c. *Line 3.*

(1) Enter the final approach course (FAC) on all procedures. Enter the exact electronic course to a hundredth of a degree. NOS will chart to the nearest whole radial/course for publication. The FAC is determined as follows:

(a) ILS, MLS, LOC, SDF, and LDA procedures - enter the official course alignment based on antenna location and orientation. For MLS with a curved path in the final segment, enter the course after the rollpoint (RP).

(b) NDB and RNAV procedures - enter the course established by FIAO computation.

(c) VOR and TACAN procedures - enter the electronic radial or its reciprocal as established by flight inspection that delivers the aircraft to the runway threshold or desired aiming point. See paragraph 816i. If other than the plotted magnetic course, enter the plotted and electronic values in Remarks section FAA Form 8260-9, or IAPA Data Record. See paragraph 909c(8).

(2) Enter FAF where applicable. On ILS/MLS forms, a FAF must be published for the time-distance requirements of the LOC/AZ-only and circling portions of the procedure, and also for application of FAR Part 121.651. The OM location is normally identified as the LOC FAF for charting purposes. A FAF shall be entered for all procedures, except those procedures without a FAF that utilize on-airport facilities, or ILS/MLS procedures that do not authorize LOC/AZ-only or circling. On RNAV forms, enter the named FAWP; if the FAF is an ATD fix, enter the ATD distance from the named MAP.

KAREN WP; or, **5 ATD from DAVID WP.**

(3) Enter the distance from the FAF to the MAP in miles and hundredths. Enter a dash when the time/distance table is not required for determination of the MAP, such as when the MAP is a facility, fix or WP. Leave **blank** for on-airport NoFAF SIAPs.

(4) Enter the distance from the FAF to the runway landing threshold, or abeam, if straight-in minimums are authorized, to the nearest hundredth of a mile. (NOS will round to the nearest 0.1 mile for publication.) Leave **blank** for circling-only and on-airport NoFAF SIAPs, and COPTER point-in-space approaches.

d. *Line 4.* Enter fixes and minimum altitudes that are to be depicted on the profile view. On procedures that do not authorize a procedure turn or holding pattern, the facility or fix designated as the start of the profile in line 2 shall be the first fix/ facility entered on line 4. See paragraph 807j(3).

(1) Fix altitudes established on ILS for LOC-only use should be coincident with the glide slope when possible. Where the stepdown fix altitude is not within 20 feet of the glide slope, annotate it for LOC use as follows:

MIN ALT CAROL 1600*
*LOC only

Note: This notation is not used when the nonprecision FAF altitude is the same as GS intercept altitude.

(2) Enter all fixes and minimum altitudes after completion of procedure turn, including any fixes associated with the procedure turn or intermediate segment, and including the FAF and any final stepdown fixes.

NOTE: Do not enter a fix on line 4 that is positioned on the profile prior to the procedure turn or holding point unless the fix is required for obstacle clearance or noise abatement after completion of the PT.

(3) Make no entry on line 4 for on-airport facilities with a single set of minimums and no stepdown fix, since the minimum altitude over the facility is determined by the MDA.

(4) For procedures with a FAF, an entry on line 4 is required for the FAF and the stepdown fix, if established.

(5) For procedures with a stepdown fix, enter the lowest MDA at the stepdown fix authorized for aircraft that cannot receive the stepdown fix. If an MDA increase is required when a remote altimeter setting is used, the

stepdown fix should be annotated to reflect the necessary altitude adjustment as follows:

MIN ALT PAULA 1420*
***1540 when using (location) altimeter setting.** (IAPA places the "*" symbol after the fix name.)

e. *Line 5. (Form 8260-3).* Enter distance in miles and hundredths to the threshold from the FAF or OM and MM. On Category II and III ILS procedures, enter distance in feet to the threshold from the IM, 150 HAT and 100 HAT points; enter a **dash** if not appropriate. On Category I, II, III, enter distance in feet from the threshold to a point abeam the GS antenna (for ILS), and abeam the elevation antenna (for MLS).

f. *Line 6. (Form 8260-3).*

(1) Enter minimum **GS/GP intercept altitude,** rounded to the next higher 100-foot increment. This altitude shall not be less than the elevation of the GS/GP at the OM or FAF.

(2) If a fix or facility is located on the final approach course **between** the precision FAF (GS/GP intercept) and the OM, enter the name of the fix or facility and the GS/GP elevation in feet.

(3) Enter the **elevation of the GS/GP** in feet at the OM, MM, and the IM. If a IM is not installed, enter a **dash.**

(4) **GS/GP altitude computations** shall include earth curvature (EC) values. EC shall not be used to determine obstacle clearance. The formula for determining EC is:

EC(ft) = (distance in NM from GS/GP ant)^2 x .8833

g. *Line 7. (Form 8260-3).*

(1) Enter **commissioned angle** for the GS/GP to nearest hundredth of a degree. The commissioned angle shall be used to make calculations entered in lines 5, 6, and 7.

(2) Enter the **threshold crossing height (TCH).** When a threshold is displaced, enter the TCH over the displaced threshold, but do not identify it as such. If the TCH over the displaced threshold is below the minimum value specified in FAA Order 8260.34, enter in accordance with the following example:

TCH 32 at displaced THR; 67 at runway end.

(a) Use the **runway crown elevation** opposite the GS antenna for TCH computations when it is determined that the lateral terrain gradient between the GS/GP antenna site and runway is relatively smooth and uniform, regardless of gradient percentage. See TERPS figure 129A, appendix 2. When terrain drops off or rises rapidly between the GS antenna and the runway, the TCH computations will be based on the **ground elevation of the GS antenna site.** See TERPS figure 129, appendix 2. Computation results shall be rounded to the nearest foot.

(b) The character of the terrain, effective GS elevation, and TCH will be **determined by agreement** between Airway Facilities and FPB personnel.

Note: Flight inspection, as well as instrument data bases, shall be based upon the same GP orientation elevation. Use AMIS as the official data source.

(c) Paragraph (a) above does NOT apply to facilities flight inspected under Order 8240.47. For these facilities, the RDH is the TCH.

h. *Line 8.*

(1) Enter the **identification and type of facility** from which the MSA is computed. On ILS and LOC procedures, an NDB or VOR facility located on the localizer course shall be used to provide MSA information when available. If an omni-directional navaid is not available on the LOC course, the primary omni-directional navaid serving that area shall be used. When the MSA facility is an LOM, enter only the identification and type of facility.

(2) Enter the MSA information **clockwise by sectors,** if used. Sectors are referenced to bearings from the primary omni-directional navaid as follows:

MSA from OAK VORTAC 360-170 4900, 170-360 3700.

(3) Provide a **single MSA** only when the altitude difference between all sectors does not exceed 300 feet, as follows:

MSA from XYZ VORTAC 7700.

(4) Enter the **radius** of the sector if more than 25 NM; and, when the facility-to-airport distance exceeds 25 NM, use a radius of up to 30 NM, as follows:

MSA from ABC VORTAC 060-150 2300, 150-240 3000, 240-330 3600, 330-060 4200 (28 NM).

(5) Where more than one procedure for an airport is established on the **same facility,** the MSA sector divisions shall be identical for each procedure.

(6) MSAs are for **emergency use only.** Do not amend procedures solely to revise an MSA except when the MSA provides less than 950 feet of obstacle clearance.

812. TAKEOFF AND ALTERNATE MINIMUMS.

a. *Takeoff Minimums.* Where takeoff minimums for all runways at the airport are standard, check the "STD" box. If takeoff minimums for any runway are other than standard or if IFR departure procedures are in effect at the airport, check the box titled "See FAA Form 8260-15 for this Airport." Complete Form 8260-15 in accordance with guidelines contained in paragraph 835. For COPTER procedures, leave both boxes **blank.** SIAP amendments specifically to address origination or cancellation of an FAA Form 8260-15 are no longer necessary. NOS will take action based solely upon the 8260-15 form.

b. *Alternate Minimums.*

(1) **To qualify** for alternate minimums, an airport must have weather reporting at the airport and the weather must be reported on Service A weather sequences. Commercial operators who have an **approved weather reporting service** may be authorized alternate minimums without the requirement for Service A hourly aviation reports.

(2) Chapter 2 of this order defines **facility monitoring** categories (1, 2, 3, and 4) and utilization of these categories. Alternate minimums shall not be denied on **precision SIAPs** if the OM or authorized substitute does not have a remote status indicator. This is because the ILS/MLS is monitored, and the GS/GP provides intercept and descent guidance. However, this does not apply to **nonprecision SIAPs** or the LOC/AZ portion of an ILS/MLS SIAP; i.e., deny alternate minimums on a nonprecision SIAP if the facility is not monitored. Alternate minimums are NOT authorized on **LORAN-C SIAPs.**

(3) **Enter alternate minimums** in the space provided. If sufficient space is not available in the Alternate Minimums block for all necessary data, the entry may be continued in the NOTES section or placed entirely on Form 8260-10. If continued in the NOTES section, separate the data from the landing minima notes by placing the data to the right side of the block. When necessary to use Form 8260-10, state: **"Continued on Page 2"** in the Alternate Minimums block.

(4) When alternate minimums are standard, enter the word **"Standard"**; when not authorized, place an **"X"** in the "NA" box. When part-time, or higher than standard for some categories, enter **"Standard #"** and annotate the appropriate condition by separate standard Note:

 # NA when control tower closed.
 # CAT D 1000-3

(5) When alternate minimums are **non-standard**; e.g., higher than standard for all categories, available for certain users, etc., do NOT place an X in the NA box. Enter # next to the "NA" box and annotate the appropriate condition by separate standard Note:

 # NA except standard for operators with approved weather reporting service.
 # CAT A,B 900-2, CAT C 900-2 1/2, CAT D 1000-3

(6) **Make separate entries** for the complete ILS/MLS and for the LOC/AZ-only on the FAA Form 8260-3. Place reference symbols appropriately; e.g., (ILS: # or LOC: Standard @). Use standard Note:

 # CAT A,B,C 800-2, CAT D 800-2 1/2
@ CAT D 800-2 1/2

813. MINIMUMS.

a. *General.* Minimums are entered in boxes provided. When dual minimums are authorized, additional boxes may have to be constructed. Enter straight-in minimums where rate of descent and alignment criteria are satisfied. Straight-in minimums shall not be denied nor canceled in order to circumvent grant agreements that have been established under airport development programs. If criteria does not permit authorizing straight-in minimums, publish circling minimums only.

b. *When a 10-mile procedure turn (or greater) is established,* Category A, B, C and D minimums may be authorized.

c. *When a 5-mile procedure turn is established,* only Category A minimums are authorized; enter **NA** in the VIS column for Category B, C, and D aircraft. **For COPTER procedures**, white-out the letter "A" and insert the word **"COPTER"**, and leave B, C, and D **blank.**

d. *When specific minimums are not authorized,* enter **NA** in the VIS column for the appropriate Category.

e. *On runways under 4,000 feet long,* the regional FPB shall coordinate with the airport sponsor/operator to determine what categories of aircraft use the airport. Where it can be clearly determined that the airport is not to be used by Category D aircraft, Category D minimums shall not be authorized; enter **NA** in the VIS column for Category D aircraft.

f. *Make no entry in the Category E boxes,* except where a valid military requirement exists. When Category E minimums are authorized, a 15-mile procedure turn is required. TERPS table 10 shall be used to establish Category E minimums. However, these minimums shall not be lower than civil Category D minimums. ILS Category II or III minimums shall not be authorized for Category E military aircraft.

g. *Type of Minimums.* The types of minimums are preprinted on Form 8260-3. On Forms 8260-4/5/7, types of minimums shall be entered as **"S- (Runway No.)"** for straight-in minimums and **"Circling"** for circling minimums.

h. *DH/MDA.* Enter the Decision Height (DH) or Minimum Descent Altitude (MDA) authorized by criteria as an MSL value in each of the appropriate DH/MDA boxes by category of aircraft. MDAs shall always be established in 20 foot increments. See TERPS paragraph 322.

i. *VIS.* Enter the visibilities authorized by TERPS, chapter 3. RVR authorized on runways to which straight-in minimums are published shall be listed in feet; e.g., **4000, 2400, 1800,** etc. See paragraph 404 of this handbook for guidance on using RVR on adjacent runways.

j. *HAT/HAA.*

(1) **HAT.** Enter height above touchdown zone elevation when straight-in minimums are authorized. When evaluating host nation procedures, where TDZE is not available, use runway threshold elevation on an interim basis to determine HAT. If neither is available, use airport elevation. For COPTER procedures white-out "HAT" and enter **"HAL"** (or **"HAS"** for point-in-space procedures).

(2) **HAA.** Enter height above airport elevation for circling minimums.

k. *ILS Category II and Category III.* When Category II and Category III minimums are authorized, they shall be included in the NOTE section immediately below the MINIMUMS boxes. These minimums shall be indicated as follows:

(1) ***"Category II ILS Special Aircrew and Aircraft Certification Required.*** **S-ILS 32L: DH 806 MSL, 151 RA, RVR 1600, HAT 150; CAT A,B,C,D. S-ILS 32L: DH 756 MSL, 104 RA, RVR 1200, HAT 100; CAT A,B,C,D."**

(2) ***"Category III ILS Special Aircrew and Aircraft Certification Required.*** **S-ILS 32L: CAT IIIA RVR 700; CAT A,B,C,D. CAT IIIB RVR 600; CAT A,B,C,D. CAT IIIC NA."**

1. *Dual Minimums.* Dual minimums, when authorized, shall be entered in boxes constructed below the preprinted minimums section. Dual minimums shall not be authorized unless a 60 foot operational advantage is obtained or a reduction in visibility can be achieved. To avoid proliferation of dual minimums, all IFR aircraft are assumed to have at least one VOR receiver. Dual minimums based on a stepdown fix combined with local and remote altimeter settings could result in four sets of minimums. **However,** only two sets of minimums shall be published on the 8260 forms. The combinations authorized are: minimums with and without a stepdown fix; or minimums with local and remote altimeter settings.

(1) When authorizing **minimums with and without a stepdown fix** and which also require local and remote altimeter settings, enter the minimums with and without the stepdown fix based on the LOCAL altimeter in the two sets of minimums boxes. Address the minimums with and without the stepdown fix based on the REMOTE altimeter setting in a Note and include the applicable visibility increases. Establish the required visibility as stated in paragraph 404q.

Note: Normally an airport with an ILS does not have a remote altimeter setting. But where this does occur, the MDA adjustment might not be suitable for DH adjustment; i.e., the adjustment might be too great, and the visibility adjustments might differ.

(a) Compare visibilities to determine Note format:

1 Where precision and nonprecision visibility adjustment is the same, use standard Note: **"When local altimeter setting not received, use (location) altimeter setting and increase all DH/MDA's 60 feet, and all visibilities 1/2 mile."** Use this Note also when visibility is affected in ALL categories; apply the greatest visibility increase.

2 Where precision and nonprecision visibility adjustments differ and visibility is affected in all categories, apply the greatest visibility increase to all categories and define application within a standard Note: **"When local altimeter setting not received, use (location) altimeter setting: increase DH to 287 feet and all visibilities 1/4 mile; increase all MDA's 60 feet and all visibilities 1/2 mile."**

3 Where precision and nonprecision visibility adjustments differ and visibility is NOT affected in all categories, apply the greatest visibility increase only to those categories which are affected and define application within a standard Note: **"When local altimeter setting not received, use (location) altimeter setting: increase DH to 287 feet and visibility CAT D 1/4 mile; increase all MDAs 60 feet and visibility CATs C and D 1/2 mile."**

Note: CAT A is not affected until the HAT is more than 880 feet; CAT B is not affected until the HAT is more than 740 feet.

(2) When **dual minimums** are appropriate **with local and remote altimeter settings,** enter the title: **"(LOCATION) ALTIMETER SETTING MINIMUMS"** over the second set.

(a) **When a procedure DOES contain a stepdown fix,** but has only local altimeter setting minimums, enter the straight-in and circling minimums required **without** the stepdown fix in the first set of boxes. Enter both straight-in and circling minimums required **with** the stepdown fix in the second set of boxes.

(b) **When a procedure does NOT contain a stepdown fix,** but has both local and remote altimeter setting minimums, enter the local altimeter setting minimums in the first set of boxes and the remote altimeter setting minimums in the second set of boxes. Use standard Note: **"When local altimeter setting not received, use (location) altimeter setting."**

(3) On procedures where the course

guidance and stepdown fix are obtained from **different VOR facilities,** two sets of minimums shall be published.

(4) On procedures where the course guidance and stepdown fix are obtained from **different NDB facilities,** two sets of minimums shall be published.

(5) If the facility providing course guidance has DME, and the procedure IS NOT identified: ".../DME", use the title: "**DME MINIMUMS**" if the fix is not named. However, if the fix is named, use the fix name to identify the minimums: "**NIXON FIX MINIMUMS.**" The latter title also applies where the fix is identified by a crossing radial/bearing.

(6) If, as in (5) above, and the procedure IS identified ".../DME", publish only one set of minimums.

(7) On procedures where the course guidance and the stepdown fix are obtained from **facilities which are of different types,** publish two sets of minimums. Use one of the following titles to identify the dual minimums:

(a) On procedures where the fix is predicated on DME only: "**DME MINIMUMS**".

(b) On procedures where a fan marker is used for the stepdown fix: "**FM MINIMUMS**".

(c) On procedures where the stepdown fix is identified by radar only: "**RADAR MINIMUMS**".

Note: When radar fixes are specified, ATC must agree to provide the radar service on a continuous basis and the fix shall be identified on the video map or map overlay.

m. *Limitations on Landing Minimums.* Minimums are affected by a number of different circumstances and conditions. Examples are enumerated below indicating the appropriate action to be taken.

(1) **Day and Night Minimums.** The authorized minimums apply to both day and night conditions unless otherwise restricted. The FIAO shall determine the operation of ALL lighting aids PRIOR to authorizing night minimums. Permanently installed **runway edge lights** (including threshold/runway end lights), defining the lateral and longitudinal boundaries of the runway, shall be operating to support night minimums (see AC150/5340-24). Airport or runway boundary lights are NOT adequate for night landing minimums unless the entire area between such lighting is suitable for landing. In special cases, portable runway lights may be used temporarily as described in AC150/5345-50.

(2) **Restriction of Night Minimums.** When night minimums are not authorized or are higher than day minimums, a restriction shall be entered in the NOTES section to deny night minimums or to specify increased night minimums:

(a) If unable to authorize night minimums, use standard Note: "**Procedure NA at night.**"

(b) If increased night visibility is required by environmental conditions, such as extraneous lighting, use standard Note: "**Night visibility minimum ____ miles.**"

(c) When straight-in minimums are authorized to an unlighted runway, but another runway is lighted, use standard Note: "**Straight-in minimums NA at night.**"

(d) When only circling minimums are authorized and at least one runway is lighted, a Note is not required for non- lighted runways. When no runways are lighted, use standard Note: "**Procedure NA at night.**"

(3) **Inoperative Components and Visual Aids.** The Inoperative Components and Visual Aids Table advises the pilot how much to increase published minimums when certain components or visual aids are known to be inoperative. When the inoperative table adjustment is not compatible with the credit that has been authorized, add Notes to the procedure specifying the necessary adjustment:

(a) When credit has not been given to a visual aid to reduce visibility, use standard Note: "**Inoperative Table does not apply to**

MALS Rwy 30."

(b) In many instances, reference to a particular component or visual aid is not necessary as no portion of the inoperative table is applicable. Use standard Note: **"Inoperative Table does not apply."**

(c) When the inoperative table applies only to a few cases, use standard Note: **"Inoperative table does not apply to CAT D"**; or, **"Inoperative table does not apply to S-LOC-31 CATs A and B."**

(d) The inoperative table, in certain circumstances, does not provide a sufficient increase to minimums. When this situation occurs, use standard Note: **"For inoperative ALSF, increase S-7 CAT D visibility to 1 3/4"**; or, **"For inoperative ALSF, increase S-LOC-7 CAT D visibility to RVR 5000, and CAT E to RVR 6000."**

(e) Where two sets of minimums are published, specify the applicable minimums affected. For example, on a VOR approach with DME minimums published as the second set, use standard Note: **"VOR Minimums: Inoperative Table does not apply to S-30 CATs C and D. DME Minimums: For inoperative MALSR, increase S-30 CAT D visibility to 1 1/4 mile."** Where the Note applies equally to both sets of minimums, do not specify the minimums.

(f) No MM. The ILS DH may be adjusted to a HAT above 200' for reasons which are not related to the loss of the MM. TERPS does not require a HAT more than 250' when the MM is inoperative. Accordingly, there may be a situation when the 50' adjustment required by the inoperative table is not appropriate. In such an event, a clarifying Note is necessary. The following are sample situations and the standard Notes to use:

1. When the established DH is already at HAT 250' or more, no adjustment for inoperative MM is required. Use standard Note: **"DH not increased for inoperative MM."** Scenarios in which this might take place are:

- Offset localizer
- Facility performance restriction
- Obstacle clearance penetrations in the final or missed approach areas.
- A threshold crossing height (TCH) waiver.

2. When the DH is established at HAT between 200' and 250', the adjustment for inoperative MM varies and the resultant HAT will not exceed 250'. Scenarios in which this might take place are:

- DH restriction between HAT 200' and 250' due to facility performance.
- HAT between 200' and 250' due to obstacle clearance penetration in the missed approach area.
- HAT below 250' due to TCH waiver.

[*Example Condition*: Established DH 1220, HAT 220] Use standard Note: **"DH increased to 1250 for inoperative MM."**

3. When the HAT is at least 250', and MM is not installed, a Note is NOT appropriate.

(4) Weather Reporting/Altimeter Setting.

(a) In accordance with TERPS paragraph 122d, an altimeter setting (local or remote) is required to authorize landing minimums. Terminal weather observation and reporting facilities (in addition to remote facility status monitoring) must be available for the airport to serve as an alternate airport. Some airports do not have any weather reporting while others provide this service on a part-time basis. A number of airports have the capability to report altimeter settings only on a full-time or part-time basis. Some operators provide approved weather reporting services, full-time or part-time, to their own company aircraft or on a contract basis to others. Evaluate these factors to determine the type of notation that may be required to support landing and/or alternate minimums.

NOTE: The phrase "except for operators with approved weather reporting service" is used only when such service is available.

(b) When a remote altimeter setting source is available on a 24-hr. basis, use of a **remote altimeter setting** on a **part-time basis**

will normally coincide with the loss of the local altimeter source; e.g., control tower closed, FSS closed, local weather office closed, etc. Use standard Note: **"When local altimeter not received, except for operators with approved weather reporting service, use Oakland altimeter setting and increase all MDAs 120 feet, and all visibilities 1/2 mile."** Where appropriate, define application to DH and/or MDA, or address when visibility is NOT affected in all categories, within the standard Note. See paragraphs 813l(1)(a)1 and 2.

(c) When an altimeter setting is provided at **uncontrolled airports**, use standard Notes described in paragraph 814e.

(d) When the use of remote altimeter setting **cannot be authorized**, use standard Note: **"When Valle altimeter setting not received, procedure NA."**

(e) Include **state identifiers** if confusion is possible. Use standard Note: **"When local altimeter not received, use Springfield, MO altimeter setting and increase all MDAs 80 feet, and all visibilities 1/2 mile."** Where appropriate, define application to DH and/or MDA, or address when visibility is NOT affected in all categories, within the standard Note. See paragraphs 813l(1)(a)1 and 2.

(f) The adjustment for a remote altimeter setting source is **cumulative**; i.e., it is additional to any inoperative component adjustment, terminal segment MRA adjustment, or altitude increase to insure communication reception.

(g) Round part-time altimeter adjustment values to the **next higher 20'** increment when publishing a Note to increase all MDAs by a specified amount. For example, if the adjustment value is 202.35', specify to increase all MDAs by 220'.

NOTE: Remember to use the part-time altimeter adjustment when determining descent gradient from a stepdown fix in final.

(5) Circling Conditions and Restrictions. Circling minimums shall not be sectorized to provide more than one circling minimum for each aircraft category. The higher minimums required for the complete circling area shall be established, or circling minimums shall be denied in the sector requiring higher minimums. When the higher minimums are authorized, a Note is not required; however, if circling is restricted in a portion of the circling area, use standard Note: **"Circling NA E of RWY 17-35"** or **"Circling NA NW of RWYs 9 and 18."**

(6) ILS restrictions. Publish restrictions to ILS LOC and GS in the NOTES section. No Note is required for an unusable LOC back course, or for a LOC lateral coverage restriction with no terminal route through the restricted area.

(a) If the LOC will not provide adequate course guidance in the area between the MM and runway threshold, use standard Note: **"ILS unusable from MM inbound."**

(b) When the GS will not provide satisfactory vertical guidance, restrict its use above or below a specific altitude. Use standard Note: **"GS unusable below/above (altitude)."**

(c) When GS indications can be received on a LOC back course approach, use standard Note: **"Disregard GS indications."**

(d) When the rate of reversal in the GS exceeds the tolerances of FAA Handbook OA P 8200.1 (Flight Inspection Manual), section 217, establish a restriction for autopilot coupled approach 50 feet above the point where the out-of-tolerance condition exists. Use standard Note: **"Autopilot coupled approach NA below 540'."**

(e) When terrain, obstacles, descent gradient, etc., do not allow the use of a LOC procedure associated with the ILS when the GS is not used, place **NA** in the visibility column for each LOC category affected. If, in such an instance, another procedure should be used instead, use standard Note: **"When GS not used, use LOC RWY 26 procedure."** When circling is authorized, but the LOC procedure associated with the ILS is "NA", use standard Note: **"Circling requires descent on GS to MDA."**

(7) Simultaneous Approaches. ILS approach procedures which meet the requirements for simultaneous approaches shall be annotated as to which runways are authorized for simultaneous operations. For example, if simultaneous approaches are authorized to runways 27L and 27R, **each** ILS SIAP shall refer to the other ILS SIAP. Use standard Note: **"Simultaneous approach authorized with RWY 27R"** (to be noted on ILS RWY 27L SIAP).

(8) Radio controlled Lights. At many locations, lighting aids are radio controlled by the pilot. This is part of a national energy savings program initiated by the FAA. A standard keying system to activate the lights is described in AC150/5340-27, and is also published in the Airman's Information Manual and the National Ocean Survey Approach Chart Legend. AC90-42 establishes Common Traffic Advisory Frequencies (CTAF) to be used at uncontrolled airports including those with part-time towers. Radio control of airport lighting systems from aircraft should be used only at airports where ATC facilities are not in operation. **Existing systems** that utilize frequencies other than the CTAF may continue to be used. However, airport operators should be encouraged to change to an established CTAF as soon as possible. All **new radio control systems** shall comply with the following if visibility credit for approach lights is to be given:

(a) The radio frequency used to activate the approach lights is an established CTAF in accordance with AC90-42.

(b) The procedure used to activate the approach lights is in accordance with AC150/5340-27.

(9) Night landing minimums shall NOT be authorized unless the requirements of AC150/5340-27 are met. See also paragraphs 813m(1) and (2). Use standard Note: **"Procedure NA at night."**

(10) PCL Note Charting. Pilot Control Lighting (PCL) is depicted on National Ocean Service (NOS) SIAP charts by the use of negative symbology. NOS obtains information for adding the symbology to SIAPs from NFDC's National Flight Data Digest (NFDD). FIAOs shall review each published procedure to insure that PCL charting is correct.

(11) Lights by prior arrangement. When the operation of lights must be arranged for before flight, use standard Note: **"Procedure NA at night except by prior arrangement for runway lights."**

(12) Lights on Request. At some locations, lights are only available by radio contact with an FBO, airport manager, etc. Use standard Note: **"Request MIRL Rwy 7/22, and VASI Rwy 22 - CTAF"** (or appropriate frequency if other than CTAF).

(13) All **Special SIAPs** issued on Form 8260-7 shall, until further advised, **continue** to have light activation Notes. Use standard Note: **"Activate MALSR Rwy 25, MIRL Rwy 7-25** (as appropriate) **- CTAF"** (or designated frequency.)

814. NOTES.

Note: See also paragraphs 252, 404, 805b, 807f, 812b, 813k, 813l, 813m (1) through (13), 832b and d, and 833g.

a. *General.* Notes pertaining to conditional use of a procedure and/or notes restricting the use of a procedure shall be entered in the NOTES section of Forms 8250-3, -4, -5, and -7. Notes and data entered in this section are items which should appear on the published chart as a Note. If sufficient space is not available on the form for all necessary notes, they may be continued on the Form 8260-10. When it is necessary to use Form 8260-10, state: **"Continued on page 2."**

b. *Note Restriction.* SIAPs shall NOT contain notes which may be construed as regulating traffic. Notes such as "VFR practice approaches NA," if required, should be in the Airport Remarks section of the Airport/Facility Directory (A/FD). Notes regarding delays due to traffic also belong in the A/FD.

c. *Avoid caution notes* about obstacles. Notes such as: "High Terrain all quadrants"; "Steeply rising terrain to 5300 4 miles SW of approach course"; or, "50' unlighted trees south of RWY 9 THR" are NOT appropriate.

d. *Avoid listing specific times* in notes whenever possible, since a change in hours of operation would require amended procedures. Instead, refer to the situation directly relating to the cause. Use standard Note: **"When control tower closed" or, "at night."** When there is NO ALTERNATIVE, times may be used if the airport operator provides assurance that the hours will not change. Most operators adjust UTC hours of operation so that local hours remain the same whether or not daylight saving time is in effect. In such cases, it is appropriate to use local time in notes.

e. *When a local altimeter setting is available at an uncontrolled airport,* including those with part-time towers, the setting will be obtained on the established CTAF for that airport whenever possible. The NFDC is responsible for designating and publishing the CTAF (see AC90-42, and AIM chapter 4). In such cases, a Note may be required. Some operators provide approved weather reporting services, full-time or part-time, to their own company aircraft or on a contract basis to others.

NOTE: The phrase "except for operators with approved weather reporting service" is used only when such service is available.

Conditions that require notes and the associated standard Notes are as follows:

(1) At airports with a **part-time tower and an FSS,** the CTAF will be a tower frequency and will be monitored by the FSS whenever the tower is closed. No note should be needed if full-time altimeter setting service is provided.

(2) At airports with an **FSS and no tower,** the CTAF is an FSS frequency. No note is needed for a full-time FSS. For a part-time FSS, use standard Note: **"Obtain local altimeter setting on CTAF; when not received, use (location) altimeter setting and increase all MDAs 80 feet, and all visibilities 1/2 mile."** Where appropriate, define application to DH and/or MDA, or address when visibility is NOT affected in all categories, within the standard Note. See paragraphs 8131(1)(a)1 and 2. If a remote altimeter source cannot be approved, end the note: **"...; when not received, procedure NA."**

(3) At airports with a **part-time tower and no FSS,** the CTAF will be a tower frequency even when the only altimeter source is UNICOM. In such cases use of UNICOM is authorized provided the note gives an alternate course of action if UNICOM is not contacted. Use standard Note: **"When control tower closed, obtain local altimeter setting on UNICOM; when not received,** (alternative action)."

(4) At airports with **no tower or FSS,** with the altimeter setting available on UNICOM, the CTAF is UNICOM. An alternate course of action is required. Use standard Note: **"Obtain local altimeter setting on CTAF; when not received,** (alternate action)."

(5) When using remote CTAF altimeter, use standard Note: **"Obtain West Allis altimeter setting on CTAF (122.8); when not received,** (alternate action)."

(6) Multiple altimeter sources shall not result in more than two sets of minimums. If the chosen combination of local and/or remote sources does **not provide full-time coverage,** deny use of the procedure when no altimeter setting is available. Use standard Note: **"When control tower closed, obtain local altimeter setting on CTAF; when not received, use Smith altimeter setting and increase all MDAs 140 feet, and all visibilities 1/2 mile; when neither received, procedure NA."** Where appropriate, define application to DH and/or MDA, or address when visibility is NOT affected in all categories, within the standard Note. See paragraphs 8131(1)(a)1 and 2.

f. *Automated Weather Observing System (AWOS)/Automated Surface Observing System (ASOS).*

(1) AWOS is an FAA sponsored, off the shelf, automatic observation system. The weather and altimeter information is forwarded to the pilot via discrete VHF radio frequency or on a NAVAID, and may be available on commercial telephone access. Additionally, many FAA maintained AWOS-3's are connected to the Service A FSS weather distribution network. AWOS is classified into **four basic levels:**

(a) **AWOS-A:** reports altimeter setting only.

(b) **AWOS-1:** reports altimeter setting, wind, temperature, dewpoint, and density altitude.

(c) **AWOS-2:** reports the same information as AWOS-1 plus visibility.

(d) **AWOS-3:** reports the same information as AWOS-2 plus cloud/ceiling data.

(2) **ASOS is a National Weather Service sponsored** automatic observation program designed to replace current observation sites which use human observers. ASOS locations will have commercial telephone access, discrete VHF air-to-ground frequency, and will be connected to the Service A FSS weather distribution network.

(3) **AWOS-3/ASOS transmitted on Service A does NOT require a backup altimeter source,** and no notes are required on the procedure.

(4) **AWOS-A, -1, -2, and AWOS-3 not transmitted on Service A DO require backup altimeter sources.** Do NOT publish backup altimeter source information as a second set of minimums, or increase visibility for the AWOS backup altimeter source. Use standard Note: **"If local altimeter setting not received, use (location) altimeter setting and increase all MDAs 100 feet."** Where appropriate, define application to DH and/or MDA within the standard Note. See paragraphs 8131(1)(a)1 and 2. If a suitable backup altimeter source is not available, deny use of the SIAP. Use standard Note: **"If local altimeter setting not received, procedure NA."** Use these standard Notes where AWOS is transmitted over an NDB.

(5) **AWOS may be used as a remote secondary altimeter source** when data is available to Flight Service Station (FSS) specialists and ATC facilities through Service A.

(6) **AWOS/ASOS at a remote location** may be used as a primary altimeter source for an airport. Use standard note: **"Use (location) altimeter setting."** However, AWOS -A, -1, -2, and AWOS -3 not transmitted on Service A still require backup altimeter setting sources. Use standard Note: **"Use (location) altimeter setting; if not received, use (location) altimeter setting and increase all MDAs 100 feet." Where appropriate, define application to DH and/or MDA within the standard Note. See paragraphs 8131(1)(a)1 and 2.** When an airport uses a remote AWOS/ASOS as a primary altimeter source, flight inspection insures AWOS/ASOS discrete frequency reception at the IAF.

(7) **AWOS-3/ASOS may be used as a remote secondary altimeter source and to support alternate minimums** at an airport when:

(a) AWOS-3/ASOS is installed and commissioned.

(b) AWOS-3/ASOS data is available to FSS specialists and ATC through **Service A** for flight planning purposes.

(8) **When the AWOS/ASOS information is transmitted** over a discrete frequency (not CTAF) or the voice portion of a local NDB or VOR, AWOS is receivable within 25nm of the AWOS site, at or above 3000' AGL. If AWOS/ASOS is located on the voice portion of a NAVAID, flight inspection checks for interference; this check is performed prior to test transmissions.

(9) Paragraph 816q contains **AWOS/ASOS charting guidance.**

g. *ASR or ARSR* may be available to provide assistance in vectoring to the approach course, identifying fixes, or to provide instrument approaches. Include standard Notes to inform the pilot of these capabilities:

(1) **When ASR and/or PAR approaches are published** for the airport, use standard Note: **"ASR" or "ASR/PAR"** - as appropriate.

(2) **Where radar is the only method** of procedure entry or determining a terminal fix, use standard Note: **"Radar required."**

NOTE: "Radar required" procedures should be avoided whenever possible.

(3) When conditions of paragraphs (1) and (2) exist at an airport, BOTH Notes apply.

h. *Equipment Requirement Notes.* Determine the need for equipment notes after evaluating all SIAP segments, including missed approach. To avoid proliferation of equipment requirement notes, all IFR aircraft are assumed to have at least one VOR receiver. Therefore, the note "VOR required" is not appropriate. VOR, ILS, or other non-ADF approaches may require ADF for procedure entry or missed approach. Use standard Note: **"ADF required."** If radar vectoring is available, use standard Note: **"ADF or radar required."**

i. *Approach Light Plane Penetrations.* Notes advising of approach light plane penetrations shall NOT be processed. When there are penetrations of the approach light plane, the responsible region shall take action to either remove the obstacle or modify the system to accommodate the obstacle. If this is not possible, the regional Airway Facilities Division processes an installation waiver. **Existing notes** referring to approach light penetrations shall be removed from the approach procedure when an appropriate waiver has been approved.

j. *The use of notes to prohibit a final approach from a holding pattern* has been DISCONTINUED. The following guidelines apply:

(1) Where a holding pattern is established at a final approach fix in lieu of a conventional procedure turn, the minimum holding altitude shall meet the altitude limitation requirements of TERPS paragraph 234e(1).

(2) Where a holding pattern is established at an intermediate fix in lieu of a conventional procedure turn, the rate of descent to the final approach fix shall meet the descent gradient requirements of TERPS paragraph 234e(2).

(3) Where a holding pattern is established for the missed approach at an intermediate or final approach fix, and a holding pattern is used in lieu of a procedure turn, the MHA for the missed approach shall conform to the altitude or descent gradient requirements of paragraph (1) or (2) above.

(4) Where a holding pattern is established for the missed approach at an intermediate or final approach fix, and a holding pattern is NOT used in lieu of a procedure turn, a conventional procedure turn shall also be established to permit pilot flexibility in executing a course reversal, and descent to final approach fix altitude.

k. *LORAN Magnetic Variation.* For pilot use, state the magnetic variation of the airport of intended landing. Use standard Note: **"Use 20E magnetic variation".**

l. When the missed approach point is more than two statute miles from the airport, use standard Note: **"Fly visual to airport, 220° - 2.5 miles."**

815. MISSED APPROACH.

a. *General.* The missed approach represents a critical phase of flight; therefore, the missed approach should be designed with a minimum of complexity. The straight ahead missed approach is the most desirable. Turning missed approaches should require as few turns as possible. Each missed approach (except radar) shall terminate at a clearance limit (fix or facility).

b. *Clearance limit altitudes* specified in missed approach instructions may be rounded to nearest 100' increments. **Other altitudes** used in the missed approach should also use 100' increments. If this causes construction difficulties, use of 50' increments is the preferred alternative, with use of 20' increments the last resort.

c. *Missed Approach Point.* On precision procedures the MAP is established by the DH. On nonprecision approach procedures, the MAP is established at a specified fix or at a specified distance from a fix or facility. On ILS/MLS procedures, the two MAPs should be coincidental. Additionally, **identify both MAPs** - one for the full ILS/MLS (DH), and one for the LOC/AZ-only minimums (circling minimums if LOC/AZ

minimums are not authorized). Identification of the LOC MAP will ensure the publication of a time/distance table on the associated approach chart. Specify distances to the nearest hundredth of a mile.

