SURREY
CITY OF PARKS

Corporate Report

NO: R254

COUNCIL DATE: December 4, 2006

REGULAR COUNCIL

TO:	**Mayor & Council**	DATE:	**November 30, 2006**
FROM:	**General Manager, Engineering**	FILE:	**8630-30(SFPR)**
SUBJECT:	**South Fraser Perimeter Road (SFPR)– Environmental Assessment Review Process**		

RECOMMENDATIONS

The Engineering Department recommends that Council:

1. Receive this report as information;
2. Direct staff to continue working with the various communities and Gateway proponents in addressing neighbourhood concerns regarding impacts from the proposed road; and
3. Authorize staff to forward a copy of this report including the appendices and the related Council resolution to the B.C. Environmental Assessment office and the Gateway Project office as the City's formal comments on the SFPR Environmental Assessment Reports that are currently under review.

BACKGROUND

The South Fraser Perimeter Road (SFPR) Project is part of the overall Gateway strategy for the region, which is to assist in the more efficient and effective transportation of people and goods. The SFPR, in particular, is focused on improvements in goods movement for the industrial lands and ports along the south side of the Fraser River, and at Roberts Bank. The Ministry of Transportation is proposing to build SFPR as a 4-lane, 80 km/h route from Delta Port Way in Delta through to 176 Street and the Golden Ears Bridge Connector Road in Surrey. The route will have a combination of grade separated interchanges and signalized intersections along its length.

Although this report concentrates on the environmental and socio-economic impacts of the SFPR, it should also be recognized that this road will also result in significant benefits to the City. The SFPR connects and provides better access for Surrey's industrial lands along the Fraser River from Port Kells to the Fraser Port Authority facilities and will act to reduce congestion on other major roads in the City. This will result in the City being

an even more attractive location for business developments which will enhance the financial health of the City.

As part of the project, the proposed project is subject to the Provincial Environmental Assessment Act and the Federal Canadian Environmental Assessment Act. The two processes are being carried out simultaneously through the BCEA office. At this time in the process, the public, First Nations, local governments and other government organizations are being given 60 days to review all the environmental reports pertaining to the proposed projects and submit comments to the BCEA office for consideration in their final assessment of the project. Comments are to be submitted to the BCEA office by mid-December.

The SFPR BCEA process includes reports addressing issues pertaining to Agriculture, Archeology, Air Quality (local & regional), Contaminated sites, Fisheries, Hydrogeology, Noise, Socio-community, Wildlife, Residual effect and Cumulative Effects assessment. The reports provide conclusions on the overall impact of the project on the community. Also included in the BCEA process are public information forums. Within Surrey, open houses on the project were held at the Bridgeview Community Center on Thursday, November 9, 2006, and at Pacific Academy on Thursday, November 16, 2006.

Staff has been involved as stakeholders at BCEA meetings, have attended open houses held within Surrey to record resident concerns and have reviewed the reports submitted in the BCEA process. Some specific community concerns are being addressed through meetings with Surrey staff, resident groups and Gateway staff.

DISCUSSION

Through the SFPR conceptual design process and the Environmental assessment review, various community concerns have surfaced. These are being addressed through discussions with Gateway staff, City staff and local residents. The concerns will not be fully addressed during the BCEA process, but the Gateway Program project office with assistance from City staff will continue to work towards solutions or appropriate mitigation. Concerns currently being addressed with City staff include:

- *Location and access points to the King Road service road:* This will be a local road adjacent to SFPR allowing neighbourhood traffic flow connectivity.
- *Fraser Heights local road access on either side of 176 Street:* A possible underpass connecting the Abbey Ridge portion of Fraser Heights located to the east of 176 Street to the area west of 176 Street where the children attend school and local shopping is conducted. Highway shortcutting and access are also being reviewed on the local road configuration.
- *Bicycle path linkages.* Gateway staff and Surrey staff are looking at bicycle path linkages and alignments to both projects and the community.
- *Connection points to the Community.* Some road connection points presented at this time may limit development in Surrey or affect existing owners. Transportation staff is working with Gateway on community access and, in particular, to industrial areas.

