ADMINISTRATIVE SERVICES AND PROPERTY MANAGEMENT
NATIONAL RESEARCH COUNCIL OF CANADA

501, boulevard de l'Université EST, Chicoutimi, QC, G7H 8C3

Specifications

SNOW REMOVAL

SEPTEMBER 2019

1. GENERAL REQUIREMENTS

1.1. Documents

1.1.1. The following documents are an integral part of these specifications:

- The specifications herein
- Site layout
- List of surfaces and doors requiring snow removal
- Level of service tables – De-icing
- Example of a snow removal operations log

1.2. Description of work

1.2.1. These specifications apply, but are not limited to the following: supply of labour, materials, tools, transportation, supervision, and all equipment required to carry out the following operations:

- Snow removal
- Abrasive/ice-melter application
- Spring clean-up of parking areas, roads, sidewalks, and drainage wells

1.2.2. Snow removal is to be available from November 1st to April 30th of each year.

1.3. Site visit

1.3.1. Prior to preparing their tenders, bidding contractors shall visit the contract site, survey the operating conditions, as well as site condition and obstacles, and examine all difficulties and advantages that may influence operating costs.

1.3.2. Any further information that may be required for the preparation of tenders shall be made available during the visit.

1.3.3. Lack of knowledge about local conditions shall not at any time be considered a valid reason for requesting additional payments.

1.4. Laws and permits

1.4.1. The Contractor shall comply with all laws, prescriptions, regulations, and orders in council from federal, provincial, and/or municipal governments relative to their operations. As well, the Contractor shall acquire all applicable permits and certificates at his own expense.

1.5. Failure to perform

1.5.1. Should the Contractor fail to perform the work and/or to meet the requirements described in these specifications or contract agreement, the Ministry Representative reserves the right to:

1.5.2. Withhold payments to the Contractor until corrective actions have been taken.

1.5.3. Hire the equipment and labour required to correct any deficiency relative to the work specified in the contract. All related expenses shall be deducted from the lump sum price tendered by the Contractor.

1.6. Required equipment

1.6.1. The Contractor shall have at his disposal all necessary equipment to perform the work described in the contract, in compliance with the specifications herein and all other contract documents so as to be able to complete operations within the specified deadlines.

1.6.2. The Contractor shall hold provincial registration certificates for all owned and/or rented equipment, as well as liability insurance for said equipment.

1.6.3. The Contractor shall provide a list of all owned equipment and copies of all rental contracts stating that the equipment listed in the contract document shall be available on demand.

1.6.4. Minimum required equipment:

- One tractor-mounted snow-blower
- One snow-blower, at least 30" wide and 10 HP, for sidewalks

- One payloader

1.7. Basic package and additional amounts for snow removal

1.7.1. Full payment of the tendered lump sum shall be made for annual snowfalls up to 300 cm (centimetres), as measured at the Canadian Forces Base (CFB) Bagotville weather station.

1.7.2. The 300 cm limit is based on average yearly precipitations between 1981 and 2010, from Environment Canada data compiled at the CFB Bagotville weather station (more precisely, the yearly average is equal to 321.7 cm).

1.7.3. The tendered lump sum shall be paid in full even if the annual snowfall is below 300 cm.

1.7.4. Additional amounts corresponding to 1/300th of the annual lump sum shall be paid for every centimetre of snow precipitation above the 300 cm limit, as measured at the CFB Bagotville weather station.

For example, for an annual snowfall of 331 cm, total payment for the year shall be:

Total payment = lump sum amount + (lump sum amount * ((331-300)/300))

1.8. GHG emissions

1.8.1. By May 15th, provide a total amount of fuel used for all snow-removal operations for the year.

1.8.2. Use the table below to specify and quantify the types of energy sources used:

Fuel/energy type	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	Clean-up
Diesel (l)							
Lead-free gas (l)							
Natural gas and propane (m^3)							
Electrical equipment recharge (GJ)							

1.8.3. A 15% margin of error for GHG quantifying is considered reasonable.

2. CONTRACT MANAGEMENT DURING OPERATIONS

2.1. Contractor's authorized representative

2.1.1. The Contractor shall appoint a representative who can be reached by phone 24/7, without exception.

2.1.2. If the Contractor's performance does not meet the requirements set out in these specifications, and the Ministry Representative or other representative is unable to reach the Contractor's representative, the Ministry Representative may, without prior notice, take the necessary actions to remedy the situation. The Contractor shall cover the costs of such remedial actions.

