PILITAK ENTERPRISES LTD

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TRAFFIC MANAGEMENT PLAN

Arctic Bay Harbour Development

DFO ET025-260070

Submitted to:

Public Services and Procurement Canada

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List of abbreviations

Abbreviation	Full Name
CCEMP	Contractor CEMP
DFO	Fisheries and Oceans Canada
EM	Environmental Monitor
NIRB	Nunavut Impact Review Board
NU	Nunavut
NWB	Nunavut Water Board
PEL	Pilitak Enterprises Ltd
PPD	Petroleum Product Division
PSPC	Public Services and Procurement Canada
SPRP	Spill Prevention and Response Plan
TDGR	Transportation of Dangerous Goods Regulations

1. INTRODUCTION

The purpose of this document is to present the Traffic Management Plan in detail for the construction project of the new harbour in Arctic Bay, Nunavut, and to ensure that all parties involved have a clear understanding of the plan's provisions and the steps to be taken during the project.

The construction project was awarded to Pilitak Enterprises Ltd (PEL) in February 2026 by Public Services and Procurement Canada (PSPC) for the Department of Fisheries and Ocean (DFO). At the end of August 2026, heavy equipment, camp facilities and material will be delivered by sealift to Arctic Bay. The project consists mainly of the construction of a new breakwater with fixed wharf, a boat launch ramp, small craft floating docks laydown area and lighting. The new marine infrastructure will be constructed during the summers of 2027, 2028 and 2029 while preparation work will be carried out during the fall of 2026.

The purpose of this Traffic Management Plan is to provide for the safe and efficient movement of traffic through the hamlet, around the work sites, and to ensure the health and safety of all persons within these areas. The plan will address the following topics:

- site routing
- the type of vehicles to be used and the speed limits
- the dust control measures
- the pedestrian protection
- training and awareness

This plan will take effect at the beginning of the 2026 construction season and will be updated as needed. The plan and any subsequent modifications will be discussed with the hamlet.

Figure 1.1: *Site locations*

Figure 1.2: *Site locations*

1.1 ADDITIONAL DOCUMENTATION

The latest version of the following documents, which have been issued for the current project, must be used in conjunction with the present plan:

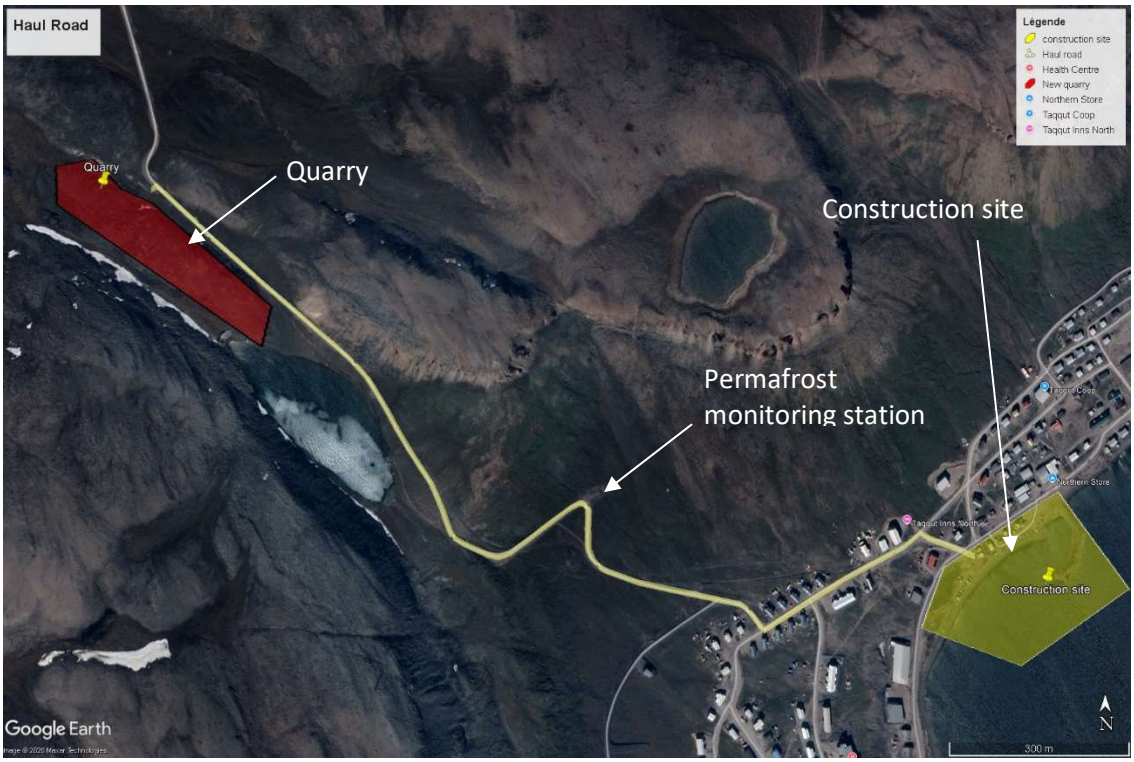
Document	**Revision**
Contract specifications and drawings	Issued for tender
Contractor Construction Environment Protection Plan CCCMP	Rev-01
Health and safety and Emergency Response Plan	Rev-00
Quarry Blasting and Management Plan	To be submitted for review
Sediment and Erosion Control Plan	To be submitted for review
Spill Prevention and Response Plan	Rev-00
Wildlife Protection and Monitoring Plan	Rev-00

