U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
National Policy

ORDER 8260.46J

Effective Date:
07/12/2022

SUBJ: Departure Procedure (DP) Program

This order provides the policy, guidance, and standardization for initiating, developing, processing, and managing the Departure Procedure (DP) Program in the United States and its territories. The original order combined into a single product textual instrument flight rules (IFR) departure procedures and graphical standard instrument departures (SIDs). It made no distinction between area navigation (RNAV) DPs: those developed solely for obstruction clearance and those developed for system enhancement. This document defines two separate types of DPs: SIDs developed for system enhancement and obstacle departure procedure (ODPs) developed solely for obstruction clearance.

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Acting Executive Director, Flight Standards Service

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Chapter 1. General Information

Section 1-1. Basic

1-1-1. Purpose of this order. This order provides policy, guidance, and standardization for initiating, developing, processing, and managing the DP program. This order contains guidance that is pertinent to Title 14, Code of Federal Regulations, (14 CFR) parts 71, 91, 97, 121, and 135.

1-1-2. Audience. All personnel who are responsible for instrument flight procedure development.

1-1-3. Where you can find this order. You can find this order on FAA's website.

1-1-4. What this order cancels. Order 8260.46H Departure Procedure (DP) Program, dated 06/04/2021.

1-1-5. Explanation of changes. Significant areas of new direction, guidance, policy, and criteria as follows:

a. General. Incorporated documentation requirements for helicopter criteria currently published in Order 8260.42B, United States Standard for Helicopter Area Navigation (RNAV).

b. Chapter 2. Added Navigation Specification (NavSpec) Required Navigation Performance 0.3 (RNP 0.3) performance based navigation (PBN) capability for helicopter departures.

c. Appendix F.

(1) Added documentation requirements for helicopter departures.

(2) Added the ability to document hover altitude to mitigate obstacle penetrations.

Chapter 2. Responsibilities

Section 2-1.

2-1-1. Departure Procedure (DP) Guidelines.

a. General. Instrument flight rules (IFR) departure procedures may be designed and published for all runways authorized by the approving authority. There are two types of DPs; those developed to assist pilots in obstruction avoidance (referred to as ODP) and those developed to communicate air traffic control (ATC) clearances (referred to as SID). Helicopter point-in-space (PinS) DP may be developed and charted as a SID (see Appendix F).

(1) Where IFR departure procedures are authorized by the approving authority conduct a diverse departure assessment. Do not conduct a diverse departure assessment for helicopter departures. Helicopter IFR diverse departures are not authorized, visual or VFR departure to an Initial Departure Fix may be authorized. [see Order 8260.3, U.S. Standard for Terminal Instrument Procedures (TERPS)].

(2) When IFR departure procedures are not authorized identify runway/heliport and reason on Form 8260.15A (see Appendix D, Section 1, paragraph 7).

b. Obstacle departure procedures. Develop an ODP and/or non-standard takeoff minimums when obstructions penetrate the 40:1 departure obstacle clearance surface (OCS) as described in Order 8260.3. Use Table 2-1-1 as a guide to determine each situation and the required action. Use Figure 2-1-1, Figure 2-1-2, or Figure 2-1-3 as an aid when applying the scenarios listed in Table 2-1-1. The following rules apply to ODPs:

(1) The primary goal in ODP development is to retain standard takeoff minimums with standard climb gradient to the extent possible. See Table 2-1-1 and associated figures that follow for recommended ODP development combinations and figure footnotes containing ODP text examples.

(2) Establish only one ODP for a runway. This will be considered the default IFR departure procedure for a given runway and is intended for pilot awareness and use in the absence of ATC radar vectors or SID assignment. Do not publish text that allows an option to use a SID or alternate maneuver assigned by ATC; e.g., “Climb runway heading to 1200 before turning or use Manchester Departure” or “Turn right, climb direct ABC VOR or as assigned by ATC.”

(3) When using Table 2-1-1, apply “before rounding” values to each situation to determine required action.

(4) Depict an ODP either textually or graphically within the following guidelines.

(a) Textual ODP. A relatively simple ODP may be published textually unless a graphical depiction is required for clarity. Textual ODP instructions that exceed a maximum of one turn or one altitude change or one climb gradient or one speed restriction, or holding must be published graphically.

(b) Graphic ODP. Complex ODPs are those that require a visual presentation to clearly communicate the departure instructions and desired flight paths. If the ODP is depicted graphically, it must be clearly stated on Form 8260-15A, Takeoff Minimums and Textual Departure Procedures (DP), in the Departure Procedure section; e.g., "USE JONES DEPARTURE." The decision to graphically publish ODPs when not required by this order rests within the service provider. When determining the need for a graphic DP, the service provider must, in addition to the textual DP restrictions noted in paragraph 2-1-1.b(4)(a), consider:

1. The number of ground-based navigational aids (NAVAIDs) and fixes;

2. Whether graphical depiction will enhance pilot comprehension of the procedure, and

3. The proximity and effect of precipitous or significant terrain.

(5) A graphic ODP may serve one or more runways at a single airport; e.g., a graphic departure may contain initial departure instructions for both runways 9 and 27 on the same chart.

(6) Develop ODPs with primary emphasis given to using the least onerous method (see Appendix A) to get the aircraft to the en route structure or at an altitude that will allow random (diverse) IFR flight, while accommodating commonly used routings out of each airport to the maximum extent practicable. Procedure designers must consider the impact on local ATC operations when using the phrases "before turning" or "before proceeding on course." ODPs must be coordinated with ATC to ensure flight safety and compatibility with the local operating environment and the en route structure.

(7) ODPs may include a climb gradient when required for obstruction avoidance and/or lateral navigation (LNAV) engagement; however, climb gradients, speed, and/or altitude restrictions solely for ATC purposes are not allowed.

(8) Naming conventions and computer code assignments for graphic ODPs must follow the guidance specified for SIDs in paragraph 3-1-3 to ensure controller awareness of route flown.

(9) Transition routes are not permitted on ODPs.

(10) When applicable, develop ODPs using ground based NAVAIDs, RNAV, or dead reckoning guidance wherever possible. Do not specify radar vectors for navigation guidance in ODP development. At those locations served by RNAV approaches exclusively, every effort must first be made to develop an ODP that accommodates conventional (preferably very high frequency omni-directional range (VOR)) navigation systems. If this effort fails, develop an RNAV ODP.

(11) When a visual climb over airport (VCOA) has been established, publish a note that requires the pilot to obtain approval from ATC with their IFR clearance when executing the VCOA (see Appendix D, Section 1, paragraph 9).

(12) Do not establish a VCOA in conjunction with an RNAV ODP.

(13) The VCOA requirement in Table 2-1-1 is mandatory. However, ATC may submit a justification request to the Flight Procedures and Airspace Group for approval to opt-out of publishing a VCOA. This "opt-out" option is intended for use at major metropolitan airports that experience a high volume of traffic (e.g., Los Angeles, San Francisco, New York, etc.) where permission to use a VCOA is impractical and/or impossible. ATC must consider user needs as well as the operational impact upon low performance aircraft that must depart IFR from mountainous/obstacle encumbered airports when deciding to submit a request to not establish a VCOA.

(14) Textual ODPs designed specifying a route must terminate at a fix/NAVAID located within the IFR en route structure and/or at an altitude that will allow random (diverse) IFR flight.

(15) Design graphic ODPs to terminate at a fix/NAVAID located within the IFR en route structure and at the appropriate altitude for route of flight.

(16) Publish a helicopter PinS DP as a SID. ODPs are not required (see Appendix F).

Table 2-1-1. ODP Development Combinations

Situation	Action
1. TERPS diverse departure obstacle assessment does not identify any obstacle penetrations.	Complete Form 8260-15A documenting standard takeoff minimums apply.
2. TERPS diverse departure obstacle assessment identifies obstacles within the initial climb area (ICA) that require a Climb Gradient (CG) greater than 200 ft/NM to an altitude of 200 feet or less, above Departure End of Runway (DER) (commonly referred to as "low, close-in obstacles").	Establish a DP that provides the pilot a note identifying the obstacle(s) type, location relative to DER, height (AGL), and elevation (MSL). See Appendix D for recommended publication text available.
3. TERPS diverse departure obstacle assessment identifies obstacles that require a CG greater than 200 ft/NM, to an altitude greater than 200 feet above DER.	**A)** Obstacles located within the ICA (extended) 3 statute miles (SM) or less from DER: Establish a DP using one of the following options (listed in order of preference): 1) Publish a textual or graphic route/sector to avoid the obstacle(s) with standard takeoff minimums and standard CG, *or* 2) Publish a ceiling and visibility to see and avoid the obstacle(s) with the option of standard takeoff minimums with a minimum CG to a specified fix or altitude that provides obstacle clearance with a standard CG, *and*; a) Provide a note identifying the obstacle(s), which specifies the obstacle description, location relative to the DER, height (AGL), and elevation (MSL), *and* 3) For ICA (extended) obstacles that penetrate the 40:1 OCS by 35 feet or less, provide an option to reduce takeoff runway length to accommodate the most penetrating obstacle based on a standard 200 ft/NM climb gradient, *or* A combination of options 1) and 2) above.
3. TERPS diverse departure obstacle assessment identifies obstacles that require a CG greater than 200 ft/NM, to an altitude greater than 200 feet above DER.	**B)** All Other Obstacles: Establish a DP using one of the following options (listed in order of preference): 1) Publish a graphic or textual route/sector to avoid the obstacle with standard takeoff minimums and standard climb, *or* 2) Publish standard takeoff minimums with a minimum CG to a specified fix or altitude that provides obstacle clearance with a standard CG, *and* a) For ICA (extended) obstacles that penetrate the 40:1 OCS by 35 feet or less, provide an option to reduce takeoff runway length to accommodate the most penetrating obstacle based on a standard 200 ft/NM CG, *and/or* i) Provide a ceiling and visibility sufficient to allow a VCOA to an altitude that will provide obstacle clearance (see paragraph 2-1-1.b(11), 2-1-1.b(12), and 2-1-1.b(13)), *or* 3) A combination of options 1 and 2 above.
3. TERPS diverse departure obstacle assessment identifies obstacles that require a CG greater than 200 ft/NM, to an altitude greater than 200 feet above DER.	**C)** Both Action A) and B) Obstacles: 1) If the DP highest CG is based on an obstacle ≤ 3 SM from DER (Action A), establish a DP using one of the following options (listed in order of preference): a) Publish a graphic or textual route/sector to avoid the obstacle with standard takeoff minimums and standard climb, *or* b) Publish standard takeoff minimums and the minimum CG required to clear the ≤ 3 SM obstacle to a specified fix or altitude that will provide subsequent obstacle clearance above all DP obstacles based on a standard 200 ft/NM CG, *and* i. Provide a ceiling and visibility to see and avoid the ≤ 3 SM obstacle and the minimum CG required to clear all other

Situation	Action
	obstacles outside the ICA (extended) to a specified fix or altitude that provides obstacle clearance, *and* ii. For ICA (extended) obstacles that penetrate the 40:1 OCS by 35 feet or less, provide an option to reduce takeoff runway length to accommodate the most penetrating obstacle based on a standard 200 ft/NM climb gradient, *and/or* c) Provide a ceiling and visibility sufficient to allow a VCOA to an altitude that will provide obstacle clearance (see paragraphs 2-1-1b.(11), 2-1-1.b(12), and 2-1-1.b(13)), 2) If the DP highest CG is based on all other obstacles (Action B), then Action B above applies. **Note:** Where a graphic route/sector is published, include on the chart: takeoff minimums, required CGs, and applicable obstacle data for each runway using the DP.
3. TERPS diverse departure obstacle assessment identifies obstacles that require a CG greater than 200 ft/NM, to an altitude greater than 200 feet above DER.	**D)** If none of the above actions is feasible, an IFR departure must not be authorized.
4. TERPS diverse departure obstacle assessment identifies obstacles requiring a CG to 200 feet or less above DER and additional obstacles that require a CG to an altitude greater than 200 feet above DER.	Apply a combination of action items from situations 2) and 3).

Figure 2-1-1. Situation 3, Action A and Situation 2/4 (as applicable)
Penetrating obstacles located <u>within</u> the 3 SM ICA

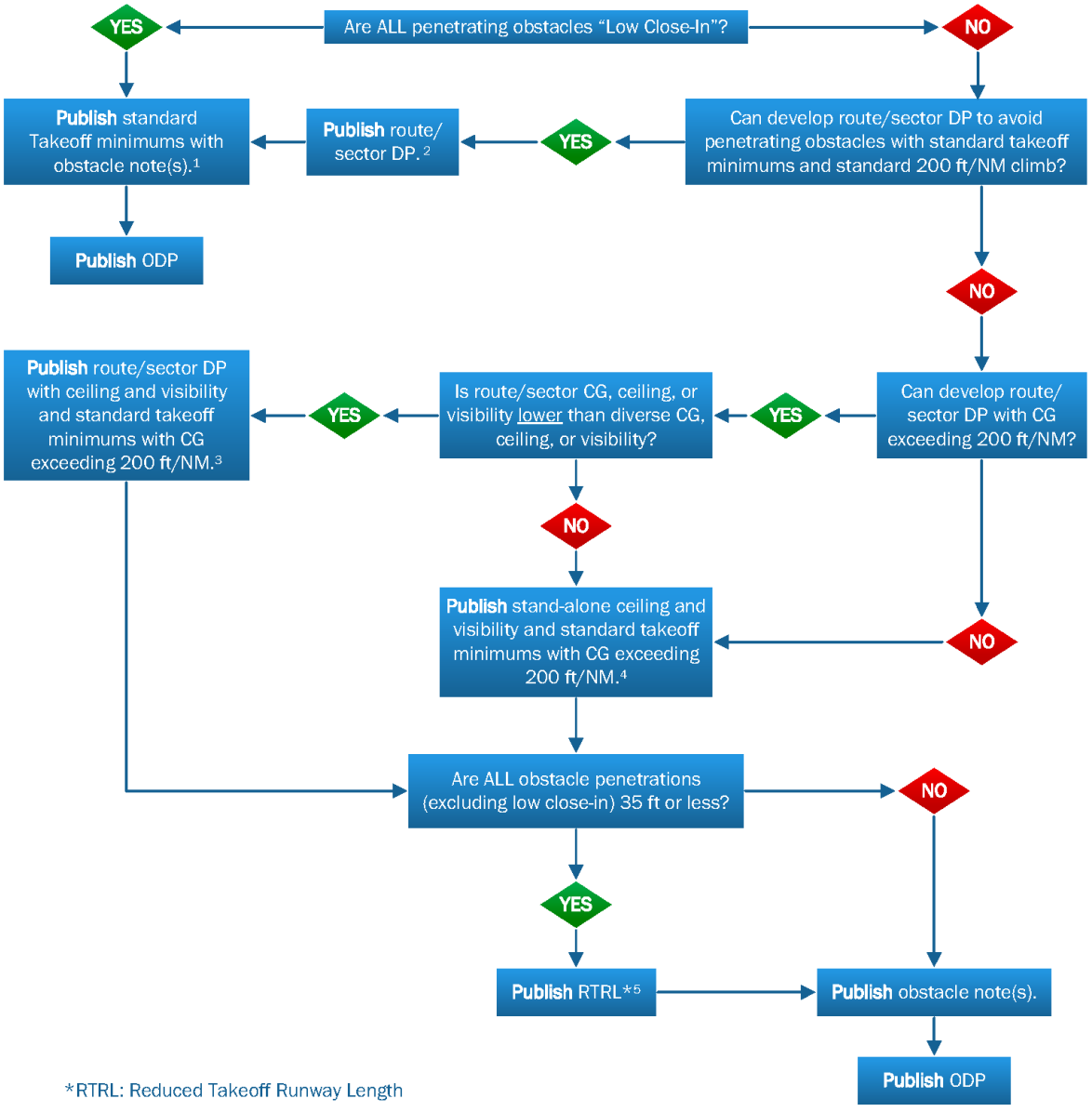


Figure 2-1-1 Form Footnotes:

1. TAKEOFF MINIMUMS: "RWY 11: STANDARD."
TEXTUAL DEPARTURE PROCEDURE: (Leave blank)
TAKEOFF OBSTACLE NOTES: "NOTE: RWY 11: (ENTER OBSTACLE NOTES)"

2. TAKEOFF MINIMUMS: "RWY 23: STANDARD."
TEXTUAL DEPARTURE PROCEDURE: "RWY 23: CLIMBING RIGHT TURN DIRECT ABC VORTAC, CONTINUE CLIMB IN ABC HOLDING PATTERN (HOLD EAST, LEFT TURNS, 252.17 INBOUND) TO CROSS ABC VORTAC AT OR ABOVE MEA FOR ROUTE OF FLIGHT."
TAKEOFF OBSTACLE NOTES: "NOTE: RWY 23: (ENTER OBSTACLE NOTES)"

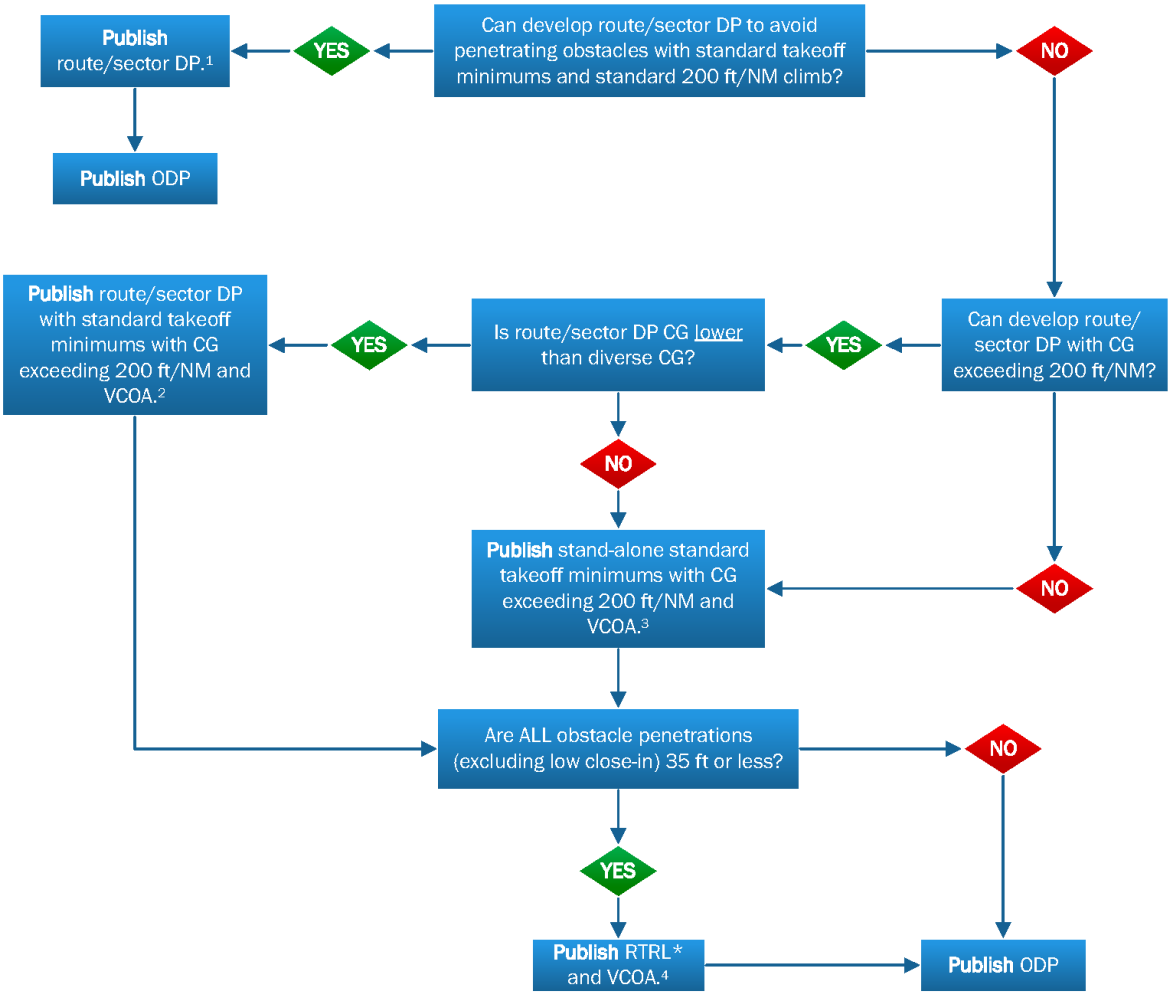
3. TAKEOFF MINIMUMS: "RWY 23: 300-1 ¼ OR STANDARD WITH MINIMUM CLIMB OF 415 FT/NM TO 2800."
TEXTUAL DEPARTURE PROCEDURE: "RWY 23: CLIMBING RIGHT TURN DIRECT ABC VORTAC, CONTINUE CLIMB IN ABC HOLDING PATTERN (HOLD EAST, LEFT TURNS, 252.17 INBOUND) TO CROSS ABC VORTAC AT OR ABOVE MEA FOR ROUTE OF FLIGHT."
TAKEOFF OBSTACLE NOTES: "NOTE: RWY 23: (ENTER OBSTACLE NOTES)"

4. TAKEOFF MINIMUMS: "RWY 27: 300-1 OR STANDARD WITH MINIMUM CLIMB OF 275 FT/NM TO 2100."
TEXTUAL DEPARTURE PROCEDURE: (Leave blank)
TAKEOFF OBSTACLE NOTES: "NOTE: RWY 27: (ENTER OBSTACLE NOTES)"

5. TAKEOFF MINIMUMS: "RWY 36: 300-2 OR STANDARD WITH MINIMUM CLIMB OF 225 FT/NM TO 600, OR ALTERNATIVELY, WITH STANDARD TAKEOFF MINIMUMS AND A NORMAL 200 FT/NM CLIMB GRADIENT, TAKEOFF MUST OCCUR NO LATER THAN 1800 FEET PRIOR TO DER."
TEXTUAL DEPARTURE PROCEDURE: "RWY 36: (Specify departure procedure or leave blank for diverse)"
TAKEOFF OBSTACLE NOTES: "NOTE: RWY 36: (ENTER OBSTACLE NOTES)"

Graphic ODP in lieu of Textual ODP
TAKEOFF MINIMUMS: (Blank)
TEXTUAL DEPARTURE PROCEDURE: "RWY 23: USE ALPHA DEPARTURE."
TAKEOFF OBSTACLE NOTES: "NOTE: RWY 23: (ENTER OBSTACLE NOTES)."

Figure 2-1-2. Situation 3, Action B
Penetrating obstacles located outside the 3 SM ICA



*RTRL: Reduced Takeoff Runway Length

Figure 2-1-2 Form Footnotes:

1. TAKEOFF MINIMUMS: "RWY 36: STANDARD."
TEXTUAL DEPARTURE PROCEDURE: "RWY 36: CLIMB ON HEADING 357.11 TO 2800 BEFORE TURNING RIGHT."

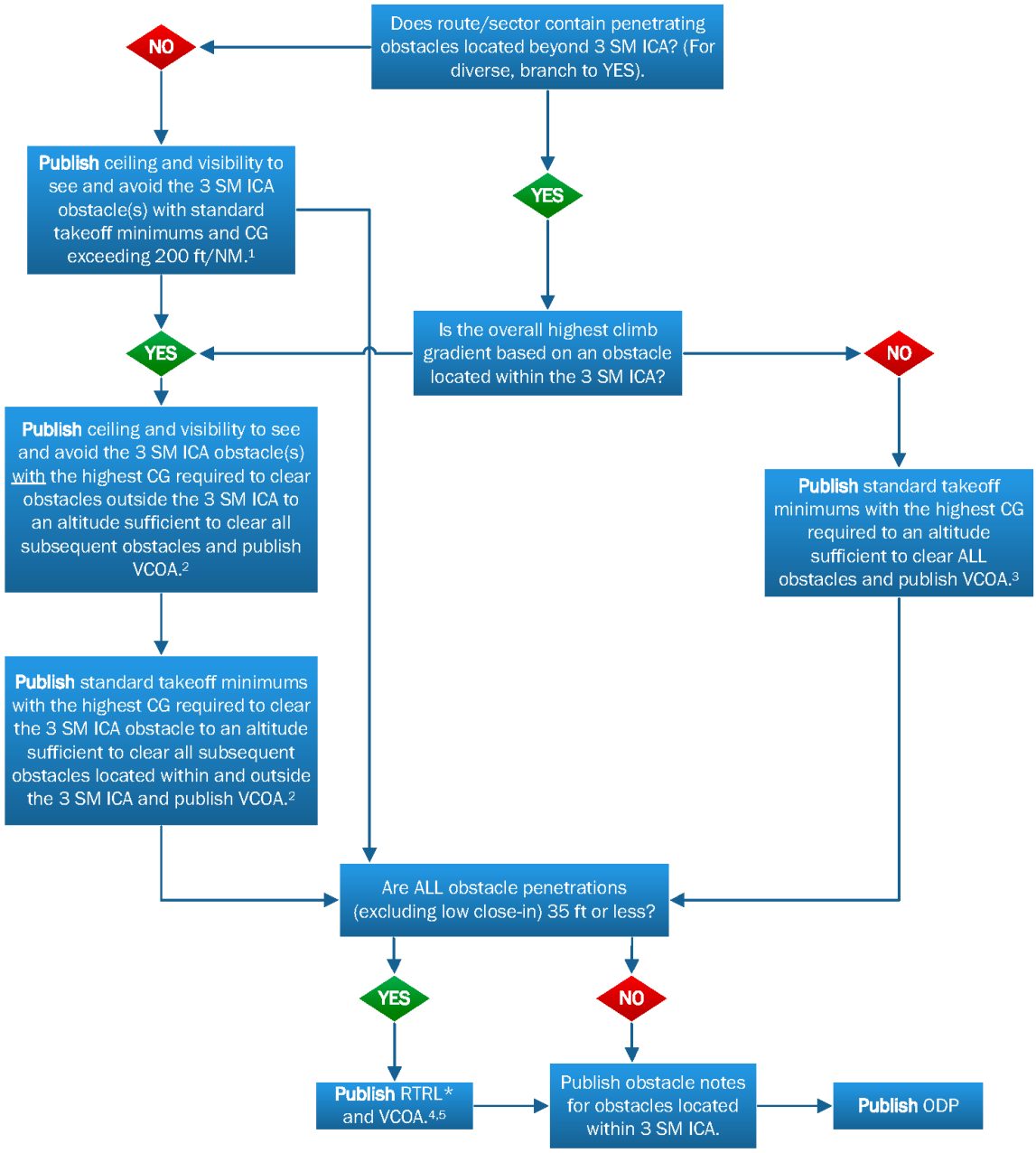
2. TAKEOFF MINIMUMS: "RWY 8: STANDARD WITH MINIMUM CLIMB OF 390 FT/NM TO 11800, OR 5300-3 FOR VCOA."
TEXTUAL DEPARTURE PROCEDURE: "RWY 8: CLIMB ON XYZ VOR/DME R-081 TO ALPHA, THEN CLIMBING LEFT TURN DIRECT XYZ VOR/DME, CONTINUE CLIMB IN XYZ HOLDING PATTERN (HOLD EAST, RIGHT TURNS, 263.57 INBOUND) TO CROSS XYZ VOR/DME AT OR ABOVE MEA FOR ROUTE OF FLIGHT."
VISUAL CLIMB OVER AIRPORT: "OBTAIN ATC APPROVAL FOR VCOA WHEN REQUESTING IFR CLEARANCE. CLIMB IN VISUAL CONDITIONS TO CROSS METRO AIRPORT AT OR ABOVE 10800 BEFORE PROCEEDING ON COURSE."

3. TAKEOFF MINIMUMS: "RWY 36: STANDARD WITH MINIMUM CLIMB OF 355 FT/NM TO 7700, OR 3800-3 FOR VCOA."
VISUAL CLIMB OVER AIRPORT: "RWY 36: "OBTAIN ATC APPROVAL FOR VCOA WHEN REQUESTING IFR CLEARANCE. CLIMB IN VISUAL CONDITIONS TO CROSS DOWNTOWN AIRPORT AT OR ABOVE 9200 BEFORE PROCEEDING ON COURSE."

4. TAKEOFF MINIMUMS: "RWY 8: STANDARD WITH MINIMUM CLIMB OF 220 FT/NM TO 10700, OR ALTERNATIVELY, WITH STANDARD TAKEOFF MINIMUMS AND A NORMAL 200 FT/NM CLIMB GRADIENT, TAKEOFF MUST OCCUR NO LATER THAN 1600 FEET PRIOR TO DER OR 5300-3 FOR VCOA."
TEXTUAL DEPARTURE PROCEDURE: "RWY 8: (Specify departure procedure, OR for diverse, leave blank)"
VISUAL CLIMB OVER AIRPORT: "OBTAIN ATC APPROVAL FOR VCOA WHEN REQUESTING IFR CLEARANCE. CLIMB IN VISUAL CONDITIONS TO CROSS (INSTRUCTIONS AS REQUIRED BASED ON DECISION ABOVE) BEFORE PROCEEDING ON COURSE."

<u>Graphic ODP in lieu of Textual ODP</u>
TAKEOFF MINIMUMS: (Blank)
TEXTUAL DEPARTURE PROCEDURE: "RWY 23: USE ALPHA DEPARTURE."
TAKEOFF OBSTACLE NOTES: "NOTE: RWY 23: (ENTER OBSTACLE NOTES)."

Figure 2-1-3. Situation 3, Action C and Situation 4
Penetrating obstacles located <u>within AND outside</u> the 3 SM ICA
that require a non-standard climb gradient (Diverse & Route/Sector)



*RTRL: Reduced Takeoff Runway Length

Figure 2-1-3 Form Footnotes:

1. TAKEOFF MINIMUMS: "RWY 11: 400-2 OR STANDARD WITH MINIMUM CLIMB OF 250 FT/NM TO 3000."
   TEXTUAL DEPARTURE PROCEDURE: "RWY 11: CLIMB ON HEADING 112.90 TO 3700 BEFORE TURNING RIGHT."
   TAKEOFF OBSTACLE NOTES: "NOTE: RWY 11: (ENTER NOTES FOR OBSTACLES LOCATED WITHIN THE 3 SM ICA)"

2. TAKEOFF MINIMUMS: "RWY 5, 300-1¼ WITH MINIMUM CLIMB OF 350 FT/NM TO 6000 OR STANDARD WITH MINIMUM CLIMB OF 500 FT/NM TO 5000 OR 2100-3 FOR VCOA."
   TEXTUAL DEPARTURE PROCEDURE: "RWY 5: (Specify departure procedure, OR for diverse, leave blank)"
   VISUAL CLIMB OVER AIRPORT: "OBTAIN ATC APPROVAL FOR VCOA WHEN REQUESTING IFR CLEARANCE. CLIMB IN VISUAL CONDITIONS TO CROSS (INSTRUCTIONS AS REQUIRED BASED ON DECISION ABOVE) BEFORE PROCEEDING ON COURSE."
   TAKEOFF OBSTACLE NOTES: "NOTE: RWY 5: (ENTER NOTES FOR OBSTACLES LOCATED WITHIN THE 3 SM ICA)"

3. TAKEOFF MINIMUMS: "RWY 5: STANDARD WITH MINIMUM CLIMB OF 425 FT/NM TO 5400 OR 2100-3 FOR VCOA."
   TEXTUAL DEPARTURE PROCEDURE: "RWY 5: (Specify departure procedure, OR for diverse, leave blank)"
   VISUAL CLIMB OVER AIRPORT: "OBTAIN ATC APPROVAL FOR VCOA WHEN REQUESTING IFR CLEARANCE. CLIMB IN VISUAL CONDITIONS TO CROSS (INSTRUCTIONS AS REQUIRED BASED ON DECISION ABOVE) BEFORE PROCEEDING ON COURSE."
   TAKEOFF OBSTACLE NOTES: "NOTE: RWY 5: (ENTER NOTES FOR OBSTACLES LOCATED WITHIN THE 3 SM ICA)"

4. TAKEOFF MINIMUMS: "RWY 11: 400-2 OR STANDARD WITH MINIMUM CLIMB OF 220 FT/NM TO 3400, OR ALTERNATIVELY, WITH STANDARD TAKEOFF MINIMUMS AND A NORMAL 200 FT/NM CLIMB GRADIENT, TAKEOFF MUST OCCUR NO LATER THAN 1200 FEET PRIOR TO DER."
   TEXTUAL DEPARTURE PROCEDURE: "RWY 11: CLIMB ON HEADING 115.90 TO 3700 BEFORE TURNING RIGHT."
   TAKEOFF OBSTACLE NOTES: "NOTE: RWY 11: (ENTER NOTES FOR OBSTACLES LOCATED WITHIN THE 3 SM ICA)"

5. TAKEOFF MINIMUMS: "RWY 5: 300-2 WITH MINIMUM CLIMB OF 210 FT/NM TO 5100 OR STANDARD WITH MINIMUM CLIMB OF 225 FT/NM TO 4200, OR ALTERNATIVELY, WITH STANDARD TAKEOFF MINIMUMS AND A NORMAL 200 FT/NM CLIMB GRADIENT, TAKEOFF MUST OCCUR NO LATER THAN 1500 FEET PRIOR TO DER OR 1700-3 FOR VCOA."
   TEXTUAL DEPARTURE PROCEDURE: "RWY 5: (Specify departure procedure, OR for diverse, leave blank)"
   VISUAL CLIMB OVER AIRPORT: "OBTAIN ATC APPROVAL FOR VCOA WHEN REQUESTING IFR CLEARANCE. CLIMB IN VISUAL CONDITIONS TO CROSS (INSTRUCTIONS AS REQUIRED BASED ON DECISION ABOVE) BEFORE PROCEEDING ON COURSE."
   TAKEOFF OBSTACLE NOTES: "NOTE: RWY 5: (ENTER NOTES FOR OBSTACLES LOCATED WITHIN THE 3 SM ICA)"

Graphic ODP in lieu of Textual ODP
TAKEOFF MINIMUMS: (Blank)
TEXTUAL DEPARTURE PROCEDURE: "RWY 23: USE ALPHA DEPARTURE."
TAKEOFF OBSTACLE NOTES: "NOTE: RWY 23: (ENTER OBSTACLE NOTES)."

c. Standard instrument departures. Develop SIDs to assist in meeting environmental, capacity, and ATC requirements. SIDs may be requested by specific ATC facilities, the military services, or other proponents to enhance operations. A SID also provides protection from obstacles and is depicted graphically; however, it will not contain the "(OBSTACLE)" designation following the procedure title on the chart, and may not be flown unless the SID is part of an IFR, ATC clearance. The following rules apply to SIDs:

(1) Design SIDs to terminate at a fix/NAVAID depicted on an IFR en route chart, at an altitude that will allow random IFR flight, or at a position and altitude where ATC radar service is provided.

(2) When a SID is designed to incorporate radar vectors or a course to be flown at the termination point, provide a heading/course for charting and incorporation into the avionics database in the event ATC instructions are not received prior to or at the termination fix.

d. Design constraints. The following design constraints apply to all ODPs and SIDs:

(1) DPs must not require a turn prior to reaching 400 feet above the departure end of runway (DER) elevation. See Order 8260.3 and Order 8260.58, United States Standard for Performance Based Navigation (PBN) Instrument Procedure Design, when a turn is required within two nautical miles (NM) of DER.

(2) The Flight Procedures and Airspace Group (or appropriate military authority) must approve DPs and DVAs requiring a CG in excess of 500 ft/NM (600 ft/NM for helicopters). See paragraph 2-1-1.e(3) for additional information regarding establishing/publishing greater than standard climb gradients.

Note: Base consideration for approval on, but not limited to, potential users/aircraft capability of meeting such a CG, and location of the obstruction along the projected flight track that is causing the CG.

(a) Requests for approval of CGs in excess of 500 ft/NM (600 ft/NM for helicopters) must include documentation showing the calculations used to derive the climb gradient values.

(b) When the Flight Procedures and Airspace Group will not approve a CG in excess of 500 ft/NM (600 ft/NM for helicopters) and all of the obstacles forcing such a CG are located inside the ICA (extended) three SM or less from DER, a ceiling and visibility may be applied to see and avoid the obstruction(s) as the only option available.

(c) When the Flight Procedures and Airspace Group will not approve a CG in excess of 500 ft/NM (600 ft/NM for helicopters) and any of the obstacles forcing such a CG are located outside the ICA (extended) greater than three SM from DER; a stand-alone VCOA procedure may be used as the only option available for obstacle avoidance.

(3) Specify speed restrictions only when necessary to ensure obstacle clearance, airspace efficiency during turns, or when necessary to achieve an operational advantage. Refer to applicable DP criteria directives.

(a) Speed restrictions to support ATC requirements are only allowed in SID design and must not be included in ODPs.

(b) Limit speed restrictions to one restriction per fix/waypoint. In this instance, an altitude that meets TERPS criteria (or if applicable, a higher altitude for ATC operational requirements) must also be charted at the fix/waypoint.

(c) Speed restrictions may apply to the entire procedure or to a specific point-in-space. Use standard notes, where possible, so that the intent can be clearly understood by the pilot; e.g., "DO NOT EXCEED XXX KIAS UNTIL PASSING (FIX NAME);" "DO NOT EXCEED XXX KIAS UNTIL LEAVING (ALTITUDE);" "INCREASE SPEED TO XXX KIAS, IF UNABLE, ADVISE ATC."

(d) For the portion of a DP that underlies Class B airspace, do not chart minimum or mandatory speed restrictions in excess of 200 KIAS. Do not establish speed restrictions that require an aircraft to exceed the restrictions in 14 CFR part 91.117 (a) and (c).

(e) Do not chart minimum or mandatory speed restrictions in excess of 250 KIAS below 10,000 feet MSL.

