

UNCLASSIFIED

NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY
GENERAL AND TECHNICAL PROVISIONS
FOR PRINTING AND FINISHING
of
DOD
FLIGHT INFORMATION PUBLICATIONS
BOOKS and CHARTS



FOURTH EDITION Revision 1
NOVEMBER 2025

Prepared By
NATIONAL GEOSPATIAL-INTELLIGENCE
AGENCY SAFETY OF NAVIGATION OFFICE
ARNOLD, MO 63010-6238

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RECORD OF CHANGE NOTICES AND AMENDMENTS

AMENDMENT/
CHANGE NOTICE

DATEEFFECTIVE
DATEREMARKS

ALL CHANGES IN GREEN REVISION 1 DATED NOVEMBER 2025

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General and Technical Provisions for Printing and Finishing
FOREWORD

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1. AUTHORITY: This document is published by the authority delegated by Department of Defense (DoD) Directive 5105.60, 29 July, 2009, National Geospatial-Intelligence Agency (NGA).

2. PURPOSE AND SCOPE:

a. These provisions are for the printing and finishing of DoD Flight Information Publication (FLIP) books and charts. No deviation shall be made from these provisions unless specifically authorized by NGA.

b. Conformance to these provisions will ensure that all FLIP products will be produced in accordance with approved methods and standards.

3. APPLICABILITY: These provisions apply to all activities involved in the production of DoD FLIP books and charts.

4. CHANGE NOTICES AND AMENDMENTS:

a. Revisions to these provisions will be issued in the form of a new edition, change notices or amendments.

b. Change notices, which may cover one or more revisions, will remain in force until superseded by a subsequent change notice, amendment, or new edition. Changes will require hand entry in the appropriate place in this manual. Recipients should maintain the Record of Change Notices and Amendments (page i) to assure receipt and posting of all change notices.

c. Amendments will be issued in the form of substitute pages when the quantity of change notices warrants consolidation to improve the readability of these provisions or to introduce major revisions. Amendments will remain in force until superseded by a change notice, subsequent amendment, or new edition. Asterisks in both margins will indicate the amended lines. Recipients should replace the old page with the amended pages. It is also recommended that the amendments be entered in the Record of Change Notices and Amendments (page i) to assure receipt and posting of all amendments.

5. SECURITY: This General and Technical Provisions document and the resultant products are UNCLASSIFIED.

6. RECOMMENDED CHANGES: Recommended changes or comments should be keyed to the specific page, paragraph and line of text. A reason should be provided for each comment to ensure understanding and complete evaluation. Comments should be forwarded directly to: Director, NGA, ATTN: SFP, J-19, 3838 Vogel Road, Arnold, MO 63010-6238.

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Abbreviations

AACDTD	Area Arrival Chart Depicting Terrain Data
AFR	Africa
AP	Area Planning
CNA	Canada and North Atlantic
CSA	Caribbean and South America
ECN	Enroute Change Notice
ECN/TCN	Enroute Change Notice/Terminal Change Notice
EEA	Eastern Europe and Asia
ENAME	Europe, North Africa and Middle East
ENROUTE	Enroute Foldout Charts
EUR	Europe
FIH	Flight Information Handbook
GP	General Planning
IAP	Instrument Approach Procedures
IFR	Instrument Flight Rules
JCP	Joint Committee on Printing
KOR	Korea
NSA	North and South America
PAA	Pacific, Australasia and Antarctica
PMS	Pantone Matching System (Inks)
STAR	Standard Terminal Arrivals
SUPP	Supplement
TCN	Terminal Change Notice
TERM	Terminal
UCN	Urgent Change Notice
VFR	Visual Flight Rules

GENERAL INFORMATION

SECTION 100 – PURPOSE

The purpose of this manual is to furnish to the contractor NGA requirements for any photo servicing, plus printing and finishing of DoD Flight Information Publications (FLIPs). These FLIP Publications are identified and listed in subsequent parts of this manual. Parts of this manual may not be applicable to a contractor based on contract award of specific publications listed by LOTs during the contract solicitation process. **LOTs 2, 3, and 4 refer to DoD FLIP Books, while LOT 1 refers to DoD FLIP Charts.**

SECTION 200 – QUALITY STANDARDS

Sampling, measuring, and testing for quality is required in accordance with standards and criteria contained in the National Geospatial-Intelligence Agency Contractor Quality Program for Printing and Finishing of DoD Flight Information Publications Books and Charts.

SECTION 300 – RAW MATERIALS

301.

Paper

301.a.

Paper used in the production of the publications covered by this manual shall be in accordance with the Government Paper Specification Standards published by the Joint Committee on Printing (JCP), Congress of the United States. The JCP documents may be obtained through the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

301.b.

JCP specifications may be changed from time to time. The specification to be used is the one in effect on the date of which a solicitation is issued for contract production of the publications covered in the solicitation.

301.c.

JCP paper code numbers and their specifications are as follows:

301.d. (1)

Book Pages

JCP **A72** (Flexural Offset Book with 30% wastepaper) JCP Waiver #88083 Grammage (Basis Weight) 63.5 cm x 96.5 cm (25" x 38") 500 sheets = 40.0 g/m² (27 lbs). Not less than 30% postconsumer fiber.

JCP A75 (Light Weight Offset Book) Grammage (Basis Weight) 63.5 cm x 96.5 cm (25" x 38") 500 sheets = 45.0 g/m² (30 lbs). With the following exceptions; Stock: Blend of bleached chemical and mechanical fiber. Groundwood pulp 30-45%. Available with up to 30% post-consumer fiber. Opacity: 89% Target. Thickness: .00226 mm, Average (mils) 2.30 mils +/-5%. Smoothness: 100-50. Color: Minimum Brightness 80%.

301.d (2)

Book Covers

JCP **L20** (Vellum-Finish Cover, White) Grammage (Basis Weight) 50.8 cm x 66.0 cm (20" x 26") 500 sheets = 135 g/m² (50 lbs).

301.d (3)

Charts (foldout)

JCP **E40** (Chemical Wood Map, Lithographic-Finish) Grammage (Basis Weight) 43.2 cm x 55.9 cm (17" x 22") 500 sheets = 75 g/m² (20 lbs).

302.

Ink

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A color match of the Pantone Matching System (PMS) on Uncoated (U) paper as identified below is acceptable for this standard.

