ICAO - VISUAL APPROACH CHART

SCALE 1:250.000

0 5 NM

0 5 Km

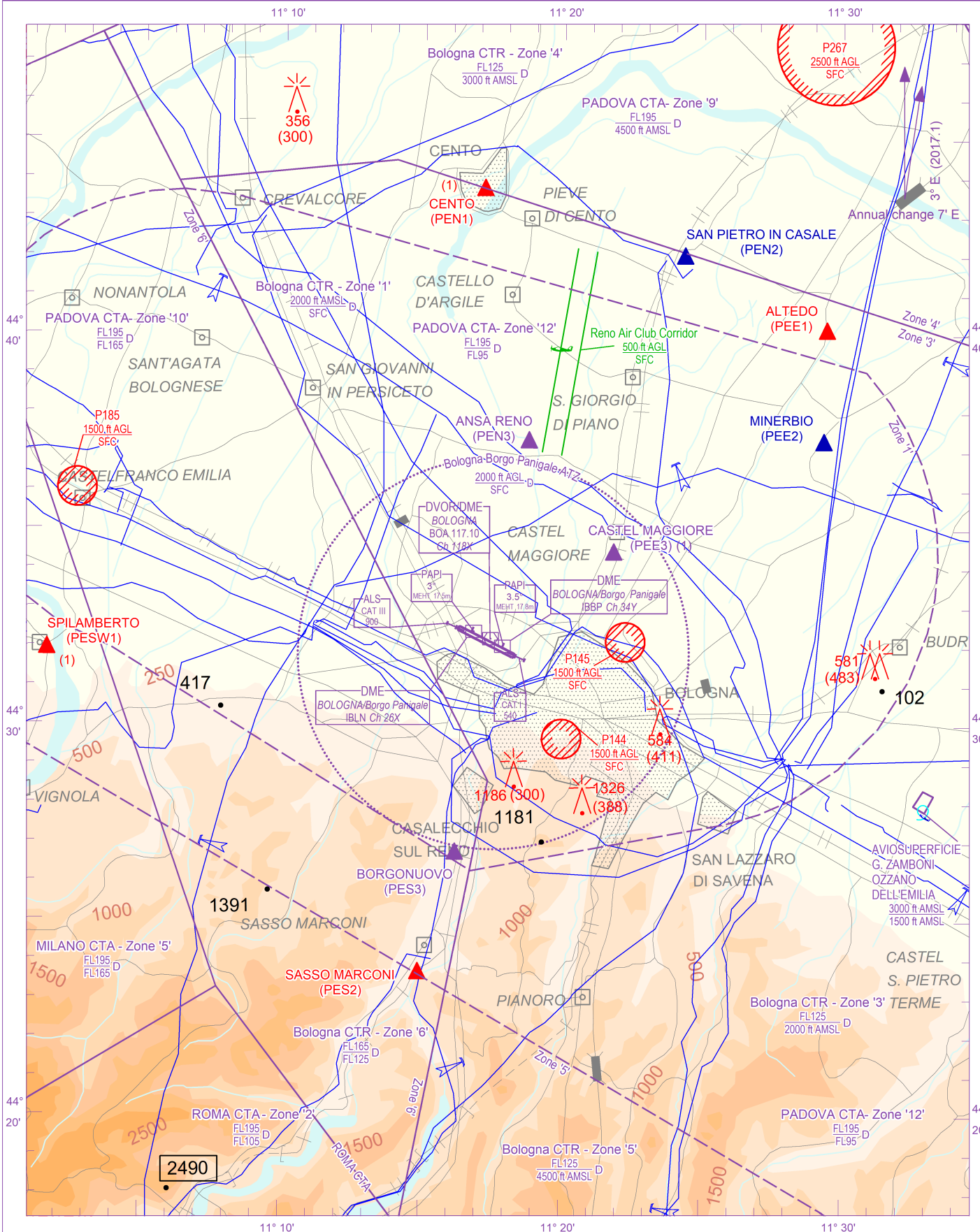
FIS	Padova Information	126.425 (124.150)
APP	Bologna APP	133.775 (118.150)
APP	Bologna Radar	133.775 (118.150)
TWR	Bologna TWR	120.800 (120.100)
ATIS	Bologna Arrival Information	134.875

AD ELEV 123

LIPE

BOLOGNA/BORGO PANIGALE

CHANGE: new aerobatic training area: "AVIOSUPERFICIE G. ZAMBONI OZZANO DELL'EMILIA (BO)"



AIRSPACE CLASSIFICATION See AIP ENR 1.4	REMARK	WARNING
TRANSITION ALT 6000 FT	(1) Entry/exit point for aeroplanes VFR/N operation also	
ELEV AND ALT IN FT IF NOT OTHERWISE INDICATED		

DOC.8168 – ED.5 2006 – AMDT 7
CHANGE: MAG VAR UPDATED

WARNING: Some users on ILS APPROACH reported false LOC captures. Pilot attention is drawn to pay max caution. See AIP ENR 1.3

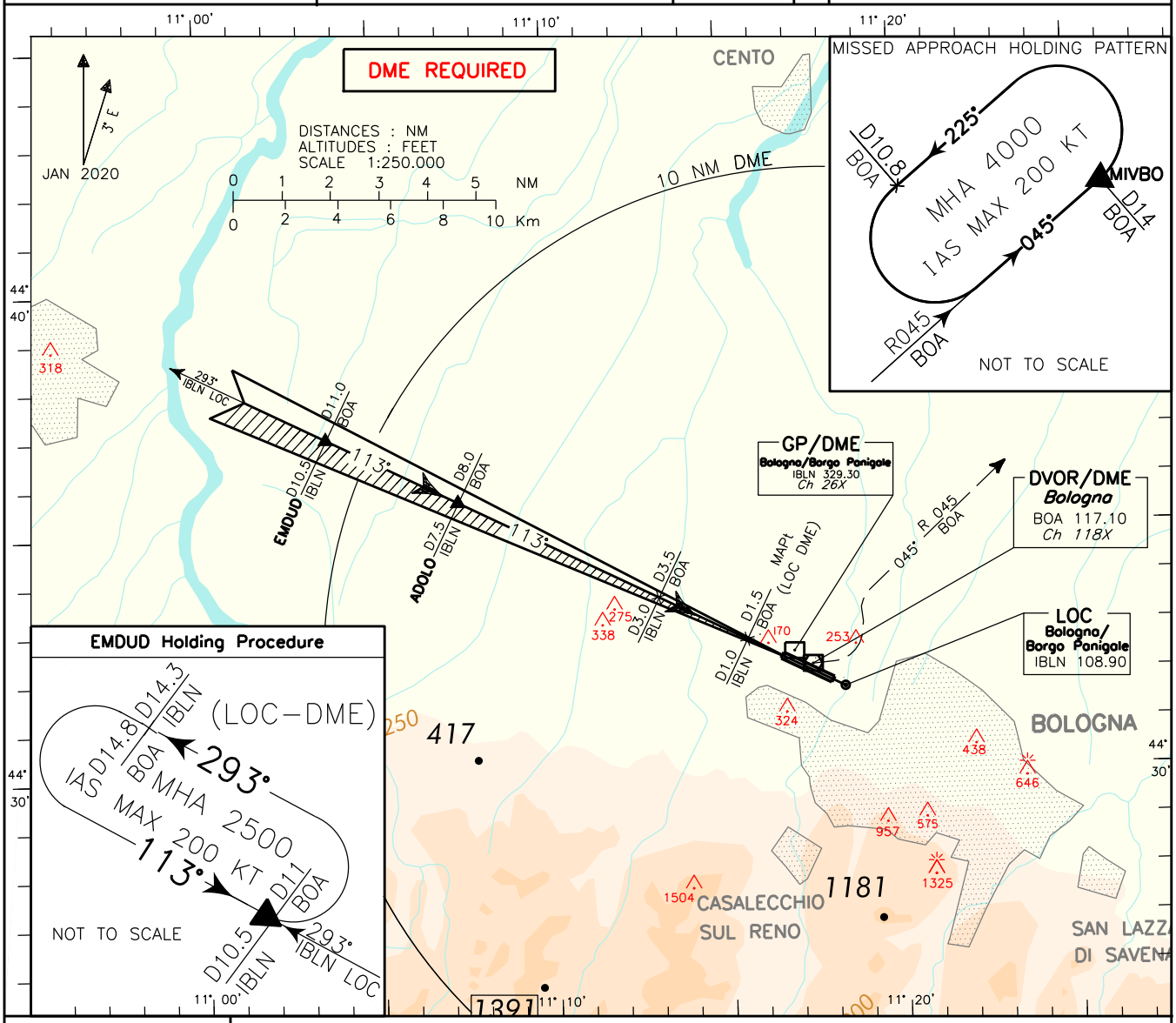
APP	Bologna APP/Radar	133.775 (118.150)
TWR	Bologna TWR	120.800 (120.100)
ATIS	Bologna Arrival Information	134.875

