

IN THE MATTER OF THE  
TRANS MOUNTAIN PIPELINE ULC EXPANSION PROJECT

HEARING ORDER OH-001-2014  
File No. OF-Fac-Oil T260-2013-03 02

**WRITTEN EVIDENCE OF THE CITY OF EDMONTON**

May 27, 2015

## TABLE OF CONTENTS

<b>1.0</b>	<b>INTRODUCTION</b>	<b>3</b>
<b>2.0</b>	<b>SUMMARY OF THE TWO OPTIONS</b>	<b>5</b>
(i)	The Lewis Estates Option	7
(ii)	The Whitemud Corridor	8
<b>3.0</b>	<b>TRANS MOUNTAIN'S IMPROPER SELECTION OF THE WHITEMUD CORRIDOR</b>	<b>9</b>
(i)	Trans Mountain Does Not Need to Use the Whitemud Corridor	9
(ii)	The Whitemud Drive Alternative Has a Greater Impact on Adjacent Landowners	10
(iii)	The Whitemud Drive Alternative Would Adversely Impact the Citizens of Edmonton	11
(iv)	The Whitemud Drive Alternative Offends Trans Mountain's Own Selection Criteria	13
<b>4.0</b>	<b>CONSTRUCTING THE TMEP IN THE WHITEMUD CORRIDOR WOULD ADVERSELY AFFECT THE CITY</b>	<b>16</b>
(i)	Increased Cost for the Whitemud Drive Expansion	16
(ii)	Restrict the City's Ability to Maintain and Repair Whitemud Drive	18
(iii)	Severely Restrict the City's Ability to Implement the Naturalization Plan for Whitemud Drive	20
<b>5.0</b>	<b>CONDITIONS THE CITY WOULD REQUIRE IF THE TMEP WERE PLACED IN THE WHITEMUD CORRIDOR</b>	<b>21</b>
<b>6.0</b>	<b>CONCLUSION</b>	<b>24</b>

## **1.0 INTRODUCTION**

- 1.01 The City of Edmonton (the “City”) is an intervenor in the National Energy Board (NEB) review of the Trans Mountain Pipeline ULC (“Trans Mountain”) Expansion Project (the “Project”).
- 1.02 The Project involves the proposed expansion of Trans Mountain’s existing pipeline from Strathcona County, AB. to Burnaby, B.C. This new pipeline has been referred to as the “TMEP” in the materials filed by Trans Mountain.
- 1.03 The majority of the proposed expansion would follow the existing pipeline corridor (referred to as the “TMPL right-of-way”). However, a new alignment has been proposed within the City of Edmonton along the Transportation and Utility Corridor (“TUC”) and the Whitemud Drive Corridor (“Whitemud Corridor”). The latter is located on Whitemud Drive between the TUC and 215 Street.
- 1.04 In its response to the City’s Information Request No. 2 (“IR”), Trans Mountain confirmed it could use the portion of the TUC located at 19975 Whitemud Drive, Edmonton, AB. and 7904 – 199 Street, Edmonton, AB. to connect the TMEP to the existing TMPL right-of-way. The TMEP would then move west through the Lewis Estates area. This alternate route has been referred to as the “Lewis Estates option” in the materials submitted by Trans Mountain and the City.
- 1.05 Trans Mountain further confirmed that if it were to use the Lewis Estates option it would have no need for the Whitemud Corridor and it would not need to use any new land owned by the City.
- 1.06 The City was initially unsure which option would be best for the citizens of Edmonton. However, after considering the Project’s impact on the surrounding community, safety, and the impact to the existing and planned City infrastructure, Simon Farbrother, the City Manager, advised Trans Mountain that the City preferred the Lewis Estates option [Correspondence from the City to Trans Mountain, dated July 28, 2014 (**TAB A**)].
- 1.07 Yet despite the City’s preference and despite the fact that this portion of the Project can be constructed without using additional lands owned by the City, Trans Mountain insists on using the Whitemud Corridor to connect the new alignment to the existing TMPL right-of-way.

- 1.08 To date, Trans Mountain has not adequately justified why it should be allowed to use the City's property for the expansion of its pipeline, particularly when there is another alternative available to it. Not only is there land available in the TUC to be used as a corridor but the existing TMPL right-of-way has the capacity for more than one pipeline.
- 1.09 The City objects to Trans Mountain's use of the Whitemud Corridor due to the negative impact it would have on the adjacent landowners and the citizens of Edmonton generally.
- 1.10 Trans Mountain's proposal would also increase the City's cost of operating and maintaining the affected portions of Whitemud Drive and would substantially interfere with the City's plans to expand the roadway.
- 1.11 In the coming years, the City will make significant improvements to Whitemud Drive, particularly at 207 Street, 215 Street and 231 Street. Part of the planned expansion would require lowering the existing roadway by 5.5 metres in some areas.
- 1.12 Having the TMEP in the Whitemud Corridor would restrict the City's ability to optimize the design of its future infrastructure for the area and would substantially increase the cost of realizing the planned expansion.
- 1.13 The proposed pipeline would also adversely affect the City's ability to implement its Naturalization Plan for the area in question.
- 1.14 Finally, the City is concerned about the effects the TMEP would have on the present and future utilities in the Whitemud Corridor.
- 1.15 Notwithstanding the above, the City's overriding concern is that the TMEP be placed in the safest location possible for the citizens of Edmonton. In Trans Mountain's response to the City's IR, it advised that the risk assessment completed to date does not take into account the City's planned Whitemud Drive expansion. Trans Mountain further advised that a risk assessment was not completed for the Lewis Estates option.
- 1.16 This is unacceptable to the City. The City respectfully request the NEB direct Trans Mountain to complete a full and proper risk assessment of the two options before a decision is made regarding where the pipeline will be placed. The risk assessment must take into account the City's planned expansion of Whitemud Drive given how extensive the improvements will be. It must also take into account the existing and planned utilities

