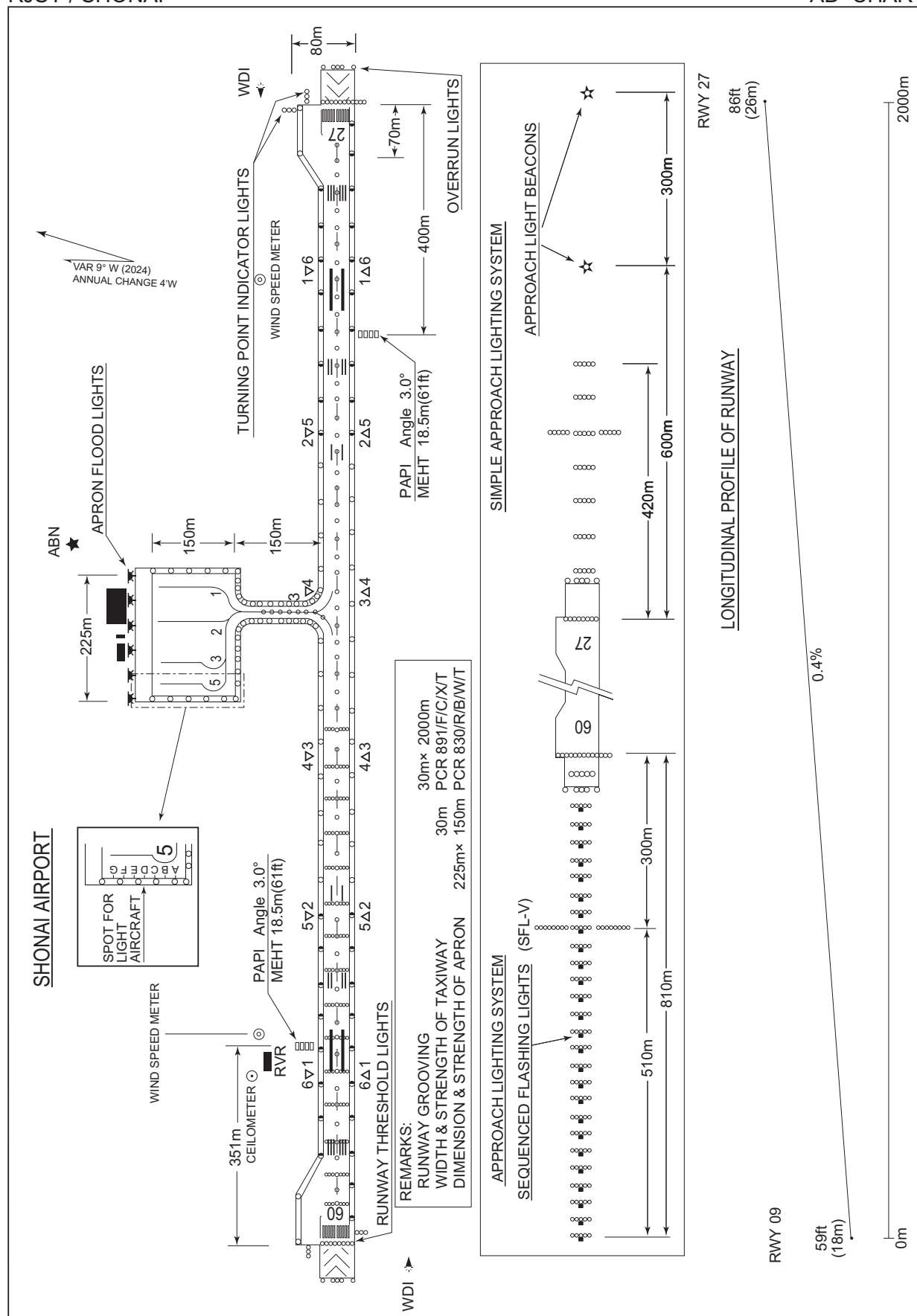


## RJSY / SHONAI

## AD CHART



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STANDARD DEPARTURE CHART - INSTRUMENT

RJSY / SHONAI

SID

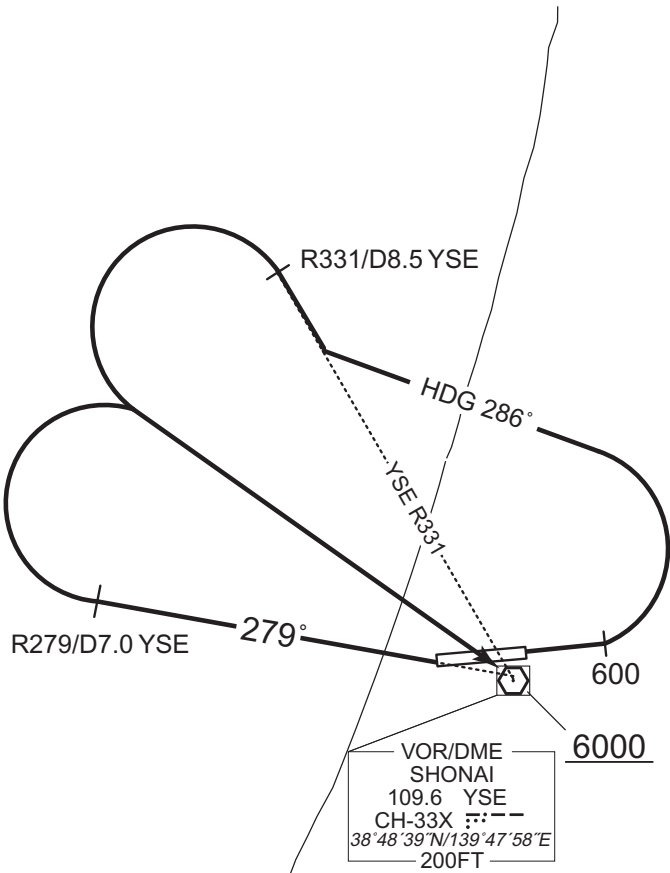
SHONAI REVERSAL FOUR DEPARTURE

RWY 09 : Climb RWY HDG to 600FT, turn left HDG 286° to intercept and proceed via YSE R331 to YSE R331/8.5DME, turn left,...

RWY 27 : Climb via YSE R279 to YSE R279/7.0DME, turn right,...