2. HAUL ROAD

The rocks and granular material for the construction of the marine facility will come from a new quarry located approximately 1.5 kilometers northwest of the harbour site. Existing roads will be used to transport the material from the quarry to the harbour site, as indicated below Figure 2.1.

Be aware that there is a permafrost monitoring station adjacent to the hairpin turn on the road to Victor Bay. Avoid damage to this instrumentation and maintain as much separation as possible to avoid changing the location's thermal regime.

Figure 2.1: *Haul road from the quarry to the construction site*



The rocks and granular material will be transported from the quarry site to the harbour construction site using HM-300 articulated dump trucks. A total of six trucks will be used for this purpose. Priority will be given to local traffic and loaded trucks; empty trucks must yield.

The hamlet roads are wide enough to allow two trucks to pass; however, special attention will be required at culvert crossings. At some locations, the gravel cover over culverts is thin, particularly along the road edges. Culvert locations will be identified with red flags. Additional fill may be required at certain culvert crossings and along narrow curves.

Low communication cables may be present along the route. The haul road will be inspected, and any affected wires may need to be raised.

From the construction site, the haul road climbs uphill, with slopes reaching up to 15% in the steeper sections. The speed limit within the hamlet is 20 km/h for trucks. The escort vehicle will adjust the convoy speed based on observed conditions. From the end of the hamlet to the quarry, the speed limit is 30 km/h for trucks. Speed limits will be adjusted as necessary based on road and weather conditions. Vehicle lights must be kept on at all times to ensure better visibility. Speed compliance will be monitored by the Site Safety Representative and the Site Superintendent. Speed limits will be regularly reviewed, communicated, and enforced through toolbox and tailgate meetings.

The expected traffic volume of haul truck is presented in the below table.

Estimated number of round trips by rock trucks from the quarry to the harbour site. All trucks will use hamlet roads to pass through the town and deliver materials.			
	During the construction season (round trip)	Daily average (round trip)	Hauling period
2026	100	10	September
2027	6,500	90	July to September
2028	3,000	40	July to September
2029	2,500	50	July-August

At the beginning and end of each construction season, haul road conditions will be assessed. Photographs of the existing road conditions will be taken, and corrective measures, where required, will be documented. The haul road will be used multiple times per day by the site superintendent, the EM, and the quarry crew. Based on personal observations, input from the environmental monitor, feedback from the hamlet, and comments from all drivers, the site superintendent will determine when maintenance and/or repairs are required to keep the road safe and ensure that it does not degrade beyond baseline conditions.

3. PEDESTRIAN AND CHILDREN PROTECTION MEASURES

3.1 TRAFFIC RESTRICTION

Material transport from the quarry to the construction site will take place during the daytime shift, between 6:00 and 18:00.