2.2. Daily and weekly inspections

2.2.1. From December 15th to March 31st, a supervisor shall carry out at least one (1) inspection per day to ensure safe conditions for pedestrian and vehicular traffic at the site.2.3. List of contacts

2.3. Contact list

2.3.1. By October 15th of each year, the Contractor shall provide a list of contact phone numbers for snow removal operations:

- Daytime supervisor
- Nighttime supervisor
- Contractor's representative
- Billing agent

2.4. Snow removal operations log

2.4.1. NRC-ATC shall hold a daily snow removal log at the site. The log is to be held by a commissioner on duty at the contract site. Every log entry shall include the following:

- Date and time
- Name and signature of the commissioner on duty
- Weather conditions
- Snowfall amount
- Condition of surfaces to be cleared
- Start and end times of operations
- Subjective performance assessment
- Supervisor inspections
- Miscellaneous (incidents, breakdowns, calls to Contractor, etc.)

2.4.2. The supervisor is free to come in and sign the log or not. Failure to sign the log means that all log entries and assessments are implicitly approved.

2.5. Physical and verbal violence

2.5.1. NRC-ATC encourages open discussion of problems, disagreements, and conflicts during contract performance.

2.5.2. While it may be normal for workers to become fatigued and impatient during heavy snowfalls, verbal and/or physical violence shall not be tolerated at any time at the site. Any misbehaviour shall be entered in the daily log.

2.5.3. Threatening someone with any kind of violence is a criminal act and, in such cases, NRC-ATC shall immediately undertake appropriate procedures with concerned authorities.

2.6. Materials approval

2.6.1. By October 15th, the Contractor shall provide a list of ice melters, abrasives, and melter-abrasive mixes for approval by the Ministry Representative.

- Environment-friendly ice melters
- Abrasives
- Melter-abrasive mixes

2.7. Melter-abrasive mix dispensers for sidewalks and stairs

2.7.1. The Contractor shall supply and cover the cost of two covered plastic boxes of at least 40 litres for melter-abrasive mixes.

2.7.2. One of the dispensers shall be placed near Door 1, and the other, at the foot of the stairs near Door 4 for use on Decks 4 and 5.

2.7.3. The dispensers shall be designed to protect the mixes against moisture and caking. Any solidified contents shall be replaced at once.

2.7.4. A small shovel shall be included with each dispenser for application by ATC personnel.

2.7.5. The Contractor shall inspect the dispensers upon every visit to the site and fill them as needed at his own expense.

2.8. Storage space

2.8.1. Storage space shall not be provided to the Contractor for his materials (earth, sand, ice melter, and other mixes), supplies, or equipment. However, the Ministry Representative shall assign storage space for a payloader for sole use at the ATC site, if necessary.

2.9. Protection of concrete kerbs and urban furniture

2.9.1. The Contractor shall be accountable for any damage to ATC property during contract performance. The Contractor shall make sure his personnel understands that special care must be taken during snow removal to prevent any damage whatsoever to concrete kerbs, sidewalks, and urban furniture (signs, lamp posts, fire hydrants, etc.).

2.9.2. At the beginning of every season, the Contractor shall inspect the premises with the Ministry Representative and make note of any pre-existing damage to kerbs, sidewalks, and urban furniture. A file shall be constructed, including photographs, to be used as reference for potential claims at the end of winter.

2.9.3. By October 15th every year, the Contractor shall provide and install markers for any obstacles and/or urban furniture that may become covered by snow.

2.9.4. The above markers shall be rigid T-type metal posts at least 1.5 m high. These must be kept clean, straight, and reasonably corrosion free. They must all be the same colour.

2.9.5. Small wire-and-plastic flags shall not be allowed.

2.9.6. Replace any damaged or missing markers at once.

2.9.7. The markers shall be installed as follows:

- Insert in the ground or grass as close as possible to concrete kerbs.
- Install a marker at every kerb direction change. For curved kerbs, place markers every eight (8) metres.
- Install two markers at each ground surface extremity in the parking areas.
- Install markers around urban furniture items.
- Install markers at every location deemed necessary by the Contractor to prevent damage to the facilities.

2.9.8. All markers must be removed by May 1st.

2.9.9. At the end of every season, inspect the premises with the Ministry Representative to assess the condition of kerbs, sidewalks, and urban furniture, and make any necessary repairs.

