

National Energy  
Board



Office national  
de l'énergie

## DECISION

File OF-Fac-Oil-T260-2013-03 19  
9 May 2018

Ms. Min Guo  
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Dear Ms. Guo, Mr. Stoness, and Mr. Denstedt:

**Trans Mountain Pipeline ULC (Trans Mountain)  
Trans Mountain Expansion Project - Certificate OC-064  
Decision for Detailed Route Hearing MH-053-2017  
Min Guo**

### 1. Background

On 19 May 2016, the National Energy Board (NEB or Board) issued its Report recommending that Governor in Council (GIC) approve the Trans Mountain Expansion Project (TMEP), subject to 157 conditions ([A77045](#)).

The TMEP included twinning the existing 1,147 kilometre long Trans Mountain Pipeline (TMPL) system in Alberta (AB) and British Columbia (BC) with approximately 981 kilometres of new buried pipeline; new and modified facilities, such as pump stations; additional tanker loading facilities at the Westridge Marine Terminal in Burnaby; and reactivating 193 kilometres of existing pipeline between Edmonton and Burnaby. Trans Mountain requested approval of a 150-metre-wide corridor for the TMEP pipeline's general route.

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On 29 November 2016, GIC directed the Board to issue the Certificate of Public Convenience and Necessity (Certificate) OC-064 ([A80871](#)), the effect of which was to approve the TMEP, including the proposed 150-metre-wide corridor.

On 3 and 17 March 2017, Trans Mountain applied to the Board for Segment 7 of its TMEP detailed route, submitting the Plan, Profile, and Book of Reference (PPBoR). Under section 34 of the *National Energy Board Act* (NEB Act), Trans Mountain made available for public viewing copies of its PPBoR, served notices on owners of lands proposed to be acquired for the proposed detailed route<sup>1</sup>, and published notices in newspapers in the vicinity of the proposed detailed route<sup>2</sup>.

In all detailed route hearings, the Board considers the following issues<sup>3</sup>:

- 1) the best possible detailed route of the pipeline;
- 2) the most appropriate method of constructing the pipeline; and
- 3) the most appropriate timing of constructing the pipeline.

In its 4 October 2017 Letter of Decision ([A86548](#)), the Board stated that it would not consider the issue of compensation to be paid to landowners as that matter is not within its jurisdiction.

## **2. Detailed Route Hearing MH-053-2017**

Ms. Guo is the registered owner of lands located at 16337 – 113B Avenue (Lot 10 Section 11 Block 5 North Range 1 West New Westminster District Plan LMP22740) in Surrey, BC and she resides on the land. Trans Mountain identified these lands as Tract 7602.004, and the property is shown on PPBoR M002-PM03024-002. Trans Mountain proposed to use these lands for temporary workspace, adjacent to the TMEP pipeline in Segment 7 (see Figures 1 and 2 and Appendix I).

Ms. Guo filed a statement of opposition on 3 May 2017 ([A83128](#)). The Board granted Ms. Guo detailed route hearing number MH-053-2017 and issued a Hearing Order on 4 October 2017 ([A86549](#)).

The oral portion of the detailed route hearing was held on 17 March 2018 in Burnaby, BC. Trans Mountain presented a panel of witnesses for cross-examination. Ms. Guo's Authorized Representative, who is her husband, Mr. Bing Pu, was present and asked questions of Trans Mountain's witness panel on her behalf. He also answered questions posed to him by the Board.

