

20-APR-2017

MDC-WAMM

1-10

AOI

AOI

GENERAL**Operational Hours****ATS Hours:** 2200-1500, other times O/R.**ATS ADMIN Hours:** MON-THU 2330-0830, FRI 2330-0900.**AD ADMIN Hours:** MON-THU 0000-0830, FRI 2330-0730.**Airport Information****RFF:** CAT 7**PCN:** RWY 18/36: 80/F/C/W/T**Operation****RWY Restriction**

After LDG ACFT must turn at the RWY end.

Warnings

Birds in vicinity of AD.

ARRIVAL**Communication****COM Failure****In VMC**

- Continue fly in VMC.
- Fly full circuit over AD, endeavor to transmit blindly his position, intention, etc., so as to be monitored by APCH or any other traffic.

In IMC

- Proceed according to current FPL to the appropriate designated navigation and serving APCH and hold over this aid until commencement of descent.
- Commence descent from the navigation aid as close as possible to ETA indicated in the filled FPL and revised in accordance with current FPL.
- Land if possible within 30min after ETA.

In case of MISAP**ILS + VOR/DME 18**

Continue on track 304° at 4500ft QNH. Turn right to MNO VOR/DME and join the HLDG.

ILS + VOR/DME 36

Continue on R352 at 4500ft QNH. Turn left to MNO VOR/DME and join the HLDG.

DEPARTURE**Take-off Minima**

RWY		18	
All ACFT	ft - m/km	0 - 400V	-
		c400 - 2.0V	SID RNAV (RNP) AR
RWY		36	
All ACFT	ft - m/km	0 - 400V	-
		c400 - 2.4V	SID RNAV (RNP) AR: MNM climb gradient 5.2% up to 700

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2-08

Tempo AFC

AFC

San
NIL
Ta

Changes: new

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2-10

AFC

AFC

AFC

AFC

6463
5000
3500
2500
1500

20
20
20
20
20

10 NM
8
6
4
2

01°00' N
01°30' N
01°00' S
01°30' S

E124°30'
E125°00'
E125°30'
E126°00'

ATIS 126.400 2200-1500
APP 119.000 2200-1500
Ratulangi TWR 118.100 2200-1500

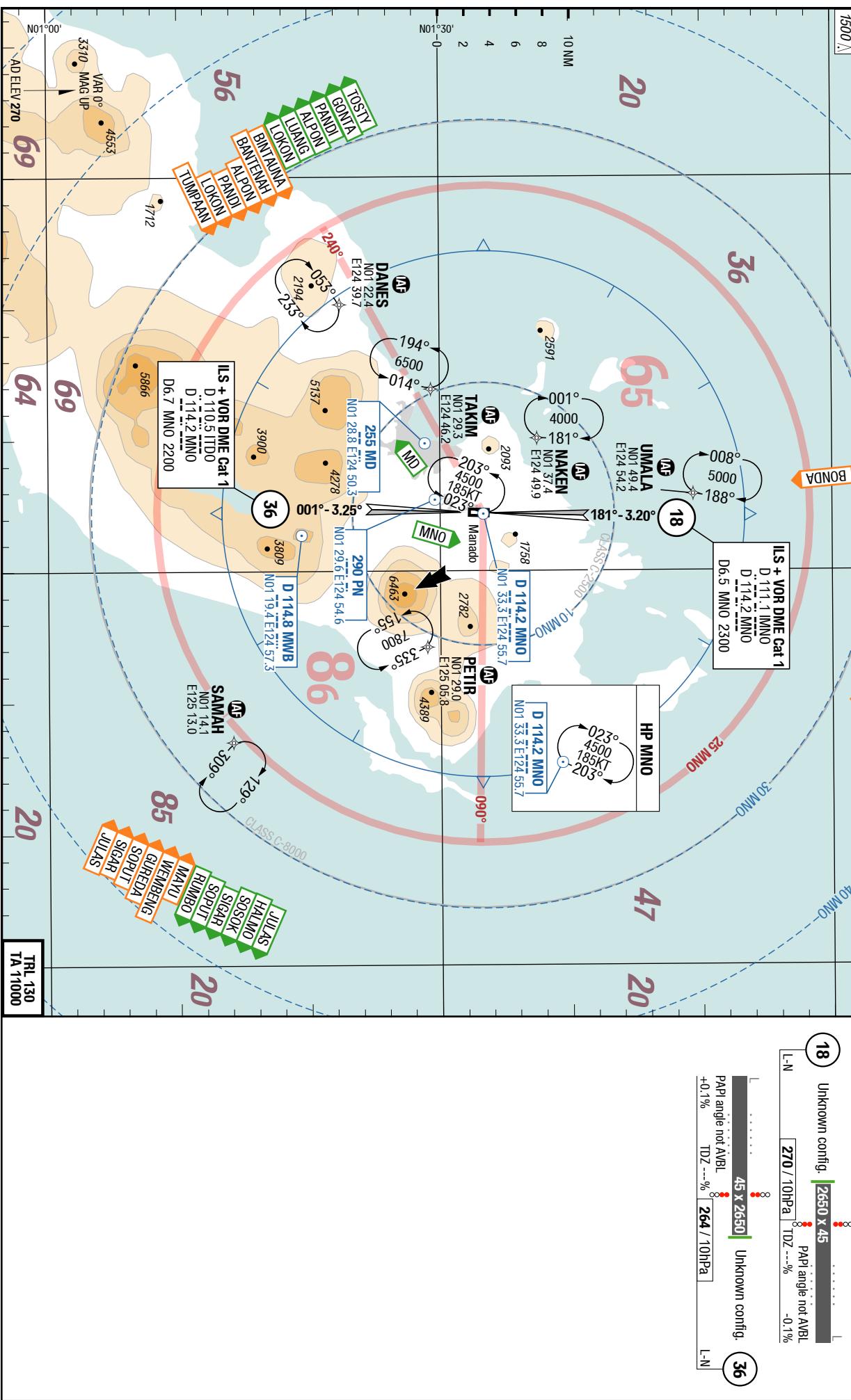
Landing RWY system:

