

ATIS **126.4**
 PENANG Tower **121.1**
 Ground **121.6**

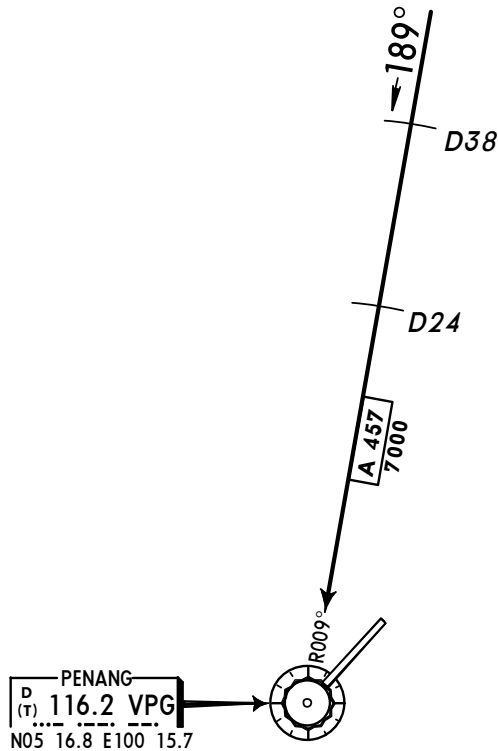
Alt Set: hPa Trans level: FL 130
 Apt Elev: 0 hPa Trans alt: 11000' (10989')

PENANG I., MALAYSIA
PENANG INTL
R-009° VPG to VPG VOR
 VOR 116.2 VPG
 -... -...
 Apt. Elev **11'**

R009°/189° (VPG VOR)

DME CHECK POINT NOT REQUIRED.

NOT TO SCALE



D24
 4000'

D38
 5500'

**AFTER
 PASSING:**

**DESCEND
 TO:**

Make one of the following approaches as directed by ATC:
 10 DME Arc VPG VOR, or
 15 DME Arc VPG VOR, or
 Over VPG VOR, carry out standard instrument approach procedure.

ATIS **126.4**
 PENANG Tower **121.1**
 Ground **121.6**

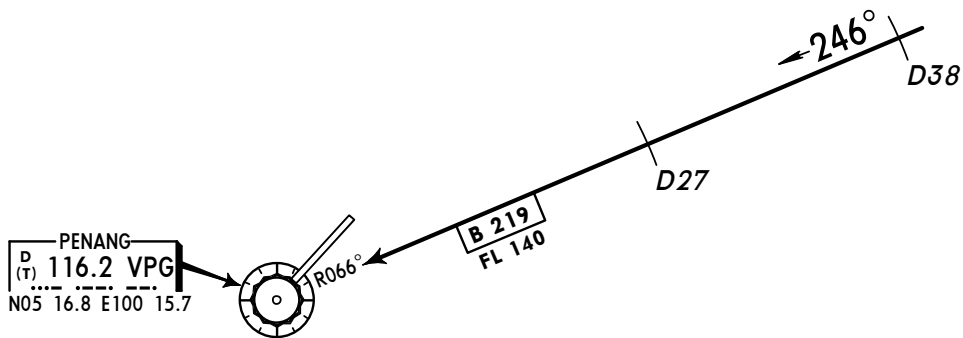
Alt Set: hPa Trans level: FL 130
 Apt Elev: 0 hPa Trans alt: 11000' (10989')

PENANG I., MALAYSIA
PENANG INTL
R-066° VPG to VPG VOR
 VOR 116.2 VPG
 Apt. Elev **11'**

R066°/246° (VPG VOR)

DME CHECK POINT NOT REQUIRED.

NOT TO SCALE



D27
 4000'

D38
 7500'

**AFTER
 PASSING:**

**DESCEND
 TO:**

Make one of the following approaches as directed by ATC:
 10 DME Arc VPG VOR, or
 15 DME Arc VPG VOR, or
 Over VPG VOR, carry out standard instrument approach procedure.

ATIS **126.4**PENANG Tower **121.1**Ground **121.6**Alt Set: MB (IN on req)
Apt Elev: 0 MBTrans level: FL 130
Trans alt: 11000' (10989')

PENANG I., MALAYSIA

PENANG INTL

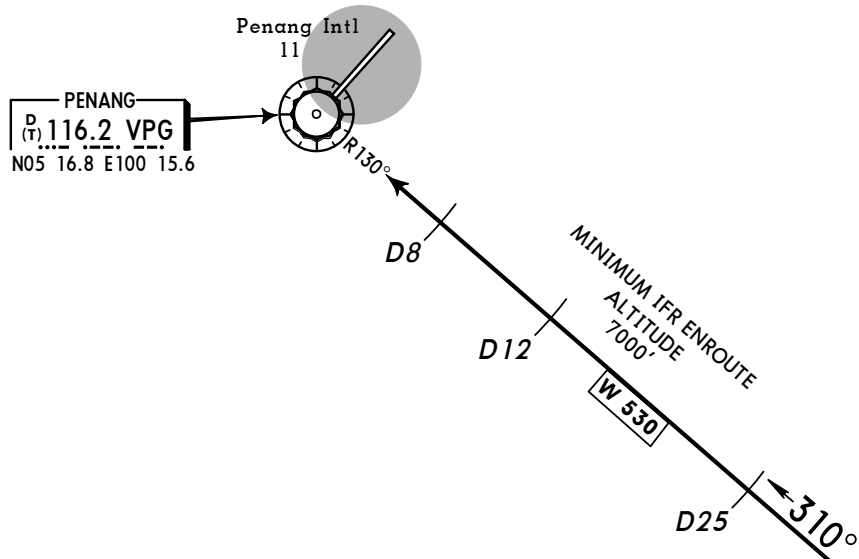
VPG R130 ARRIVAL

VOR 116.2 VPG

Apt. Elev **11'**

R130°/310° (VPG VOR)

NOT TO SCALE



D8	D12	D25
4000'	4500'	5100'

AFTER
PASSINGDESCEND
TO:

Make one of the following approaches as directed by ATC:
10 DME Arc, 15 DME Arc VPG VOR.

Over VPG VOR, carry out standard instrument approach procedure.

ATIS **126.4**PENANG Tower **121.1**Ground **121.6**Alt Set: MB (IN on req)
Apt Elev: 0 MBTrans level: FL 130
Trans alt: 11000' (10989')

PENANG I., MALAYSIA

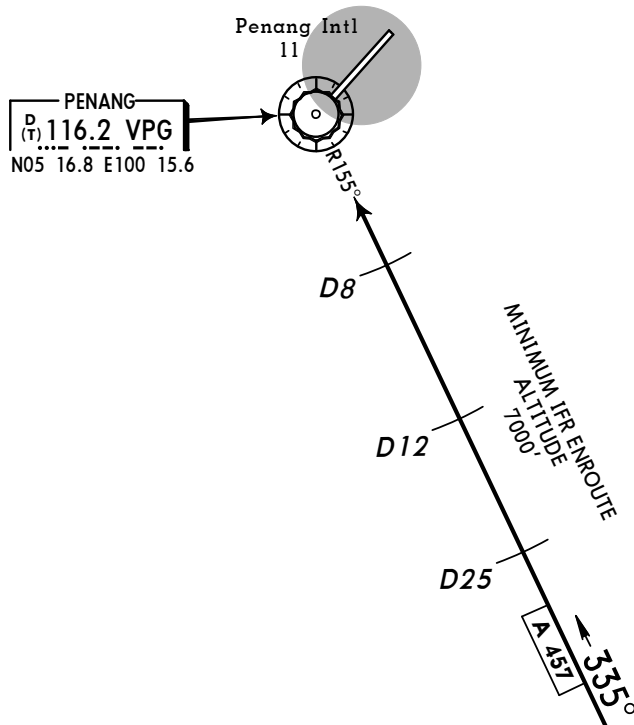
PENANG INTL

VPG R155 ARRIVAL

VOR 116.2 VPG

Apt. Elev **11'**

R155°/335° (VPG VOR)



NOT TO SCALE

D8	D12	D25
4000'	4500'	5100'

AFTER
PASSINGDESCEND
TO:

Make one of the following approaches as directed by ATC:
10 DME Arc, 15 DME Arc VPG VOR.

Over VPG VOR, carry out standard instrument approach procedure.

ATIS **126.4**PENANG Tower **121.1**Ground **121.6**Alt Set: MB (IN on req)
Apt Elev: 0 MBTrans level: FL 130
Trans alt: 11000' (10989')

PENANG I., MALAYSIA

PENANG INTL

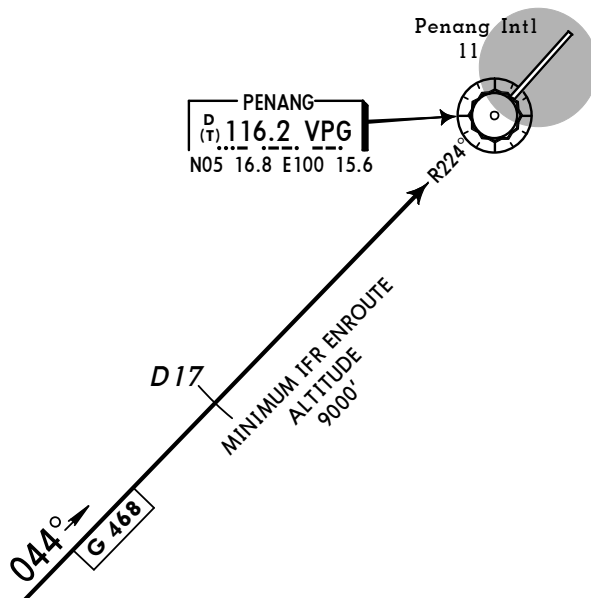
VPG R224 ARRIVAL

VOR 116.2 VPG

Apt. Elev **11'**

R224°/044° (VPG VOR)

NOT TO SCALE

AFTER
PASSINGDESCEND
TO:

D17

4000'

Make one of the following approaches as directed by ATC:
10 DME Arc, 15 DME Arc VPG VOR.

Over VPG VOR, carry out standard instrument approach procedure.

ATIS **126.4**PENANG Tower **121.1**Ground **121.6**Alt Set: MB (IN on req)
Apt Elev: 0 MBTrans level: FL 130
Trans alt: 11000' (10989')

PENANG I., MALAYSIA

PENANG INTL

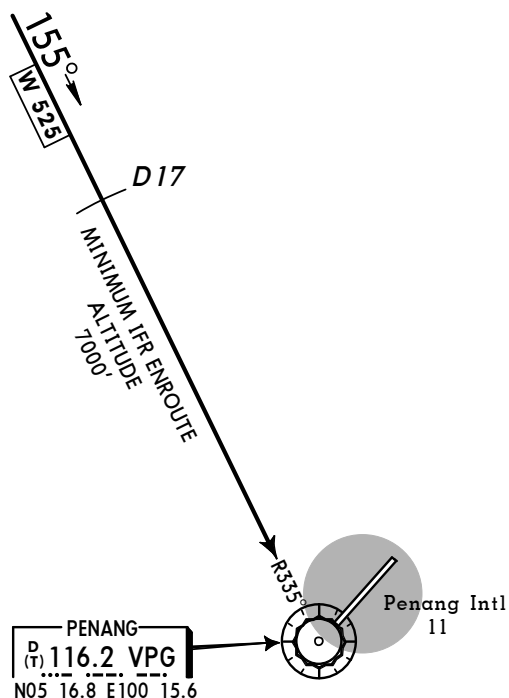
VPG R335 ARRIVAL

VOR 116.2 VPG

Apt. Elev **11'**

R335°/155° (VPG VOR)

NOT TO SCALE

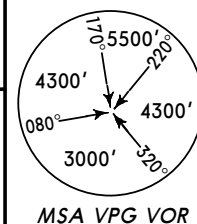
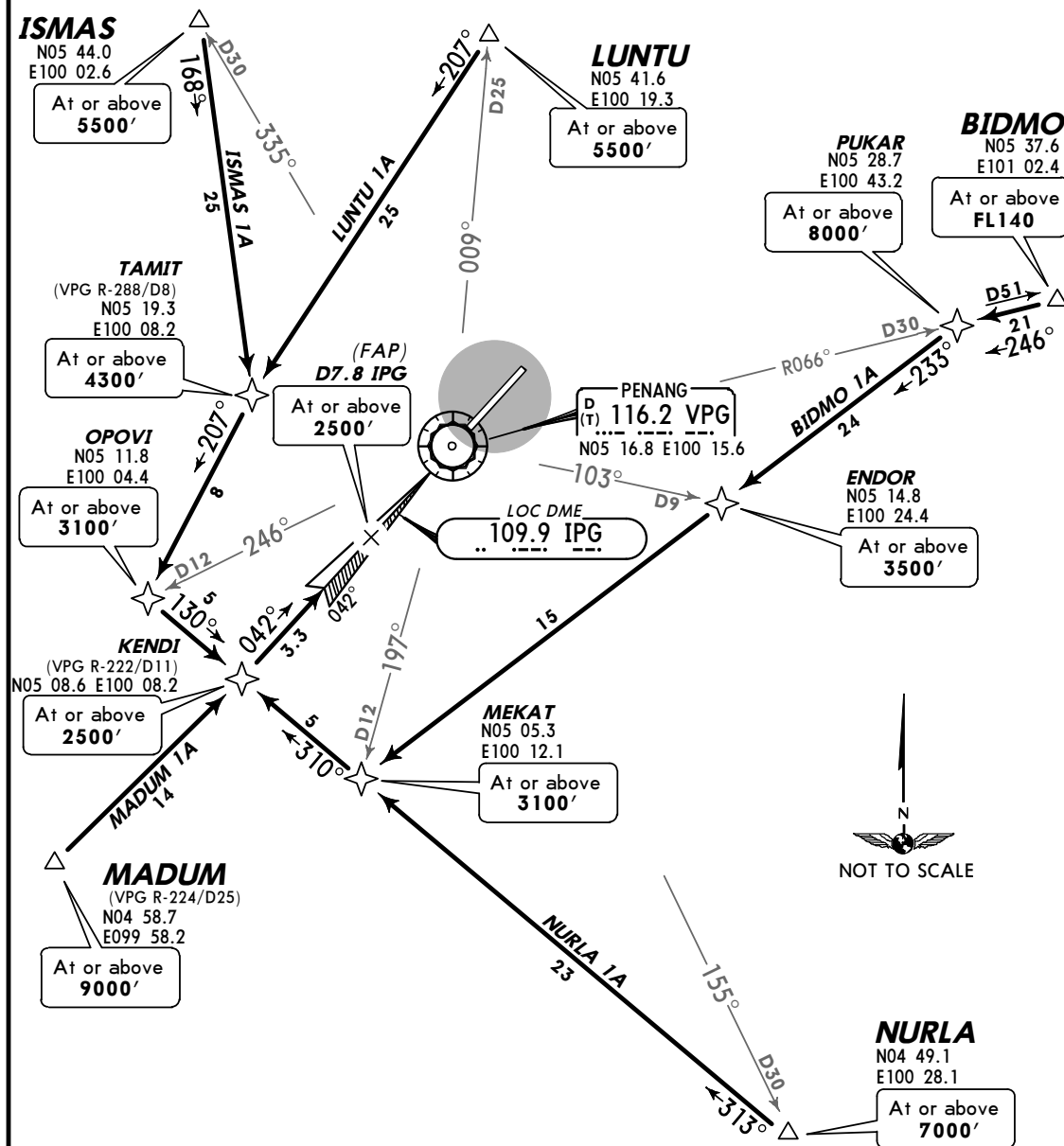
AFTER
PASSINGDESCEND
TO:

D17

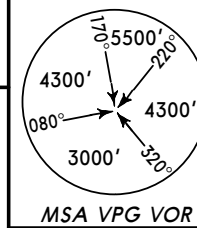
4000'

Make one of the following approaches as directed by ATC:
10 DME Arc, 15 DME Arc VPG VOR.

