Federal Aviation Administration

UNITED STATES GOVERNMENT SPECIFICATIONS

FLIGHT INFORMATION PUBLICATION
TERMINAL PROCEDURES PUBLICATION

IAC 17
6 October 2023

Prepared by the Interagency Air Committee (IAC)

UNITED STATES GOVERNMENT SPECIFICATIONS FOR THE FLIGHT INFORMATION PUBLICATION TERMINAL PROCEDURES PUBLICATION

6 October 2023

These specifications have been developed by the Interagency Air Committee (IAC), composed of representatives of the Department of Defense and the Federal Aviation Administration, for use in the preparation of the United States Government Flight Information Publication Terminal Procedures Publication. These specifications shall be complied with, without deviation, until such time as they are amended by formal IAC action.

Changes to these specifications will be provided when necessitated by new requirements or through development action of the IAC.

Questions of interpretation that arise in the use of these specifications shall be referred to the Chair, Interagency Air Committee.

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CHANGES APPLIED TO CURRENT EDITION

REQUIREMENT DOCUMENTS

a. RD 844 – Modification of Hot Spot Depiction
b. RD 869 – Removal of AL Numbers on Military Charts

EDITORIAL CHANGES

a. None applied in this edition.

CHANGES APPLIED 30 AUGUST 2023

REQUIREMENT DOCUMENTS

a. RD 860 – Pilot Controlled Lighting on IAPs

EDITORIAL CHANGES

a. None applied in this edition.

CHANGES APPLIED 30 AUGUST 2023

REQUIREMENT DOCUMENTS

a. None applied in this edition.

EDITORIAL CHANGES

a. EC 23-08 – TPP Index Abbreviations

CHANGES APPLIED 20 APRIL 2022

REQUIREMENT DOCUMENTS

a. RD 842 – Alternate Minimums Explanatory Text

EDITORIAL CHANGES

a. None applied in this edition.

CHANGES APPLIED 16 NOVEMBER 2021

REQUIREMENT DOCUMENTS

a. None applied in this edition.

EDITORIAL CHANGES

a. EC 21-09 – Remove Teletype from TPP General Information Legend

CHANGES APPLIED 26 APRIL 2021

REQUIREMENT DOCUMENTS

a. RD 831 – Addition of MSAs on DPs

EDITORIAL CHANGES

a. None applied in this edition.

CHANGES APPLIED 27 JANUARY 2021

REQUIREMENT DOCUMENTS

a. RD 827 – Airport Name Standardization

EDITORIAL CHANGES

a. None applied in this edition.

CHANGES APPLIED 4 JUNE 2020

REQUIREMENT DOCUMENTS

a. RD 812 – Addition of PDC Communication

EDITORIAL CHANGES

a. None applied in this edition.

CHANGES APPLIED 7 APRIL 2020

REQUIREMENT DOCUMENTS

a. RD 810 – Modification of Cold Temperature Explanatory Guidance in TPP

EDITORIAL CHANGES

a. EC 20-03 – TPP Legend Text for Aircraft Approach Categories

AMENDMENT OF SPECIFICATIONS

1. PROCEDURE

a. Recommendations for amendments to specifications from the Department of Defense shall be directed to:

National Geospatial-Intelligence Agency
7500 GEOINT Drive
Springfield, VA 22150-7500

b. Recommendations for amendments to specifications from the Federal Aviation Administration shall be directed to:

Federal Aviation Administration
Aeronautical Information Services
SSMC-4 Sta # 4445
1305 East-West Highway
Silver Spring, MD 20910

2. AMENDMENT SYSTEM

a. Change to the specifications will be issued at the effective date of the latest Requirement Document (RD) and / or Editorial Change (EC).
b. The Specification will be dated, indicated along the upper margin of each page, to reflect the most current change.

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TABLE OF CONTENTS

CHAPTER 1
GENERAL

1.1 PURPOSE AND SCOPE

The purpose of these specifications is to provide appropriate guidelines to effect uniformity and standardization of content and portrayal techniques in the preparation and production of the U.S. Low Altitude Terminal Publication for use by both civil and military pilots.

1.2 REQUIREMENTS

1.2.1 General

The Terminal Procedures Publication will be produced on the Aeronautical Information Regulation and Control (AIRAC) cycle at 56 day intervals in perfect bound form and loose-leaf form.

Information shall be presented in textual, tabulated, and graphic form, normally printed to read parallel to the top edge of the publication.

Airport Diagrams, Standard Taxi Route Charts, Charted Visual Flight Procedures (PVFP) and Instrument Approach Procedure (IAP) charts shall be produced in accordance with IAC 4.

Graphic Instrument Departure Charts, including both Standard Instrument Departures (SIDs) and Graphic Obstacle Departure Procedures (ODPs), shall be produced in accordance with IAC 7.

Standard Terminal Arrival (STAR) charts shall be produced in accordance with IAC 14.

NOTE: Civil IAPs and associated data covering Hawaii and the Pacific Islands are published in the Pacific Chart Supplement.

Note: DOD High Altitude Instrument Approach Procedure Charts shall be produced in accordance with DOD product specification PS/1FA/091. The DOD Flight Information Publication, Instrument Approach/Departure Procedures-U.S., Terminal Change Notices (TCN), and Unscheduled Change Notices (UCN) shall be prepared and issued in accordance with the criteria described in the DOD Annex to IAC 4, Product Specification for FLIP Low Altitude IAP Worldwide.

1.2.2 Type Style

Type style will be Futura Medium unless otherwise specified.

1.3 QUALITY AND ACCURACY

The highest standards of accuracy in plotting, drafting, reproduction, and currency of information contained therein shall be maintained.

Type style, symbols, and line weights as illustrated herein, shall be adhered to. Type size may be varied when absolutely necessary.

Although the digital chart files are compiled in accordance with these specifications, the final product may vary slightly in appearance due to differences in printing techniques/processes and/or digital display technique.

1.4 APPENDICES

Appendices at the end of these specifications shall be used as a guide in the preparation of the U.S. Terminal Procedures Publications.

1.5 REFERENCES

Catalog of Photon Type Faces.

IAC 4, United States Government Specifications, Flight Information Publication - Instrument Approach Procedures and Airport Diagrams.

IAC 7, United States Government Specifications, Flight Information Publication - Graphic Instrument Departure Procedure (DP) Charts.

IAC 14, United States Government Specifications, Flight Information Publication - Standard Terminal Arrival Charts.

DOD Annex to IAC 4, Product Specification for DOD Flight Information Publication (FLIP), Low Altitude Instrument Approach Procedures Worldwide.

DOD High Altitude Instrument Approach Procedures PS/1FA/091.

CHAPTER 2
LAYOUT AND FORMAT

2.1 GENERAL

The Terminal Procedures Publication (TPP) shall be published as volumes, by geographical areas, in both bound and loose-leaf formats. The Change Notice (CN) volume shall be published in bound format only.

Each item of information carried has its own basic layout and format as described in the references cited in **Appendix 1**.

Pages shall be printed back to back, head to toe.

The publication shall be printed in black and brown ink.

These specifications address the terminal product for the U.S., Puerto Rico, and Virgin Islands.

2.2 SIZE AND DIMENSIONS

The size and dimensions of the publication shall be as indicated in **Appendix 1** for the TPP and **Appendix 15** for the CN.

2.3 COVERS (TPP)

2.3.1 Outside Front Cover

Font, style, size, shade and position shall be as indicated in **Appendix 1**. The front cover shall contain the following information, positioned as illustrated on **Appendix 1**.

The publishing agency and seal shall be shown in white type on a blue background strip located at the top of the cover.

The title shall be identified according to the volume, e.g.,

Example: U.S. Terminal Procedures
Publication
Northeast (NE) Vol 3 of 4

The dates on the cover shall reflect the effective Z (Zulu) time and date, and the expiration Z time and date of the aeronautical data. Dates shown shall consist of the day, month, and year; e.g. 00 JUL 0000. Names of the months shall be abbreviated to the first three letters as appropriate.

The "Consult Change Notice" note shall be shown below the effective dates. This note shall not be included on the cover of the Alaska Terminal Procedures Publication.

The area of coverage applicable to each volume shall be shown in blue, with boundaries and identification text in white.

The "Consult NOTAMs for the latest information" note shall be shown below the State(s) graphic.

The "Consult/Subscribe to FAA Safety Alerts and Charting Notices at (URL to current Safety Alerts and Charting Notices website here)" note shall be shown below the "Consult NOTAMs" note.

The IAC credit note “Published from digital files compiled in accordance with Interagency Air Committee specifications and agreements approved by Department of Defense and the Federal Aviation Administration” shall be shown following the Safety Alerts note.

References:

Appendix 1 - Outside Front Cover

2.3.2 Backbone Identification

The backbone of each bound volume shall show the volume identification, e.g. VOL NE-3, the area of coverage (states or areas abbreviated), the current date and the next issue date (abbreviated). Dates shall be separated by the word “TO”, e.g. 00 JUN 00 to 00 AUG 00.

References:

Appendix 1 - Outside Front Cover

2.3.3 Inside Front Cover

The Inside Front Cover shall contain the “Table of Contents”, the “CORRECTIONS, COMMENTS, AND/OR PROCUREMENT” information.

References:

Appendix 2 - Inside Front Cover

2.3.4 Outside Back Cover

The Outside Back Cover shall provide an “AREA OF COVERAGE” chart showing the boundaries of each volume. State coverage that has been split into more than one volume will be depicted by a degree of latitude and/or longitude. For reference, some city names will be added with reference points.

A QR Code shall be provided.

References:

Appendix 3 - Outside Back Cover (U.S.)
Appendix 4 - Outside Back Cover (Alaska)

2.3.5 Inside Back Cover

A “RATE OF CLIMB/DESCENT TABLE” in feet per minute shall be provided using the content and format indicated.

References:

Appendix 14 - Rate of Climb/Descent Table

2.4 ARRANGEMENT (TPP)

2.4.1 General

The content shall be arranged as specified below.

Table 2.1 TPP Arrangement

Inside Front Cover	Table of Contents, Contact, & Published by Information
A1	Inoperative Components or Visual Aids Table
B1	Explanation of Terms/Landing Minima Data
C1	General Information
D1	Abbreviations
E1	Legend - IAP Planview
F1	Legend - IAP Profile
G1	Legend - Standard Terminal Arrival Charts
G2	Legend - Departure Procedure Charts
H1	Legend - Airport Diagram/Sketch
I1	Legend - Approach Lighting Systems
J1	Frequency Pairing
K1	Index of Terminal Charts and Minimums
L1	IFR Takeoff Minimums, Departure Procedures, and Diverse Vector Area (Radar Vectors)
M1	IFR Alternate Airport Minimums
N1	Radar Minimums
O1	Land and Hold-Short Operations (LAHSO)
P1	Hot Spots
Z1	Standard Terminal Arrival Charts
Page 1	Terminal Charts
Inside Back Cover	Rate of Climb/Descent Table
Outside Back Cover	Area of Coverage

References:

Appendix 2 - Inside Front Cover

2.4.2 Page Numbering

All pages shall be numbered at the unpunched or unbound end only, with the page numbers centered at the top or bottom of the chart as appropriate.

The inside front and back cover shall not be numbered.

The supplemental pages, including STARs, shall be lettered and numbered, using 9 point Arabic type. Within the volumes the supplemental pages will be subdivided by Section and each Section shall be lettered and numbered, e.g., "TERMS/LANDING MINIMA DATA" will be page B1 through B3. Page numbers shall be centered .20" above or below the neatline of the top or bottom of the page as appropriate.

Chart pages shall be numbered using 7 point type.

2.4.3 Blank Pages

Pages left blank shall be labeled "INTENTIONALLY LEFT BLANK" using 18 point type. The words "INTENTIONALLY LEFT BLANK" shall be shown, using three lines, and shall be centered in the upper portion of the page so that the word "BLANK" will be at the center of the page.

The .010" neatline shall be shown.

The "INTENTIONALLY LEFT BLANK" pages shall not be identified in the Table of Contents.

Blank pages required to complete a signature, and included after the last numbered chart page, shall not be numbered or identified.

The first IAP chart will always be a facing page. If there is a blank page preceding the first chart, it will be identified as "Intentionally Left Blank".

2.4.4 Supplemental Pages

Supplemental Pages shall be identified at the top and bottom of each page in accordance with the format and point type shown in **Appendix 22**.

2.4.5 Takeoff, Alternate, and Radar Minimums

Civil Takeoff, Alternate and Radar Minimums shall be arranged in alphabetical order by city and airport name. Military Takeoff and Radar Minimums shall be arranged in alphabetical order by airport and city name. When the first word of a city name (civil) or airport name (military) is abbreviated, it will be arranged in alphabetical order by the abbreviation, as shown in the authoritative database, with the exception of the abbreviation "St", e.g., St Louis, which will be arranged by the complete name Saint Louis. In all other cases, the airport name will be extracted verbatim from the authoritative database.

