



Planning Study

NON-RAILWAY USES OF RAILWAY LANDS

City of Windsor

**PREPARED BY MERIDIAN PLANNING
CONSULTANTS**

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Executive Summary

Findings

1. Windsor has 55 kilometres of rail lines, an unusually high number. There are approximately 11,200 dwellings within 300 metres of the railway lines, approximately 500 of which directly abut the right-of-way. The 11,200 dwellings represent 12.7% of all dwellings in the City of Windsor.
2. The land uses adjacent to the rail lines represent the broad spectrum of land uses found in the City as a whole. Rail corridors in some cases run through large contiguous areas of industrial uses, in other cases residential communities are divided by a rail corridor, and in others the adjacent land uses are a mix of residential, institutional, commercial and industrial.
3. Due to the geographic extent of the railway corridors and the pattern of adjacent land uses it is extremely important to assess any new proposed non-rail use of railway lands on the basis of potential impacts on adjacent uses.
4. Current proposals for non-rail uses of rail lands, such as the proposed DRTP and Ambassador Bridge projects, have the potential to create a range of significant noise and air quality impacts on neighbouring properties.
5. The Official Plan designates five Rail Yards for a variety of land uses, differing by Yard and within the Yards. The purposes range from 'Industrial' through 'Residential'. As such there are currently in place some land use policies and objectives for some Railway Yard lands that anticipate non-rail uses. The Official Plan considers Rail Yards to be a development constraint on adjoining land uses due to the potential impacts of noise and vibration and due to safety concerns.
6. The Official Plan does not specifically designate the Rail Corridors for any use. The Plan generally recognizes rail uses in many ways, the various Schedules show all of the Rail Corridors with a rail line symbol, but there is no specific land use permission granted by the Plan for the Corridors. This lack of permission is consistent with the inability of a local government to directly regulate railway use of railway lands. That is, where there is no authority to regulate there is no purpose nor need for policies permitting the use.
7. The conversion of Rail Corridors to non-rail uses would essentially be without policy guidance under the current Official Plan, except in anticipation of abandonment. In this case the Plan contemplates some form of transportation use, greenbelt or open space use or "other uses as appropriate".
8. The Plan clearly recognizes the potential impacts from rail use of the rail corridors by establishing a series of policies to ensure that new uses are not established in proximity to the corridors without studies to identify the degree of impacts and the need for mitigating measures.
9. While in general terms the Plan anticipates a process of approval for land use changes that are not contemplated by the Plan, these policies are too general to provide direction for land use change in Rail Yards and Corridors.

10. From several different perspectives both the DRTP and Ambassador Bridge proposals would require an amendment to the Official Plan to proceed.
11. The Plan deals specifically with compatibility of uses adjacent to railway uses. The Plan has policies that essentially place a priority on the railway use of lands over any proposed uses, precluding housing within certain distances and requiring mitigating measures to ensure that sensitive uses are not impacted by the railway uses. This priority of the rail use over any new uses is appropriate and stems from the currency of the rail activity thus placing the onus on the proposed new use to conform to standards protecting the operation of the existing use.
12. Section 6 of the Official Plan sets out a series of tests for Council to consider when industrial development is proposed on lands not currently designated for that purpose. These policies would be applied when considering industrial non-rail uses of rail lands. The proposals by DRTP and the Ambassador Bridge potentially would generate impacts of a similar nature to those contemplated by Section 6.4.3 and thus would appropriately require an Official Plan amendment from the perspective of meeting Official Plan objectives dealing with conformity.
13. This Plan delineates trucking activity as a separate activity within the transportation system, and notes that this activity should be separated from sensitive land uses where possible. This policy is directly applicable to the DRTP and Ambassador Bridge proposals requiring that the intrusion of trucks into sensitive areas be minimized.
14. The Plan identifies Council's intent that truck traffic should be discouraged in residential areas. The intent of these sections of the Plan is clear. A private truck road or other road intended to carry significant numbers of trucks that is not shown on Schedule F would require an Official Plan amendment to address the criteria dealing with compatibility, suitability of the lands involved and the specific noise, vibration and air quality policies of the Plan.
15. The Plan identifies how the City will address new road needs, and logically, new road proposals. As applied to the conversion of a railway corridor or part of a corridor to a private truck-only road, to a new major private road or truck staging area, the requirements identified in the Plan including the demonstration of need or identification of the corridor in the transportation master plan must be met.
16. Official Plan policies outline the City's land use approach to border crossings and state that the positive economic benefits of border crossing activity shall be maximized, and at the same time the negative impacts on the community of a new crossing will be minimized. Policy 7.2.7.2 requires that any additional crossing have minimal impacts. The DRTP proposal using a former rail corridor would create a new truck border crossing. The current Ambassador Bridge proposal would also result in an additional crossing. The Plan would require both proposals to meet the objectives of this section.
17. Rail operations are federally regulated and not directly subject to municipal zoning controls. The application of zoning to rail lands has historically not been an important or well-addressed issue in most Ontario municipalities. In some cases railway lines have not had any recognition by the zoning by-laws, in others only the rail uses are permitted, and in many an industrial zone with a broad variety of uses is applied to the railway lands.

18. Rail lands in Windsor are zoned for some non-rail uses. It was likely never contemplated that a range of non-rail uses would ever locate in a rail corridor. Most railway lines are limited in width, often have no road access or frontage to much of the corridor, and often abut the rear yards of adjacent uses.
19. Most other situations involving the elimination of rail uses on large areas of land have resulted in significant planning processes to determine the best use of the rail lands, essentially because the re-use of these lands for non-rail purposes was never contemplated. Clearly this is an issue Windsor must address given the extent and number of rail corridors throughout the City. The DRTP and Ambassador Bridge proposals are an indicator of one potential type of re-use of rail lands.
20. The proposed use of railway lands for a major private road, truck road or a truck staging area would not be permitted by By-law 8600 as amended.
21. The range of non-railway uses permitted on railway lands by the applicable zoning by-laws would allow a variety of potentially unacceptable impacts caused by uses incompatible with the existing development pattern adjacent to the rail lands. The current zoning permissions applying to railway lands should be changed.
22. The conclusions reached regarding the potentially unacceptable impacts of non-rail uses on rail lands and the advisability of the City taking steps to avoid such conflicts through changes to the zoning bylaw are consistent with the policy direction contained within the Provincial Policy Statement.
23. Three principles should apply when reviewing Official Plan policies and zoning by-law use permissions applicable to non-rail uses of railway lands. These are:
 - (a) Impacts from incompatible uses should be minimized.
 - (b) The primacy of pre-existing uses adjacent to rail corridors should be recognized.
 - (c) Potential non-rail uses are not pre-existing uses, and should be assessed as 'new' uses, judging their suitability without regard for existing rail-related impacts. Put another way, non-rail uses should be assessed in terms of their absolute impact on adjacent uses rather than their relative impact in comparison to current or potential rail use.

Recommendations

1. The City should move immediately to adopt policies in the Official Plan that would permit only rail uses in Railway Corridors.
2. Council should review the permission for non-rail uses in Rail Yards based on good planning principles, and amend the Plan accordingly.
3. Council should consider the development of comprehensive land use policies to determine potential non-rail uses of all rail lands.
4. The zoning by-law should be amended to make clear the permissions for uses on rail lands, by implementing the recommended changes to the Official Plan policies.

1.0 - Introduction

On October 6, 2003, the City of Windsor (the City) passed By-Law 341-2003 imposing interim control on non-rail uses of railway lands, including railway rights-of-way and rail yards. This by-law was amended by By-law 350-2003 on October 20, 2003, in order to include rail lands in the former Township of Sandwich south within the interim control by-law area, and to replace the map defining all rail lands under interim control in the City.

Interim control was established in order for the City to undertake a study of the land use planning policies applicable to all non-rail uses of railway lands, dealing specifically with the potential impact of non-rail uses on adjoining lands. In January 2004, Meridian Planning Consultants was retained by the City to undertake this study, and to complete it prior to the end of August 2004, in advance of the expiration of interim control on October 6, 2004.

In 2002, Windsor Council was presented with a proposal to establish a new private truck road on railway lands. Council considered that this use was potentially in conflict with some of the adjacent land uses. Council was also aware of a second proposal for non-rail uses of railway lands associated with a plan to twin the Ambassador Bridge and construct a fully-controlled limited access highway along the Essex Terminal Railway corridor.

There are 55 kilometres of rail lines in the City of Windsor with approximately 11,200 homes within 300 metres of the lines. Given the extent of the rail lines, the potential for these lines to be converted to other uses, and the potential impacts of non-rail uses the land use planning question to be addressed is:

Does the City's Official Plan and zoning by-law adequately address the potential impacts on neighbouring uses of non-rail uses on railway lands?

The purpose of this report is twofold:

- To assess the adequacy of land use planning policies currently in effect, specifically Zoning By-Law permissions and Official Plan policies, to minimize negative land use impacts adjacent to rail lands; and
- To provide a planning opinion as to whether the non-rail uses currently proposed for rail lands are permitted by the zoning by-law, namely the Detroit River Tunnel Partnership (DRTP) truck route and the Essex Terminal Railway corridor re-use in support of improved access to the Ambassador Bridge.

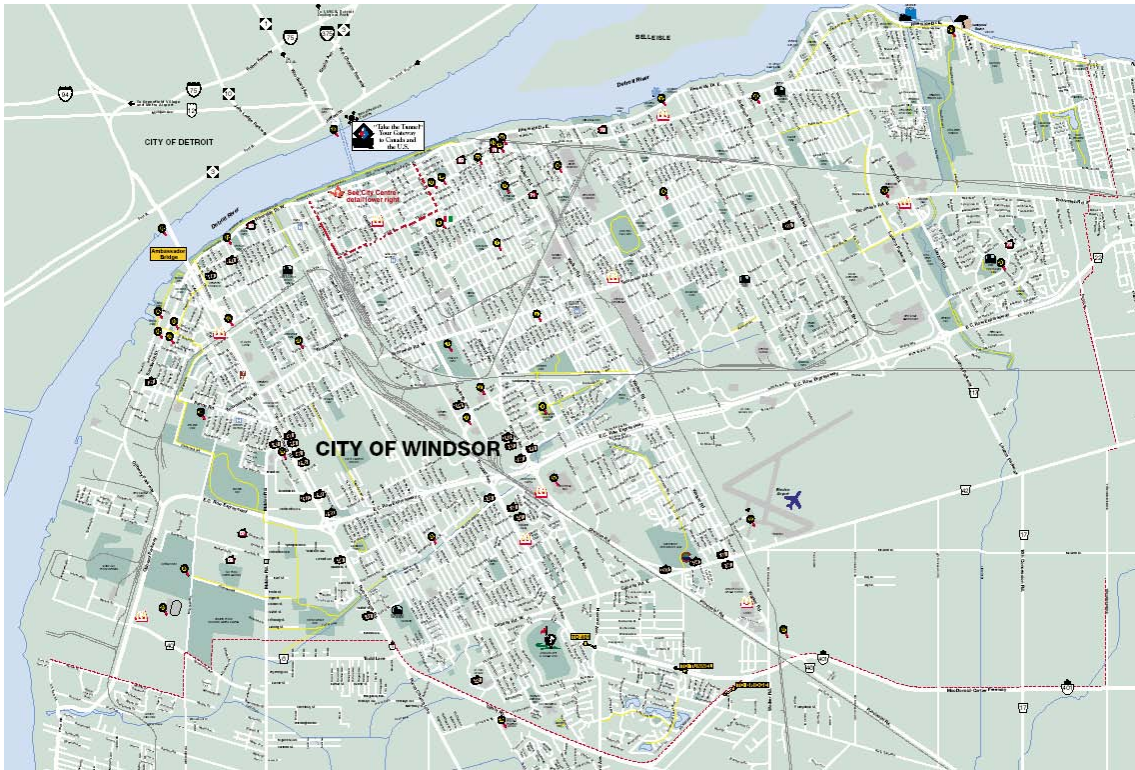
Other work was to include, if considered necessary, suggesting revisions to the City of Windsor's planning policy documents to better control the appropriate non-rail use of rail lands. The report does not address or advise the City with respect to appeals against the interim control by-law, nor does the report suggest whether the DRTP or Ambassador Bridge proposals are in the City's best interest.

2.0 – Historic - Geographic Context

Canada's southernmost city, Windsor is situated on the south shore of Lake St. Clair and the Detroit River. Adjacent to Detroit, Michigan, the City of Windsor is an international gateway for both people and trade goods. Windsor is the commercial and cultural centre for the surrounding Essex County region.



Map1: Southwestern Ontario and Detroit, Michigan.



Map 2: The City of Windsor

The City's history reflects the importance of international trade to the regional economy. Beginning as a small collection of farmsteads in the late 18th Century, Windsor's population, economy, and geography grew steadily from 1850 until the mid-1960's. The City currently has a population (2001) of 208,000¹, and covers an area of 145 square kilometers.

Windsor's early industries - distilling, sugar refining and tobacco processing - were based largely on local farming products. The economy shifted in the mid 1800's with the arrival of the railway. Windsor's first foundry and heavy manufacturers began operations around 1880. Motor vehicles were first manufactured in Windsor in 1904.

Though Windsor is the centre of Canada's automotive industry, the City began to diversify its employment base with the opening of Casino Windsor. Healthy employment growth is projected over the next 10 years, particularly for the hospitality and tourism sections. Total employment is expected to reach 134,500 by 2016². Windsor's employment, however, remains focused on major industrial employers in a number of manufacturing and commercial nodes across the city. The percentage of manufacturing/construction employment in Windsor is approximately 28.3% of the total labour force, compared to a national average of only 14.6%³.

Transportation History

¹ Statistics Canada, 2001 Community Profiles.

² City of Windsor Planning Department.

³ Statistics Canada.

In 1854 the Great Western Railway was the first railway to reach Windsor. As the chief port-of-entry to the region opposite Detroit, the Town of Windsor (now the downtown area) was chosen as the railway's termination point in 1854.

The railway's arrival resulted in large industries locating in Windsor, including the Hiram Walker distillery at the Great Western Railway's terminus. The Ford Motor Company was established in Windsor in the early 1900's, though it was the period following World War I that the auto industry grew to the dominant position it holds today. In the Second World War, industrial production increased dramatically, attracting many new workers and resulting in substantial residential growth within the City and in the surrounding townships.

There are currently seven rail corridors operating in Windsor, four of which typically operate 24 hours a day.⁴ Many of Windsor's large industries, such as General Motors of Canada, Chrysler Canada, Green Forest Lumber, and Hiram Walker and Sons, continue to use these railways for the delivery of raw materials or the distribution of manufactured goods. Compared to other Canadian cities, Windsor's economy is more reliant on the many active rail lines within municipal boundaries.

The issue of the impacts of cross-border traffic, both rail and road-based, was first raised as a city-wide issue in the early 1960s. The 1963 Windsor Area Transportation Study identified the then current transportation issues as:

- a limited and inadequate street network in the east-west direction generally resulting from several railway barriers;
- a deficient circulation pattern in the downtown area, compounded by inadequate road facilities serving the Windsor-Detroit Tunnel; and
- the lack of an adequate approach roadway system on the Detroit side of the Ambassador Bridge...encouraging through traffic to use the automobile tunnel and infiltrate local city streets.

These local traffic problems coincided with the growth in truck traffic in Ontario, as manufacturing technology changed and the shipment of goods switched primarily from railways to road-based deliveries. By 2001, only 13% of goods, by dollar value, were shipped by railway through Windsor-Detroit.⁵ During this time of industrial change, the use of Windsor's roads also changed --from serving a majority of local needs, to accommodating a high volume of non-local and international traffic.

Throughout the 1960s, 1970s and 1980s, provincial highways were constructed to accommodate this new transportation demand, including the extension to Highway 401. In 1961 trucks were first restricted from Windsor's residential streets, and truck routes were established to help the flow of international freight through the City. Since that time the City has regularly addressed the issue, and based on recommendations dating back to a 1968 study, Windsor has continually made improvements to railway crossings to help ease long roadway delays due to freight train movements.

The Importance of Trade

⁴ Although the railway industry identifies three railway corridors in the City of Windsor, seven separate railway corridor segments are identified in this study. Each of these segments is referred to as a separate corridor in this report.

⁵ Canada-US-Ontario-Michigan Border Transportation Partnership Planning/Need and Feasibility Study Report, 2004.

Canada and the United States are the largest bilateral trade partners in the world. In 2001, 87% of the value of Canadian exports was destined for the United States. Approximately 40% of these exports entered the U.S. through the southwestern Ontario corridors of Detroit-Windsor and Port Huron-Sarnia. The vast majority of trade goods moving between Southeast Michigan and southwestern Ontario are carried by truck. It was recently estimated that, in 2001, the value of two-way trade moving through Windsor was approximately \$127.5 billion.⁶ In sum, Windsor is Canada's single most important trade gateway.

The average daily international traffic passing through Windsor, in 2000 and forecast for the year 2030, is shown below:

	2000	2030
Passenger Cars	51,600	69,300 (34% increase)
Commercial Vehicles	12,800	27,900 (118% increase)

Table 1: International Traffic through Windsor, Current and Forecast

Source: Canada-US-Ontario-Michigan Border Transportation Partnership Planning/Need and Feasibility Study Report, 2004, and Canada-US-Ontario-Michigan Border Transportation Partnership Planning/Need and Feasibility Study, Existing and Future Travel Demand Working Paper, 2004.

Urban Structure

As early as the late 19th century and prior to the establishment of Windsor's road network, numerous railway links, serving largely an international gateway function, were constructed to support a growing industrial economy. The City's urban structure shows, in most cases, a grid pattern of roads overlaid on an axial pattern of railways. Today, this has resulted in the railways cutting through many Windsor neighbourhoods and interrupting the normal grid pattern of land uses.

This relatively unusual circumstance is reflected in the degree to which the railroad lines form the edges of neighbourhoods and act as barriers to local transportation networks. The City's neighbourhoods have evolved around the rail infrastructure that limits and generally negatively affects residential land uses. While roads provide access and serve a variety of social and mobility functions, railway lines generally act only as barriers and produce noise and vibration impacts which may reduce the quality of the residential environment.

⁶ Canada-US-Ontario-Michigan Border Transportation Partnership Planning/Need and Feasibility Study Report, 2004.

3.0 – Land Use Context

As identified by this report there are seven rail corridors running through the City of Windsor, as follows:

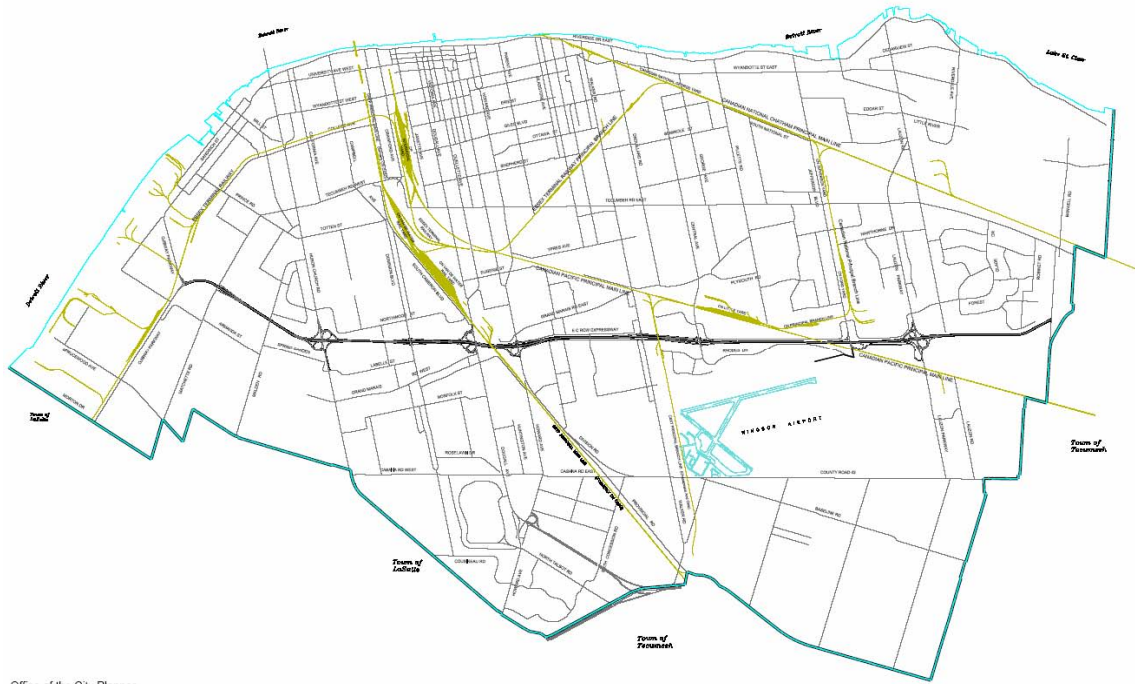
Corridor Name	Approximate Lengths Within City Boundaries
<i>CP Principal Main Line Corridor</i>	14 km
<i>CN Chatham Principal Main Line Corridor</i>	10 km
<i>Essex Terminal Railway Principal Branch Line Corridor (westerly)</i>	8 km
<i>Essex Terminal Railway Principal Branch Line Corridor (easterly)</i>	4 km
<i>CN Principal Branch Line Corridor</i>	4 km
<i>CSXT Principle Branch Line Corridor</i>	5 km
<i>Detroit River Tunnel Partnership Corridor</i>	10 km
TOTAL	55 km

Table 2: Windsor Rail Lines

There are approximately 55 kilometres of rail lines in the City of Windsor, and approximately 11,200 homes within 300 metres of the lines. By comparison, the City of Toronto has approximately 185 kilometres of rail lines. In proportion to its population, Windsor has 3.5 times greater linear extent of railway lines than the City of Toronto.

Most of these corridors were established in the late 19th Century, some as early as the 1850's. As a consequence, the land use and road pattern of the City's neighbourhoods and major employment centres have formed around the railway rights-of-way and, in recent years, have begun to infill lands adjacent to the rights-of-way.

The three dimensional relationship between the rail lines and adjacent uses has evolved over the past 150 years. Though most rail lines are at ground level, some corridors are elevated above ground while others are depressed below street level. The extent of this variation is so broad that potential impacts from non-rail uses on adjacent lands should be assessed on a case-by-case basis. For this reason it is important to require planning approvals so that these potentially significant impacts can be properly assessed



Office of the City Planner

Map 3: Railway Lines in the City of Windsor

Map 3 depicts Windsor's seven railway corridors. A detailed review of the land uses adjacent to each of the railway rights-of-way in the City was undertaken. Appendix 3 contains a larger map with the same information.

Figures 1 through 7 below highlight the land uses adjacent to each of the seven rail corridors.



Current residential (yellow) and institutional (red) land uses



Current industrial and commercial land uses (blue)



Planned future land uses: residential (yellow), institutional (red), industrial (dark blue), commercial (light blue and purple), and open space (green)

Railway lands act as a barrier between residential land uses on the west side of the corridor and industrial/commercial land uses on the east side of the corridor.