(1) **FAA Form 8260-3.** For the precision portion of the ILS procedure, the MAP is pre-printed on the form as: "ILS: at the DH." Designate the LOC and/or circling MAP as a specific distance in hundredths of a mile after a specified fix or facility or at a specified fix or facility. When LOC-only minimums are NOT authorized, the descent must be made on GS to circling MDA (see paragraph 813m(6)(e)); change the preprinted term "LOC" to Circling." If DME is available, establish a DME fix in hundredths of a mile for the nonprecision MAP.

(2) **FAA Forms 8260-4/5/7.** In the box, titled "MAP," identify the missed approach point as "a distance after (or at) a specified fix or facility" as appropriate. Establish a DME fix in hundredths of a mile if DME is available.

d. RNAV. Do NOT list coordinates for LORAN, nor radial/DME for VOR/DME RNAV. Enter the name of the MAP WP or the ATD from the Runway WP as follows:

BONLI WP; or 1 ATD from RUNEY WP.

e. Missed Approach Instructions. Where possible, develop missed approach procedures (except radar) using the same type of navigation guidance utilized for the final approach segment.

NOTE: When using the word "direct" in the missed approach instructions, ensure that all categories of aircraft are evaluated; i.e., CAT A is not encompassed in CAT D missed approach area and vice versa.

Normally, a missed approach course/heading should be specified. If no course/heading is specified, the aircraft is expected to maintain the last established course/heading. Do NOT use the terminology "Climb runway heading" or "Climb straight ahead;" e.g., use "Climb to 2,800 ..."

(1) **Where the missed approach course** differs from the final course: "Climb to 2,800 via ABC R-180 to ABC VORTAC and hold."

(2) **When the missed approach point** is also the missed approach holding fix and straight-ahead climb is not practical: "Climbing right turn to 2500 in ABC VOR holding pattern." In some cases, a straight-ahead climb or climb via a specified course/heading to an altitude, prior to returning to the holding fix, may be necessary for aircraft with larger turning radii. When this occurs, use the terminology in paragraph 815c(3).

(3) **When obstacles in a turning missed approach area** require an initial straight-ahead climb: "Climb to 3,100 then climbing left turn to 4,000 direct ABC VOR and hold."

(4) **When obstacles preclude a straight-ahead climb** and require an immediate turn: "Climbing right turn to 4,000 direct ABC VOR" or "Climbing right turn to 4,000 via heading 070 then direct ABC VOR and hold."

(5) **ILS/MLS and LOC/AZ missed approach procedures** requiring a turn of more than 15° shall specify an altitude that is at least 400' above the TDZE prior to commencing a turn. Round the resulting altitude to the next higher 100' increment: "Climb to 1,200 then climbing left turn to 3,100 via heading 070 and ABC R-167 to ABC VOR and hold." See also paragraph 815b for rounding guidance.

(6) **If the procedure serves VOR** as well as TACAN equipped aircraft, address TACAN requirements also: "Climb to 5,500 via ABC R-111 then climbing right turn to 6,000 direct ABC VORTAC and hold (TACAN aircraft continue via ABC R-280 to CAROL 10 DME and hold W, LT, 100 inbound)."

(7) **LOC courses** are specified in compass points, and NDB courses as bearings to or from: "Climb to 3,000 via I-ABC NE course and 350 bearing to DEF NDB and hold."

(8) **When the missed approach** requires no specific direction of turn: "Climb 7,000 via ABC R-197 then direct ABC VOR and hold."

(9) **RNAV missed approach routing** may be via courses or direct.

Examples: **"Climb to 5000 via 080 course to SANDY WP and hold;" or "Climbing left turn to 5,000 direct CHERL WP and hold."**

f. Missed Approach Holding. When holding is specified as part of the missed approach instructions, include holding details under Additional Flight Data. Holding is not specified when missed approach is to the FAF or IF used in holding in lieu of PT. Holding is not specified when the missed approach is to an en route fix at an altitude sufficient to permit holding and en route flight. In the latter case, ensure that holding on the missed approach course that leads to the fix is satisfactory.

g. Alternate Missed Approach. Alternate missed approach may be established when required by ATC. Alternate missed approach procedures shall not be charted. When authorized, they shall be preceded by the words: **"...or when directed by ATC."** If holding is authorized on the alternate missed approach, include holding details immediately following the alternate missed approach instructions. Alternate missed approaches should be discouraged in a radar environment. When temporary NAVAID outages (planned or unplanned) prohibit the use of the primary missed approach for a procedure, AVN-100 has the responsibility to ensure an IFR missed approach procedure is published, either on the chart or by NOTAM in the event of lost communications. This does not preclude Air Traffic from issuing alternate climb out instructions.

816. ADDITIONAL FLIGHT DATA.

When additional information or data is essential to clarify the charting of a procedure or when the procedures specialist wants information charted, but does not want it to appear on the chart as a note, the necessary information/data shall be entered in the Additional Flight Data section. Specific instructions to chart data shall be held to a minimum. (See also paragraphs 805b and 815f.)

a. If sufficient space is not available on the form for all necessary data, it may be continued in the NOTES section or on Form 8260-10. When necessary to use Form 8260-10, state: **"Continued on page 2."**

b. Visual aids and runway information once printed on the approach chart may be omitted from the additional flight data section on future amendments. Other items such as holding information, restricted area data, final approach course alignment, etc. shall be retained when amending a procedure.

c. Holding. When primary missed approach instructions provide for holding, enter Additional Flight Data as follows: **"Hold SE, RT, 313.08 inbound."**

d. The nonprecision controlling obstacle in the primary and/or secondary area of the FAS shall be shown as the FAS Obstacle. In the event a stepdown fix is used in the final approach segment, the controlling obstacle between the stepdown fix and the runway shall be shown as the FAS obstacle. Designate the obstacle location to the nearest second. Use standard Note: **"FAS Obst: 317 .Tower 364227/891523."**

e. To identify certain significant obstacles in or near the instrument approach area, include locations and heights under additional flight data. If, in the opinion of the procedures specialist, these obstacles could be **critical to flight safety**, they should be prefaced by the word **"Chart."** However, if the data is being furnished only as information, it shall NOT be prefaced by the word "Chart." Charting agencies will chart any item marked "Chart." Any item listed without indicating "CHART" will be reviewed by the charting agencies and will be charted if it meets their charting specifications. Use standard Note: **"Chart 2674 Antenna 372219/941657"** or **"2674 Antenna 372219/941657."**

f. Obstacles close to a final approach or stepdown fix considered under TERPS paragraph 289, shall be handled as follows:

(1) When paragraph 289 is applied to multiple obstacles, document only the highest obstacle in the 7:1 area.

(2) List the obstacle under Additional Flight Data as **"374 Antenna 352416/881253."** It shall NOT be identified as a "paragraph 289 obstacle." The following entry shall also be made in the Remarks section of Form 8260-9: **"TERPS paragraph 289 applied to 374 antenna 352416/881253."**

NOTE: Do NOT document takeoff obstacles on Form 8260-9 or in Additional Flight Data.

g. **Installed visual aids** must be correctly shown on the aerodrome sketch.

(1) **On initial procedures for a new IFR airport,** enter all approved lighting aids at the airport which could assist the pilot conducting the approach, such as runway lights, approach lights, **VASI, REIL**, etc.: **"HIRL RWY 18-36, MIRL RWY 3-21, VASI RWY 36, REIL RWY 21."** Do NOT identify unlighted runways.

(2) **If the present AL chart** has **incomplete or incorrect aerodrome data, or new facilities are added** which are the reason for the amendment, use standard Note: **"Chart HIRL RWY 9-27 vice MIRL;" VASI RWY's 24, 35;" "Chart MALSR RWY 18 vice MALSF."** If facilities affecting the SIAP are removed, use standard Note: **"Delete MALSR RWY 36."**

h. **Specify final approach course alignment** if OTHER than the following:

(1) **For straight-in** approaches, runway centerline at threshold, as follows:

"FAC crosses RWY C/L extended 3180 from THLD;" or FAC 450L of RWY C/L extended 3000 from THLD." (Left or right as used in the latter case is as viewed by the pilot.)

(2) **For circling approaches,** to the on-airport facility, or to the Airport Reference Point if the facility is off-airport, as follows:

"FAC crosses intersection of RWY's 9-27 and 18-36."

i. **When a flight check radial** is used for the final approach course instead of the plotted radial, use the following Note: **"FAC is a flight check value."** See also paragraph 811c(1)(c).

j. **When a procedure maneuvering area** encompasses a Warning, Restricted, or Prohibited Area, use the following Note: **"Chart R-2567."**

k. **When simultaneous approaches** are authorized, each approach shall include a note requiring the depiction of the adjacent localizer. Use standard Note: **"Depict LOC RWY 27R."**

l. **RNAV Glide Slope.**

(1) **When an RNAV procedure requires specific data** to use glide slope equipment, use standard Notes:

"Glide slope computer setting 3.08°."
"Horizontal distance MDA to MAP on GS 2.71°."
"Reference facility elevation XYZ VORTAC 1160." (VOR/DME RNAV only).
"RW16L Elevation 774.03" (When MAP is at threshold, use threshold elevation + TCH.)
"NIXON WP Elevation 845.03." (When MAP is prior to threshold, use computed MSL altitude of the desired descent angle at the MAP.)

(2) **For VOR/DME RNAV,** if the constraints specified in TERPS paragraph 1523f exist, publish ONLY the reference facility elevation data.

m. **RESERVED.**

n. **Magnetic Variation**. Except as provided in paragraph 804, enter the magnetic variation value upon which the procedure design and documentation is based. Ensure that it is the variation upon which the final approach radial, bearing, or course are predicated.

(1) **For non-RNAV SIAP's,** enter the officially assigned variation value of the facility providing final approach course guidance.

(2) **For VOR/DME RNAV SIAP's,** enter the officially assigned variation value of the reference facility.

(3) **For non-VOR/DME RNAV SIAP's** enter the officially assigned variation value of the airport served by the SIAP. See paragraph 814k.

(4) **For Departure Procedures (DP),** enter the officially assigned variation values of the airport served by the DP.

o. **Enter the Epoch Year** of the variation value as designated by AVN-160 (see paragraph 221c(1).

p. **For COPTER point-in-space SIAP's** serving more than one landing area, list available landing areas, landing area elevations, the course in hundredths of a degree, and distance from the MAP in hundredths of a mile as follows:

Chevron Heliport, 10, 090.02/2.81
Phi Heliport, 20, 087.11/2.32
Garden Island Seaplane Base, 26, 129.08/14.92

q. Where a VDP is established on a SIAP, identify the location of the VDP as follows:

Chart VDP at ____ DME.
Distance VDP to THR____ miles.
Chart VDP at ____ NM to MAP.

r. On LORAN-C SIAP's, include a reference bearing/distance to one nearby navigational aid.

(1) If the SIAP has a course reversal, define the bearing/distance from the IAF.

(2) If the SIAP has no course reversal, define the bearing/distance from the FAF or IF (or the common IF for multiple terminal routes).

Chart in planview ABC VORTAC to NIXON WP R-128/12.62NM; or Chart in planview XYZ NDB to ECKLS WP Brg 083 FROM/16.65NM.

(3) Where a non-RNAV feeder segment is established, no reference bearing/distance is required.

s. For MLS, enter the following data:

(1) Boresite AZ (mag).

(2) Limits of coverage; e.g., 300M to 060M.

(3) Height above EL antenna for all WP's from FAF to MAP.

PFAF(1590),TP(1496),RP(1183),DH(194), RWY WP(44).

t. For MLS, describe the curved path including radius and direction of turn, course before and after the turn, along-track distance from each WP:

1.25NM arc to RP
RT 351 deg to 133 deg
6.58 ATD from PFAF
6.33 ATD from TP
0.50 ATD from DH

817. LOWER BLOCKS.

a. City and State. Enter city and state name. The official 2-letter state abbreviations shall be used.

b. Airport - Elevation/TDZE.

(1) Enter the official airport name (as stated on Form 5010-1) and **airport elevation** (as stated in the AMIS/IAPA data base). Submit supporting data with the procedure for verification if a change is indicated. For multiple COPTER point-in-space SIAP's, enter **"various heliports."**

(2) Enter Touchdown Zone elevation (TDZE) (as stated in the AMIS/IAPA data base) for the runway designated in the procedure title whenever straight-in minimums are authorized. Add TDZE for sidestep runway, if applicable. Leave the TDZE blank if straight-in minimums are not authorized. For COPTER point-in-space SIAP's, leave TDZE **blank** (see paragraph 816p).

c. Facility Ident. Enter facility identification. On procedures predicated on proposed facilities and when an identification has not been assigned, leave this space **blank** and NFDC will enter the identification. For RNAV procedures, enter the identification of the SIAP reference facility. For LORAN RNAV procedures, enter the master/ secondary station designation, followed by the Group Repetition Interval (GRI).

Example: **MWX 9960.**

d. Proc. No. Enter procedure identification as determined by TERPS chapter 1, section 6, paragraph 802, of this order. When DME is required for the final approach, include "/DME" as part of the identification; e.g., VOR/DME, ILS/DME, LOC/DME, LDA/DME, NDB/DME.

NOTE: *DME is an MLS component and is not required as part of MLS procedure identification.*

e. Amdt. No. Enter **"Original"** or the amendment number, as appropriate. The amendment number shall be advanced whenever the procedure is revised. The type of revision will determine whether an amendment may be made

or whether the procedure must be cancelled and an original established.

(1) **Cancellation** of an existing procedure and establishment of an original procedure is required when:

(a) The city name is changed.

(b) The procedure identification is changed from a LOC procedure to ILS.

(c) The procedure identification is changed from an ILS procedure to LOC.

(d) Procedure ID changed from VOR-A to VOR-B, etc.

(e) Procedure ID changed to reflect a change in equipment required to fly the procedure; e.g., VOR to VOR/DME, ILS/DME to ILS.

(f) The facility providing final course guidance is relocated, if this changes the published final approach course.

(g) The reference facility is changed to another facility on a VOR/DME RNAV procedure.

(h) Straight-in minimums are added or deleted which require change to procedure ID; e.g., NDB Rwy 28 to NDB-A.

(2) **Amendment** of a procedure is required when:

(a) The identification of the facility providing final approach course guidance is changed.

(b) Equipment is added to or deleted from the procedure which does NOT change the procedure ID; e.g., adding "DME Required" Note.

(c) Procedure ID changes from VOR/DME to VOR/DME or TACAN, or vice-versa; or, from SDF to LOC, or vice-versa.

(d) The runway designation is changed due to renumbering of the runways.

(e) Any published fix, course, or altitude is changed.

(f) Any published distance is changed which:

1 Requires a change to the Time/Distance Table.

2 Is greater than 0.5nm for distances outside the FAF, or greater than 0.1nm for distances inside the FAF.

(g) Any minimums change.

(h) Airport elevation is changed where ceiling and/or visibility is affected.

(i) Frequencies are changed in Notes on the 8260-3, -4, -5, -7, or military equivalent.

(j) Lighting changes occur which affect published visibility.

(3) A **delayed amendment**, not requiring immediate amendment action, BUT which shall be processed at the next opportunity, is required when:

(a) The airport name is changed.

(b) The airport elevation/ TDZE is changed BUT published ceiling and/or visibility is NOT affected.

(c) Lighting changes occur which do NOT affect published visibility.

(d) Safety of flight is no factor.

(e) Any published distance is changed which is less than or equal to 0.5nm for distances outside the FAF, or less than or equal to 0.1nm for distances inside the FAF.

(4) **No amendment** is required when frequencies are changed which were NOT entered in Notes on the 8260-3, -4, -5, -7, or military equivalent.

f. *Effective Date.* The effective date of the procedure will **normally be added by NFDC.** The only time the effective date shall be entered by the FIAO is when a **specific** effective date is

required; e.g., a facility Mag Var rotation. Due to the heavy workload associated with the 56-day airspace charting dates, NFDC will normally schedule routine procedures amendments for charting dates which do not coincide with the 56-day cycle. When an effective date is required which is **earlier** than can be routinely assigned by NFDC, contact AVN-220 to determine the appropriate course of action to expedite publication.

(1) **Original Procedures.** The effective date of original procedures shall be in accordance with Order 8260.26; except that the 28-day change notice will not be published for Alaskan procedures.

(2) **Emergency Action (NOTAM) Revisions.** The effective date of a procedure which is revised by a FDC FI/P NOTAM is the date of the NOTAM issuance. Revision of the appropriate 8260 form will be prepared and processed by NFDC. A copy of the P/NOTAM shall be considered a permanent part of the history of the procedure.

(3) **Routine Amendments.** Routine amendments to SIAPs are made effective based on the time NFDC requires to process and distribute the SIAP, plus the time required for charting and distribution to subscribers. Normally this time period is 9 weeks after receipt of the SIAP in NFDC. Procedures which contain an en route fix name change or re-identification shall be made effective on the 56-day cycle charting date, to coincide with the publication of en route charts. Amendments to procedures pending flight inspection shall be held at the FIAO until the flight inspection is complete; then forwarded as "routine".

g. *Sup./Amdt./Dated.*

(1) *Sup:* Enter the identification of the superseded procedure if the name has changed.

(2) *Amdt:* If SIAP is original, enter **None**; otherwise, enter **Original** or amendment number as appropriate.

(3) *Dated:* If SIAP is original, leave **blank**; otherwise, enter previous amendment date.

818-830. RESERVED.

SECTION 4. COMPLETION OF FAA FORMS 8260-4/-7/-10/-15

831. GENERAL.

This section contains information applicable to the completion of Forms 8260-4, 8260-7, 8260-10, and 8260-15. Basic guidance on the completion of Forms 8260-4/7/10 is covered in section 2, and only items which differ from that guidance are contained in this section. Complete instructions are included for the Form 8260-15, Departure Procedures/Takeoff Minimums.

832. FAA FORM 8260-4, RADAR.

Instructions for completion of Forms 8260-3/5/7/10 are also applicable to Form 8260-4, except as follows:

a. *Radar Terminal Area Maneuvering Sectors and Altitudes.* When an MVA chart for these areas has been certified for ATC use by the FIAO, this data shall not be repeated on the FAA Form 8260-4. In such cases, enter a note describing the source of the data as follows:

"As established by the current Macon ASR Minimum Vectoring Altitude Chart."

(1) Where the MVA at the FAF is equal to/less than the FAF altitude, document the final segment on FAA Form 8260-9. See also paragraph 832d(1).

(2) Where the MVA at the FAF or at fixes preceding the FAF is greater than the FAF altitude, document those segments prior to the FAF on FAA Form 8260-9. See also paragraph 832d(2).

b. *Radar Missed Approach Point and Missed Approach Instructions.* A missed approach point and missed approach instructions shall be provided for each runway authorized radar straight-in landing minimums. A missed approach point and missed approach instructions shall also be provided when only circling minimums are authorized. This data should be included in the missed approach section of the Form 8260-4. Radar missed approach procedures should return the aircraft to a fix or facility without a requirement for radar guidance. If sufficient space is not available, only the missed approach point data should be included and the missed approach instructions placed in the NOTES section or on the 8260-10 continuation sheet.

c. *Approach Minimums.* The minimums section shall be completed as indicated in paragraph 813.

d. *Radar Notes.*

(1) Establish a FAF, minimum altitude (glide slope intercept altitude for PAR), and final approach course for each runway for which radar procedures are established. Runway designation may be omitted if only one runway has a radar approach.

(2) For ASR, provide **recommended altitudes** for each mile on final, but not below the lowest MDA.

(a) Calculations are made using:

- FAF altitude

- Touchdown zone elevation (airport elevation for circling-only approaches or missed approach point elevation for point-in-space approaches)

- Distance from FAF to threshold when straight-in authorized (distance from FAF to missed approach point when circling-only minimums are authorized, or for point-in-space approaches). Recommended altitudes shall be rounded to the **nearest** 20-foot increment.

(b) For ASR circling-only approaches, calculations to airport elevation could result in recommended altitudes exceeding 400 feet per mile descent gradient. If this occurs, adjust the recommended altitudes so the descent gradient (before rounding) does not exceed 400 feet per mile. Consider relocating the MAP or moving the FAF outward from the runway to achieve an acceptable descent gradient.

(c) The following example calculation illustrates two descent gradients due to a stepdown fix. If ROC would permit a stepdown fix altitude BELOW the normal gradient, raise the minimum altitude at the stepdown fix to preserve a constant gradient.

[*Example Condition:* FAF 7.8 miles from threshold, minimum altitude 9000, minimum altitude 3 mile fix 7300. TDZE 6172. MDA 6800.]

9000-7300 divided by 4.8 = 354 feet per NM.
0.80 x 354=283.

9000-283 = 8717 at 7 miles = 8720.

8717-354 = 8363 at 6 miles = 8360.

8363-354 = 8009 at 5 miles = 8000.

8009-354 = 7655 at 4 miles = 7660.

7655-354 = 7301 at 3 miles = 7300.

7300-6162 divided by 3 = 376 feet per NM.

7300-376 = 6924 at 2 miles = 6920.

6924-376 = 6548 at 1 mile = NOT USED: Below MDA.

Example FAA Form 8260-4 entry:

"Rwy 17: **FAF 7.8 miles from threshold (at LACKI OM), minimum altitude 9000, minimum altitude 3 mile fix 7300, final approach course 168. Recommended altitude 7 miles 8720, 6 miles 8360, 5 miles 8000, 4 miles 7660, 3 miles 7300, 2 miles 6920.**" (No underline is currently possible using the computer generated 8260-series forms.)

(3) When **segments prior to the FAF** are required, establish the fixes and minimum altitudes in a note preceding the Note cited above: "**9.4 miles from threshold, minimum altitude 9000.**"

(4) **Define the final approach course** in the NOTES section when circling is the only minimum authorized: "**FAF 6 miles from runway intersection, minimum altitude 8000, final approach course 060 aligned to intersection of runways 2 and 15.**"

(5) **If radar availability is limited,** use standard Note: "**When control tower closed, ASR NA.**" (This is a radar SIAP Note only - not to be used on other SIAP types.)

(6) Lost communications instructions shall be entered as follows: "**As directed by ATC on initial contact.**"

e. *Additional Flight Data.*

(1) Enter the **TDZE** in the pre-printed area for each runway authorized straight-in minimums.

(2) Indicate the **FAS obstacle** for each runway having straight-in minimums or a circling-only approach.

(3) Enter the **GS angle, TCH, and distance from THR to RPI** in feet for PAR approach procedures.

(4) Enter the **facility magnetic variation and Epoch Year** as obtained from AVN-250.

f. *City and State Section.* Data shall be the same as Forms 8260-3/5/7 except as follows:

(1) **Facility name.** Enter the identifier of the controlling facility and the type of radar; e.g., "**COS ASR,**" "**TBN ASR/PAR.**"

(2) **Procedure number.** Radar procedures shall be numbered in sequence; e.g., "**Radar 1, Radar 2, etc.**" Runway numbers shall be shown in the minimums section.

833. FAA FORM 8260-7, SPECIAL INSTRUMENT APPROACH PROCEDURE.

a. *Requests for Special IAPs.* All requests for special instrument approach procedures are forwarded to the regional FPB for approval. If the request is found acceptable, and after coordination with the other operational divisions, the FPB shall forward the request to the FIAO for procedural development. The FPB shall coordinate the priority for development with the FIAO.

b. *Responsibility.* The FPB is responsible for determining requirements for the development of

"special" IAPs. Normally the special procedure will be utilized only to provide instrument service to an air carrier or air taxi operator where an equivalent service cannot be provided by a public use approach procedure. Special procedures are not to be used as a temporary measure pending designation of controlled airspace for public use procedures (See paragraph 402). The FPB is also responsible for the coordination, reproduction, and distribution of special IAPs.

c. *Completing Form 8260-7.* Instructions for completion of forms 8260-3/5/10 are also applicable to Form 8260-7, except as follows:

(1) If use of a **named fix** which is not an en route fix is required for the special procedure, the fix shall be documented on a Form 8260-2 and processed in the normal manner. The FPB shall provide a copy to the user.

(2) IFR Departure Procedure/Takeoff Minimums, if required, shall be included in the NOTES section of the Form 8260-7 when no public SIAP serves the airport. This form will be incorporated as an amendment to the operations specifications of the certificate holder. If a public SIAP exists for the airport, instructions contained in paragraph 835c(2) apply. Use FAA Form 8260-10 if sufficient space is not available.

d. *Approval.*

(1) Following quality review, the Procedures Specialist shall sign the original Form 8260-7 in the upper portion of the space under "developed by". Pending revision of the form, the term **"recommended by"** shall be inserted in the lower half of this space which shall be signed by the FIAO Manager. Forward the completed form to the regional Flight Standards Division for final approval.

e. *Printing and Distribution.* The FPB shall provide for reproduction of the special procedure and shall provide copies in accordance with the following recommended distribution. Modify intra-regional distribution as required:

(1) Principal Operations Inspector for the air carrier or air taxi operator with additional copies to the FSDO having jurisdiction over the airport of concern.

(2) For other operators, copies to the requesting user through the associated FSDO.

(3) Regional Air Traffic Division.

(4) Air Traffic facility exercising control at the airport of concern.

(5) ATA and ALPA/APA if intended for air carrier use.

(6) Courtesy copy to Jeppesen Sanderson, Inc. and other cartographic agencies that may request copy service.

(7) ATM-600.

(8) AVN-220.

(9) FIAO.

(10) Airport Manager.

f. *Radar Special Procedures.* If there is a requirement for a radar special procedure, use FAA Form 8260-4 in lieu of Form 8260-7. Delete reference to Part 97.31 and add the word **"special"**. Use the reverse side of the Form 8260-7 to document the approval and to provide for incorporation in the Operations Specifications.

g. *Limitations on the Use of Special Procedures.*

(1) The Form 8260-7 is utilized for the design of special instrument approach charts and is NOT intended for cockpit use. The requirement that the procedure be charted is specified in the heading of the form. Add the following statement in the NOTES section of the Form 8260-7 restricting the use of the form: **"Specification only - Not for Cockpit Use."**

(2) Where a special procedure requires certain crew qualifications, training or other special considerations in order to execute the approach, the regional FPB shall add the following statement in the NOTES section of the Form 8260-7 restricting the use of that procedure to a particular operator: **"For use by ABC Airlines only."** If more than one user is authorized the same special procedure and there are no differences in the procedure design, the

FPB shall maintain a list of authorized users. This will preclude amendments to the 8260-7 form when users are added.

(3) Regional development and/or documentation of foreign terminal instrument procedures (FTIP) is not recommended unless the procedures can be subsequently maintained by the initiating region in accordance with Order 8260.31. In such cases, the FTIP may be documented on Forms 8260-7 and processed in accordance with Order 8260.31.

834. FAA FORM 8260-10. CONTINUATION SHEET.

a. *Use.* FAA Form 8260-10 is used as a continuation sheet for Forms 8260-3, 4, 5, or 7. In all cases, clearly identify by name or format what section or information is being presented on the continuation sheet. The Form 8260-10 shall be completed as follows:

(1) **Enter the type procedure** and FAR Part numbers as required.

(2) **Enter the necessary procedural data** in the space provided.

(3) **Enter the city, state, airport, etc.,** identical to the information presented on Page 1 of the SIAP.

(4) **Enter the page number and number of pages required** for the procedure in the lower right-hand corner; e.g., **Page 2 of 2 pages.** The basic Form 8260-3/4/5/7 shall be page number one, with additional Forms 8260-10 numbered sequentially.

b. *Certification.* The last page shall be the only page certified except for special instrument procedures, which shall be certified on the reverse side of the basic Form 8260-7.

835. FAA FORM 8260-15, DEPARTURE PROCEDURES/TAKEOFF MINIMUMS.

a. The *FAA Form 8260-15 documents and facilitates* transmittal of non-standard takeoff minimums and/or IFR departure procedures. It shall be used to transmit IFR departure procedures to operators with special instrument approach procedures (Form 8260-7) if public use SIAPs (FAR 97) are also authorized at the same location. At airports served only by special instrument procedures, document takeoff minimums and departure procedures on Form 8260-7.

b. *Use Form 8260-15 when:*

(1) **Any runway** requires higher than standard takeoff minimums.

(2) **IFR departure procedures** are required at an airport.

(3) **A SID is published,** and pilots must comply with the SID for obstacle avoidance.

(4) **Denying lower than standard takeoff minimums.** When touchdown and rollout RVR is available on runways with centerline lights and either RVR is installed on a baseline GREATER than 250 feet, deny takeoff minimums lower than RVR 1200/1000 by adding the following standard Note on Form 8260-15:

"RWY 27R, Air Carrier reduction below RVR 1200/1000 NA."

c. *Forms 8260-3, -4, -5, and -7.*

(1) **If the takeoff minimums are standard** for all runways, and IFR departure procedures are not required, check the **"STD"** box. Standard takeoff minimums shall apply and the Form 8260-15 is not used. If takeoff minimums are standard for all runways, but IFR departure procedures ARE required, the Form 8260-15 is used. See paragraph 835e.

(2) **If the Form 8260-15 is used,** check the box entitled, **"See FAA Form 8260-15 for this airport."**

d. *FIAO preparation of Form 8260-15.*

(1) **Coordinated With.** Enter **"X"** in the appropriate spaces. Type in other required coordination. Coordination shall be identical with the approach procedure coordination as outlined in paragraph 837d.

(2) **Body of Form.** Enter, as required, the following four headings in the order listed:

(a) "TAKEOFF MINIMUMS".

1. List runways authorized standard takeoff minimums.

2. Immediately below, list any deviations from standard minimums; e.g., restrictions.

(aa) When obstacles preclude standard takeoff minimums, provide higher than standard takeoff minimums or standard minimums with a climb gradient. Use standard Note: **Rwy 9, 400-2, or Standard with minimum climb of 235' per NM to 1500.**

3. Following the deviations, list remaining runways with ceiling and visibility minimums.

4. When low, close-in obstacles cause a climb gradient to less than 200 feet above DER (see TERPS paragraph 1205d), inform the pilot of the obstacle(s)' height (AGL) and location relative to the DER. Use standard note: **"50'AGL trees 120' left of departure end of runway"**; or, **"50'AGL bldg 500' from departure end of runway, 350' right of centerline."**

(b) "IFR DEPARTURE PROCEDURES." List the required departure procedures.

(c) "TAKEOFF OBSTACLES." Identify the location of controlling obstacles.

1. These obstacles, found only in Zone 1/Section 1, are defined as those which require higher than standard takeoff minimums or standard minimums with a climb gradient.

2. List the runway affected, elevation and type of obstacle, and the coordinates to the nearest second; e.g., **"RWY 32: 1449 Terrain 341402/861932."**

(d) "DEPARTURE OBSTACLES." Identify the location of controlling obstacles.

1. These obstacles, found outside Zone 1/Section 1 but within subsequent departure trapezoids, are defined as those which require non-standard takeoff minimums and/or a climb gradient to be published. However, if no ceiling/visibility is required, the controlling obstacle is that which causes the departure routing to be established. In the latter case, the obstacle might not be in the departure trapezoid.

2. List the runway affected, elevation and type of obstacle, and the coordinates to the nearest second; e.g., **"RWY 32: 2049 Terrain 341548/862101."**

(3) Developed By. The procedures specialist developing the data shall sign in the "developed by" space which also includes date and FIAO.

(4) Approved By. The FIAO manager shall sign in the "approved by" space which also includes date and FIAO.

(5) City, State / Airport. Complete this block with the same location and airport name as the associated approach procedure(s).

(6) Effective Date / Amdt No. The **effective date** should normally be concurrent with a SIAP amendment.

(a) If the Form 8260-15 represents a **concurrent action,** place an attention symbol (* for example) in the effective date space and enter the following in the body of the form: **" * Concurrent with (SIAP and amendment number)."**

(b) Enter **"Routine"** when submitting a Form 8260-15 submitted without an accompanying change to the associated SIAP(s).

e. *Process the 8260-15 forms* as specified in paragraph 840, except ATM-600 receives the original only.

f. *Cancellation of Form 8260-15.* When all takeoff minimums for an airport become standard and no restrictions, special provisions, or departure procedures are required, the Form 8260-15 shall be canceled. **To cancel:**

(1) **Enter** city, state, airport, effective date of current amendment, and amendment number on the bottom line of a blank Form 8260-15.

(2) **Enter "Canceled effective ____"** in the center of the form.

(3) **Beneath this entry,** explain the desired cancellation date, or enter: **"Routine."**

g. *Charting agencies* will add the takeoff minimums and departure procedures, and add the "T" symbol to the SIAP charts, based on an original Form 8260-15. They will delete the takeoff minimums and departure procedures, and delete the "T" symbol from the SIAP charts, based on a Form 8260-15 cancelation. **SIAP amendments** are NOT required for these purposes. However, at the time of the next SIAP amendment, update the "Takeoff" block on the SIAP form accordingly.

SECTION 5. CERTIFICATION, PROCESSING AND REVIEW

836. GENERAL.

Certification, processing, and review of instrument approach procedures shall be accomplished as outlined in this section.

837. CERTIFICATION AND DISTRIBUTION OF SIAPs.

Certification of instrument approach procedures shall be accomplished on the reverse side of the appropriate 8260-series from. Instructions for completion of the entries are as follows:

a. *All Affected Procedures Reviewed.* Enter "**X**" in the appropriate space.

b. *Coordinates of Facilities.* When a facility is referred to on a procedure for the first time, enter the facility coordinates. The source data for the coordinates shall be identified; e.g., **AF survey, ALP, OC, Map Study, AVN, NOS, etc.** If sufficient space is not available to list coordinates of all new facilities, the space under "Changes" shall be utilized.

c. *Required Effective Date.* The effective date for manually developed or IAPA procedures should be either "Routine", "Proposed", "Concurrent", or "Hard".

(1) **Routine Dates.** If a specific effective date is not required, enter the word "**Routine**".

(2) **Proposed Dates.** Use proposed dates *only* when facility commissioning or decommissioning is involved. This includes SIAP originals, amendments and cancellations. Refer to FAA Order 8260.26B for further guidance. Enter a proposed date as: "**P12/08/91**".

(3) **Concurrent Dates.** If the SIAP is part of a large package and/or publication is to be *concurrent with another event*, as when it is associated with an airspace case, enter the concurrent date as "**C12/08/91**", or the airspace docket number as: "**C91-AGL-29**". Use the following standard Note in the lower part of the REASONS block: "**Effective concurrent with KOKC ILS Rwy 17R Amdt 8**", or "**Effective concurrent with Airspace Docket 91-AGL-29.**"

(4) **Hard Dates.** Issue hard dates *only* for facility rotations. Enter a hard date as "**12/08/91.**"

(5) **Deviations.** Deviations from these guidelines require a Memorandum/letter from the requesting office; e.g., FPB, regional AT, etc., through the FIAO to AVN-220 detailing justification. See Order 8260.26B, paragraph 8.

d. *Coordinated With.* Coordinate all original processing and revisions to instrument approach procedures with appropriate civil aviation organizations, the appropriate ATC facilities, and the airport owner or sponsor. Coordinate with appropriate FSDO offices according to the type of operations conducted at the airport. Coordinate with other interested parties as necessary. Coordinate procedures with ATA and with ALPA if the airport is served by scheduled air carriers. Coordinate with APA (Allied Pilots Association) for procedures at airports utilized by American Airlines. This coordination action is required to provide advance notice to the user organizations that a change to FAR Part 97 is being initiated. Users have 20 working days in which to review the procedures and respond to the indicated actions during the period that the procedure is being processed. Any substantive adverse user comments during this period permits sufficient time to amend or withdraw the paperwork prior to publication. See paragraph 908 for further guidance.

(1) **Enter "X"** in the appropriate aviation organization spaces.

(2) **Designate additional organizations** or offices if additional coordination is to be accomplished.

e. *Flight Checked By.* Enter the **name and signature** of the **airspace system inspection pilot** who conducted the flight check and the date. A signature in this block *certifies* that the SIAP meets flight inspection requirements. In the absence of the flight inspection pilot, the

flight inspection **section supervisor** shall sign this block. Enter the name, title and signature of the **flight operations/scheduling section supervisor** who makes the determination that an amendment does NOT require a confirming flight inspection. Include the date of the most recent flight inspection of the facility and SIAP. Use the word **"pending"** if the procedure is submitted prior to flight check under Order 8260.26B or if publication is required on a specific charting cycle date. **Record copies** maintained in the FIAO shall be signed by the flight inspection pilot upon completion of all flight inspection requirements.

f. *Developed By.* Enter the name and signature of the procedures specialist responsible for developing the SIAP, and the date signed. Authority to sign in this block is assigned to: airspace system inspection pilots, GS-2181-13 or higher; and supervisors, regardless of job series. The signature in this block *certifies* that:

(1) **The specialist** used the most current and accurate data in developing the SIAP.

(2) **The SIAP** was developed in accordance with appropriate policies, directives, standards, and criteria. (See special instructions for FAA Form 8260-7 in paragraph 833.)

g. *Approved By.* Enter the name and signature of the FIAO manager. The signature in this block *certifies* that the SIAP:

(1) **Conforms** to procedures development policies, standards, and criteria.

(2) **Was flight checked** in accordance with applicable directives and standards. "Pending" SIAPs forwarded under FAA Order 8260.26B, Establishing and Scheduling Instrument Approach Procedures Effective Dates, will be flight checked at a later date.

(3) **Is approved** for proposed rulemaking action (FAR Part 97) and publication.

(4) **Was developed** using the most accurate data available.

h. *Changes and Reasons.* The purpose of these entries is to keep charting agencies and coordinating offices advised of major procedural changes. The listing of changes should include all revisions (except clerical) and the reasons should contain sufficient details so that the cause for the procedural amendment will be clear to the reviewing offices.

i. *Simultaneous NOTAM Cancellation.* In the event the revision supports an FDC NOTAM which will be canceled on the effective date of the revision, the following Note shall be added in the lower part of the REASONS block: **"This cancels FDC 9/175."**

838. CANCELLATION OF INSTRUMENT APPROACH PROCEDURES.

Cancellation of instrument approach procedures shall be accomplished on the same form number as required for documentation of the SIAP.

a. *Entries.* All items on the front side of the forms shall be left blank, except type of procedure and the CITY, STATE line. This line shall duplicate the currently effective SIAP. The following notation shall be typed in the NOTES section: **"Procedure canceled effective _____"** (NFDC will fill in the date.) If applicable, enter in the lower portion of the REASONS block: **"Concurrent with VOR Rwy 18, Original."**

b. *IAPA.* The methodology for cancellation of IAPA generated procedures is contained in the IAPA USERS MANUAL (IUM), chapter 3, paragraph 3.5.4.

