

## STATEMENT OF WORK

PARKS CANADA  
WINTER ROADS AND PARKING LOT MAINTENANCE  
KOUCHIBOUGUAC NATIONAL PARK OF CANADA  
KENT COUNTY, NEW BRUNSWICK

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## Section 1 - General Instructions

### 1. Description of Work

- a) Work under this contract consists of snow plowing, salting and/or sanding for all park roads and parking lots as identified below in Kouchibouguac National Park of Canada, Kent County, New Brunswick.
- b) The Contractor is responsible of the following:
  - .1 Snow plowing of the following roads shown on Figure 1 to Specified Level of Service, Section 2:
    - a) Highway 117: Park Entrance to North Boundary, 25.1 kms.
    - b) Loggiecroft Road: Highway 117 to the Wharf, 4.2 kms.
    - c) Parkway Road: Highway 117 to Pijeboogwek Parking, 0.25 kms.
    - d) Compound Access Road: Parkway to Compound Parking, 0.5 kms.
    - e) North Kouchibouguac Road: Highway 117 to Park Boundary, 1.2 kms.
    - f) Cap Saint-Louis Road: Park Boundary to Wharf, 3.8 kms
  - .2 Salting and sanding of the Highway 117, Parkway Road, Compound Access Road and North Kouchibouguac Road to Specified Level of Service, Section 2.
  - .3 Sanding of Loggiecroft and Cap Saint-Louis roads to specified Level of Service, Section 2.
  - .4 Snow plowing and salting of the following parking areas and walkways shown on Figure 2, 3 and 4 to Specified Level of Service, Section 2:
    - a) Headquarters staff parking
    - b) Visitor Center parking
    - c) Pijeboogwek parking
    - d) Compound Maintenance area
    - e) Walkways -Pijeboogwek and Administration/Visitor Center (front and rear) including emergency fire exits at administration, visitor reception center and Pijeboogwek.
    - f) Parking at former Covered Bridge on Highway 117.

2. Start and Completion Dates and Hours of Operations

- a) Start Date: November 15, of each year period of the contract.  
Completion Date: April 15, of each year period of the contract.
- b) The roads will be maintained annually at the specified Level of Service (Section 2) from November 15 to April 15 during each year of the contract period.
- c) The roads must be open for traffic for the periods specified, except under severe weather conditions.

3. Temporary Traffic Signs

- a) Without extra cost to Parks Canada, make suitable provisions to accommodate traffic, either pedestrian or vehicular, over or around any maintenance area of highway upon which work is being performed in a manner satisfactory to the Project Authority.
- b) Barricades, signs, delineators, warning lights, flag person's paddles and other devices shall be in strict accordance with the most recent version of the New Brunswick Department of [Transportation and Infrastructure Work Area Traffic Control Manual](#) (WATCM).
- c) Any issues or concerns pertaining to requirements in the WATCM shall be addressed to the Project Authority.

4. National Parks Acts

- a) Perform Work in accordance with the [National Parks Acts](#).

5. Environmental Protection

- a) Because this Work is in a National Park, it is essential lands remain in a natural state as possible. The Contractor is to take special care to protect existing structures, and shall notify the Project Authority immediately of any damage to structures, historic or natural resources during maintenance activity. The Contractor is responsible for all damages caused by the Contractor or employees.
- b) Exercise special care to avoid damage to trees, shrubs and vegetation outside the roadway. Should damage occur, restore area to satisfaction of the Project Authority. If the Contractor does not restore any damaged areas to satisfaction of the Project Authority, the work will be undertaken by other means, at the expense of the Contractor.

6. Disposal of Wastes

- a) Disposal of waste or volatile materials into waterways is prohibited.
- b) Disposal of waste petroleum products and litter at suitable locations outside the Park in accordance with applicable environmental standards.

7. Safety Measures

- a) Observe and enforce safety measures required by Provincial Government, Work Safe New Brunswick and municipal statutes and authorities.
- b) In event of conflict between any provisions of above authorities, most stringent provisions will apply.

8. Contractor's Premises

- a) In order to provide adequate response times, the Contractor must maintain a depot within 25 kms of the junction of Highway 117 and the Park boundary. This depot must be a full service area for the Contractor's plowing and salting equipment as well as a storage area for salt and sand as specified in item 9 c) below.

9. Sources and Stockpiling of Material

- a) The Contractor is required to supply all sand and salt as well as store the same outside the Park boundaries in an environmentally approved manner in accordance with applicable authorities and by using the best management practices.
- b) Make own arrangements with authorities or owners of private properties for storing and transportation of materials and machinery necessary for Work over their property, roads, or streets and be responsible for obtaining and payment of applicable fees and permits.
- c) The Contractor must ,at all time, have a minimum of 1 month supply of salt and sand on hand to maintain the roads. Storage of salt must meet all environmental regulations.

