

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

JO 7110.10BB CHG 3

Air Traffic Organization Policy

Effective Date: November 3, 2022

SUBJ: Flight Services

1. **Purpose of This Change**. This change transmits revised pages to Federal Aviation Administration Order JO 7110.10BB, Flight Services, and the Briefing Guide.

2. Audience. This change applies to select offices in Washington headquarters, service area offices, the William J. Hughes Technical Center, the Mike Monroney Aeronautical Center, and to all air traffic field facilities, international aviation field offices, and the interested aviation public.

3. Where Can I Find This Change? This change is available on the FAA website at http://faa.gov/air_traffic/publications and http://employees.faa.gov/tools_resources/orders_notices/.

4. Explanation of Policy Change. See the Explanation of Changes attachment which has editorial corrections and changes submitted through normal procedures. The Briefing Guide lists only new or modified material, along with background.

5. Distribution. This change is distributed to select offices in Washington headquarters, service area offices, the William J. Hughes Technical Center, the Mike Monroney Aeronautical Center, and to all air traffic field facilities, international aviation field offices, and the interested aviation public.

6. Disposition of Transmittal. Retain this transmittal until superseded by a new basic order.

7. Page Control Chart. See the page control chart attachment.

Alyce Hood-Fleming Acting Vice President, System Operations Services Air Traffic Organization

Flight Services Explanation of Changes Change 3

Direct questions through appropriate facility/service center office staff to the Office of Primary Interest (OPI)

a. 5–3–2. NOTIFYING ARTCC 5–4–7. MAJOR FLIGHT PLAN CHANGES FROM EN ROUTE AIRCRAFT APPENDIX A. FAA FORM 7233–4 – INTERNATIONAL FLIGHT PLAN

This change corrects the transmit flight plan time from 23 to less than 22½ hours before the proposed departure time. This change also clarifies instructions for flight service specialists in processing a military change of destination and other major flight plan changes from en route aircraft.

b. 6-1-8. ADDRESSING MESSAGES

This change adds instructions for users addressing flight plans and associated messages for instrument flight rules (IFR) flights and mixed IFR/VFR flights entering, overflying, or departing the Eurocontrol Integrated Initial Flight Plan Processing System (IFPS) Zone.

c. APPENDIX A. FAA FORM 7233-4 – INTERNATIONAL FLIGHT PLAN

This change removes existing instructions allowing alternate use of NAV/ to indicate Area Navigation (RNAV) capability to resolve incompatibility with Required Navigation Performance (RNP) routing. It adds instructions for RNP Standard Instrument Departures (SIDs) and Standard Terminal Arrival Routes (STARs), which are being added to the NAS (for example, see the KSNA STAYY SID). Removes the legacy use of NAV/ for RNAV capability to avoid the NAV/ information overriding RNP capability filed in PBN/. Because ICAO guidance is moving towards use of standardized, unambiguous codes M1 and M2 for the two variations of RNP 2, the information relating to Australia's practice is removed from the table.

d. Entire Publication

Additional editorial/format changes were made where necessary. Revision bars were not used because of the insignificant nature of these changes.

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Section 3. IFR Flight Plan Handling

5-3-1. IFR FLIGHT PLANS

Civilian IFR flight plans consist of the information requested on FAA Form 7233–4 (or Form 7233–1 for stereo routes) or an electronic equivalent. All items except Item 19 are transmitted to the ARTCC as part of the IFR flight plan proposal. Item 19 information is retained by the service that filed the flight plan, and made available to ATC upon request. DOD/military IFR flight plans within U.S. controlled airspace and civilian stereo route flight plans can still be filed using FAA Form 7233–1, or electronic equivalent.

5-3-2. NOTIFYING ARTCC

Transmit flight plans and flight plan amendments to the ARTCC for the departure point. Facilities should use FAA Order JO 7350.9, Location Identifiers, or the appropriate aeronautical charts to determine the ARTCC to which each transmission must be made. Transmit flight plans (if necessary) and flight plan amendments via interphone to the flight data position (error referral position) or departure sector when the aircraft's proposed departure time is within the parameters listed in TBL 5-3-1. Advise the ARTCC's departure sector or flight data position (error referral position), via interphone, when a message is received indicating ineligibility or a response is not received via data terminal within 10 minutes. Flight plans are automatically deleted if no action is taken within the time limits listed in TBL 5–3–1. Transmit flight plans as follows:

a. When multiple (two or more) flight plans are received from the same aircraft, or for flight plans which propose alternating VFR and IFR, stopover, or terminal area delay, the station receiving the flight plans transmits separate flight plans to the appropriate ARTCCs for each IFR portion or segment.

b. Transmit flight plans specifying special use airspace delays (MOAs, warning areas, restricted areas, ATCAA) as in subparagraph 5-3-2 a except when letters of agreement specify otherwise.

c. Aerial refueling delays, or any other en route delays not covered in subparagraphs 5-3-2 a or b and not involving a change of altitude stratum, do not require separate messages. Delay information must be filed within the route of flight. If a change of altitude stratum is indicated, transmit separate messages as in subparagraphs 5-3-2 a or b.

d. When a composite, stopover, or terminal area delay flight plan is revised:

1. Before departure, transmit the information to the original addressees plus any new addressees.

2. After departure, transmit the information to all new addresses that are affected by the change.

e. Transmit flight plans when the ETD is less than $22\frac{1}{2}$ hours of current time.

f. Address all IFR flight plan messages to the ARTCC serving the point of departure and all concerned oceanic and non-conterminous air traffic service (ATS) units, except FAA ATCTs.

NOTE-

The ARTCC within whose control area IFR flight is proposed to begin will forward the proposed tower en route flight plan data to the appropriate departure terminal facility.

g. For flights inbound to the conterminous U.S. from Alaska or Hawaii, address only the first conterminous U.S. ARTCC; for example, for a proposed flight from Sitka to Houston, address PAZAZQZX, CZVRZQZX, and KZSEZQZX.

REFERENCE-

FAA Order JO 7110.65, Para 2-2-2, Forwarding Information.

Center Filer Lock-Flight Plan (ARTCC) out Time Deletion Time¹ Name (Minutes) (Minutes) Albuquerque 46 120 Anchorage 43 90 120 Atlanta 46 Boston 55 120 Chicago 46 120 Cleveland 46 120 Denver 46 180 Fort Worth 46 180 Guam Manual 120 Coordination² (OFDPS) Honolulu Manual 120 (OFDPS) Coordination² 120 Houston 46 Indianapolis 61 240 Jacksonville 46 120 Kansas City 46 120 Los Angeles 46 120 46 120 Memphis 46 120 Miami Minneapolis 46 120 61 121 New York Oakland 46 120 Salt Lake City 46 120 San Juan³ 46 120 Seattle 46 120 46 120 Washington

TBL 5–3–1 ARTCC Flight Plan Times

¹Following proposed departure time.

²*Electronic amendments are not accepted; manual coordination is required.*

³Flight plans with San Juan Center are processed via Miami Center's Flight Data Processor.

5–3–3. CONTROL MESSAGES FOR FORMATTED IFR FLIGHT PLANS

Transmit all proposed IFR flight plan messages to the ARTCC within whose control area IFR flight is proposed to begin.

a. Communications Functions. Flight plan data messages must be addressed to the computer only. All other types of messages for ARTCC attention must be addressed to the Flight Data position only. Acknowledgements for all numbered messages will be received from the computer or the Flight Data position indicating receipt by the ARTCC, but not necessarily computer acceptance. (See TBL 5–3–2.)

TBL 5-3-2 ARTCC ID & Computer Flight Data

ARTCC	ID	Computer	Flight Data
Albuquerque	ZAB	KZABZQZX	KZABZRZX
Atlanta	ZTL	KZTLZQZX	KZTLZRZX
Anchorage	ZAN	PAZAZQZX	PAZAZRZX
Boston	ZBW	KZBWZQZX	KZBWZRZX
Chicago	ZAU	KZAUZQZX	KZAUZRZX
Cleveland	ZOB	KZOBZQZX	KZOBZRZX
Denver	ZDV	KZDVZQZX	KZDVZRZX
Fort Worth	ZFW	KZFWZQZX	KZFWZRZX
Honolulu	ZHN	PHZHZQZX	PHZHZRZX
Houston	ZHU	KZHUZQZX	KZHUZRZX
Indianapolis	ZID	KZIDZQZX	KZIDZRZX
Jacksonville	ZJX	KZJXZQZX	KZJXZRZX
Kansas City	ZKC	KZKCZQZX	KZKCZRZX
Los Angeles	ZLA	KZLAZQZX	KZLAZRZX
Memphis	ZME	KZMEZQZX	KZMEZRZX
Miami	ZMA	KZMAZQZX	KZMAZRZX
Minneapolis	ZMP	KZMPZQZX	KZMPZRZX
New York	ZNY	KZNYZQZX	KZNYZRZX
Oakland	ZOA	KZOAZQZX	KZOAZRZX
Salt Lake	ZLC	KZLCZQZX	KZLCZRZX
San Juan	ZLU	TJZSZQZX	TJZSZRZX
Seattle	ZSE	KZSEZQZX	KZSEZRZX
Washington	ZDC	KZDCZQZX	KZDCZRZX

b. Adhere to a fixed order of data. Do not exceed the stated maximum number of characters or elements allowed for each field in messages addressed to an ARTCC computer. Flight plans filed containing more than the stated character maximums should be sent using the ARTCC flight data address.

c. For manual entry into Service B, one space character must be entered at the end of each data field. The first data field of a message need not be preceded by a space. The last data field of a message need not be followed by a space.

d. Each field of data is composed of one or more elements. Discrete elements of information within a field are separated by delimiters, generally slashes (/) or periods (ABC..DEF).

e. Messages addressed using a ARTCC flight data address (see TBL 5–3–2) are not processed by the ARTCC computer. Response and/or interpretation of these messages are dependent on flight data personnel action. The prime consideration of these types of messages must be the readability of the transmitted data.

5-4-5. ACKNOWLEDGING FLIGHT NOTIFICATION MESSAGES

Acknowledge a flight notification message as soon as practical after receipt. Message acknowledgement formats are contained in Appendix D, Service B Message Formats.

NOTE-

The operational system will automatically acknowledge flight notification messages which are received in or have been edited into the correct format.

5-4-6. ACTION BY ADDRESSEES

In addition to acknowledging receipt of flight notification, addressees must take the following actions:

a. Military IFR flights.

1. Notify BASOPS, if applicable, of the inbound flight.

2. Upon request, deliver flight plan amendments to the ARTCC.

3. File the flight notification message in the operational system history files or with the daily traffic.

4. Forward the actual departure time to the destination tie-in facility for the next destination.

b. Military VFR flights.

1. Notify BASOPS, if applicable, of the inbound flight.

2. Suspense the message, await closure/cancellation/departure and assume destination station responsibility.

3. Forward the departure time to the destination tie-in facility and assume departure station responsibility.

4. All flight notification messages are suspended on the Inbound List. An entry on the list will remain there until the flight plan is closed. Thirty minutes after the ETA, if the flight plan has not been closed, it is considered overdue and will generate an alert at designated workstations.

c. If no information is received (for example, departure time, revised ETA) indicating that the flight is still active prior to the void time, close the flight

plan and note this on the flight notification message and file.

5-4-7. MAJOR FLIGHT PLAN CHANGES FROM EN ROUTE AIRCRAFT

a. Change of Destination.

1. When a civil aircraft on a VFR flight plan or a military aircraft on any flight plan changes destination, obtain and record, as a minimum, the following information if not already known:

- (a) Type of flight plan.
- (b) Aircraft identification.
- (c) Aircraft type.
- (d) Departure point.
- (e) New destination.
- (f) New ETA.
- (g) Present position.
- (h) Old destination.
- (i) Estimated time en route.

2. Transmit a revised flight notification message to the departure, original, and new destination tie-in facilities containing the type of flight, aircraft identification, aircraft type, departure point, new destination, new ETA, and in Remarks, aircraft position and time, the words "ORIG DESTN" followed by the identifier of the original destination.

b. Change from IFR to VFR. When a civil aircraft changes from an IFR to a VFR flight plan, obtain all flight plan information and send appropriate flight plan messages, including a SPL message.

c. Military Change from IFR to VFR or VFR to IFR. When a military aircraft changes from IFR to VFR, or VFR to IFR, or requests that other significant information be forwarded, transmit this information to the destination station.

5-4-8. CHANGE IN ETA

When an aircraft wants to change its ETE, obtain a new ETA, and using appropriate messaging procedures, notify the destination tie–in facility of the new ETA. The destination tie–in facility must acknowledge and, thereafter, use the new ETA as the standard for any necessary follow–up action; for example, QALQ message.

5-4-9. FLIGHT PLAN CLOSURE

Do not transmit arrival reports except under unusual circumstances or in the following cases:

a. Transmit arrival or other information involving FAA or Canadian MOT aircraft by a numbered message to any facility requested by the pilot.

EXAMPLE-FF KDCAYFYX DTG KHHRYFYX HHR002 DCA N2 A0839 (Remarks, as appropriate)

b. For U.S. military aircraft, transmit arrival reports to the departure station only when:

- **1.** Requested by BASOPS.
- 2. Special military flights arrive.

c. When a pilot closes a flight plan with a station that has not received a flight notification message, obtain as a minimum, the departure point, the flight planned destination point, and the station with which the flight plan was filed.

1. If the station receiving the closure is the tie-in station for the planned destination, transmit the appropriate message to the departure station with the remark "FPNO" and the departure point and destination identifiers. The departure station must relay the arrival information to the station holding the flight plan notification message in the active file.

2. If the station receiving the closure message is not the destination tie-in station, transmit the appropriate closure message to the destination tie-in station.

5-4-10. MILITARY FLIGHTS TO/FROM U.S.

a. To U.S. If "REQ ARR" is in remarks, suspend the flight plan until arrival information is received from BASOPS and forward to the departure location.

b. From U.S. If requested by BASOPS, include "REQ ARR" in remarks section of ICAO flight plan. Terminate suspense action only after receipt of an arrival message and delivery to BASOPS.

2. Preamble (priority, space, addressee(s).

(a) Priority. Two-character precedence field.

(b) Addressee(s). Not to exceed 69 characters or seven addressees, each addressee separated by a space.

(c) End of Line (EOL) new line key.

(d) End of Text (EOT) (enter function).

6-1-6. TRANSMISSION OF ATS MESSAGES

a. Air traffic service messages are interchanged in the international air traffic control system in the following modes:

1. The preferred step-by-step mode wherein each ACC/ARTCC sends forward the full current (updated) flight plan information as the flight progresses.

2. The simultaneous mode wherein information extracted from the filed flight plan (FPL) is sent simultaneously to all ATS units along the route of flight. In this mode, only amendments to the FPL, plus necessary control information, are forwarded from center to center as the flight progresses.

b. Prepare and transmit ATS messages as described below. Address these messages as follows:

1. Include an eight-character addressee indicator for each addressee. When the number of addressees required is more than the operational system parameters allow, two or more transmissions of the message must be made. The eight-letter combination addressee indicators are composed as follows:

(a) The four-letter ICAO location indicator; for example, MPTO. Use only those listed in ICAO DOC 7910 (Location Indicators). Some ICAO eight-character addressees for Mexico and Canada are listed in FAA Order JO 7350.9, Location Identifiers.

(b) A four-letter designator for the facility type/office, or if no designator has been assigned, affix YXYX for military, ZZZX for aircraft in flight, or YYYX for all other cases; for example, MTPPYYYX. (See Note.) REFERENCE-

ICAO DOC 8585, Designators for Aircraft Operating Agencies, Aeronautical Authorities and Services.

NOTE-

The most frequently used and authorized designators are: YAYX Government Civil Aviation Authority (FAA Regional Office or Headquarters). YCYX Rescue Coordination Center (RCC). YDYX Authority Supervising the Aerodrome. YFYX Aeronautical Fixed Station FSS/IATSC). YMYX Meteorological Office (NWS). YNYX International NOTAM Office (NOF). YTYX Telecommunications Authority. YWYX Military Flight Operational Control Center (ACP) YXYX Military Organization (BASOPS). YYYX Organization not allocated a two-letter designator. ZOZX Oceanic Air Traffic Control Center. ZPZX Air Traffic Service Reporting Office. ZQZX Computer Facility at ACC/ARTCC. ZRZX ACC/ARTCC. (Center in charge of a FIR/UIR when the message is relevant to a VFR flight (AMIS)). ZTZX Aerodrome Control Tower. ZZZX Aircraft in flight.

(c) A one-letter designator will appear following an air carrier designator to indicate the department or division of the organization addressed.

2. Filing time. A six-digit date/time group indicating the time the message is filed with the FSS for transmission.

c. Originator Indicator. Consists of an eight-letter sequence similar to an address indicator, identifying the place of origin and the organization originating the message.

d. Supplementary Address and Origin Information. When the four-letter designators YXYX, ZZZX, or YYYX are used, identify the aircraft operator or organization at the beginning of the text preceding the start-of-ATS data symbol ((--), in the same order as in the addressee(s) and/or originator indicator(s). Where there is more than one such insertion, the last should be followed by the word "stop." Where there are one or more insertions in respect to addressee indicators plus an insertion in respect to the originator indicator, the word "from" is to appear before that relating to the originator.

e. When addressing flight plan messages or related amendments and flight plan cancellation messages to centers, use one of the four-letter designators as follows:

1. If message is relevant to IFR and:

(a) The ARTCC is computer-equipped (U.S. ARTCCs), use ZQZX.

(b) The center is not computer-equipped, use ZRZX.

(c) Relevant to oceanic operations, use ZOZX.

NOTE-

Some centers may request specific addressing different from above. ZTZX and ZPZX are used internationally, but are not used in internal U.S. application.

2. If message is VFR (AMIS), use ZRZX.

3. If SVC or administrative, use ZRZX.

6-1-7. ORIGINATING MESSAGES

a. Messages for ATS purposes may be originated with ATS units by aircraft in flight, or, through local arrangements, a pilot, the operator, or their designated representative.

b. Accept airfiled flight plans or changes in destination information from aircraft inbound from foreign locations and, if requested by the pilot, enter Customs notification service.

c. Do not accept round–robin flight plans to international locations.

NOTE-

FSS must log a double (2) count for round-robin flight plans.

d. Do not accept assumed departure flight plans when the destination is in a foreign country other than Canada.

e. Aircraft movement, control, and flight information messages for purposes other than ATS, such as operational control, must be originated by the pilot, the operator, or their designated representative.

6-1-8. ADDRESSING MESSAGES

a. Addressing the flight plan is determined by the point of departure, the destination, and the FIR boundaries to be penetrated during the course of the flight.

b. Address IFR FPL messages to the ARTCC serving the airport of departure and to all ATS units (including oceanic) providing air traffic control service or concerned with flight along part or the

whole of the route to be flown except FAA ATCTs and other conterminous U.S. ARTCCs.

c. For flights where the destination is in Canada, address only the initial and final ATS units. It is not necessary to address each FIR through which the flight will operate.

NOTE-

Within the North Atlantic (NAT) Region, FPLs on turbo jet aircraft transiting the control areas of Gander Oceanic, New York Oceanic, Reykjavik, Santa Maria Oceanic, Shanwick Oceanic, and Sondrestrom (south of 70 degrees), within 90 nautical miles of the control area boundary, must be addressed to the adjacent ACC to provide lateral separation. For all other aircraft, a 120 nautical mile proximity limit must apply.

d. Flight plans and associated messages for all IFR flights, including the IFR portions of mixed IFR/VFR flights, entering, overflying, or departing the Eurocontrol Integrated Initial Flight Plan Processing System (IFPS) Zone (IFPZ), must be addressed only to the two IFPS addresses for that portion of the flight within the IFPZ: EUCHZMFP and EUCBZMFP. IFPS will ensure distribution of the accepted flight plan to all relevant Air Traffic Service (ATS) units within their area of responsibility. For more information on the IFPZ, go to: https://www.eurocontrol.int/system/integrated-initial-flight-plan-processing-system.

