Comments on Marten Falls Community Access Road Project (Project) revised Acoustic Environment Study Plan- January 7, 2022

It is essential that the Impact Statement for the Marten Falls Community Access Road Project (the Project) address all requirements outlined in the Tailored Impact Statement Guidelines (the Guidelines), and that the study plans outline a clear approach to achieving these requirements. The Impact Assessment Agency of Canada (the Agency) has highlighted sections of the Guidelines where requirements for the Impact Statement may not be met, based on content of the study plan submitted to the Agency. Note that this table does not provide an exhaustive list of the requirements described in the Guidelines should be reviewed in their entirety, including the sections identified below.

ŧ	Guidelines	Required Action for Proponent	Proponent Response	Final Study Plan Section Reference	Agency comments
	Section ¹			,	
C-01	Section 5 - Public Participation and views (including 5.1, 5.2)	Provide a clear description in the study plans of how public engagement opportunities have been and/or will be integrated into the impact statement phase. This must include detail on how the public will have opportunities to provide input to contribute to the development of the Impact Statement, as required in Section 5 of the Guidelines. Describe what engagement with the members of the public listed in the Public Participation Plan has been done in the development of the study plans, and/or any planned engagement with members of the public on the proposed study plans.	Section 4: describes how the Proponent will provide Project notices and opportunities with members of the public listed in the Public Partnership Plan. This will also include the opportunity to provide input on the existing environment, VCs, effects assessment methods, effects assessment results, and mitigation and follow-up program measures as applicable. A variety of activities will be offered so that members of the public are informed of the IS / EA Report as it progresses and are aware of the opportunities and means to provide their input. The study plans have recognized public and agency input received on the Project to date.	Section 4.1 "A variety of activities will be offered so that members of the public are informed of the IS / EA Report as it progresses and are aware of the opportunities and means to provide their input."	Section 4.1 of the study plan mentions that "a variety of activities will be offered"; however, no details on the likely engagement activities are provided. As required by Section 5 of the Guidelines, the Impact Statement must provide a record of engagement that describes all efforts taken to seek the views of local communities and other stakeholders with respect to the Project, including on the study plans. This record of engagement is to include all engagement activities undertaken prior to the submission of the Impact Statement, including prior to and during the planning phase, and in the preparation of the Impact Statement. Provide details on the timeline for public engagement relative to the project workplan, including engagement relative to the schedule for baseline work, and in consideration of the project team's timeline for the development of the Impact Statement. Demonstrate in the Impact Statement that comments provided by members of the public on the acoustic environment conditions were taken into consideration. Comments provided to the Agency are available on the Canadian Impact Assessment Registry Internet site
C-02	Section 6 - Description of Engagement with Indigenous Groups (including 6.1, 6.2, 6.3)	Provide a clear description in the study plans of how all Indigenous groups listed in the Indigenous Engagement and Partnership Plan will have opportunities to provide Indigenous knowledge, including the validation of how information they provided was applied. The study plan should include a description of the proposed methods for data collection, management of confidentiality, and information storage. This should also include a methodology for tracking information that has been approved by the group, to demonstrate that the guidance outlined in Section 6.2 of the Guidelines has been incorporated into the study plans. Describe what engagement with all the Indigenous groups listed in the Indigenous Engagement and Partnership Plan has been done in the development of the study plans, and/or any planned engagement	In Section 4.2 it is noted that the Proponent will provide Project notices and opportunities for consultation and engagement with Indigenous communities identified in the Indigenous Partnership and Engagement Plan. A variety of activities will be offered so that Indigenous communities are informed of the IS / EA Report as it progresses and are aware of the opportunities, means and timelines to provide their input. Section 2.1.1 outlines the approach to handling confidential information, by means of permission from Indigenous communities to include Indigenous Knowledge in the IS / EA Report, regardless of the source of the Indigenous Knowledge. The study plans have recognized Indigenous community input received on the Project to date.	Section 4.2 "A variety of activities will be offered so that Indigenous communities are informed of the IS / EA Report as it progresses and are aware of the opportunities, means and timelines to provide their input" "Indigenous communities will have the opportunity to comment on components of the study plans throughout the IS / EA Report consultation and engagement process"	at: https://iaac-aeic.gc.ca/050/evaluations/proj/80184/contributions Section 4.2 of the study plan states that "a variety of activities will be offered", however, no details on the planned engagement activities are provided. Section 4.2 of the study plan also states that "Indigenous communities will have the opportunity to comment on components of the study plans throughout the IS / EA Report consultation and engagement process", however, it is unclear on which components the study plans the project team plans to engage. It is also unclear whether Indigenous groups will be provided with a meaningful opportunity to provide input on a preliminary approach/method for baseline data collection, as required in Section 6 of the Guidelines, if engagement will take place after the baseline data collection is complete. Provide details on the timeline for Indigenous engagement on the acoustic environment conditions, including engagement relative to the schedule for baseline work, and spatial and temporal boundarie determinations, and particularly in relation to collection of Indigenous knowledge, and in consideration of the project team's timeline for the development of the Impact Statement. Demonstrate in the Impact Statement that comments provided by Indigenous groups on the acoustic environment were taken into

 $^{^{\}mbox{\tiny 1}}$ Refer to complete sections of the Guidelines for more context.

