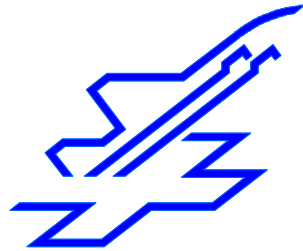


SWISS AIR FORCE
Air Crew Guide for World Economic Forum 2020



Dübendorf

WEF 2020 only

Valid from January 17th to 26th 2020

Procedures applicable for World Economic Forum only

GREY SHADED TEXT: **DEVIATION FROM INTERNATIONAL STANDARD**

Proposals for next AMDT shall be sent to

Operational Military Support (OMS)

omc@skyguide.ch

The scale published on charts may be inaccurate due to size changes.

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GENERAL

GENERAL

AD INFO

ELEV
442 m / 1450 ft

ARP (mid RWY)
47°23'54.45" N / 008°38'53.55" E

Aerodrome
Dübendorf LSMD

Postal address
LW / Airbase Dübendorf
8600 Dübendorf

Chief Flight Operations (CFO) +41 58 460 24 81
PHONE / FAX: Air Traffic Control +41 58 823 61 63 / +41 58 460 21 90
PHONE: OC +41 58 460 20 04

Variation: 2° 09' E (2015.5)

Air Traffic Control service hours, Restricted AD service hours:

Aircraft	Date	Day	Operating Hours
Jet/Prop/Heli	18. – 25.01.2020	MON – FRI	0700 – 2100 LT (0600 – 2000 UTC)
		SAT & SUN	0900 – 2000 LT (0800 – 1900 UTC) (SUN 26.01.2020 closed)

RWY PHYSICAL CHARACTERISTICS

Designation RWY NR	TRUE & MAG BRG	Dimensions of RWY (m)	Surface of RWY	THR COORD	THR ELEV	SLOPE of RWY- SWY
11	108° GEO 106° MAG	2355 X 40	ASPH	47 24.1 N 008 38.0 E	1427ft	+0.52%
29	288° GEO 286° MAG		ASPH	47 23.7 N 008 39.8 E	1470ft	-0.52%

RWY	TORA	ASDA	TODA	LDA	ASI
11	7726 ft	8448 ft	8448 ft	7726 ft	PAPI 4.5°
	2355 m	2575 m	2575 m	2355 m	
29	7726 ft	8218 ft	8382 ft	7545 ft	PAPI 4.5°
	2355 m	2505 m	2555 m	2300 m	

Helipad WEF
In front of Hangar 7, South of RWY

Meteorological Minima
See DUB 8

DUB 3

GENERAL

DEFINITIONS

GREY SHADED TEXT: DEVIATION FROM INTERNATIONAL STANDARD

Airport Reference Point (ARP)

Consider RWY Center as ARP indicated by geographical coordinates.

Aerodrome elevation

ELEV of the highest point of the Landing Area.

Runway lighting

Consult the legend on Aerodrome Charts as runway lighting is not yet standardized.

Inertial Navigation

For aircraft equipped with inertial navigation systems (INS), coordinates see DUB 3.

Magnetic variation

Horizontal angle between geographical North (non MIL coordinate grid system) and magnetic North, is measured in degrees and minutes to the East or West, depending on whether the magnetic North is situated in the East or West of geographical North.

Obstacles

High-voltage transmission lines and permanent obstacles are registered on Landing Charts only; consider that the registration of all obstacles is not guaranteed.

Runway Visual Range (RVR) / Visibility (MOR)

Distances to 2000 m (incl.) are given in RVR.

Distances over 2000 m are given in visibility (MOR).

Aerodrome traffic circuit altitude

These altitudes are approximate values to be observed because of noise, if meteorological and air traffic conditions permitting.

Indicator type

PAPI (Precision Approach Path Indicator)

MIL use only

RWY 11 = 4.5°

RWY 29 = 4.5°

Geographic Coordinates

Based on Geographic Coordinates WGS84, unless indicated otherwise.

Approach-Time / Approach Fix

Approach-time starts at the FAF/FAP (final approach fix / -point) of the RWY used for IFR approach.

Hereby, the FAF/FAP is the point of descent, at which the IFR final approach procedure (PAR, ILS, RNAV, SRA and EINA not followed by other APP) is initiated.

SERA (Standardized European Rules of the Air)

Common and standardized European rules of the air by Eurocontrol and EASA, helping free movement of aircraft across Europe's borders.

GENERAL

TIME INDICATION

All time indications used in this Air Crew Guide are completed with the corresponding reference LT (for Local Time) or UTC or Z (for Universal Time Coordinated or Zulu Time). LT applies when no reference is given. Local Time (LT) always applies for coordinated procedures with other Army services.

Standard time:

Central European Time (CET) = LT

Difference between LT and UTC: +1 hour.

Day and Night limits

Day and Night limits according VFRM, RAC 1-1

CUSTOMS

CUSTOMS

General

Entry, Departure and Landings must be performed in accordance with Civil Aviation legislation of Switzerland.

Diplomatic clearance

Foreign military aircraft and other state aircraft are subjected to a prior permission for overflying Swiss territory or landing at AFB Dübendorf.

The diplomatic representation in Switzerland of the State concerned shall submit a written application in fourfold to the Federal Office for Civil Aviation (see DUB10).

Authorization for foreign Air Crews and Aircrafts

The approval is given by Air Operations Center (AOC) in agreement with the Handling Agent, Airbase Commander and Air Force Support or upper Commander.

Fuel

Tax-free fuel available

Restrictions

WORLD ECONOMIC FORUM RELEVANT FLIGHTS ALLOWED ONLY

PAX

No constitutionally protected PAX allowed. Accurate PAX List is mandatory.

Commercial Goods

No commercial goods available.

Public Health

Flights with origin in epidemiologic affected countries are not allowed to land at LSMD.

REF AIP SWITZERLAND

GEN 1.2

2.4 Public Health

Switzerland does not exercise any health control. If necessary, special measures will be taken. The International Health Regulations 2005 (IHR 2005), adopted by the World Health Assembly on 23 MAY 2005, in force since 15 JUN 2007, are applicable. Switzerland has officially designated the airports of Zurich (LSZH) and Genève (LSGG) according to the requirements of the IHR 2005.

OPS REQUIREMENTS - GENERAL

Operational Requirements

Reverse Thrust

For deceleration, it is recommended to use entire RWY LEN AVBL.

ATC flight plan

Flight plan is compulsory, communication (regarding flight plan) to ATC is provided by ATC Dübendorf (AIS Service).

The crew is responsible for the compliance with ATC restrictions and slots (contact Flow Management Position for coordination, see DUB 10).

Weather

For general weather information (TAF, METAR) refer to civil Weather Information Services.

Actual weather information and condition for Airforce Base Dübendorf are provided.

Runway Surface Conditions

The braking action (BA) in the standard format from GOOD to POOR is available and shall be treated as estimated surface friction (ESF).

Contact Chief Flight Operations.

Outside these hours contact Meteo Schweiz (see DUB 10)

Available Ground Services

Fuel

JET A1 / F35

JET A1 with anti-ice / F34

JP 8

Note: Pipe or NATO coupling

Electricity/GPU

AC: 115V / 400Hz
3 phases, 9kVA

DC: 28V, 200A

Tow truck

Capability 20 tons, no tow bar necessary (towbarless tractor).

Fire protection

Standard ICAO cat 5 (cat 6 and 7 on request).

Deicing fluids

Type I: Kilfrost DF Plus

Type IV: Kilfrost ABC S Plus

*Note: For any special requirements contact TopMotion GmbH in advance:
aircraft.handling@topmotion.ch*

OPS REQUIREMENTS - VFR

VFR

For flight plan routing refer to VFR Manual and/or AIP–Switzerland.

Approach

ATC flight plan "Y" and "V" possible.

Departure

ATC flight plan "Z" and "V" possible.

Weather minima

According VFRM, RAC 4-0-1, 1 "VFR procedures within control zones (CTR)"

VFR

VFR weather minima according SERA 5005 and SERA 5010:

A/C	Ceiling	Visibility
All	1500ft/AGL	5000m

SVFR

A/C	Ceiling	Visibility
All	600ft/AGL	1500m

NVFR

8km VIS, Distance to clouds: 1.5km lateral / 300m vertical

Under IMC special VFR procedures (SVFR) or Low Visibility Procedure (LVP) are cleared by TWR.

Special ILS HEL Procedure during WEF see DUB 44.

OPS REQUIREMENTS - IFR

IFR

For flight plan routing refer to ENROUTE CHART – ICAO AIP Switzerland.

Approach

ATC flight plan “I” compulsory. Expect radar vectoring by ATC (DÜBENDORF ARRIVAL). ILS approach / RNAV approach track only for RWY29 available. Expect straight in landing. If required for Meteo or safety reasons expect VIS circling to RWY11. For further information contact ATC Supervisor Dübendorf (see DUB 10).

Depending on weather conditions and status of NAVAIDs all IFR approaches are vectored for:

- RNAV APCH
- Visual APCH
- ILS/DME APCH (4.5°)
- LOC/DME APCH

Departure

Startup clearance and ATC departure clearance are delivered by ATC on LSMD TWR frequency.

CONTACT DETAILS

CONTACT DETAILS

Handling Agent (TopMotion):	Phone: +41 44 820 10 60 Mail: aircraft.handling@topmotion.ch
Meteo Schweiz:	Phone: 0900 162 737 +41 58 460 91 11
ATC Supervisor Dübendorf:	Phone: +41 58 823 61 63
Chief Flight Operations (CFO)	Phone: +41 58 460 24 81 Mail: cfo-duebendorf.lw@vtg.admin.ch
Chief Support Ground	Phone: +41 58 460 22 31
Flow Management Position (FMP) Zurich	Phone: +41 43 931 69 62
Flight plan transmission by phone:	Phone: +41 43 931 61 61

Links:

Daily Airspace Bulletin Switzerland (DABS):
www.skybriefing.com

Diplomatic Clearance:
<http://www.bazl.admin.ch>
→ Portal for Specialists → Air Transport → Diplomatic Clearances

Meteo Service:
<http://www.meteoschweiz.admin.ch/>
→ Services & publications → Advice & service → Aviation weather

Obstacle Chart:
<http://map.bazl.admin.ch/>

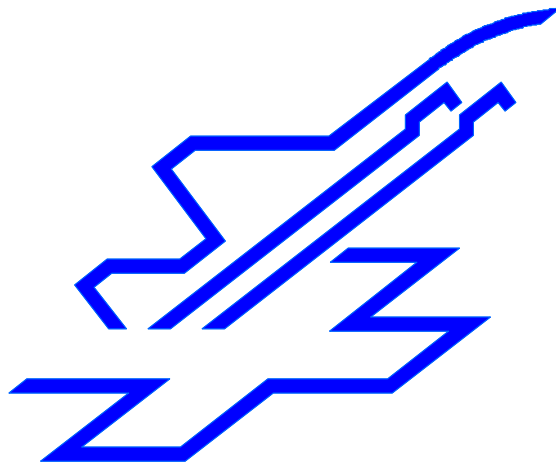
SWISS AIR FORCE
Air Crew Guide for World Economic Forum 2020

Part One

VFR

WEF 2020 only

Valid from January 17th to 26th 2020



VFR GENERAL

VFR GENERAL

Be aware of possible delay especially between 1000LT – 1100LT / 1230LT – 1430LT due to LSZH RWY 16 departures.

FLIGHT RESTRICTIONS AND REMARKS:

Temporary Airspace Restrictions

LSZH RWY34 IN USE

Status (LSZH RWY 34 in use for landing and activation of corresponding airspace) may be inquired via TEL +41 43 816 22 95 or on following frequencies:

LSZH CTR 2 HX: ZRH ATIS: 129.005 MHz
LSZH TMA 14/15 HX: ZRH ATIS: 129.005 MHz or ZRH TERMINAL: 127.755 MHz
Alternative: DUB TWR 118.975 MHz, EMM TWR 120.425 MHz

LSZH RWY34 may be used for landing at any time. However, it's mainly the case during the following times:

Monday - Friday:

2045 – 0715 LT (1945 – 0615 UTC)

Saturday, Sunday, German Public Holidays

1945 – 0915 LT (1845 – 0845 UTC)

Airspace CTR LSMD above 6000 ft/AMSL (4000ft/AMSL during APCH RWY34 LSZH):

ATC DUB may grant the authorization after coordination with ZRH ATC. Clearance for the use of the airspace within CTR LSMD above 6000 ft/AMSL (4000ft/AMSL) shall be requested as necessary by reporting times of entry and departure on DUB TWR five minutes prior to utilization.

Regulation with Speck-Fehraltorf

Aerodrome Speck-Fehraltorf is located ESE of LSMD within the CTR.
VFR activity has to be expected.

Procedures for TMA's 4,5,7,11,14 and 15 of Zurich

Entering this airspace without clearance is prohibited.

Noise Sensitive Areas

All cities, bigger towns and hospitals shall be considered as noise sensitive areas.
Overflights are only allowed exceptionally.

VFR GENERAL

PROCEDURES HELICOPTER

For ARR and DEP routes refer to pages DUB 26 to DUB 27.
For TAXI PROCEDURE refer to pages DUB 21 to DUB 22.

RESTRICTIONS

LSZH RWY 28 in-use

Sector 1:
closed unless instructed by ATC.

LSZH RWY 34 in-use

Sector 2

- ARR: Via Richterswil, Stäfa and South of Pfäffikersee max 4000ft/AMSL, then straight-in approach or according ATC. Call DUB TWR 5NM south of Richterswil (due to coordination CTR 2 LSZH).
- DEP: Via KP (max 3000ft/AMSL) along the northshore of Greifensee and Sihlbrugg (max 4000ft/AMSL), east of the line KP – Sihlbrugg.

Sector 3:
closed unless instructed by ATC.

VFR GENERAL

PROCEDURES PROP/JET

For ARR and DEP routes refer to pages DUB 25 and DUB 28.

RESTRICTIONS

LSZH RWY 28 in-use

Sector 1:

closed unless instructed by ATC. Expect traffic circuit south of aerodrome.

LSZH RWY 34 in-use

Sector 2:

- ARR RWY 29: Via Richterswil, Stäfa and South of Pfäffikersee max 4000ft/AMSL, then straight-in approach or according ATC. Call DUB TWR latest 5NM south of Richterswil (due to coordination CTR 2 LSZH). In case of go-around join right hand circuit.
- ARR RWY 11: not available unless instructed by ATC.
- DEP RWY 11:
 - PROP: Via KP (max 3000ft/AMSL) along the northshore of Greifensee and Sihlbrugg (max 4000ft/AMSL), east of the line KP – Sihlbrugg.
 - JET: According ATC.
- DEP RWY 29: Via right turn after departure only. Route according DEP RWY 11 (see above).

Sector 3:

closed unless instructed by ATC.