NOTE-

Detailed procedures and information applicable to flight plan addressing and distribution are contained in the EUROCONTROL "Network Operations HANDBOOK – IFPS User's Manual."

e. Transmit all IFR FPLs to ARTCCs no less than 1 hour prior to the proposed departure time. Do not hold FPLs until after departure time and transmit as a combined FPL and departure message (DEP). Separate FPL and DEP messages must be transmitted.

NOTE-

IFR ICAO flight plans do not require an acknowledgement to the transmitting facility.

f. Address aircraft movement messages only to those ATS units responsible for the provision of relevant service, except when requested by the operator concerned, these messages, when transmitted via the AFTN, may also be routed, as specified by the operator or a representative to:

1. One addressee at the point of intended landing or point of departure.

2. Not more than two operational control units concerned.

g. The ARTCC serving the departure airport must transmit the DEP message on IFR aircraft to all known recipients of the FPL message. Flights between conterminous U.S. and Canada (excluding Gander Oceanic), Alaska, Hawaii and Puerto Rico do not require DEP messages. Discontinuance of DEP messages affecting the route of flight can only be accomplished by ICAO Regional Air Navigation Agreement.

6-1-9. FLIGHT PLAN FORMS AND INSTRUCTIONS

a. All flights that depart U.S. controlled airspace and enter airspace controlled by a foreign Air Navigation Service Provider (ANSP) must use FAA Form 7233–4, International Flight Plan, (see Appendix A) the ICAO Model Flight Plan Form in ICAO DOC 4444, or an electronic equivalent. DOD/military may still use DD Form 1801, Military International Flight Plan. The flight plan filer is responsible for providing the information required in items 3 through 19. DOD/military may still use FAA Form 7233–1 or DD Form 175 within U.S. controlled airspace. Civilian filers of stereo route flight plans may also use FAA Form 7233–1.

b. The procedure described in subparagraph a above also applies to all flight plans originating within or transiting Pacific Flight Information Regions (FIR) and flying to or from FIRs beyond the Pacific Region including the North American (NAM) Region.

NOTE-

The NAM Region encompasses the conterminous U.S., Alaska, and Canada to the North Pole.

c. When paper forms are used, record on the form the time the flight plan was filed. This time will constitute evidence of the pilot's intention to comply with Customs, Immigration, and Public Health requirements and will be made available upon request from these authorities.

6-1-10. ICAO ATS MESSAGE FORMAT

The following are examples of ICAO message types most likely to appear on AFTN/NADIN circuits. The number above the data corresponds to the field type numbers on the flight plan form (FAA Form 7233-4) and on the chart of Standard ATS Messages and Their Composition, Appendix A.

a. Departure Message (DEP). ARTCCs are the designated ATS unit responsible for originating and transmitting DEP messages on all IFR aircraft departing airports within their center boundaries. IFR flight plans must be transmitted to ARTCCs at least 1 hour before departure. This allows ARTCCs to determine recipients of DEP message when domestic portions are transmitted to ARTCCs in an automated format. Do not hold FPLs and combine with DEP into a single message.

b. Proposed Flight Plan Messages.

1. IFR FPL. ARTCCs are the designated ATS units responsible for originating and transmitting DEP messages on all IFR aircraft departing airports within their center boundaries. IFR flight plans must be transmitted to ARTCCs at least 1 hour before departure. This allows ARTCCs to determine recipients of DEP message when domestic portions are transmitted to ARTCCs in an automated format. Do not hold FPLs and combine with DEP into a single message.

2. VFR FPL. The FSS or contracted flight plan filing service is responsible for transmitting DEP messages on VFR aircraft.

c. Delay Message (DLA). Transmitted when departure of an aircraft, for which an FPL message has been transmitted, is postponed or delayed more than 30 minutes after the estimated time of departure contained in the FPL.

d. Alerting Message (ALR). Relating to an overdue situation on an aircraft.

e. Supplementary Flight Plan (SPL). Information must be sent to ATS units that transmit Request Supplementary Flight Plan (RQS) messages.

f. Arrival Message (ARR). Sent only on Canadian MOT, U.S. DOT, or FAA aircraft or upon request.

g. Current Flight Plan (CPL) Message. Originated by and transmitted in a step-by-step mode between successive ACCs and between the last ACC to the control at the airport of intended landing. CPLs contain only information relevant to that portion of the route of flight which extends from the point of entry into the next control area or FIR to the airport of intended landing. **h.** Acceptance (ACP) Message. Transmitted when the data contained in a CPL message are found to be acceptable to the receiving ACC.

i. Flight Plan Cancellation (CNL) Message. Transmitted when a current (CPL) or filed flight plan (FPL) message was transmitted and the flight is canceled.

6-1-11. FLIGHT PLAN CHANGES AND CANCELLATIONS

a. Assume departure station duties when a flight plan change is received from an aircraft en route to a foreign location.

REFERENCE-

FAA Order JO 7110.10, Para 5–4–7, Major Flight Plan Changes from En Route Aircraft. FAA Order JO 7110.10, Para 5–4–8, Change in ETA.

b. An FSS receiving a VFR flight plan cancellation report from aircraft en route to a foreign location must transmit a cancellation message to the appropriate foreign tie-in facility.

REFERENCE– FAA Order JO 7110.10, Para 5–4–9, Flight Plan Closure.

6-1-12. AIR MOBILE SERVICE (AMS)

a. Air Mobile Service (AMS) is an international air/ground communications network. It provides service to en route aircraft primarily in support of ATC and company operations, and collects meteorological data for dissemination. Although in the U.S. this service is provided via contract (Collins Aerospace), FAA flight service facilities may be required to relay information on a case-by-case basis.

b. The AMS network is composed of individual units geographically limited to areas where effective coordination and cooperation between ground stations are possible.

c. For any individual route segment, the AMS communication requirements will normally be met by two or more network stations serving the flights on that route segment. In general, these primary stations serve the ACC serving the FIRs and the points of takeoff and landing. In some cases, additional suitably located stations are required to complete the communications coverage.

d. Each of these stations may be required at some stage of the flight to exchange communications with

the aircraft, and when not so engaged, to intercept, as required, communications exchanged between the aircraft and any one of the other stations.

e. Stations providing regular network service to aircraft operation along route segments in an ACC's FIR are termed regular stations. Other network stations will only be required to assist communications for that FIR in the event of communications failure.

f. When communications permit, aircraft should transmit their messages to the primary station of the network from which they can most readily be delivered to their ultimate destination. In particular, aircraft reports required by ATC should be transmitted to the network station serving the ATC center in whose area the aircraft is flying. Conversely, messages to aircraft in flight should be transmitted direct to the aircraft by the network station serving the location of the originator.

g. Messages passed from aircraft to a network station should be intercepted and acknowledged by other stations which serve locations where the information is also required. Such intercepts provide instantaneous delivery of information and eliminates the transmission of messages over the AFTN. Networks may not be used for transmission of aircraft reports except under the intercept principle. Acknowledgments of intercept must be made immediately after the acknowledgment of receipt by the station to which the message was passed. In the absence of acknowledgment of intercept within 1 minute, the station accepting the message from the aircraft must forward the message via the AFTN to the ultimate destination.

h. In areas or on routes where radio operations, lengths of flights, or distance between stations require additional measures to ensure continuity of communications throughout the route segment, the stations must share the responsibility of primary guard whereby each station will provide the primary guard for that portion of the flight during which the messages from the aircraft can be handled most effectively by that station.

i. During its tenure of primary guard, each station will:

1. Be responsible for designating primary and secondary frequencies for communications with aircraft.

2. Receive all position reports and handle other messages from and to the aircraft essential to the safe conduct of the flight.

3. Be responsible for the action required in case of failure of communication.

j. Transfer of primary guard from one primary station to the next will normally take place at the time of traversing FIR or control area boundaries. When communications conditions so demand, a station may be required to retain primary guard beyond geographical boundaries or release its guard before the aircraft reaches a boundary.

6-1-13. AIREPs (POSITION REPORTS)

a. AIREPs are messages from an aircraft to a ground station. AIREPs are normally comprised of the aircraft's position, time, flight level, ETA over its next reporting point, destination ETA, fuel remaining, and meteorological information. When recording an AIREP on data terminals or written copy, the following procedures must be used.

1. Each line must begin at the left margin.

2. A new line must be used for each transmission.

3. If communications allow, each report must contain the following items in the order shown:

(a) Message type aerodrome reference point (ARP).

(b) Call sign of the calling station (aircraft).

(c) Text of the message.

(d) Call sign of the station called or receiving station followed by the appropriate abbreviation to indicate received, readback, or no reply heard.

(e) Call sign of station(s) acknowledging intercept followed by appropriate abbreviation to indicate received.

(f) Designation of frequency used.

EXAMPLE-

*2866QM 8903VO 13300YH 2932QI *5631TY 11384XM 2998QL 6532UA 13294YF 5628TO 10048WH 17904ZC *For Alaskan domestic use only.

(g) Time in UTC of the communication.

4. Missing parts of the message text must be indicated by the letter "M."

EXAMPLE-

ARP CPC583 KBRO 2100 F330 MMTM 2128 ETA XMMMX 2248 FUEL 0324 KNEW RB MMMX R TO2103

b. AIREPs may be filed from any aircraft inflight within World Meteorological Organization (WMO) areas of responsibility in conformity with ICAO requirements for position, operational, or meteorological reporting in AIREP format. AIREP information must be disseminated to ATC, company, and meteorological offices as required. AIREPs consist of three sections comprised of 12 items. AIREPs may be filed in one, two, or three sections as follows:

1. Section 1, Routine report. A position report (PSNRP) comprising the Message Type Designator -ARP and the following items:

(a) Item 1, Aircraft identification.

(b) Item 2, Position. Record position in latitude (degrees as two numerics, or degrees and minutes as four numerics, followed without a space by N or S) and longitude (degrees as three numerics, or degrees and minutes as five numerics, followed without a space by E or W) or as a significant point identified by a coded designator (two-to-five characters) or as a significant point followed by a magnetic bearing (three numerics) and a distance in nautical miles (three numerics) from the point, such as 4620N07805W, 4620N078W, 46N078W, LN, MAY or DUB180040. Precede significant point by ABM (abeam), if applicable.

(c) Item 3, Time. Record time in hours and minutes UTC (four numerics). The time recorded must be the actual time of the aircraft at the position and not the time of origination or transmission of the report.

(d) Item 4, Flight level or altitude. Record flight level as "F" followed by three numerics when on standard pressure altimeter setting, such as F370. Record altitude in meters followed by M, or in feet followed by FT, when on QNH. Record ASC (level) when climbing, or DES (level) when descending to a new level after passing the significant point.

(e) Item 5, Next position and time over. Record the next reporting point and the estimated time over such reporting point, or record the estimated position that will be reached 1 hour later, according to the position reporting procedures in effect. Use the data conventions specified in subparagraph 6-1-13b1(b), Item 2, Position, for position. Record time in minutes past the hour (two numerics) or in hours and minutes UTC (four numerics) when necessary.

EXAMPLE-

PSNRP portion of AIREP prepared by De Ridder and addressed to Canadian Pacific Airlines (CPC) in Toronto and Mexico City: FF CYYZCPCX MMMXXMZT 122105 KDRIYFYX ARP CPC583 KBRO 2100 F370 MMTM28 KNEW RB MMMM R TO2103]

2. Section 2. When reported by the pilot:

(a) Item 6, Estimated Time of Arrival (ETA). Record ETA by the four-letter location indicator of the airport of first intended landing, or if no location indicator exists, the name of the airport followed by the estimated time of arrival at this aerodrome in hours and minutes UTC (four numerics).

(b) Item 7, Endurance. Record fuel in hours and minutes (four numerics).

3. Section 3. A full AIREP comprising a PSNRP, company information, and en route meteorological information.

(a) Item 8, Air temperature. Record PS (plus) or MS (minus), no space, followed by the temperature in degrees centigrade corrected for instrument error and airspeed, such as MS05.

(b) Item 9, Spot wind or mean wind and position. Spot wind is used whenever practical and normally refers to the position given in subparagraph 6-1-13b1(b), Item 2, Position. When a spot wind is given for any other location, record its position. Whenever it is not practical to record spot wind, record the mean wind between two fixes, followed by the word "mean," and the position of the midpoint between the two fixes. Record wind direction in degrees true (three numerics) and wind speed in knots (two or three numerics), separated by an oblique stroke, such as 345/55. Record the direction of variable winds of a given strength as VRB, such as VRB/10. Record light and variable winds or calm as LV. If wind position is required, record latitude and

longitude to the nearest whole degree, using the data convention specified in Item 2, such as 22N180W.

EXAMPLE-

AIREP comprised of PSNRP and aircraft operator information: FF CYYZCPCX MMMXXMZT 122105 KDRIYFYX ARP CPC583 KBRO 2100 F370 MMTM28 MMMX 2248 FUEL 0324 KNEW RB MMMX R TO2103

(c) Item 10, Turbulence (TURB). Record severe turbulence as TURB SEV and moderate turbulence as TURB MOD. If turbulence is experienced in cloud, add INC (in cloud). If in subsonic flight, report severe turbulence as soon as possible after occurrence. This requires AIREP SPECIAL. Record and report moderate turbulence only if encountered within last 10 minutes prior to reaching position in subparagraph 6-1-13b1(b), Item 2, Position. If in transonic or supersonic flight, report severe or moderate turbulence as soon as possible after occurrence. This requires AIREP SPECIAL.

(d) Item 11, Icing. Record severe icing as ICE SEV, moderate icing as ICE MOD. Report severe icing as soon as possible after occurrence. This requires AIREP SPECIAL. Record and report moderate icing only if encountered within last 10 minutes prior to reaching position in subparagraph 6–1–13b1(b), Item 2, Position.

(e) Item 12, Supplementary Information. Record data which in the opinion of the pilot-in-command are of aeronautical interest.

(1) Present Weather. Rain (RA), Snow (SN), Freezing rain (FZRA), Funnel cloud (FC) Waterspout or tornado (+FC), Thunderstorm (TS) on or near flight path, Front (FRONT).

(2) Clouds. If heights of cloud bases and/or tops can be accurately ascertained, amount of clouds scattered (SCT) if clear intervals predominate, broken (BKN) if cloud masses predominate, or continuous (CNS) type of clouds only if cumulonimbus (CB), and an indication of the bases (BASE) and/or the tops (TOP) together with the respective height indication F (number) or (number) or (number) M/ or (number) FT.

(3) Turbulence and Icing. Moderate turbulence (TURB MOD) if in subsonic flight, or

moderate aircraft icing (ICE MOD) observed prior to the last 10 minutes.

(4) D-Value. Reading or radio altimeter minus reading of pressure altimeter set to 1013.2 mb and corrected for calibration and position error; record differences as PS (plus) or MS (minus), no space, followed by the number of meters or feet.

EXAMPLE-

Full AIREP: FF CYYZCPCX MMMXXMZT KMIAYMYX 162215 TJSJYFYX ARP CPC583 2709N05415W 2212 F330 23N056W 59 0035 FUEL 0324 M534 310/60 MEAN 2543N05532W TURB MOD ICE MOD SCT CB TOP F280 TJSJ RB TO2214

NOTE-

Transmit to the WMO office serving the FIR where the report is made.

(5) Operationally Significant Weather Radar Echoes (echo or echo line). True bearing of center of echo or line and distance from aircraft in nautical miles; if appropriate, indicate weather intensifying or weakening and whether no gaps, some gaps, or frequent gaps are observed.

(6) Significant differences between conditions encountered and those forecast for the flight, such as forecast thunderstorms not observed or freezing rain not forecast.

(7) If the position of the phenomenon reported is not the same as the position given under

subparagraph 6–1–13b1(b), Item 2, Position, report it after the phenomenon.

6-1-14. AIREP SPECIALS (ARS)

a. Turbulence. TURB SEV encountered while in subsonic flight is reported as soon as possible after occurrence and requires AIREP SPECIAL. TURB MOD is reported only if encountered within 10 minutes prior to reaching reporting position. If in transonic or supersonic flight, TURB MOD and SEV is reported as soon as possible and requires AIREP SPECIAL.

b. Icing. ICE SEV is reported as soon as possible after occurrence and requires AIREP SPECIAL. ICE MOD is reported only if encountered within last 10 minutes prior to reaching reporting position.

EXAMPLE-

FF KMIAYMYX 211538 TJSJYFYX ARS PAA101 5045N02015W 1536 F310 ASC F350 51N030W 21 FUEL 0900 ICE SEV

6-1-15. ARTCC RELAY OF VFR MESSAGES

ARTCC operators must relay all international VFR flight movement messages to the adjacent FSS unless that facility is also an addressee.

NOTE-

If an overseas unit erroneously routes a VFR movement message to an ARTCC, the automatic NADIN switch will not divert it to an FSS.

TBLA-3 Item 10b Surveillance Capabilities

ENTER "N" if no surveillance equipment for the route to be flown is carried, or the equipment is unserviceable, or ENTER One or more of the following descriptors, to a maximum of 20 characters, to describe the serviceable surveillance equipment and/or capabilities on board. ENTER no more than one transponder code (Modes A, C, or S) SSR Modes A and C: А Transponder Mode A (4 digits – 4096 codes) С Transponder Mode A (4 digits - 4096 codes) and Mode C SSR Mode S: E Transponder Mode S, including aircraft identification, pressure-altitude, and extended squitter (ADS-B) capability Η Transponder Mode S, including aircraft identification, pressure-altitude, and enhanced surveillance capability I Transponder Mode S, including aircraft identification, but no pressure-altitude capability L Transponder Mode S, including aircraft identification, pressure-altitude, extended squitter (ADS-B), and enhanced surveillance capability Р Transponder Mode S, including pressure-altitude, but no aircraft identification capability S Transponder Mode S, including both pressure-altitude and aircraft identification capability Х Transponder Mode S, with neither aircraft identification nor pressure-altitude NOTE-

Enhanced surveillance capability is the ability of the aircraft to down–link aircraft derived data via Mode S transponder. ADS–B:

- B1 ADS-B with dedicated 1090 MHz ADS-B "out" capability
- B2 ADS-B with dedicated 1090 MHz ADS-B "out" and "in" capability
- U1 ADS-B with "out" capability using UAT
- U2 ADS-B with "out" and "in" capability using UAT
- V1 ADS-B with "out" capability using VDL Mode 4
- V2 ADS-B with "out" and "in" capability using VDL Mode 4

NOTE-

File no more than one code for each type of capability, e.g. file B1 or B2 and not both.

- ADS-C:
 - D1 ADS-C with FANS 1/A capabilities
 - G1 ADS-C with ATN capabilities

Alphanumeric characters not included above are reserved.

EXAMPLE-

ADE3RV/HB2U2V2G1

NOTE-

1. The RSP specification(s), if applicable, will be listed in Item 18 following the indicator SUR/, using the characters "RSP" followed by the specifications value. Currently RSP180 and RSP400 are in use.

