

## AD 2 AERODROMES

## RJCH AD 2.1 AERODROME LOCATION INDICATOR AND NAME

## RJCH - HAKODATE

## RJCH AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

|   |  |  |
|---|--|--|
| 1 | ARP coordinates and site at AD   | 414612N/1404919E   |
| 2 | Direction and distance from (city)   | 7.6KM (4.1NM), BRG 095° from Hakodate JR Station   |
| 3 | Elevation/ Reference temperature   | 111.9ft / 25°C (2004-2008)   |
| 4 | Geoid undulation at AD ELEV PSN  | 112.5FT  |
| 5 | MAG VAR/ Annual change   | 9°W (2009) / 1.2'E   |
| 6 | AD Administration, address, telephone, telefax, telex, AFS, e-mail and/or Web-site addresses | Hakodate Airport Office (Civil Aviation Bureau)<br>511, Takamatsu-cho, Hakodate, Hokkaido<br>TEL: 0138-57-1737, 0138-57-1738(OPS) FAX:0138-59-4745<br>AFS: RJCHYFYX<br>e-mail and Web-site : Nil |
| 7 | Types of traffic permitted (IFR/VFR)   | IFR/VFR  |
| 8 | Remarks  | Nil  |

## RJCH AD 2.3 OPERATIONAL HOURS

|    |                           |  |
|----|---------------------------|--|
| 1  | AD Administration         | 2230 - 1130  |
| 2  | Customs and immigration   | INTL SKED FLT hours only   |
| 3  | Health and sanitation     | Quarantine(human): 2330-0815<br>Quarantine(animal): 2330-0800<br>Quarantine(plant): INTL SKED FLT hours only |
| 4  | AIS Briefing Office       | 2230 - 1130  |
| 5  | ATS Reporting Office(ARO) | Nil  |
| 6  | MET Briefing Office       | H24 (NEW CHITOSE)  |
| 7  | ATS                       | 2230 - 1130  |
| 8  | Fuelling                  | 2230 - 1130  |
| 9  | Handling                  | 2230 - 1130  |
| 10 | Security                  | 2230 - 1130  |
| 11 | De-icing                  | Nil  |
| 12 | Remarks                   | Nil  |

**RJCH AD 2.4 HANDLING SERVICES AND FACILITIES**

|   |   |   |
|---|---|---|
| 1 | Cargo-handling facilities               | All the modern institutions that deal with the weight thing to a Boeing747 type freighter |
| 2 | Fuel/ oil types                         | Fuel grades: JET A-1<br>Oil grades: W80, MJO-2  |
| 3 | Fuelling facilities/ capacity           | Fuel Truck Refuelling   |
| 4 | De-icing facilities                     | Nil   |
| 5 | Hangar space for visiting aircraft      | Nil   |
| 6 | Repair facilities for visiting aircraft | Nil   |
| 7 | Remarks                                 | Nil   |

**RJCH AD 2.5 PASSENGER FACILITIES**

|   |                      |   |
|---|----------------------|---|
| 1 | Hotels               | Hotels in Hakodate city                             |
| 2 | Restaurants          | Available , Not continuous                          |
| 3 | Transportation       | Busses and Taxis                                    |
| 4 | Medical facilities   | Hospitals in Hakodate city                          |
| 5 | Bank and Post Office | Bank in Hakodate city, Post office in Hakodate city |
| 6 | Tourist Office       | Tourist office in Hakodate city                     |
| 7 | Remarks              | Nil   |

**RJCH AD 2.6 RESCUE AND FIRE FIGHTING SERVICES**

|   |   |              |
|---|---|--------------|
| 1 | AD category for fire fighting               | CAT 9        |
| 2 | Rescue equipment                            | Fire engines |
| 3 | Capability for removal of disabled aircraft | Nil          |
| 4 | Remarks                                     | Nil          |

**RJCH AD 2.7 SEASONAL AVAILABILITY-CLEARING**

|   |                             |  |
|---|-----------------------------|--|
| 1 | Types of clearing equipment | Snow removed equipment:<br>a)rotatry x 3<br>b)snow plows x 4<br>c)snow sweeper x 4<br>d)urea sprinkler equipment x 1 |
| 2 | Clearance priorities        | 1.RWY, 2.TWY, 3.APRON  |
| 3 | Remarks                     | Seasonal availability: All seasons.  |

## RJCH AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

|   |                                     |  |
|---|-------------------------------------|--|
| 1 | Apron surface and strength          | Surface: Concrete<br>Strength: PCN 74/F/B/X/T  |
| 2 | Taxiway width, surface and strength | Width: P1 - P6 : 23m<br>T1, T7 : 28.5m<br>T2 - T6 : 34m<br>Surface: All TWY(except P2 and P3 behind SPOT1-10) : Asphalt Concrete<br>TWY P2 and P3 behind SPOT1-10 : Concrete<br>Strength: All TWY(except P2 and P3 behind SPOT1-10) : PCN 98/F/C/X/T<br>TWY P2 and P3 behind SPOT1-10 : PCN 74/F/B/X/T                                   |
| 3 | ACL and elevation                   | Not available  |
| 4 | VOR checkpoints                     | Not available  |
| 5 | INS checkpoints                     | Spot NR<br>1 414631.62N, 1404848.33E<br>2W 414631.87N, 1404849.46E<br>2 414631.17N, 1404850.18E<br>3 414631.21N, 1404852.59E<br>4 414630.51N, 1404855.48E<br>5 414629.73N, 1404858.32E<br>6 414628.84N, 1404900.90E<br>7 414628.03N, 1404903.16E<br>8 414627.48N, 1404905.43E<br>9 414626.98N, 1404907.49E<br>10 414626.45N, 1404909.65E |
| 6 | Remarks                             | Nil  |

## RJCH 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 | ACFT stand ID signs:NR.3, NR.4 and NR.5<br>ACFT stand taxi lane:Nil<br>Visual docking guidance system :Nil  |
| 2 | RWY and TWY markings and LGT   | RWY: RWY12/30<br>(Marking) RWY designation, RWY CL, RWY THR, Aiming point, TDZ, RWY side stripe<br>(LGT): RCLL, REDL, RTHL, RENL, RTZL(RWY12), WBAR(RWY12), RWY DIST marker LGT<br><br>TWY: P1-P6<br>(Marking) TWY CL, TWY side stripe<br>(LGT) TWY edge LGT, TWY CL LGT<br><br>TWY: T1-T7<br>(Marking) TWY CL, RWY HLDG PSN, TWY side stripe<br>(LGT) TWY edge LGT, TWY CL LGT, RWY guard LGT, Taxiing guidance sign |
| 3 | Stop bars  | Nil   |
| 4 | Remarks  | (Marking) Overrun area<br>(LGT) Apron flood LGT   |

## RJCH AD 2.10 AERODROME OBSTACLES

SEE ATTACHED CHARTS

In approach/TKOF areas

| RWY/Area affected | Obstacle type  | Coordinates          | Elevation | Markings/ LGT | Remarks |
|-------------------|----------------|----------------------|-----------|---------------|---------|
| RWY30             | Light Facility | 414557.2N/1405024.8E | 152FT     |               |         |
| RWY30             | Light Facility | 414556.5N/1405027.3E | 152FT     |               |         |
| RWY30             | Antenna        | 414556.0N/1405028.2E | 160FT     |               |         |
| RWY30             | LOC            | 414555.3N/1405032.1E | 165FT     |               |         |
| RWY30             | Building       | 414556.7N/1405033.0E | 164FT     |               |         |
| RWY30             | Fence          | 414555.5N/1405033.5E | 161FT     |               |         |
| RWY30             | Tree           | 414551.5N/1405033.2E | 171FT     |               |         |
| RWY30             | Tree           | 414550.4N/1405035.0E | 169FT     |               |         |
| RWY30             | Light Facility | 414554.0N/1405037.1E | 162FT     |               |         |
| RWY30             | Light Facility | 414553.4N/1405039.6E | 165FT     |               |         |
| RWY30             | Light Facility | 414552.8N/1405042.1E | 168FT     |               |         |
| RWY30             | Light Facility | 414552.1N/1405044.5E | 171FT     |               |         |
| RWY30             | Post           | 414551.9N/1405045.7E | 176FT     |               |         |
| RWY30             | Light Facility | 414551.6N/1405046.9E | 174FT     |               |         |
| RWY30             | Light Facility | 414551.0N/1405049.3E | 177FT     |               |         |
| RWY30             | Tree           | 414549.6N/1405049.2E | 181FT     |               |         |
| RWY30             | Light Facility | 414550.4N/1405052.0E | 180FT     |               |         |
| RWY30             | Light Facility | 414549.8N/1405054.4E | 183FT     |               |         |
| RWY30             | Light Facility | 414549.2N/1405056.9E | 186FT     |               |         |
| RWY30             | Light Facility | 414548.6N/1405059.4E | 189FT     |               |         |
| RWY12             | Light Facility | 414628.2N/1404816.4E | 93FT      |               |         |
| RWY12             | Fence          | 414628.7N/1404814.0E | 95FT      |               |         |
| RWY12             | Post           | 414633.5N/1404809.4E | 104FT     |               |         |
| RWY12             | Post           | 414633.1N/1404807.6E | 101FT     |               |         |
| RWY12             | Post           | 414632.3N/1404804.9E | 105FT     |               |         |
| RWY12             | Post           | 414634.8N/1404805.3E | 106FT     |               |         |
| RWY12             | Post           | 414633.5N/1404804.3E | 106FT     |               |         |
| RWY12             | Tree           | 414630.0N/1404801.3E | 102FT     |               |         |
| RWY12             | Rod            | 414640.3N/1404736.1E | 132FT     |               |         |
| RWY12             | Rod            | 414645.2N/1404734.8E | 162FT     |               |         |
| RWY12             | Rod            | 414646.0N/1404733.7E | 164FT     |               |         |
| RWY12             | Rod            | 414646.8N/1404732.0E | 164FT     |               |         |
| RWY12             | Rod            | 414643.6N/1404658.5E | 171FT     |               |         |
| RWY12             | Post           | 414633.8N/1404811.5E | 100FT     |               |         |
| RWY12             | Building       | 414635.5N/1404807.7E | 100FT     |               |         |
| RWY12             | Post           | 414635.9N/1404806.7E | 111FT     |               |         |
| RWY12             | Post           | 414635.7N/1404805.2E | 105FT     |               |         |
| RWY12             | Antenna        | 414637.3N/1404805.9E | 103FT     |               |         |
| RWY12             | Post           | 414636.5N/1404805.5E | 110FT     |               |         |
| RWY12             | Chimney        | 414637.3N/1404804.9E | 111FT     |               |         |
| RWY12             | Lamppost       | 414626.9N/1404759.8E | 97FT      |               |         |
| RWY12             | Building       | 414628.1N/1404750.0E | 125FT     |               |         |