18	Unknown config.	270 / 10hPa	45 x 250	Unknown config.
L-N
APP
Ratulangi TWR

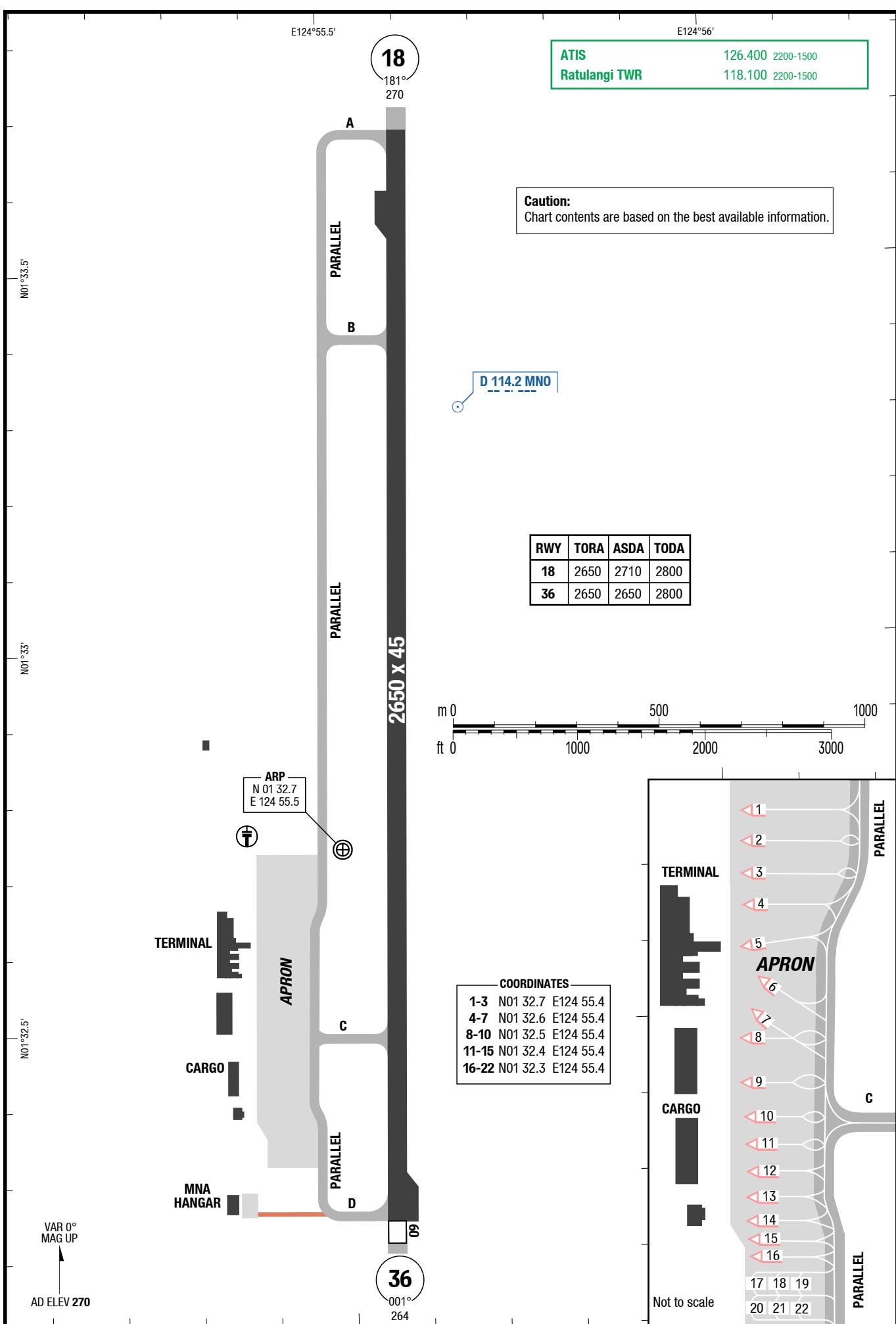
PAPI angle not AVBL
TDZ ...%
+0.1%
TDZ ...%
-0.1%

2650 x 45
264 / 10hPa

36



Changes: Reprint



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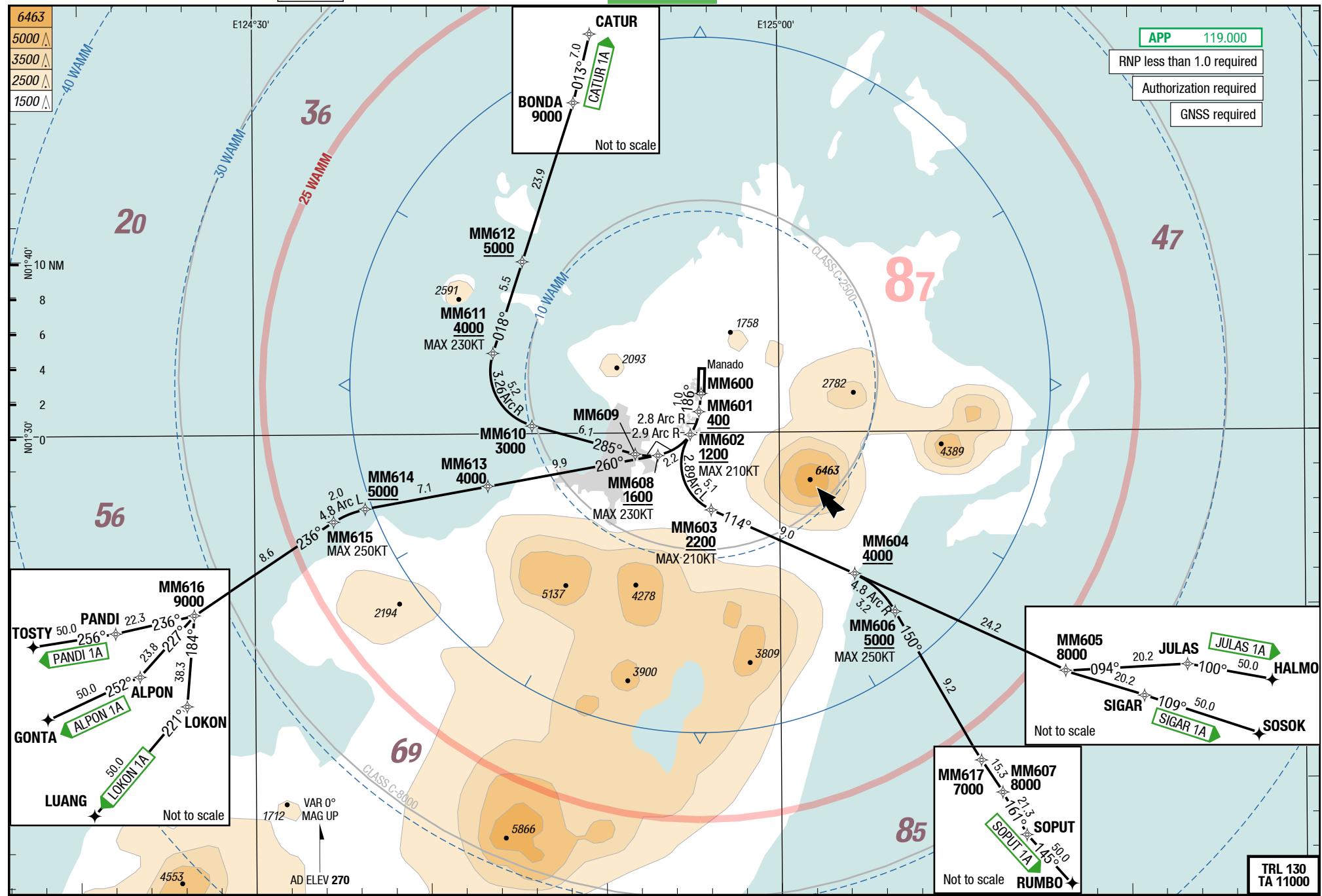
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RNAV SIDs RWY 18

