



City of Richmond

Report to Committee

To:	Public Works and Transportation Committee	Date:	September 25, 2002
From:	Gordon Chan, P. Eng. Director, Transportation	File:	6360-01
Re:	SHORT TERM FUNDING STRATEGY FOR NELSON ROAD UPGRADE - BETWEEN BLUNDELL ROAD AND WESTMINSTER HIGHWAY		

Staff Recommendation

That the proposed funding strategy for the interim upgrade of Nelson Road between Blundell Road and Westminster Highway, as described in the attached report, be received for information..

Gordon Chan, P. Eng.
Director, Transportation

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CONCURRENCE OF GENERAL MANAGER

Staff Report

Origin

At the March 20, 2002 meeting of the Public Works and Transportation Committee, the issue of the funding and timing for the upgrading of Nelson Road was discussed as part of the consideration of the staff report recommending closure of No. 8 Road at the Granville Avenue right-of-way. Specifically, the Committee raised the question of:

“... funding for the City’s portion of the reconstruction of Nelson Road and whether this project should be in the current Five Year Capital Plan.”

For consideration in the 2003 capital budget development process, a project was added to the five-year plan to widen Nelson Road between Blundell Road and Westminster Highway. The purpose of this project is to widen the road and reconstruct the pavement to accommodate the significant increase in heavy truck traffic expected as a result of on-going development in the southeast Richmond industrial area. This report discusses the development activities that are triggering the need for improved and additional roadway infrastructure in the area, describes the existing access and roadway conditions, and proposes an interim and long-term road access plans, including a funding strategy for the interim upgrading of Nelson Road.

Analysis

1. Development Activity in Southeast Richmond Industrial Area

The southeast Richmond industrial area, south of Westminster Highway and east of Highway 99, is experiencing significant development activity. With approximately 1,000 acres of industrial-zoned land, this area is one of the largest remaining industrial parks in the region (Attachment 1).

1.1 Existing Industrial Development in the Area

The following are some of the existing industrial developments in the southeast Richmond industrial area:

- Lafarge Cement (cement plant);
- ConForce Structures (pre-cast concrete structures);
- Ecowaste Industries (landfill, recycling, bio-remediation);
- Lower Mainland Sand and Gravel (aggregate sales);
- Emco Ltd (manufacturing and distribution of products for the construction industry); and
- Ingram Micro (wholesale provider of technology products).

1.2 Committed / Pending Developments

The Fraser River Port Authority (Fraser-Richmond) and Bontebok Holdings (Kingswood) are both proceeding with development of their southeast Richmond properties. The following are the committed and pending projects:

- Adesa Auto Auction (vehicle auctions);
- Hudson’s Bay Company (warehouse/distribution centre);

- Coast 2000 (inter-modal terminal);
- building permits for another 300,000 sq ft of warehouse space on the Kingswood site are expected to be applied for by the end of November 2002; and
- a pending subdivision application for the RivTow land to the south of the Kingswood property that will also contain warehouse/distribution type facilities.

1.3 Ultimate Build-Out

At full development, the southeast Richmond industrial area is expected to contain the following land uses:

- the Fraser-Richmond property is expected to contain several deep-sea terminals surrounded by ancillary uses such as container stuffing and destuffing, maintenance and storage facilities, warehouse distribution facilities and a mix of light industrial/office uses;
- the Kingswood site is expected to contain 1.5 million sq ft of industrial space;
- the RivTow property is expected to contain 450,000 sq ft of industrial space; and
- upon completion of landfilling activities, the Ecowaste land is expected to be redeveloped into a mix of warehouse/distribution and light industrial/office uses.

2. Existing Transportation Infrastructure

Nelson Road (Blundell Road to Westminster Highway) is a two lane, undivided roadway with substandard travel lane widths (3.0 m) and no shoulders. This roadway has provided adequate service to the low volumes of traffic it has carried to-date. However, the current condition of Nelson Road is likely inadequate to accommodate the large volumes of vehicular and truck traffic expected to be generated by the various existing, committed and pending developments in the area.