839. MINOR REVISIONS TO SIAPs.

Except for IAPA procedures forms, minor changes to instrument approach procedures on existing manual forms may be made providing the form can be reproduced and the changes can be made so that the panel will be camera-ready.

840. PROCESSING.

The AVN system of quality control is designed to ensure that policy and standards are uniformly applied, and that procedures are complete and accurate. The objective is to develop instrument procedures that can be can be published without change after final review. When the FIAO quality review is completed, the procedure shall be forwarded to NFDC for publication.

a. *SIAP Transmittal.* Authority to transmit SIAPs rests with the FIAO manager. When electronically transmitting IAPA generated SIAPs, use the user identification code (UIC) and password assigned to the FIAO manager. Use of the UIC and password shall be in accordance with the security provisions of Order 1600.54, Security of FAA Automatic Data Processing Systems and Facilities.

b. *Distribution.* The FIAO shall distribute public-use SIAPs as follows:

ATM-600	Orig. + 2 copies
AVN-220	1 copy
FPB	1 copy
Users (Paragraph 837d)	1 copy
FIAO	1 copy

(Refer to paragraph 833c for Special SIAP distribution channels.)

841. FIAO AND FPB REVIEW OF SIAPs AND CHARTS.
FIAOs and FPBs shall review and check FAA Forms 8260-3/4/5/10, and the associated aeronautical charts published by National Ocean Service (NOS) for variations from information submitted for publication. The FPB shall immediately report any variance or charting discrepancies identified to the attention of the FIAO. If safety of flight is involved, the FIAO shall be responsible for notifying the NFDC to initiate appropriate emergency action (Chart Correction NOTAM) to amend the procedure or to suspend its use until corrected charts can be issued. See paragraph 237.

842-899. RESERVED.

CHAPTER 9. FORMS AND FORM USE

SECTION 1. PROCEDURES FORM PROCESSING

900. INTRODUCTION.

This section provides a centralized source of guidance for Flight Standards personnel responsible for processing flight procedures forms.

901. FIAO ACTION.

a. *Forms Routing.* The following figure provides easy routing reference for FIAO forms processing. Specific directive references are included for further guidance.

b. *Frankfurt IFIO* shall process Army forms as required by the U.S. Army Aeronautical Services Detachment, Europe (USAASDE).

FAA Form	ATM-600	AVN-220	Regional FPB	ARTCC	ATCT	ATA, ALPA, APA, AOPA, NBAA, and FSDO.	FIAO Work File	Ref. (8260.19 para. unless noted.)
8260-1 (except Army)	FIAO or Regional FPB originates. Send to appropriate office for endorsement; thence thru AVN-200 to AFS-400. All offices make their own copies. Completed Orig returns to FIAO.						1	274, 903
8260-1 (Cancelation)	FIAO, Regional FPB, or AFS-400 cancels, giving date and reason. Send copies to same offices receiving approved waiver.							277, 903
8260-2 (except Army)	Orig & 2	1	1	1	1	*	1	904 - 907
	* For Special procedures, Regional FPB distributes to users.							
8260-3/4/5/15 8260-10 (Continuation)	Orig & 2	1	1	1	1	1	1	840
8260-10 (DF)	1	1	1	1	1 to DF control facility		Orig	432
8260-7	Orig to Regional FS Division. After approving, FPB distributes:						1	933
	1	1		1	1	as appropriate	1	
8260-9		1	1				Orig	909
8260-16	Orig + 2	1	1	1		*	1	910
	To ATP-230: 1 copy if associated with an airspace action. * For Off-Airway routes, Regional FPB distributes to users.							

FAA Form	ATM-600	AVN-220	Regional FPB	ARTCC	ATCT	ATA, ALPA, APA, AOPA, NBAA, and FSDO.	FIAO Work File	Ref. (8260.19 para. unless noted.)
ARMY: 8260-1/2/9/ 11/12/13/ 20/21	1	1					1	8260.15C paras 11b & 11c.
	All except -9: Orig to USAASA and 1 copy to the DARR. 8260-9: 1 copy to USAASA and 1 copy to DARR.							
USAF: 8260-11/12/ 13/20	1	1					1	8260.32A para 9f.
	FIAO obtains local Commander's endorsement, then sends Orig & 3 to the Major Command TERPS Office (MAJCOM/SCF).							
8260-2	Include 4 copies of -2 for each USAF fix.							
8260-9	Include 3 copies of -9 for each SIAP.							
7100-1/2/3/4 (SID/STAR)	1						1	461
	FIAO returns signed forms to ARTCC (or as preferred by Regional FPB)							
Substitute Routes	For publication: 2	1	1	1			Orig	314
	Non-publication:		1	1				
6050-4 (ESV)	Multiple form. Routing is specified on each page. 1 copy to AVN-240.							902

Figure 9-1

SECTION 2. EXPANDED SERVICE VOLUME REQUEST, FAA FORM 6050-4

902. PREPARATION OF FAA FORM 6050-4. Figure 9-2 is an example of a completed FAA Form 6050-4. See also paragraph 210.

a. *Part I.* This is to be completed by the originating office. State the office, airspace docket number (if this request is associated with airspace action), and the state in which the navigational facility is located. Check establish, revision, or cancel, as appropriate.

(1) Facility Data. Enter the navigational facility name (as charted) and identifier; the facility and class; the city where the facility is located; and, the frequency/channel of the facility.

(2) Expanded Service Volume Data. Enter the radial, distance, minimum and maximum MSL altitudes desired, and the operational use (requirement) of the request. Enter the name and signature of the individual initiating the request, the individual's office, and the date of the request.

b. *Part II.* To be completed by the Regional Spectrum Management Officer (SMO).

c. *Part III.* To be completed by the FIAO. Check approved, disapproved, or restricted, as appropriate. In remarks, state how the approval, disapproval, or restricted determination was made (restricted is relative to the requested data). Enter the name and signature of the individual responsible for FIAO action, the FIAO office, and the date.

d. *Cancellation.* The originating office effects ESV cancellation by completing an FAA Form 6050-4 and checking "cancel" in Part I. If the cancellation originates in the FIAO, enter "CANCELED" in Part III of the FIAO copy and enter the name and signature of the individual responsible for FIAO action, the FIAO office, and the date. (The stamp used for cancellation of FAA Form 8260-2 may be used for this purpose.)

e. *Distribution.* Disseminate approved, revised or canceled ESV requests as follows. Reproduce and include one copy to AVN-820. Forward copies 3-6 to the FPB for distribution to regional offices and ASM-500.

Copy 1 - Air traffic facility having jurisdiction over the procedure which required the ESV.
Copy 2 - Retain in the FIAO.
Copy 3 - Spectrum Engineering Division, ASM-500.
Copy 4 - Region SMO.
Copy 5 - Region ATD.
Copy 6 - Region FPB.

f. *Disapproved ESV requests.* Return to the originating office through the SMO.

EXPANDED SERVICE VOLUME REQUEST

PART I - (FOR USE BY REQUESTING OFFICE)

FROM (Originating Office)	AIRSPACE DOCKET NUMBER		
OKC FIFO	STATE: CO	X	EXPANDED SERVICE VOLUME
		X	ESTABLISH
			REVISION
			CANCEL

FACILITY DATA

CHART NAME	LOCATION (City)
GUNNISON (GUC)	GUNNISON
TYPE-CLASS	**FREQUENCY**
H-VORTAC	114.9 CHAN 96

EXPANDED SERVICE VOLUME DATA

RADIAL	DISTANCE	ALTITUDE		REQUIREMENT
		MINIMUM	MAXIMUM	
062	140	18000	37000	Off Airway Route - Frontier AL

SIGNATURE	FACILITY	DATE
F. P. SPECIALIST	OKC FIFO	7/14/82

PART II - (FOR USE BY FREQUENCY MANAGEMENT OFFICER)

EXPANDED SERVICE VOLUME ☒ APPROVED ☐ DISAPPROVED ☐ RESTRICTED

REMARKS (Distance, Altitude Restrictions, etc.)

SIGNATURE	ROUTING SYMBOL	DATE
F. M. OFFICER	ANM-426	7/26/82

PART III - (FOR USE BY FLIGHT INSPECTION FIELD OFFICE)

EXPANDED SERVICE VOLUME ☒ APPROVED ☐ DISAPPROVED ☐ RESTRICTED

REMARKS

Flight inspection satisfactory:

GUC to GUC R-062/140 @ 18000.
GUC R-062/140 to GUC @ 37000.

SIGNATURE	ROUTING SYMBOL	DATE
F. P. CHIEF	OKC FIFO	8/9/82

FAA Form 6050-4 (4-78) SUPERSEDES PREVIOUS EDITION

RETURN TO ORIGINATOR

Figure 9-2

SECTION 3. FLIGHT PROCEDURES STANDARDS WAIVER, FAA FORM 8260-1 (RIS:FS8220-7)

903. PREPARATION OF FAA FORM 8260-1, FLIGHT PROCEDURES STANDARDS WAIVER.

Itemized instructions for completing FAA Form 8260-1 are as follows: (See figures 9-3 through 9-5a for examples of completed waiver forms.)

a. *Date:* Enter the date the originating office prepared the form.

b. *Item 1: Flight Procedure Identification.* Enter the city and state, official airport name, and the flight procedure identification (excluding amendment number).

c. *Item 2: Waiver Required and Applicable Standard.* Identify clearly and accurately what standard is requested to be waived; e.g., **"Penetration of 20:1 and 34:1 slopes. TERPS paragraph 332."** Request only ONE waiver of standards on each form. When a procedure is amended, reprocessing of an existing waiver is not necessary unless the reason for the amendment directly impacts the basis for the waiver.

d. *Item 3: Reason for Waiver.* The reason for the waiver shall be clear and concise. If the waiver for an existing procedure is being revised, the effective date of the original procedure shall be included. Include full justification for the waiver; e.g., **"To allow visibility reduction to 1/2 mile for MALSR approach light system."**

e. *Item 4: Equivalent Level of Safety Provided.* Complete this item in all cases. Clearly state the equivalent level of safety.

Note: The fact that the procedure has existed for a number of years is not considered to be sole justification for an equivalent level of safety.

f. *Item 5: How Relocation or Additional Facilities Will Affect Waiver Requirement.* Enter statements in this item to indicate that considerations have been given to relocation, programming, or reprogramming action to alleviate the requirement of a waiver of standards. Normally, the insertion of NA (not applicable) in this item leaves a question as to whether any consideration has been given to this item.

g. *Item 6: Coordination With User Organizations.* Indicate the FAA offices and other organizations with whom this waiver will be coordinated.

h. *Item 7: Submitted By.* The office (FIAO or FPB) that initiated the waiver request shall complete this item.

i. *Item 8: Regional/FIAO Endorsement.*

(1) **If the FIAO initiates the waiver,** the FPB completes this section. **If the FPB initiates the waiver,** the FIAO completes this section. The endorsing office shall add any comments that will support the waiver or assist in its evaluation, and forward it to AVN-200.

(2) **If,** subsequent to the informal coordination stated in paragraph 274a, **the endorsing office considers the waiver unnecessary,** it shall so indicate and return the waiver to the originator.

j. *Item 9: AVN Endorsement.* The Flight Procedures and Inspection Division, AVN-200, shall coordinate internally as necessary, check the appropriate box, add any useful comments, and forward the waiver with accompanying technical data to AFS-400. AVN-200 shall distribute waiver origination and/or cancellation forms to AVN-540 which is the office responsible for the waiver computer automation files.

k. *Item 10: AFO Action.*

(1) The Technical Programs Division, AFS-400, shall indicate Washington Headquarters action, add any appropriate comments, and distribute the completed form as follows: (See also figure 9-1)

FIAO	Original
Regional FS Division	Copy
AVN-200	Copy
AFS-400	Copy

Each division (AVN-200 and AFS-400) shall distribute copies to the appropriate offices within its organization.

l. *Cancellation of a waiver* may be done by the initiating office or by AFS-400. The canceling office shall enter a signed statement to that effect, with the effective date and reason for cancellation. (See figure 9-3A.) The canceling office shall then distribute copies to the same organizations that received the approved waiver.

US Department of Transportation
Federal Aviation Administration

FLIGHT PROCEDURES STANDARDS WAIVER

Reports Identification Symbol FS 8220-7

Date: 4/8/77

1. Flight Procedure Identification

Schellville, CA, Sonoma Valley, LOC/DME RWY 20

2. Waiver Required And Applicable Standard

TERPS paragraph 288c: "One stepdown fix is authorized in the intermediate segment."

This procedure requires the use of three stepdown fixes in the intermediate segment.

3. Reason For Waiver *(Justification for nonstandard treatment)*

To retain the present straight-in approach HAT 657. Limitation to one intermediate stepdown fix would require a 340 foot increase in MDA and permit circling only, with visibility increased to 1 1/4 CAT A, 1 1/2 CAT B, and 3 miles CAT C and D.

Use of multiple stepdown fixes was not subject to waiver before publication of FAAH 8260.3B.

4. Equivalent Level of Safety Provided

1. Fixes are limited to DME with resulting low cockpit workload.
2. Descent gradient in the intermediate segment is nearly constant, varying from 285.7 to 300'/nm. This contributes to safety by encouraging establishment of a stabilized descent through the intermediate segment.
3. Obstacle clearance exceeds requirements in all segments.

5. How Relocation Or Additional Facilities Will Affect Waiver Requirement

These fixes are mandated by terrain in the intermediate segment.

6. Coordination With User Organizations *(Specify)*

ATA, ALPA, AOPA, NBAA, SAC FSDO.

7. SUBMITTED BY

Office Identification	Title	Signature
STS FIFO	Manager	D. T. Hatch

FAA Form 8260-1 (6-85) Supersedes Previous Edition

Figure 9-3

8. REGIONAL/FIFO ENDORSEMENT	X	Approval Recommended
		Not Recommended
		Not Required

Comments

Air carrier and general aviation user comments are entirely favorable.

Date	Routing Symbol	Signature
4/10/77	AMW-220	Chief, FIP Staff

9. AVN ENDORSEMENT	X	Approval Recommended
		Not Recommended
		Not Required

Comments

Date	Routing Symbol	Signature
5/27/77	AFS-520	Chief, Flight Procedures Branch

10. AFO ACTION	X	Approved
		Disapproved
		Not Required

Comments

This waiver is cancelled effective 9/16/83.
Change 4 to TERPS permits multiple DME fixes.

Jim E. Dean
Manager, MRY FIFO

Date	Routing Symbol	Signature
11/28/77	AFS-700	Chief, Aircraft Programs Division

Figure 9-3a

US Department of Transportation
Federal Aviation Administration

FLIGHT PROCEDURES STANDARDS WAIVER

Reports Identification Symbol FS 8220-7

Date: 5/10/84

1. Flight Procedure Identification

Bealeton, VA, Bealeton Intl, ILS RWY 18R

2. Waiver Required And Applicable Standard

TERPS paragraphs 935 and 938b(1)
Obstacles penetrate the final approach obstacle clearance surface.

3. Reason For Waiver *(Justification for nonstandard treatment)*

To retain 200' HAT and 1/2 mile visibility without raising the 2.75 degree glide slope angle.

Trees penetrating the surface by 10' were identified on an obstacle survey. These trees are on private property and the owner refuses to allow trimming.

4. Equivalent Level of Safety Provided

1. The trees are at the extreme right edge of the approach area, where the localizer needle would be off-scale to the left.
2. The localizer-only MDA has been raised to provide the required obstacle clearance.
3. Compared to most obstacles, these trees should be considered frangible.
4. A favorable CRM Report is attached.

5. How Relocation Or Additional Facilities Will Affect Waiver Requirement

Retaining the commissioned glide slope angle, and relocating the glide slope antenna and threshold, would reduce runway length unacceptably.

6. Coordination With User Organizations *(Specify)*

ATA, ALPA, NBAA, AOPA, FRR FSDO.

7. SUBMITTED BY

Office Identification	Title	Signature
AAA-220	Manager, Flight Procedures Branch	O. T. Door

FAA Form 8260-1 (6-85) Supersedes Previous Edition

Figure 9-4

8. REGIONAL/FIFO ENDORSEMENT		
	X	Approval Recommended
		Not Recommended
		Not Required

Comments

ATC requires the 2.75 degree glide slope angle to retain a cardinal altitude at the outer marker.

Date	Routing Symbol	Signature
5/13/84	IAD FIFO	Manager

9. AVN ENDORSEMENT		
		Approval Recommended
	X	Not Recommended
		Not Required

Comments

The quoted equivalent level of safety is not adequate in this case.

Alternate courses of action are available. Waiver approval would establish an unacceptable precedent.

Date	Routing Symbol	Signature
6/23/84	AVN-200	Manager, Flight Procedures and Inspection Division

10. AFO ACTION		
		Approved
	X	Disapproved
		Not Required

Comments

The decision height must be increased in accordance with TERPS paragraph 938b(1) until action to provide required obstacle clearance is completed.

Date	Routing Symbol	Signature
11/1/84	AFS-400	Manager, Technical Programs Division

Figure 9-4a

US Department of Transportation
Federal Aviation Administration

FLIGHT PROCEDURES STANDARDS WAIVER

Reports Identification Symbol FS 8220-7

Date: 6/7/84

1. Flight Procedure Identification

SMURF VHF/DME FIX, AZ

2. Waiver Required And Applicable Standard

TERPS paragraph 1761: Minimum divergence angle.
Divergence angle of relocated intersection is 40 degrees. Criteria requires 42 degrees.

3. Reason For Waiver *(Justification for nonstandard treatment)*

Relocation of SMURF to the intersection of V4 and V293 is part of a package requested by PIX ARTCC to improve airway structure and allow more efficient use of airspace. SMURF must be an intersection to allow MEA changes for non-DME equipped aircraft.

4. Equivalent Level of Safety Provided

1. Obstacle clearance is not derogated by increased fix error. SMURF is not used below 6000 and there is no terrain as high as 4000 within 13 miles of the fix.
2. Flight check shows both facilities in tolerance.
3. Holding is not authorized.
4. DME is available from both facilities forming the fix, improving accuracy for DME equipped aircraft.

5. How Relocation Or Additional Facilities Will Affect Waiver Requirement

A radial of GHQ VOR would meet angle criteria, but would require aircraft on V4 to use two off-course facilities.

6. Coordination With User Organizations *(Specify)*

PHX ARTCC, AWM-530

7. SUBMITTED BY

Office Identification	Title	Signature
FLG FIFO	Manager	L. Supremo

FAA Form 8260-1 (6-85) Supersedes Previous Edition

Figure 9-5

8. REGIONAL/FIFO ENDORSEMENT	X	Approval Recommended
		Not Recommended
		Not Required

Comments

Relocation of this fix will expedite traffic flow in and out of the Clifton-Morenci terminal complex.

Date	Routing Symbol	Signature
6/11/86	AWM-220	Manager, Flight Procedures Branch

9. AVN ENDORSEMENT	X	Approval Recommended
		Not Recommended
		Not Required

Comments

Date	Routing Symbol	Signature
7/16/86	AVN-200	Manager, Flight Procedures and Inspection Division

10. AFO ACTION	X	Approved
		Disapproved
		Not Required

Comments

Date	Routing Symbol	Signature
12/24/86	AFS-400	Manager, Technical Programs Division

Figure 9-5a

SECTION 4. RADIO FIX AND HOLDING DATA RECORD FAA FORM 8260-2

904. INTRODUCTION.

a. *General.* All civil and military named fixes and holding patterns shall be documented on FAA Form 8260-2. Named facilities do not require this documentation unless holding is established. See also paragraph 833c(1). FAA Forms 8260-2 may be initiated by either Air Traffic facilities or the FIAO. When initiated by Air Traffic facilities, the forms shall be submitted through the regional FPB to the FIAO for review, approval, and processing. When initiated by the FIAO, the information shall be coordinated with the appropriate AT facilities. The forms shall be distributed in accordance with paragraph 905o.

b. *Entries.* All radial/course/bearing entries are magnetic unless otherwise noted. Distances less than one mile shall have a zero before the decimal.

c. *Storage.* All domestic and certain foreign named fixes and holding requirements are entered into NFDC's computer for permanent storage, and are published in FAA Handbook 7350.6, Location Identifiers.

905. PREPARATION OF FAA FORM 8260-2.

a. *AIRSPACE DOCKET NUMBER.* Enter the docket number when the request is associated with an airspace action. If no docket number, leave **blank.** A docket number is required when a compulsory reporting point is established, modified, or canceled.

b. *NAME.* Enter the name of the approved fix. Intersection (INT) after the name of the fix is not necessary. See paragraph 264.

(1) DESIGNATOR. When the fix is a navigation facility, include the facility; e.g., **DENVER VORTAC, JACKSON VOR, RHONE OM, AVON NDB, ARUBA LOM, BONLI FM.**

(2) MULTIPLE DESCRIPTION. When a fix is identified by more than one method, include these methods in the fix type blocks. When an **RNAV waypoint** is collocated with another type of fix, use the same name for both.

(3) FIX TYPE. Enter the fix type(s) in the appropriate box(es), e.g., **DME, VHF, VHF/LF, LF,** or combinations thereof. List the following above the fix type boxes: for an *RNAV waypoint*, enter an **X** followed by **WP**; for *MLS*, enter an **X** followed by **MLS**; for *MLS RNAV*, enter an **X** followed by **MLS WP**; for a *RADAR Fix*, enter an **X** followed by **RADAR.** If *facility only*, no entry is required in "Fix Type" boxes.

c. *STATE.* Enter the two letter identifier of the state in which the fix is located. If the fix location is offshore, the name of the nearest state shall be used. Use **GU** for Guam. If the fix is outside the U.S. CTA/FIR, use **OA** for Offshore Atlantic, **OG** for Offshore Gulf of Mexico, or **OP** for Pacific.

d. *BLOCK 1. RADIO FIX.*

(1) TYPE OF ACTION. Enter in the appropriate box the type of action being taken. This is applicable to block 1 only, and NOT to be confused with block 2, HOLDING.

(2) FACILITY BLOCKS. En route: Where a crossing radial/bearing establishes a fix along an airway, list the on-course facility as Facility 1, and the off-course facility as Facility 2. Where a fix is established at the intersection of two airways, list the source facility farthest from the fix as Facility 1, and the crossing source facility as Facility 2. If a third facility is involved, list it as Facility 3. If more than three facility blocks are required, enter the additional facility information in the REMARKS section. **Terminal:** The facility providing positive course guidance is Facility 1. If the fix is *DME,* list the DME source, if other than facility 1, as Facility 2. If the fix is an *intersection,* list the crossing course facility as Facility 2. If a third facility is involved, list it as Facility 3. If more than three facility blocks are required, enter the additional facility information in the REMARKS section.

For a VOR/DME RNAV waypoint, list the reference facility information in Facility 1 block. Leave facility blocks **blank** for non-VOR/DME RNAV waypoints.

(a) NAME. Enter the name and identifier of the navigational facility, or the name (radio call) of the ATC facility, which is used to form this fix; e.g., **DENVER (DEN); ROONEY APPROACH.**

(b) TYPE/CLASS/CATEGORY. Enter the SSV Class, the facility type nomenclature and monitoring category of each facility used to form this fix; e.g., **H-VORTAC-1, L-VOR-1/3, LOC-1, LOC/DME-1, MH-NDB-1, H-NDB-4, LOM-4, MLS-1, MLS/DME-1, MLS/PDME-1, ASR, ARSR.**

(c) R A D I A L / C O U R S E / BEARING. Enter the radial, course, or bearing from each facility used to form this fix to the nearest hundredth of a degree. *Localizer* entries are in compass points and true course from the antenna; e.g., **NW CRS (324.45).** For *MLS*, enter AZ bearing to the nearest hundredth of a degree. For *VOR/DME RNAV,* the calculated azimuth from the reference facility forming the RWY WP is used **unless** flight inspection requires a different azimuth. In parentheses, enter the **true** radial/course/bearing to the nearest hundredth of a degree. Enter a **dash** if radial/course/bearing is not defined.

(d) DME DISTANCE. When a *DME Fix* is designated, enter the DME distance to the nearest hundredth of a mile from the facility providing DME information. Compute terminal courses and distances from the same hundredth of a mile. If the facility providing DME information is not collocated with the facility providing course guidance, list both facilities. See paragraph 807g(4)(g). Enter a **dash** when DME is not part of the fix makeup from an off-course facility used to define an intersection UNLESS the crossing radial is part of an airway segment.

1 For *MLS*, enter along-track distance, if applicable; e.g., **ATD 4.13.** See figure 9-10.

2 For *VOR/DME RNAV,* use the calculated distance from the reference facility to the RWY WP regardless of flight inspection findings.

3 For a *radar fix*, enter the distance from the fix to the threshold (straight-in minimums). Distance shall be entered to the nearest tenth of a mile in the following format: **"5.8 RADAR*, 6 RADAR*".** The asterisk denotes that an entry in the REMARKS section is required. When circling-only radar minimums are authorized, state the distance from the fix to the nearest landing surface; or, if an on-airport facility is the missed approach point, from the fix to the facility.

4 If the fix is *en route*, charting agencies will round to the nearest mile for en route charts.

(e) MRA/MAA. See also paragraphs 267 and 269. The Minimum Reception Altitude (MRA) is usually based on electronic signal strength determined by flight inspection of the navigational facility. The MAA is the Maximum Authorized Altitude for use of the fix. The specialist shall consider all possible uses of the fix, request flight inspection of the lowest altitude that may be used, and insure procedure design is compatible with any limitations imposed. MRA/MAAs assigned shall be consistent with signal strength, facility volume, air traffic requirements, and air/ground communications. Enter all MRA/MAAs in hundreds of feet; e.g., 8700/45000 shall be entered as **87/450.** When the fix is a facility, enter a **dash** for MRA; e.g., **-/120.** Fixes shall reflect the airspace structure in which they are used; e.g., low altitude **10/45, 10/120, 70/175;** high altitude **180/450.**

(f) D I S T A N C E F R O M FACILITY. When the fix is an intersection, enter the distance from the governing facility to the nearest mile. The definition of governing facility is contained in TERPS paragraph 1760. When the fix is not an intersection, leave **blank.**

(g) LEAST DIVERGENCE ANGLE. Enter the **smallest** angle formed by the radials/courses/bearings of the facilities used to form this fix. True radials, courses, and bearings, as used in HP-97 and IAPA calculations, provide the most accurate determination of actual divergence angle. Use the true divergence angle

(in whole degrees). When the fix is formed by more than two facilities, the least angle may not meet criteria. Determine whether the fix is satisfactory by examining how it is used. Consider the flight path, and what course indications will actually be used by the pilot. When the divergence angle is less than 30 degrees (45 degrees for holding), include a note in the REMARKS section indicating the terminal fix criteria used; e.g., **TERPS paragraph 287(c).** When the fix is not an intersection, leave **blank.**

(h) A I R / G R O U N D COMMUNICATIONS. Enter the ground station(s) providing communications, and check the appropriate frequency range box(es). Enter the lowest altitude at which satisfactory communications are provided at this fix. The procedures specialist must ensure available communications at fix use altitudes. If the communications altitude is higher than the fix MRA, holding altitudes and/or use of the fix as an ATC reporting point may be restricted. Flight inspection and ESV forms provide a source for this data.

(i) MRA OF OTHER FACILITIES AT THIS FIX. See also paragraphs 267 and 269. Enter the facility identification, type and class, radial, course, or bearing, DME distance, and the MRA/MAA of other facilities whose radials, courses, or bearings intersect this fix and could be used as substitutes during the shutdown of the primary facility or for other purposes. Data entered in these blocks shall be to the same order of accuracy as data entered in Block 1A. Enter the FIAO which conducted flight inspection verification and the verification date. When not applicable, leave **blank.**

(j) AUTHORIZED USE OF THIS FIX. Enter the use of this fix in the appropriate boxes. Check low boxes for fix use below 18000; high for 18000 and above (this also applies to Blocks 4A and 5). If the fix is compulsory, see also paragraph 905a. If an MCA or MRA is established at the fix, check the "flag required" box and enter the flag note in the space provided. The flag note box provided on this form is used for MCA or MRA notes at the fix. Any change in an en route MCA or MRA shall be submitted as an amendment to the airway on Form 8260-16.

(k) RADIO FIX IS. Check the approved, disapproved, or restricted box. Check the restricted box when this fix requires an MRA or MCA, or its use is limited to an individual operator on a Special SIAP or non-Part 95 routing. Military-only fixes or fixes associated with Special SIAPs shall include an operational note in the REMARKS section; e.g., **"Restricted - Aspen Airways."** When the restricted box is checked, the approved and disapproved boxes are left blank.

e. *BLOCK 2. HOLDING.*

(1) TYPE OF ACTION. Enter the type of action being taken in the appropriate box. This is applicable to block 2 only, and not to be confused with block 1, RADIO FIX. When no action is being taken, leave **blank** on originals and check NO CHANGE on revisions.

(a) HOLDING REQUIRED. Enter the holding direction (as determined in figure 8-1), the identification and type of navigational facility providing course guidance. For **RNAV,** enter only **"MLS"** or **"WP"** in the "type" column. Enter the radial/course/bearing in hundredths of a degree from the WP or navigational facility on which holding is predicated, the course inbound in hundredths of a degree, the direction of turn, and the time and/or the longest DME leg length outbound from the fix for each pattern. For **RNAV,** enter the time and/or the longest leg length outbound from the fix for each pattern.

1 When a specific holding pattern is not required, leave **blank.** If more than 3 holding patterns are required, and all turns are in the same direction, the word **ALL** may be used to indicate holding in all directions. All directions in this sense shall be confined to designated airway and routes; and when used, the words **"Airway Radials"** shall be inserted in the column headed RAD/CRS/BRG. When holding is authorized in all directions, the highest minimum holding altitude shall necessarily be applied to all holding patterns. If more than 3 holding patterns are required and each is described individually, enter the additional holding pattern information in the REMARKS section.

(b) HOLDING ALTITUDES. Enter the minimum and maximum holding altitudes

authorized for each aircraft speed category and for each holding pattern. Authorized altitudes shall be no lower than the lowest altitude requested by ATC. When holding accommodates civil jets, include speed categories 200-230K or 265K, as appropriate; when holding above 14,000 feet, use 265K. See Figure A4-6 and FAA Handbook 7130.3, Holding Pattern Criteria, Figure 1. The minimum and maximum holding altitudes for speed categories should be consistent, if feasible. When no holding is specified, leave **blank.** Enter all holding altitudes in hundreds of feet; e.g., 8700/45000 shall be entered as **87/450.**

1 Multiple use holding. When documenting holding patterns which are also used for holding in lieu of PT, the minimum holding altitude specified shall not be less than that used in the SIAP, and the controlling obstacle shall include the applicable accuracy code adjustment. Where the holding pattern has multiple uses, enter the highest minimum altitude determined from all applications as the minimum holding altitude.

(c) REASON FOR NONSTANDARD HOLDING. When holding with left turns, state the reason; e.g., **Terrain.** If standard, leave **blank.**

(d) HOLDING IS. Indicate whether holding is approved, disapproved, or restricted.

1 Unplanned holding at en route fixes may be expected on airway or route radials, bearings, or courses. If the fix is a facility, unplanned holding could be on any radial or bearing. Holding approval for en route fixes indicates approval of unplanned holding.

2 When unplanned holding is not recommended, holding should be disapproved or restricted. When planned or unplanned holding is restricted, add an appropriate note in the REMARKS section; e.g., **"Holding limited to established pattern(s)"; "Unplanned holding NA 090 CW 220"; "Unplanned holding NA on R-120 CW 272"; "Unplanned holding authorized at or above 5000'."**

3 En route fixes which also serve as missed approach clearance limits shall permit holding and en route flight. If holding is not specified, assure that the aircraft can hold on the missed approach course leading to the fix and document the controlling obstacle in Block 7.

f. *BLOCK 3. REMARKS.* The foregoing instructions recommend several uses for this section. Additional uses are as follows:

(1) FIX USE. List all airways that use the fix. List all terminal procedures that use the fix by city/state, and SIAP ID (include airport name if necessary). This assists charting agencies, and helps assure that affected airways or procedures are not overlooked when the fix is modified. Explain special fix or holding charting requirements. See also paragraph 808b.

(2) LATITUDE/LONGITUDE. Enter the fix or WP latitude and longitude in the lower left corner of the space, computed using the primary means of identifying the fix, and accurate to at least the nearest hundredth of a second; e.g., **380254.32/1035554.49.** En route fixes shall be calculated using the exact true courses between facilities making up the airway segment. If the fix is also used in a terminal procedure, then terminal priorities shall prevail.

(a) If the fix can be formed in more than one manner, show the facilities used to calculate the coordinates given, and record only one set of coordinates on the form.

(b) A few nonstandard situations exist in which the same facility serves two closely spaced parallel ILS localizers or MLS azimuths. For *OM/MM/IM*, use actual coordinates if the facility resides on the loc/az centerline. Otherwise, establish marker coordinates where the fix/marker major axis intersects the loc/az centerline. For *LOM/LMM/LIM*, use actual coordinates if the facility resides on the loc/az centerline or is within one-half the commissioned width of the loc/az from centerline. Otherwise, establish fix/marker coordinates where the marker major axis intersects the loc/az centerline.

(3) REQUIREMENTS FOR CHARTING. When it is necessary to clarify fix charting requirements (fix associated with specific SIAPs, SIDs, STARs, airways), specify which facilities are to be charted on certain charts; e.g.,

"FAC 1 & 4 CHART EN ROUTE LOW, FAC 1, 2, & 4 SID CHARTING." When it is necessary to clarify the charting requirements for holding pattern(s), list holding pattern charting.

(4) MINIMUM TURNING ALTITUDE (MTA). When an MTA is required by TERPS paragraph 1714(c), enter the MTA in the REMARKS section.

(5) Radar Fix. If applicable, explain reference "*" from Block 1, DME DISTANCE; e.g., **" * RADAR FIX 5.8 NM FROM AER 13, MERCY, NE."**

g. *BLOCK 4. AIR TRAFFIC REQUESTS APPROVAL OF REFERENCED FIX FOR:*

(1) **NAME.** Enter the name of the approved fix. See paragraph 905b. This block will assist in correlating front and back sides of the form when using PerFORM PRO to make two-sided copies.

(2) **REPORTING POINT.** Indicate whether a compulsory or an on-request reporting point is required. Indicate the airspace structure for which the fix is desired.
See also paragraph 905a.

(3) **HOLDING.** Enter the minimum and maximum holding altitudes authorized by air traffic and required for each aircraft speed category and for each holding pattern. Enter the template number of the holding pattern required for the highest altitude authorized in low and high strata for each speed category and for each holding pattern. When no holding is specified, leave **blank.** For **VOR/DME RNAV,** the distance from the WP to the reference facility shall be applied as the "fix-to-NAVAID distance" in figure 3 of FAA Handbook 7130.3, Holding Pattern Criteria. For **non-VOR/DME RNAV,** use the "15-29.9NM" distance column for terminal holding, and the "30 NM and over" distance column for en route holding in figure 3 of FAA Handbook 7130.3.

(4) **HOLDING AREAS.** Indicate whether all holding is completely within controlled airspace and clear of restricted or warning areas. When holding is not completely within controlled airspace or clear of restricted or warning areas, an entry shall be made in the REMARKS section indicating the action required by ATC. Example: **"Prior coordination required with controlling agency for holding over R-5503A/B and/or Brush Creek MOA."** When no holding is authorized, leave **blank.**

h. *BLOCK 5. CHART PUBLICATION.* Indicate whether charting is required or not required. For a "special" SIAP, check "not required." If no longer required, leave the "requested" block **blank.** When required, indicate the fix charting requirements for Terminal (AREA), Standard Instrument Departure (SID), Approach Landing Charts (AL), En Route Low, and En Route High. Use the JAL column for all military SIAP charting, low and high. Indicate the holding charting requirements for Terminal (AREA), SID, JAL, and AL. When additional charting requirements are needed, such as EN ROUTE holding, indicate the requirement in the NOTE section. If additional space is required, use the REMARKS section. See paragraph 907e.

i. *BLOCK 6. INITIATED.* Enter the date, sponsoring facility, and the name and signature of the individual who initiated this form.

j. *BLOCK 7. CONTROLLING OBSTRUCTIONS.*

(1) **Documentation.** Enter the aircraft **speed category** (if the minimum altitudes for all speed categories are the same, show only the highest speed category); the **controlling obstruction** (obstacle description and NOS obstacle number if applicable); **coordinates** (to the hundredth of a second); **MSL elevation** (to the nearest foot); **criteria** (pattern template number, P-4, P-8, etc., corresponding to the minimum holding altitude established for each speed category); the **determination** (method used to determine the controlling obstruction) for each pattern - e.g., map study, IAPA, etc. Enter the **study date** and the **name** of the individual who conducted the study.

NOTE: No entries are required for patterns in the high altitude strata within the CONUS.

(2) **Holding Pattern Analysis.** Analyze holding patterns incrementally for all altitudes requested by ATC and for all speed categories.

Do NOT use less than pattern template number 4. Apply appropriate ROC to obstacles within each template area. Some time may be saved by **initially** evaluating the patterns for the highest and lowest altitudes requested relative to the highest speed group. If the **same controlling obstacle or minimum holding altitude** results, **document** the obstacle and the associated smaller pattern template number; the evaluation is then **complete**. If, however, the minimum holding altitudes **differ**, a more detailed incremental analysis is necessary.

(3) Unusable Holding Altitudes. Where unusable holding altitudes are found, **document** the controlling obstacle and associated pattern template number for the first usable holding altitude **above and/or below** the unusable altitude(s), and restrict holding accordingly. Record multiple obstacle information in one pattern row (e.g., Pattern 1,2,3); use subsequent rows if available, or use REMARKS. Restrict holding in the REMARKS section; e.g., "**Holding restricted to 5000'**"; "**Holding not authorized above 6000'**"; "**Holding not authorized from 2100 through 3900', or from 6100 through 8000'**"; "**Holding not authorized below 5000'**".

