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February 26, 2009

Mr. David Estrin  
Environmental Law Specialist  
Gowling Lafleur Henderson LLP  
Suite 1600, 1 First Canadian Place  
100 King Street West  
Toronto, Ontario M5X 1G5

Dear Mr. Estrin:

**Re: Detroit River International Crossing (DRIC) Environmental Assessment Study**

I am writing in response to your December 12, 2008 submission on behalf of the City of Windsor on the Access Road Undertaking, Detroit River International Crossing (DRIC) Study, Draft Environmental Assessment Report. The City's submission, which focuses on the selection of the Windsor-Essex Parkway as the Recommended Plan for the access road component of the DRIC study, raises three issues.

We will respond to the three issues the City has raised but before we do, it is important to keep in mind that improving the Windsor-Detroit border crossing to support the increasing transportation needs is a priority for the governments on both sides of the border. A new end-to-end transportation system linking Highway 401 to the U.S. interstate system with inspection plazas and a new river crossing in between will speed up the flow of cross-border traffic, improve road safety, protect and strengthen local jobs, beautify the existing transportation network and stimulate investment and employment in Windsor and Essex County.

Let me also just say that we all want the best solution for the new access road. On a provincial and national level, the decisions made here will affect virtually every person in Ontario in some way or another because this is the busiest border crossing between Ontario and the U.S. and a major focal point for both trade and tourism. On a community level, a central objective of the study was to minimize impacts to the community and find ways to improve the quality of life for residents. Accordingly, a great deal of careful planning, analysis, evaluation and consultation has gone into every stage of the environmental study in order to minimize community and environmental impacts as much as possible.

In fact, over the past four years, the Canadian study team has continued to work closely with the community to meet the purpose of the study – to provide for the safe, efficient and secure movement of people and goods across the Canadian-U.S. border in the Windsor-Detroit corridor – and to achieve the local community's goals of improving quality of life, taking trucks off local streets and improving the movement of traffic across the border.

We have listened and responded. In fact, more than 300 public consultation sessions have been held since the beginning of the study with thousands of Windsor and Essex County residents,

community groups, experts, local elected officials, and other government agencies. This community input has been key to understanding the community and environmental impacts of this project so that we can minimize them wherever possible.

We recognized that identifying and evaluating alternatives would be a complex task due to the diverse nature of the project area and the inherent differences in cultures, values, objectives and priorities of the communities on both sides of the border that may be impacted by the project. Despite the complexity of the task, we believe selecting the Windsor-Essex Parkway as the Recommended Plan achieves the best balance of benefits versus impacts and will improve the quality of life for local residents. In fact, community input has helped to identify the local concerns that were considered in the development of The Windsor-Essex Parkway and in identification of specific mitigation measures.

Finally, the Windsor-Essex Parkway will be the most significant highway investment made in Ontario's history. It reflects a commitment by the governments of Canada and Ontario to build the right solution. It is unparalleled in terms of the scale and uniqueness of its community enhancement features for any highway, anywhere in Ontario. It provides for the safe, efficient and timely movement of border-bound traffic and goods while directly addressing community concerns and goals.

As we understand them, the City's comments and concerns, relate to three areas, namely:

- Air Quality
- The City's GreenLink proposal
- Environmental Assessment Act Requirements

The DRIC study team has reviewed the City's concerns and responds to each of them below. However, before we respond let me just say that over the course of the environmental assessment for the access road, the team met with and consulted many stakeholders and interested parties, as noted above. Many suggestions were made, some of which were accepted and some of which, after consideration, were not. As you know, the team is not required to accept all suggestions made during consultation, nor can it. The parameters of the project would become untenable and timelines unmanageable. The purpose of the Terms of Reference is to establish tangible objectives with a defined process, in part to allow the proponent to manage the project within an established framework. While the team followed this framework, I can tell you that a great deal of community and municipal input influenced the ultimate decisions that were made.

References to paragraphs below are to the submission by the City of Windsor dated December 12, 2008.

#### **A. Air Quality**

The city asserts that the Parkway fails to protect human health and the environment. It further states that the Parkway will result in unacceptable exposure to contaminants for local residents (primarily in paragraphs 1 – 74 and 82 – 89 of the City's submission). The DRIC study team rejects these assertions.

The modeling shows that the risk from all health-based contaminants was either negligible relative to background (existing conditions) or was well below health-based limits even under the worst (maximum) conditions. Contrary to the assertion that the technically and environmentally preferred alternative results in an increased health risk over the future "No Build" alternative, it actually provides some benefits and results in a lower health risk (in respect

of the two major pollutants studied (NO<sub>x</sub> and PM<sub>2.5</sub>) for the adjacent communities in comparison to the future "No Build" alternative.

The study team recognized that one of the goals of the Environmental Assessment (EA) is to address changes associated with the proposed activity. Air quality is clearly an important factor and the study team did extensive analyses on potential air quality impacts. In order to ensure that this requirement was satisfied, the study team and its experts prepared air quality reports in support of the overall EA report. These reports include the Practical Alternatives Evaluation Working Paper: Air Quality Impact Assessment (May 2008); the Air Quality Assessment: Technically and Environmentally Preferred Alternative, December 2008 (TEPA); and the Human Health Risk Assessment: Technically and Environmentally Preferred Alternative, December 2008 (HHRA).

The air quality reports followed the structure identified in the DRIC Air Quality Workplan, (February 2006) which was circulated to regulatory agencies for review and comment prior to publication in 2006. The model selected for air quality assessment was the CalTrans CAL3QHCR roadway dispersion model, which is accepted for use in Ontario by the Ministry of the Environment (MOE) and is supported by Environment Canada for transportation assessments. The DRIC Air Quality assessment was conducted by SENES Consultants Limited (SENES), a firm with 25 years of experience in air quality assessment.

As noted above, the reports concluded that the Parkway will result in *improvements* to air quality compared to a (future) "No Build" alternative due to decreased engine idling and increased buffer zones in the highway right-of-way. For the TEPA and the HHRA, all health based impact contaminants were either negligible relative to background (existing conditions) or were well below the guidelines even under maximum (the worst) conditions. Maximum conditions are not constant but rather predicted to occur only once per year. Considering the 14 contaminants that were assessed, the overall conclusion was that the Parkway would not cause any additional impact in comparison to the future "No Build" alternative, particularly as it relates to health impacts.

The following is a brief summary of these reports:

### 1. Practical Alternatives Report

The **Practical Alternatives Report** assessed the relative differences among six practical alternatives and a future "No Build" alternative. This comparative assessment examined two health-based indicator substances, nitrogen oxides (NO<sub>x</sub>) and fine particulate matter (PM<sub>2.5</sub>). The information gained through this assessment contributed to the evaluation of alternatives, leading to the selection of the Technically and Environmentally Preferred Alternative (TEPA).

Summaries of the findings for the initial five practical alternatives were presented at the Public Information Open House (PIOH) 5 in August 2007. The report documenting the analysis of the initial five practical alternatives was available on the Partnership website as of August 14, 2007. The City of Windsor did not provide any comments on this report.

Through the analysis of the practical alternatives, and in conjunction with ongoing consultation efforts, a sixth alternative was developed that combined beneficial features of the original alternatives. This alternative was identified as the Parkway in August 2007 and the air quality analysis of practical alternatives was updated to include it. A summary of the updated analysis was presented on May 1, 2008. The Practical Alternatives Report was updated to include the Parkway and made available on the website on June 6, 2008. The City of Windsor did not provide any comments on this report until six months later, in December 2008.

The Practical Alternatives Report assessed the maximum (worst) concentrations and exceedances (concentrations exceeding the Canada-Wide Standards guidelines) on a comparative basis for road segments within the transportation corridor. The comparisons were always in relation to the maximum concentrations predicted to occur within the entirety of a particular road segment irrespective of the specific location within that segment where the worst conditions were predicted to occur (i.e., the maximum may occur at a different location in comparison to a "No Build" scenario).