Genera	I Comments from the	ne Impact Assessment Agency of Canada	on the Marten Falls Community Access Road Draft S	tudy Plans – July 2, 2020	
#	Guidelines Section ¹	Required Action for Proponent	Proponent Response	Final Study Plan Section Reference	Agency comments
		with Indigenous groups on the proposed study plans, particularly in relation to collection of Indigenous knowledge (i.e. develop the work plan in collaboration with those Indigenous groups that would need to provide knowledge).			consideration. Comments provided to the Agency are available on the Canadian Impact Assessment Registry Internet site at: https://iaac-aeic.gc.ca/050/evaluations/proj/80184/contributions
GC-03	Section 6.2 - Analysis and response to questions, comments, and issues raised	Revise the study plans to include an approach to handling confidential information that demonstrates adherence to the guidance provided in Section 6.2 of the Guidelines.	Section 2.1.1: Section has been updated to include information regarding both confidentiality and permission information on all collected Indigenous Knowledge, regardless of the source. This section also includes how information regarding the Indigenous Knowledge Sharing Agreements will be established by the Proponent and Indigenous community participating in the Program.	Section 2.1.1 "Sensitive and / or confidential information collected through Indigenous Knowledge Sharing Agreements will be protected from public or third-party disclosure and will be established between the Proponent and Indigenous communities participating in the Indigenous Knowledge Program prior to the sharing and use of any sensitive information. Instances where Indigenous Knowledge sharing has taken place during consultation activities (e.g., meetings) will be recorded in the Record of Consultation and Engagement, including where Indigenous Knowledge was incorporated into Project decisions and into the IS / EA Report (i.e., specifics will not be included in the Record of Consultation and Engagement given the potential sensitivity and / or confidentiality of the information shared)"	As required in Section 6 of the Guidelines, describe the confidential information provided by each Indigenous group. Present the content in sufficient detail to support understanding of the potential effects and impacts on rights, while also protecting confidential/sensitive specifics and respecting stipulations in the confidentiality agreements (e.g., use buffer areas instead of specific locations, etc.). Provide to the Agency, in the form of a letter from the Indigenous group that shared confidential information, a letter confirming that: • the Indigenous group that provided confidential information is satisfied with the way the Impact Statement was informed; • the Indigenous group that provided confidential information is satisfied with the way the issue was solved or addressed.
GC-04	Study plans spatial boundaries	Describe the approach to be implemented to demonstrate how the definitions of the proposed study area boundaries: • encompass the anticipated boundaries of the Project's effects, including all potentially impacted local communities, municipalities and all Indigenous groups listed in the Indigenous Engagement and Partnership Plan; and • take into account community knowledge and Indigenous knowledge; current or traditional land and resource use by Indigenous groups; exercise of Aboriginal and Treaty rights of Indigenous peoples, including cultural and spiritual practices; physical, ecological, technical, social, health, economic and cultural considerations; and the size, nature and location of past, present and foreseeable future projects and activities.	Section 6.2: General information on study areas for the Project, including a detailed list of what was considered to develop the discipline-specific local and region study areas, is included in each study plan. Each study area has been proposed taking into consideration community knowledge and Indigenous Knowledge, current or traditional land and resource use by Indigenous communities, and the exercise of Aboriginal and Treaty Rights of Indigenous peoples, including cultural and spiritual practices, physical, ecological, technical, social, health, economic and cultural considerations available at this time. The proposed discipline-specific study areas are preliminary. The proposed study areas will be consulted and engaged on early in the IA / EA process. In addition, the Indigenous Knowledge Program provides additional opportunities for community knowledge and Indigenous Knowledge, current or traditional land and resource use by Indigenous communities, and the exercise of Aboriginal and Treaty Rights of Indigenous peoples to be shared in greater detail.	 Section 6.2 "The PDA encompasses the 100 metre-wide CAR right-of-way (ROW), temporary construction access roads, work areas, worker camps, and pits, quarries and associated access roads. The preliminary LSA currently being considered within the scope of the ongoing provincial regulatory review process generally includes the area within 2.5 km of the centreline of Alternative 1 and Alternative 4. The preliminary study area generally allows for the documentation of existing conditions and prediction of potential environmental effects for the Project. A 5 km wide study area also allows for route refinements during development of Project design (e.g., adjustment of the alignment to avoid sensitive features)" "The LSA and RSA boundaries for the Atmospheric Environment are detailed in Table 6-1 and on Figure 6-2" Local Study Area Geographic Extent: PDA plus a 4 km buffer Rationale: The setback distance is based on professional judgement and guidance provided by AER Directive 038: Noise 	As required in Section 7.4.1 of the Guidelines, provide information regarding how the following were/will be taken into account in defining the spatial boundaries: community knowledge and Indigenous knowledge; current and traditional land and resource use by Indigenous groups; exercise of Aboriginal and Treaty rights, including cultural and spiritual practices; physical, ecological, technical, social, health, economic and cultural considerations; and the size, nature and location of past, present and reasonably foreseeable future projects and activities. Provide the above information in a way that allows those who provided the knowledge to the proponent and the Agency to see their input reflected in the Impact Statement. It is not sufficient to state that "input from participants will be/was taken into account".

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				Control Directive (Directive 038) (EUB 2007) for noise assessments in Alberta, as no similar guidelines have been established in Ontario. Extending 4 km beyond the PDA will assist in the assessment of possible route refinements. - Since noise and vibration attenuate with distance, potential noise and vibration effects from the Project are expected to be the highest in the Acoustic and Vibration LSA, and any measurable noise and vibration effects due to the Project are predicted to be generally limited to the Acoustic and Vibration LSA. In the area beyond the Acoustic and Vibration LSA, noise and vibration levels from Project activities are expected to further attenuate, resulting in a lower potential contribution Regional Study Area Geographic Extent: - LSA plus a 5 km buffer Rationale: - The 5 km setback distance (from the LSA) is based on professional judgment and used to address indirect impacts outside the LSA.	
GC-06	Baseline Methodologies (Including 7.1, 7.2, 7.3, 7.4)	Provide further details in the study plans on how GBA+ has been integrated into all aspects of data collection methodology, as per Section 7.1 of the Guidelines, and into the assessment of effects and impacts, as mentioned in Sections 13, 20, 21, and others, related to effects assessments of the Guidelines	Section 4.3 has been updated to include the consideration of Identity and Gender-Based Analysis Plus (GBA+) including both Indigenous communities and their relevant subpopulations and non-Indigenous communities and their subpopulations. During consultation and engagement activities these groups (and any others defined during consultation) will be engaged with on targeted input.	- Aligns with field work completed in 2019. Section 4.3	Describe how Gender Based Analysis Plus (GBA Plus) has been or will be applied to the consideration of engagement activities. Identify specific methods targeted to specific subgroups. Provide detail on how GBA Plus has been integrated into all aspects of data collection methodology, as per Section 7.1 of the Guidelines, and into the assessment of effects and impacts, as mentioned in Sections 13, 20, 21, and others, related to effects assessments of the Guidelines. It is not sufficient to mention that GBA Plus will be applied to the assessment. Clear descriptions of how GBA Plus was integrated (including to which variables, method, and how it influenced results' interpretation) are needed in the Impact Statement.
GC-07	Section 13 - Effects Assessment (including 13.1, 13.2)	Provide details to demonstrate how the Project's potential effects will be considered, as per the requirements in Sections 13 to 19 of the Guidelines. Ensure that the effects assessment considers the effects of each of the project components and physical activities, in all phases, and that it is based on a comparison to the proposed baseline work.	Project environmental interaction are separated into Project phases, and Project activities for each environmental discipline in their VC-specific study plan listed as Table 9-1. Information collected through the various activities (e.g., field studies and programs, effects assessments) of each discipline area (e.g., wildlife, vegetation, cultural heritage) will be shared with the Indigenous Knowledge Program leads. This will support the establishment of the existing environment and the effects assessment for the Aboriginal and	Throughout the study plan, Section 9	As required in Sections 7 and 13 of the Guidelines, ensure that the effects assessment considers the effects of each of the project components (including but not limited to all alternative routes brought forward in the Impact Statement, all aggregates sources, access roads, etc.) and physical activities, in all phases, and that the assessment is based on a comparison to the data and information gathered during the proposed baseline work. Clarify the level of information that will be shared with, and explained to, the Indigenous Knowledge Program leads and whether study plans will be made available to all Indigenous groups listed in the Indigenous Engagement and Partnership Plan.