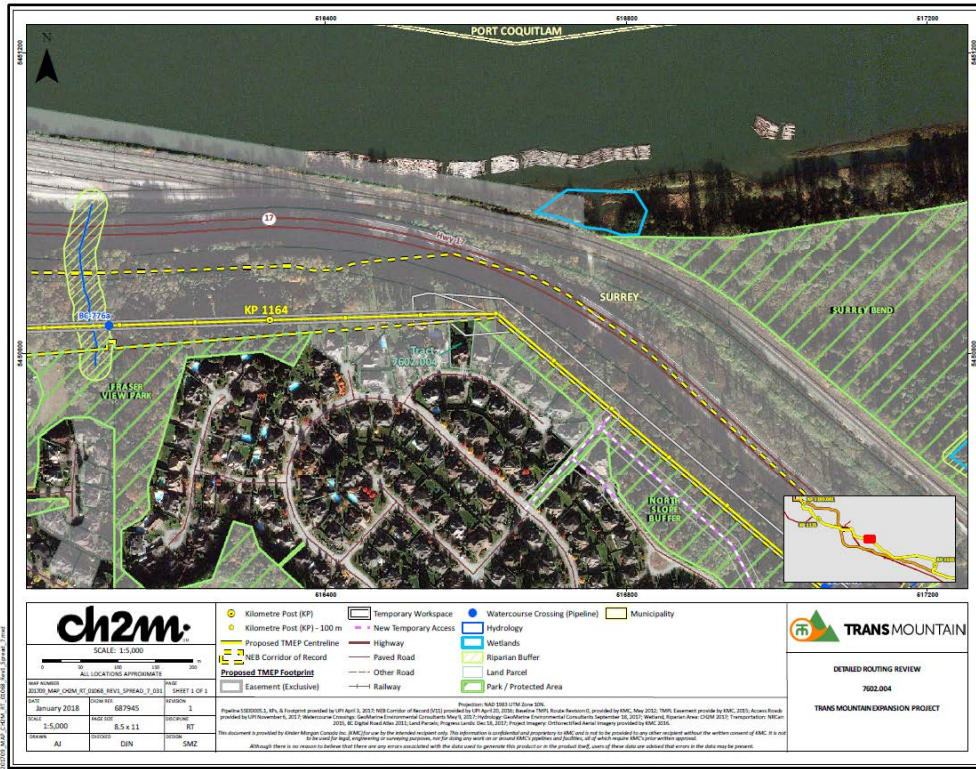
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<sup>1</sup> As required by paragraph 34(1)(a) of the NEB Act

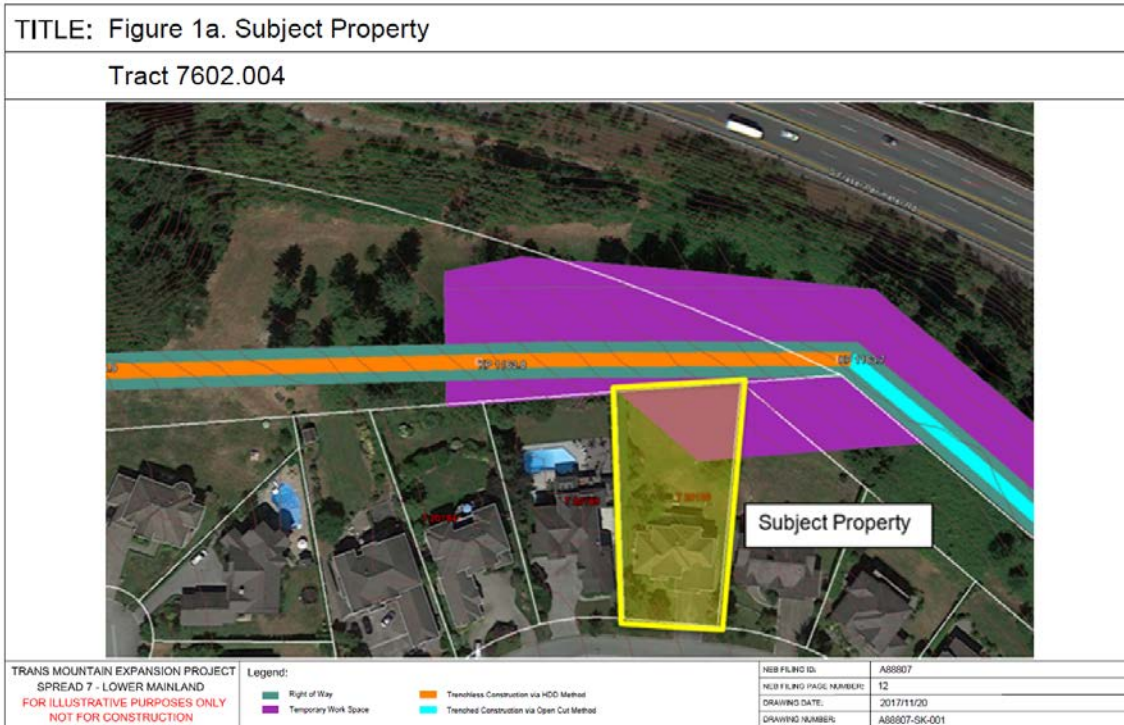
<sup>2</sup> As required by paragraph 34(1)(b) of the NEB Act