| RWY/Area affected | Obstacle type | Coordinates          | Elevation | Markings/ LGT | Remarks                   |
|-------------------|---------------|----------------------|-----------|---------------|---------------------------|
| RWY12             | Rod           | 414633.0N/1404720.2E | 170FT     |               |                           |
|                   | Spire         | 414805.6N/1405049.0E | 464FT     |               |                           |
|                   | Spire         | 414811.5N/1404802.8E | 293FT     |               |                           |
|                   | Spire         | 414812.6N/1405042.4E | 540FT     |               |                           |
|                   | Rod           | 414713.0N/1405202.5E | 338FT     |               |                           |
|                   | Spire         | 414817.5N/1404804.3E | 292FT     |               |                           |
|                   | Spire         | 414819.4N/1405035.8E | 562FT     |               |                           |
|                   | Antenna       | 414834.3N/1404848.9E | 424FT     |               |                           |
|                   | Spire         | 414826.4N/1405033.8E | 559FT     |               |                           |
|                   | Spire         | 414822.2N/1404741.2E | 344FT     |               |                           |
|                   | chimney       | 414824.9N/1404743.9E | 327FT     |               |                           |
|                   | Spire         | 414830.4N/1404756.8E | 362FT     |               |                           |
|                   | Building      | 414830.1N/1404752.9E | 340FT     |               |                           |
|                   | Spire         | 414826.1N/1404740.3E | 369FT     |               |                           |
|                   | Spire         | 414842.2N/1405026.8E | 541FT     |               |                           |
|                   | Antenna       | 414849.6N/1404847.6E | 438FT     |               |                           |
|                   | Spire         | 414843.6N/1404747.0E | 416FT     |               |                           |
|                   | Spire         | 414858.3N/1405002.8E | 595FT     |               |                           |
|                   | Spire         | 414905.8N/1404952.3E | 618FT     |               |                           |
|                   | Spire         | 414851.8N/1404739.5E | 453FT     |               |                           |
|                   | Spire         | 414912.0N/1404943.6E | 702FT     |               |                           |
|                   | Spire         | 414915.6N/1404932.4E | 570FT     |               |                           |
|                   | Spire         | 414900.2N/1404736.9E | 488FT     |               |                           |
|                   | Spire         | 414917.8N/1404920.0E | 530FT     |               |                           |
|                   | Spire         | 414919.5N/1404906.0E | 654FT     |               |                           |
|                   | Spire         | 414921.4N/1404850.7E | 629FT     |               |                           |
|                   | Spire         | 414905.9N/1404735.2E | 491FT     |               |                           |
|                   | RWY 12        | 414643.3N/1404704.1E | 174FT     |               |                           |
|                   | Building      | 414825.4N/1405040.2E | 573FT     |               |                           |
|                   | Antenna       | 414854.4N/1404843.5E | 437FT     |               |                           |
|                   | Post          | 414835.0N/1404917.1E | 413FT     |               |                           |
|                   | Tree          | 414839.8N/1404912.7E | 446FT     |               |                           |
|                   | Building      | 414847.3N/1404850.0E | 407FT     |               | Above the conical surface |
|                   | Building      | 414847.8N/1404833.6E | 403FT     |               | Above the conical surface |
|                   | Building      | 414854.4N/1404856.4E | 427FT     |               | Above the conical surface |
|                   | Building      | 414820.0N/1405000.0E | 423FT     | - / LIL       | Above the conical surface |
|                   | Building      | 414830.7N/1405007.6E | 398FT     | - / -         | Above the conical surface |
|                   | Spire         | 414820.2N/1404852.4E | 414FT     | Marking / LIL | Above the conical surface |
|                   | Spire         | 414829.1N/1404859.3E | 406FT     | Marking / -   | Above the conical surface |
|                   | Spire         | 414830.4N/1404906.0E | 394FT     | - / -         | Above the conical surface |
|                   | Spire         | 414833.4N/1404854.2E | 388FT     | Marking / -   | Above the conical surface |
|                   | Spire         | 414841.1N/1404851.4E | 391FT     |               | Above the conical surface |
|                   | Spire         | 414830.9N/1404919.9E | 387FT     | Marking / LIL | Above the conical surface |
|                   | Spire         | 414822.3N/1405031.8E | 480FT     | - / -         | Above the conical surface |
|                   | Spire         | 414820.4N/1405036.0E | 524FT     | - / -         | Above the conical surface |
|                   | Spire         | 414815.0N/1405041.3E | 545FT     | Marking / -   | Above the conical surface |

| RWY/Area affected | Obstacle type | Coordinates          | Elevation | Markings/ LGT | Remarks                   |
|-------------------|---------------|----------------------|-----------|---------------|---------------------------|
|                   | Spire         | 414807.6N/1405048.9E | 476FT     | Marking / -   | Above the conical surface |
|                   | Spire         | 414800.5N/1405055.3E | 406FT     | Marking / -   | Above the conical surface |
|                   | Spire         | 414811.5N/1404803.2E | 350FT     | Marking / -   | Above the conical surface |
|                   | Building      | 414831.3N/1405009.2E | 398FT     | - / -         | Above the conical surface |
|                   | Spire         | 414826.3N/1404757.7E | 363FT     | Marking / -   | Above the conical surface |
|                   | Spire         | 414818.6N/1404807.1E | 378FT     | Marking / LIL | Above the conical surface |

In circling area and at AD

| Obstacle type | Coordinates          | Elevation | Markings/ LGT | Remarks |
|---------------|----------------------|-----------|---------------|---------|
| Building      | 414632.7N/1404818.4E | 102FT     |               |         |
| Post          | 414634.3N/1404815.8E | 114FT     |               |         |
| Post          | 414637.4N/1404807.7E | 106FT     |               |         |
| Building      | 414602.1N/1405028.7E | 161FT     |               |         |
| Lamppost      | 414637.9N/1404808.9E | 117FT     |               |         |
| Post          | 414635.4N/1404816.0E | 126FT     |               |         |
| Post          | 414635.0N/1404819.8E | 123FT     |               |         |
| Post          | 414636.1N/1404816.0E | 126FT     |               |         |
| Post          | 414634.4N/1404822.6E | 117FT     |               |         |
| Fence         | 414604.3N/1405030.7E | 182FT     |               |         |
| Equipment     | 414616.2N/1404941.6E | 168FT     |               |         |
| Post          | 414637.4N/1404816.0E | 128FT     |               |         |
| ITV           | 414623.9N/1404914.3E | 139FT     |               |         |
| ABN           | 414633.3N/1404844.6E | 185FT     |               |         |
| Light Pole    | 414628.3N/1404907.9E | 192FT     |               |         |
| Light Pole    | 414630.8N/1404857.0E | 191FT     |               |         |
| Light Pole    | 414629.8N/1404902.2E | 192FT     |               |         |
| Light Pole    | 414631.7N/1404854.6E | 190FT     |               |         |
| Light Pole    | 414627.4N/1404913.1E | 192FT     |               |         |
| Light Pole    | 414627.9N/1404911.0E | 192FT     |               |         |
| Fence         | 414612.8N/1405014.8E | 241FT     |               |         |
| Fence         | 414615.3N/1405004.4E | 246FT     |               |         |
| Rod           | 414630.3N/1404903.8E | 219FT     |               |         |
| Tree          | 414618.6N/1404830.4E | 116FT     |               |         |
| Tree          | 414616.0N/1404840.9E | 139FT     |               |         |

| Obstacle type | Coordinates          | Elevation | Markings/ LGT | Remarks                      |
|---------------|----------------------|-----------|---------------|------------------------------|
| Tree          | 414603.3N/1404932.7E | 142FT     |               |                              |
| Building      | 414629.9N/1404711.2E | 182FT     |               |                              |
| Antenna       | 414603.2N/1404929.2E | 147FT     |               |                              |
| Rod           | 414621.0N/1404757.2E | 166FT     |               |                              |
| Signboard     | 414618.8N/1404810.9E | 136FT     |               |                              |
| Antenna       | 414559.6N/1404919.4E | 166FT     |               |                              |
| Equipment     | 414631.8N/1404909.0E | 227FT     |               |                              |
| Antenna       | 414549.6N/1404937.0E | 226FT     |               |                              |
| Equipment     | 414626.5N/1404957.2E | 292FT     |               |                              |
| Post          | 414633.2N/1404959.4E | 260FT     |               |                              |
| Signboard     | 414632.8N/1405000.6E | 261FT     |               |                              |
| Building      | 414633.9N/1405001.9E | 270FT     |               |                              |
| Building      | 414619.2N/1405010.5E | 288FT     |               |                              |
| Post          | 414623.4N/1405014.3E | 298FT     |               |                              |
| Antenna       | 414539.0N/1405005.7E | 206FT     |               |                              |
| Antenna       | 414816.0N/1404947.4E | 407FT     |               |                              |
| Rod           | 414815.4N/1404958.4E | 438FT     |               |                              |
| Spire         | 414754.3N/1405100.0E | 370FT     |               |                              |
| Antenna       | 414819.1N/1404905.8E | 401FT     |               |                              |
| chimney       | 414818.4N/1405001.7E | 458FT     |               |                              |
| Antenna       | 414820.0N/1404905.0E | 401FT     |               | Above the horizontal surface |
| Post          | 414622.7N/1405024.0E | 273FT     |               |                              |
| Antenna       | 414622.1N/1405025.0E | 314FT     |               |                              |
| Post          | 414620.7N/1405026.7E | 262FT     |               |                              |
| Post          | 414629.5N/1405029.6E | 292FT     |               |                              |
| Tree          | 414647.6N/1405024.0E | 302FT     |               |                              |
| Building      | 414716.9N/1404921.4E | 280FT     |               |                              |
| Spire         | 414632.5N/1405043.2E | 298FT     |               |                              |
| Spire         | 414644.0N/1405039.6E | 317FT     |               |                              |
| Spire         | 414703.0N/1405031.9E | 326FT     |               |                              |
| Post          | 414653.9N/1405043.5E | 322FT     |               |                              |
| Building      | 414629.4N/1405102.3E | 255FT     |               |                              |
| Tree          | 414729.4N/1404959.6E | 334FT     |               |                              |
| Spire         | 414733.3N/1405000.6E | 321FT     |               |                              |
| Antenna       | 414737.0N/1404959.0E | 377FT     |               |                              |
| Spire         | 414740.1N/1404946.4E | 378FT     |               |                              |
| Spire         | 414614.6N/1405121.2E | 257FT     |               |                              |
| Spire         | 414742.9N/1404935.0E | 400FT     |               |                              |
| Spire         | 414606.3N/1405123.6E | 253FT     |               |                              |
| Building      | 414737.9N/1405011.4E | 313FT     |               |                              |
| Spire         | 414743.6N/1404952.0E | 377FT     |               |                              |
| Rod           | 414747.6N/1404928.6E | 350FT     |               |                              |
| Lamppost      | 414731.4N/1405037.0E | 315FT     |               |                              |
| Building      | 414751.4N/1404952.6E | 348FT     |               |                              |
| Spire         | 414754.7N/1404843.8E | 351FT     |               |                              |
| Spire         | 414722.9N/1405108.6E | 318FT     |               |                              |

| Obstacle type     | Coordinates          | Elevation | Markings/ LGT | Remarks                      |
|-------------------|----------------------|-----------|---------------|------------------------------|
| Antenna           | 414802.1N/1404939.9E | 411FT     |               |                              |
| Spire             | 414743.6N/1405107.5E | 301FT     |               |                              |
| Post              | 414619.7N/1405050.8E | 269FT     |               |                              |
| Rod               | 414742.2N/1404927.7E | 328FT     |               |                              |
| Post              | 414627.4N/1405044.8E | 267FT     |               |                              |
| Spire             | 414700.7N/1405033.4E | 327FT     |               |                              |
| Spire             | 414731.5N/1405108.2E | 323FT     |               |                              |
| Rod               | 414803.5N/1404947.0E | 430FT     |               |                              |
| Antenna           | 414740.0N/1404942.0E | 383FT     |               | Above the horizontal surface |
| Building          | 414804.3N/1404943.2E | 381FT     | - / -         | Above the horizontal surface |
| Spire             | 414811.3N/1404845.5E | 341FT     | Marking / -   | Above the horizontal surface |
| Spire             | 414752.8N/1405102.4E | 304FT     | - / -         | Above the horizontal surface |
| Spire             | 414743.8N/1405108.2E | 298FT     | Marking / -   | Above the horizontal surface |
| Spire             | 414730.6N/1405109.1E | 309FT     | - / -         | Above the horizontal surface |
| Spire             | 414807.0N/1404806.1E | 309FT     | - / -         | Above the horizontal surface |
| Spire             | 414803.6N/1404816.9E | 313FT     | Marking / -   | Above the horizontal surface |
| Spire             | 414801.7N/1404823.0E | 314FT     | Marking / LIL | Above the horizontal surface |
| Antenna           | 414748.6N/1404929.7E | 341FT     | - / -         | Above the horizontal surface |
| Antenna           | 414806.3N/1404945.3E | 407FT     | - / -         | Above the horizontal surface |
| Building          | 414804.1N/1404943.8E | 372FT     | - / -         | Above the horizontal surface |
| Spire             | 414826.6N/1405028.7E | 549FT     | - / -         | Above the conical surface    |
| Spire             | 414833.7N/1404931.0E | 386FT     | Marking / -   | Above the conical surface    |
| Spire             | 414837.1N/1404940.3E | 340FT     | Marking / LIL | Above the conical surface    |
| Antenna           | 414851.9N/1404847.9E | 460FT     | Marking / -   | Above the conical surface    |
| Antenna           | 414827.7N/1405012.4E | 406FT     | - / -         | Above the conical surface    |
| Antenna           | 414748.1N/1404930.3E | 311FT     | - / -         | Above the horizontal surface |
| Building          | 414834.4N/1405013.5E | 418FT     | - / -         | Above the conical surface    |
| Building          | 414828.7N/1405010.1E | 408FT     | - / -         | Above the conical surface    |
| Antenna           | 414822.4N/1404742.7E | 330FT     | - / -         | Above the conical surface    |
| Antenna           | 414817.2N/1404950.9E | 392FT     | - / -         | Above the horizontal surface |
| Antenna           | 414821.6N/1404743.9E | 349FT     | - / -         | Above the conical surface    |
| Antenna           | 414821.5N/1404744.0E | 349FT     | - / -         | Above the conical surface    |
| Antenna           | 414816.0N/1404948.0E | 400FT     | - / -         | Above the horizontal surface |
| Antenna           | 414904.0N/1404847.0E | 479FT     | - / -         | Above the conical surface    |
| Building          | 414902.0N/1404854.0E | 465FT     | - / -         | Above the conical surface    |
|                   |                      |           |               |                              |
| Solar power plant | 414835.3N/1404833.6E | 375FT     | - / -         | Above the conical surface    |
| Rod               | 414818N1404807E      | 303FT     | - / -         | Above the conical surface    |
| Rod               | 414818N1404808E      | 306FT     | - / -         | Above the conical surface    |
| Rod               | 414819N1404809E      | 308FT     | - / -         | Above the conical surface    |
| Rod               | 414819N1404810E      | 314FT     | - / -         | Above the conical surface    |