Figure 1: Land Use Adjacent to the CN Principal Branch Line Corridor

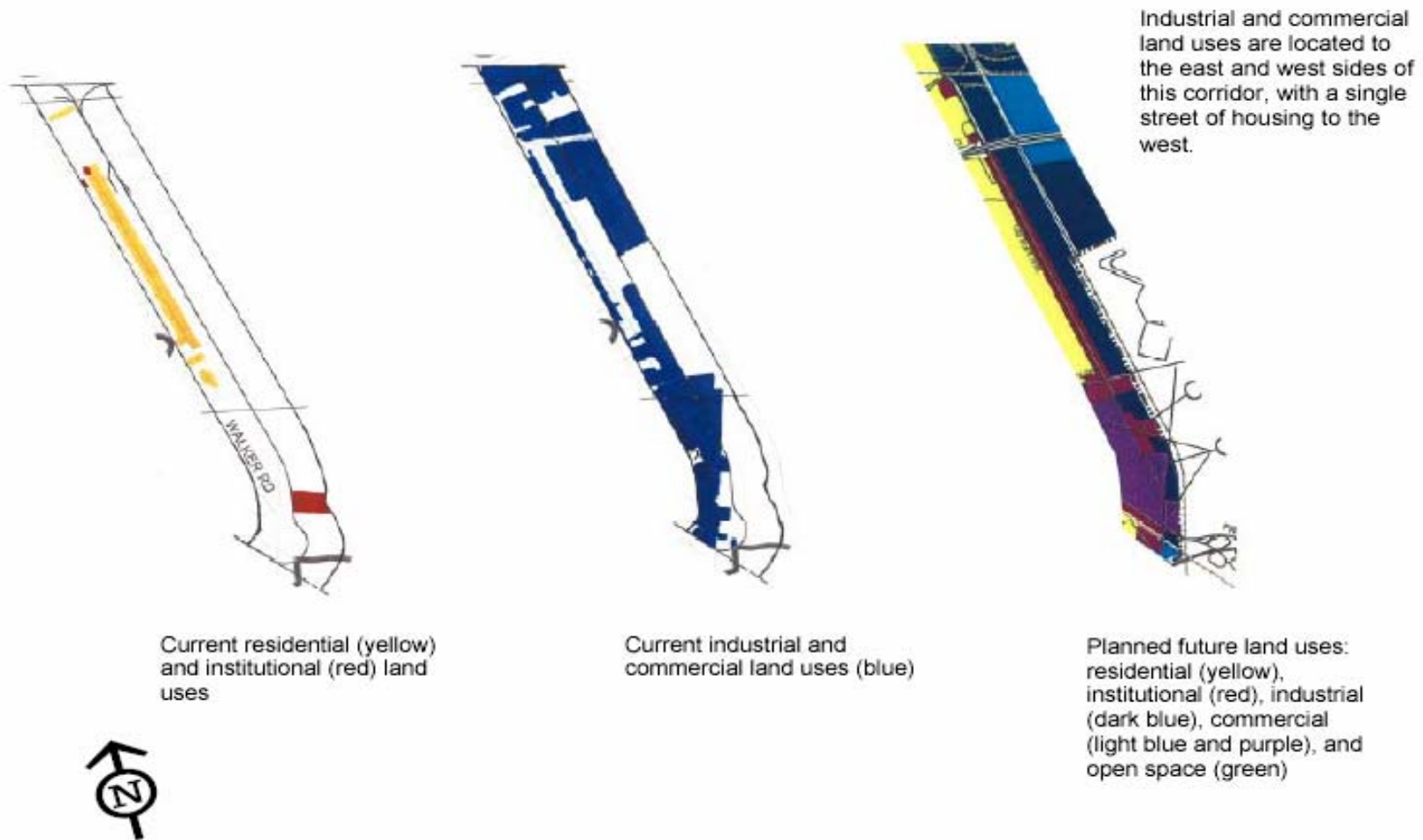
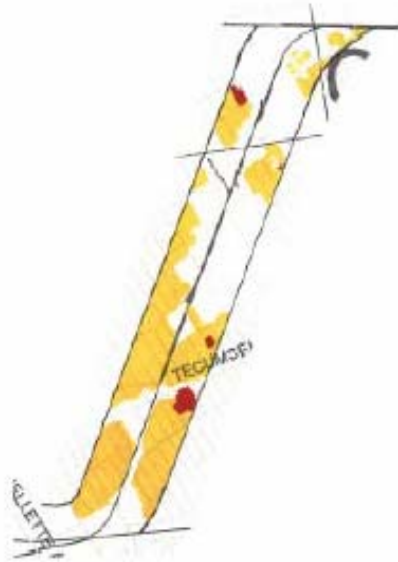


Figure 2: Land Use Adjacent to the CSXT Principal Branch Line Corridor



Current residential (yellow) and institutional (red) land uses



Current industrial and commercial land uses (blue)



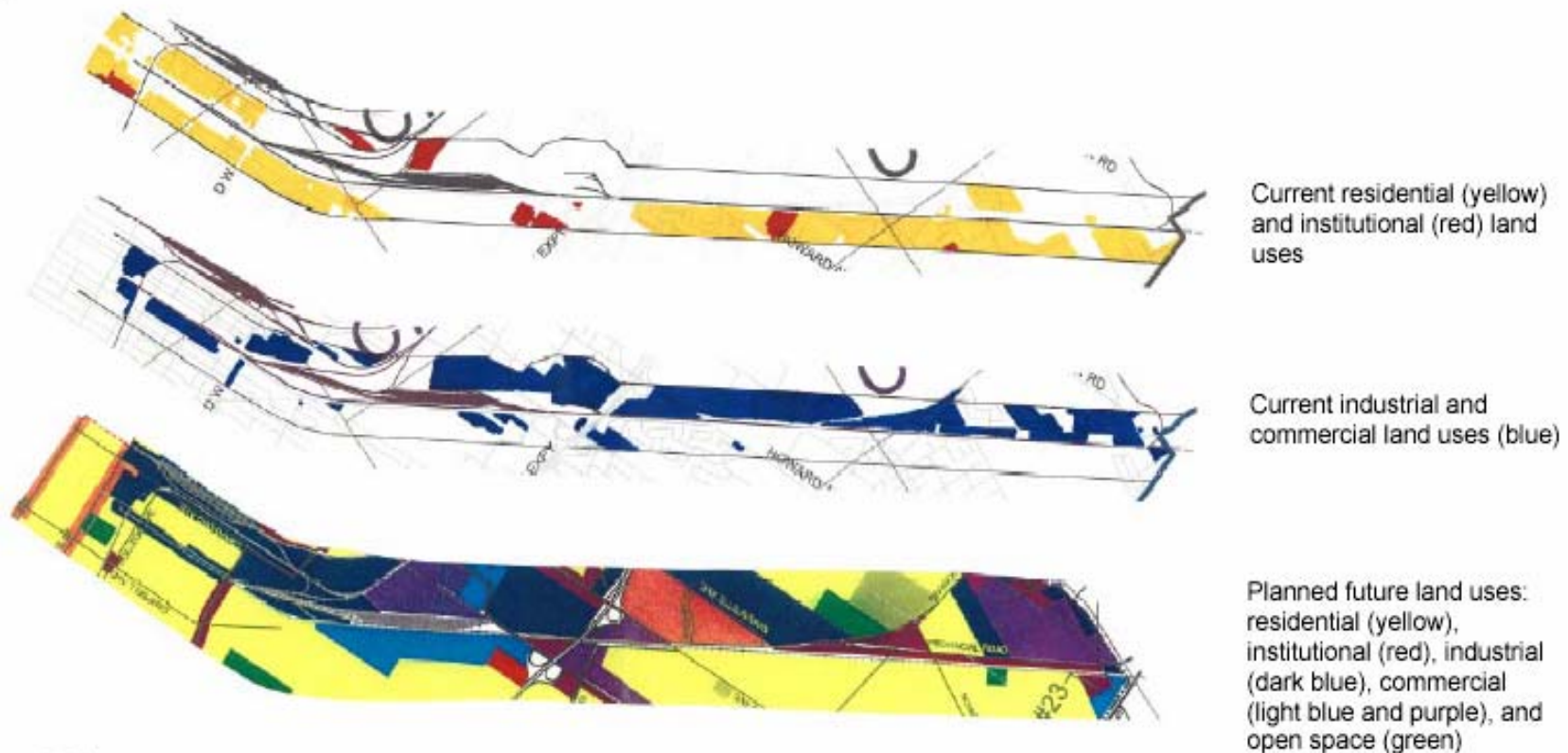
Planned future land uses: residential (yellow), institutional (red), industrial (dark blue), commercial (light blue and purple), and open space (green)

Railway lands in the southern half of this corridor separate a generally contiguous residential area, while to the north the rail lands cross a large mix of uses.

Figure 3: Land Use Adjacent to the Essex Terminal Railway Principal Branch Line Corridor (East)

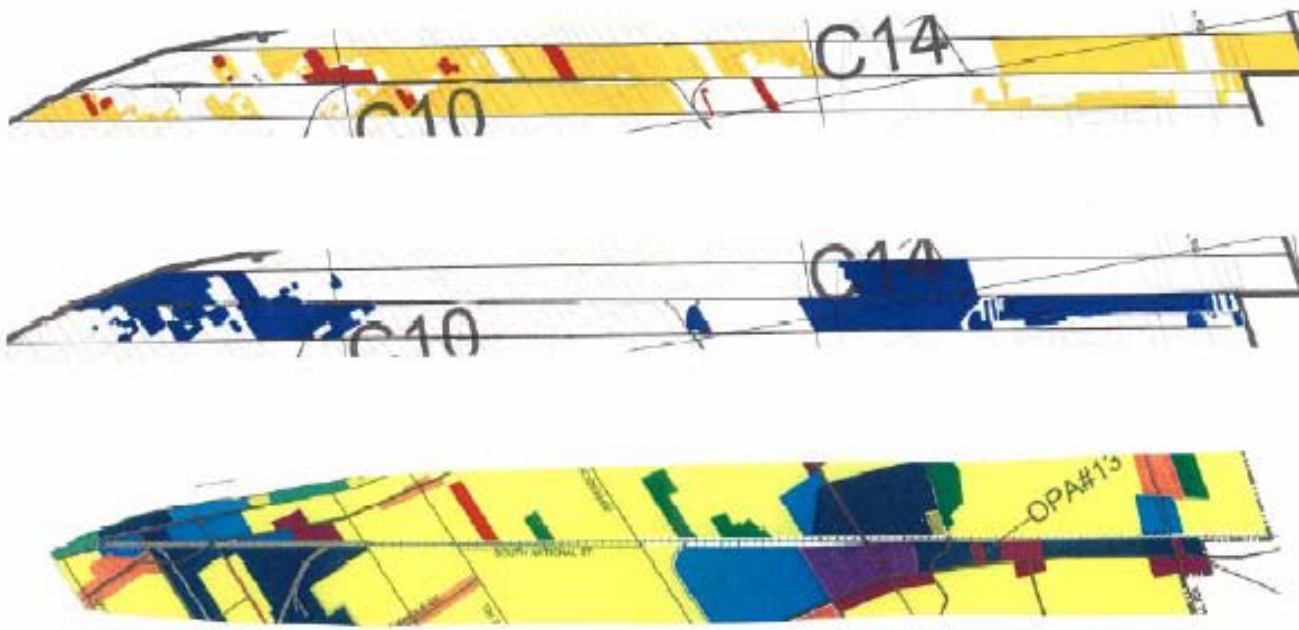


Figure 4: Land Use Adjacent to the Essex Terminal Railway Principal Branch Line Corridor (West)



Railway lands generally act to separate sensitive land uses from industrial / commercial land uses in this corridor.

Figure 5: Land Use Adjacent to the Detroit River Tunnel Partnership Corridor



Current residential (yellow) and institutional (red) land uses

Current industrial and commercial land uses (blue)

Planned future land uses: residential (yellow), institutional (red), industrial (dark blue), commercial (light blue and purple), and open space (green)



The railway lands act as barriers and run through several neighbourhoods along this line.

Figure 6: Land Use Adjacent to the CN Chatham Principal Main Line Corridor

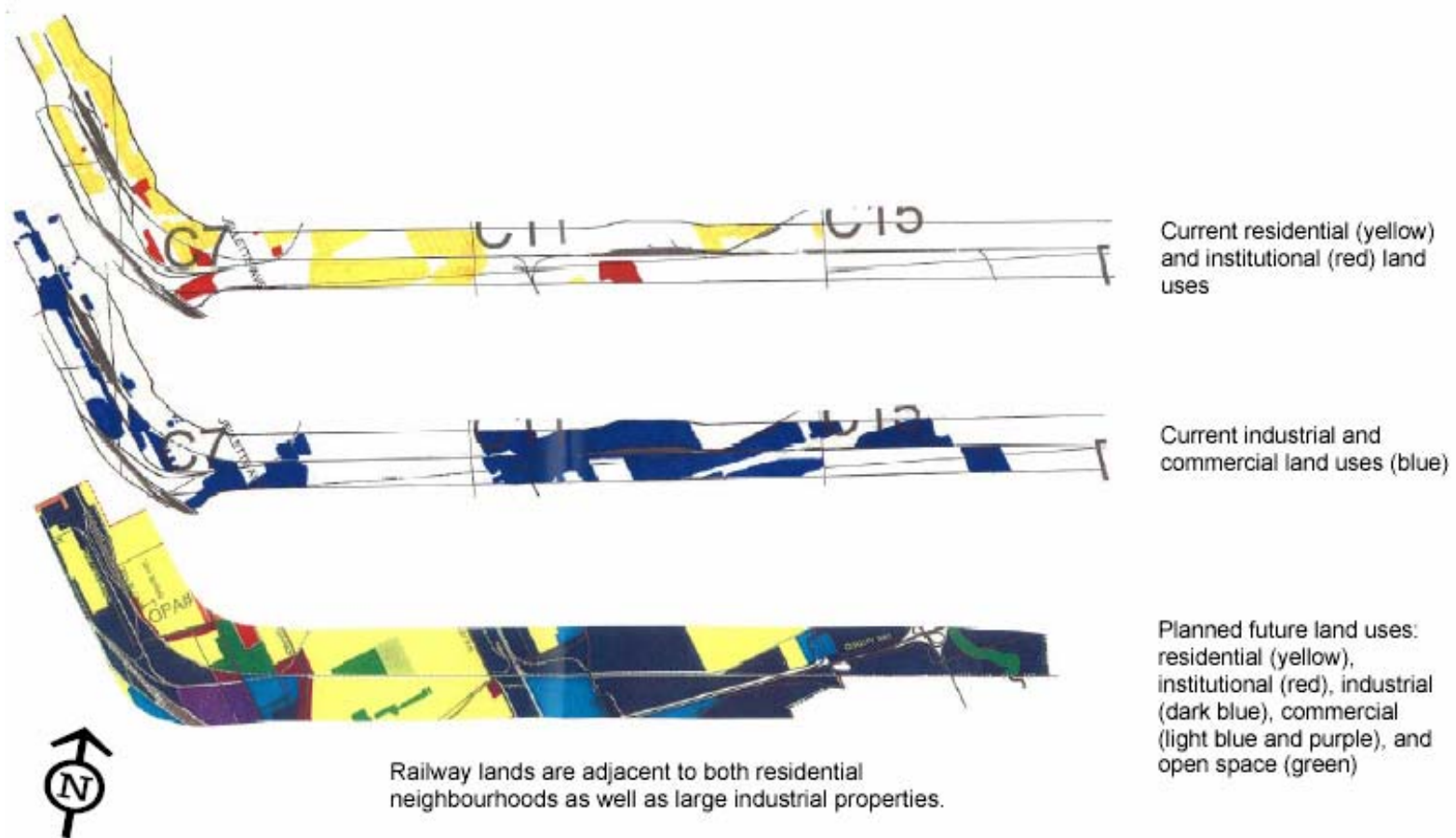


Figure 7: Land Use Adjacent to the CP Principal Main Line Corridor

Summary of Findings – Existing Conditions

In summary terms, the findings as to existing conditions are as follows:

1. Windsor has 55 kilometres of rail lines, an unusually high number. There are approximately 11,200 dwellings within 300 metres of the railway lines, approximately 500 of which directly abut the right-of-way. The 11,200 dwellings represent 12.7% of all dwellings in the City of Windsor.
2. The land uses adjacent to the rail lines represent the broad spectrum of land uses found in the City as a whole. Rail corridors in some cases run through large contiguous areas of industrial uses, in other cases residential communities are divided by a rail corridor, and in others the adjacent land uses are a mix of residential, institutional, commercial and industrial.

4.0 – Potential Impacts

With 11,200 homes located adjacent to rail lines or yards in the City, and 100,040 metres of railway property edge condition (55km of railway corridors in the City), the potential for significant extensive impacts on adjacent properties is evident.

The Geometry of Compatibility

In planning terms, compatibility refers to the relationship and impact of a parcel of land with/on its neighbours. Land uses are deemed 'compatible' when they do not have significant negative impacts on each other – they are capable of harmonious coexistence. The basic implication of the concept leads to the separation of incompatible land uses, and is enshrined in planning policy in every community in Canada.

The shape of land uses and their geometric relationship to each other often leads to differing levels of impact. For example, a 60 metre by 60 metre property (with a total area of 3600 sm.) would have a linear distance of 360 metres that borders other properties (see Figure 1). However, when a property is linear in nature, with, for example property dimensions of 10 by 360 metres (a total area of 3600 sm.) the property will have 740 metres of edge conditions that border with other land uses. Though the two example properties have the same total area, the potential impacts from the linear corridor are greater by a significant multiple.

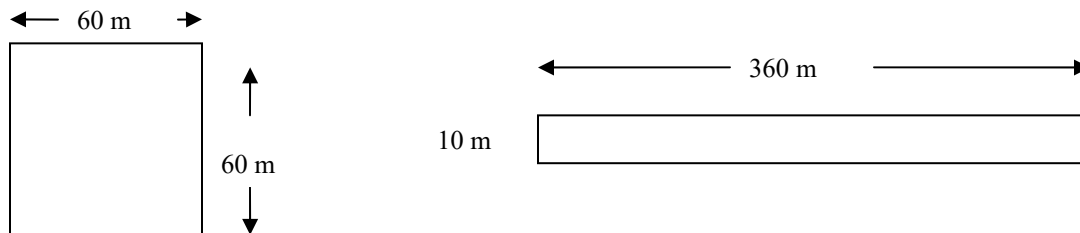


Figure 8: Compatibility of a Linear Corridor

In order to understand the potential extent of noise and air quality impacts resulting from non-rail uses of railway lands two technical modeling exercises were undertaken. These exercises attempted to quantify the nature of potential impacts, both in terms of the level or amount (for example, levels of air pollution), as well as the breadth and extent of potential impacts (how many people could be affected by these impacts). Based on the City's Official Plan Section 5: Environment, development proponents must consider a number of environmental impacts, including atmospheric air quality and noise and vibration impacts. The Plan also notes that provincial legislation, policies and appropriate guidelines must also be considered.

Potential Noise and Vibration Impacts

In order to provide an objective indication of the potential noise emissions from proposed major private road proposals, Valcoustics Canada Ltd. undertook a preliminary predictive assessment of the potential for environmental noise emissions from the operation of the Detroit River Tunnel Partnership project. The preliminary analysis shows that, without mitigation, and without any screening, the potential influence area (i.e., where MOE noise criteria would be exceeded), could extend out more than several hundred metres on each side. Appendix 5 provides a copy of the Valcoustics report with figures that depict the day-time and night-time noise exposure levels due

to truck traffic. Based on the assumptions used in this modeling exercise, the proposed DRTP project (as an example of a truck road) has the potential to produce significant noise impacts on surrounding lands.

Potential Air Quality Impacts

With respect to potential air quality impacts from private road proposals, SENES Consultants Ltd. undertook a preliminary modelling exercise in order to determine the areas and extent of potential air quality emissions which would result from the proposed DRTP project. SENES used the U.S. EPA Industrial Source Complex (Version 3) (ISC 3) dispersion model, and meteorological data from Windsor, to simulate the dispersion of the emissions from the proposed truck corridor into the surrounding areas. The area modelled for air quality impacts includes the proposed corridor from the E.C. Row Expressway up to the entrance of the existing rail tunnel, and a customs plaza, located roughly 2 km north of the EC Row Expressway.

Based on the assumptions used in the modelling, SENES concluded the following:

1. Areas adjacent to the corridor will experience some impacts, including exceedances of provincial Ambient Air Quality Criteria (AAQC).
2. The areas actually subject to air quality impacts would likely be larger than indicated in the numerical results presented below for two reasons:
 - a) the concentrations presented do not include the existing background levels of air pollutants in the Windsor area. If the impacts from the DRTP corridor are added to background levels, the potentially impacted area would likely be larger than presented below; and
 - b) the modeling assumed trucks were traveling at ground level, whereas if the proposed road is above grade (which we understand would be the case for a significant part of its length in order to parallel elevated portions of the rail line) this would also cause a larger area to be impacted by air pollutants than presented below.
3. As shown in Appendix 6, areas adjacent to the corridor will experience TSP concentrations in excess of the provincial standard ($120 \mu\text{g}/\text{m}^3$ averaged over 24-hours) for up to 230 m from the centre of the roadway before the TSP concentrations drops to $120 \mu\text{g}/\text{m}^3$ (i.e., the concentration will be greater than the provincial AAQC for 230 m on each side of the roadway).
4. As shown in Appendix 6, areas adjacent to the corridor will experience PM10 concentrations in excess of the provincial standard ($50 \mu\text{g}/\text{m}^3$ averaged over 24 hours). The maximum distance on either side of the roadway to the point at which the PM10 concentration drops to $50 \mu\text{g}/\text{m}^3$ is 185 m.
5. As shown in Appendix 6, some areas adjacent to the corridor will experience NOx concentrations in excess of the 1 hour standard ($400 \mu\text{g}/\text{m}^3$). The maximum distance from the centre of the roadway to the point at which the NOx concentration drops to $400 \mu\text{g}/\text{m}^3$ is 140 m.
6. As shown in Appendix 6, there are no predicted exceedances of the odour guideline (1 OU/ m^3 averaged over 10 minutes). However, the guideline value of 1 OU is based on the odour intensity that typically results in complaints. The levels at which odours are detected and recognized are much lower. Based on the predicted concentrations, it is likely that diesel odours will be noticeable, on occasion. Also, as discussed previously, this guideline is based on the response of average members (e.g. 50%) of the population.

Some individuals are more sensitive to odours than others. Thus, the more sensitive members of the population in the vicinity of the truck corridor (~200 m) may, on occasion, react adversely to diesel exhaust odours.

These two technical studies highlight perhaps the most quantifiable impacts that a truck road might have. Both studies indicate that the potential impacts associated with the DRTP proposal would be expected to also occur from the Ambassador Bridge parkway proposal, if the same assumptions used in the DRTP studies regarding the grade as well as numbers, types and speed of trucks are applicable to that proposal.