LOT 1 (Charts)

[illegible]

LOT 2 (Books)

PMS	PRODUCT
Pantone Black	All LOT 2 Products
199 Red	AFR ECN/TCN Cov 1 Border & Pg No.
728 Brown	AFR Supp/Term Cov 1,4 Overprint
464 Brown	AFR Supp/Term Terrain Body Pgs
427 Gray	CNA TCN Cov 1,4 Overprint
427 Gray	CNA Term Cov 1,4 Overprint
290 Blue	CSA TCN Cov 1,4 Overprint
290 Blue	CSA Term Cov 1,4 Overprint
199 Red	EEA ECN/TCN Cov 1 Border & Pg No.
1585 Orange	EEA Supp/Term Cov 1,4 Overprint
464 Brown	EEA Supp/Term Terrain Body Pgs
566 Green	ENAME TCN Cov 1,4 Overprint
566 Green	ENAME Term Cov 1,4 Overprint
106 Yellow	PAA TCN Cov 1,4 Overprint
106 Yellow	PAA Term Cov 1,4 Overprint
464 Brown	Selected Term Books Terrain Body Pgs
4/C Process (CYMK)	VFR EUR Body Pgs
566 Green	VFR EUR Cov 1,4 Overprint
Reflex Blue	VFR EUR Cov Border & Text
4/C Process (CYMK)	VFR KOR Body Pgs
106 Yellow	VFR KOR Cov 1,4 Overprint
Reflex Blue	VFR KOR Cov Border & Text

LOT 3 (Books)

PMS	PRODUCT
Pantone Black	All LOT 3 Products
199 Red	CSA ECN Cov 1 Border & Pg Number
290 Blue	CSA Supp Cov 1,4 Overprint
566 Green	ENAME Supp Cov 1,4 Overprint
199 Red	PAA ECN Cov 1 Border & Pg Number
106 Yellow	PAA Supp Cov 1,4 Overprint
Reflex Blue	US IFR Supp Cov's 1,2,3,4 Text
199 Red	US VFR ECN Cov 1 Border & Pg Number
498 Brown	US VFR Supp Cov's 1,2,3,4 Text

LOT 4 (Books)

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UNSCHEDULED URGENT CHANGE NOTICES			
LOT 2 (Books)			
Category	Products	Cover 1	Any Subsequent Pages
TERMINALS :	CNA, CSA, ENAME, PAA, US	Black Only	Black and Possibly 464 Brown Terrain
SUPP / TERM :	AFR, EEA (AFR & EEA as SUPP UCNs)	199 Red Border & Pg Number, Black Text	Black Only
SUPP / TERM :	AFR, EEA (AFR & EEA as TERM UCNs)	Black Only	Black and Possibly 464 Brown Terrain
VFRs :	EUR, KOR	Reflex Blue Only (Border and Text)	4/C Process or Possibly Black Only

LOT 3 (Books)			
Category	Product	Cover 1	Any Subsequent Pages
SUPPLEMENTS	CSA, ENAME, PAA, IFR, VFR, FIH	199 Red Border & Pg Number, Black Text	Black Only
LOT 1 CHARTS	AFR, CSA, EEA, ENAME, PAA Enroute	199 Red Border & Pg Number, Black Text	Black Only
LOT 1 CHARTS	US AACD TD (Alaska Charts)	199 Red Border & Pg Number, Black Text	Black Only

LOT 4 (Books)			
Category	Product	Cover 1	Any Subsequent Pages
PLANNING	GP, AP 1,2,3,4, 1B Books	Black Only	Black Only

Density and L.a.b. Readings

LOT 1 (Charts) printed colors shall conform to the following ink density readings. Readings were obtained from white paper stock using a X-Rite series model 404 densitometer.

LOT 1 (Charts) PRINTING COLOR DENSITY TOLERANCES				
Specification (Dry) (Uncoated Stock)				
PMS	COLOR	LIGHT	NORMAL	DARK
134	Yellow	48	55	62
139	Brown	99	105	111
354	Green	82	91	100
498	Brown	88	99	111
Pantone Black	Black	103	115	130
Reflex Blue	Blue	100	110	120

LOT 1 (Charts) printed colors shall conform to the following ink L.a.b. readings. Readings were obtained from E40 paper stock using a Gretag/Macbeth series, model Eye-One spectrophotometer.

LOT 1 (Charts) L.a.b. READINGS				
Specification (Dry) (Uncoated Stock)				
PMS	COLOR	<u>L</u>	<u>a</u>	<u>b</u>
134	Yellow	83.5	1.7	42.4
139	Brown	56.2	10.6	33.8
354	Green	58.1	- 43.8	22.9
498	Brown	46.5	14.7	12.9
Pantone Black	Black	32.7	0.7	2.3
Reflex Blue	Blue	42.83	8.08	-42.16

LOT 2 (Books) printed colors shall conform to the following ink density readings. Readings were obtained from white paper stock using a X-Rite series model 500 spectrodensitometer.

LOT 2 (Books) PRINTING COLOR DENSITY TOLERANCES Specification (Dry) (Uncoated Stock)				
PMS	COLOR	LIGHT	NORMAL	DARK
106	Yellow	62	67	72
199	Red	100	105	110
290	Blue	17	22	27
427	Gray	23	28	33
464	Brown (Terrain)	93	98	103
566	Green	27	32	37
728	Brown	60	65	70
1585	Orange	90	95	100
Pantone	Black	102	107	112
Reflex	Blue	130	135	140
Process	Blue (cyan)	122	127	132
Process	Yellow	90	95	100
Process	Red (Magenta)	130	135	140
Process	Black	160	165	170

LOT 2 (Books) printed colors shall conform to the following ink L.a.b. readings. Readings were obtained from white paper stock using a X-Rite series model 500 spectrodensitometer.

LOT 2 (Books) L.a.b. READINGS Specification (Dry) (Uncoated Stock)				
PMS	COLOR	<u>L</u>	<u>a</u>	<u>b</u>
106	Yellow	90.26	- 1.10	63.20
199	Red	56.59	56.42	15.65
290	Blue	86.39	- 5.69	- 13.51
427	Gray	76.91	- 1.01	- 1.18
464	Brown (Terrain)	47.26	10.39	20.49
566	Green	82.87	- 16.01	- 0.68
728	Brown	66.27	11.30	20.51
1585	Orange	69.26	46.34	48.41
Pantone	Black	31.63	1.38	1.18
Reflex	Blue	29.65	21.43	- 55.86
Process	Blue (cyan)	57.71	- 21.89	- 45.02
Process	Yellow	93.81	- 3.77	77.28
Process	Red (Magenta)	56.08	62.57	3.00
Process	Black	38.86	1.21	0.08

LOT 3 (Books) printed colors shall conform to the following ink density readings. Readings were obtained from white paper stock using a X-Rite series model 500 spectrodensitometer.

LOT 3 (Books) PRINTING COLOR DENSITY TOLERANCES Specification (Dry) (Uncoated Stock)				
PMS	COLOR	LIGHT	NORMAL	DARK
106	Yellow	62	67	72
199	Red	100	105	110
290	Blue	17	22	27
498	Brown	96	101	106
566	Green	27	32	37
Pantone	Black	102	107	112

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Reflex	Blue	130	135	140
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302 (CONT).

LOT 3 (Books) printed colors shall conform to the following ink L.a.b. readings. Readings were obtained from white paper stock using a X-Rite series model 500 spectrodensitometer.

