

AD 2 AERODROMES

RJCO AD 2.1 AERODROME LOCATION INDICATOR AND NAME

RJCO - SAPPORO

RJCO AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

| | | |
|---|--|---|
| 1 | ARP coordinates and site at AD | 430703N/1412253E |
| 2 | Direction and distance from (city) | 4.1nm N of SAPPORO |
| 3 | Elevation/ Reference temperature | 26FT / - |
| 4 | Geoid undulation at AD ELEV PSN | Nil |
| 5 | MAG VAR/ Annual change | 9° W(2006) |
| 6 | AD Administration, address, telephone, telefax, telex, AFS, e-mail and/or Web-site addresses | JSDF-G. PUBLIC AD. Okadama-cho, Higashi-ku, Sapporo, Hokkaido |
| 7 | Types of traffic permitted (IFR/VFR) | IFR/VFR |
| 8 | Remarks | Okadama Airport Office(CAB) Okadama-cho, Higashi-ku, Sapporo, Hokkaido Tel:011-781-4161 Fax:011-781-4186 |

RJCO AD 2.3 OPERATIONAL HOURS

| | | |
|----|---------------------------|---|
| 1 | AD Administration | 2230 - 1130 Other time 1HR PN |
| 2 | Customs and immigration | On request Customs: 011-231-1443 Immigration: 0570-003259 (140#) |
| 3 | Health and sanitation | Quarantine(human): On request(0134-23-4162) Quarantine(animal, plant): Nil |
| 4 | AIS Briefing Office | 2230 - 1130 Other time 1HR PN (CAB: Nil) |
| 5 | ATS Reporting Office(ARO) | Nil |
| 6 | MET Briefing Office | H24(NEW CHITOSE) |
| 7 | ATS | 2230 - 1130 Other time 1HR PN |
| 8 | Fuelling | 2100 - 0900 |
| 9 | Handling | 2130 - 1000 |
| 10 | Security | 2230 - 1130 |
| 11 | De-icing | Nil |
| 12 | Remarks | HR of Service at CAB OPS Section 2230 - 1130(Daily) |

RJCO AD 2.4 HANDLING SERVICES AND FACILITIES

| | | |
|---|---|---|
| 1 | Cargo-handling facilities | All the modern institutions that deal with the weight thing to DH8C |
| 2 | Fuel/ oil types | Fuel grades: (CIV) JET A1, AVGAS100, (JSDF) JET A1 |
| 3 | Fuelling facilities/ capacity | (CIV) Fuel truck refueling / No limitation |
| 4 | De-icing facilities | Nil |
| 5 | Hangar space for visiting aircraft | Nil |
| 6 | Repair facilities for visiting aircraft | Nil |
| 7 | Remarks | Nil |

RJCO AD 2.5 PASSENGER FACILITIES

| | | |
|---|----------------------|-----------------|
| 1 | Hotels | At Sapporo City |
| 2 | Restaurants | At Sapporo City |
| 3 | Transportation | Bus and Taxi |
| 4 | Medical facilities | Nil |
| 5 | Bank and Post Office | At Sapporo City |
| 6 | Tourist Office | Nil |
| 7 | Remarks | Nil |

RJCO AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

| | | |
|---|---|--------------------|
| 1 | AD category for fire fighting | To be issued later |
| 2 | Rescue equipment | To be issued later |
| 3 | Capability for removal of disabled aircraft | To be issued later |
| 4 | Remarks | Nil |

RJCO AD 2.7 SEASONAL AVAILABILITY-CLEARING

| | | |
|---|-----------------------------|---|
| 1 | Types of clearing equipment | Snow remove equipments (JSDF):To be issued later *(CAB) : Snow sweeper x 1, Snow plow x 3, Rotary plow x 2 |
| 2 | Clearance priorities | To be issued later |
| 3 | Remarks | *For NR.2 TWY and CIVIL APRON TWY/APN to measure the coefficient of friction : TWY NR.1, MIDDLE, NR.2, CIVIL APRON |

RJCO AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

| | | |
|---|-------------------------------------|--|
| 1 | Apron surface and strength | Surface : Asphalt and concrete Strength : PCR 383/R/A/W/T |
| 2 | Taxiway width, surface and strength | Width:18m To be issued later |
| 3 | ACL and elevation | Not available |
| 4 | VOR checkpoints | Nil |
| 5 | INS checkpoints | Nil |
| 6 | Remarks | Nil |

RJCO AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

| | | |
|---|--|---|
| 1 | Use of aircraft stand ID signs, TWY guide lines and Visual docking/ parking guidance system of aircraft stands | Nil |
| 2 | RWY and TWY markings and LGT | RWY : 14/32 (Marking) RWY designation, RWY CL, RWY THR, RWY middle point, TDZ, RWY side stripe (LGT) RCLL, REDL, RTHL, RENL, Take off aiming LGT TWY : NR1, NR2 (Marking) TWY CL, RWY HLDG PSN, TWY side stripe, Mandatory instruction (LGT) TWY edge LGT, Taxiing guidance sign TWY : Middle (Marking) TWY CL |
| 3 | Stop bars | Nil |
| 4 | Remarks | (Marking) Overrun area, Apron TWY CL (LGT) Apron flood LGT |

RJCO AD 2.10 AERODROME OBSTACLES

| RWY/Area affected | Obstacle type | Coordinates | Elevation | Markings/ LGT | Remarks |
|-------------------|---------------|-------------|-----------|---------------|---------|
| Nil | | | | | |

RJCO AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

| | | |
|----|--|--|
| 1 | Associated MET Office | NEW CHITOSE |
| 2 | Hours of service MET Office outside hours | H24(NEW CHITOSE) |
| 3 | Office responsible for TAF preparation Periods of validity | Nil |
| 4 | Trend forecast Interval of issuance | Nil |
| 5 | Briefing/ consultation provided | Briefing is available upon inquiry at NEW CHITOSE. |
| 6 | Flight documentation Language(s) used | C En |
| 7 | Charts and other information available for briefing or consultation | S ₆ , U ₈₅ , U ₇ , U ₅ , U ₃ , U ₂₅ , U ₂ /T _r , P _S , P ₅ , P ₃ , P ₂₅ , P _{SWE} , P _{SWF} , P _{SWG} , P _{SWI} , P _{SWM} , P _{SW(domestic)} , E, C, W _E , W _F , W _G , W _I , W, N |
| 8 | Supplementary equipment available for providing information | Doppler Radar for airport weather (See below figure) |
| 9 | ATS units provided with information | TWR, APP |
| 10 | Additional information(limitation of service, etc.) | Observations / 2200-1130 Observation is made by the Ministry of Defence |

Airspace for the advisory service concerning low level wind shear



RJCO AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

| Designations RWY NR | TRUE BRG | Dimensions of RWY(M) | Strength(PCR) and surface of RWY | THR coordinates THR geoid undulation | THR elevation and highest elevation of TDZ of precision APP RWY |
|------------------------|----------|-------------------------|--|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 14 | 134.85° | 1500x45 | PCR 286/F/D/X/T SW20000kg (44000lbs) DW25000kg (55000lbs) Asphalt | 430719.87N | THR ELEV : 20FT |
| | | | | 1412229.11E | |
| | | | | 104.1ft | |
| 32 | 314.85° | 1500x45 | | 430645.58N | THR ELEV : 27FT |
| | | | | 1412316.16E | |
| | | | | 104.0ft | |
| Slope of RWY | | Strip Dimensions(M) | | Remarks | |
| 7 | | 10 | | 12 | |
| SEE AD2.24 AD CHART | | 1620x300 1620x300 | | RWY Grooving 1500mX45m | |

RJCO AD 2.13 DECLARED DISTANCES

| RWY Designator | TORA (m) | TODA (m) | ASDA (m) | LDA (m) | Remarks |
|----------------|-------------|-------------|-------------|------------|---------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 14 | 1500 | 1500 | 1500 | 1500 | Nil |
| 32 | 1500 | 1500 | 1500 | 1500 | Nil |

RJCO AD 2.14 APPROACH AND RUNWAY LIGHTING

| RWY Designator | APCH LGT type LEN INTST | RTHL Color WBAR | PAPI (VASIS) Angle DIST FM THR MEHT | RTZL LEN | RCLL LEN Spacing Color INTST | REDL LEN Spacing Color INTST | RENL Color WBAR | STWL LEN Color |
|----------------------------------|-------------------------------------|-----------------------|--|-------------|--|--|-----------------------|----------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 14 | Nil | Green | PAPI 3.0°/Left 273m 45FT | Nil | 1500m - Coded color - | 1500m - Coded color - | Red | Nil |
| 32 | Nil | Green | PAPI 3.0°/Left 251m 39FT | Nil | 1500m - Coded color - | 1500m - Coded color - | Red | Nil |
| Remarks | | | | | | | | |
| 10 | | | | | | | | |
| RWY THR ID LGT for RWY 14/32 THR | | | | | | | | |

RJCO AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

| | | |
|---|--|--|
| 1 | ABN/IBN location, characteristics and hours of operation | ABN:430641N/1412253E, White/Green EV6sec, HO |
| 2 | LDI location and LGT Anemometer location and LGT | LDI : Nil Anemometer : RWY32, AVBL |
| 3 | TWY edge and center line lighting | TWY edge LGT: Blue TWY CL LGT: Nil |
| 4 | Secondary power supply/ switch-over time | Nil |
| 5 | Remarks | WDI LGT |

RJCO AD 2.16 HELICOPTER LANDING AREA

| |
|-----|
| Nil |
|-----|

RJCO AD 2.17 ATS AIRSPACE

| Designation and lateral limits | | Vertical limits (ft) | Airspace classification | ATS unit call sign Language | Remarks |
|--------------------------------|---|----------------------|-------------------------|---|---------|
| 1 | | 2 | 3 | 4 | 6 |
| SAPPORO CTR | Area within a radius of 5nm of SAPPORO ARP (4307N/14123E) . | 4000 or below | D | SAPPORO TOWER En | |
| SAPPORO APPROACH CONTROL AREA | SEE RJCO ATTACHED CHART | | E | SAPPORO APP, SAPPORO RADAR, SAPPORO DEP En | |

