

Washington-Dulles Air Traffic Control Tower

Standard Operating Procedures

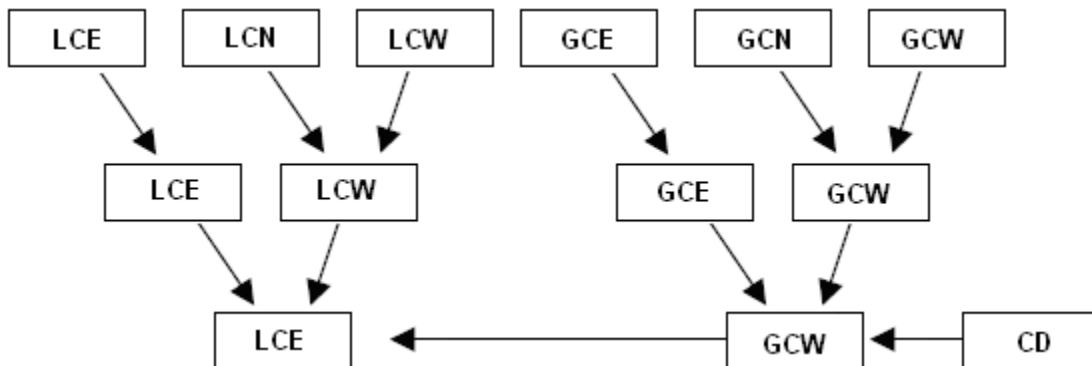
- 1) **Purpose** This order defines duties and responsibilities, depicts areas of airspace, runways, and taxiways allocated to each position and provides supplemental direction as necessary for each position of operation within the Dulles Air Traffic Control Tower (ATCT).
- 2) **Distribution** This order is distributed to all IAD ATCT personnel.
- 3) **Positions**

<u>Position</u>	<u>Abbreviation</u>	<u>Frequency</u>	<u>ARTS ID</u>	<u>Callsign</u>	<u>Relief Callsign</u>	<u>Voice Room</u>
Local Control East***	LCE	120.10	3T	IAD_E_TWR	IAD_E1_TWR	IAD_3T
Local Control West	LCW	134.42	3W	IAD_W_TWR	IAD_W1_TWR	IAD_3W
Local Control North	LCN	120.25	3V	IAD_N_TWR	IAD_N1_TWR	IAD_3V
Ground Control East	GCE	121.95	3E	IAD_E_GND	IAD_E1_GND	IAD_3E
Ground Control West***	GCW	132.45	3G	IAD_W_GND	IAD_W1_GND	IAD_3G
Ground Control North	GCN	121.62	3D	IAD_N_GND	IAD_N1_GND	IAD_3D
Clearance Delivery	CD	135.70	3C	IAD_DEL	IAD_C_DEL	IAD_3C

- a. ***Indicates primary positions
- b. All Local Control positions have "T" ARTS Tag.
- c. When operating with only one (1) Local and one (1) Ground Controller
 - i. LCE shall use IAD_TWR as the callsign and IAD_E_TWR in relief.
 - ii. GCW shall use IAD_GND as the callsign and IAD_W_GND in relief.

4) **Opening Additional Positions** Additional IAD ATCT positions may be opened only when authorized by the ATM or DATM.

5) **Combining Positions** Positions and responsibilities shall be combined as follows:



Local Control (LC)
General Information and Procedures

1) General

- a. Local Control shall be responsible for separation between:
 - i. Successive departures.
 - ii. Departures and arrivals.
 - iii. Departures and missed approaches/go-arounds.
 - iv. Tower local traffic and over flights – from departures, arrivals and go-arounds.
- b. Local Control shall determine the active runways
- c. Local Control shall maintain the ATIS.

2) Active Runway Selection

- a. The Runway 19L/19C/19R/30 configuration (South Operations with 30) is the **Calm Wind** runway configuration and shall be used when winds are less than 5 knots. Other runway configurations may be used with calm winds if it provides an operational advantage.
- b. Use the following table to determine the active runways based on the wind direction when the winds are 5 knots or greater.

<u>Wind Direction</u>	<u>Active Runways</u>	<u>Configuration Name</u>
281 clockwise to 030	1L, 1C, 1R and 30	North Ops with 30
031 clockwise to 100	1L, 1C and 1R	North Ops
101 clockwise to 210	19L, 19C, 19R and 12	South Ops with 12
211 clockwise to 280	19L, 19C, 19R and 30	South Ops with 30
-	19L, 19C and 19R	South Ops

- c. Runway 1L/19R - Due to the lengthy taxi to/from the terminal area:
 - i. Runway 1L shall only be used for departures.
 - ii. Runway 19R shall only be used for arrivals.
- d. Runway 12 shall only be used for arrivals and may only be used when the 19s are active.
- e. Runway 30 shall only be used for departures unless the winds are greater than 25kts and align with Runway 30 more than any other runway.

3) Runway Configurations

- a. See Appendix 2 for the *Runway Configuration and Assignments* tables.
- b. The TRACON shall select the type of approach in use and coordinate with the appropriate Local Control prior to change. If an aircraft is conducting a type of approach other than the one being advertised, coordination shall be effected either verbally, via chatbox or through the use of the scratchpad.
- c. If Runway 30 is required for arrivals, SHD-IADFE shall use the ILS 1R circle to 30.