AD ELEV 123

LIPE

BOLOGNA

ILS-Z RWY 12

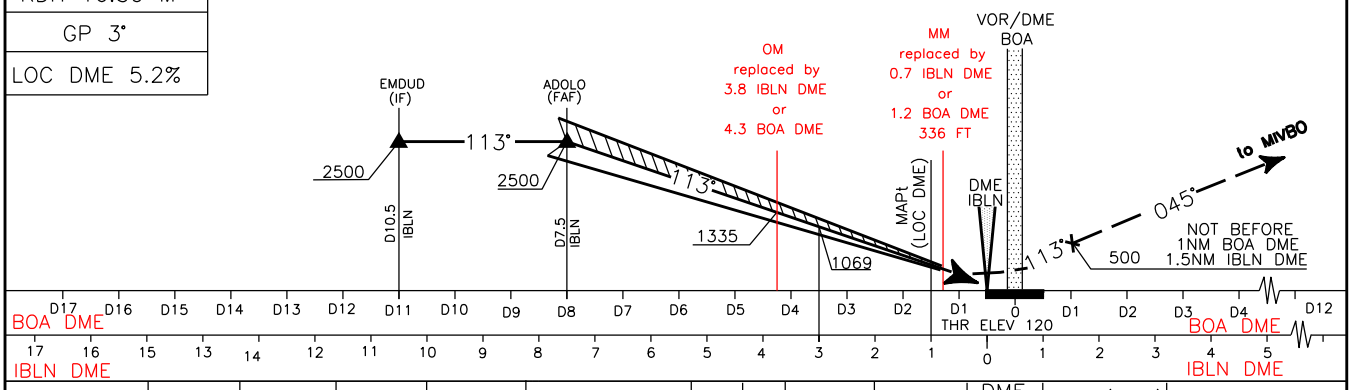


TRANSITION ALT 6000

MISSED APPROACH: Climb to 4000 ft on RWY heading. Passing 500 ft turn left (not before 1NM BOA DME/1.5 NM IBLN DME, after THR 12), with IAS MAX 200 kt to join and follow RDL 045 BOA VOR until 14NM BOA DME to join MIVBO holding pattern.

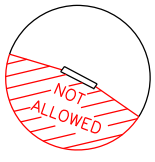
REMARK: Missed approach obstacle clearance is provided by 2.5% gradient. 4.2% gradient (250 ft/NM) is required to remain inside vertical limits of CTR Zone 3 (controlled airspace) while entering MIVBO Holding pattern.

RDH	16.50 M
GP	3°
LOC DME	5.2%



OCA (OCH)		A	B	C	D
STRAIGHT IN APPROACH	ILS I	308 (188)	319 (199)	327 (207)	338 (218)
	ILS II	165 (45)	176 (56)	206 (86)	246 (126)
	LOC DME	480 (357)			
CIRCLING (*)		730 (607)	750 (627)	990 (867)	1100 (977)

(*) CIRCLING SECTOR

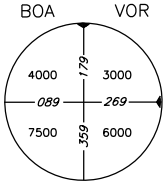


ONLY NORTH OF RWY

GS	FT PER MIN	OM–MAPt 2.83 NM	MAPt–THR 0.81 NM
80	425	2:07	0:36
100	531	1:42	0:29
120	637	1:25	0:24
140	743	1:13	0:21
160	849	1:04	0:18

DME IBLN	ALT (HGT)
7 DME	2342 (2222)
6 DME	2024 (1904)
5 DME	1706 (1586)
4 DME	1387 (1267)
3 DME	1069 (949)
2 DME	750 (630)
1 DME	432 (312)

MNM SECT ALT



DOC.8168 – ED.5 2006 – AMDT 7

CHANGE: MAG VAR UPDATED

WARNING: Some users on ILS APPROACH reported false LOC captures Pilot attention is drawn to pay max caution. See AIP ENR 1.3

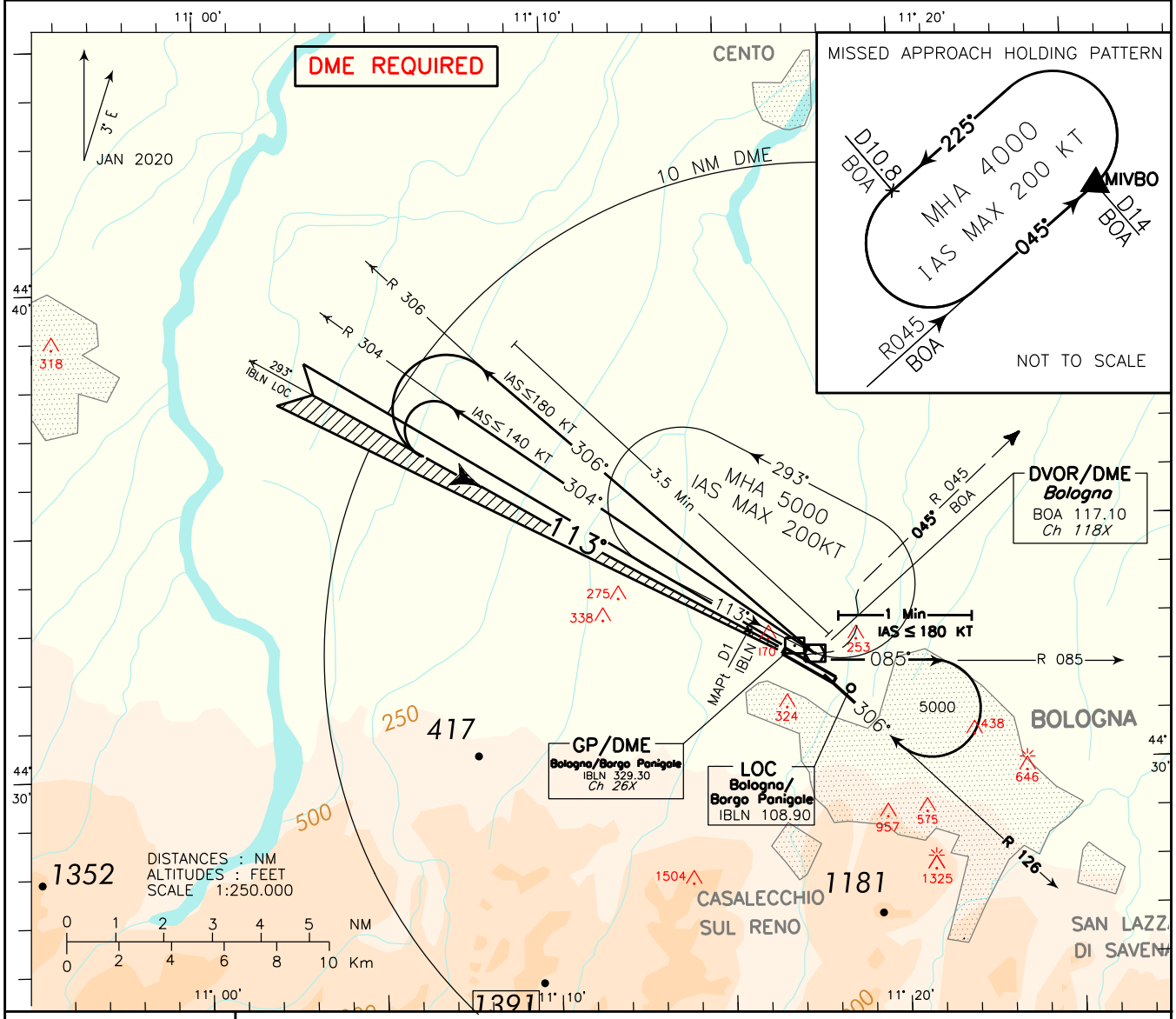
APP	Bologna APP/Radar	133.775	(118.150)
TWR	Bologna TWR	120.800	(120.100)
ATIS	Bologna Arrival Information	134.875	

