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Meeting notes from:

**The Fifteenth Meeting of the
Detroit River International Crossing
*Community Consultation Group***

Meeting Date/Location:

August 21st, 2007/Holiday Inn Select — Windsor, Ontario

Facilitator: Glenn Pothier, President, GLPi

Meeting Purpose

This fifteenth meeting of the Community Consultation Group (CCG) was focused on providing an update on Study progress including an overview of a new Parkway Alternative option and sharing air quality monitoring station findings. More specifically, the meeting was designed to:

- Provide an overview of the highlights from the August Public Information Open Houses — and a preview of the upcoming follow-up workshops.
- Provide a description of the Parkway Alternative, including its relative differences as compared to previous options.
- Update members on the quarterly results recorded at the two air quality monitoring stations set-up along the proposed route for the access road — and to place this data in context.
- Update members on the overall status of both the Canadian and U.S. initiatives.
- Provide an overview of next steps in the project, including the meetings schedule.
- Allow for public/CCG member comments and questions about issues of their choosing.

Summary of Meeting Highlights

Opening Remarks

- Glenn Pothier, the independent meeting facilitator, called the group to order, welcomed all participants, introduced project team members, and provided an overview of the meeting agenda.

Review of the February 21/07 CCG Meeting Summary

- Glenn Pothier noted that the summary of the February 21/07 CCG meeting had been previously distributed to all CCG members. He then asked for feedback regarding any substantive errors or omissions. No comments were offered.

Public Comment

- Glenn Pothier reminded the group that in the interest of openness, transparency and accountability, any member of the public can attend a CCG meeting as an observer. He then asked if any comments/questions were forthcoming from observers at this time. None were raised.

Update on Study Progress

- Len Kozachuk (Deputy Project Manager, URS Canada) began the update by asking the how many CCG members had attended the August Public Information Open House Meeting — a majority reported having done so. Mr. Kozachuk then:
 - Reminded people of the purpose of the study and described the Environmental Assessment key study activities; and
 - Provided an overview of the summary of the analysis completed for the seven evaluation factors for the five access road alternatives and the plaza and crossing alternatives.
- Mr. Kozachuk explained that the results of the analysis completed to date have resulted in the ‘at grade’ alternatives (1A and 2A) and the tunnel (Alternative 3) not being considered further by the study team given that they do not provide the best balance of advantages and disadvantages. He then introduced the Parkway Alternative — an access road alternative based on refinements to below-grade Practical Alternatives 1B and 2B — that is a transportation corridor with a number of short tunnels with green spaces placed on top of them. The ‘surface decks’ could be used for parks, recreational spaces and/or to improve community connections. Mr. Kozachuk noted that analysis of the Parkway Alternative is currently underway and will be presented to the public in coming months.
- Both during and following Mr. Kozachuk’s remarks as described above, CCG members offered a number of comments and questions:

Question: How can it be that a tunnel is not better for air quality?

Response: Looking at the bigger picture, the access road is only one factor contributing to local air quality — there are a number of other factors affecting air quality in Windsor, including trans-boundary airflow. Upcoming improvements in fuels and engine technology will reduce emissions and contribute to improvements in air quality. All of the access road alternatives provide a freeway connection that will reduce the number of vehicles starting and stopping at traffic signals — this will help reduce emitted pollutants. In terms of the tunnel option specifically, the air quality model results show that the tunnel does reduce the concentration of fine dust within 50 metres of the roadway. However, once you get beyond 100 metres from the right of way corridor, there is little to no difference in air quality among the alternatives as compared to a ‘no-build’ scenario. Again, the roadway is only one influence on air quality.

Question: Have you tested noise barriers to see how effective they are in dealing with both car and truck traffic?

Response: Through the use of berms and noise walls it is possible to decrease noise impacts to less than 5 dBA (3 dBA is a barely perceptible change).

Question: How many noise berms are you looking at and what is the size of the berms?

Response: Each noise berm would be unique to its location. The number, size and locations of the berms are still being evaluated.

