

# AVOP

**Airport Traffic Directives | D 2024**

**Version: June, 2024**

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Greater Toronto Airports Authority  
P.O. Box 6031  
3111 Convair Drive  
Toronto AMF, Ontario L5P 1B2  
(416) 776-3000  
[www.TorontoPearson.com](http://www.TorontoPearson.com)

# Front Matter

## Document Control

Version	Date	Changes	Prepared by	Approved by
July 2015	2015-07-27	Revised per Paul Woods.	Jill Smith, Manufact Technical Writing Inc.	Paul Woods
December 2018	2018-12-21	Revised per Paul Woods and Brian Oldham	Craig Gross, Manufact Technical Writing Inc.	Paul Woods
March 2023	2023-02-28	Updated various sections	Christopher Stubbs	Robyn Rau
June 2024	2024-04-14	Document changes will be shown by providing a vertical line in the margin where changes in paragraphs or wording are made. Completely rewritten documents will not display vertical black lines  Reformatted document, added list of figures, added list of changes, and added index.	Dariusz Jawornicki  Craig Gross, Manufact Technical Writing Inc.	Robyn Rau

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# 1. Introduction

## 1.1 About This Document

This volume of Airport Traffic Directives outlines the airside rules and policies governing the use of the AVOP D permit. D permits are issued to those with a need and right to regularly access runways and taxiways in the ongoing and regular performance of their duties. AVOP D permit holders will have been formally trained to AVOP DA standards and possess all the necessary knowledge and skill to comply with rules outlined in the Airport Traffic Directives – AVOP DA manual found on webpage. Pearson Airside Vehicle Operator's Permit – GTAA AVOP | Pearson Airport (torontopearson.com)

Use this manual as a guide to study for the written and practical exams to upgrade a DA AVOP permit to attain a D AVOP level. Keep it available as a reference tool during the life of your D certification.

This document should also be used in conjunction with the Airport Traffic Directives – AVOP Requirements and Administration document, which contains information on policies and procedures related to application, training, testing, renewal procedures etc. It also outlines infraction types and penalties for failing to operate according to established airside rules.

Content in these books complies with the standards and practices published in Transport Canada's Aerodrome Standards and Recommended Practices, Canadian Aviation Regulations, and the Airport Traffic Regulations.

## 1.2 Airside Surfaces

**Movement Area:** The portion of the airside used for the movement of aircraft. This portion is further divided into the Apron and Manoeuvring Areas.

**Apron Area:** Accommodates the loading and unloading of passengers and cargo, the refueling, servicing, maintenance, and parking of aircraft, and any movement of aircraft, vehicles, and pedestrians necessary for such purposes. At Toronto Pearson, aprons are the areas adjacent to airside buildings, including but not limited to terminal buildings.

**Manoeuvring Area** (the focus of this document): Used for the takeoff, landing, and taxiing of aircraft. It includes runways, taxiways, Rapid Exit (taxiways enabling aircraft at high speeds to safely exit from runways), and apron entrances/exits (apron and taxiway intersections).

**Additional airside areas at Toronto Pearson include:**

- Infield Tunnel.
- General Aviation North Area.
- Central Deicing Facility. (CDF)
- Infield Concourse (IFC)
- FedEx Apron.
- Bombardier Facility
- 3-Bay/Skyservice Hangar.
- Cargo West (Cargo 1, 2, 3).
- Cargo East (Vista Cargo)

## 2. Manoeuvring Area

### 2.1 Introduction

To operate a vehicle on the Manoeuvring Area, a driver must hold a valid D permit and a Radiotelephone Operator's Restricted Certificate (Aeronautical).



The Manoeuvring Area must not be used as a shortcut to other areas of the airport.

### 2.2 Air Traffic Control Authorization

ATC directs the movement of all traffic on the Manoeuvring Area except for the uncontrolled Taxiway Kilo (in the General Aviation North Area).

No vehicle operator shall enter the Manoeuvring Area unless authorized by ATC. Only those vehicles with legitimate operational requirements will be allowed to proceed into this area.

### 2.3 Manoeuvring Area Incursion

A Runway incursion is any occurrence at an aerodrome involving the incorrect presence of an aircraft, vehicle, or person on the protected area of a surface designated for the landing and takeoff of an aircraft.

Vehicle operators involved in an incursion shall advise the airport AOC at (416) 776-3055 once they have safely exited the Manoeuvring Area.

- The GTAA will temporarily confiscate the AVOP card of any driver who proceeds onto or within the Manoeuvring Area without authorization from ATC for at least a twenty-four (24) hour period to allow the employee a break from the environment after the incident. This is not deemed to be punitive but allows a "cooling off period". An additional suspension and/or training may be implemented once an investigation is completed, and corrective action is taken.
- As applicable, an Aviation Safety Officer may issue an AVOP infraction and charges may apply by Peel Regional Police.
- Endangering the safety of aircraft is an offence and criminal charges may be laid under either the
- Aeronautics Act or the Criminal Code of Canada.

**Transport Canada defines an Incursion as:**

"The incorrect presence of an aircraft, vehicle or pedestrian within the area protected for the landing and takeoff of an aircraft."



## 2.4 Closed Surfaces

When taxiways or runways are closed—as indicated by obstruction lights, an illuminated X, or physical barricades — vehicle operators must receive permission from Ground Control or attending personnel before entering these areas.

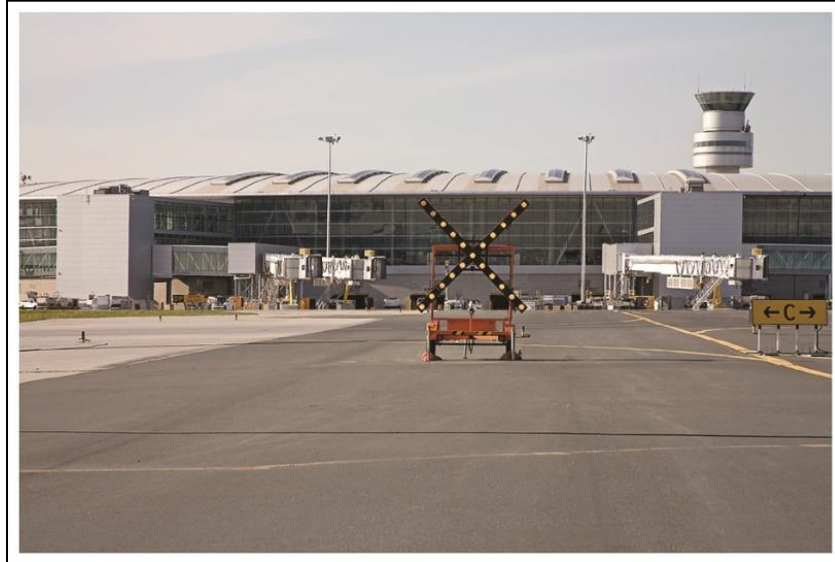


Figure 2-1: An illuminated X indicating a closed area or surface.

### 2.4.1 Driving Through Closed Surfaces

While driving on the airfield (Aprons and Manoeuvring areas) transiting through closures or construction sites is not permitted, even if instructed by Nav Canada or another controlling apron advisory unit.