札幌進入管制区
Sapporo Approach Control Area



RJCO AD 2.18 ATS COMMUNICATION FACILITIES

| Service designation | Call sign | Frequency | Hours of operation | Remarks |
|---------------------|------------------------------------|---|----------------------------------|--|
| 1 | 2 | 3 | 4 | 5 |
| APP/ASR | Sapporo Approach/ Sapporo Radar | 119.225MHz 315.9MHz 121.5MHz 243.0MHz | 2230-1130 Other Time 1HR PN | |
| DEP | Sapporo Departure | 121.075MHz 315.9MHz | 2230-1130 Other Time 1HR PN | |
| TWR | Sapporo Tower | 126.2MHz 118.1MHz 140.5MHz 138.05MHz 304.8MHz 123.1MHz(1) 121.5MHz(E) | 2230 - 1130 Other time 1HR PN | (1) For rescue only |
| GCA-ASR -PAR | Sapporo GCA | 120.3MHz 133.0MHz 138.3MHz 122.35MHz 304.6MHz 121.5MHz(E) 243.0MHz(E) | 2230 - 1130 Other time 1HR PN | Glide path 3.0°. ASR RWY 14/32. PAR RWY14/32 |
| GND | Sapporo Ground | 121.8MHz | 2230 - 1130 Other time 1HR PN | |

RJCO AD 2.19 RADIO NAVIGATION AND LANDING AIDS

| Type of aid (VOR declination) | ID | Frequency | Hours of operation | Position of transmitting antenna coordinates | Elevation of DME transmitting antenna | Remarks |
|----------------------------------|-----|---------------------|--------------------|--|---------------------------------------|--|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| VOR (9°W/2009) | SPE | 113.9MHz | H24 | 431028.71N/ 1411808.58E | | VOR Unusable : 190°-200° beyond 35nm BLW 7000ft. 210°-220° beyond 30nm BLW 9000ft. 220°-230° beyond 25nm BLW 9000ft. 230°-260° beyond 30nm BLW 9000ft. |
| DME | SPE | 1173MHz (CH-86X) | H24 | 431029.08N/ 1411807.22E | 87ft | DME Unusable : 190°-200° beyond 30nm BLW 7000ft. 200°-210° beyond 35nm BLW 9000ft. 210°-250° beyond 30nm BLW 9000ft. 250°-260° beyond 35nm BLW 9000ft. |
| MSAS | | 1575.42MHz | H24 | | | Transmitting antennas are satellite based. |

RJCO AD 2.20 LOCAL TRAFFIC REGULATIONS

1. Airport regulations

- 1. All MIL ACFT 48HR PPR to Sapporo BOPS(TEL:011-781-8321 EXT 270)
- 2. Civil transient ACFT
 - a) PPR to JSDF-G Sapporo AD(TEL:011-781-8321 EXT 366) for AD use application
 - b) PPR to CAB Okadama Airport Office(TEL:011-781-4162) for parking

2. Taxiing to and from stands

Nil

3. Parking area for small aircraft(General aviation)

Nil

4. Parking area for helicopters

Nil

5. Apron - taxiing during winter conditions

Nil

6. Taxiing - limitations

Nil

7. School and training flights - technical test flights - use of runways

Nil

8. Helicopter traffic - limitation

TKOF from RWY: Do not start turns until passing DER.
TKOF from HELISPOTS: Do not start turns until passing abeam DER.

9. Removal of disabled aircraft from runways

Nil

RJCO AD 2.21 NOISE ABATEMENT PROCEDURES

Nil

RJCO AD 2.22 FLIGHT PROCEDURES

1.1 TAKE OFF MINIMA

| | RWY | REDL & RCLL AVBL | | REDL or RCLL AVBL | | REDL & RCLL OUT | |
|-----------------------|-----|---------------------|----------|-------------------|----------|-----------------|----------|
| | | CEIL-RVR | CEIL-VIS | CEIL-RVR | CEIL-VIS | CEIL-RVR | CEIL-VIS |
| TKOF ALTN AP FILED | 14 | 0'-500m *0'-300m | 0'-400m | 0'-600m | 0'-600m | 0'-800m | 0'-800m |
| | 32 | 0'-500m *0'-300m | | 0'-600m | | 0'-800m | |
| OTHER | 14 | AVBL LDG MINIMA | | | | | |
| | 32 | | | | | | |

NOTE: SIDs are designed in accordance with provisional standards for FLIGHT PROCEDURE DESIGN.

*Applicable when two RVRs available.

1.2 TAKE OFF MINIMA for RNAV DEPARTURE

| | RWY | ACFT CAT | REDL & RCLL | | REDL or RCLL or RCL Marking | | NIL (DAYTIME ONLY) | |
|--|-------|----------|-----------------|------|--------------------------------|------|-----------------------|------|
| | | | RVR | VIS | RVR | VIS | RVR | VIS |
| Multi-Engine ACFT with TKOF ALTN AP FILED | 14/32 | A,B,C | 400m | 400m | 400m | 400m | - | 500m |
| OTHER | 14/32 | A,B,C | AVBL LDG MINIMA | | | | | |

2. WX MINIMA CONCERNING PAR/ASR APCH PROCEDURE

PAR RWY 14

| MINIMA THR elev. 20 AD elev. 26 | | | | |
|---------------------------------|----------|-------------|----------|------|
| CAT | | | CIRCLING | |
| | DA(H) | RVR/ CMV | MDA(H) | VIS |
| A | 224(204) | 1000 | 520(494) | 1600 |
| B | | | 580(554) | 2400 |
| C | | | | |
| D | - | - | - | - |

Circling east side of RWY only.

ASR RWY 14

| MINIMA THR elev. 20 AD elev. 26 | | | | |
|---------------------------------|----------|-------------|----------|------|
| CAT | | | CIRCLING | |
| | MDA(H) | RVR/ CMV | MDA(H) | VIS |
| A | 500(474) | 1500 | 520(494) | 1600 |
| B | | 2000 | 580(554) | 2400 |
| C | | | | |
| D | - | - | - | - |

Circling east side of RWY only.

PAR RWY 32

| MINIMA THR elev. 27 AD elev. 26 | | | | |
|---------------------------------|----------|-------------|----------|------|
| CAT | | | CIRCLING | |
| | DA(H) | RVR/ CMV | MDA(H) | VIS |
| A | 227(200) | 1000 | 520(494) | 1600 |
| B | | | 580(554) | 2400 |
| C | | | | |
| D | - | - | - | - |

Circling east side of RWY only.

ASR RWY 32

| MINIMA THR elev. 27 AD elev. 26 | | | | |
|---------------------------------|----------|-------------|----------|------|
| CAT | | | CIRCLING | |
| | MDA(H) | RVR/ CMV | MDA(H) | VIS |
| A | 540(514) | 1500 | 540(514) | 1600 |
| B | | 2000 | 580(554) | 2400 |
| C | | | | |
| D | - | - | - | - |

Circling east side of RWY only.

3. MISSED APCH PROCEDURE FOR PAR/ASR RWY 32 APCH

Climb via SPE VOR/DME, SPE R350 to 4,000ft, turn left, proceed to SPE VOR/DME and hold.
Contact SAPPORO TOWER.

4. Lost Communication Procedures for arrival aircraft under radar navigational guidance

If radio communications with Sapporo Radar/GCA are lost 1 minute in the pattern, 15 seconds on surveillance final approach, or 5 seconds on PAR final approach, Mode A/3 Code 7600 and ;

1. Contact Sapporo Radar/Tower.
2. If unable, proceed in accordance with visual flight rules.
3. If unable, proceed to SAPPORO VOR/DME at last assigned altitude or 4,000ft whichever is higher and execute instrument approach.

*Make right turn within 12NM from SPE.(RWY32 ONLY)

5. Automated Radar Terminal System(ARTS)

札幌進入管制所の指示のもと、当該進入管制区を飛行する航空機は、モード A/3 の二次レーダー個別コード及びモード C による応答を指示される。

二次レーダー個別コードを搭載していない航空機が当該コードによる応答を指示された場合は、管制官に対し、その旨通報すること。

Aircraft flying under control of Sapporo control in the approach control in the approach control area will be instructed to reply with discrete code on Mode A/3 and Mode C.

If an aircraft with non-discrete code capability be instructed to reply with the discrete code, it shall report a controller accordingly.

RJCO AD 2.23 ADDITIONAL INFORMATION

Nil

RJCO AD 2.24 CHARTS RELATED TO AN AERODROME

Aerodrome/Heliport Chart
Standard Departure Chart - Instrument (KURIS, SAPPORO REVERSAL, SAPPORO)*
Standard Departure Chart - Instrument (KURIS REVERSAL)*
Standard Departure Chart - Instrument (BANKE-RNAV)
Standard Departure Chart - Instrument (TOBET EAST-RNAV)
Standard Departure Chart - Instrument (TOBET NORTH-RNAV)
Standard Arrival Chart - Instrument (MOIWA, RUMOI, KURIS NORTH-RNAV)
Standard Arrival Chart - Instrument (MOIWA, RUMOI, KURIS SOUTH-RNAV)
Instrument Approach Chart (VOR RWY14)*
Instrument Approach Chart (VOR RWY32)*
Instrument Approach Chart (RNP Z RWY14)
Instrument Approach Chart (RNP Y RWY14 (LPV ONLY))
Instrument Approach Chart (RNP RWY32)
Other Chart (LDG CHART)
Other Chart (MVA CHART)

*Designed in accordance with provisional standards for FLIGHT PROCEDURE DESIGN.

