Lynn Lake Gold Project: Traffic and Access Plan

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Document History

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Revision History

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Revision #	Date	Summary of Changes	Author

Approvals

This document requires the following approvals:

Name	Company Title	Date	Signature

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Acronyms and Abbreviations

AADT	Annual Average Daily Traffic
Alamos	Alamos Gold Inc.
BMP	Best Management Practices
CCS	Coverage Count Stations
CEAA 2012	*Canadian Environmental Assessment Act, 2012*
EIS	Environmental Impact Statement
EMMP	Environmental Management and Monitoring Plan
IAAC	Impact Assessment Agency of Canada
LOS	Level of Service
MECC	Manitoba Environment and Climate Change (formerly Manitoba Environment, Climate and Parks, and formerly Manitoba Conservation and Climate)
MI	Manitoba Infrastructure
PCS	Permanent Counter Station
PR	Provincial Road
RGMP	Responsible Gold Mining Principles
ROM	Run-of-Mine
TAC	Traffic and Access Plan

Glossary

Adaptive Management	The process of using the findings from ongoing monitoring to continually improve mitigation strategies and procedures to further lessen effects on selected valued components
Assessment	The evaluation and interpretation of available information to provide a basis for decision-making.
Communications	Advisories, directives, information, and messages that are transmitted.
Impact	The negative effect of a hazardous incident on people, property, the environment, the economy and/or services.
Incident	An occurrence or event that requires an emergency response to protect people, property, the environment, the economy and/or services.
Mitigation	Actions taken to reduce the adverse impacts or an emergency or disaster. Such actions may include diversion or containment measures to lessen impacts of a flood or spill.
Site	The geographical location of an incident.

1.0 INTRODUCTION

The following presents the traffic and access plan ('TAP' or 'the Plan'), which considers the pre-construction, construction, operation, and decommissioning/closure phases of the Lynn Lake Gold Project ('LLGP' or 'the Project') to contribute to the mitigation, management, and monitoring of Project-related effects on traffic and access. It is one component of the overall Environmental Management and Monitoring Program (EMMP) for the Project.

1.1 PURPOSE

The purpose of the TAP is to provide for the protection of wildlife, employees, contractors, and the public through the safe management of mine traffic and use of roads on-site and to the sites. The Plan describes the traffic management and control procedures that will be followed during all phases of the Project. The Plan will be updated as required.

1.2 OBJECTIVES

The main objectives of the TAP are to:

- Manage traffic at the sites and along access roads in a manner that protects wildlife, increases worker and public safety, and reduces effects on mine productivity.
- Provide a framework for transportation and site access which is compliant with applicable environmental statutes and regulations.
- Enable the transportation of personnel, materials and equipment in a manner that meets Alamos Gold Inc. (Alamos) policies.

1.3 RELATIONSHIP TO OTHER MANAGEMENT PLANS

The TAP is intended as a general guide to traffic and access during the lifetime of the Project. Other plans, such as the Explosives Management Plan, the Emergency Response and Spill Prevention and Contingency Plan, the Waste Management Plan, and the Wildlife Monitoring and Management Plan work in concert with this plan with measures associated with traffic and access management and mitigation.

1.4 REGULATORY CONTEXT

The Project EIS was submitted to the Impact Assessment Agency of Canada (formerly the Canadian Environmental Assessment Agency) pursuant to CEAA 2012, and to Manitoba Environment and Climate Change (MECC; formerly Manitoba Environment, Climate and Parks and formerly Manitoba Conservation and Climate) as an Environment Act Proposal pursuant to *The Environment Act* of Manitoba. The relevant federal and provincial regulatory requirements related to traffic and access management and monitoring are outlined below.

1.4.1 Federal Regulatory Requirements

Federal regulatory requirements related to this TAP are outlined in the following:

- *Canadian Environmental Assessment Act* – related to the construction, operation, decommissioning, and abandonment of a new metal mill or gold mine above certain ore input capacity and ore production thresholds (CEA Agency 2012).
- *Canadian Environmental Protection Act*, 1999 – related to the conveyance in transit of hazardous waste or hazardous recyclable material or prescribed non-hazardous waste for final disposal.
- *Transportation of Dangerous Goods Act*, 1992 – related to the development and approval of an Emergency Response Assistance Plan before the transport of certain dangerous goods.
- *Fisheries Act* – related to the potential for the harmful alteration, disruption, or destruction of fish habitat that could result from Project activities and potential for deposition of deleterious materials into watercourses or waterbodies frequented by fish.
- *Migratory Birds Convention Act*, 1994 - The *Migratory Birds Convention Act* and its regulations make it an offence to deposit oil, oily waste, or other substances harmful to migratory birds into water inhabited by migratory birds. This Act is administered by the Canadian Wildlife Service of Environment Canada.

1.4.2 Provincial Regulatory Requirements

The Project is subject to *The Dangerous Goods Handling and Transportation Act* and the associated Storage and Handling of Petroleum Products and Allied Products Regulation, MR 188/2001 and the Environmental Accident Reporting Regulation and Schedule under *The Dangerous Goods Handling and Transportation Act* (of Manitoba).