As of fall 2002, Nelson Road will be the only access to this area. With the opening of the first phases of the Fraserport and Kingswood developments, the heavy truck traffic volume on Nelson Road is expected to increase from 370 to 1,200 trucks / day. The opening of the Coast 2000 development in 2003/04 will add an additional 400 trucks to the daily traffic volume on this roadway.

3. Short Term Road Requirements – Nelson Road Upgrade

3.1 Widening of Nelson Road between Westminster Highway and Blundell Road

Although the cross section of Nelson Road is inadequate, technical analysis indicates that from a capacity point of view, four lanes are not required in the short term. Recognizing the constraints of the City's current Roads DCC program, a phased upgrading plan is proposed for Nelson Road between Blundell Road and Westminster Highway.

The proposed improvement (maintaining two travel lanes) will involve the widening of Nelson Road from its current width of 6.0 m to 10.5 m. This cross section would provide two 3.75 m travel lanes and 1.5 m paved shoulders. Certain roadway features such as curb, gutter, sidewalk and street trees are not included in the interim option. In addition, the stability of the west road ditch will be enhanced, by shifting the road to the east, away from the ditch and a large

GVRD water transmission main. This will eliminate the need for any remedial reinforcing of the ditch, which would otherwise be required. The project is estimated to cost \$2,377,000.

3.2 Intersection Improvements – Nelson Road at Westminster Highway and Blundell Road

The intersection of Nelson Road and Westminster is being upgraded by the Fraser River Port Authority as part of development conditions for Phase I of their Fraser-Richmond project. Similarly, the intersection of Nelson Road and Blundell Road is being upgraded by the developer as part of the development conditions for the Kingswood site.

4. Long Term Road Access Plan to Support Full Build-Out

Westminster Highway will be unable to accommodate the site-generated traffic from the development of the southeast Richmond industrial area in the long term. Several comprehensive studies have been undertaken to assess the long-term transportation infrastructure requirements for this area. The scope of these studies and the findings are summarized below.

4.1 Richmond Sub-Area Transportation Study

The study was jointly undertaken by the City, the Ministry of Transportation and TransLink to consider options for addressing the level of traffic congestion and capacity requirements along the Highway 99 corridor through south Richmond and to recommend solutions to improve east-west connectivity in the vicinity of the Steveston Interchange and Blundell Road overpass. The study recommended three essential upgrades to the area road system:

- construction of an interchange at Blundell Road and Highway 99;
- widening of Blundell Road between No. 5 Road and No 6 Road to four lanes; and
- widening of Steveston Highway to four lanes between Sidaway Road and No. 5 Road, including four lanes through the Steveston interchange.

4.2 Fraser-Richmond Servicing Report

This report was undertaken by the Fraser River Port Authority in consultation with the City to identify the necessary servicing requirements for their Fraser-Richmond development. The report identified Blundell Road as the primary access to the development with a connection to Highway 99 as the only means of preventing industrial traffic from overwhelming the rural agricultural roads. In the interim, until Blundell Road is extended to Highway 99, Westminster Highway via Nelson Road will provide access to the area.

4.3 Long Term Road Access Plan

Based on these two studies and other work undertaken by City staff, a long-term transportation plan for the southeast Richmond industrial area has been developed (Attachment 2). The primary attributes of this plan are as follows:

- access to the area will be via a newly constructed four lane Blundell Road extending east-west through the centre of the industrial area;
- to the west, Blundell Road is proposed to connect to Highway 99 at a new interchange;

- to the east, Blundell Road will connect to Westminster Highway via Nelson Road; and
- Nelson Road from Blundell Road to Westminster Highway will be upgraded to four lanes.

The timing of this work would depend on the pace of development in the area and funding availability. The City has applied to TransLink to have this corridor admitted to the regional Major Road Network (MRN). If approved, the formal recognition of the regional significance of Blundell Road would allow the City to access TransLink funding for road construction.