Issues Raised at Public Open Houses

Staff attended each of the open houses conducted in Surrey in regard to the SFPR project. Both open houses had information available to the public, with staff present from BCEA and Gateway to answer very specific questions on the process and reports submitted for the project. A set of handouts was available to the public at the open houses. Copies of these, together with a summary of the issues raised by the public during the informal question period of the open house, are included in the appendices of this report.

SUMMARY OF ENVIRONMENTAL ASSESSMENT REPORTS

Staff have read and reviewed the set of reports, which make up the Environmental Assessment for SFPR. Appendix II includes a short summary of staff findings on these reports.

KEY CITY AND COMMUNITY ISSUES

Of the various issues included in the environmental assessment, key items from the community's and City's perspective are as follows:

Noise

Each of the community groups expressed concern regarding noise from the SFPR. Concerns included:

- The traffic volumes and percentage of trucks used in the sound assessment were questioned
- Concern as to what type of mitigation each area would receive; Gateway confirmed "quiet pavement" would be used throughout Fraser Heights
- The need for a treed buffer providing visual impact mitigation and noise reduction
- Vibration impacts (structural and noise) need to be fully assessed due to the soft soils in Bridgeview

Access/Transportation

The key transportation issues identified by the community and staff that need to be addressed by the Gateway project are:

- Royal Heights residents are opposed to the Elevator Road overpass due to noise and visual concerns; options to avoid or mitigate need to be reviewed.
- The Tannery Road Interchange and adjacent intersections will become congested, which could affect business development in the area. Roadway alternatives need to be developed.
- The King Road connector routing and the 136 Street access to SFPR (rather than at Surrey Road) are of concern to the Port Mann Community. Further community consultation is needed.
- Abbey Ridge residents have requested Barnston Drive pass under Highway 15 rather than intersect with it. The City and Gateway are conceptually supportive of this approach and the technical feasibility is under review.

- The need for a pedestrian overpass of the SFPR on the east side of KGH has been identified for access to the industrial area north of SFPR from the Scott Road SkyTrain Station.

Overall

Some issues are being left until late in the design process and should be brought into the planning stage as they may have an impact on the community. Such items include:

- Fraser floodplain elevations – revised 2006 values.
- South Westminster dyke closure during emergencies.
- Emergency accesses.
- Drainage needs crossing the road – there has been no review of the City's proposed plans or of the existing flows and culvert needs which could impact size, alignment and fisheries concerns along the corridor.
- Linkage with GVS&DD sanitary trunk twinning needs or the proposed water main tunnel project under the Fraser River near the Port Mann Bridge.

CONCLUSION

Based on the above discussion, it is recommended that Council:

- Direct staff to continue working with the various communities and Gateway proponents in addressing neighbourhood concerns regarding impacts from the proposed SFPR project; and
- Authorize staff to forward a copy of this report including the appendices and the related Council resolution to the B.C. Environmental Assessment office and the Gateway Project office as the City's formal comments on the SFPR Environmental Assessment Reports that are currently under review.

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General Manager, Engineering

JB/CAB/brb/rdd/amr
Attachment

APPENDIX I

SUMMARY OF INPUT FROM COMMUNITY OPEN HOUSES

November 9, 2006 - Bridgeview Community Center Meeting:

- Air quality results – studies show this will improve in the future with or without the project.
- Noise abatement and proximity to houses after road construction.
- King Road / 116 Avenue road alignment and access.
- Access to Surrey – access points seem too far apart between 176 Street and 136 Street – some think another access point should be at Surrey Road.
- Use of trees as a buffer along the whole road alignment for noise abatement.
- Use of freighters on the river to move trucks as opposed to new road construction. The thought is that freighters would not impact the community and would address the transportation trucking needs.
- Size of the BCEA document was too large for most to review (said to be over 3,000 pages) – public would like an extension to the 60-day comment period in order to have more time to review the documents.
- Discussion on Highway 1 congestion and its impact on this project.
- Questions regarding whether access to the Scott Road SkyTrain station will be improved through this road, enabling more people to access the parking lots to facilitate more taking SkyTrain.
- Royal Heights residents presented a list of concerns which will be presented to the BCEA office – some of the key issues they will present are eagle and wildlife protection, 136 Street connection, noise issues, unstable hillside issues, Surrey Road connection, King Road alignment, having hill streets separate from King Road.
- Proximity of the SFPR to existing homes in Bridgeview – how far will it be to the closest home.
- The existing raptors' nests in the corridor alignment – how will they be preserved and protected?
- Transportation contribution to greenhouse gases in the region?
- Geotechnical concerns of the area in relation to construction and vibration.
- Environmental disturbances and destruction potential – would the panel recommend against the project at any time to the Minister?

