ALO ATCT 7110.1G

WATERLOO ATCT

STANDARD OPERATING PROCEDURES

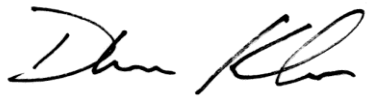
February 24, 2025

VATSIM MINNEAPOLIS ARTCC

VIRTUAL AIR TRAFFIC SIMULATION NETWORK

SUBJ: *ALO ATCT (ALO) Standard Operating Procedures*

This order prescribes air traffic control procedures and phraseology for use by Air Traffic Control Specialists at the Waterloo ATCT on the VATSIM network. Controllers are required to be familiar with the provisions of this order that pertain to their operational responsibilities and to exercise their best judgement if they encounter situations not covered by it.



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Order Record of Changes

Change	Description	Effective Date	Issued By
	Original Publication	February 24, 2025	DE

Paragraph *Page*

CHAPTER 1. GENERAL

1-1. PURPOSE OF THIS ORDER

This order defines the principle positions and procedural responsibilities for maintaining a safe and efficient operation within the Waterloo ATCT/TRACON and designates the jurisdictional boundaries.

1-2. DISTRIBUTION

All vZMP members.

1-3. CANCELLATION

Reserved.

1-4. EXPLANATION OF CHANGES

Initial release.

1-5. EFFECTIVE DATE

This order is effective February 24, 2025.

CHAPTER 2. INTRAFACILITY PROCEDURES

2-1. TABLE OF POSITIONS

The following positions are in use at Waterloo ATCT/TRACON:

Position Name	***Frequency***	***STARS ID***	***Callsign***
Radar	118.900	W	ALO_APP
Local Control	125.075	L	ALO_TWR
Ground Control/Clearance Delivery	121.900	G	ALO_GND

2-2. RELIEF BRIEFINGS

Checklists for each position can be found in Appendix 1.

2-3. RUNWAY HEADING

The runway heading for each runway is as follows:

1. Runway 12 – 120°
2. Runway 18 – 180°
3. Runway 30 – 300°
4. Runway 36 – 360°

When fan headings are needed for separation, runway heading will be issued as stated above.

2-4. DEPARTURE CORRIDOR

The departure corridor is 20° left and right of the runway heading of the designated departure runway; surface to 4000 MSL, starting at the departure end extending to 10 Nautical Miles (NM) range mark of the Waterloo ASR.

Example-
Runway 30 departure corridor is 280° - 320°

CHAPTER 3. CLEARANCE DELIVERY/GROUND CONTROL

3-1. LATERAL BOUNDARIES

The lateral boundaries of the Ground Control position are all movement areas, excluding the designated active runway(s) and its protected area, and the helipads located between the east end of Taxiway A and the National Guard ramp.

3-2. CLEARANCE DELIVERY/GROUND CONTROL DUTIES

a. Receive, formulate, issue clearances/instructions, and ensure pilot read back accuracy.

b. Apply flow restrictions, as required.

c. Coordinate with other positions.

d. Issue ground movement instructions.

e. Process flight progress strips.

f. Conduct and receive position relief briefings.

3-3. GROUND MOVEMENT

a. Ground Control shall exchange information as necessary for safe and efficient use of airport runways and movement areas.

b. Ground Control shall coordinate crossing the active runway and the helipads.

c. Ground Control shall coordinate prior to taxiing departing aircraft to non-active runways. The runway is active as soon as taxi instructions are issued and remains active until returned to Ground Control.

d. Ground Control may approve intersection departures in accordance with FAA JO 7110.65. All intersection departures shall be coordinated with Local Control.

Note - Local Control may disapprove the use of an intersection departure when traffic conditions do not permit the use of that intersection.

e. All operations on an active runway, other than crossing, shall be on Local Control frequency.

3-4. FORMULATE CLEARANCES/INSTRUCTIONS

Ensure that the following items are included in an IFR/VFR-On-Top/SVFR clearance.

a. Aircraft identification

b. Clearance limit

c. Route of flight

d. Altitude

1. IFR – 4000

2. On Top (OTP) – Clearance with a 4000 MSL restriction

3. SVFR – At or below 4000 MSL

e. Departure frequency

f. Transponder code

3-5. VFR AIRCRAFT

a. Assign departure frequency and formulate departure strips to all participating basic radar service aircraft.

b. Enter basic radar service flight plans in STARS.

c. Issue departure frequency and assigned beacon code to aircraft.