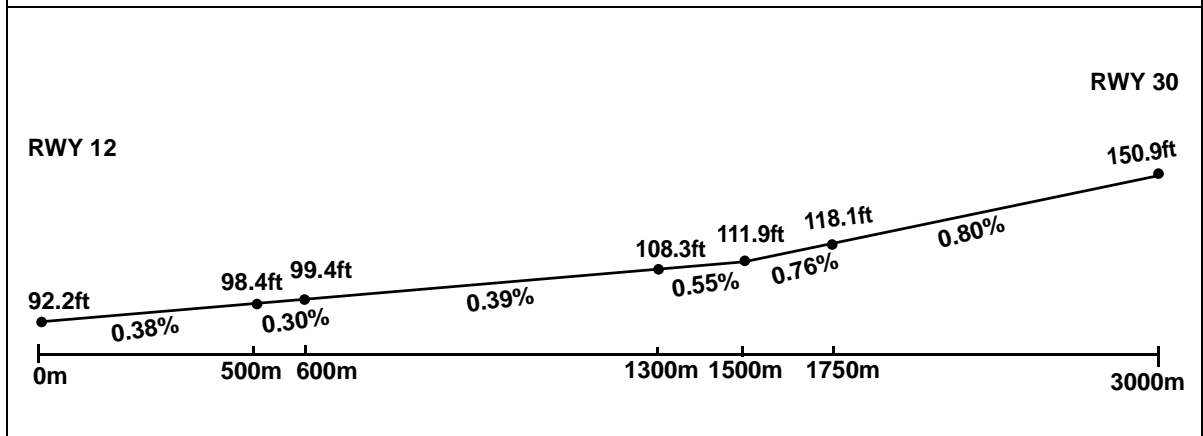
## RJCH AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

|    |  |   |
|----|--|---|
| 1  | Associated MET Office  | NEW CHITOSE   |
| 2  | Hours of service<br>MET Office outside hours                           | H24 (NEW CHITOSE)   |
| 3  | Office responsible for TAF preparation<br>Periods of validity          | NEW CHITOSE<br>30 Hours   |
| 4  | Trend forecast<br>Interval of issuance                                 | Nil   |
| 5  | Briefing/consultation provided   | Briefing is available upon inquiry at NEW CHITOSE   |
| 6  | Flight documentation<br>Language(s) used                               | C<br>En   |
| 7  | Charts and other information available<br>for briefing or consultation | S <sub>6</sub> , U <sub>85</sub> , U <sub>7</sub> , U <sub>5</sub> U <sub>3</sub> , U <sub>25</sub> , U <sub>2</sub> /Tr, P <sub>S</sub> , P <sub>5</sub> , P <sub>3</sub> , P <sub>25</sub> , P <sub>SWE</sub> , P <sub>SWF</sub> , P <sub>SWG</sub> , P <sub>SWI</sub> ,<br>P <sub>SWM</sub> , P <sub>SW</sub> (domestic), E, C, W <sub>E</sub> , W <sub>F</sub> , W <sub>G</sub> , W <sub>I</sub> , W, N |
| 8  | Supplementary equipment<br>available for providing information         | Nil   |
| 9  | ATS units provided with information                                    | TWR, APP, ATIS  |
| 10 | Additional information(limitation of<br>service, etc.)                 | Nil   |

## RJCH AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

| Designations<br>RWY NR | TRUE BRG | Dimensions of<br>RWY(M) | Strength(PCN) and<br>surface of RWY   | THR coordinates<br>THR geoid undulation | THR elevation and<br>highest elevation of<br>TDZ<br>of precision APP RWY |
|------------------------|----------|-------------------------|---------------------------------------|---|--|
| 1                      | 2        | 3                       | 4                                     | 5                                       | 6  |
| 12                     | 107.98°  | 3000×45                 | PCN<br>98/F/C/X/T<br>Asphalt Concrete | 414627.62N<br>1404817.61E<br>112.6FT    | THR ELEV 92.2ft<br>TDZ ELEV 103ft  |
| 30                     | 287.98°  | 3000×45                 | PCN<br>98/F/C/X/T<br>Asphalt Concrete | 414557.54N<br>1405021.00E<br>112.5FT    | THR ELEV 151ft   |

| Slope of RWY        | Strip<br>Dimensions(M)   | RESA (Overrun)<br>Dimensions(M)   | Remarks               |
|---------------------|--------------------------|---|-----------------------|
| 7                   | 10                       | 11  | 14                    |
| see attached figure | 3120×300<br><br>3120×300 | 192 × (MNM:102 MAX:300)*<br><br>47 × (MNM:217 MAX:300)*<br>*For detail, ask airport administrator | RWY grooving 3000X45m |



## RJCH AD 2.13 DECLARED DISTANCES

| RWY Designator | TORA<br>(m) | TODA<br>(m) | ASDA<br>(m) | LDA<br>(m) | Remarks |
|----------------|-------------|-------------|-------------|------------|---------|
| 1              | 2           | 3           | 4           | 5          | 6       |
| 12             | 3000        | 3000        | 3000        | 3000       | Nil     |
| 30             | 3000        | 3000        | 3000        | 3000       | Nil     |

## RJCH AD 2.14 APPROACH AND RUNWAY LIGHTING

| RWY<br>Designator   | APCH<br>LGT<br>type<br>LEN<br>INTST | RTHL<br>Color<br>WBAR | PAPI<br>(VASIS)<br>Angle<br>DIST FM THR<br>MEHT | RTZL<br>LEN | RCLL<br>LEN<br>Spacing<br>Color<br>INTST          | REDL<br>LEN<br>Spacing<br>Color<br>INTST             | RENL<br>Color<br>WBAR | STWL<br>LEN<br>Color |
|---|-------------------------------------|-----------------------|---|-------------|---|--|-----------------------|----------------------|
| 1   | 2                                   | 3                     | 4   | 5           | 6   | 7  | 8                     | 9                    |
| 12  | PALS<br>(CAT I)<br>640m<br>LIH      | Green<br>Green        | PAPI<br>3.0°/Left<br>384m<br>65ft               | 900m        | 3000m<br>30m<br>Coded Color<br>(White/Red)<br>LIH | 3000m<br>60m<br>Coded Color<br>(White/Yellow)<br>LIH | Red                   | Nil<br>(*2)          |
| 30  | SALS<br>(*1)<br>420m<br>LIH         | Green<br>-            | PAPI<br>3.0°/Left<br>538m<br>74ft               | -           | 3000m<br>30m<br>Coded Color<br>(White/Red)<br>LIH | 3000m<br>60m<br>Coded Color<br>(White/Yellow)<br>LIH | Red                   | Nil<br>(*2)          |
| Remarks   |                                     |                       |   |             |   |  |                       |                      |
| 10  |                                     |                       |   |             |   |  |                       |                      |
| SALS with RAI(LEN:480m) and APCH Guidance LGT(1341m and 1760m FM RWY THR) for RWY 30(*1)<br>Overrun area edge LGT: LEN:60m Color:Red (*2) |                                     |                       |   |             |   |  |                       |                      |

## RJCH AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

|   |  |   |
|---|--|---|
| 1 | ABN/IBN location, characteristics and hours of operation | ABN: 414633N/1404843E, ALTN FLG(2)WG EV 4.3sec , HO   |
| 2 | LDI location and LGT<br>Anemometer location and LGT      | LDI : Nil<br>Anemometer: RWY12 400m WSW from ABN, LGTD<br>RWY30 2350m ESE from ABN, LGTD        |
| 3 | TWY edge and center line lighting                        | TWY edge and center line lights installed, see AD2.9  |
| 4 | Secondary power supply/<br>switch-over time              | Within 1sec : REDL, RENL, RTHL, WBAR, RCLL, Overrun area edge LGT<br>Within 15sec: Other lights |
| 5 | Remarks  | WDI LGT   |

## RJCH AD 2.16 HELICOPTER LANDING AREA

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

| Designation and lateral limits |  | Vertical limits (ft) | Airspace classification | ATS unit call sign Language                       | Remarks |
|--------------------------------|--|----------------------|-------------------------|---|---------|
| 1                              |  | 2                    | 3                       | 4   | 6       |
| HAKODATE CTR                   | Area within a radius of 5 nm of HAKODATE ARP (41°46'N140°49'E) | 3000                 | D                       | HAKODATE TWR En                                   |         |
| HAKODATE ACA                   | SEE RJCH ATTACHED CHART  |                      | E                       | HAKODATE APP<br>HAKODATE DEP<br>HAKODATE RADAR En |         |

## RJCH AD 2.18 ATS COMMUNICATION FACILITIES

| Service designation | Call sign                  | Frequency   | Hours of operation | Remarks                    |
|---------------------|----------------------------|---|--------------------|----------------------------|
| 1                   | 2                          | 3   | 4                  | 5                          |
| TWR                 | Hakodate Tower             | 118.35MHz(1)<br>126.2MHz(2)<br>121.5 MHz(E)<br>243.0 MHz(E) | 2230 - 1130        | (1)Primary<br>(2)Secondary |
| APP/ASR             | Hakodate<br>Approach/Radar | 119.0 MHz<br>121.0 MHz<br><br>121.5MHz(E)<br>243.0MHz(E)    | 2230 - 1130        |                            |
| DEP                 | Hakodate Departure         | 127.9 MHz<br>121.0 MHz<br>121.5MHz(E)<br>243.0MHz(E)        | 2230 - 1130        |                            |
| ATIS                | Hakodate Airport           | 126.6MHz  | 2230 - 1130        |                            |

