# AIRPORT TRAFFIC DIRECTIVES
# and
# AIRSIDE VEHICLE OPERATOR PERMIT
# **(AVOP) 'D'** PROGRAM MANUAL
# **3rd Edition**


**To schedule appointments, reference the information on the Thunder Bay Airport website within the AVOP section under "Working at the Airport".**

https://www.tbairport.on.ca/page/avop-material

# AIRSIDE VEHICLE OPERATORS PERMIT PROGRAM (AVOP) INTRODUCTION

The Airside of an airport is a specialized working environment governed by rules designed to prevent accidents and minimize the risk of injury to all persons.

This manual is a reference source that combines applicable federal regulations, along with local rules and procedures relating to the safe operations of equipment and vehicles used within the airside-working environment. This manual is printed under the authority of the TBIAAI at the Thunder Bay Airport.

## 1.0 DEFINITIONS

**Aerodrome**
Any area of land, water (including the frozen surface thereof), or other supporting surface used or designated, prepared, equipped, or set apart for use either in whole or in part for the arrival and departure, movement, or servicing of aircraft, and including any buildings, installations, and equipment in connection there with the aerodrome.

**Aircraft**
Any machine capable of deriving support in the atmosphere from the reactions of the air.

**Airport**
An aerodrome in respect of which a Canadian aviation document is in force. For the purposes of this document “airport” means the Thunder Bay International Airport located in Thunder Bay, Ontario (CYQT).

**Airport Traffic**
All traffic on the maneuvering area of an airport and all aircraft flying in the vicinity of an airport.

**Airside**
That area of an airport intended to be used for activities related to aircraft operations and to which public access is normally restricted.

**Airside Vehicle Operator's Permit (AVOP)**
A document issued by the aerodrome operator (TBIAAI) certifying that the person named therein is authorized to operate vehicles in an airside area.

**Apron**
That part of an aerodrome, other than the maneuvering area, intended to accommodate the loading and unloading of passengers and cargo, the refueling, servicing, maintenance, and parking of aircraft, and any movement of aircraft, vehicles, and pedestrians to allow execution of those functions.

**Apron Traffic**
All aircraft, vehicles, equipment and pedestrians using the apron at the Thunder Bay International Airport.

**AFFS**
Aircraft Firefighting Service

**APCO**
Airport Pass Control Office

**Blind Transmissions**
A transmission from one station to another when two-way communication cannot be established and it is believed that the called station can hear transmissions, but is unable to transmit.

**Controlled Airport**
An airport at which an air traffic control unit is provided.

**Crosswalk**
Any portion of a road, an apron, or any other area designated by a sign or surface marking as a pedestrian crossing.

**Designated Vehicle Corridor**
A road delineated by surface markings on an apron.

**Designated Vehicle Crossing Point**
A location on an apron, delineated by surface markings, where vehicles are to cross an aircraft taxi-line.

**Equipment**
Any motor vehicle or mobile device, either self-propelled or towed or of a specialized nature, used for runway and airfield maintenance or in the maintenance, repair and servicing of aircraft including test equipment and cargo and passenger handling equipment.

**Flight Service Specialist**
A person who provides advisory information to aircraft and vehicles using, or about to use, the maneuvering areas of an airport where control service is not available.

**Flight Service Station (FSS)**
A facility from which aeronautical information and related aviation support services are provided to aircraft including airport and vehicle advisory services for designated uncontrolled airports.

**Glide Path**
That part of an instrument landing system that helps the pilot approach the runway on the correct descent angle to the designated touchdown zone.

**Ground Control**
The operating position in the control tower that provides: (a) clearances and instructions for the movement of airport traffic, and (b) information to all traffic within the airport perimeter as it is known and pertinent.

**Groundside**
That area of an airport not intended to be used for activities related to aircraft operations and to which the public normally has unrestricted access.

**Holding Bay**
A defined area where aircraft can be held, or bypassed, to facilitate the efficient surface movement of aircraft.

**Hold-Short**
Instructions to hold at least 45 m (200 ft.) from the edge of a runway while awaiting permission to cross or proceed onto a runway.

**Intersection**
The point at which a road, runway or taxiway meets or crosses another road, runway or taxiway.

**Light Signal from Airport Control Tower**
A light used by the tower to control airport traffic when there is no radio communication.

**Localizer**
That part of the instrument landing system that helps the pilot remain lined up with the runway during his approach.

**Maneuvering Area**
That part of an aerodrome intended to be used for the taking off and landing of aircraft and the movement of aircraft associated with taking off and landing, excluding aprons.

**Movement Area**
That part of an aerodrome to be used for the surface movement of aircraft and includes the maneuvering areas and aprons.

**Off the Runway**
Indicates a vehicle is at least 45 m (200 ft.) to the side of the nearest edge of the runway in use, wherever practical.

**Operational Stand**
An area on an airport apron designated for the parking of aircraft for the purpose of loading and unloading passengers, and the provision of ground services.

**Operator**
The person responsible for the operation and safety of the vehicle and equipment; usually referred to as the driver.

**Restricted Area**
An area of an airport designated by a sign as an area to which access by persons or vehicles requires the production of a valid Restricted Area Identification Card.

**Restricted Radiotelephone Operator's Certificate**
A document issued by Industry Canada certifying that the holder may act as an operator on any aeronautical-land radio station fitted with radiotelephone equipment only, transmitting on fixed frequencies and not open to public correspondence.

**Restricted Area Identification Card (RAIC) – "Red Pass"**
An Aerodrome Operator issued identification card which may allow non-passenger access to the restricted areas of airports.

**Taxiway**
That part of an aerodrome used for maneuvering aircraft and airport equipment between the apron area and runway (vole de circulation).

**TBIAAI**
Thunder Bay International Airport Authority Inc., the Aerodrome Operator at Thunder Bay International Airport (CYQT).

**Threshold**
The beginning of that portion of the runway usable for landing.

**Uncontrolled Airport**
An airport that is "non-controlled" to the extent that the airport does not have an operating air traffic control tower.

**Vehicle**
An automobile, bicycle, over-snow vehicle, truck, bus, or any self- propelled vehicle or device in, on or by which a person or thing is or may be transported, carried, or conveyed on land, and includes a machine designed to derive support in the atmosphere from reactions against the earth's surface of air expelled from the machine, but does not include an aircraft.

**Vehicle Advisory Service**
Information provided by the flight service station for the safe movement of known vehicles and aircraft on maneuvering areas at locations where no control tower is in operation.

**Vehicle Corridors**
Parallel 150-mm (6-in.) wide, solid white lines spaced 7.5 m apart to provide guidance to vehicle and equipment operators.

**Warning Devices:** A siren and flashing red light.

## 2.0 AIRSIDE TRAFFIC DIRECTIVES FOR THE OPERATION OF VEHICLES ON AIRPORT MOVEMENT AREAS

### 2.1 General

The directives contained in this manual apply at this airport which is operated by the Thunder Bay International Airports Authority Inc. and are based on Acts, Regulations and procedures applied nationally for the safe and orderly operation of vehicles on airport movement areas.

There may be considerable difference in the operating conditions at each airport because of the size and complexity of operation, climatic conditions, geographical location and other factors. Thunder Bay Airport Traffic Directives address these differences by establishing the procedures that apply to the operation of a vehicle at our airport.

### 2.2 Airside Vehicle Operator's Permit (AVOP)

No person shall operate a vehicle in the airside area of this airport unless:

(a) That person is in possession of an airside vehicle operator's permit, or
(b) That person is escorted or accompanied by a person who is in possession of an airside vehicle operator's permit, or
(c) That person is authorized by the TBIAAI to operate a vehicle in that area.