Question: Which segment of the access road would require a berm and which would require a noise barrier wall?

Response: The answer is highly location-dependent. Berms take up more space and would only be possible in certain areas. Others will only accommodate a noise barrier wall. Noise barriers are generally four-to-five meters high. Noise mitigation in the Malden Road/Spring Garden area needs further study. It is important to remember that there would be no substantial changes in noise levels after mitigation regardless of the alternative.

Question: Did the material handed-out at the recent PIOH contain specific examples of noise abatement materials? I don't recall seeing any.

Response: Yes, sketches of berms and walls were included in the PIOH package.

Comment/Question: The CCG would like to have a noise specialist come to a meeting to discuss noise impacts associated with all the alternatives currently under review — we have talked about this before. When will the DRIC noise expert come to one of our meetings?

Response: I can't give you an exact date, but this is something we can look into arranging.

Comment: Using dB(A) to measure noise impacts is like using a 1970's measure. You should be using more up-to-date standards and approaches. Requiring a change of 5 dB(A) before mitigation is considered may not be an appropriate threshold. [NOTE: A post-CCG meeting comment recommended that SONES (Zwicher, ISO532B) and Articulation Index % (AI%) should be used to better measure motor vehicle and human noise impacts (these are based on international standards). In addition, it was suggested that Peak dB(A) at Peak Traffic must be assessed as Peak Impact.]

Response: [Comment noted.]

Discussion of the Parkway Alternative

- Building on his earlier introduction of the Parkway Alternative, Len Kozachuk and his colleague Murray Thompson (Project Manager, URS Canada) gave an expanded overview of this option. More specifically, they noted that the Parkway Alternative:
 - Addresses the future transportation and mobility needs of the region.
 - Includes 10 short tunnels to improve community connections across the corridor.
 - Includes recreational trails for pedestrians and cyclists along and across the corridor.
 - Features proposed landscaping that is designed to reduce the visual impacts of the Parkway from the surrounding community.
 - Provides for potential recreational or other opportunities on the tunnel decks.
 - [Note: A series of slides were shown depicting the Parkway Alternative section by section.]

- Both during and following the expanded description of the Parkway alternative, CCG members offered a number of comments and questions [Please note that some questions were received and answered subsequent to the meeting, as per the agreement of CCG members]:

Question/Comment: What is the Study Team's definition of a tunnel? What you seem to be calling a tunnel, I call an underpass — the term 'tunnel' is misleading.

Response: The Parkway Alternative proposes short tunnels, approximately 120 to 240 metres in length. The short tunnels are not simply roadway bridges or underpasses.

Question: How long must a tunnel be to require ventilation?

Response: Any tunnel over approximately 240 metres in length requires mechanical ventilation systems be put into place.

Comment/Question: Alternative 3 — the fuller, end-to-end tunneling option — includes ventilation buildings with associated stacks. Your analysis shows that there are more NO_x pollutants under this scenario. What type of technology is incorporated in the ventilation stacks?

Response: The Study Team has looked at the effectiveness of various types of solutions. None is 100% effective in capturing all pollutants. Higher ventilation stacks result in a greater dispersion of pollutants.

Comment: With the latest technology, the air emitted from stacks — for the tunnel option — will be cleaner than it would with an at-grade or below-grade roadway.

Response: [Comment noted.]

Question: Was emissions mitigation included in the air quality model?

Response: No mitigation was included in the air quality model.

Comment: The term ‘short tunnels’ should be changed to ‘overpasses.’

Response: [Comment noted.]

Comment/Question: Alternative 3 — the fuller tunneling option — is reported to be three-to-six times more costly to construct than any of the other alternatives (either at-grade or below grade). How was the costing done?

Response: A number of factors were considered in developing the cost figures for each of the alternatives — from local construction costs, to standardized costs for materials based on projects completed throughout the province, and so forth. The costs are reflective of both the increased effort and materials needed to construct an end-to-end tunnel as well as the increased construction risks and complexities. A complete description and explanation of the factors that were included in developing the construction costs can be found in the Cost and Constructability Report available on the project website (www.partnershipborderstudy.com), under the Canadian Reports tab.