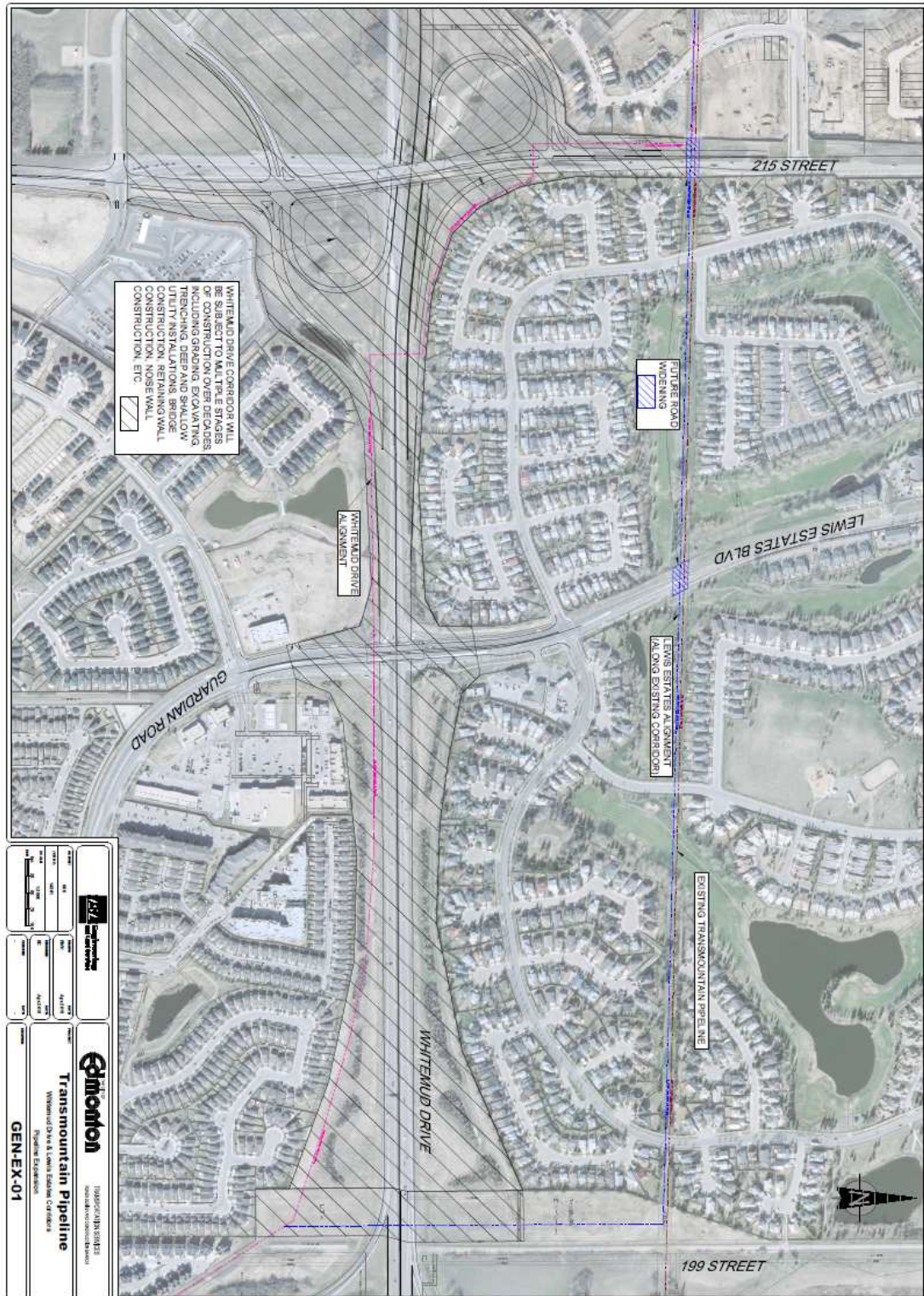
in the Whitemud Corridor given how narrow the right-of-way is. Specific focus should be placed on what would happen to the pipeline if one or more of the utilities failed in the area.

1.17 If the NEB permits Trans Mountain to use the Whitemud Corridor for the Project, the City respectfully requests that the NEB's conditions specify Trans Mountain:

- (a) is responsible for the portion of the TMEP located in the Whitemud Corridor (AK 43.15 to AK44) for the lifespan of the TMEP;
- (b) is to financially compensate the City for all costs associated with having the TMEP in the Whitemud Corridor, including the anticipated costs the City will incur when it expands the roadway in that area, for the lifespan of the TMEP;
- (c) is to adopt the pipeline alignment modifications proposed by ISL to connect the TMEP to the TMPL;
- (d) is to allow the City to carry out routine roadway and landscaping maintenance in the Whitemud Corridor without the need to seek prior approval from Kinder Morgan or obtain the necessary KMC permits;
- (e) is to waive the cost of the Kinder Morgan inspector anytime such inspector is present to monitor work done near the pipeline in Whitemud Drive;
- (f) is to bear all the costs associated with inspecting, investigating, engineering, and protecting the pipeline during the Whitemud Drive expansion or any other work in the area; and
- (g) the conditions of this Order apply equally to Kinder Morgan Canada.

