



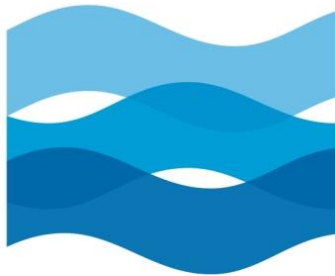
**WATERFRONT**Toronto

Peer Review - EA Study Design  
Billy Bishop Toronto City  
Airport (BBTCA) Runway Expansion  
and Introduction of Jet Aircraft

FINAL REPORT

August 2015





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## **ACRONYMS AND ABBREVIATIONS**

AERMOD	Atmospheric Dispersion Modelling System
ARCADIS	ARCADIS Canada Inc.
BBTCA	Billy Bishop Toronto City Airport
CALPUFF	Meteorological and Air Quality Monitoring System
CCG	Canadian Coast Guard
CEAA	<i>Canadian Environmental Assessment Act</i>
CO	Carbon Monoxide
COPA	Canadian Owners and Pilots Association
dba	Decibel Values of Sounds
EA	Environmental Assessment
EC	Environment Canada
GBE	Government Business Enterprise
GWC	Greater Waterfront Coalition
HEAT	Habitat and Environmental Assessment Tool
INM	Integrated Noise Model
Ldn	Day-Night Sound Level
MEZ	Marine Exclusion Zone
MTCS	Ministry of Tourism, Culture and Sports
MOECC	Ministry of the Environment and Climate Change
NEF	Noise Exposure Forecast
NOx	Nitrogen Oxides
PM <sub>2.5</sub>	Particulate Matter up to 2.5 micrometers in size
PM <sub>10</sub>	Particulate Matter up to 10 micrometers in size
SO <sub>2</sub>	Sulphur Dioxide
TPA	Toronto Port Authority
TRCA	Toronto Region Conservation Authority
US EPA	United States Environmental Protection Agency
WHO	World Health Organization

## **1.0 INTRODUCTION**

The purpose of this current Project is to undertake a peer review of the Environmental Assessment (EA) for the Proposed Runway Extension and Introduction of Jet Aircraft at the Billy Bishop Toronto City Airport (BBTCA), being led by Waterfront Toronto (legally known as Toronto Waterfront Revitalization Corporation) and funded by PortsToronto (legally known as Toronto Port Authority).

Waterfront Toronto is the public advocate and agent of waterfront revitalization and has been mandated by the Governments of Canada and Ontario and the City of Toronto to deliver a revitalized waterfront. PortsToronto is mandated by the federal government to facilitate commercial trade in the Toronto port.

Any decision to lift the jet ban to introduce jet aircraft and extend the runway at the BBTCA must be studied and stakeholders consulted given the potential impact on Toronto's waterfront. Waterfront Toronto wants to ensure that the outcome will not negatively affect the significant achievements that have already been made for the future vision of the revitalized waterfront.

Waterfront Toronto contracted ARCADIS Canada Inc. (ARCADIS) as an independent third party to conduct the peer review. This review is being supported by PortsToronto as a step to further enhance the transparency of the overall environmental assessment process, and to address comments received from the public, stakeholders and agencies.

ARCADIS has assembled a highly qualified team of specialists with the requisite expertise in all technical areas, EA process and public and stakeholder engagement, relevant to this Project.

### **1.1 BACKGROUND**

PortsToronto, formerly the Toronto Port Authority (TPA), was established by the Federal Government under the *Canada Marine Act* in 1999. They are a federally assigned Government Business Enterprise (GBE) that provides regulatory controls of marine and air transportation in the port and harbour, grants permits for powered boating activities, oversees land development and engages in trade development for the ports terminals. PortsToronto is responsible for managing the entire Toronto Harbour area, including the BBTCA, formerly called the Toronto City Centre Airport.

The *Canada Marine Act* outlines for PortsToronto the public imperatives of community interest, safety and environmental protection, and requires PortsToronto, as a GBE, to uphold the federally-appointed mandate to ensure the continued commercial viability of PortsToronto assets. According to the *Canada Marine Act*, PortsToronto is obliged to "manage the marine infrastructure and services in a commercial manner that encourages, and takes into account, input from users and the community in which a port or harbour is located" (*Canada Marine Act*, Section 4(f), 1998, p. 4). As

such, in managing the BBTCA, PortsToronto must consider and assess proposed changes to the BBTCA operations and infrastructure in consultation with local communities and stakeholders.

PortsToronto operates the BBTCA under the conditions of an agreement called the Tripartite Agreement, which was originally drafted and signed in 1983 by the City of Toronto, Transport Canada and PortsToronto. The Tripartite Agreement details the conditions under which the BBTCA operates; such as the flight curfew, the noise limitations, the prohibition of the use of jet aircraft, the prohibition against any lengthening of the operational portion of the runway and the rights and responsibilities of each signatory. Without the consensus of all three signatories, no changes can be made to the Tripartite Agreement.

In 2013, Porter Airlines submitted a proposal to the City of Toronto, copying PortsToronto, requesting to introduce jet aircraft at the BBTCA. Part of this proposal included an extension of the land mass at each end of the main runway in order to lengthen the operational portion of the runway. This extension would accommodate the use of the requested jet aircraft for scheduled flight operations. As the Tripartite Agreement does not allow the use of jet aircraft for scheduled commercial travel or the lengthening of the operational portion of the runway, the terms of the Tripartite Agreement would need to be amended by all three signatories to approve Porter's proposal.

In 2013, the City of Toronto undertook a review of the potential impacts of Porter's Proposal, which were presented to the public and to Toronto City Council in late 2013 and early 2014. In April 2014, City of Toronto Council requested that further study and analysis of the effects of jet aircraft at the BBTCA and associated mitigation measures be completed. This request consisted of four key components and included:

1. commencement of an Airport Master Plan for the BBTCA that contemplates the introduction of jets on a theoretical basis;
2. development of a Precinct Plan for the Bathurst Quay neighbourhood (now called the Bathurst Quay Neighbourhood Plan);
3. commencement of design work for the proposed runway extension; and
4. completion of an EA.

PortsToronto engaged the services of AECOM to undertake the EA to identify the effects of the proposed changes on the nearby environment. The result of the EA will provide information that will allow stakeholders to objectively consider the proposal and to make an informed decision on the choices that need to be made related to impacts, benefits and mitigation measures associated with the potential execution of the Project.



In preparation for the EA, AECOM has drafted a Study Design Report. The Study Design Report (*AECOM Report dated April 2015 – Environmental Assessment of Proposed Runway Extension and Introduction of Jets at Billy Bishop Toronto City Airport Draft Study Design Report*) serves three purposes;

1. Outlines the study process that PortsToronto proposes to follow for the EA and provides a focus for early engagement.
2. Documents, for stakeholder review and comment, the planning decisions that have been made on a preliminary basis with respect to:
  - ✓ scenarios to be assessed by the EA;
  - ✓ measures to assess the effects of the proposal; and
  - ✓ methods for conducting the effects assessment.
3. Provides the basis for moving the study forward once stakeholder comments regarding the above have been considered.

The AECOM EA will focus on the following effects assessment studies:

- Air Quality;
- Archaeology and Cultural Heritage;
- Land Use and Built Form;
- Natural Environment;
- Marine Navigation;
- Marine Physical Conditions and Water Quality;
- Noise;
- Socio Economic Conditions; and
- Transportation.

## **1.2 CURRENT ASSIGNMENT**

The objective of this current Project is to conduct a peer review of the scope, methodology and results of the BBTCA EA that is currently being undertaken by AECOM. The purpose of a peer review is to review the documentation with respect to how well it meets regulatory requirements, how well it addresses public and stakeholder comments and concerns and whether all of the assumptions used are reasonable such that the decision-making is replicable.

Typically, an EA is triggered by a requirement under the *Canadian Environmental Assessment Act (CEAA)* or the *Ontario EA Act*. It should be noted, however, that the BBTCA runway extension proposal is not subject to the requirements of either *Act*. As there are no regulatory requirements defining the EA process for this proposal, AECOM has developed a scope of work based on engagement with stakeholders and on experience with other EAs at both the provincial and federal levels. This proposed approach blends the key elements of both the federal and provincial EA processes, taking into consideration input from stakeholders. In general, though, PortsToronto elected to follow the general framework set out under the *Ontario EA Act* due to the robustness of the engagement process enabled by the *Act*, however, the general framework adopted for this EA does not accommodate a formal appeals process as required under the *Act*.

The peer review is divided into two (2) distinct phases: Phase 1 – peer review of the EA study design; and Phase 2 – peer review of the effects assessment reported in the EA.

The test of a good EA is whether the decisions made make sense given the information available and the concerns and comments raised by stakeholders. It asks questions:

- Was something missed?
- Does this decision reflect the best and most relevant information?
- Are the predicted effects reasonable and acceptable given the benefits of the project?
- Has this decision been made in the best interest of those most affected by it?

Successfully undertaking a peer review requires the peer review team to review the detailed technical information while at the same time being able to pull back and see the broader decision-making and how all the pieces fit together.