(4) Climb-In-Hold. Evaluate climb-in-hold, as appropriate, IAW FAAH 7130.3, Holding Pattern Criteria, paragraph 35. Document in REMARKS; e.g., "**Climb-in-hold evaluated (265K).**" Indicate in parentheses the speed group required by paragraph 35. Handle new obstacles discovered as a result of this process on a case-by-case basis in coordination with AVN-220.

k. *BLOCK8. FLIGHT INSPECTION.* Enter the FIAO which conducted flight inspection verification and the verification date. If flight inspection records are not available and the facilities are inspected by SAFI, "**SAFI**" may be entered provided the fix falls within the operational service volume for all the facilities listed. The word "**Pending**" is appropriate for facility rotations for which hard dates are established; and, may be used for any fix on original/amended SIAPs forwarded under the provisions of Order 8260.26B. Any changes required as a result of flight inspection findings would necessitate a revised 8260-2. Leave **blank** for oceanic waypoints identified by long range navigation equipment.

l. *BLOCK 9. REVISION RECORD.* Enter the revision number, the revision date, and the superseded revision number and date. When the fix is an original, enter "**Original**" and the date. The date of FIAO approval is also the revision date.

m. *BLOCK 10. REASON FOR REVISION.* State the reason(s) for the revision. When the fix is an original, leave **blank.** If applicable, enter: "**Concurrent with Jackson Hole WY VOR/DME Rwy 36, Amdt 16.**"

n. *BLOCK 11. FIAO APPROVAL.* Enter the date, FIAO, and the name and signature of the individual approving this form.

o. *BLOCK 12. DISTRIBUTION.*

(1) Distribute the approved 8260-2s for fixes, including military fixes (except Army) and fixes associated with Special SIAPs, as follows:

ATM-600	Orig. + 2 cys
FPB	1 copy
ARTCC	1 copy
ATCT (if appropriate)	1 copy
AVN-220	1 copy
FIAO	1 copy

(2) Enter the routing symbol in the box(es) for the specific office to which distribution is made.

(a) For U.S. Army fixes, distribute 8260-2s as specified in Order 8260.15.

(b) For fixes associated with Special SIAPs, the FPB shall distribute copies of 8260-2s to intended users.

(c) For fixes associated with SIDs or STARs, include normal distribution copies for ATM-600 and ARTCC in the package forwarded to the regional ATD.

p. *BLOCK 13. WASHINGTON ACTION.* This space is reserved for NFDC use.

906. CANCELLATION.

a. *FIX CANCELLATION.* When cancellations are necessary, it is recommended that a copy of the existing 8260-2 be stamped **CANCELED.** Assure that the canceled stamp includes a signature, date, and the name of the FIAO taking action.

b. *HOLDING CANCELLATION.* When holding cancellations are necessary, a revision is required. In Block 2, HOLDING, check the **CANCEL** box and in Block 2D, check the **DISAPPROVED** box. When more than one holding pattern is established and you wish to cancel an individual holding pattern and retain the other(s), a **revision** is required. In this case, check the **MODIFY** box in Block 2, HOLDING, and identify the modification in Block 10, REASON FOR REVISION.

c. *DISTRIBUTION.* Distribution shall be in accordance with paragraph 905o of this order.

907. GENERAL.

a. *SIAP Cancellation.* Whenever a SIAP is canceled, process a revision or cancellation of 8260-2s for fixes associated with that SIAP.

b. *En Route Fixes.* When it is determined that an established en route fix is to be used on another type of chart for the first time, the 8260-2 must be amended to include an **X** under the appropriate heading opposite **FIX REQUESTED** in Block 5, CHART PUBLICATION.

c. *SIAP Fixes.* Do not establish a named fix for the following unless required for control of aircraft:

(1) DME only Fix. Do NOT forward 8260-2s for unnamed DME Fixes.

(2) Starting and ending points of arc initial or feeder segments.

(3) Points where initial or feeder segments intercept the final course prior to the intermediate or initial fix.

d. *Chart Clutter.* Consider also chart clutter and chart usability prior to establishing any named fixes.

e. *Proper Charting.* When processing 8260-2s for any type of action, research all appropriate publications (AL, JAL, AREA, SID STAR, PROFILE DESCENT, EN ROUTE LOW, and EN ROUTE HIGH) to assure proper charting is or will be accomplished.

f. *Military Procedures.* The requirement to document and name all holding fixes on 8260-2s also applies to military procedures. Controlling obstacles and flight inspection must be documented.

g. *Fix Name Change.* If the FIAO initiates a fix name change, process a revised 8260-2 and explain in REMARKS; e.g., "**Name changed from LESLI to WALLS.**" If ATM-600 changes the fix name by a National Flight Data Digest (NFDD) item, only a pen and ink change is required on the file copies of the 8260-2. NO SIAP amendment is necessary when a SIAP fix name is changed.

SECTION 5. FORM LETTER FOR COORDINATION OF SIAPs

908. PREPARATION OF COORDINATION LETTER.

a. *Standard Form Letter.* A transmittal is required to distribute FAA Forms 8260-3/4/5/15 to public users for comment. Comments shall be considered before the procedure is forwarded for publication. See paragraph 421. The standard letter format may apply not only to requests for user comment, but also to contacts within the administration. All replies shall be directed to the regional FPB office.

b. *Comment Date.* The date requested for submission of comments may be established based on the needs of the receiving office. However, at least 20 working days shall be allowed for reply.

U.S. Department
of Transportation
**Federal Aviation
Administration**

Aviation Standards National
Field Office

P.O. Box 25082
Oklahoma City, Oklahoma 73125

Executive Assistant
National Business Aircraft Assn.
1200 Eighteenth St., N.W.
Washington, D.C. 20036

Dear Sir:

Please review the attached instrument approach procedure/procedures.

Original procedures contain new information not previously published. Amendments to existing procedures list the proposed changes on the reverse side of the instrument approach procedures.

Your comments may be made on this transmittal letter in the space provided below or by separate statement. The instrument approach procedure may also be retained for your files.

Your reply should be received no later than _____; otherwise, we will assume that you concur with this proposal. Reply should be addressed to the following office:

FAA Great Lakes Regional Office, Attn. AGL-220
2300 East Devon Avenue
Des Plaines, IL 60018

L.D. Fantin
Acting Manager, Battle Creek Flight
Inspection Field Office

Attachment

REMARKS_____

_____

Signature_____

Title_____

Figure 9-6
Standard Form Letter

SECTION 6. STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD, FAA FORM 8260-9 (RIS: FS 8260-7)

909. PREPARATION OF FAA FORM 8260-9.

The Standard Instrument Approach Procedure Data Record, FAA Form 8260-9, and the IAPA Data Record shall be prepared in accordance with the instructions below for each instrument approach procedure developed by Flight Inspection Field Offices. The form is designed as a supporting document for the approach procedure. It serves as a checklist for the Procedures Specialist, as a technical reference for the Flight Inspector, and provides a permanent record of data currently available at the time of procedural development.

a. *PART A: OBSTRUCTION DATA.*

(1) **BLOCK 1:**

(a) **App.Segment.** Identify each Feeder, Initial, Intermediate, and Final segment, and stepdown fixes therein. If the IF is also an initial approach fix, identify the IF with **"(IAF)"** in the "From" column. For ILS SIAPs which have separate intermediate and final segments for ILS and LOC, identify all: **Intermediate: ILS** and **Intermediate: LOC**; **Final: ILS** and **Final: LOC.**

(b) **From/To.** Enter **segment start/end points,** including stepdown segments, as listed in the Terminal Routes section of the FAA Forms 8260-3/4/5/7. Enter the **PT completion distance** in the "From" column opposite the intermediate or final segment, as appropriate. Enter the actual **missed approach point** in the "To" column for the final/stepdown segments. Enter **"GS Intcp"** in the "From" column and **"DH"** in the "To" column for precision final.

(c) **Obstruction.** Enter controlling obstruction type (tower, trees, terrain, etc.) and NOS obstacle number, if available, within each approach segment on one line; enter segment highest terrain data (if different) on the next. Make only one entry if terrain is controlling obstruction. Number each obstruction and segment highest terrain sequentially as they appear on the form in blocks 1 to 4. To satisfy Flight Inspection requirements, and for documentation purposes, manually **number** each obstruction/segment terrain data element on the IAPA generated 8260-9 form in the same manner. Corresponding numbers shall be used to identify the controlling obstructions/ terrain on an accompanying chart or IAPA/Tektronix hardcopy of the SIAP. (See Chart Documentation below). **For obstructions/ terrain common to other segments,** enter only the obstruction number in the "obstruction" column for each subsequent repetition, leaving the "coordinates" column **blank,** but completing remaining column entries.

(d) **Coordinates.** Enter controlling obstacle and/or terrain coordinates in degrees, minutes and seconds; e.g., **411532/943028.**

(e) **Elev MSL.** Enter the controlling obstacle/terrain MSL elevation followed in parentheses by the appropriate accuracy code. Any required altitude adjustment due to accuracy code application is shown in the "Alt. Adj." column. Terrain used for airspace evaluation has no accuracy code assigned.

(f) **ROC.** Enter required obstruction clearance (ROC) for each segment and any required altitude adjustment. See paragraph 272a and b. For ILS/MLS, where appropriate, enter **"ASC"** (all surfaces clear). Where obstacle penetrations cause DH adjustment, enter the slope penetrated; e.g., **34:1.** Where obstacles require a glideslope higher than 3°, enter the slope supporting the higher glideslope; e.g., **31.9:1** (for a 3.2° glideslope). Document obstacle penetrations per paragraph 909a(1)(c).

(g) **Alt. Adj.** Do NOT enter additives required for rounding purposes. State only the reason for and amount of adjustment, rounded to the next higher foot. The following **codes** should be used: **RA** - remote altimeter; **AS** - airspace; **AT** -air traffic; **AC** - accuracy code; **SI** - straight-in mins; **XL** - excessive length of final; **PR** - precipitous terrain; **HAA** - circling minimum HAA; **MA** - missed approach; **PT** - procedure turn; **DG** - descent gradient; **GS** - glideslope, etc.

For example: **AC50, AT100, AS1500, etc.** If necessary explain the code used in Part C - REMARKS. For ILS/MLS, where obstacles require a glideslope higher than 3°, enter **GS** but exclude the amount of adjustment.

(h) Min. Alt. The obstruction elevation + ROC + altitude adjustment = **minimum altitude** (computed); OR, high terrain elevation + airspace adjustment = **minimum altitude** (computed). These values shall then be rounded as appropriate to hundreds of feet. Enter the computed and rounded values, separated by a "/"; e.g., **2554/2600**. Make entries on the obstruction line as well as the airspace evaluation line. When possible, separate sets of segment entries with a blank line. The segment minimum altitude to be published shall be the **higher** rounded value, and shall match the respective altitudes shown on the corresponding FAA Form 8260-3/4/5/7. For part-time remote altimeters, make entries in the final/stepdown "Alt. Adj." and "Min. Alt." columns on a separate line just below the entries for full-time altimeter. The minimum altitude values for final/stepdown and circling shall be rounded to the next higher 20-foot increment. For ILS/MLS, enter DH and HAT values separated by a "/"; e.g., **1718/200**.

(2) BLOCK 2: Identify the procedure turn fix/facility under the "From" column. Enter the procedure turn completion distance under the "To" column. If a procedure turn is not authorized, enter **"NA"** under the "from" column. Enter **"Hold-in-Lieu-of"** in the space above "Procedure Turn" as appropriate. Enter the **Hold-in-Lieu-of-PT facility/fix** in the "From" column, and the **holding template number** in the "To" column. Allow two lines for obstruction/ airspace evaluation entries.

(3) BLOCK 3:

(a) Identify the missed approach point (MAP). For ILS/MLS, list both precision and nonprecision MAPs (if not collocated), listing precision first. Enter the elevation of the missed approach surface (HMAS) at the MAP: enter the HMAS for ILS/MLS first, then for LOC/AZ. Separate both figures with a "/". For the LOC portion of an ILS with a stepdown, enter the surface elevation associated with the lowest MDA. Elaborate in REMARKS as necessary.

(b) Specify the clearance limit under the "to" column.

(c) Document the controlling obstacle (see paragraph 272d(3)), including 40:1 surface penetrations and 1000' level surface penetrations, by obstacle type, coordinates and elevation. Specify the controlling obstruction, coordinates, and elevation where a climb gradient is required for ILS CATs II or III.

(d) Enter **"ASC"** in the "ROC" column. Enter the clearance limit altitude in hundreds of feet MSL. Elaborate in REMARKS, if necessary.

(4) BLOCK 4: Enter the circling data for each category of aircraft authorized by the procedure. The required height above the airport (HAA), the straight-in MDA, or the circling ROC may determine the minimum circling altitude. When the minimum altitude has been established, enter the resulting HAA in the "actual" block. If two HAA's are available, enter both HAA's separated by a "/". Enter controlling obstacle type and NOS obstacle number. Enter controlling obstacle coordinates to the nearest second. Enter controlling obstacle MSL elevation followed in parentheses by the appropriate accuracy code. Enter ROC to the nearest foot. When HAA controls the circling minimum altitude, enter **"HAA"** in the "ALT. ADJUST." column; when the straight-in MDA controls the circling minimum altitude, enter **"SI"**. Enter other adjustment codes and amounts as appropriate (see Block 1, paragraph g). Enter only the published minimum altitudes to the next higher 20' increment. If use of a remote altimeter requires a higher minimum circling altitude, enter both values separated by a "/" (or only the remote altimeter value, if applicable).

(5) BLOCK 5: Identify the navaid on which MSAs are predicated, the type of obstructions and their location by reference to bearing and distance (nearest 0.1nm) from the navaid. Enter the controlling obstruction type (tower, trees, etc.) for each sector. Enter the MSL elevation of the respective controlling obstacle to the nearest foot followed in parentheses by the appropriate accuracy code. Enter the resulting MSA in the appropriate block in hundreds of feet. If a "common safe altitude" is established, define only one sector (360° - 360°) and only the one controlling obstacle.

(6) City/State, Airport, SIAP Data: Enter city/state, airport elevation, etc., as on FAA Forms 8260-3/4/5/7. Enter facility identification and type. Enter the three-letter code for the FAA region responsible for the SIAP.

b. *PART B: SUPPLEMENTAL DATA.*

(1) BLOCK 1: Identify the facility or facilities providing approach control and terminal service to the airport. If no full-time or part-time control tower, include the associated FSS. Flight inspection reports are the source for the primary frequency bands in which satisfactory communications are provided. For clarity, facility identification should agree with those used in the Airport/Facility Directory (A/FD).

(2) BLOCK 2: Identify the facility providing local weather reporting service, the location with reference to the airport served by the procedure, and the hours that weather service is available to the public. Split the boxes as necessary to indicate multiple sources. For record purposes, "ESSA" is now **NWS** (National Weather Service). "FAA" requires a weather observer. Enter AWOS, including level, SAWRS, LAWRS, ASOS, etc., in "Other".

(3) BLOCK 3: Identify by location identifier the altimeter setting source (or sources separated by a "/"). If the altimeter setting is derived from a remote source, indicate the distance to 0.01nm and clock hours of remote service. Indicate the resulting altitude raw adjustment (ROC increase) to 0.01 feet. Use this value rounded to the nearest whole foot increment in the "ALT.ADJ." column in Part A.

(4) BLOCK 4: Identify the primary navaid (facility providing final approach guidance) and the point providing Category 1 monitoring service. Space is provided to show hours of operation by Category 1 and Category 3 monitoring service at part-time monitoring points. The secondary navaid is used to provide the same information for supporting navaids utilized for descent fixes in the final approach segment. Alternate minimums shall not be established lower than the crossing altitude of a fix predicated on a Category 3 monitored navaid, either primary or secondary.

(5) BLOCK 5: Specify the floor of controlled airspace underlying the final approach course (FAC). Identify the type of controlled airspace and the hours of operation for control zones.

(6) BLOCK 6: Indicate the available approach and runway lighting for the airport and list the runways served by each type of lighting aid. Complete preprinted entries on computer generated form. Enter VASI, PAPI, etc., data in "Other". Enter "**(PCL)**" in the respective block when pilot controlled lights are available.

(7) BLOCK 7: List the runways with serviceable runway markings. Place "**BSC**" data on Runway line, "**PIR**" data on "All Weather" line, and "**NPI**" data on "Instrument" line. Place non-standard data in REMARKS.

(8) BLOCK 8: List each runway served by runway visual range (RVR) in the approach and roll out ends. Enter midfield RVR data on first line: e.g., "**Midfield 31**".

(9) BLOCK 9: Provide GS/GP information as indicated for all ILS/MLS procedures to the following accuracy: GS/GP angle - nearest .01°; distance THR to GS/GP Ant -nearest foot; elevation RWY THR and GS/GP Ant - 0.1 foot; TCH - nearest 0.1 foot. These values shall agree with the AMIS database.

(10) BLOCK 10: Identify the desired approach course aiming point as determined by the procedure construction. Normally this will be the runway threshold or a point on the runway centerline extended at a specified distance from the threshold. Check both blocks on any ILS/MLS, or where the FAC is directly aligned to the runway threshold. For distances from threshold between 3000' and 5200', enter the specific value. For those final approaches that parallel the runway centerline extended or intersect the centerline more than 5,200' from the threshold, specify "3000' from c/line" as well as the distance between the FAC and the centerline extended at that point. For circling or point in space alignment, explain in REMARKS.

(11) BLOCK 11: Specify the total number of waivers approved for each approach procedure and the dates of Washington approval. Where no waivers have been issued indicate "**None**" in the

"Number of Waivers on File" box.

c. *PART C: REMARKS.* Use this space to amplify previous entries (state associated block number for reference), or to record essential data not considered elsewhere on the form. See also paragraphs 811c(1)(c) and 816f.

(1) For visibility computations, make an entry only if a Paragraph 332 surface is penetrated: **"Para 332, 34:1 penetration".**

(2) State the effect, if any, of waivers to published minimums.

(3) For VOR/DME RNAV SIAPs, enter the MAWP XTRK error.

(4) For RNAV SIAPs, state the type and coordinates of the obstacle penetrating the RNAV Descent Angle Obstacle Slope.

(5) Enter the amount of threshold displacement, if any.

(6) Enter airspace data required by paragraph 507k. Carry this information forward until amended.

(7) When flight inspection determines TCH in accordance with FAA Order 8260.47, enter: **"Flight Check RDH __ft., (Order 8260.47)."**

(8) When flight inspection establishes a final approach course (FAC) other than the plotted magnetic course, enter:

"Plotted FAC is 087.43° M."
"Electronic flight inspected FAC is 089° M."

(9) Enter EDA high/low terrain data, if appropriate, including coordinates and elevation, for each RASS evaluated and used. (Data may be entered on front side if room allows.) If appropriate, identify the RASS by ICAO airport ID:

EDA (KEWR) 404353/741525 280'MSL
404000/740760 0'MSL

d. *PART D: PREPARED BY.* Enter the name and title of the FIAO representative responsible for preparing the data record; the date prepared; and, the originating office.

e. *PART E: Instrument Approach Procedure.* Disregard the pre-printed "Part E: Instrument Approach Procedure" section on manual forms. Continue REMARKS as necessary here and in the corresponding block on computer generated forms. A graphic sketch of the plan and profile views of the approach procedure and the operational minimums as envisioned by the Procedures Specialist shall be depicted on a separate 8 1/2" x 11" sheet. This graphic presentation becomes part of the FIAO file, and is required to test the validity of the narrative procedure and to uncover any potential charting problems prior to formal publication. A copy of the published approach and landing chart shall be attached to the Form 8260-9 as part of the permanent record.

f. *Distribution.* Completed copies of the FAA Form 8260-9 shall be retained with the associated SIAP and distributed as follows:

FIAO	Original
FPB	1 copy
AVN-220	1 copy
U.S. Army	As required

SECTION 7. TRANSMITTAL OF AIRWAYS-ROUTE DATA, FAA FORM 8260-16

910. PREPARATION OF FAA FORM 8260-16.

This form serves as a transmittal sheet of en route procedural data to be published under Part 95. It may be used by Flight Inspection Field Offices as a record of current en route information.

a. *AIRWAY NO. OR ROUTE.* Enter the **airway number, "Part 95 Direct,"** or **"Off-Airway Non-95"** as appropriate. Use a separate form for each type of route.

b. *FROM/TO.* Each segment (fix to fix) shall be listed, unless succeeding segments have no significant changes. Segments must be separated at facilities, flagged fixes, and changes of MEA, MOCA, or MAA. All airways and routes terminate at the U.S. control area boundary (route alignment may be explained in REMARKS).

(1) **Route segments** are normally listed from West to East for even numbered airways, or South to North for odd numbered airways. When amending published routes, follow the order of listing in the semi-annual consolidation of Part 95 routes.

(2) **Fixes** are identified by name, state, and type, in the sequence used in the semi-annual consolidation.

c. *ROUTINE OR DOCKET NO.* Enter the docket number when the request is associated with an airspace action. If processing is to be routine, leave **blank.**

d. *CONTROLLING TERRAIN/OBSTRUCTION AND COORDINATES.* When controlled airspace is a factor in MEA determination, make two entries: the highest terrain and the highest tree or man-made obstacle (if above the highest terrain). Use the " @ " to identify which obstacle controls the MEA, even though MRA may require a higher altitude. Show coordinates to the minute (seconds optional). Annotate a controlling obstacle that is in the secondary area, and show the required obstacle clearance. No entry is required for jet routes if terrain is not a factor. Enter reduction of mountainous obstacle clearance.

e. *MRA/MOCA.* Enter both figures. To reduce chart clutter, MOCAs less than 500 feet below MEAs should not be published unless they allow use of a cardinal altitude within 25 statute miles of a facility. If a MOCA is not to be published, line it out (the figure will still be legible for office record purposes).

f. *MAA/MEA.* Enter both figures. When dual MEAs are used, show the directions of flight. When an MEA change occurs at a DME-only fix, dual MEAs are required since non-DME aircraft cannot receive the fix. When minor MEA differences exist in adjacent segments, coordinate with ATC to establish a common altitude.

g. *CHANGEOVER POINT.* Enter the changeover point in the segment where it lies. If midpoint, leave **blank.** If NOT midpoint enter the mileage from and the identifier of the nearest facility. If a **gap** exists, the changeover point may be at the middle of the gap; however, leave **blank.** If a **dogleg,** enter **"DL".** If the dogleg point is a fix, enter the fix name. Establish a named fix on all dogleg airways which meet en route VHF intersection criteria. Establish a named DME fix on all dogleg airways which do not meet VHF intersection criteria.

h. *FIX MRA/MCA.* Entries here are referred to the appropriate fix by an attention symbol **(*).** The same information is required on the FAA Form 8260-2 for the fix. Show the direction of flight for MCAs.

i. *REMARKS.* Use this section for all pertinent supporting data. Typical entries include:

Airspace floor
Terrain clearance applied
Dogleg radials for Part 95 Direct and Off-Airway Non-95 Routes
Reason for MEA adjustment
Reason for MAA reduction
MEA gap
Cancel segment (reason)

TRANSMITTAL OF AIRWAYS/ROUTE DATA

Page 1 of 1 Pages

AIRWAY NO. OR ROUTE	FROM / TO	ROUTINE OR DOCKET NO.	CONTROLLING @ TERRAIN/OBSTRUCTION AND COORDINATES	MRA MOCA	MAA MEA	CHANGE OVER POINT	FIX MRA/MCA	REMARKS	FLIGHT INSPECTION DATES
V123	DONAL, VA INT	92-AEA-152	Terrain 549 @ 384100/775511 Stack 762 382150/773105	1600 ~~1000~~	17500 2000		* MRA 3000		3/12/92
	Funal, VA VORTAC								
V123	Funal, VA VORTAC	92-AEA-152	Terrain 850 390100/784311 Tower 1560 @ 385601/781241	2000 ~~2600~~	17500 4000NE 2600SW			1200 floor	3/12/92
	SHIRL, VA DME Fix								
V45 V234	PINAP, HI INT		Ships 200 throughout area	7000	4500	50 HRT	* MCA 5500N	Lower MEA & MCA	SAFI
	CANRY, HI INT			1200	7000				
J345	Lost Wages, NV VOR			23000	45000			MEA Gap 32 NM 126 LWG - 159 UPC Raise MEA; add Gap	5/24/88 6/2/92
	Up Creek, CO VORTAC				23000				
Part 95 Direct	Rightoff, WY VORTAC		Terrain (sec) 440700/1112301 ROC 1250	7000 ~~8000~~	17500 8000	MP			6/15/89
	Farin, ID LOM								
Off-Airway Non-95	Frigidest, MT VOR		Terrain 4300 440700/1071101 OC reduced 300	6000 ~~6000~~	27000 6000	MP		FGD direct YZA. Wolf Air Taxi. Add user: Lonslo Air	7/15/91
	US/Canada Border								

DATE

OFFICE: ABC FIFO

TITLE: Manager

SIGNATURE: Quint E. Sential

FAA Form 8260-16 (6-78) [illegible]

Figure 9-7
Transmittal of Airways/Route Data

(1) To assist charting agencies, when segments are amended or canceled, describe the changes in this section or elsewhere on the form as appropriate.

j. *FLIGHT INSPECTION DATES.* Enter the date of the original flight inspection, if available. Use **"Pending"** for new/relocated facility dockets. If flight inspection records are not available and the facilities are inspected by SAFI, enter **"SAFI"**. Use additional lines to log subsequent flight inspection, periodic reviews, and amendments. When the form's available spaces are filled, white-out the entries on manually completed forms, and start over. Regenerate electronic forms as necessary when available spaces are filled, deleting previously entered dates. Carry forward any manually entered dates.

k. *DISTRIBUTION.* The approved FAA Form 8260-16 shall be prepared by the FIAO and distributed as follows:

ATM-600	Original and 2 cys.
ATP-240	1 copy (if associated with an airspace action)
FPB	1 copy
ARTCC	1 copy
AVN-220	1 copy
FIAO	1 copy

l. *Examples:* Figure 9-15 contains a consolidated group of examples that can be used when completing FAA Form 8260-16.

m. *CANCELLATION.* Airways cancellation is accomplished through the rule making process. Regions publish a Notice of Proposed Rulemaking (NPRM), and upon publication of the final rule, NFDC removes the affected airways from Part 95. Procedure specialists remove or line through, as appropriate, the FAA Form 8260-16 entries referenced in the final rule.

911-999. RESERVED.

APPENDIX 1.

FLIGHT PROCEDURES REFERENCES

APPENDIX 1. FLIGHT PROCEDURES REFERENCES

The following documents form the basic reference library for flight procedures activities.

ORDERS AND NOTICES

Number	Subject
1000.1	Policy Statement of the Federal Aviation Administration
1010.59	Omni-directional Approach Lighting System
1050.1	Policies and Procedures for Considering Environmental Impacts.
1720.23	Distribution of Aeronautical Charts and Related Flight Information Publications
1800.56	Administration of Aviation Standards Activities - Program Guidelines
5010.4	Airport Safety Data Program
5100.38	Airport Improvement Program (AIP) Handbook
6030.1	FAA Policy on Facility Relocations Occasioned by Airport Improvements or Changes
6030.18	Mobile Air Traffic Control, Navigational Aid, Communication and Power System
6030.20	Electrical Power Policy
6050.32	Spectrum Management Regulations and Procedures Manual
6560.10	Runway Visual Range (RVR)
6700.20	Non-Federal Navigational Aids and Air Traffic Control Facilities
6750.16	Siting Criteria for Instrument Landing Systems
6750.24	ILS and Ancillary Electronic Component Configuration and Performance Requirement
6750.49	Maintenance of Instrument Landing Systems (ILS) Facilities
6850.2	Visual Guidance Lighting Systems
6850.5	Maintenance of Lighted Navigational Aids.
6950.2	Electric Power Policy Implementation at National Airspace System Facilities
6980.12	Provision of Remote Monitor for Electrical Power and/or Remote Start of Engine Generators
6980.26	Battery Backup Power Systems - Theory and Selection Guidelines
7031.2	Airway Planning Standards #1 Terminal Air Navigation Facilities and ATC Services
7031.3	Airway Planning Standards #2 Air Route Traffic Control
7032.5	Airport Surface Detection Equipment (ASDE-3) Air Traffic Service Operational Requirements
7100.9	Standard Terminal Arrival (STAR)
7110.10	Flight Services
7110.19	Designation Taxiways as Temporary Runways
7110.22	Arrival and Departure Handling of High Performance Aircraft
7110.65	Air Traffic Control
7110.79	Charted Visual Flight Procedures
7130.3	Holding Pattern Criteria
AT 7130.8	Development of Holding Pattern Criteria and Procedures
7210.3	Facility Operations and Administration
7210.37	En Route Minimum IFR Altitude (MIA) Sector Charts
7232.5	Reduced or Increased Operating Hours for ATCT's/Approach Control Facilities
7350.2	Air Traffic Operational Coding System
7350.6	Location Identifiers
7400.2	Procedures for Handling Airspace Matters
7900.2	Reporting of Electronic Navigation Aids and Communication Facilities Data to the NFDC
7930.2	Notices to Airmen (NOTAM's)
8200.1	United States Standard Flight Inspection Manual
VN 8240.1A	NAVAID Facility and Airport Data Procedures
8240.47	Determination of ILS Glidepath Angle, Reference Datum Heights (RDH), and Ground Point of Intercept (GPI)
8260.3	United States Standard for Terminal Instrument Procedures (TERPS)

VN 8260.4	ILS Obstacle Risk Analysis
8260.15	U.S. Army Terminal Instrument Procedures Service
8260.16	Airport Obstruction Surveys
8260.19	Flight Procedures and Airspace
8260.23	Calculation of Radio Altimeter Height
8260.25	Implementing Epoch Year Magnetic Variation Values
8260.26	Establishing and Scheduling Standard Instrument Procedure Effective Dates
8260.31	Foreign Terminal Instrument Procedures
8260.32	U.S. Air Force Terminal Instrument Procedure Service
8260.33	Instrument Approach Procedures Automation (IAPA) Program
8260.36	Civil Utilization of Microwave Landing System (MLS)
8260.37	Heliport Civil Utilization of Collocated Microwave Landing System (MLS).
8260.38	Civil Utilization of Global Positioning System (GPS)
8260.39	Close Parallel ILS/MLS Approaches
8260.40	Flight Management System (FMS) Instrument Procedures Development
8260.41	Obstacle Assessment Surface Evaluation for Independent Simultaneous Parallel Precision Operations
8260.42	Helicopter Global Positioning System (GPS) Nonprecision Approach Criteria
8260.43	Prioritization for Development of Wide Area Augmentation System GPS Instrument Approach Procedures
8260.44	Civil Utilization of Area Navigation (RNAV) Departure Procedures
8260.45	Terminal Arrival Area (TAA) Design Criteria
8260.46	Instrument Departure Procedure (DP) Program
8260.47	Barometric Vertical Navigation (VNAV) Instrument Procedures Development
8260.48	Area Navigation (RNAV) Approach Construction Criteria
8400.8	Procedures for Approval of Facilities for FAR Part 121 and Part 135 CAT III Operations
8400.10	Air Transportation Operations Inspector's Handbook
8700.1	General Aviation Operations Inspector's Handbook

ADVISORY CIRCULARS

61-27	Instrument Flying Handbook
70-2	Airspace Utilization Considerations in the Proposed Construction, Alteration, Activation and Deactivation of Airports
70/7460-1	Obstruction Marking and Lighting
70/7460-2	Proposed Construction or Alteration of Objects that May Affect the Navigable Airspace
73-2	IFR Helicopter Operations in the Northeast Corridor
90-42	Traffic Advisory Practices at Airports Without Operating Control Towers
90-45A	Approval of Area Navigation Systems for Use in the U.S. National Airspace System
90-80	Approval for Offshore Standard Approach Procedures (OSAP), Airborne Radar Approaches (ARA), and Helicopter En route Descent Areas (HEDA)
91-14	Altimeter Setting Sources
91-16	Category II Operations-General Aviation Airplanes
91-54	Automatic Reporting Systems-Altimeter Setting and Other Operational Data
97-1	Runway Visual Range (RVR)
120-28	Criteria for Approval of Category III Landing Weather Minima
120-29	Criteria for Approving Category I and Category II Landing Minima for FAR 121 Operators
150/5070-6	Airport Master Plans
150/5200-28	Notices to Airmen for Airport Operators
150/5300-13	Airport Design
150/5340-1	Standards for Airport Markings
150/5340-4	Installation Details for Runway Centerline and Touchdown Zone Lighting Systems
150/5340-14	Economy Approach Lighting Aids
150/5340-17	Standby Power for Non-FAA Airport Lighting Systems

150/5340-18	Standards for Airport Sign Systems
150/5340-19	Taxiway Centerline Lighting Systems
150/5340-24	Runway and Taxiway Edge Lighting Systems
150/5340-26	Maintenance of Airport Visual Aid Facilities
150/5340-27	Air-to-Ground Radio Control of Airport Lighting Systems
150/5390-2	Heliport Design
170-9	Criteria for Acceptance of Ownership and Servicing of Civil Aviation Interest(s) Navigational and Air Traffic Control Systems and Equipment
170-13	Approach Lighting System Configurations and Energy Conservation

TITLE 14, CODE OF FEDERAL REGULATIONS (CFR).

Part 1	Definitions and Abbreviations
Part 71	Designations of Class A, Class B, Class C, Class D, and Class E Airspace Areas; Airways; Routes; and Reporting Points
Part 73	Special Use Airspace
Part 75	Establishment of Jet Routes and Area High Routes
Part 77	Objects Affecting Navigable Airspace
Part 91	General Operating and Flight Rules
Part 93	Special Air Traffic Rules and Airport Traffic Patterns
Part 95	IFR Altitudes
Part 97	Standard Instrument Approach Procedures
Part 103	Ultralight Vehicles
Part 121	Certification and Operations: Domestic, Flag, and Supplemental Air Carriers and Commercial Operators of Large Aircraft
Part 125	Certification and Operations: Airplanes Having a Seating Capacity of 20 or More Passengers or Maximum Payload Capacity of 6000 Pounds or More
Part 129	Operations: Foreign Air Carriers and Foreign Operators of U.S. - Registered Aircraft Engaged in Common Carriage
Part 135	Air Taxi Operators and Commercial Operators
Part 152	Airport Aid Program
Part 157	Notice of Construction, Alteration, Activation and Deactivation of Airports
Part 171	Non-Federal Navigation Facilities

OTHER PUBLICATIONS

Aeronautical Information Manual (AIM)
Airport Facility Directory
Airport Master Record - FAA Form 5010.1
Airspace Dockets
Area Charts
Ceiling-Visibility Climatological Study and System Enhancement Factors, June 1975
Federal Air Traffic Activity
Graphics Notices and Supplemental Data
LORAN Airport Screening Model
LORAN Site Evaluation System (LSES)
Low and High Altitude En Route Charts
National Flight Data Digest (NFDD)
National Plan of Integrated Airport System (NPIAS)
NOS Quarterly Obstacle Memo - Digital Obstacle File
Notices to Airmen (NOTAM's)
OC Charts

OTHER PUBLICATIONS (CONTINUED)

Sectional and Terminal Area Charts
SIAP's, DP's, STAR's, FTIP's
Transmittal Letters (Instrument Approach Procedures)
USGS Topographical Charts

APPENDIX 2.

OBSTACLE ACCURACY STANDARDS, CODES, AND SOURCES

APPENDIX 2. OBSTACLE ACCURACY STANDARDS, CODES, AND SOURCES

100. UNITED STATES NATIONAL MAP ACCURACY STANDARDS.

With a view to the utmost economy and expedition in producing maps which fulfill not only the broad needs for standard or principal maps, but also the reasonable particular needs of individual agencies, standards of accuracy for published maps are defined as follows:

a. Horizontal accuracy. For maps on publication scales larger than 1:20,000, not more than 10 percent of the points tested shall be in error by more than 1/30 inch, measured on the publication scale; for maps on publication scales of 1:20,000 or smaller, 1/50 inch. These limits of accuracy shall apply in all cases to positions of well-defined points only. Well-defined points are those that are easily visible or recoverable on the ground, such as the following: monuments or markers, such as bench marks, property boundary monuments; intersections of roads, railroads, etc.; corners of large buildings or structures (or center points of small buildings); etc. In general, what is well defined will also be determined by what is able to be plotted on the scale of the map within 1/100 inch. Thus, while the intersection of two roads or property lines meeting at right angles would come within a sensible interpretation, identification of the intersection of such lines meeting at an acute angle would obviously not be practicable within 1/100 inch. Similarly, features not identifiable upon the ground within close limits are not to be considered as test points within the limits quoted, even though their positions may be scaled closely upon the map. In this class would come timber lines, soil boundaries, etc.

b. Vertical accuracy, as applied to contour maps on all publication scales, shall be such that not more than 10 percent of the elevations tested shall be in error more than one-half the contour interval. In checking elevations taken from the map, the apparent vertical error may be decreased by assuming a horizontal displacement within the permissible horizontal error for a map of that scale.

c. Map accuracy testing may be accomplished by comparing the positions of points whose locations or elevations are shown upon it with corresponding positions as determined by surveys of a higher accuracy. Tests shall be made by the producing agency, which shall also determine which of its maps are to be tested and the extent of such testing.

d. Published maps meeting these accuracy requirements shall note this fact on their legends, as follows: **"This map complies with National Map Accuracy Standards."**

e. Published maps whose errors exceed those stated before shall omit from their legends all mention of standard accuracy.

f. Enlargements. When a published map is a considerable enlargement of a map drawing (manuscript) or of a published map, that fact shall be stated in the legend. For example, **"This map is an enlargement of a 1:20,000-scale map drawing,"** or **"This map is an enlargement of a 1:24,000-scale published map."**

g. Data Interchange. To facilitate ready interchange and use of basic information for map construction among all Federal map-making agencies, manuscript maps and published maps, wherever economically feasible and consistent with intended map use, shall conform to latitude and longitude boundary size, being 15, 7.5, or 3-3/4 minutes of latitude and longitude.

101. ACCURACY CODES AND SOURCES.

a. Accuracy Codes. Allowable accuracy of vertical and horizontal data was originally determined by a joint DOD/DOC/DOT task group in 1979. Accuracy codes established by that task group are no longer documented on 8260-series forms. Instead, document the vertical and/or horizontal adjustment applied. See paragraph 909a(1)(g).

HORIZONTAL

Code	Tolerance	
1	+20'	(6 m)
2	+50'	(15 m)
3	+100'	(30 m)
4	+250'	(75 m)
5	+500'	(150 m)
6	+1000'	(300 m)
7	+1/2 NM	(900 m)
8	+1 NM	(1800 m)
9	Unknown	

VERTICAL

Code	Tolerance	
A	+3'	(1 m)
B	+10'	(3 m)
C	+20'	(6 m)
D	+50'	(15 m)
E	+125'	(38 m)
F	+250'	(75 m)
G	+500'	(150 m)
H	+1000'	(300 m)
I	Unknown	

b. Sources. The task group was provided specified accuracies from each of the following sources:

(1) Department of Commerce. Charting information is verified and published by the National Ocean Service (NOS).