The Project is also subject to *The Workplace Safety and Health Act*. Pursuant to this Act, under the *Operation of Mines Regulation,* MR 212/2011 provisions are made for the operation of a mine, including use of haul roads and transporting materials (e.g., compressed gas and explosives).

1.4.3 Corporate or Other Policies

As a member of the World Gold Council, Alamos is a proud supporter of the Responsible Gold Mining Principles (the RGMPs). The ten RGMPs provide a framework that sets expectations for consumers, investors, and the downstream gold supply chain as to what constitutes responsible gold mining, addressing key environmental, social and governance issues for the gold mining sector. They are designed to provide confidence to governments, investors, employees and contractors, communities, supply chain partners and civil society that gold has been produced responsibly. Following the release of the RGMPs in September 2019, Alamos has implemented and aligned to the framework, and obtained external assurance to provide further confidence that the gold produced by Alamos is responsibly mined. In 2023 Alamos communicated its progress on implementing the RGMPs through Alamos' 2022 RGMP Progress Report which received independent audit/assurance from EEM EHS Management Inc. (Alamos 2023). The 2022 RGMP Progress Report reflects Alamos' third year reporting under the RGMP. Alamos will continue to implement the

RGMPs through 2024 and beyond. The RGMPs are only applicable to operating mines. The Lynn Lake Gold Project will be incorporated as it transitions through construction into operation.

Alamos has a series of guiding corporate sustainability standards (Table 1-1), including:

- Hazard Identification & Risk Management
- Incident Classification, Investigation & Reporting

Alamos' standards are regularly updated to reflect the latest developments. For the most current and up-to-date standards, please refer to the online (internal) version.

Table 1-1 Corporate Sustainability Standards

Corporate Standard	Requirement
Hazard Identification & Risk Management (CSS-GOV-2.1)	All Alamos locations shall maintain systems to identify, prevent and/or manage sustainability risks that face its operations and those which its activities may pose to others. This includes but is not limited to hazards and risks related to the: • Health and Safety of our workforce and communities, • Environmental impacts of our activities (local and downstream), • Societal and community impacts, and • Security and protection of people and property.
Hazard Identification & Risk Management (CSS-GOV-2.2)	Site Managers are responsible to ensure that appropriate resources, both internal and external, are available to identify, quantify, manage, and report sustainability hazards and risks. Assessments shall consider all site activities including: • Contractor works, • Regulatory requirements • Permit or license requirements, • Alamos Sustainability Standards requirements, and • Other site-specific requirements.
Hazard Identification & Risk Management (CSS-GOV-2.3)	Sites shall maintain a risk registry of all site risks. The risk registry will be updated at least quarterly or when major changes/incidents occur. Clear responsibility and authority for implementing, managing, reporting, and coordinating updates to the risk registry shall be designated to a specific employee(s).
Hazard Identification & Risk Management (CSS-GOV-2.4)	All corporate, site and task-level risks shall be assessed against the Alamos Risk Matrix, including likelihood and consequence assessments.

Corporate Standard	Requirement
Hazard Identification & Risk Management (CSS-GOV-2.5)	Sites shall apply the hierarchy of controls considering (in order of priority): 1. Elimination – Remove the hazard 2. Substitution – Replace the hazard 3. Engineering control – physically control or isolate the hazard (e.g., dikes, guarding, interlocks) 4. Administrative control – control response/avoidance of hazard (e.g., training, procedures, reducing employee exposure to hazards, signage) 5. PPE or Mitigation – Protect people (personal protective equipment) or the environment (spill kits) from the hazard. This is the last line of defense. Extreme and high risks that exist after controls have been applied should go through a formal review with the Site Manager.
Hazard Identification & Risk Management (CSS-GOV-2.6)	Sites shall ensure effective communication of risks and controls to the workforce based on the nature of the activity and related risk. The nature of communication may change based on the risk frequency and consequence. For example, communication may include induction training, refresher training, policies, procedures and/or signage.
Hazard Identification & Risk Management (CSS-GOV-2.7)	For each identified risk, management shall assess and manage the risk appropriately with consideration to the risk rating. In considering risk mitigation, management must evaluate the cost of controls versus the benefit derived and ensure the resultant control framework is effective.
Hazard Identification & Risk Management (CSS-GOV-2.9)	The Alamos Executive and Internal Audit Director shall review and verify enterprise risks on a quarterly basis.
Incident Classification, Investigation & Reporting (CSS-GOV-8.3)	The Corporate Sustainability Team shall maintain an Incident Alert email group user list comprised of, at a minimum: • Alamos Executive and Management, • Country Managers, • General Managers; and • Project Managers.
Incident Classification, Investigation & Reporting (CSS-GOV-8.6)	The Corporate Sustainability Team shall provide a report on significant incidents on a quarterly basis to senior management and the Technical & Sustainability Committee of the Board.
Incident Classification, Investigation & Reporting (CSS-GOV-8.7)	Corporate Sustainability and Risk Management teams shall annually review and revise the Alamos Risk Assessment Consequence Table to ensure thresholds are consistent with the Alamos Enterprise Risk Management system.

1.4.4 Approval Related Requirements

The conditions relating to traffic and access laid out in the federal Decision Statement issued under the *Canadian Environmental Assessment Act, 2012,* provincial Environmental Act Licence No. 3390 (Gordon), and provincial Environmental Act Licence No. 3391 (MacLellan) are outlined in Table 1-2 below.