## RJCH AD 2.19 RADIO NAVIGATION AND LANDING AIDS

| Type of aid<br>(VOR<br>declination) | ID  | Frequency           | Hours of<br>operation | Position of<br>transmitting<br>antenna<br>coordinates | Elevation of<br>DME<br>transmitting<br>antenna | Remarks   |
|-------------------------------------|-----|---------------------|-----------------------|---|--|---|
| 1                                   | 2   | 3                   | 4                     | 5   | 6  | 7   |
| VOR<br>(9°W/2014)                   | HWE | 112.3MHz            | H24                   | 414626.51N/<br>1404955.98E                            |  | VOR unusable:<br>020°-030° beyond 30nm BLW 6000ft.<br>030°-040° beyond 35nm BLW 5000ft.<br>070°-090° beyond 25nm BLW 5000ft.<br>090°-100° beyond 35nm BLW 5000ft.<br>100°-110° beyond 20nm BLW 4000ft.<br>200°-240° beyond 35nm BLW 5000ft.<br>340°-350° beyond 35nm BLW 6000ft.<br>350°-010° beyond 15nm BLW 6000ft. |
| DME                                 | HWE | 1157MHz<br>(CH-70X) | H24                   | 414626.51N/<br>1404955.98E                            | 300ft  | DME unusable:<br>000°-020° beyond 25nm BLW 6000ft.<br>100°-110° beyond 35nm BLW 4000ft.<br>340°-360° beyond 30nm BLW 6000ft.  |
| ILS-LOC 12                          | IHL | 109.3MHz            | 2230 - 1130           | 414555.24N/<br>1405030.81E                            |  | LOC:235m (771ft) away FM RWY 30<br>THR, BRG (MAG) 117°  |
| ILS-GP 12                           | -   | 332.0MHz            | 2230 - 1130           | 414620.82N/<br>1404827.84E                            |  | GP : 290m (951ft) FM inside RWY 12<br>THR, 126m (413ft) S of RCL.<br>GP 3.0°<br>HGT of ILS Ref datum 15.5m(51ft).   |
| ILS-DME 12                          | IHL | 991MHz<br>(CH-30X)  | 2230 - 1130           | 414620.53N/<br>1404828.07E                            | 111ft  | DME:297m(974ft) inside FM RWY 12<br>THR, 132m(433ft) S of RCL.  |
| MSAS                                |     | 1575.42MHz          | H24                   |   |  | Transmitting antennas are satellite<br>based.   |

ILS for RWY12

REMARKS : 1.ILS-LOC beam(BRG) 117°  
 2.ILS-GP Angle 3.0°  
 3.HGT of ILS REF datum 15.5m(51.0ft)  
 4.ELEV of ILS-DME 33.9m(111ft)

**RJCH AD 2.20 LOCAL TRAFFIC REGULATIONS**

## 1. Airport regulations

**PPR**

Prior permission is required for all transient aircraft due to parking congestion except scheduled and/or emergency flight.  
Tel: RJCH CAB OPR 0138-57-1738

## 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

**Wing tip clearance at the TWY intersection (REF AD1.1.6.8)**

Wing tip clearance at the TWY intersection between the aircraft holding at the stop marking on the TWY and the other aircraft taxiing behind it are as follows.

When B772 holding at the stop marking on TWY T2 or T6

| Wing Span (WS) of aircraft taxiing on TWY P1-P2 or P5-P6 | WS=<35.4m | 35.4m<WS=<52.4m | WS >52.4m | Legend:<br>*A : wing tip clearance >= 15m<br>*B : 6.5m =< wing tip clearance < 15m<br>*C : wing tip clearance < 6.5m |
|--|-----------|-----------------|-----------|--|
| Wing tip clearance                                       | *A        | *B              | *C        |  |

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

Nil

## 8. Helicopter traffic - limitation

Nil

## 9. Removal of disabled aircraft from runways

Nil

## RJCH AD 2.21 NOISE ABATEMENT PROCEDURES

**1.Noise abatement Operating Procedures**

For all jet aircraft, in order to reduce aircraft noise in the vicinity of airport, the following procedures shall be applied unless compliance of the procedures adversely affects the safety of aircraft operations. In case that the aircraft is unable to take these procedures, pilots should execute alternative procedures which are considered to be practically equivalent.

- (1) For take-off from RWY30: Steepest Climb Procedure
- (2) For landing to RWY12: Delayed Flap Approach Procedure and Reduced Flap Setting Procedure
- (3) Reverse Thrust: Nil

**2. Preferential Runways Procedures: Nil****3. Noise Preferential Routes: Nil****1. 騒音軽減運航方式**

すべてのジェット機に対して、空港周辺における航空機騒音軽減のため、運航の安全に支障のない範囲で、以下の方式が適用される。ただし、これらの方式によることができない航空機は実効的にこれらと同等と認められる代替方式を実施するものとする。

- (1) 離陸について（滑走路 30）  
急上昇方式
- (2) 着陸について（滑走路 12）  
ディレイド・フラップ進入方式及び低フラップ角着陸方式
- (3) リバース・スラストについて  
なし

**2. 優先滑走路方式**

なし

**3. 優先飛行経路**

なし

## RJCH AD 2.22 FLIGHT PROCEDURES

**1. TAKE OFF MINIMA**

|  | RWY | ACFT<br>CAT | REDL & RCLL     |      | REDL or RCLL or<br>RCL marking |      | NIL<br>(DAYTIME ONLY) |      |
|--|-----|-------------|-----------------|------|--------------------------------|------|-----------------------|------|
|  |     |             | RVR             | VIS  | RVR                            | VIS  | RVR                   | VIS  |
| Multi-Engine<br>ACFT with<br>TKOF ALTN<br>AP Filed | 12  | A,B,<br>C,D | 400m            | 400m | 400m                           | 400m | -                     | 500m |
|  | 30  | A,B,<br>C,D | -               | 400m | -                              | 400m | -                     | 500m |
| OTHER  | 12  | A,B,<br>C,D | AVBL LDG MINIMA |      |                                |      |                       |      |
|  | 30  |             |                 |      |                                |      |                       |      |

**2. Trajectorized Airport Traffic Data Processing System (TAPS)**

Aircraft flying under control of Hakodate 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 capability be instructed to reply with the discrete code, it shall report a controller accordingly.

函館アプローチの指示のもとに、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、管制官に対してその旨通報すること。

**3. Lost communication procedures for arrival aircraft under radar navigational guidance**

If radio communications with HAKODATE Approach/Radar are lost for 1 minute, squawk Mode A/3 Code 7600 and;

- (I) 1. Contact HAKODATE Tower.
- 2. If unable, proceed in accordance with visual flight rules.
- 3. If unable, proceed to HAKODATE VOR/DME at last assigned altitude or 5,000 feet whichever is higher, and execute instrument approach
- (II) Procedures other than above will be issued when situation required.

**RJCH AD 2.23 ADDITIONAL INFORMATION**

Nil

**RJCH AD 2.24 CHARTS RELATED TO AN AERODROME**

Aerodrome Chart

Aircraft Parking/Docking Chart

Aerodrome Obstacle Chart-ICAO type A (RWY12)

Aerodrome Obstacle Chart-ICAO type A (RWY30)

Aerodrome Obstacle Chart-ICAO type B

Standard Departure Chart-Instrument (HAKODATE SOUTH, HAKODATE REVERSAL, TAPPI, ESASI, TIKYU)

Standard Departure Chart-Instrument (TSUGARU-RNAV)

Standard Arrival Chart-Instrument (YAGEN-RNAV)

Standard Arrival Chart-Instrument (EMINA-RNAV)

Standard Arrival Chart-Instrument (KURMI-RNAV)

Standard Arrival Chart-Instrument (YHUKA)

Instrument Approach Chart (ILS Z or LOC Z RWY12)

Instrument Approach Chart (ILS Y or LOC Y RWY12)

Instrument Approach Chart (VOR RWY30)

Instrument Approach Chart (VOR RWY12)

Instrument Approach Chart (RNAV(GNSS) Z RWY30)

Instrument Approach Chart (RNAV(RNP) Y RWY30)

Other Chart (Visual REP)

Other Chart (LDG CHART)

Other Chart (MVA CHART)



## MARKING AIDS

Mandatory  
instruction  
marking



VAR9® W-2009  
Annual Change 1.2% E



SEQUENCED FLASHING LIGHTS  
(SFL-V)



RUNWAY ALIGNMENT INDICATOR



CHANGE:STOP BAR LGT abolished

AIRCRAFT PARKING/DOCKING CHART

RJCH / HAKODATE

AD CHART



AERODROME OBSTACLE CHART - ICAO  
TYPE A (OPERATING LIMITATIONS)

DIMENSIONS AND ELEVATIONS IN FEET, BEARINGS ARE MAGNETIC



AERODROME OBSTACLE CHART - ICAO  
TYPE A (OPERATING LIMITATIONS)

DIMENSIONS AND ELEVATIONS IN FEET, BEARINGS ARE MAGNETIC

MAGNETIC VARIATION 9° W-APR 2018



| DECLARED DISTANCES                       |        |
|--|--------|
| RWY 12                                   | RWY 30 |
| 3000m TAKE OFF RUN AVAILABLE             | 3000m  |
| 3000m TAKE OFF DISTANCE AVAILABLE        | 3000m  |
| 3000m ACCELERATE STOP DISTANCE AVAILABLE | 3000m  |
| 3000m LANDING DISTANCE AVAILABLE         | 3000m  |



| LEGEND |                                     |
|--------|-------------------------------------|
| ①      | IDENTIFICATION NUMBER               |
| ●      | POLE, TOWER, SPIRE, ANTENNA, ETC    |
| ✳      | TREE                                |
| ▬      | LEVEE                               |
| —+—    | TRANSMISSION LINE OR OVERHEAD CABLE |
| △      | TRIANGULATION POINT                 |
| ☆      | AERONAUTICAL GROUND LIGHT           |
| —      | RIVER                               |

| AMENDMENT RECORD |      |            |
|------------------|------|------------|
| Nr               | DATE | ENTERED BY |
|                  |      |            |



DIMENSIONS AND ELEVATIONS IN FEET, BEARINGS ARE MAGNETIC



STANDARD DEPARTURE CHART - INSTRUMENT

RJCH / HAKODATE

SID and TRANSITION

HAKODATE SOUTH SEVEN DEPARTURE

RWY 12: Climb RWY HDG until 600FT, turn right HDG239°...

RWY 30: Climb RWY HDG until 500FT, turn left HDG149°...

...to intercept and proceed via HWE R194 to MRE VOR/DME.

Cross HWE R194/30.0DME at or above 6000FT.

Note RWY12 : 4.0% climb gradient required up to 1300FT.

OBST ALT 919FT located at 3.43NM 105° FM end of RWY12.

RWY30 : 5.4% climb gradient required up to 1600FT.

OBST ALT 1296FT located at 4.63NM 267° FM end of RWY30.

HAKODATE REVERSAL FIVE DEPARTURE

RWY 12: Climb RWY HDG until 600FT, turn right HDG239°...

RWY 30: Climb RWY HDG until 500FT, turn left HDG149°...

...to intercept and proceed via HWE R194 to 3000FT, turn right direct to HWE VOR/DME.

Cross HWE VOR/DME at or above 5000FT.

Note RWY12 : 4.0% climb gradient required up to 1300FT.

OBST ALT 919FT located at 3.43NM 105° FM end of RWY12.

RWY30 : 5.4% climb gradient required up to 1600FT.

OBST ALT 1296FT located at 4.63NM 267° FM end of RWY30.

TAPPI SEVEN DEPARTURE

RWY 12: Climb RWY HDG until 600FT, turn right HDG272°...

RWY 30: Climb RWY HDG until 500FT, turn left HDG182°...

...to intercept and proceed via HWE R227 to TAPPI. Cross TAPPI at or above FL170.

Note RWY12 : 4.0% climb gradient required up to 1300FT.

OBST ALT 919FT located at 3.43NM 105° FM end of RWY12.

RWY30 : 5.4% climb gradient required up to 1600FT.

OBST ALT 1296FT located at 4.63NM 267° FM end of RWY30.

YUWA TRANSITION

From over TAPPI, proceed via UWE R008 to UWE VOR/DME.

Cross UWE R008/21.0DME at assigned altitude.

ESASI FIVE DEPARTURE

RWY 12: Climb RWY HDG until 600FT, turn right HDG340°...

RWY 30: Climb RWY HDG until 700FT, turn right,...

...to intercept and proceed via HWE R295 to ESASI.

Note RWY12 : 4.9% climb gradient required up to 1300FT.

OBST ALT 919FT located at 3.43NM 105° FM end of RWY12.

TIKYU ONE DEPARTURE

RWY 12: Climb RWY HDG until 600FT, turn left,...

RWY 30: Climb RWY HDG until 600FT, turn left HDG073°...

...to intercept and proceed via HWE R118 to TIKYU.

Cross TIKYU at or above 6000FT.

Note RWY12 : 6.3% climb gradient required up to 1700FT.