If instructed by any controlling unit to transit through a closure or construction area vehicle operators are to respectfully decline and respond by stating an alternate route is required to avoid the closure area.

Only those with a valid operational requirement/need and right to be inside of the closure or construction site shall enter these areas. When there is a need to work inside of a closed area the driver must report to the on-site contact (Security Personnel, Site Superintendent, Supervisor, etc.) to advise they are in the work area and confirm the requirement of the task(s) necessary.

## 2.5 Driving on Runways

**When given permission to cross or drive on a runway driver shall:**

- Drive as quickly as safely possible in order to minimize the time spent on the runway.
- Drive to the right of the runway centreline markings to enhance vehicle visibility by ATC.

Vehicles driving directly on the runway centreline are not clearly visible from the air and, at night, may blend in with the runway lighting.

## 2.6 Taxiway Pavement Markings

**Taxiway Centreline Markings:** Single yellow lines used throughout the taxiway system to guide aircraft to and from runways. Aircraft nose wheels are centered on the line to ensure that the main wheels remain on the pavement and the wings will not contact any known fixed obstacles.

**Taxi Side Stripe Markings:** Two solid yellow lines 15cm wide and spaced 15cm apart indicating the edge of aircraft load bearing surfaces.

## 2.7 Driving on Taxiways

Drivers should use the taxiway centreline as a guide while driving on the taxiways. If a vehicle approaches in the opposite direction, drivers shall position themselves to the right of the centreline for passing.

Signs identifying runways and taxiways are usually posted to the driver's left in order to provide drivers with adequate warning for safe turning.

## 2.8 Holding Short

Drivers shall hold short of taxiways and runways as directed by ATC at the designated hold point.

**Note:** In cases where hold lines are not marked, drivers must stop before the hold signs located at least 60 m from the runway edge when directed to hold short of a runway by ATC.

### 2.8.1 Holding Short of a Taxiway

When holding short of taxiways, drivers shall stop at the intersection markings or signage, or in their absence, at least 60m from the intersection.

## 2.9 Approaching a Hold Line

Approach a hold line or sign slowly, thereby indicating to ATC the intention to stop. Stop approximately one car length from the hold lines. This distance ensures visual contact with the signs and provides enough space to turn away from the hold line if required.

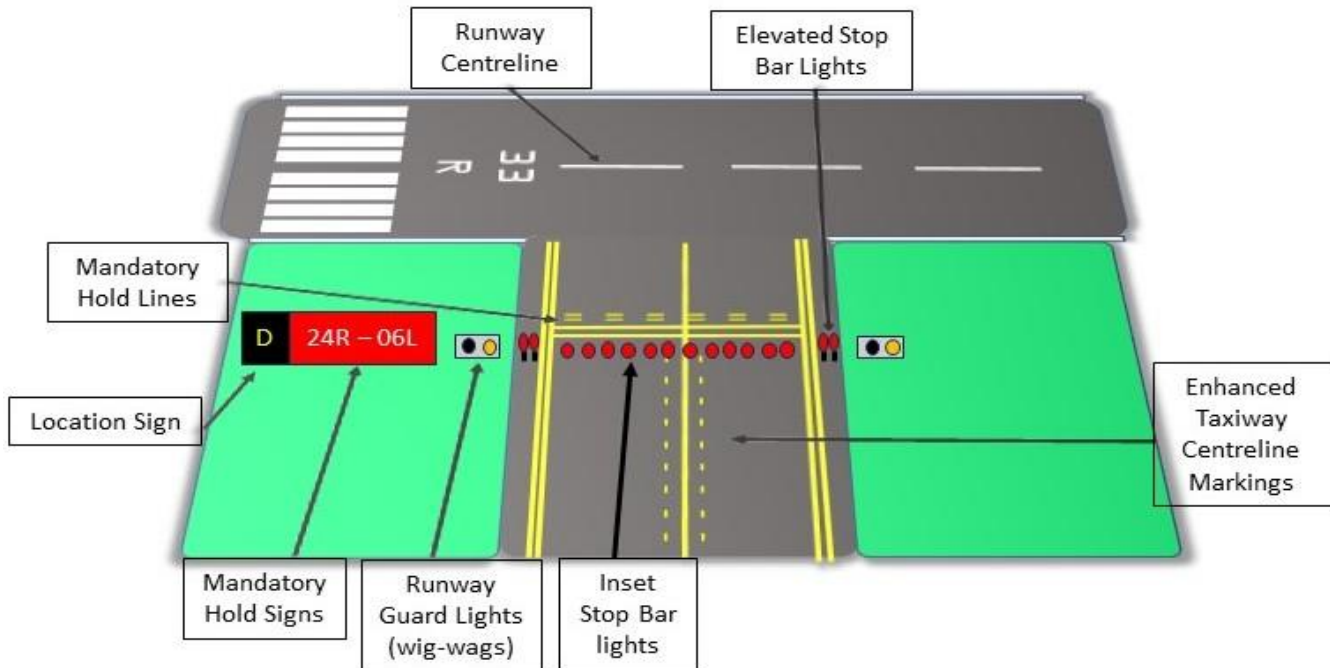


Figure 2-2: A identifies the position drivers shall assume when holding short of a runway.

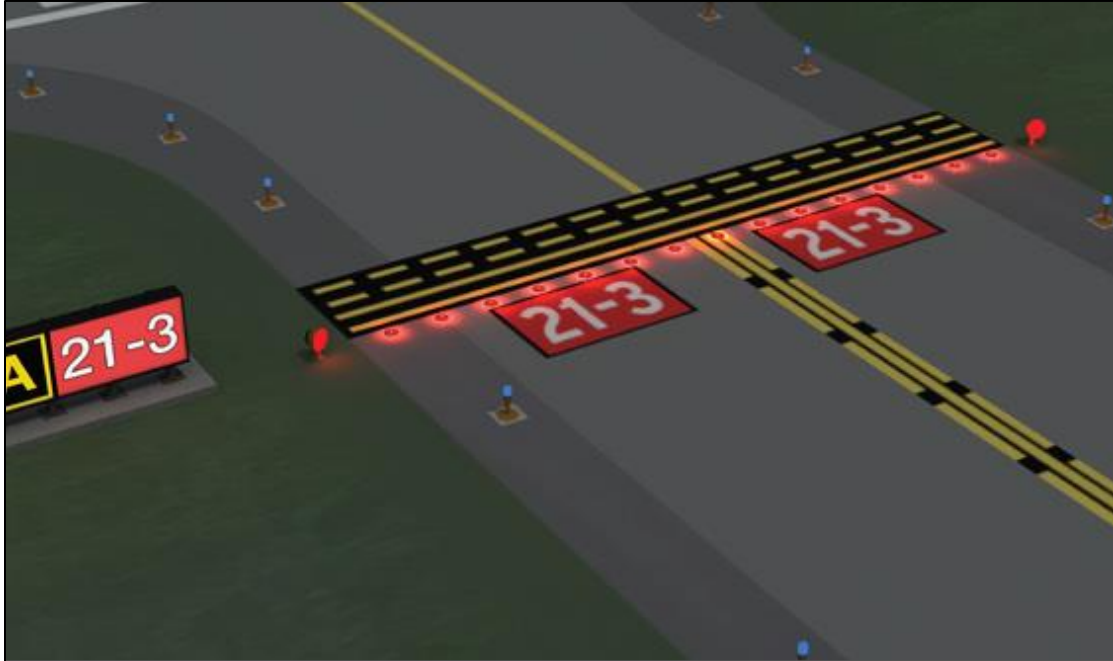
## 2.10 Stop Bars

Stop bars identify a mandatory hold position and, where installed, are comprised of **inset red lights** across the taxiway and **elevated stop bars** on either side of the taxiway at the hold point.

