



THE CORPORATION OF DELTA

COUNCIL REPORT

REGULAR MEETING

To: Mayor and Council
From: Engineering Department
Environmental Services Division
Community Planning and Development Department
Human Resources and Corporate Planning Department
Parks Recreation and Culture Department

Date: November 23, 2006

South Fraser Perimeter Road Environmental Assessment Summary of Staff and Advisory Committee Comments

The following report has been reviewed and endorsed by the Chief Administrative Officer.

■ RECOMMENDATIONS:

- A. That the key issues and concerns discussed in this report be used to form the basis for Delta's written response to the BC Environmental Assessment Office with respect to the Environmental Assessment of the South Fraser Perimeter Road.
- B. That a draft letter to the BC Environmental Assessment Office be brought forward for consideration and approval at the December 11, 2006 Regular Meeting.
- C. That a public information meeting be held in North Delta in early 2007 regarding Delta's submission to the BC Environmental Assessment Office and traffic issues.

■ PURPOSE:

The purpose of this report is:

1. To present a summary of staff and Advisory Committee comments regarding the South Fraser Perimeter Road (SFPR) environmental assessment application.
2. To seek Council approval to proceed with a formal response to the BC Environmental

Assessment Office (EAO) based on key issues discussed in this report.

It is recommended that a draft letter of response to the EAO be brought forward for Council consideration and approval at the December 11, 2006 Regular Meeting in order to meet the public consultation period deadline of December 17, 2006.

■ BACKGROUND:

Pre-Application activities for the Environmental Assessment (EA) of the SFPR began in February 2003 which started the process of conducting studies to obtain the necessary information to make a formal application for EA. In August of 2006, the Ministry of Transportation's Gateway Program (Gateway) submitted an EA application to the EAO for the proposed SFPR. The SFPR is subject to a coordinated review under the *British Columbia Environmental Assessment Act* (BCEAA) as well as the *Canadian Environmental Assessment Act* (CEAA).

The EA application was formally accepted for review by the EAO on October 10, 2006 and the 180 day EAO review period began on October 11, 2006. The sixty-day public comment period on the EA application began on October 19, 2006 and ends on December 17, 2006. As part of the public comment period, three public open houses were held in Delta.

Staff and Advisory Committee members have worked diligently to review the application and to provide a comprehensive response on behalf of the municipality within the time constraints imposed.

■ DISCUSSION:

REPORT STRUCTURE:

The report has been structured to present information specific to the significant impacts associated with the development and operation of the SFPR. Specific requests have been formulated to address Delta's interests with respect to these impacts. Detailed Departmental and Advisory Committee comments have been included as attachments to this report. Due to the tight time constraints as part of the review, additional Advisory Committee comments may be reported directly to Council by the committees. As much as possible, staff comments have been translated into specific action requests.

CONTEXT:

Delta's response to the EAO will be based on the assumption that the SFPR will be approved in a form that is substantially in accordance with the proposal submitted by Gateway. A number of alternatives were considered and analyzed by Gateway through the project development; however these were determined by Gateway to not meet the goals of the Gateway Program. This included the upgraded Highway 17 alignment supported by Council. The EAO reviews only the alignment submitted and make a recommendation to the Ministers based on this alignment. If the proposal is deemed to have unacceptable environmental effects, it would be up to Gateway to make changes to the proposal.

It is also important to consider the role of other government and regulatory agencies in the approval and review process. Although issues such as air quality and environmental protection are of paramount concern at the municipal level, the responsibility for ensuring applicable regulations and standards are complied with rests with regional, provincial and federal authorities. Mitigation strategies to achieve environmental protection will, therefore, be determined by those agencies with the appropriate expertise and legislative authority. Delta must ensure that its concerns are fully expressed in order that the decision-makers are aware of, and can be responsive to, community wishes and preferences. Opportunities for further input into mitigation and compensation options not yet formalized in the EA application will be provided to Delta as a member of the EAO working group.

CERTIFICATION:

The EAO is currently receiving public input and Gateway will be given an opportunity to respond to the issues raised. The public comment period ends December 17, 2006 and the EAO has until April 8, 2006 to submit an assessment report to the Minister of Environment and Minister of Community Services for a decision. The assessment report is a strategic-level evaluation of the project, which concentrates on the significant issues that need to be addressed as a basis for a political approval-in-principle decision. If the project is approved, an Environmental Assessment Certificate is issued.

Since it is a coordinated review, the EAO assessment report will also be used by the Canadian Environmental Assessment Agency as the basis for their Screening of the project. A CEAA Screening is a systematic approach to documenting the environmental effects of a proposed project and determining the need to eliminate or minimize (mitigate) the adverse effects, to modify the project plan or to recommend further assessment through mediation or an assessment by a review panel. As part of the Screening, the Department of Fisheries and Oceans (DFO) and Transport Canada (TC), who are the federal Responsible Authorities (RA), must determine the significance of the environmental effects of the project. DFO's involvement as a RA is triggered due to the stream crossings of SFPR and the requirement for a *Fisheries Act* authorization. TC is triggered as a RA due to federal funding provided, the requirement for approval under the *Navigable Waters Protection Act* and the requirement for a permit under the *Railway Safety Act* for rail crossings. This determination of significance of environmental effects either leads the RA's to proceed with their authorization and issuance of permits for the project or ask the Minister of Environment to refer the project to a mediator or review panel. Federal Minister approval is not required as part of a CEAA Screening.