2.4.6 Land and Hold Short Operations (LAHSO)

LAHSO entries shall be arranged by city and airport name as extracted verbatim from the authoritative database. Abbreviations will be alphabetized by the abbreviation with the exception of "St", e.g., St Louis as Saint Louis.

2.4.7 Hot Spots

Hot Spot entries shall be arranged by city and airport name as extracted verbatim from the authoritative database. Abbreviations will be alphabetized by the abbreviation with the exception of "St", e.g., St Louis as Saint Louis.

2.4.8 STAR Charts

Star Charts shall be arranged in alphabetical order by procedure name.

2.4.9 Date of Last Revision

The latest revision date (Julian) shall be shown on all pages other than the outside covers, using 7 point type, e.g., 99014, as shown in the Appendices. This date reflects the latest revision of any type made to that page.

2.4.10 Date of Last Procedural Revision

The AIRAC date of the last procedural (upnumber or upletter) revision applied to the chart, shall be shown using 7 point type, e.g., 25JUN15 as shown in the Appendices on Instrument Approach Procedure Charts, Takeoff Minimum and (Obstacle) Departure Procedures, Diverse Vector Area (Radar Vectors), RADAR Minimums, Graphic Instrument Departure Procedures, Standard Terminal Arrival charts, and Charted Visual Flight Procedure charts.

2.5 CONTENT (TPP)

2.5.1 Table of Contents

The Table of Contents shall be located on the inside front cover.

2.5.2 Inoperative Components or Visual Aids Table

The Inoperative Components or Visual Aids Table shall be formatted as indicated in **Appendix 5**

2.5.3 Explanation of Terms/Landing Minima Data

These pages shall contain "IFR LANDING MINIMA", "LANDING MINIMA FORMAT", "COPTER MINIMA", "RNAV (GPS) MINIMA", "CIRCLING APPROACH PROTECTED AIRSPACE", "AIRCRAFT APPROACH CATEGORIES", "MANUEVERING TABLE", "COMPARABLE VALUES OF RVR AND VISABILITY", "RADAR MINIMA" information, and other related terms and information as necessary.

References:

Appendix 6 - Explanation of Terms/Landing Minima Data

2.5.4 General Information

The General Information pages shall contain the information positioned as illustrated in **Appendix 7**.

2.5.5 Abbreviations

A listing of abbreviations shall appear in accordance with **Appendix 8**.

2.5.6 Legends

All terminal procedures symbology shall be depicted and identified in legends arranged in the following sequence (content and arrangement will be in accordance with the indicated IAC specification):

- Instrument Approach Procedures Planview Symbols (IAC 4).
- Instrument Approach Procedures Profile (IAC 4)
- Standard Terminal Arrivals (IAC 14)
- Graphic Instrument Departures (IAC 7)
- Airport Diagram/Airport Sketch (IAC 4)
- Approach Lighting Systems (IAC 4)

2.5.7 Frequency Pairing Table

Content and format shall be as indicated in **Appendix 9**.

2.5.8 Index of Terminal Charts and Minimums

An index shall be prepared for each geographical area and shall be current with each issue of charts.

References:

Appendix 10 - Index of Terminal Charts and Minimums
Appendix 11 - Index of Terminal Charts and Minimums - Complex

2.5.8.1 Index Make-up

The index shall be a columnized listing of charts, takeoffs, alternates, radar minima, LAHSO and Hot Spots arranged in alphabetical order by the associated city followed by the airport name. Military airports are arranged alphabetically by the airport name followed by the associated city.

When there is more than one airport associated with a city, the airports will be arranged under the city name in alphabetical order by the first word in the official airport name. When the first word of an airport name is abbreviated, it will be arranged in alphabetical order by the abbreviation, as shown in the authoritative database, with the exception of the abbreviation “St”, e.g., St Louis, which will be arranged by the complete name Saint Louis. In all other cases, the airport name will be extracted verbatim from the authoritative database.

The airport identifier will be placed in parenthesis after the airport name (FAA designator for civil airports, ICAO designator for military airports). Airports outside the contiguous United States will be shown with the FAA designated identifier in parenthesis followed by the ICAO location indicator in parenthesis.

The index shall be a columnized listing (2 columns per page) of charts and their page numbers contained in the publication arranged in accordance with the Table of Contents.

2.5.8.2 Cross References

Cross references within the index will be provided as follows:

- Airport names will be cross-referenced to the city.
- Military airports will be cross-referenced from the city and installation name as appropriate.
- Civil Airports commonly associated with a city listed in another volume shall be cross-referenced; e.g.,

CINCINNATI, OH
GREATER CINCINNATI INTL-SEE COVINGTON, KY
VOL SE-1

Continuation pages will not be listed in the index.

2.5.8.3 Format/Index Entries

The basic format is shown in **Appendix 10** and **Appendix 11**. DoD High/Low Altitude procedures shall be included in the appropriate volume. DoD High Altitude procedures shall precede Low Altitude procedures. Each entry in the index will include the following information where applicable in the indicated order:

Table 2.2 Order of Index Entries

Takeoff Minimums	
Diverse Vector Area (Radar Vectors)	
Alternate Airport Minimums	
Radar Minimums	
LAHSO	
Hot Spots	
STAR Charts	
IAPs	
	ILS or LOC
	ILS
	ILS (SA CAT I)
	ILS (SA CAT I & II)
	ILS (CAT II)
	ILS (CAT II & III)
	ILS (SA CAT II)
	ILS/DME
	ILS V (CONVERGING)
	GLS
	RNAV (RNP)
	RNAV (GPS)
	GPS
	LOC/DME
	LOC
	LOC/BC
	LDA
	SDF
	VOR/DME
	VOR/DME OR TACAN
	VOR
	VOR or TACAN
	TACAN

Table 2.2 Order of Index Entries (Continued)

	NDB/DME
	NDB
	COPTER ILS OR LOC
	COPTER ILS
	COPTER LOC/DME
	COPTER LOC
	COPTER LDA
	COPTER RNAV
	COPTER VOR/DME
	COPTER VOR
	COPTER TACAN
	COPTER NDB
	LORAN-C
	PRM AAUP
	ILS PRM
	ILS PRM (SA CAT I)
	ILS PRM (SA CAT I & II)
	ILS PRM (CAT II)
	ILS PRM (CAT II & III)
	ILS PRM (SA CAT II)
	GLS PRM
	RNAV (RNP) PRM
	RNAV (GPS) PRM
	LDA PRM
CVFP	
	CHARTED VISUAL
AIRPORT DIAGRAM	
DPS	
	RNAV DEPARTURE AAUP
	DEPARTURE (OBSTACLE)
	DEPARTURE
	DEPARTURE (COPTER)

2.5.9 IFR Takeoff Minimums, (Obstacle) Departure Procedures, and Diverse Vector Area (Radar Vectors)

Refer to IAC 4 for content and format.

2.5.10 IFR Alternate Airport Minimums

Refer to IAC 4 for content and format.

2.5.11 Radar Minimums

Refer to IAC 4 for content and format.

2.5.12 Land and Hold Short Operations (LAHSO)

Content and format shall be as indicated in **Appendix 12**.

2.5.13 Hot Spots

Hot Spot content and format shall be as indicated in **Appendix 13**.

2.5.14 Standard Terminal Arrival Charts

STARs will be in the front of each volume in alphabetical order by procedure name. Refer to IAC 14 for content and format.

2.5.15 Terminal Charts

Refer to IAC 4 for content and format of IAPs, CVFPs and Airport Diagrams.

Refer to IAC 7 for content and format of Graphic Departures.

2.5.16 Rate of Climb/Descent Table

A Rate of Climb/Descent Table shall be provided on the Inside Back Cover using the content and format as indicated in **Appendix 14**.

2.6 AMENDMENTS - TPP (COUNTERMINOUS U.S. ONLY) CHANGE NOTICE (CN)

2.6.1 General

A Change Notice (CN) will be produced for issue effective 28 days following the effective date of the volumes.

The CN will be a single-volume publication containing revised, amended, and original charts, and supplemental data changes affecting any volume. These changes will be effective on the CN effective date and will remain in effect for the next 28 days.

Except in extreme circumstances when safety of flight dictates, Airport Diagrams, Standard Terminal Arrivals, Standard Instrument Departures and Graphic Departure Procedures will not be included in the Chart Notice.

In the event it is necessary to promulgate important graphic or textual data that cannot be adequately disseminated through the FAA Notice to Airmen (NOTAM) system, a SPECIAL NOTICE accompanied by charts and/or page(s) of supplemental data may be issued off-cycle.

Canceled charts and supplemental data shall be listed in the index.

2.6.2 CN Cover Format

2.6.2.1 Outside Front Cover

Refer to **Appendix 15** for content and format of CN Outside Front Cover.

2.6.2.2 Inside Front Cover

General information and instructions concerning the use of the CN will be printed on the inside of the front cover. Refer to **Appendix 16** for content and format.

2.6.2.3 Inside Back Cover

The inside of the back cover shall remain blank.

2.6.2.4 Outside Back Cover

The outside back cover will show the Area of Coverage in accordance with **Appendix 3**.

2.6.3 CN Content

Supplemental data and charts will be printed back to back, head to toe.

The first chart will be a facing page. If there is a blank page preceding the first chart, it will be identified as "Intentionally Left Blank".

Supplemental Data, i.e., Takeoff, Alternate, and Radar minimums will be arranged by volume with the civil entries listed alphabetically by city, and airport name. Military entries will be listed alphabetically by airport name and city. These pages will be lettered and numbered using 7 pt type. When the first word of a city name (civil) or airport name (military) is abbreviated, it will be arranged in alphabetical order by the abbreviation, as shown in the authoritative database, with the exception of the abbreviation "St", e.g., St Louis, which will be arranged by the complete name Saint Louis. In all other cases, the airport name will be extracted verbatim from the authoritative database.

The charts included in the single-volume CN will be arranged as a composite of all volumes, with airports listed alphabetically by city, and airport name. Military entries will be listed alphabetically by airport name and city. When the first word of a city name (civil) or airport name (military) is abbreviated, it will be arranged in alphabetical order by the abbreviation, as shown in the authoritative database, with the exception of the abbreviation "St", e.g., St Louis, which will be arranged by the complete name Saint Louis. In all other cases, the airport name will be extracted verbatim from the authoritative database. If the airport name differs from the city it serves, an appropriate cross reference will be included in the "INDEX OF TERMINAL CHARTS AND MINIMUMS". See **Appendix 17** for content and format.

Textual information and charts shall be printed in black, using solid and screened color as indicated within these specifications.

IFR Takeoff Minimums and (Obstacle) Departure Procedures. See **Appendix 18** for layout and format.

IFR Alternate Airport Minimums. See **Appendix 19** for layout and format.

Radar Instrument Approach Minimums. See **Appendix 20** for layout and format.

2.7 AMENDMENTS - CHANGE NOTICE (CN) (ALASKA)

A CN may be issued at the midpoint of the normal revision cycle of the volume when safety considerations of a hazardous nature require the issuance of an amended and/or an original procedure.

A CN shall consist of a single page (s) issuance of the appropriate and applicable procedure(s).

CNs shall be annotated with the following note (replacing the page number) centered across the top margin of the page, utilizing negative type. e.g. ALASKA TERMINAL CHANGE (See **Appendix 21**).

The page number at the bottom of the page shall be shown also using negative type; e.g.;

REPLACED PAGE 00
or
NEW PAGE 00a

Procedures issued to replace an existing procedure within the volume shall be printed on gum-backed paper.