No individual shall be entitled to apply for an Airside Vehicle Operators permit if under the age of majority (18).

An Airside Vehicle Operator's Permit is issued by the TBIAAI on the basis of applicant knowledge of the airside traffic directives for this airport. An AVOP examiner administers all theory and practical tests.

Application for an AVOP must be made to the TBIAAI by the applicant, in writing, and must include the address of the applicant and reasons for the application. All AVOP applications are made through the AVOP protocols outlined within the *Airport Traffic Directives AVOP Requirements and Administration* document, located on the airport's website.

To avoid delays, you should also check with the Pass Control Office to ensure that all clearances and other certificates or licenses that you may be required to hold are available at the time of application for an Airside Vehicle Operator's Permit.

**Note**: Subject to being revoked or suspended, an Airside Vehicle Operator's Permit issued under the Thunder Bay Airside Traffic Directives is valid for the period stated on the permit.

The Restricted Area Identification Card (also known as a RAIC or a "Red Pass") is not an AVOP. These two documents are managed separately within the TBIAAI and the processes for managing each are posted on the airport's website.

On the expiry of an Airside Vehicle Operator's Permit, the permit holder shall forthwith return the permit to the TBIAAI.

### 2.3 Applying for an Airside Vehicle Operators Permit

AVOP applications can be obtained from the airport's website.

Two types of permits are available:

**D/A Permit**: is an AVOP authorizing the person named therein to operate a vehicle on airside aprons, the perimeter road, and service roads as required in the performance of their duties. This permit **DOES NOT** allow the person to operate a vehicle in the maneuvering areas (runways and taxiways) and is subject to any restrictions specified within the Airside Traffic Directives and to those specified on the permit.

**D Permit**: is an AVOP authorizing the person named therein to operate a vehicle on all airside areas at Thunder Bay International Airport, subject to any restrictions specified within the Thunder Bay Airport Traffic Directives and to those specified on the permit.

An application for an AVOP must be completed with the pertinent information required for the type of AVOP being sought:

(i) A valid TBIAAI issued Restricted Area Identification Card (for either "D/A" or "D"), and
(ii) A valid Provincial/Territorial Driver's License (for either "D/A" or "D"), and
(iii) An aeronautical Restricted Radiotelephone Operator's Permit from Industry Canada ("D" only).
- Note: Members of the RCMP & DND are exempt, from this 3rd requirement.

The applicant shall deliver the AVOP application form to the AVOP office and produce all required documents (i.e. Restricted Area Identification Card, Provincial/Territorial Driver's License and a Restricted Radiotelephone 0perator's Permit, if applicable).

In order to maintain airside vehicle operator population within appropriate and manageable limits, airside vehicle operation will be limited to those persons with a justifiable need and right. The TBIAAI shall determine from the information contained on the application if the applicant has a justifiable need and right to operate a vehicle without escort.

### 2.4 Arranging for an AVOP Test

Once the need and right of an AVOP applicant has been demonstrated to the satisfaction of the TBIAAI, the applicant will be provided with a current copy of the study material and arrangements for the AVOP test can be made.
An AVOP test consists of two parts: i) a written knowledge test and ii) a practical test
NOTE: Responsibility for providing practical training to an AVOP applicant ("D/A" or "D") rests with the employer of the individual applying for the AVOP.

Appointments for the written knowledge test can be made by contacting the Airport AVOP Office. Maximum time allocated for the written test will be one (1) hour for the "D/A" and one and one half-hours for the "D". Results shall immediately follow the test; a pass mark for the knowledge test is 90%.

Appointments for either a "D/A" or "D" practical test are to be made through the Airport AVOP Office. Appointments for practical tests can only be made after the appropriate written knowledge test has been successfully completed.

The practical test is conducted to confirm the driver's ability to apply the knowledge gained from the Airport Traffic Directive in the working environment. The practical test shall be conducted within the geographical limits associated with the type of AVOP ("D/A" or "D") applied for. Applicants for a "D" permit must also demonstrate the proper application of radio communication skills.

An Airside Vehicle Operator's Permit (AVOP) shall be issued upon successful completion of the written and practical tests.

All airside vehicle operators are subject to revocation only for failure to apply procedures and recommended safety practices applicable to the permit, and reflected in the Airside Traffic Directives. A fee for reinstatement of AVOP privileges will be applied at the time of re-test.

### 2.5 Reporting an Accident

All vehicle accidents should be reported as soon as possible to Airport Security (475-9129). Accidents/incidents resulting in serious personal injury or damage to TBIAAI property or equipment must be reported immediately to the Airport Duty Manager (625-0595). If a vehicle is disabled as the result of an accident while operating in the maneuvering area, the ATC or FSS must be notified following the proper protocols while in the airfield.

If immediate medical assistance is required, **call 911 first**, and then contact Security via the Airport Emergency phone number 475-9129, or notify ATC Ground Controller via VHF radio that assistance is required.

### 2.6 Reporting of Hazardous Debris on Aircraft Movement Areas (FOD)

The control of FOD (Foreign Object Debris) is the responsibility of all airside drivers. If an operator discovers debris on a maneuvering area surface the operator should immediately report this to the Ground Controller. The Ground Controller will in-turn notify the Emergency Response Operations Centre (EROC) for retrieval or cleaning. If an operator discovers debris while on an Apron, the operator may stop to retrieve the material, if it is safe to do so. If unable to do this please report the problem to the EROC (577–3557).

### 2.7 Operating Procedures Specific to Thunder Bay International Airport

Whenever a self-propelled vehicle is operating on a maneuvering surface, its headlights will be turned on.

Apron traffic shall use the vehicle corridor at all times when traversing the apron area from one side to the other.

Before operating a vehicle on the maneuvering area, an operator must have a valid AVOP and a Restricted Radiotelephone Operators Certificate. Whenever non-radio equipped vehicles are operating, they shall be escorted by a qualified employee in a radio-equipped, TBIAAI approved vehicle. This employee will be responsible for requesting and acknowledging all Air Traffic instructions. Only TBIAAI approved vehicles are authorized to access the maneuvering areas.

Air Traffic Service includes both Air Traffic Control (Tower) and the Flight Service Station. ATC provides vehicle control from (06:00 to 23:00) and FSS provides vehicle advisory from (23:00 to 06:00).

ATS controls all vehicle traffic on the airport maneuvering area, unless otherwise stated in the ATS/Airport Operator agreement and drivers and pedestrians must always obey its instructions.

Vehicle operators must always report to ATS before entering and immediately after leaving the maneuvering area.

Before proceeding onto a maneuvering area, the vehicle operator shall contact ATS for permission to proceed to a specific location by a specified route. Radio contact shall be made before accessing the airfield. The vehicle operator shall read back all instructions from ATS.

Aircraft being towed or vehicle towing an aircraft must always be in radio contact with ATS before entering and while within the maneuvering area.

Requests for permission to proceed into the maneuvering area shall include:

(i) Your vehicle identification (Call Sign);
(ii) Your current location;
(iii) Your specific designation and intended route, along with intended activity/work to be performed in the maneuvering area.

### 2.8 Operating Procedure Restrictions Specific to the Thunder Bay International Airport

All AVOP holders are required to maintain a valid Ontario Driver's

License.

Suspension of an AVOP:

Shall normally be the first form of emergency action taken by the TBIAAI or its designate. Emergency action shall be taken when it is clearly needed in the public interest, for the proper use and protection of the airport and will be done immediately upon recognition of the need for such action and only for non-punitive reasons.