<sup>3</sup> As set out in subsection 36(1) of the NEB Act

**Figure 1 – Map of Ms. Guo’s Property<sup>4</sup>**



**Figure 2 – Close-up Map of Ms. Guo’s Property<sup>4</sup>**



<sup>4</sup> Figures 1 and 2 were maps filed by Trans Mountain as part of its evidence for detailed route hearing MH-053-2017 ([A89011-10](#)).

## **2.1 Proposed Detailed Route**

As shown in Figures 1 and 2, the proposed detailed route is adjacent to Ms. Guo's property between Kilometre Post (KP) 1163.75 and KP 1164.4, on an escarpment overlooking the South Fraser Perimeter Road. A portion of Ms. Guo's property will be used for temporary construction workspace required to support a 650-metre horizontal directional drill (HDD) being proposed on the adjacent property to the north (Tract 7602). No permanent easement is required on Ms. Guo's property. The total area of temporary workspace required on Ms. Guo's property is 0.11 acres.

## **2.2 Location of the Route**

### **2.2.1 Trans Mountain's Routing Criteria**

In selecting its 150-metre-wide corridor and detailed route for the new TMEP pipeline, Trans Mountain said that it had established a hierarchy of routing principles. In descending order of preference, these were:

1. where practicable, co-locate the new TMEP pipeline on or adjacent to the existing TMPL easement;
2. where co-location was not practicable, minimizing the creation of new linear corridors by installing the new TMEP pipeline adjacent to existing easements or rights-of-way for other linear facilities including other pipelines, power lines, highways, roads, railways, fibre optic cables and other utilities;
3. if co-location with any existing linear facility was not feasible, install the new pipeline in a new easement selected to balance safety, engineering, construction, environmental, cultural and socio-economic factors; and
4. in the event a new easement was necessary, minimize the length of the new easement before returning to a contiguous right-of-way.

Trans Mountain said that it had been engaging landowners in its routing discussions since 2012 and used this feedback to optimize the location of its 150-metre-wide corridor. Trans Mountain further said that determination of routing feasibility for TMEP included consideration of a range of factors including safety, constructability, operability, geo-technical stability, environmental, cultural, and socio-economic suitability.

### **2.2.2 Proposed Detailed Route**

Ms. Guo did not raise specific concerns about the location of the route or propose any alternatives. In her statement of opposition, Ms. Guo expressed concerns about safety during operations, the potential for earthquakes, and noise during construction. Ms. Guo also raised concerns the value of her property could drop because of the proposed construction work.

## **2.3 Methods and Timing of Construction**

With respect to Trans Mountain's alignment from KP 1163.75 to KP 1164.4, adjacent to Ms. Guo's property, the proposed method of construction is HDD. Trans Mountain said that this technique was chosen to avoid areas of slope instability that were identified along the proposed route of the new TMEP pipeline. Trans Mountain stated that an HDD, approximately 650 metres in length, is planned in order to mitigate geotechnical hazards by positioning the pipeline at a depth well below the zone of slope instability. Trans Mountain also indicated that the HDD requires additional workspace at the entry and exit locations, but avoids impacting trees and environmental features between the entry and exit points.

During the oral hearing Trans Mountain confirmed that installation of the new TMEP pipeline generally requires a construction right-of-way of 45 metres. However, the construction right-of-way has been reduced to 25 metres in urban areas, including the City of Surrey. Upon completion of the construction, only a 10-metre-wide permanent right-of-way will remain.