## **2.0 SUMMARY OF THE TWO OPTIONS**

2.01 The following diagram depicts the two options discussed above.



- 2.02 The diagram is a satellite image of the area in question. ISL has superimposed the planned Whitemud Drive expansion onto the image. The expansion of Whitemud Drive will be quite extensive and will incorporate bridges and overpasses.
- 2.03 The pink line represents Trans Mountain's TMEP route through the Whitemud Corridor. As can be seen, the proposed route is quite torturous, requiring a number of sharp turns and significant depth variations before the TMEP finally connects with the TMPL right-of-way.
- 2.04 In contrast, the blue line represents the Lewis Estates option which would require only one 90 degree turn from the TUC corridor before the TMEP connects with Trans Mountain's existing pipeline corridor.
- 2.05 The following are the relevant factors which must be considered when deciding where the proposed pipeline should be placed.

**(i) The Lewis Estates Option**

- 2.06 The TMPL right-of-way is approximately 18.29 metres wide with the existing 24" Trans Mountain pipeline located approximately 6 metres south of the north boundary. The community of Lewis Estates has been built around the right-of-way, as has the Lewis Estates Golf course.
- 2.07 There are also a number of utility crossings present in the existing pipeline corridor. However, these services were installed after the pipeline was established and as such the utility crossings were constructed at elevations that protected the pipeline and the utility.
- 2.08 Finally, the Lewis Estates area is a mature community with mature trees, some of which are found within the existing pipeline corridor. If the TMEP were to be constructed in this area, these trees could potentially be in danger of being removed.
- 2.09 Both ISL and Trans Mountain have confirmed the Project could be completed using Lewis Estates option. This includes using the TUC connection at 19975 Whitemud Drive and 7904 – 199 Street.

(ii) **The Whitemud Corridor**

2.10 The road right-of-way for Whitemud Drive that Trans Mountain is proposing to use is located between Anthony Henday Drive (part of the TUC) and 215 Street/Winterburn Road.

2.11 The road right-of-way ranges in width from approximately 300 metres adjacent to the TUC and the large interchange at Anthony Henday Drive to 77 metres just west of Guardian Road. The road right-of-way on 215 Street is approximately 50 metres wide and there is no opportunity for expansion [ISL Report at pg. 30, s.4.4.2 (**TAB B**)].

2.12 The following utilities are present in the area:

- a Chevron pipeline;
- an ATCO PL-323 mm Natural Gas line;
- an ATCO PL 114.3 mm Natural Gas line;
- an ATCO PL 26.7 mm Natural Gas line;
- a Leddy 60 mm Gas line;
- a Leddy 88.9 mm Oil Effluent line;
- a Penn West 273.1 mm Fresh Water line;
- a Penn West 219.1 mm Fresh Water line;
- an EPCOR 300 mm water main;
- a 200 mm forced sanitary sewer line;
- buried Powerlines and Telecommunication lines; and
- buried Street Light Cables found throughout the project area.

[ISL Report at pgs. 30 & 31 (**TAB B**)].

2.13 Some of these utilities will need to be protected or moved when the City begins its Whitemud Drive expansion. The current plan includes widening Whitemud Drive to six



basic lanes, with interchanges at 231 Street and 215 Street and an overpass at 207 Street/Guardian Road. The road will be lowered approximately 5.5 metres at the interchanges and retaining walls will need to be built in areas where the right-of-way is limited. A storm sewer will also need to be constructed, with catch basins, manholes and lift stations for the area [ISL Report, Appendix B: Whitemud Drive Functional Plan – Selected Exhibits (**TAB B**)].

- 2.14 The above noted expansion is expected to be staged over 25 years.
- 2.15 In the interim, ATCO Pipelines will be adding a new 323 mm high pressure natural gas line in the area. This addition will likely occur within the next two years.

### **3.0 TRANS MOUNTAIN'S IMPROPER SELECTION OF THE WHITEMUD CORRIDOR**

#### **(i) Trans Mountain Does Not Need to Use the Whitemud Corridor**

- 3.01 In response to the City's IR, Trans Mountain advised it "did assess the viability of the TUC connection as part of a comparative assessment which evaluated the Lewis Estates alternative along the existing TMPL versus the Whitemud Drive alternative (via the Whitemud Utility Corridor). The assessment primarily considered difficulty of construction, impact to the respective communities and costs. The assessment deemed both routes viable with similar costs; however, at the time of the assessment it was Trans Mountain's estimation that the Whitemud Drive alternative would be the least difficult to construct of the two alternatives. In addition, Trans Mountain evaluated that the Whitemud Drive alternative would have less direct impact to the adjacent landowners and to the community compared to the Lewis Estates alternative. At the time of the filing of the final corridor with the NEB, the City of Edmonton had not expressed a definitive position for either corridor and accordingly, Trans Mountain elected to carry forward the Whitemud Drive alternative (via the Whitemud Utility Corridor) and no longer consider the Lewis Estates alternative which included the TUC Connection" [Trans Mountain's Response to the City's IR #2, s.2.1(c) (**Filing ID A66278**)].
- 3.02 The fact that construction within the Whitemud Corridor would be easier than the Lewis Estates option does not justify Trans Mountain's use of land owned by the City when there is land available in the TUC and their own right-of-way.

- 3.03 It also does not outweigh the adverse effects the TMEP would have on the adjacent landowners along Whitemud Drive and the citizens of Edmonton generally.
- 3.04 Finally, the decision to use the Whitemud Corridor offends a number of factors Trans Mountain has identified as being important when deciding where the pipeline should be constructed.