VFR – CHART LEGEND

CHART LEGEND

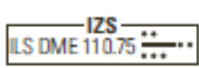
Aerodromes

	ZURICH International Airport, hard surface RWY
	Airport, hard surface RWY
	Airfield (private), hard surface RWY
	Airfield (private), unpaved RWY
	Civil airport with military use (joint), hard surface RWY
	Civil airfield with military use (joint), hard surface RWY
	Military aerodrome, hard surface RWY
	Military aerodrome, unpaved RWY
	Alignment of longest RWY
	Closed aerodrome
	Heliport

Obstacles

	Obstacle and obstacle group, numerals indicate elevation of top in ft AMSL, or Height in ft AGL
	Obstacle and obstacle group, lighted
	Obstacle, lighted 500 ft AGL or more
	Transmission lines
	Mainly aerial cableways, numerals indicate heights of top in ft AGL

Navigation

	DME
	Tag for DME
	VOR/DME
	Tag for VOR/DME
	NDB
	Tag for NDB
	Compulsory and on request reporting point
	Intersection (INT) reporting compulsory/on request
	Waypoint (WPT) Fly-by reporting compulsory/on request
	Waypoint (WPT) Fly-over reporting compulsory/on request
	TAG for INT or WPT with MCA
	ILS front course
	ILS profile
	Tag for ILS with morse code

Tracks

	Approach
	Missed approach
	Engine Out Standard Instrument Departure (EOSID)

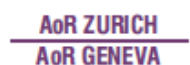
COR: Legend Swiss MIL FLIP integrated (WEF 12OCT2017)

VFR – CHART LEGEND

Airspace Structure



Flight information region, FIR



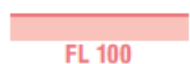
Area of responsibility, AoR



ATS routes



Flight information zone, FIZ



Buffer zone to AWY,
at and above indicated FL



TEMPO buffer



CTR airspace class **A**



CTR airspace class **C D**



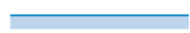
Airspace class **A**



Airspace class **C D**



Airspace class **E**



TEMPO **C D**



Tag for airspace

Airspace Restriction



Prohibited, restricted
or danger area



Nature reserve, overflight
at high altitude only

Miscellaneous



Separation line
Mittelland-Jura/Alps



Political border



Protected Area



Noise sensitive Area

5500

All indications of altitude
in ft AMSL

5500

All indications of heights
in ft AGL

Airspace Activities



Hang glider area



Glider activity



Paraglider area



Parachute jumping



Free balloon site



Winch-launching



Helicopter activity

COR: Legend Swiss MIL FLIP integrated (WEF 12OCT2017)

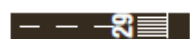
VFR - AERODROME SIGNS

ADDITIONAL AERODROME CHART ELEMENTS

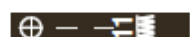
Runway, Taxiway, Apron



Paved pre-threshold area;
not suitable for the normal
use by aircraft



Hard surface RWY
with displaced THR



Hard surface RWY with
displaced THR, touchdown
point 1-engine ACFT



ARP on RWY



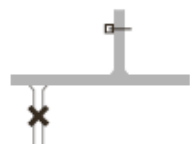
Begin/End of RWY



Grass RWY



Apron and TWY



Barrier on TWY,
closed TWY



Apron BDRY

Marking, Lighting, Landing Facilities



WDI,
lighted and unlighted



Drag chute release signal



Arresting cable and barrier



ARG

Infrastructure



Helicopter landing area



Weapon troubles area



Alert location port



AIS/MET



Hot refuelling area

Navigation



Radio communication
installations



LOC or SRE/SSR antenna



GP/DME or LOC/DME
antenna



QUAD radar / MALS+ radar



VASIS

Base Map



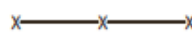
Road



Railway and railway tunnel



Buildings



Fence



Transmission lines

VFR - AERODROME SIGNS

STANAG SIGNALS

04 / 22

Runway Designator

A - H

Taxiway Designator



Taxiway Direction, lighted



Location Holding Position, lighted



Runway Distance Remaining, lighted
provides remaining runway length in 1000 feet increments



Black-ice Emergency Warning System



Taxiway Edge Light



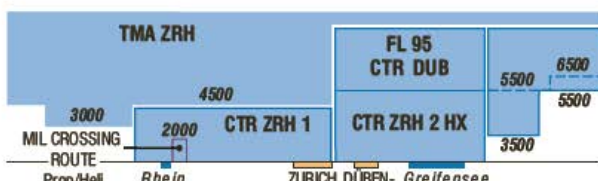
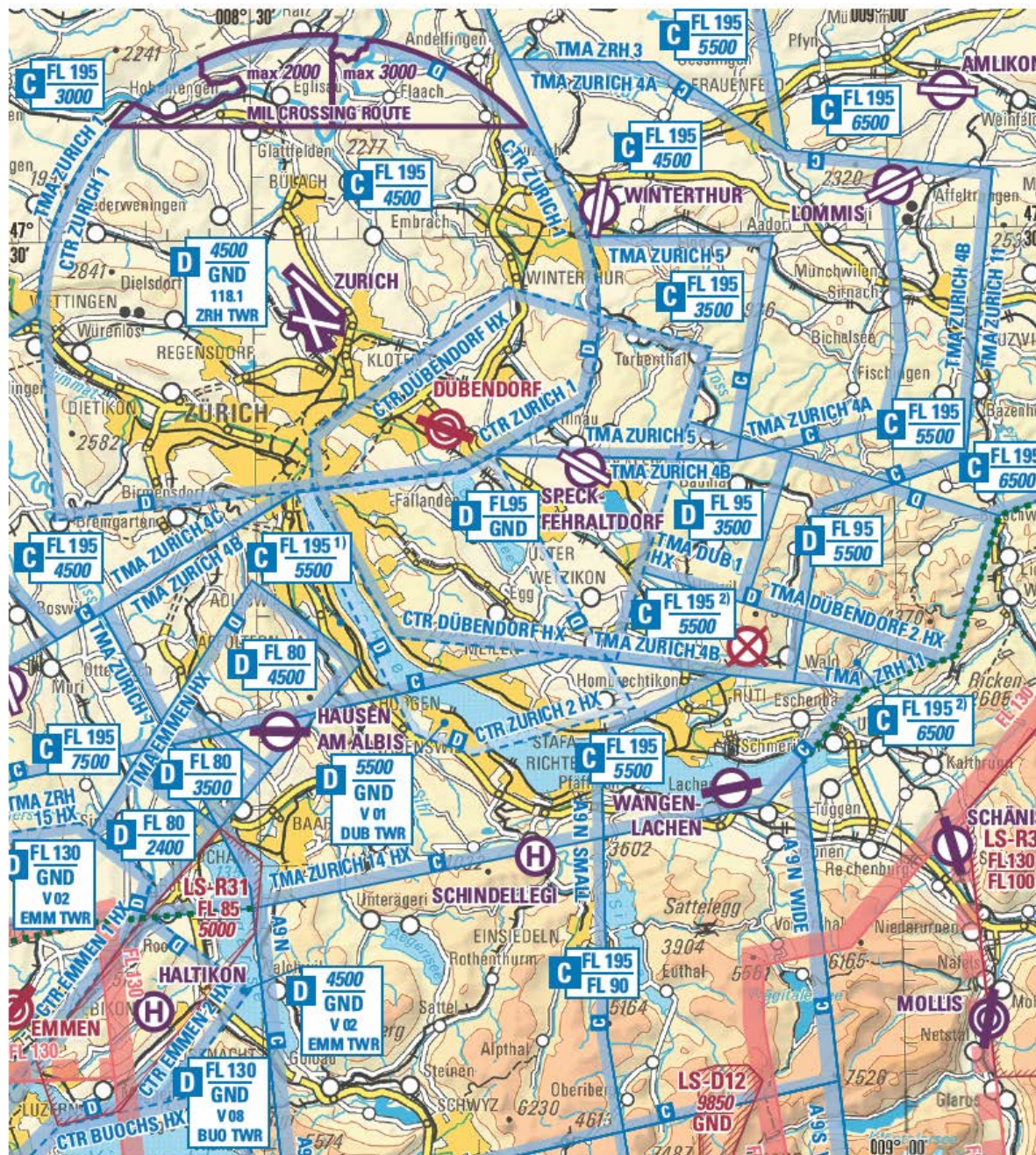
Rotating Beacon

AERA CHART

DUEBENDORF (LSMD)

ARR	TWR	DEP	VAR: 2°09' E (2015.5)
134.925	118.975	134.925	

VFR AREA CHARTS



- 1) Flights until 6000 (when LSZH RWY34 in use) or flights until FL80 (O/R FL90) are cleared by:
 - EMM TWR when EMM ON,
 - DUB TWR when EMM OFF.
- 2) Flights until FL 120 are cleared by:
 - DUB TWR when DUB ON
 - APP ZURICH when DUB OFF.

When LSZH RWY34 in use see GEN
Without CLR CTR/TMA DUB MAX 6000ft AMSL

COR: editorial (WEF 10OCT2019)

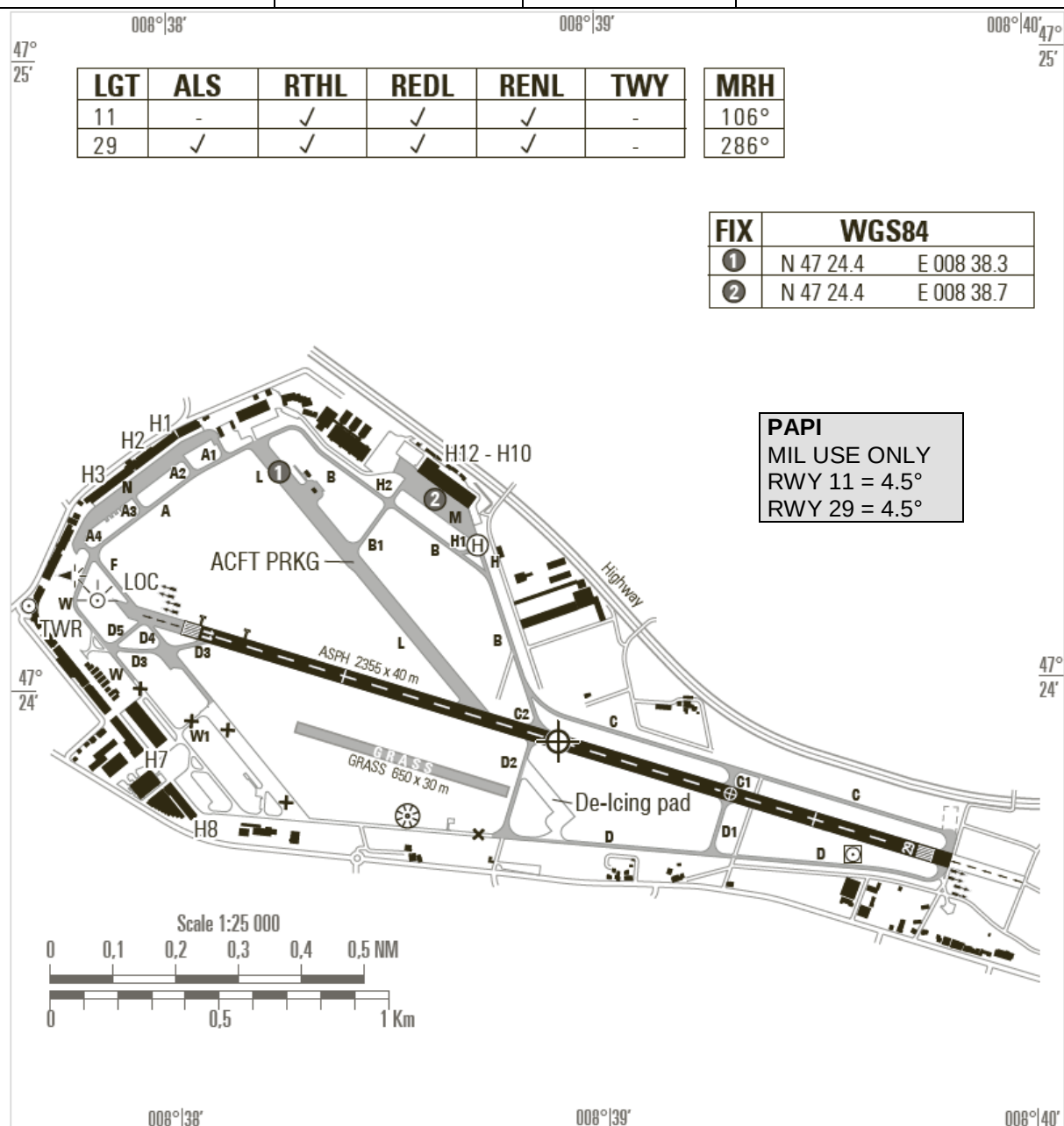
DUB 19

AERODROME CHART

AERODROME CHART

DUEBENDORF (LSMD)

ARR	TWR	DEP	VAR: 2°09' E (2015.5)
134.925	118.975	134.925	



RWY width 40m / 131ft

Slope RWY 11: +0.52%
RWY 29: -0.52%

TWY width 10m / 33ft

Helicopters max overall width
WEF HELIPAD 18m

DUB 20

TAXI PROCEDURE

ARR

TWR

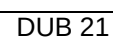
DEP

VAR: 2°09' E
(2015.5)

