



SAWYER INTERNATIONAL AIRPORT

Marquette, Michigan

**Air Operations Area
(AOA)**

**Airfield and Driver's
Safety and Information
Manual**

**Duane DuRay, C.M.
Airport Manager**

ACM Exhibit No: 22

PREFACE

This Airfield Driver's Training and Information Manual has been developed and is intended to provide information relative to Sawyer International Airport (SAW).

The manual has been developed so airport employees and tenants can study and review the manual while at work and acquire information and knowledge of the rules, regulations and procedures to drive on the airport and the Airport Operations Area, or AOA.

If you have any questions, comments or suggestions concerning this manual, or any other issues or concerns regarding airfield and airport operations at SAW, please contact a member of the Operations and/or Maintenance Department, or a member of the administrative staff.

COUNTY OF MARQUETTE

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Airport Operations Division
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SAFETY NOTICE TO ALL PERSONNEL

Each year, accidents and incidents occur involving personnel, aircraft and vehicles on airports throughout the country that result in personal injury, property damage, and even fatalities.

(The County of Marquette and Sawyer International Airport has rules and procedures for the safe operation of vehicles while on the airport.)

These rules are for the safety of all individuals working or driving on the Airport Operations Area, or AOA.

AIRPORT OPERATIONS AREA (AOA) USERS
Sawyer International Airport
Gwinn, Michigan 49841

Subject: Airport Operations Area - Driver's Safety Manual and Test

To All Personnel Requesting AOA Driving Privileges:

The following manual is a guide for personnel to use when taking the Sawyer Int'l. Airport - Airport Operations Area Driver's Test.

Prior to taking the test, the first step is to thoroughly review the information contained in the SAW Driver's Manual as you will need to have an excellent understanding of this information prior to being allowed to take the test. Upon successfully passing the test, you may be granted unescorted access and driving privileges on either the movement or non-movement areas, depending upon the nature of your job responsibilities, of the Airport Operations Area.

All personnel are required to review this manual. When you have completed reviewing the manual, you can, in turn, take the SAW AOA Driver's Test. All personnel are encouraged to use the driver's manual while they are taking the test. When you are finished taking the test, submit the test to the Airport Manager, or his designee, for grading and/or re-testing.

A passing score of 100% is required. Any test score less than 100% will require you to go back and correct any wrong answers until you have obtained a score of 100%, explaining each incorrect answer to the test proctor.

The completed forms will then need to be turned into the Airport Manager, or his designee. Should you have any questions, feel free to contact the Airport Manager anytime at 346-3308, ext. 222 or the Airport Maintenance Department at 346-4336.

Sincerely,

Duane R. DuRay
Airport Manager
Sawyer International Airport

AVIATION DEFINITIONS

The following aviation terms may be helpful to those working at Sawyer International Airport, including those in the air carrier, industrial, corporate, general and sport aviation communities.

Air Cargo Ramp:

Ramp area used for the handling of freight.

Air Carrier:

An aircraft operator granted operating authority by the FAA under FAR Part 121 providing scheduled service with aircraft having 10 or more seats.

Airport Operations Area (AOA):

The areas on the airport are intended for the movement and parking of aircraft. At SAW, all areas inside the perimeter fence of the airport are considered part of the AOA.

Air Traffic Control (ATC):

A service to promote safe, orderly, and expeditious movement of air traffic.

Air Traffic Control Tower (ATCT):

A facility where ATC services are provided. Sawyer has an FAA Contract Tower providing service from 6:00 a.m. to 10:00 p.m. seven days a week.

Aircraft:

A device intended for flight through the air.

Airfield:

The area inside the airport perimeter fence that includes runways, taxiways, aprons, and runway and taxiway safety areas.

Airport:

An area used for the landing and takeoff of aircraft that includes its buildings and facilities.

Apron:

A defined area on an airport for the parking of aircraft and ground handling operations, also referred to as a ramp.

Baggage Cart:

A non-motorized, wheeled trailer used to transport baggage to and from the aircraft and the passenger terminal.

Controlled Airport:

An airport that has an operational Air Traffic Control Tower.

Driver:

Any person that is responsible for the directional control of a vehicle while the vehicle is in operation.

Emergency Vehicle/s:

Vehicles of the Fire, Police and Sheriff's Departments, Ambulances and Airport vehicles responding to an emergency. These vehicles have the Right-of-Way over all other vehicles operating on the airfield.

Federal Aviation Administration (FAA):

A division of the Department of Transportation charged with regulating air commerce to promote safety and development in the aviation industry.

