

List of pages in this Trip Kit

Trip Kit Index

Airport Information For EGCC

Terminal Charts For EGCC

Revision Letter For Cycle 01-2015

Change Notices

Notebook

General Information

Location: Manchester Gbr
IATA Code: MAN
Lat/Long: N53° 21.2' W002° 16.5'
Elevation: 257 ft

Airport Use: Public
Magnetic Variation: 2.0°W

Fuel Types: Jet A-1
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: No

Sunrise: 0823 Z
Sunset: 1606 Z,

Runway Information

Runway: 05L
Length x Width: 10000 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 231 ft
Lighting: Edge, ALS, Centerline, TDZ
Displaced Threshold: 1401 ft

Runway: 05R
Length x Width: 10007 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 189 ft
Lighting: Edge, ALS, Centerline

Runway: 23L
Length x Width: 10007 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 227 ft
Lighting: Edge, ALS, Centerline
Displaced Threshold: 611 ft

Runway: 23R
Length x Width: 10000 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 256 ft
Lighting: Edge, ALS, Centerline, TDZ
Displaced Threshold: 600 ft

Communication Information

- ATIS 128.175 Arrival Service
- ATIS 121.975 Departure Service
- ATIS 113.55 Arrival Service
- Manchester Ground Tower 121.85
- Manchester Ground Tower 121.7
- Manchester Tower 119.4
- Manchester Tower 118.625
- Manchester Delivery Clearance Delivery 121.7
- Manchester Radar Approach Control 135.0
- Manchester Radar Approach Control 118.575
- Manchester Director Approach Control 121.35

1. GENERAL

1.1. ATIS

D-ATIS Arrival 128.175 113.550

D-ATIS Departure 121.975

1.2. NOISE ABATEMENT PROCEDURES

1.2.1. GENERAL

The following procedures may at any time be departed from to the extent necessary for avoiding immediate danger. Every operator of ACFT using the APT shall ensure at all times that ACFT are operated in a manner calculated to cause the least disturbance practicable in areas surrounding the APT.

1.2.2. PREFERENTIAL RWY

RWY 23R/L shall be used for all movements when tailwind component is not greater than 5 KT on RWY or at 2000'.

1.2.3. NIGHTTIME RESTRICTIONS

Restrictions are imposed on jets, details to be obtained from the Airfield Duty Manager.

RWYs 23L/05R will not normally be used between 2200-0600LT, except when RWYs 23R/05L closed for maintenance.

Between 2330-0559LT ACFT in group QC 4 will not be scheduled to depart.

OPERATIONAL RESTRICTIONS:

Between 2300-0659LT ACFT in groups QC 8 and QC 16 will not be scheduled to take-off and land except in emergency or if exempt.

Jet and turbo-prop ACFT approaching Manchester APT are expected to minimize noise disturbance by use of low power, low drag and between 2200-0559LT continuous descent approach procedures.

Noise Level Band (EPNdB)	QUOTA Count	Noise Level Band (EPNdB)	QUOTA Count
84 - 86.9	0.25	96 - 98.9	4
87 - 89.9	0.5	99 - 101.9	8
90 - 92.9	1	more than 101.9	16
93 - 95.9	2		

1.2.4. RUN-UP TESTS

ATC will approve idle ground engine runs. A safety man must be positioned behind the ACFT to warn road traffic.

Permission for ground testing in excess of idle must be requested through the Airfield Duty Manager, Ext 3331. Engine test above idle must commence in the Engine Test Bay.

Times of operation are 0600-2300LT.

Engine testing on the open airfield will only be allowed for Chapter 2 ACFT between 0900-1700LT and for Chapter 3 ACFT between 0600-2300LT.

Propeller-driven ACFT are to be classified as Chapter 3.

1.2.5. AUXILIARY POWER UNITS (APUs)

Fixed Electrical Ground Power Units (GPUs) must be used where available, use of GPUs and APUs should be limited.

1.3. LOW VISIBILITY PROCEDURES (LVP) DURING CAT II/III OPERATIONS

1.3.1. GENERAL

APT operates two stages of LVP in CAT II/III operations:
ATC LVP and ATC LVP due to ceiling.

1. GENERAL

1.3.1.1. ATC LVP (RVR less than 600m)

- Reversion to a single RWY operation 23R or 05L. For any residual departures from 23L/05R, the centerline lights are spaced at 30m intervals which requires that, except where an AOC (air operator certificate) holder has less restrictive state authorised take-off minima, departures in RVR of less than 400m are not permitted.
- Departing ACFT: ATC will require departing ACFT to use the following CAT III holding points:
RWY 23R: J1.
RWY 05L: A1.
- Arriving ACFT: Only the following designated exits will be illuminated for ACFT to vacate:
RWY 23R via HST BD, AE or link A,
RWY 05L via link J.

1.3.1.2. ATC LVP DUE TO CEILING (RVR 600m or greater and ceiling of 200' or less)

- RWY 23L/23R dual RWY operation or RWY 05L single RWY operation.
All available RWY exits associated with either RWY 23R or RWY 05L will be illuminated.
ACFT may vacate at any of these exits.
23L/23R dual RWY operation will require departing ACFT to "hold short" of RWY 23R at the following CAT III holding points as instructed: H1, F1 or D1. Pilots are required to read back all ATC "hold short" instructions.
- Ground Movement Radar (GMR) is normally available to monitor pilot "RWY vacated" reports. When GMR is not available, RWY LOC Sensitive Area (LSA) vacation will be assessed by receipt of a pilot report that the ACFT has passed the last alternate yellow and green centerline lights.
These lights denote the extent of the ILS LSA.
- Pilots will be informed of the relevant procedure that is in operation by Arrival and Departure ATIS or by RTF.
- When LVP are in force, the appropriate landing rates that can be expected are:

RVR(m)	Expected Landing Rate
Between 1000m and 600m	20
Between 600m and 400m	12
Less than 400m	10

1.4. RWY OPERATIONS

General operating principles for two RWY segregated operations. The two RWYs are 1280'/390m apart and staggered by 6070'/1850m in order to comply with ICAO rules for simultaneous operations on parallel or near-parallel instrument RWYs (SOIR). Therefore in normal operations arrivals can operate independently on one RWY whilst departures use the other.

Dual RWY segregated operations are normally in force between: Mon-Fri 0630-1030LT and 1600-2000LT, Sat 0630-1030LT and Sun 1600-2000LT. At other times, single RWY, mixed-mode operations are in force using RWY 05L/23R.

Pilots requiring use of RWY 05R/23L for ACFT performance reasons outside dual RWY segregated hours should advise ATC at the earliest opportunity. Efforts will be made to make RWY 05R/23L available, however, some delay may be experienced.

Returning this RWY to service may take in excess of 30 minutes, and it should not be assumed to be available as a diversion alternate to RWY 05L/23R.

Due to local planning constraints, RWY 05R/23L is not normally available between 2200-0600LT.

1. GENERAL

1.5. TAXI PROCEDURES

RWY 05L/23R has a turning circle at the Northeastern end, ABEAM Link J, for use by ACFT up to A380.

RWY 05R/23L has a turning circle at 5971' (1820m) from RWY 23L threshold for use by ACFT up to B767.

All turning circles have unlit painted centerline and blue edge lighting beyond RWY edges.

ACFT should follow the painted centerline in a clockwise direction, unless directed otherwise by ATC.

Jet ACFT are to engage minimum power when using TWYs A, B and C due to the proximity of light ACFT OPS in this area.

A380 ACFT: Reduced TWY centerline to object clearance of 161' (49m) applies along TWYs A and J (between J1 and J5).

Pilots of long-wheelbase ACFT such as B777-300 and A340-600 should exercise caution when negotiating TWY curves and intersections as main-gear to pavement edge clearance may be limited.

AN-124 ACFT will be provided with wing-tip escort vehicles on TWYs north side of RWY 05L/23R.

Pilots are reminded of the need to exercise caution on wingtip clearances from other ACFT when manoeuvring in close proximity on the ground. Particular care should be taken in the RWY holding areas and at RWY crossing points.

Do not cross red stop bars unless authorized to do so by ATC.

RWY 05L/23R: The hard shoulders outboard of the RWY side stripes have only 25% of the RWY bearing strengths and should not be used by ACFT turning on the RWY or when backtracking. The grass verges are unstrengthened and when wet unlikely to sustain loads.

ACFT using TWY L are to use minimum power. B777, A340-600 and A380 ACFT are prohibited from using this TWY.

MIM power to be used by outbound ACFT using TWY D between holding point D7 and ABEAM stand 32 (Pier C).

1.6. PARKING INFORMATION

Stands 100 and 101 have downward slopes of 1.5% from center of stand towards TWY D.

TWYs P and Q may be used for ACFT parking. In darkness or if Low Visibility Procedures are in force, a Follow-me car will be provided.

All Terminal 1 and 2 stands (except stands 12L and 201), all Terminal 3 pier-served stands and stand 73 equipped with SAFEDOCK.

On all remote stands (except stand 73) and stands 12L, 56 thru 58, 100, 101 and 201 marshaller required.

Pilots must not enter a stand unless the Stand Entry Guidance has been activated and the correct ACFT type is displayed, or a marshaller has signalled clearance to proceed. If SEG is not activated upon approach to a stand, flight crews must hold position on the TWY and advise GMC. Flight crews must not attempt to self-park.

1.7. OTHER INFORMATION

1.7.1. GENERAL

Pilots should note that RWY 05L/23R has a convex profile, the highest point is ABEAM TWY HZ.

1. GENERAL

1.7.2. WARNING

Pilots are warned, when landing on RWY 23R in strong Northwesterly winds, of the possibility of turbulence and large wind shear effects.

Flocks of up to 100 racing pigeons may be encountered flying across the APT below 100' during the racing season, April-September.

Four high visibility bright lights from golf driving range 1500m/0.8NM LEFT of THR 23R.

2. ARRIVAL

2.1. NOISE ABATEMENT PROCEDURES

2.1.1. GENERAL

Unless otherwise authorized by ATC, ACFT using the ILS shall not descend below 2000' before intercepting GS, nor thereafter fly below it. ACFT approaching without ILS or radar assistance follow a descent path which will not result in its being at any time lower than the approach path which would be followed by an ACFT using the ILS GS.

For visual approaches, or following a visual circuit, to RWY 23R/L the following additional limitations apply:

- Jet ACFT shall not join the final approach at a height of less than 1760'.
- Propeller-driven ACFT whose MTWA exceeds 5700kg shall not join the final approach at a distance of less than 3NM from the landing THR and at a height of less than 1260'.

2.1.2. NIGHTTIME RESTRICTIONS

Between 2300-0600LT, visual approaches are not permitted. ACFT shall be positioned, by RADAR, to join the final APP at a distance of not less than 7NM from touchdown. This restriction does not apply to non-jet ACFT whose MTWA is 5700kg or less.

2.1.3. REVERSE THRUST

Avoid use of reverse thrust consistent with the safe operation of the ACFT, especially between 2300-0700LT.

2.2. CAT II/III OPERATIONS

RWY 05L is available for CAT II/III operations, however due to terrain profile CAT II approaches may only be made by ACFT CAT A & B (Vat no greater than 120 KT), and when the ILS status is CAT III.

RWY 23R is available for CAT II/III operations, CAT II approaches may only be made when ILS status is CAT III.

2.3. RWY OPERATIONS

2.3.1. MINIMUM RWY OCCUPANCY TIME

Pilots are reminded that rapid exits from the landing RWY enable ATC to apply minimum spacing on final approach that will achieve maximum RWY utilisation and will minimise the occurrence of "go-arounds".

RWY 05R arrivals:

All ACFT must vacate the RWY no later than VB and proceed direct to TWY V. ACFT remaining on the RWY to vacate at VA or T will infringe the ILS LOC critical area.

Similarly TWY S is not to be used.

RWY 05L arrivals:

TWY F available as exit during daylight hours only. TWY D is not available as RWY exit.

RWY 23R arrivals:

TWYs D and F are not available as exits.

2. ARRIVAL

2.4. OTHER INFORMATION

2.4.1. GENERAL

When landing on RWY 23R, the apex lies 2300'/700m into the TDZ. Should the ACFT still be flared beyond this point, the RWY surface will be falling away at a significant rate, with the risk of a late touchdown.

2.4.2. LOW POWER/LOW DRAG PROCEDURES

ACFT should descend at a rate of at least 500' per minute, ATC will advise an estimate of track distance to touchdown when clearance to descend below the transition altitude is given. Further distance information will be given between descent clearance and the instruction to turn onto the intercept heading to the ILS localizer.

Due to high ground East of the APT, descent below 3000' will be in accordance with chart Manchester 10-1R.

Recommended speeds:

210 KT-240 KT intermediate approach;

160 KT-180 KT at a range of 12NM from touchdown;

160 KT from 8NM to 4NM from touchdown.

ATC may request specific speeds for accurate spacing and pilots are requested to comply with any speed adjustments as promptly as feasible within operational constraints. If a speed change for ACFT performance reasons is necessary, advise ATC.

3. DEPARTURE

3.1. START-UP, PUSH-BACK & TAXI PROCEDURES

Pilots are required to inform MANCHESTER Delivery when ready to start.

Start-up and push-back clearance is given by MANCHESTER Ground.

Start-up approval does not imply approval to push-back.

When requesting start-up or push-back, pilots should give the full call sign, type and stand number.

ACFT must be ready in all respects to start before calling on the appropriate frequency. Pilots should only request push-back when they are actually ready to do so.

When requesting push-back clearance, pilots are to inform ATC if headset communication with ground crew is not established.

Push-back clearance must not be requested until ground crew has confirmed to flight deck, that ACFT is closed up and tug is manned and fully ready to move.

Pilots are advised that delays in excess of 10 min can be expected at the holding point during busy morning and evening periods. Sufficient time should be allowed for start, push-back and taxi to take account of such delay especially if to comply with a Calculated Take-off Time (CTOT).

ACFT will not be permitted to reverse off pier-served stands under own power.

ACFT requesting push-back must be in direct communication with the tug crew, via headset person. ACFT must inform ATC if they have no direct communication with a headset person.

3. DEPARTURE

Flights subject to en-route ATC delays may request, or may be required to push off stand and reposition at a remote location awaiting CTOT. Airlines must co-ordinate push and park requests via Handling Agent, who must liaise with Airfield Control. Requests to push and park are to be made to Delivery. Clearance for push and park manoeuvre will be given on the GND frequency to the tug crew and not to the flight crew. Flight crew should monitor MANCHESTER Ground frequency and note instructions given. Remote locations for push and park are limited and subject to the conditions stated in the Manchester Airport Aerodrome Manual. At remote location flight crew must monitor Delivery frequency. ACFT may taxi away from a remote parking location with CAUTION and using MIM power.

3.2. NOISE ABATEMENT PROCEDURES

Link Alpha should be used for all jet ACFT and all large propeller-driven ACFT departing from RWY 05L.

Between 0600-2330LT any ACFT may depart from links AG, AF and B subject to operational requirements by ATC/pilots.

Between 2330-0600LT all jet ACFT and large propeller-driven ACFT shall depart from the most westerly link available.

After take-off operate every jet ACFT so that it is at or above 1260' at the point nearest to the noise monitoring terminal for the relevant departure.

ACFT are to be operated in the quietest possible manner, ACFT exceeding the following noise levels will be subject to an initial penalty of 750 GBP, plus an additional 150 GBP for each decibel thereafter:

Period (LT)	MAX Level dB(A)
0600-0700	82
0700-2300	90
2300-2330	82
2330-0600	81

Details of noise monitoring locations and performance are obtainable from:

Environment Department

(Tel.: + 44 161 489 3504, email: environment@manairport.co.uk).

Jet ACFT maintain a minimum climb gradient of at least 500' per minute at power settings to ensure progressively decreasing noise levels at points on the ground under the flight path beyond the monitoring terminal.

3. DEPARTURE

The noise preferential routes and procedures depicted on chart 10-4 and on Manchester SID charts are to be flown by all departing ACFT until the level defined stated below is reached:

Via	Termination preferential route
- LISTO from RWYs 05L/R, 23R/L	.5000'
- ASMIM, DESIG or MONTY from RWYs 05L/R	.4000'
- KUXEM, LIVSU or MONTY from RWYs 23R/L	.3000'
- POL, SONEX from RWYs 05L/R, 23R/L	.4000'
- SANBA from RWYs 23R/L	.5000'

Exempted are:

- ACFT of 5700kg MTWA or less;
- Those ACFT instructed by ATC to make early turns in order to expedite traffic flow, such instructions may be issued between 0700-2300LT, to propeller ACFT of 23000kg MTWA or less and the following jet ACFT:
BAe 146 (Avro RJ series), Canadair Regional Jet, Embraer EMB-135/145;
- And unless otherwise instructed by ATC or deviations are required in the interests of safety.

The use of these routes is supplementary to noise abatement take-off techniques. After take-off, pilots should ensure that they are at a minimum altitude of 760' before commencing any turn.

Non-standard departure instructions will not normally be issued between 2300-0700LT.

3.3. RWY OPERATIONS

3.3.1. MINIMUM RWY OCCUPANCY TIME

Whenever possible, cockpit checks should be completed prior to line-up, and any checks requiring completion whilst on the RWY should be kept to the minimum required. Pilots should ensure that they are able to commence the take-off roll immediately after take-off clearance is issued.

3.4. OTHER INFORMATION

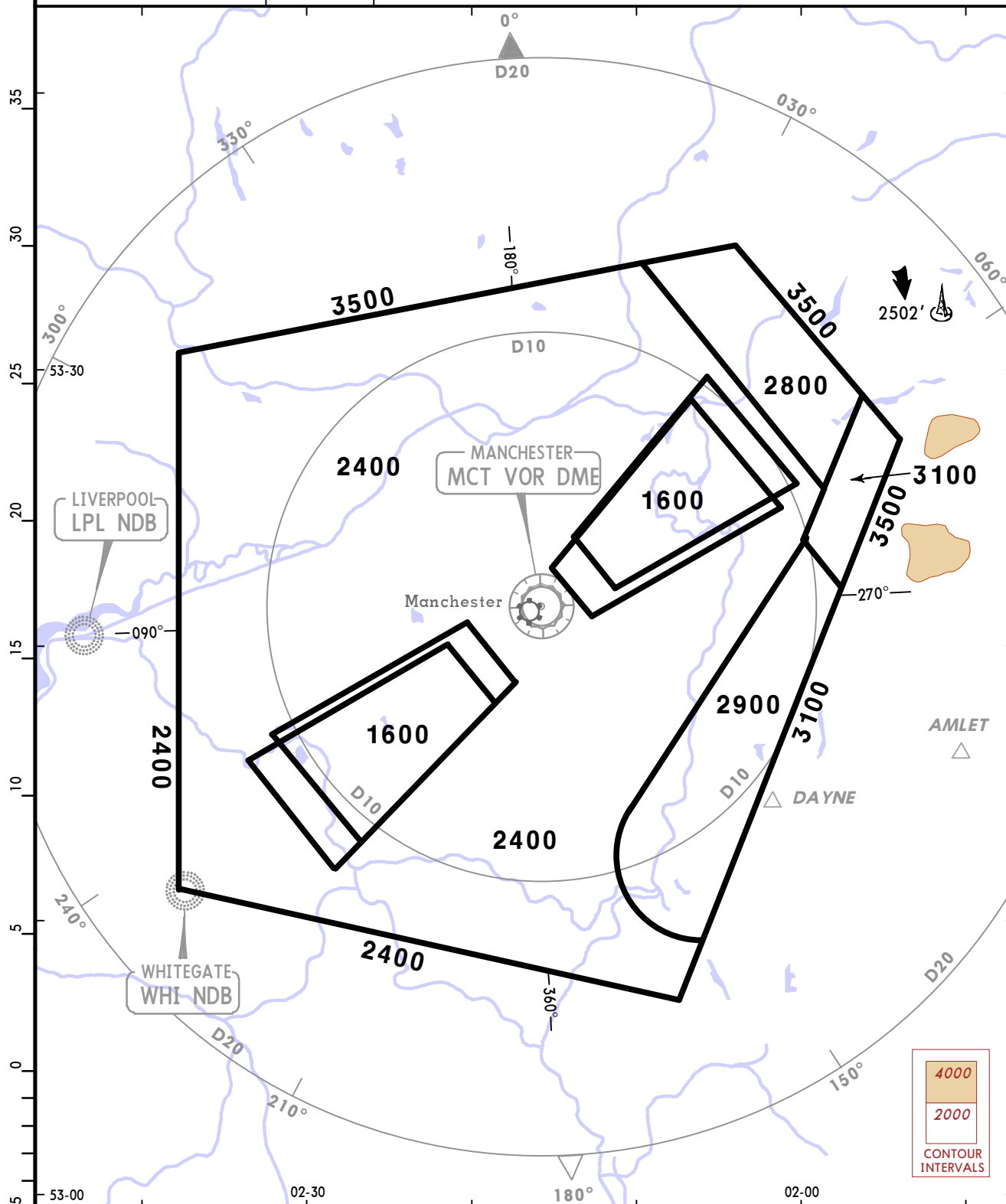
When lined up for take-off from RWY 05L/23R, the full length of the RWY surface may not be visible from the flight deck.