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AD CHART



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STANDARD DEPARTURE CHART - INSTRUMENT

RJCO / SAPPORO

SID

KURIS THREE DEPARTURE

RWY 14: Turn left,....

RWY 32: Turn right,....

....Climb via HDG 057° to intercept and proceed via SPE R103 to KURIS.

Cross KURIS at or above 5000FT.

SAPPORO REVERSAL FOUR DEPARTURE

RWY 14: Turn left,....

RWY 32:

....Climb to SPE VOR/DME, via SPE R335, turn left to intercept and proceed via SPE R310 to SPE VOR/DME within SPE 15.0DME.

Cross SPE R335/6.0DME at or below 6000FT,
cross SPE R310/6.0DME at or above 10000FT.

SAPPORO THREE DEPARTURE

RWY 14: Turn left,....

RWY 32:

....Climb to SPE VOR/DME.

RUMOI TRANSITION

From over SPE VOR/DME, climb via SPE R040 to RUMOI.

Cross SPE R040/8.0DME at or above 4000FT, cross RUMOI at assigned altitude.

BEEBA TRANSITION

From over SPE VOR/DME, climb via SPE R069 to BEEBA.

Cross BEEBA at assigned altitude.

MOIWA TRANSITION

From over SPE VOR/DME, climb via SPE R325 to 3000FT or above, turn left to intercept and proceed via SPE R203 to MOIWA.

Cross MOIWA at or above 7000FT.

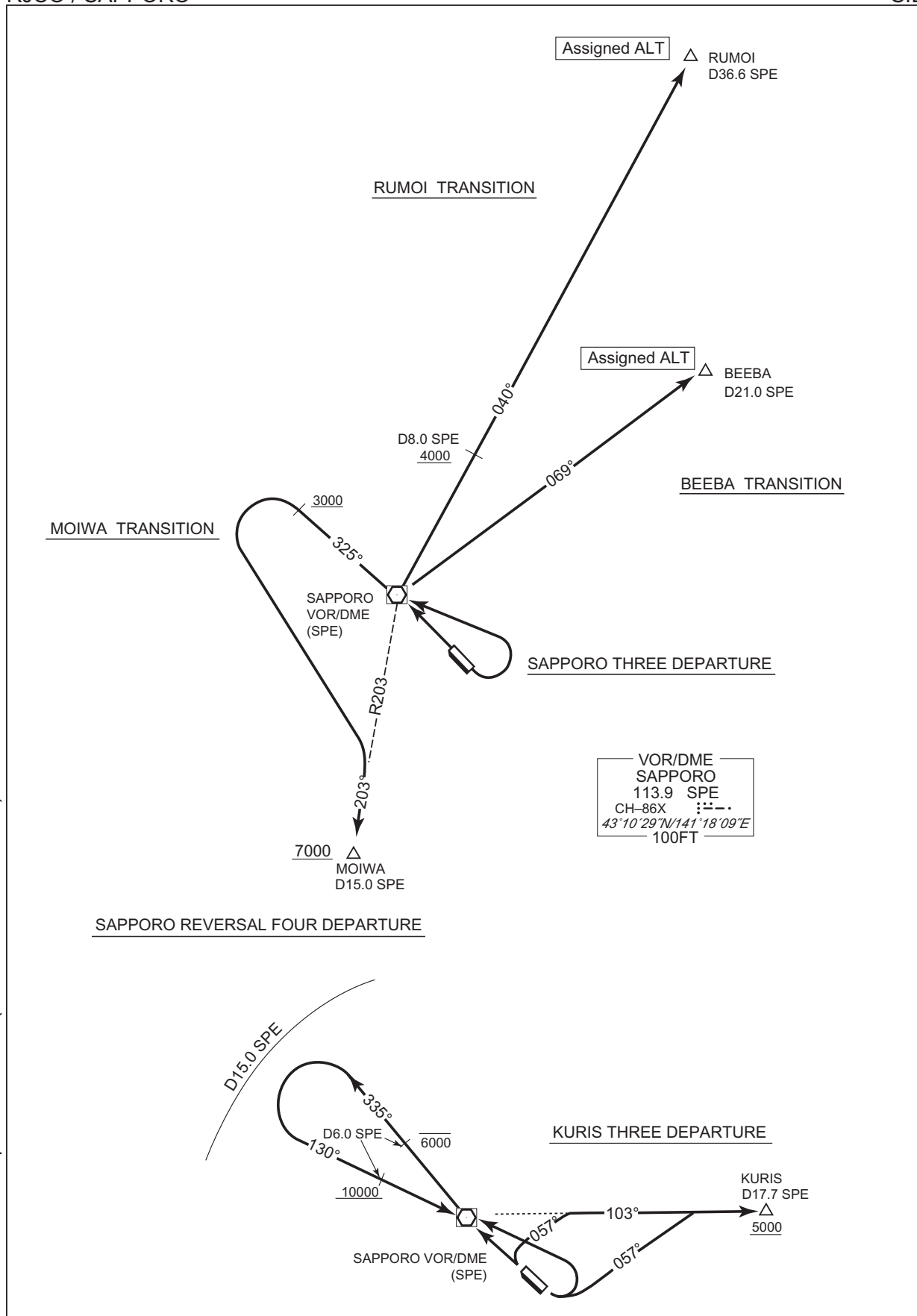
Note: Do not start left turn to MOIWA before SPE VOR/DME.

STANDARD DEPARTURE CHART - INSTRUMENT

RJCO / SAPPORO

SID

CHANGE : Description of PROC(SID and TRANSITION).



STANDARD DEPARTURE CHART - INSTRUMENT

RJCO / SAPPORO

SID

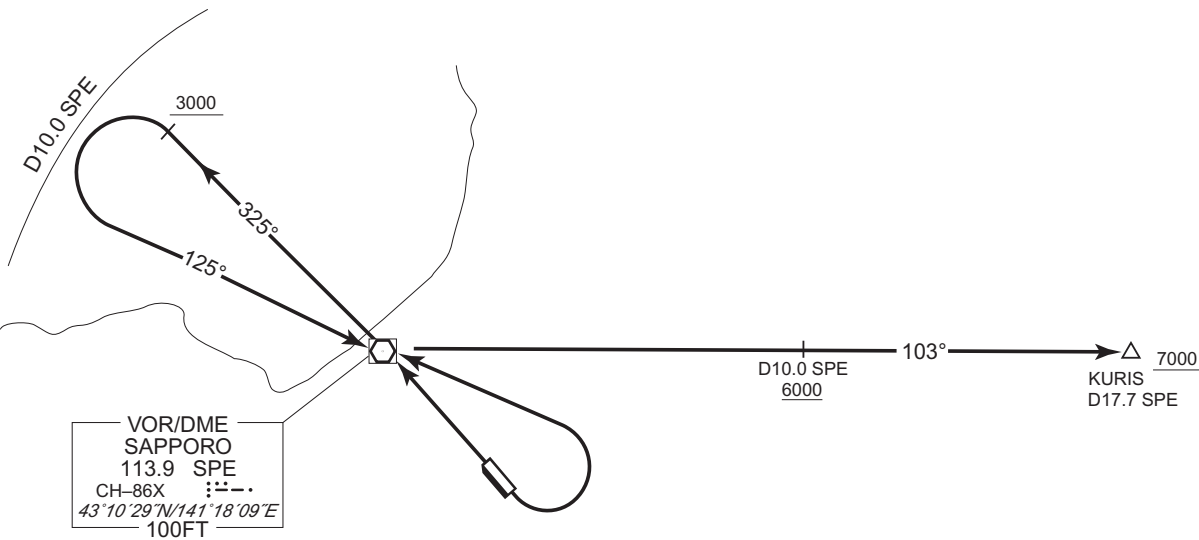
KURIS REVERSAL FOUR DEPARTURE

RWY 14 : Turn left,....

RWY 32 :