OBST ALT 1302FT located at 4.03NM 101° FM end of RWY12.

RWY30 : 5.4% climb gradient required up to 1600FT.

OBST ALT 1296FT located at 4.63NM 267° FM end of RWY30.

## STANDARD DEPARTURE CHART - INSTRUMENT

RJCH / HAKODATE

SID and TRANSITION



## STANDARD DEPARTURE CHART - INSTRUMENT

RJCH / HAKODATE

RNAV SID and TRANSITION

| TSUGARU ONE DEPARTURE<br>KOMACHI TRANSITION   |                       | RNAV1   |
|---|-----------------------|---|
| Note 1) DME/DME/IRU or GNSS required.<br>※The aircraft equipped with only DME/DME/IRU must be able to update its position without delay at the starting point of take-off roll.<br>2) RADAR service required.   | Critical DME          | RWY12 : MRE : 30.0NM to TAPPI – TAPPI<br><br>RWY30 : MRE : 47.6NM to TAPPI – TAPPI<br>HWE : 47.6NM to TAPPI – 40.0NM to TAPPI<br>KOMACHI Transition :<br>MRE: TAPPI - 24.0NM to UWE<br>HWE: TAPPI - 55.0NM to UWE<br>UWE: 55.0NM to UWE - 24.0NM to UWE<br>HPE: 16.0NM to UWE - UWE |
|   | DME GAP               | RWY12 : RWY12DER – 30.0NM to TAPPI<br>RWY30 : RWY30DER – 47.6NM to TAPPI<br>KOMACHI Transition: 24.0NM to UWE – 22.0NM to UWE<br>19.0NM to UWE – 16.0NM to UWE  |
|   | Inappropriate Navaids | See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1   |
| <div>VAR 9°W (2014)</div> <p><u>TSUGARU ONE DEPARTURE</u></p> <p><u>KOMACHI TRANSITION</u></p> <p>TAPPI<br/>410805.5N<br/>1400954.5E</p> <p>YUWA(UWE)<br/>393701.7N<br/>1401113.0E</p> <p>VOR/DME<br/>HAKODATE<br/>112.3 HWE<br/>CH-70X<br/>41°46'27"N/140°49'56"E<br/>300FT</p> <p>VOR/DME<br/>YUWA<br/>110.65 UWE<br/>CH-43Y<br/>39°37'02"N/140°11'13"E<br/>300FT</p> <p>VOR/DME<br/>AOMORI<br/>114.1 MRE<br/>CH-88X<br/>40°44'20"N/140°42'19"E<br/>800FT</p> |                       |   |
| <p><u>TSUGARU ONE DEPARTURE</u></p> <p>RWY12 : Climb on HDG117° at or above 600FT, turn right direct to TAPPI.<br/>RWY30 : Climb on HDG297° at or above 500FT, turn left direct to TAPPI.</p> <p>NOTE RWY12 : 4.0% climb gradient required up to 1300FT.<br/>OBST ALT 919FT located at 3.43NM 105° FM end of RWY12.<br/>RWY30 : 5.4% climb gradient required up to 1600FT.<br/>OBST ALT 1296FT located at 4.63NM 267° FM end of RWY30.</p>                      |                       |   |
| <p><u>KOMACHI TRANSITION</u><br/>From TAPPI, to UWE.</p>  |                       |   |



## STANDARD DEPARTURE CHART - INSTRUMENT

## RJCH / HAKODATE

## RNAV SID and TRANSITION

TSUGARU ONE DEPARTURE

## RWY12

| 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              | —                   | —        | 117<br>(108.0) | -8.9               | —             | —              | +600          | —            | —              | RNAV1                    |
| 002           | DF              | TAPPI               | —        | —              | -8.9               | —             | R              | —             | —            | —              | RNAV1                    |

## RWY30

| 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              | —                   | —        | 297<br>(288.1) | -8.9               | —             | —              | +500          | —            | —              | RNAV1                    |
| 002           | DF              | TAPPI               | —        | —              | -8.9               | —             | L              | —             | —            | —              | RNAV1                    |

KOMACHI TRANSITION

| 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              | TAPPI               | —        | —              | -8.9               | —             | —              | —             | —            | —              | RNAV1                    |
| 002           | TF              | UWE                 | —        | 188<br>(179.4) | -8.9               | 91.1          | —              | —             | —            | —              | RNAV1                    |

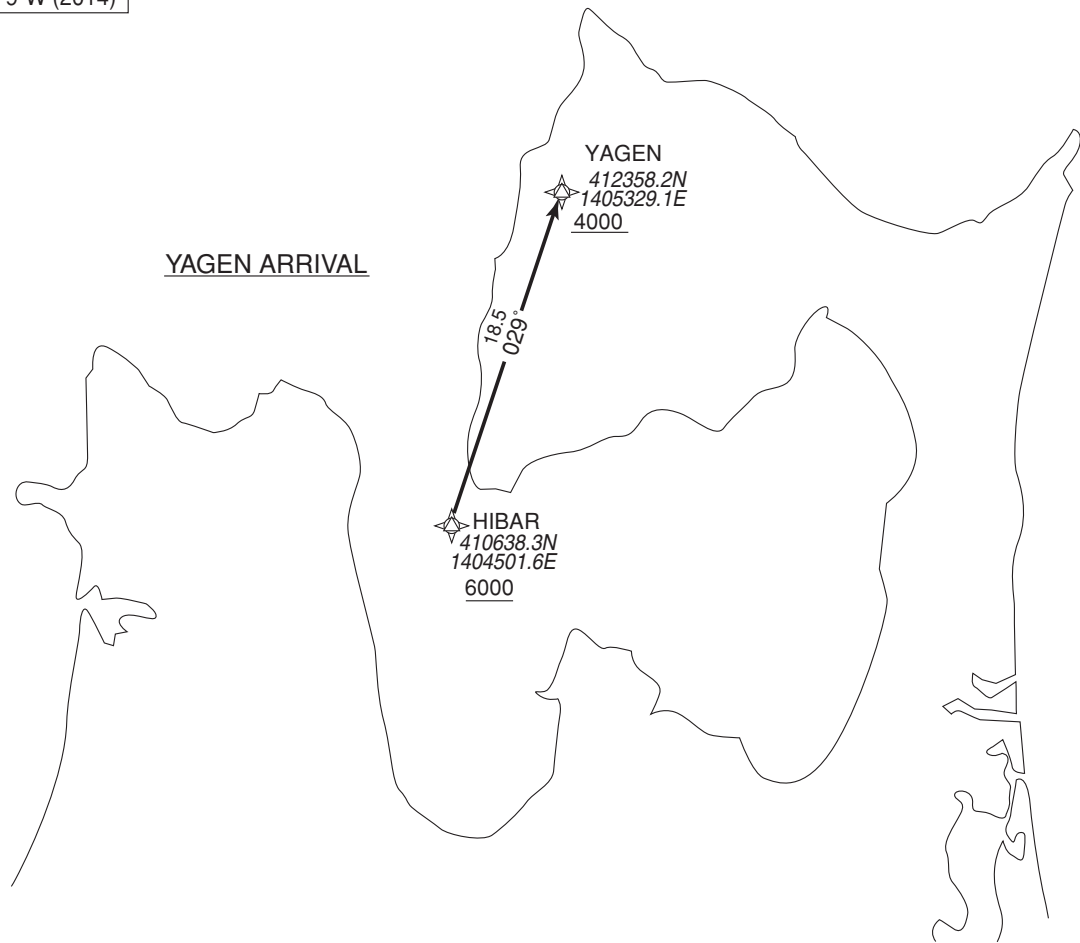
STANDARD ARRIVAL CHART - INSTRUMENT

RJCH / HAKODATE RNAV STAR RWY30

| YAGEN ARRIVAL | RNAV1 |
|---------------|-------|
|---------------|-------|

Note 1 ) DME/DME/IRU or GNSS required.  
2 ) RADAR service required.

VAR 9°W (2014)



**YAGEN ARRIVAL**  
From HIBAR at or above 6000FT, to YAGEN at or above 4000FT.

|                        |  |
|------------------------|--|
| Critical DME           | HWE : 7.0NM to YAGEN – YAGEN<br>MKE : 7.0NM to YAGEN – YAGEN |
| DME GAP                | HIBAR - 7.0NM to YAGEN                                       |
| Inappropriate Nav aids | See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1            |

| 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              | HIBAR               | —        | —              | -8.9               | —             | —              | +6000         | —            | —              | RNAV1                    |
| 002           | TF              | YAGEN               | —        | 029<br>(020.1) | -8.9               | 18.5          | —              | +4000         | —            | —              | RNAV1                    |

## STANDARD ARRIVAL CHART - INSTRUMENT

RJCH / HAKODATE

RNAV STAR RWY30

## EMINA ARRIVAL

RNAV1

Note 1 ) DME/DME/IRU or GNSS required  
2 ) RADAR service required

VAR 9°W (2014)

EMINA ARRIVAL

From HIBAR at or above 6000FT, to EMINA at or above 4000FT.

|                        |   |
|------------------------|---|
| Critical DME           | HWE : 10.0NM to EMINA – EMINA<br>MRE : 10.0NM to EMINA – 9.0NM to EMINA |
| DME GAP                | HIBAR – 10.0NM to EMINA   |
| Inappropriate Nav aids | See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1                       |

| 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              | HIBAR               | —        | —              | -8.9               | —             | —              | +6000         | —            | —              | RNAV1                    |
| 002           | TF              | EMINA               | —        | 039<br>(029.6) | -8.9               | 29.1          | —              | +4000         | —            | —              | RNAV1                    |

STANDARD ARRIVAL CHART - INSTRUMENT

RJCH / HAKODATE

RNAV STAR RWY12



## STANDARD ARRIVAL CHART - INSTRUMENT

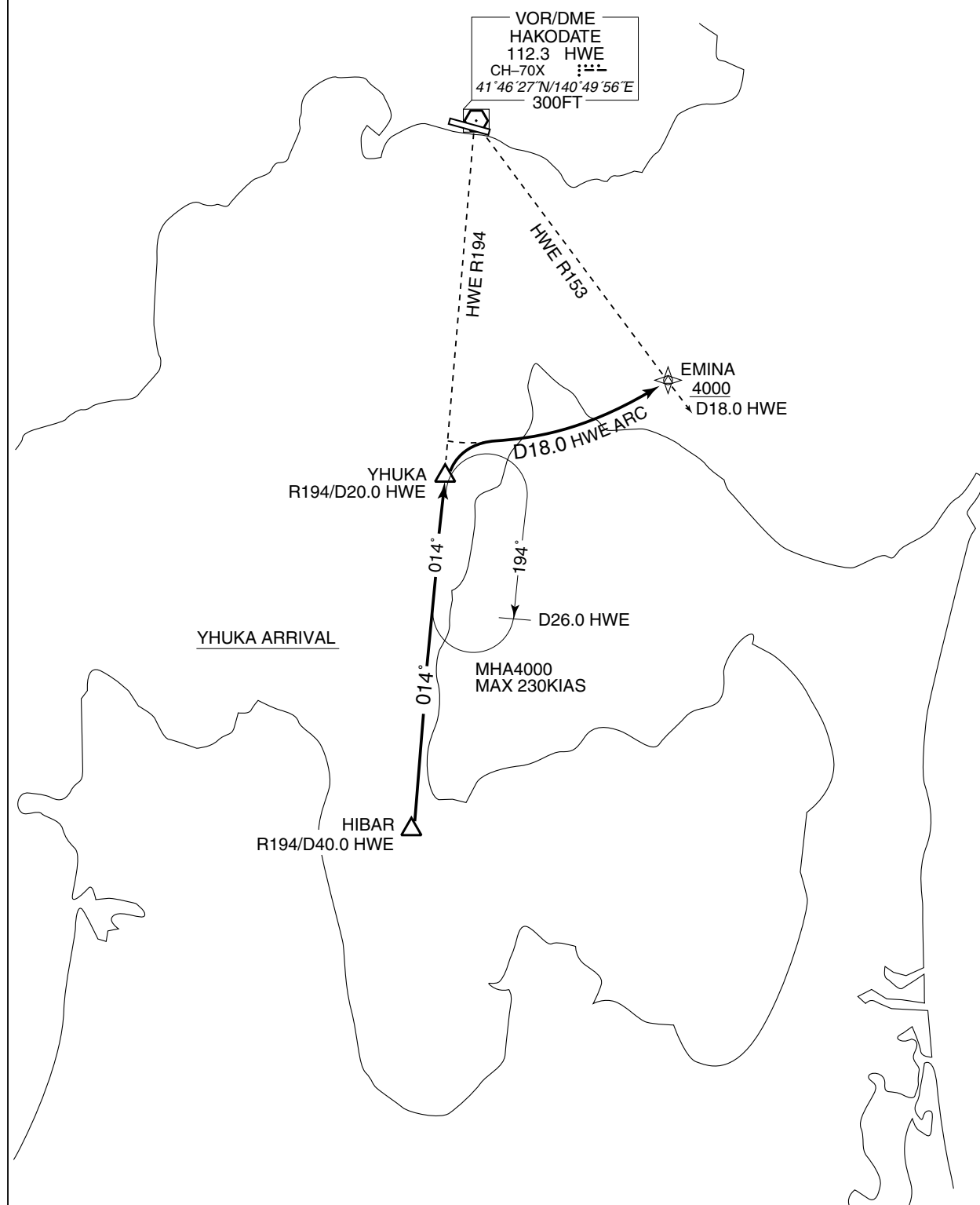
RJCH / HAKODATE

STAR

YHUKA ARRIVAL

From over HIBAR, via HWE R194 to YHUKA, turn right via HWE 18.0DME  
counterclockwise ARC to EMINA.