### **2.3.1 Safety During Construction and Operations**

#### ***Views of Min Guo***

Ms. Guo was primarily concerned about the safety of the pipeline during operations, but also expressed concern about safety during construction. Ms. Guo asked Trans Mountain to provide a 100-percent guarantee of pipeline safety, to ensure that her children can play safely in their backyard.

#### ***Views of Trans Mountain***

Trans Mountain said that it would be irresponsible for it to give a 100-percent guarantee regarding pipeline safety throughout construction and operations. However, during the oral hearing Trans Mountain summarized several mitigation measures it will implement in order to ensure the pipeline is built and operated safely and responsibly, including:

- fencing off all temporary workspace during construction;
- compliance with applicable codes and regulations;
- use of a SCADA [supervisory control and data acquisition] monitoring system that includes a leak detection system;
- implementation of Trans Mountain's integrity program, natural hazard programs, damage prevention program, emergency response program, and public education program;
- air monitoring; and
- ground monitoring.

Trans Mountain also said that it will continue to work with Ms. Guo to ensure her and her family remain safe.

### **2.3.2 Earthquakes**

#### ***Views of Min Guo***

Ms. Guo said that research shows there is a one-in-four chance that Metro Vancouver will suffer a major earthquake within the next 50 years. Ms. Guo asked Trans Mountain what measures it has taken to prevent damage to the new TMEP pipeline in case of an earthquake. Ms. Guo also asked Trans Mountain to provide a 100-percent guarantee that there would be no damage to the new TMEP pipeline in the event of an earthquake.

#### ***Views of Trans Mountain***

Trans Mountain indicated that it is impossible to give a 100-percent guarantee about a future event such as an earthquake. However, Trans Mountain committed to ensuring the pipeline is designed to the appropriate standards and accepted practices for seismic considerations in this region. During the oral hearing Trans Mountain summarized several mitigation measures it will implement in order to prevent damage to the pipeline in case of an earthquake. These measures include, but are not limited to:

- establishing a comprehensive program to monitor and protect the pipeline facilities;
- using welded steel pipes and increased wall thickness, which have been demonstrated to perform well in seismic events in countries around the world;
- complying with the building code and applicable engineering and design standards to maximize the safety and integrity of the pipeline's design; and
- designing the pipeline for a 1-in-2,475 year return earthquake, as per Condition 68 of the Certificate.

During the oral hearing Trans Mountain confirmed that the new TMEP pipeline is designed not to leak or cause damage for a seismic event with a return period of 1-in-2,475 years. Trans Mountain further explained that in the event of an earthquake significantly larger than that, it is possible that the pipeline could leak. However, Trans Mountain said it is highly unlikely and that it views the design criteria as a credible worst-case scenario.

### **2.3.3 Noise**

#### ***Views of Min Guo***

In her statement of opposition Ms. Guo expressed concern about the noise levels from construction (70-80 dBA) and construction taking place 24 hours a day, seven days a week, for at least six weeks. Ms. Guo said that the level of noise will be detrimental to the health and well-being of her family, and would also violate City of Surrey noise control bylaws.

## *Views of Trans Mountain*

Trans Mountain said that, per Condition 74 of the Certificate, a specific Noise Mitigation Plan for each HDD drill location has to be submitted to the Board at least three months prior to construction. Trans Mountain also said that noise modeling will be conducted to accurately predict sound levels at the affected areas. In addition, sound walls/barriers will be in place to reduce the noise levels significantly.

Trans Mountain also said that its Noise Mitigation Plan complies with *BC Noise Control Best Practices Guidelines* issued by the BC Oil and Gas Commission. Trans Mountain further confirmed that, with the implementation of mitigation measures, noise will be below acceptable limits. The temporary relocation of specific residents is possible if mitigation is not successful, as described in the Noise Management Plan. Trans Mountain indicated at the hearing it had previously provided applicable portions of the current draft Noise Management Plan to Ms. Guo, including specific daytime and nighttime sound level limits, planned mitigation controls, sound barriers, and monitoring plans during construction. Trans Mountain said that it will continue engaging with Ms. Guo in developing a Noise Management Plan to address her concerns.