AD ELEV 123

LIPE

BOLOGNA

ILS-Y RWY 12

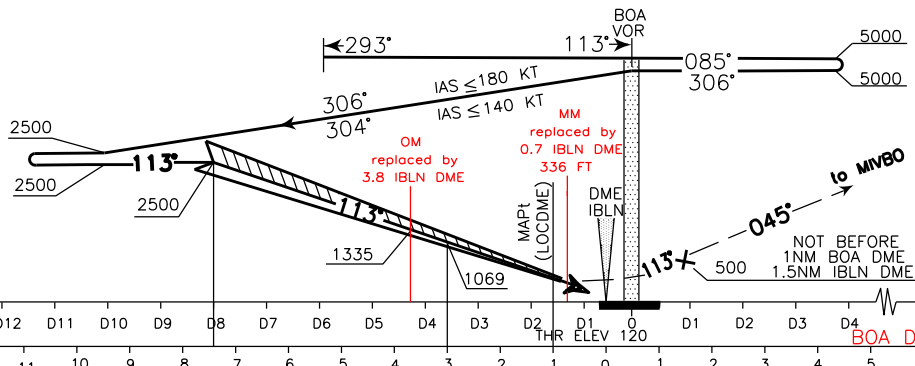


TRANSITION ALT 6000

MISSED APPROACH: Climb to 4000 ft on RWY HEADING. Passing 500 ft turn left (not before 1NM BOA DME/1.5NM IBLN DME, after THR 12), with IAS MAX 200 kt to join and follow RDL 045 BOA VOR until 14NM BOA DME to join MIVBO holding pattern.

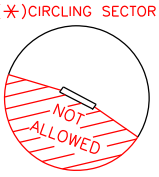
REMARK: Missed approach obstacle clearance is provided by 2.5% climb gradient. 4.2% gradient (250 ft/NM) is required to remain inside vertical limits of CTR Zone 3 (controlled airspace) while entering MIVBO Holding pattern.

RDH	16.50 M
GP	3°
LOCDME	5.2%



OCA (OCH)		A	B	C	D
STRAIGHT IN APPROACH	ILS I	308 (188)	319 (199)	327 (207)	338 (218)
	ILS II	165 (45)	176 (56)	206 (86)	246 (126)
	LOCDME	480 (357)			
CIRCLING (✳)		730 (607)	750 (627)	990 (867)	1100 (977)

(✳)CIRCLING SECTOR

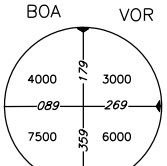


ONLY NORTH OF RWY

GS	FT PER MIN	OM–MAPt	MAPt–THR	DME IBLN	ALT (HGT)
		2.83 NM	0.81 NM	7 DME	2342 (2222)
80	425	2:07	0:36	6 DME	2024 (1904)
100	531	1:42	0:29	5 DME	1706 (1586)
120	637	1:25	0:24	4 DME	1387 (1267)
140	743	1:13	0:21	3 DME	1069 (949)
160	849	1:04	0:18	2 DME	750 (630)
				1 DME	432 (312)

MNM SECT ALT

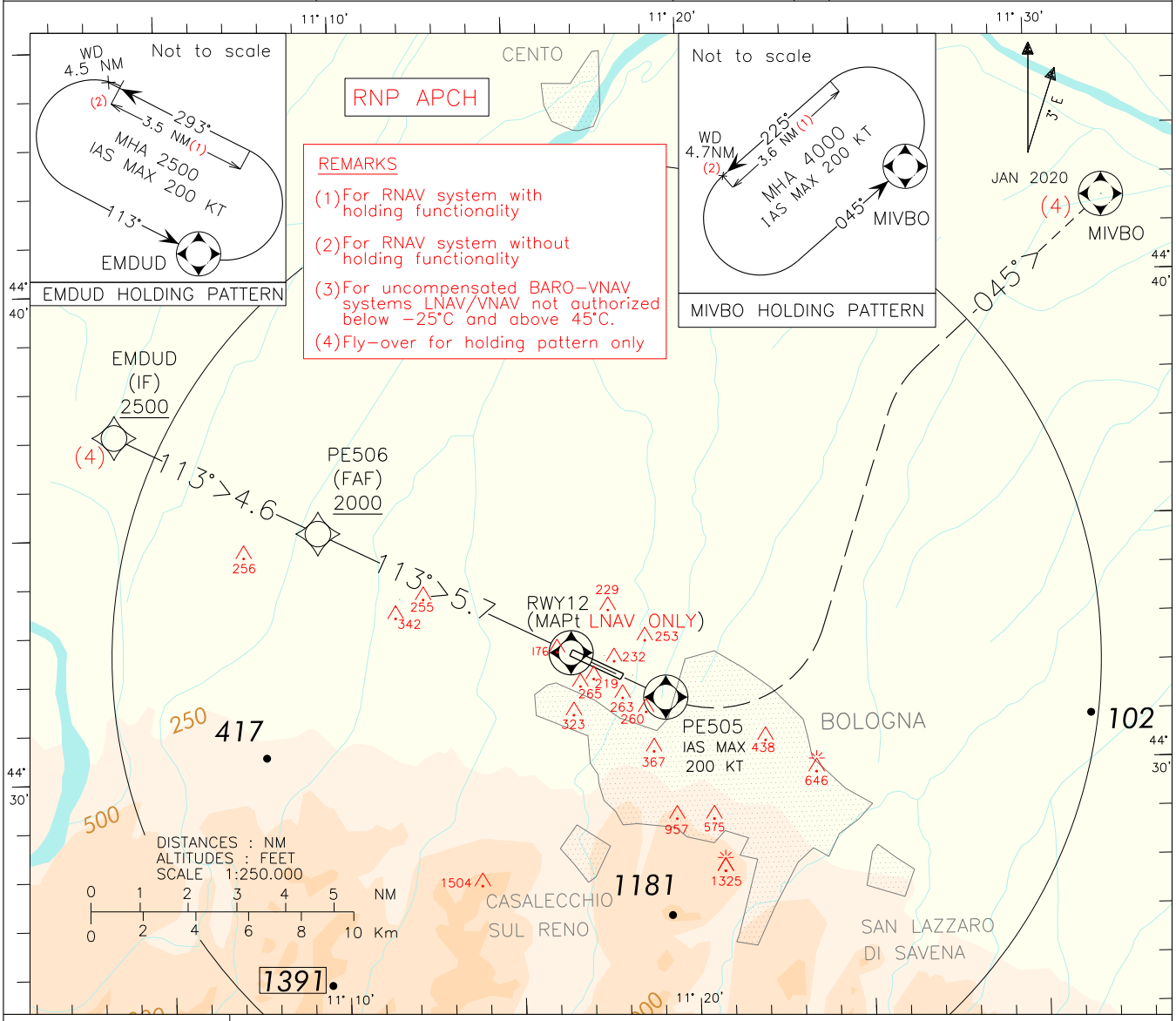
BOA VOR



DOC.8168 — ED.5 2006 — AMDT 7
CHANGE: REPRINTING

EGNOS CH 72354 E12A	APP Bologna APP/Radar 133.775 (118.150) TWR Bologna TWR 120.800 (120.100) ATIS Bologna Arrival Information 134.875	AD ELEV 123	LIPE

BOLOGNA
RNP RWY 12

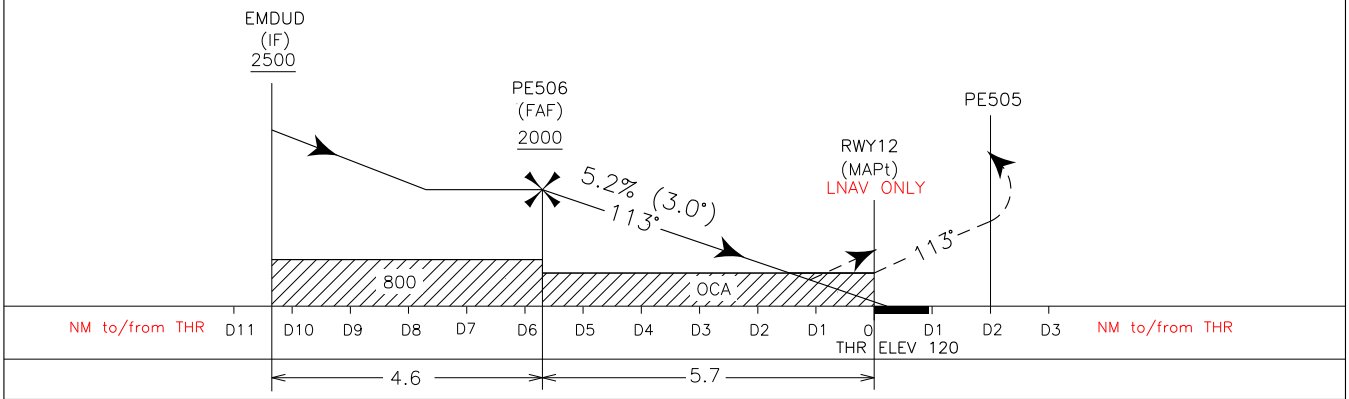


TRANSITION ALT 6000

TCH 16.5 M

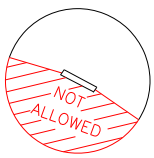
MISSED APPROACH: Climb to 4000 Ft. Continue on course 113° to PE505 then turn left (IAS MAX 200 KT) on course 045° to MIVBO and hold.

