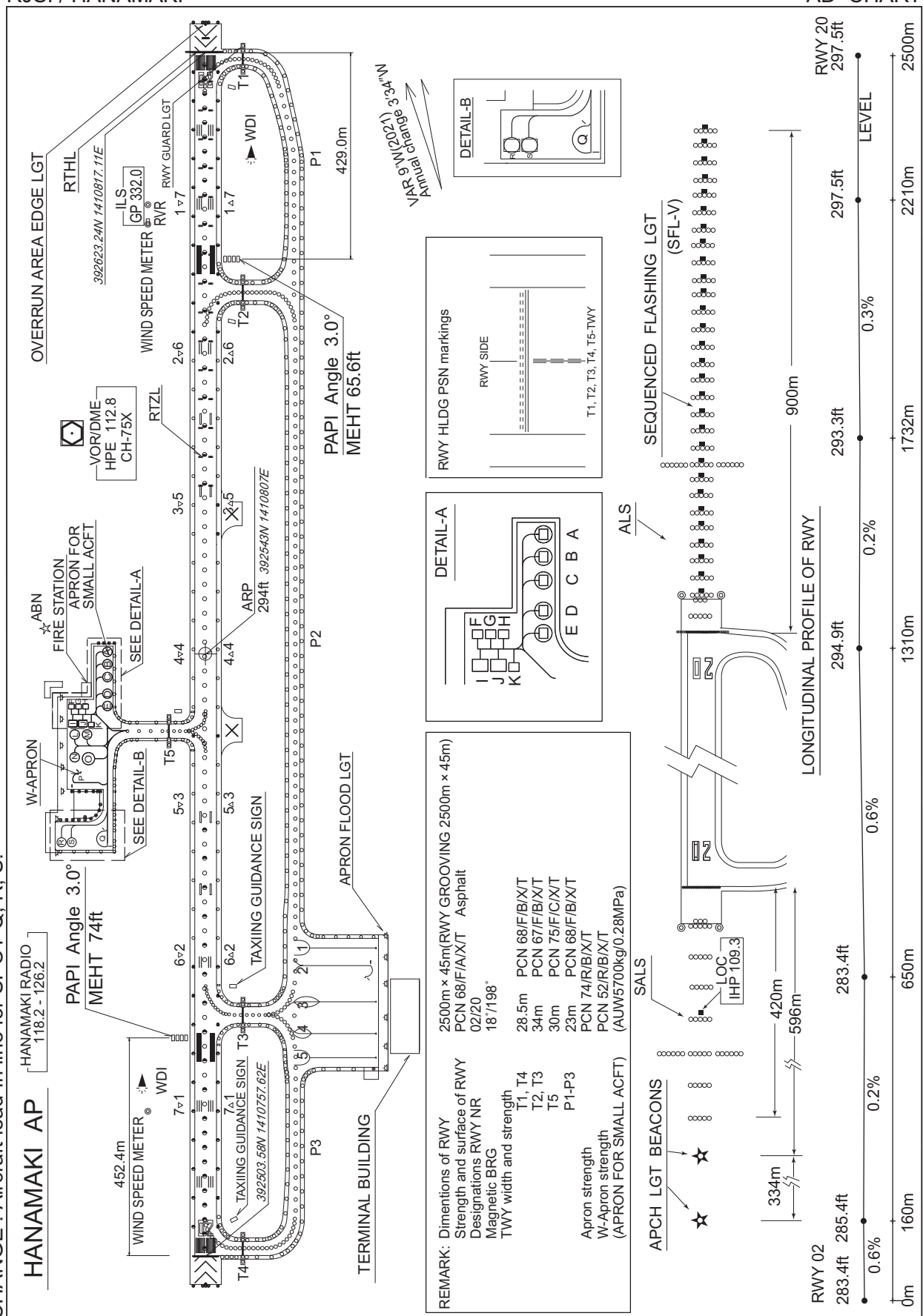


RJSI / HANAMAKI

AD CHART



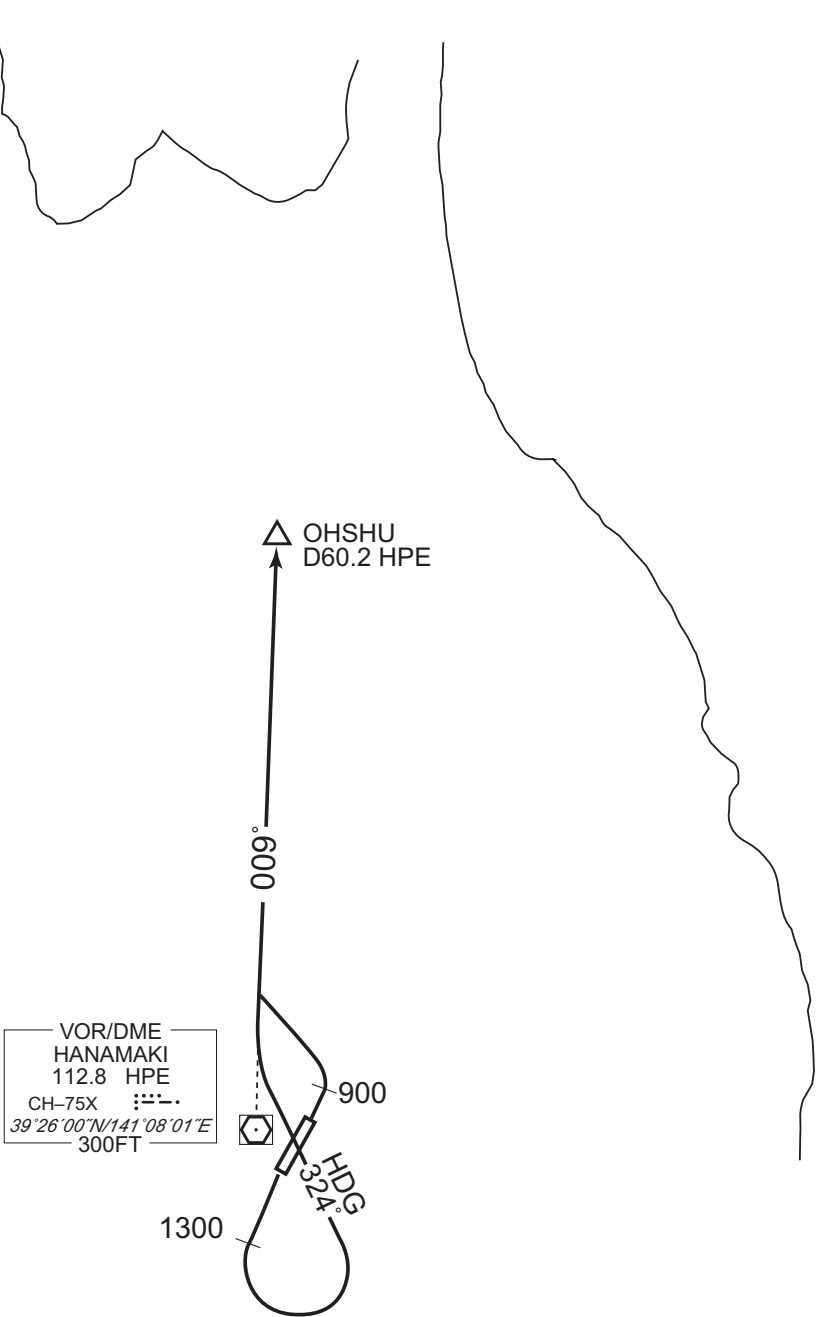
STANDARD DEPARTURE CHART -INSTRUMENT

RJSI / HANAMAKI SID

OHSU ONE DEPARTURE

- RWY 02 : Climb RWY HDG to 900FT, turn left...
- RWY 20 : Climb RWY HDG to 1300FT, turn left HDG 324°...
...to intercept and proceed via HPE R009 to OHSU.

CHANGE : Description of PROC name.



STANDARD DEPARTURE CHART -INSTRUMENT

RJSI / HANAMAKI

SID

NIIGATA FIVE DEPARTURE

RWY 02 : Climb RWY HDG to HPE 3.5 DME, turn right...

RWY 20 : Climb RWY HDG to HPE 3.5 DME, turn left...

...proceed to HPE VOR/DME, via HPE R236 to HPE 50.0DME(GTC 79.6DME),
via GTC R055 to GTC.Cross HPE VOR/DME at or above 2200 FT, cross HPE R236/50.0DME
(GTC R055/79.6DME) at or above 11000 FT.

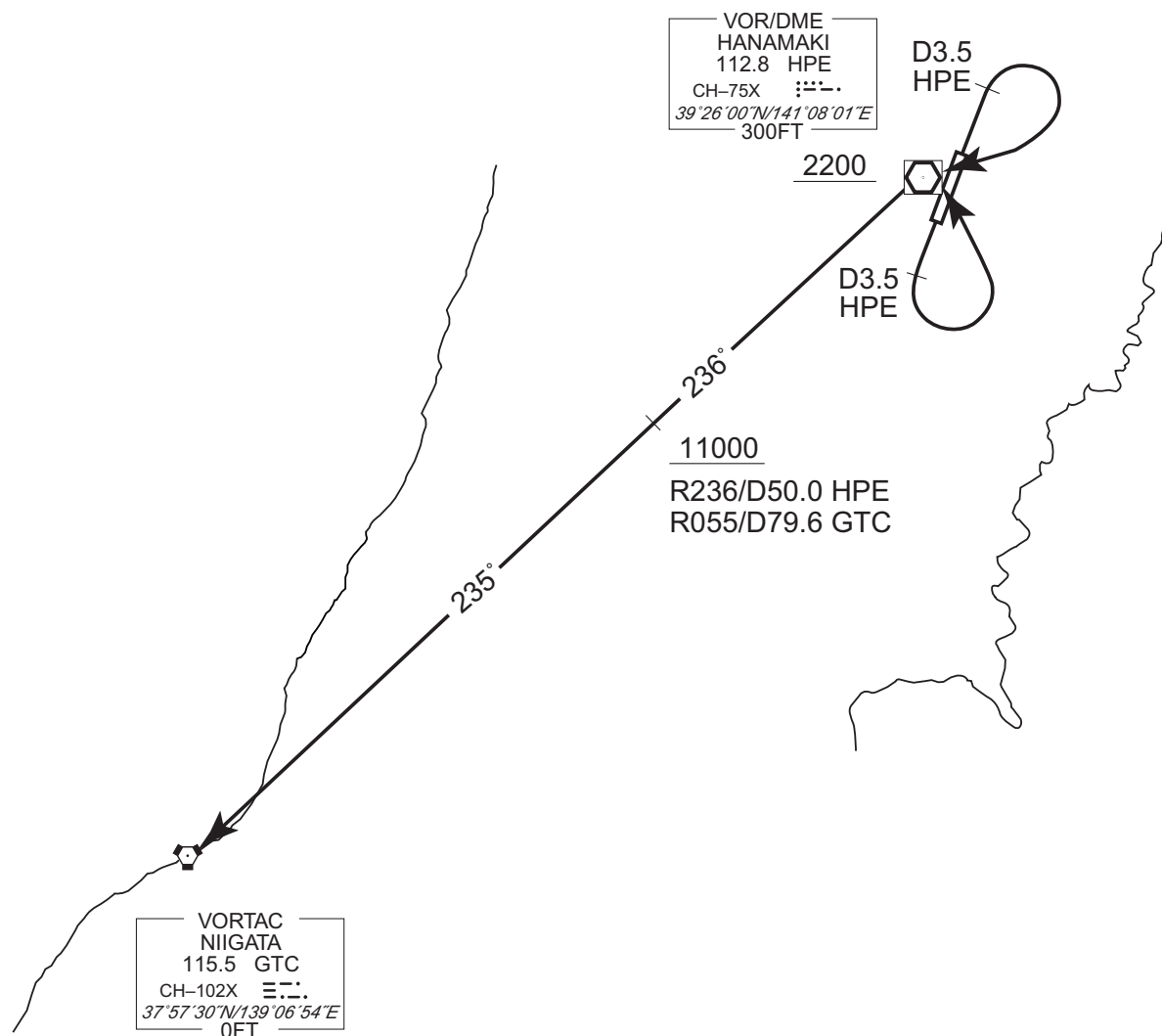
Note RWY02 : 4.5% climb gradient required up to 2400FT.