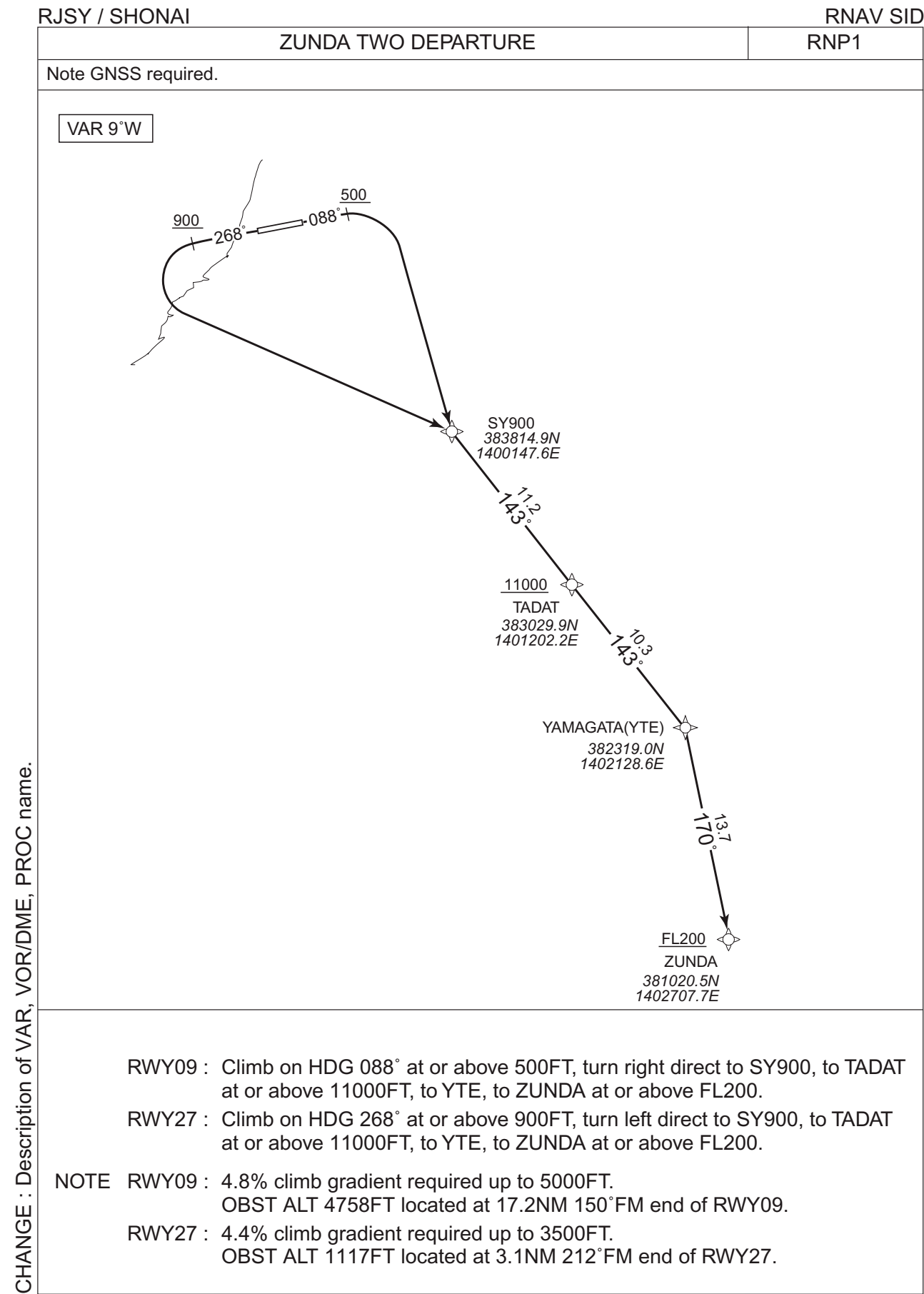
...direct to YSE VOR/DME.

Cross YSE VOR/DME at or above 6000FT.



CHANGE : PROC renamed. PROC course.

STANDARD DEPARTURE CHART - INSTRUMENT



STANDARD DEPARTURE CHART - INSTRUMENT

RJSY / SHONAI

RNAV SID

ZUNDA TWO DEPARTURE

RWY09

| 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              | -                   | -        | 088<br>(079.5) | -8.8               | -             | -              | +500          | -            | -              | RNP1                     |
| 002           | DF              | SY900               | -        | -              | -8.8               | -             | R              | -             | -            | -              | RNP1                     |
| 003           | TF              | TADAT               | -        | 143<br>(134.0) | -8.8               | 11.2          | -              | +11000        | -            | -              | RNP1                     |
| 004           | TF              | YTE                 | -        | 143<br>(134.1) | -8.8               | 10.3          | -              | -             | -            | -              | RNP1                     |
| 005           | TF              | ZUNDA               | -        | 170<br>(161.1) | -8.8               | 13.7          | -              | +FL200        | -            | -              | RNP1                     |

RWY27

| 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              | -                   | -        | 268<br>(259.5) | -8.8               | -             | -              | +900          | -            | -              | RNP1                     |
| 002           | DF              | SY900               | -        | -              | -8.8               | -             | L              | -             | -            | -              | RNP1                     |
| 003           | TF              | TADAT               | -        | 143<br>(134.0) | -8.8               | 11.2          | -              | +11000        | -            | -              | RNP1                     |
| 004           | TF              | YTE                 | -        | 143<br>(134.1) | -8.8               | 10.3          | -              | -             | -            | -              | RNP1                     |
| 005           | TF              | ZUNDA               | -        | 170<br>(161.1) | -8.8               | 13.7          | -              | +FL200        | -            | -              | RNP1                     |

CHANGE : Navigation Specification(Basic RNP1 → RNP1).

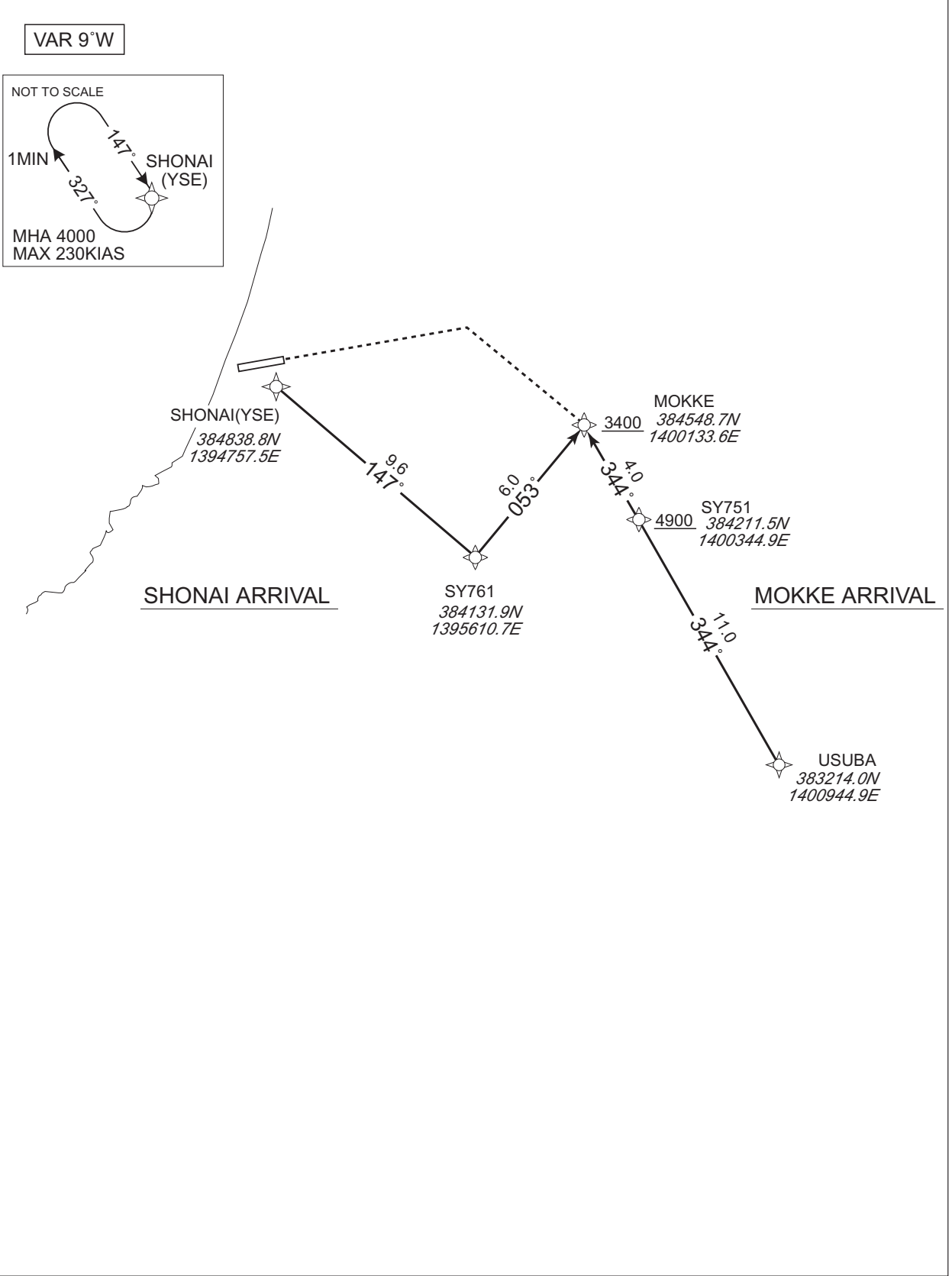
STANDARD ARRIVAL CHART -INSTRUMENT

RJSY / SHONAI

RNAV STAR RWY27

|                                 |      |
|---------------------------------|------|
| MOKKE ARRIVAL<br>SHONAI ARRIVAL | RNP1 |
|---------------------------------|------|

Note GNSS required.