Over VPG VOR, carry out standard instrument approach procedure.

ATIS
126.4Apt Elev
11'Alt Set: hPa Trans level: FL130 Trans alt: 11000'
Adhere to vertical restrictions (STAR steps) on descent.**BIDMO 1A [BIDM1A], ISMAS 1A [ISMA1A],
LUNTU 1A [LUNT1A], MADUM 1A [MADU1A],
NURLA 1A [NURL1A] ARRIVALS**
(RWY 04)

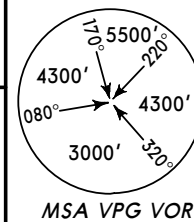
STAR	ROUTING
BIDMO 1A	From BIDMO track to PUKAR, then turn LEFT track 233° to ENDOR and MEKAT. At MEKAT turn RIGHT track 310° to KENDI.
ISMAS 1A	From ISMAS track 168° to TAMIT, then turn RIGHT track 207° to OPOVI. At OPOVI turn LEFT track 130° to KENDI.
LUNTU 1A	From LUNTU track 207° to TAMIT then to OPOVI. At OPOVI turn LEFT track 130° to KENDI.
MADUM 1A	From MADUM track to KENDI.
NURLA 1A	From NURLA track 313° to MEKAT, then track 310° to KENDI.
LANDING	
Intercept localizer for ILS approach.	

ATIS
126.4Apt Elev
11'Alt Set: hPa Trans level: FL130 Trans alt: 11000'
Adhere to vertical restrictions (STAR steps) on descent
unless specifically cancelled.**BIDMO 1B [BIDM1B], ISMAS 1B [ISMA1B],
LUNTU 1B [LUNT1B], NURLA 1B [NURL1B],
PAPDA 1B [PAPD1B] ARRIVALS**
(RWY 22)**PAPDA**
N05 49.5
E100 45.2At or above
9000'**ISMAS**
N05 44.0
E100 02.6At or above
5500'**LUNTU**
N05 41.6
E100 19.3At or above
5500'**UPTOP**
(VPG R-042/D12)
N05 25.8
E100 23.7At or above
2800'**GOBAR**
(VPG R-053/D16)
N05 26.5
E100 28.4At or above
3100'**BIDMO**
(VPK R-066/D51)
N05 37.6
E101 02.4At or above
FL140**IDVAN**
N05 30.2
E100 19.7At or above
4100'**PUKAR**
N05 28.7
E100 43.2At or above
8000'**REKUS**
N05 24.3
E100 28.6At or above
3100'**PENANG**
D (T) 116.2 VPG
N05 16.8 E100 15.6

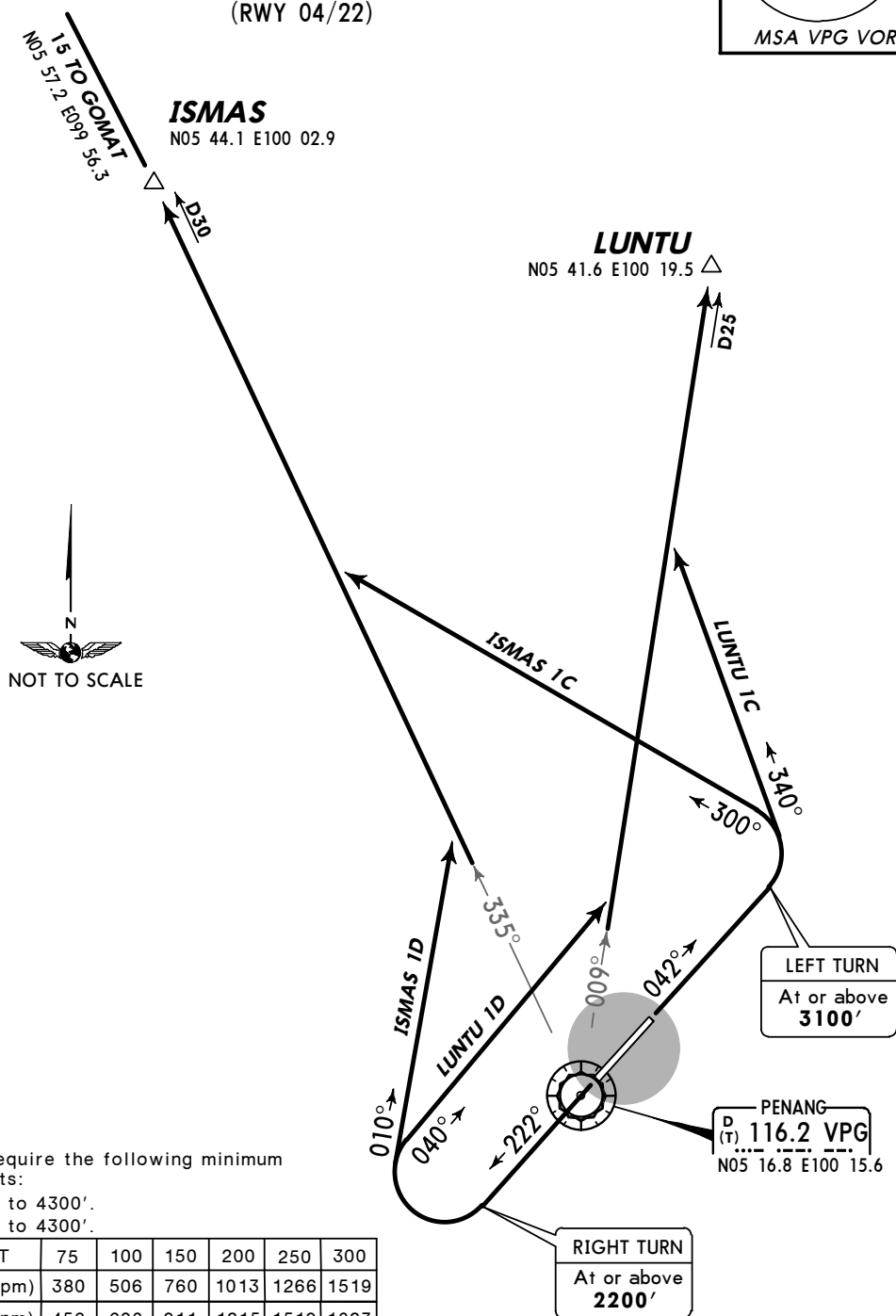
STAR	ROUTING
BIDMO 1B	From BIDMO track 247° to PUKAR, then turn RIGHT track 261° to GOBAR and UPTOP.
ISMAS 1B	From ISMAS track 129° to IDVAN, then turn RIGHT track 138° to UPTOP.
LUNTU 1B	From LUNTU track 165° to UPTOP.
NURLA 1B	From NURLA track 001° to REKUS, then turn LEFT to 286° to UPTOP.
PAPDA 1B	From PAPDA track 222° to UPTOP.
LANDING	
Intercept VPG R-042 for VOR/DME approach.	

Apt Elev
11'

Trans level: FL 130 Trans alt: 11000'



DEPARTURES NORTH

ISMAS 1C, ISMAS 1D, LUNTU 1C, LUNTU 1D
(RWY 04/22)These SIDs require the following minimum
climb gradients:

Rwy 04: 6.0% to 4300'.

Rwy 22: 5.0% to 4300'.

Gnd speed-KT	75	100	150	200	250	300
5.0% V/V (fpm)	380	506	760	1013	1266	1519
6.0% V/V (fpm)	456	608	911	1215	1519	1823

RWY	INITIAL CLIMB
04	Track 042°, after passing 3100', turn LEFT.
22	Track 222°, after passing 2200', turn RIGHT.
SID	ROUTING
ISMAS 1C	Track 300°, intercept VPG R-335 outbound to GOMAT.
ISMAS 1D	Track 010°, intercept VPG R-335 outbound to GOMAT.
LUNTU 1C	Track 340°, intercept VPG R-009 outbound to LUNTU.
LUNTU 1D	Track 040°, intercept VPG R-009 outbound to LUNTU.

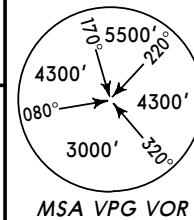
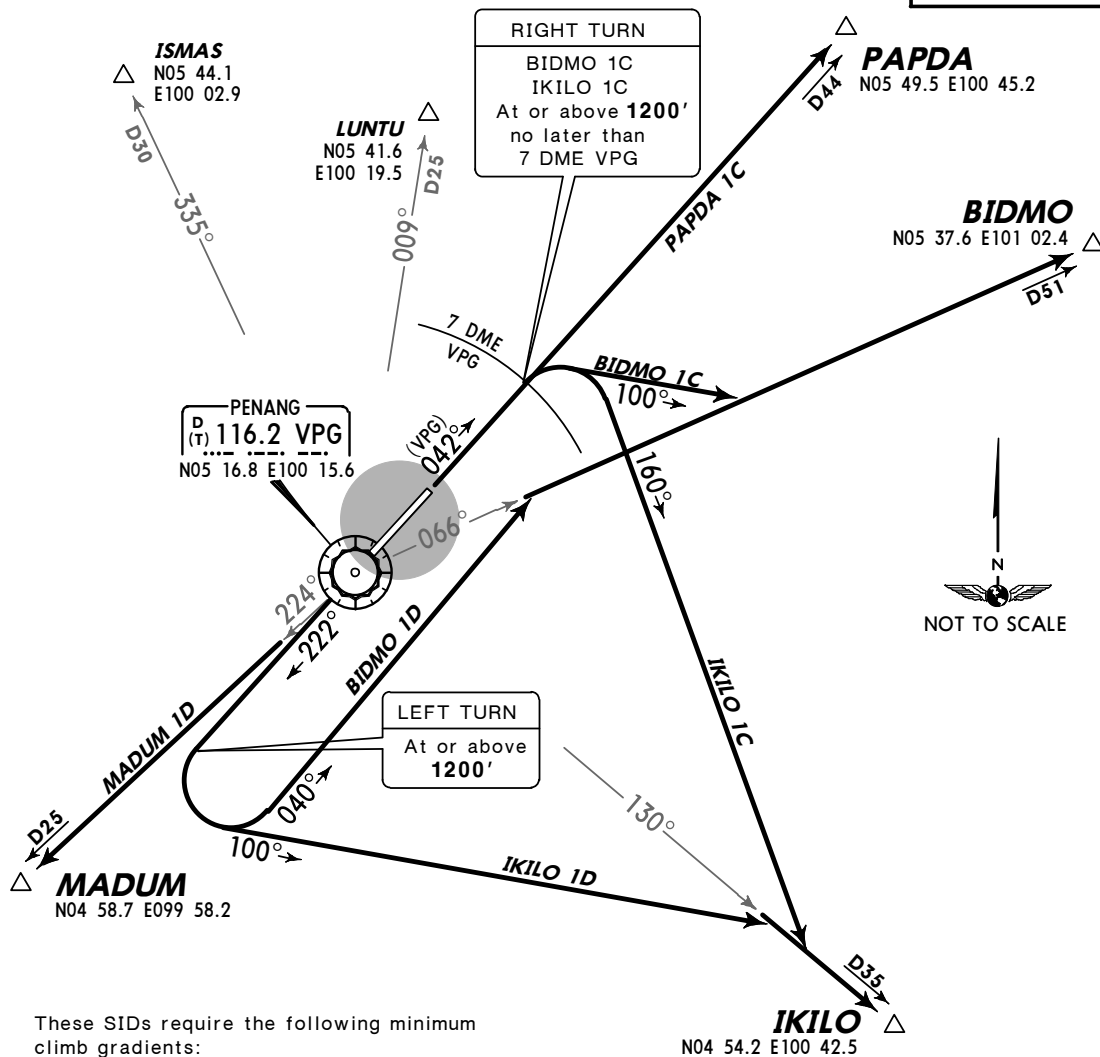
CHANGES: New procedure at this airport.

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Print Date: 01 May 2012

Apt Elev
11'

Trans level: FL 130 Trans alt: 11000'

**DEPARTURES NORTHEAST, EAST, SOUTH & SOUTHWEST**
BIDMO 1C, BIDMO 1D, IKILO 1C, IKILO 1D, MADUM 1D, PAPDA 1C
(RWY 04/22)

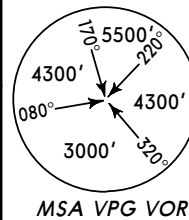
These SIDs require the following minimum climb gradients:
RWY 04: BIDMO; 5.0% to FL 140, PAPDA 1C;
5.0% to 5500'.
RWY 22: MADUM 1D; 5.0% to 9000'.

