

Grand Rapids Pipeline GP Ltd.
**Consideration of Grand Rapids’
Compliance with Conditions 12
and 13 of *Decision 2014-012***

September 2, 2015

Alberta Energy Regulator

Decision 2015 ABAER 004: Grand Rapids Pipeline GP Ltd., Consideration of Grand Rapids'
Compliance with Conditions 12 and 13 of *Decision 2014-012*

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Grand Rapids Pipeline GP Ltd.

Consideration of Grand Rapids' Compliance with Conditions 12 and 13 of *Decision 2014-012*

Decision

[1] Having carefully considered all of the evidence, the AER confirms that Grand Rapids Pipeline GP Ltd. (Grand Rapids) has satisfied the requirements of conditions 12 and 13 of the AER's *Decision 2014 ABAER 012: Grand Rapids Pipeline GP Ltd., Applications for the Grand Rapids Pipeline Project (Decision 2014-012)*. The panel has not identified an alternative route that is superior to or more suitable than the applied-for route and is therefore satisfied that the applied-for route between the northeast quarter of Section 2, Township 55, Range 21, West of the 4th Meridian (NE 7-055-21W4M) and SE 6-054-22W4M as described in Application No. 1771853 is the superior and most suitable route. Grand Rapids may proceed to construct the applied-for route.

Introduction

Background

[2] Grand Rapids, which is jointly owned by TransCanada PipeLines Limited and Phoenix Energy Holdings Limited, applied under the *Pipeline Act*, the *Public Lands Act*, and the *Environmental Protection and Enhancement Act* for approval to construct, operate, and reclaim the Grand Rapids pipeline project. The proposed project consisted of two main transmission pipelines (main lines), two smaller-diameter lateral pipelines, three pump stations, and three terminals.

[3] The AER held a public hearing for the applications for the Grand Rapids pipeline project in June and July of 2014. The hearing closed on July 18, 2014, and the panel issued *Decision 2014-012* on October 9, 2014. The panel approved the applications with certain exceptions and imposed 26 conditions on the project. The panel remained constituted to consider the conditions arising from the decision.

[4] Condition 12 of *Decision 2014-012* states the following:

Grand Rapids must not construct or carry out any incidental activities, including clearing or preparing the right-of-way, for the segments of the main lines between NE 7-055-21W4M and SE 6-054-22W4M unless Grand Rapids satisfies the panel that the applied-for route is the superior route. Grand Rapids must conduct an analysis on at least one alternative pipeline route that avoids the Fort Industrial Estates Ltd. lands located in the west half of Section 1-055-22W4M and the lands within the city of Fort Saskatchewan that Grand Rapids is prepared to construct. The analysis must include a comparison of the identified alternative route with the currently applied-for route and detailed information on any stakeholder concerns. Once the analysis is complete, Grand Rapids must submit it to the panel for review. Upon review, the panel may require further

analysis, direct Grand Rapids to file an amendment application for the alternative route, or permit Grand Rapids to proceed with the currently applied-for route if it is satisfied that it is the most suitable route.

[5] Condition 13 of the same decision states the following:

Grand Rapids must not construct or carry out any incidental activities, including clearing or preparing the ROW, for the segments of the main lines between NE 7-055-21W4M and SE 6-054-22W4M unless Grand Rapids satisfies the panel that the applied-for route is the superior route. Grand Rapids must conduct an analysis of at least one alternative pipeline route that avoids the Guenette lands located in the south half of Section 34-054-22W4M, NW 27-054-22W4M, and NE 28-054-22W4M that Grand Rapids would be prepared to construct. The analysis must include a comparison of the alternative route identified with the currently applied-for route and detailed information regarding any stakeholder concerns. Once the analysis is complete, Grand Rapids must submit it to the panel for review. Upon review, the panel may require further analysis, direct Grand Rapids to file an amendment application for the alternative route, or permit Grand Rapids to proceed with the currently applied for route should the panel be satisfied that it is the most suitable route.

[6] Grand Rapids submitted its alternative routing analysis to the AER on June 8, 2015.

Process to Consider Compliance with Conditions 12 and 13

[7] In its alternative routing analysis submission, Grand Rapids indicated that it had discussed with Fort Industrial Estates Ltd. (Fort Industrial) and D&A Guenette Farms Ltd. (Guenette Farms), and had agreed on, a process by which the AER could determine compliance with conditions 12 and 13. Grand Rapids submitted a proposed process and timelines for a hearing and for submission due dates. After additional correspondence from the parties about due dates, the panel agreed with the process proposed by the parties and set out the requested timeframes in a notice of hearing issued on June 15, 2015.

[8] On July 15, 2015, one day after Grand Rapids submitted its reply to the interveners' submission, Fort Industrial and Guenette Farms submitted an adjournment request because of procedural and fairness concerns about Grand Rapids filing new evidence in its reply. The parties corresponded about potential timelines for the hearing and final argument, and the AER issued a notice of rescheduling of hearing on July 17, 2015.

[9] On July 21, 2015, counsel for Fort Industrial informed the panel that his client was withdrawing from the compliance hearing and that it supported the applied-for route and supported a determination that condition 12 had been satisfied.

Hearing

[10] The AER held a public hearing that began on July 23, 2015, in Edmonton, Alberta, and continued on July 28, 2015, before hearing commissioners A. H. Bolton, (presiding), R. C. McManus, and C. Macken. Those who appeared at the hearing are listed in appendix 1.

[11] As a result of Fort Industrial's withdrawal from the hearing, the part of the hearing that was to consider Grand Rapids' compliance with condition 12 pertaining to the Fort Industrial lands was not required. Instead, the hearing focused on Grand Rapids' compliance with condition 13 of *Decision 2014-012* pertaining to the Guenette Farms lands.

Issues

[12] Despite Fort Industrial's withdrawal from the hearing, the panel is still required to decide whether Grand Rapids has satisfied conditions 12 and 13 of *Decision 2014-012* and whether the applied-for route or one of the alternatives is the superior or most suitable route. As both conditions required Grand Rapids to perform the same analysis, and for the same segment of the project route, the panel will consider Grand Rapids' compliance with both conditions as part of this decision.

[13] The panel considers the issues before it to be the following:

- Has Grand Rapids satisfied the requirements of conditions 12 and 13?
- Has Grand Rapids convinced the panel that the applied-for route is the superior and most suitable route? Or alternatively, are any of the alternative routes superior to the applied-for route?

[14] In reaching its decision, the panel has considered all relevant materials constituting the record of this proceeding, including the evidence and argument provided by each party. Accordingly, references in this decision to specific parts of the record are intended to help the reader understand the panel's reasoning on a particular matter and do not mean that the panel did not consider all relevant parts of the record with respect to that matter.

Has Grand Rapids Satisfied the Requirements of Conditions 12 and 13?

[15] In its consideration of whether Grand Rapids satisfied the requirements of conditions 12 and 13, the panel has to determine whether Grand Rapids met the three criteria listed in the conditions:

- Did Grand Rapids conduct an analysis of at least one alternative pipeline route that it is prepared to construct, that avoids the Fort Industrial and Guenette Farms lands and the lands within Fort Saskatchewan?
- Did the analysis include a comparison of the identified alternative routes with the applied-for route?
- Did the analysis include detailed information about any stakeholder concerns?

[16] Grand Rapids submitted documentation that identified one alternative route (alternative route 1) that does not meet the first criterion of avoiding the Fort Industrial and Guenette Farms lands as well as lands within Fort Saskatchewan. However, Grand Rapids said that it was prepared to construct this route. It submitted a second alternative route (alternative route 2) that it would be prepared to construct. Alternative route 2 avoids Fort Industrial and Guenette Farms lands as well as Fort Saskatchewan. Grand

Rapids also identified and evaluated three additional routes that it considered but is not prepared to construct.

[17] The panel notes that alternative route 1 does not meet the requirements of the conditions because it crosses the Fort Industrial and Guenette Farms lands and is merely located on the east side of the existing pipeline rights-of-way (ROWs) rather than the west. The panel acknowledges that alternative route 2 meets the requirements of the conditions. Therefore, the panel finds that this requirement of the conditions has been met.

[18] Grand Rapids provided a comparison of the identified alternative routes with the applied-for route using, among other factors, its 10-point route selection criteria. While Guenette Farms expressed concern about the lack of quantitative analysis and reports from independent experts in Grand Rapids' submission, the criteria used for analysis were identified and quantitative data was provided for some of the criteria. The panel finds that this meets the requirement to provide a qualitative and quantitative analysis comparing the applied-for route with the proposed alternative routes.

[19] Grand Rapids provided information pertaining to landowner concerns about the alternative routes that it is prepared to construct. It provided the participant involvement program summaries, which outlined the concerns raised by each of the landowners along the proposed alternative routes. While Guenette Farms raised concerns about the nature of the materials provided during consultation and about the potential confusion among stakeholders that the material could cause, the panel is satisfied that Grand Rapids provided sufficient information about stakeholder concerns along the proposed alternative routes and that the information provided to stakeholders was sufficient for the stakeholders to identify the alternative routes being considered. The panel finds that Grand Rapids has met this requirement of the conditions.

[20] Overall, the panel is satisfied that the level of analysis provided by Grand Rapids meets the requirements of the conditions. While the panel acknowledges that the analysis contained some minor errors and omissions and additional detail would have been helpful in some areas, the analysis provides the information the panel requires to determine whether the applied-for route, or one of the alternative routes, is the superior or most suitable route.

Has Grand Rapids Satisfied the Panel that the Applied-for Route is the Superior and Most Suitable Route?

Approach to Alternative Route Comparison

[21] In *Decision 2014-012*, the panel directed that Grand Rapids not proceed with construction of the referenced section of the project unless it satisfies the panel that the applied-for route is the “superior” and “most suitable” route as compared with alternatives that Grand Rapids is prepared to construct.

[22] In its submissions, Grand Rapids suggested that previous decisions of the Energy and Utilities Board (EUB) and the Energy Resources Conservation Board (ERCB) (predecessors to the AER) about pipeline routing took an approach that is different and less onerous than the expected standard outlined in the conditions for the comparison of route alternatives. Grand Rapids cited EUB *Decision 2007-065*, in which the EUB stated that, in considering alternative routes, it must “satisfy itself that a clearly superior... pipeline route exist[s] that would cause it to reject the applied-for ... route.” Grand Rapids also cited ERCB *Decision 2010-022*, in which the ERCB stated that “applicants are not required to show that their applied-for or preferred routes are superior to any possible alternatives routes.” In this decision, the ERCB determined that it must be satisfied that the route could be constructed in a manner that is safe; meets all regulatory requirements; does not have unacceptable impacts on stakeholders, the environment, or land uses; and considers the nature of the area.

[23] Grand Rapids argued that in those earlier decisions, an applied-for route would not be rejected unless an alternative route was determined to be demonstrably better.