**(ii) The Whitemud Drive Alternative Has a Greater Impact on Adjacent Landowners**

- 3.05 The current TMPL system has been in operation since 1953. When it was first constructed, the TMPL 18 m easement bypassed the then southern limits of the City of Edmonton. However, after more than 60 years of urban growth, there are now a number of residential properties adjacent to the TMPL right-of-way.
- 3.06 Those residences however, have always been subject to the restrictions associated with the TMPL right-of-way and Kinder Morgan's Ground Disturbance Pipeline Protection Requirements (the "KMC Requirements") and its Design and Landscaping Guidelines (the "Landscape Restrictions") [**TAB D**].
- 3.07 According to the KMC Requirements, any person performing work that disturbs the ground surface *in any way whatsoever* within a Kinder Morgan Canada ("KMC") right of way or the 30 metre safety zone surrounding the pipeline must call Alberta One-Call *at least* 3 business days prior to commencing the ground disturbance.
- 3.08 All ground disturbances, *including landscaping activities*, within 30 metres of any KMC pipeline requires a 30 Metre Ground Disturbance Safety Zone Permit and all ground disturbances within or across any KMC right-of-way and/or pipeline requires an approved Pipeline Proximity Installation Permit.
- 3.09 Work cannot begin until the permit is in place, the pipeline has been marked and, where required, a KMC representative is onsite.
- 3.10 A landowner's ability to erect a fence near a KMC pipeline is also governed by the company. Fences may cross over a pipeline, but should not run parallel to it. Moreover, the distance from the centerline of the pipe to the centerline of a post should be at least 2 metres and prior to the construction of the fence, a Proximity Permit is required.

- 3.11 Landowners are even subject to planting restrictions near a KMC pipeline right-of-way. A permit is required in order to plant a flower bed, vegetable garden, lawn or low shrubbery directly over or within 3 metres of a pipeline right-of-way. There is a height restriction of 1 metre as well.
- 3.12 Vegetation over 1.8 metres is not permitted within 3 metres of a KMC pipeline and tree canopies overhanging the right-of-way are considered to be within the right-of-way even if the trunk is outside the boundary.
- 3.13 Despite the above noted requirements and restrictions, the residential properties that are adjacent to the existing TMPL right-of-way would not be affected if Trans Mountain selects the Lewis Estates option for the TMEP. This is because KMC's requirements and restrictions were in place even before the property was purchased.
- 3.14 The same cannot be said if the TMEP were placed in the Whitemud Drive Corridor. The property owners adjacent to the proposed route would be subject to a number of requirements and restrictions that did not exist when they purchased their home.
- 3.15 Suddenly the simple act of planting a flower bed would require a permit from KMC and property owners would now be restricted as to what vegetation they can plant near the right-of-way. For more ambitious landscaping projects, a KMC representative may be required to be onsite.
- 3.16 Foisting such requirements and restrictions on unsuspecting property owners is unjust, particularly when there is a viable alternative available to Trans Mountain which would avoid the residences near Whitemud Drive.
- 3.17 In light of the above, when the two options are compared, it is incorrect to state "the Whitemud Drive alternative would have less direct impact to the adjacent landowners" than the Lewis Estates alternative.
- (iii) The Whitemud Drive Alternative Would Adversely Impact the Citizens of Edmonton**
- 3.18 Whitemud Drive is the main east-west roadway in southern Edmonton and it forms part of the City's inner ring road. It currently functions as a freeway between Anthony Henday Drive in the west and the east.

- 3.19 For the intersection at 215 Street/Winterburn Road, the average annual weekday traffic for 2014 was estimated to be 6,580 vehicles per day (vpd) in the west to 22,780 vpd in the east. For north/south traffic, the average annual weekday traffic for 2013 was estimated to be 13,500 vpd to the south of Whitemud Drive and 5,900 vpd to the north [ISL Report at pgs. 29 & 30, s.4.4.2 (**TAB B**)].
- 3.20 For the Guardian Road/Lewis Estates Boulevard area, the average annual weekday traffic was estimated to be 12,400 vpd south of Whitemud Drive.
- 3.21 If Trans Mountain were permitted to use the proposed route through the Whitemud Corridor an enormous amount of traffic would need to be redirected during the construction of the pipeline and any time maintenance and repairs were made to the pipeline.
- 3.22 Moreover, even after the construction has been completed, tens of thousands of people could still be adversely affected if a rupture were to occur in the Whitemud Drive area. The above noted traffic statistics for the relevant portions of Whitemud Drive represents the estimated number of vehicles in the area at any given time. Each vehicle would obviously contain at least one individual. This can be compared to the number of residential properties currently adjacent to the TMPL right-of-way in the Lewis Estates area. At any given time those residences could be empty thereby significantly reducing the number of individuals who might be present during a pipeline rupture.
- 3.23 In regards to the number of residences that potentially could be affected by a rupture, Trans Mountain has estimated “from an examination of aerial photography, along the section of the existing TMPL Corridor west of the TUC, there appears to be 75 residences abutting that portion of the City of Edmonton Utility Corridor containing the TMPL. By comparison, along the TMEP Corridor following the Whitemud Extension and connecting to the TMPL right-of-way west of 215 Street, there appear to be 90 residences abutting the Corridor.” [Trans Mountain’s Response to the City’s IR #2, s.2.1(d) (**Filing ID A66278**)]
- 3.24 In light of the above, it is incorrect to state “the Whitemud Drive alternative would have less direct impact ... to the community compared to the Lewis Estates alternative.”