OBST ALT 1641FT located at 4.1NM 091° FM end of RWY02.

RWY20 : 3.9% climb gradient required up to 1100FT.

OBST ALT 722FT located at 2.8NM 166° FM end of RWY20.

CHANGE : PROC renamed. PROC course. ALT restriction.



STANDARD DEPARTURE CHART -INSTRUMENT

RJSI / HANAMAKI

SID

HANAMAKI REVERSAL TWO DEPARTURE

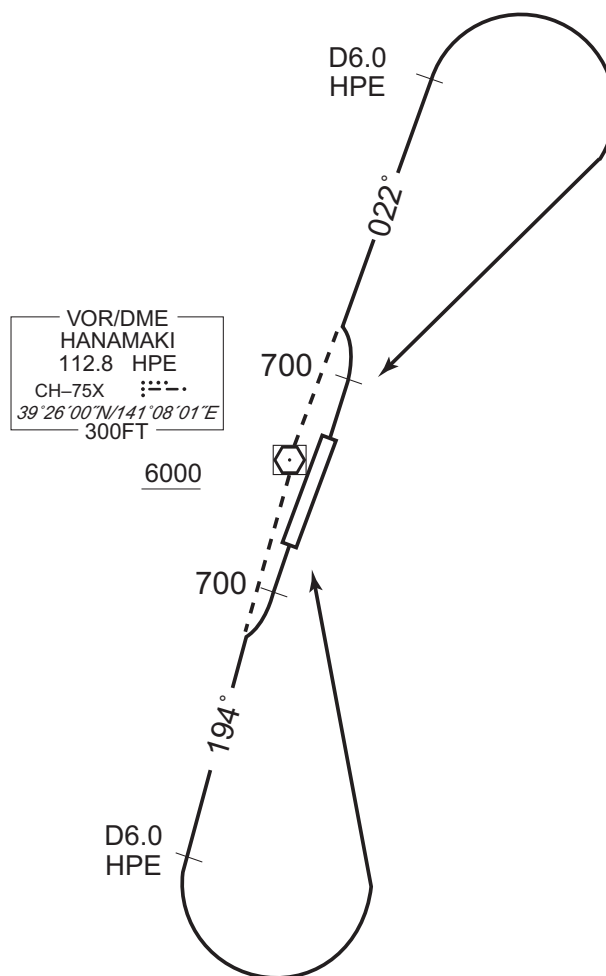
RWY 02 : Climb RWY HDG to 700FT, via HPE R022 to 6.0 DME, turn right...

RWY 20 : Climb RWY HDG to 700FT, via HPE R194 to 6.0 DME, turn left...
...proceed to HPE VOR/DME.

Cross HPE VOR/DME at or above 6000FT.

Note RWY02 : 5.0% climb gradient required up to 3200FT.

OBST ALT 2691FT located at 9.1NM 058° FM end of RWY02.



CHANGE : Description of PROC name.

STANDARD DEPARTURE CHART -INSTRUMENT

RJSI / HANAMAKI

RNAV SID

SAMBO ONE DEPARTURE

Basic RNP1

Note GNSS required.

VAR 9°W

RWY02 : Climb on HDG 019° at or above 700FT, direct to AKARI, to DASCO to SAMBO.
RWY20 : Climb on HDG 199° at or above 1300FT, turn right direct to SI010, to AKARI, to DASCO to SAMBO .
Note RWY02 : 4.0% climb gradient required up to 700FT.
OBST ALT 318FT located at 0.2NM 061° FM end of RWY02.
RWY20 : 4.0% climb gradient required up to 2700FT.
OBST ALT 3117FT located at 10.7NM 351° FM end of RWY20.

RWY02

| 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 | - | - | 019 (010.7) | -8.7 | - | - | +700 | - | - | Basic RNP1 |
| 002 | DF | AKARI | - | - | -8.7 | - | - | - | - | - | Basic RNP1 |
| 003 | TF | DASCO | - | 009 (000.8) | -8.7 | 7.9 | - | - | - | - | Basic RNP1 |
| 004 | TF | SAMBO | - | 345 (336.6) | -8.7 | 21.9 | - | - | - | - | Basic RNP1 |

RWY20

| 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 | - | - | 199 (190.7) | -8.7 | - | - | +1300 | - | - | Basic RNP1 |
| 002 | DF | SI010 | - | - | -8.7 | - | R | - | - | - | Basic RNP1 |
| 003 | TF | AKARI | - | 025 (016.7) | -8.7 | 17.0 | - | - | - | - | Basic RNP1 |
| 004 | TF | DASCO | - | 009 (000.8) | -8.7 | 7.9 | - | - | - | - | Basic RNP1 |
| 005 | TF | SAMBO | - | 345 (336.6) | -8.7 | 21.9 | - | - | - | - | Basic RNP1 |

STANDARD DEPARTURE CHART -INSTRUMENT

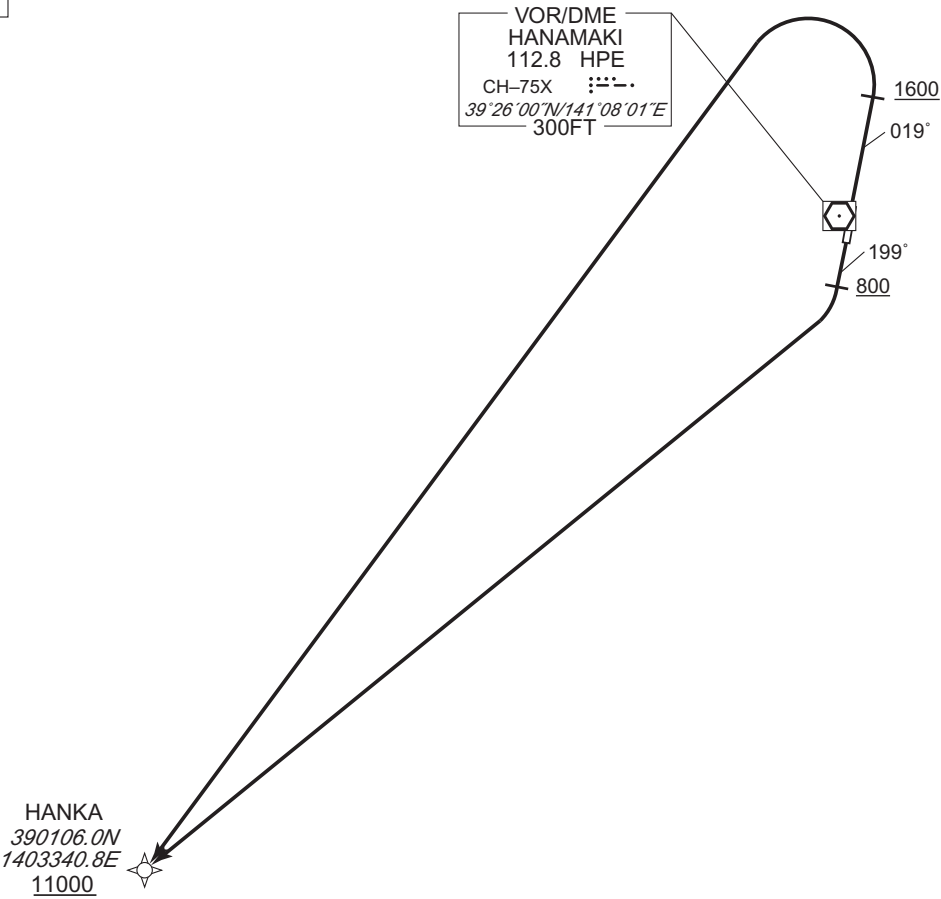
RJSI / HANAMAKI

RNAV SID

| HANKA ONE DEPARTURE | Basic RNP1 |
|---------------------|------------|
|---------------------|------------|

Note GNSS required

VAR 9°W



RWY02 : Climb on HDG 019° at or above 1600FT, turn left direct to HANKA, at or above 11000FT.
RWY20 : Climb on HDG 199° at or above 800FT, turn right direct to HANKA, at or above 11000FT.
Note RWY02: 5.0% climb gradient required up to 3600FT.

OBST ALT 1936FT located at 5.5NM 340° FM end of RWY02.
OBST ALT 3018FT located at 8.2NM 310° FM end of RWY02.

RWY20: 5.0% climb gradient required up to 5400FT.
OBST ALT 4593FT located at 18.2NM 227° FM end of RWY20.
OBST ALT 5151FT located at 20.8NM 232° FM end of RWY20.

