Province negotiates a new contract with BC Ferries, we are committed to ensuring an efficient, reliable ferry service for our coastal and island communities. If you have any questions, feel free to contact Kirk Handrahan, Executive Director, Marine Branch. He can be reached at 250 952-0678 or by e-mail at Kirk.Handrahan@gov.bc.ca and would be pleased to meet with you.

Thank you again for taking the time to write.

Sincerely,

Blair Lekstrom
Minister

Copy to: Kirk Handrahan, Executive Director
Marine Branch

Information provided by: Previous ML 186332 DM 188547 185181 183132

Parkinson, Carolyn TRAN:EX

From: Transportation, Minister TRAN:EX
Sent: Thursday, April 14, 2011 1:22 PM
To: s22
Cc: Handrahan, Kirk TRAN:EX
Subject: 193865 - Fixed Link to Gabriola Island

s22

193865 - Fixed Link to Gabriola Island

Dear s22

Thank you for your e-mail of March 17, 2011, expressing your continued support for a fixed link to Gabriola Island.

I understand you have raised this issue with my predecessor, the Honourable Shirley Bond, and other Cabinet ministers over the past few years. Ministry staff also advise me that they have been in contact with you by phone and e mail regarding this matter. Please allow me to take this opportunity to confirm for you there are no plans to replace ferry service to Gabriola Island with a fixed link, nor will any further consideration be given to such a proposal in the foreseeable future.

Please be assured that as the Province negotiates a new contract with BC Ferries, we are committed to ensuring an efficient, reliable ferry service for our coastal and island communities. If you have any questions, feel free to contact Kirk Handrahan, Executive Director, Marine Branch. He can be reached at 250 952-0678 or by e mail at Kirk.Handrahan@gov.bc.ca and would be pleased to meet with you.

Thank you again for taking the time to write.

Sincerely,

Blair Lekstrom
Minister

Copy to: Kirk Handrahan, Executive Director
Marine Branch

From: s22
Sent: Thursday, March 17, 2011 11:33 AM
To: Transportation, Minister TRAN:EX
Subject: Attention -- Transportation services to Gulf Islands and Vancouver Island.

Attention Lynette.

Honourable Blair Lekstrom,
Minister of Transportation and Infrastructure, Victoria.
March 17.
Minister,

The issue is B.C. Ferries and Alternative Service Provision, (ASP).
In the last Annual Report of B.C. Ferries has made it clear that many potential changes are being considered for the reduction of subsidized service, especially for the smaller Gulf Islands. The lower Gulf Islands have annual losses of 20 million dollars and Gabriola Is. has a nearly 2 million dollar loss. B.C. Ferries has just spent 17 million on refurbishing the Gabriola Ferry so that it will last a few more years.

The ASP is considering elimination of terminals and in some cases ferries. Also being considered is reduction of services. Gabriola Island is also being considered for the having the Ferry replaced by a fixed link.

The fixed link would not be done by the Corporation and would presumably come under the purview of your Ministry.

Having lived with my family, three children and three grandchildren on Gabriola Island for about 38 years I am well acquainted with the history of Transportation issues concerning Vancouver Island and I was responsible for getting David Hahn funding an attitude survey conducted in order to create a baseline of information on the subject from a local context.

We have a nucleus of interested persons who wish to pursue the ASP of replacing the existing ferry with a fixed link. This project could be stand alone or in the the context of a wider consideration of Transportation options.

Three of us are asking to come to Victoria and have, say, a half hour of the most appropriate persons time, to have a quick overview of the issue, to see if there is some common ground between us, your Ministry, and the plans that may be being considered for the future of Transportation to Vancouver Island and the Gulf Islands.

Please let us know the time and date that is most suitable for your staff member.

Congratulations on your choice of Premier Clarke to lead the Province.

Best regards, s22

Parkinson, Carolyn TRAN:EX

Subject: FW: A Potential Fixed Link to Vancouver Island

From: s22
Sent: April 10, 2011 2:51 PM
To: Lekstrom.MLA, Blair
Subject: A Potential Fixed Link to Vancouver Island

Attention: Hon. Blair Lekstrom, Minister of Transportation and Infrastructure
I am dismayed to see that the most current update of the engineering information on this proposed project was way back in 1985. I know there are more current technologies available that could be explored.