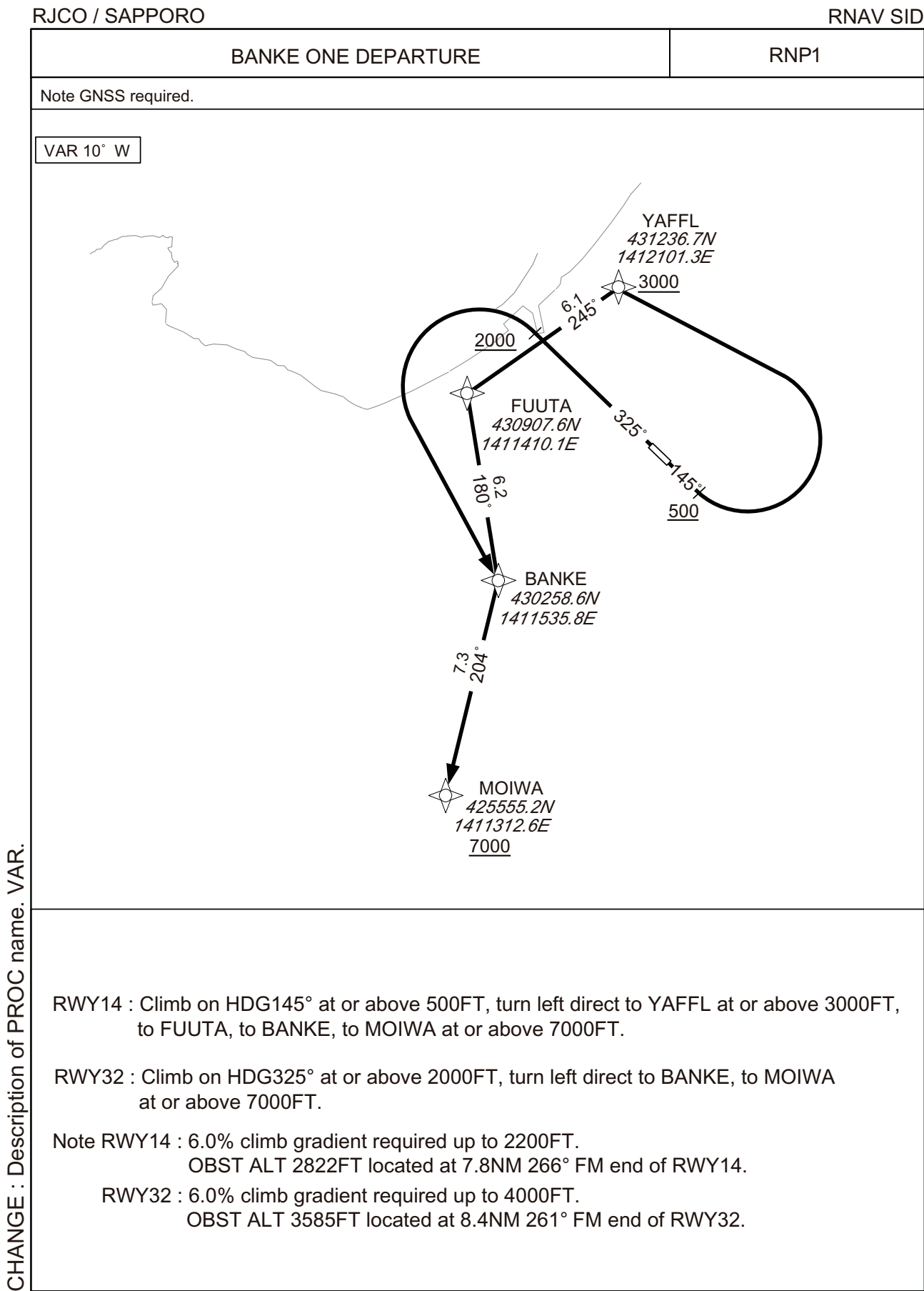
....climb direct to SPE VOR/DME, via SPE R325 until passing 3000 FT, turn left to intercept and proceed via SPE R305 to SPE VOR/DME within SPE 10.0DME, via SPE R103 to KURIS.

Cross SPE R103/10.0DME at or above 6000FT,
cross KURIS at or above 7000FT.



CHANGE : Description of PROC.

STANDARD DEPARTURE CHART - INSTRUMENT



STANDARD DEPARTURE CHART - INSTRUMENT

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RNAV SID

BANKE ONE DEPARTURE

RWY14

| Serial Number | Path Descriptor | Waypoint Identifier | Fly Over | Course °M(°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (FT) | Speed (KIAS) | Vertical Angle | Navigation Specification |
|---------------|-----------------|---------------------|----------|----------------|--------------------|---------------|----------------|---------------|--------------|----------------|--------------------------|
| 001 | VA | - | - | 145 (134.8) | -9.7 | - | - | +500 | - | - | RNP1 |
| 002 | DF | YAFFL | - | - | -9.7 | - | L | +3000 | - | - | RNP1 |
| 003 | TF | FUUTA | - | 245 (235.2) | -9.7 | 6.1 | - | - | - | - | RNP1 |
| 004 | TF | BANKE | - | 180 (170.4) | -9.7 | 6.2 | - | - | - | - | RNP1 |
| 005 | TF | MOIWA | - | 204 (193.9) | -9.7 | 7.3 | - | +7000 | - | - | RNP1 |

RWY32

| Serial Number | Path Descriptor | Waypoint Identifier | Fly Over | Course °M(°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (FT) | Speed (KIAS) | Vertical Angle | Navigation Specification |
|---------------|-----------------|---------------------|----------|----------------|--------------------|---------------|----------------|---------------|--------------|----------------|--------------------------|
| 001 | VA | - | - | 325 (314.8) | -9.7 | - | - | +2000 | - | - | RNP1 |
| 002 | DF | BANKE | - | - | -9.7 | - | L | - | - | - | RNP1 |
| 003 | TF | MOIWA | - | 204 (193.9) | -9.7 | 7.3 | - | +7000 | - | - | RNP1 |

CHANGE : Navigation Specification(Basic RNP1 → RNP1).

STANDARD DEPARTURE CHART - INSTRUMENT

RJCO / SAPPORO

RNAV SID

TOBET EAST ONE DEPARTURE

RNP1

Note GNSS required.

VAR 10° W

TOBET
431437.1N
1413258.7E

KURIS
430918.8N
1414221.6E
5000

8.7
137°

500
325°
145°
500

RWY14 : Climb on HDG145° at or above 500FT, turn left direct to TOBET, to KURIS at or above 5000FT.

RWY32 : Climb on HDG325° at or above 500FT, turn right direct to TOBET, to KURIS at or above 5000FT.

Note RWY14 : 6.0% climb gradient required up to 500FT.
RWY32 : 6.0% climb gradient required up to 500FT.

RWY14

| Serial Number | Path Descriptor | Waypoint Identifier | Fly Over | Course °M(°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (FT) | Speed (KIAS) | Vertical Angle | Navigation Specification |
|---------------|-----------------|---------------------|----------|---------------|--------------------|---------------|----------------|---------------|--------------|----------------|--------------------------|
| 001 | VA | — | — | 145 (134.8) | -9.7 | — | — | +500 | — | — | RNP1 |
| 002 | DF | TOBET | — | — | -9.7 | — | L | — | — | — | RNP1 |
| 003 | TF | KURIS | — | 137 (127.7) | -9.7 | 8.7 | — | +5000 | — | — | RNP1 |

RWY32

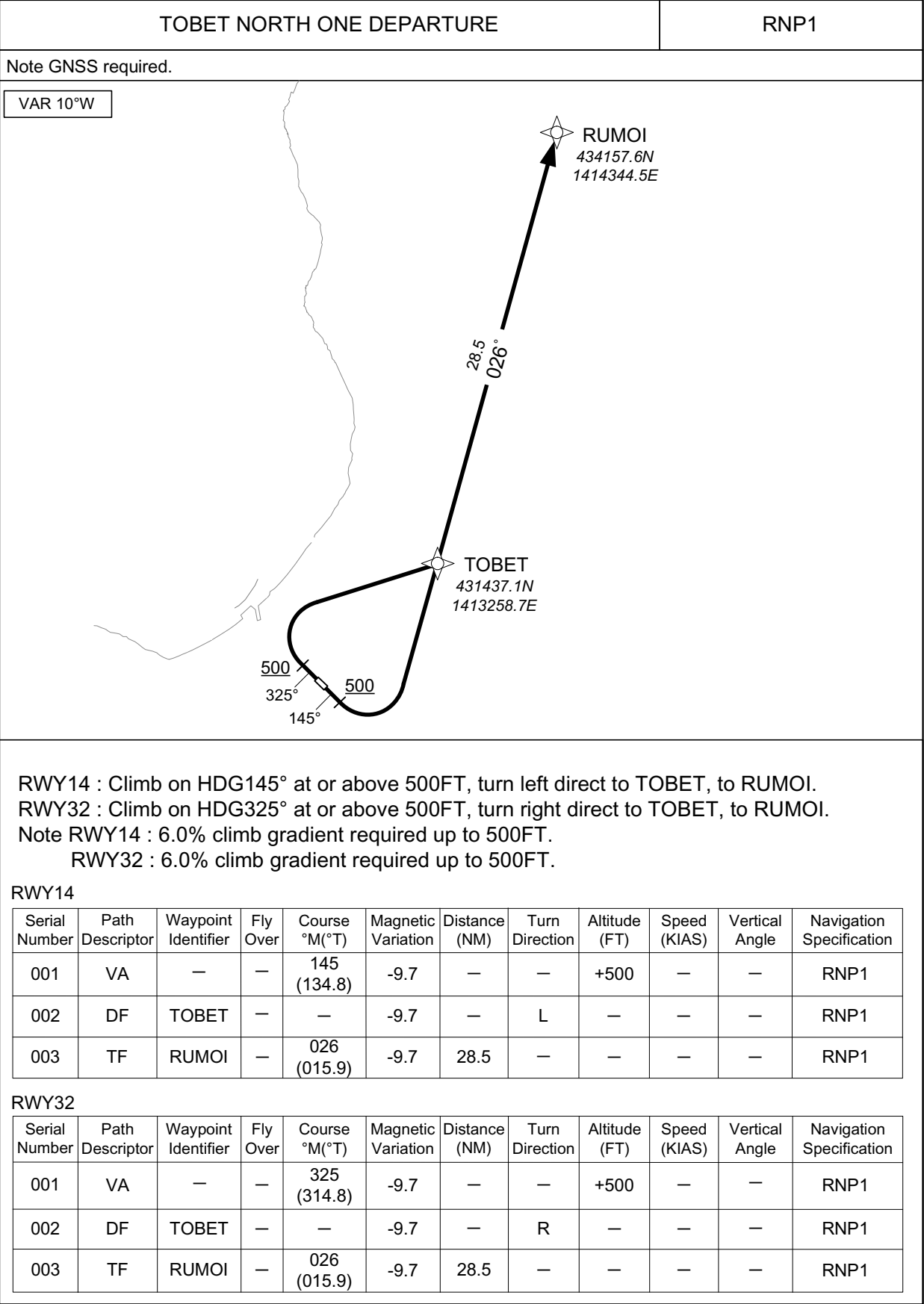
| Serial Number | Path Descriptor | Waypoint Identifier | Fly Over | Course °M(°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (FT) | Speed (KIAS) | Vertical Angle | Navigation Specification |
|---------------|-----------------|---------------------|----------|---------------|--------------------|---------------|----------------|---------------|--------------|----------------|--------------------------|
| 001 | VA | — | — | 325 (314.8) | -9.7 | — | — | +500 | — | — | RNP1 |
| 002 | DF | TOBET | — | — | -9.7 | — | R | — | — | — | RNP1 |
| 003 | TF | KURIS | — | 137 (127.7) | -9.7 | 8.7 | — | +5000 | — | — | RNP1 |

CHANGE : Description of PROC name and VAR.

