

2018 - 2019

Aircraft Non-Movement Area Familiarization Manual For Ground Vehicle Operators



Version: 10/2/2018

DFW DALLAS
FORT WORTH
INTERNATIONAL
AIRPORT

Table of Contents

General Information	3
Introduction to this Familiarization Manual.....	4
DFW Passenger Terminals.....	6
Security	7
Security Identification Display Area (SIDA).....	8
AOA Vehicle Access Permits.....	9
The AOA Gate Barrier System – SIDA Vehicle Entry/Exit.....	10
AOA Ground Vehicle Operator Safety.....	11
Ground Vehicle Operator Safety Responsibilities.....	12
AOA Driver Authorization/Identification	13
Ground Vehicle Lighting Equipment.....	14
Aircraft Push Back Operations Safety.....	15
Nighttime Driving Conditions Safety.....	16
Vehicle Accident Reporting	16
Foreign Object Debris/Foreign Object Damage (FOD).....	17
Aircraft Non-Movement Areas	18
CTA.....	20
The Non-Movement Area.....	21
Non-Movement Area Boundary Line.....	22
Non-Movement Area Boundary Line Extension.....	23
REVIEW	24
Special/Joint-Use Emergency Roadway Procedures.....	25
Special Emergency Roadway (ARFF) Procedures for the Joint-Use of the West Cargo Area Emergency Access Roadway Route.....	26
Authorized Non-Movement Area Drivers' Vehicle Access to the American Airlines/Delta Airlines Southeast Glycol Storage Area	27
Surface Incidents and Runway Incursions.....	29
Surface Incidents and Runway Incursions.....	30
Incident/Incursion Prevention By Using Situational Awareness	32
Escorting Ground Vehicles/Personnel.....	33
Aircraft Lighting	35
Appendix A: Key Acronyms/Definitions	36
Appendix B: Phonetic (ICAO) Alphabet and Numbers.....	37



*Published by the DFW Airport Operations Department, Technical and Simulated Training.
For questions, comments, or corrections please contact us via email at
techtrain@dfwairport.com*

IMPORTANT! Driver Policy

Effective October 1, 2018, all drivers on the **Airport Operations Area (AOA)** must **abide** by the requirements set forth in the Airport Driving Handbook. This document can be found by visiting dfwairport.com/operations. Questions regarding this policy or the handbook can be directed to airfield.safety@dfwairport.com.

General Information

The **Dallas/Fort Worth International Airport (DFW)** is one of the busiest airports in the world, averaging approximately 1,800 operations (combined landings and takeoffs) daily. It provides service to over 200 destinations including approximately 40 international destinations around the world. **DFW** annually ranks within the top five busiest airports in total operations in the world, and, ranks in the top ten of the busiest passenger traffic airports in the world.

The airport is surrounded by the cities of Grapevine, Coppell, Irving, Grand Prairie, Fort Worth, and Euless, encompassing more than 27 square miles of land. **DFW** is the third largest airport in land size area, in the world. **DFW** is owned by the cities of Dallas and Fort Worth.

American Airlines (AA) and Envoy (previously **American Eagle**) Airlines (**AE**) carry approximately 85% of passenger traffic at **DFW**.

The airport is generally considered to be defined by two areas of operations: **Landside** and **Airside**.

Landside includes the public side of the airport such as toll & non-toll roadways, parking areas & garages, hotels and the ticketing counters/baggage claim areas of the terminals.

The **Airside** portion of the airport refers to the restricted-access and secured **Air Operations Area (AOA)**. This is the portion of the airport where aircraft **land, takeoff, taxi, and park**.



NOTE: The Air Operations Area (AOA) of Dallas/Fort Worth International Airport is a highly restrictive portion of the airport where only authorized persons may enter.

Introduction to this Familiarization Manual

The information contained in this **Aircraft Non-Movement Area Familiarization Manual for Ground Vehicle Operators** is for persons who

intend to operate ground vehicles in the **DFW** aircraft **Non-Movement Areas (NMAs)**, which are the passenger terminal ramp and hangar ramp areas. The **NMAs**, which are part of the larger **Air**

Operations Area (AOA) or “**Airside**”, require security identification and authorization (badge/decals) to enter and occupy the **AOA**, and, recommended driver training and certification (Driver’s Certification Badge) to operate a ground vehicle safely in the **NMA**.



This Familiarization Manual reviews the Federal regulatory and safety information related to ground vehicle and personnel operations in the **NMAs**. This Manual includes information pertaining to the **AOA**, the **NMA**, and also applicable information about the **Aircraft Movement Areas (AMAs)** that ground vehicle operators should be familiar with.

Each person intending to operate a ground vehicle in the **NMA** is responsible for being familiar with this material. To accomplish that, each person should complete several online computer-based training units before operating a ground vehicle in the **NMA**. The appropriate training unit curriculum requirements for each driver can be found in the **DFW LEARNINGHUB**. Instructions on how to find the **LEARNINGHUB** follow.

Additionally, persons intending to operate a ground vehicle in the **NMA** may also need to complete an instructor-led **Driver Simulation Scenario** on a periodic basis.

To find the online and instructor-led training units supporting these requirements in the **DFW LEARNINGHUB**, for:

- **DFW Airport Board Employees:** If the required training is not already part of your LearningHub online Learning Plan, have your supervisor contact techtrain@dfwairport.com and request the correct curriculum be added to your profile.
- **Non-DFW-Airport-Employees:** For information on all of DFW Airport's driver training programs, please visit www.dfwairport.com/drive.

DFW Passenger Terminals

The *Dallas/Ft Worth International Airport (DFW)* has six commercial, scheduled-airline passenger terminals (includes a satellite terminal). Five are used for domestic flights and one is used for international flights.

The airport also has a Corporate Aviation terminal for unscheduled/non-airline passenger flights.

Security

The **Air Operations Area (AOA)** includes all portions of the airport that are designed and used for landing, take off, and surface maneuvering of aircraft. The **AOA** also includes aircraft parking, loading and unloading, and maintenance/hangar areas. A six-foot-high chain link fence, topped with barbed and razor wire, as well as positive-controlled **AOA** entry/exit gates, protect all such areas. No unguarded openings to the **AOA** perimeter fencing are allowed.



The security protection of the **AOA** is maintained in accordance with **CFR PART 1542**, entitled "**Airport Security.**" The **DFW Department of Public Safety (DPS)** is responsible for airport security and maintaining the **DFW Airport Security Program**. Any person authorized to be in the **AOA** is also responsible for ensuring that unauthorized access is prevented, and if observed, reported. Open gates shall be guarded and no person shall be allowed **AOA** entry without proper identification, nor will any vehicle be allowed entry without a valid **Vehicle Access Permit**, unless that person and/or vehicle is under escort at all times by a person authorized to escort.

Any person/vehicle **NOT** displaying a proper access badge and/or **Vehicle Access Permit**, who/that is not being properly escorted, shall be immediately escorted off the **AOA** by **Airfield Operations** or **DPS**.



Report any unescorted person who does not display proper identification and/or any vehicle that does not display a valid **Vehicle Access Permit**, to the **DFW DPS** immediately.

Security Identification Display Area (SIDA)

The **SIDA** is that portion of the airport identified by the airport's security plan as the area requiring each person to continuously display airport-approved security identification medium (i.e., an Airport-issued personal picture badge) over their outermost garment and above the waist-belt area, unless that person is under airport-approved escort, and the escort is displaying a valid **DFW SIDA** badge.