10. Contractor's Representative

- a) The Contractor must continuously have an authorized representative to whom communications may be addressed and who will be competent to speak for the Contractor in discussing work and work methods.

11. Weight Restrictions

- a) The Contractor must respect the applicable Provincial Government Weight Restrictions on highways and bridges.

12. Speed Restrictions

- a) The Contractor must respect the posted speed limit signs.

13. Park Signs

- a) Maintain existing signs erected by Park Administration. When it is necessary to remove a sign to enable maintenance work to proceed in its vicinity, dismantle sign, and re-establish it on a temporary post or stand and set back from construction area or transport and stockpile signs in designated storage area as directed by the Project Authority. This work is considered to be incidental and no separate payment to be made for maintaining and moving Park signs.

14. Codes and Standards

- a) Materials and workmanship must conform to or exceed applicable standards of Canadian Government Specifications Board (CGSB), Canadian Standards Association (CSA), American Society for Testing and Materials (ASTM), American Association of State Highway and Transportation Officials (AASHTO) and other referenced organizations.
- b) Conform to latest revision of dated referenced standard as reaffirmed or revised to date of advertising of this specification. Standard or codes not dated will be deemed editions in force on that date.

15. Communications

- a) All patrol, plowing and salting units must be equipped with cellular phones.
- b) The Contractor's supervisor is to be available by phone and cellular phone 24 hours per day during the full term of the contract.

## **Section 2 – Level of Service**

### PART 1 – GENERAL

#### 1.1 Related Work

- Section 3 - Road Patrol
- Section 4 - Snow Plowing
- Section 5 - Sanding and Salting

### PART 2 - LEVEL OF SERVICE

#### 2.1 General

- . In general, the classes of roads under this contract and the corresponding level of service are as outlined in Tables A and B.

#### 2.2 Co-ordination

Work under this contract is governed by these specifications. However, Highway 117 is part of the provincial highway system and it is imperative that winter maintenance on this road is consistent inside and outside the park. It is therefore the Contractor's responsibility to communicate regularly with the local New Brunswick Department of Transportation and Infrastructure Authorities to ensure this condition is being met. Any discrepancies in levels of service must be brought to the attention of the Park immediately.

#### 2.3 Hours of Operation

Normal hours of operation for winter maintenance activities under this contract must be 5 AM to 11 PM. However as per article 2.2 above, it is the Contractors responsibility to ensure responsibility to ensure coverage for Highway 117 inside the Park is consistent with New Brunswick Department of Transportation and Infrastructure coverage outside the Park.

#### 2.4 Parking Areas

- a) Parking areas must be as shown on Figures 2, 3, and 4.
- b) Snow removal in parking areas must be done with a blower to avoid piling snow on or against fences, buildings and trees. Frontend loaders may be used for slight accumulations or for removal of slush.
- c) Snow removal for walkways at the front and rear of the Administration building and Pijeboogwek to be done with small walk-behind blowers. Work for these areas as well as the Maintenance Compound area shall include hand shoveling around doors, walls and other obstructions.

SNOW AND ICE CONTROL

TABLE A

\* Class "A-2" – Arterial and Collector (Highway 117, North Kouchibouguac Road, Parkway, Compound Access Road)

\* Class "C" – Low Traffic Collector and Local Roads (Loggicroft and Cap Saint-Louis Road)

Temperature	Pavement Condition	Precipitation	Instruction	Salt Application Rates Kilograms per 2 lane kilometers	
				" A-2 "	" C "
0° and above	Wet	Snow	Plow, then sand or salt	110 kg.	Sand hills, curves, intersections, slippery spots.
		Freezing rain	Sand or salt	85 kg.	Sand
- 4° to 0° C	Wet	Snow	Plow, then sand or salt	170 kg., repeat if necessary at 85 kg.	Sand hills, curves, intersections, slippery spots.
		Freezing rain	Sand or salt	170 kg., repeat if necessary at 85 kg.	Sand
- 7° to - 4° C	Wet	Snow	Plow, then sand or salt	200 kg., repeat if necessary at 110 kg.	Sand hills, curves, intersections, slippery spots.
-10° to - 7° C	Dry	Snow	Plow, then sand	Sand	Sand hills, curves, intersections, slippery spots.
Below -10° C	Snow packed	Nil	Plow, then sand	Sand	Sand hills, curves, intersections, slippery spots.
	Dry	Snow	Plow, then sand	Sand	Sand hills, curves, intersections, slippery spots.