An AVOP is automatically revoked when:

(i) The expiry date of the AVOP is reached. (This normally coincides with the expiry date of an individual's RAIC
(ii) The RAIC of an AVOP holder has been revoked, suspended or is no longer valid with respect to the airside of Thunder Bay International Airport.
(iii) The AVOP holder's Ontario Driver's License has been revoked, suspended, or is no longer valid.
(iv) The AVOP holder is no longer employed:
- At Thunder Bay International Airport; or
- In a position at the airport which no longer requires that person to operate a vehicle on the airside of Thunder Bay International Airport.

Escorting of a vehicle on the airside of Thunder Bay International Airport shall be provided by:

(i) A licensed (AVOP) vehicle operator seated next to the normal operator of the vehicle; or
(ii) A licensed (AVOP) vehicle operator guiding the other person on a "follow me" basis either:
- In a separate vehicle; or
- As a pedestrian.

The responsibility for providing an escort to a vehicle operated on the airside rests with the person who invited the vehicle onto the airside. Any AVOP holder providing escort to a vehicle is responsible for the movement and parking of the escorted vehicle while it remains within the airside area. The escort shall not lead or direct the escorted vehicle into any area of airside to which the escort is not authorized to operate a vehicle under the escort's AVOP. An escort must not abandon a vehicle under their escort so long as that vehicle remains within the airside area of the airport. The foregoing rules are in addition to, but do not replace or otherwise supersede, any other rules or regulations respecting the control of vehicles on the airside of the airport, nor any security regulations applicable to this airport.

Familiarity with all airside areas of the airport, under any and all circumstances, is the ongoing responsibility of the permit holder.

All vehicles and mobile equipment that are equipped with headlights must turn on those headlights, in the low beam position, whenever they are operating on airside areas. This applies to all airside areas.

**NOTE**: Vehicles that are being operated in the maneuvering area and which are equipped with daytime running lights (DRL) must also be so equipped such that they are capable of "flashing" these lights at the Control Tower in the event of radio failure.

### 2.9 Operation of Vehicles on Aprons and Other Uncontrolled Movement Areas (Applies to "D/A" and "D" permits).

As per the type of AVOP permit being applied for, all AVOP holders are required to know the Apron layouts including the vehicle corridor system, intersection of the Apron and Taxiways, aircraft movement guidelines, aircraft gates, and operational stands/positions) as illustrated within the Apron Site Plan. The maximum speed limits, unless otherwise posted, areas follows:

| AREA | SPEED LIMIT |
|---|---|
| **Vehicle Corridors (Head of Stand and Tail of Stand roads), roads, aprons and service areas (unless otherwise posted)** | **25 km/hr** |
| **Baggage make up areas inside the Air Terminal Building** | **5 km/hr** |
| **Within 25 ft of a parked aircraft** | **10 km/hr** |
| **Perimeter Road (light vehicles)** | **50 km/hr** |
| **Perimeter Road (Fuel trucks, heavy vehicles)** | **25 km/hr** |

Normally, vehicles shall leave the vehicle corridor for the following reasons only:

(i) To access one of the nine (9) truck-way doors to the Air Terminal Building.
(ii) To gain access to an aircraft parked at the Terminal Building for purposes of providing service to that aircraft.
- Vehicles may also move between directly adjacent aircraft parking positions when performing their duties without entering the vehicle corridor.

(iii) To park the vehicle in an approved area authorized by TBIAAI.

AVOP permit holders must know the location of the perimeter road and all of the aprons (also referred to as "ramps") as illustrated in the Airside Map.

AVOP permit holders must also be aware of all maneuvering area boundaries. "D/A" permit holders are not authorized to operate a vehicle in the maneuvering area.

The perimeter road is provided for airport operations and security reasons only. Use of the perimeter road is limited to AVOP holders with a justifiable need (a requirement in the course of their duties) to operate a vehicle in that area.

On special occasions the TBIAAI or its designate can authorize driver's access to the Perimeter roads.

**2.10 Operation of Vehicles on Controlled Maneuvering Areas (Applies to "D" permits)**

The vehicle radio call sign, issued by TBIAAI, shall be used in full in every transmission from that vehicle to Ground Control. Any vehicle using a call sign not issued for that vehicle by the TBIAAI will be denied access to the maneuvering area.

The Aerodrome Beacon is located on top of the control tower and should be used as a reference point by all vehicle operators while in the maneuvering area.

Imperial units, rather than metric units, are to be used when communicating with ground control via radio (e.g. 200 feet east of Runway 07).

**2.11 Radio Frequencies and Hours of Use**

The ground frequency at Thunder Bay International Airport is **121.9**.

Air Traffic Control operates between the hours of 06:00 and 23:00.
Flight Service Station operates 24 hours a day and has control of 121.9 between the hours of 23:00 to 06:00.

**2.12 Pedestrian Corridors**

Pedestrian corridors are designated areas located around the Air Terminal Building on Aprons 1, 1A and 1B. Vehicle operators will avoid the pedestrian corridors whenever possible, and absolutely when the corridors are actively in use.

**2.13 Vehicle Corridors**

One main vehicle corridor is designated on the main apron area and extends from Gate 15 to the east side of Apron 1A. This corridor shall be used when travelling across the apron area. Operators will turn off towards the ATB or taxiways at right angles to head to their destination point.

**2.14 Airside Restriction of Vehicles Fitted with Stud-Embedded Tires**

In order to maintain safety standards, vehicle with stud-embedded tires have been strictly prohibited from operating on airside.

## 3.0 RESPONSIBILITIES AND DUTIES

### 3.1 General

Each employer must ensure that their employees are qualified to operate vehicles and equipment that they are required to operate in the course of performing their duties on the airside.