Flight Service Station (FSS):

(FSS) is an air traffic facility that provides information and services to aircraft pilots before, during, and after flights, but unlike air traffic control (ATC), is not responsible for giving instructions or clearances or providing separation.

FOD:

Foreign Object Debris or Damage.

General Aviation:

All of civil aviation except air carriers and large aircraft operations.

Ground Support Equipment:

Equipment used to support aircraft.

Guidance Signs:

Yellow signs with black letters that indicate direction for taxiways, ramps, and terminals.

Hangar:

Buildings used to shelter aircraft.

Hold Short Lines:

Pair of solid and a pair of dashed yellow lines designating a stopping point where ATC clearance must be obtained before entering a runway.

Hold Short Signs:

Red signs with white letters adjacent to the hold short lines which indicate the point at which the Air Traffic Control Tower must be contacted to received permission to enter or cross an active runway.

ILS (Instrument Landing System)**Critical Area:**

Area where ILS signals interference may occur from either a surface vehicle or aircraft.

Jet Blast:

High velocity exhaust from jet turbine engines.

Jetway:

A passenger loading bridge used between the aircraft and the terminal building.

Movement Area:

Those areas controlled by ATC including runways, taxiways, and safety areas. Approval from ATC must be obtained prior to entering this area.

Non-Movement Area:

Those areas not controlled by ATC including aprons and parking areas. ATC services are available in these areas, as pilots transition from a non-movement area to a movement area making individual alertness imperative to safe operations.

Perimeter Road:

Vehicle road established along the perimeter fence of the airport.

Ramp:

A defined area on an airport for the parking of aircraft and ground handling operations. Also referred to as an apron.

Runway Incursion:

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 take off of aircraft.

Restricted Area:

The area of the airport inside the perimeter fence where personnel must display an airport I.D. badge.

Runway:

A defined rectangular paved area for aircraft takeoff and landing.

Safety Area:

A defined rectangular area extending beyond the runways and taxiways. Objects placed in the safety area must be necessary for aircraft operations and be on a frangible mounting.

SIDA**(Security Identification Display Area):**

Any area identified in the Airport Security Program as requiring each person to continuously display airport issued or airport approved identification, unless the person is under airport approved escort.

Taxiway:

Paved area for aircraft movement between the runway and parking area.

Terminal:

A building for the efficient movement of passengers in transit between ground and air transportation.

Tow:

The process of moving an aircraft on the airport surface with a ground vehicle.

Tug:

A tractor used for towing baggage carts, aircraft, and ground support equipment.

Uncontrolled Airport:

An airport that does not have an operating Air Traffic Control Tower, or like Sawyer, that has an ATCT, yet has limited hours of operation.

Vehicle:

Any motorized equipment that requires a driver.

Vehicle Lane:

Painted roadways on apron areas for the purpose of ground vehicle traffic.

INTRODUCTION

PURPOSE

The purpose of presenting the AOA driver's training class is to provide training to all individuals who operate vehicles and/or equipment on the AOA.

The intent of this study guide is to supply individuals having legitimate vehicle operating requirements, with information on procedures required for safe vehicle operations on the AOA and other restricted areas at Sawyer International Airport.

The information in this study guide has been extracted from appropriate Airfield Rules and Regulations. Compliance with these procedures, rules and regulations is required in order to have the privilege of operating vehicles on the AOA.

Neither the County of Marquette, the Sawyer International Airport, its employees, nor any participating governmental agency, assume responsibility for the loss, injury or damage to persons or property by reason of fire, vandalism, collision, strikes, wind, flood, earthquake, or other acts of God or acts of public enemy.

Nor do said entities assume liability for personal injury or property damage while on Airport property or while using the facilities of same privileges.

Each individual whose job duties require that they operate on the Sawyer International Airport is required to obtain an AOA driving privileges before operating a vehicle on any portion of the AOA. Use of the AOA privileges is to be strictly related to the use indicated on the application, and not for general purposes or personal benefit of the permit holder.

It is the responsibility of all entities sponsoring vehicle operators at the airport to inform their employees of the driving privileges program and the necessity to obtain AOA driving privileges.

Airport staff will conduct two versions of the driver's training: Movement Area training (those who have a legitimate business requirement to operate on any Runway or Taxiway in the performance of their duties); and non-movement area training (those personnel who operate company and/or personal vehicles on the ramp and apron areas).