The purpose of the EA is summarized as follows as per the PortsToronto RFP:

*For the purpose of the proposed project and assessment, the environment includes the natural environment, the built environment, human health and socio-economic matters (including, for example, transportation, land use, businesses, cultural and heritage matters).*

*The EA will identify the existing or baseline environmental conditions, and then identify and assess potentially significant effects on the environment for relevant aspects of the proposed project. The EA will also identify and assess appropriate mitigation measures, which may include revisions to the design of the project, to address potentially significant environmental effects.*



*Taking into account the federal nature of the TPA's activities, the purposes of the EA should aim to:*

- protect the components of the environment that are within federal jurisdiction from significant adverse environmental effects that would likely be caused by the proposed project, including the effects of accidents and malfunctions;*
- promote and engage in consultation about the proposed project and to ensure that appropriate opportunities are provided for meaningful public participation during the environmental assessment;*
- consider actions that promote sustainable development in order to achieve or maintain a healthy environment and a healthy economy; and*
- consider the cumulative effects of physical activities associated with the proposed project.*

It should be noted that there are three other independently run studies that are being concurrently undertaken by Ports Toronto and the City of Toronto. The studies are as follows:

#### **Bathurst Quay Neighborhood Plan**

- The City of Toronto is undertaking a master plan of the Bathurst Quay neighborhood which is adjacent to the airport and approximately bounded by the Western Gap, Coronation Park, Lake Shore Blvd and Dan Leckie Way. The study will look at the overall vision for the neighborhood including built form, parks, public realm and the transportation network.

#### **BBTCA Preliminary Runway Design**

- PortsToronto has hired a consultant to design a runway that would allow for the operation of jets. The design of the runway is assumed to be the baseline runway design being studied in the main study.

#### **BBTCA Master Planning Exercise**

- PortsToronto has a hired a consultant to update the 2012 BBTCA Airport Master Plan. The master plan update assumes, on a theoretical basis, the runway extension and increased passenger demand beyond the existing limits and jet aircraft ban as specified by the Tripartite Agreement between PortsToronto, City of Toronto and Transport Canada.

Since the work of each of these studies informs each other, Ports Toronto is coordinating the sharing of information from these studies between the public, stakeholders, agencies and the City of Toronto. It is assumed that information from each of these three studies will be utilized as baseline conditions for the EA.

## 2.0 PEER REVIEW APPROACH

Given the high level of public scrutiny of the BBTCA Runway Extension and Jet Use Study Project, we understand the importance of providing a balanced, detailed review of the scope, methodology and results of the EA based on international best practices and federal / provincial EA legislation and requirements. The peer review will identify any gaps, oversights, and under- and overestimations in the EA methodology and results, and will provide practical suggestions for dealing with any issues that are identified.

The following outlines our methodology in conducting the peer review.

### 2.1 METHODOLOGY

As noted above, the peer review is being undertaken in two (2) distinct phases. This report is focused on the Phase 1 peer review, that is, the review of the AECOM Draft Study Design Report. The study design is being reviewed to ensure it is appropriately robust and had applied best practices in addressing key areas of concern, and to ensure that it meets the elements of the federal and provincial EA processes that are being used for the study. Waterfront Toronto provided ARCADIS Canada the following two key documents for this review:

- (1) AECOM Report dated April 2015 – Environmental Assessment of Proposed Runway Extension and Introduction of Jets at Billy Bishop Toronto City Airport Draft Study Design Report; and
- (2) Memo – Draft Study Design Report 30-Day Review Comments, prepared by AECOM, dated Wednesday, June 16, 2015.

In addition to reviewing the documents above, this phase of the peer review also involved participation in four Working Group Meetings. The Working Group includes representation from Waterfront Toronto, PortsToronto, City of Toronto, Toronto and Region Conservation Authority (TRCA), Canadian Owners and Pilots Association (COPA), Greater Waterfront Coalition (GWC) and ARCADIS. The meetings were as follows:

- June 22 – Presentation given by ARCADIS Project Manager to discuss the peer review process, initial peer review findings, other stakeholder comments etc.; (attached to this report as Appendix A).
- July 7 – Presentation given by Ed Hore of GWC pertaining to concerns with AECOM's Draft Study Design especially on aspects pertaining to the methodology for the economic analysis and safety assessment.
- July 13 – (Presentation of draft Phase 1 peer review results given by ARCADIS Project Manager (attached to this report as Appendix B);

- July 27 – Conference call between the ARCADIS technical experts and peer review Working Group to discuss the Working Group’s comments on the ARCADIS draft Phase 1 peer review report.

ARCADIS also attended a stakeholder group meeting on June 24<sup>th</sup> at which participants were updated on the peer review process and the Airport Master Plan. Participants at this meeting included representatives from local ratepayer and interest groups.

Using the two documents provided by Waterfront Toronto and two additional reports provided by GWC 1: Safety Issues to Consider in the Proposal to Expand the Island Airport for Jets; and 2: Delft, March 2013. The Economics of Airport Expansion), as well as other correspondence from GWC, and the information discussed in the first three Working Group meetings attended by ARCADIS, the peer review of the AECOM Draft Study Design was undertaken taking the following, and other key questions, into consideration:

- Have the study areas and baseline conditions been properly identified?
- Have appropriate EA processes been used in line with best practices?
- Were all appropriate data sources consulted?
- Does the public consultation process meet the requirements of the EA process being followed?
- Have all relevant approval agency regulations/requirements (e.g., Department of Fisheries and Oceans) been identified and addressed?
- Are technical studies designed in accordance with appropriate assessment techniques, models, etc.?
- Does the study design incorporate the input received through initial consultation?
- Are key decisions and assumptions adequately rationalized/justified/ defended, or is there a misstep in logic?

The ARCADIS draft Phase 1 peer review report was submitted to the peer review Working Group on July 10<sup>th</sup> for review in preparation for the detailed discussions on July 27<sup>th</sup>. Subsequent to the July 27 Working Group Meeting conference call, additional information was provided to ARCADIS by AECOM through PortsToronto in order to fill gaps in the draft study design methodologies as identified by ARCADIS in its July 10<sup>th</sup> draft Phase 1 peer review report, particularly regarding the following disciplines: (1) Noise; (2) Natural Environment; (3) Public Health; (4) Socio-Economic Conditions, and (5) Air Quality.

### 3.0 FINDINGS OF PEER REVIEW OF AECOM'S DRAFT STUDY DESIGN REPORT

This chapter summarizes the results of the peer review of AECOM's Draft Study Design Report. It includes most of ARCADIS' peer review comments contained in the July 10<sup>th</sup> draft report, but also incorporates clarifications resulting from the discussions during the July 27<sup>th</sup> conference call, and from subsequent information provided by AECOM up to August 7<sup>th</sup>. The peer review was conducted by experts in all technical areas relevant to EA. The findings of the technical experts are reflected in the comments below. Generally, based on the number and extent of the public comments identified in the documents reviewed, it appears that noise, air quality and safety concerns within the Marine Exclusion Zone (MEZ) are the three (3) most common concerns noted by the public.

#### 3.1 EA PROCESS AND LEGISLATION

As was noted earlier, the BBTCA runway extension proposal is not subject to the requirements of the *Ontario EA Act* or the federal *CEAA*. Each level of government has provided written confirmation of that fact. The EA process proposed by Ports Toronto incorporates procedural elements from both the federal and provincial *EA Acts*, but PortsToronto elected to follow the general framework set out under the *Ontario EA Act* due to the robustness of the engagement process enabled by the *Act*.

This approach, which includes the consideration of two (2) alternative scenarios (future baseline without the project, and future with the proposed runway extension and jet aircraft), is reasonable and consistent with best practice when no specific federal or provincial EA process is triggered.

#### 3.2 PUBLIC CONSULTATION & STAKEHOLDER ENGAGEMENT

The approach to stakeholder engagement seems to be reasonable and reflective of best practices. The following areas for improvement have been noted:

- More detail should be included with respect to First Nation and Métis consultation, including a list of comments and issues raised.
- Detail on approximate extent and timing of Phase 2 Engagement Activities should be added. (For example, what consultation mechanisms will be used at each decision point.)
- Table 4.1 seems to be out of place in the Draft Study Design Report.
- A summary of comments raised should be added to all subsections within Section 4.1 of the Draft Study Design Report.

- There seems to be confusion between what is part of the EA and what is part of the Master Plan and what the public can comment on. In keeping with best practices, we would suggest that additional clarity be provided within the Draft Study Design to differentiate between these processes. This issue was clearly indicated at the June 24<sup>th</sup> meeting.

### **3.3 AIR QUALITY**

The sections immediately following summarize, for the most part, ARCADIS' peer review comments on AECOM's Draft Study Design pertaining to air quality, as was included in our draft peer review report which was submitted on July 10<sup>th</sup> and discussed during the July 27<sup>th</sup> peer review Working Group meeting/conference call.

#### Study Area

The study area was defined based on locations expected to be most affected by air quality. Since most emission sources associated with the project will be ground-based, maximum concentrations are expected to occur within close proximity to the BBTCA where key areas of concern have already been identified.

- It should be noted that the combined effect of the BBTCA with other local emission sources (e.g., local road traffic) has the potential to reach areas north of the study area defined in Figure 3-3. This was demonstrated in Appendix E of the Health Impact Assessment completed by Golder Associates in 2013. In other words, the study area does not appear to be large enough to be able to quantify whether or not the combined effect of the project with other local sources will lead to exceedances of ambient air quality criteria in areas to the north of the Gardiner Expressway.
- Consideration should be made to extend the study area to the north of the Gardiner Expressway in order to demonstrate that the cumulative effects of the proposed project will not lead to exceedances of ambient air quality criteria in areas to the north of BBTCA (i.e., Wards 19 and 20).
- Figure 3-3 identifies receptors of concern related to air quality. It is unclear whether or not these receptors are the only receptors that will be considered in the air quality study, or if this figure is intended to highlight areas of concern identified by stakeholders and community members. If a single receptor is chosen to represent one area (e.g., Ward's Island), then the receptor should be placed at the residence on Ward's Island located closest to the project, not in the middle of the island. This approach will result in a more conservative estimate of air quality concentrations for residents in this area, for example.