134.925

118.975

134.925

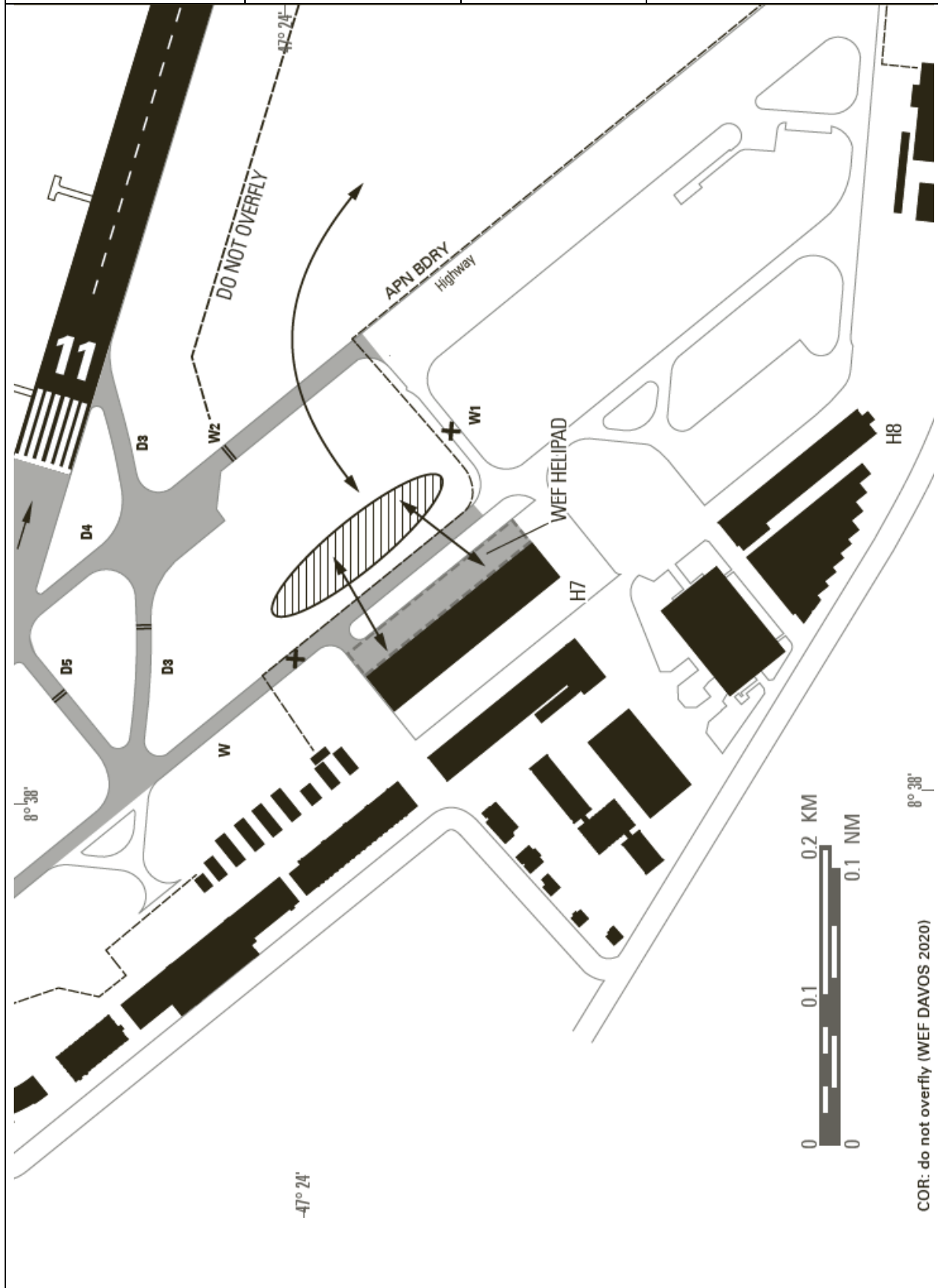


TAXI PROCEDURE HEL

TAXI PROCEDURE & HELIPAD SITUATION

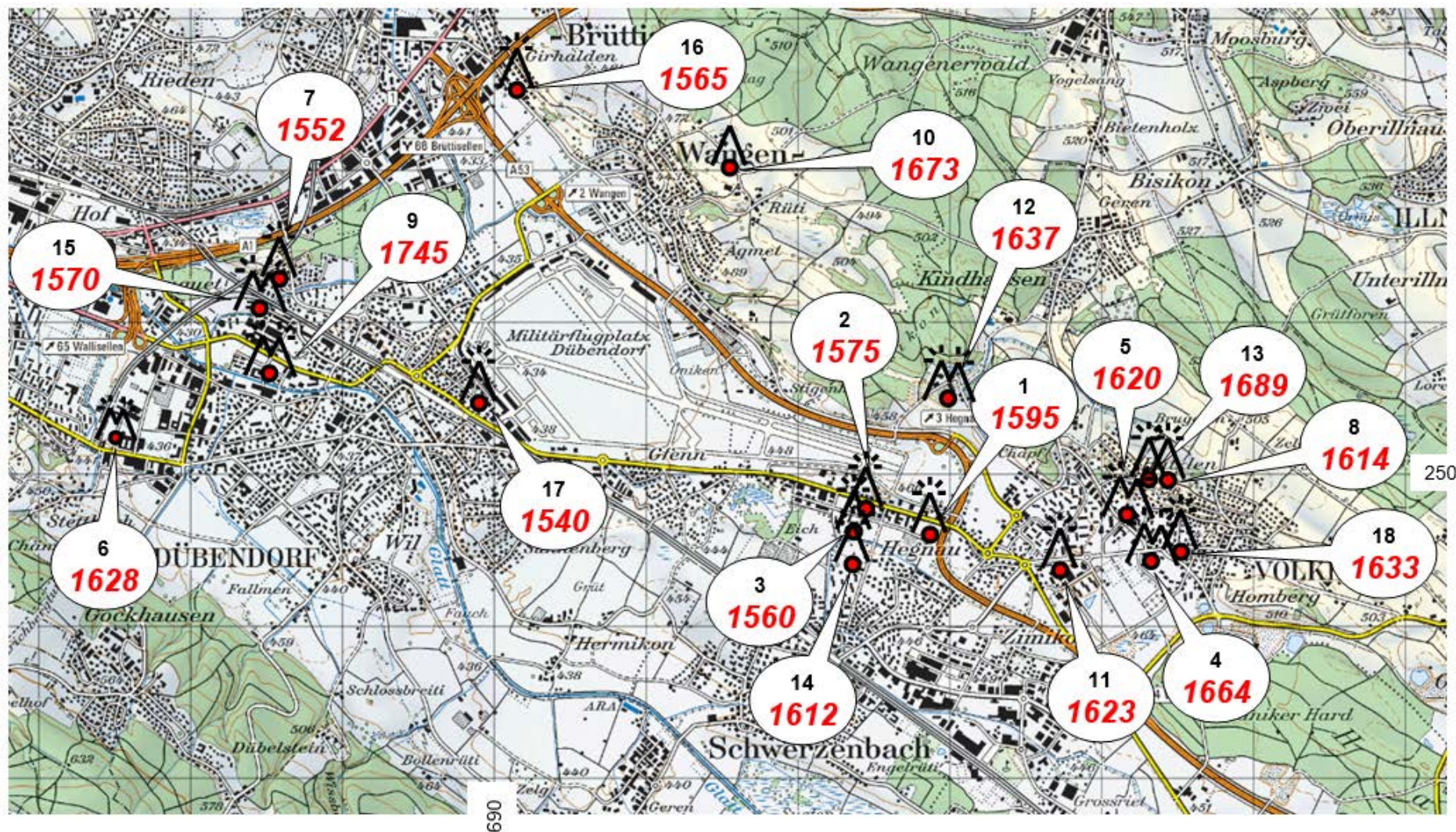
DUEBENDORF (LSMD)

ARR	TWR	DEP	VAR: 2°09' E (2015.5)
134.925	118.975	134.925	



DUB 22

OBSTACLES AND CRANES CHART



NMLC72/2019: last update 29.10.2019

DUB 23

OBSTACLES AND CRANES

Nr auf Karte (siehe Rückseite):	1	2	3	4
Art:	Baukran	Baukran	Baukran	Krangruppe
Standort:	Zürcherstrasse Volketswil 0.6km SE THR 29	Maiaherstrasse Volketswil ~0.4km S THR29	Maiaherstrasse Volketswil ~0.5km S THR29	Neuwiesenstrasse 21 Volketswil ~ 2km ESE THR 29
Koordinaten:	692'920 / 249'620	692'326 / 249'843	692'362 / 249'634	694335 / 249362
Höhe:	35m (485m/1595ft AMSL)	35m (480m/1575ft AMSL)	25m (475m/1560ft AMSL)	46m (508m/1664ft AMSL)
Markierungen:	Tagesmarkierung und Nachtbefeuerung vorhanden	Tagesmarkierung und Nachtbefeuerung vorhanden	Tagesmarkierung und Nachtbefeuerung vorhanden	Tagesmarkierung und Nachtbefeuerung vorhanden
Dauer:	UFN	UFN	UFN	UFN

Nr auf Karte (siehe Rückseite):	5	6	7	8 (neu)
Art:	Krangruppe	Krangruppe	Baukran	Baukran
Standort:	Wallbergstrasse 35 Volketswil ~ 1.7 km ESE THR 29	Zürichstrasse Dübendorf ~ 2.5km WSW THR11	Föhrlibuckstrasse 11 Dübendorf ~ 1.7 km WNW THR 11	Walbergstrasse 5-9 Volketswil ~ 1.8 km W THR 29
Koordinaten:	694160 / 249725	687751 / 250252	688569 / 251308	694181 / 249700
Höhe:	23m (494m/ 1620ft AMSL)	~ 60m (496m / 1628ft AMSL)	27m (473m/ 1552ft AMSL)	21m (492m / 1614ft AMSL)
Markierungen:	Tagesmarkierung und Nachtbefeuerung vorhanden	Tagesmarkierung und Nachtbefeuerung vorhanden	Tagesmarkierung und Nachtbefeuerung vorhanden	Tagesmarkierung und Nachtbefeuerung vorhanden
Dauer:	UFN	UFN	UFN	UFN

Nr auf Karte (siehe Rückseite):	9	10 (neu)	11	12
Art:	Krangruppe	Baukran	Baukran	Krangruppe
Standort:	Florastrasse Dübendorf ~ 1.5km W THR11	Im Stutz 21 Wangen ~ 1.6 km N THR 11	Im Zentrum 18 Volketswil ~ 1.4km SE THR29	Schützenstrasse 55 Volketswil ~ 0.7 km NE THR 29
Koordinaten:	688608 / 250652	691319 / 251929	693727 / 249367	692949 / 250494
Höhe:	100m (532m / 1745ft AMSL)	30m (510m/ 1673ft AMSL)	32m (495m / 1623ft AMSL)	28m (599m / 1637ft AMSL)
Markierungen:	Tagesmarkierung und Nachtbefeuerung vorhanden	Keine	Tagesmarkierung und Nachtbefeuerung vorhanden	Tagesmarkierung und Nachtbefeuerung vorhanden
Dauer:	UFN	UFN	UFN	UFN

OBSTACLES AND CRANES

Nr auf Karte (siehe Rückseite):	13	14	15	16
Art:	Baukran	Baukran	Krangruppe	Baukran
Standort:	Huzlenstrasse 13 Volketswil ~ 1.8 km E THR 29	Hellwisstrasse 4 Volketswil ~ 0.7 km S THR 29	Überlandstrasse 133 Dübendorf ~ 1.6 km WNW THR 11	Haldenstrasse 47 Brüttisellen ~ 1.7 km N THR 11
Koordinaten:	694280 / 249935	692381 / 249401	688469 / 251071	690129 / 252528
Höhe:	20m (515m/ 1689ft AMSL)	46m (492m / 1612ft AMSL)	45m (479m/ 1570ft AMSL)	39m (477m/ 1565ft AMSL)
Markierungen:	Tagesmarkierung und Nachtbefeuerung vorhanden	Tagesmarkierung und Nachtbefeuerung vorhanden	Tagesmarkierung und Nachtbefeuerung vorhanden	Tagesmarkierung und Nachtbefeuerung vorhanden
Dauer:	UFN	UFN	UFN	UFN

Nr auf Karte (siehe Rückseite):	17	18 (neu)	19	20
Art:	Baukran	Baukran		
Standort:	Kunklerstrasse 40 Dübendorf ~ 0.4 km SSW THR 11	Zentralstrasse 5 Volketswil ~ 2.2 km W THR 29		
Koordinaten:	689885 / 250451	694476 / 249496		
Höhe:	31m (470m/ 1540ft AMSL)	32m (498m/ 1633ft AMSL)		
Markierungen:	Tagesmarkierung und Nachtbefeuerung vorhanden	Tagesmarkierung und Nachtbefeuerung vorhanden		
Dauer:	UFN	UFN		

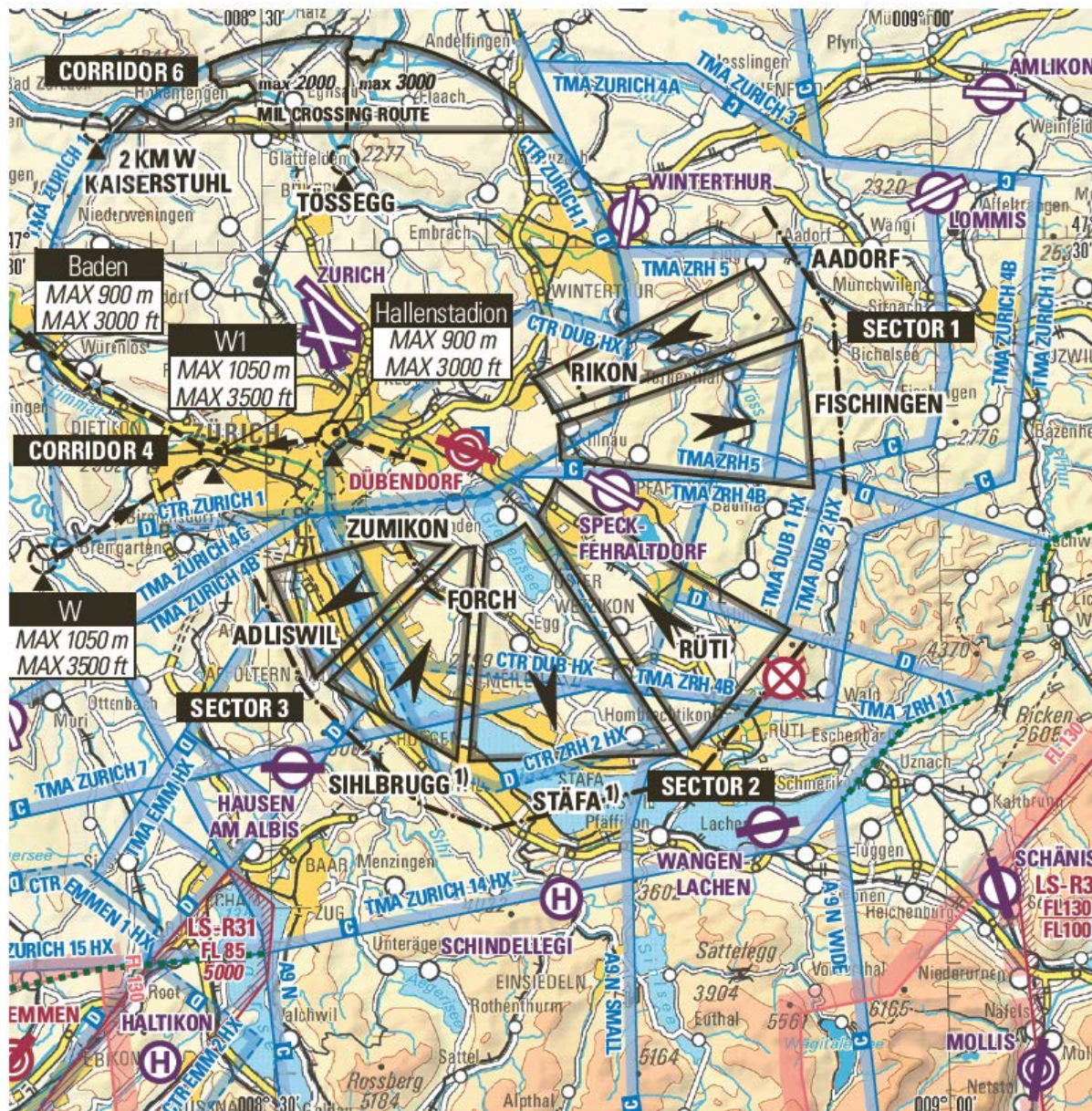
See NOMIL 72/2019 (EFFECTIVE DATE 29.October 2019),
approved by C Op LT DUB on 28.10.2019.

VFR ARR/DEP ROUTES

ARRIVAL/DEPARTURE ROUTES

DUEBENDORF (LSMD)

ARR	TWR	DEP	VAR: 2°09' E (2015.5)
134.925	118.975	134.925	



- 1) When LSZH RWY34 or RWY28 in use see VFR GENERAL



Reporting Line



Subject to Authorization by ATC



See VFR GENERAL

Without CLR CTR/TMA DUB MAX
6000ft AMSL

Scale 1:500 000



HEL VFR ARR / DEP ROUTES

DUEBENDORF (LSMD)



INFO	ARR	APP	TWR	DEP	VAR
V/U 10	V/U 11	V/U 29	V/U 01	V/U 11 V/U 29	2° 09' E (2015.5)

Avoid cities and isolated houses!