4) Change in Runway Direction of Operation Checklist

- a. Coordinate the first and last arrival/departure for each runway with SHD IADFW.
- b. Upon notification by SHD IADFW, ensure departures are stopped for sector reconfiguration.
- c. Ensure departures are held until SHD IADFW releases them.
- d. Inform Ground Control and Ramp Control of the new departure configuration and where to stage aircraft for departure.
- e. Ensure coordination is accomplished with all tower personnel.
- f. SHD IADFW shall inform LCE the sector reconfiguration is complete and when departures are released.
- g. Ensure the ATIS has been updated and reflects the proper status.

5) Forwarding Departure Information Forward departure information and the departure sequence to ASPER or TILLY via the chat box or override unless requested otherwise.

- a. Rolling Calls shall be made no sooner than when the aircraft commences departure roll and no later than the aircraft reaching the departure end of the runway.

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- b. Release Requests shall be made up to five (5) minutes prior to aircraft beginning their departure roll.
- c. Rolling Calls and Release Requests shall include the following information:
 - i. Call sign.
 - ii. Departure runway.
 - iii. IFR departure fix, initial route, or name of local airport/destination, and the term "VFR" if appropriate.
 - iv. Heading if non-standard or additional information/restrictions as needed/required.
 - v. Ensure that aircraft taxied to non-designated departure runways have been coordinated accordingly with the appropriate Local Control positions.

Example: UAL123 30 LDN

6) Simultaneous Runway Use

- a. Runways 1L/19R, 1C/19C and 1R/19L shall be operated independently of each other. LC shall ensure there will be no conflicts with traffic departing or executing a missed approach on another runway when assigning departure headings.
- b. Issue traffic advisories to landing traffic when conducting simultaneous approaches by advising them of other arriving and departing traffic.

7) Line Up and Wait (LUAW) LUAW procedures are authorized at IAD. Such operations are generally viewed as necessary to maintain airport efficiency. Use LUAW when it is expected the aircraft will depart after conflicting traffic is clear of the runway/intersection. Utilize good operating practices and memory aids as needed when using LUAW procedures.

- a. The landing clearance need not be withheld if traffic is holding in position.
- b. Withhold landing clearance when the ceiling is less than 800 ft or visibility is less than 2 miles. Or do not use LUAW for departures between successive arrivals.

8) Departure Headings

- a. All departures shall fly Runway Heading per the CAPITAL-DP unless assigned otherwise by LC. LC need not say "fly runway heading" or assign the headings shown on the DP.
- b. Predetermined departure headings are listed in Appendix 2 of this SOP and are to be used only when requested by ASPER.

9) Missed Approaches / Go Arouns The Tower shall inform the appropriate departure controller of a missed approach/go-around. Coordinate with all other Local Control positions prior to issuing turns away from the runway heading. Unless otherwise coordinated, issue the following instructions to missed approach/go-around aircraft for the corresponding runways:

- a. Runways 19L, 19C or 19R – assign a heading from 190 thru 230 as necessary, climb to 2000 feet, and handoff to TILLY, 126.65.
- b. Runways 1L, 1C, or 1R – assign a heading from 340 thru 360 as necessary, climb to 2500 feet, and handoff to ASPER, 125.05.
- c. Runway 12 – after ensuring separation from other arrivals and departures, assign a heading from 190 thru 230 as necessary, climb to 2000 feet, and handoff to TILLY, 126.65.
- d. Runway 30 – fly runway heading, climb to 2000 feet, and handoff to ASPER, 125.05.

10) Transfer of Communications

- a. Communications transfer should take place within 1 NM of the departure runway end. Transfer of control and communications occur simultaneously.
- b. LC must notify departure control of any take-off cancellations or aborts which occur after the Release Request or Rolling Call has been made.

Local Control Positions**Local Control East (LCE)****1) Responsibilities**

- a. LCE is the Tower Cab Supervisor.
- b. LCE shall have jurisdiction for the LCE airspace depicted in Appendix 1 and for Runway 1R/19L.
- c. LCE is responsible for determining the active runways.
- d. LCE is responsible for maintaining the ATIS.

2) Position Information

- a. Frequency: 120.10
- b. Callsign: IAD_E_TWR
- c. ARTS ID: 3T

3) Helicopter Operations LCE shall control helicopters landing/departing the airport to/from the east.

- a. Accept or deny handoff/point-out from LCW on helicopter traffic over flying the airport west to east at or below 2,000 feet.
- b. Handoff or point out helicopters inbound to Landmark from northeast through southeast clockwise or traffic over flying the airport east to west at or below 2,000 feet to LCW.

Local Control North (LCN)**1) Responsibilities** LCN shall have jurisdiction for Runways 1C/19C. This position does not have control of any airspace except for that airspace directly north and south of the runway which is used for arriving and departing traffic.**2) Position Information**

- a. Frequency: 120.25
- b. Callsign: IAD_N_TWR
- c. ARTS ID: 3V

Local Control West (LCW)**1) Responsibilities** LCW shall have jurisdiction for the LCW airspace depicted in Appendix 1 and for Runways 1L/19R and 12/30.**2) Position Information**

- a. Frequency: 134.42
- b. Callsign: IAD_W_TWR
- c. ARTS ID: 3W

3) Helicopter Operations

- a. LCW must receive a point-out from LCN prior to crossing Runway 1C/19C.
- b. LCW shall control helicopters landing/departing Landmark to/from the west.
- c. LCW shall accept or deny handoff/point-out from LCE on helicopter traffic inbound to Landmark from the east or traffic over flying the airport east to west at or below 2,000 feet.