(a) Airport Obstruction Chart (OC) obstacle accuracies quoted by NOS are:

1. Flightpath and transitional areas +20' (6 m) horizontally and +2' (1 m) vertically out to 20,000'(6100m). **Code 1A.**

2. Flightpath and transitional area +40' (12 m) horizontally and +20' (6 m) vertically beyond 20,000' (6100 m). **Code 2C.**

3. Horizontal surface area +20' (6 m) horizontally and +5' (1.5 m) vertically. **Code 1B.**

4. Conical surface +40' (12 m) horizontally and +20' (6 m) vertically. **Code 2C**

5. Radio and TV towers +20-40' (6-12m) horizontally, as in paragraphs 101b(1)(a)1 and 2, but +40' (12 m) horizontally and +10' (3 m) vertically if not surveyed for an OC chart. **Code 2B.** (Radio and TV towers are accurate vertically to +2' (.6 m) anywhere on the OC survey if they penetrate a surface) **Code 2A.**

(b) World Aeronautical Chart (WAC), Sectional Chart, and VFR Terminal Chart.

1. Terrain features which are not marked as spot elevations:

Chart	Horizontal	Vertical*
WAC	+1700' (500 m)	+500' (150 m)
Sec	+900' (275 m)	+250' (75 m)
VFR	+500' (150 m)	+250' (75 m)

*1/2 contour line

2. When **obstacles or mountain peaks** are specifically marked by a spot elevation, the vertical accuracy changes to +3' (1 m). Thus, vertical accuracy code becomes "**1A**."

3. When these charts are used to **establish coordinates**, it must be recognized that Inter-Agency Air Cartographic Committee (IACC) charting standards permit displacement of objects to provide for relative depiction. To account for these additional errors, the horizontal accuracy factors shall be **doubled** for manmade obstacles depicted on WAC, Sectional, and VFR charts.

(2) Department of Defense.

(a) National Imaging Mapping Agency (NIMA): (Outside U.S. Only)

1. NIMA's **taped terrain data** from 1:350,000 charts, +500' (150 m) horizontally and +100' (30 m) vertically. **Code 5E.**

2. Automated Obstruction File, varied accuracy. Use +500' (150 m) horizontally and +125' (38 m) vertically unless verified to a higher accuracy. **Code 5E.**

(b) Air Force Communication Agency. Terrain and structures from Air Force Form 1530. Accuracy varied. Use +500' (150 m) horizontally and +125' (38 m) unless verified to a higher accuracy.

(c) OC surveys conducted by U.S. Army Topographic Units shall have the same accuracy standards as those developed by the Department of Commerce (see paragraph 101b(1)(a).

(3) Department of Transportation. FAA obstacle data for terrain structures are recorded on airspace, airport, and procedures records. If the original source is Obstruction Clearance (OC) or aero charts, accuracies in paragraph 101b(1)(a) are appropriate. Other accuracies are as follows:

(a) Field inspections that employ a theodolite, +50' (15 m) horizontally and +20' (6 m) vertically. **Code 2C.**

(b) Obstruction evaluations: All obstacles, +250' (75 m) horizontally and +50' (15 m) vertically, unless verified to a higher accuracy. **Code 4D.**

(c) Quarterly Obstacle Memo - Digital Obstacle File, depending upon data source, from +20' (6 m) to +1 NM (1800 m) horizontally, and from +3' (1 m) to +1,000' (300 m) vertically. **Code 1A to 8H.**

(d) Airport Field Offices (AFO) may assign their own codes to obstacles on engineering drawings furnished to Flight Standards.

(e) Airway Facility (AF) Division Field Survey; navigation aids, +20' (6 m) horizontally and 3' (1 m) vertically. **Code 6E.** Other obstacles, +50' (15 m) horizontally and +10' (3 m) vertically, unless verified to a higher accuracy. **Code 2B.**

(f) Flight inspection fly-by, +250' (75 m) horizontally and +50' (15 m) vertically. **Code 4D.**

(g) Estimated by airport owner or operator, +1/2 NM (900 m) horizontally and +500' (150 m) vertically. **Code 7G.**

(4) Department of Interior. U.S. Geological Survey data in magnetic tape files are claimed to be accurate to +1,000' (300 m) horizontally and +100' (30 m) vertically. **Code 6E.** For the following charts, when obstacles or mountain peaks are specifically marked by a spot elevation, the vertical accuracy changes to +3' (1 m). Otherwise, these charts have the following accuracies:

(a) Topographical charts (1:250,000 scale), +1,000' (300 m) horizontally and +100' (30 m) vertically. **Code 6E.**

(b) Topographical charts (1:62,500 or 1:63,360 scale), +150' (75 m) horizontally and +50' (15 m) vertically. **Code 4D.**

(c) Topographical charts [1:20,000, 1:24,000) (7 1/2 min. Quad series), and 1:25,000], +40' (12 m) horizontally and +20' (6 m) vertically. **Code 2C.**

(d) Topographical charts (1:100,000 scale), +40' (12 m) horizontally and +20' (6 m) vertically.

(5) Other.

(a) Tactical Flying Chart, TFC(L), 2nd Series, (1:250,000 scale), +500' (150 m) horizontally and +125' (38 m) vertically. **Code 5E.**

(b) Series M745 (Ausgabe 4-DMG), (1:50,000 scale), +50' (15 m) horizontally and +20' (6 m) vertically. **Code 2C.**

(6) Digital Elevation Data. U.S. Geological Survey data for terrain elevations is typically based on Digital Elevation Models (DEM). National Imaging and Mapping Agency (NIMA) survey data for terrain elevations is typically based on Digitized Terrain Elevation Data (DTED). Source documentation from the NOS supports the following horizontal and vertical accuracies; these values shall be used in instrument procedure construction:

(a) DEM 7.5 Minute (Level 1), +13 m (43') horizontally and +14 m (46') vertically.

(b) DEM 7.5 Minute (Level 2), +13 m (43') horizontally and +17 m (56') vertically.

(c) DTED 1 Degree (Level 1), +50 m (164′) horizontally and +30 m (98′) vertically.

(d) DEM 1 Degree (1:250,000 scale), +130 m (427′) horizontally and +30 m (98′) vertically.

APPENDIX 3. DIRECTIVE FEEDBACK INFORMATION FAA FORM 1320-19

APPENDIX 3. DIRECTIVE FEEDBACK INFORMATION, FAA FORM 1320-19

U.S. Department
of Transportation

Federal Aviation
Administration

Directive Feedback Information

Please submit any written comments or recommendations for improving this directive, or suggest new items or subjects to be added to it. Also, if you find an error, please tell us about it.

Subject: Order _____

To: Directives Management Officer, AVN-12

(Please check all appropriate line items)

O An error (procedural or typographical) has been noted in paragraph _____ on page _____.

O Recommend paragraph _____ on page _____ be changed as follows:
(attach separate sheet if necessary)

O In a future change to this directive, please include coverage on the following subject
(briefly describe what you want added):

O Other comments:

O I would like to discuss the above. Please contact me.

Submitted by:_____ Date:_____

FTS Telephone Number: _____ Routing Symbol: _____

FAA Form 1320—19 (6-89)

APPENDIX 4. RADIO FIX AND HOLDING DATA RECORD FAA FORM 8260-2

RADIO FIX AND HOLDING DATA RECORD

AIRSPACE DOCKET	FIX				STATE
	NAME	X	WP		
			DME	VHF	
91-ANM-31	JASIN		VHF/LF	LF	CO

1. RADIO FIX	TYPE OF ACTION (check one)	X	ESTABLISH	CANCEL
			MODIFY	NO CHANGE

A. FACILITY TYPE	FACILITY 1	FACILITY 2	FACILITY 3
NAME	DENVER (DEN)		
TYPE / CLASS / CATEGORY	H-VORTAC-1		
RADIAL / COURSE / BEARING	312.92 (324.92)		
DME DISTANCE (from)	15.13		
MRA/MAA	65/175		

B. DISTANCE FROM FACILITY: LEAST DIVERGENCE ANGLE:

C. AIR/GROUND COMMUNICATIONS	WITH	SATISFACTORY ON		AT
	DEN APP/DEP CON BJC TOWER		HF	
			X VHF	
			X UHF	6500 MSL

D. MRA OF OTHER FACILITIES AT THIS FIX	FACILITY	TYPE/CLASS	RADIAL CRS	DME	MRA/MAA	CHECKED BY	DATE

E. AUTHORIZED USE OF THIS FIX

AIRSPACE	COMPULSORY	ON REQUEST	HOLDING	ALT. CHANGE	ARRIVAL	DEPARTURE	FLAG REQ'D
LOW		X	X				
HIGH							

FLAG NOTE:

F. RADIO FIX IS (Check one)	X	APPROVED		DISAPPROVED		RESTRICTED

2. HOLDING	TYPE OF ACTION (Check one)	X	ESTABLISH	CANCEL
			MODIFY	NO CHANGE

A. HOLDING REQUIRED

PAT.	DIRECTION	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L or R)	TIME / DME OUTBOUND
1	NW		WP	313	133	L	- / 4
2							/
3							/

B. HOLDING ALTITUDES

PATTERN	ALL AIRCRAFT	170 - 175 K	200 - 230 K	265 K	310 K
1		90/140	90/140		
2					
3					

C. REASON FOR NONSTANDARD HOLDING: TERRAIN

D. HOLDING IS (Check one)		APPROVED		DISAPPROVED	X	RESTRICTED

3. REMARKS:

FIX USE: JEFFCO, DENVER, CO - RNAV RWY 29R

JASIN WP COLLOCATED WITH JASIN INT.

HOLDING LIMITED TO ESTABLISHED PATTERN.

	FACILITY 4
NAME	
TYPE / CLASS	
RADIAL/CRS	
D M E DIST.	
M R A / M A A	

LAT/LONG: 400019.41/1050424.01

FAA Form 8260 - 2 (computer generated)

Figure A4-1

RADIO FIX AND HOLDING DATA RECORD

AIRSPACE DOCKET	FIX NAME			STATE
	JACKSON VOR/DME	DME / VHF / VHF/LF / LF		WY

1. RADIO FIX	TYPE OF ACTION (check one)		
	ESTABLISH		CANCEL
	X MODIFY		NO CHANGE

A. FACILITY TYPE	FACILITY 1	FACILITY 2	FACILITY 3
NAME	JACKSON (JAC)		
TYPE / CLASS / CATEGORY	L-VOR/DME-1		
RADIAL / COURSE / BEARING	-		
DME DISTANCE (from)	-		
MRA/MAA	-/250 #		

B. DISTANCE FROM FACILITY: LEAST DIVERGENCE ANGLE:

C. AIR/GROUND COMMUNICATIONS	WITH	SATISFACTORY ON		AT
	IDA FSS ZLC ARTCC		HF	
			X VHF	
			X UHF	6000 MSL

D. MRA OF OTHER FACILITIES AT THIS FIX	FACILITY	TYPE/CLASS	RADIAL CRS	DME	MRA/MAA	CHECKED BY	DATE
	IDA	L-VOR/DME	067		130'250	SEA FIFO	1/29/75

E. AUTHORIZED USE OF THIS FIX

AIRSPACE	COMPULSORY	ON REQUEST	HOLDING	ALT. CHANGE	ARRIVAL	DEPARTURE	FLAG REQ'D
LOW		X	X	X	X	X	X
HIGH		X	X	X			

FLAG NOTE: MCA V330 13100W, V520 14300W

F. RADIO FIX IS (Check one)	X APPROVED	DISAPPROVED	RESTRICTED

2. HOLDING	TYPE OF ACTION (Check one)		
		ESTABLISH	CANCEL
		MODIFY	X NO CHANGE

A. HOLDING REQUIRED

PAT.	DIRECTION	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L or R)	TIME / DME OUTBOUND
1	S	JAC	VOR/DME	184	004	R	1-1 1/2 / -
2							/
3							/

B. HOLDING ALTITUDES

PATTERN	ALL AIRCRAFT	170 - 175 K	200 - 230 K	265 K	310 K
1		140'250	140	145'250	
2					
3					

C. REASON FOR NONSTANDARD HOLDING:

D. HOLDING IS (Check one)	APPROVED	DISAPPROVED	X RESTRICTED

3. REMARKS: FIX USE: JACKSON, WY - ILS RWY 18
VOR/DME RWY 36
VOR-A
V328, V330, V465, V520

ESV APPROVED 6/29/85.
HOLDING LIMITED TO ESTABLISHED PATTERN.
MINIMUM TURNING ALTITUDES: AIRCRAFT PROCEEDING: MLD V465 JAC V330 IDA, OR MLD V465 JAC V520 DBS, OR IDA V330 JAC V520 DBS, MUST MAINTAIN 15800 OR HIGHER UNTIL ESTABLISHED ON CENTERLINE OF V330 OR V520 W BOUND.
AIRCRAFT PROCEEDING: BPI V328 JAC V520 DBS, OR BPI V328 JAC V330 IDA, OR BPI V328 JAC V465 MLD, MUST MAINTAIN 14300 OR HIGHER UNTIL ESTABLISHED ON CENTERLINE OF V330, V465, OR V520.

	FACILITY 4
NAME	
TYPE / CLASS	
RADIAL/CRS	
D M E DIST.	
M R A / M A A	

AIRCRAFT PROCEEDING: BPI V328 JAC V465 DNW MUST MAINTAIN 15000 OR HIGHER UNTIL ESTABLISHED ON CENTERLINE OF V465.

LAT/LONG: 433630.10/1104402.00

FAA Form 8260 - 2 (computer generated)

Figure A4-2

4. AIR TRAFFIC REQUESTS APPROVAL OF REFERENCED FIX FOR:			NAME: JACKSON VOR/DME	
A. REPORTING POINT		COMPULSORY	AIRSPACE STRUCTURE FOR WHICH FIX IS DESIRED	X LOW ALTITUDE
	X	ON REQUEST		X HIGH ALTITUDE

B. HOLDING

PAT.	SPEED	AIRSPACE		SPEED	AIRSPACE		SPEED	AIRSPACE		SPEED	AIRSPACE	
	170 - 175	L	H	200 - 230	L	H	265	L	H	310	L	H
1	140/250	8	11	140	8		145/250	16	20			
2												
3												

C. HOLDING AREAS		YES	NO
	COMPLETELY WITHIN CONTROLLED AIRSPACE *(If answer is "NO" indicate Air Traffic action required in item 3 "REMARKS")*	X	
	CLEAR OF RESTRICTED / WARNING AREAS	X	

5. CHART PUBLICATION		
	X	REQUIRED
		NOT REQUIRED

		TERMINAL	SID	STAR	JAL	AL	ENROUTE LOW	ENROUTE HIGH
FIX	PRESENT					X	X	X
	REQUESTED					X	X	X
HOLDING	PRESENT					X	NOTE:: HOLDING EN ROUTE LOW	
	REQUESTED					X		

6. INITIATED	DATE: 02/07/89	FACILITY: SEA FIFO	SIGNATURE: N. FALLIBLE

7. CONTROLLING OBSTRUCTIONS

PATTERN	AIRCRAFT	OBSTRUCTION	COORDINATES	ELEVATION (msl)	CRITERIA	DETERMINATION
1	200-230 265	TERRAIN TERRAIN	434304/1104900 434307/1104904	11523 12514	P-13 P-16	MAP STUDY AND FLT CK.
2						
3						

DATE CHECKED: 02/07/89	CHECKED BY: N. FALLIBLE

8. FLIGHT INSPECTION:			9. REVISION RECORD	
	LOW ALTITUDE	HIGH ALTITUDE	REVISION NO.	DATE OF REVISION:
FIDO / FIFO	SEA	SEA	5	7/6/89
VALIDATION DATES	6/29/89	6/29/89		
			SUPERSEDES:	DATED:
			4	11/15/77

10. REASON FOR REVISION:
CHANGE MCA V330.
REVISE MTA'S.
CHANGE CONTROLLING OBSTRUCTION FOR HOLDING.
ADDED 265K SPEED CATEGORY.

11. FIFO APPROVAL	DATE: 07/06/89	FIFO: SEA	SIGNATURE: L. SUPREMO

12. DISTRIBUTION *(No. of copies)*	NFDC: ATM-600	REGION/AREA: ANM-220	ARTCC: ZLC	AVN: AVN-220	FIFO: SEA	OTHER: ATCT

13. WASHINGTON ACTION	NOT REQUIRED		
	COMPLETED	DATE	EFFECTIVE

Figure A4-2a

RADIO FIX AND HOLDING DATA RECORD

AIRSPACE DOCKET	FIX NAME			STATE
	FUZZY	X	RADAR	AR
		X	DME / VHF	
			VHF/LF / LF	

1. RADIO FIX	TYPE OF ACTION (check one)		
	X ESTABLISH		CANCEL
	MODIFY		NO CHANGE

A. FACILITY TYPE	FACILITY 1	FACILITY 2	FACILITY 3
NAME	HIGHHAT (HGH)	NUTTY APPROACH	
TYPE / CLASS / CATEGORY	L-VORTAC-1	ASR	
RADIAL / COURSE / BEARING	049.00 (056.00)	-	
DME DISTANCE (from)	8.00	5.0 RADAR *	
MRA/MAA	16/175	16/100	

B. DISTANCE FROM FACILITY: LEAST DIVERGENCE ANGLE:

C. AIR/GROUND COMMUNICATIONS	WITH	SATISFACTORY ON		AT	
	NUTTY ATCT		HF	1600	MSL
			X VHF		
			X UHF		

D. MRA OF OTHER FACILITIES AT THIS FIX	FACILITY	TYPE/CLASS	RADIAL CRS	DME	MRA/MAA	CHECKED BY	DATE

E. AUTHORIZED USE OF THIS FIX

AIRSPACE	COMPULSORY	ON REQUEST	HOLDING	ALT. CHANGE	ARRIVAL	DEPARTURE	FLAG REQ'D
LOW		X		X	X		
HIGH							

FLAG NOTE:

F. RADIO FIX IS (Check one)				
	X APPROVED	DISAPPROVED		RESTRICTED

2. HOLDING	TYPE OF ACTION (Check one)		
	ESTABLISH		CANCEL
	MODIFY		NO CHANGE

A. HOLDING REQUIRED

PAT.	DIRECTION	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L or R)	TIME / DME OUTBOUND
1							/
2							/
3							/

B. HOLDING ALTITUDES

PATTERN	ALL AIRCRAFT	170 - 175 K	200 - 230 K	265 K	310 K
1					
2					
3					

C. REASON FOR NONSTANDARD HOLDING:

D. HOLDING IS (Check one)				
	APPROVED	X DISAPPROVED		RESTRICTED

3. REMARKS:

FIX USE: NORTH LITTLE ROCK, AR - VOR RWY 35
VOR/DME RWY 35

*** FUZZY RADAR 5.0 NM RADAR FIX AER 35, NORTH LITTLE ROCK, AR.**

	FACILITY 4
NAME	
TYPE / CLASS	
RADIAL/CRS	
D M E DIST.	
M R A / M A A	

LAT/LONG: 362743.81/0940534.91

FAA Form 8260 - 2 (computer generated)

Figure A4-3

RADIO FIX AND HOLDING DATA RECORD

AIRSPACE DOCKET	FIX NAME: BUZZY	RADAR: X	DME:	VHF:	VHF/LF:	LF:	STATE: NE

1. RADIO FIX	TYPE OF ACTION (check one)	ESTABLISH: X	MODIFY:	CANCEL:	NO CHANGE:

A. FACILITY TYPE	FACILITY 1	FACILITY 2	FACILITY 3
NAME	MERCY (I-MCE)	ROONEY APPROACH	
TYPE / CLASS / CATEGORY	LOC-1	ASR	
RADIAL / COURSE / BEARING	NW CRS (324.45)	-	
DME DISTANCE (from)	-	5.8 RADAR *	
MRA/MAA	10/45	10/100	

B. DISTANCE FROM FACILITY: LEAST DIVERGENCE ANGLE:

C. AIR/GROUND COMMUNICATIONS: WITH ROONEY ATCT; SATISFACTORY ON: HF: , VHF: X, UHF: X; AT 1000 MSL

D. MRA OF OTHER FACILITIES AT THIS FIX

FACILITY	TYPE/CLASS	RADIAL CRS	DME	MRA/MAA	CHECKED BY	DATE

E. AUTHORIZED USE OF THIS FIX

AIRSPACE	COMPULSORY	ON REQUEST	HOLDING	ALT. CHANGE	ARRIVAL	DEPARTURE	FLAG REQ'D
LOW		X		X	X		
HIGH							

FLAG NOTE:

F. RADIO FIX IS (Check one)	APPROVED: X	DISAPPROVED:	RESTRICTED:

2. HOLDING	TYPE OF ACTION (Check one)	ESTABLISH:	CANCEL:
		MODIFY:	NO CHANGE:

A. HOLDING REQUIRED

PAT.	DIRECTION	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L or R)	TIME / DME OUTBOUND
1							/
2							/
3							/

B. HOLDING ALTITUDES

PATTERN	ALL AIRCRAFT	170 - 175 K	200 - 230 K	265 K	310 K
1					
2					
3					

C. REASON FOR NONSTANDARD HOLDING:

D. HOLDING IS (Check one)	APPROVED:	DISAPPROVED: X	RESTRICTED:

3. REMARKS:

FIX USE: MERCY, NE - LOC RWY 13.

* BUZZY RADAR 5.8 NM RADAR FIX AER 13, MERCY, NE.

	FACILITY 4
NAME	
TYPE / CLASS	
RADIAL/CRS	
D M E DIST.	
M R A / M A A	

LAT/LONG: 410246.21/0973251.61

FAA Form 8260 - 2 (computer generated)

Figure A4-4

RADIO FIX AND HOLDING DATA RECORD

AIRSPACE DOCKET	FIX NAME						STATE
	ROMEN LOM	X	DME	X	VHF		CA
			VHF/LF		LF		

1. RADIO FIX	TYPE OF ACTION (check one)		ESTABLISH		CANCEL
		X	MODIFY		NO CHANGE

A. FACILITY TYPE	FACILITY 1	FACILITY 2	FACILITY 3
NAME	ROMEN (OS)	LOS ANGELES (I-HBQ)	SEAL BEACH (SLI)
TYPE / CLASS / CATEGORY	LOM-1	LOC/DME-1	L-VORTAC-1
RADIAL / COURSE / BEARING	-	E CRS (083.00)	299.35 (313.35)
DME DISTANCE (from)	-	8.14	-
MRA/MAA	-/175	17/175 *	17/175

B. DISTANCE FROM FACILITY: 16 — LEAST DIVERGENCE ANGLE: 50

C. AIR/GROUND COMMUNICATIONS	WITH	SATISFACTORY ON			AT	
	LAX APCH, TOWER, HHR FSS			HF		
			X	VHF	1700	MSL
			X	UHF		

D. MRA OF OTHER FACILITIES AT THIS FIX	FACILITY	TYPE/CLASS	RADIAL CRS	DME	MRA/MAA	CHECKED BY	DATE

E. AUTHORIZED USE OF THIS FIX

AIRSPACE	COMPULSORY	ON REQUEST	HOLDING	ALT. CHANGE	ARRIVAL	DEPARTURE	FLAG REQ'D
LOW		X	X	X	X		
HIGH							

FLAG NOTE:

F. RADIO FIX IS (Check one)		X	APPROVED		DISAPPROVED		RESTRICTED

2. HOLDING	TYPE OF ACTION (Check one)		ESTABLISH		CANCEL
		X	MODIFY		NO CHANGE

A. HOLDING REQUIRED

PAT.	DIRECTION	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L or R)	TIME / DME OUTBOUND
1	E	I-HBQ	LOC	W CRS	249	L	1 / 5
2	E	I-OSS	LOC	W CRS	249	L	1 / 5
3							/

B. HOLDING ALTITUDES

PATTERN	ALL AIRCRAFT	170 - 175 K	200 - 230 K	265 K	310 K
1		22/140	22/140		
2		22/140	22/140		
3					

C. REASON FOR NONSTANDARD HOLDING: TO AVOID PARALLEL RUNWAYS.

D. HOLDING IS (Check one)		APPROVED		DISAPPROVED	X	RESTRICTED

3. REMARKS:

FIX USE:	CHART FACILITIES	CHART HOLDING
LOS ANGELES INTL		
ILS RWY 24L	1,2,3	PAT 1
ILS RWY 24R	1,3,4	PAT 2
MUTHA TWO STAR	1,2,3,4	

HOLDING LIMITED TO ESTABLISHED PATTERNS.
* ESV'S: I-HQB & I-OSS TO 85 NM TO 25000, 4/13/89.
FIX COLLOCATED WITH ROMEN LOM.

	FACILITY 4
NAME	LOS ANGELES (I-OSS)
TYPE / CLASS	LOC/DME-1
RADIAL/CRS	E CRS (083.00)
D M E DIST.	8.09
M R A / M A A	17/175 *

LAT/LONG: 335753.61/1191637.41

FAA Form 8260 - 2 (computer generated)

Figure A4-5

RADIO FIX AND HOLDING DATA RECORD

AIRSPACE DOCKET	FIX NAME					STATE
	SMITH	X	DME		VHF	AK
			VHF/LF		LF	

1. RADIO FIX	TYPE OF ACTION (check one)			
		X	ESTABLISH	CANCEL
			MODIFY	NO CHANGE

A. FACILITY TYPE	FACILITY 1	FACILITY 2	FACILITY 3
NAME	BONELLI (BLI)	MDONLY (MDK)	
TYPE / CLASS / CATEGORY	MH-NDB-1/3	T-VOR/DME-1/3	
RADIAL / COURSE / BEARING	333.00 (358.00)	-	
DME DISTANCE (from)	-	6.00	
MRA/MAA	10/175	10/125	

B. DISTANCE FROM FACILITY: LEAST DIVERGENCE ANGLE: 22

C. AIR/GROUND COMMUNICATIONS	WITH	SATISFACTORY ON			AT	
	ZAN ARTCC UNICOM			HF		
			X	VHF	1000	MSL
				UHF		

D. MRA OF OTHER FACILITIES AT THIS FIX	FACILITY	TYPE/CLASS	RADIAL CRS	DME	MRA/MAA	CHECKED BY	DATE

E. AUTHORIZED USE OF THIS FIX

AIRSPACE	COMPULSORY	ON REQUEST	HOLDING	ALT. CHANGE	ARRIVAL	DEPARTURE	FLAG REQ'D
LOW		X		X	X		
HIGH							

FLAG NOTE:

F. RADIO FIX IS (Check one)		APPROVED		DISAPPROVED	X	RESTRICTED
2. HOLDING	TYPE OF ACTION (Check one)			ESTABLISH		CANCEL
				MODIFY		NO CHANGE

A. HOLDING REQUIRED

PAT.	DIRECTION	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L or R)	TIME / DME OUTBOUND
1							/
2							/
3							/

B. HOLDING ALTITUDES

PATTERN	ALL AIRCRAFT	170 - 175 K	200 - 230 K	265 K	310 K
1					
2					
3					

C. REASON FOR NONSTANDARD HOLDING:

D. HOLDING IS (Check one)		APPROVED	X	DISAPPROVED		RESTRICTED

3. REMARKS:

FIX USE: BONELLI, AK - NDB/DME RWY 16.

	FACILITY 4
NAME	
TYPE / CLASS	
RADIAL/CRS	
D M E DIST.	
M R A / M A A	

LAT/LONG: 613016.21/1673239.61

FAA Form 8260 - 2 (computer generated)

Figure A4-6

RADIO FIX AND HOLDING DATA RECORD

AIRSPACE DOCKET	FIX					STATE
	NAME	X	WP			
			DME		VHF	
	JOINR		VHF/LF		LF	LA

1. RADIO FIX	TYPE OF ACTION (check one)		ESTABLISH		CANCEL
		X	MODIFY		NO CHANGE

A. FACILITY TYPE	FACILITY 1	FACILITY 2	FACILITY 3
NAME			
TYPE / CLASS / CATEGORY			
RADIAL / COURSE / BEARING			
DME DISTANCE (from)			
MRA/MAA			

B. DISTANCE FROM FACILITY: LEAST DIVERGENCE ANGLE:

C. AIR/GROUND COMMUNICATIONS	WITH	SATISFACTORY ON			AT	
	ZHU ARTCC			HF		
			X	VHF		
			X	UHF	1500	MSL

D. MRA OF OTHER FACILITIES AT THIS FIX	FACILITY	TYPE/CLASS	RADIAL CRS	DME	MRA/MAA	CHECKED BY	DATE

E. AUTHORIZED USE OF THIS FIX

AIRSPACE	COMPULSORY	ON REQUEST	HOLDING	ALT. CHANGE	ARRIVAL	DEPARTURE	FLAG REQ'D
LOW		X	X				
HIGH							

FLAG NOTE:

F. RADIO FIX IS (Check one)	X	APPROVED		DISAPPROVED		RESTRICTED

2. HOLDING	TYPE OF ACTION (Check one)		ESTABLISH		CANCEL
		X	MODIFY		NO CHANGE

A. HOLDING REQUIRED

PAT.	DIRECTION	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L or R)	TIME / DME OUTBOUND
1	W		WP	267.02	087.02	R	1 / 4
2							/
3							/

B. HOLDING ALTITUDES

PATTERN	ALL AIRCRAFT	170 - 175 K	200 - 230 K	265 K	310 K
1		15/70			
2					
3					

C. REASON FOR NONSTANDARD HOLDING:

D. HOLDING IS (Check one)		APPROVED		DISAPPROVED	X	RESTRICTED

3. REMARKS:

FIX USE: VENICE, LA - COPTER LORAN RNAV 087

LORAN-C WAYPOINT

HOLDING LIMITED TO ESTABLISHED PATTERN FOR HELICOPTERS ONLY.

	FACILITY 4
NAME	
TYPE / CLASS	
RADIAL/CRS	
D M E DIST.	
M R A / M A A	

LAT/LONG: 291549.48/893333.56

FAA Form 8260 - 2 (computer generated)

Figure A4-7

4. AIR TRAFFIC REQUESTS APPROVAL OF REFERENCED FIX FOR:			NAME: JOINR		
A. REPORTING POINT		COMPULSORY	AIRSPACE STRUCTURE FOR WHICH FIX IS DESIRED	X	LOW ALTITUDE
	X	ON REQUEST			HIGH ALTITUDE

B. HOLDING

PAT.	SPEED	AIRSPACE		SPEED	AIRSPACE		SPEED	AIRSPACE		SPEED	AIRSPACE	
	170 - 175	L	H	200 - 230	L	H	265	L	H	310	L	H
1	15/70	4										
2												
3												

C. HOLDING AREAS		YES	NO
	COMPLETELY WITHIN CONTROLLED AIRSPACE *(If answer is "NO" indicate Air Traffic action required in item 3 "REMARKS")*	X	
	CLEAR OF RESTRICTED / WARNING AREAS	X	

5. CHART PUBLICATION	X	REQUIRED
		NOT REQUIRED

		TERMINAL	SID	STAR	JAL	AL	ENROUTE LOW	ENROUTE HIGH
FIX	PRESENT							
	REQUESTED					X		
HOLDING	PRESENT						NOTE::	
	REQUESTED					X		

6. INITIATED	DATE: 09/04/90	FACILITY: AVN-270	SIGNATURE: HENDER S. WILLIAMS

7. CONTROLLING OBSTRUCTIONS

PATTERN	AIRCRAFT	OBSTRUCTION	COORDINATES	ELEVATION (msl)	CRITERIA	DETERMINATION
1	170-175	TERRAIN/TREE	291549'893334	104	P-4	MAP STUDY
2						
3						

DATE CHECKED: 08/30/90	CHECKED BY: A. COLDMAN

8. FLIGHT INSPECTION:			9. REVISION RECORD	
	LOW ALTITUDE	HIGH ALTITUDE	REVISION NO. 1	DATE OF REVISION: 09/04/90
FIDO / FIFO	OKC FIFO			
VALIDATION DATES	ON FILE			
			SUPERSEDES: ORIGINAL	DATED: 08/05/87

10. REASON FOR REVISION:

UPDATE FORM
NEW CONTROLLING OBSTACLE

11. FIFO APPROVAL	DATE: 09/04/90	FIFO:	SIGNATURE: HENDER S. WILLIAMS

12. DISTRIBUTION *(No. of copies)*	NFDC: ATM-613	REGION/AREA: ASW-220	ARTCC: ZHU	AVN: AVN-220	FIFO: OKC	OTHER:

13. WASHINGTON ACTION	NOT REQUIRED		
	COMPLETED	DATE	EFFECTIVE

Figure A4-7a

RADIO FIX AND HOLDING DATA RECORD

AIRSPACE DOCKET	FIX NAME: CELIN						STATE: TX
			X	DME	X	VHF	
				VHF/LF		LF	

1. RADIO FIX	TYPE OF ACTION (check one)		ESTABLISH		CANCEL
		X	MODIFY		NO CHANGE

A. FACILITY TYPE	FACILITY 1	FACILITY 2	FACILITY 3
NAME	BLUE RIDGE (BUJ)	DALLAS-FORT WORTH (DFW)	
TYPE / CLASS / CATEGORY	L-VORTAC-1	H-VORTAC-1	
RADIAL / COURSE / BEARING	260.17 (268.17)	015.17 (023.17)	
DME DISTANCE (from)	23.00	-	
MRA/MAA	28/175	28/175	

B. DISTANCE FROM FACILITY: 26 — LEAST DIVERGENCE ANGLE: 65

C. AIR/GROUND COMMUNICATIONS	WITH: REGIONAL APP CON	SATISFACTORY ON			AT: 2800 MSL
				HF	
			X	VHF	
			X	UHF	

D. MRA OF OTHER FACILITIES AT THIS FIX	FACILITY	TYPE/CLASS	RADIAL CRS	DME	MRA/MAA	CHECKED BY	DATE

E. AUTHORIZED USE OF THIS FIX

AIRSPACE	COMPULSORY	ON REQUEST	HOLDING	ALT. CHANGE	ARRIVAL	DEPARTURE	FLAG REQ'D
LOW		X			X		
HIGH							

FLAG NOTE:

F. RADIO FIX IS (Check one)		X	APPROVED		DISAPPROVED		RESTRICTED

2. HOLDING	TYPE OF ACTION (Check one)		ESTABLISH		CANCEL
			MODIFY	X	NO CHANGE

A. HOLDING REQUIRED

PAT.	DIRECTION	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L or R)	TIME / DME OUTBOUND
1							/
2							/
3							/

B. HOLDING ALTITUDES

PATTERN	ALL AIRCRAFT	170 - 175 K	200 - 230 K	265 K	310 K
1					
2					
3					

C. REASON FOR NONSTANDARD HOLDING:

D. HOLDING IS (Check one)	X	APPROVED		DISAPPROVED		RESTRICTED

3. REMARKS:

FIX USE: V66-278
HEAVN ARRIVAL, DALLAS-FORT WORTH, TX
UNPLANNED HOLDING AUTHORIZED AT OR ABOVE 2800'.

	FACILITY 4
NAME	
TYPE / CLASS	
RADIAL/CRS	
D M E DIST.	
M R A / M A A	

LAT/LONG: 331612.20/964918.10

FAA Form 8260 - 2 (computer generated)

Figure A4-8

4. AIR TRAFFIC REQUESTS APPROVAL OF REFERENCED FIX FOR:		NAME: CELIN
A. REPORTING POINT	[ ] COMPULSORY [X] ON REQUEST	AIRSPACE STRUCTURE FOR WHICH FIX IS DESIRED [X] LOW ALTITUDE [ ] HIGH ALTITUDE

B. HOLDING

PAT.	SPEED	AIRSPACE		SPEED	AIRSPACE		SPEED	AIRSPACE		SPEED	AIRSPACE	
	170 - 175	L	H	200 - 230	L	H	265	L	H	310	L	H
1												
2												
3												

C. HOLDING AREAS		YES	NO
	COMPLETELY WITHIN CONTROLLED AIRSPACE *(If answer is "NO" indicate Air Traffic action required in item 3 "REMARKS")*	X	
	CLEAR OF RESTRICTED / WARNING AREAS	X	

5. CHART PUBLICATION	[X] REQUIRED [ ] NOT REQUIRED

		TERMINAL	SID	STAR	JAL	AL	ENROUTE LOW	ENROUTE HIGH
FIX	PRESENT			X				
	REQUESTED			X				
HOLDING	PRESENT					X	NOTE::	
	REQUESTED					X		

6. INITIATED	DATE: 09/02/92	FACILITY: AVN-270	SIGNATURE: W. HINDSIGHT

7. CONTROLLING OBSTRUCTIONS

PATTERN	AIRCRAFT	OBSTRUCTION	COORDINATES	ELEVATION (msl)	CRITERIA	DETERMINATION
1	200-230	TOWER	331610/964917	1849	P-14	MAP STUDY
2						
3						

DATE CHECKED: 07/13/92	CHECKED BY: D. PUGNOSE

8. FLIGHT INSPECTION:			9. REVISION RECORD	
	LOW ALTITUDE	HIGH ALTITUDE	REVISION NO.	DATE OF REVISION:
FIDO / FIFO	OKC FIFO		3	9/2/92
VALIDATION DATES	7/28/92			
			SUPERSEDES:	DATED:
			2	12/22/80

10. REASON FOR REVISION:

LUE VOR/DME DELETED FROM FIX MAKEUP DUE TO FACILITY DECOMMISSIONING.
DFW VORTAC ADDED TO FIX MAKEUP.
CHANGED MRA TO MATCH AIRWAY MEA.
DOCUMENTED UNPLANNED HOLDING.