In its written evidence, Trans Mountain said that, where stages of work must occur 24 hours per day and seven days per week, it will follow appropriate notifications. If work is required outside of regular noise bylaw hours, Trans Mountain will limit noise to the minimal activities only required to maintain schedule.

### **2.4 Summary of Commitments**

During the oral hearing, Trans Mountain re-iterated the commitments it made during the Certificate hearing and in condition filings related to pipeline integrity and safety. In addition, Trans Mountain committed to the following measures that related directly to Ms. Guo's lands:

- fencing off all temporary workspace during construction;
- continuing consultation with Ms. Guo;
- implementing its Noise Management Plan;
- following applicable noise bylaws;
- relocating Ms. Guo if necessary;
- conducting noise modelling; and
- using sound walls/barriers.

### **3. Board Decision for Detailed Route Hearing MH-053-2017**

The Board appreciates the time spent by Ms. Guo and Trans Mountain in discussing their concerns at the detailed route hearing.

The Board notes that Ms. Guo's main submissions were not on issues properly within scope of the hearing. Rather, the primary focus was to obtain a "100-percent guarantee" that her family would never encounter safety or other issues from the new TMEP pipeline.

The Board is of the view that matters of safety, spill prevention and response, incidents and related matters are not generally within the scope of a detailed route hearing. These matters were assessed in detail in the Certificate hearing for the TMEP. Trans Mountain is under a continuing obligation to fulfill the conditions and commitments it made related to safety and emergency management during that hearing. The Board notes that there are extensive views provided on these issues in the NEB Report ([A77045](#)), specifically in Chapters 6, 7, 8, and 9, and that the Board imposed numerous conditions in these areas.

The Board holds Trans Mountain to high standards for safety. It is a company's responsibility to keep its pipelines safe through implementation and continuous improvement of a comprehensive management system, and effective pipeline integrity, safety, security, environmental protection, as well as crossing and public awareness programs, with a target of zero spills. While the Board expects the company to take every possible action to keep its pipeline safe, no regulator can guarantee that a project will be incident free.

As stated in the NEB Report, Trans Mountain must implement a comprehensive management system and constantly seek out opportunities to improve its performance. Trans Mountain must meet best practices in mitigating safety issues, such as earthquakes. Trans Mountain must design the project and associated mitigation measures so that it complies with current and applicable regulations and standards.

The Board acknowledges Ms. Guo's concern about noise during construction. The Board notes that Ms. Guo's property will only be used for temporary workspace and that the TMEP right-of-way will not be located on her property. The Board further notes Trans Mountain's commitments to mitigate and address the issue of noise and to continue engaging with Ms. Guo regarding her concerns. The Board is of the view that, with the implementation of mitigation measures, noise will be minimal and of short duration, and that the impacts on Ms. Guo will be minimal.

Having considered all of the evidence filed on the record by the parties, the representations made at the oral portion of the detailed route hearing, and the matters described above, the Board finds that the route proposed by Trans Mountain is the best possible detailed route of the pipeline, and the methods and timing of constructing the pipeline are the most appropriate, subject to the commitments made by Trans Mountain. While the Board acknowledges that Ms. Guo does not want pipeline construction to occur in close proximity to her residence, the Project has been found to be in the public interest and the Board is satisfied that Trans Mountain has appropriately addressed the issues relevant to the PPBoR in proximity to Ms. Guo's lands.

Any approval by the Board of the PPBoR for Ms. Guo's lands will include a condition requiring Trans Mountain to list and to fulfill the commitments it made in the course of this detailed route hearing, and update its alignment sheets. Ms. Guo is entitled to seek remedy from the Board if the commitments are not being fulfilled.



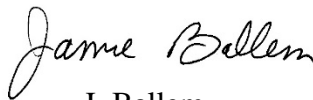
Trans Mountain is reminded that the relevant conditions of approval in Certificate OC-064 apply to the construction and operation of the TMEP in relation to any work on Ms. Guo's lands.