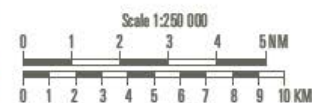
----- 300 m / 1000 ft AGL

 If instruction by TWR "LOW ALTITUDE": 100 m / 350 ft AGL

When LSZH RWY34 in use see DUB 5

For Obstacles see Obstacle Chart 1:100 000

Without CLR CTR/TMA DUB MAX 6000ft AMSL



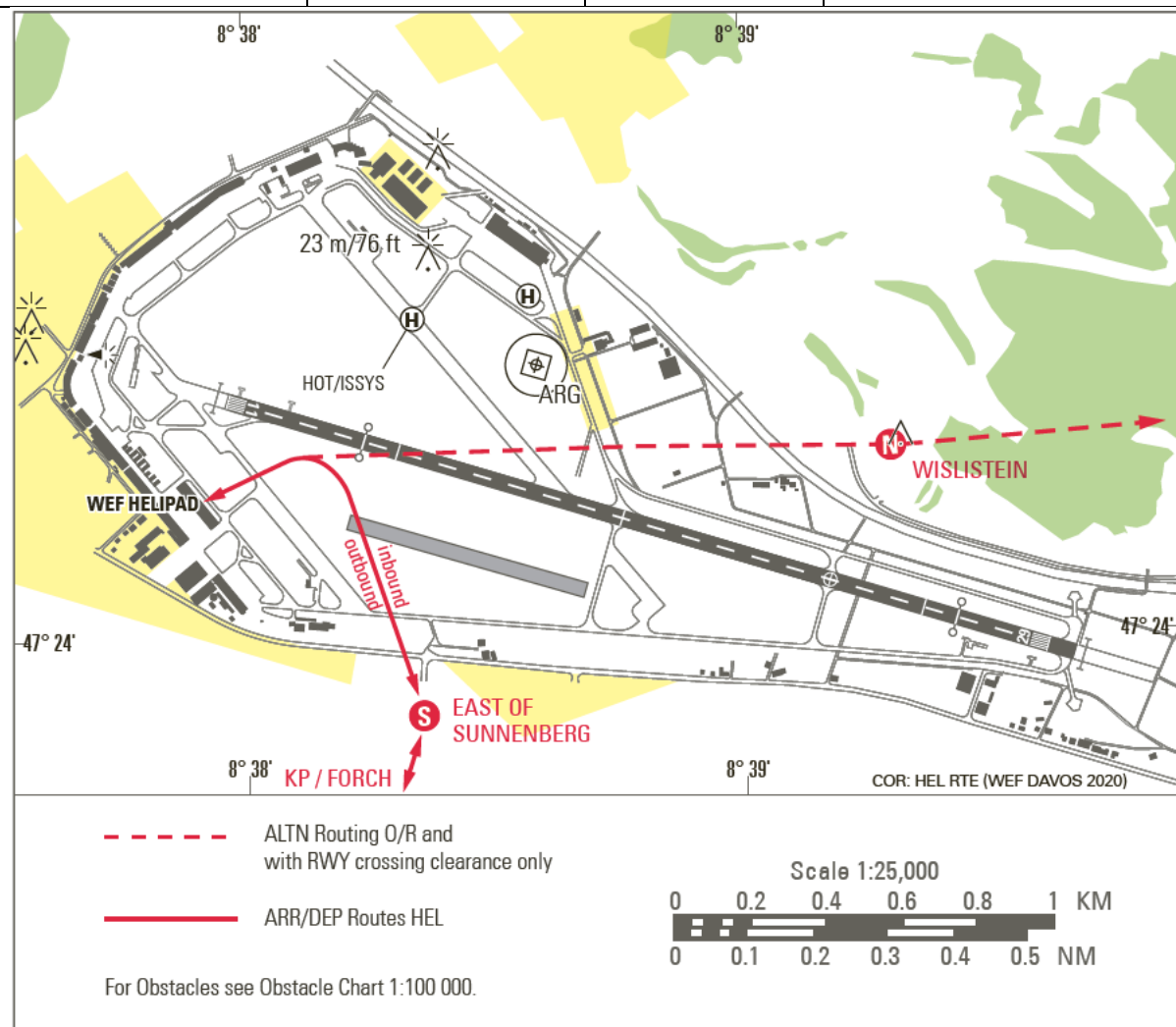
DUB 27

VFR ARR/DEP ROUTES

HEL LANDING CHART

DUEBENDORF (LSMD)

ARR	TWR	DEP	VAR: 2°09' E (2015.5)
134.925	118.975	134.925	



ARRIVAL CORRIDOR from the SOUTH	At least 200 m/GND / 600ft/AGL to "S", then descend for landing max. 90 KTS. Cross the RWY only with CLR! If TWR instruction "LOW ALTITUDE" 100 m/GND / 350ft/AGL to "S", then descend for landing.
DEPARTURE CORRIDOR to the SOUTH	Climb immediately to 200 m/GND / 600 ft/AGL. Cross the RWY only with CLR. If TWR instruction "LOW ALTITUDE", climb at aerodrome fence to 100 m/GND / 350ft/AGL. Remain at this Altitude to Lake Greifensee.
ARRIVAL CORRIDOR from the NORTH	200m/GND / 600ft/AGL to „N“, then descend for landing max. 90 KTS. If TWR instruction "LOW ALTITUDE" descend to 100m/GND / 350ft/AGL to "N", then descend for landing.
DEPARTURE CORRIDOR to the NORTH	Climb immediately to 200m/GND / 600ft/AGL. If TWR instruction "LOW ALTITUDE" climb to 100m/GND / 350ft/AGL and remain at this altitude to Russikon.

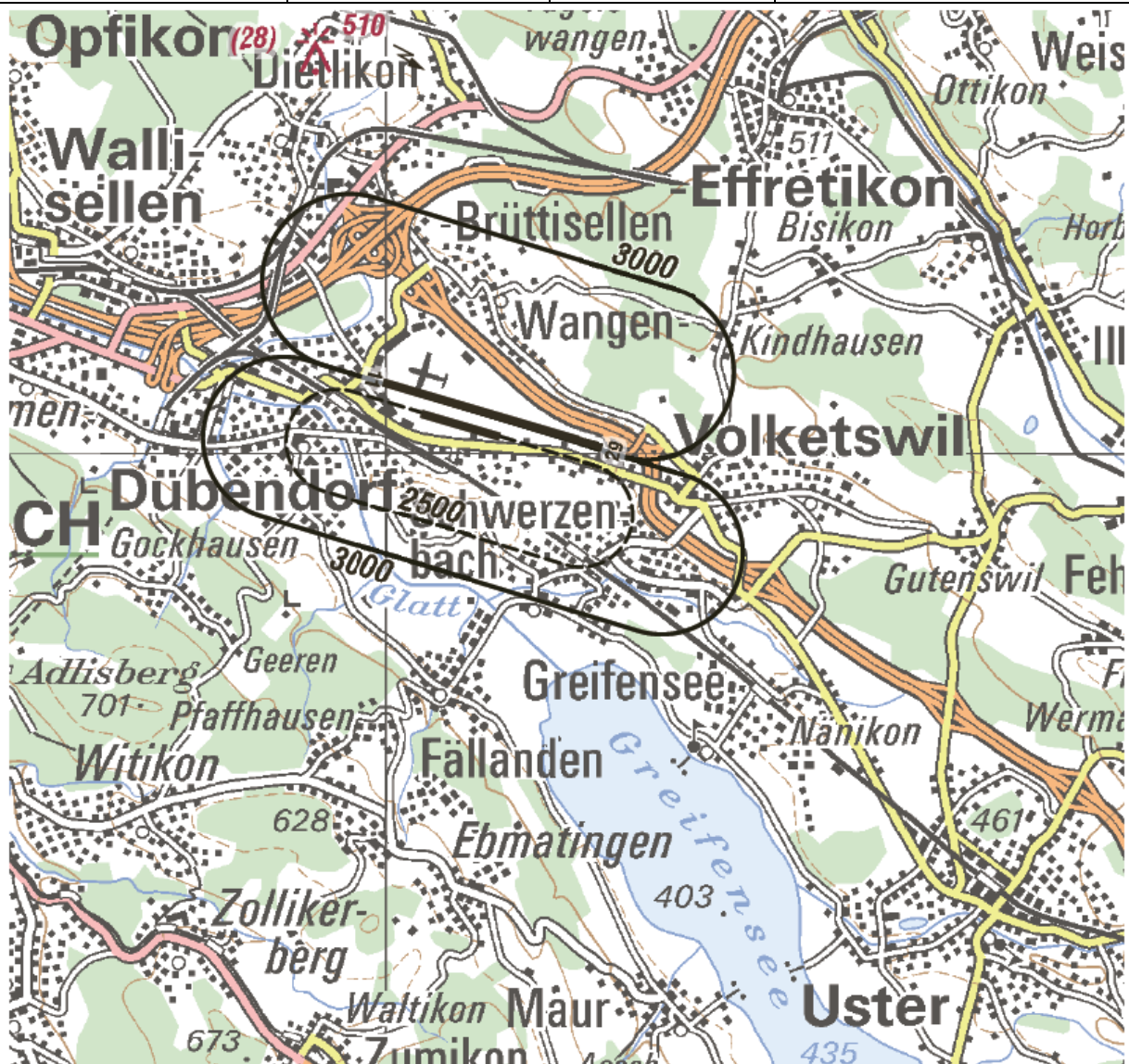
DUB 28

VFR LANDING CHART

LANDING CHART

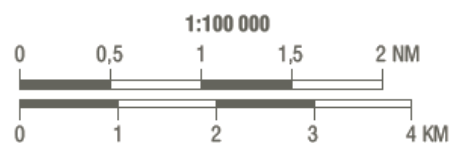
DUEBENDORF (LSMD)

ARR	TWR	DEP	VAR: 2°09' E (2015.5)
134.925	118.975	134.925	



———— 3000 or according ATC

----- 2500



For Obstacles see Obstacle Chart 1:100 000

Without CLR CTR/TMA DUB MAX 6000ft AMSL

COR: editorial (WEF 10OCT2019)

DUB 29

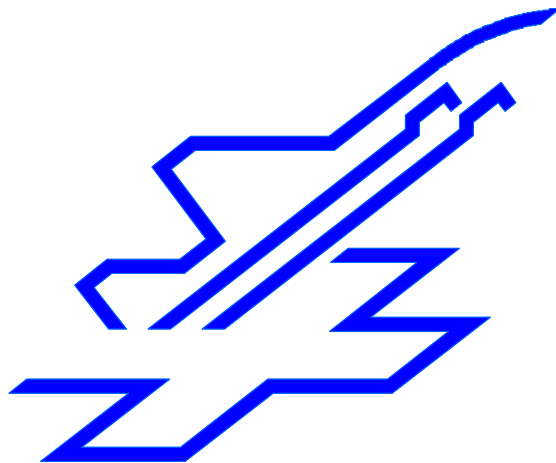
SWISS AIR FORCE
Air Crew Guide for World Economic Forum 2020

Part Two

IFR

WEF 2020 only

Valid from January 17th to 26th 2020



DUB 30

IFR GENERAL

GENERAL

CIVIL AIRCRAFT AT MILITARY AIRBASE LSMD

Dübendorf is a military airbase which does not meet all requirements according to ICAO Annex 14.

Several installations such as the PAPI and the approach light system are not compliant with civil standards and shall be disregarded for flight planning and operation.

SAFA CHECKS

Expect random SAFA spot checks by FOCA after landing.

Civil users are advised to take the following into consideration:

ILS APCH PROCEDURES

While the ILS 29 radio-signal fulfills the requirements as per ICAO Annex 10, the approach leads to a non-instrument runway according to ICAO Annex 14. Therefore the ILS is uncategorized.

ILS RWY 29 STEEP APCH

The ILS RWY 29 has a glidepath of 4.5° and is therefore considered as steep approach. A/C must be certified and crew must be trained to conduct steep approach. No exceptions to this regulation are granted. For A/C and/or crew unable to use steep approaches a RNAV (GNSS) APCH "W" RWY 29 is available with a glidepath of 4.4° offering both LPV and LNAV MNM.

For more details see DUB 40 (ILS) and DUB 42 (RNAV "W").

PAPI (Precision Approach Path Indicator) MIL use only

RWY 11 = 4.5°

RWY 29 = 4.5°

Minima for IFR departures (TKOF minima)

RWY	ACFT CAT	RVR (m) / Ceiling (ft AGL)		RMK
		No LGT AVBL	REDL AVBL	
All	A-D	800 / --	400 / --	NIL
All	H	800 / --	400 / --	NIL

RNAV APCH

RNAV (GNSS) X,Y and Z not available during WEF.

DEFINITION OF APPROACH-TIME / APPROACH FIX

Approach-time starts at the FAF/FAP (final approach fix / -point) of the RWY used for IFR approach.

Hereby, the FAF/-FAP is the point of descent, at which the IFR final approach procedure (ILS, RNAV, LOC) is initiated.

IFR GENERAL

ILS / RNAV APPROACH PROCEDURES

Uncategorized ILS approach RWY 29 due to runway type: Non-instrument runway.
 ILS 29 signal fulfills ICAO Annex 10, CAT I specifications.
 Steep approach.

APPLICABLE MNM FOR ACFT CAT A-D: DH 500ft (1970ft/AMSL)

RADIO NAVIGATION AND LANDING AIDS

TYPE CATEGORY (VARIATION)		ID	FREQUENCY	HOURS OF OPERATION	SITE OF TRANSMITTING ANTENNA COORDINATES	ELEVATION OF DME TRANSMITTING ANTENNA [m]	REMARKS / RESTRICTIONS
ILS 29 LOC UNCAT		IDU	111.15 MHz	H24	47° 24' 08.59"N 008° 37' 48.59"E		LLZ: 17NM -35°S... 30° N 5300ft QNH 25NM + 10° 7300ft QNH DME: 17NM -35°S... 30° N 5300ft QNH 25NM + 10° 7300ft QNH GP: no restriction
GP 29				H24	47° 23' 43.51"N 008° 39' 34.45"E		GP Angle 4.5°
DME 29				H24	47° 23' 43.28"N 008° 39' 34.24"E	446.3	

RESTRICTIONS

LSZH RWY 28 in use

When ILS RWY 28 at LSZH is in operation, DUB will be limited to 6000 ft.

- Line-up from the SW
- IFR SID are possible, expect delay

LSZH RWY 34 in use

Expect significant delay (or routing to ALTN in exceptional cases depending on traffic amount of LSZH). Preferred DEP RWY11.

Expect IFR APCH RWY29 with straight-in LDG. (Circling to RWY11 available in exceptional cases only).

IFR GENERAL - HEL

FLIGHTS FROM DAVOS (LSMV) TO ZURICH (LSZH)

ICAO flight plan "Z" with Destination LSMD (Alternate LSZH) mandatory.
Item 18: RMK/REQ ARR MSG TO LSMDYWYA NO LDG AT LSMD

For the flight plan to be accepted joining via ZUE has to be filled in.

METEO MINIMA

Be aware entering CTR LSZH requires 2000m VIS.

In any case at IDU DME3.0 visual contact compulsory to complete the APCH in VMC via Route S or Route 4B/4G.

If no visual contact, G/A has to be initiated.

COPTER IFR DEPARTURES RWY 11

COPTER RNAV SID LS110 1K not available for civil HEL Operators during WEF 2020.