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RNAV SIDs RWY 36



Changes: ALT, Speed RESTR

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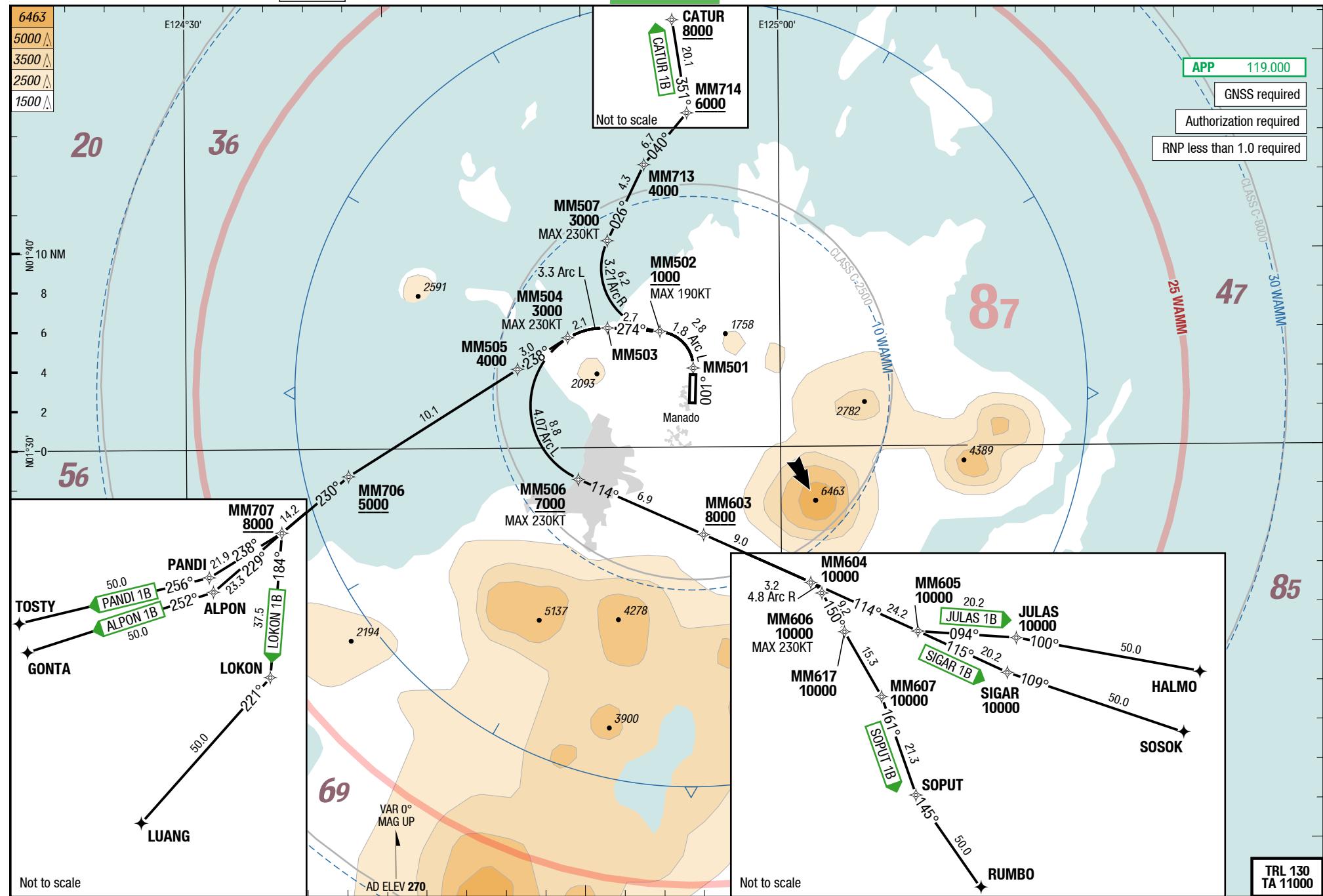
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4-20