RWY02

| 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 | — | — | 019 (010.7) | -8.7 | — | — | +1600 | — | — | Basic RNP1 |
| 002 | DF | HANKA | — | — | -8.7 | — | L | +11000 | — | — | Basic RNP1 |

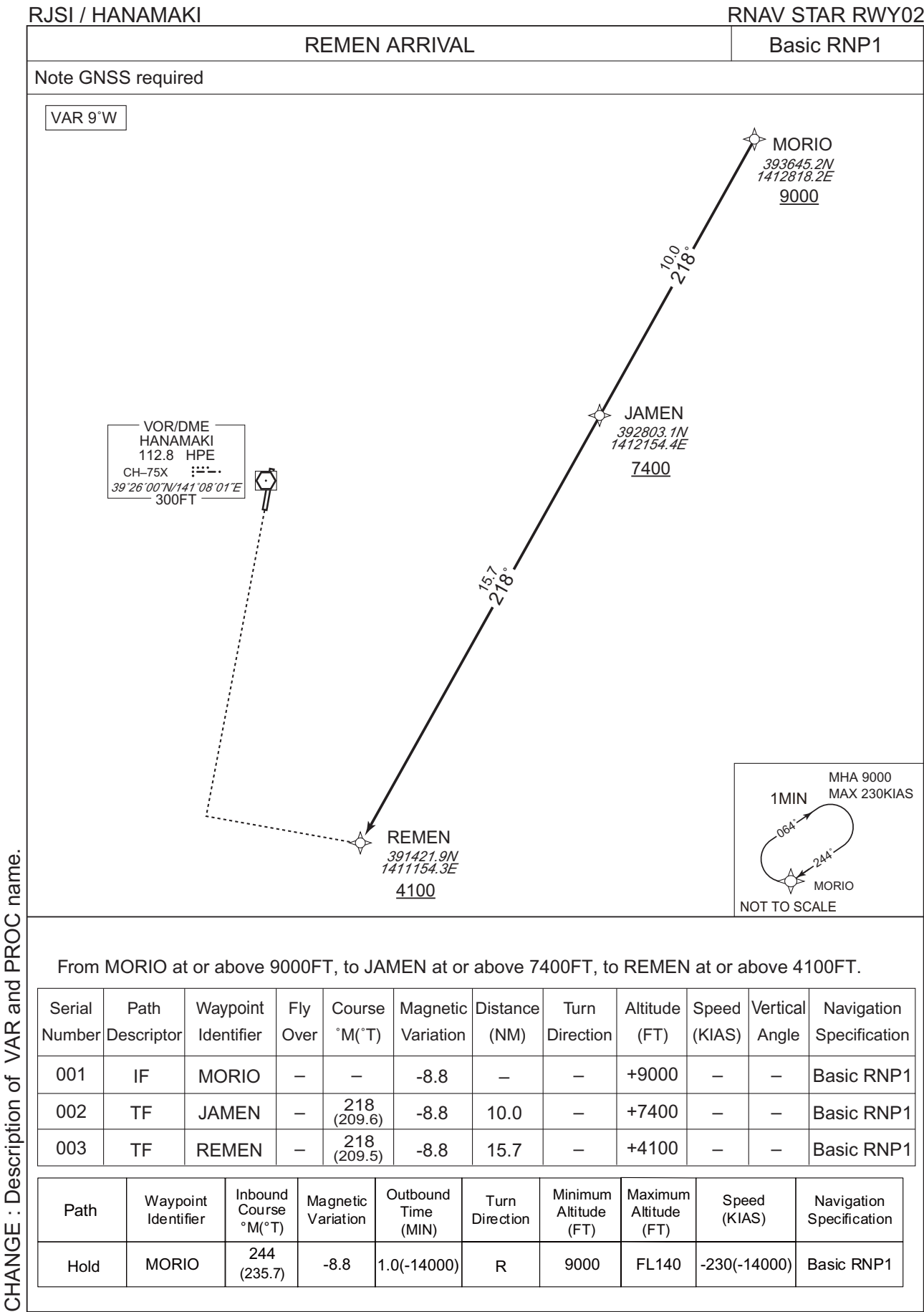
RWY20

| 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 | — | — | 199 (190.7) | -8.7 | — | — | +800 | — | — | Basic RNP1 |
| 002 | DF | HANKA | — | — | -8.7 | — | R | +11000 | — | — | Basic RNP1 |

CHANGE : Description of VAR and PROC name.

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STANDARD ARRIVAL CHART - INSTRUMENT



STANDARD ARRIVAL CHART - INSTRUMENT

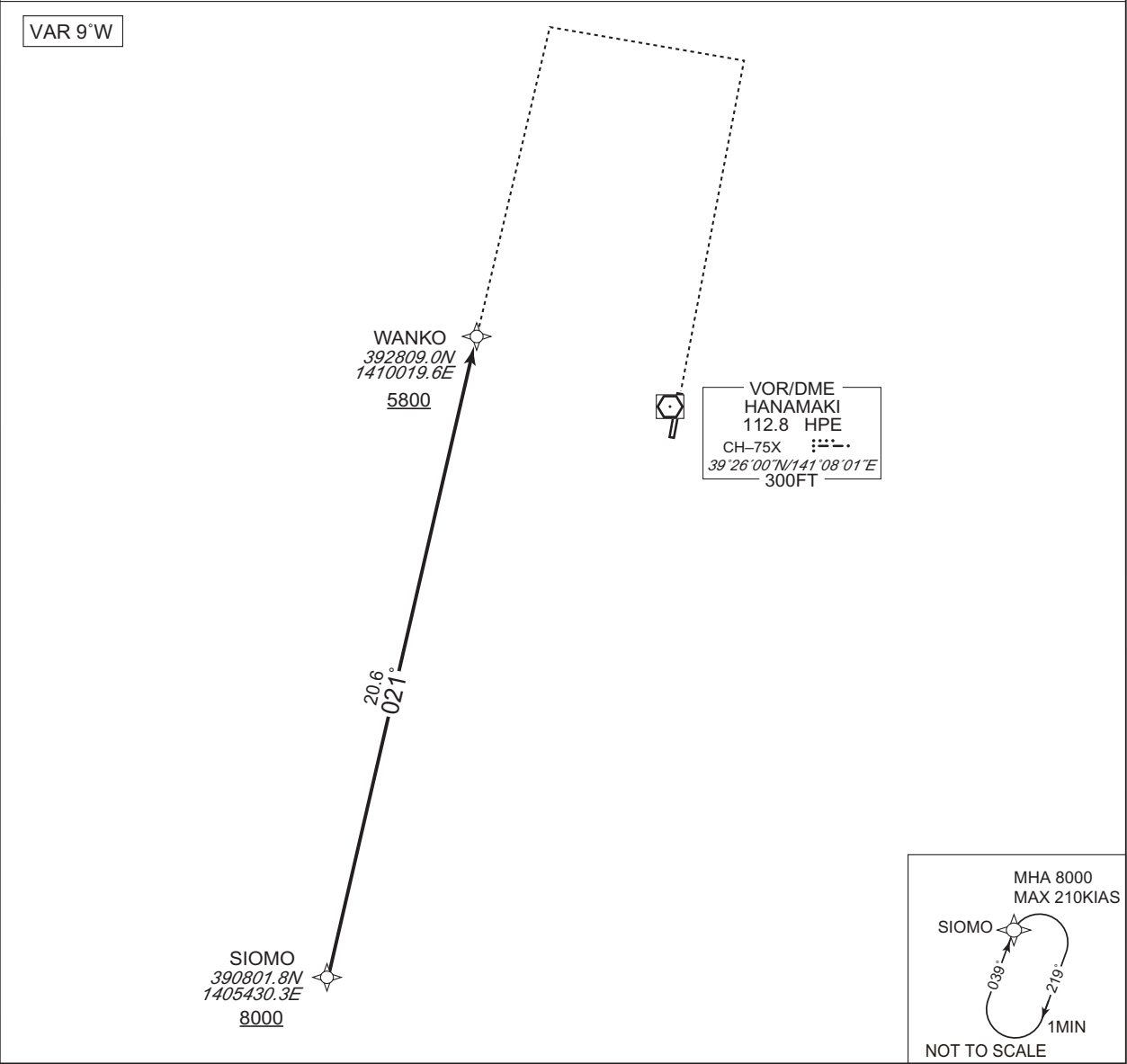
RJSI / HANAMAKI

RNAV STAR RWY20

WANKO ARRIVAL

Basic RNP1

Note GNSS required



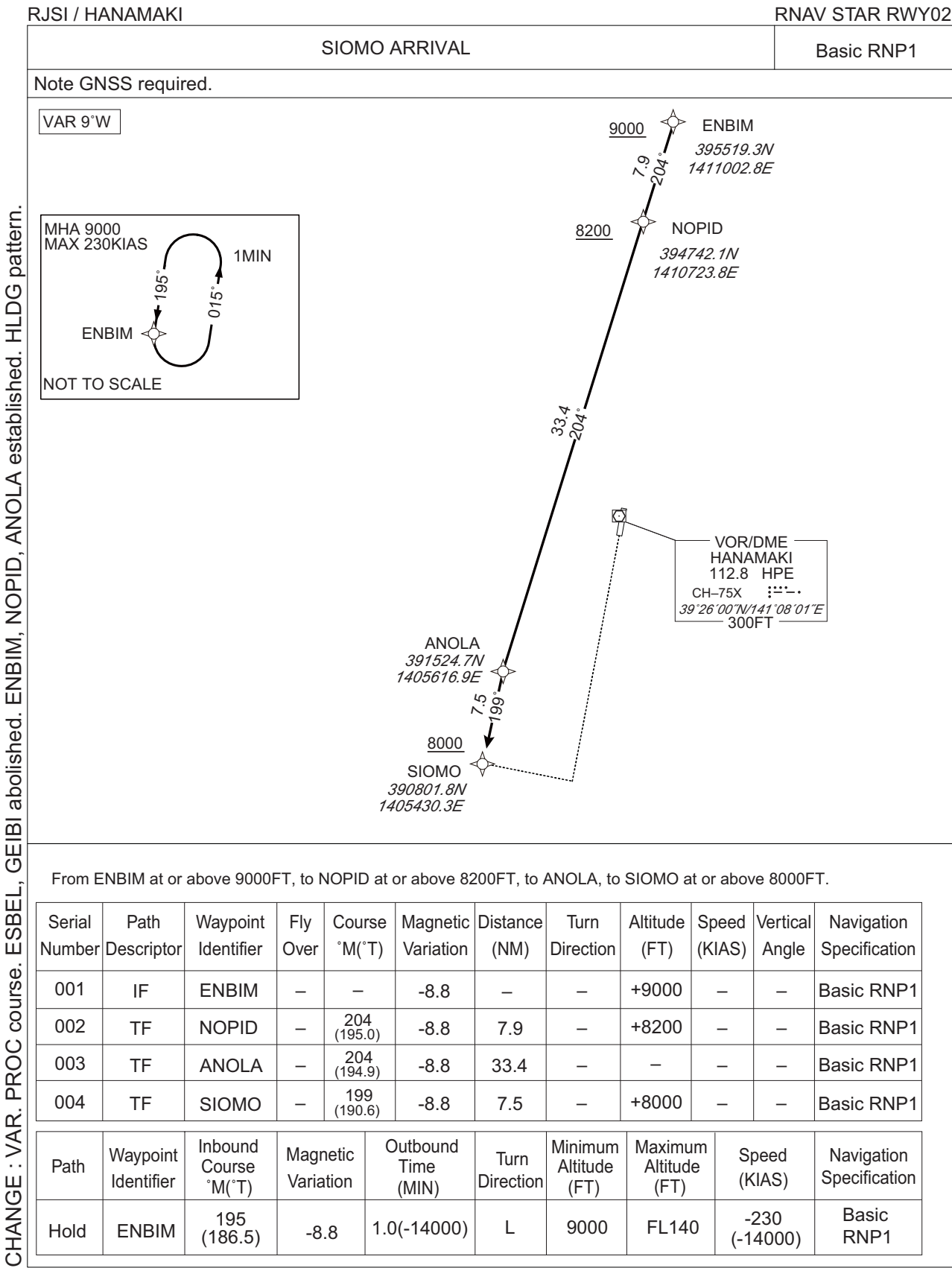
From SIOMO at or above 8000FT, to WANKO at or above 5800FT.