IFR CHART LEGEND / TABLES

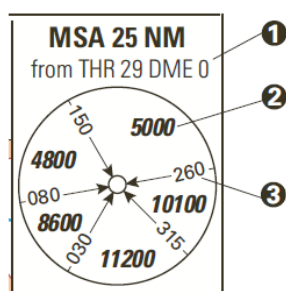
Altitude corrections at low OAT

The temperature correction on altitude effects the following published altitudes, which therefore should be increased whenever the OAT is below -15°C on the aerodrome:

OAT (°C)	Height above elevation of the altimeter setting source (feet)													
	200	300	400	500	600	700	800	900	1000	1500	2000	3000	4000	5000
0	20	20	30	30	40	40	50	50	60	90	120	170	230	280
-10	20	30	40	50	60	70	80	90	100	150	200	290	390	490
-20	30	50	60	70	90	100	120	130	140	210	280	420	570	710
-30	40	60	80	100	120	140	150	170	190	280	380	570	760	950
-40	50	80	100	120	150	170	190	220	240	360	480	720	970	1210
-50	60	90	120	150	180	210	240	270	300	450	590	890	1190	1500

MINIMUM SECTOR ALTITUDE (MSA)

NOTE: Normal coverage is a 25 NM radius from the forming facility/fix. If the protected coverage is other than 25 NM, that radius is depicted below the forming facility/fix. If the depiction of the MSA is feasible on the MAP VIEW the MSA BOX will not be shown.



- ❶ Navaid/Fix/ARP the MSA is predicated on.
- ❷ Minimum sector altitude.
- ❸ Sector defining Radial/Bearing, always depicted inbound for the Navaid, Fix or Aerodrome Reference Point (ARP).

GRADIENT TO RATE TABLE

TABLES

GRADIENT TO RATE TABLE

This table provides a RATE OF CLIMB (ROC) or DESCEND (ROD) in feet per minute below the GROUND SPEED IN KNOTS for the gradient shown in FEET PER NAUTICAL MILE, DEGREES and PER CENT at the left. This table is for use in climbs, descends from altitude and non-precision instrument approach procedures.

GRADIENT			GROUND SPEED IN KNOTS													
ft/NM	°	%	60	70	80	100	120	140	150	160	180	200	250	300	350	400
300	2.83°	4.94	300	350	400	500	600	700	750	800	900	1000	1250	1500	1750	2000
320	3.02°	5.27	320	373	427	533	640	747	800	853	960	1067	1333	1600	1867	2133
340	3.20°	5.60	340	397	453	567	680	793	850	907	1020	1133	1417	1700	1983	2267
360	3.39°	5.92	360	420	480	600	720	840	900	960	1080	1200	1500	1800	2100	2400
380	3.58°	6.25	380	443	507	633	760	887	950	1013	1140	1267	1583	1900	2217	2533
400	3.77°	6.58	400	467	533	667	800	933	1000	1067	1200	1333	1667	2000	2333	2667
420	3.96°	6.91	420	490	560	700	840	980	1050	1120	1260	1400	1750	2100	2450	2800
440	4.14°	7.24	440	513	587	733	880	1027	1100	1173	1320	1467	1833	2200	2567	2933
460	4.33°	7.57	460	537	613	767	920	1073	1150	1227	1380	1533	1917	2300	2683	3067
480	4.52°	7.90	480	560	640	800	960	1120	1200	1280	1440	1600	2000	2400	2800	3200
500	4.70°	8.23	500	583	667	833	1000	1167	1250	1333	1500	1667	2083	2500	2917	3333
520	4.89°	8.56	520	607	693	867	1040	1213	1300	1387	1560	1733	2167	2600	3033	3467
540	5.08°	8.89	540	630	720	900	1080	1260	1350	1440	1620	1800	2250	2700	3150	3600
560	5.27°	9.22	560	653	747	933	1120	1307	1400	1493	1680	1867	2333	2800	3267	3733
580	5.45°	9.55	580	677	773	967	1160	1353	1450	1547	1740	1933	2417	2900	3383	3867
600	5.64°	9.88	600	700	800	1000	1200	1400	1500	1600	1800	2000	2500	3000	3500	4000
620	5.83°	10.20	620	723	827	1033	1240	1447	1550	1653	1860	2067	2583	3100	3617	4133
640	6.01°	10.53	640	747	853	1067	1280	1493	1600	1707	1920	2133	2667	3200	3733	4267
660	6.20°	10.86	660	770	880	1100	1320	1540	1650	1760	1980	2200	2750	3300	3850	4400
680	6.39°	11.19	680	793	907	1133	1360	1587	1700	1813	2040	2267	2833	3400	3967	4533
700	6.57°	11.52	700	817	933	1167	1400	1633	1750	1867	2100	2333	2917	3500	4083	4667
720	6.76°	11.85	720	840	960	1200	1440	1680	1800	1920	2160	2400	3000	3600	4200	4800
740	6.94°	12.18	740	863	987	1233	1480	1727	1850	1973	2220	2467	3083	3700	4317	4933
760	7.13°	12.51	760	887	1013	1267	1520	1773	1900	2027	2280	2533	3167	3800	4433	5067
780	7.32°	12.84	780	910	1040	1300	1560	1820	1950	2080	2340	2600	3250	3900	4550	5200
800	7.50°	13.17	800	933	1067	1333	1600	1867	2000	2133	2400	2667	3333	4000	4667	5333
820	7.69°	13.50	820	957	1093	1367	1640	1913	2050	2187	2460	2733	3417	4100	4783	5467
840	7.87°	13.82	840	980	1120	1400	1680	1960	2100	2240	2520	2800	3500	4200	4900	5600
860	8.06°	14.15	860	1003	1147	1433	1720	2007	2150	2293	2580	2867	3583	4300	5017	5733
880	8.24°	14.48	880	1027	1173	1467	1760	2053	2200	2347	2640	2933	3667	4400	5133	5867
900	8.43°	14.81	900	1050	1200	1500	1800	2100	2250	2400	2700	3000	3750	4500	5250	6000
920	8.61°	15.14	920	1073	1227	1533	1840	2147	2300	2453	2760	3067	3833	4600	5367	6133
940	8.79°	15.47	940	1097	1253	1567	1880	2193	2350	2507	2820	3133	3917	4700	5483	6267
960	8.98°	15.80	960	1120	1280	1600	1920	2240	2400	2560	2880	3200	4000	4800	5600	6400
980	9.16°	16.13	980	1143	1307	1633	1960	2287	2450	2613	2940	3267	4083	4900	5717	6533

TABLES

GRADIENT			GROUND SPEED IN KNOTS													
ft/NM	°	%	60	70	80	100	120	140	150	160	180	200	250	300	350	400
1000	9.35°	16.46	1000	1167	1333	1667	2000	2333	2500	2667	3000	3333	4167	5000	5833	6667
1020	9.53°	16.79	1020	1190	1360	1700	2040	2380	2550	2720	3060	3400	4250	5100	5950	6800
1040	9.71°	17.12	1040	1213	1387	1733	2080	2427	2600	2773	3120	3467	4333	5200	6067	6933
1060	9.90°	17.45	1060	1237	1413	1767	2120	2473	2650	2827	3180	3533	4417	5300	6183	7067
1080	10.08°	17.77	1080	1260	1440	1800	2160	2520	2700	2880	3240	3600	4500	5400	6300	7200
1100	10.26°	18.10	1100	1283	1467	1833	2200	2567	2750	2933	3300	3667	4583	5500	6417	7333
1120	10.44°	18.43	1120	1307	1493	1867	2240	2613	2800	2987	3360	3733	4667	5600	6533	7467
1140	10.63°	18.76	1140	1330	1520	1900	2280	2660	2850	3040	3420	3800	4750	5700	6650	7600
1160	10.81°	19.09	1160	1353	1547	1933	2320	2707	2900	3093	3480	3867	4833	5800	6767	7733
1180	10.99°	19.42	1180	1377	1573	1967	2360	2753	2950	3147	3540	3933	4917	5900	6883	7867
1200	11.17°	19.75	1200	1400	1600	2000	2400	2800	3000	3200	3600	4000	5000	6000	7000	8000
1300	12.08°	21.40	1300	1517	1733	2167	2600	3033	3250	3467	3900	4333	5417	6500	7583	8667
1400	12.98°	23.04	1400	1633	1867	2333	2800	3267	3500	3733	4200	4667	5833	7000	8167	9333
1500	13.87°	24.69	1500	1750	2000	2500	3000	3500	3750	4000	4500	5000	6250	7500	8750	10000
1600	14.75°	26.33	1600	1867	2133	2667	3200	3733	4000	4267	4800	5333	6667	8000	9333	10667
1700	15.63°	27.98	1700	1983	2267	2833	3400	3967	4250	4533	5100	5667	7083	8500	9917	11333
1800	16.50°	29.62	1800	2100	2400	3000	3600	4200	4500	4800	5400	6000	7500	9000	10500	12000
1900	17.36°	31.27	1900	2217	2533	3167	3800	4433	4750	5067	5700	6333	7917	9500	11083	12667
2000	18.22°	32.92	2000	2333	2667	3333	4000	4667	5000	5333	6000	6667	8333	10000	11667	13333
2100	19.07°	34.56	2100	2450	2800	3500	4200	4900	5250	5600	6300	7000	8750	10500	12250	14000
2200	19.90°	36.21	2200	2567	2933	3667	4400	5133	5500	5867	6600	7333	9167	11000	12833	14667
2300	20.73°	37.85	2300	2683	3067	3833	4600	5367	5750	6133	6900	7667	9583	11500	13417	15333

AERODROME CHART

AERODROME CHART

Elevation 442 m / 1450ft

DUEBENDORF (LSMD)

ARR

TWR

DEP

134.925

118.975

134.925

VAR: 2°09' E
(2015.5)

47°
25'

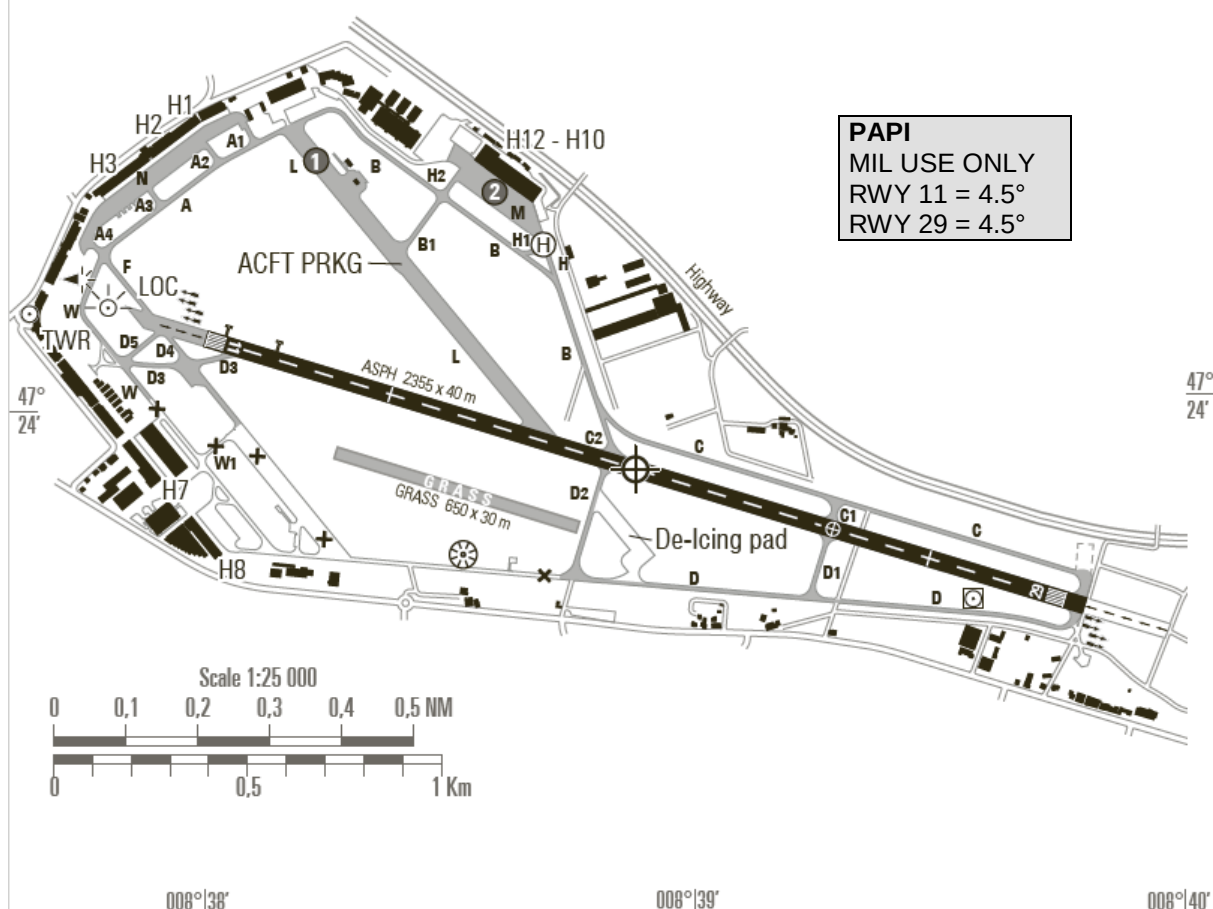
008°|38'

008°|39'

008°|40'
47°
25'

LGT	ALS	RTHL	REDL	RENL	TWY	MRH
11	-	✓	✓	✓	-	106°
29	✓	✓	✓	✓	-	286°

FIX	WGS84	
①	N 47 24.4	E 008 38.3
②	N 47 24.4	E 008 38.7



RWY width 40m / 131ft

Slope RWY 11: +0.52%

RWY 29: -0.52%

TWY width 10m / 33ft

Helicopters max overall width
WEF HELIPAD 18m

STAR TO VIBAX

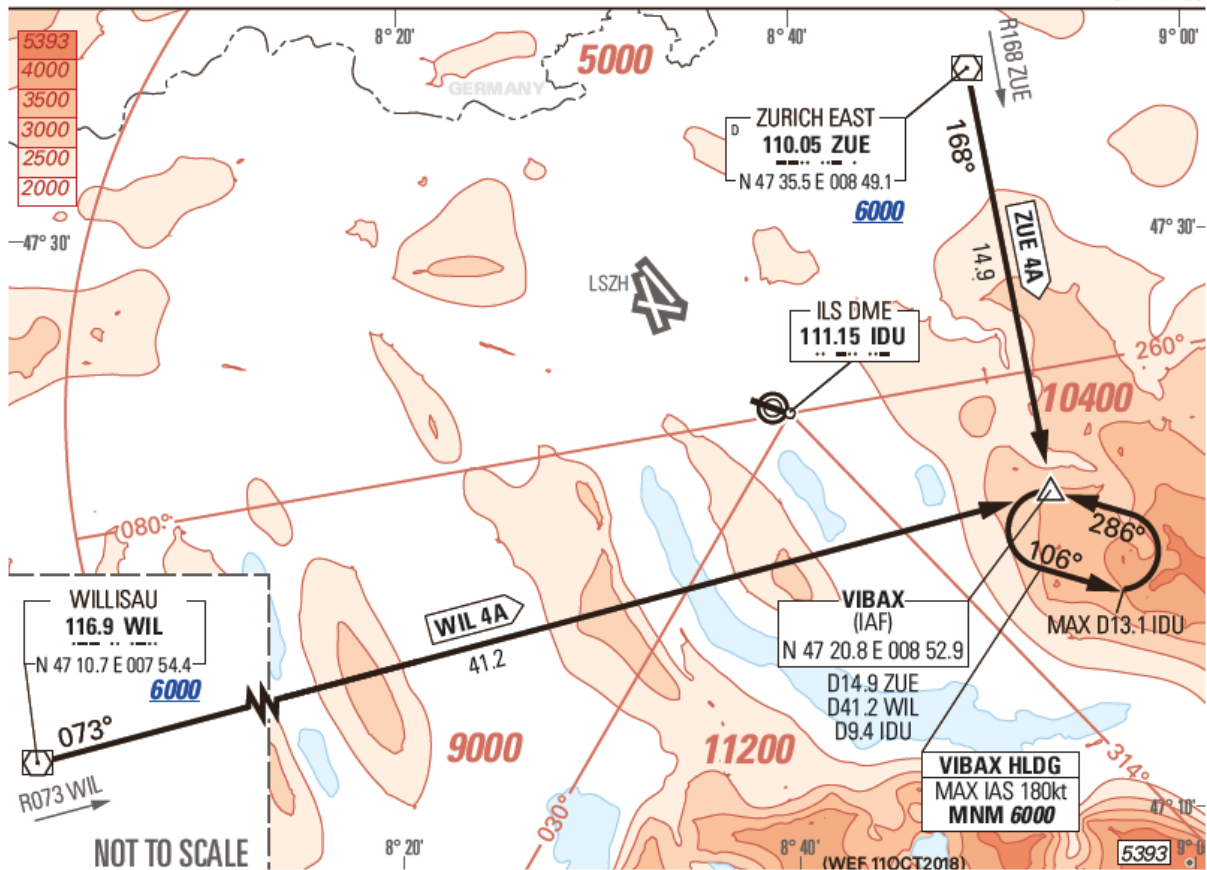
NON RNAV STAR

Elevation 442 m / 1450ft

DUEBENDORF (LSMD)

ARR	TWR	DEP	VAR: 2°09' E (2015.5)
134.925	118.975	134.925	

TRANS LVL: BY ATC
TRANS ALT: 7000



WIL 4A [WIL 4A]

At WIL (MCA 6000) intercept R073 WIL. Proceed to VIBAX.