## LEVEL OF SERVICE

## TABLE B

CLASS	LEVEL OF SERVICE
A-2 Highway 117, North Kouchibouguac Road, Parkway, Compound Access Road	<ol style="list-style-type: none"> <li>1. Plow after 2 cm accumulation</li> <li>2. Plow continuously during storm, visibility permitting.</li> <li>3. Controlled salting after driving lanes are plowed with no further accumulation expected.</li> <li>4. Widen during day light hours only.</li> <li>5. Driving lanes bare within 24 hours after end of storm.</li> </ol>
C Loggicroft Road, Cap Saint-Louis Road	<ol style="list-style-type: none"> <li>1. Plow after 8 cm accumulation</li> <li>2. Sand hills, curves and icy spots</li> <li>3. Widen during daylight hours only.</li> </ol>
Parking Areas and Walkways	<ol style="list-style-type: none"> <li>1. Staff parking and Visitor Center parking plowed within 6 hours or by 8 AM.</li> <li>2. Walkways to Administration building cleared by 8 AM.</li> <li>3. Compound Maintenance area plowed by 11 AM.</li> <li>4. Pijeboogwek plowed within 6 hours or by 9 AM.</li> <li>5. Ice Control to be carried out for all parking areas as required to ensure areas are safe.</li> <li>6. Salt for parking areas and Administration walkways will be supplied by the Contractor.</li> <li>7. Parking at former Covered Bridge on Highway 117 to be plowed following the end of the weather event. This parking must be considered incidental to plowing Highway 117.</li> </ol>



## **Section 3 – Road Patrol**

### PART 1 – GENERAL

#### 1.1 Related Work

- Section 2 - Level of Service
- Section 4 - Snow Plowing
- Section 5 - Sanding and Salting

### PART 2 – EXECUTION

#### 2.1 Patrol Vehicle

- . The Contractor will be required to monitor snowfall and road condition and to dispatch plows, salting and sanding equipment to achieve the Level of Service specified in Section 2.

#### 2.2 Frequency of Patrol

- . Patrols will be carried out on each road at least once per day; more frequently during periods of snow, blowing snow and freezing rain.

#### 2.3 Reporting

- a) Any damage to guiderails, bridges, culverts, etc. observed during routine road patrol will be reported to the Project Authority that same day.
- b) All patrols must be documented on forms supplied by Parks Canada (see Appendix 1).
- c) All plowing, salting and sanding operations are to be reported on forms supplied by Parks Canada (see Appendix 2). The seasonal summary (see Appendix 3) shall be filled and submitted to the Project Authority by the 1st of May of the current year.

## **Section 4 – Snow Plowing**

### PART 1 – GENERAL

#### 1.1 Related Work

- Section 2 - Level of Service
- Section 3 - Road Patrol
- Section 5 - Sanding and Salting
- Section 6 - Scarifying

### PART 2 – EXECUTION

#### 2.1 Width to be Maintained

For the duration of the contract, the width to be maintained is that of the pavement width plus the shoulder.

#### 2.2 Operation Procedure

The Contractor must start operations at the beginning of each snow fall and plow continuously as long it is snowing and as often as necessary to permit the flow of traffic as per the Level of Service, Section 2.

#### 2.3 Potential Danger Areas

The Contractor must pay great attention to the care of potentially dangerous areas such as narrow cuttings, curves, guide rails, bridges, intersections, stop signs, etc. so as to prevent accidents and avoid damage to these features.

#### 2.4 After Snowfall

After each snowfall, the Contractor must continue to remove snow to the width required as per the Level of Service, Section 2, Table B. In order to prevent, as much as possible, the formation of drifts the Contractor must lower the snowbanks on each side of the road. Moreover intersections must be cleared to ensure adequate visibility.

#### 2.5 Slush

All roads shall be plowed in such a manner as to have a smooth traveling surface. When the roads are slush covered, it will be the Contractor's responsibility to remove all slush that develops either because of thawing of snow built-up on the roads.

#### 2.6 Removal of Plows

The removal of snowplows from the road under severe conditions, visibility less than 200 m, is to be on a consultative bases with the Project Authority and the New Brunswick Department of Transportation and Infrastructure Area Superintendent.

## 2.7 Snow Plow Markers

- a) The Contractor is required to provide, place and remove markers to protect guardrails, bridges, etc. The care of these markers will be the Contractor's responsibility.
- b) Markers shall be 50 mm X 50 mm wood stakes approximately 1.5 m in height with reflectors.

## 2.8 Signs

The clearing away of snow obscuring the legibility of signs is the Contractor's responsibility.