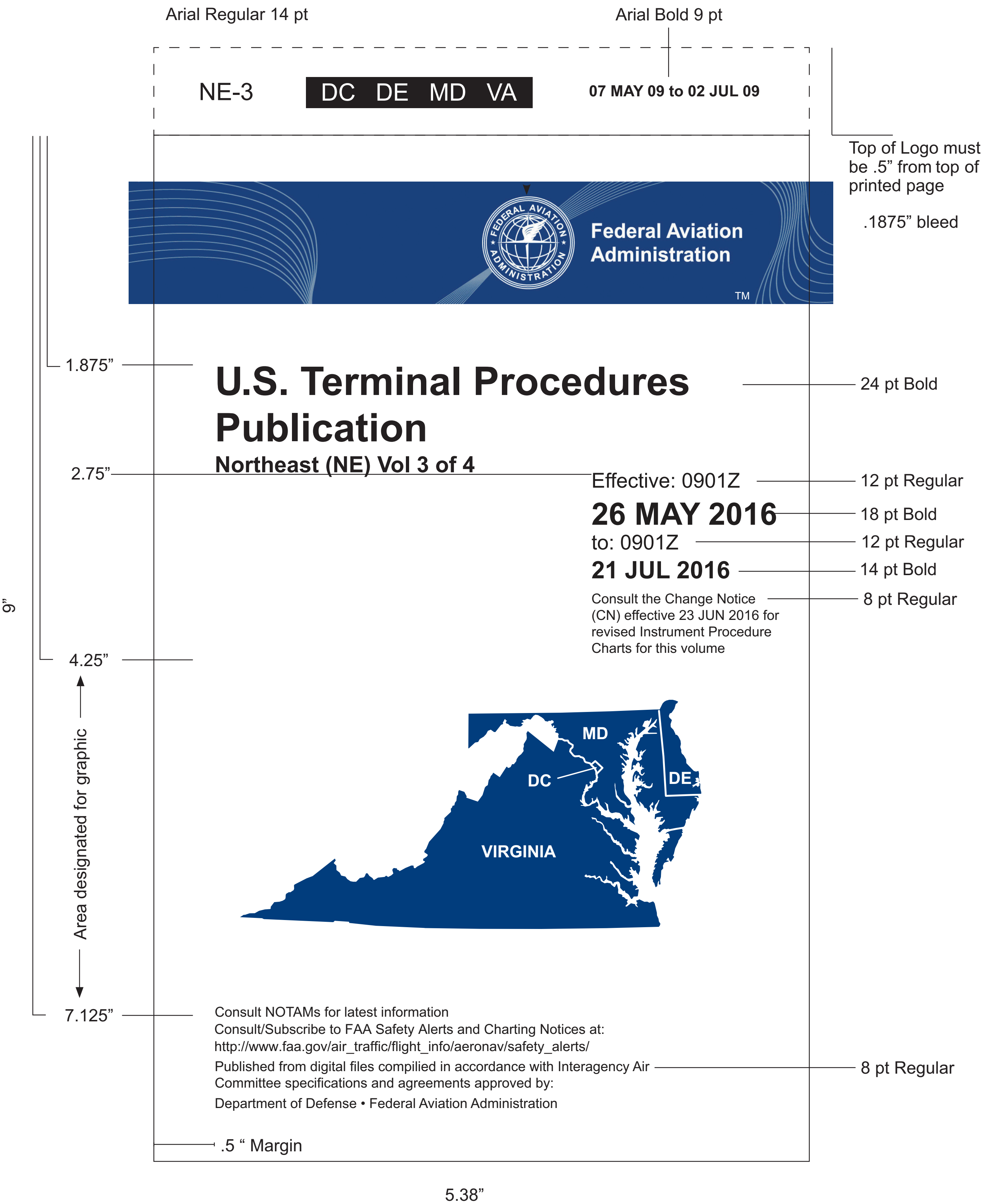
CNs shall normally be printed on one side only. Procedures shall be printed, backed-up, head-to-toe, only when appropriate to the layout, format, and arrangement of the publication.

Procedures issued as an additional page to the volume shall be printed on plain paper.

The effective date of the CN shall be positioned below the procedure title in the lower left corner.

APPENDIX 1
OUTSIDE FRONT COVER

All type on cover must be Arial font - no centering.



APPENDIX 2
INSIDE FRONT COVER

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TERMINAL PROCEDURES TABLE OF CONTENTS

CORRECTIONS, COMMENTS AND/OR PROCUREMENT

FOR CHARTING ERRORS, OR FOR CHANGES, ADDITIONS, RECOMMENDATIONS ON PROCEDURAL ASPECTS CONTACT:

Point of Contact Address

For inquiries regarding military charts, please contact Current NGA email Address

FOR PROCUREMENT:
For digital products, visit our website at: Current Digital Products URL

For a list of approved FAA Print Providers, visit our website at:
Current List of FAA Approved Print Providers URL

Frequently asked questions (FAQ) are answered on our website at: Current FAQ URL
See the FAQs prior to contact via toll free number or email.

Request for the creation or revisions to Airport Diagrams should be in accordance with FAA Order 7910.4

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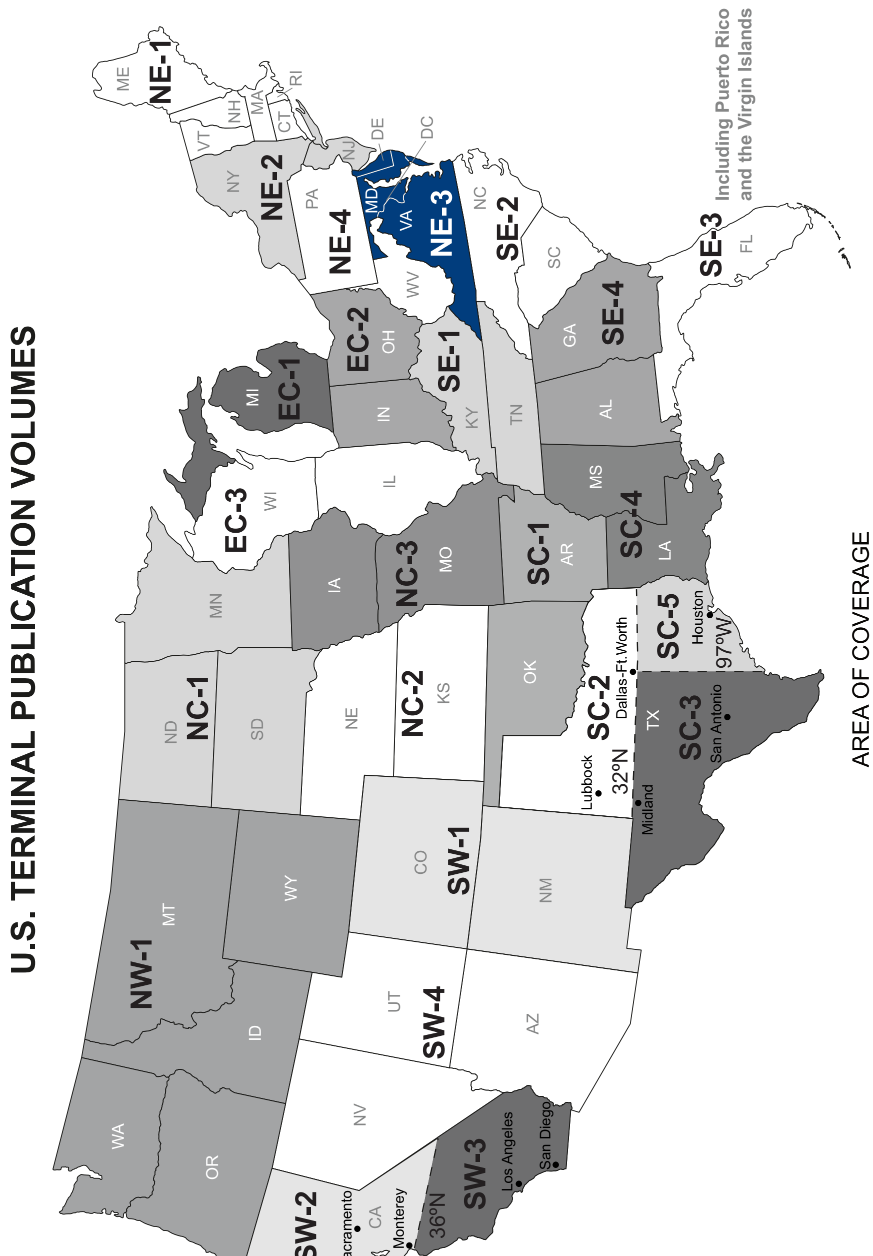
APPENDIX 3
OUTSIDE BACK COVER (U.S.)



FAA Product ID: BTPPNE3

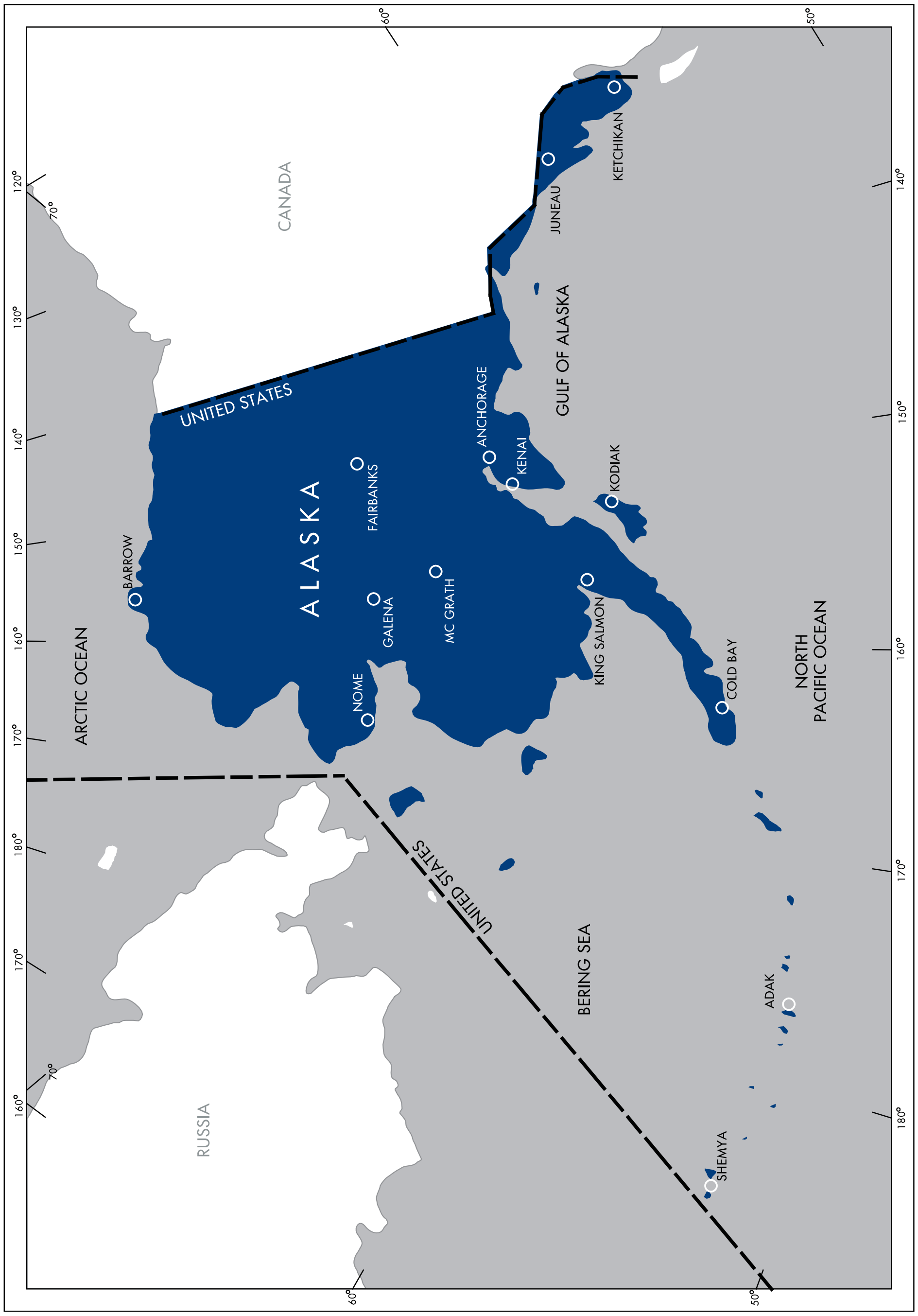
NSN 7641015059584

NGA REF. NO. TERMXFAABTPPNE3

OK-10-2859

EFF. DATE 10266

APPENDIX 4
OUTSIDE BACK COVER (ALASKA)



ALASKA COVERAGE

FAA Product ID: ATP

NSN 7641014109675

NGA REF. NO. TERMXAKTPP

EFF. DATE 10266

OK-09-3959

APPENDIX 5
INOPERATIVE COMPONENTS OR VISUAL AIDS TABLE

INOP COMPONENTS 00000

INOPERATIVE COMPONENTS OR VISUAL AIDS TABLE
(For Civil Use Only)

Straight-in and Sidestep landing minimums published on instrument approach procedure charts are based on full operation of all components and visual aids (see exception below for ALSF 1 & 2) associated with the particular approach chart being used. Higher minimums are required with inoperative components or visual aids as indicated below. If more than one component is inoperative, each minimum is raised to the highest minimum required by any single component that is inoperative. ILS glideslope inoperative minimums are published on the instrument approach charts as localizer minimums. This table applies to approach categories A thru D and is to be used unless amended by notes on the approach chart. Such notes apply only to the particular approach category(ies) as stated. Category E inoperative notes will be specified when published on civil charts. The inoperative table does not apply to Circling minimums. See legend page for description of components indicated below.