There are two ways that issues raised during the public consultation process can be addressed: either through a permitting process or as conditions attached to the Environmental Assessment Certificate. It would be in Delta's best interests to have as many conditions attached to the certificate as possible that relate directly to municipal concerns and preferred mitigation options.

GENERAL COMMENTS

OPEN HOUSES:

Gateway held three open houses in Delta to receive public comments on the SFPR EA. The format was static displays with a one-hour question and answer period at the end of the event. Generally the open houses were well attended. The most prevalent concerns heard from the public that attended the open houses related to air quality, noise, heritage, impacts on Burns Bog and general quality of life. EAO staff were in attendance to receive verbal comments from the public, as well as through comment cards distributed at the open houses. The EAO has been posting comments on their website as they receive them.

Members of the Sunbury Neighbourhood Association (SNA) and other North Delta residents, that attended the North Delta open house, clearly expressed their preference of a tunnel through the North Delta segment of the route. Gateway has dismissed this option as not desirable primarily based on increased cost and safety issues. In the EA application, a four-page analysis is included on the tunnel option. Concerns were voiced from the public that this option was not looked at seriously. Gateway's full analysis of the tunnel option was presented in a more detailed report. Although not included in the EA application, the report has since been provided directly to the SNA and posted on Gateway's website.

EA APPLICATION CONCLUSIONS:

The final conclusion of the environmental assessment is that if recommended avoidance and mitigation measures are effectively implemented, the majority of project related effects can be fully mitigated. It is stated in the EA application that while it is assumed that mitigation and compensation programs will be effective in addressing adverse effects, it is recognized that given the extent and nature of some project related effects (i.e., agriculture, hydrogeology, vegetation and wildlife, fisheries and noise) there may be a requirement for a follow-up and monitoring program to ensure that mitigation and compensation measures are achieving their intended objectives.

The mitigation and compensation measures proposed by Gateway in the EA application are typically conceptual. It is intended that through the review process these concepts will be further refined. In Delta's comments on the EA application there are a number of measures that are suggested would be desirable from the local community's point of view. The comments and questions raised by staff require further clarification and commitments to mitigation and compensation that ensures the effects of the SFPR are fully mitigated. Further, such commitments need to be formalized prior to environmental certification.

The following are key issues, concerns and requests raised by staff and committees through the review of the EA application. Detailed comments have been included in the attachments.

SIGNIFICANT IMPACTS

AGRICULTURE

According to the EA, approximately 90 hectares of agricultural land will be directly affected by the SFPR footprint and right-of-way, along with an additional 15 hectares of agricultural land that will be removed from agricultural production as a result of severance or isolation. All of this land is within Delta's municipal boundaries. Staff believes that the severance and isolation impacts are understated in the EA application since the analysis assumes that fields and parcels that are severed or isolated will be consolidated with neighbouring properties regardless of ownership, and hence are not accounted for as losses to agricultural land or production. Land consolidation is not a realistic assumption in many cases and is essentially unenforceable when different land owners are involved. Direct loss of farmland and losses due to decreased farm viability may significantly affect Delta's farming community. These losses may also affect wildlife since a large portion of Delta's agricultural land also is wildlife habitat. At this stage, although Gateway is investigating compensation options, they have not formally committed to adding land to the Agricultural Land Reserve (ALR) as compensation. Proposed compensation focuses on providing improvements to agricultural capability of remaining land rather than no net loss of land.

The EA also identifies a number of indirect impacts to farmland, farmers and the agricultural economy. These indirect impacts include effects on drainage and irrigation, effects on access and transportation, change in land values and potential conversion of land to non-farm activities.

It is important that these impacts be fully mitigated through the commitments made in the EA process. The following are proposed requests to be made to Gateway to ensure full mitigation of agricultural impacts of the construction and operation of the SFPR:

- That the calculation of direct impacts be revisited to include as a loss any field or parcel that is not viable for farming regardless of whether there is potential for consolidation with an adjacent field or parcel.
- That there be no net loss of agricultural land in Delta as a result of SFPR development.
- That indirect impacts be fully mitigated, including ensuring an improvement of agricultural access and continuity throughout Delta.
- That Gateway commit to pay the costs of all transportation infrastructure improvements necessary to mitigate the impacts of the SFPR on farmers.
- That Gateway commit to pay the cost of all drainage and irrigation infrastructure improvements necessary to mitigate the impacts of the SFPR on farmland or to enhance agricultural productivity where that is deemed to be acceptable compensation.
- That Delta be given an opportunity to review and provide comments on a detailed compensation strategy prior to a final decision being made on the application.
- That Gateway identify and commit to providing vegetated buffers along the highway corridor

where appropriate and where farm productivity will not be adversely affected.

A number of specific mitigation measures have been proposed. These are shown on a map included as Attachment B.

The Mayor's Standing Committee on Agriculture (SCA) discussed agricultural impacts of SFPR at their November 8, 2006 meeting. Due to lack of quorum, the meeting was held on an informal basis. A number of comments were provided by members of the committee but are considered draft at this time. The SCA will be meeting on November 29 to provide formal comments. These comments will be included in the next staff report on December 11 to be included in Delta's formal submission to the EAO. The interim draft comments are included as Attachment C.