ZUE 4A [ZUE 4A]

At ZUE (MCA 6000) intercept R168 ZUE. Proceed to VIBAX.

COM FAILURE PROC
squawk 7600

Proceed via STAR to VIBAX. At last received or acknowledged EAT or, if no EAT has been received or acknowledged at FPL ETA, descend in the VIBAX holding pattern to 6000. Carry out a STANDARD INSTRUMENT APCH for the RWY in use.

RNAV 1 STAR

RNAV 1 STAR

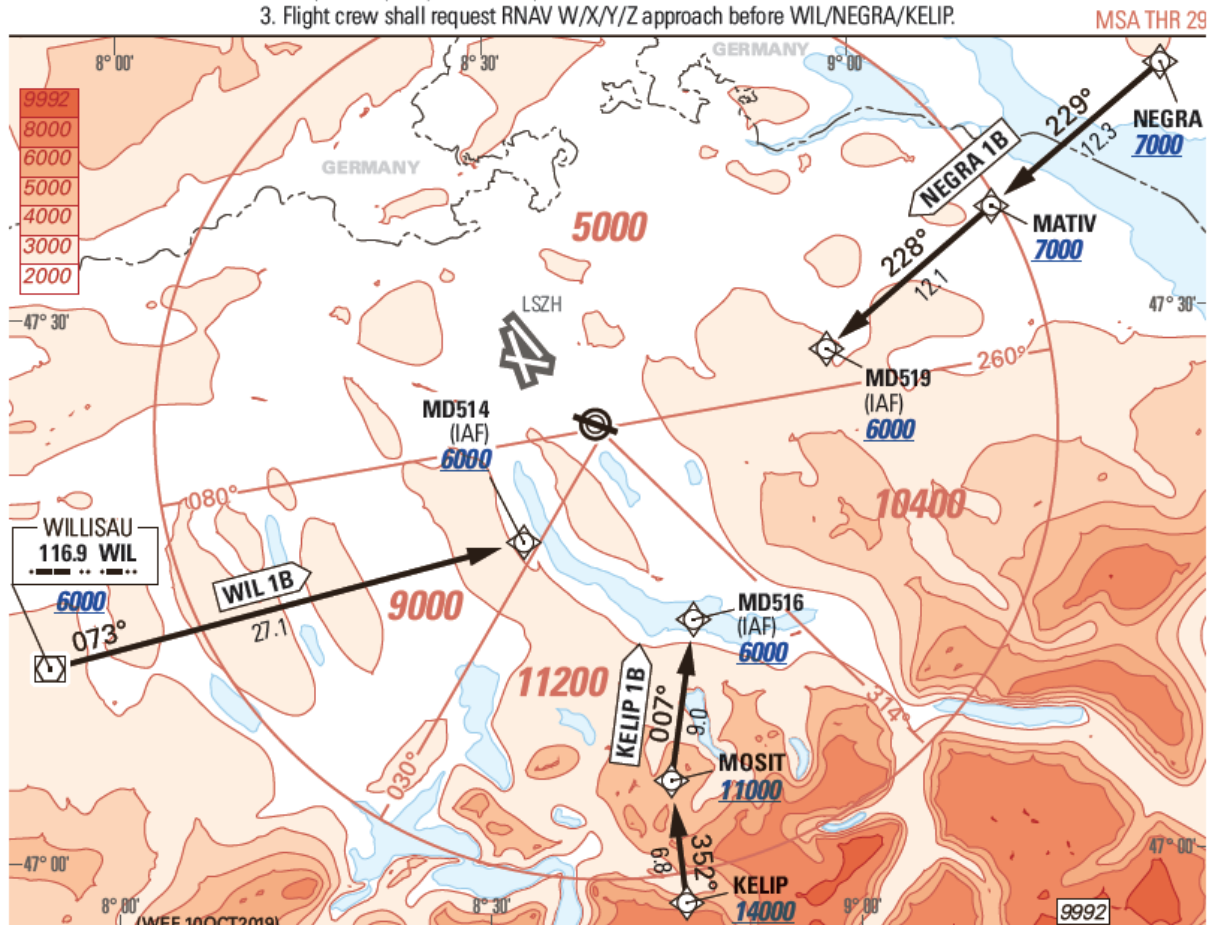
Elevation 442 m / 1450ft

DUEBENDORF (LSMD)

ARR	TWR	DEP	VAR: 2°09' E (2015.5)
134.925	118.975	134.925	

TRANS LVL: BY ATC
TRANS ALT: 7000

1. GNSS required.
2. IFR profiles partly within airspace class E.
3. Flight crew shall request RNAV W/X/Y/Z approach before WIL/NEGRA/KELIP.



WIL 1B [WIL1B]	From WIL (MCA 6000) proceed to MD514 (MCA 6000).
KELIP 1B [KEL11B]	From KELIP (MCA 14000) proceed via MOSIT (MCA 11000) to MD516 (MCA 6000).
NEGRA 1B [NEGR1B]	From NEGRA (MCA 7000) proceed via MATIV (MCA 7000) to MD519 (MCA 6000).

IFR APCH

WAY POINT LIST RNAV 1 STAR

LSMD ELEV 442 m / 1450ft

WAY POINT RNAV 1 STAR LSMD

Name	Type	Coordinates	
		Latitude	Longitude
WIL		47° 10' 41.9" N	007° 54' 21.3" E
MD514	IAF	47° 17' 26.3" N	008° 32' 56.3" E
KELIP		46° 57' 22.3" N	008° 45' 42.0" E
MOSIT		47° 04' 08.7" N	008° 44' 37.7" E
MD516	IAF	47° 13' 02.2" N	008° 46' 37.2" E
NEGRA		47° 43' 20.0" N	009° 25' 37.9" E
MATIV		47° 35' 35.0" N	009° 11' 32.0" E
MD519	IAF	47° 27' 52.2" N	008° 57' 50.6" E

INSTRUMENT APCH CHART

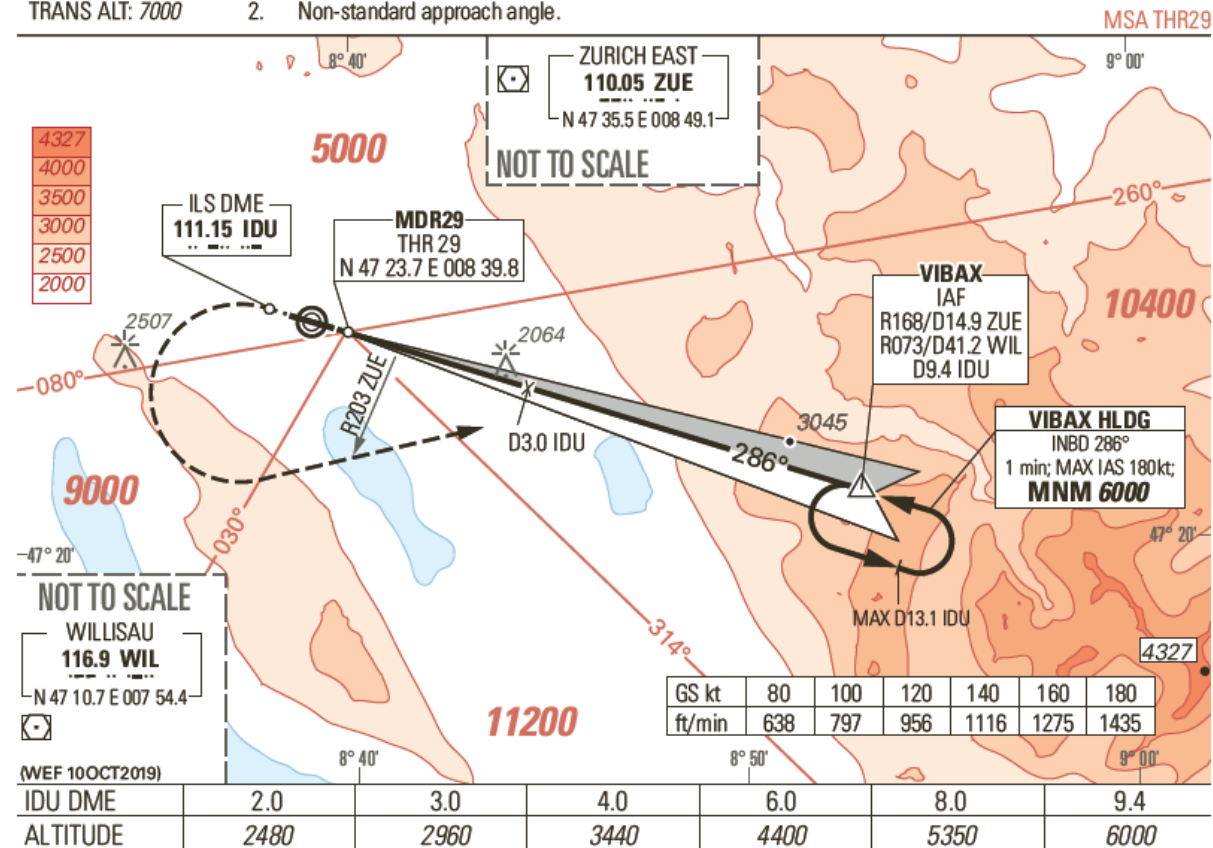
ILS / DME RWY 29

Elevation 442 m / 1450ft

DUEBENDORF (LSMD)

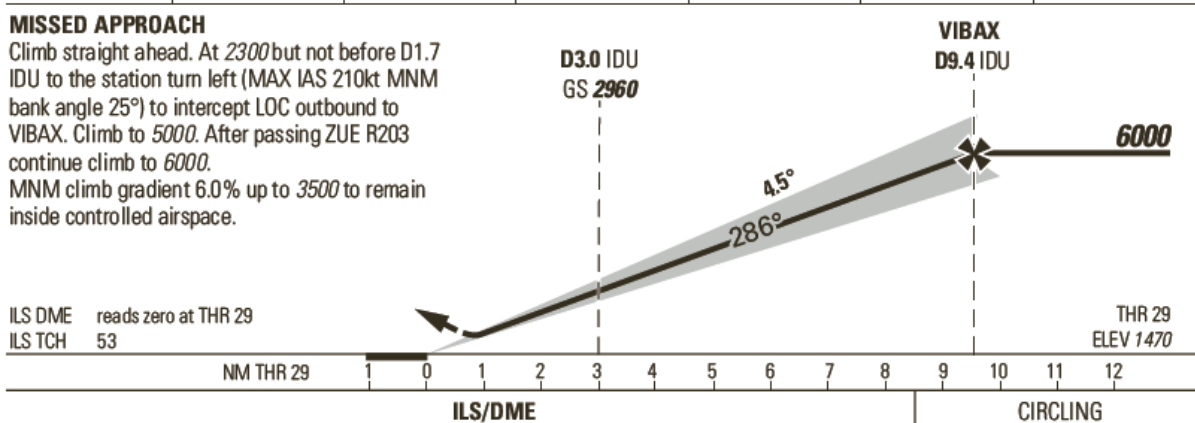
ARR	TWR	DEP	VAR 2°09' E (2015.5)
134.925	118.975	134.925	

- TRANS LVL: BY ATC
TRANS ALT: 7000
1. Circling must remain inside CTR at all time. MAX distance parallel of RWY for all ACFT Cat: 3 NM.
 2. Non-standard approach angle.



MISSED APPROACH

Climb straight ahead. At 2300 but not before D1.7 IDU to the station turn left (MAX IAS 210kt MNM bank angle 25°) to intercept LOC outbound to VIBAX. Climb to 5000. After passing ZUE R203 continue climb to 6000. MNM climb gradient 6.0% up to 3500 to remain inside controlled airspace.



	DA(H)				MDA(H)	VIS
	A: 1871 (401)	B: 1891 (421)	C: 1911 (441)	D: 1927 (457)		
A	FULL				2300 (850)	1500m
B	RVR 1500m				2800 (1350)	1600m
C	RVR 1900m		CMV 2100m		3000 (1550)	2400m
D	RVR 2000m		CMV 2200m		3200 (1750)	3600m

These depicted DA(H) are only for MIL use, according DUB 31 applicable MNM for civil aircraft DH 500ft.

INSTRUMENT APCH CHART

LOC / DME RWY 29

Elevation 442 m / 1450ft

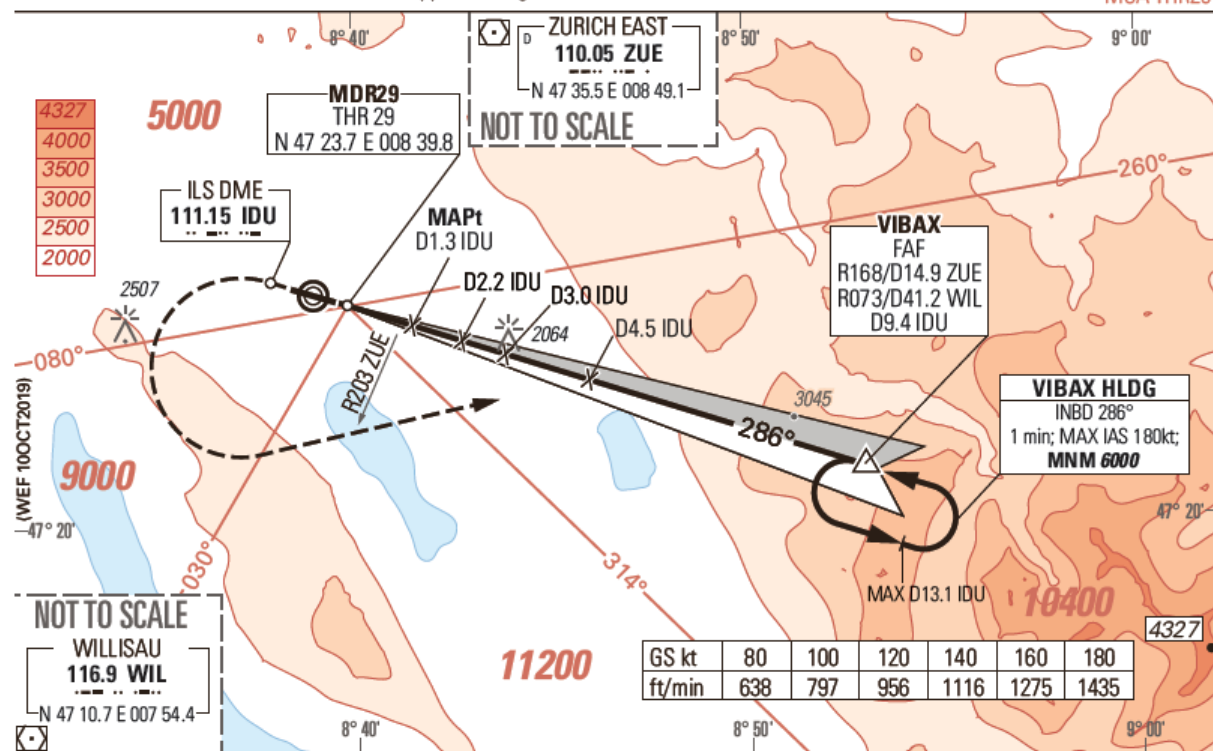
DUEBENDORF (LSMD)

ARR	TWR	DEP	VAR 2°09' E (2015.5)
134.925	118.975	125.950 (ZRH DEP)	

TRANS LVL: BY ATC
TRANS ALT: 7000

1. Circling must remain inside CTR at all time. MAX distance parallel of RWY for all ACFT Cat: 3 NM.
2. Non-Standard approach angle.