Table 1-2 Approval Related Requirements

Licence	Condition	Corresponding TAP Section
CEAA, 2012	5.1 The Proponent shall develop, prior to construction and in consultation with Indigenous groups, measures to mitigate adverse impacts from the Designated Project on access to lands and resources used for traditional purposes, including the implementation of safe access point(s) and/or routes within the local assessment areas. The Proponent shall submit these measures to the Agency prior to construction.	3.0
Environment Act Licence No. 3390 (Gordon)	39. The licensee shall comply with all the applicable requirements of: b) The Dangerous Goods Handling and Transportation Act, and regulations issued thereunder, respecting the handling, transport, storage and disposal of any dangerous goods brought onto or generated at the development.	3.0
Environment Act Licence No. 3391 (MacLellan)	41. The licensee shall comply with all the applicable requirements of: b) The Dangerous Goods Handling and Transportation Act, and regulations issued thereunder, respecting the handling, transport, storage and disposal of any dangerous goods brought onto or generated at the development. .	3.0

2.0 EXISTING CONDITIONS

2.1 SITE DESCRIPTION AND ACCESS

The MacLellan site currently consists of an all-weather gravel access road, a bridge over the Keewatin River, a power transmission line (abandoned pole line), and infrastructure from the former underground mine. The Gordon site consists of an all-weather gravel access road, a bridge over the Hughes River, two capped mine rock storage areas and two capped overburden storage areas, and two water-filled open pits.

In the case of the Gordon and MacLellan site access roads, most of the traffic will start off as construction vehicles and equipment, followed by heavy load haul trucks during operation (transporting ore for processing from the Gordon site to the MacLellan site). There is currently a 50 km/hour posted speed on both access roads. Both roads connect directly to PR 391 and are stop-controlled from the access roads. There are no turning lanes to either of the access roads. Sightlines at both access road stops to PR 391 will require improvements through tree clearing to provide sufficient sight distances to allow large haul trucks to safely operate.

The 4.8 km access road to MacLellan will be upgraded and resurfaced. The single-lane concrete bridge over the Keewatin River was removed in the spring of 2021 and replaced with a new prefabricated, two-lane steel bridge to accommodate the increase in traffic to and from the site. Access to the Gordon site is along an existing 15 km two-lane gravel road that will be upgraded for the mine operation period. The road will be used to haul Run-of-Mine (ROM) ore from the Gordon site to the MacLellan process plant for six years. Gravel service roads that will be 5 m wide will be used to access site facilities (i.e., drainage sumps, reagent delivery, electrical substations, administration building, sewage treatment, explosives magazines, etc.). A gate house will be located at the MacLellan site on the access road on the west side of the Keewatin River bridge.

The access roads for light and heavy vehicles and equipment to the Gordon and MacLellan mine sites are shown in Map 1 (Appendix A).

2.2 TRAFFIC PATTERN AND VOLUMES

2.2.1 Provincial Road 391

There are two structures on PR 391 between the two site access roads and one on each of the Gordon and MacLellan site access roads. These structures have been assessed to determine their condition and load rating restrictions. Those findings are reported in Stantec 2021, Appendix C. The location of the structures, culverts, and gravel sections are shown on maps in Stantec 2021.

Existing surface conditions for the approximately 40 km section of PR 391 in the vicinity of Lynn Lake are rated as poor to good. Several sections of pavement have been reverted to granular surface because of ongoing settlement issues in areas of discontinuous permafrost, making it difficult to maintain a paved

surface. Other than the sections reverted to gravel, there has been one 6-km section of PR 391 between the two sites that may require extensive maintenance to retain acceptable operating conditions. That section of road is constructed with an Asphalt Surface Treatment, and it is showing substantial signs of deterioration. The remaining road is constructed to MI Secondary Arterial standards with asphalt surface. The section of PR 391 between the MacLellan and Gordon access roads is not affected by Manitoba Spring Road Restrictions.

Fourteen MI coverage count stations (CCSs) are located on PR 391 between Lynn Lake and Thompson (Stantec 2021). Two of those count stations (CS 2435 and CS 2023) are located within the segment between Lynn Lake and the Gordon site access road. Coverage count stations are short-term traffic count stations that collect 48-hour coverage counts in a survey-year, typically on a 3-year basis. Annual Average Daily Traffic (AADT) volumes at CCSs are estimated using the coverage count results and AADT volumes from a parent permanent count station (PCS). The parent (control) count station for all CCSs along PR 391 within the study area is Station 82.

Traffic data for the selected count stations are provided in Table 2-1, below.

AADT for selected count stations were analyzed. Traffic volumes at all stations followed a similar pattern, with a clear peak in the late 1990s to early 2000s, followed by a sharp drop corresponding to the closure of the Keystone Gold Mine near Lynn Lake. This data demonstrates that traffic volumes in this area are generally quite low and can be heavily influenced by specific economic developments.

Traffic data beyond the early 2000s were analyzed to better understand traffic volume trends in the absence of mining operations. The analysis of traffic data between 2003 to 2016 showed that recent year's traffic growth was relatively flat with a slight downward trend. Given this trend, it was determined that the 2016 traffic volumes were an appropriate estimate for 2020 volumes.