POLICY

The goal of this program is safety through strict compliance with airfield regulations. Accomplishing this goal requires those airlines, tenants, and other sponsoring users of the airfield to work closely with the airport to promote strict adherence to the rules and regulations pertaining to the airfield among those individuals they sponsor to be licensed. An enforcement program is in place to monitor and enforce these regulations.

Additionally, other major goals of the program are to:

1. Provide initial airfield vehicle operation training for new employees and refresher training for all current employees through testing and permitting.
2. Stress the importance of safety procedures to prevent personal injury and property damage accidents.

AUTHORITY

The Sawyer International Airport, under authority of Federal Aviation Regulation Part 139.329, Ground Vehicles, is responsible for, “establishing and implementing procedures for the safe and orderly access to, and operation on, the movement area and safety areas by ground vehicles, including provisions identifying the consequences of non-compliance with the procedures by an employee, tenant, or contractor.”

The County of Marquette authorizes the Airport Manager to, “prescribe and formulate reasonable rules governing the operation of the municipal airport and the conduct of flying there at.” Accordingly, these rules and permitting procedures are adopted for immediate implementation.

PERMITTING PROCEDURES

PERMIT MATERIALS

The Driver's Manual for the airfield driver's test may be obtained at the office of the Airport Manager, or his designee.

(1) Application & Study Materials

The FAA Airport Vehicle Driving Guide and the Sawyer International Airport AOA Driver's Guide will be mandatory reading prior to the test being given. This information is available at the Airport Administration Office, or through your employer.

(2) Pre-requisites

Applicants must possess a current and valid driver's license before applying for the airfield driver's test. A license is required to operate a motorized vehicle on the AOA.

Applicants must also possess, or concurrently apply for, a valid Sawyer International Airport I.D. badge, if applicable.

Applicants must also complete the AOA Driver Training Class. (*Contact the Airport Maintenance Department for a schedule of training dates.*)

TYPES OF PRIVILEGES

Movement Area Privileges - allows for the operation on all areas of the AOA to include the movement and non-movement areas. (*See Exhibit I.*)

Non-Movement Area Privileges- allows for the operation on the non-movement areas only. (See Exhibit I.)

TRAINING

The Airport Operations Division will conduct the Driver's Training. **It is the employer's responsibility to ensure that all applicants sent to the training and testing session are adequately prepared.**

TESTING

The Airport Operations Office will conduct the testing of all applicants.

(1) Examination Content

The written examination will consist of multiple choice and true/false questions, and will cover material from the FAA Driver's Guide, the Sawyer International Airport AOA Driver's Guide Supplement, and classroom training.

A practical or "skills" test, which will be administered only for those employees needing movement-area privileges, and will be conducted only after the applicant has passed the written exam. This skills test will consist of a hands-on driving test on the AOA.

The Maintenance Superintendent, or his designee, will ride with the individual and require them to drive to various points on the airfield making use of correct radio communications with ATCT personnel if required in the course of their duties.

(2) Examination Grading

A score of 100% is required to pass the written exam. The practical exam will be graded on a pass/fail basis, and will be determined based on the individual's competence in radio communications, AOA driving procedures, and airfield familiarization.

(3) Exam Failures

Applicants who fail the initial test will not be issued movement/ non-movement area driving privileges. Individuals must contact the Airport Operations Division to schedule a review session. Individuals that fail the test will not be authorized to operate on the AOA during the interim period. No more than three tests may be taken before retraining is required.

Applicants failing the test three times will be required to present a letter on company letterhead, signed by the company manager responsible for training, that states the necessity for the applicant to possess an AOA driving privileges and that the applicant has been re-trained. After presenting the letter, the applicant may take one test. If the applicant fails the test, no further tests will be administered to the individual for a period of 30 calendar days.

TENURE OF DRIVING PRIVILEGES

AOA driving privileges must be renewed annually.

ENFORCEMENT

(1) Authorized Enforcers

The Airport Operations division will conduct inspections and enforce violations regarding safety on the AOA. All violators will be subject to a Notice of Violation, or (NOV) through written warnings.

The County of Marquette, through the office of the Airport Manager, or his designee, may revoke or suspend the AOA driving privileges for any violation of vehicle operation standards that he deems as an unsafe operation.

(2) Notice of Violation (NOV)

The NOV will be in the form of a written warning, and will be issued for observed violations of any rules, regulations or laws governing or established for the safe and orderly conduct while on the airport.

The Notice of Violation will be monitored and issued by the Airport Operations division, with discretion by the Airport Manager.

