



2008/2009
Airside Winter
Operations Program

Edmonton City Centre Airport Aerial View



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AIRSIDE WINTER OPERATIONS PROGRAM (AER-002P) DISTRIBUTION/REVISION LIST

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1 GENERAL INFORMATION

1.1 Introduction

Airside Winter Operations at City Centre Airport (CCA) maintain and monitor all runways, taxiways, aprons and airside roads to ensure safe and continuous operation of the airport during winter conditions. Operations include snow removal, ice control and surface condition reporting on all airside surfaces.

1.2 Regulations / Standards

The following standards and procedures were used, in conjunction with historic experience at CCA, in the development of these procedures:

TP312: Aerodrome Standards and Recommended Practices, Versions 3 and 4

TP659: Airports Winter Surface Maintenance Manual

1.3 Contacts

Title	Phone		Cell
Airport Manager (Steve Maybee)	780-477-1992	ext 227	780-887-9716
Superintendent of Airport Operations (Gary Lamb)	780-477-1992	ext 222	780-908-6894
Field Maintenance Foreman (Rod Marshall)	780-477-1992	ext 226	780-908-6892
Seasonal Foreman (Mike Pratt)	780-477-1992	ext. 226	780-297-1965
Airport Security	780-477-2442		780-906-7500

2 RESPONSIBILITIES

2.1 Field Maintenance

Field Maintenance is responsible for ensuring the safe and continuous operation of airside activities during the winter season. This includes the regular monitoring and reporting of runway conditions, snow removal and ice control. The Operations Manager has responsibility for winter operations; however, the Field Maintenance Foreman direct daily activities.

Airport Security In the event of an incident, Airport Security is responsible for completing or obtaining an Airport Incident Report, They are also responsible for completing visual runway checks when Field Maintenance Staff are not on duty.

3 RESOURCES

3.1 Equipment

The use of all equipment by Edmonton Airports personnel must follow Standard Operating Procedures.

3.2 Personnel

During the winter season from November to March, the full-time Airfield Maintenance Personnel are supplemented by the hiring of seasonal operators. Airfield Maintenance Personnel divided into crews, each with a Foreman. The Superintendent of Airport Operations is on duty during standard working hours. Full-time Airfield Maintenance Personnel are on standby coverage during the months of October and April.

3.2.1 Schedules

Snow Removal Crew:

Operators are on site from 07:00-15:00 daily, Monday thru Friday and 19:00-03:00 nightly Sunday thru Thursday. In the event of storm conditions, shifts are extended to provide 24 hour coverage. Weekends are covered on standby.

3.3 Ice Control Agents

The chemicals used for ice control on airside surfaces are potassium acetate, an anti-ice agent, and urea, Sodium Formate a de-icing agent. All de-icing and anti-icing chemicals in use have been approved by Transport Canada. **No salt** can be used on any airside surface since it is a potential hazard to aircraft.

3.4 Sand

To minimise damage to aircraft, all sand used by Edmonton Airports on airside meets the Transport Canada specifications outlined in *TP659, Appendix A*.

4 SNOW REMOVAL PROCEDURES

Snow removal must be carried out in a manner that will maintain the continuous and safe operation of the airport. It should not interfere with normal airport operations unless approved by the Superintendent of Airport Operations or Field Maintenance Foreman. Removal should begin as soon as conditions warrant and continue, uninterrupted, throughout the snowfall. The use of all equipment by Airfield Maintenance Personnel must follow Standard Operating Procedures for the specific equipment used.

4.1 Priorities

Priorities are determined to ensure the continuous and safe operation of the airport and meet Transport Canada's Airport Regulation requirements for safe operations at the airport. Priority areas are outlined on the airside snow removal map.

Priority I: The following areas are cleared on a continuous basis throughout the snowfall to maintain the operational capability of the airport:

- Active Runway (Generally Runway 16-34)
- Active Taxiways (D, A, Y and B)
- Access to FBO's. (Shell and Esso)

Priority II: Other operational areas on the airside are to be cleared throughout the snowfall, after Priority I areas have been cleared and accumulations are within tolerable levels. This is to ensure that airport operations may switch to the alternate runway, should conditions warrant.

- Alternate Runway (Generally Runway 12-30)
- Secondary Taxiways (E, C, W, X and T)
- Access road to Fuel Farm.

Priority III: The remainder of airside areas are to be cleared after the snowfall:

- Remaining Apron areas, as required;
- Remaining Airside Access Roads;
- Security Fence Perimeter Road;
- Edge lights, PAPIs, RILs and Runway End Identification lighting, as required;
- Pre-threshold areas, as required;
- Glide Path Sites, as required;
- Tenant Areas, as contracted.

Priorities may be altered, if conditions warrant, by the Superintendent of Airport Operations or Field Foreman. As mentioned, the Priority 1 runway is generally Runway 16-34; however, Runway 12-30, and associated taxiways, may be used if conditions such as prevailing winds warrant.