# PART 3 – EQUIPMENT REQUIREMENTS

## 3.1 Plow Truck

- a) The plow truck shall be equipped with a one-way plow and wing, safety lights, warning signs and other safety features to New Brunswick Department of Transportation and Infrastructure standards.
- b) The vehicle must comply in all respects with the Highway Act regulations of New Brunswick.
- c) Vehicle to comply with applicable Canadian Motor Vehicle Safety Standards.
- d) An inspection of all equipment to be used for snow plowing will be completed and approved by the Project Authority.

## 3.2 Plow Truck Attachments

- a) The plow truck must be equipped with a salt spreader complete with electronic spreader controls that are regulated to ground speed.
- b) The Plow truck must be equipped with an infrared pavement sensor.
- c) The push frame to be constructed from 4" X 4" X 3/8" steel tubing, 2 compression coils springs to provide a safety trip (the springs must have safety retainer tubes to prevent projectile), oscillating bar to permit plow to follow the contour of the road and 2 adjustable push shoes of NI-HARD cast iron.

## 3.3 Condition of Equipment

- a) All equipment must be in good working order.

## 3.4 Replacement Units

- a) Replacement units must be available for immediate dispatch in the event of equipment breakdown.

## **Section 5 – Sanding and Salting**

### PART 1 - GENERAL

#### 1.1 Related Work

- Section 2 - Level of Service
- Section 3 - Road Patrol
- Section 4 - Snow Plowing
- Section 6 - Scarifying

### PART 2 - PRODUCTS

#### 2.1 Salt Abrasives

- Salt used for maintenance purposes under this contract shall conform to the following requirements for Type 1 de-icing salt as per ASTM standards.
- Chemical Composition:  
Sodium Chloride (NaCl), min. 94.0 %
- Physical Requirements;

Sieve Size	Weight % Passing
20 000	.....
14 000	100
10 000	95 to 100
5 000	20 to 90
2 500	10 to 60
630	0 to 10

#### 2.2 Sand

Sand used for maintenance purpose under this contract must be conform to the following requirements for maintenance gravel.

- a) Sound, hard, durable, angular material free from soft, thin, elongated or laminated particles, organic material, or other deleterious substances.
- b) Salt must be mixed with sand during stockpiling. Maximum salt content to be 2½ % by weight.

- c) Gradation to be within limits specified when tested;

Sieve Size	Weigh % Passing
6.7 mm	100
4.75 mm	90 - 100
2.36 mm	50 - 95
1.18 mm	20 - 90
600 Um	0 - 75
300 Um	0 - 35
150 Um	0 - 15
75 Um	0 - 5

### PART 3 - EXECUTION

#### 3.1 Width to be Maintained

For the duration of the contract, the width to be salted or sanded is specified in Table A and B in Section 2, Part 2. Salt is to be applied in a narrow strip down the center, crown of a two-lane highway. On super-elevated sections (curves), the salt shall be kept as high up on the curve as possible. Sand must be applied the full width of the roadway.

#### 3.2 Operation Procedure

Salt must be applied to meet the level of service as per the Level of Service, Section 2, Table A and B. Salt can also be applied prior to snow fall in order to prevent ice from bonding on roadway.

#### 3.3 Potential Danger Areas

The Contractor must pay great attention to the care of potentially dangerous areas such as narrow cuttings, curves, guiderails, bridges, intersections, stop signs, etc. so as to prevent accidents and avoid damage to these features. Pre-salting should also be carried out in sun-melt areas.

#### 3.4 After Snowfall

After each snowfall, the Contractor must continue to salt and sand to the width required as per the Level of Service, Section 2, Table B.

## PART 4 - EQUIPMENT REQUIREMENTS

### 4.1 Salt Truck

- a) The salt truck must be equipped with a minimum 4 cubic meter box with electronic spreader controls that are regulated to ground speed, safety lights, warning signs and other safety features to New Brunswick Department of Transportation and Infrastructure Standards.
- b) The vehicle must comply in all respects with the Highway Act Regulations of New Brunswick.
- c) Vehicle to comply with all applicable Canadian Motor Vehicle Safety Standards.
- d) An inspection of all equipment to be used for snow plowing and salting/sanding will be completed and approved by an authorized Park representative.

### 4.2 Condition of Equipment

All equipment must be in good working order.

### 4.3 Replacement Units

Replacement units must be available for immediate dispatch in the event of equipment breakdown.

## **Section 6 – Scarifying**

### PART 1 – GENERAL

#### 1.1 Related Work

- Section 2 - Level of Service
- Section 3 - Road Patrol
- Section 4 - Snow Plowing
- Section 5 - Salting and Sanding

### PART 2 – EXECUTION

#### 2.1 Conditions for Scarifying

- a) When cold, windy conditions are severe and there is considerable build-up of polished snow or ice, scarifying will be required on all highways.
- b) Scarifying must be done when the snowpack or ice build-up is so smooth and hard that sand will not stick to the surface.