The **SIDA** encompasses passenger **Terminals A, B, C, D, E, and E-Satellite** ramp areas. It also includes the **Airline Cargo/Terminal 5E** (previously the Delta Airlines Cargo) ramp area, the **East and West Airfreight/Air Cargo** ramp areas, the **DFW International Air Cargo** ramp areas, all **American Airlines** hangar ramp areas, the **Envoy/American Eagle Airlines** hangar ramp area, and the present **Corporate Aviation (CA)/Terminal 1E** and the previous **General Aviation (GA)** ramp areas.

AOA Badges

The **Airport Identification Badge**, also known as the **AOA Badge**, is issued by **Access DFW** to persons who are authorized access to secure areas of **DFW Airport** through doors and gates controlled by the **Automated Access Control System (AACS)**. For **SIDA Badge** information/application, go to the web site: www.dfwairport.com/badge

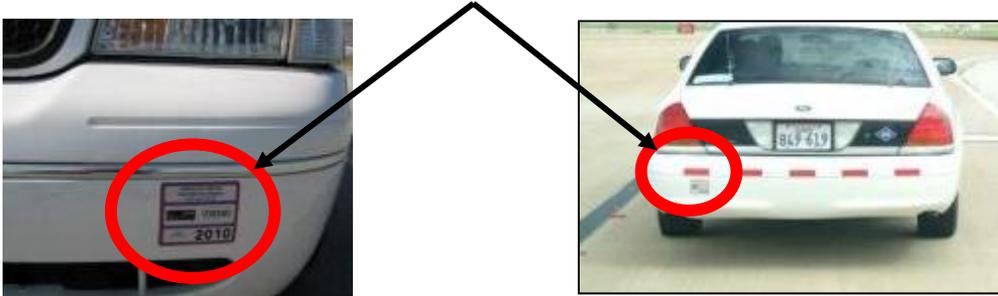
Authorized Access to the SIDA

No person shall enter the **SIDA** without proper authorization. Any person found in the **SIDA** without a valid **DFW AOA/SIDA Badge**, and not being properly escorted by someone with a current **DFW AOA/SIDA Badge**, will be considered unauthorized, reported to **DFW DPS** and removed from the **SIDA** immediately. The unauthorized person will be subject to prosecution. Additionally, any vehicle not displaying a valid **DFW AOA Vehicle Access Permit**, that is not being properly escorted by a person with a current **DFW AOA/SIDA Badge**, shall be reported to **DFW DPS** and escorted off the **AOA**.

AOA Vehicle Access Permits

Access DFW administers the **AOA Vehicle Access Permit** program. There are three types of **Vehicle Access Permits** – **Permanent**, and **Temporary & Escorted Vehicle Access Permits**.

The **Permanent AOA Vehicle Access Permit** (consisting of 2 identical decals per vehicle – examples shown below) is affixed to the front and rear bumpers of the permitted vehicle. The **Permanent Permit** decal displays the permit number and expiration date, and is valid for a maximum of three years.



The **Temporary AOA Vehicle Access Permit** consists of a blue hanger-type placard designed to be hung on the inside rear view mirror of the vehicle to which the permit is issued. It contains the permit number, the vehicle's license plate number, and the expiration date of the permit which is a specific period of time that is less than one year.



(Temporary AOA Vehicle Access Permit)



(Escorted Vehicle Access Permit)

The **Escorted Vehicle Access Permit** is also a temporary but a more restrictive duration permit. It is a blue hanger-type placard designed to be hung on the inside rear view mirror of the vehicle being escorted. This permit is issued by **DPS** at **AOA** entry gates, and is valid for only 24 hours! This vehicle must be constantly escorted by an **SIDA/AOA Badge-holder**.

Only authorized vehicles with valid **AOA Vehicle Access Permits** (i.e., **Permanent** or **Temporary**) are allowed on the **AOA** without an escort. The person driving the vehicle must have a valid **SIDA AOA Badge**. The **maximum speed limit** in **aircraft non-movement areas** is **20 mph!**

The AOA Gate Barrier System – SIDA Vehicle Entry/Exit



When approaching one of these gates for entry into, or exit out of the **AOA**, a **Red Traffic Light** will be seen, the fence-gate closed, the fence-gate arm “DOWN” (horizontal position), and the metal-plate barrier “UP” (vertical position).

When the **AOA Gate Barrier System** is activated, the traffic light turns **Yellow**, the fence-gate opens, the fence-gate arm rises (vertical position), and the metal-plate barrier lowers (horizontal position).

For exits, the system activates when the vehicle drives over an in-pavement detection loop, located before the gate. Once open, the vehicle pulls forward to a point just beyond the opened gate side over an in-pavement detection loop, and **STOPS**.

WARNING: In all cases:

- If the traffic light is **Red**, **DO NOT ATTEMPT** to cross the metal barricade!
- **DO NOT TAILGATE OR ATTEMPT TO PIGGYBACK WITH A VEHICLE AHEAD.**
- The vehicle driver is responsible for any damage caused to the barricade, the fence-gate arm, the traffic light, the **AOA** fence-gate, or the driver’s vehicle.
- **ALWAYS** wait for the gate to completely close behind you, regardless of whether or not the **AOA Gate** is staffed with a security guard. **YOU ALONE ARE RESPONSIBLE FOR INSURING THE GATE’S SECURITY IN THIS SITUATION!** To ensure this secure closure, pull forward far enough for the gate to swing closed behind you. Once the fence-gate is closed and secure, you may drive away. **NOTE:** If there is a vehicle exiting immediately behind you, pull forward leaving enough space for that vehicle to exit, pass over the in-pavement loop, and thereby activate the fence-gate closing mechanism. That following vehicle must then take the position of ensuring the **AOA** fence-gate opening is closed and secure. The security of the gate becomes the responsibility of the vehicle that has just exited.

AOA Ground Vehicle Operator Safety

Safety Belts

Safety belt use is mandatory, and vehicle restraints shall be used at all times by occupants traveling in a vehicle that is equipped with such safety items.



Safe Operation of Vehicles

Operators of ground vehicles in the **AOA** will operate their vehicles in a safe and responsible manner. Be courteous, and obey all posted speed limits. Keep in mind that during inclement weather lower speeds are prudent in order to maintain a safe and secure working environment.

No vehicle shall be operated on the **AOA** in a careless or negligent manner, in disregard of the safety of others, or at a speed or in a manner which endangers persons or property.

Safety Equipment

Safety vests with reflective striping are required for all personnel working or driving on the AOA. It is recommended that other personal safety equipment appropriate to the work area also be utilized. Using items such as hearing protection, break-away neck lanyards, and other safety items may reduce the risk of injury in the workplace.



Personal Communications/Electronic Devices

According to the Airport Driving Handbook: "Mobile devices cannot be used to text, use internet applications or to video or capture images while vehicles are in motion."

Penalties: Violations of DFW Airport Rules and Regulations are grounds for immediate suspension or revocation of an Airport Identification Badge, SIDA badge, Driving Endorsement, and/or Vehicle Access Permit(s).