REMARK: Missed approach obstacle clearance is provided by 2.5% gradient. 4.2% gradient (250 ft/NM) is required to remain inside vertical limits of CTR Zone 3 (controlled airspace) while entering MIVBO Holding pattern.



OCA (OCH)		A	B	C	D
STRAIGHT IN APPROACH	LPV	380 (260)	390 (270)	400 (280)	410 (290)
	LNAV/VNAV	420 (300)	430 (310)	440 (320)	450 (330)
	LNAV	570 (447)			
CIRCLING (✳)		730 (607)	750 (627)	990 (867)	1100 (977)

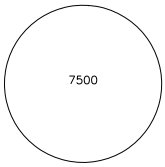
(✳) CIRCLING SECTOR



ONLY NORTH OF RWY

GS	FT PER MIN	Distance to RWY12	ALT (HGT)
80	430		
100	530	5 NM	1770 (1650)
120	640	4 NM	1450 (1330)
140	745	3 NM	1130 (1010)
160	850	2 NM	810 (690)

MNM SECT ALT
25NM ARP



TABULAR DESCRIPTION

RNP RWY 12

Serial Number	Path Terminator	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed Limit (kt)	VPA/ TCH	Navigation Specification
010	IF	EMDUD	-	-	-	-	-	+2500	-	-	RNP APCH
020	TF	PE506	-	113 (116.6)	-	4.6	-	+2000	-	-	RNP APCH
030	TF	RWY12	Y	113 (116.7)	-	5.7	-	+174	-	-3.0/16.5	RNP APCH
040	CF	PE505	Y	113 (116.7)	-	2.1	-	-	-200	-	RNP APCH
050	CF	MIVBO	-	045 (048.6)	+3	-	L	+4000	-200	-	RNP APCH
060	HM	MIVBO	Y	045 (048.6)	-	-	L	+4000	-200	-	RNAV

Path Terminator	Waypoint Identifier	Inbound Course °M (°T)	Leg Distance (NM) (1)	Timing(min.)/ Waypoint Distance (NM) (2)	Turn Direction	Minimum Altitude (FT)	Maximum Altitude (FL)	Speed Limit (kt)	Magnetic Variation (°)	Navigation Specification
HM	EMDUD	113 (116.6)	3.5	4.5	L	+2500	-	-200	+3	RNAV

Path Terminator	Waypoint Identifier	Inbound Course °M (°T)	Leg Distance (NM) (1)	Timing(min.)/ Waypoint Distance (NM) (2)	Turn Direction	Minimum Altitude (FT)	Maximum Altitude (FL)	Speed Limit (kt)	Magnetic Variation (°)	Navigation Specification
HM	MIVBO	045 (048.6)	3.6	4.7	L	+4000	-	-200	+3	RNAV

(1) RNAV system with holding functionality
(2) RNAV system without holding functionality

WAYPOINT LIST
RNP RWY 12

Waypoint Identifier	Coordinates
PE506	44°34'58.3" N 011°09'23.6" E
PE505	44°31'26.2" N 011°19'14.1" E

SBAS FAS DATA BLOCK LIPE RNP RWY 12

INPUT DATA	
PARAMETERS	**VALUES**
Operation Type	0
SBAS Provider	1
Airport Identifier	LIPE
Runway	12
Runway Direction	0
Approach Performance Designator	0
Route Indicator	
Reference Path Data Selector	0
Reference Path Identifier	E12A
LTP/FTP Latitude	443224.0060N
LTP/FTP Longitude	0111633.5485E
LTP/FTP Ellipsoidal Height (metres)	75.8
FPAP Latitude	443147.7000N
Delta FPAP Latitude (seconds)	-36.3060
FPAP Longitude	0111814.4370E
Delta FPAP Longitude (seconds)	100.8885
Threshold Crossing Height	16.50
TCH Units Selector	1
Glidepath Angle (degrees)	3.00
Course Width (metres)	105.00
Length Offset (metres)	0
HAL (metres)	40.0
VAL (metres)	50.0

OUTPUT DATA	
Data Block	10 05 10 09 0C 0C 00 00 01 32 31 05 8C 4F 1D 13 19 D1 D6 04 F6 16 5C E4 FE 31 14 03 4A 81 2C 01 64 00 C8 FA 6D B0 D0 E2
Calculated CRC Value	6DB0D0E2

Required Additional Data (not CRC wrapped)

Parameters	Values
ICAO Code	LI
LTP/FTP Orthometric Height (metres)	36.6
FPAP Orthometric Height (metres)	36.1

Intenzionalmente bianca

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CHANGE: MAG VAR UPDATED AND RENUMBERED PAGE

DOC.8168 – ED.5 2006 – AMDT 7

REMARK:
NOT STANDARD ICAO:
FINAL APPROACH TRACK AT 1400m
LIES 189m NORTH OF RCL EXTENSION

APP	Bologna APP/Radar	133.775(118.150)
TWR	Bologna TWR	120.800(120.100)
ATIS	Bologna Arrival Information	134.875

AD ELEV 123

LIPE

BOLOGNA

VOR RWY 12

11° 00' 11° 10' 11° 20'

44° 40' 30'

JAN 2020

DME REQUIRED

WARNING:

VISUAL SEGMENT SURFACE PENETRATED BY TREES ON LEFT OF FINAL TRACK THE PAPI INDICATION AFTER OCA(OCH) STRICTLY MANDATORY

10 NM DME

CENTO

MISSED APPROACH HOLDING PATTERN

D10.8 BOA 225° MHA 4000 IAS MAX 200 KT MIVBO D14 BOA 045° R045 BOA

NOT TO SCALE

318

R 293 BOA

EMDUD D11.0 BOA

113°

FAF ADOLO D 8 BOA

DVOR/DME Bologna BOA 117.10 Ch 118X

R 045 BOA 045°

338 D 3 BOA MAPt D 2 BOA 170 253 D 1 BOA IAS MAX 200 KT 324 438 646 957 575 1325

417

DISTANCES : NM
ALTITUDES : FEET
SCALE 1:250.000

0 1 2 3 4 5 NM
0 2 4 6 8 10 Km

1504

1181

BOLOGNA

CASALECCHIO SUL RENO

SAN LAZZARO DI SAVENA

1391

EMDUD Holding Procedure

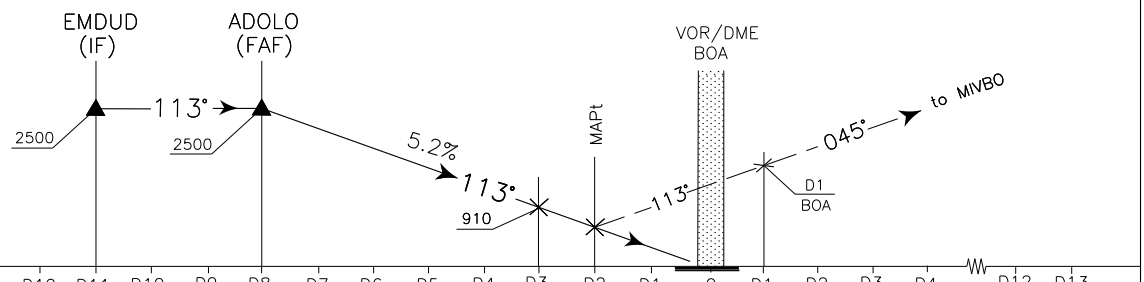
(VOR–DME)

D14.8 BOA 293° MHA 2500 IAS MAX 200 KT 113° D11 BOA R293 BOA

TRANSITION ALT 6000

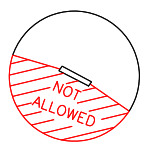
MISSED APPROACH: Continue on TR 113° climbing to 4000 ft. At 1NM after BOA DME turn left with IAS MAX 200 kt to join and follow RDL 045 BOA VOR until 14NM BOA DME to join MIVBO Holding pattern.