Summary of Findings

1. Due to the geographic extent of the railway corridors, and the pattern of adjacent land uses it is extremely important to assess the potential impacts of proposed non-rail use of railway lands on adjacent uses.
2. Current proposals for non-rail uses of rail lands, such as the proposed DRTP and Ambassador Bridge projects, have the potential to create a range of potentially significant noise and air quality impacts on neighbouring properties.

5.0 – Official Plan Policies – Adequacy in Addressing Non-rail Uses of Rail Lands

This chapter reviews the City of Windsor Official Plan in order to determine the adequacy of policies addressing the potential use of railway lands for non-rail purposes. The DRTP and Ambassador Bridge proposals are also reviewed to determine what guidance is provided by the Plan for such uses, as specific and current proposals for non-rail use of railway lands. The chapter begins by looking at the Official Plan's general objectives, specifically at the Plan's objectives with respect to rail yards and rail corridors, and the adequacy of technical/impact policies. Official Plan policies are then reviewed in light of the DRTP and Ambassador Bridge proposals.

General Objectives/Policies

Use of Railway Lands for Non-Rail Purposes

Schedule D Land Use, provides the basic arrangement of uses for the City. It sets out the locations for residential, commercial, and industrial uses, open spaces and a variety of combinations of land uses. Schedule D and the accompanying policies establish the basic land use regime to be followed in making planning decisions. The Plan is adopted by Council pursuant to the Planning Act. Section 16 of the Act sets out that an Official Plan “*shall contain goals, objectives and policies established primarily to manage and direct physical change and the effects on the social, economic, and natural environment of the municipality....*”

The residential communities and neighborhoods in Windsor are designated on Schedule D as 'Residential', employment areas are designated as 'Business Park', 'Commercial Corridor', 'Mixed Use', 'Commercial Centre' or 'Industrial'. The major automobile plants, for example, are designated 'Industrial', the large retail malls as 'Commercial Centre'.

Rail Yards

There are both Rail Corridors and Rail Yards referenced in the text of the Official Plan, primarily in Section 7 Transportation. However only Rail Yards are actually defined and designated on the Official Plan. The five Yards in the City are designated for a variety of uses, differing by Yard and within Yards. The purposes range from 'Industrial' through 'Residential'. The five Yards are shown in the exhibit below:

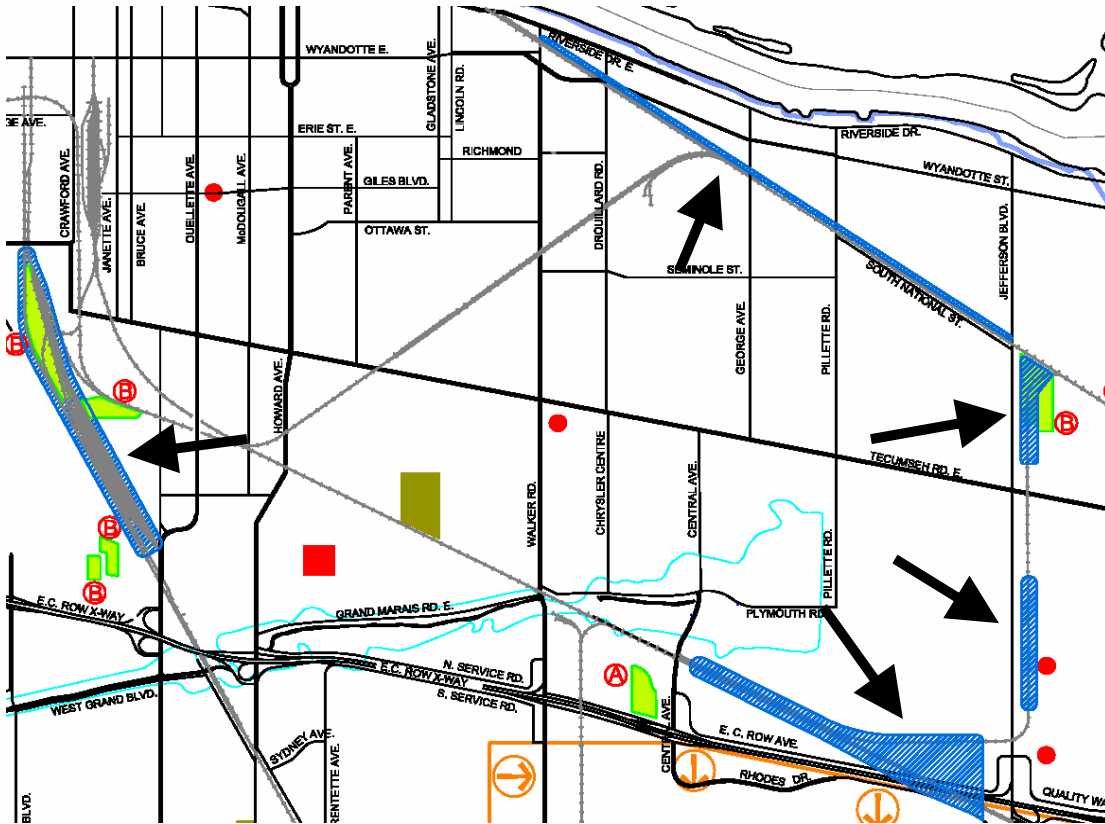


Figure 9: Rail Yards in the City of Windsor

Note: Black arrows indicate the locations of Rail Yards

The definition for rail yards is found in Section 4.4.5.7:

“5.4.5.7 Rail Yard Definition - For the purpose of this Plan, Rail Yard includes the lands associated with a designated rail yard.”

The policy applicable to Schedule C states:

“5.2.2 Schedule C: Development Constraint Areas – The following environmental management designations shall be identified on Schedule C: development Constraint Areas:

(k) Rail Yards (amended by OMB order 1485 – 11/01/2002)”

This policy identifies Rail Yards as a development constraint feature, of a similar nature to floodplains, pollution control plants, and natural heritage features. This recognition is supported by the policies in Section 7.2.6.8 of the Plan which preclude new residential uses within 300 metres of the Rail Yards and require studies and mitigating measures for proposed residential uses located between 300 and 1000 metres of a Rail Yard, as well as studies related to potential vibration and impacts on sensitive land uses. The relevant section reads as follows:

“7.2.8.6 Development Adjacent to a Rail Yard - Council shall protect designated rail yards from Incompatible development. Accordingly, development adjacent to

a Rail Yard designated on Schedule C: Development Constraint Areas will be subject to the following:

a) New residential development and other new sensitive land uses, which require a rezoning (exclusive of a zoning by-law consolidation), plan of subdivision or plan of condominium are not permitted within 300 metres of a designated Rail Yard.

b) All proponents of new residential development and other new sensitive land uses, located between 300 and 1000 metres of a designated Rail Yard (exclusive of the George Avenue Rail Yard unless required by the City), which require a rezoning (exclusive of a zoning by-law consolidation), plan of subdivision or plan of condominium shall complete a noise study to support the proposal, and, if the need for mitigation measures is determined by this study, shall identify and recommend appropriate mitigation measures, in accordance with the Procedures chapter of this Plan;

c) All proponents of new development within 75 metres of a designated Rail Yard shall complete a vibration study to support the proposal, and, if the need for mitigation measures is determined by the study, shall identify and recommend appropriate mitigation measures, in accordance with the Procedures chapter of this Plan;

d) All proponents of new residential development and other new sensitive land uses, within 1000 metres of a designated Rail Yard, which requires a rezoning (exclusive of a zoning by-law consolidation), plan of subdivision or plan of condominium will consult with the appropriate railway company prior to the finalization of any noise and/or vibration abatement study required by this Plan;

e) All proponents of new development abutting a rail yard, which require a rezoning (exclusive of a zoning by-law consolidation), plan of subdivision, plan of condominium or site plan approval, shall incorporate appropriate safety measures such as setbacks, berms and security fencing to the satisfaction of the Municipality, in consultation with the relevant public agency and the appropriate railway company. (amended by OMB order 1485 – 11/01/2002)

7.2.8.7 Safety Measures - All proposed development adjacent to a railway right-of-way or rail yard shall be required to incorporate appropriate safety measures such as setbacks, berms and security fencing to the satisfaction of the Municipality in consultation with relevant public agencies and the appropriate railway company.

7.2.8.8 Consult Railways - All proponents of development within 500 metres of a railway rights-of-ways are encouraged to consult with the appropriate railway company prior to the finalization of any noise and vibration abatement study or development proposal.”

These policies are designed to separate Rail Yards from incompatible uses, generally identified as sensitive land uses and specifically identified as residential uses (Section 7.2.8.6 a),b) and d)). The policies establish means to preclude or minimize impacts where incompatibility is considered to be a given – within 300 metres for residential uses – and where incompatibility may be a

problem but possibly mitigated – between 300 metres and 1,000 metres. Noise, vibration and safety are specifically referenced as impacts of Rail Yards that may cause the incompatibility.

It should be noted that two of the Rail Yards have more than one development constraint feature shown affecting the same area of land. The figure below shows one of these areas:

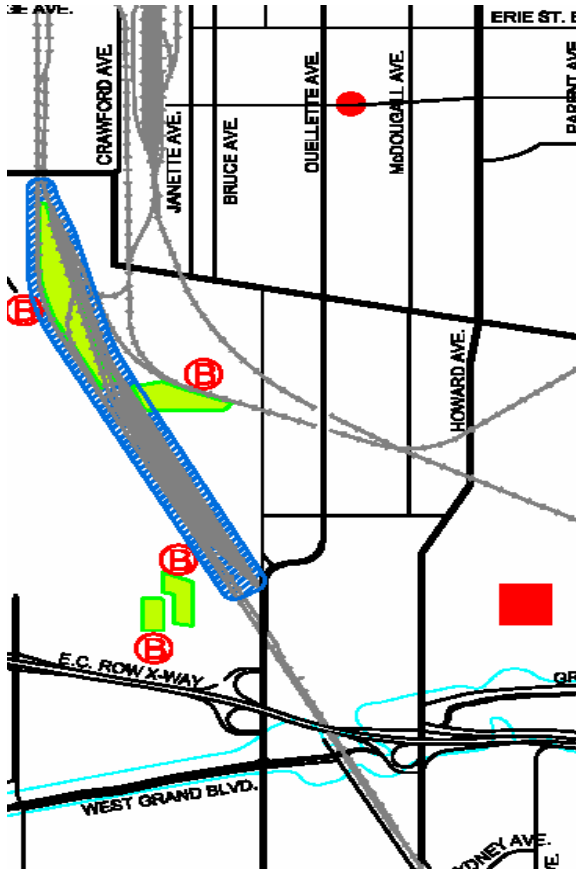


Figure 10: Example: Rail Yard Affected by Other Development Constraints – Extract from Schedule C of the Official Plan

Note: Blue hatched area identifies Rail Yard land constraint. Bright green shading indicates an Environmental Policy Area constraint and olive shading indicates Natural Heritage Area constraint.

Thus the Rail Yard acts as a constraint on the development of adjacent lands while at the same time the Rail Yard lands are constrained in two cases by Environmental Policy Area B features affecting a portion of the Rail Yard lands. One Rail Yard, the Vanderwater Yard, is also the location of a Natural Heritage constraint.

The requirements to address the EPA-B development constraint affecting some of the Rail Yards are provided in Sections 5.3.4.6 and 5.3.4.7:

“5.3.4.6 Development Proposals Within an EPA A or B - Proponents of development or infrastructure undertakings within an Environmental Policy Area A or B shall be required to complete an Environmental Evaluation Report or other suitable study to the satisfaction of the Municipality in accordance with the Procedures chapter of this Plan.

5.3.4.7 Adjacent Lands - The Municipality may require proponents of development on lands adjacent to an Environmental Policy Area A or B to complete an Environmental Evaluation Report or other suitable study to the satisfaction of the Municipality in accordance with the Procedures chapter of this Plan. The identification of adjacent lands subject to this requirement will be determined by the Municipality on a site-specific basis, with regard to provincial legislation, policies and appropriate guidelines, and in accordance with policy 10.2.5.4 of this Plan.”

These policies would require any non-rail use on certain Rail Yards that were subject to a planning application to prepare an Environmental Evaluation Report or other study to address the specific issue.

The designations on Schedule D represent Council’s long-range land use objectives for the use of the Rail Yards. It is important to note that in some cases the designations on Schedule D are different than the existing uses, indicating Council’s objective for a specific land use. For example while the Vanderwater Yard is designated on Schedule D, Land Use as Industrial, some of the Yard on the CN Chatham Principal Main Line Corridor at South National and Jefferson Boulevard is designated as ‘Residential’ and the remainder as ‘Business Park’.

While Schedule D shows some of the Rail Yard areas with a designation for a future use, some of the Rail Yard lands are left white, or without a designation. In addition some of the Rail Yard lands are simply shown with railway line symbols, again without a land use designation. However much of the Rail Yard lands are designated, and the Plan shows environmental constraints in some of the Yards. As such there are currently in place land use policies and objectives for some Railway Yard lands that anticipate non-rail uses.

Rail Corridors

The Rail Corridors, as distinct from the Rail Yards, appear not to be designated for a use by the Official Plan. The Corridors are indicated by a railway track symbol on Schedule D but do not have an overlying colour indicating a designation. Discussions with a former City of Windsor staff member indicate that the lack of a designation is the result of a decision to make the railway line symbol visible, rather than a specific intent to have no applicable designation. Apparently the intent was to have adjacent designations extend to the centre line of the rail corridors.

In any case, this lack of designation is unique to the Plan and leaves the lands involved without any policy directing future uses. Two typical examples are shown enlarged in the exhibit below:

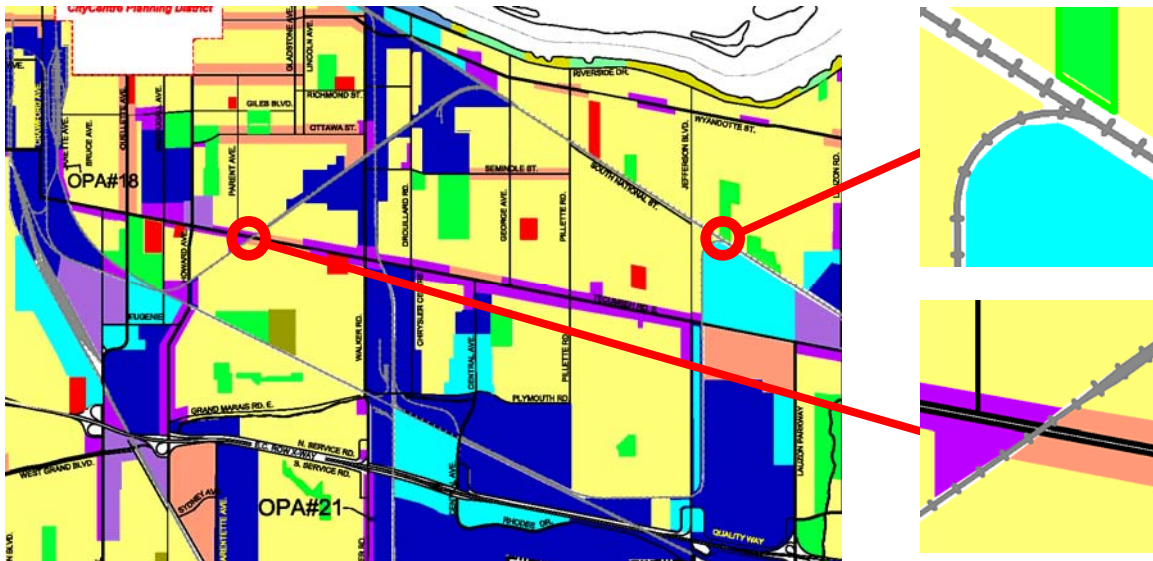


Figure 11: Rail Corridors Are Not Given Land Use Designations

While the Rail Corridors are not designated for a land use by the Plan, Section 7.2.8.5 establishes the policy framework for development adjacent to a Rail Corridor. This section reads as follows:

“7.2.8.5 Development Adjacent to a Corridor - Council shall evaluate a proposed development adjacent to a Rail Corridor, in accordance with the following:

a) All proponents of a new development within 300 metres of a rail corridor, may be required to complete a noise study to support the proposal, and if the need for mitigation measures is determined by such study, shall identify and recommend appropriate mitigation measures, in accordance with the Procedures chapter of this Plan.

b) All proponents of new development, located within 75 metres of a rail corridor, shall complete a vibration study to support the proposal, and if the need for mitigation measures is determined by such study, shall identify and recommend appropriate mitigation measures, in accordance with the Procedures chapter of this Plan.

c) All proponents of new development adjacent to a rail corridor will consult with the appropriate railway company prior to the finalization of any noise or vibration study required by this Plan.

d) All proponents of new development abutting a rail corridor, which require a rezoning (exclusive of a by-law consolidation), plan of subdivision, plan of condominium or site plan approval, shall incorporate appropriate safety measures such as setbacks, berms and security fencing to the satisfaction of the Municipality, in consultation with the relevant public agency and the appropriate railway company. (amended by OMB order 1485 – 11/01/2002)”

The policies that apply to development adjacent to a Rail Corridor are very similar to those related to Rail Yards except that the Rail Corridor policies do not preclude residential uses, although they

do require noise studies for all forms of development that are proposed within 300 metres, and vibration studies for all forms of development within 75 metres. These policies again recognize the potential incompatibility between new uses and rail uses, establishing the criteria in order to properly manage land use change.

Abandonment

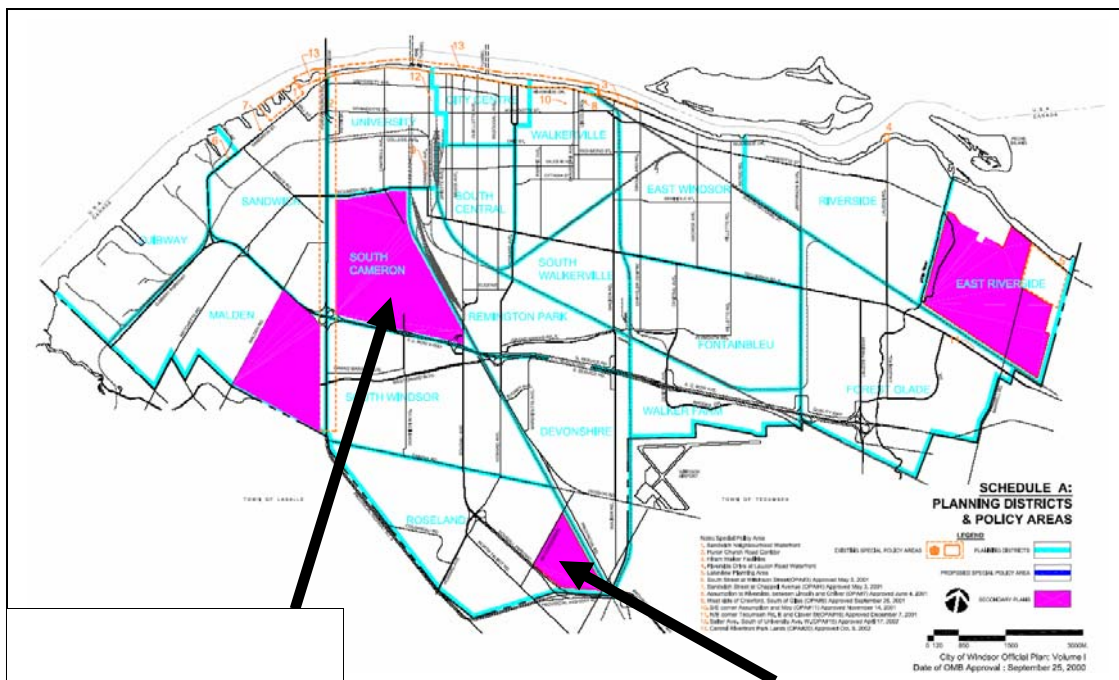
The Official Plan only contemplates the use of Rail Corridor lands for non-rail purposes through the process of abandonment. Section 7.2.8.4 reads as follows: *“Abandoned Rights-of-Way - Council shall encourage the reuse of abandoned railway rights-of-way for the enhancement of the transportation system, the Greenway System and other uses as appropriate.”* This policy realistically recognizes that linear corridors provide access through urban areas and may be used for a variety of purposes given their linear nature. It is important to note that the presumption of abandonment brings with it the opportunity for the City to acquire the land through the abandonment process.

General Policies

In addition to the relatively specific policies discussed above there are also a series of objectives and criteria generally related to the goal of compatibility that would apply in the case of proposals that do not conform to the Plan. While in general terms the Plan anticipates a process of approval for land use changes that are not contemplated by the Plan, these policies are too general to provide direction for land use change in Rail Yards and Corridors.

Secondary Plan Policies

The Official Plan also contains more detailed policies for two planning areas which are the locations of railway corridors. The map below indicates the boundaries of the North Roseland and South Cameron planning areas.



**North Roseland
Planning Area**

Map 4: South Cameron and North Roseland Planning Areas

North Roseland Planning Area

The North Roseland Planning Area abuts the DRTP corridor to the west, at the most southerly portion of Windsor. As noted in Section 3.3.3 Volume II of the Official Plan, most of the area is designated and zoned for residential use.

Sections 3.3.6 and 3.6.10 of the policies applying to the North Roseland Planning Area deal with potential noise and vibration impacts due to road and railway operations.

3.5.2 Noise and Vibration Protection – Facilitate noise/vibration reduction from roads and rail and protect future residents from unacceptable levels of noise/vibrations.

3.6.10 Noise Controls – Provide adequate noise control to reduce noise pollution, vibrations from railway tracks and highways by utilizing minimum intrusive features and appropriate subdivision designs/site plan layouts.

Section 3.7.7.7 is the only location in the City's planning documents where the use of roads as through truck routes is raised as an issue.

*3.7.7.7 Proposed Class II Collector Road - A Class II Collector Road (22 metre wide road right-of-way) is proposed to link Walker Road and Sixth Concession Road at Ducharme Street. Similarly a Class II Collector Road link is proposed from Holburn at Sixth Concession Road to Walker/Sixth Concession Class II Collector Road. Similarly another Class II Collector Road link is proposed to link the north and east sections of Walker/Sixth Concession Class II Collector Road. The location of Low Profile Residential lot frontages shall be avoided on Class II Collector Roads and these collectors **shall not be used as a through truck route.** (emphasis original)*

South Cameron Planning Area

Several policies in the South Cameron Planning Area also raise the issue of noise impacts from roads and railway tracks.

4.5.5 Noise Protection – Facilitate noise reduction in development and protect residents from unacceptable levels of noise.

4.6.8 Noise Pollution – Reduce noise pollution from railway tracks and highways by utilizing minimally obtrusive features.

4.7.10 Environment - Noise pollution from surrounding roads and railway tracks is a serious problem and appropriate measures are required.

These policies recognize the local issues of noise pollution from road and railway sources in the South Cameron area.