Question: What is the cost for each of the DRIC meetings in comparison to the cost of the tunnel? What impact does one have on the other?

Response: The capital and construction costs for the tunnel or any of the other options are separate from the environmental assessment project costs. The DRIC initiative is a planning study in which a Technically and Environmentally Preferred Alternative will be determined as part of the formal, required Environmental Assessment process. The Environmental Assessment report documenting the study outcomes will be submitted to the Minister of the Environment for approval. No access road alternative, plaza, or crossing alternative will be carried forward to detailed design unless the Minister of the Environment approves the Technically and Environmentally Preferred Alternative. Should approval be given, then the detailed design work will begin. After the design is complete, the project will be put out to tender and, thereafter, construction will commence. Costs associated with completing the DRIC study are entirely separate from those that will be allocated for the detailed design of the Technically and Environmentally Preferred Alternative and eventual construction of the

access road, plaza and crossing. A planning study such as DRIC is conducted for every large infrastructure project in Ontario — and in Canada when federal interests are involved — in order to determine what is the least environmentally harmful alternative for a particular transportation problem. Conducting a planning study and evaluating a number of alternatives is the legislated process that must be followed.

Question: What is the estimated cost of the Parkway Alternative?

Response: The Study Team is currently evaluating the Parkway Alternative and will complete the analysis for the seven evaluation factors later this fall. At present, the estimated cost for the Parkway Alternative is approximately \$1.5 billion, subject to refinement based on further study.

Question: What is the width of the Parkway Alternative, including each of the walls in the underpass structure?

Response: The average width of the Parkway Alternative (outside edge of pavement to outside edge of pavement) is approximately 50 metres in sections where there are 80 lanes (six highway lanes and two ramps). In sections where there are six highway lanes only, the width of the paved area is approximately 40 metres.

Question: What is the definition of a tunnel or short tunnel? What is your reference that permits usage of the term ‘tunnel’? Can you provide a reference for any other existing designated ‘tunnel’ in North America that is less than or equal to 240 metres in length? Does the term ‘short tunnel’ comply with either the Ontario, Canadian, North American, or International definitions of the term ‘Tunnel’?

Response: For the purposes of this study, the definition of a tunnel is somewhat subjective and not prescriptive. The National Fire Protection Association publication NFPA 502 (Standard for Road Tunnels, Bridges, and Other Limited Access Highways 2008 Edition) defines a tunnel to be at least 90m in length. The tunnels that comprise the Parkway Alternative are approximately 120 m in length.

Question: What firm was used to do the tunneling analysis for the DRIC Study? Did DRIC use an outside firm?

Response: Golder Associates and expertise within URS was used to do the tunneling analysis for the DRIC Study. Golder Associates is a member of the DRIC Study Team.

Question: URS in Sydney, Australia is participating in a tunnel study — was the URS office in Sydney contacted by the DRIC team for their advice?

Response: No, not for this study.

Question: Has the analysis conducted thus far been peer reviewed by firms not working directly with DRIC?

Response: The work on DRIC is being completed in accordance with the Work Plans reviewed by government agencies and ministries, as well as municipalities and the public. We are also aware that the City of Windsor is currently reviewing the analysis for this study with outside experts. The geotechnical work being conducted by Golder Associates is undergoing a peer review by other geotechnical experts. The technical and environmental work will be submitted for review by government ministries and agencies.

Question: The owner of the Ambassador Bridge controls approximately 30-40% of the trucks that pass through this area — what if he requires that these trucks use the Ambassador Bridge regardless of whether there is a new crossing?

Response: A component of the DRIC study is to improve the transportation network by extending Highway 401 to a new plaza and crossing location. The new freeway is designed to create sufficient capacity to meet the transportation needs for the future. This will increase the options that are available, though there is no means of forcing use of any particular option.

Comment: Even with the Parkway Alternative and all the short tunnels, vehicles still have the option of using the Ambassador Bridge.

Response: That's correct.