(3) Penalties for Violations

In accordance with FAR Part 139.329(b) requiring “provisions identifying the consequences of noncompliance with the procedures by an employee, tenant, or contractor” the County of Marquette through Sawyer Int’l. Airport has established the following penalties for violations of the safe and orderly operation of vehicles in the movement and non-movement areas by ground vehicles.

- | | |
|---|--------------------|
| (1) First Offense: | Written Warning |
| (2) Second Offense within 12 months of the first offense: | 1 Week Revocation |
| (3) Third Offense within 12 months of first offense: | 1 Month Revocation |
| (4) Fourth Offense within 12 months of first offense: | Total Revocation |

HEARING

Upon written request within 3 working days of a Notice of Violation, the option of a hearing or a meeting with the Airport Manager, or his designated representative, will be scheduled before any of the above penalties for driving violations are taken.

SECURITY ON THE AIRPORT OPERATIONS AREA – A.O.A.

AUTHORIZED VEHICLE IDENTIFICATION

Only vehicles with an operational need to be on the AOA shall be permitted. All vehicles on the AOA must be marked with the company name and/or have a rotating or flashing amber beacon approved by the Airport Manager, or his designee.

Any vehicles observed driving on the AOA that appear to be unauthorized or, when applicable, are not being properly escorted shall be reported to the Airport Operations office at (906) 346-4336 or (906) 250-1928.

VEHICLE ACCESS: Vehicle access to the AOA is obtained through airfield perimeter gates.

ELECTRIC GATES: When entering or leaving the AOA through an automated gate, the driver must wait until the gate is fully closed before leaving the gate.

MANUALLY OPERATED GATES: All non-electric, manually operated gates (both vehicle and/or pedestrian) must be secured after a vehicle or pedestrian passes through. After passing through, failure to close the gate could result in a revocation of the AOA driving privileges.

UNRESTRICTED ACCESS: Any person that discovers a vehicle and/or pedestrian gates open and unattended should report this discrepancy to Airport personnel immediately at (906) 250-1928.

EMERGENCY VEHICLES: All emergency vehicles not assigned to the Sawyer Int'l. Airport, including those assigned to local Sheriff, State Patrol and Township Police, Fire and EMS departments assisting with mutual aid response, will be escorted by personnel with the appropriate I.D. badge (if applicable) and the AOA driving privileges.

VEHICLE ESCORTS

The following procedures must be followed when providing an escort on the AOA:

1. If an individual cannot be escorted by a responsible airport tenant with driver's privileges they may contact Airport Operations to provide an escort which will be subject to availability, and the determination for the need of the escort;
2. Any company and/or individual under escort shall be informed that any movement on the AOA without proper escort will result in removal from the AOA, of which a NOV shall be issued, and the vehicle may be removed at the owner's expense; and,
3. The individual providing the escort shall be held responsible for ensuring that the vehicle under escort is escorted properly until they leave the AOA, and ensuring all perimeter gates are properly secured. Any violations caused by the escorted vehicle will be considered as a violation by the escort.

CONDUCTING GROUND VEHICLE OPERATIONS WHILE ON THE AOA

MOVEMENT AREA & NON-MOVEMENT AREAS

The airport operations area (AOA) consists of all restricted ground areas of the airport, including taxiways, runways, loading ramps, and parking areas. In other words, everything inside the perimeter fence and can be divided into two separate areas: a movement area, and a non-movement area. (See Exhibit I.)

1. The movement area is that designated area which is under positive control by ATC.
 - a. Clearance must first be obtained from ATC prior to entrance into the movement area. At Sawyer International Airport, when on the movement area (runways, taxiways and safety areas) an escort by the Airport is mandatory if the driver does not possess a movement area driver's privileges.
 - b. You must monitor your radio at all times and get permission from ATC to enter and drive on any movement areas.
2. The non-movement areas are all areas not controlled by ATC including designated aprons, parking areas, and vehicle roadways including the perimeter road. ATC services are not provided in these areas.
 - a. Always know the boundary of the non-movement area.
 - b. You may see markings that identify the boundary between the non-movement area and the movement area that is under the Air Traffic Control (ATC). These markings consist of two yellow lines- one solid and one dashed. The dashed line is located on the movement side – the area controlled by ATC. Always stay in the non-movement area unless you are authorized by the airport operator and have permission from the control tower to be in the movement area.

Sawyer International Airport is a Primary Non-Hub commercial service airport with an FAA Contract Airport Traffic Control Tower (ATCT) that operates from 6:00 a.m. to 10:00 p.m., seven days a week.

During ATCT hours of operation, all requests to access the movement areas must have the approval of Air Traffic Control at all times. The ground control frequency for Sawyer International Airport is 121.65.