Cross EMINA at or above 4000FT.

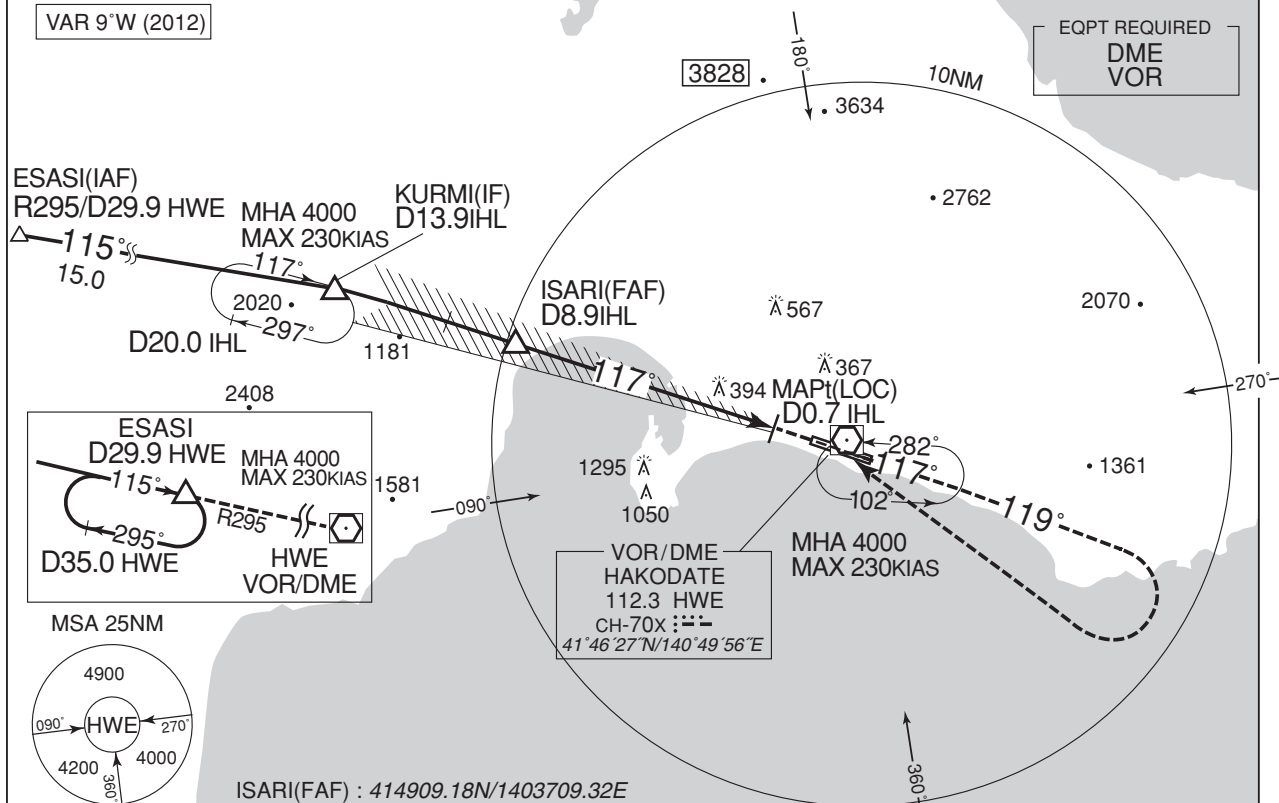


## RJCH / HAKODATE

ILS Z or LOC Z RWY12

VAR 9°W (2012)

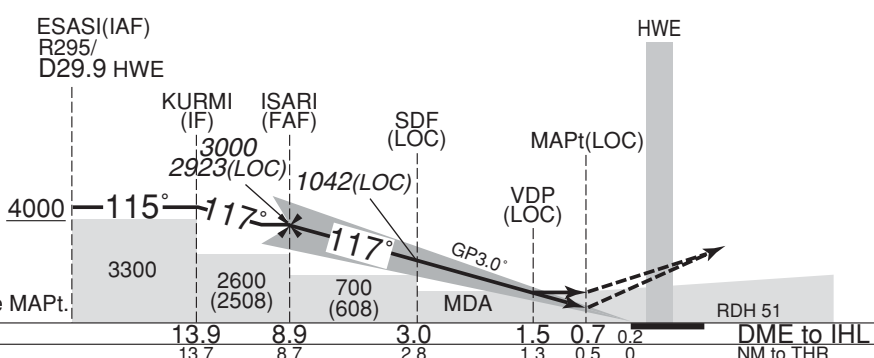
EQPT REQUIRED -  
DME  
VOR



| NM to IHL            | FAF  | 8    | 7    | 6    | 5    | 4    | 3    | 2   | MAPt |
|----------------------|------|------|------|------|------|------|------|-----|------|
| ALT (3.0° APCH Path) | 2923 | 2634 | 2316 | 1997 | 1679 | 1361 | 1042 | 724 | —    |

**MISSED APPROACH**  
Climb on HDG117° to 600FT,  
via HWE R119 to 4000FT,  
turn right, direct to HWE  
VOR/DME and hold.  
Contact HAKODATE APP.

Timing not authorized for defining the MAPt.



Missed APCH climb gradient MNM 5.0%

| MINIMA |           | THR elev. 92 |           | AD elev. 112 |           |           |      |
|--------|-----------|--------------|-----------|--------------|-----------|-----------|------|
| CAT    | CAT I     |              | LOC       |              | CIRCLING  |           |      |
|        | DA(H)     | RVR/<br>CMV  | MDA(H)    | RVR/<br>CMV  | MDA(H)    | VIS       |      |
| A      | 292 (200) | 700          | 540 (448) | 1200         | 550 (438) | 1600      |      |
| B      |           |              |           | 1300         | 570 (458) |           |      |
| C      |           |              |           | 299 (207)    | 1400      | 600 (488) | 2400 |
| D      |           |              |           | 309 (217)    | 1600      | 690 (578) | 3200 |

Circling to SOUTH side of RWY only.

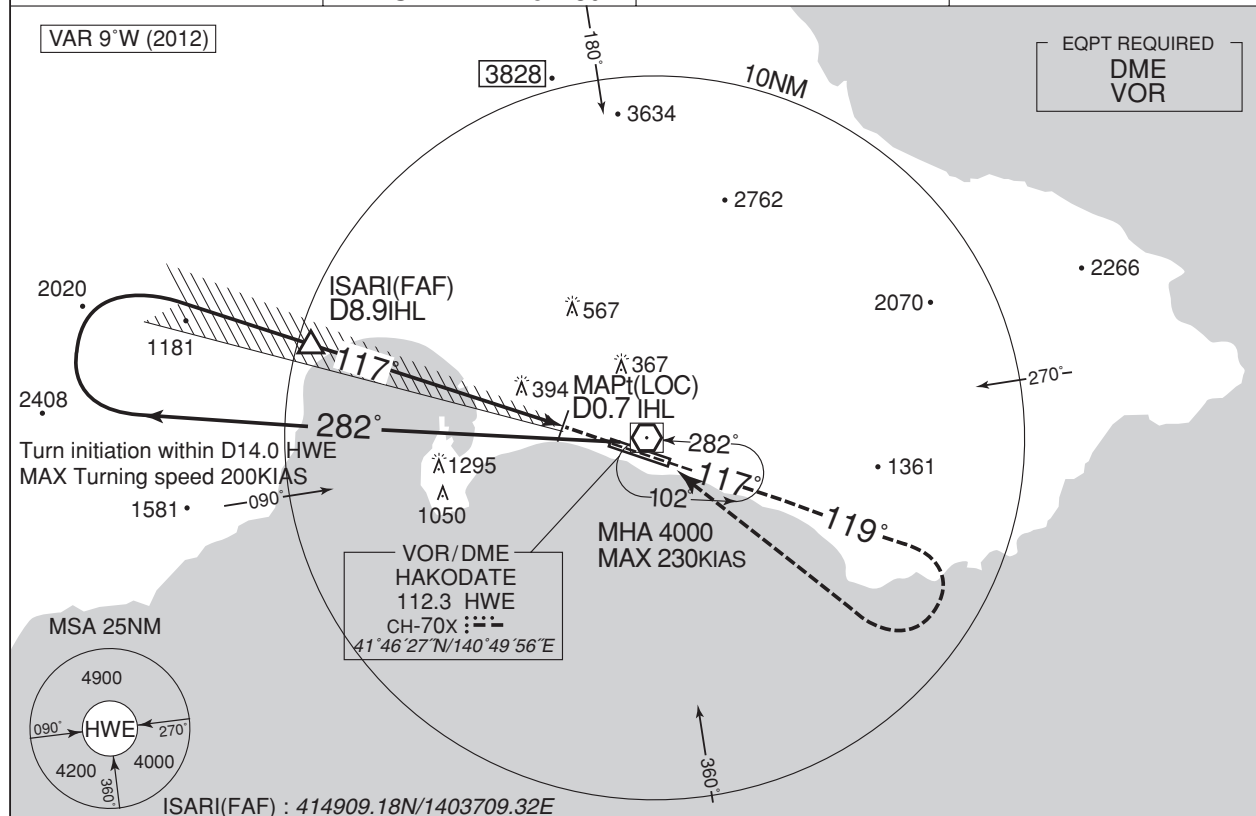
MINIMA with Missed APCH climb gradient of 2.5% are not established.

## INSTRUMENT APPROACH CHART

RJCH / HAKODATE

ILS Y or LOC Y RWY12

|  |  |                                |                          |
|--|--|--------------------------------|--------------------------|
| HAKODATE APP<br>119.0 – 121.0<br>127.9 | ILS-LOC<br>109.3 IHL : : :<br>ILS-GP 332.0<br>ILS-DME IHL CH-30x | HAKODATE TWR<br>118.35 – 126.2 | RADAR AVBL<br>ATIS 126.6 |
|--|--|--------------------------------|--------------------------|

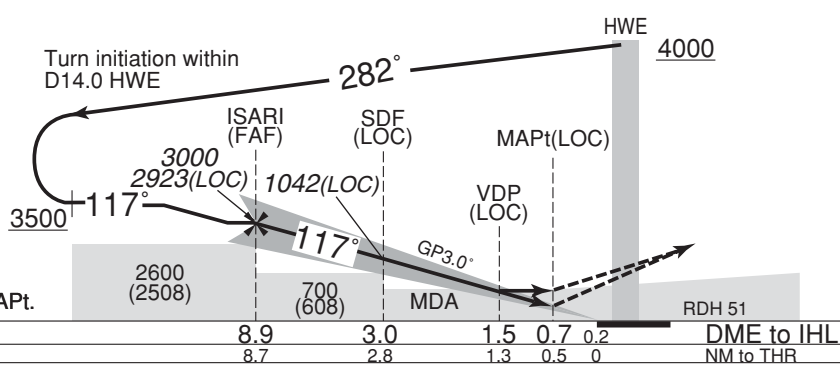


| NM to IHL            | FAF  | 8    | 7    | 6    | 5    | 4    | 3    | 2   | MAPt |
|----------------------|------|------|------|------|------|------|------|-----|------|
| ALT (3.0° APCH Path) | 2923 | 2634 | 2316 | 1997 | 1679 | 1361 | 1042 | 724 | —    |

## MISSED APPROACH

Climb on HDG117° to 600FT,  
via HWE R119 to 4000FT,  
turn right, direct to HWE  
VOR/DME and hold.  
Contact HAKODATE APP.