#### 2.2 Operation Procedure for Scarifying

The procedure must be carried out using a grader with a blade equipped with teeth to roughen and scarify the snow and ice pack. Do not damage asphalt surface.

#### 2.3 Condition for Ice Removal

When under thawing conditions ice builds up during colder period and forms potholes greater than 75 mm the ice shall be removed by grader using a summer blade to avoid damage to the road surface. Do not damage asphalt surface.

### PART 3 - EQUIPMENT REQUIREMENTS

#### 3.1 Grader

- a) The grader must be equipped with a wing.
- b) The vehicle must comply in all respects with the Highway Act regulations of New Brunswick.
- c) Vehicle to comply with all applicable Canadian Motor Vehicle Safety Standards.
- d) An inspection of all equipment to be used for scarifying will be completed and approved by the Project Authority or its authorized representative.
- e) The grader must be equipped with one rotating amber beacon located on the cab roof and four way flashing lights.

- f) If a V-mounted plow is attached to the grader, the push frame to be constructed from 4" X 4" X 3/8" steel tubing, 2 compression coil springs to provide a safety trip (the springs must have safety retainer tubes to prevent projectile), oscillating bar to permit plow to follow the contour of the road and 2 adjustable push shoes of NI-HARD cast iron.

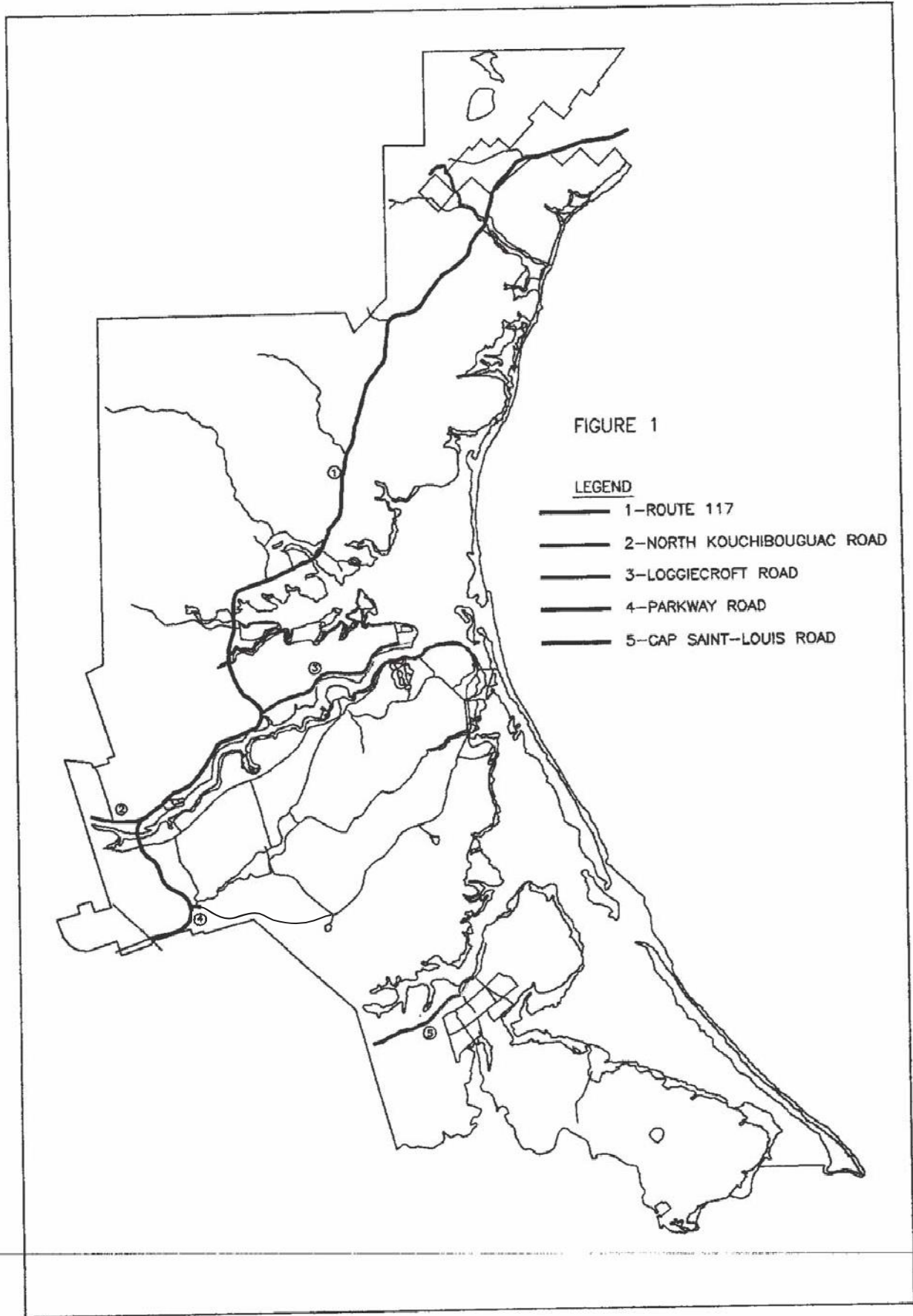
### 3.2 Condition of Equipment

All equipment must be in good working order.