2. List additional surveillance equipment or capabilities in Item 18 following the indicator SUR/.

TBLA-4
Item 18 NAV/, COM/, DAT/, and SUR/ capabilities used by FAA

Item	Purpose	Entry	Explanation
NAV/ entries used by FAA	Radius-to-Fix (RF) capa- bility	Z1	RNP-capable flight is authorized for Radius-to-Fix opera- tions.
	Fixed Radius Transitions (FRT)	Z2	RNP-capable flight is authorized for Fixed Radius Transi- tions.
	Time of Arrival Control (TOAC)	Z5	RNP-capable flight is authorized for Time of Arrival Control.
	Advanced RNP (A-RNP)	P1	Flight is authorized for A-RNP operations.
	Helicopter RNP 0.3	R1	Flight is authorized for RNP 0.3 operations (pertains to helicopters only).
	RNP 2 Continental	M1	Flight is authorized for RNP 2 continental operations.
	RNP 2 Oceanic/Remote	M2	Flight is authorized for RNP 2 oceanic/remote operations.
COM/ entries used by FAA	N/A	N/A	The FAA currently does not use any entries in COM/.
DAT/ entries used by FAA	Capability and preference for delivery of pre-depar- ture clearance	Priority number followed by: • FANS • FANSP • PDC • VOICE	Entries are combined with a priority number, for example; 1FANS2PDC means a preference for departure clearance delivered via FANS 1/A; with capability to also receive the clearance via ACARS PDC. FANS = FANS 1/A DCL FANSP = FANS 1/A + DCL PDC = ACARS PDC VOICE = PDC via voice (no automated delivery)
SUR/ entries used by FAA	Req. Surveillance Perfor- mance	RSP180	Aircraft is authorized for Required Surveillance Performance RSP180
		RSP400	Aircraft is authorized for Required Surveillance Performance RSP400
	ADS-B	260B	Aircraft has 1090 MHz Extended Squitter ADS–B compliant with RTCA DO–260B (complies with FAA requirements)
		282B	Aircraft has 978 MHz UAT ADS–B compliant with RTCA DO–282B (complies with FAA requirements)

NOTE-

1. Other entries in NAV/, COM/, DAT/, and SUR/ are permitted for international flights when instructed by other service providers. Direction on use of these capabilities by the FAA is detailed in the following sections.

2. In NAV/, descriptors for advanced capabilities (Z1, P1, R1, M1, and M2) should be entered as a single character string with no intervening spaces, and separated from any other entries in NAV/ by a space.

EXAMPLE-NAV/Z1P1M2 SBAS

Type of Douting	Douting Conshility Dequired Item		Item 10a		Notos
Type of Kouting	Capability Kequired	item iva	See NOTE 3	See NOTE 4	INOLES
RNAV SID or STAR	DNAV 1	GR	D2		If GNSS
(See NOTE 1)	KINAV I	DIR	D4		If DME/DME/IRU
RNP SID or STAR	RNP 1 GNSS	GR	02		If GNSS only
(See NOTE 2)	RNP 1 GNSS	DGIR	01		If GNSS primary and DME/DME/IRU backup
RNP SID or STAR with RF	RNP 1 GNSS	GRZ	02	Z1	If GNSS only
(See NOTE 2)	RNP 1 GNSS	DGIRZ	01	Z1	If GNSS primary and DME/DME/IRU backup
Domestic Q-Route (see	DNAV 2	GR	C2		If GNSS
Gulf of Mexico Q-Routes)	KINAV Z	DIR	C4		If DME/DME/IRU
T-Route	RNAV 2	GR	C2		GNSS is required for T-Routes
RNAV (GPS) Approach	RNP Approach, GPS	GR	S 1		
RNAV (GPS) Approach	RNP Approach, GPS Baro-VNAV	GR	S2		
RNAV (GPS) Approach with RF required	RNP Approach, GPS RF Capability	GRZ	S2	Z1	Domestic arrivals do not need to file PBN approach
RNP AR Approach with RF	RNP (Special Autho- rization Required) RF Leg Capability	GR	T1		capabilities to request the approach.
RNP AR Approach with- out RF	RNP (Special Autho- rization Required)	GR	T2		

TBLA-13 Filing for Performance Based Navigation (PBN) Routes

NOTE-

1. If the flight is requesting an RNAV SID only (no RNAV STAR) or RNAV STAR only (no RNAV SID) then consult guidance on the FAA website at

https://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/air_traffic_services/flight_plan_filing.

2. *PBN* descriptor D1 includes the capabilities of D2, D3, and D4. PBN descriptor B1 includes the capabilities of B2, B3, B4, and B5. PBN descriptor C1 includes the capabilities of C2, C3, and C4.

3. In NAV/, descriptors for advanced capabilities (Z1, P1, R1, M1, and M2) should be entered as a single character string with no intervening spaces, and separated from any other entries in NAV/ by a space.

EXAMPLE-

NAV/Z1P1M2 SBAS

7. Automated Departure Clearance Delivery (DCL or PDC). When planning to use automated pre-departure clearance delivery capability, file as indicated below.

(a) PDC provides pre-departure clearances from the FAA to the operator's designated flight operations center, which then delivers the clearance to the pilot by various means. Use of PDC does not require any special flight plan entry.

(b) DCL provides pre-departure clearances from the FAA directly to the cockpit/FMS via Controller Pilot Datalink Communications (CPDLC). Use of DCL requires flight plan entries as follows:

• Include CPDLC codes in Item 10a only if the flight is capable of en route/oceanic CPDLC, the codes are not required for DCL.

• Include Z in Item 10a to indicate there is information provided in Item 18 DAT/.

• Include the clearance delivery methods of which the flight is capable, and order of preference in Item 18 DAT/. (See AIM 5–2–2)

- VOICE deliver clearance via Voice
- PDC deliver clearance via PDC
- FANS deliver clearance via FANS 1/A
- FANSP deliver clearance via FANS 1/A+

EXAMPLE– DAT/1FANS2PDC

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DAT/1FANSP2VOICE
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8. Operating in Reduced Vertical Separation Minima (RVSM) Airspace (Item 10a). When planning to fly in RVSM airspace (FL 290 up to and including FL 410) then file as indicated below.

(a) If capable and approved for RVSM operations, per AIM 4–6–1, Applicability and RVSM Mandate (Date/Time and Area), file a W in Item 10a. Include the aircraft registration mark in Item 18 REG/, which is used to post-operationally monitor the safety of RVSM operations.

• Do not file a "W" in Item 10a if the aircraft is capable of RVSM operations, but is not approved to operate in RVSM airspace.

• If RVSM capability is lost after the flight plan is filed, request that ATC remove the 'W' from Item 10a.

(b) When requesting to operate non-RVSM in RVSM airspace, using one of the exceptions identified in AIM 4–6–10, do not include a "W" in Item 10a. Include STS/NONRVSM in Item 18. STS/NONRVSM is used only as part of a request to operate non-RVSM in RVSM airspace.

9. Eligibility for Reduced Oceanic Separation. Indicate eligibility for the listed reduced separation minima as indicated in the tables below. Full Operational Requirements for these services are found in the U.S. Aeronautical Information Publication (AIP) ENR 7, Oceanic Operations, available at http://www.faa.gov/air traffic/publications/atpubs/aip html/index.html.

TBL A-14 Filing for Gulf of Mexico CTA

						Flight	Plan Entries	
Dimension of Separa- tion	Separation Minima	ADS-C Surveillance Requirements	Comm. Re- quirement	PBN Re- quirement	ADS–C in Item 10b	CPDLC in Item 10a	PBN in Item 18 PBN/ (also File 'R' in Item 10a)	PBN in Item 18 NAV/
Lateral	50 NM	N/A (ADS-C not required)	Voice comm– HF or VHF as required to maintain con- tact over the entire route to be flown.	RNP10 or RNP4	N/A	N/A	A1 or L1	N/A

NOTE-

If not RNAV10/RNP10 capable and planning to operate in the Gulf of Mexico CTA, then put the notation NONRNP10 in Item 18 RMK/, preferably first.

TBLA-15 Filing for 50 NM Lateral Separation in Anchorage Arctic FIR

						Flight	Plan Entries	
Dimension of Separa- tion	Separa- tion Mini- ma	ADS-C Surveillance Requirements	Comm. Re- quirement	PBN Require- ment	ADS–C in Item 10b	CPDLC in Item 10a	PBN in Item 18 PBN/ (also File 'R' in Item 10a)	PBN in Item 18 NAV/
Lateral	50 NM	N/A (ADS-C not required)	None be- yond normal requirements for the airspace	RNP10 or RNP4	N/A	N/A	A1 or L1	N/A

TBL A-16

Filing for 30 NM Lateral, 30 NM Longitudinal, and 50 NM Longitudinal Oceanic Separation in Anchorage, Oakland, and New York Oceanic CTAs

	Separation Minima	ADS–C Surveillance Requirements	Comm. Re- quirement	PBN Require- ment	Flight Plan Entries			
Dimension of Separation					ADS–C in Item 10b	CPDLC in Item 10a	PBN in Item 18 PBN/ (also File 'R' in Item 10a)	PBN in Item 18 NAV/
Longitudinal	50 NM	Position report at least every 27 min- utes (at least every 32 minutes if both air- craft are approved for RNP-4 opera- tions)	CPDLC	RNP10	D1	J5, and/ or J6, and/ or J7	A1	N/A
Longitudinal	30 NM	ADS–C position re- port at least every 10 minutes	CPDLC	RNP4	D1	J5, and/ or J6, and/ or J7	L1	N/A
Lateral	30 NM	ADS-C-based later- al deviation event contract with 5NM lateral deviation from planned routing set as threshold for triggering ADS re- port of lateral devia- tion event	CPDLC	RNP4	D1	J5, and/ or J6, and/ or J7	L1	N/A

TBL A-17	
Filing for Reduced Oceanic Separation when RSP/RCP Required on March 29.	2018

	Separation Minima	RSP Re- quirement	RCP Re- quirement	PBN Require- ment	Flight Plan Entries				
Dimension of Separation					RSP in Item 18 SUR/	RCP in Item 10a	CDPLC in Item10a	PBN in Item 18 PBN/ (also File 'R' in Item 10a)	PBN in Item 18 NAV/
Lateral	55.5 km 30 NM	180	240	RNP 2 or RNP 4	RSP180	Р2	J5, and/or J6, and/or J7	L1	
Perfor- mance– based Longitudinal	5 Minutes	180	240	RNAV 10 (RNP 10) RNP 4, or RNP 2 oceanic/ remote	RSP180	Р2	J5, and/or J6, and/or J7	A1 or L1	M2
Perfor- mance- based Longitudinal	55.5 km 30 NM	180	240	RNP 4 or RNP 2 oceanic/ remote	RSP180	P2	J5, and/or J6, and/or J7	L1	M2
Perfor- mance- based Longitudinal	93 km 50 NM	180	240	RNAV 10 (RNP 10) or RNP 4	RSP180	P2	J5, and/or J6, and/or J7	A1 or L1	

NOTE-

1. Filing of RNP 2 alone is not supported in FAA controlled airspace; PBN/L1 (for RNP 4) or PBN/A1 (for RNP 10) must be filed to obtain the indicated separation.

2. Use of "RNP2" in NAV/ signifies continental RNP 2 (and means the same as M1). Continental RNP 2 is not adequate for reduced oceanic separation. Descriptor M2 indicates RNP 2 global/oceanic RNP 2 capability.

10. Date of Flight (Item 18 DOF/)

Flights planned 22½ hours or more after the time the flight plan is filed, must include the date of flight in DOF/ expressed in a six-digit format YYMMDD, where YY equals the year (Y), MM equals the month, and DD equals the day.

NOTE-

FAA ATC systems will not accept flight plans 22¹/₂ hours or more prior to the proposed departure time. FAA Flight Service and commercial flight planning services generally accept flight plans earlier and forward to ATC at an appropriate time, typically 2 to 4 hours before the flight.

EXAMPLE-

DOF/171130

11. Reasons for Special Handling (Item 18 STS/)

(a) Indicate the applicable Special Handling in Item 18 STS/ as shown in TBL A-18.

NOTE-

Priority for a flight is not automatically granted based on filing one of these codes but is based on documented procedures. In some cases, additional information may also be required in remarks; follow all such instructions as well.

PILOT/CONTROLLER GLOSSARY

PURPOSE

a. This Glossary was compiled to promote a common understanding of the terms used in the Air Traffic Control system. It includes those terms which are intended for pilot/controller communications. Those terms most frequently used in pilot/controller communications are printed in *bold italics*. The definitions are primarily defined in an operational sense applicable to both users and operators of the National Airspace System. Use of the Glossary will preclude any misunderstandings concerning the system's design, function, and purpose.

b. Because of the international nature of flying, terms used in the Lexicon, published by the International Civil Aviation Organization (ICAO), are included when they differ from FAA definitions. These terms are followed by "[ICAO]." For the reader's convenience, there are also cross references to related terms in other parts of the Glossary and to other documents, such as the Code of Federal Regulations (CFR) and the Aeronautical Information Manual (AIM).

c. This Glossary will be revised, as necessary, to maintain a common understanding of the system.

EXPLANATION OF CHANGES

- d. Terms Added: CALIBRATED AIRSPEED NATIONAL SECURITY AREA REDUCED VERTICAL SEPARATION MINIMUM (RVSM) AIRSPACE
- e. Terms Modified: SPECIAL USE AIRSPACE

f. Editorial/format changes were made where necessary. Revision bars were not used due to the insignificant nature of the changes.
11/3/22

C

CALCULATED LANDING TIME- A term that may be used in place of tentative or actual calculated landing time, whichever applies.

CALIBRATED AIRSPEED (CAS) – The indicated airspeed of an aircraft, corrected for position and instrument error. Calibrated airspeed is equal to true airspeed in standard atmosphere at sea level.

CALL FOR RELEASE– Wherein the overlying ARTCC requires a terminal facility to initiate verbal coordination to secure ARTCC approval for release of a departure into the en route environment.

CALL UP– Initial voice contact between a facility and an aircraft, using the identification of the unit being called and the unit initiating the call.

(Refer to AIM.)

CANADIAN MINIMUM NAVIGATION PERFOR-MANCE SPECIFICATION AIRSPACE– That portion of Canadian domestic airspace within which MNPS separation may be applied.

CARDINAL ALTITUDES- "Odd" or "Even" thousand-foot altitudes or flight levels; e.g., 5,000, 6,000, 7,000, FL 250, FL 260, FL 270.

(See ALTITUDE.) (See FLIGHT LEVEL.)

CARDINAL FLIGHT LEVELS-(See CARDINAL ALTITUDES.)

CAT-

(See CLEAR-AIR TURBULENCE.)

CATCH POINT- A fix/waypoint that serves as a transition point from the high altitude waypoint navigation structure to an arrival procedure (STAR) or the low altitude ground-based navigation structure.

CEILING- The heights above the earth's surface of the lowest layer of clouds or obscuring phenomena that is reported as "broken," "overcast," or "obscuration," and not classified as "thin" or "partial."

(See ICAO term CEILING.)

CEILING [ICAO]– The height above the ground or water of the base of the lowest layer of cloud below

6,000 meters (20,000 feet) covering more than half the sky.

CENTER-

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(See AIR ROUTE TRAFFIC CONTROL CENTER.)
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CENTER'S AREA– The specified airspace within which an air route traffic control center (ARTCC) provides air traffic control and advisory service.

(See AIR ROUTE TRAFFIC CONTROL CENTER.) (Refer to AIM.)

CENTER WEATHER ADVISORY– An unscheduled weather advisory issued by Center Weather Service Unit meteorologists for ATC use to alert pilots of existing or anticipated adverse weather conditions within the next 2 hours. A CWA may modify or redefine a SIGMET.

(See AIRMET.) (See CONVECTIVE SIGMET.) (See SAW.) (See SIGMET.) (Refer to AIM.)

CENTRAL EAST PACIFIC- An organized route system between the U.S. West Coast and Hawaii.

CEP-

(See CENTRAL EAST PACIFIC.)

CERAP-

(See COMBINED CENTER-RAPCON.)

CERTIFICATE OF WAIVER OR AUTHORIZA-TION (COA)– An FAA grant of approval for a specific flight operation or airspace authorization or waiver.

CERTIFIED TOWER RADAR DISPLAY (CTRD)– An FAA radar display certified for use in the NAS.

CFR-

(See CALL FOR RELEASE.)

CHA

(See CONTINGENCY HAZARD AREA)

CHAFF– Thin, narrow metallic reflectors of various lengths and frequency responses, used to reflect radar energy. These reflectors, when dropped from aircraft and allowed to drift downward, result in large targets on the radar display. CHART SUPPLEMENT U.S.– A publication designed primarily as a pilot's operational manual containing all airports, seaplane bases, and heliports open to the public including communications data, navigational facilities, and certain special notices and procedures. This publication is issued in seven volumes according to geographical area.

CHARTED VFR FLYWAYS– Charted VFR Flyways are flight paths recommended for use to bypass areas heavily traversed by large turbine-powered aircraft. Pilot compliance with recommended flyways and associated altitudes is strictly voluntary. VFR Flyway Planning charts are published on the back of existing VFR Terminal Area charts.

CHARTED VISUAL FLIGHT PROCEDURE APPROACH– An approach conducted while operating on an instrument flight rules (IFR) flight plan which authorizes the pilot of an aircraft to proceed visually and clear of clouds to the airport via visual landmarks and other information depicted on a charted visual flight procedure. This approach must be authorized and under the control of the appropriate air traffic control facility. Weather minimums required are depicted on the chart.

CHASE – An aircraft flown in proximity to another aircraft normally to observe its performance during training or testing.

CHASE AIRCRAFT-(See CHASE.)

CHOP- A form of turbulence.

a. Light Chop– Turbulence that causes slight, rapid and somewhat rhythmic bumpiness without appreciable changes in altitude or attitude.

b. Moderate Chop– Turbulence similar to Light Chop but of greater intensity. It causes rapid bumps or jolts without appreciable changes in aircraft altitude or attitude.

(See TURBULENCE.)

CIRCLE-TO-LAND MANEUVER- A maneuver initiated by the pilot to align the aircraft with a runway for landing when a straight-in landing from an instrument approach is not possible or is not desirable. At tower controlled airports, this maneuver is made only after ATC authorization has been obtained and the pilot has established required visual reference to the airport.

(See CIRCLE TO RUNWAY.) (See LANDING MINIMUMS.) (Refer to AIM.)

CIRCLE TO RUNWAY (RUNWAY NUMBER)– Used by ATC to inform the pilot that he/she must circle to land because the runway in use is other than the runway aligned with the instrument approach procedure. When the direction of the circling maneuver in relation to the airport/runway is required, the controller will state the direction (eight cardinal compass points) and specify a left or right downwind or base leg as appropriate; e.g., "Cleared VOR Runway Three Six Approach circle to Runway Two Two," or "Circle northwest of the airport for a right downwind to Runway Two Two."

(See CIRCLE-TO-LAND MANEUVER.) (See LANDING MINIMUMS.) (Refer to AIM.)

CIRCLING APPROACH-(See CIRCLE-TO-LAND MANEUVER.)

CIRCLING MANEUVER-(See CIRCLE-TO-LAND MANEUVER.)

CIRCLING MINIMA– (See LANDING MINIMUMS.)

CLASS A AIRSPACE– (See CONTROLLED AIRSPACE.)

- CLASS B AIRSPACE-(See CONTROLLED AIRSPACE.)
- CLASS C AIRSPACE-(See CONTROLLED AIRSPACE.)
- CLASS D AIRSPACE-(See CONTROLLED AIRSPACE.)

CLASS E AIRSPACE– (See CONTROLLED AIRSPACE.)