3. CONTRACT PERFORMANCE

3.1. Qualitative standards

3.1.1. In accepting this contact with NRC, the Contractor implicitly confirms having the required competencies and experience to perform snow removal and apply abrasives and ice melters in such a way as to ensure pedestrian and vehicle safety. Consequently, the Contractor knows best as to the appropriate snow removal and product application methods, strategies, and frequencies both during normal operations and in the presence of deficiencies and/or hazards. This statement does not relieve the Contractor from complying with the

requirements stated herein, but provides enough freedom to meet those requirements in the most cost-effective and efficient way possible.

3.1.2. In addition to the requirements stated herein, the Contractor shall be responsible for taking the proper corrective actions when notified of deficiencies and hazards at the site.

3.1.3. At all times, the premises concerned in this contract shall be maintained in such a way as to ensure pedestrian and vehicle safety at the site. Whenever the Contractor is made aware of deficiencies and/or hazards, he shall address said deficiencies and hazards as soon as possible in an effort to mitigate any potential dangers.

3.1.4. Drainage wells shall be kept clear of snow and ice at all times.

3.1.5. Leaving snow banks on the surfaces concerned in this contract is not allowed. Removal of the snow banks arising from municipal snow removal operations at the two main ATC entrances is included in this contract.

3.1.6. Snow banks along service roads and especially at intersections and along parking areas must never exceed 90 cm in height.

3.2. Snow removal sequence

3.2.1. Snow removal must be done in all areas mentioned below and indicated on the snow removal drawing. The Contractor shall comply with the instructions stating the snow removal priorities established by the Ministry Representative.

3.2.2. Priority sequences before 6:00 a.m.:

- Main access road including the sidewalk section up to Door 1
- Visitor parking
- Service road

3.2.3. Subsequent sequences starting at 7:30 AM:

3.2.4. All other areas and doors on the snow removal list.

3.2.5. In accepting this contact with NRC, the Contractor implicitly confirms having the required material and human resources to perform the contract in Saguenay-Lac-St-Jean winter conditions. Storms and heavy snowfall are normal conditions in the Saguenay-Lac-St-Jean region. Ongoing snowfall or a storm at the time when normal operations are due to start, and/or deficiencies and hazards, are not considered valid reasons to delay snow removal operations beyond the scheduled times stated herein.

3.3. Snow removal priorities

3.3.1. During snowfall, the equipment in use must be assigned in such a way as to cover the largest area possible at the same time. However, the Contractor shall deploy the equipment needed

to clear the main roads as fast and as efficiently as possible to ensure safe vehicle traffic at all times. Nevertheless, all other areas must also be cleared of snow expediently, as stated in the contact.

3.3.2. Snow removal priorities are as follows:

Priority	Snow removal area	Maximum deadline
1	Main roadways and sidewalk in front of Door 1	1 hour after the start of snow removal operations
2	Parking areas, service roads, manoeuvering area, all sidewalks	2 hours after the start of snow removal operations
3	Laboratory areas	5 hours after the start of snow removal operations
4	Finalise snow removal, move snow to areas where stockpiling is allowed	48 hours after the start of snow removal operations

Refer to the snow removal drawing to see the areas stated in the table.

3.4. Adherence and de-icing

3.4.1. All snow removal surfaces stated in this contract are also subject to de-icing.

3.4.2. At all times, the Contractor shall make sure the sidewalks, traffic lanes, and parking areas are cleared in such a way as to ensure maximum traction and friction for pedestrians and vehicles.

3.4.3. A surface is considered hazardous when traction from winter tires and/or winter footwear is not sufficient to ensure pedestrian and/or vehicle stability and safety. Bare ice may not necessarily be visible for a surface to be hazardous.

3.4.4. The subjective assessment of a qualified supervisor is required to determine if a surface has sufficient traction to ensure the safety of users. The supervisor shall continuously survey operations at regular intervals to ensure adequate monitoring when weather conditions are likely to cause traction issues.

3.4.5. The Contractor is responsible for selecting the most appropriate de-icing agents according to weather conditions, including ambient temperature, wind, precipitation, surface condition, ice type, as well as the characteristics of the various ice melters, abrasives, and melter-abrasive mixes normally in use.

3.4.6. Refer to the tables showing the expected service levels depending on the various winter conditions that may affect the site.