(iv) **The Whitemud Drive Alternative Offends Trans Mountain's Own Selection Criteria**

- 3.25 Trans Mountain has developed its own criteria for when the TMEP should deviate from the existing TMPL right-of-way. Ten factors have been identified, which are listed in Table 4.2.1 [Volume 2, Section 4.2.2 at pg. 2-49 (**Filing ID A55987**)].
- 3.26 The first factor listed is safety with the goal being to “minimize areas posing hazards to (a) construction//operations workers – workspace, overhead hazards, geotechnical hazard; (b) public – traffic interaction, proximity to excavations and heavy equipment.”
- 3.27 The second factor noted is pipeline integrity with the goal being to “minimize crossing areas with geotechnical hazards, high potential for third-party contact, and poor maintenance access.”
- 3.28 The sixth factor is infrastructure with the goal being to “minimize encroachment on existing and planned infrastructure.”
- 3.29 If safety is to be measured in part by traffic interaction and the proximity to excavations and heavy equipment, one would be hard pressed to conclude the Whitemud Drive alternative is safer than the Lewis Estates option. As noted above, traffic volume is extremely heavy on Whitemud Drive and such traffic would be directly impacted during the construction of the TMEP. The number of people exposed to the excavation and heavy equipment would also be higher on the Whitemud Drive as compared to the 75 residences that currently abut the relevant portion of the TMPL right-of-way.
- 3.30 Of greater concern for the City however is the second factor which focuses on pipeline integrity. Trans Mountain has identified third-party damage as a “principal threat” to the TMEP [Volume 7, Section 3.1.2 at pg. 7-10 (**Filing ID A56025**)] and has gone so far as to state “all pipelines experience some level of threat due to third-party damage, the magnitude of this threat being a function of the effectiveness of damage prevention measures, adjacent land use, depth of cover, material properties and pipeline design. *Although damage prevention measures can help minimize this threat, the risk of third-party damage can never be fully neutralized.*” (emphasis added) [Volume 7, Section 3.1.3.5 at pg. 7-13 (**Filing ID A56025**)]

- 3.31 As noted above, the City is planning an extensive expansion of Whitemud Drive, particularly in the Lewis Estates Boulevard/ Guardian Road area and at the intersection of 215 Street. The City plans on widening the road to 6 lanes and will construct a bridge at Lewis Estates Boulevard/Guardian Road. Ramps will be utilized for the 215 Street location, which will require the road to be lowered by approximately 5.5 metres.
- 3.32 A lift station will also be constructed as part of the Whitemud Drive improvement to deal with storm drainage for the area, along with the necessary catch basins, subdrains and storm sewers.
- 3.33 The construction activities planned for this area of Whitemud Drive are significant and will involve an enormous amount of excavating, heavy machinery and added utilities. Retaining walls, guide signage and lighting foundations will also be needed but the exact placement of such infrastructure has not been finalized. In fact, even large structures such as the exact placement of the Lewis Estates Boulevard/Guardian Road bridge has not been determined. This is because the City is still in the planning phase for the Whitemud Drive upgrade.
- 3.34 Despite the amount and nature of the future construction, including the uncertainty of where some of the infrastructure will be placed, Trans Mountain has advised it has not completed a dedicated risk assessment for the Whitemud Corridor [Trans Mountain's Response to the City's IR #2, s.2.2.1(e) (**Filing ID A66278**)].
- 3.35 Instead, Trans Mountain is relying on the consultations it has had with the City to develop the pipeline alignment for the Whitemud Drive Corridor. Details of that alignment were provided in response to the City's Motion to Compel a Full and Adequate Response to its IR (**Filing ID A4J5D6**).
- 3.36 The current alignment for the Whitemud Corridor is based on the City's initial Concept Plan for the Whitemud Drive expansion. Changes will likely be made to that plan to take into account, amongst other things, unanticipated needs and construction issues. Such changes may ultimately negate some, or all, of the safety provisions Trans Mountain has designed into the current pipeline alignment.
- 3.37 Given this, it is difficult to understand why Trans Mountain would construct its pipeline in an area it knows will be subject to extensive third party excavation and construction. Trans Mountain has admitted "the risk of third-party damage can never be fully

neutralized.” However, in this case, the risks that are specific to the Whitemud Corridor *can largely be avoided* if the Lewis Estates option is selected. The latter would also allow Trans Mountain to meet its goal of minimizing encroachments on existing and planned infrastructure.

- 3.38 Trans Mountain has justified its selection of the Whitemud Drive Corridor on the basis that it “would be the least difficult to construct” and that it “would have less direct impact to the adjacent landowners and to the community compared to the Lewis Estates alternative.”
- 3.39 The City does not accept this justification, particularly since the last two points are incorrect. Trans Mountain’s justification therefore rests solely on the difficulty of construction.
- 3.40 Trans Mountain and ISL have confirmed the Project can be completed using the Lewis Estates option, albeit with some difficulty. However, the burden of construction should not outweigh the concerns detailed above, particularly the concerns related to safety.
- 3.41 At the very least, Trans Mountain should be required to demonstrate the Whitemud Drive alternative is as safe, if not safer, than the Lewis Estates option.
- 3.42 In that regard, the City respectfully submits the NEB should order Trans Mountain to complete a full and proper risk assessment of both the Whitemud Drive and the Lewis Estates options. The assessment should take into account the risks specific to both locations.
- 3.43 For the Whitemud Corridor, the analysis should consider any elevated risks associated with the planned road expansion as well as the effects the other utilities would have on the pipeline, particularly if one or more of those utilities were to fail. The City is specifically concerned with the ATCO natural gas lines, already present as well as planned for the area.
- 3.44 If the Lewis Estates option proves to be the safer alternative, the TMEP should be placed there. The convenience of construction should not outweigh people’s safety.