Stop bars may be illuminated during low visibility operations, for testing, or at other times deemed appropriate. ATC shall deactivate these lights before allowing an aircraft or vehicle to proceed onto the runway.

Drivers **shall not** cross an illuminated stop bar. If authorized by ATC to cross an illuminated stop bar, drivers shall query the authorization to proceed and advise the controller that they are prohibited from crossing an illuminated stop bar.

ATC will offer alternate routing if technical limitations prevent the controller from deactivating the illuminated stop bar.



**Figure 2-3: Stop Bars**

**Stop Bars:** A line of red lights inset into the pavement and spanning the width of the taxiway at mandatory holding positions. Vehicles and aircraft must not cross an illuminated stop bar until the bar is deactivated.

**Elevated Stop Bars:** Red lights positioned at the side of the taxiway, at the mandatory holding position, used in conjunction with inset stop bars.

## 2.11 Grassed Areas

Vehicles stopping on grassed areas shall not be left unattended within a runway strip and/or obstacle limitation surface. Vehicles travelling along the sides of taxiways shall not be closer than **36m from the taxiway edge**.

When holding short of either a runway or a taxiway while waiting for permission from Ground Control to cross from one grassed area to another, a vehicle must hold no closer than **60m** from the runway or taxiway edge.

## 2.12 Glide Paths and Localizers

Vehicles can seriously interfere with electronic equipment. Vehicles must stay clear of Instrument Landing System (ILS) transmitter buildings unless authorized by ATC.

*See the AVOP Map for ILS glide path and localizer locations identified with GP and LOC designations.*

## 2.13 Holding Positions

**Mandatory holding position:** Illuminated signage, pavement markings, and runway guard lights (wig-wags) identify mandatory hold positions prior to a runway.

**Taxiway holding position:** Illuminated signage, pavement markings, and taxiway intersection lights identify taxiway hold positions.

**Road holding position:** A stop sign and/or pavement markings, and a pair of single red intersection lights on each side of the road identify road holding positions.

All hold positions are signed; however, pavement markings (hold lines) may be absent when a hold position is on a runway.

For a diagram detailing hold line lighting and signage, see Figure 2.2

### 2.13.1 Other Holding Positions

Drivers may encounter other unique mandatory hold positions and are required to hold at these positions when specifically instructed by ATC (for example, **33R APCH** and **ILS hold positions**, such as **05 CAT I, II, or III**).



Figure 2-4: Mandatory Instruction Signs

### 2.14 Manoeuvring Area

Taxiways are identified by single letters, usually posted on the left side of the taxiway. Rapid Exit are identified by a letter and a number. Apron entrance/exits are identified by two letters. The first letter corresponds to the associated taxiway and the second letter indicates the entrance/exit.

**Mandatory Hold Lines:** A set of two solid and two broken yellow parallel lines spanning the width of a taxiway. Hold lines are located at least 90m from the runway centreline (usually 60m from the runway edge). Vehicles and aircraft must stop behind the solid lines and proceed only when authorized by Air Traffic Control (ATC).



Figure 2-5: Mandatory Hold Lines

**Category I, II, III:** Two solid yellow parallel lines spanning the width of the taxiway with perpendicular sets of yellow lines between them. These lines indicate an **Instrument**

**Landing System (ILS) hold position** that ensures vehicles are not holding in electronically sensitive areas and causing interference to the glide path or localizer signals.

**Note:** Drivers shall stop at Category I, II, III hold lines when requested by ATC to “hold short of the Cat I, II, III hold.”

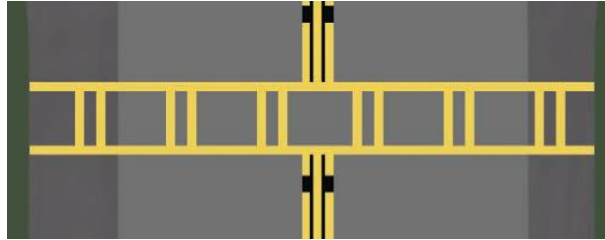


Figure 2-6: Category I/II/III Hold Markings

**Intermediate Holding Position Marking:** is established at an intersection of two taxiways or at a geographic position fix on a taxiway, where aircraft may be asked to hold as part of normal taxi routing.



Figure 2-7: Intermediate Holding Position Markings

**Enhanced Taxiway Centerline Marking:** The enhanced taxiway centerline marking consists of a parallel line of yellow dashes on either side of the normal taxiway centerline. The taxiway centerlines are enhanced for a maximum of 150 feet (47 m) prior to a runway holding position marking. The purpose of this enhancement is to warn the pilot that he/she is approaching a runway holding position marking and should prepare to stop unless he/she has been cleared onto or across the runway by ATC.

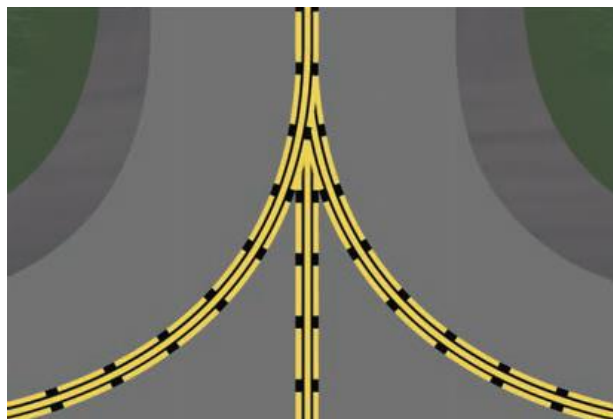


Figure 2-8: Enhanced Taxiway Centerline Marking

**Manoeuvring Area Delimitation Marking:** is necessary to delineate the area where ATC aircraft control is provided and not provided as part of the agreement between the aerodrome operator and the ATC unit. The dashed side indicates the movement area, which is under ATC control, and the

solid line indicates the nonmovement area. Currently located on Taxiway Whisky and Apron Entrance/Exit Juliet Charlie.