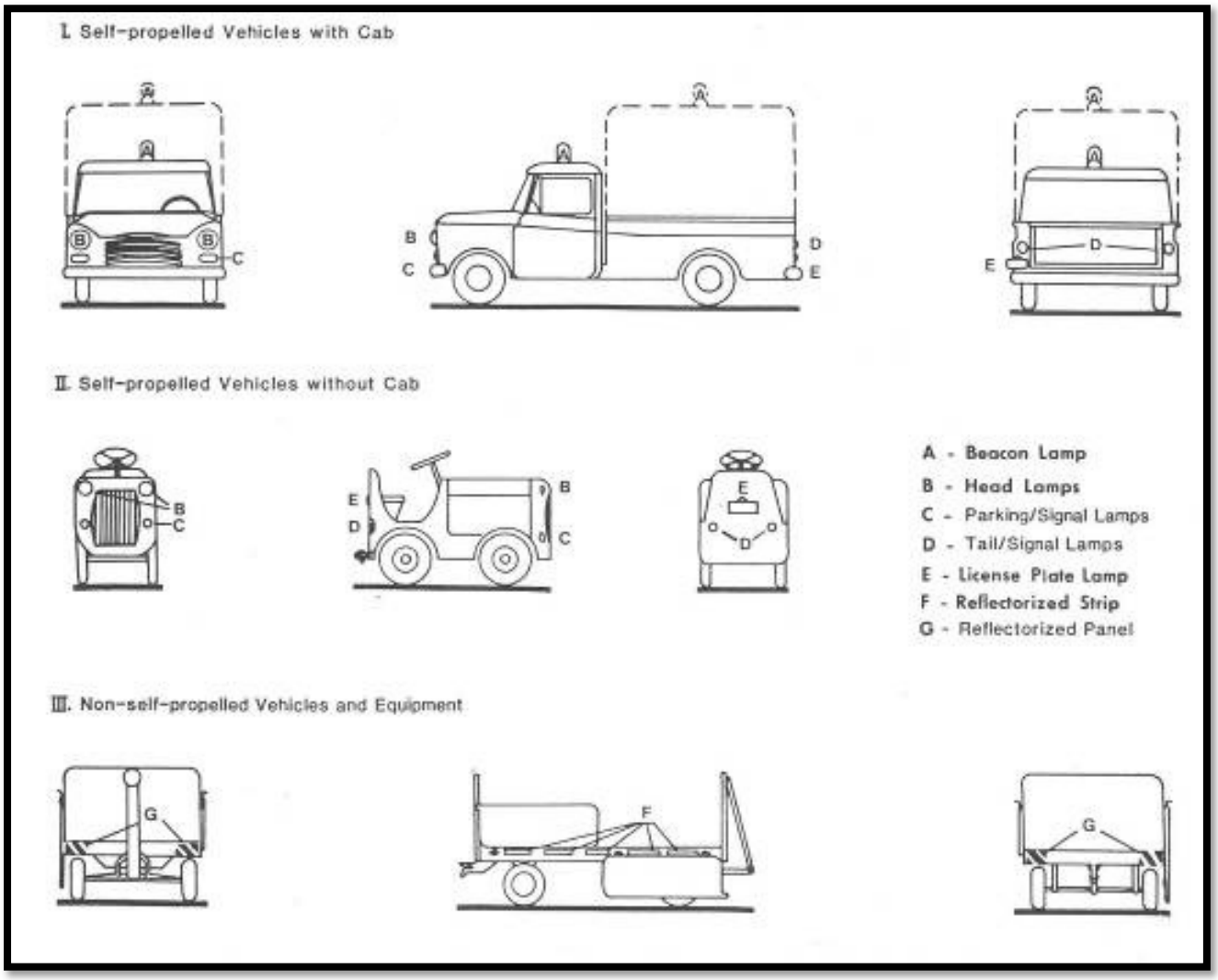
### 3.2 Vehicle Markings, Identification and Lighting

Before operating a motor vehicle on the airside of an airport the vehicle operator must become familiar with the regulations and procedures in this manual and obtain authorization from the TBIAAI.

The vehicle operator must ensure that the vehicle is operating satisfactorily and has the required safety equipment and markings. All operators shall notify their immediate supervisor of any equipment malfunction.

Markings on all equipment must be kept clean, operational and in good condition at all times. The presence of improperly or inadequately marked equipment on airside can be a hazard to aircraft and other operators.

All vehicles shall be marked in accordance with the following figure:



In addition, all vehicles must prominently display corporate markings identifying the owner or operator.

Vehicles operated in the controlled movement areas shall not be completely white in color. A white vehicle will "disappear" against the white environment during the winter season.
All vehicle lighting shall be kept in working order, including; headlights, tail lights, hazard lights and rotating/flashing beacons. Your vehicle's headlights must be turned on while operating on airside. All vehicles with roofs operated in the movement area must be equipped with a rotating or flashing yellow beacon. Beacons must be turned on at all times while vehicles are operating/in motion on airside. If your vehicle does not meet the requirement for a rotating beacon, you must use the four-way flashers/hazard lights, if the vehicle is equipped with them. In the event while driving airside a vehicle's beacon stops working, the driver must activate the four-way flashers/hazard lights this is a temporary measure and must be corrected as soon as possible. If hazard lights are not installed on the vehicle it shall be removed form service immediately until the beacon is repaired.

Rotating or flashing beacons must rotate at a constant speed no greater than ninety
(90) Rotations per minute as per Transport Canada, Aerodrome Standards and Recommended Practices.

Vehicles operating under escort on airside must have a beacon or operate with hazard lights on.

### 3.3 Safety and Security

If you encounter any obstruction or potentially hazardous condition on any aircraft movement surface, report its nature and location to your supervisor in order that corrective action may be taken.

All personnel with TBIAAI issued Restricted Area Identification Cards shall wear these on outer clothing, ensuring they are always visible when in the restricted areas.

A person who is not in possession of valid identification shall not enter or remain in any area of an airport that is designated by a sign as a restricted area unless authorized to do so by the TBIAAI. Persons not displaying the passes should be considered unauthorized and should be reported immediately to TBIAAI or its representative.

All designated gates must be kept closed and locked to prevent unauthorized personnel or vehicles access to the airside.

## 4.0 VEHICLE OPERATING PROCEDURES

### 4.1 General

Aircraft always have the right-of-way. A vehicle operator shall yield to any aircraft. Before entering an airport movement area, the vehicle operator shall always visually check and ensure that aircraft are not approaching or departing.
Vehicles and pedestrians are permitted on the airport movement area only with authorization from the TBIAAI.
No person shall operate a vehicle in an airside area unless the vehicle displays a provincial registration plate or a registration plate or other means of identification issued or authorized by the TBIAAI.

No person shall operate a vehicle in an airside area while under a prohibition from operating a vehicle imposed by a court or judge.
No person shall operate a vehicle in an airside area in a manner that, having regard to all the circumstances, including the amount of traffic, is dangerous to aircraft, equipment, persons or vehicles.

Headlights must be turned on whenever a vehicle is operating in the maneuvering area.

All vehicles operating on airport movement areas shall have safety equipment and display markings as described in Section 3.1 – Vehicle Markings, Identification and Lighting.

Every operator of a vehicle in an airside area shall yield the right-of-way to an emergency vehicle with warning devices operating.

Every operator of a vehicle in an airside area, other than an emergency vehicle with warning devices operating, shall yield the right-of-way to:

(a) Vehicles and equipment engaged in snow removal, pavement, ice control activities or other maintenance activities; and
(b) Vehicles towing aircraft

Every operator of a vehicle involved in an accident in the airside area of an airport shall report the accident forthwith as outlined in Section 2.4 - Reporting an Accident

Smoking is not permitted on apron areas or any maneuvering area. This prohibition applies to persons both inside and outside vehicles and equipment.

No person shall park an aircraft fuel servicing vehicle within 15 m (50 ft.) of any airport terminal building, aircraft cargo building, aircraft hangar or any other airport structure designed to house the public that has windows or doors in any exposed walls.

No person shall park a vehicle in any area designated by a sign as an area in which parking is prohibited.

No person shall, without the permission of the airport manager, park a vehicle in any area of an airport not intended for the use of vehicles.

No person shall park a vehicle in any area of an airport designated by a sign as a loading area.

Wherever possible and practical, vehicles and equipment should be backed into parking areas. This is particularly important around air terminal buildings, loading bridge areas, and other heavy traffic areas.

No person shall:

(a) Throw, deposit or knowingly leave on a road, apron or maneuvering area at an airport any glass, nails, tacks, scraps of metal, chemical sub- stance or other material that may damage any aircraft or vehicle; or
(b) Throw, deposit or knowingly leave any form of trash or garbage at airport except in a container provided for that purpose.

Foreign material such as mud and gravel can seriously damage aircraft engines. Vehicle operators should ensure that the surfaces of movement areas are kept clean by checking that wheels and tires are clean before they enter these areas. If foreign material is deposited on these surfaces, operators shall notify the airport manager, the field maintenance supervisor, the ground controller, or the flight service specialist and arrange for immediate removal.

Vehicle operators shall remain a safe distance from areas affected by jet blast or prop-wash of maneuvering aircraft, and not pass in front of or closely behind aircraft with engines running unless the wheels of the aircraft are chocked or the aircraft marshaller waves permission.