Question: How many access points are there for the Parkway Alternative?

Response: There is a minimum of three exits/entrances on the Parkway.

Question: Have you factored in the life-cycle cost for the alternatives? Why would it be more expensive to maintain the tunnel compared to the non-covered roadway alternatives — shouldn't it be the other way around?

Response: The life-cycle costs for all five alternatives have been examined and are part of the Cost Report available on the project website. With the tunnel alternative, there are additional structural and ventilation maintenance costs that result in a higher life-cycle cost.

Comment: If we end up with anything less than an end-to-end tunnel, we will be cheating ourselves. Do not put price ahead of a first-class job.

Response: [Comment noted.]

Question: When will the recommended preferred alternative be announced?

Response: The DRIC Study Team will recommend a preferred alternative in 2008.

Question: Will the new freeway be under the jurisdiction of the Ministry of Transportation or the City of Windsor?

Response: The extension of Highway 401 will be a provincial facility — it will be under the jurisdiction of the Ministry of Transportation.

Question: Does the evaluation of all the access road alternatives, including the Parkway Alternative, include emergency response options?

Response: Yes. The DRIC Study Team has met with the municipal emergency services groups to discuss emergency event-related access issues concerning each alternative. This valued input has already contributed to design modifications. Of note, there will be a reasonable number of regularly spaced exits and changeable message boards (ITS) are planned for the extension of Highway 401.

Question: What is the projected construction schedule?

Response: The goal is to complete construction by 2013. To meet this timeframe, construction is expected to begin in 2009-2010. Construction of the freeway, plaza and crossing will likely occur at the same time.

Question: What will happen to existing traffic while construction is occurring?

Response: Staging of construction is being planned so that traffic will remain in the corridor during construction. Traffic may be periodically shifted from one side of the road to the other and the service road may handle all traffic during certain construction times.

Question: What is the current amount of border traffic crossing at the Ambassador Bridge?

Response: Truck traffic crossing at the Ambassador Bridge is relatively unchanged from year 2000 volumes. However, car traffic is down from this time period. The traffic analysis predicted both a high and low range for both types of traffic, and current volumes are still within this range.

Question: At the beginning of this study, how much truck and vehicle traffic was projected for the next 20 years — are your projections still the same?

Response: The DRIC Study Team developed ‘high growth’ and ‘low growth’ estimates. Our estimate of projected traffic growth is a 120% increase in truck traffic and a 40% increase for auto traffic over the next 30 years. This has not changed.

Question: Given that traffic crossing the Ambassador Bridge has remained relatively constant or declined, has this affected the need for a new crossing?

Response: No. The DRIC study is addressing the future transportation and mobility needs of the region. We are looking out 30 years and beyond as part of the process of locating a new crossing between Windsor and Detroit.

Question: If you build the highway extension in a built-up area, aren’t fumes more contained than if released in an open area?

Response: The proposed corridor is fairly wide and open, and the below grade portions of the road are not overly tall. Traffic-related emissions would not be contained.

Comment: Consider charging tolls for the new freeway, like Highway 407 — maybe involve a private interest. The toll money could be used to pay for a full tunnel. Windsor deserves a tunnel.

Response: [Comment noted.]

Comment: The residents of Windsor want to have a tunnel constructed. Places in Europe — like Sweden and Switzerland — have successfully constructed tunnels.

Response: The end-to-end tunnel option was one of the practical alternatives evaluated for this study. It was found to offer no real advantages in terms of reducing impacts to properties, land use, natural features or cultural features. An end-to-end tunnel alternative offers some advantages to air quality in the immediate corridor vicinity through lower particulate concentrations compared to the do-nothing alternative (in fact, this is the case for all of the alternatives given coming improvements in fuel and technology). However, the reductions in particulate concentrations are offset somewhat by increases in concentrations of gaseous pollutants emitted from the ventilation buildings that are dispersed over a larger area beyond the access road corridor — these cannot be captured with current pollution control technology. In addition, the cost of the end-to-end tunnel was found to be three-to-six times more expensive than any of the other alternatives under consideration, representing a difference of between 2.5-to-3 billion dollars. These costs are reflective of both the increased effort and materials needed to construct an end-to-end tunnel as well as the increased construction risks and complexities. Simply put, the benefits of

an end-to-end tunnel do not outweigh the costs. Tunnels in Europe are constructed for various reasons, including providing access through mountains or under bodies of water. These tunnels typically have a specific purpose of crossing a geographic or densely developed area.