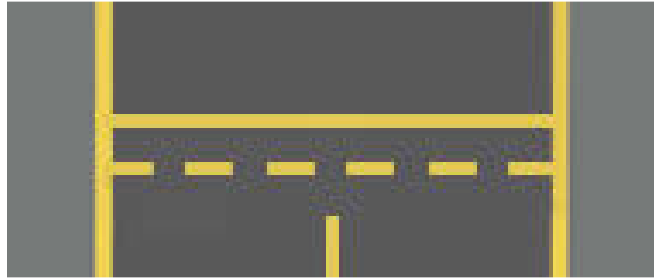


Figure 2-9: Manoeuvring Area Delimitation Marking

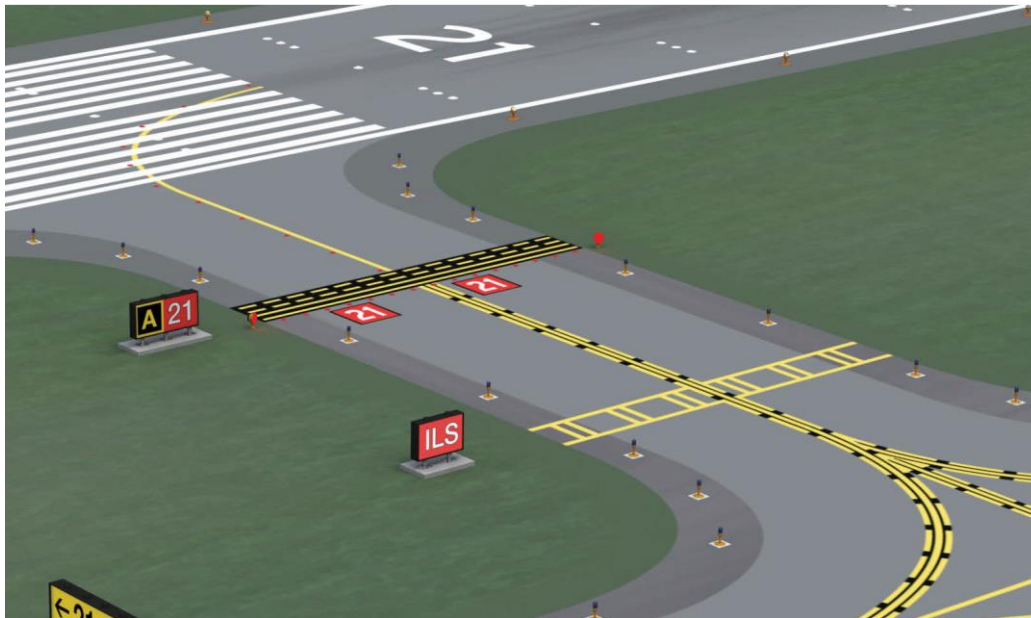


Figure 2-10: Manoeuvring Area markings at taxiway and runway intersection.

## 2.15 Runway Pavement Markings

**Runway Designation Markings:** White numbers at each end of a runway that face approaching (landing) aircraft. Runways are identified by their location corresponding to the magnetic compass numbered in tens of degrees (240 degrees location is read as 24).

At Toronto Pearson, the paired runways (15/33 and 06/24) are further identified by their relative positions to each other, and an L or R indicates left and right respectively.

**Toronto Pearson's runways are identified as follows:**

- 05/23
- 15R/33L and 15L/33R
- 06L/24R and 06R/24L

**Runway Centreline Markings:** The center of a runway is marked with a broken white line. (The lines are 30m in length and 30m apart.)

**Threshold Markings:** A series of parallel white lines placed at a 90-degree angle to the end of the runway. Threshold markings identify the beginning of that portion of a runway usable for aircraft landings.

**Threshold Bar (Formerly known as Transverse Stripe):** A solid white line not less than 1.8 m wide and spanning each end of a runway. Threshold Bar identify the beginning of the usable portion of a runway and are also used to indicate the displacement of the threshold. In cases where the threshold does not correspond to the start of the runway surface, white lines painted close together to form arrows will point to the displaced threshold.

**Runway Side Stripe Markings:** A white stripe between the thresholds of a paved runway where there is a lack of contrast between the runway edges and the shoulders or surrounding terrain.

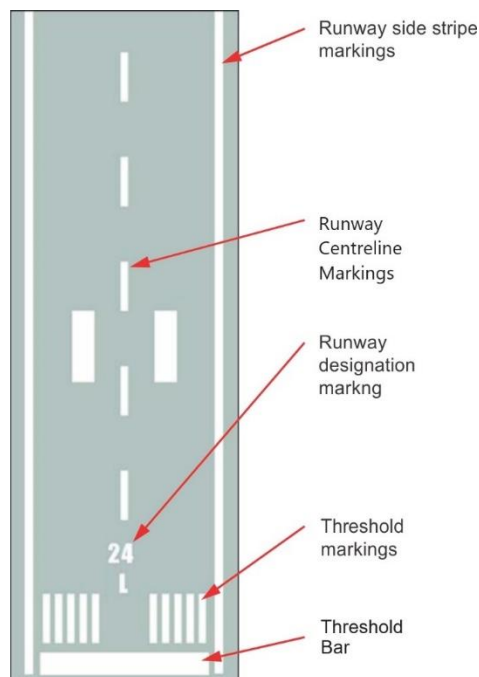


Figure 2-11: Runway markings appear as shown.

## 2.16 Airside Lighting

### 2.16.1 Runways

**Runway Edge Lights:** White lights along the edge of the runway, spaced not more than 60m apart except in some areas where more spacing is required. The edge lights in the **last 600m** section **show yellow** towards an aircraft on take-off.

**Runway Centreline Lights:** Lights located along the centreline of the runway showing **white** from the threshold to the point 900m from the runway end. For the next 600m, the lights **alternate red and white**. At 300m from the runway end the **lights show red to the runway end**.

**Runway Threshold Lights:** Green lights identifying the beginning of the usable portion of the runway for landing aircraft.