Gnd speed-KT	75	100	150	200	250	300
5.0% V/V (fpm)	380	506	760	1013	1266	1519

RWY	INITIAL CLIMB
04	Track 042°.
22	Track 222°.
SID	ROUTING
BIDMO 1C	After passing 1200' no later than 7 DME VPG. Turn RIGHT, track 100°. Intercept VPG R-066 outbound to BIDMO.
BIDMO 1D	After passing 1200'. Turn LEFT, track 040°. Intercept VPG R-066 outbound to BIDMO.
IKILO 1C	After passing 1200' no later than 7 DME VPG. Turn RIGHT, track 160°. Intercept VPG R-130 outbound to IKILO.
IKILO 1D	After passing 1200'. Turn LEFT, track 100°. Intercept VPG R-130 outbound to IKILO.
MADUM 1D	Intercept VPG R-224 outbound to MADUM.
PAPDA 1C	Intercept VPG R-042 outbound to PAPDA.

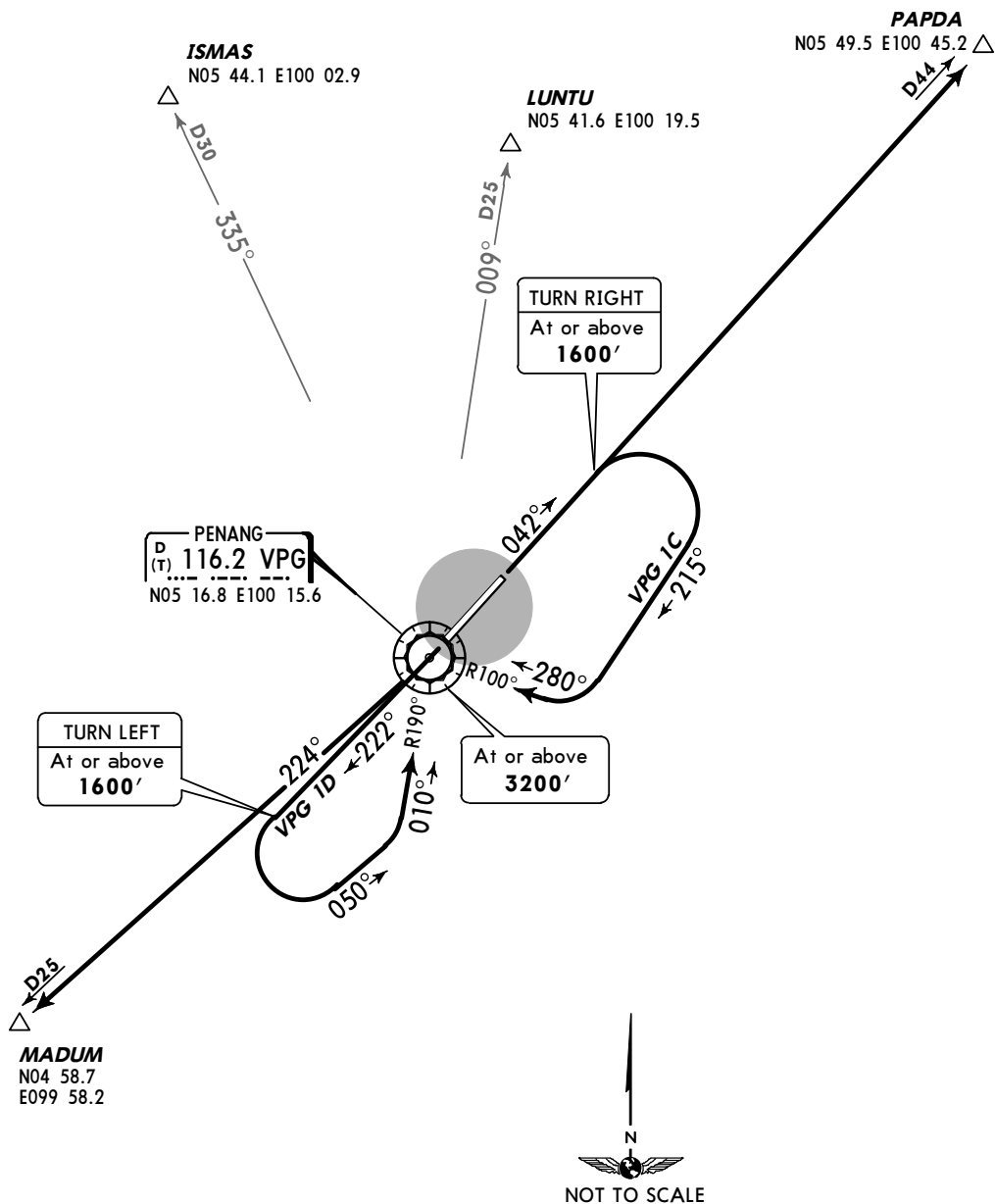
Apt Elev
11'

Trans level: FL 130 Trans alt: 11000'



DEPARTURES VPG

VPG 1C, VPG 1D
(RWYS 04/22)



SID	ROUTING
VPG 1C (RWY 04)	Track 042°, after passing 1600', turn RIGHT. Track 215°, intercept VPG R-100 inbound to VPG.
VPG 1D (RWY 22)	Track 222°, after passing 1600', turn LEFT. Track 050°, intercept VPG R-190 inbound to VPG.

**REHABILITATION OF AIRFIELD PAVEMENT FOR
PARKING APRON BAY 3 TO BAY 5, AND NEW
APRON TAXIWAY**

1. INTRODUCTION

- 1.1 The Parking Apron at the Penang Intl Airport is currently undergoing rehabilitation. The works involve the rehabilitation of Bay 3 to Bay 5, and introduction of new Apron Taxiway.

2. PURPOSE

- 2.1 The purpose of this AIP Supplement is to notify the aviation industry of the works schedule and the changes and the restriction on the movement areas at the Parking Apron and Taxiways of Penang International Airport. These include closures to portion[s] of taxiway[s], and closures to portion[s] of apron.
- 2.2 All works are expected to be completed by September 2009.

3. WORKS SCHEDULE

- 3.1 The works schedule is basically divided into two (2) phases:

Phase 1: From 08 March 2009 to 07 June 2009

Main Works:

1. Rehabilitation of Bay 3 & Bay 4
2. Provision of new Apron Taxiway

Phase 2: From 08 June 2009 to 07 September 2009

Main Works:

1. Rehabilitation of Bay 4 & Bay 5
2. Provision of new Apron Taxiway

4. WORKS UNDER PHASE 1

- 4.1 Works under Phase 1 shall commence from 08 March 2009 to 07 June 2009.
(See Diagram A)
- 4.2 WORKING HOURS
- 4.2.1 Works are carried out during normal operational hours.
- 4.3 MOVEMENT AREA RESTRICTIONS
- 4.3.1 Bay 3 and Bay 4 will be closed during the rehabilitation works.
No aircraft movement through these bays is allowed.
- 4.3.2 Taxiway E will be closed during the rehabilitation works. No aircraft movement through this taxiway is allowed.
- 4.3.3 Taxiway F, G, H are available for Entry/Exit into the Parking Apron.
- 4.3.4 Aircraft 'push-out' Bay 5 faces South.

5. WORKS UNDER PHASE 2

- 5.1 Works under Phase 2 shall commence from 08 June 2009 to 07 September 2009.
(See Diagram B)
- 5.2 WORKING HOURS
- 5.2.1 Works are carried out during normal operational hours.
- 5.3 MOVEMENT AREA RESTRICTIONS
- 5.3.1 Bay 4 and Bay 5 will be closed during the rehabilitation works.
No aircraft movement through these bays is allowed.
- 5.3.2 Taxiway F will be closed during the rehabilitation works.
No aircraft movement through this taxiway is allowed.
- 5.3.3 Taxiway E, G and H are available for Entry/Exit into the Parking Apron.
- 5.3.4 Aircraft 'push-out' Bay 3 via Taxiway E to Taxiway A faces North/South.

6. REGULATION ON MOVEMENT AREA

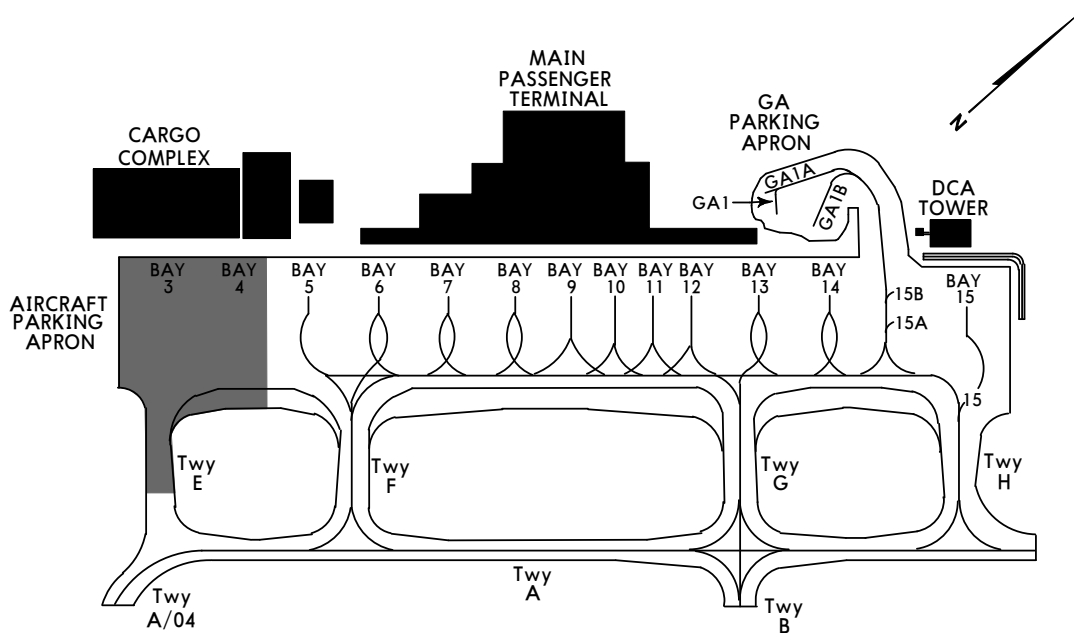
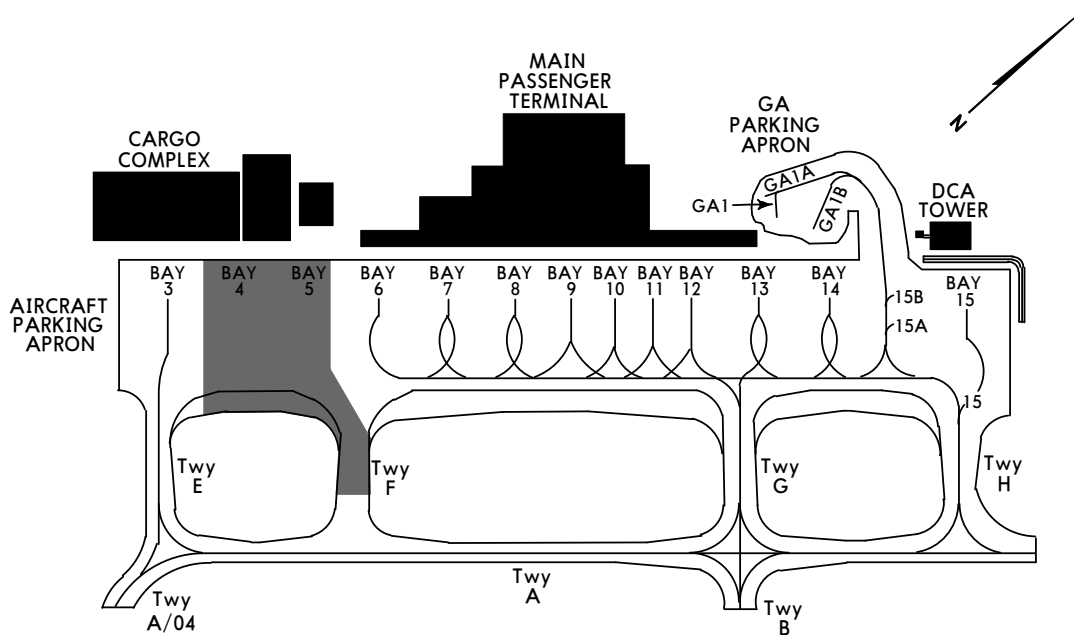
- 6.1 The routes to be used by aircraft when taxiing into-, on and out- of the Apron will be specified by Air Traffic Control. The issuance by Air Traffic Control of a taxi route to an aircraft does not relieve the pilot-in-command of the responsibility to maintain separation with other aircraft on the movement area or to comply with Air Traffic Control directions intended to regulate aircraft movement.

7. IMPLEMENTATION

- 7.1 This AIP Supplement and relevant charts will be applicable during the whole of the rehabilitation.
- 7.2 Trigger NOTAM will be issued notifying the effective date of implementation.

8. CANCELLATION

- 8.1 This AIP Supplement will remain current until all works have completed.

DIAGRAM APhase 1: 08 March 2009
to 07 June 2009**DIAGRAM B**Phase 2: 08 June 2009
to 07 September 2009

UPGRADING WORKS AT PENANG INTERNATIONAL AIRPORT **BAYAN LEPAS PULAU PINANG**

1. PURPOSE

1.1 The objective of these charts (10-8B to 10-8K) is to ensure the flow of information necessary for the safe, regularity and efficiency of international air navigation. Penang International Airport is currently under a stimulus package of upgrading works. The main components for the Penang International Airport upgrading works will include upgrading and expansion of the existing passenger terminal, a new multi-storey car park, a new central utility building, security fencing, main infrastructure works, and extension to the aircraft parking apron.

2. SCOPE OF WORKS

2.1 The purpose of these charts (10-8B to 10-8K) is to notify the aviation industry of the aircraft parking stands positions as well as the restrictions areas at the Main Terminal Apron, General Aviation Apron and Helicopter Apron before, during and after construction period.