Full Operation Exception: For ALSF 1 & 2 operated as SSALR, or when the sequenced flashing lights are inoperative, there is no effect on visibility for ILS lines of minima.

(1) ILS, PAR, LPV, GLS minima

Inoperative Component or Visual Aid	Increase Visibility
All ALS types (except ODALS)	¼ mile

(2) ILS, LPV, GLS with visibility minima of RVR 1800†/2000*/2200*

Inoperative Component or Visual Aid	Increase Visibility
ALSF 1 & 2, MALSR, SSALR	To RVR 4000† To RVR 4500*
TDZL or RCLS	To RVR 2400#
RVR	To ½ mile

#For ILS, LPV, GLS procedures with a 200 foot HAT, RVR 1800 authorized with use of FD or AP or HUD to DA.

(3) All Approach Types and all lines of minima other than (1) & (2) above

Inoperative Component or Visual Aid	Increase Visibility
ALSF 1 & 2, MALSR, SSALR	½ mile
MALSF, MALS, SSALF, SSALS, SALSF, SALS	¼ mile

(4) Sidestep minima (CAT C-D)

Inoperative Component or Visual Aid to Sidestep Runway	Increase Visibility
ALSF 1 & 2, MALSR, SSALR	½ mile

(5) All Approach Types, All lines of minima

Inoperative Component or Visual Aid	Increase Visibility
ODALS (CAT A-B)	¼ mile
ODALS (CAT C-D)	⅛ mile

INOP COMPONENTS 00000

APPENDIX 6
EXPLANATION OF TERMS/LANDING MINIMA DATA

TERMS/LANDING MINIMA DATA 00000

IFR LANDING MINIMA

The United States Standard for Terminal Instrument Procedures (TERPS) is the approved criteria for formulating instrument approach procedures. Landing minima are established for six aircraft approach categories (ABCDE and COPTER). In the absence of COPTER MINIMA, helicopters may use the CAT A minimums of other procedures.

LANDING MINIMA FORMAT

In this example airport elevation is 1179, and runway touchdown zone elevation is 1152.

DA — Visibility (RVR 100's of feet) — Aircraft Approach Category — HAT

CATEGORY	A	B	C	D
S-ILS 27	1352/24		200	(200-½)
S-LOC 27	1440/24	288	(300-½)	1440/50 288 (300-1)
CIRCLING	1540-1 361 (400-1)	1640-1 461 (500-1)	1640-1½ 461 (500-1½)	1740-2 561 (600-2)

Straight-in ILS to Runway 27

Straight-in with Glide Slope Inoperative or not used to Runway 27

MDA — HAA — Visibility in Statute Miles

All **weather** minimums in parentheses not applicable to Civil Pilots. Military Pilots refer to appropriate regulations.

COPTER MINIMA ONLY

CATEGORY	COPTER
H-176°	680-½ 363 (400-½)

Copter Approach Direction — Height of MDA/DA Above Landing Area (HAL)

No circling minimums are provided

NOTE: The W symbol indicates outages of the WAAS vertical guidance may occur daily at this location due to initial system limitations. WAAS NOTAMS for vertical outages are not provided for this approach. Use LNAV minima for flight planning at these locations, whether as a destination or alternate. For flight operations at these locations, when the WAAS avionics indicate that LNAV/VNAV or LPV service is available, then vertical guidance may be used to complete the approach using the displayed level of service. Should an outage occur during the procedure, reversion to LNAV minima may be required. As the WAAS coverage is expanded, the W will be removed.

RNAV minimums are dependent on navigation equipment capability, as stated in the applicable AFM, AFMS, or other FAA approved document. See AIM paragraph 5-4-5, AC 90-105 and AC 90-107 for detailed requirements for each line of minima.

COLD TEMPERATURE AIRPORTS

NOTE: A ❄-12°C symbol indicates a cold temperature altitude correction is required at this airport when reported temperature is at or below the published temperature. See the following Cold Temperature Error Table to make manual corrections. Advise ATC with altitude correction. Advising ATC with altitude corrections is not required in the final segment. See Aeronautical Information Manual (AIM), Chapter 7, for guidance and additional information. For a complete list, see the "Cold Temperature Airports" link under the Additional Resources heading at the bottom of the following page: http://www.faa.gov/air_traffic/flight_info/aeronav/digital_products/dtpp/search/

COLD TEMPERATURE ERROR TABLE

HEIGHT ABOVE AIRPORT IN FEET

REPORTED TEMP °C	200	300	400	500	600	700	800	900	1000	1500	2000	3000	4000	5000
+10	10	10	10	10	20	20	20	20	20	30	40	60	80	90
0	20	20	30	30	40	40	50	50	60	90	120	170	230	280
-10	20	30	40	50	60	70	80	90	100	150	200	290	390	490
-20	30	50	60	70	90	100	120	130	140	210	280	420	570	710
-30	40	60	80	100	120	140	150	170	190	280	380	570	760	950
-40	50	80	100	120	150	170	190	220	240	360	480	720	970	1210
-50	60	90	120	150	180	210	240	270	300	450	590	890	1190	1500

AIRCRAFT APPROACH CATEGORIES

Aircraft approach category indicates a grouping of aircraft based on a speed of VREF, if specified, or if VREF not specified, 1.3 VSO at the maximum certificated landing weight. VREF, VSO, and the maximum certificated landing weight are those values as established for the aircraft by the certification authority of the country of registry. Helicopters are Category A aircraft. An aircraft shall fit in only one category. When necessary to operate the aircraft at an airspeed in excess of the maximum airspeed of its certified aircraft approach category, pilots should use the applicable higher category minima. For additional options and to ensure the aircraft remains within protected airspace, consult the AIM. See following category limits:

MANEUVERING TABLE

Approach Category	A	B	C	D	E
Speed (Knots)	0-90	91-120	121-140	141-165	Abv 165

TERMS/LANDING MINIMA DATA 00000

APPENDIX 6
EXPLANATION OF TERMS/LANDING MINIMA DATA (CONTINUED)

TERMS/LANDING MINIMA DATA 00000

CIRCLING APPROACH OBSTACLE PROTECTED AIRSPACE

The circling MDA provides vertical obstacle clearance during a circle-to-land maneuver. The circling MDA protected area extends from the threshold of each runway authorized for landing following a circle-to-land maneuver for a distance as shown in the tables below. The resultant arcs are then connected tangentially to define the protected area.

STANDARD CIRCLING APPROACH MANEUVERING RADIUS

Circling approach protected areas developed prior to late 2012 used the radius distances shown in the following table, expressed in nautical miles (NM), dependent on aircraft approach category. The approaches using standard circling approach areas can be identified by the absence of the C symbol on the circling line of minima.

Circling MDA in feet MSL	Approach Category and Circling Radius (NM)				
	CAT A	CAT B	CAT C	CAT D	CAT E
All Altitudes	1.3	1.5	1.7	2.3	4.5

C EXPANDED CIRCLING APPROACH MANEUVERING AIRSPACE RADIUS

Circling approach protected areas developed after late 2012 use the radius distance shown in the following table, expressed in nautical miles (NM), dependent on aircraft approach category, and the altitude of the circling MDA, which accounts for true airspeed increase with altitude. The approaches using expanded circling approach areas can be identified by the presence of the C symbol on the circling line of minima.

Circling MDA in feet MSL	Approach Category and Circling Radius (NM)				
	CAT A	CAT B	CAT C	CAT D	CAT E
1000 or less	1.3	1.7	2.7	3.6	4.5
1001-3000	1.3	1.8	2.8	3.7	4.6
3001-5000	1.3	1.8	2.9	3.8	4.8
5001-7000	1.3	1.9	3.0	4.0	5.0
7001-9000	1.4	2.0	3.2	4.2	5.3
9001 and above	1.4	2.1	3.3	4.4	5.5

Comparable Values of RVR and Visibility

The following table shall be used for converting RVR to ground or flight visibility. For converting RVR values that fall between listed values, use the next higher RVR value; do not interpolate. For example, when converting 4800 RVR, use 5000 RVR with the resultant visibility of 1 mile.

RVR (feet)	Visibility (SM)	RVR (feet)	Visibility (SM)	RVR (feet)	Visibility (SM)	RVR (feet)	Visibility (SM)
1600	¼	2400	½	3500	⅝	5500	1
1800	½	2600	½	4000	¾	6000	1¼
2000	½	3000	⅝	4500	⅞		
2200	½	3200	⅝	5000	1		

RADAR MINIMA

	RWY	GP/TCH/RPI	CAT	DA/ MDA-VIS	HAT/ HAA	CEIL-VIS	CAT	DA/ MDA-VIS	HAT/ HAA	CEIL-VIS
PAR	10	2.5°/42/1000	ABCDE	**195**/16	100	(100-¼)				
	28	2.5°/48/1068	ABCDE	**187**/16	100	(100-¼)				
ASR	10		ABC	**560**/40	463	(500-¾)	DE	**560**/50	463	(500-1)
	28		AB	**600**/50	513	(600-1)	CDE	**600**/60	513	(600-1¼)
CIR	10		AB	**560**-1¼	463	(500-1¼)	CDE	**560**-1½	463	(500-1½)
	28		AB	**600**-1¼	503	(600-1¼)	CDE	**600**-1½	503	(600-1½)

Visibility (RVR 100's of feet)

Visibility in Statute Miles

All minimums in parentheses not applicable to Civil Pilots. Military Pilots refer to appropriate regulations.

Radar Minima:

1. Minima shown are the lowest permitted by established criteria. Pilots should consult applicable directives for their category of aircraft.
2. The circling MDA and weather minima to be used are those for the runway to which the final approach is flown- not the landing runway. In the above RADAR MINIMA example, a category C aircraft flying a radar approach to runway 10, circling to land on runway 28, must use an MDA of 560 feet with weather minima of 500-1½.

NOTE: Military RADAR MINIMA may be shown with communications symbology that indicates emergency frequency monitoring capability by the radar facility as follows:
(E) VHF and UHF emergency frequencies monitored
(V) VHF emergency frequency (121.5) monitored
(U) UHF emergency frequency (243.0) monitored

Additionally, unmonitored frequencies which are available on request from the controlling agency may be annotated with an "x".

▲ Alternate Minimums not standard. Civil users refer to tabulation. USA/USN/USAF pilots refer to appropriate regulations.

▲ NA Alternate minimums are Not Authorized due to unmonitored facility or absence of weather reporting service.

▼ Airport is published in the Takeoff Minimums, (Obstacle) Departure Procedures, and Diverse Vector Area (Radar Vectors) tabulation.

TERMS/LANDING MINIMA DATA 00000

APPENDIX 7
GENERAL INFORMATION

GENERAL INFO 00000

GENERAL INFORMATION

This publication is issued every 56 days and includes Standard Instrument Approach Procedures (SIAPS), Standard Instrument Departures (SIDs), Standard Terminal Arrivals (STARs), IFR Takeoff Minimums and (Obstacle) Departure Procedures (ODPs), IFR Alternate Minimums, and Radar Instrument Approach Minimums for use by civil and military aviation. The organization responsible for SIAPs, Radar Minimums, SIDs, STARs and graphic ODPs is identified in parentheses in the top margin of the procedure; e.g., (FAA), (FAA-O), (USA), (USAF), (USN). SIAPS with the (FAA) and (FAA-O) designation are regulated under 14 CFR, Part 97. SIAPs with the (FAA-O) designation have been developed under Other Transaction Agreement (OTA) by private providers and have been certified by the FAA. See 14 CFR, Part 91.175 (a) and the AIM for further details. 14 CFR, Part 91.175 (g) and the Special Notices section of the Chart Supplement contain information on civil operations at military airports.

The FAA uses an internal numbering system on all charts in the TPP. This Approach and Landing (AL) number is located on the top center margin of the chart followed by the organization responsible for the procedure in parentheses, e.g., AL-18 (FAA). Military procedures do not show a chart reference number, but do show the appropriate authority for the procedure, e.g., (USN).

CHART CURRENCY INFORMATION

Date of Latest Revision 09365

The Date of Latest Revision identifies the Julian date the chart was added or last revised for any reason. The first two digits indicate the year, the last three digits indicate the day of the year (001 to 365/6) in which the latest revision of any kind has been made to the chart.