| 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 | SIOMO | — | — | -8.8 | — | — | +8000 | — | — | Basic RNP1 |
| 002 | TF | WANKO | — | 021 (012.6) | -8.8 | 20.6 | — | +5800 | — | — | Basic 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 | SIOMO | 039 (030.1) | -8.8 | 1.0(-14000) | R | 8000 | FL140 | -210(-14000) | Basic RNP1 |

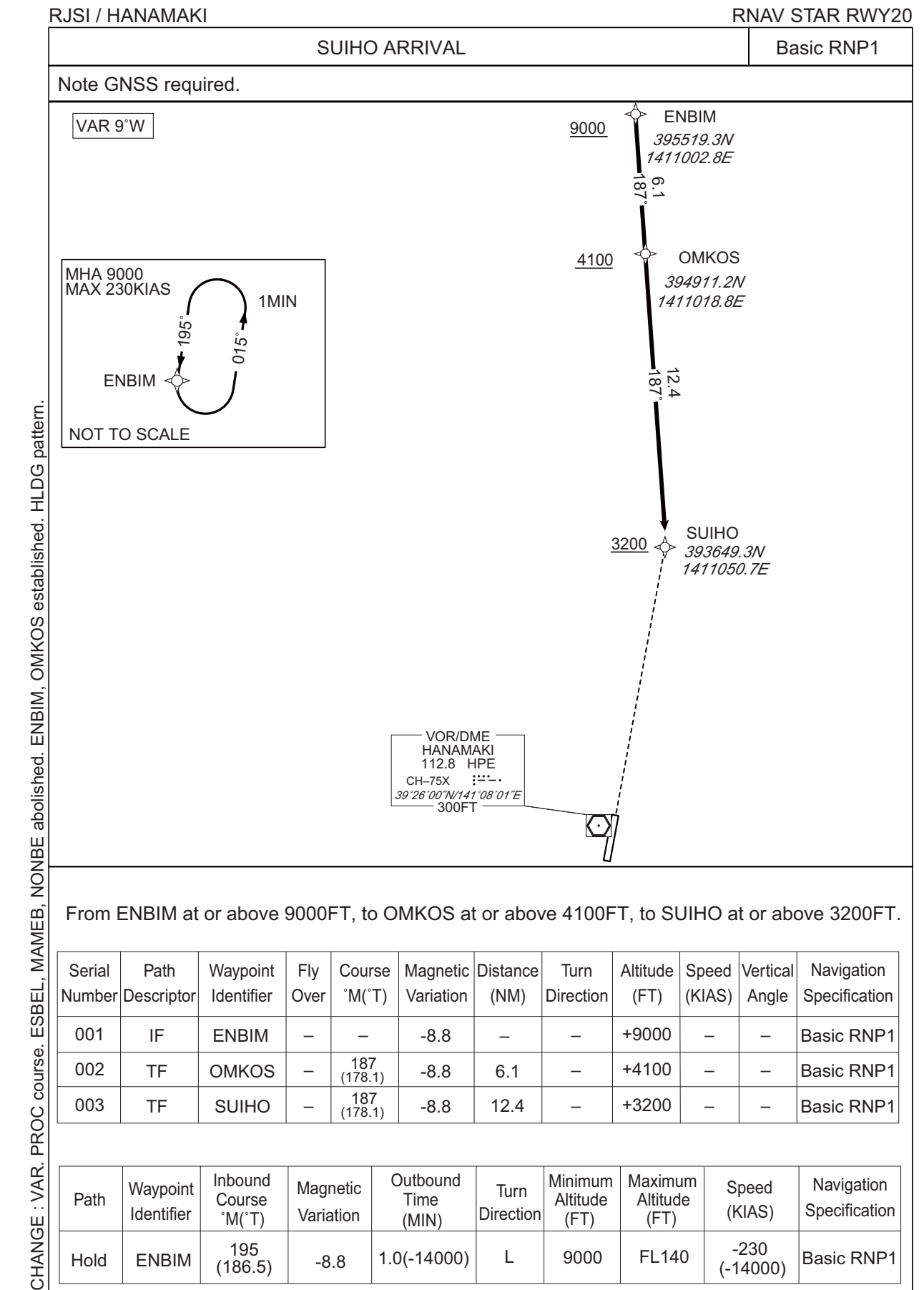
CHANGE : Description of VAR and PROC name.

STANDARD ARRIVAL CHART - INSTRUMENT

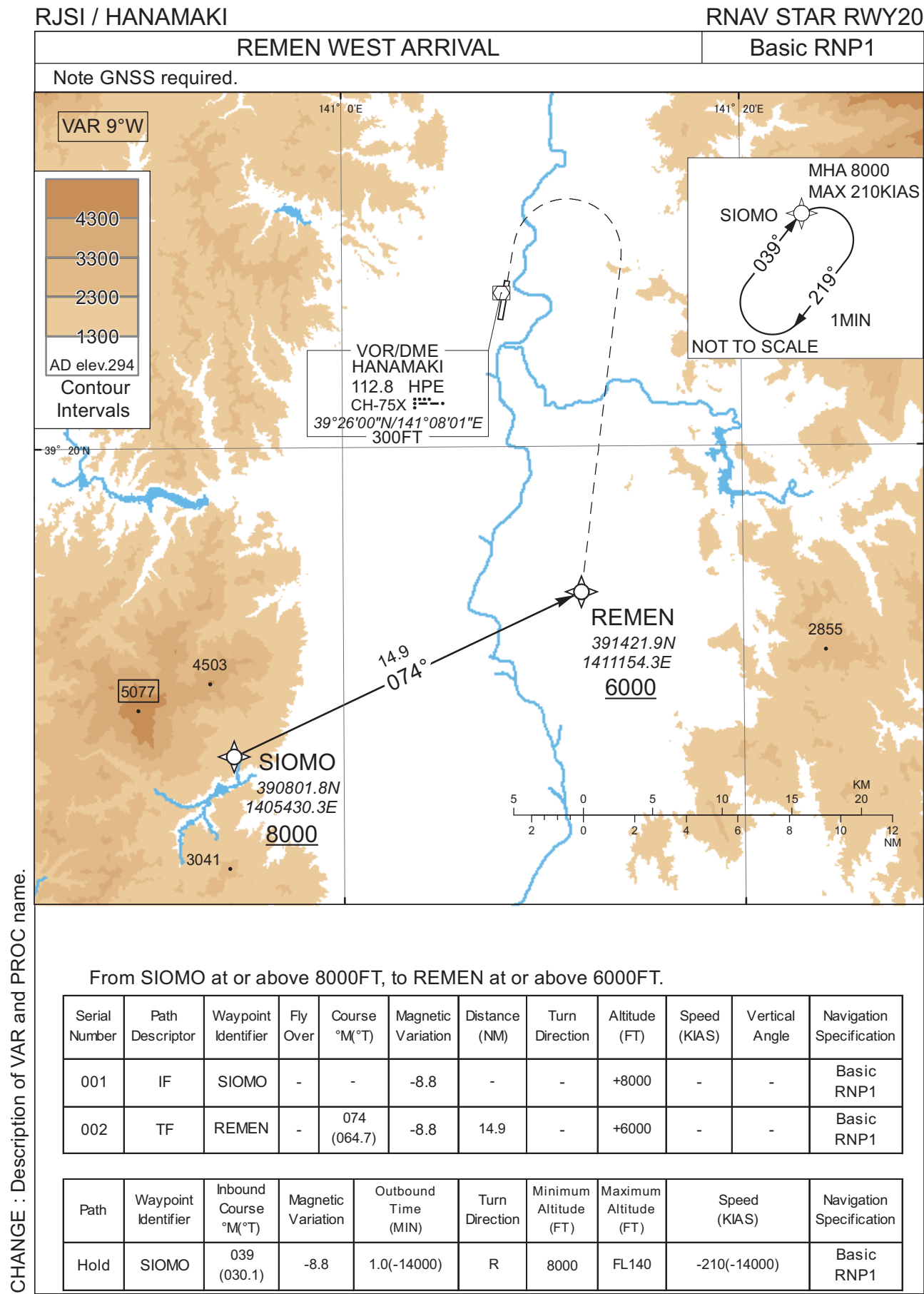


CHANGE : VAR. PROC course. ESBEL, GEIBI abolished. ENBIM, NOPID, ANOLA established. HLDG pattern.