During the hours of 10:00 p.m. to 6:00 a.m., the ATCT combines its ground and local frequencies to the Common Area Traffic Frequency, or CTAF, at 119.975.

The Green Bay- FSS frequency is 123.60 and the UNICOM frequency is 122.70.

GENERAL OPERATING RULES & PROCEDURES

- 1) All motor vehicles and ground equipment operating on the AOA must be maintained in sound mechanical condition.
- 2) All drivers on the AOA have the same responsibility as that of a pilot taxiing an aircraft.
- 3) No vehicle shall be operated on airport property if such a vehicle is so constructed, equipped, or loaded as to be a hazard to persons or property.
- 4) No vehicle will be allowed to operate on the AOA unless the vehicle is equipped with adequate lights, horn(s), brakes, windshield wipers, and directional signals if originally provided by the manufacturer of the equipment.
- 5) Clear vision from the driver's seat is required and should be adhered to. No person shall operate any motorized vehicle when their vision is restricted by the load being carried.
- 6) All paved areas on the airport, within the AOA, shall have the status of city streets and be governed by city and state laws as applicable.
- 7) No one will make any repairs to motor vehicles anywhere on the airport other than in a designated shop area, except minor repairs necessary to remove such disabled vehicles from the airport.
- 8) No personnel shall move, interfere, or tamper with any aircraft, aircraft parts, motor vehicles or parts thereof, or any instrument or tool without the express written or oral permission of the owner, or satisfactory evidence of the right to do so is granted by the owner, or as approved and deemed necessary by the County of Marquette.
- 9) All motor vehicles operating on any area of the AOA will continuously display their vehicle headlights and tail lights during the hours of darkness (official sundown) or reduced visibility (rain, snow, fog, etc.)
- 10) All motor vehicles and/or ground equipment, with the exception of tugs or belt loaders, on the AOA shall display a rotating amber beacon, strobe or flashing light at all times.
- 11) All drivers operating motor vehicles during nighttime hours shall angle their vehicle so that the headlight beams are directed away from any aircraft cockpit / pilot.
- 12) At no time, shall any vehicle, except those vehicles utilized for the handling and servicing of aircraft, be allowed between an aircraft and a passenger boarding gate that requires passengers to walk on the ramp to the aircraft.
- 13) All non-motorized ground support equipment (baggage carts, lavatory service carts, etc.) shall be prominently marked with the company logo and reflective tape.
- 14) The number of passengers allowed on a vehicle is limited to the number of properly installed seats.

- 15) All contractors working on, adjacent to or in close proximity of the airport utilizing construction equipment with booms of a substantial height must be flagged at the highest point during daytime operations and lighted during hours of darkness.
- 16) During hours the equipment is not in operation, the boom shall be lowered. If necessary, the Airport Operations Division will issue a Notice to Airmen regarding the airport change condition.

PARKING RESTRICTIONS

1. No person shall park a vehicle in any of the following areas: fuel storage area, passenger ramp and apron, cargo ramp and apron or aircraft parking and storage areas, except at such places and for such periods of time as may be prescribed by the Operations Division of Sawyer International Airport. Aircraft refueling vehicles will be parked only in areas designated by the Airport Operations Division.
2. Refueling units will be stored outside, not less than fifty (50) feet from a building, and ten (10) feet from each other. Exceptions to this rule apply only when minor adjustments or repairs are necessary to move such units to a storage area when failure occurs elsewhere on the airport.

No gasoline truck, empty or full, will be brought into, kept or stored within any building at the Airport, unless said building is used exclusively for that purpose.

3. All motorized equipment must be parked so that it may be readily driven or towed away from the plane in case of emergency.
 - **Refueling vehicles shall never be parked facing into an aircraft.**
 - **Refueling vehicles shall never conduct fueling operations with personnel on board, and the doors to the aircraft in a closed position.**
 - **Refueling vehicles shall be chocked at all times while parked.**
4. At no time shall a motorized vehicle (including fuel deliver vehicles) be left unattended while the engine is running.

Communication at Towered Airports

When driving on the movement area at tower-controlled airports, clear and proper communication is vital. Both you and the air traffic controller must ensure that your communications are understood.

- Never assume anything.
- Always ask for assistance if you have any doubt whether to proceed.
- If the instructions you receive from ATC are unclear, ask that they be repeated by stating "Say again".
- If there is anything about the instructions you do not understand, ask for further explanation.
- Repeat or "Read-back" your instructions from ATC.