CHANGE : Description of VAR, VOR/DME.

STANDARD ARRIVAL CHART -INSTRUMENT

RJSY / SHONAI

RNAV STAR RWY27

| MOKKE ARRIVAL   |                 |                     |          |                |                    |               |                |               |              |                |                          |
|---|-----------------|---------------------|----------|----------------|--------------------|---------------|----------------|---------------|--------------|----------------|--------------------------|
| From USUBA, to SY751 at or above 4900FT, to MOKKE at or above 3400FT. |                 |                     |          |                |                    |               |                |               |              |                |                          |
| 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              | USUBA               | -        | -              | -8.8               | -             | -              | -             | -            | -              | RNP1                     |
| 002   | TF              | SY751               | -        | 344<br>(334.8) | -8.8               | 11.0          | -              | +4900         | -            | -              | RNP1                     |
| 003   | TF              | MOKKE               | -        | 344<br>(334.8) | -8.8               | 4.0           | -              | +3400         | -            | -              | RNP1                     |

| SHONAI ARRIVAL                                   |                 |                     |          |                |                    |               |                |               |              |                |                          |
|--|-----------------|---------------------|----------|----------------|--------------------|---------------|----------------|---------------|--------------|----------------|--------------------------|
| From YSE, to SY761, to MOKKE at or above 3400FT. |                 |                     |          |                |                    |               |                |               |              |                |                          |
| 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              | YSE                 | -        | -              | -8.8               | -             | -              | -             | -            | -              | RNP1                     |
| 002  | TF              | SY761               | -        | 147<br>(137.9) | -8.8               | 9.6           | -              | -             | -            | -              | RNP1                     |
| 003  | TF              | MOKKE               | -        | 053<br>(044.4) | -8.8               | 6.0           | -              | +3400         | -            | -              | 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 | YSE                 | 147<br>(137.9)        | -8.8               | 1.0(-14000)         | R              | 4000                  | FL140                 | -230(-14000) | RNP1                     |

CHANGE : Navigation Specification(Basic RNP1 → RNP1).

STANDARD ARRIVAL CHART -INSTRUMENT

RJSY / SHONAI

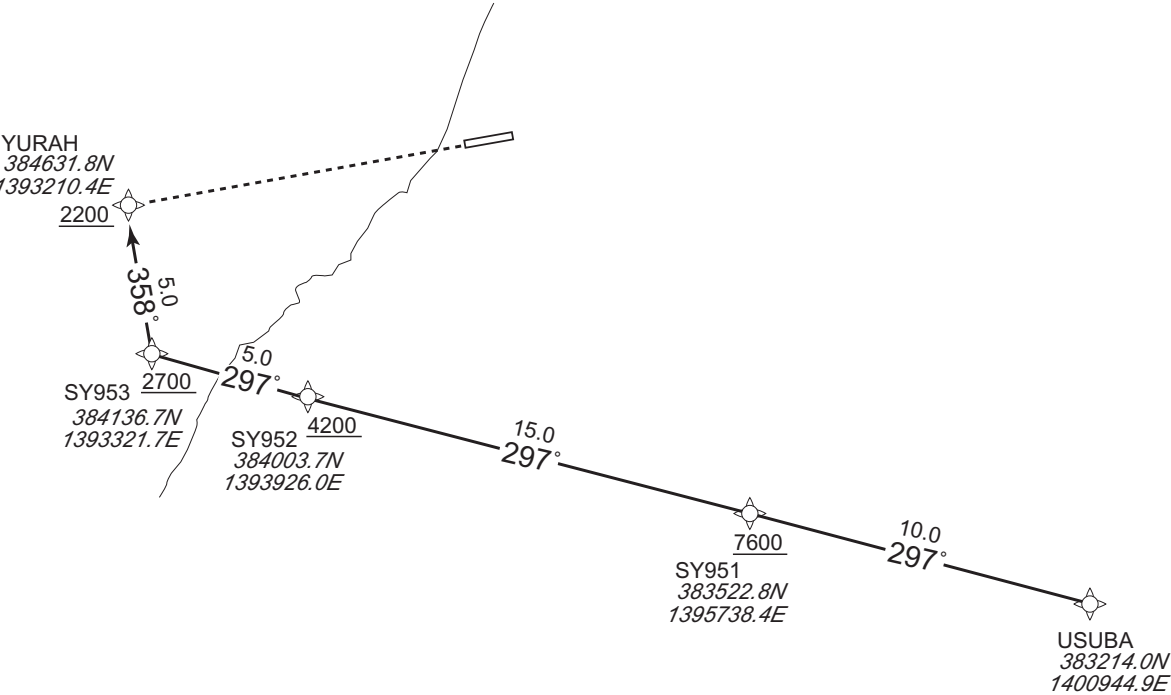
RNAV STAR RWY09

YURAH ARRIVAL

RNP1

Note GNSS required.

VAR 9°W



CHANGE : Description of VAR, VOR/DME, STAR name.

From USUBA, to SY951 at or above 7600FT, to SY952 at or above 4200FT, to SY953 at or above 2700FT, to YURAH at or above 2200FT.

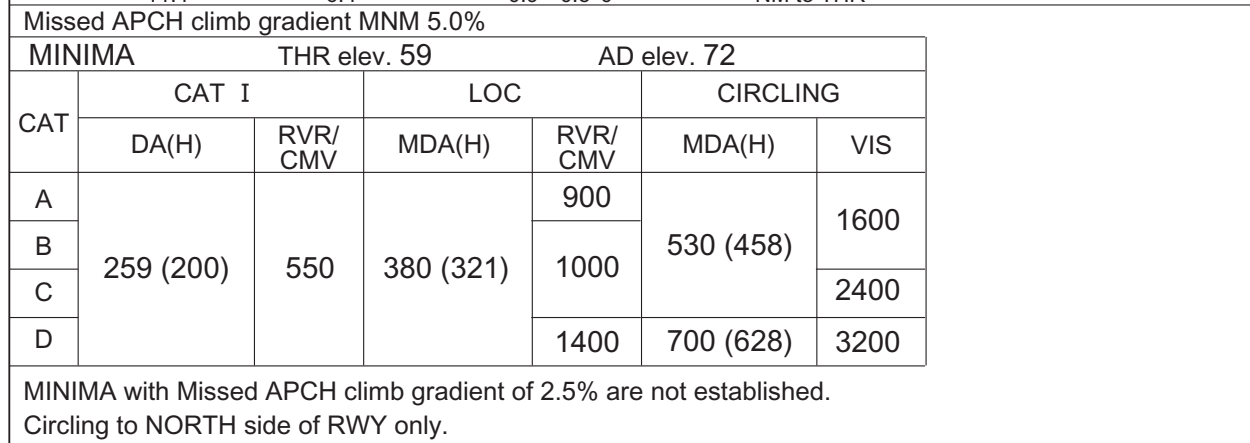
| Serial Number | Path Descriptor | Waypoint Identifier | Fly Over | Course °M(°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (FT) | Speed (KIAS) | Vertical Angle | Navigation Specification |
|---------------|-----------------|---------------------|----------|---------------|--------------------|---------------|----------------|---------------|--------------|----------------|--------------------------|
| 001           | IF              | USUBA               | —        | —             | -8.8               | —             | —              | —             | —            | —              | RNP1                     |
| 002           | TF              | SY951               | —        | 297 (288.4)   | -8.8               | 10.0          | —              | +7600         | —            | —              | RNP1                     |
| 003           | TF              | SY952               | —        | 297 (288.3)   | -8.8               | 15.0          | —              | +4200         | —            | —              | RNP1                     |
| 004           | TF              | SY953               | —        | 297 (288.1)   | -8.8               | 5.0           | —              | +2700         | —            | —              | RNP1                     |
| 005           | TF              | YURAH               | —        | 358 (349.3)   | -8.8               | 5.0           | —              | +2200         | —            | —              | RNP1                     |