MANCHESTER Radar (APP)
118.57Apt Elev
257'

Alt Set: hPa

Trans level: By ATC

Trans alt: 5000'

**OUTSIDE THE DESIGNATED RADAR MINIMUM ALTITUDE AREA**

The minimum altitude to be allocated by the radar controller will be either the Minimum Sector Altitude or 1000' above any fixed obstacles:

- within 5 NM ① of the aircraft and
- within the sector 15 NM ② ahead of and within 20° either side of the aircraft's track.

3 NM ① or 10 NM ② when the aircraft is within 15 NM of the radar antennae.

PROCEDURE**LOSS OF COMMUNICATION PROCEDURE****INITIAL APPROACH**

Continue visually or by means of an appropriate approved final approach aid. If not possible proceed to DAYNE holding via AMLET or ROSUN holding via BURNI at FL60 or last assigned level if higher, as appropriate to the final approach chart.

INTERMEDIATE AND FINAL APPROACH

Continue visually or by means of an appropriate final approach aid. If not possible follow the Missed Approach Procedure to DAYNE holding via AMLET or ROSUN holding via BURNI, as appropriate to the final approach chart.

Alt Set: hPa
Trans level: By ATC Trans alt: 5000'
Aircraft joining controlled airspace from NORTHEAST
will route via SETEL.

TO BE USED WHEN MCT UNSERVICEABLE

WARNING

Do not proceed beyond DALEY without ATC clearance.

N54 32.9 W001 51.3

TILNI
D49.1 → 192°
DALEY 4D
19.7 ←

GASKO
N54 13.5 W001 57.4
← 237°
D29.4
R012°

BEGAM
N54 09.4 W002 07.3
→ 234°
14

SLP SETEL
N54 00.8 W002 26.2
173° → 21

MAA N57
140

LAKEY
N54 14.3 W002 58.9
D85.2
149° →
DALEY 2A
29.2

FL140
FL70

Pole Hill
D(H) 112.1 POL
N53 44.6 W002 06.2

DALEY
N53 40.1 W002 21.0
MAX 230 KT

D44.3 / 49
11.7
D44.3 R329°
TNT 115.7

SLP TNT D56

NOT TO SCALE

SPEED RESTRICTION

Pass SLP or 3 Min before reaching facility at 250 KT or when at FL140 or below.

LP Speed Limit Point

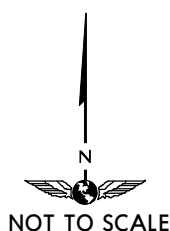
**DESCENT PLANNING/
ATC REQUIREMENTS**

determining top of descent pilots should plan for possible

SLP Speed Limit Point

**ACTUAL DESCENT CLEARANCE
WILL BE AS DIRECTED BY ATC**

Direct distance from DALEY to:
Manchester Apt 19 NM

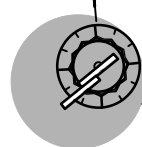
D-ATIS
128.175 113.55Apt Elev
257'Alt Set: hPa
Trans level: By ATC Trans alt: 5000'DAYNE 2A [DAYN2A]
DAYNE 1B [DAYN1B]
ARRIVALSMANCHESTER
D (H) 113.55 MCT
N53 21.4 W002 15.7

DESCENT PLANNING/ATC REQUIREMENTS

When determining top of descent point, pilots should plan for possible clearance as follows:

DAYNE 2A: FL200 by 25 NM before TNT (N-57, Q-4),
FL200 by ELVOS ((U)T-420),**DAYNE 1B:** FL200 by D25 TNT,
and for possible clearance to lowest holding level
(FL70) by DAYNE.

Pilots unable to comply must notify ATC as soon as possible.

**ACTUAL DESCENT CLEARANCE WILL BE AS
DIRECTED BY ATC****DAYNE**
N53 14.3 W002 01.8**AMLET**
N53 16.1 W001 50.3

FL70

12.1
DAYNE
2A, 1BSLP
D5 TNTTRENT
D (H) 115.7 TNT
N53 03.2 W001 40.2

SPEED RESTRICTION

Cross SLP or 3 Min before
holding facility at 250 KT or
less when at FL140 or below.

■ SLP Speed Limit Point

WARNING

Do not proceed beyond DAYNE
without ATC clearance.

① ALTERNATE HOLDING

To be used when
MCT VOR or DME u/s.TRENT
D (H) 115.7 TNT
N53 03.2 W001 40.2GROUND PROXIMITY WARNING
SYSTEM (GPWS) NUISANCE WARNINGSTo minimize occurrences, aircraft enroute
DAYNE holding to RWYs 23L/R, MAX
210 KT between TNT R-300 and R-350
unless otherwise authorized by ATC.

STAR

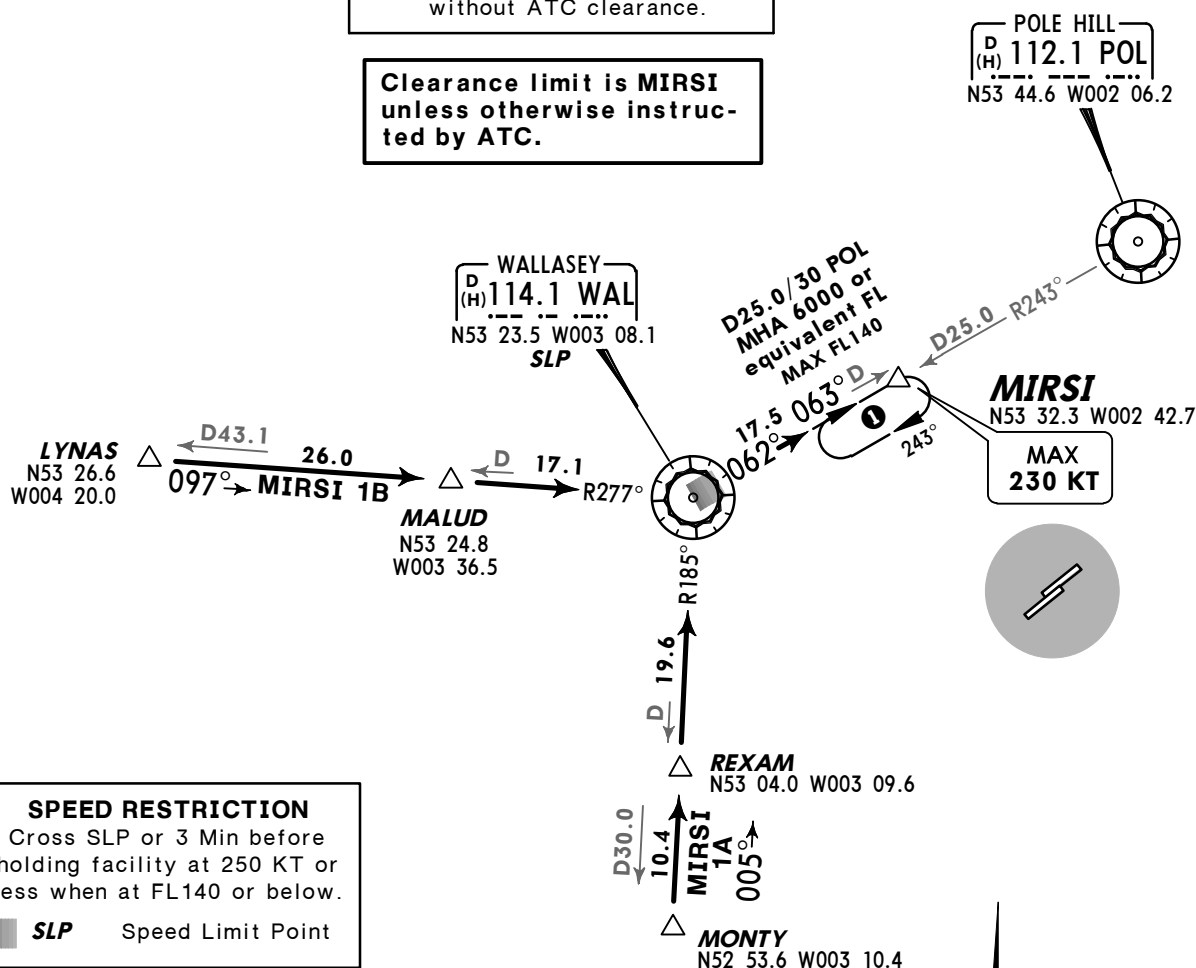
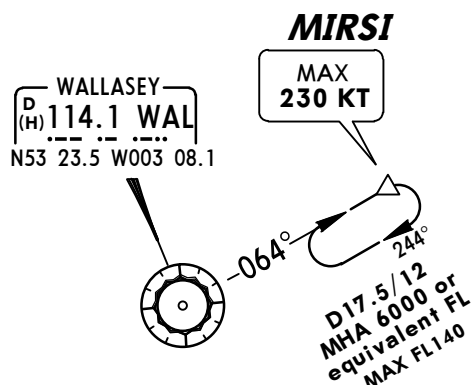
ROUTING

DAYNE 2A

At TNT, intercept TNT R-312 to DAYNE.

DAYNE 1B

At LESTA, intercept TNT R-132 inbound to TNT, TNT R-312 to DAYNE.

D-ATIS
128.175 113.55Apt Elev
257'Alt Set: hPa
Trans level: By ATC Trans alt: 5000'**MIRSI 1A [MIRS1A]
MIRSI 1B [MIRS1B]
ARRIVALS****WARNING**Do not proceed beyond MIRSI
without ATC clearance.Clearance limit is **MIRSI**
unless otherwise instructed
by ATC.Direct distance
from MIRSI to:
Manchester Apt 19NM**1 ALTERNATE HOLDING**To be used when
POL VOR or DME u/s.

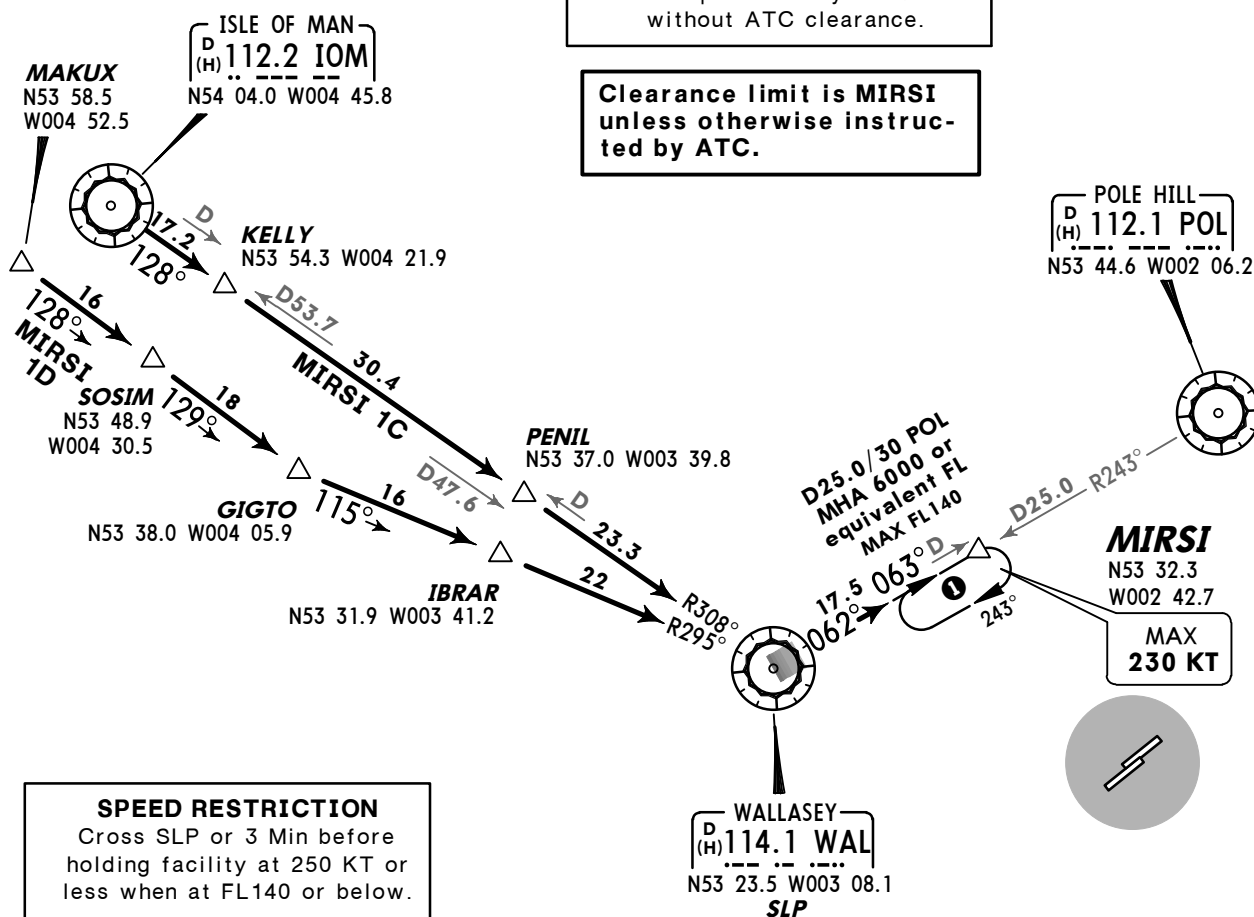
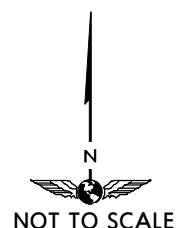
NOT TO SCALE

STAR**ROUTING**

MIRSI 1A	At MONTY intercept WAL R-185 inbound via REXAM to WAL, turn RIGHT, WAL R-062 to MIRSI.
MIRSI 1B	At LYNAS intercept WAL R-277 inbound via MALUD to WAL, turn LEFT, WAL R-062 to MIRSI.

D-ATIS
128.175 113.55Apt Elev
257'Alt Set: hPa
Trans level: By ATC Trans alt: 5000'MIRSI 1C [MIRS1C]
MIRSI 1D [MIRS1D]
ARRIVALS

WARNING

Do not proceed beyond MIRSI
without ATC clearance.Clearance limit is MIRSI
unless otherwise instructed by ATC.Direct distance
from MIRSI to:
Manchester Apt 19NM

STAR

ROUTING

MIRSI 1C

Intercept WAL R-308 inbound via KELLY and PENIL to WAL, turn LEFT, WAL
R-062 to MIRSI.

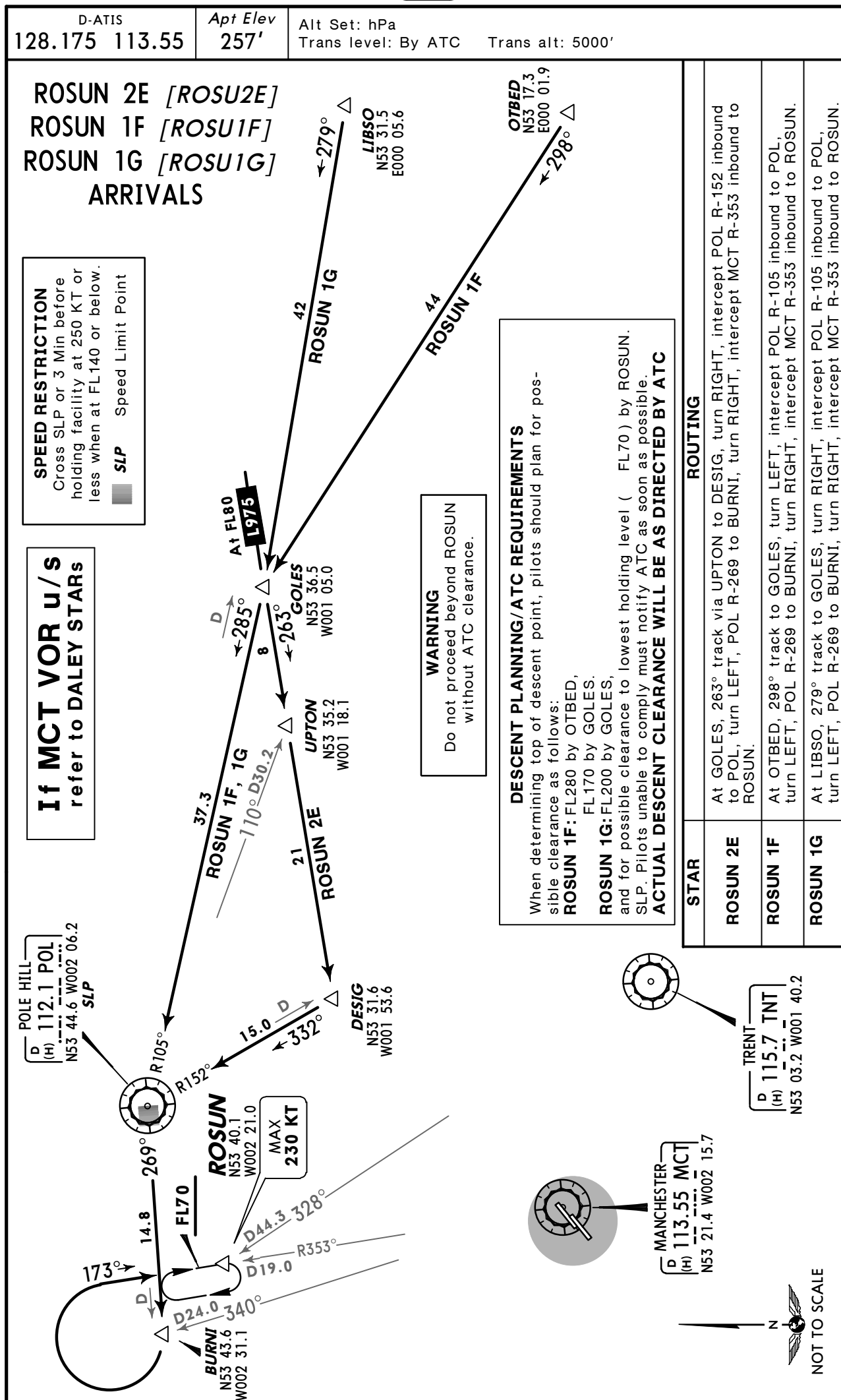
MIRSI 1D

At MAKUX via SOSIM to GIGTO, then via IBRAR to WAL, turn LEFT, WAL
R-062 to MIRSI.

Alt Set: hPa
Trans level: By ATC Trans alt: 5000'
Aircraft joining controlled airspace from NORTHEAST
will route via SETEL.

**If MCT VOR u/s
refer to DALEY STARS**

© JEPPESEN, 2003, 2014. ALL RIGHTS RESERVED.



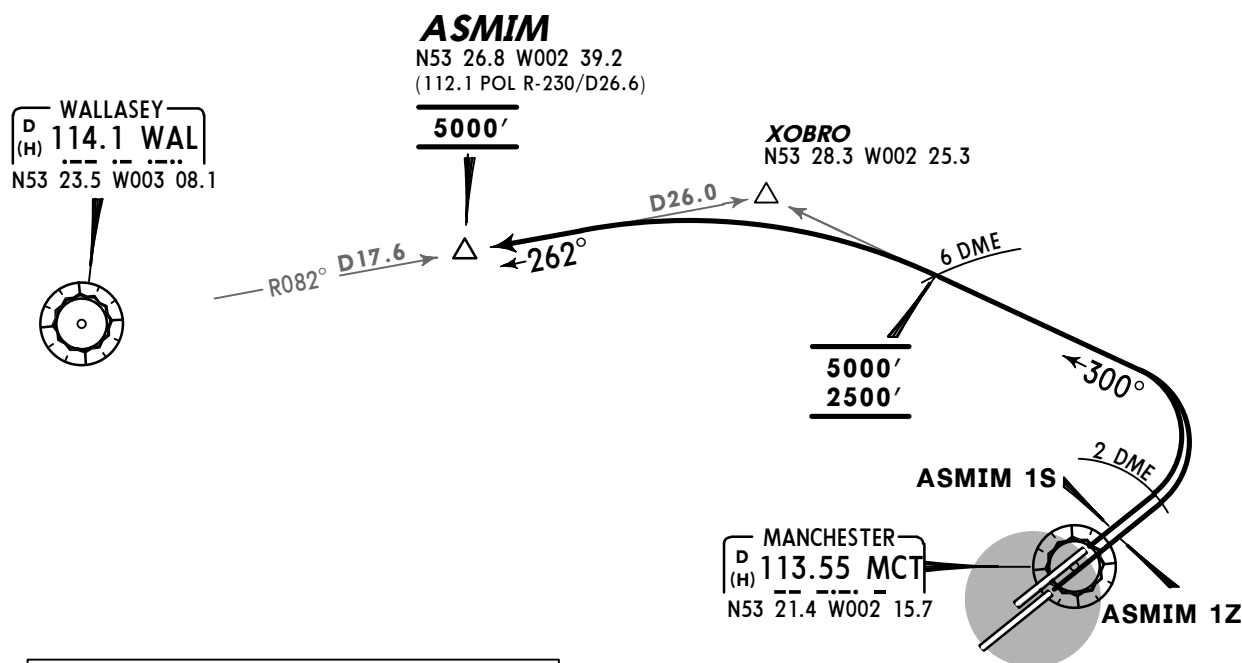
SCOTTISH
Control
128.050Apt Elev
257'

- Trans level: By ATC Trans alt: 5000'
1. When instructed contact SCOTTISH Control after take-off, report C/S, SID designator, current altitude and initial cleared altitude.
 2. SIDs include noise preferential routes (refer to 10-4).
 3. EXPECT first CPDLC Data Link Authority to be airway L-10 EGPX, airway L-70 EISN.
 4. Cruising levels will be allocated enroute by SCOTTISH Control.
 5. Do not climb above SID level until cleared by ATC.
 6. Rwy 05L: EXPECT close-in obstacles.