3.2 ESCORT VEHICLE

Articulate dump trucks and heavy equipment will be escorted along the road segment that crosses the hamlet. The escort vehicle will be equipped with an orange flashing light and an orange flag for visibility. It will also have an FM radio, set to channel 2, to maintain communication with truck drivers, as well as a loudspeaker to provide instructions if needed—particularly to alert children near the roadway.

Each truck, piece of heavy equipment, or convoy of trucks traveling through the hamlet will be accompanied by an escort vehicle. The vehicle driver will stop at intersections to ensure it is safe for road users and pedestrians to cross. They will also warn nearby children to maintain a safe distance when trucks are approaching and, when required, will act as a signaler.

The escort vehicle (s) will have the following equipment:

- standard PPE (hard hart, safety boots, safety vest)
- FM radio
- Stop/slow paddle

3.3 PRORITY TO PEDESTRIAN

All vehicles shall give priority to pedestrians. Drive slowly at all times, especially near the school, the Co-op store, and any other public buildings. Extra care must be taken because roads are shared with pedestrians and children. Be aware that children often play in the streets and may not pay much attention to vehicles.

3.4 ROAD SIGNALER

Flag persons or traffic control personnel may be used during periods of increased traffic or near high-risk crossing areas. The site superintendent, in consultation with the site safety officer, will determine when such measures are required.

4. TRAFIC CONTROL AT CONSTRUCTION SITES

Road conditions will be regularly monitored to prevent damage and erosion, particularly during wet weather. Hauling operations may be temporarily suspended to allow for road maintenance and necessary repairs. The road surface will be frequently graded to maintain smooth conditions, and additional granular material will be applied as needed.

4.1 HARBOUR SITE

Access to the harbour construction site will be controlled using temporary construction fencing and/or barriers to ensure the safety of workers, site users, and the public. Two restricted areas will be established and maintained in accordance with the project schedule, as presented in the **Figure 4.1.1**.

Access to Area 1 will be restricted during breakwater construction, Zone A dredging, and shoreline construction activities. Access to Area 2 will be restricted during the demolition of the existing breakwater and the laydown area construction.

The location of fences and barriers will be adjusted as needed to reflect each phase of the project. Arrangements will be made to maintain access to the harbour site for boaters throughout the duration of the project. Temporary fencing may be removed during sealift unloading operations to facilitate safe and efficient material handling.

Access to the new breakwater will be prohibited to all non-construction vehicles for the duration of the project. Access to the new breakwater by pedestrians and fishermen will be prohibited during the construction season. After working hours, pedestrian and fisherman access will be discouraged; however, it may not be possible to fully prevent it. A night watch will be in place to monitor and secure the site throughout the construction season.

Stop signs will be installed where they are currently missing. As shown in **Figure 4.2.2**, construction signage—including speed limits for construction vehicles and restricted area notices—will be installed on both sides of the road. The speed limit for construction vehicles within hamlet limits will be 20 km/h. All other vehicles will adhere to the speed limits established by the hamlet.