The Practical Alternatives Report was clearly stated to be a comparative analysis of the various alternatives. Moreover, the analysis was based on maximum concentrations predicted to occur only once per year. As indicated, the analysis showed no clear preference amongst the alternatives, as all alternatives would provide similar contaminant loading. The conclusion was that the mass of contaminants released to the air is the same for any alternative but still less than in a "No Build" scenario.

## 2. TEPA report

The **TEPA report** examined predicted impacts on air quality for both the TEPA and the future "No Build" alternative. This data was also used as input to the Human Health Risk Assessment. The results reported in the TEPA report describe both the relative difference between the TEPA and the future "No Build" alternative and the actual estimates of future air quality with the TEPA in place. As committed in the Air Quality Workplan (2006), the TEPA report assesses 14 contaminants.

Pollutant concentrations reported in the TEPA report are maximum predicted concentrations (i.e., the worst pollutant levels). It is important to note that the maximums are not usual and are predicted to occur only once per year. Where no specific air quality monitoring receptors are identified, these maximum concentrations represent the maximum concentrations at any of the receptors assessed (i.e., the maximum concentration of 30  $\mu\text{g}/\text{m}^3$  listed in the TEPA report for  $\text{PM}_{2.5}$  in Table 4.20 occurs only at one of the 2400 receptors assessed) and are not indicative of the typical concentrations at each individual receptor, nor are they indicative of the maximum concentrations at all receptors. All other receptors will be exposed to lower concentrations under all meteorological conditions.

Both the Practical Alternatives Report and the TEPA Report relied on information obtained from computer modeling of future conditions, which in turn depends on a variety of input parameters. For a comparative analysis, it is important to have the input parameters remain constant with variation limited to traffic data and roadway geometry.

The parameters, which were kept constant for the "No Build" alternative, the TEPA and all other alternatives included: meteorological data, emission factors for tailpipe emissions, US EPA road dust calculation methodology, receptor locations, vehicle weight and length, background ambient concentrations, and horizon years (2015, 2025, and 2035).

Over 2400 modelled receptors were examined for impacts. These receptors were spaced to determine both near-distance and farther distance results from the roadways. The first two rows of receptors were placed at 50 m intervals from each side of the existing road, followed by 100 m intervals up to 500 m away. Another grid with 500 m x 500 m spacing was then overlaid to cover the rest of the modelling domain, which was essentially all of west Windsor, and adjacent portions of LaSalle and Tecumseh. In preparing the TEPA report, the study team responded to comments received on the Practical Alternatives report, and highlighted 64 receptors, representing specific neighbourhoods, schools, parks and churches.

The Practical Alternatives report used a very conservative silt loading factor to calculate impacts of  $PM_{2.5}$ . In fact, during the assessment of the Practical Alternatives it was noticed that the silt loading factor used for  $PM_{2.5}$  may have been overly conservative relative to published data in the literature. This conservatism was most notable within close proximity to the roadway. Predicted concentrations close to the roadway were higher than measured values published in literature for similar traffic volumes. The Practical Alternatives report indicated that refinements of modelling parameters would be undertaken for the analysis of the TEPA, and this was done. For the TEPA Report an effort was made to develop more realistic, yet still conservative silt loading and is consistent with the silt loading levels used in the US EPA AP 42 emission factors for applicable traffic volumes for uncontrolled roads.

The Practical Alternatives report assessed the maximum predicted concentration and the highest number of days predicted to exceed the guidelines (exceedances) on a relative basis along road segments within the transportation corridor for each alternative and the "No Build" alternative. All receptors along the road segment were considered, but only the highest of the maximum concentrations of those receptors was reported for each alternative within each road segment. All other receptors within that road segment, therefore, would have lower predicted maximum concentrations.

Due to differences in alignment and traffic volumes, these maximum predicted concentration points may not occur at the same location for the practical alternatives and the "No Build" alternative. A highest maximum location for the "No Build" alternative may not have been the highest maximum location for the other alternatives if traffic was moved away from that "No Build" point in the alternatives. The highest maximum location for the alternatives could have moved to a location closer to the new alternative roadway alignment. Therefore, the maximums reported for any of the alternatives represent the maximum along that road segment but would not necessarily coincide in location with the maximum for the "No Build" alternative as there are alignment and traffic variations of the traffic corridor between the practical alternatives and the "No Build" scenario.

As the Practical Alternatives report compared the highest maximum predicted concentrations relative to each other, these comparisons are neither indicative of concentrations along the entire segment, nor of predicted changes within the road segment for most receptors. This is particularly important to note given that the maximum concentrations predicted at each of the receptors occur only once per year and not necessarily on the same day as the receptors have to be downwind of the source to be impacted by the source and not all receptors can be downwind simultaneously.

As stated in the TEPA report, modelled  $PM_{10}$  exceedances are likely over-predicted due to a number of factors. For example, precipitation, which has a mitigating effect, was not considered in the model. Background concentrations that occur only 10% of the time were assumed to have occurred for the entire year. While this may be a reasonable approach to predict individual maximum concentrations, it is overly conservative for estimating frequency of exceedances. For receptors further from the road, consideration of plume depletion would also lead to lower concentrations. This same consideration applies to receptors within the right-of-way.

The analysis of practical alternatives showed that there is effectively no difference in air quality between the below-grade alternatives and the end-to-end tunnel alternative beyond about 100 metres from the right-of-way, and only minor differences between 50 and 100 metres. In the TEPA Report, the results for all health based contaminants were either negligible relative to background concentrations or were well below the guidelines even under maximum conditions.

The studies concluded that the Parkway will provide *improvements* to air quality relative to a future "No Build" alternative due to decreased idling and the increased buffer zones of the right

of way. While no alternative can be fully protective of air quality in Windsor and Essex County given the levels of trans-boundary pollution there (i.e., pollution originating at locations in the U.S. but carried by wind across the border), the studies concluded that the Parkway will actually *improve* air quality compared to a future “No Build” alternative. The analysis of practical alternatives showed that there is effectively *no difference* in air quality between the below-grade alternatives and the end-to-end tunnel alternative beyond 100 metres from the roadway, and only minor differences between 50 and 100 metres. Thus, tunnels may provide a means of moving emissions from one location to another (i.e., from one adjoining neighbourhood to another). This could affect very localized concentrations at some points along the roadway i.e. within 50-100m, but does not impact overall air quality in the Windsor air shed. As discussed more fully later when we come to consider the City’s GreenLink proposal, longer tunnels could in fact result in increased emissions near tunnel portals.

The updated analysis also showed that the Recommended Plan does not result in an increased health risk over the future “No Build” alternative. Rather, for  $\text{NO}_x$  and  $\text{PM}_{2.5}$ , the Recommended Plan actually results in a *lower* health risk in comparison to the future “No Build” alternative. The Recommended Plan also provides some benefits over the original TEPA for the communities along the Windsor-Essex Parkway.

### 3. HHRA report

The **HHRA report** used data from the TEPA report and assessed the relative differences between the TEPA and the future “No Build” alternative for the health based contaminants.

Particulate pollution matter consists of solid particles or liquid droplets that are suspended in air. In terms of health impact studies on particulate matter, the emphasis has been moving to the finer fractions over the last 30 years as monitoring equipment has advanced to be able to detect differences in the particulate matter fractions. Total particulate matter (PM) generally is considered particulate with a size up to 44 microns or  $\mu\text{m}$ .  $\text{PM}_{10}$  is that portion of PM associated with a size fraction of lower than 10  $\mu\text{m}$ .  $\text{PM}_{2.5}$  fraction references the portion of PM that is associated with sizes lower than 2.5  $\mu\text{m}$ . Both PM and  $\text{PM}_{10}$  are sometimes referred to as coarse particulate and  $\text{PM}_{2.5}$  is referred to as fine particulate. Ultrafine and submicron particulates refer to size fractions lower than 1  $\mu\text{m}$ .