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		Provide detail on how engagement with all Indigenous groups listed in the Indigenous Engagement and Partnership Plan and the public will inform the effects assessment and the selection of mitigation measures and follow-up program measures.	Treaty Rights and Interests environmental discipline, as well as the identification of potential mitigation measures and monitoring programs.		
GC-08	Section 13.1	Provide clear descriptions of the rationale behind the assumptions, including but not limited to the assumed average daily traffic and vehicles composition during the construction and operation phases that will be considered for the effects assessment and the cumulative effects assessment.	Section 10: Current assumptions to be used in the effects assessment have been identified. Any additional assumptions will be identified and rationale will be provided in the IS / EA Report.	Section 10 "The assumptions that have been made in developing the Study Plan are detailed in Section 9. Any additional assumptions required to complete the effects assessment, for example the assumed average daily traffic on the CAR, will be clearly identified and a rationale provided in the IS / EA Report"	Before conducting the effects assessment analysis, the Agency advises the proponent to seek the Federal Review Team's confirmation of the assumptions that will be used in the analysis or, at a minimum, to discuss the type of assumptions that will be considered. As required by Section 13.1 of the Guidelines, ensure that the Impact Statement clearly outlines the assumptions used for the assessment of effects, including cumulative effects, on each valued component.
GC-09	Section 19.2 - Impacts on the Exercise of Aboriginal and Treaty Rights	Describe an approach for identifying the potentially impacted rights of Indigenous peoples of Canada that are recognized and affirmed by section 35 of the <i>Constitution Act, 1982</i> , and for integrating the potential impacts on those rights into the collection of baseline information and the effects assessment.	All study plans reference how potential effects on Indigenous rights will be assessed in the Aboriginal and Treaty Rights and Interests Study Plan. Impacts on Rights considerations are explained in the rationale for defining a Local Study Area and Regional Study Area for Aboriginal and Treaty Rights and Interests VCs. Further information for this is listed in Section 6.2.2 in the Aboriginal and Treaty Rights and Interests Study Plan.	Section 5, and Section 6.2.2 in the Aboriginal and Treaty Rights and Interests Study Plan	Feedback was provided in the Federal Review Team's comments package on the Aboriginal and Treaty Rights and Interests Study Plan.
GC-11	Section 25 – Description of the Project's contribution to sustainability	Provide detail on the approach to meeting the requirements of Section 25 of the Guidelines regarding the description of the Project's contribution to sustainability.	Section 9: the sustainability assessment for the Project will be undertaken on the preferred alternative and will characterize the Project's contribution to sustainability incorporating the requirements set out in Section 25 of the TISG.	Section 9.7	Section 9.7 of the study plan is listing the requirements outlined in Section 25 of the Guidelines. Ensure that the Impact Statement provides a description of the method or approach followed to meet the requirements of Section 25 of the Guidelines.