Radio Communication Procedures

1. Use an aviation two-way radio with the airport's ground control and tower frequencies on it. Each vehicle should have a call sign identifying the vehicle.
2. Think about what are you are going to say before calling the controller.
3. Know and use the proper phraseology. Never use Citizen's Band (CB) lingo or law enforcement "ten" codes.
4. Use the proper sequence in calling the controller. Before you start talking, make sure that no one else is already talking. Then key your microphone and do the following:
 - a. State that you are calling and identify yourself by using your vehicle call sign, "Oak City Ground, Maintenance One."
 - b. Wait for the controller to respond. Be patient as it sometimes takes a while if the controller is busy. When the controller responds, "Maintenance One, Oak City Ground," state where you are and where you want to go. For example, "Maintenance One is on the terminal ramp and would like to cross 1-8 Right (18R) at Taxiway Bravo and proceed to the VOR." Wait for the controller's response.
 - c. The controller will either approve or deny your request, or give you modified instructions.
 - d. **Always** read back all hold short instructions. "AP One, roger, will hold short of Runway."
 - e. If an air traffic controller directs you to do something that you believe is unsafe, you should ask the controller for **clarification** before complying with the instruction.

Note: Use extreme caution when you hear the phrase "go ahead". Controllers use this to mean "state your request." It never means, "Proceed!"

AIRPORT REMOVAL OF VEHICLES OF UNAUTHORIZED VEHICLES

Any unauthorized vehicle which has been parked in a space reserved for specific parking may be removed or caused to be removed by the County of Marquette, through the Sheriff's Department via authorization from Airport Operations.

AIRCRAFT RIGHT-OF-WAY

1. All motor vehicles and ground equipment must stop and yield to moving aircraft while in any area of the AOA. **Aircraft always have the right of way, even over emergency vehicles.**
2. An aircraft with its beacon flashing on the top or bottom of its fuselage indicates that the aircraft engines are running or are about to be started, and caution should be taken.
3. The operator **shall never** drive directly closely behind or into the path of any moving aircraft.
4. **All vehicles will yield the right-of-way to all authorized vehicles responding to emergency situations by pulling the vehicle to the far right and stopping until it is clear to proceed.**

PROHIBITIONS

No vehicle shall operate in any portion of the AOA:

1. In a careless or negligent manner;
2. In disregard of the rights and safety of others;
3. Without due caution or at a speed or manner which could endanger persons or property;
4. While the driver is under the influence of any debilitating substance; and,
5. If it is hazardously equipped or loaded in a manner, which could endanger persons or property.

SMOKING

1. Smoking is absolutely prohibited on any area of the AOA.
2. No person will smoke on any ramp area, in any shop area, hangar area, or other building used to store, maintain, or operate aircraft.

USE OF ROADWAYS

1. Vehicles shall enter designated driving lanes only at a point closest to origin.
2. The operator of a motorized vehicle shall never drive on a runway or taxiway unless properly permitted to do so and in constant contact with personnel in the ATCT.
3. All vehicles not equipped with an amber rotating beacon, or other lighting system, for emergency vehicles and continuous two-way radio communication to communicate with ATC, will be limited to transit operations only and conducted within the non-movement areas such as ramps and vehicle driving lanes and those areas outlined on the non-movement area.

The rules for the use of the perimeter road are as follows:

- (1) All oversized vehicles, such as fuel transports, are allowed no further than the fuel farm without prior permission of the Airport Manager, or his designee.
- (2) Other vehicles operating on the AOA shall be allowed only under an approved escort by Airport Operations personnel, or other approved personnel, and with permission of the Airport Management.

OPERATING SPEEDS

1. The maximum speed for all vehicles and equipment, with the exception of authorized emergency vehicles during period of emergency response, while operating on or within the vehicle roadways is 20 miles per hour.
2. The maximum speed for vehicles and equipment operated in all non-movement areas other than aprons is 15 miles per hour.
3. The maximum speed for vehicles operated in the baggage sort areas is 5 miles per hour.
4. The maximum speed for all motor vehicles and ground equipment operated in movement areas such as runways and taxiways will be determined by the operator in accordance with operational necessity and safe operating practices.

INSURANCE REQUIREMENTS

No one will operate a motor vehicle on or within the AOA of the Sawyer International Airport without having in force an appropriate liability insurance policy to provide coverage for liability arising from bodily injury and property damage.

VEHICLE ACCIDENTS

The driver of any motor vehicle involved in any accident while on the AOA must report the accident by calling Airport Operations immediately at 364-0939 or 250-1928 to coordinate the arrival of a County Sheriff or other Law Enforcement Officer to investigate the accident, and to take a report.