PM is emitted from many sources, including power plants, ethanol plants, manufacturing, smelters, automobiles, burning industrial fuels, wood smoke, and dust from paved and unpaved roads, quarries, rock crushing operations, construction, and agricultural activities. In order to reduce PM concentrations, it is necessary to reduce overall combustion emissions from many sources, including motor vehicles, equipment, industries, power plants, and agricultural and residential burning. Existing levels of PM in areas near the border may also be as a result of trans-boundary pollution that is windblown into the area. For example, pollution levels in the Windsor area are influenced by pollutant matter carried by wind over the border from the U.S.

In the last five to ten years, health impact studies have been focussing on the impacts of  $\text{PM}_{2.5}$  and finer fractions. Health risks of  $\text{PM}_{2.5}$  have been studied extensively over the last decade, whereas the evidence concerning the health risks of the coarse fraction (PM and  $\text{PM}_{10}$ ) is relatively limited. Both Canada and Ontario have adopted the Canada-Wide Standards (CWS) for  $\text{PM}_{2.5}$  rather than  $\text{PM}_{10}$  due to the abundant evidence of health effects associated with  $\text{PM}_{2.5}$ . The reason for this is that the smaller the size of particulate matter, the farther it can travel into the lungs.  $\text{PM}_{2.5}$  is small enough that it bypasses the body’s natural defenses and gets trapped in the air sacs of the lungs, causing an inflammatory response increasing the potential for a

heart attack and can increase the incidence and severity of respiratory diseases. Thus, the HHRA focused on PM<sub>2.5</sub>.

Air quality standards are also reflecting these trends with the implementation of standards for the finer particulates. Very few jurisdictions currently regulate or suggest air quality guidelines for PM. In both Canada and Ontario the limits for PM are based on visibility. The US EPA standard for PM was revoked in 1987 and was replaced by a standard for PM<sub>10</sub>. PM<sub>2.5</sub> standards were implemented in 1987 in the US and the Canada-Wide Standard for PM<sub>2.5</sub> was accepted by Ontario in 1998.

In 2006, the US EPA revised standards for PM<sub>2.5</sub> moving from 65 µg/m<sup>3</sup> to 35 µg/m<sup>3</sup>, and retains the current annual fine particle standard at 15 µg/m<sup>3</sup>. The US EPA retained the existing 24-hour PM<sub>10</sub> standard of 150 µg/m<sup>3</sup>; however, due to a lack of evidence linking health problems to long-term exposure to coarse particle pollution, the Agency revoked the annual PM<sub>10</sub> standard. The Canadian Federal government has not developed a PM<sub>10</sub> Canada-Wide Standard due to insufficient evidence on the appropriateness of the standard. In addition, the federal government also recognizes that initiatives to reduce PM<sub>2.5</sub> will also likely reduce PM<sub>10</sub> concentrations.

In any event, modeled PM<sub>10</sub> exceedances are likely over-predicted due to a number of factors. For example, precipitation, which has a cleansing effect, was not considered in the model. The background concentration used in the modelling was based on conditions that only occur 10% of the time – that means the background is lower 90% of the time.

With this report information in mind and turning now to several of the assertions made in the City's submission that refer to report excerpts on mortality and risk, it is clear that this information is taken out of context by the City and is thus, misinterpreted. For example, paragraphs 37 to 39 of the submission state that "...the Tunnel's segments would result in a decrease of 6% for all causes of death, 9% decrease in cardiopulmonary mortality and 12% decrease in lung cancer based on the health impacts cited by DRIC per 10 µg/m<sup>3</sup> increment of PM 2.5", and erroneously conclude that "*...a Tunnel ... decreases death rates by up to 12% over the no-build*".

The City asserts that:

Whatever DRIC concludes in the EAR, the families living in the estimated 230 homes within 50 m of the Parkway ROW, and 585 homes within 100 m of the Parkway ROW (and outside of the area proposed for purchase by DRIC), cannot be expected to consider the Parkway of equally "low impact" as a Tunnel that decreases death rates by up to 12% over the no-build.

The City has misinterpreted the information from the report in making this assertion by confusing long-term impacts for short-term impacts. The numbers quoted are for long-term impacts (i.e., chronic exposure for 24 hours a day, 365 days per year) and reflect the maximum concentrations, which, we have noted previously, are predicted to occur only once per year and therefore are not representative of long-term impacts. In addition, the improvements cited for longer tunnels only apply to receptors located between the tunnel ends and are therefore not representative of all receptor locations, including those at the tunnel ends.

Moreover, the decreases referred to relate to decreases in mortality rates rather than to the whole population. So, for example, a 6% decrease in all causes of death (which is equivalent to 8.5 deaths per thousand per year) would mean that the decrease in mortality is 0.5 deaths per thousand per year to those chronically exposed to a difference of 15 µg/m<sup>3</sup> per year. Further, the 12% decrease in lung cancer mortality would apply to a base rate of about 0.05% of the population dying from lung cancer per year, or 0.5 deaths per thousand per year). Therefore, a reduction of 12% of the 0.5 deaths is equivalent to 0.06 fewer deaths per thousand per year.

This reduction would only be expected to occur if the thousand people in this example were exposed for an *entire lifetime* at this level. However, it is important to note that none of the increments relating to traffic approach these levels on a long-term basis.

The City has again misinterpreted the report information in its assertion at paragraph 47 of the submission claiming that the Parkway would increase the risk of cardiopulmonary mortality by 1.34% and for all causes of death by 3.2%. While studies have shown that there is a small potential increase in mortality due to short term (24-hour) exposure of PM<sub>2.5</sub> increases of 10 µg/m<sup>3</sup> or more, as quoted in the Human Health Risk Assessment, in a population of one million, about 1.2 additional deaths would be associated with an increase of 50 µg/m<sup>3</sup> of PM<sub>2.5</sub> compared to 23 expected deaths per day. This would occur only if all of the million people were exposed to the 50 µg/m<sup>3</sup> increment for the full 24 hours. Such conditions are not possible for the Parkway for two reasons. The first reason that such conditions are not possible is that exposure on the green spaces within the right-of-way would occur over a much shorter timeframe (less than 24 hours) to a smaller population (less than one million). The second reason that such conditions are not possible is that, most of the time, receptor locations within the right-of-way are below the applicable Air Quality Criteria.

#### 4. Comparison to GreenLink proposal

The DRIC study team was able to use the information gained through the analysis of six alternatives, including the Parkway, to understand the benefits and impacts of the GreenLink concept. For example, one of the differences between the Parkway and GreenLink is the length of the tunnels. The DRIC analysis of six alternatives shows that there is effectively no difference in air quality between the below-grade alternatives and the six-kilometre tunnel alternative beyond 100 metres from the right-of-way and only minor differences between 50 and 100 metres. Constructing tunnels longer than those proposed in the Windsor-Essex Parkway would not provide additional improvements in air quality. Longer tunnels of the GreenLink proposal could result in *increased* emissions near tunnel portals because emissions that would otherwise be dispersed over a larger area would now be concentrated at the portals.

The amount of contamination released to the air would be no different under the GreenLink proposal than for the alternatives, regardless of tunnel length. It is the same for any option. So, contrary to the City's assertion that the Windsor-Essex Parkway is less protective of air quality because of its "landscaped overpasses" as compared to the "true tunnels" proposed in GreenLink; the reports show that tunnels, regardless of length, only provide a means of moving emissions from one location to another (i.e., from one adjoining neighbourhood to another), which affects very local concentrations i.e. within 50-100m, but does not impact overall air quality in the Windsor airshed but could result in increased emissions near tunnel portals. The amount of contamination released to the air under the GreenLink concept would be the same as for the alternatives.