[24] Recognizing that the panel is not bound by previous decisions, the panel does not believe that the intent of conditions 12 and 13 is fundamentally different from the approach taken in some previous decisions, such as EUB *Decision 2007-065*. In *Decision 2014-012* the panel stated (in paragraphs 168 and 179) that it was not satisfied with Grand Rapids' assessment of the segment of the pipeline that affected the Fort Industrial and Guenette Farms lands and lands within Fort Saskatchewan. Specifically, the panel expressed concern (in paragraphs 170 and 179) that Grand Rapids had not provided a qualitative and quantitative comparison of the applied-for route and any alternatives that avoided the Fort Industrial and Guenette Farms lands and lands within Fort Saskatchewan. The panel also expressed concern (in paragraphs 168 and 169) that Grand Rapids had not adequately considered potentially relevant routing criteria, such as avoiding urban areas. For these reasons the panel was not able to determine whether the applied-for route or some other route was the superior or most suitable route. The panel stated in *Decision 2014-012* that the onus was on Grand Rapids to demonstrate that the applied-for route was the superior route. The panel believes this is consistent with ERCB *Decision 2010-022*, which says the following:

The Board expects applicants to consider more than one route option where circumstances warrant during the initial project design and planning stages of a project in order to find an appropriate and thorough balance of interests in the selection of a preferred route. To what extent each route is to be considered by applicants will vary with the particular circumstances and facts of each application. In that vein, the Board encourages applicants to consider alternative routes thoroughly before making their applications to the Board and to provide the Board with this information in their applications.

[25] The intent of conditions 12 and 13 was to provide the panel with the information needed to determine whether an alternative route exists that is superior to the applied-for route. The panel also believes that this approach is consistent with EUB *Decision 2007-065* in that if an alternative route is identified that is clearly superior to the applied-for route, the panel would reject the applied-for route in

favour of the alternative. If no clearly superior alternative route exists, by default the applied-for route would be accepted as the superior or most suitable route. This is the approach the panel has taken in considering the various routes presented in the routing analysis submitted by Grand Rapids.

Route Selection Criteria

[26] Grand Rapids explained that its route selection process involves considering regional and local land-use policies and plans to select a preferred linear alignment. Grand Rapids goes on to consider local and site-specific planning elements of the potential routes within the preferred corridor. This begins with identification of possible routes that accommodate identified project control points and meet Grand Rapids' 10-point route selection criteria. Routes that meet these criteria are further evaluated against the results of ongoing participant involvement and consultation, detailed project design, and other considerations to determine whether a route continues to be feasible, whether any issues can be addressed through route refinements or reasonable mitigation measures, and whether the route should be eliminated from further consideration.

[27] A major focus of the parties' submissions and testimony at the hearing was route selection criteria. Each party used a different set of route selection criteria to evaluate the various route options. The three routes Grand Rapids is prepared to construct meet its criteria, but to varying degrees. Grand Rapids relied on the results of its route selection process to conclude that the applied-for route is the superior or most suitable route.

[28] The following are Grand Rapids' route selection criteria:

- Observe project-control points.
- Minimize, considering other route selection objectives, the total route length.
- Ensure operations and maintenance access and power availability.
- Minimize the impact on stakeholders, aboriginal communities, and the environment.
- Follow existing linear disturbances wherever possible to minimize the area of new disturbance and cumulative impacts, maximize the amount of temporary workspace on existing ROWs, and reduce the potential fragmentation of wildlife habitat.
- Avoid or reduce effects on environmentally sensitive areas.
- Minimize the number of watercourse crossings.
- Avoid park lands, cemeteries, and historical sites.
- Comply with existing regional land use plans.
- Factor in hydraulic design, constructability, and cost considerations.

[29] Grand Rapids testified that a paramount consideration for selecting a route is the ability to follow existing linear disturbances, as this limits or avoids a range of potential impacts. Grand Rapids informed the panel that avoiding urban areas, while not a specific criterion, was considered part of compliance with existing land use plans for the area.

[30] R. Berrien of Berrien & Associates, on behalf of Guenette Farms, used the following criteria to evaluate Grand Rapids' routing analysis:

- Overall route length
- Existing linear disturbance deviations
- Number of wetlands crossed
- Number of watercourses crossed
- Constructability
- Farmsteads in proximity
- Avoidance of urban areas
- Congestion

[31] Mr. Berrien testified that in his review of Grand Rapids' comparative route analysis he gave more weight to avoiding urban areas, avoiding homesites, and congestion. Mr. Berrien testified that he did not consider impact on landowners to be a differentiating criterion because, in his estimation, all of his criteria would have the outcome of minimizing impacts on landowners.

[32] Each party presented various reasons and argument on the usefulness or applicability of each other's criteria, how individual criteria should be applied or weighted, and how the results should be evaluated to determine the superior or most suitable route.

[33] The panel notes that the criteria used by the parties have a fair amount in common. Each party considers total route length, the number of wetlands and water crossings, and whether existing linear disturbances are followed.

[34] One major difference is that Grand Rapids' criteria are corporate criteria that the company consistently uses as part of its route selection process for all pipelines. Mr. Berrien's criteria were selected specifically to address the characteristics of this segment of Grand Rapids' pipeline project. The panel recognizes there are different objectives behind each set of criteria and that each has its own particular value and usefulness depending on the specific situation or the purpose for which they are used.

[35] Another key difference between the two sets of criteria is the weight the parties give to certain criterion. Mr. Berrien placed more emphasis on avoiding urban centres and homesites, whereas Grand

Rapids placed more weight on complying with existing land use plans and avoiding impacts on landowners.

[36] Given the obvious importance of route selection criteria to the parties and to the panel's decision, the panel paid particular attention to this issue in its deliberations. It is the panel's view that route selection criteria are a critical and necessary part of the route selection process. While a robust set of criteria is necessary to determine the most appropriate route for an entire project, individual criteria may not be relevant everywhere along the proposed route. The selection and weighting of one criterion over another is most useful when considered in the context of a specific segment of a pipeline and should be used to evaluate the pipeline's impact on local distinguishing factors, such as environmentally sensitive areas or unique geotechnical features that might limit constructability in an area. For instance, if wetlands are not present in an area, this criterion would be given less weight in the evaluation for that specific segment.

[37] Existing AER regulations and guidance documents do not identify a specific set of criteria that project proponents must use for pipeline route planning or for comparing alternative pipeline routes. However, in considering Grand Rapids' routing analysis the panel was mindful of its mandate under the *Responsible Energy Development Act (REDA)* and other relevant statutes.

[38] Section 2(1) of *REDA* describes the mandate of the AER as being, "(a) to provide for the efficient, safe, orderly, and environmentally responsible development of energy resources in Alberta." In carrying out its mandate, the AER must also consider the following factors under section 3 of the *Responsible Energy Development Act General Regulation*: (a) the social and economic effects of the energy resource activity; (b) the effects of the energy resource activity on the environment; and (c) the impacts on a landowner as a result of the use of the land on which the energy resource activity is or will be located. The *Pipeline Act* allows the AER to inquire into and examine any matter relating to, among other things, the economic, orderly, and efficient development in the public interest of pipeline facilities in Alberta. The purpose of the *Environmental Protection and Enhancement Act* is to support and promote the protection, enhancement, and wise use of the environment while recognizing the need for Alberta's economic growth and prosperity in an environmentally responsible manner and the need to integrate environmental protection and economic decisions in the earliest stages of planning.

[39] In light of the above, the panel must consider the economic, social, and environmental effects of the project as well as impacts on landowners when assessing Grand Rapids' routing alternatives. In this respect, the panel identified criteria that in its estimation are the most appropriate in the context of this particular review. The panel does not believe that a single set of routing criteria can be universally applied in all situations. The panel's criteria include many of the criteria identified by the parties in their submissions, although as the panel's analysis will reveal, there are key differences in the emphasis or weighting placed on certain criteria.

[40] The panel used the following criteria to evaluate the various routes:

- Observe project control points
- Minimize, considering other route selection objectives, the total route length
- Consider operational factors such as maintenance access, power availability, and pipeline integrity
- Follow existing linear disturbances wherever possible
- Minimize impact on landowners, aboriginal communities, and other stakeholders
- Minimize the number of watercourse and wetland crossings
- Minimize the impact on the environment and sensitive environmental receptors
- Avoid park lands, cemeteries, historical sites, and archeological sites
- Avoid known ceremonial, spiritual, habitation, and resource-gathering sites
- Comply with existing land use plans and setbacks
- Include hydraulic design, constructability, and cost considerations

Observe project control points

[41] The panel agrees with Grand Rapids that observing project control points for the start and end points of pipeline segments is an important criterion when considering routing of a pipeline. For the Grand Rapids project, segment 4 connects key shipping and delivery points. Specifically, this leg of the pipeline connects the Heartland Terminal to the northeast pipeline corridor (NEPC) and is a key segment of the overall project. The panel acknowledges Mr. Berrien's view that observing control points is not a useful comparison criterion because it is a requirement for any pipeline route. The panel will address this issue as part of its review of the alternative routes.

Minimize, considering other route selection objectives, the total route length

[42] A shorter route generally reduces the amount of surface disturbance, limits the number of potentially affected stakeholders, and helps with hydraulic design and system optimization while minimizing constructability concerns and project cost. A proponent, after weighing other route selection objectives, should endeavour to minimize the length of a pipeline route. That being said, total route length may be less important than other criteria, such as minimizing impacts on landowners and the environment.

Consider operational factors such as maintenance access, power availability, and pipeline integrity

[43] When evaluating possible pipeline routes, operational considerations, including maintenance access, power availability, and pipeline integrity, are important. The panel accepts Grand Rapids'

argument that different operational, accessibility, or power availability requirements can pose challenges or constraints on a route. In contrast, Mr. Berrien argued that this criterion is a given for all pipelines and does not help to evaluate the nature of any routing impacts. The panel accepts that this criterion, while important, might not always be a differentiating criterion depending on the alternatives being considered.

Follow existing linear disturbances wherever possible

[44] Following existing linear disturbances where possible is an expectation of the AER and other stakeholders, such as municipalities and counties. It is also a consideration of the Canadian Standards Association for pipeline route selection. Constructing a new pipeline alongside existing alignments helps limit the area of new disturbance and cumulative impacts, maximizes the amount of temporary workspace on existing ROWs, and reduces potential fragmentation of land and wildlife habitat.

Minimize impact on landowners, aboriginal communities, and other stakeholders

[45] The panel believes that minimizing the impact of pipeline routing on landowners, aboriginal communities, and other stakeholders is one of the more important criteria in any route selection process. However, the panel recognizes that route planning is a complex and challenging exercise and that it may not be possible for project proponents to address all stakeholder issues to their satisfaction. While the panel has not included a separate criterion for avoiding homesites as Mr. Berrien did, it considers this a subset of minimizing impacts on landowners.