**Ground Control (GC)
General Information and Procedures**

- 1) **General** GC shall be responsible for aircraft movement on taxiways and those runways designated as non-active.
- 2) **Helicopter Movements** When advised of helicopter movement by LC to/from other than active runways, exchange pertinent traffic information and approve or disapprove the movement as appropriate.
- 3) **ATIS** Ensure all departing aircraft have current ATIS code.
- 4) **General Aviation Parking** General Aviation aircraft shall be directed to one of the fixed base operator parking areas unless requested otherwise by the pilot.
 - a. Dulles Jet Center – Approach end of RWY 19L
 - b. Landmark Aviation – Approach end of RWY 19C
- 5) **Midfield Ramp Area** The Midfield Ramp is a non-movement area. GC cannot approve push backs or startups. When RAMP is not open and multiple departure runways are in use, CD shall inform departures to contact GCE prior to push-back to determine the runway in use.
 Note: If only one runway is being used for departures, that information is included in the ATIS and departures should not be instructed to contact CG for their runway assignment. Be sure aircraft have the proper ATIS code prior to taxi.
- 6) **Taxiway Directions** Use the following taxi routes for arrival and departure aircraft. A deviation from this is approved as long as coordinated with all other Local and Ground Control's.

North Operations		
Active Runway	Taxiway	Taxiway Direction
1L / 1C	YANKEE North of ALPHA	Northbound
	YANKEE South of ALPHA	Southbound
	ZULU	Southbound
1R	KILO	Northbound
	JULIET	Southbound
30	Departures - ZULU to QUEBEC	

South Operations		
Active Runway	Taxiway	Taxiway Direction
19C	YANKEE	Southbound
	ZULU	Northbound
19L	JULIET	Arrivals Only
	KILO	Departures Only
12 / 19R	Arrivals - QUEBEC then left on ZULU***	
30	Departures - YANKEE left on Y11 or QUEBEC	

***LCW shall instruct Runway 12 arrival aircraft to hold short of Y and handoff to GCW.

- 7) **Frequency Change to Tower** LC shall decide whether departures shall **contact** or **monitor** tower's frequency. This must be coordinated with the appropriate GC. The following are suggestions on when to use each method that provide the most efficiency.

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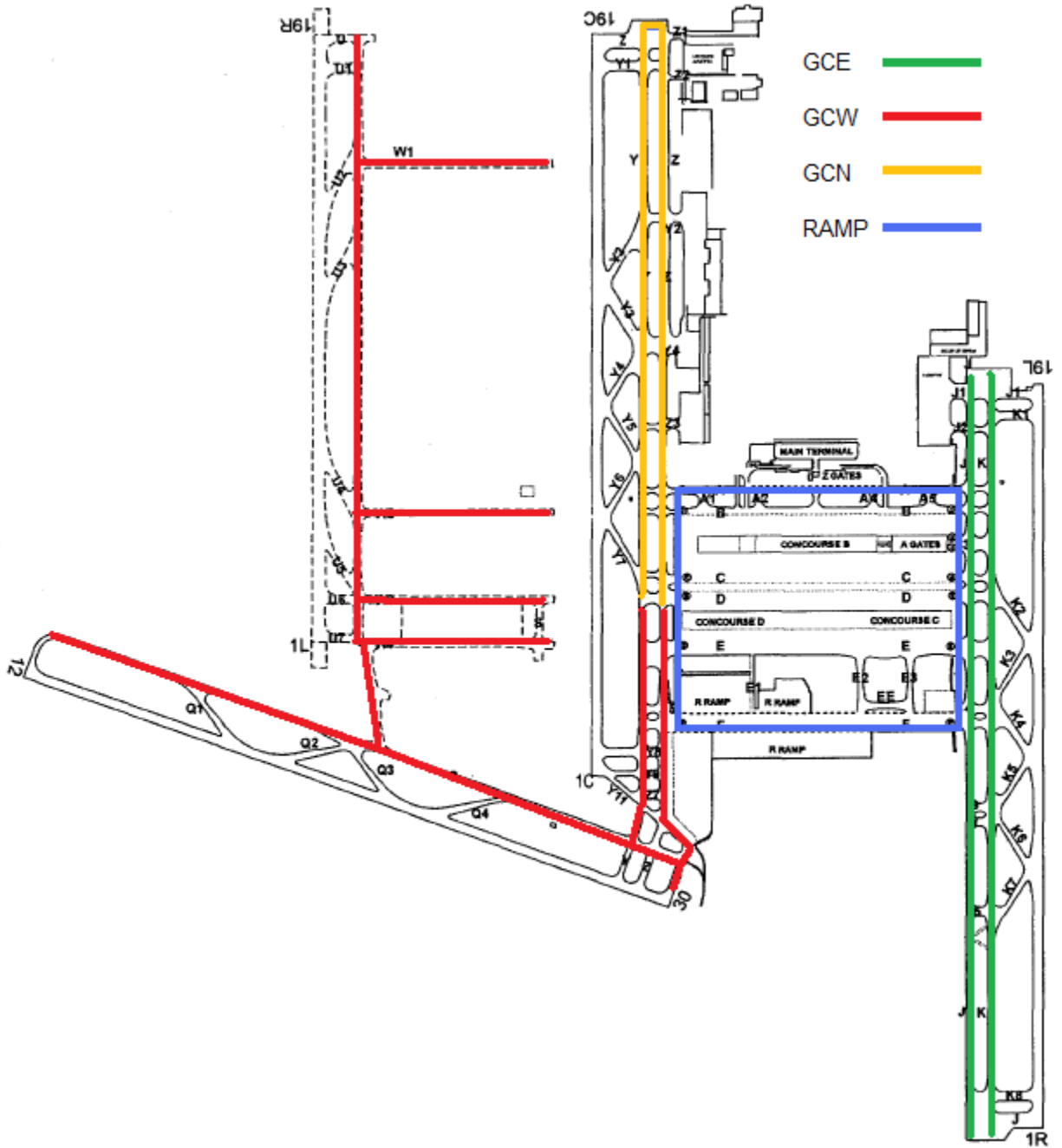
- a. GC shall use “**contact tower**” once the departure is sequenced and holding short of the departure runway. This is recommended during periods when traffic is light. In most cases the pilot will call tower when they are ready for takeoff.
- b. GC shall use “**monitor tower**” once the departure is in line in the departure sequence. This is recommended during periods when traffic is heavy. In most cases, the departures are in line and on the tower frequency waiting for instructions. Tower will call the departure when instructions need to be given. This reduces LC’s frequency congestions because pilots are not wasting frequency time checking in, rather waiting for somebody to call them.