November 16 - Pacific Academy Community Meeting

- Traffic volumes were questioned. The reports used volumes that were thought to be low. If traffic volumes are under-predicted, then noise effects would also be less than actual. The group was asked to reassess noise based on the previous traffic numbers or those if shown to be higher than previously thought.
- The height of the wetland bridge and 176 Street ramp were brought into question, as the height will have a direct relation to predicted noise levels in the area.
- Air quality report findings were asked to be explained, especially in relation to why the results show less air pollution in the future. The group responded by discussing the new Federal standards in term of vehicle emissions.
- Discussion on road closures near 176 Street and the movement of traffic east-west to ensure communities are not isolated.

- Wildlife movements over or under SFPR were discussed. Residents concerned with stranding or wildlife not being able to cross the proposed road, in particular medium to large mammals (coyotes, raccoons and bears).
- Shoulder width for bicycles not adequate – safety of cyclists discussed.
- The use and extent of the use of quiet pavement was brought up – would this be used for the full length of Fraser Heights – Gateway proponents agreed to this during the open house.
- Will the tree buffer between the road and existing houses be retained and will coniferous trees be planted to be more of a screen than the existing deciduous? Gateway team will maintain existing vegetation but will be looking at taking coniferous trees into the plan for replanting.
- Will lighting be added to the road? Residents are not happy with the current lighting from CN Inter-modal yards and would like to eliminate further lighting. Gateway is not proposing lighting along its alignment except at major intersections.
- SFPR will be a hazardous good route – questions on emergency access points and also the new location of Fire hall 5 was discussed.
- Noise mitigation measures, and who decides on the measures during the design was discussed. Mitigation is to meet Ministry of Transportation standards and will be decided by the Government based on funding and the community – MoT policy is based on the change in noise levels from existing conditions to build-out.
- Noise mitigation in Abbey Ridge area was discussed. Since this is the connector road portion of the project, would noise mitigation be considered?
- How will noise and the upslope properties in Fraser Heights be addressed? Noise is amplified as it goes up the hill.
- Has the affect of interim traffic changes been looked at (i.e., if all the Gateway projects do not advance, what would be the impact)? In particular if the Port Mann twinning is delayed or deleted, what will be the impact on SFPR in terms of traffic volumes, noise and air quality?
- Is noise mitigation based on property value considerations or cost of living? How is the mitigation value determined?
- Was traffic and noise modeling conducted for the connector roads (in particular, steep slope braking by trucks)?
- Was topography considered in noise studies as opposed to just distance from road considerations?
- Question on whether cancer related risks would increase along the SFPR alignment based on air quality if the vehicle emission standards did not change from those currently used by government.

APPENDIX II

SUMMARY OF STAFF REVIEW ENVIRONMENTAL ASSESSMENT REPORTS

Agricultural

There are no agricultural areas along the SFPR alignment in the Surrey portion of the project. Agricultural issues pertain to lands within Delta only.

Air Quality

Air quality is affected by traffic levels which, west of the Pattullo Bridge, are expected to increase significantly by 2021 along with a potential doubling of the percentage of trucks, depending on the location and time of day. There will be a more significant increase in traffic east of the Pattullo Bridge where the route is currently discontinuous and there are no direct connections to Highway 1.

The proponent notes that, over time, emissions of local pollutants such as particulate matter are expected to decline. This is attributed primarily to improvements in engine technologies and more stringent emission standards that are now required under federal legislation.

Theoretically, the new road will reduce congestion delays in some areas and therefore reduce emissions in these areas since the total travel time will be reduced. However the potential for volume delays contributing to local air quality degradations due to the congestion regularly experienced on the Pattullo Bridge has not been addressed.