STANDARD DEPARTURE CHART - INSTRUMENT

RJCO / SAPPORO

RNAV SID



CHANGE : Description of PROC name and VAR.

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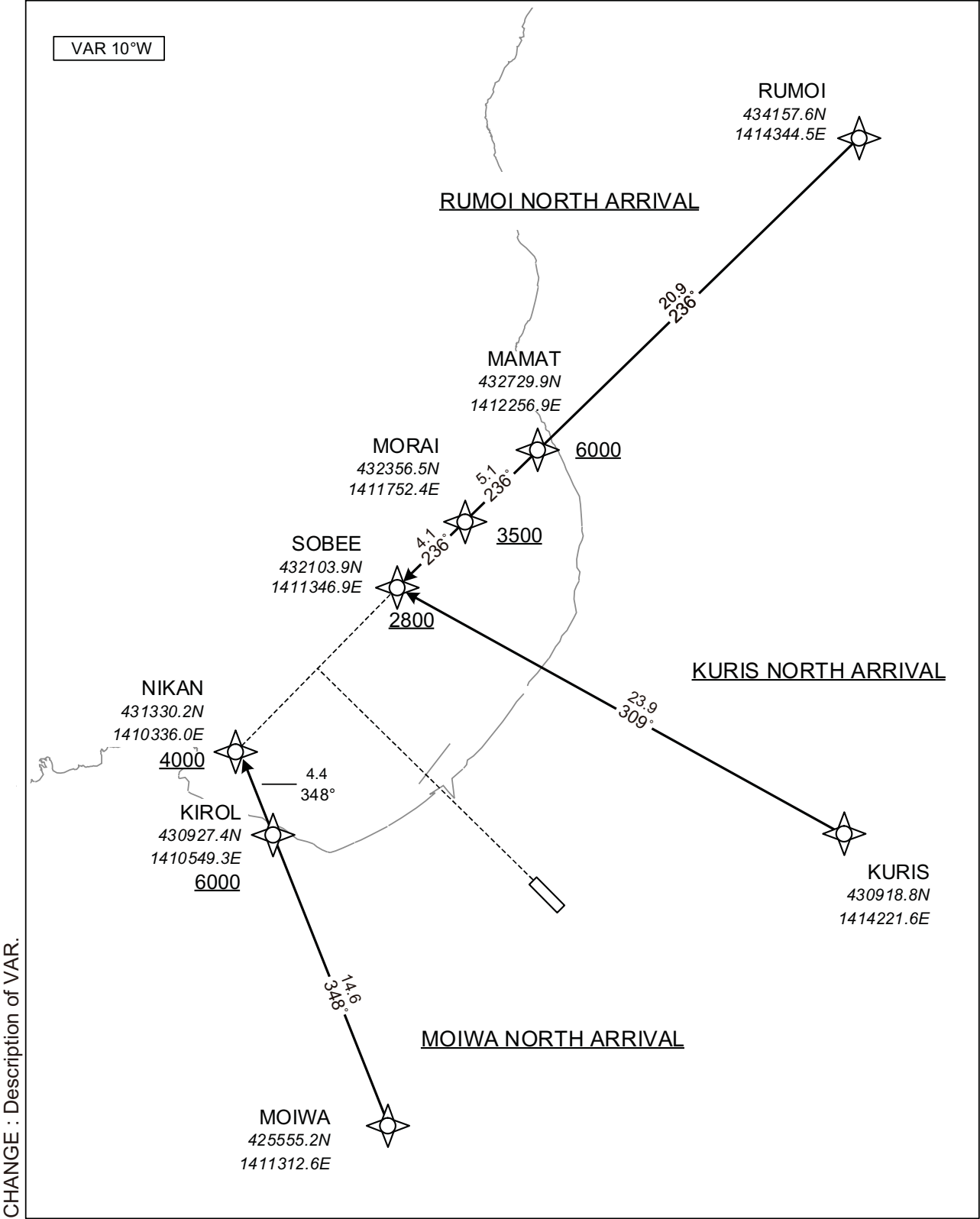
STANDARD ARRIVAL CHART-INSTRUMENT

RJCO / SAPPORO

RNAV STAR RWY14

| | |
|---|------|
| MOIWA NORTH ARRIVAL RUMOI NORTH ARRIVAL KURIS NORTH ARRIVAL | RNP1 |
|---|------|

Note GNSS required.



STANDARD ARRIVAL CHART-INSTRUMENT

RJCO / SAPPORO

RNAV STAR RWY14

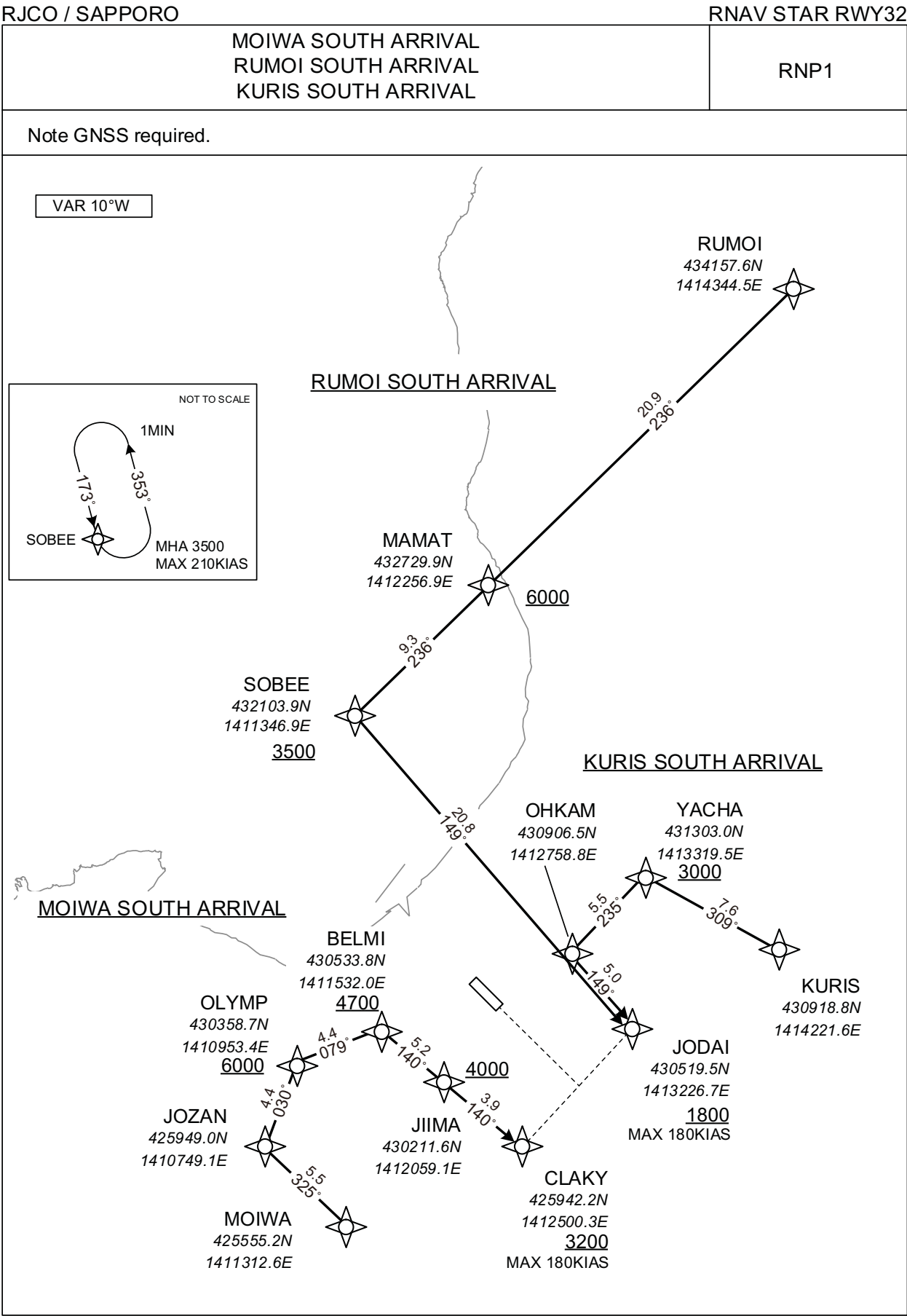
| MOIWA NORTH ARRIVAL | | | | | | | | | | | |
|---|-----------------|---------------------|----------|----------------|--------------------|---------------|----------------|---------------|--------------|----------------|--------------------------|
| From MOIWA, to KIROL at or above 6000FT, to NIKAN at or above 4000FT. | | | | | | | | | | | |
| Serial Number | Path Descriptor | Waypoint Identifier | Fly Over | Course °M(°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (FT) | Speed (KIAS) | Vertical Angle | Navigation Specification |
| 001 | IF | MOIWA | - | - | -9.9 | - | - | - | - | - | RNP1 |
| 002 | TF | KIROL | - | 348 (338.3) | -9.9 | 14.6 | - | +6000 | - | - | RNP1 |
| 003 | TF | NIKAN | - | 348 (338.2) | -9.9 | 4.4 | - | +4000 | - | - | RNP1 |

| RUMOI NORTH ARRIVAL | | | | | | | | | | | |
|--|-----------------|---------------------|----------|----------------|--------------------|---------------|----------------|---------------|--------------|----------------|--------------------------|
| From RUMOI, to MAMAT at or above 6000FT, to MORAI at or above 3500FT, to SOBEE at or above 2800FT. | | | | | | | | | | | |
| Serial Number | Path Descriptor | Waypoint Identifier | Fly Over | Course °M(°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (FT) | Speed (KIAS) | Vertical Angle | Navigation Specification |
| 001 | IF | RUMOI | - | - | -9.9 | - | - | - | - | - | RNP1 |
| 002 | TF | MAMAT | - | 236 (226.3) | -9.9 | 20.9 | - | +6000 | - | - | RNP1 |
| 003 | TF | MORAI | - | 236 (226.0) | -9.9 | 5.1 | - | +3500 | - | - | RNP1 |
| 004 | TF | SOBEE | - | 236 (226.0) | -9.9 | 4.1 | - | +2800 | - | - | RNP1 |

| KURIS NORTH ARRIVAL | | | | | | | | | | | |
|--|-----------------|---------------------|----------|----------------|--------------------|---------------|----------------|---------------|--------------|----------------|--------------------------|
| From KURIS, to SOBEE at or above 2800FT. | | | | | | | | | | | |
| Serial Number | Path Descriptor | Waypoint Identifier | Fly Over | Course °M(°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (FT) | Speed (KIAS) | Vertical Angle | Navigation Specification |
| 001 | IF | KURIS | - | - | -9.9 | - | - | - | - | - | RNP1 |
| 002 | TF | SOBEE | - | 309 (299.6) | -9.9 | 23.9 | - | +2800 | - | - | RNP1 |

CHANGE : Navigation Specification(Basic RNP1 → RNP1).