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AC-02	General Comment	Sections 9, 12.2, 12.4, 15.2, 15.3, 15.4, 16.1, 17.2, 19.1 and 20	The Guidelines include requirements beyond those in Sections 8.1 and 14.1 that are related to the acoustic environment (such as Sections 9, 12.2, 12.4, 15.2, 15.3, 15.4, 16.1, 17.2, 19.1 and 20). Changes to the acoustic environment could have effects on environmental, social, health and economic valued components, as well as effects to Indigenous peoples' current use of lands and resources for traditional purposes and conditions related to the impacts on rights of Indigenous peoples, for example. Whether in the acoustic environment study plan or in other topic specific study plans, there must be a demonstration of the approach to meet all requirements of the Guidelines, including those related to effects on community well-being from changes to soundscapes, and impacts of noise on the experience of a practice or the exercise of rights. The interactions of effects and the interconnectedness of the valued components is not apparent in this and other study plans.	Section 9.3 of the updated Study Plan provides preliminary information on the interaction of effects and the interconnectedness of the VCs. Further information will be provided in the IS / EA Report.	Section 9.3	The required action was partially addressed. While Table 9-3 of the study plan acknowledges potential interactions and pathways of effects, the approaches to assess the potential impacts from changes to the acoustic environment were not included. Include in the Impact Statement an acoustic effects assessment that meets the requirements of the Guidelines, including those related to effects on community wellbeing from changes to soundscapes, impacts of noise on the experience of a practice or the exercise of rights, or interactions of effects and the interconnectedness of the valued components.
AC-03	Section 3: Spatial Boundaries: Study Area "Noise may affect nearby wildlife, which may affect outdoor recreational and teaching activities of the community and Indigenous groups such as hunting and trapping for recreational and food purposes. However, the federal and provincial noise guidelines do not quantify indirect acoustic effects; and the direct and quantifiable acoustics effects are expected to be limited to the LSA."	 Section 19.1 "The potential effects, to consider assessing include both adverse and positive effects to the current use of land and resources for traditional purposes, physical and cultural heritage, and environmental, health, social and economic conditions of Indigenous peoples impacted by the Project, including interferences of the Project with the following: quantity and quality of resources available for harvesting (e.g., species of cultural importance, including traditional and medicinal plants); experiences of being on the land, including ability to pass on Indigenous knowledge and language (e.g., impacted from: changes in air quality, noise exposure, effects of vibrations from blasting and other activities);" 	Provide further details that demonstrate the methodologies and approaches to studying the impacts of noise to Indigenous peoples, as required in Section 19 of the Guidelines. Cross-reference any specific acoustic/noise methodologies and indicators that are to be found in other plans.	As identified in Section 4.2 of the Study Plan, the Proponent will provide opportunities for consultation and engagement with Indigenous communities identified in Table 4-1, which is inclusive of all Indigenous communities identified in the Indigenous Partnership and Engagement Plan for the Marten Falls Community Access Road Project Impact Assessment (the Agency 2020a). Further information on how Indigenous Knowledge will be considered in the IS / EA Report has been included in Section 5 of the Study Plan. Section 5 of the Study Plan provides further details on the two concurrent and complementary avenues for Indigenous communities and groups to be engaged with and provide input on the Project: the Indigenous Knowledge Program and the Consultation and Engagement Program. Section 9.3 of the updated Study Plan provides preliminary information on the interaction of effects and the interconnectedness of the VCs. Further information will be provided in the IS / EA Report.	Section 4.2, 5 and 9.3	The required action was not addressed. Provide a work plan that outlines how Indigenous groups and members of the public will be engaged on the acoustic study plan. The work plan should include scheduling and sequencing of engagement activities relative to proposed baseline work, engagement on the study plan, spatial and temporal boundaries determinations, and particularly in relation to collection of Indigenous knowledge. See also GC-02 above.

² Refer to complete sections of the Guidelines for more context

Federal	Review Team comments on the	Marten Falls Community Access Road	Project Draft Acoustic Study Plan submitted in 2020			
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AC-04	Section 3: Spatial Boundaries: Study Area "the direct and quantifiable acoustics effects are expected to be limited to the Local Study Area.	Section 13.1 "Predictions must be made on clearly stated assumptions and the Impact Statement must clearly describe how it has tested each assumption"	Provide details to demonstrate that direct and quantifiable acoustics effects are expected to be limited to the Local Study Area, considering the life of the Project and future uses of the road (including for mining purposes), and clearly identify the various noise receptors that are taken into account.	The Study Areas are defined and described in this Study Plan. Section 9.5 describes how the worst-case receptors will be assessed and their relevance to meeting noise and vibration criteria. The worst-case receptors are generally those located closest to the noise and vibration generating activities, and are likely located within the Local Study Area. As noted in Section 9.4.1, if residual acoustic effects from the Project are predicted, a cumulative effects assessment will be carried out to assess the combined impact of the Project and other existing physical activities, as well as future physical activities that are certain and reasonably foreseeable. The cumulative effects assessment will consider other existing or future certain and reasonably foreseeable physical activities located within 5 km of Project receptors.	Section 6	The required action was addressed.
AC-05	Section 4.1: 2019 Baseline Noise Field Program "The field program was conducted in November 2019 and included a monitoring component (Baseline Noise Monitoring) and measurement component (Baseline Noise Measurements) As a result of discussions with the Project Team, two representative sensitive receptor locations were selected for both the Baseline Noise Monitoring and Baseline Noise Measurements. The first receptor location was selected to correspond to a populated area where it was expected that the ambient levels would be influenced by human activities. A second receptor location, within the area located further from the community, was identified to document ambient levels characteristic of natural environment without the influence of human activities. These two locations are	 Section 8.1 "The Impact Statement must: provide current ambient noise levels at key receptor points to traditional land users and sensitive human receptors, including the results of a baseline ambient noise survey and permissible sound levels for each receptor. Information on typical sound sources (both natural and anthropogenic), geographic extent and temporal variations will be included. When collecting baseline ambient noise survey data at human receptor locations, consider the following recommended questions: Does the community or land users value certain non-anthropogenic (i.e., natural) sounds? Is there an expectation of quiet at any specific locations or times? What are typical sleep hours (10pm to 7am being the default assumption)? What is the baseline prevalence of noise annoyance toward existing 	 a) Update the study plan to describe how the 2019 monitoring locations are representative of baseline conditions at sensitive receptor locations (as per Section 8.1 of the Guidelines) and provide further details about the locations (e.g. provide a map). b) Clarify the length and timing of monitoring and how temporal variability will be considered (e.g., seasonal variation in levels, types of community activity, weather conditions) (as per Section 8.1 of the Guidelines). c) Clarify whether the collected baseline data includes audio recordings and whether any baseline ambient noise survey data [e.g., community annoyance with noise, measured as percent highly annoyed (%HA)] were collected from community members (as per Section 8.1 of the Guidelines). 	The acoustic field program was only one session (late fall 2019) in MFFN covering two (2) locations for long-term monitoring. There are no additional field monitoring programs proposed as part of the Study Plan. The results of the desktop and field assessment studies will be provided at a later date.	Section 7.2	a) This part of the comment was addressed. b) This part of the comment was partially addressed. In the Impact Statement clarify whether the monitored/measured data captured seasonal variations of ambient sounds and noise levels over a complete 24-hour period. Explain how the data is representative of a yearly Day-Night Sound Level. c) This part of the comment was partially addressed. The baseline noise field program indicates that ambient sound data collected during abnormal noise events or under unfavourable weather conditions was screened out to establish valid baseline noise data. Depending on the amount of remaining baseline data and specific times of data gaps, this screening process may affect the level of certainty in the %HA calculations. In the Impact Statement, provide detailed information about baseline data used in the %HA calculations, including the amount of data used and the timing of its collection. Furthermore, discuss the level of uncertainty in the %HA calculations due to screening of baseline data.