FAA Procedure Amendment Number → Orig 31DEC09 ← Procedure Amendment Effective Date
FAA Procedure Amendment Number → Amdt 2B 12MAR09 ← Procedure Amendment Effective Date

The FAA Procedure Amendment Number represents the most current amendment of a given procedure. The Procedure Amendment Effective Date represents the AIRAC cycle date on which the procedure amendment was incorporated into the chart. Updates to the amendment number & effective date represent procedural/criteria revisions to the charted procedure, e.g., course, fix, altitude, minima, etc. On Departure Procedures and Standard Terminal Arrivals, procedural revisions to the current chart are indicated by an upnumber to the procedure title with the procedure amendment effective date following. On Radar Minima, Takeoff Minimums and (Obstacle) Departure Procedures and Diverse Vector Areas, the FAA Procedure Amendment Number, Procedure Effective Date, and the Julian Date of Last Revision will be shown on the same line, e.g., AMDT 2 10DEC15 (15344).

MISCELLANEOUS

★ Indicates a non-continuously operating facility, see Chart Supplement.

For Civil (FAA) instrument procedures, "RADAR REQUIRED" in the planview of the chart indicates that ATC radar must be available to assist the pilot when transitioning from the en route environment. "Radar required" in the pilot briefing portion of the chart indicates that ATC radar is required on portions of the procedure outside the final approach segment, including the missed approach. Some military procedures also have equipment requirements such as "Radar Required", but do not conform to the same charting application standards used by the FAA.

Distances are in nautical miles (except visibility in statute miles and Runway Visual Range in hundreds of feet). Runway dimensions are in feet. Elevations are in feet, Mean Sea Level (MSL). Ceilings are in feet above airport elevation. Radials/bearings/headings/courses are magnetic. Horizontal Datum: Unless otherwise noted on the chart, all coordinates are referenced to North American Datum 1983 (NAD 83), which for charting purposes is considered equivalent to World Geodetic System 1984 (WGS 84).

Terrain is scaled within the neat lines (planview boundaries) and does not accurately underlie not-to-scale distance depictions or symbols.

GENERAL INFO 00000

APPENDIX 7
GENERAL INFORMATION (CONTINUED)

GENERAL INFO 00000

STANDARD TERMINAL ARRIVALS AND DEPARTURE PROCEDURES

The use of the associated codified STAR/DP and transition identifiers are requested of users when filing flight plans online. It must be noted that when filing a STAR/DP with a transition, the first three coded characters of the STAR and the last three coded characters of the DP are replaced by the transition code. Examples: ACTON SIX ARRIVAL, file (AQN.AQN6); ACTON SIX ARRIVAL, EDNAS TRANSITION, file (EDNAS.AQN6). FREEHOLD THREE DEPARTURE, file (FREH3.RBV), FREEHOLD THREE DEPARTURE, ELWOOD CITY TRANSITION, file (FREH3.EWC).

PROCEDURE PBN/EQUIPMENT REQUIREMENTS

Users will begin to see Performance-Based Navigation (PBN) Requirements and Equipment Requirements on Instrument Approach Procedures (IAPs), RNAV STARs and RNAV DPs prominently displayed in separate, standardized notes boxes. For procedures with PBN elements, the PBN box will contain the procedure's navigation specification(s); and, if required: specific sensors or infrastructure needed for the navigation solution; any additional or advanced functional requirements; the minimum Required Navigation Performance (RNP) value and any amplifying remarks. Items listed in this PBN box are REQUIRED for the procedure's PBN elements. The Equipment Requirements Box will list non-PBN requirements. On charts with both PBN elements and equipment requirements, the PBN requirements box will be listed first. The publication of these notes will continue incrementally until all charts have been amended to comply with the new standard.

IAP PBN/Equipment Requirements Notes Box

PBN Requirements Box →	From WINRZ, LIBGE: RNAV-1 GPS, RNAV-1GPS from MAP to YARKU.
Equipment Requirements Box →	DME required for LOC only.
Standard Procedure Notes Box →	T Circling to Rwy 25 NA at night. #For inop MALSR increase S-ILS 16R all cats visibility to 2½ SM.

RNAV STAR and DP PBN/Equipment Requirements Notes Box

PBN Requirements Box →	RNAV 1 - DME/DME/IRU or GPS
Equipment Requirements Box →	RADAR required

PILOT CONTROLLED AIRPORT LIGHTING SYSTEMS

Reference the Chart Supplement for detailed information on pilot controlled lighting (PCL) systems.

Available FAA standard approach lighting systems are shown using the system identification and are symbolized using negative symbology, e.g., A1, V

Available approach lighting systems that do not have a system identification are shown with a negative "L" symbol beside the name.

To activate lights, use frequency indicated in the communication section of the chart with a L or the appropriate lighting system identification e.g., UNICOM 122.8 L, A1, V

KEY MIKE	FUNCTION
7 times within 5 seconds	Highest intensity available
5 times within 5 seconds	Medium or lower intensity (Lower REIL or REIL-off)
3 times within 5 seconds	Lowest intensity available (Lower REIL or REIL-off)

GENERAL INFO 00000

APPENDIX 8
ABBREVIATIONS

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ABBREVIATIONS

AAF	Army Air Field
AAUP	Attention All Users Page
ADF	Automatic Direction Finder
ADIZ	Air Defense Identification Zone
AFAUX	Air Force Auxiliary
AFB	Air Force Base
AFRC	Armed Forces Reserve Center/Air Force Reserve Command
AGL	Above Ground Level
AFHP	Air Force Heliport
AFIS	Automatic Flight Information Service
AHP	Army Heliport
ALF	Auxiliary Landing Field
ALS	Approach Light System
ALSF	Approach Light System with Sequenced Flashing Lights
ANGB	Air National Guard Base
ANGS	Air National Guard Station
Ant	Antenna
AOB	At or Below
AP	Autopilot System
APCH	Approach
APP CON	Approach Control
AR	Authorization Required
ARB	Air Reserve Base
ARPT	Airport
ARR	Arrival
AS	Air Station
ASOS	Automated Surface Observing System
ASR	Airport Surveillance RADAR
ASSC	Airport Surface Surveillance Systems
ATC	Air Traffic Control
ATCT	Airport Traffic Control Tower
ATIS	Automatic Terminal Information Service
AUNICOM	Automated UNICOM
AWOS	Automated Weather Observing System
Baro-VNAV	Barometric Vertical Navigation
BC	Back Course
brg	Bearing
CAPT	Captain
CAT	Category
CCW	Counterclockwise
CDI	Course Deviation Indicator
CGAS	Coast Guard Air Station
Chan	Channel
CIR	Circling
CL	Centerline Lighting System
CLNC DEL	Clearance Delivery
CNF	Computer Navigation Fix
CPDLC	Controller Pilot Data Link Communications
CTAF	Common Traffic Advisory Frequency
CW	Clockwise
D-ATIS	Digital-Automatic Terminal Information Service
DA	Decision Altitude
DEP	Departure
DEP CON	Departure Control
DER	Departure End of Runway
DH	Decision Height
DME	Distance Measuring Equipment
DP	Departure Procedure
DTHR	Displaced Runway Threshold
DVA	Diverse Vector Area
ELEV	Elevation
EMAS	Engineered Material Arresting System
EXEC	Executive
FAF	Final Approach Fix
FD	Flight Director System
FL	Flight Level
FLD	Field
FM	Fan Marker
FMS	Flight Management System
GBAS	Ground Based Augmentation System
GCA	Ground Control Approach
GCO	Ground Communication Outlet
GLS	Ground Based Augmentation System Landing System
GP	Glidepath
GPS	Global Positioning System
GS	Glide Slope
HAA	Height Above Airport
HAL	Height Above Landing
HAT	Height Above Touchdown
HATh	Height Above Threshold
HCH	Heliport Crossing Height
hdg	Heading
HIRL	High Intensity Runway Lights
HUD	Head-up Display
IAF	Initial Approach Fix
IAP	Instrument Approach Procedure
ICAO	International Civil Aviation Organization
IF	Intermediate Fix
IFR	Instrument Flight Rules
ILS	Instrument Landing System
IM	Inner Marker
INC	Incorporated
Inop	Inoperative
INT	Intersection
INTCNTL	Intercontinental
INTL	International
JNGB	Joint National Guard Base
JRB	Joint Reserve Base
K	Knots
KIAS	Knots Indicated Airspeed
LAAS	Local Area Augmentation System

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APPENDIX 8
ABBREVIATIONS (CONTINUED)

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ABBREVIATIONS

LDA……………………	Localizer Type Directional Aid
Ldg……………………	Landing
LIRL…………………...	Low Intensity Runway Lights
LNAV…………………	Lateral Navigation
LOA……………………	Letter of Agreement/ Authorization
LOC…………………...	Localizer
LOM…………………...	Locator Outer Marker
LP……………………...	Localizer Performance
LPV……………………	Localizer Performance with Vertical Guidance
LR……………………...	Lead Radial
LRRS…………………	Long Range RADAR Station
MAA…………………...	Maximum Authorized Altitude
MALS…………………	Medium Intensity Approach Lighting System
MALSF………………..	Medium Approach Lighting System with Sequenced Flashers
MALSR………………..	Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights
MAP…………………...	Missed Approach Point
MCAF…………………	Marine Corps Air Facility
MCALF………………..	Marine Corps Auxiliary Landing Filed
MCAS…………………	Marine Corps Air Station
MCB…………………...	Marine Corps Base
MCOLF………………..	Marine Corps Outlying Field
MDA…………………...	Minimum Descent Altitude
MEA…………………...	Minimum Enroute Altitude
MEML…………………	Memorial
METRO………………	Metropolitan
MIRL…………………..	Medium Intensity Runway Lights
MM……………………	Middle Marker
MOCA…………………	Minimum Obstruction Clearance Altitude
MRA…………………...	Minimum Reception Altitude
MSL……………………	Mean Sea Level
MSPEC………………	Management Specification
MUNI…………………..	Municipal
N/A……………………	Not Applicable
NA……………………	Not Authorized
NAAS…………………	Naval Auxiliary Air Station
NAF…………………...	Naval Air Facility
NALF…………………	Naval Auxiliary Landing Field
NAS…………………...	Naval Air Station
NDB…………………..	Nondirectional Radio Beacon
NM……………………	Nautical Mile
NOLF…………………	Naval Outlying Field
NoPT	No Procedure Turn
NOTAM………………	Notice to Air Missions
NS……………………..	Naval Station
NTL…………………...	National
ODALS………………..	Omnidirectional Approach Lighting System
ODP…………………...	Obstacle Departure Procedure
OM……………………	Outer Marker
OPSPEC……………	Operations Specification
PAR………………….	Precision Approach Radar
PDC…………………	Pre-Departure Clearance
PRM…………………	Precision Runway Monitor
Pvt…………………...	Private
R……………………..	Radial
RA…………………...	Radio Altimeter setting height
RAIL…………………	Runway Alignment Indicator Lights
RCLS………………..	Runway Centerline Light System
REIL…………………	Runway End Identifier Lights
RF…………………...	Radius to Fix
RGNL………………..	Regional
RLLS………………..	Runway Lead-in Light System
RNAV………………..	Area Navigation
RNP…………………	Required Navigation Performance
RPI…………………..	Runway Point of Interception)
RVR…………………	Runway Visual Range
RWY………………...	Runway
S……………………..	Straight-in
SALS………………..	Simplified Short Approach Light System
SALSF………………	Short Approach Lighting System with Sequenced Flashing Lights
SDF………………….	Simplified Directional Facility
SFB………………….	Space Force Base
SID…………………..	Standard Instrument Departure
SM………..………….	Statute Mile
SR-SS……………….	Sunrise-Sunset
SSALF………………	Short Approach Lighting System with Sequenced Flashing Lights
SSALR………………	Simplified Short Approach Light System with Runway Alignment Indicator Lights
SSALS………………	Simplified Short Approach Lighting System
ST……………………	Saint
STE………………….	Sainte
STAR………………..	Standard Terminal Arrival
TAA………………….	Terminal Arrival Area
TACAN……………...	Tactical Air Navigation
TCH………………….	Threshold Crossing Height
TDZ………………….	Touchdown Zone
TDZE………………..	Touchdown Zone Elevation
TDZ/CL……………...	Touchdown Zone and Runway Centerline Lighting
TDZL………………...	Touchdown Zone Lights
THR………………….	Threshold
TODA………………..	Takeoff Distance Available
TORA………………..	Takeoff Run Available
tr……………………..	Track
TRML………………..	Terminal
TWR…………………	Tower
UNICOM…………….	Universal Communications Station
USA………………….	United States Army
USAF………………..	United States Air Force

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APPENDIX 8
ABBREVIATIONS (CONTINUED)