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## RJSY / SHONAI

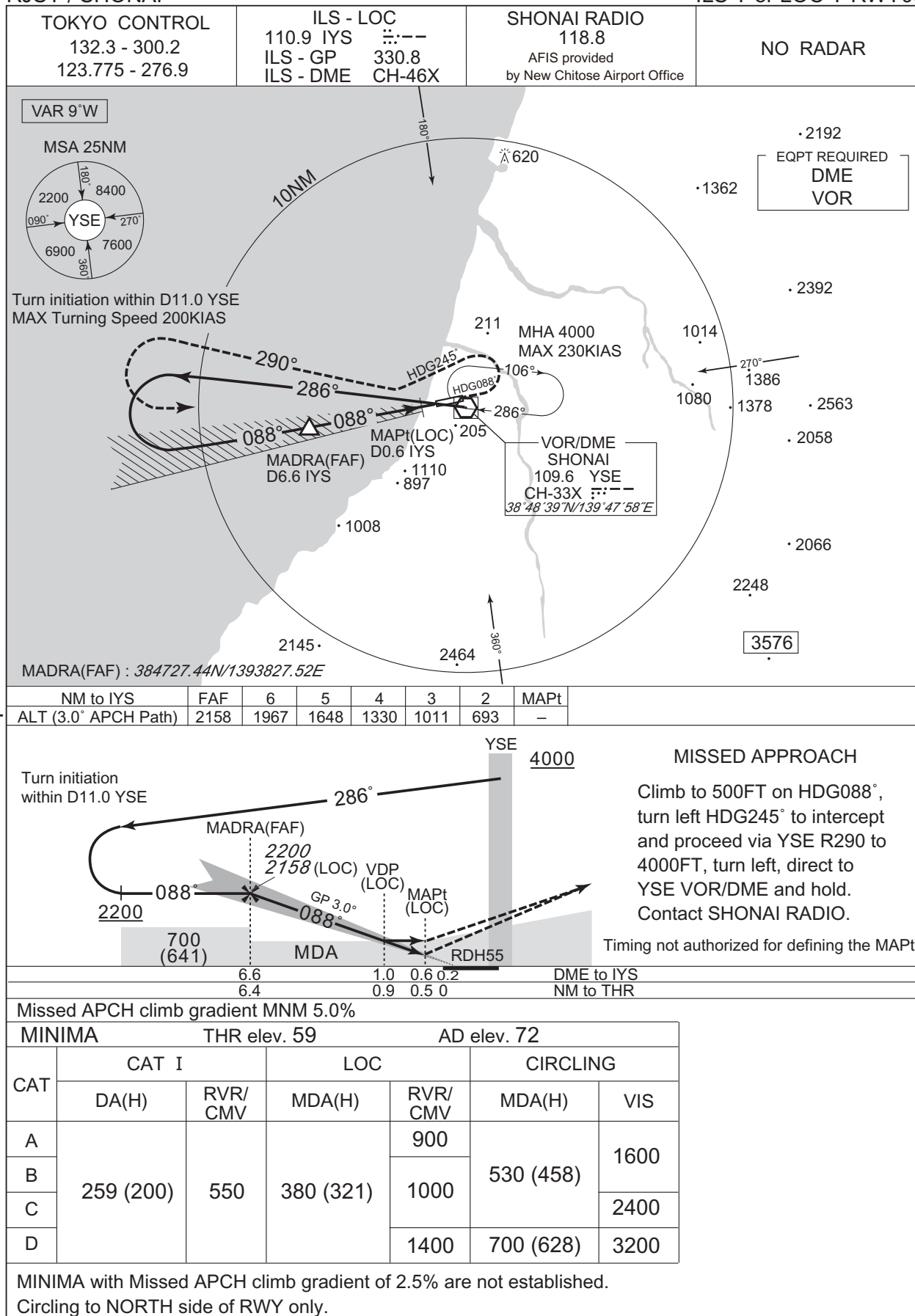
ILS Z or LOC Z RWY09



## INSTRUMENT APPROACH CHART