LOT 3 (Books) L.a.b. READINGS Specification (Dry) (Uncoated Stock)				
PMS	COLOR	<u>L</u>	<u>a</u>	<u>b</u>
106	Yellow	90.26	- 1.10	63.20
199	Red	56.59	56.42	15.65
290	Blue	86.39	- 5.69	- 13.51
498	Brown	42.25	14.58	6.62
566	Green	82.87	- 16.01	- 0.68
Pantone	Black	31.63	1.38	1.18
Reflex	Blue	29.65	21.43	- 55.86

LOT 4 (Books) printed colors shall conform to the following ink density readings. Readings were obtained from white paper stock using a X-Rite series model 500 spectrodensitometer.

LOT 4 (Books) PRINTING COLOR DENSITY TOLERANCES Specification (Dry) (Uncoated Stock)				
PMS	COLOR	LIGHT	NORMAL	DARK
Pantone	Black	102	107	112

LOT 4 (Books) printed colors shall conform to the following ink L.a.b. readings. Readings were obtained from white paper stock using a X-Rite series model 500 spectrodensitometer.

LOT 4 (Books) L.a.b. READINGS Specification (Dry) (Uncoated Stock)				
PMS	COLOR	<u>L</u>	<u>a</u>	<u>b</u>
Pantone	Black	31.63	1.38	1.18

303.

Adhesive

303.a.

Adhesive used for glue-bound publications shall be moisture resistant.

303.b.

Adhesive shall be capable of being elongated at least 400% within 10 to 30 seconds without breaking (complete separation).

303.c.

Adhesive shall be flexible at -5.5 degrees Celsius (+22 degrees Fahrenheit).

Test procedures for adhesive characteristics can be found in NGA Contractor Quality Program for Printing and Finishing of DOD Flight Information Publications Books and Charts.

SECTION 400 – PHOTO SERVICE

All of NGA's FLIP products are in digital format and are to be downloaded at the contractors facility(s). At this point the contractor could convert these files to film or send directly to plate or press. If converting to film, it is the contractors responsibility to ensure quality of image is maintained through to the platemaking process.

401.

Compositing and/or Duplicating of Films

401.a.

All products are printed from downloaded files consisting of solid colors and/or screen tints. Screen tints consist of various tone percentages of 120 and 240 line dot screens and/or various tones of line ruling screens.

401.b.

Imagery on the individual negatives/positives shall match that seen on monitors during the downloading process.

401.c.

Any duplicating of negatives/positives shall retain the exact same quality, characteristics, and features as the original film that was duplicated.

401.d.

Screen dot dimensions shall be the same as the original $\pm .005$ mm ($\pm .0002$ ").

401.e.

Line weight shall be the same as the original $+ .013$ mm ($+ .0005$ ").

401.f.

Final negatives shall be free of pinholes, scratches, abrasions, kinks, etc., that will result in visible imperfections on the printed chart/page.

401.g.

Screens shall be applied at specified angle and percentage of tone.

402.

Replacement Charts

Replacement chart(s) may be necessary when the complexity of changes make other means of notifying product users inappropriate. When a replacement chart is required, both sides of the chart will be printed when appropriate. The top front panel of the replacement chart shall be diagonally overprinted (45 degrees reading uphill left to right) in solid PMS 498 (Brown) the words "REPLACEMENT CHART" and pertinent effective data.

SECTION 500 – PRINTING

501.

Reproduction of the products can be by any printing process which will conform to and fully satisfy this document, and which will produce a functionally satisfactory product.

502.

Print must be free of smears, scratches, holes, spots, fill-ins, and any other blemishes.

503.

Contractor's Credit Note

No contractor's credit note will be added.

504.

Books

504.a.

Signature Markers

To ensure inclusion of all signatures in their proper sequence in the finished books, contractors shall apply and print staggered signature markers. Marker images shall be on both sides of the outside trim at the folded edge. Contractors producing more than one book title shall have a different type of signature marker or symbol for each different book produced.

505.

Charts

505.a.

Registration Marks

505.a. (1)

A minimum of three center registration marks consisting of the left, right, and top marks shall be printed 3.2 mm (1/8") inside the chart trim. Printed marks shall be 3.2 mm (1/8") in length. These shall be left on during the entire run and shall be used as a basis for registration of the platemaking and printing operation. Registration evaluation of the features shall be on the basis of these marks.

505.a. (2)

Backup registration for charts, printing head-to-head, is accomplished with the top, left, and right center registration marks. Charts that are printed head-to-foot will additionally require a bottom center registration mark. Backup registration can then be accomplished with the top, left, and right center marks on one chart registering to the bottom, left, and right center marks of the backup chart.

505.a. (3)

Misregister of the center marks shall not exceed .5 mm (.02") in any given direction.

505.b.

Color Circles/Bars

Color circles or bars shall be printed on the gripper edge of each sheet. Circles 8.0 mm (5/16") or more in diameter shall be alternated between each standard print color required to print a specific chart, and evenly spaced a maximum of 7.6 cm (3") apart across each sheet of paper outside the trim area. For charts printed face and back, the placement shall be such that the color circles printed on the face side of the sheet shall not fall in line with those printed on the back side of the sheet. Color circles are to provide densitometric readings as described in the NGA Contractor Quality Program for Printing and Finishing of DoD Flight Information Publications Books and Charts.

SECTION 600 – DISTRIBUTION

For general and technical packaging and distribution provisions, see the NGA General and Technical Provisions for the Distribution of DoD Flight Information Publications Books and Charts.

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INSTRUMENT APPROACH PROCEDURES (TERMINAL) BOOKS

Canada and North Atlantic High/Low Altitude

Caribbean and South America High/Low Altitude, Volumes 1-2

Europe, North Africa, and Middle East High/Low Altitude, Volumes 1-7

Pacific, Australasia, and Antarctica High/Low Altitude, Volumes 1-3

United States Low Altitude, Volumes 1-22

United States High Altitude (3 Titles)

SUPPLEMENT/TERMINAL BOOKS

Africa SUPP/TERM High/Low Altitude

Eastern Europe and Asia SUPP/TERM High/Low Altitude

STANDARD TERMINAL ARRIVALS (STAR) BOOK

United States Standard Terminal Arrivals

VFR ARRIVAL/DEPARTURE ROUTES BOOKS

Europe VFR Arrival/Departure

Korea VFR Arrival/Departure

SECTION 700 – GENERAL

700.a.

These publications consist of Instrument Approach Procedures (IAP) and Standard Terminal Arrival charts and associated data in bound book form having separate printed covers and lightweight body pages. The Visual Flight Rules (VFR) Arrival/Departure Routes publications consist of visual approach and departure route procedure charts and associated data in bound book form having separate

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printed covers and lightweight body pages.

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701.

PAPER

701.a.

The book body pages shall be printed on JCP **A75** and glue bound book covers shall be printed on JCP **L20**.
See paragraph 301 for specifications.

702.

INK

702.a.