- It is also unclear as to whether a full model receptor grid will be used in the dispersion modelling. A receptor grid is typically used for the purpose of presenting contour plots of air pollutant concentrations across the entire study area, which aid in the interpretation of model results.

### Background Data

- It is understood that background concentrations will be established using the results of the City-wide air quality model which will be validated with monitoring data. While monitoring data for NO<sub>x</sub> and PM<sub>2.5</sub> is readily available for recent years from local Ministry of the Environment and Climate Change (MOECC) and Environment Canada (EC) stations, data for PM<sub>10</sub>, acrolein, benzene and benzo(a)pyrene are not. It is unclear if the Hanlan's Point Research Station has data for PM<sub>10</sub>, acrolein, benzene or benzo(a)pyrene.
- Consideration should be given to using data collected by Metrolinx as part of the Georgetown South Ambient Air Quality Monitoring Program (<http://www.gotransit.com/gts/en/monitoring/aamrp.aspx>). Three stations exist in total. One station is located at 10 Ordance Avenue (about 1 km north of the BBTCA).

### Selected Contaminants

The study design identifies that the following contaminants of concern will be quantitatively assessed: NO<sub>x</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, acrolein, benzene and benzo(a)pyrene.

- The study notes that consideration will also be given to chromium. The study design should include the rationale for the selection of these contaminants. It is common practice in transportation projects to consider carbon monoxide (CO) and sulphur dioxide (SO<sub>2</sub>). These contaminants should be considered in this study or the rationale for their exclusion should be clearly stated.
- The Draft Study Design Report also states that odour and black carbon/soot impacts will be qualitatively assessed. Odour and black carbon are possible to quantify using published emission factors and can also be easily included in dispersion modelling. Given that there is concern from stakeholders about odour and black soot, consideration should be made to include these constituents as part of the quantitative analysis (i.e., emissions estimates and modelling). Otherwise, the study design should clearly describe the rationale for not completing a quantitative assessment.
- Appendix B of the Draft Study Design Report states that the qualitative assessments of odour and soot will assess "future with jets scenario relative to baseline". It appears that odour studies of the BBTCA have been previously conducted, while a recent study conducted by



the MOECC will be used to establish baseline soot levels. However, the MOECC data set appears to be limited and should be evaluated for its representativeness in establishing baseline soot levels.

### Emission Inventory

Methods for estimating airport emissions will be completed using standard emission estimation methods.

It is unclear how vehicle emissions on local roads or ferry emissions will be estimated. The Draft Study Design Report states that United States Environmental Protection Agency (US EPA) models will be used, but does not state which model.

### Dispersion Modelling

The Draft Study Design Report states that the air quality assessment will “conduct dispersion modelling using a US EPA and MOECC approved model to determine the downwind concentrations of the contaminants...”

- ❑ It does not explicitly state which model will be used (i.e., AERMOD or CALPUFF). It is recommended that the CALPUFF dispersion model be used since CALPUFF is better suited for modelling situations near a large body of water. It would also be consistent with the City-wide air quality study by Golder Associates which used CALPUFF.
- ❑ The modelling period and source of meteorological data should also be included in the Draft Study Design Report. One year is typically acceptable if site-specific meteorological data are used.

### Climate Change

- ❑ The boundaries of the greenhouse gas inventory are not defined. Since climate change is a global phenomenon, greenhouse gas emissions from aircraft that occur beyond our provincial and national borders should be considered. It is expected that the addition of jets will allow airlines to fly further to an increased number of destinations. Therefore, the effect of increased fuel consumption due to longer flight paths should be considered in the greenhouse gas inventory.

Subsequent to the discussion of the draft peer review comments during the July 27<sup>th</sup> Working Group meeting, AECOM, through PortsToronto provided some additional information related to the air quality study methods and data sources. Based on this information, several of the initial review findings described above have been addressed, including:

- ❑ The study design will consider data available from Metrolinx as part of the Georgetown South Project, as recommended in the initial review findings.

- ❑ The study method clarifies which emissions model will be used. The methodology indicates that the U.S. EPA MOVES model will be used to estimate emissions from roads. This is an acceptable model. It also states that U.S. EPA emission factors will be used to estimate ferry emissions, which is also an acceptable approach.
- ❑ The study method now states that the CALPUFF model will be used in conjunction with one year of meteorological data generated by CALMET. This is an acceptable modelling approach for locations near large water bodies.
- ❑ As recommended in the initial review findings, the revised study method now indicates that the MOECC's assessment of "black soot" will be reviewed and discussed.

The revised study design also states that road traffic will be modelled including the Gardiner Expressway, Lakeshore Blvd. and arterial streets. However, it is unclear which portions of these roadways will be included in the study. For example, will only the portion of the Gardiner Expressway that falls within the Study Area shown in Figure 3-3 (from approximately Bathurst St. to York St.) be included? As discussed in the initial review findings above, consideration should be given to extending the study area north of the Gardiner Expressway, particularly if emissions from this roadway will be modelled.

### 3.4 PUBLIC HEALTH

The paragraph and bullet immediately following summarize, for the most part, ARCADIS' peer review comments on AECOM's Draft Study Design pertaining to public health, as was included in our draft peer review report which was submitted on July 10<sup>th</sup> and discussed during the July 27<sup>th</sup> Working Group meeting/conference call.

It is unclear how the existing condition will be evaluated in the EA. From a public health standpoint, it is important that the existing condition be evaluated so that the public understands their current health risks which can then be compared to the future condition. A high level discussion of how health will be addressed in the EA was provided in the study design in various sections. A concern is that

- ❑ The effects assessment does not include the evaluation of public health separately. It seems to be included under the air quality assessment, noise assessment and transportation assessment. However, Section 3.7.2 of the report indicates that the consultant is engaged with the City of Toronto Public Health Department and will continue the assessment methodology provided by the Golder 2013 Health Impact Assessment Report. Given the discussion in Section 3.7.2, it is recommended that a separate public health section, including an appendix be prepared that takes the information from the air quality, noise and transportation assessment and provides an assessment on public health within the EA. This allows for a more transparent evaluation of health effects for public consumption and would help address the public concerns, as noted in their comments.

Subsequent to the discussion of the draft peer review comments during the July 27<sup>th</sup> Working Group meeting, AECOM, through PortsToronto provided some additional information related to the study area boundaries, scope of the work and understanding of the issues. Based on this information, we concur with the study area boundaries.

The study scope was a high level discussion and involved the following:

- ❑ “Engage in ongoing discussions with the City of Toronto’s Department of Public Health;
- ❑ Assess the impacts of changes to air quality associated with the proposal on hospitalization rates or incidence of air quality-related illnesses by comparing air quality impacts to regulatory or policy-based thresholds;
- ❑ Compare results of the air quality modelling conducted in accordance with the air quality effects assessment study to Toronto Public Health’s Toxicity Reference Values in addition to the Ministry of the Environment and Climate Change ambient air quality criteria and Canadian ambient air quality standards; and
- ❑ Compare current and future modelled noise levels to the Department of Public Health noise reference values.”

It is expected that the scope of work would provide more detail as to how the assessment will actually be carried out; for example what are the regulatory or policy-based thresholds that are going to be used? What are the public health noise reference values that are going to be used?

It should be noted that a comparison to the Ministry of the Environment and Climate Change ambient air quality standards or to Canadian ambient air quality standards are not considered to be adequate for evaluating potential health impacts as many of them are not based on the protection of human health and some of them are dated and do not reflect current understanding on health effects.

PortsToronto subsequently has provided the health based values that will be used in the study and AECOM has indicated that they will provide a separate health section within the EA document as well as an appendix that will summarize all information and analyses of health effects.

### **3.5 NOISE**

The sections immediately following summarize ARCADIS’ peer review comments on AECOM’s Draft Study Design pertaining to noise, as was included in our draft peer review report which was submitted on July 10<sup>th</sup> and discussed during the July 27<sup>th</sup> peer review Working Group meeting/conference call.

The scope of work for a large-scale noise assessment prepared to support an EA study is typically driven by guidelines developed under the provincial or federal EA Acts (*Ontario EA Act or CEAA*, as applicable). As noted in the Draft Study Design Report, this project does not trigger a requirement to complete an EA under either the Federal or Provincial EA Acts; however, Toronto City Council has requested that an EA be completed regardless, in order to inform its position on the proposed undertaking. As neither the Provincial nor Federal regulating bodies were officially engaged, it was up to the proponent (PortsToronto) to develop the scope of work with input from the City of Toronto, stakeholders and the public. The proponent opted to design the scope of work based on the Provincial assessment mechanism.

- The review mechanism to be employed by the City when rendering a decision on the project from a noise standpoint is unclear.

The City of Toronto issued a letter to PortsToronto dated June 1st, 2015, outlining a number of issues to be addressed in the EA scope of work. With regard to noise (directly or indirectly), these included a full assessment of existing operations, consideration of a “do nothing” scenario, alteration of the “proposed growth” scenario to be consistent with the caps and phasing framework that was approved by City Council, an assessment of short-term impacts related to engine run-ups, an assessment of indoor noise impacts (including schools), and the application of health-based noise guidelines when evaluating effects of the project.

- It is assumed that the assessment scenarios will be updated in accordance with the City of Toronto request.

In addition to the City of Toronto comments, the proponent received numerous comments from stakeholders and the public outlining issues of importance that they felt should be part of the noise assessment. These were communicated through public information sessions and feedback received after the 30-day review period of the study design.