**ASMIM 1S [ASMI1S]
ASMIM 1Z [ASMI1Z]
RWYS 05L/R DEPARTURES
~~SPEED~~ MAX 250 KT BELOW FL100
UNLESS OTHERWISE AUTHORIZED**

WARNING: Do not climb above
5000' until instructed by ATC.

WARNING
No turns below 760'



WARNING RWY 05L: In the event of a missed approach on runway 05R ATC may instruct aircraft which have departed from runway 05L to make a LEFT turn in order to establish separation.

These SIDs require minimum climb gradients of
5.24% until MCT 2 DME, then
4.0% up to 2500', then
3.55% to ASMIM for ATC or airspace purposes.

Gnd speed-KT	75	100	150	200	250	300
3.55% V/V (fpm)	270	360	539	719	899	1079
4.0% V/V (fpm)	304	405	608	810	1013	1215
5.24% V/V (fpm)	398	531	796	1061	1327	1592

AVERAGE TRACK MILEAGE
ASMIM 1S: 20 NM to ASMIM
ASMIM 1Z: 21 NM to ASMIM

SID	RWY	ROUTING/ALTITUDE
ASMIM 1S	05L	Climb straight ahead, at MCT 2 DME turn LEFT, 300° track towards XOBRO, cross MCT 6 DME at or above 2500' (MAX 5000'), intercept WAL R-082 inbound, to ASMIM, cross at 5000'.
ASMIM 1Z	05R	

SCOTTISH
Control
136.575Apt Elev
257'

- Trans level: By ATC Trans alt: 5000'
1. When instructed contact SCOTTISH Control after take-off, report C/S, SID designator, current altitude and initial cleared altitude.
 2. SIDs include noise preferential routes (refer to 10-4).
 3. EXPECT first CPDLC Data Link Authority to be EGTT.
 4. Cruising levels will be allocated enroute by SCOTTISH Control.
 5. Rwy 05L: EXPECT close-in obstacles.
 6. Do not climb above SID level until cleared by ATC.

DESIG 1S [DES11S]
DESIG 1Z [DES11Z]
RWYS 05L/R DEPARTURES
~~SPEED~~ MAX 250 KT BELOW FL100
UNLESS OTHERWISE AUTHORIZED

WARNING
No turns below **760'**

WARNING: Do not climb above
5000' until instructed by ATC.

WARNING RWY 05L: In the event of
a missed approach on runway 05R ATC
may instruct aircraft which have depar-
ted from runway 05L to make a LEFT
turn in order to establish separation.

WALLASEY
D (H) 114.1 WAL
N53 23.5 W003 08.1

POLE HILL
D (H) 112.1 POL
N53 44.6 W002 06.2

D12 MCT
5000'
4000'

DESIG
N53 31.6 W001 53.6
5000'

152° D15
D45.3

D14 MCT
N53 30.2 W001 57.5

At or above **760'**
but not before **DER**

DESIG 1S

MANCHESTER
D (H) 113.55 MCT
N53 21.4 W002 15.7

DESIG 1Z



These SIDs require a minimum climb gradient
of
5.7% up to 4000' for ATC or airspace purposes.

Gnd speed-KT	75	100	150	200	250	300
5.7% V/V (fpm)	433	577	866	1154	1443	1732

AVERAGE TRACK MILEAGE
DESIG 1S: 17 NM to DESIG
DESIG 1Z: 16 NM to DESIG

SID	RWY	ROUTING/ALTITUDE
DESIG 1S	05L	Climb straight ahead, at or above 760', but not before DER intercept MCT R-053, cross D12 MCT at or above 4000' (MAX 5000'), at D14 MCT turn RIGHT, intercept WAL R-082, to DESIG at 5000'.
DESIG 1Z	05R	Climb straight ahead on MCT R-053, cross D12 MCT at or above 4000' (MAX 5000'), at D14 MCT turn RIGHT, intercept WAL R-082, to DESIG at 5000'.

SCOTTISH
Control
128.050Apt Elev
257'

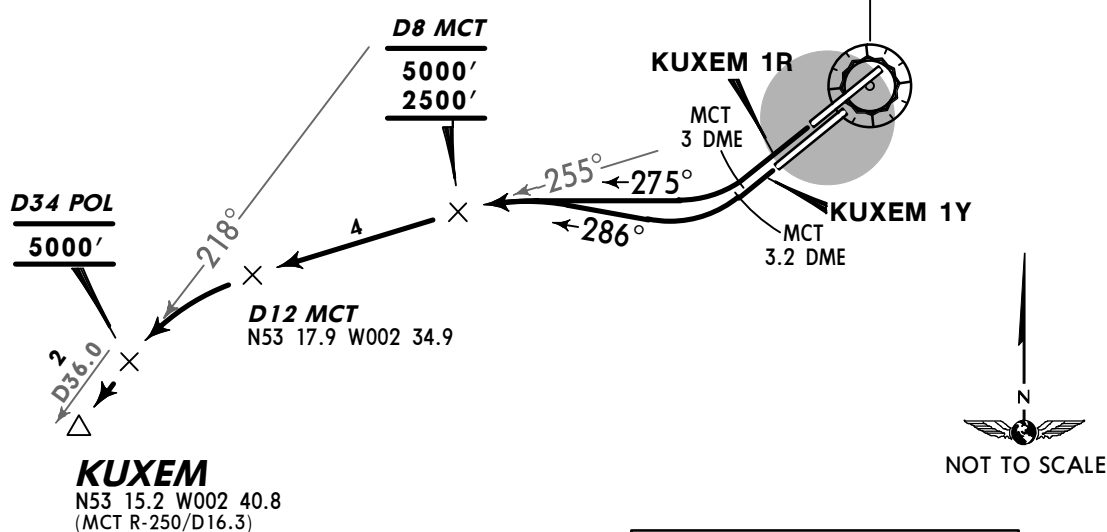
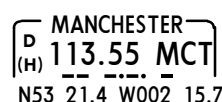
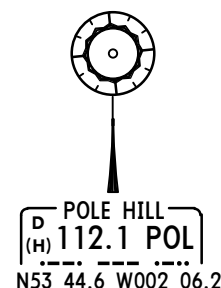
- Trans level: By ATC Trans alt: 5000'
1. When instructed contact SCOTTISH Control after take-off, report C/S, SID designator, current altitude and initial cleared altitude.
 2. SIDs include noise preferential routes (refer to 10-4).
 3. EXPECT first CPDLC Data Link Authority to be EGTT.
 4. Cruising levels will be allocated enroute by SCOTTISH Control (at or below FL190) or LONDON Control (above FL190).
 5. Rwy 23R: EXPECT close-in obstacles.
 6. Do not climb above SID upper limit (5000') until cleared by ATC.
- Actual cleared levels will be allocated by ATC.

**KUXEM 1R [KUXE1R]
KUXEM 1Y [KUXE1Y]
RWYS 23R/L DEPARTURES
~~SPEED~~ MAX 250 KT BELOW FL100
UNLESS OTHERWISE AUTHORIZED**

WARNING
No turns below 760'

WARNING: Do not climb above
5000' until instructed by ATC.

WARNING RWY 23L: In the event of
a missed approach on runway 23R ATC
may instruct aircraft which have depar-
ted from runway 23L to make a LEFT
turn in order to establish separation.



These SIDs require minimum climb gradients
of

KUXEM 1R: 5.55% until MCT 3 DME, then
5.21% up to 2500', then
4.51% up to 5000' for ATC or
airspace purposes.

KUXEM 1Y: 12.33% until MCT 3.2 DME, then
5.21% up to 2500', then
4.51% up to 5000' for ATC or
airspace purposes.

AVERAGE TRACK MILEAGE
KUXEM 1R: 15 NM to KUXEM
KUXEM 1Y: 16 NM to KUXEM

Gnd speed-KT	75	100	150	200	250	300
4.51% V/V (fpm)	343	457	685	913	1142	1370
5.21% V/V (fpm)	396	528	791	1055	1319	1583
5.55% V/V (fpm)	422	562	843	1124	1405	1686
12.33% V/V (fpm)	936	1249	1873	2497	3122	3746

SID	RWY	ROUTING/ALTITUDE
KUXEM 1R ①	23R	Climb straight ahead, at MCT 3 DME turn RIGHT, 275° track, intercept MCT R-255, cross D8 MCT at or above 2500' (MAX 5000'), at D12 MCT turn LEFT, intercept POL R-218, cross D34 POL at 5000' to KUXEM.
KUXEM 1Y ①	23L	Climb straight ahead, at MCT 3.2 DME turn RIGHT, 286° track, intercept MCT R-255, cross D8 MCT at or above 2500' (MAX 5000'), at D12 MCT turn LEFT, intercept POL R-218, cross D34 POL at 5000' to KUXEM.
① Airway UN-862: Aircraft requesting a cruising level of FL270 or above can EXPECT a clearance from LONDON Control to cross AMRAL at or above FL270.		

SCOTTISH
Control
134.425Apt Elev
257'

- Trans level: By ATC Trans alt: 5000'
1. When instructed contact SCOTTISH Control after take-off, report C/S, SID designator, current altitude and initial cleared altitude.
 2. SIDs include noise preferential routes (refer to 10-4).
 3. EXPECT first CPDLC Data Link Authority to be EGTT.
 4. Cruising levels will be allocated enroute by SCOTTISH Control (at or below FL190) or LONDON Control (above FL190).
 5. In order to alleviate airspace congestion and improve ATC flexibility, pilots of jet aircraft allowed to fly the LISTO SID may be offered SANBA 1R/1Y SID at a late stage prior to departure. Pilots unable to accept a SANBA SID when offered must inform ATC.
 6. Rwy 23R: EXPECT close-in obstacles.

LISTO 2R [LIST2R], LISTO 2Y [LIST2Y]

RWYS 23R/L DEPARTURES

RESTRICTED USE ①

VIA AIRWAYS AND FOR LEAVING CONTROLLED AIRSPACE VIA TNT

~~SPEED~~ MAX 250 KT BELOW FL100**UNLESS OTHERWISE AUTHORIZED**

- ① Available to non-jet acft and the following jet acft: acft up to 35000 KG MTOW, BAe 146 (Avro RJ series); Embraer E135, E145; Bombardier CRJ1/2/7/9; BD-700 Global Express; Gulfstream 5. **Pilots must ensure adherence to clearance as issued by ATC.**

AVERAGE TRACK MILEAGE
LISTO 2R: 15 NM to LISTO
LISTO 2Y: 14 NM to LISTO

SPEED PROFILE

Speed profile applies to all acft following these SIDs unless cancelled by ATC.
Jet traffic MTOW above 35000 KG:
250 KT until FL100.
280-290 KT between FL100 & FL260.
Jet traffic MTOW below 35000 KG & all non-jet traffic:
210-250 KT until FL260.
If unable to comply, inform ATC before obtaining departure clearance.

WARNING: Do not climb above 5000' until instructed by ATC.

- ② Aircraft requesting cruising levels at or below FL70 will be routed via PEDIG.

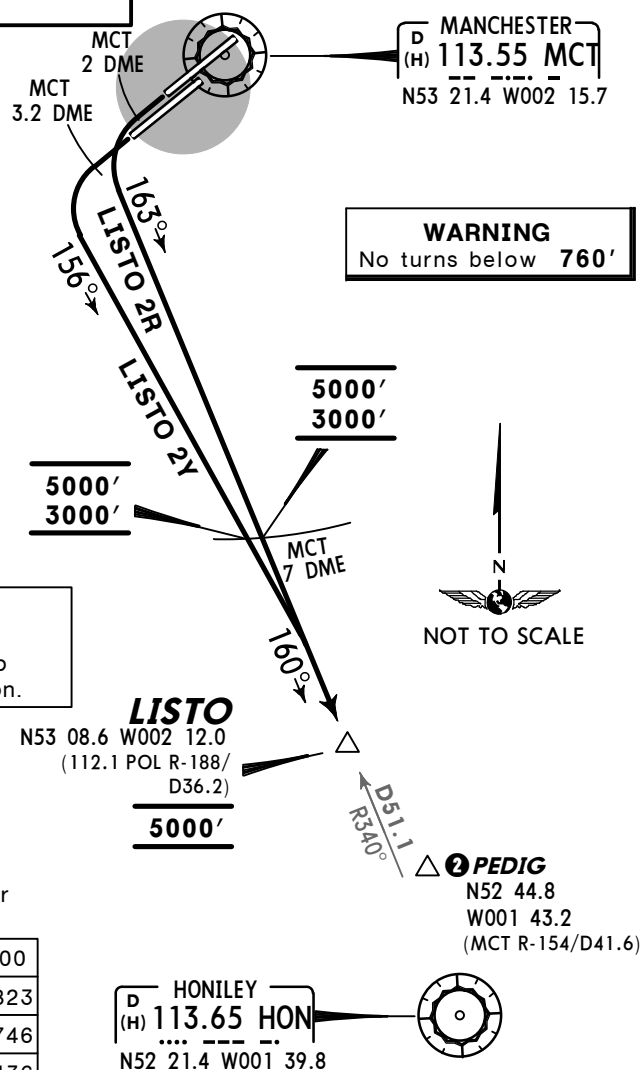
WARNING RWY 23L: In the event of a missed approach on runway 23R ATC may instruct aircraft which have departed from runway 23L to make a LEFT turn in order to establish separation.

These SIDs require minimum climb gradients of

LISTO 2R: 14.6% until MCT 2 DME, then 6% up to 5000' for ATC or airspace purposes.

LISTO 2Y: 12.33% until MCT 3.2 DME for ATC or airspace purposes.

Gnd speed-KT	75	100	150	200	250	300
6.0% V/V (fpm)	456	608	911	1215	1519	1823
12.33% V/V (fpm)	936	1249	1873	2497	3122	3746
14.6% V/V (fpm)	1109	1479	2218	2957	3696	4436



SID	RWY	ROUTING/ALTITUDE
LISTO 2R	23R	Climb straight ahead, at MCT 2 DME turn LEFT, 163° track, cross MCT 7 DME at or above 3000' (MAX 5000'), intercept HON R-340 inbound to LISTO at 5000'.
LISTO 2Y	23L	Climb straight ahead, at MCT 3.2 DME turn LEFT, 156° track, cross MCT 7 DME at or above 3000' (MAX 5000'), intercept HON R-340 inbound to LISTO at 5000'.

SCOTTISH
Control
134.425Apt Elev
257'

- Trans level: By ATC Trans alt: 5000'
1. When instructed contact SCOTTISH Control after take-off, report C/S, SID designator, current altitude and initial cleared altitude.
 2. SIDs include noise preferential routes (refer to 10-4).
 3. EXPECT first CPDLC Data Link Authority to be EGTT.
 4. Cruising levels will be allocated enroute by SCOTTISH Control (at or below FL190) or LONDON Control (above FL190).
 5. Rwy 05L: EXPECT close-in obstacles.

LISTO 2S [LIST2S], LISTO 2Z [LIST2Z]
RWYS 05L/R DEPARTURES
VIA AIRWAYS AND FOR LEAVING CONTROLLED AIRSPACE VIA TNT
~~SPEED~~ MAX 250 KT BELOW FL100
UNLESS OTHERWISE AUTHORIZED

WARNING
No turns below 760'

WARNING: Do not climb above
5000' until instructed by ATC.

1 Aircraft requesting cruising
levels at or below FL70
will be routed via PEDIG.

SPEED PROFILE

Speed profile applies to all acft
following these SIDs unless cancelled
by ATC.

Jet acft above 35000 KG MTOW:

250 KT until FL100,

280-290 KT between FL100 & FL260.

Jet acft below 35000 KG MTOW &
all non-jet acft:

210-250 KT until FL260.

If unable to comply, inform ATC be-
fore obtaining departure clearance.

WARNING RWY 05L: In the event of
a missed approach on runway 05R ATC
may instruct aircraft which have depar-
ted from runway 05L to make a LEFT
turn in order to establish separation.

These SIDs require minimum climb gradients
of

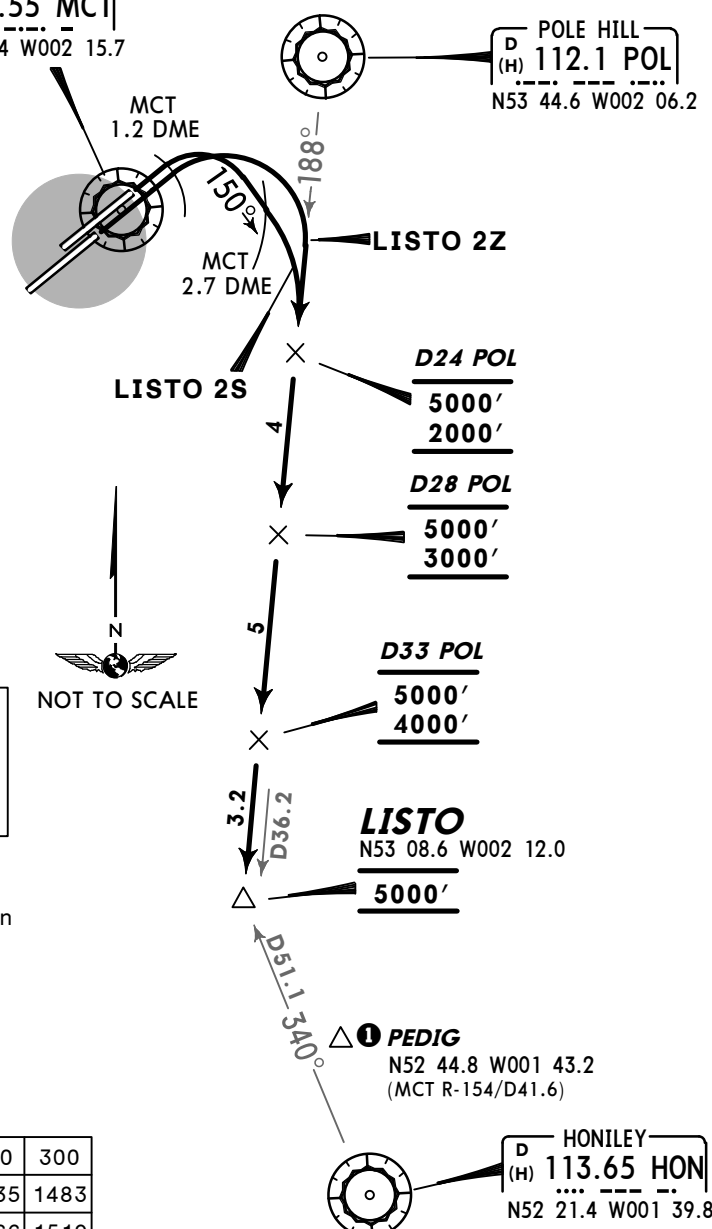
LISTO 2S: 10.86% until MCT 1.2 DME, then
6.86% up to 2000', then
5% up to 5000' for ATC or
airspace purposes.

LISTO 2Z: 4.88% until MCT 1.2 DME, then
6.86% up to 2000', then
5% up to 5000' for ATC or
airspace purposes.