Overprint background and bleed at all final trims on outside covers 1, 4, and spine the following solid PMS colors on JCP **L20** white cover stock :

Africa	PMS 728	Brown
Canada and North Atlantic	PMS 427	Gray
Caribbean and South America	PMS 290	Blue
Eastern Europe and Asia	PMS 1585	Orange
Europe, North Africa, Middle East	PMS 566	Green
Pacific, Australasia & Antarctica	PMS 106	Yellow
 VFR Europe	 PMS 566	 Green (plus solid Reflex Blue border bleed four sides on covers 1, 4 and outside edges of spine)
 VFR Korea	 PMS 106	 Yellow (plus solid Reflex Blue border bleed four sides on covers 1, 4 and outside edges of spine)
 United States Low and High Altitude		 No overprint bleed (remains white stock)
United States STAR		No overprint bleed (remains white stock)

702.b.

Cover and Body Text: Text for Instrument Approach Procedures, Supplement/Terminal, and Standard Terminal Arrivals book covers shall be printed in PMS Pantone Black ink. See paragraph 302 (tables) for specifications.

702c.

Selected Body pages: Instrument Approach Procedure pages requiring topographic terrain elevation contour lines/screens shall be printed in PMS 464 Brown.

702.d.

VFR Cover Text: VFR Arrival/Departure Routes book covers shall be printed in PMS Reflex Blue.
VFR Body Text: VFR Arrival/Departure Routes book body pages shall be printed in 4-Color Process inks.

703.

ADHESIVE

See paragraph 303 for specifications.

704.

PRINTING-GENERAL

704.a.

IAPs, SUPPs/TERMs, STAR, VFRs,
The text pages shall be printed back to back, head to foot, with lines of type reading parallel to the bound edge. The outside front cover and outside back cover shall be printed head to the bound edge. Inside front cover shall be printed foot to the bound edge; the inside back cover shall be printed

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head to the bound edge, except the VFR Korea Book, which prints foot to the bound edge.

704.b.

Registration

704.b. (1)

The back images shall be centered on the face images so that the 12.4 cm (4-7/8") and 17.8 cm (7") neatlines back-up.

704.b. (2)

Center register marks of the VFR body pages located at the head, left, and right shall be used for registering of colors.

704.b. (3)

Cover images shall be printed centered on the finished cover size.

704.c.

Backbone Text

The backbones shall be printed so that book titles on the spines will be right reading when the outside front cover is face down.

705.

FOLDING

The signature shall be folded so pages are in correct sequence and imagery will not be cut off during binding or trimming operations.

706.

COLLATING

706.a.

IAPs, SUPPs/TERMs, STAR, VFRs, signatures (pages) shall be collated in the proper sequence, i.e., Roman page numerals first, followed by Arabic numerals.

706.b.

Pages shall be in proper sequence and will not be inverted.

706.c.

The folios (page numbers), and chart name and facility on individual pages shall agree with the index of the book.

707.

BINDING

707.a.

Publications can be either glue bound or saddle stitched, depending on the number of pages. The publication shall always be glue bound when the page count is 97 or more. When the page count is 96 or less, the book may be produced either glue bound or saddle stitched. This is at the contractor's option.

707.b.

When a book is saddle stitched, it shall be stitched on the 13.5 cm (5-5/16") dimension with a minimum of two staples of sufficient strength to provide a secure binding. Staple location will be 7.0 cm (2-3/4") center to center of the outer staples and positioned on the saddle. The staple edge shall not be less than 19.1 mm (3/4") from either side of the book. The binding tension of the staples shall be controlled so that the center signature pages are not cut or torn.

707.c.

The books shall be bound on the 13.5 cm (5-5/16") top side.

707.d.

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The cover shall be a one-piece wrap around.

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708.

FINISHING

708.a.

IAPs, SUPP/TERMs, STAR, VFRs shall be trimmed to a finished size of 13.5 cm (5-5/16") x 21.0 cm (8-1/4").

TERMINAL CHANGE NOTICE (TCN)

Canada and North Atlantic High/Low Altitude IAP

Caribbean and South America High/Low Altitude IAP

Europe, North Africa, and Middle East High/Low Altitude IAP

Pacific, Australasia, and Antarctica High/Low Altitude IAP

United States High/Low Altitude IAP

ENROUTE CHANGE NOTICES (ECN)/TERMINAL CHANGE NOTICES (TCN)

Africa SUPP/TERM High/Low Altitude

Eastern Europe and Asia SUPP/TERM High/Low Altitude

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Terminal Change Notices (TCNs) as well as Enroute Change Notices/Terminal Change Notices (ECNs/TCNs) are published to correct procedures, to maintain currency, or to issue special information to users on a scheduled basis. These publications may be textual data only or textual and graphic.

710.

PAPERCOVERS

When the page count is 96 pages or less the covers shall be either JCP **A75** (Self cover) or JCP **L20**. This is the contractor's option. When the page count is 97 or more, the covers shall always be JCP **L20**. Glue bound books shall always use JCP **L20** cover stock.

710.a.

BODY

Body pages and self covers shall be printed on JCP **A75**. See paragraph 301 for specifications.

710.b.

JCP **L20** white stock shall, where appropriate, be overprinted on the outside of covers 1, 4, and spine to obtain appropriate background colors. The overprinting shall include sufficient bleed at all final trim edges to ensure any bordering white stock is omitted from the final product.

711.

INK

See paragraph 302 (tables) for specifications

711.a.

Solid background color bleed overprinting on covers 1, 4, and spine is required when either JCP **A75** (Self cover) or JCP **L20** cover stock is used on four of the TCNs. The PMS colors for overprinting are as follows:

Background color bleed overprinting on covers 1, 4, and spine is required when either JCP **A75** (Self cover) or JCP **L20** cover stock is used on the following first four TCNs. The PMS colors for overprinting are as follows:

Canada and North Atlantic TCN	Solid PMS 427	Gray
Caribbean and South America TCN	Solid PMS 290	Blue
Europe, North Africa, and Middle East TCN	Solid PMS 566	Green
Pacific, Australasia & Antarctica TCN	Solid PMS 106	Yellow
United States Low and High Altitude TCN	No background overprint (remains white stock)	

711.b.

Cover and Body Text: All text for TCN and ECN/TCN covers and body pages shall be printed in PMS Pantone Black ink. See paragraph 302 (tables) for specifications. No text/data shall be printed on the inside or outside of the back cover.

711c.

Selected Books and Body pages: Instrument Approach Procedure pages requiring topographic terrain elevation Contour lines/screens shall be printed in PMS 464 Brown.

711.d.

Africa SUPP/TERM High/Low ECN/TCN: The outside front cover shall be printed with the border and number of pages in PMS 199 Red. Other textual data on the front and succeeding pages shall be printed in PMS Pantone Black.

711.e.