3.4.7. Use of conventional sodium chloride (NaCl), calcium and calcium chloride (road salt) shall not be permitted. Only so-called environment- and infrastructure-friendly options may be considered.

3.5. Snow disposal

3.5.1. Accumulated snow along traffic lanes shall be either blown onto the courtyard or removed to a snow disposal site that meets environmental standards. Plowing snow and/or encroaching on grass-covered areas with snow-removal machinery shall not be permitted. Snow may be amassed on the asphalted portion of the parking lot that is farthest from the building, and along a two-metre (2 m) strip on the right-hand side of the service road, but must be removed within eight (8) hours after the start of snow removal operations.

3.5.2. Snow may not be blown or amassed near fire-fighting equipment or sidewalk access points.

3.5.3. Snow may not be blown or amassed near trees, shrubs, and any other ornamental vegetation.

3.5.4. Snow may not be amassed on adjacent sites to the ATC (public ways, city property, university campus, or other third-party properties around the site).

3.6. Snow removal during daytime snowfalls

3.6.1. Begin operations as soon as the snow cover reaches five centimetres (5 cm).

3.6.2. Clear the snow from the main access roads, parking areas, collection points, and other areas, as shown on the drawing, to ensure smooth pedestrian and vehicular flow.

3.6.3. Re-initiate snow removal every time the snow cover reaches five centimetres (5 cm) throughout the duration of the snowfall.

3.6.4. As soon as snowing has stopped, finish clearing any accumulated snow (blowing or removal).

3.7. Snow removal from nighttime snowfalls

3.7.1. Every day of the week, including Saturdays, Sundays, and Holidays, the Contractor shall deploy the necessary personnel and equipment to remove the snow from the stipulated areas as soon as the snow cover from one or multiple precipitation episodes reaches five centimetres (5 cm).

3.7.2. The Contractor shall begin operations in due time to make sure the requirements stated in Section 3.2 - Snow removal sequence are met.

3.7.3. The Contractor shall not delay the start or completion of operations any time a snowfall or snowstorm requires the deployment of personnel and equipment.

3.8. Snow removal following gusting winds

3.8.1. Whenever snow blown by gusting winds reaches a height of five centimetres (5 cm), whether it is snowing or not, the Contractor shall make sure the service roads, sidewalks, parking areas, and other areas stipulated in these specifications are cleared of snow to ensure pedestrians and vehicles can smoothly access all areas of the site.

3.8.2. No additional payments shall be made to the Contractor for any snow removal operations due to gusting winds.

3.9. Snow removal from sidewalks

3.9.1. Clear sidewalks A-F, as indicated on the drawing as soon as the snow cover reaches five centimetres (5 cm) as a result of one or multiple snowfalls or drifting snow.

3.9.2. Snow removal from the sidewalks shall be done using snow-blowers of adequate width not exceeding the width of the sidewalks. If the snow is cleared using a tractor-mounted snow blower, its width may not exceed the width of the sidewalks.

3.9.3. The ATC security guard shall clear the area around Door 1 up to a two-metre (2 m) radius until 9:00 a.m., after which time the Contractor shall take over for the rest of the day.

3.9.4. The part of the large sidewalk in front of Door 1 up to the street level must be cleared before 7:00 a.m. and, consequently, the use of a payloader is permitted for that part of the sidewalk only.

3.10. Required operations after snow removal

3.10.1. Continue to remove the snow amassed along the roads, intersections, access points, and sidewalks until normal traffic conditions can resume.

3.10.2. Apply abrasive and ice melting agents as prescribed in Section 3.3 - Adherence and de-icing.

3.10.3. Move accumulated snow to the designated areas using a snow-blower only – plowing is not permitted.

3.10.4. Finalise snow clearing from the sidewalks, fire hydrants, doors, and all other areas covered in these specifications.

3.11. Snow clearing around fire hydrants, Siamese couplings, and PIV valve

3.11.1. Remove the snow in a radius of at least one metre (1 m) around fire hydrants, Siamese couplings, and PIV valve.

3.11.2. Clear access to fire-hydrants to a width of at least one metre (1 m) from the nearest snow-free point.

3.11.3. Leave a snow cover of at least 10 cm, ± 5 cm, over grass-covered areas.

3.11.4. Snow from areas around the fire hydrants, Siamese couplings, and PIV valve shall be cleared using a snow blower no wider than the width of the sidewalks.