CLASS G AIRSPACE– Airspace that is not designated in 14 CFR Part 71 as Class A, Class B, Class C, Class D, or Class E controlled airspace is Class G (uncontrolled) airspace.

(See UNCONTROLLED AIRSPACE.)

CLEAR AIR TURBULENCE (CAT)– Turbulence encountered in air where no clouds are present. This term is commonly applied to high-level turbulence associated with wind shear. CAT is often encountered in the vicinity of the jet stream.

(See WIND SHEAR.) (See JET STREAM.)

CLEAR OF THE RUNWAY-

a. Taxiing aircraft, which is approaching a runway, is clear of the runway when all parts of the aircraft are held short of the applicable runway holding position marking.

b. A pilot or controller may consider an aircraft, which is exiting or crossing a runway, to be clear of the runway when all parts of the aircraft are beyond the runway edge and there are no restrictions to its continued movement beyond the applicable runway holding position marking.

c. Pilots and controllers shall exercise good judgment to ensure that adequate separation exists between all aircraft on runways and taxiways at airports with inadequate runway edge lines or holding position markings.

CLEARANCE-

(See AIR TRAFFIC CLEARANCE.)

CLEARANCE LIMIT– The fix, point, or location to which an aircraft is cleared when issued an air traffic clearance.

(See ICAO term CLEARANCE LIMIT.)

CLEARANCE LIMIT [ICAO] – The point to which an aircraft is granted an air traffic control clearance.

CLEARANCE VOID IF NOT OFF BY (TIME)– Used by ATC to advise an aircraft that the departure release is automatically canceled if takeoff is not made prior to a specified time. The expiration of a clearance void time does not cancel the departure clearance or IFR flight plan. It withdraws the pilot's authority to depart IFR until a new departure release/release time has been issued by ATC. Pilots who choose to depart VFR after their clearance void time has expired should not depart using the previously assigned IFR transponder code.

(See ICAO term CLEARANCE VOID TIME.)

CLEARANCE VOID TIME [ICAO]– A time specified by an air traffic control unit at which a clearance ceases to be valid unless the aircraft concerned has already taken action to comply therewith.

CLEARED APPROACH– ATC authorization for an aircraft to execute any standard or special instrument approach procedure for that airport. Normally, an

aircraft will be cleared for a specific instrument approach procedure.

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(See CLEARED (Type of) APPROACH.)
(See INSTRUMENT APPROACH
PROCEDURE.)
(Refer to 14 CFR Part 91.)
(Refer to AIM.)
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CLEARED (Type of) APPROACH– ATC authorization for an aircraft to execute a specific instrument approach procedure to an airport; e.g., "Cleared ILS Runway Three Six Approach."

(See APPROACH CLEARANCE.) (See INSTRUMENT APPROACH PROCEDURE.) (Refer to 14 CFR Part 91.) (Refer to AIM.)

CLEARED AS FILED– Means the aircraft is cleared to proceed in accordance with the route of flight filed in the flight plan. This clearance does not include the altitude, DP, or DP Transition.

(See REQUEST FULL ROUTE CLEARANCE.) (Refer to AIM.)

CLEARED FOR TAKEOFF – ATC authorization for an aircraft to depart. It is predicated on known traffic and known physical airport conditions.

CLEARED FOR THE OPTION– ATC authorization for an aircraft to make a touch-and-go, low approach, missed approach, stop and go, or full stop landing at the discretion of the pilot. It is normally used in training so that an instructor can evaluate a student's performance under changing situations. Pilots should advise ATC if they decide to remain on the runway, of any delay in their stop and go, delay clearing the runway, or are unable to comply with the instruction(s).

(See OPTION APPROACH.) (Refer to AIM.)

CLEARED THROUGH – ATC authorization for an aircraft to make intermediate stops at specified airports without refiling a flight plan while en route to the clearance limit.

CLEARED TO LAND – ATC authorization for an aircraft to land. It is predicated on known traffic and known physical airport conditions.

CLEARWAY- An area beyond the takeoff runway under the control of airport authorities within which terrain or fixed obstacles may not extend above specified limits. These areas may be required for certain turbine-powered operations and the size and upward slope of the clearway will differ depending on when the aircraft was certificated.

(Refer to 14 CFR Part 1.)

CLIMB TO VFR– ATC authorization for an aircraft to climb to VFR conditions within Class B, C, D, and E surface areas when the only weather limitation is restricted visibility. The aircraft must remain clear of clouds while climbing to VFR.

(See SPECIAL VFR CONDITIONS.) (Refer to AIM.)

CLIMBOUT- That portion of flight operation between takeoff and the initial cruising altitude.

CLIMB VIA– An abbreviated ATC clearance that requires compliance with the procedure lateral path, associated speed restrictions, and altitude restrictions along the cleared route or procedure.

CLOSE PARALLEL RUNWAYS– Two parallel runways whose extended centerlines are separated by less than 4,300 feet and at least 3000 feet (750 feet for SOIA operations) for which ATC is authorized to conduct simultaneous independent approach operations. PRM and simultaneous close parallel appear in approach title. Dual communications, special pilot training, an Attention All Users Page (AAUP), NTZ monitoring by displays that have aural and visual alerting algorithms are required. A high update rate surveillance sensor is required for certain runway or approach course spacing.

CLOSED LOOP CLEARANCE- A vector or reroute clearance that includes a return to route point and updates ERAM to accurately reflect the anticipated route (e.g., a QU route pick that anticipates length of vector and includes the next fix that ties into the route of flight.)

CLOSED RUNWAY- A runway that is unusable for aircraft operations. Only the airport management/ military operations office can close a runway.

CLOSED TRAFFIC- Successive operations involving takeoffs and landings or low approaches where the aircraft does not exit the traffic pattern.

CLOUD- A cloud is a visible accumulation of minute water droplets and/or ice particles in the atmosphere above the Earth's surface. Cloud differs from ground fog, fog, or ice fog only in that the latter are, by definition, in contact with the Earth's surface.

CLT-

(See CALCULATED LANDING TIME.)

CLUTTER– In radar operations, clutter refers to the reception and visual display of radar returns caused by precipitation, chaff, terrain, numerous aircraft targets, or other phenomena. Such returns may limit or preclude ATC from providing services based on radar.

(See CHAFF.) (See GROUND CLUTTER.) (See PRECIPITATION.) (See TARGET.) (See ICAO term RADAR CLUTTER.)

CMNPS-

(See CANADIAN MINIMUM NAVIGATION PERFORMANCE SPECIFICATION AIRSPACE.)

COA-

(See CERTIFICATE OF WAIVER OR AUTHORIZATION.)

COASTAL FIX- A navigation aid or intersection where an aircraft transitions between the domestic route structure and the oceanic route structure.

CODES- The number assigned to a particular multiple pulse reply signal transmitted by a transponder.

(See DISCRETE CODE.)

COLD TEMPERATURE CORRECTION- A correction in feet, based on height above airport and temperature, that is added to the aircraft's indicated altitude to offset the effect of cold temperature on true altitude.

COLLABORATIVE TRAJECTORY OPTIONS PROGRAM (CTOP)– CTOP is a traffic management program administered by the Air Traffic Control System Command Center (ATCSCC) that manages demand through constrained airspace, while considering operator preference with regard to both route and delay as defined in a Trajectory Options Set (TOS).

COMBINED CENTER-RAPCON– An air traffic facility which combines the functions of an ARTCC and a radar approach control facility.

(See AIR ROUTE TRAFFIC CONTROL CENTER.) (See RADAR APPROACH CONTROL FACILITY.)

COMMON POINT- A significant point over which two or more aircraft will report passing or have

reported passing before proceeding on the same or diverging tracks. To establish/maintain longitudinal separation, a controller may determine a common point not originally in the aircraft's flight plan and then clear the aircraft to fly over the point.

(See SIGNIFICANT POINT.)

COMMON PORTION-

(See COMMON ROUTE.)

COMMON ROUTE– That segment of a North American Route between the inland navigation facility and the coastal fix.

OR

COMMON ROUTE-(See SEGMENTS OF A SID/STAR)

COMMON TRAFFIC ADVISORY FREQUENCY (CTAF)– A frequency designed for the purpose of carrying out airport advisory practices while operating to or from an airport without an operating control tower. The CTAF may be a UNICOM, Multicom, FSS, or tower frequency and is identified in appropriate aeronautical publications.

(See DESIGNATED COMMON TRAFFIC ADVISORY FREQUENCY (CTAF) AREA.) (Refer to AC 90-66, Non–Towered Airport Flight Operations.)

COMPASS LOCATOR- A low power, low or medium frequency (L/MF) radio beacon installed at the site of the outer or middle marker of an instrument landing system (ILS). It can be used for navigation at distances of approximately 15 miles or as authorized in the approach procedure.

a. Outer Compass Locator (LOM)– A compass locator installed at the site of the outer marker of an instrument landing system.

(See OUTER MARKER.)

b. Middle Compass Locator (LMM)– A compass locator installed at the site of the middle marker of an instrument landing system.

(See MIDDLE MARKER.) (See ICAO term LOCATOR.)

COMPASS ROSE– A circle, graduated in degrees, printed on some charts or marked on the ground at an airport. It is used as a reference to either true or magnetic direction.

COMPLY WITH RESTRICTIONS – An ATC instruction that requires an aircraft being vectored

back onto an arrival or departure procedure to comply with all altitude and/or speed restrictions depicted on the procedure. This term may be used in lieu of repeating each remaining restriction that appears on the procedure.

COMPOSITE FLIGHT PLAN– A flight plan which specifies VFR operation for one portion of flight and IFR for another portion. It is used primarily in military operations.

(Refer to AIM.)

COMPULSORY REPORTING POINTS- Reporting points which must be reported to ATC. They are designated on aeronautical charts by solid triangles or filed in a flight plan as fixes selected to define direct routes. These points are geographical locations which are defined by navigation aids/fixes. Pilots should discontinue position reporting over compulsory reporting points when informed by ATC that their aircraft is in "radar contact."

COMPUTER NAVIGATION FIX (CNF)- A Computer Navigation Fix is a point defined by a latitude/longitude coordinate and is required to support Performance-Based Navigation (PBN) operations. A five-letter identifier denoting a CNF can be found next to an "x" on en route charts and on some approach charts. Eventually, all CNFs will be labeled and begin with the letters "CF" followed by three consonants (e.g., 'CFWBG'). CNFs are not recognized by ATC, are not contained in ATC fix or automation databases, and are not used for ATC purposes. Pilots should not use CNFs for point-topoint navigation (e.g., proceed direct), filing a flight plan, or in aircraft/ATC communications. Use of CNFs has not been adopted or recognized by the International Civil Aviation Organization (ICAO).

(REFER to AIM 1–1–17b5(i)(2), Global Positioning System (GPS).

CONDITIONS NOT MONITORED- When an airport operator cannot monitor the condition of the movement area or airfield surface area, this information is issued as a NOTAM. Usually necessitated due to staffing, operating hours or other mitigating factors associated with airport operations.

CONFIDENCE MANEUVER– A confidence maneuver consists of one or more turns, a climb or descent, or other maneuver to determine if the pilot in command (PIC) is able to receive and comply with ATC instructions. CONFLICT ALERT– A function of certain air traffic control automated systems designed to alert radar controllers to existing or pending situations between tracked targets (known IFR or VFR aircraft) that require his/her immediate attention/action.

(See MODE C INTRUDER ALERT.)

CONFLICT RESOLUTION– The resolution of potential conflictions between aircraft that are radar identified and in communication with ATC by ensuring that radar targets do not touch. Pertinent traffic advisories shall be issued when this procedure is applied.

Note: This procedure shall not be provided utilizing mosaic radar systems.

CONFORMANCE– The condition established when an aircraft's actual position is within the conformance region constructed around that aircraft at its position, according to the trajectory associated with the aircraft's Current Plan.

CONFORMANCE REGION– A volume, bounded laterally, vertically, and longitudinally, within which an aircraft must be at a given time in order to be in conformance with the Current Plan Trajectory for that aircraft. At a given time, the conformance region is determined by the simultaneous application of the lateral, vertical, and longitudinal conformance bounds for the aircraft at the position defined by time and aircraft's trajectory.

CONSOLAN- A low frequency, long-distance NAVAID used principally for transoceanic navigations.

CONSOLIDATED WAKE TURBULENCE (CWT)– A version of RECAT that has nine categories, A through I, that refines the grouping of aircraft while optimizing wake turbulence separation.

CONSTRAINT SATISFACTION POINT (CSP)– Meter Reference Elements (MREs) that are actively scheduled by TBFM. Constraint satisfaction occurs when the Scheduled Time of Arrival generated for each metered flight conforms to all the scheduling constraints specified at all the applicable CSPs.

CONTACT-

a. Establish communication with (followed by the name of the facility and, if appropriate, the frequency to be used).

b. A flight condition wherein the pilot ascertains the attitude of his/her aircraft and navigates by visual reference to the surface.

(See CONTACT APPROACH.) (See RADAR CONTACT.)

CONTACT APPROACH– An approach wherein an aircraft on an IFR flight plan, having an air traffic control authorization, operating clear of clouds with at least 1 mile flight visibility and a reasonable expectation of continuing to the destination airport in those conditions, may deviate from the instrument approach procedure and proceed to the destination airport by visual reference to the surface. This approach will only be authorized when requested by the pilot and the reported ground visibility at the destination airport is at least 1 statute mile.

(Refer to AIM.)

CONTAMINATED RUNWAY– A runway is considered contaminated whenever standing water, ice, snow, slush, frost in any form, heavy rubber, or other substances are present. A runway is contaminated with respect to rubber deposits or other friction-degrading substances when the average friction value for any 500-foot segment of the runway within the ALD fails below the recommended minimum friction level and the average friction value in the adjacent 500-foot segments falls below the maintenance planning friction level.

CONTERMINOUS U.S.– The 48 adjoining States and the District of Columbia.

CONTINENTAL UNITED STATES – The 49 States located on the continent of North America and the District of Columbia.

CONTINGENCY HAZARD AREA (CHA)– Used by ATC. Areas of airspace that are defined and distributed in advance of a launch or reentry operation and are activated in response to a failure.

(See AIRCRAFT HAZARD AREA.) (See REFINED HAZARD AREA.) (See TRANSITIONAL HAZARD AREA.)

CONTINUE– When used as a control instruction should be followed by another word or words clarifying what is expected of the pilot. Example: "continue taxi," "continue descent," "continue inbound," etc.

CONTROL AREA [ICAO]– A controlled airspace extending upwards from a specified limit above the earth.

Pilot/Controller Glossary

CONTROL SECTOR– An airspace area of defined horizontal and vertical dimensions for which a controller or group of controllers has air traffic control responsibility, normally within an air route traffic control center or an approach control facility. Sectors are established based on predominant traffic flows, altitude strata, and controller workload. Pilot communications during operations within a sector are normally maintained on discrete frequencies assigned to the sector.

(See DISCRETE FREQUENCY.)

CONTROL SLASH– A radar beacon slash representing the actual position of the associated aircraft. Normally, the control slash is the one closest to the interrogating radar beacon site. When ARTCC radar is operating in narrowband (digitized) mode, the control slash is converted to a target symbol.

CONTROLLED AIRSPACE– An airspace of defined dimensions within which air traffic control service is provided to IFR flights and to VFR flights in accordance with the airspace classification.

a. Controlled airspace is a generic term that covers Class A, Class B, Class C, Class D, and Class E airspace.

b. Controlled airspace is also that airspace within which all aircraft operators are subject to certain pilot qualifications, operating rules, and equipment requirements in 14 CFR Part 91 (for specific operating requirements, please refer to 14 CFR Part 91). For IFR operations in any class of controlled airspace, a pilot must file an IFR flight plan and receive an appropriate ATC clearance. Each Class B, Class C, and Class D airspace area designated for an airport contains at least one primary airport around which the airspace is designated (for specific designations and descriptions of the airspace classes, please refer to 14 CFR Part 71).

c. Controlled airspace in the United States is designated as follows:

1. CLASS A– Generally, that airspace from 18,000 feet MSL up to and including FL 600, including the airspace overlying the waters within 12 nautical miles of the coast of the 48 contiguous States and Alaska. Unless otherwise authorized, all persons must operate their aircraft under IFR.

2. CLASS B– Generally, that airspace from the surface to 10,000 feet MSL surrounding the nation's busiest airports in terms of airport operations or passenger enplanements. The configuration of each

Class B airspace area is individually tailored and consists of a surface area and two or more layers (some Class B airspace areas resemble upside-down wedding cakes), and is designed to contain all published instrument procedures once an aircraft enters the airspace. An ATC clearance is required for all aircraft to operate in the area, and all aircraft that are so cleared receive separation services within the airspace. The cloud clearance requirement for VFR operations is "clear of clouds."

3. CLASS C- Generally, that airspace from the surface to 4,000 feet above the airport elevation (charted in MSL) surrounding those airports that have an operational control tower, are serviced by a radar approach control, and that have a certain number of IFR operations or passenger enplanements. Although the configuration of each Class C area is individually tailored, the airspace usually consists of a surface area with a 5 NM radius, a circle with a 10 NM radius that extends no lower than 1,200 feet up to 4,000 feet above the airport elevation, and an outer area that is not charted. Each person must establish two-way radio communications with the ATC facility providing air traffic services prior to entering the airspace and thereafter maintain those communications while within the airspace. VFR aircraft are only separated from IFR aircraft within the airspace.

(See OUTER AREA.)

4. CLASS D– Generally, that airspace from the surface to 2,500 feet above the airport elevation (charted in MSL) surrounding those airports that have an operational control tower. The configuration of each Class D airspace area is individually tailored and when instrument procedures are published, the airspace will normally be designed to contain the procedures. Arrival extensions for instrument approach procedures may be Class D or Class E airspace. Unless otherwise authorized, each person must establish two-way radio communications with the ATC facility providing air traffic services prior to entering the airspace and thereafter maintain those communications while in the airspace. No separation services are provided to VFR aircraft.

5. CLASS E– Generally, if the airspace is not Class A, Class B, Class C, or Class D, and it is controlled airspace, it is Class E airspace. Class E airspace extends upward from either the surface or a designated altitude to the overlying or adjacent controlled airspace. When designated as a surface area, the airspace will be configured to contain all instrument procedures. Also in this class are Federal airways, airspace beginning at either 700 or 1,200 feet AGL used to transition to/from the terminal or en route environment, en route domestic, and offshore airspace areas designated below 18,000 feet MSL. Unless designated at a lower altitude, Class E airspace begins at 14,500 MSL over the United States, including that airspace overlying the waters within 12 nautical miles of the coast of the 48 contiguous States and Alaska, up to, but not including 18,000 feet MSL, and the airspace above FL 600.

CONTROLLED AIRSPACE [ICAO]– An airspace of defined dimensions within which air traffic control service is provided to IFR flights and to VFR flights in accordance with the airspace classification.

Note: Controlled airspace is a generic term which covers ATS airspace Classes A, B, C, D, and E.

CONTROLLED TIME OF ARRIVAL– Arrival time assigned during a Traffic Management Program. This time may be modified due to adjustments or user options.

CONTROLLER-

(See AIR TRAFFIC CONTROL SPECIALIST.)

CONTROLLER [ICAO]– A person authorized to provide air traffic control services.

CONTROLLER PILOT DATA LINK COMMUNICATIONS (CPDLC)– A two-way digital communications system that conveys textual air traffic control messages between controllers and pilots using ground or satellite-based radio relay stations.