**Runway End Lights:** Red lights facing the runway and identifying the runway's end.



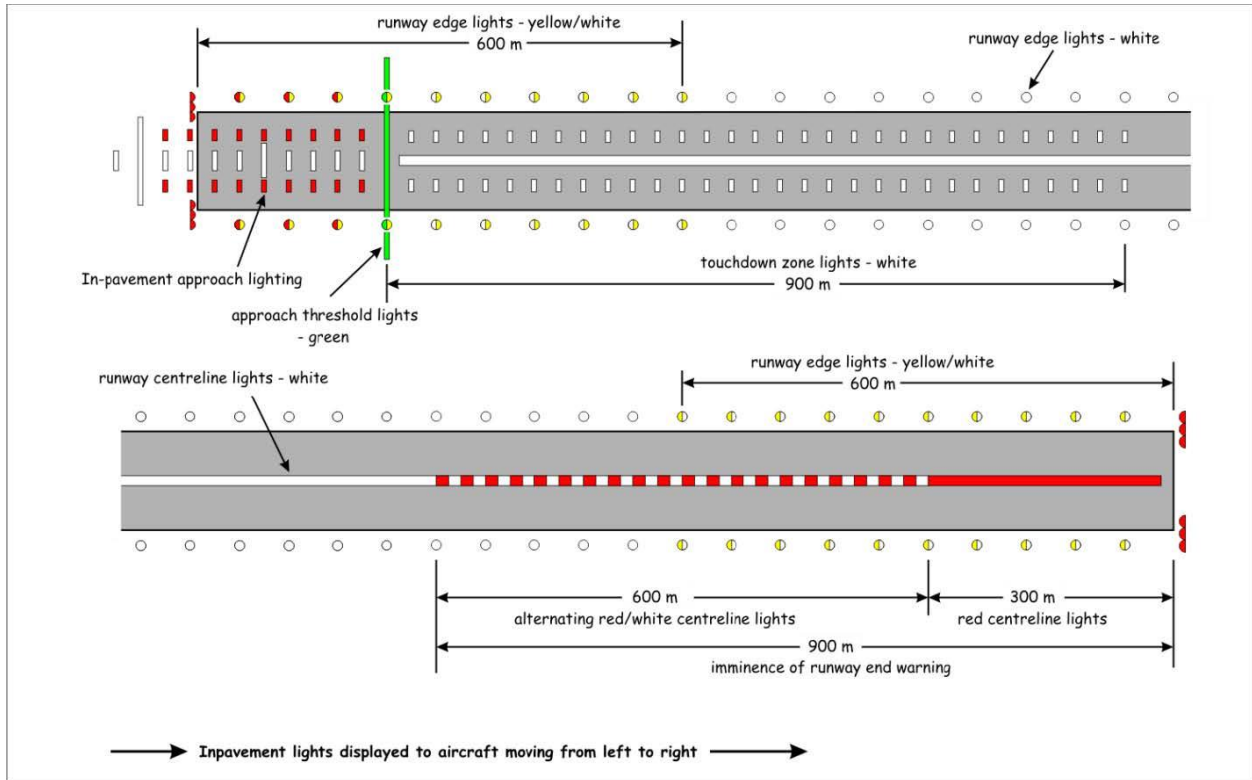


Figure 2-12: Runway Lights

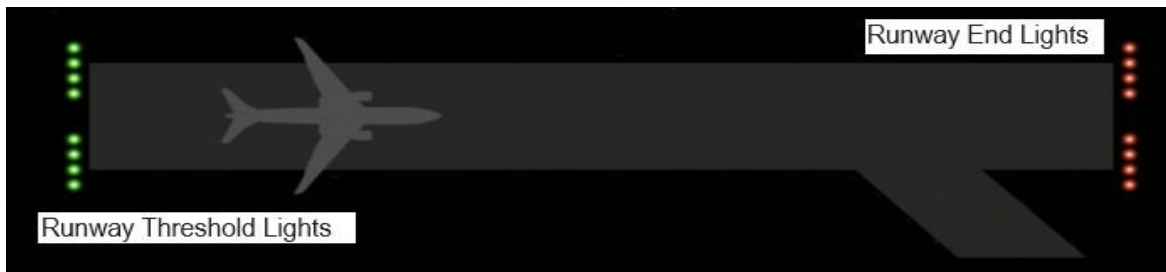


Figure 2-13: Runway Threshold and End lights

**NOTE:** Runway edge lights that begin to dim and brighten continuously are a **warning signal for all vehicles to immediately vacate the runway** and the area extending from each end of the runway (that is, the clearway/stopway 60m). A cleared runway ensures aircraft an unobstructed approach for landing and gaining altitude after takeoff.

### 2.16.2 Taxiways

**Rapid Exit Taxiway Centreline Lights:** Alternating **green and yellow lights** from the runway centreline to the taxi holding position and thereafter showing green. These lights identify the entry and centerline of rapid exit taxiways.

**Taxiway Centreline lights:** Green lights along the center of the taxiway providing guidance between the runway centreline and the point on the apron where aircraft commence Manoeuvring for parking. On some taxiways, taxiway centreline lights between runway-holding positions when crossing a runway, show alternating green and yellow.

**Runway Guard Lights (Wig-Wags):** Alternating flashing amber lights facing the taxiway located at the mandatory holding position. There are two types of runway guard lights: elevated located at each side of the taxiway and inset into the pavement and spanning the width of the taxiway.



Figure 2-14: Runway Guard Lights (elevated and inset)

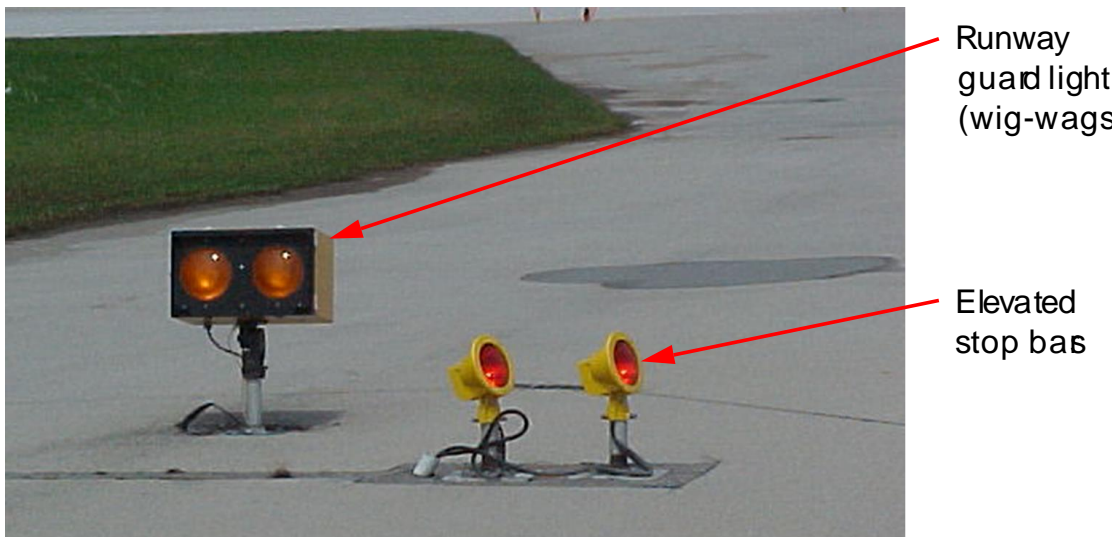


Figure 2-15: Elevated Stop Bars and Runway Guard Lights

**Taxiway Edge Lights:** Blue lights spaced at a maximum of 60m apart along the edge of taxiways. Blue reflectors may be used instead of edge lights when centreline lighting is in place.

**Intermediate Holding Position Lights (Formerly known as Taxiway Intersection Lights):** Three yellow inset lights spaced 1.5m apart and inset across the intersections of taxiways or an apron indicating a safe distance to hold from the intersection.

### 2.16.3 Manoeuvring Area Signs

**\*Note:** Illuminated Display signs are being replaced by back-lit signs and they will look identical during daylight and night.