3.12. Spring cleanup

3.12.1. The Contractor shall clean up all accumulated sand and aggregates from all paved and concrete areas once all the snow has melted, or by April 21st at the latest. Use mechanical street sweeping and watering equipment for this purpose.

3.12.2. Once the sand has been cleaned up from the parking areas and sidewalks, the Contractor shall scour all drainage wells in the parking areas and access roads to make sure the storm sewers are clear and free-flowing.

1. Service level for a road surface that is entirely clear after initial snow removal.

Service levels - Clear

Surface Temp.	Measures		
	Sidewalks CRITICAL	Main roadways CRITICAL	Parking spaces After snowfall
0°C +	**As needed** Environment-friendly ice melters	**As needed** Environment-friendly ice melters	**As needed** Abrasives
0°C to -7°C	Environment-friendly ice melters	Environment-friendly ice melters	**As needed** Abrasives
-7°C to -20°C	Abrasives	Abrasives	**As needed** Abrasives
-20°C -	Abrasives	Abrasives	**As needed** Abrasives

2. Service levels for a road surface that is partially clear after initial snow removal

Service levels – partially clear

Surface Temp.	Measures		
	Sidewalks CRITICAL	Main roadways CRITICAL	Parking spaces After snowfall
0°C +	**As needed** Environment-friendly ice melters	**As needed** Environment-friendly ice melters	**As needed** Abrasives
0°C to -7°C	Abrasives	Abrasives	**As needed** Abrasives
-7°C to -20°C	Abrasives	Abrasives	**As needed** Abrasives
-20°C -	Abrasives	Abrasives	**As needed** Abrasives

3. Service level for a road surface that is covered with packed snow after initial snow removal.

Service level – packed snow

Surface Temp.	Measures		
	Sidewalks CRITICAL	Main roadways CRITICAL	Parking spaces After snowfall
0°C +	**As needed** Abrasives	**As needed** Abrasives	**As needed** Abrasives
0°C to -7°C	Abrasives	Abrasives	**As needed** Abrasives
-7°C to -20°C	Abrasives	Abrasives	**As needed** Abrasives
-20°C -	Abrasives	Abrasives	**As needed** Abrasives

4. Service levels for freezing rain.

Service level – Freezing rain

Surface temp.	Measures		
	Sidewalks CRITICAL	Main roadways CRITICAL	Parking spaces After rain
0°C +			
0°C -	MIX Ice melters 25% Abrasives 75%	MIX Ice melters 25% Abrasives 75%	**As needed** Environment-friendly ice melters

5. Service levels for freezing rain leading to glaze ice.

Service level – Glaze ice

Surface temp.	Measures		
	Sidewalks CRITICAL	Sidewalks CRITICAL	Parking spaces After rain
0°C +	MIX Ice melters 25% Abrasives 75%	MIX Ice melters 25% Abrasives 75%	**As needed** Environment-friendly ice melters
0°C -	MIX Ice melters 25% Abrasives 75%	MIX Ice melters 25% Abrasives 75%	**As needed** Environment-friendly ice melters

NRC-ATC Snow removal log

Day	Month	Year	NIGHT	DAY	EVENING	Commissioner's name and signature	Supervisor's name and signature (optional)

Weather conditions

SHIFT START	MID-SHIFT
Temperature (°C)	Temperature (°C)
Wind: Speed / Direction	Wind: Speed / Direction
Precipitation: Amount of snowfall (cm)	Precipitation: Amount of snowfall (cm)
None ☐	None ☐
Powdery/dry ☐	Powdery/dry ☐
Wet snow ☐	Wet snow ☐
Snow drifts/gusty winds ☐	Snow drifts/gusty winds ☐
Rain/Freezing rain ☐	Rain/Freezing rain ☐

TIME	NOTES (Calls to contractor, who answered, time of supervisor's visit, incidents, damages to property, etc.)