AIR QUALITY

The key findings of the local air quality and regional air quality studies of the EA application are that despite the projected increase in traffic, traffic related emissions are expected to decrease by 2021, with or without the Gateway Program. These decreases are primarily attributed to improved emission technology for trucks and cars along with cleaner gasoline and diesel fuels. It is also stated that emissions will decrease with the Gateway Program as a result of less congestion and reduced idling time for vehicles.

AirCare is expected to continue until at least 2011 and this program has been very successful at getting the older polluting light-duty vehicles off the road in the region. Pollution controls have increased substantially for new trucks which have only just recently been possible due to the drastic reduction in sulphur content in diesel fuel. For the predicted improvements in reductions of air contaminants from the vehicle fleet to be realized, the older trucks must be replaced with new trucks. Staff are proposing that Gateway be requested to work with other provincial agencies to develop a comprehensive AirCare program for heavy trucks to ensure that our air benefits from the newer pollution control technology on trucks. The AirCare program could include facilities along the SFPR to facilitate vehicle testing. This is stated in the following request:

- That the Ministry of Transportation, along with other Provincial government agencies, develop a comprehensive AirCare program for heavy trucks to ensure that predicted air quality improvements are realized or exceeded.

BURNS BOG

The SFPR footprint does not encroach on the 2,050 hectare Burns Bog Ecological Conservancy Area (BBECA). However, due to its proximity to Burns Bog it does directly impact other land that is outside BBECA but is considered to be part of the ecologically-viable limit of Burns Bog. The Hydrogeological Impact Assessment and the Vegetation and Wildlife Impact Assessment sections of the SFPR EA application provide detailed information on these impacts around Burns Bog.

Approximately 27 hectares of land required for the construction of SFPR has attributes important to Burns Bog, as described in the Burns Bog Ecosystem Review. About 12.8 hectares have recognized ecological and hydrogeological values. The majority of this is on the western edge of

Burns Bog, where the proposed alignment is between Crescent Slough and Burns Bog, traveling through privately held land, as well as property owned by Delta. The remaining 14 hectares are either previously disturbed or currently in agricultural production.

The SFPR will potentially isolate a number of privately owned parcels of land around Burns Bog, some with ecological attributes. Under the current zoning, these lands could be potentially developed right up to the border of the BBECA. The SFPR will facilitate industrial development to the north of the alignment but will preclude development to the south proximal to the BBECA due to access issues.

Included in the compensation concepts provided in the EA application is the protection of currently privately owned land for its ecological attributes. Specific properties are not identified and areas have not been quantified. An additional concept provided is the restoration of certain lands that have been degraded or impacted by former land uses. Staff are recommending that the following requests be made of Gateway:

- That an area of privately held land having attributes important to Burns Bog be acquired by Gateway and transferred to Delta for inclusion in the BBECA. The area of land should be at least two times the total area of land having attributes important to Burns Bog that is required for construction of SFPR.
- That Gateway's compensation plan include remediation of the "Southern Cross" of the former Alpha landfill that encroaches into the BBECA, as well as other sites that are or may be included in the BBECA.

Gateway completed an assessment of a number of potential alignments for SFPR along the 72nd Street corridor and this was included in Technical Volume 4 of the EA application. The recommended alignment was along the western boundary of the Delta-owned property on the west side of Burns Bog. This alignment would avoid severing the parcel and result in a lower ecological impact on this parcel and the property to the south known as "Sherwood Forest". The reason provided in the assessment for shifting the alignment to the east was to avoid impacts to the Delta sanitary sewer in this location. However, shifting the alignment to the east brings the SFPR closer to Burns Bog and creates a potentially greater impact on the Bog. The Engineering Department has identified this sewer as requiring replacement due to potential impacts of building SFPR, therefore there is potential to build the road on top of the existing sewer right-of-way and maintain the western alignment.

- That Gateway shift the alignment back to the west as originally proposed in the 72nd Street corridor evaluation.

Gateway has advised that specific attention will be given to the design details with respect to hydrogeology around Burns Bog, so that construction of SFPR does not negatively impact groundwater flow or water chemistry. In the attached comments, staff have requested a number of clarifications with respect to these issues.

The SFPR will sever and isolate a number of industrial properties between the highway and Burns

Bog. Some of these properties are portions of landfills or other previously disturbed land that may have contaminants present. There will be no access to these properties after SFPR is constructed which will preclude development or clean-up of the parcels. Therefore the following request is made to Gateway:

- That Gateway ensures that all isolated parcels between SFPR and Burns Bog are fully remediated to a level that is appropriate for land adjacent to Burns Bog and that these lands are returned to Bog where practicable.

WILDLIFE, VEGETATION AND FISH HABITAT

The Wildlife and Vegetation Impact Assessment estimates that SFPR is predicted to directly impact vegetation and wildlife on an area of 96 hectares. Other indirect impacts include loss of wildlife migration corridors. Work is being done to minimize these impacts and provide compensation for the impacts that cannot be avoided. Compensation could include: acquisition and long-term protection of existing habitat, creation and/or protection of migration corridors, enhancement and/or restoration of habitat impacted by historical development, and support for regional conservation initiatives. Specific compensation projects have not yet been identified and will be further quantified through consultation with the EAO working group and specifically the Canadian Wildlife Service. Staff will be reporting back to Council as these plans are developed. One specific key request in staff comments is:

- That Gateway acquire, protect and enhance wildlife corridors between Burns Bog and the Fraser River, between North Delta ravines and the Fraser River, and between individual North Delta ravines.