Comment: DRIC has said that an end-to-end tunnel is no longer being considered. The West Windsor Truck Watch does not support the Parkway Alternative. Our position has been that the route should either bypass the city or a full tunnel should be built. Recent decisions suggest that neither of these is likely. We urge DRIC to re-consider the end-to-end tunnel option — there are many benefits to this option. Windsor is being forced to host the most important crossing in North America and we deserve to have the best possible solution. If the Windsor-Detroit crossing is the most important crossing in North America, the most forward-thinking solution must be implemented. The citizens of Windsor are committed to the tunnel alternative. There should not be any trade-offs. Some things are more important than money. Nothing should be done until there is a funding commitment for the entire project end-to-end: access road, plaza, bridge.

Response: [Comment noted.]

Question: Is the ‘do nothing’ alternative for segments of the project or the whole project?

Response: The ‘do nothing’ alternative is for the entire project, not just segments of the project. This study is looking for an end-to-end solution including an access road, plaza, crossing and U.S. plaza/interchange connections. The ‘do nothing’ (or no build) alternative must be examined under the Environmental Assessment Act.

Question: How can a tunnel alternative with ventilation systems not have more benefits than the other access road alternatives?

Response: While the tunnel does offer advantages in terms of reducing fine dust particle concentrations within 50 metres of the roadway, the dispersion through the ventilation stacks results in increases in gaseous pollutants (e.g. NOx) over a broader area.

Comment: You are just talking about a fan system for the ventilation. I thought a tunnel would include scrubbers to clean the air before it’s released from the stacks. You need to clean the air if you’re hoping for air quality improvements. If you just blow the dirty air out of the stacks there won’t be any difference.

Response: Scrubber and other air cleaning technologies are forms of mitigation. The results of the modeling showed that this type of mitigation was not required.

Comment: Your evaluation of the tunnel option should have included scrubbers or some technology to clean the air.

Response: [Comment noted.]

Comment: I'm concerned that the access roadway planned from Malden Road to one of the plaza locations will be at-grade and that pollution stemming from the plaza access road will have a negative impact on adjacent neighbourhoods.

Response: [Comment noted.]

Question: The DRIC Study Team had developed three access road alternatives: the at-grade, below-grade and tunnel. Where did the Parkway Alternative come from?

Response: The Parkway Alternative includes a freeway and service roads, with short tunnel sections. It also includes green spaces and connections to existing neighbourhoods and green areas. This is a new option developed by the DRIC Team that incorporates and responds to comments made by the public during consultation on the other access road alternatives.

Comment: The Parkway Alternative is neither a tunnel nor a parkway — it should be named a 'below-grade road with overpasses.' The DRIC label misrepresents what it is.

Response: [Comment noted.]

Question: Has the DRIC Study Team met with the City of Windsor's experts about their proposal?

Response: The DRIC Study Team has not seen the city's plans or met with their experts since June. We are waiting for the City's formal response to the Parkway Alternative.

Question: There appear to be significant differences between the City's plans and the DRIC plans — what are the differences?

Response: The DRIC Study Team has met with the City to discuss the Parkway Alternative and to show the below-grade alternative with the greenspace and end-to-end recreational trails. Again, we are still waiting to see the City's plans.

Question/Comment: Will construction for a particular segment of the roadway occur 24 hours a day, right behind people's homes, for 8-10 months duration? Both the municipality and the province need to protect people.

Response: Construction details have not yet been determined. This work will begin once there is a Technically Preferred Alternative and will continue through the detailed design phase. Potential impact on residents is certainly a factor that will be considered.