Ground Vehicle Operator Safety Responsibilities

The following are the responsibilities of **ALL** vehicle operators intending to operate on the **DFW Air Operations Area (AOA)**:

- Ensure each vehicle they operate is equipped with, and has an operational light-bar or flashing/rotating beacon on top of their vehicle. These lights will be on when operating on the **AOA**. (**NOTE:** Not all **DPS** vehicles are equipped with exterior flashing lights, a light bar, or a rotating beacon on top of the vehicle. Some vehicles have these lights installed inside the vehicle but visible to outside the vehicle.)
- **ALL** vehicle operators must always remember that:

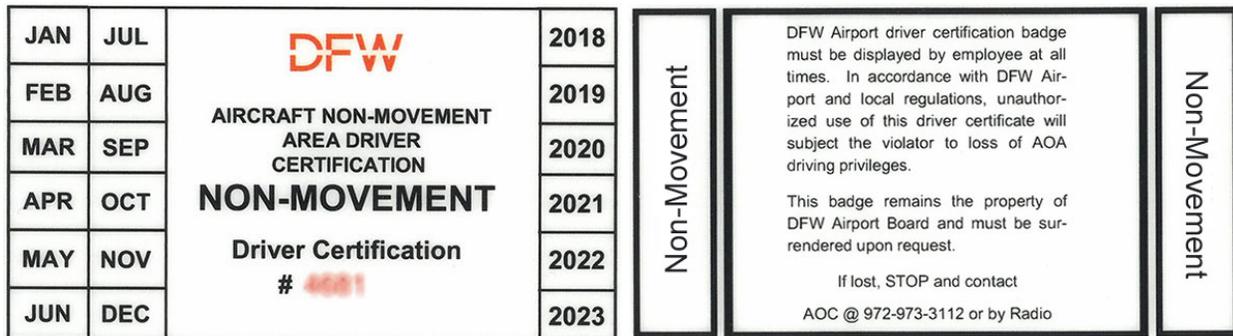


AIRCRAFT ALWAYS HAVE THE RIGHT OF WAY, EVERYWHERE IN THE AOA!

AOA Driver Authorization/Identification

The **DFW Airport Administrative Policy and Procedure AO.014.02, Ground Vehicle Driver Training for Air Operations Area**, effective 08/01/2015, states that vehicle operators shall receive a Driver Certification card which clearly indicates when all required training has been successfully completed. This authorization shall indicate in which area(s) of the **AOA** the vehicle operator is authorized to drive in". In this example, the Non-Movement Areas of the AOA. A facsimile of the current Authorization's front & back are shown below:

"NON-MOVEMENT" (Aircraft Non-Movement Area) Badge: This badge applies to, and is awarded to vehicle operators "authorized to operate a ground vehicle, **unescorted**, **BUT** only within the **Non-Movement Area of the AOA.**" **To operate beyond the Non-Movement Area of the AOA into the Aircraft Movement Area (AMA), the vehicle operator must be escorted."**



At the time of **Driver Certification Badge** issuance, the expiration date month and year will be hole-punched for validation and expiration information. The day due in that month is the last day; i.e., 28, 29, 30 or 31.

Ground Vehicle Lighting Equipment

Ground Vehicle Lighting

Before operating in the **Air Operations Area (AOA)**:

All headlights, tail lights, running/clearance lights, and beacons/light bars on the vehicle shall be in operational condition.

Headlights, and if equipped, beacons/light bars, and running/clearance lights should be on while operating on the **AOA**.



Lighting Equipment/Colors

- **Aircraft Rescue and Fire Fighting (ARFF) Vehicles** – Red or combination of red-and-white flashing beacons. During non-emergency driving, amber/yellow flashing beacons will be used.
- **Airfield Operation's Vehicles** – Yellow flashing beacons/bars.
- **Aircraft Support Vehicles** – Yellow or red steady burning beacons.
- **DPS Police & Airport Security Vehicles** – Signal blue or a combination of red-and-signal blue flashing beacons for most.

Other vehicles (Ex. Construction, Tenants, etc.) – Yellow flashing/rotating beacons at the highest vertical point of the vehicle.



Aircraft Push Back Operations Safety

Aircraft which are parked at passenger terminal gates "**push back**" to exit the gate area, and taxi for takeoff.

Push backs occur when aircraft are slowly pushed backwards by a tug-tractor. Be alert for wing walkers and their signals, this will alert you to aircraft preparing to "**push back**" from the gate, under the power of a tractor. When it is clear behind the aircraft, the wing walkers will raise their batons, which signal the tug driver it is "**all clear**", and the "**push back**" process begins. All vehicles must yield to this operation!



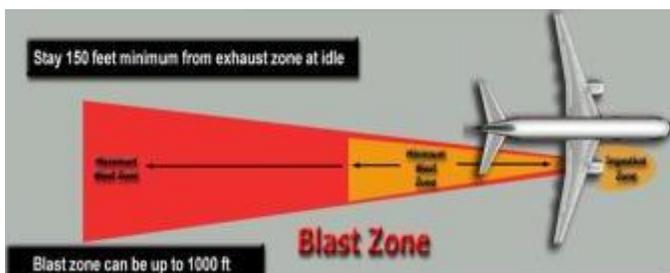
DO NOT DRIVE behind aircraft pushing back! **STOP** and give way to the aircraft operation.

DO NOT DRIVE between any wing walker or aircraft marshaller while the aircraft is being pushed, or pulled by an aircraft tug-tractor. Stop when directed by the aircraft handlers and yield to the operation.



Jet Blast Danger

When driving behind aircraft that are taxiing, be aware of the hazards of jet blast and use caution when aircraft apply "**extra power**" to begin taxiing from a standstill, or increase the aircraft's speed while taxiing. Avoid the "**ingestion area**" in front of the engine inlets.



Nighttime Driving Conditions Safety

Nighttime driving requires total concentration on the part of the vehicle operator. Nighttime driving can be disorienting and confusing. Aircraft can taxi with or without their taxi or landing lights on, at their discretion. Navigation/Position/Anti-collision lights alone may be hard to see by vehicle operators.

When driving on the **AOA** at night, always use caution. Open your side window(s) slightly to detect engine noise, and look for the Navigation/Position/Anti-collision lights of taxiing aircraft.



Vehicle Accident Reporting

Any accidents occurring anywhere on the airport should be reported immediately to the **A**irport **O**perations **C**enter (**AOC**) at 972-973-3112 and a written report made of the incident. **DPS** will respond to the location, evaluate the damage and include that information in the report. **Report any personnel injury immediately to 911.**



Foreign Object Debris/Foreign Object Damage (FOD)

FOD is **Foreign Object Debris**, or a substance, part, component, natural element or live animal that has the potential to accidentally encounter an aircraft and threaten its safe operation, and/or cause such damage that requires repair to the aircraft.

FOD also stands for **Foreign Object Damage** to an aircraft attributed to foreign object debris.



FOD can be found in equipment, at terminal gates, cargo aprons, taxiways, runways, and run-up pads. It causes damage through direct contact with airplanes, such as cutting airplane tires or being ingested into engines, or as a result of being thrown by jet blast and damaging airplanes or injuring people. **FOD** can cause severe, or even fatal, injuries.



FOD barrels are located on each gate. **FOD** represents an enormous cost for aircraft repair and millions of dollars in lost revenue while the aircraft are out of service. **FOD** can cause personal injury, which can result in lost wages or even permanent disability.

Effective **FOD** prevention requires daily attention.

Do not eat or drink inside vehicles on the ramp, as the trash this generates can lead to additional **FOD**. Do not leave trash in the open bed of a truck.

No Tailgate! Trash can fall out of the open bed and become FOD.



If you find debris or trash – **PICK IT UP** immediately and place it in a **FOD** container.



Concrete pavement breaking up! Pieces of concrete are becoming FOD.



Non-Movement Areas

Aircraft Non-Movement Areas

The **Aircraft Non-Movement Area**, or just the “**Non-Movement Area**” is an area of the **SIDA** that is inside the Airside’s **Air Operations Area (AOA)**, and is located mostly next to the passenger terminals, but also at hangars, and other aircraft parking areas as well. **Non-Movement Area-only drivers** must remain within these areas while “Airside”.