RNAV SIDs RWY 36

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RNAV SIDs RWY 36



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SID

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SID

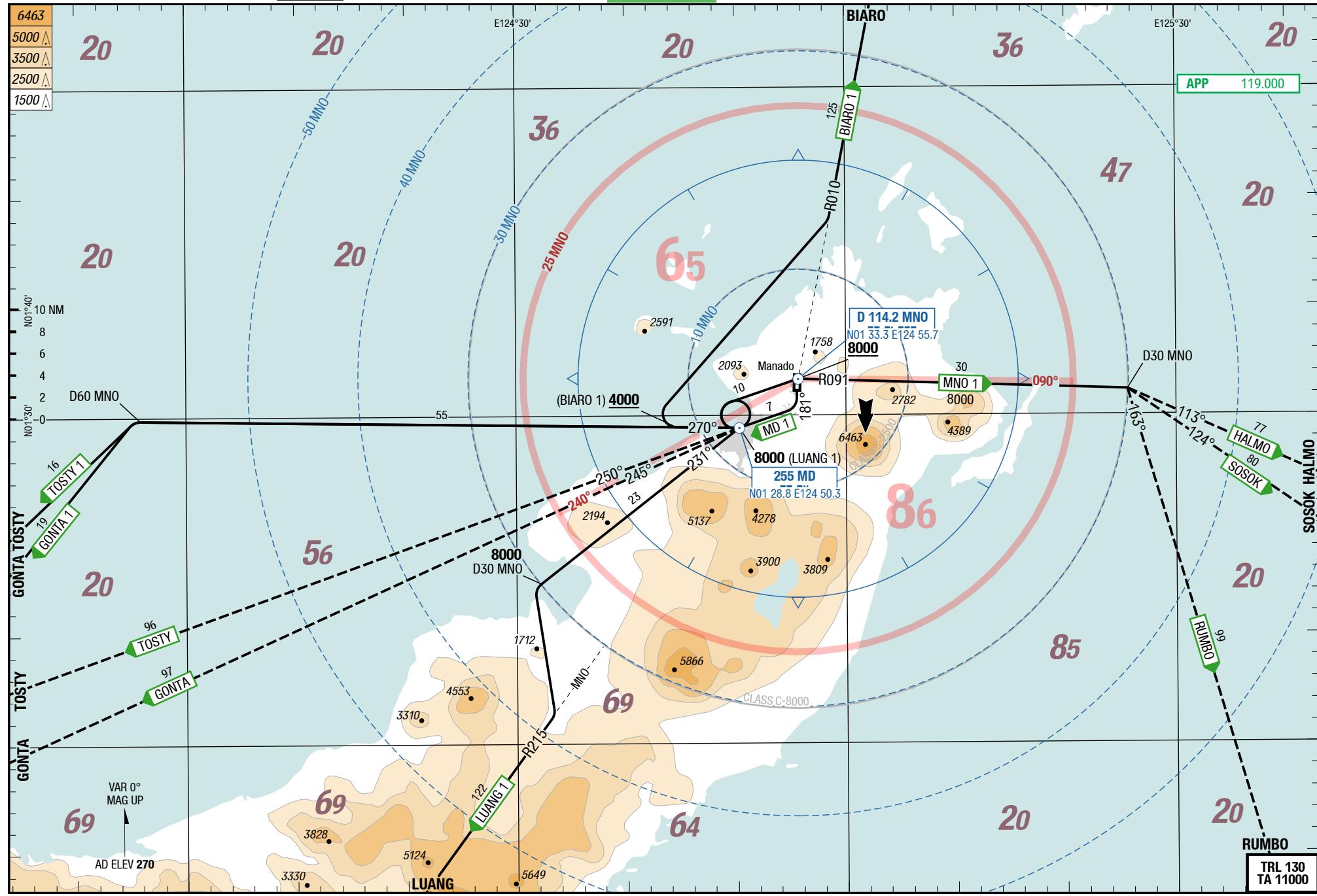
4-30

SIDs RWY 18

SID RWY 36

SIDs RWY 18

SID RWY 36



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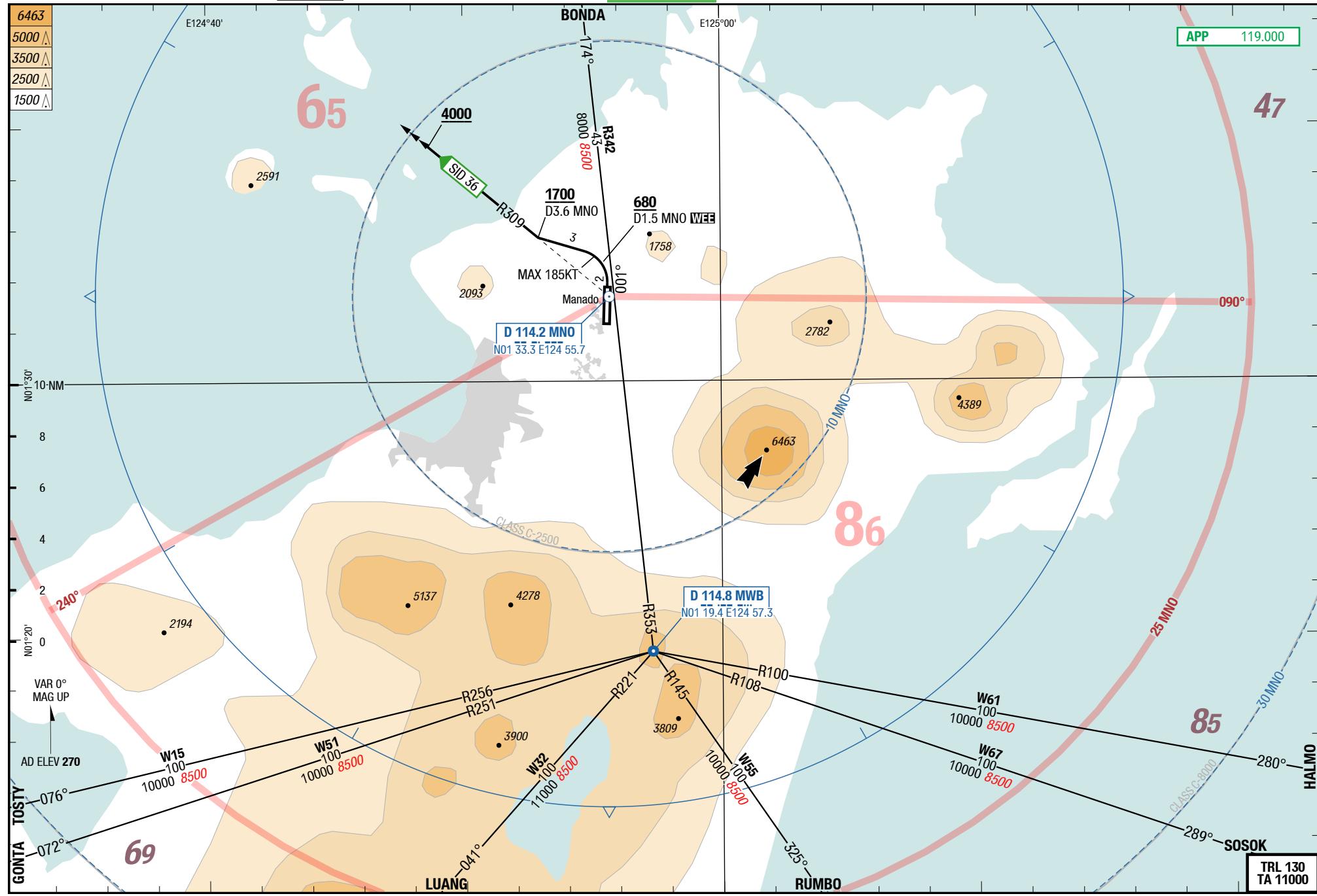
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4-40