Sign	Illuminated Display*	Location	Indicated Action
 Mandatory Hold	NOT APPLICABLE	Signage or painted markings on taxiways or runways prior to runway intersections.	Identifies the position to hold prior to entering or crossing a runway.
 Location / Mandatory Hold	NOT APPLICABLE	On taxiways at runway intersections.	Identifies the position to hold prior to entering or crossing a runway.
 Category I Hold Sign	NOT APPLICABLE	On taxiways or runways.	Identifies the position to hold to ensure the vehicle is clear of an area critical or sensitive to an ILS.
 ILS Hold Sign	NOT APPLICABLE	On taxiways or runways.	Identifies the position to hold to ensure the vehicle is clear of an area critical or sensitive to an ILS.
 Runway Exit or Direction		On runways or taxiways.	Indicates the name and direction of the upcoming rapid exit taxiway.
 Direction Sign		On taxiways and runways.	Indicates the name and direction of the upcoming taxiway.
 Location		On taxiways.	Indicates the taxiway on which your vehicle is currently positioned.

Table 2-1: Manoeuvring Area Signs

## 2.17 Reporting to Non-Passenger Screening – Vehicle (NPS-V)

All vehicle operators, when exiting the Manoeuvring area and needing to remain within the critical area, must first report to a Non-Passenger Screening checkpoint for RAIC verification and random screening by a Canadian Aviation Transportation Security Agency (CATSA) officer. Failure to report to an NPS-V checkpoint and remaining in the critical area is a violation if the Canadian Aviation Security Regulations may result in enforcement action against the driver.

The critical area is comprised of the passenger terminals and the accompanying apron areas, including the H-gate areas, and the Infield Concourse (IFC) when it is operation for passenger services. Aircraft tow crews are exempt from reporting to an NPS-V location when entering the apron area to position an aircraft on a gate and taking an aircraft back to a company hanger/apron.

A map of the Critical Area can be found on the AVOP web page [YYZ Site Map](#).

## 3. Radiotelephone Procedures

### 3.1 Introduction

To apply for a D permit, applicants must have a Radiotelephone Operator's Restricted Certificate (Aeronautical). The Study Guide for the Radiotelephone Operator's Restricted Certificate (Aeronautical) may be obtained at Industry Canada offices or downloaded from the Industry Canada web site.

This chapter describes radiotelephone procedures pertaining to operations at Toronto Pearson International Airport.

### 3.2 Radio Operation

Before attempting to speak over a frequency, listen to its activity and avoid interrupting any current transmission.

When the frequency is clear, press and hold the press to talk (PTT) button to speak, and release to listen. Avoid clicking on and off and release the PTT button immediately when your transmission is complete.

Ensure that the radio is never positioned in such a way that the PTT button can be accidentally depressed. This is referred to as a "stuck mic (mike)" and renders a radio frequency unusable, which can create significant disruption in the movement of airport traffic. If the frequency to which the radio is tuned seems quiet for an inordinate length of time, double-check the position of the microphone.

#### 3.2.1 Using Call Signs

When operating in the Movement Area, vehicle operators shall use the assigned vehicle call sign for all radio communications with Air Traffic Control (ATC) or the Apron Management Unit (AMU).

**Call sign must be displayed inside the vehicle.**

Abbreviated call signs may create confusion with other vehicles or aircraft and must not be used.

#### 3.2.2 Radio Volume

**Radio operators shall ensure that:**

- Radios are clearly readable from any location on the field. Ground Control will deny any driver with an unsatisfactory radio access to the Manoeuvring Area.
- All instruction is clearly heard by maintaining sufficient radio volume level, using a headset, or closing vehicle windows. When holding short of a runway, the extreme noise of landing and departing aircraft can easily drown out radio transmissions.

### 3.3 Contacting Air Traffic Control

Before entering any part of the Manoeuvring Area, operators shall establish contact with ATC and obtain the necessary authorization. Furthermore, they shall ensure that they clearly understand all ATC instructions before entering the Manoeuvring Area or crossing a runway.

Monitor the radio at all times while in the Manoeuvring Area. No vehicle operator shall leave a vehicle radio unattended except with the specific permission of the Air Traffic Controller.

Vehicle operators should be familiar with aircraft types, as the Ground Controller may refer to aircraft types when specifying directions. For example, drivers may be instructed to follow an A-320.

Controllers may also use cardinal compass points (North, South, East, West) in their instructions.

## 3.4 Crossing a Runway

Explicit authorization is required for an aircraft or vehicle to cross a runway, regardless of whether or not the runway is active. If runway authorization is not included in a transmission, the vehicle operator shall request and verify ATC authorization for crossing the runway before proceeding.

In addition to receiving ATC permission via radio to proceed into or within the Manoeuvring Area, drivers shall visually check that proceeding as permitted will not cause interference with any aircraft.

### 3.4.1 Calling “Off the Runway”

Vehicle operators use the term “**off**” when leaving the runway to avoid any confusion with aircraft pilots who use the term “clear”.

After receiving instructions to cross, or when exiting a runway, drivers shall advise ATC they are “off” the runway when the vehicle is past the hold line or, if no line is marked, at least 60m from the edge of the runway. Drivers shall not report “off” while still in the process of leaving the runway. A sample radio communication follows.

**Controller:** “Tractor 131 plus two, cross 33R, V, turn right on E, contact Pad Control on 131.175.”

**Vehicle:** “Cross 33R, V, right on E, contact Pad Control 131.175, Tractor 131 plus two.”

**Vehicle:** “Tractor 131 plus two, off 33R.”

### 3.4.2 Calling “Established”

Drivers shall advise that they are off, or at location within, the Manoeuvring Area by calling “established” **only** when requested to do so by ATC. This reduces radio congestion.

**An example follows.**





**Vehicle:** “South Ground, Safety 202 on B1, request proceed to AK.” **Controller:** “Proceed to AK and call established, Safety 202.” **Vehicle:** “Safety 202, proceed to AK and call established.”

**Vehicle:** “Safety 202, established AK.”

### 3.5 Radio Failure

If a driver's radio fails while the vehicle is in the Manoeuvring Area, the driver shall turn the vehicle to face the control tower and flash the headlights off and on.

**The Ground Controller shall respond using the following light signals:**

	Flashing green light – proceed.
	Steady red light – stop.
	Flashing red light – vacate the runway.
	Flashing white light – return to the starting point on the Manoeuvring Area.

While driving in the Manoeuvring Area under light signals, drivers shall hold short of each intervening runway and receive permission to proceed—indicated by a flashing green light—before crossing the runway.

If a driver's radio and vehicle both fail, the driver shall stay with the vehicle and attempt to establish contact with the tower through other means of communication (for example, a cellular telephone or company radio). In adverse weather conditions normally associated with combined vehicle and radio failure, the vehicle provides protection until help arrives.

If communication with the tower cannot be established, call the Airport Emergency Line at 416-776-3033.

### 3.6 Runway Safety

While operating a vehicle on the Manoeuvring Area means much of the other vehicle traffic “clutter” that is encountered on the aprons is not an issue, the severity of consequence can be much higher when an accident or incident does occur.

The following practices must be observed by drivers operating in or near the runway / taxiway environment.

#### Ensure Need and Right

- Use service roads whenever possible to minimize time spent on taxiways and runways.

#### Vehicle Serviceability

- Ensure appropriate vehicle lights (high beams, flashers, beacons, and auxiliary lighting) are operational prior to departure.