[46] The panel also recognizes that municipalities and counties are important stakeholders in energy development because of their role in regional development and land use planning. For the purposes of the panel's analysis, the views of Strathcona County (County) and the City of Fort Saskatchewan (City) will be discussed under the land-use planning criteria.

Minimize the number of watercourse and wetland crossings

[47] Both parties included this criterion in their analysis. The panel agrees that minimizing the number of watercourse and wetland crossings is an accepted and important element of pipeline route planning due to the potential for adverse impacts on water quality and ecosystem integrity. However, the panel's view is that a route is not necessarily superior because it crosses fewer water courses than another alternative. The number of water crossings alone may not be as important as the role or ecological value of the particular waterbodies being crossed and therefore a simple comparison of the number of crossings may not be sufficient to indicate which route is superior. Where wetlands and watercourses cannot be avoided, it is important to ensure that appropriate mitigation measures are taken to reduce or minimize any adverse effects.

Minimize the impact on the environment and sensitive environmental receptors

[48] In addition to minimizing the number of watercourse and wetland crossings, avoiding and minimizing other environmental effects, including effects on environmentally sensitive features, is an important criterion for pipeline route planning. Environmentally sensitive features include areas of important wildlife habitat, rare or native vegetation, old-growth forest, unique landscape features, and steep slopes that are subject to mass movement or erosion. Where such features cannot be avoided through route selection, appropriate mitigation measures can minimize the potential for and significance of adverse effects.

Avoid park lands, cemeteries, historical sites, and archeological sites

[49] Parklands, cemeteries, and historical and archeological sites are all important factors that may present challenges or barriers for pipeline route selection. Pipeline companies are required to identify such features and to avoid them or follow regulatory requirements for protecting them or otherwise avoiding any adverse impacts.

Avoid known ceremonial, spiritual, habitation, and resource-gathering sites

[50] Energy companies are required to consult with aboriginal communities to identify ceremonial, spiritual, and habitation and resource-gathering sites. Where such sites are identified, companies must follow regulatory requirements and work with stakeholders to identify and implement mitigation measures as appropriate.

Comply with existing land use plans and setbacks

[51] The panel recognizes its responsibility to consider municipal planning policies and land use bylaws when making decisions about proposed energy development. It is the panel's view that pipeline applicants are expected to comply with existing land use requirements and policies for a given area unless there is a compelling reason to do otherwise.

Include hydraulic design, constructability, and cost considerations

[52] The panel believes that hydraulic design, constructability, and cost are all valid considerations for pipeline route selection. Operators must be able to construct, operate, and maintain the integrity of their pipelines throughout their lifetime. Furthermore, *REDA* and the *Pipeline Act* require a consideration of the economic effects of proposed energy activities and incorporate the concept of economic and orderly development, which requires a consideration of costs. While costs are a valid consideration when evaluating various route alternatives, they must be weighed against other criteria such as effects on the environment and future land use and impacts on landowners. The panel agrees with Grand Rapids that any additional costs associated with a route should be weighed against the relative benefits provided by that route in terms of avoiding impacts.

[53] The panel has not included a separate criterion for congestion as Mr. Berrien did, as it believes congestion is related to the issue of constructability. The panel will address concerns about congestion as part of this criterion.

Are Any of the Alternative Routes Superior to the Applied-for Route?

Routes Considered by Grand Rapids

[54] Grand Rapids identified three routes that it was prepared to construct for the segment of the pipeline under consideration: the applied-for route, alternative route 1, and alternative route 2 (see figure 1).

[55] The applied-for route follows the west-recommended corridor and would be constructed on the west side of the corridor. A segment of the route crosses four quarter sections of land within Fort Saskatchewan. Alternative route 1 follows a similar route except for a part of the route that crosses over to the east side of the west-recommended corridor between NW 1-022-55W4M and NW 27-022-54W4M.

[56] Alternative route 2 deviates from the main section of the applied-for route in SW 7-021-55W4M and reconnects in SE 6-022-54W4M. About 8.4 kilometres (km) of the route follows the east-recommended corridor. The other 7.4 km of the route follows existing pipeline alignments. This route does not come in contact with any land within Fort Saskatchewan.

[57] Grand Rapids also assessed three other routes, referred to as alternatives A, B, and C, that it ultimately decided it was not prepared to construct because the routes did not satisfy some of Grand Rapids' 10-point routing criteria. Specifically, these routes don't follow existing linear disturbances or recommended pipeline corridors for most of their length and they bisect several rural properties, do not have the support of landowners, and were not supported by the County or the City.

[58] The panel agrees with Grand Rapids' assessment that alternatives A, B, and C do not satisfy some important route planning criteria. The panel also notes that there was no significant discussion of these alternatives at the hearing. The balance of the decision will therefore focus on a comparison of the applied-for route, alternative route 1, and alternative route 2.

Route Comparison

Observe Project Control Points

[59] The panel notes that all of the alternative routes considered connect to points on the applied-for route to the south of the Heartland Terminal in NE 7-055-21W4M and to the northeast of the NEPC in SE 6-054-22W4M. Since all of the routes considered have the same control points, the panel finds that this criterion is not a significant or differentiating factor for the segment of the pipeline under consideration.

Minimize, Considering Other Route Selection Objectives, the Total Route Length

[60] The applied-for route is 14.4 km long and alternative routes 1 and 2 are 14.5 and 15.8 km, respectively. Alternative route 1 is similar to the applied-for route and is only marginally longer. Alternative route 2 follows a different path and is 1.4 km longer. While alternative route 2 is 10 per cent longer than the applied-for route between the control points established in conditions 12 and 13, this additional length decreases in significance when compared with the 460 km length of the Grand Rapids' pipeline project.

[61] The panel accepts Grand Rapids' argument that the additional 1.4 km of ROW length of alternative route 2 will result in additional disturbance and some associated environmental effects due to the additional disturbance. Using the ownership sketches for the applied-for route and alternative route 2, the panel determined that alternative route 2 includes a ROW that is 7 hectares (ha) larger and requires temporary workspace that is more than 20 ha larger than the applied-for route (no ownership sketches were provided for alternative route 1); see table 1. However, the panel does not believe the difference in effects will be significant given that they will occur on agricultural lands and that standard mitigation measures will be used to minimize these effects. Nonetheless, when considered together, the additional length and surface disturbance required for alternative route 2 lead the panel to conclude that alternative route 2 is not superior to the applied-for route for this criterion.

Table 1. Combined right-of-way and temporary workspace land use footprint

Route	Pipeline length	Permanent ROW	Temporary workspace
Applied-for route	14.4 km	34.10 ha	68.21 ha
Alternative route 1	14.5 km	Not available	Not available
Alternative route 2	15.8 km	41.79 ha	89.42 ha

Consider Operational Factors such as Maintenance Access, Power Availability, and Pipeline Integrity

[62] There are no pump stations or other facilities that require power along the proposed segments of the applied-for route or alternative routes 1 and 2. There are also no significant restrictions on access for operations and maintenance for any of the routes considered. Therefore, the panel finds that operational considerations are not a differentiating criterion for the segment of the pipeline under consideration.

Follow Existing Linear Disturbances Wherever Possible

[63] The applied-for route and alternative route 1 follow the west-recommended corridor. Those routes also closely follow existing linear disturbances except for two minor deviations for the applied-for route and one minor deviation for alternative route 1. These deviations are required in order to avoid wetlands and surface development.

[64] Alternative route 2 follows the east-recommended corridor for about 8.4 km. The remaining 7.4 km follows other existing pipeline alignments. Alternative route 2 also almost completely follows existing linear disturbances.

[65] Alternative routes 1 and 2 parallel existing linear disturbances for 98 per cent of their respective routes, whereas the applied-for route parallels 94 per cent of existing linear disturbances along its route.

[66] The panel finds that following existing linear disturbances is not a significant differentiator between the applied-for route and alternative routes 1 and 2. All three routes almost completely parallel existing linear disturbances; see table 2. The panel agrees with Grand Rapids that the difference between the applied-for route (94 per cent) and alternative routes 1 and 2 (98 per cent) in alignment with existing linear disturbances is not significant. The total length of the deviations for the applied-for route is 576 m compared with 290 m for alternative route 1 and 316 m for alternative route 2; thus the difference is 286 m between the applied-for route and alternative route 1 and 260 m between the applied-for route and alternative route 2 over more than 14 kms.

Table 2. Deviations from existing linear disturbances

Route	Alignment with existing linear disturbances	Number of material deviations	Approximate length of total deviations
Applied-for route	94%	2	576 metres (m)
Alternative route 1	98%	1	290 m
Alternative route 2	98%	1	316 m

[67] Guenette Farms expressed concern about the potential impacts of the deviations on the applied-for route. There are two significant deviations (i.e., more than 50 m in length) from existing linear disturbances on the applied-for route: a) SW 34-54-22W4M to avoid a low/wet area and existing riser valve location; and b) NE 28-54-22W4M to address constructability issues associated with a draw and with the location where an Inter Pipeline Ltd. pipeline crosses to the west side of the west-recommended corridor.

[68] Based on the evidence, the panel finds that both deviations reflect general pipeline routing practice and remain consistent with routing criteria by minimizing impacts on both wetlands and pre-existing surface development. Mr. Guenette admitted in cross-examination that at least part of the deviation on the eastern boundary of NE 28-054-22 W4M of the applied-for route aligns with two existing ROWs to which he had previously agreed (Enbridge Pipelines [Woodland] Inc. and Air Products Canada Ltd. pipelines).

[69] Mr. Foster testified on behalf of Grand Rapids that they were willing to discuss potential mitigation with Guenette Farms, including potential microrouting adjustments that might alleviate the

impact of the deviations. The panel expects the parties to work cooperatively to minimize any impacts arising from these deviations.

Minimize Impact on Landowners, Aboriginal Communities, and Other Stakeholders

[70] Impacts on landowners, aboriginal communities, and other stakeholders are an important consideration in pipeline route selection. For the pipeline segment under consideration in this decision, the lands affected by all of the pipeline route alternatives are privately owned. No concerns by aboriginal or broad community stakeholder groups, other than the City and County, were identified. The views of the City and County are considered in the land use planning section of this decision report.

[71] Grand Rapids identified impacts on landowners as an important criterion in the analysis of the applied-for route and proposed alternative routes. In support of its comparative route analysis, Grand Rapids provided landowner consultation records that outlined landowner concerns about alternative routes 1 and 2 and A, B, and C.

Applied-for Route

[72] Grand Rapids submitted that, except for Guenette Farms, landowners along this segment of the applied-for route have no objections to the proposed route. They noted that 20 of the 21 landowners, including Fort Industrial, have agreements with Grand Rapids and support the applied-for route.