Technical Criteria/Impact Policies

Noise and Vibration

The Official Plan considers noise and vibration as potential impacts requiring review as part of the development approval process.

“5.4.5.1 Regard for Noise and Vibration - Council shall require the proponent of development in proximity to existing or proposed sources of noise and vibration to evaluate the potential negative impacts of such noise and vibration on the proposed future land use. In determining the exact distances for the application of this policy, the Municipality shall have regard to provincial legislation, policies and appropriate guidelines.”

Official Plan policies on potential noise and vibration impacts are further detailed in Section 10.2.11 of the Plan, which states:

“10.2.11 Noise and/or Vibration Study

10.2.11.1 Purpose - The purpose of a Noise and/or Vibration Study is to demonstrate that a proposed development may proceed in such a manner that the public is protected from unacceptable levels of noise and vibration associated with uses such as industrial operations, public highways, rail corridors and yards, and airports.

10.2.11.2 Study Components - Where a Noise and/or Vibration Study is required, such a study should:

(a) Assess the existing and predicted noise and vibration levels on the site, identify and recommend various abatement measures, warning clauses, and/or other appropriate measures, which can be implemented and secured by way of zoning, site plan approval and/or development agreement.”

It is important to understand the distinction between assessing the impacts of a new source of noise or vibration as opposed to assessing the degree to which a new use would be affected by existing noise and vibration sources. While the policies in Section 10.2.11 primarily assume the existence of the source of noise and/or vibration, they apparently do not address situations in which the new development that is proposed may be a cause of impacts. Potential sources of noise or vibration would be subject to the following policies in this Section which establish the need to have regard for provincial standards and approvals:

“(b) Have regard to relevant provincial legislation, policies and appropriate guidelines.

10.2.11.3 Certificate of Approval - In circumstances where statutory provincial approvals for noise and vibration are required, the Municipality will ensure that a Certificate of Approval is sought and obtained before development proceeds.”

These policies confirm the basic principle that compatibility, in terms of noise and vibration impacts is an important criteria in reviewing proposals for development, with the policy being expressed as protecting the public from “*unacceptable levels of noise and vibration*”. These policies should be clarified and broadened to ensure they deal with potential new sources of noise and/or vibration.

Air Quality

There are specific policies in the Plan dealing with air quality that place the onus on a proponent to minimize impacts. These are found in Section 5.3.7.2 and read as follows:

“5.3.7.2 Reduce Air Pollution - Council will contribute to the reduction of air pollution by using the following land use planning approaches:

(b) regulating development which has the potential to increase atmospheric pollution in accordance with the Land Use chapter of this Plan.”

These policies again confirm the basic principle that compatibility, in terms of air quality, is an important criteria in reviewing proposals for development. They support further measures to enable the City to appropriately apply the land use planning process to proposals such as the DRTP truckway and Ambassador Bridge proposals, which have “the potential to increase atmospheric pollution”.

Areas in Transition

While there are no criteria specifically addressing the non-rail use of Rail Corridors the Plan does contemplate change in older/abandoned Industrial or Business park areas by establishing a series of criteria for Council to use in assessing such proposals. These are found in Section 6.4.2.7:

“6.4.2.7 Areas in Transition - Council may support the redevelopment of older and/or abandoned Industrial or Business Park areas to other land uses provided:

(a) the proponent can demonstrate that:

(i) the redevelopment of the area would not be detrimental to other Industrial or Business Park uses still operating in the area; and

(ii) the redevelopment of the area is in keeping with the long term transition of the entire area to similar uses;

(b) the environmental conditions of the site do not preclude development (see Environment chapter); and

(c) subject to an amendment to this Plan that is consistent with the appropriate policies for the desired land use.”

These are reasonable policies that address the potential for significant change in industrial areas requiring that existing similar uses are not negatively impacted, that the proposed uses are consistent with the long-term goals for the area, and that environmental conditions are appropriate. These policies also require an amendment to the Plan, a necessary process due to the significance of the potential change. This section is an example of some of the policies that would be appropriately applied to potential non-rail uses of rail lands. These policies anticipate change, provide some general direction from Council, include general criteria, and require a further planning process through an Official Plan amendment.

Summary of Findings

1. The Official Plan designates five Rail Yards for a variety of land uses, differing by Yard and within the Yards. The purposes range from 'Industrial' through 'Residential'. As such there are currently in place some land use policies and objectives for some Railway Yard lands that anticipate non-rail uses. The Official Plan considers Rail Yards to be a development constraint on adjoining land uses due to the potential impacts of noise and vibration and due to safety concerns.
2. The Official Plan does not specifically designate the Rail Corridors for any use. The Plan generally recognizes rail uses in many ways, the various Schedules show all of the Rail Corridors with a rail line symbol, but there is no specific land use permission granted by the Plan for the Corridors. This lack of permission is consistent with the inability of a local government to directly regulate railway use of railway lands. That is, where there is no authority to regulate there is no purpose nor need for policies permitting the use.
3. The conversion of Rail Corridors to non-rail uses would essentially be without policy guidance under the current Official Plan, except in anticipation of abandonment. In this case the Plan contemplates some form of transportation use, greenbelt or open space use or "other uses as appropriate".
4. The Plan clearly recognizes the potential impacts from rail use of the rail corridors by establishing a series of policies to ensure that new uses are not established in proximity to the corridors without studies to identify the degree of impacts and the need for mitigating measures.
5. While in general terms the Plan anticipates a process of approval for land use changes that are not contemplated by the Plan, these policies are too general to provide direction for land use change in Rail Yards and Corridors.

Official Plan Policies and the Conformity of DRTP/Ambassador Bridge Proposals

As identified earlier, Schedule D of the Official Plan provides no direction for non-rail uses of Rail Corridor lands, as such only the more general policies of the Plan can provide some insight as to the intention for non-rail uses. The following text comments on these policies and the direction they provide in considering the specific proposals by DRTP and the Ambassador Bridge for new truck facilities related to a border crossing.

2.0 Glossary – Infrastructure consists of both the transportation system and physical services.

This policy identifies that infrastructure is defined to include the transportation system (see below) and physical services. No distinction is made between public or private ownership.

2.0 Glossary – Transportation System refers to all modes of transportation and their corresponding facilities, including walking, cycling, public transportation, roads, border crossings, rail, air and water transportation.

This definition describes what is contemplated as part of the City of Windsor's transportation system. While both the DRTP proposal and Ambassador Bridge proposal could be considered to meet that definition, such proposals would of course be required to be in conformity with other aspects of the Plan.

3.1 Vision - The Corporation of the City of Windsor's and Council's commitment to the vision is reflected in an action strategy centred around four interrelated themes, namely:

(a) safe, caring and diverse community - Windsor's neighbourhoods are the foundation of our community, each with their own character, scale and sense of place, people, as well as a range of services and amenities. To develop a safe, caring and diverse community, the Official Plan supports positive physical change in our neighbourhoods which respects and improves the existing historical, physical, social, economic and environmental character of these areas.; and

(b) vibrant economy - Windsor is an international gateway and major manufacturing centre located at the heart of the Great Lakes. To support a vibrant economy, the Official Plan will ensure that Windsor maximizes its geographic and community advantages conducive to economic diversification and growth.

(c) sustainable, healthy environment - Windsor values harmony between human activities and natural systems. To achieve a sustainable, healthy environment, the Official Plan will enhance Windsor's natural environment by conserving the most environmentally significant and sensitive areas and by encouraging appropriate urban development.

These themes are three of four overarching vision statements that constitute the City's future vision. They highlight the balance that must always be struck in providing for a 'vibrant economy' while ensuring that 'physical change'...respects, improves the existing character of neighborhoods and does not create adverse health impacts.

3.2 Principles

3.2.1 Neighbourhoods – Developing and strengthening neighbourhoods is the foundation for land use planning in Windsor.

3.2.2 Economy - Establishing a diverse and sustainable economy is fundamental to the overall well-being of Windsor.

3.2.10 Transportation - Providing a sustainable transportation system enhances physical mobility and ensures that the economic, social and environmental needs of Windsor are being met.

3.2.11 International Gateway - Providing for the efficient multi-modal cross border movement of people and goods strengthens Windsor's role as an international gateway.

3.2.12 Infrastructure - Adequate and well maintained sewers, roads, watermains and other infrastructure are essential to a healthy population, environment and vibrant economy.

3.2.16 Flexible Approach - Changes in the economy, environment and society require innovative and flexible approaches to land use planning that recognize that the use of land and buildings will change and evolve over time.

These principles represent relevant value statements as part of the qualitative framework supporting the vision themes, and are intended to manage the City's physical growth and development and achieve the community vision. Principles which support economic growth, infrastructure and cross border movements are to be balanced with principles which respect land use compatibility in order to strengthen neighbourhoods and ensure that social and environmental needs are being met.

Land Use compatibility as an objective is referenced early in the Plan in Section 3.3:

3.3 Growth Concept - Compatible residential, commercial and employment growth will be directed to appropriate locations within existing and planned neighbourhoods to reduce development and infrastructure costs and provide opportunities to live, work and shop in close proximity.

Several sections of the Plan deal with specific types of impacts related to compatibility. Section 5.3.1.11 establishes Council's objectives related to air quality.

5.3.1.11 Air Quality - To improve atmospheric air quality through the planning process.

Section 5.3.7 specifically deals with potential air quality impacts.

5.3.7 Atmospheric Air Quality Policies

5.3.7.2 Reduce Air Pollution - Council will contribute to the reduction of air pollution by using the following land use planning approaches:

- (b) regulating development which has the potential to increase atmospheric pollution in accordance with the Land Use chapter of this Plan;*

Noise attenuation is also referenced as an objective in Section 5.4.1.5.

5.4.1.5 Noise Attenuation – To protect the residents of Windsor from unacceptable levels of noise which may negatively impact their health and well being.

The Plan deals specifically with compatibility of uses adjacent to railway uses. The following series of policies essentially place a priority on the railway use of lands over any proposed uses, precluding housing within certain distances and requiring mitigating measures to ensure that sensitive uses are not impacted by the railway uses. This priority of the rail use over any new uses stems from the currency of the rail activity thus placing the onus on the proposed new use to conform to standards protecting the operation of the existing use.

5.4.5 Noise and Vibration Policies

5.4.5.7 Rail Yard Definition - For the purpose of this Plan, Rail Yard includes the lands associated with a designated rail yard. (amended by OMB order 1485 – 11/01/2002)

5.4.5.8 Refer to Transportation Chapter - Council shall evaluate a proposed development adjacent to a Rail Yard designated on Schedule C: Development Constraints, in accordance with the Transportation chapter of this Plan. (amended by OMB order 1485 – 11/01/2002).

Despite these policies pertaining to Rail Yards the Plan does not extend this priority of use to non-rail uses of the railway lands. The policies are instructive in the importance placed on not creating incompatible relationships between uses.

Section 6.4 deals with Employment uses, establishing the Industrial and Business Park designations:

6.4 Employment

Employment lands provide the main locations for business and industrial activities. In order to strengthen Windsor's economy, meet the land and infrastructure needs of employment activities and address concerns over compatibility, employment land uses are provided under two designations on Schedule D as either Industrial or Business Park.

While the Rail Corridors are not designated, the Industrial Policies of the Plan provide some insight into the nature of the current rail use and Council policy applicable to the establishment of a new industrial use with potential impacts similar to that of the DRTP and Ambassador Bridge proposals. The Plan defines the nature of industrial uses in Section 6.4.3:

6.4.3 Industrial Policies

6.4.3.1 Permitted Uses - Uses permitted in the Industrial land use designation identified on Schedule D: Land Use include establishments which may exhibit any or all of the following characteristics:

- (a) large physical size of site or facilities;*
- (b) outdoor storage of materials or products;*
- (c) large production volumes or large product size;*
- (d) frequent or continuous shipment of products and/or materials;*
- (e) long hours of production and shift operations;*
- (f) likelihood of nuisances, such as noise, odour, dust or vibration;*
- (g) multi-modal transportation facilities;*
- (h) is dependent upon, serves or otherwise complements the industrial function of the area; and (amended by OPA #22 –07/16/02)*
- (i) service and repair facilities. (amended by OPA #22 – 07/16/02)*

Given the nature of the uses anticipated in the Industrial designation the Plan goes on to provide criteria for appropriate locations, generally stressing the need to avoid impacts on adjacent uses. The Locational Criteria are found in Section 6.4.3.3

6.4.3.3 Locational Criteria – Industrial development shall be located where:

- (a) the industrial use can be sufficiently separated and/or buffered from sensitive land uses;*
- (b) there is access to an arterial road;*
- (c) full municipal physical services can be provided;*
- (d) industry related traffic can be directed away from residential areas;*
- (e) peak period public transportation service can be provided; and*
- (f) there is access to designated truck routes.*

This policy establishes Council's criteria to minimize the impacts of industrial uses by requiring locations that can be sufficiently separated or buffered from sensitive uses and that can be accessed without affecting residential areas. In addition to these locational criteria Council requires a proponent proposing a new industrial use to demonstrate the following:

6.4.3.4 Evaluation Criteria - At the time of submission, the proponent shall demonstrate to the satisfaction of the Municipality that a proposed industrial development is:

- (a) feasible having regard to the other provisions of this Plan, provincial legislation, policies and appropriate guidelines and support studies for uses:
 - (i) within or adjacent to any area identified on Schedule C: Development Constraint Areas and described in the Environment chapter of this Plan;*
 - (ii) within a site of potential or known contamination;*
 - (iii) where traffic generation and distribution is a provincial or municipal concern; and*
 - (iv) adjacent to sensitive land uses and/or heritage resources.**
- (b) in keeping with the goals, objectives and policies of any secondary plan or guideline plan affecting the surrounding area;*
- (c) capable of being provided with full municipal physical services and emergency services;*
- (d) provided with adequate off-street parking; and*
- (e) compatible with the surrounding area in terms of siting, orientation, setbacks, parking and landscaped areas.*

Non-rail uses of an industrial or similar nature if proposed on the various Rail Corridors, because of their extent and large number of adjacent uses, would bring into play most of the above policies. Several Corridors are within or adjacent to Environmental Policy Areas as shown on Schedule C. Several known or suspected former waste disposal sites are immediately adjacent to Rail Corridors. Traffic generation is a concern in much of the City. Three of the City's Secondary Plan areas are bordered by Rail Corridors.

Perhaps most importantly, the final criteria of 6.4.3.4, (e) requires that any industrial development is compatible with the surrounding area. This policy further details the general statement earlier in the Chapter on employment which is Section 6.4.1.3:

6.4.1.3 Compatible Development – To ensure that employment uses are developed in a manner which are compatible with other land uses.

In summary, Section 6 of the Official Plan sets out a series of tests for Council to consider when industrial development is proposed on lands not currently designated for that purpose. These are the type of policies that could be applied in the future when considering non-rail uses of rail lands that may cause impacts of a similar nature, such as the proposed truck routes.

Section 6.4.3.5 further details Council's intent to ensure that industrial uses minimize potential impacts

6.4.3.5 Design Guidelines – The following design guidelines shall be considered when evaluating the proposed design of an Industrial development:

- (a) the ability to achieve the associated policies as outlined in the Urban Design chapter of this Plan;*
- (b) the provision of appropriate landscaping or other buffers to enhance:
 - (i) all parking lots, and outdoor loading, storage and service areas; and*
 - (ii) the separation between the industrial use and adjacent sensitive uses, where appropriate.**
- (c) motorized vehicle access is oriented in such a manner that industry related traffic will be discouraged from using Local Roads where other options are available;*
- (e) loading bays and service areas are located to avoid conflict between pedestrian circulation, service vehicles and movement along the public right-of-way; and*

This policy establishes the design criteria for minimizing industrial land use impacts, again re-enforcing the need for separation between industrial and sensitive land uses.

There is no question that the proposals by DRTP and the Ambassador Bridge potentially would generate impacts of a similar nature to those contemplated by Section 6.4.3 and thus would appropriately require an Official Plan amendment from the perspective of meeting Official Plan objectives dealing with conformity.

There are a series of policies in the Official Plan that deal with the broader transportation network and the City's policies related to a variety of transportation modes.

7.2.1.2 Integrated Transportation System – To provide for the integration, coordination and extension of the transportation system within, to and from Windsor.

7.2.1.3 Transportation Corridors – To protect long-term transportation corridors and their ancillary facilities (amended by OMB order 1485 – 11/01/2002).

7.2.1.4 Truck Routes – To establish safe and efficient truck routes within and through Windsor.

7.2.1.11 International Gateway – To uphold and advance Windsor's role as Canada's foremost international gateway.

7.2.1.12 Rail Service – To support the provision of freight and passenger rail service to Windsor.

The above policies identify the Official Plan's objectives with regards to the provision of the City's transportation system and clearly support the establishment of 'safe and efficient' truck routes that serve the gateway function.

7.2.2.1 Transportation System Definition – For the purposes of this Plan, the Transportation System refers to all modes of transportation and their corresponding facilities, including walking cycling, public transportation, roads, border crossings, rail, air and water transportation

This policy defines what is contemplated as part of the City's transportation system. While a major private road would fall within this definition, it would of course be required to comply with all other aspects of the Plan.

7.2.2.2 Schedule F: Roads and Bikeways

This schedule designates the road and bikeway elements of the transportation system. It would be appropriate to require any major private road, such as those proposed by DRTP and the Ambassador Bridge, to be indicated on this Schedule. This would require an amendment to the schedule as well as the establishment of a new category of road in the Plan.

7.2.2.4 Cooperation and Coordination - Council shall work to achieve the coordinated planning, expansion and maintenance of the transportation system in cooperation with other public agencies and private organizations.

Policy 7.2.2.4 encourages the participation of private organizations in providing the transportation needs of the City.

The Official Plan has some policies that deal directly with trucking and border crossing issues. Section 7.2.2.8 speaks to Council's long term concern regarding the impacts of truck traffic on sensitive areas and the need to balance these impacts against the practical reality that business and industries require truck access to function.

7.2.2.8 Truck Route System - Council shall establish and manage a truck route system to minimize the intrusion of trucks into sensitive areas while providing acceptable access to businesses and industries.

This policy encourages the delineation of trucking activity as a separate activity within the transportation system, and notes that this activity should be separated from sensitive land uses where possible. This policy is directly applicable to the DRTP and Ambassador Bridge proposals requiring that the intrusion of trucks into sensitive areas be minimized. The impact of trucking is further dealt with in Section 7.2.2.9.

7.2.2.9 Truck Access - Council recognizes that while truck access is necessary for some properties, the adverse effects of truck traffic shall be minimized by:

- (a) discouraging truck traffic in residential and pedestrian oriented areas;*
- (b) directing land uses which generate substantial truck traffic to appropriate areas in accordance with the Land Use chapter of this Plan;*
- (c) ensuring the proper design of roads intended to carry truck traffic;*
- (d) providing highly visible signage of acceptable truck routes;*
- (e) restricting the times during which truck access is permitted through sensitive areas; and*
- (f) implementing other measures as may be appropriate and necessary.*

This policy identifies Council's intent that truck traffic should be discouraged in residential areas. The intent of these sections of the Plan is clear. A private truck road or other road intended to carry significant numbers of trucks that is not shown on Schedule F would require an Official Plan

amendment to address the criteria dealing with compatibility, suitability of the lands involved and the specific noise, vibration and air quality policies of the Plan.

Section 7.2.6.12 in fact sets out a process and criteria for Council review of proposals to construct new roads.

7.2.6.12 New or Additional Rights-of-Way - Council shall support the construction of new roads and right-of-way widening for the purpose of adding to the traveled portion of a road only when either of the following factors have been met:

(a) the new road and/or widened right-of-way has been identified as a recommended system improvement in this Plan, the transportation master plan and/or the cycling master plan; or

(b) the need for the new road and/or widened right-of-way has been clearly demonstrated through a comprehensive analysis and public consultation process, conducted in addition to the transportation master plan, in accordance with relevant provincial legislation and the resulting road improves the transportation system by:

(i) reducing the use of local roads by non-local traffic;

(ii) minimizing conflicts between local and non-local traffic;

(iii) improving the level-of-service and road capacity;

(iv) minimizing any negative impacts on the social and natural environment of adjacent areas; and

(v) providing for cycling facilities, as appropriate.

This policy identifies how the City will address new road needs, and logically, new road proposals. As applied to the conversion of a railway corridor or part of a corridor to a private truck-only road, to a new major private road or truck staging area, the requirements identified in 7.2.6.12 place the onus on the proponent to demonstrate either that the new road is recommended in the Plan (or the transportation master plan) or that the need has been “clearly demonstrated” through a comprehensive analysis and public consultation process and can be shown to achieve the above- noted criteria. .

7.2.7 Border Crossing Policies

7.2.7.1 Economic Benefits – Council shall maximize the economic development potential provided by cross-border traffic by promoting the development of multi-modal facilities and Employment and Commercial uses at appropriate locations within Windsor.

7.2.7.2 Additional Crossing – Council shall ensure that the construction of an additional crossing has minimal negative social, environmental and economic impacts on Windsor.

These policies outline the City’s land use approach to border crossings, in that the positive economic benefits of border crossing activity shall be maximized, though the negative impacts on the community of a new crossing will be minimized. Policy 7.2.7.2 requires that any additional crossing has minimal impacts. The DRTP proposal using a former rail corridor would create a

new truck border crossing. The current Ambassador Bridge proposal would also result in an additional crossing. The Plan would require both proposals to meet the objectives of this section.

10.1.3 Permitted Uses in All Land Use Designations – Infrastructure and municipal facilities and services may be permitted in all areas of Windsor without requiring an amendment to this Plan.

While it could be argued that this clause means a new truck road, interpreted as infrastructure may be permitted without a Plan amendment, it is the general intent and experience in Ontario that policies of this nature are to be applied to municipal and other public sector infrastructure. In this case both of the proposals are for-profit facilities.

Other policies of the Plan, particularly dealing with Council's control of truck routes, suggest that a private truck road was not intended to be included in the term 'infrastructure'. In our opinion clause 10.1.3 was not intended and should not be interpreted to be applicable to proposals such as those by the DRTP and Ambassador Bridge.

Summary of Findings

In summary, our findings with regards to the conformity of the DRTP and Ambassador Bridge proposals with respect to Official Plan policies are as follows:

1. From several different perspectives both proposals would require an amendment to the Official Plan to proceed.
2. The Plan deals specifically with compatibility of uses adjacent to railway uses. The Plan has policies that essentially place a priority on the railway use of lands over any proposed uses, precluding housing within certain distances and requiring mitigating measures to ensure that sensitive uses are not impacted by the railway uses. This priority of the rail use over any new uses is appropriate and stems from the currency of the rail activity thus placing the onus on the proposed new use to conform to standards protecting the operation of the existing use.
3. Section 6 of the Official Plan sets out a series of tests for Council to consider when industrial development is proposed on lands not currently designated for that purpose. These policies would be applied when considering industrial non-rail uses of rail lands. The proposals by DRTP and the Ambassador Bridge potentially would generate impacts of a similar nature to those contemplated by Section 6.4.3 and thus would appropriately require an Official Plan amendment from the perspective of meeting Official Plan objectives dealing with conformity.
4. This Plan delineates trucking activity as a separate activity within the transportation system, and notes that this activity should be separated from sensitive land uses where possible. This policy is directly applicable to the DRTP and Ambassador Bridge proposals requiring that the intrusion of trucks into sensitive areas be minimized.
5. The Plan identifies Council's intent that truck traffic should be discouraged in residential areas. The intent of these sections of the Plan is clear. A private truck road or other road intended to carry significant numbers of trucks that is not shown on Schedule F would require an Official Plan amendment to address the criteria dealing with compatibility, suitability of the lands involved and the specific noise, vibration and air quality policies of the Plan.