3-6. FLIGHT PROGRESS STRIPS

a. Deliver marked strips to Local Control.

CHAPTER 4. LOCAL CONTROL

4-1. VERTICAL-LATERAL BOUNDARIES

a. The vertical and lateral boundaries of the Local Control position include:

1. The area within a five nautical mile (NM) radius of the Waterloo Airport Surveillance Radar (ASR) from the ground up to and including 4000 feet MSL.

2. The departure corridor. (see para. 2-4).

3. The designated active runway(s) and its/their protected area(s).

4. The helipads located between the east end of Taxiway A and the National Guard ramp.

b. The transfer of communications point between the Tower and Radar.

1. IFR departures – Prior to leaving the departure corridor.

2. IFR arrivals – No later than 5 NM, but no more than 15 NM.

4-2. POSITION DUTIES AND RESPONSIBILITIES

a. Determine and issue instructions relative to sequencing and separating arriving and departing aircraft.

b. Assign runways.

c. Utilize the Terminal Display Workstation (TDW). The TDW must display a minimum of 20 NM from ALO ASR.

d. Conduct, receive, and record position relief briefings.

e. Coordinate with Ground Control prior to use of non-active runway and when returning runway to nonactive status.

f. Issue safety alerts to aircraft when aware that the aircraft is in a position/altitude which places it in unsafe proximity to terrain, obstructions, or other aircraft.

g. Determine when traffic, weather, or airport conditions preclude visual approaches.

h. Determine minimum spacing interval between arriving aircraft based on conditions.

i. Be responsible for providing/ensuring separation between:

1. Successive departures

2. Arrivals and departures including actual or possible missed approaches.

j. Issue headings as appropriate to IFR/SVFR departure aircraft so they will remain within the active departure corridor. Local Control can operate up to, but must not cross, the boundary of the designated active departure corridor.

k. All IFR departures off the designated departure runway should normally be issued runway heading (see para. 2-3), unless a fan heading is needed for separation.

l. All VFR departures will normally be on-course, however, if given a heading, indicate the heading on the strip.

m. Issue circling instructions to aircraft on circling approaches.

n. Obtain a release from Arrival/Departure Control for all IFR aircraft that will depart from the non-active runway and issue runway heading, unless coordinated differently. Release is valid for 3 minutes.

o. All SVFR operations must be approved by Radar. Coordinate all start and stop times.

p. Set the quick look function to display all active control positions.

q. Arriving VFR aircraft should be instructed how to enter the traffic pattern by the Local controller.

4-3. RUNWAY USAGE

Use the runway most nearly aligned with the wind when five knots or more, or the “calm wind” runway (30) when less than five knots, unless another runway will be operationally advantageous or requested by the pilot. Verbally coordinate any changes to IFR/SVFR aircraft’s landing runway with the radar controller.

4-4. TRANSFER OF COMMUNICATIONS

a. Ensure transfer of communications is completed by five miles, but not more than fifteen miles for arrivals.

b. Ensure verbal coordination has been completed prior to transferring control of aircraft maintaining visual separation

4-5. MISSED APPROACHES/GO-AROUNDS

a. LC shall:

1. Always remain cognizant of the possibility of an unplanned missed approach/go-around when formulating same runway/crossing runway takeoff and landing clearances. Be prepared to issue immediate de-confliction control instructions. Fly-overs and encounters with wake turbulence should be avoided.

2. Unless otherwise coordinated, instruct aircraft that execute an unplanned missed approach/go-around to fly runway heading or the heading necessary to establish initial separation within the departure corridor and maintain 4000 ft. Prepare and forward a departure strip to the radar position in a timely manner, as appropriate.

3. In the event LC retains a go-around in the pattern for re-sequence, coordinate through a point-out to the radar position any local traffic that may not be retained within the tower's delegated airspace.

b. The radar controller is responsible for issuing planned missed approach instructions and shall radar identify all missed approach/go-around aircraft under their control per FAA JO 7110.65. If verbal/nonverbal rolling boundary notification is not received from LC, use identification methods (IDENT).

NOTE –
IFR aircraft on a visual approach or instrument approach that execute a missed approach/go-around continue to receive IFR service until the aircraft lands or cancels IFR. When visual separation, either tower applied or pilot applied, cannot be achieved and sustained, controllers must issue instructions to establish separation.