- The noise study design currently lacks the detail required to comment on whether the proposed approach will be sufficient to address the scope of work that has been requested from the City of Toronto, stakeholders and the public. The study design provides a general overview of the noise assessment process (e.g., sources of criteria, models to be used), but does not get into any specifics (e.g., actual criteria to be applied and to which sources of noise).

In reviewing the Draft Study Design Report, it was noted that sound levels at schools will be assessed using the indicators Ldn (day-night sound level) and N70 (number of aircraft movement events that exceed 70 dBA); however, the actual criteria to be applied were not stated. The City of Toronto has specifically identified that noise impacts at schools should focus on an assessment of indoor environments. The Ldn is a 24-hour community noise exposure indicator that was specifically

developed to account for increased noise sensitivity during sleeping hours by penalizing sounds that occur during night-time hours by +10 dB. Therefore, if a source under assessment operates 24-hours, its night-time operations will be penalized by +10 dB in the assessment of impacts.

- ❑ A school does not operate at night, so it is unclear whether night-time contributions from BBTCA will be considered in the assessment at this location. There is potential that this metric could be applied in a way that overstates the baseline ambient conditions (by penalizing the ambient night-time condition) and understate the impact of the source (by assuming its night-time operations are not relevant at this location). This would be an invalid comparison.
- ❑ It should be noted that the World Health Organization (WHO) has an indoor guideline limit for noise inside of classrooms of 35 dBA during class hours, which was developed to protect speech intelligibility and message communication, and avoid disturbance of information extraction. The relevance of a 24-hour exposure criteria that was developed specifically to address night-time noise sensitivity is questionable at this location.

Several public concerns have been raised pertaining to the assessment of low frequency noise, which is not currently addressed in the scope of work. One comment in particular identified that residents have been complaining of rattling windows.

- ❑ Noise-induced vibration should be considered as a potential noise effect of the project. Octave band data from the aircraft manufacturer and/or measurement programs can be compared to published sound pressure thresholds that would be expected to cause excitation of building components if exceeded.

The lack of detail in the scope makes it difficult to determine whether public concerns over the modelling scope will be addressed. Several comments convey concern that component operations at the BBTCA will be separated out and assessed individually rather than airport operations being assessed as a whole. For instance, the NEF and INM contours are stated to include only aircraft departure, arrival and flyover; however, taxiing, engine run-up and other supporting operations would occur within the same time period.

- ❑ The scope is not clear on whether the assessment approach will seek to combine the predicted impacts of all activities at the BBTCA in an effort to demonstrate the cumulative noise impact at the sensitive receptor locations when comparing to the health-based criteria requested by the City of Toronto.

Subsequent to our July 10th draft peer review submission of the study design and the July 27th Working Group meeting/conference call, additional information was supplied by AECOM through PortsToronto to provide clarification on the noise study design. The additional information provided

clarification on the assessment approach and the specific sound level criteria that are to be applied in the study. The steps that have been provided outline that noise modelling will be completed in the INM model, and the output data from INM (i.e., LDN sound levels) will be used to develop N70 contours.

The proposed modelling approach will result in the prediction of 24-hour LDN values, while the presented criteria values are primarily energy equivalent sound levels (Leq) calculated over an interval of less than 24-hours. It remains unclear how the LDN and N70 model outputs will be converted for direct comparison to the adopted criteria, which use metrics other than LDN and N70.

The additional information outlines that the assessment will be based on an average traffic day with regard to the flight data input to the model, as per the approach utilized by the FAA. Noise complaints are more likely to be associated with busier days than the average condition. For example, Transport Canada utilizes the 95th percentile daily traffic data for modelling assessments.

The new information provide additional detail on only a portion of the study scope. The study design outlined that the assessment would utilize models that were not mentioned in the new information. For instance, the scope outlines that the Cadna-A model will factor into the assessment; however, it is not clear how it will be utilized in the assessment. It would be useful for each model to be identified with the source(s) it will be used to assess.

The additional information identifies that the public is interested in in-the-moment sound levels, and that this concern will be addressed through the use of N70. As noted, the N70 will only indicate whether 70 dBA was exceeded or not; it does not identify the actual peak levels that may be experienced, which may be of greater interest to the public. However, as noted in the additional information, the monitoring data will be useful for providing information on actual in-the-moment sound levels during BBTCA operations.

Our July 10th submission identified concerns with using LDN values to assess noise impacts at schools, as the LDN is a metric that was developed to assess receptors with increased sensitivity to noises that occur at night-time. The additional information indicates that the 24-hour LDN predictions at the school will be adjusted to account for the fact that the school is not occupied at night. This confirms that the occupants of the school are not sensitive to night-time noise at this location, and as such the applicability of an LDN at this location is questionable. As we noted previously, there is a possibility that the use of LDN at this location could result in an invalid comparison if the baseline condition is calculated in such a way that the night-time ambient condition (i.e., due to local road and rail traffic) at this location is included and penalized by +10 dB. This would be unreasonable with no occupants at night, and would overestimate baseline conditions. Such an over-estimated baseline would serve to lessen the predicted impact of the project.



Lastly, the new information provided does not speak to whether an assessment of noise-induced vibration will be considered. The potential for this effect was one of the concerns raised by the public and we believe that this should be considered as part of the EA.

### 3.6 NATURAL ENVIRONMENT

The sections immediately following summarize ARCADIS' peer review comments on AECOM's Draft Study Design pertaining to natural environment as was included in our draft peer review report which was submitted on July 10th and discussed during the July 27th peer review Working Group meeting/conference call.

#### Aquatic

The peer review found there was very little detail on the specific methodology that will be used to conduct field studies, so it is difficult to provide specific comments. In a general sense, the coarse scope of work provided by AECOM seems adequate, and we concur with the intent to use TRCA's Habitat and Environmental Assessment Tool (HEAT) to identify impacts, and that mitigation and compensation measures will be recommended for the altered habitat. It is also encouraging that the TRCA supports the study design for this work. In addition, we note the following:

- Additional information on the details of the field studies will be required to make a full assessment of the methodology. For example, it is stated that aquatic habitat will be assessed through visual observations. In one of the studies previously conducted at the airport (Dillon 2013), visual observations of aquatic habitat were made by personnel standing on shore. These type of observations provide limited information on the habitat and conditions present and would be inadequate for assessing the entire habitat area within the area of the proposed runway extension. However, if the visual observations will be made with, for example, an underwater camera, that would provide much more detailed and valuable information.

#### Terrestrial

Since the natural environment methodology outlined is not very detailed, the following review comments are based on general methodology, not survey protocols.

- The study design is adequate provided it addresses amphibians and reptile surveys. This is not obvious in the design as there is no specific mention of amphibian and reptile surveys and it is not clear if they are included or if they have been completed as part of previous wildlife surveys.

Subsequent to the July 27th Working Group meeting/conference call, additional details on sampling in both the terrestrial and aquatic environments were provided (July 29th Table) by AECOM through PortsToronto. Although the additional information is generally acceptable, further information on

methods should be provided in the study design. For example, an underwater camera was used to identify substrate, emerging and submerged vegetation using a grid based system. However, the sensitivity of the camera (in lux) for underwater monitoring has not been defined, and the size of the grid and proposed number of samples were not made available. The hydroacoustic (sonar) study also should have more detail (transducer frequency, mode of operation- horizontal or fixed, length of monitoring period etc.) or at least the details referenced.

Similarly, the methodology for the terrestrial environment is now better described, however, additional details should be provided in the study design as per the comments above.

Technical references should have been provided to support methods. Details of the methods are important since results and data interpretation is based on the sample collections, and the reviewer should be aware of any limitations which may influence conclusions (e.g. camera limited in turbid environment). In the final study design report, it is expected that additional information will be provided on methodology and possible limitations of approaches.

### **3.7 SOCIO-ECONOMIC CONDITIONS**

The following comments reflect our review of the AECOM Draft Study Design Report as well as the review of the additional information received from AECOM through Ports Toronto subsequent to the submission of our draft peer review comments and discussions held during the July 27<sup>th</sup> Working Group meeting.

#### General Approach:

The proposed approach for assessing socio-economic conditions is innovative for an environmental assessment. The logic flow and additional detail provided in subsequent information provided clarification with regard to how receptors are identified, inter-relationships identified, and how AECOM will assess the consequences of the change in future passenger volumes associated with the runway extension.

The Study Design proposes a value based approach. Social assets' have been categorized according to the value placed on them by interested parties and are split into 'use values' and 'non-use values' to be assessed (which are set out in a graphic). "Use values are assets that exist because people use them such as tourism and recreation opportunities" and "Non-use values are aspects of the environment that exist independent of people's use or enjoyment of them".

This approach then lists a mixture of activities (such as 'sight-seeing' and 'recreational activities'), indicators (such as 'property values'), concepts (such as 'quality of life') and commercial ventures (such as 'hotels' and 'restaurants') that it is inferred could be affected by the proposed project, and

then identifies a range of topics for which there may be ‘implications’ from effects to these things, including:

- Government Costs/Revenues;
- Employment;
- Business Implications;
- Business Revenues;
- Public Health;
- Public Safety; and
- Economic Development.

The defined study area for ‘non-use values’ incorporates the City of Toronto. Non-use values are listed as,

- preserve future options;
- legacy for future generations; and
- build Toronto’s brand.

#### Social Analysis:

The socio-economic study area was expanded based on public input received which will provide a broader area for data collection and, consequently, a broader range of participants.