Timing not authorized for defining the MAPt.



Missed APCH climb gradient MNM 5.0%

## MINIMA

THR elev. 92

AD elev. 112

| CAT | CAT I     |             | LOC       |             | CIRCLING  |      |
|-----|-----------|-------------|-----------|-------------|-----------|------|
|     | DA(H)     | RVR/<br>CMV | MDA(H)    | RVR/<br>CMV | MDA(H)    | VIS  |
| A   | 292 (200) | 700         | 540 (448) | 1200        | 550 (438) | 1600 |
| B   |           |             |           | 1300        | 570 (458) |      |
| C   | 299 (207) |             |           | 1400        | 600 (488) | 2400 |
| D   | 309 (217) |             |           | 1600        | 690 (578) | 3200 |

Circling to SOUTH side of RWY only.

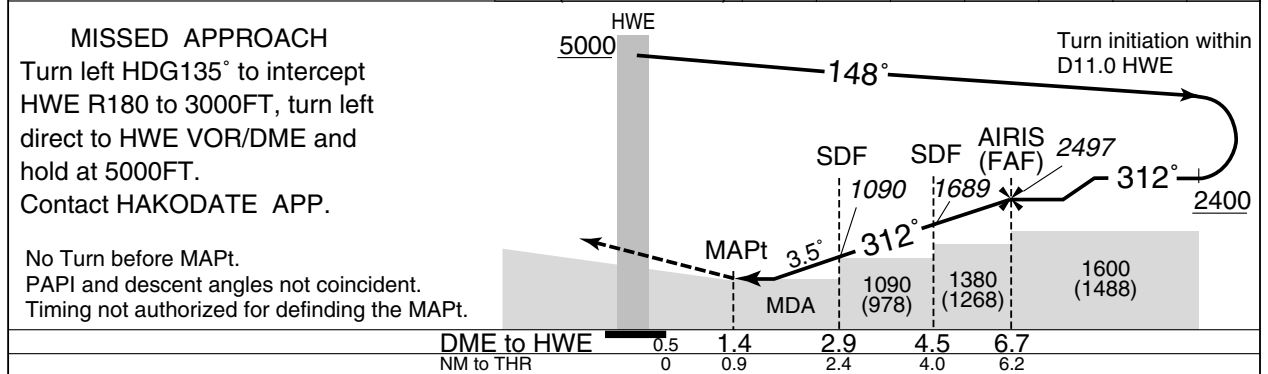
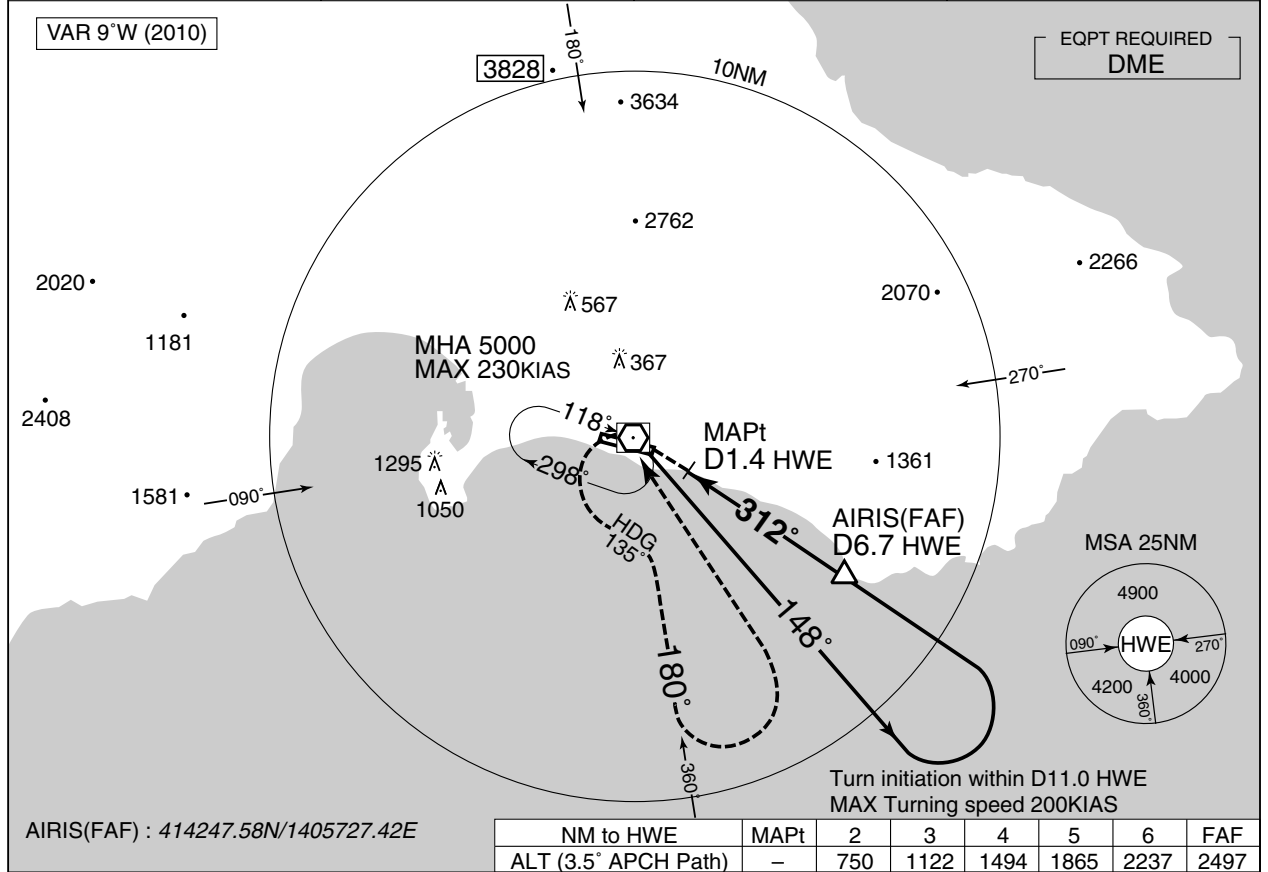
MINIMA with Missed APCH climb gradient of 2.5% are not established.

INSTRUMENT APPROACH CHART

RJCH / HAKODATE

VOR RWY30

|  |   |                                  |                          |
|--|---|----------------------------------|--------------------------|
| HAKODATE APP<br>119.0 – 121.0<br>127.9 | HAKODATE VOR/DME<br>112.3 HWE<br>CH-70X<br>41°46'27"N/140°49'56"E | HAKODATE TOWER<br>118.35 – 126.2 | RADAR AVBL<br>ATIS 126.6 |
|--|---|----------------------------------|--------------------------|



| MINIMA |           |      |           |      | THR elev. 151 | AD elev. 112 |
|--------|-----------|------|-----------|------|---------------|--------------|
| CAT    |           |      | CIRCLING  |      |               |              |
|        | MDA(H)    | CMV  | MDA(H)    | VIS  |               |              |
| A      | 730 (618) | 1000 | 730 (618) | 1600 |               |              |
| B      |           | 1200 |           | 2400 |               |              |
| C      |           |      |           | 3200 |               |              |
| D      |           | 1600 |           |      |               |              |

Circling to SOUTH side of RWY only.



## INSTRUMENT APPROACH CHART

RJCH / HAKODATE

VOR RWY12

|  |   |                                  |                          |
|--|---|----------------------------------|--------------------------|
| HAKODATE APP<br>119.0 – 121.0<br>127.9 | HAKODATE VOR/DME<br>112.3 HWE<br>CH-70X<br>41°46'27"N/140°49'56"E | HAKODATE TOWER<br>118.35 – 126.2 | RADAR AVBL<br>ATIS 126.6 |
|--|---|----------------------------------|--------------------------|



**MISSED APPROACH**  
Climb via HWE R109 to 4000FT, turn right direct to HWE VOR/DME and hold.  
Contact HAKODATE APP.

PAPI and descent angles not coincident.  
Timing not authorized for defining the MAPt.



Missed APCH climb gradient MNM 3.6%

**MINIMA** THR elev. 92 AD elev. 112

| CAT | CIRCLING  |         | CIRCLING  |      |
|-----|-----------|---------|-----------|------|
|     | MDA(H)    | RVR/CMV | MDA(H)    | VIS  |
| A   | 530 (438) | 1200    | 550 (438) | 1600 |
| B   |           | 1300    | 570 (458) |      |
| C   |           | 1400    | 600 (488) |      |
| D   |           | 1600    | 690 (578) |      |

Circling to SOUTH side of RWY only.