3. NEW AIRCRAFT PARKING STAND CONFIGURATIONS

3.1 The new aircraft parking stands are indicated in the table below (Refer to 10-8K):

NO	AIRCRAFT STAND NUMBER	AIRCRAFT TYPE OR EQUIVALENT	STAND TYPE	WGS 84 POSITION
1	Bay A1	B747-400.	Contact	To Be Notified
2	Bay A1L	B737-800.	Contact	To Be Notified
3	Bay A1R	B737-800.	Contact	To Be Notified
4	Bay A2	B737-800.	Contact	To Be Notified
5	Bay A3	B737-800.	Contact	To Be Notified
6	Bay A4	B747-400.	Contact	To Be Notified
7	Bay A4L	B737-800.	Contact	To Be Notified
8	Bay A4R	B737-800.	Contact	To Be Notified
9	Bay A5	B737-800.	Contact	To Be Notified
10	Bay A6	B747-400.	Contact	To Be Notified
11	Bay A6L	B737-800.	Contact	To Be Notified
12	Bay A6R	B737-800.	Contact	To Be Notified
13	Bay A7	B747-400.	Remote	To Be Notified
14	Bay A8	B747-400.	Remote	To Be Notified
15	Bay A9	B747-400.	Remote	To Be Notified
16	Bay B1	B737-800.	Contact	To Be Notified
17	Bay B2	ATR-72.	Remote	To Be Notified
18	Bay B3	B737-800.	Contact	To Be Notified
19	Bay B4	ATR-72.	Remote	To Be Notified
20	Bay B5	B737-800.	Contact	To Be Notified
21	Bay B6	ATR-72.	Remote	To Be Notified
22	Bay B7	B737-800.	Contact	To Be Notified
23	Bay B9	B747-400.	Remote	To Be Notified
24	Helicopter Stand B11A	Mi-17.	Remote	To Be Notified
25	Helicopter Stand Apron B11B	AS 355.	Remote	To Be Notified
26	Helicopter Stand B11C	Mi-17.	Remote	To Be Notified
27	Helicopter Stand B11D	AS 355.	Remote	To Be Notified

UPGRADING WORKS AT PENANG INTERNATIONAL AIRPORT **BAYAN LEPAS PULAU PINANG: CONTINUED**

4. LOCAL TRAFFIC REGULATIONS AND RESTRICTIONS

- 4.1 The pilot-in-command and aircraft marshallers shall be responsible for the safety of aircraft with respect to all other aircraft, vehicles, persons, and other obstructions on the apron during docking, engine start up, push back and taxiing.
- 4.2 *Temporary Bay* is an aircraft parking bay which is used throughout the duration of a specific phase in the construction sequence.
- 4.3 The *Temporary Bay* is positioned 98 feet (30 meters) away from its existing location, in the direction perpendicular to the length of the pier.
- 4.4 The *Temporary Bay* is applicable only to Code C aircraft.

5. WORK PHASES, SCHEDULES, AND PROGRAMS

- 5.1 The works schedule and program is divided into 6 phases. Refer to **10-8D - 10-8J** for details.

Phases	Schedules	Programs
Phase 1	Nov 2010 - Mar 2011	1) Closure of existing Bay 13 and 14 2) Operation of Temporary Bay B1, B3, B5, and B7. 3) Reopening of Temporary Bay B5 and B7 as new Bay B5 and B7.
Phase 2	Mar 2011 - May 2011	1) Reopening of Temporary Bay B3 and B1 as new Bay B3 and B1. 2) Closure of existing Bay 11 and 12. 3) Operation of Temporary Bay 11 and 12. 4) Reopening of Temporary Bay 12 as new Bay A1R.
Phase 3	May 2011 - Aug 2011	1) Reopening of existing Bay 11 as new Bay A1L and A1. 2) Closure of existing Bay 9 and 10. 3) Operation of Temporary Bay 9 and 10. 4) Reopening of Temporary Bay 10 as new Bay A2.
Phase 4	Aug 2011 - Oct 2011	1) Reopening of existing Bay 9 as new Bay A3. 2) Closure of existing Bay 7 and 8. 3) Operation of Temporary Bay 7 and 8. 4) Reopening of Temporary Bay 8 as new Bay A4R.
Phase 5	Oct 2011 - Dec 2011	1) Reopening of existing Bay 7 as new Bay A5. 2) Closure of existing Bay 3, 4, 5 and 6. 3) Operation of Temporary Bay 3, 4, 5 and 6. 4) Reopening of Temporary Bay 6 as new Bay A6L, A6, and A6R.
Phase 6	Dec 2011 - Jan 2012	1) Reopening of Temporary Bay 3, 4 and 5 as new Bay A7, A8, and A9. 2) Closure of existing Bay GA1A, GA1 and GA1B. 3) Reopening of Bay GA1A, GA1 and GA1B as new Bay B2, B4 and B6.

6. WORKING HOURS

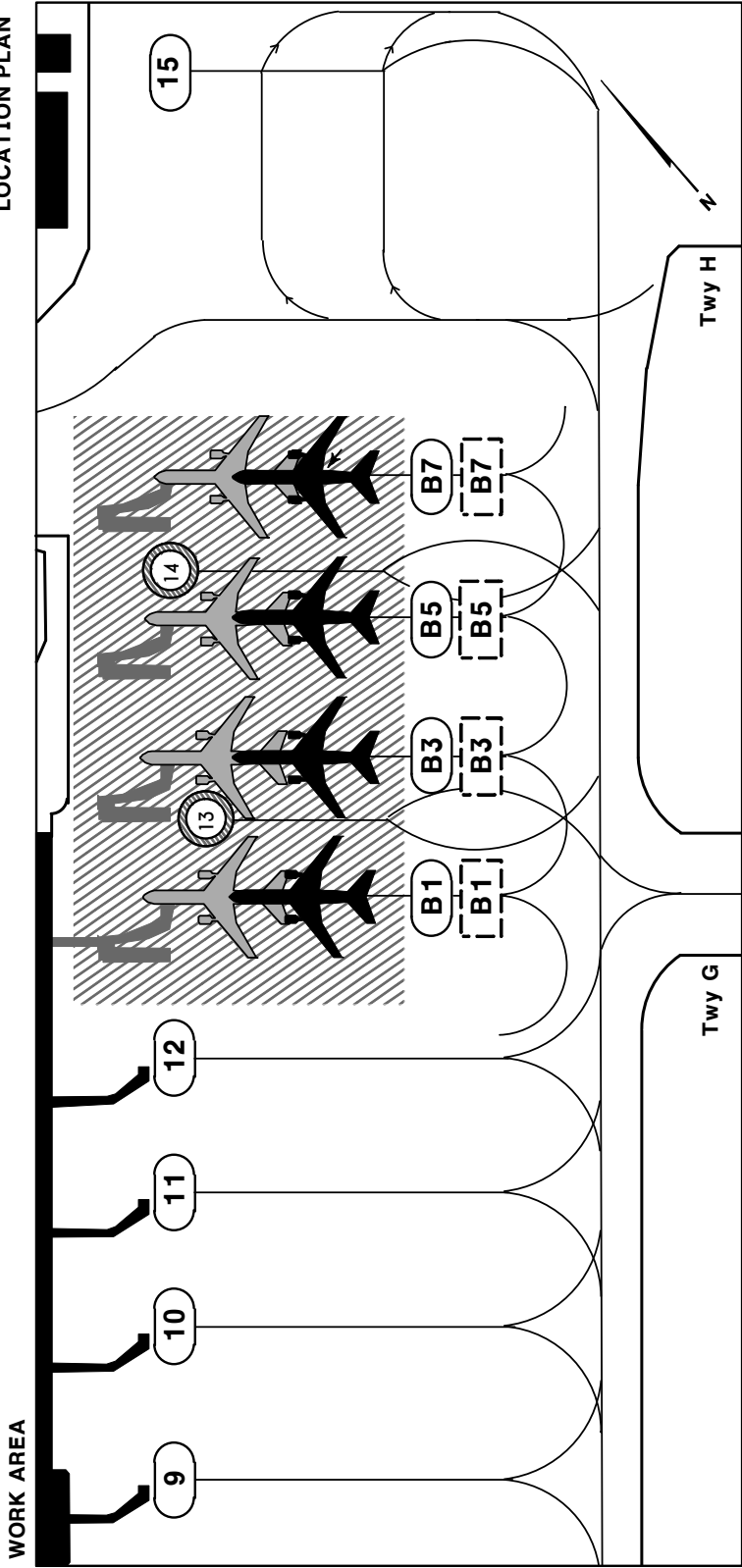
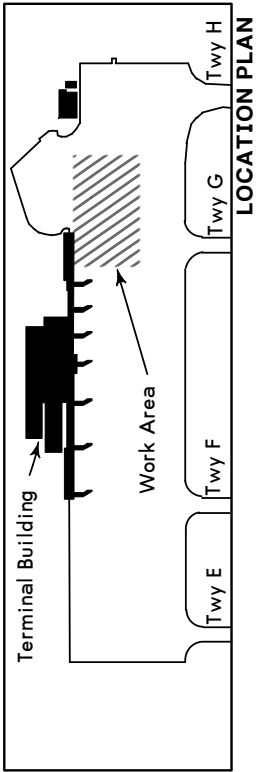
- 6.1 Works Hours: Daily (during Airport Operational Hours and Closure Hours)

7. IMPLEMENTATION

- 7.1 These charts (10-8B - 10-8K) will be applicable during the whole of rehabilitation.
- 7.2 Trigger NOTAM will be issued notifying the effective date of implementation.

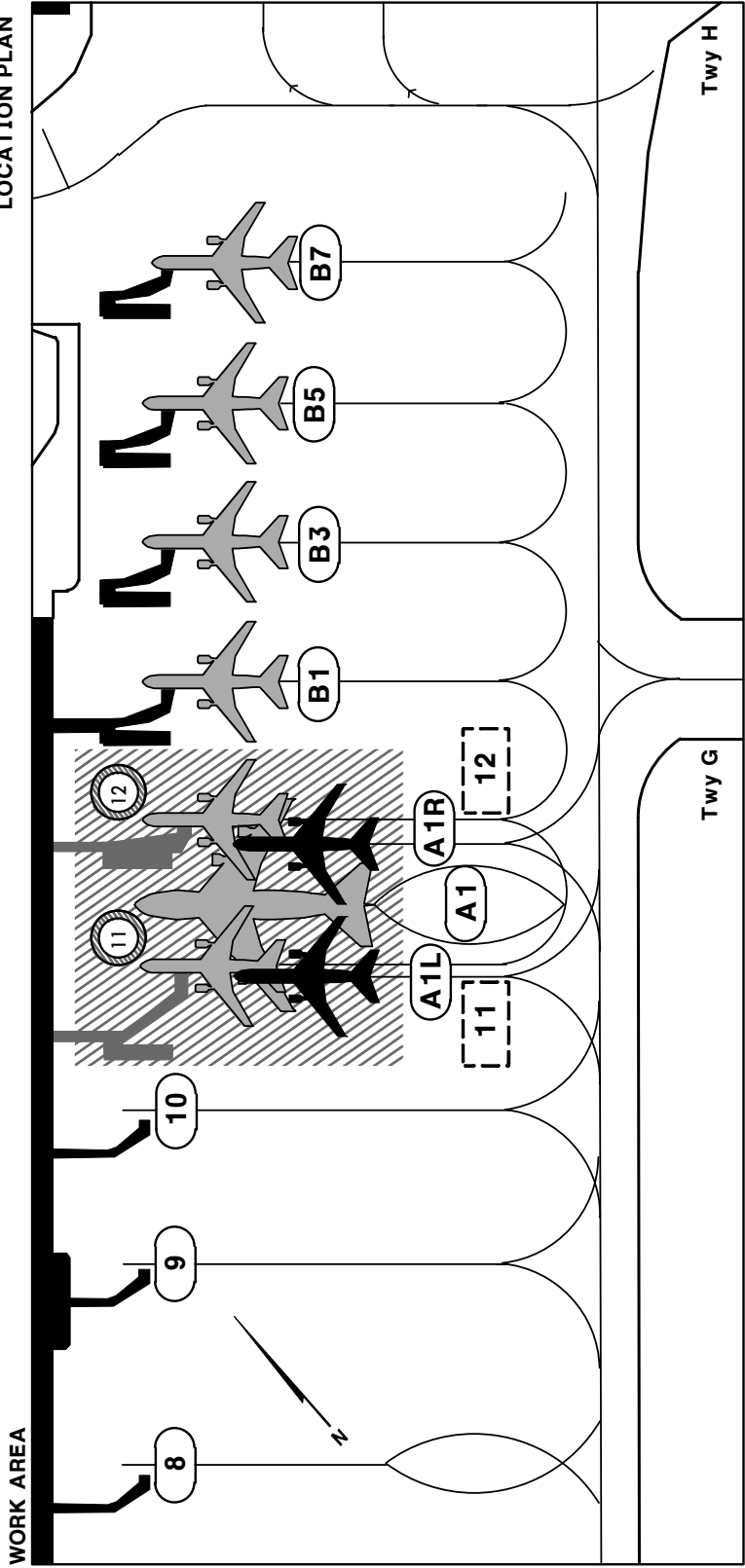
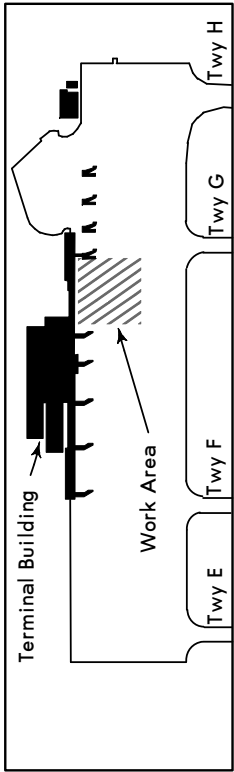
UPGRADING WORKS AT PENANG INTERNATIONAL AIRPORT
BAYAN LEPAS PULAU PINANG: CONTINUED
PHASE 1 - (NOVEMBER 2010 TO MARCH 2011)