Figure 4.1.1 *Harbour construction site restricted areas*

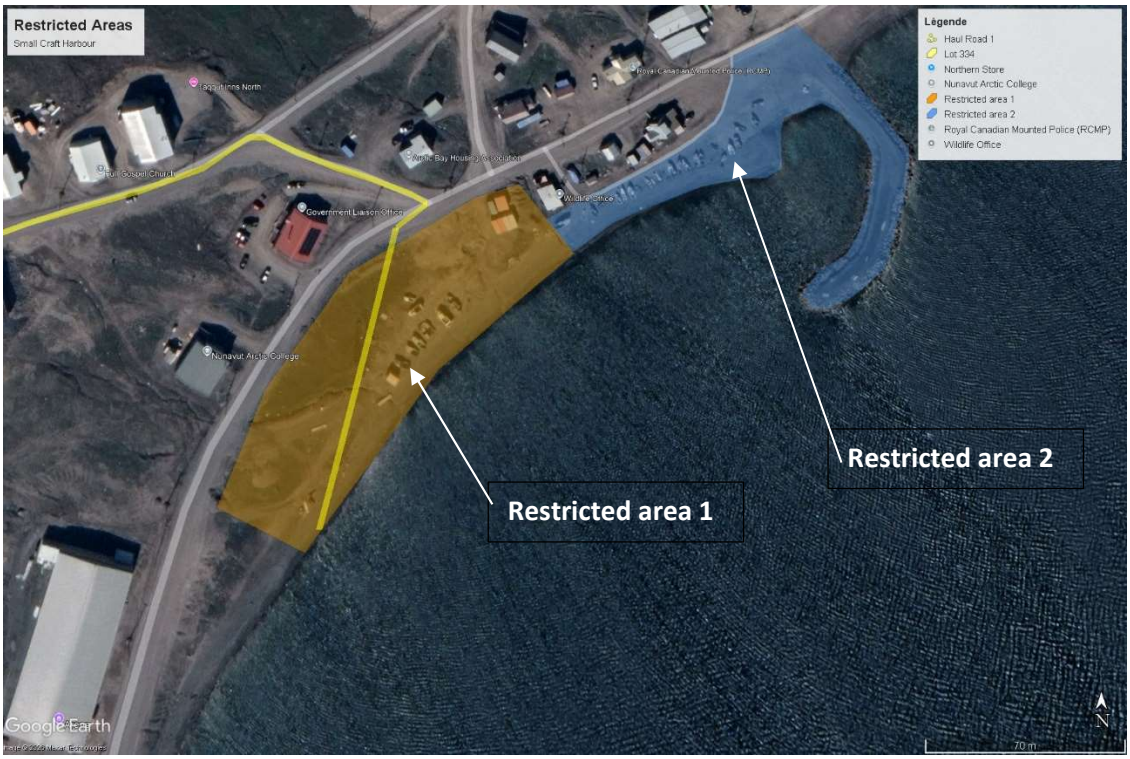


Figure 4.2.2 *Harbour and haul road Construction signs*

4.2 QUARRY

The haul road from quarry to the construction site is not wide enough to allow construction vehicles to circulate next to each other. Two pull-over areas will be constructed along this road section, as indicated on the figure 4.2. The priority shall be given to full trucks coming from the quarry. The truck drivers will be communicating between each other with the mobile radios installed in each truck. The speed limit for hauling trucks and construction equipment will be 30 km/h on the road section between the quarry and the hamlet boundary. All other vehicles will adhere to the speed limits established by the hamlet (30 km/hr on Victor Bay road). Haul trucks shall reduce their speed when another type of vehicle is approaching from the opposite direction. Drivers should be very cautious when pedestrians and children are present along the haul road and adjust their speed accordingly.

The quarry and material processing areas will be restricted to authorized workers and project vehicles, with the exception of occasional users requiring access to the carving quarry. These users will be met with in advance to establish a protocol ensuring safe access.

Before each blast, the road to Victor Bay will be temporarily closed for 300 metres on each side of the quarry. The public will be notified at least 12 hours and again 2 hours in advance through the project Facebook page and local radio announcements. A designated vehicle, staffed by a worker equipped with an FM radio, will control access on each side of the closure and await instructions from the site superintendent before reopening the road. The road closure is expected to last no longer than 30 minutes.

Figure 4.2.1 *Hauling Road Construction Signs*

4.3 LAYDOWN AREA AND MAINTENANCE GARAGE

The laydown area and maintenance garage are located on the east side of the community tank farm. The barge winter storage area is situated approximately 250 meters to the southeast and will also be used for sealift unloading. Use of this area will be coordinated with the hamlet and other contractors to ensure continued access. Due to an upcoming project, the barge winter storage area may be relocated further to the east.

The road in this area provides access to the airport, sewage lagoon, and water supply lake. Vehicle and equipment operators will be regularly reminded to pay close attention when exiting the laydown area. The speed limit for hauling trucks and construction equipment will be 35 km/h on the road section between the laydown area and the hamlet boundary. All other vehicles will adhere to the speed limits established by the hamlet (50 km/hr).