Both the Practical Alternatives and the TEPA report acknowledge that concentrations are highest in close proximity to the road but the results presented in the TEPA report are maximum concentrations and are expected to occur only once per year. Most of the time receptor locations within the right-of-way indicate concentration levels that are below the applicable Air Quality Criteria.

With respect to the Human Health Risk Assessment, the DRIC study team experts reject the suggestion that the Parkway will be hazardous to human health. The modeling shows that all health-based impact contaminants were either negligible relative to background (existing concentration levels) or were well below the guidelines even under maximum conditions (the worst conditions). Contrary to the assertion that the TEPA results in an increased health risk over the Future "No Build" alternative, the TEPA actually results in a lower health risk for NO<sub>x</sub>



and PM<sub>2.5</sub>, in comparison to the Future “No Build” alternative and provides some benefits over the original TEPA over the future “No-Build” condition for the communities along the Windsor-Essex Parkway.

Lastly, the City’s submission erroneously suggests that the Parkway will result in unacceptable exposure to nearby residents and that it fails to protect human health and the environment. With respect, the City fails to take into account existing air contamination that is strongly influenced by pollution blowing in across the border from the United States. Even the City’s own GreenLink proposal cannot improve trans-boundary pollution levels. Further, the City’s own studies show that tailpipe emissions from the GreenLink proposal are virtually identical to those under the DRIC study so the assertion that GreenLink and not the Parkway protects the environment and human health is not borne out. Finally, the City’s assertion that tunnels will protect residential neighbourhoods from tailpipe emissions is misleading. Tunnels do not decrease overall emissions; they only move them to another location, resulting in the same overall emission impacts in the Windsor air shed as under the Parkway alternative. As both GreenLink and the Parkway have tunneled and at/below grade roadway segments, they both propose using green spaces as buffer zones between the highway and residential areas as mitigation measures to reduce such exposure and impact. Maximum concentrations may actually be higher with the GreenLink proposal as it could have elevated emissions compared to the Parkway in locations near tunnel portals due to the greater proposed tunnel length and increased emissions from the portals.

## **B. The City’s GreenLink proposal**

In response to the introduction of the Parkway as a refined alternative for the access road, the City of Windsor released its own concept for the access road in October 2007, called GreenLink Windsor, which it asserts better meets the evaluation criteria employed in the DRIC Environmental Assessment, referring to a table set out on page 22 of the City’s submission (and described in paragraphs 91 – 93 of the City’s submission). It appears that the City has mistaken “descriptive features” of the Parkway, copied by the City from a “Frequently Asked Questions” document for evaluation criteria prepared by the DRIC study team. Based on this fundamental misunderstanding of the descriptive features for the evaluation criteria, the City took it upon itself to step into the shoes of the EA Proponent to develop its own “alternative” rather than providing comments on the Proponent’s alternatives.

The TOR clearly sets out how alternatives are to be generated. It was never contemplated that alternatives generated by any person other than the Proponent would be considered. The TOR, approved by the regulatory body, *does not* therefore require the team to assess GreenLink as an “alternative” and any suggestion to the contrary is simply not correct.

What the TOR *did* require was: ““During the environmental study process, consultation with municipalities will involve reviewing, commenting, and providing input to the environmental studies, the technical analysis and the ongoing comment/input to the consultation process” (TOR – section 5.2.3). These opportunities were provided by the DRIC study team through numerous consultation sessions, as detailed below.

The approach of first identifying Illustrative Alternatives, evaluating them and subsequently identifying Practical Alternatives, was clearly set out in the approved TOR. In accordance with the process identified in the EA TOR, the practical alternatives for the DRIC study were identified through the systemic analysis and evaluation of Illustrative Alternatives. The Illustrative Alternatives were presented for consultation in June 2005, and analysis and evaluation was undertaken during the summer and fall of 2005. This evaluation process resulted

in the identification of an Area of Continued Analysis in November 2005. In March 2006, with technical parameters and in consultation with communities, municipalities, agencies, and other stakeholders, a set of practical alternatives (i.e., a "short list") was identified. The selected practical alternatives represented a reasonable set of alternatives that could be expected to result in a solution that would achieve the best overall balance of transportation engineering and environmental impacts, considering input that had been received through consultation on those issues. The initial five practical alternatives were presented for public consultation in March 2006.

Design concepts prepared for the preferred Practical alternatives were presented for comments at consultation activities held in March 2006, the third round of Public Information Open Houses. In general, the alternatives developed for the new access road were based on the premise that it would extend from Highway 401 at North Talbot Road to one of three alternative plaza locations. The input received through these consultation activities with interested stakeholders, including the City of Windsor, and the public was considered in the development, analysis and evaluation of alternatives. In some cases, the comments and/or desires of interested stakeholders were not supported by the study team's analysis and evaluation, in which case they were not reflected in the final outcomes. However, in many cases the comments reinforced the analysis/evaluation and/or caused the team to adjust its thinking regarding the balance of impacts and benefits of the undertaking. As a result, the consultation activities have influenced the outcome of the project in many significant ways. Contrary to the assertion that the study team has not taken the City's input into account, the study team acknowledges that the City has contributed significantly to the study process through its input, including input such as the Schwartz Report (January 2005), which outlined a vision for a new border crossing and plaza in the Brighton Beach area, and a controlled access facility connecting to Highway 401. The Schwartz report discounted alternatives, such as use of EC Row Expressway, and the DRTP Corridor through the central parts of Windsor. The report considered access road alternatives in the Huron Church Road/Highway 3 corridor, the corridor which was ultimately selected by the study team as the preferred route for the access road.

Preliminary analysis results for the initial five access road alternatives were presented at the December 2006 public information open house sessions. The complete analysis of the initial five access road alternatives was presented at the fifth round of PIOHs in August 2007, and technical reports were posted on the study website. Through analysis of these alternatives, and consultation with stakeholders, the DRIC study team determined that additional analysis of either an end-to-end at-grade roadway or an end-to-end tunnel was not warranted. This result was presented to stakeholders during consultation activities in August 2007.

At the same time, the Parkway alternative was introduced and was developed based on the notion of a more "green", context sensitive alternative that emerged through consultation with stakeholders, including the City of Windsor, and refinements to the below-grade and tunnel alternatives. Introduction of the Parkway at the same time as the presentation of the full analysis of the initial five practical alternatives gave stakeholders the opportunity to reflect on the features of the Parkway, in the full knowledge of the detailed analysis information.

Unhappy with the introduction of the Parkway alternative, the City chose to ignore the Environmental Assessment TOR process requirements and rather than provide input to the team, it instead developed its own version of what it considered to be a viable "alternative". However, under the TOR the City is not in a position to put forward "alternatives" since it is NOT the proponent of the project.

Nevertheless, the team found the City's prior input useful input to the study. So, when the City put forward the GreenLink concept rather than give input on the practical alternatives, the DRIC

study team did take a look at GreenLink to determine whether it contained information the team could use in its efforts to identify a preferred alternative. The team did not, and was under no legal obligation to, evaluate GreenLink as an “alternative”.

The DRIC study team reviewed the GreenLink concept along with all of the information provided by the City of Windsor and its consultants. The DRIC study team attended the open houses hosted by Windsor in October 2007, and met with Windsor representatives during October and November of that year, in an effort to gain improved understanding of GreenLink. As part of this effort, the DRIC study team travelled to New York City to meet with Windsor’s consultants all in the hope of gaining a better understanding of the City’s concerns with the Parkway alternative.

In order to canvas reliable input through public consultation from interested stakeholders and the public, the DRIC study team felt it necessary to correct misinformation that the City placed in the public realm regarding the alleged benefits of GreenLink over the Parkway alternative. Thus, in April 2008, the DRIC study team prepared clarification information sheets dealing with highway specifications and cost estimates.