REMARK: Missed approach obstacle clearance is provided by 2.5% gradient. 4.2% gradient (250 ft/NM) is required to remain inside vertical limits of CTR Zone 3 (controlled airspace) while entering MIVBO Holding pattern.



OCA (OCH)		A	B	C	D
STRAIGHT IN APPROACH	VORDME	580 (457)			
(✳) CIRCLING		730 (607)	750 (627)	990 (867)	1100 (977)

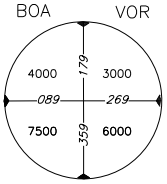
(✳) CIRCLING SECTOR



ONLY NORTH OF RWY

GS	FT PER MIN	FAF–MAPt 6 NM	DIST	ALT (HGT)
80	420	4:30	7 DME	2180 (2057)
100	530	3:36	6 DME	1860 (1737)
120	635	3:00	5 DME	1550 (1427)
140	740	2:34	4 DME	1230 (1107)
160	845	2:15	3 DME	910 (787)

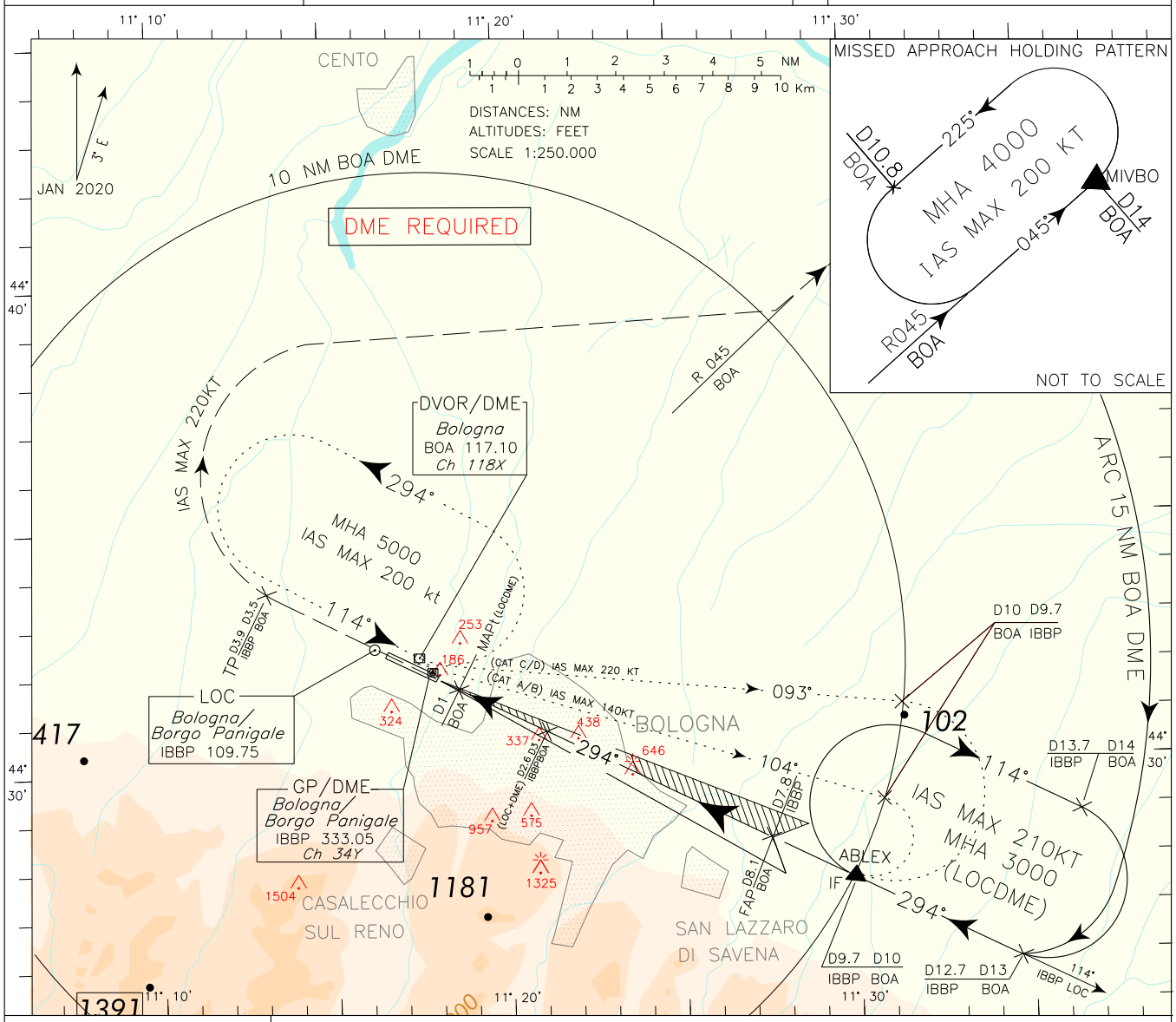
MNM SECT ALT



DOC.8168 - ED.5 2006 - AMDT 4

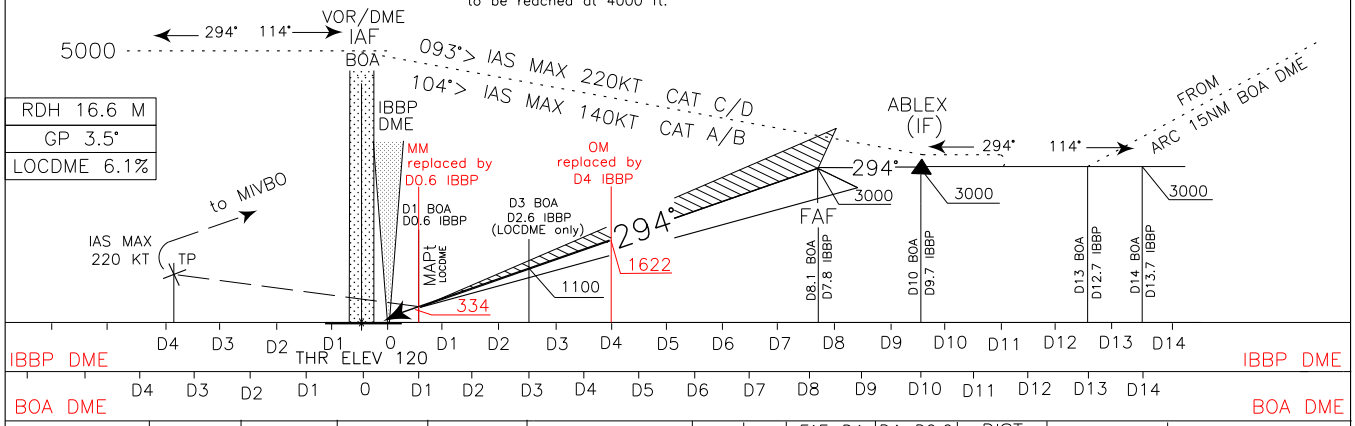
CHANGE: REPRINTING

APP Bologna APP/Radar 133.775 (118.150) TWR Bologna TWR 120.800 (120.100) ATIS Bologna Arrival Information 134.875	AD ELEV 123	LIPE	BOLOGNA ILS or LOC RWY 30



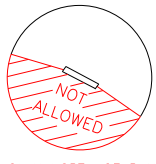
TRANSITION ALT 6000

MISSED APPROACH: Proceed on TR 294° climbing to 4000 ft. At 3.9 NM IBBP (3.5 NM BOA) after IBBP/BOA DME turn right (IAS MAX 220 kt) to join and follow RDL 045 BOA VOR until 14 NM BOA/IBBP DME to join MIVBO holding pattern to be reached at 4000 ft.