### 3.3 Replacement Units

Replacement units must be available within 24 hours' notice.







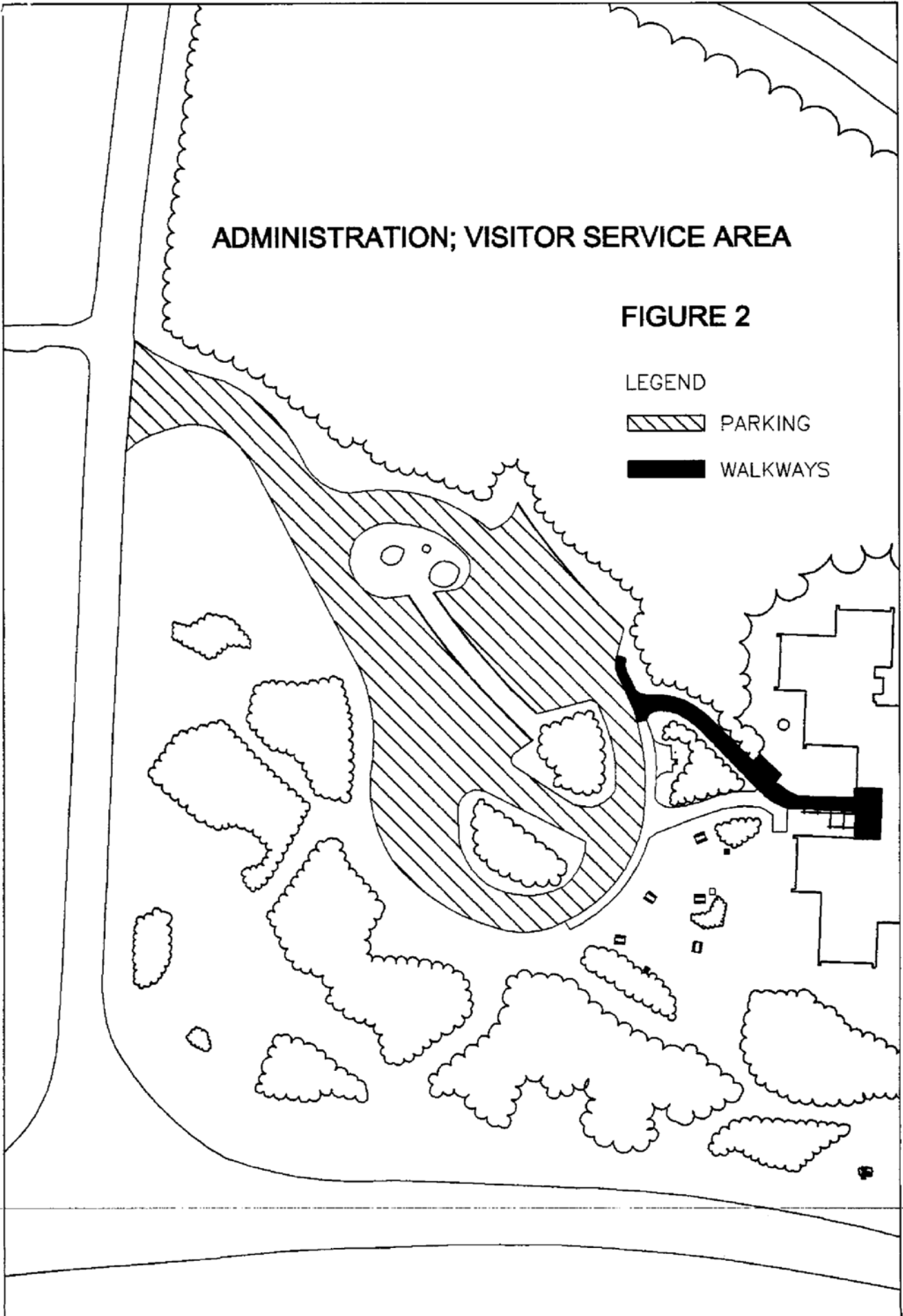
**ADMINISTRATION; VISITOR SERVICE AREA**