Snow is also removed from several service routes and areas used by Edmonton Airports staff, but not by the public. These areas are cleared on request and include:

- Navigational and guidance installation areas;
- AWOS;
- Transmitter site.

4.2 Allowable Accumulations

Generally, snow removal on the active (Priority I) runway begins when snow begins to accumulate. Clearing begins on the alternate (Priority II) runway when clearing of the Priority I areas is complete, regardless of snowfall. Priority III areas are cleared after the snowfall has ceased, unless immediate access is required (as determined by the Field Maintenance Foreman).

4.3 Runway

Whenever possible, runways are cleared to a bare and dry surface for their full width. The Priority I runway is cleared throughout the storm, before all other surfaces. The Priority II runway is also cleared throughout the snowstorm, after all Priority I areas have been cleared. If at any time the cleared width falls below full width, Field Maintenance advises the Control Tower. If possible, clearing takes place in a manner that allows for the continuous operation of the runway during snow removal.

If, in the opinion of the Field Foreman, efficiencies could be gained by the closure of a runway the following actions will take place:

1. The Field Foreman may request the closure of a runway by contacting the Control Tower.
2. The Tower will grant the request unless precluded by extenuating operational considerations.
3. The closure will be in effect for a maximum of one hour.
4. The closure will be advertised by voice advisory (ATIS) issued by the Tower personnel.
5. Tower personnel will confirm the re-opening of the runway with the Field Foreman.
6. The Field Foreman will advise Security of the closure of a runway and its subsequent re-opening.

4.4 Apron

The preparation of a safe operating environment on the apron areas is the responsibility of Edmonton Airports; the safe conduct of airline operations, including the safety of passengers, is the responsibility of the airlines. Snow is removed from the Apron area in a manner that reflects the amount of accumulation. If light snow conditions exist, (less than 5 cm), the snow is swept off the area. If greater accumulations are present or if a windrow begins to develop, large apron areas are cleared using appropriate equipment.

4.5 Edge Lights, Glide Path Areas & Pre-Threshold Areas

These areas are cleared to Transport Canada standards to provide for safe winter operations at the airport.

4.6 Visual Aids

Snow is removed from these areas when it provides an obstacle to a correct approach slope reading. Removal is usually done during clean-up operations.

4.7 Windrows

Windrows may be permitted on manoeuvring areas to a maximum height of 30 cm. All efforts will be made to limit the time frame windrows will be on manoeuvring areas. Airfield Maintenance Personnel will advise the control tower when windrows are created on manoeuvring areas. Windrows may be permitted on airside roads, at the discretion of the Superintendent of Airport Operations or the Airfield Maintenance Personnel. Windrows may be permitted on airside roads, at the discretion of the Superintendent of Airport Operations or the Field Foreman.

5 ICE CONTROL

It is preferable to control the formation of ice rather than try to remove ice that has already formed. To do this, careful monitoring of weather and runway conditions is required. Once ice has formed, it is vital that it is removed as quickly as possible. CCA uses chemicals for ice control.

5.1 Chemical Ice Control

The chemicals used for runway ice control are potassium acetate, sodium Formate and urea. To prevent the build-up of ice, potassium acetate is spread on surfaces before ice forms. If ice has already formed, urea is used to soften the ice so it can be easily removed by either plows or sweepers. The effectiveness of these chemicals depends on temperature and wind conditions. Their application is at the discretion of the Field Maintenance Foreman.

6 SURFACE CONDITION REPORTING

6.1 Surface Condition Reports

During the winter months, Surface Condition Reports are issued and updated every 8 hours, or as necessary when runway conditions change. Surface condition reports are filled out manually and faxed to Flight Services, Red Deer Radio and CYXD Control tower a copy is also maintained in the foreman's office. Voice advisory of runway conditions is provided to the Control Tower after every runway check or change in runway conditions. Surface Condition Reports are also filled out after every incident or accident on airside surfaces.

6.2 Visual Inspections

Visual inspections of the runway surface are done in conjunction with regular airfield inspections. These inspections are done daily at 0600, 1400 and 2200 hrs local time. Field Maintenance Staff are responsible for checks during normal working hours, and GARDA Security is responsible for inspections during off-hours. Any abnormalities are reported to the Control Tower and rectified, if possible.

6.3 Friction Testing

Friction testing is done on a runway, and the Canadian Runway Friction Index (CRFI) is included in the Surface Condition Report, if the runway surface has any patches of:

- ice;
- compacted snow;
- slush/ice combination;
- loose snow (less than 2.5 cm);
- chemical on ice.

Testing is not done if the runway surface is wet, has no indication of ice build-ups, or has loose snow exceeding 2.5 cm.

7 COMMUNICATION

The Field Maintenance Foreman co-ordinates the communication processes. He is responsible for the completion and distribution of Surface Condition Reports and for the co-ordination of snow removal and ice control activities. When snow removal is necessary, the Foreman contacts the Control Tower to determine which runway is active, given the weather and wind conditions. In conjunction with the Control Tower, the Foreman determines an appropriate action plan for snow removal/ice control, to ensure the safe, continuous operation of the airport during the winter season.