The Wildlife and Vegetation Impact Assessment is very comprehensive and quantifies the habitat types that will be affected. However it does not specifically estimate the number of trees that will be lost resulting from the development of SFPR. The Ministry of Environment's tree replacement criteria specifies size and number of trees to be replaced based on the diameter of the tree cut. This ranges from 2 for 1 replacement trees for trees smaller than 6 inches in diameter (150 mm) to 8 for 1 replacement for trees between 24 and 36 inches in diameter (600 – 900 mm). Replacement criteria for trees larger than 36 inches in diameter (900 mm) is to be determined on an individual basis. Replacement trees are to have a minimum height of 2.0 metres. Staff is recommending that the following requests be made to Gateway:

- That the approximate number, size and species of all trees that will be lost along the entire SFPR alignment be identified and that the SFPR incorporate Ministry of Environment tree replacement as a minimum standard. These trees should be in addition to any planting requirements of the Fisheries and Wildlife compensation plans.
- That trees be planted along the SFPR alignment to provide a visual screen to residential and agricultural areas along the alignment and provide mitigation for air pollution and greenhouse gas emissions from vehicles using the road.

Delta has placed a high priority and set goals with respect to maintaining and improving our urban

forest so it is important that SFPR contribute to this objective. Delta has set a minimum goal of 40% tree canopy cover. Staff are proposing the following evaluation be used to ensure that the tree planting is successful:

- That Gateway commit to ensuring that the number of trees planted result in a canopy cover area equal to 20% of the SFPR right-of-way area ten years after project completion and 40% canopy cover twenty years after project completion.

The Fisheries and Aquatic Resources Impact assessment section of the EA application quantifies the impacts on fisheries resources throughout the alignment. The estimated area of impact to fish habitat is 3.1 hectares of aquatic habitat and 14.5 hectares of riparian habitat. After the implementation of compensation opportunities there is potential for a net gain of aquatic (4.9 hectares) and riparian (3.0 hectares) habitats. Some, but not all of the proposed compensation areas are within Delta. All compensation plans are only conceptual at this stage and will be finalized through the EA review process and in consultation with the Department of Fisheries and Oceans (DFO). It is vital that the appropriate level of compensation works is implemented within Delta so that there is also a net gain of habitat within Delta's boundaries. The following request is included within staff's comments:

- That Gateway ensure that the appropriate level of fisheries compensation work is conducted within Delta's boundaries so that there is a net gain of aquatic and riparian habitat within Delta.

In staff's comments, it is requested that consideration be given to reinstating Sunbury Creek from River Road north to the Fraser River. This compensation project was not proposed by Gateway due to potential conflicts with the archaeological values of the Glenrose Cannery site. Delta Engineering staff has advised that the existing culvert which Sunbury Creek flows in would have to be upgraded through the development of the SFPR. Archaeological deposits within the vicinity of the filled in ravine and culvert have previously been disturbed and staff feel that it may be possible to improve fisheries values in this area while respecting the archaeological values of the site. Staff will be reporting back with details on specific fish compensation opportunities in Delta as they are developed.

NOISE AND VISUAL IMPACTS

With the selection of the south option for the SFPR through Ladner, many of the noise and visual impacts to this part of Delta were mitigated through avoidance. There remain a number of residences within the agricultural area that are impacted and these have been identified in the Noise Impact Study as potential locations for noise barriers. One area in particular that will be impacted is the residential area near Ladner Trunk Road and 72nd Street. This area has been identified as potentially requiring noise barriers. It is noted that at many of the sites, including the one at Ladner Trunk Road and 72nd Street, noise impacts could be mitigated with the application of Open Graded Asphalt (OGA) also known as "quiet pavement" and that conventional noise barriers may not be necessary. Staff support the use of quiet pavement used in conjunction with physical noise barriers, specifically, staff are requesting:

- That Open Graded Asphalt, in conjunction with physical noise barriers, be used through all residential areas impacted by the SFPR.

Health Canada's National Guidelines for Environmental Noise Control have recommended day and night limits for average exterior noise levels to avoid any significant noise impacts in residential areas. These are 55 dBA during the day and 50 dBA at night which combined equal a Leq(24) of 54 dBA. In most cases, these guidelines are more stringent than MOT noise policy. Health Canada guidelines are not specifically addressed with respect to the estimate of impacts from the SFPR on residents. Staff have included the following request to ensure that noise is fully mitigated:

- That Gateway ensure that noise levels as a result of SFPR, at all residences along the SFPR meet Health Canada's guidelines for Environmental Noise Control.

It is requested previously in this report that tree planting be incorporated as a visual screen between the SFPR and the residential and agricultural areas. One area that this is especially important would be screening the highway from East Ladner residences.

The North Delta section of SFPR is where the majority of noise impacts are expected to occur. The conceptual design proposes a split grade roadway south of the existing rail corridor through North Delta, with the eastbound lanes higher than the westbound lanes. This will be visible from a number of residents and in very close proximity to houses on properties that are not required for the SFPR alignment. In the socio-community assessment, Gateway identifies the SFPR route from Alex Fraser Bridge to Elevator Road to have a high visual impact rating.