Gnd speed-KT	75	100	150	200	250	300
4.88% V/V (fpm)	371	494	741	988	1235	1483
5.0% V/V (fpm)	380	506	760	1013	1266	1519
6.86% V/V (fpm)	521	695	1042	1389	1737	2084
10.86% V/V (fpm)	825	1100	1650	2200	2749	3299

MANCHESTER
D (H) 113.55 MCT
N53 21.4 W002 15.7

POLE HILL
D (H) 112.1 POL
N53 44.6 W002 06.2



AVERAGE TRACK MILEAGE
18 NM to LISTO

SID	RWY	ROUTING/ALTITUDE
LISTO 2S	05L	Climb straight ahead, at MCT 1.2 DME turn RIGHT, 150° track, at MCT 2.7 DME turn RIGHT, intercept POL R-188, cross D24 POL at or above 2000' (MAX 5000'), D28 POL at or above 3000' (MAX 5000'), D33 POL at or above 4000' (MAX 5000'), to LISTO at 5000'.
LISTO 2Z	05R	Climb straight ahead, at MCT 1.2 DME turn RIGHT, intercept POL R-188, cross D24 POL at or above 2000' (MAX 5000'), D28 POL at or above 3000' (MAX 5000'), D33 POL at or above 4000' (MAX 5000'), to LISTO at 5000'.

SCOTTISH
Control
128.050Apt Elev
257'

- Trans level: By ATC Trans alt: 5000'
1. When instructed contact SCOTTISH Control after take-off, report C/S, SID designator, current altitude and initial cleared altitude.
 2. SIDs include noise preferential routes (refer to 10-4).
 3. EXPECT first CPDLC Data Link Authority to be airway L10 EGPX, airway L70 EISN.
 4. Cruising levels will be allocated enroute by SCOTTISH Control.
 5. Do not climb above SID level until cleared by ATC.
 6. Rwy 23R: EXPECT close-in obstacles.

LIVSU 1R [LIVS1R]
LIVSU 1Y [LIVS1Y]
RWYS 23R/L DEPARTURES
~~SPEED~~ MAX 250 KT BELOW FL100
UNLESS OTHERWISE AUTHORIZED

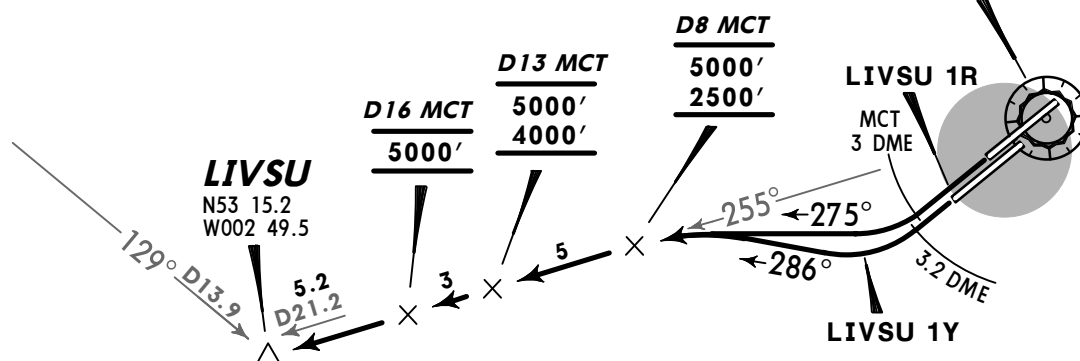
WARNING: Do not climb above
5000' until instructed by ATC.

WARNING
No turns below 760'

WALLASEY
D 114.1 WAL
(H) N53 23.5 W003 08.1



MANCHESTER
D 113.55 MCT
(H) N53 21.4 W002 15.7



These SIDs require minimum climb gradients
of

LIVSU 1R: 5.55% until MCT 3 DME, then
5.21% up to 2500', then
3.43% up to 5000' for ATC or
airspace purposes.

LIVSU 1Y: 12.33% until MCT 3.2 DME, then
5.21% up to 2500', then
3.43% up to 5000' for ATC or
airspace purposes.

Gnd speed-KT	75	100	150	200	250	300
3.43% V/V (fpm)	261	347	521	695	868	1042
5.21% V/V (fpm)	396	528	791	1055	1319	1583
5.55% V/V (fpm)	422	562	843	1124	1405	1686
12.33% V/V (fpm)	936	1249	1873	2497	3122	3746



NOT TO SCALE

WARNING RWY 23L: In the event of
a missed approach on runway 23R ATC
may instruct aircraft which have departed
from runway 23L to make a LEFT
turn in order to establish separation.

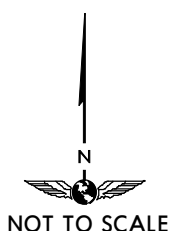
AVERAGE TRACK MILEAGE
LIVSU 1R: 21 NM to LIVSU
LIVSU 1Y: 20 NM to LIVSU

SID	RWY	ROUTING/ALTITUDE
LIVSU 1R	23R	Climb straight ahead, at MCT 3 DME turn RIGHT, 275° track, intercept MCT R-255, cross D8 MCT at or above 2500' (MAX 5000'), D13 MCT at or above 4000' (MAX 5000'), D16 MCT at 5000', to LIVSU.
LIVSU 1Y	23L	Climb straight ahead, at MCT 3.2 DME turn RIGHT, 286° track, intercept MCT R-255, cross D8 MCT at or above 2500' (MAX 5000'), D13 MCT at or above 4000' (MAX 5000'), D16 MCT at 5000', to LIVSU.

SCOTTISH
Control
128.050Apt Elev
257'

- Trans level: By ATC Trans alt: 5000'
1. When instructed contact SCOTTISH Control after take-off, report C/S, SID designator, current altitude and initial cleared altitude.
 2. SIDs include noise preferential routes (refer to 10-4).
 3. EXPECT first CPDLC Data Link Authority to be EGTT.
 4. Cruising levels will be allocated enroute by SCOTTISH Control (at or below FL190) or LONDON Control (above FL190).
 5. Rwy 23R: EXPECT close-in obstacles.
 6. Do not climb above SID upper limit (5000') until cleared by ATC.
- Actual cleared levels will be allocated by ATC.

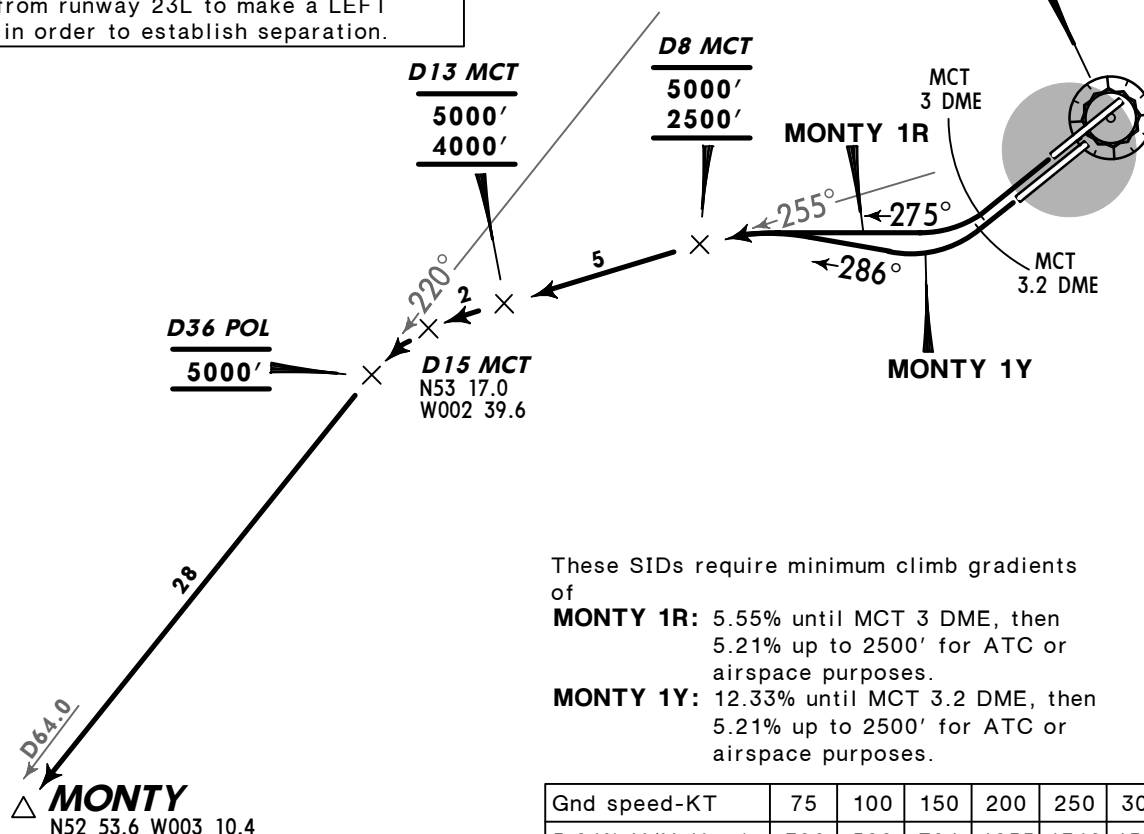
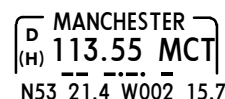
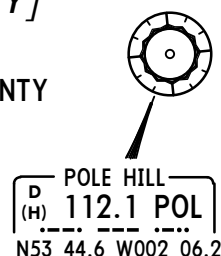
MONTY 1R [MONT1R], MONTY 1Y [MONT1Y]
RWYS 23L/R DEPARTURES
FOR AIRCRAFT LEAVING CONTROLLED AIRSPACE AT MONTY
~~SPEED~~ MAX 250 KT BELOW FL100
UNLESS OTHERWISE AUTHORIZED



WARNING
No turns below **760'**

WARNING: Do not climb above
5000' until instructed by ATC.

WARNING RWY 23L: In the event of a missed approach on runway 23R ATC may instruct aircraft which have departed from runway 23L to make a LEFT turn in order to establish separation.



AVERAGE TRACK MILEAGE
MONTY 1R: 44 NM to MONTY
MONTY 1Y: 45 NM to MONTY

These SIDs require minimum climb gradients of

MONTY 1R: 5.55% until MCT 3 DME, then 5.21% up to 2500' for ATC or airspace purposes.

MONTY 1Y: 12.33% until MCT 3.2 DME, then 5.21% up to 2500' for ATC or airspace purposes.

Gnd speed-KT	75	100	150	200	250	300
5.21% V/V (fpm)	396	528	791	1055	1319	1583
5.55% V/V (fpm)	422	562	843	1124	1405	1686
12.33% V/V (fpm)	936	1249	1873	2497	3122	3746

SID	RWY	ROUTING/ALTITUDE
MONTY 1R	23R	Climb straight ahead, at MCT 3 DME turn RIGHT, 275° track, intercept MCT R-255, cross D8 MCT at or above 2500' (MAX 5000'), D13 MCT at or above 4000' (MAX 5000'), at D15 MCT turn LEFT, intercept POL R-220, cross D36 POL at 5000', to MONTY.
MONTY 1Y	23L	Climb straight ahead, at MCT 3.2 DME turn RIGHT, 286° track, intercept MCT R-255, cross D8 MCT at or above 2500' (MAX 5000'), D13 MCT at or above 4000' (MAX 5000'), at D15 MCT turn LEFT, intercept POL R-220, cross D36 POL at 5000', to MONTY.

SCOTTISH
Control
128.050Apt Elev
257'

- Trans level: By ATC Trans alt: 5000'
1. When instructed contact SCOTTISH Control after take-off, report C/S, SID designator, current altitude and initial cleared altitude.
 2. SIDs include noise preferential routes (refer to 10-4).
 3. EXPECT first CPDLC Data Link Authority to be EGTT.
 4. Cruising levels will be allocated enroute by SCOTTISH Control (at or below FL190) or LONDON Control (above FL190).
 5. Rwy 05L: EXPECT close-in obstacles.
 6. Do not climb above SID upper limit (5000') until cleared by ATC. Actual cleared levels will be allocated by ATC.

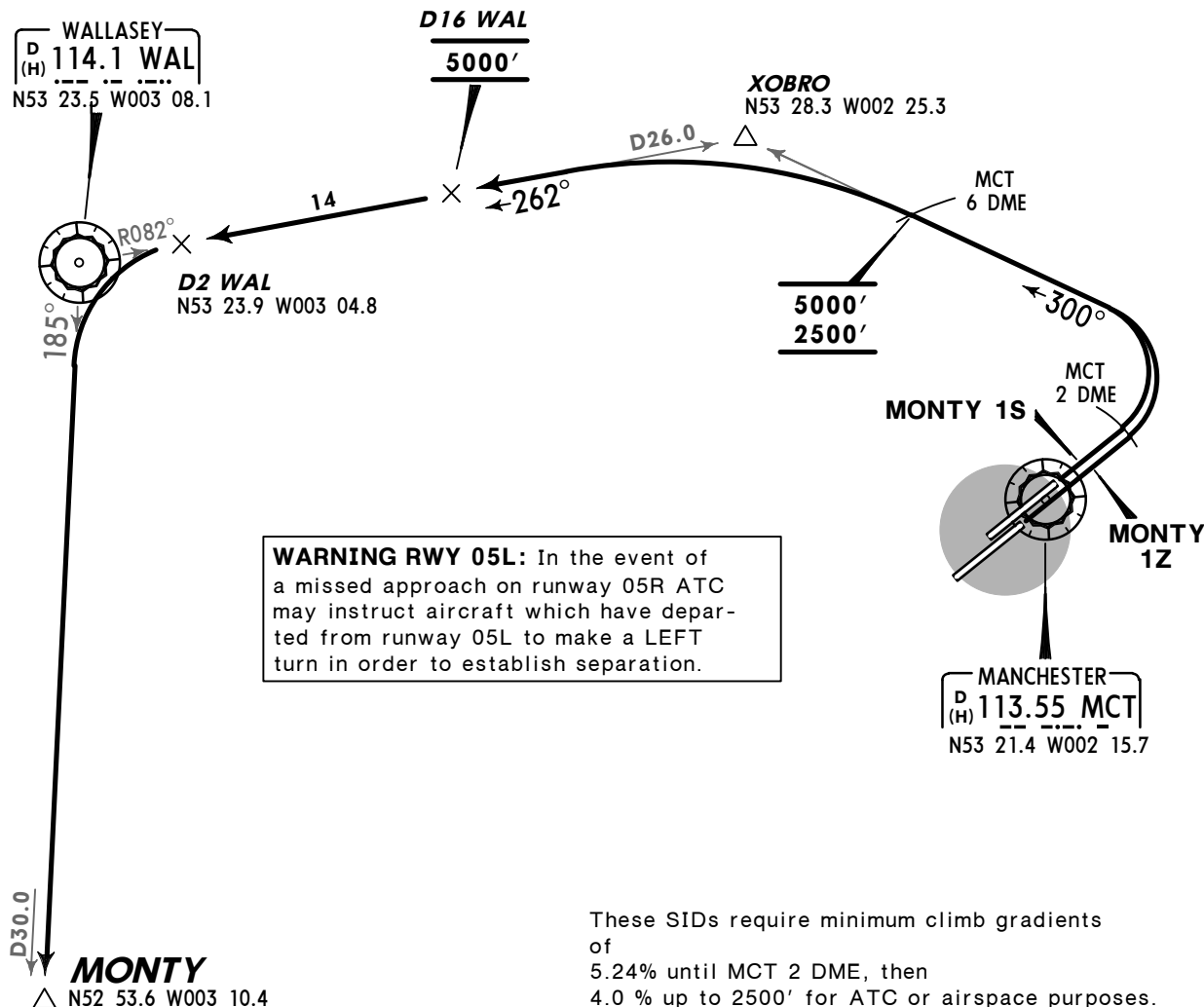
**MONTY 1S [MONT1S]
MONTY 1Z [MONT1Z]
RWYS 05L/R DEPARTURES**

FOR AIRCRAFT LEAVING CONTROLLED AIRSPACE AT MONTY

**~~SPEED~~ MAX 250 KT BELOW FL100
UNLESS OTHERWISE AUTHORIZED**

WARNING
No turns below 760'

WARNING: Do not climb above
5000' until instructed by ATC.



AVERAGE TRACK MILEAGE
MONTY 1S: 67 NM to MONTY
MONTY 1Z: 68 NM to MONTY

These SIDs require minimum climb gradients of
5.24% until MCT 2 DME, then
4.0 % up to 2500' for ATC or airspace purposes.

Gnd speed-KT	75	100	150	200	250	300
4.0% V/V (fpm)	304	405	608	810	1013	1215
5.24% V/V (fpm)	398	531	796	1061	1327	1592

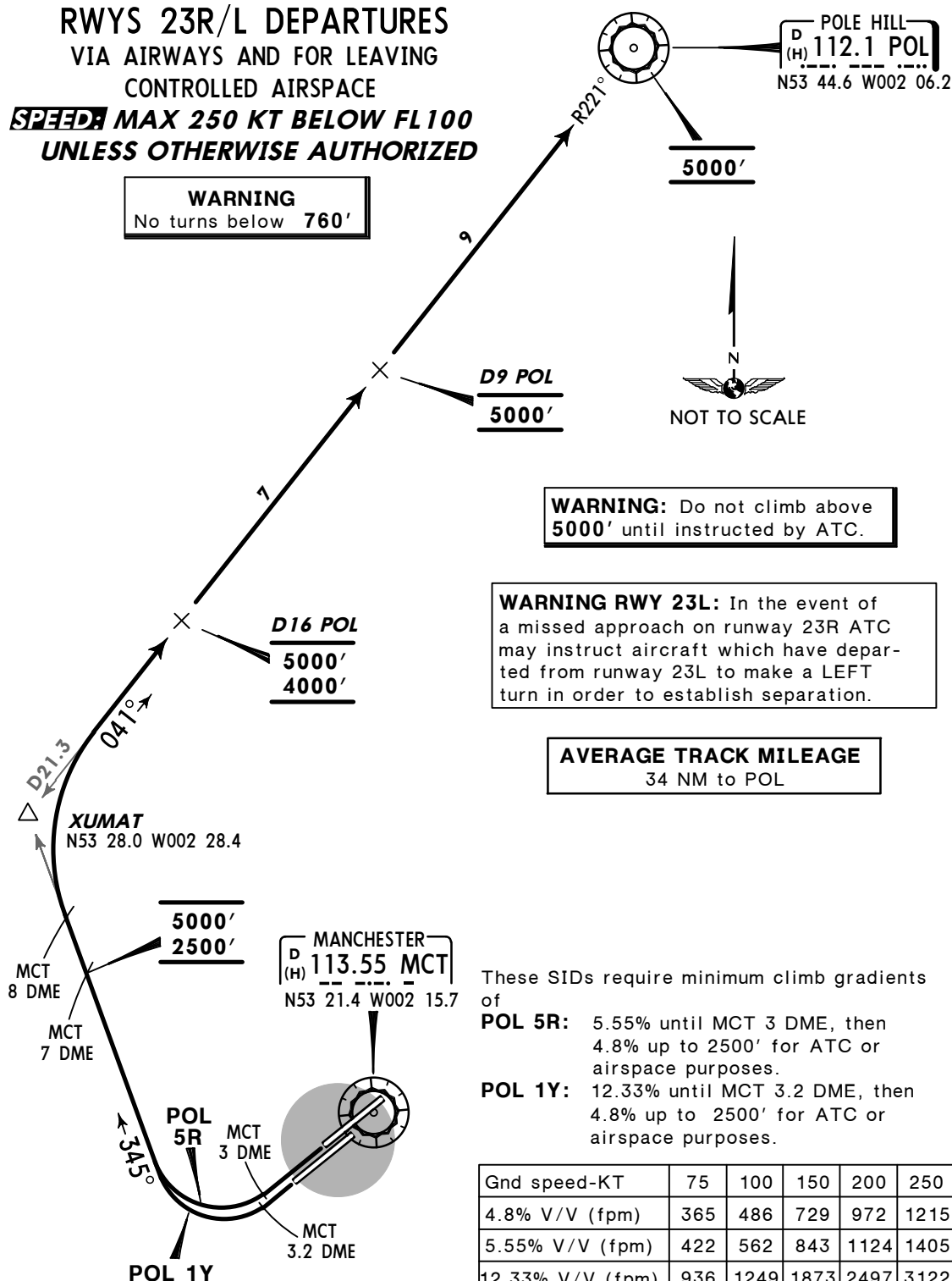
SID	RWY	ROUTING/ALTITUDE
MONTY 1S	05L	Climb straight ahead, at MCT 2 DME turn LEFT, 300° track towards XOBRO, cross MCT 6 DME at or above 2500' (MAX 5000'), intercept WAL R-082 inbound, cross D16 WAL at 5000' to D2 WAL, turn LEFT, intercept WAL R-185 to MONTY.
MONTY 1Z	05R	

SCOTTISH
Control
136.575Apt Elev
257'

- Trans level: By ATC Trans alt: 5000'
1. When instructed contact SCOTTISH Control after take-off, report C/S, SID designator, current altitude and initial cleared altitude.
 2. SIDs include noise preferential routes (refer to 10-4).
 3. EXPECT first CPDLC Data Link Authority to be EGPX.
 4. Cruising levels will be allocated enroute by SCOTTISH Control.
 5. Rwy 23R: EXPECT close-in obstacles.
 6. Do not climb above SID level until cleared by ATC.