Eastern Europe and Asia SUPP/TERM High/Low ECN/TCN: The outside front cover shall be printed with the border and number of pages in PMS 199 Red. Other textual data on the front and succeeding pages shall be

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printed in PMS Pantone Black.

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712.

ADHESIVES

See paragraph 303 for specifications.

713.

PRINTING

713.a.

GENERAL

TCN and ECN/TCN pages shall be printed back to back, head to foot. The outside front cover shall be printed head to the bound edge. The inside front cover shall be printed foot to the bound edge. The back cover shall not be printed inside or outside.

713.b.

Register of Pages and Covers

713.b. (1)

TCN and ECN/TCN cover images shall be printed centered on the finished cover size.

713.b. (2)

ECN and ECN/TCN pages shall be printed back to back with the lines of type reading parallel to the bound edge. The back images shall be centered on the face images so that the 12.4 cm (4-7/8") x 17.8 cm (7") neatlines back-up.

713.c.

Backbone Type for Glue Bound Books

The backbone type shall be printed so that book titles shall be right reading when the book is face down.

714.

FOLDING

The signatures shall be folded so pages are in correct sequence and detail is not trimmed during binding and trimming operations.

715.

COLLATING

715.a.

The signatures (pages) shall be collated in the proper sequence, i.e., Roman page numerals first, followed by Arabic numerals.

715.b.

Pages shall be in proper sequence, and not inverted.

715.c.

The folios (page numbers), and chart name and facility on individual pages shall agree with the index of the book.

716.

BINDING

716.a.

The TCNs and ECNs/TCNs can be either glue bound or saddle stitched depending on the number of pages.

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See paragraph 707.a. for additional information.

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716.b.

When a book is saddle stitched, it shall be stitched on the 13.5 cm (5-5/16") dimension with a minimum of two staples of sufficient strength to provide a secure binding. Staple location shall be 7.0 cm (2-3/4") center to center of the outer staples and positioned on the saddle. The staple edge shall not be less than 19.1 mm (3/4") from either side of the book. The binding tension of the staples shall be controlled so that the center signature pages are not cut or torn.

716.c.

TCN and ECN/TCN books of 16 pages or less may be either stapled in the upper left corner or saddle stitched at the option of the contractor. Stapled books shall be fastened with one staple in the upper left corner. The staple shall be positioned parallel to the top edge of the collated sheets 3.2 mm (1/8") from the edges. Saddle stitched books shall be bound with one staple placed no closer than 19.1 mm (3/4") from the end of bound edge. A finished TCN or ECN/TCN shall have open pages on all unbound edges.

716.d.

The cover shall be one piece wrap around.

716.e.

The book shall be glue bound or stitched on the 13.5 cm (5-5/16") top side.

717.

FINISHING

717.a.

Trimming and Finished Size

The TCN and ECN/TCN publications shall be trimmed to a finished size 13.5 cm (5-5/16") x 21.0 cm (8-1/4").

717.b.

TCN and ECN/TCN books may be trimmed to the finished dimensions in single sheets or fabricated in multiples of two sheets (four pages) by trimming to the finished width dimensions, doubling the specified length, and then folding the sheet in half to achieve the required finished length.

INTENTIONALLY

LEFT

BLANK

~~URGENT CHANGE NOTICE (UCN)~~

~~FOR TERMINAL BOOKS, SUPPLEMENT/TERMINAL BOOKS, STAR BOOK,~~

~~AND VFR ARRIVAL/DEPARTURE ROUTES BOOKS~~

~~Africa SUPP/TERM High/Low Altitude~~

~~Eastern Europe and Asia SUPP/TERM High/Low Altitude~~

~~Canada and North Atlantic High/Low Altitude IAP~~

~~Caribbean and South America High/Low Altitude IAP~~

~~Europe, North Africa, and Middle East High/Low Altitude IAP~~

~~Pacific, Australasia, and Antarctica High/Low Altitude IAP~~

~~United States High Altitude & Low Altitude IAP~~

~~United States STAR~~

~~VFR Arrival/Departure Routes Europe~~

~~VFR Arrival/Departure Routes Korea~~

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~~An Urgent Change Notice (UCN) is published to correct procedures, to maintain currency, or to issue special information to users on an unscheduled basis. UCNs may be textual data only or textual and graphic.~~

719.

PAPER

~~The book pages and self covers shall be printed on JCP A75. See Paragraph 301 for specifications.~~

720.

INK

~~See paragraph 302 (tables) for specifications of inks listed below:~~

720.a.

~~UCNs for IAPs, SUPP/TERMs, and STAR shall be printed in PMS Pantone Black for the covers, plus possibly PMS 464 brown if terrain contour lines also print on subsequent pages.~~

720.b.

~~UCNs for VFRs shall be printed entirely in PMS Reflex Blue for the outside front covers and 4-Color Process or only PMS Pantone Black for subsequent pages.~~

721.

PRINTING

721.a.

~~UCN pages for IAPs, SUPP/TERMs, and STAR shall be printed back to back, head to foot, bound on top edge. The outside front cover shall be printed head to the bound edge. The inside front cover shall be printed foot to the bound edge. The inside back cover may be printed head to the bound edge when necessary. Textual and/or Graphic VFR UCNs shall be printed back to back, head to foot. The cover page of the UCN shall have a blue border (PMS Reflex Blue).~~

721.b.

Register of Pages and Covers

721.b. (1)

~~Cover images shall be printed centered on the finished cover size. IAP, SUPP/TERMs, STAR, and VFR UCN pages shall be printed back to back, with the lines of type reading parallel to the bound edge.~~

721.b. (2)

~~The back images shall be centered on the face images so that the 12.4 cm (4 7/8") x 17.8 cm (7") neatlines back up.~~

722.

COLLATING

~~When more than one sheet is required, the sheets are collated in numerical sequence by page numbers.~~

723.

BINDING

723.a.

~~Collated copy (composed of either single sheets or combined single and folded sheets) is fastened with one staple in the upper left corner. The staple is positioned parallel to the top edge of the collated sheets, 3.2 mm (1/8") from the edges.~~

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~~723.b.~~

~~UCNs of more than four pages may be produced in folded signature form and saddle stitched. When this method is used, one staple may be used. Staple(s) will be placed no closer than 19.1 mm (3/4") from the end of the bound edge.~~

~~723.c.~~

~~UCNs are bound on the 13.5 cm (5 5/16") top side. The finished UCNs must have open pages on all unbound edges.~~

~~724.~~~~FINISHING~~~~724.a.~~

~~The UCNs are finished to 13.5 cm x 20.0 cm (5 5/16" x 7 7/8") using either one of the following methods:~~

~~724.b.~~

~~UCNs may be trimmed to the finished dimensions in single sheets or fabricated in multiples of two sheets (four pages) by trimming to the finished width dimension, doubling the specified length, and then folding the sheet in half to achieve the required finished length.~~

INTENTIONALLY

LEFT

BLANK

SECTION 800

SUPPLEMENT BOOKS AND FLIGHT INFORMATION HANDBOOK (FIH)

Caribbean and South America Enroute

Europe, North Africa, and Middle East Enroute

Pacific, Australasia, and Antarctica Enroute

United States IFR Enroute

United States VFR

Flight Information Handbook (FIH)

SECTION 800 – GENERAL

800.a.