As an island property owner and resident your inattention to our transportation needs leave me feeling misled and angry. When we purchased our gulf island home we believed that the ferries would continue to be treated as an essential service not a luxury service run by a, for profit, private company. Riding a ferry to and from the mainland with our vehicle is a luxury we can no longer afford. The Vancouver lower mainland is where the bulk of employment and economic opportunity is located but the cost to ride a ferry to and from the lower mainland is keeping prospective visitors on the east side of the Georgia Straight.

This issue must be addressed before the full time island residents who create and support the essential services and economies on the islands go bankrupt and are forced to vacate their lifetime homes.

Please take a serious look at our plight-please!

Sincerely,

s22

Pages 356 through 361 redacted for the following reasons:
- -
s13

Parkinson, Carolyn TRAN:EX

From: Transportation, Minister TRAN:EX
Sent: Wednesday, May 4, 2011 4:32 PM
To: s22
Subject: 194564 – Fixed Link and BC Ferries Rates

s22

194564 - Fixed Link and BC Ferries Rates

Dear s22

Thank you for your e-mail of April 10, 2011, regarding the possibility of a fixed link between the Lower Mainland and Vancouver Island and BC Ferries' rates.

I recognize you would like the ministry to undertake further studies to revisit the possibility of a fixed link. However, no new technologies have emerged to overcome the considerable technical challenges identified in the studies undertaken in the 1980's, and financially the costs of such a project remain prohibitive. Taking into account inflation, a fixed link from Vancouver Island to the Lower Mainland would cost taxpayers an estimated $12 billion, which is not currently feasible. Even with such a fixed link, we would still need to provide ferry service for the Gulf Island and northern routes, and it's these routes that require substantial taxpayer support, not the ones between Vancouver Island and the mainland.

With respect to your comments about the cost of ferry travel, I understand your frustration about increased rates. The independent BC Ferry Commission reviews BC Ferries' costs and makes decisions about the maximum allowable fare increases. The Commission recently released its preliminary decision for ferry rate increases to be implemented from 2012 to 2016, and while I'm relieved the price caps are not as high as anticipated, I share the public's concerns regarding ferry rate increases for minor and northern routes.

As the Province reviews all available options, I encourage British Columbians to submit their comments to the BC Ferry Commissioner, who will take their views and suggestions into consideration in making his final decision. You can send an e-mail to the Commissioner at info@bcferrycommission.com before June 30, 2011. For more information, please visit the BC Ferry Commission's web site at http://www.bcferrycommission.com/what_s_new.html.

Effective, reliable ferry services are integral to the sustainability of our island and coastal communities. The Province has demonstrated its financial commitment to coastal ferries with contributions exceeding $1 billion since 2001, which includes the provincial service fee, capital improvements, fees to support unregulated routes, federal funding, fuel adjustments and social assistance programs.

Thank you again for taking the time to write.

Sincerely,

Blair Lekstrom
Minister

From: s22
Sent: April 10, 2011 2:51 PM

To: Lekstrom.MLA, Blair
Subject: A Potential Fixed Link to Vancouver Island
Attention: Hon. Blair Lekstrom, Minister of Transportation and Infrastructure I am dismayed to see that the most current update of the engineering information on this proposed project was way back in 1985. I know there are more current technologies available that could be explored.

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This issue must be addressed before the full time island residents who create and support the essential services and economies on the islands go bankrupt and are forced to vacate their lifetime homes.

Please take a serious look at our plight-please!

Sincerely,

s22

Pages 364 through 367 redacted for the following reasons:
- -
s13

Parkinson, Carolyn TRAN:EX

From: Transportation, Minister TRAN:EX
Sent: Thursday, November 3, 2011 4:18 PM
To: s22
Cc: premier@gov.bc.ca; david.hahn@bcferries.com; Sturrock, Ian F TRAN:EX
Subject: 199087 - Proposed Buckley Bay/Denman Island Cable Ferry and a Fixed Link

s22

199087 - Proposed Buckley Bay/Denman Island Cable Ferry and a Fixed Link

Dear s22

Thank you for your e-mail of September 29, 2011, regarding BC Ferries' proposed cable ferry service and the idea of a fixed link for the Buckley Bay/Denman Island route.