(4) Do not use fan markers as a fix to designate a turning point on a SID or ODP.

(5) Do not establish VCOA procedures in conjunction with a SID.

(6) Except for departures that use Radar vectors to join RNAV routes, RNAV departure procedures must only serve one airport.

(7) Do not establish DPs containing more than one departure route from the end of a runway to the end of the DP to support different types of aircraft (e.g., jet, turbo-prop, etc.) or different equipment requirements (distance measuring equipment (DME), non-DME). Where this is necessary, develop separate procedures.

e. Charting constraints. The following charting constraints apply:

(1) Communications. Charting of the Departure Control frequency will occur automatically (without coordination). Other communication types will be depicted only when specifically requested. For additional frequencies requested by the Instrument Flight Procedure Validation Team or specified on the worksheet, specify Chart ATIS, Chart CLNC DEL, etc.

(2) Charting altitudes. Document altitudes for charting as follows:

(a) Graphic departure procedures may require depiction of a minimum altitude at a fix established along the departure route. SIDs may require altitudes to support ATC requirements; however, do not depict ATC-required altitudes on ODPs.

(b) When ATC requests a minimum "at or above" altitude restriction at a fix in an initial SID routing (prior to reaching the SID termination fix) that is higher than the required procedure design minimum altitude at the same fix, the higher requested ATC altitude then

becomes the minimum altitude at that fix. This altitude must support all procedure design and criteria requirements (i.e., obstacle clearance/procedure design constraints/navigation solution and the ATC requirement(s)).

1. When establishing crossing altitudes for other than meeting obstacle clearance and/or to support a shortened ICA to ensure LNAV engagement can occur before turning, stakeholders should give consideration to aircraft performance limitations based on the type of aircraft expected to be using the SID and whether those aircraft will be capable of meeting these altitude restrictions. This may require consultation with industry partners and local operators that could be impacted.

2. Calculate (but do not publish) the CG necessary to meet each minimum altitude restriction. Flight Procedures and Airspace Group's approval is required if the calculated CG exceeds 500 ft/NM (600 ft/NM for helicopters).

(c) When an ATC facility has requested an "at or below" altitude restriction at a fix, ensure that the requested altitude meets all required obstacle clearance (ROC) requirements specified in Order 8260.3, Chapter 14, as well as other criteria design standards. ATC may also have a need to establish an "at or above" altitude in conjunction with the "at or below" altitude at the same fix making this either a "mandatory" or "block" fix crossing altitude (see paragraph 2-1-1.e(2)(b)).

(d) When ATC requests an altitude restriction for a fix located on a transition route, it must be at or above the specified minimum en route altitude (MEA) for the route (see note in paragraph 2-1-1.e(2)(b)). Do not raise an MEA to support ATC operational requirements; use fix crossing altitudes where operationally needed.

(e) Enter altitudes to be charted on the appropriate 8260-15 series form (see Appendix D or Appendix E). Government and civil charting organizations will chart/depict these altitudes according to their individual specifications.

(f) For SIDs, enter the Top Altitude(s) on Form 8260-15B, Graphic Departure Procedure. Top Altitudes will be provided by the applicable controlling ATC Facility, the Service Area Flight Procedures Team (FPT), or be specified within the Graphic Departure Procedure Requirements Worksheet per Appendix B, etc.). A top altitude may be a specific altitude, a specific flight level, or may be in the form of, "Assigned by ATC." *A maximum of two numerical values Top Altitudes are allowed per SID (see Note below)*. A third Top Altitude in the form of "assigned by ATC" may be used when flexibility is needed for the efficient flow of traffic. The variations permitted are specified in Appendix D, Section 2, and Appendix E, Section 1. Top Altitudes 18,000 feet MSL and above must be specified as a Flight Level. The Top Altitude provided must be at or above all fix crossing altitude restrictions specified along the departure route and transitions and must not be lower than the highest climb to altitude listed in the takeoff requirements of the procedure. For example, if the Takeoff minimums state a 360 ft/NM climb gradient until reaching 6000, the ATC assigned Top Altitude will be no lower than 6000.

Note: Even though a SID may serve more than one airport, a maximum of only two numerical values and one "assigned by ATC" per SID are authorized. Top Altitudes may be specified on each Form 8260-15B.

(3) Charting a minimum CG. See applicable 8260-series orders for the appropriate criteria to use when establishing a minimum CG. Enter minimum CG and associated termination altitude for charting on the appropriate 8260-15 series form (see Appendix D, Appendix E, or Appendix F).

(a) Establish a single minimum CG exceeding 200 ft/NM (400 ft/NM for helicopters beginning at the initial departure fix (IDF)) whenever required for obstruction clearance and include the altitude to which the gradient is required in the Takeoff Minimums note; e.g., "(TAKEOFF MINIMUMS) WITH MINIMUM CLIMB OF 300 FT/NM TO 4300."

(b) When a CG is necessary to support a shortened ICA to ensure LNAV engagement occurs before turning (e.g., 500 ft/NM to 1300), a reduced, second CG may be established in this situation only (i.e., a maximum of two CGs).

(c) Do not chart CGs that may be needed to support airspace, navigation solution, environmental, or ATC operational limitations.

Note 1: Pilots are expected to determine if minimum crossing altitudes can be met, based on the performance capability of the aircraft they are operating. However, CGs must be evaluated between fixes where minimum crossing altitudes have been established to determine if the CG is excessive/unrealistic for the anticipated types of aircraft that will use the SID. These CGs will not be charted. See paragraph 2-1-1.e(2)(b) for action that may be necessary.

Note 2: Helicopter point-in-space IFR departures depart VFR (or may depart visually for approved Special) from a heliport/departure surface, to the IDF. The departure is considered as beginning at the IDF for departures that do not contain a "visual" segment (see Appendix F, paragraph 2). The climb gradient for helicopter departures is normally much greater to the IDF after which the CG is reduced to (typically) the standard CG of 400 ft/NM in the 20:1 area.

(4) Charting speed restrictions. Identify required speed restrictions per Interagency Air Committee (IAC) specifications. Also, see paragraph 2-1-1.d(3) for design constraints.

(a) Speed restrictions for textual ODPs will follow the departure instructions; e.g., "...climbing right turn direct XXX VOR. Do not exceed 200 KIAS until XXX VOR."

(b) Annotate speed restrictions for graphic ODPs and SIDs on the chart at the restriction point; in the Additional Flight Data block of Form 8260-15B, document the speed restriction as follows: CHART SPEED ICON (Maximum/Minimum/Mandatory) SPEED (value) KIAS AT (Fix Name). State speed restrictions not associated with a fix in the form of a chart note; e.g., "Chart Note: DO NOT EXCEED 210 KIAS UNTIL ESTABLISHED DIRECT ABC VOR."

(5) ODPs depicted graphically must have the term "(OBSTACLE)" printed on the graphic (see Appendix D or Appendix E). Indicate the word "OBSTACLE" adjacent to the

"Type" line on Form 8260-15B. U.S. Government charts will include this immediately following the procedure title; e.g., TETON ONE DEPARTURE (OBSTACLE).

(6) ODPs developed for RNAV use must have the terms (OBSTACLE) and (RNAV) printed on the graphic. Indicated by the words "OBSTACLE" and "RNAV" adjacent to the "Type" line on Form 8260-15B. U.S. Government charts will include this immediately following the procedure title; e.g., LASCH ONE DEPARTURE (OBSTACLE) (RNAV).

(7) All Graphic DPs must include applicable takeoff minimums and climb gradients on the graphic chart. Obstacle DPs must also include obstacle data (see Table 2-1-1) on the graphic chart, even if redundant to information published textually.

(8) ATC radar vectoring may be used as part of an RNAV SID and published on the same chart with an RNAV route departure from a different runway; however, both must contain the same common segment prior to reaching the end of the departure (see Appendix E, Section 2 for unique database coding requirements).

(9) When ATC has determined that they do not want pilots to "Flight Plan" or file a particular SID (i.e., use will be determined by ATC), ATC will request that a chart note be placed on the SID. In the "Procedural Data Notes" section of Form 8260-15B, use: "CHART NOTE: DO NOT FILE – TO BE ASSIGNED BY ATC."

f. Equipment requirements. DPs are also categorized by equipment requirements as follows:

(1) Non-RNAV DP. A DP established for aircraft equipped with conventional avionics using ground-based NAVAIDs; e.g., nondirectional beacon (NDB), very high frequency omni-directional range (VOR), very high frequency omni-directional range/tactical air navigation (VORTAC), localizer (LOC), etc. These DPs may also be designed using dead reckoning navigation.

(2) RNAV DP. A DP established for aircraft equipped with RNAV avionics; e.g., Global Positioning System (GPS), flight management system (FMS), etc. Do not require automated vertical navigation.

Note: Do not combine non-RNAV and RNAV SIDs on the same chart. However, RNAV waypoints may be depicted on conventional Radar SID charts to support ATC operational requirements.

(3) Radar SID. A SID established when ATC has a need to vector aircraft on departure to a particular ATS Route, NAVAID, or fix. Radar vectors may also be used to join conventional or RNAV navigation SIDs. Annotate SIDs requiring radar vectors with RADAR REQUIRED.

(4) A note may be required to address the need for specific DME facilities to be operational. These are referred to as critical DME facilities.

Example:

Note: For Non-GPS Equipped aircraft, ABC, JKL, and XYZ DMEs Must Be Operational.

(5) Except as required by paragraph 2-1-1.f(3), all "RNAV 1" DPs that are annotated "DME/DME/IRU or GPS REQUIRED" must be annotated with the note: "RADAR REQUIRED FOR NON-GPS EQUIPPED AIRCRAFT."

(6) PBN chart annotation: A navigation specification (NavSpec) contains the performance-based accuracy integrity, and continuity requirements of PBN navigation for a given airspace construction. Apply the RNAV 1 NavSpec for PBN SIDs under most circumstances. Alternative use of RNP 1, A-RNP, RNP AR DP, and RNP 0.3. NavSpecs is detailed in Order 8260.58. For the en route phase of flight, including SID en route transitions, the standard NavSpec is RNAV 2.

(a) Provide a PBN Requirements Box when there is a PBN segment in the procedure.

(b) Separate the PBN Requirements Box from other procedural and non-procedural notes and information on the chart

(c) Specify PBN requirements notes on Form 8260-15B in the following format: "NavSpec – Sensor, Function. Remarks." When the note does not contain Function and Remark, the "period" is placed after the Sensor (e.g., "RNP 1 - GPS."). When the note does contain a Remark, the "period", in the Remark, is placed after the NavSpec or Sensor or Function and Remark (e.g., "RNAV 1 – GPS. FROM YABUT: RNP 1." or "RNP 1 - GPS. FROM YABUT: A-RNP, MIN RNP 0.30. AP/FD.").

1. NavSpec: Identify the NavSpec as appropriate. RNAV 1, RNP 1, A-RNP, RNP AR DP, RNP 0.3. RNP AR DP (without additional NavSpecs) can only be used when publishing a stand-alone graphic DP. When a NavSpec is only applicable to a specific runway transition(s) or leg(s) of a DP, identify this is a "Remark" by stating the waypoint where the NavSpec begins followed by NavSpec - Sensor, Function. Remark (e.g., "RNAV 1 – DME/DME/IRU or GPS. FROM YABUT: RNP 1 - GPS, RF.").

2. Sensor: The required sensor is applicable to the NavSpec.

a RNAV 1: Aircraft equipped with GPS and/or DME/DME/IRU sensors may support RNAV 1 DPs. If the RNAV DP intends to support aircraft without GPS, then the DP requires a DME availability or screening assessment to ensure adequate DME facility coverage exists along the DP's path. If the DME assessment is satisfactory and radar monitoring is also available, then the PBN Requirements Box may identify both GPS and DME/DME/IRU as supporting sensors. If the DME assessment fails or radar monitoring is not available, then the RNAV 1 DP must identify GPS as the only available sensor.

b RNP 1 , A-RNP, RNP AR DP, and RNP 0.3: The only authorized sensor for any RNP NavSpec is GPS. No ATC monitoring is required when GPS is the only sensor option (do not annotate "RADAR REQUIRED").

3. Function: Common functions are RF turns and MIN RNP values. These functions can only be used with RNP NavSpecs. They can be applicable to the entire DP or only to a specific runway transition(s) or leg(s).

a RF turns applicable to all runway transition(s) or leg(s) of the DP: Identify this as the function (e.g., "RNP 1 – GPS, RF.").

b RF turn applicable only to a specific runway transition(s) or leg(s) of a DP: Identify this as a "Remark" by stating the waypoint where the RF turn begins followed by NavSpec - Sensor, Function. Remark (e.g., "RNAV 1 – DME/DME/IRU or GPS. FROM YABUT: A-RNP - GPS, MIN RNP 0.30. AP/FD.").

c Lateral Accuracy Function: A-RNP has lateral accuracy values of 1.00 or 0.30. RNP AR DP has lateral accuracy values from 1.00 to 0.30. Document only A-RNP or RNP AR DP NavSpecs when the lateral accuracy value is < 1.00 (e.g., "A-RNP - GPS, MIN RNP 0.30, AP/FD" or "RNP AR DP – GPS, MIN RNP 0.70, AUTHORIZATION REQUIRED").

4. Remark: Common remarks are Autopilot/Flight Director (AP/FD) and Authorization Required. Additionally when a NavSpec, Sensor or Function is only applicable to a specific runway transition(s) or leg(s) document this as a remark.

a A-RNP require AP/FD; document "AP/FD" as a remark.

b RNP 0.3 require AP; document "AP" as a remark.

c RNP AR DP require authorization; document "AUTHORIZATION REQUIRED" as a remark.

d When the NavSpec does not change but a Function (RF/Lateral Accuracy value <1.00) is only applicable to a specific runway transition(s) or leg(s) then do not repeat the NavSpec (e.g., "RNP 1 – GPS. FROM YABUT: RF" or "A-RNP – GPS. AP/FD. FROM HEERE: RF, MIN RNP 0.30.").

e When the Sensor does not change but a NavSpec, Function, or Remark is only applicable to a specific runway transition(s) or leg(s) then do not repeat the Sensor (e.g., "RNP 1 – GPS. FROM YABUT: A–RNP, RF").

f When more than two waypoints are listed use a comma between waypoints and "OR" prior to the last waypoint (e.g., "FROM YABUT, HEERE OR THERE: RF").

5. Common PBN requirements notes(s) as applicable:

a RNAV 1 (no RF turns or NavSpec for a specific runway transition(s)/leg(s)): "RNAV 1 – GPS." or "RNAV 1 – DME/DME/IRU OR GPS."

b RNAV 1 (with specific RF turns): "RNAV 1 – DME/DME/IRU OR GPS. FROM HEERE OR THERE: RNP 1 – GPS, RF."

c RNP 1 no RF turns: "RNP 1 – GPS."

d RNP 1 (with RF turns or specific RF turns): "RNP 1 – GPS, RF." or "RNP 1 – GPS. FROM HEERE OR THERE: RF."

e A–RNP (lateral accuracy of 1.00 and no RF turns): "A-RNP – GPS, AP/FD."

f A–RNP (lateral accuracy of 0.30 and no RF turns): "A-RNP – GPS, MIN RNP 0.30, AP/FD."

g A-RNP (lateral accuracy of 0.30 and specific RF turns): "A-RNP – GPS, RF MIN RNP 0.30, AP/FD" or "A-RNP – GPS. AP/FD. FROM HEERE OR THERE: RF, MIN RNP 0.30."

h RNP AR DP (lateral accuracy of 1.00 and no RF turns): "RNP AR DP – GPS, AUTHORIZATION REQUIRED."

i RNP AR DP (lateral accuracy < 1.00 and no RF turns): "RNP AR DP – GPS, MIN RNP 0.70. AUTHORIZATION REQUIRED."

j RNP AR DP (lateral accuracy < 1.00 and specific RF turns): "RNP AR DP – GPS, RF, MIN RNP 0.50. AUTHORIZATION REQUIRED." or "RNP AR DP – GPS. AUTHORIZATION REQUIRED. FROM HEERE OR THERE: RF, MIN RNP 0.70."

k Helicopter RNP 0.3: "RNP 0.3 – GPS. AP." or "RNP 0.3 – GPS, RF. AP."

g. Terminology. The following terminology applies for initial climb instructions:

(1) When required, departure instructions must specify the actual heading to be flown after takeoff. Example: "Climb on heading 350.10...." Some existing procedures specify, "Climb runway heading." Procedure developers will update these procedures during the periodic review process, changing the terminology to specify the actual heading to be flown.

Note: For database coding, heading/track/course values must be in hundredths of a degree. For charting purposes, these heading/track/course values will be rounded to the nearest whole degree (hundredths of a degree are not used in ATC communications).

(2) If departure instructions require ATC to assign a heading or heading and altitude, use "Climb on assigned heading for radar vectors to (name of fix/airway, etc.)," or "Climb on assigned heading to (altitude) for radar vectors to (name of fix/airway, etc.)."

(3) If departure instructions require a specific altitude to climb to after takeoff, do not use the terminology "Climb to (altitude) …" without including a heading to fly. Example: "Climb on heading 310.25 to 1500…"

(4) Do not use the terminology "Climb straight ahead…" or "Maintain runway track...," as there is no guidance or reference definition of this phraseology for the pilot to apply.

(5) Ensure initial departure instructions that require altitude restrictions are written clearly and in order to be flown to lessen the possibility of pilot deviations. For example, "Climb on heading 240.15 to1500, cross TEB 4.5 DME at 1500, then climb and maintain 2000, thence…" or "Climb on heading 195.47 to 1500, then climbing right turn to heading 280, maintain 4000, thence…" or "Climb on heading 123.31 to 3000, then climbing left turn to assigned heading for Radar vectors to HAIKU, maintain 14,000, thence…"

(6) A departure procedure requiring a turn does not require an initial climb heading to be specified. For example, "Climbing right turn direct XYZ VOR…" Direction of turn must be specified when turn exceeds 15 degrees.

(7) Do not use the word immediate/immediately in any type of departure instructions; e.g., turning instruction or speed restrictions. Old early turn departure procedures may contain instructions to "Turn left (right) as soon as practicable." This terminology is used on non-standard departure procedures approved by the Flight Standards or the appropriate military authority.

h. Diverse vector area (DVA). An ATC facility may request a DVA to permit vectoring of aircraft on departure, below the minimum vectoring altitude (MVA) or minimum IFR altitude (MIA) under the provisions in Order JO 7210.3, paragraph 3-8-5, Establishing Diverse Vector Areas. Order 8260.3 contains the criteria used for development. See Appendix G of this order for documenting the development of a DVA.

i. Attention All Users Page (AAUP). For simultaneous RNAV departures, an AAUP must be published. The AAUP provides the flight crew with procedures that must be used when conducting these operations, in a form that may be reviewed prior to conducting the procedure.

Note: The flight crew will be notified when an AAUP is published. The note will appear on the narrative page immediately beneath the departure route description title. See Appendix E, Section 1, paragraph 14c.

(1) Site Implementation Team (SIT). A SIT is normally established to address issues related to establishing the procedures. If no team is established, the FAA facility that provides ATC services to the airport, at which the operations are to be conducted, is responsible for the AAUP. The SIT is:

(a) Comprised of FAA and industry members with the team leadership designated by Air Traffic.

(b) Responsible for the development, among other things, of an AAUP.

(2) AAUP preparation. The AAUP must present the step-by-step procedures used to conduct the procedure. Develop the AAUP using Form 8260-15E, Attention All Users Page, and the guidance provided in Appendix E, Section 3.

Note: An AAUP example is provided in Appendix E and may not be the most current or not necessarily applicable to other locations. This example should be used as a developmental guideline. AAUPs must reflect the requirements of the specific procedure and airport for which they are developed.

(3) AAUP processing. The SIT (or applicable ATC facility) must submit the draft AAUP to 9-AWA-AFS400-COORD@faa.gov. For departure AAUPs, include documentation of coordination with Air Traffic Mission Support Services, Mission Support Policy Directorate. Use the subject line "Approval Request: AAUP Simultaneous Arrival" or "Approval Request: AAUP Simultaneous RNAV DP" as appropriate. Flight Operations Group will submit the approved AAUP and requested effective date to Aeronautical Information Services.

EXCEPTION: In the case of a Special Procedure requiring an AAUP, Flight Procedures and Airspace Group will coordinate the effective date with the appropriate parties.

(4) AAUP publication. The originating organization will determine the required publication date; coordinate with Aeronautical Information Services as necessary. After receiving the AAUP from the Flight Operations Group, the Aeronautical Data Group will:

(a) Verify the applicability of the publication date and assign that date for publication.

(b) Coordinate with the Flight Operations Group who will, in turn, contact the originating organization and Aeronautical Information Services should a change in the previously agreed upon date be required.

Note: When publishing a new AAUP in conjunction with a new or revised procedure, it is important that the AAUP be coordinated jointly between the originating organization, Aeronautical Information Services Instrument Flight Procedures Group, Aeronautical Information Services, Aeronautical Data Group, and the Flight Operations Group to ensure its publication is concurrent with the procedure(s) for which the AAUP was developed.

(c) Publish the AAUP in the National Flight Data Digest (NFDD).

Note: The NFDD is the source for AAUP information for publication by all chart producers.

2-1-2. Responsibilities.

a. General. The following guidance outlines procedures for DP requests, processing, and cancellation.

(1) Procedure requests. SIDs are normally requested by the ATC facility responsible for departure control at the airport where the procedure is proposed, or by another proponent through the Aeronautical Information Services "IFP Gateway." Process all requests for new or

amended SIDs through the Service Area Operations Support Group, Flight Procedures Team (OSG FPT) and the OSG FPT will forward to the appropriate Instrument Flight Procedure (IFP) Validation Team in accordance with Order 8260.43, Flight Procedures Management Program.

(2) Requirements. ATC must provide the OSG FPT, detailed operational requirements and restrictions for inclusion in the SID design. Aeronautical Information Services must make every effort to meet ATC-identified operational requirements and constraints using current criteria and policy. When current criteria and policy will not support a design to meet ATC requirements, Aeronautical Information Services, Flight Procedures and Airspace Group, and other Air Traffic organizations/involved parties must work together to find an acceptable solution.

(3) Cancellation. The IFP Validation Team must approve all proposed SID cancellations. AJV-A has sole responsibility for canceling ODPs. AJV-A cancels a DVA by notifying the ATC Facility Manager and Support Specialist by phone/e-mail, followed by a memorandum to indicate the previously approved Form 8260-15D, Diverse Vector Area, is no longer valid.

b. Proponent. A proponent's request to develop a DP must include the information in Appendix B and Appendix C. Complete and forward this information to the ATC facility providing departure control service to the airport for acceptance, prior to development. The DP request package must include the following:

(1) An outline of the type of procedure and expected benefits.

(2) A proposed ground track, including associated fixes and any proposed altitude or speed restrictions.

(3) A request (if required) for development assistance from the servicing ATC facility.

(4) Air Traffic is responsible for satisfying the requirements for Order 1100.161 paragraph 3-2, Air Traffic Safety Oversight, Safety Risk Management Program for changes to the National Airspace System (NAS).

c. ATC. When assisting a proponent or requesting a SID, the ATC facility providing departure control service must:

(1) Evaluate the proponent's request to ascertain preliminary operational feasibility and to determine/verify that significant benefits (see Appendix B) will be derived.

(2) Assist in designing the procedure by providing the proponent with information pertaining to traffic flow and operational constraints; e.g., routes, minimum IFR altitudes, facility/sector lateral and vertical airspace boundaries, special use airspace, miscellaneous activity areas, etc.

Note: When an ATC facility proposes SID development from an airport served primarily by air carriers, it may attempt to solicit the assistance of a "lead carrier" in the design and flyability of the proposed procedure.

(3) Coordinate with other ATC facilities affected by the procedure.

(4) Coordinate with the servicing Air Route Traffic Control Center (ARTCC) to obtain a five-letter pronounceable name for all fixes in the graphic DP. Complete Form 8260-2, Radio Fix and Holding Data Record, for each fix being established, modified, or canceled (see Appendix C). Include the worksheet(s) as part of the graphic DP request package. Existing fixes/NAVAIDs should be used where conveniently located.

(5) Coordinate with the servicing ARTCC to obtain a name and computer code for the SID as specified in Chapter 3.

(6) Complete the DP requirements data worksheet (see Appendix B), when applicable.

(7) Forward the requested package to the applicable Service Area OSG. The package must contain worksheets for all fixes, the DP requirements data worksheet, and a sketch of procedures requiring graphic publication (see Appendix D or Appendix E).

(8) Review SIDs at least biennially for continued need. Coordinate requested changes through the applicable Service Area OSG FPT.

(9) Collaborate with the Flight Operations Group when the development of an AAUP is necessary for RNAV departure procedures. See paragraph 2-1-1.i for additional guidance.

d. Service Area Operations Support Group.

(1) Review the DP package for completeness.

(2) Review DPs for impact based on Facilities and Equipment changes, National Change Proposal, or other applicable projects.

Note: The point-of-contact (POC) and telephone number for the ATC facility is listed on the Graphic DP requirements worksheet. The FPT must contact the POC to resolve any problems in developing the requested procedure and provide appropriate alternatives. The POC must be responsible for additional coordination of changes required for development. The FPT should coordinate with the Flight Procedure and Airspace Group's designated representative for assistance where necessary.

(3) Act as the focal point for all ATC coordination and provide appropriate assistance in resolving any problems identified during the development process.

(4) Ensure that a DME/DME screening model has been run on RNAV SIDs to determine if the procedure is useable by suitably equipped aircraft, prior to submission.

Note: The DME/DME assessment process is contained in Order JO 7470.1, DME/DME Infrastructure Evaluation for Area Navigation (RNAV) Routes and Procedures.

(5) Facilitate discussion of the procedure at the IFP Validation Team.

(6) Forward the DP package to AJV-A.

(7) Provide one copy of each 8260-2 and 8260-15 series form(s) to all affected ATC facilities.

(8) The OSG FPT notifies the requesting ATC facility of the anticipated publication date and any delay in the publication and cause.

(9) The OSG FPT must ensure that changes to the NAS comply with Order 1100.161, paragraph 3-2.

e. Aeronautical Information Services.

(1) Develop and process textual ODPs on Form 8260-15A, Takeoff Minimums and Obstacle Departure Procedures, under applicable directives.

(2) Develop and process graphic ODPs and SIDs on Form 8260-15B.

(3) Develop and process a Form 8260-15C, Departure Data Record, for all RNAV DPs.

(4) Develop and process a Form 8260-15D, Diverse Vector Area, for all DVAs.

(5) Ensure that a DME/DME screening model has been run on RNAV "obstacle" departures (the Service Area OSG is responsible for DME/DME screening of SIDs) to determine if the procedure is useable by suitably equipped aircraft, prior to submission for flight inspection.

Note: The DME/DME assessment process is contained in separate guidance.

(6) Submit DPs to Flight Program Operations, for necessary action.

(7) After satisfactory flight inspection, forward the original Form(s) 8260-2 and original 8260-15 series forms to Aeronautical Data Group. Copies are available for distribution (see paragraph 2-1-2.d(5)).

(8) Develop, review, track, and cancel NOTAMs relating to ODPs, SIDs, and Diverse Vector Areas (DVAs).

(9) Assign an effective date for all ODPs, SIDs, and DVAs. Publish both textual and graphic ODPs in the Transmittal Letter (TL) authorizing charting agencies to publish the procedure(s). Submit SIDs and DVAs to the Aeronautical Data Group for incorporation into the NFDD.

(10) Monitor and track the status of concurrent instrument approach procedure (IAP) packages to ensure that the entire package is published with the same effective date.

(11) Ensure related controlled airspace actions as required by Order JO 7400.2, Procedures for Handling Airspace Matters, have been completed prior to assigning an effective date.

(12) Ensure routine procedures have been flight inspected prior to incorporation in the TL.

(13) Review DPs periodically for continued need, obstacle clearance, and compliance with current criteria and policy; and coordinate proposed changes with the appropriate ATC facility. When application of new criteria or a new obstacle affects an ODP, SID, or DVA that requires adjustment to an obstacle-driven CG, all DPs must be evaluated to determine if other CGs require adjustment. If CG adjustments are required, they must be updated simultaneously in the same charting cycle.

(14) When a location currently has standard takeoff minimums and circumstances now require non-standard takeoff minimums and/or an ODP development, amend the current Form 8260-15A for the airport accordingly.

(15) When it is necessary to cancel a DP, process the appropriate Form 8260-15 as directed in paragraph 2-1-5.c.

(16) Add the "T" symbol to the IAP and SID charts whenever the Form 8260-15A contains any data entries on the Form other than the word "Standard."

Note: The "T" symbol will not be placed on graphic ODPs.

(17) Delete the "T" symbol from the IAP and SID charts whenever the Form 8260-15A reflects no data entries on the form other than the word "Standard." This symbol deletion applies when a Textual ODP is not published or when removal of textual ODP information is necessary based on a revised Form 8260-15A.

Note: The basic rule is that if an ODP is published (Text or Graphic), the "T" symbol is required on all approach charts to that airport. If an ODP is not published, a "T" symbol will not appear on approach charts.

(18) Issue P-NOTAMs to correct U.S. Government charting discrepancies and compilation errors required (see Order 8260.19, Flight Procedures and Airspace).

f. Flight Program Operations.

(1) Coordinate and execute flight validation and flight inspection for FAA-developed procedures and under a reimbursable agreement with other IFP providers,

(2) Provide flight inspection results and archived reports upon request, and

(3) Verify DME/DME coverage when applicable.

g. Aeronautical Data Group.

(1) Conduct a review of submitted forms to ensure compatibility with the National Airspace System Resources (NASR), national database, and compliance with applicable directives relative to form entries.

(2) Publish SIDs, associated fixes, AAUPs, and DVAs in the daily NFDD authorizing charting agencies to publish these procedures. See paragraph 2-1-1.i(4) for more specific AAUP responsibilities.

(3) Resolve data conflicts, form discrepancies, etc., with Aeronautical Information Services.

(4) File and maintain the original signed copy of the forms.

2-1-3. Accuracy Verification and Responsibilities. Any ATC facility, military service, proponent, charting agency, procedure user, concerned individual, organization, or office must:

a. Notify Aeronautical Information Services of published errors (including omissions) that affect safety of flight by the fastest means available. Aeronautical Information Services must take appropriate NOTAM action under Order 8260.19.

b. Notify Aeronautical Information Services whenever pre-publication errors are discovered in the TL. Aeronautical Information Services will coordinate necessary corrective actions and promulgate corrected data/forms.

c. Notify the Aeronautical Data Group whenever pre-publication errors are discovered in the NFDD. The Aeronautical Data Group will coordinate necessary corrective actions and promulgate corrected data/forms.

d. Notify Aeronautical Information Services whenever charting discrepancies/compilation errors are detected in U.S. Government published aeronautical products. Aeronautical Information Services will coordinate corrective actions.

2-1-4. Military Departure Procedures.

a. Name and number all military DPs in accordance with the criteria outlined in this order.

Note: Military DPs are not handled or published in the same manner as civil DPs. Approval authority for DPs at military airports rests with the military. The FAA develops U.S. Air Force DPs at domestic civil airports under Order 8260.32, United States Air Force Terminal Instrument Procedures Service. The National Geospatial-Intelligence Agency (NGA) publishes all military DPs.

b. The FAA requires that all military DPs be coordinated with FAA ATC facilities when such DPs affect the NAS. The Air Traffic facility providing the departure service must assist the military in coordinating the procedures and in obtaining computer codes to ensure that the procedures are properly interfaced with the NAS. U.S. Air Force and Navy procedures are NOT sent to Aeronautical Data Group.

c. When military DPs affect airspace under the jurisdiction of FAA facilities, those affected ATC facilities/ARTCCs must maintain copies of the applicable military or FAA procedure approval forms.

d. When a military DP has a climb gradient established to clear obstruction(s) that uses a military exception (see Order 8260.3 regarding departure criteria), the procedure must be annotated NOT FOR CIVIL USE.

2-1-5. FAA 8260-15 Series Forms (see appendices D through G).

a. The 8260-15 series forms document standard takeoff minimums and facilitate transmittal of nonstandard takeoff minimums and/or departure procedures. These forms will be the basis for charting agencies to publish non-standard takeoff minimums, departure procedures, and/or to add/delete charting icons used to denote that other than standard takeoff minimums and/or specific obstacle departure procedures are published. For helicopter departures, see Appendix F.

(1) Use Form 8260-15A to document:

(a) Standard takeoff minimums.

(b) Nonstandard takeoff minimums and/or higher than standard climb gradients for a runway.

(c) Textual ODPs.

(d) That the ODP for a runway is published graphically.

(e) Other pertinent textual data for publication; e.g., obstacle data notes, VCOA data, etc.

(2) Use Form 8260-15B to document:

(a) Graphically depicted complex ODPs and all SIDs.

(b) Other pertinent procedural data; e.g., fixes, NAVAIDs, routes, vectoring areas, altitudes, etc. required for charting database development on RNAV DPs.

(3) Use Form 8260-15C to document RNAV DPs in a manner consistent with and which aids in charting and database coding. Specifically use Form 8260-15C to document:

(a) The RNAV route of flight in terms of a series of segments defined by fix name, positions, waypoint type, leg types, course, and distance.

(b) Altitude and airspeed restrictions associated with fixes.

(4) Use Form 8260-15D to document a DVA.

(5) Use Form 8260-15E to document RNAV DP AAUPs for locations where it has been determined that detailed departure information is necessary. See paragraph 2-1-1.i for AAUP guidance.

b. Administratively process the 8260-15 series forms as specified in Order 8260.19, Chapter 8. Additionally, when submitting procedures for waiver and/or Flight Standards approvals,

include supporting documentation; e.g., for excessive climb gradient approval, submit documentation showing calculations. See Order 8260.19, Chapter 2 for waiver and approval processing guidance.

c. Cancel the Form 8260-15(s) for specific takeoff minimums for an airport or cancel any textual or graphical DP(s) or DVA no longer required, as follows:

(1) Enter the current information from the top line of page 1 of Form 8260-15A/B/D and into the corresponding blocks on blank Forms 8260-15A and/or 8260-15B or 8260-15D. Additionally, on Form 8260-15B, complete the "Airports Served" section.

(2) Select "Cancellation" on the Form and "Procedure Canceled Effective (Date)" will automatically appear in the "Takeoff Minimums" section on Form 8260-15A and/or "DP Route Description" section of Form 8260-15B. For a DVA, select "Cancellation" above the "For ATC Use Only" box where this information will be entered automatically. A stamp may be used for this purpose. Do not enter a cancellation effective date for Special procedures.

2-1-6. Procedure Amendments. Amend all departure procedures using either the full amendment or an abbreviated amendment process as specified below. A full amendment must ensure that periodic review requirements have been met for the procedures documented on the specific form being completed. A full amendment requires a complete procedure package (i.e., all necessary forms, maps, and supporting documentation) be developed and submitted for processing. An abbreviated amendment only requires submission of the Forms 8260-15A/B as applicable (and Form 8260-15C, if an RNAV procedure) for processing (see Note 2). See Order JO 8200.44, Flight Inspection Services Instrument Flight Procedure Coordination, for guidance on what must be submitted for flight inspection. Submit departure procedures developed by a non-FAA Service Provider to the Flight Procedures and Airspace Group to determine flight validation requirements.

Note 1: Flight Program Operations (or the Flight Procedures and Airspace Group for procedures not developed and/or flight inspected by the FAA) may establish unique/specific policy guidelines with individual procedure development authorities, addressing specific situations that do not require submission for flight inspection/validation. Specify this exception (or exceptions) in either an FAA directive or policy memorandum controlled by the flight inspection/validation authority. Provide the Flight Procedures and Airspace Group a copy of all policy memorandums between Flight Program Operations and procedure developers.

Note 2: When the abbreviated amendment process is used, take steps to ensure all supporting documentation, e.g., maps, waiver/approval letters, etc., remain on file in the abbreviated amendment procedure package.

a. Textual ODPs.

(1) When completing a full amendment, advance the amendment number in the "AMDT No." item of Form 8260-15A; e.g., "AMDT 1," "AMDT 4." When the "abbreviated amendment" process is used, an alphabetical suffix is added/advanced whenever the procedure is revised; for example "ORIG-A," "AMDT 5C." The circumstances dictating the need for revision

determine whether an amendment or abbreviated amendment may be made or whether the existing procedure must be canceled and an original established.

(2) Use P-NOTAMs to act as an "abbreviated amendment" for Textual ODPs to effect changes immediately and to generate a publication change, creating a letter suffix as noted in the above paragraph (also see Order 8260.19).

b. Graphic ODPs and SIDs.

(1) Whenever changing the "DP Name" in the title line of the Form 8260-15B, or changing the procedure "Type," cancel the procedure and develop a new procedure.

(2) Both the full and the abbreviated amendment processes require the number in the procedure title to be increased; e.g., "SHEMP 2" increases to "SHEMP 3" [see paragraph 3-1-3.f)].

(3) Require a full amendment whenever a change is made to the items listed below as specified on Form 8260-15B:

(a) DP route description (pertains to entire route charted to include leg lengths when applicable).

(b) Transition routes (adding/revising).

(c) Airports served (Only when airports are added).

(4) Use an abbreviated amendment whenever a change is made to the items listed below as specified on Form 8260-15B. Do not use a P-NOTAM to effect an abbreviated amendment for graphic ODPs and SIDs. See Appendix D, Section 2, and Appendix E, Section 1, for "Remarks" documentation requirements when an abbreviated amendment is used.

(a) Transition routes (only when removing).

(b) Procedural data notes/Takeoff minimums.

(c) Takeoff obstacle notes.

(d) Lost Comm procedures.

(e) Additional flight data.