STANDARD ARRIVAL CHART-INSTRUMENT



STANDARD ARRIVAL CHART-INSTRUMENT

RJCO / SAPPORO

RNAV STAR RWY32

MOIWA SOUTH ARRIVAL

From MOIWA, to JOZAN, to OLYMP at or above 6000FT, to BELMI at or above 4700FT, to JIIMA at or above 4000FT, to CLAKY at or above 3200FT.

| Serial Number | Path Descriptor | Waypoint Identifier | Fly Over | Course °M(°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (FT) | Speed (KIAS) | Vertical Angle | Navigation Specification |
|---------------|-----------------|---------------------|----------|----------------|--------------------|---------------|----------------|---------------|--------------|----------------|--------------------------|
| 001 | IF | MOIWA | - | - | -9.9 | - | - | - | - | - | RNP1 |
| 002 | TF | JOZAN | - | 325 (314.7) | -9.9 | 5.5 | - | - | - | - | RNP1 |
| 003 | TF | OLYMP | - | 030 (020.0) | -9.9 | 4.4 | - | +6000 | - | - | RNP1 |
| 004 | TF | BELMI | - | 079 (068.9) | -9.9 | 4.4 | - | +4700 | - | - | RNP1 |
| 005 | TF | JIIMA | - | 140 (130.2) | -9.9 | 5.2 | - | +4000 | - | - | RNP1 |
| 006 | TF | CLAKY | - | 140 (130.3) | -9.9 | 3.9 | - | +3200 | -180 | - | RNP1 |

RUMOI SOUTH ARRIVAL

From RUMOI, to MAMAT at or above 6000FT, to SOBEE at or above 3500FT, to JODAI at or above 1800FT.

| Serial Number | Path Descriptor | Waypoint Identifier | Fly Over | Course °M(°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (FT) | Speed (KIAS) | Vertical Angle | Navigation Specification |
|---------------|-----------------|---------------------|----------|----------------|--------------------|---------------|----------------|---------------|--------------|----------------|--------------------------|
| 001 | IF | RUMOI | - | - | -9.9 | - | - | - | - | - | RNP1 |
| 002 | TF | MAMAT | - | 236 (226.3) | -9.9 | 20.9 | - | +6000 | - | - | RNP1 |
| 003 | TF | SOBEE | - | 236 (226.0) | -9.9 | 9.3 | - | +3500 | - | - | RNP1 |
| 004 | TF | JODAI | - | 149 (139.1) | -9.9 | 20.8 | - | +1800 | -180 | - | RNP1 |

| Path | Waypoint Identifier | Inbound Course °M(°T) | Magnetic Variation | Outbound Time (MIN) | Turn Direction | Minimum Altitude (FT) | Maximum Altitude (FT) | Speed (KIAS) | Navigation Specification |
|------|---------------------|-----------------------|--------------------|---------------------|----------------|-----------------------|-----------------------|--------------|--------------------------|
| Hold | SOBEE | 173 (163.3) | -9.9 | 1.0(-14000) | L | 3500 | FL140 | -210(-14000) | RNP1 |

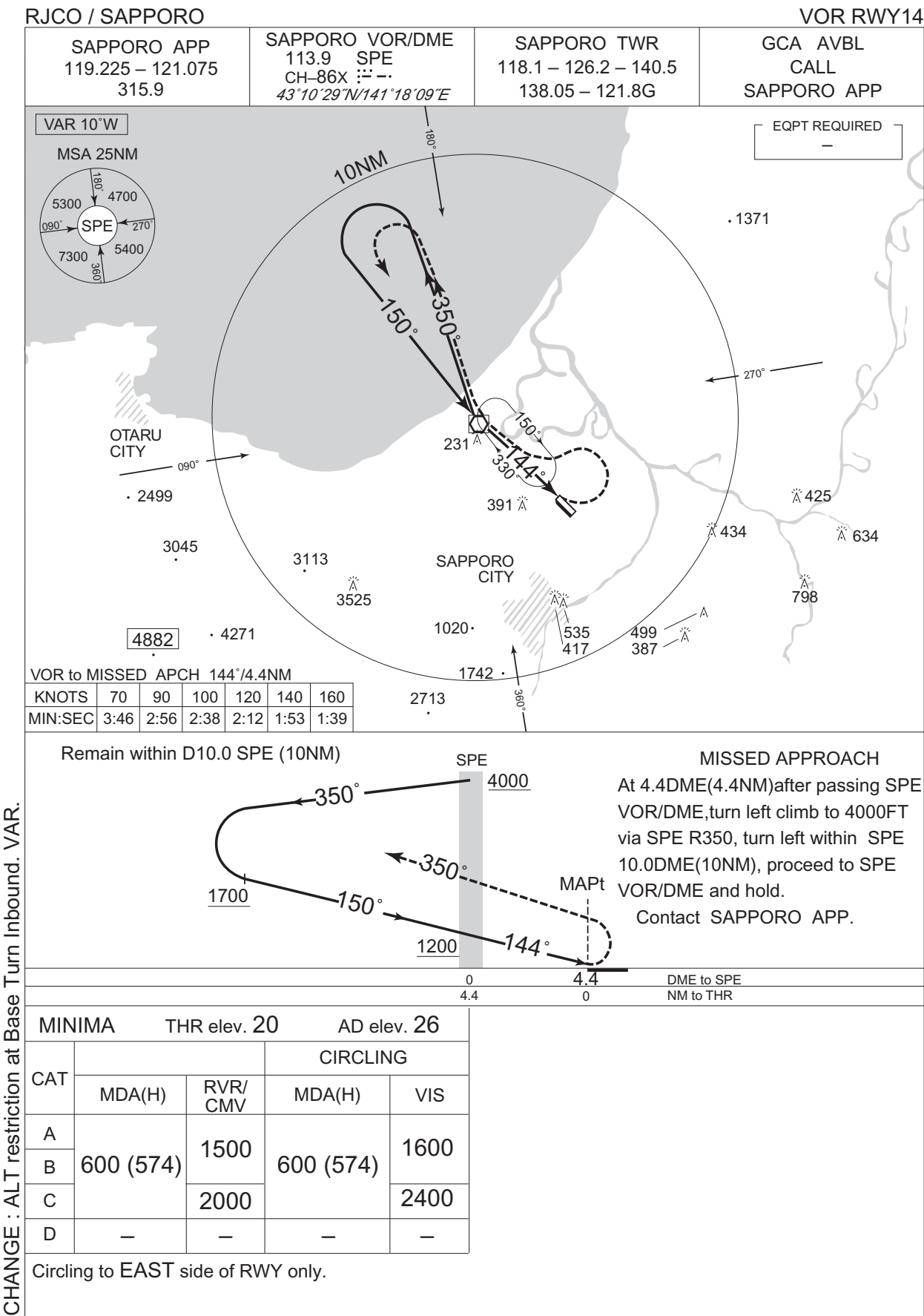
KURIS SOUTH ARRIVAL

From KURIS, to YACHA at or above 3000FT, to OHKAM, to JODAI at or above 1800FT.

| Serial Number | Path Descriptor | Waypoint Identifier | Fly Over | Course °M(°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (FT) | Speed (KIAS) | Vertical Angle | Navigation Specification |
|---------------|-----------------|---------------------|----------|----------------|--------------------|---------------|----------------|---------------|--------------|----------------|--------------------------|
| 001 | IF | KURIS | - | - | -9.9 | - | - | - | - | - | RNP1 |
| 002 | TF | YACHA | - | 309 (299.6) | -9.9 | 7.6 | - | +3000 | - | - | RNP1 |
| 003 | TF | OHKAM | - | 235 (224.7) | -9.9 | 5.5 | - | - | - | - | RNP1 |
| 004 | TF | JODAI | - | 149 (139.2) | -9.9 | 5.0 | - | +1800 | -180 | - | RNP1 |

CHANGE : Navigation Specification(Basic RNP1 → RNP1).

INSTRUMENT APPROACH CHART



CHANGE : ALT restriction at Base Turn Inbound. VAR.