Contaminated Sites

There are numerous areas of potential concern along the SFPR alignment. Report findings state, "Aquatic life and fish habitat may be affected if the contaminants are brought to the surface or forced into active water flows." Other concerns include:

- The impact to existing and proposed utilities if contaminants are found to be in the granular backfill areas. Need to ensure utility corridors do not become pathways for contaminant migration.
- The report does not mention contacting the City and reviewing documents the City may have on known contaminant areas.
- The report does not mention procedures to be followed if off-site migration of contaminants is found – it only mentions containing contaminants on-site.

Fisheries

Although fisheries impacts are under Federal and Provincial jurisdiction, the waterways used for the transportation and rearing and spawning of fish are under the management of the local government as they form part of the Surrey drainage network. Key issues from the report review include:

- Storm water impacts and coordination with local needs are not being addressed until later in the design process. All impacts to fisheries cannot be identified if these are not addressed at this planning stage.

- The proposed habitat rating system is not consistent with the system that DFO requires local governments and developers to use. A consistent standard should be applied.
- Some existing creek values were questioned.
- Some of the mitigation works as proposed do not coordinate with Surrey projects (i.e., Elevator Road and the Colliers Creek diversion; also Fraser floodplain works near 176 Street).
- Some mitigation is proposed on lands currently owned by the City. There has yet to be any discussion on property agreements, etc., regarding the impacts to Surrey-owned lands. Mitigation and the proposed road could impact some vacant industrial lands near the Port Mann Bridge – City staff are currently reviewing the impacts from the road project and related mitigation works proposed under the Gateway program. Further comments will be provided in this regard upon completion of the review.

Hydrogeology

This report looked at the impact of the SFPR project on existing groundwater and the groundwater effects on construction activities. Key issues can be summarized as follows:

- The report does not address how the high water tables in Bridgeview and road construction requirements adjacent to existing homes and businesses will be managed.
- King Road/116 Street area is an area of significant groundwater seepage from the ridge area. Numerous slides have occurred in this reach over the years. The need to address local stability in the design of new local roads and SFPR in the existing sloped areas should be highlighted.

Water Quality

The report plays down the effects on water quality as a result of the proposed road. Since the area is already urbanized, the report refers to it as already being impacted. Key issues surrounding the water quality report include:

- The report does not provide any proposed measures to address storm runoff from the proposed road structure. In many road projects the City undertakes, water quality treatment is required prior to road runoff being discharged into local streams.
- The report provides little information on sediment control during construction phasing, particularly the preloading portion of the works. The new Surrey Erosion and Sediment Control By-law should be referenced by the Gateway design team during subsequent phases of the project.

Wildlife and Vegetation

The report looks at wildlife and vegetation issues along the SFPR corridor, in particular in relation to the Federal Species at Risk Act and also the Provincial Wildlife Act. Key findings of staff reviews include:

- Low ratings of the Fraser Heights area to Pacific Water shrew habitat even though one was trapped in the area. Based on conversations with the Ministry of

Environment staff on other projects, this area would have been considered as having a high probability rating for the Pacific Water shrew.

- MoT and the Gateway project will be required to provide wildlife mitigation. The City will consider this as a precedent for projects in the future when dealing with Ministry staff.
- The mention of large mammals, particularly bears in the Fraser Heights area, was dismissed. Bears are found 1 to 2 times per year in this area. They are thought to swim across the Fraser River landing at Surrey Bend or Barnston Island.

Noise

Noise and its mitigation is a significant concern to residents living adjacent to the proposed SFPR. The following are concerns with the report findings:

- There is no reference to vibration impacts or effects on areas where poor soils are noted. With respect to vibrations the area of concern is in the community of Bridgeview where existing traffic and small potholes have been found to create significant effects from vibrations and noise to the local community. Soils are extremely soft and vibrations are easily transmitted through these soils.
- Noise mitigation measures are described for some of the areas along the SFPR – in Bridgeview the use of noise walls was suggested. Again the construction and maintenance of these walls could be an issue on the soft soils. Often homes have to be built on piles in the area to prevent settlement. Point loading is not possible without incurring significant settlements in most areas of Bridgeview.