(f) Airports served (only when an airport identifier (ID), city/state has changed or an airport is deleted).

(g) Communications.

(h) Fixes and/or NAVAIDs (only those requested for charting purposes, but *are not* included in the textual description of the departure or entered in the transition route data).

(i) Remarks (that will require a change to what will be charted on the procedure).

(j) Altitude changes (RNAV procedures require TARGETS assessment when altitude changes are made). This includes adding/revising Top Altitudes to a SID.

(k) Top altitude changes (adding/deleting/revising).

(l) Heading/course/track number changes made to support a magnetic variation update that does not alter the ground track of the existing procedure.

(5) An amendment is not required for changes made to the items listed below as specified on Form 8260-15B.

(a) Controlling obstacle (that does not require a change to what will be charted on the procedure; note the change in the procedure package historical information and retain until a future amendment/abbreviated amendment Form reflects this new controlling obstacle).

(b) Remarks (that do not require a change to what will be charted on the procedure).

c. DVA. Any change to a DVA is considered an amendment and requires a new Form 8260-15D to be generated, establishing a new amendment number.

Chapter 3. Guidelines for the Design of Graphic Instrument Departure Procedures (DPs)

Section 3-1.

3-1-1. General.

a. DPs must be designed so that they provide obstacle clearance, least onerous routing (where possible), and can be confidently and consistently flown by all aircraft expected to use the procedure.

b. A DP must be relatively simple and easily understood. To avoid chart complexity and human factors concerns, limit the number of airports and/or runways from which a particular DP may be used to only those necessary to support operations.

c. A DP should use only the minimum number of fixes, turns, or altitude changes necessary to depict the route.

d. A DP should be developed to accommodate as many different types of aircraft as possible.

e. A DP should avoid the use of DME arcs.

f. Graphic ODPs must be designed to terminate at a fix/NAVAID located within the IFR en route structure or at an altitude that will allow random IFR flight.

g. A SID must provide for a significant user/system benefit.

h. A SID must reduce pilot/controller communications and workload.

i. A SID must be designed to terminate at a fix/NAVAID located within the IFR en route structure, at an altitude that will allow random IFR flight, or at a position where ATC radar service is provided.

j. A transition may be developed from the end of a SID to support a need to take aircraft to additional fixes/NAVAIDs depicted on an IFR en route chart. A SID may contain multiple transitions and may share a common segment prior to branching off into multiple directions.

k. Avoid speed restrictions whenever possible. See paragraphs 2-1-1.d(3) and 2-1-1.e(4) for specific guidance.

l. Altitude.

(1) Limit the number of altitude requirements to the minimum necessary. ATC operational restrictions are not permitted on ODPs.

(2) Minimum and maximum block altitudes for the same fix/waypoint are permitted. See paragraph 2-1-1.e(2) for specific guidance and charting constraints.

(3) Do not use multiple altitude restrictions at the same fix for different aircraft types or departure runways; e.g., "Turbo-props cross GRAVY at-or-below 5000, Turbo-jets cross GRAVY at-or-above 6000" or "RWY 9: Cross XRRAY at 9000; RWY 27: Cross XRRAY at 11000." See exception in paragraph 3-1-1.l(6).

(4) Define crossing altitude restrictions as "at-or-above," or "at-or-below or "at." Use of "at-or-above" altitudes are preferred; avoid "at" and "at-or-below" altitudes whenever possible.

Note: Do not use "Expect" altitude restrictions.

(5) Procedure designers must use good judgment and common sense, coupled with operational input where available, to restrict procedural altitudes due to precipitous terrain.

(6) For SIDs, procedure designers will be provided the Top Altitude(s) for documentation on Form 8260-15B. Top Altitudes must not exceed three per procedure, regardless of how many airports are served by the SID. See also paragraph 2-1-1.e(2)(f). Two top altitudes will be a numeric value; the third top altitude will be "as assigned by ATC." This may be in the form of two different altitudes used to support different aircraft types (e.g., turbo-jet and propeller driven) since a Top Altitude is not coded as part of the departure procedure and will not appear on Form 8260-15C. ATC may elect to not publish a specific Top Altitude, preferring to issue the Top Altitude as part of the ATC clearance. When this occurs, ATC will request the Top Altitude information be stated as "Assigned by ATC," and state "Maintain ATC Assigned Altitude" as part of Departure Route Description. See Appendix D, Section 2, or Appendix E, Section 1, for the Top Altitude variations permitted.

m. Climb gradient. DPs are designed assuming a minimum standard CG of 200 ft/NM (400 ft/NM for helicopters) to ensure required obstacle clearance is achieved. Higher CGs must be published when required for obstruction clearance and/or when needed to support a shortened ICA for LNAV engagement (see paragraphs 2-1-1.d(2) and 2-1-1.e(3) for specific guidance).

Note: Do not establish a greater than standard CG solely to reach an altitude sooner for LNAV engagement purposes when an early turn is not necessary.

3-1-2. Graphic DPs must include a MSA for each airport served by the DP. Establish an MSA for all graphic departure procedures within a 25-NM radius of a specified point for use during emergency situations. RNAV MSAs must not be sectored.

3-1-3. Naming of DPs (see Figure 3-1-1 through Figure 3-1-8).

a. Textual ODPs are not named, while all graphic ODPs and SIDs must be named as described in this section.

b. SIDs designed using radar vectors as the only navigation source to the en route environment, are normally named to correspond with the terminal control facility name. For example, the SID from Tampa International Airport is named the TAMPA THREE; the SID from Greater Cincinnati Airport is named the CINCINNATI EIGHT. If the terminal control facility name is already in use, use a fix, city, airport, or geographical area name in that order.

c. SIDs designed using a diverse vector area and radar vectors to a common specified route must be named to correspond to the fix/NAVAID/waypoint where the specified route ends. For example, the SID uses a diverse vector area and radar vectors to a fix/NAVAID/waypoint that begins a specified route to COTEE; the SID is named the COTEE ONE.

d. DPs designed using conventional, RNAV, or required navigation performance (RNP) guidance must be named to correspond with the en route fix/NAVAID name where the DP ends. For example, a conventional DP from Altoona-Blair County Airport that ends at the TATES fix is named the TATES TWO DEPARTURE. If the DP is an RNAV procedure, the "(RNAV)" must be included in the name for example, TATES TWO DEPARTURE (RNAV). See Appendix E to see how this will be documented for RNAV procedures.

e. If two or more DPs end at the same fix/NAVAID, the second and subsequent procedures must be named for the city, airport, or geographical area in that order. For example, a SID from Greater Cincinnati Airport that ends at the REDSS fix is named the REDSS FOUR DEPARTURE. A SID from Cincinnati-Lunken Airport that also ends at the REDSS fix is called the LUNKEN SEVEN DEPARTURE.

f. Number each original graphic DP "ONE." Number subsequent amendments in numerical sequence through NINE and then start over with ONE (see paragraph 2-1-6.b for the amendment process).

3-1-4. Transition Naming. DP transition names must always correspond with the fix/NAVAID where the transition ends. For example, the FORT LAUDERDALE SEVEN DEPARTURE termination fix is the Fort Lauderdale VORTAC (FLL) and it has a transition to the ZAPPA intersection; the transition name is ZAPPA. The REDSS FOUR DEPARTURE terminates at the REDSS fix and it has a transition to the Johnstown VORTAC (JST); the transition name is JOHNSTOWN.

3-1-5. Computer Identification Codes. See pages Appendix B for examples.

a. Textual ODPs. Textual ODPs will not receive a computer identification code.

b. Graphic ODPs and SIDs. Computer identification codes are assigned to graphic DPs by using the abbreviated name of the DP; e.g., a NAVAID or airport three-letter NAVAID or airport ID, a four-letter geographical abbreviation, or a five-letter fix/waypoint name, or other five-letter code, followed by the current DP number, then a dot, followed by the fix/NAVAID ID where the DP ends. For example, the CINCINNATI EIGHT DEPARTURE in paragraph 3-1-3.d is coded "CVG8.CVG"; the FORT LAUDERDALE SEVEN DEPARTURE in paragraph 3-1-4 is coded "FLL7.FLL" and the "TATES TWO DEPARTURE in paragraph 3-1-3.d is coded "TATES2.TATES." A computer identification code is not required and; therefore, optional for radar vector SIDs that do not contain a specified or common route published as part of the SID; i.e., a SID based solely on radar vectors to the en route structure.

Note: In order to determine if a Computer Identification Code is to be established for a new (or can be removed from an existing) radar vector SID, the applicable ATC facility must be contacted to "confirm" what action is desired.

c. SID transition. SID transition computer codes are assigned by using the SID identifier and number as noted in paragraph 3-1-5.b, followed by a dot, followed by the identifier of the en route fix where the transition ends. Using the Fort Lauderdale example in paragraph 3-1-4, the ZAPPA transition is coded "FLL7.ZAPPA." Using the REDSS example in paragraph 3-1-4, the Johnstown transition is coded "REDSS4.JST.

3-1-6. RNAV DPs. The following general criteria and guidelines apply only to DPs designed for exclusive use by certain RNAV-equipped aircraft. See the latest edition of Order 8260.58 for specific guidance and criteria.

a. Waypoints. Specify all waypoints as either fly-by or fly-over.

(1) Use fly-by waypoints whenever possible.

(2) Use fly-over waypoints only when operationally necessary or for obstacle clearance.

b. Leg types. Table 3-1-1 shows permissible leg types for use with RNAV DPs.

Table 3-1-1. Permissible leg types

FROM	VIA (leg type)	TO
AER	CF[3], DF[4]	FB/FO
AER	VI[1]	See [1]
AER	VA[2]	ALT
AER	VM[8]	HDG
ALT	CF[3], DF[4]	FB/FO
ALT	VM[2]	ALT
FO[10]	HM	ALT
FB	TF[5]	FB/FO
FB	RF[6]	FB
FO	DF[4], TF[5]	FB/FO
FO	VM[8]	HDG
FO/FB	FM[9]	Course
IF[7]	DF[4], TF[5]	FB/FO

[1] VI (Heading-to-intercept) may only be used as the first leg of a departure and must be followed by a course-to-fix (CF) leg.

[2] VA (Heading-to-an-altitude) may only be used as the first leg of a departure and must be followed by a direct-to-fix (DF) leg or a heading-to-manual termination (VM). The altitude must be an at-or-above altitude; a mandatory (i.e., "at") altitude must not be used at the first fix. Do not use a VA leg specifically for engagement only.

[3] CF may only be used as the first leg of a departure or as the leg following a departure VI leg.

[4] DF may be used as the first leg of a departure, the leg following a departure VA leg, and for any leg thereafter preceded by a fly-over (FO) waypoint (WP) only.

[5] TF (Track-to-fix) is not used as the first leg of a departure. TF is the preferred leg after the first leg of a departure.

[6] RF (Constant radius arc) may only be used when necessary because some users do not have RF capability. An RF leg may only be used after a TF, CF, or another RF leg.

[7] IF (Initial fix) is used to designate the first fix of a departure transition, i.e., the IF is coincident with the DP termination fix. IF is also used to designate the point at which RNAV begins when used in conjunction with radar vectors.

[8] VM legs are only to be used in conjunction with ATC radar vectoring.

[9] FM (Course from a fix-to-manual termination) legs are used when requested by ATC and must be at an altitude at or above the minimum vectoring altitude or minimum IFR altitude for direction of flight.

[10] HM legs are used when a climb in a holding pattern is required on departure to allow the aircraft to be at an altitude at or above the minimum vectoring altitude or minimum IFR altitude for direction of flight. See Figure E-7 and Figure E-13.

Note: AER – approach end of runway; ALT – altitude; FB– fly-by fix; FO– fly-over fix.

(1) VA leg followed by DF leg – "Takeoff RWY 32R: Climb on heading 317.66 to 1000, then climbing right turn direct LARRY."

(2) Although the first altitude of a VA/DF leg type sequence appears to be specified in the text instructions as a "mandatory" altitude, it must be documented on the Form 8260-15C as an "at or above" altitude to ensure all the various types of aircraft avionics equipment operate appropriately.

(3) VA leg followed by VM leg – "Takeoff RWY 32R: Climb on heading 317.66 to 1500, FOR VECTORS TO LARRY."

Note: This leg type combination is used for "Radar Vectors to Join RNAV Routes" departure procedures where ATC wants the aircraft to climb on a specified heading to an altitude prior to initiating radar vectors. Following the vectoring sequence, ATC is expected to issue a clearance direct to the IDF.

c. Leg length.

(1) Use the longest legs possible. The designer must consider speed and course changes when determining minimum leg length. See Order 8260.58 for specific minima.

(2) There is no maximum leg length for straight-line paths. Exception: Do not develop leg lengths in the en route environment exceeding 260 miles to ensure the geodesic path does not exceed the protected airspace for a great circle path.

d. For RNAV chart annotation see paragraph 2-1-1.f(3).

3-1-7. Examples of Various Graphic Departure Scenarios (see Figure 3-1-1 through Figure 3-1-8).

Figure 3-1-1. Graphic Departure Scenario #1, Obstacle DP with No Transitions

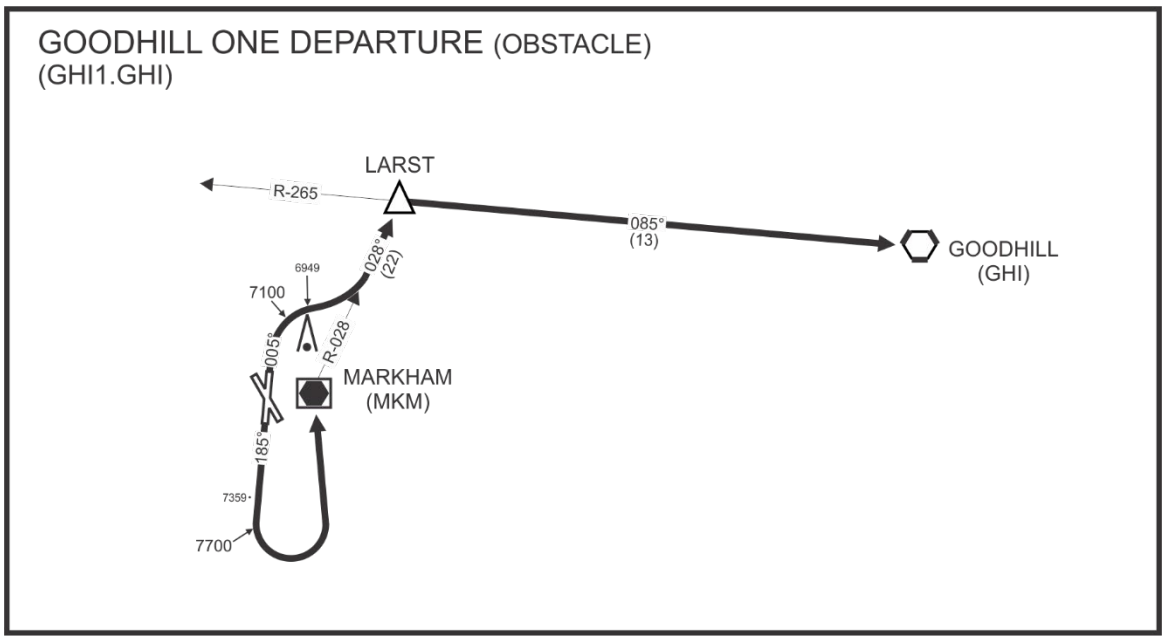


Figure 3-1-2. Graphic Departure Scenario #2, DP with No Transitions

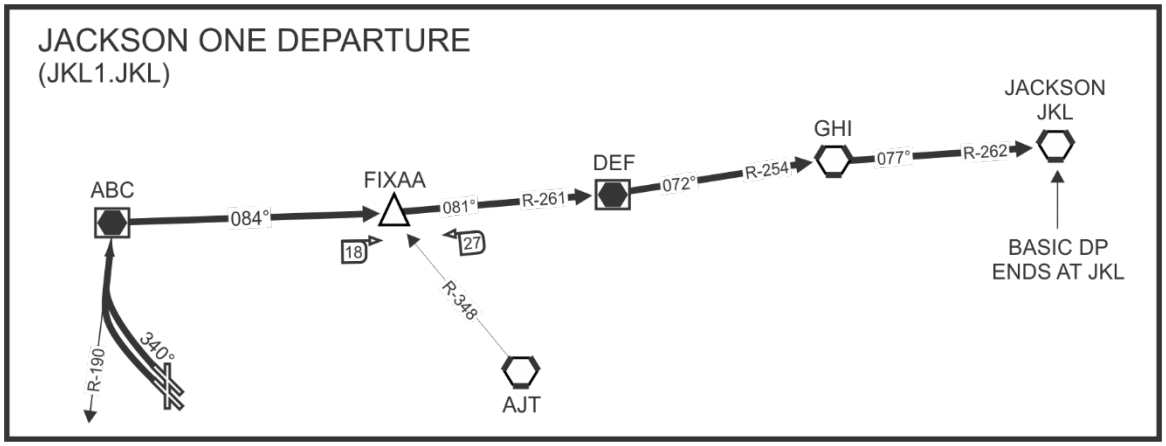


**Figure 3-1-3. Graphic Departure Scenario #3,
DP with Two Transitions that Share a Common Segment**

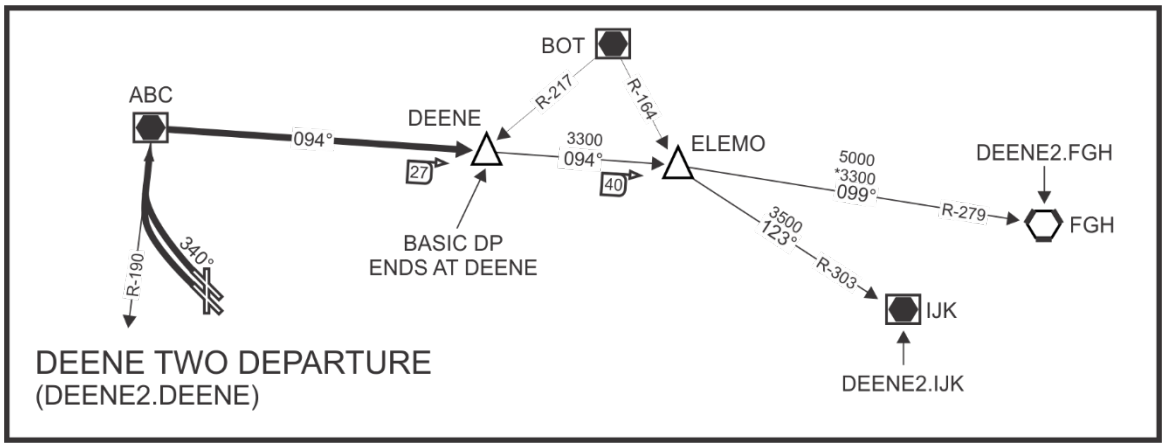


Figure 3-1-4. Graphic Departure Scenario #4, SID with Three Transitions

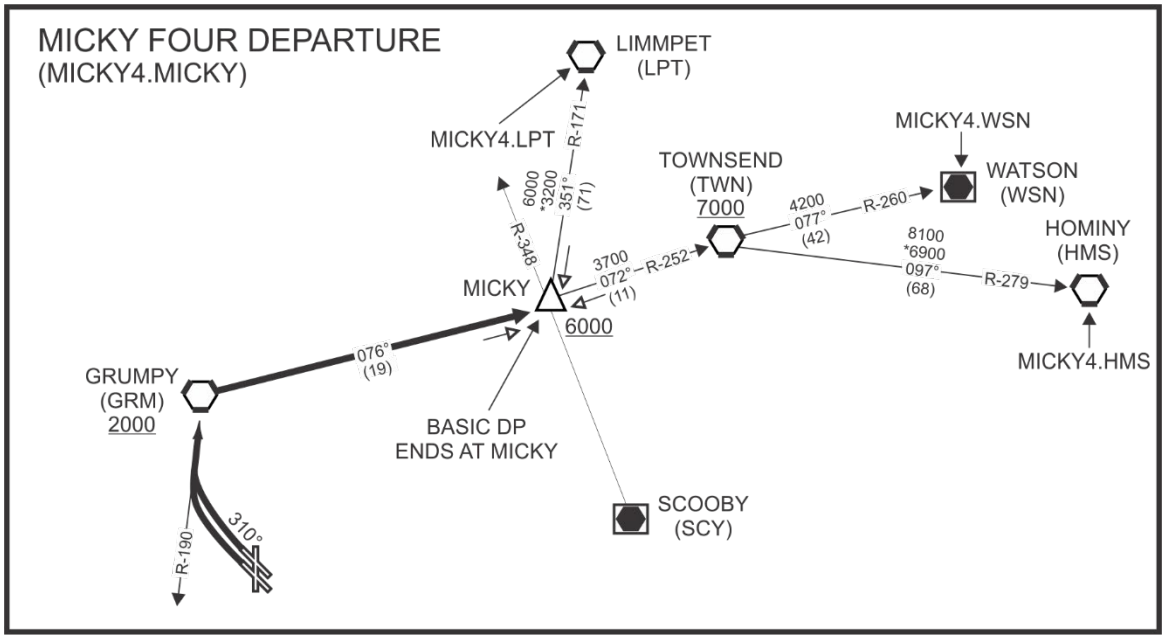


Figure 3-1-5. Graphic Departure Scenario #5, RNAV SID with Four Transitions

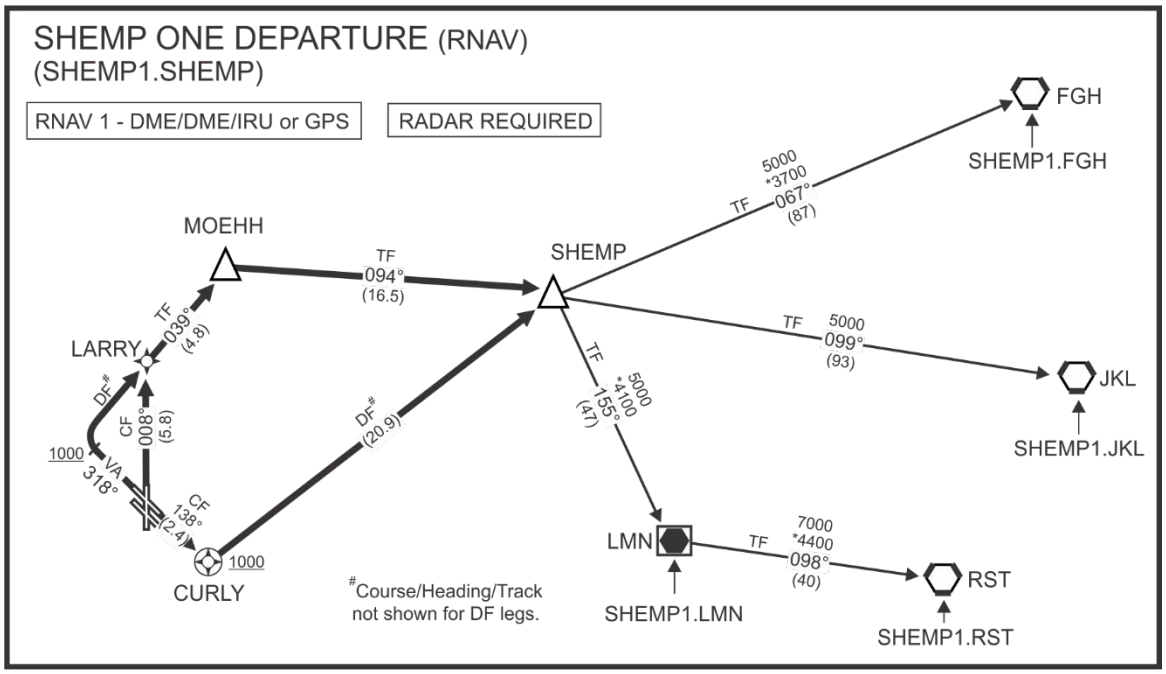


Figure 3-1-6. Graphic Departure Scenario #6, RNAV SID with Four Transitions

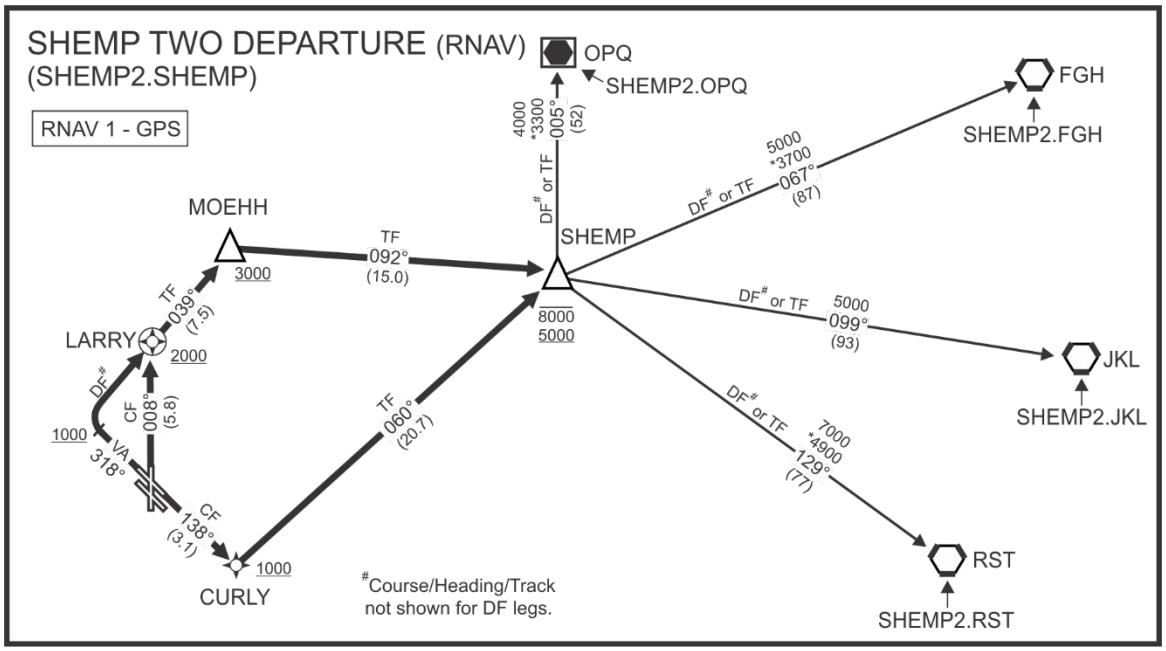


Figure 3-1-7. Graphic Departure Scenario #7, Radar Departure with Four Transitions

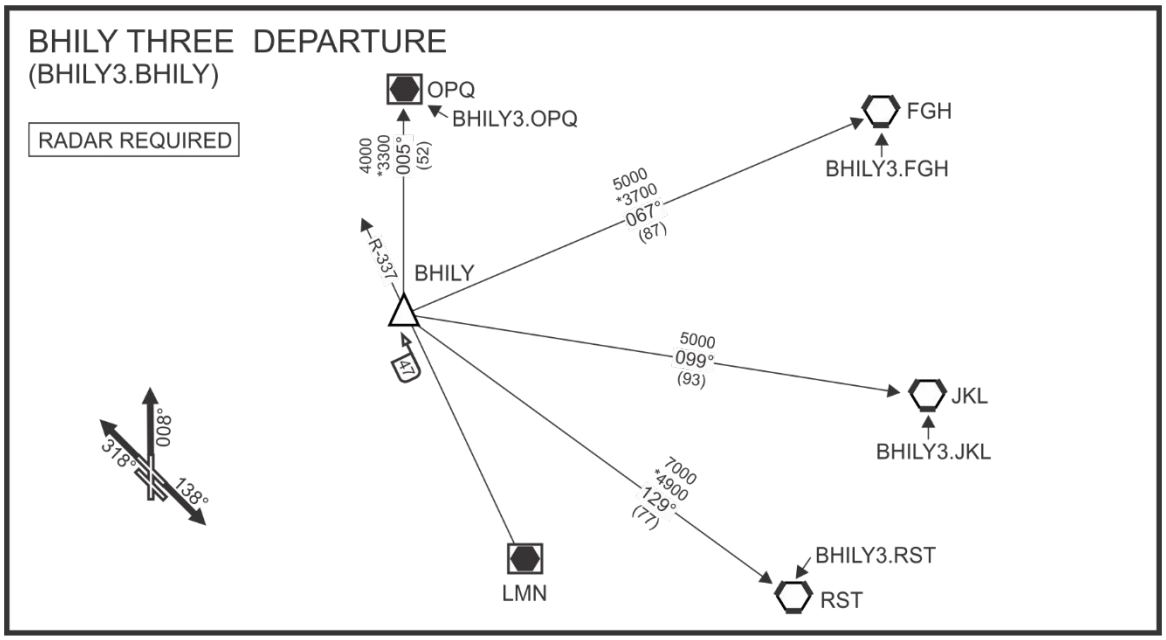
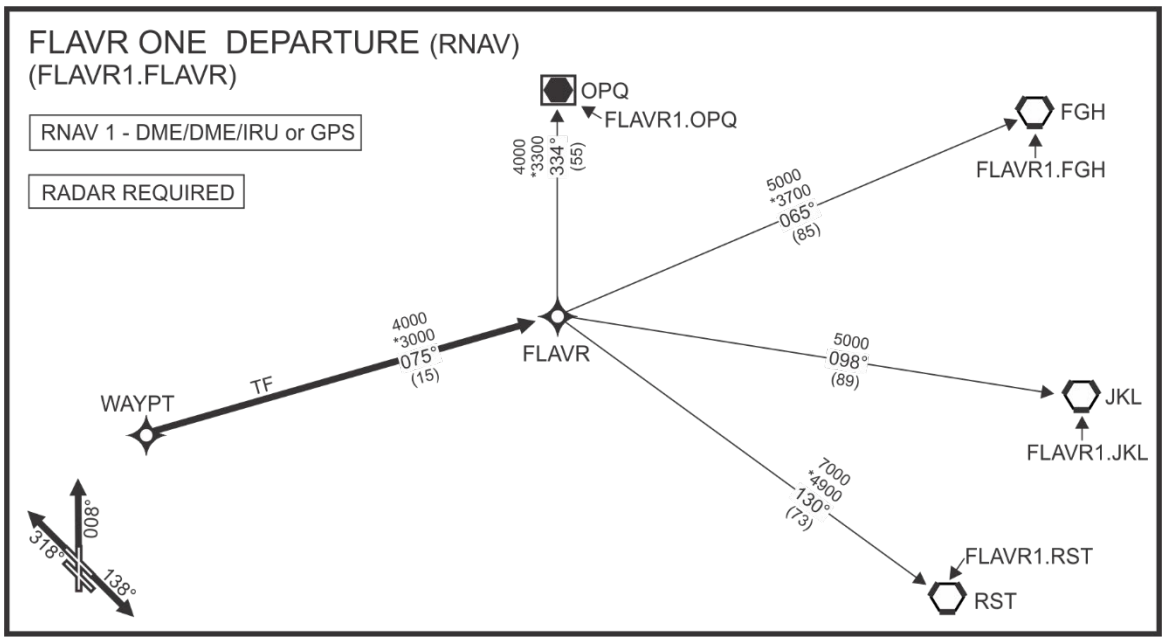


Figure 3-1-8. Graphic Departure Scenario #8,
RNAV Departure Using Radar Vectors with Four Transitions



Appendix A. Administrative Information

1. Distribution. This order is distributed electronically only.

2. Background. The original order combined into a single product, textual IFR departure procedures that were developed by the Aeronautical Information Services under the guidance of the Flight Standards Service, and graphic SIDs that were designed and produced under the direction of the ATO into a single product. This combined product introduced the new acronym, Departure Procedures (DP), to the pilot/controller community and the aforementioned terms of "IFR departure procedure," and "SID" were eliminated. The original order also provided for the graphic publication of IFR DP to facilitate pilot understanding of the procedure as well as all RNAV and RNP DPs, both those developed solely for obstruction clearance and those developed for system enhancement. Elimination of the term "SID" created undue confusion in both the domestic and international aviation communities. Therefore, in the interest of international harmonization, the FAA reintroduced the term "SID" in Order 8260.46B while also using the term "Obstacle Departure Procedures" to describe certain procedures. This order defines two separate types of DPs: SIDs and ODPs and provides policy guidance for the development and documentation of each.

3. Definitions. As used in this order, "must" means compliance is mandatory. All references to related Orders and Publications apply to the latest edition. A glossary of additional terms, abbreviations, and acronyms used in this order:

a. Aeronautical Data Group. The FAA office responsible for the collection, validation, and dissemination of all aeronautical information relating to the NAS.

b. Approach end of runway (AER). The first portion of the runway available for landing. If the runway threshold is displaced, use the displaced threshold Lat/Long as the AER.

c. Area navigation (RNAV). A method of navigation which permits aircraft operations on any desired flight path within the coverage of ground- or space-based navigation aid or within the limits of the capability of self-contained aids, or a combination of these.

d. Climb gradient (CG). A climb requirement expressed in feet per NM (ft/NM).

e. Controller chart. An aeronautical chart developed for internal ATC reference in specific ATC facilities. These charts may also be used to design instrument procedures to support ATC operations.

f. Departure end of runway (DER). The end of the runway that is opposite the landing threshold.

g. Departure procedure (DP). A preplanned IFR departure procedure published for pilot use, in graphic or textual format, that provides obstruction clearance from the terminal area to the en route structure. There are two types of DPs - ODPs printed either textually or graphically, and SIDs, which is always printed graphically.

h. Diverse vector area (DVA). An area in which a prescribed departure route is not required. Radar vectors may be issued below the minimum vectoring or minimum IFR altitude. It can be established for diverse departure, departure sectors, and/or video map radar areas portraying obstacles and terrain.

i. Electronic transmission. Transmittal via electronic mail (e-mail) or facsimile (fax).

j. Fix. A generic term used to define a predetermined geographical position used for route definition. A fix may be a ground-based NAVAID, a waypoint, or defined by reference to one or more radio NAVAIDs.

k. Flight Procedures Team (FPT). An element of AJV, geographically located in each Air Traffic Service Area.

l. Fly-by waypoint. A fly-by waypoint requires the use of turn anticipation to avoid overshoot of the next flight segment.

m. Fly-over waypoint. A fly-over waypoint precludes any turn until the waypoint is overflown and is followed either by an intercept maneuver of the next flight segment or direct flight to the next waypoint.

n. Initial climb area (ICA). A segment variable in length starting at the DER which allows the aircraft sufficient distance to reach an altitude of at least 400 feet above the DER.

o. Initial departure fix (IDF). The first published fix/waypoint used for the departure. The IDF denotes the beginning of the RNAV portion of the SID.

Note: "IF" is used for coding of the IDF. "IF" or "IDF" will not be placed on a departure chart in order to prevent confusion. The "IF" acronym is also used in conjunction with the intermediate fix of an instrument approach procedure.

p. Instrument Flight Procedure (IFP) Validation Team. A team located in each service center that will validate all IFP requests to ensure efficient use of FAA resources to benefit the NAS.

q. Least onerous methods. The use of obstacle DP criteria standards to clear terrain or other obstacles that will result in the lowest possible climb gradient and/or route that provides the most efficient means for departing that runway.

r. National Flight Data Digest (NFDD). A daily publication, prepared by the Aeronautical Data Group to promulgate non-regulatory changes to the NAS.

s. Navigational aid (NAVAID) (see Aeronautical Information Manual). Any visual or electronics device airborne or on the surface which provides point-to-point guidance information or position data to aircraft in flight.

t. Non-RNAV DP. A DP whose ground track is based on ground-based NAVAIDs and/or dead reckoning navigation.

u. Obstacle. An object, structure, terrain feature, or vegetation, at a fixed geographical location, or which may be expected at a fixed location within a prescribed area, with reference to which vertical clearance must be provided during flight operations. Unless limited to certain heights, assume mobile objects 17-feet high are on Interstate Highways, mobile objects 15-feet high are on any other public roadway, mobile objects 10-feet high are on private roads, and mobile objects 23-feet high are on a railroad track. The tallest point of a watercraft (for example, the mast) is assumed according to the types of watercraft know to use an anchorage or to transit a waterway. Includes taxiing aircraft except where operational restrictions prevent taxi operations during takeoff and landings. Any mobile object may be ignored provided positive controls are applied by the airport authority or by air traffic control to exclude their presence during flight operations.

v. Obstacle clearance surface (OCS). Level or sloping surface used for obstacle evaluation. The separation between this surface and specified minimum altitude, glidepath angle or minimum required climb path defines the MINIMUM required obstruction clearance at any given point.

w. Obstacle departure procedure (ODP). A preplanned IFR departure procedure printed for pilot use in textual or graphic form to provide obstruction clearance via the least onerous method from the terminal area to the appropriate en route structure. ODPs provide obstruction clearance and may be flown without ATC clearance unless an alternate departure procedure (SID or radar vector) has been specifically assigned by ATC.

x. Proponent. The originator of a DP requirement. This may include an individual user group, ATC, Aeronautical Information Services, or other appropriate government agency.

y. Radar SID. A SID established when ATC has a need to vector aircraft on departure to a particular ATS Route, NAVAID, or fix.

z. RNAV DP. A DP developed for RNAV-equipped aircraft whose ground track is based on satellite or DME/DME navigation systems.

aa. Required Navigation Performance (RNP). A statement of the 95 percent navigation accuracy performance that meets a specified value for a particular phase of flight or flight segment and incorporates associated on-board performance monitoring and alerting features to notify the pilot when the RNP for a particular phase or segment of a flight is not being met.

bb. Runway heading. The magnetic direction that corresponds with the runway centerline extended, not the painted runway numbers on the runway. Pilots cleared to “fly or maintain runway heading” are expected to fly or maintain the published heading that corresponds with the extended centerline of the departure runway (until otherwise instructed by ATC), and are not to apply drift correction; e.g., RWY 4, actual magnetic heading of the runway centerline 044.22 degrees, fly 044 degrees.

cc. Service providers. Any organization, company, or person who develops and/or maintains instrument flight procedures.

dd. Significant benefits. Tangible or intangible advantages resulting from the implementation of a DP such as fuel savings from reduced flight tracks and time, reduced inter-/intra-facility coordination, reduced communications between ATC and pilots, increased flexibility of airspace management and sectorization due to more predictable ground tracks, or other similar benefits to users or providers.

ee. 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.

ff. SID transition. A published segment used to connect the SID to one or several en route airways/jet routes.

gg. Terminal Area Route Generation Evaluation and Traffic Simulation (TARGETS). An air traffic tool for RNAV DP design.

hh. Top altitude. In reference to SID published altitude restrictions, the charted "maintain" altitude contained in the procedure description or assigned by ATC.

ii. Transmittal letter (TL). A biweekly publication, prepared by Aeronautical Information Services, used as the medium to promulgate instrument approach procedures and textual ODPs and their effective dates for publication.

jj. Visual climb over airport (VCOA). A departure option to allow an aircraft to climb over the airport with visual references to obstacles to attain a suitable altitude from which to proceed with the instrument portion of the departure. VCOA procedures are developed to avoid obstacles greater than three SM from the departure end of the runway as an alternative to complying with climb gradients greater than 200 ft/NM. These procedures are either published in the "Takeoff Minimums and (Obstacle) Departure Procedures, and Diverse Vector Area (Radar Vectors)" section of the Terminal Procedures Publications or as an option on a Graphic ODP.

kk. Waypoint (WP). A predetermined geographical position used for route definition and progress reporting purposes that is defined by latitude/longitude. For VOR/DME systems, it is defined by the radial/distance of the position from the reference facility.