6. The Plan identifies how the City will address new road needs, and logically, new road proposals. As applied to the conversion of a railway corridor or part of a corridor to a private truck-only road, to a new major private road or truck staging area, the requirements identified in the Plan including the demonstration of need or identification of the corridor in the transportation master plan must be met.
7. Official Plan policies outline the City's land use approach to border crossings and state that the positive economic benefits of border crossing activity shall be maximized, though the negative impacts on the community of a new crossing will be minimized. Policy 7.2.7.2 requires that any additional crossing has minimal impacts. The DRTP proposal using a former rail corridor would create a new truck border crossing. The current Ambassador Bridge proposal would also result in an additional crossing. The Plan would require both proposals to meet the objectives of this section.
8. The truckway and parkway proposals have the potential to create significant environmental impacts on neighbouring lands. The Plan calls on Council through the planning process to protect residents from health impacts, including noise and air contaminants. In order to achieve these goals, the City's planning process should require proposals of this nature to demonstrate, through appropriate studies, both that they will not result in significant impacts and that they will result in minimizing environmental and community impacts.

6.0 – Zoning By-laws

Background

On October 6, 2003, the City of Windsor (the City) passed a By-Law (341-2003) imposing interim control on non-rail uses of railway lands. The properties affected included railway rights-of-way and rail yards. The Interim Control By-law was passed in part due to concerns that the current zoning by-law might permit non-rail uses that would involve significant land use conflicts with adjacent uses.

Concurrently to the passing of interim control, Council repealed (by enacting By-Law 340-2003) the portions of Zoning By-Law 227-2002 as identified on the schedule to By-Law 340-2003, namely those portions of By-law 227-2002 not yet in effect due to an appeal. Through the repeal of these portions, Zoning By-Laws 8600 (unamended) and 3072 remain in force in those areas, which include the rail lands owned by CN Rail. Appendix 1 includes a map showing the approximate location and extent of rail lands affected by the Interim Control By-law.

This section of the report directly addresses the permissions for land uses on railway lands provided for by By-law 227-2002 (amendments to By-law 8600). It is intended that by-law 8600, the City's comprehensive zoning by-law, will apply to all lands in the City when this issue has been resolved.

Rail operations are federally-regulated

Rail operations are federally regulated and as such are not directly subject to municipal zoning controls. As a consequence the application of zoning to rail lands has historically not been a significant issue in most Ontario municipalities. In some cases railway lines have not had any recognition by the zoning by-laws, in others only the rail uses are permitted, and in many an industrial zone with a broad variety of uses is applied to the railway lands.

The present case brings to the forefront a contradiction resulting from these typical zoning regimes. Rail lands in Windsor are zoned for some non-rail uses. Most railway lines are limited in width, often have no road access or frontage to much of the corridor, and often abut the rear yards of adjacent uses. It was likely never contemplated that a variety of non-rail uses would ever locate in a rail corridor.

Most other situations involving the elimination of rail uses on large areas of land have resulted in significant planning processes to determine the best use of the rail lands. Clearly this is an issue Windsor must address given the extent and number of rail corridors throughout the City and the potential for significant non-rail uses such as the DRTP and Ambassador Bridge proposals to locate on rail lands.

As a first step in understanding whether or not change to the planning documents is needed, a review of the as-of-right permissions granted by By-law 8600 as amended has been undertaken. Two questions are relevant to this review:

1. Would By-law 8600 as amended permit the use of railway lands for a major private road, or as a staging area for trucks?
2. Are the current as-of-right uses appropriate uses for all or some of the rail lands?

Are the DRTP and Ambassador Bridge Proposals Permitted by By-law 8600 as amended?

In order to answer this question it is necessary to properly describe and define the nature of the proposed uses, both generally and specifically, and review the current use permissions, and definitions in the by-law. Zoning by-laws and Official Plans generally describe land uses as falling into broad categories that are based on the essential nature of a use. Thus residential uses are those that house people, industrial uses those that store, manufacture or add value in some way to a product. Commercial uses involve the selling of a good or service, usually to the public. The nature of the use can also involve consideration of the off-site impacts of a use, uses with significant impacts being grouped as industrial uses, even though they may represent a very broad range of uses.

The use proposed by DRTP is a private road, for use by trucks only. The use proposed by the Ambassador Bridge is effectively a private road to allow vehicles, primarily trucks, to use the bridge or an expanded bridge. Both uses will be private in the sense that the owners are a private corporation, and for trucks using them a charge will be levied. Thus both proposals involve the provision of a service, the use of a road, for a fee.

The use proposed is similar, from a land use analysis perspective, to a commercial parking lot, in that it is an area of land, with little in the way of buildings, used by vehicles for a fee, or a drive-through car wash, providing a wash of a vehicle for a fee. The activity that occurs is the temporary parking and/or movement of vehicles over the land, but the nature of the use is commercial. No product is produced or value added to materials, as would be the case with a typical industrial use.

At the same time it could be argued that the activity involved in the use is much more typically an industrial use. It involves heavy trucks that are transporting goods and raw materials for delivery. While there is no main industrial use involved, that is the trucks may come from any location or use and deliver goods or materials to many other locations or uses, the activity itself is typically associated with industrial uses.

The Ambassador Bridge site, including the customs and immigration facilities on the Canadian side, is zoned Commercial District 4.4 (CD4.4). The zone permits a motor vehicle bridge, customs and immigration offices and facilities, any one or more of the following uses in combination with the foregoing uses: warehouse, business office, financial office, and retail store. The zone also permits a public parking area and any accessory uses. The proposed use by the Ambassador Bridge controlled access road and staging area of the Essex Terminal Railway corridor, being a similar use, would at the least require a similar zoning, i.e. to be rezoned to CD4.4.

The existence of the CD4.4 zone for the current Ambassador Bridge assists in concluding that the DRTP proposal, to have a consistent treatment, would require a site-specific rezoning to permit the proposed use.

Other Perspectives on Interpreting the By-law

The purpose of a zoning by-law is to regulate the use of land to minimize impacts from incompatible uses. Put another way, the zoning by-law implements the municipality's Official Plan which itself establishes the range of uses allowed in area in order to achieve a variety of objectives, one of which is to provide for the greatest amenity and order through the minimization of negative impacts resulting from the proximity of incompatible uses.

By-law 8600 as amended attempts to accomplish this objective by limiting the location and nature of industrial uses to specific areas that generally contain like uses and are not the location of sensitive land uses such as housing. The industrial zoning category that applies to the rail lands at issue is a fairly broad one in the sense that there are a wide variety of industrial uses that are permitted.

The Intent of the By-law is Clear

By-law 8600 previously listed docks, freight terminals, warehouses, parking areas, heavy repair shops and storage as permitted uses in the MD1.3 zone. In addition, in a specific area west of the downtown, and including portions of the CP Intermodal Yard and the Essex Terminal Rail Line (referred to as Zoning District Map pages 11B and 11C) a wide variety of industrial uses were permitted as well. The effect of By-law 227-2002 is to significantly reduce the broad variety of permitted industrial uses in this specific area leaving only a railway, private or public dock, truck transportation facilities, warehouse, towing service, and public parking area as the permitted uses. The application of By-law 8600 as amended by By-law 227-2002 will be to permit only the above noted uses on all railway lands in the City.

The intent of the by-law is relatively clear with respect to permissions for industrial uses given the specificity of the uses listed. By-law 8600 (as amended) specifically permits truck transportation facilities, and it has been suggested that this broad term might describe the DRTP proposal. It is not considered that the intent of the by-law was to permit a commercial truck road or staging area for trucks under this broad term. To suggest so would be to assume that City of Windsor Council had considered the truck road/staging area uses and proceeded to approve the by-law with the intent of allowing such uses as of right. Given the tests in the Official Plan for the location of new industrial uses there is clearly a policy intent to minimize impacts on adjacent uses, an objective that would be impossible to control or determine with an as-of-right permission for all railway corridors to be used for a truck road or other major private road.

From a broader planning perspective the intent of the by-law is to limit incompatible uses and it would not be consistent with this intent to conclude that the by-law intended to permit the use of the rail corridor for a twenty four operation involving up to 10,000 trucks per day immediately adjacent to residential areas. From the plain meaning perspective, no use listed could be considered to incorporate the proposed uses with the exception of “truck transportation facilities” in By-law 8600.

The essential issue in judging whether or not a truck road/staging area could be interpreted to fall within the term “truck transportation facilities” is which interpretation would best fall within the intent of the by-law. A broader interpretation that concluded the permission was granted could result in potentially substantial impacts on adjacent residential areas without any mitigation or technical studies of potential impact – clearly not the intent of the By-law. Whereas an interpretation that concluded the uses were not permitted, and would thus require a change to the by-law, would better conform to the intent of the by-law by ensuring the degree and extent of incompatibility was justified. At the very least this interpretation would require a public process that would involve technical studies to determine the extent of impact.

There is no policy change in the Official Plan, which By-law 227-2002 was implementing, which would suggest an intent to broaden the uses permitted on railway lands, or to include major private roads or truck staging areas in the new term “truck transportation facilities”. It is our understanding that the intention of By-Law 227-2002 was to maintain the same uses for all railway lines and yards in Windsor as were found in By-Law 8600 since 1986.

It is our conclusion that the use of the lands for the DRTP or Ambassador Bridge proposal in the relevant zone in By-law 8600 as amended would not be permitted.

Are the Current Use Permissions on Railway Lands Appropriate?

Given the extraordinary extent of the rail corridors throughout the City, and the very wide range of uses adjoining the rail corridors it is unlikely that any single use could be considered to be compatible at all locations along the rail lines. A review of the zoning categories in By-law 8600 as amended shows that of the nine zoning categories ranging from open space to heavy industrial fully all of them are found adjacent to one of the rail corridors.

For example, the variety of land uses lying adjacent to the railway lands makes it clear that there are some railway lands that should not be used for heavy industrial uses, generally described as facilities primarily with outdoor operations and the potential for noise and air quality impacts. Certainly uses with a significant amount of trucking activity would typically be a land use that should be separated from residential and other sensitive uses by some distance. Current Plan policies dealing with rail yard impacts would be an appropriate starting point in the development of new regulations and policy.

While zoning permitting a railway, private or public dock, truck transportation facilities, warehouse, towing service, and public parking area, and accessory outdoor storage yards may be appropriate where railway lines serve other industries, or where associated terminals provide access to multi-modal facilities adjacent to major highways (essentially depending on the surrounding land uses) the application of a blanket zoning permission to corridors of land that traverse the entire City and touch on a wide variety of neighborhoods and uses, is clearly not an appropriate circumstance.

The current zoning permissions applying to railway corridor lands should be changed to permit only railway uses. The zoning permission affecting railway yards should be reviewed in the context of existing uses and potential impacts on adjoining uses.

Summary of Findings

In summary, our findings with regards to the City's Zoning By-laws are as follows:

1. Rail operations are federally regulated and not directly subject to municipal zoning controls. The application of zoning to rail lands has historically not been an important or well-addressed issue in most Ontario municipalities. In some cases railway lines have not had any recognition by the zoning by-laws, in others only the rail uses are permitted, and in many an industrial zone with a broad variety of uses is applied to the railway lands.
2. Rail lands in Windsor are zoned for some non-rail uses. It was likely never contemplated that a range of non-rail uses would ever locate in a rail corridor. Most railway lines are limited in width, often have no road access or frontage to much of the corridor, and often abut the rear yards of adjacent uses.
3. Most other situations involving the elimination of rail uses on large areas of land have resulted in significant planning processes to determine the best use of the rail lands, essentially because the re-use of these lands for non-rail purposes was never contemplated. Clearly this is an issue Windsor must address given the extent and number of rail corridors throughout the City. The DRTP proposal is an indicator of one potential re-use of rail lands.

4. The proposed use of railway lands for a major private road, truck road or a truck staging area would not be permitted by By-law 8600 as amended.
5. The range of non-railway uses permitted on railway lands by the applicable zoning by-laws would allow a variety of potentially unacceptable impacts caused by uses incompatible with the existing development pattern adjacent to the rail lands. The current zoning permissions applying to railway lands should be changed.

7.0 – Provincial Policy & Guidelines

The Ontario Ministry of Environment has a guideline (D-6) “Compatibility Between Industrial Facilities and Sensitive Land Uses” that is intended to be applied in the land use planning process to assist municipalities in establishing policies to deal with compatibility of industrial uses. The objective of the guideline is to prevent or minimize future land use problems arising from the encroachment of sensitive land use upon industrial land use and vice versa, as these two types of land uses are normally incompatible, due to possible adverse effects on sensitive land use created by industrial operations.

To assist planning authorities in achieving the objective, the guideline categorizes industrial facilities into three Classes according to the objectionable nature of their emissions, their physical size/scale, production volumes and/or the intensity and scheduling of operations. The guideline establishes recommended separation distances between sensitive uses (including residential uses) and three classes of industrial uses as defined below:

Class I Industrial Facility - A place of business for a small scale, self contained plant or building which produces/stores a product which is contained in a package and has low probability of fugitive emissions. Outputs are infrequent, and could be point source or fugitive emissions for any of the following: noise, odour, dust and/or vibration. There are daytime operations only, with infrequent movement of products and/or heavy trucks and no outside storage. See Appendix A of this guideline for classification criteria and examples to categorize a specific industry.

Class II Industrial Facility - A place of business for medium scale processing and manufacturing with outdoor storage of wastes or materials (i.e. it has an open process) and/or there are periodic outputs of minor annoyance. There are occasional outputs of either point source or fugitive emissions for any of the following: noise, odour, dust and/or vibration, and low probability of fugitive emissions. Shift operations are permitted and there is frequent movement of products and/or heavy trucks during daytime hours. See Appendix A of this guideline for classification criteria and examples to categorize a specific industry.

Class III Industrial Facility - A place of business for large scale manufacturing or processing, characterized by: large physical size, outside storage of raw and finished products, large production volumes and continuous movement of products and employees during daily shift operations. It has frequent outputs of major annoyance and there is high probability of fugitive emissions. See Appendix A of this guideline for classification criteria and examples to categorize a specific industry.

These guidelines should be considered when reviewing the existing zoning permissions and in consideration of zoning applications for future development on railway lands.

The Provincial Policy Statement (PPS) provides policy direction on matters of provincial interest related to land use planning and development. The PPS is intended to promote a policy-led system which recognizes that there are complex inter-relationships among environmental, economic and social factors in land use planning. Currently, planning authorities are required to “have regard to” the objectives of the PPS when making decisions related to land use planning and development.”

The PPS states the Province's high-level principles in this regard as follows:

"Ontario's long term economic prosperity, environmental health and social well-being depend on:

- 1. Managing change and promoting efficient, cost-effective development and land use patterns which stimulate economic growth and protect the environment and public health;*
- 2. Protecting resources for their economic use and/or environmental benefits; and*
- 3. Reducing the potential for public cost or risk to Ontario's residents by directing development away from areas where there is a risk to public health or safety or of property damage."*

Section 1.1 Developing Strong Communities states that:

"1.1.1 Subject to the provisions of policy 1.1.2, cost-effective development patterns will be promoted. Accordingly:

- f) Development and land use patterns which may cause environmental or public health and safety concerns will be avoided;*

1.1.2 Land requirements and land use patterns will be based on:

- d) development standards which are cost effective and which will minimize land consumption and reduce servicing costs; and*
- e) providing opportunities for redevelopment, intensification and revitalization in areas that have sufficient existing or planned infrastructure.*

1.1.3 Long term economic prosperity will be supported by:

- a) making provisions such that infrastructure and public service facilities will be available to accommodate projected growth;*
- c) providing for an efficient, cost-effective, reliable, multi-modal transportation system that is integrated with adjacent systems and those of other jurisdictions and is appropriate to address expected growth;*
- g) planning so that major facilities (such as airports, transportation corridors, sewage treatment facilities, waste management systems, industries and aggregate activities) and sensitive land uses are appropriately designed, buffered and/or separated from each other to prevent adverse effects from odour, noise and other contaminants."*

Section 1.3 Infrastructure states the following:

“1.3.2 TRANSPORTATION

1.3.2.1 Transportation systems will be provided which are safe, environmentally sensitive, and energy efficient.

1.3.3 TRANSPORTATION CORRIDORS AND INFRASTRUCTURE CORRIDORS

1.3.3.1 Corridors and rights-of-way for significant transportation and infrastructure facilities will be protected.”

The PPS defines the following terms specifically:

Development: means the creation of a new lot, a change in land use, or the construction of buildings and structures, requiring approval under the Planning Act; but does not include activities that create or maintain infrastructure authorized under an environmental assessment process; or works subject to the Drainage Act.

Infrastructure: means physical structures that form the foundation for development. Infrastructure includes: sewage and water works, waste management systems, electric power, communications, transit and transportation corridors and facilities, and oil and gas pipelines and associated facilities.

Multi-modal transportation system: means a transportation system which may include several forms of transportation such as automobiles, walking, truck, cycling, bus, rapid transit and rail.

Sensitive land uses: means buildings, amenity areas, or outdoor spaces where routine or normal activities occurring at reasonably expected times would experience one or more adverse effects from contaminant discharges generated by a nearby major facility. Sensitive land uses may be a part of the natural or built environment. Examples include: residences, day care centres, and educational and health facilities.

In December 2003, the Ontario Government introduced Bill 26, *The Strong Communities Planning Amendment Act, 2004*. One of the changes proposed through this Bill is changing the "have regard to" implementation standard for applying the Provincial Policy Statement. If passed, the new implementation standard would require that decisions "shall be consistent with" the Provincial Policy Statement.

Findings

1. The conclusions reached regarding the potentially unacceptable impacts of non-rail uses on rail lands and the advisability of the City taking steps to avoid such conflicts through changes to the zoning bylaw are consistent with the policy direction in the Provincial Policy Statement.

8.0 – Discussion & Recommendations

The analysis of the City's policy documents demonstrates that the Official Plan and the Zoning By-law require revisions to deal with the potential impacts on non-rail uses of rail lands. The uses permitted by By-law 8600 as amended should be further limited to ensure compatibility with adjacent uses in any future land use change. In considering the necessary changes, and the approach to be used by the City in dealing with the significant areas of land involved, several principles should be considered.

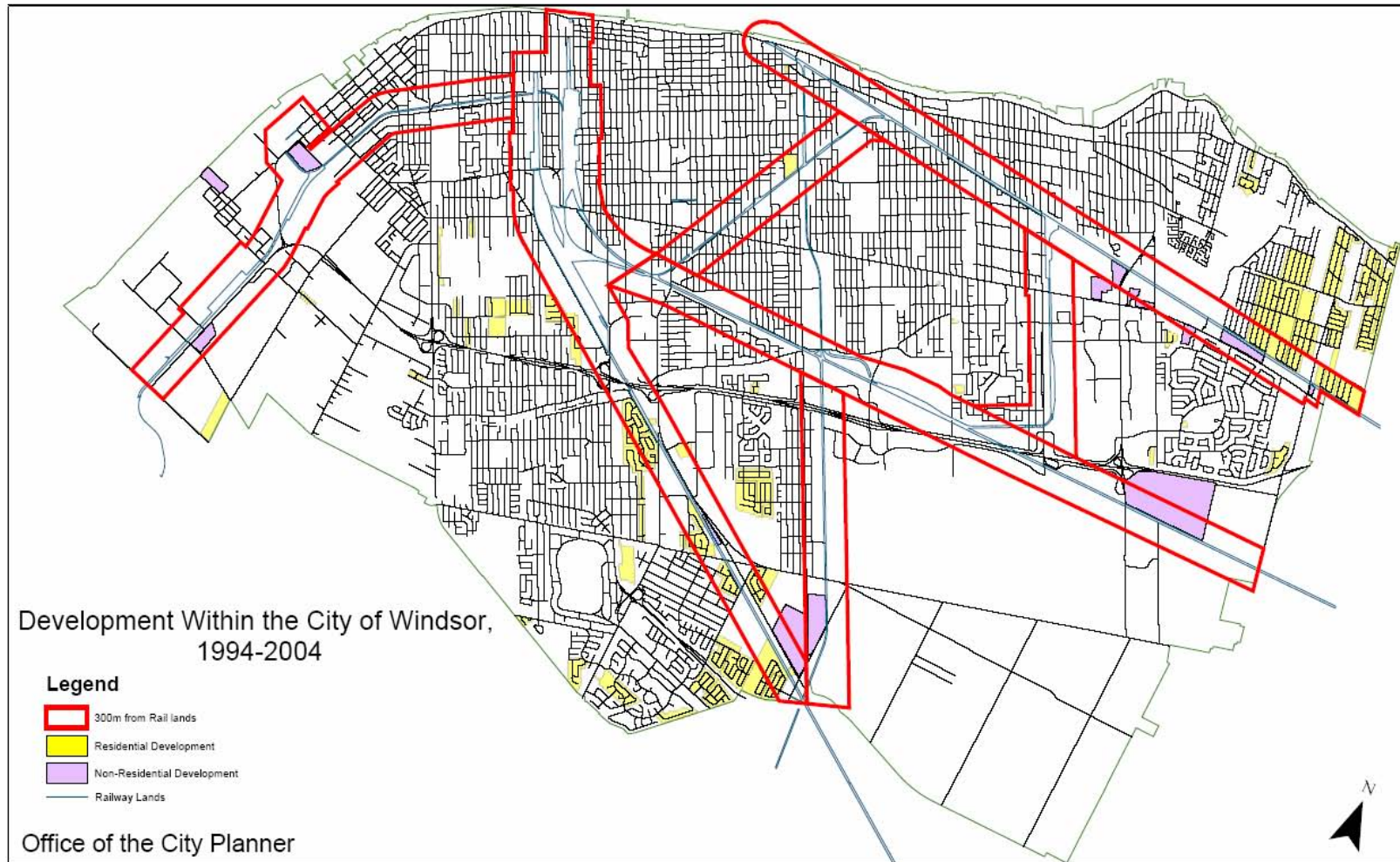
Principle #1 – Minimizing impacts from incompatible uses

It is a basic tenet of good planning to group compatible uses and separate incompatible uses. Incompatibility can be defined as incapable of association or harmonious coexistence. Land use policies and Official Plan designations by their very nature limit permitted uses in a given area to those that can typically co-exist without negatively impacting each other, otherwise termed as compatible uses.