All vehicles and equipment operating on airport maneuvering areas at controlled airports, and airports with a Flight Service Station including those serviced by a Remote Flight Service Station shall have a functioning two-way radio operated by a person with a valid restricted radio-telephone operator's certificate, or be escorted by a vehicle so equipped and manned. Each operator shall ensure that the two-way radio is working before the vehicle enters the airport maneuvering area. The radio frequencies to be used and times of use are listed in the Local Airport Traffic Directives.

Vehicles can seriously interfere with electronic equipment. No vehicle should proceed closer than 150 m (500 ft.) from an Instrument Landing System (ILS) transmitter building except with permission of the Control Tower or Flight Service Station. The location of sensitive air navigation equipment and related zones of restricted vehicle operation are indicated on the Airside Map of the Local Airport Traffic Directives.

Vehicle operators shall use service and perimeter roads to reach field locations when these roads are available and time permits.

No person shall operate a vehicle on a road at an airport at a rate of speed that exceeds the speed limit posted for that road or, where no speed limit is posted, 50 km/h.

Operators and vehicles will remain clear of the scene of an accident and aircraft carrying distinguished visitors unless authorized by the TBIAAI.

### 4.2 Operation of Vehicles on Aprons and Other Uncontrolled Movement Areas

Every operator of a vehicle on an apron shall acknowledge and obey any instruction received from an apron management unit.

**RIGHT OF WAY**

At all times, vehicle operators shall give right of way in the following order of priority:

- Pedestrians
- Aircraft
- Emergency Vehicles with warning devices operating
- Snow removal or maintenance equipment in the performance of their duties
- Vehicles towing/push back Aircraft
- Aircraft refueling vehicles

All vehicles and equipment on the apron must be operated by persons authorized by the TBIAAI or be escorted by a vehicle operated by a person so qualified. At this airport authorization is a valid Airside Vehicle Operator's Permit (AVOP), the operator must carry the permit on his/her person while driving airside.

An AVOP may limit the holder to operation of a vehicle on the airport apron. This limitation recognizes that the operator will not require access to airside areas other than the apron and that vehicles used in the normal performance of his/her duties will not normally be equipped with safety and radio equipment necessary for safe vehicle operation on airport maneuvering areas.

All self-propelled vehicles must be equipped with headlamps, tail lamps, parking lamps and, if licensed for off airport use, a license plate lamp. Vehicles with a cab must also be equipped with a rotating or flashing beacon lamp mounted on top of the vehicle. Vehicles without a cab must be capable of operating the parking and tail lamps so that they flash on and off in unison.

Whenever a self-propelled vehicle is moving from one place to another on the airport apron, those lamps equipped with a flasher (beacon lamp only for vehicles with a cab) must be in operation. The purpose of this procedure is to indicate to taxiing aircraft that the vehicle is being operated in the active apron area. These lamps should not, therefore, be left flashing when the vehicles is stationary within the perimeter of a parked aircraft for the purpose of providing service to that aircraft. Improper use of flashing lamps is potentially distracting to taxiing aircraft and downgrades their value as a warning indicator that the vehicle is in motion.

Headlamps and non-flashing tail and parking lamps must be operated during hours of darkness and reduced visibility and may be left on as required while engaged in service to parked aircraft. All vehicle lamps should be turned off when the vehicle is parked in approved parking locations.

All non-self-propelled equipment is required to carry a strip of yellow reflective material along the full length of the equipment and diagonal yellow and black panels on the front and rear lower corners.

The presence of unlit equipment on airport aprons can be a significant hazard to taxiing aircraft. For this reason, it is important that the reflective material on all equipment should be kept clean and in good condition at all times.

Section 3.1 of this manual illustrates the location and color of apron vehicle safety markings required at Thunder Bay International Airport.

The vehicle operator must know the apron layout, including the location of operational stands, vehicle corridors, and aircraft taxi lines.

All vehicle operations shall follow the designated routing as defined by the TBIAAI in these airside traffic directives.
Vehicle operators must understand the pavement marking system.

(a) White lines pertain to vehicle movement and control.

I. Vehicle corridors used on apron 1 are marked by two solid white lines 7.5 m (25 ft.) apart, centered by a single broken line.
II. Security line are solid white lines 150 mm (6 in.) wide used to denote the parking area for ground service vehicles and equipment.

(b) Yellow lines pertain to aircraft movement and control.

I. Aircraft movement guidelines' solid yellow lines 150 mm (6 in.) wide, are continuations of taxiway centerlines that serve as a center-of-aircraft guideline to aid aircraft traversing the apron. (These lines may not be required on some small aprons.
II. Aircraft lead-in lines are marked by two 150-mm (6 in.) solid yellow lines spaced 150 mm (6 in.) apart. The spacing and angle vary, depending on the "design aircraft" and local operating procedures.

**Note**: See section 5.1 for additional information

At airports with designated vehicle corridors all vehicles (with the exception of vehicles noted below) must operate within these corridors when moving about the apron, e.g., to or from operational stands, between operational stands, across aircraft taxi lanes, etc.

Only these vehicles may operate outside the corridors:

(a) Vehicles such as TBIAAI airport maintenance, construction and snow removal vehicles, that require access to other areas of the apron when performing their duties; and

(b) Emergency vehicles, with warning devices operating, when responding to an emergency.

All vehicles and equipment shall yield the right-of-way to airport maintenance equipment and airport emergency service vehicles performing their duties.
No person shall operate a vehicle within 15 m (50 ft.) of an aircraft being fueled or de-fueled except for the purpose of servicing that aircraft or as required when operating within a designated vehicle corridor.
Vehicles already in a designated vehicle corridor have right-of-way over all other vehicles attempting to enter. Where thoroughfares intersect, the vehicle on the right has the right-of-way. You must use the right-hand lane of a designated vehicle corridor and should not pass other moving vehicles.
Vehicle corridors are not "guaranteed safe routes". Taxiing or parked aircraft may at times encroach on vehicle corridors, and you must avoid such aircraft.
If a vehicle lane is obscured for any reason, such as faded paint or snow cover, operators should conform to the designated roadway as nearly as possible, and exercise caution.
On aprons where vehicle corridors have not been designated, you should use extra care. Avoid, as much as possible, operating in aircraft taxi lanes and cross aircraft taxi lanes only at right angles.

Areas within operational stands provide free movement for vehicles performing their duties.
Every operator of a vehicle entering or on an apron shall yield the right-of- way to an aircraft that is approaching and is close enough to constitute an immediate hazard and refrain from proceeding until the operator can do so in safety.

No operator of a vehicle entering or on an apron shall approach or cross an aircraft movement guideline except:

a) At a right angle to the aircraft movement guideline; or
b) Where -a designated vehicle-crossing point exists, at that crossing point.

Unless otherwise authorized by the TBIAAI, no person shall drive vehicles and equipment on an apron at a rate of speed in excess of 25 km/h (15 mph.) Operators shall reduce speed and maintain a careful lookout when near aircraft and corners of buildings or other installations.

Equipment and vehicles shall not be parked or left unattended on vehicular routes or aircraft movement areas without the permission of the TBIAAI. Vehicles must be parked only in approved areas when not in immediate use. Every person operating a vehicle on an apron shall yield the right-of-way to pedestrians being escorted between an aircraft and the terminal building.

Every operator of a vehicle shall yield the right-of-way to a pedestrian who is within a pedestrian crosswalk.

No operator of a vehicle shall overtake or pass another vehicle at or within 30 m (100 ft.) of a pedestrian crosswalk.

No pedestrian on an apron shall impede, interfere with or obstruct in any way the free movement of apron traffic except in the course of his employment relating to the control of that traffic.