STANDARD ARRIVAL CHART - INSTRUMENT



STANDARD ARRIVAL CHART - INSTRUMENT

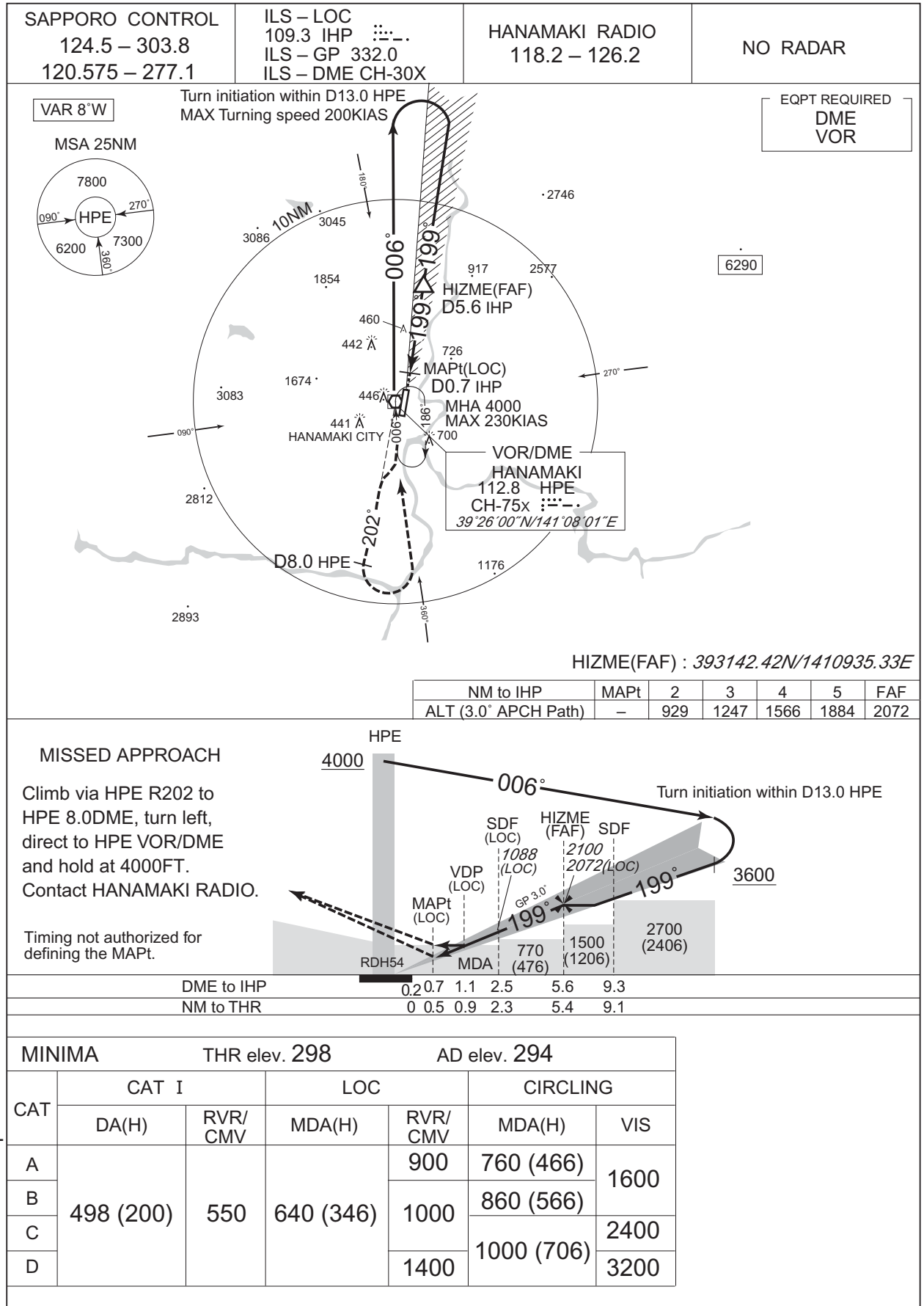


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INSTRUMENT APPROACH CHART

RJSI / HANAMAKI

ILS Z or LOC Z RWY20

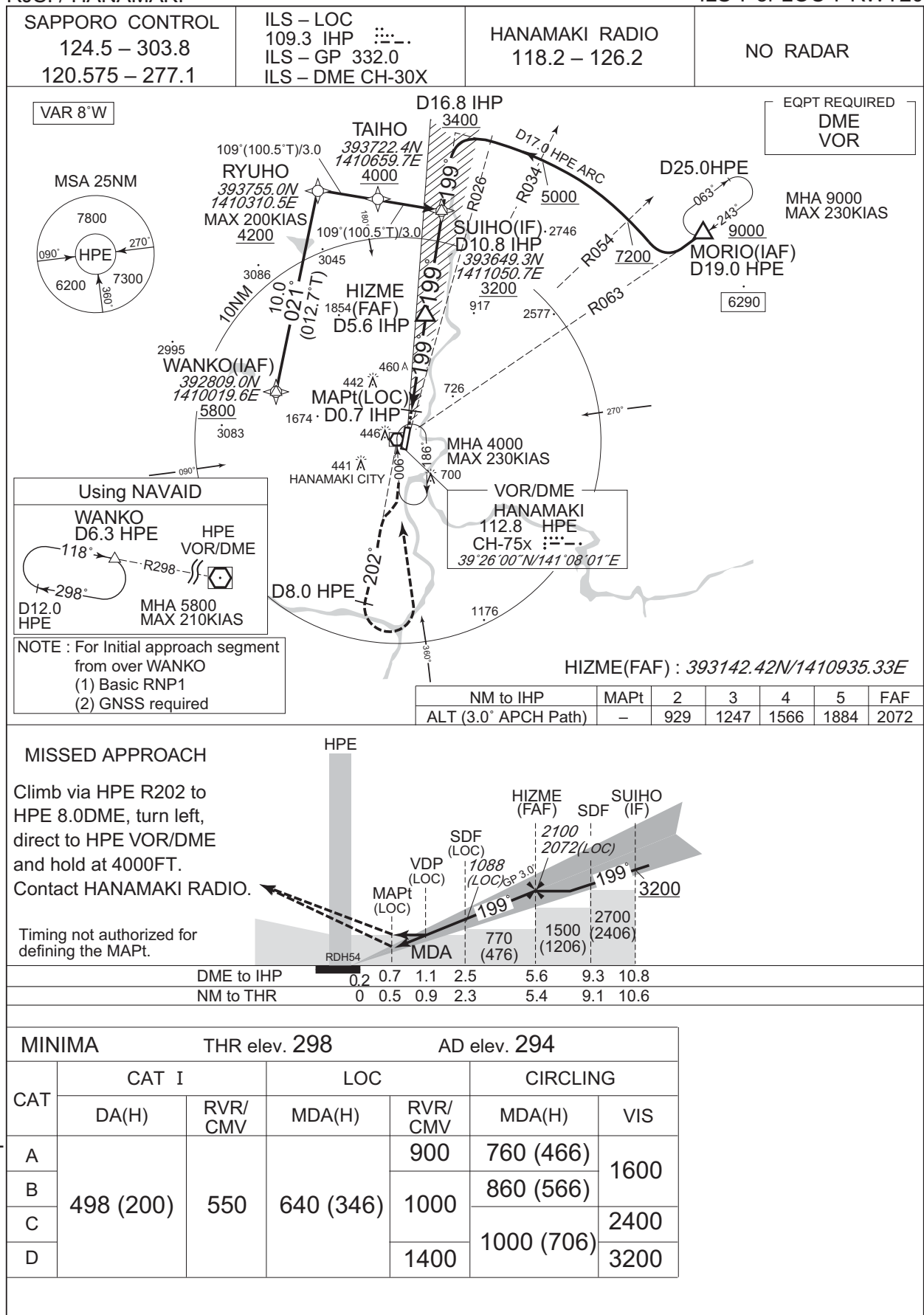


CHANGE : Description of VAR.

INSTRUMENT APPROACH CHART

RJSI / HANAMAKI

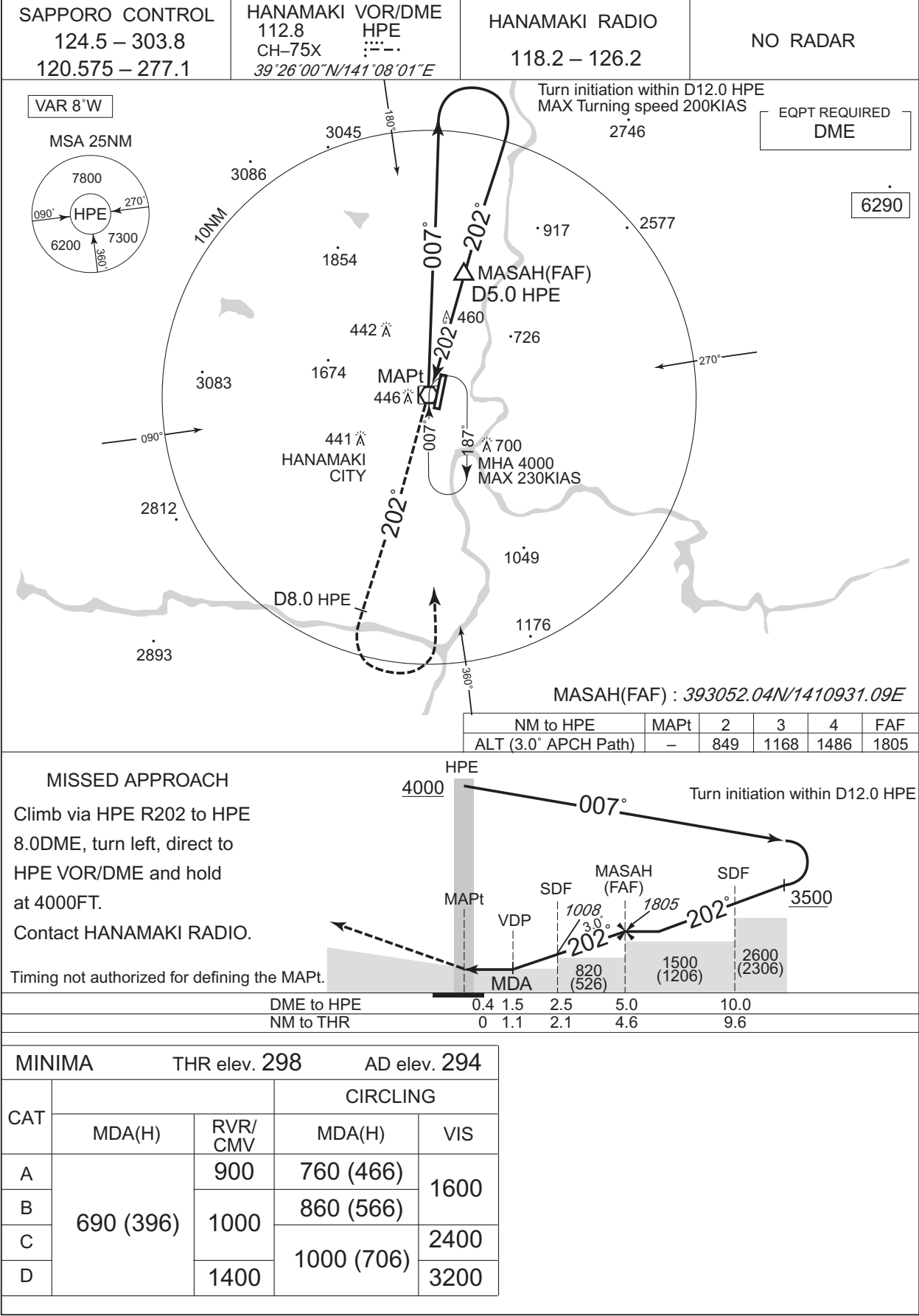
ILS Y or LOC Y RWY20



CHANGE : Description of VAR.

