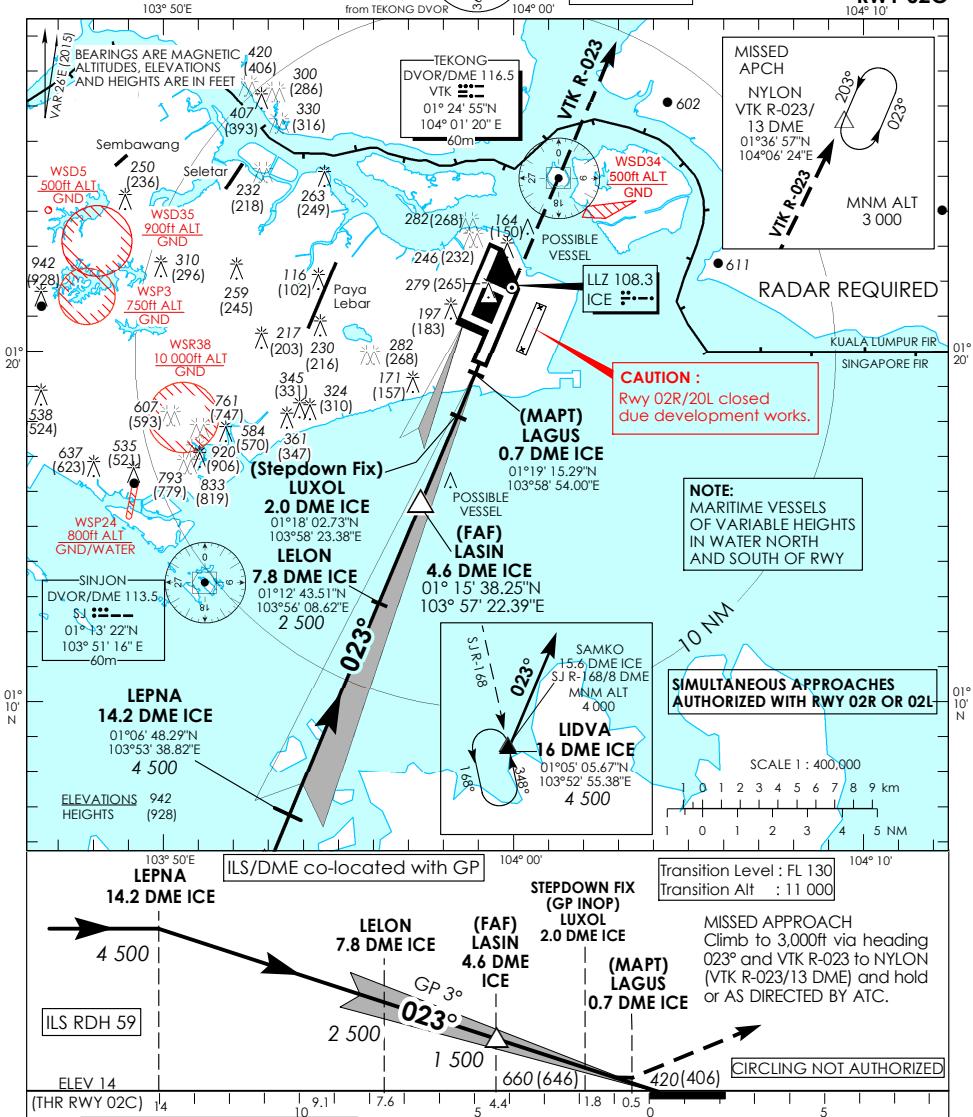


INSTRUMENT APPROACH CHART

AERODROME ELEV 22ft
HEIGHT RELATED TO
THR RWY 02C - ELEV 14ft

D-ATIS	AP ID	WSSS
APP	128.6	
	120.3	
TWR	119.3	
	118.6	
	118.25	

SINGAPORE/
SINGAPORE CHANGI
ICE ILS/DME
RWY 02C



Timing Not Authorized When GP INOP		Nautical Miles from RWY 02C				
		OCA (OCH)				
Category of Aircraft		A	B	C	D	D _L
Straight-in	CAT I ILS	170 (156)	180 (166)	196 (182)	209 (195)	212 (198)
	GP INOP (with stepdown fix)			420 (406)		
	GP INOP (without stepdown fix)			660 (646)		

Distance	4 DME		3 DME		
Altitude (Height)	1290 (1276)		970 (956)		
Speed	knots	70	120	150	185
FAF - MAPT 3.9nm	min : s*	3 : 21	1 : 57	1 : 34	1 : 16
Rate of descent/GS	ft/min	370	635	795	980

INSTRUMENT APPROACH CHART

AERODROME ELEV 22ft

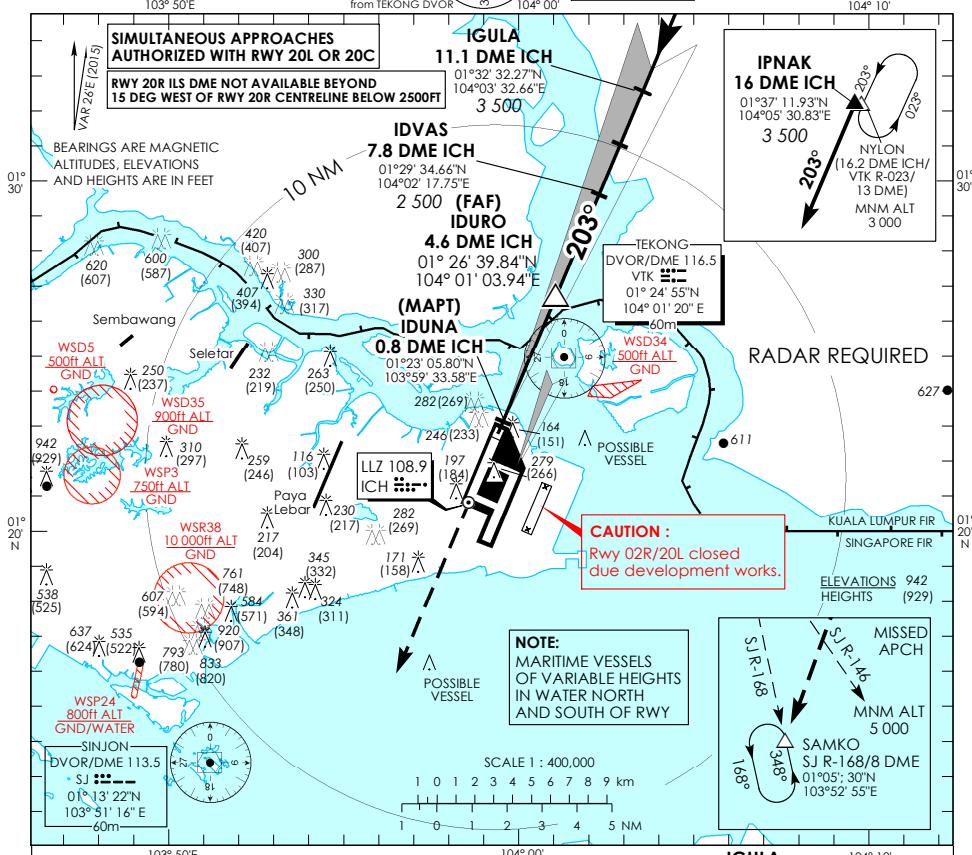
HEIGHT RELATED TO
DTHR RWY 20R - ELEV 13ft

from T

360 104° 00'

D-ATIS	AP ID	WSS
	128.6	
APP	120.3	
	119.3	
TWR	118.6	
	118.25	

SINGAPORE/
SINGAPORE CHANGI
ICH ILS/DME
RWY 20R

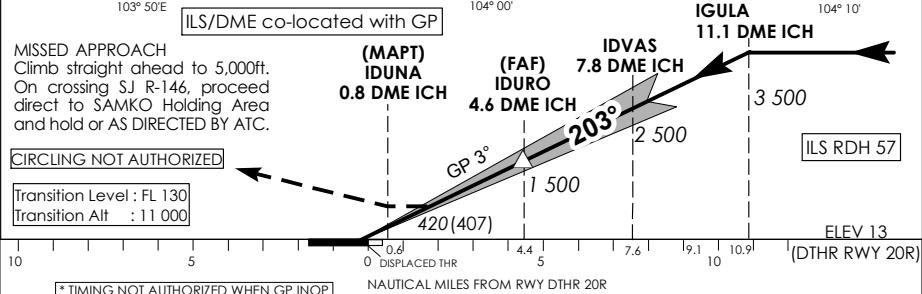


MISSED APPROACH

Climb straight ahead to 5,000ft.
On crossing SJ R-146, proceed
direct to SAMKO Holding Area
and hold or AS DIRECTED BY ATC.

CIRCULATING NOT AUTHORIZED

Transition Level : FL 130

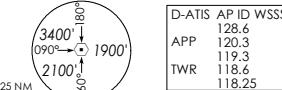


* TIMING NOT AUTHORIZED WHEN GP INOP

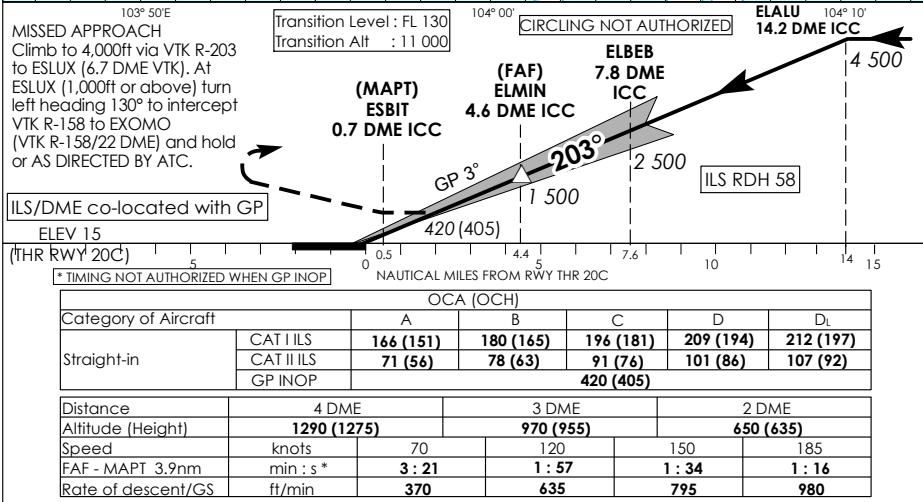
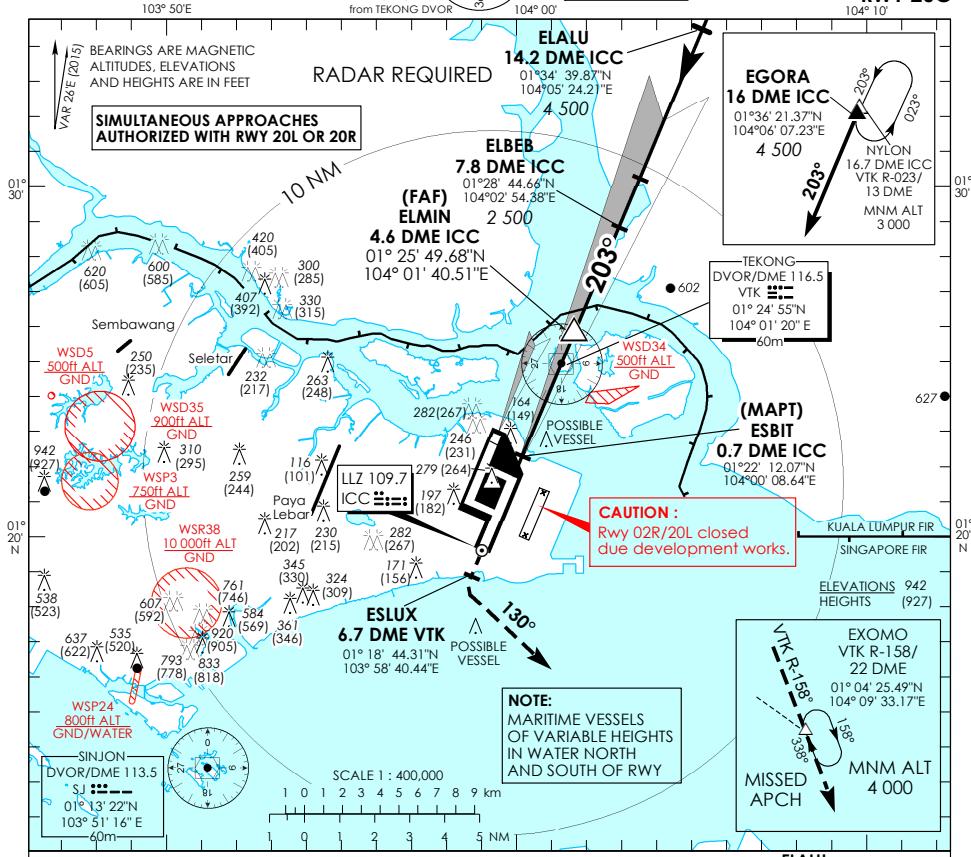
OCA (OCH)					
Category of Aircraft		A	B	C	D
Straight-in	CAT I ILS	152 (139)	159 (146)	179 (166)	192 (179)
	GP INOP	420 (407)			
Distance	4 DME		3 DME		2 DME
Altitude (Height)	1290 (1277)		970 (957)		650 (637)
Speed	knots	70	120	150	185
FAF - MAPT 3.9nm	min : s *	3 : 21	1 : 57	1 : 34	1 : 16
Rate of descent/GS	ft/min	370	635	795	980

**INSTRUMENT
APPROACH
CHART**

AERODROME ELEV 22ft
HEIGHT RELATED TO
THR RWY 20C - ELEV 15ft

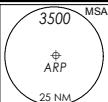


**SINGAPORE/
SINGAPORE CHANGI
ICC ILS/DME
RWY 20C**



INSTRUMENT APPROACH CHART

AERODROME ELEV 22ft
HEIGHT RELATED TO
THR RWY 02C - ELEV 14ft



D-ATIS	AP ID	WSSS
APP	128.6	
	120.3	
	119.3	
TWR	118.6	
	118.25	

SINGAPORE/
SINGAPORE CHANGI
RNAV (GNSS) RWY 02C

Category of Aircraft	A	B	C	D
LNAV	2.5%	490 (480)	OCA (OCH)	
LNAV without SDF	2.5%	890 (880)	OCA (OCH)	
LNAV/VNAV	2.5%	360 (350)	OCA (OCH)	

Fix	SAMKO	KIMER	KASPO	KAKSA	RW02C	NYLON
Altitude (Height)	4000 (3986)	2000 (1986)	1600 (1586)	990 (976)	490 (476)	3000 (2986)
Speed	knots	80	100	120	140	160
FAF - MAPT 5nm	min : s	3 : 45	3 : 00	2 : 30	2 : 09	1 : 53
Rate of descent/GS	ft/min	425	531	637	743	849
						955

**STANDARD ARRIVAL CHART
RNAV (GNSS) -
INSTRUMENT (STAR)**

ACC 133.25
APP 124.6 / 120.3
ARR 119.3
TWR 118.6 / 118.25

TRANSITION ALTITUDE
11 000ft

D-ATIS AP ID-WSSS
128.6

**SINGAPORE/Singapore Changi
RWY 02L/C**
**ARAMA ONE ALPHA ARRIVAL
ARAMA 1A**

ELEV, ALT IN FEET
BEARINGS, TRACKS AND
RADIALS ARE MAGNETIC
VAR 26°E (2015)

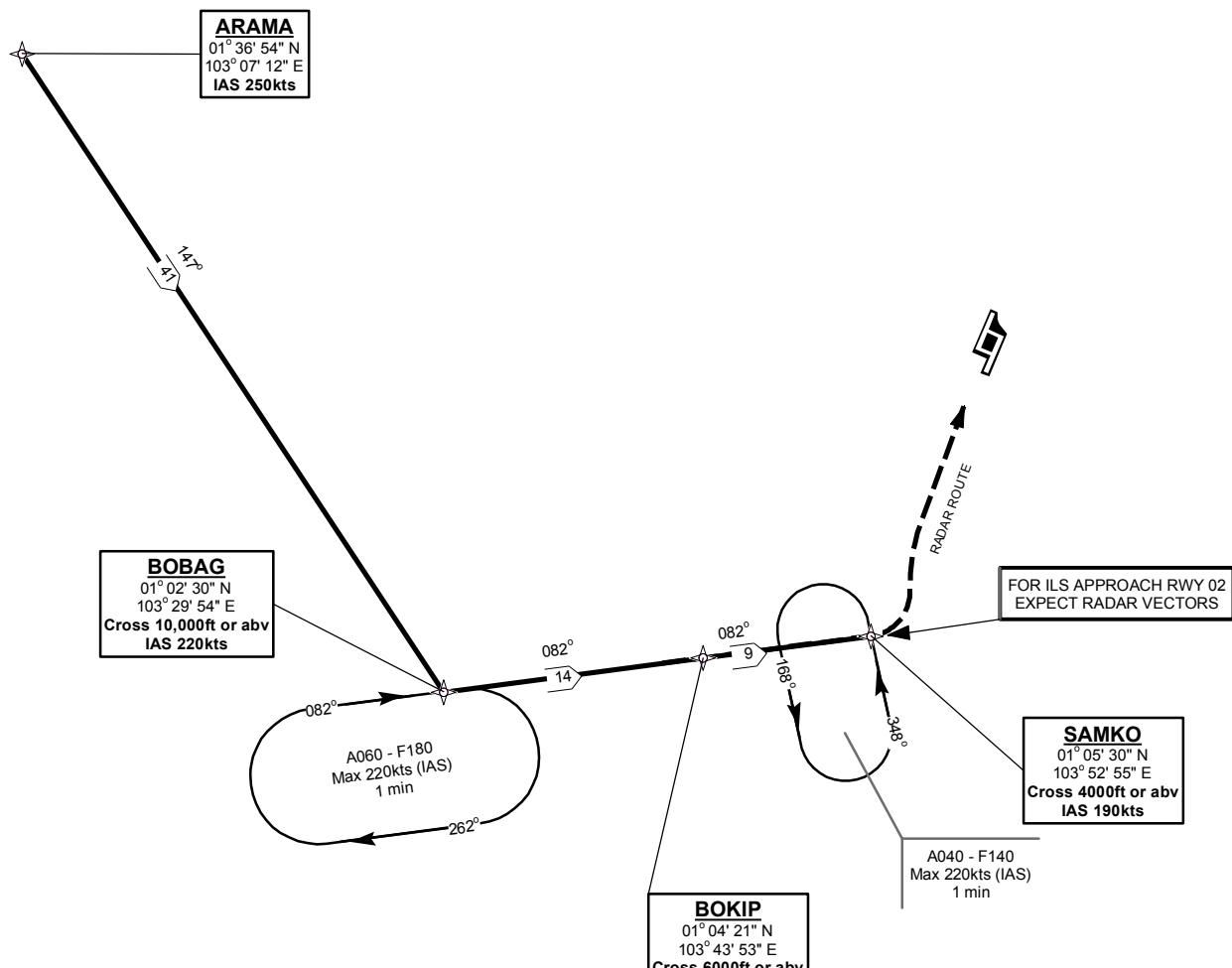
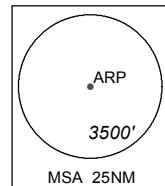
DISTANCES IN NM

NOTE: RADAR REQUIRED

NOTE: RNAV-1 NAVIGATION SPECIFICATION GNSS REQUIRED

NOTE: REFER TO BACK PAGE FOR

- FORMAL AND TABULAR DESCRIPTIONS
- RADIO COM FAILURE PROCEDURES



NOT TO SCALE

ARAMA 1A (STAR) RNAV GNSS RWY 02L/02C - DESCRIPTIONS**Formal & Abbreviated Descriptions**

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
From ARAMA, speed 250kts. To BOBAG at or above 10000ft, speed 220kts, turn left. To BOKIP at or above 6000ft. To SAMKO at or above 4000ft, speed 190kts.	ARAMA [K250] - BOBAG [A100+; K220; L] - BOKIP [A060+] - SAMKO [A040+; K190]	IF TF TF TF	N N N N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
IF	ARAMA	-	-	-0.5	-	-	K250	RNAV1
TF	BOBAG	-	147(147.5)	-0.5	L	A100+	K220	RNAV1
TF	BOKIP	-	082(082.5)	-0.5	-	A060+	-	RNAV1
TF	SAMKO	-	082(082.8)	-0.5	-	A040+	K190	RNAV1