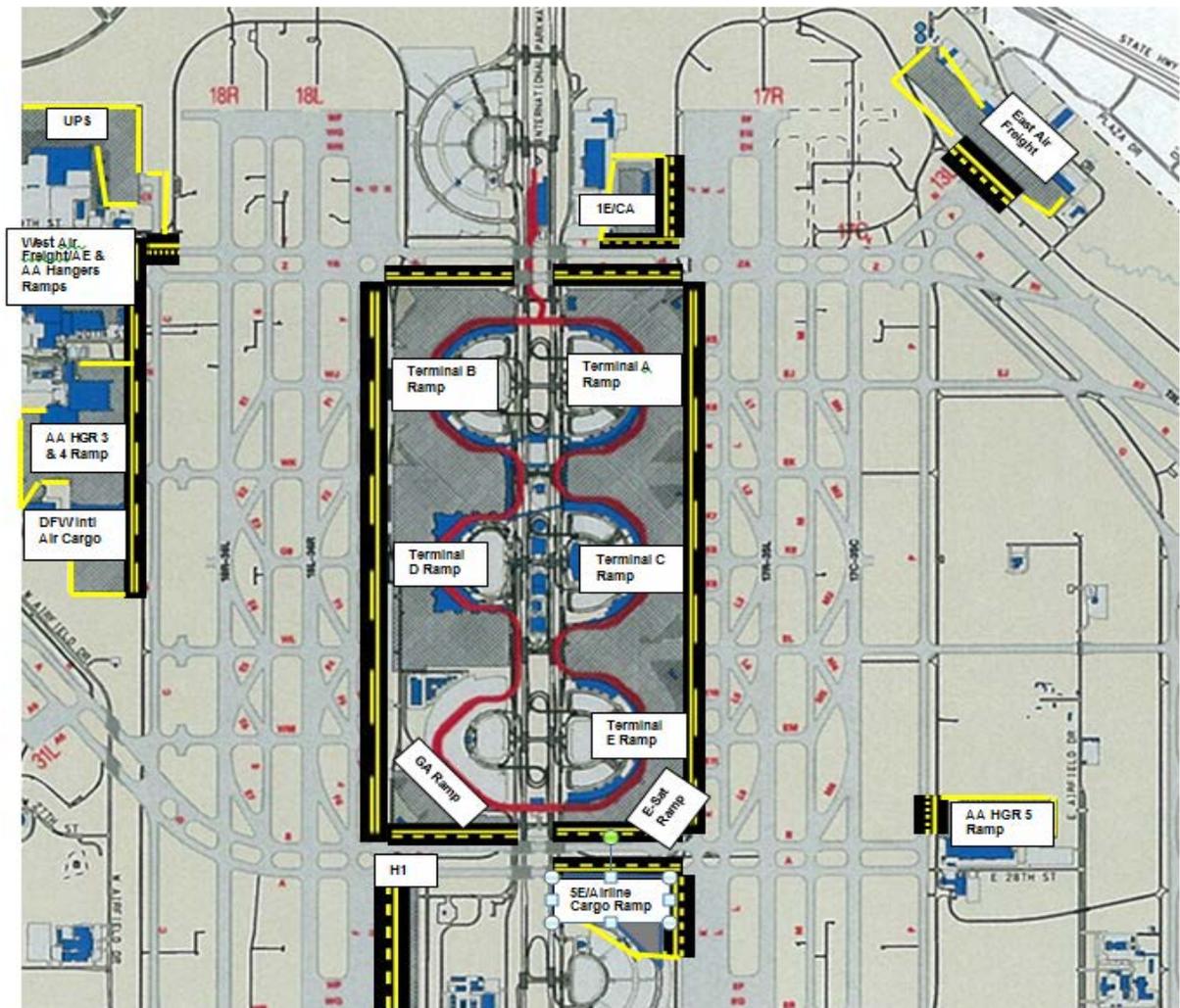
The terms “**Non-Movement Area**” and “**Movement Area**” refer to the **FAA Control Tower’s** Areas-of-Responsibility, and not whether aircraft actually move around in these areas. The reason is that the **FAA Control Tower** is not responsible for, and does not control aircraft and vehicle activities/movements in the areas designated as “**Non-Movement Areas**”. The **FAA Control Tower** is **ONLY** responsible for, and **DOES CONTROL** aircraft and vehicle activities/movements in the areas designated as “**Movement Areas**”.

The “**Movement and Non-Movement Areas**”, are visibly separated by a boundary line that is marked with the surface-painted “**Non-Movement Area Boundary Marking**” . The marking is composed of two yellow lines, one solid and one dashed, painted over a black background. Persons not authorized in the **AMA** unescorted (i.e., ramp personnel), who cross this **Non-Movement Area Boundary Marking** to the **Aircraft Movement Area (AMA)**, are in **violation** of **Federal** and **DFW AOA Driving Rules!**

DFW’s Non-Movement Areas include the ramps of **Passenger Terminals’ A, B, C, D, E & E Satellite; West & East Air Freight** ramps; the **United Parcel Service (UPS)** ramp; the **American Airlines (AA) Hangars 1–5** ramps; the **Airline Cargo (Terminal 5E)** ramp; the **Corporate Aviation (CA)/(Terminal 1E)** ramp and the previously-used **General Aviation (GA)** ramp; **Taxilane H1** on the Southwest Hold Pad, and the **DFW International Cargo** ramps. (**NOTE: Taxilane H1 on the Southwest Hold Pad cannot be reached without entering the AMA! Call the AOC 972-973-3112 for an escort.**)



Non-Movement Areas



The above depiction shows the **DFW Non-Movement Areas (NMAs)**, shaded in dark gray within yellow & black-outlined **Non-Movement Area Boundary Marking**, that separates the **Aircraft Movement Areas** from the **NMAs**.

Again, the designated **NMAs** are: **Passenger Terminals A, B, C, D, E & E Satellite** ramps; the **West and East Air Freight/Cargo** ramps; the **United Parcel Service (UPS)** ramp; the **American Airlines (AA)** hangars 1 – 5 ramps; the **Terminal 5E/Airline Cargo** Ramp; the **Terminal 1E/Corporate Aviation (CA)** ramp and the previously-used **General Aviation (GA)** ramp; Taxilane **H1** on the **Southwest Hold Pad**, and the **DFW International Air Cargo** ramps. **NOTE: Taxilane H1 on the Southwest Hold Pad cannot be reached without entering the AMA! Call for Escort!!**

CTA

The **C**entral **T**erminal **A**rea (**CTA**) refers to the area encompassing **Passenger Terminals A, B, C, D, E,** and **E-Satellite** ramps, and the **Corporate/General Aviation** ramps. The **CTA** is part of the **Non-Movement Area**.