CONVECTIVE SIGMET– A weather advisory concerning convective weather significant to the safety of all aircraft. Convective SIGMETs are issued for tornadoes, lines of thunderstorms, embedded thunderstorms of any intensity level, areas of thunderstorms greater than or equal to VIP level 4 with an area coverage of $\frac{4}{10}$ (40%) or more, and hail $\frac{3}{4}$ inch or greater.

(See AIRMET.) (See CWA.) (See SAW.) (See SIGMET.) (Refer to AIM.)

CONVECTIVE SIGNIFICANT METEOROLOG-ICAL INFORMATION-

(See CONVECTIVE SIGMET.)

COOPERATIVE SURVEILLANCE– Any surveillance system, such as secondary surveillance radar (SSR), wide–area multilateration (WAM), or ADS– B, that is dependent upon the presence of certain equipment onboard the aircraft or vehicle to be detected.

(See AUTOMATIC DEPENDENT SURVEILLANCE-BROADCAST.) (See NON-COOPERATIVE SURVEILLANCE.) (See RADAR.) (See WIDE AREA MULTILATERATION.)

COORDINATES- The intersection of lines of reference, usually expressed in degrees/minutes/ seconds of latitude and longitude, used to determine position or location.

COORDINATION FIX– The fix in relation to which facilities will handoff, transfer control of an aircraft, or coordinate flight progress data. For terminal facilities, it may also serve as a clearance for arriving aircraft.

COPTER-

(See HELICOPTER.)

CORRECTION- An error has been made in the transmission and the correct version follows.

COUPLED APPROACH– An instrument approach performed by the aircraft autopilot, and/or visually depicted on the flight director, which is receiving position information and/or steering commands from onboard navigational equipment. In general, coupled non-precision approaches must be flown manually (autopilot disengaged) at altitudes lower than 50 feet AGL below the minimum descent altitude, and coupled precision approaches must be flown manually (autopilot disengaged) below 50 feet AGL unless authorized to conduct autoland operations. Coupled instrument approaches are commonly flown to the allowable IFR weather minima established by the operator or PIC, or flown VFR for training and safety.

COUPLED SCHEDULING (CS)/ EXTENDED METERING (XM)– Adds additional Constraint Satisfaction Points for metered aircraft along their route. This provides the ability to merge flows upstream from the meter fix and results in a more optimal distribution of delays over a greater distance from the airport, increased meter list accuracy, and more accurate delivery to the meter fix.

COURSE-

a. The intended direction of flight in the horizontal plane measured in degrees from north.

b. The ILS localizer signal pattern usually specified as the front course or the back course.

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(See BEARING.)
(See INSTRUMENT LANDING SYSTEM.)
(See RADIAL.)
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CPDLC-

(See CONTROLLER PILOT DATA LINK COMMUNICATIONS.)

CPL [ICAO]-

(See ICAO term CURRENT FLIGHT PLAN.)

CRITICAL ENGINE– The engine which, upon failure, would most adversely affect the performance or handling qualities of an aircraft.

CROSS (FIX) AT (ALTITUDE) – Used by ATC when a specific altitude restriction at a specified fix is required.

CROSS (FIX) AT OR ABOVE (ALTITUDE)– Used by ATC when an altitude restriction at a specified fix is required. It does not prohibit the aircraft from crossing the fix at a higher altitude than specified; however, the higher altitude may not be one that will violate a succeeding altitude restriction or altitude assignment.

(See ALTITUDE RESTRICTION.) (Refer to AIM.)

CROSS (FIX) AT OR BELOW (ALTITUDE)– Used by ATC when a maximum crossing altitude at a specific fix is required. It does not prohibit the aircraft from crossing the fix at a lower altitude; however, it must be at or above the minimum IFR altitude.

(See ALTITUDE RESTRICTION.) (See MINIMUM IFR ALTITUDES.) (Refer to 14 CFR Part 91.)

CROSSWIND-

a. When used concerning the traffic pattern, the word means "crosswind leg."

(See TRAFFIC PATTERN.)

b. When used concerning wind conditions, the word means a wind not parallel to the runway or the path of an aircraft.

(See CROSSWIND COMPONENT.)

CROSSWIND COMPONENT- The wind component measured in knots at 90 degrees to the longitudinal axis of the runway.

CRUISE– Used in an ATC clearance to authorize a pilot to conduct flight at any altitude from the minimum IFR altitude up to and including the altitude specified in the clearance. The pilot may level off at any intermediate altitude within this block of airspace. Climb/descent within the block is to be made at the discretion of the pilot. However, once the pilot starts descent and verbally reports leaving an altitude without additional ATC clearance. Further, it is approval for the pilot to proceed to and make an approach at destination airport and can be used in conjunction with:

a. An airport clearance limit at locations with a standard/special instrument approach procedure. The CFRs require that if an instrument letdown to an airport is necessary, the pilot shall make the letdown in accordance with a standard/special instrument approach procedure for that airport, or

b. An airport clearance limit at locations that are within/below/outside controlled airspace and without a standard/special instrument approach procedure. Such a clearance is NOT AUTHORIZA-TION for the pilot to descend under IFR conditions below the applicable minimum IFR altitude nor does it imply that ATC is exercising control over aircraft in Class G airspace; however, it provides a means for the aircraft to proceed to destination airport, descend, and land in accordance with applicable CFRs governing VFR flight operations. Also, this provides search and rescue protection until such time as the IFR flight plan is closed.

(See INSTRUMENT APPROACH PROCEDURE.)

CRUISE CLIMB– A climb technique employed by aircraft, usually at a constant power setting, resulting in an increase of altitude as the aircraft weight decreases.

CRUISING ALTITUDE– An altitude or flight level maintained during en route level flight. This is a

constant altitude and should not be confused with a cruise clearance.

(See ALTITUDE.) (See ICAO term CRUISING LEVEL.)

CRUISING LEVEL-(See CRUISING ALTITUDE.)

CRUISING LEVEL [ICAO]– A level maintained during a significant portion of a flight.

CSP-

(See CONSTRAINT SATISFACTION POINT)

CT MESSAGE– An EDCT time generated by the ATCSCC to regulate traffic at arrival airports. Normally, a CT message is automatically transferred from the traffic management system computer to the NAS en route computer and appears as an EDCT. In the event of a communication failure between the traffic management system computer and the NAS, the CT message can be manually entered by the TMC at the en route facility.

CTA-

(See CONTROLLED TIME OF ARRIVAL.) (See ICAO term CONTROL AREA.) CTAF-

(See COMMON TRAFFIC ADVISORY FREQUENCY.)

CTOP-

(See COLLABORATIVE TRAJECTORY OPTIONS PROGRAM)

CTRD-

(See CERTIFIED TOWER RADAR DISPLAY.)

CURRENT FLIGHT PLAN [ICAO]– The flight plan, including changes, if any, brought about by subsequent clearances.

CURRENT PLAN– The ATC clearance the aircraft has received and is expected to fly.

CVFP APPROACH-

(See CHARTED VISUAL FLIGHT PROCEDURE APPROACH.)

CWA-

(See CENTER WEATHER ADVISORY and WEATHER ADVISORY.)

CWT-

(See CONSOLIDATED WAKE TURBULENCE.)

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NAS-

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(See NATIONAL AIRSPACE SYSTEM.)
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NAT HLA-

(See NORTH ATLANTIC HIGH LEVEL AIRSPACE.)

NATIONAL AIRSPACE SYSTEM– The common network of U.S. airspace; air navigation facilities, equipment and services, airports or landing areas; aeronautical charts, information and services; rules, regulations and procedures, technical information, and manpower and material. Included are system components shared jointly with the military.

NATIONAL BEACON CODE ALLOCATION PLAN AIRSPACE (NBCAP)– Airspace over United States territory located within the North American continent between Canada and Mexico, including adjacent territorial waters outward to about boundaries of oceanic control areas (CTA)/Flight Information Regions (FIR).

(See FLIGHT INFORMATION REGION.)

NATIONAL FLIGHT DATA DIGEST (NFDD)– A daily (except weekends and Federal holidays) publication of flight information appropriate to aeronautical charts, aeronautical publications, Notices to Air Missions, or other media serving the purpose of providing operational flight data essential to safe and efficient aircraft operations.

NATIONAL SEARCH AND RESCUE PLAN– An interagency agreement which provides for the effective utilization of all available facilities in all types of search and rescue missions.

NATIONAL SECURITY AREA (NSA)-(See SPECIAL USE AIRSPACE.)

NAVAID-

(See NAVIGATIONAL AID.)

NAVAID CLASSES– VOR, VORTAC, and TACAN aids are classed according to their operational use. The three classes of NAVAIDs are:

- **a.** T– Terminal.
- **b.** L– Low altitude.
- **c.** H– High altitude.

Note: The normal service range for T, L, and H class aids is found in the AIM. Certain operational

requirements make it necessary to use some of these aids at greater service ranges than specified. Extended range is made possible through flight inspection determinations. Some aids also have lesser service range due to location, terrain, frequency protection, etc. Restrictions to service range are listed in Chart Supplement U.S.

NAVIGABLE AIRSPACE– Airspace at and above the minimum flight altitudes prescribed in the CFRs including airspace needed for safe takeoff and landing.

(Refer to 14 CFR Part 91.)

NAVIGATION REFERENCE SYSTEM (NRS)– The NRS is a system of waypoints developed for use within the United States for flight planning and navigation without reference to ground based navigational aids. The NRS waypoints are located in a grid pattern along defined latitude and longitude lines. The initial use of the NRS will be in the high altitude environment. The NRS waypoints are intended for use by aircraft capable of point–to–point navigation.

NAVIGATION SPECIFICATION [ICAO] – A set of aircraft and flight crew requirements needed to support performance–based navigation operations within a defined airspace. There are two kinds of navigation specifications:

a. RNP specification. A navigation specification based on area navigation that includes the requirement for performance monitoring and alerting, designated by the prefix RNP; e.g., RNP 4, RNP APCH.

b. RNAV specification. A navigation specification based on area navigation that does not include the requirement for performance monitoring and alerting, designated by the prefix RNAV; e.g., RNAV 5, RNAV 1.

Note: The Performance–based Navigation Manual (Doc 9613), Volume II contains detailed guidance on navigation specifications.

NAVIGATIONAL AID– Any visual or electronic device airborne or on the surface which provides point-to-point guidance information or position data to aircraft in flight.

(See AIR NAVIGATION FACILITY.)

NAVSPEC-

(See NAVIGATION SPECIFICATION [ICAO].)

NBCAP AIRSPACE-

(See NATIONAL BEACON CODE ALLOCATION PLAN AIRSPACE.)

NDB-

(See NONDIRECTIONAL BEACON.)

NEGATIVE- "No," or "permission not granted," or "that is not correct."

NEGATIVE CONTACT– Used by pilots to inform ATC that:

a. Previously issued traffic is not in sight. It may be followed by the pilot's request for the controller to provide assistance in avoiding the traffic.

b. They were unable to contact ATC on a particular frequency.

NFDD-

(See NATIONAL FLIGHT DATA DIGEST.)

NIGHT– The time between the end of evening civil twilight and the beginning of morning civil twilight, as published in the Air Almanac, converted to local time.

(See ICAO term NIGHT.)

NIGHT [ICAO]– The hours between the end of evening civil twilight and the beginning of morning civil twilight or such other period between sunset and sunrise as may be specified by the appropriate authority.

Note: Civil twilight ends in the evening when the center of the sun's disk is 6 degrees below the horizon and begins in the morning when the center of the sun's disk is 6 degrees below the horizon.

NO GYRO APPROACH– A radar approach/vector provided in case of a malfunctioning gyro-compass or directional gyro. Instead of providing the pilot with headings to be flown, the controller observes the radar track and issues control instructions "turn right/left" or "stop turn" as appropriate.

(Refer to AIM.)

NO GYRO VECTOR-

(See NO GYRO APPROACH.)

NO TRANSGRESSION ZONE (NTZ)– The NTZ is a 2,000 foot wide zone, located equidistant between parallel runway or SOIA final approach courses, in which flight is normally not allowed. NONAPPROACH CONTROL TOWER- Authorizes aircraft to land or takeoff at the airport controlled by the tower or to transit the Class D airspace. The primary function of a nonapproach control tower is the sequencing of aircraft in the traffic pattern and on the landing area. Nonapproach control towers also separate aircraft operating under instrument flight rules clearances from approach controls and centers. They provide ground control services to aircraft, vehicles, personnel, and equipment on the airport movement area.

NONCOMMON ROUTE/PORTION– That segment of a North American Route between the inland navigation facility and a designated North American terminal.

NON-COOPERATIVE SURVEILLANCE- Any surveillance system, such as primary radar, that is not dependent upon the presence of any equipment on the aircraft or vehicle to be tracked.

(See COOPERATIVE SURVEILLANCE.) (See RADAR.)

NONDIRECTIONAL BEACON– An L/MF or UHF radio beacon transmitting nondirectional signals whereby the pilot of an aircraft equipped with direction finding equipment can determine his/her bearing to or from the radio beacon and "home" on or track to or from the station. When the radio beacon is installed in conjunction with the Instrument Landing System marker, it is normally called a Compass Locator.

(See AUTOMATIC DIRECTION FINDER.) (See COMPASS LOCATOR.)

NONMOVEMENT AREAS- Taxiways and apron (ramp) areas not under the control of air traffic.

NONPRECISION APPROACH– (See NONPRECISION APPROACH PROCEDURE.)

NONPRECISION APPROACH PROCEDURE- A standard instrument approach procedure in which no electronic glideslope is provided; e.g., VOR, TACAN, NDB, LOC, ASR, LDA, or SDF approaches.

NONRADAR– Precedes other terms and generally means without the use of radar, such as:

a. Nonradar Approach. Used to describe instrument approaches for which course guidance on final approach is not provided by ground-based precision or surveillance radar. Radar vectors to the

final approach course may or may not be provided by ATC. Examples of nonradar approaches are VOR, NDB, TACAN, ILS, RNAV, and GLS approaches.

(See FINAL APPROACH COURSE.) (See FINAL APPROACH-IFR.) (See INSTRUMENT APPROACH PROCEDURE.) (See RADAR APPROACH.)

b. Nonradar Approach Control. An ATC facility providing approach control service without the use of radar.

(See APPROACH CONTROL FACILITY.) (See APPROACH CONTROL SERVICE.)

c. Nonradar Arrival. An aircraft arriving at an airport without radar service or at an airport served by a radar facility and radar contact has not been established or has been terminated due to a lack of radar service to the airport.

(See RADAR ARRIVAL.) (See RADAR SERVICE.)

d. Nonradar Route. A flight path or route over which the pilot is performing his/her own navigation. The pilot may be receiving radar separation, radar monitoring, or other ATC services while on a nonradar route.

(See RADAR ROUTE.)

e. Nonradar Separation. The spacing of aircraft in accordance with established minima without the use of radar; e.g., vertical, lateral, or longitudinal separation.

(See RADAR SEPARATION.)

NON-RESTRICTIVE ROUTING (NRR)- Portions of a proposed route of flight where a user can flight plan the most advantageous flight path with no requirement to make reference to ground-based NAVAIDs.

NOPAC-

(See NORTH PACIFIC.)

NORDO (No Radio)– Aircraft that cannot or do not communicate by radio when radio communication is required are referred to as "NORDO."

(See LOST COMMUNICATIONS.)

NORMAL OPERATING ZONE (NOZ)– The NOZ is the operating zone within which aircraft flight remains during normal independent simultaneous parallel ILS approaches.

NORTH AMERICAN ROUTE- A numerically coded route preplanned over existing airway and route systems to and from specific coastal fixes serving the North Atlantic. North American Routes consist of the following:

a. Common Route/Portion. That segment of a North American Route between the inland navigation facility and the coastal fix.

b. Noncommon Route/Portion. That segment of a North American Route between the inland navigation facility and a designated North American terminal.

c. Inland Navigation Facility. A navigation aid on a North American Route at which the common route and/or the noncommon route begins or ends.

d. Coastal Fix. A navigation aid or intersection where an aircraft transitions between the domestic route structure and the oceanic route structure.

NORTH AMERICAN ROUTE PROGRAM (NRP)– The NRP is a set of rules and procedures which are designed to increase the flexibility of user flight planning within published guidelines.

NORTH ATLANTIC HIGH LEVEL AIRSPACE (NAT HLA)– That volume of airspace (as defined in ICAO Document 7030) between FL 285 and FL 420 within the Oceanic Control Areas of Bodo Oceanic, Gander Oceanic, New York Oceanic East, Reykjavik, Santa Maria, and Shanwick, excluding the Shannon and Brest Ocean Transition Areas. ICAO Doc 007 *North Atlantic Operations and Airspace Manual* provides detailed information on related aircraft and operational requirements.

NORTH PACIFIC- An organized route system between the Alaskan west coast and Japan.

NOT STANDARD– Varying from what is expected or published. For use in NOTAMs only.

NOT STD-

(See NOT STANDARD.)

NOTAM-

(See NOTICE TO AIR MISSIONS.)

NOTAM [ICAO]– A notice containing information concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel concerned with flight operations.

a. I Distribution – Distribution by means of telecommunication.

b. II Distribution – Distribution by means other than telecommunications.

NOTICE TO AIR MISSIONS (NOTAM)– A notice containing information (not known sufficiently in advance to publicize by other means) concerning the establishment, condition, or change in any component (facility, service, or procedure of, or hazard in the National Airspace System) the timely knowledge of which is essential to personnel concerned with flight operations.

NOTAM(D)– A NOTAM given (in addition to local dissemination) distant dissemination beyond the area of responsibility of the Flight Service Station. These NOTAMs will be stored and available until canceled.

c. FDC NOTAM- A NOTAM regulatory in

nature, transmitted by USNOF and given system wide dissemination.

(See ICAO term NOTAM.)

NRR-

(See NON-RESTRICTIVE ROUTING.)

NRS-

(See NAVIGATION REFERENCE SYSTEM.)

NUMEROUS TARGETS VICINITY (LOCA-TION)– A traffic advisory issued by ATC to advise pilots that targets on the radar scope are too numerous to issue individually.

(See TRAFFIC ADVISORIES.)

RADAR ROUTE- A flight path or route over which an aircraft is vectored. Navigational guidance and altitude assignments are provided by ATC.

(See FLIGHT PATH.) (See ROUTE.)

RADAR SEPARATION-(See RADAR SERVICE.)

RADAR SERVICE– A term which encompasses one or more of the following services based on the use of radar which can be provided by a controller to a pilot of a radar identified aircraft.

a. Radar Monitoring– The radar flight-following of aircraft, whose primary navigation is being performed by the pilot, to observe and note deviations from its authorized flight path, airway, or route. When being applied specifically to radar monitoring of instrument approaches; i.e., with precision approach radar (PAR) or radar monitoring of simultaneous ILS,RNAV and GLS approaches, it includes advice and instructions whenever an aircraft nears or exceeds the prescribed PAR safety limit or simultaneous ILS RNAV and GLS no transgression zone.

(See ADDITIONAL SERVICES.)

(See TRAFFIC ADVISORIES.)

b. Radar Navigational Guidance– Vectoring aircraft to provide course guidance.

c. Radar Separation– Radar spacing of aircraft in accordance with established minima.

(See ICAO term RADAR SERVICE.)

RADAR SERVICE [ICAO] – Term used to indicate a service provided directly by means of radar.

a. Monitoring– The use of radar for the purpose of providing aircraft with information and advice relative to significant deviations from nominal flight path.

b. Separation– The separation used when aircraft position information is derived from radar sources.