RADIO COMMUNICATIONS FAILURE PROCEDURE

1	SET TRANSPONDER TO MODE A/C CODE 7600
2	When cleared via ARAMA 1A by Singapore ATC <ul style="list-style-type: none"> (a) Maintain last assigned flight level or altitude and proceed on ARAMA 1A to SAMKO (b) From SAMKO commence descent and carry out appropriate landing procedure for RWY 02 as close as possible to EAT or ETA (c) If unable to effect a landing, refer to Singapore AIP for missed approach procedure
3	No clearance or instruction received from Singapore ATC <ul style="list-style-type: none"> - Refer to Singapore AIP for radio communications failure procedure

**STANDARD ARRIVAL CHART
RNAV (GNSS) -
INSTRUMENT (STAR)**

ACC 133.25
APP 124.6 / 120.3
ARR 119.3
TWR 118.6 / 118.25

TRANSITION ALTITUDE
11 000ft

D-ATIS AP ID-WSSS
128.6

**SINGAPORE/Singapore Changi
RWY 02L/C**
**ASUNA ONE ALPHA ARRIVAL
ASUNA 1A**

ELEV, ALT IN FEET
BEARINGS, TRACKS AND
RADIALS ARE MAGNETIC
VAR 26°E (2015)

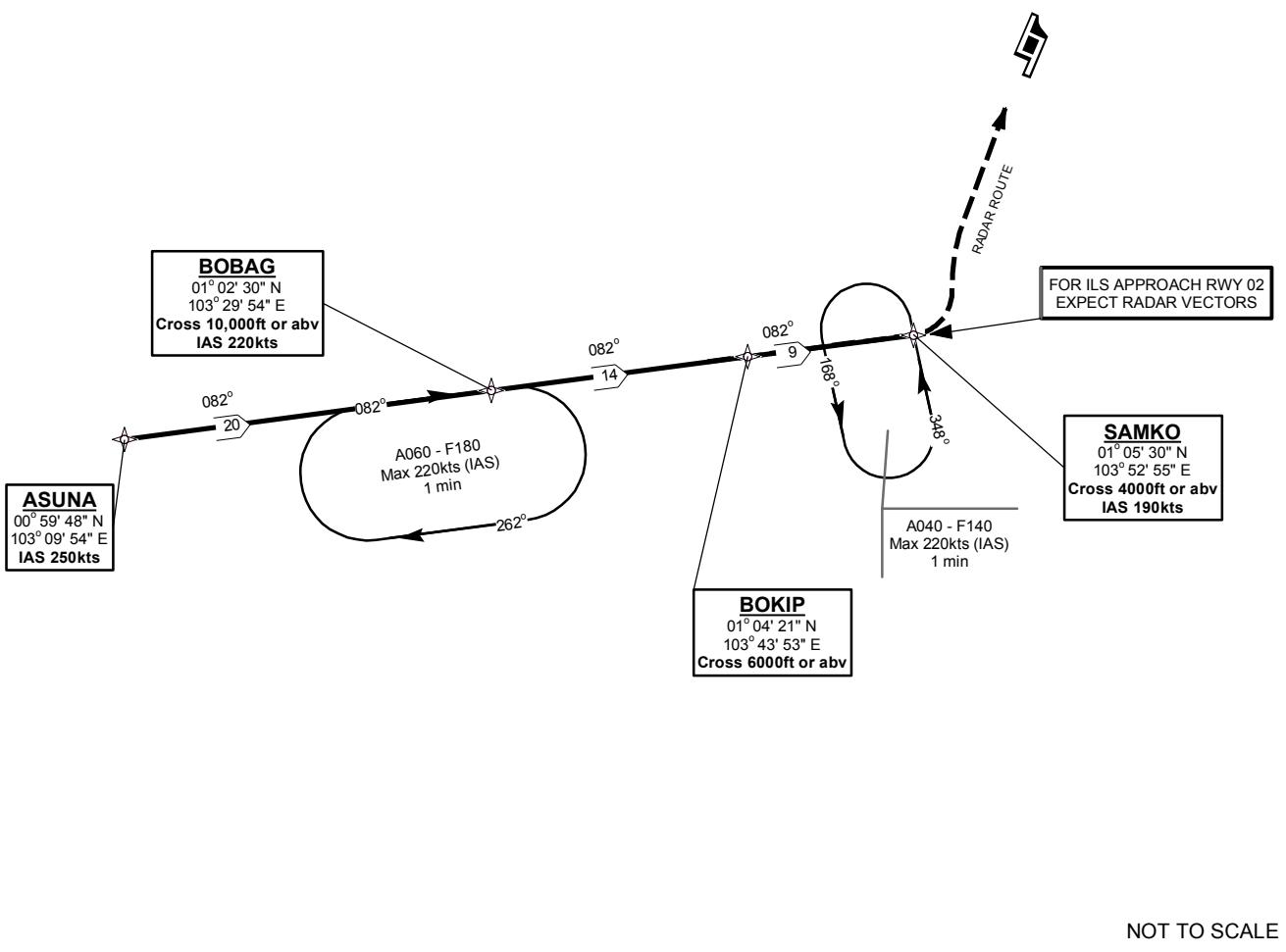
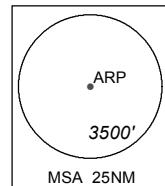
DISTANCES IN NM

NOTE: RADAR REQUIRED

NOTE: RNAV-1 NAVIGATION SPECIFICATION GNSS REQUIRED

NOTE: REFER TO BACK PAGE FOR

- FORMAL AND TABULAR DESCRIPTIONS
- RADIO COM FAILURE PROCEDURES



ASUNA 1A (STAR) RNAV GNSS RWY 02L/02C - DESCRIPTIONS**Formal & Abbreviated Descriptions**

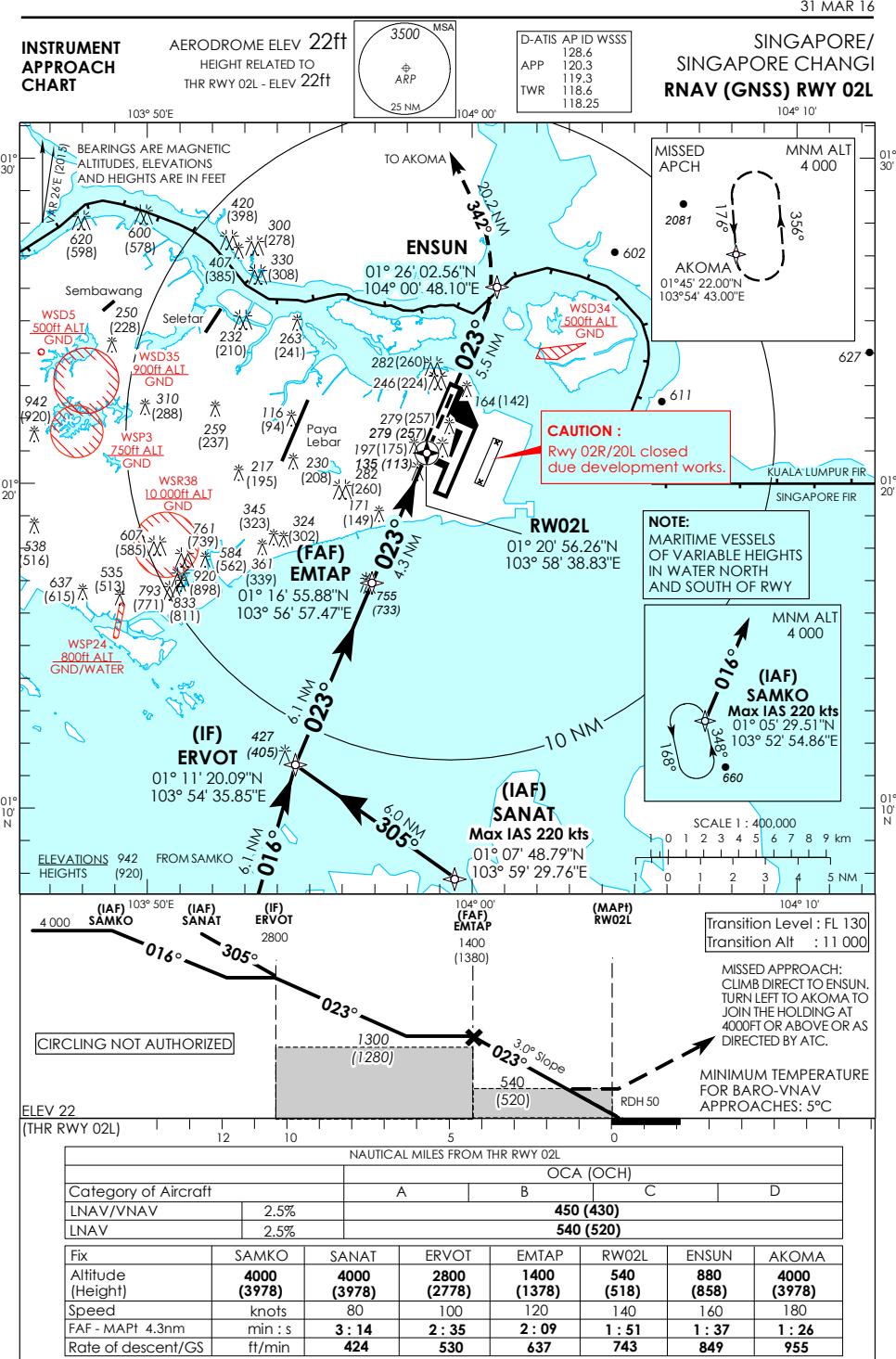
Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
From ASUNA, speed 250kts. To BOBAG at or above 10000ft, speed 220kts. To BOKIP at or above 6000ft. To SAMKO at or above 4000ft, speed 190kts.	ASUNA [K250] - BOBAG [A100+; K220] - BOKIP [A060+] - SAMKO [A040+; K190]	IF TF TF TF	N N N N

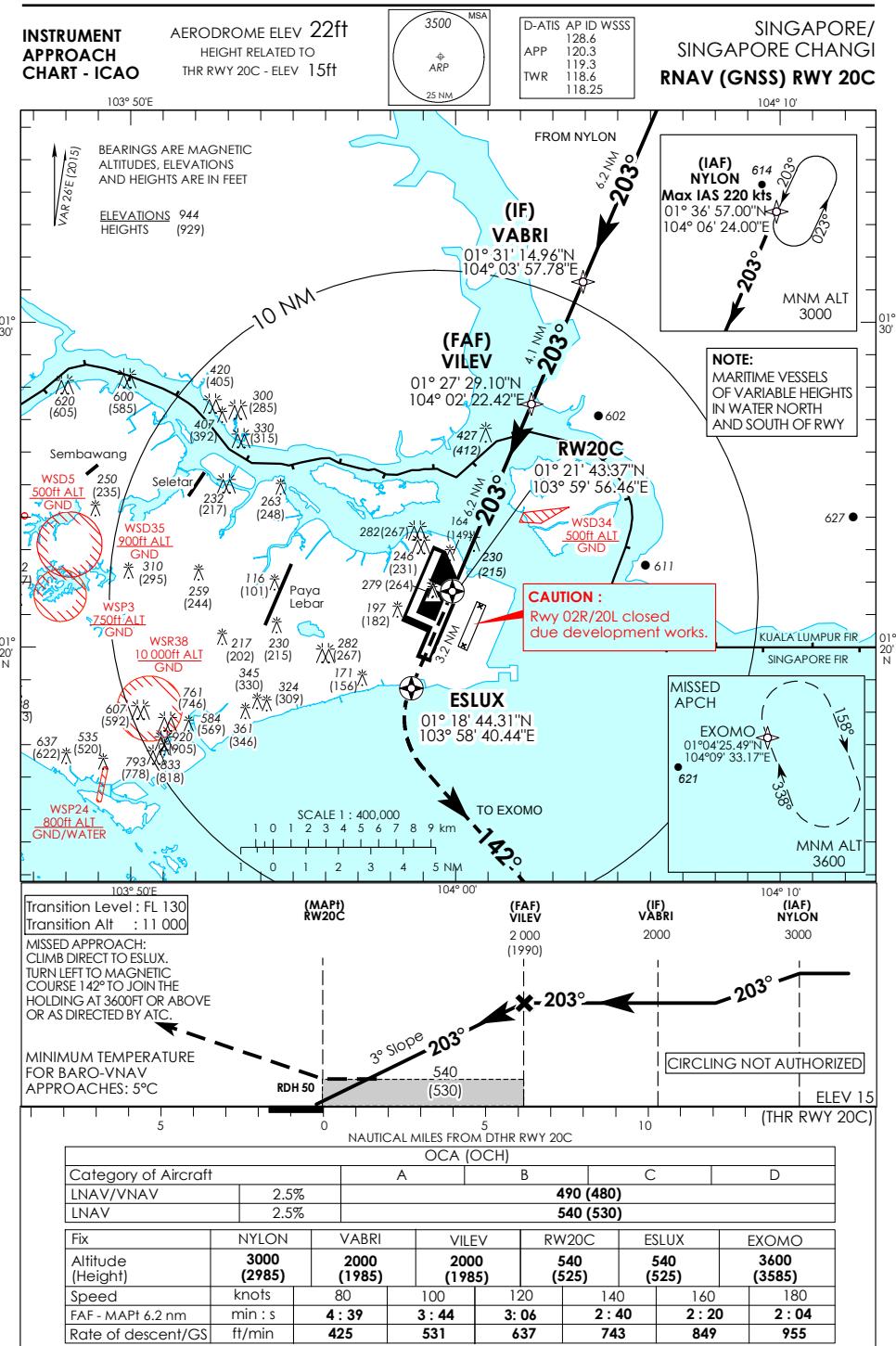
Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
IF	ASUNA	-	-	-0.5	-	-	K250	RNAV1
TF	BOBAG	-	082(082.4)	-0.5	-	A100+	K220	RNAV1
TF	BOKIP	-	082(082.5)	-0.5	-	A060+	-	RNAV1
TF	SAMKO	-	082(082.8)	-0.5	-	A040+	K190	RNAV1

RADIO COMMUNICATIONS FAILURE PROCEDURE

1	SET TRANSPONDER TO MODE A/C CODE 7600
2	When cleared via ASUNA 1A by Singapore ATC <ul style="list-style-type: none"> (a) Maintain last assigned flight level or altitude and proceed on ASUNA 1A to SAMKO (b) From SAMKO commence descent and carry out appropriate landing procedure for RWY 02 as close as possible to EAT or ETA (c) If unable to effect a landing, refer to Singapore AIP for missed approach procedure
3	No clearance or instruction received from Singapore ATC <ul style="list-style-type: none"> - Refer to Singapore AIP for radio communications failure procedure





**STANDARD ARRIVAL CHART
RNAV (GNSS) -
INSTRUMENT (STAR)**

ACC 133.25
APP 124.6 / 120.3
ARR 119.3
TWR 118.6 / 118.25

TRANSITION ALTITUDE
11 000ft

D-ATIS AP ID-WSSS
128.6

**SINGAPORE/Singapore Changi
RWY 20R/C**

**ARAMA ONE BRAVO ARRIVAL
ARAMA 1B**

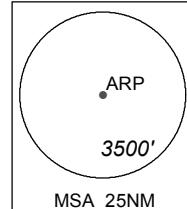
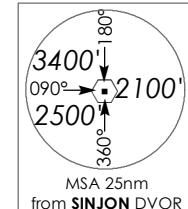
ELEV, ALT IN FEET
BEARINGS, TRACKS AND
RADIALS ARE MAGNETIC
VAR 26°E (2015)

DISTANCES IN NM

NOTE: RADAR REQUIRED

NOTE: RNAV-1 NAVIGATION SPECIFICATION GNSS REQUIRED

NOTE: REFER TO BACK PAGE FOR
- FORMAL AND TABULAR DESCRIPTIONS
- RADIO COM FAILURE PROCEDURES



ARAMA
01° 36' 54" N
103° 07' 12" E
IAS 250kts

A030 - F140
Max 220kts (IAS)
1 min

FOR ILS APPROACH RWY 20
EXPECT RADAR VECTORS

NYLON
01° 36' 57" N
104° 06' 24" E

203°

BIPOP
01° 31' 22" N
104° 10' 18" E
Cross 3000ft or abv
IAS 190kts

BOBAG
01° 02' 30" N
103° 29' 54" E
Cross 10,000ft or abv
IAS 220kts

DOVAN
01° 19' 38" N
104° 12' 49" E
Cross 4000ft or abv

BTM
01° 08' 13" N
104° 07' 58" E
Cross 7000ft or abv
IAS 220kts

SAMKO
01° 05' 30" N
103° 52' 55" E

083°
A060 - F180
Max 220kts (IAS)
1 min
263°

082°
23

080°
15

023°
21

For flight landing at Singapore Changi Airport, pilots are to request for the STAR from Singapore ATC when the flight is within 120 DME SJ and RWY 20 is in use.
Flight shall still remain under the control of WMKK ATC.

NOT TO SCALE

ARAMA 1B (STAR) RNAV GNSS RWY 20R/20C - DESCRIPTIONS**Formal & Abbreviated Descriptions**

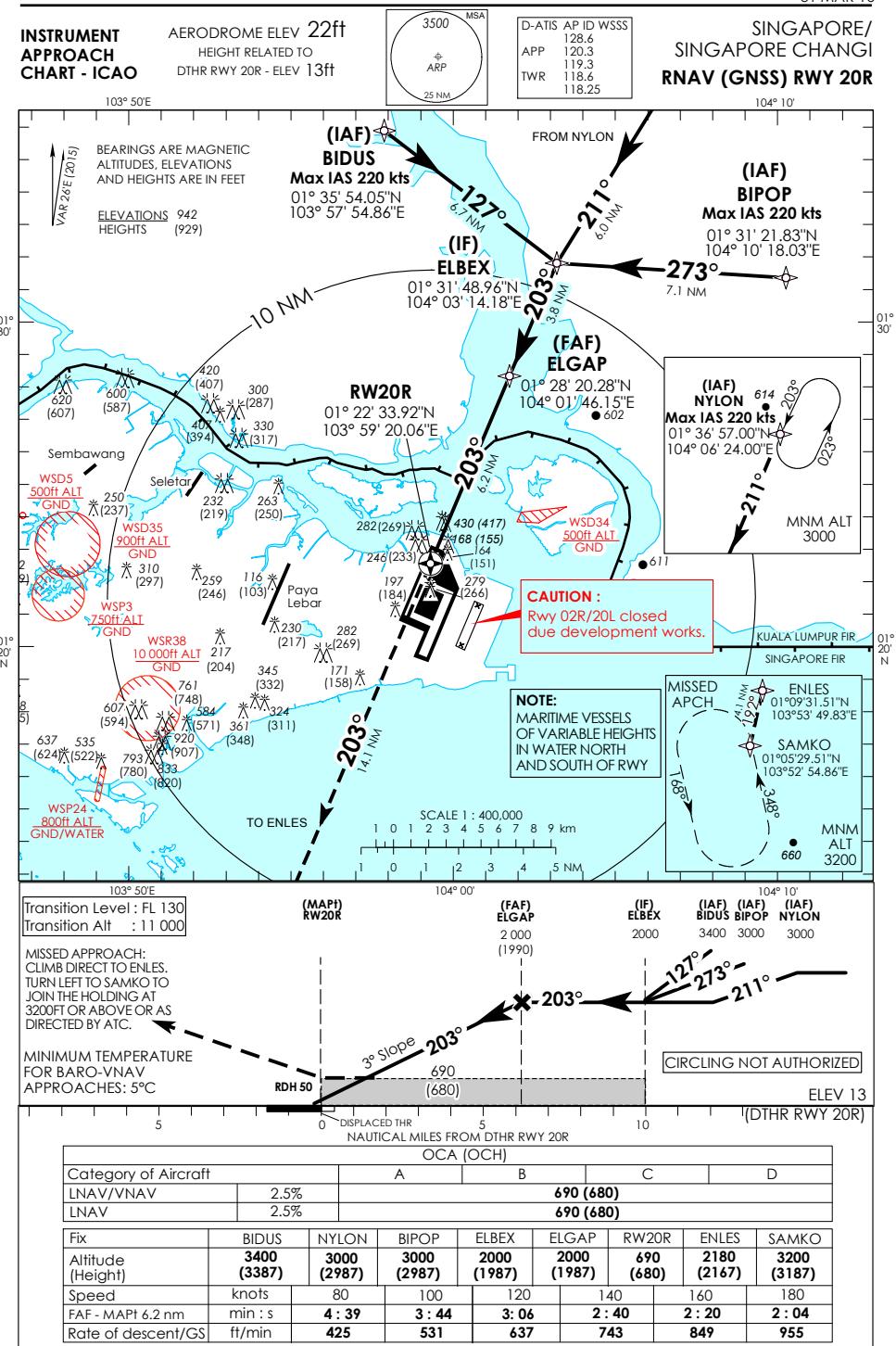
Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
From ARAMA, speed 250kts. To BOBAG at or above 10000ft, speed 220kts, turn left. To SAMKO, turn left. To BTM at or above 7000ft, speed 220kts, turn left. To DOVAN at or above 4000ft, turn left. To BIPOP at or above 3000ft, speed 190kts.	ARAMA [K250] - BOBAG [A100+; K220; L] - SAMKO [L] - BTM [A070+; K220; L] - DOVAN [A040+; L] - BIPOP [A030+; K190]	IF TF TF TF TF TF	N N N N N N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
IF	ARAMA	-	-	-0.5	-	-	K250	RNAV1
TF	BOBAG	-	147(147.5)	-0.5	L	A100+	K220	RNAV1
TF	SAMKO	-	082(082.6)	-0.5	L	-	-	RNAV1
TF	BTM	-	080(080.5)	-0.5	L	A070+	K220	RNAV1
TF	DOVAN	-	023(023.1)	-0.5	L	A040+	-	RNAV1
TF	BIPOP	-	348(348.5)	-0.5	-	A030+	K190	RNAV1