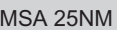
RJCO / SAPPORO

SAPPORO APP
119.225 – 121.075
315.9

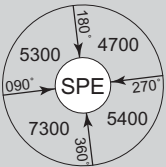
SAPPORO VOR/DME
113.9 SPE 33--
CH-86X
43°10'29"N/141°18'09"E

SAPPORO TWR
118.1 – 126.2 – 140.5
138.05 – 121.8G

GCA AVBL
CALL
SAPPORO APP



- EQPT REQUIRED
DME

OTARU
CITY

• 2499

3045

3113

3525

SAPPORO

4882

• 4271

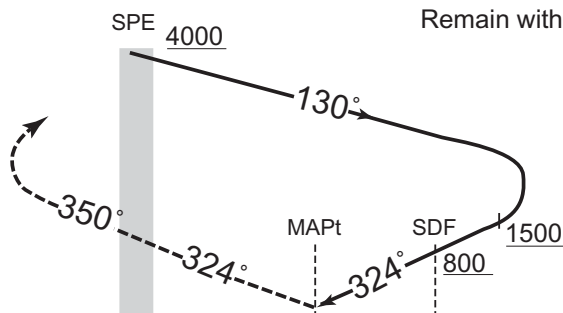
2713

SPE 4000

Remain within SPE 13DME

MISSED APPROACH

At 5.3DME prior to SPE VOR/DME
climb to 4000FT via SPE R144
then SPE R350, turn left
within SPE 10.0DME, proceed to
SPE VOR/DME and hold.
Contact SAPPORO APP.



| |
|------------|
| DME to SPE |
| NM to THR |

Q

4

45

9.0

3.7

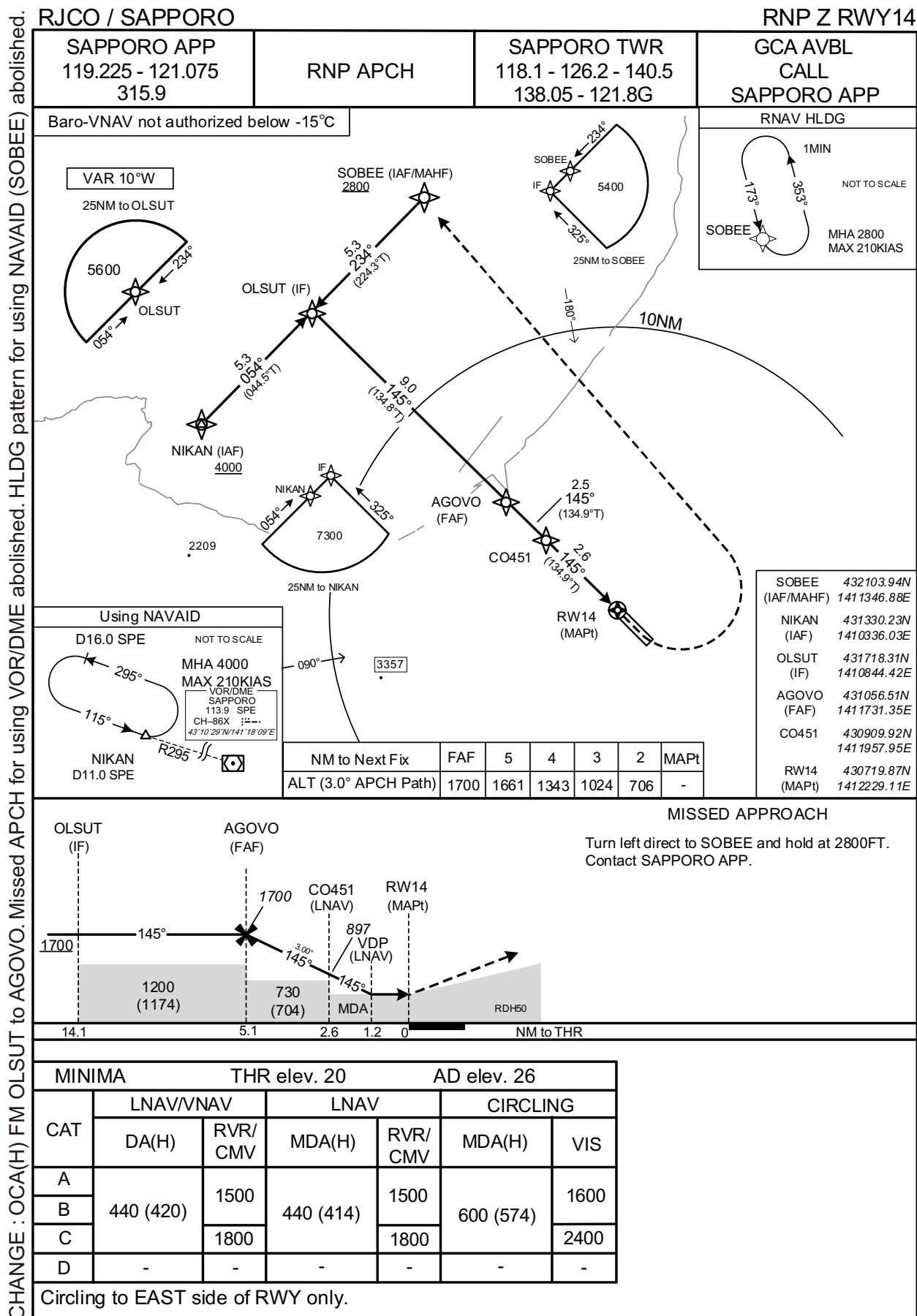
MINIMA THR elev. 27 AD elev. 26

| CAT | | | CIRCLING | |
|-----|-----------|-------------|-----------|------|
| | MDA(H) | RVR/ CMV | MDA(H) | VIS |
| A | 620 (594) | 1500 | 620 (594) | 1600 |
| B | | | | |
| C | | 2000 | | 2400 |
| D | — | — | — | — |

Circling to **EAST** side of RWY only.

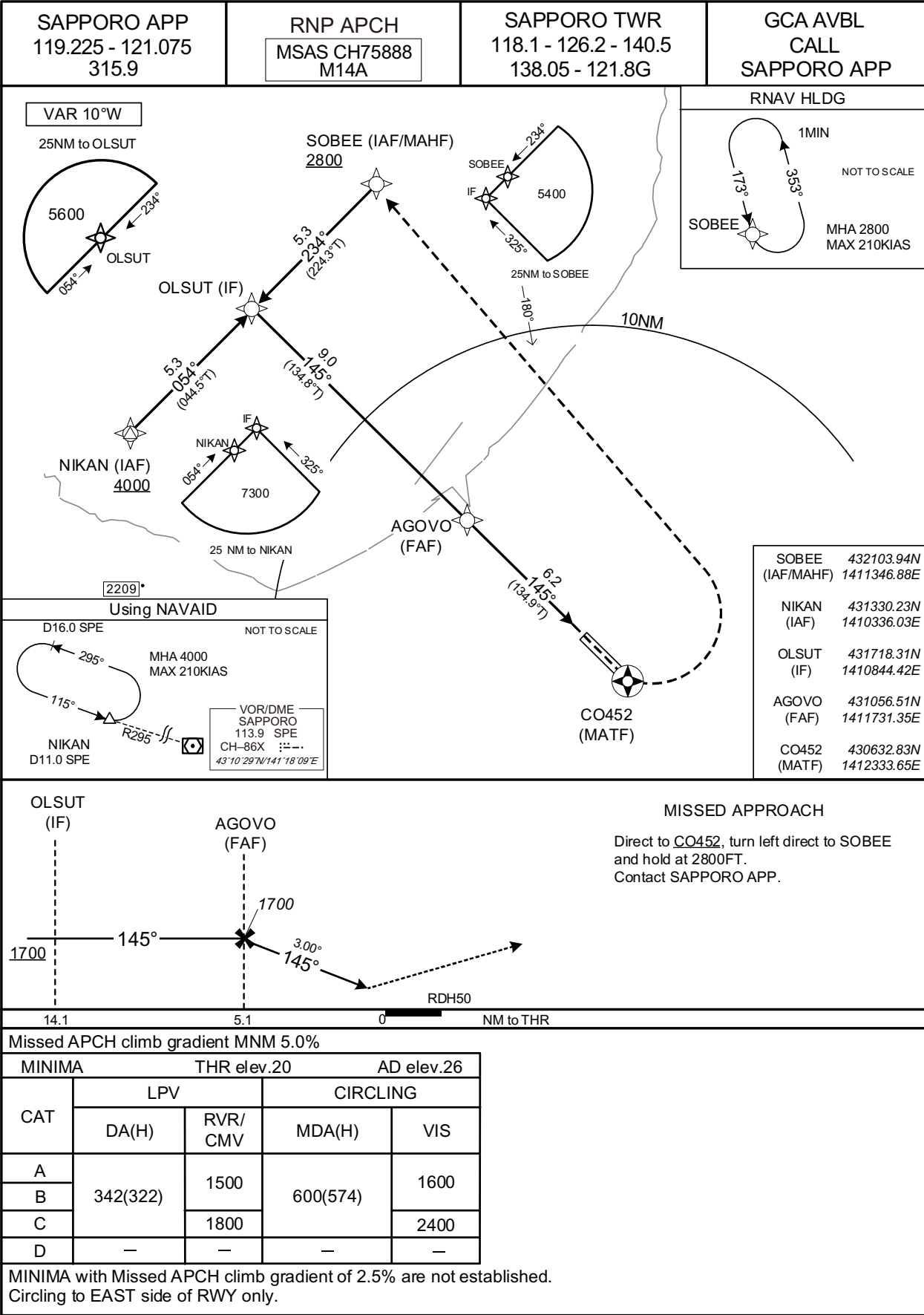
CHANGE : VAR.