LEGEND				
	CLOSED BAY		TEMPORARY BAY LOCATION	WORK AREA
	EXISTING OR NEW BAY NUMBER		NEW BAY LOCATION	
	TEMPORARY BAY NUMBER		NEW PASSENGER RAMP TO BE CONSTRUCTED	



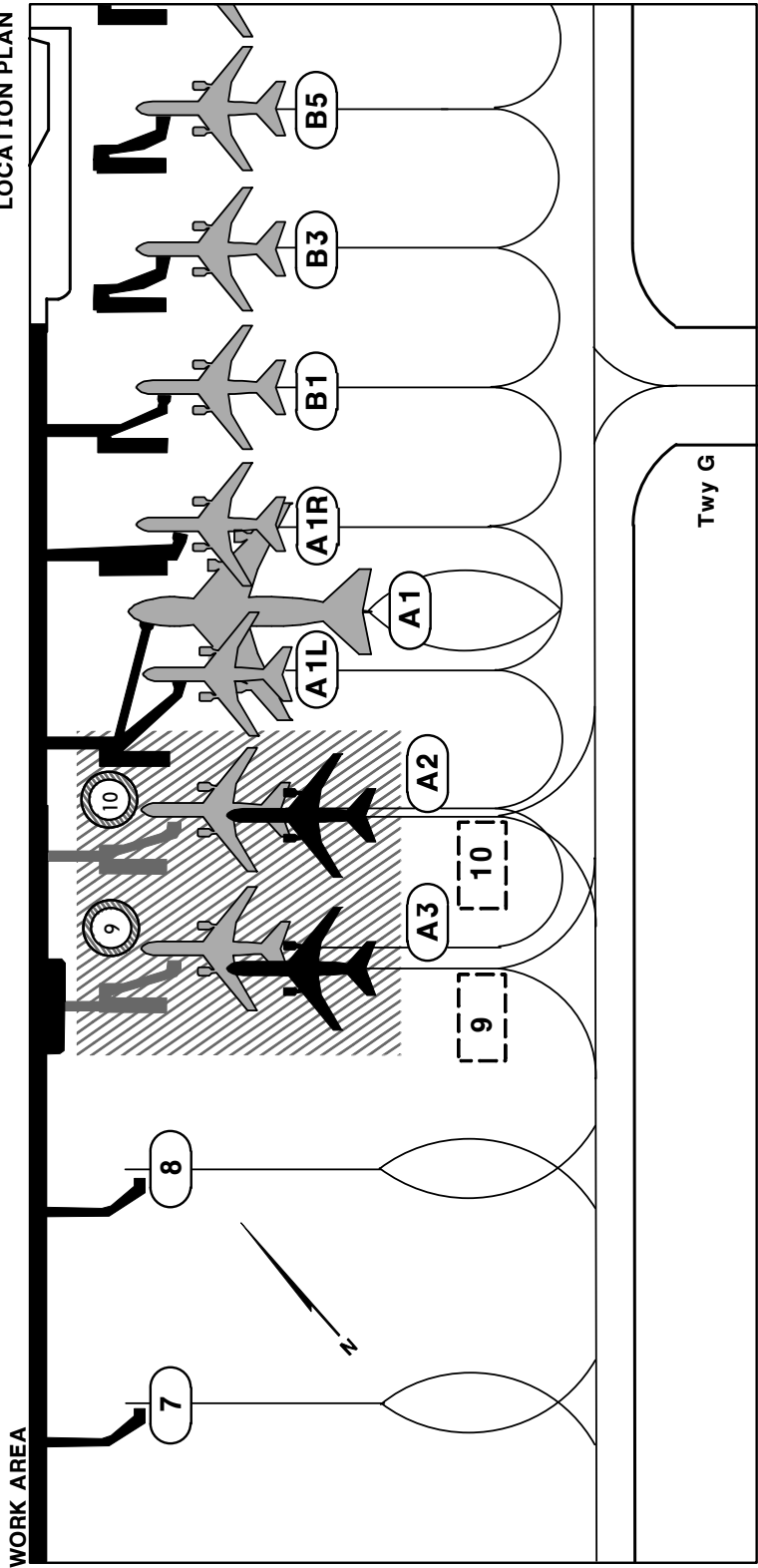
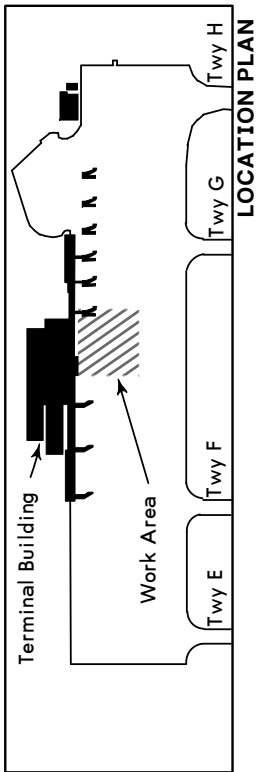
UPGRADING WORKS AT PENANG INTERNATIONAL AIRPORT
BAYAN LEPAS PULAU PINANG: CONTINUED
PHASE 2 - (MARCH 2011 TO MAY 2011)

LEGEND				
	CLOSED BAY		TEMPORARY BAY LOCATION	WORK AREA
	EXISTING OR NEW BAY NUMBER		NEW BAY LOCATION	
	TEMPORARY BAY NUMBER		NEW PASSENGER RAMP TO BE CONSTRUCTED	



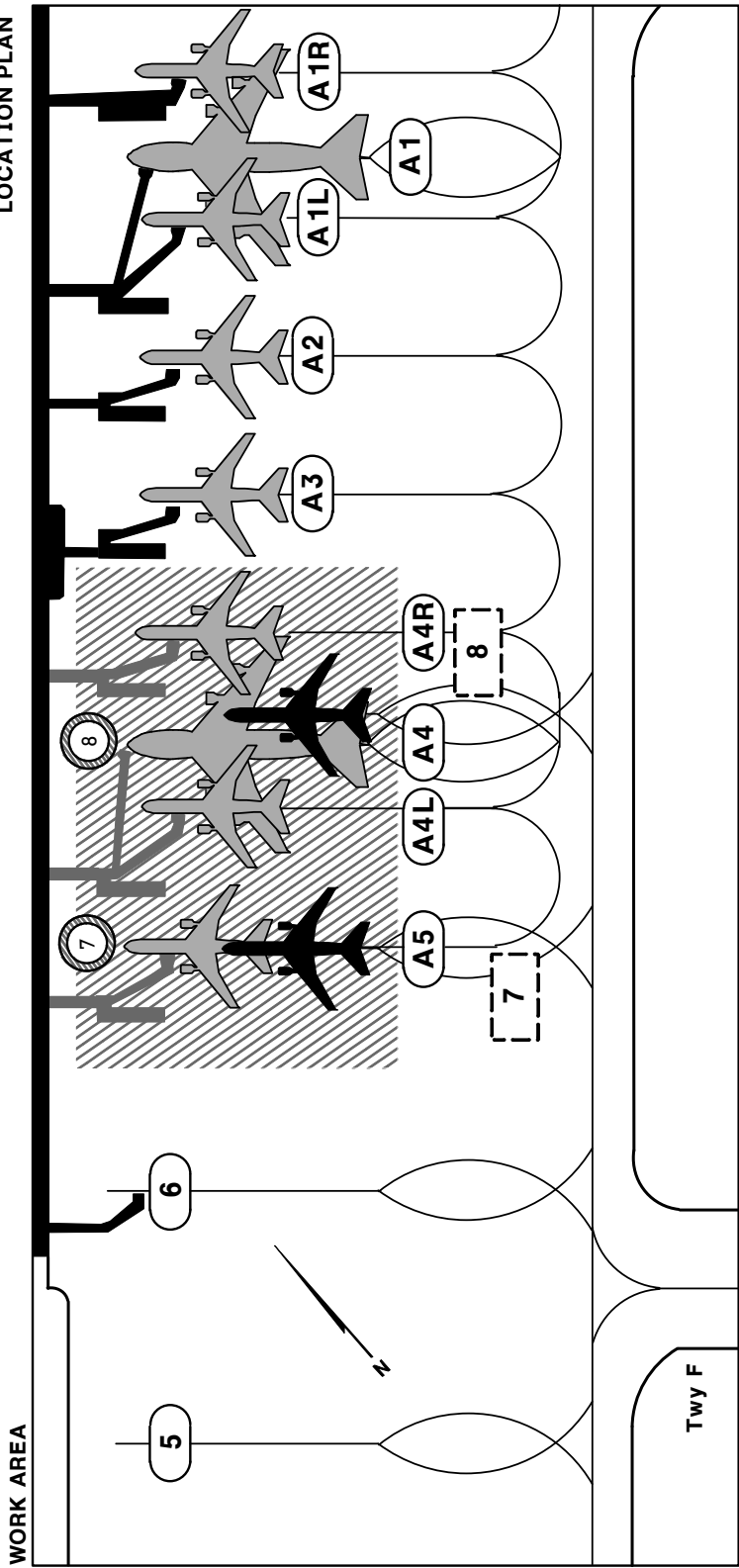
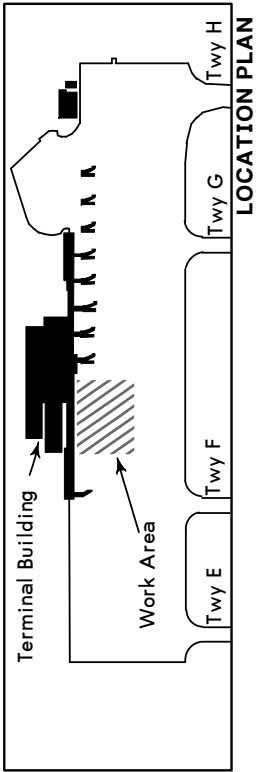
UPGRADING WORKS AT PENANG INTERNATIONAL AIRPORT
BAYAN LEPAS PULAU PINANG: CONTINUED
PHASE 3 - (MAY 2011 TO AUGUST 2011)

LEGEND				
	CLOSED BAY		TEMPORARY BAY LOCATION	WORK AREA
	EXISTING OR NEW BAY NUMBER		NEW BAY LOCATION	
	TEMPORARY BAY NUMBER		NEW PASSENGER RAMP TO BE CONSTRUCTED	



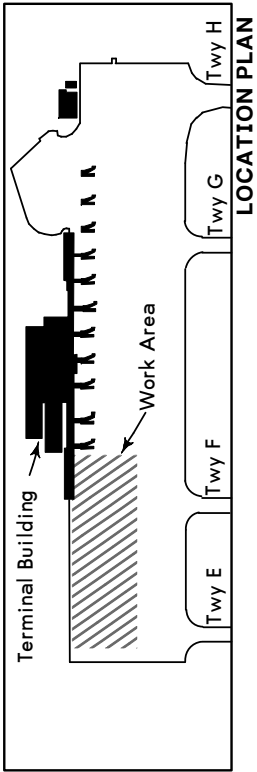
UPGRADING WORKS AT PENANG INTERNATIONAL AIRPORT
BAYAN LEPAS PULAU PINANG: CONTINUED
PHASE 4 - (AUGUST 2011 TO OCTOBER 2011)

LEGEND				
	CLOSED BAY		TEMPORARY BAY LOCATION	WORK AREA
	EXISTING OR NEW BAY NUMBER		NEW BAY LOCATION	
	TEMPORARY BAY NUMBER		NEW PASSENGER RAMP TO BE CONSTRUCTED	



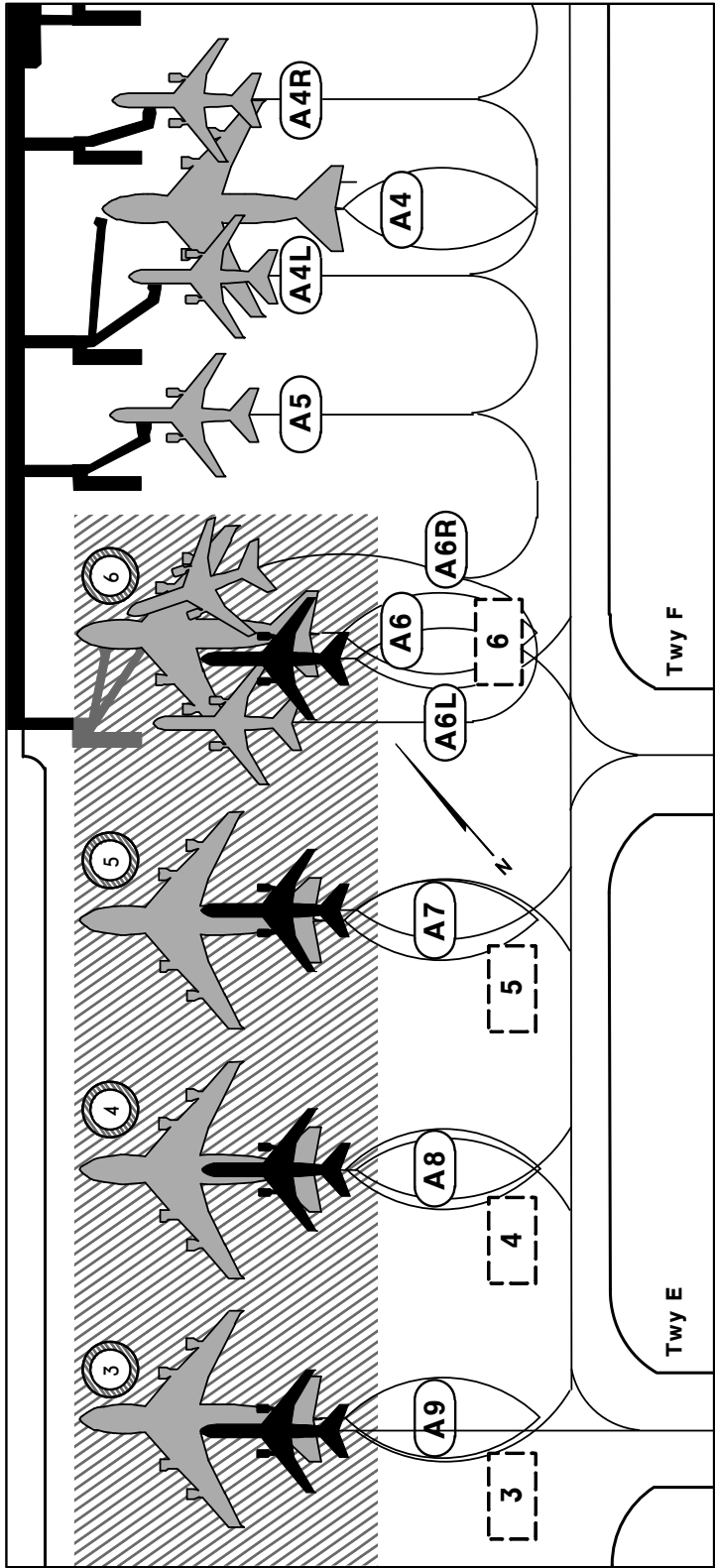
UPGRADING WORKS AT PENANG INTERNATIONAL AIRPORT
BAYAN LEPAS PULAU PINANG: CONTINUED
PHASE 5 - (OCTOBER 2011 TO DECEMBER 2011)