RADIO COMMUNICATIONS FAILURE PROCEDURE

1	SET TRANSPONDER TO MODE A/C CODE 7600
2	When cleared via ARAMA 1B by Singapore ATC <ul style="list-style-type: none"> (a) Maintain last assigned flight level or altitude and proceed on ARAMA 1B to BIPOP, then direct to NYLON (b) From NYLON commence descent and carry out appropriate landing procedure for RWY 20 as close as possible to EAT or ETA (c) If unable to effect a landing, refer to Singapore AIP for missed approach procedure
3	No clearance or instruction received from Singapore ATC <ul style="list-style-type: none"> - Refer to Singapore AIP for radio communications failure procedure



**STANDARD ARRIVAL CHART
RNAV (GNSS) -
INSTRUMENT (STAR)**

ACC 134.2
APP 124.05 / 120.3
ARR 119.3
TWR 118.6 / 118.25

TRANSITION ALTITUDE
11 000ft

D-ATIS AP ID-WSSS
128.6

**SINGAPORE/Singapore Changi
RWY 02L/C
KARTO ONE ALPHA ARRIVAL
KARTO 1A**

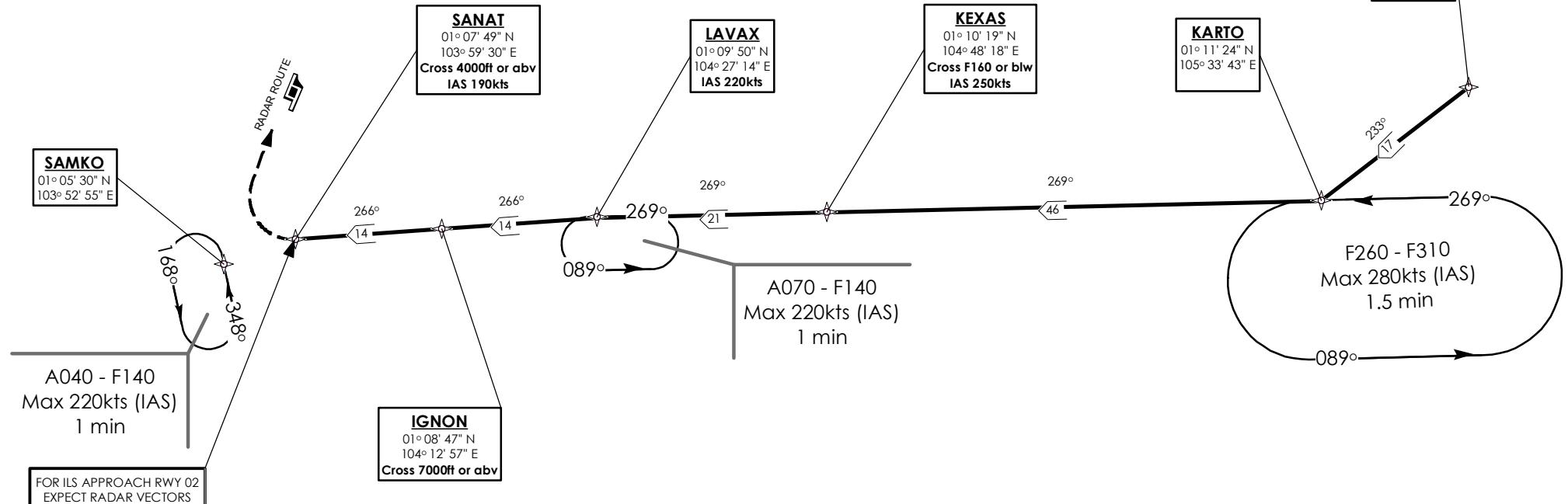
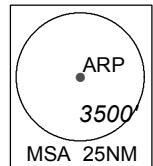
ELEV, ALT IN FEET
BEARINGS, TRACKS AND
RADIALS ARE MAGNETIC
VAR 26°E (2015)

DISTANCES IN NM

NOTE: RADAR REQUIRED

NOTE: RNAV-1 NAVIGATION SPECIFICATION GNSS REQUIRED

NOTE: REFER TO BACK PAGE FOR
- FORMAL AND TABULAR DESCRIPTIONS
- RADIO COM FAILURE PROCEDURES



NOT TO SCALE

KARTO 1A (STAR) RNAV GNSS RWY 02L/02C - DESCRIPTIONS

Formal & Abbreviated Descriptions

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
From TOMAN. To KARTO, turn right. To KEXAS at or below FL160, speed 250kts. To LAVAX, speed 220kts,turn left.To IGNON at or above 7000ft. To SANAT at or above 4000ft, speed 190kts.	TOMAN - KARTO [R] - KEXAS [FL160-; K250] - LAVAX [K220; L] - IGNON [A070+] - SANAT [A040+; K190]	IF TF TF TF TF TF	N N N N N N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
IF	TOMAN	-	-	-0.5	-	-	-	RNAV1
TF	KARTO	-	233(233.5)	-0.5	R	-	-	RNAV1
TF	KEXAS	-	269(269.5)	-0.5	-	FL160-	K250	RNAV1
TF	LAVAX	-	269(269.5)	-0.5	L	-	K220	RNAV1
TF	IGNON	-	266(266.5)	-0.5	-	A070+	-	RNAV1
TF	SANAT	-	266(266.5)	-0.5	-	A040+	K190	RNAV1

RADIO COMMUNICATIONS FAILURE PROCEDURE

1	SET TRANSPONDER TO MODE A/C CODE 7600
2	When cleared via KARTO 1A by Singapore ATC <ul style="list-style-type: none"> (a) Maintain last assigned flight level or altitude and proceed on KARTO 1A to SANAT, then direct to SAMKO (b) From SAMKO commence descent and carry out appropriate landing procedure for RWY 02 as close as possible to EAT or ETA (c) If unable to effect a landing, refer to Singapore AIP for missed approach procedure
3	No clearance or instruction received from Singapore ATC <ul style="list-style-type: none"> - Refer to Singapore AIP for radio communications failure procedure

**STANDARD ARRIVAL CHART
RNAV (GNSS) -
INSTRUMENT (STAR)**

ACC 133.25
APP 124.6 / 120.3
ARR 119.3
TWR 118.6 / 118.25

TRANSITION ALTITUDE
11 000ft

D-ATIS AP ID-WSSS
128.6

**SINGAPORE/Singapore Changi
RWY 20R/C**
**ASUNA ONE BRAVO ARRIVAL
ASUNA 1B**

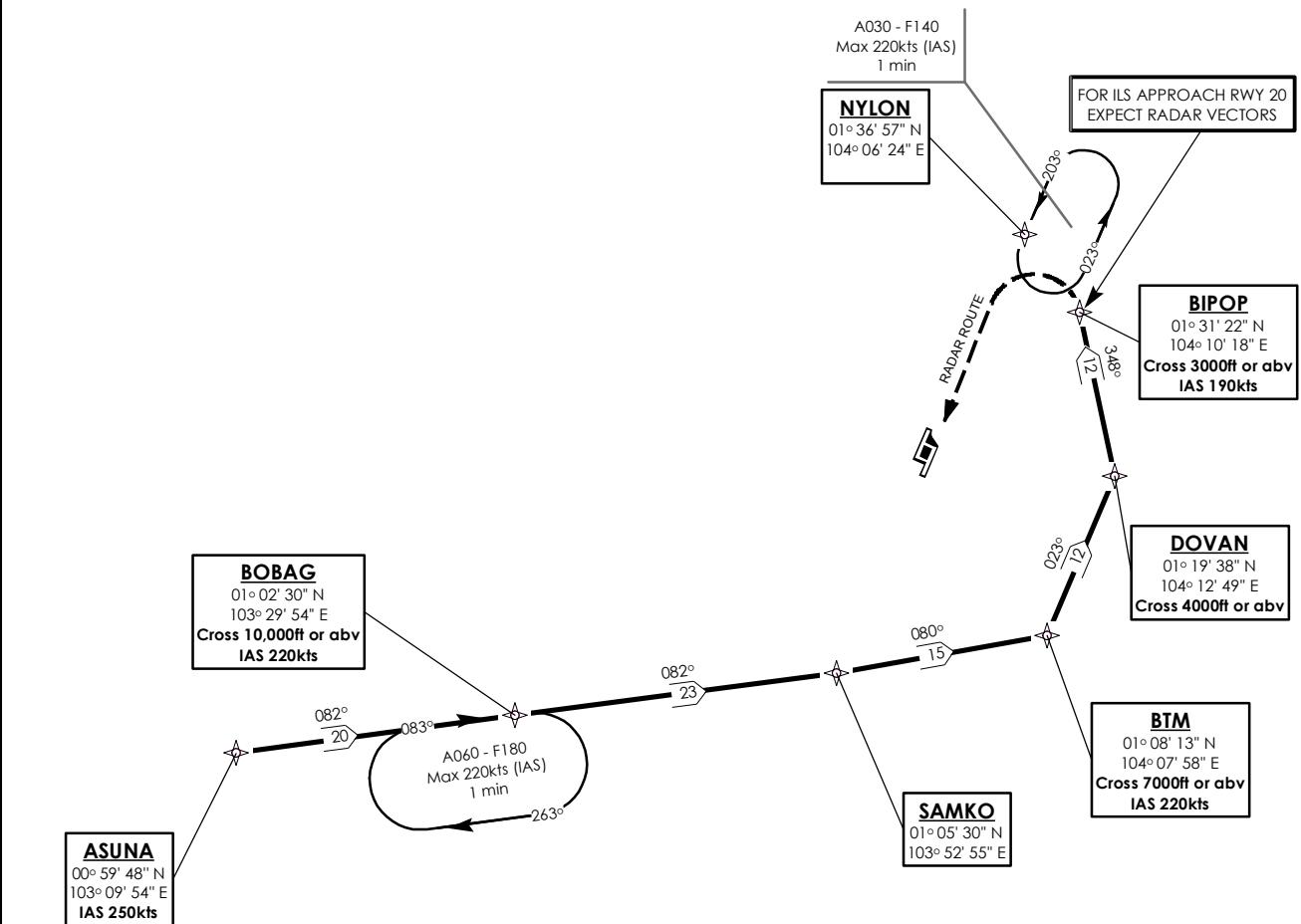
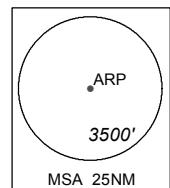
ELEV, ALT IN FEET
BEARINGS, TRACKS AND
RADIALS ARE MAGNETIC
VAR 26°E (2015)

DISTANCES IN NM

NOTE: RADAR REQUIRED

NOTE: RNAV-1 NAVIGATION SPECIFICATION GNSS REQUIRED

NOTE: REFER TO BACK PAGE FOR
- FORMAL AND TABULAR DESCRIPTIONS
- RADIO COM FAILURE PROCEDURES



NOT TO SCALE

ASUNA 1B (STAR) RNAV GNSS RWY 20R/20C - DESCRIPTIONS

Formal & Abbreviated Descriptions

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
From ASUNA, speed 250kts. To BOBAG at or above 10000ft, speed 220kts. To SAMKO, turn left. To BTM at or above 7000ft, speed 220kts, turn left. To DOVAN at or above 4000ft, turn left. To BIPOP at or above 3000ft, speed 190kts.	ASUNA [K250] - BOBAG [A100+; K220] - SAMKO [L] - BTM [A070+; K220; L] - DOVAN [A040+; L] - BIPOP [A030+; K190]	IF TF TF TF TF TF	N N N N N N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
IF	ASUNA	-	-	-0.5	-	-	K250	RNAV1
TF	BOBAG	-	082(082.4)	-0.5	-	A100+	K220	RNAV1
TF	SAMKO	-	082(082.6)	-0.5	L	-	-	RNAV1
TF	BTM	-	080(080.5)	-0.5	L	A070+	K220	RNAV1
TF	DOVAN	-	023(023.1)	-0.5	L	A040+	-	RNAV1
TF	BIPOP	-	348(348.5)	-0.5	-	A030+	K190	RNAV1

RADIO COMMUNICATIONS FAILURE PROCEDURE

1	SET TRANSPONDER TO MODE A/C CODE 7600
2	When cleared via ASUNA 1B by Singapore ATC <ul style="list-style-type: none"> (a) Maintain last assigned flight level or altitude and proceed on ASUNA 1B to BIPOP, then direct to NYLON (b) From NYLON commence descent and carry out appropriate landing procedure for RWY 20 as close as possible to EAT or ETA (c) If unable to effect a landing, refer to Singapore AIP for missed approach procedure
3	No clearance or instruction received from Singapore ATC <ul style="list-style-type: none"> - Refer to Singapore AIP for radio communications failure procedure

**STANDARD ARRIVAL CHART
RNAV (GNSS) -
INSTRUMENT (STAR)**

ACC 134.4
APP 124.05 / 120.3
ARR 119.3
TWR 118.6 / 118.25

TRANSITION ALTITUDE
11 000ft

D-ATIS AP ID-WSSS
128.6

**SINGAPORE/Singapore Changi
RWY 02L/C
OBDOS ONE ALPHA ARRIVAL
OBDOS 1A**

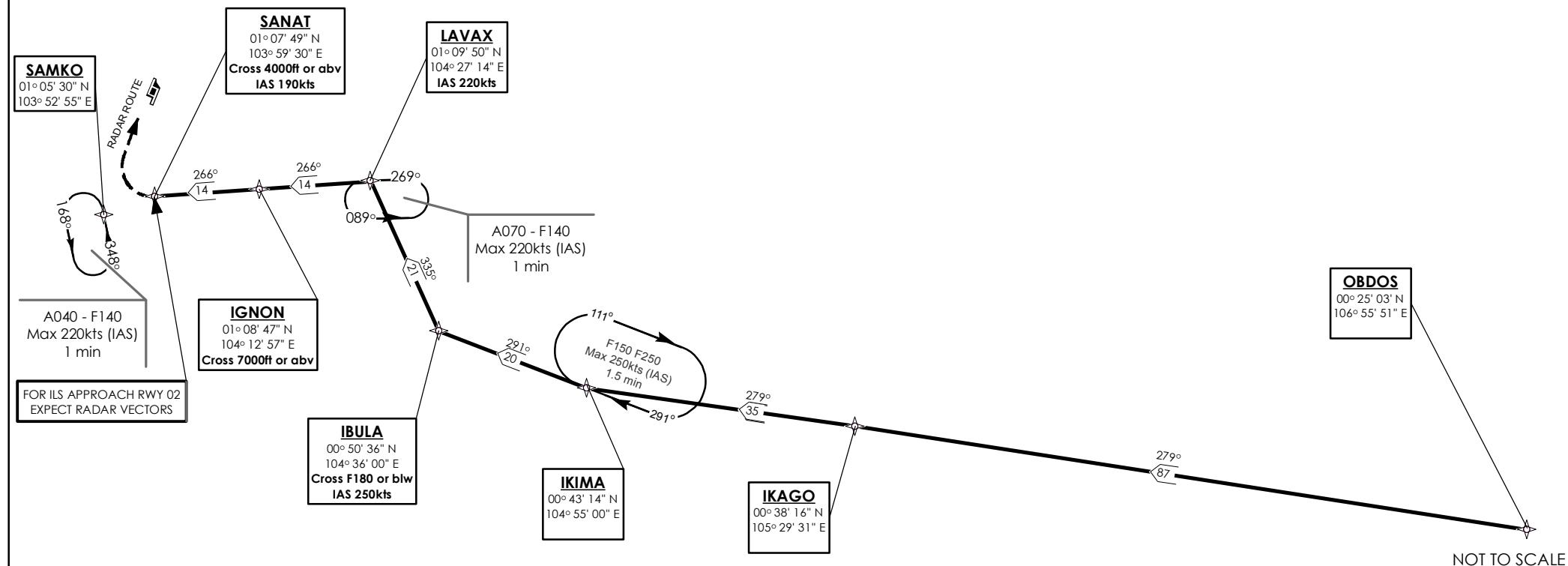
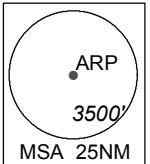
ELEV, ALT IN FEET
BEARINGS, TRACKS AND
RADIALS ARE MAGNETIC
VAR 26°E (2015)

DISTANCES IN NM

NOTE: RADAR REQUIRED

NOTE: RNAV-1 NAVIGATION SPECIFICATION GNSS REQUIRED

NOTE: REFER TO BACK PAGE FOR
- FORMAL AND TABULAR DESCRIPTIONS
- RADIO COM FAILURE PROCEDURES



OBDOS 1A (STAR) RNAV GNSS RWY 02L/02C - DESCRIPTIONS**Formal & Abbreviated Descriptions**

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
From OBDOS. To IKAGO. To IKIMA, turn right. To IBULA at or below FL180, speed 250kts, turn right. To LAVAX, speed 220kts, turn left. To IGNON at or above 7000ft. To SANAT at or above 4000ft, speed 190kts.	OBDOS - IKAGO - IKIMA [R] - IBULA [FL180-; K250; R] - LAVAX [K220; L] - IGNON [A070+] - SANAT [A040+; K190]	IF TF TF TF TF TF TF	N N N N N N N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
IF	OBDOS	-	-	-0.5	-	-	-	RNAV1
TF	IKAGO	-	279(279.5)	-0.5	-	-	-	RNAV1
TF	IKIMA	-	279(279.5)	-0.5	R	-	-	RNAV1
TF	IBULA	-	291(291.1)	-0.5	R	FL180-	K250	RNAV1
TF	LAVAX	-	335(335.4)	-0.5	L	-	K220	RNAV1
TF	IGNON	-	266(266.5)	-0.5	-	A070+	-	RNAV1
TF	SANAT	-	266(266.5)	-0.5	-	A040+	K190	RNAV1

RADIO COMMUNICATIONS FAILURE PROCEDURE

1	SET TRANSPONDER TO MODE A/C CODE 7600
2	When cleared via OBDOS 1A by Singapore ATC <ul style="list-style-type: none"> (a) Maintain last assigned flight level or altitude and proceed on OBDOS 1A to SANAT, then direct to SAMKO (b) From SAMKO commence descent and carry out appropriate landing procedure for RWY 02 as close as possible to EAT or ETA (c) If unable to effect a landing, refer to Singapore AIP for missed approach procedure
3	No clearance or instruction received from Singapore ATC <ul style="list-style-type: none"> - Refer to Singapore AIP for radio communications failure procedure

**STANDARD ARRIVAL CHART
RNAV (GNSS) -
INSTRUMENT (STAR)**

ACC 134.4
APP 124.05 / 120.3
ARR 119.3
TWR 118.6 / 118.25

TRANSITION ALTITUDE
11 000ft

D-ATIS AP ID-WSSS
128.6

**SINGAPORE/Singapore Changi
RWY 20R/C
OBDOS ONE BRAVO ARRIVAL
OBDOS 1B**

ELEV, ALT IN FEET
BEARINGS, TRACKS AND
RADIALS ARE MAGNETIC
VAR 26'E (2015)