5. Funding Strategies

5.1 Short Term Funding Strategy for Nelson Road

A phased approach to upgrading Nelson Road is proposed, recognizing the limited funding available in the Roads DCC Program. Even with such an approach, the Roads DCC Program cannot support the entire cost of this work. The participation of the area developers is therefore essential.

Proposed Funding Strategy

As part of the Kingswood and RivTow development (on Nelson Road south of Blundell Road), the proponents are required to provide frontage improvements across their property. Most of these road improvements will be made south of Blundell Road, where traffic volumes will be relatively low. It is expected that the section of Nelson Road between Blundell Road and Westminster Highway will carry most of the traffic generated in the area. Staff are discussing with the developers of these two properties to direct the funding for the usual frontage improvements towards implementing the Nelson Road upgrade project.

Financial Implications

It is estimated that of the \$2,377,000 capital cost of the Nelson Road upgrade, area developers could provide up to \$950,000 of the cost through the proposed funding strategy. These costs are based on conceptual designs and will be refined.

Application for MRN Admission

The City has applied to TransLink for cost sharing of the Nelson Road upgrade project. This application is conditional on the Blundell Road/Nelson Road corridor being admitted to the MRN. However, preliminary indications from TransLink regarding the potential admission of Blundell Road and Nelson Road to the MRN have not been encouraging.

5.2 Long Term Funding Strategies

The cost of implementing the long-term access plan far exceeds the available funding from the Road DCC Program. Staff are developing a long term funding strategy to achieve these improvements, which will be the subject of a future report to the Public Works and Transportation Committee.

The following are possible principles that could be considered to guide the development of this strategy:

- adjacent land owners are expected to play a significant role in the funding strategy;
- developer contributions to area transportation infrastructure shall not be limited to their DCC exposure;
- the feasibility of establishing a local DCC area will be investigated;
- all opportunities for public-private partnerships will be explored; and
- senior government participation will be vigorously pursued, in particular from TransLink, the provincial Ministry of Transportation and Transport Canada.

Financial Impact

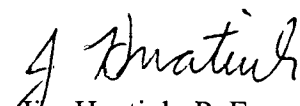
The cost of implementing the interim widening of Nelson Road between Blundell Road and Westminster Highway is \$2,377,000. No property acquisition is required. It is recommended that this project only proceed with the financial contribution of the area developers, as the City's Roads DCC program lacks sufficient resources to accommodate the full \$2,377,000 project cost.

It is estimated that developer contributions (in lieu of frontage improvements) could amount to \$950,000 if negotiations with the developers of both the Kingswood and RivTow properties are successfully concluded. Applying this amount to the project cost would reduce the City's exposure to \$1,427,000, of which \$786,000 will be drawn from Roads DCC and \$641,000 from water utility. The City's part of the project cost has been included as a candidate project in the 2003 Capital Plan.