SID RWY 36

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SID RWY 36



Changes: ALT, AWY

20-APR-2017

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RNAV SIDs RWY 18

ALPON 1A / CATUR 1A / JULAS 1A / LOKON 1A / PANDI 1A / SIGAR 1A

RWY 18 (181°)

DESIGNATOR	ROUTING	ALTITUDES
	Runway 18	
ALPON 1A 119.000 ①	MM600 - MM601 [R] - MM602 [K210- ;R] - MM608 [K230-] - MM613 - MM614 [L] - MM615 [K250-] - MM616 - ALPON - GONTA	MM601 MNM 400 MM602 MNM 1200 MM608 MNM 1600 MM613 at 4000 MM614 MNM 5000 MM616 at 9000
CATUR 1A 119.000 ①	MM600 - MM601 [R] - MM602 [K210- ;R] - MM608 [K230- ;R] - MM609 - MM610 [R] - MM611 [K230-] - MM612 - BONDA - CATUR	MM601 MNM 400 MM602 MNM 1200 MM608 MNM 1600 MM610 at 3000 MM611 MNM 4000 MM612 MNM 5000 BONDA at 9000
JULAS 1A 119.000 ①	MM600 - MM601 [R] - MM602 [K210- ;L] - MM603 [K210-] - MM604 - MM605 - JULAS - HALMO	MM601 MNM 400 MM602 MNM 1200 MM603 MNM 2200 MM604 MNM 4000 MM605 at 8000
LOKON 1A 119.000 ①	MM600 - MM601 [R] - MM602 [K210- ;R] - MM608 [K230-] - MM613 - MM614 [L] - MM615 [K250-] - MM616 - LOKON - LUANG	MM601 MNM 400 MM602 MNM 1200 MM608 MNM 1600 MM613 at 4000 MM614 MNM 5000 MM616 at 9000
PANDI 1A 119.000 ①	MM600 - MM601 [R] - MM602 [K210- ;R] - MM608 [K230-] - MM613 - MM614 [L] - MM615 [K250-] - MM616 - PANDI - TOSTY	MM601 MNM 400 MM602 MNM 1200 MM608 MNM 1600 MM613 at 4000 MM614 MNM 5000 MM616 at 9000
SIGAR 1A 119.000 ①	MM600 - MM601 [R] - MM602 [K210- ;L] - MM603 [K210-] - MM604 - MM605 - SIGAR - SOSOK	MM601 MNM 400 MM602 MNM 1200 MM603 MNM 2200 MM604 MNM 4000 MM605 at 8000

① Obstacles: Trees 600ft from DER, 175ft left of centerline, 304ft AMSL. Trees 831ft from DER, 819ft right of centerline, 426ft AMSL. Trees 1395ft from DER, 994ft left of centerline, 478ft AMSL

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RNAV SIDs RWY 18

SOPUT 1A

RWY 18 (181°)

DESIGNATOR	ROUTING	ALTITUDES
	Runway 18	
SOPUT 1A 119.000 ①	MM600 - MM601 [R] - MM602 [K210- ;L] - MM603 [K210-] - MM604 [R] - MM606 [K250-] - MM617 - MM607 - SOPUT - RUMBO	MM601 MNM 400 MM602 MNM 1200 MM603 MNM 2200 MM604 MNM 4000 MM606 MNM 5000 MM617 at 7000 MM607 at 8000

① Obstacles: Trees 600ft from DER, 175ft left of centerline, 304ft AMSL. Trees 831ft from DER, 819ft right of centerline, 426ft AMSL. Trees 1395ft from DER, 994ft left of centerline, 478ft AMSL

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5-30

RNAV SIDs RWY 36

ALPON 1B / CATUR 1B / JULAS 1B / LOKON 1B / PANDI 1B / SIGAR 1B

RWY 36 (001°)

	GS	120	150	180	210	240	270
5.2%	ft/MIN	700	800	1000	1200	1300	1500

DESIGNATOR	ROUTING	ALTITUDES
	Runway 36	
ALPON 1B 5.2% to 700 119.000 ①	MM501 [L] - MM502 [K190-] - MM503 [L] - MM504 [K230-] - MM505 - MM706 - MM707 - ALPON - GONTA	MM502 MNM 1000 MM504 at 3000 MM505 at 4000 MM706 MNM 5000 MM707 MNM 8000
CATUR 1B 5.2% to 700 119.000 ①	MM501 [L] - MM502 [K190- ;R] - MM507 [K230-] - MM713 - MM714 - CATUR	MM502 MNM 1000 MM507 at 3000 MM713 at 4000 MM714 MNM 6000 CATUR MNM 8000
JULAS 1B 5.2% to 700 119.000 ①	MM501 [L] - MM502 [K190-] - MM503 [L] - MM504 [K230- ;L] - MM506 [K230-] - MM603 - MM604 - MM605 - JULAS - HALMO	MM502 MNM 1000 MM504 at 3000 MM506 MNM 7000 MM603 MNM 8000 MM604 at 10000 MM605 at 10000 JULAS at 10000
LOKON 1B 5.2% to 700 119.000 ①	MM501 [L] - MM502 [K190-] - MM503 [L] - MM504 [K230-] - MM505 - MM706 - MM707 - LOKON - LUANG	MM502 MNM 1000 MM504 at 3000 MM505 at 4000 MM706 MNM 5000 MM707 MNM 8000
PANDI 1B 5.2% to 700 119.000 ①	MM501 [L] - MM502 [K190-] - MM503 [L] - MM504 [K230-] - MM505 - MM706 - MM707 - PANDI - TOSTY	MM502 MNM 1000 MM504 at 3000 MM505 at 4000 MM706 MNM 5000 MM707 MNM 8000
SIGAR 1B 5.2% to 700 119.000 ①	MM501 [L] - MM502 [K190-] - MM503 [L] - MM504 [K230- ;L] - MM506 [K230-] - MM603 - MM604 - MM605 - SIGAR - SOSOK	MM502 MNM 1000 MM504 at 3000 MM506 MNM 7000 MM603 MNM 8000 MM604 at 10000 MM605 at 10000 SIGAR at 10000

① Trees 380ft from DER, 400ft left of centerline, 385ft AMSL.