POL 5R, POL 1Y
RWYS 23R/L DEPARTURES
VIA AIRWAYS AND FOR LEAVING
CONTROLLED AIRSPACE
~~SPEED~~ MAX 250 KT BELOW FL100
UNLESS OTHERWISE AUTHORIZED

WARNING
No turns below **760'**



These SIDs require minimum climb gradients of

POL 5R: 5.55% until MCT 3 DME, then 4.8% up to 2500' for ATC or airspace purposes.

POL 1Y: 12.33% until MCT 3.2 DME, then 4.8% up to 2500' for ATC or airspace purposes.

Gnd speed-KT	75	100	150	200	250	300
4.8% V/V (fpm)	365	486	729	972	1215	1458
5.55% V/V (fpm)	422	562	843	1124	1405	1686
12.33% V/V (fpm)	936	1249	1873	2497	3122	3746

SID	RWY	ROUTING/ALTITUDE
POL 5R	23R	Climb straight ahead, at MCT 3 DME turn RIGHT, 345° track towards XUMAT, cross MCT 7 DME at or above 2500' (MAX 5000'), at MCT 8 DME turn RIGHT, intercept POL R-221 inbound, cross D16 POL at or above 4000' (MAX 5000'), D9 POL at 5000', to POL at 5000'.
POL 1Y	23L	Climb straight ahead, at MCT 3.2 DME turn RIGHT, 345° track towards XUMAT, cross MCT 7 DME at or above 2500' (MAX 5000'), at MCT 8 DME turn RIGHT, intercept POL R-221 inbound, cross D16 POL at or above 4000' (MAX 5000'), D9 POL at 5000', to POL at 5000'.

SCOTTISH
Control
136.575Apt Elev
257'

- Trans level: By ATC Trans alt: 5000'
1. When instructed contact SCOTTISH Control after take-off, report C/S, SID designator, current altitude and initial cleared altitude.
 2. SIDs include noise preferential routes (refer to 10-4).
 3. EXPECT first CPDLC Data Link Authority to be EGPX.
 4. Cruising levels will be allocated enroute by SCOTTISH Control.
 5. Do not climb above SID level until cleared by ATC.
 6. Rwy 05L: EXPECT close-in obstacles.

POL 4S, POL 1Z
RWYS 05L/R DEPARTURES
VIA AIRWAYS AND FOR LEAVING CONTROLLED AIRSPACE
~~SPEED~~ MAX 250 KT BELOW FL100
UNLESS OTHERWISE AUTHORIZED

WARNING
No turns below **760'**



WARNING: Do not climb above
5000' until instructed by ATC.

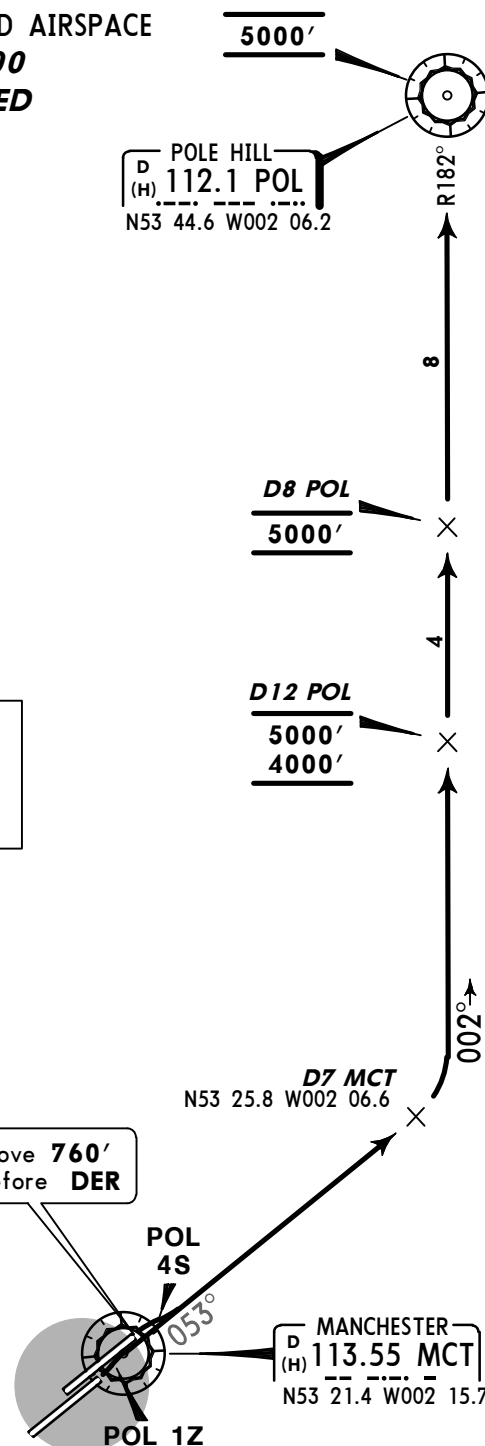
WARNING RWY 05L: In the event of
a missed approach on runway 05R ATC
may instruct aircraft which have departed
from runway 05L to make a LEFT
turn in order to establish separation.

AVERAGE TRACK MILEAGE
POL 4S: 25 NM to POL
POL 1Z: 26 NM to POL

These SIDs require a minimum climb gradient
of
4.27% up to 4000' for ATC or airspace
purposes.

Gnd speed-KT	75	100	150	200	250	300
4.27% V/V (fpm)	324	432	649	865	1081	1297

At or above **760'**
but not before **DER**



SID	RWY	ROUTING/ALTITUDE
POL 4S	05L	Climb straight ahead, at or above 760', but not before DER, intercept MCT R-053, at D7 MCT turn LEFT, intercept POL R-182 inbound, cross D12 POL at or above 4000' (MAX 5000'), D8 POL at 5000', to POL at 5000'.
POL 1Z	05R	Climb straight ahead, intercept MCT R-053, at D7 MCT turn LEFT, intercept POL R-182 inbound, cross D12 POL at or above 4000' (MAX 5000'), D8 POL at 5000', to POL at 5000'.

SCOTTISH
Control
134.425Apt Elev
257'

- Trans level: By ATC Trans alt: 5000'
1. When instructed contact SCOTTISH Control after take-off, report C/S, SID designator, current altitude and initial cleared altitude.
 2. SIDs include noise preferential routes (refer to 10-4).
 3. EXPECT first CPDLC Data Link Authority to be EGTT.
 4. Cruising levels will be allocated enroute by SCOTTISH Control (at or below FL190) or LONDON Control (above FL190).
 5. Rwy 23R: EXPECT close-in obstacles.

SANBA 1R [SANB1R], SANBA 1Y [SANB1Y]
RWYS 23R/L DEPARTURES
JET-AIRCRAFT ONLY
~~SPEED~~ MAX 250 KT BELOW FL100
UNLESS OTHERWISE AUTHORIZED

WARNING: Do not climb above
5000' until instructed by ATC.

WARNING
No turns below **760'**

SPEED PROFILE

Speed profile applies to all acft following these SIDs unless cancelled by ATC.
Jet traffic MTOW above 35000 KG:
250 KT until FL100.
280-290 KT between FL100 & FL260.
Jet traffic MTOW below 35000 KG:
240-250 KT until FL260.
If unable to comply, inform ATC before obtaining departure clearance.

WARNING RWY 23L: In the event of a missed approach on runway 23R ATC may instruct aircraft which have departed from runway 23L to make a LEFT turn in order to establish separation.

AVERAGE TRACK MILEAGE
SANBA 1R: 18 NM to SANBA
SANBA 1Y: 16 NM to SANBA

These SIDs require minimum climb gradients of

SANBA 1R: 5.55% until MCT 3 DME, then 4.6% up to 5000' for ATC or airspace purposes.

SANBA 1Y: 12.33% until MCT 3.2 DME, then 4.9% up to 5000' for ATC or airspace purposes.

Gnd speed-KT	75	100	150	200	250	300
4.6% V/V (fpm)	349	466	699	932	1165	1397
4.9% V/V (fpm)	372	496	744	992	1241	1489
5.55% V/V (fpm)	422	562	843	1124	1405	1686
12.33% V/V (fpm)	936	1249	1873	2497	3122	3746

SID	RWY	ROUTING/ALTITUDE
SANBA 1R	23R	Climb straight ahead, at MCT 3 DME turn RIGHT, 275° track, at MCT 5 DME turn LEFT to TABLY, intercept HON R-335 inbound, cross D58 HON/D10 MCT at or above 3000' (MAX 5000'), to SANBA at 5000'.
SANBA 1Y	23L	Climb straight ahead, at MCT 3.2 DME turn RIGHT, 285° track, at MCT 5 DME turn LEFT to TABLY, intercept HON R-335 inbound, cross D58 HON/D10 MCT at or above 3000' (MAX 5000'), to SANBA at 5000'.

SCOTTISH
Control
136.575Apt Elev
257'

Trans level: By ATC Trans alt: 5000'

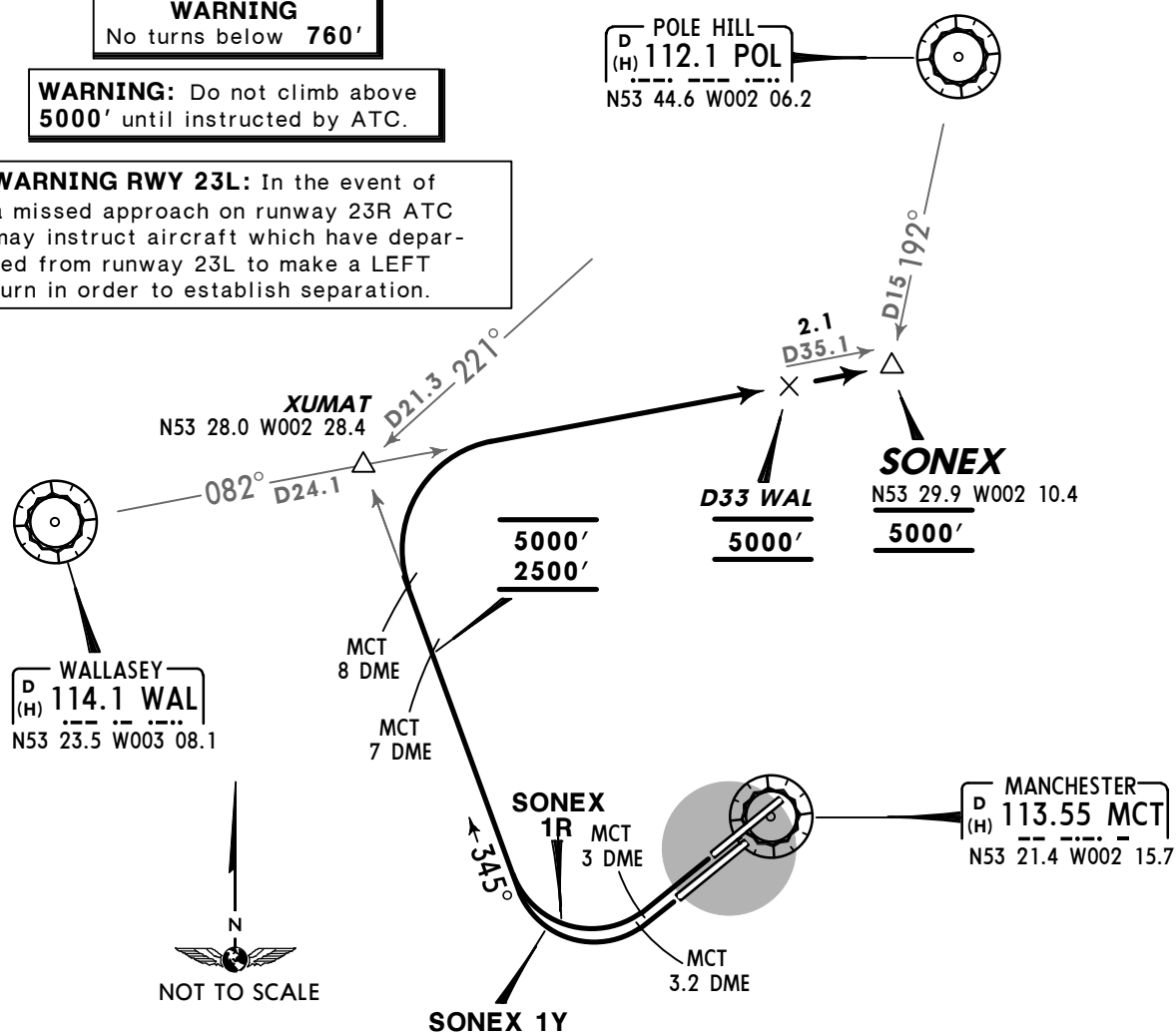
1. When instructed contact SCOTTISH Control after take-off, report C/S, SID designator, current altitude and initial cleared altitude.
2. SIDs include noise preferential routes (refer to 10-4).
3. EXPECT first CPDLC Data Link Authority to be EGTT.
4. Cruising levels will be allocated enroute by SCOTTISH Control.
5. Rwy 23R: EXPECT close-in obstacles.
6. Do not climb above SID level until cleared by ATC.

SONEX 1R [SONE1R], SONEX 1Y [SONE1Y]
RWYS 23R/L DEPARTURES
~~SPEED~~ MAX 250 KT BELOW FL100
UNLESS OTHERWISE AUTHORIZED

WARNING
No turns below **760'**

WARNING: Do not climb above **5000'** until instructed by ATC.

WARNING RWY 23L: In the event of a missed approach on runway 23R ATC may instruct aircraft which have departed from runway 23L to make a LEFT turn in order to establish separation.



These SIDs require minimum climb gradients of

SONEX 1R: 5.55% until MCT 3 DME, then 4.8% up to 2500' for ATC or airspace purposes.

SONEX 1Y: 12.33% until MCT 3.2 DME, then 4.8% up to 2500' for ATC or airspace purposes.

SID	RWY	ROUTING/ALTITUDE
SONEX 1R	23R	Climb straight ahead, at MCT 3 DME turn RIGHT, 345° track towards XUMAT, cross MCT 7 DME at or above 2500' (MAX 5000'), at MCT 8 DME turn RIGHT, intercept WAL R-082, cross D33 WAL at 5000', to SONEX at 5000'.
SONEX 1Y	23L	Climb straight ahead, at MCT 3.2 DME turn RIGHT, 345° track towards XUMAT, cross MCT 7 DME at or above 2500' (MAX 5000'), at MCT 8 DME turn RIGHT, intercept WAL R-082, cross D33 WAL at 5000', to SONEX at 5000'.

NOISE ABATEMENT

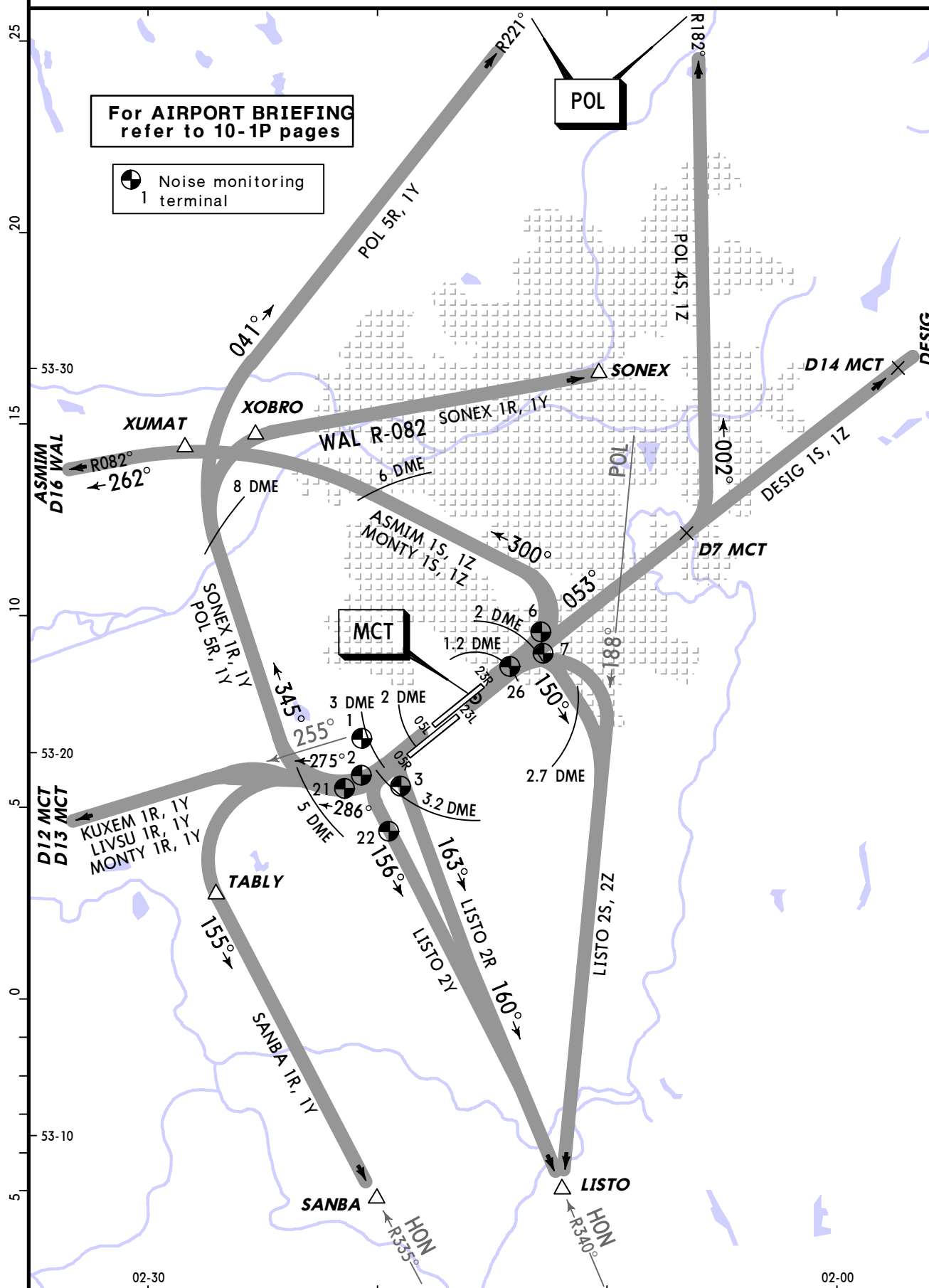
Distance to run to the appropriate Noise Monitoring Terminal (NMT) is in NM from take-off position which gives max TORA.