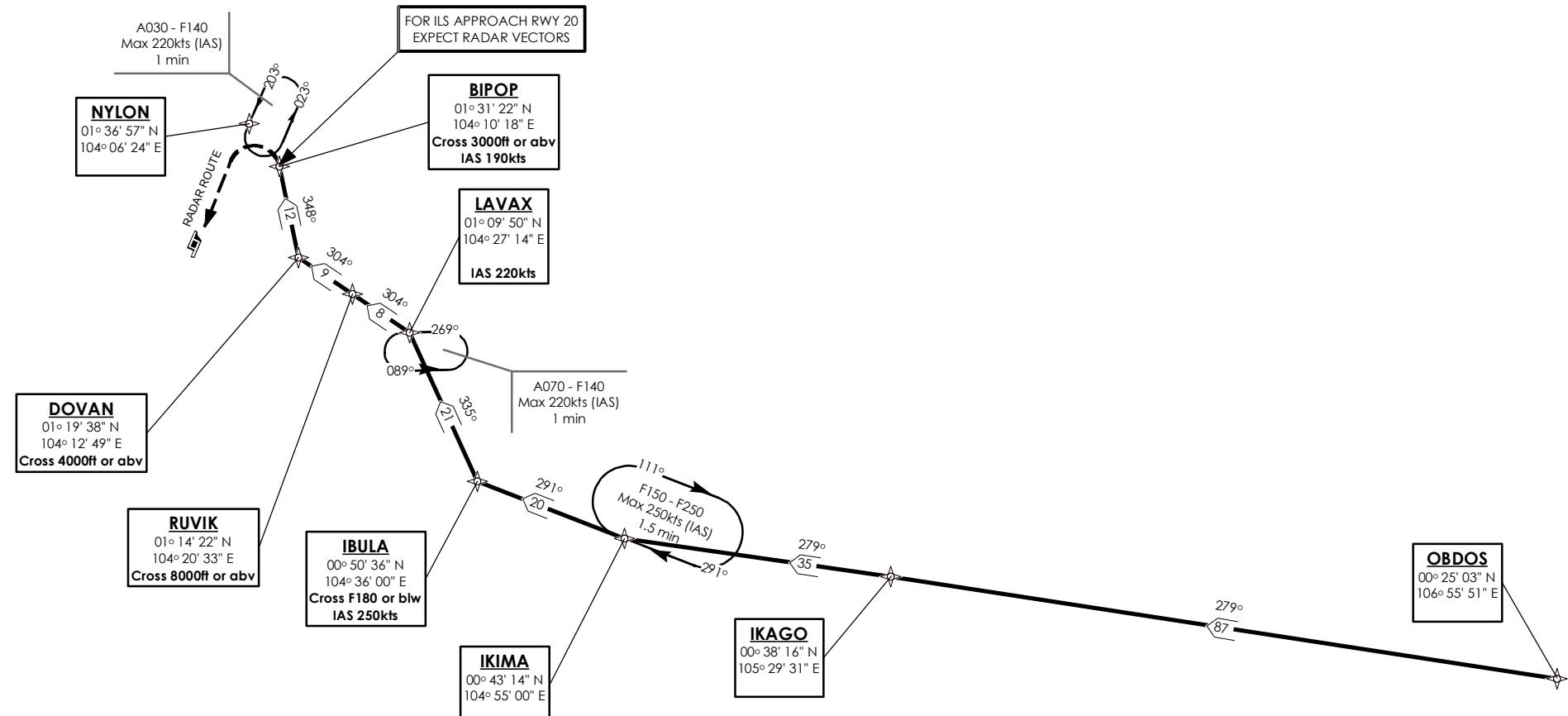
DISTANCES IN NM

NOTE: RADAR REQUIRED

NOTE: RNAV-1 NAVIGATION SPECIFICATION GNSS REQUIRED

NOTE: REFER TO BACK PAGE FOR

- FORMAL AND TABULAR DESCRIPTIONS
- RADIO COM FAILURE PROCEDURES



OBDOS 1B (STAR) RNAV GNSS RWY 20R/20C - DESCRIPTIONS**Formal & Abbreviated Descriptions**

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
From OBDOS. To IKAGO. To IKIMA, turn right. To IBULA at or below FL180, speed 250kts, turn right. To LAVAX, speed 220kts, turn left. To RUVIK at or above 8000ft. To DOVAN at or above 4000ft, turn right. To BIPOP at or above 3000ft, speed 190kts.	OBDOS - IKAGO - IKIMA [R] - IBULA [FL180-; K250; R] - LAVAX [K220; L] - RUVIK [A080+] - DOVAN [A040+; R] - BIPOP [A030+; K190]	IF TF TF TF TF TF TF TF	N N N N N N N N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
IF	OBDOS	-	-	-0.5	-	-	-	RNAV1
TF	IKAGO	-	279(279.5)	-0.5	-	-	-	RNAV1
TF	IKIMA	-	279(279.5)	-0.5	R	-	-	RNAV1
TF	IBULA	-	291(291.1)	-0.5	R	FL180-	K250	RNAV1
TF	LAVAX	-	335(335.4)	-0.5	L	-	K220	RNAV1
TF	RUVIK	-	304(304.0)	-0.5	-	A080+	-	RNAV1
TF	DOVAN	-	304(304.1)	-0.5	R	A040+	-	RNAV1
TF	BIPOP	-	348(348.5)	-0.5	-	A030+	K190	RNAV1

RADIO COMMUNICATIONS FAILURE PROCEDURE

1	SET TRANSPONDER TO MODE A/C CODE 7600
2	When cleared via OBDOS 1B by Singapore ATC <ul style="list-style-type: none"> (a) Maintain last assigned flight level or altitude and proceed on OBDOS 1B to BIPOP, then direct to NYLON (b) From NYLON commence descent and carry out appropriate landing procedure for RWY 20 as close as possible to EAT or ETA (c) If unable to effect a landing, refer to Singapore AIP for missed approach procedure
3	No clearance or instruction received from Singapore ATC <ul style="list-style-type: none"> - Refer to Singapore AIP for radio communications failure procedure

**STANDARD ARRIVAL CHART
RNAV (GNSS) -
INSTRUMENT (STAR)**

ACC 133.25
APP 124.6 / 120.3
ARR 119.3
TWR 118.6 / 118.25

TRANSITION ALTITUDE
11 000ft

D-ATIS AP ID-WSSS
128.6

**SINGAPORE/Singapore Changi
RWY 20R/C**
LELIB THREE BRAVO ARRIVAL
LELIB 3B

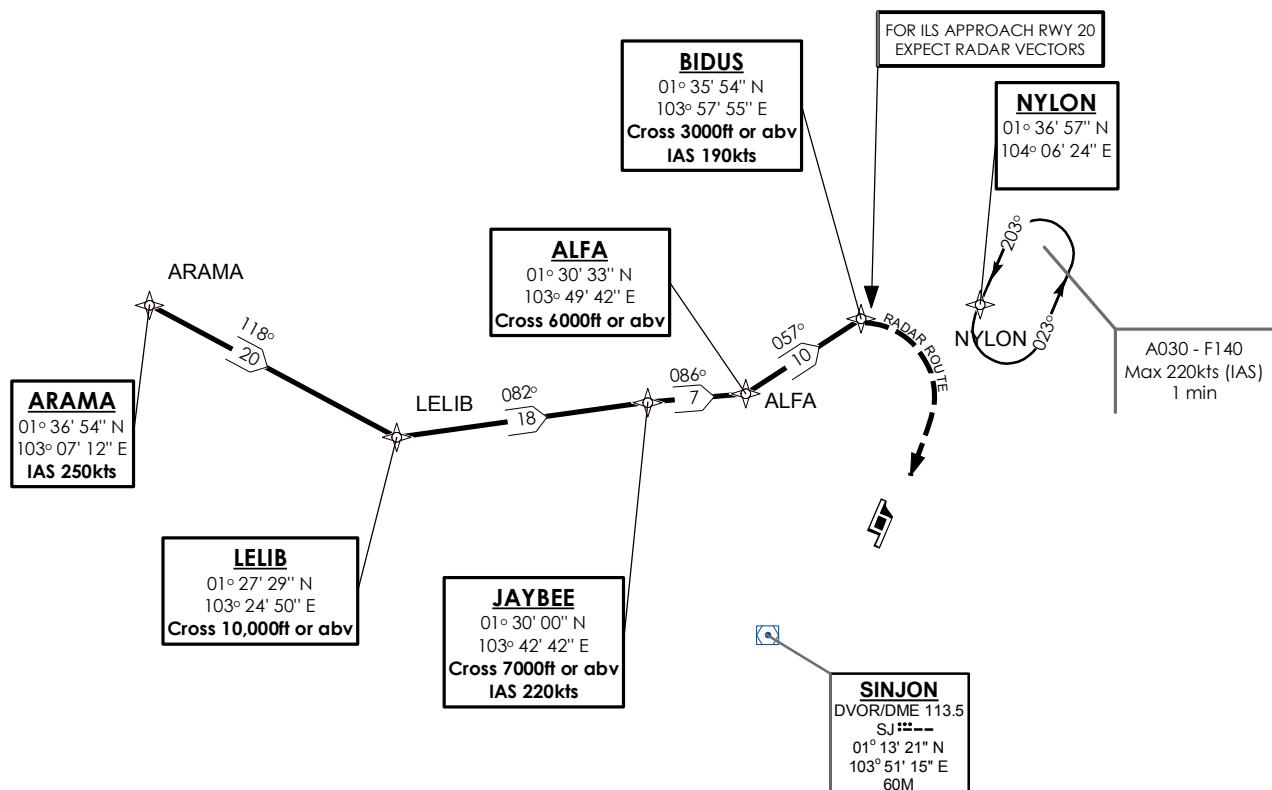
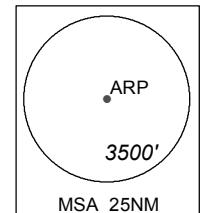
ELEV, ALT IN FEET
BEARINGS, TRACKS AND
RADIALS ARE MAGNETIC
VAR 26°E (2015)

DISTANCES IN NM

NOTE: RADAR REQUIRED

NOTE: RNAV-1 NAVIGATION SPECIFICATION GNSS REQUIRED

NOTE: REFER TO BACK PAGE FOR
- FORMAL AND TABULAR DESCRIPTIONS
- RADIO COM FAILURE PROCEDURES



For flight landing at Singapore Changi Airport, pilots are to request for the STAR from Singapore ATC when the flight is within 120 DME SJ and RWY 20 is in use.
Flight shall still remain under the control of WMKK ATC.

NOT TO SCALE

LELIB 3B (STAR) RNAV GNSS RWY 20R/20C - DESCRIPTIONS**Formal & Abbreviated Descriptions**

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
From ARAMA, speed 250kts. To LELIB at or above 10000ft, turn left. To JAYBEE at or above 7000ft, speed 220kts, turn right. To ALFA at or above 6000ft, turn left. To BIDUS at or above 3000ft, speed 190kts.	ARAMA [K250] - LELIB [A100+; L] - JAYBEE [A070+; K220; R] - ALFA [A060+; L] - BIDUS [A030+; K190]	IF TF TF TF TF	N N N N N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
IF	ARAMA	-	-	-0.5	-	-	K250	RNAV1
TF	LELIB	-	118(118.5)	-0.5	L	A100+	-	RNAV1
TF	JAYBEE	-	082(082.0)	-0.5	R	A070+	K220	RNAV1
TF	ALFA	-	086(086.5)	-0.5	L	A060+	-	RNAV1
TF	BIDUS	-	057(057.1)	-0.5	-	A030+	K190	RNAV1

RADIO COMMUNICATIONS FAILURE PROCEDURE

1	SET TRANSPONDER TO MODE A/C CODE 7600
2	When cleared via LELIB 3B by Singapore ATC <ul style="list-style-type: none"> (a) Maintain last assigned flight level or altitude and proceed on LELIB 3B to BIDUS, then direct to NYLON (b) From NYLON commence descent and carry out appropriate landing procedure for RWY 20 as close as possible to EAT or ETA (c) If unable to effect a landing, refer to Singapore AIP for missed approach procedure
3	No clearance or instruction received from Singapore ATC <ul style="list-style-type: none"> - Refer to Singapore AIP for radio communications failure procedure

**STANDARD ARRIVAL CHART
RNAV (GNSS) -
INSTRUMENT (STAR)**

ACC 133.8
APP 124.05 / 120.3
ARR 119.3
TWR 118.6 / 118.25

TRANSITION ALTITUDE
11 000ft

D-ATIS AP ID-WSSS
128.6

**SINGAPORE/Singapore Changi
RWY 02L/C
MABAL ONE ALPHA ARRIVAL
MABAL 1A**

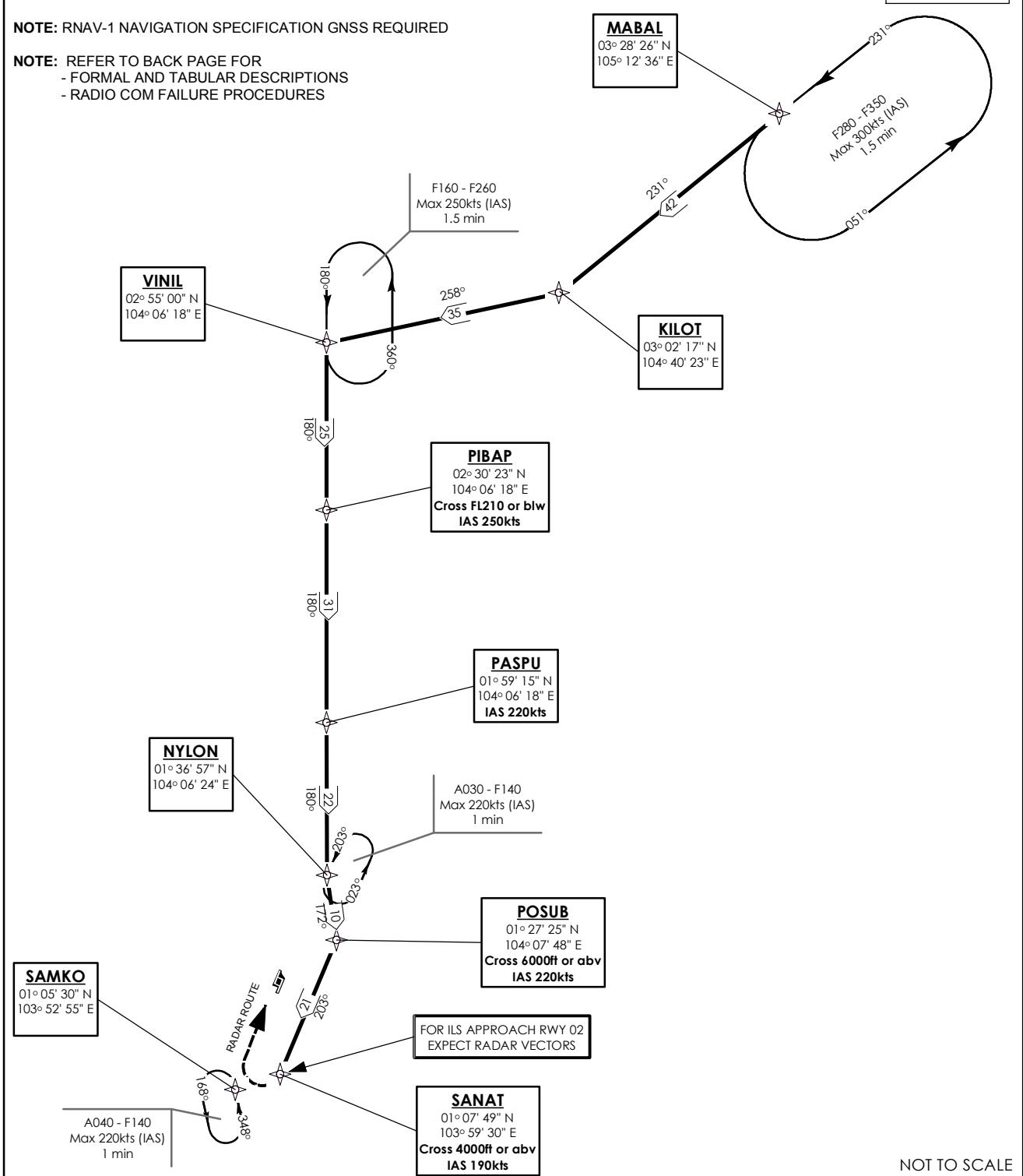
ELEV, ALT IN FEET
BEARINGS, TRACKS AND
RADIALS ARE MAGNETIC
VAR 26°E (2015)

DISTANCES IN NM

NOTE: RADAR REQUIRED

NOTE: RNAV-1 NAVIGATION SPECIFICATION GNSS REQUIRED

NOTE: REFER TO BACK PAGE FOR
- FORMAL AND TABULAR DESCRIPTIONS
- RADIO COM FAILURE PROCEDURES



MABAL 1A (STAR) RNAV GNSS RWY 02L/02C - DESCRIPTIONS**Formal & Abbreviated Descriptions**

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
From MABAL. To KILOT, turn right. To VINIL, turn left. To PIBAP at or below FL210, speed 250kts. To PASPU, speed 220kts. To NYLON, turn left. To POSUB at or above 6000ft, speed 220kts, turn right. To SANAT at or above 4000ft, speed 190kts.	MABAL - KILOT [R] - VINIL [L] - PIBAP [FL210-; K250] - PASPU [K220] - NYLON [L] - POSUB [A060+; K220; R] - SANAT [A040+; K190]	IF TF TF TF TF TF TF TF	N N N N N N N N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
IF	MABAL	-	-	-0.5	-	-	-	RNAV1
TF	KILOT	-	231(231.1)	-0.5	R	-	-	RNAV1
TF	VINIL	-	258(258.0)	-0.5	L	-	-	RNAV1
TF	PIBAP	-	180(180.0)	-0.5	-	FL210-	K250	RNAV1
TF	PASPU	-	180(180.0)	-0.5	-	-	K220	RNAV1
TF	NYLON	-	180(180.5)	-0.5	L	-	-	RNAV1
TF	POSUB	-	172(172.5)	-0.5	R	A060+	K220	RNAV1
TF	SANAT	-	203(203.1)	-0.5	-	A040+	K190	RNAV1

RADIO COMMUNICATIONS FAILURE PROCEDURE

1	SET TRANSPONDER TO MODE A/C CODE 7600
2	When cleared via MABAL 1A by Singapore ATC <ul style="list-style-type: none"> (a) Maintain last assigned flight level or altitude and proceed on MABAL 1A to SANAT, then direct to SAMKO (b) From SAMKO commence descent and carry out appropriate landing procedure for RWY 02 as close as possible to EAT or ETA (c) If unable to effect a landing, refer to Singapore AIP for missed approach procedure
3	No clearance or instruction received from Singapore ATC <ul style="list-style-type: none"> - Refer to Singapore AIP for radio communications failure procedure