RADAR SERVICE TERMINATED– Used by ATC to inform a pilot that he/she will no longer be provided any of the services that could be received while in radar contact. Radar service is automatically terminated, and the pilot is not advised in the following cases:

a. An aircraft cancels its IFR flight plan, except within Class B airspace, Class C airspace, a TRSA, or where Basic Radar service is provided.

b. An aircraft conducting an instrument, visual, or contact approach has landed or has been instructed to change to advisory frequency.

c. An arriving VFR aircraft, receiving radar service to a tower-controlled airport within Class B airspace, Class C airspace, a TRSA, or where sequencing service is provided, has landed; or to all other airports, is instructed to change to tower or advisory frequency.

d. An aircraft completes a radar approach.

RADAR SURVEILLANCE– The radar observation of a given geographical area for the purpose of performing some radar function.

RADAR TRAFFIC ADVISORIES- Advisories issued to alert pilots to known or observed radar traffic which may affect the intended route of flight of their aircraft.

(See TRAFFIC ADVISORIES.)

RADAR TRAFFIC INFORMATION SERVICE– (See TRAFFIC ADVISORIES.)

RADAR VECTORING [ICAO]– Provision of navigational guidance to aircraft in the form of specific headings, based on the use of radar.

RADIAL- A magnetic bearing extending from a VOR/VORTAC/TACAN navigation facility.

RADIO-

a. A device used for communication.

b. Used to refer to a flight service station; e.g., "Seattle Radio" is used to call Seattle FSS.

RADIO ALTIMETER– Aircraft equipment which makes use of the reflection of radio waves from the ground to determine the height of the aircraft above the surface.

RADIO BEACON-

(See NONDIRECTIONAL BEACON.)

RADIO DETECTION AND RANGING-(See RADAR.)

RADIO MAGNETIC INDICATOR– An aircraft navigational instrument coupled with a gyro compass or similar compass that indicates the direction of a selected NAVAID and indicates bearing with respect to the heading of the aircraft.

RAIS-

(See REMOTE AIRPORT INFORMATION SERVICE.)

RAMP-(See APRON.) RANDOM ALTITUDE– An altitude inappropriate for direction of flight and/or not in accordance with FAA Order JO 7110.65, paragraph 4–5–1, VER-TICAL SEPARATION MINIMA.

RANDOM ROUTE- Any route not established or charted/published or not otherwise available to all users.

RC-

(See ROAD RECONNAISSANCE.)

RCAG-

(See REMOTE COMMUNICATIONS AIR/GROUND FACILITY.)

RCC-

(See RESCUE COORDINATION CENTER.)

RCO-

(See REMOTE COMMUNICATIONS OUTLET.)

RCR-

(See RUNWAY CONDITION READING.)

READ BACK- Repeat my message back to me.

RECEIVER AUTONOMOUS INTEGRITY MON-ITORING (RAIM)– A technique whereby a civil GNSS receiver/processor determines the integrity of the GNSS navigation signals without reference to sensors or non-DoD integrity systems other than the receiver itself. This determination is achieved by a consistency check among redundant pseudorange measurements.

RECEIVING CONTROLLER- A controller/facility receiving control of an aircraft from another controller/facility.

RECEIVING FACILITY-(See RECEIVING CONTROLLER.)

RECONFORMANCE- The automated process of bringing an aircraft's Current Plan Trajectory into conformance with its track.

REDUCE SPEED TO (SPEED) – (See SPEED ADJUSTMENT.)

REFINED HAZARD AREA (RHA)– Used by ATC. Airspace that is defined and distributed after a failure of a launch or reentry operation to provide a more concise depiction of the hazard location than a Contingency Hazard Area.

(See AIRCRAFT HAZARD AREA.) (See CONTINGENCY HAZARD AREA.) (See TRANSITIONAL HAZARD AREA.) REDUCED VERTICAL SEPARATION MINI-MUM (RVSM) AIRSPACE– RVSM airspace is defined as any airspace between FL 290 and FL 410 inclusive, where eligible aircraft are separated vertically by 1,000 feet. Authorization guidance for operations in this airspace is provided in Advisory Circular AC 91–85.

REIL-

(See RUNWAY END IDENTIFIER LIGHTS.)

RELEASE TIME- A departure time restriction issued to a pilot by ATC (either directly or through an authorized relay) when necessary to separate a departing aircraft from other traffic.

(See ICAO term RELEASE TIME.)

RELEASE TIME [ICAO] – Time prior to which an aircraft should be given further clearance or prior to which it should not proceed in case of radio failure.

REMOTE AIRPORT INFORMATION SERVICE (RAIS)– A temporary service provided by facilities, which are not located on the landing airport, but have communication capability and automated weather reporting available to the pilot at the landing airport.

REMOTE COMMUNICATIONS AIR/GROUND FACILITY– An unmanned VHF/UHF transmitter/ receiver facility which is used to expand ARTCC air/ground communications coverage and to facilitate direct contact between pilots and controllers. RCAG facilities are sometimes not equipped with emergency frequencies 121.5 MHz and 243.0 MHz.

(Refer to AIM.)

REMOTE COMMUNICATIONS OUTLET (RCO)- An unmanned communications facility remotely controlled by air traffic personnel. RCOs serve FSSs. Remote Transmitter/Receivers (RTR) serve terminal ATC facilities. An RCO or RTR may be UHF or VHF and will extend the communication range of the air traffic facility. There are several classes of RCOs and RTRs. The class is determined by the number of transmitters or receivers. Classes A through G are used primarily for air/ground purposes. RCO and RTR class O facilities are nonprotected outlets subject to undetected and prolonged outages. RCO (O's) and RTR (O's) were established for the express purpose of providing ground-to-ground communications between air traffic control specialists and pilots located at a satellite airport for delivering en route clearances, issuing departure authorizations, and acknowledging instrument flight rules cancellations or departure/landing times. As a secondary function, they may be used for advisory purposes whenever the aircraft is below the coverage of the primary air/ground frequency.

REMOTE PILOT IN COMMAND (RPIC)– The RPIC is directly responsible for and is the final authority as to the operation of the unmanned aircraft system.

REMOTE TRANSMITTER/RECEIVER (RTR)-(See REMOTE COMMUNICATIONS OUTLET.)

REPORT– Used to instruct pilots to advise ATC of specified information; e.g., "Report passing Hamilton VOR."

REPORTING POINT- A geographical location in relation to which the position of an aircraft is reported.

(See COMPULSORY REPORTING POINTS.) (See ICAO term REPORTING POINT.) (Refer to AIM.)

REPORTING POINT [ICAO]– A specified geographical location in relation to which the position of an aircraft can be reported.

REQUEST FULL ROUTE CLEARANCE– Used by pilots to request that the entire route of flight be read verbatim in an ATC clearance. Such request should be made to preclude receiving an ATC clearance based on the original filed flight plan when a filed IFR flight plan has been revised by the pilot, company, or operations prior to departure.

REQUIRED NAVIGATION PERFORMANCE (RNP)– A statement of the navigational performance necessary for operation within a defined airspace. The following terms are commonly associated with RNP:

a. Required Navigation Performance Level or Type (RNP-X). A value, in nautical miles (NM), from the intended horizontal position within which an aircraft would be at least 95-percent of the total flying time.

b. Advanced – Required Navigation Performance (A–RNP). A navigation specification based on RNP that requires advanced functions such as scalable RNP, radius–to–fix (RF) legs, and tactical parallel offsets. This sophisticated Navigation Specification (NavSpec) is designated by the abbreviation "A–RNP".

c. Required Navigation Performance (RNP) Airspace. A generic term designating airspace, route(s), leg(s), operation(s), or procedure(s) where minimum required navigational performance (RNP) have been established.

d. Actual Navigation Performance (ANP). A measure of the current estimated navigational performance. Also referred to as Estimated Position Error (EPE).

e. Estimated Position Error (EPE). A measure of the current estimated navigational performance. Also referred to as Actual Navigation Performance (ANP).

f. Lateral Navigation (LNAV). A function of area navigation (RNAV) equipment which calculates, displays, and provides lateral guidance to a profile or path.

g. Vertical Navigation (VNAV). A function of area navigation (RNAV) equipment which calculates, displays, and provides vertical guidance to a profile or path.

REROUTE IMPACT ASSESSMENT (RRIA)– A capability within the Traffic Flow Management System that is used to define and evaluate a potential reroute prior to implementation, with or without miles–in–trail (MIT) restrictions. RRIA functions estimate the impact on demand (e.g., sector loads) and performance (e.g., flight delay). Using RRIA, traffic management personnel can determine whether the reroute will sufficiently reduce demand in the Flow Constraint Area and not create excessive "spill over" demand in the adjacent airspace on a specific route segment or point of interest (POI).

RESCUE COORDINATION CENTER (RCC)– A search and rescue (SAR) facility equipped and manned to coordinate and control SAR operations in an area designated by the SAR plan. The U.S. Coast Guard and the U.S. Air Force have responsibility for the operation of RCCs.

(See ICAO term RESCUE CO-ORDINATION CENTRE.)

RESCUE CO-ORDINATION CENTRE [ICAO]– A unit responsible for promoting efficient organization of search and rescue service and for coordinating the conduct of search and rescue operations within a search and rescue region.

RESOLUTION ADVISORY– A display indication given to the pilot by the Traffic alert and Collision Avoidance System (TCAS II) recommending a maneuver to increase vertical separation relative to an intruding aircraft. Positive, negative, and vertical speed limit (VSL) advisories constitute the resolution advisories. A resolution advisory is also classified as corrective or preventive.

RESTRICTED AREA-(See SPECIAL USE AIRSPACE.) (See ICAO term RESTRICTED AREA.)

RESTRICTED AREA [ICAO]– An airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is restricted in accordance with certain specified conditions.

RESUME NORMAL SPEED– Used by ATC to advise a pilot to resume an aircraft's normal operating speed. It is issued to terminate a speed adjustment where no published speed restrictions apply. It does not delete speed restrictions in published procedures of upcoming segments of flight. This does not relieve the pilot of those speed restrictions that are applicable to 14 CFR Section 91.117.

RESUME OWN NAVIGATION– Used by ATC to advise a pilot to resume his/her own navigational responsibility. It is issued after completion of a radar vector or when radar contact is lost while the aircraft is being radar vectored.

(See RADAR CONTACT LOST.) (See RADAR SERVICE TERMINATED.)

RESUME PUBLISHED SPEED– Used by ATC to advise a pilot to resume published speed restrictions that are applicable to a SID, STAR, or other instrument procedure. It is issued to terminate a speed adjustment where speed restrictions are published on a charted procedure.

RHA-

(See REFINED HAZARD AREA.)

RMI-

(See RADIO MAGNETIC INDICATOR.)

RNAV-

(See AREA NAVIGATION (RNAV).)

RNAV APPROACH– An instrument approach procedure which relies on aircraft area navigation equipment for navigational guidance.

(See AREA NAVIGATION (RNAV).) (See INSTRUMENT APPROACH PROCEDURE.)

ROAD RECONNAISSANCE (RC)- Military activity requiring navigation along roads, railroads, and rivers. Reconnaissance route/route segments are seldom along a straight line and normally require a lateral route width of 10 NM to 30 NM and an altitude range of 500 feet to 10,000 feet AGL.

ROGER – I have received all of your last transmission. It should not be used to answer a question requiring a yes or a no answer.

(See AFFIRMATIVE.) (See NEGATIVE.)

ROLLOUT RVR-(See VISIBILITY.)

ROTOR WASH– A phenomenon resulting from the vertical down wash of air generated by the main rotor(s) of a helicopter.

ROUND–ROBIN FLIGHT PLAN– A single flight plan filed from the departure airport to an intermediary destination(s) and then returning to the original departure airport.

ROUTE- A defined path, consisting of one or more courses in a horizontal plane, which aircraft traverse over the surface of the earth.

(See AIRWAY.) (See JET ROUTE.) (See PUBLISHED ROUTE.) (See UNPUBLISHED ROUTE.)

ROUTE ACTION NOTIFICATION- EDST notification that a PAR/PDR/PDAR has been applied to the flight plan.

(See ATC PREFERRED ROUTE NOTIFICATION.) (See EN ROUTE DECISION SUPPORT TOOL.)

ROUTE AMENDMENT DIALOG (RAD)– A capability within the Traffic Flow Management System that allows traffic management personnel to submit or edit a route amendment for one or more flights.

ROUTE SEGMENT– As used in Air Traffic Control, a part of a route that can be defined by two navigational fixes, two NAVAIDs, or a fix and a NAVAID.

(See FIX.) (See ROUTE.) (See ICAO term ROUTE SEGMENT.)

ROUTE SEGMENT [ICAO]– A portion of a route to be flown, as defined by two consecutive significant points specified in a flight plan.

RPIC-

(See REMOTE PILOT IN COMMAND.)

RRIA-

(See REROUTE IMPACT ASSESSMENT.)

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RSA-
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(See RUNWAY SAFETY AREA.)

RTR-

(See REMOTE TRANSMITTER/RECEIVER.)

RUNWAY- A defined rectangular area on a land airport prepared for the landing and takeoff run of aircraft along its length. Runways are normally numbered in relation to their magnetic direction rounded off to the nearest 10 degrees; e.g., Runway 1, Runway 25.

(See PARALLEL RUNWAYS.) (See ICAO term RUNWAY.)

RUNWAY [ICAO]– A defined rectangular area on a land aerodrome prepared for the landing and takeoff of aircraft.

RUNWAY CENTERLINE LIGHTING-(See AIRPORT LIGHTING.)

RUNWAY CONDITION CODES (RwyCC)– Numerical readings, provided by airport operators, that indicate runway surface contamination (for example, slush, ice, rain, etc.). These values range from "1" (poor) to "6" (dry) and must be included on the ATIS when the reportable condition is less than 6 in any one or more of the three runway zones (touchdown, midpoint, rollout).

RUNWAY CONDITION READING– Numerical decelerometer readings relayed by air traffic controllers at USAF and certain civil bases for use by the pilot in determining runway braking action. These readings are routinely relayed only to USAF and Air National Guard Aircraft.

(See BRAKING ACTION.)

RUNWAY CONDITION REPORT (RwyCR)– A data collection worksheet used by airport operators that correlates the runway percentage of coverage along with the depth and type of contaminant for the purpose of creating a FICON NOTAM.

(See RUNWAY CONDITION CODES.)

RUNWAY END IDENTIFIER LIGHTS (REIL)– (See AIRPORT LIGHTING.) RUNWAY ENTRANCE LIGHTS (REL)–An array of red lights which include the first light at the hold line followed by a series of evenly spaced lights to the runway edge aligned with the taxiway centerline, and one additional light at the runway centerline in line with the last two lights before the runway edge.

RUNWAY GRADIENT- The average slope, measured in percent, between two ends or points on a runway. Runway gradient is depicted on Government aerodrome sketches when total runway gradient exceeds 0.3%.

RUNWAY HEADING– The magnetic direction that corresponds with the runway centerline extended, not the painted runway number. When cleared to "fly or maintain runway heading," pilots are expected to fly or maintain the heading that corresponds with the extended centerline of the departure runway. Drift correction shall not be applied; e.g., Runway 4, actual magnetic heading of the runway centerline 044, fly 044.

RUNWAY IN USE/ACTIVE RUNWAY/DUTY RUNWAY– Any runway or runways currently being used for takeoff or landing. When multiple runways are used, they are all considered active runways. In the metering sense, a selectable adapted item which specifies the landing runway configuration or direction of traffic flow. The adapted optimum flight plan from each transition fix to the vertex is determined by the runway configuration for arrival metering processing purposes.

RUNWAY LIGHTS-(See AIRPORT LIGHTING.)

RUNWAY MARKINGS-(See AIRPORT MARKING AIDS.)

RUNWAY OVERRUN– In military aviation exclusively, a stabilized or paved area beyond the end of a runway, of the same width as the runway plus shoulders, centered on the extended runway centerline.

RUNWAY PROFILE DESCENT- An instrument flight rules (IFR) air traffic control arrival procedure to a runway published for pilot use in graphic and/or textual form and may be associated with a STAR. Runway Profile Descents provide routing and may depict crossing altitudes, speed restrictions, and headings to be flown from the en route structure to the point where the pilot will receive clearance for and execute an instrument approach procedure. A Runway Profile Descent may apply to more than one runway if so stated on the chart.

(Refer to AIM.)

RUNWAY SAFETY AREA- A defined surface surrounding the runway prepared, or suitable, for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway. The dimensions of the RSA vary and can be determined by using the criteria contained within AC 150/5300-13, Airport Design, Chapter 3. Figure 3–1 in AC 150/5300-13 depicts the RSA. The design standards dictate that the RSA shall be:

a. Cleared, graded, and have no potentially hazardous ruts, humps, depressions, or other surface variations;

b. Drained by grading or storm sewers to prevent water accumulation;

c. Capable, under dry conditions, of supporting snow removal equipment, aircraft rescue and firefighting equipment, and the occasional passage of aircraft without causing structural damage to the aircraft; and,

d. Free of objects, except for objects that need to be located in the runway safety area because of their function. These objects shall be constructed on low impact resistant supports (frangible mounted structures) to the lowest practical height with the frangible point no higher than 3 inches above grade.

(Refer to AC 150/5300-13, Airport Design, Chapter 3.)

RUNWAY STATUS LIGHTS (RWSL) SYSTEM– The RWSL is a system of runway and taxiway lighting to provide pilots increased situational awareness by illuminating runway entry lights (REL) when the runway is unsafe for entry or crossing, and take-off hold lights (THL) when the runway is unsafe for departure. RUNWAY TRANSITION– (See SEGMENTS OF A SID/STAR)

RUNWAY TRANSITION WAYPOINT-(See SEGMENTS OF A SID/STAR.)

RUNWAY USE PROGRAM– A noise abatement runway selection plan designed to enhance noise abatement efforts with regard to airport communities for arriving and departing aircraft. These plans are developed into runway use programs and apply to all turbojet aircraft 12,500 pounds or heavier; turbojet aircraft less than 12,500 pounds are included only if the airport proprietor determines that the aircraft creates a noise problem. Runway use programs are coordinated with FAA offices, and safety criteria used in these programs are developed by the Office of Flight Operations. Runway use programs are administered by the Air Traffic Service as "Formal" or "Informal" programs.

a. Formal Runway Use Program– An approved noise abatement program which is defined and acknowledged in a Letter of Understanding between Flight Operations, Air Traffic Service, the airport proprietor, and the users. Once established, participation in the program is mandatory for aircraft operators and pilots as provided for in 14 CFR Section 91.129.

b. Informal Runway Use Program– An approved noise abatement program which does not require a Letter of Understanding, and participation in the program is voluntary for aircraft operators/pilots.

RUNWAY VISUAL RANGE (RVR)-(See VISIBILITY.)

RwyCC-

(See RUNWAY CONDITION CODES.)

RwyCR-

(See RUNWAY CONDITION REPORT.)

SIMULTANEOUS (CONVERGING) INDEPEND-

ENT APPROACHES- An approach operation permitting ILS/RNAV/GLS approaches to non-parallel runways where approach procedure design maintains the required aircraft spacing throughout the approach and missed approach and hence the operations may be conducted independently.

SIMULTANEOUS ILS APPROACHES- An approach system permitting simultaneous ILS approaches to airports having parallel runways separated by at least 4,300 feet between centerlines. Integral parts of a total system are ILS, radar, communications, ATC procedures, and appropriate airborne equipment.

(See PARALLEL RUNWAYS.) (Refer to AIM.)