[73] At the time of Grand Rapids' application, Guenette Farms owned four quarter sections of land affected by the applied-for route (SW 34-054-22W4M, SE 34-054-22W4M, NW 27-054-22W4M, and NE 28-054-22W4M). Mr. Guenette confirmed that as many as 17 pipelines are currently located on these lands. He said that at the time of purchase, there were 8 to 10 pipelines, and since purchasing the lands in 1988 and 1989, he has agreed to allow as many as eight additional pipelines on these lands. Guenette Farms recently purchased the west half of 8-054-22W4M, which is also traversed by the west-recommended corridor and the Grand Rapids applied-for route.

[74] Mr. Guenette submitted that the applied-for route will affect the value of his land and his ability to develop his lands. He confirmed his approach to acquire farm land near growing communities that he anticipates will expand at some point and incorporate these lands. Mr. Guenette believes that annexation of the lands will increase the value of the lands because they could be used for residential or industrial development.

[75] Mr. Guenette said that he supports pipeline development. However, he believes that he has accommodated more than his fair share of pipelines on his lands and he believes that the pipeline corridor on his lands is full. He said that his family should not have to bear the loss of future development opportunities and reduction in the value of these lands by continuing to accommodate pipelines such as the proposed Grand Rapids project.

[76] Grand Rapids indicated that it had sought to obtain development plans from Guenette Farms so that it could identify microrouting measures or other actions to mitigate the effects of the applied-for route. It noted that the lack of specific development plans or timelines made it difficult to identify such mitigation measures. Grand Rapids submitted that any incremental disturbance caused by its pipelines could be mitigated and would not by itself significantly affect future development of the lands, if and when that might occur. Grand Rapids also noted that in addition to the pipelines in the west-recommended corridor, the Guenette Farms lands contained several pipelines, well sites, and other features that were impediments to longer-term development. During cross-examination by Grand Rapids, Guenette Farms' expert witness, Mr. Berrien, acknowledged that the presence of these features on the Guenette Farms lands would limit future development independent of the proposed Grand Rapids pipeline.

[77] The width of the west-recommended corridor was the subject of speculation at the hearing. In a question to Grand Rapids, counsel for Guenette Farms suggested that the width of the west-recommended corridor was "over 720 feet [220 m]." In response to a question from the panel, Grand Rapids estimated the west-recommended corridor to be at least 150 m wide and "probably in excess of 250 m." Using the odometer on his vehicle, Mr. Guenette estimated the west-recommended corridor to be "200 metres plus" in width where it crosses township road 542 just north of 8-054-22W4M on land that he recently purchased.

[78] An examination of the ownership sketches submitted by Grand Rapids indicates that the existing west-recommended corridor (excluding pipelines crossing the corridor on various diagonal routes) contains 9 to 11 pipelines on the Guenette Farms lands. The total width of the current ROW varies from about 105 to 130 metres, depending on which of the Guenette Farms land is considered. Factoring in the additional 24-metre permanent ROW that Grand Rapids is requesting, the west-recommended corridor would increase in width by about 18–23 per cent, depending on which of the Guenette Farms land is considered. In instances where the Grand Rapids pipeline deviates from the existing pipeline alignments to avoid topographical features, the effective width of the west-recommended corridor would be greater.

[79] The permanent right-of-way and temporary workspace footprint of the applied-for pipeline route on the Guenette Farms lands is shown in table 3.

Table 3. Applied-for route ROW and temporary workspace requirements for the Guenette Farms lands

Guenette Farms lands	Permanent ROW	Temporary workspace
SW 34-054-22W4M	1.86 ha	4.52 ha
SE 34-054-22W4M	0.88 ha	1.27 ha
NW 27-054-22W4M	0.97 ha	1.85 ha
NE 28-054-22W4M	1.33 ha	3.42 ha
Total	5.05 ha	11.06 ha

[80] The panel notes that the applied-for route will affect an additional 5.05 ha of the Guenette Farms lands for the life of the Grand Rapids pipeline, estimated to be 30 to 50 years or longer. During this time no structures could be built on the permanent ROW. This is an increase of about 20 per cent over the existing footprint of the west-recommended corridor. While Grand Rapids submitted that the effect of the applied-for route on the Guenette Farms lands was incremental and not significant, the panel does not agree that a 20 per cent increase in the width or footprint of the corridor is insignificant. However, Guenette Farms did not present any future development plans, conceptual or otherwise, or provide any expert evidence to suggest timeframes wherein these lands may be potentially developed. Guenette Farms also did not describe how the presence of the Grand Rapids pipelines, in the context of the existing west-recommended corridor and other facilities, pipelines, and topographical features that already exist on their lands, would affect such plans. Consequently, the panel is unable to quantify the effects of the applied-for route on the Guenette Farms' future development plans in any meaningful way.

[81] Guenette Farms raised concerns about the impact of the project on their farming practices in the 2014 hearing. However, the concerns primarily related to the two-year construction period and to Mr. Guenette's ability to access parts of his fields to farm or to control weeds. In the current proceeding, Guenette Farms did not provide any additional evidence about the impact of the pipeline on Mr. Guenette's farming practices or on agricultural use of the land. Mr. Guenette acknowledged that pipelines are an inconvenience the year that they are constructed but once they are in the ground and everything is put back to normal, "you can just farm over them." Grand Rapids stated that the current plan was to construct the two pipelines concurrently. The panel interprets this to mean that both pipelines would be constructed in a continuous process during a single construction season, thereby reducing the impacts on the Guenette Farms farming operations. The panel also accepts that Guenette Farms would be able to continue the agricultural use of these lands once the pipelines are built and the ROW reclaimed.

[82] Mr. Berrien noted that the applied-for route is located near several residences or homesites and used proximity of farmsteads as a routing criterion in his analysis. He raised concerns about inconvenience and public safety regarding pipeline construction near residences as a negative aspect of the applied-for route. The panel notes that with the exception of Guenette Farms, all of the landowners along the applied-for route have entered into agreements with Grand Rapids. The panel therefore assumes that Grand Rapids has addressed any public safety or nuisance and inconvenience concerns associated with construction activities to the satisfaction of these landowners and finds that this is not a differentiating factor between any of the routes considered.

Alternative Route 1

[83] Grand Rapids submitted that with the exception of Guenette Farms, no other landowners affected by alternative route 1 had objections to this routing of the pipeline. Grand Rapids stated that alternative route 1 was proposed as a way to address Guenette Farms' concerns about the future development potential of their lands. By crossing to the east side of the west-recommended corridor, the pipeline would

be located further from future potential development growth in Fort Saskatchewan and might reduce incremental impacts on the Guenette Farms lands. However, Grand Rapids confirmed that Guenette Farms has not indicated whether alternative route 1 would alleviate any of their concerns about future development of their lands.

[84] Guenette Farms did not appear to differentiate between impacts of the applied-for route and impacts of alternative route 1, as both routes would follow the west-recommended corridor. They appeared to reject any significant difference between alternative route 1 and the applied-for route. Guenette Farms maintained their view that the pipeline corridor on their lands is full and that they did not want any additional pipelines on these lands.

Alternative Route 2

[85] Grand Rapids said that it conducted a comprehensive engagement with landowners on alternative route 2 and submitted participant involvement summaries documenting consultation efforts with all 25 landowners along this route.

[86] Landowners along alternative route 2 identified a number of concerns, including concerns about the effects of the pipeline on future land development opportunities, land values, agricultural operations, and gravel resource extraction, concerns about the proposed width of the pipeline ROW (several landowners indicated they would only consider a 10-metre-wide ROW), and concerns about inadequate compensation.

[87] Grand Rapids provided a “heat map” to visually illustrate the level of support or opposition from landowners along all the routes considered, including alternative route 2. The heat map divides landowners into three categories: those that would support or not oppose the project, those with moderate potential to oppose the project and file a statement of concern (SOC), and those with high potential to object to the project and most likely to file an SOC. Of the 25 landowners along alternative route 2, Grand Rapids characterized 18 landowners as being in the moderate- to high-likelihood category to file an SOC. These included several landowners who appear to have avoided Grand Rapids’ efforts to consult with them as well as landowners who indicated that their agreement or support would be subject first to what they determined was a satisfactory compensation agreement.

[88] Mr. Berrien raised concerns with the veracity of conclusions illustrated in Grand Rapids’ “heat map” and with the merits of comparing the level of support for the applied-for route with the level of support for alternative route 2. He suggested that the high level of acceptance for the applied-for route reflects the fact that Grand Rapids has been able to negotiate agreements with landowners on this route as a result of several years of consultations and compensation negotiations. He noted that the same level of effort has not been devoted to negotiations with landowners on alternative route 2. Consequently, Mr. Berrien believes it is not appropriate to use the differing levels of landowner support as a criterion for determining whether the applied-for route or alternative route 2 is the superior or most suitable route. He

noted that without an equivalent level of effort to address landowner concerns along alternative route 2, the panel may not be able to properly compare the level of landowner support or resistance along the two routes.

[89] Grand Rapids indicated that some landowners on alternative route 2 were not prepared to discuss their concerns or potential impacts and mitigations until they had reached agreement on compensation matters. Both Grand Rapids and Mr. Berrien agreed that landowners often expect agreement on the “whole package” of concerns, including compensation matters, and without such agreement they may file SOC with the AER to preserve or enhance their negotiating position.

[90] In addition to landowners along alternative route 2, two parties have subsurface interests in gravel extraction projects.

[91] Reperio Resources Corporation (Reperio) has leased the following lands along alternative route 2 for a gravel extraction project (Reperio Project):

- SW 36-054-22W4M
- NW 25-054-22W4M
- SW 25-054-22W4M

[92] Where alternative route 2 crosses the above lands, it would run parallel to an existing alignment of four pipelines. While alternative route 2 would not increase the fragmentation of lands associated with the Reperio Project, it would reduce gravel extraction equal to the 24-metre width of the ROW. The areal extent of the Reperio Project appears to be extensive; however, Reperio did not appear at the hearing and no evidence was filed about the quality or depth of the gravel deposit or the economic viability of developing it.

[93] Sureway Contracting Ltd. (Sureway) owns SW 9-054-22W4M and reported to Grand Rapids that this land is being actively mined for gravel. However, Sureway did not appear at the hearing and no evidence was submitted about the extent of its current or future potential gravel operations.

[94] While there was some disagreement about the potential for future gravel extraction operations in these areas, the panel notes that none of the parties challenged Grand Rapids' assessment that these gravel interest holders might be entitled to compensation from Grand Rapids for loss of gravel resources and that they have a moderate or high potential to file an SOC about alternative route 2.

[95] Given the extensive level of consultation, negotiation, and proposed mitigations that have occurred on the applied-for route compared with the alternatives, the panel agrees it is difficult to interpret and compare the level of support or resistance to each of the routes and their potential impact on landowners. The panel found that the level of opposition to alternative route 2 as outlined in Grand Rapids' participant involvement records did not always appear to align with the classification colours

used by Grand Rapids on the heat map provided. However, based on the evidence, it is clear that there is more support for the applied-for route than alternative route 2 at this time.