**FIGURE 2**

LEGEND

 PARKING


 WALKWAYS




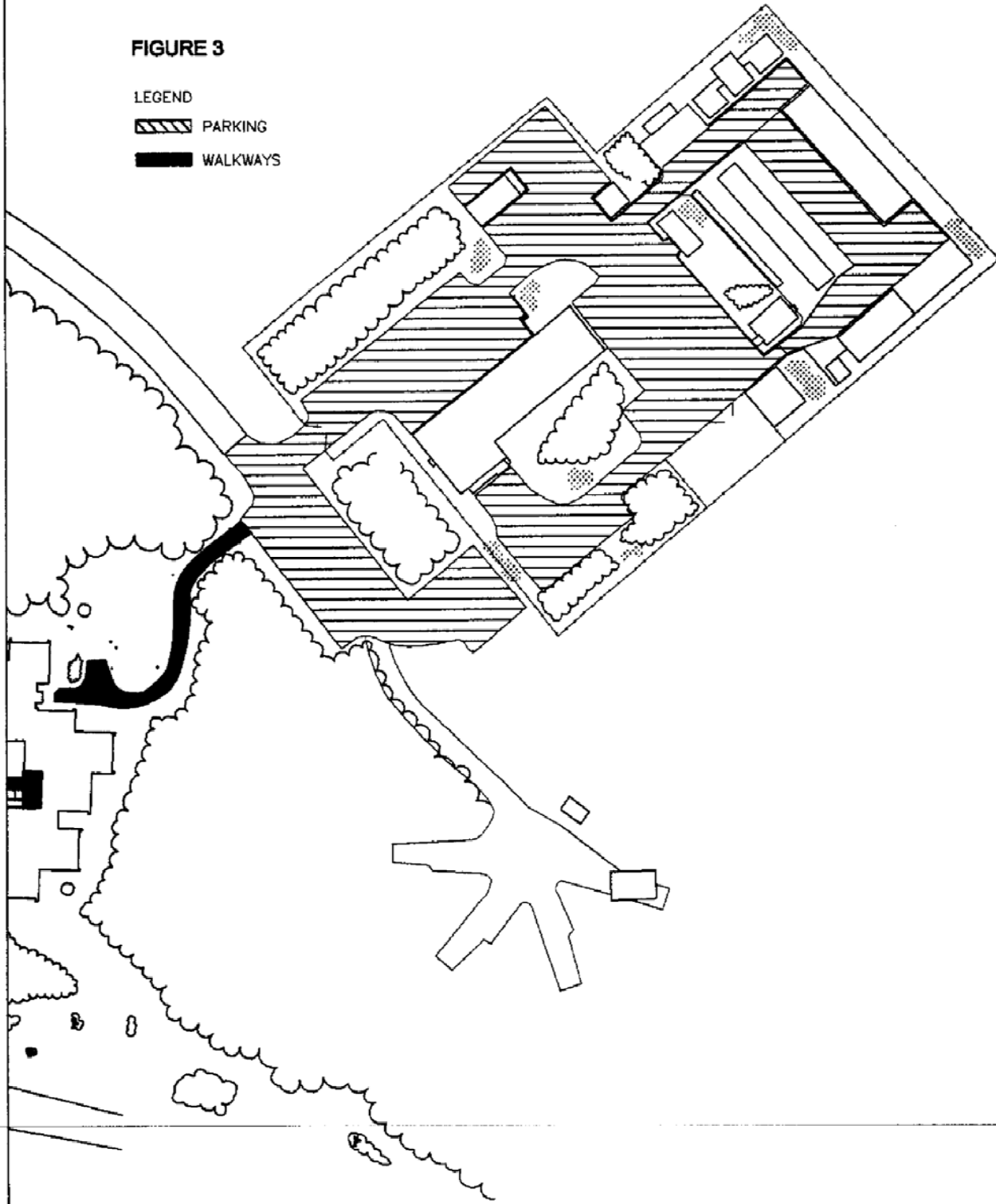
# COMPOUND WORKS AREA

FIGURE 3

LEGEND

 PARKING

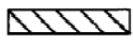
 WALKWAYS




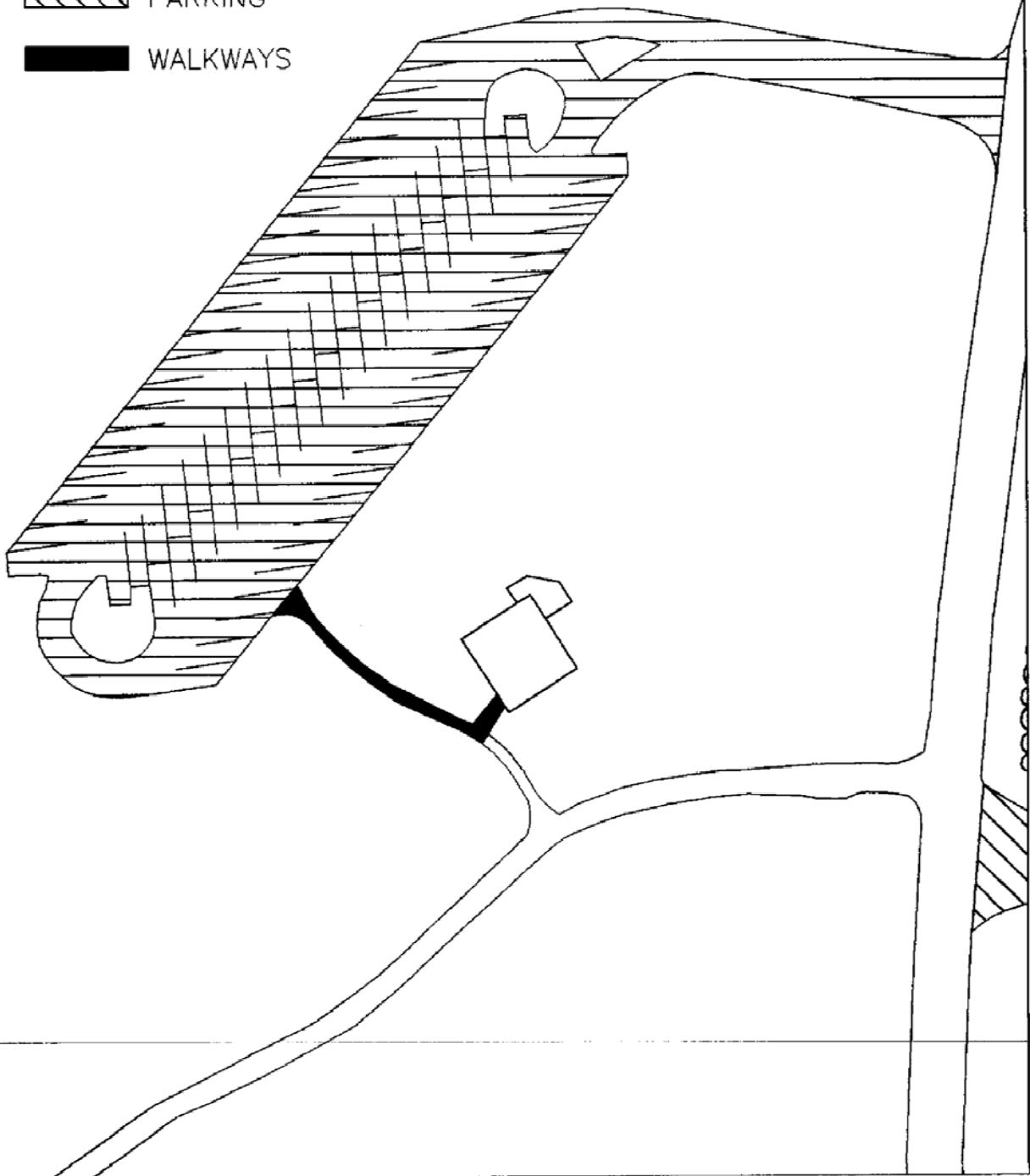
# PIJEBOOGWEK AREA

## FIGURE 4

LEGEND

 PARKING

 WALKWAYS





**Appendix 2**

**Weather Event Response: Salt/Sand Usage**

Kouchibouguac National Park of Canada

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Event Response Number: \_\_\_\_\_

Description of Weather Event: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Location	# of Applications		Application Rate (kg/2-lane km)	
	Salt	Sand	Salt	Sand
Highway 117				
Loggicroft Road				
Parkway Road (km 0.0 to 0.25)				
Compound Access Road				
North Kouchibouguac Road				
Cap Saint-Louis Road				
Headquarters Staff Parking				
Visitor Center Parking				
Pijeboogwek Parking				
Compound Maintenance Area				

Response Summary

Total Salt Use	t	Total Sand Use	t
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Other Notes:

**Appendix 3**

**Seasonal Summary: Salt / Sand Usage**

Kouchibouguac National Park of Canada

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Event Response #	Date	Weather Description	Total Material Usage (t)	
			Salt	Sand
Total:			t	t
			Salt use	Sand use

Seasonal Precipitation Summary

Source: Environment Canada Kouchibouguac Station ID 8102328

Month	Precipitation (mm)		
November			
December			
January			
February			
March		Total Precipitation	mm
April			

Other Notes: \_\_\_\_\_