The Enroute Supplements, IFR, VFR, and Flight Information Handbook (FIH) are bound books having separate printed covers and lightweight body pages.

801.

General and Technical Provisions for Printing and Finishing

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PAPER

See paragraph 301 for specifications.

801.a.

Overprint background and bleed at all final trims on outside front covers, outside back cover, and spine the following solid PMS colors on JCP L20 white cover stock :

Caribbean and South America	Solid PMS 290	Blue
Europe, North Africa, Middle East	Solid PMS 566	Green
Pacific, Australasia & Antarctica	Solid PMS 106	Yellow

US IFR	No background overprint (remains white stock)
US VFR	No background overprint (remains white stock)
FIH	No background overprint (remains white stock)

801.b.

Book body pages shall be printed on JCP A72.

802.

INK

See paragraph 302 (tables) for specifications.

802.a.

Pages shall be printed in PMS Pantone Black.

802.b.

Cover text shall be printed in PMS Pantone Black, except for the following:

United States IFR Supplement	PMS Reflex Blue
United States VFR Supplement	PMS 498 Brown

803.

ADHESIVES

See paragraph 303 for specifications.

804.

PRINTING

804.a.

Register of Pages and Covers

804.a. (1)

Cover 1 images shall be printed centered on the finished cover size with reference to the limits of type. The lines of type shall be perpendicular to the bound edge and printed back to back, head to head, with the top line of covers 2 through 4 aligning with the top line of cover 1.

804.a. (2)

Pages shall be printed back to back, head to head, with the lines of type reading perpendicular to the bound edge. Backup pages for the supplements shall be centered on the face images. Backup pages for the FIH shall also be centered on the face images.

804.a. (3)

Printed index tabs (except U.S. VFR) on covers and pages shall line up correctly on the finished book.

805.

FOLDING

The signatures shall be folded so that pages are in correct sequence and imagery shall not be cut off during binding or trimming operations.

806.

COLLATING

The signature sheets or pages shall be collated in the proper sequence and not inverted.

807.

BINDING

807.a.

Glue Bound Publications

The books shall be glue bound on the 21.0 cm (8-1/4") left side.

807.b.

Strength

Binding shall be of sufficient strength to pass the tests for binding adequacy. **See paragraph 707.a.** for additional information.

808.

FINISHING

The publications shall be trimmed to a finished size of 13.0 cm (5-1/8") x 21.0 cm (8-1/4").

INTENTIONALLY

LEFT

BLANK

SUPPLEMENT ENROUTE CHANGE NOTICES (ECN)

Caribbean and South America

Pacific, Australasia, and Antarctica

United States VFR

809.

GENERAL

ECNs are published to correct published Supplement Books, to maintain currency, or to issue special information to users. They are published and distributed on a scheduled basis. ECNs may be textual data only or textual and graphic.

810.

PAPER

JCP **A72** -- See paragraph 301 for specifications.

811.

INK

ECNs for Supplement Books shall be printed with the border and number of pages in PMS 199 Red. Other textual data on the front and succeeding pages shall be printed in PMS Pantone Black. See paragraph 302 for specifications.

812.

PRINTING

Textual and/or Graphic ECNs shall be printed back to back, head to foot.

813.

COLLATING

When more than one sheet is required, the sheets shall be collated in numerical sequence by page numbers.

814.

BINDING

814.a.

Collated copy (composed of either single sheets or combined single and folded sheets) shall be fastened with one staple in the upper left corner. The staple shall be positioned parallel to the top edge of the collated sheets, 3.2 mm (1/8") from the edges.

814.b.

ECNs with less than five pages may be folded and do not require binding. ECNs of more than four pages may be produced in folded signature form and saddle stitched. When this method is used, one staple may be used to bind ECNs of 16 pages or less (including any blank pages at the back). ECNs over 16 pages shall have two staples (saddle stitched) on the 12.1 cm (4-3/4") dimension; staple location shall be 5.7 cm (2-1/4") center to center and positioned on the saddle. Staples shall be placed no closer than 19.1 mm (3/4") from the end of the bound edge. ECNs shall have open pages on all unbound edges.

815.

FINISHING

815.a.

ECNs shall be trimmed to a finished size of 12.1 cm (4-3/4") x 21.0 cm (8-1/4").

815.b.

ECNs may be trimmed to the finished dimensions in single sheets or fabricated in multiples of two sheets (four pages) by trimming to the finished width dimension, doubling the specified length, and then folding the sheet in half to achieve the required finished length.

SUPPLEMENT URGENT CHANGE NOTICES (UCNs)

Caribbean and South America

Europe, North Africa, and Middle

East Pacific, Australasia, and

Antarctica United States IFR

United States VFR

Flight Information Handbook (FIH)

816.

GENERAL

Urgent Change Notices (UCNs) for Supplement Books and the Flight Information Handbook (FIH) are published to correct published books, to maintain currency or to issue special information to users. They are published and distributed on an unscheduled basis. UCNs may be textual data only or textual and graphic.

817.

PAPER

General and Technical Provisions for Printing and Finishing

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~~JCP A72 See paragraph 301 for~~

~~specifications. 818.~~

~~INK~~

~~UCNs for Supplement Books and the Flight Information Handbook shall be printed with the border and number of pages in PMS 199 Red. Other textual data on the front and succeeding pages shall be printed in PMS Pantone Black. See paragraph 302 (tables) for specifications.~~

~~819.~~

~~PRINTING~~

~~Textual and/or Graphic UCNs shall be printed back to back, head to foot. The lines of type shall be parallel to the bound edge.~~

~~820.~~

~~FOLDING~~

~~The signature shall be folded so that pages are in correct sequence and imagery shall not be cut off during binding or trimming operations.~~

~~821.~~

~~COLLATING~~

~~The signatures, sheets or pages shall be collated in the proper sequence and not inverted. When more than one sheet is required, the sheets shall be collated in numerical sequence by page numbers.~~

~~822.~~

~~BINDING~~

~~822.a.~~

~~Collated copy (composed of either single sheets or combined single and folded sheets) shall be fastened with one staple in the upper left corner. The staple shall be positioned parallel to the top edge of the collated sheets, 3.2 mm (1/8") from the edge.~~

~~822.b.~~

~~UCNs with less than five pages may be folded and do not require binding. UCNs of more than four pages may be produced in folded signature form and saddle stitched. When this method is used, one staple may be used to bind UCNs of 16 pages or less (including any blank pages at the back). UCNs of over 16 pages shall have two staples (saddle stitched) on the top side; staple location will be 5.7 cm (2 1/4") center to center and positioned on the saddle. Staples shall be placed no closer than 19.1 mm (3/4") from the end of the bound edge.~~