[96] With respect to the applied-for route, the panel notes that 20 of the 21 landowners along this route have reached agreement with Grand Rapids and either support or do not oppose this route, including Fort Industrial. The panel also notes that the Guenette Farms lands are all currently zoned for agricultural use and the Guenettes have no specific development plans or timelines for development of the lands at this time. While one of the quarter sections recently acquired by the Guenettes (NW 8-054-22W4M) is within the area proposed to be annexed by the City of Fort Saskatchewan (see figure 1), this land was not owned by the Guenettes at the time of the application and is not the subject of this proceeding. The lands owned by the Guenettes at the time of the application and the underlying proceeding are not within the area proposed to be annexed. Also, the annexation process has not started and it is not clear to the panel whether or when the proposed annexation would occur. For these reasons, the panel is not able to assess the effects of the applied-for route on the Guenette Farms' future development plans in a meaningful way.

[97] The panel finds that alternative route 1 is unlikely to be significantly different from the applied-for route with respect to its potential impacts on landowners, given its similarity to the applied-for route.

[98] With respect to alternative route 2, the panel notes that several of the landowners along the route have expressed some concern about the route and may file SOCs. Impacts identified by these landowners include width of the ROW, sterilization of gravel resources, access, disturbance of land, ability to develop the land in the future, and compensation. The panel understands that landowners often file SOCs in order to advance their negotiations on compensation matters, even when they may not have any other significant concerns.

[99] The panel accepts that parties with gravel rights that would be affected by alternative route 2 would likely seek compensation for the loss of gravel resources and that it is reasonable to expect these parties to file SOCs unless negotiations on compensation for gravel losses are successful. The panel also acknowledges that some landowners along alternative route 2 appear to have avoided Grand Rapids' consultation efforts and that the most recent pipelines that have followed this route appear to have routed around some of these landowners, resulting in these pipelines deviating significantly from the east-recommended corridor. While the panel believes that with additional consultation efforts it is likely that Grand Rapids would be able to reach agreement with many of the landowners and holders of gravel rights along alternative route 2, the panel also accepts that it is likely that some landowners or interest holders would submit SOCs about alternative route 2 and that a hearing could be required to consider their concerns.

[100] Given the above, the panel finds that neither alternative route 1 nor alternative route 2 is clearly superior to the applied-for route in terms of minimizing impacts on landowners. As stated by Grand

Rapids, there does not appear to be “an obvious path of least resistance” for routing this segment of the pipeline because each of the routes will be viewed negatively by some parties.

[101] In closing argument, Grand Rapids indicated that the width of the permanent ROW required on the Guenette Farms lands could potentially be reduced to 20 metres as a result of its current construction plans, and there may be some opportunities to reduce the width of deviations on Mr. Guenette’s lands. The panel expects Grand Rapids and Guenette Farms to work together to reduce the overall impacts on the Guenette Farms lands to the extent practical.

Minimize the Number of Watercourse and Wetland Crossings

[102] In its June 8 submission, Grand Rapids identified the number of watercourse and wetland crossings along the three routes (see table 4) and found that its criterion to minimize the number of watercourse and wetlands crossings was satisfied for all three routes, resulting in a rating of “best” or “acceptable” for each route.

[103] In its submission, Guenette Farms raised concerns about the quantities calculated by Grand Rapids for this criterion. For instance, there was no backup information to support Grand Rapids’ calculations—it differed from the information for the same route in the original application, and there appeared to be errors and discrepancies in the numbers, making Grand Rapids’ analysis unreliable. In the analysis conducted by Mr. Berrien on behalf of Guenette Farms, Mr. Berrien used 15, 16, and 13 as the combined number of watercourse and wetland crossings for the applied-for route, alternative route 1, and alternative route 2, respectively. Mr. Berrien rated alternative route 2 as “green” or “moderately low impact” and alternative routes 1 and 2 as “red” or “higher or greater impacts.”

[104] In its July 14 reply submission, Grand Rapids provided revised numbers for the number of watercourse and wetland crossings along the applied-for route and alternative route 1 along with air photos showing the locations of the watercourses and wetlands included in its analysis. Grand Rapids submitted that the numbers provided in its June 8 submission were accurate but were calculated using end points that differed from those used for alternative route 2 and that the revised numbers allowed for a more direct comparison between the alternative routes. The revisions to the number of crossings for the applied-for route and alternative route 1 did not change Grand Rapids’ assessment of the routes with respect to this criterion.

Table 4. Number of watercourse and wetland crossings

	Applied-for route	Alternative route 1	Alternative route 2
Grand Rapids' June 8, 2015, submission			
Watercourse crossings	10	3	3
Wetland crossings	5	6	11
Total	15	9	14
Grand Rapids' July 14, 2015, reply submission			
Watercourse crossings	8	8	3
Wetland crossings	4	9	11
Total	12	17	14

Watercourse Crossings

[105] The panel notes that all three of the routes cross Ross Creek, which is the most significant watercourse to be crossed by the pipelines along this segment of the route. The remaining watercourses are all minor tributaries, man-made drainage ditches, or natural low-lying areas that facilitate drainage during periods of increased precipitation and surface runoff. Although there are more of these watercourses along the applied-for route (seven compared with one or two on alternative route 2), all are minor crossings where standard construction and mitigation measures will be sufficient to avoid adverse environmental effects. As a result, the panel does not find that the number of watercourse crossings is a significant differentiator between the three routes or that any of the routes are clearly better at minimizing impacts on watercourses.

Wetland Crossings

[106] The updated numbers provided by Grand Rapids identified 4 wetland crossings along the applied-for route, 9 wetland crossings along alternative route 1, and 11 wetland crossings along alternative route 2. Grand Rapids submitted that none of the wetlands along any of the routes were particularly significant or warranted special crossing methods, such as horizontal directional drilling (HDD), and could be crossed using standard construction and mitigation measures.

[107] Guenette Farms questioned the number of wetlands in Grand Rapids' analysis, submitting air photos that show that some of the wetlands along alternative route 2 do not appear in certain years and appear to have been farmed in those years. Guenette Farms also identified a prominent wetland near Ross Creek crossing along the applied-for route that was not accounted for in Grand Rapids' comparison of the alternative routes. Guenette Farms argued that Grand Rapids had underestimated the number of wetlands along the applied-for route and overestimated the number of wetlands along alternative route 2. Guenette Farms also argued that Grand Rapids had not provided information on the biological significance or

importance of the wetlands along the various routes that would allow a meaningful comparison of the routes.

[108] The panel notes that Grand Rapids evaluated the wetlands along the applied-for route using air photo interpretation, helicopter flyover, and ground-level classification following the Canadian Wetland Classification System. For alternative route 2, likely wetland and watercourse crossings were identified through a desktop review consisting of air photo interpretation and review of other available information such as soil mapping. Field verification of the desktop review and classification of wetlands according to wetland type were not done as part of the assessment for the alternative routes. The limitations and observed discrepancies and omissions limited the usefulness and reliability of the wetlands analysis provided by Grand Rapids.

[109] The panel observes that most of the wetlands along the applied-for route are classified as marsh or swamp. From the aerial photos and drone video it is clear that the areas of all routes have been highly developed with the vast majority of wetlands and watercourses having been impacted to varying degrees. For example, several of the seasonal marshes have been historically cultivated during dry years and are farmed to the edge when water is present.

[110] Several wetlands would likely be considered to have higher ecological value due to the intactness of riparian vegetation, hydrological connectivity, and other features. Along the applied-for route and alternative route 1 this would include the wetland to the south of Ross Creek and Township Road 544 in NE 15-054-22W4M. This wetland was classified as a shrubby swamp in the original application but was omitted in the routing analysis. Although bisected by the nearby road and the recommended west pipeline corridor, it is large and likely retains ecological value. In SW 34-055-22W4M is a semipermanent wetland with some intact vegetation that is likely viable aquatic and waterfowl habitat. Along alternative route 2 are a wetland and an unidentified watercourse near Township Road 550 that, while impacted by the road, appear to have well-established riparian vegetation zones. Farther south in SW 36-055-22W4M is a wetland that has been cultivated to the fringe, but wetland vegetation is still present and historical air photos indicate that the water is permanent and is likely viable aquatic and waterfowl habitat.

[111] Overall, from aerial photos and video footage, the panel finds that all routes are similar in terms of the number, size, and likely classification of wetlands. From the video, it appears the largest wetland of importance is the one south of Ross Creek on the applied-for route and alternative route 1. However this wetland has already been impacted by other activities, and if the pipeline is installed along the pre-existing disturbed area, additional impact onto this wetland would be minimal. As most of the wetlands potentially crossed by either route are ephemeral in nature and are already impacted by other activities, mitigation of effects of the pipeline crossing will be simplified and restoration to pre-activity conditions will likely occur within a short period. For those wetlands with more mature vegetation, including woody species, restoration from pipeline crossing will require a longer period to re-establish vegetation.

[112] The panel does not believe that simply counting and comparing the number of watercourse and wetland crossings is sufficient to allow for the superiority of a route to be determined or that small differences in the number of watercourse crossings is sufficient to judge the superiority of one route over another. One must also consider the nature and significance of the different watercourses and wetlands to be crossed and the potential for residual effects after mitigation measures are implemented.

[113] Due to pre-existing development impacts for both routes, wetland values appear to be low. While the wetlands likely provide some ecological function that should be maintained, restoration to pre-existing (current) conditions after pipeline construction will likely be easier as a result of this impairment.

[114] In this situation, all routes share similar challenges that can be addressed through appropriate mitigation, post-construction monitoring, and remediation. The panel therefore finds that neither the applied-for route, alternative route 1, nor alternative route 2 is clearly superior from the perspective of minimizing impacts on watercourses and wetlands.

Minimize Impact on the Environment and Sensitive Environmental Receptors

[115] Except for the watercourses and wetlands identified along the various routes, no other environmentally sensitive features or areas have been identified along the applied-for route, alternative route 1, or alternative route 2. The panel acknowledges that all of these routes are within sharp-tailed grouse habitat; however, this is not a differentiator between the various alternative routes.

[116] As discussed in the section on minimizing route length, while the additional 1.4 km of length on alternative route 2 will result in some additional impacts due to disturbance of land along the ROW, the panel does not believe that this disturbance will have any lasting environmental effects given that the disturbance will occur on agricultural lands and that standard mitigation measures will be used to minimize these effects.

[117] As a result, the panel finds that this criterion is not a significant differentiator between the various alternative routes evaluated by Grand Rapids and that on this criterion none of the routes is clearly superior.