4. Acronyms.

Table A-1. Listing of Acronyms

Abbreviation	Explanation
AAO	Adverse Assumption Obstacle
AAUP	Attention All Users Page
AER	Approach End of Runway
AGL	Above Ground Level
AIRAC	Aeronautical Information, Regulation, and Control
ARTCC	Air Route Traffic Control Center
ASOS	Automated Surface Observing System
ATC	Air Traffic Control
ATS	Air Traffic System
AWOS	Automated Weather Observing System
CF	Course to Fix
CFR	Code of Federal Regulations
CG	Climb Gradient
CTAF	Common Traffic Advisory Frequency
DER	Departure End of Runway
DF	Direct to Fix
DME	Distance Measuring Equipment
DP	Departure Procedure
DRP	Departure Reference Point
DVA	Diverse Vector Area
FB	Fly By
FM	Course from Fix to Manual Termination
FMS	Flight Management System
FO	Fly Over
FPT	Flight Procedures Team
GPS	Global Positioning System
IAC	Interagency Air Committee
IAP	Instrument Approach Procedure
ICA	Initial Climb Area

Abbreviation	Explanation
ICAO	International Civil Aviation Organization
IDF	Initial Departure Fix
IF	Initial Fix
IFP	Instrument Flight Procedure
IFR	Instrument Flight Rules
IMC	Instrument Meteorological Conditions
IRU	Inertial Reference Unit
KIAS	Knot Indicated Airspeed
LNAV	Lateral Navigation
MEA	Minimum En route Altitude
MIA	Minimum IFR Altitude
MOA	Military Operating Area
MOCA	Minimum Obstacle Clearance Altitude
MRA	Minimum Reception Altitude
MSL	Minimum Sea Level
MVA	Minimum Vectoring Altitude
NAS	National Airspace System
NAVAID	Navigational Aid
NDB	Non-directional Beacon
NFDD	National Flight Data Digest
NM	Nautical Mile
OCS	Obstacle Clearance Surface
ODP	Obstacle Departure Procedure
OEA	Obstacle Evaluation Area
OSG	Operations Support Group
OTA	Other Transactional Authority
PBN	Performance Based Navigation
P-NOTAM	Permanent NOTAM
POC	Point of Contact
RF	Radius to Fix
RNAV	Area Navigation

Abbreviation	Explanation
RNP	Required Navigation Performance
RVR	Runway Visual Range
SID	Standard Instrument Departure
SIT	Site Implementation Team
SM	Statute Mile
TACAN	Tactical Air Navigation
TC	True Course
TERPS	Terminal Instrument Procedures
TF	Track to Fix
TL	Transmittal Letter

Abbreviation	Explanation
VA	Heading to Altitude
VCA	Visual Climb Area
VCOA	Visual Climb Over Airport
VFR	Visual Flight Rules
VI	Heading to Intercept
VM	Heading to Manual Termination
VOR	Very High Frequency Omni-directional Range
VORTAC	Very High Frequency Omni-directional Range/TACAN

5. Related Publications.

Table A-2. FAA Orders

	Order Number	Title of Order
	1100.161	Air Traffic Safety Oversight
	7210.3	Facility Operation and Administration
	7400.2	Procedures for Handling Airspace Matters
JO	7470.1	Distance Measuring Equipment (DME)/DME Infrastructure Evaluation for Area Navigation (RNAV) Routes and Procedures
	8260.3	U.S. Standard for Terminal Instrument Procedures (TERPS)
	8260.19	Flight Procedures and Airspace
	8260.26	Establishing and Scheduling Standard Instrument Procedure Effective Dates
	8260.43	Flight Procedures Management Program
	8260.58	U.S. Standard for Performance Based Navigation (PBN) Instrument Procedure Design

Table A-3. Advisory Circulars

AC Number	Title of Advisory Circular
90-100	U.S. Terminal and En Route Area Navigation (RNAV) Operations
90-105	Approval Guidance for RNP Operations and Barometric Vertical Navigation in the U.S. National Airspace System (NAS)

Table A-4. Other Publications

Type	Title of Publication
IAC No. 4	Interagency Air Committee Chart Specification for Instrument Approach Procedures and Airport Diagrams
IAC No. 7	Interagency Air Committee Chart Specification for Graphic Instrument Departure Procedure Charts
IAC No. 17	Interagency Air Committee Chart Specification for Terminal Procedures Publications
RTCA DO-187	Minimum Operational Performance Standards for Airborne Area Navigation Equipment Using Multi-Sensor Inputs

6. Forms and Reports. Appendices B, C, D, E, F, and G contain requirements data, applicable forms, and associated instructions.

7. Information Update. For your convenience, Form 1320-19, Directive Feedback Information, is included at the end of this order to note any deficiencies found, clarifications needed, or suggested improvements regarding the contents of this order. When forwarding your comments to the originating office for consideration, please provide a complete explanation of why the suggested change is necessary.

Appendix B. Graphic Departure Procedure (DP) Requirements Worksheet

Section 1. Instructions for Completing the Graphic DP Requirements Worksheet

1. General. This worksheet (see Figure B-1) may be used to process changes to existing DPs. In such cases, only complete those lines needed to convey the request/recommendation.

Note: Proponents with the capability may use electronically generated FAA 8260-15 series forms (with graphic depiction included) instead of the Graphic DP Requirements Worksheet.

2. Complete the Graphic DP Requirements Worksheet. Enter all applicable information:

a. Line 1 – Airport ID(s). Enter the ICAO ID(s) of each.

b. Line 2 – City and State. Self-explanatory.

c. Line 3 – DP Name and Computer Codes. Enter the proposed name of the DP and computer code. Use the naming and computer code conventions as outlined in Chapter 3. Coordinate the proposed name(s) and code(s) with the servicing ARTCC to ensure there are no duplications.

d. Line 4 – Action Required. Indicate whether a new procedure is being established or modifying an existing DP.

e. Line 5 – Communications. Indicate the communications functions to be charted; e.g., ATIS, AWOS/ASOS, CTAF, CLNC DEL, DEP CON, etc. List specific frequency(ies) only when multiple frequencies are available at a facility and there may be confusion as to which should be assigned to the procedure, or if the frequency(ies) are unique to the procedure. Coordinate with ATC as necessary. Charting of the Departure Control frequency will occur automatically (without coordination). Other communication types will be depicted only when specifically requested. For additional frequencies requested by the IFP Validation Team or specified on the worksheet, specify Chart ATIS, CLNC DEL, etc.

f. Line 6 – Route.

(1) Line 6.1 – Runway(s)/Helipad(s). Indicate the runway number(s) or helipad(s) the DP will serve.

(2) Line 6.2 – Initial Route from Runway. Indicate the desired initial route(s) that is required. If known, specify the single heading/course, or range of headings for each runway authorized for the SID.

(3) Line 6.3 – ATC Requested Routing/Operational Parameters. Enter any information that would assist the procedure developer by providing flexibility in ground tracks. For example, if ATC needs the departure track to go generally south and join a route at a specified point and the exact ground track is not important, so state. Conversely, if there is flexibility to the east but there is an operational constraint to the west, that information must be provided. In extraordinary

cases, when exact ground track is the primary concern in RNAV DPs, specify desired routing. ATC should specify the routing based on ATC needs.

(4) Line 6.4 – Fix(es). Enter each fix in the order flown. For the Departure IF, either indicate a specific point or at least describe the factors constraining the placement of the fix. Enter coordinates to the nearest 0.01 arc second when known. The TARGETS distribution package will satisfy this requirement. If used, enter the statement "See attached (DP name) TARGETS distribution package dated (date)."

Note: If an existing fix/NAVAID is used, enter only the fix name/facility type and ID, and any altitude restriction at the fix.

(5) Line 6.5 – ATC Required Altitudes. Enter any altitude restrictions associated with each fix.

(6) Line 6.6 – Enter the "Top Altitude(s)" (SID Only). For multiple airports, include the Airport ID and/or specific runways when "Top Altitudes" differ between airports and/or runways [see paragraph 2-1-1.e(2)(f)].

g. Line 7 – Transitions. (NA for ODPs)

(1) Line 7.1 – Identification. Enter the proposed name and computer code of each transition (see block 3).

(2) Line 7.2 – Transition Fix(es) (see block 6.4).

(3) Line 7.3 – ATC Required Altitudes (see block 6.5).

(4) Line 7.4 – ATC Operational Parameters (see block 6.3).

h. Line 8 – Lost Communications. List specific lost communications instructions if other than 14 CFR Part 91.185 (standard).

i. Line 9 – Graphic Depiction. Provide a basic sketch of the procedure. The sketch may be hand drawn, computer generated, or overlaid on the appropriate portion of a controller chart. It is not necessary for the sketch to be to an exact scale. The intent here is to provide the procedure developer with a visual correlation of the textual route description.

j. Line 10 – Requested Publication Date or Airspace Docket Number. Enter the desired effective date that coincides with the charting cycle. If the DP effective date is to be concurrent with an airspace action, enter the docket number, which may be obtained from the applicable ATO Service Area. See Order 8260.26, Appendix A for chart dates and lead-time for submission.

k. Line 11 – Remarks.

(1) Indicate that the environmental review under Order 1050.1 (latest edition) and the noise screening have been accomplished.

(2) Enter appropriate information to clarify a data entry; e.g., airspeed restriction for air traffic, maximum altitude for aircraft performance, etc.

(3) If the proposed DP does not meet the criteria requirements in paragraph 2-1-1, a statement of justification is necessary to explain why a DP is required. Avoid publication of unnecessary DPs.

l. Line 12 – Point of Contact (POC). Self-explanatory.

Figure B-1. Graphic Departure Procedure (DP) Requirements Worksheet

1. Airport(s) _____ _____ _____ _____ _____

2. City and State _____

3. DP Name _____ **Computer Code** __

4. Action Required: Establish ____ Amend _____

5. Communications: Enter an X in the space provided next to the communications function listed. Enter specific frequency(ies) only when multiple frequencies are available at a facility and there may be confusion as to which should be assigned to the procedure, or if the frequency is unique to the procedure.

ATIS _____ AWOS/ASOS ____ CLEARANCE DELIVERY ____ GROUND _____

TOWER _____ CTAF _____ DEPARTURE CONTROL _____ ARTCC _____

6. Route:

6.1. Runway(s) _____ **Helipads/Vertiports** _____

6.2. Initial Route From Runway _____

6.3. ATC Requested Routing/Operational Parameters _____

6.4. Fix(es):

NAME _____ NAVAID_____ LAT/LONG_____ALT _____
NAME _____ NAVAID_____ LAT/LONG_____ALT _____
NAME _____ NAVAID_____ LAT/LONG_____ALT _____
NAME _____ NAVAID_____ LAT/LONG_____ALT _____
NAME _____ NAVAID_____ LAT/LONG_____ALT _____
NAME _____ NAVAID_____ LAT/LONG_____ALT _____
NAME _____ NAVAID_____ LAT/LONG_____ALT _____

6.5. ATC Required Altitudes: _____

6.6. Top Altitudes: _____

Figure B-1. Graphic Departure Procedure (DP) Requirements Worksheet (Continued)

7. Transitions: (Not allowed for graphic Obstacle Departure Procedures (ODPs))

7.1 Identification:

NAME_____COMPUTER CODE_____

NAME_____COMPUTER CODE_____

NAME_____COMPUTER CODE_____

NAME_____COMPUTER CODE_____

NAME_____COMPUTER CODE_____

7.2 Transition Fix(es):

Note: If fix/NAVAID is currently published on an en route chart, enter only the fix name and/or facility ID, and required altitude.

NAME _____ NAVAID_____ LAT/LONG_____ALT _____

NAME _____ NAVAID_____ LAT/LONG_____ALT _____

NAME _____ NAVAID_____ LAT/LONG_____ALT _____

NAME _____ NAVAID_____ LAT/LONG_____ALT _____

NAME _____ NAVAID_____ LAT/LONG_____ALT _____

NAME _____ NAVAID_____ LAT/LONG_____ALT _____

NAME _____ NAVAID_____ LAT/LONG_____ALT _____

7.3. ATC Required Altitudes: _____

7.4. ATC Operational Parameters: _____

8. Lost Communications: _____

Figure B-1. Graphic Departure Procedure (DP) Requirements Worksheet (Continued)

9. Graphic Depiction:

Note: Depiction must clearly portray intended routing, fixes, NAVAIDs, and altitudes to be used in the DP. A separate sheet may be used.

10. Request Publication Date or Airspace Docket Number

11. Remarks:

12. Point-of-Contact:

ATC Facility Name.

POC's Name.

Telephone Number.

Fax Number.

E-Mail Address.

Appendix C. FAA Form 8260-2, Data Worksheet

Section 1. Instructions for Completing the Graphic DP Requirements Worksheet

1. General. See Figure C-1 for requesting modification of fixes (including "Fix Use" updates) and/or holding patterns associated with existing 14 CFR part 95 routes, 14 CFR part 97 approaches, Special procedures, SID or STARs.

2. Complete and Submit the FAA Form 8260-2 Data Worksheet.

a. The Data Worksheet should be submitted to the Office of Primary Responsibility (OPR) identified on the Form 8260-2 for proper action to be taken.

b. For those fixes/holding patterns documented on older versions of Form 8260-2 that do not contain an OPR listed, contact Aeronautical Data Group, for a determination on where to submit this request.

c. Enter as much information as possible and explain the addition or deletion in Block 10, Remarks.

(1) Block 1. Requested Publication Date. Enter the desired effective date that coincides with the charting cycle (see Order 8260.26, Appendix A). If the Form 8260-2 request is to be in conjunction with an airspace action, obtain the docket number from the Western, Central, or Eastern Service Area for En Route Operations, Airspace Group. For Form 8260-2 requests, allow at least 20 weeks lead-time from the desired effective date.

(2) Block 2. Fix Name. Enter the five-character pronounceable name obtained from ARTCC. Do not include "WP" as part of the name. If requesting holding at a navigational aid, enter the name and type of navigational aid.

(3) Block 3. Fix Type. List the type(s) of fix, e.g., RADAR, WP, DME, INT (made up of crossing radials, bearings, or combinations of both).

(4) Block 4. State. Enter the state in which the fix is located.

(5) Block 5. ICAO Region Code. Enter the ICAO Region code in which the fix is located.

(6) Block 6. Location. Latitude and longitude accurate to the hundredth of a second; e.g., 09.25 sec. List all navigational aids used for the fix makeup. Provide radials or bearings, DME, and distance values to the hundredth value; e.g., 347.23°; 08.37NM.

(7) Block 7. Type of Action Required. Check applicable box to establish, modify, or cancel the fix. If there is no change to the fix, check "no change."

(8) Block 8. Holding. Describe holding patterns required at fix. When climb-in-holding is required, provide detailed holding instructions including maximum altitude and maximum speed (if other than standard).

(9) Block 9. Charting. Indicate required charting; i.e., terminal, SIDs, STARs, or en route charts.

(10) Block 10. Remarks. List all procedures which use the fix and other uses of the fix; e.g., reporting points, etc. Include any other information that may assist in developing the fix. Justify the requirement for other than routine processing and charting.

(11) Block 11. Point-of-Contact (POC). Self-explanatory.

Figure C-1. Form 8260-2, Data Worksheet

1. **Requested Publication Date:** _____
2. **Fix Name:** _____
3. **Fix Type:** _____
4. **State:** _____
5. **ICAO Region Code:** _____
6. **Location:** _____
7. **Type of (Fix) Action Required:** Establish ☐ Modify ☐ Cancel ☐ No Change ☐
8. **Holding:** _____

   _____
9. **Charting:** _____
10. **Remarks** (Use additional paper if required):

---

11. **Point of Contact (POC):**

    ATC Facility Name.

    POC's Name.

    Telephone Number.

    FAX Number.

    E-Mail Address

Appendix D. FAA Form 8260-15A, Takeoff Minimums and Obstacle Departure Procedures (ODP) and Sample Forms

Section 1. Instructions for Completing FAA Form 8260-15A

1. General. Develop a separate Form 8260-15A for each airport with approved instrument procedures.

a. If all runways are standard (e.g., no ODP required), then state "Standard." The form must encompass all runways for that airport.

b. Use Table 2-1-1 as a guide to initiate the required "Action" to support the "Situation" for a specific airport.

2. Complete the FAA Form 8260-15A. Enter all applicable information.

Note: The procedure name derived from the title line must be included in all correspondence and documentation.

a. Airport ID. Enter the ICAO ID, if one is not available, enter the FAA airport ID.

b. City and State. Complete this section with the same location data as on the associated approach procedure(s).

c. AMDT No. Enter standard entry as on Standard Instrument Approach Procedures (SIAP).

d. Actual Effective Date. Leave blank. Aeronautical Information Services will normally add the effective date. Enter an effective date only when a specific effective date is required; e.g., Magnetic Variation (MagVar) rotation. If the procedure is a "Special," Flight Procedures and Airspace Group's designated personnel will enter the effective date.

e. Takeoff Minimums. Enter takeoff minimums as directed below; however, do not list Takeoff Minimums for the runway(s) served by a graphic ODP [see paragraph 8].

(1) List the runway(s) that are not authorized for IFR departures. If none of the actions listed in Table 2-1-1 are feasible, or if another reason(s) precludes ODP development (noise abatement, environmental, etc.), an IFR departure must not be authorized.

Examples:

RWY 27: NA - OBSTACLES.
RWY 35: NA - ENVIRONMENTAL.
RWY 17: NA - OBSTACLES AND NOISE ABATEMENT.

Followed by:

(2) List the runway(s) authorized standard takeoff minimums.

Example:

RWY 9, 31: STANDARD.

Followed by:

(3) List the runway(s) that have any deviations from standard minimums and/or restrictions. For helicopters, see Appendix F.

Example:

TAKEOFF MINIMUMS: RWY 13: 400-2 OR STANDARD WITH MINIMUM CLIMB OF 310 FT/NM TO 900, OR ALTERNATIVELY, WITH STANDARD TAKEOFF MINIMUMS AND A NORMAL 200 FT/NM CLIMB GRADIENT, TAKEOFF MUST OCCUR NO LATER THAN 1800 FEET PRIOR TO DER.

(a) When obstacles in the ICA cause a climb gradient to an altitude 200 feet or less above DER, before rounding, do not publish takeoff minimums or a climb gradient for these obstacles. Instead, identify the obstacle data by note for publication in the "Takeoff Obstacle Notes" section.

(b) When obstacles 3 SM or less from DER preclude standard takeoff minimums:

Note: The obstacle may be within the ICA or ICA extended to 3 SM.

1. Provide a note identifying the obstacle(s) in the "Takeoff Obstacle Notes" section.

2. Provide higher than standard takeoff minimums followed by the alternative of standard minimums with a specified climb gradient.

3. Identify the obstacle(s) on which the published ceiling and visibility is based in the Controlling Obstacles section.

(c) When obstacles beyond 3 SM of DER preclude standard takeoff minimums:

1. Provide standard takeoff minimums with minimum climb gradient requirements.

2. Provide higher than standard takeoff minimums to allow a VCOA. Use standard note in the following format: RWY XX: (CIG/VSBY) for VCOA.

Example:

TAKEOFF MINIMUMS: RWY 9: STANDARD WITH MINIMUM CLIMB OF 310 FT/NM TO 1400, OR ALTERNATIVELY, WITH STANDARD TAKEOFF MINIMUMS AND A NORMAL 200 FT/NM CLIMB GRADIENT, TAKEOFF MUST OCCUR NO LATER THAN 1800 FEET PRIOR TO DER OR 1100-3 FOR VCOA.

f. TEXTUAL Departure Procedure.

(1) When a specific departure route is necessary, provide the complete text, by runway, for required DPs.

(a) When a climb to an altitude is necessary before turning, define the limitation as clear and simple as possible when limiting the initiation of a turn; e.g., "RWY 36: CLIMB ON HEADING 350.11 TO 2800 BEFORE TURNING LEFT."

Note: Procedure designers must consider the impact on local ATC operations when using such phrases as "before turning" or "before proceeding on course." Additionally, more emphasis may be necessary to define a turn in a certain direction, for example, "before turning left/right" or "before turning east/north," etc.; therefore, coordinate these actions with ATC to ensure compatibility with the local operating environment. In addition, these words describe better for the pilot where the penetrations are located relative to the runway end.

(b) When a DP routing is required and VOR or TACAN is used to define the route, use the format: RWY 9: CLIMBING LEFT TURN TO INTERCEPT ABC VORTAC R-310 TO 6000 BEFORE PROCEEDING ON COURSE.

(c) When a DP routing is required and NDB is used to define the route, use course to or bearing from the NDB; e.g., RWY 35: CLIMB ON HEADING 350…, THEN CLIMBING RIGHT TURN TO INTERCEPT BEARING 020 FROM ABC NDB TO 6000 BEFORE PROCEEDING ON COURSE; or RWY 35: CLIMB ON HEADING 030…, THEN ON COURSE 015 TO ABC NDB TO 4000 BEFORE PROCEEDING ON COURSE.

(d) When a ODP routing permits a climb within a sector, define the courses to remain within in a clockwise fashion; e.g., "RWY 12: CLIMB ON A HEADING BETWEEN 061 CW TO 228 FROM DEPARTURE END OF RUNWAY, OR MINIMUM CLIMB OF 260 FT/NM TO 8700 FOR HEADINGS 229 THROUGH 300."

(e) When a DP routing is required and a localizer course is used to define the route, use magnetic direction of localizer course to be flown; e.g., "RWY 5: CLIMB ON I-XXX LOCALIZER NE COURSE TO 3000 BEFORE TURNING."

(f) When the departure instructions must be graphically depicted, inform the pilot of the name of the default Obstacle DP, and submit an accompanying Form 8260-15B; e.g., Use standard Note: "USE JONES DEPARTURE" when the graphic obstacle DP serves all runways or use "RWY 27: USE SMITH DEPARTURE" when the graphic obstacle DP serves only a specific runway.

(2) It is not appropriate to use the wording “Comply with ODP or....” This could be confusing and cause the pilot to use a different routing than was expected by ATC.

(3) Do not use the phrase “...or comply with ATC instructions.” The pilot is aware that ATC instructions are to be complied with, when possible, and safety of flight is not compromised.

(4) Specify a single obstacle DP. Do not provide an option to use a SID as the default ODP. For example, do not use “Climb runway heading to 1200 before turning or use Manchester Departure.”

g. Visual Climb Over Airport.

(1) When a VCOA has been established, include instructions to climb in visual conditions to cross a specified airport, NAVAID, or fix at or above a specified altitude before proceeding on course.

(2) The statement “Obtain ATC approval for VCOA when requesting IFR clearance” must be included at the beginning of the VCOA instructions.

Examples:

RWY 19: OBTAIN ATC APPROVAL FOR VCOA WHEN REQUESTING IFR CLEARANCE. CLIMB IN VISUAL CONDITIONS TO CROSS HICKORY REGIONAL AIRPORT AT OR ABOVE 1200 BEFORE PROCEEDING ON COURSE.

ALL RUNWAYS, OBTAIN ATC APPROVAL FOR VCOA WHEN REQUESTING IFR CLEARANCE. CLIMB IN VISUAL CONDITIONS TO CROSS XYZ VOR SOUTHEAST BOUND AT OR ABOVE 4200, THEN PROCEED ON XYZ R-150 TO HAMET.

h. Takeoff Obstacle Notes.

(1) Enter a note regarding obstacles found as a result of applying Table 2-1-1, Situation 2 action, and Situation 3, action “A” (see Appendix D).

Note: Do not identify/publish an adverse assumption obstacle (AAO) as a “takeoff obstacle” because pilots are not familiar with the AAO concept. However, publishing a ceiling and visibility will allow for those situations where the CG cannot be achieved and still afford the pilot the opportunity to visually acquire and avoid any obstruction that could have been built without notice to the FAA.

(2) The note must include the runway affected and inform the pilot of the obstacle(s) type and location relative to the DER and height [AGL/elevation (MSL)]. When there are obstacles on both sides of the runway centerline extended, note the most significant obstacles left and right of the runway centerline. Phrases such as “multiple antennas, numerous trees, etc.” are acceptable. Also, when identifying these obstacles, be as descriptive as reasonably possible so as to provide the pilot a clear understanding of what to prepare and/or look for; e.g., instead of just saying “power poles,” it would be more helpful to use the descriptor of “power lines” in some

instances. Another example would be instead of just saying “terrain,” if applicable; use of “ridgeline” or “bluff” would provide a clearer picture. Specify distances 1 NM or greater to the nearest whole and tenth of a NM (e.g., 2.1 NM FROM DER). Specify distances less than 1 NM in feet (e.g., 1280 FT FROM DER).

Examples:

NOTE: RWY 35: TREES 1280 FT FROM DER, 120 FT LEFT OF CENTERLINE, 50 FT AGL/1527 FT MSL.

NOTE: RWY 35: BUILDING 2.1 NM FROM DER, 160 FT LEFT OF CENTERLINE, 350 FT AGL/1927 FT MSL.

NOTE: RWY 17: MULTIPLE BUILDINGS 500 FT FROM DER, 350 FT RIGHT OF CENTERLINE, 50 FT AGL/1107 FT MSL. ANTENNA 6000 FT FROM DER, 1235 FT LEFT OF CENTERLINE, 200 FT AGL/1257 FT MSL.

NOTE: RWY 27: MULTIPLE TREES AND ANTENNAS BEGINNING 500 FT FROM DER, 350 FT RIGHT OF CENTERLINE, UP TO 110 FT AGL/1307 FT MSL.

NOTE: RWY 17: VEHICLES ON ROAD 660 FT FROM DER, CROSSING EXTENDED RUNWAY CENTERLINE, 18 FT AGL/962 FT MSL.

(3) Charting agents must publish these obstacle notes.

i. Controlling Obstacles.

(1) Document the controlling obstacle(s) found as a result of applying Table 2-1-1, Situation 3 and/or Situation 4 [see Appendix D, paragraph 7.c(2)]. When there is more than one controlling obstacle to be documented, following the coordinates, include what entity it applies too; i.e., “(Ceiling),” “(Visibility),” “(Climb Gradient),” or “(Climb-To Altitude).” Do not list Controlling Obstacles for the runway(s) served by a graphic default ODP as described in Appendix D.

Note: For all DPs, the controlling obstacle is that obstacle which, having penetrated the 40:1 OCS causes the most adverse climb gradient, climb-to altitude, and/or ceiling and visibility to be published.

(2) Use the following format to list the runway affected, elevation, and type of obstacle, the coordinates to the nearest 0.01 second; e.g., “RWY 32: 2049 FT MSL ANTENNA 341548.01N/0862101.05W.”

(3) Document the obstacle(s) that mandated development of a specific textual ODP route. These obstacles are not considered the “controlling obstacles” because they are not a factor to the specified route being flown. Do not chart this information on the procedure. Document these obstacles as follows:

"OBSTACLES MANDATING ODP ROUTE DEVELOPMENT: RWY 36: 2049 FT MSL ANTENNA 341658.01N/0863108.05W."

(4) Document the highest obstacle *within* the visual climb area (VCA) of a VCOA. If the "climb to" altitude is based on an obstacle located *outside* the VCA, then also document that obstacle. Do not chart this information on the procedure. Document as follows:

"VISUAL CLIMB AREA OBSTACLE: 908 FT MSL STADIUM 360732.50N/0970359.30W."

And if applicable:
"OBSTACLE OUTSIDE VISUAL CLIMB AREA MANDATING VCOA CLIMB TO ALTITUDE: 2049 FT MSL BUILDING 360712.72N/0970424.60W."

j. Remarks. List information/data that is not normally charted; e.g., administrative data or notes for controller information (requested by ATC). However, if something does need to be charted, precede the text with the "Chart Note:" annotation. See Order 8260.19, for a chart note that is required if the ODP is a Special. General chart notes (not Takeoff Minimums or Departure Instructions Notes) need to include instructions to the chart organization to place the note at the bottom of the entry. Use the following format: "Chart Note at bottom of entry…" Document as the first entry, "Special Use Procedure," if the ODP is at a private airport and will not be published under 14 CFR part 97.

k. Flight Inspected By. Enter the name of the pilot who conducted the flight inspection/validation, and the date.

l. Developed By. Enter the name of the FAA procedure specialist and organizational routing code. If developed under an Other Transactional Authority (OTA), enter the procedure developer's name and organization.

m. Approved By. Enter the name of the Aeronautical Information Service Manager, or his/her delegated representative. For procedures developed under an OTA, enter the name of the organization's manager or his/her delegated representative. This individual must sign in the "approved by" space, and enter the date signed. If the procedure is a "Special," this line will contain the name of and be signed by the Flight Procedures and Airspace Group Manager.

n. Required Effective Date.

(1) Enter the effective date as noted in Order 8260.19 (latest edition), Chapter 8. Optimally, submit as routine. En route submission cutoff dates apply to graphic DPs. If the Form 8260-15A represents a concurrent action, enter "CONCURRENT" followed by the necessary information; e.g., Airport ID, IAP name and amendment number; airspace action, or other event.

(2) When documenting Standard Takeoff Minimums where all runways have a clear 40:1 Obstacle Clearance Surface (i.e., No ODP or obstacle notes required), enter "N/A."

o. Coordinated With. Specify the offices/organizations the procedure was coordinated. DP coordination must be identical with the approach procedure coordination as outlined in Order 8260.19 (latest edition), Chapter 8.

p. Changes/Reasons. List changes and reasons relating to data entries on page one. Additionally, when a VCOA cannot be established, an explanation must be provided; e.g., "VCOA not established at ATC request due to (Reason)."

Figure D-1.

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP)
TITLE 14 CFR PART 97.37

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated.
Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statute miles or feet RVR unless otherwise indicated.

AIRPORT ID	CITY	STATE	AMDT NO	ACTUAL EFFECTIVE DATE
KMLS	MILES CITY/FRANK WILEY FIELD	MT	ORIG	

CANCELLATION ☐

TAKEOFF MINIMUMS:
STANDARD

TEXTUAL DEPARTURE PROCEDURES:

VISUAL CLIMB OVER AIRPORT:

TAKEOFF OBSTACLE NOTES:

CONTROLLING OBSTACLES:

REMARKS:

FLIGHT INSPECTED BY	OFFICE	DATE	
DEVELOPED BY	OFFICE	DATE	
APPROVED BY	OFFICE	DATE	TITLE
			MANAGER

REQUIRED EFFECTIVE DATE:
ROUTINE

COORDINATED WITH:

A4A ☐ **ALPA** ☒ **AOPA** ☒ **APA** ☒ **HAI** ☐ **NBAA** ☒ **OTHER:** ARPT MGR, ZNY, ZDC

CHANGES - REASONS:

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Figure D-2.

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP)
TITLE 14 CFR PART 97.37

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated.
Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statute miles or feet RVR unless otherwise indicated.

AIRPORT ID	CITY	STATE	AMDT NO	ACTUAL EFFECTIVE DATE
KHCK	DANVILLE	TX	ORIG	

CANCELLATION ☐

TAKEOFF MINIMUMS:
RWY 1, NA - OBSTACLES
RWY 32, STANDARD
RWY 14, 500-2 OR STANDARD WITH MINIMUM CLIMB OF 330 FT PER NM TO 1200
RWY 19, STANDARD WITH MINIMUM CLIMB OF 214 FT PER NM TO 1100, OR ALTERNATIVELY WITH STANDARD TAKEOFF MINIMUMS AND A NORMAL 200 FT PER NM CLIMB GRADIENT. TAKEOFF MUST OCCUR NO LATER THAN 2000 FEET PRIOR TO DER OR 1000-2 FOR VCOA.

TEXTUAL DEPARTURE PROCEDURES:
RWY 32, CLIMB ON HEADING 317.66 TO 2200 BEFORE TURNING LEFT

VISUAL CLIMB OVER AIRPORT:
RWY 19, OBTAIN ATC APPROVAL FOR VCOA WHEN REQUESTING IFR CLEARANCE. CLIMB IN VISUAL CONDITIONS TO CROSS HICKORY REGIONAL AIRPORT AT OR ABOVE 1300 BEFORE PROCEEDING ON COURSE.

TAKEOFF OBSTACLE NOTES:
NOTE: RWY 14, BUILDING 1.9 NM FROM DER, ON RWY CENTERLINE, 478 FT AGL/974 FT MSL.
NOTE: RWY 32, TREES 143 FT FROM DER, 25 FT LEFT OF CENTERLINE, 21 FT AGL/498 FT MSL.

CONTROLLING OBSTACLES:
RWY 14: 974 FT MSL BUILDING 324911.09N/0964838.62W
RWY 19: 922 FT MSL TOWER 324748.00N/0965137.00W
RWY 32: 1049 FT MSL TOWER 325216.19N/0965523.02W
RWY 19 (VCOA): 974 FT MSL BUILDING 324911.09N/0964838.62W

OBSTACLES MANDATING ODP ROUTE DEVELOPMENT: RWY 32 - 1539 FT MSL TOWER 325249.09N/0965639.66W

REMARKS:

FLIGHT INSPECTED BY	OFFICE	DATE	
DEVELOPED BY	OFFICE	DATE	
APPROVED BY	OFFICE	DATE	TITLE
			MANAGER

REQUIRED EFFECTIVE DATE:
CONCURRENT WITH KHCK RNAV (GPS) RWY 14, ORIG

COORDINATED WITH:

A4A ☐ ALPA ☒ AOPA ☒ APA ☒ HAI ☐ NBAA ☒ **OTHER:** ARPT MGR, FCR ATCT, ZFW

CHANGES - REASONS:

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Figure D-3.

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP)
TITLE 14 CFR PART 97.37

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated.
Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statute miles or feet RVR unless otherwise indicated.

AIRPORT ID	CITY	STATE	AMDT NO	ACTUAL EFFECTIVE DATE
KXXX	LASKY	WY	ORIG	

CANCELLATION ☐

TAKEOFF MINIMUMS:
RWY 16, 34: NA - OBSTACLES

TEXTUAL DEPARTURE PROCEDURES:
RWY 18, 36: USE GOODHILL DEPARTURE

VISUAL CLIMB OVER AIRPORT:

TAKEOFF OBSTACLE NOTES:

CONTROLLING OBSTACLES:

REMARKS:

FLIGHT INSPECTED BY	**OFFICE**	**DATE**	
DEVELOPED BY	**OFFICE**	**DATE**	
APPROVED BY	**OFFICE**	**DATE**	**TITLE** MANAGER

REQUIRED EFFECTIVE DATE:
ROUTINE

COORDINATED WITH:

A4A ☐ **ALPA** ☒ **AOPA** ☒ **APA** ☒ **HAI** ☐ **NBAA** ☒ **OTHER:** ARPT MGR, LSK ATCT, LSK APP CON, ZLC, ZOB

CHANGES - REASONS:

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Figure D-4.

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP)
TITLE 14 CFR PART 97.37

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated.
Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statute miles or feet RVR unless otherwise indicated.

AIRPORT ID	CITY	STATE	AMDT NO	ACTUAL EFFECTIVE DATE
KXXX	LASKY	WY	4	

CANCELLATION ☒

TAKEOFF MINIMUMS:

Procedure Canceled Effective 01/05/2017

TEXTUAL DEPARTURE PROCEDURES:

VISUAL CLIMB OVER AIRPORT:

TAKEOFF OBSTACLE NOTES:

CONTROLLING OBSTACLES:

REMARKS:

FLIGHT INSPECTED BY	OFFICE	DATE	
DEVELOPED BY	OFFICE	DATE	
APPROVED BY	OFFICE	DATE	TITLE
			MANAGER

REQUIRED EFFECTIVE DATE:
ROUTINE

COORDINATED WITH:

A4A ☐ **ALPA** ☒ **AOPA** ☒ **APA** ☒ **HAI** ☐ **NBAA** ☒ **OTHER:** ARPT MGR, LSK ATCT, LSK APP CON, ZLC, ZOB

CHANGES - REASONS:
OBSTACLE DATA REVIEW - ODP NO LONGER REQUIRED

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Figure D-5.

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP)
TITLE 14 CFR PART 97.37

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated.
Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statute miles or feet RVR unless otherwise indicated.