**STANDARD ARRIVAL CHART
RNAV (GNSS) -
INSTRUMENT (STAR)**

ACC 134.2
APP 124.05 / 120.3
ARR 119.3
TWR 118.6 / 118.25

TRANSITION ALTITUDE
11 000ft

D-ATIS AP ID-WSSS
128.6

**SINGAPORE/Singapore Changi
RWY 20R/C
KARTO ONE BRAVO ARRIVAL
KARTO 1B**

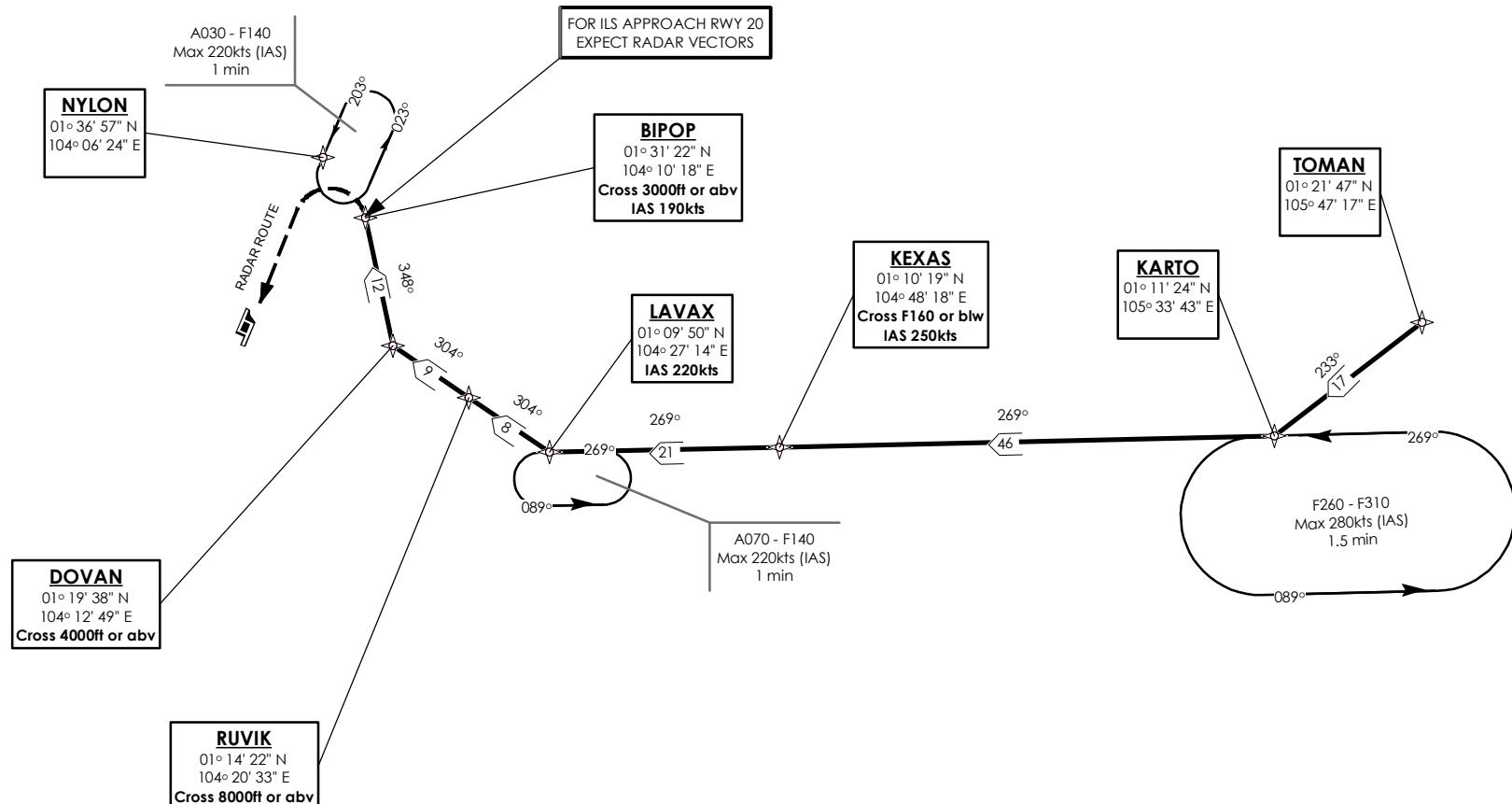
ELEV, ALT IN FEET
BEARINGS, TRACKS AND
RADIALS ARE MAGNETIC
VAR 26°E (2015)

DISTANCES IN NM

NOTE: RADAR REQUIRED

NOTE: RNAV-1 NAVIGATION SPECIFICATION GNSS REQUIRED

NOTE: REFER TO BACK PAGE FOR
- FORMAL AND TABULAR DESCRIPTIONS
- RADIO COM FAILURE PROCEDURES



NOT TO SCALE

KARTO 1B (STAR) RNAV GNSS RWY 20R/20C - DESCRIPTIONS**Formal & Abbreviated Descriptions**

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
From TOMAN. To KARTO, turn right. To KEXAS at or below FL160, speed 250kts. To LAVAX, speed 220kts, turn right. To RUVIK at or above 8000ft. To DOVAN at or above 4000ft, turn right. To BIPOP at or above 3000ft, speed 190kts.	TOMAN - KARTO [R] - KEXAS [FL160-; K250] - LAVAX [K220; R] - RUVIK [A080+] - DOVAN [A040+; R] - BIPOP [A030+; K190]	IF TF TF TF TF TF TF	N N N N N N N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
IF	TOMAN	-	-	-0.5	-	-	-	RNAV1
TF	KARTO	-	233(233.5)	-0.5	R	-	-	RNAV1
TF	KEXAS	-	269(269.5)	-0.5	-	FL160-	K250	RNAV1
TF	LAVAX	-	269(269.5)	-0.5	R	-	K220	RNAV1
TF	RUVIK	-	304(304.0)	-0.5	-	A080+	-	RNAV1
TF	DOVAN	-	304(304.1)	-0.5	R	A040+	-	RNAV1
TF	BIPOP	-	348(348.5)	-0.5	-	A030+	K190	RNAV1

RADIO COMMUNICATIONS FAILURE PROCEDURE

1	SET TRANSPONDER TO MODE A/C CODE 7600
2	When cleared via KARTO 1B by Singapore ATC <ul style="list-style-type: none"> (a) Maintain last assigned flight level or altitude and proceed on KARTO 1B to BIPOP, then direct to NYLON (b) From NYLON commence descent and carry out appropriate landing procedure for RWY 20 as close as possible to EAT or ETA (c) If unable to effect a landing, refer to Singapore AIP for missed approach procedure
3	No clearance or instruction received from Singapore ATC <ul style="list-style-type: none"> - Refer to Singapore AIP for radio communications failure procedure

**STANDARD ARRIVAL CHART
RNAV (GNSS) -
INSTRUMENT (STAR)**

ACC 133.8
APP 124.05 / 120.3
ARR 119.3
TWR 118.6 / 118.25

TRANSITION ALTITUDE
11 000ft

D-ATIS AP ID-WSSS
128.6

**SINGAPORE/Singapore Changi
RWY 02L/C**
BIKTA ONE ALPHA ARRIVAL
BIKTA 1A

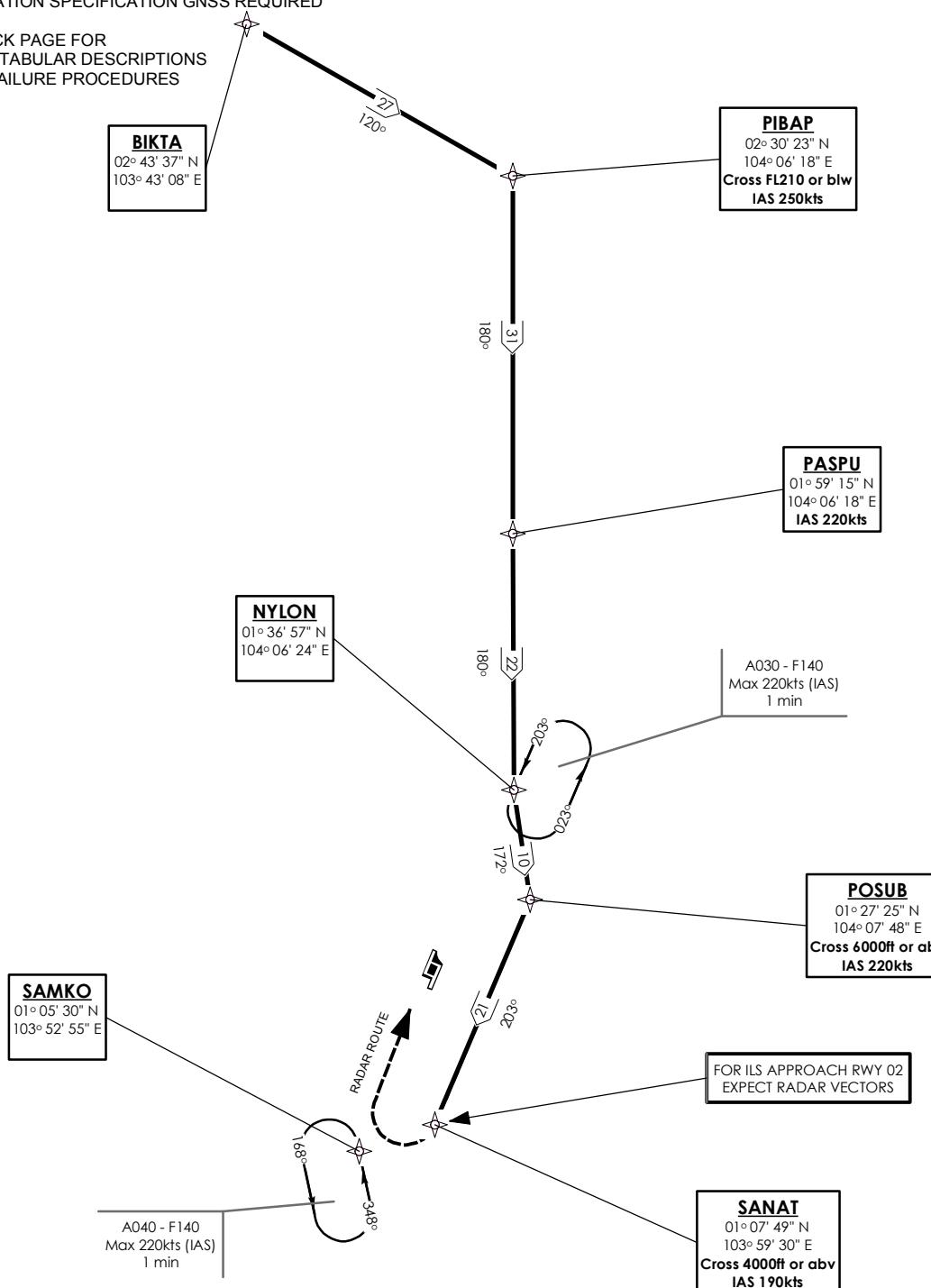
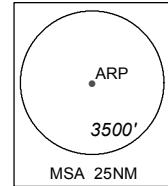
ELEV, ALT IN FEET
BEARINGS, TRACKS AND
RADIALS ARE MAGNETIC
VAR 26°E (2015)

DISTANCES IN NM

NOTE: RADAR REQUIRED

NOTE: RNAV-1 NAVIGATION SPECIFICATION GNSS REQUIRED

NOTE: REFER TO BACK PAGE FOR
- FORMAL AND TABULAR DESCRIPTIONS
- RADIO COM FAILURE PROCEDURES



NOT TO SCALE

BIKTA 1A (STAR) RNAV GNSS RWY 02L/02C - DESCRIPTIONS

Formal & Abbreviated Descriptions

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
From BIKTA. To PIBAP at or below FL210, speed 250kts, turn right. To PASPU, speed 220kts. To NYLON, turn left. To POSUB at or above 6000ft, speed 220kts, turn right. To SANAT at or above 4000ft, speed 190kts.	BIKTA - PIBAP [FL210-; K250; R] - PASPU [K220] - NYLON [L] - POSUB [A060+; K220; R] - SANAT [A040+; K190]	IF TF TF TF TF TF	N N N N N N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
IF	BIKTA	-	-	-0.5	-	-	-	RNAV1
TF	PIBAP	-	120(120.5)	-0.5	R	FL210-	K250	RNAV1
TF	PASPU	-	180(180.0)	-0.5	-	-	K220	RNAV1
TF	NYLON	-	180(180.5)	-0.5	L	-	-	RNAV1
TF	POSUB	-	172(172.5)	-0.5	R	A060+	K220	RNAV1
TF	SANAT	-	203(203.1)	-0.5	-	A040+	K190	RNAV1

RADIO COMMUNICATIONS FAILURE PROCEDURE

1	SET TRANSPONDER TO MODE A/C CODE 7600
2	When cleared via BIKTA 1A by Singapore ATC <ul style="list-style-type: none"> (a) Maintain last assigned flight level or altitude and proceed on BIKTA 1A to SANAT, then direct to SAMKO (b) From SAMKO commence descent and carry out appropriate landing procedure for RWY 02 as close as possible to EAT or ETA (c) If unable to effect a landing, refer to Singapore AIP for missed approach procedure
3	No clearance or instruction received from Singapore ATC <ul style="list-style-type: none"> - Refer to Singapore AIP for radio communications failure procedure

**STANDARD ARRIVAL CHART
RNAV (GNSS) -
INSTRUMENT (STAR)**

ACC 133.8
APP 124.05 / 120.3
ARR 119.3
TWR 118.6 / 118.25

TRANSITION ALTITUDE
11 000ft

D-ATIS AP ID-WSSS
128.6

**SINGAPORE/Singapore Changi
RWY 20R/C**
BIKTA ONE BRAVO ARRIVAL
BIKTA 1B

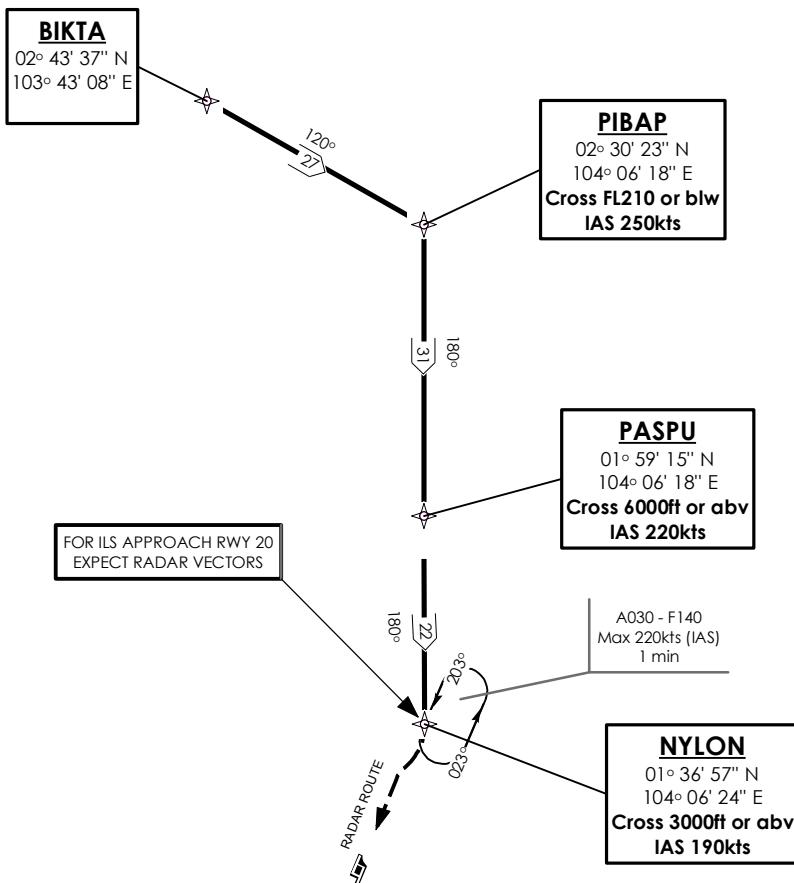
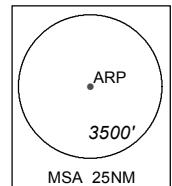
ELEV, ALT IN FEET
BEARINGS, TRACKS AND
RADIALS ARE MAGNETIC
VAR 26°E (2015)

DISTANCES IN NM

NOTE: RADAR REQUIRED

NOTE: RNAV-1 NAVIGATION SPECIFICATION GNSS REQUIRED

NOTE: REFER TO BACK PAGE FOR
- FORMAL AND TABULAR DESCRIPTIONS
- RADIO COM FAILURE PROCEDURES



NOT TO SCALE

BIKTA 1B (STAR) RNAV GNSS RWY 20R/20C - DESCRIPTIONS

Formal & Abbreviated Descriptions

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
From BIKTA. To PIBAP at or below FL210, speed 250kts, turn right. To PASPU, at or above 6000ft, speed 220kts. To NYLON at or above 3000ft, speed 190kts.	BIKTA - PIBAP [FL210-; K250; R] - PASPU [A060+; K220] - NYLON [A030+; K190]	IF TF TF TF	N N N N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
IF	BIKTA	-	-	-0.5	-	-	-	RNAV1
TF	PIBAP	-	120(120.5)	-0.5	R	FL210-	K250	RNAV1
TF	PASPU	-	180(180.0)	-0.5	-	A060+	K220	RNAV1
TF	NYLON	-	180(180.5)	-0.5	-	A030+	K190	RNAV1

RADIO COMMUNICATIONS FAILURE PROCEDURE

1	SET TRANSPONDER TO MODE A/C CODE 7600
2	When cleared via BIKTA 1B by Singapore ATC <ul style="list-style-type: none"> (a) Maintain last assigned flight level or altitude and proceed on BIKTA 1B to NYLON (b) From NYLON commence descent and carry out appropriate landing procedure for RWY 20 as close as possible to EAT or ETA (c) If unable to effect a landing, refer to Singapore AIP for missed approach procedure
3	No clearance or instruction received from Singapore ATC <ul style="list-style-type: none"> - Refer to Singapore AIP for radio communications failure procedure

**STANDARD ARRIVAL CHART
RNAV (GNSS) -
INSTRUMENT (STAR)**

ACC 133.8
APP 124.05 / 120.3
ARR 119.3
TWR 118.6 / 118.25

TRANSITION ALTITUDE
11 000ft

D-ATIS AP ID-WSSS
128.6

**SINGAPORE/Singapore Changi
RWY 20R/C**
MABAL ONE BRAVO ARRIVAL
MABAL 1B

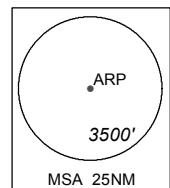
ELEV, ALT IN FEET
BEARINGS, TRACKS AND
RADIALS ARE MAGNETIC
VAR 26°E (2015)

DISTANCES IN NM

NOTE: RADAR REQUIRED

NOTE: RNAV-1 NAVIGATION SPECIFICATION GNSS REQUIRED

NOTE: REFER TO BACK PAGE FOR
- FORMAL AND TABULAR DESCRIPTIONS
- RADIO COM FAILURE PROCEDURES



VINIL
02° 55' 00" N
104° 06' 18" E

F160 - F260
Max 250kts (IAS)
1.5 min

MABAL
03° 28' 26" N
105° 12' 36" E

F280 - F350
Max 300kts (IAS)
1.5 min

KILOT
03° 02' 17" N
104° 40' 23" E

PIBAP
02° 30' 23" N
104° 06' 18" E
Cross FL210 or blw
IAS 250kts

PASPU
01° 59' 15" N
104° 06' 18" E
Cross 6000ft or abv
IAS 220kts

FOR ILS APPROACH RWY 20
EXPECT RADAR VECTORS

A030 - F140
Max 220kts (IAS)
1 min

NYLON
01° 36' 57" N
104° 06' 24" E
Cross 3000ft or abv
IAS 190kts

RADAR ROUTE

NOT TO SCALE

MABAL 1B (STAR) RNAV GNSS RWY 20R/20C - DESCRIPTIONS**Formal & Abbreviated Descriptions**

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
From MABAL. To KILOT, turn right. To VINIL, turn left. To PIBAP at or below FL210, speed 250kts. To PASPU, at or above 6000ft, speed 220kts. To NYLON at or above 3000ft, speed 190kts.	MABAL - KILOT [R] - VINIL [L] - PIBAP [FL210-; K250] - PASPU [A060+; K220] - NYLON [A030+; K190]	IF TF TF TF TF TF	N N N N N N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
IF	MABAL	-	-	-0.5	-	-	-	RNAV1
TF	KILOT	-	231(231.1)	-0.5	R	-	-	RNAV1
TF	VINIL	-	258(258.0)	-0.5	L	-	-	RNAV1
TF	PIBAP	-	180(180.0)	-0.5	-	FL210-	K250	RNAV1
TF	PASPU	-	180(180.0)	-0.5	-	A060+	K220	RNAV1
TF	NYLON	-	180(180.5)	-0.5	-	A030+	K190	RNAV1

RADIO COMMUNICATIONS FAILURE PROCEDURE

1	SET TRANSPONDER TO MODE A/C CODE 7600
2	When cleared via MABAL 1B by Singapore ATC <ul style="list-style-type: none"> (a) Maintain last assigned flight level or altitude and proceed on MABAL 1B to NYLON (b) From NYLON commence descent and carry out appropriate landing procedure for RWY 20 as close as possible to EAT or ETA (c) If unable to effect a landing, refer to Singapore AIP for missed approach procedure
3	No clearance or instruction received from Singapore ATC <ul style="list-style-type: none"> - Refer to Singapore AIP for radio communications failure procedure

**STANDARD ARRIVAL CHART
RNAV (GNSS) -
INSTRUMENT (STAR)**

ACC 133.8
APP 124.05 / 120.3
ARR 119.3
TWR 118.6 / 118.25

TRANSITION ALTITUDE

11 000ft

D-ATIS AP ID-WSSS
128.6

**SINGAPORE/Singapore Changi
RWY 02L**
**LEBAR TWO ALPHA ARRIVAL
LEBAR 2A**

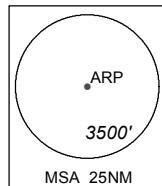
ELEV, ALT IN FEET
BEARINGS, TRACKS AND
RADIALS ARE MAGNETIC
VAR 26'E (2015)

DISTANCES IN NM

NOTE: RADAR REQUIRED**NOTE:** RNAV-1 NAVIGATION SPECIFICATION GNSS REQUIRED

NOTE: REFER TO BACK PAGE FOR
- FORMAL AND TABULAR DESCRIPTIONS
- RADIO COM FAILURE PROCEDURES

PASPU
01° 59' 15" N
104° 06' 18" E
IAS 220kts



19°
(35)