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ABBREVIATIONS

USCG……………….	United States Coast Guard
USMC……………….	United States Marine Corps
USN…………………	United States Navy
USSF………………..	United States Space Force
VASI…………………	Visual Approach Slope Indicator
VCOA……………….	Visual Climb Over Airport
VDA……………………	Vertical Descent Angle
VDP……………………	Visual Descent Point
VFR…………………...	Visual Flight Rules
VGSI…………………..	Visual Glide Slope Indicator
VNAV………………….	Vertical Navigation
VOR…………………...	Very High Frequency Omni-Directional Range
VORTAC……………...	Very High Frequency Omni-Directional Range/Tactical Air Navigation
WAAS…………………	Wide Area Augmentation System
WP/WPT……………...	Waypoint

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APPENDIX 9
FREQUENCY PAIRING

FREQ PAIRING 20198

FREQUENCY PAIRING TABLE

TACAN CHANNEL	VHF FREQUENCY	TACAN CHANNEL	VHF FREQUENCY	TACAN CHANNEL	VHF FREQUENCY
17Y	108.05	40X	110.30	88Y	114.15
18X	108.10	40Y	110.35	89Y	114.25
18Y	108.15	41Y	110.45	90Y	114.35
19Y	108.25	42X	110.50	91Y	114.45
20X	108.30	42Y	110.55	92Y	114.55
20Y	108.35	43Y	110.65	93Y	114.65
21Y	108.45	44X	110.70	94Y	114.75
22X	108.50	44Y	110.75	95Y	114.85
22Y	108.55	45Y	110.85	96Y	114.95
23Y	108.65	46X	110.90	97Y	115.05
24X	108.70	46Y	110.95	98Y	115.15
24Y	108.75	47Y	111.05	99Y	115.25
25Y	108.85	48X	111.10	100Y	115.35
26X	108.90	48Y	111.15	101Y	115.45
26Y	108.95	49Y	111.25	102Y	115.55
27Y	109.05	50X	111.30	103Y	115.65
28X	109.10	50Y	111.35	104Y	115.75
28Y	109.15	51Y	111.45	105Y	115.85
29Y	109.25	52X	111.50	106Y	115.95
30X	109.30	52Y	111.55	107Y	116.05
30Y	109.35	53Y	111.65	108Y	116.15
31Y	109.45	54X	111.70	109Y	116.25
32X	109.50	54Y	111.75	110Y	116.35
32Y	109.55	55Y	111.85	111Y	116.45
33Y	109.65	56X	111.90	112Y	116.55
34X	109.70	56Y	111.95	113Y	116.65
34Y	109.75	80Y	113.35	114Y	116.75
35Y	109.85	81Y	113.45	115Y	116.85
36X	109.90	82Y	113.55	116Y	116.95
36Y	109.95	83Y	113.65	117Y	117.05
37Y	110.05	84Y	113.75	118Y	117.15
38X	110.10	85Y	113.85	119Y	117.25
38Y	110.15	86Y	113.95		
39Y	110.25	87Y	114.05		

See the Chart Supplement for a complete listing.

FREQ PAIRING 20198

APPENDIX 10
INDEX OF TERMINAL CHARTS AND MINIMUMS

INDEX OF TERMINAL CHARTS AND MINIMUMS

APPENDIX 11
INDEX OF TERMINAL CHARTS AND MINIMUMS - COMPLEX

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13066

INDEX OF TERMINAL CHARTS AND MINIMUMS

NAME PROC SECT PG NAME PROC SECT PG

ATLANTA, GA(CON'T)

HARTSFIELD-JACKSON ATLANTA INTL(ATL)

HARTSFIELD-JACKSON ATLANTA INTL(ATL) (CON'T)

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SE-4

APPENDIX 12
LAND AND HOLD SHORT OPERATIONS (LAHSO)

12264

LAND AND HOLD-SHORT OPERATIONS (LAHSO)

LAHSO is an acronym for "Land and Hold-Short Operations." These operations include landing and holding short of an intersection runway, an intersecting taxiway, or other predetermined points on the runway other than a runway or taxiway. Measured distance represents the available landing distance on the landing runway, in feet.

Specific questions regarding these distances should be referred to the air traffic manager of the facility concerned. The Aeronautical Information Manual contains specific details on hold-short operations and markings.

CITY/AIRPORT	LDG RWY	HOLD-SHORT POINT	AVBL LDG DIST
BATTLE CREEK, MI			
W.K. KELLOGG (BTL)	05L	13-31	7,000 feet
DETROIT, MI			
COLEMAN A. YOUNG MUNI (DET)	15	07-25	4,900 feet
FLINT, MI			
BISHOP INTL (FNT)	09	18-36	4,100 feet
	36	09-27	6,300 feet
TRAVERSE CITY, MI			
CHERRY CAPITAL (TVC)	18	10-28	2,850 feet
	28	18-36	5,500 feet

12264

APPENDIX 13
HOT SPOTS

12152

HOT SPOTS

An "airport surface hot spot" is a location on an aerodrome movement area with a history or potential risk of collision or runway incursion, and where heightened attention by pilots/drivers is necessary.

A "hot spot" is a runway safety related problem area on an airport that presents increased risk during surface operations. Typically it is a complex or confusing taxiway/taxiway or taxiway/runway intersection. The area of increased risk has either a history of or potential for runway incursions or surface incidents, due to a variety of causes, such as but not limited to: airport layout, traffic flow, airport marking, signage and lighting, situational awareness, and training. Hot spots are depicted on airport diagrams as open circles or ellipses designated as "HS 1", "HS 2", etc. and tabulated in the list below with a brief description of each hot spot. Hot spots will remain charted on airport diagrams until such time the increased risk has been reduced or eliminated.

CITY/AIRPORT	HOT SPOT	DESCRIPTION*
ATWATER, CA		
CASTLE (MER)	HS 1	Twy A, Twy A1, Twy B, and Twy G complex int.
	HS 2	Twy A and southeast ramp, traffic congestion.
CONCORD, CA		
BUCHANAN FLD (CCR)	HS 1	Rwy 01L-19R, Twy E and Twy J.
	HS 2	Rwy 32L and run-up area, Twy J.
	HS 3	Complex int at Rwy 01R-19L, Twy J, Twy A, Twy C, and Twy K.
	HS 4	Rwy 32L apch, Twy A.
HAYWARD, CA		
HAYWARD EXECUTIVE (HWD)	HS 1	Rwy 10L-28R, Twy E and Twy A.
	HS 2	Area not visible from ATCT.
	HS 3	Area not visible from ATCT.
LIVERMORE, CA		
LIVERMORE MUNI (LVK)	HS 1	Rwy 25R, Twy B.
	HS 2	Rwy 25L, Twy C.
	HS 3	Rwy 07L, Twy H.
	HS 4	Rwy 07R, Twy G.
	HS 5	Rwy 25R, Twy G.
	HS 6	Ints of Twy J, Twy A, and Twy G.
NAPA, CA		
NAPA COUNTY (APC)	HS 1	Twy A, Twy C, Twy E and the ramp.
	HS 2	Rwy 24, Twy A.
	HS 3	Rwy 24 and Rwy 36L.
OAKLAND, CA		
METROPOLITAN OAKLAND INTL (OAK)	HS 1	Rwy 27R, Twy A and Twy B.
	HS 2	Rwy 09L-27R, Twy H, Twy G, Twy C and Twy D.
	HS 3	Rwy 09L and Rwy 33, Twy J, Twy P, and Twy C, complex int.
	HS 4	Area not visible from the South Twr.
SACRAMENTO, CA		
SACRAMENTO EXECUTIVE (SAC)	HS 1	Rwy 16-34 and Rwy 12-30 at Twy M.
	HS 2	Inbound Twy A and outbound Twy B.
	HS 3	Portion of Twy E not visible from twr.
SACRAMENTO, CA		
SACRAMENTO INTL (SMF)	HS 1	Rwy 16R-34L and Twy A10
SALINAS, CA		
SALINAS MUNI (SNS)	HS 1	Twy A and Twy C int in close proximity of Rwy 08-26.

(SEE CONTINUATION PAGE FOR MORE LISTINGS)

12152

APPENDIX 14
RATE OF CLIMB/DESCENT TABLE

CLIMB/DESCENT TABLE 00000

INSTRUMENT TAKEOFF OR APPROACH PROCEDURE CHARTS
RATE OF CLIMB/DESCENT TABLE
(ft per min)

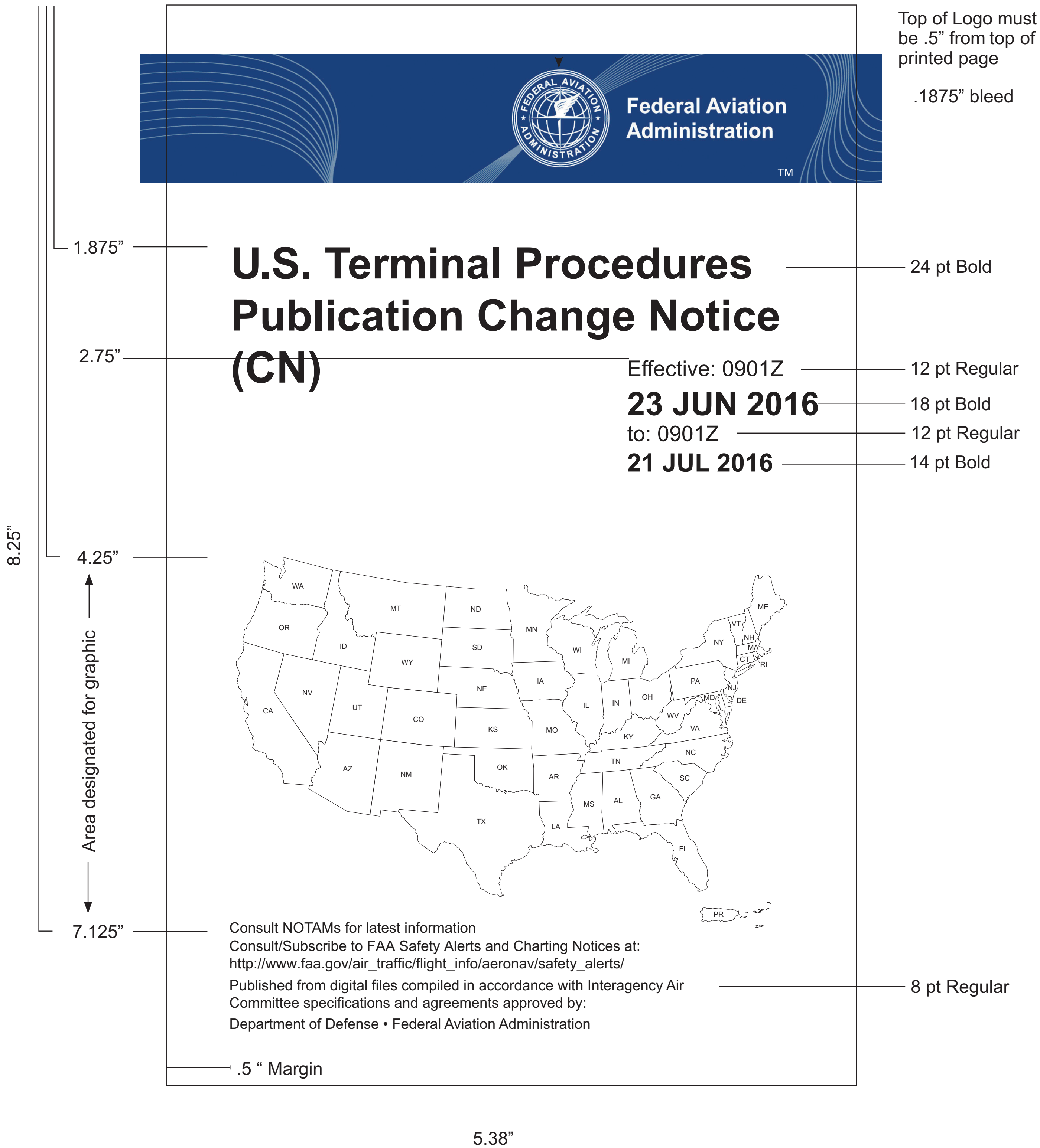
A rate of climb/descent table is provided for use in planning and executing climbs or descents under known or approximate ground speed conditions. It will be especially useful for approaches when the localizer only is used for course guidance. A best speed, power, altitude combination can be programmed which will result in a stable glide rate and altitude favorable for executing a landing if minimums exist upon breakout. Care should always be exercised so that minimum descent altitude and missed approach point are not exceeded.