3.45 If the risk levels are the same for the two options, the City respectfully submits the TMEP should still be placed in the Lewis Estates area, given the adverse effects on the City with using the Whitemud Corridor. Those effects are detailed below.

**4.0 CONSTRUCTING THE TMEP IN THE WHITEMUD CORRIDOR WOULD ADVERSELY AFFECT THE CITY**

4.01 Having the TMEP in the Whitemud Corridor would:

- (a) significantly increase the City's cost of expanding Whitemud Drive and limit the City's opportunity for optimization and innovation for the future expansion of Whitemud Drive;
- (b) restrict the City's ability to maintain and repair the affected portions of Whitemud Drive; and
- (c) severely restrict the City's ability to implement its Naturalization Plan for the affected portions of Whitemud Drive.

**(i) Increased Cost for the Whitemud Drive Expansion**

4.02 If the TMEP is constructed in the Whitemud Corridor the City will incur several direct capital and operational costs and a number of unknown future costs associated with the loss of flexibility in the Corridor.

4.03 One of the anticipated costs relates to the construction of the Lewis Estates Boulevard/Guardian Road bridge. The horizontal alignment for the TMEP comes in close proximity to where the City originally designed the location of the bridge abutment. Now, in order to avoid the pipeline, the City will likely need to construct a larger and longer bridge. Not only will this increase the cost of materials to the City, it will increase the cost of maintaining the bridge over the expected lifespan.

4.04 The TMEP will also affect the manner in which the City can build the bridge. Normally the City would simply drive the piles into the ground but the vibrations could potentially damage the pipeline. As such, the piles will need to be drilled which is expected to double the cost for the work.



- 4.05 ISL has estimated the presence of the pipeline in the Whitemud Corridor could increase the City's costs to build the Lewis Estates Boulevard/Guardian Road bridge by an additional \$9,383,425.40 [ISL Report at pgs. 37 & 38 (**TAB B**)].
- 4.06 The cost of constructing the Whitemud Drive storm sewer would also likely increase as approximately 900 metres of the storm sewer would be located within 30 metres of the pipeline. ISL has estimated the City will incur an additional cost of \$1,600,000.00 as a result of having to work in close proximity to the pipeline [ISL Report at pgs. 37 & 38 (**TAB B**)].
- 4.07 Similarly, the cost of constructing retaining walls and noise walls would likely increase if the wall foundations are close to the pipeline. ISL has estimated the increased cost for the retaining walls to be \$600,000.00 and the noise walls to be \$400,000.00 [ISL Report at pgs. 37 & 38 (**TAB B**)].
- 4.08 There are a number of other potential costs the City may incur during the expansion of Whitemud Drive as a result of the TMEP, particularly if custom foundations and poles are needed for signal lights and street lights.
- 4.09 The City would also be subject to the costs associated with having a KMC inspector present for the construction activities within 7.5 metres of the pipeline. Given the nature of the work planned, the KMC inspector could be at the job site for months at a time for which the City would have to compensate KMC.
- 4.10 KMC's Requirements also specify that all ground disturbances within 0.6 metres of either edge of the TMEP must be performed by hand digging or hydrovac. Given the TMEP would be directly under the road the City wants to expand, this requirement would substantially increase the cost of construction for portions of the Whitemud Drive improvement.
- 4.11 All of these costs would be avoided if the Project were constructed using the Lewis Estates option.
- 4.12 Given the magnitude of the anticipated costs, if the only determinative issue between the two options being considered is the ease in which Trans Mountain can construct its proposed pipeline in the City of Edmonton, then little weight should be given to Trans Mountain's preference.

- 4.13 Trans Mountain's convenience should not come at such a burden to the City, particularly when Trans Mountain has no right to use the City's property. There is land available in the TUC corridor that Trans Mountain could utilize to complete the Project and it should be ordered to do so.

**(ii) Restrict the City's Ability to Maintain and Repair Whitemud Drive**

- 4.14 The KMC Requirements would also affect the City's ability to maintain and repair the affected portions of Whitemud Drive. Those portions would also be subject to s.112 of the *National Energy Board Act*, R.S.C. 1985, c. N-7.
- 4.15 Under the KMC Requirements, the City would need to arrange for a site meeting with a KMC inspector for any ground disturbance within 30 metres of the pipeline, the right-of-way, or which may, in some other way affects the pipeline. The City would not be allowed to perform the work until the intention and ultimate location of the ground disturbance has been verified by the KMC inspector.
- 4.16 The City would also need to obtain a 30 Metre Ground Disturbance Safety Zone Permit or a Pipeline Proximity Installation Permit if the disturbance is within or across the pipeline or pipeline right-of-way.
- 4.17 Moreover, all work within 7.5 metres of the pipeline must be supervised by an KMC inspector and the City would not be able to proceed with the work until the inspector was on site.
- 4.18 Finally, any ground disturbance using power operated equipment within 5 metres of the pipe would require the pipeline to be exposed by hand digging or hydrovac in at least 1 location by the City in the presence of the KMC inspector.
- 4.19 The KMC Requirements define a ground disturbance as any "work that disturbs the ground surface in any way whatsoever with a Kinder Morgan Canada ("KMC") right of way or the 30 metre safety zone surrounding the Pipeline."
- 4.20 Applying that definition, almost all of the road work the City typically does for Whitemud Drive would be subject to the KMC Requirements. This would range from repaving to spot repairing portions of the road (including potholes), if the latter disturbs the earth below the asphalt.