Terminal A Ramp



Corporate Aviation Ramp – February 2011

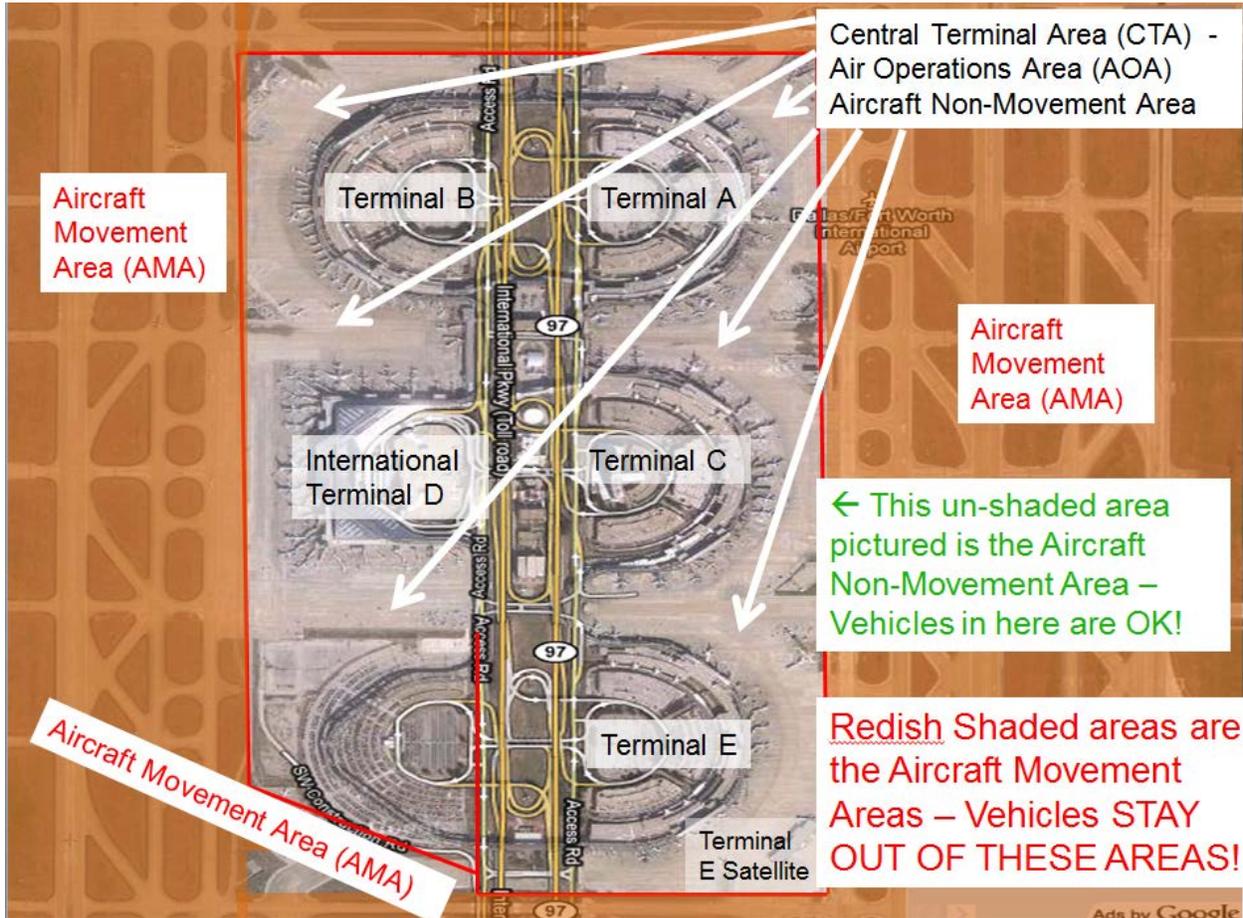
General rules on the AOA while operating in the aircraft Non–Movement Area

- **Aircraft always** have the right-of-way, everywhere in the **AOA**.
- Maximum speed limit on ramp areas is **20 MPH**. Inclement weather may dictate lower speeds.
- On ramp areas, aircraft taxi via taxilanes which are designated by a solid line usually yellow in color, but in some cases airline tenants may utilize other colors. Always use caution when driving near aircraft in these areas.
- Fire lanes are designated by **RED LINES** and the lanes must always remain **clear**.
- Do not block driveways or **AOA** gates.
- Do not park within fifteen (15) feet of a fire hydrant in any direction.
- Do not drive under any portion of an aircraft or allow the wing of an aircraft to pass over your vehicle.
- Do not drive between an aircraft and a loading gate when passengers are using the Passenger Boarding Bridge.
- Do not drive under or park under a Passenger Boarding/Jet Bridge.
- Do not drive near moving aircraft!



Non-Movement Areas

The Non-Movement Area



NOTE: Terminal 1E/Corporate Aviation (CA) ramp, also part of the CTA, is not shown in this depiction of the Central Terminal Area portion of the Non-Movement Area.



Non-Movement Areas

Non-Movement Area Boundary Line

The **DFW** **A**irport **C**ertification **M**anual (**ACM**) specifies that only ground vehicles **necessary** for the operation of the airport shall be authorized **unescorted access** into the **Aircraft Movement Area** (that is, **Taxiways**, **Runways** and their **protected safety areas**). **Non-Movement Area** (ramp and apron) drivers must remain inside the **Non-Movement Area**, and not enter the **Movement Area** at any time unless being escorted by an Airport-authorized Escort.

The specific ground vehicles/operators/drivers that are defined as “**necessary**” are identified in the “**Aircraft Certification Manual**.” However, suffice it to say that almost all of these necessary vehicles are **DFW Airport Board** vehicles.

All other ground vehicle operators/drivers who need to leave the **Non-Movement Area** and cross into the **Aircraft Movement Area** are **required to obtain Airport Board escorts** by contacting the **Airport Operations Center (AOC)**.

Call the AOC at **972-973-3112**, to obtain an **AMA** escort.



Ramps & Terminals are located in here, on this side of the marking.

Aircraft Non-Movement Area
NOT controlled by **FAA** Airport Traffic Control Tower. Vehicles Okay here

Taxiways and Runways are located out here.

Aircraft Movement Area – controlled by the **FAA** Airport Traffic Control Tower. Non-Movement Area (ramp) Drivers not permitted out here without escort!



Surface-painted Non-Movement Area Boundary Marking. Boundary Marking’s meaning for Non-Movement Area Drivers continues laterally to next NMA Marking

Remember, **Non-Movement-Area-ONLY** vehicle drivers **SHALL NOT CROSS** the **Non-Movement Area Boundary Marking**  into the **AIRCRAFT MOVEMENT AREA** (dashed side of the marking) unless accompanied by an Escort.

Vehicle drivers/pedestrians restricted to the **Non-Movement-Area-ONLY**, who are observed beyond the **Non-Movement Area Boundary Marking**  should expect to be immediately reported to **DFW Airfield Operations** and **DFW DPS Police**. **WARNING!** Crossing this **Boundary Marking** can lead to **suspension** of the violator’s **SIDA Badge**, and prohibit the violator from entering the **AOA**.



Non-Movement Areas

Non-Movement Area Boundary Line Extension

IMPORTANT! This pavement marking with 2 yellow stripes, one solid and one dashed painted over a black background – known as the “**Non-Movement Area Boundary Marking**” – separates the ramp and parking areas where **Non-Movement Area Drivers and Personnel** are permitted to operate without Escort (i.e., the aircraft **Non-Movement Area**), from the area where **Non-Movement Area Drivers and Personnel** are prohibited from being in (i.e., the **Aircraft Movement Area**).

Although it is not painted or delineated in any way, the “**Non-Movement Area Boundary Marking**” extends laterally to both sides of the Marking across the asphalt shoulders of the taxiway, and across any adjacent vehicle roads/grass areas/etc. to join the next taxiway’s “**Non-Movement Area Boundary Marking**”. (See the example of red solid/dashed lines depicting this Marking’s extension below.)



The Non-Movement Area Boundary Marking, and its significance for Non-Movement Area Personnel, extends and continues invisibly across the asphalt shoulders, and any adjacent grass, dirt or vehicle roads until reaching and joining the next taxiway’s or taxilane’s Non-Movement Area Boundary Marking. DO NOT CROSS THE LINE!





Non-Movement Areas

REVIEW

Vehicle drivers and personnel who are **NOT** authorized **unescorted access** out of the **Non-Movement Area** into/on the **Aircraft Movement Area** **ARE NOT PERMITTED** to cross this marking  without an **Airport Board escort**.

The **solid yellow line**  is located on the aircraft **Non-Movement Area** side.