ft/NM	%	GROUND SPEED (knots)											ANGLE
		60	90	120	150	180	210	240	270	300	330	360	
152	2.50	150	230	300	380	460	530	610	680	760	840	910	1.43
200	3.29	200	300	400	500	600	700	800	900	1000	1100	1200	1.89
210	3.46	210	320	420	530	630	740	840	950	1050	1160	1260	1.98
220	3.62	220	330	440	550	660	770	880	990	1100	1210	1320	2.07
230	3.79	230	350	460	580	690	810	920	1040	1150	1270	1380	2.17
240	3.95	240	360	480	600	720	840	960	1080	1200	1320	1440	2.26
250	4.11	250	380	500	630	750	880	1000	1130	1250	1380	1500	2.36
260	4.28	260	390	520	650	780	910	1040	1170	1300	1430	1560	2.45
270	4.44	270	410	540	680	810	950	1080	1220	1350	1490	1620	2.54
280	4.61	280	420	560	700	840	980	1120	1260	1400	1540	1680	2.64
290	4.77	290	440	580	730	870	1020	1160	1310	1450	1600	1740	2.73
300	4.94	300	450	600	750	900	1050	1200	1350	1500	1650	1800	2.83
310	5.10	310	470	620	780	930	1090	1240	1400	1550	1710	1860	2.92
320	5.27	320	480	640	800	960	1120	1280	1440	1600	1760	1920	3.01
330	5.43	330	500	660	830	990	1160	1320	1490	1650	1820	1980	3.11
340	5.60	340	510	680	850	1020	1190	1360	1530	1700	1870	2040	3.20
350	5.76	350	530	700	880	1050	1230	1400	1580	1750	1930	2100	3.30
360	5.92	360	540	720	900	1080	1260	1440	1620	1800	1980	2160	3.39
370	6.09	370	560	740	930	1110	1300	1480	1670	1850	2040	2220	3.48
380	6.25	380	570	760	950	1140	1330	1520	1710	1900	2090	2280	3.58
390	6.42	390	590	780	980	1170	1370	1560	1760	1950	2150	2340	3.67
400	6.58	400	600	800	1000	1200	1400	1600	1800	2000	2200	2400	3.77
450	7.41	450	680	900	1130	1350	1580	1800	2030	2250	2480	2700	4.24
500	8.23	500	750	1000	1250	1500	1750	2000	2250	2500	2750	3000	4.70
550	9.05	550	830	1100	1380	1650	1930	2200	2480	2750	3030	3300	5.17

CLIMB/DESCENT TABLE 00000

APPENDIX 15
CN FRONT COVER

All type on cover must be Arial font - no centering.



APPENDIX 16
CN INSIDE FRONT COVER

GENERAL INFORMATION/INSTRUCTIONS

CHANGE NOTICE (CN) FOR UNITED STATES GOVERNMENT

TERMINAL PROCEDURES PUBLICATION

GENERAL : The United States Terminal Procedures are published in 25 Bound Volumes on a 56-day cycle. This CN is published at the mid 28-day point and contains revisions, additions and deletions to the last complete issue of the 24 volumes covering the conterminous U.S. There is no CN published for airports in the states of Alaska, Hawaii, or Pacific Islands.

OPERATIONAL USE OF THE CHANGE NOTICE : During flight planning or in the case of an in-flight diversion, it is imperative that the pilot first consult this CN before making any decision as to which procedures are current at the airport of intended landing. If the airport of intended landing is not listed in the supplementary information or Index of Charts then the airport information in the basic 24 volumes has not changed.

INDEX OF TERMINAL PROCEDURES : All civil airports which have revised, added or deleted procedures are listed alphabetically by city in the Index. In addition to the airport name, the Index includes the CN page number, the current procedure designation, the affected page and volume number in the last issue of the 24 conterminous US volumes and an indicaton whether the procedure is new, has been deleted, or replaces an existing procedure.

EFFECTIVE DATES: All procedures in this CN are effective on the dates shown on the front cover unless indicated otherwise in the Index, i.e., if the procedure revision is effective on a date other than the CN publication date, this will be noted in the Index instructions by "Effective (date)". This will also be shown on the planview of the affected Chart(s)

CONSULT CURRENT NOTAMS.

APPENDIX 17
CN INDEX OF TERMINAL CHARTS AND MINIMUMS

TABLE OF CONTENTS

INDEX OF TERMINAL CHARTS AND MINIMUMS

NAME	PROC	SECT PG	ACTION
ALBUQUERQUE, NM			
ALBUQUERQUE INTL SUNPORT			
IAPS	RNAV (RNP) Y RWY 21	1	REPLACE PG. 16 VOL SW-1
	RNAV (RNP) Y RWY 26	2	REPLACE PG. 17 VOL SW-1
	RNAV (RNP) Z RWY 21	3	REPLACE PG. 20 VOL SW-1
	RNAV (RNP) Z RWY 26	4	REPLACE PG. 21 VOL SW-1
	RNAV (GPS) Y RWY 08	5	REPLACE PG. 23 VOL SW-1
ALFRED C BUBBA THOMAS			
---**SEE SINTON, TX**			
ASTORIA, OR			
ASTORIA RGNL			
IAPS	ILS RWY 26	6	REPLACE PG. 13 VOL NW-1
ATKINSON, NE			
STUART-ATKINSON MUNI			
IAPS	RNAV (GPS) RWY 29	7	REPLACE PG. 26 VOL NC-2
	VOR/DME RWY 29	8	REPLACE PG. 27 VOL NC-2
ATKINSON MUNI			
---**SEE PITTSBURG, KS**			
ATLANTA, GA			
ATLANTA RGNL FALCON FLD			
IAPS	ILS OR LOC RWY 31	9	REPLACE PG. 46 VOL SE-4
	RNAV (GPS) RWY 13	10	REPLACE PG. 47 VOL SE-4
	RNAV (GPS) RWY 31	11	REPLACE PG. 48 VOL SE-4
	NDB RWY 31	12	REPLACE PG. 49 VOL SE-4
HARTSFIELD-JACKSON ATLANTA INTL			
IAPS	RNAV (GPS) PRM RWY 09L	13	REPLACE PG. 100 VOL SE-4
	RNAV (GPS) RWY 09L	14	REPLACE PG. 102 VOL SE-4
	RNAV (GPS) PRM RWY 09R	15	REPLACE PG. 134 VOL SE-4
AURORA, MO			
JERRY SUMNERS SR AURORA MUNI			
IAPS	RNAV (GPS) RWY 18	16	REPLACE PG. 21 VOL NC-3
BATAVIA, OH			
CLERMONT COUNTY			
IAPS	RNAV (GPS) RWY 22	17	REPLACE PG. 44 VOL EC-2
BEATRICE, NE			
BEATRICE MUNI			
IAPS	RNAV (GPS) RWY 14	18	REPLACE PG. 36 VOL NC-2
	VOR RWY 36	19	REPLACE PG. 42 VOL NC-2
BELLEVILLE, KS			
BELLEVILLE MUNI			
IAPS	RNAV (GPS) RWY 36	20	REPLACE PG. 44 VOL NC-2

APPENDIX 18
CN IFR TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

TAKEOFF MINIMUMS (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

00000

INSTRUMENT APPROACH PROCEDURE CHARTS

IFR TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

Civil Airports and Selected Military Airports

ALL USERS: Airports that have Departure Procedures (DPs) designed specifically to assist pilots in avoiding obstacles during the climb to the minimum enroute altitude, and/or airports that have civil IFR takeoff minimums other than standard, are listed below. Takeoff Minimums and Departure Procedures apply to all runways unless otherwise specified. An entry may also be listed that contains only Takeoff Obstacle Notes. Altitudes, unless otherwise indicated, are minimum altitudes in MSL.

DPs specifically designed for obstacle avoidance are referred to as Obstacle Departure Procedures (ODPs) and are textually described below, or published separately as a graphic procedure. If the ODP is published as a graphic procedure, its name will be listed below, and it can be found in either this volume (civil), or the applicable military volume, as appropriate. Users will recognize graphic obstacle DPs by the term "(OBSTACLE)" included in the procedure title; e.g., TETON TWO (OBSTACLE). If not specifically assigned an ODP, SID, or radar vector as part of an IFR clearance, an ODP may be required to be flown for obstacle clearance, even though not specifically stated in the IFR clearance. When doing so in this manner, ATC should be informed when the ODP being used contains a specified route to be flown, restrictions before turning, and/or altitude restrictions.

Some ODPs, which are established solely for obstacle avoidance, require a climb in visual conditions to cross the airport, a fix, or a NAVAID in a specified direction, at or above a specified altitude. These procedures are called Visual Climb Over Airport (VCOA). To ensure safe and efficient operations, the pilot must verbally request approval from ATC to fly the VCOA when requesting their IFR clearance.

At some locations where an ODP has been established, a diverse vector area (DVA) may be created to allow radar vectors to be used in lieu of an ODP. DVA information will state that headings will be as assigned by ATC and climb gradients, when applicable, will be published immediately following the specified departure procedure.

Graphic DPs designed by ATC to standardize traffic flows, ensure aircraft separation and enhance capacity are referred to as "Standard Instrument Departures (SIDs)". SIDs also provide obstacle clearance and are published under the appropriate airport section. ATC clearance must be received prior to flying a SID.

CIVIL USERS NOTE: Title 14 Code of Federal Regulations Part 91 prescribes standard takeoff rules and establishes takeoff minimums for certain operators as follows: (1) For aircraft, other than helicopters, having two engines or less – one statute mile visibility. (2) For aircraft having more than two engines – one-half statute mile visibility. (3) For helicopters – one-half statute mile visibility. These standard minima apply in the absence of any different minima listed below.

MILITARY USERS NOTE: Civil (nonstandard) takeoff minima are published below. For military takeoff minima, refer to appropriate service directives.

EAST CENTRAL VOL. 2

FINDLAY, OH

FINDLAY (FDY)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 1 06DEC18 (18340) (FAA)

TAKEOFF MINIMUMS:

Rwy 25, 300-1⅝ or std. w/min. climb of 210’ per NM to 1100, or alternatively with std. takeoff minimums and a normal 200’ per NM climb gradient, takeoff must occur no later than 1400’ prior to DER.

TAKEOFF OBSTACLE NOTES:

Rwy 7, road with vehicles beginning 55’ from DER, 308’ right of centerline, up to 15’ AGL/821’ MSL.
Wall, pole beginning 121’ from DER, 48’ left of centerline, up to 10’ AGL/816’ MSL.
Tree, road with vehicles, pole beginning 154’ from DER, 69’ right of centerline, up to 32’ AGL/838’ MSL.
Road with vehicles beginning 210’ from DER, 1’ left of centerline, up to 15’ AGL/821’ MSL.
Trees beginning 279’ from DER, 45’ right of centerline, up to 33’ AGL/839’ MSL.
Tree, pole, building beginning 338’ from DER, 33’ left of centerline, up to 26’ AGL/832’ MSL.
Tree 1715’ from DER, 959’ right of centerline, 54’ AGL/860’ MSL.
Trees beginning 1846’ from DER, 407’ right of centerline, up to 64’ AGL/870’ MSL.
Building 2374’ from DER, 1054’ right of centerline, 110’ AGL/916’ MSL.
Building, tree, wind indicator beginning 2417’ from DER, 109’ right of centerline, up to 121’ AGL/927’ MSL.
Rwy 18, tree 2786’ from DER, 150’ left of centerline, 876’ MSL.
Rwy 25, fence, vegetation beginning 26’ from DER, 141’ left of centerline, up to 6’ AGL/799’ MSL.
Road with vehicles beginning 133’ from DER, 108’ right of centerline, up to 15’ AGL/803’ MSL.
Sign, tree, pole beginning 473’ from DER, 421’ right of centerline, up to 64’ AGL/852’ MSL.
Tree, pole, road with vehicles beginning 785’ from DER, 397’ right of centerline, up to 15’ AGL/802’ MSL.
Elevator, tree beginning 1824’ from DER, 295’ right of centerline, up to 78’ AGL/869’ MSL.
Trees beginning 2207’ from DER, 454’ right of centerline, up to 88’ AGL/876’ MSL.
Elevator 1.2 NM from DER, 1040’ right of centerline, 206’ AGL/999’ MSL.
Elevator 1.3 NM from DER, 1114’ right of centerline, 207’ AGL/1000’ MSL.
Rwy 36, pole 1191’ from DER, 742’ right of centerline, 39’ AGL/835’ MSL.
Tree 1559’ from DER, 498’ left of centerline, 51’ AGL/847’ MSL.

APPENDIX 19
CN IFR ALTERNATE AIRPORT MINIMUMS

INSTRUMENT APPROACH PROCEDURE CHARTS

A IFR ALTERNATE AIRPORT MINIMUMS

Pilots must review the IFR Alternate Minimums Notes to determine alternate airport suitability.
A NA designation on the approach chart means that pilots may not use that approach as an alternate due to unmonitored facility, absence of weather reporting service, or lack of adequate navigation coverage. Approaches with the A NA designation are not listed in this section. A designation on the approach chart indicates that the approach procedure has non-standard minimums (for aircraft other than helicopters) or restrictions (for all users) for its use as an alternate.