- A greater focus in the current study is placed on the potential impacts to the social environment and the inter-relationships between the City of Toronto, air passengers, local business and waterfront users as it has not been adequately addressed previously. Although we agree, economic impacts and benefits influence planning and decision making and as such are also important and need to be fully understood.
- The study design has been adopted to integrate feedback from public review, e.g. expansion of the study area to include Ontario Place and extension of data collection (e.g. interviews, surveys) into summer 2015.

#### Data Collection:

As per AECOM’s Draft Study Design report, the data collection will be based predominantly on intercept survey and interviews which will provide important perspective from a wide range of stakeholders. Based on this, we have the following comments:

- ❑ Has consideration been given to inclusion of seasonal residents residing on boats docked at marinas located within the study area, into either the intercept or pre-arranged interviews?
- ❑ Although stated in the Draft Study Design Report that an attempt will be made to capture input from a variety of users (e.g., users from local neighbourhoods, other Torontonians and residents from inside and outside the Greater Toronto Area (GTA)), it is not clear how these groups will be targeted and if the objective is a statistical representation.
- ❑ The impact assessment on user experience on existing and future use is stated to relate to noise, air quality and quality of life; however, is consideration given to traffic patterns and the potential for increased traffic to/from airport to create increased nuisance and inconvenience to area residents and their quality of life.

The key lines of inquiry for both the intercept surveys and the pre-arranged surveys were provided in the subsequent information. Based on our review of this information we believe the line of questioning is comprehensive enough to measure and assess the socio-economic impact of the possible future scenarios.

#### Economic Analysis:

The proposed approach to economic effects states, *“There have been numerous economic benefit studies linked to airport operations. These studies will be reviewed and analyzed to understand the potential incremental economic impacts of the proposal.”* The studies are listed in Appendix B as follows:

- ❑ CommunityAIR, 2013. Reviewing Deluce’s Jets Proposal: What the City Has (and Hasn’t) Done;
- ❑ Environics Research Group, 2013. Toronto Resident Survey: Billy Bishop Toronto City Airport;
- ❑ InterVISTAS Consulting, 2012. Billy Bishop Toronto City Airport (YTZ) Economic Impact Study;
- ❑ HLT Advisory, 2013. Economic Impact Considerations of an Expanded Billy Bishop Toronto City Airport.

As stated in the Draft Study Design Report, it is AECOM’s intention to interpret the findings of these reports using inputs gained from interviews with airport related businesses and intercept surveys with airport users. Any claims regarding impacts or benefits in the EA will need to be supported by the existing economic studies. The additional information provided by AECOM through PortsToronto does clarify that potential displacement impacts will be considered. The AECOM

review will include an assessment of the conclusions to determine if the economic study included the influence of Pearson International Airport. Interviews with the Greater Toronto Airport Authority (GTAA) to collect data on long term capacity capabilities and long-term plans for regional air travel have also been identified.

Section 3.4 states that, “The cumulative net effects of the proposed future scenario on community assets will be compared to the cumulative net effects of the permitted future scenario on community assets”. However, there is no methodology outlined for how cumulative effects will be assessed.

Other specific comments in relation to the Draft Study Design Report are as follows:

- ❑ Appendix B, page ii – Section 2 in the table – Land Value assessment and investment generation are missing from the list of assets.
- ❑ Appendix B page 4, 3rd paragraph – Study Area definition should also consider journey times to the development area alongside travel patterns.

### 3.8 LAND USE & BUILT FORM

The defined study area (s. 3.3.8 Built Form and Land Use) appears inclusive; however, there is a direct link to nuisance effects (specifically noise) and compatible land use. The proposed methodology for assessment of effects identifies review of the regulatory framework, compliance issues, height restrictions and visual influence and identifies several criteria (e.g., property values, use and enjoyment of public facilities and institutions) for consideration. Built form and land use are directed by federal and provincial policies and municipal priorities as reflected in Official Plans and zoning by-laws. Review of these policies and assessment of compatibility appears to be the basis of the proposed study design which is an acceptable and reasonable approach.

#### Waterfront Revitalization:

The study design currently does not specifically reference Waterfront Toronto’s revitalization efforts. We recommended the scope of the EA expand to include the assessment of the potential of the proposed future expansion scenario to influence waterfront revitalization efforts, and elevate waterfront revitalization to a separate discipline for study. Recognizing the airport is only one component of the waterfront, how will its expansion potentially impact the balance of other waterfront land uses? Based on the subsequent information provided by AECOM through PortsToronto, it appears the key line of questioning during the intercept and pre-arranged interviews would result in qualitative data applicable to this assessment.

### 3.9 MARINE PHYSICAL CONDITIONS AND WATER QUALITY

This section summarizes the results of the review of AECOM's Draft Study Design pertaining to marine physical conditions and water quality. These comments are essentially the same as were submitted by ARCADIS on July 10th, as no new information was provided by AECOM subsequent to the July 27th Working Group Meeting/conference call.

#### Marine Physical Conditions

The peer review of the comments received during the 30 Day Public Review Process and the Environmental Assessment of Proposed Runway Extension and Introduction of Jets at Billy Bishop Toronto City Airport Draft Study Design Report produced no significant issues to raise.

#### Water Quality

The consultant thoroughly discussed methods to assess impact on water quality, however, there is no obvious discussion on how the consultant will control stormwater (100 year storm). What method of containing the stormwater will be used to ensure at least 90% removal of solids?

### 3.10 TRANSPORTATION

#### Safety:

Due to the fact that an airport expansion is being proposed in a very high population density zone, the public has expressed concern that safety is not being adequately covered, including analysis of:

- impacts of runway overrun by aircraft;
  - crash location model;
  - crash consequence model;
  - calculated increase in potential death and injury by allowing jets to fly, and the rate of increase based on volume of traffic.
- This is a valid and critical factor related to accidents in the water and revised plans need to be addressed before new aircraft are introduced.
- The 2015 Master Planning Exercise must address public safety considerations such as the above as part of the Transport Canada regulations that guide airport design and operation (such as TP312 – Aerodrome Standards and Recommended Practices), and that the runway design be prepared in accordance with these safety standards.



Marine Exclusion Zone (MEZ):

It was suggested at a Citizen's Advisory Meeting that the Canadian Coast Guard (CCG) should be contacted regarding the Marine Exclusion Zone that accompanies the proposed runway, especially because it extends far into the harbour and will restrict marine traffic. The Toronto Harbour is an important site for sailing and other boating activities as well as commercial traffic. No reference to making contact with CCG has been included in the Draft Design Study Report.

- This is a valid point. CCG needs to be included due to potential changes in the ATONS (Aids to Navigation). We recommend also including / consulting with PortsToronto personnel, any other affected marine pilot agencies, commercial operations, Navigation Canada if required, and Toronto Polices Services Marine Unit.

City Council directed "that any of the requested studies to be conducted exclude any consideration of either a runway or an extension of the Marine Exclusion Zone as currently configured, that would materially encroach upon the western shipping channel. This topic has been placed in the Master Planning Exercise, which has no consultative process, rather than in the "Environmental Assessment of Proposed Runway Extension and Introduction of Jets at Billy Bishop Toronto City Airport". The Toronto Boaters' Alliance believes public input is essential on this topic.

- This is a valid point. The changes must be consistent with navigational safety standards and take into account all aspects of practical vessel navigation including vessel sizes, including draft and air draft restrictions, changes in channel widths and the length of reaches in the channel. Further, the MEZ must be part of the EA scope to ensure it undergoes a consultative process.

Land Use & Built Form (Approach):

The following was asked as part of the 30-day review process:

"Should there not be an official cut-off minimum angle for approaching aircraft into BBTCA coming in over the waters of Lake Ontario and the Toronto Harbour? If there is a minimum approach angle in place and if it is/has been breached at BBTCA; why has it not been enforced?"

- The approach zone characteristics have a substantial impact on aircraft safety as well as vessel safety. Airports have approach glide paths that also require breakaway paths. These can be impacted by vessels navigating near runway ends. Boston approach to 11/22 at Logan from the west is a good example of this. The approaches need to be designed in alignment with the runway so as to minimize impacts on vessels and aircraft.

(Runway Approach Lighting):

The following was noted in the comments of the 30-day review period:

“The EA ignores safety recommendations (TP312) on runway approach lighting (“Transport Canada didn't make us do it. Safety issues need to be addressed.”

- ❑ We understand that “according to Transport Canada, approach lighting is not a standard for non-precision approaches and the BBTCA is a non-precision approach airport. As such, approach light will not be installed at the airport”. Plans should include the potential for new approach lighting that may impact marine navigation channels.

The following was also recorded as one of the comments received during the 30-day review period:

Lack of consideration of approach lighting – The requirements for runway approach lighting are substantial in that the lighting arrays are specified as being from 420 metres to 720 metres in length extending from each end of the runway. Such lighting arrays, now or at any time in the future, would have huge impacts on the Inner Harbour and would make use of the Western Gap impossible. If such lighting could ever be demanded in order to maintain or meet future requirements, or to satisfy demands in the future for greater safety at BBTCA, then they should be studied.

- ❑ As per above, plans should include the potential for new approach lighting that may impact marine navigation channels.

Transportation (Ground and Marine):

Regarding ground and marine transportation, it is recommended that the EA address the following:

- ❑ The BBTCA may expect a significant increase in demand for commercial vehicles, including fuel trucks. The EA should address this issue in detail.
- ❑ The study area for the transportation assessment should extend to Fleet Street – Lakeshore Blvd West in the north (the east and west boundary of the area are sufficient). The anticipated increase in passenger volume documented in 2015 Master Plan Exercise will cause proportional increase in demand for ground transportation including transit.
- ❑ Parking demand at Stadium Rd/Little Norway Crescent parking lot and on the BBTCA grounds should be assessed. Need for structure parking should be assessed.
- ❑ Demand, operations and functional improvement to the existing passenger pick up/drop off zone should be assessed.