LEGEND				
	CLOSED BAY		TEMPORARY BAY LOCATION	WORK AREA
	NEW BAY NUMBER		NEW BAY LOCATION	
	TEMPORARY BAY NUMBER		NEW PASSENGER RAMP TO BE CONSTRUCTED	



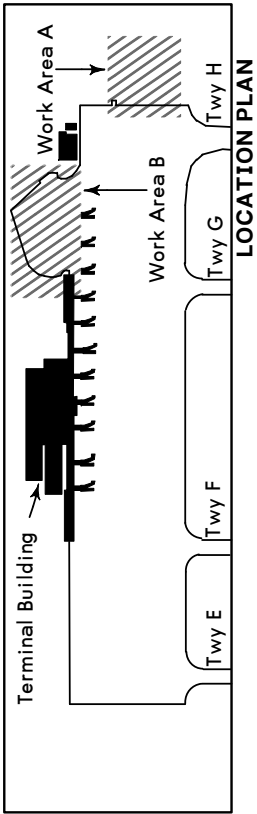
LOCATION PLAN

WORK AREA

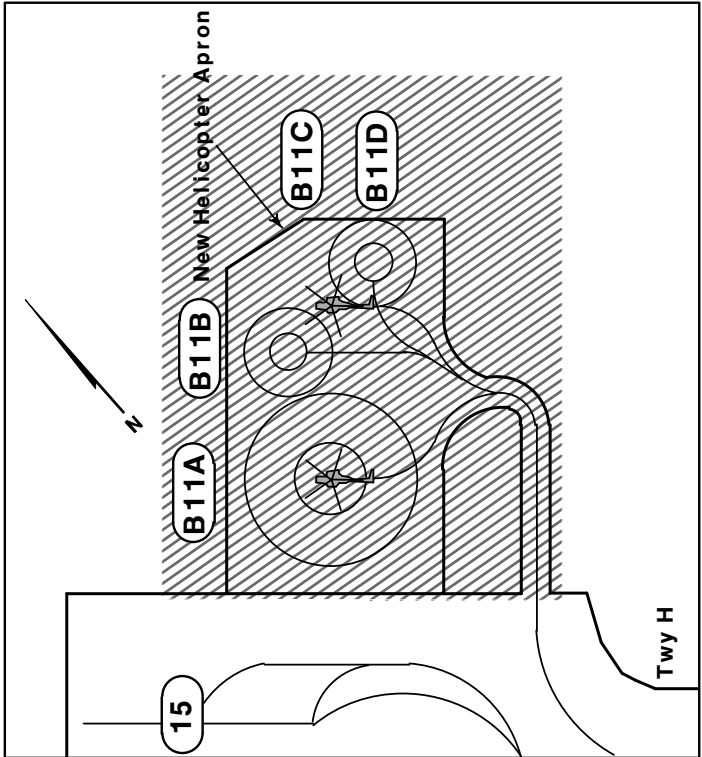


UPGRADING WORKS AT PENANG INTERNATIONAL AIRPORT
BAYAN LEPAS PULAU PINANG: CONTINUED
PHASE 6 - (DECEMBER 2011 TO JANUARY 2012)

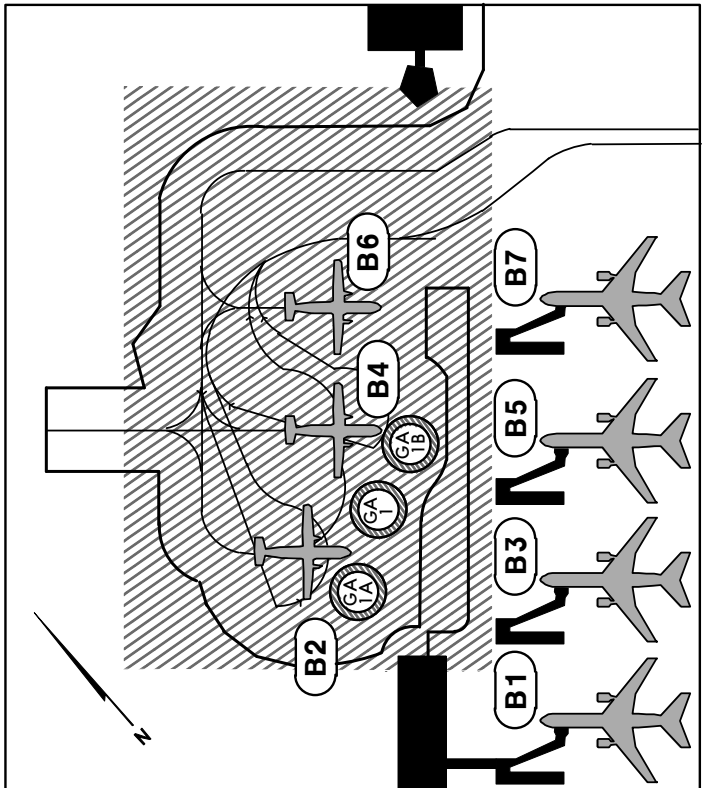
LEGEND			
	CLOSED BAY	WORK AREA	
	EXISTING OR NEW BAY NUMBER		NEW BAY LOCATION



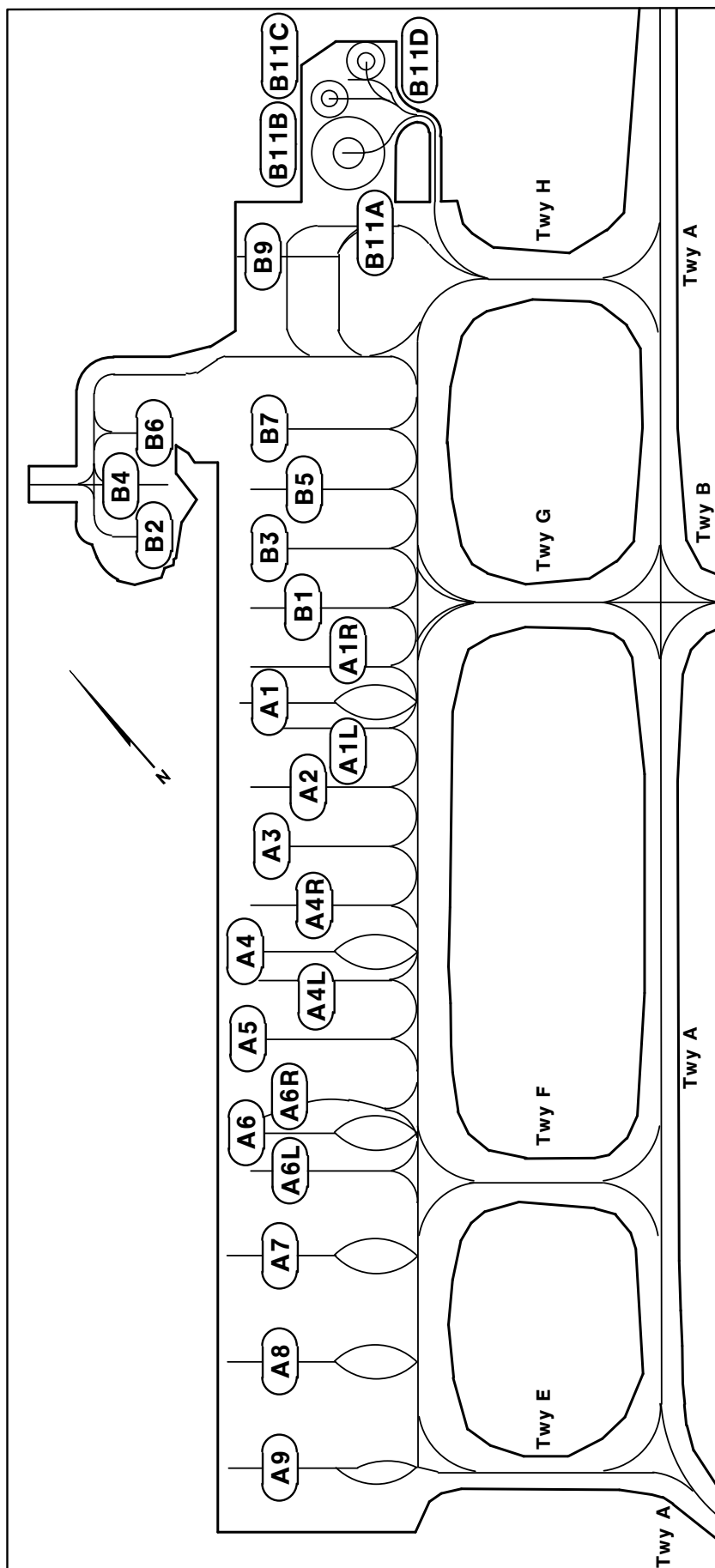
WORK AREA A



WORK AREA B



UPGRADING WORKS AT PENANG INTERNATIONAL AIRPORT
BAYAN LEPAS PULAU PINANG: CONTINUED
NEW APRON LAYOUT



WMKP/PEN

Apt Elev 11'

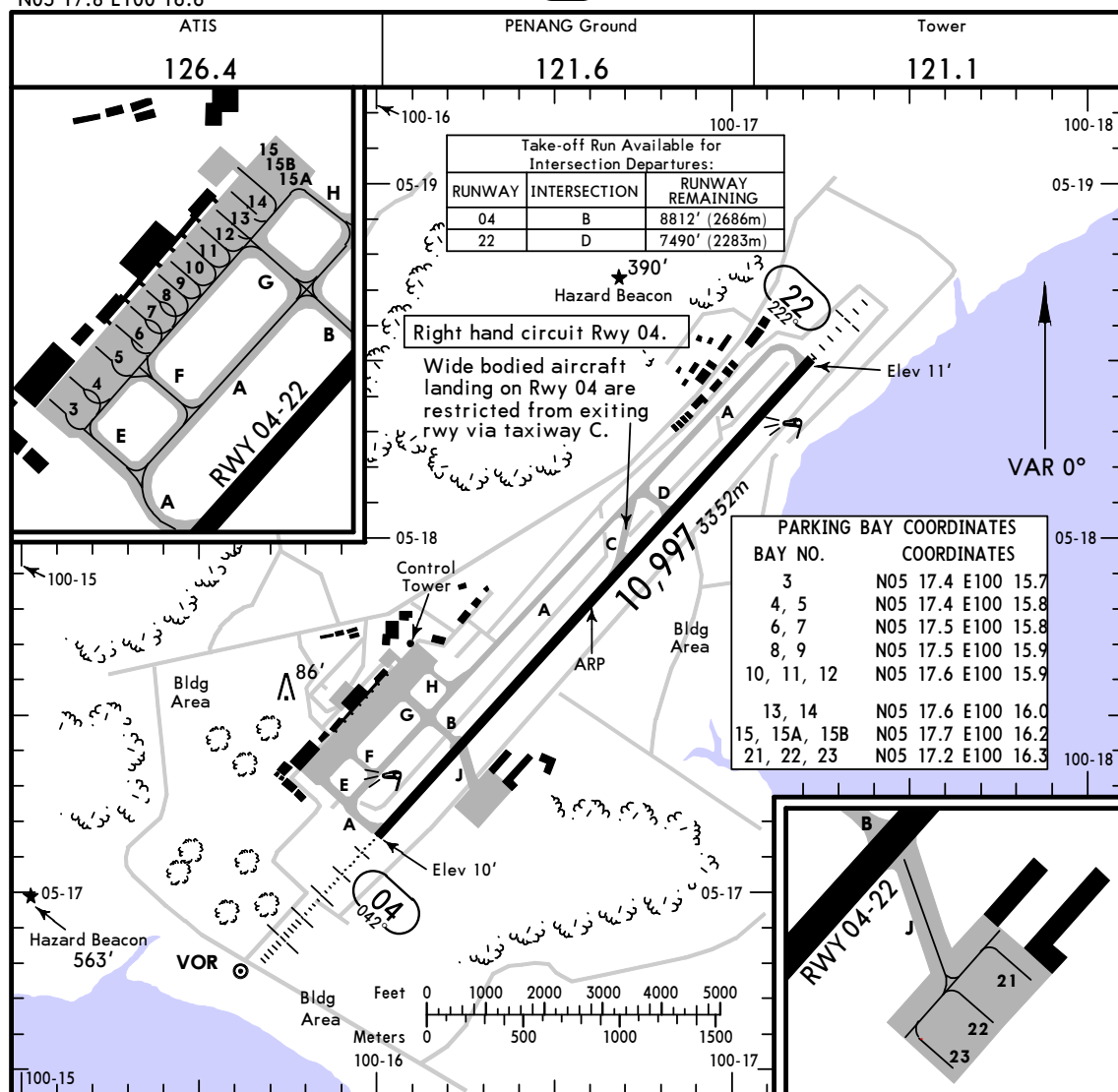
N05 17.8 E100 16.6

JEPPESSEN

26 NOV 10 10-9

PENANG I, MALAYSIA

PENANG INTL



RLG AUTOMATED GUIDE-IN SYSTEM

The RLG Automated Guide-in System is installed at aircraft parking bays 6 thru 13 at Penang International. The system enables the pilot seated on the left of the cockpit to position the aircraft on the correct stand centerline and stop position.