INSTRUMENT APPROACH CHART



INSTRUMENT APPROACH CHART

RJCO / SAPPORORNP Y RWY14(LPV only)



INSTRUMENT APPROACH CHART

RJCO / SAPPORO

RNP Y RWY14(LPV only)

FAS DATA BLOCK

| | | | |
|----------------------------------|---------------|----------------------------|---------------|
| Operation type | 0 | LTP/FTP ellipsoidal height | +00374 |
| SBAS service provider identifier | 2 | FPAP Latitude | 430641.1115N |
| Airport identifier | RJCO | FPAP Longitude | 1412322.2875E |
| Runway | 14 | Threshold crossing height | 00015.0 |
| Approach performance designator | 0 | TCH units selector | 1 |
| Route indicator | Y | Glide path angle | 03.00 |
| Reference path data selector | 0 | Course width at threshold | 105.00 |
| Reference path ID | M14A | ∠ length offset | 0192 |
| LTP/FTP latitude | 430719.8510N | HAL | 40.00 |
| LTP/FTP longitude | 1412229.1365E | VAL | 50.00 |
| CRC remainder | DE9BC9B1 | | |

Required additional data

| | |
|----------------------------|-----|
| LTP/FTP orthometric height | 5.7 |
|----------------------------|-----|

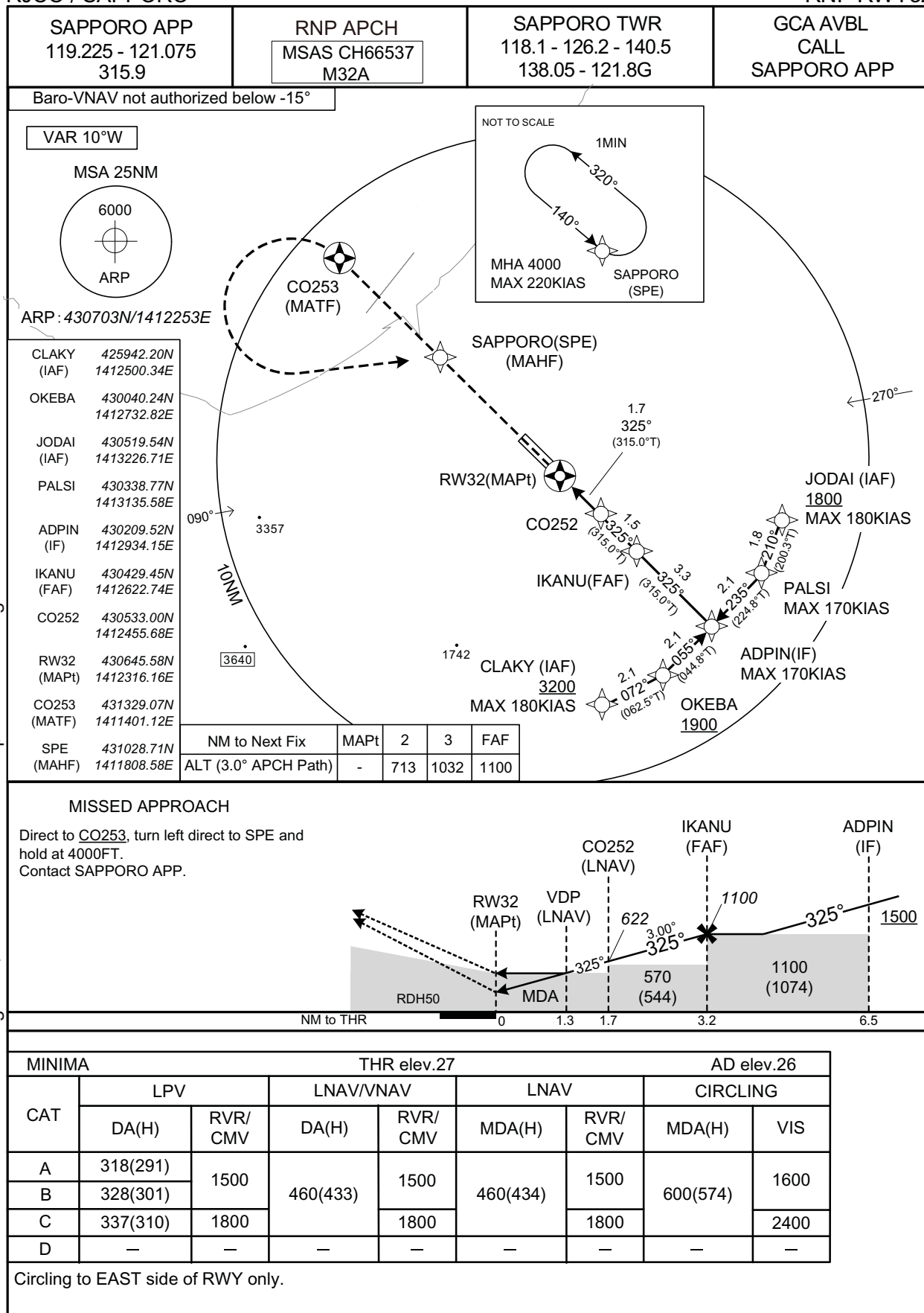
CHANGE : Description of PROC name.

INSTRUMENT APPROACH CHART

RJCO / SAPPORO

RNP RWY32

CHANGE : Missed APCH for using VOR/DME abolished. HLDG pattern for using NAVAID abolished.



INSTRUMENT APPROACH CHART

RJCO / SAPPORO

RNP RWY32

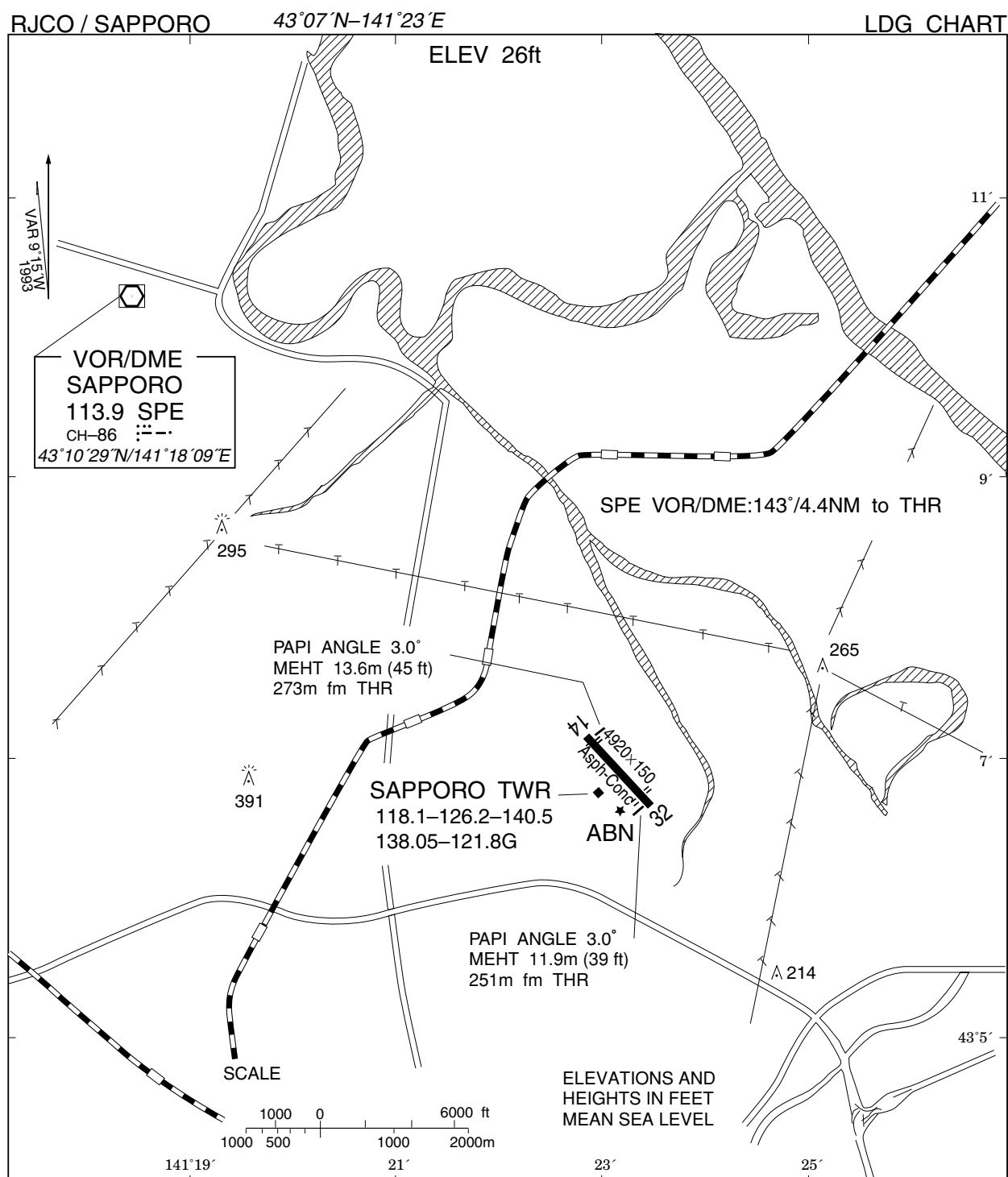
FAS DATA BLOCK

| | | | |
|----------------------------------|---------------|----------------------------|---------------|
| Operation type | 0 | LTP/FTP ellipsoidal height | +00394 |
| SBAS service provider identifier | 2 | FPAP Latitude | 430724.3050N |
| Airport identifier | RJCO | FPAP Longitude | 1412223.0240E |
| Runway | 32 | Threshold crossing height | 00015.0 |
| Approach performance designator | 0 | TCH units selector | 1 |
| Route indicator | | Glide path angle | 03.00 |
| Reference path data selector | 0 | Course width at threshold | 105.00 |
| Reference path ID | M32A | ∠ length offset | 0192 |
| LTP/FTP latitude | 430645.5665N | HAL | 40.00 |
| LTP/FTP longitude | 1412316.1770E | VAL | 50.00 |
| CRC remainder | 56210C49 | | |

Required additional data

| | |
|----------------------------|-----|
| LTP/FTP orthometric height | 7.7 |
|----------------------------|-----|

CHANGE : Description of FAS DATA BLOCK ITEM(CRC remainder).



RJCO / SAPPORO

Minimum Vectoring Altitude CHART

VAR 9°W (2013)