Comment: The community would like to have a governance meeting with the Minister in charge of border issues. This is something that should occur in the near future. There is a need to ensure that appropriate policies and regulations are in place.

Response: [Comment noted.]

Comment: This project, in part, was based on the need to provide redundancy to the existing border crossing. All the alternatives presented have an expressway plus a service road. There is agreement that there needs to be a new expressway to a new crossing, but it does not necessarily mean that the existing road (Huron Church Road/Highway 3) be utilized. Consider looking at a bypass and other options that would solve the redundancy problem. Consider revisiting a new separate expressway route.

Response: [Comment noted.]

- Following the discussion of the Parkway Alternative and related issues, Len Kozachuk and Murray Thompson continued with a presentation of the plaza and crossing analysis that has been completed to date.
- Mr. Kozachuk then noted that the Ministry of Transportation is interested in speaking with property owners about the property acquisition process. He also described and promoted the upcoming post-PIOH workshops.

Report on Air Quality Monitoring Station Findings

- Glenn Pothier introduced the next meeting component — namely an update on findings from the two air quality monitoring stations set-up along the proposed route for the access road.
- Abby Salb (Air Quality Specialist, SENES Consultants) provided an overview of the second quarter air quality information collected at the monitoring stations between January-March 2007. In so doing, Ms. Salb:
 - Described the various pollutants that are being measured and noted that the approach also includes the recording of meteorological data and allows for coordinated data capture with passing traffic.
 - Noted the locations of the two air quality monitoring stations — one beside the Ontario Public Health Lab, the other opposite the entrance to St. Clair College.

- Noted that the monitors self-calibrate daily and are also manually checked every two weeks — and that the monitoring process is approved by Ontario Ministry of the Environment.
 - Reported that the wind direction recordings show that the predominant winds blow from the south/southwest (for this quarterly time period).
 - Described the daily concentrations for various pollutants — for example, PM_{2.5}, NO_x, and other air toxics — and the number of times, if any, that various criteria thresholds were exceeded.
 - Described next steps and provided an update on the air modeling.
- During and following Ms. Salb’s presentation, CCG members offered a number of questions and comments:

Question: How is air quality monitoring data collected — is it hourly or on a 24-hour basis? Do you capture wind gusts? What do the colours mean?

Response: All the data from the air quality monitoring stations is collected on an hourly basis. The wind rose diagrams presented depict the direction of the wind and the colours on the arms of the wind rose show wind speed. Wind gust data is not collected.

Question: Children in Windsor are experiencing negative health effects from air quality (problems related to lungs, breathing). What is a safe level for PM_{2.5}?

Response: Concentrations of PM_{2.5} measured at the two DRIC air quality monitoring stations are within the expected range from 8-48 µg/m³, with an average of 20µg/m³ being measured. There were some exceedances of the Canada Wide Standard (CWS) at each site.

Question: Does the air quality monitoring capture tire and roadway degradation?

Response: The monitoring equipment will reflect particulate generated from the roadway, although it cannot specifically identify the source of the particulate. It captures particulate from all sources including roads and tires.

Question: Were the recorded levels of PM_{2.5} put into the air quality model?

Response: The measurement results from the monitoring stations are consistent with the inputs used in the air quality modeling.

Comment: When examining the wind direction, it appears that the wind is mostly from the south/southwest. This means that the roadway pollutants from Huron Church Road will blow over much of the rest of the city.

Response: The typical wind directions for Ontario are southwest in the summer and northwest in the winter.

Question: Have transboundary air pollution sources — from Ohio and elsewhere — been considered in the modeling?

Response: Yes, transboundary air pollution sources such as those in Ohio have been considered in the modeling. The model covers both industrial and roadway air quality data.

Comment: You should use the collected data to convince the United States to clean-up what they're doing.

Response: [Comment noted.]

Question: What is the likelihood of getting the St. Clair College air quality monitoring station moved across the street?