I recognize you have concerns about the potential change to the way ferry service is provided on this route. That being said, many coastal communities have expressed concerns over the level of recent fare increases, and I understand BC Ferries is exploring cost-effective alternatives to protect the sustainability of the coastal ferry system.

As an independent company, BC Ferries is responsible for making its own capital investment decisions under the regulatory oversight of the BC Ferry Commission. It's important to note that when making decisions to upgrade or replace vessels, BC Ferries must ensure it can continue to deliver the core service levels outlined in the service contract between the corporation and the provincial government, including a certain number of daily and annual round trip sailings on each route. The corporation must also meet all regulatory requirements set by Transport Canada to ensure passenger safety.

BC Ferries is in the best position to address your concerns about the proposed cable ferry, and I have taken the liberty of sharing your comments with BC Ferries' President and CEO, David Hahn, for his review.

With respect to the idea of building a bridge on this route, constructing such a bridge would present several technical challenges. This area is prone to earthquakes, and this combined with the soft soils on the Vancouver Island side of the channel increase the complexity and cost of constructing such a project. Baynes Sound has water depths in excess of 50 metres, and supports for the bridge would need to be located in shallower water, closer to shore. As well, vertical clearance under the bridge must be high enough to accommodate marine traffic. A suspension bridge with a main span of approximately 1,000 metres would be needed to meet these constraints; this span length is over twice that of the Lions Gate Bridge at the entrance to Burrard Inlet in Vancouver.

To construct this bridge, we would also have to take into account factors such as capital costs, property acquisition, and bridge maintenance in a salt water environment. The capital cost to build this fixed link is estimated to be around $500 million. We would also need to address critical issues related to engineering, environmental and socio-economical factors, and conduct extensive consultation with First Nations, local governments and stakeholders. Having said that, I appreciate your suggestion for the construction of a fixed link, and I assure you the ministry will continue to closely monitor developments in this field.

If you have any additional questions or comments regarding fixed links, please don't hesitate to contact the ministry's Senior Bridge Design and Construction Engineer, Ian Sturrock. He is available by telephone at 250 356-9862 or by e-mail at Ian.Sturrock@gov.bc.ca and would be pleased to assist you.

Thank you again for taking the time to write.

Sincerely,

Blair Lekstrom
Minister

Copy to: Premier Christy Clark

David Hahn, President and CEO
BC Ferries

Ian Sturrock, Senior Bridge Design and Construction Engineer
Highways Department, Engineering

From: s22
Sent: Thursday, September 29, 2011 10:49 PM
To: Transportation, Minister TRAN:EX
Cc: Coons.MLA, Gary E LASS:EX; Dix.MLA, Adrian LASS:EX; christy.clark.mla@leg.bc.ca
Subject: Denman Island Cable Ferry - opposed - and had more than enough

Dear Mr. Lekstrom,

After living on Denman Island for almost 14 years and having watched our island community and those of other coastal communities around us get thrashed by B.C. Ferries, I have to say "Enough is enough."

Now we are going into "untested waters" with B.C. Ferries going ahead (I hear it's a "done deal") with a cable ferry from Buckley Bay on Vancouver Island to Denman Island. B.C Ferries spent much money in the past few years already rebuilding docks on both sides and now they are going ahead with this….I have many concerns with this ferry as does the rest of the community…..these concerns were aired at the meeting of the Commissioner yesterday from what I was told. I couldn't attend the meeting; it was held at 3:00 in the afternoon when so many of us were at work.

At this point, I would like to agree with another proposal put forward by someone at one of the meetings …. JUST BUILD A BRIDGE! Be done with it. Enough with B.C. Ferries. They are going to farm out the ferry to (yet another) alternative service provider in any case. There is no accountability to the people B.C. Ferries is intended to serve.

In the end, do we want ONE province or TWO? The way the ferries have been going, we might as well have two….there seems to be no recognition of the fact that we have a huge coastline in this province with lots of water between….this is part of our highway! Do we value rural communities? Do we want services to be in place for those people who want to visit rural communities?