PR 391 is currently operating a Level of Service (LOS) A, which indicates that under reasonable road conditions drivers can travel at or near posted speeds as road conditions allow and pass other vehicles as needed. Local conditions on specific segments of PR 391 may reduce passing opportunities and the ability to travel the posted speed limit in a safe manner. The current demand flow rates on PR 391 are substantially lower than the available capacity (Stantec 2021).

Table 2-1 Historical Traffic Data PR 391

DIR	DATE	AADT				ASDT%	30th Hour %
		Station 2023 – Bridge at 7.2 km east of Lynn Lake	Station 2435 – PR 391 east of the Hughes River	Station 2125 – 2.1 km south of Leaf Rapids	Station 2433 – PR 391 west of PR #280		
C	**1989**	240	173	300	260	n/a*	0*
C	**1990**	240	175	305	265	n/a*	0*
C	**1991**	200	175	280	280	n/a*	0*
C	**1992**	200	180	280	280	n/a*	0*
C	**1993**	160	120	250	250	n/a*	0)
C	**1995**	130	130	210	220	124	20
C	**1997**	450	170	320	320	118	15
C	**1999**	390	190	340	370	124	15
C	**2001**		170	410	500	122	0
C	**2003**	110	90	180	370	125	15
C	**2005**	100	70	120	310	118	14
C	**2007**	100	70	150	n/a*	n/a*	14
C	**2009**	110	80	170	610	n/a*	0*
C	**2011**	110	80	150	510	118	13
C	**2013**	110	80	140	480	119	14
C	**2016**	100	70	130	490	117	13

Notes:

Directions: C – Combined two-way movement; Date: year of traffic estimate

AADT: Average Annual Daily Traffic

ASDT%: Average Summer Daily Traffic Volume (based on % of AADT). At coverage count stations, this value is assumed to be

the same as the ASDT% at the permanent counter designated as that site's control station.

30th Hour: 30th highest hourly volume over period expressed as a % of AADT. At coverage count stations, the 30th Highest Hour

is assumed to be equal to the 30th Highest Hour at the permanent counter designated as that site's control station.

*Data not collected/calculated or available.

2.2.2 Access Roads

The Gordon and MacLellan site access roads are gravel surfaced and in fair condition with several sections in poor condition, with loose gravel and rutting observed. The design alignments meet current design standards for local access roads. Th roads are narrow with the bush line adjacent to the shoulder line in places. These conditions could impact the safe operation of Project vehicles on the roads.

Traffic volumes on the Gordon site access road and the MacLellan site access road were not counted, as volumes are anticipated to low based on traffic on PR 391. Intersection operations are expected to be well below capacity. No auxiliary lanes on PR 391 are in place.

2.2.3 Signage

Access onto PR 391 is controlled with stop signs on each of the access road approaches. The increased activity on these access roads may warrant consideration of installing truck entrance signage as per Manitoba Transportation and Infrastructure policies. Traffic signing along the access roads are incomplete with curve sign and other warning signs non-existent or missing. Access to these roads is controlled by gates located near PR 391. Stop signs at the intersection with PR 391 are in place but need replacement to confirm proper reflectivity standards are met. Sight lines at the intersection need to be confirmed and obstructions cleared as required.

2.3 PROJECTED ACTIVITY

2.3.1 Provincial Road (PR) 391/Access Roads

The existing traffic volume on PR 391 is 150 vehicles per day (conservative high estimate; Stantec 2021). The maximum projected additional traffic will occur during Project operation, with an additional 26 vehicles/hour along segment 1 (PR 391 from Lynn Lake to Gordon site access road) and an additional 9 vehicles/hour along segment 2 (PR 391 from Gordon site access road to Thompson). It should also be noted that all Project traffic is expected to consist of vehicle types that would be classified as “trucks” for plan purposes (Stantec 2021).

Existing and future traffic operations were analyzed for two segments of PR 391. Segment 1 extended from the Town of Lynn Lake to the Gordon site access road, and segment 2 extended from the Gordon site access road to the City of Thompson. Existing traffic volumes along both study segments are very low, which allows the highway facility to operate at the highest possible level of service. Peak hour traffic volumes generated from the proposed operations were estimated to be 29 vehicles per hour (veh/h) on segment 1 and 20 veh/h on segment 2. The results of the traffic analysis showed these additional volumes will have a very minimal effect on operational performance. Furthermore, there is sufficient capacity on PR 391 to accommodate higher volumes if needed (Stantec 2021).

Existing road surface of the site access roads, including bridges drainage culverts will require increased maintenance activity and at least one 6-km section of PR 391 will likely require resurfacing to accommodate anticipated traffic and loading before hauling operations start. Other sections of PR 391 may require additional maintenance or resurfacing to facilitate the increased traffic (Stantec 2021).

Pedestrian activity is sporadic, but present. Installing signing as per MI policy 100-B-4 is recommended (Stantec 2021).

There are seasonal road restrictions on portions of PR 391 between the Thompson and the Gordon site access road. These restrictions will require consideration when moving equipment and materials from Thompson to the Project sites (Stantec 2021).