The following types of aircraft are programmed into the system at the coinciding gates:

Bay 6 - B727, B737, B757, B767, B747, B777, A300, A310, A320, A330, DC-10, L1011, MD-11

Bay 7 - B727, B737, B757, B767, B777, A300, A310, A320, A330, DC-10, L1011, MD-11

Bay 8 - B727, B737, B757, B767, B747, B777, A300, A310, A320, A330, DC-10, L1011, MD-11

Bay 9 - B727, B737, B757, A320

Bay 10 - B727, B737

Bay 11 - B727, B737

Bay 12 - B727, B737

Bay 13 - B727, B737, B757, B767, B747, B777, A300, A310, A320, A330, DC-10, L1011, MD-11

DESCRIPTION OF SYSTEM

The RLG System consists of a metal enclosure housing attached to the terminal building or other support precisely lined up perpendicular to and .533m (21 inches) left of the centerline. The upper part of the housing contains digital aircraft indicators and indicates closing information, in meters, from ten (10) meters to stop, and "STOP" when the aircraft reaches the correct stopping position. The three sets of lamps below the aircraft indicator provide additional stopping guidance (see Figure 2). As each color is activated, the other colors automatically turn off.

The bottom of the enclosure housing contains three (3) neon tubes; a green tube flanked by a red tube on each side. The green tube is encased in baffles, and the red tubes are behind flanges so as not to be visible from straight-on. When the pilot is taxiing in and can see only the green tube, the aircraft is within three inches of the taxi guidance centerline. If a line of red is visible on either side, the aircraft is off-line in that direction (see Figure 1).

The laser scanner/microprocessor housing located on the aircraft centerline is to receive landing information and automatically preset trucking track.

PILOT OPERATING INSTRUCTIONS

Aircraft Type Identification -

Check aircraft indicator light to be sure ground crew has set the system for your type of aircraft. If the aircraft indicator light is set correctly and the azimuth lights are illuminated, enter the gate.

Azimuth Guidance - Line up so that the green vertical azimuth tube on the bottom part of the housing is visible. If a line of red can be seen on either side of the green, the aircraft is off centerline in that direction (see Figure 1).

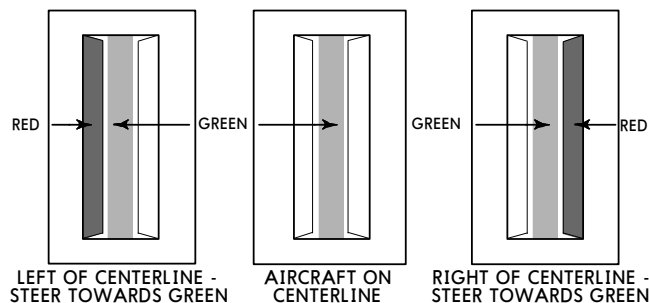


Figure 1

NOTE: System is designed for interpretation from the left-hand pilot seat only.

RLG AUTOMATED GUIDE-IN CONTD

Stopping Guidance

Look at the round incandescent lamps on the top half of the housing and interpret as shown in Figure 2. The round green lamps will illuminate when the laser scanner has acquired the aircraft.

The round amber lights will illuminate and the aircraft indicator will display "10M" when the aircraft is 10 meters from the stop position. The amber lights will continue to illuminate while the aircraft indicator counts down from 10 meters to 1 meter in 1 meter increments.

The amber lights will extinguish and the round red lights will illuminate simultaneously when the aircraft is in the correct stop position.

The red lights will illuminate and "STOP" will be displayed when the aircraft reaches stop position.

If any light fails, the entire system will automatically shut off and the aircraft will be towed or marshalled into the bay. The ground crew has back-up manual controls which will preempt automatic controls should an emergency stop be necessary prior to reaching stop position, or to complete guide-in procedures manually should the apron sensors become inoperative.

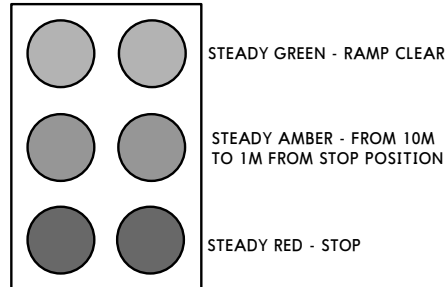
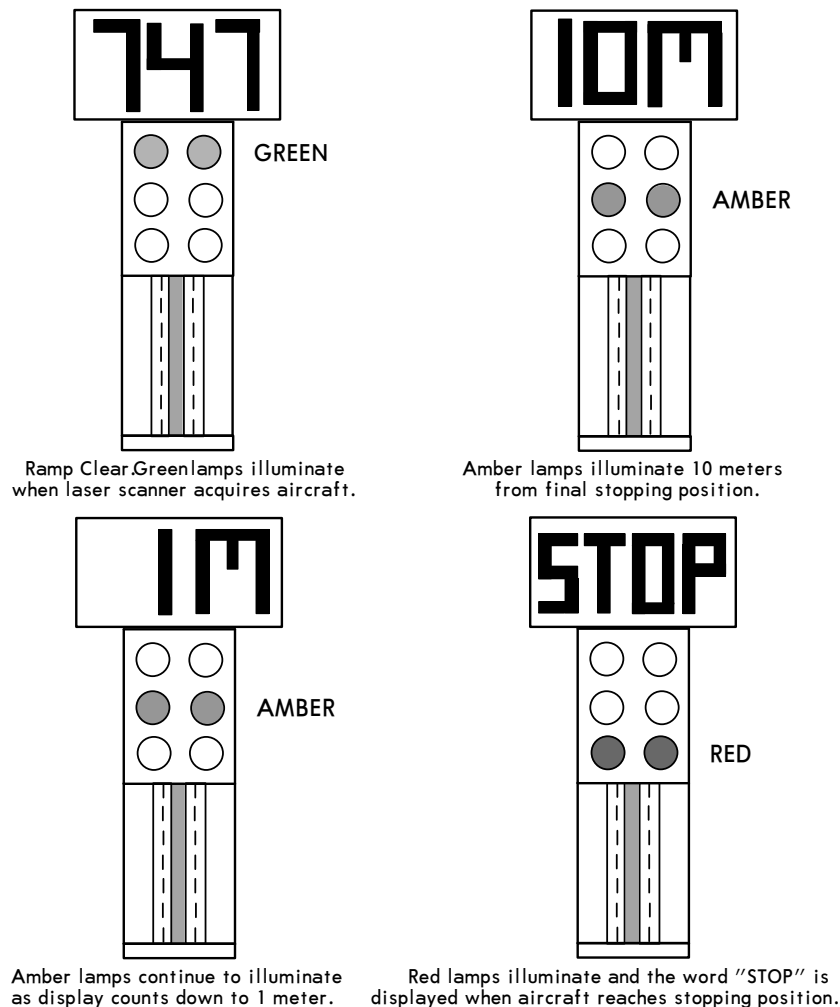


Figure 2

Diagram of the RLG Automated Guide-In System



WMKP/PEN
PENANG INTL

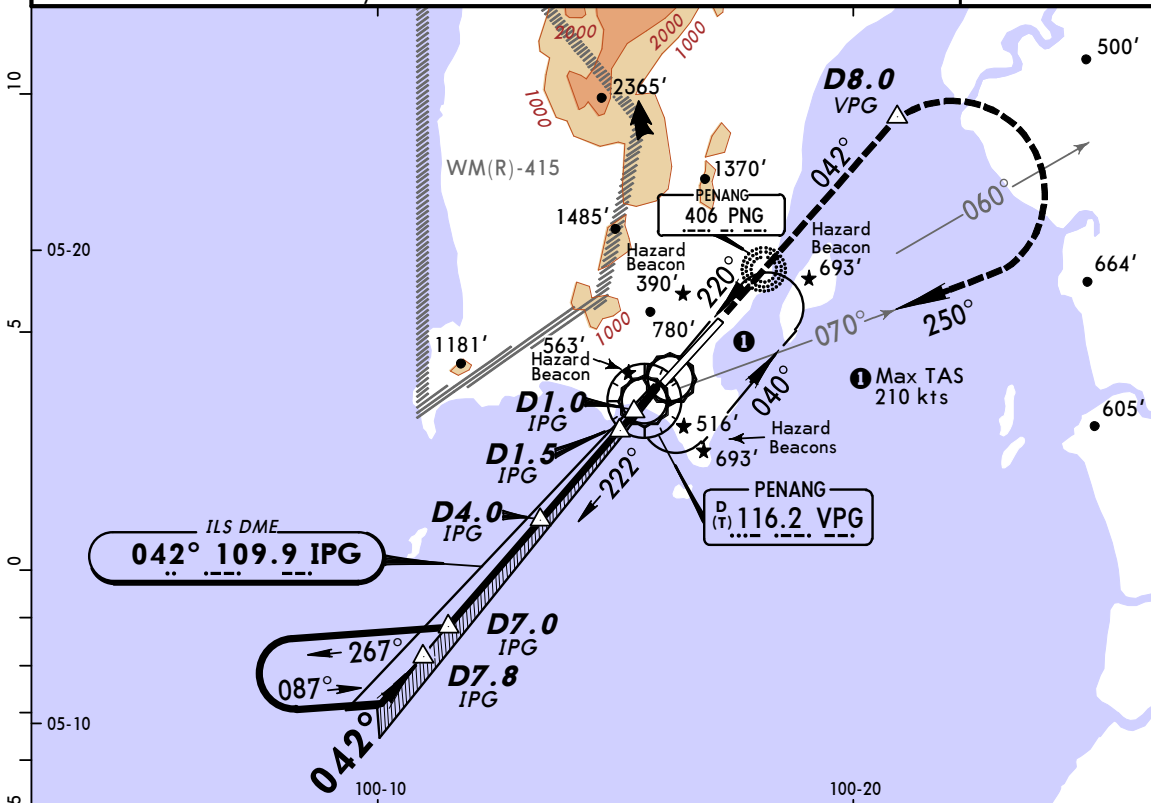
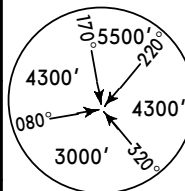
JEPPESEN
10 OCT 03 (11-1)

PENANG I, MALAYSIA
ILS (LOC DME) Rwy 04

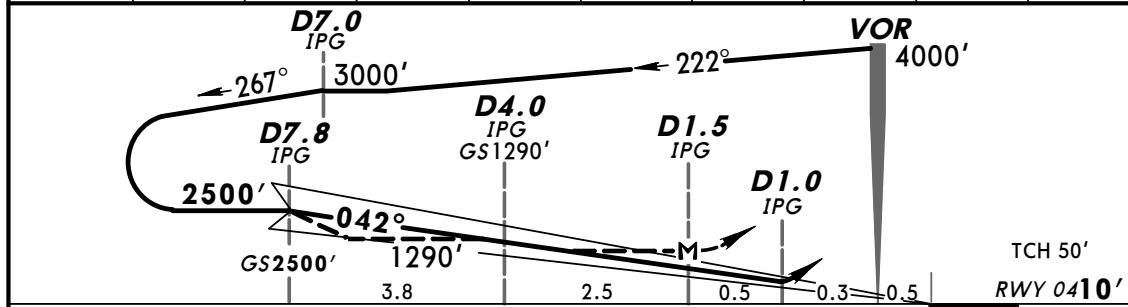
BRIEFING STRIP™

ATIS 126.4		PENANG Tower 121.1		Ground 121.6	
LOC IPG 109.9	Final Apch Crs 042°	GS D7.8 2500' (2490')	ILS DA(H) 300' (290')	Apt Elev 11'	RWY 04 10'
MISSED APCH: Climb on 042°, cross D8.0 VPG at 1700' or above, turn RIGHT, intercept inbound R-070 VPG VOR heading 250° to return to VPG VOR, hold at 4000' or as directed by ATC.					
Alt Set: hPa		Rwy Elev: 0 hPa		Trans level: FL 130	
1. CAUTION: Back course not flyable.				Trans alt: 11000'	

MSA VPG VOR



LOC	IPG DME	7.0	6.0	5.0	4.0	3.0	2.0	1.5	1.0
(GS out)	ALTITUDE	2240'	1920'	1610'	1290'	970'	650'	490'	330'