Avoid Park Lands, Cemeteries, Historical Sites, and Archeological Sites

[118] There are no identified park lands, cemeteries, historical sites, archaeological sites, or other cultural sites along the applied-for route, alternative route 1, or alternative route 2. As such, this is not a significant or differentiating criterion for this segment.

Avoid Known Ceremonial, Spiritual, Habitation, and Resource Gathering Sites

[119] The applied-for route, alternative route 1, and alternative route 2 are located entirely on privately owned lands. There are no identified ceremonial, spiritual, habitation, or resource gathering sites along either of the routes. As such, this is not a significant or differentiating criterion for this segment.

Comply with Existing Land Use Plans and Setbacks

[120] In *Decision 2014-012*, the panel provided its rationale for conditions 12 and 13 by explaining that it was not satisfied with Grand Rapids' assessment of routes A and B (paragraph 170).¹ In the panel's opinion, Grand Rapids failed to adequately consider relevant criteria, such as the avoidance of urban areas. The panel considered it "important to avoid urban and industrial areas where possible and where an alternative exists in order to reduce impacts on landowners and future developments" (paragraph 169).

[121] The panel recognizes its responsibility to consider land use planning policies and bylaws when making decisions about proposed energy developments. It is the panel's view that pipeline applicants are expected to comply with existing land use requirements and policies for a given area, unless there is a compelling reason to do otherwise. Therefore, the panel assessed the three routes that Grand Rapids is prepared to construct in terms of their compliance with existing land use plans and setbacks. The panel also considered the impact of the pipeline on the Guenette Farms lands in the context of the land use plans for the area.

[122] Based on the evidence before it, the panel finds the following land use documents and plans are relevant to its review of the three routes Grand Rapids is prepared to construct.

The Capital Region *Regional Energy Corridors Policy Framework*

[123] The *Regional Energy Corridors Policy Framework (Framework)*, included with Guenette Farms' submission, was prepared for the Capital Region Board (CRB) in October 2014. In the document it is stated that the provincial government mandated that the CRB *Growth Plan* identify the location of corridors as part of a comprehensive integrated regional land use plan for the region. The CRB *Growth Plan* provides policy direction that influences regional energy corridors and is not a statutory document.

[124] The *Framework* states the following:

- There are two formally designated corridors in the region: the transportation utility corridor and the NEPC.
- The NEPC is largely full, with real development constraints for future linear corridor development.
- Two major common routes have developed to connect Alberta's Industrial Heartland to the NEPC.

¹ For clarification, Route A as referenced in *Decision 2014-012* is the applied-for route described in the route selection analysis submitted by Grand Rapids on June 15, 2015, and route B is now called alternative route A.

- These two routes are recognized as unofficial corridors.
- Future pipelines will likely follow these unofficial corridors.

[125] The two unofficial corridors referred to in the *Framework* are the east and west-recommended corridors referred to in the parties' submissions and in relevant land use plans for the area.

[126] The *Framework* recommends that the CRB adopt an energy corridors policy framework that supports a master plan to guide the development of energy corridors. In section 3.2 of the *Framework*, it is stated that key components of the petroleum system are very close to being isolated with limited opportunities for growth and expansion as a direct result of a shortage of space for pipelines to export bitumen. The *Framework* contemplates an additional 14 to 16 pipelines for the region between now and 2034.

[127] According to the *Framework*, there is a policy gap in the CRB *Growth Plan* for planning future energy corridors. While the *Growth Plan* directs municipalities to "identify and protect" infrastructure corridors in their statutory plans, it assumes knowledge of where future corridors will be located. The *Framework* acknowledges that municipalities, on their own, have limited ability to direct the location of corridors.

[128] One of the two existing pipeline corridors, the west-recommended corridor crosses a small area within the easterly limits of Fort Saskatchewan. This area is identified in the *Framework* as a physical constraint area for future corridor development.

[129] The *Framework* also notes that the AER has a role in corridor development by laying out the regulatory terms for pipelines specifically with regard to setback distances and a preference for alignment of pipelines adjacent to existing corridors.

Fort Saskatchewan Municipal Development Plan and Land Use Bylaw

[130] A segment of the applied-for route and alternative route 1 passes through Fort Saskatchewan's eastern boundary where the land is identified for future light and medium industrial use. The *Fort Saskatchewan Municipal Development Plan (FSMDP)* does not contain any policy or direction on pipeline corridors.

[131] The Fort Saskatchewan land use bylaw regulates specific uses of land. The lands on which the applied-for route and alternative route 1 would be constructed are designated industrial reserve, meaning that the lands are currently in agricultural use and are identified for industrial development in the future if and when the lands are subdivided.

Josephburg Road North Industrial Area Structure Plan

[132] The *Josephburg Road North Industrial Area Structure Plan (JASP)* is a bylaw adopted by the City of Fort Saskatchewan (the City) in January 2011 that covers an area of land within Fort Saskatchewan that contains a lot of heavy industry. The area structure plan gives further expression to goals identified in the *FSMDP*, and as submitted by Grand Rapids it expressly contemplates a pipeline corridor at the location of the applied-for route and alternative route 1. Goal 4.4 in the *JASP* is “to ensure the integrity of the existing pipeline and utility corridors by incorporating the right of ways, where feasible, into the development fabric of the plan area.” The *JASP* also contemplates the potential for additional pipelines to be constructed beside the existing corridor. Grand Rapids’ applied-for route and alternative route 1 follow the west-recommended corridor through the land covered by the *JASP*. The Guenette Farms lands are outside of the *JASP*; however, the Fort Industrial lands are inside the plan area.

Strathcona County Municipal Development Plan and Land Use Bylaw

[133] The *Strathcona County Municipal Development Plan (SCMDP) Bylaw 1-2007* identifies conceptual land uses as urban, agri-industrial transition policy area, and agricultural large holdings policy area. The Guenette Farms lands fall into the “Agricultural Large Holdings” category. As stated in Grand Rapids’ CITYTREND submission, “[t]he policy aims at minimizing the fragmentation of agricultural land by limiting subdivision and ensuring the viability of large agricultural operations.”

[134] The *SCMDP* provides direction for future pipelines “to maintain the identified recommended corridors or to parallel existing transportation infrastructure.” The plan recognizes the importance of both the east and west-recommended corridors. The Strathcona land use bylaw is a regulatory instrument that specifies a purpose for certain lands (parks, residential, agriculture) and requirements for how development will occur.

Grand Rapids Alternative Route Analysis

[135] Grand Rapids testified that while it did not have criteria specific to avoiding or minimizing impacts on urban areas, this was considered as part of its criterion related to compliance with existing land use plans for the area. Grand Rapids reviews land use policies and plans in order to identify existing pipeline corridors and preferred alignments in a region. The results are used to eliminate clearly inferior routes from further consideration.

[136] Grand Rapids submitted that the applied-for route is the superior route because it is compatible with existing land use plans and is supported by the County and the City and by all landowners along the ROW except for Guenette Farms.

[137] Grand Rapids engaged CITYTREND to review the relevant land use planning documents. The CITYTREND report finds that the applied-for route and alternative route 1 are superior from a land use

planning perspective given that, among other things, they are the shortest routes, follow the west-recommended corridor, and do not result in additional fragmentation of land.

[138] Guenette Farms submitted that the applied-for route and alternative route 1 will impact their ability to develop the lands in the future and will take away lands that may become part of Fort Saskatchewan. The Guenettes Farms' submission relies primarily on a report by routing expert Mr. Berrien. Mr. Berrien submits that complying with existing land use plans is not a useful criterion, nor is it a criterion he uses because under Alberta law everyone is required to comply with land use plans. In his opinion, the important criterion in the context of segment 4 is to avoid urban areas, residences, and congestion.

[139] In Mr. Berrien's view, Grand Rapids has not properly considered the impact of the applied-for route and alternative route 1 on urban areas and therefore its analysis is inadequate.

The Applied-For Route and Alternative Route 1

[140] Both the applied-for route and alternative route 1 are mainly on land in Strathcona County except for the short section that crosses four quarter sections of land inside the east boundary of Fort Saskatchewan. The land inside Fort Saskatchewan is zoned "Industrial Reserve" and is in agricultural use, and the expectation is that it will be rezoned when it is subdivided. The land in Strathcona County on which these routes would be constructed is zoned "Agricultural General" in the Strathcona Municipal Development Plan.

[141] Both the applied-for route and alternative route 1 follow the west-recommended corridor. Of the land along the corridor, 82 per cent is zoned for agricultural use and 18 per cent is zoned for industrial reserve.

[142] Grand Rapids said that its staff had numerous consultations in the form of meetings and correspondence with City and County authorities beginning in 2012 and continued to consult with the City and County subsequent to *Decision 2014-012*. Throughout these consultations, City and County staff did not identify any concerns about the-applied-for route.

[143] However, in a letter dated June 22, 2015, to Fort Industrial, the mayor of Fort Saskatchewan expressed a preference for the pipeline to be located outside of Fort Saskatchewan's boundaries to preserve its future tax base. Grand Rapids reported that in a subsequent meeting between the City and Grand Rapids, the mayor clarified that the City's preference is alternative route 1 on the east side of the west-recommended corridor and that this preference "was based off of its effort to maintain industrial zoned lands in order to encourage development and contribute to its tax base." However, Grand Rapids reported that the mayor also says that the City's preference is not a strong concern and that the City continues to support the project.

[144] The panel finds that the applied-for route and alternative route 1 comply with City and County land use plans and zoning for the area. While the panel acknowledges that the mayor of Fort Saskatchewan expressed a preference for alternative route 1, this preference was raised very recently. Also, given that the City did not seek to be a participant in this or the underlying proceeding and that the mayor was not a participant in this proceeding, the panel was not able to give much weight to the views expressed in the letter from the mayor or in the meeting notes prepared by Grand Rapids.

[145] Mr. Berrien submitted that the fact that the project crosses an urban area should be enough justification to choose an alternative route outside of Fort Saskatchewan. In *Decision 2014-012*, the panel expressed the view that, where possible, urban lands should be avoided unless there is a clear alternative. While avoiding urban areas where alternatives exist seems to be good practice, the current planning policies and bylaws for the area do not require this.

[146] In this case, the panel accepts the authority of the planning documents, which contemplate continued use and potential expansion of the west-recommended corridor. The panel agrees with Grand Rapids that the fact that a pipeline route is in an urban area does not, in itself, determine whether the route gives rise to unacceptable impacts. The panel therefore finds that it was reasonable for Grand Rapids to rely on these documents for its original routing analysis and for the alternative routing analysis required under conditions 12 and 13.

[147] The Guenette Farms lands are located entirely within Strathcona County and are zoned "Agriculture: General." Grand Rapids submitted that since the lands are zoned agricultural, the location of the pipeline in the existing west-recommended corridor is not incompatible with land use zoning. As noted earlier, Mr. Guenette purchased the lands in 1988-89. He began acquiring lands in Strathcona County anticipating that land value near Fort Saskatchewan would in time appreciate and that the lands would eventually be rezoned or annexed by the City for commercial or residential use. Grand Rapids testified that there is no evidence of any City plans to annex the Guenette Farms lands.