Conclusion

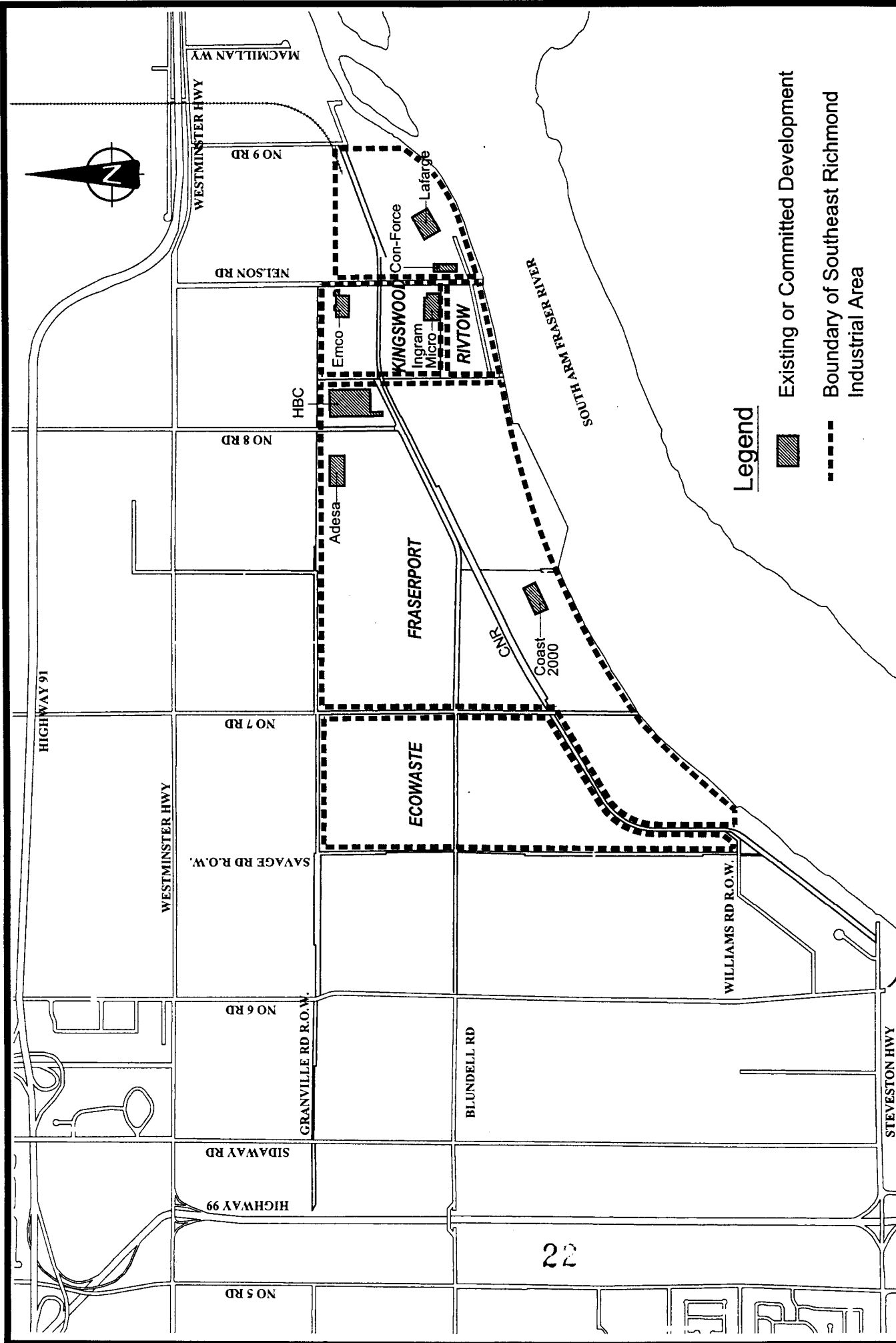
The southeast Richmond industrial area represents one of the largest industrial-zoned areas in the region and has enormous growth potential. There is currently significant development activity occurring in the area that is driving the need for expanded road infrastructure. This report identifies an interim upgrading plan for Nelson Road between Blundell Road and Westminster Highway. A possible funding strategy is proposed to leverage contributions from the development industry and, possibly, by cost sharing with TransLink.

This report also lays out a number of general principles to guide the development of a funding strategy for long range transportation improvements in the area. The principles involve the financial participation of area land owners, developers and senior governments as well as exploring public-private partnerships. A long term funding strategy, based on these principles will be presented for consideration at a future Public Works and Transportation Committee meeting.