Changes: PROC, ALT, Speed RESTR

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5-40

RNAV SIDs RWY 36

SOPUT 1B

RWY 36 (001°)

	GS	120	150	180	210	240	270
5.2%	ft/MIN	700	800	1000	1200	1300	1500

DESIGNATOR	ROUTING	ALTITUDES
		Runway 36
SOPUT 1B 5.2% to 700 119,000 ①	MM501 [L] - MM502 [K190-] - MM503 [L] - MM504 [K230- ;L] - MM506 [K230-] - MM603 - MM604 [R] - MM606 [K230-] - MM617 - MM607 - SOPUT - RUMBO	MM502 MNM 1000 MM504 at 3000 MM506 MNM 7000 MM603 MNM 8000 MM604 at 10000 MM606 at 10000 MM617 at 10000 MM607 at 10000

① Trees 380ft from DER, 400ft left of centerline, 385ft AMSL.

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MDC-WAMM**5-50****SIDs RWY 18****BIARO 1 / GONTA 1 / LUANG 1 / MANADO 1 / MD 1 / TOSTY 1**

RWY 18 (181°)

DESIGNATOR	ROUTING	ALTITUDES
	Runway 18	
BIARO 1 119.000	RT to MD - QDR 270 MD - at MNM 4000 RT intercept R010 MNO to BIARO	
GONTA 1 119.000	RT to MD - QDR 270 MD - at D60 MNO LT direct GONTA	
LUANG 1 119.000	RT to MD - climb overhead MD - QDR 231 MD - at D30 MNO LT intercept R215 MNO to LUANG	leave MD at 8000 D30 MNO at 8000
MANADO 1 MNO 1 119.100	RT to MD - RT direct MNO - R091 MNO - at D30 MNO RT TRANSITION HALMO 113° to HALMO RUMBO 163° to RUMBO SOSOK 124° to SOSOK	MNO MNM 8000
MD 1 119.100	RT to MD TRANSITION GONTA MD - 245° to GONTA TOSTY MD - 250° to TOSTY	
TOSTY 1 119.000	RT to MD - QDR 270 MD - at D60 MNO LT direct TOSTY	

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MDC-WAMM**5-60****SID RWY 36****SID 36**

RWY 36 (001°)

	GS	120	150	180	210	240	270
6.5%	ft/MIN	800	1000	1200	1400	1600	1800

DESIGNATOR	ROUTING	ALTITUDES
SID 36 6.5% to 1700 119.000 ①	at MNM 680 or D1.5 MNO , whichever is earlier, LT (MAX 185KT) - at D3.6 MNO intercept R309 MNO - at MNM 4000 proceed to BONDA / GONTA / HALMO / LUANG / RUMBO / SOSOK / TOSTY or as instructed by ATC.	D3.6 MNO MNM 1700

① Climb gradient 6.5% due avoid hills of 1227ft NE of APT and overfly high terrain 1404ft NW of APT.

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STARs

STAR

Sam Rat
NIL
STARs

6-30

646
5000
3500
2500
1500

20

20

1

10

ATIS 126.400
APP 119.000

A vertical scale bar with a total length of 10 km, divided into 10 segments of 1 km each. The scale is labeled '10 KM' at the top. Below the scale, the text 'N01°30'' is written vertically, indicating a bearing of 1°30' North.

1

Changes: chart layout, ASP, WPT , VAR

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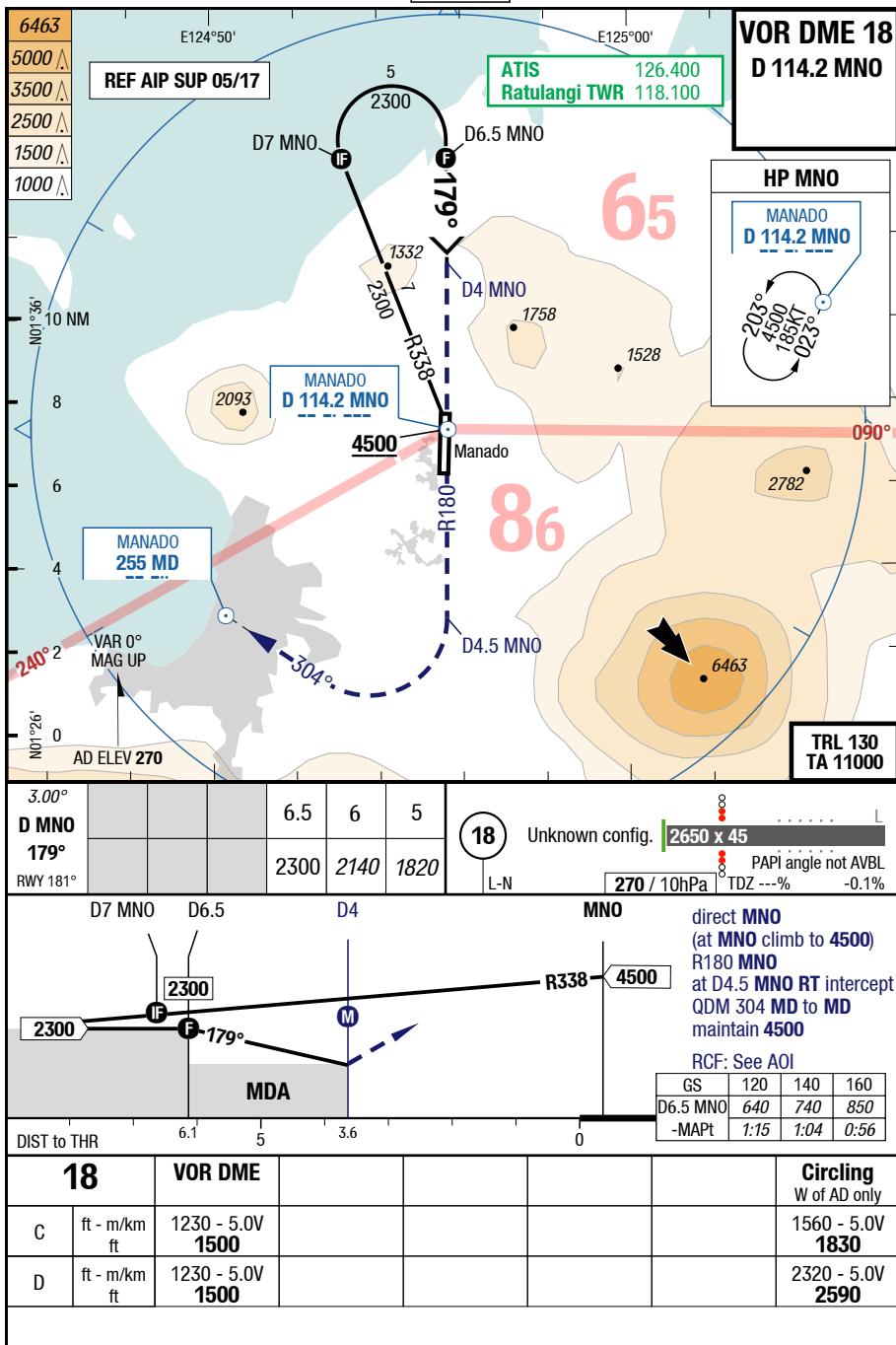
MDC-WAMM