[148] An article in the Sherwood Park News, dated June 29, 2015, was included in Guenette Farms' submission. The article describes the City's intent to annex land from the County to build residential and commercial projects. An accompanying sketch depicts the west pipeline corridor running through the area that would be annexed and used for residential purposes. The article also reports the Strathcona County mayor's disappointment on hearing that the City intends to annex Strathcona County lands. Except for one quarter section recently acquired by Guenette Farms (NW 8-054-22W4M), the Guenette Farms lands are not part of the proposed annexation. However, Mr. Guenette told the panel that he intends to ask Fort Saskatchewan to include his lands in any future annexation.

[149] It is the panel's view that the issue of the annexation of Strathcona County lands by the City is somewhat speculative. The only evidence on this point is a newspaper article submitted by Guenette Farms. Moreover, Grand Rapids testified that the County and the City have an agreement in place to not

annex land from each other until at least 2031. The panel accepts that without evidence to the contrary, annexation is uncertain and may be many years in the future. The panel agrees with Grand Rapids' argument that, at this point in time, any potential impacts of the project on Guenette Farms' development aspirations cannot be adequately tested because of the lack of evidence on this point.

[150] Guenette Farms submitted that the west-recommended corridor is full. The panel notes that currently the corridor has no boundaries and that land use planning documents refer to protecting the corridor for further expansion. The CRB *Growth Plan* also anticipates further expansion of the corridor.

[151] Given the evidence before it, it is not possible for the panel to say that the corridor is full. The panel respects the direction the municipalities have identified in their land use planning documents. While there is already a significant number of pipelines in this corridor, planning documents suggest that the corridor might expand and have more pipelines in the future.

Alternative Route 2

[152] This route is entirely within Strathcona County on lands that are zoned agriculture. About 8.4 km of the route follows the east-recommended corridor, and the remaining 7.4 km follows existing alignments that contain multiple pipelines.

[153] It is Grand Rapids' opinion that alternative route 2, while not incompatible with land use planning policies, is inferior to the applied-for route and alternative route 1 because it does not follow the east-recommended corridor for its entire length. Grand Rapids reported that while the County expressed support for alternative route 2 as long as it followed the railway alignment, the County noted

- the potential conflict with a large-scale gravel extraction project (Reperio Project),
- that alternative route 2 is longer than the other two routes, and
- that alternative 2 would create new disturbance in an area that has not been disturbed in some time.

[154] Intuitively, it would seem to the panel that alternative route 2 would result in less potential for land use conflict given that it is located some distance from urban areas and is zoned agricultural for its entire length. Landowners would be able to continue to farm over the pipelines after construction and reclamation. However, the panel finds there is some evidence that the County does not fully support this route, given its potential conflict with the Reperio Project, its increased length, and the fact that this area has not been used for pipelines recently.

[155] The panel finds that land use planning information is a combination of policy direction and statutory requirements and is quite persuasive. In the context of condition 13, the panel has much more evidence before it about existing and future land use policies and plans for the area than it had for the underlying proceeding in 2014. Based on the evidence, the panel accepts that Grand Rapids relied on current land use plans and zoning bylaws when selecting the three routes it is prepared to construct.

[156] The panel notes that the CRB *Framework* was produced after Grand Rapids had completed its original routing analysis and after the hearing that is the subject of *Decision 2014-012*. Meeting notes of conversations in April and May 2015 between Grand Rapids and Neal Sarnecki of the CRB confirmed that the CRB is committed to directing the industry to respect the existing recommended corridors by planning pipeline infrastructure within those corridors where possible. The CRB has initiated a process to review pipeline corridor policies in collaboration with industry and the province. As a result of this process, the CRB expects to provide additional policies about the recommended corridors or criteria to respond to growing pipeline demand from industry.

[157] The panel notes that the three routes Grand Rapids is prepared to construct are consistent with the policy direction of the CRB. Although 7.4 km of alternative route 2 does not follow one of the two recommended corridors, it follows existing pipeline alignments.

[158] The panel understands the *Framework* document and the CRB *Growth Plan* to be policy instruments that provide direction to CRB membership. The panel finds it relevant that the *Growth Plan* acknowledges the existence of the two informal corridors and anticipates that future pipelines would likely follow these alignments.

[159] As stated in *Decision 2014-012*, the two existing corridors have no defined boundaries and the lands within the corridors have not been acquired for designation as formal corridors. While they have some statutory weight by virtue of their inclusion in the land use plans, particularly the *JASP*, they continue to be recommended corridors. In some instances they are considered “protected” in light of being identified in land use plans, and there is mention in the CRB *Framework* of the need to protect the corridors for future expansion.

[160] The panel places significant weight on the fact that the two corridors are identified as recommended corridors or preferred alignments in existing planning documents and as such provide planning guidance from the City, the County, and the CRB that pipelines should continue to be constructed in these corridors rather than create additional disturbance in the form of de facto corridors.

[161] The panel has considered the evidence on the issue of compliance with existing land use plans. It is clear that the County, the City, and the CRB prefer pipelines to follow existing corridors and not create new disturbance unless absolutely necessary. It is also clear that the corridors are protected to some degree by land use plans and bylaws and from a policy perspective are expected to expand in the future. The panel concludes that for this criterion, all three of the routes are acceptable from a land use planning perspective and none of the routes is clearly superior.

Hydraulic Design, Constructability, and Cost Considerations

[162] Grand Rapids submitted that the applied-for route was the superior route because it presented no design or constructability constraints and was the lowest-cost option of the alternatives considered. Grand Rapids' analysis indicated that the applied-for route would require 71 crossings of other pipelines, pipeline corridors, county and access roads, and other utilities (see table 5). Three of these crossings would require horizontal directional drilling (HDD) methods. Grand Rapids noted that fewer crossings were required on the original route but that reroutes resulting from stakeholder consultation had resulted in additional crossings, including HDD crossings.

Table 5. Number of crossings for each proposed pipeline route

Route	Crossing types					Total crossings
	Other pipelines	Pipeline corridors	Country and access roads	Rail lines	Other utilities	
Applied-for route	29	4 (total of 56 pipelines)	11	n/a	27	71
Alternative route 1	21	6 (total of 85 pipelines)	10	n/a	26	63
Alternative route 2	16	2 (total of 16 pipelines)	9	2	16	45

[163] Grand Rapids indicated that while alternative route 1 was about 100 metres longer than the applied-for route, it did not pose any major construction challenges. Alternative route 1 would involve 63 crossings of other pipelines, pipeline corridors, county and access roads, and other utilities (table 5). It would require four forged bends and five crossings using HDD methods, resulting in about \$4.8 million in additional pipeline design, materials, and construction costs.

[164] Grand Rapids submitted that alternative route 2 would require constructing and maintaining 2.8 km of additional pipeline length (2 pipelines x 1.4 km of additional length) and would require 45 crossings of other pipelines, pipeline corridors, county and access roads, rail lines, and other utilities (table 5). Grand Rapids said that construction of this route would require five forged bends and two crossings using HDD methods and would incur about \$9.7 million in additional pipeline design, materials, and construction costs. Grand Rapids said that the additional construction costs do not include additional project costs in the range of \$12 to \$15 million for extended regulatory review, sunk land costs on the applied-for route (including negotiated payments for land rights and other land related compensation), workaround mobilization/demobilization costs in advance of alternative route 2 ROW land acquisition, and loss of the summer 2015 construction season. Grand Rapids also said that additional costs related to new ROW land acquisition on alternative route 2 were expected to be multiples of current market value and that these costs are not reflected in the cost estimates provided.

[165] Despite its view that the applied-for route was the superior route by this criterion, Grand Rapids rated all of the routes as “best” or “acceptable” in terms of technical constructability.

[166] Guenette Farms argued that from a constructability perspective, Grand Rapids' own analysis clearly indicates that alternative route 2 is superior because it has significantly fewer crossings than the applied-for route and fewer is better. Mr. Berrien also argued that the crossing numbers provided by Grand Rapids underestimated the constructability and congestion issues along the applied-for route because the number of pipelines in the various pipeline corridors and the length of those crossings are not clearly reflected in Grand Rapids' crossing numbers. Accounting for the number of pipelines in each corridor, Mr. Berrien identified the total number of crossings as 119, 143, and 54 for the applied-for route, alternative route 1, and alternative route 2, respectively. On the basis of these numbers, Mr. Berrien rated alternative route 2 as "green" or "comparatively low impact" and the applied-for route and alternative route 1 as red or "higher or greater impact."

[167] Mr. Berrien pointed to the number of "jigs and jogs" along the applied-for route as further evidence of the congestion and constructability issues associated with the applied-for route as compared with alternative route 2. With respect to congestion, Mr. Berrien rated alternative route 2 as "green" or "less congested" and alternative route 1 and the applied-for route as "red" or "more congested."

[168] Grand Rapids did not agree that congestion is a criterion relevant to the analysis and did not consider paralleling other pipelines to be congestion. Grand Rapids argued that without considering whether unacceptable impacts arise, the application of this criterion as suggested by Mr. Berrien would contradict the routing principle applied and accepted by various environmental, regulatory, and land use planning authorities to use existing pipeline corridors where possible. Grand Rapids said that from a constructability perspective, safety is of the utmost importance. Only when congestion is such that it could not build, operate, and maintain the pipeline safely and protect the integrity of the pipeline would congestion be a concern. Grand Rapids submitted that was not the case for the applied-for route or for alternative routes 1 and 2.

[169] Grand Rapids also argued that Mr. Berrien's assessment seeks to compare a refined route that accommodates landowner preferences and environmental and other constraints (i.e., the applied-for route) with an alternative route that is not yet informed by detailed site examinations and surveys and by the degree of landowner engagement characteristic of land rights acquisition negotiations (i.e., alternative route 2). Grand Rapids suggested that the number of crossings for alternative route 2 was likely an underestimation of the final number of crossings because reroutes resulting from further stakeholder consultation would likely increase the number of crossings required, as had occurred on the applied-for route.

[170] The panel accepts that constructability is a complex issue that involves considering more than just the number of crossings involved, and that it may be misleading to compare the number of crossings on the various routes given the differing levels of landowner consultation and engineering design that have occurred on each route. The panel also accepts Grand Rapids' argument that simply paralleling a significant number of other pipelines is not enough to indicate a congestion problem. Despite these

comments, it does appear to the panel that alternative route 2 poses fewer constructability issues than the applied-for route. On this basis, alternative route 2 seems to be superior to the applied-for route from a constructability perspective.