To be effective, noise barriers must block line of sight and this also provides a visual barrier between residents and the highway. Noise barriers work better when they are close to either the noise source or the receiver and when the receiver's elevation is similar to, or lower than that of the roadway. Staff suggest that the construction of a snow-shed type roof structure over the SFPR through the North Delta alignment would ensure that line-of-sight is completely blocked. This would provide a noise and visual barrier for the residents in the area. It is also suggested that a "green roof" design be implemented to help mitigate impacts to habitat and stormwater management. The following request is included in staff comments to the EAO:

- That Gateway incorporate a "snow shed type" roof design for the North Delta section of the SFPR to fully mitigate noise and visual impacts of SFPR and further that the design utilize a "green roof" to help mitigate habitat and stormwater impacts. Consideration should also be given to providing for cycle and pedestrian access along this corridor along with access across the SFPR to the Fraser River.

HERITAGE IMPACTS

The impact of the SFPR on Delta's heritage has potentially been underestimated. The EA application suggests that the impact on heritage properties would be minimal (7 properties) based on direct property impact only. In determining impact on heritage value, it is critical to consider

impacts on context and site surroundings.

Heritage value is determined by conducting an evaluation of each site, considering Architectural History, Cultural History, Context and Integrity. All of Delta's heritage properties were assessed in this manner at the time they were included on the Heritage Inventory. The properties along the SFPR alignment need to be reassessed by Gateway using standard accepted criteria to take into account the presence of the SFPR on the heritage values of those properties and not merely direct impacts. This will enable the impact on heritage value to be more clearly defined and will assist in determining appropriate mitigation measures to be proposed and considered.

The impact on North Delta heritage specifically is significant. While only 7 properties are identified as suffering direct impact, 18 of North Delta's 22 heritage sites, or over 80%, will be visually and contextually impacted. In East Delta, around the intersection of 72nd Street and Ladner Trunk Road there is a number of heritage homes that are indirectly impacted by the alignment.

The following requests are included in staff's comments:

- That a heritage professional, acceptable to Delta, is retained by Gateway to conduct a detailed assessment of heritage values considering architectural history, cultural history, context and integrity. The terms of reference of the assessment are to be approved by Delta. A photographic record of impacted areas, superimposing graphics of the SFPR, should be provided in the consultant's report to aid visualization of the impact on the community generally and more specifically the heritage context.
- That Gateway provide funding for the restoration of heritage properties directly impacted by the SFPR route and conduct monitoring during construction and operation of SFPR to quantify structural impacts to heritage structures.
- That Gateway contribute to a Heritage Restoration Fund as compensation for indirect impacts to heritage properties, and that these funds could be administered by the municipality and allocated to other heritage related projects in Delta.

The Heritage Advisory Commission (HAC) has discussed this issue at their October and November meetings. The HAC is concerned about direct and indirect impacts on Heritage values of the community. Draft minutes and a summary of comments from these meetings are included in Attachment D. The HAC will have further more detailed comments which they will be summarizing in a separate report to Council.

INDUSTRIAL LANDS IMPACTS

The EA examines socio-economic impacts based on industrial land development, the employment that could be supported by the land development, changes in property values and tax implications. The EA predicts an overall positive impact to the municipality in terms of property taxes and development fees. Their assessment is predicated on higher development fees and faster development rates that would occur as a result of the improved road network and increased access to industrial areas. The overall financial benefit to Delta predicted by Gateway is \$94.3 million in cumulative property taxes (gross) by 2021 as a result of the development of SFPR. The table below

from the SFPR EA summarizes the information for Delta's industrial land.

Factor	Without SFPR	With SFPR	Difference
Land build out by 2021	172 ha	202 ha	30 ha
2021 cumulative building area	758,064 sq m	910,822 sq m	152,758 sq m
2021 cumulative land value	\$272.8 million	\$451.2 million	\$178.4 million
2021 tax revenue (annual snapshot)	\$27.8 million	\$36.3 million	\$8.5 million
2021 total new employment	13,005 employees	16,478 employees	3,473 employees
Cumulative tax revenue by 2021	\$218.6 million	\$312.9 million	\$94.3 million

Estimated Benefits Provided by SFPR

Source: Technical Volume 15, Socio-Community Impact Assessment, Table 7-1 page 79

Property Taxes

While there will be some benefit from increased development in the River Road East area, there is an immediate and sustained impact from loss of property taxes and potential reduced development fees affected by SFPR construction and operation. Overall, there will be 77 hectares (190 acres) of industrial land in Delta lost to SFPR development. Municipal property tax losses projected as a result of the SFPR equate to approximately \$1 million per year for the municipal portion, and \$2 million per year gross.

At the very least, the projected benefits of increased development and higher development fees associated with the SFPR must cover the estimated lost property taxes of approximately \$44 million associated with vacant industrial land (see table below). Projected benefits would need to be significantly higher in order to cover property taxes if improvements are included in the calculation.

Municipal taxes will also be negatively affected by the SFPR due to holding properties required for staging during the construction period. For example, industrial properties near the proposed Sunbury Interchange would yield significantly greater property taxes and higher development fees with improvements versus land utilized for construction yards. This impact could be reduced if Gateway were to use lands currently unavailable for development (for example DLC sites) for this purpose.