8) Departure Runway Assignments

- a. After considering such things as flow restrictions, current arrival demand and the overall efficiency of the departure flow, assign runways/intersections to departing aircraft per Appendix 2.
- b. Prior to taxiing a departing aircraft to a runway other than the appropriately designated runway for the configuration in use, obtain approval from the appropriate LC.

9) Procedures for Multiple Ground Controls Assigning Ground Controls

- a. Clearance Delivery shall...
 - i. Instruct aircraft parked at Landmark to contact GC on 121.625. (132.45 if combined at GCW).
 - ii. Instruct aircraft parked at Dulles Jet Center to contact GC on 121.950.
- b. Two Ground Controls
 - i. Aircraft taxiing off the Midfield Ramp from spots 70, 72, 78, 80 and 82 shall contact GCW on 132.45
 - ii. Aircraft taxiing off the Midfield Ramp from spots 71, 73, 75, 77, 79, 81, and 83 shall contact GCE on 121.9.
- c. Three Ground Controls
 - i. Aircraft taxiing off the Midfield Ramp from spots 70, 72, and 78 shall contact GCN on 121.625
 - ii. Aircraft taxiing off the Midfield Ramp from spots 80 and 82 shall contact GCW on 132.45
 - iii. Aircraft taxiing off the Midfield Ramp from spots 71, 73, 75, 77, 79, 81, and 83 shall contact GCE on 121.9.



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Ground Control East (GCE)**1) Position Information**

- a. Frequency: 121.95
- b. Callsign: IAD_E_GND
- c. ARTS ID: 3E

- 2) Areas of Jurisdiction** GCE has jurisdiction for all J and K taxiways, and Runway 19L/1R run-up blocks.

Ground Control West (GCW)**1) Position Information**

- a. Frequency: 132.45
- b. Callsign: IAD_W_GND
- c. ARTS ID: 3G

- 2) Areas of Jurisdiction** GCW has jurisdiction for all Z, Y, and Q taxiways south of Taxiway D and the Runway 30 run up block.

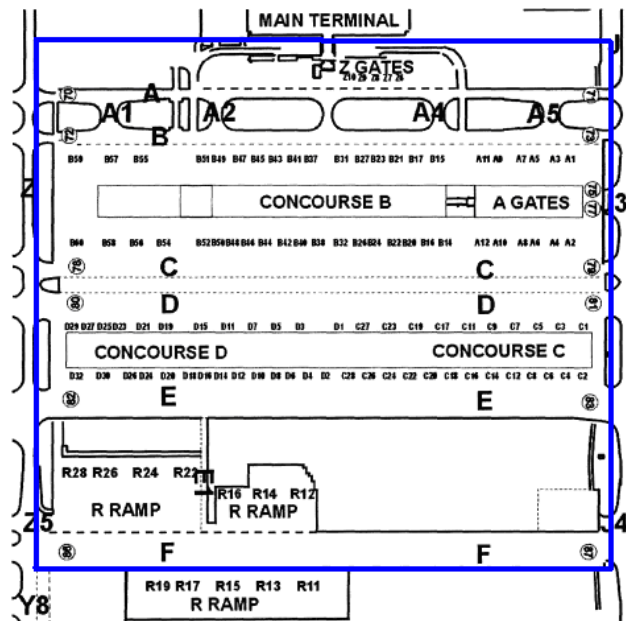
Ground Control North (GCN)**1) Position Information**

- a. Frequency: 121.62
- b. Callsign: IAD_N_GND
- c. ARTS ID: 3H

- 2) Areas of Jurisdiction** GCN has jurisdiction for all Z and Y taxiways north of Taxiway D, and for the Runway 19C run up block.

Ramp Control (RAMP)

- 1) **General** The midfield ramp area is a non-movement area and in the real world it is operated by the Metropolitan Washington Airport Association (MWAA), not the FAA. We have created a Ramp Control position to establish order on the midfield ramp area during events or periods of heavy traffic. During normal operations on VATSIM, no controller is responsible for aircraft movement in this area. That means pilots may push back and startup at will. When RAMP is closed, GC does not assume the RAMP position and duties. When RAMP is open, it does not assume the Clearance Delivery position and duties, those remain with GCW.
- 2) **Opening RAMP** Ramp Control may only be opened when authorized by the ATM or DATM.
- 3) **Position Information**
 - a. Frequency: 129.55
 - b. Callsign: IAD_R_GND
 - c. ARTS ID: 3P
- 4) **Areas of Jurisdiction** RAMP has jurisdiction for the midfield ramp area (outlined in blue below) which includes taxiways A, B, C, D, E, and F between J and Z.



