

ITEM	10
MANAGER'S REPORT NO.	18
COUNCIL MEETING	94/03/21

TO: CITY MANAGER
1994 MARCH 15

FROM: DIRECTOR PLANNING AND BUILDING
OUR FILE: RZ#74/93

SUBJECT: REZONING REFERENCE #74/93
CANADIAN NATIONAL RAILWAY COMPANY / STANCHEM INC.

PURPOSE: To provide Council with a status position on the CN/Stanchem rezoning proposal in the Big Bend area.

RECOMMENDATION:

1. THAT this report be received for the information of Council.

REPORT

1.0 BACKGROUND

Council, on 1994 January 24, received a Rezoning Report providing information on an application from the Canadian National Railway Company (CN) to rezone lands referenced on Figure 1 **attached** to provide for the phased development of its rail oriented industrial lands in the Big Bend area.

As can be seen on Figure 2 **attached**, the first 21 acre phase is proposed to consist of rail infrastructure to serve as a CN CargoFlo facility, a 5 acre component of which is proposed to include a 35,000 sq. ft. building to house Stanchem Inc.'s (Stanchem) chemical warehouse, bulk storage, distribution and processing facilities. The Stanchem operation would handle some 70 different commodities including regulated and non-regulated products. A liquid storage component consisting of 8 external tanks is proposed.

2.0 EXISTING SITUATION

The January 24th Rezoning Report was referred to staff to respond to a number of questions raised by Council members. CN was advised that these questions included the following:

2.1 Soil Conditions

The sufficiency of the soils, including materials which have been placed on-site to achieve floodproof elevations, has been raised. In this regard it will be necessary to provide geotechnical information which takes into account current day standards for foundations and the type of structures which are proposed, including liquid storage facilities. Information has also been requested on the number and size of storage tanks and the chemicals to be stored therein.

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2.2 Environmental Concerns

The fact that the site is located within the Big Bend area in close proximity to the North Arm of the Fraser River has caused concern. Information will need to be provided to ensure that the Stanchem facility as well as CN's CargoFlo component will not have a negative impact on the environment. This needs to include potential discharges to the atmosphere, to the land, and to the Fraser River and the associated local drainage facilities. The relationship of the proposed facility to other uses in the Big Bend area including residential and institutional areas will also need to be addressed.

2.3 Suitability of Existing M3 Zoned Parcel to House Stanchem Facility

Council has been advised that, initially, CN Rail proposed locating the Stanchem facility on its existing M3 zoned lands on the south side of the railway line. The M3 zone provides for the manufacturing, processing and storage of chemical and allied products as a permitted use. It was noted, therefore, that CN would need only to apply for and received Preliminary Plan Approval and subsequently, to satisfy the conditions of use in the M3 District and the technical requirements for obtaining a Building Permit.

The southerly portion of this alternate site is designated for water dependent industrial use. This area is also covered by the Statement of Intent which has been entered into by the City and other estuary managers under the auspices of the Fraser River Estuary Management Program. It has been determined that the FREMP Environmental Review Committee does not support the use of the North Arm for the shipment of certain of the chemicals proposed to be handled at the Stanchem facility.

It would, therefore, be necessary to confine the proposed Stanchem facility to the northerly portion of the site. This in itself is not considered to be an impediment, as Stanchem requires only approximately 5 acres of the site which is approximately 20 acres in size. It is recognized that, in this situation, it would not be feasible to combine CN's CargoFlo operation with the Stanchem facility and that CN would continue with its application to locate its CargoFlo operation on the north side of the existing railway line.

Council has requested staff to contact Federal and Provincial authorities to determine if they would approve the use of a portion of this site as initially proposed. In this regard, letters have been forwarded to the Department of Fisheries and Oceans, Environment Canada and the Ministry of Environment, Lands and Parks. This matter has also been referred to the Fraser River Estuary Management Program (FREMP). While FREMP's jurisdiction does not include the proposed development site, its input is sought with regard to any potential impacts that this upland project may have on the water quality of the Fraser River.