### 4.3 Maneuvering Areas - Controlled Airports

Before operating a vehicle on the maneuvering area, the operator must have a valid Airside Vehicle Operator's Permit and a Restricted Radiotelephone Operator's Certificate.

Whenever non-radio-equipped vehicles and equipment are operating in groups or fleets with a radio-equipped vehicle, they shall be under the control of a qualified employee responsible for requesting and acknowledging all ground control instructions.

The control tower directs all traffic on an airport maneuvering area, unless otherwise stated in the Control Tower/AGM agreement and drivers and pedestrians must always obey its instructions.

Vehicle operators must always report to the ground controller before entering and immediately after leaving the maneuvering area.

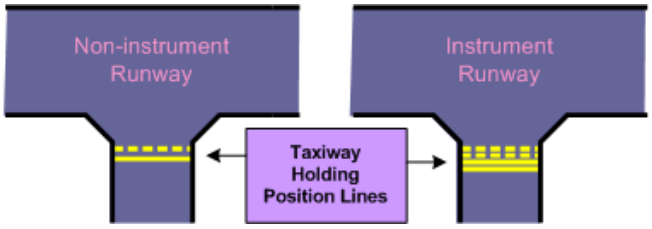
Before proceeding onto maneuvering areas, the vehicle operator shall contact the ground controller for permission to proceed to a specific location by a specified route. The vehicle operator shall acknowledge all instructions from the ground controller as understood, or request that the instructions be repeated if not understood. The operator shall proceed, only along the specified route to the specified location unless he receives alternate instructions.

Aircraft being towed or vehicles towing an aircraft must always be in radio contact with ground control before entering and while within the maneuvering area.

Requests for permission to proceed into the maneuvering area shall include:

a) The vehicle identification;
b) Its current location;
c) The intended activity/work to be performed while in the maneuvering area and/or specific destination and intended route (otherwise, the ground controller will normally specify the route to be followed) and;
d) The time the vehicle and/or the person will be in the maneuvering area.

Whenever an operator is instructed to hold short of a runway, or is awaiting permission to cross or to proceed onto a runway, the operator shall hold the vehicle 45 m (200 ft.) from the nearest edge of the runway, or behind the solid yellow line on taxiways so marked.




This procedure also applies to the area extending from each end of the runway to permit unobstructed aircraft approach to the runway for landing and to gain altitude after take-off. Where the land falls away sharply off the end of a runway, this procedure may not apply.

**Note**: Taxiways are marked with a solid and broken yellow line, or two solid and two broken yellow lines, with the broken lines closest to the runway. When instructed to leave the runway, vehicle operators shall acknowledge instructions and proceed to a taxi holding position or to a safe position off to the side of the runway at least 45 m (200 ft.) from the nearest edge of the runway. Once in a holding position, vehicle operators shall inform the ground controller that they are off the runway and give their exact position.

**Note**: Vehicles and equipment sometimes may have to operate within 45 m (200 ft.) of the runway. When this happens, the operator must inform the ground controller of the approximate distance of the vehicle or equipment from the nearest runway edge.

If equipment breaks down, the operator shall immediately notify ground control of the location and difficulty and ask for assistance.

While on the maneuvering areas, vehicle operators shall always monitor the appropriate ground control frequency and acknowledge and comply with any instructions from ground control.

If the radio fails while the vehicle is in the maneuvering areas, turn the vehicle to face the control tower and flash the headlights off and on. The ground controller will respond using the following light signals:

| ATC Light Instruction: | Direction for Vehicle: |
|---|---|
| Flashing green light: | **Proceed;** |
| Steady red light: | **Stop, hold your position;** |
| Flashing red light: | **Vacate the runway;** |
| Flashing white light: | **Return to starting point on the airport.** |

**Note**: In the course of moving from the maneuvering area ((d) above), the vehicle operator must hold short of each intervening runway and receive permission to proceed (flashing green light signal) before crossing the runway.

If your radio and vehicle both fail while in the maneuvering area, light and place red road flares approximately 30 m (100 ft.) ahead of and behind the vehicle in a line parallel to the nearest runway or taxiway as a warning to aircraft. If the flares when placed are not likely to be seen from the control tower due to snow banks or other intervening obstructions, light and place one or more flares near the vehicle where they may be clearly visible from the control tower. Stay with the vehicle. In adverse weather conditions normally associated with combined vehicle and radio failure, the vehicle may provide your best protection until help arrives.

The blinking on and off of runway lights is a warning signal for all vehicles to leave the runway immediately.

### 4.4 Maneuvering Areas - Uncontrolled airports with a Flight Service Station (2300-0600 hours)

Vehicles on the maneuvering area must be operated by persons with a valid Airside Vehicle Operator's Permit and a Restricted Radiotelephone Operator's Certificate.

Whenever non-radio-equipped vehicles and equipment are operating in groups or fleets with a radio-equipped vehicle, they shall be under the control of a qualified employee responsible for requesting and acknowledging all Flight Service Station instructions.

At uncontrolled airports Flight Service Stations provide a Positive Vehicle Advisory Service (PVAS) for the safe movement of known vehicles and aircraft on maneuvering areas.
Vehicles shall only be operated on or near a maneuvering area in accordance with instructions issued by the Flight Service Specialist.
Instructions from the Flight Service Specialist should be responded to in the same manner as if issued by a Ground Controller.

Vehicle operators must always report to the Flight Service Station before entering and immediately after leaving the maneuvering area.

Before proceeding onto a maneuvering area, vehicle operators shall contact the Flight Service Specialist to advise of their intentions and provide the following information:

e) The vehicle identification;
f) Its current location;
g) The intended activity/work to be performed in the maneuvering area; and/or
h) Specific destination and intended route, and;
i) The time the vehicle and/or person will be on the maneuvering area.

Vehicle operators shall acknowledge all information received from the Flight Service Specialist only if completely understood. If in doubt as to the information received, a repetition shall be requested either in full or in part.
Flight Service Specialists provide advisories according to "reported" or observed aircraft traffic.

**Note**: Vehicle Operators must understand the term "reported". Aircraft are not required to be radio-equipped at non-controlled airports and therefore, may arrive and depart without contacting the Flight Service Station. The phrase "no reported" traffic does not necessarily mean "no traffic". It only means that no aircraft have made their presence or intentions known to the Flight Service Specialist. Thus, Vehicle Operators shall always visually check and ensure that aircraft are not approaching or departing.

Vehicles towing aircraft shall be in communication with the Flight Service Station.

Vehicle Operators shall proceed along only the specified route to the specified destination unless alternate advice is received.

### 4.5 Combined Radio/Vehicle Failure

If your radio and vehicle fail while in the maneuvering area, light and place red, road flares approximately 30 m (100 ft.) ahead of and behind the vehicle, parallel to the runway or taxiway as a warning to aircraft. If you have reason to believe your flares will be noticed and assistance provided, stay with the vehicle. In adverse weather conditions normally associated with combined vehicle and radio, the vehicle may provide your best protection.

When instructed to hold short of a runway, or while awaiting permission to cross or to proceed onto a runway, Vehicle Operators shall remain at least 45 m (200 ft.) from the nearest edge of the runway or behind the solid yellow line on taxiways so marked.

This procedure also applies to the area extending from each end of the runway to permit unobstructed aircraft approach to the runway for landing and to gain altitude after take-off. Where the land falls away sharply off the end of a runway, this procedure may not apply.

When instructed to leave the runway, vehicle operators shall acknowledge the instruction and proceed to a taxi holding position or to a safe position off to the side of the runway at least 45 m (200 ft.) from the nearest edge of the runway. Once in the holding position, immediately inform the Flight Service Station that you are off the runway and state your exact position.