- 5) **Procedures**
 - a. RAMP shall approve all push backs in the midfield ramp area and inform aircraft which way to push their tail. Runway 1R/19L shall "push tail west" and Runways 1L/19R, 1C/19C and 30 shall "push tail east."
Example: "UAL123 push approved, push tail west, call when ready to taxi."
 - b. Use the table in the Runway Assignments section to determine which runway to use based on the departure gate and runway configuration. Ground Control may change runway assignments as needed.
 - c. When aircraft are ready to taxi, instruct aircraft to:
 - i. Runway 1R/19L: Taxi east off the ramp, hold short of J, and contact ground on 121.9 when #1.
 - ii. Runway 1/19R, 1C/19C, 30: Taxi west off the ramp, hold short of Z, and contact ground on 132.45** when #1.

**If GCN is open, aircraft on taxiways A, B, and C shall use 121.62 and aircraft on taxiways D and E shall use 132.45.

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Clearance Delivery (CD)

1) **Responsibilities** Issue ATC clearances to all departing aircraft.

2) **Position Information**

- a. Frequency: 135.750
- b. Callsign: IAD_DEL
- c. ARTS ID: 3C

3) **IFR Departures**

- a. Issue either the CAPITAL standard instrument departure or a clearance to expect "radar vectors" to the first fix (see table below).
- b. Assign 3,000 feet to all IFR departures and an altitude to expect 10 minutes after departure. When an aircraft's clearance has been revised, restate the altitude to maintain and the altitude to expect 10 minutes after departure.
- c. Issue the appropriate departure frequency (see table below)
- d. Assign a beacon code
- e. Do not amend flight plan routes unless the pilot can accept and fly the new routing.

4) **VFR Departures**

- a. Issue a clearance to depart the Class Bravo airspace.
- b. Assign runway heading.
- c. Issue an altitude at or below 3,000 feet.
- d. Issue the appropriate departure control frequency (see table below)
- e. Assign a beacon code

5) **Departure Fixes**

- a. Unless coordinated with the departure controller, all aircraft shall use one of the following departure gates:

Direction	Gate
North	WOOLY, EMI
East	SWANN, PALEO
South / Southeast	DAILY
South / Southwest	HAFNR, FLUKY
West	BLUES***
Northwest	MRB, BUFFR, JERES

- b. ***Departures requesting AML/GINYA J149 shall be cleared via "... radar vectors to EYTEE join J149 ..."
- c. ***Departures requesting LDN J134 shall be cleared via "... radar vectors BLUES, direct RAMAY, direct EYTEE, join J134 ..."
- d. If EMI is the first waypoint in the flight plan, clear aircraft "... via radar vectors WOOLY direct EMI ..."