AIRPORT ID	CITY	STATE	AMDT NO	ACTUAL EFFECTIVE DATE
KPIT	PITTSBURGH	PA	4	

CANCELLATION ☐

TAKEOFF MINIMUMS:
RWY 10L, 10C, 10R, 28L, 28C, 28R, 14, STANDARD
RWY 32, 200- 1/2 OR STANDARD WITH MINIMUM CLIB OF 240 FT PER NM TO 1500, OR ALTERNATIVELY, WITH STANDARD TAKEOFF MINIMUMS AND A NORMAL 200 FT PER NM CLIMB GRADIENT, TAKEOFF MUST OCCUR NO LATER THAN 2100 FEET PRIOR TO DER.

TEXTUAL DEPARTURE PROCEDURES:

VISUAL CLIMB OVER AIRPORT:

TAKEOFF OBSTACLE NOTES:
NOTE: RWY 10L, TREE 1367 FT FROM DER 733 FT LEFT OF CENTERLINE 59 FT AGL/1233 FT MSL. ROD ON OIL TOWER 4168 FT FROM DER, 910 FT LEFT OF CENTERLINE, 112 FT AGL/1262 FT MSL. TOWER 4175 FT FROM DER, 864 FT LEFT OF CENTERLINE, 112 FT AGL/1282 FT MSL. TREE 1463 FT FROM DER, 673 FT LEFT OF CENTERLINE, 38 FT AGL/1212 FT MSL.
NOTE: RWY10C: MULTIPLE TREES BEGINNING 3207 FT FROM DER, 461 FT LEFT OF CENTERLINE, UP TO 26 FT AGL/1263 FT MSL.
NOTE: RWY10R: MULTIPLE TREES BEGINNING 1082 FT FROM DER, 102 FT RIGHT OF CENTERLINE, UP TO 65 FT AGL/1265 FT MSL. OL ON MONITOR POLE 4590 FT FROM DER, 1124 FT LEFT OF CENTERLINE, 55 FT AGL/1241 FT MSL. POLE 4610 FT FROM DER, 1136 FT LEFT OF CENTERLINE, 55 FT AGL/1241 FT MSL.
NOTE: RWY 28L, TREE 2272 FT FROM DER, 1109 FT LEFT OF CENTERLINE, 64 FT AGL/1272 FT MSL. TREE 39 FT FROM DER, 498 FT LEFT OF CENTERLINE 55 FT AGL/ 1144 FT MSL.
NOTE: RWY 28R, TREE 1810 FT FROM DER, 912 FT RIGHT OF CENTERLINE, 34 FT AGL/1272 FT MSL. BUSH 73 FT FROM DER, 477 FT LEFT OF CENTERLLINE, 12 FT AGL/1215 FT MSL. POLE 645 FT FROM DER, 663 FT LEFT OF CENTERLINE, 44 FT AGL/1159 FT MSL.
NOTE: RWY 14, TREE 968 FT FROM DER, 516 FT RIGHT OF CENTERLINE, 44 FT AGL/1158 FT MSL.
NOTE: RWY 32, ANT ON OL TOWER 1.1 NM FROM DER, 435 FT LEFT OF CENTERLINE, 105 FT AGL/1354 FT AGL. TOWER 6812 FT FROM DER, 497 FT LEFT OF CENTERLINE, 96 FT AGL/1342 FT MSL. LT ON POLE 454 FT FROM DER, 515 FT RIGHT OF CENTERLINE, 25 FT AGL/1173 FT MSL. MULTIPLE TREES BEGINING 1717 FT FROM DER, 1108 FT RIGHT OF CENTERLINE, UP TO 61 FT AGL/1321 FT MSL. TREE 6074 FT FROM DER, 1272 FT RIGHT OF CENTERLINE, 61 FT AGL/1321 FT MSL. TREE 2577 FT FROM DER, 1108 FT RIGHT OF CENTERLINE, 74 FT AGL/1233 FT MSL. TREE 2480 FT FROM DER, 1118 FT RIGHT OF CENTERLINE, 333 FT AGL/1212 FT MSL.

CONTROLLING OBSTACLES:
RWY 32: 1354 FT MSL TOWER 403032.06N/0801435.23W

REMARKS:

FLIGHT INSPECTED BY	OFFICE	DATE	
DEVELOPED BY	OFFICE	DATE	
APPROVED BY	OFFICE	DATE	TITLE
			MANAGER

REQUIRED EFFECTIVE DATE:
ROUTINE

COORDINATED WITH:

A4A ☒ **ALPA** ☒ **AOPA** ☒ **APA** ☒ **HAI** ☐ **NBAA** ☒ **OTHER:** ARPT MGR, PIT APP CON, ZOB

CHANGES - REASONS:
1. RWY 32 ADDED CLIMB GRADIENT AND CEILING/VISIBILITY - NEW CONTROLLING OBSTACLE REQUIRED A CLIMB GRADIENT.
2. DELETED DEPARTURE PROCEDURES - DIVERSE DEPARTURE AUTHORIZED.

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Section 2. Instructions for Completing FAA Form 8260-15B, Graphic Departure Procedure (DP) (non-RNAV DP)

1. General. Refer to the paragraph 2 for direction when filling out FAA Form 8260-15Bs for non-RNAV Departure Procedures.

2. Complete the FAA Form 8260-15B. Enter all applicable information.

a. Title Line. The title line consists of the six following elements and will be filled in as noted.

(1) DP Name. Enter name of departure procedure. For example, the CATHEDRAL SEVEN DEPARTURE is entered as CATHEDRAL. The procedure name derived from the title line must be included in all correspondence and documentation.

(2) Number. Enter departure procedure number (spelled out); e.g., EIGHT.

(3) DP Computer Code. Enter computer identification code as coordinated with by ATC (see Chapter 3).

(4) Superseded Number. Departure procedure number (spelled out) superseded by this procedure. Enter "None" for a new procedure.

(5) Dated. Date of superseded procedure. Format: MM/DD/YYYY.

(6) Actual Effective Date. Leave blank. The effective date will normally be added by Aeronautical Information Services. Enter an effective date only when a specific effective date is required; e.g., MagVar rotation. If the procedure is a "Special," the Flight Procedure and Airspace Group's designated representative will enter the effective date.

b. Type. Check all boxes that apply. The choices are "Obstacle," "SID," "RNAV," 'Copter," and "Special." Attach an up-to-date, clear graphic depiction of the procedure. Do Not include a textual description of transitions or departure route text.

c. DP Route Description. Provide the initial climb out instructions for each runway and a textual description of the departure route(s) to the DP termination fix. Include only information pertinent to the departure procedure. Where the initial climb out instructions from multiple runways join and share a common route/instructions prior to the DP termination fix, end each instruction with "…, thence…" followed by a paragraph containing the common information (see Figure D-6). If the DP route can be clearly understood from a graphic depiction, a complete textual description is not necessary. Simply state, "...then on depicted route." Define crossing altitudes at fixes as follows:

(1) Document crossing altitude restrictions in plain text; e.g., "CROSS GRM VORTAC AT OR ABOVE (ALTITUDE)"; "CROSS BRADY AT OR BELOW (ALTITUDE)"; "CROSS SHEMP AT OR ABOVE (ALTITUDE), AT OR BELOW (ALTITUDE)"; "CROSS EDDIE AT (ALTITUDE)."

(2) Altitude restrictions requested by ATC (not authorized for ODPs).

(a) See Order 8260.3, and/or other 8260-series directives, as applicable, for the criteria to use when establishing fix crossing altitude restrictions requested by ATC.

(b) See paragraph 2-1-1.e(2) for altitude charting constraints.

d. Transition Routes. (Not Authorized for ODPs.)

(1) Transition Name. Name each transition according to the name of the fix at the transition termination point entered in Appendix D, paragraph 4.d. Do not include the word "Transition."

(2) Transition Computer Codes. Enter computer code as coordinated with ATC (see Chapter 3).

(3) From FIX/NAVAID. Fix/NAVAID where the basic DP ends; e.g., DANNY INT, BICKR.

(4) To FIX/NAVAID. En route fix/NAVAID where each transition ends; e.g., DANNY, BICKR. If a transition has multiple segments, enter one line for each segment.

(5) Course. Specify the course for each transition segment. Enter the actual magnetic course to the hundredth of a degree (see Order 8260.19, Chapter 8). When documenting the course between facilities, provide this information for both facilities.

Example:

076.56 & 080.47 (TWN R-077 & WSN R-260)

Note: Aeronautical Information Services will round for publication.

(6) Distance. Specify the distance for each transition segment. Enter the distance to the hundredth of a mile (see Order 8260.19, Chapter 8). When documenting the course/distance between facilities, provide this information for both facilities.

Example:

41.61

Note: Aeronautical Information Services will round for publication.

(7) MEA. Enter MEA along transition route. By definition, the MEA also encompasses the MRA. If transitions share a common segment, make sure the MEA for that segment is the same for each transition.

(8) MOCA. Enter MOCA along transition route. To reduce chart clutter, do not publish MOCAs less than 500 feet below MEAs.

(9) Crossing altitudes/fixes. When a SID Transition(s) must accommodate an ATC required altitude at a specified fix, only document the ATC altitude; e.g., "BECKY AT/ABOVE 9000." No secondary altitude is required on transition routes since an MEA is specified that will provide obstacle clearance and ensure design constraints are met. The ATC altitude must not be lower than the MEA.

e. PBN Requirement Notes. List all restrictions for navigation performance to fly the procedure. Document PBN in accordance with paragraph 2-1-1.f(3) on the Form 8260-15B.

f. Equipment Requirement Notes. List all restrictions for navigation performance to fly the procedure. Document PBN in accordance with paragraph 2-1-1.f on the Form 8260-15B.

g. Procedural Data Notes. List any procedural data information that is to appear in note form on the graphic depiction; e.g., turbo jet only, etc. See paragraph 2-1-1.f, for specific information that must be charted and entered in this section. See Order 8260.19 for a chart note that is required if the SID/Graphic ODP is a Special procedure (see Appendix F for helicopters).

h. Takeoff Minimums.

(1) Takeoff Minimums. List the runway(s) that are not authorized for IFR departures. If none of the actions listed in Table 3-1-1 are feasible, or if another reason(s) precludes DP development (noise abatement, environmental, etc.), an IFR departure must not be authorized.

Examples:

RWY 27: NA - OBSTACLES.
RWY 35: NA - ENVIRONMENTAL.
RWY 17: NA - OBSTACLES AND NOISE ABATEMENT.

Followed by:

(2) List the runway(s) authorized standard takeoff minimums.

Example:

RWY 9, 31: STANDARD.

Followed by:

(3) List the runway(s) that have any deviations from standard minimums and/or restrictions.

Examples:

TAKEOFF MINIMUMS: RWY 13: 400-2 OR STANDARD WITH MINIMUM CLIMB OF 310 FT/NM TO 900, OR ALTERNATIVELY, WITH STANDARD TAKEOFF MINIMUMS AND NORMAL 200 FT/NM CLIMB GRADIENT, TAKEOFF MUST OCCUR NO LATER THAN 1800 FEET PRIOR TO DER.

TAKEOFF MINIMUMS: RWY 27: STANDARD WITH MINIMUM CLIMB OF 280 FT/NM TO 2500, OR ALTERNATIVELY, WITH STANDARD TAKEOFF MINIMUMS AND NORMAL 200 FT/NM CLIMB GRADIENT, TAKEOFF MUST OCCUR NO LATER THAN 1800 FEET PRIOR TO DER.

i. Takeoff Obstacle Notes. Enter detailed takeoff obstacle notes only when the procedure is designated as an ODP. For SIDs, do not enter detailed obstacle notes. At locations where a textual ODP has been established that contain "Takeoff Obstacle Notes," enter: "See Form 8260-15A, Takeoff Minimums and Obstacle Departure Procedures (ODP)."

(1) Enter a note regarding obstacles found as a result of applying Table 2-1-1; Situation 2 action and Situation 3, action "A" (see Form 8260-15A).

Note: An AAO must not be identified/published as a "takeoff obstacle" because pilots are not familiar with the AAO concept. However, publishing a ceiling and visibility will allow for those situations where the CG cannot be achieved and still afford the pilot the opportunity to visually acquire and avoid any obstruction that could have been built without notice to the FAA.

(2) The note must include the runway affected and inform the pilot of the obstacle(s) type and location relative to the DER, and height [AGL/elevation (MSL)]. When there are obstacles on both sides of the runway centerline extended, note the most significant obstacles left and right of the runway centerline. Phrases such as "multiple antennas, numerous trees, etc." are acceptable. Also, when identifying these obstacles, be as descriptive as reasonably possible so as to provide the pilot a clear understanding of what to prepare and/or look for; e.g., instead of just saying "power poles," it would be more helpful to use the descriptor of "power lines" in some instances. Another example would be instead of just saying "terrain," if applicable; use of "ridgeline" or "bluff" would provide a clearer picture. Specify distances one NM or greater to the nearest whole and tenth of a NM (e.g., 2.1 NM from DER). Specify distances less than one NM in feet (e.g., 1280 FT from DER).

Examples:

NOTE: RWY 35: TREES 1280 FT FROM DER, 120 FT LEFT OF CENTERLINE, 50 FT AGL/1527 FT MSL.

NOTE: RWY 35: BUILDING 2.1 NM FROM DER, 160 FT LEFT OF CENTERLINE, 350 FT AGL/1927 FT MSL.

NOTE: RWY 17: MULTIPLE BUILDINGS 500 FT FROM DER 350 FT RIGHT OF CENTERLINE, 50 FT AGL/1107 FT MSL. ANTENNA 6000 FT FROM DER, 1235 FT LEFT OF CENTERLINE, 200 FT AGL/1257 FT MSL.

NOTE: RWY 27: MULTIPLE TREES AND ANTENNAS BEGINNING 500 FT FROM DER, 350 FT RIGHT OF CENTERLINE, UP TO 110 FT AGL/1307 FT MSL.

NOTE: RWY 17: VEHICLES ON ROAD 660 FT FROM DER, CROSSING EXTENDED RUNWAY CENTERLINE, 18 FT AGL/962 FT MSL.

NOTE: H2/09: MULTIPLE TREES AND ANTENNAS BEGINNING 500 FT FROM HDRP, 350 FT RIGHT OF DP COURSE, UP TO 110 FT AGL/1307 FT MSL.

(3) Charting agents must publish these obstacle notes.

j. Controlling Obstacles.

(1) Document the controlling obstacle(s) found as a result of applying Table 2-1-1, Situation 3 and/or Situation 4. When there is more than one controlling obstacle to be documented, following the coordinates, include what entity it applies to; i.e., "(Ceiling)," "(Visibility)," "(Climb Gradient)," or "(Climb-To Altitude)."

Note: For all DPs, the controlling obstacle is that obstacle which, having penetrated the 40:1 Obstacle Clearance Surface (OCS) causes the most adverse climb gradient, climb-to altitude, and/or ceiling and visibility to be published.

(2) Use the following format to list the runway affected, elevation and type of obstacle, the coordinates to the nearest 0.01-second; e.g., "RWY 32: 2049 FT MSL ANTENNA 341548.01N/0862101.05W."

(3) Document the obstacle(s) that mandated development of a specific graphic ODP route. These obstacles are not considered the "controlling obstacles" because they are not a factor to the specified route being flown. Do not chart this information on the procedure. Document these obstacles as follows:

"OBSTACLES MANDATING ODP ROUTE DEVELOPMENT: RWY 36: 2049 FT MSL ANTENNA 341658.01N/0863108.05W."

k. MSA. Enter the MSA for each airport served by the DP. If the DP serves more than one airport, then precede the MSA information with the airport ID as derived from NASR or when applicable the ICAO ID, when available for locations outside the contiguous United States followed by the minimum altitude.

(1) Enter the identification and type of facility if the MSA is based on a facility, followed by the minimum altitude. For an MSA based on an ARP, use the airport ID as derived from NASR or when applicable the ICAO ID, when available for locations outside the contiguous United States followed by the minimum altitude.

(a) Single Airport Served: "MSA FROM XYZ VORTAC, 3700"

(b) Multiple Airports served:

1. "KMDW: MSA FROM XYZ VORTAC, 3700"

2. "KORD: MSA FROM XYZ VORTAC, 3700"

(c) If the MSA is sectored (not applicable for RNAV), enter the information clockwise by sectors referenced to bearings from the facility.

"MSA FROM XYZ VORTAC 360-170 4900, 170-360 3700"

l. Lost Communications Procedures. ATC is responsible for determining the need and content of lost communications instructions. Leave blank when procedures are the same as in 14 CFR part 91.185 (standard).

m. Additional Flight Data.

(1) List any additional charting instructions, items essential to clarify charting or information a specialist has determined needs charting as other than a note.

(2) Examples of data may include terrain features, airports, Special Use Airspace (SUA), holding patterns, or takeoff and departure obstacles; e.g., CHART: _____MOA; CHART: HOLDING PATTERN AT ICT VORTAC, HOLD NE, RT, 222.03 INBOUND (Include Leg Length for RNAV or DME Holding, when applicable and speed, if other than standard). Ensure that the accompanying Form 8260-2 contains the appropriate documentation for holding patterns supporting the departure procedure.

(a) Document Top Altitudes (SID Only) provided by ATC as follows:

(b) For a single airport, specify the "Top Altitude (s)" specific to a given runway(s) or transition(s), as applicable.

Examples:

CHART: TOP ALTITUDE: 16000,
or
CHART: TOP ALTITUDE RWY 8/25/34L/34R/35L/35R: 16000; RWY 16L/16R/17L/17R: 12000,
or,
CHART: TOP ALTITUDE: STEVE AND DANNO TRANSITIONS: FL230; CHNHO AND KONOH TRANSITIONS: FL180
or,
CHART: TOP ALTITUDE: ASSIGNED BY ATC.

(c) For multiple airports, in addition to paragraph 11.c(1), include the airport names and/or specific runways when "Top Altitudes" differ between airports and/or specific runways.

Examples:

Starship Muni - CHART: TOP ALTITUDE: 16000
Anywhere Intl - CHART: TOP ALTITUDE RWY 8/25/34L/34R/35L/35R: 16000; RWY 16L/16R/17L/17R: 12000
Mayfair Metro - CHART: TOP ALTITUDE 12000

If all airports share a common "Top Altitude," then state as such:
All Airports - CHART: TOP ALTITUDE: 12000

(d) For cases where there will be a need for a different Top Altitude, for example one for jet aircraft and another for turbo-prop aircraft.

Example:

CHART TOP ALTITUDE: (JETS) 7000/(TURBO-PROPS) 2000

Two numeric Top Altitudes are allowed per procedure, a third top altitude "as assigned by ATC" is also allowed, the paragraph 11.c(3) option must not be combined with either conditions specified in paragraphs 11.c(1) or 11.c(2).

n. Airports Served. List the official airport ID, city, and two-letter state code served by the departure procedure.

Note: An obstacle DP may only serve one airport.

o. Communications. Charting of the Departure Control frequency will occur automatically (without coordination). Other communication types will be depicted only when specifically requested. For additional frequencies requested by the Instrument Flight Procedure (IFP) Validation Team or specified on the worksheet, specify Chart ATIS, CLNC, DEL, etc.

p. Fixes and/or NAVAIDs. Enter only the fixes and/or NAVAIDs for which charting is requested but are not included in the textual description of the departure or entered in the transition route data.

q. Remarks.

(1) List information/data that is not to be charted; e.g., administrative data or notes for controller information (requested by ATC). However, if something does need to be charted, precede the text with the "Chart Note:" annotation.

(2) See Order 8260.19 for a chart note that is required if the SID/Graphic ODP is a Special procedure. General chart notes (not Takeoff Minimums or Departure Instructions Notes) need to include instructions to the chart organization to place the note at the bottom of the entry. Use the following format: "Chart Note at bottom of entry…"

(3) When the procedure is being processed as an abbreviated amendment [see paragraph 2-1-6.b(4)], enter "Abbreviated Amendment."

r. Flight Inspected By. Enter the name of the pilot who conducted the flight inspection/ validation, and the date.

s. Developed By. Enter the name of the FAA procedure specialist and organizational routing code. If developed under an OTA, enter the procedure developer's name and organization.

t. Approved By. Enter the name of Aeronautical Information Services Manager, or his/her delegated representative. For procedures developed under an OTA, enter the name of the organization's manager or his/her delegated representative. This individual must sign in the "approved by" space and enter the date signed. If the procedure is a "Special," this line will contain the name of and be signed by the Flight Procedures and Airspace Group Manager.

u. Required Effective Date.

(1) Enter the effective date as noted in Order 8260.19 (latest edition), Chapter 8. Optimally, submit as routine. En route submission cutoff dates apply to graphic DPs. Special procedures documented on Form 8260-7s do not have an effective date. The Flight Procedures and Airspace Group's designated representative is responsible for entering a date.

(2) If the Form 8260-15B represents a concurrent action, enter "CONCURRENT" followed by the necessary information; e.g., Airport ID, IAP name and amendment number; airspace action, or other event.

v. Coordinated With. Specify the offices/organizations the procedure was coordinated. Departure procedure coordination must be identical with the approach procedure coordination as outlined in Order 8260.19 (latest edition), Chapter 8.

w. Changes/Reasons. List changes and reasons relating to data entries.

Figure D-6.

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
GRAPHIC DEPARTURE PROCEDURES (DP)

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated
Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statue miles or feet RVR unless otherwise indicated.

DP NAME	NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
GOODHILL	ONE	GH1.GH1	NONE		

TYPE:	OBSTACLE	COPTER	SID	SPECIAL	RNAV
	☒	☐	☐	☐	☐

CANCELLATION ☐

DP ROUTE DESCRIPTION:
TAKEOFF RWY 18: CLIMB HEADING 185.22 TO 7700, THEN CLIMBING LEFT TURN DIRECT MKM VOR/DME, THEN ON MKM R-028 TO LARST, THENCE...

TAKEOFF RWY 36: CLIMB HEADING 005.22 TO 7100, THEN CLIMBING RIGHT TURN TO INTERCEPT MKM R-028 TO LARST, THENCE...

... RIGHT TURN TO INTERCEPT GHI R-265 TO GHI VORTAC, CROSS GHI VORTAC AT OR ABOVE MEA/MCA FOR ASSIGNED ROUTE OF FLIGHT.

VOCA ALL RUNWAYS: OBTAIN ATC APPROVAL FOR VCOA WHEN REQUESTING IFR CLEARANCE. CLIMB IN VISUAL CONDITIONS TO CROSS MKM VOR/DME NORTHEASTBOUND AT OR ABOVE 8100, THEN ON MKM R-028 TO LARST, THENCE...

... RIGHT TURN TO INTERCEPT GHI R-265 TO GHI VORTAC, CROSS GHI VORTAC AT OR ABOVE MEA/MCA FOR ASSIGNED ROUTE OF FLIGHT.

TRANSITION ROUTES (GRAPHIC DEPICTION ONLY):

TRANSITION NAME	TRANSITION COMPUTER CODE	FROM FIX/NAVAID	TO FIX/NAVAID	COURSE	DISTANCE	MEA	MOCA	CROSSING ALTITUDE/FIXES
								- +

PBN REQUIREMENT NOTES:

EQUIPMENT REQUIREMENT NOTES:

PROCEDURAL DATA NOTES:

TAKEOFF MINIMUMS:
RWY 16, 34: NA - OBSTACLES
RWY 36: STANDARD
RWY 18: STANDARD WITH MINIMUM CLIMB OF 380 FT PER NM TO 7700 OR1800-3 FOR VCOA

TAKEOFF OBSTACLES NOTES:

CONTROLLING OBSTACLES:
RWY18: 7359 FEET MSL TREES 433303.44N/1104648.03W
RWY 18 (VOCA): 7751 FEET MSL TREES 433807.67N/1104133.89W
RWY 36: 6949 FEET MSL TOWER 433801.40N/1104220.06W

MSA:
FROM MKM VOR/DME 8700

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DP NAME	NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
GOODHILL	ONE	GH1.GH1	NONE		

LOST COMMUNICATIONS PROCEDURES:

ADDITIONAL FLIGHT DATA:

AIRPORTS SERVED:

AIRPORT ID	CITY	STATE
XXXX	LASKY	WY

COMMUNICATIONS:

FIXES AND/OR NAVAIDS:

REMARKS:

FLIGHT INSPECTED BY	OFFICE	DATE

DEVELOPED BY	OFFICE	DATE

APPROVED BY	OFFICE	DATE	TITLE
			MANAGER

REQUIRED EFFECTIVE DATE
ROUTINE

COORDINATED WITH:

A4A ☒ ALPA ☒ AOPA ☒ APA ☒ HAI ☐ NBAA ☒ **OTHER:** ARPT MGR, LSK ATCT, ZLC

CHANGES - REASONS:

Figure D-7.

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
GRAPHIC DEPARTURE PROCEDURES (DP)

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated
Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statue miles or feet RVR unless otherwise indicated.

DP NAME	NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
MICKY	FOUR	MICKY4.MICKY	THREE	03/17/2015	

TYPE: OBSTACLE ☐ COPTER ☐ SID ☒ SPECIAL ☐ RNAV ☐

CANCELLATION ☐

DP ROUTE DESCRIPTION:
TAKEOFF RWY 31L/R: CLIMB ON HEADING 309.71 AND GRM R-190 TO CROSS GRM VORTAC AT OR ABOVE 2000, THEN RIGHT TURN TO INTERCEPT GRM R-078 TO CROSS MICKY AT OR ABOVE 6000. MAINTAIN 9000, EXPECT CLEARANCE TO FILED ALTITUDE AT MICKY.

TRANSITION ROUTES (GRAPHIC DEPICTION ONLY):

TRANSITION NAME	TRANSITION COMPUTER CODE	FROM FIX/NAVAID	TO FIX/NAVAID	COURSE	DISTANCE	MEA	MOCA	CROSSING ALTITUDE/FIXES
HOMINY	MICKY4.HMS	MICKY	TWN VORTAC	072.94 (TWN R-072)	10.89	3700		TWN AT/ABOVE 7000
		TWN VORTAC	HMS VORTAC	097.22 & 098.54 (TWN R-097 & HMS R-279)	68.47	8100	6900	
LIMPET	MICKY4.LPT	MICKY	LPT VORTAC	351.19 (LT R-171)	70.98	6000	3200	
WATSON	MICKY4.WSN	MICKY	TWN VORTAC	071.64 (TWN R-072)	10.00	3700		
		TWN VORTAC	WSN VORTAC	076.56 & 080.47	41.61	4200		

PBN REQUIREMENT NOTES:

EQUIPMENT REQUIREMENT NOTES:

PROCEDURAL DATA NOTES:
CHART NOTE: DO NOT FILE - TO BE ASSIGNED BY ATC.

TAKEOFF MINIMUMS:
RWY 13L, 13R, 18, 36: NA FOR THIS SID - NOISE ABATEMENT
RWY 31L: 300-1 3/4 OR STANDARD WITH MINIMUM CLIMB OF 310 FT PER NM TO 2000.
RWY 31R: 300-1 3/4 OR STANDARD WITH MINIMUM CLIMB OF 310 FT PER NM TO 2000 OR ALTERNATIVELY, WITH STANDARD TAKEOFF MINIMUMS AND A NORMAL 200 FT PER NM CLIMB GRADIENT, TAKEOFF MUST OCCUR NO LATER THAN 2100 FEET PRIOR TO DER

TAKEOFF OBSTACLES NOTES:

CONTROLLING OBSTACLES:
RWY 31L: 1049 FEET MSL TOWER 325304.00N/0965428.00W
RWY 31R: 739 FEET MSL BUILDING 325245.67N/0965221.00W

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DP NAME	NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
MICKY	FOUR	MICKY4.MICKY	THREE	03/17/2015	

MSA:
FROM GRM VORTAC 9000

LOST COMMUNICATIONS PROCEDURES:

ADDITIONAL FLIGHT DATA:
CHART: TOP ALTITUDE: 9000

AIRPORTS SERVED:

AIRPORT ID	CITY	STATE
KXXXX	DALLAS	TX

COMMUNICATIONS:
CHART: ASOS

FIXES AND/OR NAVAIDS:
SCY VOR/DME

REMARKS:

FLIGHT INSPECTED BY	OFFICE	DATE
	AJW-XXXX	MM/DD/YYYY

DEVELOPED BY	OFFICE	DATE
	AJV-XXXX	MM/DD/YYYY

APPROVED BY	OFFICE	DATE	TITLE
	AJV-XXXX	MM/DD/YYYY	MANAGER

REQUIRED EFFECTIVE DATE
CONCURRENT WITH AIRSPACE DOCKET 15-ASW-28

COORDINATED WITH:

A4A ☒ **ALPA** ☒ **AOPA** ☒ **APA** ☒ **HAI** ☐ **NBAA** ☒ **OTHER:** ARPT MGR, MET ATCT, REG ATCT, ZFW

CHANGES - REASONS:
1. ADDED HMS TRANSITION - RAPT REQUEST.
2. ADDED TOP ALTITUDE - ATC REQUEST.

Figure D-8.

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
GRAPHIC DEPARTURE PROCEDURES (DP)

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated
Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statue miles or feet RVR unless otherwise indicated.

DP NAME	NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
GOODHILL	ONE	GH1.GH1	NONE	MM/DD/YYYY	

TYPE: OBSTACLE ☐ COPTER ☐ SID ☐ SPECIAL ☐ RNAV ☐

CANCELLATION ☒

DP ROUTE DESCRIPTION:

Procedure Canceled Effective 01/05/2022

TRANSITION ROUTES (GRAPHIC DEPICTION ONLY):

TRANSITION NAME	TRANSITION COMPUTER CODE	FROM FIX/NAVAID	TO FIX/NAVAID	COURSE	DISTANCE	MEA	MOCA	CROSSING ALTITUDE/FIXES

PBN REQUIREMENT NOTES:

EQUIPMENT REQUIREMENT NOTES:

PROCEDURAL DATA NOTES:

TAKEOFF MINIMUMS:

TAKEOFF OBSTACLES NOTES:

CONTROLLING OBSTACLES:

MSA:

LOST COMMUNICATIONS PROCEDURES:

ADDITIONAL FLIGHT DATA:

AIRPORTS SERVED:

AIRPORT ID	CITY	STATE

COMMUNICATIONS:

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DP NAME	NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
GOODHILL	ONE	GH1.GH1	NONE	MM/DD/YYYY	

FIXES AND/OR NAVAIDS:

REMARKS:

FLIGHT INSPECTED BY	OFFICE	DATE

DEVELOPED BY	OFFICE	DATE
	AJV-XXXX	MM/DD/YYYY

APPROVED BY	OFFICE	DATE	TITLE
	AJV-XXXX	MM/DD/YYYY	MANAGER

REQUIRED EFFECTIVE DATE
ROUTINE

COORDINATED WITH:

A4A ☐ **ALPA** ☐ **AOPA** ☐ **APA** ☐ **HAI** ☐ **NBAA** ☐ **OTHER:**

CHANGES - REASONS:
PROCEDURE CANCELED - OBSTACLE DATA REVIEW - ODP NO LONGER REQUIRED

Appendix E. FAA Form 8260-15B, Graphic Departure Procedures (RNAV)

Section 1. Instructions for Completing FAA Form 8260-15B (RNAV DPs)

1. General. Refer to the paragraph 2 for direction when filling out FAA Form 8260-15Bs for RNAV Departure Procedures.

2. Complete the FAA Form 8260-15B. Enter all applicable information.

a. Title Line. The title line consists of the following six elements and will be filled in as noted.

(1) DP Name. Enter name of departure procedure. For example, the CATHEDRAL SEVEN DEPARTURE is entered as CATHEDRAL. The procedure name derived from the title line must be included in all correspondence and documentation.

(2) Number. Enter departure procedure number (spelled out); e.g., EIGHT.

(3) DP Computer Code. Enter computer identification code coordinated with ATC (see Chapter 3).

(4) Superseded Number. Departure procedure number (spelled out) superseded by this procedure. Enter "None" for a new procedure.

(5) Dated. Date of superseded procedure. Format: MM/DD/YYYY.

(6) Actual Effective Date. Leave blank. The effective date will normally be added by Aeronautical Information Services. Enter an effective date only when a specific effective date is required; e.g., MagVar rotation. If the procedure is a "Special," the Flight Procedure and Airspace Group's designated representative will enter the effective date.

b. Type. Check all boxes that apply. The choices are "Obstacle," "SID," "RNAV," 'Copter," and "Special." Attach an up-to-date, clear graphic depiction of the procedure. Do not include a textual description of transitions or departure route text.

c. DP Route Description. Provide the initial climb out instructions for each runway and a textual description of the departure route(s) to the DP termination fix. Include only information pertinent to the departure procedure. Where the initial climb out instructions from multiple runways join and share a common route/instructions prior to the DP termination fix, end each instruction with "…, thence…" followed by a paragraph containing the common information (see Figure D-2). If the DP route can be clearly understood from a graphic depiction, a complete textual description is not necessary. Simply state, "...then on depicted route." Define crossing altitudes at fixes as follows:

(1) Document crossing altitude restrictions in plain text; e.g., "CROSS GRM VORTAC AT OR ABOVE (altitude)"; "CROSS BRADY AT OR BELOW (altitude)"; "CROSS SHEMP AT OR ABOVE (altitude), AT OR BELOW (altitude)"; "CROSS EDDIE AT (altitude)."

(2) Altitude restrictions requested by ATC (not authorized for ODPs).

(a) See Order 8260.3 and/or other 8260-series directives, as applicable, for the criteria to use when establishing fix crossing altitude restrictions requested by ATC.

(b) See paragraph 2-1-1.e(2) for altitude charting constraints.

Note: Information in this section must match the corresponding information in the Altitude column of the Form 8260-15C.

(3) See Table E-1 for specific wording and required information. Specify the turn direction as either “Left/Right” as follows:

(4) DF legs. For all course changes exceeding 15 degrees.

(5) CF and TF legs. For all course changes exceeding 90 degrees.

Note: If the DP route becomes a series of consecutive TF legs with turns less than or equal to 90 degrees, a complete textual description from that point is not necessary. Simply state, “...then on depicted route” (see example, “TAKEOFF RWY 1”).

(6) Document all courses, headings, tracks, and distances to the nearest hundredth unit of measurement.

Note: Fix/NAVAID column entries will be published verbatim on the Aeronautical Information Services chart, with the exception of courses, headings, and tracks, which will be rounded by Aeronautical Information Services to the nearest whole degree.

(7) When using a VA, VI, or VM leg, specify the actual heading to be flown (e.g., do not use “climb on runway heading”). Ensure courses, tracks, headings, and distances entered on Form 8260-15B match the equivalent true values and distances entered on Form 8260-15C as appropriate.

Table E-1. Leg Type Wording and Required Information

8260-15C Leg Type	8260-15B Wording	8260-15B Required Information
CF	"course"	course/distance/turn direction***
DF	"direct"	turn direction*/distance**
FM	“track”	course
HM	“track”	course/distance/altitude/turn direction
TF	"track"	course/distance/turn direction***
VA	"heading"	heading/altitude
VI	“heading”	heading
VM	“heading”	heading

* Do not specify turn direction when a DF leg is used as the first leg of a DP. For subsequent legs, only specify turn direction for DF legs when amount of turn exceeds 15 degrees.
** Do not specify distance when part of a VA-DF leg combination.
*** Only specify turn direction for CF or TF legs when amount of turn exceeds 90 degrees.

Examples:

VI leg followed by CF leg – “TAKEOFF RWY 32R: CLIMB ON HEADING 317.66 TO INTERCEPT COURSE 041.20 TO LARRY.”

VA leg followed by DF leg – “TAKEOFF RWY 32R: CLIMB ON HEADING 317.66 TO 1000, THEN CLIMBING RIGHT TURN DIRECT LARRY.”

Although the first altitude of a VA/DF leg type sequence appears to be specified in the text instructions as a “mandatory” altitude, it must be documented on the Form 8260-15C as an “at or above” altitude to ensure all the various types of aircraft avionics equipment operate appropriately.

VA leg followed by VM leg – “TAKEOFF RWY 32R: CLIMB ON HEADING 317.66 TO 1500, FOR VECTORS TO LARRY.”

This leg type combination is used for “Radar Vectors to Join RNAV Routes” departure procedures where ATC wants the aircraft to climb on a specified heading to an altitude prior to initiating radar vectors. Following the vectoring sequence, ATC is expected to issue a clearance direct to the IDF.

CF leg - “TAKEOFF RWY 1: CLIMB ON COURSE 007.52 TO LARRY, THENCE...”

DF leg - “TAKEOFF RWY 14L: CLIMB DIRECT CURLY, THENCE...”

CF leg followed by TF legs (less than 90-degree course changes) – “TAKEOFF RWY 1: CLIMB ON COURSE 007.52 TO LARRY, THEN ON DEPICTED ROUTE TO SHEMP, THENCE...”

CF leg followed by DF leg – “TAKEOFF RWY 14L: CLIMB ON COURSE 137.64 TO CROSS CURLY AT OR ABOVE 1000, THEN CLIMBING LEFT TURN DIRECT SHEMP, THENCE...”

VM leg – "TAKEOFF RWY 35C: CLIMB ON HEADING 350.11 OR AS ASSIGNED BY ATC TO 3000, FOR VECTORS TO AIMEE, THENCE…"

FM leg – "…THEN ON TRACK 050.33, FOR VECTORS TO KAHNI."

HM leg – SEE FIGURE E-7 AND FIGURE E-13.