L. Mercier  
Presiding Member

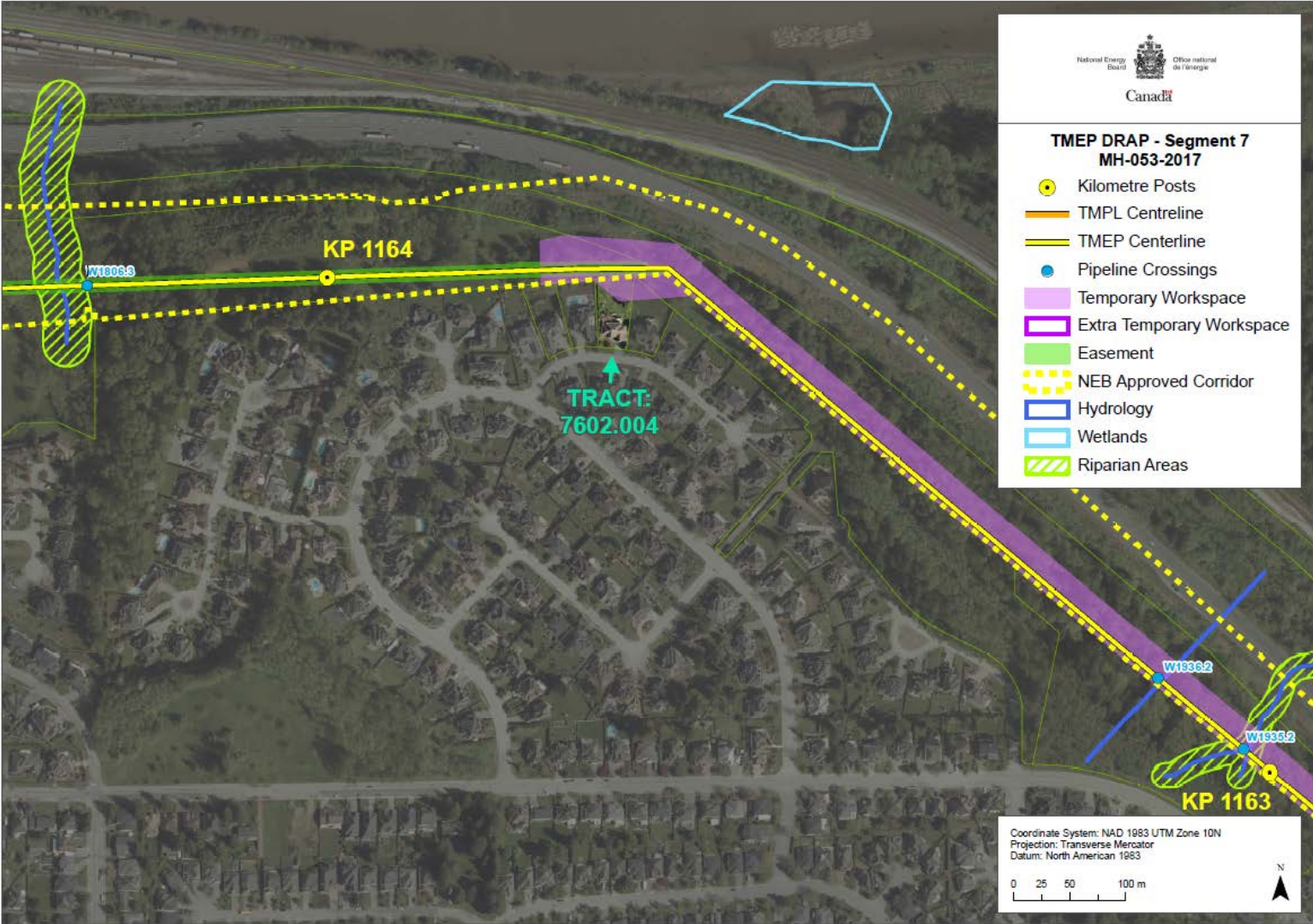


S. Parrish  
Member



J. Ballem  
Member

Appendix I – Maps of Min Guo’s Property



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