- ❑ Considering limited accessibility to the BBTCA, there is a need to assess (if only at a conceptual level) construction impacts on area traffic and on passenger access to the airport.
- ❑ Transit accessibility and transit service impacts should be looked at in much more detail. Provision of additional shuttle buses and functional solutions to promote higher transit use are essential to address.
- ❑ Impact on the commercial vehicle demand and operations should be assessed.

### 3.11 ARCHAEOLOGY & CULTURAL HERITAGE

This section summarizes the results of the review of AECOM's Draft Study Design pertaining to archaeology and cultural heritage. These comments are essentially the same as were submitted by ARCADIS on July 10th, as no new information was provided by AECOM subsequent to the July 27<sup>th</sup> Working Group Meeting/conference call.

Three main areas will need to be addressed to enhance the study design:

- ❑ The definition of a “cultural heritage feature” should be revised and broadened to include all the types of cultural heritage resources that are defined in the *Ontario Heritage Act*, rather than just buildings or landscapes that are listed in a provincial or federal heritage database (which is what this study says it is using as its definition of a cultural heritage feature or asset). There is a checklist document used by the Ministry of Tourism, Culture and Sports (MTCS) called “Screening for Impacts to Built Heritage and Cultural Heritage Landscapes” which states that both known and potential cultural heritage resources need to be identified. Examples of these kinds of resources include:
  - residences older than 40 years;
  - industrial, commercial or institutional buildings;
  - engineering works; and
  - parks, gardens, or prominent natural features that could have special value to people.

If a resource meets the criteria in Ontario Regulation 9/06 under the *Ontario Heritage Act*, it is a cultural heritage resource.

- ❑ One of the comments from the City of Toronto was that the Heritage Preservation Services staff will review the Stage 1 reports for both land and water areas, but the review found no mention in the Draft Study Design Report of conducting a separate report on the underwater archaeological environment. There is also no discussion of any framework for addressing

underwater archaeological resources within the Stage 1 report, except for a brief note in the lists of Information Sources that shipwreck databases will be checked. Again, the potential for there being additional types of archaeological resources offshore is probably significant (given the location of the study area) so the types of underwater archaeological resources being considered should be broadened to include more than just known shipwrecks. This aspect of the study needs to be better addressed, in terms of identifying the many possible types of underwater archaeological resources that could be present and how it will be determined if there is enough potential to warrant an underwater archaeological study at the next stage of investigations.

- The information sources being used for this study should also include First Nations, who often have historical documents, oral histories, and other useful information in their archives to contribute to our understanding of prior uses of the lands within the study area. Many First Nations are now asking archaeological and cultural heritage consultants to contact them in this regard so that they can contribute to the background research stage of assessments and other heritage studies.

## 4.0 SUMMARY RECOMMENDATIONS

Table 4.1 summarizes the recommendations of the peer review of AECOM's Draft Study Design Report. The recommendations are based on our review of the documentation provided by Waterfront Toronto, documents provided by GWC, discussions held during the peer review Working Group meetings, and the additional information provided by AECOM through PortsToronto subsequent to the July 27<sup>th</sup> Working Group meeting. These recommendations are to be read in conjunction with the details provided in Chapter 3.0.

**Table 4.1 Summary of Recommendations for the Draft Study Design Report**

EA Process and Legislation
<ul style="list-style-type: none"> <li><input type="checkbox"/> No significant issues to raise</li> </ul>
Public Consultation and Stakeholder Engagement
<ul style="list-style-type: none"> <li><input type="checkbox"/> More detail should be included with respect to First Nation and Métis consultation, including a list of comments and issues raised.</li> <li><input type="checkbox"/> Detail on approximate extent and timing of Part 2 Engagement Activities should be added. (For example, what consultation mechanisms will be used at each decision point)</li> <li><input type="checkbox"/> Table 4.1 seems to be out of place in the Draft Study Design Report.</li> <li><input type="checkbox"/> A summary of comments raised should be added to all subsections within Section 4.1 of the Draft Study Design Report.</li> <li><input type="checkbox"/> There seems to be confusion between what is part of the EA and what is part of the Master Plan and what the public can comment on. In keeping with best practices, we would suggest that additional clarity be provided within the Study Design to differentiate between these processes. This issue was clearly indicated at the June 24<sup>th</sup> meeting.</li> </ul>
Air Quality
<ul style="list-style-type: none"> <li><input type="checkbox"/> The latest information of the study design states that road traffic will be modelled including the Gardiner Expressway, Lakeshore Blvd. and arterial streets. However, it is unclear which portions of these roadways will be included in the study. For example, will only the portion of the Gardiner Expressway that falls within the Study Area (from approximately Bathurst St. to York St.) be included? This should be clarified.</li> <li><input type="checkbox"/> Consideration should be given to extending the study area north of the Gardiner Expressway, particularly if emissions from this roadway will be modelled.</li> </ul>

### **Public Health**

- ❑ It is expected that the scope of work would provide more detail in how the assessment will actually be carried out; for example what are the regulatory or policy-based thresholds that are going to be used? What are the public health noise reference values that are going to be used?
- ❑ It should be noted that a comparison to the Ministry of the Environment and Climate Change ambient air quality standards or to Canadian ambient air quality standards are not considered to be adequate for evaluating potential health impacts as many of them are not based on the protection of human health and some of them are dated and do not reflect current understanding on health effects.

### **Noise**

- ❑ The proposed modelling approach will result in the prediction of 24-hour LDN values, while the presented criteria values are primarily energy equivalent sound levels (Leq) calculated over an interval of less than 24-hours. AECOM should clarify how the LDN and N70 model outputs will be converted for direct comparison to the adopted criteria, which use metrics other than LDN and N70.
- ❑ The latest information provided by AECOM outlines that the assessment will be based on an average traffic day with regard to the flight data input to the model, as per the approach utilized by the FAA. Noise complaints are more likely to be associated with busier days than the average condition. For example, Transport Canada utilizes the 95th percentile daily traffic data for modelling assessments.
- ❑ The latest information provide additional detail on only a portion of the study scope. The study design outlined that the assessment would utilize models that were not mentioned in the new information. For instance, the scope outlines that the Cadna-A model will factor into the assessment; however, it is not clear how it will be utilized in the assessment. Each model should be identified with the source(s) it will be used to assess.
- ❑ The latest information identifies that the public is interested in in-the-moment sound levels, and that this concern will be addressed through the use of N70. The N70 will only indicate whether 70 dBA was exceeded or not; it does not identify the actual peak levels that may be experienced, which may be of greater interest to the public. However, as noted in the additional information, the monitoring data will be useful for providing information on actual in-the-moment sound levels during BBTCA operations.
- ❑ There is a possibility that the use of LDN at the school location could result in an invalid comparison if the baseline condition is calculated in such a way that the night-time ambient condition (i.e., due to local road and rail traffic) at this location is included and penalized by



+10 dB. This would be unreasonable with no occupants at night, and would overestimate baseline conditions. Such an over-estimated baseline would serve to lessen the predicted impact of the project. This approach should be reconsidered.

- ❑ The latest information provided does not speak to whether an assessment of noise-induced vibration will be considered. The potential for this effect was one of the concerns raised by the public and this should be considered as part of the EA.

### **Natural Environment**

- ❑ Although the latest information provided is generally acceptable, further information on methods should have been included. For example, an underwater camera was used to identify substrate, emerging and submerged vegetation using a grid based system. However, the sensitivity of the camera (in lux) for underwater monitoring has not been defined, and the size of the grid and proposed number of samples are also not available. The hydroacoustic (sonar) study also should have more detail (transducer frequency, mode of operation-horizontal or fixed, length of monitoring period etc.) or at least the details referenced.
- ❑ Similarly, the methodology for the terrestrial environment is better described but more detail should be provided.
- ❑ Technical references should have been provided to support methods. Details of the methods are important since results and data interpretation is based on the sample collections, and the reviewer should be aware of any limitations which may influence conclusions (e.g. camera limited in turbid environment). In the final report, it is expected that additional information will be provided on methodology and possible limitations of approaches.

### **Socio-Economic Conditions**

#### Social Analysis:

- ❑ A greater focus in the current study is placed on the potential impacts to the social environment and the inter-relationships between the City of Toronto, air passengers, local business and waterfront users as it has not been adequately addressed previously. Although we agree, economic impacts and benefits influence planning and decision making and as such are also important and need to be fully understood.

#### Economic Analysis:

- ❑ Any claims regarding impacts or benefits in the EA will need to be supported by the existing economic studies.
- ❑ 'Section 3.4 in AECOM's Draft Study Design states that, "The cumulative net effects of the proposed future scenario on community assets will be compared to the cumulative net effects

of the permitted future scenario on community assets”. However, there is no methodology outlined for how cumulative effects will be assessed. This should be provided.

Other specific comments in relation to the Draft Study Design Report are as follows:

- Appendix B, page ii – Section 2 in the table – Land Value assessment and investment generation are missing from the list of assets.
- Appendix B page 4, 3rd paragraph – Study Area definition should also consider journey times to the development area alongside travel patterns.

### **Land Use and Built Form**

#### Waterfront Revitalization:

- The study design currently does not specifically reference Waterfront Toronto’s revitalization efforts. We recommended the scope of the EA expand to include the assessment of the potential of the proposed future expansion scenario to influence waterfront revitalization efforts, and elevate waterfront revitalization to a separate discipline for study. Recognizing the airport is only one component of the waterfront, how will its expansion potentially impact the balance of other waterfront land uses. Based on the subsequent information provided by AECOM through PortsToronto, it appears the key line of questioning during the intercept and pre-arranged interviews would result in qualitative data applicable to this assessment.