**Note:** When you are not able to move your vehicle at least 45 m (200 ft.) from the runway edge, you must inform the Flight Service Station of your approximate distance from the edge of the runway.

If vehicles or equipment breakdown, the vehicle operator shall immediately notify the Flight Service Station of the location of the disabled vehicle or equipment and request assistance.

If the vehicle radio fails while in the maneuvering area, the vehicle operator must leave the maneuvering area immediately and, as soon as possible, inform the Flight Service Station by telephone or other appropriate means that the vehicle(s) is no longer in the maneuvering area.

Vehicle operators shall immediately leave the runway when:

a) an aircraft makes a low pass; or
b) The runway lights are blinked on and off.

## 5 Airside Pavement Markings, Lights and Signs

### 5.1 General

Both vehicle and aircraft movement on the ground is guided by pavement markings, lights and signs on the airside which is different from those used on roads and highways.

This section describes and illustrates the markings, lights and signs most commonly used at airports and which an airside vehicle operator is required to know. Other traffic control devices, in addition to the following ones, may be used at some airports and will be explained as required, in the Local Directives which form a part of this manual.

### 5.2 Pavement Markings

Aircraft Movement Guide Lines

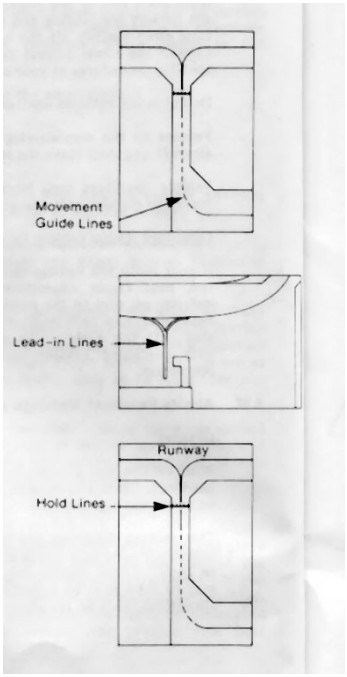
A single yellow line extending from the runway along a taxiway to, and in some cases, along the apron. The nose wheel of the aircraft is centered on this line to ensure that the main wheels are on pavement and that the wings will not contact known obstructions (buildings, light standards etc.). On aprons, vehicles may only cross aircraft movement guide- lines at right angles.

Aircraft Lead-in Lines

Delineated by a single 8” wide solid yellow line between an aircraft guide line and a gate or parking position. These lines may be highlighted in black for definition on some surfaces. The aircraft nose wheel is centered on these lines to guide the aircraft into the parking position without hitting other parked aircraft or obstructions. Most airlines direct their pilots to follow these lines, without deviation, in order to protect the aircraft.

Hold Lines

A solid and a broken yellow line or two solid and two broken yellow lines across the width of a taxiway with the broken line(s) closest to the runway. Vehicles and aircraft must stop behind the solid line(s) and not proceed unless and until permitted to do so by the air traffic controller or Flight Service Specialist.




Runway Headings (Designation) Markings

Each end of a runway is numbered in tens of degrees corresponding to the direction of the runway in relation to a magnetic compass. The compass of an aircraft will read 2700 when approaching the end of **a** runway marked with the number 27.

The numbers are painted white and face towards the end of the runway. When two parallel runways are provided at an airport they will be identified with the compass heading number plus the letter 'L' for left and 'R' for right painted in white below the number. Vehicle operators should know the various runway headings (numbers) and their location on the airport.

Runway Center Line

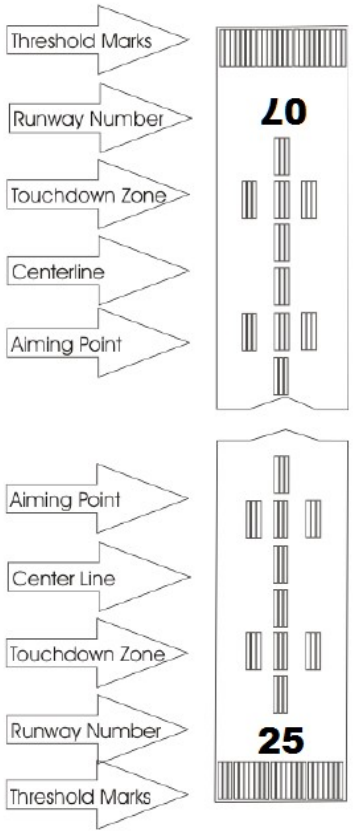
The center of a runway may be marked with a broken white line made up of several lines close together; each group is 100 in length with 100 between.

Threshold Markings

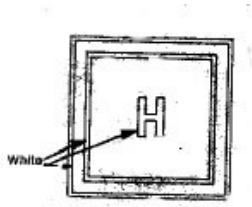
The beginning of the usable part of a runway for aircraft landing may be marked with a series of solid white lines parallel to the length of the runway. The lines are in groups. The number of lines in group, and the number of groups of lines varies according to the width of the runway.

Displaced Threshold Markings

If for any reason, the threshold is set-in from the end of the runway, white lines painted close together to form arrows, pointed to a bar across the runway, indicate the beginning of the usable runway for aircraft.



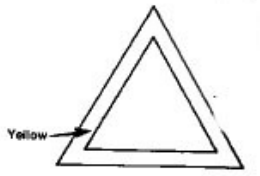
Helicopter Areas



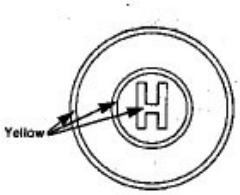

The paved surface of areas designated for the arrival and departure of helicopters is designated by a large white 'H' within a white square or circle.

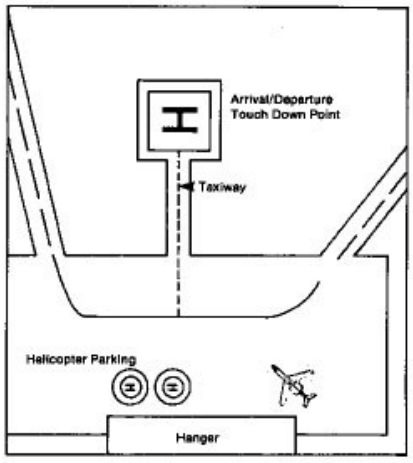
The area where a helicopter may arrive or depart (but not land) is marked with a yellow triangle.

Helicopter parking (or touch down) locations on an apron are marked by two yellow circles with yellow capital "H' inside the smaller circle.




Paved taxiways between the helicopter arrival/departure and parking positions are marked with a yellow line that may extend onto the apron.




All vehicle operators must remain outside the perimeter marking of helicopter arrival/departure areas and parking locations except when engaged in service to these aircraft.

### 5.3 Lights

Aerodrome Beacon

The aerodrome beacon is a large rotating white light mounted at a location such as on top of the control tower. This is the case at Thunder Bay Airport. The beacon is provided for visual identification of the airport by aircraft but is also a good reference point for vehicles on the airfield.

Different colored lights are used to indicate the edge of various aircraft movement surfaces.