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	expected to allow the team to document the range in existing ambient noise levels within the LSA [local study area]. Data for the monitoring/measurements, and the corresponding reporting includes the following information for each location: • Recording mode; ()" 5. Data Management and Analysis "() The screening will be completed using various tools, which may include audio recording (where deemed appropriate), analysis of the raw noise monitoring data in combination with meteorological data, or similar."	noise sources (e.g., road traffic, aircraft, and other industrial sounds)? Provide the approximate number, distance and identity factors of likely human receptors, including any foreseeable future receptors, that may be impacted by changes in air, water, country food quality (e.g., dust deposition on vegetation), and noise levels. At minimum, provide a map showing approximate locations of permanent residences, temporary land uses (e.g., cabins and traditional sites) and known locations of sensitive human receptors (e.g., schools, hospitals, community centres, retirement complexes or assisted care homes)."				From the study plan, it seems that only Marten Fall First Nation was consulted for the 2019 monitoring program. Ensure that the Impact Statement demonstrates that all potentially impacted Indigenous groups listed in the Indigenous Engagement and Partnership Plan were consulted on potential acoustic impacts in order to meet the requirements of Section 6 of the Guidelines. See also comment GC-02, GC-03 and GC-04 above.
AC-06	Section 4.2: Desktop Assessment "This study plan focuses on the additional studies that are anticipated to be required to gather information beyond what is currently available through existing information sources". Section 7: Conformance with Federal and Provincial Guidance Acoustic Environment Study will include a baseline ambient study that will inform permissible sound levels at sensitive receptors. Monitoring locations were selected to capture the range of existing noise sources considering numerous factors, including geographic and temporal variations. The baseline prevalence of noise annoyance will be captured by determining the baseline percent highly annoyed (%HA) level. This determination is required as part of the Acoustic Environment Study's change in %HA assessment.	 Section 8.1 ""The Impact Statement must: provide current ambient noise levels at key receptor points to traditional land users and sensitive human receptors, including the results of a baseline ambient noise survey and permissible sound levels for each receptor. Information on typical sound sources (both natural and anthropogenic), geographic extent and temporal variations will be included. When collecting baseline ambient noise survey data at human receptor locations, consider the following recommended questions: Does the community or land users value certain nonanthropogenic (i.e., natural) sounds? Is there an expectation of quiet at any specific locations or times? What are typical sleep hours (10pm to7am being the default assumption)? What is the baseline prevalence of noise annoyance toward existing noise sources (e.g., road, traffic, aircraft, and other industrial sounds)?" 	Provide detail to demonstrate the proposed approach and methods used to meet the requirements of the Guidelines, particularly Section 8.1. Update the study plan to include the list of all Indigenous groups that will be engaged, at a minimum the Indigenous groups listed in the Indigenous Engagement and Partnership Plan (IEPP), as part of the baseline data collection, defining the list of criteria and indicators, and effects assessment analysis. The list should be consistent throughout the study plan. Provide further detail to describe how Indigenous groups and the public have been, or will be, provided an opportunity to inform the acoustic baseline data collection and effects assessment.	Section 9.2 details the assessment VCs and indicators. A description of how these correlate to effects on humans is also provided. Section 9.4 has been revised to include numerous indicators related to night-time operations and noise events.	Sections 9.2 and 9.4	The required action was partially addressed. Provide a work plan that outlines how Indigenous groups and members of the public will be engaged on the acoustic study plan. The work plan should include scheduling and sequencing of engagement activities relative to proposed baseline work, engagement on the study plan, spatial and temporal boundaries determinations, and particularly in relation to collection of Indigenous knowledge. See also GC-01, GC-02, and AC-03 above.

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AC-07	Section 6.1 Indicators and Expression of Change "The indicators have been determined for the Acoustic Environment through consideration of the following: • human health effects; • consultation with regulatory agencies and industrial stakeholders; • potential presence within the area associated with the Project, and potential for alteration or disturbance as a result; • social or economic importance; and • any other relevant and credible source, such as scientific or academic publications or input from the public. ()" Table 6-1: Acoustic Environment Indicators - "Expressions of change: Leq(1); Leq(16) - Rationale for selection: Used in provincial guidelines to describe baseline noise levels, and assess stationary noise source effects; to assess road traffic noise effects - Expression of change: %HA - Rationale for selection: Used in federal guidelines to assess noise effects on human health and potential for complaints due to noise exposure"	Section 6 "the proponent must provide Indigenous groups with an opportunity to: • comment on the list of valued components and indicators;" Section 14.1 "The Impact Statement must: • describe consultation with regulators, stakeholders, community groups, landowners and Indigenous groups about potential effects to the atmospheric, acoustic, and visual environment; • identify and justify the approach to determine the extent to which sound effects resulting from the Project are adverse" Section 16.1 "With respect to biophysical determinants of health, the Impact Statement must () • describe nuisances and environmental, social and economic changes that could potentially be sources of adverse human health effects and the potential human receptors of these effects; • in situations where project related air, water or noise emissions meet local, provincial, territorial or federal guidelines, and yet public concerns were raised regarding human health effects, provide a description of the public concerns and how they were or are to be addressed. () The proponent should provide a detailed rationale/explanation for any deviation from recommended assessment approaches/methods, including Health Canada's guidance, or when determining such assessment is not warranted."	Revise the study plan to provide a description of each indicator presented and describe each indicator's expression of change and potential interpretation for the effect analysis. Clarify how the proposed indicators are appropriate to assess health- related effects at receptors due to noise-induced hearing loss, sleep disturbance, or interference with speech comprehension. Provide details to demonstrate how Indigenous groups listed in the Indigenous Engagement and Partnership Plan that may have views on these studies have been/will be provided with an opportunity to comment on the list of indicators. Clarify whether concerns relating to increased noise were raised by the public or Indigenous groups.	The requested information has been provided in the updated Study Plan. As identified in Section 4.2 of the Study Plan, the Proponent will provide opportunities for consultation and engagement with Indigenous communities identified in Table 4-1, which is inclusive of all Indigenous communities identified in the Indigenous Partnership and Engagement Plan for the Marten Falls Community Access Road Project Impact Assessment (the Agency 2020a). Further information on how Indigenous Knowledge will be considered in the IS / EA Report has been included in Section 5 of the Study Plan. Section 5 of the Study Plan provides further details on the two concurrent and complementary avenues for Indigenous communities and groups to be engaged with and provide input on the Project: the Indigenous Knowledge Program and the Consultation and Engagement Program.	Sections 4.2, 5, 9.2, and 9.3	The required action was partially addressed. Provide a work plan that outlines how Indigenous groups and members of the public will be engaged on the acoustic study plan. The work plan should include scheduling and sequencing of engagement activities relative to proposed baseline work, engagement on the study plan, spatial and temporal boundaries determinations, and particularly in relation to collection of Indigenous knowledge. See also GC-01, GC-02, AC-03 and AC-06 above.
AC-08	Section 6.2 Methods for Predicting Future Conditions "Where roadway parameters are not available (e.g., traffic composition), the assessment	Section 13.1 "Predictions must be made on clearly stated assumptions and the Impact Statement must clearly describe how it has tested each assumption"	Where roadway parameters are not available, ensure that the parameters incorporated in the assessment are clearly described in the Impact Statement and confirm that are approved by Ontario.	Section 9.4.2 describes the provincial guidelines that will be used to assess traffic noise impacts.	Section 9.4.2	The required action was addressed.