2.4 Access

The question as to the movement of goods to and from the proposed facility has been raised. CN will need to provide the projected number of movements to the site by rail (number of occasions and number of cars), and the number of truck movements which would utilize local streets to gain access to Marine Way and beyond.

3.0 PROPOSED ENVIRONMENTAL IMPACT STUDY

CN was advised that it is evident from the Council discussion and representations made by others that a number of concerns have been raised regarding public safety and the potential impacts on the environment associated with the proposed establishment of the Stanchem facility in the Big Bend area. In order to provide Council and the public with assurances that the storage, processing, distribution, transport and trading of chemical products will provide the highest level of protection and will not negatively impact the community and the environment, CN was advised that it is staff's position that an environmental impact study will be necessary.

While the primary focus has been on the Stanchem component of the development proposal, this study would also need to address the CargoFlo component as well.

In order to ensure that such a study is impartial, it is proposed that terms of reference be developed by staff in conjunction with CN and Stanchem and agreed to by all parties. A shortlist of independent, qualified firms would then be formulated and they would be invited to submit proposals to undertake the environmental impact study.

The cost of this study would be borne by CN and/or Stanchem. In addition to providing assurances to the Council, area residents and others, the study will be of benefit to CN in the development and marketing of its other holdings in this area.

CN has formally responded to the foregoing in a 1994 March 15 letter advising that it understands the City Council's concerns and certainly will work with City staff to provide full answers to these and any other questions raised during the course of the rezoning.

CN advised that normally it would provide additional, more detailed information during the advancement of its rezoning application, including an Environmental Impact Study. CN's internal approval process also requires it to prepare a report based on the Federal Government's "Environmental Assessment Review Process". In this particular situation, CN has stated that it recognizes that, due to concerns already raised, the preparation of an Environmental Impact Study prior to the rezoning being advanced for First Reading and presentation to a Public Hearing, will provide Council and the public with a full understanding of the proposed facilities and their impact on the community and the environment. Moreover, CN appreciates the concerns that the study be prepared by an impartial third party.

CN, therefore, has agreed to work with Burnaby staff to prepare terms of reference for the Environmental Impact Study for review by Council, to jointly prepare a shortlist of independent qualified firms who would be invited to submit proposals, and to provide the selected firm with a complete understanding of the Stanchem and CargoFlo operations. CN has agreed to fund this study.

4.0 SOIL CONDITIONS

A detailed report of the soil conditions and any required works will be provided with the proposed Environmental Impact Study. Notwithstanding this fact, CN has received a letter from Golder Associates Ltd.'s (Golder) providing a preliminary geotechnical engineering assessment of the site.

Golder has advised that there are three general geotechnical issues which should be addressed for the project. The following lists these issues and, based on available information, provides Golder's preliminary comments and opinions:

- 4.1 **Geotechnical Aspects of Structures** - Conventional methods of foundation support of the proposed structures are considered to be feasible at this site provided they are properly designed to account for the soil conditions.
- 4.2 **Stability of Fills** - The fills which have been placed to date are generally suitable for general site grading. However, some post-construction settlements of grade supported structures should be anticipated due to unavoidable long term compression of the peat and organic silt. These grade supported structures should be designed to accommodate such settlements.
- 4.3 **Earthquake Stability of Ground** - The results of an initial deep borehole and testholes indicate that the lower natural compact to dense sands are not generally susceptible to liquefaction due to a "design earthquake" (1 in 475 years return period and 0.21 g peak horizontal firm ground acceleration, as per the 1990 National Building Code). The risk of a massive liquefaction slide of the proposed building and tank farm into the Fraser River, in the event of a design earthquake, is considered to be low (i.e. a massive liquefaction slide is not considered to be an issue for siting of the facility).

The very soft to soft peat, organic silt and silts are not considered to be susceptible to liquefaction in the event of a design earthquake.