~~823.~~

~~FINISHING~~

~~UCNs shall be trimmed to a finished size of 12.1 cm (4 3/4") x 21.0 cm (8 1/4").~~

SECTION 900PLANNING BOOKS~~GP GENERAL PLANNING BOOK~~~~AP/1 N. & S. AMERICA AREA PLANNING~~~~AP/1B N. & S. AMERICA MILITARY TRAINING ROUTES~~~~AP/2 EUROPE, AFRICA & MIDDLE EAST AREA PLANNING AP/3~~~~PACIFIC, AUSTRALASIA & ANTARCTICA AREA PLANNING AP/4~~~~EASTERN EUROPE & ASIA AREA PLANNING~~**SECTION 900 GENERAL**

~~The Planning Books consist of solid textual data and graphic data in either bound book form (self cover), or in glue bound book form having separate printed cover and lightweight body pages.~~

~~901.~~

PAPER

~~The Planning Book pages and covers are printed on JCP A72 when self covered and staple bound. When the books are glue bound, the pages are printed on JCP A72 with JCP L20 used for covers. See paragraph 301 for specifications.~~

~~902.~~

General and Technical Provisions for Printing and Finishing

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INK

~~The ink required for covers and pages is PMS Pantone Black. See paragraph 302 (tables) for specifications. 903.~~

ADHESIVE

~~See paragraph 303 for specifications.~~

904.

PRINTING

904.a.

General Planning Books

904.a. (1)

~~Front covers for the books are printed on the inside and outside. The outside back covers will be printed with a graphic. The inside back cover may be printed or left blank depending on the number of pages required for the book.~~

904.a. (2)

~~Pages for the bound books are printed face and back, head to head for binding on the 27.6 cm (10 7/8") left side.~~

904.b.

Register of Pages

904.b. (1)

~~Pages are printed back to back, head to head, with the lines of type reading perpendicular to the bound edge.~~

904.b. (2)

~~The back up page will be located so that the page number and titles back up the face page for AP/1, AP/1B, AP/2, AP/3, and AP/4.~~

904.b. (3)

~~Printing of each section for the GP, AP/1, AP/2, AP/3, and AP/4 shall begin on the leading side of the sheet (right hand page). A blank page will be used whenever necessary on the back side of a page to meet the requirement of starting each section on the leading side of sheet. Pages are printed back to back, head to head, with lines of type reading perpendicular to the bound edge. Back up pages are centered on the face images.~~

905.

FOLDING

~~The signatures will be folded so that the imagery is not trimmed nor the pages wrinkled.~~

906.

COLLATING

~~The signatures, sheets, or pages will be collated in the proper sequence and not inverted.~~

907.

BINDING

907.a.

General

~~Publications can be either glue bound or saddle stitched, depending on the number of pages. The publication will always be glue bound when the page count is 161 or more. When the page count is 160 pages or less, the book may be produced either glue bound or saddle stitched. This is at the contractor's option.~~

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907.a. (1)

~~The Planning Book will be bound on the 27.6 cm (10 7/8") side.~~

907.a. (2)

~~The covers will be a one piece wrap around.~~

907.a. (3)

~~Saddle Stitched book covers will be JCP A72, (self cover).~~

907.a. (4)

~~When the books are glue bound, JCP L20 covers will be used.~~

907.b.

~~Staple Bound Publications~~

907.b. (1)

~~The books will be saddle stitched on the left side with a minimum of two staples of sufficient size and strength to penetrate all pages and provide a secure binding. The binding tension of the staples shall be controlled so the center signature pages are not cut or torn.~~

907.b. (2)

~~The staple location on the books will be 17.8 cm (7") center to center of the outer staples. The outer end of either staple shall be no closer than 2.5 cm (1") from the edge of the book.~~

908.

~~FINISHING~~

908.a.

~~The planning publications will be square trimmed to a finished size of 20.3 cm (8") x 27.6 cm (10 7/8").~~

909.

~~DRILLING~~

909.a.

~~Planning Books~~

909.a. (1)

~~Drill three holes, 7.9 mm (5/16") diameter with the center of holes placed 9.5 mm (3/8") from the bound edge.~~

909.a. (2)

~~The holes will be in a line parallel to the bound edge.~~

909.a. (3)

~~All three hole positions will be measured from the bottom trim to the center of each hole according to the following dimensions: 3.0 cm (1 3/16"), 13.8 cm (5 7/16"), and 24.6 cm (9 11/16").~~

909.b.

~~All drilled holes will be clean and free of burrs and plugs.~~

PLANNING BOOKS

URGENT CHANGE NOTICE (UCN)

918.

GENERAL

~~Urgent Change Notices are published to correct published FLIP Planning Books, to maintain currency or to issue special information to users. They are published and distributed on an unscheduled basis.~~

919.

PAPER

~~UCNs are printed on JCP A72. See paragraph 301 for specifications.~~

920.

INK

~~The ink required for the UCNs is PMS Pantone Black. See paragraph 302 (tables) for specifications.~~

921.

PRINTING

921.a.

General

~~Pages for the UCNs are printed face to back, head to head.~~

921.b.

Register of Pages

921.b. (1)

~~Pages are printed back to back, head to head with the lines of type perpendicular to the bound edge.~~

921.b. (2)

~~The back-up page will be located so that the page numbers and title back up the front page.~~

922.

FINISHING

~~The publications will be square trimmed to a finished size of 20.3 cm (8") x 27.6 cm (10 7/8").~~

923.

BINDING

~~Urgent Change Notices (UCNs) of more than one sheet are normally stapled in the upper left corner with one staple. However, for UCNs of up to four pages, the following optional method may be used: Print the UCN as a four page booklet with one fold on the left 27.6 cm (10 7/8"). For UCNs of more than four pages, the optional method of saddle stitching may be used. Stapling requirements are the same as given for books in paragraph 907.~~

924.

DRILLING

~~Same requirement as for the books. See paragraph 909.a.~~

SECTION 1000

ENROUTE CHARTS, AREA CHARTS, AND REPLACEMENT CHARTS

Africa (AFR)

Caribbean and South America (C&SA)

Eastern Europe and Asia (EEA)

Europe/North Africa/Middle East (ENAME)

Pacific, Australasia, and Antarctica (PAA)

SECTION 1000 – GENERAL

Enroute, Area, and Replacement Charts are printed in four colors (i.e., PMS 498 Brown, PMS Reflex Blue, PMS 354 Green, PMS Pantone Black, solid colors and screen tints) and are accordion folded.

1001.

PAPER

See paragraph 301 for specifications.

1002.

INK

See paragraph 302 (tables) for specifications.

1003.

PHOTO SERVICE

The following screen values for Four-Color (spot colors) Charts have been established.