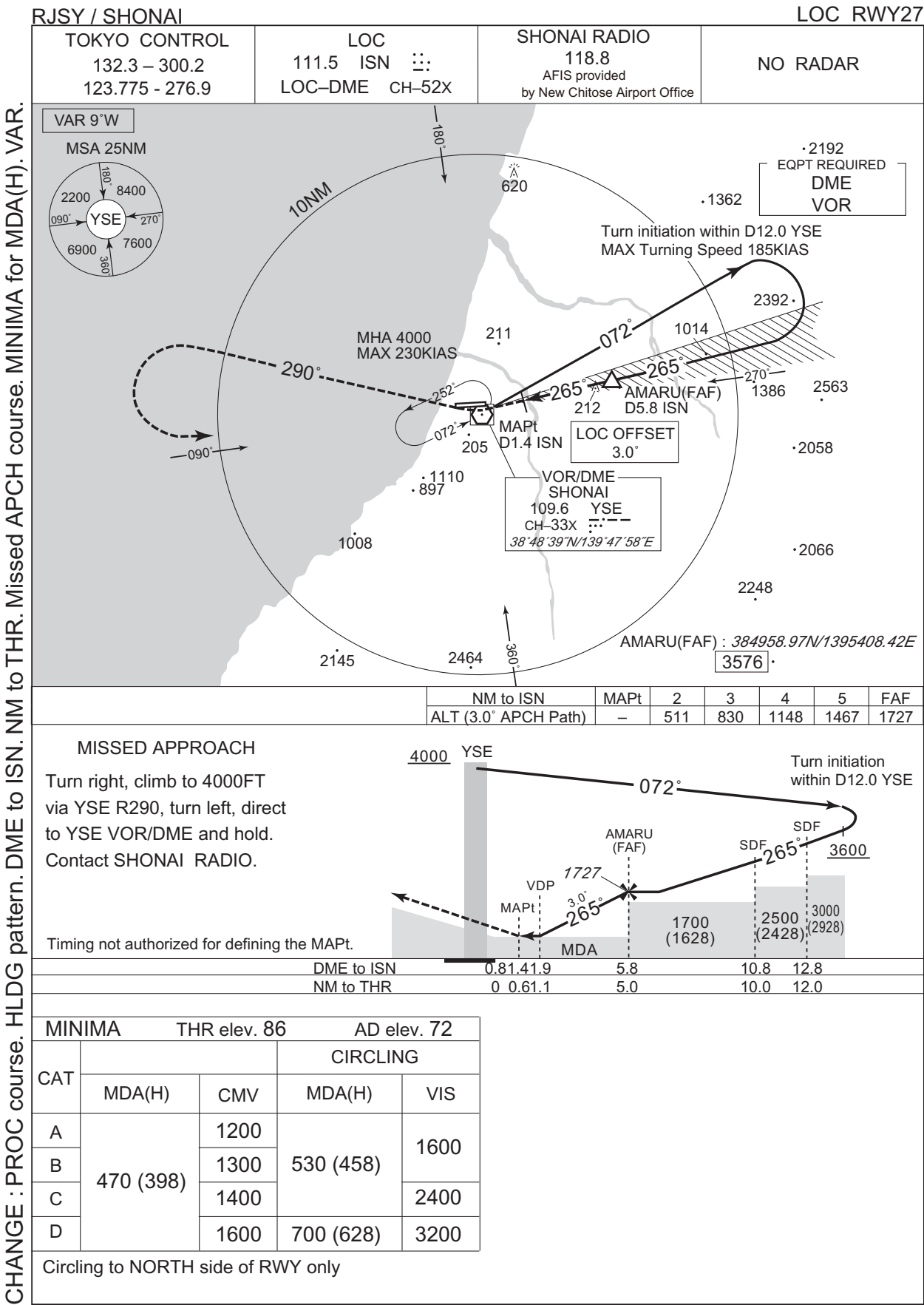
RJSY / SHONAI

ILS Y or LOC Y RWY09



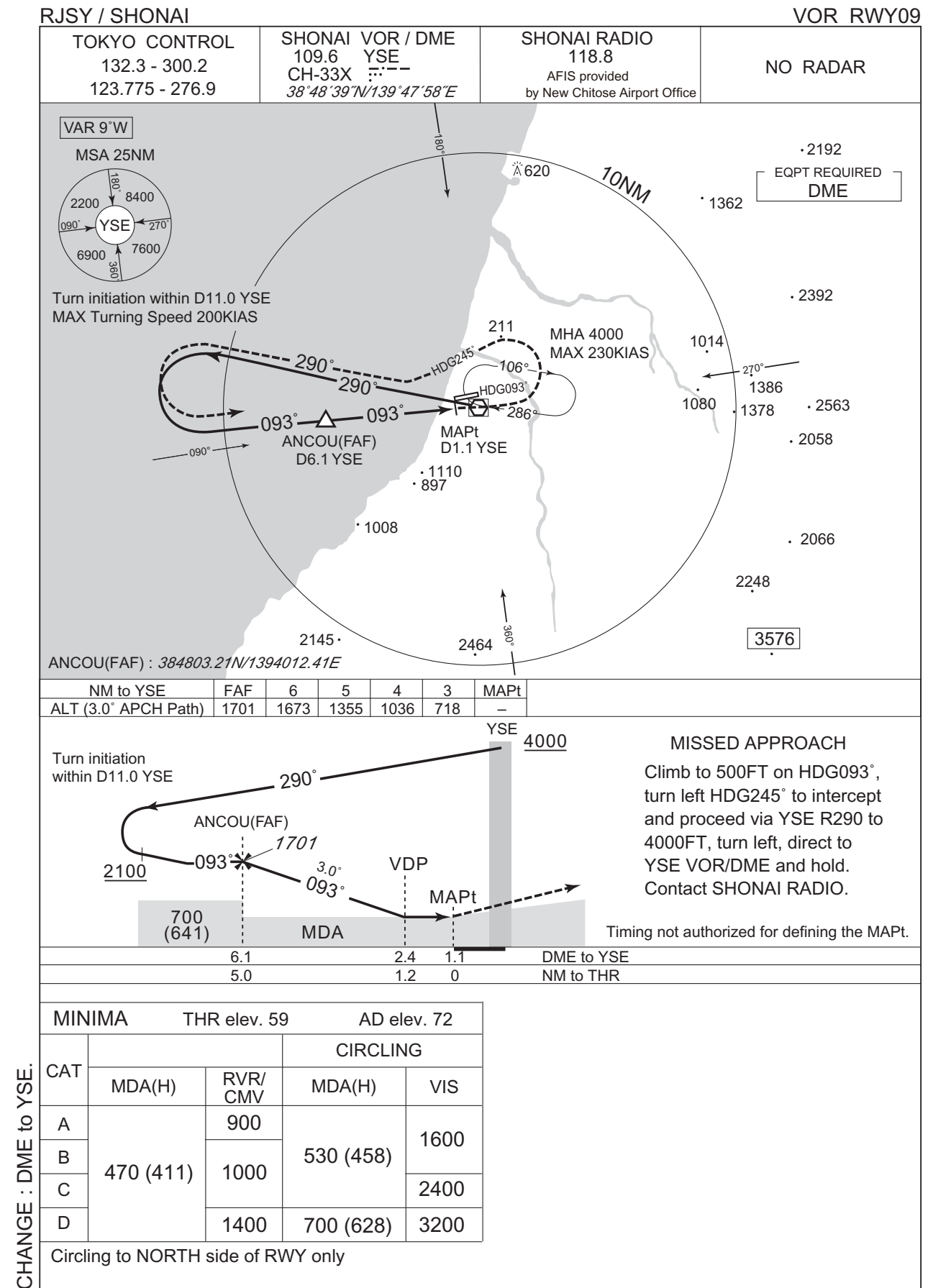
CHANGE : PROC course. Missed APCH course. HLDG pattern.