Alamos noted in the EIS and in the Federal Information Request Response IAAC-R2-009 that hauling traffic estimates were based on a conservative assumed haulage rate of 4,100 tonnes per day (seven truckloads per hour for 20 hours per day for ore transportation between the Gordon and MacLellan sites) during the first six years of mining operation. The updated Traffic Impact Study presented traffic volumes representative of one-way trips (full truck only) between the Gordon and MacLellan sites (e.g., 6.5 trucks per hour one way [full trucks] transporting ROM ore). The peak hourly volumes are unchanged.

Truck sizes and load frequency associated with Project operation were subsequently updated and represented round (two-way) trips of trucks and vehicles per day (full and empty). The number of trucks transporting ROM ore from the Gordon site to the MacLellan site was estimated to be 13 trucks per hour two way (i.e., 6.5 inbound loaded trucks and 6.5 outbound empty trucks per hour). The number of truck loads was unchanged (one-way trips) because the number of truck loads (frequency) remained equivalent to the number of full trucks only (loads per day). The projected traffic volumes during Project construction, operation, and decommissioning/closure and the truck load frequency during operation are the same as the projected volumes and load frequency used to inform the assessment of effects of Project-related traffic.

3.0 PROJECT TRAFFIC MANAGEMENT

Mitigation measures related to general traffic risks were developed as part of the EIS and are listed below in Sections 3.1 and 3.2. Standard best management practices (BMP) have also been incorporated. With respect to the transportation of dangerous goods, all stipulations of The Dangerous Goods Handling and Transportation Act will be met throughout all relevant stages of the Project.

3.1 CONSTRUCTION

3.1.1 Gordon and MacLellan Sites

- All vehicles supporting the Project in active work areas must have a working strobe light and buggy whip.
- All heavy equipment and vehicles must operate with headlights and parking/clearance or fog lights on.
- Emergency vehicles have the right-of-way over all vehicles and equipment when lights are flashing.
- Heavy equipment will have the right-of-way over light vehicles.
- Large transportation trucks will be used to reduce the number of trips.
- Mobile equipment will have exhaust mufflers.
- Heavy equipment following distance guidelines will be established through the Contractor's Traffic Management Plan.
- New road crossings will be sized and installed following Manitoba Infrastructure guidelines (DFO and MNR 1996).
- Grading perimeter and access roads to divert runoff away from the open pits and fish-bearing waterbodies.
- Design for restriction of unauthorized access to habitat adjacent to the PDA.
- Implement road safety measures such as speed limits and signage to reduce the chance for wildlife collisions both on-site and between sites.
- Upgrading and resurfacing the existing access roads to the MacLellan and Gordon sites.
- Implement standard construction procedures and a Traffic Management Plan to reduce traffic delays during construction.
- Provide bussing services between the temporary camp and Gordon site.
- Encourage carpooling among locally resident construction workers.
- Access routes will be developed in compliance with provisions of *The Crown Lands Act* and *The Mines and Minerals Act*.

- Alamos will post warning signs on the access roads to discourage unauthorized access and snowmobiling due to safety concerns.
- Controlled intersections will have traffic signs and highway rules will apply for the access roads.
- Passing is permitted only when safe to do so and must always yield to oncoming traffic.
- Clear verbal communication on the radio is required prior to passing any heavy equipment.
- When visibility makes the operation of heavy equipment unsafe, due to fog, inclement weather, or excessive dust, the equipment will be shut down and its location communicated.
- Wildlife must be given the right-of-way and allowed unhindered progress.

3.2 OPERATION

3.2.1 Gordon and MacLellan Sites

- On-site haul roads and access roads will be maintained in good condition, with regular inspections to monitor loose dust on the roads.
- Haul truck speed on the on-site haul roads will be limited to 35 km/h (loaded) and 40 km/h (empty). Vehicle speed on the access roads will be limited to 40 km/h.
- Implementation of flagging crews during high traffic events on and to the sites.
- All vehicles supporting the Project in active work areas must have a working strobe light and buggy whip.
- All heavy equipment and vehicles must operate with headlights and parking/clearance or fog lights on.
- Emergency vehicles have the right-of-way over all vehicles and equipment when lights are flashing.
- Heavy equipment will have the right-of-way over light vehicles.
- Equipment and light vehicles must take extra caution not to drive over any electrical equipment trailing cables; if crossing is required, cable mats must be used and are to be anchored down, and adequately marked.
- Heavy equipment following distance guidelines will be established through the Contractor's Traffic Management Plan.
- Large transportation trucks will be used to reduce the number of trips.
- Passing is permitted only when safe to do so and must always yield to oncoming traffic.
- Clear verbal communication on the radio is required prior to passing any heavy equipment.
- Water trucks spraying water in an active PDA must not be passed; at no time will a light vehicle of piece of equipment come in contact with water spray from a large water truck while following behind.