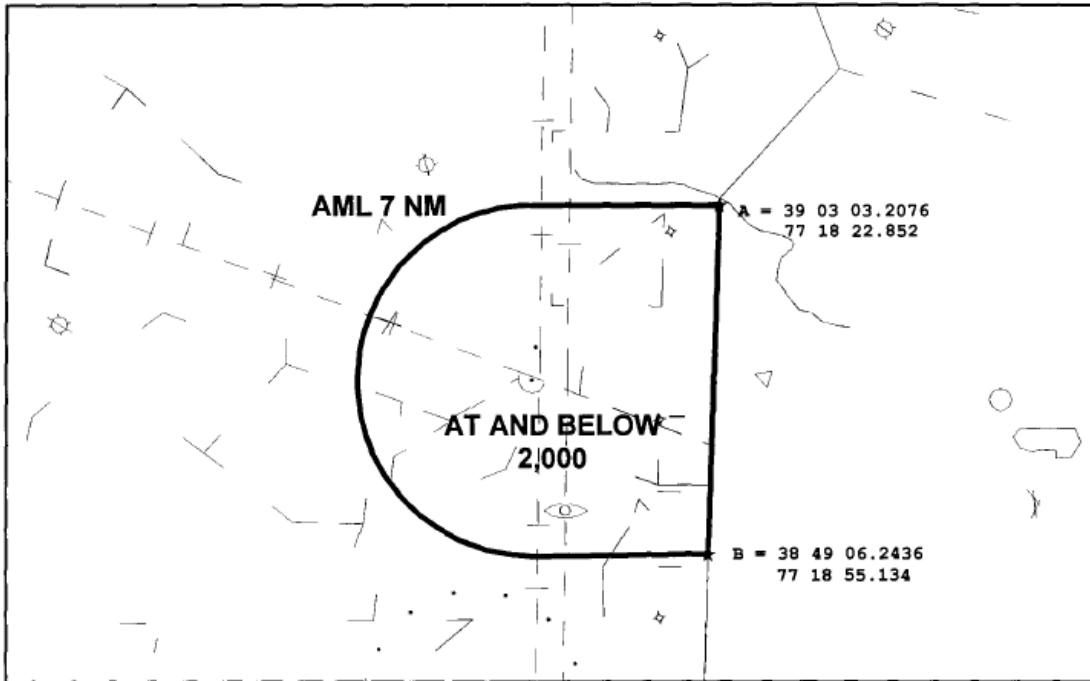
6) **Departure Frequency**

TILLY – 126.65	ASPER – 125.05
BLUES***	SWANN
FLUKY	PALEO
HAFNR	DAILY
GVE	JERES
	BUFFR
	WOOLY
	MRB

*** Departures filing for J149 or J134 will be assigned 126.65 as the departure frequency.
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- 7) Aircraft Clearances and Delays** In the event aircraft will be delayed due to weather and/or traffic management initiatives, issue clearances to all aircraft regardless of the status of a particular route. After the clearance has been read back correctly, inform aircraft there are delays and to contact ground for an estimated departure time.
- 8) Assigning a Ground Control** The configuration of the airport requires aircraft to know which departure runway to expect prior to pushback to be sure the aircraft has pushed in the proper direction. Ground Control assigns the runways. When RAMP is not open and only one runway is being used for departures, this information is included in the ATIS and departures should not be instructed to contact CG for their runway assignment. Be sure they have the proper ATIS code prior to taxi. Note: If Ground Control is not online, another position may be covering ground control.
- a. During normal periods when there is one Ground Control online. Instruct aircraft to "Contact ground on 132.45 prior to pushback for runway assignment."
 - b. If RAMP is open, instruct aircraft to "Contact Ramp Control on 129.55 for pushback."
 - c. If multiple Ground Controls are open, GCE will provide the runway assignments. Instruct aircraft to "Contact ground on 121.95 prior to pushback for runway assignment."

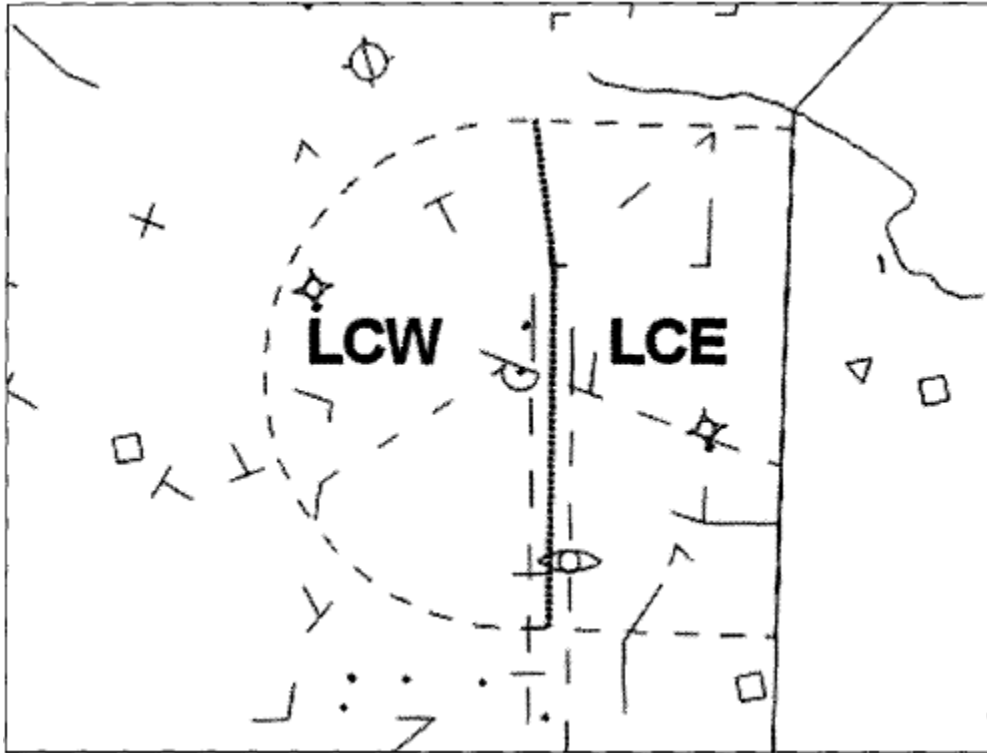
Appendix 1
Tower Airspace



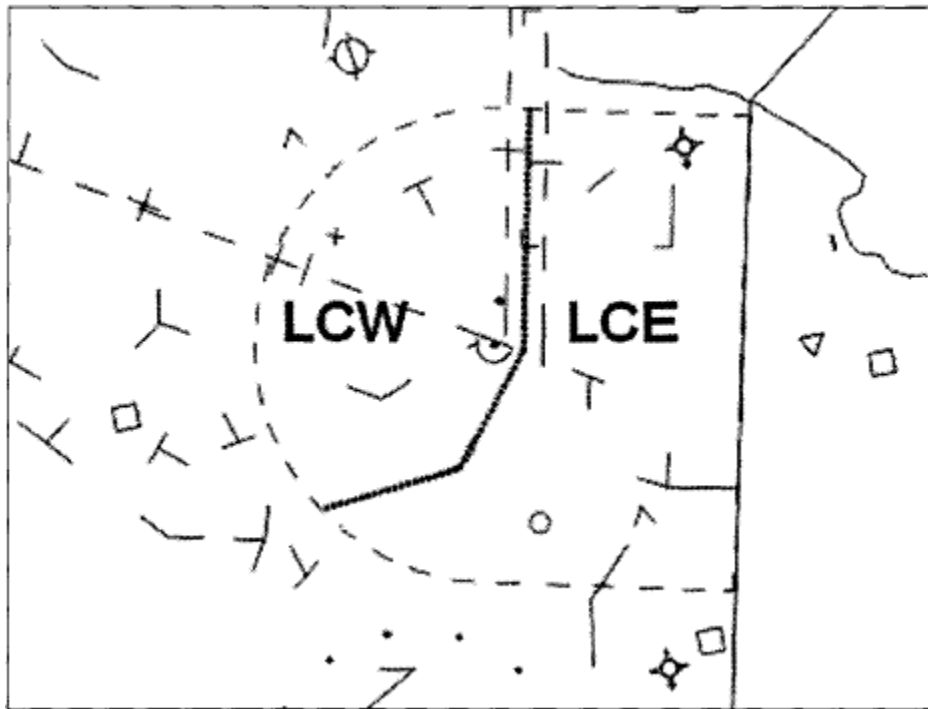
Dulles Tower is delegated 2,000 feet MSL and below within the AML 7 NM Class B surface area plus the area encompassed by eastward extensions from the northern and southernmost points terminating at points A & B as depicted above.