11. FIFO APPROVAL	DATE: 09/02/92	FIFO: AVN-270	SIGNATURE: W. HINDSIGHT

12. DISTRIBUTION *(No. of copies)*	NFDC: ATM-600	REGION/AREA: ASW-220	ARTCC: ZFW	AVN: AVN-220	FIFO: OKC	OTHER: DFW ATCT

13. WASHINGTON ACTION	NOT REQUIRED		
	COMPLETED	DATE	EFFECTIVE

Figure A4-8a

RADIO FIX AND HOLDING DATA RECORD

AIRSPACE DOCKET	FIX				STATE
	NAME				
	Arsenal	X	DME	VHF	Iowa
			VHF/LF	LF	

1. RADIO FIX	TYPE OF ACTION (check one)		ESTABLISH		CANCEL
		X	MODIFY		NO CHANGE

A. FACILITY TYPE	FACILITY 1	FACILITY 2	FACILITY 3
NAME	Davenport (CVA)	412924.9	
TYPE / CLASS / CATEGORY	L-BVORTAC-1	902943.9	
RADIAL / COURSE / BEARING	178.6		
DME DISTANCE (from)	13.1		
MRA/MAA	26/17S		

B. DISTANCE FROM FACILITY: LEAST DIVERGENCE ANGLE:

C. AIR/GROUND COMMUNICATIONS	WITH	SATISFACTORY ON		AT	
	MZV TOWER ZAU ARTCC		HF		
			X VHF		
			X UHF	2000	MSL

D. MRA OF OTHER FACILITIES AT THIS FIX	FACILITY	TYPE/CLASS	RADIAL CRS	DME	MRA/MAA	CHECKED BY	DATE

E. AUTHORIZED USE OF THIS FIX

AIRSPACE	COMPULSORY	ON REQUEST	HOLDING	ALT. CHANGE	ARRIVAL	DEPARTURE	FLAG REQ'D
LOW		X	X	X	X		
HIGH							

FLAG NOTE:

F. RADIO FIX IS (Check one)	X	APPROVED		DISAPPROVED		RESTRICTED

2. HOLDING	TYPE OF ACTION (Check one)		ESTABLISH		CANCEL
		X	MODIFY		NO CHANGE

A. HOLDING REQUIRED

PAT.	DIRECTION	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L or R)	TIME / DME OUTBOUND
1	SE		W/P	146	326	R	- / 4
2							/
3							/

B. HOLDING ALTITUDES

PATTERN	ALL AIRCRAFT	170 - 175 K	200 - 230 K	265 K	310 K
1		26/17O	26/17O		
2					
3					

C. REASON FOR NONSTANDARD HOLDING:

D. HOLDING IS (Check one)	X	APPROVED		DISAPPROVED		RESTRICTED

3. REMARKS: FAF DVN RNAV RWY 32

Missed approach holding fix DVN RNAV RWY 14

CANCELLED
BTL FIFO

7/1/91
DATE

John Q. Smith
SIGNATURE

	FACILITY 4
NAME	
TYPE / CLASS	
RADIAL/CRS	
D.M.E DIST.	
M.R.A., M.A.A.	

LAT/LONG:

FAA Form 8260 - 2 (computer generated)

Figure A4-9

APPENDIX 5. ILS - STANDARD INSTRUMENT APPROACH PROCEDURE FAA FORM 8260-3

U. S. Department of Transportation
Federal Aviation Administration

ILS - STANDARD INSTRUMENTAPPROACH PROCEDURE

FAR PART 97.29

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

TERMINAL ROUTES

FROM	TO	COURSE AND DISTANCE	ALTITUDE
CGT VORTAC (IAF)	LUMPY/ORD 14.00 DME/RADAR	356/9.81 (CGT R-356) & 320.08/10.02	5000*
LUMPY	KITTS /ORD 11.00 DME/RADAR	320.08/3.00 (I-RVG)	4000
KITTS	GRETI /ORD 8.09 DME/RADAR	320.08/2.91 (I-RVG)	3000
GRETI	JOCKY LOM/INT/ORD 6.58 DME	320.08/1.51 (I-RVG)	2600 #
		# MANDATORY	

MISSED APPROACH

ILS: AT THE DH. LOC: 5.61 MILES AFTER JOCKY OR AT ORD 1.00 DME FIX.

CLIMB TO 1200, THEN CLIMBING LEFT TURN TO 4000 VIA DPA R-085 TO DPA VOR/DME AND HOLD.

ADDITIONAL FLIGHT DATA:
HOLD W, RT, 068 INBOUND.
FAS OBST: 794 BLDG 415436/875136
CHART MIDWAY AIRPORT

1. PT NA SIDE OF COURSE ____ OUTBOUND ____ FT WITHIN ____ MILES OF ____ (IAF)
2. PROFILE STARTS AT LUMPY.
3. FAC: 320.08 FAF: JOCKY DIST FAF TO MAP: 5.61 THLD: 5.61
4. MIN. ALT: LUMPY 5000*, KITTS 4000, GRETI 3000, JOCKY MANDATORY 2600
5. DIST TO THLD FROM OM: 5.61 MM: 0.62 IM: ____ 150 HAT: ____ 100 HAT: ____ GS ANT: 1074
6. MIN GS INCPT: 5000* GS ALT AT: LUMPY 5000, KITTS 4000 OM: 2514 MM: 894 IM: ____
7. GS ANGLE: 3.00 TCH: 58
8. MSA FROM: RV LOM 360-180, 3400; 180-360, 2600

MAG VAR: 0 EPOCH YEAR: 85

MINIMUMS

TAKEOFF: ____ STANDARD [X] SEE FAA FORM 8260-15 FOR THIS AIRPORT ALTERNATE: N A ____ ILS: STANDARD LOC: STANDARD

CATEGORY =====>	A			B			C			D			E		
	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA
S-ILS 32L	856	1800	200	856	1800	200	856	1800	200	856	2000	200			
S-LOC 32L	1060	2400	404	1060	2400	404	1060	4000	404	1060	4000	404			
CIRCLING	1160	1	493	1160	1	493	1160	1 1/2	493	1220	2	551			

NOTES: ASR
DME OR RADAR REQUIRED
*4000 WHEN AUTHORIZED BY ATC
SIMULTANEOUS APPROACH AUTHORIZED WITH RWY 32R

CITY AND STATE	ELEVATION: 667 TDZE: 656 AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
CHICO. IL	HAIRY INTL	I-RVG	ILS RWY 32L, AMDT 21	AMDT: 20 DATED: 3/16/89

FAA FORM 8260 - 3 (computer generated) PAGE OF PAGES

Figure A5-1

U. S. Department of Transportation
Federal Aviation Administration

ILS - STANDARD INSTRUMENTAPPROACH PROCEDURE

FAR PART 97.29

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

TERMINAL ROUTES

FROM	TO	COURSE AND DISTANCE	ALTITUDE
LISON INT	FND NDB/BAL 8.8 DME	095.02/20.11	2500
BAL VORTAC	FND NDB	330.23/8.82	2500
EMI VORTAC (IAF)	FND NDB (NoPT)	151.43/15.62	2500
R-042 BAL VORTAC CCW (IAF)	FND NDB (NoPT)	15 DME ARC & 152.36/6.21 (I-FND) (BAL LR-340)	2500
FND NDB	TRUTH OM/BAL 5.10 DME	152.36/3.73 (I-FND)	2000 #
		# MANDATORY	

MISSED APPROACH

ILS: AT THE DH. CIRCLING: 3.79 MILES AFTER TRUTH OR AT 1.30 DME FIX.

CLIMB TO 600 THEN CLIMBING LEFT TURN TO 2000 VIA BAL R-105 TO BOAST INT/11 DME AND HOLD.

ADDITIONAL FLIGHT DATA:
HOLD E, LT, 285 INBOUND.
FAS OBST: 428 TREE 391415/764302
CHART: 1259 ANTENNA 391713/764516

1. PT L SIDE OF COURSE 332.36 OUTBOUND 2500 FT WITHIN 10 MILES OF FND NDB (IAF)
2.
3. FAC: 152.36 FAF: TRUTH DIST FAF TO MAP: 3.79 THLD: 3.79
4. MIN. ALT: FND NDB 2500, TRUTH MANDATORY 2000
5. DIST TO THLD FROM OM: 3.78 MM: 0.51 IM: 150 HAT: 100 HAT: GS ANT: 1200
6. MIN GS INCPT: 2500 GS ALT AT: OM: 1435 MM: 367 IM:
7. GS ANGLE: 3.00 TCH: 59
8. MSA FROM: BAL VORTAC 2400

MAG VAR: 8W EPOCH YEAR: 85

MINIMUMS

TAKEOFF: [ ] STANDARD [X] SEE FAA FORM 8260-15 FOR THIS AIRPORT ALTERNATE: N A [ ] ILS: STANDARD @ LOC: NA

CATEGORY ==>>	A			B			C			D			E		
	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA
S-ILS 15R	340	2400	200	340	2400	200	340	2400	200	340	2400	200			
S-LOC		NA			NA			NA			NA				
CIRCLING	680	1	524	680	1	524	680	1 1/2	524	760	2	604			

NOTES: AUTOPILOT COUPLED APPROACH NA.
GS UNUSABLE BELOW 310'.
CIRCLING NA SW OF RWYS 10 & 33L.
CIRCLING REQUIRES DESCENT ON GS TO MDA.

@ CAT D 700-2
ASR
DME FROM BAL VORTAC. SIMULTANEOUS RECEPTION OF I-BAL AND BAL DME REQUIRED.

CITY AND STATE	ELEVATION: 156 TDZE: 140 AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP: ILS RWY 15 AMDT: 4 DATED: 3 AUG 80
GARRETT, MD	GARRETT INTL	I-FND	ILS RWY 15R, AMDT 5	

FAA FORM 8260 - 3 (computer generated) PAGE OF PAGES

Figure A5-2

U. S. Department of Transportation
Federal Aviation Administration

ILS - STANDARD INSTRUMENTAPPROACH PROCEDURE

FAR PART 97.29

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

TERMINAL ROUTES

FROM	TO	COURSE AND DISTANCE	ALTITUDE
TESSY INT (IAF)	LOMMA INT (NOPT)	161.21/12.82 (GJT R-341)	9300
MACKS (IAF)	LOMMA (NOPT)	111.31/7.59 (I-GJT)	9000
R-217 GJT VORTAC CW (IAF)	R-276 GJT VORTAC	14 DME ARC	11000
R-276 GJT VORTAC CW	LOMMA (NOPT)	14 DME ARC (GJT LR-330)	9000
LOMMA	FRUITA NDB/INT	111.31/6.41 (I-GJT)	7600
FRU NDB	RHONE OM/INT	111.31/4.40 (I-GJT)	6300

MISSED APPROACH

ILS: AT THE DH. LOC: 3.91 MILES AFTER RHONE OR AT 1.80 DME FIX.

CLIMB TO 5600 THEN CLIMBING RIGHT TURN TO 10000 DIRECT GJT VORTAC AND HOLD; OR WHEN DIRECTED BY ATC, CLIMB TO 5600, THEN CLIMBING RIGHT TURN TO 8000 DIRECT FRU NDB AND HOLD W, RT, 111 INBOUND.

ADDITIONAL FLIGHT DATA:
HOLD SW, RT, 052 INBOUND.
FAS OBST: 4909 TERRAIN 390855/1083321
CHART: 7205 TOWER 390331/1084613

1. PT L SIDE OF COURSE 291.31 OUTBOUND 8000 FT WITHIN 10 MILES OF FRUITA (IAF)
2.
3. FAC: 111.31 FAF: RHONE DIST FAF TO MAP: 3.91 THLD: 4.51
4. MIN. ALT: FRUITA 7600, RHONE 6300 # # LOC ONLY
5. DIST TO THLD FROM OM: 4.51 MM: 0.61 IM: 150 HAT: 100 HAT: GS ANT: 1152
6. MIN GS INCPT: 7600 GS ALT AT: FRUITA 7564 OM: 6201 MM: 5058 IM:
7. GS ANGLE: 2.75 TCH: 60
8. MSA FROM: FRU NDB 045-135 11500, 135-225 10700, 225-045 10100

MAG VAR: 14E EPOCH YEAR: 85

MINIMUMS

TAKEOFF: | STANDARD | X | SEE FAA FORM 8260-15 FOR THIS AIRPORT | ALTERNATE: N A | ILS: @ | LOC: STANDARD $

CATEGORY ======>	A			B			C			D			E		
	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA
S-ILS 11	5032	1/2	200	5032	1/2	200	5032	1/2	200	5032	1/2	200			
S-LOC 11	5180	1/2	348	5180	1/2	348	5180	1/2	348	5180	3/4	348			
CIRCLING	5380	1	522	5440	1	582	5460	1 3/4	602	5540	2 1/4	682			

NOTES: USE I-GJT DME WHEN ON LOCALIZER COURSE.

@ CAT A,B,C 700-2, CAT D 700-2 1/4
$ CAT D 800-2 1/4

CITY AND STATE	ELEVATION: 4858 TDZE: 4832 AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
GRAND BOULDER, CO	HOOKER FIELD	I-GJT	ILS RWY 11, AMDT 11, 15 SEP 89	AMDT: 10
				DATED: 15 OCT 88

FAA FORM 8260 - 3 (computer generated) PAGE OF PAGES

Figure A5-3

U. S. Department of Transportation
Federal Aviation Administration

ILS - STANDARD INSTRUMENTAPPROACH PROCEDURE

FAR PART 97.29

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

TERMINAL ROUTES

FROM	TO	COURSE AND DISTANCE	ALTITUDE
GEP VORTAC	GREYS INT/I-MSP 10.50 DME	137.12/27.45	4000
FGT VORTAC (IAF)	GREYS (NOPT)	035.31/12.21	4000
PRESS INT (IAF)	GREYS (NOPT)	250.01/4.61 (HDG) & 296.36/5.48 (I-MSP)	4000
ETTER INT (IAF)	GREYS (NOPT)	005.03/3.60 (HDG) & 296.36/4.82 (I-MSP)	4000
GREYS	NARCO LOM/I-SP 5.71 DME	296.36/4.82 (I-MSP)	2700

MISSED APPROACH

ILS: AT THE DH. LOC: 5.48 MILES AFTER NARCO OR AT I-MSP 0.22 DME FIX.

CLIMB TO 1500, THEN CLIMBING LEFT TURN TO 4000 DIRECT FGT VORTAC AND HOLD.

ADDITIONAL FLIGHT DATA:

HOLD S, RT, 358.00 INBOUND.
FAS OBST: 1029 TREES 445125/930953
DO NOT CHART EAGAN FIX ON CAT II SIAP.

1. PT NA SIDE OF COURSE ____ OUTBOUND FT WITHIN ____ MILES OF ____ (IAF)
2. HOLD SE GREYS, RT, 296.36 INBOUND, 4000 FT IN LIEU OF PT (IAF).
3. FAC: 296.36 FAF: NARCO DIST FAF TO MAP: 5.48 THLD: 5.48
4. MIN. ALT: GREYS 4000, NARCO 2700, EAGAN/ I-MSP 2.21 DME/RADAR 1340 # # LOC ONLY
5. DIST TO THLD FROM OM: 5.51 MM: 0.50 IM: 0.22 150 HAT: 1968 100 HAT: 1014 GS ANT: 1003
6. MIN GS INCPT: 2700 GS ALT AT: ____ OM: 2643 MM: 1014 IM: 916
7. GS ANGLE: 3.00 TCH: 52
8. MSA FROM: MS LOM 330-060 3400, 060-330 2800

MAG VAR: 5E EPOCH YEAR: 85

MINIMUMS

TAKEOFF: [ ] STANDARD [X] SEE FAA FORM 8260-15 FOR THIS AIRPORT ALTERNATE: N A [ ] ILS: STANDARD @ LOC: STANDARD $

CATEGORY =====>	A			B			C			D			E		
	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA
S-ILS 29L	1023	1800	200	1023	1800	200	1023	1800	200	1023	1800	200	1023	2400	200
S-LOC 29L	1340	2400	517	1340	2400	517	1340	5000	517	1340	6000	517	1340	6000	517
CIRCLING	1360	1	519	1360	1	519	1360	1 1/2	519	1460	2	619	1800	3	959
EAGAN FIX MINIMUMS															
S-LOC 29L	1280	2400	457	1280	2400	457	1280	4000	457	1280	5000	457	1280	5000	457
CIRCLING	1360	1	519	1360	1	519	1360	1 1/2	519	1460	2	619	1800	3	959

NOTES: FOR INOPERATIVE ALSF: INCREASE S-ILS CAT E VISIBILITY TO RVR 4000;
INCREASE S-LOC CAT E VISIBILITY TO 1 3/4.
CATEGORY II ILS SPECIAL AIRCREW AND AIRCRAFT CERTIFICATION REQUIRED.
S-ILS 29L: DH 973 MSL, RA NA, RVR 1600, HAT 150; CAT A,B,C,D.
S-ILS 29L: DH 923 MSL, RA NA, RVR 1200, HAT 100; CAT A,B,C,D.

@ CAT D 700-2, CAT E 1000-3
$ CAT E 1000-3

ASR

CITY AND STATE	ELEVATION: 841 TDZE: 823 / AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
MINNEHAHA, MN	MINNEHAHA MUNI	I-MSP	ILS RWY 29L, AMDT 38	AMDT: 37
				DATED: 29 NOV 89

FAA FORM 8260 - 3 (computer generated) PAGE OF PAGES

Figure A5-4

U. S. Department of Transportation
Federal Aviation Administration

ILS - STANDARD INSTRUMENTAPPROACH PROCEDURE

FAR PART 97.29

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

TERMINAL ROUTES

FROM	TO	COURSE AND DISTANCE	ALTITUDE
SUNOL INT/OAK 21.00 DME (IAF)	GROVE INT/OAK 11.71 DME	229/0.71 (HDG) & 275.11/8.82 (I-OAK)	3500 *
GROVE	HAYZE INT/OAK 9.00 DME	275.11/2.71 (I-OAK)	2700
HAYZE	CASES OM/OAK 5.00 DME	275.11/4.02 (I-OAK)	1500

MISSED APPROACH

ILS: AT THE DH. LOC: 4.21 MILES AFTER CASES OR AT DME FIX.

CLIMB TO 500 THEN CLIMBING RIGHT TURN TO 3000 VIA OAK R-313 TO PEERE INT AND HOLD.

ADDITIONAL FLIGHT DATA:

HOLD SE, RT, 313.00 INBOUND.
FAS OBST:
RWY 27R - 142 TOWER 374300/1221110
RWY 27L - 153 TOWER 374230/1221038

1. PT NA SIDE OF COURSE ____ OUTBOUND ____ FT WITHIN ____ MILES OF ____ (IAF)
2. PROFILE STARTS AT GROVE.
3. FAC: 275.11 FAF: CASES DIST FAF TO MAP: 4.21 THLD: 4.21
4. MIN. ALT: GROVE 3500 *, HAYZE 2700 #, CASES 1500 # # LOC ONLY
5. DIST TO THLD FROM OM: 4.21 MM: 0.49 IM: ____ 150 HAT: ____ 100 HAT: ____ GS ANT: 989
6. MIN GS INCPT: 3500 * GS ALT AT: HAYZE 2619 OM: 1353 MM: 222 IM: ____
7. GS ANGLE: 2.90 TCH: 51
8. MSA FROM: OAK VORTAC 350-170 4900, 170-350 3700

MAG VAR: 17E EPOCH YEAR: 85

MINIMUMS

TAKEOFF: ____ STANDARD [X] SEE FAA FORM 8260-15 FOR THIS AIRPORT ALTERNATE: N A ____ ILS: STANDARD @ LOC: STANDARD $

CATEGORY =====>	A			B			C			D			E		
	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA
S - I L S 27R	254	1	250	254	1	250	254	1	250	254	1	250			
S - L O C 27R	400	1	396	400	1	396	400	1	396	400	1 1/4	396			
CIRCLING	500	1	494	540	1	534	680	2	674	680	2 1/4	674			
SIDESTEP 27L	420	1	415	420	1	415	420	1 1/4	415	420	2	415			

NOTES: INOPERATIVE TABLE DOES NOT APPLY.
AUTOPILOT COUPLED APPROACH NA BELOW 350'.
* 3000 WHEN AUTHORIZED BY ATC.

@ CAT C 700-2, CAT D 700-2 1/4
$ CAT D 800-2 1/4

CITY AND STATE	ELEVATION: 6 TDZE: 27R 4 / AIRPORT NAME: 27L 5	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
OAKTREE, CA	METROPOLE INTL	I-OAK	ILS RWY 27R, AMDT 31	AMDT: 30
				DATED: 9 JUN 88

FAA FORM 8260 - 3 (computer generated) PAGE OF PAGES

Figure A5-5

U. S. Department of Transportation
Federal Aviation Administration

ILS - STANDARD INSTRUMENTAPPROACH PROCEDURE

FAR PART 97.29

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

TERMINAL ROUTES

FROM	TO	COURSE AND DISTANCE	ALTITUDE
CSN VORTAC (IAF)	MOSBY INT (NOPT)	083.00/20.61	3000
BRV VORTAC (IAF)	MOSBY (NOPT)	359.08/23.31	3000
MOSBY	TILLE LOM	010.03/7.71 (I-IAD)	1900

MISSED APPROACH

ILS: AT THE DH. LOC: 4.61 MILES AFTER TILLE OR AT DME FIX.

CLIMB TO 800 THEN CLIMBING RIGHT TURN TO 3000 VIA AML R-040 TO ASPER INT/AML 14.7 DME AND HOLD.

ADDITIONAL FLIGHT DATA:

HOLD NE, RT, 220.00 INBOUND.
FAS OBST: 430 TREE 385212/772543
DEPICT LOC RWY 1L.

1. PT NA SIDE OF COURSE ____ OUTBOUND ____ FT WITHIN ____ MILES OF ____ (IAF)
2. HOLD S TILLE, LT, 010.01 INBOUND, 1900 FT IN LIEU OF PT (IAF).
3. FAC: 010.01 FAF: TILLE DIST FAF TO MAP: 4.61 THLD: 4.61
4. MIN. ALT: TILLE 1900
5. DIST TO THLD FROM OM: 4.61 MM: 0.49 IM: 850 150 HAT: 1812 100 HAT: 858 GS ANT: 1050
6. MIN GS INCPT: 1900 GS ALT AT: ____ OM: 1849 MM: 536 IM: 413
7. GS ANGLE: 3.00 TCH: 55
8. MSA FROM: AML VORTAC 360-180 2300, 180-270 2600, 270-360 3400

MAG VAR: 9W EPOCH YEAR: 85

MINIMUMS

TAKEOFF: [X] STANDARD [ ] SEE FAA FORM 8260-15 FOR THIS AIRPORT ALTERNATE: N A [ ] ILS: STANDARD LOC: STANDARD

CATEGORY =====>	A			B			C			D			E		
	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA
S-ILS 1R	513	1800	200	513	1800	200	513	1800	200	513	1800	200			
S-LOC 1R	680	2400	367	680	2400	367	680	2400	367	680	4000	367			
CIRCLING	840	1	527	840	1	527	840	1 1/2	527	880	2	567			

NOTES: CATEGORY II ILS SPECIAL AIRCREW AND AIRCRAFT CERTIFICATION REQUIRED. S-ILS 1R: DH 463 MSL, 145 RA, RVR 1600, HAT 150; CAT A,B,C,D. S-ILS 1R: DH 413 MSL, 100 RA, RVR 1200, HAT 100, CAT A,B,C,D.
CATEGORY III ILS SPECIAL AIRCREW AND AIRCRAFT CERTIFICATION REQUIRED. S-ILS 1R: CAT IIIA RVR 700; CAT A,B,C,D. CAT IIIB RVR 600; CAT A,B,C,D. CAT IIIC NA.

SIMULTANEOUS APPROACHES AUTHORIZED WITH RWY 1L.

CITY AND STATE	ELEVATION: 313 TDZE: 313 / AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
WASHINGTON, DC	DULLSVILLE INTL	IAD	ILS RWY 1R, AMDT 21	AMDT: 20
				DATED: 24 AUG 88

FAA FORM 8260 - 3 (computer generated) PAGE OF PAGES

Figure AS-6

U. S. Department of Transportation
Federal Aviation Administration

ILS - STANDARD INSTRUMENTAPPROACH PROCEDURE

FAR PART 97.29

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

TERMINAL ROUTES

FROM	TO	COURSE AND DISTANCE	ALTITUDE
ENDAL INT (IAF)	KEIPY INT (NOPT)	227.12/6.81 (I-TRI)	5000
KEIPY	MOCCA LOM/INT	227.12/9.72 (I-TRI)	3600
DAMAS INT	SEMET INT	273.01/12.22 (TR BRG 093)	6000
SEMET	MOCCA	273.01/9.83	4100

MISSED APPROACH

ILS: AT THE DH. LOC: 6.00 MILES AFTER MOCCA OR AT DME FIX.

CLIMB TO 3600 DIRECT BOOIE LOM/INT AND HOLD; OR WHEN DIRECTED BY ATC, CLIMB TO 2000 THEN CLIMBING LEFT TURN TO 6000 VIA HEADING 180 AND HMV VORTAC R-233 TO AFTEN INT AND HOLD NE, RT, 047 INBOUND.

ADDITIONAL FLIGHT DATA:
HOLD SW, RT, 047 INBOUND.
FAS OBST: 1950 TREES 363204/822106
DO NOT CHART EAVER INT ON CAT II SIAP.

1. PT R SIDE OF COURSE 047.12 OUTBOUND 4100 FT WITHIN 10 MILES OF MOCCA (IAF)
2.
3. FAC: 227.12 FAF: MOCCA DIST FAF TO MAP: 6.00 THLD: 6.00
4. MIN. ALT: MOCCA 3600, EAVER INT 2400 * * LOC ONLY
5. DIST TO THLD FROM OM: 6.00 MM: 0.50 IM: 870 150 HAT: 1812 100 HAT: 858 GS ANT: 1051
6. MIN GS INCPT: 3600 GS ALT AT: OM: 3509 MM: 1745 IM: 1619
7. GS ANGLE: 3.00 TCH: 55
8. MSA FROM: TR LOM 270-090 5400, 090-180 7400, 180-270 6300

MAG VAR: 4W EPOCH YEAR: 85

MINIMUMS

TAKEOFF: [ ] STANDARD [X] SEE FAA FORM 8260-15 FOR THIS AIRPORT ALTERNATE: N A [ ] ILS: # $ LOC: # $

CATEGORY =====>	A			B			C			D			E		
	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA
S-ILS 23	1718	1800	200	1718	1800	200	1718	1800	200	1718	1800	200			
S-LOC 23	2400	4000	882	2400	4000	882	2400	2 1/4	882	2400	2 1/2	882			
CIRCLING	2400	1 1/4	881	2400	1 1/4	881	2400	2 3/4	881	2400	3	881			
EAVER INT MINIMUMS															
S-LOC 23	2200	2400	682	2200	2400	682	2200	1 1/2	682	2200	1 3/4	682			
CIRCLING	2260	1	741	2260	1 1/4	741	2320	2 1/4	801	2320	2 1/2	801			

NOTES: ASR
CIRCLING NA N OF RWYS 9 AND 23.

CAT A,B 900-1 1/4, CAT C 900-2 3/4, CAT D 900-3
$ NA WHEN TOWER CLOSED

CONTINUED ON PAGE 2.

CITY AND STATE	ELEVATION: 1519 TDZE: 1518 AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
KINGS, TN	SPORT CITY	I-TRI	ILS RWY 23, AMDT 22	AMDT: 21 DATED: 4 AUG 88

FAA FORM 8260 - 3 (computer generated)

Figure A5-7

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

ILS — STANDARD INSTRUMENT APPROACH PROCEDURE

FLIGHT STANDARDS SERVICE - FAR PART 97. 29

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

NOTES: (CONTINUED)

WHEN TOWER CLOSED:

1. ALSF-1 OPERATES AS SSALS.
2. INCREASE S-ILS VISIBILITY TO RVR 4000 ALL CATS.
3. INCREASE S-LOC CAT AB VISIBILITY TO RVR 6000, CAT C TO 2 3/4, CAT D TO 3.
4. INOPERATIVE TABLE DOES NOT APPLY TO S-ILS OR S-LOC VISIBILITIES.
5. INCREASE EAVER INT S-LOC CAT AB VISIBILITY TO RVR 4000, CAT C 2, CAT D 2 1/4.
6. FOR INOPERATIVE SSALS, INCREASE EAVER INT S-LOC CAT A,B VISIBILITY TO RVR 5000.

CATEGORY II ILS SPECIAL AIRCREW AND AIRCRAFT CERTIFICATION REQUIRED.
S-ILS-23: DH 1668 MSL, 192 RA, RVR 1600, HAT 150; CAT A,B,C,D.
S-ILS-23: DH 1618 MSL, 139 RA, RVR 1200, HAT 100: CAT A,B,C,D.

WHEN TOWER CLOSED CAT II NA.

CITY AND STATE	ELEVATION: 1519 TDZE: 1518 AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
				AMDT: 21
KINGS, TN	SPORT CITY	I-TRI	ILS RWY 23, AMDT 22	DATED: 4 AUG 88

FAA FORM 8260 - 10 (computer generated) Page 2 of 2 Pages

Figure A5-7a

APPENDIX 6. RADAR - STANDARD INSTRUMENT APPROACH PROCEDURE FAA FORM 8260-4

U.S. DEPARTMENT OF TRANSPORTATION -- FEDERAL AVIATION ADMINISTRATION

RADAR -- STANDARD INSTRUMENT APPROACH PROCEDURE -- FLIGHT STANDARDS SERVICE -- FAR PART 97.31

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

Initial approach minimum altitude(s) shall correspond with those established for enroute operation in the particular area or as set forth below. Positive identification must be established with the radar controller. From initial contact with radar to final authorized landing minimums, the instructions of the radar controller are mandatory except when; (A) Visual contact is established on final approach at or before descent to the authorized landing minimums; or (B) at pilot's discretion if it appears desirable to discontinue the approach.

Except when the radar controller may direct otherwise prior to final approach, a missed approach shall be executed as provided below when; (A) communications on final approach is lost for more than 5 seconds during a precision approach, or for more than 30 seconds during a surveillance approach; (B) directed by radar controllers; (C) visual contact is not established upon descent to authorized landing minimums; or (D) if landing is not accomplished.

RADAR TERMINAL AREA MANEUVERING SECTORS AND ALTITUDES (Sectors and distances measured from radar antenna)

FROM	TO	DISTANCE	ALTITUDE	DISTANCE	ALTITUDE	DISTANCE	ALTITUDE	DISTANCE	ALTITUDE	DISTANCE	ALTITUDE
AS ESTABLISHED BY THE CURRENT CLEKINS ASR MINIMUM VECTORING ALTITUDE CHART.											

MISSED APPROACH

MAP: RWY 5R, 10L, 18, 23L, 28R, 36 THRESHOLD.

SEE PAGE 2 FOR MISSED APPROACH INSTRUCTIONS.

MINIMUMS

TAKEOFF: | STANDARD | X | SEE FAA FORM 8260-15 FOR THIS AIRPORT | ALTERNATE: N A | | STANDARD

CATEGORY	A			B			C			D			E		
	DH/ MDA	VIS	HAT/HAA	DH/MDA	V I S	HAT/HAA	DH/MDA	V I S	HAT/HAA	DH/MDA	V I S	HAT/HAA	DH/MDA	V I S	HAT/HAA
S-5R	1180	2400	404	1180	2400	404	1180	4000	404	1180	5000	404			
S-10L	1220	1	438	1220	1	438	1220	1 1/4	438	1220	1 1/2	438			
S-18	1220	1	435	1220	1	435	1220	1 1/4	435	1220	1 1/2	435			
S-23L	1240	5000	455	1240	5000	455	1240	5000	455	1240	5000	455			
S-28R	1240	2400	448	1240	2400	448	1240	4000	448	1240	5000	448			
S-36	1220	1	431	1220	1	431	1220	1 1/4	431	1220	1 1/2	431			
CIRCLING	1300	1	508	1300	1	508	1300	1 1/2	508	1360	2	568			

NOTES: RWY 5R: FAF 6 MILES FROM THRESHOLD, MINIMUM ALTITUDE 2600; FINAL APPROACH COURSE 057. RECOMMENDED ALTITUDE 5 MILES 2300, 4 MILES 2000, 3 MILES 1700, 2 MILES 1400.
RWY 10L: FAF 6 MILES FROM THRESHOLD, MINIMUM ALTITUDE 2000; FINAL APPROACH COURSE 100. RECOMMENDED ALTITUDE 5 MILES 1600, 4 MILES 1600, 3 MILES 1400.
RWY 18: FAF 6 MILES FROM THRESHOLD, MINIMUM ALTITUDE 2600; FINAL APPROACH COURSE 186. RECOMMENDED ALTITUDE 5 MILES 2300, 4 MILES 2000, 3 MILES 1700, 2 MILES 1400.
RWY 23L: FAF 6 MILES FROM THRESHOLD, MINIMUM ALTITUDE 2600; MINIMUM ALTITUDE 4 MILE FIX 1900; FINAL APPROACH COURSE 237. RECOMMENDED ALTITUDE 5 MILES 2260, 4 MILES 1900, 3 MILES 1620, 2 MILES 1340.
RWY 28R: IF 12 MILES FROM THRESHOLD ON RUNWAY CENTERLINE EXTENDED; FAF 6 MILES FROM THRESHOLD, MINIMUM ALTITUDE 2600, MINIMUM ALTITUDE 2 MILE FIX 1400; (CONT'D PG 2)

LOST COMMUNICATIONS (ALL RWYS): AS DIRECTED BY ATC ON INITIAL CONTACT.

ADDITIONAL FLIGHT DATA

TDZE: 776	RWY: 5R	TDZE: 782	RWY: 10L
TDZE: 785	RWY: 18	TDZE: 785	RWY: 23L
TDZE: 792	RWY: 28R	TDZE: 789	RWY: 36

FAS OBSTACLES:
RWY 5R - 927 STACK 412009/815634
RWY 10L - 967 BLDG 412506/815403
RWY 18 - 925 BLDG 412744/815111
RWY 23L - 930 STACK 412442/814932
RWY 28R - 937 W/T 412449/814630

MAG VAR: 7W EPOCH YEAR: 90

CITY AND STATE	ELEVATION: / AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP
HOPLAND, OH	792 HOPLAND-CLEKINS INTL	CLE ASR	RADAR-1, AMDT 29	AMDT: 28
				DATED: 14 FEB 88

FAA FORM 8260 - 4 (computer generated) Page 1 of 2

Figure A6-1

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

RADAR

STANDARD INSTRUMENT APPROACH PROCEDURE

FLIGHT STANDARDS SERVICE - FAR PART 97. 31

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

RWY 28R (CONT'D): FINAL APPROACH COURSE 280. RECOMMENDED ALTITUDE 5 MILES 2300, 4 MILES 2000, 3 MILES 1700, 2 MILES 1400.
RWY 36: FAF 6 MILES FROM THRESHOLD, MINIMUM ALTITUDE 2600; MINIMUM ALTITUDE 2 MILE FIX 1400; FINAL APPROACH COURSE 004.
RECOMMENDED ALTITUDE 5 MILES 2300, 4 MILES 2000, 3 MILES 1700, 2 MILES 1400.

S-5R: FOR INOPERATIVE ALSF-1, INCREASE CAT D VISIBILITY TO RVR 6000.
S-23L: INOPERATIVE TABLE DOES NOT APPLY TO CAT A,B,C.
FOR INOPERATIVE MALSR, INCREASE CAT D VISIBILITY TO RVR 6000.

MISSED APPROACH INSTRUCTIONS:
RWY 5R & 10L: CLIMBING LEFT TURN TO 3000 VIA 360 HEADING AND CXR R-286 TO CRIBS INT AND HOLD E, RT, 286 INBOUND.
RWY 36: CLIMB TO 3000 VIA 360 HEADING AND CXR R-286 TO CRIBS INT AND HOLD E, RT, 286 INBOUND.
RWY 18 & 23L: CLIMBING RIGHT TURN TO 3000 DIRECT DJB VORTAC AND HOLD W, RT, 077 INBOUND.
RWY 28R: CLIMBING LEFT TURN TO 3000 DIRECT DJB VORTAC AND HOLD W, RT, 077 INBOUND.

CITY AND STATE	ELEVATION: 792 TDZE: AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
				AMDT: 28
HOPLAND, OH	HOPLAND-CLEKINS INTL	CLE ASR	RADAR-1, AMDT 29	DATED: 02/14/88

FAA FORM 8260 - 10 (computer generated) Page 2 of 2 Pages

Figure A6-1a

U.S. DEPARTMENT OF TRANSPORTATION -- FEDERAL AVIATION ADMINISTRATION

RADAR -- STANDARD INSTRUMENT APPROACH PROCEDURE -- FLIGHT STANDARDS SERVICE -- FAR PART 97.31

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

Initial approach minimum altitude(s) shall correspond with those established for enroute operation in the particular area or as set forth below. Positive identification must be established with the radar controller. From initial contact with radar to final authorized landing minimums, the instructions of the radar controller are mandatory except when; (A) Visual contact is established on final approach at or before descent to the authorized landing minimums; or (B) at pilot's discretion if it appears desirable to discontinue the approach.

Except when the radar controller may direct otherwise prior to final approach, a missed approach shall be executed as provided below when; (A) communications on final approach is lost for more than 5 seconds during a precision approach, or for more than 30 seconds during a surveillance approach; (B) directed by radar controllers; (C) visual contact is not established upon descent to authorized landing minimums; or (D) if landing is not accomplished.

RADAR TERMINAL AREA MANEUVERING SECTORS AND ALTITUDES (Sectors and distances measured from radar antenna)

FROM	TO	DISTANCE	ALTITUDE	DISTANCE	ALTITUDE	DISTANCE	ALTITUDE	DISTANCE	ALTITUDE	DISTANCE	ALTITUDE
AS ESTABLISHED BY THE CURRENT GALENA ASR MINIMUM VECTORING ALTITUDE CHART.											

MISSED APPROACH

MAP: PAR RWYS 7, 25 - DH

ASR RWY 7 - 1/4 MI. FROM THRESHOLD
ASR RWY 25 - THRESHOLD

SEE PAGE 2 FOR MISSED APPROACH INSTRUCTIONS.

MINIMUMS

TAKEOFF: [X] STANDARD [ ] SEE FAA FORM 8260-15 FOR THIS AIRPORT | ALTERNATE: N A [ ] STANDARD

CATEGORY	A			B			C			D			E		
	DH/ MDA	VIS	HAT/HAA	DH/MDA	V I S	HAT/HAA	DH/MDA	V I S	HAT/HAA	DH/MDA	V I S	HAT/HAA	DH/MDA	V I S	HAT/HAA
PAR 6-7	399	1	250	399	1	250	399	1	250	399	1	250	399	1	250
PAR 6-25	352	1/2	200	352	1/2	200	352	1/2	200	352	1/2	200	352	1/2	200
ASR 6-7	440	1	291	440	1	291	440	1	291	440	1	291	440	1	291
ASR 6-25	500	1	348	500	1	348	500	1	348	500	1	348	500	1	348
CIRCLING	540	1	388	620	1	468	620	1 1/2	468	720	2	568	720	2	568

NOTES:

PAR RWY 7: FAF 5.25 MILES FROM THRESHOLD. GLIDE SLOPE INTERCEPT ALTITUDE 1600. FINAL APPROACH COURSE 068.

PAR RWY 25:FAF 5.25 MILES FROM THRESHOLD. GLIDE SLOPE INTERCEPT ALTITUDE 1600. FINAL APPROACH COURSE 248.

ASR RWY 7: FAF 5.25 MILES FROM THRESHOLD, MINIMUM ALTITUDE 1600; FINAL APPROACH COURSE 068. RECOMMENDED ALTITUDE 5 MILES 1540, 4 MILES 1260, 3 MILES 980, 2 MILES 700.