- When visibility makes the operation of heavy equipment unsafe, due to fog, inclement weather, or excessive dust, the equipment will be shut down and its location communicated.
- Roads will be proactively prepared for inclement weather by stockpiling the relevant materials in required areas and maintaining easy access to the required equipment.
- Roads are to be managed for snow melt and precipitation by preparing and maintaining ditch grading and addressing soft and low spots.
- Maintaining access roads by periodically regrading and ditching to improve water flow and reduce erosion.
- Maintaining culverts in access road crossings to remove accumulated material and debris to reduce erosion, flooding, and sediment mobilization.
- Implement road safety measures such as speed limits and signage to reduce the chance for wildlife collisions both on-site and between sites.
- Maintenance of on-site roads in good condition with regular inspections to monitor dust control effectiveness.
- Control of access to the PDAs using a security gate and guard house, and by employing on-site security staff.
- Schedule arrivals/departures of employee traffic to occur earlier than the existing observed a.m. peak hour for local traffic and later than the existing observed p.m. peak hour if needed.
- Scheduling of alternating work shifts so that all workers do not arrive in and leave the area at the same time will limit Project-related demands on both traffic and air services and infrastructure.
- Encourage carpooling among locally resident operation workers.
- Visitors and Project personnel are to park in designated parking areas.
- When parking heavy equipment side by side, operators are to allow for 8 m clearance from other equipment, set the park brake and apply two-wheel chocks or ground engaging tools. When parking end to end, heavy equipment is to allow for a 25 m spacing and will offset the unit to the left such that the front vehicle has clear visibility of the rear unit in a good side mirror.
- No vehicle or personnel is to approach a heavy vehicle unless the unit is parked, with brake set and wheel chock positioned.
- When parking light vehicles outside of a designated parking area, set the park brake and apply two-wheel chocks or ground engaging tools.
- Before coming within 50 m of a manned heavy vehicle, ensure there is clear verbal contact and acknowledgement, or direct visual acknowledgement. A 50 m safe parking radius from all heavy equipment is to be maintained.
- Heavy vehicles should never approach within 50 m of any vehicles unless passing on a site road.

- Alamos will implement traffic control measures which may include gating approaches to Project access roads, placing large boulders and/or gated fencing to restrict public access to the PDAs.
- Alamos will engage local land and resource users (e.g., recreational harvesters) and the Town of Lynn Lake to address, to the extent possible, issues related to the restriction in use of the Gordon site access road and with local boaters to address navigation issues as well as access and safety issues related to navigation along watercourses affected by the Project, including engagement regarding the need to provide marked portages to circumvent obstructions.

3.3 DECOMMISSIONING/CLOSURE

3.3.1 Gordon and MacLellan Sites

- All vehicles supporting the Project in active work areas must have a working strobe light and buggy whip.
- All heavy equipment and vehicles must operate with headlights and parking/clearance or fog lights on.
- Emergency vehicles have the right-of-way over all vehicles and equipment when lights are flashing.
- Heavy equipment will have the right-of-way over light vehicles.
- Heavy equipment following distance guidelines will be established through the Contractor's Traffic Management Plan.
- Large transportation trucks will be used to reduce the number of trips.
- Mobile equipment will have exhaust mufflers.
- Passing is permitted only when safe to do so and must always yield to oncoming traffic.
- Clear verbal communication on the radio is required prior to passing any heavy equipment.
- Control site access by resource users during post-closure.
- Implement measures to control access on mine access roads during decommissioning/closure phase (e.g., gates).
- Scarify/remove all linear features, including site access roads, when no longer required during decommissioning/closure phase of project.

4.0 MONITORING ACTIVITIES

Monitoring is the continuation of observation, measurement, or assessment of conditions at and surrounding the Project, its components, or activities. Two types of monitoring are typically undertaken: (1) to verify the accuracy of predictions and implemented mitigation measures; and (2) compliance monitoring for verification of practices or procedures to meet legislated requirements. Components to be monitored have been determined based on regulatory instrument requirements as per legislation, environmental importance, sensitivity and vulnerability, and license requirements.

The TAP provides details on the location, design, methods (e.g., parameters to be measured), applicable regulatory instruments, and a schedule for monitoring activities. Engagement of Indigenous Nations in monitoring will be incorporated into the monitoring plans where appropriate and applicable.

Monitoring activities during the construction, operation, and decommissioning/closure phases will be used to verify EIS predictions and evaluate the effectiveness of mitigation strategies for the key environmental effects detailed in Section 4.1 to 4.3 of the TAP. Management activities provide guidance for addressing specific issues that arise during the construction, operation, and decommissioning/closure phases of the Project.

The monitoring programs will be the same for both the Gordon and MacLellan sites.

A qualified person (e.g., safety officer) will undertake traffic management monitoring activities.

4.1 PRE-CONSTRUCTION/CONSTRUCTION

4.1.1 Gordon and MacLellan Site

- Monitor traffic delays at intersections and implement appropriate changes.
- Record wildlife sightings within the site and along the access roads.
- Track road safety incidents and determine trends to identify areas requiring further mitigation.
- Inspect access roads regularly to identify areas requiring road maintenance.
- Implement maintenance schedules for bridges, culverts, ditches, and sediment control measures.

4.2 OPERATION

4.2.1 Gordon and MacLellan Site

- Monitor traffic delays at intersections and implement appropriate changes.
- Record wildlife sightings within the site and along the access roads.
- Track road safety incidents and determine trends to identify areas requiring further mitigation.

- Inspect access roads regularly to identify areas requiring road maintenance.
- Implement maintenance schedules for bridges, culverts, ditches, and sediment control measures.