The saturated surficial fills are considered to be at moderate risk to liquefaction in the event of a design earthquake. The effects, if any, would be settlement or heaving of the local ground surface and grade support facilities founded above such loose saturated fills. It is further anticipated that liquefaction of the saturated fills would not involve a massive failure of the fills into the Fraser River. If potential liquefaction of the fills is a concern for certain facilities, then stabilization of these fills, such as by replacing the loose to compact fills with compacted granular fills, should be carried out.

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Based on available information, it is Golder's opinion that, from a geotechnical engineering perspective, the site is suitable for the proposed Stanchem facility provided that appropriate geotechnical measures, such as those summarized above, are carried out. An additional site investigation and engineering analysis is required at the detailed design stage to provide the necessary engineering parameters for the comprehensive design of the facility and confirmation of the above preliminary assessment. A site specific analysis of earthquake ground motion amplification due to an earthquake is recommended for input to the design of the proposed facility.

5.0 SUMMARY

The Canadian National Railway Company has submitted an application to rezone a portion of its lands in the Big Bend area. The first phase is intended to accommodate CN's CargoFlo facility and Stanchem Inc.'s chemical warehouse, bulk storage, distribution and processing facilities.

Council has raised a number of concerns regarding the Stanchem component of the proposal and has referred the rezoning application to staff to provide additional information. It is staff's position that, in order to provide Council and the public with assurances that the proposed facility will provide the highest level of protection and will not negatively impact the community and the environment, an Environmental Impact Study is required.

CN has agreed with this position and confirmed its intention to work with City staff to prepare terms of reference for this study for review by Council, to jointly prepare a shortlist of qualified firms who would be invited to submit proposals, and to provide the selected firm with a complete understanding of the Stanchem and CargoFlo operations. CN has agreed to fund this study.

With respect to the soil conditions, a detailed report will be provided with the proposed Environmental Impact Study. Preliminary indications are that the site is suitable for the proposed development and that the site facilities will be designed and constructed to accommodate settlements which may result in the event of an earthquake.

CN owns other lands which are pre-zoned for M3 Heavy Industrial use and were initially considered for the Stanchem facility. Staff has requested Federal and Provincial authorities to advise as to any approvals which would be required by the agencies, together with their position as to the acceptability of the proposed use in the pre-zoned location under their regulations.

6.0 ADVANCEMENT OF REZONING

It is staff's intention to work with CN and Stanchem to complete terms of reference for the proposed Environmental Impact Study. Once this information is in hand and replies have been received from Federal and Provincial agencies regarding the existing pre-zoned site, a further report will be submitted to Council.

Planning and Building

Re: Rezoning Reference #74/93

Canadian National Railway Co./Stanchem Inc.

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Assuming that it is considered at that time to be appropriate to advance this rezoning further, authorization will then be sought to work towards a suitable plan of development. Provision would also be made to engage an independent consultant to complete the Environmental Impact Study.

Once work on these items has been completed, Council will be in a position to consider the advancement of this rezoning to First Reading and its presentation to a Public Hearing.