[171] Guenette Farms noted that Grand Rapids' analysis included many measures of cost differentials and argued that costs incurred as a result of preapproval spending should not be a relevant consideration when comparing the various routes. Mr. Berrien argued that if cost differentials were used as a criterion, future applicants could simply spend all the needed costs to acquire most of a ROW and then advise the objectors and the AER that it had spent so much money that its efforts must be approved regardless of the suitability of the route. Mr. Berrien submitted that acquiring a ROW before a permit and licence might help a company achieve its commercial targets and provide other competitive advantages, but only if a thorough and competent job of route planning precedes the ROW purchase. As a result, Mr. Berrien did not rate the various routes using the cost criterion.

[172] Grand Rapids argued that the most practical approach for major pipeline land acquisition programs is to settle all issues in full, including compensation, in advance of a potential regulatory hearing. As a result, land acquisition costs and associated engineering, and design costs incurred in addressing landowner and stakeholder concerns are an industry norm in pipeline routing. Grand Rapids submitted that if it had not satisfied landowner concerns, many of the landowners along the applied-for route would have filed statements of concern. Grand Rapids therefore argued that sunk costs associated with the applied-for route were reasonable and prudent costs to incur in the circumstances and should be a consideration for the panel.

[173] While the panel agrees with Grand Rapids that costs are a valid consideration when evaluating the various route alternatives, the panel also finds merit in Mr. Berrien's argument that sunk costs should not be used as justification for an inferior route.

[174] The only design and construction cost information Grand Rapids provided for the alternative routes were relative costs compared with the cost of constructing the applied-for route. When the panel asked whether Grand Rapids could provide the estimated cost of constructing the applied-for route, Grand Rapids indicated that this information was not readily available because the cost information is tabulated by construction spread and not specifically for the segment of the pipeline being considered in the routing analysis. Without this information, or detailed cost estimates for each of the alternative routes considered, the panel was not able to assess the validity of the cost estimates provided by Grand Rapids or determine the significance of the incremental costs of alternative routes 1 and 2. While on the basis of the cost estimates provided by Grand Rapids it appears that the applied-for route would be the lowest-cost route, for the above reasons the panel was not able to determine which route was superior from a cost perspective.

Conclusion

[175] The panel is aware that conducting a routing analysis is a challenging exercise, and it is difficult to satisfy all stakeholders involved when selecting a route. The AER expects applicants to consider more than one route option during the initial project design where circumstances warrant and to take a reasonable and balanced approach to route selection. Small differences in any individual routing criteria are not likely to be sufficient to demonstrate the suitability or superiority of a particular route. Routing analysis requires a careful consideration and balancing of the various routing criteria to arrive at a route that minimizes adverse effects while achieving desired outcomes.

[176] The panel believes that all of the criteria it considered are important and useful criteria when evaluating pipeline route alternatives. However, with respect to the specific segment of the Grand Rapids project that is the subject of conditions 12 and 13 of AER *Decision 2014-012*, the panel finds the following criteria to be the most relevant and useful:

- Minimize impact on landowners, aboriginal communities, and other stakeholders.
- Comply with existing land use plans.
- Minimize the number of watercourse and wetland crossings.

[177] Consequently, the panel placed significant weight on each of these criteria in reaching its decision.

[178] With respect to minimizing impacts on landowners, aboriginal communities, and other stakeholders, the panel did not find that alternative route 1 or alternative route 2 were superior to the applied-for route. Each of the routes will result in some impacts on landowners, and some landowners appear to be resistant to each of the routes. While the panel acknowledges that the nature of the impacts along each route may differ, based on the evidence presented the panel was not able to determine that the impacts on landowners along alternative route 2 would be significantly less than the impacts on landowners along the applied-for route.

[179] From a land use planning perspective, the panel finds that the applied-for route, alternative route 1, and alternative route 2 are all acceptable. Land use policy and planning documents prepared by the Capital Region Board, Strathcona County, and the City of Fort Saskatchewan support the continued use and potential expansion of the west-recommended corridor and the east-recommended corridor. While intuitively it appears to the panel that following alternative route 2 and the east-recommended corridor would result in fewer potential land use conflicts with urban development, this view is not reflected in current planning documents prepared by the relevant planning authorities. The panel considers it was reasonable for Grand Rapids to have relied on the existing planning documents during its routing analysis and selection, and finds that the applied-for route, alternative route 1, and alternative route 2 all comply with current land use planning requirements.

[180] The panel finds that the number and types of watercourse and wetland crossings along the applied-for route, alternative route 1 and alternative route 2 were similar. Although there was conflicting evidence during the hearing on the number of crossings along each route, the panel does not believe that a simple comparison of the number of watercourse and wetland crossings or small differences in the number of crossings is sufficient to determine the superiority of a route. Of greater importance is the nature and significance of the different watercourses and wetlands to be crossed and the potential for residual effects after mitigation measures are implemented. In this situation, given the panel's finding that the number and types of watercourses and wetlands along each route were similar, the panel does not find that alternative route 1 or alternative route 2 is superior to the applied-for route.

[181] While it appears to the panel that alternative route 2 is superior to the applied-for route from a constructability perspective, this is based primarily on the fewer number of crossings along alternative route 2. However, the panel acknowledges that constructability is a complex issue that involves a consideration of more than just the number of crossings involved. The panel accepts Grand Rapids' evidence that the applied-for route, alternative route 1, and alternative route 2 all meet or exceed Grand Rapids' criteria for constructability. The panel is not able to determine which route was superior from a cost perspective.

[182] The other routing criteria considered by the panel were not determinative for the segment of the route under consideration.

[183] For the above reasons, the panel did not find that alternative route 1 or alternative route 2 is superior to the applied-for route. Grand Rapids may proceed to construct the applied-for route.

Dated in Calgary, Alberta, on September 2, 2015.

Alberta Energy Regulator

< original signed by >

A. H. Bolton, P.Ge.
Presiding Hearing Commissioner

< original signed by >

R. C. McManus, M.E.Des.
Hearing Commissioner

< original signed by >

C. Macken
Hearing Commissioner

Appendix 1 Hearing Participants

Principals and Representatives

(Abbreviations used in report)

Witnesses

Grand Rapids Pipeline GP Ltd. (Grand Rapids)

L. Olthafer

K. Slipp

S. Damji

N. Esposito

J. Hunt

J. Foster

L. Petrick

L. Gibb, of CH2M Hill Energy Canada Ltd.

B. Romanesky, of CITYTREND

D&A Guenette Farms Ltd. (Guenette Farms)

K. Wilson

D. Guenette

R.A. Berrien, of Berrien Associates Ltd.

Alberta Energy Regulator staff

J. Moore, AER Counsel

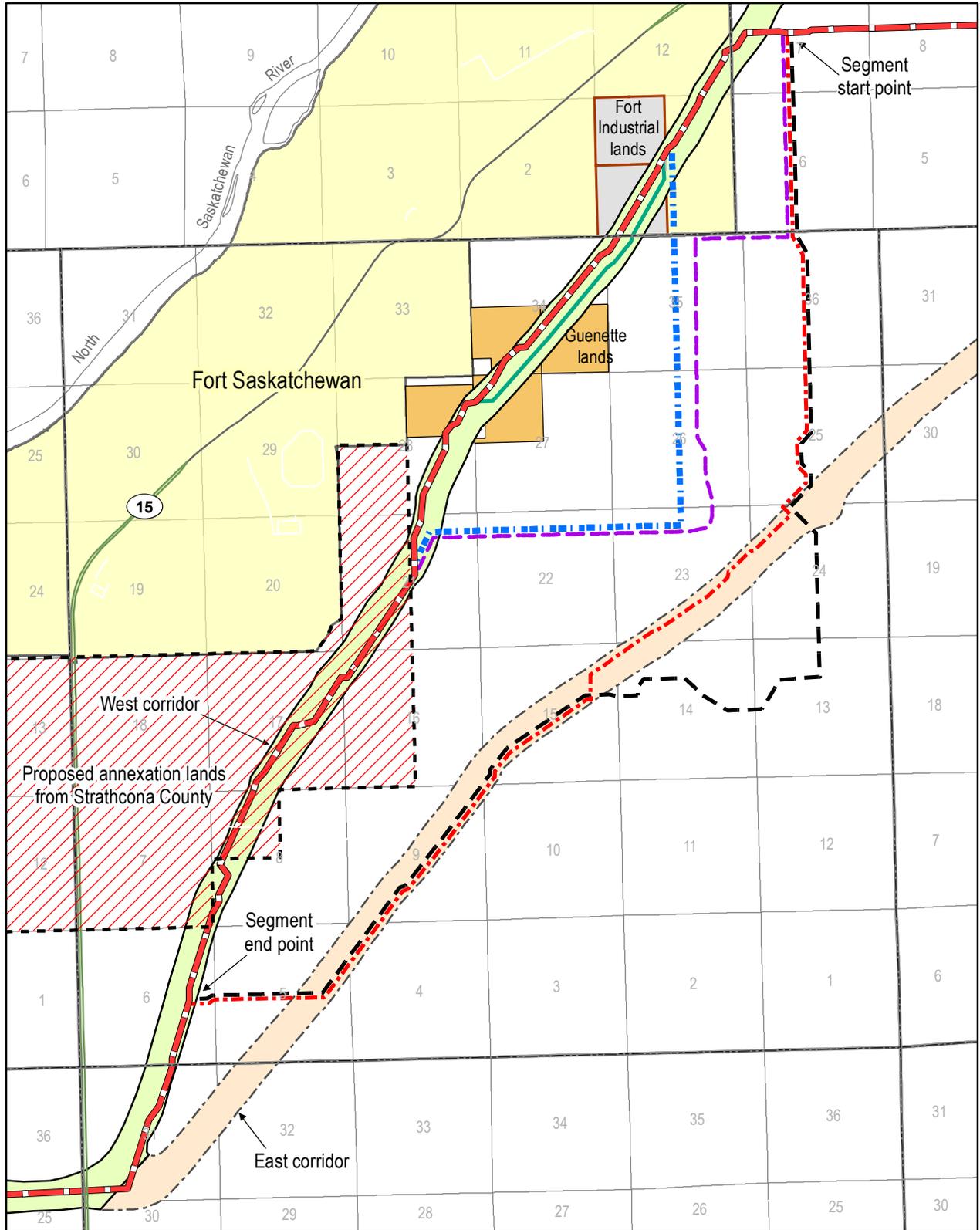
A. Karg, AER Counsel

J. Koppe

R. Ruddell

A. Shukalkina

W. LaFountain



T. 55

T. 54

T. 53

Legend

- Proposed GRP applied for route
- Proposed GRP alternative route 1
- Proposed GRP alternative route 2
- Proposed GRP alternative route A
- Proposed GRP alternative route B
- Proposed GRP alternative route C

- Proposed annexation lands
- East recommended corridor
- West recommended corridor

Figure 1. Grand Rapids' applied-for and alternative routes for conditions 12 & 13