Appendix 1

North Operation



South Operation



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**Appendix 2
Runway Configurations and Assignments**

Primary Runway Configurations

<u>1's Only</u>		
<u>1L</u>	<u>1C</u>	<u>1R</u>
-Overflow departures	-Primary departures	-Primary arrivals
	-Overflow arrivals	

<u>19's Only</u>		
<u>19L</u>	<u>19C</u>	<u>19R</u>
-Primary departures	-Primary arrivals	-Overflow arrivals
-Overflow arrivals	-Departure overflow	

Runway 12/30 may be used as needed in order to provide an operational benefit.

**Appendix 2
Runway Configurations and Assignments**

South Operations

<u>19s with 30</u>					<u>19s with 12</u>				
<u>Normal Operations</u>					<u>Normal Operations</u>				
	<u>19L</u>	<u>19C</u>	<u>19R</u>	<u>30</u>		<u>19L</u>	<u>19C</u>	<u>19R</u>	<u>12</u>
Arrivals:		✓	✓		Arrivals:		✓	✓	✓
DP Gates:	FLUKY	<i>BLUES</i>		SWANN	DP Gates:	FLUKY	SWANN		
	HAFNR			PALEO		HAFNR	PALEO		
	GVE			DAILY		GVE	DAILY		
	BLUES			WOOLY		BLUES	WOOLY		
				MRB			MRB		
				BUFFR			BUFFR		
				JERES			JERES		
<u>Departure Push</u>					<u>Departure Push</u>				
	<u>19L</u>	<u>19C</u>	<u>19R</u>	<u>30</u>		<u>19L</u>	<u>19C</u>	<u>19R</u>	<u>12</u>
Arrivals:	✓		✓		Arrivals:			✓	✓
DP Gates:	HAFNR	<i>BLUES</i>		SWANN	DP Gates:	HAFNR	SWANN		
	FLUKY	<i>MRB</i>		PALEO		FLUKY	PALEO		
	GVE	<i>BUFFR</i>		DAILY		GVE	DAILY		
	<i>BLUES</i>	<i>JERES</i>		WOOLY		<i>BLUES</i>	WOOLY		
				<i>MRB</i>			BLUES		
				<i>BUFFR</i>			MRB		
				<i>JERES</i>			BUFFR		
							JERES		
<u>Arrival Push</u>					<u>Arrival Push</u>				
	<u>19L</u>	<u>19C</u>	<u>19R</u>	<u>30</u>		<u>19L</u>	<u>19C</u>	<u>19R</u>	<u>12</u>
Arrivals:	✓	✓	✓		Arrivals:	✓	✓	✓	✓
DP Gates:	HAFNR			SWANN	DP Gates:	HAFNR	SWANN		
	FLUKY			PALEO		FLUKY	PALEO		
	GVE			DAILY		GVE	DAILY		
				WOOLY			WOOLY		
				MRB			MRB		
				BUFFR			BUFFR		
				JERES			JERES		
				BLUES			BLUES		
				<i>HAFNR</i>			<i>HAFNR</i>		
				<i>FLUKY</i>			<i>FLUKY</i>		
				<i>GVE</i>			<i>GVE</i>		

Departure Gates in *italic* shall be used for overflow.

Configurations outlined in red are recommended when winds allow runway 12 or 30 to be used.

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**Appendix 2
Runway Configurations and Assignments**

North Operations

<u>Normal Operations</u>				
	<u>1L</u>	<u>1C</u>	<u>1R</u>	<u>30</u>
Arrivals:		✓	✓	
DP Gate:	SWANN	SWANN		BLUES
	<i>PALEO</i>	PALEO		FLUKY
	<i>DAILY</i>	DAILY		HAFNR
	<i>WOOLY</i>	WOOLY		GVE
	<i>MRB</i>	MRB		
	<i>BUFFR</i>	BUFFR		
	<i>JERES</i>	JERES		
<u>Departure Push</u>				
	<u>1L</u>	<u>1C</u>	<u>1R</u>	<u>30</u>
Arrivals:			✓	
DP Gate:	BLUES	SWANN	All	FLUKY
	MRB	PALEO	Arrivals	HAFNR
	BUFFR	DAILY		GVE
	JERES	WOOLY		<i>BLUES</i>
		<i>MRB</i>		
		<i>BUFFR</i>		
		<i>JERES</i>		
<u>Arrival Push</u>				
	<u>1L</u>	<u>1C</u>	<u>1R</u>	<u>30</u>
Arrivals:		✓	✓	
DP Gate:	SWANN	<i>MRB</i>	SWANN	BLUES
	PALEO	<i>BUFFR</i>	<i>PALEO</i>	FLUKY
	DAILY	<i>JERES</i>	<i>DAILY</i>	HAFNR
	WOOLY		<i>WOOLY</i>	GVE
	MRB			
	BUFFR			
	JERES			

Departure Gates in *italic* shall be used for overflow.