During this time, refinements were made to the Parkway alternative, in part from the input gained through consultation, and the refined alternative was renamed the Windsor-Essex Parkway. The analysis of practical alternatives was updated to include the Windsor-Essex Parkway. With this information in hand, the evaluation of the six practical alternatives (initial five plus Windsor-Essex Parkway) was undertaken. A summary of the evaluation, and the identification of the Technically and Environmentally Preferred Alternative (TEPA), was released to the public on May 1, 2008. The results of this evaluation were presented at the sixth round of PIOHs in June 2008. Stakeholders were encouraged to provide feedback on all of the information presented at these Open Houses.

Contrary to the City’s assertion, at paragraph 119 of its submission, that the team failed to evaluate a reasonable range of practical alternatives, the fact is that the team developed six (6) alternatives and evaluated them all against the specified evaluation criteria. The Parkway alternative and subsequently, the refined Windsor-Essex Parkway were composite alternatives developed based on analysis, evaluation and consultation input, including input derived from GreenLink. Let’s be clear - GreenLink was considered as *input* to the DRIC study only. It was not and never has been a practical alternative in the DRIC study. As such and contrary to the City’s assertions, there was NO requirement for the DRIC study team to undertake an analysis and evaluation of GreenLink on the same basis as the six practical alternatives.

Further, the team was under no legal obligation to accept alternatives or composite solutions generated from stakeholders. Rather, it listened to input from those stakeholders in making refinements to the alternative and in generating the composite solutions. The Windsor-Essex Parkway is the culmination of all of that analysis, evaluation and consultation carried out over the course of many years. To suggest that the team must start over at square one simply because Windsor didn’t get its preferred choice would create serious delay, increase the financial costs of the project and make the EA process unmanageable. The fact that the GreenLink proposal was modified over time by the City amply demonstrates the impracticality of the suggestion that the team was required to fully assess any proposal put forward by other persons. If that were so, the process would never end. GreenLink was considered appropriately - as input to the process. The City’s ongoing input has been extremely valuable to the study team and GreenLink was no exception as it did result in some improvements to the Parkway alternative. However, the DRIC study team found no real advantage of the GreenLink proposal, detailed below, over the Parkway alternative so it was not pursued further.

### Review of GreenLink as Input to the Parkway

The GreenLink proposal was similar to the Parkway alternative in many respects. They both include a below-grade freeway with tunneled sections and both include green space features. However, there were some significant differences, the most significant of which was the fact that GreenLink proposed approximately 3.8 kilometres of tunneled section, over 2 kilometres more than the 1.5 kilometres of tunnels proposed in the Parkway Alternative. As well,, GreenLink featured individual tunnels greater than 240 m in length (two tunnels were each greater than one kilometre in length). Further, GreenLink included a tunnel section under the Grand Marais Drain. The Parkway Alternative was developed to pass over the Grand Marais Drain to avoid construction in difficult ground conditions and the associated problems related to schedule impacts, constructability risks, and the increased costs associated with a tunneled crossing in this area.

The City asserts that the 3.8 kilometres of covered roadway proposed in GreenLink would provide more green space on top of the freeway than the 1.5 kilometres of covered roadway proposed with the Parkway, or the 1.8 kilometres of covered roadway proposed with the refined Windsor-Essex Parkway. This greater length of covered sections, the assertion is, would allow for increased connectivity across the highway corridor. On the contrary, the coverage provided by the Windsor-Essex Parkway, with tunnels ranging in length from 120m to 240m (i.e. 1 - 2 football fields) strategically placed along the corridor, will provide enhanced community connectivity in comparison to the "barrier" condition that currently exists with Huron Church Road/Highway 3. The 11 covered sections incorporated within the Windsor-Essex Parkway are a unique feature for an Ontario highway and will provide opportunities for extensive landscaping and naturalization. Accordingly,, the DRIC study team rejects the suggestion that GreenLink provides any significant benefit over the Windsor-Essex Parkway in terms of protection of community or neighbourhood characteristics.

The study team carefully reviewed and assessed all of the information available about the GreenLink proposal, and considered the extent to which it would be appropriate to modify the August 2007 Parkway Alternative. Some of the aspects of the GreenLink proposal considered by the DRIC study team included a review of the following:

#### 1. Cross-section

The DRIC study team, in its review of the GreenLink proposal using information provided by the City, concluded that there are significant safety standard gaps in the proposal, as follows:

##### a) Shoulder Widths

The GreenLink concept proposed 1.2 m (4 ft) wide shoulders running along the right-side of the roadway and left-side shoulders ranging from 0.6 m to 1.9 m (2 ft to 6 ft). The Ontario standard for construction of shoulders on new 6-lane freeways is 3 m (10 ft) on both sides. This Ontario standard is important because it influences highway safety and capacity in the following ways:

- Wider shoulders provide a lane for emergency vehicle access;
- Wider shoulders provide more time and space for drivers to correct their steering when inadvertently leaving the lane;
- Wider shoulders provide a refuge area for avoiding collisions;
- Wider shoulders allow drivers who need to pull off the road the room to do so to avoid impeding traffic in the adjacent traffic lane;
- Wider shoulders allow for increased space for maintenance activities without impacting traffic (such as guide rail repair, debris pick up, etc.);

- Wider shoulders allow for increased space for snow storage, which is critical in a below-grade roadway;
- Wider shoulders allow area for surface water to collect during heavy rain storms without encroaching on the driving lane; and
- Wider shoulders allow faster incident clearance resulting in increased traffic flow, reduced green house gas emissions and increased safety by reducing secondary incidents downstream (i.e., rear-end collisions or side-swipes when merging).

As a part of the consultation process, the DRIC study team met with local and provincial emergency services organizations to discuss roadway designs that best incorporate the objectives of improvements in traffic movement and safety for road users and accessibility for emergency services workers.

Emergency services vehicles (police, fire and ambulance) need to get to those in need quickly and safely. In heavy traffic, emergency vehicles can use wide shoulders to get to an accident scene quickly. Emergency personnel can also use the wider shoulders to remove disabled vehicles and attend to people in need while allowing drivers to resume traveling at close to normal speeds with fewer disruptions to traffic flow.

The study team concluded that shoulders that meet the Ontario standard will meet the needs of emergency personnel and the objectives of highway safety. The GreenLink proposal contains insufficient shoulder widths to meet these needs and objectives.

#### b) Side Slope

The GreenLink proposal includes extensive use of vertical retaining walls. This design aspect in conjunction with narrow shoulders could affect response capabilities of emergency services. In a below-grade access road, flatter slopes, such as those contemplated in the Parkway alternative, would provide improved access for emergency personnel and evacuation for injured or stranded drivers if access points are compromised.

## 2. Ambient Air Quality

The DRIC study team reviewed the information provided by the City, and considered the air quality implications of the GreenLink proposal in comparison to the Parkway alternative.

On a Windsor air shed basis, the reports show that air quality is generally not impacted by any of the six Practical Alternatives, including a full six-kilometre tunnel. The evaluation of Practical Alternatives concluded that the greatest impacts from roadways were typically limited to within the first 50-100 m of the right-of-way when comparing one alternative to another. GreenLink was sufficiently similar to the practical alternatives that this conclusion would not change. As the six-kilometre tunnel alternative did not have substantial air quality benefits over the below-grade alternatives, neither would the tunnels included in the GreenLink proposal. As a result, GreenLink was not expected to impact Windsor air quality in any manner that is significantly different from the practical alternatives that were analyzed in detail, with one exception. Maximum concentrations under the GreenLink proposal may actually be higher as there could be elevated emissions in locations near tunnel portals compared to the Parkway alternative due to the greater tunnel length and increased emissions from the GreenLink tunnel portals.