NOTE –
IFR aircraft on a visual approach that execute a go-around and are retained in the pattern for resequencing remain "cleared for visual approach". Therefore, it is not appropriate for LC to assign the Minimum Vector Altitude (MVA). There is no published pattern altitude for Waterloo Regional Airport. If the pilot requests an altitude assignment for the pattern, issue "at or below 2500".

CHAPTER 5. RADAR

5-1. VERTICAL AND LATERAL BOUNDARIES

The lateral boundaries of the Waterloo approach airspace are as depicted in the Minneapolis ARTCC/Waterloo ATCT Letter of Agreement up to and including 10,000 ft. MSL.

a. The transfer of control points between the Tower and Radar are:

1. IFR departures – Prior to leaving the departure corridor.

2. IFR arrivals – No later than 5 NM, but no more than 15 NM.

5-2. APPROACH CONTROL POSITION DUTIES AND RESPONSIBILITIES

a. Ensure radar separation standards and handoff procedures are applied.

b. Provide appropriate radar services to IFR and basic radar service aircraft.

c. Establish and maintain positive radar identification.

d. Provide non-radar separation when required.

e. Conduct, receive and record position relief briefings.

f. Quick look all positions to provide constant identity of all aircraft in your jurisdiction.

g. Ensure vertical separation is utilized between aircraft that are on opposite base legs until another form of separation exists.

h. Inform Local Control (LC) of arriving IFR, SVFR and basic radar service aircraft via STARS. Runways other than the designated arrival runway must be indicated in the STARS scratch pad area. Request approval from Local Control verbally (include a position report, not more than 20 miles from the airport) for all IFR and SVFR aircraft which will enter the protected departure airspace for the designated departure runway.

i. Ensure that arrivals or overflight traffic requiring IFR separation remain 3 miles laterally or 1000 feet vertically from the designated active departure corridors unless coordinated.

j. STARS automation may be used to accomplish point-outs through Tower’s designated airspace.

k. Unless coordinated, transfer communications to Tower prior to 5, but not more than 15 miles from the airport. Instruct aircraft to contact the tower in the order they are sequenced.

l. Inform LC of aircraft which will execute a planned missed approach via STARS. Coordinate alternate climb out instructions verbally

m. LC will issue circling instructions to aircraft on circling approaches

n. Unless verbally coordinated, Approach Control shall assume control of departing aircraft for turns away from runway heading of the designated departure runway (see para. 2-3), and beacon code changes.

o. Assign altitudes in accordance with Appendix 3, Minimum Vectoring Altitude (MVA) Chart.

p. Ensure verbal coordination has been completed prior to transferring control of aircraft maintaining visual separation.

5-3. AUTOMATED HANDOFF PROCEDURES

Handoffs to adjacent approaches are accomplished with the following identifiers:

1. CID - Δ1

2. RST - Δ2

3. DSM - Δ3

APPENDIX 1. POSITION CHECKLISTS

RADAR POSITION RELIEF BRIEFING

a. Status information area
b. Weather
c. PIREPs/SIGMETs/NOTAMs
d. Equipment status/outages
e. Airport Conditions/Activities
f. Status of all runways
g. Frequency changes
h. Restrictions
i. Communication status/Traffic