INSTRUMENT APPROACH CHART

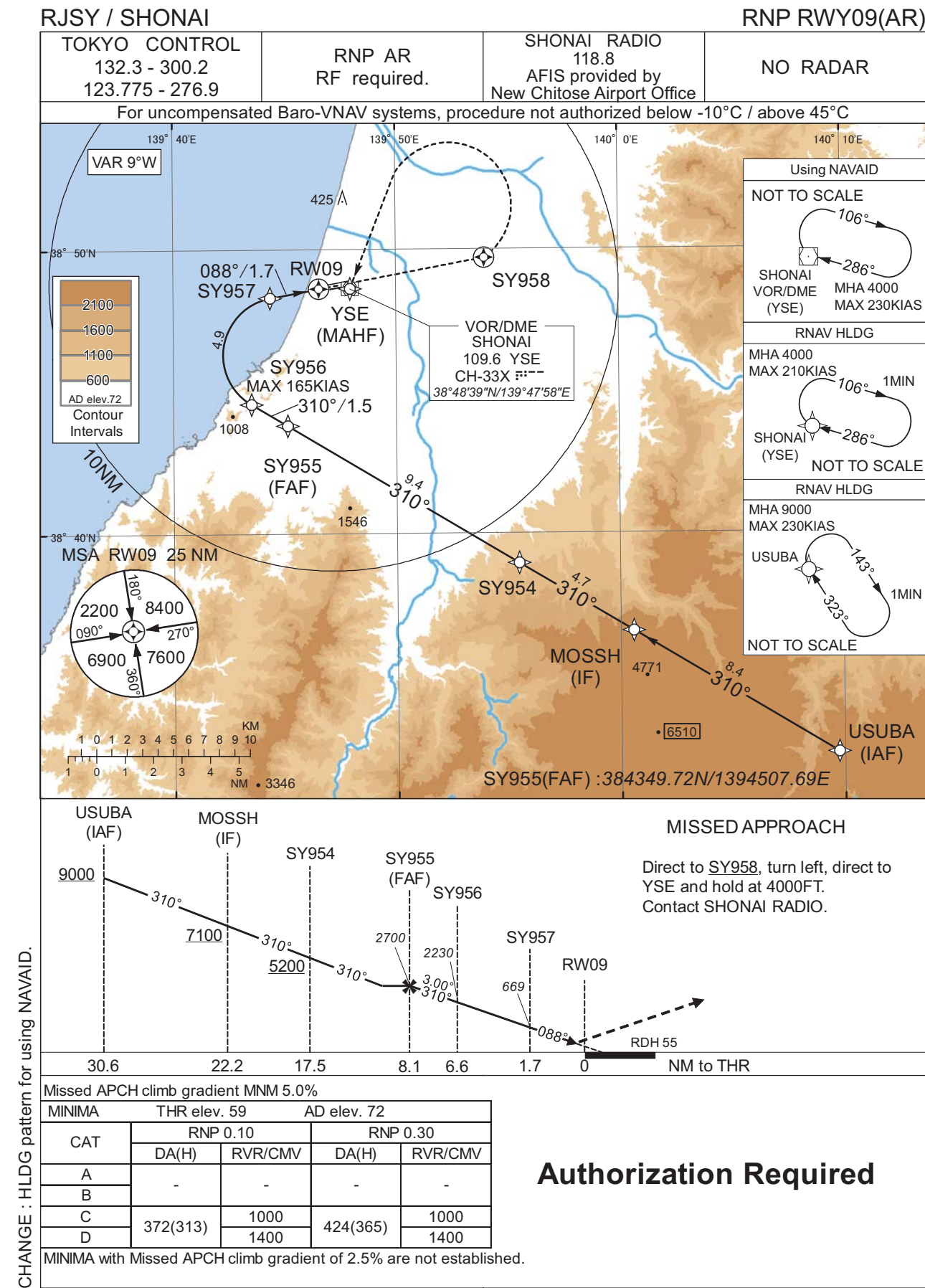


CHANGE : PROC course. HLDG pattern. DME to ISN. NM to THR. Missed APCH course. MINIMA for MDA(H). VAR.

INSTRUMENT APPROACH CHART



INSTRUMENT APPROACH CHART



## INSTRUMENT APPROACH CHART

RJSY / SHONAI

RNP RWY09(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                                 | USUBA               | -        | -              | -8.8               | -             | -              | +9000         | -            | -               | -          |
| 002           | TF                                 | MOSSH               | -        | 310<br>(301.2) | -8.8               | 8.4           | -              | +7100         | -            | -               | 1.0        |
| 003           | TF                                 | SY954               | -        | 310<br>(301.1) | -8.8               | 4.7           | -              | +5200         | -            | -               | 1.0        |
| 004           | TF                                 | SY955               | -        | 310<br>(301.1) | -8.8               | 9.4           | -              | 2700          | -            | -               | 1.0        |
| 005           | TF                                 | SY956               | -        | 310<br>(301.0) | -8.8               | 1.5           | -              | 2230          | -165         | -3.00           | 0.1<br>0.3 |
| 006           | RF<br>Center:<br>SYRF1<br>r=2.03NM | SY957               | -        | -              | -8.8               | 4.9           | R              | 669           | -            | -3.00           | 0.1<br>0.3 |
| 007           | TF                                 | RW09                | Y        | 088<br>(079.4) | -8.8               | 1.7           | -              | 114           | -            | -3.00/55        | 0.1<br>0.3 |
| 008           | DF                                 | SY958               | Y        | -              | -8.8               | -             | -              | -             | -            | -               | 1.0        |
| 009           | DF                                 | YSE                 | -        | -              | -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 | USUBA               | 323<br>(314.1)        | -8.8               | 1.0 (-14000)        | R              | 9000                  | FL140                 | -230<br>(-14000) | 1.0       |
| Hold | YSE                 | 286<br>(277.0)        | -8.8               | 1.0 (-14000)        | R              | 4000                  | FL140                 | -210<br>(-14000) | 1.0       |

Waypoint Coordinates

| Waypoint Identifier | Coordinates              | RF Arc Center Identifier | Coordinates              |
|---------------------|--------------------------|--------------------------|--------------------------|
| USUBA               | 383214.02N / 1400944.88E | SYRF1                    | 384619.71N / 1394450.17E |
| MOSSH               | 383634.00N / 1400035.10E |                          |                          |
| SY954               | 383858.43N / 1395528.53E |                          |                          |
| SY955               | 384349.72N / 1394507.69E |                          |                          |
| SY956               | 384435.19N / 1394330.47E |                          |                          |
| SY957               | 384819.37N / 1394421.61E |                          |                          |
| RW09                | 384838.58N / 1394633.12E |                          |                          |
| SY958               | 384943.40N / 1395359.19E |                          |                          |
| YSE                 | 384838.81N / 1394757.51E |                          |                          |

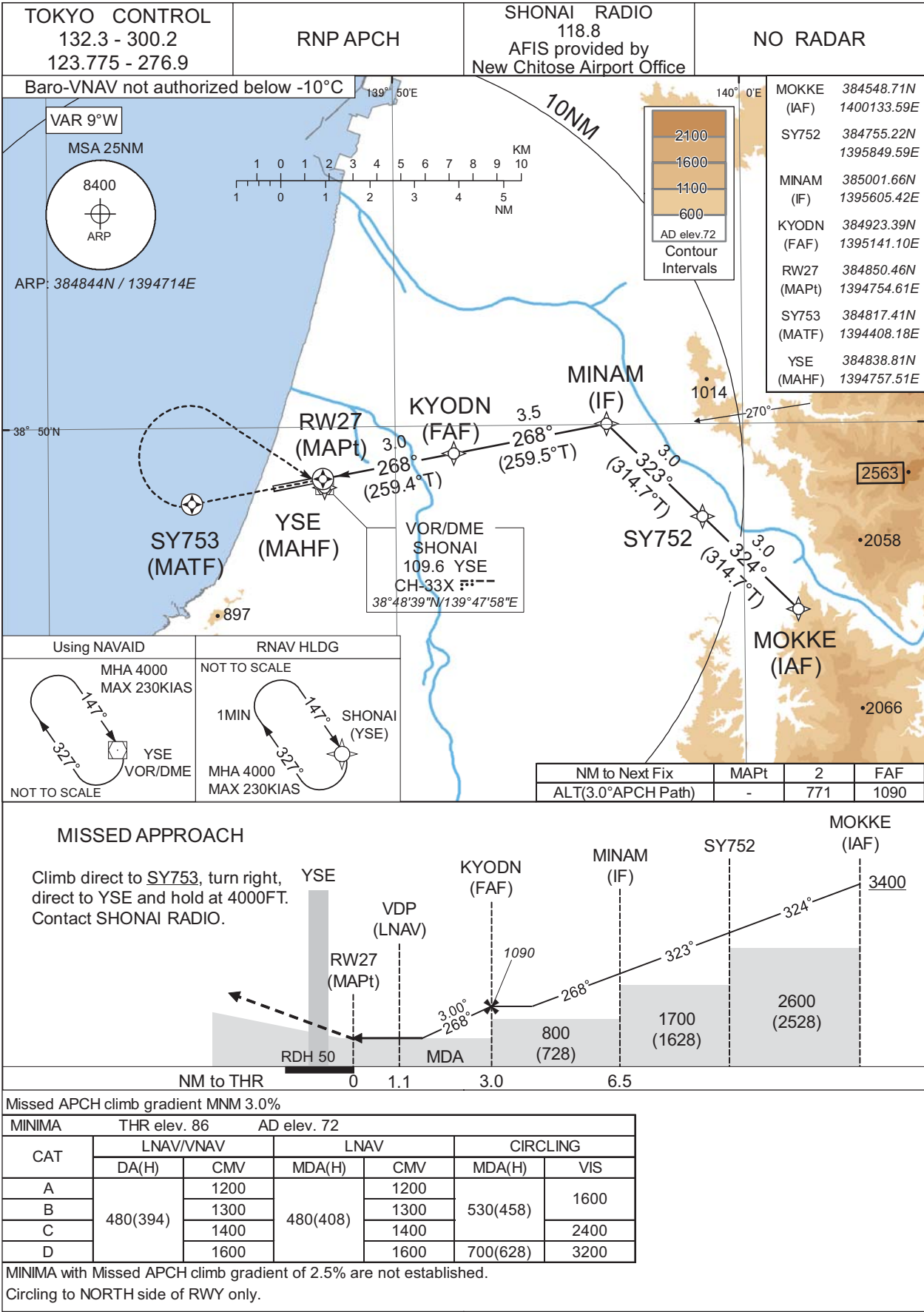
CHANGE : PROC renamed.