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#	Study Plan (2020) Reference	Guidelines Section ²	Required Action for Proponent	Proponent Response	Study Plan (2021) Reference	Agency comments
	will incorporate standard parameters provided in provincial traffic noise quidelines".					
AC-09	Section 6.2 Methods for Predicting Future Conditions "Road traffic noise due to the Project will be predicted using an algorithm that is acceptable to the MECP [Ontario ministry of environment, conservation and parks] and MTO [Ontario ministry of transportation]. The traffic noise assessment will incorporate the following () Predicted future day/night traffic volumes and vehicle composition; Noise due to Project construction activities will be predicted using industry standard methods. Construction equipment noise emissions may be estimated using a combination of industry standard reference publications and noise levels collected from similar equipment for other projects. () Where possible, receptor locations and time periods should be incorporated with consideration of relevant input collected through community consultations and the Indigenous Knowledge Program, such as: typical sleep hours, and the expectation of quiet at specific locations or times."	 Section 14.1 "The Impact Statement must: describe changes in ambient vibration and other sound levels resulting from the Project at potential receptor locations, including changes to the perception of non- anthropogenic sounds; quantify sound levels at appropriate distances from any Project facility and/or activities and describe for each contributing source the timing (e.g., hours of night-time activities), number and duration of noise events and their sound characteristics, including frequency spectrum; provide the hourly distribution of baseline noise events at night in comparison to predicted individual noise events at night at each receptor location; consider the expectation of peace and quiet at receptors (e.g., in a quiet rural area or during Indigenous land use) and the applicable community-based policies concerning noise (e.g., complaints resolution processes); identify and justify the approach to determine the extent to which sound effects resulting from the Project are adverse and describe any changes in night-time light levels as a result of the Project;" Section 22 "The proponent must identify and assess the Project's cumulative effects using the approach described in the Agency's guidance documents related to cumulative environmental, health, social and economic effects Finalizing the choice of valued components and the appropriate boundaries, including potential transboundary areas, to assess cumulative effects, is informed and confirmed as part of the tailoring 	Provide detail in the study plan to demonstrate that road traffic noise will be assessed for all relevant phases of the Project. Provide details to demonstrate that the effects assessment for the operation phase will include the effect cause by all different users (traffic volume, type of vehicles, etc.), including Indigenous groups, the general public, and mining proponents of reasonably foreseeable future projects (e.g., Eagle's Nest, Blackbird, Black Thor, Black Label, Big Daddy, anticipated future community access roads). Explain whether the noise assessment will consider increases in individual night-time noise events and their potential effect on sleep disturbance. Provide detail to demonstrate that construction noise lasting longer than one year at any given location will be assessed. Provide a rationale for excluding noise-related complaints as an indicator of adverse health effects. Clarify how complaints resolution process will be considered in the Impact Statement. Describe any applicable noise adjustments (e.g. for "quiet rural areas", time-of-day, tonal and/or impulsive noise) that are being considered and provide a description when they have been used or when it has been decided they are not applicable in a given scenario. Provide details to demonstrate how the noise assessment will inform the decision whether to assess cumulative effects on human health due to noise.	Section 9.2 details the assessment VCs and indicators. A description of how these correlate to effects on humans is also provided. As noted in Section 9.4.1, if residual acoustic effects from the Project are predicted, a cumulative effects assessment will be carried out to assess the combined impact of the Project and other existing physical activities, as well as future physical activities that are certain and reasonably foreseeable. The cumulative effects assessment will consider other existing or future certain and reasonably foreseeable physical activities located within 5 km of Project receptors. Section 9.4 has been revised to include numerous indicators related to night-time operations and noise events. Acoustic and Vibration Environment Study will consider community input and applicable policies (related to noise complaint resolution processes) where applicable and relevant. Further information will be provided in the IS / EA Report. Section 9.4 details the federal, provincial and applicable guidance that will be used to assess all phases of the Project, including construction durations of less than one year and greater than one year. Section 9.4.4 describes the potential adjustments that may be applied according to federal / World Health Organization and provincial guidelines. Section 9.3 of the updated study plan provides preliminary information on the interaction of effects and the interconnectedness of the VCs. Refer to the Human Health and Community Safety Study Plan for more information on human health effects. Further information will be provided in the IS / EA Report.	Sections 9.2 and 9.4	The required action was partially addressed. The study plan does not explain how consultation with the public, Indigenous groups, federal authorities and other interested parties will inform and confirm the approach for the cumulative effects assessment, as required by Section 22 of the Guidelines. Include in the Impact Statement an acoustic effects assessment that meets the requirements of the Guidelines, including the requirements related to cumulative effects assessment.