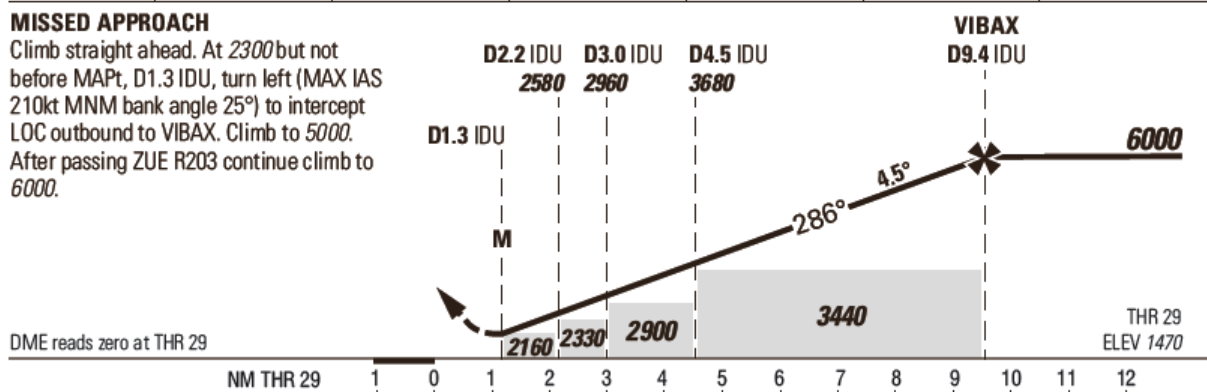
MSA THR29



IDU DME	2.0	3.0	4.0	6.0	8.0	9.4
ALTITUDE	2480	2960	3440	4400	5350	6000

MISSED APPROACH

Climb straight ahead. At 2300 but not before MAPt, D1.3 IDU, turn left (MAX IAS 210kt MNM bank angle 25°) to intercept LOC outbound to VIBAX. Climb to 5000. After passing ZUE R203 continue climb to 6000.



LOC/DME			CIRCLING	
Missed apch climb grad MNM 5.0% up to 2300				
MDA(H) 2150 (700)				
	FULL	ALS OUT	MDA(H)	VIS
A	RVR 1500m		2300 (850)	1500m
B			2800 (1350)	1600m
C	CMV 3100m		3000 (1550)	3300m
D			3200 (1750)	3600m

INSTRUMENT APCH CHART

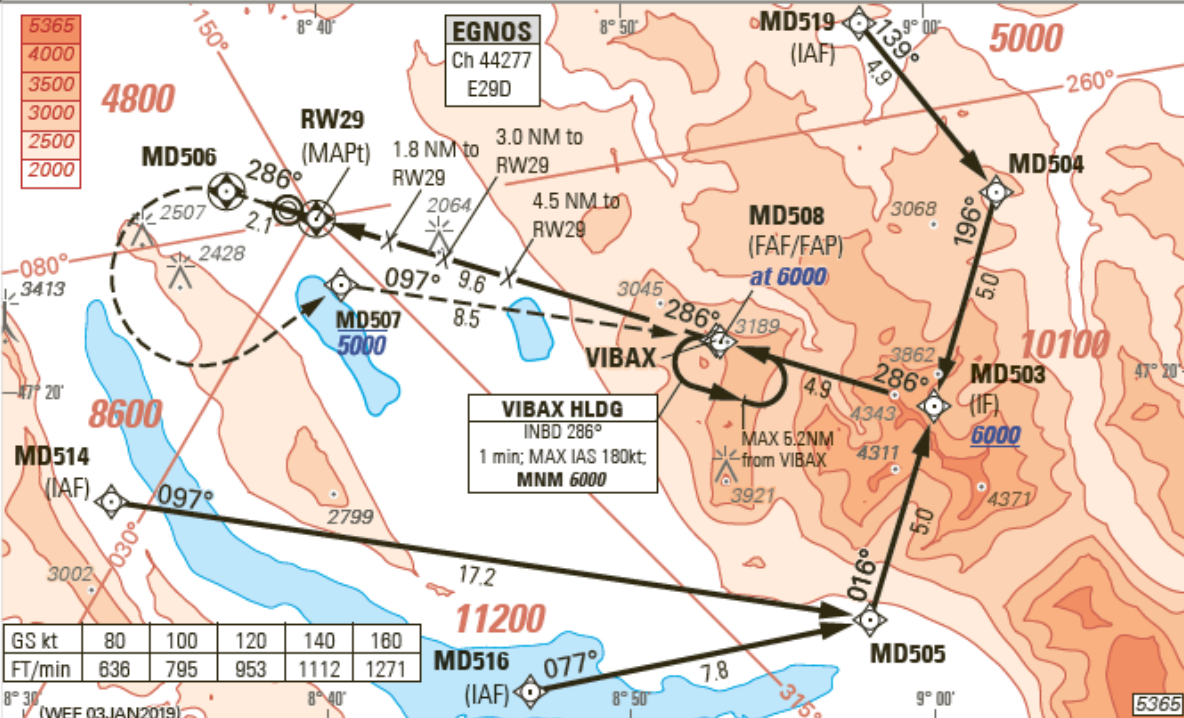
RNAV (GNSS) W RWY29

Elevation 442 m / 1450ft

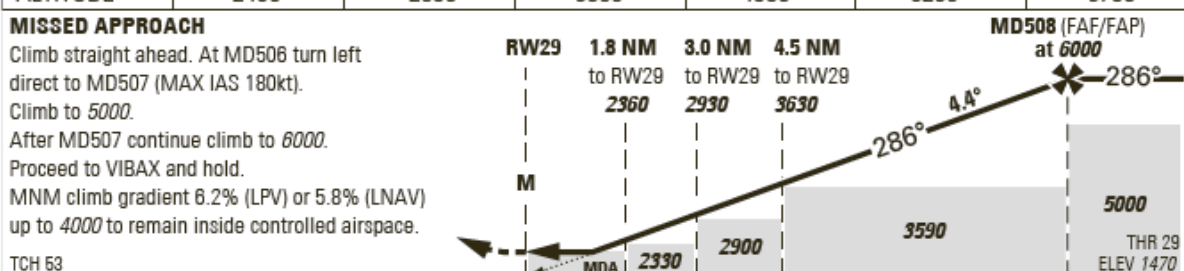
DUEBENDORF (LSMD)

ARR	TWR	DEP	VAR: 2°09' E (2015.5)
134.925	118.975	125.950 (ZRH DEP)	

TRANS LVL: BY ATC 1. Non-standard approach angle.
TRANS ALT: 7000 2. PAPI is set to 4.5°. (For MIL USE only.)
3. IFR profiles partly within airspace class E. 4. Speed limit MAX IAS 180kt from MD504/MD505.
5. CTN: 0.6 NM BFR THR29 right of centreline visual segment surface (VSS) penetrated by trees up to 1700ft AMSL.
6. LNAV procedure shall be flown as continuous descend approach.



GS kt	80	100	120	140	160
FT/min	636	795	953	1112	1271



LPV (Cat I)		LNAV				CIRCLING			
Missed apch climb grad min 5.6 % up to 2700		Missed apch climb grad min 2.5 %		Missed apch climb grad min 5.0 % up to 2700		Missed apch climb grad min 2.5 %			
A: 1885 (415) DA(H) B: 1904 (434) C: 1924 (464) D: 1941 (471)		A: 2283 (813) DA(H) B: 2303 (833) C: 2322 (862) D: 2339 (869)		MDA(H) 2230 (760)		MDA(H) 2630 (1160)			
FULL	ALS OUT	FULL	ALS OUT	FULL	ALS OUT	FULL	ALS OUT	MDA(H)	VIS
A	RVR 800m	RVR 800m		RVR 1500m		RVR 1500m		2400 (960)	1500m
B								2800 (1360)	1800m
C	RVR 1500m	RVR 1500m		CMV 3100m	CMV 3300m	CMV 5000m		3100 (1660)	5000m
D				-		-		3200 (1760)	5000m

These depicted DA(H) are only for MIL use, according DUB 31 applicable MNM for civil aircraft DH 500ft.

WAY POINT LIST RNAV (GNSS) W RWY29**DUEBENDORF (LSMD)** ELEV 442 m / 1450ft**WAY POINT LIST RNAV (GNSS) W RWY29**

Name	Type	Coordinates	
		Latitude	Longitude
MD514	IAF	47° 17' 26.3 N	008° 32' 56.3" E
MD516	IAF	47° 13' 02.2" N	008° 46' 37.2" E
MD519	IAF	47° 27' 52.2" N	008° 57' 50.6" E
MD505		47° 14' 30.6" N	008° 57' 49.1" E
MD504		47° 24' 01.5" N	009° 02' 18.9" E
MD503	IF	47° 19' 16.1" N	009° 00' 03.8" E
VIBAX		47° 20' 49.8" N	008° 52' 55.8" E
RWY29	THR	47° 23' 43.10" N	008° 39' 45.84" E
MD506		47° 24' 20.7" N	008° 36' 52.8" E
MD507		47° 22' 13.3" N	008° 40' 35.9" E
MD508	FAF / FAP	47° 20' 47.2" N	008° 53' 10.5" E

INSTRUMENT APCH CHART

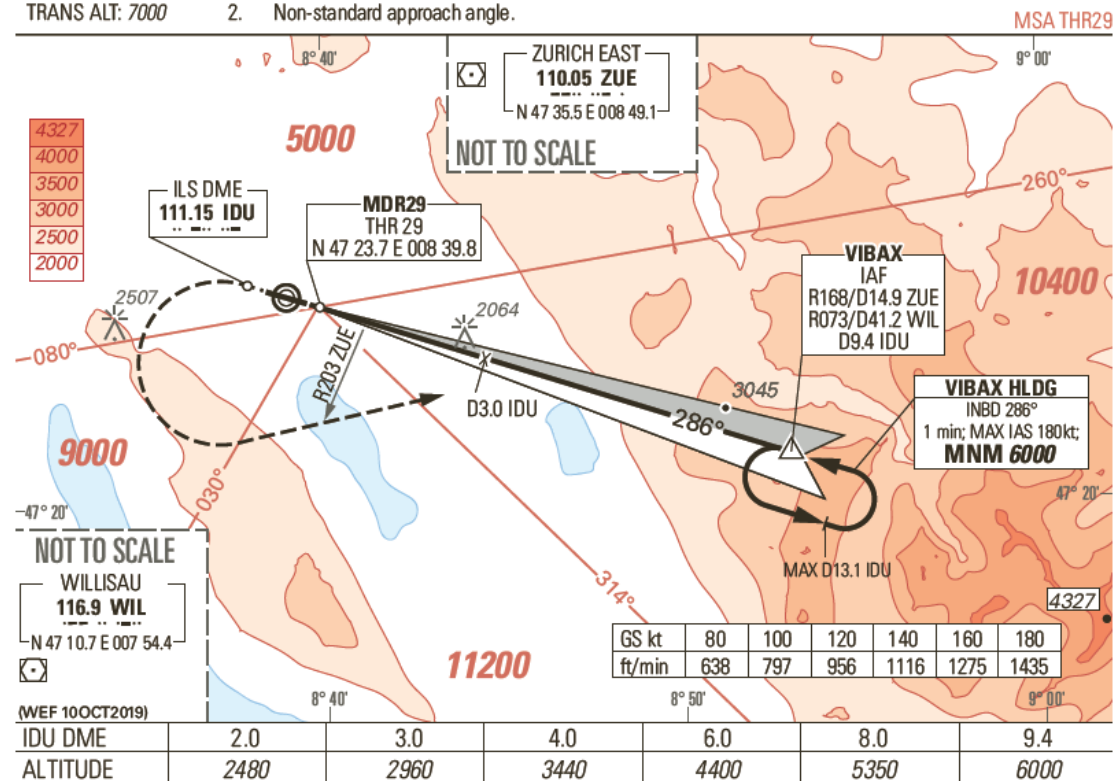
ILS CLOUDBREAK TO LSZH (HEL ONLY)

Elevation 442 m / 1450ft

DUEBENDORF (LSMD)

ARR	TWR	DEP	VAR: 2°09' E (2015.5)
134.925	118.975	134.925	

- TRANS LVL: BY ATC 1. Circling must remain inside CTR at all time. MAX distance parallel of RWY for all ACFT Cat: 3 NM.
TRANS ALT: 7000 2. Non-standard approach angle.



MISSED APPROACH

Climb straight ahead. At 2300 but not before D1.7 IDU to the station turn left (MAX IAS 210kt MNM bank angle 25°) to intercept LOC outbound to VIBAX. Climb to 5000. After passing ZUE R203 continue climb to 6000. MNM climb gradient 6.0% up to 3500 to remain inside controlled airspace.

ILS DME reads zero at THR 29
ILS TCH 53



ILS/DME				CIRCLING	
DA(H)	A: 1871 (401)	B: 1891 (421)	C: 1911 (441)	D: 1927 (457)	
A	FULL				MDA(H)
B	RVR 1500m				2300 (850)
C	RVR 1900m				2800 (1350)
D	RVR 2000m				3000 (1550)
					3200 (1750)
					3600m

VIS: 2000m

RMK:

Be aware when proceeding to LSZH: Route 4A/B only available in VMC.