4.3 DECOMMISSIONING/CLOSURE/POST CLOSURE

4.3.1 Gordon and MacLellan Site

- Monitor traffic delays at intersections and implement appropriate changes.
- Record wildlife sightings within the site and along the access roads.
- Track road safety incidents and determine trends to identify areas requiring further mitigation.
- Inspect access roads regularly to identify areas requiring road maintenance.
- Implement maintenance schedules for bridges, culverts, ditches, and sediment control measures.

4.4 SCHEDULE

Monitoring activities for traffic delays, wildlife sightings, road safety, inspection and maintenance will be conducted on a regular basis and reported weekly and/or monthly. In the event of a road safety incident, a post-incident monitoring schedule will be developed on a case-by-case basis in consultation with applicable regulatory agencies depending on the type of incident and degree of environmental damage.

5.0 ADAPTIVE MANAGEMENT

Adaptive management is a planned process for responding to uncertainty or to an unanticipated or underestimated Project effect. Information learned from monitoring actual Project effects is applied and compared to predicted effects. Where a variance between the actual and predicted effects occurs, a determination is made as to whether modifications or other actions are necessary to revise the existing mitigation measures.

Results from monitoring will be used through an adaptive management process to adjust mitigation measures and to modify plans on an ongoing basis, if required.

5.1 THRESHOLDS FOR ADAPTIVE MANAGEMENT

For the TAP, the triggers for adaptive management are as follows:

- An increase in road safety incidents at and to the Gordon and MacLellan sites.
- An incident of non-compliance with *The Dangerous Goods Handling and Transportation Act* and the associated Storage and Handling of Petroleum Products and Allied Products Regulation, MR 188/2001 or *The Workplace Safety and Health Act* (Manitoba).
- Observation of conditions that could compromise the safety of Project personnel or increase the risk of potential road safety incidents.

Should an unexpected deterioration in the environment be observed as part of monitoring, intervention mechanisms will be applied as part of the process of adaptive management. This will include an investigation into the cause of the deterioration and identification of existing or new mitigation measures which will be implemented to address the deterioration.

Information collected as part of reporting activities will be reviewed by the Site Supervisor responsible for traffic operations to determine the effectiveness of mitigation measures identified in the TAP. Adjustments will be made to the plan as needed in accordance with the adaptive management process in place for the Project.

6.0 TRAFFIC AND ACCESS COMMUNICATION

6.1 RADIO PROTOCOL

Communication is an integral part of the TAP. Equipment and vehicles travelling on the site or on access roads will be equipped with two-way radios. Site vehicles and buildings will be connected via a VHF radio link using a designated mine frequency. Restricted access and radio call-in requirements will be implemented as required and enforced. Signs indicating restricted access and radio call-in instructions will be posted at various locations where required. All personnel and contractors operating a motor vehicle at the mine site will be prohibited from using a cell phone or other communication devices while operating a motor vehicle.

All vehicles must be tuned to a designated mine frequency while traveling along, stopped on, or working on the access roads and must adhere to the road radio protocol:

- Drivers must use the radio to alert other road users of their whereabouts.
- Access roads will be marked with kilometre markers at every kilometre, with zero station being the Highway access (PR 391).
- When on the way up either of the access roads drivers must call out their vehicle type, access road name, location, and direction every kilometre (e.g., “Heavy Truck 5 up”).
- Drivers headed down the road must call out their vehicle type, location, and direction every kilometre (e.g., “Heavy Truck 8 down”).
- Vehicles driving down have the right-of-way.
- When driving up the mine access road towards the mine, choose an appropriate pull-out in order to safely avoid any traffic travelling down the access road.
- Vehicles must use the radio to notify others when they are entering the access road either at the mine site or the highway (e.g., “Heavy truck up from highway”, or “Heavy truck down from mine”).
- When approaching mobile equipment slow down and use the radio to ask the operator if it is safe to pass. If no response is received, wait until the operator pulls over and signals that it is safe to pass.
- Car Audio or music must not be at a volume that will potentially interfere with the driver’s ability to safely monitor the radio.

The following back-up alarms and horn signals will be utilized as a means of communication while traveling on the mine sites:

- All rubber tired mobile equipment in excess of 7,000 kg will be equipped with a backup alarm that is clearly audible above background noise and continuous as long as the equipment is moving in reverse.
- If not equipped with a backup alarm, all vehicles will sound their horn three times prior to backing up.
- Horn signals are defined for trucks prior to starting (1 honk), moving (2 honks), and reversing (3 honks) .For shovels or dozers signaling to trucks, 3 honks are required to tell the operator to start reversing and 1 honk is required to tell them when to stop.
- The Contractor's Traffic Management Plan will include the above horn signaling requirements.
- All personnel (drivers and operators) entering an active Project area must be knowledgeable of traffic control systems and must obey control signage.

6.2 REPORTING

Reports from monitoring programs will be submitted annually to regulatory authorities and shared with interested Indigenous Nations and stakeholders.

Reporting activities will include:

- Weekly reporting of wildlife sightings within the site and along the access roads.
- Timely reporting road safety and environmental incidents to determine trends and to identify areas requiring further mitigation.
- Reporting on road inspections to identify areas requiring road maintenance (weekly and/or monthly).