### **Marine Physical Conditions and Water Quality**

#### Marine Physical Conditions

- No significant issues to raise.

#### Water Quality

- There is no obvious discussion on how the consultant will control stormwater (100 year storm). What method of containing the stormwater will be used to ensure at least 90% removal of solids?

### **Transportation**

#### Safety:

- The public has expressed concern that safety is not being adequately covered, including analysis of: impacts of runway overrun by aircraft; crash location model; crash consequence model; calculated increase in potential death and injury by allowing jets to fly, and the rate of

increase based on volume of traffic. This is a valid and critical factor related to accidents in the water and revised plans need to be addressed before new aircraft are introduced.

Marine Exclusion Zone (MEZ):

- ❑ The Canadian Coast Guard (CCG) should be consulted due to potential changes in the ATONS (Aids to Navigation). We recommend also including / consulting with PortsToronto personnel, any other affected marine pilot agencies, commercial operations, Navigation Canada if required, and Toronto Polices Services Marine Unit.
- ❑ Any changes to the western shipping channel must be consistent with navigational safety standards and take into account all aspects of practical vessel navigation including vessel sizes, including draft and air draft restrictions, changes in channel widths and the length of reaches in the channel. Further, the MEZ must be part of the EA scope to ensure it undergoes a consultative process.

Land Use & Built Form (Approach):

- ❑ The approach zone characteristics have a substantial impact on aircraft safety as well as vessel safety. Airports have approach glide paths that also require breakaway paths. These can be impacted by vessels navigating near runway ends. Boston approach to 11/22 at Logan from the west is a good example of this. The approaches need to be designed in alignment with the runway so as to minimize impacts on vessels and aircraft.

(Runway Approach Lighting):

- ❑ We understand that “according to Transport Canada, approach lighting is not a standard for non-precision approaches and the BBTCA is a non-precision approach airport. As such, approach light will not be installed at the airport”. Plans should include the potential for new approach lighting that may impact marine navigation channels.
- ❑ As per above, plans should include the potential for new approach lighting that may impact marine navigation channels.

Transportation (Ground and Marine):

- ❑ The BBTCA may expect a significant increase in demand for commercial vehicles, including fuel trucks. The EA should address this issue in detail.
- ❑ The study area for the transportation assessment should extend to Fleet Street – Lakeshore Blvd West in the north (the east and west boundary of the area are sufficient). The anticipated increase in passenger volume documented in 2015 Master Plan Exercise will cause proportional increase in demand for ground transportation including transit.
- ❑ Parking demand at Stadium Rd/Little Norway Crescent parking lot and on the BBTCA grounds should be assessed. Need for structure parking should be assessed.

- ❑ Demand, operations and functional improvement to the existing passenger pick up/drop off zone should be assessed.
- ❑ Considering limited accessibility to the BBTCA, there is a need to assess (if only at a conceptual level) construction impacts on area traffic and on passenger access to the airport.
- ❑ Transit accessibility and transit service impacts should be looked at in much more detail. Provision of additional shuttle buses and functional solutions to promote higher transit use are essential to address.
- ❑ Impact on the commercial vehicle demand and operations should be assessed.

### **Archaeology and Cultural Heritage**

- ❑ The definition of a “cultural heritage feature” should be revised and broadened to include all the types of cultural heritage resources that are defined in the Ontario Heritage Act, rather than just buildings or landscapes that are listed in a provincial or federal heritage database (which is what this study says it is using as its definition of a cultural heritage feature or asset).
- ❑ One of the comments from the City of Toronto was that the Heritage Preservation Services staff will review the Stage 1 reports for both land and water areas, but the review found no mention in the Draft Study Design Report of conducting a separate report on the underwater archaeological environment. There is also no discussion of any framework for addressing underwater archaeological resources within the Stage 1 report, except for a brief note in the lists of Information Sources that shipwreck databases will be checked. The potential for there being additional types of archaeological resources offshore is probably significant (given the location of the study area) so the types of underwater archaeological resources being considered should be broadened to include more than just known shipwrecks. This aspect of the study needs to be better addressed, in terms of identifying the many possible types of underwater archaeological resources that could be present and how it will be determined if there is enough potential to warrant an underwater archaeological study at the next stage of investigations.
- ❑ The information sources being used for this study should also include First Nations, who often have historical documents, oral histories, and other useful information in their archives to contribute to our understanding of prior uses of the lands within the study area.



## **Appendix A**

Presentation Given to the Working  
Group (22 June 2015)

# **WORKING GROUP MEETING INITIAL FINDINGS OF PEER REVIEW**

Presented by:  
Fred Bernard

June 22, 2015

## **STUDY DESIGN REVIEW**

- The study design is being reviewed to ensure that it meets the elements of the federal and provincial EA processes that are being used for the study, and other best practices.
- An Initial review to identify any major issues with discipline-specific study design (any Red Flags or Show Stoppers).

## KEY QUESTIONS

- Some of the key questions to be asked at this stage include:
  - Have the study areas and baseline conditions been properly identified?
  - Were all appropriate data sources consulted?
  - Does the public consultation process meet the requirements of the EA process being followed?

## KEY QUESTIONS (Cont'd)

- Have all relevant approval agency regulations/requirements (e.g., Department of Fisheries and Oceans) been identified and addressed?
- Are technical studies designed in accordance with appropriate assessment techniques, models, etc.?
- Does the study design incorporate the input received through initial consultation?
- Are key decisions and assumptions adequately rationalized/justified/ defended, or is there a misstep in logic?



## INITIAL FINDINGS

- EA Process:
  - The proposed project is not subject to the requirements of the Ontario EA Act or the federal CEAA. Each level of government has provided written confirmation of that fact.
  - The EA process proposed by Ports Toronto incorporates procedural elements from both the federal and provincial EA Acts.
  - This approach is reasonable and consistent with best practice when no specific requirements apply.

## INITIAL FINDINGS (Cont'd)

- Public/Stakeholder Engagement:
  - The process allows for public engagement in study design and EA development.
  - Draft Study Design Report shows how comments were incorporated in the study design and whether or not the study scope was revised.
  - This approach is reasonable and consistent with best practice.
  - There seems to be confusion between what is part of the EA and what is part of the Master Plan and what the public can comment on.

## INITIAL FINDINGS (Cont'd)

- Scenarios to be Assessed:
  - Future baseline based on the 2012 Master Plan – no jets.
  - Future operating scenario based on 2015 Master Plan – with jets.
  - Some stakeholders and members of the public have requested assessment of existing conditions.

## INITIAL FINDINGS (Cont'd)

- Study Area:
  - Would vary depending on discipline requirements.
- Parameters Proposed for Assessment:
  - Air Quality;
  - Noise;
  - Marine Navigation/ Transportation;
  - Marine Physical Conditions and Water Quality;

## INITIAL FINDINGS (Cont'd)

- Parameters Proposed for Assessment (Cont'd):
  - Built Form and Land Use;
  - Archaeology and Land Use;
  - Socio-economic;
  - Natural Environment.
  - Consider adding public health to the list. We need to look further into the rationale.

## INITIAL FINDINGS (Cont'd)

- Sources of Information:
  - Existing Literature
  - Agency Engagement
  - Technical Studies
  - Stakeholder Engagement
  - Public Engagement
  - Reasonable number and variety of sources are identified for this type of study.

## INITIAL DISCIPLINE-SPECIFIC STUDY METHODOLOGIES

- Air Quality:
  - Should consider extending the study area to the north of the Gardiner Expressway in order to demonstrate cumulative effects.
  - The study design should provide rationale for the inclusion and exclusion of contaminants of concern.
  - The study design should provide the rationale for proposing qualitative rather than quantitative assessment for certain contaminants.

## INITIAL DISCIPLINE-SPECIFIC STUDY METHODOLOGIES (Cont'd)

- Noise:
  - Scope of work based on the provincial assessment mechanism which is quite robust and suitable for this type of study.
  - The study design provides a general overview of the noise assessment process, but lacks certain specifics (e.g., actual criteria to be applied).
  - More clarity needed on how all on-site noise sources will be combined to demonstrate overall impact.



## INITIAL DISCIPLINE-SPECIFIC STUDY METHODOLOGIES (Cont'd)

- Marine Navigation/Transportation:
  - The study area for the transportation assessment should extend to Fleet Street – Lakeshore Blvd West in the north.
  - Study design should include the potential for new approach lighting that may impact marine navigation channels.
  - Impact on the commercial vehicle demand and operations should be assessed.

## INITIAL DISCIPLINE-SPECIFIC STUDY METHODOLOGIES (Cont'd)

- Marine Physical Conditions and Water Quality:
  - The study design seems to effectively discuss the methods to assess impact on water quality.
  - Details missing pertaining to the methodology for controlling the 100-year storm.

## INITIAL DISCIPLINE-SPECIFIC STUDY METHODOLOGIES (Cont'd)

- Built Form and Land Use:
  - The proposed work plan seems to be an acceptable and reasonable approach.
  - The proposed study design appears to address the comments documented in the 30-day review comment report.

## INITIAL DISCIPLINE-SPECIFIC STUDY METHODOLOGIES (Cont'd)

- Archaeology and Cultural Heritage:
  - No mention in the study design report of preparing a separate report on the underwater archaeological environment.
  - The information sources being used for this study should also include First Nations.