In the event of injury, the driver shall render assistance as needed until an emergency vehicle arrives and a Law Enforcement Officer provides his/her approval to leave the scene.

AIRCRAFT OPERATIONS

GENERAL INFORMATION

To operate safely around aircraft, the vehicle operator must have a basic understanding of how to operate while in the airport environment.

Aircraft can be divided into three categories: air carrier and other large aircraft, general aviation aircraft and helicopters. Air carrier aircraft are easily visible during daytime operations.

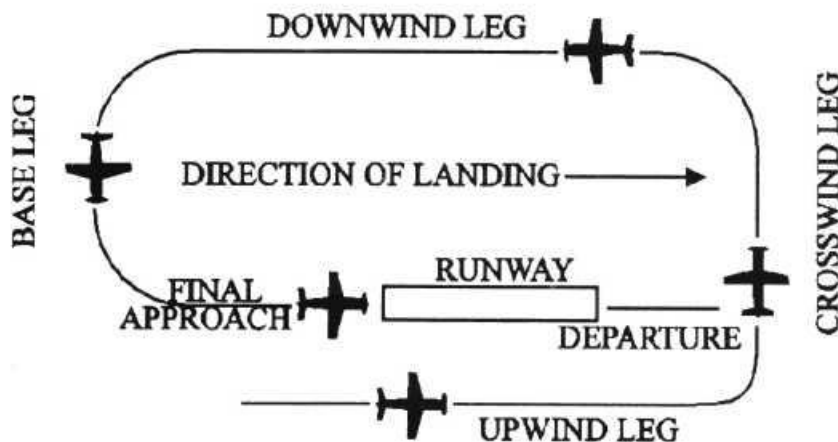
Drivers operating on the airfield must be knowledgeable of the various types of aircraft operations in the airport environment and be watchful for any possible vehicle / aircraft incursions.

Hold Position Markings on the Movement Area

Runway hold position markings (also called hold lines) identify the location on the movement area where a vehicle must stop when the operator does not have clearance to proceed on the runway. They consist of four yellow lines—two solid and two dashed extending across the width of the taxiway or runway. Vehicles must stop short of the first solid line. These lines will always be accompanied by a red and white runway hold position sign. ILS (Instrument Landing System) Critical Areas have hold position markings to show pilots and vehicle operators where to stop to avoid interfering with navigational signals. This ladder-like marking will be accompanied by a red sign with the letters “ILS” in white adjacent to the taxiway.

Traffic Pattern Terminology

Traffic approaching a runway for a landing follows a pattern. The standard pattern is a rectangular box with the pilot making all turns to the left. (Check with your airport manager to find out what traffic patterns are used at your airport.) Each side of the pattern has a name, as shown in the diagram. Pilots use these names to report their position on the radio when they are in the traffic pattern. For examples, a pilot may say, “Entering downwind for runway 19,” or, “Turning base for runway 1.” Familiarity with these names will help you locate an aircraft when the pilot reports his/her position on the radio.



Light Gun System

Air Traffic controllers have a backup communication system to use in the event an aircraft, vehicle, or controller's radio fails. Controllers use a **Light Gun** with different colored lenses to tell pilots or vehicle drivers what to do.

Meanings of light gun signals:

- Steady Green- It's okay to cross the runway or taxiway.
- Steady Red- Stop!
- Flashing Red- Move off the runway or taxiway.
- Flashing White- Return to your starting point on the airport.
- Alternating Red & Green- Proceed with extreme caution.

If you are ever working on a runway or taxiway and your radio quits, move your vehicle off the runway or taxiway, turn your vehicle toward the tower, and flash your headlights. This signals the controller's attention to direct you toward another part of the airport. Rather than use light gun signals, the controller may call airport operations to provide you with an escort. Be patient. **Even a failed radio is not an excuse for proceeding without a proper clearance.**

Runways:

Runways are rectangular-shaped, paved surfaces designed for the landing and takeoff of airplanes. Only drive on runways when necessary for airport operations. Do not enter or cross a runway unless you have authorization from airport management and permission from ATC.

Runway Identifications: Runways are numbered from 1 to 36 based on their magnetic direction rounded off to the nearest 10 degrees. For example, a runway aligned to the magnetic heading of 180 degrees would be Runway 18. Each runway will have two identifications based upon the direction of travel. For example, if one end of the runway is numbered "18," the other end will be numbered "36." If there are parallel runways, each runway's identification number will have an "L," "C," or "R" to indicate its relative location (left, center, or right) to the other parallel runway(s).