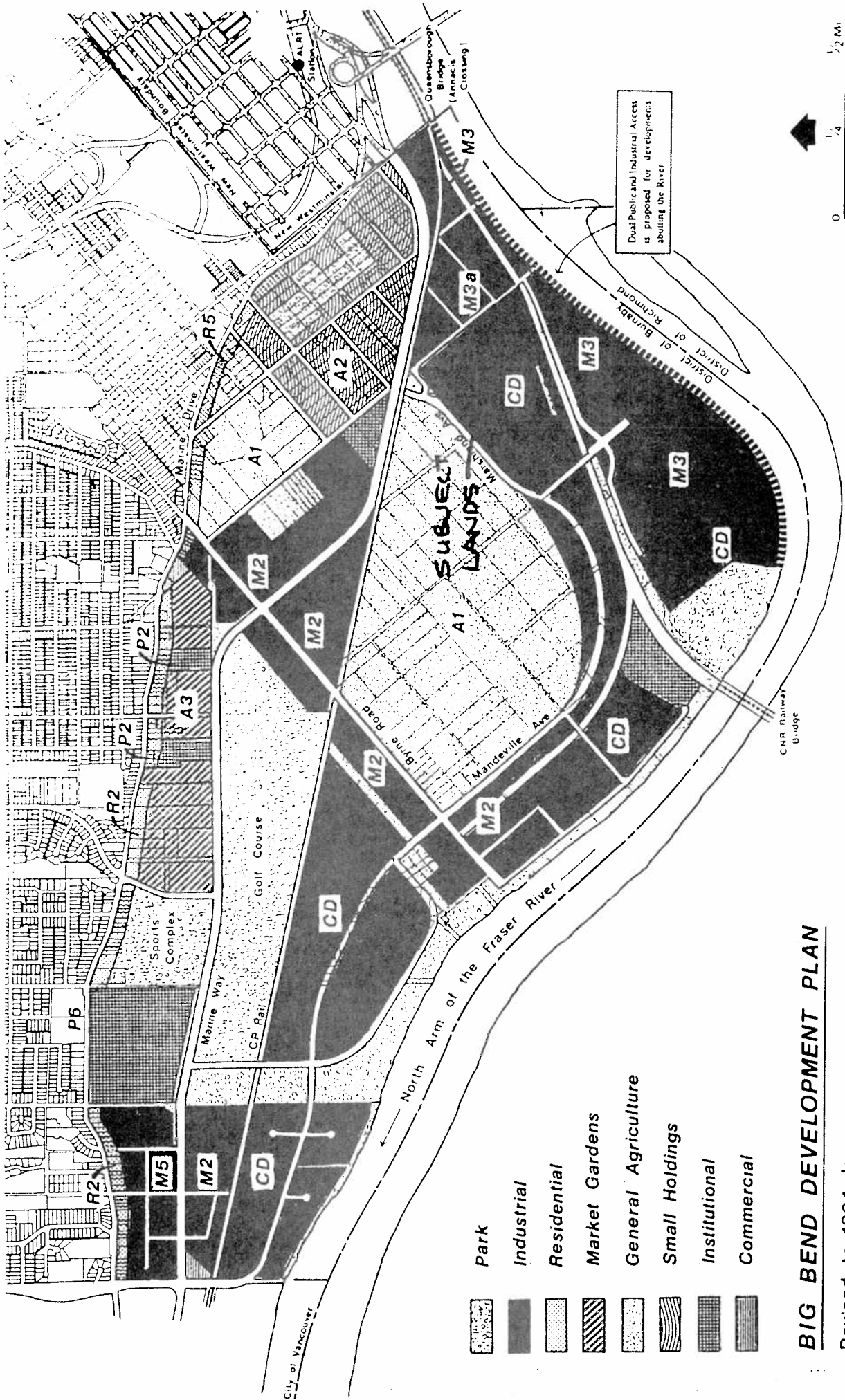


D.G. Stenson, Director
PLANNING AND BUILDING

PB/jp

Attachment

cc: Director Engineering
Director Administrative & Community Services
Chief Environmental Health Officer
Chief Fire Prevention Officer
City Solicitor



- Park
- Industrial
- Residential
- Market Gardens
- General Agriculture
- Small Holdings
- Institutional
- Commercial