ASR RWY 25: FAF 5.25 MILES FROM THRESHOLD, MINIMUM ALTITUDE 1600; MINIMUM ALTITUDE 2.5 MILE FIX 600; FINAL APPROACH COURSE 248. RECOMMENDED ALTITUDE 5 MILES 1500, 4 MILES 1140, 3 MILES 780, 2.5 MILES 600, 2 MILES 520.

LOST COMMUNICATIONS (ALL RWYS): AS DIRECTED BY ATC ON INITIAL CONTACT.

ADDITIONAL FLIGHT DATA

TDZE: 149	RWY: 7	TDZE: 152	RWY: 25
TDZE:	RWY:	TDZE:	RWY:

FAS OBST:
PAR RWY 7: 179 TREE 644409/1565733
PAR RWY 25: 161 ROAD 644410/1565436
ASR RWY 7: 187 ANTENNA 644418/1565724
ASR RWY 25: 238 NDB 644417/1564823
PAR RWY 7: GS 2.50 / TCH 34 / RPI 772
PAR RWY 25: GS 2.50 / TCH 36 / RPI 827

MAG VAR: 23E EPOCH YEAR: 85

CITY AND STATE	ELEVATION: 152 AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP
STARDUST, AK	GALAXY	GAL ASR/PAR	RADAR-1, AMDT 7	AMDT: 6 DATED: 13 MAY 88

FAA FORM 8260 - 4 (computer generated)

Figure A6-2

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

RADAR **STANDARD INSTRUMENT APPROACH PROCEDURE**

FLIGHT STANDARDS SERVICE - FAR PART 97. 31

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

PAR RWY 25: GS 2.50 / TCH 36 / RPI 827

INOPERATIVE TABLE DOES NOT APPLY TO ASR S-25 CAT A,B,C.
FOR INOPERATIVE ALSF-1, INCREASE ASR S-25 CAT D,E VISIBILITY TO 3/4.
INOPERATIVE ASR: PAR IS AVAILABLE ONLY IF AIRCRAFT HAS OPERABLE TACAN, OR VOR AND DME.
PAR RWY 7: EXECUTE VOR/DME OR TACAN RWY 7 APPROACH AND REPORT 12 DME INBOUND ON FINAL APPROACH FOR PAR PICKUP.
PAR RWY 25: EXECUTE VOR/DME OR TACAN RWY 25 APPROACH AND REPORT 4 DME INBOUND ON FINAL APPROACH FOR PAR PICKUP.

VASI RWY 7: VASI NOT COINCIDENT WITH PAR RWY 7.

MISSED APPROACH INSTRUCTIONS:
RWY 7: CLIMB TO 3000 DIRECT GAL VORTAC OR BZP NDB AND HOLD NE, LT, 246 INBOUND; OR HOLD SW, RT, 066 INBOUND. TACAN AIRCRAFT CLIMB TO 4000 VIA GAL R-065 TO GROFF/20 DME AND HOLD SW, RT, 065 INBOUND.
RWY 25: CLIMB TO 1500, THEN CLIMBING RIGHT TURN TO 3000 DIRECT GAL VORTAC OR BZP NDB AND HOLD NE, LT, 246 INBOUND; OR HOLD SW, RT, 066 INBOUND. TACAN AIRCRAFT CLIMB TO 3000 VIA GAL R-245 TO DOWDI/20 DME AND HOLD NE, RT, 245 INBOUND.

ALTERNATE MISSED APPROACH INSTRUCTIONS:
RWYS 7 & 25: CLIMB TO 3000, THEN AS DIRECTED BY ATC.

CITY AND STATE	ELEVATION: 152 TDZE: AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
STARDUST, AK	GALAXY	GAL ASR/PA	RADAR-1, AMDT 7	AMDT: 6
				DATED: 05/06/88

FAA FORM 8260 - 10 (computer generated) Page 2 of 2 Pages

Figure A6-2a

APPENDIX 7. STANDARD INSTRUMENT APPROACH PROCEDURE FAA FORM 8260-5

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

LOC/BC

STANDARD INSTRUMENT APPROACH PROCEDURE

FLIGHT STANDARDS SERVICE - FAR PART 97. 25

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

TERMINAL ROUTES

FROM	TO	COURSE AND DISTANCE	ALTITUDE
BUXOM INT/RADAR/I-IAP 12.31 DME (IAF)	LEVEE INT/I-IAP 9.50 DME	099.08/2.81 (I-IAP)	3000
LEVEE	PORTA INT/I-IAP 3.69 DME	099.08/5.81 (I-IAP)	1500

MISSED APPROACH

MAP: 3.21 MILES AFTER PORTA OR AT I-IAP 0.48 DME

CLIMBING LEFT TURN TO 4000 VIA BTG R-160 TO BTG VORTAC; OR, WHEN DIRECTED BY ATC, CLIMB TO 900 THEN CLIMBING RIGHT TURN TO 4000 VIA UBG R-040 TO UBG VORTAC.

ADDITIONAL FLIGHT DATA:

FAS OBST: 120 TREE 453540/1223736
CHART: 298 BRIDGE 453742/1223951
CHART VDP AT 1.3 DME.
DISTANCE VDP TO THR 1.5 MILES.

1. PT NA SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)
2. PROFILE STARTS AT BUXOM.
3. FAC 099.08 FAF PORTA DIST FAF TO MAP 3.21 THLD 4.00
4. MIN. ALT BUXOM 3000, LEVEE 3000, PORTA 1500
6. MSA FROM: BTG VORTAC 310-120 6100, 120-310 3400

MAG VAR: 20E EPOCH YEAR: 80

MINIMUMS

TAKEOFF: | STANDARD | X | SEE FAA FORM 8260-15 FOR THIS AIRPORT | ALTERNATE: N A | STANDARD @ @ CAT D 1000-3, CAT E 1100-3

CATEGORY =====>	A			B			C			D			E		
	MDA	VIS	HAT/HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA
S-LOC 10L	380	1	355	380	1	355	380	1	355	380	1	355	380	1	355
CIRCLING	720	1	694	740	1	714	740	2	714	980	3	954	1060	3	1034

NOTES: INOPERATIVE TABLE DOES NOT APPLY TO CATS A,B,C.
RADAR REQUIRED.

CITY AND STATE	ELEVATION: 26 TDZE: 25 AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP
ROSELAND, OR	ROSELAND INTL	I-IAP	LOC BC RWY 10L, AMDT 13	AMDT 12 DATE 5 MAY 88

FAA FORM 8260 - 5 (computer generated) PAGE OF PAGES

Figure A7-1

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

LOC

STANDARD INSTRUMENT APPROACH PROCEDURE

FLIGHT STANDARDS SERVICE - FAR PART 97. 25

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

TERMINAL ROUTES

FROM	TO	COURSE AND DISTANCE	ALTITUDE
MAMMY INT/I-LUK 7.61 DME /RADAR	DEFTS INT/I-LUK 4.60 DME	025.11/3.01 (I-LUK)	2000

MISSED APPROACH

MAP: 4.11 MILES AFTER DEFTS OR AT I-LUK 0.49 DME

CLIMBING RIGHT TURN TO 2600 DIRECT LUK NDB AND HOLD.

ADDITIONAL FLIGHT DATA:

HOLD NE, RT, 230 INBOUND.
FAS OBST: 990 ANTENNA 390348/842630
CHART: 1185 TOWERS 390031/842637

1. PT NA SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)
2. PROFILE STARTS AT MAMMY.
3. FAC 025.11 FAF DEFTS DIST FAF TO MAP 4.11 THLD 4.79
4. MIN. ALT MAMMY 2500, DEFTS 2000
8. MSA FROM: CVG VORTAC 2900

MAG VAR: 4W EPOCH YEAR: 90

MINIMUMS

TAKEOFF: STANDARD [X] SEE FAA FORM 8260-15 FOR THIS AIRPORT ALTERNATE: N A [ ] # CAT A,B 900-2 CAT C,D 900-2 3/4

CATEGORY =====>	A			B			C			D			E		
	MDA	VIS	HAT/HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA
S-2R	1240	1	758	1240	1 1/4	758	1240	2 1/4	758	1240	2 1/2	758			
CIRCLING	1300	1	817	1300	1 1/4	877	1300	2 1/2	877	1300	2 3/4	877			

NOTES: DISREGARD GS INDICATIONS.
RADAR AND ADF REQUIRED.

WHEN CONTROL TOWER CLOSED, ALTERNATE MINIMUMS NA.

CITY AND STATE	ELEVATION: 483 TDZE: 482 AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP AMDT 6 DATE 28 AUG 88
SIN CITY, OH	SUNKEN LUNKEN FIELD	I-LUK	LOC BC RWY 2R, AMDT 7	

FAA FORM 8260 - 5 (computer generated) PAGE OF PAGES

Figure A7-2

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

LOC/DME **STANDARD INSTRUMENT APPROACH PROCEDURE**

FLIGHT STANDARDS SERVICE - FAR PART 97. 25

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

TERMINAL ROUTES

FROM	TO	COURSE AND DISTANCE	ALTITUDE
BOI 22.00 DME/RADAR (IAF)	17.00 DME	278.01/4.91 (I-BOI)	6800
17.00 DME	11.00 DME	278.01/6.00 (I-BOI)	5900
11.00 DME	7.00 DME	278.01/4.00 (I-BOI)	4900

MISSED APPROACH

MAP: I-BOI 0.51 DME

CLIMB TO 4500 VIA BOI VORTAC R-278 TO JIMMI/12 DME AND HOLD.

ADDITIONAL FLIGHT DATA:

HOLD W, RT, 098.01 INBOUND.
FAS OBST: 3039 TERRAIN 433228/1161024
3059 TERRAIN 433223/1160942

1. PT NA SIDE OF COURSE ____ OUTBOUND ____ FT WITHIN ____ MILES OF ____ (IAF)
2. PROFILE STARTS AT 17.00 DME.
3. FAC 278.01 FAF 7.00 DME DIST FAF TO MAP - THLD 5.39
4. MIN. ALT 17.00 DME 6800, 11.00 DME 5900, 7.00 DME 4900, 3.50 DME 3600
8. MSA FROM: BOI VORTAC 130-300 6500, 300-130 9400

MAG VAR: 17E EPOCH YEAR: 85

MINIMUMS

TAKEOFF: | STANDARD | X | SEE FAA FORM 8260-15 FOR THIS AIRPORT | ALTERNATE: N A | STANDARD # # CAT E 900-3

CATEGORY =====>	A			B			C			D			E		
	MDA	VIS	HAT/HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA
S-28L	3300	3/4	446	3300	3/4	446	3300	1 1/4	446	3300	1 1/2	446	3300	1/1/2	446
SIDESTEP 28R	3300	1	442	3300	1	442	3300	1/1/2	442	3300	2	442	3300	2	442
CIRCLING	3300	1	442	3320	1	462	3320	1 1/2	462	3420	2	562	3680	3	822

NOTES: DISREGARD GS INDICATIONS.
CIRCLING NA NORTH OF RWY 10L-28R.
INOPERATIVE TABLE DOES NOT APPLY TO S-28L CAT C.
RADAR REQUIRED.
DME FROM BOI VORTAC. SIMULTANEOUS RECEPTION OF I-BOI AND BOI DME REQUIRED.

CITY AND STATE	ELEVATION: 2858 TDZE: 28L 2854 / AIRPORT NAME: 28R 2858	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP
				AMDT 4
BOSS, ID	BOSS AIR TERMINAL	I-BOI	LOC/DME BC RWY 28L, AMDT 5	DATE 3 JUL 88

FAA FORM 8260 - 5 (computer generated) PAGE OF PAGES

Figure A7-3

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

NDB

STANDARD INSTRUMENT APPROACH PROCEDURE

FLIGHT STANDARDS SERVICE - FAR PART 97. 27

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

TERMINAL ROUTES

FROM	TO	COURSE AND DISTANCE	ALTITUDE
CGT VORTAC (IAF)	ROANN INT/ORD 13.60 DME/ RADAR	356.02/11.61 (CGT R-356) & 320.01/8.82 (ID BRG 140)	4000 *
ROANN	ID LOM	320.01/6.91	2700

MISSED APPROACH

MAP: 6.00 MILES AFTER ID LOM

CLIMBING RIGHT TURN TO 4000 VIA ORD R-089 TO LAIRD INT AND HOLD.

ADDITIONAL FLIGHT DATA:

HOLD E, RT, 269 INBOUND.
FAS OBST: 852 CONTROL TOWER 415838/875416

1. PT NA SIDE OF COURSE ____ OUTBOUND ____ FT WITHIN ____ MILES OF ____ (IAF)
2. PROFILE STARTS AT ROANN.
3. FAC 320.01 FAF ID LOM DIST FAF TO MAP 6.00 THLD 6.00
4. MIN. ALT ROANN 4000 *, ID LOM 2700, ORD 2.50 DME/RADAR 1220
6. MSA FROM: ID LOM 360-180 3400, 180-360 2600

MAG VAR: 0 EPOCH YEAR: 80

MINIMUMS

TAKEOFF: | | STANDARD | X | SEE FAA FORM 8260-15 FOR THIS AIRPORT | ALTERNATE: NA | X |

CATEGORY =====>	A			B			C			D			E		
	MDA	VIS	HAT/HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA
S-32R	1220	4000	567	1220	4000	567	1220	5000	567	1220	1 1/2	567			
CIRCLING	1220	1	553	1220	1	553	1220	1 1/2	553	1220	2	553			
RADAR OR DME MINIMUMS															
S-32R	1160	4000	507	1160	4000	507	1160	5000	507	1160	6000	507			
CIRCLING	1160	1	493	1160	1	493	1160	1 1/2	493	1220	2	553			

NOTES: RADAR OR DME REQUIRED.
* 2700 WHEN AUTHORIZED BY ATC.

CITY AND STATE	ELEVATION: 667 TDZE: 653 AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP
CAGO, IL	HARE INTERNATIONAL	ID	NDB RWY 32R, AMDT 19	AMDT 18
				DATE 9 AUG 88

FAA FORM 8260 - 5 (computer generated) PAGE OF PAGES

Figure A7-4

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

NDB/DME

STANDARD INSTRUMENT APPROACH PROCEDURE

FLIGHT STANDARDS SERVICE - FAR PART 97. 27

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

TERMINAL ROUTES

FROM	TO	COURSE AND DISTANCE	ALTITUDE
GJT VORTAC	RGB NDB/DME	046.03/57.51	13000
RGB NDB/DME	REFRY/8.00 DME	072.00/8.00	13000
EKR VORTAC	REFRY	136.02/36.21	13000
RLG VORTAC (IAF)	RGB 072.00/23	220.02/44.82	13000
RGB 072.00/23	17.00 DME	252.00/6.00 (RGB Brg 072)	11200
17.00 DME	13.00 DME	252.00/4.00 (RGB Brg 072)	10500
13.00 DME	REFRY	252.00/5.00 (RGB Brg 072)	9500

MISSED APPROACH

MAP: RGB NDB/DME

CLIMB TO 3 DME VIA RGB BRG 252, THEN CLIMBING RIGHT TURN DIRECT RGB NDB/DME, CONTINUE CLIMB TO 13000 IN HOLDING PATTERN.

ADDITIONAL FLIGHT DATA:

HOLD E. LT, 252.00 INBOUND.
FAS OBST: 5961 TERRAIN 393047/1074204
MIRL RWY 8-26
REIL, VASI RWYS 8,26

1. PT R SIDE OF COURSE 072.0 OUTBOUND 12500 FT WITHIN 15 MILES OF REFRY/8.00 DME * (IAF)
2. * MAINTAIN 13000 OR ABOVE UNTIL ESTABLISHED OUTBOUND FOR PT.
3. FAC 252.00 FAF REFRY DIST FAF TO MAP - THLD
4. MIN. ALT 17.00 DME 11200, 13.00 DME 10500, REFRY 9500, 3.00 DME 7500
8. MSA FROM: RGB NDB/DME 12900

MAG VAR: 13E EPOCH YEAR: 85

MINIMUMS

TAKEOFF: [ ] STANDARD [X] SEE FAA FORM 8260-15 FOR THIS AIRPORT ALTERNATE: N A [X]

CATEGORY =====>	A			B			C			D			E		
	MDA	VIS	HAT/HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA
CIRCLING	6400	1	848	6400	1 1/4	848	6400	2 1/2	848		NA				

NOTES: CIRCLING NA S OF RWY 8-26.
OBTAIN LOCAL ALTIMETER SETTING ON CTAF; WHEN NOT RECEIVED, PROCEDURE NA.

CITY AND STATE	ELEVATION: 5552 TDZE: - AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP
EIFFEL, CO	PARIS COUNTY	RGB	NDB/DME-A, ORIGINAL	AMDT NONE
				DATE

FAA FORM 8260 - 5 (computer generated) PAGE OF PAGES

Figure A7-5

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

SDF

STANDARD INSTRUMENT APPROACH PROCEDURE

FLIGHT STANDARDS SERVICE - FAR PART 97. 25

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

TERMINAL ROUTES

FROM	TO	COURSE AND DISTANCE	ALTITUDE
BELGO INT	CALIN LOM	116.03/13.02	3000
MILTO INT	CALIN LOM	055.04/26.11	3000
STE VORTAC (IAF)	FLAVN INT (NOPT)	257.00/24.61	3000
FLAVN	CALIN LOM	338.02/6.81	2700

MISSED APPROACH

MAP: 4.00 MILES AFTER CALIN LOM

CLIMB TO 3000, THEN LEFT TURN DIRECT DU LOM AND HOLD.

ADDITIONAL FLIGHT DATA:

HOLD S, RT, 338.02 INBOUND.
FAS OBST: 1421 SILO 443705/900956

1. PT NA SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)
2. HOLD S DU LOM, RT, 338.02 INBOUND, 3000 FT IN LIEU OF PT (IAF).
3. FAC 338.02 FAF CALIN LOM DIST FAF TO MAP 4.00 THLD 4.00
4. MIN. ALT CALIN LOM 2700
8. MSA FROM: DU LOM 315-135 3000, 135-315 2500

MAG VAR: 0 EPOCH YEAR: 85

MINIMUMS

TAKEOFF: | STANDARD | X | SEE FAA FORM 8260-15 FOR THIS AIRPORT | ALTERNATE: N A | X |

CATEGORY =====>	A			B			C			D			E		
	MDA	VIS	HAT/HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA
S-34	1680	1	423	1680	1	423	1680	1 1/4	423	1680	1 1/4	423			
CIRCLING	1740	1	463	1740	1	463	1740	1 1/2	463	1840	2	583			
WAUSAU ALTIMETER SETTING MINIMUMS															
S-34	1800	1	543	1800	1	543	1800	1 1/4	543	1800	1 1/4	543			
CIRCLING	1860	1	583	1860	1	583	1880	1 1/2	603	1900	2	623			

NOTES: OBTAIN LOCAL ALTIMETER SETTING ON CTAF; WHEN NOT RECEIVED, USE WAUSAU ALTIMETER SETTING.
INOPERATIVE TABLE DOES NOT APPLY.
ADF REQUIRED.

CITY AND STATE	ELEVATION: 1277 TDZE: 1257 AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP
MARSH, WI	MARSH MUNICIPAL	DUS	SDF RWY 34, AMDT 4	AMDT 3 DATE 20 DEC 84

FAA FORM 8260 - 5 (computer generated) PAGE OF PAGES

Figure A7-6

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

VOR/DME RNAV **STANDARD INSTRUMENT APPROACH PROCEDURE**

FLIGHT STANDARDS SERVICE - FAR PART 97. 33

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

TERMINAL ROUTES

FROM	TO	COURSE AND DISTANCE	ALTITUDE
SLAPS WP (IAF)	3.00 ATD FROM AVCAT WP	079.03/5.00	4300

MISSED APPROACH

MAP: AVCAT WP

CLIMBING LEFT TURN TO 4700 DIRECT TO LBB VORTAC.

ADDITIONAL FLIGHT DATA:

FAS OBST: 3384 CONTROL TOWER 333958/1014911
FAF: 3.00 ATD 333942.50/1015318.93
CHART: 3576 TOWER 333716/1015353

GLIDE SLOPE COMPUTER SETTING 3.12
HORIZONTAL DISTANCE MDA TO MAP ON GS 1.21NM.
REFERENCE FACILITY ELEVATION LBB VOR/DME 3320.

AVCAT WP ELEV 3306'

1. PT NA SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)
2. PROFILE STARTS AT SLAPS WP.
3. FAC 079.03 FAF 3.00 ATD FROM AVCAT WP DIST FAF TO MAP - THLD 3.00
4. MIN. ALT SLAPS WP 4700, 3.00 ATD FROM AVCAT WP 4300
8. MSA FROM: AVCAT WP 5200

MAG VAR: 11E EPOCH YEAR: 75

MINIMUMS

TAKEOFF: X STANDARD | SEE FAA FORM 8260-15 FOR THIS AIRPORT | ALTERNATE: NA STANDARD

CATEGORY =====>	A			B			C			D			E		
	MDA	VIS	HAT/HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA
S-8	3640	1	384	3640	1	384	3640	1	384	3640	1 1/4	384			
CIRCLING	3720	1	439	3740	1	459	3740	1 1/2	459	3840	2	559			

NOTES: RADAR REQUIRED.

CITY AND STATE	ELEVATION: 3281 TDZE: 3256 AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP RNAV RWY 8 AMDT 1 DATE 23 FEB 78
LOOBUCK, TX	LOOBUCK INTERNATIONAL	LBB	VOR/DME RNAV RWY 8, AMDT 2	

FAA FORM 8260 - 5 (computer generated) PAGE OF PAGES

Figure A7-7

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

VOR/DME RNAV

STANDARD INSTRUMENT APPROACH PROCEDURE

FLIGHT STANDARDS SERVICE - FAR PART 97. 33

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

TERMINAL ROUTES

FROM	TO	COURSE AND DISTANCE	ALTITUDE
BERGG WP (IAF)	HANNS WP	093.00/15.81	3000
HANNS WP	5.00 ATD FROM JAPAN WP	047.12/6.00	2400

MISSED APPROACH

MAP: JAPAN WP

CLIMB TO 3000 VIA COURSE 047 TO HEDDS WP AND HOLD.

ADDITIONAL FLIGHT DATA:

HOLD NE, RT, 227.12 INBOUND.
FAS OBST: 1014 TREE 362105/922949
FAF: 5.00 ATD 361847.03/923329.11

REFERENCE FACILITY ELEVATION FLP VOR/DME 780.

1. PT NA SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)
2. HOLD SW HANNS WP, RT, 047.12 INBOUND, 3000 FT IN LIEU OF PT (IAF).
3. FAC 047.12 FAF 5.00 ATD FROM JAPAN WP DIST FAF TO MAP - THLD 5.00
4. MIN. ALT HANNS WP 3000, 5.00 ATD FROM JAPAN WP 2400
8. MSA FROM: JAPAN WP 2700

MAG VAR: 3E EPOCH YEAR: 90

MINIMUMS

TAKEOFF: | STANDARD | X | SEE FAA FORM 8260-15 FOR THIS AIRPORT | ALTERNATE: N A | X |

CATEGORY =====>	A			B			C			D			E		
	MDA	VIS	HAT/HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA
S-5	1280	1	352	1280	1	352	1280	1	352		NA				
CIRCLING	1400	1	472	1400	1	472	1420	1 1/2	492		NA				
HARRISON ALTIMETER SETTING MINIMUMS															
S-5	1420	1	492	1420	1	492	1420	1 1/4	492		NA				
CIRCLING	1540	1	612	1540	1	612	1560	1 3/4	632		NA				

NOTES:
OBTAIN LOCAL ALTIMETER SETTING ON CTAF; WHEN NOT RECEIVED, USE HARRISON ALTIMETER SETTING.

CITY AND STATE	ELEVATION: 928 TDZE: 928 AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP RNAV RWY 5 AMDT ORIGINAL DATE 3 MAY 90
MOUNTAIN CABIN, AR	CABIN COUNTY REGIONAL	FLP	VOR/DME RNAV RWY 5, AMDT 1	

FAA FORM 8260 - 5 (computer generated) PAGE OF PAGES

Figure A7-8

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

LORAN RNAV **STANDARD INSTRUMENT APPROACH PROCEDURE**

FLIGHT STANDARDS SERVICE - FAR PART 97. 33

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

TERMINAL ROUTES

FROM	TO	COURSE AND DISTANCE	ALTITUDE
SCAPO WP (IAF)	WETTR WP	099.00/8.55	3300

MISSED APPROACH

MAP: PONCO WP

CLIMBING LEFT TURN TO 4000 VIA COURSE 348 TO BATTLEGROUND WP AND HOLD.

ADDITIONAL FLIGHT DATA:

HOLD NW, RT, 149.00 INBOUND.
FAS OBST: 635 TOWER 453605/1224115
FAF: 6.00 ATD 453836.41/1224439.78

GLIDE SLOPE COMPUTER SETTING 3.20 DEGREES.
HORIZONTAL DISTANCE MDA TO MAP ON GS 2.45NM.
PONCO WP ELEVATION 69.

1. PT NA SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)
2. PROFILE STARTS AT WETTR WP.
3. FAC 099.00 FAF 6.00 ATD FROM PONCO WP DIST FAF TO MAP - THLD 6.00
4. MIN. ALT WETTR WP 3300, 6 .00 ATD FROM PONCO WP 2100
8. MSA FROM: PONCO WP 5600

MAG VAR: 20E EPOCH YEAR: 80

MINIMUMS

TAKEOFF: | STANDARD | X | SEE FAA FORM 8260-15 FOR THIS AIRPORT | ALTERNATE: N A | # CAT A,B 900-2, CAT C 900-2 1/2, CAT D 1000-3

CATEGORY =====>	A			B			C			D			E		
	MDA	VIS	HAT/HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA
S-10R	900	2400	880	900	4000	880	900	2	880	900	2 1/4	880			
CIRCLING	900	1	873	900	1 1/4	873	900	2 1/2	873	980	3	953			

NOTES: USE 20E MAGNETIC VARIATION.

CITY AND STATE	ELEVATION: 27 TDZE: 20 AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP
STORMLAND, OR	STORMLAND INTL	MWX 9940	LORAN RNAV RWY 10R, ORIGINAL	AMDT NONE DATE

FAA FORM 8260 - 5 (computer generated) PAGE OF PAGES

Figure A7-9

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

LORAN RNAV **STANDARD INSTRUMENT APPROACH PROCEDURE**

FLIGHT STANDARDS SERVICE - FAR PART 97. 33

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

TERMINAL ROUTES

FROM	TO	COURSE AND DISTANCE	ALTITUDE
BATTLEGROUND WP	WHAMY WP	126.03/17.61	3500

MISSED APPROACH

MAP: BACUP WP

CLIMBING RIGHT TURN TO 4000 VIA COURSE 334 TO BATTLEGROUND WP AND HOLD.

ADDITIONAL FLIGHT DATA:

HOLD NW, RT, 149.00 INBOUND.
FAS OBST: 664 TOWER 453248/1223353
806 TREE 453515/1222606
FAF: 5.00 ATD 453237.75/1222748.29
BACUP WP ELEVATION 75.

1. PT NA SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)
2. HOLD E WHAMY WP, LT, 279.02 INBOUND, 3500 FT IN LIEU OF PT (IAF).
3. FAC 279.02 FAF 5.00 ATD FROM BACUP WP DIST FAF TO MAP - THLD 5.00
4. MIN. ALT WHAMY WP 3500, 5.00 ATD FROM BACUP WP 2000
8. MSA FROM: BACUP WP 5700

MAG VAR: 20E EPOCH YEAR: 80

MINIMUMS

TAKEOFF: STANDARD [X] SEE FAA FORM 8260-15 FOR THIS AIRPORT ALTERNATE: N A STANDARD # # CAT D 1000-3

CATEGORY =====>	A			B			C			D			E		
	MDA	VIS	HAT/HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA
S-28R	700	5000	673	700	5000	673	700	1 1/2	673	700	1 3/4	673			
CIRCLING	720	1	693	740	1	713	740	2	713	980	3	953			

NOTES: INOPERATIVE TABLE DOES NOT APPLY TO CATS A AND B.
USE 20E MAGNETIC VARIATION.

CITY AND STATE	ELEVATION: 27 TDZE: 27 AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP
STORMLAND, OR	STORMLAND INTL	MWX 9940	LORAN RNAV RWY 28R, ORIGINAL	AMDT NONE
				DATE

FAA FORM 8260 - 5 (computer generated) PAGE OF PAGES

Figure A7-10

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

LORAN RNAV **STANDARD INSTRUMENT APPROACH PROCEDURE**

FLIGHT STANDARDS SERVICE - FAR PART 97. 33

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

TERMINAL ROUTES

FROM	TO	COURSE AND DISTANCE	ALTITUDE
OPAUL WP	ALGER WP	280.09/17.11	2000

MISSED APPROACH

MAP: LAKKS WP

CLIMBING LEFT TURN TO 2000 VIA 083 COURSE TO OPAUL WP AND HOLD.

ADDITIONAL FLIGHT DATA:

HOLD E, RT, 263.00 INBOUND.
FAS OBST: 80 BOATS 300334/900148

GLIDE SLOPE COMPUTER SETTING 3.16 DEGREES.
HORIZONTAL DISTANCE MDA TO MAP ON GS 0.84NM.
LAKKS WP ELEVATION 59.

1. PT NA SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)
2. HOLD N ALGER WP, LT, 175.03 INBOUND, 1700 FT IN LIEU OF PT (IAF).
3. FAC 175.03 FAF ALGER WP DIST FAF TO MAP - THLD 4.90
4. MIN. ALT ALGER WP 1700
8. MSA FROM: LAKKS WP 2100

MAG VAR: 4E EPOCH YEAR: 65

MINIMUMS

TAKEOFF: [ ] STANDARD [X] SEE FAA FORM 8260-15 FOR THIS AIRPORT ALTERNATE: N A [ ] STANDARD #

CATEGORY =====>	A			B			C			D			E		
	MDA	VIS	HAT/HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA
S-18R	340	1/2	331	340	1/2	331	340	1/2	331	340	1	331			
CIRCLING	460	1	451	460	1	451	500	1 1/2	491	600	2	591			

NOTES: WHEN CONTROL TOWER CLOSED PROCEDURE NA.
FOR INOPERATIVE MALSR, INCREASE CAT D VISIBILITY TO 1 1/4.
USE 4E MAGNETIC VARIATION.

NA WHEN CONTROL TOWER CLOSED.

CITY AND STATE	ELEVATION: 9 TDZE: 9 AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP AMDT NONE DATE
NEW LAKEFRONT, LA	ORLEANS INTL	MWX7980	LORAN RNAV RWY 18R, ORIGINAL	

FAA FORM 8260 - 5 (computer generated) PAGE OF PAGES

Figure A7-11

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

VOR

STANDARD INSTRUMENT APPROACH PROCEDURE

FLIGHT STANDARDS SERVICE - FAR PART 97. 23

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

TERMINAL ROUTES

FROM	TO	COURSE AND DISTANCE	ALTITUDE
HENNA INT	MGY VOR	318.02/15.68	2700
MIZZA INT	MGY VOR	065.03/12.39	2700
RID VORTAC	MGY VOR	111.01/30.11	2700

MISSED APPROACH

MAP: MGY VOR

CLIMBING LEFT TURN TO 3000 VIA MGY VOR R-138 TO HENNA INT AND HOLD.

ADDITIONAL FLIGHT DATA:

HOLD SW, LT, 055.00 INBOUND.
FAS OBST: 1140 ANTENNA 393801/841340
FAC CROSSES RWY C/L EXTENDED 3000 FROM THLD.
CHART MALS RWY 20.

1. PT R SIDE OF COURSE 030.0 OUTBOUND 2700 FT WITHIN 10 MILES OF MGY VOR (IAF)
2.
3. FAC 210.03 FAF DIST FAF TO MAP THLD
4. MIN. ALT NANSY 4 RADAR 2000
6. MSA FROM: MGY VOR 3100

MAG VAR: 3W EPOCH YEAR: 80

MINIMUMS

TAKEOFF: STANDARD [X] SEE FAA FORM 8260-15 FOR THIS AIRPORT ALTERNATE: N A [X]

CATEGORY =====>	A			B			C			D			E		
	MDA	VIS	HAT/HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA
S-20	2000	1 1/4	1039	2000	1 1/2	1039	2000	3	1039	2000	3	1039			
CIRCLING	2000	1 1/4	1038	2000	1 1/2	1038	2000	3	1038	2000	3	1038			
NANSY RADAR FIX MINIMUMS															
S-20	1460	3/4	499	1460	3/4	499	1460	1 1/4	499	1460	1 1/2	499			
CIRCLING	1480	1	518	1480	1	518	1500	1 1/2	538	1740	2 1/2	778			

NOTES: USE WRIGHT-PATTERSON ALTIMETER SETTING.
INOPERATIVE TABLE DOES NOT APPLY TO VOR MINIMUMS.
INOPERATIVE TABLE DOES NOT APPLY TO S-20 CAT C FOR NANSY RADAR FIX MINIMUMS.

CITY AND STATE	ELEVATION: 962 TDZE: 961 AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP
				AMDT 6
CLAYTON, OH	CLAYTON-DAYTON GENERAL	MGY	VOR RWY 20, AMDT 7	DATE 20 JUL 90

FAA FORM 8260 - 5 (computer generated) PAGE OF PAGES

Figure A7-12

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

VOR/DME **STANDARD INSTRUMENT APPROACH PROCEDURE**

FLIGHT STANDARDS SERVICE - FAR PART 97. 23

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

TERMINAL ROUTES

FROM	TO	COURSE AND DISTANCE	ALTITUDE
ARCHH/GJT 40.00 DME	OAB VOR/DME	237.02/8.42	8000
EDLES/HVE 39.00 DME	OAB VOR/DME	047.03/10.21	8000
OAB VOR/DME	VANNE/6.00 DME	137.00/6.00	8000
ATLET/GJT 40.00 DME (IAF)	CALDE/13.71 DME (NOPT)	217.00/8.91 (GJT R-217)	8000
ANIUM INT (IAF)	CALDE (NOPT)	037.00/9.81 (GJT R-217) (OAB LR-139)	8000
CALDE	VANNE	317.00/7.70 (OAB R-137)	6600
VANNE	FURLO/4.91 DME	317.00/1.10 (OAB R-137)	6300

MISSED APPROACH

MAP: OAB R-137/0.50 DME

CLIMBING LEFT TURN TO 6700 VIA OAB R-286, THEN RIGHT TURN TO 8000 DIRECT OAB VOR/DME AND HOLD.

ADDITIONAL FLIGHT DATA:

HOLD W, LT, 106.00 INBOUND.
FAS OBST: 5279 TREES 384114/1094121
CHART R-6413
VASI RWYS 15, 33

1. PT L SIDE OF COURSE 137.0 OUTBOUND 8000 FT WITHIN 10 MILES OF VANNE (IAF)
2.
3. FAC 317.00 FAF FURLO DIST FAF TO MAP - THLD 4.51
4. MIN. ALT VANNE 6600, FURLO 6300
6. MSA FROM: OAB VOR/DME 060-150 13400, 150-240 7400, 240-330 10000, 330-060 10600

MAG VAR: 15E EPOCH YEAR: 75

MINIMUMS

TAKEOFF: | STANDARD | X | SEE FAA FORM 8260-15 FOR THIS AIRPORT | ALTERNATE: N A | X |

CATEGORY =====>	A			B			C			D			E		
	MDA	VIS	HAT/HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA
S-33	5880	1 1/4	1333	5880	1 1/2	1333	5880	3	1333	5880	3	1333			
CIRCLING	5880	1 1/4	1306	5880	1 1/2	1306	5880	3	1306	5880	3	1306			

NOTES: USE GRAND JUNCTION ALTIMETER SETTING.
OPERATORS WITH APPROVED WEATHER REPORTING SERVICE USE LOCAL ALTIMETER SETTING, AND REDUCE ALL MDAS 300'.
PROCEDURE NA WHEN R-6413 IN OPERATION.

CITY AND STATE	ELEVATION: 4574 TDZE: 4547 AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP
MOABITE, UT	MOABITE FIELD	OAB	VOR/DME RWY 33, AMDT 2	AMDT 1
				DATE 14 FEB 80

FAA FORM 8260 - 5 (computer generated) PAGE OF PAGES

Figure A7-13

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

VOR/DME

STANDARD INSTRUMENT APPROACH PROCEDURE

FLIGHT STANDARDS SERVICE - FAR PART 97. 23

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

TERMINAL ROUTES

FROM	TO	COURSE AND DISTANCE	ALTITUDE
SHIRT INT (IAF)	KURLE/6.01 DME (NOPT)	270.00/0.41 (HDG) & 224.02/9.81 (MXQ R-044)	2600
HENNA INT	MXQ VOR/DME	085.02/8.61	2600
MXQ VOR/DME	KURLE	044.03/6.00	2600

MISSED APPROACH

MAP: MXQ R-044/1.31 DME

CLIMBING RIGHT TURN TO 4000 VIA HEADING 310 THEN DIRECT NXQ VOR/DME AND HOLD.

ADDITIONAL FLIGHT DATA:

HOLD NE, RT, 224.03 INBOUND.
FAS OBST: 1195 TREES 392646/834601
FAC CROSSES RWY C/L EXTENDED 3000 FROM THLD.
CHART: R-5503

1. PT L SIDE OF COURSE 044.0 OUTBOUND 2600 FT WITHIN 10 MILES OF KURLE (IAF)
2.
3. FAC 224.02 FAF KURLE DIST FAF TO MAP - THLD 5.21
4. MIN. ALT KURLE 2600
8. MSA FROM: MXQ VOR/DME 360-270 2600, 270-360 3100

MAG VAR: 3W EPOCH YEAR: 80

MINIMUMS

TAKEOFF: [X] STANDARD [ ] SEE FAA FORM 8260-15 FOR THIS AIRPORT ALTERNATE: N A [X]

CATEGORY =====>	A			B			C			D			E		
	MDA	VIS	HAT/HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA	MDA	VIS	HAT/ HAA
S-22	1460	2400	389	1460	2400	389	1460	2400	389	1460	5000	389			
CIRCLING	1580	1	509	1580	1	509	1580	1 1/2	509	1640	2	569			
WRIGHT-PATTERSON AFB ALTIMETER SETTING MINIMUMS															
S-22	1560	2400	489	1560	2400	489	1560	4000	489	1560	5000	489			
CIRCLING	1700	1	629	1700	1	629	1700	1 3/4	629	1740	2	669			

NOTES: OBTAIN LOCAL ALTIMETER SETTING, RUNWAY LIGHTS, AND APPROACH LIGHTS ON CTAF.
PROCEDURE NA SATURDAY/SUNDAY OR HOLIDAYS EXCEPT BY PRIOR ARRANGEMENT.
FOR INOPERATIVE ALSF-1, INCREASE S-22 CAT D VISIBILITY TO RVR 6000.