OCA (OCH)		A	B	C	D
STRAIGHT IN APPROACH	ILS I	325(205)	340(220)	350(230)	360(240)
	LOCDME	600 (477)			
(✳) CIRCLING		730 (607)	750 (627)	990 (867)	1100 (977)

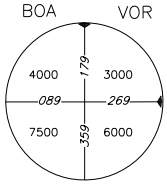
(✳) CIRCLING SECTOR



ONLY NORTH OF RWY

GS	FT PER MIN	FAF–D4 IBBP	D4–D0.6 IBBP	DIST IBBP	ALT (HGT)
		3.8 NM	3.4 NM	7.8 DME	3000 (2880)
80	486	2 : 51	2 : 33	7 DME	2700 (2580)
100	608	2 : 17	2 : 02	6 DME	2330 (2210)
120	729	1 : 54	1 : 42	5 DME	1960 (1840)
140	851	1 : 38	1 : 27	4 DME	1590 (1470)
160	972	1 : 25	1 : 17	3 DME	1220 (1100)
				2 DME	850 (730)

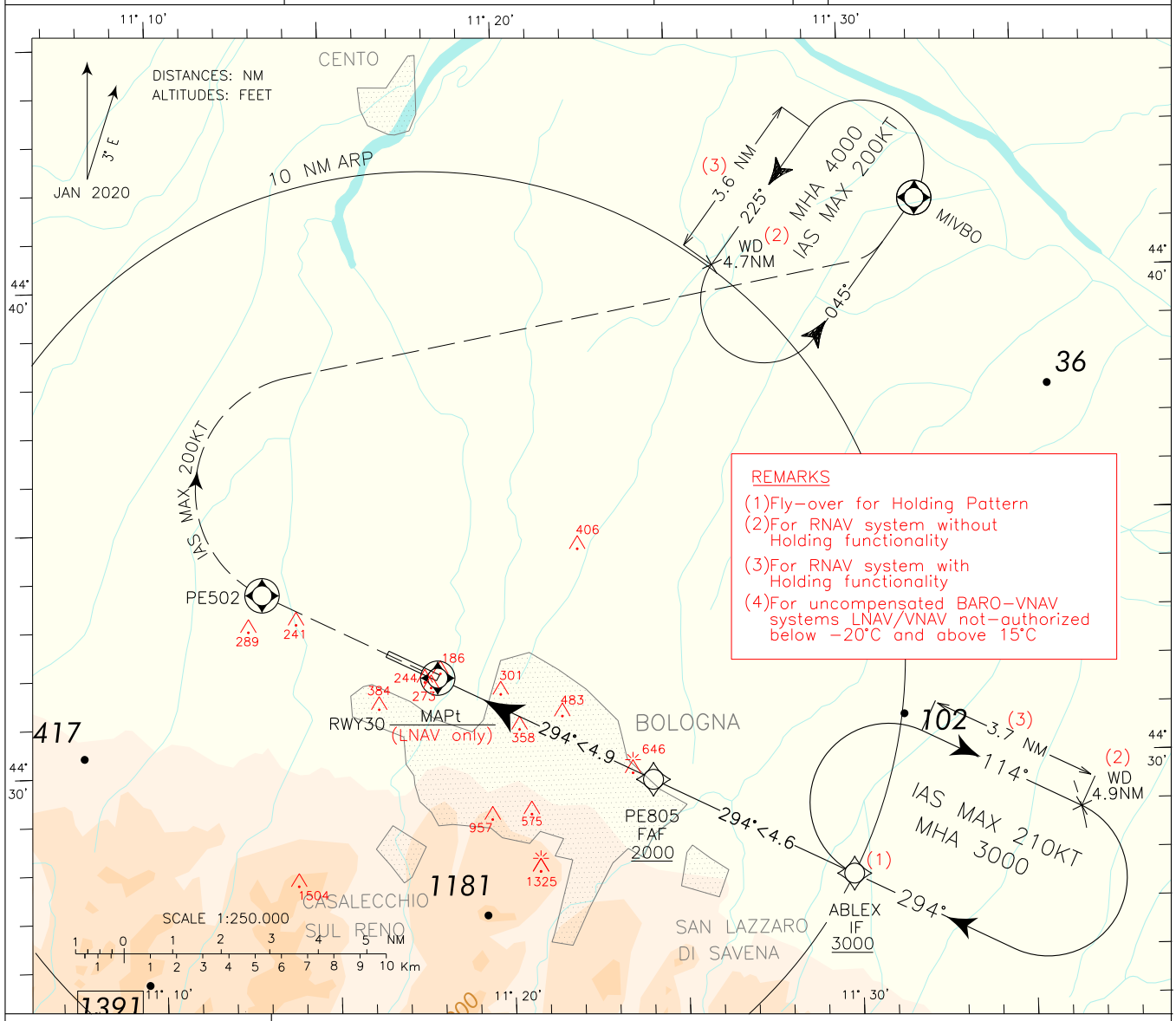
MNM SECT ALT



DOC.8168 — ED.6 2014 — AMDT 7

CHANGE: REPRINTING

EGNOS CH 87874 E30A	APP Bologna APP/Radar 133.775 (118.150) TWR Bologna TWR 120.800 (120.100) ATIS Bologna Arrival Information 134.875	AD ELEV 123	LIPE	BOLOGNA RNP RWY 30



REMARKS

(1) Fly-over for Holding Pattern

(2) For RNAV system without Holding functionality

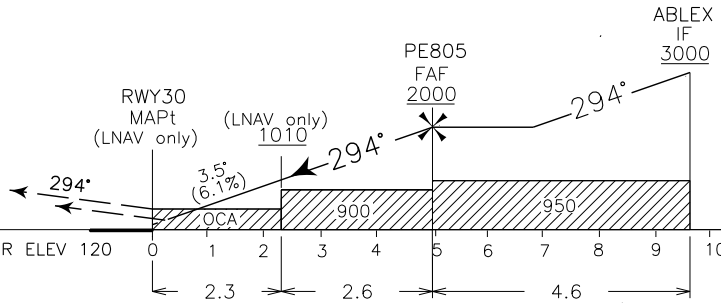
(3) For RNAV system with Holding functionality

(4) For uncompensated BARO-VNAV systems LNAV/VNAV not-authorized below -20°C and above 15°C

TRANSITION ALT 6000

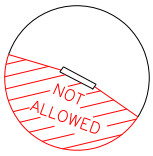
TCH 16.6 M

MISSED APPROACH: Climb to 4000 Ft. Continue on course 294° to PE502 then turn right (IAS MAX 200KT) on course 045° to MIVBO and hold.



OCA(OCH)		A	B	C	D
STRAIGHT IN APPROACH	LPV	400(280)	410(290)	420(300)	430(310)
	LNAV/VNAV	450(330)	460(340)	470(350)	480(360)
	LNAV	620 (497)			
(*) CIRCLING		730 (607)	750 (627)	990 (867)	1100 (977)

(*) CIRCLING SECTOR

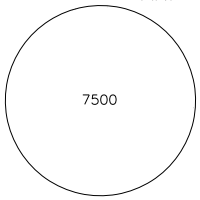


ONLY NORTH OF RWY

GS	FT PER MIN	DISTANCE	ALT (HGT)
80	494		
100	618		
120	741	4	1660 (1540)
140	865	3	1290 (1170)
160	988	2	920 (800)
180	1112	1	550 (430)

MNM SECT ALT

25NM ARP



TABULAR DESCRIPTION

RNP RWY 30

Serial Number	Path Terminator	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation (°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed Limit (kt)	VPA/ TCH	Navigation Specification
010	IF	ABLEX		-				+3000	-210		RNP APCH
020	TF	PE805		294 (296.8)		4.6		+2000			RNP APCH
030	TF	RWY30	Y	294 (296.7)		4.9		@175		-3.5/55	RNP APCH
040	CF	PE502	Y	294 (296.7)	+3				-200		RNP APCH
050	CF	MIVBO		045 (048.5)	+3		R		-200		RNP APCH
060	HM	MIVBO	Y	045 (048.5)			L	+4000	-200		RNAV

Path Terminator	Waypoint Identifier	Inbound Course °M (°T)	Leg Distance (NM) (1)	Timing(min.)/ Waypoint Distance (NM) (2)	Turn Direction	Minimum Altitude (FT)	Maximum Altitude (FL)	Speed Limit (kt)	Magnetic Variation (°)	Navigation Specification
HM	MIVBO	045 (048.5)	3.6	4.7	L	4000	-	-200	+3	RNAV
HM	ABLEX	294 (296.8)	3.7	4.9	R	3000	-	-210	+3	RNAV

(1) RNAV system with holding functionality
(2) RNAV system without holding functionality