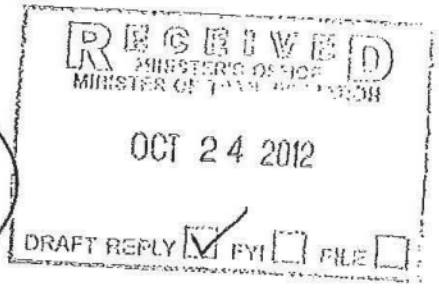
Please just consider building a bridge….for the money it is going to cost, get rid of our pariah - B.C. Ferries. We got rid of Mr. Hahn…..now, get rid of B.C. Ferries from our community altogether…OR TAKE IT BACK fully under government folds and serve the communities as you have done Whistler (Sea-to-Sky Highway, no tolls) and many other mainland communities.

Sincerely,

s22

s22

s22



October 17, 2012

Dear Minister Polak,

I would like to refer to the letter I received from the Honourable Christy Clark, dated September 20, 2012.

I hope this letter here is soon enough that it reaches you before any decisions have been made in regards to the island bridge link. What is involved is several different ways to get traffic from Vancouver down into the state of Washington and then over to the San Juan Islands bridging and tunneling to Sidney on Vancouver Island.

This idea is not my idea either from the States or here in Canada. The possibility of various routes has been in the papers at least two times that I know of, and maybe more. It is the only practical way, and the least expensive to get a link to Vancouver Island year round. No ferries.

I am willing to fly over to Victoria and bring my maps and we can look at them together. I am also willing to fly into Victoria airport and take yourself and an aide of yours and fly you the route, on my nickel. I'll pick up the total cost.

The best thing to do in political terms is to kite the idea, put it out to the public that you're looking at that possibility. Of course, you have to contact the appropriate authorities in the US and then they could do the same. There has been a big push in years gone by to get tourist facilities in the San Juan Islands where people could get to. One could be on the big San Juan Island. And the second one could be on Orcas Island. I see hotels tall enough with observations decks on top. There would be heavy booking year round for such accommodations.

You may find out that the US government would be interested, particularly the federal highway system. If we agree to go all the way down to Burlington, and then turn off towards Anacortes, that is the least expensive way for us. It's about 35 or 40 miles further for us Canadians to reach Victoria by Sidney. Whichever way, we all get to see the San Juan Islands. It would be a crime to miss them in a lifetime.

I sincerely hope to hear from you. I do think it would be wise to kite it, to put it out there and see what response you get. You may be surprised. We are talking about a toll highway.

Thank you sincerely,

s22

Grubesic, Lisa TRAN:EX

From: s22
Sent: August 1, 2003 5:08 PM
To: Transportation, Minister TRAN:EX
Subject: Re: 115097 Bridge to Gabriola Island

Dear Minister Reid
The time to start would be now . This project has been hoped for three decades now. At least give the people of the island a chance at the poll I mentioned. This would at least get the ball rolling in the proper direction.

Thank You

s22

----- Original Message -----
From: Transportation, Minister TRAN:EX
To: s22
Sent: Friday, August 01, 2003 10:53 AM
Subject: 115097 Bridge to Gabriola Island

Reference: 115097

s22

Dear s22

Re: Bridge to Gabriola Island

I am writing in response to your e-mail of June 20, 2003, regarding the possibility of a bridge from Gabriola Island to Vancouver Island.

The provincial government has looked at the potential costs involved in constructing bridges to replace some existing ferry routes. We found that a bridge from Gabriola Island to Vancouver Island may make financial sense in the future. Rough estimates suggest that the bridge could cost between $45 million and $50 million and that current ferry tolls and the existing subsidy may come close to recouping this cost.

Part of my ministry's role is to identify future transportation corridors and acquire land for them if it becomes available. To this end, we are considering acquiring several land parcels owned by the forest company Weyerhauser that could be used in the future for a transportation corridor.

However, we are not currently contemplating the construction of a bridge to Gabriola as sufficient capital resources are not available. When the time comes to develop this idea further, we will certainly invite opinions from individuals, businesses and other members of your community.

Thank you for taking the time to write.