SIMULTANEOUS OFFSET INSTRUMENT APPROACH (SOIA)– An instrument landing system comprised of an ILS PRM, RNAV PRM or GLS PRM approach to one runway and an offset LDA PRM with glideslope or an RNAV PRM or GLS PRM approach utilizing vertical guidance to another where parallel runway spaced less than 3,000 feet and at least 750 feet apart. The approach courses converge by 2.5 to 3 degrees. Simultaneous close parallel PRM approach procedures apply up to the point where the approach course separation becomes 3,000 feet, at the offset MAP. From the offset MAP to the runway threshold, visual separation by the aircraft conducting the offset approach is utilized.

(Refer to AIM)

SIMULTANEOUS (PARALLEL) DEPENDENT APPROACHES- An approach operation permitting ILS/RNAV/GLS approaches to adjacent parallel runways where prescribed diagonal spacing must be maintained. Aircraft are not permitted to pass each other during simultaneous dependent operations. Integral parts of a total system ATC procedures, and appropriate airborne and ground based equipment.

SINGLE DIRECTION ROUTES– Preferred IFR Routes which are sometimes depicted on high altitude en route charts and which are normally flown in one direction only.

(See PREFERRED IFR ROUTES.) (Refer to CHART SUPPLEMENT U.S.)

SINGLE FREQUENCY APPROACH- A service provided under a letter of agreement to military single-piloted turbojet aircraft which permits use of a single UHF frequency during approach for landing. Pilots will not normally be required to change frequency from the beginning of the approach to touchdown except that pilots conducting an en route descent are required to change frequency when control is transferred from the air route traffic control center to the terminal facility. The abbreviation "SFA" in the DOD FLIP IFR Supplement under "Communications" indicates this service is available at an aerodrome.

SINGLE-PILOTED AIRCRAFT– A military turbojet aircraft possessing one set of flight controls, tandem cockpits, or two sets of flight controls but operated by one pilot is considered single-piloted by ATC when determining the appropriate air traffic service to be applied.

(See SINGLE FREQUENCY APPROACH.)

SKYSPOTTER- A pilot who has received specialized training in observing and reporting inflight weather phenomena.

SLASH- A radar beacon reply displayed as an elongated target.

SLDI-

(See SECTOR LIST DROP INTERVAL.)

SLOW TAXI– To taxi a float plane at low power or low RPM.

SMALL UNMANNED AIRCRAFT SYSTEM (sUAS)–An unmanned aircraft weighing less than 55 pounds on takeoff, including everything that is on board or otherwise attached to the aircraft.

SN-

(See SYSTEM STRATEGIC NAVIGATION.)

SPACE–BASED ADS–B (SBA)– A constellation of satellites that receives ADS–B Out broadcasts and relays that information to the appropriate surveillance facility. The currently deployed SBA system is only capable of receiving broadcasts from 1090ES–equipped aircraft, and not from those equipped with only a universal access transceiver (UAT). Also, aircraft with a top–of–fuselage–mounted transponder antenna (required for TCAS II installations) will be better received by SBA, especially at latitudes below 45 degrees.

(See AUTOMATIC DEPENDENT SURVEILLANCE-BROADCAST.) (See AUTOMATIC DEPENDENT SURVEILLANCE-BROADCAST OUT.)

SPACE LAUNCH AND REENTRY AREA-Locations where commercial space launch and/or reentry operations occur. For pilot awareness, a rocket–shaped symbol is used to depict space launch and reentry areas on sectional aeronautical charts.

SPEAK SLOWER– Used in verbal communications as a request to reduce speech rate.

SPECIAL ACTIVITY AIRSPACE (SAA)– Any airspace with defined dimensions within the National Airspace System wherein limitations may be imposed upon aircraft operations. This airspace may be restricted areas, prohibited areas, military operations areas, air ATC assigned airspace, and any other designated airspace areas. The dimensions of this airspace are programmed into EDST and can be designated as either active or inactive by screen entry. Aircraft trajectories are constantly tested against the dimensions of active areas and alerts issued to the applicable sectors when violations are predicted.

(See EN ROUTE DECISION SUPPORT TOOL.)

SPECIAL AIR TRAFFIC RULES (SATR)– Rules that govern procedures for conducting flights in certain areas listed in 14 CFR Part 93. The term "SATR" is used in the United States to describe the rules for operations in specific areas designated in the Code of Federal Regulations.

(Refer to 14 CFR Part 93.)

SPECIAL EMERGENCY- A condition of air piracy or other hostile act by a person(s) aboard an aircraft which threatens the safety of the aircraft or its passengers.

SPECIAL FLIGHT RULES AREA (SFRA)– An area in the NAS, described in 14 CFR Part 93, wherein the flight of aircraft is subject to special traffic rules, unless otherwise authorized by air traffic control. Not all areas listed in 14 CFR Part 93 are designated SFRA, but special air traffic rules apply to all areas described in 14 CFR Part 93.

SPECIAL INSTRUMENT APPROACH PROCE-DURE-

(See INSTRUMENT APPROACH PROCEDURE.)

SPECIAL USE AIRSPACE– Airspace of defined dimensions identified by an area on the surface of the earth wherein activities must be confined because of their nature and/or wherein limitations may be imposed upon aircraft operations that are not a part of those activities. Types of special use airspace are:

a. Alert Area– Airspace which may contain a high volume of pilot training activities or an unusual type

of aerial activity, neither of which is hazardous to aircraft. Alert Areas are depicted on aeronautical charts for the information of nonparticipating pilots. All activities within an Alert Area are conducted in accordance with Federal Aviation Regulations, and pilots of participating aircraft as well as pilots transiting the area are equally responsible for collision avoidance.

b. Controlled Firing Area– Airspace wherein activities are conducted under conditions so controlled as to eliminate hazards to nonparticipating aircraft and to ensure the safety of persons and property on the ground.

c. Military Operations Area (MOA)– Permanent and temporary MOAs are airspace established outside of Class A airspace area to separate or segregate certain nonhazardous military activities from IFR traffic and to identify for VFR traffic where these activities are conducted. Permanent MOAs are depicted on Sectional Aeronautical, VFR Terminal Area, and applicable En Route Low Altitude Charts.

Note: Temporary MOAs are not charted.

(Refer to AIM.)

d. National Security Area (NSA)– Airspace of defined vertical and lateral dimensions established at locations where there is a requirement for increased security of ground facilities. Pilots are requested to voluntarily avoid flying through the depicted NSA. When a greater level of security is required, flight through an NSA may be temporarily prohibited by establishing a TFR under the provisions of 14 CFR Section 99.7. Such prohibitions will be issued by FAA Headquarters and disseminated via the U.S. NOTAM System.

(Refer to AIM)

e. Prohibited Area– Airspace designated under 14 CFR Part 73 within which no person may operate an aircraft without the permission of the using agency.

(Refer to AIM.)

(Refer to En Route Charts.)

f. Restricted Area– Permanent and temporary restricted areas are airspace designated under 14 CFR Part 73, within which the flight of aircraft, while not wholly prohibited, is subject to restriction. Most restricted areas are designated joint use and IFR/VFR operations in the area may be authorized by the controlling ATC facility when it is not being utilized by the using agency. Permanent restricted areas are depicted on Sectional Aeronautical, VFR Terminal

Area, and applicable En Route charts. Where joint use is authorized, the name of the ATC controlling facility is also shown.

Note: Temporary restricted areas are not charted.

(Refer to 14 CFR Part 73.) (Refer to AIM.)

g. Warning Area– A warning area is airspace of defined dimensions extending from 3 nautical miles outward from the coast of the United States, that contains activity that may be hazardous to nonparticipating aircraft. The purpose of such warning area is to warn nonparticipating pilots of the potential danger. A warning area may be located over domestic or international waters or both.

SPECIAL VFR CONDITIONS– Meteorological conditions that are less than those required for basic VFR flight in Class B, C, D, or E surface areas and in which some aircraft are permitted flight under visual flight rules.

(See SPECIAL VFR OPERATIONS.) (Refer to 14 CFR Part 91.)

SPECIAL VFR FLIGHT [ICAO]– A VFR flight cleared by air traffic control to operate within Class B, C, D, and E surface areas in meteorological conditions below VMC.

SPECIAL VFR OPERATIONS– Aircraft operating in accordance with clearances within Class B, C, D, and E surface areas in weather conditions less than the basic VFR weather minima. Such operations must be requested by the pilot and approved by ATC.

(See SPECIAL VFR CONDITIONS.) (See ICAO term SPECIAL VFR FLIGHT.)

SPEED-

(See AIRSPEED.) (See GROUND SPEED.)

SPEED ADJUSTMENT– An ATC procedure used to request pilots to adjust aircraft speed to a specific value for the purpose of providing desired spacing. Pilots are expected to maintain a speed of plus or minus 10 knots or 0.02 Mach number of the specified speed. Examples of speed adjustments are:

a. "Increase/reduce speed to Mach point (number)."

b. "Increase/reduce speed to (speed in knots)" or "Increase/reduce speed (number of knots) knots."

SPEED BRAKES– Moveable aerodynamic devices on aircraft that reduce airspeed during descent and landing.

SPEED SEGMENTS– Portions of the arrival route between the transition point and the vertex along the optimum flight path for which speeds and altitudes are specified. There is one set of arrival speed segments adapted from each transition point to each vertex. Each set may contain up to six segments.

SPOOFING– Denotes emissions of GNSS–like signals that may be acquired and tracked in combination with or instead of the intended signals by civil receivers. The onset of spoofing effects can be instantaneous or delayed, and effects can persist after the spoofing has ended. Spoofing can result in false and potentially confusing, or hazardously misleading, position, navigation, and/or date/time information in addition to loss of GNSS use.

SPEED ADVISORY– Speed advisories that are generated within Time–Based Flow Management to assist controllers to meet the Scheduled Time of Arrival (STA) at the meter fix/meter arc. See also Ground–Based Interval Management–Spacing (GIM–S) Speed Advisory.

SQUAWK (Mode, Code, Function)– Used by ATC to instruct a pilot to activate the aircraft transponder and ADS–B Out with altitude reporting enabled, or (military) to activate only specific modes, codes, or functions. Examples: "Squawk five seven zero seven;" "Squawk three/alpha, two one zero five."

(See TRANSPONDER.)

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STA-
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(See SCHEDULED TIME OF ARRIVAL.)

STAGING/QUEUING– The placement, integration, and segregation of departure aircraft in designated movement areas of an airport by departure fix, EDCT, and/or restriction.

STAND BY– Means the controller or pilot must pause for a few seconds, usually to attend to other duties of a higher priority. Also means to wait as in "stand by for clearance." The caller should reestablish contact if a delay is lengthy. "Stand by" is not an approval or denial.

STANDARD INSTRUMENT APPROACH PRO-CEDURE (SIAP)–

(See INSTRUMENT APPROACH PROCEDURE.)

STANDARD INSTRUMENT DEPARTURE (SID)– A preplanned instrument flight rule (IFR) air traffic control (ATC) departure procedure printed for pilot/controller use in graphic form to provide obstacle clearance and a transition from the terminal area to the appropriate en route structure. SIDs are primarily designed for system enhancement to expedite traffic flow and to reduce pilot/controller workload. ATC clearance must always be received prior to flying a SID.

(See IFR TAKEOFF MINIMUMS AND DEPARTURE PROCEDURES.) (See OBSTACLE DEPARTURE PROCEDURE.) (Refer to AIM.)

STANDARD RATE TURN- A turn of three degrees per second.

STANDARD TERMINAL ARRIVAL (STAR)– A preplanned instrument flight rule (IFR) air traffic control arrival procedure published for pilot use in graphic and/or textual form. STARs provide transition from the en route structure to an outer fix or an instrument approach fix/arrival waypoint in the terminal area.

STANDARD TERMINAL ARRIVAL CHARTS-(See AERONAUTICAL CHART.)

STANDARD TERMINAL AUTOMATION RE-PLACEMENT SYSTEM (STARS)-(See DTAS.)

STAR-

(See STANDARD TERMINAL ARRIVAL.)

STATE AIRCRAFT– Aircraft used in military, customs and police service, in the exclusive service of any government or of any political subdivision thereof, including the government of any state, territory, or possession of the United States or the District of Columbia, but not including any government-owned aircraft engaged in carrying persons or property for commercial purposes.

STATIC RESTRICTIONS- Those restrictions that are usually not subject to change, fixed, in place, and/or published.

STATIONARY AIRSPACE RESERVATION– The term used in oceanic ATC for airspace that encompasses activities in a fixed volume of airspace to be occupied for a specified time period. Stationary Airspace Reservations may include activities such as special tests of weapons systems or equipment; certain U.S. Navy carrier, fleet, and anti–submarine operations; rocket, missile, and drone operations; and certain aerial refueling or similar operations.

(See STATIONARY ALTITUDE RESERVATION.)

STATIONARY ALTITUDE RESERVATION (STATIONARY ALTRV)– An altitude reservation which encompasses activities in a fixed volume of airspace to be occupied for a specified time period. Stationary ALTRVs may include activities such as special tests of weapons systems or equipment; certain U.S. Navy carrier, fleet, and anti–submarine operations; rocket, missile, and drone operations; and certain aerial refueling or similar operations.

STEP TAXI– To taxi a float plane at full power or high RPM.

STEP TURN– A maneuver used to put a float plane in a planing configuration prior to entering an active sea lane for takeoff. The STEP TURN maneuver should only be used upon pilot request.

STEPDOWN FIX- A fix permitting additional descent within a segment of an instrument approach procedure by identifying a point at which a controlling obstacle has been safely overflown.

STEREO ROUTE– A routinely used route of flight established by users and ARTCCs identified by a coded name; e.g., ALPHA 2. These routes minimize flight plan handling and communications.

STNR ALT RESERVATION– An abbreviation for Stationary Altitude Reservation commonly used in NOTAMs.

(See STATIONARY ALTITUDE RESERVATION.)

STOL AIRCRAFT– (See SHORT TAKEOFF AND LANDING AIRCRAFT.)

STOP ALTITUDE SQUAWK– Used by ATC to instruct a pilot to turn off the automatic altitude reporting feature of the aircraft transponder and ADS–B Out. It is issued when a verbally reported altitude varies by 300 feet or more from the automatic altitude report.

(See ALTITUDE READOUT.) (See TRANSPONDER.)

STOP AND GO– A procedure wherein an aircraft will land, make a complete stop on the runway, and then commence a takeoff from that point.

(See LOW APPROACH.) (See OPTION APPROACH.)

STOP BURST-(See STOP STREAM.)

STOP BUZZER-

(See STOP STREAM.)

STOP SQUAWK (Mode or Code)– Used by ATC to instruct a pilot to stop transponder and ADS–B transmissions, or to turn off only specified functions of the aircraft transponder (military).

(See STOP ALTITUDE SQUAWK.) (See TRANSPONDER.)

STOP STREAM– Used by ATC to request a pilot to suspend electronic attack activity.

(See JAMMING.)

STOPOVER FLIGHT PLAN– A flight plan format which permits in a single submission the filing of a sequence of flight plans through interim full-stop destinations to a final destination.

STOPWAY– An area beyond the takeoff runway no less wide than the runway and centered upon the extended centerline of the runway, able to support the airplane during an aborted takeoff, without causing structural damage to the airplane, and designated by the airport authorities for use in decelerating the airplane during an aborted takeoff.

STRAIGHT-IN APPROACH IFR- An instrument approach wherein final approach is begun without first having executed a procedure turn, not necessarily completed with a straight-in landing or made to straight-in landing minimums.

(See LANDING MINIMUMS.) (See STRAIGHT-IN APPROACH VFR.) (See STRAIGHT-IN LANDING.)

STRAIGHT-IN APPROACH VFR– Entry into the traffic pattern by interception of the extended runway centerline (final approach course) without executing any other portion of the traffic pattern.

(See TRAFFIC PATTERN.)

STRAIGHT-IN LANDING– A landing made on a runway aligned within 30° of the final approach course following completion of an instrument approach.

(See STRAIGHT-IN APPROACH IFR.)

STRAIGHT-IN LANDING MINIMUMS– (See LANDING MINIMUMS.) STRAIGHT-IN MINIMUMS-(See STRAIGHT-IN LANDING MINIMUMS.)

STRATEGIC PLANNING– Planning whereby solutions are sought to resolve potential conflicts.

sUAS-

(See SMALL UNMANNED AIRCRAFT SYSTEM.)

SUBSTITUTE ROUTE- A route assigned to pilots when any part of an airway or route is unusable because of NAVAID status. These routes consist of:

a. Substitute routes which are shown on U.S. Government charts.

b. Routes defined by ATC as specific NAVAID radials or courses.

c. Routes defined by ATC as direct to or between NAVAIDs.

SUNSET AND SUNRISE– The mean solar times of sunset and sunrise as published in the Nautical Almanac, converted to local standard time for the locality concerned. Within Alaska, the end of evening civil twilight and the beginning of morning civil twilight, as defined for each locality.

SUPPLEMENTAL WEATHER SERVICE LOCA-TION– Airport facilities staffed with contract personnel who take weather observations and provide current local weather to pilots via telephone or radio. (All other services are provided by the parent FSS.)

SUPPS- Refers to ICAO Document 7030 Regional Supplementary Procedures. SUPPS contain procedures for each ICAO Region which are unique to that Region and are not covered in the worldwide provisions identified in the ICAO Air Navigation Plan. Procedures contained in Chapter 8 are based in part on those published in SUPPS.

SURFACE AREA– The airspace contained by the lateral boundary of the Class B, C, D, or E airspace designated for an airport that begins at the surface and extends upward.

SURFACE METERING PROGRAM– A capability within Terminal Flight Data Manager that provides the user with the ability to tactically manage surface traffic flows through adjusting desired minimum and maximum departure queue lengths to balance surface demand with capacity. When a demand/capacity imbalance for a surface resource is predicted, a metering procedure is recommended. SURFACE VIEWER– A capability within the Traffic Flow Management System that provides situational awareness for a user–selected airport. The Surface Viewer displays a top–down view of an airport depicting runways, taxiways, gate areas, ramps, and buildings. The display also includes icons representing aircraft and vehicles currently on the surface, with identifying information. In addition, the display includes current airport configuration information such as departure/arrival runways and airport departure/arrival rates.

SURPIC- A description of surface vessels in the area of a Search and Rescue incident including their predicted positions and their characteristics.

(Refer to FAA Order JO 7110.65, Para 10–6–4, INFLIGHT CONTINGENCIES.)

SURVEILLANCE APPROACH– An instrument approach wherein the air traffic controller issues instructions, for pilot compliance, based on aircraft position in relation to the final approach course (azimuth), and the distance (range) from the end of the runway as displayed on the controller's radar scope. The controller will provide recommended altitudes on final approach if requested by the pilot.

(Refer to AIM.)

SUSPICIOUS UAS– Suspicious UAS operations may include operating without authorization, loitering in the vicinity of sensitive locations, (e.g., national security, law enforcement facilities, and critical infrastructure), or disrupting normal air traffic operations resulting in runway changes, ground stops, pilot evasive action, etc. The report of a UAS operation alone does not constitute suspicious activity. Development of a comprehensive list of suspicious activities is not possible due to the vast number of situations that could be considered suspicious. ATC must exercise sound judgment when identifying situations that could constitute or indicate a suspicious activity.

SWAP-

(See SEVERE WEATHER AVOIDANCE PLAN.)

SWSL-

(See SUPPLEMENTAL WEATHER SERVICE LOCATION.)

SYSTEM STRATEGIC NAVIGATION– Military activity accomplished by navigating along a preplanned route using internal aircraft systems to maintain a desired track. This activity normally requires a lateral route width of 10 NM and altitude range of 1,000 feet to 6,000 feet AGL with some route segments that permit terrain following.