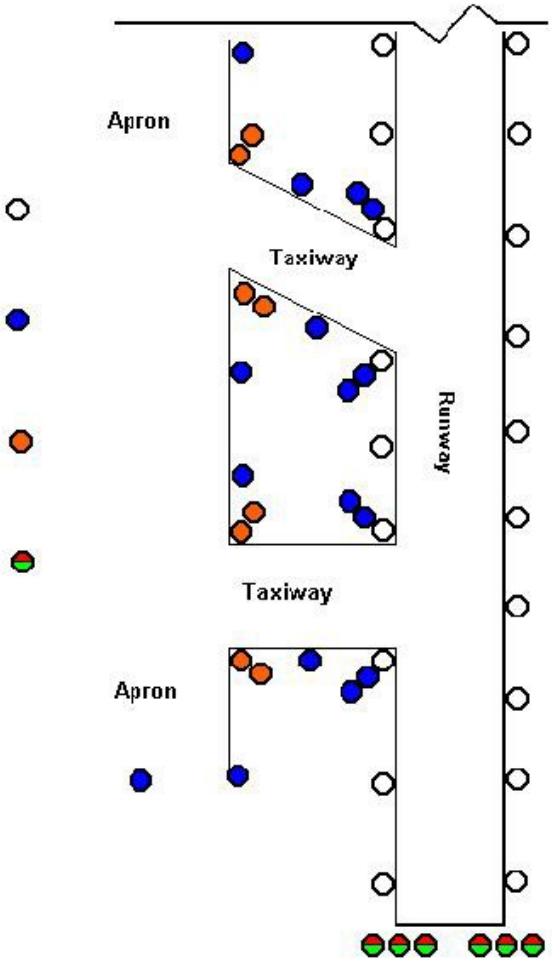
**Controlled Area Lighting**

White lights are used along the edge of runways.

Blue lights are used along the edge of aprons and taxiways.

Amber lights are used at the intersection of aprons and taxiways.

Two-sided lights (half red and half green) are used at the end of runways with the green half pointing towards the approach to the runway.




Every vehicle operator must know the meaning of these lights to avoid entering areas where they are not permitted to be and as a guide to vehicle movement within the maneuvering areas (runways and taxiways) of the airport.

### 5.4 Signs

Airside Service Roads:

Signs used on aprons and airside service roads are generally the same signs as those used on provincial roads throughout Canada. All vehicle operators on airside service roads are required to comply with these signs which are enforceable under the Airport Traffic Regulations.

Maneuvering Area Signs:
Signs used on the maneuvering area (runways and taxiways) are designed and intended for the use and guidance of aircraft. They are also of value to vehicle operators to identify areas they should not enter or as guides to vehicle operation while in the maneuvering area.

These signs are normally mounted on either the left, right or both sides of a runway or taxiway according to requirements and are located 15 m to 20 m (501 to 651) from the edge of the maneuvering surface.

"Mandatory Instruction Signs"
With white letters/numbers on a red back-ground include:

"Mandatory Instruction Signs" with white letters/numbers on a red back-ground includes

(a) "Hold" signs which may be used in conjunction with "Hold" lines (pavement markings) on a taxiway.


(b) Runway Designator signs when used alone (not in conjunction with a "hold" sign). When these signs are red, they carry the combined message to "hold short" and that the runway ahead is as indicated on the sign.


Directional, Information signs and Designator signs (when used in conjunction with a red hold sign) may be green with white letters/numbers on yellow with black letters/numbers.

TP 2633

(a) Directional signs normally have an arrow indicating the direction of travel to exits, aprons, terminal buildings, or other facilities named on the sign.


(b) Information signs provide information of interest primarily to aircraft but which may also be helpful to vehicle operators as reference points.


(c) Designator signs like street signs, identify the names of runways by number and of taxiways by letter. Remember that taxiways are referred to when speaking by using the phonetic alphabet so that taxiway "A" is spoken of as "taxiway Alpha"; taxiway "B" is "taxiway Bravo", etc. and that a vehicle may not enter a taxiway without prior approval of ground control or Flight Services or, in their absence, the approval of the Airport Manager.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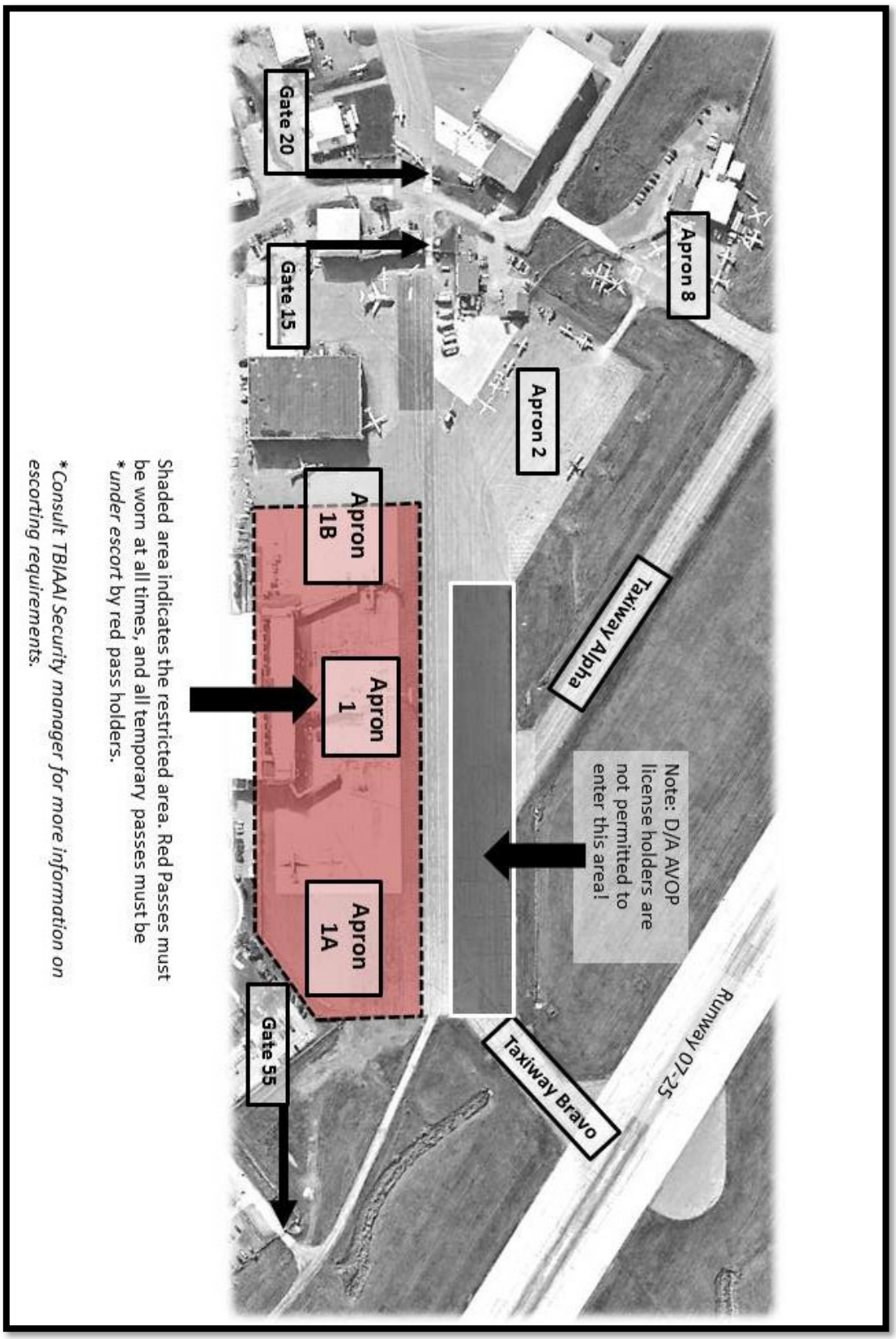
***Applicable fees will apply to all rewrites and no-shows.***

## 6 Restricted Area Map



## 7 Airside Map