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7-08

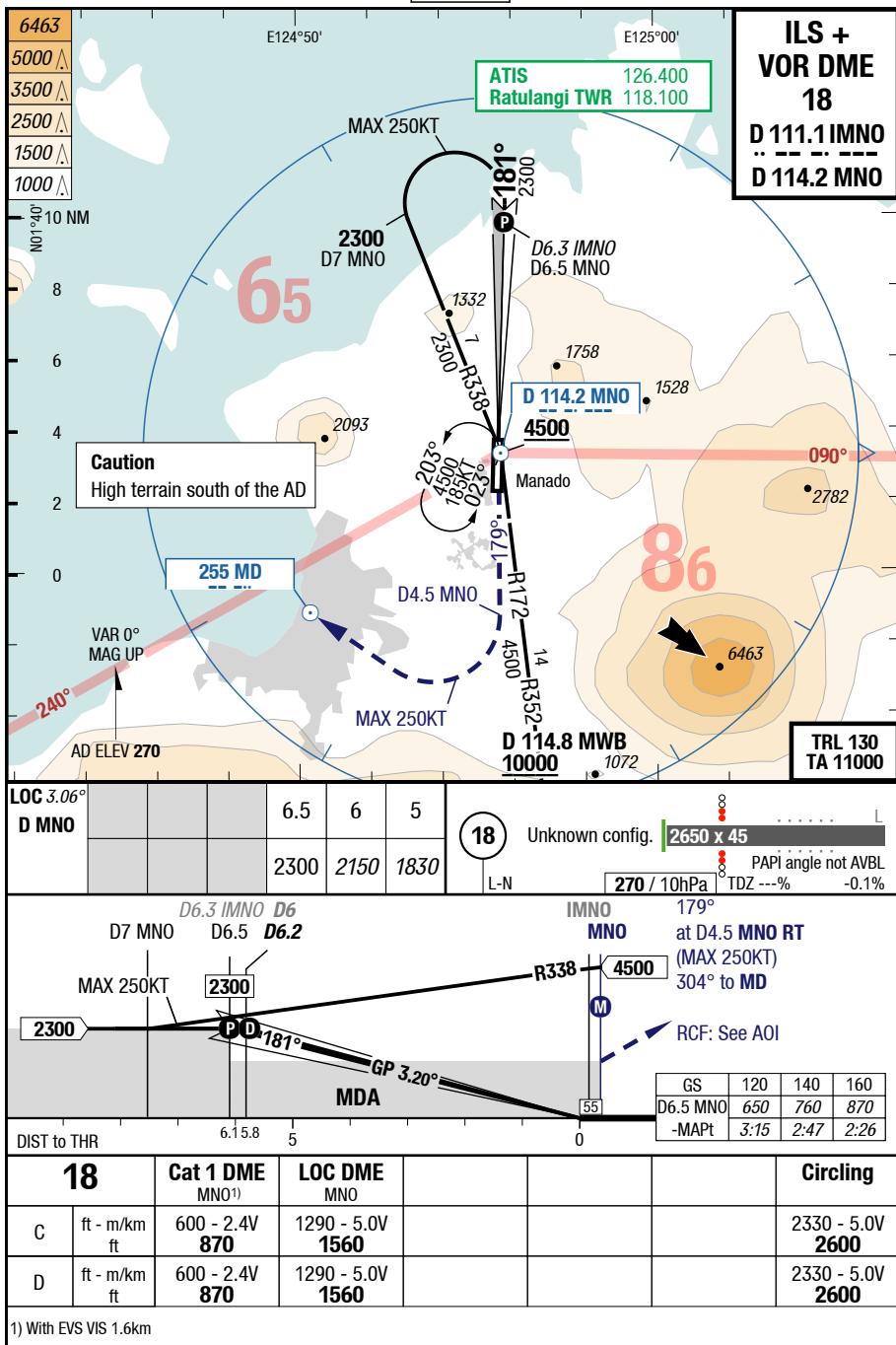
Tempo VOR DME 18



Changes: new

7-10

ILS + VOR DME 18

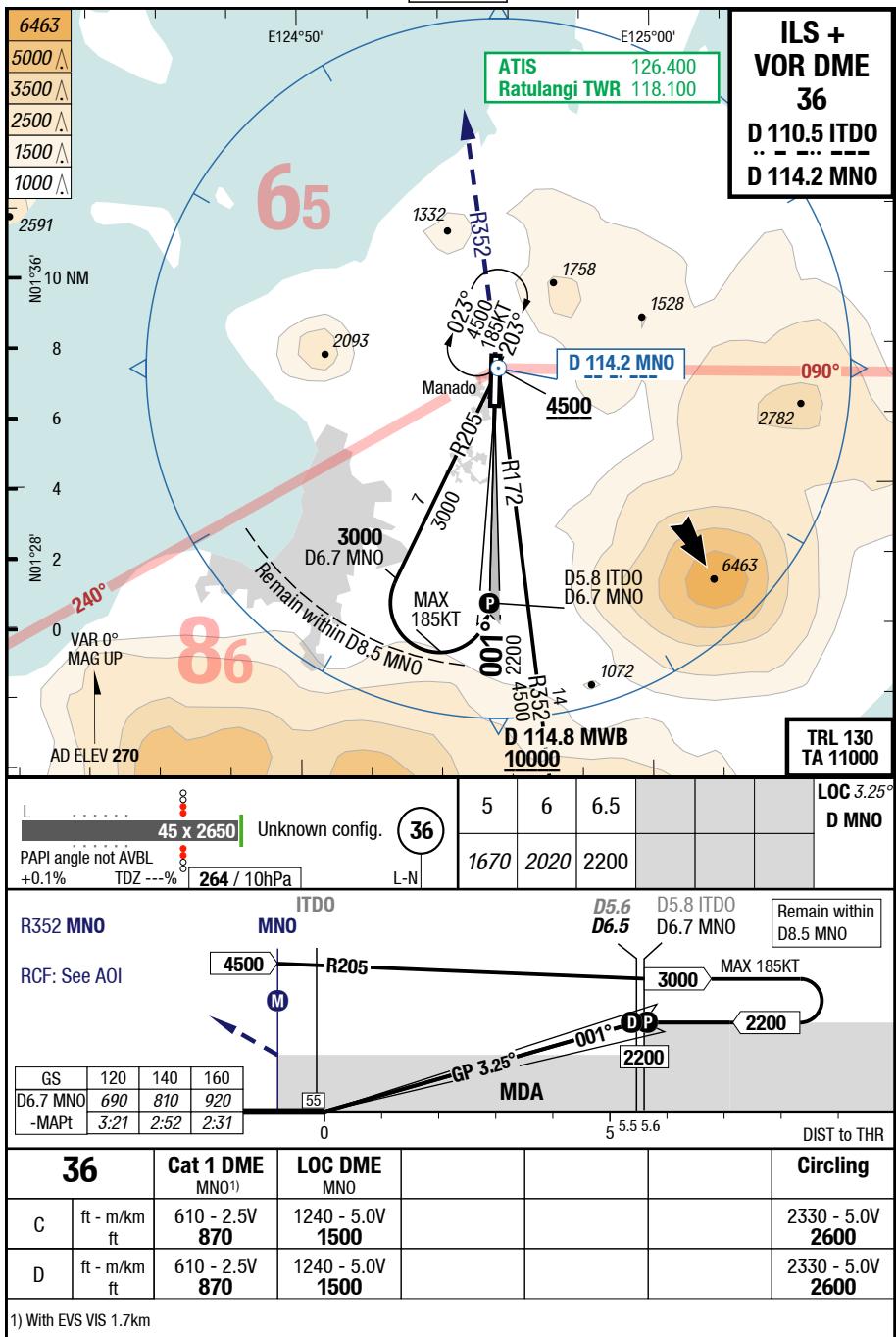


1) With EVS VIS 1.6km

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ILS + VOR DME 36