INSTRUMENT APPROACH CHART

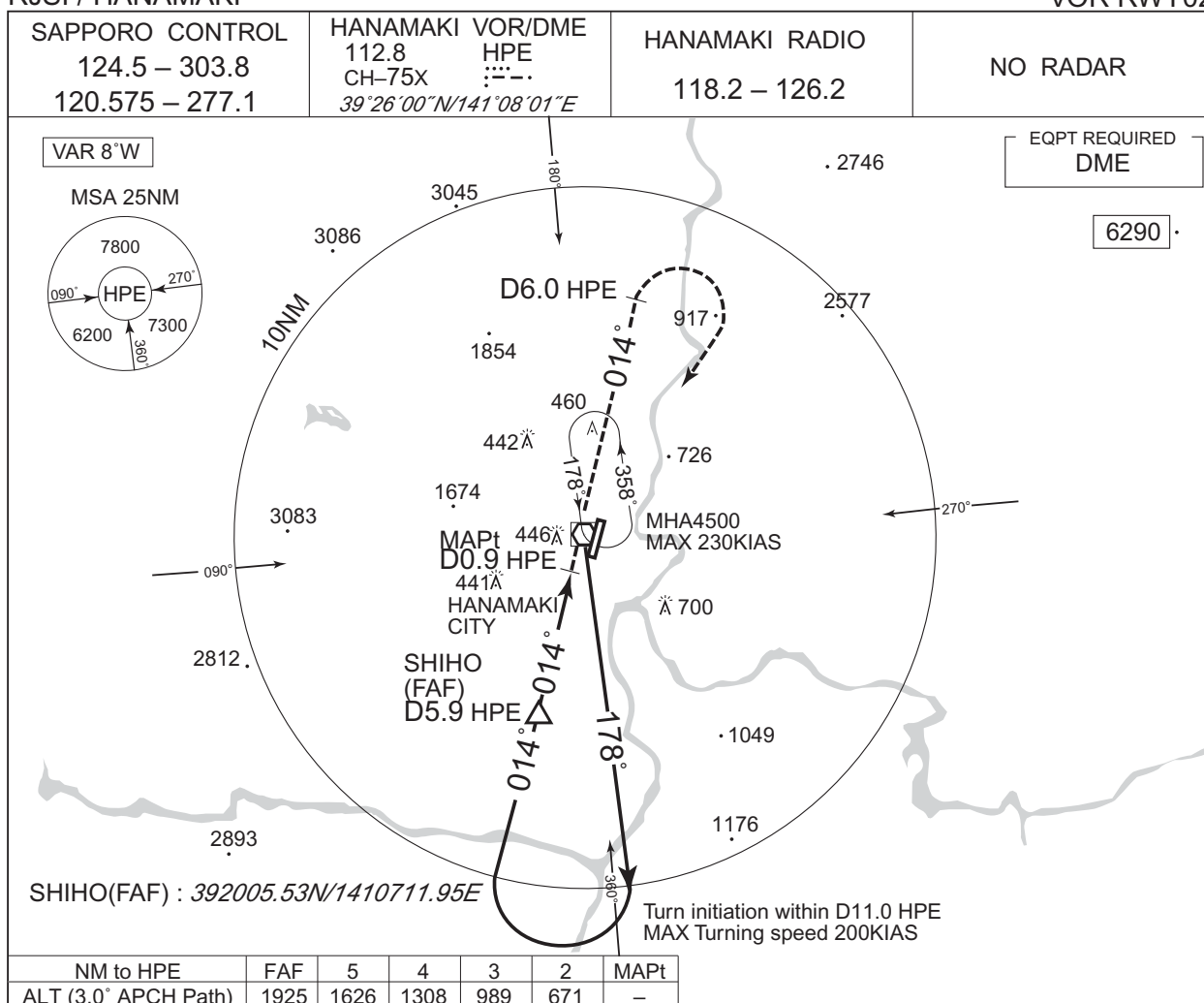
RJSI / HANAMAKI VOR RWY20



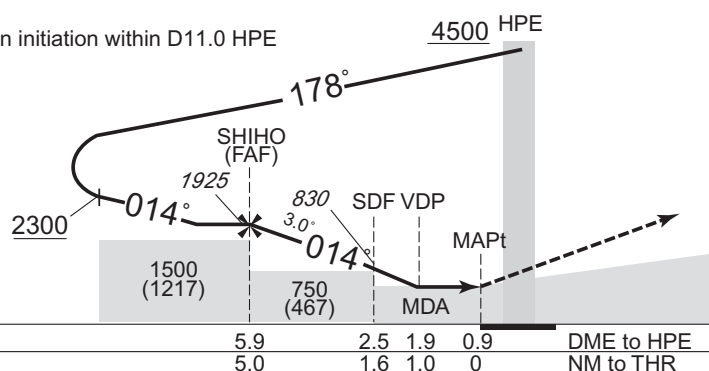
INSTRUMENT APPROACH CHART

RJSI / HANAMAKI

VOR RWY02



Turn initiation within D11.0 HPE



MISSED APPROACH

Climb via HPE R014 to HPE
6.0DME, turn right, proceed to HPE
VOR/DME and hold at 4500FT.
Contact HANAMAKI RADIO.

Timing not authorized for defining the MAPt.

CHANGE : Description of VAR.

Missed APCH climb gradient MNM 3.6%

| MINIMA | | THR elev. 283 | AD elev. 294 | |
|--------|-----------|---------------|--------------|------|
| CAT | | | CIRCLING | |
| | MDA(H) | CMV | MDA(H) | VIS |
| A | 640 (357) | 1200 | 760 (466) | 1600 |
| B | | 1300 | 860 (566) | |
| C | | 1400 | 1000 (706) | 2400 |
| D | 650 (367) | 1600 | | 3200 |

MINIMA with Missed APCH climb gradient of 2.5% are not established.

RJSI / HANAMAKI

RNP Z RWY02

CHANGE: Description of VAR.

INSTRUMENT APPROACH CHART

RJSI / HANAMAKI

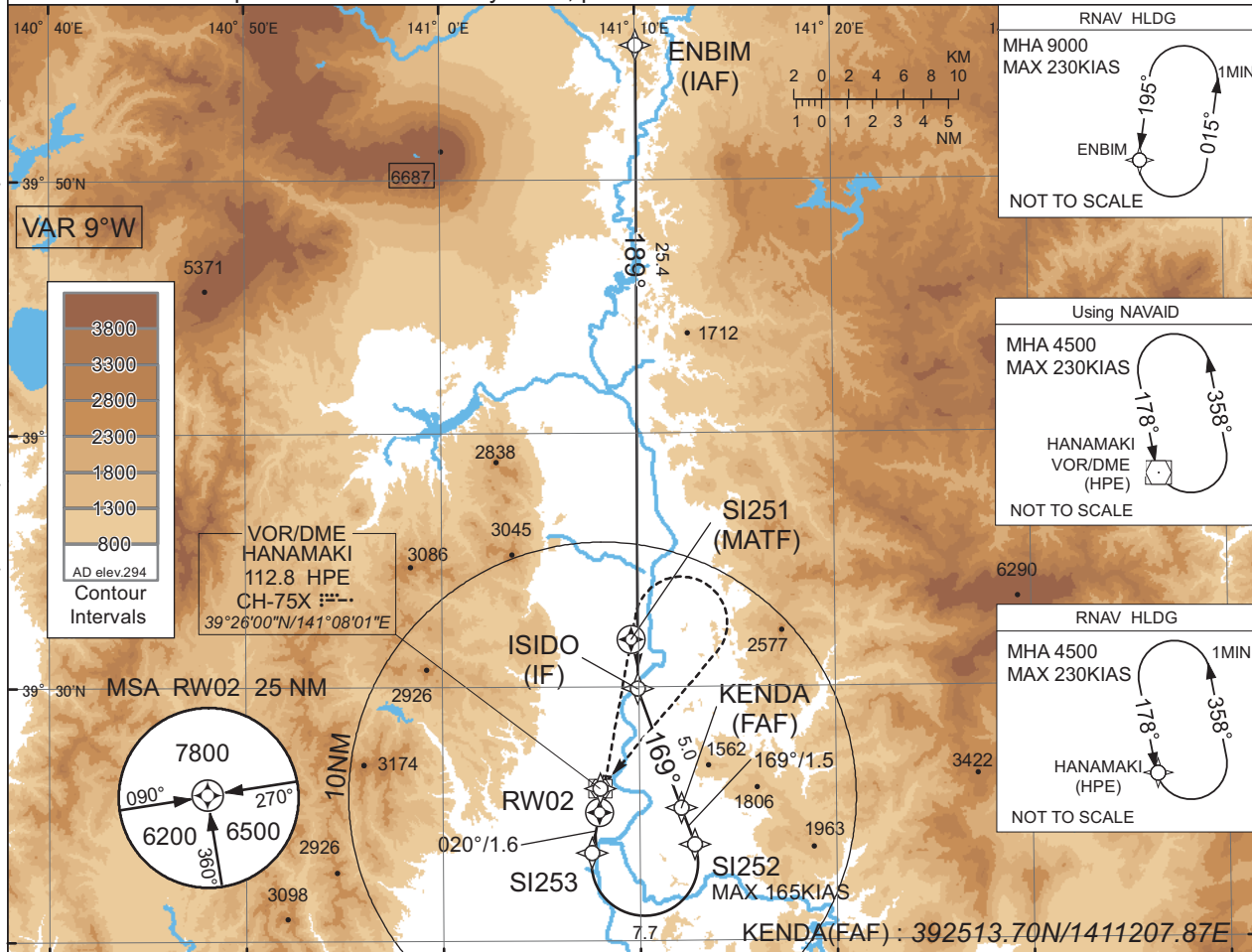
RNP Y RWY02(AR)

SAPPORO CONTROL
124.5 - 303.8
120.575 - 277.1RNP AR
RF required.HANAMAKI RADIO
118.2 - 126.2

NO RADAR

For uncompensated Baro-VNAV systems, procedure not authorized below -20°C / above 45°C

CHANGE : PROC course. ESBEL, NOJYO abolished. ENBIM established. ENBIM HLDG established(ENBIM). RNAV HLDG established(ENBIM). RNAV HLDG abolished(ESBEL). RNAV HLDG established(ENBIM).