Response: We had originally proposed to locate the monitoring station on the north side of Highway 3 at Mt. Carmel School, but were unable to obtain permission from the school board. We are satisfied that what is being collected at the station on the south side of Highway 3 is representative data for the area. Remember, we can match data with wind direction — this gives us source data from various directions.

Question: When modeling the air quality impacts from PM_{2.5}, NO_x, and VOCs, were the most stringent standards for these air pollutants used in the model — and was your recorded data measured against them? Were more stringent standards used in other countries applied to the model?

Response: Ontario and Canada standards were used. These air quality standards for PM_{2.5} and NO_x are similar to those found in other countries.

Comment: Canada does not have the highest standards for air quality. There is a need to look at other jurisdictions, especially those that have endorsed the Kyoto Protocol.

Response: [Comment noted.]

Question: What air quality-related benefit would an end-to-end tunnel have compared to the Parkway Alternative?

Response: Compared to the at-grade and below-grade alternatives, the tunnel reduces fine dust particle concentrations within 50 metres of the roadway. The air quality impact assessment of the Parkway Alternative has not yet been completed.

Comment: Your evaluation of the end-to-end tunnel alternative should have included the use of scrubbers — that would have made a difference in the analysis.

[Note: In response to multiple comments along the lines of the one described above, Glenn Pothier, the meeting facilitator, said that the meeting summary would reflect two widespread CCG member perceptions: 1) That the DRIC team's evaluation of the end-to-end tunnel alternative should have included the use of scrubbers/air cleaning technology; and 2) Disbelief of the DRIC contention that the use of scrubbers/air cleaning technology would not have made a significant difference in the modeled air quality outcome and subsequent analysis of the alternatives against air quality-related criteria.]

Question: Please provide the top three-to-five types of existing or planned future technologies used for scrubbing air quality in tunnels. Please provide a list of the technologies that were examined as part of this study.

Response: Most tunnels in the world are not equipped with systems to remove air pollutants from the exhaust stream. This is generally because in most cases, the best overall environmental performance is achieved using dispersion techniques. However, some tunnels do have air pollution control systems installed for specific purposes. The primary reason for the use of contaminant removal technologies has been to improve in-tunnel visibility and when access to fresh air is difficult.

Generally, there are two types of Air Pollution Control Systems (APCSs) that have been used in tunnels around the world to date. These are as follows:

- Electrostatic Precipitators (ESPs) to reduce particulates in in-tunnel air
- NO_x removal technologies, which are typically installed at or near the ventilation stacks and include:
 - Absorption using potassium hydroxide (KOH) on an absorbent material, which converts NO₂ into KNO₂ and KNO₃. The system must be regenerated every 8 to 10 months, which necessitates removal of the absorbent material, washing, drying, then soaking in KOH solution. Thus, an additional redundant system would likely be required to maintain NO_x removal when the first system is off-line for regeneration.
 - Absorption using pellets soaked in Na₂SO₄ to physically absorb NO₂ into the pores of the pellets. The system must be frequently regenerated (every 12 days or so) by soaking the pellets in a Na₂SO₄ solution. Thus a second

system would be required to maintain NO_x removal when the first system is off-line for regeneration.

Various other types of technologies have been tested or promoted as being suitable to remove/reduce air contaminants in tunnel air, but they have not been installed in any locations as of yet. These include:

- Fabric filters, which pass particulate laden air through a filter material for removal;
- Biofiltration, which uses biological processes to reduce air contaminants
- Gas turbines, to reduce air contaminants by passing tunnel air through a gas fired turbine;
- Agglomeration, which aggregates very small particulates into larger particles, which can then be more effectively removed using other technologies such as ESP's;
- Gas/liquid scrubbing, whereby air contaminants are collected in the scrubber liquor, which is subsequently removed for off-site treatment.