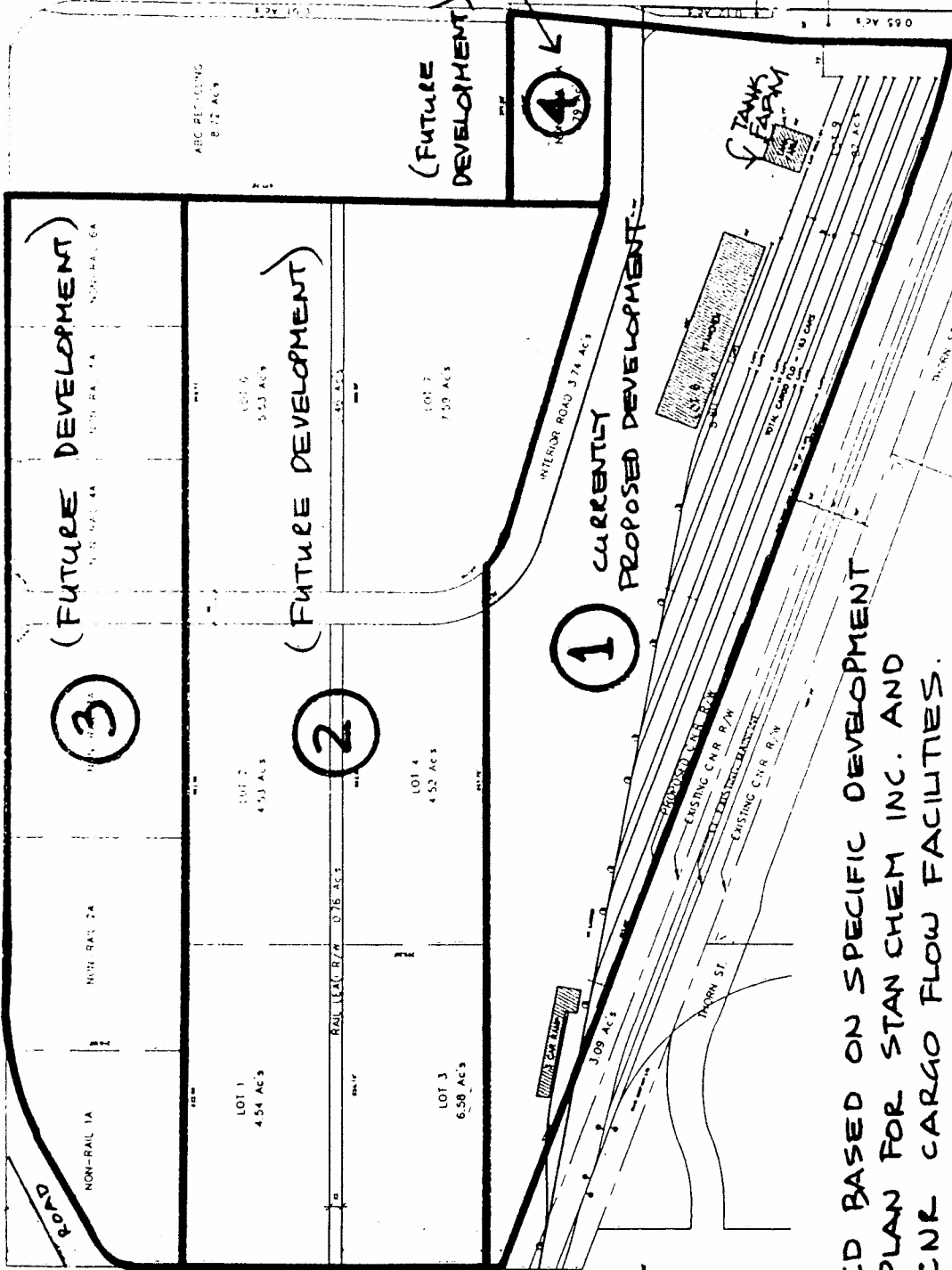
BIG BEND DEVELOPMENT PLAN

Revised to 1994 January

Figure 1
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CD BASED ON SPECIFIC DEVELOPMENT PLAN FOR STAN CHEM INC. AND CNR CARGO FLOW FACILITIES.

CD BASED ON M2 & M3 DISTRICT GUIDELINES FOR FUTURE DEVELOPMENT FOR RAIL-ORIENTED FREIGHT FORWARDING USES.

CD BASED ON M5 DISTRICT USES (NON-RAIL)
 CD BASED ON M2 & M3 DISTRICT USES (NON-RAIL)

- ①
- ②
- ③
- ④

R.Z. 74/93

FIGURE 2

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PROPOSED COMPREHENSIVE