Federal	Review Team comments on the	Marten Falls Community Access Road	d Project Draft Acoustic Study Plan submitted in 2020			
#	Study Plan (2020) Reference	Guidelines Section ²	Required Action for Proponent	Proponent Response	Study Plan (2021) Reference	Agency comments
		process through consultation with the public, Indigenous groups, lifecycle regulators, jurisdictions, federal authorities and other interested parties				
		The Impact Statement must: • assess the cumulative effects to each valued component selected by comparing the future scenarios with the Project and without the Project"				
AC-10	Section 6.2 Methods for Predicting Future Conditions "If needed, noise due to Project construction involving stationary sources (e.g., aggregate extraction and refining) will be predicted in accordance".	Section 14.1 "The Impact Statement must: describe changes in ambient vibration and other sound levels resulting from the Project at potential receptor locations, including changes to the perception of non-anthropogenic sounds;"	Provide detail to explain the criteria or circumstances that will determine whether there is a need for predicting noise due to Project construction involving stationary sources.	Section 9.4.2 describes the circumstances for assessing stationary noise due to construction activities and how provincial and federal guidelines will inform the assessment.	Section 9.4.2	The required action was addressed.
AC-11	Section 6.3 Magnitude of Effect Table 6-2: Acoustic Environment Magnitude - "Definition of magnitude level: Increase of (1-3; 3-5; 5 or more) dB above baseline noise level - Rationale: Industry references for human perception of changes in sound level."	Section 14.1 "The Impact Statement must: • describe changes in ambient vibration and other sound levels resulting from the Project at potential receptor locations, including changes to the perception of non- anthropogenic sounds;"	Broaden the scope of the proposed magnitude definition to include changes to the characteristics of the sound from baseline, in addition to the comparison of predicted and baseline noise levels. Other criteria that could contribute to magnitude could include changes in frequency, changes in sound modulation, increased impulsiveness, a shift in noise from the daytime to being more at night, a shift from quiet rural to traffic or construction-related noise, etc.	Section 9.6 describes magnitude definitions in terms of the federal, provincial and other applicable criteria presented in Section 9. The VCs, indicators, and adjustments for sound character that will be used in the effects assessments are described in Section 9.2.	Sections 9.2, Section 9.4.4 and 9.6.	The required action was partially addressed. Section 9.4.4 of the study plan indicates that to account for increased annoyance associated with changes to sound characteristics, the noise assessment will consider adjustments for certain sound characteristics as well as for receptor characteristics. However, the study plan does not clarify whether all applicable adjustments or assessments for sound sources, sound characteristics, and time periods will be followed, as per Health Canada's noise guidance document (2017) and ISO 1996-1:2016, which include: Evening sounds require 5 dB adjustment; Night sounds require a 10 dB adjustment; Weekend day-time sounds require a 5 dB adjustment; High-energy impulsive sounds (e.g., blasting) requires a separate assessment where US EPA (1974)'s sonic boom criterion (i.e., 125-10 log N dBZ, or Z-weighted decibels) be used as a mitigation noise level for blasting that lasts less than one year. In the Impact Statement, clarify whether all
						applicable adjustments or assessments for sound sources, sound characteristics, and time periods will be followed, as per Health

Federal	Review Team comments on the	e Marten Falls Community Access Road	d Project Draft Acoustic Study Plan submitted in 2020			
#	Study Plan (2020) Reference	Guidelines Section ²	Required Action for Proponent	Proponent Response	Study Plan (2021) Reference	Agency comments
						Canada's noise guidance document (2017) and ISO 1996-1:2016. 3
AC-12	Section 7 Conformance with Federal and Provincial Guidance "Federal and Provincial noise guidelines have been developed based on research into human response to noise exposure. The noise guidelines do not address whether these criteria are applicable to wildlife, nor do the guidelines provide separate criteria for wildlife assessment. We are not aware of any underwater noise or vibration thresholds that would be applicable for this project. As such, the Acoustic Environment Study Plan will assess acoustic impacts on human receptors only. Acoustic impacts and existing conditions related to underwater environments will not be determined or measured."	Section 8.1 "The Impact Statement must: • for the aquatic environment, provide current underwater soundscape and vibration descriptions of the study area and at the project site from various sources based on acoustic measurements. Provide information on vibration and sound sources, geographic extent and spatial and temporal variations within the water column;" Section 13.1 "The Impact Statement must describe in detail the project's potential adverse and positive effects in relation to each phase of the Project (construction, operation, maintenance, suspension, decommissioning, and abandonment)"	Describe an approach and methods to provide current underwater soundscape and vibration descriptions of the study area and at the project site from various sources that are based on acoustic measurements. Provide information on how vibration and sound sources, geographic extent and spatial and temporal variations within the water column will be studied. Provide details to clarify if acoustic effects from any works, undertakings, or activities will occur in fish and fish habitat.	MFFN is not aware of any underwater noise or vibration thresholds that would be applicable for this project. As such, the Acoustic and Vibration Environment Study Plan will assess acoustic impacts on human receptors only. Acoustic impacts and existing conditions related to underwater environments will not be determined or measured. Industry-standard mitigation, avoidance and protections measures will be implemented into the work plan, and includes those to avoid impacts to fish as a result of activities likely to produce underwater noise and vibration. This includes all DFO Fish and Fish Habitat Protection Program Measures to Protect Fish and Fish Habitat (general measures as well as applicable Measures from standard codes of practice) that apply, including those relating to vibration and noise. Further details can be found in the Fish and Fish Habitat Study Plan. Section 9.3 of the updated study plan provides preliminary information on the interaction of effects and the interconnectedness of the VCs. Further information will be provided in the IS / EA Report.	Section 9.3	The required action was addressed. It is understood that construction type at each crossing will dictate the need for piling or vibro-piling activities, which may or may not affect fish and/or fish habitat. During the permitting phase of the Project, this information will be required. At the current stage of the Project, the Federal Review Team understands that no plans are in place to conduct piling or vibro-piling. This information may not be required for the baseline phase of the Project, but will be required by the Department of Fisheries and Oceans at the permitting phase, depending on the design of specific watercourse crossings.
AC-13	Section 7 Conformance with Federal and Provincial Guidance "The ambient noise monitoring results will serve as a baseline for the traffic noise assessment of the CAR. Road traffic is typically considered a source of ambient noise. Therefore, an increase in road traffic noise is considered an increase in ambient noise. This principle will be used to assess the operations of the CAR, including describing human perceptibility of the increase in noise. Ambient noise includes	Section 13.1 "The Impact Statement must describe in detail the project's potential adverse and positive effects in relation to each phase of the Project (construction, operation, maintenance, suspension, decommissioning, and abandonment)" Section 14.1 "The Impact Statement must • describe changes in ambient vibration and other sound levels resulting from the Project at potential receptor locations, including changes to the perception of non- anthropogenic sounds;"	Provide detail to demonstrate that ambient vibration and other sound levels resulting from the Project will be described for each phase of the Project.	Section 9.4 details how federal, provincial and other applicable guidance that will be used to assess all phases of the Project.	Section 9.4	The required action was addressed.