	Shift start conditions							Snow removal start time	Snow removal end time	Quality of snow removal					Time of abrasive/ melters application	Type of abrasive/ melters			Quality of snow removal					Mid-shift conditions						
	Clear	Packed snow	Wet snow	Packed snow	Ice	Snow covered ice	Drifting snow			Mediocre	Several issues	A few issues	Good	Excellent		Abrasives (sand)	Envir.-friendly melter	MIX melter/ abrasive	Mediocre	Several issues	A few issues	Good	Excellent	Clear	Packed snow	Wet snow	Packed snow	Ice	Snow covered ice	Drifting snow
Main roads	☐	☐	☐	☐	☐	☐	☐			☐	☐	☐	☐	☐		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Sidewalks	☐	☐	☐	☐	☐	☐	☐			☐	☐	☐	☐	☐		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Parking	☐	☐	☐	☐	☐	☐	☐			☐	☐	☐	☐	☐		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Service roads	☐	☐	☐	☐	☐	☐	☐			☐	☐	☐	☐	☐		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Manoeuvering areas	☐	☐	☐	☐	☐	☐	☐			☐	☐	☐	☐	☐		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Laboratory areas	☐	☐	☐	☐	☐	☐	☐			☐	☐	☐	☐	☐		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
FH, siameses & PIV	☐	☐	☐	☐	☐	☐	☐			☐	☐	☐	☐	☐		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Doors	☐	☐	☐	☐	☐	☐	☐			☐	☐	☐	☐	☐		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Quality chart

Excellent
Diligent work, no long-term packed snow accumulation on all surfaces.

Good
Satisfactory work, no hazards, no ice, no packed snow on roadways.

A few issues
Some snow ridges and some loose snow left on surfaces, no hazards.

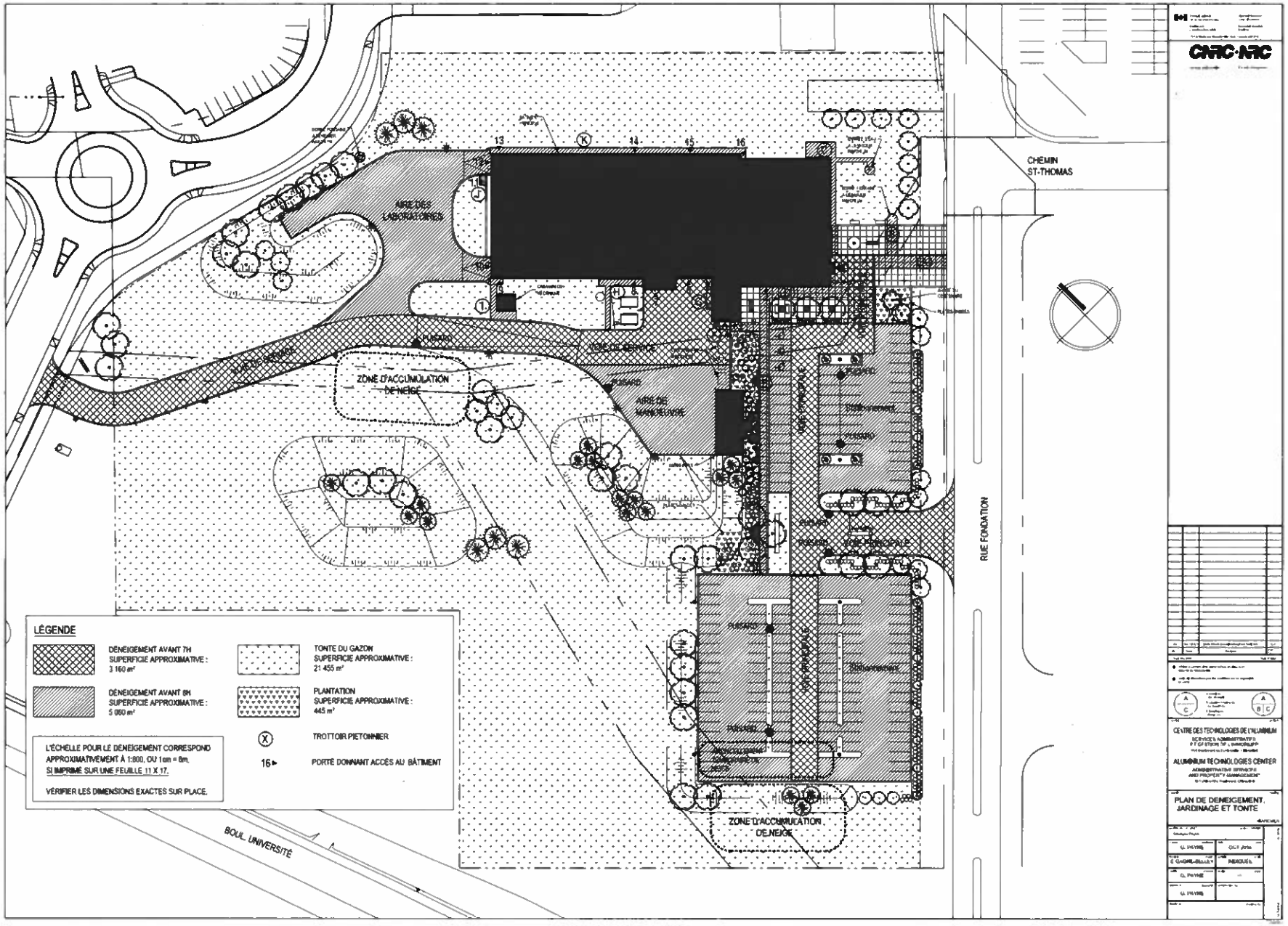
Several issues
Ice, snow ridges and loose snow on surfaces, corners left uncleared, relatively few hazards.