Alternate Minima (ref: 14 CFR 91.169)

	Precision Approach	Non-Precision Approach
Standard	**600-2**	**800-2**
A Non-Standard or restrictions	As indicated below	As indicated below
Helicopters	For the selected approach: Ceiling: 200’ above published ceiling Visibility: the greater of 1 SM visibility or the published visibility	
US Military (USA/USN/USAF)	See Service Regulations	

Note: For alternate airport flight planning purposes, precision approach operations include: ILS, PAR, and GLS, and Non-Precision approach operations include: NDB, VOR, LOC, TACAN, LDA, SDF, ASR, RNAV (GPS) and RNAV (RNP).

NAME ALTERNATE MINIMUMS

EAST CENTRAL VOL 3

SUPERIOR, WI
RICHARD I
BONG (SUW)…………………..**RNAV (GPS) Rwy 4**
RNAV (GPS) Rwy 14
RNAV (GPS) Rwy 22[1]
RNAV (GPS) Rwy 32
Category D, 800-2¼.
[1]NA when local weather not available.

NORTH CENTRAL VOL 3

OELWEIN, IA
OELWEIN
MUNI (OLZ)…………………...**RNAV (GPS) Rwy 13**
Category D, 800-2¼.

NAME ALTERNATE MINIMUMS

NORTHWEST VOL 1

REDMOND, OR
ROBERTS
FLD (RDM)………….………..**ILS or LOC Rwy 23**[13]
RNAV (GPS) Rwy 11[1]
RNAV (GPS) Y Rwy 5[1]
RNAV (GPS) Y Rwy 23[2]
RNAV (GPS) Z Rwy 29[1]
VOR-A[12]
[1]NA when local weather not available.
[2]Category D, 800-2¼.
[3] LOC, Category E, 800-2½.

SOUTHEAST VOL 2

BEAUFORT, NC
MICHAEL J
SMITH FLD (MRH)…………….**RNAV (GPS) Rwy 3**
RNAV (GPS) Rwy 8
RNAV (GPS) Rwy 14
RNAV (GPS) Rwy 21
RNAV (GPS) Rwy 26
RNAV (GPS) Rwy 32
NA when local weather not available.

APPENDIX 20
CN RADAR INSTRUMENT APPROACH MINIMUMS

D1

RADAR MINS

15036

RADAR INSTRUMENT APPROACH MINIMUMS

EAST CENTRAL VOL 1

BATTLE CREEK, MI Amdt 2, 13DEC90 (15036) (FAA) ELEV **952**
W. K. KELLOGG (BTL)
RADAR-1 119.2 239.25

	RWY	GP/TCH/RPI	CAT	DA/ MDA-VIS	HAT/ HAA	CEIL-VIS	CAT	DA/ MDA-VIS	HAT/ HAA	CEIL-VIS
CIRCLING			A	**1420**-1	468	(500-1)	B	**1440**-1	488	(500-1)
			C	**1480**-1½	528	(600-1½)	D	**1520**-2	568	(600-2)
			E	**1740**-2¾	788	(800-2¾)				

When Kalamazoo control tower closed, procedure not authorized.
When Battle Creek control tower closed, use Kalamazoo altimeter setting and increase all MDA's 60 feet and Category E visibility ¼ mile.

EAST CENTRAL VOL 3

GREEN BAY, WI Amdt 9C, 06JUL06 (15036) (FAA) ELEV **695**
AUSTIN STRAUBEL INTL (GRB)
RADAR-1 119.4 338.2

	RWY	GP/TCH/RPI	CAT	DA/ MDA-VIS	HAT/ HAA	CEIL-VIS	CAT	DA/ MDA-VIS	HAT/ HAA	CEIL-VIS
ASR	36		AB	**1100**/24	418	(500-½)	C	**1100**/40	418	(500-¾)
			D	**1100**/50	418	(500-1)				
	24		AB	**1120**-1	438	(500-1)	C	**1120**-1¼	438	(500-1¼)
			D	**1120**-1½	438	(500-1½)				
	6		AB	**1220**/24	528	(600-½)	C	**1220**/50	528	(600-1)
			D	**1220**/60	528	(600-1¼)				
	18		AB	**1220**-1	525	(600-1)	C	**1220**-1½	525	(600-1½)
			D	**1220**-1¾	525	(600-1¾)				
CIRCLING	ALL RWY		AB	**1220**-1	525	(600-1)	C	**1220**-1½	525	(600-1½)
			D	**1260**-2	565	(600-2)				

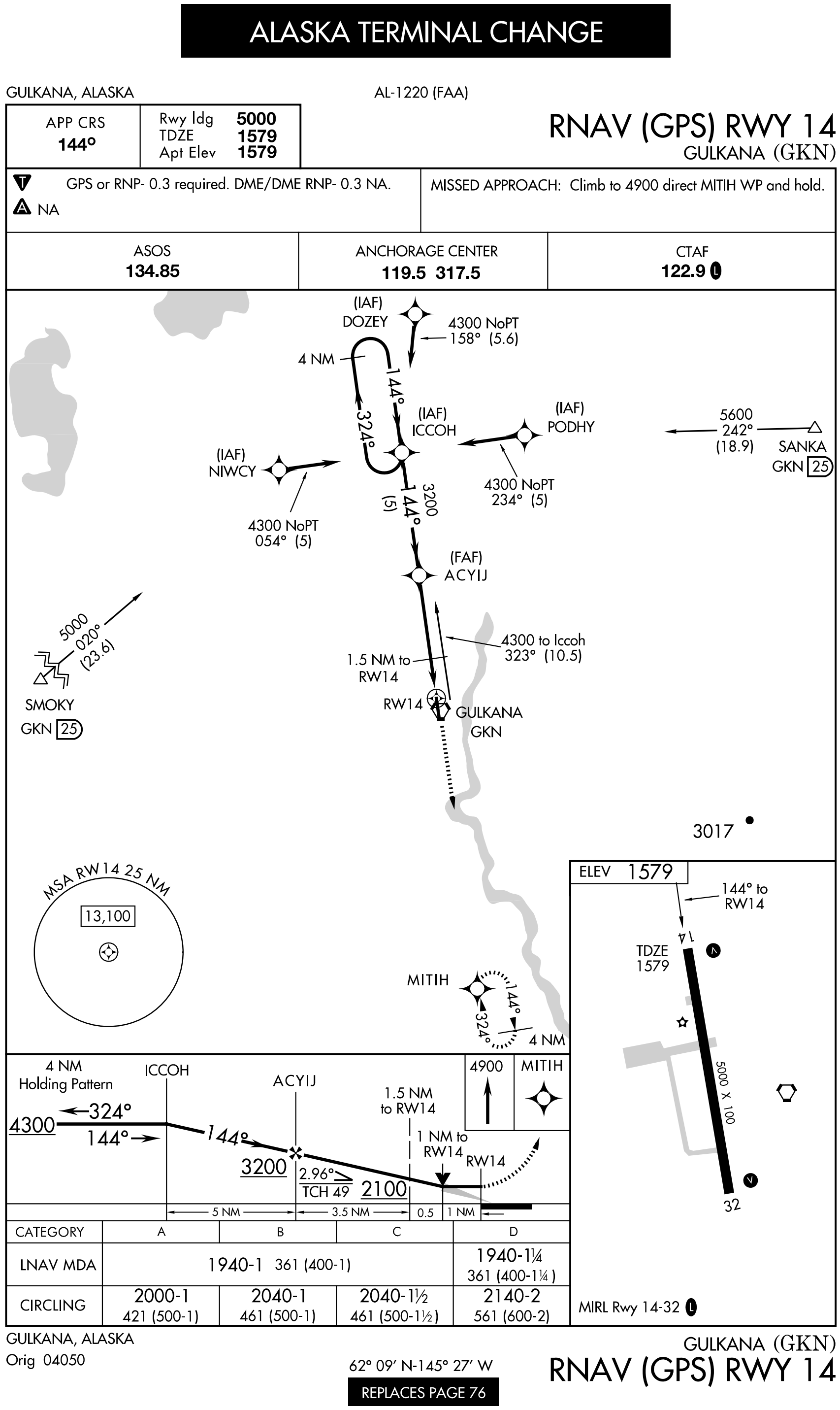
For inoperative MALSR, increase ASR S-36 Category D visibility to RVR 6000.
When control tower closed, ASR not authorized.

RADAR INSTRUMENT APPROACH MINIMUMS

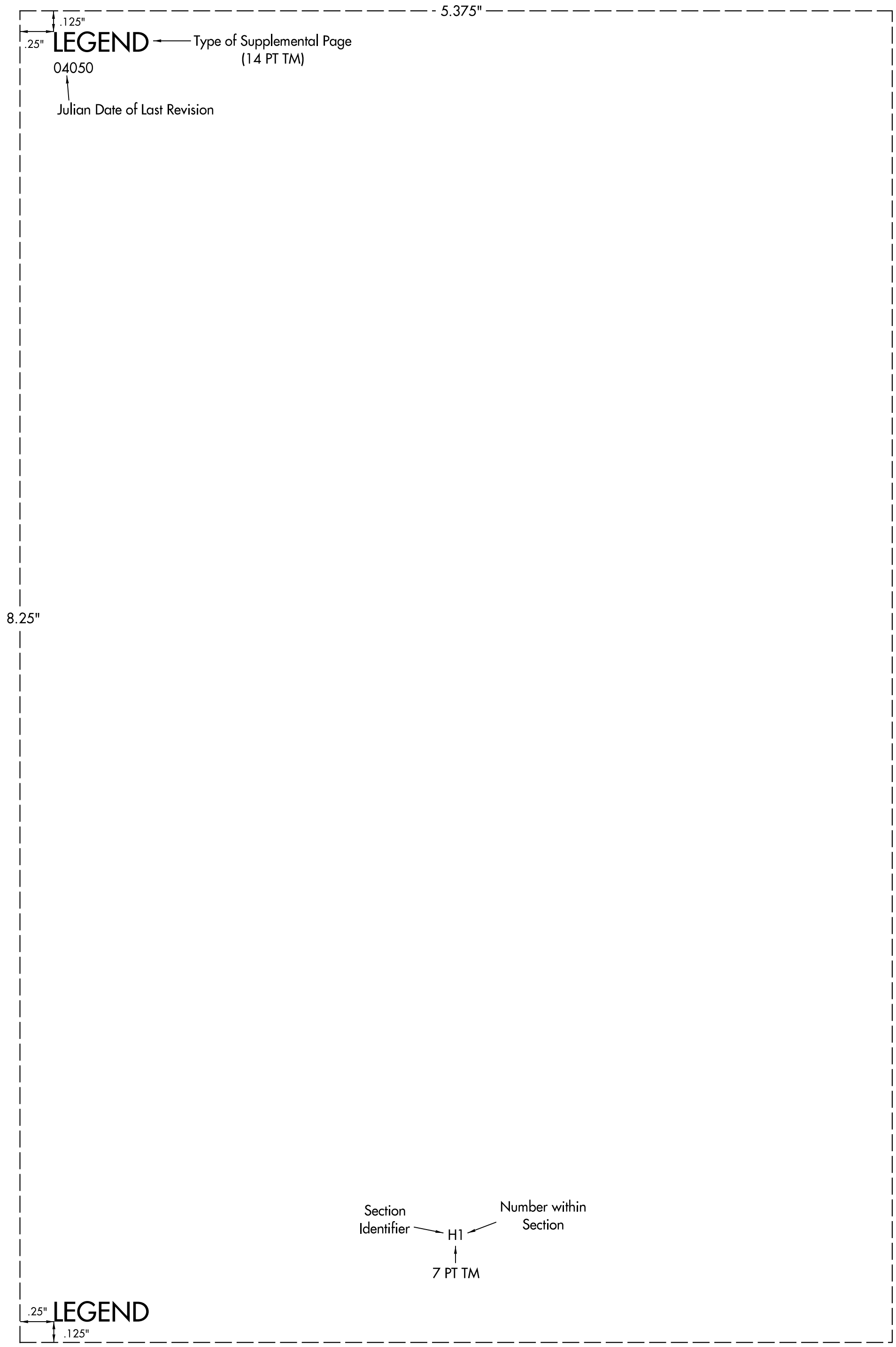
RADAR MINS

15036 D1

APPENDIX 21
CN ALASKA



APPENDIX 22
SUPPLEMENTAL PAGE FORMAT



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