Runway Markings: Runway markings are white. Each runway will have a center line and a runway identification marking located at each end. Runways may also have other markings such as side stripes, thresholds, aiming points, and touchdown zone markings.

Runway Lights: Edge lights on runways are white but may change to amber for the last 2,000 feet. Threshold lights are located at each runway end; these are green on the approach side and red on the runway side. Some airports have runway centerline lights; these lights are white except for the last 3,000 feet. They alternate white and red from 3,000 feet to 1,000 feet from the end and are solid red the last 1,000 feet.

Taxiways:

Taxiways are used by aircraft to get to and from the ramp/apron and the runway.

Taxiway Identification: Taxiways are identified by letters or letter/number combinations.

Taxiway Markings: Taxiway markings are yellow. They have a solid yellow centerline stripe and may also have solid or dashed double edge lines. Each taxiway that enters the runway will have a hold position marking (see discussion on hold markings) indicating where you should stop to remain clear of the runway.

Taxiway Lights: Taxiway edge lights are blue, and centerline lights are green. Some airports may not have taxiway lights; others may use blue edge reflectors or green centerline reflectors in lieu of lights.

Movement Area Signs:

There are three basic types of signs that you may encounter on the movement area—mandatory instruction, location, and guidance signs. These signs are color-coded for easy recognition and are located adjacent to runways and taxiways. These signs may also be painted on the pavement at some airports.

Mandatory Instruction Signs: A **red** sign with a **white** inscription is a mandatory instruction sign—**do not** proceed past one of these signs without explicit clearance from ATC. The most common form of this sign is the **runway hold position**. Both runway identifications are usually included on the sign with the numbers arranged to indicate the direction of each threshold. For example, 33-15 indicates that the threshold for runway 33 is to the left and the threshold for runway 15 is to the right.

Location Signs: A **black** sign with a **yellow** inscription is a **location sign** that identifies the taxiway or runway that you are on.

Guidance Signs: A **yellow** sign with a **black** inscription is a **guidance sign**. These signs always have arrows. The arrow shows the direction to turn onto the indicated taxiway. Sometimes, these signs may be co-located with a location sign and/or other guidance signs in an array. Guidance signs may also indicate a direction to a destination on the airport such as a runway or terminal building.

TAKEOFFS AND LANDINGS

All aircraft flight operations must originate and terminate from an active runway surface. However, helicopters may land directly at their apron parking area, as designated by ATC.

AIRCRAFT TAXIING

NOTE: Exercise extreme caution at all times when approaching an aircraft with its beacons, strobes or running lights turned on, as the aircraft's engines could be running or the pilot preparing for engine start-up.

Taxiing is defined as aircraft moving under their own power between parking areas and active movement areas and non-movement areas of the airport such as runways, taxiways and aprons.

The airline ramp is for the parking of air carrier aircraft only. At no time shall any military, corporate or general aviation aircraft be allowed to taxi on the airline ramp without the express oral and/or written permission of the Airport Manager, or his designee.

PARKING

All aircraft must park at the termination of their flight operations in an approved parking area - a gate, apron, FBO, or hangar.

At no time shall a corporate or general aviation aircraft be allowed to park at the passenger terminal without the verbal or written permission of the Airport Manager, or his designee.

DEPARTING THE GATE AREA(S)

Aircraft may depart the gate or designated parking area under power (powering out), (power back) or by being pushed back by a tug.

Powering out creates strong wind-gusts that can reach up to 300 miles per hour at close range and can be extremely dangerous to personnel and equipment that are in close proximity.

Prior to the aircraft departure, personnel working on the ramp shall ensure that measures are in place to properly secure all GSE equipment and related ramp equipment including FODs (foreign object debris or damage) containers so as not to be wind-blown into ramp personnel, other aircraft, vehicles, and buildings.

ENGINE RUN-UPS

Before takeoff, smaller aircraft may conduct an engine run-up at high RPM's. This can create a strong gust of air (prop-wash or jet blast) behind the aircraft and can occasionally send loose objects a substantial distance.

HELICOPTER OPERATIONS

Because of the unique capabilities of helicopters and other rotor-wing aircraft, special precautions must be taken around operating helicopters. Most important is to be aware of the main rotor and the tail rotor blades that rotate at high speeds.

All personnel shall maintain a safe distance from the helicopter, and stay in sight of the pilot at all times and to not approach the helicopter until all rotor blades have come to a complete stop.