Rwy	NMT	NM
23R	1	3.4
	3	3.4
	2	3.8

Rwy	NMT	NM
23L	21	3.5
	22	3.5

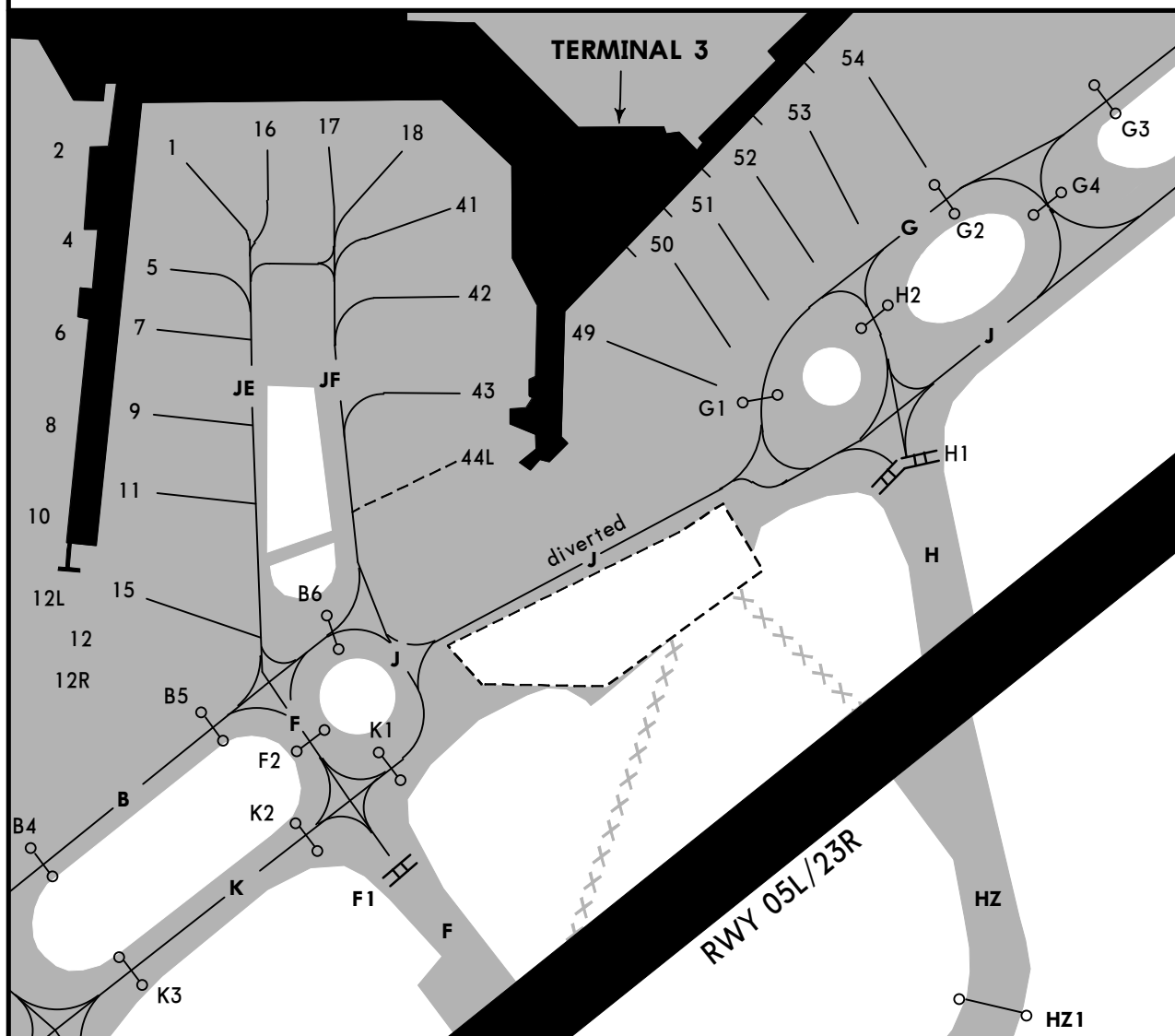
Rwy	NMT	NM
05L	7	3.4
	6	3.7

Rwy	NMT	NM
05R	26	3.5



PAVEMENT RECONSTRUCTION WORKS - TAXIWAY JULIET

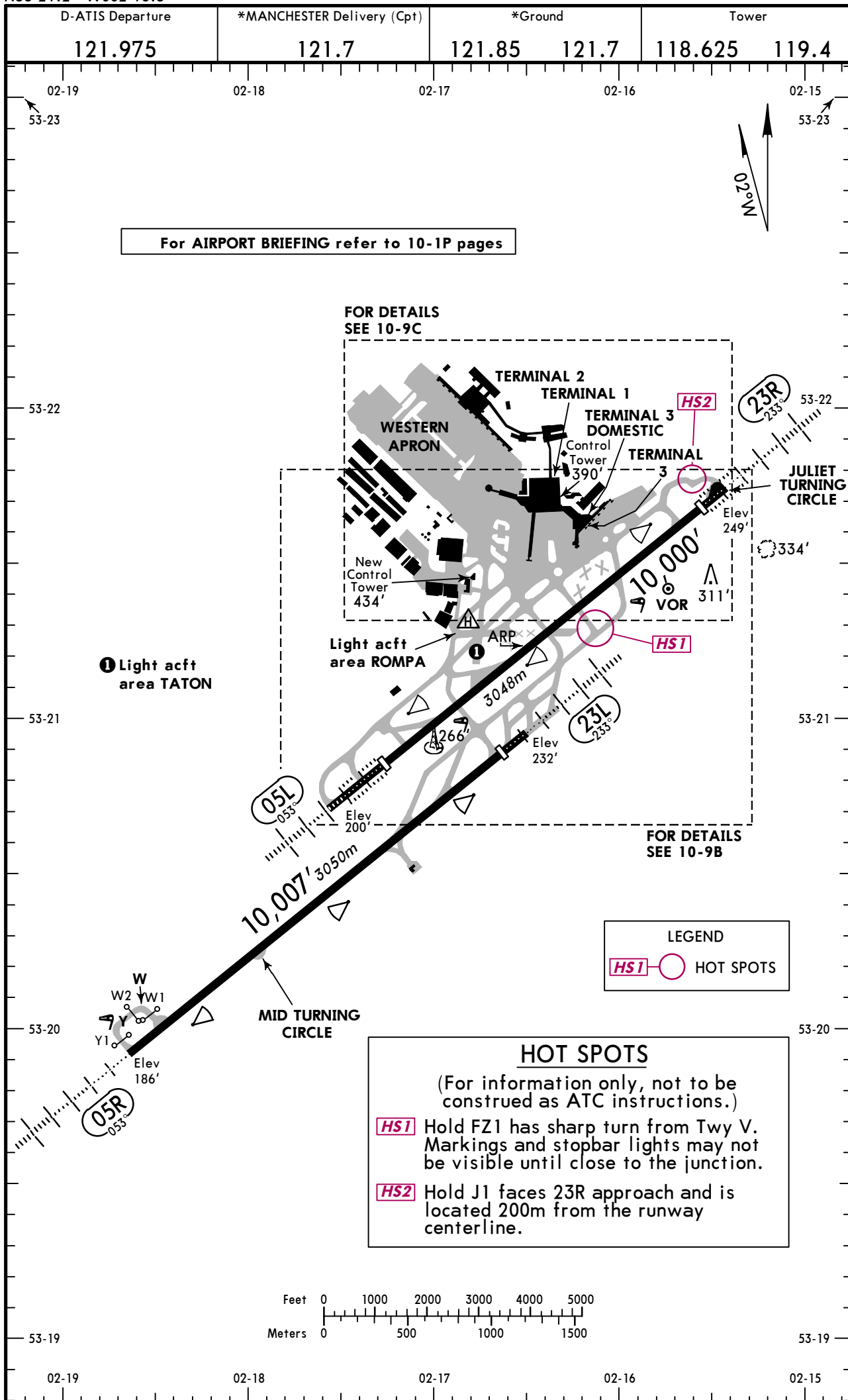
REFER ALSO TO LATEST NOTAMS



Pavement reconstruction work will take place on Sunday thru Thursday nights (inclusive) each week. The diverted centerline will be available for use outside working hours only by ACFT up to ICAO code E, wingspan max 213'/65m.

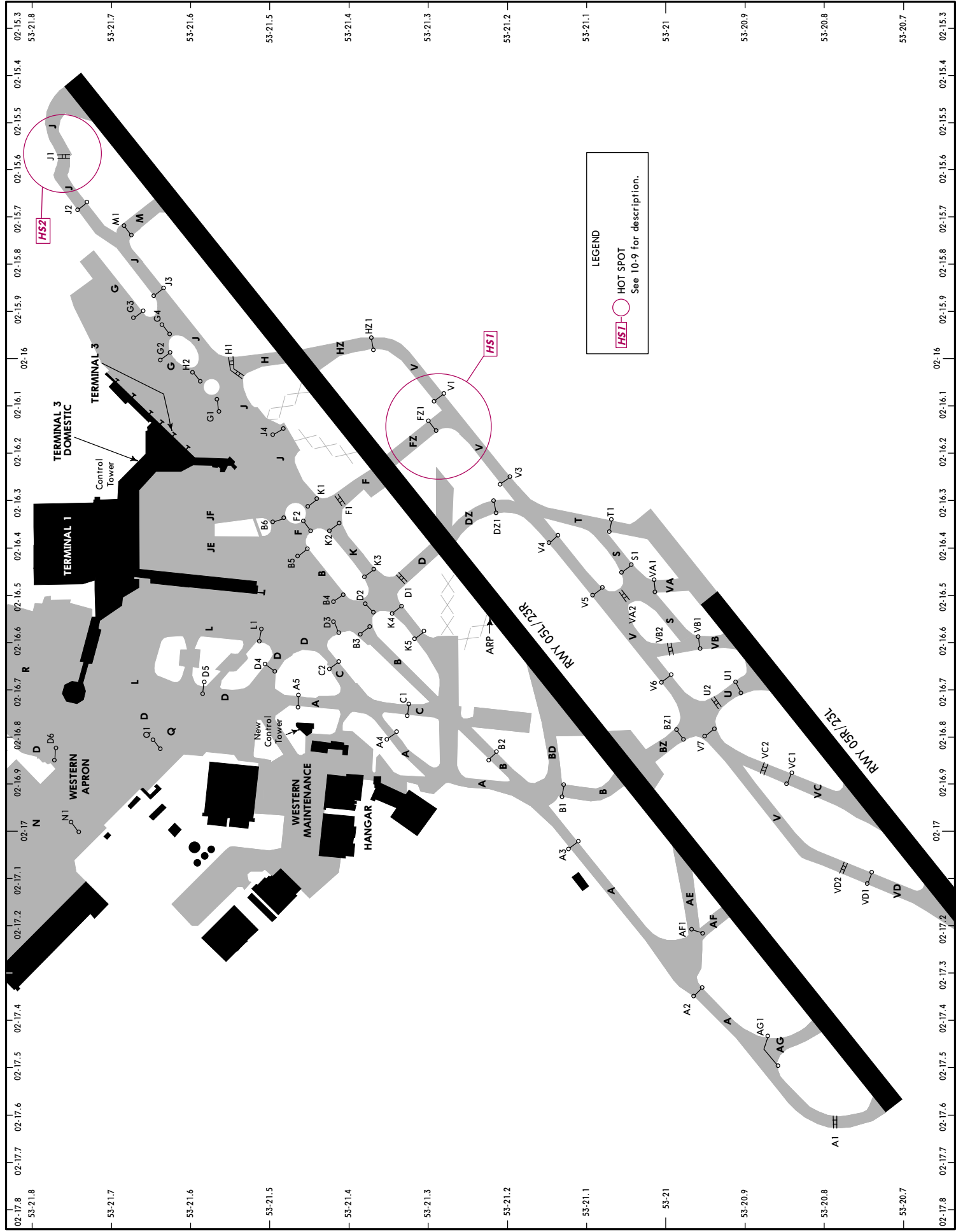
An Airfiled Operation Follow-me vehicle will be provided to guide ACFT along diverted TWY centerline HN and during periods of low visibility.

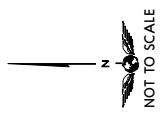
During working hours the portion of TWY J around the works area will be closed. ACFT requiring to taxi EAST or WEST past the work area will be required to backtrack RWY 05L/23R as directed by ATC. ICAO code F ACFT will be required to backtrack RWY 05L/23R as directed by ATC to by-pass the works area H24.



USABLE LENGTHS

© JEPPESEN, 2007, 2014. ALL RIGHTS RESERVED.





LEGEND

L, R

Parking stand
LEFT, RIGHT

▤

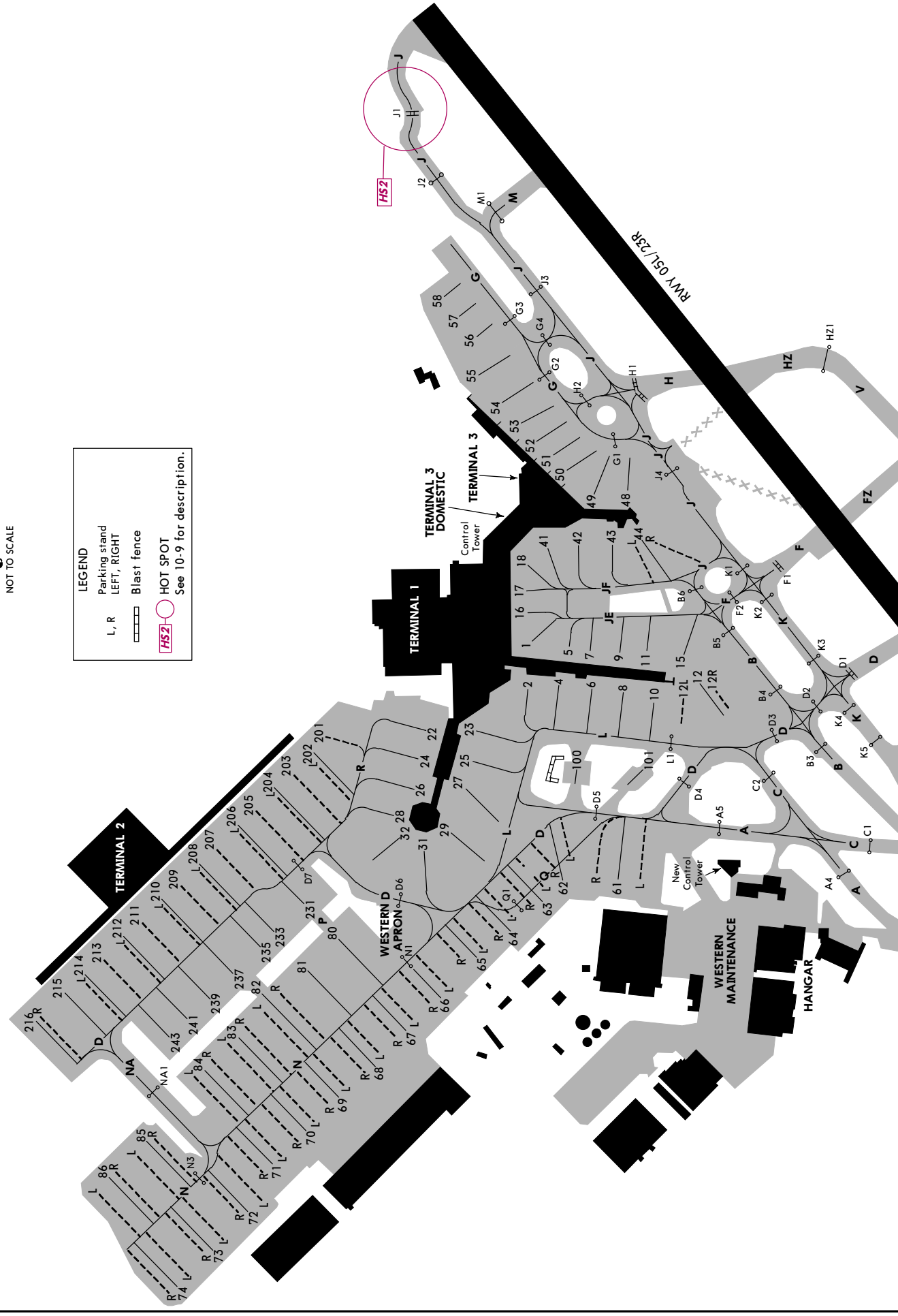
Blast fence

HS2

○

HOT SPOT

See 10-9 for description..



INS COORDINATES					
STAND No.	COORDINATES		STAND No.	COORDINATES	
1	N53 21.6	W002 16.4	83L	N53 21.9	W002 17.1
2, 4	N53 21.6	W002 16.5	83R	N53 21.9	W002 17.0
5	N53 21.6	W002 16.4	84, 84L	N53 22.0	W002 17.1
6 thru 9	N53 21.6	W002 16.5	84R	N53 21.9	W002 17.1
10 thru 15	N53 21.5	W002 16.5	85, 85L, 85R	N53 22.0	W002 17.2
16	N53 21.7	W002 16.4	86	N53 22.0	W002 17.3
17, 18	N53 21.7	W002 16.3	86L	N53 22.1	W002 17.3
22 thru 25	N53 21.7	W002 16.6	86R	N53 22.0	W002 17.3
26	N53 21.7	W002 16.7	100	N53 21.6	W002 16.6
27	N53 21.7	W002 16.6	101	N53 21.5	W002 16.6
28	N53 21.8	W002 16.7	201	N53 21.8	W002 16.6
29, 31	N53 21.7	W002 16.7	202 thru 203	N53 21.9	W002 16.6
32	N53 21.8	W002 16.7	204L	N53 21.9	W002 16.7
41 thru 44L	N53 21.6	W002 16.3	204	N53 21.9	W002 16.6
44R	N53 21.5	W002 16.3	205 thru 206L	N53 21.9	W002 16.7
47	N53 21.5	W002 16.2	207	N53 21.9	W002 16.8
48 thru 50	N53 21.6	W002 16.2	208 thru 210L	N53 22.0	W002 16.8
51, 52	N53 21.6	W002 16.1	211 thru 213	N53 22.0	W002 16.9
53, 54	N53 21.7	W002 16.1	214	N53 22.1	W002 16.9
55 thru 57	N53 21.7	W002 16.0	214L	N53 22.1	W002 17.0
58	N53 21.7	W002 15.9	215, 216, 216R	N53 22.1	W002 17.0
61	N53 21.6	W002 16.8	231	N53 21.8	W002 16.8
61L	N53 21.5	W002 16.8	233, 235	N53 21.9	W002 16.9
61R	N53 21.6	W002 16.8	237, 239	N53 21.9	W002 17.0
63R	N53 21.6	W002 16.8	241	N53 22.0	W002 17.0
64 thru 65R	N53 21.7	W002 16.9	243	N53 22.0	W002 17.1
66, 66L, 66R	N53 21.7	W002 17.0			
67	N53 21.8	W002 17.0			
67L	N53 21.7	W002 17.0			
67R thru 69L	N53 21.8	W002 17.1			
69R, 70, 70L	N53 21.8	W002 17.2			
70R	N53 21.9	W002 17.2			
71	N53 21.9	W002 17.3			
71L	N53 21.9	W002 17.2			
71R thru 72R	N53 21.9	W002 17.3			
73, 73L, 73R	N53 21.9	W002 17.4			
74, 74L, 74R	N53 22.0	W002 17.4			
80	N53 21.8	W002 16.9			
81	N53 21.9	W002 16.9			
82 thru 83	N53 21.9	W002 17.0			

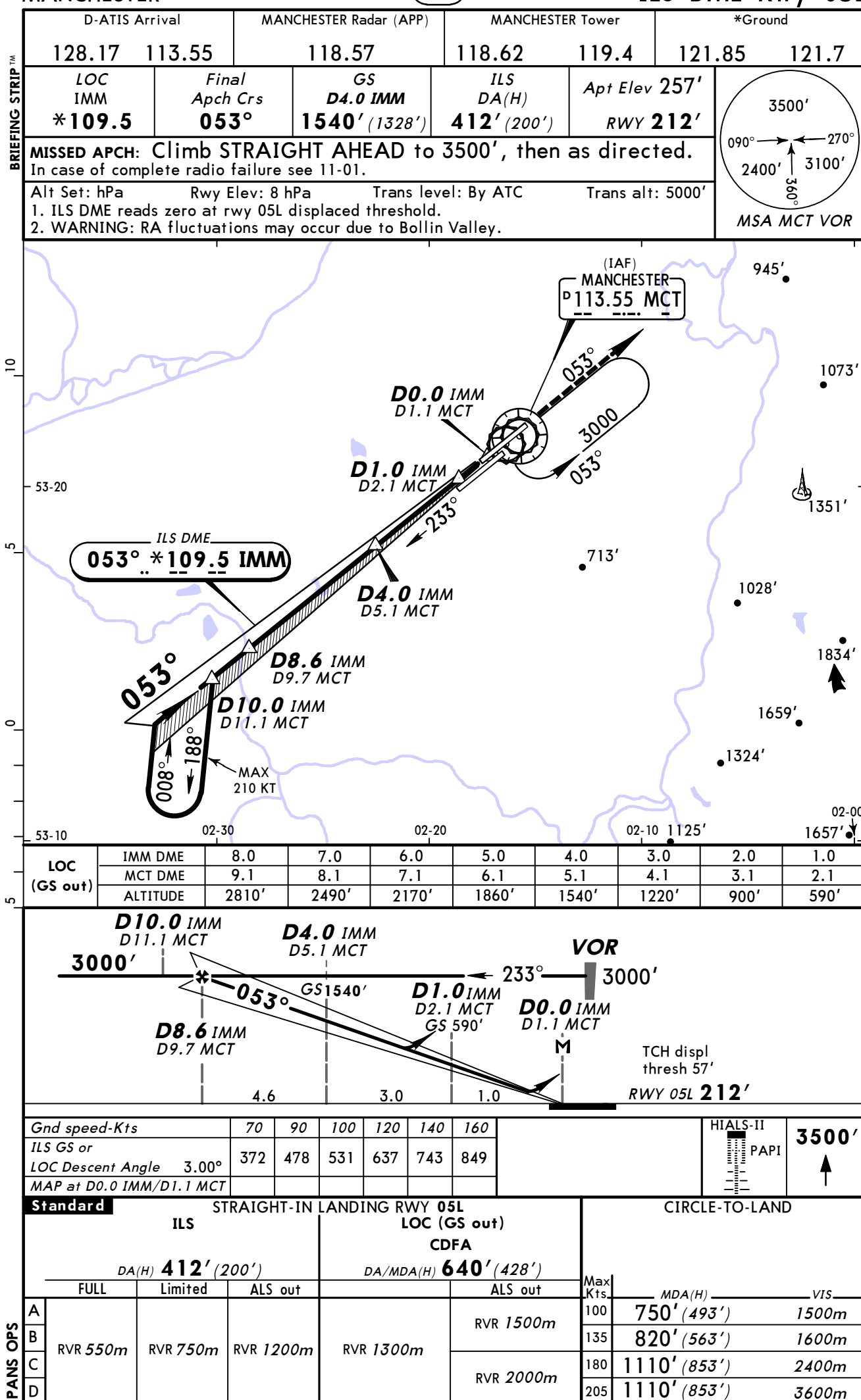
STRAIGHT-IN RWY		DA(H) / MDA(H)	RVR (ALS/ALS out)
05L	CAT 2 ILS DME	312' (100')	RA 107' - 300m
	ILS DME	412' (200')	500m / 1000m
	LOC	640' (428')	800m / 1000m
	VOR DME	690' (478')	1000m / 1000m
05R	ILS DME	386' (200')	500m / 1000m
	LOC	530' (344')	800m / 1000m
	VOR DME	630' (444')	800m / 1000m
23L	RNAV	680' (453')	1000m / 1000m
	VOR DME	690' (463')	1000m / 1000m
23R	CAT 2 ILS DME	349' (100')	RA 102' - 300m
	ILS DME	449' (200')	500m / 1000m
	LOC	640' (391')	800m / 1000m
	VOR DME	690' (441')	800m / 1000m