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BRIEFING GUIDE



U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

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1. PARAGRAPH NUMBER AND TITLE:

5–3–2 NOTIFYING ARTCC 5–4–7. MAJOR FLIGHT PLAN CHANGES FROM EN ROUTE AIRCRAFT Appendix A. FAA Form 7233–4 – International Flight Plan

2. BACKGROUND: Following the publication of FAA Order JO 7110.10BB, Change 1, an error was discovered in paragraph 5-3-2 and Appendix A specifying the time instrument flight rules (IFR) flight plans can be transmitted to the appropriate ARTCC. The time has been corrected from 23 hours to less than $22\frac{1}{2}$ hours. Also, Change 1 omitted specific actions in paragraph 5-4-7 that are to be taken when an IFR military aircraft changes destination while en route.

3. CHANGE:

OLD

5-3-2. NOTIFYING ARTCC

Title through d2

e. Transmit flight plans when the ETD is <u>within 23</u> hours of current time.

<u>NOTE-</u>

In the event of a time zone difference between the station and the associated ARTCC, use the ARTCC's local time in determining transmission time.

OLD

5-4-7. MAJOR FLIGHT PLAN CHANGES FROM EN ROUTE AIRCRAFT

a. Change of Destination.

1. When <u>an</u> aircraft on a VFR flight plan changes destination, obtain and record, as a minimum, the following information if not already known:

OLD

Appendix A. FAA Form 7233-4 – International Flight Plan

Title through TBL A-17 NOTE

10. Date of Flight (Item 18 DOF/)

Flights planned <u>more than 23 hours after the time</u> the flight plan is filed, must include the date of flight in DOF/ expressed in a six-digit format YYMMDD, where YY equals the year (Y), MM equals the month, and DD equals the day.

NEW

5-3-2. NOTIFYING ARTCC

No Change

e. Transmit flight plans when the ETD is <u>less than</u> $22\frac{1}{2}$ hours of current time.

Delete

NEW

5–4–7. MAJOR FLIGHT PLAN CHANGES FROM EN ROUTE AIRCRAFT

No Change

1. When <u>a civil</u> aircraft on a VFR flight plan <u>or</u> <u>a military aircraft on any flight plan</u> changes destination, obtain and record, as a minimum, the following information if not already known:

NEW

Appendix A. FAA Form 7233–4 – International Flight Plan

No Change

10. Date of Flight (Item 18 DOF/)

Flights planned $2\underline{21/2}$ hours <u>or more</u> after the time the flight plan is filed, must include the date of flight in DOF/ expressed in a six-digit format YYMMDD, where YY equals the year (Y), MM equals the month, and DD equals the day.

NOTE-

FAA ATC systems will not accept flight plans <u>more</u> <u>than 23</u> hours prior to the<u>ir</u> proposed departure time. FAA Flight Service and commercial flight planning services generally accept flight plans earlier and forward to ATC at an appropriate time, typically 2 to 4 hours before the flight.

EXAMPLE-DOF/171130

NOTE-

FAA ATC systems will not accept flight plans $2\frac{21/2}{2}$ hours <u>or more</u> prior to the proposed departure time. FAA Flight Service and commercial flight planning services generally accept flight plans earlier and forward to ATC at an appropriate time, typically 2 to 4 hours before the flight.

No Change

1. PARAGRAPH NUMBER AND TITLE: 6–1–8. ADDRESSING MESSAGES

2. BACKGROUND: Eurocontrol's Integrated Initial Flight Plan Processing System (IFPS) is a centralized service designed to rationalize the reception, initial processing, and distribution of flight plan data related to instrument flight rules (IFR) flight within participating European Countries collectively known as the IFPS Zone (IFPZ). All aircraft flying into, departing from, or transiting Europe must file an International Civil Aviation Organization (ICAO) flight plan with the IFPS. This system is the sole source for the distribution of the IFR portions of flight plan information to air traffic control within the IFPZ. Therefore, IFR flight plans and associated messages destined to Europe must be addressed only to the two IFPS addresses for that portion of the flight within the IFPZ: EUCHZMFP (Brussels) and EUCBZMFP (Paris).

3. CHANGE:

OLD NEW 6-1-8. ADDRESSING MESSAGES 6-1-8. ADDRESSING MESSAGES Title through c *NOTE* No Change Add d. Flight plans and associated messages for all IFR flights, including the IFR portions of mixed IFR/VFR flights, entering, overflying, or departing the Eurocontrol Integrated Initial Flight Plan Processing System (IFPS) Zone (IFPZ), must be addressed only to the two IFPS addresses for that portion of the flight within the **IFPZ: EUCHZMFP and EUCBZMFP. IFPS** will ensure distribution of the accepted flight plan to all relevant Air Traffic Service (ATS) units within their area of responsibility. For more information on the IFPZ, go to: https://www.eurocontrol.int/system/integrated -initial-flight-plan-processing-system. NOTE-Add Detailed procedures and information applicable to flight plan addressing and distribution are contained in the EUROCONTROL "Network Operations HANDBOOK - IFPS User's Manual." d through f Re–letter as **e** through **g**
1. PARAGRAPH NUMBER AND TITLE: Appendix A. FAA Form 7233-4 – International Flight Plan

2. BACKGROUND: FAA Advisory Circular 90–105A describes a number of Performance Based Navigation (PBN) capabilities that will be required for routes to be implemented in the National Airspace System. These include Required Navigation Performance (RNP) 1, Radius to Fix (RF) capability; Advanced RNP (A–RNP); RNP 0.3 (Helicopters); Fixed Radius Transitions (FRT); Time of Arrival Control (TOAC) and RNP 2 (both Continental and Oceanic/Remote). En Route Automation Modernization (ERAM) is being updated to allow route assignment to restrict eligibility to flights with these capabilities.

3. CHANGE:

OLD

Appendix A. FAA Form 7233-4 – International Flight Plan

Title through TBL A-3

NEW

Appendix A. FAA Form 7233–4 – International Flight Plan

No Change

OLD

TBL A-4	
Item 18 NAV/, COM/, DAT/, and SUR/ capabilities used b	y FAA

Item	Purpose	Entry	Explanation
NAV/ en-	Qualify PBN for de-	RNVD0E2A1	Indicates that flight is capable of RNAV 1 arrivals and RNAV
tries used	parture or arrival only		2 en route, but cannot fly an RNAV 1 departure.
by FAA		RNVD1E2A0	Indicates that flight is capable of RNAV 1 departures and
			<u>RNAV 2 en route, but cannot fly an RNAV 1 arrival.</u>
	Add	Add	Add
COM/ en-			The FAA currently does not use any entries in COM/.
tries used	N/A	N/A	
by FAA			
DAT/ en-	Capability and prefer-	Priority number	Entries are combined with a priority number, for example;
tries used	ence for delivery of	followed by:	1FANS2PDC means a preference for departure clearance
by FAA	pre-departure clear-	• FANS	delivered via FANS 1/A; with capability to also receive the
	ance	• FANSP	clearance via ACARS PDC.
		• PDC	FANS = FANS 1/A DCL
		VOICE	FANSP = FANS 1/A+ DCL
			PDC = ACARS PDC
			VOICE = PDC via voice (no automated delivery)

SUR/ en- tries used	Req. Surveillance Per- formance	RSP180	Aircraft is authorized for Required Surveillance Performance RSP180
by FAA		RSP400	Aircraft is authorized for Required Surveillance Performance RSP400
	ADS-B	260B	Aircraft has 1090 MHz Extended Squitter ADS–B compliant with RTCA DO–260B (complies with FAA requirements)
	282B	282B	Aircraft has 978 MHz UAT ADS-B compliant with RTCA DO-282B (complies with FAA requirements)

NEW

TBL A-4 Item 18 NAV/, COM/, DAT/, and SUR/ capabilities used by FAA

Item	Purpose	Entry	Explanation
NAV/ entries used by FAA	<u>Radius-to-Fix (RF) ca-</u> <u>pability</u>	<u>Z1</u>	<u>RNP-capable flight is authorized for Radius-to-Fix</u> <u>operations.</u>
	Fixed Radius Transitions (FRT)	<u>Z2</u>	<u>RNP-capable flight is authorized for Fixed Radius</u> <u>Transitions.</u>
	<u>Time of Arrival Control</u> (TOAC)	<u>Z5</u>	<u>RNP-capable flight is authorized for Time of Arrival</u> <u>Control.</u>
	<u>Advanced RNP</u> (<u>A-RNP)</u>	<u>P1</u>	Flight is authorized for A-RNP operations.
	Helicopter RNP 0.3	<u>R1</u>	Flight is authorized for RNP 0.3 operations (pertains to heliconters only).
	RNP 2 Continental	M1	Flight is authorized for RNP 2 continental operations.
	RNP 2 Oceanic/Remote	<u>M2</u>	Flight is authorized for RNP 2 oceanic/remote operations.
COM/ entries used by FAA	N/A	N/A	The FAA currently does not use any entries in COM/.
DAT/ entries used by FAA	Capability and preference for delivery of pre-depar- ture clearance	Priority number followed by: • FANS • FANSP • PDC • VOICE	Entries are combined with a priority number, for example; 1FANS2PDC means a preference for departure clearance delivered via FANS 1/A; with capability to also receive the clearance via ACARS PDC. FANS = FANS 1/A DCL FANSP = FANS 1/A + DCL PDC = ACARS PDC VOICE = PDC via voice (no automated delivery)
SUR/ entries used by FAA	Req. Surveillance Perfor- mance	RSP180	Aircraft is authorized for Required Surveillance Performance RSP180
		RSP400	Aircraft is authorized for Required Surveillance Performance RSP400
	ADS-B	260B	Aircraft has 1090 MHz Extended Squitter ADS–B compliant with RTCA DO–260B (complies with FAA requirements)
		282B	Aircraft has 978 MHz UAT ADS–B compliant with RTCA DO–282B (complies with FAA requirements)

<u>NOTE-</u>

Other entries in NAV/, COM/, DAT/, and SUR/ are permitted for international flights when instructed by other service providers. Direction on use of these capabilities by the FAA is detailed in the following sections.

Add

Add

TBL A-5 through d6

<u>NOTE-</u>

<u>1.</u> Other entries in NAV/, COM/, DAT/, and SUR/ are permitted for international flights when instructed by other service providers. Direction on use of these capabilities by the FAA is detailed in the following sections.

2. In NAV/, descriptors for advanced capabilities (Z1, P1, R1, M1, and M2) should be entered as a single character string with no intervening spaces, and separated from any other entries in NAV/ by a space.

<u>EXAMPLE-</u> <u>NAV/Z1P1M2 SBAS</u>

No Change

OLD

Type of Douting	Canability Doquirod	Itom 10a	Item 18 PBN/	Add	Notos	
Type of Routing	Capability Required	Item Iva	See NOTE <u>4</u>	Auu	Notes	
RNAV SID or STAR (See	DNAV 1	GR	D2		If GNSS	
NOTE 1)	KINAV I	DIR	D4		If DME/DME/IRU	
٨dd	Add	Add	Add		Add	
Auu	Add	Add	Add		Add	
LL A	Add	Add	Add	Add	Add	
Add	Add	Add	Add	Add	Add	
Domestic Q-Route (see	DNAVO	GR	C2		If GNSS	
Gulf of Mexico Q-Routes)	KINAV 2	DIR	C4		If DME/DME/IRU	
T-Route	RNAV 2	GR	C2		GNSS is required for T-Routes	
RNAV (GPS) Approach	RNAV Approach, GPS	GR	S 1			
RNAV (GPS) Approach	RN <u>AV</u> Approach, GPS Baro–VNAV	GR	S2			
Add	Add	Add	Add	Add	Domestic arrivals do not need to file PBN approach	
RNP AR Approach with RF	RNP (Special Autho- rization Required) RF Leg Capability	GR	T1		capabilities to request the approach.	
RNP AR Approach with- out RF	RNP (Special Autho- rization Required)	GR	T2			

TBL A-13 Filing for Performance Based Navigation (PBN) Routes

NEW

TBL A-13 Filing for Performance Based Navigation (PBN) Routes

Type of Routing	Capability Required	Item 10a	Item 18 PBN/	Item 18 NAV/	Notes	
Type of Routing	Supusing Required	Item Iou	See NOTE <u>3</u>	<u>See NOTE 4</u>	10005	
RNAV SID or STAR	DNIAN/ 1	GR	D2		If GNSS	
(See NOTE 1)	KINAV I	DIR	D4		If DME/DME/IRU	
RNP SID or STAR	<u>RNP 1</u> <u>GNSS</u>	<u>GR</u>	<u>02</u>		If GNSS only	
<u>(See NOTE 2)</u>	<u>RNP 1</u> <u>GNSS</u>	<u>DGIR</u>	<u>01</u>		<u>If GNSS primary and DME/DME/IRU back-up</u>	
RNP SID or STAR with	<u>RNP 1</u> <u>GNSS</u>	<u>GRZ</u>	<u>02</u>	<u>Z1</u>	If GNSS only	
<u>RF required</u> (See NOTE 2)	<u>RNP 1</u> GNSS	<u>DGIRZ</u>	<u>01</u>	<u>Z1</u>	<u>If GNSS primary and DME/DME/IRU back- цр</u>	
Domestic Q-Route (see		GR	C2		If GNSS	
Gulf of Mexico Q-Routes)	RNAV 2	DIR	C4		If DME/DME/IRU	
T-Route	RNAV 2	GR	C2		GNSS is required for T-Routes	
RNAV (GPS) Approach	RN P Approach, GPS	GR	S 1			
RNAV (GPS) Approach	RN <u>P</u> Approach, GPS Baro-VNAV	GR	S2			
<u>RNAV (GPS) Approach</u> with RF required	<u>RNP Approach, GPS</u> <u>RF Capability</u>	<u>GRZ</u>	<u>S2</u>	<u>Z1</u>	Domestic arrivals do not need to file PBN approach	
RNP AR Approach with RF	RNP (Special Autho- rization Required) RF Leg Capability	GR	T1		capabilities to request the approach.	
RNP AR Approach with- out RF	RNP (Special Autho- rization Required)	GR	T2			

NOTE-

1. If the flight is requesting an RNAV SID only (no RNAV STAR) or RNAV STAR only (no RNAV SID) then <u>the flight</u> plan can include the following entries in Item 18 NAV/:

• Assign RNAV SID, but no RNAV STAR: NAV/RN-VD1E2A0 (optionally, the A0 may be omitted)

• Assign RNAV STAR, but no RNAV SID: NAV/RN-VD0E2A1 (optionally, the D0 may be omitted)

2. *PBN* <u>code</u> *D1* includes the capabilities of D2, D3, and *D4. PBN* <u>code</u> *B1* includes the capabilities of B2, B3, <u>and</u> *B4. PBN* code *C1* includes the capabilities of C2, C3, and C4.

NOTE-

1. If the flight is requesting an RNAV SID only (no RNAV STAR) or RNAV STAR only (no RNAV SID) then <u>consult</u> <u>guidance</u> on the FAA website at <u>https://www.faa.gov/about/office_org/headquarters_o</u> <u>ffices/ato/service_units/air_traffic_services/flight_pla</u> <u>n_filing</u>.

2. *PBN* <u>descriptor</u> *D1* includes the capabilities of D2, D3, and D4. *PBN* <u>descriptor</u> *B1* includes the capabilities of B2, B3, B4<u>, and B5</u>. *PBN* <u>descriptor</u> *C1* includes the capabilities of C2, C3, and C4.

3. In NAV, descriptors for advanced capabilities (Z1, P1, R1, M1, and M2) should be entered as a single character string with no intervening spaces, and separated from any other entries in NAV/ by a space.

<u>EXAMPLE–</u> <u>NAV/Z1P1M2 SBAS</u>

No Change

9. Eligibility for Reduced Oceanic Separation. Indicate eligibility for the listed reduced separation minima as indicated in the tables below. <u>Full</u> <u>Operational Requirements for these services are</u> <u>found in the U.S. Aeronautical Information</u> <u>Publication (AIP) ENR 7, Oceanic Operations,</u> available at

http://www.faa.gov/air_traffic/publications/atp ubs/aip_html/index.html.

No Change

OLD

TBL A-17 Filing for Reduced Oceanic Separation when RSP/RCP Required on March 29, 2018

					Flight Plan Entries				
Dimension of Separation	Separation Minima	RSP Require- ment	RCP Require- ment	PBN Require- ment	RSP in Item 18 SUR/	RCP in Item 10a	CDPLC in Item10a	PBN in Item 18 PBN/ (also File 'R' in Item 10a)	PBN in Item 18 NAV/
Lateral	55.5 km 30 NM	180	240	RNP 2 or RNP4	RSP180	Р2	J5, and/or J6, and/or J7	L1	
Perfor- mance– based Longitudinal	5 Minutes	180	240	RNAV10 (RNP10) RNP4, or RNP2	RSP180	P2	J5, and/or J6, and/or J7	A1 or L1	<u>RNP2</u> (<u>See</u> <u>Note)</u>
Perfor- mance– based Longitudinal	55.5 km 30 NM	180	240	RNP4 or RNP2	RSP180	Р2	J5, and/or J6, and/or J7	L1	<u>RNP2</u> (See Note)
Perfor- mance– based Longitudinal	93 km 50 NM	180	240	RNAV10 (RNP10) or RNP4 <u>.</u>	RSP180	Р2	J5, and/or J6, and/or J7	A1 or L1	

Add

Add

d7 through d8(b)

9. Eligibility for Reduced Oceanic Separation. Indicate eligibility for the listed reduced separation minima as indicated in the tables below.

TBL A-14 through TBL A-16

NEW

TBL A-17 Filing for Reduced Oceanic Separation when RSP/RCP Required on March 29, 2018

					Flight Plan Entries				
Dimension of Separation	Separation Minima	RSP Re- quirement	RCP Re- quirement	PBN Require- ment	RSP in Item 18 SUR/	RCP in Item 10a	CDPLC in Item10a	PBN in Item 18 PBN/ (also File 'R' in Item 10a)	PBN in Item 18 NAV/
Lateral	55.5 km 30 NM	180	240	RNP 2 or RNP 4	RSP180	P2	J5, and/or J6, and/or J7	L1	
Perfor- mance– based Longitudinal	5 Minutes	180	240	RNAV 10 (RNP 10) RNP 4, or RNP 2 <u>oceanic/</u> <u>remote</u>	RSP180	Р2	J5, and/or J6, and/or J7	A1 or L1	<u>M2</u>
Perfor- mance– based Longitudinal	55.5 km 30 NM	180	240	RNP 4 or RNP 2 <u>oceanic/</u> <u>remote</u>	RSP180	Р2	J5, and/or J6, and/or J7	L1	<u>M2</u>
Perfor- mance– based Longitudinal	93 km 50 NM	180	240	RNAV 10 (RNP 10) or RNP 4	RSP180	P2	J5, and/or J6, and/or J7	A1 or L1	

NOTE-

RNP2 is not supported in FAA controlled airspace; *PBN/L1* (for *RNP4*) must be filed to obtain the indicated separation.

Add

<u>NOTE-</u>

<u>1. Filing of</u> RNP_2 <u>alone</u> is not supported in FAA controlled airspace; PBN/L1 (for RNP_4) <u>or PBN/A1</u> (for RNP 10) must be filed to obtain the indicated separation.

2. Use of "RNP2" in NAV/ signifies continental RNP 2 (and means the same as M1). Continental RNP 2 is not adequate for reduced oceanic separation. Descriptor M2 indicates RNP 2 global/oceanic RNP 2 capability.