#### Be Prepared -- Know Your Route and Risks

- Review the airport map prior to moving the vehicle and have it out and available for immediate reference while driving.
- Review current airfield information for any taxiway closures, runway closures, construction activity, or other surface risks and brief these with other vehicle occupants if available.

#### Professional Phraseology

- During radio transmissions, use correct terminology and proper voice cadence. Don't be casual.

- Copy your clearance and review the assigned route. Read back all clearances. If in doubt always ask again.

#### **Listen for Call Sign Conflicts**

- Be aware of aircraft with similar call signs to each other and yours – especially duplicate numerals. Listen for company prefixes.

#### **Visually Confirm Clearances**

- When cleared to cross any runway or taxiway, first visually check to ensure there is no conflicting traffic. If there is any doubt that the runway is clear, reconfirm crossing clearance with ATC.

#### **Don't Assume You Are Visible**

- Sightlines for pilots while aircraft are on the ground can be extremely limited when it comes to spotting vehicles and equipment due to height differential between aircraft and vehicles, aircraft windshield size and configuration and the position of other aircraft structures such as wings and engines.

#### **Avoid Task Saturation**

- Eliminate distractions while driving.
- Focus attention and have your “eyes out” of the vehicle. Assign secondary tasks to other occupants of the vehicle whenever feasible.

### **3.6.1 Driver Disorientation**

**If vehicle operators become lost or confused while driving on the Manoeuvring Area, they shall:**

- stop the vehicle.
- immediately notify Ground Control.

If an incursion or accident occurs as a result of driver disorientation, ASOs may issue an AVOP infraction and Peel Regional Police may lay charges under the Aeronautics Act.

## **3.7 Equipment Failure**

If equipment breaks down while in the Manoeuvring Area, operators shall immediately notify the Ground Controller of their location and difficulty and request assistance.

**If equipment breaks down on the apron, drivers shall:**

- contact the AMU, provided the vehicle is equipped with a radio and the driver is licensed to use it.
- remain with the equipment if possible.
- contact their employer.
- advise AOC at (416) 776-3055.

### **3.7.1 Reporting Foreign Object Debris**

Vehicle operators who encounter or cause any obstruction or potentially hazardous condition on the Movement Area— including FOD—shall report its nature and location to the AOC at (416) 776-3055.

Vehicle operators shall **not** stop driving on the Manoeuvring Area without contacting ATC.



**Therefore, when encountering FOD in the Manoeuvring Area vehicle operators shall:**

- a. advise ATC of the type and exact location of the FOD
- b. continue driving as instructed by ATC.

## 3.8 Radio Communications Procedures

- Ensure that your vehicle radio can transmit and receive the airport’s ground control frequencies. Perform a “radio check” to assess your radios at the start of each shift (radio checks should be done on Apron frequency, so you don’t add extra radio traffic to ATC workload)
- Ensure your vehicle has identifying call sign, and clearly marked inside your vehicle.
- Know the standard (ATC) phraseology and never use Citizen’s Band (CB) lingo or law enforcement codes.
- Think about what you are going to say before calling the controller. Know your call sign, location on the airfield and where you intend to go.

**The message usually consists of four parts:**

- The Call Up
- The Reply
- The Message
- The Acknowledgement or Ending

**The Call Up:**

- Station Being Called & Your Call Sign (South Ground “Van 32”)

**The Reply: (by the ground station)**

- Your Call Sign, Station in Control; Go Ahead (Van 32, south ground, go ahead)

**The Message: (by vehicle Request)**

- Your Call Sign, Location, Destination, (task if any) (Van 32, “AM” request proceed “EA”)

**The Message: (by ground station)**

- Van 32 proceed V, x33R, E, EA

**The Acknowledgement or Ending:**

- Read Back all Instructions (V, x33R, E, EA, Van 32)

### 3.8.1 ATC/Driver Radio Communication Examples

**Call-up consist of:** station being called and your call sign.

**Request consist of:** your call sign, current location, and your destination.

**EXAMPLE 1:**

**Driver:** South ground, Tractor 24.

**ATC Controller:** Tractor 24 South Ground.

**Driver:** Tractor 24, at “AM” request proceed “EB”.

**ATC Controller:** Tractor 24 proceed via alpha, tango, hold short runway 33R.

**Driver:** Alpha, tango, hold short runway 33R, Tractor 24.

**ATC Controller:** Tractor 24 cross runway 33R, echo, echo bravo.

Read back of all runway holding instructions is required and must include the phrase “Hold Short”, the runway’s identifying number and your call sign.

With a little practice, radio communications are not difficult. If you are unsure about what the controller said, or if you don’t understand an instruction, ask the controller to repeat the communication by transmitting “SAY AGAIN”.

ATC controller, even one who is extremely busy, would rather repeat and explain instructions than have a misunderstanding lead to a runway incursion. Don’t proceed thinking that the instructions will become clear once you drive a little farther.

Use extreme caution when you hear the phraseology “GO AHEAD” as it is only meant for you to proceed with your message and is not to be used for any other purpose. It NEVER means to proceed in moving your vehicle about, or to cross runways.

**EXAMPLE 2:**

**Driver:** South ground, Tractor 24.

**ATC Controller:** Tractor 24 South Ground.

**Driver:** Tractor 24, at “AM” request proceed “EB”.

**ATC Controller:** Tractor 24 proceed via alpha, tango, hold short runway 33R.

**Driver:** Alpha, tango, hold short runway 33R, Tractor 24.

**ATC Controller:** Tractor 24 echo, echo bravo.

**Driver:** South ground, confirm crossing runway 33R, Tractor 24.

**ATC Controller Instructions of** (go ahead, sure, yes, correct) are not instructions to cross the runway.

**ATC Controller Instruction should be:** Tractor 24 cleared to cross runway 33R, echo, echo bravo.

Remember an ATC instruction to operate on taxiways in **NOT** a clearance to cross a runway holding position, illuminated stop-bar or to enter on to a runway unless specifically cleared to do so by ATC.

Always ensure that you maintain a listening watch on the appropriate frequency when operating on the Manoeuvring area.

While operating on the Manoeuvring area, vehicle operators shall ensure procedural compliance and standard phraseology is used.