Sincerely,

Judith Reid
Minister

Andrews, Sarah R TRAN:EX

Pending
Fixed Link

From: s22
Sent: April 10, 2002 10:39 PM
To: Transportation, Minister TRAN:EX
Subject: Re: Fixed Link - 94807

Thank you Minister for your thoughts with respect to the fixed link. I am familiar with the floating bridge proposal and I am NOT a supporter of that proposal for many of the reasons that you have itemized, and more if you are a boater. I am however very much a proponent of a NORTH Island bridge, with highway links to the interior and the lower mainland.

The North Island Bridge and Coastal Mountain Highway system at one end of this fabulous Island and a vigorous ferry system at the other would, in my view, provide alternative choices for Islanders and mainland tourists alike. Islanders deserve an alternative choice. As do mainlanders wanting to travel to the island. We, jointly, have an opportunity to develop a circle route from anywhere on the continent to Vancouver Island and return. North America has but one
major island on its western shores, and that alone could bring a series of benefits, including permanent jobs, to the length and breadth of the Island, including your constituency.

Interior residents wanting to get to this island are just as frustrated as Islanders who need to travel to the mainland. And mainlanders seldom travel to the Island because of the cost and frustration. A North Island bridge located where the island and mainland almost touch, coupled with a scenic coastal mountain highway, would bring huge benefits to the island and to the province.

I would urge you to 'float' this concept at some of your meetings and presentations in the interior, and guage for yourself the level of acceptance. Imagine events such as a cycling 'Island Tour' from Whistler, or Kamloops! Imagine the bus, rail and marine links that would develop along the length of the Island. And look down the road to the day when a million residents will call the island 'home', and the need for an alternative to the ferries will be essential. That day Minister, is only a decade away.

This note Minister is just the briefest overview of the benefits to the whole province from the construction of a North Island Bridge and coastal mountain highway system. I would be pleased to present more details of this concept to a panel or review board studying this issue. Indeed, I would be pleased to serve on an advisory board to study this eventuality.

The North Island bridge addresses every issue of concern to those who must travel between the mainland and the Island, and with the exception of a 30 minute crossing to Vancouver, it wins on almost every count.

I will provide more details in due course.

s22

-----Original Message-----
From: Transportation, Minister TRAN:EX
<Minister.Transportation@gems5.gov.bc.ca>
To: s22
Date: Wednesday, April 10, 2002 3:50 PM
Subject: Fixed Link - 94807

Reference: 94807

s22

Dear s22

Re: Fixed Link

I am writing in response to your letter regarding a proposal to build a fixed link between Vancouver Island and the mainland. Please accept my apologies for the lateness of my reply.

While many British Columbians feel a fixed link is an interesting option, this proposal presents significant engineering, environmental, social and financial challenges.

Conventional bridges cannot be built in water as deep as the Georgia Strait. In the 1980s, the provincial government commissioned engineering and economic pre-feasibility studies to examine other types of crossings. These studies looked at the options of an underground tunnel, a submerged floating tunnel and a floating bridge.

The most striking technical challenges facing these options are presented by the Georgia Strait itself. The waters are very deep, in excess of 350 metres, with a very thick, soft bottom sediment. These conditions will make anchoring any fixed link structure very challenging. The area is vulnerable to earthquakes, extreme wave conditions and underwater landslides. Any fixed link would need to allow the passage of major vessels, including tankers and military vessels, and be able to withstand an accidental collision. The crossing would be up to 24 kilometres across. No comparable crossing exists anywhere in the world.

Of the alternatives to a conventional bridge, a floating bridge presents the fewest practical problems, would be the fastest to construct, and is the least expensive. Nonetheless, our very preliminary estimates suggest that a floating bridge could cost between $8 billion and $12 billion. Cost overruns beyond these amounts would be likely, given the unprecedented technical challenges. The bridge would take a significant time to construct.

Assuming that all current and projected ferry traffic would use the fixed link instead, a one-way tariff on the crossing would need to be $260 to $800 per vehicle in order to recover costs over 100 years. This amount reflects the cost of construction, maintenance, rehabilitation, insurance, and the return-on-investment (ROI) of 12 to 20 percent necessary to attract private sector investors. (The lower tariff represents an $8 billion bridge with a 12 percent ROI. The higher tariff represents a $12 billion bridge with a 20 percent ROI.) Although these figures are rough estimates, it is unlikely that travellers would be willing to bear any tariff of this magnitude.