Jim Hnatiuk, P. Eng.
Transportation Engineer

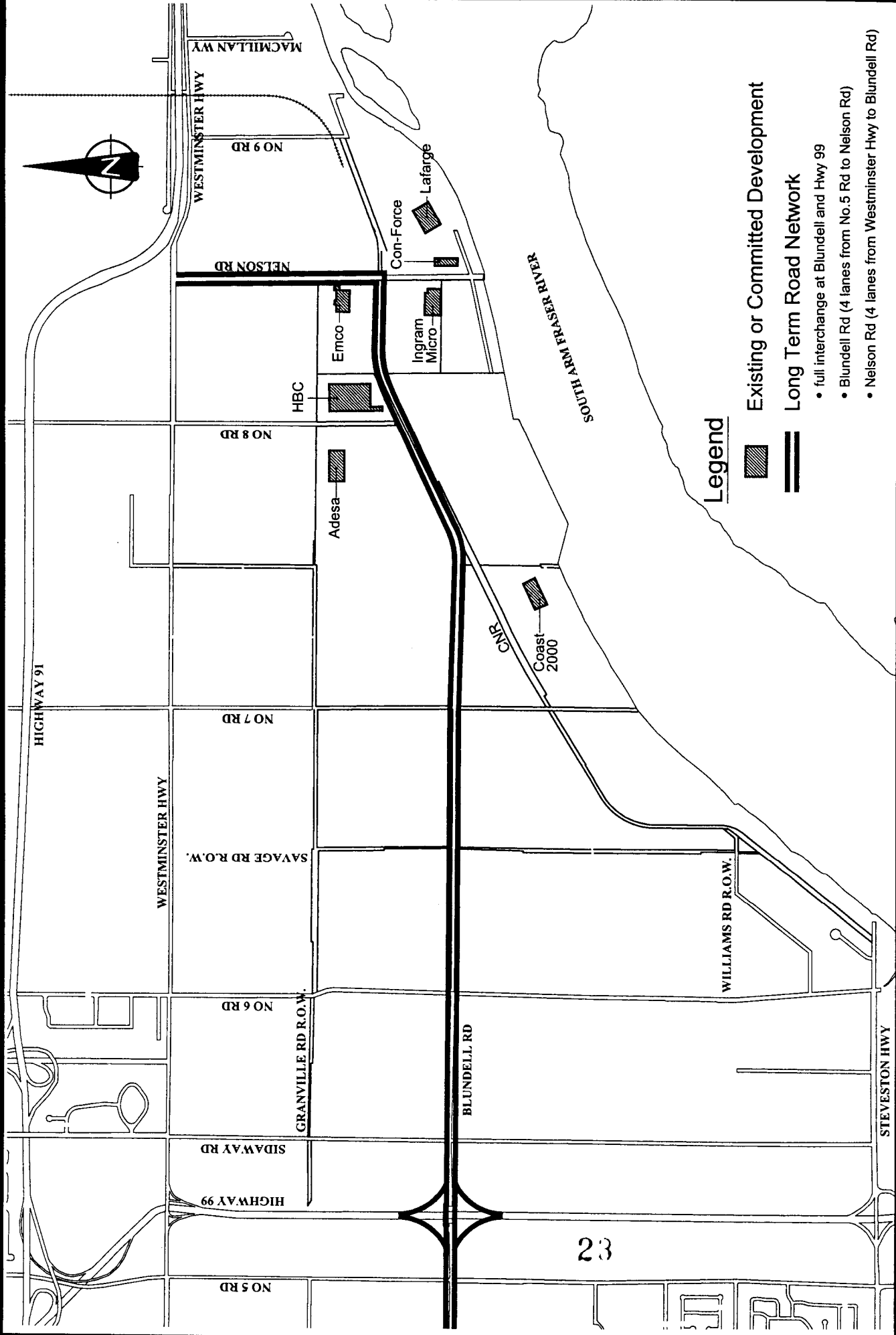
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Legend

-  Existing or Committed Development
-  Boundary of Southeast Richmond Industrial Area

Southeast Richmond Industrial Area



Legend

-  Existing or Committed Development
-  Long Term Road Network
- full interchange at Blundell and Hwy 99
- Blundell Rd (4 lanes from No.5 Rd to Nelson Rd)
- Nelson Rd (4 lanes from Westminster Hwy to Blundell Rd)

Long Term Road Network