ENBIM
(IAF)

9000

41.3

ISIDO
(IF)

15.9

KENDA
(FAF)

10.9

SI252

9.4

SI253

1.6

RWY02

RDH 50

0 NM to THR

MISSED APPROACH

Climb to 4500FT, direct to
SI251, turn right direct to
HPE and hold.
Contact HANAMAKI RADIO.

Missed APCH climb gradient MNM 4.0%

| MINIMA | THR elev. 283 | AD elev. 294 |
|--------|---------------|--------------|
| CAT | RNP 0.30 | |
| | DA(H) | CMV |
| A | - | - |
| B | - | - |
| C | 595(312) | 1400 |
| D | | 1600 |

MINIMA with Missed APCH climb gradient of 2.5% are not established.

Authorization Required

INSTRUMENT APPROACH CHART

RJSI / HANAMAKI

RNP Y RWY02(AR)

CHANGE : PROC course. ESBEL,NOJOY abolished. ENBIM established. RNAV HLDG established(ENBIM).

Coding Table

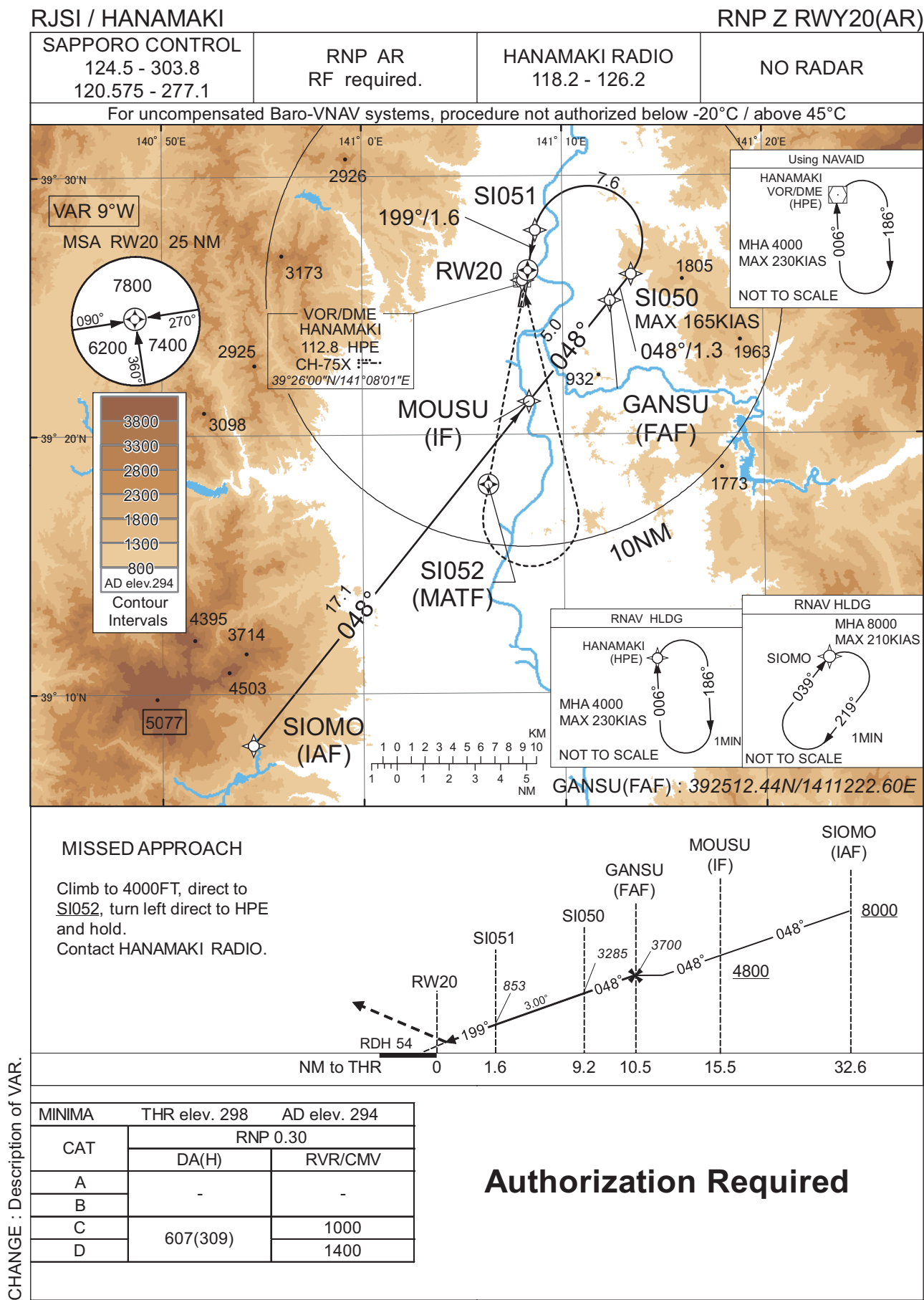
| Serial Number | Path Descriptor | Waypoint Identifier | Fly Over | Course °M(°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (FT) | Speed (KIAS) | VPA/ RDH (°/FT) | RNP Value |
|---------------|------------------------------------|---------------------|----------|---------------|--------------------|---------------|----------------|---------------|--------------|-----------------|-----------|
| 001 | IF | ENBIM | - | - | -8.8 | - | - | +9000 | - | - | - |
| 002 | TF | ISIDO | - | 189 (180.2) | -8.8 | 25.4 | - | +4000 | - | - | 1.0 |
| 003 | TF | KENDA | - | 169 (160.3) | -8.8 | 5.0 | - | 3800 | - | - | 1.0 |
| 004 | TF | SI252 | - | 169 (160.4) | -8.8 | 1.5 | - | 3312 | -165 | -3.00 | 0.3 |
| 005 | RF Center: SIRF1 r=2.10NM | SI253 | - | - | -8.8 | 7.7 | R | 848 | - | -3.00 | 0.3 |
| 006 | TF | RW02 | Y | 020 (010.7) | -8.8 | 1.6 | - | 333 | - | -3.00/50 | 0.3 |
| 007 | DF | SI251 | Y | - | -8.8 | - | - | - | - | - | 1.0 |
| 008 | DF | HPE | - | - | -8.8 | - | R | 4500 | - | - | 1.0 |

| Path | Waypoint Identifier | Inbound Course °M(°T) | Magnetic Variation | Outbound Time (MIN) | Turn Direction | Minimum Altitude (FT) | Maximum Altitude (FT) | Speed (KIAS) | RNP Value |
|------|---------------------|-----------------------|--------------------|---------------------|----------------|-----------------------|-----------------------|---------------|-----------|
| Hold | ENBIM | 195 (186.5) | -8.8 | 1.0 (-14000) | L | 9000 | FL140 | -230 (-14000) | 1.0 |
| Hold | HPE | 178 (169.7) | -8.8 | 1.0 (-14000) | L | 4500 | FL140 | -230 (-14000) | 1.0 |

Waypoint Coordinates

| Waypoint Identifier | Coordinates | RF Arc Center Identifier | Coordinates |
|---------------------|--------------------------|--------------------------|--------------------------|
| ENBIM | 395519.34N / 1411002.82E | SIRF1 | 392304.37N / 1411014.42E |
| ISIDO | 392956.45N / 1410957.05E | | |
| KENDA | 392513.70N / 1411207.87E | | |
| SI252 | 392347.07N / 1411247.89E | | |
| SI253 | 392327.97N / 1410734.24E | | |
| RW02 | 392503.58N / 1410757.62E | | |
| SI251 | 393152.68N / 1410937.82E | | |
| HPE | 392600.09N / 1410800.60E | | |

INSTRUMENT APPROACH CHART



INSTRUMENT APPROACH CHART

RJSI / HANAMAKI

RNP Z RWY20(AR)

Coding Table

| Serial Number | Path Descriptor | Waypoint Identifier | Fly Over | Course °M(°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (FT) | Speed (KIAS) | VPA/ RDH (°/FT) | RNP Value |
|---------------|---------------------------|---------------------|----------|---------------|--------------------|---------------|----------------|---------------|--------------|-----------------|-----------|
| 001 | IF | SIOMO | - | - | -8.8 | - | - | +8000 | - | - | - |
| 002 | TF | MOUSU | - | 048 (038.8) | -8.8 | 17.1 | - | +4800 | - | - | 1.0 |
| 003 | TF | GANSU | - | 048 (038.9) | -8.8 | 5.0 | - | 3700 | - | - | 1.0 |
| 004 | TF | SI050 | - | 048 (038.9) | -8.8 | 1.3 | - | 3285 | -165 | -3.00 | 0.3 |
| 005 | RF Center: SIRF2 r=2.10NM | SI051 | - | - | -8.8 | 7.6 | L | 853 | - | -3.00 | 0.3 |
| 006 | TF | RW20 | Y | 199 (190.7) | -8.8 | 1.6 | - | 352 | - | -3.00/54 | 0.3 |
| 007 | DF | SI052 | Y | - | -8.8 | - | - | - | - | - | 1.0 |
| 008 | DF | HPE | - | - | -8.8 | - | L | 4000 | - | - | 1.0 |

| Path | Waypoint Identifier | Inbound Course °M(°T) | Magnetic Variation | Outbound Time (MIN) | Turn Direction | Minimum Altitude (FT) | Maximum Altitude (FT) | Speed (KIAS) | RNP Value |
|------|---------------------|-----------------------|--------------------|---------------------|----------------|-----------------------|-----------------------|---------------|-----------|
| Hold | SIOMO | 039 (030.1) | -8.8 | 1.0 (-14000) | R | 8000 | FL140 | -210 (-14000) | 1.0 |
| Hold | HPE | 006 (357.5) | -8.8 | 1.0 (-14000) | R | 4000 | FL140 | -230 (-14000) | 1.0 |