1) With EVS VIS 1.7km

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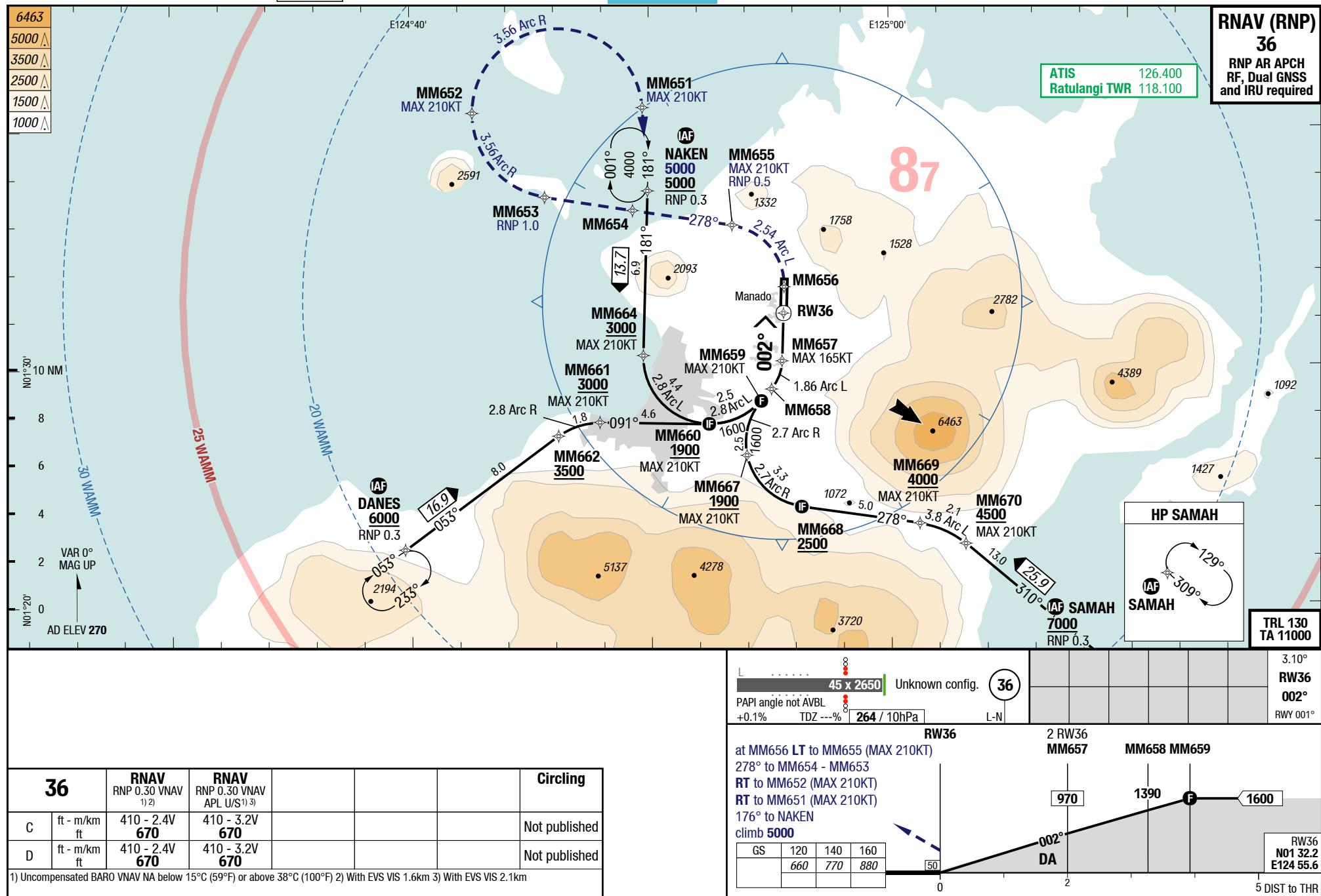
7-40

RNAV (RNP) 36

10

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RNAV (RNP) 36



7-50

NDB 36 Circling

IAC