**Appendix 2
Runway Configurations and Assignments**

Runway 12/30 Unavailable

<u>1's Only</u>			
<u>Departure Push</u>			
	<u>1L</u>	<u>1C</u>	<u>1R</u>
Arrivals:			✓
DP Gate:	FLUKY	BLUES	SWANN
	HAFNR	MRB	PALEO
	GVE	BUFFR	DAILY
	<i>BLUES</i>	JERES	WOOLY

<u>Arrival Push</u>			
	<u>1L</u>	<u>1C</u>	<u>1R</u>
Arrivals:		✓	✓
DP Gate:	FLUKY	SWANN	SWANN
	HAFNR	PALEO	<i>PALEO</i>
	GVE	DAILY	<i>DAILY</i>
	BLUES	WOOLY	<i>WOOLY</i>
		MRB	
		BUFFR	
		JERES	

<u>19's Only</u>			
<u>Departure Push</u>			
	<u>19L</u>	<u>19C</u>	<u>19R</u>
Arrivals:			✓
DP Gates:	FLUKY	BLUES	SWANN
	HAFNR	MRB	PALEO
	GVE	BUFFR	DAILY
	<i>BLUES</i>	JERES	WOOLY

<u>Arrival Push</u>			
	<u>19L</u>	<u>19C</u>	<u>19R</u>
Arrivals:		✓	✓
DP Gates:	FLUKY	SWANN	SWANN
	HAFNR	PALEO	<i>PALEO</i>
	GVE	DAILY	<i>DAILY</i>
	BLUES	WOOLY	<i>WOOLY</i>
		MRB	
		BUFFR	
		JERES	

Departure Gates in *italic* shall be used for overflow.

**Appendix 3
Departure Headings**

1) North Operations

<u>Active Runways</u>	<u>Landing Runway</u>	<u>Departure Runway</u>	<u>Departure Fixes</u>	<u>Heading</u>	<u>Frequency</u>	<u>Sector</u>
Runways 1R, 1C, 1L and 30	1R / 1C / 1L	1R, 1C, or 1L***	SWANN, PALEO, DAILY	360	125.05	ASPER
			WOOLY, J518, J211, J220, J227	340	125.05	ASPER
		30	MRB	320	125.05	ASPER
			AML J149, CSN	270	126.65	TILLY
			FLUKY, HAFNR, GVE, MOL, BLUES	250	126.65	TILLY
			Note: A Runway 30 and 1C departure configuration requires prior coordination with PCT. *** Tower shall not launch departures off 1R/1C/30 simultaneously to fixes listed in the same box.			
Runways 1R, 1C, 1L and 30	1R / 1C / 1L	30 Only	SWANN, PALEO, DAILY	360	125.05	ASPER
			WOOLY, J518, J211, J220, J227	340	125.05	ASPER
			MRB	320	125.05	ASPER
			AML J149, CSN	270	126.65	TILLY
			FLUKY, HAFNR, GVE, MOL, BLUES	250**	126.65	TILLY
		** TILLY has control for turns to the south.				
Runways 1R and 1C 12/30 unavailable	1R / 1C	1R	SWANN, PALEO, DAILY, WOOLY, J518, J211, J220, J227	010	125.05	ASPER
			AML J149, CSN	260	126.65	TILLY
			FLUKY, HAFNR, GVE, MOL, BLUES	240**	126.65	TILLY
		** TILLY has control for turns to the south.				
Runway 30 Only	30	30	SWANN, PALEO, DAILY	360	125.05	ASPER
			WOOLY, J518, J211, J220, J227	340	125.05	ASPER
			MRB	320	125.05	ASPER
			AML J149, CSN	270	126.65	TILLY
			FLUKY, HAFNR, GVE, MOL, BLUES	250**	126.65	TILLY
			** TILLY has control for turns to the south.			

2) South Operations

<u>Active Runways</u>	<u>Landing Runway</u>	<u>Departure Runway</u>	<u>Departure Fixes</u>	<u>Heading</u>	<u>Frequency</u>	<u>Sector</u>
Runway 19C, 19L, and 12	19L/19C/12	19L or 19C	SWANN, DAILY, PALEO, MRB, WOOLY, J518, J211, J220, J227, BLUES	250*	125.05	ASPER
			AML J149	230	126.65	TILLY
			CSN	215	126.65	TILLY
			FLUKY, HAFNR, GVE, MOL, BRV	190	126.65	TILLY
			* ASPER has control for turns to the north.			
Runways 19C and 19L 12/30 unavailable	19L / 19C	19C	SWANN, DAILY, PALEO, MRB, WOOLY, J518, J211, J220, J227, BLUES	250*	125.05	ASPER
		19L	AML J149	230	126.65	TILLY
			CSN	215	126.65	TILLY
			FLUKY, HAFNR, GVE, MOL, BRV	190	126.65	TILLY
			* ASPER has control for turns to the north.			
Runways 19C, 19L and 30	19L / 19C	30	SWANN, DAILY, PALEO	330	125.05	ASPER
			WOOLY, J518, J211, J220, J227	315	125.05	ASPER
			MRB	300	125.05	ASPER
		19L or 19C (or 30***)	AML J149, BLUES	230	126.65	TILLY
			CSN	215	126.65	TILLY
			FLUKY, HAFNR, GVE, MOL, BRV	190	126.65	TILLY
			*** Tower shall not launch departures off 19L/19C/30 simultaneously to fixes listed in the same box.			
Runways 19C, 19L and 30	19L / 19C	30 only	SWANN, DAILY, PALEO	330	125.05	ASPER
			WOOLY, J518, J211, J220, J227	315	125.05	ASPER
			MRB	300	125.05	ASPER
			AML J149, BLUES	230	126.65	TILLY
			CSN	215	126.65	TILLY
			FLUKY, HAFNR, GVE, MOL, BRV	190	126.65	TILLY