CITY AND STATE	ELEVATION: 1071 TDZE: 1071 AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP
MINGTON, OH	EXPRESS REGIONAL	MXQ	VOR/DME RWY 22, AMDT 2	AMDT 1 DATE 24 JUN 82

FAA FORM 8260 - 5 (computer generated) PAGE OF PAGES

Figure A7-14

ALL AFFECTED PROCEDURES REVIEWED?	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE
[X] YES [ ] NO		*

COORDINATED WITH:

ATA	AAT	ALPA	APA	AOPA	NBAA	OTHER (specify)
[ ]	[ ]	[ ]	[ ]	[X]	[X]	[X] DAY ATCT, ZID, AMGR.

FLIGHT CHECKED BY		
NAME: I. WEAR NOTIES	FIFO AVX	DATE: 10/07/09
DEVELOPED BY		
NAME: HAN DRON	FIFO AVX	DATE: 10/10/85
APPROVED BY		
NAME: IAM N. CHARGE MANAGER	FIFO AVX	DATE: 10/11/85

CHANGES:

1. FAC; PT OUTBOUND COURSE; HOLDING INBOUND COURSE; MAP; TERMINAL ROUTE COURSE/DISTANCE.
2. DELETED VDP.

* EFFECTIVE CONCURRENT WITH VOR RWY 4, AMDT 2.

REASONS:

1. IAPA COMPUTATION.
2. SIAP USES REMOTE ALTIMETER.

Figure A7-14a

APPENDIX 8. SPECIAL INSTRUMENT APPROACH PROCEDURE FAA FORM 8260-7

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION -- FLIGHT STANDARDS SERVICE

COPTER VOR/DME

SPECIAL INSTRUMENT APPROACH PROCEDURE -- FLIGHT STANDARDS SERVICE

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

If an instrument approach procedure of the above type is conducted at the below named airport, it shall be conducted in accordance with a charted instrument approach procedure predicated on the specifications contained herein, unless an approach is conducted in accordance with a different procedure for such airport authorized by the Administrator. Minimum altitudes shall correspond with those established for en route operation in the particular area or as set forth below.

TERMINAL ROUTES

FROM	TO	COURSE AND DISTANCE	ALTITUDE
LFT VORTAC (IAF)	LLA VORTAC R-059/20.00	180.01/21.08	1600
R-020 LLA VORTAC CW (IAF)	R-059 LLA VORTAC	20 DME ARC	1600
R-150 LLA VORTAC CCW (IAF)	R-059 LLA VORTAC	20 DME ARC	1600
LLA VORTAC R-059/20.00	GROPH 18.00 DME	239.00/2.00 (LLA R-059)	1200

MISSED APPROACH

MAP: LLA R-059/15.00

CLIMB TO 1600 DIRECT LLA VORTAC.

1. PT NA SIDE OF COURSE ____ OUTBOUND ____ FT WITHIN ____ MILES OF ____ (IAF)
2. PROFILE STARTS AT LLA R-059/20.00
3. FAC: 239.00 FAF: GROPH 18.00 DME DIST FAF TO MAP: - THLD: ____
4. MIN. ALT: R-059/20.00 1600, GROPH 1200
5. DIST TO THLD FROM OM: ____ MM: ____ IM: ____ 150 HAT: ____ 100 HAT: ____ GS ANT: ____
6. MIN GS INCPT: ____ GS ALT AT: ____ OM: ____ MM: ____ IM: ____
7. GS ANGLE: ____ TCH: ____
8. MSA FROM: LLA VORTAC 280-010 2800, 010-280 1700

ADDITIONAL FLIGHT DATA: SEE BACK FOR LISTING OF HELIPORTS SERVED.

FAS OBST: 50 TERRAIN 294600/920630

MAG VAR: 7E EPOCH YEAR: 85

MINIMUMS

TAKEOFF: [X] STANDARD [ ] SEE FAA FORM 8260-15 FOR THIS AIRPORT ALTERNATE: N A [X]

CATEGORY =====>	COPTER			B			C			D			E		
	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/ HAA	DH/ MDA	VIS	HAT/ HAA	DH/ MDA	VIS	HAT/ HAA	DH/ MDA	VIS	HAT/ HAA
H-239	300	3/4	295												
LAFAYETTE ALTIMETER SETTING MINIMUMS															
H-239	420	3/4	415												

NOTES: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE LAFAYETTE ALTIMETER SETTING.
PROCEED VFR FROM MAP TO LANDING AREA, OR CONDUCT THE SPECIFIED MISSED APPROACH PROCEDURE.
NIGHT VISIBILITY MINIMUM 1 MILE.

CITY AND STATE	ELEVATION: TDZE: AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
OIL PATCH, LA	Various Heliports	LLA	COPTER VOR/DME 239, AMDT 7	AMDT: 6
				DATED: 4/30/87

FAA FORM 8260 - 7 (computer generated) PAGE OF PAGES

Figure A8-1

NOTES CONTINUED: **ADDITIONAL FLIGHT DATA (CONT'D):**
HELICOPTER LOGISTICS - OIL PATCH (7R4) LANDING AREA, 10, 306.01/2.51.
PETROL AIR (LA33)- LANDING AREA, 20, 292.02/2.52.
ABC HELICOPTERS - OIL PATCH TERMINAL (2L43) LANDING AREA, 26, 335.03/3.83.

AIR CARRIER NOTES:

The procedure on the other side and the foregoing data are hereby:

FLIGHT CHECKED BY		
NAME: **I. M. FEARLESS**	FIFO **LFT**	DATE: **11 Mar 91**
DEVELOPED BY		
NAME: **I. TERPSDIT**	FIFO **LFT**	DATE: **1 Mar 91**
RECOMMENDED BY		
NAME: **I. M. WRIGHT** MANAGER	FIFO **LFT**	DATE: **12 Mar 91**
APPROVED BY		
NAME: **I. GESSO**	REGION, FLT STANDARDS **ASO**	DATE: **03/28/91**

OPERATIONS SPECIFICATIONS -- AIRPORT

_____ holding Air Carrier Operating Certificate No. _____ hereby acknowledges receipt of Operations Specifications to operate into and out of the airport named on the other side as a ☐ Regular, ☐ Refueling, ☐ Alternate, ☐ Provisional for _____ airport with the following type aircraft:

Unless otherwise authorized in the Operations Specifications - Airport, an instrument approach of this type shall be conducted in accordance with the procedure specified on the other side and the air carrier minimums specified above with the following exceptions:

DATE: _____ RECEIVED FOR THE AIR CARRIER BY: _____ TITLE: _____
SIGNATURE

AMENDMENT NO. _____

BY DIRECTION OF THE ADMINISTRATOR _____ _____
SIGNATURE TITLE

EFFECTIVE DATE: _____

Figure A8-1a

APPENDIX 9. STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD FAA FORM 8260-9

STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD

PART - A OBSTRUCTION DATA

1. APP SEGMENT	FROM	TO	OBSTRUCTION	COORDINATES	ELEV. MSL	ROC	ALT. ADJUSTMENTS	MIN. ALT.
FEEDER	HENNA INT	MXQ VOR/DME	1. TWR (36-2345)	392704/835002	1321 (1A)	1000		2321/2300
			2. TERRAIN	392703/835003	1139		AS1500	2639/2600
FEEDER	MXQ VOR/DME	KURLE/6.01 DME	1.		1321 (1A)	1000		2321/2300
			3. TERRAIN	392949/834137	1139		AS1500	2639/2600
INITIAL (DR)	SHIRT INT	R-044/11.00 DME	4. TWR (36-3456)	393909/833945	1337 (1A)	1000		2337/2300
		(NOPT)	3.		1139		AS1500	2639/2600
INTERMEDIATE	R-044/11.00 DME	KURLE/6.01 DME	5. BLDG (36-4567)	393633/834209	823 (4D)	500	AC50, DG1200	1373/2600
			6. TERRAIN	393634/834208	999		AS1000	1999/2000
FINAL	KURLE/6.01 DME	R-044/1.30 DME	7. 100' TREES	392646/834601	1195 (2C)	250		1445/1460
			8. TERRAIN	393849/834558	1095			
							RA 109	1554/1560
	KURLE/6.01 DME	10 NM	9. TWR (36-4321)	393008/835032	1380 (1A)	1000		2380/2400
2. PROCEDURE TURN			3.		1139		AS1500	2635/2600
MAP:	R-044/1.30	MXQ VOR/DME				ASC		
3. MISSED APPROACH								
ELEV:	1201							

4. CIRCLING AREA	DISTANCE	HT. ABV. ARPT. REQUIRED	HT. ABV. ARPT. ACTUAL					
CATEGORY A	1.3 NM	350	509 / 629	10. TWR (36-3421)	392647/834842	1278 (1A)	300	/ RA109	1580 / 1700
CATEGORY B	1.5 NM	450	509 / 629	10.		1278 (1A)	300	/ RA109	1580 / 1700
CATEGORY C	1.7 NM	450	509 / 629	10.		1278 (1A)	300	/ RA109	1580 / 1700
CATEGORY D	2.3 NM	550	569 / 669	1.		1321 (1A)	300	HAA / RA109	1640 / 1740
CATEGORY E	4.5 NM	550							

5. MINIMUM SAFE ALTITUDES — PRIMARY NAVAID: MXQ VOR/DME

SECTOR	OBSTRUCTION	BRG / DIST	ELEVATION	M S A	SECTOR	OBSTRUCTION	BRG / DIST	ELEVATION (MSL)	M S A
360-090	TWR (36-0684)	162/4.1	1405 (4D)	2500	180-270	TWR (36-0020)	263/24.8	1569 (2C)	2600
090-180	TWR (36-0274)	137/8.7	1502 (4D)	2600	270-360	TWR (36-0043)	312/27.8	2049 (4D)	3100

CITY AND STATE	AIRPORT & ELEVATION 1071	FACILITY	PROCEDURE AND AMENDMENT NO:	REGION
MINGTON, OH	EXPRESS REGIONAL	MXQ VOR/DME	VOR/DME RWY 22, AMDT 2	AGL

FAA Form 8260 - 9 (computer generated)

Figure A9-1

NOTES / EXPLANATIONS FROM OPPOSITE SIDE OF FORM:
AIRSPACE DATA:
1. RWY 22 THR: 392633.58/834711.02
2. FAF COORDS: 393018.52/834259.56
3. DIST THR TO 1000' PT: 2.32 NM
4. WIDTH FINAL SEGMENT AT 1000' PT: 2.26 NM
   HI TERRAIN FINAL SEGMENT: 1095 MSL
5. FINAL SEGMENT TRUE COURSE: 221.03
6. DIST FAF TO 1500' PT: 4.07 NM
7. WIDTH INTERMEDIATE SEGMENT AT 1500' PT: 4.60 NM
   HI TERRAIN INTERMEDIATE SEGMENT: 999 MSL
8. INTERMEDIATE SEGMENT TRUE COURSE: 221.03
9. HI TERRAIN IN PT AREA: 1135 MSL

PART B - SUPPLEMENTAL DATA

1. COMMUNICATIONS WITH :	2. WEATHER SERVICE	3. ALTIMETER SETTING
DAY ATCT	[ ] ESSA OTHER: SAWRS	SOURCE: SAWRS/FFO
	[ ] FAA	
	[ ] A/C	DISTANCE: 0/26.78
SATISFACTORY ON: [X] VHF [X] UHF [ ] HF	LOCATION: ON AIRPORT	HOURS REMOTE OPERATION: 1600 SAT - 1600 MON
	HRS OPTN: 24	ADJUSTMENT: 108.91

4. MONITOR STATUS	PRIMARY	SECONDARY
	NAVAID: MXQ VOR/DME	NAVAID:
	MONITOR POINT: DISPATCH CENTER	MONITOR POINT:
HRS OPTN:	CAT. 1: 1600 MON - 1600 SAT	CAT. 1:
	CAT. 3:	CAT. 3:

5. AIRSPACE				
	FLOOR OF CONTROLLED AIRSPACE UNDER FAC		[X]	CONTROL AREA
	[X] CONTROL ZONE: 24	HOURS OPTN	[X]	TRANSITION AREA

6. APPROACH & RUNWAY LIGHTING				
	[ ]	ALS	[X]	REIL 22
	[ ]	(S) SALS	[X]	TDZ
	[X]	MALS 4, 22	[X]	C/LINE 4-22
	[ ]	HIRL	[X]	OTHER (Specify) VASI 4,22
	[ ]	MIRL		

7. RUNWAY MARKINGS	8. RUNWAY VISUAL RANGE
ALL WEATHER PIR-G 22	APPROACH 22
INSTRUMENT NPI-G 4	ROLL OUT

9. GLIDE SLOPE		
	G S ANGLE:	ELEV RWY THRESHOLD:
	DISTANCE FROM RWY:	ELEV GS ANTENNA:
		THRESHOLD CROSSING HEIGHT:

10. FINAL APPROACH COURSE AIMING			
	[ ]	RUNWAY THRESHOLD	3000 F T. FROM THRESHOLD
	[X]	ON CENTERLINE	F T. FROM CENTERLINE

11. WAIVERS OF STANDARDS	NUMBER OF WAIVERS ON FILE	DATES OF APPROVAL
	NONE	

PART C - REMARKS: NO VDP DUE TO OBSTACLE PENETRATIONS.
MAP PRIOR TO THR TO REDUCE MDA.
TERPS PARAGRAPH 289 APPLIED TO 1235 TREES 392950/834137.
CALL CTAF FOR WX, HIRL, ALSF-1; PPR FOR SAME 1600 SAT - 1600 MON.
PCL: REIL - 5 CLICKS, VASI - 5 CLICKS, PAUSE, 3 MORE CLICKS; ALL OFF - 7 CLICKS.
SIAP NA 1600 SAT - 1600 MON (+ HOL) EXCEPT BY PPR.

PART D - PREPARED BY:	DATE:
HAN DRON	01/23/96
TITLE: AIRSPACE SYSTEM INSPECTION PILOT	OFFICE: XXX FIFO

Figure A9-1a

STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD

PART - A OBSTRUCTION DATA

1. APP SEGMENT	FROM	TO	OBSTRUCTION	COORDINATES	ELEV. MSL	ROC	ALT. ADJUSTMENTS	MIN. ALT.
FEEDER	DAMAS INT	SEMET INT	1. 100' TREES	363030/815910	4347 (2C)	1500 $	AT153	6000/6000
			2. TERRAIN	363030/815910	4247		AS1500	
	SEMET	MOCCA LOM/INT	3. 100' TREES	363640/821705	2504 (2C)	1500 $	PT96	4004/4100 #
			4. TERRAIN	363640/821705	2404		AS1500	
INITIAL	ENDAL INT	KEIPY INT	5. 100' TREES	364110/821145	3210 (2C)	1000	AT790	5000/5000
			6. TERRAIN	364110/821145	3110		AS1000	
INTERMEDIATE: ILS	KEIPY (10 NM)	GS INTCP	7. 100' TREES	363900/821615	2709 (2C)	500	GS391	3600/3600
			8. TERRAIN	363900/821615	2609		AS1000	3609/3600
INTERMEDIATE: LOC	KEIPY (10 NM)	MOCCA	7.		2709 (2C)	500		
			8.		2609		AS1000	3609/3600
FINAL: ILS	GS INTCP	DH				ASC		1718/200
			9. TERRAIN	363305/822037	2050			
FINAL: LOC	MOCCA	EAVER INT	10. 100' TREES	363305/822037	2150 (2C)	250		2400/2400
			9.		2050			
STEPDOWN	EAVER	THR	11. 100' TREES	363204/822106	1950 (2C)	250		2200/2200
			12. TERRAIN	363204/822106	1850			
			7.		2709 (2C)	1000	GS391	4100/4100
2. PROCEDURE TURN	MOCCA	10 NM	8.		2609		AS1500	4109/4100
MAP:	DH/THR	BOOIE LOM/INT				ASC		
3. MISSED APPROACH		AFTEN INT						
ELEV:	1593							

4. CIRCLING AREA	DISTANCE	REQUIRED	ACTUAL	HT. ABV. ARPT.
CATEGORY A	1.3 NM	350	881/741	
CATEGORY B	1.5 NM	450	881/741	
CATEGORY C	1.7 NM	450	881/801	
CATEGORY D	2.3 NM	550	881/801	
CATEGORY E	4.5 NM	550		

5. MINIMUM SAFE ALTITUDES — PRIMARY NAVAID: MOCCA LOM

SECTOR	OBSTRUCTION	BRG / DIST	ELEVATION	M S A	SECTOR	OBSTRUCTION	BRG / DIST	ELEVATION (MSL)	M S A
360-090	100' TREES	038/20.1	4308	5400	180-270	100' TREES	180/25.3	5290	6300
090-180	100' TREES	165/29.2	6367	7400	270-360	TWR (43-3456)	327/25.4	4406	5500

CITY AND STATE	AIRPORT & ELEVATION	FACILITY	PROCEDURE AND AMENDMENT NO:	REGION
KINGS, TN	SPORT CITY 1519	I-TRI	ILS RWY 23, AMDT 22	ASO

FAA Form 8260 - 9 (computer generated)

Figure A9-2

NOTES / EXPLANATIONS FROM OPPOSITE SIDE OF FORM:
AIRSPACE DATA:
1. RWY 23 COORDS: 362853.18/822403.05
2. FAF COORDS: 363319.30/821905.00
3. DIST THR TO 1000' PT: 4.81 NM.
4. WIDTH FINAL SEGMENT AT 1000' PT: 1.60 NM.
   HI TERRAIN FINAL SEGMENT: 2050 MSL.
5. FINAL SEGMENT TRUE COURSE: 223.12
6. DIST FAF TO 1500' PT: 8.8 NM.
7. WIDTH INTERMEDIATE SEGMENT AT 1500' PT: 7.3 NM.
   HI TERRAIN INTERMEDIATE SEGMENT: 2609 MSL.
8. INTERMEDIATE SEGMENT TRUE COURSE: 223.12
9. HI TERRAIN IN PT AREA: 2609 MSL.

PART B - SUPPLEMENTAL DATA

1. COMMUNICATIONS WITH:	2. WEATHER SERVICE	3. ALTIMETER SETTING
TRI APPCON	[X] ESSA OTHER:	SOURCE: TRI ATCT
	[ ] FAA	DISTANCE: ON AIRPORT
	[ ] A/C	
SATISFACTORY ON: [X] VHF [X] UHF [ ] HF	LOCATION: ON AIRPORT	HOURS REMOTE OPERATION:
	HRS OPTN: 24	ADJUSTMENT:

4. MONITOR STATUS	PRIMARY	SECONDARY
	NAVAID: I-TRI	NAVAID: MOCCA LOM
	MONITOR POINT: TRI ATCT	MONITOR POINT: TRI ATCT
	HRS OPTN: CAT. 1 0630-2300 (LCL); CAT. 3 2300-0630 (LCL)	HRS OPTN: CAT. 1 0630-2300 (LCL); CAT. 3 2300-0630 (LCL)

5. AIRSPACE	FLOOR OF CONTROLLED AIRSPACE UNDER FAC			
	[X] CONTROL ZONE: 16.5	HOURS OPTN	[X]	TRANSITION AREA
			[ ]	CONTROL AREA

6. APPROACH & RUNWAY LIGHTING				
	[ ]	ALS	[X]	REIL 23
	[ ]	(S) SALS	[ ]	TDZ
	[X]	MALS 5, 23, 9, 27	[X]	C/LINE 23
	[X]	HIRL 5-23	[X]	OTHER (Specify) VASI 5
	[ ]	MIRL		

7. RUNWAY MARKINGS	8. RUNWAY VISUAL RANGE
ALL WEATHER PIR-G 5-23	APPROACH 23 *
INSTRUMENT NPI-G 9-27	ROLL OUT 23

9. GLIDE SLOPE		
	G S ANGLE: 3.00	ELEV RWY THRESHOLD: 1518.36
	DISTANCE FROM RWY: 1050	ELEV GS ANTENNA: 1513.2/ RWY ABM 1518.4
		THRESHOLD CROSSING HEIGHT: 55.0

10. FINAL APPROACH COURSE AIMING			
	[X]	RUNWAY THRESHOLD	F T. FROM THRESHOLD
	[X]	ON CENTERLINE	F T. FROM CENTERLINE

11. WAIVERS OF STANDARDS	NUMBER OF WAIVERS ON FILE	DATES OF APPROVAL
	1	2/18/77

PART C - REMARKS: $ - DESIGNATED MOUNTAINOUS TERRAIN REDUCED CLEARANCE 1500' ROC.
- PT REQUIRED: DG FROM MOCCA AT 4100 = 430 FT/NM.
TOWER CLOSED 2300-0630 (LCL); ALSF-1 BECOMES SSALS; ALTERNATE MINIMA NA.
WAIVER: GS EQUIPMENT SHELTER LESS THAN 250 FT FROM CENTERLINE (242'). NO EFFECT ON MINIMUMS.
* US WEATHER BUREAU PROVIDES RWY 22 APPROACH RVR READOUT 24 HOURS.

PART D - PREPARED BY:	DATE:
S. I. APPROCHE	03/30/89
TITLE: AERONAUTICAL INFORMATION SPECIALIST	OFFICE: ABC FIFO

Figure A9-2a

APPENDIX 10. EMERGENCY DF APPROACH PROCEDURE FAA FORM 8260-10

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

EMERGENCY DF APPROACH PROCEDURE

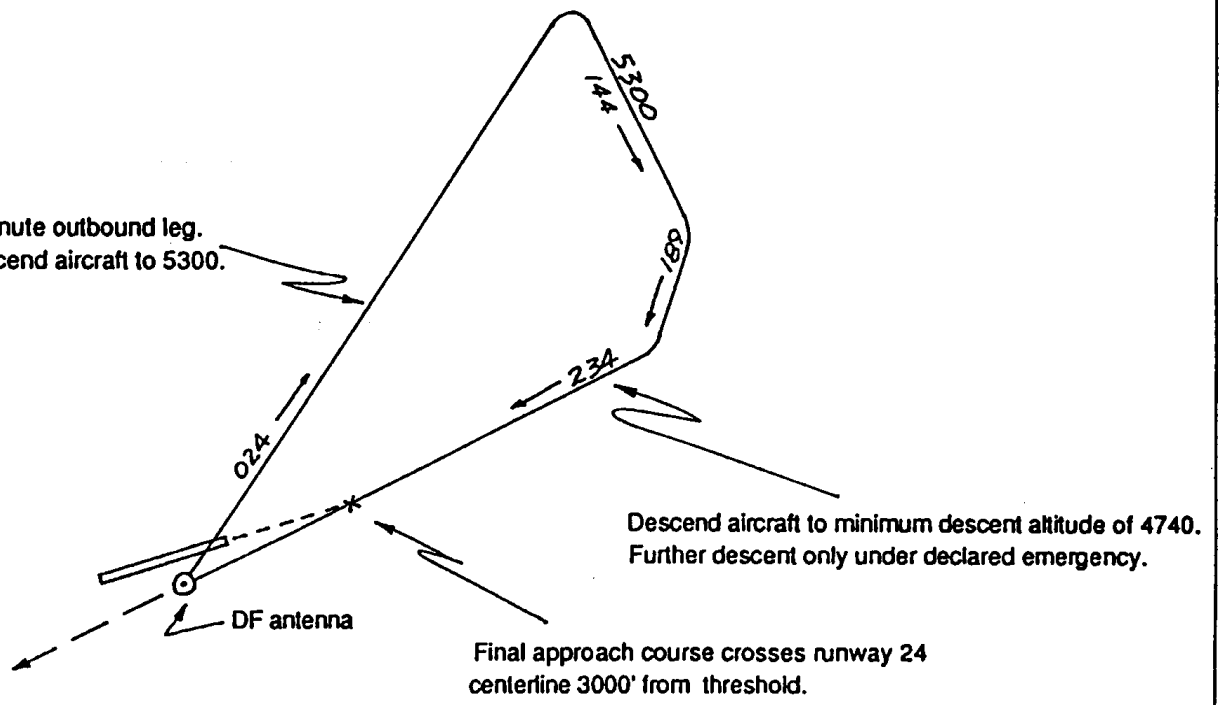
FLIGHT STANDARDS SERV'CE

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

BEARINGS AND DISTANCES ARE FROM THE DF ANTENNA. SECTOR ALTITUDES REFLECT OBSTACLE CLEARANCE ONLY, NOT FACILITY COVERAGE.

TRANSITION TO DF ANTENNA

SECTOR	DISTANCE	MEA
360-360	100 NM	10100
360-360	40 NM	7400
090-360	40 NM	6900
360-360	20 NM	6300



MISSED APPROACH:

AFTER PASSING DF ANTENNA, CLIMB TO 6300 ON COURSE 234 WITHIN 10 MILES.

DF CONTROL FROM: ANTIOCH FSS

MAG VAR: 11 E **EPOCH YR: 85**

CITY AND STATE	ELEVATION: 3965 TDZE: 3949 AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
				AMDT: 5
ANTIOCH, NE	ANTIOCH COUNTY AIRPORT	AOO DF	DF RWY 24, AMDT 6, 8/7/91 LOW ALTITUDE (MAX 150K)	DATED: 7/14/89

FAA FORM 8260 - 10 (computer generated) Page 1 of 1 Pages

Figure A10-1

APPENDIX 11.
DEPARTURE PROCEDURES / TAKEOFF MINIMUMS
FAA FORM 8260-15

U.S. DEPARTMENT of TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

DEPARTURE PROCEDURES / TAKEOFF MINIMUMS

Bearings, headings, courses 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, except visibilities which are in statute miles or in feet RVR.

COORDINATED WITH:

ATA	AAT	ALPA	APA	AOPA	NBAA	OTHER (specify)
[X]	[ ]	[X]	[X]	[X]	[X]	[X] ZID, CVG ATCT, LUK TOWER, AMGR.

TAKEOFF MINIMUMS:

RWYs 2L, 2R, 6 400-1 or Standard with minimum climb of 400' per NM to 1800.
RWYs 20L, 20R, 24 300-1

RWY 20L - 150' AGL tower 3000' from departure end of runway, 600' right of centerline.
RWY 20R - 150' AGL tower 3000' from departure end of runway, 600' left of centerline.
RWY 24 - 130' AGL trees 2430' from departure end of runway.

IFR DEPARTURE PROCEDURE:

RWYs 2L, 2R, 6, 20L, 20R, 24 - Climb to 1800 before turning on course.

TAKEOFF OBSTACLES:

RWY 2L - 866 Tree 390752/842457
RWY 2R - 856 Tree 390756/842433
RWY 6 - 749 Tree 390638/842345
RWY 20L - 716 Tree 390446/842511
RWY 20R - 895 Tree 390505/842627
RWY 24 - 831 Tree 390555/842637

DEPARTURE OBSTACLES:

RWY 20L - 1047 Antenna 390452/842651
RWYs 2L, 2R, 20R, 24 - 1796 Tower 390659/842315

* Concurrent with ILS RWY 20L, Amdt 13.

DEVELOPED BY		APPROVED BY	
SIGNATURE: I. M. WRONG	DATE: 06/30/91 FIFO: ANY	SIGNATURE: I. M. WRIGHT	DATE: 06/30/91 FIFO: ANY

CITY AND STATE	AIRPORT	EFFECTIVE DATE	AMDT. NO.
ROSETOWN, OH	ROSETOWN MUNI AIRPORT	* Routine	6

FAA FORM 8260 - 15 (computer generated)

Figure A11-1

U.S. DEPARTMENT of TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

DEPARTURE PROCEDURES / TAKEOFF MINIMUMS

Bearings, headings, courses 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, except visibilities which are in statute miles or in feet RVR.

COORDINATED WITH:

ATA	AAT	ALPA	APA	AOPA	NBAA	OTHER (specify)
[X]	[ ]	[X]	[X]	[X]	[X]	[X] SEA FSDO, ZLX, ARPT MGR.

TAKEOFF MINIMUMS:

RWYs 3, 7, 21, 25, 34 Standard
RWY 16 NA

IFR DEPARTURE PROCEDURE:

RWYs 3 and 7 turn left, RWYs 21, 25, 34 turn right, direct PIH VORTAC.
Aircraft departing on PIH VORTAC R-235 CW R-016 climb on course.
All others continue climb on R-235 to 6000, then climbing right turn direct PIH VORTAC, cross at or above 7300.

TAKEOFF OBSTACLES:

DEPARTURE OBSTACLES:

RWYS 3, 7, 21, 25, 34: 9271 TERRAIN 424600/1120830

* Concurrent with Airspace Docket ANM-91-28

DEVELOPED BY		APPROVED BY	
SIGNATURE: I. M. WRONG	DATE: 06/30/91 FIFO: ANY	SIGNATURE: I. M. WRIGHT	DATE: 06/30/91 FIFO: ANY

CITY AND STATE	AIRPORT	EFFECTIVE DATE	AMDT. NO.
ATHOL, ID	HENLEY MUNICIPAL	*	1

FAA FORM 8260 - 15 (computer generated)

Figure A11-2

*U.S. GOVERNMENT PRINTING OFFICE:1994-301-719/95817

CHANGE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

8260.19C CHG 1

9/18/98

SUBJ: FLIGHT PROCEDURES AND AIRSPACE

1. PURPOSE. This change transmits revised pages to Order 8260.19C, Flight Procedures and Airspace.

2. DISTRIBUTION. This order is distributed in Washington headquarters to the branch level of the offices of System Safety, Aviation Policy and Plans, Air Traffic Systems Development, Aviation Research, Communications, Navigation, and Surveillance Systems, Airport Safety and Standards; to Flight Standards, Air Traffic, and Airway Facilities Services; and to the National Flight Data Center (NFDC); to the National Flight Procedures Office, the National Airway Systems Engineering, and Regulatory Standards Divisions at the Mike Monroney Aeronautical Center; to the branch level in the regional Flight Standards, Air Traffic, Airway Facilities, and Airports Divisions; to all Flight Inspection Offices; International Flight Inspection Office; the Europe, Africa, and Middle East Area Office; Flight Standards District Airway Facilities Field Offices; special mailing list ZVN-826; and Special Military and Public Addressees.

3. CANCELLATION. This change cancels Order 8260.25B, Implementing Epoch Year Magnetic Variation Values, dated February 11, 1986.

4. EXPLANATION OF CHANGES.

a. **Portions of Chapters 1, 2, and 3 are rewritten** to reflect organizational changes and reassignment of responsibilities of the Flight Standards Service (AFS) and the Aviation System Standards (AVN).

b. **Responsibilities of the National Flight Data Center (NFDC)** are more clearly defined.

c. **Computer Generated Forms.** Modifies instructions for the use of computer generated forms in the development of instrument procedures.

5. DISPOSITION OF TRANSMITTAL. After filing, this change transmittal should be retained.

PAGE CONTROL CHART

REMOVE PAGES	DATED	INSERT PAGES	DATED
1-1 thru 1-10	9/16/93	1-1 thru 1-9	9/18/98
2-1 thru 2-32	9/16/93	2-1 thru 2-28	9/18/98

Distribution: A-W(SY/PO/UA/AR/ND/AS/AT/FS/AF)-3; ATA-100(15CYS); AVN-100(150CYS); **Initiated By:** AFS-400
AOS-200(10CYS); AMA-200(80CYS); A-X(FS/AT/AF/AS)-3; A-FFS-4(ALL); AEU-1(10CYS);
A-FFS-7(STD); A-FAF-2/3/7(STD); ZVN-826; Special Military and Public Addressees

PAGE CONTROL CHART

REMOVE PAGES	DATED	INSERT PAGES	DATED
3-3 and 3-4	9/16/93	3-3 and 3-4	9/18/98
3-7 thru 3-12	9/16/93	3-7 thru 3-12	9/18/98

Richard O. Gordon
Acting Director, Flight Standards Service

CHANGE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

8260.19C CHG 2

12/29/99

SUBJ: FLIGHT PROCEDURES AND AIRSPACE

1. PURPOSE. This change transmits revised pages to Order 8260.19C, Flight Procedures and Airspace.

2. DISTRIBUTION. This order is distributed in Washington headquarters to the branch level in the Offices of System Safety, Aviation Policy and Plans, Air Traffic Systems Development, Aviation Research, Communications, Navigation, and Surveillance Systems, Airport Safety and Standards; to Flight Standards, Air Traffic, and Airway Facilities Services; to the Aeronautical Information Division (ATA-100); to the National Flight Procedures Office (AVN-100), the National Airway Systems Engineering and the Regulatory Standards Divisions at the Mike Monroney Aeronautical Center; to the branch level in the regional Flight Standards, Air Traffic, Airway Facilities, and Airports Divisions; to all Flight Inspection Offices; International Flight Inspection Office; the Europe, Africa, and Middle East Area Office; to all Flight Standards and Airway Facilities Field Offices; special mailing list ZVN-826; and Special Military and Public Addressees.

3. EFFECTIVE DATE. May 15, 2000.

4. EXPLANATION OF CHANGES. Chapters 4, 5, 6, and 7 are rewritten to reflect organizational changes and reassignment of responsibilities of the Flight Standards Service and the Aviation System Standards (AVN). Policy and responsibilities are also revised to reflect current policy and terminal instrument procedures (TERPS) instruction letters.

a. Chapter 2.

(1) Paragraph 223a. Revises AVN-100 - National Flight Data Center (NFDC) coordination procedures for FDC Notice to Airmen (NOTAM) transmittal.

(2) Paragraph 224. Updates NOTAM policy for departure procedures (DP's).

(3) Paragraph 264. Updates information relating to naming navigational fixes to satisfy the requirements of Order 8260.40B, Flight Management System.

b. Chapter 4.

(1) Paragraph 404. Updates information to reflect modifications made in Order 8260.3B CHG 17, United States Standard for Terminal Instrument Procedures (TERPS).

(2) Paragraph 421. Modifies latter portion of paragraph to reflect evaluation and disposition of user comments.

Distribution: A-W(SY/PO/UA/AR/ND/AS/AT/FS/AF)-3; ATA-100(15CYS); AVN-100(150CYS); AOS-200(10CYS); AMA-200(80CYS); A-X(FS/AT/AF/AS)-3; A-FFS-O (STD); AEU-1(10CYS); A-FAF-O(STD); ZVN-826; Special Military and Public Addressees **Initiated By:** AFS-420

(3) **Paragraph 430.** Clarifies establishment of visual descent point (VDP).

(4) **Section 4.** Terminates the use of commercial broadcast stations for instrument procedure development. Section RESERVED for Special Procedure processing instructions.

(5) **Section 7.** Updates information relating to instrument departure procedures to bring the order in consonance with Order 8260.46, Instrument Departure Procedure (DP) Program. Defines policy for DP development, provides specifications for textual versus graphic departures, and provides methodology for publication of both obstacle and ATC required altitudes/climb gradients.

(6) **Section 8.** Removes all references to Standard Instrument Procedures (SID's) and clarifies AVN-100 responsibilities relating to Standard Terminal Arrival Routes (STAR's).

c. Chapter 5.

(1) **Paragraph 501.** Changes and reassigns the responsibilities of AVN-100, and adds the responsibilities of the All Weather Operations Program Managers in the Regional Flight Standards Divisions.

(2) **Paragraph 502.** Defines procedures for obstruction evaluations (OE) more clearly and updates responsibilities to reflect recent organizational changes.

(3) **Paragraph 506.** Clarifies AVN-100 actions.

(4) **Paragraph 507.** Changes text and graphics to more clearly define controlled airspace requirements.

d. Chapter 6.

(1) **Paragraph 600.** Adds U.S. Navy address for official inquiries.

(2) **Paragraph 601.** Emphasizes importance and responsibility of documenting/ maintaining military fixes.

e. Chapter 7.

(1) **Paragraph 701d.** Incorporates regional level of responsibility.

(2) **Paragraph 702.** Provides a more concise list of operational benefits/improvements.

(3) **Paragraph 703.** Provides more extensive information for performing a safety analysis.

(4) **Paragraph 706a(5).** Adds information concerning an unsuccessful flight check.

(5) **Paragraph 706e.** Adds drawing concerning "Stand-Alone Fix on Localizer Course."

(6) **Section 8.** Provides more information regarding the responsibility for Facilities and Equipment (F&E) support.

f. Chapter 8.

(1) Paragraph 815g. Adds requirement for AVN-100 to ensure a missed approach procedure is available during NAVAID outages.

(2) Paragraph 816l(1). Adds more definitive guidance in the Standard Notes for area navigation (RNAV) glide slope.

(3) Paragraph 816n(4). Adds information concerning magnetic variation of departure procedures.

g. Appendix 1. Updates Flight Procedures' references, and adds U.S. Army Topographic Units to accuracy codes and sources.

h. Appendix 2.

(1) Paragraph 101a. Deletes the requirement to list the accuracy code(s) on 8260 series forms, but the actual adjustment(s) is documented.

(2) Paragraph 101b(2)(b). Expands Department of Defense (DOD) sources to include digital elevation data and tactical flying charts and defines accuracy more clearly.

(3) Paragraph 101b(6). Adds accuracy code requirements under digital terrain.

5. DISPOSITION OF TRANSMITTAL. After filing, this change transmittal should be retained.

PAGE CONTROL CHART

REMOVE PAGES	DATED	INSERT PAGES	DATED
iii thru xiii	9/16/93	iii thru xiii	12/29/99
1-3 and 1-4	9/18/98	1-3 and 1-4	12/29/99
2-11 thru 2-16	9/18/98	2-11 thru 2-16	12/29/99
2-21 and 2-22	9/18/87	2-21	12/29/99
		2-22	9/18/98
2-25 and 2-26	9/18/98	2-25 and 26	12/29/99
3-7 and 3-8	9/18/98	3-7	12/29/99
		3-8	9/18/98
4-1 thru 4-19	9/16/93	4-1 thru 4-18	12/29/99
5-1 thru 5-22	9/16/93	5-1 thru 5-21 (and 5-22)	12/29/99
6-1 (and 6-2)	9/16/93	6-1 (and 6-2)	12/29/99
7-1 thru 7-13	9/16/93	7-1 thru 7-14	12/29/99
8-23 thru 8-26	9/16/93	8-23 thru 8-26	12/29/99

PAGE CONTROL CHART

REMOVE PAGES	DATED	INSERT PAGES	DATED
APPENDIX 1 1 thru 5	9/16/93	APPENDIX 1 1 thru 5 (and 6)	12/29/99
APPENDIX 2 1 thru 4	9/16/93	APPENDIX 2 1 thru 5 (and 6)	12/29/99

L. Nicholas Lacey
Director, Flight Standards Service