PAA	ENAME	CSA	EEA	AFRICA	PMS COLOR	SCREEN / SOLID
X	X	X	X	X	498 Brown	100% Solid
X	X	X	X	X	498 Brown	54% 240D - 30/60 degree Biangle
X	X	X	X	X	498 Brown	54% 120D - 15 degree
X	X	X	X	X	498 Brown	31% 240D - 30 degree
X	X	X	X	X	498 Brown	31% 120D - 15 degree
X	X	X	X	X	498 Brown	12% 120D - 60 degree

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X	X	X	X	X	Reflex Blue	100% Solid
X	X	X	X	X	Reflex Blue	54% 240D - 30/60 degree Biangle
X	X	X	X	X	Reflex Blue	7% 120D - 60 degree
X	X	X	X	X	354 Green	21% 120D - 45 degree
X	X	X	X	X	354 Green	67% 240D - 30/60 degree Biangle
X	X	X	X	X	354 Green	Vignette 15% to 20% - 90 degree
X	X	X	X	X	Pantone Black	100% Solid
X	X	X	X	X	Pantone Black	54% 120D - 15 degree
X	X	X	X	X	Pantone Black	42% 240D - 30/60 degree Biangle
X	X	X	X	X	Pantone Black	31% 120D - 15 degree

1004.

PRINTING

1004.a.

All charts shall print with odd numbered charts printed on the front side and even numbered charts printed on the back side (with the single exception and abnormality of CSA low altitude chart L3 having chart A3 printing on its reverse side).

1004.b.

Africa Charts (AFR)

AFR Enroute Charts 1/2 shall be printed head to head. Charts 3/4 and A1/A2 shall be printed head to foot.

1004.c.

Eastern Europe and Asia Charts (EEA)

All EEA Enroute Charts (1/2, 3/4, 5/6, 7/8, 9/10, 11/12, 13/14, 15/16, 17/18, 19/20, 21/22, 23/24, and 25/26) shall be printed head to foot.

1004.d.

Caribbean and South America Charts (CSA)

CSA Enroute Low Altitude Charts (L1/2, L3/A3, L5/6, L7/8, L9/10, L11/12, L13/14, L15/16, L17/18, A1/A2) shall be printed head to head. All CSA Enroute High Altitude Charts (H1/2, H3/4, H5/6, H7/8, H9/10, H11/12) shall be printed head to head. Note: Chart sheet H3/4 has an extended panel.

1004.e.

Europe, North Africa, and Middle East Charts (ENAME)

1004.e. (1)

ENAME Enroute Low Altitude Charts 1/2, 3/4, 7/8, 9/10, 11/12, 13/14, 19/20, 21/22, 23/24, 25/26, 27/28, 29/30, A1/A2 and A3/A4 shall be printed head-to-head.

1004.e. (2)

ENAME Enroute Low altitude Charts 5/6, 15/16, 17/18 shall be printed head-to-foot. Charts 5/6, 9/10, 11/12, 25/26, 27/28 and 29/30 each has an extended panel.

1004.e. (3)

ENAME Enroute High Altitude Charts 3/4, 7/8, 9/10, 11/12, 15/16, 19/20, 21/22 shall be printed head-to-head. Charts 15/16 each has an extended panel.

1004.e. (4)

ENAME Enroute High Altitude Charts 1/2, 5/6, 13/14, 17/18 shall be printed head-to-foot. Charts 5/6, 15/16, 17/18, 21/22 each has an extended panel.

1004.f.

Pacific, Australasia, and Antarctica (PAA)

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1004.f. (1)

PAA Enroute High / Low Altitude Charts 1/2, 3/4, 5/6, 7/8, 9/10, 11/12, 13/14, 15/16, 17/18, 19/20, 21/22, 23/24, A1/A2 shall be printed head-to-head.

1005.

FINISHING

1005.a.

Trimming and Finished Size

All Enroute Low, Enroute High, Area and Terminal Area Charts (except extended panel charts) shall be trimmed to a finished rectangular size of 50.8 cm (20") x 114.3 cm (45"). Extended panel charts shall be trimmed to a finished rectangular size of 50.8 cm (20") x 139.7 cm (55").

1005.b.

Folding

All charts (except extended panel charts) shall be accordion folded uniformly eight times to form nine 12.7 cm (5") panels. Extended panel charts shall be folded ten times to form eleven 12.7 cm (5") panels. When folded in this manner, all chart sizes shall be 12.7 cm (5") x 50.8 cm (20") with the title panel appearing as the top panel. The title panel shall be on the left side of all odd numbered charts. With the title of the odd numbered chart face up and the chart folded into nine panels (eleven for extended panel charts), the bottom half of the folded chart is then folded back underneath the top half, forming a finished size of 12.7 cm (5") x 25.4 cm (10"). Edges of folded charts shall be flush and even.

1005.c.

Collating

1005.c. (1)

Charts shall be collated in the sets and sequences described in the following paragraphs and shall be contained by a string, rubber band, paper band, plastic band, or plastic wrap of sufficient strength to ensure their arrival to consignees intact. Sets shall be collated so that the final fold of each chart is at the same end and all charts are faced identically in numerical order with the index tabs face up.

1005.c. (2)

Africa

Enroute High/Low Charts 1 through 4 with index tabs showing 1 and 3. Area Charts A-1/A-2 with index tabs.

1005.c. (3)

Eastern Europe and Asia

Enroute High/Low Charts 1 through 26 with index tabs showing 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23 and 25.

1005.c. (4)

Caribbean and South America

1005.c. (4) (a)

Enroute Low Altitude Charts L-1 through L-18 with index tabs showing L-1, L-3, L-5, L-7, L-9, L-11, L-13, L-15, and L-17. Chart A3, versus L4, prints on the back of L3.

1005.c. (4) (b)

Enroute High Altitude Charts H-1 through H-6 with index tabs showing H-1, H-3, and H-5.

1005.c. (4) (c)

Charts A-1 / A-2 shall not collate.

1005.c. (5)

Europe, North Africa, and Middle East

1005.c. (5) (a)

Enroute Low Altitude Charts L-1 through L-30 with index tabs showing L-1, L-3, L-5, L-7, L-9, L-11, L-13, L-15, L-17, L-19, L-21, L-23, L-25, L-27, and L-29 followed by Terminal Area Charts A-1/A-2, A-3/A-4 with index tabs

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showing A-1/A-2, A-3/A-4.

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1005.c. (5) (b)

Enroute High Altitude Charts H-1 through H-22 with index tabs showing H-1, H-3, H-5, H-7, H-9, H-11, H-13, H-15, H-17, H-19, and H-27.

1005.c. (6)

Pacific, Australasia, and Antarctica

1005.c. (6) (a)

Enroute Charts 1 through 24 with index tables showing 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23 followed by Area Charts A-1/A-2 with index tab showing A-1/A-2.

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SECTION 1200

AREA ARRIVAL CHARTS DEPICTING TERRAIN DATA

AND

REPLACEMENT CHARTS

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