Thus the objective in making planning decisions is to understand the nature and extent of impacts in advance of land use change and make decisions accordingly. Some decisions can be made with relatively little study – the City has limited the uses permitted in residential areas to those that produce little in the way of impacts that would affect people living in their homes. Other planning decisions must be informed by technical studies, options for mitigation determined and then a decision made which balances sometimes competing objectives.

Principle #2 - The primacy of pre-existing uses

Most of the policies in the City of Windsor Official Plan that deal with noise and vibration impacts are written to ensure that impacts on new development from existing noise and vibration sources are minimized. The policies require studies and mitigation for uses in proximity to Rail Yards and Rail Corridors, or within the Airport Operating Area as both uses are existing noise and/or vibration sources. Map 5 details lands that have been developed in the City of Windsor in the past 10 years. Those residential areas shown on the map that lie within 300 metres of the railway line have all proceeded following detailed studies and implementation of any necessary noise and vibration mitigation measures.



Map 5: Development Within the City of Windsor, 1994-2004

These impact policies are reasonable and realistic given that without a requirement for municipal approval or regulation both airports and railway facilities may produce impacts that would negatively affect adjacent land uses. This risk is offset by the Plan requirement for studies and mitigation which places the onus on the proponent for new development. This primacy of the existing use is a common approach to compatibility as it applies to rail and airport facilities.

As a land use planning principle the primacy of a long term use of land implicitly recognizes that land uses established after the development of the rail lines have done so with full knowledge of the activity and potential for impacts from rail operations. Any urban centre has a wide variety of living environments, offering a variety of lifestyles at varying costs which generally reflect the quality of the residential environment. Housing impacted by rail noise and vibration, while not an ideal living environment, offers locations and forms of housing that are clearly needed in Windsor, as in many other communities, and form parts of many neighborhoods in the City.

Principle #3 – Potential non-rail uses should be assessed as ‘new’ uses

A corollary to the principle of ‘pre-existing uses’ is the recognition that when a use changes, and creates a new set of potential impacts, the onus is on the new use to demonstrate that the potential impacts can be mitigated and/or can be justified within the current planning policy framework. Thus while rail uses of railway lands exist outside of the direct control of the City, and appropriately require any new uses to resolve and mitigate impacts caused by the rail operation, the same principle applied to non-rail uses has a reverse consequence. Non-rail uses are subject to local land use controls and must be considered in terms of the potential impacts on existing adjacent uses, which are the ‘pre-existing uses’.

Where the Plan deals with land uses that are subject to municipal controls that may themselves cause noise and vibration impacts, the policies should place the onus on new development to minimize and mitigate impacts on existing uses. This approach is applied by the Plan to new industrial uses which are required to locate in consideration of sensitive land uses and compatibility.

The lack of federal jurisdiction over non-rail uses changes the situation fundamentally. While rail uses have to date received a special recognition in Windsor’s planning documents, and the Plan has appropriately limited the nature and extent of incompatible uses in proximity to Rail Yard and Corridors, non-rail uses will represent a new use and should be assessed on that basis. There is no planning justification for non-rail uses to be exempted in any way from appropriate land use controls. This principle also suggests that ‘new’ non-rail uses of rail corridors should be reviewed from a planning perspective in terms of the full range of possible uses on the lands rather than being considered exclusively as an alternative to a rail use. This approach would mean that non-rail uses should be assessed in terms of their absolute impact on adjacent uses rather than their relative impact in comparison to current or potential rail use.

Summary of Findings

In summary the findings in regard to good planning principles are as follows:

1. Three principles should apply when reviewing Official Plan policies and zoning by-law use permissions applicable to non-rail uses of railway lands. These are:
 - (a) Impacts from incompatible uses should be minimized.
 - (b) The primacy of pre-existing uses adjacent to rail corridors should be recognized.

- (c) Potential non-rail uses are not pre-existing uses, and should be assessed as 'new' uses, judging their suitability without regard for existing rail-related impacts. Put another way, non-rail uses should be assessed in terms of their absolute impact on adjacent uses rather than their relative impact in comparison to current or potential rail use.

Recommendations

1. The City should move immediately to adopt policies in the Official Plan that would permit only rail uses in Railway Corridors.
2. Council should review the permission for non-rail uses in Rail Yards based on good planning principles, and amend the Plan accordingly.
3. Council should consider the development of comprehensive land use policies to determine potential non-rail uses of all rail lands.
4. The zoning by-law should be amended to make clear the permissions for uses on rail lands, by implementing the recommended changes to the Official Plan policies.

APPENDICES

APPENDIX 1: Interim Control By-Law

BY - LAW NUMBER 341-2003

**A BY-LAW TO IMPOSE INTERIM CONTROL
ON THE NON-RAIL USES OF RAILWAY
RIGHTS OF WAYS AND RAIL YARDS IN THE
CITY OF WINDSOR**

Passed the 6th day of October, 2003.

WHEREAS Section 38 of the Planning Act, R.S.O. 1990, Chapter p. 13, provides that where the Council of a local municipality has by resolution, directed that a study be undertaken in respect of land use planning policies in the municipality or in a defined area thereof, the Council of the municipality may pass a by-law to be in effect for a period of time specified in the by-law, which period shall not exceed one year from the date of the passing thereof, prohibiting the use of lands, buildings or structures within the municipality or within the defined area or areas thereof, for such purposes as may be set out in the by-law;

AND WHEREAS The Council of the Corporation of the City of Windsor has by resolution directed that a study be undertaken in respect of land use planning policies that should apply to all non rail uses of all railway lands in Windsor, including the potential impact of non rail uses on adjoining lands;

AND WHEREAS the Council of the Corporation of the City of Windsor deems it expedient and in the public interest to prohibit the use on all railway lands in Windsor of certain lands, buildings and structures, which may be used for non railway purposes, other than those uses lawfully being carried out on the day of passage of this Interim Control Bylaw, in order to allow the municipality to review an if deemed appropriate, implement the findings of the said study.

THEREFORE the Council of the Corporation of the City of Windsor enacts as follows:

- 1) Notwithstanding the permitted uses and regulations of Zoning By-law 3072 as amended, and Zoning By-law 8600 as amended, all railway lands within the City of Windsor, including railway rights-of-ways and rail yards, as shown by a heavy bold line on Schedule "A" annexed hereto, shall not be used for any purpose other than for a railway or other uses lawfully being carried out on the day of passage of this by-law.
- 2) That where any conflict exists between the provisions of this By-law and any other By-law of The Corporation of the City of Windsor this By-law shall prevail;
- 3) That this By-law shall be in effect for the period of one year from the passing thereof.



MAYOR



CLERK

First Reading - October 6, 2003
Second Reading - October 6, 2003
Third Reading - October 6, 2003

BY-LAW NUMBER 341-2003

A BY-LAW TO IMPOSE INTERIM CONTROL
ON THE NON-RAIL USES OF RAILWAY
RIGHTS OF WAYS AND RAIL YARDS IN THE
CITY OF WINDSOR

Passed the 6th day of October, 2003.

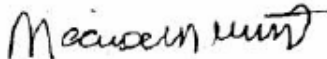
WHEREAS Section 38 of the Planning Act, R.S.O. 1990, Chapter p. 13, provides that where the Council of a local municipality has by resolution, directed that a study be undertaken in respect of land use planning policies in the municipality or in a defined area thereof, the Council of the municipality may pass a by-law to be in effect for a period of time specified in the by-law, which period shall not exceed one year from the date of the passing thereof, prohibiting the use of lands, buildings or structures within the municipality or within the defined area or areas thereof, for such purposes as may be set out in the by-law;

AND WHEREAS The Council of the Corporation of the City of Windsor has by resolution directed that a study be undertaken in respect of land use planning policies that should apply to all non rail uses of all railway lands in Windsor, including the potential impact of non rail uses on adjoining lands;

AND WHEREAS the Council of the Corporation of the City of Windsor deems it expedient and in the public interest to prohibit the use on all railway lands in Windsor of certain lands, buildings and structures, which may be used for non railway purposes, other than those uses lawfully being carried out on the day of passage of this Interim Control Bylaw, in order to allow the municipality to review an if deemed appropriate, implement the findings of the said study.

THEREFORE the Council of the Corporation of the City of Windsor enacts as follows:

- 1) Notwithstanding the permitted uses and regulations of Zoning By-law 3072 as amended, and Zoning By-law 8600 as amended, and Zoning By-law 85-18 as amended of the former Township of Sandwich South, all railway lands within the City of Windsor, including railway rights-of-ways and rail yards, as shown by a heavy bold line on Schedule "A" annexed hereto, shall not be used for any purpose other than for a railway or other uses lawfully being carried out on the day of passage of this by-law. (AMENDED by B/L 350-2003, October 20, 2003)
- 2) That where any conflict exists between the provisions of this By-law and any other By-law of The Corporation of the City of Windsor this By-law shall prevail.
- 3) That this By-law shall be in effect for the period of one year from the passing thereof.

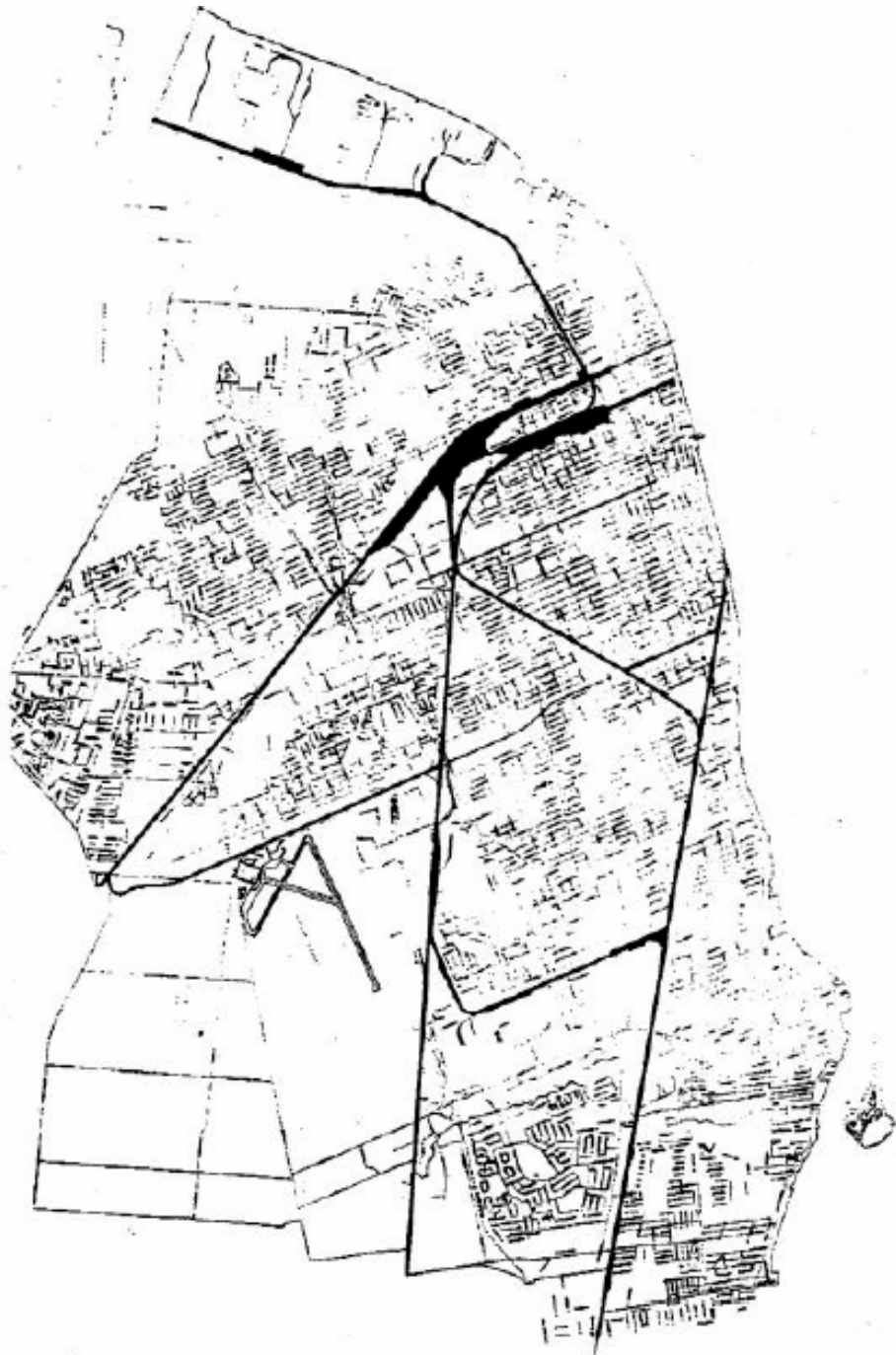


MAYOR



CLERK

First Reading - October 6, 2003
Second Reading - October 6, 2003
Third Reading - October 6, 2003



This is SCHEDULE 'A' to By-law 341-2003, As AMENDED by By-law 350-2003, Oct. 20, 2003

At MAYOR David Cosentino CLERK Paula Aubrey

APPENDIX 2: Interim Control By-Law Chronology

- January 27, 2003, Council resolution M9-2003 was passed, stating that “City Council re-affirm its previous resolution M1-2003, adopted on January 6, 2003, which voices City Council’s strongest opposition to the proposed “4 lane Truckway Corridor” to both Federal and provincial Government Officials and further, that Council is opposed to:
 - The creation of a truck parkway between Highway 401 and the E.C. Row Expressway;
 - The use and upgrading of the CASO corridor and Ojibway Parkway as it may relate to the creation of a truck parkway;
 - The use of the CASO corridor north of E.C. Row as a truck route.”
- March 4, 2003, Council resolution M9-2003 reconfirmed.
- August 26, 2003, Report to Council from the City Solicitor providing updated information regarding the Federal Environmental Assessment of the DRTP proposal.
- October 6, 2003, Council passed By-law 340-2003 repealing the provisions of Zoning By-law 227-2002 not yet in force, namely those lands under appeal to the Ontario Municipal Board.
- October 6, 2003, Council passed By-law 341-2003, imposing interim control for a period of one year on the non-rail uses of railway rights-of-ways and rail yards in the City of Windsor.
- October 7, 2003, Report to Council recommending a further amendment to By-law 227-2003 such that those lands under By-law 8600 remain under this by-law and not 227-2002. The Council resolution passing By-law 340-2003 only repealed lands governed under Zoning By-Law 3072.
- October 20, 2003, Council passed By-law 350-2003, amending by-law 341-2003 in order to include rail lands in the former Township of Sandwich south within the interim control by-law area, and to replace the map defining all rail lands under interim control in the City.

APPENDIX 3: Map of Railway Lines in the City of Windsor

APPENDIX 4: Relevant Sections of Zoning By-laws

By-Law 3072

Railway lands are zoned Manufacturing District 1.1 (M1.1) by this by-law, which zone category allows the following uses:

- (i) *The manufacture and/or assembly of the following: automobile parts and accessories, non-alcoholic beverages, small boats and marine accessories, cosmetics, ceramics, electrical appliances and electronic devices, floor coverings, food products excepting the rendering or refining of fats or oils and the manufacture fish products, sauerkraut, vinegar or yeast; housewares, jewellery, mobile homes, light metal products, patent medicine, plastic products, signs, scientific and precision tools and instruments, sporting goods, toys;*
- (ii) *Manufacturing from the following previously prepared materials: bone, fabric, fur, glass, leather, paper, textiles, tobacco, wood and yarn;*
- (iii) *Blueprinter, book binder, building contractor provided there is no outdoor storage of heavy equipment and/or building materials; dock, dry cleaning and dyeing including a pickup depot, electrical contractor, freight terminal, heating contractor, heavy machinery sales and display, household mover, laundry, lumber yard, parking area, plumbing and plastering contractor, packaging trades, pest exterminator, roofing, siding or eavestroughing use, retreading or recapping of tires, heavy repair shop, storage uses -excepting, however, any use listed in clauses (i) and (ii). paragraph (c) of Section 13. subsection (IX Manufacturing District 2.1. soft drink bottling, taxidermist, tinsmith, welder, wholesale store or warehouse;*
- (iv) *A retail store in combination with and accessory to any use permitted in subparagraphs (i), (ii) and (iii) of this paragraph provided, however that the retail store floor area does not exceed 25% of the gross floor area of all buildings on the lot or 15% of the lot area, whichever is less;*
- (v) *An animal hospital including the office of a veterinary surgeon, animal pound, collision shop, automobile repair garage, the boarding of pets; motor vehicle dealership.*
- (vi) *Any of the following uses lawfully existing on the effective date of this by-law: -banquet hall, bank, bowling alley, car wash, club, curling rink, drive-in theatre, a restaurant provided there is no drive-in service, the sale of mobile home trailers, the sale of builders' supplies, a trailer park as defined in Section 379(1) paragraph 87 of The Municipal Act, R.S.O. 1960. Chapter 249 as amended: a service station;*
- (vii) *The residence of a caretaker accessory to and in combination with a permitted use;*
- (viii) *Any building or use of the Corporation;*
- (ix) *Any use similar or accessory to a permitted use;*
- (x) *An engineering and/or architectural office;*
- (xi) *A food catering service;*
- (xiii) *A public parking area.*

By-law 3072 defines a 'highway' as follows:

"Means all allowances for roads made by the Crown surveyors, all highways laid out or established under the authority of any statute, all roads on which public money has been expended for opening them or on which statute labour has been

usually performed, all roads dedicated by the owner of the lands to public use, and all alterations and deviations of and all bridges over such allowances”

The by-law defines a ‘use’ as:

“When used as a noun means the purpose for which a lot or part thereof, building or part thereof or other structure or part thereof is designated, maintained or occupied”

Section 2(2) of the by-law states the following in respect to the interpretation of a ‘use’:

“In this by-law, unless the context otherwise requires, the expression “use” or “to use” shall include anything done or permitted by the owner or occupant of any land, building or structure, directly or indirectly, or by or through any trustee, tenant, servant or agent acting for or with the knowledge and consent of such owner or occupant, for the purpose of making use of the said land, building or structure.”

‘Freight terminals’ is not defined in the by-law.

Under the Performance Standards section of M1.1, the by-law states:

- (i) No discharge into the air of any dust, dirt, or particulate matter created by any operation or emanating from any products stored subsequent to processing shall be permitted;*
- (ii) Noise emanating from any use in an M1.1 District shall not exceed the level of ordinary conversation at the boundaries of the lot. Short intermittent noise peaks shall be permitted if they do not exceed normal traffic noise at any point on the lot boundaries;*
- (iii) No obnoxious, toxic or corrosive fumes or gases shall be emitted;*
- (iv) No odours shall be perceptible at the lot boundaries;*

By-Law 8600 (Unamended)

This by-law zones railway lands as Manufacturing District 1.3 (MD 1.3), and describes the permitted uses as follows:

Manufacturing District 1.3 (MD1.3)

(a) Permitted Uses

- (i) A railway; private or public dock;*
- (ii) Truck transportation facilities;*
- (iii) A warehouse;*
- (iv) A public parking area;*
- (v) Any use accessory to the foregoing uses including an outdoor storage yard.*
- (vi) For all lands zoned MD1.3 on Zoning District Map Pages 11B and 11C, any industrial use permitted in paragraph*

(a) subsection (1) of this Section, MD1.1 District, may be permitted in this district;

The uses permitted listed above in the MD1.3 zone include uses permitted in paragraph (a) subsection 1 of MD1.1, which is as follows:

(i) *In this sub-section, any product described as small shall not exceed a maximum weight of 50 kilograms and a maximum volume of one cubic metre;*

(ii) *And one or more of the following industrial uses:*

Food and Beverage Industries - a food catering service; preparation packaging and processing of food products, including a bakery, but not including any of the following activities: rendering of fats or oils; slaughtering or processing of poultry, fish or meat products; processing of sauerkraut, vinegar, or yeast; flour milling.

Secondary Manufacturing - Manufacturing from any of the following materials: textiles; fur; glass; leather; paper; plastics; wood; yarns; tobacco; rubber and rubberized products.

Pharmaceutical Products - Manufacture of cosmetics, drugs, pharmaceutical products, toiletries.

Electrical Appliances - Construction of electrical products, the manufacture of small parts therefor.

Motor Vehicle Parts - Manufacture of small parts for motor vehicles.

Scientific and Industrial Professional Equipment - Construction of scientific or professional equipment, the construction of industrial equipment.

Signs - Construction or repair of electrical or other signs, billboards or other commercial advertising structures.

Tool and Die - Manufacture of moulds, dies, patterns, machines tools, jigs, fixtures.

Miscellaneous Manufacturing - Manufacture of musical instruments, ceramics, jewellery, toys, cutlery, or other small metal products, manufacture and application of protective coatings.

Warehousing - Warehouse, storage tanks, self-storage facility.

Repairs/Motor Vehicle Repair - A light repair shop, a heavy repair shop.

Welding - A welding shop for the welding of small metal products.

- (iii) *The operation of a railway, water transportation facilities including a public or private dock. Truck transportation facilities are not permitted except as an accessory use to an industrial use permitted under sub-section (ii) of this paragraph;*
- (iv) *Dry cleaning, dyeing, laundry;*
- (v) *Commercial printing engraving, stereotyping, publishing, photographic processing;*
- (vi) *A contractor's office;*
- (vii) *Veterinary clinic;*
- (viii) *A wholesale store, machinery, tool or equipment rental agency, gas bar, automobile sales lot, a retail store for the sale of any one or more of the following: building supplies, tools, machinery, and machine parts, home and garden maintenance and repair equipment, motor vehicle parts, a coin operated car wash, automatic car wash, take-out restaurant, micro-brewery, existing club;*
- (ix) *A public parking area;*
- (x) *Any use accessory to the foregoing uses, which may include the following: a caretakers residence, an outdoor storage yard, provided that there is no outdoor storage of sand or other aggregates, incidental millwork related to the retail sale of lumber.*

By-Law 8600 as amended by 227-2002

This by-law zones railway lands as Manufacturing District 1.3 (MD 1.3), and describes the permitted uses as follows:

Manufacturing District 1.3 (MD1.3)

(a) Permitted Uses

- (i) *A railway; private or public dock;*
- (ii) *Truck transportation facilities;*
- (iii) *A warehouse; towing service;*
- (iv) *A public parking area;*
- (v) *Any use accessory to the foregoing uses including an outdoor storage yard.*
- (vi) *For all lands zoned MD1.3 on Zoning District Map Pages 11B and 11C, any industrial use permitted in paragraph (a) subsection (1) of this Section, MD1.1 District, may be permitted in this district;*

The uses permitted listed above in the MD1.3 zone include uses permitted in paragraph (a) subsection 1 of MD1.1, which is as follows:

(i) *In this sub-section, any product described as small shall not exceed a maximum weight of 50 kilograms and a maximum volume of one cubic metre;*

(ii) *And one or more of the following industrial uses:*

Food and Beverage Industries - a food catering service; preparation packaging and processing of food products, including a bakery, but not including any of the following activities: rendering of fats or oils; slaughtering or processing of poultry, fish or meat products; processing of sauerkraut, vinegar, or yeast; flour milling.