Although a fixed link between Vancouver Island and the mainland would be very challenging given current technology and costs, ministry staff will continue to monitor developments in this field. In the future, should technology make a fixed link more attractive, the provincial government and the public will be in a better position to evaluate the social and environmental concerns that would also need to be resolved before the project could proceed.

Thank you for taking the time to write.

Sincerely,

Judith Reid
Minister

Chan, Rita Y TRAN:EX

169306

From: s22
Sent: Monday, June 30, 2008 3:33 PM
To: Transportation, Minister TRAN:EX
Subject: copy of letter to David Hahn

Attachments: bc ferries ltr - response to bridge comment.doc

bc ferries ltr - response to b...

Mr. Falcon:

Attached please find a copy of a letter sent to David Hahn regarding his recent foray into the idea of a fixed link to Gabriola Island.

s22

s22

June 29,2008

David Hahn
CEO
BC Ferries Corporation
1112 Fort Street
Victoria, BC Canada V8V 4V2

Dear Mr. Hahn:

On June 26/08, I watched an interview that Vaughn Palmer conducted with you in which you suggested that, as a result of a single request, BC ferries would be willing to make $5000.00 available to conduct a survey to ask residents of Gabriola Island whether we would prefer a bridge or the continuation of ferry service to our island. You also noted that this statement was likely to raise the ire of Gabriolans. You were indeed correct.

I can only assume your quick response, and the resulting comments of Deborah Marshall, reveal a bias, which I believe is extremely inappropriate for either you or BC Ferries to express. Mr. Hahn, if you do indeed have some urge to build bridges – physical, not metaphorical ones apparently - perhaps you could add your talents to the provincial government's desire to express its edifice complex by building new bridges in Vancouver.

Gabriola is an island. I suspect most of us live here because it is an island with the associated characteristics and qualities of island life. Attaching it to Vancouver Island would irrevocably alter not just the lifestyle, but the quality of life, the social fabric and the ecology of this unique piece of BC. I'm not sure if you've had the opportunity to visit Gabriola, but I'd encourage you to do so to get a sense of what it is we are trying to preserve. I'd be pleased to show you around.

Mr. Hahn, I'd be far more appreciative if you would put your considerable energies and talents into finding ways to maintain a reasonably priced and fair ferry service to this island that is held in trust for all of British Columbians, rather than engaging in speculation regarding the option of a fixed link. Perhaps I'll forward a request to fund a survey to determine whether or not a hot air balloon service might be a reasonable alternative to the current service. After all, it's only $5,000.00.

Yours truly,

s22

cc: Andre Lemieux
Chair, Gabriola Ferry Advisory Committee

Martin Crilly,
Ferry Commissioner

Hon. Kevin Falcon
Minister of Transportation

Province of
British Columbia

Legislative Assembly

Ida Chong, C.G.A., M.L.A.
(Oak Bay-Gordon Head)

GOVERNMENT CAUCUS OF BRITISH COLUMBIA

GORDON HEAD OFFICE:
223 - 3930 Shelbourne Street
Victoria, B.C. V8P 5P6
Phone: 250 472-8528
Fax: 250 472-6163
e-mail: ida.chong.mla@leg.bc.ca

OAK BAY OFFICE:
218 - 2186 Oak Bay Avenue
Victoria, B.C. V8R 1G3
Phone: 250 598-8398
website: www.idachongmla.bc.ca

146155

Received in CU:	APR - 5 2006
Issue:	
Program Area:	
Copy to:	

IMPORTANT: If this is not your issue please advise the CU immediately at CorrespondenceUnit@gems3.gov.bc.ca

15 March 2006

s22

Dear s22

You wrote to me some time ago concerning transportation issues, and in particular your proposal of a bridge from north Saanich to Saltspring Island, and then back on to Vancouver Island north of Duncan.

Although the current plans for easing traffic from Victoria to other points on Vancouver Island do not include anything of this scope, I think your idea is an interesting one. I have therefore forwarded a copy of your letter and map to the Honourable Kevin Falcon, Minister of Transportation, for his information as well.

Thank you for writing on this important issue.

Yours truly,

Ida Chong, MLA
Oak Bay-Gordon Head

cc: The Honourable Kevin Falcon
Minister of Transportation

s22

September 29, 2005

To
Hon. Ida Chong

Dear Ida Chong.