WAYPOINT LIST
RNP RWY 30

Waypoint Identifier	Coordinates
PE805	44°29'40.3" N 011°24'07.5" E
PE502	44°33'40.7" N 011°12'60.0" E

SBAS FAS DATA BLOCK LIPE RNP RWY 30

INPUT DATA	
PARAMETERS	**VALUES**
Operation Type	0
SBAS Provider	1
Airport Identifier	LIPE
Runway	30
Runway Direction	0
Approach Performance Designator	0
Route Indicator	
Reference Path Data Selector	0
Reference Path Identifier	E30A
LTP/FTP Latitude	443152.9670N
LTP/FTP Longitude	0111759.7955E
LTP/FTP Ellipsoidal Height (metres)	75.9
FPAP Latitude	443228.5135N
Delta FPAP Latitude (seconds)	35.5465
FPAP Longitude	0111621.0025E
Delta FPAP Longitude (seconds)	-98.7930
Threshold Crossing Height	16.6
TCH Units Selector	1
Glidepath Angle (degrees)	3.50
Course Width (metres)	105.00
Length Offset (metres)	0
HAL (metres)	40.0
VAL (metres)	50.0

OUTPUT DATA	
Data Block	10 05 10 09 0C 1E 00 00 01 30 33 05 0E 5D 1C 13 E7 72 D9 04 F7 16 B5 15 01 2E FC FC 4C 81 5E 01 64 00 C8 FA 14 4A 7A 9B
Calculated CRC Value	144A7A9B

Required Additional Data (not CRC wrapped)

Parameters	Values
ICAO Code	PE
LTP/FTP Orthometric Height (metres)	36.7
FPAP Orthometric Height (metres)	37.5

Intenzionalmente bianca

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DOC.8168 — ED.5 2006 — AMDT 4
CHANGE: MAG VAR UPDATED AND RENUMBERED PAGE

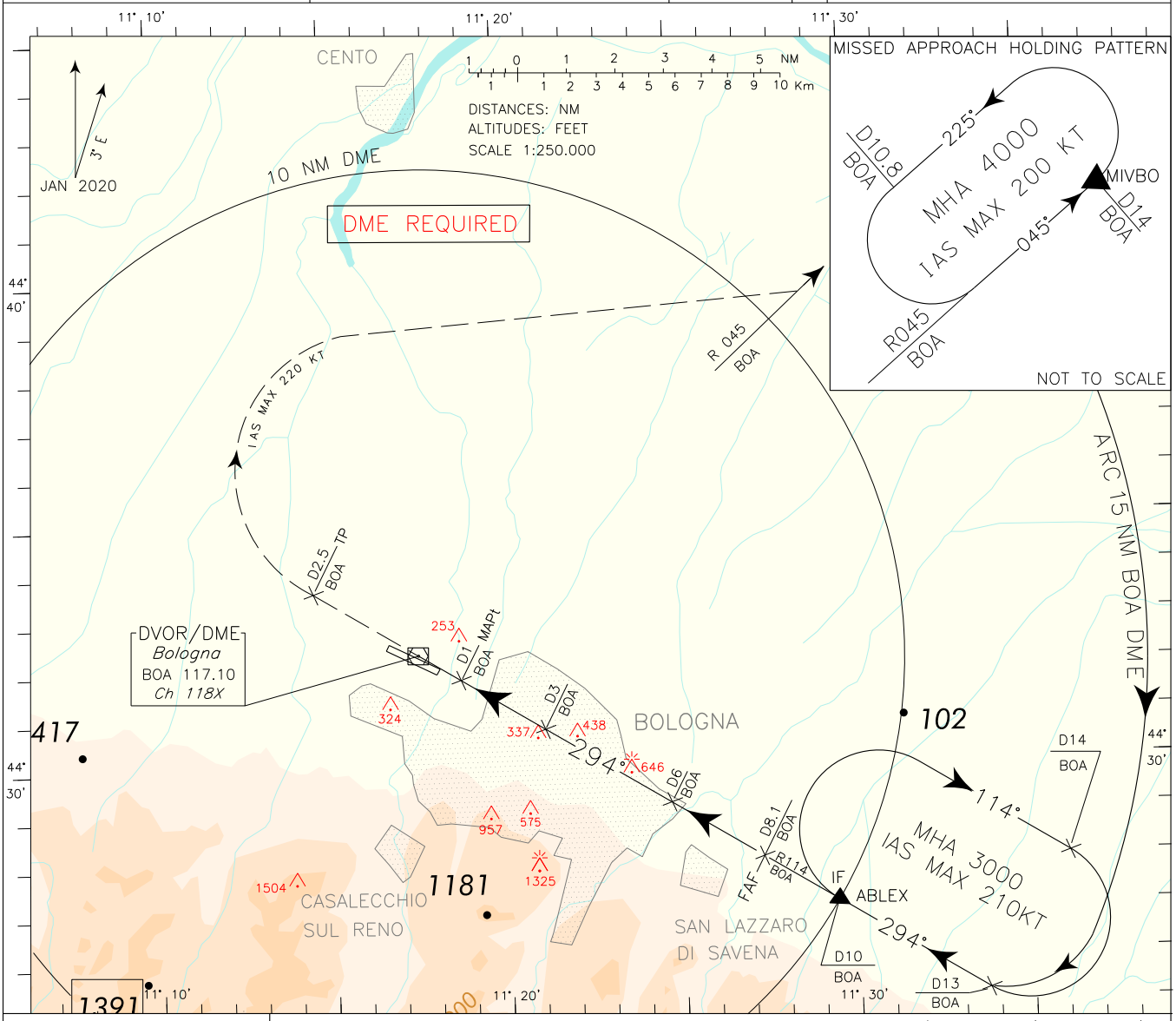
REMARK:
NOT STANDARD ICAO:
FINAL APPROACH TRACK
AT 1400m LIES 202m NORTH OF
EXTENDED CENTRE LINE

APP	Bologna APP/Radar	133.775 (118.150)
TWR	Bologna TWR	120.800 (120.100)
ATIS	Bologna Arrival Information	134.875

AD ELEV 123

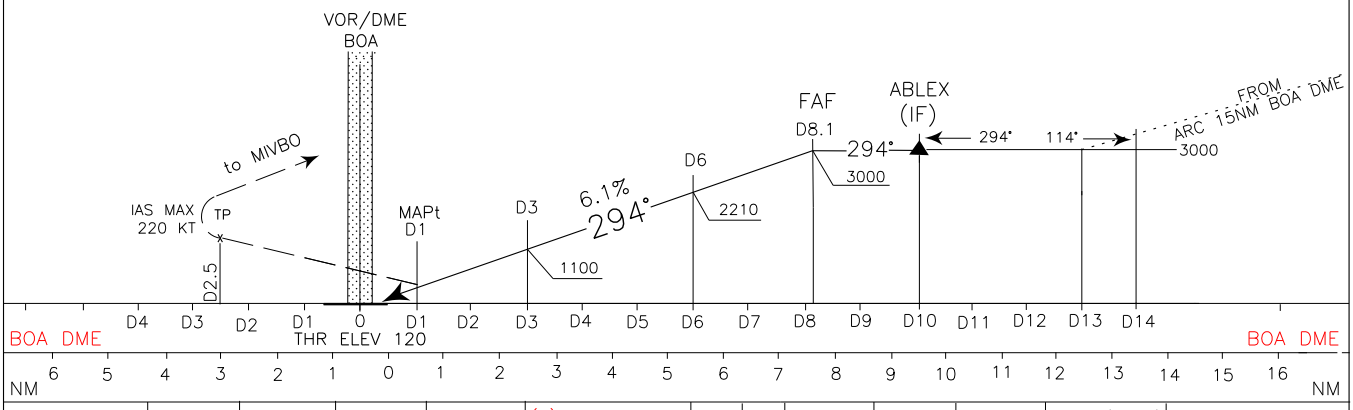
LIPE

BOLOGNA
VOR-Z RWY 30



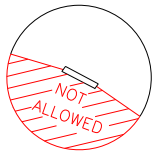
TRANSITION ALT 6000

MISSED APPROACH: Proceed on TR 294° climbing to 4000 ft. At 2.5 NM BOA DME after BOA VOR/DME turn right (IAS MAX 220 kt) to join and follow RDL 045 BOA VOR until 14 NM BOA DME to join MIVBO holding pattern to be reached at 4000 ft.