Residents at both of the community meetings expressed concern regarding noise from the SFPR. Issues included:

- The traffic volumes and percent trucks used in the sound assessment were questioned;
- Concern as to what type of mitigation each area would receive, Gateway confirmed that quiet pavement would be used throughout Fraser Heights *(City staff will pursue the use of quiet pavement on all sections of the SFPR adjacent to residential neighbourhoods)*;
- The need for a treed buffer providing visual and noise reduction;
- Vibration impacts (structural and noise) need to be fully assessed due to the soft soils in Bridgeview; and
- Properties elevated from the roadway would be subjected to perceptible noise due to the clear line of sight to the highway and the high vehicle speeds.

Of general concern is the methodology used to measure sound levels and to determine whether or not a significant increase in noise levels will occur, as is required by Ministry of Transportation guidelines before mitigation measures are provided. The Ministry standards are based on Leq24 measures, which average measured sound over a 24-hour period. However, there may be short-term periods where noise will exceed acceptable levels for residential areas.

Where noise from high speed traffic with a high percentage of trucks may impact nearby residential land uses, it should be expected that the project proponent will incorporate sound mitigation measures regardless of fixed Ministry guideline formulas. Similarly, in cases where there are adjacent noise generators such as trains or industry, the proponent

should be expected to moderate the guideline formulas that currently consider that this existing background noise reduces the need for further mitigation.

At this stage, there is lack of detail as to how noise impacts will be mitigated. The proponent has indicated that this will need to wait until the final alignment has been established and the detailed design is complete. As a result, it is not possible for the City to determine if the final mitigation applied is appropriate. For this reason, there may be merit in the Environmental Assessment Office providing a provisional approval for the project, subject to final mitigation measures being identified.

Archaeology and Heritage Resources

The portions of the report pertaining to First Nations issues are best reviewed by the First Nations community. First Nations are on the review committee at the BCEA stakeholders' table.

The City's Heritage Advisory Commission reviewed the section on Archaeology and Heritage and agreed that a number of archaeological sites along the alignment are significant. It was noted that there was a lack of information on physical heritage and further work is necessary in this area.

Identified sites of importance included:

- The current railway bridge (New Westminster Bridge), opened in 1904 with a second deck carrying traffic over the Fraser River. Note that 112th Avenue which parallels King George Highway in Bridgeview is the original alignment of the Old Pacific Highway (1913, paved 1923).
- King George Highway (1940) is listed on the Surrey Heritage Register (SHR). Portions are the former Old Pacific Highway from Whalley.
- BC Electric Railway right of way, built in 1910, is listed on the SHR. It carried the BC Interurban service, from Vancouver, through Surrey and beyond. Some trestles, culverts and power poles still have heritage value.
- There are three other rail lines of historical significance: the Great Northern Railway (1889); a southern extension from Brownsville to the Port Guichon - Cloverdale, also referred to as the Colebrook Line (about 1904); and the shore line route replacing the Great Northern's first route through Port Kells and Cloverdale (1909). Stations in the area included Brownsville and Liverpool.
- Old Yale Road is not listed in this location, however it is historically significant and follows its original alignment.
- Brownsville was a community located on the Fraser River at the foot of Old Yale Road. A ferry landing connected Surrey and New Westminster. At its height, the community boosted of a number of hotels and other commercial establishments.
- Bridgeview is a historical community, focused on a central square and created through subdivision in 1892.
- South Westminster Park and Sand Bar (On the SHR).
- Olsen House at 10979 Olsen Road (On the SHR).

Sensitivity to recognizing and enhancing the cultural values of these features in the development of the SFPR is indicated.

Socio Community Impact Assessment

The proposed SFPR alignment is near the Royal Heights, South Westminster, St, Helens, Bridgeview, Bolivar Heights, Port Mann, Fraser Heights and Port Kells communities within Surrey. In addition to potential noise impacts discussed above, there are also issues of access, community severance and visual intrusion. Visual intrusion can result from the traffic on the SFPR itself as well as the structures built and the mitigation measures applied, such as sound walls. Consultation with the community is required to ensure that these mitigation measures are attractive and non-intrusive. For example, a number of residents along the alignment have expressed a preference for berms and plantings where possible in lieu of concrete sound walls or no treatment other than quiet pavement.