Waypoint Coordinates

| Waypoint Identifier | Coordinates | RF Arc Center Identifier | Coordinates |
|---------------------|--------------------------|--------------------------|--------------------------|
| SIOMO | 390801.78N / 1405430.28E | SIRF2 | 392732.73N / 1411119.82E |
| MOUSU | 392119.11N / 1410818.81E | | |
| GANSU | 392512.44N / 1411222.60E | | |
| SI050 | 392613.23N / 1411326.21E | | |
| SI051 | 392756.30N / 1410839.89E | | |
| RW20 | 392623.24N / 1410817.11E | | |
| SI052 | 391806.42N / 1410615.76E | | |
| HPE | 392600.09N / 1410800.60E | | |

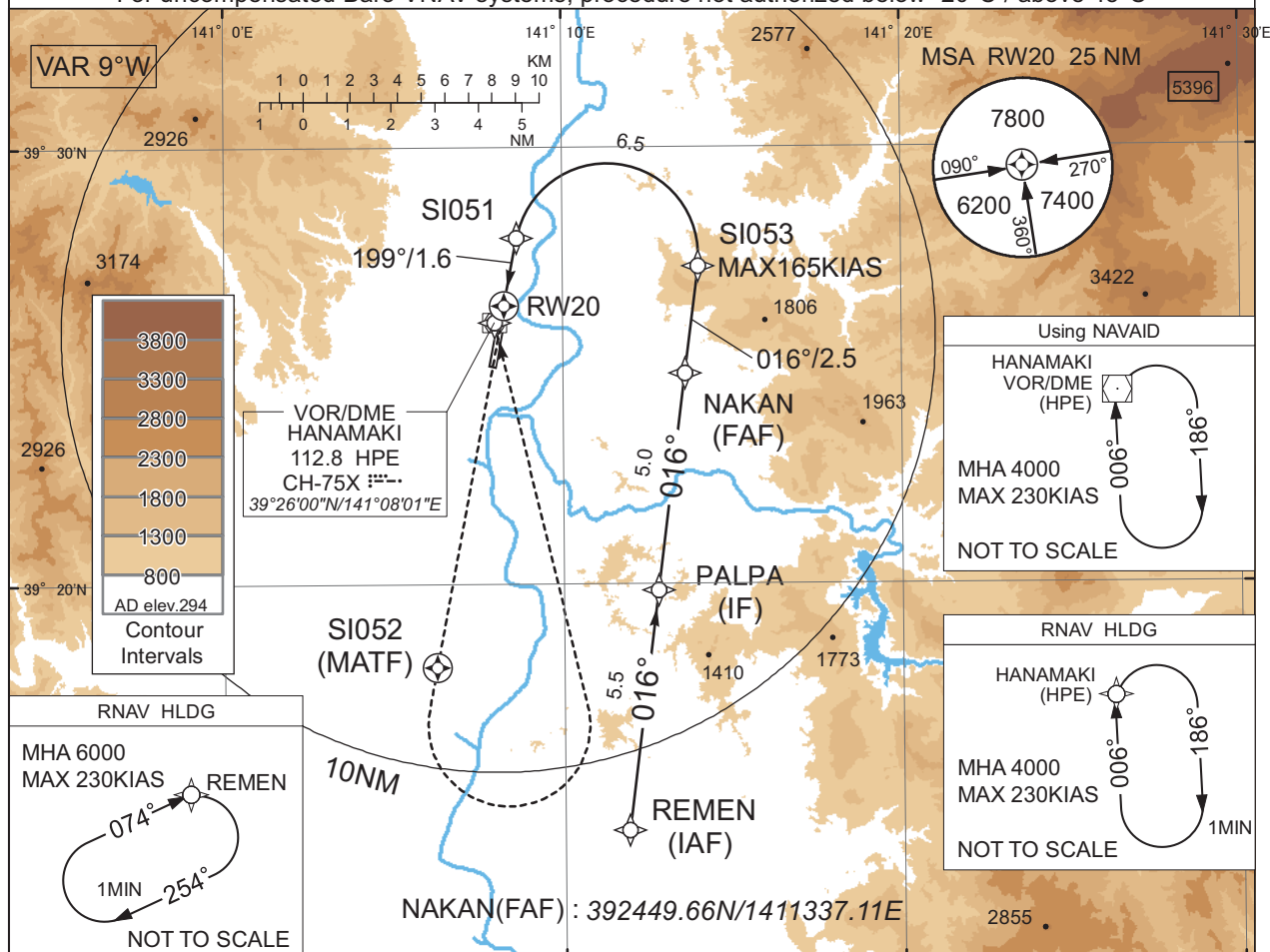
CHANGE : PROC renamed.

RJSI / HANAMAKI

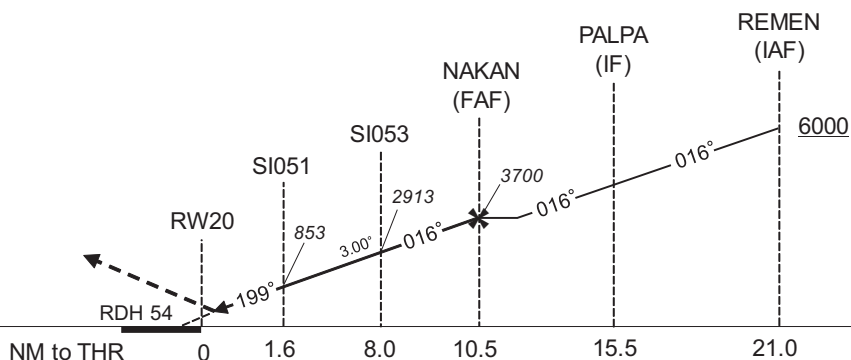
RNP Y RWY20(AR)

| | | | |
|---|------------------------|---------------------------------|----------|
| SAPPORO CONTROL 124.5 - 303.8 120.575 - 277.1 | RNP AR RF required. | HANAMAKI RADIO 118.2 - 126.2 | NO RADAR |
|---|------------------------|---------------------------------|----------|

For uncompensated Baro-VNAV systems, procedure not authorized below -20°C / above 45°C



Climb to 4000FT, direct to SI052, turn left direct to HPE and hold.
Contact HANAMAKI RADIO.



| | | |
|--------|---------------|--------------|
| MINIMA | THR elev. 298 | AD elev. 294 |
| CAT | RNP 0.30 | |
| | DA(H) | RVR/CMV |
| A | - | - |
| B | - | - |
| C | 607(309) | 1000 |
| D | | 1400 |

Authorization Required

INSTRUMENT APPROACH CHART

RJSI / HANAMAKI

RNP Y RWY20(AR)

Coding Table

| Serial Number | Path Descriptor | Waypoint Identifier | Fly Over | Course °M(°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (FT) | Speed (KIAS) | VPA/ RDH (°/FT) | RNP Value |
|---------------|---------------------------|---------------------|----------|---------------|--------------------|---------------|----------------|---------------|--------------|-----------------|-----------|
| 001 | IF | REMEN | - | - | -8.8 | - | - | +6000 | - | - | - |
| 002 | TF | PALPA | - | 016 (007.2) | -8.8 | 5.5 | - | - | - | - | 1.0 |
| 003 | TF | NAKAN | - | 016 (007.2) | -8.8 | 5.0 | - | 3700 | - | - | 1.0 |
| 004 | TF | SI053 | - | 016 (007.2) | -8.8 | 2.5 | - | 2913 | -165 | -3.00 | 0.3 |
| 005 | RF Center: SIRF2 r=2.10NM | SI051 | - | - | -8.8 | 6.5 | L | 853 | - | -3.00 | 0.3 |
| 006 | TF | RW20 | Y | 199 (190.7) | -8.8 | 1.6 | - | 352 | - | -3.00/54 | 0.3 |
| 007 | DF | SI052 | Y | - | -8.8 | - | - | - | - | - | 1.0 |
| 008 | DF | HPE | - | - | -8.8 | - | L | 4000 | - | - | 1.0 |

| Path | Waypoint Identifier | Inbound Course °M(°T) | Magnetic Variation | Outbound Time (MIN) | Turn Direction | Minimum Altitude (FT) | Maximum Altitude (FT) | Speed (KIAS) | RNP Value |
|------|---------------------|-----------------------|--------------------|---------------------|----------------|-----------------------|-----------------------|---------------|-----------|
| Hold | REMEN | 074 (065.0) | -8.8 | 1.0 (-14000) | R | 6000 | FL140 | -230 (-14000) | 1.0 |
| Hold | HPE | 006 (357.5) | -8.8 | 1.0 (-14000) | R | 4000 | FL140 | -230 (-14000) | 1.0 |

Waypoint Coordinates

| Waypoint Identifier | Coordinates | RF Arc Center Identifier | Coordinates |
|---------------------|--------------------------|--------------------------|--------------------------|
| REMEN | 391421.92N / 1411154.27E | SIRF2 | 392732.73N / 1411119.82E |
| PALPA | 391951.68N / 1411248.23E | | |
| NAKAN | 392449.66N / 1411337.11E | | |
| SI053 | 392716.81N / 1411401.29E | | |
| SI051 | 392756.30N / 1410839.89E | | |
| RW20 | 392623.24N / 1410817.11E | | |
| SI052 | 391806.42N / 1410615.76E | | |
| HPE | 392600.09N / 1410800.60E | | |

CHANGE : PROC renamed.

RJSI / HANAMAKI

Visual REP



CHANGE : Map updated. BRG/DIST from ARP. Taseko established. Tsuchisawa abolished.

※図中に標高を示す数字がある場合、単位はメートル(m)である。The unit of measurement used to express elevation is meter(m).

| Call sign | BRG / DIST from ARP | Remarks |
|-----------------|---------------------|----------------------------|
| 盛岡 Morioka | 360°T / 16.4NM | JR駅 JR Station |
| 城山 Shiroyama | 012°T / 8.4NM | 城跡 The site of a castle |
| 豊沢 Toyosawa | 293°T / 8.1NM | 豊沢ダム Dam |
| 田瀬湖 Taseko | 121°T / 10.0NM | 田瀬ダム Dam |
| 北上 Kitakami | 184°T / 8.9NM | JR駅 JR Station |
| 水沢 Mizusawa | 178°T / 17.4NM | JR駅 JR Station |



RJSI / HANAMAKI

Minimum Vectoring Altitude CHART