Figure 4.3.1: *Laydown area and maintenance garage*

4.4 INTERACTION WITH HAMLET VEHICLES

When driving on hamlet roads, be aware that sewage trucks, water trucks, and fuel trucks often cross roads and travel between buildings. Where the road is not wide enough, give priority to hamlet vehicles. Make sure not to park vehicles in a way that restricts access to buildings for water, fuel, or sewage services.

5. DUST CONTROL AND VEHICLE MAINTENANCE

5.1 DUST CONTROL

For dust control, both water and calcium chloride will be applied to minimize airborne dust. Water will be distributed using a water truck equipped with a rear spreader bar to ensure even coverage. Calcium chloride will be applied using a 2-tonne spreader mounted on the back of a pickup truck.

The manufacturer's recommended application rate for calcium chloride is approximately one tonne per kilometer for a road width of 10 meters. Multiple applications may be required throughout the summer, depending on weather conditions and traffic volume.

Based on daily site observations, the EM with the site superintendent will assess conditions and determine when additional dust suppression measures are necessary.

Water truck equipped with a spreader bar

Pickup truck equipped with a spreader for calcium chloride

5.2 VEHICLE MAINTENANCE

All equipment and vehicles are inspected and maintained in accordance with manufacturer recommendations and our established maintenance program. Each operator is responsible for conducting daily routine inspections, completing the inspection sheet, and immediately reporting any issues or concerns to the site superintendent. Considering that vehicles will be traveling on steep hills, special attention should be given to brake components during the daily inspection routine, and the following items should be verified:

- Check brake warning lights and monitor panel.
- Test Service brake, Retarder brake and parking brake.
- Check brake oil level/hydraulic fluid.
- Inspect for oil leaks, damaged hoses, Loose fittings.
- Listen for abnormal noises during braking.
- Verify no overheating around wheel ends.

Qualified mechanics will be working full-time at our maintenance garage in Arctic Bay, where all maintenance and repair work will be carried out.

A service truck will also be available for on-site maintenance and repairs. When intervention is required on existing roads, the service truck driver shall always park the vehicle in a manner that does not block the road.

6. TRAINING

6.1 ESCORT VEHICLE DRIVERS

Training will be provided to the escort vehicle drivers by our health & safety representative. The training will be done at the beginning of each construction season and whenever new people are hired for these tasks. The training session will include:

- job role and responsibilities
- clothing and equipment required
- communication equipment and protocols
- job Basics (such as taking the control position and laying out signs)
- practice and procedures
- emergency procedures
- review of the Traffic Management Plan
- review the WSCC code of conduct

The escort vehicle drivers must have a valid class 5 driver licence. The trainings will be done according to the *Northwest Territories and Nunavut Traffic Control Person Code of Practice*.

6.2 ARTICULATED DUMP TRUCK DRIVERS

Training on the articulated dump truck will be provided at the start of the construction project. In addition to covering safe equipment operation and maintenance procedures, the training will also address speed limits and best practices for driving on steep slopes.

7. TRAFFIC AWARNESS CAMPAINGN

A traffic awareness campaign will be implemented before and during construction activities to promote road safety within the community, with a particular focus on children and teenagers. The campaign will address the increased presence of construction vehicles, including dump trucks and heavy equipment, traveling through the village.

The objectives of the campaign are to:

- Increase public awareness of construction traffic hazards.
- Encourage safe pedestrian, bicycle, ATV, and snowmobile practices near haul routes.
- Reduce the risk of vehicle–pedestrian interactions; and promote shared responsibility between the construction team and the community.

The campaign will include the following measures:

- Community Communication through the Community meetings, the project Facebook page and the local radio.
- Advance notice of construction activities and haul routes will be provided to the Hamlet office, local schools, and community organizations.
- Information posters and public notices will be displayed in common community areas such as the school, arena, Co-op sore, and Hamlet office.
- When possible, road safety presentations will be delivered at the local school prior to the start of hauling activities where the following safety topics will be discussed:
  - Staying clear of moving trucks and heavy equipment.
  - Avoiding blind spots around vehicles.
  - Looking both ways before crossing roads.
  - Do not ride a bicycle near moving trucks.
  - Stay visible