Manufacturing - Manufacturing from any of the following materials: textiles; fur; glass; leather; paper; plastics; wood; yarns; tobacco; rubber and rubberized products.

Pharmaceutical Products - Manufacture of cosmetics, drugs, pharmaceutical products, toiletries.

Electrical Appliances - Construction of electrical products, the manufacture of small parts therefor.

Motor Vehicle Parts - Manufacture of small parts for motor vehicles.

Scientific and Industrial Professional Equipment - Construction of scientific or professional equipment, the construction of industrial equipment.

Signs - Construction or repair of electrical or other signs, billboards or other commercial advertising structures.

Tool and Die - Manufacture of moulds, dies, patterns, machines tools, jigs, fixtures.

Miscellaneous Manufacturing - Manufacture of musical instruments, ceramics, jewellery, toys, cutlery, or other small metal products, manufacture and application of protective coatings.

Warehousing - Warehouse, storage tanks, self-storage facility.

Repairs/Motor Vehicle Repair - A light repair shop, a heavy repair shop.

Welding - A welding shop for the welding of small metal products.

(iii) *The operation of a railway, water transportation facilities including a public or private dock. Truck transportation facilities are not permitted except as an accessory use to an industrial use permitted under sub-section (ii) of this paragraph;*

(iv) *Dry cleaning, dyeing, laundry;*

- (v) *Commercial printing engraving, stereotyping, publishing, photographic processing;*
- (vi) *A contractor's office, towing service, exclusive of an outdoor storage yard for the storage of motor vehicles;*
- (vii) *Veterinary clinic;*
- (viii) *A wholesale store, machinery, tool or equipment rental agency, gas bar, automobile sales lot, a retail store for the sale of any one or more of the following: building supplies, tools, machinery, and machine parts, home and garden maintenance and repair equipment, recreational products, motor vehicle parts, a coin operated car wash, automatic car wash, restaurant, take-out restaurant, health studio, retail store for the sale of home furnishings and appliances;*
- (ix) *Business offices;*
- (x) *A public parking area; ambulance service;*
- (xi) *Any use accessory to the foregoing uses, which may include the following: a retail store in combination with and accessory to any industrial use permitted in subparagraph (ii), of this paragraph, provided that the net floor area of the retail store does not exceed the greater of 25% of the gross floor area of the main building or 15% of the lot area; a caretakers residence, an outdoor storage yard, provided that there is no outdoor storage of sand or other aggregates, incidental millwork related to the retail sale of lumber.*

(b) Regulations

- (i) *Maximum building height – 14 metres*
- (ii) *Supplementary Regulations*
 - *See Section*
 - 21 re: *Supplementary Use Regulations*
 - 22 re: *Supplementary Lot Regulations*
 - 23 re: *Supplementary Building Regulations*
 - 24 re: *Parking Space Regulations*
 - 25 re: *Parking Area Regulations*
- (iii) *The operation of a railway, water transportation facilities including a public or private dock. Truck transportation facilities are not permitted except as an accessory use to an industrial use permitted under subparagraph (ii) of this paragraph;*

The by-law defines a 'highway' as follows (the same definition as bylaw 3072):

"Means all allowances for roads made by the Crown surveyors, all highways laid out or established under the authority of any statute, all roads on which public money has been expended for opening them or on which statute labour has been usually performed, all roads dedicated by the owner of the lands to public use, and all alterations and deviations of and all bridges over such allowances"

The by-law defines a 'use' two ways, as follows:

"When used as a noun means the purpose for which a lot or part thereof, building or part thereof or other structure or part thereof is designated, maintained or occupied"

"When used as a verb means anything done by any person or permitted, either directly or indirectly by any person, for the purpose of making use of a lot or part thereof, building or part thereof, or other structure or part thereof"

APPENDIX 5: Valcoustics Preliminary Review of Potential Noise Impacts

Preliminary Overview

Environmental Noise Aspects

Detroit River Tunnel Project
City of Windsor

June 2004
Project: 104-034

Prepared for

Meridian Planning Consultants

Prepared by



A. D. Lightstone, Ph.D., P.Eng.



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Preliminary Overview

Environmental Noise Aspects

Detroit River Tunnel Project City of Windsor

1.0 INTRODUCTION

The Detroit River Tunnel Partnership (DRTP) has proposed the conversion of the existing rail tunnels under the Detroit River at Windsor for use by trucks, together with a dedicated route for trucks through the City of Windsor, to connect with Highway 401. As part of implementing the proposed Truck Route Corridor, a number of new or modified grade separations/interchanges with existing roads will be needed. In addition to the truck route, a vehicle processing facility will also be required along the approach to the border crossing.

At the request of Meridian Planning Consultants Inc., Valcoustics Canada Ltd. undertook a preliminary modelling exercise in order to examine potential noise impacts which may be created for lands in the neighbourhood of the proposed DRTP Truck Corridor. While we specifically used data applicable to the DRTP proposal, we believe the potential noise impacts would also be applicable to another proposed private truckway associated with the Ambassador Bridge, if the same assumptions regarding numbers, types and speeds of trucks used in our modelling apply to that proposal.

2.0 NOISE AND VIBRATION ASSESSMENT CRITERIA

Typically, noise from widened or new roadways is assessed both in terms of the absolute sound exposure levels at nearby receptors and in terms of the change to the environment, with the ambient environment as a reference. Note, the Ministry of Environment (MOE) guidelines prohibit counting railway corridors (and aircraft) as part of the ambient. Thus, the reference, background sound levels for assessment of the new facility would be the existing (and future) situation at the receptors, excluding the railway corridor activity.

Changes to the environment of 3 dBA or less would generally be considered insignificant. Changes of 5 dBA or more are increasingly significant. Changes of 10 dBA or more are considered very significant, being twice as loud.

The existing or amended railway corridor carrying through trains would be considered a transportation corridor. Any truck processing facility would/should be treated as a stationary source. Long driveways or private roads on industrial sites (e.g., quarries) would normally be treated as part of the stationary source.

Regardless of whether all or part of the new facility is considered a stationary source or a transportation source, its noise (and other) impacts needs to be considered.

Generally, ground vibration from roadways using rubber tired vehicles is not a concern, unless there are special circumstances such as an expansion joint for a bridge, close to sensitive neighbouring uses. Presumably, the proponents of the project would apply the vibration criteria advocated by the railways, to assess and mitigate potential impact from revised rail facilities on neighbouring sensitive land uses, such as residential.

3.0 POTENTIAL NOISE IMPACT OF TRUCK CORRIDOR

For this report, we have used data indicating average weekday two-way truck traffic at the Ambassador Bridge of 9,245 trucks for the day period (0700-2300 hours) with a peak hour of 695 trucks, and an average for nighttime (2300-0700 hours) of 3,017 trucks, with a peak hour of 395 trucks.

Tables 1 to 3 and Figures 1 to 3 summarize a simple wayside noise analysis for a truck road at different traffic volumes assuming:

- level, soft ground between road and receptor;
- receptor height of 1.5 m (standing height at-grade);
- constant vehicle speed of 80 km/hr; and
- no mitigation in the form of new works or screening from existing buildings on either side of the proposed route.

The above preliminary analysis is for daytime, nighttime and one-hour periods, in accordance with the time periods defined in the MOE noise guidelines.

The range of noise criteria that would apply to a stationary source at adjacent residential development would be 50 dBA (one-hour L_{eq}) during any hour of the day and 45 dBA during any hour of the night, in the worst case (or something higher depending on existing road traffic but excluding trains). If the private truck route is considered a transportation corridor, the applicable criteria would be 55 dBA (16-hour L_{eq}) during day and 50 dBA (8-hour L_{eq}) at night.

Presumably, over the relatively near future (10 year projection), the truck traffic volumes for an expedited border crossing facility could increase by a factor of two or three. Thus, day/night volumes of up to 18000-27000/6000-9000 and peak hourly volumes of up to 1400-2100 for day hours and 800-1200 for night hours might result.

From Tables 1 to 3 and Figures 1 to 3, without mitigation, and without any screening, comparing against the various noise criteria, the potential influence area (i.e., where the noise criteria would be exceeded) could extend out more than several hundred metres on each side.

Assuming development parallel to the truck route and the truck facility at-grade, the first row of buildings adjacent to the truck route would experience the highest sound exposures. Subsequent rows of buildings would experience reduced noise due to increased distance and screening by the intervening development, depending on relative heights. Buildings on streets at 90° to the truck route would potentially have less screening benefit. Upper storeys would also experience less screening and other sound attenuating effect, resulting in higher sound exposures than at 1.5 m elevation. Where the track facility is elevated above grade, the screening effects of intervening buildings may be less, and the potential zone of noise impact greater.

In addition, there is also the potential for new noise impacts in the region around new grade-separated road crossings and new interchanges and connections to existing roads.

Further, the truck processing facilities at the "Customs Plaza" also have the potential for noise impact on surrounding lands due to the potentially significant number of truck movements, including large numbers of idling trucks.

Note, subject to the design of the trucking facilities, the average speed of truck travel, or speed at certain portions may vary. The sound generation of a dedicated truck facility is relatively insensitive to speed, reducing by about one (1) dBA per 10 km/hr of speed reduction. For example, at an average speed of 66 km/hr the sound exposure levels in Tables 1 to 3 and Figures 1 to 3 would be reduced by about 1.2 dBA. The effect of such speed variations on the size of the potential zone of noise impact is small.

4.0 POTENTIAL IMPACT OF RAIL CORRIDOR

One of the alternative alignment options shown by the DRTP for the new rail tunnel (Alignment Option B) is considerably offset from the current location, with a new alignment route through Windsor. This alternative could potentially significantly affect lands that now receive little or no railway noise impact.

Such a new railway corridor alignment also has the potential for significant impact due to ground vibration on neighbouring lands.

5.0 CONCLUSIONS

The proposed DRTP project has the potential to produce significant noise (as well as vibration impacts) on surrounding lands. In our opinion, the preliminary noise assessment results warrant that the proponent conduct detailed studies:

- to demonstrate and confirm that potential noise (and vibration) impacts on surrounding uses can be adequately mitigated by facility design;
- to document what mitigation techniques are proposed; and
- to demonstrate that after mitigation measures are implemented the applicable provincial noise criteria will not be exceeded.

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TABLE 1
SOUND EXPOSURES (dBA)* DUE TO TRUCK ROUTE
DAYTIME (16-HOUR)

Total Heavy Truck Volume	Distance (m)								Trucks/Hour
	15	30	50	100	200	300	400	500	
1000	70	65	61	56	51	48	46	45	62.5
2000	73	68	64	59	54	51	49	48	125
3000	74	69	66	61	56	53	51	49	187.5
5000	77	72	68	63	58	55	53	52	312.5
10000	80	75	71	66	61	58	56	55	625
20000	83	78	74	69	64	61	59	58	1250
30000	84	79	76	71	66	63	61	59	1875

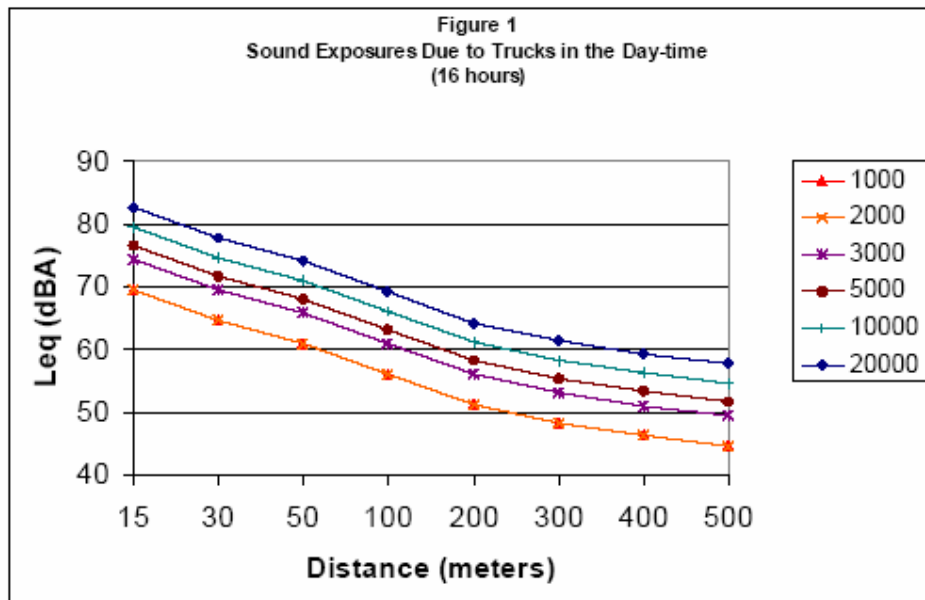
* 16-Hour L_{eq}

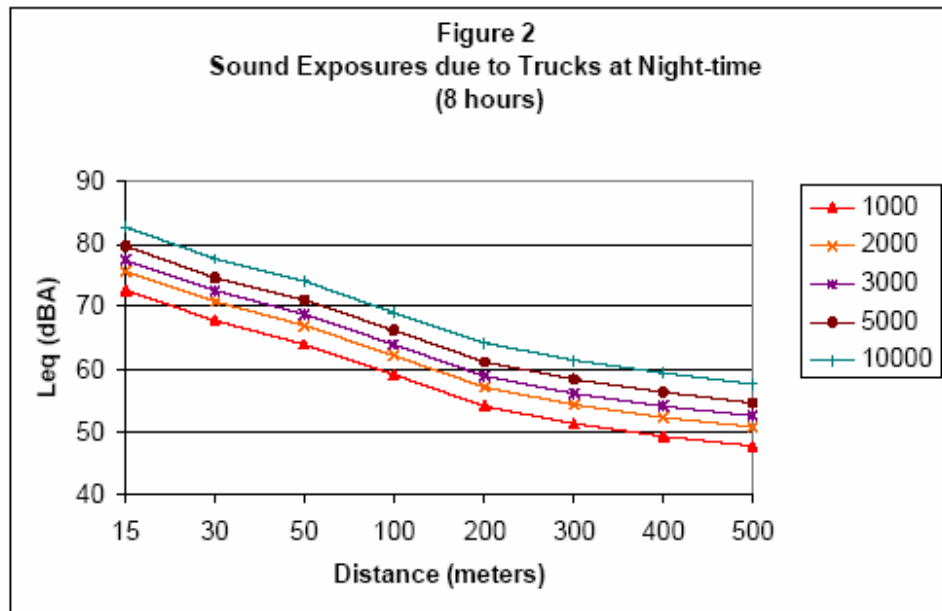
TABLE 2
SOUND EXPOSURES (dBA) DUE TO TRUCK ROUTE
NIGHTTIME (8-HOUR)

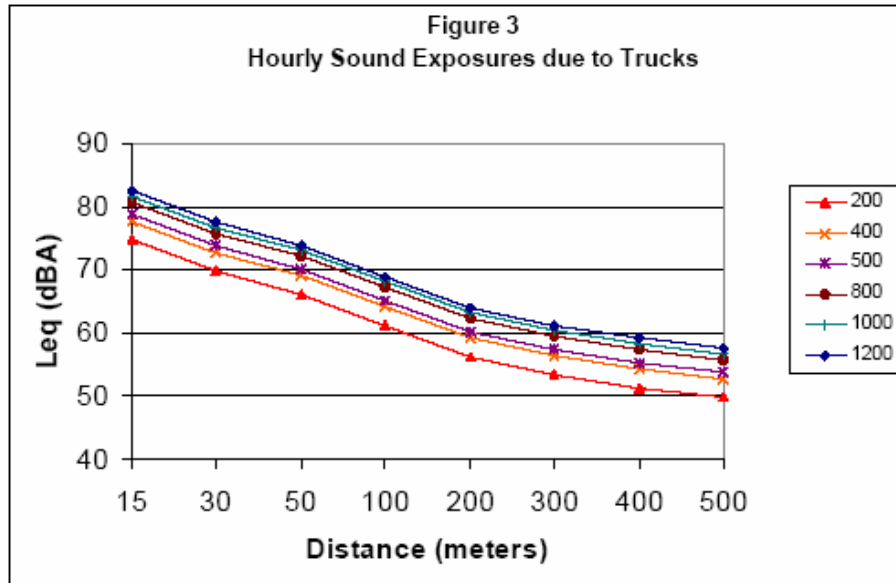
Total Heavy Truck Volume	Distance (m)								Trucks/Hour
	15	30	50	100	200	300	400	500	
1000	73	68	64	59	54	51	49	48	125
2000	76	71	67	62	57	54	52	51	250
3000	77	72	69	64	59	56	54	53	375
5000	80	75	71	66	61	58	56	55	625
10000	83	78	74	69	64	61	59	58	1250

TABLE 3
SOUND EXPOSURES (dBA) DUE TO TRUCK ROUTE
HOURLY

Total Heavy Truck Volume	Distance (m)							
	15	30	50	100	200	300	400	500
200	75	70	66	61	56	53	51	50
400	78	73	69	64	59	56	54	53
500	79	74	70	65	60	57	55	54
700	80	75	72	67	62	59	57	56
1000	82	77	73	68	63	60	58	57
1200	82	78	74	69	64	61	59	58







APPENDIX 6: SENES Consultants Review of Potential Air Quality Impacts



SENE Consultants Limited

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33735

June 8th, 2004

Meridian Planning Consultants Inc.
113 Collier Street
Barrie, Ontario
L4M 1H2

Attention: Robert Lehman

RE: Proposed DRTP Truck Corridor - Potential Air Quality Impacts

Dear Mr. Lehman,

The Detroit River Tunnel Partnership (DRTP) has proposed the conversion of the existing rail tunnels under the Detroit River at Windsor for use by trucks, together with a dedicated route for trucks through the City of Windsor, to connect with Highway 401. In addition to the truck route, a vehicle processing facility will also be needed along the approach to the border crossing.

At your request, SENES Consultants Limited undertook a modelling exercise in order to examine potential air quality impacts which may be created for lands in the neighbourhood of the proposed DRTP Truck Corridor. While we specifically used data applicable to the DRTP proposal, we believe the projected impacts would also be applicable to another proposed private truckway associated with the Ambassador Bridge, if the same assumptions regarding the grade as well as numbers, types and speed of trucks used in our modelling apply to that proposal.

SENE used the U.S. EPA Industrial Source Complex (Version 3) (ISC 3) dispersion model, and meteorological data from Windsor, to simulate the dispersion of the emissions from the proposed truck corridor into the surrounding areas. The source area modelled encompassed the proposed corridor from the E.C. Row Expressway up to the entrance of the existing rail tunnel, including a customs plaza, located roughly 2 km north of the EC Row Expressway.

The assumptions that were used in the modelling are as follows:

1. A total of 12,262 trucks per day will use the corridor (based on current daily truck volumes on the Ambassador Bridge).
2. The corridor will be paved. Our modelling assumed that no dust control measures will be applied.

Specialists in Energy, Nuclear and Environmental Sciences

3. The existing rail tunnels will be retrofitted for use by trucks.
4. Northbound (U.S. bound) trucks were assumed to queue from the E.C. Row Expressway all the way to the proposed DTRP customs plaza (2.2 km). SENES assumed a total of 146 trucks in the queue at any given time (15.2 m per truck, over the entire length of road). A total of 247 trucks per hour will move through the queue. The trucks move slowly toward the customs plaza, in stops and starts. A maximum speed of 33 km/h was assumed for these movements. All of the vehicles were assumed to be idling between movements, due to short stopping times (e.g. 3 to 4 minutes).
5. SENES modelling is based on the proposed DRTP "Canada Only Customs Plaza" option as presented in the April 2004 DRTP Overview. In this scenario, it was assumed that all of the docks and half of the parking spaces are occupied. Of these trucks, half were assumed to be idling. Employee parking was not modelled as their contribution would be very small in comparison to the truck traffic. A total of 5,922 U.S. bound trucks were assumed to pass through the facility per day. An additional 6,340 Canada bound trucks were assumed to by-pass it.
6. Southbound (Canada bound) traffic was assumed to be free-flowing from the customs facility to the EC Row Expressway. An average speed of 66 km/h was used for the selection of appropriate emission factors.
7. Emissions due to exhaust and vehicle travel were calculated using standard U.S. EPA emission factors from AP-42 and the MOBILE and PART5 models. Emissions of the following pollutants were calculated and modelled:
 - TSP;
 - PM₁₀;
 - NO_x;
 - SO₂; and
 - CO.
8. The effects of odours on an exposed population are based mainly on the subjective experience of the exposed individuals. For the purposes of this study, odour is defined as the response to olfactory stimulation that produces annoyance and is characterized as a nuisance effect.

The standard definition of odour unit (OU) is used in this analysis. One OU is defined as the quantity of odorous substances which, when dispersed in one cubic metre of odour-free air, becomes just detectable under laboratory conditions by 50% of an average sample of the population. This 50% odour detection level is also referred to as the odour threshold value, or OTV.



There is no specific regulatory limit for odour, however the MOE recommends a maximum concentration of 1 OU/m³ (10 minute average basis) as a criterion for assessing the potential for adverse impacts.

9. Odour due to diesel exhaust is difficult to quantify. There are no emission factors available in the literature for diesel exhaust. However, aldehydes (formaldehyde, benzaldehyde and acrolein) are believed to be the primary source of odour in diesel exhaust. As a result, SENES calculated and modelled emissions of total aldehydes as a surrogate for odour. This was then converted to odour units using an odour threshold of 150 µg/m³ (based on approximate average for formaldehyde, benzaldehyde and acrolein) for total aldehyde.
10. Emissions from the tunnels were not modelled. Additional emissions would be expected in the vicinity of the tunnel due to ventilation of truck exhausts from the tunnels. Potential air quality impacts in this area would depend on the location and characteristics of the exhaust vent (e.g. flow rate, pollutant exhaust concentrations, etc.)
11. Emissions due to construction activities were not considered, although it is expected that there would be potential dust (TSP, PM₁₀) impacts during this phase. SENES recommends that a Dust Mitigation Plan be required to control emissions during the construction phase.

Results

Based on the assumptions used in the modelling, SENES concludes the following:

1. Areas adjacent to the corridor will experience some impacts, including exceedances of provincial Ambient Air Quality Criteria (AAQC).
2. The areas actually subject to air quality impacts would likely be larger than indicated in the numerical results presented below for two reasons:
 - a) the concentrations presented do not include the existing background levels of air pollutants in the Windsor area. If the impacts from the DRTP corridor are added to background levels, the potentially impacted area would likely be larger than presented below; and
 - b) the modeling assumed trucks were traveling at ground level, whereas if the proposed road is above grade (which we understand would be the case for a significant part of its length in order to parallel elevated portions of the rail line) this would also cause a larger area to be impacted by air pollutants than presented below.