Mediocre
Significant hazards for users, poor quality of work in all aspects.

List of surfaces and doors to be cleared

Complementary to the snow removal plan

Surface	Description	Approx. Surf. area m²
Main access road	Roadway from the street near the gates to Door 1	1,205
Employee parking	Employee parking	2,835
Visitor parking	Visitor parking minus the main access road part	1,131
Service road	Road to shipping/receiving dock	1,584
Manoeuvring area	Manoeuvring area around outdoor storage	622
Laboratory area	Manoeuvring areas around Doors 10 and 12	1,172
Sidewalk A	Sidewalk in front of main entrance Door 1, 3 m strip only	54
Sidewalk B	Sidewalk to the fire hydrant	25
Sidewalk C	Sidewalk to Siamese couplings and water inlet valve	50
Sidewalk D	Sidewalk in from of the main building, Doors 2 and 3	137
Sidewalk E	Sidewalk to employee parking	124
Sidewalk F	Landing near the containers and Door 4, including stairs	6
Sidewalk G	Landing at Door 5, including stairs	9
Sidewalk H	Sidewalk in front of Door 8, LGE-1 exit near the water towers	22
Sidewalk I	Sidewalk to the hydroforming shed and Exit 9, LGE-1	4
Sidewalk J	Sidewalk from Door 11 exit	3
Sidewalk K	Sidewalk from Doors 13, 14, 15 and 16 exits	100
Door 1	Main entrance, Atrium	-
Door 2	Atrium exit	-
Door 3	Door - SOUTH exit stairs	-
Door 4	Exit from indoor storage	-
Door 5	Shipping & receiving door	-
Door 6	Shipping & receiving dock (garage)	-
Door 7	Door to annex room (Hydro-Quebec)	-
Door 8	LGE-1 exit	-
Door 9	LGE-1 service door	-
Door 10	LGE-1 garage door	-
Door 11	Shipping & receiving door	-
Door 12	LGE-2 garage door	-
Door 13	LGE-2 service door	-
Door 14	LGE-2 exit	-
Door 15	Door - NORTH exit stairs	-
Door 16	Ground floor offices exit	-


CNRC·NRC
CHEMIN ST-THOMAS
RUE FONDATION
BOUL. UNIVERSITÉ
AIRE DES LABORATOIRES
ZONE D'ACCUMULATION DE NEIGE
AIRE DE MANŒUVRE
ZONE DE SERVICE
PLANTATION
ZONE D'ACCUMULATION DE NEIGE
LÉGENDE
DÉNEIGEMENT AVANT 7H
SUPERFICIE APPROXIMATIVE :
3 160 m²
DÉNEIGEMENT AVANT 8H
SUPERFICIE APPROXIMATIVE :
5 060 m²
TONTE DU GAZON
SUPERFICIE APPROXIMATIVE :
21 455 m²
PLANTATION
SUPERFICIE APPROXIMATIVE :
445 m²
TROTTOIR PIETONNIER
PORTE DONNANT ACCÈS AU BÂTIMENT
L'ÉCHELLE POUR LE DÉNEIGEMENT CORRESPOND APPROXIMATIVEMENT À 1:800, OU 1cm = 8m, SI IMPRIMÉ SUR UNE FEUILLE 11 X 17.
VÉRIFIER LES DIMENSIONS EXACTES SUR PLACE.
CENTRE DES TECHNOLOGIES DE L'ALUMINIUM
ALUMINUM TECHNOLOGIES CENTER
PLAN DE DÉNEIGEMENT, JARDINAGE ET TONTE