LOCAL CONTROL POSITION RELIEF BRIEFING

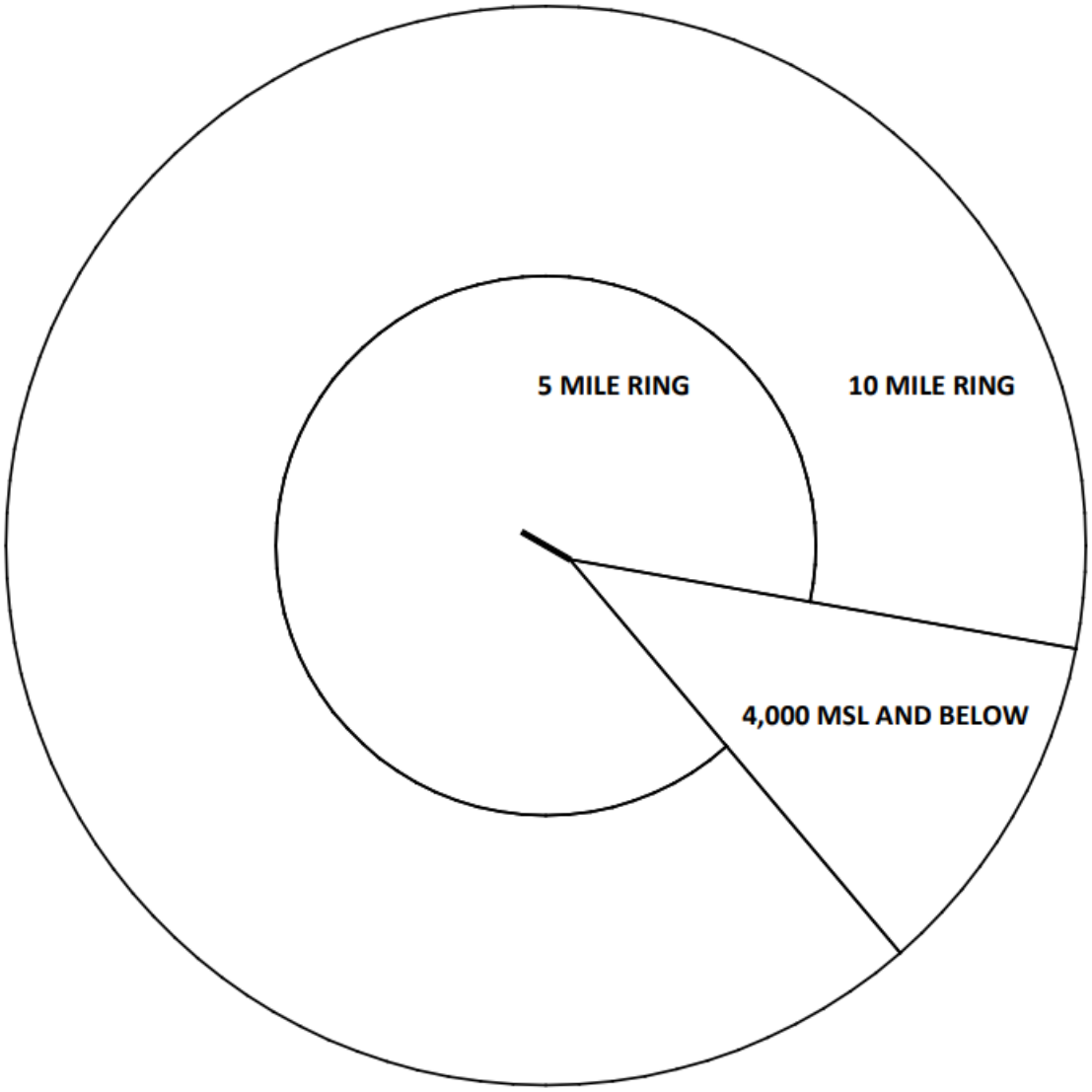
a. Status information area
b. Weather
c. PIREPs/SIGMETs/NOTAMs
d. Equipment status/outages
e. Airport Conditions/Activities
f. Status of all runways
g. Departure restrictions
h. Communication status/Traffic