- 4.21 Work that falls within 30 metres of pipeline could be subject to considerable delay, as arrangements would need to be made to meet with a KMC inspector and City would need to obtain either a 30 Metre Ground Disturbance Safety Zone Permit or Pipeline Proximity Installation Permit.
- 4.22 Given the level of vehicular traffic for the area of, and around, the Whitemud Corridor, any delay to urgent repairs would have a significant adverse impact on the citizens of Edmonton as a vital part of the City's inner ring road could be shut down while arrangements were being made with KMC so that the City could repair its own property.
- 4.23 Moreover, once this preliminary step is completed further impacts would arise during the performance of the repair and/or maintenance work, including the need for special equipment and additional personnel to deal with the pipeline.
- 4.24 All of this would come at a significant cost to the City, both in terms of money and time.
- 4.25 Finally, the City would also be subject to further restrictions regarding maintenance and repair work for the relevant portions of Whitemud Drive, as a result of s. 112 of the *National Energy Board Act*, RSC 1985, c. N-7, which states:

**112.** (1) Subject to subsection (5), no person shall, unless leave is first obtained from the Board, construct a facility across, on, along or under a pipeline or excavate using power-operated equipment or explosives within thirty metres of a pipeline.

(2) Subject to subsection (5), no person shall operate a vehicle or mobile equipment across a pipeline unless leave is first obtained from the company or the vehicle or mobile equipment is operated within the travelled portion of a highway or public road.

...

(5) The Board may make orders or regulations governing

(a) the design, construction, operation and abandonment of facilities constructed across, on, along or under pipelines;

(b) the measures to be taken by any person in relation to

(i) the construction of facilities across, on, along or under pipelines,

(ii) the construction of pipelines across, on, along or under facilities, other than railways, and

(iii) excavations within thirty metres of a pipeline; and

(c) the circumstances in which or conditions under which leave under subsection (1) or (2) is not necessary.

...

(8) Every person who contravenes subsection (1) or (2), a direction made under subsection (4) or an order or regulation made under subsection (5) is guilty of an offence and liable

(a) on summary conviction, to a fine not exceeding one hundred thousand dollars or to imprisonment for a term not exceeding one year or to both; or

(b) on conviction on indictment, to a fine not exceeding one million dollars or to imprisonment for a term not exceeding five years or to both.

4.26 The requirements and restrictions that would be placed on the City as a result of having the pipeline in the Whitemud Corridor would be extremely onerous. Absent a demonstrable need to place the TMEP in this area, placing such a burden on the City would be unjust.

**(iii) Severely Restrict the City's Ability to Implement the Naturalization Plan for Whitemud Drive**

4.27 In 1994, the City developed a Naturalization Master Plan to guide roadway and park naturalization. The aim is to introduce trees and shrubs in appropriate areas throughout the City to promote natural vegetation to capture rainwater, thereby decreasing pressure on the City's drainage system and reducing the risk of flooding.

4.28 The other aim of the Naturalization Master Plan is to reduce the City's maintenance costs by introducing vegetation which would not require mowing.

4.29 The City is currently updating its Master Naturalization Plan and one of the areas identified to be converted from grassland to a forested/shrub area is Whitemud Drive.

4.30 However, if the TMEP were constructed in the Whitemud Corridor, the City would be subject to Kinder Morgan's Design and Landscaping Guidelines for that area. This would severely restrict what the City could plant near the pipeline and in the Whitemud Drive right-of-way.

- 4.31 For the area directly over and within 3 metres of the pipeline, the City would be restricted to 1 metre high mature plants. For the Whitemud Drive right-of-way, the City would be restricted to plants 1 to 1.8 metres in height, so long as the plant was not within 3 metres of the pipeline.
- 4.32 This would disrupt the City's current naturalization plan for the area and may require the City to use vegetation that would require some level of maintenance, be it mowing or some other form of up keep.
- 4.33 The City may also be forced to add more infrastructure to the drainage system in and around the Whitemud Corridor to offset the loss of a more natural drainage system.
- 4.34 All of this would come at a cost to the City, both in terms of time and money.

**5.0 CONDITIONS THE CITY WOULD REQUIRE IF THE TMEP WERE PLACED IN THE WHITEMUD CORRIDOR.**

- 5.01 The City cannot overstate the fact that Trans Mountain does not need to use the Whitemud Corridor to complete the Project and to date, it has failed to provide sufficient justification regarding why it should be allowed to restrict the City's right to use its own property.
- 5.02 However, if Trans Mountain is allowed to proceed with its preferred route, it is the City's position that it must financially compensate the City for all costs associated with having the pipeline in Whitemud Drive, including all costs that arise during the Whitemud Drive expansion.
- 5.03 Trans Mountain has advised other municipalities that it believes "historical practice provides a reasonable approach respecting cost sharing and cost recovery for past, current and future infrastructure development. In general, Trans Mountain believes it is reasonable for the project to reimburse municipalities for any modifications to their existing infrastructure required to accommodate the Project. In the planning and design of the Project, Trans Mountain is willing to work with municipalities to accommodate reasonably foreseeable plans for municipal infrastructure including roads and utilities in the design and development of the pipeline. Once the Project is in operation, any subsequent design and development of municipal infrastructure would be completed with the pipeline in place and should modifications or relocations of the pipeline be required to accommodate new municipal infrastructure, Trans Mountain would look to the

municipality for reimbursement.” [Response to Information Request No. 1 from City of Surrey, s.1.3(a) (**Filing ID A3X6A5**)]