This letter is in response to recent public concerns over the safety of the Malahat section of the Island Highway, and the need for an alternate route in case of road closures or nature disasters.

The alternate route I propose would provide another transportation lane between the Upper Island and the Swartz Bay Ferry terminal, The Victoria International airport and the Victoria area.

The new route would become an extension of an upgraded Pat Bay Highway. Near the Swartz Bay ferry terminal a bridge could be built to the west, to the south end of Saltspring Island. From there the highway would go around the southwest side of a lightly populated area of the island, to another bridge across the narrows north of Maple Bay. Then the route would re-connect with the Island Highway somewhere west of Crofton. I have attached a rough map of the proposal.

The advantage of this route is that it widely separates the traffic flows. An upgraded Malahat, a bridge over Saanich Inlet, or a parallel inland route would still see all traffic re-converging south of Duncan.

An advantage of the Saltspring Island Highway would be a huge savings in the operation of existing ferry routes. Three routes no longer required would be the Brentwood-Mill Bay run, the Swartz Bay - Fulford, and the Vesuvius-Crofton runs.

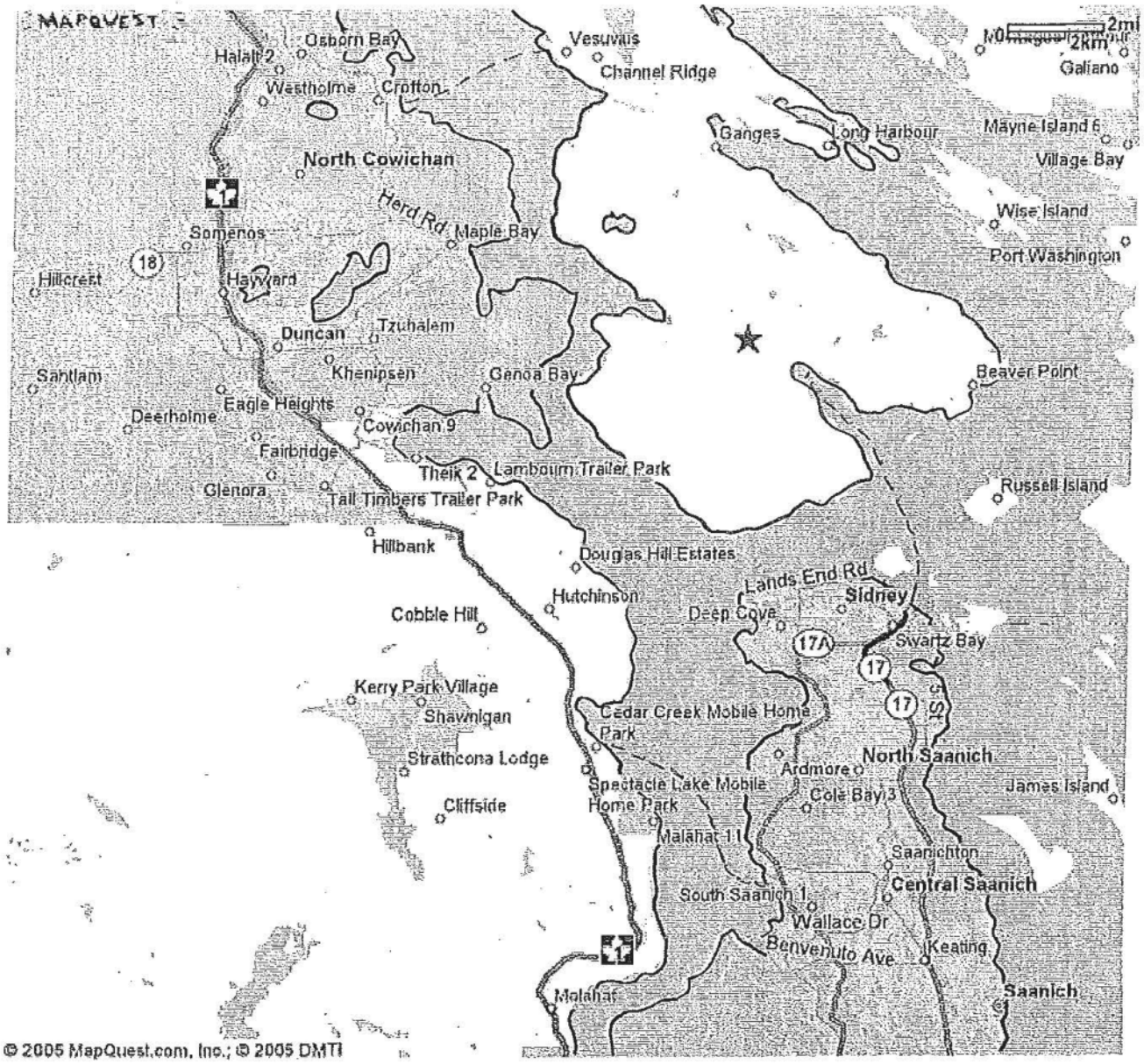
These suggestions are only intended as food for thought from a long time resident in the Victoria area. Feel free to forward my ideas to other Government Members.