INSTRUMENT APPROACH CHART

RJSY / SHONAI

RNP Z RWY27

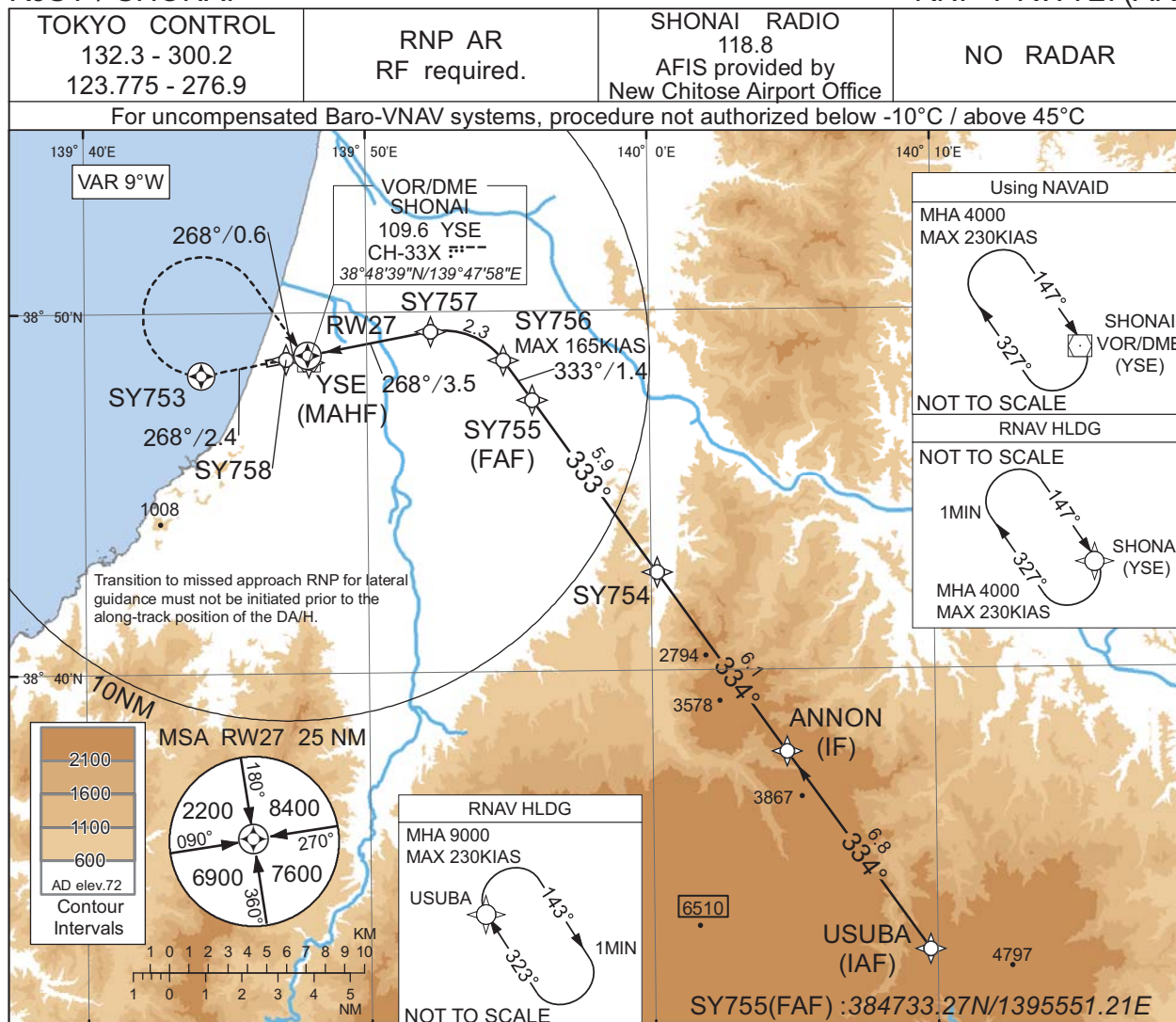




## INSTRUMENT APPROACH CHART

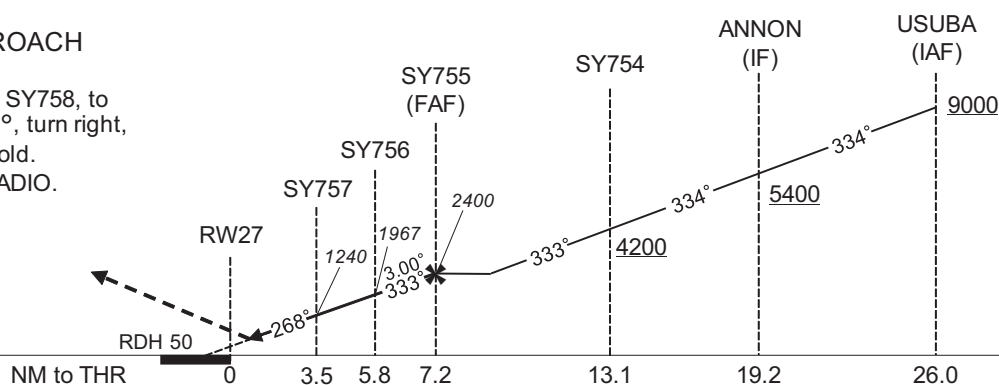
RJSY / SHONAI

RNP Y RWY27(AR)



## MISSED APPROACH

Climb to 4000FT, to SY758, to SY753 on track 268°, turn right, direct to YSE and hold.  
Contact SHONAI RADIO.



Missed APCH climb gradient MNM 5.0%

| CAT | THR elev. 86 |      | AD elev. 72 |      |
|-----|--------------|------|-------------|------|
|     | RNP 0.12     |      | RNP 0.30    |      |
|     | DA(H)        | CMV  | DA(H)       | CMV  |
| A   | -            | -    | -           | -    |
| B   | -            | -    | -           | -    |
| C   | 386(300)     | 1400 | 424(338)    | 1400 |
| D   |              | 1600 |             | 1600 |

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

**Authorization Required**

CHANGE : HLDG pattern for using NAVAID.