PAPA UNIFORM
DVOR/DME 115.1
PU ~~---~~
01° 25' 24" N
103° 56' 00" E
60M
Cross 7,000ft or abv

DEVIATION IS NOT PERMITTED
BETWEEN SJ AND PU

WSR38
10,000ft ALT
GND

20°
(3)

SINJON
DVOR/DME 113.5
SJ ~~---~~
01° 13' 21" N
103° 51' 15" E
60M
Cross 7,000ft or abv

PALGA
01° 10' 59" N
103° 47' 59" E
IAS 220kts

PAMSI
01° 04' 59" N
103° 48' 45" E

FOR ILS APPROACH RWY 02
EXPECT RADAR VECTORS

SAMKO
01° 05' 30" N
103° 52' 55" E
Cross 4,000ft or abv
IAS 190kts

RADAR ROUTE

NOT TO SCALE

LEBAR 2A (STAR) RNAV GNSS RWY 02L - DESCRIPTIONS

Formal & Abbreviated Descriptions

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
From PASPU, speed 220kts. To PU at or above 7000ft, turn right. To SJ at or above 7000ft, turn right. To PALGA, speed 220kts, turn left. To PAMSI, turn left. To SAMKO at or above 4000ft, speed 190kts.	PASPU [K220] - PU [A070+; R] - SJ [A070+; R] - PALGA [K220; L] - PAMSI [L] - SAMKO [A040+; K190]	IF TF TF TF TF TF	N N N N N N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
IF	PASPU	-	-	-0.5	-	-	K220	RNAV1
TF	PU	-	197(197.5)	-0.5	R	A070+	-	RNAV1
TF	SJ	-	202(202.5)	-0.5	R	A070+	-	RNAV1
TF	PALGA	-	234(234.5)	-0.5	L	-	K220	RNAV1
TF	PAMSI	-	173(173.5)	-0.5	L	-	-	RNAV1
TF	SAMKO	-	082(082.5)	-0.5	-	A040+	K190	RNAV1

RADIO COMMUNICATIONS FAILURE PROCEDURE

1	SET TRANSPONDER TO MODE A/C CODE 7600
2	When cleared via LEBAR 2A by Singapore ATC (a) Maintain last assigned flight level or altitude and proceed on LEBAR 2A to SAMKO (b) From SAMKO commence descent and carry out appropriate landing procedure for RWY 02L as close as possible to EAT or ETA (c) If unable to effect a landing, refer to Singapore AIP for missed approach procedure
3	No clearance or instruction received from Singapore ATC - Refer to Singapore AIP for radio communications failure procedure

**STANDARD ARRIVAL CHART
RNAV (GNSS) -
INSTRUMENT (STAR)**

ACC 134.4
APP 124.05 / 120.3
ARR 119.3
TWR 118.6 / 118.25

TRANSITION ALTITUDE
11 000ft

D-ATIS AP ID-WSSS
128.6

**SINGAPORE/Singapore Changi
RWY 02L/C
SURGA ONE ALPHA ARRIVAL
SURGA 1A**

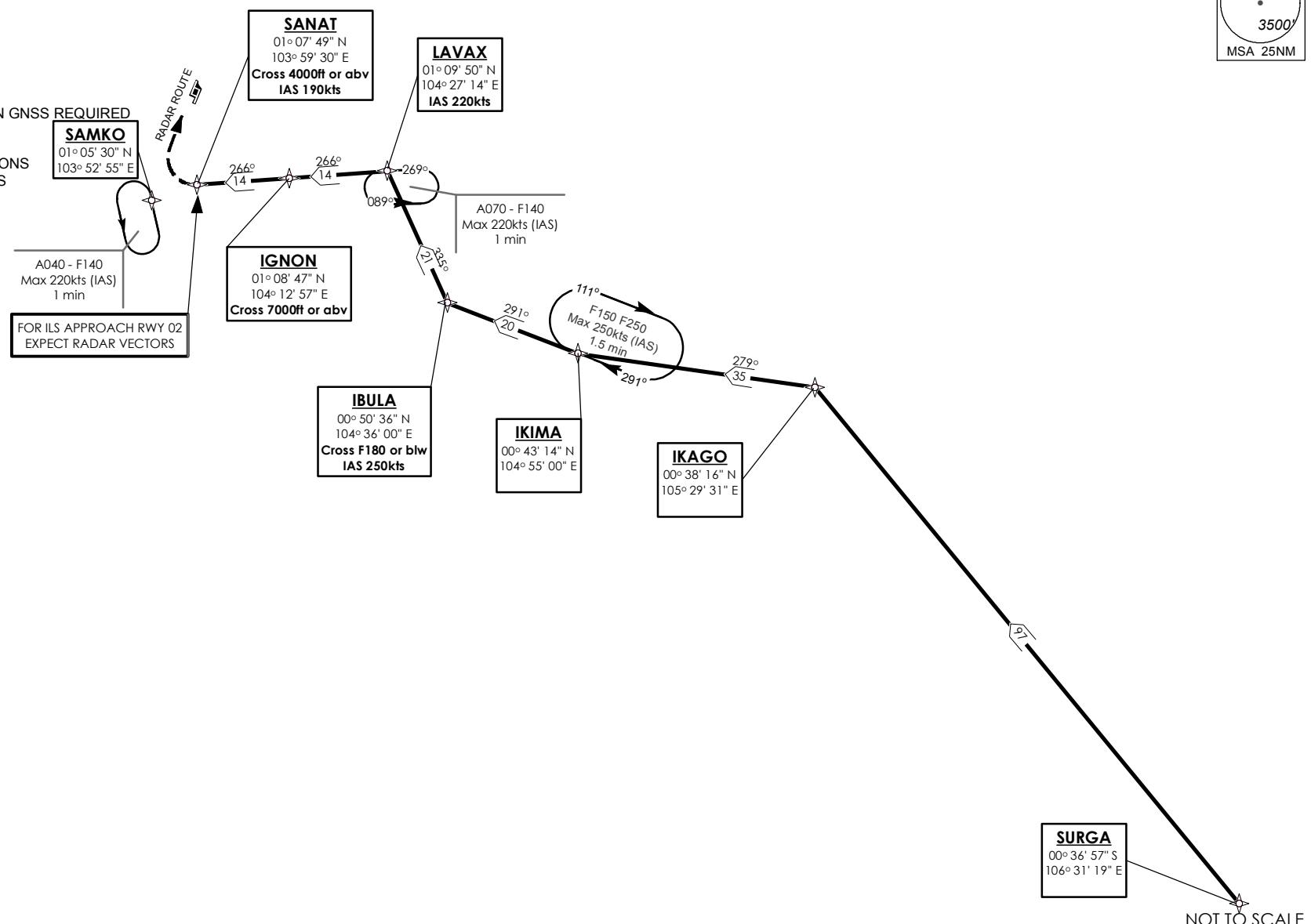
ELEV, ALT IN FEET
BEARINGS, TRACKS AND
RADIALS ARE MAGNETIC
VAR 26°E (2015)

DISTANCES IN NM

NOTE: RADAR REQUIRED

NOTE: RNAV-1 NAVIGATION SPECIFICATION GNSS REQUIRED

NOTE: REFER TO BACK PAGE FOR
- FORMAL AND TABULAR DESCRIPTIONS
- RADIO COM FAILURE PROCEDURES



SURGA 1A (STAR) RNAV GNSS RWY 02L/02C - DESCRIPTIONS**Formal & Abbreviated Descriptions**

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
From SURGA. To IKAGO, turn left. To IKIMA, turn right. To IBULA at or below FL180, speed 250kts, turn right. To LAVAX, speed 220kts, turn left. To IGNON at or above 7000ft. To SANAT at or above 4000ft, speed 190kts.	SURGA - IKAGO [L] - IKIMA [R] - IBULA [FL180-; K250; R] - LAVAX [K220; L] - IGNON [A070+] - SANAT [A040+; K190]	IF TF TF TF TF TF TF	N N N N N N N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
IF	SURGA	-	-	-0.5	-	-	-	RNAV1
TF	IKAGO	-	320(320.4)	-0.5	L	-	-	RNAV1
TF	IKIMA	-	279(279.5)	-0.5	R	-	-	RNAV1
TF	IBULA	-	291(291.1)	-0.5	R	FL180-	K250	RNAV1
TF	LAVAX	-	335(335.4)	-0.5	L	-	K220	RNAV1
TF	IGNON	-	266(266.5)	-0.5	-	A070+	-	RNAV1
TF	SANAT	-	266(266.5)	-0.5	-	A040+	K190	RNAV1

RADIO COMMUNICATIONS FAILURE PROCEDURE

1	SET TRANSPONDER TO MODE A/C CODE 7600
2	When cleared via SURGA 1A by Singapore ATC <ul style="list-style-type: none"> (a) Maintain last assigned flight level or altitude and proceed on SURGA 1A to SANAT, then direct to SAMKO (b) From SAMKO commence descent and carry out appropriate landing procedure for RWY 02 as close as possible to EAT or ETA (c) If unable to effect a landing, refer to Singapore AIP for missed approach procedure
3	No clearance or instruction received from Singapore ATC <ul style="list-style-type: none"> - Refer to Singapore AIP for radio communications failure procedure

**STANDARD ARRIVAL CHART
RNAV (GNSS) -
INSTRUMENT (STAR)**

ACC 134.4
APP 124.6 / 120.3
ARR 119.3
TWR 118.6 / 118.25

TRANSITION ALTITUDE
11 000ft

D-ATIS AP ID-WSSS
128.6

**SINGAPORE/Singapore Changi
RWY 02L/C
REPOV ONE ALPHA ARRIVAL
REPOV 1A**

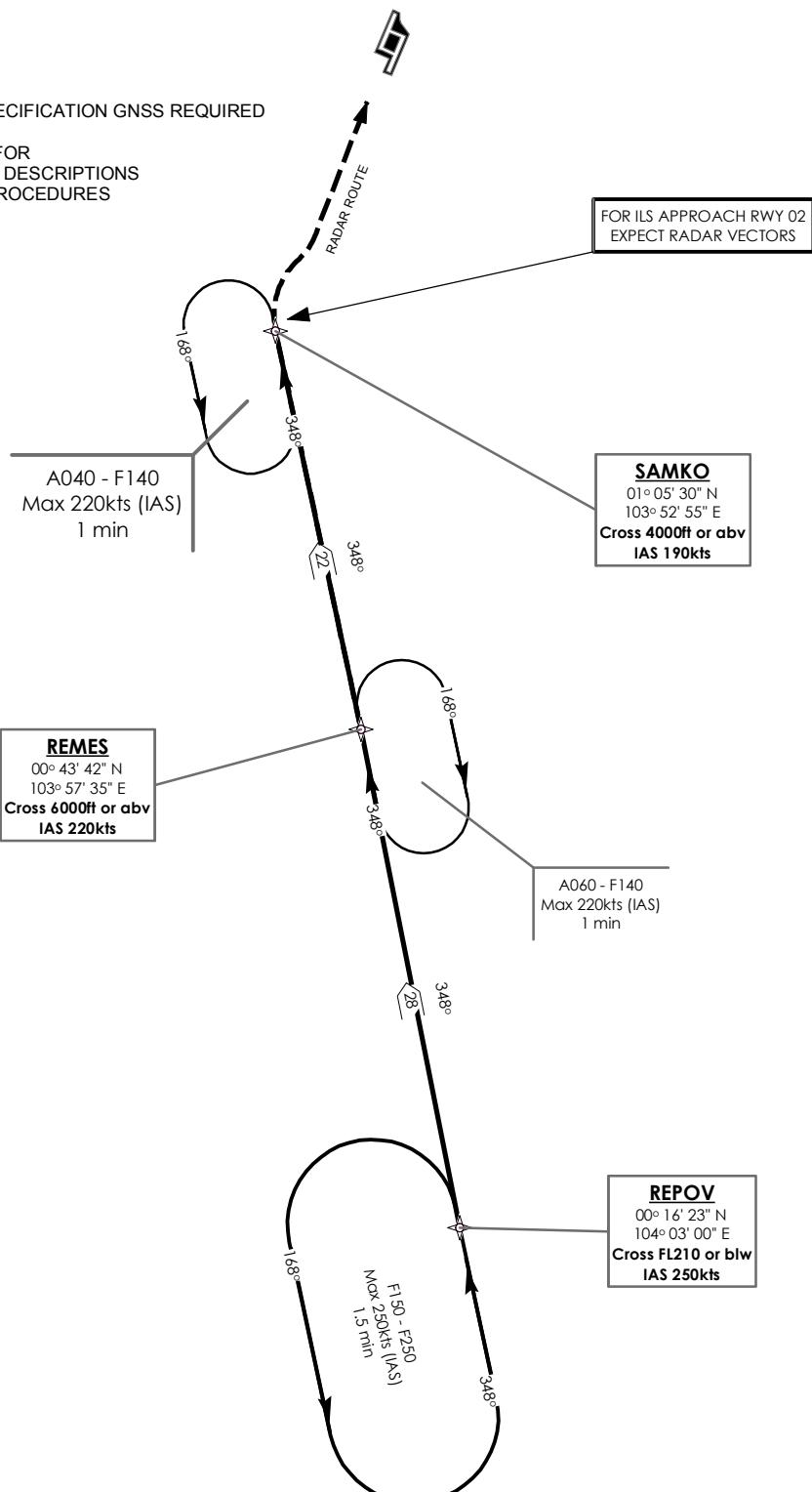
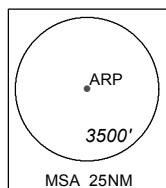
ELEV, ALT IN FEET
BEARINGS, TRACKS AND
RADIALS ARE MAGNETIC
VAR 26°E (2015)

DISTANCES IN NM

NOTE: RADAR REQUIRED

NOTE: RNAV-1 NAVIGATION SPECIFICATION GNSS REQUIRED

NOTE: REFER TO BACK PAGE FOR
- FORMAL AND TABULAR DESCRIPTIONS
- RADIO COM FAILURE PROCEDURES



NOT TO SCALE

REPOV 1A (STAR) RNAV GNSS RWY 02L/02C - DESCRIPTIONS**Formal & Abbreviated Descriptions**

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
From REPOV at or below FL210, speed 250kts. To REMES at or above 6000ft, speed 220kts. To SAMKO at or above 4000ft, speed 190kts.	REPOV [FL210-; K250] - REMES [A060+; K220] - SAMKO [A040+; K190]	IF TF TF	N N N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
IF	REPOV	-	-	-0.5	-	FL210-	K250	RNAV1
TF	REMES	-	348(348.7)	-0.5	-	A060+	K220	RNAV1
TF	SAMKO	-	348(348.5)	-0.5	-	A040+	K190	RNAV1

RADIO COMMUNICATIONS FAILURE PROCEDURE

1	SET TRANSPONDER TO MODE A/C CODE 7600
2	When cleared via REPOV 1A by Singapore ATC <ul style="list-style-type: none"> (a) Maintain last assigned flight level or altitude and proceed on REPOV 1A to SAMKO (b) From SAMKO commence descent and carry out appropriate landing procedure for RWY 02 as close as possible to EAT or ETA (c) If unable to effect a landing, refer to Singapore AIP for missed approach procedure
3	No clearance or instruction received from Singapore ATC <ul style="list-style-type: none"> - Refer to Singapore AIP for radio communications failure procedure

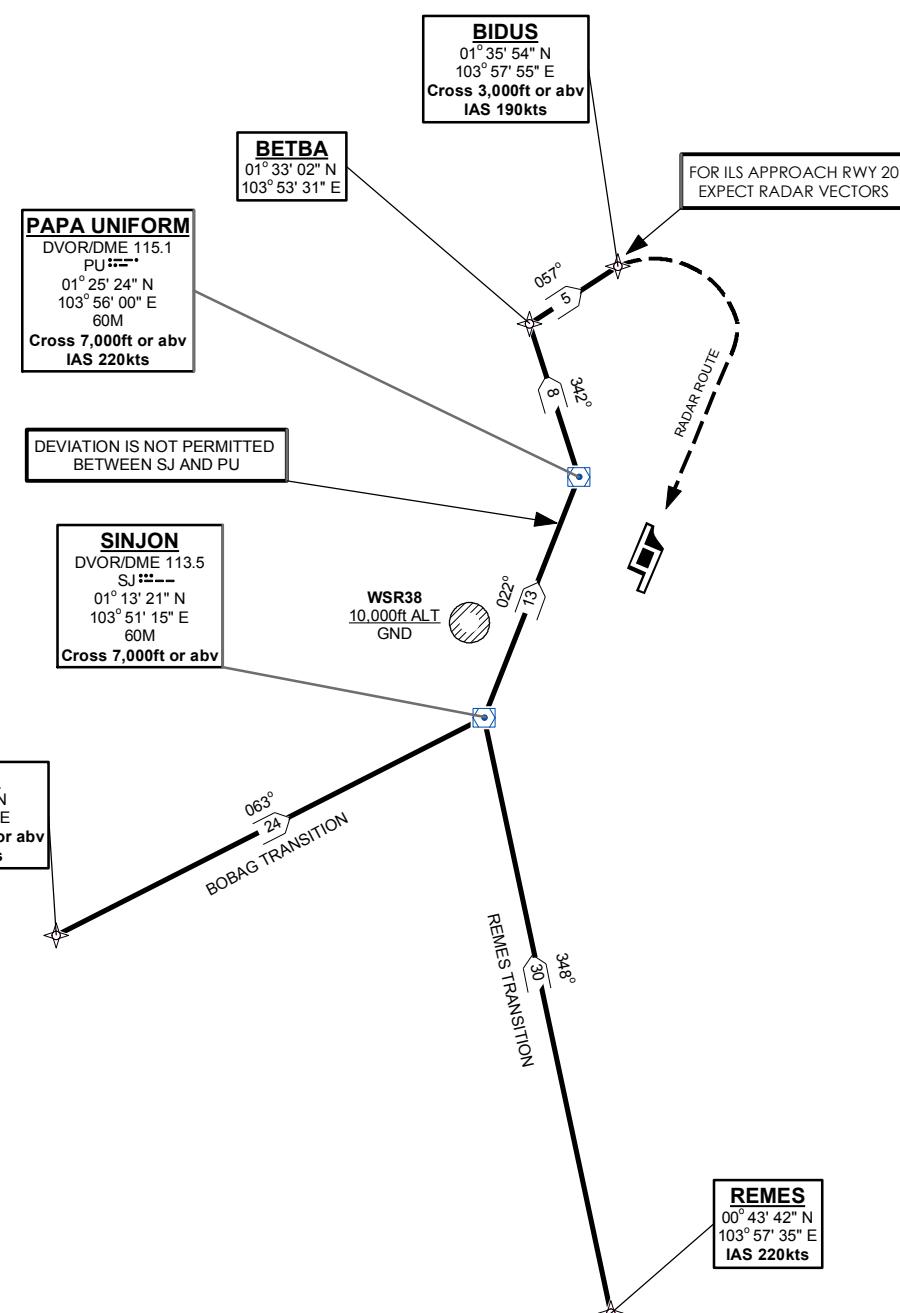
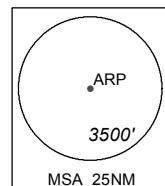
**STANDARD ARRIVAL CHART
RNAV (GNSS) -
INSTRUMENT (STAR)**

ACC 133.25 / 134.4
APP 124.6 / 120.3
ARR 119.3
TWR 118.6 / 118.25

TRANSITION ALTITUDE
11 000ft

D-ATIS AP ID-WSSS
128.6

**SINGAPORE/Singapore Changi
RWY 20R**
**LEBAR TWO BRAVO ARRIVAL
LEBAR 2B**



LEBAR 2B (STAR) RNAV GNSS RWY 20R - DESCRIPTIONS**Formal & Abbreviated Descriptions**

Formal Description (BOBAG Transition)	Abbreviated Description	Path Terminator	Fly-Over required
From BOBAG at or above 10000ft, speed 220kts. To SJ at or above 7000ft, turn left. To PU at or above 7000ft, speed 220kts, turn left. To BETBA, turn right. To BIDUS at or above 3000ft, speed 190kts.	BOBAG [A100+; K220] - SJ [A070+; L] - PU [A070+; K220; L] - BETBA [R] - BIDUS [A030+; K190]	IF TF TF TF TF	N N N N N
Formal Description (REMES Transition)	Abbreviated Description	Path Terminator	Fly-Over required
From REMES, speed 220kts. To SJ at or above 7000ft, turn right. To PU at or above 7000ft, speed 220kts, turn left. To BETBA, turn right. To BIDUS at or above 3000ft, speed 190kts.	REMES [K220] - SJ [A070+; R] - PU [A070+; K220; L] - BETBA [R] - BIDUS [A030+; K190]	IF TF TF TF TF	N N N N N