Estimate of Municipal Property Tax Impacts

Number of acres lost to SFPR	190
Average price / acre	\$400,000
Total value (2006)	\$76.0 million
Light Industry rate, municipal portion (2006)	13.7296 / \$1000
Total Light Industry rate, all portions (2006)	27.9311 / \$1000
Estimated property taxes, municipal portion (2006)	\$1.04 million
Estimated property taxes, gross (2006)	\$2.12 million
Estimated municipal taxes to 2021, land vacant	\$23.5 million
Estimated gross taxes to 2021, land vacant	\$43.9 million
<i>Estimated municipal taxes, with improvements</i>	<i>\$35 million</i>
<i>Estimated gross taxes, with improvements</i>	<i>\$65.9 million</i>

Note: Estimates are based on SFPR EAA assumptions with the exception of tax revenues associated with improved parcels.

Access

Road closures and severance by the SFPR will significantly affect access to industrial properties. The greatest impacts will occur to properties bordering the 80th Street intersection and Sunbury Industrial Area interchange. MOT proposes to build a new frontage road near 80th Street which dead ends south of SFPR. It appears that better integration with the local road network is needed.

Proposed Mitigation:

Gateway claims that the loss in industrial lands (77 hectares) and associated municipal tax revenues will be more than offset by the benefits of the SFPR in terms of improved access. It is difficult to substantiate Gateway's claim as it is predicated on a host of assumptions. Staff believes that Gateway needs to do more in terms of facilitating frontage access to our industrial lands to mitigate SFPR and recommend the following:

- That Gateway provide continued frontage road access between 80th Street and Sunbury Industrial Area interchange. Gateway provision of River Way dedication and contribution towards construction would meet this condition.
- That Gateway improve access for industrial parcels in the Sunbury Industrial area.
- That Gateway provide compensation for loss of municipal taxes and development fees due to SFPR construction and operation.

RESIDENTIAL LAND IMPACTS

The EA application identifies 137 residential lots as entirely or partially affected by the SFPR (Surrey and Delta combined). Staff estimate that there are 96 residentially zoned lots within North Delta that are either entirely or partially affected by the alignment. In addition, noise, visual and community access impacts will be imposed on other residential properties in the vicinity of the road. (Noise and visual mitigation measures are addressed elsewhere in this report.) In order to reduce residential property impacts and the impact on Delta's residential tax base, the following request is included in the staff comments:

- That Gateway do more in terms of proposed mitigation measures to reduce the residential property impacts of the routing of SFPR.

CONTAMINATED SITES

The proposed SFPR alignment crosses a number of sites that are known to be contaminated or are suspected of contamination. These include old Demolition and Land Clearing (DLC) landfill sites along River Road. Gateway has committed to follow the appropriate legislation when dealing with these sites, however as noted previously in the report, there will be contaminated sites that are severed and isolated by SFPR that must be cleaned up through development of the road. In addition to this, staff have included the following request:

- That Gateway and the Province of BC implement design strategies to minimize the environmental impacts of cutting a road through the provincially permitted landfills and include complete properties in risk assessment and remediation activities so that the properties can be returned to fully functioning industrial land.

CUMULATIVE ENVIRONMENTAL EFFECTS:

The cumulative effects assessment of the EA application states that for the majority of parameters assessed the cumulative effects of the SFPR are considered low. The cumulative effect on air quality was negligible and low-moderate cumulative effects were identified for greenhouse gas emissions and noise.

The cumulative effects assessment considered a number of historical and development activities as well as existing and future projects. In the staff comments, a number of projects that were not included in the assessment are identified and requested that they be included. These include potential agricultural development of treaty settlement lands, development of a second terminal at Deltaport, rail expansion and historical highway development in the project area. Delta's comments to the EAO will emphasize that an adequate cumulative effects assessment has not been undertaken by Gateway and request that Gateway take these the above-noted issues into consideration in a revised cumulative effects assessment.

DELTA OWNED LANDS

The SFPR runs through a number of Delta owned properties. These include properties around Burns Bog, two parcels of the Delta Shake and Shingle Landfill, property leased by Delta Cedar Products, and property within Collings, Kendale and Norum Ravines. The total amount of Delta owned land directly required for SFPR is estimated at 16 hectares. Staff will be discussing lands issues with Council in a subsequent report.

ENGINEERING ISSUES

TRANSPORTATION

North Delta Access Strategy

Currently, the Sunbury/Annieville Neighbourhood has access from:

- The south with intersections on Nordel Way at Brooke Road, 112th Street and 116th Street;
- The east along 92nd Avenue and River Road; and,
- The west along River Road.

The neighbourhood has transit service along River Road which travels between the Scott Road Skytrain Station and the Ladner Transit Exchange, connecting with other transit routes. This bus route is also used by regional transit patrons traveling between the Tsawwassen Ferry Terminal and Skytrain.

An earlier design concept for the SFPR included access points from River Road directly to the SFPR at three locations in North Delta. These access locations were removed from the design concept following public consultation with the residents of the Sunbury/Annieville Neighbourhood and direction from Council.

In general, the SFPR is proposing to follow an alignment just south of the BN/SF Railway near the Fraser River. However, at two locations the Railway is very close to River Road and the SFPR is proposing to consume the River Road Right of Way, thereby closing River Road at these locations. The proposal would remove two of the main access points for the Sunbury/Annieville Neighbourhood. This will significantly impact travel capacity and patterns in and out of the neighbourhood as the existing neighbourhood access points along Nordel Way can be quite congested during peak commuter travel periods.