Next Steps

- Len Kozachuk (Deputy Project Manager, URS Canada) then provided a brief project status update for activities on the Canadian and American sides of the Detroit River, and an overview of next steps. In so doing, Mr. Kozachuk noted that:
 - The U.S. Study Team is continuing to evaluate their plaza/interchange locations and have recently presented a short-list of alternatives.
 - The Canadian Study Team is continuing to evaluate the Parkway Alternative and will complete this analysis in the Fall.
 - The selection of the Technically and Environmentally Preferred end-to-end (Canada and U.S.) Alternative should occur by mid-2008.
 - There continues to be a strong working relationship with the U.S. partners and a high degree of information sharing and cooperation.
- Following Mr. Kozachuk's overview, CCG members offered a number of questions and comments:

Question/Comment: Have construction firms already been selected? The DRIC timeline does not seem to allow for an independent bidding process.

Response: The next steps of the DRIC Project are under review by the Partnership, but broadly defined we see the environmental assessment documentation being completed by the third quarter of 2008, an allowance of one year for approval and, assuming approval is given, construction beginning later in 2009. To meet the project timelines, it is possible that a

bidding process for design and/or construction of the project may be carried out in parallel to other phases of the project.

Question: When will the expansion of Highway 401 to six lanes to Howard Avenue take place?

Response: The contract to bring six lanes to Howard Avenue will be part of the DRIC Project construction.

Question: When will the formal notice of expropriation occur?

Response: Expropriations cannot take place until after the Environmental Assessment is approved by the Minister of the Environment, which is projected to occur in 2009. Currently, the Ministry of Transportation is seeking to talk to property owners on a 'willing buyer/willing seller' basis.

Question: What happened to the \$300 million dollars allocated to the Windsor transportation study in 2002?

Response: That study was part of the 'Let's Get Windsor Moving' initiative that includes, for example, the Walker Road improvement construction project currently underway. The DRIC study is separate and not part of the Let's Get Windsor Moving initiative.

Question: What does the Parkway Alternative mean to this study?

Response: After carefully examining the analysis for the at-grade and tunnel alternatives, we will not be carrying them forward as viable options. The Parkway Alternative is a refinement of the below-grade alternatives (1B and 2B). We will conduct further analysis to more fully evaluate this option and compare it with the other below-grade alternatives.

Question: What if someone sells you his or her house, but you don't end up building anything or building where you planned?

Response: Though it's not an overly satisfactory answer, the reality is that all parties would be taking risks — both the buyer and the seller. Given the nature of the environmental assessment process, there are no certainties about the outcome or the eventual construction of the proposed freeway.

Comment: For the record, I just want to say that not everyone in the community wants the tunnel alternative. There are concerns about a number of tunnel-related issues including fears of accidents or incidents occurring in the tunnel and the danger to commuters given the lack of an easy escape route.

Response: [Comment noted.]

- In response to a question, Glenn Pothier noted that there is currently no date planned for the next CCG meeting, but that it is likely to take place late in 2007. A notice will be sent to CCG members when a date has been set.

Open Forum/Public Comment

- Glenn Pothier asked whether the Study Team had any further business to add to the meeting agenda. No issues were raised.
- Glenn Pothier then asked whether CCG members had any further business to add to the meeting agenda. No issues were raised.
- Glenn Pothier then made the ‘second round’ call for any comments/questions from meeting observers. None were raised.

Closing Remarks

- Glenn Pothier thanked the group for their attendance and participation.
- The meeting was formally adjourned (having run from approximately 6:40 to 9:25 p.m.).

Attendance (names listed in order as recorded on the participant sign-in sheet)

CCG Members and Public Observers

Les Chaif
Dennis Boismier
Louann Sharp
Larry & Mary Stiers
Kevin O'Neil
Terry Kennedy
Ed Arditti
Jim Martin
Ian Naisbitt
Ray Bezaire
June & Robert Thibert
Frank Mallat
Mary Ann Cuderman
Paul and Liz Morneau
Mike Duchene
L. Pizzolitto
Robert Beneau
Lucy Malizia
Alice DiCaro
James White
Jaye Lacerte
Pierre Quenneville

Partnership:

Dave Wake, Joel Foster and Kevin DeVos — Ontario Ministry of Transportation

Consultant Team:

Murray Thompson, Len Kozachuk, Irene Hauzar — URS Canada
Abby Salb — SENES.