Residential Impacts

There are two residential areas of particular concern:

Bridgeview

This community has been historically impacted by surrounding industrial land uses and community severance due to arterial streets with high traffic volumes and heavy industrial traffic. Bridgeview is situated in a location of low elevation which, together with peat soils, will result in drainage challenges. The techniques used for preloading of the SFPR alignment will be important for avoiding any additional drainage problems.

Particular care is needed in the Bridgeview areas to ensure that any local access east of the Pattullo Bridge does not encourage shortcutting traffic through the area, which currently has a limited number of sidewalks, narrow streets and a significant number of school aged children.

Fraser Heights

This community currently enjoys an attractive setting and experiences relatively low traffic volumes. Care should be taken to maintain the natural landscape buffers in this area between the community and the alignment. A detailed tree retention policy and landscaping plan is required to identify potential visual intrusion impacts in this area. The Fraser Heights area also has an attractive network of trails and opens spaces that must be preserved, as discussed further in the next section.

Park Impacts

The SFPR alignment will affect access to Surrey's Fraser River shore. While much of this shoreline is a working waterfront, there are a number of existing and planned park facilities and Bikeway/Greenway routes that will be affected. It is important to ensure that attractive and convenient access is maintained after the project is completed. Specific areas which need to be addressed in the detailed design, in terms of access and integration, include:

- The proposed Port Mann Park;
- The proposed Riverside Greenway;

- The proposed Fraser Heights Neighbourhood Loop Greenway with connector to the Surrey Bend conservation area;
- The 104th Avenue Connection to the Surrey Bend conservation area and Barnston Island ferry terminal;
- The proposed Port Kells Greenway;
- Bikeways and other bicycle facilities providing access to the Golden Ears Bridge;
- Brownsville Bar Park;
- Tannery Road Park; and
- Proposed Greenway Links from Tannery Road Park to Brownsville Bar Park continuing across the SFPR along Old Yale Road and Scott Road to the Scott Road SkyTrain Station area and the Bridgeview Community. Old Yale Road is also considered to be a heritage road within the City and special consideration is required to address this heritage value.

Socio-Economic Assessment

The SFPR route through Surrey traverses a significant number of important current and future industrial and employment areas. This include Fraser Surrey Docks, rail switching yards, light and heavy industry, several commercial retail centres and the proposed future business parks in the South Westminster area that would be connected to the Scott Road SkyTrain Station.

As the alignment is ideal for businesses that focus on transportation access or on being located centrally within the region, visibility and high quality local access is important. With the significant long-term shortage of industrial land in the GVRD, it is essential that the SFPR enhance rather than reduce access to these employment areas while discouraging through traffic from using local residential streets. The limited number of access points makes this problematic. As a result, quality frontage roads and convenient connections to local roads are required to reduce inconvenience to current businesses and attract future businesses. These roadways should be designed to accommodate industrial traffic associated with the port and transportation industries, including heavy trucks, parking where appropriate and local traffic, including cyclists who are common in many of the region's business park areas.

As it is clear that much of the industrial land in the South Westminster and Bridgeview areas will be developed to a higher degree than at present. Roadways and structures, other than the actual SFPR itself, within the SFPR scope of work should all be designed with adequate, direct and attractive pedestrian facilities. Experience has shown that where these have sometimes been omitted on major highway projects due to a lack of demand at the outset of the project, and they are highly problematic to include at a later date. These omissions lead to barrier effects in the short term and high costs in the long term as they are retrofitted.