- 5.04 The City does not accept the above position. The City has made repeated requests to Trans Mountain to revise the TMEP route out of the Whitemud Corridor in light of the City’s expansion plans for the area. The City has even provided Trans Mountain with detailed information outlining the magnitude of the proposed expansion but has emphasized the designs are still preliminary and can change due to the limited design detail available and the conceptual nature of the Whitemud Drive expansion plan that is currently in place.
- 5.05 If, despite the information provided and the City’s objection, Trans Mountain knowingly constructs its pipeline in an area that will be undergoing significant change, then it should bear *all* the costs associated with that decision.
- 5.06 It is not appropriate for Trans Mountain to take the position that it will only compensate the City for modifications to its current infrastructure needed to construct its pipeline but once the Project is completed, the City will be responsible for the costs associated with having the pipeline in its property.
- 5.07 The election to use the Whitemud Corridor rather than the equally viable Lewis Estates option was made by Trans Mountain, and if that decision is foisted on the City, the adverse impacts on the City must be minimized or negated, if possible.
- 5.08 To do this, Trans Mountain should be held responsible for its decision to place the pipeline in the Whitemud Corridor *for the lifespan of the pipeline*. This would mean anytime the pipeline needs to be moved, Trans Mountain would be responsible for the same with all costs resting with the company.
- 5.09 Trans Mountain would also be responsible for all direct and indirect costs that the City incurs as a result of having the pipeline in its property. This includes pipeline related costs that would arise during the City’s administration, maintenance and operation of the affected portions of Whitemud Drive and the pipeline costs associated with the expansion of the roadway.

- 5.10 Moreover, the current pipeline alignment for the Whitemud Corridor should be redesigned in accordance with the route modification suggested by ISL in order to address some of the issues that will arise when the City begins the expansion of Whitemud Drive.
- 5.11 Having the pipeline in the Whitemud Corridor would subject the City to the KMC Requirements and the Landscape Restrictions. Arrangements would need to be made to allow the City to carry out routine roadway and landscaping maintenance without the need to obtain prior approval from Trans Mountain or the various permits described in the KMC Requirements. Moreover, the City should be exempt from having to compensate KMC for having an inspector on site during the expansion of Whitemud Drive or any other major roadwork in that area.
- 5.12 Finally, Trans Mountain should be responsible for all costs associated with inspecting, investigating, engineering and protecting the pipeline during the Whitemud Drive expansion or any other future improvements for the area.
- 5.13 To obtain the above requested protection, the City relies on s.108 of the *National Energy Board Act*, RSC 1985, c. N-7, which states:

**108.** (1) Subject to subsection (4), no company shall construct a pipeline that passes on, over, along or under a utility **unless a certificate has been issued, or an order has been made** under section 58, in respect of the pipeline, and

(a) **the certificate or order contains a term or condition relating to that utility;**

(b) the company has been granted leave under subsection (2); or

(c) the company is constructing the pipeline in circumstances specified in an order or regulation made under subsection (4)

....

(6) In this section, **“utility” means a highway**, an irrigation ditch, a publicly owned or operated drainage system, sewer or dike, an underground telegraph or telephone line or a line for the transmission of hydrocarbons, electricity or any other substance.

- 5.14 If the NEB permits Trans Mountain to use the Whitemud Corridor to complete the Project, the City respectfully requests that the NEB attach conditions in its Order which specify Trans Mountain:

- (a) is responsible for the portion of the TMEP located in the Whitemud Corridor (AK 43.15 to AK44) for the lifespan of the TMEP;
- (b) is to financially compensate the City for all costs associated with having the TMEP in the Whitemud Corridor, including the anticipated costs the City will incur when it expands the roadway in that area, for the lifespan of the TMEP;
- (c) is to adopt the pipeline alignment modifications proposed by ISL to connect the TMEP to the TMPL;
- (d) is to allow the City to carry out routine roadway and landscaping maintenance in the Whitemud Corridor without the need to seek prior approval from Kinder Morgan or obtain the necessary KMC permits;
- (e) is to waive the cost of the Kinder Morgan inspector anytime such inspector is present to monitor work done near the pipeline in Whitemud Drive;
- (f) is to bear all the costs associated with inspecting, investigating, engineering, and protecting the pipeline during the Whitemud Drive expansion or any other work in the area; and
- (g) the conditions of this Order apply equally to Kinder Morgan Canada.

## **6.0 CONCLUSION**

- 6.01 In conclusion, the City respectfully requests that the NEB order Trans Mountain to complete a full and proper assessment of the Lewis Estates option and the Whitemud Corridor before a decision is made regarding where to construct this portion of the TMEP.
- 6.02 If it is determined that the Lewis Estates option is safer or that the risk levels are the same for the two options, the City respectfully requests the NEB order Trans Mountain to complete the Project using the Lewis Estates option.
- 6.03 If the Project is to be completed using the Whitemud Corridor, the City respectfully requests the NEB attach the above noted conditions to its Order for the Project.



## ATTACHMENTS

**TAB A** – Correspondence from the City to Trans Mountain, dated July 28, 2014

**TAB B** – ISL Engineering and Land Services Report

**TAB C** – Resume of Rodney Peacock, P.Eng and Brad Campbell, P.Tech (Eng.)

**TAB D** – Kinder Morgan Ground Disturbance Pipeline Protection Requirements and Design and Landscaping Guidelines