OCA (OCH)	A	B	C	D
STRAIGHT IN APPROACH — VOR	600 (477)			
(X) CIRCLING	730 (607)	750 (627)	990 (867)	1100 (977)

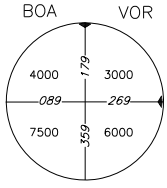
(X) CIRCLING SECTOR



ONLY NORTH OF RWY

GS	FT PER MIN	FAF–D3	D3–MAPt	DIST	ALT (HGT)
		5.1 NM	2 NM	8.1 DME	3000 (2877)
80	486	3 : 50	1 : 30	7 DME	2680 (2457)
100	608	3 : 03	1 : 12	6 DME	2210 (2087)
120	729	2 : 33	1 : 00	5 DME	1840 (1717)
140	851	2 : 11	0 : 51	4 DME	1470 (1347)
160	972	1 : 55	0 : 45	3 DME	1100 (977)
				2 DME	720 (597)

MNM SECT ALT
BOA VOR



CHANGE: MAG VAR UPDATED AND RENUMBERED PAGE — DOC.8168 — ED.5 2006 — AMDT 4

REMARK:
FINAL APPROACH TRACK IS OFFSET 5.3° FROM RCL EXTENSION.
IT INTERSECTS RCL EXTENSION AT 1541m BEFORE THR 30.

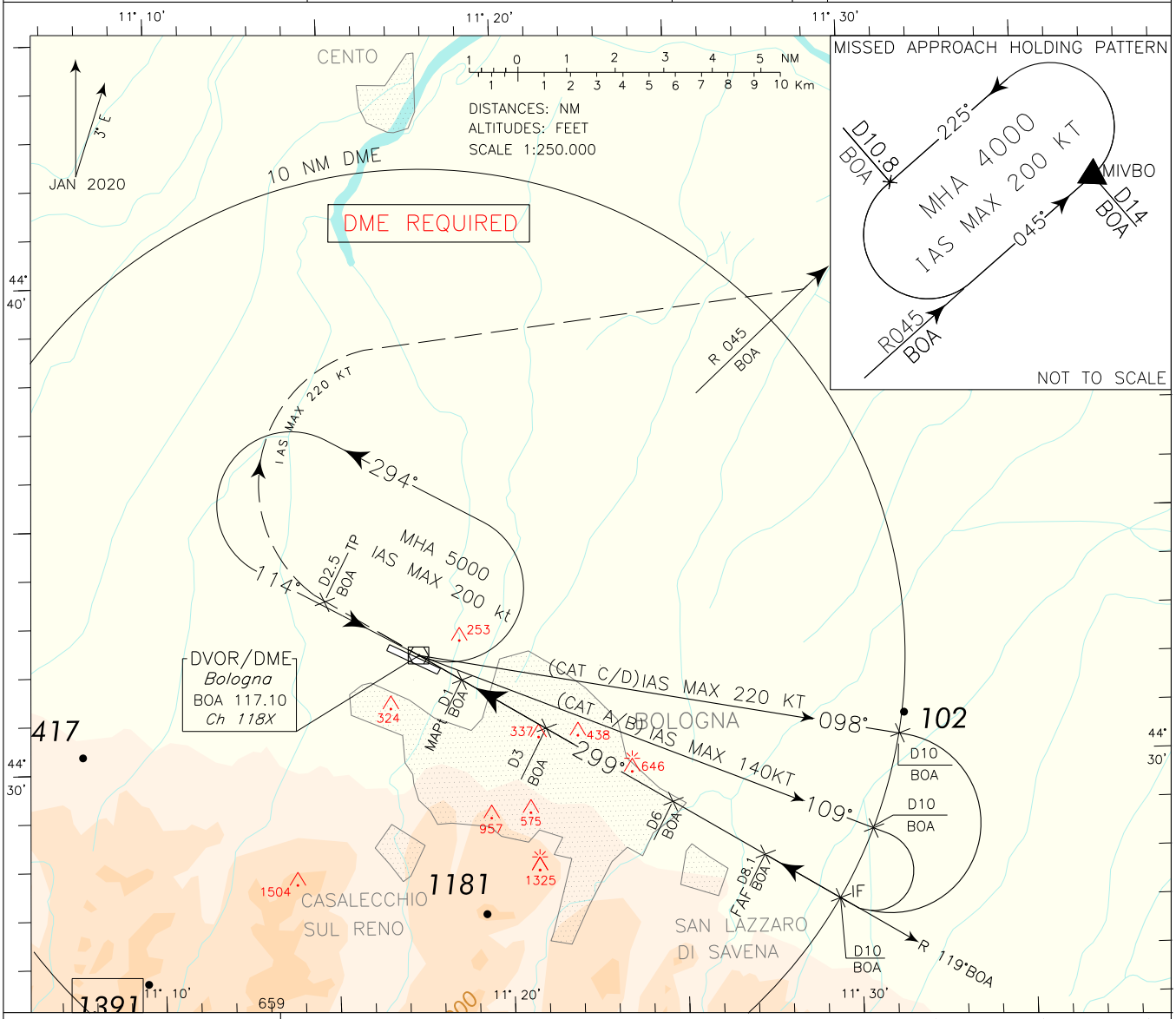
APP	Bologna APP/Radar	133.775 (118.150)
TWR	Bologna TWR	120.800 (120.100)
ATIS	Bologna Arrival Information	134.875

AD ELEV 123

LIPE

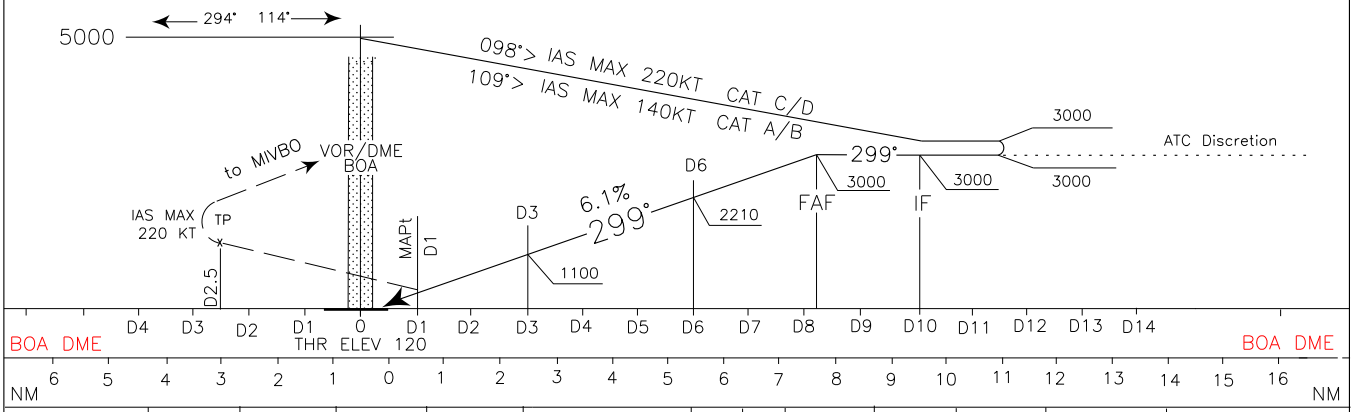
BOLOGNA

VOR-Y RWY 30



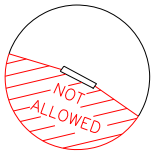
TRANSITION ALT 6000

MISSED APPROACH: Proceed on TR 299° climbing to 4000 ft. At 2.5 NM BOA DME after BOA VOR/DME turn right (IAS MAX 220 kt) to join and follow RDL 045 BOA VOR until 14NM BOA DME to join MIVBO Holding Pattern to be reached at 4000ft



OCA (OCH)	A	B	C	D
STRAIGHT IN APPROACH — VOR	600 (477)			
(X) CIRCLING	730 (607)	750 (627)	990 (867)	1100 (977)

(X) CIRCLING SECTOR



ONLY NORTH OF RWY

GS	FT PER MIN	FAF–D3 5.2 NM	D3–MAPt 2 NM
80	486	3 : 54	1 : 30
100	608	3 : 07	1 : 12
120	729	2 : 36	1 : 00
140	851	2 : 14	0 : 51
160	972	1 : 57	0 : 45

DIST	ALT (HGT)
8.1 DME	3000 (2877)
7 DME	2680 (2457)
6 DME	2210 (2087)
5 DME	1840 (1717)
4 DME	1470 (1347)
3 DME	1100 (977)
2 DME	720 (597)

MNM SECT ALT
BOA VOR