If you have questions, please feel free to contact the AVOP Office at 416-776-2867 or email AVOP@gtaa.com

# Appendix A: Airport Frequencies

Manoeuvring Area	
North Ground (North of AK)	121.650
South Ground (South of AK)	121.900
Centre Ground	119.100
North Tower	118.700
South Tower	118.350
Tower Back-up	118.000
Emergency Frequency	121.500
Apron Management Units (AMU)	
<b>North Apron including:</b> <ul style="list-style-type: none"> <li>• all gates north of Gate 143</li> <li>• Cargo West (Cargo 1, 2, 3)</li> <li>• Infield Concourse Apron (IFC)</li> <li>• FedEx</li> </ul>	122.275
<b>South Apron including:</b> <ul style="list-style-type: none"> <li>• all gates south of Gate 142</li> <li>• all H gates.</li> <li>• Avitat/Skysservice</li> <li>• 3-Bay Hangar</li> </ul>	122.075
A-CDM Coordinator	122.875
T1 & T3 Apron Back-up	122.825
Apron Tow Coordinator	136.525
Central Deicing Facility (CDF)	
Pad Control	131.175
Iceman South (Pads 1, 2, 3)	131.375
Iceman North (Pads 4, 5, 6)	129.625
CDF Back-up	131.950

## A.1. Phonetic Alphabet

Letter	Word	Pronounced as
<b>A</b>	Alfa	AL FAH
<b>B</b>	Bravo	BRAH VOH
<b>C</b>	Charlie	CHAR LEE
<b>D</b>	Delta	DELL TAH
<b>E</b>	Echo	ECK OH
<b>F</b>	Foxtrot	FOKS TROT
<b>G</b>	Golf	GOLF
<b>H</b>	Hotel	HOH TELL
<b>I</b>	India	IN DEE AH
<b>J</b>	Juliett	JEW LEE ETT
<b>K</b>	Kilo	KEY LOH
<b>L</b>	Lima	LEE MAH
<b>M</b>	Mike	MIKE
<b>N</b>	November	NO VEM BER
<b>O</b>	Oscar	OSS CAH
<b>P</b>	Papa	PAH PAH
<b>Q</b>	Quebec	KEH BECK
<b>R</b>	Romeo	ROW ME OH
<b>S</b>	Sierra	SEE AIR RAH
<b>T</b>	Tango	TANG GO
<b>U</b>	Uniform	YOU NEE FORM
<b>V</b>	Victor	VIK TAH
<b>W</b>	Whiskey	WISS KEY
<b>X</b>	X-ray	ECKS RAY
<b>Y</b>	Yankee	YANG KEY
<b>Z</b>	Zulu	ZOO LOO

## A.2. Numbers

Number	Pronounced as	Number	Pronounced as
0	ZE RO	6	SIKS
1	WUN	7	SEV EN
2	TOO	8	AIT
3	TREE	9	NIN ER
4	FOW ER	10	ONE ZERO
5	FIFE		

Number	Pronounced as
74	SEVEN FOUR
100	ONE ZERO ZERO
584	FIVE EIGHT FOUR
12000	ONE TWO THOUSAND or ONE TWO ZERO ZERO ZERO
38542	THREE EIGHT FIVE FOUR TWO
Decimal	DAY SEE MAL
Hundred	HUN DRED
Thousand	TOU SAND

## Appendix B: Procedural Words and Phrases

Word or Phrase	Meaning
<b>ACKNOWLEDGE</b>	Let me know that you have received and understood this message.
<b>AFFIRMATIVE</b>	An expression used in radio communication meaning “Yes”.
<b>APPROVED</b>	Permission granted
<b>BREAK</b>	Indicates the separation between portions of the message. (To be used where there is no clear distinction between the text and other portions of the message.)
<b>BREAK BRAK</b>	Separation between messages for two different aircraft
<b>CHECK</b>	Examine a system or procedure
<b>CONFIRM</b>	Verify (clearance, instruction, action, information) given
<b>CONTACT</b>	Establish communication with...
<b>CORRECT</b>	True or accurate
<b>CORRECTION</b>	An error was made in transmission, the correction will follow
<b>DISREGARD</b>	Ignore
<b>EXPEDITE</b>	Comply with instruction as soon as possible
<b>HOW DO YOU READ?</b>	Can you hear my transmission clearly? <b>Note:</b> The readability scale is: <ul style="list-style-type: none"> <li>• Unreadable</li> <li>• Readable now and then</li> <li>• Readable but with difficult</li> <li>• Readable</li> <li>• Perfectly readable</li> </ul>
<b>I DO NOT UNDERSTAND</b>	I do not understand, please rephrase your last transmission
<b>I SAY AGAIN</b>	I repeat for clarity or emphasis
<b>IMMEDIATELY</b>	Immediate action as required for safety reasons
<b>MONITOR</b>	Listen to (frequency) without checking in
<b>NEGATIVE</b>	No, or Permission not granted, or Not correct, or Not capable.
<b>OVER</b>	End of transmission, require response
<b>READ BACK</b>	Repeat all, or the specified part, of this message back to me exactly as received.
<b>RECLEARED</b>	A change has been made to your last clearance and this new clearance supersedes your previous clearance or part thereof

Word or Phrase	Meaning
<b>ROGER</b>	I have received your transmission (generally used by ATC rather than pilots)
<b>SAY AGAIN</b>	Repeat all, or specified part of last transmission.
<b>SPEAK SLOWER</b>	Reduce rate of speech
<b>STANDBY</b>	Wait and monitor frequency, caller will re-establish contact.
<b>UNABLE</b>	Cannot comply with instruction, or clearance, or request.
<b>WILCO</b>	I understand the message and will comply.
<b>WITHOUT DELAY</b>	Follow instructions expeditiously, specifically, and safely.
<b>WORDS TWICE</b>	Communication difficult; please say every word or group of words twice. Communication difficult; therefore, I will repeat every word/group of words twice.

**NOTE:** You may hear phraseology such as **“blocked”**, **“stepped on”**, or **“two at once”** used by ATC or other pilots. These phrases all indicate that your transmission was interrupted or distorted by other radio transmissions.

# Appendix C: List of Changes

## C.1. Changes in Front Matter

### Added:

- Table of Figures.

## C.2. Terminology Changes

Previous	Revised
High Speed Exits	Rapid Exits
Taxiway Intersection Marking	Intermediate Holding Position Marking
Transverse Stripe	Threshold Bar

## C.3. Changes in Section 2

### 2.14 Manoeuvring Area

- Added - Manoeuvring Area Delimitation Marking: is necessary to delineate the area where ATC aircraft control is provided and not provided as part of the agreement between the aerodrome operator and the ATC unit. The dashed side indicates the movement area, which is under ATC control, and the solid line indicates the nonmovement area.

### 2.16.1 Runways

- Added - Runway Edge Lights: White lights along the edge of the runway, spaced not more than 60m apart except in some areas where more spacing is required. The edge lights in the last 600 m section show yellow towards an aircraft on take-off.

### 2.16.2 Taxiway

- Added - Taxiway Centreline lights: Green lights along the center of the taxiway providing guidance between the runway centreline and the point on the apron where aircraft commence Manoeuvring for parking. On some taxiways, taxiway centre line lights between runway-holding positions when crossing a runway, show alternating green and yellow.

### 2.16.2 Taxiway (Continued)

- Added - Runway Guard Lights (Wig-Wags): Alternating flashing amber lights facing the taxiway located at the mandatory holding position. There are two types of runway guard lights: elevated located at each side of the taxiway and inset into the pavement and spanning the width of the taxiway.

### 2.16.3 Maneuvering Area Signs

- Change - Illuminated Display signs are being replaced by back-lit signs and they will look identical during daylight and night.



## C.4. Changes in Appendix A: Airport Frequencies

**Added:**

- All H gates (122.075)
- A-CDM Coordinator (122.875)
- T1 & T3 Apron Backup (122.825)
- Apron Tow Coordinator (136.525)

## C.5. Changes in Appendix C: List of Changes

**Added:**

- Appendix C: List of Changes

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