With Council concurrence, staff asked the Gateway Program to consider the benefits of reconnecting River Road to the west and east of the neighbourhood as a local municipal road with no direct connection to the SFPR. Gateway reviewed a number of options and concluded that it would be technically possible to connect River Road between Centre Street and Nordel Way along an east/west route adjacent the south edge of the proposed SFPR. This route could either cross the BN/SF Railway at grade, as it does now, or be grade separated at the railway by widening the planned SFPR overpass of the railway to include River Road. It would also be technically possible to connect River Road to the east, along a route adjacent to the south edge of the SFPR intersecting with Grace Road at the planned overpass of the SFPR to Elevator Road.

The objective of providing these road connections would be to provide better access to the neighbourhood for automobiles, cyclists, pedestrians, emergency vehicles, and transit services without providing routes that could encourage short-cutting through traffic in the neighbourhood. With this objective in mind, staff believe the neighbourhood would be best served with a River Road connection to the east intersecting with Grace Road for all traffic, and a River Road connection to the west intersecting with Nordel Way for transit, pedestrians, cyclists, and emergency vehicles only. The connection to the west should be grade separated from the BN/SF Railway to provide a safer route for transit vehicles, mitigate train whistling, and allow the option for the access to be opened to all traffic, should this be the desire of the neighbourhood and the will of Council in the future.

Based on previous Council direction, any option that leaves River Road open would be conditional on agreement from Translink to remove River Road from the regional truck route system. This project, and a non-truck route status, may cause TransLink to review whether the North Delta section of River Road still qualifies as a Major Road Network roadway.

River Way

River Way is a planned east-west collector roadway in the Tilbury/Sunbury Industrial Area. The concept of this future roadway is identified in the Delta Official Community Plan. However, the concept has not been developed to sufficient detail to select a preferred alignment of the route. Staff have been involved in technical discussions with the Gateway Program staff to ensure the proposed access points to the SFPR will accommodate a connection with a future River Way collector road. Also, it is staff's opinion that a southern alignment adjacent to the north side of the SFPR is the

preferred routing of River Way. This would provide access to industrial properties in the Sunbury Area that are south of the BN/SF railway spur and allow the properties to also be served by the railway spur. As Gateway is acquiring lands from all property owners throughout this area, and as significant industrial land base is consumed by the SFPR, it is recommended that Gateway be requested to acquire a 24 metre wide road right of way for River Way at this time in order to facilitate development in this area as discussed previously in this report. It was also recommended in the Industrial Land section that Gateway be requested to contribute to construction of River Way.

Boundary Bay Airport Access

The current concept for primary access to the Boundary Bay Airport is via 80th Street with an improved connection to Ladner Trunk Road and an overpass of the BC Railway. However, to promote the further development of the airport and reduce high levels of traffic on Ladner Trunk Road which often conflict with slow moving farming vehicles, consideration of a direct access from Highway 99 to the Boundary Bay Airport is suggested. Technical options should be developed and the connection built by the Gateway Program to provide access to the airport from Highway 99.

Landfill Access

The preliminary design for the SFPR crosses Burns Drive at 72nd Street severing access to the landfill site. Gateway staff have examined a number of options for providing a new access to the landfill site. The objectives of this refinement are to provide access to the landfill and reduce reliance on Burns Drive as an access route. The Gateway Program staff are developing technical options to provide access to the landfill site directly from Highway 99. The latest options have focused on trying to accommodate this access by providing destination designated lanes and ramps at the proposed Highway 99/SFPR interchange. These options add significant costs to the interchange as more levels to the interchange would be needed which increases the height of the structure. Given the desire to provide access to the Boundary Bay Airport from the highway system, it may be more efficient to provide access to both the landfill site and the airport from one interchange on Highway 99 east of 72nd Street (perhaps at 80th Street). Staff will pursue additional access options for the landfill site with Gateway Program staff.

In accordance with previous general direction from Council, the landfill access and the Airport access should be consolidated at one location.

Cycling Facility

A cycling facility on the shoulder of SFPR is proposed in the EA application. This is not acceptable from a public safety point of view especially considering the speed of traffic and number of trucks that will be using SFPR. A cycling facility physically separated from SFPR traffic is supported to ensure that this is a safe and useable facility. This would facilitate major links to other cycling routes including the Lochside Regional Trail in Victoria.

The section through the Tilbury Industrial area would also be a benefit to the employees working in this area. This route could be within the SFPR right-of-way or an alternate parallel alignment. Staff will work with Gateway to identify the most appropriate location for the cycling route and will be reporting back to Council as this concept is further developed.

The following requests are included in the staff comments on transportation and shown on the map

included as Attachment, that Gateway be required to:

- Connect River Road to the east of the Sunbury/Annieville Neighbourhood to intersect with Grace Road for all traffic.
- Connect River Road to the west of the Sunbury/Annieville Neighbourhood by an overpass of the BN/SF Railway to intersect with Nordel Way for pedestrians, cyclists, transit and emergency vehicles only.
- Provide road dedication for River Way and contribute to construction.
- Provide a direct connection from Highway 99 to the Boundary Bay Airport.
- Provide a direct connection from Highway 99 to the landfill site.
- Provide an off-street cycling pathway or trail from the Tsawwassen Ferry Terminal to the eastern extent of the SFPR similar to Vancouver Island facilities (Lochside and Galloping Goose Regional Trails) and that this facility utilizes the SFPR right-of-way where practical or expands the existing cycling facilities along the corridor.