Tabular Descriptions (BOBAG Transition)

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
IF	BOBAG	-	-	-0.5	-	A100+	K220	RNAV1
TF	SJ	-	063(063.5)	-0.5	L	A070+	-	RNAV1
TF	PU	-	022(022.5)	-0.5	L	A070+	K220	RNAV1
TF	BETBA	-	342(342.5)	-0.5	R	-	-	RNAV1
TF	BIDUS	-	057(057.5)	-0.5	-	A030+	K190	RNAV1

Tabular Descriptions (REMES Transition)

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
IF	REMES	-	-	-0.5	-	-	K220	RNAV1
TF	SJ	-	348(348.5)	-0.5	R	A070+	-	RNAV1
TF	PU	-	022(022.5)	-0.5	L	A070+	K220	RNAV1
TF	BETBA	-	342(342.5)	-0.5	R	-	-	RNAV1
TF	BIDUS	-	057(057.5)	-0.5	-	A030+	K190	RNAV1

RADIO COMMUNICATIONS FAILURE PROCEDURE

1	SET TRANSPONDER TO MODE A/C CODE 7600
2	When cleared via LEBAR 2B by Singapore ATC <ul style="list-style-type: none"> (a) Maintain last assigned flight level or altitude and proceed on LEBAR 2B to BIDUS, then direct to NYLON (b) From NYLON commence descent and carry out appropriate landing procedure for RWY 20R as close as possible to EAT or ETA (c) If unable to effect a landing, refer to Singapore AIP for missed approach procedure
3	No clearance or instruction received from Singapore ATC <ul style="list-style-type: none"> - Refer to Singapore AIP for radio communications failure procedure

**STANDARD ARRIVAL CHART
RNAV (GNSS) -
INSTRUMENT (STAR)**

ACC 134.4
APP 124.6 / 120.3
ARR 119.3
TWR 118.6 / 118.25

TRANSITION ALTITUDE
11 000ft

D-ATIS AP ID-WSSS
128.6

**SINGAPORE/Singapore Changi
RWY 20R/C**
REPOV ONE BRAVO ARRIVAL
REPOV 1B

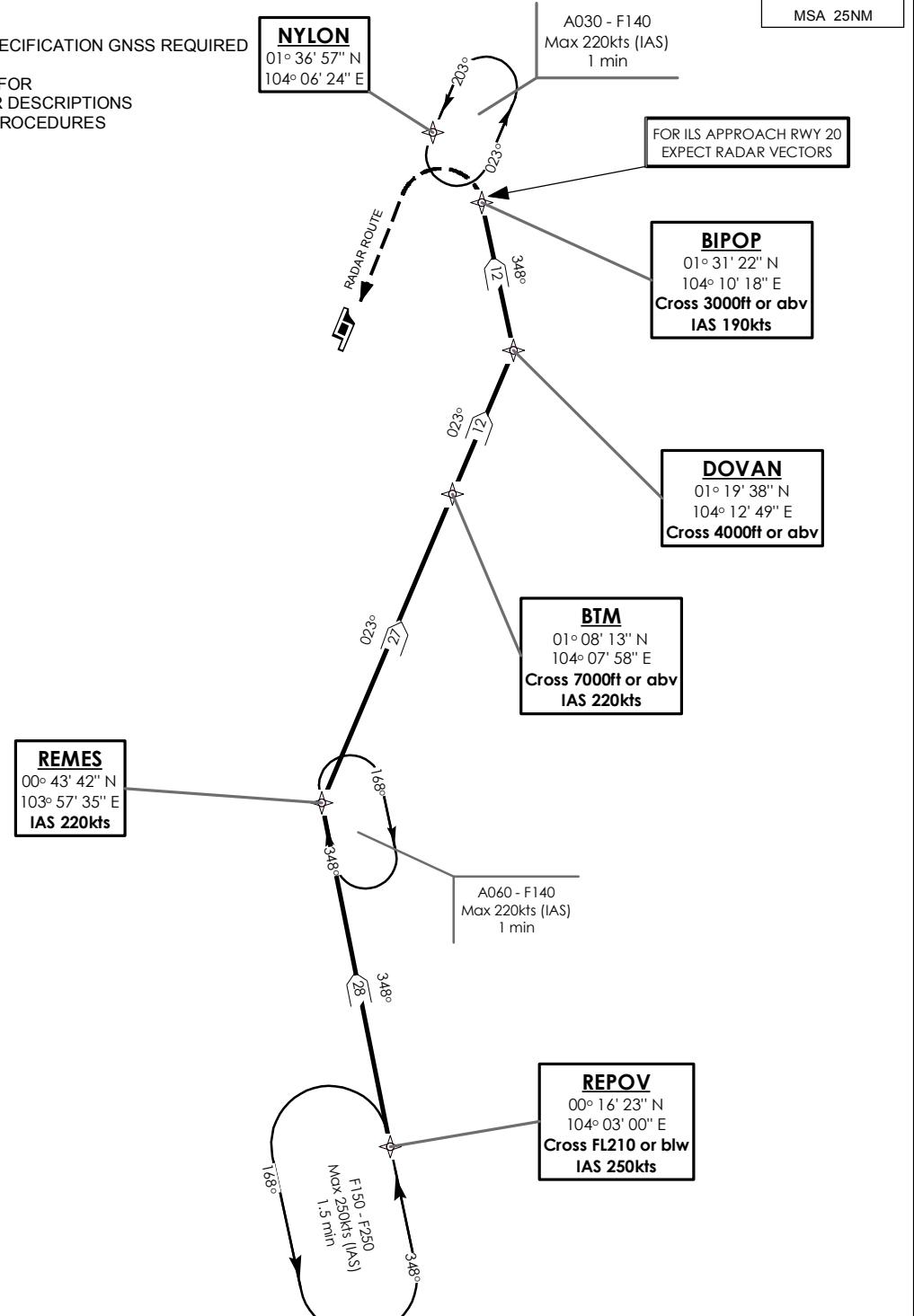
ELEV, ALT IN FEET
BEARINGS, TRACKS AND
RADIALS ARE MAGNETIC
VAR 26°E (2015)

DISTANCES IN NM

NOTE: RADAR REQUIRED

NOTE: RNAV-1 NAVIGATION SPECIFICATION GNSS REQUIRED

NOTE: REFER TO BACK PAGE FOR
- FORMAL AND TABULAR DESCRIPTIONS
- RADIO COM FAILURE PROCEDURES



REPOV 1B (STAR) RNAV GNSS RWY 20R/20C - DESCRIPTIONS**Formal & Abbreviated Descriptions**

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
From REPOV at or below FL210, speed 250kts. To REMES, speed 220kts, turn right. To BTM at or above 7000ft, speed 220kts. To DOVAN at or above 4000ft, turn left. To BIPOP at or above 3000ft, speed 190kts.	REPOV [FL210-; K250] - REMES [K220; R] - BTM [A070+; K220] - DOVAN [A040+; L] - BIPOP [A030+; K190]	IF TF TF TF TF	N N N N N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
IF	REPOV	-	-	-0.5	-	FL210-	K250	RNAV1
TF	REMES	-	348(348.7)	-0.5	R	-	K220	RNAV1
TF	BTM	-	023(023.1)	-0.5	-	A070+	K220	RNAV1
TF	DOVAN	-	023(023.1)	-0.5	L	A040+	-	RNAV1
TF	BIPOP	-	348(348.5)	-0.5	-	A030+	K190	RNAV1

RADIO COMMUNICATIONS FAILURE PROCEDURE

1	SET TRANSPONDER TO MODE A/C CODE 7600
2	When cleared via REPOV 1B by Singapore ATC <ul style="list-style-type: none"> (a) Maintain last assigned flight level or altitude and proceed on REPOV 1B to BIPOP, then direct to NYLON (b) From NYLON commence descent and carry out appropriate landing procedure for RWY 20 as close as possible to EAT or ETA (c) If unable to effect a landing, refer to Singapore AIP for missed approach procedure
3	No clearance or instruction received from Singapore ATC <ul style="list-style-type: none"> - Refer to Singapore AIP for radio communications failure procedure

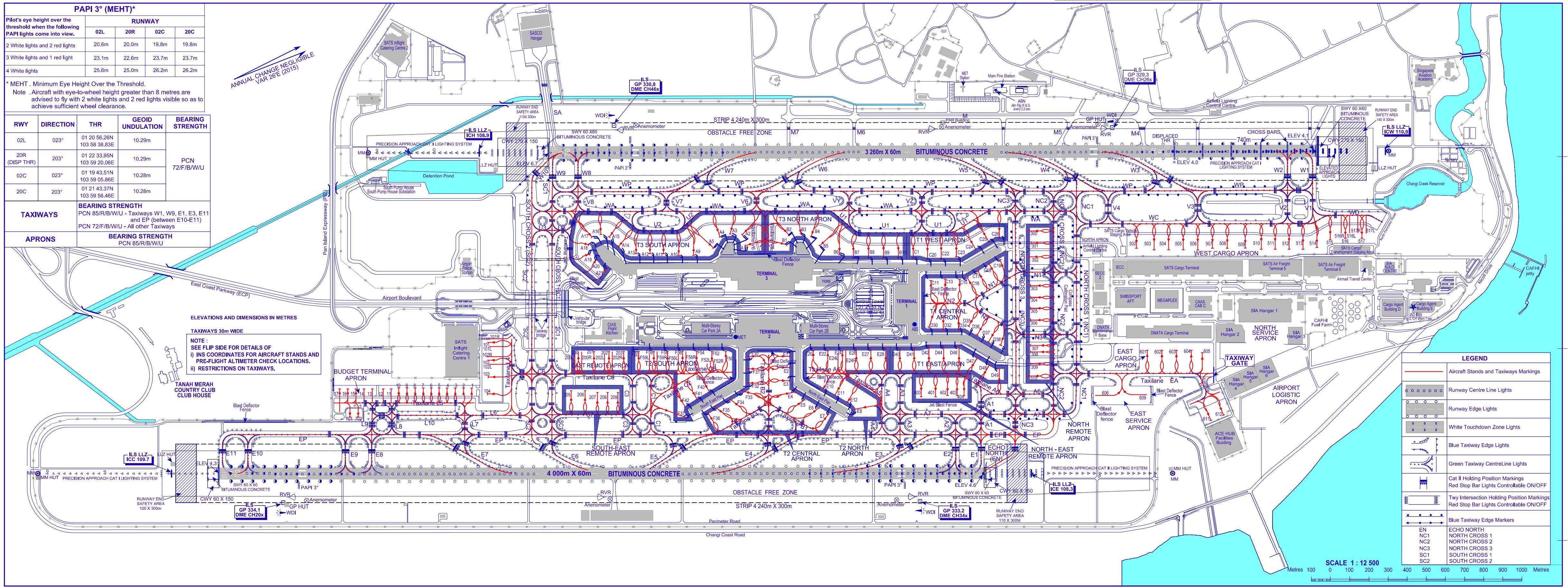
AERODROME CHART - ICAO

01° 21' 33"N
103° 59' 22"E

AERODROME ELEVATION 6.66m

TWR 118.6 / 118.25
GND 124.3 / 121.85 / 121.725
DELIVERY 121.65

SINGAPORE/SINGAPORE CHANGI



INS COORDINATES FOR AIRCRAFT STANDS AND PRE-FLIGHT ALTIMETER CHECK LOCATIONS

LOCATION	STAND NR	NORTH LAT	EAST LONG	ELEVATION
T3 SOUTH APRON	A1	01 21 21.52	103 59 06.25	4.75m (15.58ft)
	A2	01 21 21.75	103 59 04.00	4.65m (15.26ft)
	A3	01 21 19.86	103 59 02.79	4.66m (15.29ft)
	A4	01 21 17.61	103 59 02.54	4.79m (15.72ft)
	A5	01 21 15.50	103 59 03.62	4.86m (15.94ft)
	A9	01 21 12.56	103 59 03.65	5.02m (16.47ft)
	A10	01 21 10.34	103 59 02.40	5.04m (16.54ft)
	A11	01 21 07.93	103 59 01.41	5.25m (17.22ft)
	A12	01 21 05.76	103 59 00.49	5.38m (17.65ft)
	A13	01 21 03.59	103 58 59.58	5.48m (17.98ft)
	A14	01 21 01.66	103 58 57.59	5.57m (18.27ft)
	A15	01 21 00.77	103 58 55.41	5.46m (17.91ft)
	A16	01 20 59.27	103 58 54.20	5.51m (18.08ft)
	A17	01 20 57.25	103 58 54.06	5.23m (17.16ft)
	A18	01 20 55.87	103 58 55.25	5.37m (17.62ft)
	A19	01 20 55.26	103 58 57.13	5.40m (17.72ft)
	A20	01 20 56.09	103 58 58.83	5.45m (17.88ft)
	A21	01 20 57.10	103 59 00.80	5.49m (18.01ft)
T3 NORTH APRON	B1	01 21 26.88	103 59 08.37	4.82m (15.81ft)
	B2	01 21 28.18	103 59 06.82	4.68m (15.35ft)
	B3	01 21 30.33	103 59 07.30	4.65m (15.26ft)
	B4	01 21 32.03	103 59 08.60	4.75m (15.58ft)
	B5	01 21 32.98	103 59 10.89	4.80m (15.75ft)
	B6	01 21 35.15	103 59 13.16	4.96m (16.27ft)
	B7	01 21 37.65	103 59 13.93	4.97m (16.31ft)
	B8	01 21 39.94	103 59 15.20	5.09m (16.70ft)
	B9	01 21 42.19	103 59 16.16	5.13m (16.83ft)
	B10	01 21 44.47	103 59 17.12	5.10m (16.73ft)
T1 WEST APRON	C1	01 21 46.75	103 59 18.08	5.09m (16.70ft)
	C20	01 21 48.83	103 59 19.23	5.08m (16.67ft)
	C22	01 21 51.00	103 59 20.13	5.15m (16.90ft)
	C23	01 21 53.56	103 59 20.77	5.08m (16.67ft)
	C24	01 21 56.54	103 59 20.97	4.89m (16.04ft)
	C25	01 21 59.12	103 59 20.59	4.99m (16.37ft)
T1 CENTRAL APRON	C26	01 22 01.48	103 59 20.76	5.01m (16.44ft)
	C11	01 21 47.42	103 59 23.82	5.07m (16.63ft)
	C13	01 21 49.64	103 59 24.75	5.05m (16.57ft)
	C15	01 21 51.90	103 59 25.71	5.05m (16.57ft)
	C16	01 21 53.63	103 59 26.42	4.91m (16.11ft)
	C17	01 21 55.63	103 59 26.07	5.03m (16.50ft)
	C18	01 21 57.86	103 59 25.75	4.99m (16.37ft)
	C19	01 21 59.79	103 59 25.63	4.95m (16.24ft)
	D30	01 21 44.54	103 59 30.14	5.09m (16.70ft)
	D32	01 21 46.73	103 59 31.07	5.08m (16.67ft)
T1 EAST APRON	D34	01 21 49.03	103 59 32.04	5.07m (16.63ft)
	D35	01 21 50.87	103 59 32.82	5.02m (16.47ft)
	D36	01 21 51.98	103 59 34.52	5.06m (16.60ft)
	D37	01 21 53.37	103 59 36.28	4.97m (16.31ft)
	D38	01 21 54.58	103 59 37.77	4.99m (16.37ft)
	D40	01 21 38.13	103 59 32.89	5.07m (16.63ft)
	D41	01 21 40.30	103 59 33.81	5.07m (16.63ft)
	D42	01 21 42.70	103 59 34.48	5.11m (16.77ft)
T2 NORTH APRON	D44	01 21 44.97	103 59 35.44	5.08m (16.67ft)
	D46	01 21 47.40	103 59 36.72	4.93m (16.17ft)
	D47	01 21 49.19	103 59 38.89	4.97m (16.31ft)
	D48	01 21 50.60	103 59 40.77	4.97m (16.31ft)
	D49	01 21 52.23	103 59 42.35	4.98m (16.34ft)
T2 CENTRAL APRON	E8	01 21 27.99	103 59 38.45	4.68m (15.35ft)
	E10	01 21 24.15	103 59 32.67	4.71m (15.45ft)
	E11	01 21 25.57	103 59 34.37	4.78m (15.68ft)
	E12	01 21 27.20	103 59 36.42	4.75m (15.58ft)
	E20	01 21 24.36	103 59 27.08	5.04m (16.54ft)
	E22	01 21 26.64	103 59 28.04	5.07m (16.63ft)
	E24	01 21 29.01	103 59 29.06	5.09m (16.70ft)
	E24L	01 21 28.32	103 59 28.77	5.10m (16.73ft)
	E24R	01 21 29.53	103 59 29.28	5.08m (16.67ft)
	E26	01 21 31.19	103 59 29.96	5.08m (16.67ft)
T2 SOUTH APRON	E27	01 21 33.46	103 59 30.93	5.03m (16.50ft)
	E28	01 21 35.74	103 59 31.89	5.08m (16.67ft)
	E1	01 21 20.02	103 59 25.58	4.91m (16.11ft)
	E2	01 21 19.28	103 59 27.30	4.90m (16.08ft)
	E3	01 21 18.44	103 59 29.27	4.82m (15.81ft)
	E4	01 21 18.10	103 59 31.70	4.80m (15.75ft)
	E5	01 21 19.56	103 59 33.72	4.90m (16.08ft)
T2 EAST APRON	E6	01 21 21.22	103 59 35.93	4.84m (15.88ft)
	E7	01 21 22.48	103 59 37.46	4.73m (15.52ft)
	F30	01 21 14.71	103 59 23.33	4.92m (16.14ft)
	F31	01 21 13.87	103 59 25.30	4.91m (16.11ft)
	F32	01 21 13.03	103 59 27.26	4.85m (15.91ft)
	F33	01 21 11.30	103 59 28.54	4.91m (16.11ft)
	F34	01 21 08.98	103 59 28.96	4.92m (16.14ft)
	F35	01 21 06.28	103 59 29.29	4.90m (16.08ft)
T2 WEST APRON	F36	01 21 04.34	103 59 29.67	4.82m (15.81ft)

INS COORDINATES FOR AIRCRAFT STANDS AND PRE-FLIGHT ALTIMETER CHECK LOCATIONS

LOCATION	STAND NR	NORTH LAT	EAST LONG	ELEVATION
T2 SOUTH APRON	F37	01 20 59.83	103 59 27.87	4.75m (15.58ft)

LOCATION	STAND NR	NORTH LAT	EAST LONG	ELEVATION
EAST REMOTE APRON	200	01 20 47.83	103 59 11.67	6.23m (20.44ft)

LOCATION	STAND NR	NORTH LAT	EAST LONG	ELEVATION
SOUTH-EAST REMOTE APRON	101	01 20 34.88	103 59 04.05	4.49m (14.73ft)

LOCATION	STAND NR	NORTH LAT	EAST LONG	ELEVATION
NORTH REMOTE APRON	300	01 22 06.95	103 59 22.67	4.53m (14.86ft)

LOCATION	STAND NR	NORTH LAT	EAST LONG	ELEVATION
NORTH-EAST REMOTE APRON	400	01 21 38.71	103 59 40.14	4.31m (14.14ft)