For climb-in hold procedures, document the inbound course in MAG; the holding pattern leg length; the minimum holding altitude, and the direction of turns in the remarks. You'll notice that a climb-in hold requires the fix to be a FO and that the holding pattern is also a FO. The leg type is a HM. Holding airspeed may also be restricted for containment based on the unique wind effect when holding at slow airspeeds. This requires the airspeed to be increased upon reaching the holding pattern altitude. If a specific holding airspeed is required, document on Form 8260-15C.

d. Transition Routes (Not Authorized for ODPs).

(1) Transition name. Name each transition according to the name of the fix at the transition termination point entered in paragraph 4.d. Do not include the word "TRANSITION."

(2) Transition computer codes. Enter computer code as coordinated with ATC (see Chapter 3).

(3) From FIX/NAVAID. Fix/NAVAID where each transition begins (normally, the en route fix where the DP ends); e.g., DANNY, BICKR.

(4) To FIX/NAVAID. En route fix/NAVAID where each transition ends; e.g., DANNY, BICKR. If a transition has multiple segments, enter one line for each segment.

(5) Course. Specify the course for each transition segment. Enter the actual magnetic course to the hundredth of a degree (see Order 8260.19, Chapter 8). When documenting the course between facilities, provide this information for both facilities.

Examples:

DF leg – "DIRECT," "RIGHT TURN DIRECT," or "LEFT TURN DIRECT"

CF leg – Not used for transition routing.

TF leg – "TRACK 067.11" or "RIGHT TURN, TRACK 054.94"

Course – 076.56 & 080.47 (TWN R-077 & WSN R-260)

Note 1: The VA or VI leg, when used, will be used only on the first leg of a departure and as such, a VA/VI leg should not appear in the transition route.

Note 2: Aeronautical Information Services will round for publication.

(6) Distance. Specify the distance for each transition segment. Enter the distance to the hundredth of a mile (see Order 8260.19, Chapter 8). When documenting the course/distance between facilities, provide this information for both facilities.

Example: 41.61 **Note:** Aeronautical Information Services will round for publication.

(7) MEA. Enter MEA along transition route. By definition, the MEA also encompasses the MRA. If transitions share a common segment, make sure the MEA for that segment is the same for each transition.

(8) MOCA. Enter MOCA along transition route. To reduce chart clutter, do not publish MOCAs less than 500 below MEAs.

(9) Crossing altitudes/fixes. When a SID Transition(s) must accommodate an ATC required altitude at a specified fix, only document the ATC altitude; e.g., "BECKY AT/ABOVE 9000." No secondary altitude is required on transition routes since an MEA is specified that will provide obstacle clearance and ensure design constraints are met. The ATC altitude must not be lower than the MEA.

e. PBN Requirement Notes. List all restrictions for navigation performance to fly the procedure. Document PBN in accordance with paragraph 2-1-1.f(3) on the Form 8260-15B.

f. Equipment Requirement Notes. List all restrictions for navigation performance to fly the procedure. Document PBN in accordance with paragraph 2-1-1.f on the Form 8260-15B.

g. Procedural Data Notes. List any procedural data information that is to appear in note form on the graphic depiction; e.g., turbo jet only, etc. See paragraph 2-1-1, for specific information that must be charted and entered in this section. See Order 8260.19 for a chart note that is required if the SID/Graphic ODP is a Special procedure (see Appendix F for helicopters).

h. Takeoff Minimums:

(1) List the runway(s) that are not authorized for IFR departures. If none of the actions listed in Table E-1 are feasible, or if another reason(s) precludes DP development (noise abatement, environmental, etc.), an IFR departure must not be authorized.

Examples:

RWY 27: NA - OBSTACLES.
RWY 35: NA - ENVIRONMENTAL.
RWY 17: NA - OBSTACLES AND NOISE ABATEMENT.

Followed by:

(2) List the runway(s) authorized standard takeoff minimums.

Example:

RWY 9, 31: STANDARD.

Followed by:

(3) List the runway(s) that have any deviations from standard minimums and/or restrictions.

Examples:

TAKEOFF MINIMUMS: RWY 13: 400-2 OR STANDARD WITH MINIMUM CLIMB OF 310 FT/NM TO 900, OR ALTERNATIVELY, WITH STANDARD TAKEOFF MINIMUMS AND A NORMAL 200 FT/NM CLIMB GRADIENT, TAKEOFF MUST OCCUR NO LATER THAN 1800 FEET PRIOR TO DER.

TAKEOFF MINIMUMS: RWY 27: STANDARD WITH MINIMUM CLIMB OF 280 FT/NM TO 2500, OR ALTERNATIVELY, WITH STANDARD TAKEOFF MINIMUMS AND A NORMAL 200 FT/NM CLIMB GRADIENT, TAKEOFF MUST OCCUR NO LATER THAN 1800 FEET PRIOR TO DER.

i. Takeoff Obstacle Notes. Enter detailed takeoff obstacle notes only when the procedure is designated as an ODP. For SIDs, do not enter detailed obstacle notes. At locations where a textual ODP has been established that contain "Takeoff Obstacle Notes," enter: "See Form 8260-15A, Takeoff Minimums and Obstacle Departure Procedures (ODP)."

(1) Enter a note regarding obstacles found as a result of applying Table 2-1-1, Situation 2 action, and Situation 3, action "A."

Note: An AAO must not be identified/published as a "takeoff obstacle" because pilots are not familiar with the AAO concept. However, publishing a ceiling and visibility will allow for those situations where the CG cannot be achieved and still afford the pilot the opportunity to visually acquire and avoid any obstruction that could have been built without notice to the FAA.

(2) The note must include the runway affected and inform the pilot of the obstacle(s) type and location relative to the DER, and height [AGL/elevation (MSL)]. When there are obstacles on both sides of the runway centerline extended, note the most significant obstacles left and right of the runway centerline. Phrases such as "multiple antennas, numerous trees, etc." are acceptable. Specify distances one NM or greater to the nearest whole and tenth of a NM (e.g., 2.1 NM from DER). Also, when identifying these obstacles, be as descriptive as reasonably possible so as to provide the pilot a clear understanding of what to prepare and/or look for; e.g., instead of just saying "power poles," it would be more helpful to use the descriptor of "power lines" in some instances. Another example would be instead of just saying "terrain," if applicable; use of "ridgeline" or "bluff" would provide a clearer picture. Specify distances less than one NM in feet (e.g., 1280 FT from DER).

Examples:

NOTE: RWY 35: TREES 1280 FT FROM DER, 120 FT LEFT OF CENTERLINE, 50 FT AGL/1527 FT MSL.

NOTE: RWY 35: BUILDING 2.1 NM FROM DER, 160 FT LEFT OF CENTERLINE, 350 FT AGL/1927 FT MSL.

NOTE: RWY 17: MULTIPLE BUILDINGS 500 FT FROM DER, 350 FT RIGHT OF CENTERLINE, 50 FT AGL/1107 FT MSL. ANTENNA 6000 FT FROM DER, 1235 FT LEFT OF CENTERLINE, 200 FT AGL/1257 FT MSL.

NOTE: RWY 27: MULTIPLE TREES AND ANTENNAS BEGINNING 500 FT FROM DER, 350 FT RIGHT OF CENTERLINE, UP TO 110 FT AGL/1307 FT MSL.

NOTE: RWY 17: VEHICLES ON ROAD 660 FT FROM DER, CROSSING EXTENDED RUNWAY CENTERLINE, 18 FT AGL/962 FT MSL.

(3) Charting agents must publish these obstacle notes.

j. Controlling Obstacles.

(1) Document the controlling obstacle(s) found as a result of applying Table 2-1-1, Situation 3 and/or Situation 4. When there is more than one controlling obstacle to be documented, following the coordinates, include what entity it applies to; i.e., "(Ceiling)," "(Visibility)," "(Climb Gradient)," or "(Climb-To Altitude)."

Note: For all DPs, the controlling obstacle is that obstacle which, having penetrated the 40:1 OCS causes the most adverse climb gradient, climb-to altitude, and/or ceiling and/or visibility to be published.

(2) Use the following format to list the runway affected, elevation and type of obstacle, the coordinates to the nearest 0.01 second, and if applicable, OCS height above DER elevation; e.g., "RWY 32: 2049 FT MSL ANTENNA 341548.01N/0862101.05W."

(3) Document the obstacle(s) that mandated development of a specific RNAV ODP route. These obstacles are not considered the "controlling obstacles" because they are not a factor to the specified route being flown. Do not chart this information on the procedure. Document these obstacles as follows:

"OBSTACLES MANDATING ODP ROUTE DEVELOPMENT: RWY 36: 2049 FT MSL ANTENNA 341658.01N/0863108.05W."

k. MSA. Enter the MSA for each airport served by the DP. If the DP serves more than one airport, then precede the MSA information with the airport ID. Enter the airport ID as derived from NASR or when applicable the ICAO ID, when available, for locations outside the contiguous United States followed by the minimum altitude. RNAV MSAs must not be sectored.

"MSA FROM KORD 4000"
"MSA FROM KMDW, 3000"

l. Lost Communications Procedures. ATC is responsible for determining the need and content of lost communications instructions. Leave blank when procedures are the same as in 14 CFR Part 91.185 (standard).

m. Additional Flight Data. List any additional charting instructions, items essential to clarify charting or information a specialist has determined needs charting as other than a note. Examples of data may include:

(1) Terrain features, airports, Special Use Airspace (SUA), holding patterns, or takeoff and departure obstacles; e.g., CHART: _____ MOA; CHART: HOLDING PATTERN AT ICT VORTAC, HOLD NE, RT, 222.03 INBOUND (include Leg Length for RNAV or DME Holding, when applicable and speed, if other than standard). Ensure that the accompanying Form 8260-2 contains the appropriate documentation for holding patterns supporting the departure procedure.

(2) Document top altitudes (SID only) provided by ATC as follows:

(a) For a single airport, specify the "Top Altitude (s)" specific to a given runway(s) or transition(s), as applicable.

Examples:

CHART: TOP ALTITUDE: 16000,
or
CHART: TOP ALTITUDE RWY 8/25/34L/34R/35L/35R: 16000; RWY 16L/16R/17L/17R: 12000,
or
CHART: TOP ALTITUDE: STEVE AND DANNO TRANSITIONS: FL230; CHNHO AND KONOH TRANSITIONS: FL180,
or,
CHART: TOP ALTITUDE: ASSIGNED BY ATC.

(b) For multiple airports, in addition to paragraph 11.b(1), include the airport names and/or specific runways when "Top Altitudes" differ between airports and/or specific runways.

Examples:

Starship Muni - CHART: TOP ALTITUDE: 16000
Anywhere Intl - CHART: TOP ALTITUDE RWY 8/25/34L/34R/35L/35R: 16000; RWY 16L/16R/17L/17R: 12000.
Mayfair Metro - CHART: TOP ALTITUDE: 12000.

If all airports share a common "Top Altitude," then state as such:
All Airports - CHART: TOP ALTITUDE: 12000.

(c) For cases where there will be a need for a different "Top Altitude," one for jet aircraft and another for propeller driven aircraft.

Example:

CHART TOP ALTITUDE: (JETS) 7000/(PROPS) 2000.

Note: Since no more than two numerical "Top Altitudes" are allowed per procedure, and a third altitude, "as assigned by ATC," the paragraph 11.b(3) option must not be combined with either conditions specified in paragraphs 11.b(1) or 11.b(2).

(3) Document the minimum crossing altitude at the IF on RNAV Radar departure procedures as follows: CHART: MINIMUM CROSSING ALTITUDE AT (RNAV IF)-(Altitude).

(4) Enter one of the following for DME/DME assessment results:

(a) "DME/DME ASSESSMENT: SAT (RNP 1.0 OR 2.0 AS APPROPRIATE)." Indicates a successful assessment to the RNP value specified.

(b) "DME/DME ASSESSMENT: UNSAT (RNP 1.0), SAT (RNP 2.0)." Indicates an unsuccessful assessment to RNP 1.0, but returned a successful assessment to RNP 2.0.

(c) "DME/DME ASSESSMENT: UNSAT." Indicates an unsuccessful assessment to RNP 2.0.

(d) "DME/DME Assessment: NOT CONDUCTED."

Note 1: If the DME/DME assessment indicates "UNSAT" or "NOT CONDUCTED," the PBN Requirements Sensor note "GPS " must be entered in the PBN Requirement Notes.

Note 2: The DME/DME assessment process is covered in FAA Order 7470.1, Distance Measuring Equipment (DME)/DME Infrastructure Evaluation for Area Navigation (RNAV) Routes and Procedures.

n. Airports Served. Except for departures that use Radar vectors to join RNAV routes, RNAV DPs must only serve one airport. List the airport ID, city, and two-letter state code served by the departure procedure.

(1) Single Airport Served: "MSA FROM XYZ VORTAC, 3700"

(2) Multiple Airports Served:

(a) "KMDW: MSA FROM XYZ VORTAC, 3700"

(b) "KORD: MSA FROM XYZ VORTAC, 3700"

o. Communications. Charting of the Departure Control Frequency will occur automatically (without communication). Other communication types will be depicted only when specifically requested. For additional frequencies requested by the IFP Validation Team or specified on the worksheet, specify Chart ATIS, CLNC DEL, etc.

p. Fixes and/or NAVAIDs. Enter only those fixes and/or NAVAIDs for which charting is requested but are not included in the textual description of the departure or entered in the transition route data.

q. Remarks.

(1) List information/data, which is not to be charted; e.g., administrative data or notes for controller information (requested by ATC). However, if something does need to be charted, precede the text with the "Chart Note:" annotation.

(2) See Order 8260.19 for a chart note that is required if the SID/Graphic ODP is a Special Instrument Procedure. General chart notes (not Takeoff Minimums or Departure Instructions Notes) need to include instructions to the chart organization to place the note at the bottom of the entry. Use the following format: "Chart Note at bottom of entry…"

(3) When an AAUP has been established (see paragraph 2-1-1.i), a chart note must be established as follows: "CHART NOTE: SEE ADDITIONAL REQUIREMENTS ON AAUP."

(4) When the procedure is being processed as an abbreviated amendment [see paragraph 2-1-6.b(4)], enter "Abbreviated Amendment."

r. Flight Inspected By. Enter the name of the pilot who conducted the flight inspection/ validation, and the date.

s. Developed By. Enter the name of the FAA procedure specialist and organizational routing code. If developed under an OTA, enter the procedure developer's name and organization.

t. Approved By. Enter the name of the Aeronautical Information Services Manager, or his/her delegated representative. For procedures developed under an OTA, enter the name of the organization's manager his/her delegated representative. This individual must sign in the

"approved by" space and enter the date signed. If the procedure is a "Special," this line will contain the name of and be signed by the Flight Procedures and Airspace Group Manager.

u. Required Effective Date.

(1) Enter the effective date as noted in Order 8260.19 (latest edition), Chapter 8. Optimally, submit as routine. En route submission cutoff dates apply to graphic DPs. Special procedures documented on Form 8260-7s do not have an effective date. The Flight Procedures and Airspace Group's representative is responsible for entering a date.

(2) If the Form 8260-15B represents a concurrent action, enter "CONCURRENT" followed by the necessary information; e.g., Airport ID, IAP name and amendment number, airspace action, or other event.

v. Coordinated With. Specify the offices/organizations the procedure was coordinated. Departure procedure coordination must be identical with the approach procedure coordination as outlined in Order 8260.19 (latest edition), Chapter 8.

w. Changes - Reasons. List changes and reasons relating to data entries.

Figure E-1.

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
GRAPHIC DEPARTURE PROCEDURES (DP)

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated
Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statue miles or feet RVR unless otherwise indicated.

DP NAME	NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
SHEMP	ONE	SHEMP1.SHEMP	NONE		

TYPE:	OBSTACLE	COPTER	SID	SPECIAL	RNAV
	☐	☐	☒	☐	☒

CANCELLATION ☐

DP ROUTE DESCRIPTION:
TAKEOFF RWY 1: CLIMB ON COURSE 007.52 TO LARRY, THEN ON DEPICTED ROUTE TO SHEMP, THENCE...

TAKEOFF RWY 14L: CLIMB ON COURSE 137.64 TO CROSS CURLY AT OR ABOVE 1000, THEN CLIMBING LEFT TURN DIRECT TO SHEMP, THENCE...

TAKEOFF RWY 32R: CLIMB ON HEADING 317.66 TO 1000, THEN CLIMBING RIGHT TURN TO LARRY, THEN ON DEPICTED ROUTE TO SHEMP, THENCE...

... (TRANSITION). MAINTAIN 5000, EXPECT FILED ALTITUDE 10 MINUTES AFTER DEPARTURE

TRANSITION ROUTES (GRAPHIC DEPICTION ONLY):

TRANSITION NAME	TRANSITION COMPUTER CODE	FROM FIX/NAVAID	TO FIX/NAVAID	COURSE	DISTANCE	MEA	MOCA	CROSSING ALTITUDE/FIXES
FOGART	SHEMP1.LGH	SHEMP	FGH VORTAC	TRACK 067.11	87.24	5000	3700	
JENKO	SHEMP1.JKL	SHEMP	JKLVORTAC	TRACK 098.77	92.51	5000		
LAYMAN	SHEMP1.LMN	SHEMP	LMN VORTAC	RIGHT TURN TRACK 154.94	47.23	5000	4100	
ROOSTER	SHEMP1.RST	SHEMP	LMN VORTAC RST VORTAC	RIGHT TURN TRACK 154.94 TRACK 098.38	47.23 39.79	5000 7000	4100 4400	

PBN REQUIREMENT NOTES:
RNAV 1 - DME/DME/IRU OR GPS

EQUIPMENT REQUIREMENT NOTES:
RADAR REQUIRED

PROCEDURAL DATA NOTES:

TAKEOFF MINIMUMS:
RWY 14R, 19, 32L: NA - AIR TRAFFIC.
RWY 1, 32R: STANDARD.
RWY 14L: 500-2 1/2 OR STANDARD WITH MINIMUM CLIMB OF 330 FT PER NM TO 1200

TAKEOFF OBSTACLES NOTES:
NOTE: RWY 1: OBSTRUCTION LIGHT 1022 FEET FROM DER, 672 FEET RIGHT OF CENTERLINE, 73 FEET AGL/543 FEET MSL
NOTE: RWY 14L: BUILDING 1.98 NM FROM DER, 575 FEET RIGHT OF CENTERLINE, 478 FEET AGL/974 FEET MSL
NOTE: RWY 32R: TREES 143 FEET LEFT OF DER, 21 FEET AGL/498 FEET MSL

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DP NAME	NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
SHEMP	ONE	SHEMP1.SHEMP	NONE		

CONTROLLING OBSTACLES:
RWY 1: 543 FEET MST OBSTRUCTION LIGHT 325141.44/N0965102.87W
RWY 14L: 974 FEET MSL BUILDING 324911.09N/0964838.62W
RWY 32R: 1049 FEET MSL TOWER 325216.19N/0985523.02W, 498 FEET MSL TREES 325125.20N/0985125.68W

MSA:
FROM FOUR CLOWNS REGIONAL 4000

LOST COMMUNICATIONS PROCEDURES:

ADDITIONAL FLIGHT DATA:
DME/DME ASSESSMENT: SAT

AIRPORTS SERVED:

AIRPORT ID	CITY	STATE
KXXXX	VICTORVECTORVILLE	TX

COMMUNICATIONS:

FIXES AND/OR NAVAIDS:

REMARKS:

FLIGHT INSPECTED BY	OFFICE	DATE
	AJW-XXXX	MM/DD/YYYY

DEVELOPED BY	OFFICE	DATE
	AJV-XXXX	MM/DD/YYYY

APPROVED BY	OFFICE	DATE	TITLE
	AJV-XXXX	MM/DD/YYYY	MANAGER

REQUIRED EFFECTIVE DATE
ROUTINE

COORDINATED WITH:

A4A ☒ **ALPA** ☐ **AOPA** ☒ **APA** ☒ **HAI** ☐ **NBAA** ☒ **OTHER:** ARPT MGR, FCR ATCT, ZFW

CHANGES - REASONS:

Figure E-2.

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
GRAPHIC DEPARTURE PROCEDURES (DP)

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statue miles or feet RVR unless otherwise indicated.

DP NAME	NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
SHEMP	TWO	SHEMP2.SHEMP	ONE		

TYPE:	OBSTACLE	COPTER	SID	SPECIAL	RNAV
	☐	☐	☒	☐	☒

CANCELLATION ☐

DP ROUTE DESCRIPTION:
TAKEOFF RWY 1: CLIMB ON COURSE 007.52 TO CROSS LARRY AT OR ABOVE 2000, THEN ON TRACK 038.92 TO CROSS MOEHH AT OR ABOVE 3000, THEN ON TRACK 091.64 TO CROSS SHEMP AT OR ABOVE 5000, AT OR BELOW 8000, THENCE...

TAKEOFF RWY 14L: CLIMB ON COURSE 137.64 TO CROSS CURLY AT OR ABOVE 1000, THEN CLIMBING LEFT TURN DIRECT TO SHEMP, THENCE...

TAKEOFF RWY 32R: CLIMB ON HEADING 317.66 TO 1000, THEN CLIMBING RIGHT TURN TO LARRY, THEN ON DEPICTED ROUTE TO SHEMP, THENCE...

... (TRANSITION). MAINTAIN 5000, EXPECT FILED ALTITUDE 10 MINUTES AFTER DEPARTURE

TRANSITION ROUTES (GRAPHIC DEPICTION ONLY):

TRANSITION NAME	TRANSITION COMPUTER CODE	FROM FIX/NAVAID	TO FIX/NAVAID	COURSE	DISTANCE	MEA	MOCA	CROSSING ALTITUDE/FIXES	
FOGART	SHEMP2.LGH	SHEMP	FGH VORTAC	TRACK 067.11	87.23	5000	3700		- +
JENKO	SHEMP2.JKL	SHEMP	JKL VORTAC	TRACK 096.77	92.51	5000			- +
OPAKE	SHEMP2.OPQ	SHEMP	OPQ VORTAC	LEFT TURN TRACK 003.19	52.21	4000	3300		- +
ROOSTER	SHEMP2.RST	SHEMP	RST VORTAC	TRACK 098.38	39.797	7000	4900		- +

PBN REQUIREMENT NOTES:
RNAV 1 - GPS

EQUIPMENT REQUIREMENT NOTES:

PROCEDURAL DATA NOTES:

TAKEOFF MINIMUMS:
RWY 14R, 19, 32L: NA - AIR TRAFFIC
RWY 1, 32R: STANDARD
RWY 14L: 500-2 1/2 OR STANDARD WITH MINIMUM CLIMB OF 330 FT PER NM TO 1200

TAKEOFF OBSTACLES NOTES:
SEE FORM 8260-15A, TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP).

CONTROLLING OBSTACLES:
RWY 1: 543 FEET MSL OBSTRUCTION LIGHT 325141.44/N0965102.87W
RWY 14L: 974 FEET MSL BUILDING 324911.09N/0964838.62W
RWY 32R: 1049 FEET MSL TOWER 325216.19N/0985523.02W, 498 FEET MSL TREES 325125.20N/0985125.68W

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DP NAME	NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
SHEMP	TWO	SHEMP2.SHEMP	ONE		

MSA:
FROM FOUR CLOWNS REGIONAL 5000

LOST COMMUNICATIONS PROCEDURES:

ADDITIONAL FLIGHT DATA:
DME/DME ASSESSMENT: UNSAT
CHART SPEED ICON: MAXIMUM SPEED 230 KIAS AT MOEHH
CHART: TOP ALTITUDE: 5000

AIRPORTS SERVED:

AIRPORT ID	CITY	STATE
KXXXX	VICTORVECTORVILLE	TX

COMMUNICATIONS:

FIXES AND/OR NAVAIDS:

REMARKS:

FLIGHT INSPECTED BY	OFFICE	DATE
	AJW-XXXX	MM/DD/YYYY

DEVELOPED BY	OFFICE	DATE
	AJV-XXXX	MM/DD/YYYY

APPROVED BY	OFFICE	DATE	TITLE
	AJV-XXXX	MM/DD/YYYY	MANAGER

REQUIRED EFFECTIVE DATE
ROUTINE

COORDINATED WITH:

A4A ☒ **ALPA** ☐ **AOPA** ☒ **APA** ☒ **HAI** ☐ **NBAA** ☒ **OTHER:** ARPT MGR, FCR ATCT, ZFW

CHANGES - REASONS:
1. ADDED OPQ TRANSITION - RAPT REQUEST
2. REMOVED LMN VOR/DME FROM RST TRANSITION - RAPT REQUEST
3. RELOCATED MOEHH - RAPT REQUEST
4. DELETED AUTHORIZATION TO USE DME/DME/IRU - ABILITY TO USE DME/DME/IRU NO LONGER AVAILABLE
5. DELETED NOTE: RADAR REQUIRED FOR NON-GPS EQUIPPED AIRCRAFT - ABILITY TO USE DME/DME/IRU NO LONGER AVAILABLE
6. ADDED TOP ALTITUDE - ATC REQUEST
7. DELETED TAKEOFF OBSTACLE NOTES - POLICY CHANGED TO NOT CHART THESE ON SIDS; PILOT WILL REFER TO ODP FOR TAKEOFF OBSTACLE NOTES

Figure E-3.

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
GRAPHIC DEPARTURE PROCEDURES (DP)

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated
Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statue miles or feet RVR unless otherwise indicated.

DP NAME	NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
ARKES	ONE	ARKES1.ARKES	NONE		

TYPE:	OBSTACLE	COPTER	SID	SPECIAL	RNAV
	☐	☐	☒	☐	☒

CANCELLATION ☐

DP ROUTE DESCRIPTION:
TAKEOFF RWY 9L: CLIMB ON HEADING 093.36 TO 520, THEN DIRECT JUMAR, THEN LEFT TURN ON TRACK 351.15 TO HAPOR, THEN ON DEPICTED ROUTE, THENCE...
TAKEOFF RWY 9R: CLIMB ON HEADING 093.38 TO 520, THEN CLIMBING LEFT TURN DIRECT JUMAR, THEN LEFT TURN ON TRACK 351.15 TO HAPOR, THEN ON DEPICTED ROUTE, THENCE...
TAKEOFF RWY 13: CLIMB ON HEADING 138.38 TO 520, THEN CLIMBING LEFT TURN DIRECT JUMAR, THEN LEFT TURN ON TRACK 351.15 TO HAPOR, THEN ON DEPICTED ROUTE, THENCE...
TAKEOFF RWY 27L: CLIMB ON HEADING 273.39 TO 520, THEN CLIMBING RIGHT TURN DIRECT NOVAE, THEN ON DEPICTED ROUTE, THENCE...
TAKEOFF RWY 27R: CLIMB ON HEADING 273.36 TO 520, THEN DIRECT NOVAE, THEN ON DEPICTED ROUTE, THENCE...
TAKEOFF RWY 31: CLIMB ON HEADING 318.37 TO 520, THEN DIRECT NOVAE, THEN ON DEPICTED ROUTE, THENCE...

...MAINTAIN 3000. EXPECT CLEARANCE FILED ALTITUDE 10 MINUTES AFTER DEPARTURE.

TRANSITION ROUTES (GRAPHIC DEPICTION ONLY):

TRANSITION NAME	TRANSITION COMPUTER CODE	FROM FIX/NAVAID	TO FIX/NAVAID	COURSE	DISTANCE	MEA	MOCA	CROSSING ALTITUDE/FIXES
								- +

PBN REQUIREMENT NOTES:
RNAV 1 - DME/DME/IRU OR GPS

EQUIPMENT REQUIREMENT NOTES:
RADAR REQUIRED FOR NON-GPS AIRCRAFT

PROCEDURAL DATA NOTES:
NOTE: TURBOJET AIRCRAFT ACCELERATE TO 250 KTS WITHIN 7NM OF DEPARTURE, IF UNABLE ADVISE ATC

TAKEOFF MINIMUMS:
RWY 9L, 9R: STANDARD
RWY 13, 27L, 27R, 31: STANDARD WITH CLIMB OF 500 FT PER NM TO 520

TAKEOFF OBSTACLES NOTES:
SEE FORM 8260-15A, TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP).

CONTROLLING OBSTACLES:
RWY 9L: 362 FEET MSL STACKS 260509.00N/0800730.00W
RWY 13: 1049 FEET MSL TOWER 255935.28N/0801026.00W
RWY 27L: 1049 FEET MSL TOWER 255935.28N/0801026.00W
RWY 27R: 1049 FEET MSL TOWER 255935.28N/0801026.00W

MSA:
FROM FORT LAUDERDALE 3000

LOST COMMUNICATIONS PROCEDURES:

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DP NAME	NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
ARKES	ONE	ARKES1.ARKES	NONE		

ADDITIONAL FLIGHT DATA:
DME/DME/IRU ASSESSMENT: SAT (RNP 2.0)
CHART: TOP ALTITUDE: 3000

AIRPORTS SERVED:

AIRPORT ID	CITY	STATE
KFLL	FORT LAUDERDALE	FL

COMMUNICATIONS:
CHART: ATIS

FIXES AND/OR NAVAIDS:

REMARKS:

FLIGHT INSPECTED BY	OFFICE	DATE
	AJV-XXXX	MM/DD/YYYY

DEVELOPED BY	OFFICE	DATE
	AJV-XXXX	MM/DD/YYYY

APPROVED BY	OFFICE	DATE	TITLE
	AJV-XXXX	MM/DD/YYYY	MANAGER

REQUIRED EFFECTIVE DATE
ROUTINE

COORDINATED WITH:

A4A ☒ **ALPA** ☒ **AOPA** ☒ **APA** ☒ **HAI** ☐ **NBAA** ☒ **OTHER:** MIA APP CON, ZMA

CHANGES - REASONS:

Figure E-4.

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
GRAPHIC DEPARTURE PROCEDURES (DP)

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated
Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statue miles or feet RVR unless otherwise indicated.

DP NAME	NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
FLAVR	ONE	FLAVR1.FLAVR	NONE		

TYPE: OBSTACLE ☐ COPTER ☐ SID ☐ SPECIAL ☐ RNAV ☐

CANCELLATION ☒

DP ROUTE DESCRIPTION:

Procedure Canceled Effective 01/05/2022

TRANSITION ROUTES (GRAPHIC DEPICTION ONLY):

TRANSITION NAME	TRANSITION COMPUTER CODE	FROM FIX/NAVAID	TO FIX/NAVAID	COURSE	DISTANCE	MEA	MOCA	CROSSING ALTITUDE/FIXES

PBN REQUIREMENT NOTES:

EQUIPMENT REQUIREMENT NOTES:

PROCEDURAL DATA NOTES:

TAKEOFF MINIMUMS:

TAKEOFF OBSTACLES NOTES:

CONTROLLING OBSTACLES:

MSA:

LOST COMMUNICATIONS PROCEDURES:

ADDITIONAL FLIGHT DATA:

AIRPORTS SERVED:

AIRPORT ID	CITY	STATE

COMMUNICATIONS:

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DP NAME	NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
FLAVR	ONE	FLAVR1.FLAVR	NONE		

FIXES AND/OR NAVAIDS:

REMARKS:

FLIGHT INSPECTED BY	OFFICE	DATE

DEVELOPED BY	OFFICE	DATE
	AJV-XXXX	MM/DD/YYYY

APPROVED BY	OFFICE	DATE	TITLE
	AJV-XXXX	MM/DD/YYYY	MANAGER

REQUIRED EFFECTIVE DATE
ROUTINE

COORDINATED WITH:

A4A ☐ ALPA ☐ AOPA ☐ APA ☐ HAI ☐ NBAA ☐ OTHER:

CHANGES - REASONS:
PROCEDURE CANCELED - ATC REQUEST

Figure E-5.

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
GRAPHIC DEPARTURE PROCEDURES (DP)

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statue miles or feet RVR unless otherwise indicated.

DP NAME	NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
STAYY	TWO	STAYY2.STAYY	ONE	02/01/2018	

TYPE:	OBSTACLE	COPTER	SID	SPECIAL	RNAV
	☐	☐	☒	☐	☒

CANCELLATION ☐

DP ROUTE DESCRIPTION:
TAKEOFF RWY 20R: CLIMB ON COURSE 195.91 TO CROSS BIKKL AT OR ABOVE 556, THEN LEFT TURN TO HEFAY, THEN RIGHT TURN TO CROSS PAPAU AT OR BELOW 5000 AND AT OR BELOW 220 KIAS, THEN LEFT TURN TO CROSS LRREN AT OR BELOW 5000, THEN LEFT TURN TO HTCHR, THEN ON TRACK 140.28 TO TANGL, THEN ON TRACK 102.72 TO CROSS SHIRR AT OR ABOVE 7000, THEN ON TRACK 072.64 TO DANAH, THEN ON TRACK 048.34 TO CROSS STAYY AT OR ABOVE 9000, THENCE...

...ON (TRANSITION). MAINTAIN 13000. EXPECT FILED ALTITUDE 10 MINUTES AFTER DEPARTURE.

TRANSITION ROUTES (GRAPHIC DEPICTION ONLY):

TRANSITION NAME	TRANSITION COMPUTER CODE	FROM FIX/NAVAID	TO FIX/NAVAID	COURSE	DISTANCE	MEA	MOCA	CROSSING ALTITUDE/FIXES
AVRRY	STAYY2.AVRRY	STAYY	FNCHH	TRACK 079.58	12.24	9000	5800	- +
			TBERD	TRACK 063.61	12.51	10000	5300	- +
			PEELR	TRACK 079.68	33.13	15000	10800	- +
			MTBAL	TRACK 079.71	14.77	15000	8700	- +
			AVRRY	TRACK 057.20	25.24	15000	7500	- +
CENERY	STAYY2.CNERY	STAYY	WIILD	TRACK 098.42	13.40	9000	5700	- +
			FLWRZ	TRACK 079.30	16.65	10000	7000	- +
			BLCKD	TRACK 078.71	23.94	15000	10800	- +
			CSTWY	TRACK 078.96	19.59	15000	10800	- +
			CNERY	TRACK 058.68	23.99	15000	5900	- +
OTAYY	STAYY2.OTAYY	STAYY	WIILD	TRACK 098.42	13.40	9000	5700	- +
			WAGAV	TRACK 143.57	15.78	10000	4600	- +
			OTAYY	TRACK 169.02	35.92	15000	4300	- +
TCATE	STAYY2.TCATE	STAYY	WIILD	TRACK 098.42	13.40	90000	5700	- +
			TCATE	TRACK 125.64	56.29	15000	8700	- +

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DP NAME	NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
STAYY	TWO	STAYY2.STAYY	ONE	02/01/2018	

PBN REQUIREMENT NOTES:
RNP 1 - GPS, RF.

EQUIPMENT REQUIREMENT NOTES:

PROCEDURAL DATA NOTES:
NOTE: TURBOJET ONLY
NOTE: PARACHUTE JUMPING ALL HOURS, 14000 AND BELOW, NORTH OF ROUTE BETWEEN STAYY AND FNCHH

TAKEOFF MINIMUMS:
RWY 2L, 2R, 20L: NA-ATC.
RWY 20R: STANDARD WITH A MINIMUM CLIMB OF 500 FT PER NM TO 600

TAKEOFF OBSTACLES NOTES:
SEE FORM 8260-15A, TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP)

CONTROLLING OBSTACLES:
RWY 20R: 919 FT MSL AAO 333627.20N/1175013.20W

MSA:
FROM JOHN WAYNE AIRPORT - ORANGE COUNTY 15000

LOST COMMUNICATIONS PROCEDURES:

ADDITIONAL FLIGHT DATA:
DME/DME ASSESSMENT: NOT CONDUCTED.
CHART: TOP ALTITUDE: 13000.
CHART: SPEED ICON MAXIMUM SPEED 220 KIAS AT PAPAU.

AIRPORTS SERVED:

AIRPORT ID	CITY	STATE
KSNA	SANTA ANA	CA

COMMUNICATIONS:
CHART: GND CON (EAST) (WEST)

FIXES AND/OR NAVAIDS:

REMARKS:
1. ABBREVIATED AMENDMENT.

DP NAME	NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
STAYY	TWO	STAYY2.STAYY	ONE	02/01/2018	

FLIGHT INSPECTED BY	OFFICE	DATE
	AJW-XXXX	MM/DD/YYYY

DEVELOPED BY	OFFICE	DATE
	AJV-XXXX	MM/DD/YYYY

APPROVED BY	OFFICE	DATE	TITLE
	AJV-XXXX	MM/DD/YYYY	MANAGER

REQUIRED EFFECTIVE DATE
ROUTINE

COORDINATED WITH:

A4A ☒ **ALPA** ☒ **AOPA** ☒ **APA** ☒ **HAI** ☐ **NBAA** ☐ **OTHER:** ZLA, SOCAL APP CON, SNA ATCT, AMGR

CHANGES - REASONS:
1. ADDED NOTE: DO NOT FILE - TO BE ASSIGNED BY ATC. - ATC REQUEST.
2. REPLACED TAKEOFF OBSTACLE NOTES WITH SEE FORM 8260-15A, TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP) - IAW AFS WAIVER TO FAAO 8260.46F MEMO.

Figure E-6.

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
GRAPHIC DEPARTURE PROCEDURES (DP)

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated
Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statue miles or feet RVR unless otherwise indicated.

DP NAME	NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
FLAVR	ONE	FLAVR1.FLAVR	NONE		

TYPE:	OBSTACLE	COPTER	SID	SPECIAL	RNAV
	☐	☐	☒	☐	☒

CANCELLATION ☐

DP ROUTE DESCRIPTION:
TAKEOFF RWY 1, 14L, 32R: CLIMB ON ASSIGNED HEADING FOR RADAR VECTORS TO CROSS WAYPT AT OR ABOVE 4000, THEN ON TRACK 075.33 TO FLAVR, THENCE...