UTILITIES AND DRAINAGE / IRRIGATION

Water Utility

The proposed SFPR is crossing Delta's water infrastructure at a number of locations along the corridor (28th Ave and Hwy 17, 36th Ave, 64th Street, 72nd Street W/m for Ladner Trunk Road to north of the proposed interchange, Ladner Trunk Road, 80th Street, along River Rd. from West of Nordel Way to Center Street, Elevator Rd.). At locations along the proposed corridor where the water system will be impacted it is important that the existing watermains will be removed and replaced. Specific concerns that are required to be addressed by Gateway are:

- That Gateway provide for bypass and continued system operation throughout the construction.
- That Gateway install new pipes that provide for a shallow depth and adequate access.
- That Gateway ensure that settlement will not adversely affect the long term water system operation.

Sanitary Sewer System

The proposed SFPR will affect the existing trunk forcemain system at several locations along the proposed road alignment (existing forcemain along 42 A Ave. alignment, and the forcemain from Burns Dr. north to the McAllister Rd.). The proximity of the proposed SFPR to the existing forcemain and the overall road construction significantly increases the risk of disturbance, leakage and breakage from the forcemain. This is a very significant public impact and environmental concern, since it is the sole pipe servicing all of Ladner and Tsawwassen.

The trunk forcemain issues that are required to be addressed are:

- That Gateway provide for bypass and continued system safe operation throughout the construction.
- That Gateway construct a parallel forcemain system along the SFPR alignment north of Burns Drive to McAllister Road, complete with Right of Way in favour of Delta within the SFPR corridor.
- That Gateway provide a Right of Way within the SFPR corridor to construct a new forcemain from McAllister Rd. and 72nd Street to the GVRD South Surrey Interceptor.

It is anticipated Delta and Gateway will have to develop a cost sharing arrangement for the trunk forcemain work.

Drainage Management

The proposed four lane highway will increase the runoff rate and storm water runoff volumes along this corridor. Key Drainage issues that need to be addressed during the SFPR construction are:

- That Gateway provide oversized culvert capacity at an appropriate depth to maintain and/or improve conveyance.
- That Gateway address downstream capacity improvements including ditching, culverts and pump station improvements.
- That Gateway ensures that storm water runoff quality treatment is not impaired.
- That Gateway constructs the SFPR drainage system so that Highway runoff is separated from the Bog runoff.
- That Gateway improves the Bog lagg zone, so that overall Bog groundwater levels will increase (e.g. an option may be raising 80th Street south of the SFPR).
- That Gateway ensures adequate storm water storage / discharge capacity during high tides for the River Road east area by constructing a large storage ditch adjacent to the road but on the north side of the SFPR.
- That Gateway provides a drainage / irrigation channel adjacent to the SFPR / River Way.
- That Gateway implements environmental enhancements along the North Delta streams, such as:
 - Northeast Interceptor Canal, fish friendly improvements with off channel areas
 - Improvements to other N. Delta watercourses, ensuring adequate sized, fish friendly passages and channels.

- Minimize SFPR runoff to local watercourses.

Irrigation

The irrigation system is critical to the viability of the agricultural community. In order to move irrigation through the community the ditch and culvert elevations must be constructed at appropriate elevations with more than adequate conveyance capacity. In addition to the measures identified above to address the drainage impacts the following specific measures should be implemented:

- That Gateway provides a new channel along the edge of the SFPR Right of Way to bring river water from 80th and 96th streams which can then be distributed into east Delta, west Delta, and south to 36th Avenue.
- That Gateway ensures that the irrigation system operation is improved by providing adequate interconnection between proposed channel improvements and the existing irrigation system.

A number of the requested utility, drainage and irrigation improvements are shown on Attachments F and G.

CONSTRUCTION

The construction of SFPR has the potential to have significant impacts on the community. In the various sections of the EA application, mitigation and best practices are noted to minimize local impacts. The following specific requests are made to Gateway to ensure that these impacts are minimized. That Gateway be required to:

- Maintain access to all properties and Delta roads throughout construction.
- Ensure compliance with Delta noise bylaw.
- Minimize construction and truck traffic by utilizing alternate methods of material transport such as pumping and conveyors.
- Use on-road fuels for construction equipment, including bio-diesel.
- Ensure effective and complete dust control measures are implemented.

If the SFPR is built in phases, there could be the potential for additional impacts to the community. Gateway must ensure that the SFPR project is fully funded prior to starting so that construction impacts are not unnecessarily extended over time, including traffic issues that may result from the completion of sections of the SFPR in advance of full project completion.

■ CONCLUSION:

Comments from staff and Advisory Committees with respect to the South Fraser Perimeter Road Project are presented and areas of specific concern for Delta have been highlighted. Subject to Council approval, a submission to the BC Environmental Assessment Office will be drafted to substantially incorporate the contents of this report, ensure that the concerns of the municipality are clearly articulated and that community preferences are represented.

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■ ATTACHMENTS:

- A. [Summary of Staff Comments](#)
- B. [Link to Attachments B to G](#)
- B. Map of Desired Agricultural Improvements

- C. Summary of comments from draft minutes from November 8, 2006 meeting of Standing Committee on Agriculture
- D. Summary of Comments from Heritage Advisory Commission minutes from October 12, 2006 and November 9, 2006 meetings
- E. Map of Transportation Issues
- F. Map of Utility Issues
- G. Map of Drainage and Irrigation Issues