³ References: 1) Health Canada. 2017. Guidance for Evaluating Human Health Impacts in Environmental Assessment: NOISE. Available at: https://publications.gc.ca/site/eng/9.832514/publication.html
2) International Organization for Standardization (ISO). 2016. ISO 1996-1:2016 Acoustics – Description, measurement and assessment of environmental noise – Part 1: Basic quantities and assessment procedures.
3) US Environmental Protection Agency (USEPA).1974. Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety.

	Study Plan (2020) Reference	Guidelines Section ²	Required Action for Proponent	Proponent Response	Study Plan (2021) Reference	Agency comments
	both anthropogenic and non- anthropogenic sounds. Ambient monitoring datasets include thousands of datapoints, and it is impractical to separate anthropogenic and non- anthropogenic events. As such, the Acoustic Environment Study will describe changes to the perception of sound with respect to the baseline ambient levels (e.g., anthropogenic + non- anthropogenic sounds)."					
AC-14	Section 7 Conformance with Federal and Provincial Guidance "Acoustic Environment Study will describe noise source characteristics used in the noise impact assessment(s). Acoustic Environment Study will present hourly baseline results of the field monitoring program. Noise impact assessment will include a comparison of predicted noise levels and measured baseline levels. Acoustic Environment Study will include community input and applicable policies Acoustic Environment Study will gauge adverse noise impacts using accepted industry, Provincial, and Federal descriptors."	 Section 14.1 "The Impact Statement must: quantify sound levels at appropriate distances from any Project facility and/or activities and describe for each contributing source the timing (e.g., hours of night-time activities), number and duration of noise events and their sound characteristics, including frequency spectrum; provide the hourly distribution of baseline noise events at night in comparison to predicted individual noise events at night at each receptor location; consider the expectation of peace and quiet at receptors (e.g., in a quiet rural area or during Indigenous land use) and the applicable community-based policies concerning noise (e.g., complaints resolution processes); identify and justify the approach to determine the extent to which sound effects resulting from the Project are adverse and describe any changes in night-time light 	Provide detail to demonstrate that the proposed approaches and methods will meet the requirements of the Guidelines, particularly Section 14.1.	Section 9.2 details the assessment VCs and indicators. A description of how these correlate to effects on humans is also provided. Section 9.4 has been revised to include numerous indicators related to night-time operations and noise events. Acoustic and Vibration Environment Study will assess adverse noise impacts using accepted industry, provincial, and federal descriptors, including noise at night, if applicable.	Section 9.2, 9.4 and 11	The required action was addressed.

#	Study Plan (2021) Section	Tailored Impact Statement Guidelines Section	Context	Required Action for the Proponent
AC-15	Footnote 8, Section 9.2 "In February 2020 a regional assessment of the Ring of Fire region commenced; however, it is not sufficiently advanced at this time to inform the Project VCs. The VCs will be consulted and engaged on early in the IA/EA process and finalized taking into consideration the input received. Therefore, only information relevant to the Project that arises from the regional assessment of the Ring of Fire within an appropriate timeline will inform the VCs for the Project."	Editorial comment	The statement in the footnote 8 in Section 9.2 "In February 2020 a regional assessment of the Ring of Fire region commenced; however, it is not sufficiently advanced at this time to inform the Project VCs." is inaccurate, as the Regional Assessment in the Ring of Fire area has not yet begun.	Replace the text in footnote 8 with "In February 2020, the Minister of Environment and Climate Change determined that a regional assessment will be conducted in an area centred on the Ring of Fire mineral deposits in northern Ontario. Relevant information available in relation to the Regional Assessment in the Ring of Fire area would be considered in the impact assessment of the Project."
AC-16		Section 7.3 "For each of the valued components that will be assessed in the Impact Statement, the proponent must create a study plan and a work plan to be validated by the Agency. Upon receipt of a study plan, the Agency may request that the proponent present and discuss the study plan at technical meetings, which will be scheduled during the impact statement phase."	In order to meet the requirements of Section 7.3 of the Guidelines, a work plan or work plans for the valued components to be assessed in the Impact Statement must be submitted to the Agency for validation. Since this acoustic study plan does not include content for a work plan, notably this plan does not outline when baseline data will be collected for each Indigenous group (i.e., scheduling, sequencing), the submission of a work plan is an outstanding requirement of the Guidelines.	Provide a work plan that outlines how the acoustic study plan will be executed in the field, including when baseline data will be collected. The work plan should include scheduling and sequencing of engagement activities relative to proposed baseline work, engagement on the study plan, spatial and temporal boundaries determinations, and particularly in relation to collection of Indigenous knowledge.
AC-17	Table 11-3: Study Plan Federal and Provincial Concordance – Requirement Deviations		Proposed amendments and/or deviations from the Guidelines will not be reviewed or approved during the study plans review process. The Agency will provide guidance on the process to propose amendments and/or deviations to the Guidelines to the project team.	