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

## RJCH / HAKODATE

RNAV(GNSS) Z RWY30

11/10/18

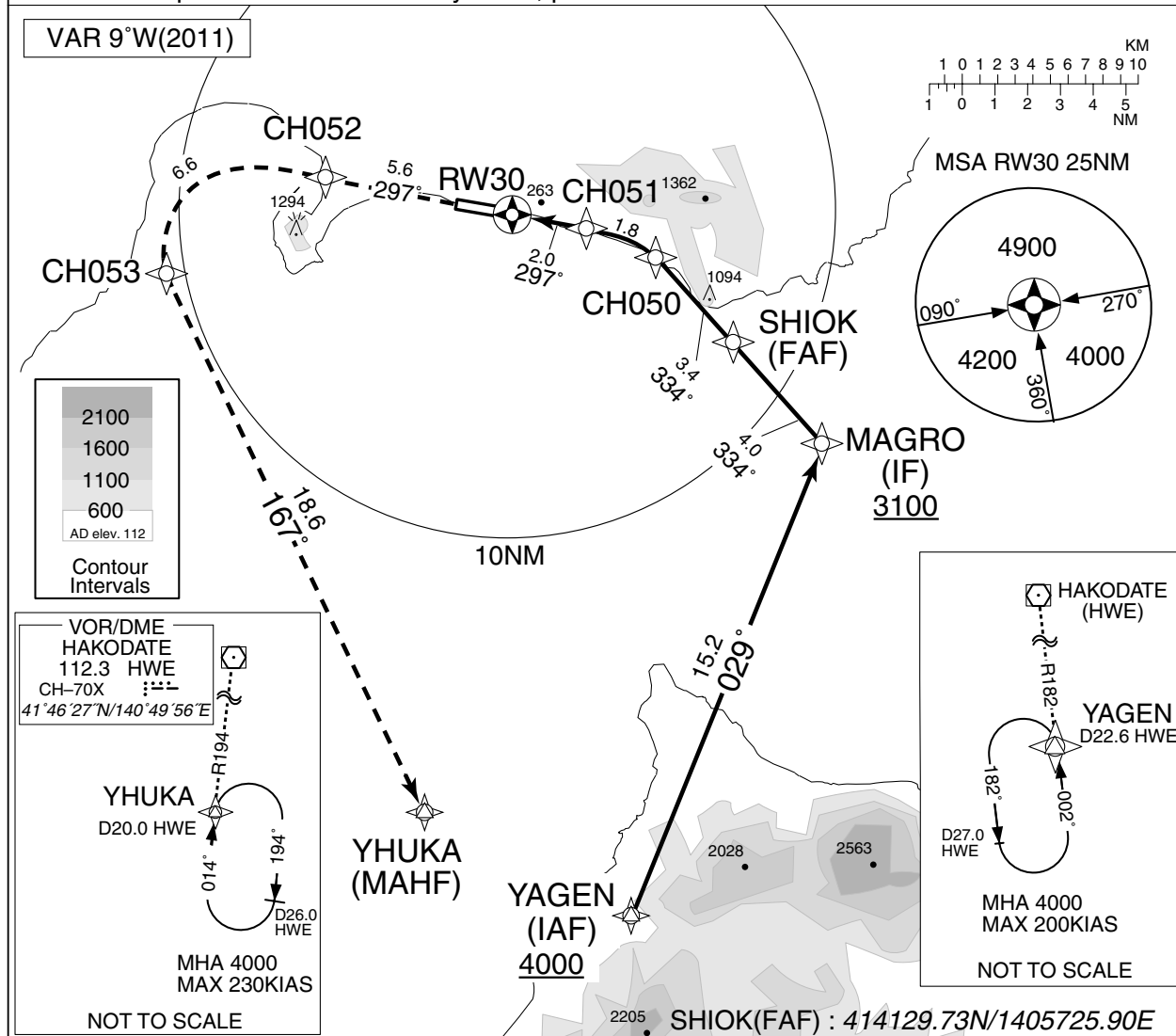
## INSTRUMENT APPROACH CHART

RJCH / HAKODATE

RNAV(RNP) Y RWY30

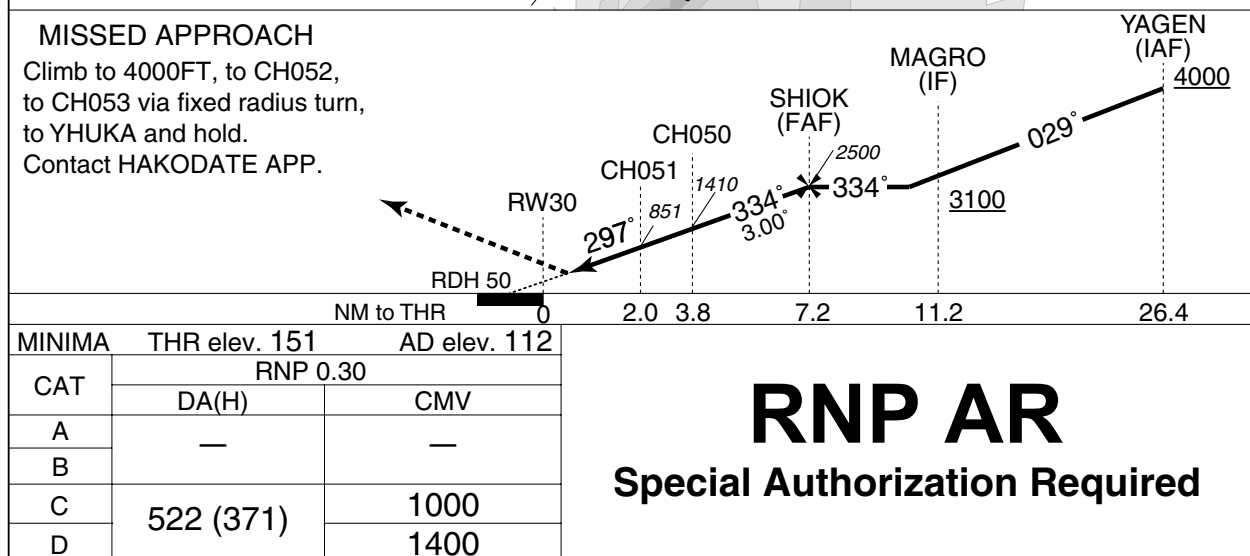
|  |                      |                                |                          |
|--|----------------------|--------------------------------|--------------------------|
| HAKODATE APP<br>119.0 – 121.0<br>127.9 | GNSS and RF required | HAKODATE TWR<br>118.35 – 126.2 | RADAR AVBL<br>ATIS 126.6 |
|--|----------------------|--------------------------------|--------------------------|

For uncompensated Baro-VNAV systems, procedure not authorized below -15°C / above 45°C



## MISSED APPROACH

Climb to 4000FT, to CH052,  
to CH053 via fixed radius turn,  
to YHUKA and hold.  
Contact HAKODATE APP.

**RNP AR****Special Authorization Required**

## INSTRUMENT APPROACH CHART

RJCH / HAKODATE

RNAV(RNP) Y RWY30

RNAV(RNP) Y RWY30Coding Table

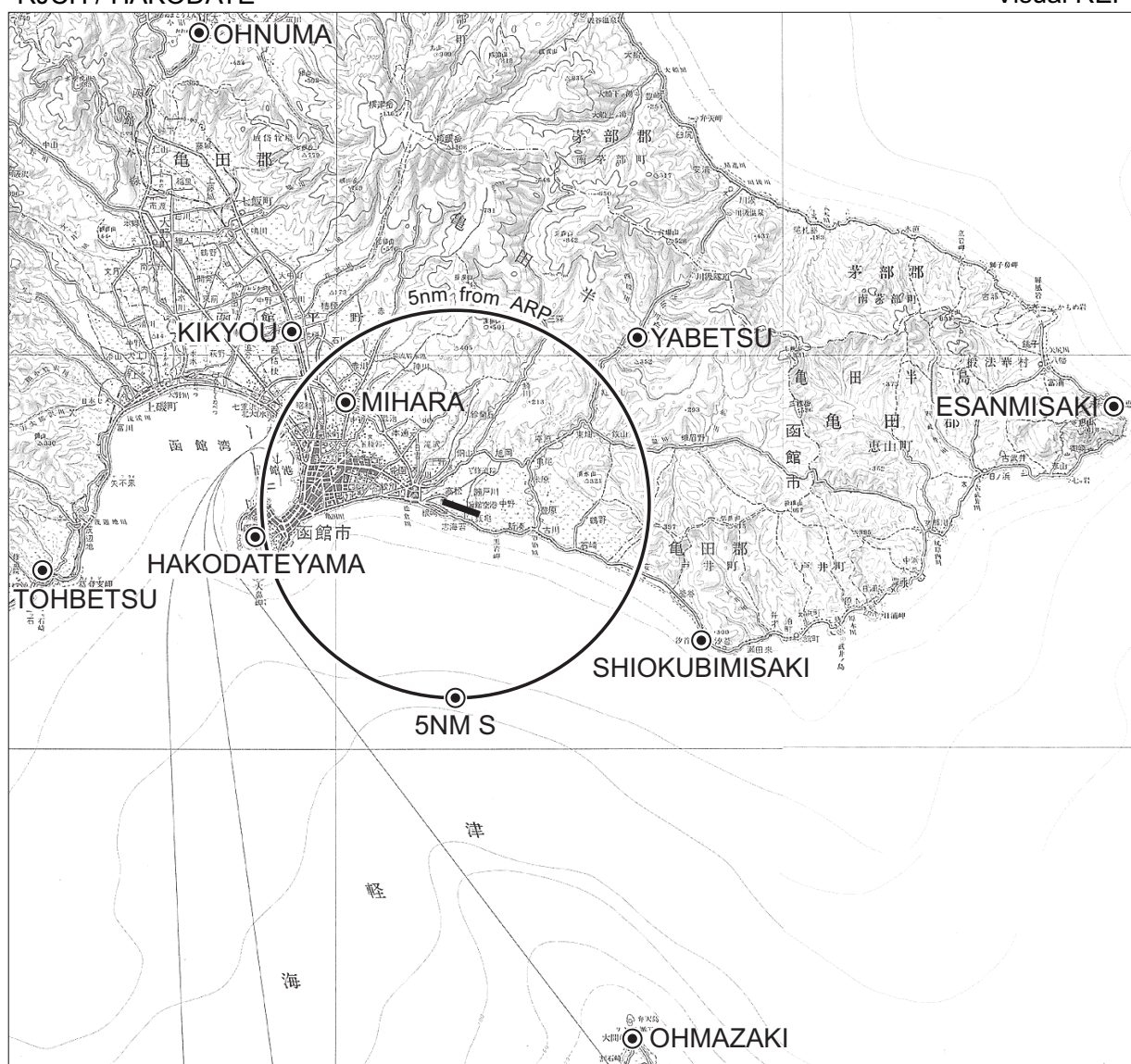
| Serial Number | Path Descriptor                    | Waypoint Identifier | Fly Over | Course [°M(°T)] | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (FT) | Speed (KIAS) | VPA/RDH (°/FT) | RNP Value |
|---------------|------------------------------------|---------------------|----------|-----------------|--------------------|---------------|----------------|---------------|--------------|----------------|-----------|
| 001           | IF                                 | YAGEN               | —        | —               | -8.9               | —             | —              | +4000         | —            | —              | —         |
| 002           | TF                                 | MAGRO               | —        | 029<br>(020.2)  | -8.9               | 15.2          | —              | +3100         | —            | —              | 1.0       |
| 003           | TF                                 | SHIOK               | —        | 334<br>(325.1)  | -8.9               | 4.0           | —              | 2500          | —            | —              | 1.0       |
| 004           | TF                                 | CH050               | —        | 334<br>(325.0)  | -8.9               | 3.4           | —              | 1410          | —            | -3.00          | 0.3       |
| 005           | RF<br>Center:<br>CHRF1<br>r=2.74NM | CH051               | —        | —               | -8.9               | 1.8           | L              | 851           | —            | -3.00          | 0.3       |
| 006           | TF                                 | RW30                | Y        | 297<br>(288.1)  | -8.9               | 2.0           | —              | 201           | —            | -3.00/50       | 0.3       |
| 007           | TF                                 | CH052               | —        | 297<br>(288.1)  | -8.9               | 5.6           | —              | —             | —            | —              | 1.0       |
| 008           | RF<br>Center:<br>CHRF2<br>r=2.90NM | CH053               | —        | —               | -8.9               | 6.6           | L              | —             | —            | —              | 1.0       |
| 009           | TF                                 | YHUKA               | —        | 167<br>(158.5)  | -8.9               | 18.6          | —              | 4000          | —            | —              | 1.0       |

Waypoint Coordinates

| Waypoint Identifier | Coordinates            | RF Arc Center Identifier | Coordinates            |
|---------------------|------------------------|--------------------------|------------------------|
| YAGEN               | 412358.17N/1405329.09E | CHRF1                    | 414243.29N/1405148.88E |
| MAGRO               | 413813.12N/1410029.95E | CHRF2                    | 414456.26N/1404159.49E |
| SHIOK               | 414129.73N/1405725.90E |                          |                        |
| CH050               | 414417.82N/1405448.22E |                          |                        |
| CH051               | 414519.47N/1405256.91E |                          |                        |
| RW30                | 414557.54N/1405021.00E |                          |                        |
| CH052               | 414742.10N/1404311.31E |                          |                        |
| CH053               | 414352.33N/1403822.94E |                          |                        |
| YHUKA               | 412632.43N/1404728.04E |                          |                        |

RJCH / HAKODATE

Visual REP



| Call sign               | BRG / DIST from ARP | Remarks                     |
|-------------------------|---------------------|-----------------------------|
| 矢 別<br>Yabetsu          | 052°/ 5.7NM         | ダム<br>Dam                   |
| 恵 山 岬<br>Esanmisaki     | 089°/16.4NM         | 灯台<br>Lighthouse            |
| 汐 首 岬<br>Shiokubimisaki | 128°/ 7.3NM         | 灯台<br>Lighthouse            |
| 大 間 崎<br>Ohmazaki       | 170°/14.2NM         | 岬<br>Cape                   |
| 5NM S                   | 180°/ 5.0NM         | 海上<br>Over the sea          |
| 美 原<br>Mihara           | 319°/ 4.5NM         | ラジオアンテナ<br>Radio antenna    |
| 桔 梗<br>Kikyou           | 325°/ 5.7NM         | JR駅<br>JR Station           |
| 当 別<br>Tohbetsu         | 270°/11.5NM         | トラビスト修道院<br>Religious house |
| 函 館 山<br>Hakodateyama   | 271°/ 5.3NM         | テレビ塔<br>TV tower            |
| 大 沼<br>Ohnuma           | 340°/14.4NM         | JR駅<br>JR Station           |

## LDG CHART