LOCATION	STAND NR

**STANDARD ARRIVAL CHART
RNAV (GNSS) -
INSTRUMENT (STAR)**

ACC 134.4
APP 124.05 / 120.3
ARR 119.3
TWR 118.6 / 118.25

TRANSITION ALTITUDE
11 000ft

D-ATIS AP ID-WSSS
128.6

**SINGAPORE/Singapore Changi
RWY 20R/C
SURGA ONE BRAVO ARRIVAL
SURGA 1B**

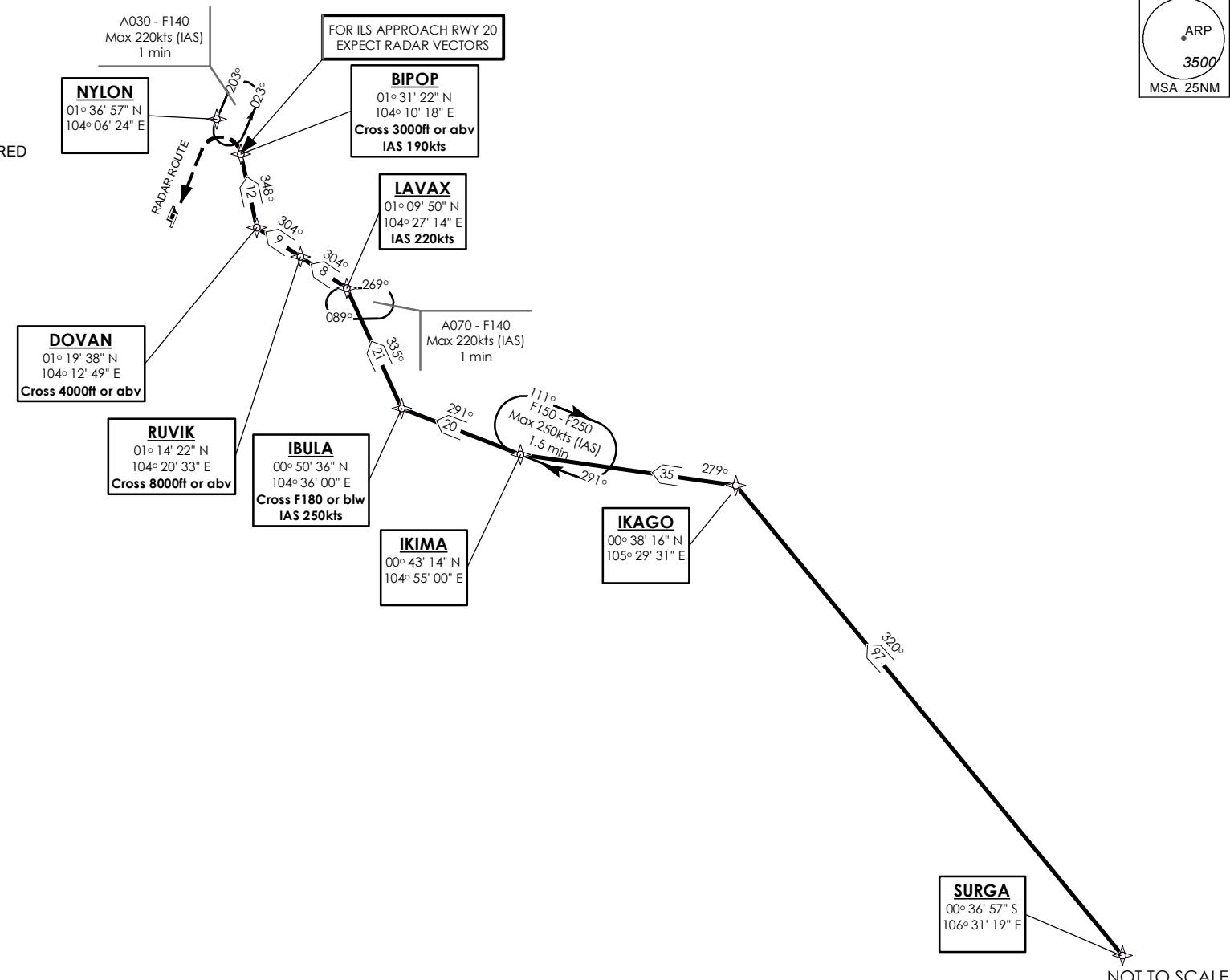
ELEV, ALT IN FEET
BEARINGS, TRACKS AND
RADIALS ARE MAGNETIC
VAR 26°E (2015)

DISTANCES IN NM

NOTE: RADAR REQUIRED

NOTE: RNAV-1 NAVIGATION SPECIFICATION GNSS REQUIRED

NOTE: REFER TO BACK PAGE FOR
- FORMAL AND TABULAR DESCRIPTIONS
- RADIO COM FAILURE PROCEDURES



SURGA 1B (STAR) RNAV GNSS RWY 20R/20C - DESCRIPTIONS**Formal & Abbreviated Descriptions**

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
From SURGA. To IKAGO, turn left. To IKIMA, turn right. To IBULA at or below FL180, speed 250kts, turn right. To LAVAX, speed 220kts, turn left. To RUVIK at or above 8000ft. To DOVAN at or above 4000ft, turn right. To BIPOP at or above 3000ft, speed 190kts.	SURGA - IKAGO [L] - IKIMA [R] - IBULA [FL180-; K250; R] - LAVAX [K220; L] - RUVIK [A080+] - DOVAN [A040+; R] - BIPOP [A030+; K190]	IF TF TF TF TF TF TF TF	N N N N N N N N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
IF	SURGA	-	-	-0.5	-	-	-	RNAV1
TF	IKAGO	-	320(320.4)	-0.5	L	-	-	RNAV1
TF	IKIMA	-	279(279.5)	-0.5	R	-	-	RNAV1
TF	IBULA	-	291(291.1)	-0.5	R	FL180-	K250	RNAV1
TF	LAVAX	-	335(335.4)	-0.5	L	-	K220	RNAV1
TF	RUVIK	-	304(304.0)	-0.5	-	A080+	-	RNAV1
TF	DOVAN	-	304(304.1)	-0.5	R	A040+	-	RNAV1
TF	BIPOP	-	348(348.5)	-0.5	-	A030+	K190	RNAV1

RADIO COMMUNICATIONS FAILURE PROCEDURE

1	SET TRANSPONDER TO MODE A/C CODE 7600
2	<p>When cleared via SURGA 1B by Singapore ATC</p> <ul style="list-style-type: none"> (a) Maintain last assigned flight level or altitude and proceed on SURGA 1B to BIPOP, then direct to NYLON (b) From NYLON commence descent and carry out appropriate landing procedure for RWY 20 as close as possible to EAT or ETA (c) If unable to effect a landing, refer to Singapore AIP for missed approach procedure
3	<p>No clearance or instruction received from Singapore ATC</p> <ul style="list-style-type: none"> - Refer to Singapore AIP for radio communications failure procedure

**STANDARD ARRIVAL CHART
RNAV (GNSS) -
INSTRUMENT (STAR)**

ACC 133.8
APP 124.05 / 120.3
ARR 119.3
TWR 118.6 / 118.25

TRANSITION ALTITUDE
11 000ft

D-ATIS AP ID-WSSS
128.6

**SINGAPORE/Singapore Changi
RWY 02L/C**
VEPLI ONE ALPHA ARRIVAL
VEPLI 1A

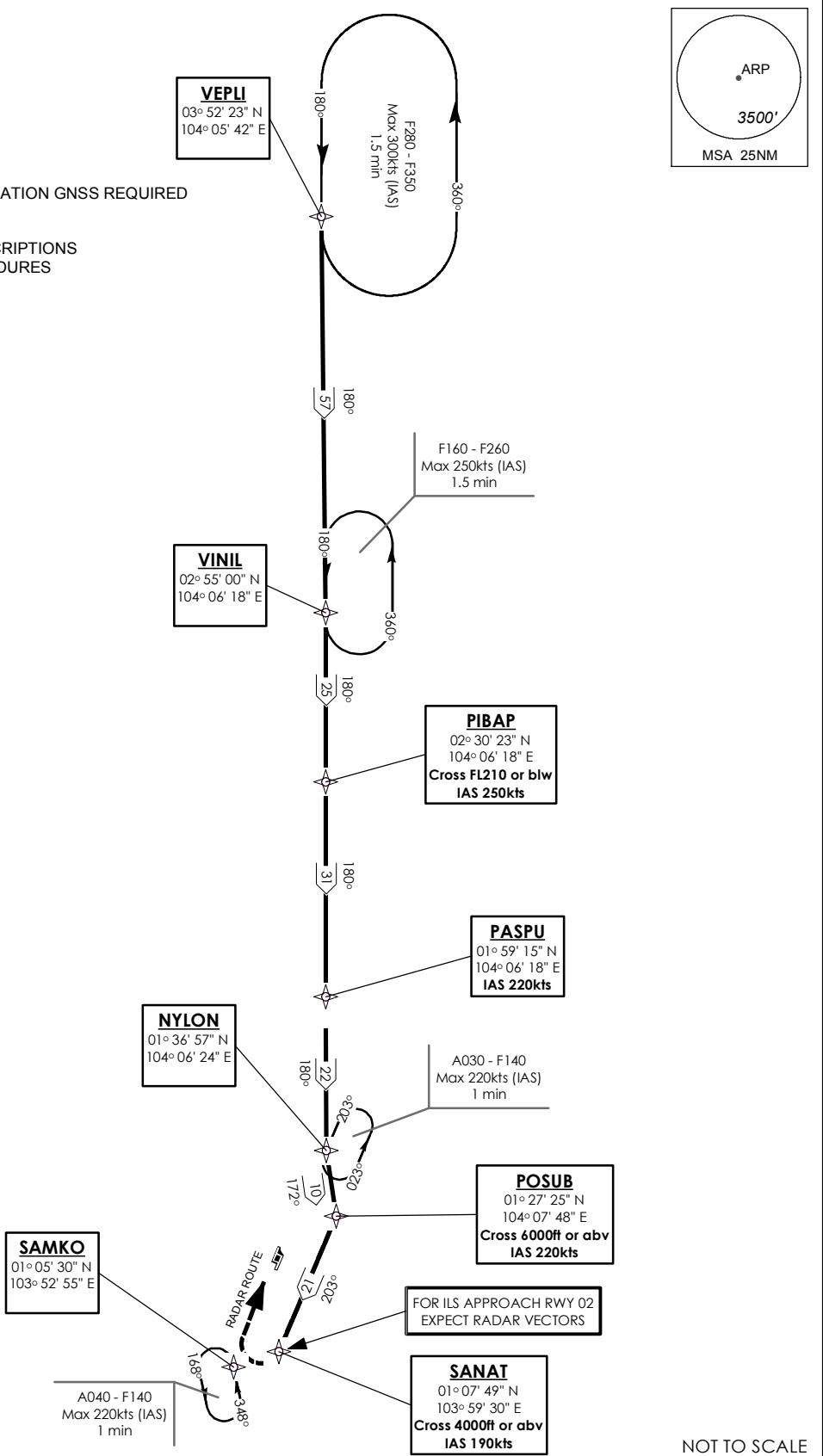
ELEV, ALT IN FEET
BEARINGS, TRACKS AND
RADIALS ARE MAGNETIC
VAR 26°E (2015)

DISTANCES IN NM

NOTE: RADAR REQUIRED

NOTE: RNAV-1 NAVIGATION SPECIFICATION GNSS REQUIRED

NOTE: REFER TO BACK PAGE FOR
- FORMAL AND TABULAR DESCRIPTIONS
- RADIO COM FAILURE PROCEDURES



VEPLI 1A (STAR) RNAV GNSS RWY 02L/02C - DESCRIPTIONS**Formal & Abbreviated Descriptions**

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
From VEPLI. To VINIL. To PIBAP at or below FL210, speed 250kts. To PASPU, speed 220kts. To NYLON, turn left. To POSUB at or above 6000ft, speed 220kts, turn right. To SANAT at or above 4000ft, speed 190kts.	VEPLI - VINIL - PIBAP [FL210; K250] - PASPU [K220] - NYLON [L] - POSUB [A060+; K220; R] - SANAT [A040+; K190]	IF TF TF TF TF TF TF	N N N N N N N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
IF	VEPLI	-	-	-0.5	-	-	-	RNAV1
TF	VINIL	-	180(180.5)	-0.5	-	-	-	RNAV1
TF	PIBAP	-	180(180.0)	-0.5	-	FL210-	K250	RNAV1
TF	PASPU	-	180(180.0)	-0.5	-	-	K220	RNAV1
TF	NYLON	-	180(180.5)	-0.5	L	-	-	RNAV1
TF	POSUB	-	172(172.5)	-0.5	R	A060+	K220	RNAV1
TF	SANAT	-	203(203.1)	-0.5	-	A040+	K190	RNAV1

RADIO COMMUNICATIONS FAILURE PROCEDURE

1	SET TRANSPONDER TO MODE A/C CODE 7600
2	When cleared via VEPLI 1A by Singapore ATC <ul style="list-style-type: none"> (a) Maintain last assigned flight level or altitude and proceed on VEPLI 1A to SANAT, then direct to SAMKO (b) From SAMKO commence descent and carry out appropriate landing procedure for RWY 02 as close as possible to EAT or ETA (c) If unable to effect a landing, refer to Singapore AIP for missed approach procedure
3	No clearance or instruction received from Singapore ATC <ul style="list-style-type: none"> - Refer to Singapore AIP for radio communications failure procedure

**STANDARD ARRIVAL CHART
RNAV (GNSS) -
INSTRUMENT (STAR)**

ACC 133.8
APP 124.05 / 120.3
ARR 119.3
TWR 118.6 / 118.25

TRANSITION ALTITUDE
11 000ft

D-ATIS AP ID-WSSS
128.6

**SINGAPORE/Singapore Changi
RWY 20R/C
VEPLI ONE BRAVO ARRIVAL
VEPLI 1B**

ELEV, ALT IN FEET
BEARINGS, TRACKS AND
RADIALS ARE MAGNETIC
VAR 26°E (2015)

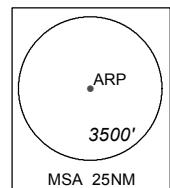
DISTANCES IN NM

NOTE: RADAR REQUIRED

NOTE: RNAV-1 NAVIGATION SPECIFICATION GNSS REQUIRED

NOTE: REFER TO BACK PAGE FOR
- FORMAL AND TABULAR DESCRIPTIONS
- RADIO COM FAILURE PROCEDURES

VEPLI
03° 52' 23" N
104° 05' 42" E



180°
F280 - F330
Max 300kts (IAS)
1.5 min

360°

VINIL
02° 55' 00" N
104° 06' 18" E

180°
57°
F160 - F260
Max 250kts (IAS)
1.5 min

360°

PIBAP
02° 30' 23" N
104° 06' 18" E
Cross FL210 or blw
IAS 250kts

180°
25°
31°

FOR ILS APPROACH RWY 20
EXPECT RADAR VECTORS

PASPU
01° 59' 15" N
104° 06' 18" E
Cross 6000ft or abv
IAS 220kts

180°
22°
20°
20°
20°

A030 - F140
Max 220kts (IAS)
1 min

NYLON
01° 36' 57" N
104° 06' 24" E
Cross 3000ft or abv
IAS 190kts

NOT TO SCALE

VEPLI 1B (STAR) RNAV GNSS RWY 20R/20C - DESCRIPTIONS**Formal & Abbreviated Descriptions**

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
From VEPLI. To VINIL. To PIBAP at or below FL210, speed 250kts. To PASPU, at or above 6000ft, speed 220kts. To NYLON at or above 3000ft, speed 190kts.	VEPLI - VINIL - PIBAP [FL210-; K250] - PASPU [A060+; K220] - NYLON [A030+; K190]	IF TF TF TF TF	N N N N N

Tabular Descriptions

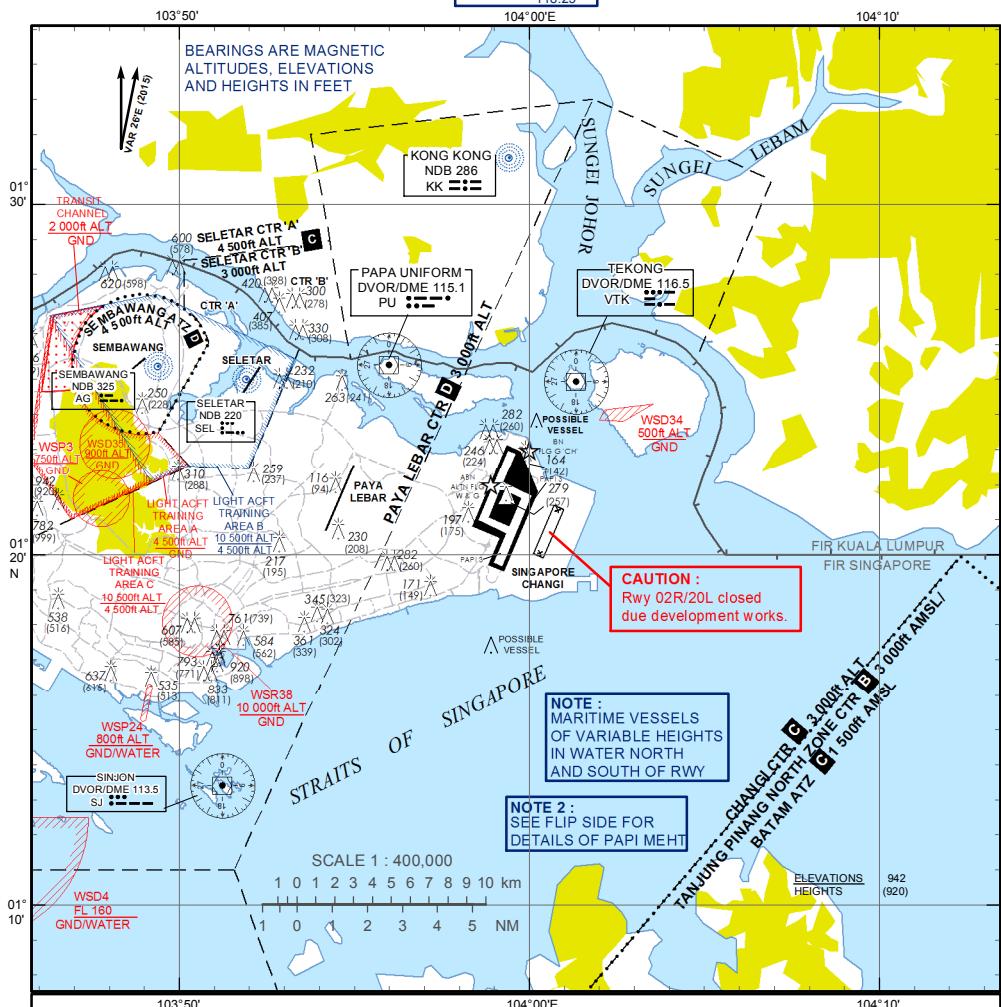
Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
IF	VEPLI	-	-	-0.5	-	-	-	RNAV1
TF	VINIL	-	180(180.5)	-0.5	-	-	-	RNAV1
TF	PIBAP	-	180(180.0)	-0.5	-	FL210-	K250	RNAV1
TF	PASPU	-	180(180.0)	-0.5	-	A060+	K220	RNAV1
TF	NYLON	-	180(180.5)	-0.5	-	A030+	K190	RNAV1

RADIO COMMUNICATIONS FAILURE PROCEDURE

1	SET TRANSPONDER TO MODE A/C CODE 7600
2	When cleared via VEPLI 1B by Singapore ATC <ul style="list-style-type: none"> (a) Maintain last assigned flight level or altitude and proceed on VEPLI 1B to NYLON (b) From NYLON commence descent and carry out appropriate landing procedure for RWY 20 as close as possible to EAT or ETA (c) If unable to effect a landing, refer to Singapore AIP for missed approach procedure
3	No clearance or instruction received from Singapore ATC <ul style="list-style-type: none"> - Refer to Singapore AIP for radio communications failure procedure

**VISUAL
APPROACH
CHART - ICAO**
**AERODROME ELEV 22 ft
HEIGHTS RELATED
TO AD ELEV**

D-ATIS	AP ID	WSSS
APP	128.6	
TWR	120.3	
	119.3	
	118.6	
	118.25	

SINGAPORE/SINGAPORE CHANGI
VISUAL APPROACH PROCEDURE

- An IFR flight operating into Singapore Changi Airport may be cleared for a visual approach subject to the following conditions :-
 - The pilot has the aerodrome in sight and can conduct his approach with visual reference to terrain;
 - The flight will not cause delay to other traffic;
 - There is no conflicting tall vessel movement;
 - The cloud ceiling at the aerodrome is 4,000ft or more for landing on RWY 02C/L and 3,000ft or more for on RWY 02R/20L ; and
 - The visibility at the aerodrome is 5km or more.
- Notwithstanding para 1d) and 1e), if the pilot reports that he has the aerodrome in sight and can conduct his approach with visual reference to terrain, the flight may be cleared for a visual approach.
- Pilots may expect radar vectoring for separation and sequencing with other traffic prior to being cleared for a visual approach.

PAPI 3° (MEHT)*				
Pilot's eye height over the threshold when the following PAPI lights come in view.	RUNWAY			
	02L	20R	02C	20C
2 White lights and 2 Red lights	20.6m	20.0m	19.8m	19.8m
3 White lights and 1 Red light	23.1m	22.6m	23.7m	23.7m
4 White lights	25.6m	25.0m	26.2m	26.2m

*MEHT : Minimum Eye Height Over the Threshold.
Note : Aircraft with eye-to-wheel height greater than 8 metres are advised to fly with 2 white lights and 2 red lights visible so as to achieve sufficient wheel clearance.