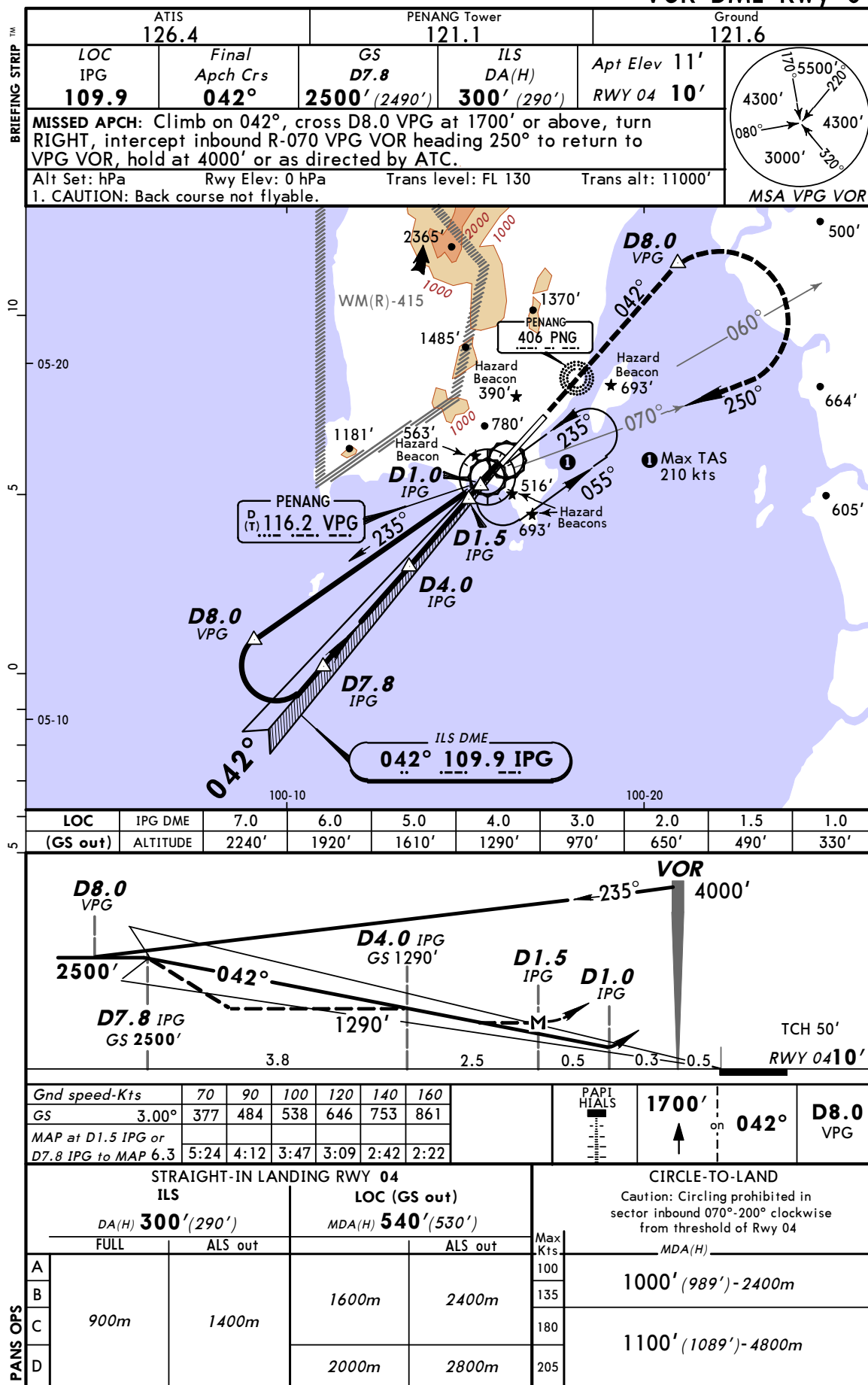
Gnd speed-Kts	70	90	100	120	140	160	PAPI		1700'	on 042°	D8.0 VPG
GS	3.00°	377	484	538	646	753	HIALS				
MAP at D1.5 IPG or											
D7.8 IPG to MAP	6.3	5:24	4:12	3:47	3:09	2:42					

STRAIGHT-IN LANDING RWY 04				CIRCLE-TO-LAND			
ILS		LOC (GS out)		Caution: Circling prohibited in sector inbound 070°-200° clockwise from threshold of Rwy 04			
DA(H) 300' (290')		MDA(H) 540' (530')		MDA(H)			
FULL	ALS out		ALS out	Max Kts.			
A				100	1000' (989') - 2400m		
B				135			
C	900m	1400m		180	1100' (1089') - 4800m		
D				205			
		2000m	2800m				

CHANGES: Procedure.

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Print Date: 01 May 2012



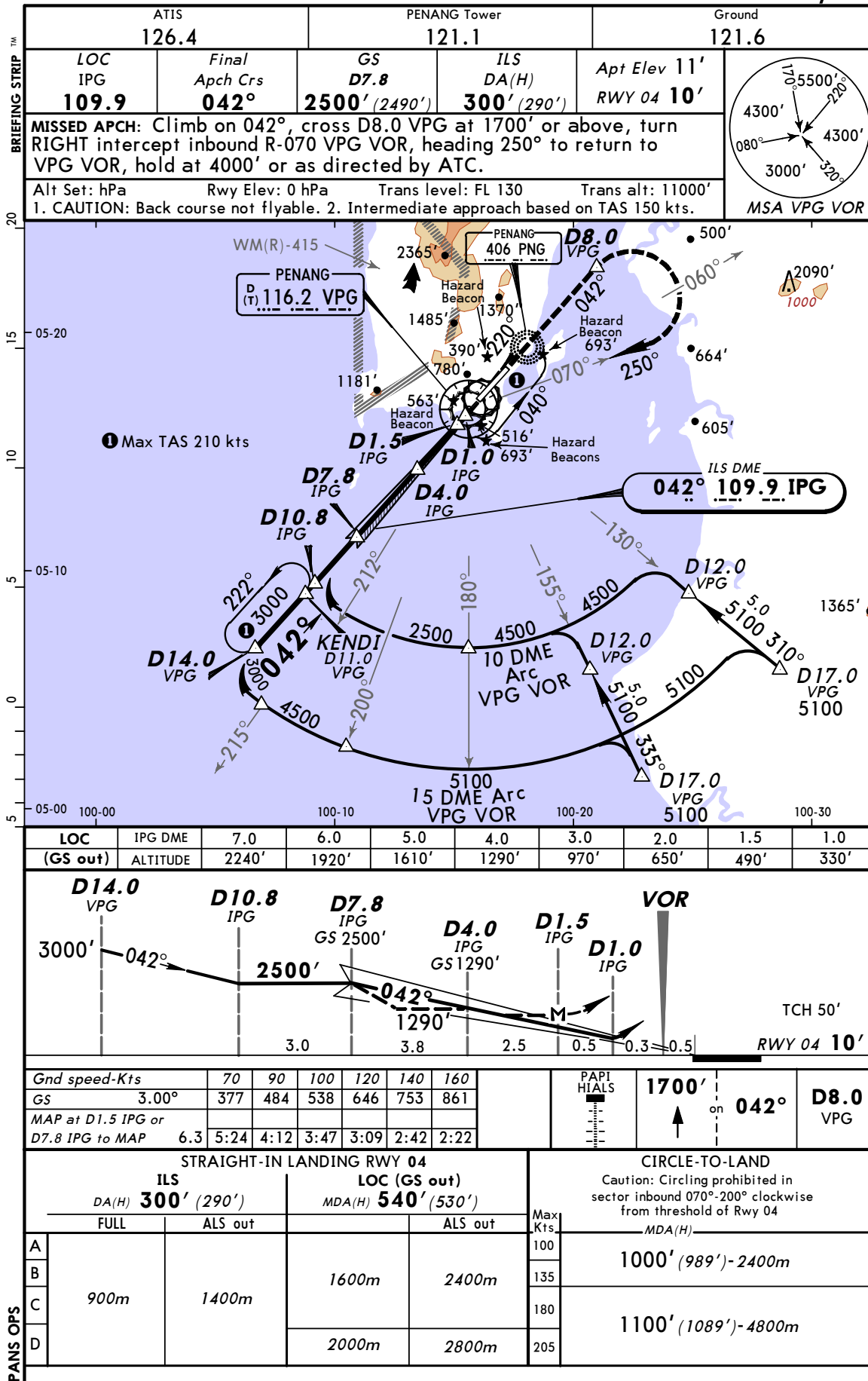
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JEPPesen

PENANG I, MALAYSIA

PENANG INTL

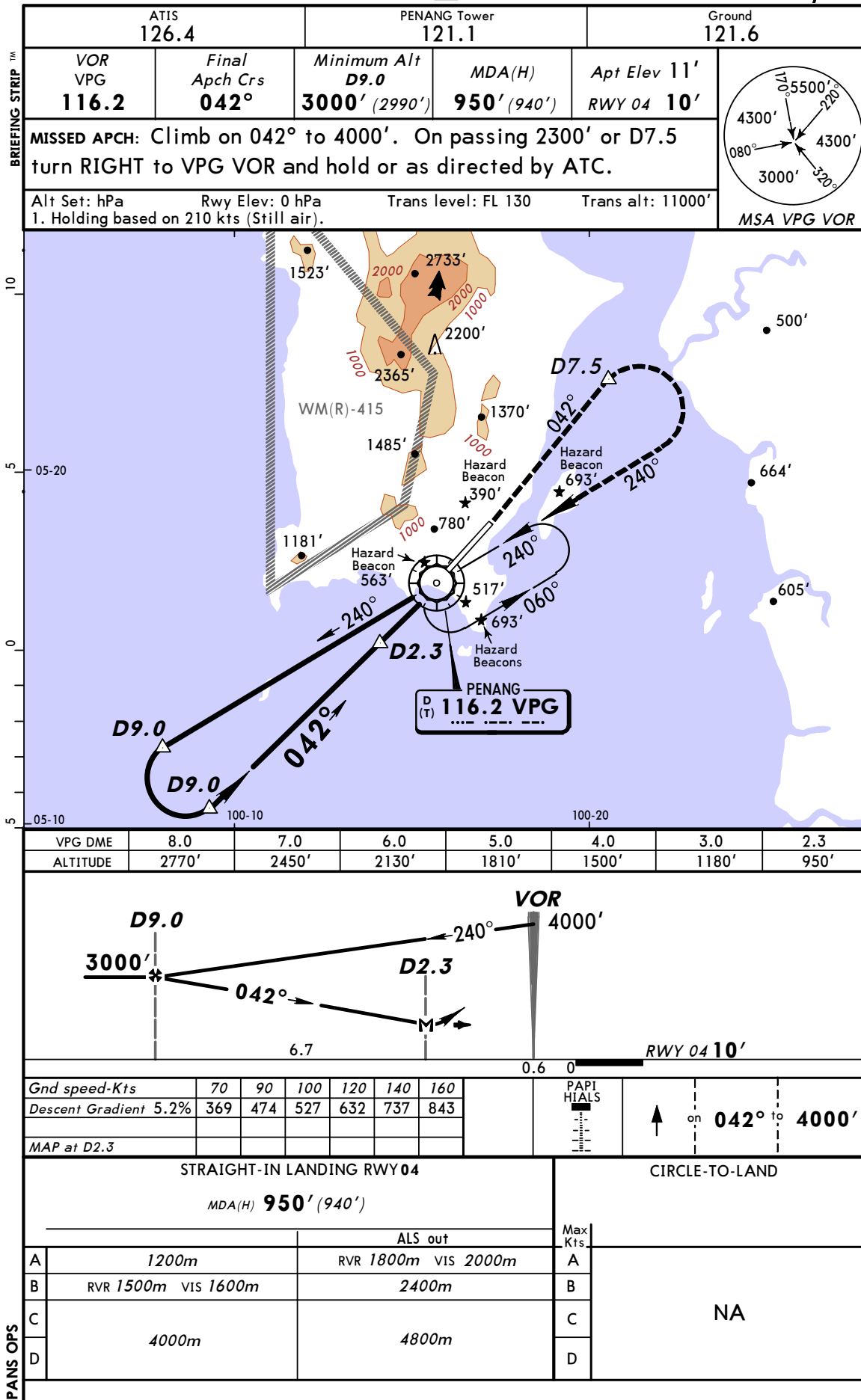
10 OCT 03 (11-3)

ILS (LOC DME) &
VOR DME Arc Rwy 04

WMKP/PEN
PENANG INTL

JEPPESEN
21 OCT 05 (13-1)

PENANG I, MALAYSIA
VOR DME Rwy 04

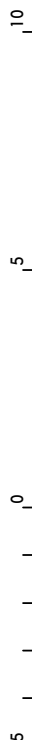




CHANGES: Procedure, circling minimums.

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PENANG I, MALAYSIA
VOR DME Rwy 22



<i>Gnd speed-Kts</i>	70	90	100	120	140	160			 on 222° to 4000'
<i>Descent Gradient 5.2%</i>	369	474	527	632	737	843			
<i>MAP at D5.6</i>									

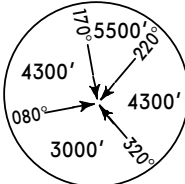
PANS OPS

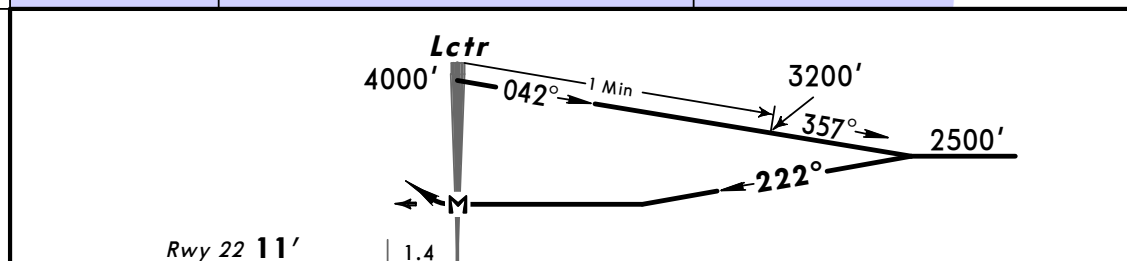
Print Date: 01 May 2012

WMKP/PEN
PENANG INTL

JEPPESEN
13 APR 12 (16-1) CAT C & D

PENANG I, MALAYSIA
LOCATOR Rwy 22

BRIEFING STRIP™		ATIS 126.4	PENANG Tower 121.1	Ground 121.6
Lctr PNG 406	Final Apch Crs 222°	No FAF	MDA(H) 1000' (989')	Apt Elev 11' Rwy 22 11'
<p>MISSED APCH: Climb on 222° to 1900' or above, turn LEFT and return to holding pattern or as directed by ATC.</p> <p>Alt Set: hPa Rwy Elev: 0 hPa Trans level: FL 130 Trans alt: 11000'</p> <p>1. Based on TAS 225 Kts (still air) for Cat C & D acft only.</p>				
 <p>MSA PNG Lctr</p>				



Gnd speed-Kts	70	90	100	120	140	160
Descent Gradient 4.7%	333	428	476	571	666	762
MAP at Lctr						

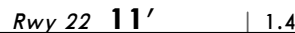
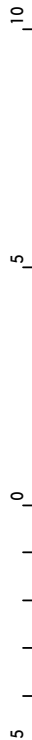
STRAIGHT-IN LANDING RWY 22			CIRCLE-TO-LAND		
MDA(H) 1000' (989')			CAUTION: Circling prohibited in sector inbound 070°-200° clockwise from threshold Rwy 22.		
ALS out			MDA(H)		
C	4800m		Max Kts	1100' (1089') - 4800m	
D			180		
			205		

CHANGES: Chart reindexed.

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PENANG I, MALAYSIA
A & B LOCATOR Rwy 22



PAPISALS



Diagram illustrating the structure of PAPISALS (Polymerized Aqueous Phase Interfacial Surface Layer) showing a central core and multiple layers of polymer chains.

PANS OPS

Print Date: 01 May 2012