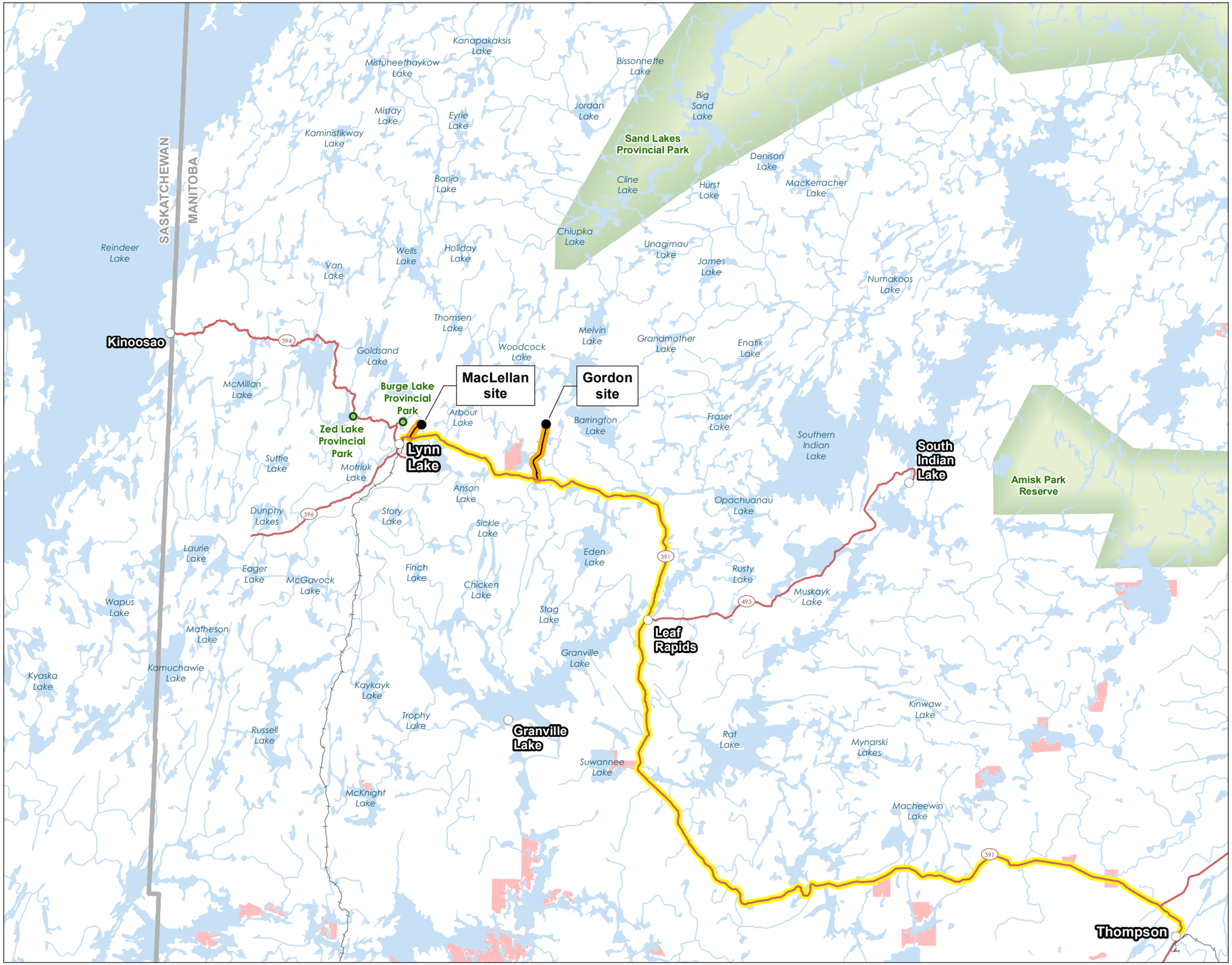
The reporting will be used to inform adaptive management reviews.

7.0 REFERENCES

Alamos (Alamos Gold Inc.). 2023. 2022 Report on Conformance to the Responsible Gold Mining Principles. Available at: https://s24.q4cdn.com/779615370/files/doc_downloads/rgmp/AGI-2022-RGMP-Report-Final.pdf. (Accessed April 2024)

Stantec Consultants Ltd. 2021. Lynn Lake Gold Project: Road Operation Traffic Study. Final Report: An Assessment of Current and Projected Flows, Road Conditions and Required Operating and Maintenance Activities on Provincial Highway (PR 391). Prepared for Alamos Gold Inc. Winnipeg, MB.

Appendix A Map



Stantec

Transportation Impact Study Area
- Access Road
- PR391 from Thompson to Lynn Lake

Landbase
- Community
- Highway
- Access Road
- Rail
- Watercourse
- Waterbody
- First Nation Reserve
- Provincial Park
- Provincial Border

N

0 10 20 Kilometres

(At original document size of 11x17)
1:1,000,000

Notes
1. Coordinate System: NAD 1983 UTM Zone 14N
2. Base Data Sources: Government of Manitoba and Government of Canada

Project Location
Lynn Lake, Manitoba

Prepared by ACampigotto on 2021-03-10
Technical Review by BKurylko on 2021-03-10

Client/Project
111473008
ALAMOS GOLD INC.
Lynn Lake Gold Project

Map No.
1

Title
Study Area

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