The Practical Alternatives Report did provide a relative evaluation of tunnels in comparison to the other practical alternatives and concluded that the amount of contamination released to the air is the same for any of the options. Thus, tunnels provide a means of moving emissions from one location to another (i.e., from one adjoining neighborhood to another). This may affect very local concentrations (i.e within 50-100m), but does not impact overall air quality in the Windsor

air shed. Overall loading for all alternatives is essentially the same and longer tunnels could result in increased emissions near tunnel portals. As the GreenLink proposal involves a combination of exposed roadways and tunnels, communities adjacent to uncovered roadways would be exposed to concentrations comparable to those in adjacent communities for the Parkway.

The DRIC study team found no significant overall differences between the Windsor-Essex Parkway and alternatives with longer tunnel sections, particularly related to health-related contaminants. It is acknowledged that longer tunnel sections could provide improvements in some very localized areas with respect to the larger particulate matter. However, as previously stated, the team believes the exceedances of the criteria for PM and PM<sub>10</sub> are over predicted and only occur for short durations. It is important to note that the longer tunnels of the GreenLink proposal could result in increased emissions near tunnel portals because the emissions which would otherwise be dispersed over a larger area would be concentrated at the portals.

The approach used for the comparison of Practical Alternatives was to examine a specific road segment and compare the difference in the “maximum of the maximum” concentrations between “No Build” and the alternative of interest within that stretch of road. As there are open spaces and uncovered roads with GreenLink in all road segments that were used for the assessment of the Practical Alternatives, the maximum concentrations for GreenLink would have shown similar patterns to the six practical alternatives and the overall conclusions of the report would not have changed.

Many of the absolute tables in the TEPA report also use this relative comparison regardless of receptor location. For example, PM<sub>10</sub> Tables 4-14 through 4-18 would not likely be very different if the assessment had been conducted for GreenLink as the maximums would occur near open areas of the GreenLink proposal. Maximums may actually have been higher with GreenLink, as the GreenLink proposal could have elevated emissions relative to the Parkway in locations near tunnel portals due to the greater length of tunnels and increased emissions from the GreenLink tunnel portals. Exceedance days would also be expected to be similar for the GreenLink proposal due to the open areas.

### 3. GreenLink Potential Air Rights Development

The design of the GreenLink tunnels is proposed to support 2-3 storey structures, such as town houses, walk up apartments, some commercial uses. To support these uses, the tunnels may require additional modifications which would entail further costs. However, placing residences on top of the roadway seems contrary to the ideal of both the Parkway and GreenLink, which is to provide new green space for the community, and to provide sufficient buffer space between residences and the roadway.

### 4. Noise Reduction and Community Linkages Potential

With respect to any potential noise reductions associated with the longer tunnel sections proposed in the GreenLink proposal, as suggested in paragraphs 75 – 81 of the City's submission, the study team again turned to its analysis of Alternative 3, the 6 kilometre tunnel, as compared to the below-grade alternatives. That analysis showed that future noise levels for a below-grade freeway could be limited to acceptable levels, and in some cases reduced, from a future “No Build” scenario particularly when standard noise mitigation measures (berms and/or barriers) were applied. In fact, in many areas, the Windsor-Essex Parkway will actually result in sound level reductions in 2035, in comparison to **existing** conditions. The DRIC study team

acknowledged that mitigation measures would be included with the Parkway and other below-grade alternatives.

The study team also considered the extent to which the longer GreenLink tunnels would enhance community connectivity. It is acknowledged that longer tunnel sections potentially provide more space for active recreation on the tunnel roof; however, the team concluded that the 120 – 240m lengths provided by the Windsor-Essex Parkway alternative would provide adequate opportunities for community connections in a pedestrian friendly environment.

#### 5. Green Space Considerations

The GreenLink proposal has the same general footprint as that of the Parkway and therefore, the overall impacts to the natural environment were considered relatively equal. The only difference between the two from a natural perspective was the potential for restoration and enhancement opportunities on the additional green space that could be provided on top of the longer GreenLink tunnel sections. However, given the overall anticipated impacts to the natural environment from both proposals, this additional benefit was considered relatively minor.

#### 6. Cost and Constructability

Last but not least, the study team assessed the GreenLink proposal from the cost and constructability viewpoint. The cost estimate presented by the City was not comparable to the estimates prepared by the DRIC study team for the practical alternatives (i.e. length of roadway included, freeway cross section and inclusion of allowance for inflation). In order to make a direct cost comparison, the study team had to develop a cost estimate for the GreenLink proposal on the same basis as the estimates that had been developed for the practical alternatives and the Parkway alternative. Using this approach, the study team estimated the cost of the GreenLink proposal at \$2.3 to \$2.5-billion about \$700 to \$900-million more than the estimate of \$1.6-billion that was developed for the Windsor-Essex Parkway alternative in the spring of 2008.

The City has confirmed that the GreenLink cost estimate it provided does not extend to the same limits as the DRIC access road (North Talbot Road to Malden Road), nor is the cost expressed in the same base year (2011). The Parkway cost estimates include engineering costs, an allowance for inflation, full left and right shoulders and address the complete access road from Highway 401 at North Talbot Road Malden Road whereas the GreenLink proposal does not include these items. The revised total cost estimate for the GreenLink proposal including these items would then increase to between \$2.3 to \$2.5 billion.

Accordingly, once the cost estimates for GreenLink are revised to include these items, an “apples to apples” comparison could be done, which revealed that the GreenLink proposal is \$700 to \$900 million more expensive to construct than the Parkway.

#### 7. Other issues with the GreenLink proposal

Turning now to the City’s summary of the Parkway versus the GreenLink proposal, as presented on page 30 of its submission, the DRIC study team disagrees with most of the statements presented in this table and does not agree with the City’s depiction that the Parkway is inferior to GreenLink in many respects.

First, it is important to note that this table dates from October 2007. Therefore, when it refers to the Parkway, it is not even referring to the Recommended Plan as presented in the Draft Environmental Assessment report and the Environmental Assessment report. Since the comparison is not reflective of the Recommended Plan, all assumptions and allegations in the City’s submission are called into question.

Second, with respect to the Windsor-Essex Parkway, the DRIC study team rejects the assertion that there are noise impacts “throughout the corridor”. In fact, the commitment to noise mitigation, as outlined in the Environmental Assessment and as documented in the noise reports, clearly mitigates noise effectively.

Third, the DRIC study team rejects the assessment that the Parkway would rate “poorly” in the city’s category “Creates City Links”. The 120m to 240m tunnels effectively provide new connections between communities that are currently separated by the existing at-grade roadway. The DRIC study team also rejects the assertion that the Parkway provides minimal opportunities for community cohesion and virtually no opportunities for such Gateway features as community statements. The team finds the comments related to land values to be unsubstantiated.

Fourth, with respect to green opportunities, the team rejects the assertion that the Windsor-Essex Parkway provides minimal opportunities. In fact, the Windsor-Essex Parkway provides more than 300 acres of green space that would otherwise not be available.

Fifth, the table is misleading in respect of the comparative costs of the two proposals. Of particular concern, in the table on page 30 of the submission, is the statement that the GreenLink corridor would cost “\$1.566 to \$1.676B (2007)”. The team has advised the City repeatedly that this figure is simply not comparable to the \$1.5B figure presented in August 2007 for the Parkway alternative, nor the \$1.6 B figure for the Windsor-Essex Parkway as identified in May of 2008 for a variety of reasons. Specifically, the construction horizon years are different. Additionally, the GreenLink number presented is a 2007 construction cost estimate, whereas the estimate for the Windsor-Essex Parkway is corrected for inflation to a 2011 construction year. Further, the project limits used in developing the cost estimates are not consistent in that the GreenLink estimate is for a section of roadway 4 kilometres shorter than the comparable estimate for the Windsor-Essex Parkway the GreenLink estimate does not include the same allowances for engineering and other costs as are included in the Windsor-Essex Parkway; and the roadway cross-section used for the GreenLink estimate is narrower than the Parkway, and does not meet provincial standards for new freeways.