The **dashed yellow line**  is located on the **Aircraft Movement Area** side.

Non-Movement Area Drivers must stay on the **solid**-line side of this boundary marking, including its implied virtual extensions to the next painted marking. Do not cross into the **Aircraft Movement Area** on the dashed line side.

Unauthorized entry into the **Aircraft Movement Area** violates **Title 14 Code of Federal Regulations, Part 139**, and will potentially lead to suspension of your **SIDA** badge for the airport, as well as other consequences.

Ramp personnel Do NOT cross into the Aircraft Movement Area unless properly escorted!

**Aircraft Movement Area –
RUNWAYS/TAXIWAYS/SAFETY AREAS**

Under positive control by the FAA ATCT. You must be authorized to be in this area.



Non-Movement Area –

Consists of ramps, gate and aircraft parking areas NOT controlled by the FAA ATCT.



Aircraft **R**escue and **F**ire**F**ighting (**ARFF**) (pronounced “arf”) roads, also known as “**emergency access roads**”, “**emergency roads**”, or simply “**ARFF Roads**”, are used for **DPS** emergency personnel & equipment responses to airfield locations, from each **DPS** fire station.

When operating a ground vehicle in/on these areas, **do not block or obstruct these emergency access (ARFF) roads**. Should you become aware of any **ARFF** road being blocked, **immediately** notify the **Airport Operation Center** at 972-973-3112.

**Always give way to EMERGENCY equipment.
Always yield to aircraft.**

Special/Joint-Use Emergency Roadway Procedures

DFW has a unique joint-use **ARFF**/ground service vehicle road on the northwest side of the airfield. Authorized ground service vehicle operators are permitted to drive on these roads, but only on the **outer** (shoulder) surface lanes as identified here by the black arrows in the image below.



The **center** lanes (identified here by the red arrows) are for airport emergency vehicles only! The maximum speed on all **ARFF** roads, including the Northwest **ARFF**/Service Road is **45 mph**. Of course, weather conditions may dictate a lesser safe operating speed.

- Use caution while driving on **ARFF** roads as many of these cross taxiways and taxilanes, especially those adjacent to the terminal and cargo areas where aircraft operations may be in progress.
- **DO NOT TRANSIT/DRIVE ON THE UNITED PARCEL SERVICE (UPS) RAMP (EASTERN EDGE) WHEN DRIVING THIS ROUTE!!**



Special Emergency Roadway (ARFF) Procedures for the Joint-Use of the West Cargo Area Emergency Access Roadway Route.

There are 6 taxiway/taxilane & roadway intersections located on the “18R Emergency (ARFF) Road” & the “Northwest Emergency Loop” Route (aka, “West Cargo Area Emergency Access (ARFF) Roadway”) that require special attention by all vehicle drivers due to these taxiway/taxilane & roadway intersections being used by taxiing aircraft and Emergency Vehicles. The six intersections depicted are:

1. Taxiway/Taxilane “WF” at the **NW Emergency Loop** intersection.
2. Taxiway/Taxilane “C” at the **NW Emergency Loop** intersection.
3. Taxiway/Taxilane “Z” and **18R Emergency Road** intersection.
4. Taxiway/Taxilane “C5” and **18R Emergency Road** intersection.
5. Taxiway/Taxilane “WK” and **18R Emergency Road** intersection.
6. Taxiway/Taxilane “C9” and **18R Emergency Road** intersection.



Intersections 1 – 6 are denoted by special white and black pavement markings nicknamed “zippers” where they cross taxiways/taxilanes.



Personnel authorized to drive on the West Cargo Area Emergency Access Roadway (**18R Emergency Road** & the **Northwest Emergency Loop**), must **ALWAYS** give the right-of-way to aircraft & airport emergency vehicles. Ground Service Vehicles must yield completely when being approached from head-on, from behind, or when following behind emergency traffic.

Due to the weight of emergency vehicles, DPS emergency trucks cannot travel on the shoulder of the road. Ground Service Vehicle drivers must move to the right shoulder of the roadway (as far as the shoulder and the ground service vehicle’s weight will allow), come to a complete stop, and let the emergency vehicle(s) pass.

Authorized Non-Movement Area Drivers' Vehicle Access to the American Airlines/Delta Airlines Southeast Glycol Storage Area



This **ARFF Emergency** road leads from the **Terminal 5E/Airline Cargo** ramp, south to the **American (AA)** and **Delta (DL)** Airlines' **Southeast Glycol Storage** area. **AA** and **DL** ground service vehicles driven by non-movement area personnel are the **only** tenants authorized to use this road.

This access road to the **AA** and **DL** Southeast Glycol Storage area continues past the blast wall. **AA/DL** drivers must remain on this road depicted by the green arrows!

NON-MOVEMENT AREA DRIVERS DO NOT TURN LEFT WHERE THE RED ARROW INDICATES!



WHEN EXITING THE GYCOL STORAGE AREA, NON-AMA DRIVERS DO NOT TURN or PROCEED EAST towards the **Taxiways**, the **Southeast Hold Pad**, the **Southeast Perimeter Road** or the **Runways!** Travel beyond the point shown below, in those directions, requires an **Authorized Escort**.





The **DFW Aircraft Movement Area (AMA)** consists of the **runways, taxiways, and other areas** of an airport which are utilized for **taxiing, air taxiing** (helicopters), **takeoff, and landing** of aircraft, not including loading ramps and aircraft parking areas.

The Safety and Protected areas adjacent to **Movement Areas** are also considered part of those **runways, taxiways, and other areas** used for **taxiing, air taxiing, takeoff, and landing**.

Vehicles and/or persons that have a valid reason to enter or work in restricted areas such as **Runways or Taxiways** or their **Safety and Protected Areas, Object Free Areas, Obstacle Free Zones, and ILS Critical Areas**, and **ARE NOT AUTHORIZED UNESCORTED ACCESS** into the **Aircraft Movement Area**, must call the Airport Operations Center (**AOC**) at **972-973-3112**, to obtain approval for their operation and an Airfield Operations Escort.

ONLY designated, trained and certified **Movement Area** drivers **MAY CROSS** the **Non-Movement Area Boundary Marking** and enter the **AIRCRAFT MOVEMENT AREA**.

Non-Movement Area personnel must understand that the **Non-Movement Area Boundary Marking** signifies the lateral limit of the adjacent Taxiway and its paved and unpaved area.

Personnel or vehicles who locate themselves just beyond the pavement shoulders of a taxiway, and outside of the **NON-MOVEMENT AREA, ARE NOT CLEAR OF THE LATERAL LIMITS OF THE TAXIWAY'S PROTECTED AREA, AND ARE A THREAT TO THE SAFETY OF AIRCRAFT OPERATING ON THAT TAXIWAY!**

Non-Movement Area personnel crossing this line can expect to receive a **suspension** of their (the violator's) **SIDA Badge**, and prohibition of the violator from entering the **AOA**.

Surface Incidents and Runway Incursions

A **Surface Incident** is any event where an unauthorized movement by an aircraft, **vehicle, or pedestrian** occurs on the **Aircraft Movement Area** that affects or could affect the safety of flight. The term **Surface Incident** will apply only to non-runway locations such as taxiways.