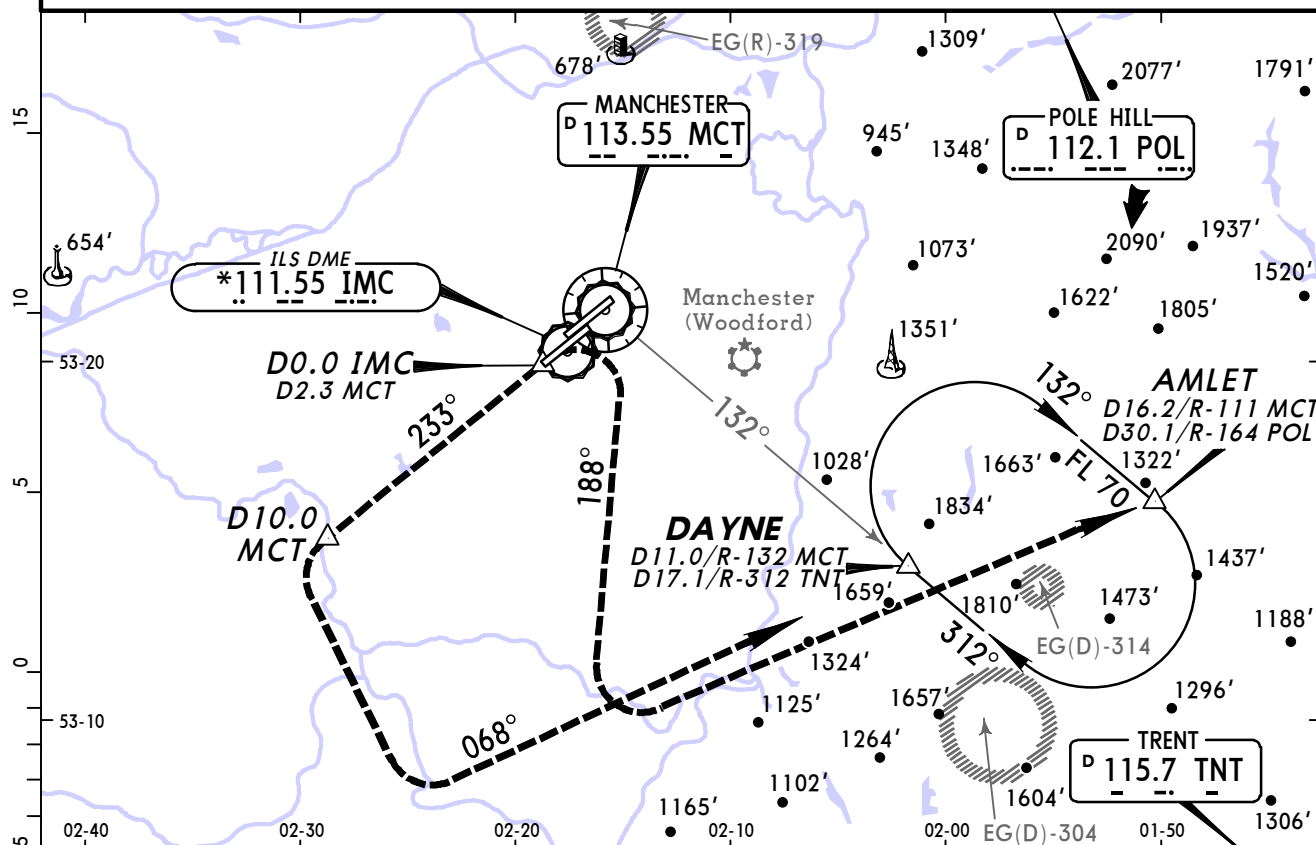
CIRCLE-TO-LAND	MDA(H)	VIS
	750' (493')	1000m

TAKE-OFF RWY 05L/R, 23L/R				
LVP must be in Force ❶				
RL, FATO LTS, CL & RVR info	RL, FATO LTS & RCLM	Unlit/unmarked defined RWY/FATO	Nil Facilities DAY	Nil Facilities NIGHT
150m	200m	200m	250m ❷	800m

❶ Without LVP 400m are stipulated.

❷ Or rejected take-off distance whichever is the greater.

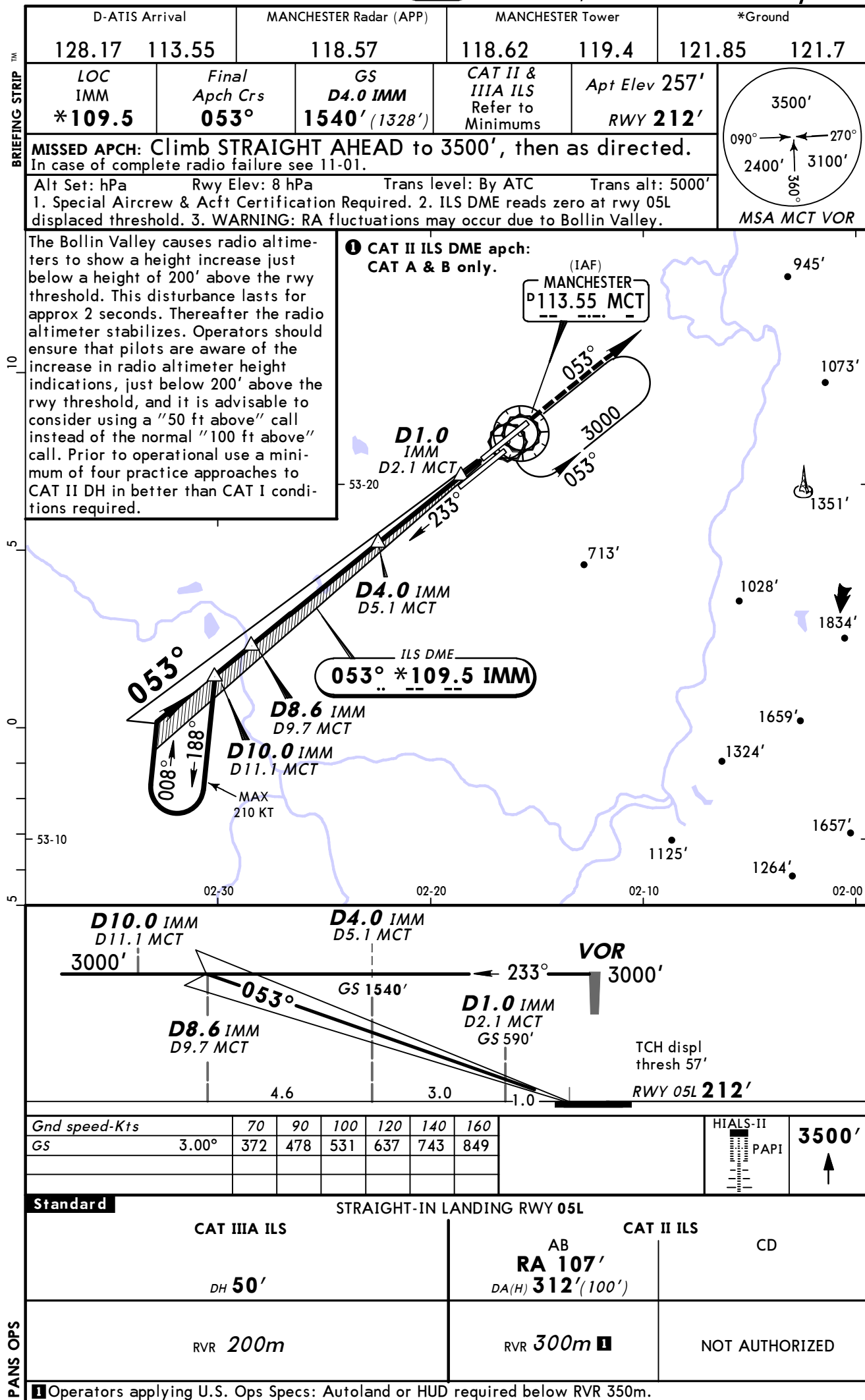


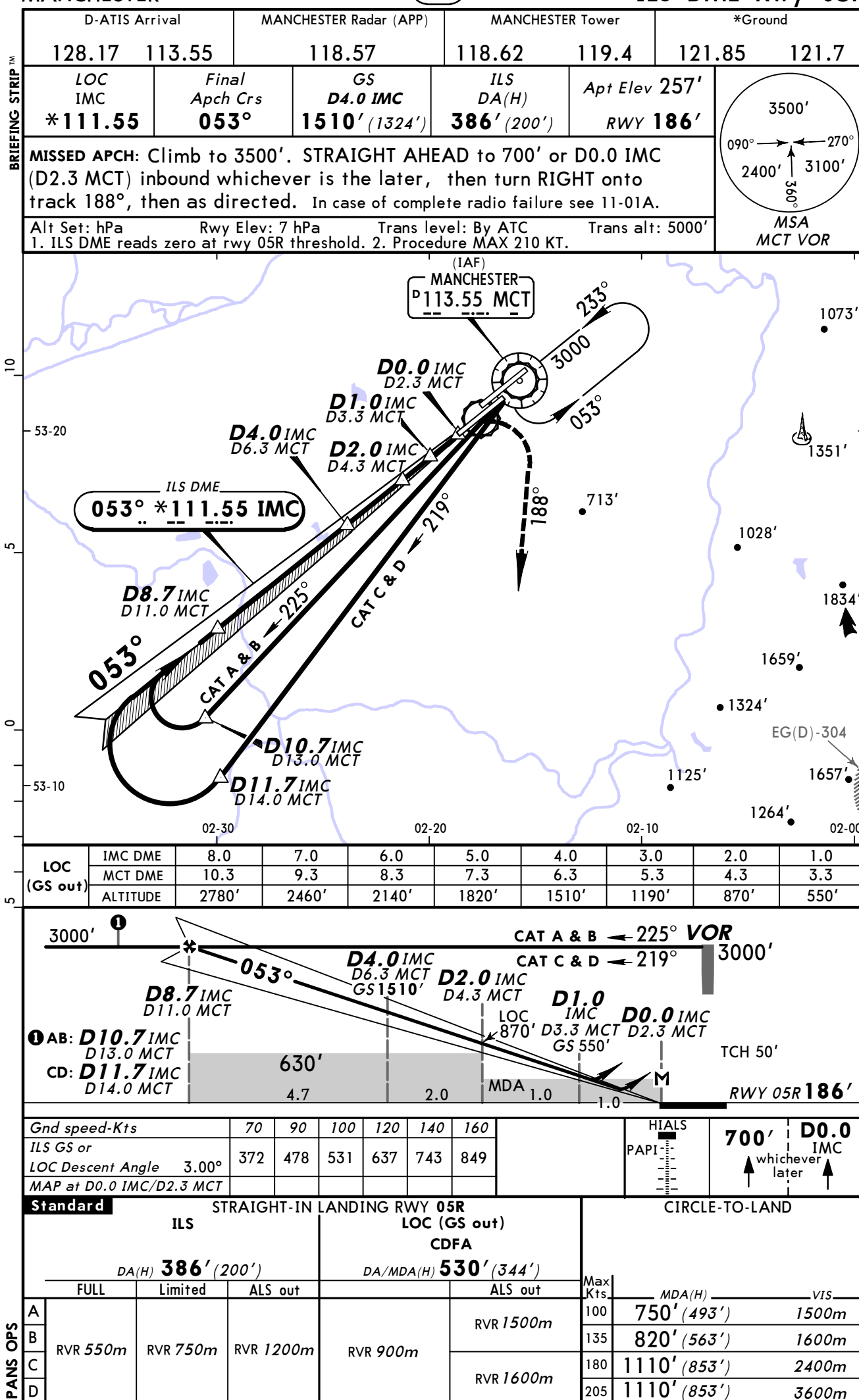
PROCEDURES TO BE USED IN THE EVENT OF RADIO
FAILURE FOLLOWING A MISSED APPROACH**MISSED APCH:**

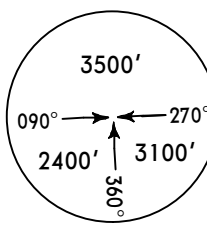
Rwy 05R: Climb to 3500'. **ILS & LOC:** STRAIGHT AHEAD to 700' or D0.0 IMC (D2.3 MCT) inbound, whichever is the later, **(VOR DME:** STRAIGHT AHEAD to 700'), then turn RIGHT onto track 188° climbing to FL 70. When established on track 188° and above 3500' turn LEFT direct to AMLET to join DAYNE holding.

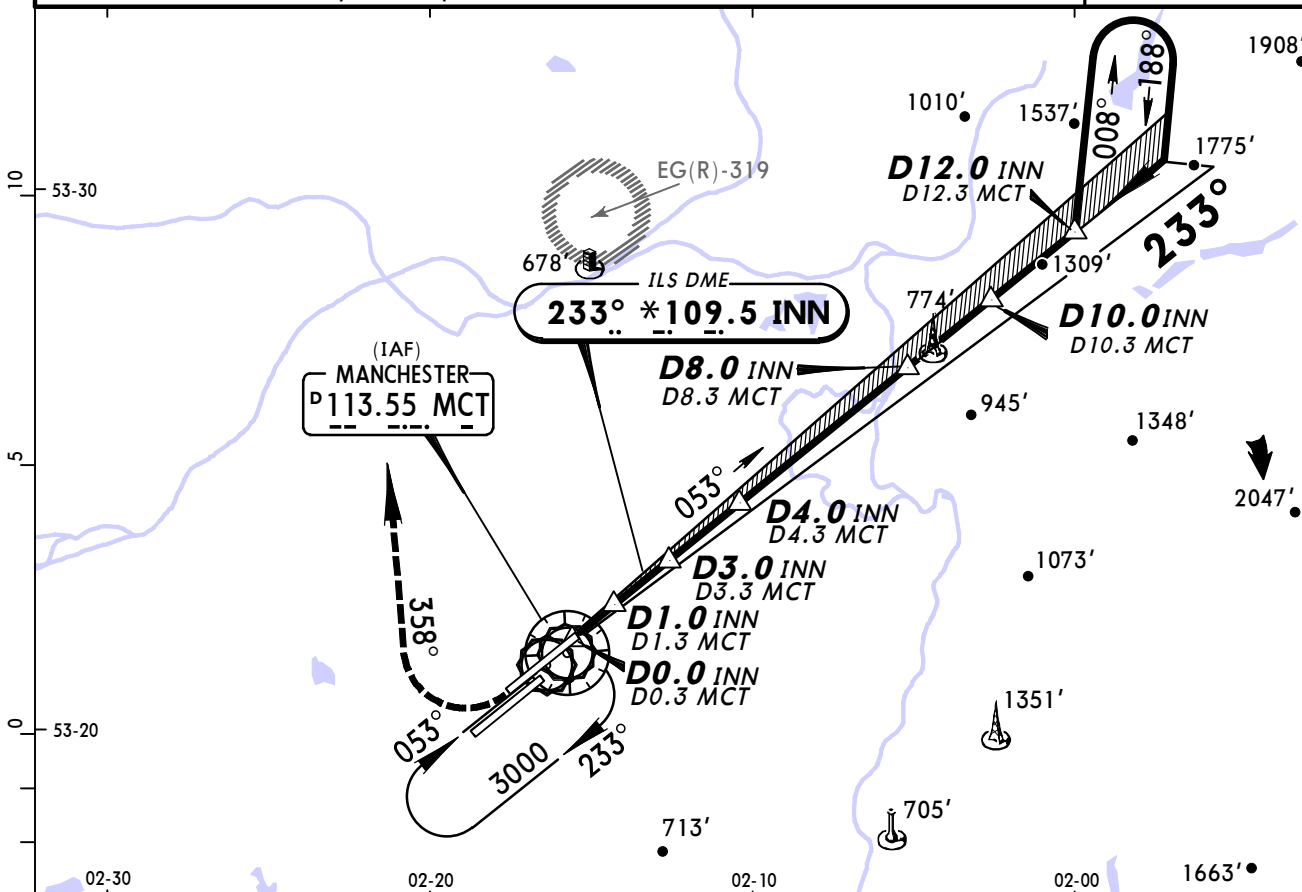
Rwy 23L: Climb STRAIGHT AHEAD to 3500'. At D10.0 MCT turn LEFT onto track 068° continue climbing to FL 70 to enter DAYNE holding.

Acft unable to reach 3500' before D10.0 MCT, climbing turn LEFT at D10.0 MCT until reaching 3500', before proceeding to DAYNE holding as detailed above.

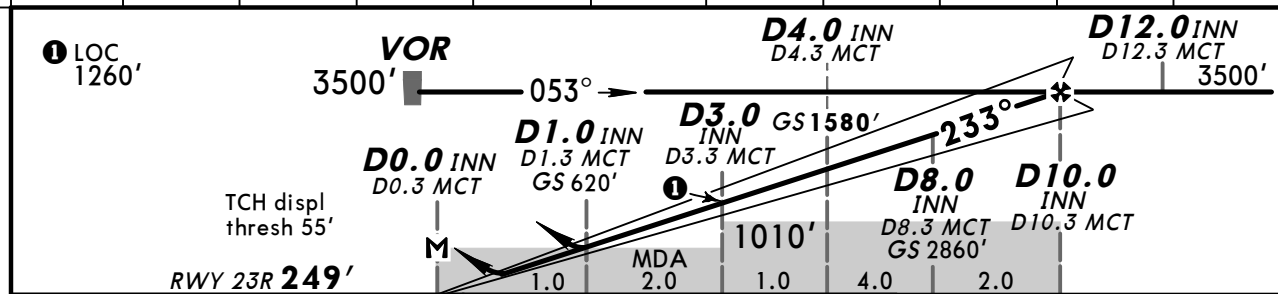




D-ATIS Arrival 128.17 113.55		MANCHESTER Radar (APP) 118.57		MANCHESTER Tower 118.62 119.4		*Ground 121.85 121.7	
LOC INN *109.5	Final Apch Crs 233°	GS D4.0 INN 1580' (1331')	ILS DA(H) 449' (200')	Apt Elev 257' RWY 249'		 MSA MCT VOR	
MISSED APCH: Climb to 3500'. STRAIGHT AHEAD until passing 750' or D0.0 INN (D0.3 MCT) inbound, whichever is the later, then turn RIGHT onto track 358°, then as directed. For separation from departing traffic RWY 23L expedite climb through 750' before commencing RIGHT turn onto 358°. In case of complete radio failure see 11-01.							
Alt Set: hPa		Rwy Elev: 9 hPa		Trans level: By ATC		Trans alt: 5000'	
ILS DME reads zero at rwy 23R displaced threshold.							