Traffic and Transportation

This is not a formal component of the environmental process but the vehicular access points, pedestrian issues, and traffic modeling are discussed within various sections of many specific reports. The following is a summary of traffic and transportation issues identified by Surrey staff and expressed to staff at the public open houses for the project:

- Royal Heights residents are opposed to the Elevator Road overpass due to noise and visual concerns. However, access is required for the businesses along Elevator Road north of the SFPR. The Gateway Project needs to continue to look at options as to how this overpass can be avoided or mitigated to address the concerns of the Royal Heights residents.
- The South Westminster area is planned for significant redevelopment. This redevelopment is already underway in some areas such as immediately south of the SFPR and west of Tannery Road. This, combined with the development of the SFPR, will significantly increase the traffic volumes in the area. Traffic analysis has shown that the planned Tannery Road Interchange and adjacent intersections will be strained, which could affect economic development in the area. The City and Gateway are looking at options to address this issue.
- The King Road connector has been raised as a concern by residents and the Port Mann Community Association. The primary concern is the routing; however, concerns have also been expressed about shortcutting through local streets, alignment of the SFPR in this area and locating a connection to the SFPR at 136 Street rather than Surrey Road. The City and Gateway team are developing options and working with the community to try and address residents' concerns.
- Abbey Ridge residents have generally supported having either 179 Street or 182A Street or both intersect with the Golden Ears Bridge Connector Road. They have, however, raised concerns regarding shortcutting, safety and noise. Based on the road network planned, the City does not anticipate any potential for shortcutting along these roads. The City will be working with Gateway to assess the safety concerns.
- The Abbey Ridge residents also identified the need to have Barnston Drive pass under Highway 15. The City is supportive of this concept as the neighbourhoods either side of Highway 15 require a strong connection due to shared facilities such as schools and shopping. The Gateway Project is currently assessing the feasibility of this option.
- The public has identified the need for a pedestrian overpass of the SFPR on the east side of KGH. They have noted that there are many employees of the industrial area north of SFPR that take SkyTrain and walk to work from the Scott Road Station. This issue will need to be assessed and resolved as part of the Gateway project.
- Concern was expressed in a Public Meeting about the use of the paved shoulders for bicycle traffic. The City is supportive of the use of shoulders or bike lanes adjacent to roadways. These facilities are primarily intended for commuter cyclists. The City has future plans to construct a recreational bicycle path adjacent to the SFPR from the Port Mann Bridge to the Golden Ears Bridge. A connection will also be provided to Barnston Island, a popular location for recreational cycling.

Other Review Considerations

This section in the summary document details items, which fall outside the major report topics outlined above. The information discusses in general ways what other topics/items may arise during the course of the project.

Accidents and Malfunctions

- Damage to existing utilities is mentioned in this section. The proposed works could significantly impact the Surrey vacusan sewer system, yet no mention has been made

in this regard. Similarly large Terasen Gas crossings, GVS&DD water main trunks and sanitary trunks may also be impacted. Further work on this topic needs to be conducted.

Effects of the Environment on the Project

- Seismic works identified – this was not referenced to the proposed noise mitigation walls in the Bridgeview area or the impacts to the road structure beyond new bridges proposed along the alignment.
- Slope stability impacts along the Surrey frontage are not identified; especially considering this area has a history of slope issues.
- In the section on Sea level rise, the author makes reference to dykes being present along the whole SFPR alignment with the exception of the portion near 176 Street. This statement is false. There are no dykes east of Bolivar Creek. SFPR may have a high potential to be flooded from high tide events under current conditions if grades are not examined east of Bolivar Creek.
- New Provincial flood prediction levels may have a significant effect on road construction at the eastern end of the project.
- SFPR needs to address the dyke closure requirements at Bolivar Creek where the existing dyke crosses 116 Street.
- Emergency closure and route planning will also be required for the length of the project especially in light of the limited access points along the route.
- Where 136 Street currently crosses 116 Avenue, flooding is often occurring at the present time. This is due to high tides and the low road infrastructure in the area. Road elevations at this intersection will be critical.
- Erosion and erosion protection are not being considered along the SFPR alignment due to the small risk potential from existing creeks. Many of these creeks do have higher risk potentials; drainage assessments and discussions with local governments could assist in outlining these areas and planning accordingly.
- There are currently no discussions underway between the City and the Province on addressing flood issues at 176 Street and 104 Avenue. The Gateway team will need to address these issues during the course of their design.
- The Provincial Director of Dykes should be consulted in this project as the project does cross existing dyked areas and will potentially create holes in the dyke systems.