Examples of a **Surface Incident** include:

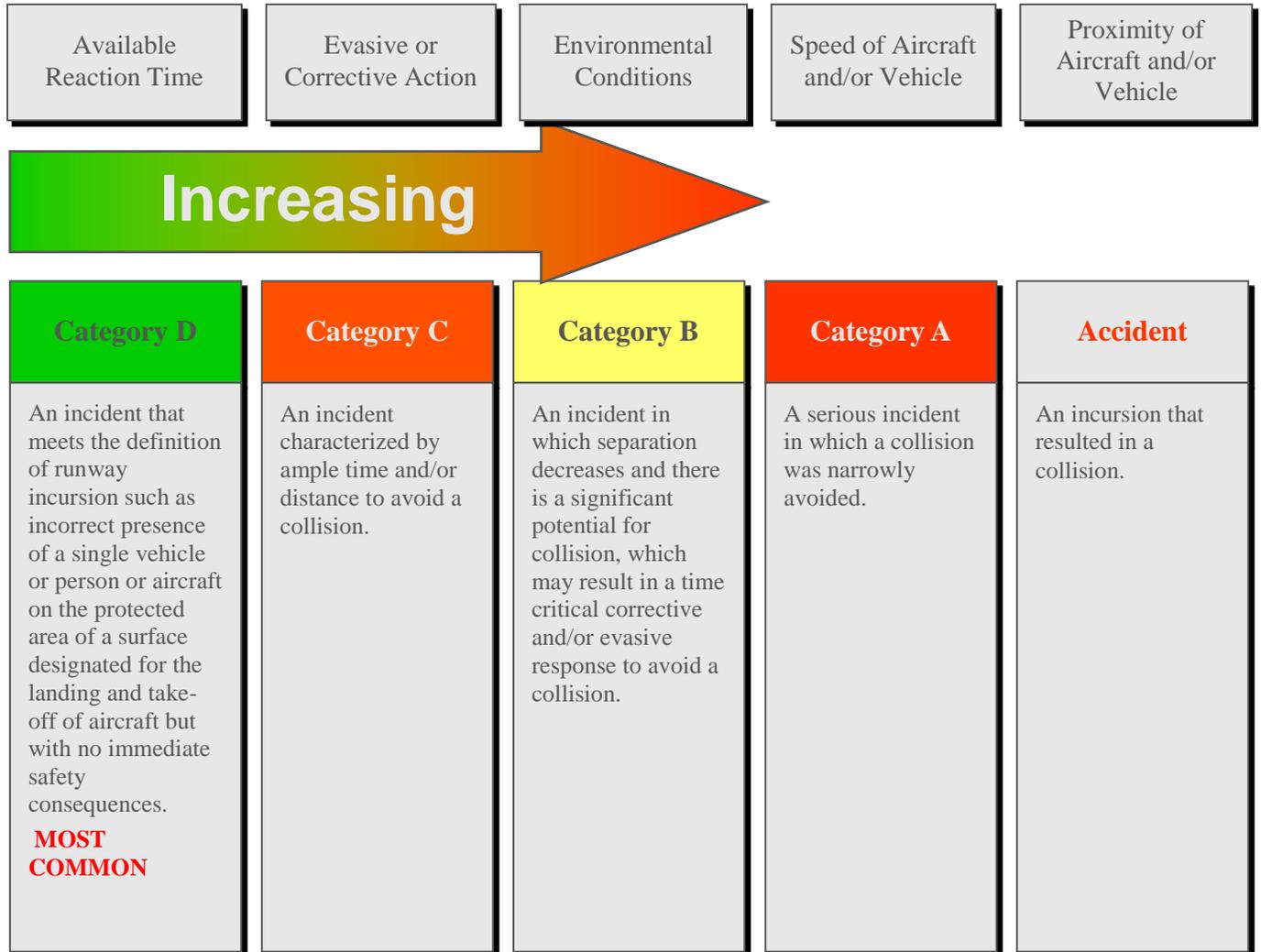
- **Airport Tenant vehicle operators** that are **not authorized unescorted access to the AMA**, driving past the **Non-Movement Area Boundary Marking**  and into the **Aircraft Movement Area**, without an **Airport Board** escort.
- Construction vehicles driving beyond the cone line defining the closed portion of the airfield that is their work area, into the **Aircraft Movement Area**, unescorted.
- **Airport Board-owned vehicle operators not authorized unescorted access to the AMA**, driving on an **ARFF** road that intersects with a **Taxiway**, and then crossing that **Taxiway**, unescorted.



Surface Incidents and Runway Incursions

A **Runway Incursion** is any occurrence at an aerodrome involving the incorrect presence of an aircraft, **vehicle, or person** on the protected area of the surface designated for the landing and take-off of aircraft.

The severity of a **Runway Incursion** is categorized by letter designation: **A, B, C,** and **D**. The category “**A**” **Runway Incursion** is the most severe.



Runway Incursions are classified and grouped into three types:

- 1) Operational Errors/Deviations (**OE/D**) – an air traffic controller commits an error
- 2) Pilot Deviations (**PD**) – commercial, general aviation, or military **pilot** error
- 3) **Vehicle & Pedestrian Deviations (V/PD)** – Airport Board vehicles, **ARFF** (Fire Trucks), Super Tugs, Tenant vehicles, delivery trucks, trash trucks, construction vehicles, fuel trucks, and pedestrians are examples of who commits this type of error.

Operational Errors OE/D	Pilot Deviations PD	Vehicle/Pedestrian Deviation V/PD
Action of an Air Traffic Controller that results in: Less than required minimum separation between 2 or more aircraft, or between an aircraft and obstacles, (vehicles, equipment, personnel on runways) or clearing an aircraft to take off or land on a closed runway.	Action of a pilot that violates any Federal Aviation Regulation Example: a pilot crosses a runway without prior authorization from FAA air traffic control.	Pedestrians or vehicles entering any portion of the runway environment without prior authorization from FAA air traffic control.

The three main causes of **Runway Incursions** are:

- 1) Breakdown in communications
- 2) Lack of airport familiarity
- 3) Loss of situational awareness (see next page)



Incident/Incursion Prevention By Using Situational Awareness

Situational awareness is the ability to identify, process, and comprehend the critical elements of information about where you are and what is happening around you. Situational awareness is a skill necessary to both ground and in-flight operations.

- **KNOW** where you are and where aircraft are operating around you at all times.
- **LISTEN AND LOOK** – be aware of your surroundings. Open the driver's window slightly.
- **LOCATE** where you want to go. If outside of the **NMA**, call for an Escort.
- **REQUEST** your selected/desired route if this routing requires approval.
- **COMPARE** your requested route with the route(s) you are directed to take.
- **WHEN IN DOUBT** get assistance by radio or telephone!

Always have a pre-planned route of travel prior to driving on or around the **AOA**. Never travel into locations where you are not permitted. If ever in doubt about anything, get help before getting yourself or others into a potentially dangerous situation.

Maintaining SITUATIONAL AWARENESS is essential to preventing surface incidents and runway incursions!



Escorting Ground Vehicles/Personnel

No motor vehicle shall enter the **Air Operations Area (AOA)** unless the vehicle displays an **AOA Vehicle Access Permit**, or is being escorted by an authorized escort of the **DFW Airport Board**, the **FAA**, or the airport tenant responsible for the **AOA** gate through which the person and vehicle is to enter.