These cost-related points have been repeatedly made clear to the City and its consultants but the information was never corrected on the GreenLink website. It is misleading for the City to continue to present these figures as an “apples-to-apples” comparison. When a more comparative analysis is done, the reality is that **GreenLink would cost between \$700 and \$900M more** than the Windsor-Essex Parkway.

Based on all of the available information, the DRIC study team concluded that there are no real advantages of the GreenLink proposal over the practical alternatives. The longer tunnels proposed in the GreenLink proposal offered no significant overall air quality benefits over the Parkway or the other practical alternatives. Further, it included substandard design elements for a provincial highway, and it would likely cost almost \$1B more than the Parkway to construct. The study team concluded that the increased cost of the GreenLink proposal does not result in significant enough additional benefit in terms of air quality, noise reduction, and community connectivity to warrant its adoption as an alternative. However, the DRIC study team considered modifications to the Parkway from the GreenLink proposal that provided improvements or enhancements to the Parkway but did not pursue its other attributes further. For example, in response to the GreenLink proposal and other suggestions received after the Public Information Open Houses, the study team did modify the Parkway to include a new tunnel section near Spring Garden Road, and the tunnel at Howard Avenue was shifted and lengthened. There were also other minor shifts to tunnel lengths and portal locations. In total, these resulted in increasing the amount of tunneled section from 1.5km to 1.86km.



## Conclusion

To summarize, the DRIC study team believes that the Windsor-Essex Parkway achieves all of the benefits that might be provided by the GreenLink concept, at a significantly lower cost. The Windsor-Essex Parkway creates opportunities for a signature gateway welcoming people to Windsor, Ontario, and Canada. It is truly a unique transportation project with 11 tunnelled sections, 20km of recreational trails and over 300 acres of green space, a highway type which can be found nowhere else in Ontario. With the mitigation proposed in terms of landscaping, planting of trees and shrubs, noise mitigation and contour grading, the Windsor-Essex Parkway will improve air quality over a future "No Build" situation, limit noise, and reduce visibility of international trucks from nearby residents. As with GreenLink, the Windsor-Essex Parkway effectively separates international and local traffic. Furthermore, by providing shoulder widths that meet MTO standards, the Parkway improves operations, safety and addresses the future transportation needs of the region better than GreenLink. The Windsor-Essex Parkway provides effective community linkages, thus helping to unite the communities currently divided by the existing highway and creates significant opportunities for enhancing local ecological areas and providing new linkages. It provides for uninterrupted pedestrian and non-motorized pathways in an urban friendly environment and it does it all at a substantially lower cost than the GreenLink proposal.

The TOR set out a comprehensive and systematic process by which alternatives were developed and refined through extensive consultation, analysis and evaluation. Of the six practical alternatives, the Parkway was selected as the preferred alternative after technical studies were undertaken to examine each alternative. Within the TOR, there is no obligation on the DRIC study team to consider as alternatives suggestions proposed by any person other than the Proponent. Nevertheless, the team did review GreenLink as input to the process and adopted some of its features. The DRIC study team used its existing technical and scientific knowledge to review the GreenLink proposal for attributes that might improve the preferred alternative since it had similarities to the Parkway. A comprehensive review of GreenLink was neither required, since it is not an alternative, nor necessary because one of the alternatives under consideration was a six-kilometre tunnel. The study team therefore had the knowledge to evaluate the environmental effects associated with long tunnels. Finding no real advantage of the GreenLink proposal over the practical alternatives, the DRIC study team, as proponents for the project, decided to not pursue it further.

The DRIC study team followed the requirements of the TOR in selecting the Windsor-Essex Parkway as the Recommended Plan. It considered suggestions made by Windsor and even incorporated aspects of its GreenLink proposal. The process to identify illustrative alternatives, which were narrowed down to practical alternatives, was completed in accordance with the approved TOR. Windsor fully participated in those processes in meaningful ways and made many suggestions to the team throughout. GreenLink also provided meaningful input to the process as it resulted in modifications to the Parkway but it did not offer any real advantages over the alternatives to cause its adoption by the study team as an alternative. Perhaps the result would have been different had Windsor presented a proposal that offered real advantages and benefits over the alternatives. It did not. Ultimately it is the Proponent that moves the environmental process for this major transportation solution forward. That decision was made with regard to the purpose of the Act and to minimize community impacts as much as possible.

No solution can result in the community being completely unaffected but the Windsor-Essex Parkway will result in positive benefits. By taking trucks off local roads, it will ease congestion in the City and reduce the harmful effects of truck idling. The green space features will not only enhance community connections, they will also serve as a buffer zone between the highway

and residential areas. Improved traffic movement across the border will result in positive economic and tourism impacts.

The decisions of the DRIC study team were environmentally sound and followed the requirements of the approved TOR. It is inappropriate to suggest that the process was not followed simply because Windsor disagrees with the selection of the preferred alternative. Windsor had many opportunities during the extensive consultations undertaken during the process and participated in meaningful and realistic ways, even influencing aspects of the preferred alternative decision and the refined Windsor-Essex Parkway. It would place an unreasonable burden on all proponents to require them, on the eve of the completion of the comprehensive and systematic environmental review following terms of reference approved by the regulatory authorities, to go back and do it all again because the City would prefer its own proposal. It is also highly unlikely that “doing it all again” would change the outcome of the TEPA.

### **C. Environmental Assessment Act Requirements**

The city asserts that the DRIC study team failed to carry out “the required evaluation of GreenLink” and failed to follow requirements of the Environmental Assessment Act (primarily in paragraphs 94 – 128 of the City’s submission). The DRIC study team rejects these assertions.

The EA Terms of Reference (TOR) identifies consultation with affected parties as an essential part of the planning process. From the outset of the study, the DRIC study team recognized the need for consultation with a wide variety of stakeholders. The consultation program is discussed in Chapter 3 of the EA Report.

The EA TOR also identifies the process to be used for the generation and assessment of alternatives. The practical alternatives for the DRIC study were identified through the evaluation of Illustrative Alternatives. This approach is in accordance with the process identified in the EA TOR. The initial five practical alternatives were presented for public consultation in March 2006. The TOR does not identify a process to be followed in the event a stakeholder brought forward an alternative.

The DRIC study team has encouraged input from municipalities, including the City of Windsor, throughout the study process. In the approved TOR, the partnership made the following commitment regarding consultation with municipalities.

During the environmental study process, consultation with municipalities will involve reviewing, commenting and providing input to the environmental studies, the technical analysis and the ongoing comment/input to the consultation process. Generally, consultation with municipal representatives will be sought throughout the study process. Liaison with municipal representatives will be arranged to obtain information on study area features, exchange pertinent study information and obtain input on project issues pertaining to each municipality.

As outlined in Chapter 3 of the EA Report, between January 2005 and November 2008, the DRIC study team met with Windsor representatives at least fifty (50) times, beginning with an initial meeting with staff in February 2005, and the first meeting with Windsor City Council in March 2005. In addition to meetings in Windsor and Toronto, the DRIC study team accommodated Windsor’s wishes by travelling to New York City on two occasions, to meet with representatives of Windsor’s consulting team.

The DRIC study team identified reasonable alternatives through a thorough and systematic process, consistent with the commitments made in the TOR. Through analysis of these

alternatives, and consultation with stakeholders, including Windsor, the DRIC study team has identified as its Recommended Plan, the Windsor-Essex Parkway.