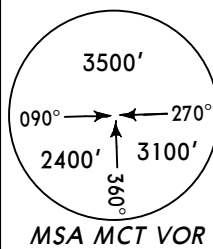


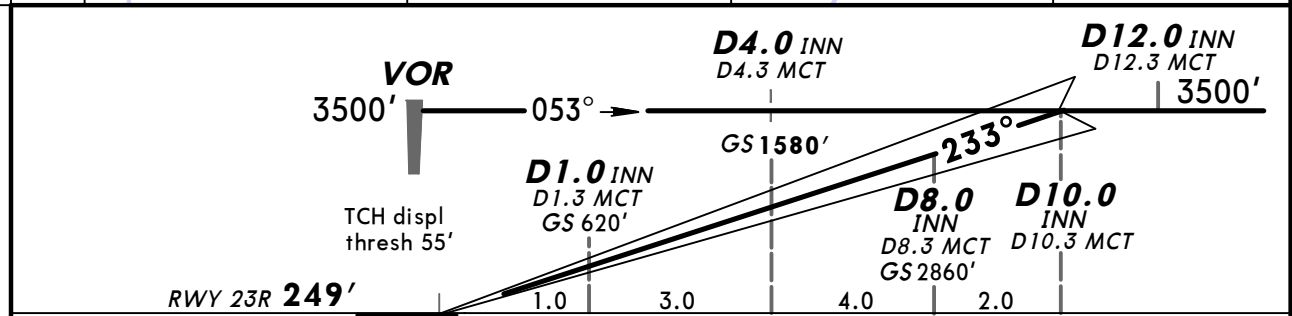
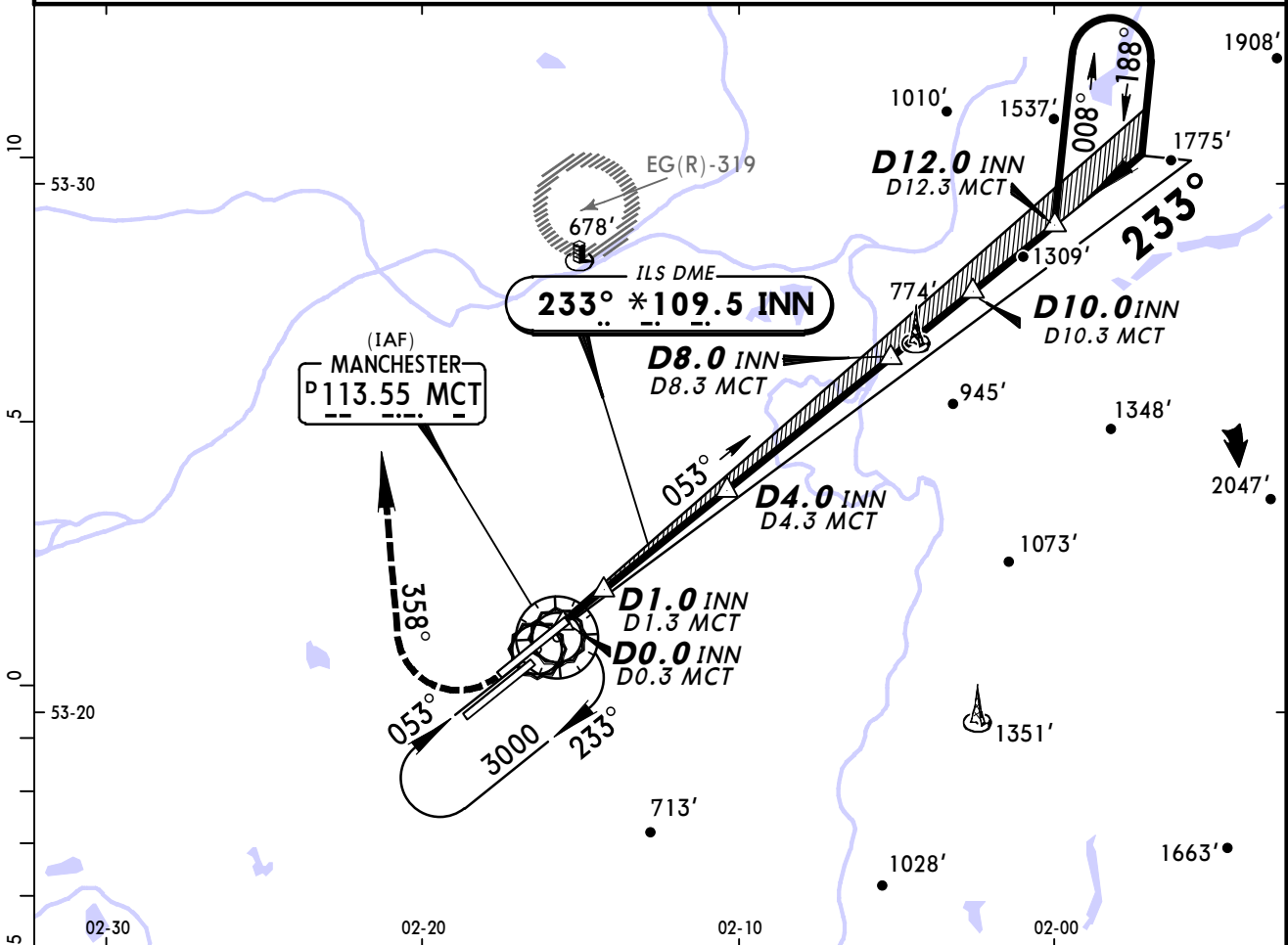
LOC (GS out)	INN DME	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
	MCT DME	1.3	2.3	3.3	4.3	5.3	6.3	7.3	8.3	9.3
	ALTITUDE	620'	940'	1260'	1580'	1900'	2220'	2540'	2860'	3180'



Gnd speed-Kts	70	90	100	120	140	160	 HIALS-II PAPT	750' D0.0 ↑ whichever later ↑
ILS GS or	372	478	531	637	743	849		
LOC Descent Angle 3.00°								
MAP at D0.0 INN/D0.3 MCT								

PANS OPS	STRAIGHT-IN LANDING RWY 23R				CIRCLE-TO-LAND		
	ILS			LOC (GS out)			
				CDFA			
	DA(H) 449' (200')			DA/MDA(H) 640' (391')			
	FULL	Limited	ALS out	ALS out	Max Kts	MDA(H)	VIS
	A				100	750' (493')	1500m
B	RVR 550m	RVR 750m	RVR 1200m	RVR 1100m	135	820' (563')	1600m
C					180	1110' (853')	2400m
D					205	1110' (853')	3600m

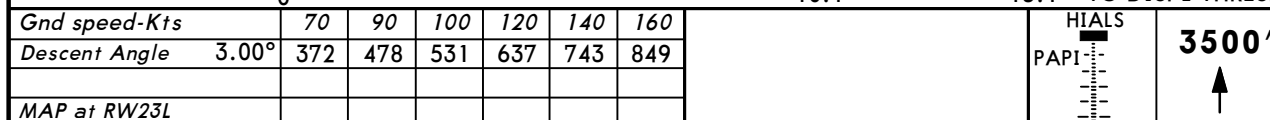
D-ATIS Arrival		MANCHESTER Radar (APP)		MANCHESTER Tower		*Ground	
128.17	113.55	118.57		118.62	119.4	121.85	121.7
LOC INN *109.5	Final Apch Crs 233°	GS D4.0 INN 1580' (1331')	CAT II & IIIA ILS Refer to Minimums	Apt Elev 257' RWY 249'		 MSA MCT VOR	
MISSED APCH: Climb to 3500'. STRAIGHT AHEAD until passing 750' or D0.0 INN (D0.3 MCT) inbound, whichever is the later, then turn RIGHT onto track 358°, then as directed. For separation from departing traffic RWY 23L expedite climb through 750' before commencing RIGHT turn onto 358°. In case of complete radio failure see 11-01.							
Alt Set: hPa		Rwy Elev: 9 hPa		Trans level: By ATC		Trans alt: 5000'	
1. Special Aircrew & Acft Certification Required. 2. ILS DME reads zero at rwy 23R displ threshold.							



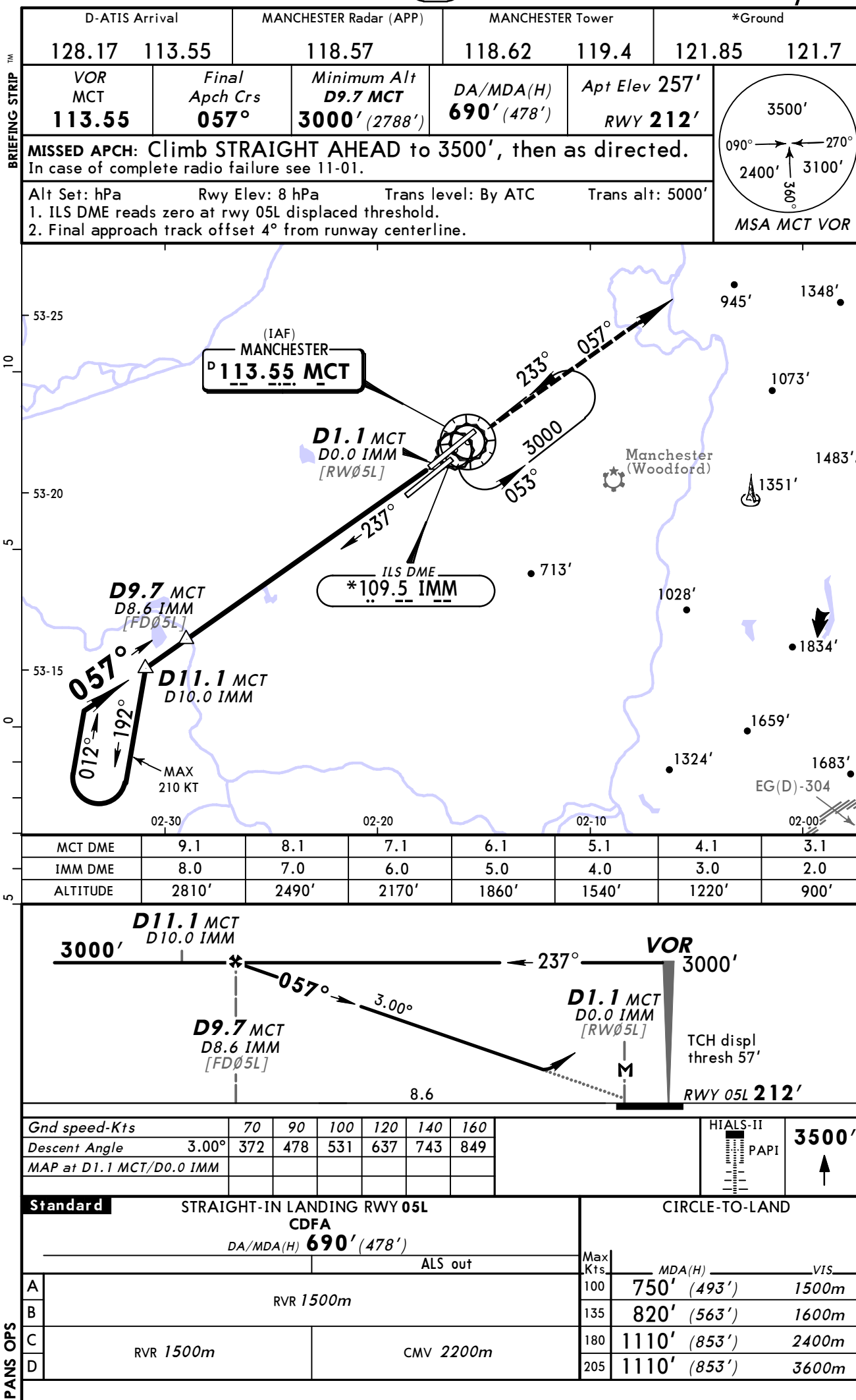
Gnd speed-Kts	70	90	100	120	140	160	HTALS-II PAPI	750' D0.0 ↑ INN ↑ whichever later
GS	372	478	531	637	743	849		

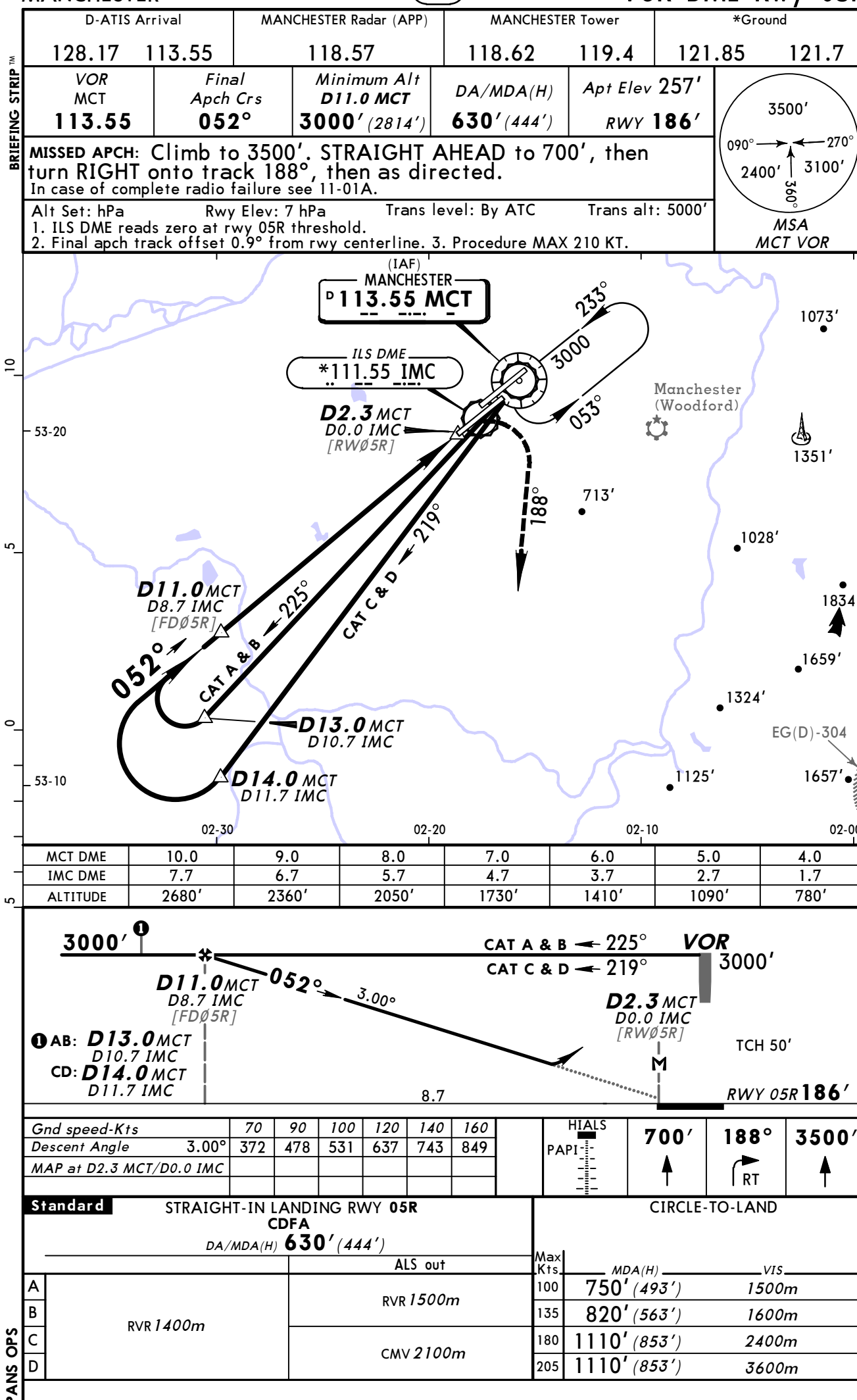
Standard		STRAIGHT-IN LANDING RWY 23R	
CAT IIIA ILS		CAT II ILS	
DH 50'		ABC RA 103' DA(H) 349' (100')	D RA 105' DA(H) 351' (102')
RVR 200m		RVR 300m	

BRIEFING STRIP™

5

PANS OPS





BRIEFING STRIP TM



PANS OPS

Standard		STRAIGHT-IN LANDING RWY 23L		CIRCLE-TO-LAND		
		CDFA				
		DA/MDA(H) 690' (463')				
		ALS out		Max Kts	MDA(H)	VIS
A	RVR 1500m			100	750' (493')	1500m
B				135	820' (563')	1600m
C	RVR 1500m	CMV 2200m	180	1110' (853')	2400m	
D			205	1110' (853')	3600m	

BRIEFING STRIP™



Standard		STRAIGHT-IN LANDING RWY 23R		CIRCLE-TO-LAND	
		CDFA			
		DA/MDA(H) 690' (441')			
		ALS out		Max Kts	
				MDA(H)	VIS
A	RVR 1400m	RVR 1500m		100	750' (493') 1500m
B				135	820' (563') 1600m
C		CMV 2100m		180	1110' (853') 2400m
D				205	1110' (853') 3600m

Chart changes since cycle 26-2014

ADD = added chart, REV = revised chart, DEL = deleted chart.

ACT	PROCEDURE IDENT	INDEX	REV DATE	EFF DATE
MANCHESTER, (MANCHESTER - EGCC)				
REV	AIRPORT BRIEFING (DEP CON...	10-1P6	28 Nov 2014	11 Dec 2014
DEL	DALEY 1A, 1B, 1C & 4D ARR...	10-2	28 Nov 2014	11 Dec 2014
ADD	DALEY 2A, 2B & 4D ARRS	10-2	28 Nov 2014	11 Dec 2014
REV	DALEY 2E, 1F & 1G ARRS	10-2A	28 Nov 2014	11 Dec 2014
REV	DAYNE 2A & 1B ARRS	10-2B	28 Nov 2014	11 Dec 2014
ADD	MIRSI 1A & 1B ARRS	10-2C	28 Nov 2014	11 Dec 2014
DEL	MIRSI 1A, 1B, 1C & 1D ARR...	10-2C	28 Nov 2014	11 Dec 2014
ADD	MIRSI 1C & 1D ARRS	10-2D	28 Nov 2014	11 Dec 2014
DEL	ROSUN 1A, 1B, 1C & 4D ARR...	10-2D	28 Nov 2014	11 Dec 2014
ADD	ROSUN 2A, 2B & 4D ARRS	10-2E	28 Nov 2014	11 Dec 2014
DEL	ROSUN 2E, 1F & 1G ARRS	10-2E	28 Nov 2014	11 Dec 2014
ADD	ROSUN 2E, 1F & 1G ARRS	10-2F	28 Nov 2014	11 Dec 2014
ADD	ASMIM 1S & 1Z DEPS	10-3	28 Nov 2014	11 Dec 2014
DEL	DESIG 1R & 1Y DEPS	10-3	28 Nov 2014	11 Dec 2014
REV	DESIG 1S & 1Z DEPS	10-3A	28 Nov 2014	11 Dec 2014
ADD	KUXEM 1R & 1Y DEPS	10-3B	28 Nov 2014	11 Dec 2014
DEL	LISTO 2R & 2Y DEPS	10-3B	28 Nov 2014	11 Dec 2014
ADD	LISTO 2R & 2Y DEPS	10-3C	28 Nov 2014	11 Dec 2014
REV	LISTO 2S & 2Z DEPS	10-3D	28 Nov 2014	11 Dec 2014
ADD	LIVSU 1R & 1Y DEPS	10-3E	28 Nov 2014	11 Dec 2014
DEL	MONTY 1R & 1Y DEPS	10-3E	28 Nov 2014	11 Dec 2014
ADD	MONTY 1R & 1Y DEPS	10-3F	28 Nov 2014	11 Dec 2014
DEL	MONTY 1S & 1Z DEPS	10-3F	28 Nov 2014	11 Dec 2014
ADD	MONTY 1S & 1Z DEPS	10-3G	28 Nov 2014	11 Dec 2014
DEL	NOKIN 1R & 1Y DEPS	10-3G	28 Nov 2014	11 Dec 2014
DEL	NOKIN 1S & 1Z DEPS	10-3H	28 Nov 2014	11 Dec 2014
ADD	POL 5R & 1Y DEPS	10-3H	28 Nov 2014	11 Dec 2014
ADD	POL 4S & 1Z DEPS	10-3J	28 Nov 2014	11 Dec 2014
DEL	POLE HILL 5R & 1Y DEPS	10-3J	28 Nov 2014	11 Dec 2014
DEL	POLE HILL 4S & 1Z DEPS	10-3K	28 Nov 2014	11 Dec 2014
ADD	SANBA 1R & 1Y DEPS	10-3K	28 Nov 2014	11 Dec 2014
DEL	SANBA 1R & 1Y DEPS	10-3L	28 Nov 2014	11 Dec 2014
ADD	SONEX 1R & 1Y DEPS	10-3L	28 Nov 2014	11 Dec 2014
DEL	WALLASEY 1R & 1Y DEPS	10-3M	28 Nov 2014	11 Dec 2014
DEL	WALLASEY 1S & 1Z DEPS	10-3N	28 Nov 2014	11 Dec 2014
REV	NOISE ABATEMENT (DIAGRAM)	10-4	28 Nov 2014	11 Dec 2014

TERMINAL CHART CHANGE NOTICES

Chart Change Notices for Airport EGCC

Type: Terminal

Effectivity: Temporary

Begin Date: Immediately

End Date: 20141219

Pavement reconstruction work on Twy J. Refer to 10-8 and latest NOTAMs