CLEARANCE DELIVERY/GROUND CONTROL POSITION RELIEF BRIEFING

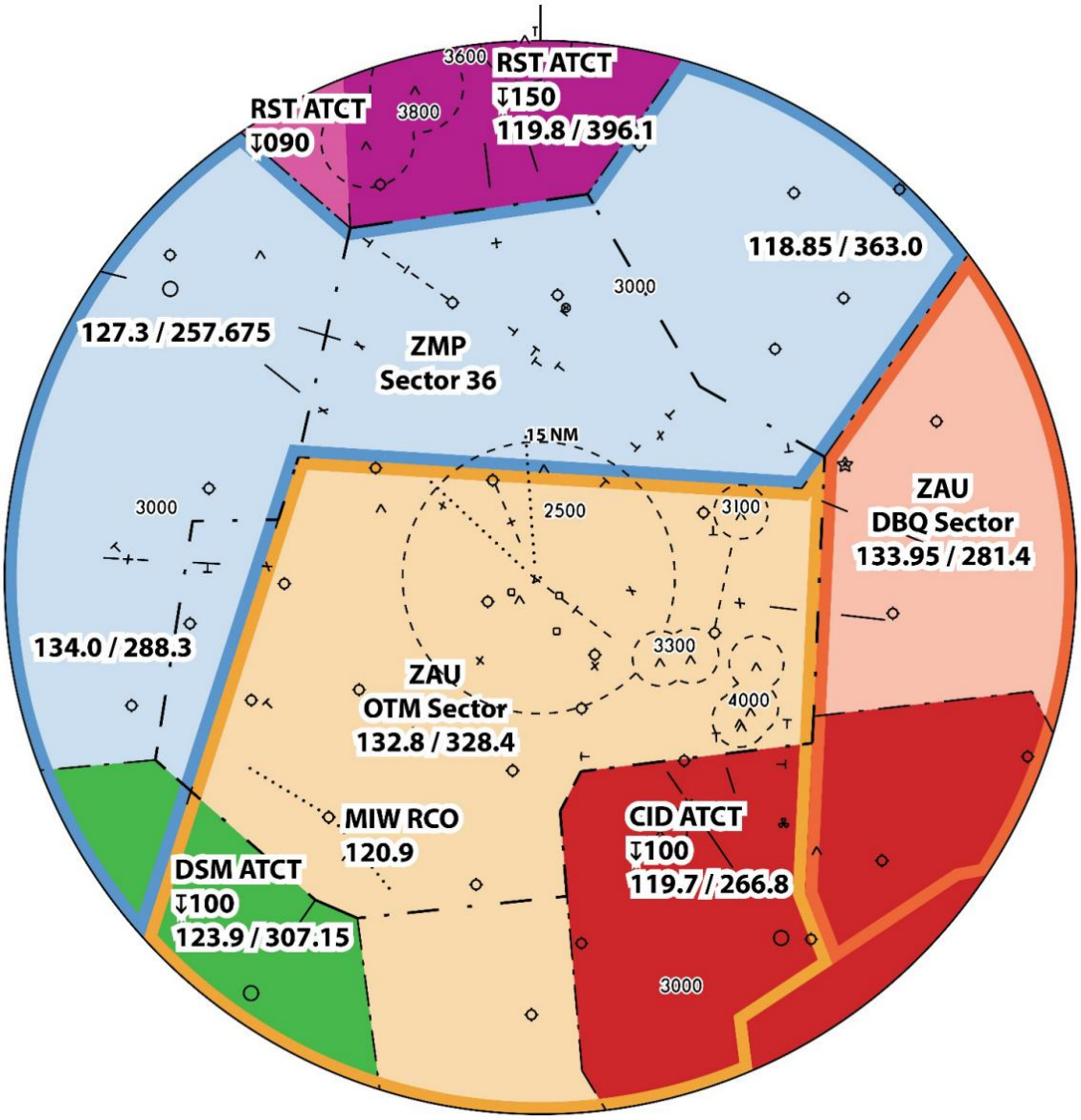
a. Status information area
b. Weather
c. PIREPs/SIGMETs/NOTAMs
d. Equipment status/outages
e. Airport Conditions/Activities
f. Status of all runways
g. Communication status/Traffic

APPENDIX 2. DESIGNATED DEPARTURE AIRSPACE CHART

Departure airspace for all runways at Waterloo Air Traffic Control Tower is 4000 MSL and below for the respective departure runway.



APPENDIX 3. MINIMUM VECTORING ALTITUDE CHART



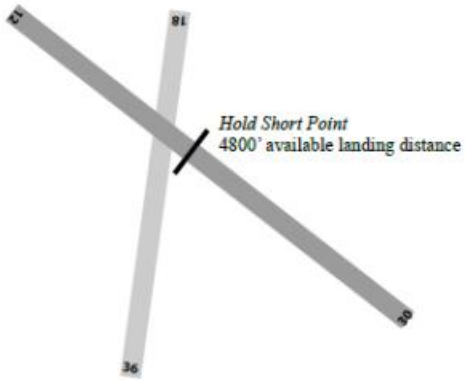
APPENDIX 4. LAND AND HOLD SHORT OPERATIONS (LAHSO)

Land and Hold Short Operations (LAHSO) shall be conducted in accordance with FAA JO 7110.118. Eligible aircraft are categorized into groups based on the available landing distance (ALD) and can be found in FAA JO 7360.1.

Authorized LAHSO runways:

Runway	Hold-Short Point	ALD	Group	Designation
30	RWY 18/36	4800’	5 & Below	Day
36	RWY 12/30	3650’	3 & Below	Day

Land Runway 30, Hold Short Runway 18/36



Land Runway 36, Hold Short Runway 12/30