When vehicle drivers being escorted are not familiar with the **AOA**, the vehicle driver(s) being escorted will receive a verbal explanation from the **DFW Airport Board Escort** on what will happen on the escort. The **DFW Airport Board Escort** will also brief that if that is necessary hand signals may be used to communicate with the driver(s) being escorted, and the signals will be discussed and demonstrated. The **DFW Airport Board Escort** will also brief the escorted driver(s) to remain(s) immediately behind the **DFW Airport Board Escort's** vehicle, with the standing instruction to **FOLLOW THE ESCORT AT ALL TIMES UNTIL RELEASED BY THE DFW AIRPORT BOARD ESCORT DRIVER FROM THE ESCORT ACTIVITY.**



Although this is the responsibility of the Escort Driver, the vehicle(s) being escorted should be aware of the following on any escort:

- Speed factor of the vehicles being escorted, particularly the slowest ones.
 - The slowest driving vehicle will be positioned directly behind the Escort vehicle. This will set the pace for the entire escorted convoy.
 - Keep in mind that large heavy equipment vehicles, such as a loaded dump truck or a convoy of many vehicles, cannot stop as fast as a car or pickup truck can.
- If escorting numerous vehicles back and forth from a gate to a construction site, the use of the same route of travel, avoiding taxiways/runways when possible, will help minimize **FOD**, the clean-up phase, and the closure-reopening inspection process.

The maximum ratio for escorting individuals in the **DFW SIDA** is one (1) **AOA** badged individual to five (5) non-**AOA**-badged individuals, **BUT**, in any event, non-badged individuals must remain within sight, and physical and voice control of their escort at all times.

Additionally, **DFW Airport Board** employees who provide escorts are required to:

- Physically meet with the party(s) to be escorted and verbally instruct them to follow the employee escort at all times as considerations of safety permit, and until the party(s) being escorted is(are) released by the employee performing the escort,
- Ensure the party(s) being escorted clearly understand their instructions,
- Confirm the escort release point with the party(s) to be escorted,
- Before beginning the escort, issue a laminated “Release/Pickup Point Escort Instruction Sheet” to the operator of each vehicle being escorted,
- Ensure the party(s) being escorted follow the employee escort at all times,
- Before releasing the party(s) being escorted, retrieve each of the laminated “Release/Pickup Point Escort Instruction Sheets” issued,
- Release the party(s) being escorted at the pre-determined Release Point

NOTE: Asphalt Shoulders and FAA Navigational Aid Roads

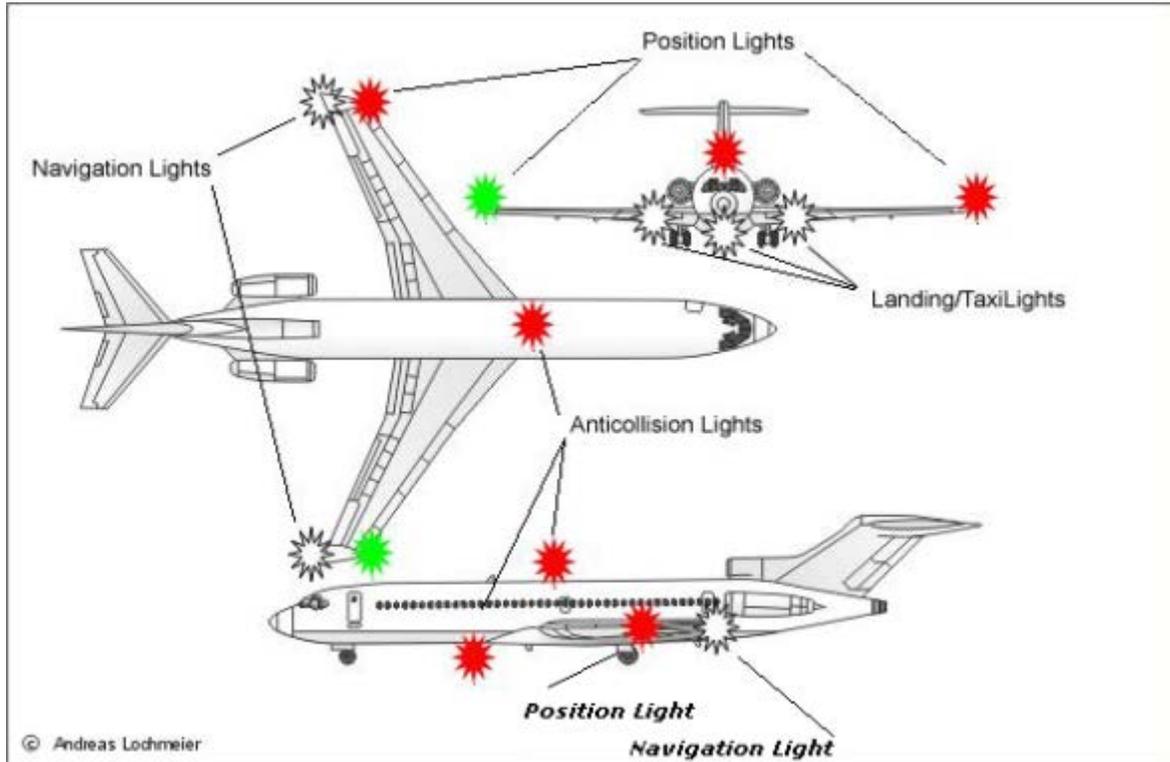
HEAVY equipment should avoid traveling on the soft asphalt surfaces of shoulders, blast pads, and **FAA** roads to prevent damaging the surface. If damage to the asphalt surface does occur, report the damage to **A**irport **O**perations **C**enter (**AOC**) at 972-973-3112.

Construction vehicles shall be marked with a 3'x3' orange and white checkered flag in lieu of overhead lighting.



Aircraft Lighting

When driving at night, or during low visibility conditions, it is important to be on the lookout for aircraft. Aircraft have lights placed at specific locations. Knowing the specific colors and placements of these lights will help you ascertain the size and direction of movement of the aircraft. Please study the graphic below and become acquainted with aircraft lighting.



- Anti-collision lights – These are rotating Beacons or strobe lights which can be red or white. The FAA recommends these lights be turned on anytime an aircraft's engines are running.
- Position/Navigation lights - An unobstructed red light on the left side and green on the right near the wing tips and a white light near the tail or on the wingtips, visible from the rear of the aircraft.
- Taxi/Landing Lights – Bright lights used during taxi, landing and take-off operations, during operations below 10,000 ft., and within ten nautical miles of an airport.

Appendix A: Key Acronyms/Definitions

AA – American Airlines
AACCS – Automated Access Control System
ACM – Airport Certification Manual
AE – American Eagle/Envoy Airlines
AEPs – Apron Entry/Exit Points
AMA – Aircraft Movement Area
ARFF – Aircraft Rescue and Fire Fighting
AOA – Air Operations Area
AOC – Airport Operations Center
ATC – Air Traffic Control
ATCT – Airport Traffic Control Tower
CA – Corporate Aviation
CFR – Code of Federal Regulation
CTA – Central Terminal Area
DFW – Dallas/Fort Worth International Airport
DL – Delta Airlines
DPS – Department of Public Safety
FAA – Federal Aviation Administration
FOD – Foreign Object Debris/Damage
NMA – Non-Movement Area
RSA – Runway Safety Area
SIDA – Security Identification Display Area
SMGCS – Surface Movement Guidance Control System
TRIP – Terminal Renewal and Improvement Program
TSA – Transportation Security Administration
UPS – United Parcel Service
VFR – Visual Flight Rules

Appendix B: Phonetic (ICAO) Alphabet and Numbers

DFW Board personnel who are authorized to communicate on **ATC** frequencies use the **International Civil Aviation Organization (ICAO)** phonetic alphabet. That phonetic alphabet is to be used when stating taxiway names and locations designated by letters.

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

<u>Numeral</u>	<u>Name</u>	<u>Pronunciation</u>
1	One.....	(WUN)
2	Two	(TOO)
3	Three	(TREE)
4	Four	(FOW-ER)
5	Five.....	(FIFE)
6	Six.....	(SIX)
7	Seven.....	(SEV-EN)
8	Eight.....	(AIT)
9	Nine	(NIN-ER)
0	Zero	(ZEE-RO)