Sincerely

s22

myTELUS

maps & directions



Existing Island Highway

Proposed Highway

Existing Ferry Routes
That would no longer be required

by s22 - Sept. '05

BRITISH COLUMBIA

July 23, 2002

s22

Dear Mr. s22

Thank you for your follow-up letter regarding your support for building of a bridge across Dodds Narrows, between Gabriola Island and Nanaimo. I am pleased that Mr. Frank Blasetti was able to discuss your concerns directly with your organization.

As you know, the government is currently developing a long-term transportation plan for British Columbia. The current financial situation for British Columbia requires us to look at new, innovative ways to build and maintain our infrastructure. Partnerships between government and the private sector may provide the best solution.

The recently announced discussion paper *Creating Opportunities for Expanding Transportation Infrastructure* looks at how private-sector investment can be increased to create more transportation infrastructure in the province. The paper has been published online with the *Transportation Investment Act*, which was introduced in spring of this year and will be debated in this fall. You may wish to review the paper on the ministry website at http://www.th.gov.bc.ca/BCHighways/partnerships/Alternative_Delivery.htm

Your continued support is much appreciated. I have shared your comments with the Honourable Judith Reid, Minister of Transportation, for her awareness.

Sincerely,

Gordon Campbell
Premier

pc: Honourable Judith Reid

Office of the Premier

Mailing Address:
PO Box 9041 Stn Prov Govt
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s22

July16th. 2002

Premier Gordon Campbell
Government of British Columbia
Victoria, B.C.

Dear Mr. Premier

Following my previous letter regarding transportation options to Vancouver Island in general and Gabriola Is. in particular, your assistants kindly organized a meeting, in Nanaimo, with Mr. Frank Plasetti to discuss how your Private, Public, Participation process might assist us to develop a plan for the replacement of the Gabriola Ferry with a fixed link.
Mr. Plasetti was very helpful and noted that B.C. Ferry Corp had identified the Gabriola run as being a candidate for fixed link replacement; Mr Plasetti also noted that the Legislation still had to be finalized, regarding the implementation of Tolls to pay for infrastructural development.
We have, on Gabriola, the nucleus of an organization called " The Gabriola Transportation Authority", and we are waiting to hear from your Government that you are willing to go ahead with the principle of "replace Ferries with Bridges where possible".
The Ministry of Transportation uses the Engineering estimates for the Gabriola Bridge Proposal from SNC Lavelin and while SNC Lavelin would certainly be interested in the construction they do need a strong signal that the project is a "GO", before they proceed any further. As you are aware, Transportation changes for Vancouver Island have been around for decades. These changes have been indentified as precursors to economic diversification for Vancouver Island.
If your Government decides to sell any of B.C.Ferry Corp in general and the Gabriola run in particular please let us have an opportunity to raise the issue of replacement by a Bridge. Please note: SNC Lavelin, in its estimates, uses a four lane Substructure and not a two lane; this increases the cost and also means that eventually a new main Ferry Terminal on Gabriola could be utilized. If as Mr. Plasetti mentioned to us, that your Government would consider just replacing the Gabriola Ferry, then we would not require a four lane substructure.
We are looking forward to hearing your plans for Transportation to Vancouver Island in a changing economic climate.

Sincerely s22 for the Gabriola Transportation Authority.

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