3. As shown in Figures 1a & 1b, areas adjacent to the corridor will experience TSP concentrations in excess of the provincial standard ($120 \mu\text{g}/\text{m}^3$ averaged over 24-hours) for up to 230 m from the centre of the roadway before the TSP concentrations drops to $120 \mu\text{g}/\text{m}^3$ (i.e., the concentration will be greater than the provincial AAQC for 230 m on each side of the roadway).¹
4. As shown in Figures 2a & 2b, areas adjacent to the corridor will experience PM_{10} concentrations in excess of the provincial standard ($50 \mu\text{g}/\text{m}^3$ averaged over 24 hours). The maximum distance on either side of the roadway to the point at which the PM_{10} concentration drops to $50 \mu\text{g}/\text{m}^3$ is 185 m.
5. As shown in Figures 3a & 3b, some areas adjacent to the corridor will experience NO_x concentrations in excess of the 1 hour standard ($400 \mu\text{g}/\text{m}^3$). The maximum distance from the centre of the roadway to the point at which the NO_x concentration drops to $400 \mu\text{g}/\text{m}^3$ is 140 m.
6. As shown in Figure 4, there are no predicted exceedances of the odour guideline ($1 \text{ OU}/\text{m}^3$ averaged over 10 minutes). However, the guideline value of 1 OU is based on the odour intensity that typically results in complaints. The levels at which odours are detected and recognized are much lower. Based on the predicted concentrations, it is likely that diesel odours will be noticeable, on occasion. Also, as discussed previously, this guideline is based on the response of average members (e.g. 50%) of the population. Some individuals are more sensitive to odours than others. Thus, the more sensitive members of the population in the vicinity of the truck corridor (~200 m) may, on occasion, react adversely to diesel exhaust odours.
7. There are no predicted exceedances of any standards for CO or SO_2 .
8. These results are based on the "Canada Only" Customs Plaza scenario. The co-located customs facility, which has a larger number of proposed spaces, and the "Integrated Customs Plaza" Option would be expected to have slightly higher concentrations of gaseous pollutants (e.g. NO_x and odour) due to more idling trucks expected in the parking area, and southbound vehicle queuing, as Canada-bound trucks line up for customs inspections. However, concentrations of TSP and PM_{10} would be expected to be lower between the border and the customs facility due to lower vehicle speeds and decreased dust loadings from the road surface.

¹ Note that in the scenarios with queuing (Figures 1a & 2a), the particulate concentrations are lower in the section between the E.C. Row Expressway and the Customs Plaza. This is because the vehicles in the queue are travelling slowly, and as a result there is a significant decrease in the particulate emitted from the road surface. For modelling purposes, SENES assumed that these emissions are negligible (zero).

SENES' Qualifications

Established in 1980, SENES Consultants Limited provides a broad scope of services related to the atmospheric environment and the management of air resources. These include capacity building in air quality management, the design and undertaking of air quality and odour monitoring programs; assessment of impacts on air quality either on or by proposed projects including stationary and mobile sources; preparation, analysis and management of air emission inventories; air license and permit applications; abatement technologies and associated costs; application, development and verification of computer models that simulate contaminant behaviour in the environment; and advice and expert testimony on a wide range of air quality matters.

The Air Quality Group at SENES - Richmond Hill Office is comprised of approximately a dozen scientific and engineering staff where approximately half of the staff can be classified as senior engineers and scientists that independently manage projects and have at least ten years experience. The remaining staff in the Richmond Hill Air Quality Group are junior engineers that provide competent and cost effective technical support on projects, and intermediate-level staff that are in transition between the junior and senior levels. The group includes a mix of expertise including the ability to complete and interpret sophisticated atmospheric dispersion modeling; assess a variety of industrial processes from the perspective of air emissions reporting, applications for certificate of approval and resolution of complex pollution abatement problems; ambient air monitoring; and a unique ability interpret meteorological data inputs to modeling.

It was a pleasure working with you on this project. Please do not hesitate to call me if you have any questions.

Yours very truly,

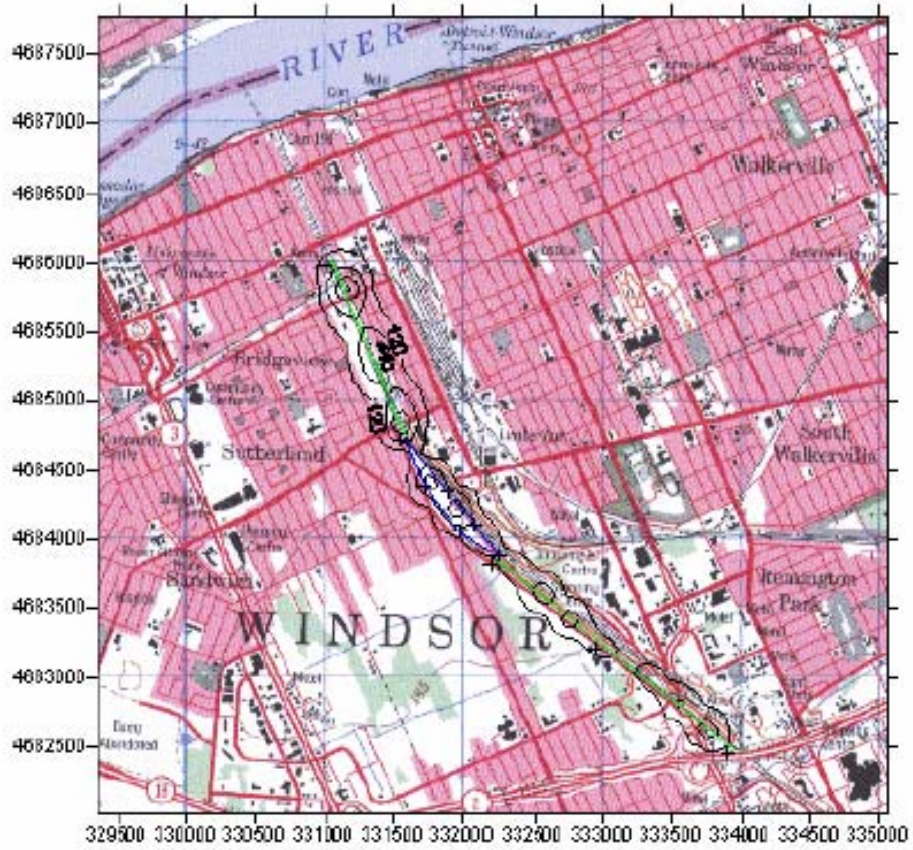
SENES Consultants Limited



Abigail C. Salb, M.Sc., P.Eng.
Environmental Engineer



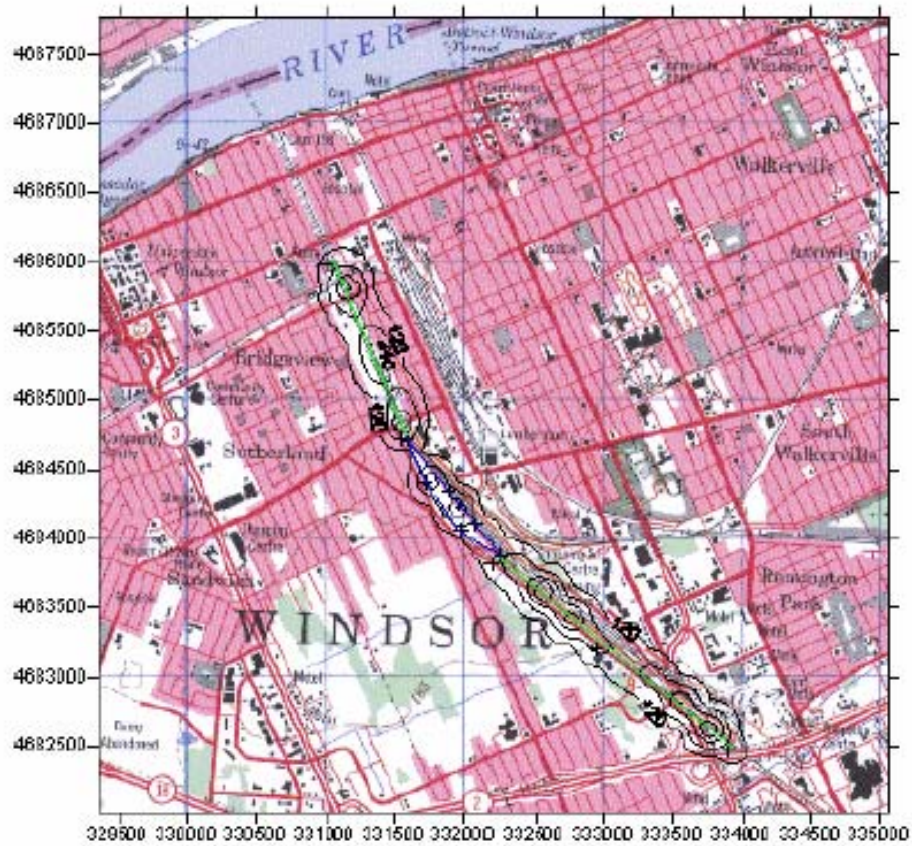
Figure 1a
Proposed CRTP Truck Corridor
Predicted 24-hour TSP Concentrations
With Traffic Queuing



MOE Ambient Air Quality Criterion for TSP = 120 µg/m³ (averaged over 24 hours)



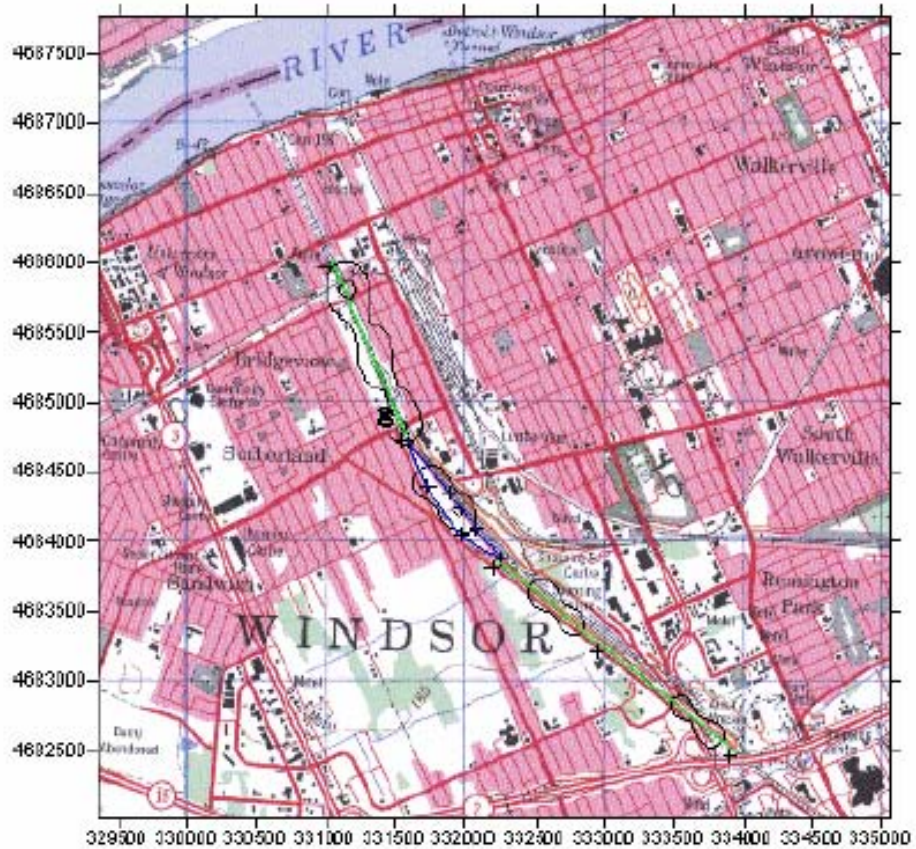
Figure 1b
Proposed CRTP Truck Corridor
Predicted 24-hour TSP Concentrations
No Traffic Queuing



NO Ambient Air Quality Criterion for TSP = 120 $\mu\text{g}/\text{m}^3$ (averaged over 24 hours)



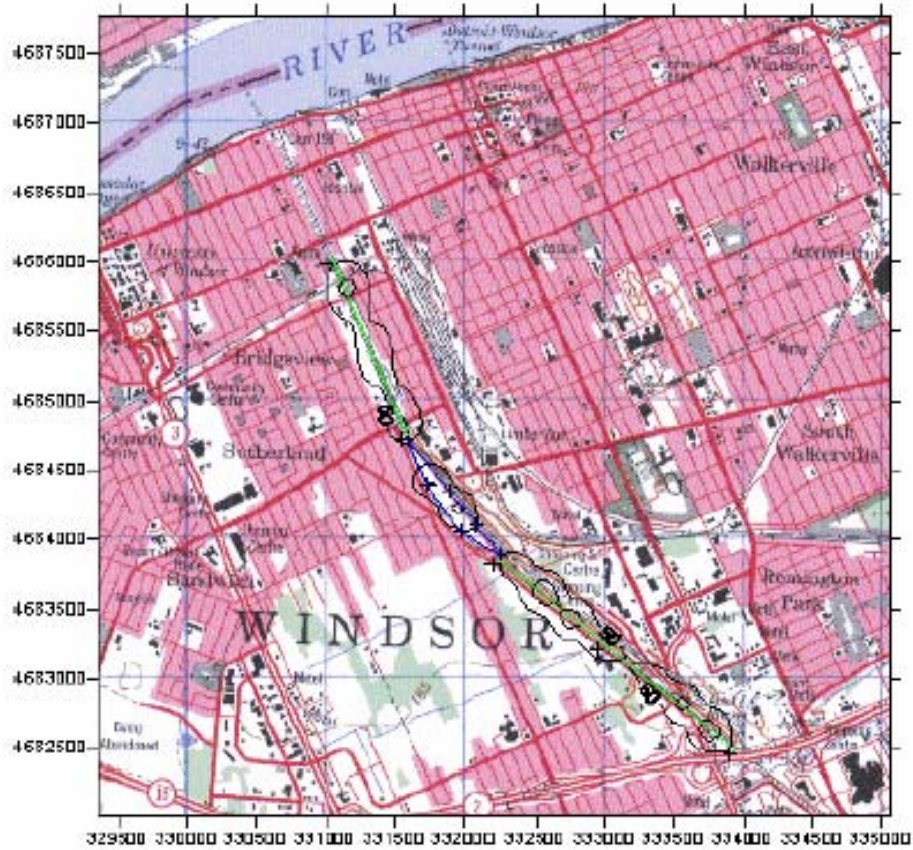
Figure 2a
Proposed CRTP Truck Corridor
Predicted PM10 Concentrations
With Traffic Queuing



MOE Ambient Air Quality Criterion for PM10 = 50 µg/m³ (averaged over 24 hours)



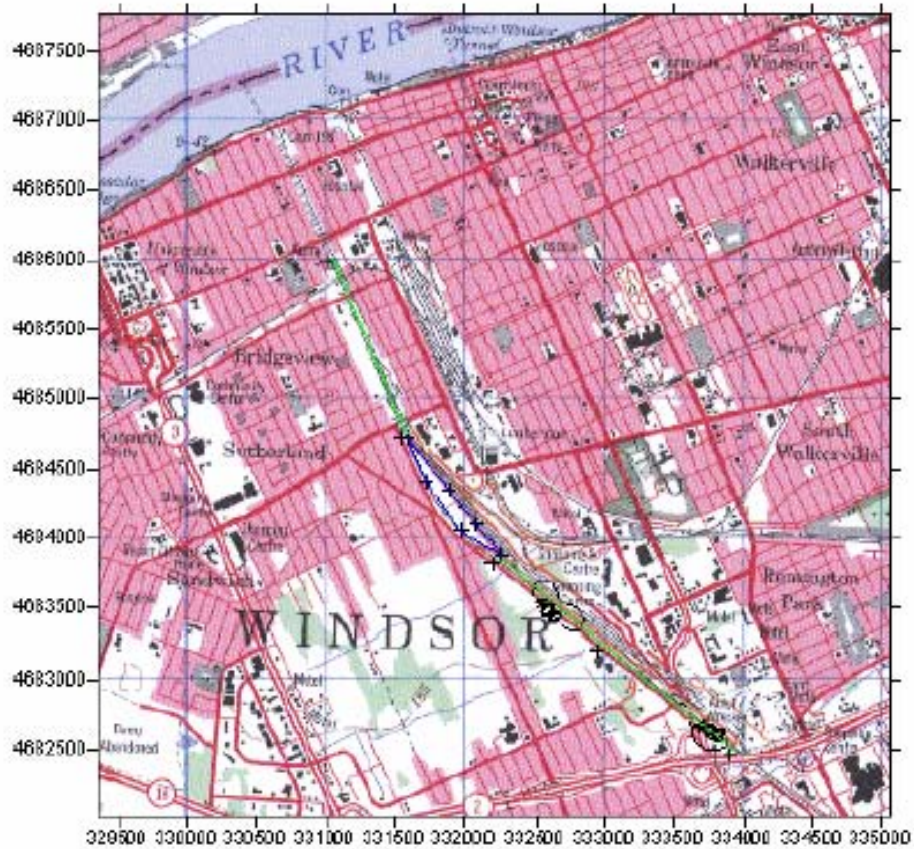
Figure 2b
Proposed DRTP Truck Corridor
Predicted PM₁₀ Concentrations
No Traffic Queuing



NO E Ambient Air Quality Criterion for PM₁₀ = 50 µg/m³ (averaged over 24 hours)



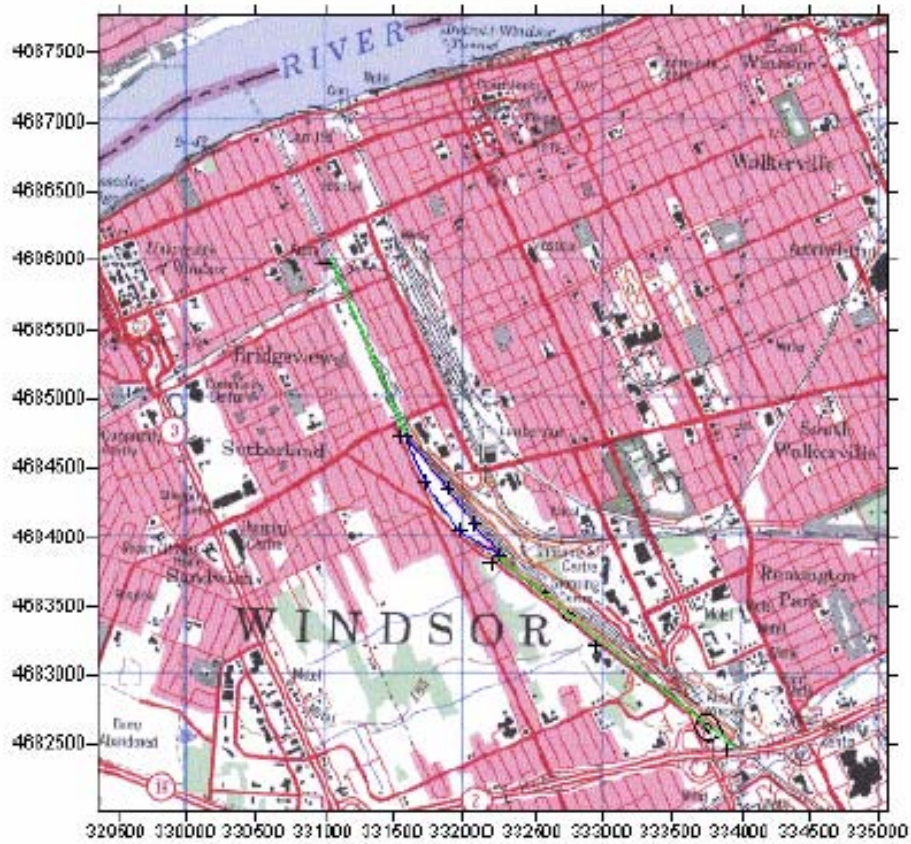
Figure 3a
Proposed DRTP Truck Corridor
Predicted 1 hour NO_x Concentrations
With Traffic Queuing



NOE Ambient Air Quality Criteria for NO_x = 400 µg/m³ (averaged over 1 hour)



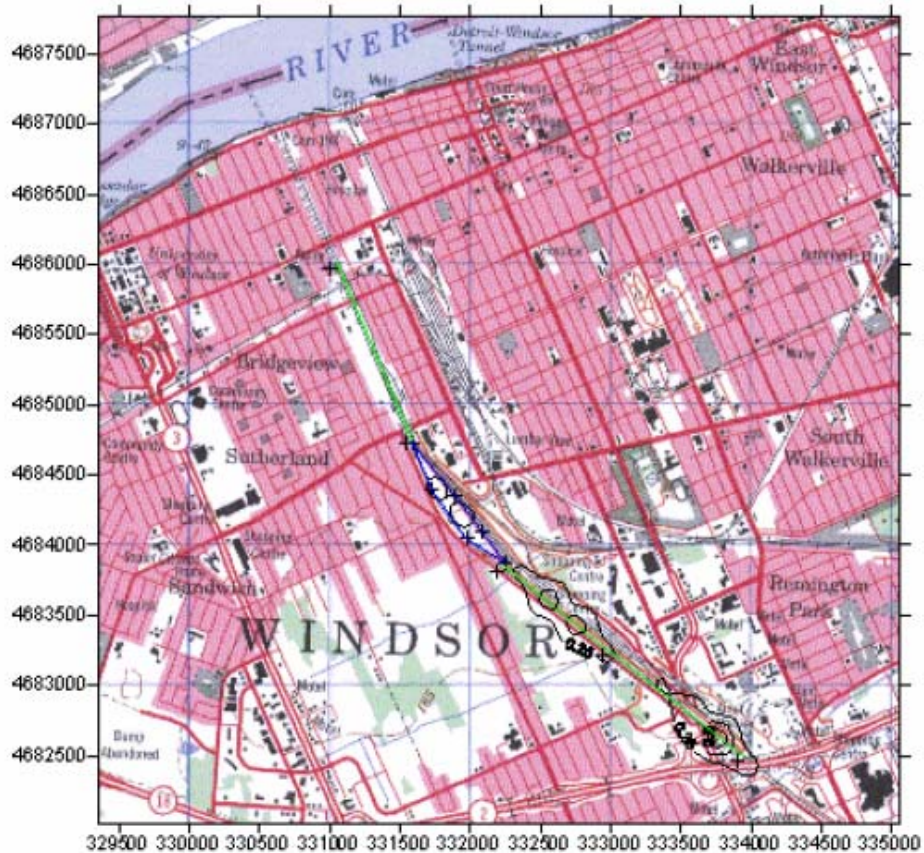
Figure 3b
Proposed DRTV Truck Corridor
Predicted 1 hour NO_x Concentrations
No Traffic Queuing



NO_x Ambient Air Quality Criterion for NO_x = 400 ppbM³ (averaged over 1 hour)



Figure 4
Proposed DRTP Truck Corridor
Predicted 10 Minute Odour Concentrations
With Traffic Queuing



MOE Ambient Air Quality Criteria for Odour = 1.0 U/m³ (averaged over 10 minutes)



APPENDIX 7: Potential Amendments to the Official Plan