## INITIAL DISCIPLINE-SPECIFIC STUDY METHODOLOGIES (Cont'd)

- **Socio-economic:**
  - The socio-economic study area was expanded based on public input received.
  - Need to clarify if seasonal residents residing on boats are an integral part of the assessment.
- **Natural Environment:**
  - The study design seems adequate in general but needs to provide more details on the methodologies for conducting terrestrial and aquatic field studies.

## INITIAL DISCIPLINE-SPECIFIC STUDY METHODOLOGIES (Cont'd)

- **Public Health:**
  - The effects assessment does not include the evaluation of public health separately. It seems to be included under the air quality, noise and transportation assessments.
  - We would like to see a separate public health document.



## **NEXT STEPS**

- More detailed review of EA study design based on study design report.
- More detailed discipline-specific review of study design report and 30-Day Review Comments.
- Report on findings covering all disciplines.



## **Appendix B**

Presentation of Draft Phase I Peer  
Review Report Results (13 July  
2015)

## **WORKING GROUP MEETING #3 PEER REVIEW SUMMARY OF DRAFT STUDY DESIGN REPORT**

Presented by:  
Fred Bernard

July 13, 2015

### **STUDY DESIGN REVIEW**

- The study design is being reviewed to ensure that it meets the elements of the federal and provincial EA processes that are being used for the study, and other best practices.

## KEY QUESTIONS

- Some of the key questions to be asked at this stage include:
  - Have the study areas and baseline conditions been properly identified?
  - Are the appropriate parameters being assessed?
  - Were all appropriate data sources consulted?
  - Does the public consultation process meet the requirements of the EA process being followed?

## KEY QUESTIONS (Cont'd)

- Have all relevant approval agency regulations/requirements (e.g., Department of Fisheries and Oceans) been identified and addressed?
- Are technical studies designed in accordance with appropriate assessment techniques, models, etc.?
- Does the study design incorporate the input received through initial consultation?
- Are key decisions and assumptions adequately rationalized/justified/ defended, or is there a misstep in logic?

## A FEW GENERAL NOTES

- Details are provided in the Draft Peer Review Report.
- Only a few key points are highlighted for each discipline.
- Not intended to be exhaustive.
- Discipline experts can provide elaboration during the review process.

## FINDINGS

- EA Process:
  - The proposed project is not subject to the requirements of the Ontario EA Act or the federal CEAA.
  - The EA process proposed by PortsToronto incorporates procedural elements from both the federal and provincial EA Acts.
  - This approach is reasonable and consistent with best practice when no specific requirements apply.



## FINDINGS (Cont'd)

- Public Consultation/Stakeholder Engagement:
  - The process allows for public engagement in study design and EA development.
  - Draft Study Design Report shows how comments were incorporated in the study design and whether or not the study scope was revised.
  - This approach is reasonable and consistent with best practice.
  - There seems to be confusion between what is part of the EA and what is part of the Master Plan and what the public can comment on.

## FINDINGS (Cont'd)

- Scenarios to be assessed:
  - Future baseline based on the 2012 Master Plan – no jets.
  - Future operating scenario based on 2015 Master Plan – with jets.
  - This approach is generally reasonable, but in some instances an assessment of existing conditions may be appropriate if existing conditions are considered to be already problematic.

## FINDINGS (Cont'd)

- Study Area:
  - Would vary depending on discipline requirements.
  - Air and noise receptors added based on public comment.
- Parameters Proposed for Assessment:
  - Air Quality;
  - Noise;
  - Marine Navigation/ Transportation;
  - Marine Physical Conditions and Water Quality;

## FINDINGS (Cont'd)

- Parameters Proposed for Assessment (Cont'd):
  - Built Form and Land Use;
  - Archaeology and Land Use;
  - Socio-economic;
  - Natural Environment.
- Public health should be added to the list.



## FINDINGS (Cont'd)

- Sources of Information:
  - Existing Literature;
  - Agency Engagement;
  - Technical Studies;
  - Stakeholder Engagement;
  - Public Engagement.
- Reasonable number and variety of sources are identified for this type of study.

## DISCIPLINE-SPECIFIC STUDY METHODOLOGIES

- Air Quality:
  - The study design should provide rationale for the inclusion and exclusion of contaminants of concern, e.g. CO, SO<sub>2</sub>.
  - The study design should provide the rationale for proposing qualitative rather than quantitative assessment for certain contaminants, e.g., odour and black carbon.
  - The Draft Study Design should specify which model will be used for dispersion modelling. We recommend CALPUFF because the airport is situated close to a large body of water.

## DISCIPLINE-SPECIFIC STUDY METHODOLOGIES (Cont'd)

- Air Quality (Cont'd):
  - It is unclear how data based on the City-wide air quality model and ambient air quality monitoring data will be used to represent the contribution from background sources. Question: will monitoring data be used to validate the City-wide model results?
  - The boundaries of the greenhouse gas inventory are to be defined.

## DISCIPLINE-SPECIFIC STUDY METHODOLOGIES (Cont'd)

- Noise:
  - Scope of work based on the provincial assessment mechanism which is quite robust and suitable for this type of study.
  - The study design provides a general overview of the noise assessment process, but lacks certain specifics (e.g., actual criteria to be applied).
  - Noise induced vibration should be considered, especially since concerns have already been raised with regard to low frequency noise.
  - More clarity needed on how all on-site noise sources will be combined to demonstrate overall impact.

## DISCIPLINE-SPECIFIC STUDY METHODOLOGIES (Cont'd)

- Transportation:
  - The study area for the transportation assessment should extend to Fleet Street – Lakeshore Blvd West in the north.
  - Impacts on the commercial vehicle demand and operations should be assessed.
  - Impacts on the ferry service should be assessed, e.g., is the current ferry vessel sufficient for future demand?

## DISCIPLINE-SPECIFIC STUDY METHODOLOGIES (Cont'd)

- Transportation (Cont'd):

### Safety:

Due to the fact that an airport expansion is being proposed in a very high population density zone, public concern about safety has to be adequately addressed, including analysis of:

- impacts of runway overrun by aircraft;
- crash location model;
- crash consequence model; and
- calculated increase in potential death and injury by allowing jets to fly, and the rate of increase based on volume of traffic.



## DISCIPLINE-SPECIFIC STUDY METHODOLOGIES (Cont'd)

- Transportation (Cont'd):

Marine Exclusion Zone (MEZ):

The Toronto Harbour is an important site for sailing and other boating activities as well as commercial traffic. No reference to making contact with CCG has been included in the Draft Design Study Report. Input from CCG needs to be included as does the local marine pilot agency.

Runway Approach:

The study design should include plans for the potential for new approach lighting that may impact marine navigation channels.

## DISCIPLINE-SPECIFIC STUDY METHODOLOGIES (Cont'd)

- Marine Physical Conditions and Water Quality:

- The study design seems to effectively discuss the methods to assess impact on water quality.
- Details missing pertaining to the methodology for controlling the 100-year storm. This needs to be included.

## DISCIPLINE-SPECIFIC STUDY METHODOLOGIES (Cont'd)

- Built Form and Land Use:
  - The proposed work plan seems to be an acceptable and reasonable approach in terms of the information sources to be consulted, e.g., Official Plans, zoning by-laws, federal and provincial policies.
  - The proposed study design appears to address the comments documented in the 30-day review comment report.
  - The draft study design does not specifically reference evaluation of potential impacts on Toronto's Waterfront revitalization efforts. This should be addressed in the EA.

## DISCIPLINE-SPECIFIC STUDY METHODOLOGIES (Cont'd)

- Archaeology and Cultural Heritage:
  - Their definition of a "cultural heritage feature" should be revised and broadened to include all the types of cultural heritage resources that are defined in the *Ontario Heritage Act*, rather than just buildings or landscapes that are listed in a provincial or federal heritage database.
  - The information sources being used for this study should also include First Nations, who often have historical documents, oral histories, and other useful information in their archives.

## DISCIPLINE-SPECIFIC STUDY METHODOLOGIES (Cont'd)

- Socio-economic:
  - The socio-economic study area was expanded based on public input received.
  - Need to clarify if seasonal residents residing on boats are an integral part of the assessment.
  - There is no distinction between socio-economic effects that could result from the construction and operation phases of the development.

## DISCIPLINE-SPECIFIC STUDY METHODOLOGIES (Cont'd)

- Socio-economic (Cont'd):
  - Draft intercept surveys were not provided for review, consequently, it is difficult to determine what information will be collected.
  - It is important that the economic analysis demonstrate that the reports reviewed are current, relevant or robust to be relied on as the main source of information for the economic assessment.



## DISCIPLINE-SPECIFIC STUDY METHODOLOGIES (Cont'd)

- Socio-economic (Cont'd):
  - Any claims regarding impacts or benefits in the EA will need to be supported by the existing economic studies or by new analyses.
- Natural Environment:
  - The study design seems adequate in general but needs to provide more details on the methodologies for conducting terrestrial and aquatic field studies.

## DISCIPLINE-SPECIFIC STUDY METHODOLOGIES (Cont'd)

- Public Health:
  - It is unclear how the existing condition will be evaluated in the EA.
  - The effects assessment does not include the evaluation of public health separately. It seems to be included under the air quality, noise and transportation assessments.
  - We recommend a separate public health document be prepared. This will allow for a more transparent assessment considering the public concerns.



## **NEXT STEPS**

- Review of the Draft Peer Review Report on Study Design by the Working Group and other Stakeholders.
- ARCADIS will receive and incorporate, as appropriate, comments on the Draft Peer Review Report on the Study Design.
- ARCADIS will finalize the Peer Review Report on the Study Design.