Contrary to the assertions in paragraphs 129 – 153 of the City's submission, the commitment in the EA TOR to present analysis of the practical alternatives prior to selecting the TEPA was addressed through a series of activities. At the Practical Alternatives stage, the DRIC study team identified reasonable alternatives through a thorough and systematic process, involving the analysis and evaluation of the Illustrative Alternatives. The initial group of five practical alternatives was presented for consultation in March 2006. Comments were received from many stakeholders, including the City of Windsor. The analysis and evaluation of Practical Alternatives provided stakeholders with additional consultation opportunities, above and beyond those proposed in the TOR. Preliminary analysis results for the initial five access road alternatives were presented at the December 2006 PIOH. The complete analysis of the initial five access road alternatives was presented at the fifth round of PIOHs in August 2007, and technical reports were posted on the study website.

At the same PIOHs in August, 2007, the Parkway alternative was introduced. The Parkway alternative was developed based on refinements to the below-grade and tunnel alternatives. The Parkway was based on the notion of a more "green", context sensitive alternative, which emerged through consultation with stakeholders including the City of Windsor. Introduction of the Parkway at the same time as the presentation of the full analysis of the initial five practical alternatives gave stakeholders the opportunity to reflect on the features of the Parkway, in the full knowledge of the detailed analysis information.

In October 2007, the City of Windsor introduced the GreenLink concept to the public. The DRIC study team reviewed publicly available information on the GreenLink proposal, asked the city for additional information about the proposal, attended the City's GreenLink public meetings and, contrary to the assertions made in paragraphs 163 – 169 of the City's submission, met with city representatives during October, November and December 2007. These meetings provided the opportunity for the study team to gain improved understanding of the GreenLink proposal and for city representatives to gain improved understanding of the Parkway alternative. Subsequently, in March 2008, the City provided more information about the GreenLink proposal to the study team.

During the winter of 2007-2008, the DRIC study team developed refinements to the Parkway alternative. In making these refinements, the study team considered stakeholder input, including the input obtained from the city's GreenLink proposal. The refined Parkway alternative was introduced as the Windsor-Essex Parkway. The analysis of practical alternatives was updated to include the Windsor-Essex Parkway. With this information in hand, the evaluation of the six practical alternatives (initial five plus the Windsor-Essex Parkway) was undertaken. A summary of the evaluation, and the identification of the Technically and Environmentally Preferred Alternative, was released to the public on May 1 2008. The results of this evaluation were presented at the sixth round of PIOHs in June 2008. Stakeholders were encouraged to provide feedback on all of the information presented at these Open Houses.

The Windsor-Essex Parkway was identified as preferred among the six practical alternatives for the access road in four of the seven key factor areas considered. In two of the seven factor areas, no clear preference was identified. In the area of Cost and Constructability, the at-grade Alternative 2A was identified as the preferred alternative. For Changes to Air Quality, no clear preference was determined due to the limited range of impacts (typically within the first 50 m), the contribution from other sources including transboundary sources, and the overall loading for all scenarios is essentially equivalent. The Windsor-Essex Parkway alternative was the second-

most expensive alternative and is identified as having greater cost and constructability risks than the other alternatives except for the tunnel alternative.

The DRIC study team agrees that cost is not an exclusionary factor. The factor "Cost and Constructability" is one of seven factors used in the analysis and evaluation of the practical alternatives, as discussed in Chapter 8 of the EA Report.

Estimates of construction costs were prepared for six Practical Alternatives, including the Windsor-Essex Parkway. Estimates for all six alternatives were prepared in a systematic and traceable manner, based on a conceptual level of design, which is considered a reasonable basis for comparison of practical alternatives. Cost estimates are documented in Preliminary Construction Cost Estimate Report for Practical Alternatives (May 2008). The analysis and evaluation process is documented in the EA Report (Chapter 8) and in Generation and Assessment of Practical Alternatives and Selection of the Technically and Environmentally Preferred Alternative – Access Road Alternatives (December 2008).

Comments received during and following the Open Houses in June 2008 were considered by the DRIC study team, and additional refinements were made in the development of the concept design of the Windsor-Essex Parkway. The refined plan, together with associated mitigation measures was presented as the Recommended Plan, at the seventh and final round of PIOHs in November 2008.

Contrary to the City's assertions at paragraphs 194 – 225, the DRIC study team is confident that the assessment completed is more than sufficient to understand the relative costs and benefits of GreenLink as opposed to the practical alternatives. There are many similarities between GreenLink and the Windsor-Essex Parkway. There are also some differences. The DRIC study team was able to use the information gained through the analysis of six alternatives, including the Parkway, to understand the benefits and impacts of the GreenLink concept.

The analysis of the initial five practical alternatives (presented in August of 2007) shows that the costs of long tunnel sections (a 6km tunnel was studied) do not result in significant additional benefits. The analysis, as well as consultation with the community however, did indicate that the original below grade alternatives could be improved by enhancing community connectivity and greening the corridor. The Windsor-Essex Parkway achieves this improvement at a reasonable cost. GreenLink would add a further \$700-900M of cost to a project which is, by far, the most expensive highway project in Ontario's history on a cost per kilometre basis, and would not achieve sufficient benefits to justify this expenditure. The vast amount of data and analysis completed for the practical alternatives is a sufficient basis to make this judgment and a full analysis and evaluation of GreenLink is not needed nor warranted.

#### **D. Concluding Remarks**

The great majority of points raised by Windsor challenge the quality of the evidence of the environmental assessment. Even the City cannot provide complete information about all the possible future effects of a project or exclude all possible future outcomes, but the DRIC study team has attempted to provide as complete information as is possible in its reports. The DRIC study team ensured that a high degree of specialized expertise in environmental matters, technical requirements and public policy matters was applied to the undertaking and it ensured it had significant community, stakeholder and public input to the project.

When assessing the significance of the environmental effects of the undertaking, it is virtually impossible to employ a fixed or wholly objective standard. Rather, much of it contains a large measure of opinion and judgment from the experts. Reasonable people can and do disagree about the adequacy and completeness of evidence which forecasts future results and about the significance of such results. That is why many alternatives were developed and composite

solutions refined. Finding a preferred alternative that best mitigated impacts and resulted in positive benefits for the community led the team, through comprehensive and expert evidence, to the Windsor-Essex Parkway as the alternative that best met all of the objectives of the DRIC study and the requirements of the TOR. Therefore, the Windsor-Essex Parkway was identified as the Recommended Plan.

The Windsor-Essex Parkway is the culmination of all the analysis, evaluation and consultation that was carried out over the course of many years. To suggest that the team must start over at square one simply because Windsor didn't get its preferred choice would create serious delay, increase the financial costs of the project and make the EA process unmanageable. The fact that the GreenLink proposal was modified over time amply demonstrates the impracticability of the suggestion that the team was required to fully assess any proposal put forward by other persons. If that were so, the process would never end. GreenLink was considered as input to the process. The City's ongoing input has been extremely valuable and GreenLink was no exception as it did result in some improvements to the Parkway alternative.

Let me just say that we all want the best solution for the new access road. The objective is to find a preferred access road solution that will achieve our common goals, to get trucks off local streets and improve the quality of life for Windsor and affected municipalities of Essex County. Structured with the community in mind, the Windsor-Essex Parkway achieves the best balance of benefits versus impacts and *will* improve the quality of life for those living in impacted communities.

With the effects of the current economic uncertainty being felt Province-wide, moving forward with the new Windsor Gateway without delay will generate thousands of jobs, free up the flow of traffic on Canada's most important trade corridor, get trucks off city streets, reduce traffic congestion, reduce uncertainty and stimulate investment and employment in Windsor and Essex County.

Yours truly,

A handwritten signature in black ink, appearing to read "Dave Wake". The signature is fluid and cursive, with a long horizontal stroke at the end.

Dave Wake

Manager, Planning Office