## INSTRUMENT APPROACH CHART

RJSY / SHONAI

RNP Y RWY27(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                                 | USUBA               | -        | -              | -8.8               | -             | -              | +9000         | -            | -               | -            |
| 002           | TF                                 | ANNON               | -        | 334<br>(324.8) | -8.8               | 6.8           | -              | +5400         | -            | -               | 1.0          |
| 003           | TF                                 | SY754               | -        | 334<br>(324.7) | -8.8               | 6.1           | -              | +4200         | -            | -               | 1.0          |
| 004           | TF                                 | SY755               | -        | 333<br>(324.7) | -8.8               | 5.9           | -              | 2400          | -            | -               | 1.0          |
| 005           | TF                                 | SY756               | -        | 333<br>(324.6) | -8.8               | 1.4           | -              | 1967          | -165         | -3.00           | 0.12<br>0.30 |
| 006           | RF<br>Center:<br>SYRF2<br>r=2.01NM | SY757               | -        | -              | -8.8               | 2.3           | L              | 1240          | -            | -3.00           | 0.12<br>0.30 |
| 007           | TF                                 | RW27                | Y        | 268<br>(259.5) | -8.8               | 3.5           | -              | 136           | -            | -3.00/50        | 0.12<br>0.30 |
| 008           | TF                                 | SY758               | -        | 268<br>(259.4) | -8.8               | 0.6           | -              | -             | -            | -               | 0.12<br>0.30 |
| 009           | CF                                 | SY753               | Y        | 268<br>(259.4) | -8.8               | 2.4           | -              | -             | -            | -               | 1.0          |
| 010           | DF                                 | YSE                 | -        | -              | -8.8               | -             | R              | 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 | USUBA               | 323<br>(314.1)        | -8.8               | 1.0 (-14000)        | R              | 9000                  | FL140                 | -230<br>(-14000) | 1.0       |
| Hold | YSE                 | 147<br>(137.9)        | -8.8               | 1.0 (-14000)        | R              | 4000                  | FL140                 | -230<br>(-14000) | 1.0       |

Waypoint Coordinates

| Waypoint Identifier | Coordinates              | RF Arc Center Identifier | Coordinates              |
|---------------------|--------------------------|--------------------------|--------------------------|
| USUBA               | 383214.02N / 1400944.88E | SYRF2                    | 384729.55N / 1395244.67E |
| ANNON               | 383745.37N / 1400445.25E |                          |                          |
| SY754               | 384245.22N / 1400013.26E |                          |                          |
| SY755               | 384733.27N / 1395551.21E |                          |                          |
| SY756               | 384839.83N / 1395450.54E |                          |                          |
| SY757               | 384928.52N / 1395216.49E |                          |                          |
| RW27                | 384850.46N / 1394754.61E |                          |                          |
| SY758               | 384843.80N / 1394708.93E |                          |                          |
| SY753               | 384817.41N / 1394408.18E |                          |                          |
| YSE                 | 384838.81N / 1394757.51E |                          |                          |

CHANGE : PROC renamed.

RJSY / SHONAI

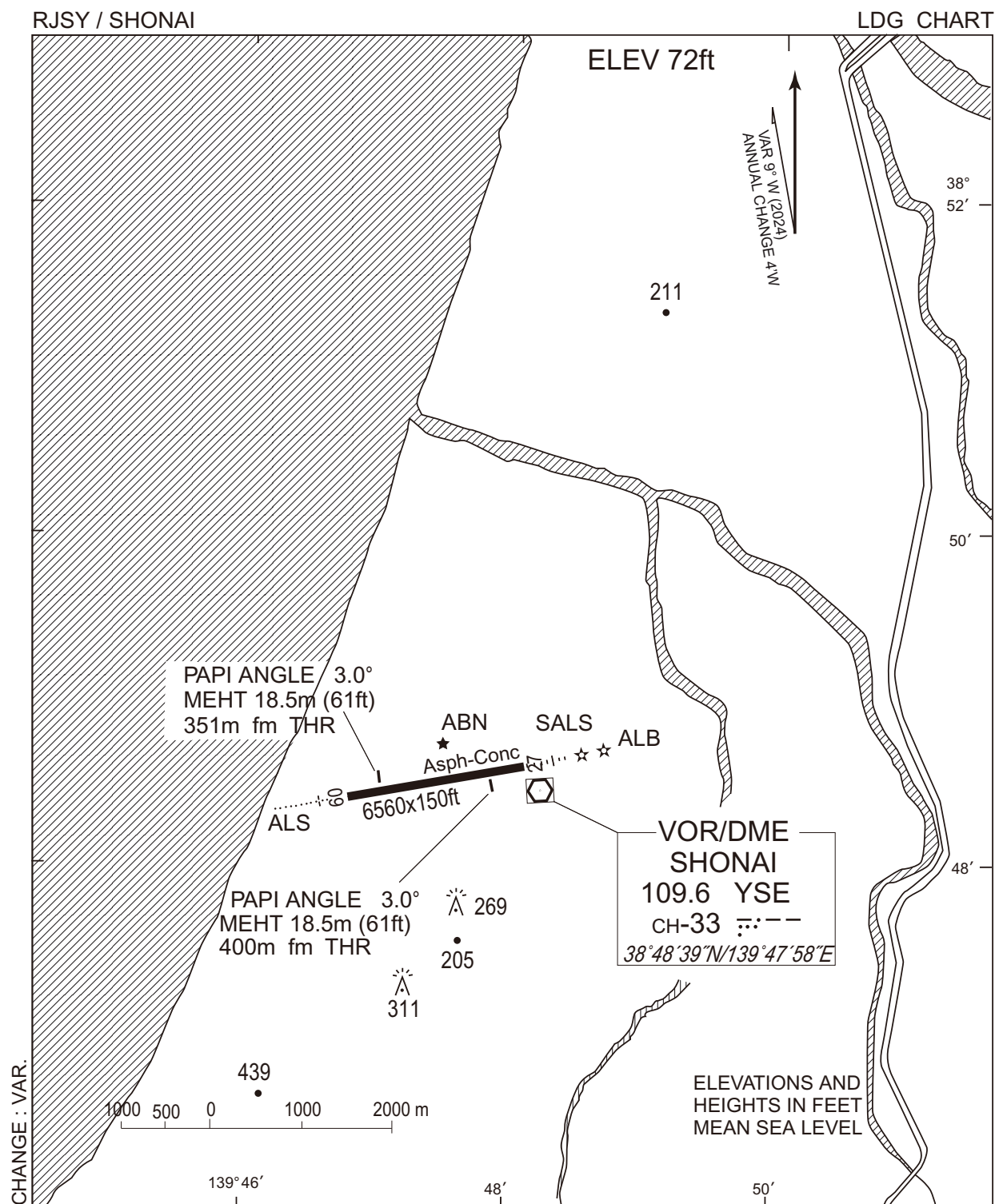
Visual REP



※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                             |
|------------------------|---------------------|-------------------------------------|
| 吹浦<br>Fukura           | 014°T / 16.0NM      | 吹浦港<br>Harbor                       |
| 酒田<br>Sakata           | 009°T / 8.1NM       | 酒田港<br>Harbor                       |
| 最上<br>Mogami           | 089°T / 9.1NM       | 最上川橋<br>Bridge                      |
| 鶴岡<br>Tsuruoka         | 153°T / 4.9NM       | JR駅<br>Station                      |
| 波渡崎<br>Hatozaki        | 225°T / 10.6NM      | 岬<br>Cape                           |
| あさひインター<br>Asahi Inter | 167°T / 11.9NM      | 山形自動車道 庄内あさひインターチェンジ<br>Interchange |

CHANGE : VAR.



RJSY / SHONAI

Minimum Vectoring Altitude CHART