...(TRANSITION), MAINTAIN 5000, EXPECT FILED ALTITUDE 10 MINUTES AFTER DEPARTURE

TRANSITION ROUTES (GRAPHIC DEPICTION ONLY):

TRANSITION NAME	TRANSITION COMPUTER CODE	FROM FIX/NAVAID	TO FIX/NAVAID	COURSE	DISTANCE	MEA	MOCA	CROSSING ALTITUDE/FIXES
FOGART	FLAVR1.FGH	FLAVR	FGH VORTAC	TRACK 065.11	84.74	5000	37000	
JENKO	FLAVR1.JKL	FLAVR	JKL VORTAC	TRACK 098.06	88.90	5000		
OPAKE	FLAVR1.OPQ	FLAVR	OPQ VORTAC	LEFT TURN TRACK 333.67	55.23	4000	3300	
ROOSTER	FLAVR1.RST	FLAVR	RST VORTAC	TRACK 129.92	72.85	7000	4900	

PBN REQUIREMENT NOTES:
RNAV 1 - DME/DME/IRU OR GPS

EQUIPMENT REQUIREMENT NOTES:
RADAR REQUIRED

PROCEDURAL DATA NOTES:

TAKEOFF MINIMUMS:
RWY 14R, 19, 32L: NA - AIR TRAFFIC.
RWY 1, 32R: STANDARD.
RWY 14L: 500-2 1/2 OR STANDARD WITH MINIMUM CLIMB OF 330 FT PER NM TO 1200

TAKEOFF OBSTACLES NOTES:
SEE FORM 8260-15A, TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP).

CONTROLLING OBSTACLES:
RWY 1: 543 FEET MST OBSTRUCTION LIGHT 325141.44/N0965102.87W
RWY 14L: 974 FEET MSL BUILDING, 324911 09N/0964838.62W
RWY 32R: 1049 FEET MSL TOWER, 325216 19N/0985523.02W, 498 FEET MSL TREES 325125.20N/0985125.68W

MSA:
FROM FOUR CLOWNS REGIONAL 4000

LOST COMMUNICATIONS PROCEDURES:

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DP NAME	NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
FLAVR	ONE	FLAVR1.FLAVR	NONE		

ADDITIONAL FLIGHT DATA:
DME/DME ASSESSMENT: SAT
CHART: MINUMUM CROSSING ALTITUDE AT WAYPT- AT OR ABOVE 4000
CHART: TOP ALITUDE: 5000

AIRPORTS SERVED:

AIRPORT ID	CITY	STATE
KXXXX	VICTORVECTORVILLE	TX

COMMUNICATIONS:

FIXES AND/OR NAVAIDS:

REMARKS:

FLIGHT INSPECTED BY	OFFICE	DATE
	AJW-XXXXQ	MM/DD/YYYY

DEVELOPED BY	OFFICE	DATE
	AJV-XXXX	MM/DD/YYYY

APPROVED BY	OFFICE	DATE	TITLE
	AJV-XXXX	MM/DD/YYYY	MANAGER

REQUIRED EFFECTIVE DATE
ROUTINE

COORDINATED WITH:

A4A ☒ **ALPA** ☒ **AOPA** ☒ **APA** ☒ **HAI** ☐ **NBAA** ☒ **OTHER:** ARPT MGR, FCR ATCT, ZFW

CHANGES - REASONS:

Figure E-7.

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
GRAPHIC DEPARTURE PROCEDURES (DP)

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated
Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statue miles or feet RVR unless otherwise indicated.

DP NAME	NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
TAHOE	ONE	TAHOE1.TAHOE	NONE		

TYPE:	OBSTACLE	COPTER	SID	SPECIAL	RNAV
	☐	☐	☒	☐	☒

CANCELLATION ☐

DP ROUTE DESCRIPTION:
TAKEOFF RWY 2: CLIMB HEADING 015.99 TO 6420, THEN CLIMBING LEFT TURN DIRECT PWWDR. THENCE...

TAKEOFF RWY 29: CLIMB HEADING 285.99 TO 6420, THEN CLIMBING RIGHT TURN DIRECT PWWDR. THENCE...
...ON TRACK 322.28 TO TAHOE, CROSS TAHOE AT OR ABOVE 11000. CONTINUE CLIMB IN HOLD TO 12000 BEFORE PROCEEDING ON ASSIGNED TRANSITION.

TRANSITION ROUTES (GRAPHIC DEPICTION ONLY):

TRANSITION NAME	TRANSITION COMPUTER CODE	FROM FIX/NAVAID	TO FIX/NAVAID	COURSE	DISTANCE	MEA	MOCA	CROSSING ALTITUDE/FIXES
MUSTANG	TAHOE1.FMG	TAHOE	FMG VORTAC	DIRECT		1200	10700	
SIGNA	TAHOE1.SIGNA	TAHOE	SIGNA	DIRECT		1200	11400	

PBN REQUIREMENT NOTES:
RNAV 1 - GPS

EQUIPMENT REQUIREMENT NOTES:

PROCEDURAL DATA NOTES:

TAKEOFF MINIMUMS:
RWYS 11, 20: NA - OBSTACLES.
RWY 2: STANDARD WITH MINIMUM CLIMB OF 500 FT/NM TO 6420 THEN MINIMUM CLIMB OF 425 FT/NM TO 11000.
RWY 29: STANDARD WITH MINIMUM CLIMB OF 500 FT/NM TO 10200.

TAKEOFF OBSTACLES NOTES:
RWY 2: TREES BEGINNING 2 FT FROM DER, 288 FT LEFT OF CENTERLINE, UP TO 60 FT AGL/5939 FT MSL. TREES BEGINNING 420 FT FROM DER, 312 FT RIGHT OF CENTERLINE. UP TO 60 FT AGL/5939 FT MSL.

RWY 29: TREES BEGINNING 679 FT FROM DER, 507 FT LEFT OF CENTERLINE. UP TO 60 FT AGL/5997 FT MSL. TREES BEGINNING 116 FT FROM DER, 412 FT RIGHT OF CENTERLINE. UP TO 60 FT AGL/5971 FT MSL.

CONTROLLING OBSTACLES:
RWY 2: 6919 FT MSL AAO 392252.05N/1200710.34W
RWY 29: 6870 FT MSL TREE 392109.18N/1201143.41W

MSA:

LOST COMMUNICATIONS PROCEDURES:

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DP NAME	NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
TAHOE	ONE	TAHOE1.TAHOE	NONE		

ADDITIONAL FLIGHT DATA:
DME/DME ASSESSMENT: NOT CONDUCTED
CHART: V-200
CHART SPEED ICON: MAXIMUM SPEED 250 KIAS AT TAHOE
CHART: TOP ALTITUDE: 13000
CHART HOLDING PATTERN AT TAHOE: HOLD NE, RT, 136.00 INBOUND, 11 NM LEGS

AIRPORTS SERVED:

AIRPORT ID	CITY	STATE
KTRK	TRUCKEE	CA

COMMUNICATIONS:
UNICOM (CTAF), OAKLAND CENTER, AWOS-3PT

FIXES AND/OR NAVAIDS:

REMARKS:
CLIMB IN HOLD REQUESTED BY ATC DUE TO NON-TURBO AIRCRAFT LIMITATIONS.
TARGETS RUN DOES NOT ACCOUNT FOR ATD. PER TARGETS DISTRO PACKAGE, DTA IS 3.10 WHEN SEGMENT LENGTHS IS 3.55. TOTAL DTA PLUS ATD FOR SEGMENT BETWEEN PWWDR AND TAHOE IS 4.10.

FLIGHT INSPECTED BY	OFFICE	DATE
	AJW-XXXX	MM/DD/YYYY

DEVELOPED BY	OFFICE	DATE
	AJV-XXXX	MM/DD/YYYY

APPROVED BY	OFFICE	DATE	TITLE
	AJV-XXXX	MM/DD/YYYY	MANAGER

REQUIRED EFFECTIVE DATE
ROUTINE

COORDINATED WITH:

A4A ☐ ALPA ☐ AOPA ☐ APA ☐ HAI ☐ NBAA ☐ OTHER:

CHANGES - REASONS:

Section 2. Instructions for Completing FAA Form 8260-15C, Departure (Data Record)

1. General. More detailed instructions are contained in paragraph 2.

a. Enter a dash (e.g., "-") in the FO/FB, Leg Type, TC (True Course), and Distance columns when they are intentionally left blank.

b. The departure routing from each authorized runway to the DP fix (i.e., the DP termination fix) is documented first, followed by the routing from the DP fix to each transition fix as appropriate.

2. Complete the FAA Form 8260-15C. Enter all applicable information**.**

a. Fix/NAVAID. Enter the name of the fix/NAVAID in one of the following formats: (five-letter pronounceable name; (NAVAID) three-letter facility ID and type (e.g., ABC VORTAC).

b. Lat/Long. Enter the latitude and longitude, separated by a "slant(/)" to the nearest hundredth of a second.

c. C (Chart). Enter a Y (yes) if a fix is to be charted. Enter an N (no) if a fix does not require charting. Any fix where a change in altitude, course, or speed, including WPs where turns or transitions begin and end, require charting.

d. FO/FB. Enter the FO (Fly-over) or FB (Fly-by) as appropriate to indicate desired use. FB is the normal designation. Determination is based on operational or obstacle requirements.

e. Leg type. Enter the two-letter leg-type; e.g., IF, TF, RF, etc.

f. TC. Enter the true course (TC) to the nearest hundredth of a degree. The charting agency will apply magnetic variation, if necessary, and round for publication.

g. Dist. Enter the distance to the nearest hundredth of a NM. The charting agency will round for publication.

h. Altitude. Enter the minimum, mandatory, or maximum altitude in 100-foot increments (or Flight Levels in 1000-foot increments) and label each altitude/flight level as "at/above," "at," or "at/below." Enter "block altitudes" with a "B" between the altitude values; e.g., 5000B8000.

i. Speed. Enter the minimum, mandatory, or maximum airspeed(s) in KIAS. Optionally, the airspeed may be entered as ground speed (GS). Label airspeed restrictions as "at/above," "at," or "at/below," as appropriate. Following the numerical value, add "K" for KIAS or "G" for ground speed. Enter restrictions only where necessary for procedural containment, or for traffic flow requirements.

j. Remarks. Enter any pertinent information that would clarify a data entry; e.g., airspeed restriction for turn radius. Additionally, such items as CG restrictions, displaced threshold

information, transition computer code, (see Order 8260.19, Chapter 2, Section 2-5), etc., are also placed in this column.

k. Departure Routing to DP Fix (see examples).

(1) The initial departure routing represents the most complex portion of documenting the RNAV or RNP DP.

(2) The first three lines of Form 8260-15C are typically the most problematic, largely due to the variables associated with permissible leg types and waypoint sequencing.

(3) The following line-by-line explanation used in conjunction with guidance in paragraph 3-1-6.b, outlines the departure sequence element (i.e., from AER to DP fix) beginning at the AER*, with each succeeding line representing a permissible option until reaching the DP fix. Fix/NAVAIDs, Lat/Long, "C" (chart), FO/FB, Leg Type, TC (True Course), and Distance columns are required entries except as noted.

(4) Altitude and Speed columns enter restrictions associated with the Fix/NAVAID column as appropriate.

***Note:** WP placement is computed from DER as outlined in Order 8260.58 (latest edition); AER is a required coding element used for course/heading and distance computations.

(5) For each authorized runway:

(a) First line of each element.

(b) In the Fix/NAVAID column, enter the AER. Example: "RW14L (AER)."

(c) In the Lat/Long column, enter the AER Lat/long. If the runway threshold is displaced, enter the displaced AER Lat/long and note the amount of displacement in Remarks column.

Example: "RW 14L (AER)*, 325117.19N/0965114.05W*, *DISPL THLD (1273 FT)."

(d) In the "C" column, enter "N."

(e) Remaining columns leave blank.

Note: For procedures that are strictly Radar Vectors to RNAV, an AER entry is not necessary (i.e., the first entry will be an IF). For procedures that incorporate Radar Vectors to RNAV for one or more runways on the same chart that contains an RNAV route departure off other runways, the runway(s) that use Radar Vectors to RNAV will require an "AER" entry prior to defining the IF.

(6) Second line options.

(a) CF leg from AER to FB/FO: True Course and Distance columns enter true course/distance from AER to the next fix (see example SHEMP ONE, RW01).

(b) DF leg from AER to FB/FO: True Course column, leave blank. Distance column, enter distance from AER to the next fix (see example SHEMP TWO, RW01).

(c) VI to CF leg (see third line options for required CF entries): Fix/NAVAID column, leave blank. Lat/Long column, enter the computed Lat/long of the VI/CF intersect point. C columns leave blank. True Course column, enter the true heading to be flown as computed from AER to VI/CF intersect point. Distance column, enter distance from AER to VI/CF intersect point. Speed and Altitude columns: Leave blank.

(d) VA to DF leg (see third line options for required DF entries): Fix/NAVAID column, enter the climb-to MSL altitude. Lat/Long, C, and FO/FB columns, leave blank. True Course column, enter the true azimuth of the takeoff runway. Distance, Altitude, and Speed columns, leave blank (see example for SHEMP TWO, RW32R).

(7) Third line options. If required; third line required for VA combinations:

(a) DF leg (preceded by FO WP): True Course column, leave blank. Distance column, enter the distance between the plotted positions of fixes. Remarks column, specify turn direction as either "Left/Right Turn" when required (see example SHEMP ONE, RW14L).

(b) TF leg: True Course and Distance columns, enter the true course and distance between the plotted positions of fixes. Remarks Column, specify turn direction as described above only if course change exceeds 90 degrees.

(c) CF leg (VI/CF combination): True Course and Distance columns, enter the true course and distance from the VI/CF intersect point to the next fix (CF termination fix). Remarks column, specify turn direction as described above only if course change exceeds 90 degrees (see example SHEMP ONE, RW32R).

(d) DF leg (VA/DF combination): True Course and Distance columns leave blank. Remarks column, specify turn direction as either "Left/Right Turn" when required (see example SHEMP TWO, RW32R).

(8) Fourth and subsequent lines (DF or TF only). Same as paragraph 3.c(1) and 3.c(2) entries.

(9) The DP routing concludes with the DP fix data entered on the last line of each routing element. Repeat this process until all authorized runways have been entered.

l. Transition Routing (see examples). For each transition:

(1) First line of each element.

(a) Fix/NAVAID and Lat/Long columns: Enter the DP fix name and Lat/long.

(b) “C” (chart) column: Enter “Y.”

(c) FO/FB column: Leave blank.

(d) Leg Type column: Enter “IF.”

(e) True Course, Distance, Altitude, and Speed columns: Leave blank.

(f) Remarks column: Enter the transition computer code.

(2) Second and subsequent lines (DF or TF only). Same as departure routing element paragraph 3.c(1) and 3.c(2) entries. Enter the transition fix data on the last line of the transition routing element.

Figure E-8.

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
DEPARTURE (DATA RECORD)

DP NAME	NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
SHEMP	ONE	SHEMP1.SHEMP	NONE		

FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
RWY01 (AER)	325030.65N/0965118.52W	N	-	-	-	-			
LARRY	325615.86N/0965038.96W	Y	FB	CF	005.52	5.77			
MOEHH	330002.41N/0964701.80W	Y	FB	TF	038.92	4.84			
SHEMP	3259.32.61N/0962728.24W	Y	FB	TF	091.61	16.46			
RWY14L (AER)*	325117.19N/0965114.05W*	N	-	-	-	-			*DISPL THLD (1273 FT)
CURLY	324935.46N/0964916.24W	Y	FO	CF	135.64	2.37	AT/ABOVE 1000		CG 330 FT PER NM TO 1200
SHEMP	259.32.61N/0962728.24W	Y	FB	DF		20.87			LEFT TURN
RWY32R (AER)	325031.35N/0965020.95W	N	-	-	-	-			
1000 MSL	--	-	-	VA	315.66	3.64	AT/ABOVE 1000		
LARRY	325031.35N/0965020.95W	Y	FO	DF	-	-			RIGHT TURN
MOEHH	330002.41N/0964701.80W	Y	FO	TF	038.92	4.84			
SHEMP	3259.32.61N/0962728.24W	Y	FO	TF	065.11	87.24			
SHEMP	3259.32.61N/0962728.24W	Y	-	IF	-	-			SHEMP1.JKL
JKL VORTAC	333543.94N/0945243.79W	Y	FB	TF	152.94	47.23			
SHEMP	3259.32.61N/0962728.24W	Y	-	IF	-	-			SHEMP1.JKL
JKL VORTAC	324749.41N/0943828.97W	Y	FB	TF	152.94	47.23			
SHEMP	324749.41N/0943828.97W	Y	-	IF	-	-			SHEMP1.LMN

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DP NAME						NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
SHEMP						ONE	SHEMP1.SHEMP	NONE		
FIX/NAVAID	**LAT/LONG**	**C**	**FO/FB**	**LEG TYPE**	**TC**	**DIST (NM)**	**ALTITUDE**	**SPEED**	**REMARKS**	
LMN VORTAC	321721.40N/0960207.48W	Y	FB	TF	152.94	47.23				
SHEMP	3259.32.61N/0962728.24W	Y	-	IF	-	-			SHEMP1.RST	
LMN VORTAC	321721.40N/0960207.48W	Y	FB	TF	152.94	47.23				
RST VORTAC	321246.96N/0951530.88W	Y	FB	TF	096.38	39.79				

Figure E-9.

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
DEPARTURE (DATA RECORD)

DP NAME	NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
SHEMP	TWO	SHEMP2.SHEMP	ONE		

FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
RWY01 (AER)	325030.65N/0965118.52W	N	-	-	-	-			
LARRY	325932.61N/0962728.24W	Y	FO	DF	-	-	AT/ABOVE 2000		
MOEHH	330205.91N/0964502.64W	Y	FO	TF	038.97	7.49	AT/ABOVE 3000	AT/BELOW 220K	
SHEMP	325932.61N/0962728.24W	Y	FO	TF	099.71	15.00	5000B8000		
RWY14L (AER)	325117.19N/0965114.05W*	N	-	-	-	-			*DISPL THLD (12973 FT)
CURLY	324905.36N/0964841.41W	Y	FB	DF	-	3.07	AT/ABOVE 1000		CG 300 FT PER MIN TO 1200
SHEMP	325932.61N/0962728.24W	Y	FO	TF	059.62	20.69	5000B8000		
RWY32R (AER)	325031.35N/0965020.95W	Y	-	-	-	-			
1000 MSL	-	-	-	VA	315.66	-	AT/ABOVE 1000		
LARRY	325932.61N/0962728.24W	Y	FO	DF	-	-	AT/ABOVE 2000		RIGHT TURN
MOEHH	330205.91N/0964502.64W	Y	FO	TF	038.8	7.49	AT/ABOVE 3000	AT/ABOVE 220K	
SHEMP	325932.61N/0962728.24W	Y	FO	TF	091.64	16.46	5000B8000		
SHEMP	325932.61N/0962728.24W	Y	-	IF	-	-			SHEMP2.FHG
FGH VORTAC	333543.94N/0945243.79W	Y	FB	TF	065.11	87.24			RIGHT TURN
SHEMP	325932.61N/0962728.24W	Y	-	IF	-	-			SHEMP2.JKL
JKL VORTAC	324749.41N/0943828.97W	Y	FB	TF	096.77	92.51			RIGHT TURN

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DP NAME						NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
SHEMP						TWO	SHEMP2.SHEMP	ONE		
FIX/NAVAID	**LAT/LONG**	**C**	**FO/FB**	**LEG TYPE**	**TC**	**DIST (NM)**	**ALTITUDE**	**SPEED**	**REMARKS**	
SHEMP	325932.61N/0962728.24W	Y	-	IF	-	-			SHEMP2.OPQ	
OPQ VOR/DME	-	Y	FB	TF	003.19	52.21			LEFT TURN	
SHEMP	325932.61N/0962728.24W	Y	-	IF	-	-			SHEMP2.RST	
RST VORTAC	321246.96N/0951530.88W	Y	FB	TF	127.19	76.63			RIGHT TURN	

Figure E-10.

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
DEPARTURE (DATA RECORD)

DP NAME	NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
ARKES	ONE	ARKES1.ARKES	NONE		

FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
RWY09L (AER)*	260436.98N/0800953.20W	N	-	-	-	-			*DISPL THLD (577 FT)
520 MSL	-	-	-	VA	090.35	-	AT/ABOVE 520		
JUMAR	260431.29N/0795501.17W	Y	FB	DF	-	-			
HAPOR	261243.07N/0795655.56W	Y	FB	TF	348.15	8.25			LEFT TURN
SECOR	261427.18N/0801120.40W	Y	FB	TF	277.66	13.08			
ATONE	262312.14N/0801223.68W	Y	FB	TF	314.03	12.56			
ARKES	263437.73N/0802503.60W	Y	FB	TF	343.91	11.86			
RWY09R (AER)*	260357.49N/0800933.63W	N	-	-	-	-			*DISPL THLD (320 FT)
520 MSL	-	-	-	VA	090.36	-	AT/ABOVE 520		
JUMAR	260431.29N/0795501.17W	Y	FB	DF	-	-			LEFT TURN
HAPOR	261243.07N/0795655.56W	Y	FB	TF	348.15	8.35			LEFT TURN
SECOR	261427.18N/0801120.40W	Y	FB	TF	277.66	13.08			
ATONE	262312.14N/0801223.68W	Y	FB	TF	314.03	12.56			
ARKES	263437.73N/0802503.60W	Y	FB	TF	343.91	11.86			
RWY13 (AER)	260444.05N/0800937.40W	N	-	-	-	-			
520 MSL	-	-	-	VA	135.36	-	AT/ABOVE 520		CG 500 FT PER NM TO 520
JUMAR	260431.29N/0795501.17W	Y	FB	DF	-	-			LEFT TURN
HAPOR	261243.07N/0795655.56W	Y	FB	TF	348.18	8.35			LEFT TURN
SECOR	261427.18N/0801120.40W	Y	FB	TF	277.66	13.08			
ATONE	262312.14N/0801223.68W	Y	FB	TF	314.03	12.56			

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DP NAME						NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
ARKES						ONE	ARKES1.ARKES	NONE		
FIX/NAVAID	**LAT/LONG**	**C**	**FO/FB**	**LEG TYPE**	**TC**	**DIST (NM)**	**ALTITUDE**	**SPEED**	**REMARKS**	
ARKES	263437.73N/0802503.60W	Y	FB	TF	343.91	11.86				
RWY27L (AER)*	260357.17N/0800840.84W	N	-	-	-	-			*DISPL THLD (577 FT)	
520 MSL	-	-	-	VA	270.39	-	AT/ABOVE 50		CG 500 FT PER NM TO 520	
NOVAE	260438.90N/0801553.29W		FB	DF	-	-			RIGHT TURN	
KRMIT	261322.00N/0801816.69W	Y	FB	TF	346.11	8.95				
ATONE	262312.14N/0801223.68W	Y	FB	TF	344.07	10.20				
ARKES	263437.73N/0802503.60W	Y	FB	TF	343.91	11.86				
RWY27R (AER)*		N	-	-	-	-			*DISPL THLD (577 FT)	
520 MSL	-	-	-	VA	270.36	-	AT/ABOVE 520		CG 500 FT PER NM TO 520	
NOVAE	263437.73N/0802503.60W	Y	FB	DF	-	-				
KRMIT	261322.00N/0801816.69W	Y	FB	TF	346.11	8.95				
ATONE	262312.14N/0801223.68W	Y	FB	TF	344.07	10.20				
ARKES	263437.73N/0802503.60W	Y	FB	TF	344.91	11.86				
RWY3 (AER)*		N	-	-	-	-			*DISPL THLD (577 FT)	
520 MSL	-	-	-	VA	315.37	-	AT/ABOVE 520		CG 500 FT PER NM TO 520	
NOVAE	260438.90N/0801553.29W	Y	FB	DF	-	-			LEFT TURN	
KRMIT	261322.00N/0801816.69W	Y	FB	TF	346.11	8.95				
ATONE	262312.14N/0801223.68W	Y	FB	TF	344.07	10.20				
ARKES	263437.73N/0802503.60W	Y	FB	TF	343.91	11.86				

Figure E-11.

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
DEPARTURE (DATA RECORD)

DP NAME	NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
FLAVR	ONE	FLAVR1.FLAVR	NONE		

FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
WAYPT	325534.27N/0964004.08W	Y	FB	IF	-	-	AT/ABOVE 4000		
FLAVR	325756.89N/0962315.04W	Y	FB	TF	073.3	14.77			
FLAVR	325756.89N/0962315.04W	Y	-	IF	-	-			FLAVR1.FGH
FGH VORTAC	333543.94N/0945243.79W	Y	FB	TF	085.11	84.74			
FLAVR	325756.89N/0962315.04W	Y	-	IF	-	-			
JKL VORTAC	324749.41N/0943828.97W	Y	FB	TF	098.05	88.80			FLAVR1.JKL
FLAVR	325756.89N/0962315.04W	Y	-	IF	-	-			FLAVR1.OPG
OPQ VOR/DME	334641.06N/0965429.57W	Y	FB	TF	333.87	55.23			LEFT TURN
FLAVR	325756.89N/0962315.04W	Y	-	IF	-	-			FLAVR1.RST
RST VORTAC	312146.96N/0951530.88W	Y	FB	TF	129.02	72.85			

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Figure E-12.

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
DEPARTURE (DATA RECORD)

DP NAME	NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
STAYY	TWO	STAYY2.STAYY	ONE	02/01/2018	

FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
RW20R (AER)	334053.93N/1175154.21W	N	-	-	-	-			
BIKKL	333909.48N/1175300.38W	Y	FB	CF	207.91	1.97	AT/ABOVE 556		CG 500 FT PER NM TO 600
HEFAY	333807.44N/1175317.61W	Y	FB	RF	-	1.07			2.07 NM RADIUS CCW (CFCJQ)
PAPAU	333709.19N/1175332.46W	Y	FB	RF	-	1.00	AT/ABOVE 5000	AT/BELOW 220K	2.08 NM RADIUS CW (CFDSG)
LRREN	333501.79N/1175400.22W	Y	FB	RF	-	2.18	AT/BELOW 5000		4.03 NM RADIUS CCW (CFFBZ)
HTCHR	333330.30N/1175327.97W	Y	FB	RF	-	1.60			4.06 NM RADIUS CCW (CFGBM)
TANGL	333027.00N/1175133.00W	Y	FB	TF	152.28	3.44			
SHIRR	332830.00N/1174630.00W	Y	FB	TF	114.72	4.65	AT/ABOVE 7000		
DANAH	332851.62N/1174154.15W	Y	FB	TF	084.64	3.86			
STAYY	333459.41N/1172901.23W	Y	FB	TF	060.34	12.39	AT/ABOVE 9000		
STAYY	333459.41N/1172901.23W	Y	-	IF	-	-	AT/ABOVE 9000		STAYY2.AVRRY
FNCHH	333438.20N/1171422.80W	Y	FB	TF	091.58	12.24			
TBERD	333744.21N/1165951.91W	Y	FB	TF	075.61	12.51			
PEELR	333639.62N/1162012.96W	Y	FB	TF	091.68	33.13			
MTBAL	333611.93N/1160232.30W	Y	FB	TF	091.71	14.77			
AVRRY	334507.35N/1153414.56W	Y	FB	TF	069.20	25.24			

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DP NAME					NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
STAYY					TWO	STAYY2.STAYY	ONE	02/01/18	
FIX/NAVAID	**LAT/LONG**	**C**	**FO/FB**	**LEG TYPE**	**TC**	**DIST (NM)**	**ALTITUDE**	**SPEED**	**REMARKS**
STAYY	333459.41N/1172901.23W	Y	-	IF	-	-	AT/ABOVE 9000		STAYY2.CNERY
WIILD	333017.34N/1171359.88W	Y	FB	TF	110.42	13.40			
FLWRZ	332953.00N/1165405.90W	Y	FB	TF	091.31	16.65			
BLCKD	332931.77N/1162528.14W	Y	FB	TF	090.71	23.94			
CSTWY	332909.77N/1160203.05W	Y	FB	TF	090.96	19.59			
CNERY	333703.75N/1153456.72W	Y	FB	TF	070.68	23.99			
STAYY	333459.41N/1172901.23W	Y	-	IF	-	-	AT/ABOVE 9000		STAYY2.OTAYY
WIILD	333017.34N/1171359.88W	Y	FB	TF	110.42	13.40			
WAGAV	331553.62N/1170613.02W	Y	FB	TF	155.57	15.78			
OTAYY	323954.45N/1170658.45W	Y	FB	TF	181.02	35.92			
STAYY	333459.41N/1172901.23W	Y	-	IF	-	-	AT/ABOVE 9000		STAYY2.TCATE
WIILD	333017.34N/1171359.88W	Y	FB	TF	110.42	13.40			
TCATE	324829.07N/1162859.88W	Y	FB	TF	137.64	56.29			

Figure E-13.

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
DEPARTURE (DATA RECORD)

DP NAME	NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
TAHOE	ONE	TAHOE1.TAHOE	NONE		

FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
RW02 (AER)	391852.27N/1200823.90W	N	-	-	-	-			CG 500 FT/NM TO 6420
6420 MSL	-	-	-	VA	029.99	-			CG 425 FT/NM TO 11000
PWWDR	392743.22N/1200653.96W	Y	FB	DF	-	-			LEFT TURN
RW29 (AER)	391854.87N/1200752.74W	N	-	-	-	-			CG 500 CT/NM TO 10200
6420 MSL	-	-	-	VA	299.99				
PWWDR	392743.22N/1200653.96W	Y	FB	DF	-	-			RIGHT TURN
PWWDR	392743.22N/1200653.96W	Y	-	IF	-	-			
TAHOE	393058.46N/1200844.70W	Y	FO	TF	336.28	03.55	AT/ABOVE 11000	AT/BELOW 250K	
TAHOE	393058.46N/1200844.70W	Y	FO	HA	150.00	11	12000		RIGHT TURN
TAHOE	393058.46N/1200844.70W	Y	-	IF	-	-			TAHOE1.FMG
FMG VORTAC	393152.55N/1193921.86W	Y	FB	DR	-	-			
TAHOE	393058.46N/1200844.70W	Y	-	IF	-	-			TAHOE1.SIGNA
SIGNA	392049.57N/1203820.84W	Y	FB	DF	-	-			

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Section 3. Instructions for Completing FAA Form 8260-15E, RNAV Departure Procedure Attention All Users Page (AAUP) (RNAV Departure Procedure)

1. General. This section provides procedural guidance for developing AAUPs utilized when conducting simultaneous RNAV departure operations from two or more runways. For implementing this section, consider simultaneous operations to be those when RNAV departures can be independently conducted by air traffic.

a. This guidance applies to simultaneous RNAV departure procedures that use published SIDs with tracks that utilize a standard track divergence angle of 15 degrees or more, as well as those that use reduced track divergence angles.

b. Use Form 8260-15E to document an RNAV Departure Procedure AAUP. If an AAUP for a departure procedure using navigation other than RNAV is proposed, collaborate with the Flight Operations Group for the development of the AAUP.

2. Complete the FAA Form 8260-15E. Enter all applicable information.

a. Title Line. The title line consists of the following three headings and will be filled in as noted (for a sample, see Figure E-14).

(1) City, State. Enter name of city and state abbreviation; e.g., ATLANTA, GA.

(2) Airport ID. Enter airport ID, e.g., (ATL).

Note: Aeronautical Data Group, as the official source of airport IDs, will verify that the ID is correct.

(3) Effective Date. The originating organization determines the desired effective date after coordination with Aeronautical Information Services and the Flight Operations Group and then entered on the AAUP form.

b. General Information. This section consists of the following four elements and will be filled out as noted (see Figure E-14).

(1) Preflight. Upon assignment of an RNAV SID, crosscheck the charted RNAV SID with the aircraft navigation system. Consider the following crosscheck items:

(a) Departure Runway if known;

(b) Waypoint sequencing on the RNAV SID;

(c) En Route Transition;

(d) Any specific aircraft navigation operating procedures or limitations,

(e) Do not modify or manually construct waypoints on the SID.

(2) Before Takeoff. Verify any modification to the navigation system, including runway changes, against the charted RNAV SID. Advise ATC if unable to verify correct loading of the runway and/or procedure or if unable to comply with the RNAV SID. Ensure a runway position update is accomplished prior to takeoff, if required.

(3) Line Up/Takeoff. Expect a takeoff clearance to include, "RNAV track to the first fix/waypoint" or an assigned heading. Consider the following:

(a) If assigned a heading do not delete the RNAV SID from the navigation system.

(b) An RNAV takeoff clearance will be issued with "RNAV to" phraseology. For example, "(Callsign) 123, RNAV to MPASS, Runway 26L, Cleared for Takeoff." The expected pilot response is "(Callsign) 123, RNAV to MPASS, Runway 26L, Cleared for Takeoff."

(c) Verify the departure clearance takeoff runway and cleared to fix/waypoint is displayed in the aircraft navigation system. If a discrepancy exists, request an initial heading for takeoff from tower or refuse the takeoff clearance until the discrepancy is resolved.

(d) Verify lateral mode to be used on departure.

(e) Fly the published procedure issued in the IFR clearance if no additional instructions are received with the take-off clearance.

(4) After Takeoff. RNAV to fix/waypoint. Fly runway heading, engage lateral navigation flight guidance when appropriate, and fly the cleared departure procedure. Strict compliance with the lateral track, charted altitude and any speed restrictions is imperative. Parallel RNAV departures must not encroach on the airspace between extended parallel runway centerlines without specific ATC clearance. Manually intervene, if required, to remain on track to avoid deviating in the direction of a parallel runway, track, or aircraft. If unable to comply with the SID profile, either laterally or vertically, immediately notify ATC. Assigned Heading: Fly assigned heading until otherwise cleared.

c. Additional Airport Information. This section will contain information specific to the airport and may contain both textual instructions and graphical depictions; i.e., SPECIFIC INFORMATION: Instructions as applicable (see Figure E-14).

d. Administrative Information. Items below are for informational and administrative purposes only. These items are to be completed on the forms and not to be published on the AAUP. A blank Form 8260-15E is available on the FAA website.

(1) Developed By. Enter the name of the person responsible for producing the AAUP. This individual must sign in the "developed by" space, and enter the date signed. Enter the office or function of the person responsible, such as ATL TRACON or ATL SIT.

(2) Approved By. Specify the office/organization that approved the AAUP.

(3) Coordinated With. Specify the offices/organizations the AAUP was coordinated.

(4) Changes (for revised AAUPs)/Reasons (for initial or revised AAUPs). List changes and reasons relating to AAUP entries.

e. AAUP Processing. The SIT (or applicable ATC facility) must submit the draft AAUP to 9-AWA-AFS400-COORD@faa.gov. For departure AAUPs, include documentation of coordination with Air Traffic Mission Support Services, Mission Support Policy Directorate. Use the subject line "Approval Request: AAUP Simultaneous Arrival" or "Approval Request: AAUP Simultaneous RNAV DP" as appropriate. Flight Operations Group will submit the approved AAUP and requested effective date to Aeronautical Information Services.

EXCEPTION: In the case of a Special procedure requiring an AAUP, Flight Procedures and Airspace Group will coordinate the effective date with the appropriate parties.

Figure E-14. Sample of Completed FAA Form 8260-15E

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
RNAV DEPARTURE PROCEDURE
ATTENTION ALL USERS PAGE (AAUP)

AIRPORT ID	CITY, STATE	EFFECTIVE DATE
KATL	ATLANTA, GA	

ATTENTION ALL USERS PAGE (AAUP)

SIMULTANEOUS RNAV DEPARTURE

The purpose of this briefing is to provide guidance, safe operating practices, and phraseology that will help ensure heightened awareness when conducting parallel RNAV departures at specific airports. Where applicable, pilots should comply with established company procedures for RNAV operations.

1. PREFLIGHT:

Upon assignment of an RNAV SID, crosscheck the charted RNAV SID with the aircraft navigation system. Consider the following crosscheck items:

- Departure runway, if known
- A waypoint sequence on the RNAV SID
- En route transition
- Do not modify or manually construct waypoints on the SID
- Any specific aircraft navigation operating procedures

2. BEFORE TAKEOFF:

Any modification, including runway changes should be verified in the navigation system with the RNAV SID. If unable to verify correct loading or if unable comply with the RNAV SID, advise ATC. If required, ensure runway position update is accomplished prior to take off.

3. LINE UP/TAKEOFF:

Expect a takeoff clearance that will include an assigned heading or the RNAV track to the first waypoint. Take in to consideration the following:

- If assigned a heading do not delete the RNAV SID from the navigation system.
- **Verify that the correct runway and first waypoint** are loaded, and that the correct lateral navigation mode is available for use after takeoff. If the takeoff clearance does not match the planned/loaded procedure, either request an initial heading from tower or refuse the takeoff clearance until the discrepancy is resolved.
- A typical takeoff clearance will state, for example, "(Callsign) 123 RNAV to MPASS, Runway 26L, Cleared for Takeoff." The expected pilot response is, "(Callsign) 123, RNAV to MPASS, Runway 26L, Cleared for Takeoff."

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FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
RNAV DEPARTURE PROCEDURE
ATTENTION ALL USERS PAGE (AAUP)

AIRPORT ID	CITY, STATE	EFFECTIVE DATE
KATL	ATLANTA, GA	

4. AFTER TAKEOFF:

Unless instructed to fly a heading by the Tower, engage lateral navigation flight guidance as soon as practical and fly the departure precisely. Strict compliance with the lateral track, charted altitude, and speed restrictions is imperative. Parallel RNAV departures must not encroach on the airspace between extended parallel runway centerlines without specific ATC clearance. Manually intervene if necessary to stay on track to avoid deviating in the direction of a parallel runway, track, or aircraft. If unable to comply with the SID profile, either laterally or vertically, immediately notify ATC.

5. SPECIFIC INFORMATION:

Runway assignment will be issued on initial contact with Atlanta Ground Control at the Ramp exit spot. During dual runway simultaneous departure operations, expect an RNAV departure clearance. During triple simultaneous departure operations, expect a radar vector departure clearance after takeoff and expect vectors to join the filed RNAV/SID route.

Atlanta Departure RNAV SIDs and Associated Departure Directions

NORTH	EAST	SOUTH	WEST
CADIT	DAWGS	BRAVS	JOGOR (WEST 1)
COKEM	DOOLY	PNUTT	JCKTS (WEST 1)
SUMMT	MUNSN	THRSR	GEETK (WEST 2)
NUGGT	UGAAA	NOVSS	RMBLN (WEST 2)

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
RNAV DEPARTURE PROCEDURE
ATTENTION ALL USERS PAGE (AAUP)

AIRPORT ID	CITY, STATE	EFFECTIVE DATE
KATL	ATLANTA, GA	

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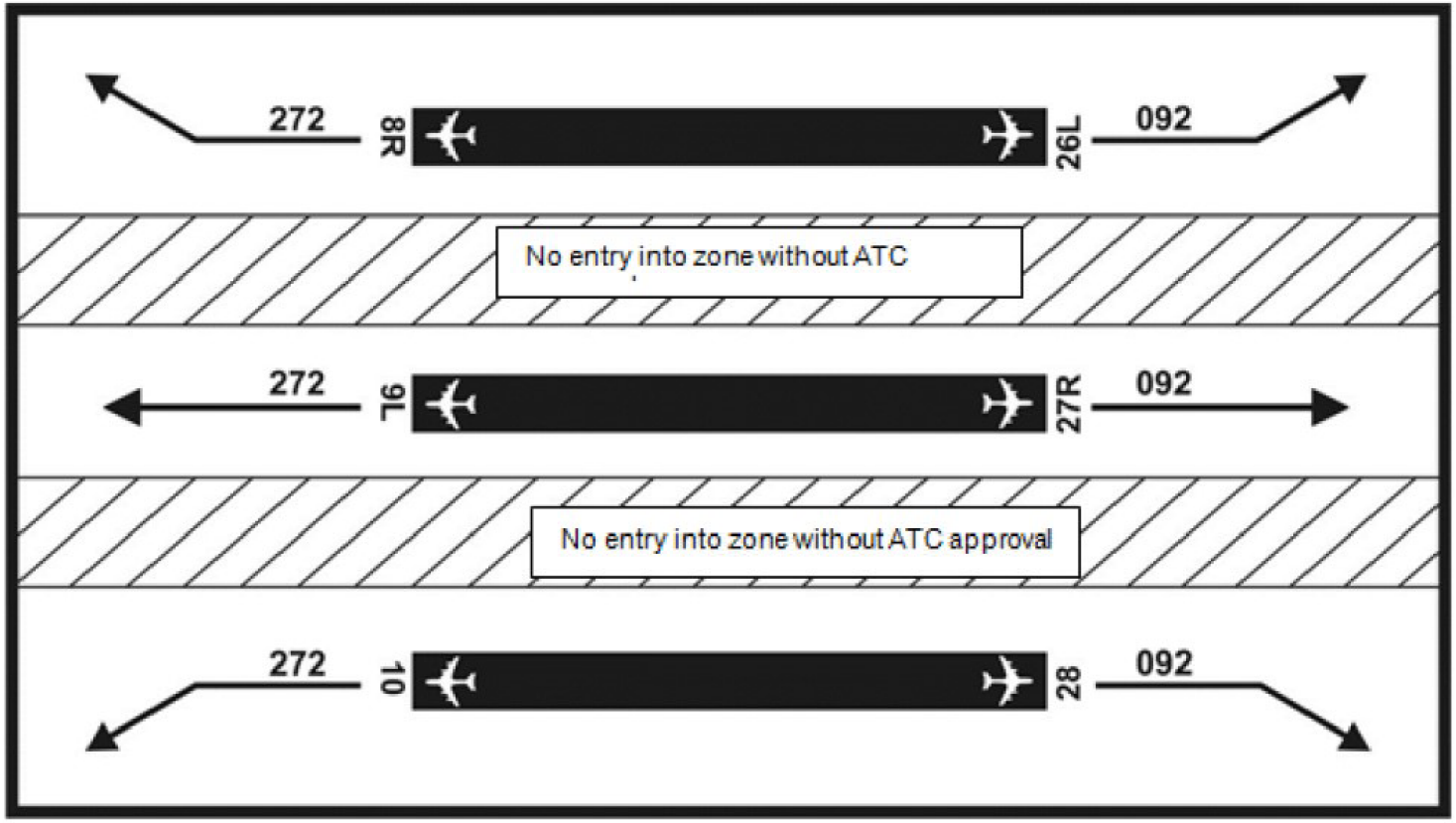

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
RNAV DEPARTURE PROCEDURE
ATTENTION ALL USERS PAGE (AAUP)

AIRPORT ID	CITY, STATE	EFFECTIVE DATE
KATL	ATLANTA, GA	

ADMINISTRATIVE INFORMATION: (Do Not Publish)

DEVELOPED BY: **OFFICE SYMBOL:** **DATE:**

APPROVED BY: **OFFICE SYMBOL:** **DATE:**

COORDINATED WITH: RAPT, AJV, Delta Air Lines, and AFS-400

CHANGES - REASONS:

CHANGES: N/A (Original)
REASONS: New operation with multiple parallel RNAV departure procedures.

Appendix F. Helicopter RNAV Departure Procedures

1. General.

a. Helicopter criteria allows for a point-in-space (PinS) Visual or VFR instrument departure from a VFR-certified heliport. For procedures performed as Special procedures, approval is required from the Flight Procedures and Airspace Group. All departures must see and avoid obstacles until reaching the Initial Departure Fix (IDF) where IFR flights begin.

b. All PinS IFR helicopter DPs will consist of a "visual" or "VFR" segment to the IDF, thence via a defined route that is published/charted in graphic form as a SID. The procedure must comply with design and documentation guidelines specified in Chapters 2 and 3 and Appendices C, D, and E to the maximum extent possible with exceptions as noted throughout this directive.

c. PinS departures may be established to support multiple departure locations. When this condition exists, use a single Form 8260-15A for each heliport identifying the departure to be used. A PinS graphic SID may serve more than one departure location, list each heliport as an Airport Served on the SID.

d. RNAV PinS. Form 8260-15C must accompany all Form 8260-15B submissions.

2. Departure Procedure.

a. Departure from a location with a visual segment will be conducted by crossing the IDF outbound at-or-above the altitude depicted. The helicopter will initially establish a hover at or above the heliport crossing height (HCH). If required, specify a minimum hover height in the instructions on the chart to avoid obstacles. The helicopter will leave the departure location on the outbound heading/course specified, climbing at-or-above 400 ft/NM, remaining clear of clouds, crossing at-or-above the IDF altitude specified, prior to proceeding outbound on the procedure.

b. Departure from a location with a visual flight rules (VFR) segment will be conducted by crossing the IDF outbound at the altitude depicted. Departure procedures that support multiple departure locations will have a VFR segment leading to the IDF. The helicopter will leave the departure location via pilot navigation in order to align with the departure route and comply with the altitude specified at the IDF.

c. Proceed out the described route as specified, crossing each consecutive fix at or above the indicated altitude(s) until reaching the end of the departure.

3. Documentation. Complete both a Form 8260-15A stating to use the SID and a Form 8260-15B/C as applicable to define the SID. Comply with this order, except as noted below:

a. Table 2-1-1, ODP Development Combinations, does not apply to helicopter PinS departure procedures.

b. DP Route Description, will consist of two independent sets of instructions. The "VISUAL SEGMENT" or "VFR SEGMENT" and the "IFR SEGMENT."

(1) Helicopter procedures with a "Visual Segment" will include a hover height (AGL), contain a specific route to the IDF, and the instruction to remain clear of clouds.

Example:

"Hover at 15 ft AGL, then climb on track 275.21, remaining clear of clouds, to cross JONES at or above 900."

(2) Helicopter procedures with a "VFR Segment" will contain instructions to conduct a VFR climb to the IDF (see Figure F-2).

Example:

"VFR Climb to SOSNO, Cross SOSNO at or above 800."

c. Procedures will contain the following chart notes as applicable.

(1) Document the altimeter source to be used when departing, use: "NOTE: USE (location name) ALTIMETER SETTING."

(2) For procedures that incorporate a turn, document speed restrictions that reflect the speed used for the determination of the turn radius. See paragraph 2-1-1.e(4).

(3) For all procedures using RNP 0.3: "NOTE: PILOT MUST ENSURE CDI SENSITIVITY IS SET TO 0.30 NM.

d. PBN and Equipment Notes. [NavSpec– Sensor(s), Function(s), Remarks.] Annotate the following in the 8260-15 series forms.

(1) NavSpec from Order 8260.58, Table 1-2-1.

(a) RNAV 1.

(b) RNP 0.3 may be an alternative use of RNP 1 for helicopters as defined Order 8260.58, Table 1-2-1. RNP 0.3 is used only for helicopter operations.

(2) Determine the SENSOR requirement. All RNP NavSpecs require GPS.

(3) Determine any unique Functional requirements.

(a) If a procedure requires a function that is Optional to the core NavSpec, it must be listed. For example, RNP 1 options include RF turns, so RF turn functions must be listed alone if used on a common segment of the departure (e.g., RNP 1 – GPS, RF) and used with the RF turn FIX name when multiple transitions apply, but only 1 has the RF turn (e.g., "RNP 1 – GPS, RF from SUZAN").

(b) Procedure designers should familiarize themselves with core NavSpecs and functions to properly utilize the advantages of PBN in the NAS. See ICAO Document 9613 for basic instruction on NavSpecs and function available to designers to apply to departures.

(4) Determine if Remarks are required. Use plain language remarks to indicate to the pilot any unique PBN circumstance or feature that must be made known such as the initiation point of an RF turn on a departure.

e. Document applicable Takeoff Minimums.

(1) Apply applicable ceiling and visibility and/or standard minimum climb gradient to altitude to mitigate obstacles within the visual segment of Proceed Visual departures.

(2) Minimum ceiling will correspond with the IFR MSL altitude required at the IDF rounded up to the next higher 100-ft increment, or the highest Heliport Reference Point elevation rounded up to the next higher 100-ft increment, whichever is higher. Consideration must be given to remote weather source altitude in relation to DP location altitude to ensure accurate ceiling computation.

(3) Minimum visibility for Proceed Visual departures will be ¾ SM or the distance from the helipoint to the IDF, whichever is greater.

(4) Do not publish weather minimums for Proceed VFR departures.

f. Takeoff Obstacle Notes.

(1) Helicopter procedures that contain a "visual segment" from the heliport to the IDF that require obstacles to be identified in the Takeoff Obstacle Notes section of Form 8260-15B must have the obstacle(s) defined by the distance (to the nearest tenth of a NM, or feet if the distance is less than 0.5 NM from the heliport) and bearing (magnetic) from the heliport. Also, include the type of obstacle and MSL elevation; e.g., Antenna, 1.3 NM bearing 221°, 166 MSL.

(2) Helicopter procedures that contain a "VFR segment" from one or multiple heliports to the IDF must not contain Takeoff Obstacle Notes. Leave this section of Form 8260-15B blank. Controlling Obstacles will be documented per Appendix E, Section 1, paragraph 9 consisting of the MSL elevation, description, and coordinates.

g. Appendix E, Section 1, paragraph 9, Controlling Obstacles. Document the controlling obstacle(s) on Form 8260-15B in the "Controlling Obstacles" section as follows:

(1) The controlling obstacle within the IDF flat surface area and which the IDF crossing altitude is based upon will be documented and preceded by "IDF Altitude Controlling Obstacle" and will provide the height (MSL), obstacle type (Tower, AAO, etc.), (MSL), and geographical coordinates:

Example:

"IDF ALTITUDE CONTROLLING OBSTACLE: 2290 FT MSL, ANTENNA, 370549.22N/0802934.16W"

(2) The controlling obstacle within the 20:1 sloping area will be preceded by "IFR Segment Controlling Obstacle" and will provide the height (MSL), obstacle type (Tower, AAO, etc.), and geographical coordinates:

Example:

"IFR SEGMENT ALTITUDE CONTROLLING OBSTACLE: 3325 FT MSL, BUILDING, 370648.22N/0803133.15W"

h. Appendix D, Section 1, paragraph 1, use Form 8260-15A for a single departure procedure that serves multiple departure locations.

i. Appendix D, Section 1, paragraph 8a(6), place the name of the SID that will be used in the "Textual Departure Procedure" section of the Form 8260-15A.

j. Appendix E, Section 1, paragraph 2, insert "COPTER" prior to "RNAV" to indicate that this procedure supports helicopter operations only.

k. Appendix E, Section 1, paragraph 3, DP Route Description, will consist of two independent sets of instructions. The "VISUAL SEGMENT" *or* "VFR SEGMENT" and the "IFR SEGMENT."

(1) Special helicopter procedures with a "Visual Segment" will include a hover height (AGL), contain a specified route to the IDF, and the instruction to remain clear of clouds.

Example:

"Hover at 15 feet/AGL, then climb on track 275.21, remaining clear of clouds, to cross JONES at or above 900.

(2) Helicopter procedures with a "VFR Segment" will contain instructions to conduct a VFR climb to the IDF (see Figure F-1).

Example:

"VFR Climb to SOSNO, Cross SOSNO at or above 800."

l. Appendix E, Section 1, paragraph 7, Takeoff Obstacle Notes.

(1) Helicopter procedures that contain a "visual segment" from the heliport to the IDF that require obstacles to be identified in the Takeoff Obstacle Notes section of Form 8260-15B must have the obstacle(s) defined by the distance (to the nearest tenth of a NM, or feet if the distance is less than 0.5 NM from the heliport) and bearing (magnetic) from the heliport. Also, include the type of obstacle and MSL elevation; e.g., Antenna, 1.3 NM bearing 221°, 166 MSL.

(2) Helicopter procedures that contain a "VFR segment" from one or multiple heliports to the IDF must not contain Takeoff Obstacle Notes. Leave this section of Form 8260-15B blank. Controlling Obstacles will be documented per Appendix E, Section 1, paragraph 8, consisting of the MSL elevation, description, and coordinates.

m. Appendix E, Section 1, paragraph 9, Controlling Obstacles. Document the controlling obstacle(s) on Form 8260-15B in the "Controlling Obstacles" section as follows:

(1) The controlling obstacle within the IDF flat surface area and which the IDF crossing altitude is based upon will be documented and preceded by "IDF Altitude Controlling Obstacle" and will provide the height (MSL), obstacle type (Tower, AAO, etc.), and geographical coordinates.

Example:

"IDF ALTITUDE CONTROLLING OBSTACLE: 2290 FT MSL, ANTENNA, 370549.22N/0802934.16W"

(2) The controlling obstacle within the 20:1 sloping area will be preceded by "IFR Segment Controlling Obstacle" and will provide the height (MSL), obstacle type (Tower, AAO, etc.), and geographical coordinates.

Example:

"SEGMENT ALTITUDE CONTROLLING OBSTACLE: 3325 FT MSL, BUILDING, 370648.22N/0803133.15W"

4. PBN Requirements, Equipment Requirements, and Procedural Data Notes.

a. For PBN requirements see paragraph 2-1-1.f(6).

b. For Equipment requirements see paragraph 2-1-1.f(1) through 2-1-1.f(5).

c. Procedures will contain the following chart notes as applicable:

(1) For RNAV DPs when using RNP 0.3 add "NOTE: PILOT MUST ENSURE CDI SENSITIVITY IS SET TO 0.30 NM."

(2) Document the altimeter source to be used when departing, use: "NOTE: USE (location name) ALTIMETER SETTING."

(3) For procedures that incorporate a turn, document speed restrictions that reflect the speed used for the determination of the turn radius. See paragraph 2-1-1.e(4).

(4) For all Special procedures: "NOTE: PILOT MUST ENSURE CDI SENSITIVITY IS SET TO 0.30 NM. CDI MAY BE RESET TO 1.00 NM AFTER (Fix Name)."

5. MSA. Apply paragraph 3-1-2 except for PinS use IDF (see Figures 1 and 2, PinS: "MSA FROM JEREL, 2500 within a 25 NM radius").

Figure F-1.

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
GRAPHIC DEPARTURE PROCEDURES (DP)

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated
Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statue miles or feet RVR unless otherwise indicated.

DP NAME	NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
GARYS	ONE	GARYS1.GARYS	NONE		

TYPE:	OBSTACLE	COPTER	SID	SPECIAL	RNAV
	☐	☒	☒	☒	☐

CANCELLATION ☐

DP ROUTE DESCRIPTION:
VISUAL SEGMENT: HOVER AT 15 FEET AGL, THEN TAKEOFF HEADING 300.31 TO INTERCEPT COURSE 270.31, REMAINING CLEAR OF CLOUDS, CLIMBING TO CROSS FSTFX IDF AT OR ABOVE 1500.

IFR SEGMENT: CLIMB ON COURSE TO CROSS SECFX AT OR ABOVE 2000, THEN TRACK 180.21 TO CROSS THDFX AT OR ABOVE 3000, THEN TRACK 245.33 TO CROSS FORFX AT OR ABOVE 4000, THEN TRACK 180.21 TO CROSS GARYS AT 5000.

TRANSITION ROUTES (GRAPHIC DEPICTION ONLY):

TRANSITION NAME	TRANSITION COMPUTER CODE	FROM FIX/NAVAID	TO FIX/NAVAID	COURSE	DISTANCE	MEA	MOCA	CROSSING ALTITUDE/FIXES
								-
								+

PBN REQUIREMENT NOTES:
RNP 0.3 - GPS. AP.

EQUIPMENT REQUIREMENT NOTES:

PROCEDURAL DATA NOTES:
NOTE: USE TILLAMOOK ALTIMETER SETTING
NOTE: POSITIVE COURSE GUIDANCE ON COURSE 270.31 REQUIRED TO ENTER IMC PRIOR TO FSTFIX.
NOTE: LIMIT TO 120 KIAS ON DEPARTURE TO GARYS
NOTE: PILOT MUST ENSURE CDI SENSITIVITY IS SET TO 0.30 NM
NOTE: PROCEDURE NA AT NIGHT

TAKEOFF MINIMUMS:
600-3/4 OR STANDARD WITH MINIMUM CLIMB OF 600 FT PER NM TO 3500

TAKEOFF OBSTACLES NOTES:
ANTENNA 1.3 NM BEARING 221, 166 MSL

CONTROLLING OBSTACLES:
IDF ALITITUDE CONTROLLING OBSTACLE: 166 FEET MSL ANTENNA 452646.70N/1235252.30W
SEGMENT ALITTUDE CONTROLLING OBSTACLE: 652 FEET MSL POWER LINES 452730.60N/1235354.20W

MSA:
FROM ANY HOSPITAL 4000

LOST COMMUNICATIONS PROCEDURES:
PROCEED TO ANYFX WAYPOINT THEN EXECUTE THE COPTER RNAV (GPS) 128 APPROACH

ADDITIONAL FLIGHT DATA:
CHART: TOP ALTITUDE: ASSIGNED BY ATC

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DP NAME	NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
GARYS	ONE	GARYS1.GARYS	NONE		

AIRPORTS SERVED:

AIRPORT ID	CITY	STATE
XXXX	ANYTOWN	OR

COMMUNICATIONS:

FIXES AND/OR NAVAIDS:

REMARKS:

FLIGHT INSPECTED BY	OFFICE	DATE	
	AJW-XXXX	MM/DD/YYYY	

DEVELOPED BY	OFFICE	DATE	
	AJV-XXXX	MM/DD/YYYY	

APPROVED BY	OFFICE	DATE	TITLE
	AJV-XXXX	MM/DD/YYYY	MANAGER

REQUIRED EFFECTIVE DATE
ROUTINE

COORDINATED WITH:

A4A ☐ **ALPA** ☐ **AOPA** ☐ **APA** ☐ **HAI** ☐ **NBAA** ☐ **OTHER:**

CHANGES - REASONS:

Figure F-2.

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
GRAPHIC DEPARTURE PROCEDURES (DP)

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated
Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statue miles or feet RVR unless otherwise indicated.

DP NAME	NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
OHANA	ONE	OHANA1.OHANA	NONE		

TYPE:	OBSTACLE	COPTER	SID	SPECIAL	RNAV
	☐	☒	☒	☐	☒

CANCELLATION ☐

DP ROUTE DESCRIPTION:
VFR SEGMENT: VFR CLIMB TO ALOHA, CROSS ALOHA AT OR ABOVE 800

IFR SEGMENT: TRACK 040.30 TO CROSS PEARL AT OR ABOVE 1600, THEN TRACK 040.44 TO CROSS HARBR AT OR ABOVE 3300, THEN TRACK 129.41 TO CROSS MOSES AT OR ABOVE 3500, THEN TRACK 086.11 TO CROSS OHANA AT OR ABOVE 3700

TRANSITION ROUTES (GRAPHIC DEPICTION ONLY):

TRANSITION NAME	TRANSITION COMPUTER CODE	FROM FIX/NAVAID	TO FIX/NAVAID	COURSE	DISTANCE	MEA	MOCA	CROSSING ALTITUDE/FIXES
								-
								+

PBN REQUIREMENT NOTES:
RNAV 1 - GPS

EQUIPMENT REQUIREMENT NOTES:

PROCEDURAL DATA NOTES:
NOTE: USE HONOLULU ALTIMETER SETTING

TAKEOFF MINIMUMS:
FROM ALOHA IDF, MINIMUM CLIMB OF 580 FT PER NM TO 3300

TAKEOFF OBSTACLES NOTES:

CONTROLLING OBSTACLES:
IDF ALTITUDE CONTROLLING OBSTACLE: 995 FEET MSL TERRAIN 212350.00N/1574553.00W
SEGMENT CONTROLLING OBSTACLE: 1049 FEET MSL ANTENNA 212410.20N/1574630.20W

MSA:
FROM KAMEHAMEHA MEDICAL CENTER HELIPORT 4000

LOST COMMUNICATIONS PROCEDURES:
PROCEED TO AKANA WAYPOINT THEN EXECUTE COPTER RNAV (GPS) 220 APPROACH

ADDITIONAL FLIGHT DATA:
CHART: TOP ALTITUDE: ASSIGNED BY ATC

AIRPORTS SERVED:

AIRPORT ID	CITY	STATE

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DP NAME	NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
OHANA	ONE	OHANA1.OHANA	NONE		
PHXX		KAMEHAMEHA			HI

COMMUNICATIONS:
CHART: AWOS-3

FIXES AND/OR NAVAIDS:

REMARKS:

FLIGHT INSPECTED BY	OFFICE	DATE
	AJW-XXXX	MM/DD/YYYY

DEVELOPED BY	OFFICE	DATE
	AJV-XXXX	MM/DD/YYYY

APPROVED BY	OFFICE	DATE	TITLE
	AJV-XXXX	MM/DD/YYYY	MANAGER

REQUIRED EFFECTIVE DATE
ROUTINE

COORDINATED WITH:

A4A ☐ ALPA ☐ AOPA ☐ APA ☐ HAI ☒ NBAA ☐ OTHER:

CHANGES - REASONS:

Appendix G. FAA Form 8260-15D, Diverse Vector Area

Section 1. Instructions for Completing FAA Form 8260-15D

1. General. Develop a separate Form 8260-15D (or applicable military form) for each airport where a DVA has been developed and forward to the requesting ATC facility.

a. The information on the form will be used by the facility to establish the DVA procedure (see Figure G-1).

b. For a complex DVA, consider providing a graphic depiction of the area to the facility in addition to the Form 8260-15D.

2. Complete the FAA Form 8260-15D. Enter all applicable information.

a. Airport ID. Enter the ICAO ID; if one is not available, enter the FAA airport ID.

b. City and State. Complete this section with the same location data as on the associated Form 8260-15A.

c. Amendment number. Enter the amendment number as applicable. When the Form 8260-15D is an original, enter "ORIG."

d. Actual Effective date. The effective date is the AIRAC date the DVA will be published.

e. Chart – Diverse Vector Area (Radar Vectors). List each runway to be charted followed by "Heading as assigned by ATC." When applicable, include climb gradient information [see paragraph 2-1-1.d(2)].

Example:

RWY 21: HEADING AS ASSIGNED BY ATC; REQUIRES MINIMUM CLIMB OF 215 FT/NM TO 4000.

RWY 4, 22, 30L, 30R: HEADING AS ASSIGNED BY ATC.

RWY 17: HEADING AS ASSIGNED BY ATC; REQUIRES MINIMUM CLIMB OF 215 FT/NM TO 1500.

f. For ATC use only. List each runway assessed for a DVA followed by a description of the area. Do not include the buffer areas within the description since these descriptions may be used by ATC facilities to develop radar video maps of the DVA.

(1) Isolation area. Include the latitude/longitude of the DRP and a distance from DRP determined by the diverse departure evaluation distance (25/46 NM) minus 5 NM. Describe in detail the isolation area(s) that must be avoided.

Example:

RWY 31: ALL AREA WITHIN 20 NM OF 352336.01N/0973607.80W (DEPARTURE REFERENCE POINT) EXCEPT FOR THE FOLLOWING AREAS: 1) WITHIN 3 NM RADIUS OF 352557.45N/0974109.53W AND 2) WITHIN 3 NM RADIUS OF 353405.64N/0972920.85W.

(2) Range of authorized headings. Describe the authorized range of headings (corresponding to the lateral sector boundaries) beginning with the extreme left heading, clockwise to the extreme right heading as would be viewed from the departure runway in the direction of the departure, as well as the distance from the DRP to which the DVA is applicable. Also, provide a detailed point-to-point description of the area to assist in the creation of a video map.

Example:

RWY 6: AUTHORIZED HEADINGS 270 CLOCKWISE TO 150 WITHIN 20 NM OF 384457.07N/0902229.98W (DEPARTURE REFERENCE POINT).

INCLUDES ALL AREA WITHIN 384457.07N/0902229.98W TO 384454.27N/0904803.87W THEN VIA 20 MILE ARC CENTERED ON 384457.07N/0902229.98W TO 382736.10N/0900946.11W TO 384457.07N/0902229.98W.

(3) Climb to initial MVA/MIA. Describe the authorized range of headings beginning with the extreme left heading, clockwise to the extreme right heading as would be viewed from the departure runway in the direction of the departure. The DVA description must state it is applicable only within those areas where the MVA/MIA sector altitude is equal to or less than the initial MVA/MIA.

Example:

RWY 36: AUTHORIZED HEADINGS 310 CLOCKWISE TO 050 TO 3500 WITHIN ANY MVA SECTOR WITH A MINIMUM ALTITUDE OF 3500 OR LESS.

(4) Defined area. Use latitude/longitude points, lines, arcs, and arc center points (as applicable) to describe the area.

Example:

RWY 21L: WITHIN THE AREA BOUNDED BY A SERIES OF LINES FROM
381458.00N/1215805.00W TO
381014.00N/1220922.00W TO
380200.00N/1215823.00W TO
381831.00N/1213839.00W TO
382207.00N/1214546.00W TO
381458.00N/1215805.00W.

g. Obstacle evaluation area (OEA). This area is used to document and describe the OEA (including buffer areas where utilized) of the DVA and will primarily be used for identifying and evaluating the aeronautical effect of proposed obstacles. Enter a description of each OEA (using as necessary latitude/longitudes, bearings, arcs, radii, etc.) for which a DVA has been established.

h. Authorized facility. Specify the ATC facility(s) which requested the DVA and for which the DVA is applicable. When an additional ATC facility has requested to use an existing DVA (see Order 8260.3 for limitations when an additional ATC facility will use the DVA), that facility must also be specified. Include facility(s) contact information, i.e., phone number.

i. Form 7210-9 date. For a DVA based on a climb to an initial MVA/MIA, enter the date of the Form 7210-9 that was used to evaluate the DVA. Leave blank for other DVA types.

Note: A DVA does not require a flight inspection; therefore, no additional signatures are required.

j. Developed by. Enter the name of the FAA procedure specialist and organizational routing code.

k. Approved by. Enter the name of the Aeronautical Information Services Manager, or the delegated representative. This individual must sign in the “approved by” space and enter the date signed.

l. Changes/Reasons. List changes or reasons from the Form 8260-15D, which immediately preceded the current version. Leave blank for an original.

Figure G-1.

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
DIVERSE VECTOR AREA (DVA)

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Distances are in nautical miles.

AIRPORT ID	CITY	STATE	AMDT NO	ACTUAL EFFECTIVE DATE
KBUR	BURBANK	CA	ORIG	04/19/2017

CHART - DIVERSE VECTOR AREA (Radar Vectors):

RWY 8: HEADING AS ASSIGNED BY ATC; REQUIRES MINIMUM CLIMB OF 420 FT PER NM TO 2500.
RWY 15: HEADING AS ASSIGNED BY ATC; REQUIRES MINIMUM CLIMB OF 340 FT PER NM TO 2100.
RWY 26: HEADING AS ASSIGNED BY ATC; REQUIRES MINIMUM CLIMB OF 380 FT PER NM TO 4800.
RWY 33: HEADING AS ASSIGNED BY ATC; REQUIRES MINIMUM CLIMB OF 460 FT PER NM TO 4900.

CANCELLATION ☐

FOR ATC USE ONLY:

RWY 8: AUTHORIZED HEADINGS 130 CLOCKWISE TO 230 WITHIN 14 NM OF 341152.16N/1182145.10W (DEPARTURE REFERENCE POINT) INCLUDES ALL AREA WITHIN 341152.16N/1182145.10W TO 341210.88N/1181950.58W, THEN VIA 4.2 NM CLOCKWISE ARC CENTERED ON 340758.47N/1181955.56W TO 341033.83N/1181556.21W, TO 340255.26N/1180845.99W, THEN VIA 14 NM CLOCKWISE ARC CENTERED ON 341152.16N/1182145.10W TO 340516.21N/1183638.11W, TO 341152.16N/1182145.10W.

RWY 15: AUTHORIZED HEADINGS 180 CLOCKWISE TO 270 WITHIN 13 NM OF 341225.16N/1182132.34W (DEPARTURE REFERENCE POINT) INCLUDES ALL AREA WITHIN 341225.16N/1182132.34W TO 341034.49N/1182032.29W, THEN VIA 4.2 NM CLOCKWISE ARC CENTERED ON 340937.95N/1182528.28W TO 340845.58N/1182031.23W, TO 335926.73N/1182253.83W, THEN VIA 13 NM CLOCKWISE ARC CENTERED ON 341225.16N/1182132.34W TO 341506.65N/1183652.75W, TO 341225.16N/1182132.34W.

RWY 26: AUTHORIZED HEADINGS 240 CLOCKWISE TO 300 WITHIN 14 NM OF 341151.86N/1182123.67W (DEPARTURE REFERENCE POINT) INCLUDES ALL AREA WITHIN 341151.86N/1182123.67W TO 340730.78N/1183725.98W, THEN VIA 14 NM CLOCKWISE ARC CENTERED ON 341151.86N/1182123.67W TO 342114.26N/1183357.65W, TO 341151.86N/1182123.67W.

RWY 33: AUTHORIZED HEADINGS 250 CLOCKWISE TO 300 WITHIN 12 NM OF 341157.34N/1182124.65W (DEPARTURE REFERENCE POINT) INCLUDES ALL AREA WITHIN 341157.34N/1182124.65W TO 341016.12N/1183543.96W, THEN VIA 12 NM CLOCKWISE ARC CENTERED ON 341157.34N/1182124.65W TO 342121.65N/1183025.75W, TO 341550.79N/1182302.39W, THEN VIA 4.2 NM CLOCKWISE ARC CENTERED ON 341243.12N/1182625.68W TO 341339.62N/1182129.50W, TO 341157.34N/1182124.65W.

OBSTACLE EVALUATION AREA (not for video mapping use):

RWY 8: FROM 341152.16N/1182145.10W TO 341210.88N/1181950.58W, THEN VIA 4.2 NM CLOCKWISE ARC CENTERED ON 340758.47N/1181955.56W TO 341132.53N/1181714.57W, TO 340556.01N/1180628.11W, THEN VIA 14 NM CLOCKWISE ARC CENTERED ON 341152.16N/1182145.10W TO 340528.69N/1180644.22W, THEN VIA 3.06 NM CLOCKWISE ARC CENTERED ON 340255.26N/1180845.99W TO 340030.26N/1180630.31W, THEN VIA 17 NM CLOCKWISE ARC CENTERED ON 341152.16N/1182145.10W TO 340351.13N/1183949.16W, THEN VIA 3 NM CLOCKWISE ARC CENTERED ON 340516.21N/1183638.11W TO 340803.38N/1183759.29W, THEN VIA 14 NM CLOCKWISE ARC CENTERED ON 341152.16N/1182145.10W TO 340953.91N/1183827.56W, TO 341152.16N/1182145.10W. CONTROL OBSTACLE: 2039 FT. MSL AAO ON TERRAIN AT 340813.79N/1181935.23W (CG AND CTA).

RWY 15: FROM 341225.16N/1182132.34W TO 341034.49N/1182032.29W, THEN VIA 4.2 NM CLOCKWISE ARC CENTERED ON 340937.95N/1182528.28W TO 341013.20N/1182027.56W, TO 335937.01N/1181840.28W, THEN VIA 13 NM CLOCKWISE ARC CENTERED ON 341225.16N/1182132.34W TO 335932.04N/1181916.11W, THEN VIA 3.02 NM CLOCKWISE ARC CENTERED ON 335926.73N/1182253.83W TO 335629.26N/1182339.01W, THEN VIA 16 NM CLOCKWISE ARC CENTERED ON 341225.16N/1182132.34W TO 341543.65N/1184025.28W, THEN VIA 3 NM CLOCKWISE ARC CENTERED ON 341506.65N/1183652.75W TO 341757.77N/1183543.81W, THEN VIA 13 NM CLOCKWISE ARC CENTERED ON 341225.16N/1182132.34W TO 341918.49N/1183450.99W, TO 341225.16N/1182132.34W. CONTROL OBSTACLE: 1719 FT. MSL AAO ON TERRAIN AT 340734.43N/1182205.99W (CG AND CTA).

RWY 26: FROM 341151.86N/1182123.67W TO 340313.07N/1183440.34W, THEN VIA 14 NM CLOCKWISE ARC CENTERED ON 341151.86N/1182123.67W TO 340446.45N/1183556.82W, THEN VIA 3 NM CLOCKWISE ARC CENTERED ON 340730.78N/1183725.98W TO 340634.56N/1184051.98W, THEN VIA 17 NM CLOCKWISE ARC CENTERED ON 341151.86N/1182123.67W TO 342314.61N/1183639.58W, THEN VIA 3 NM CLOCKWISE ARC CENTERED ON 342114.26N/1183357.65W TO 342314.80N/1183115.95W, THEN VIA 14 NM CLOCKWISE ARC CENTERED ON 341151.86N/1182123.67W TO 342414.56N/1182920.27W, TO 341151.86N/1182123.67W. CONTROL OBSTACLE: 3799 FT. MSL AAO ON TERRAIN AT 342117.06N/1182732.03W (CG AND CTA).

RWY 33: FROM 341157.34N/1182124.65W TO 340618.06N/1183410.24W, THEN VIA 15 NM CLOCKWISE ARC CENTERED ON 341157.34N/1182124.65W TO 340722.11N/1183446.65W, THEN VIA 3 NM CLOCKWISE ARC CENTERED ON 341016.12N/1183543.96W TO 340950.56N/1183918.70W, THEN VIA 15 NM CLOCKWISE ARC CENTERED ON 341157.34N/1182124.65W TO 342323.44N/1183309.36W, THEN VIA 3.03 NM CLOCKWISE ARC CENTERED ON 342121.65N/1183025.75W TO 342256.30N/1182717.93W, TO 341441.71N/1182157.38W, THEN VIA 4.2 NM CLOCKWISE ARC CENTERED ON 341243.12N/1182625.68W TO 341339.62N/1182129.50W, TO 341157.34N/1182124.65W CONTROL OBSTACLE: 6239 FT. MSL AAO ON TERRAIN AT 355758.83N/1152742.32W. CONTROL OBSTACLES: 3999 FT. MSL AAO ON TERRAIN AT 342124.40N/1182615.00W (CG) AND 3959 FT. MSL AAO ON TERRAIN AT 342123.57N/1182615.36W (CTA).

AUTHORIZED FACILITY:

SOUTHERN CALIFORNIA TRACON (SCT) PHONE: (858) 537-5801 FACILITY MANAGER, (858) 537-5830 OPERATIONS SUPPORT MANAGER.

FAA FORM 7210-9 DATE:

AIRPORT ID	CITY	STATE	AMDT NO	EFFECTIVE DATE
KBUR	BURBANK	CA	ORIG	04/19/2017

DEVELOPED BY	OFFICE	DATE	
APPROVED BY	**OFFICE**	**DATE**	**TITLE**
			MANAGER

CHANGES - REASONS:

Figure G-2.

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
DIVERSE VECTOR AREA (DVA)

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Distances are in nautical miles.

AIRPORT ID	CITY	STATE	AMDT NO	ACTUAL EFFECTIVE DATE
KLBB	LUBBOCK	TX	ORIG	

CHART - DIVERSE VECTOR AREA (Radar Vectors):

CANCELLATION ☒

FOR ATC USE ONLY:

Procedure Canceled Effective 01/05/2017

OBSTACLE EVALUATION AREA (not for video mapping use):

AUTHORIZED FACILITY:

FAA FORM 7210-9 DATE:

DEVELOPED BY	OFFICE	DATE	

APPROVED BY	OFFICE	DATE	TITLE
			MANAGER

CHANGES - REASONS:
DVA NO LONGER REQUIRED - ATC REQUEST

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