SID RWY 11

NON RNAV SID RWY 11

Elevation 442 m / 1450ft

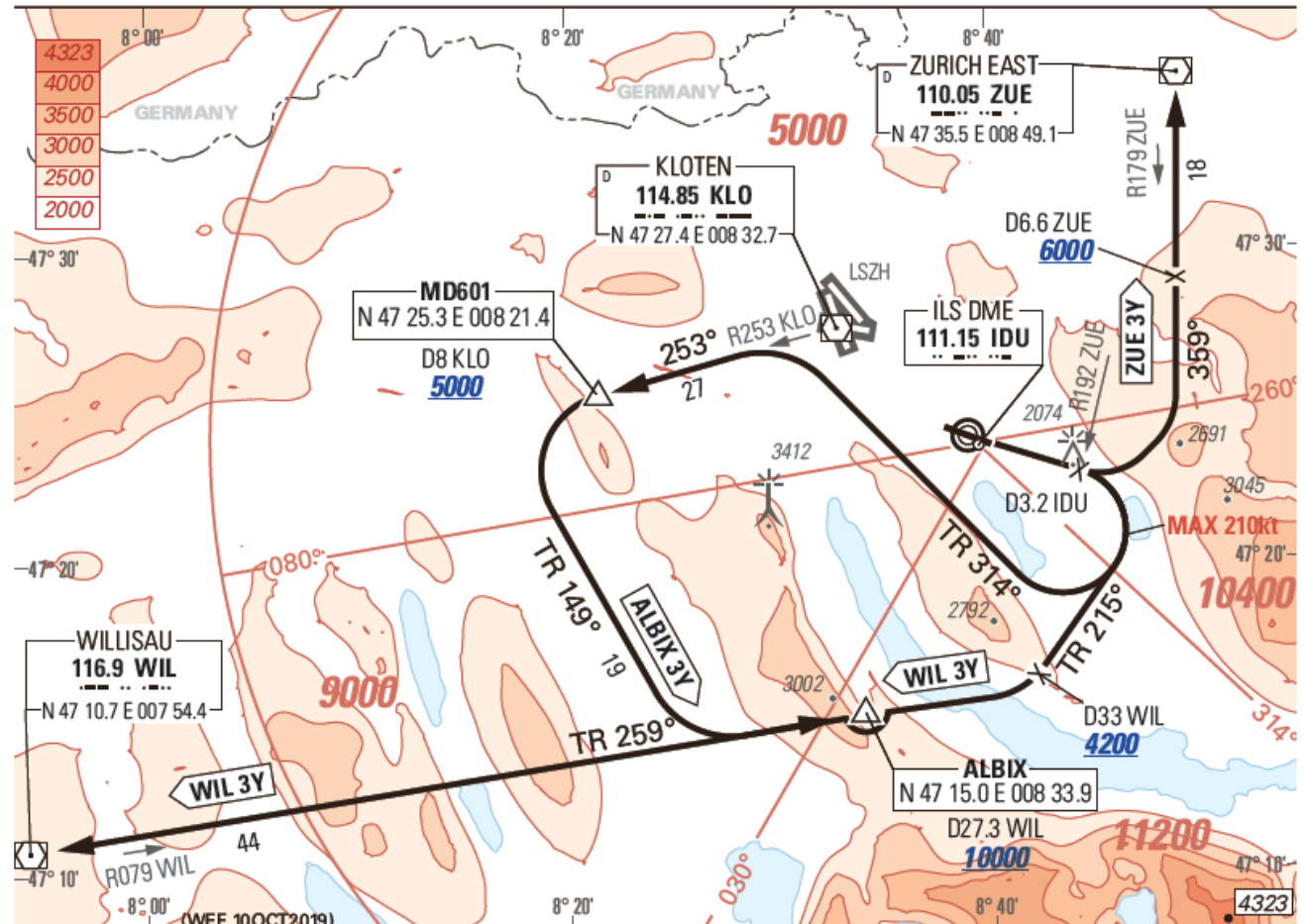
DUEBENDORF (LSMD)

ARR	TWR	DEP	VAR: 2°09' E (2015.5)
134.925	118.975	134.925	

TRANS LVL: BY ATC
TRANS ALT: 7000

1. CLOSE-IN OBST: Left and right of track up to 1600ft AMSL shortly after end of RWY 11.

MSA THR29



Initial climb clearance **5000ft**

ALBIX 3Y [ALB3Y] Minimum climb gradient 7.6% up to 2800ft.	Climb straight ahead. When crossing R192 ZUE or at D3.2 IDU turn right (MAX IAS 210kt). Establish TR 314° to intercept R253 KLO. Proceed to MD601. At MD601 turn left. Establish TR 149° to intercept R079 WIL. Proceed to ALBIX. Cross MD601 at 5000 or above, ALBIX at 10000 or above.
WIL 3Y [WL3Y] Minimum climb gradient 7.6% up to 4000ft.	Climb straight ahead. When crossing R192 ZUE or at D3.2 IDU turn right (MAX IAS 210kt). Establish TR 215° to intercept R079 WIL. Proceed to WIL. Cross D33 WIL at 4200 or above.
ZUE 3Y [ZUE3Y] Minimum climb gradient 7.6% up to 2800ft	Climb straight ahead. When passing D3.2 IDU turn left to intercept R179 ZUE. Proceed to ZUE. Cross D6.6 ZUE at 6000 or above. Note: For routing after ZUE: see AIP LSZH AD 2.24.6-1
COM FAILURE PROC squawk 7600	Cross ZUE / ALBIX / WIL climbing to/at last assigned and acknowledged FL but not below MCA (Leave last assigned and acknowledged FL or ALT earliest three minutes after airborne). Continue climb to FPL FL.

DUB 46

NON RNAV SID RWY 11

Air Crew Guide LSMD

WEF 2020 only

DÜBENDORF (LSMD)

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SID RWY 29

NON RNAV SID RWY 29

Elevation 442 m / 1450ft

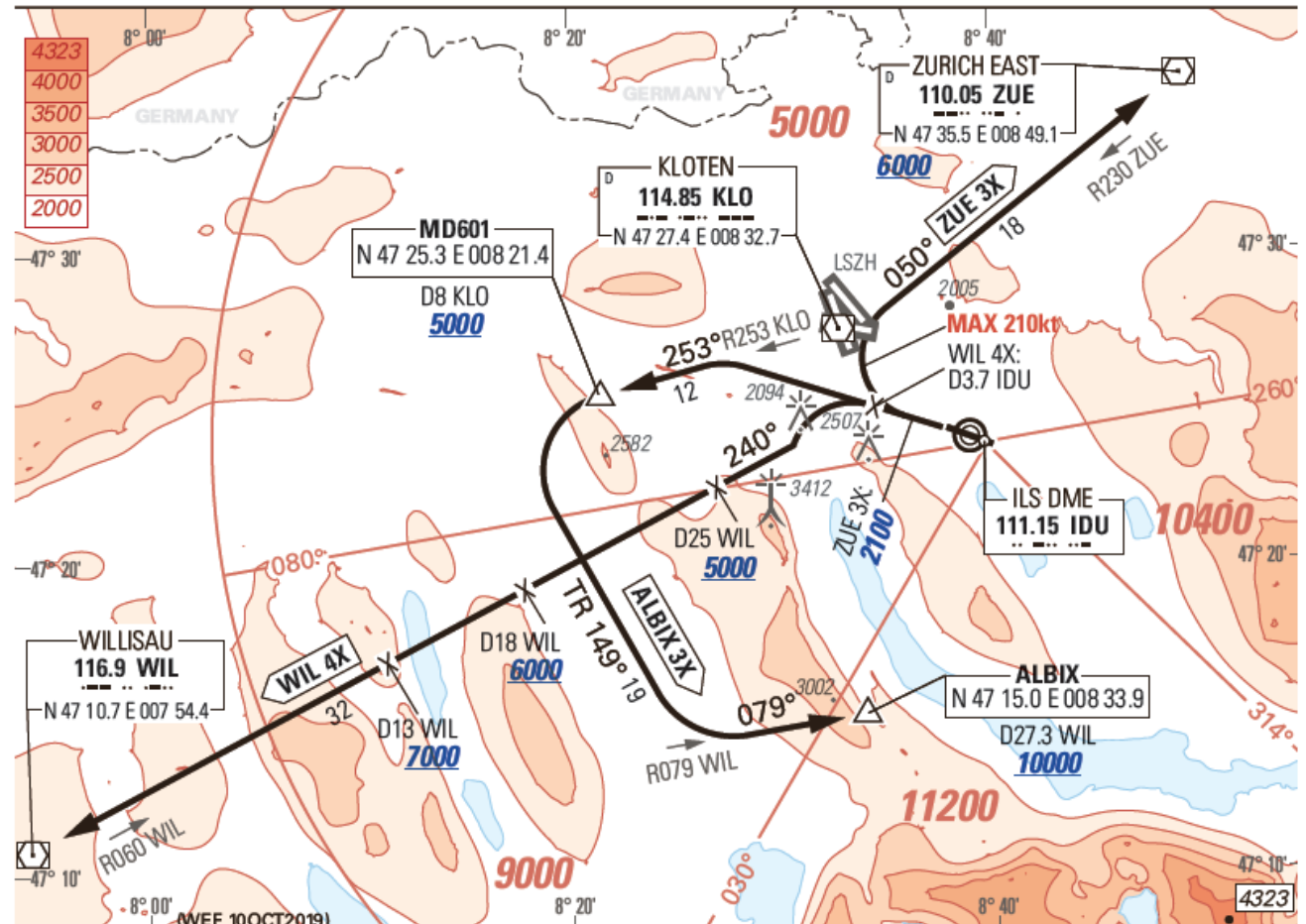
DUEBENDORF (LSMD)

ARR	TWR	DEP	VAR: 2°09' E (2015.5)
134.925	118.975	134.925	

TRANS LVL: BY ATC
TRANS ALT: 7000

1. CLOSE-IN OBST: Left of track up to 1550ft AMSL shortly after end of RWY 29.

MSA THR29



Initial climb clearance **5000ft**

ALBIX 3X [ALB3X] Minimum climb gradient 5.4% up to 2500ft.	Climb straight ahead. Intercept R253 KLO. Proceed to MD601. At MD601 turn left, establish TR 149° to intercept R079 WIL. Proceed to ALBIX. Cross MD601 at 5000 or above, ALBIX at 10000 or above.
WIL 4X [WIL4X] Minimum climb gradient 5.7% up to 3700ft.	Climb straight ahead. At D3.7 IDU turn left. Intercept R060 WIL. Proceed to WIL. Cross D25 WIL at 5000 or above, D18 WIL at 6000 or above, D13 WIL at 7000 or above. Note: Expect bad VOR signal quality as well as low field strength for VOR and DME WIL at 3400 and below.
ZUE 3X [ZUE3X] Minimum climb gradient 5% up to 1700ft.	Climb straight ahead. When passing 2100 turn right (MAX IAS 210kt), intercept R230 inbound ZUE. Proceed to ZUE. Cross ZUE at 6000 or above. Caution: Unknown GLD ACT to be expected outside of Zurich TMA.
COM FAILURE PROC squawk 7600	Cross ZUE / ALBIX / WIL climbing to/at last assigned and acknowledged FL but not below MCA (Leave last assigned and acknowledged FL or ALT earliest three minutes after airborne). Continue climb to FPL FL.

DUB 47

NON RNAV SID RWY 29

Air Crew Guide LSMD

WEF 2020 only

DÜBENDORF (LSMD)

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COPTER RNAV DEP RWY 11

COPTER RNAV SID

Elevation 442 m / 1450ft

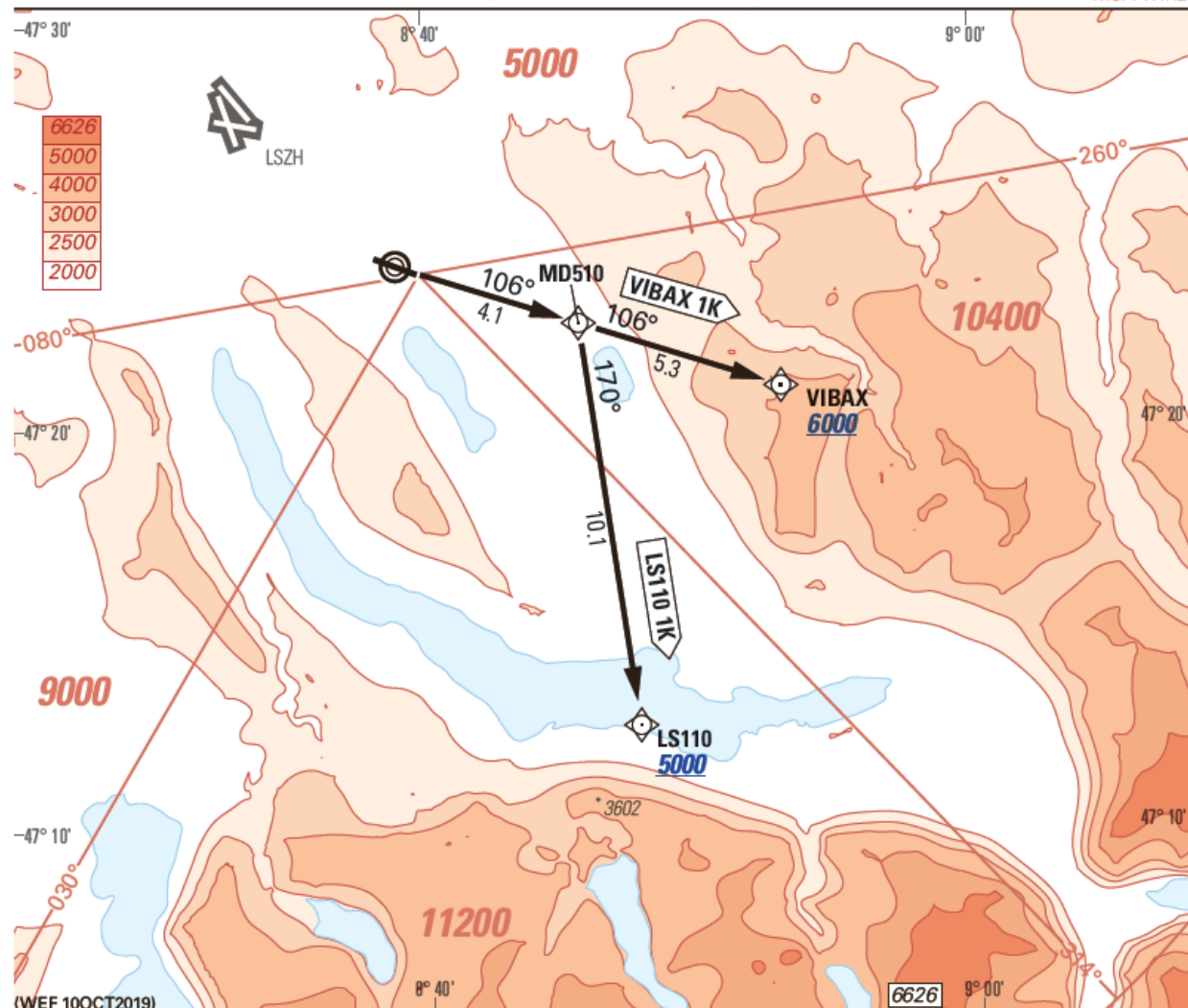
DUEBENDORF (LSMD)

ARR	TWR	DEP	VAR: 2°09' E (2015.5)
134.925	118.975	134.925	

TRANS LVL: BY ATC
TRANS ALT: 7000

1. CAT H only.
2. GNSS required, RNAV 1 certification required.

MSA THR29



Initial climb clearance:

LS110 1K 5000ft / VIBAX 1K 6000ft

LS110 1K [LS111K] Minimum climb gradient 8.7% up to 1800ft. 8.7% up to 3000ft due to airspace.	Climb on RWY track. Proceed via MD510 to LS110. Cross LS110 at 5000ft or above (LFN MEA).
VIBAX 1K [VIBA1K] Minimum climb gradient 8.7% up to 1800ft.	Climb on RWY track. Proceed via MD510 to VIBAX. Cross VIBAX at 6000ft or above (7.9% to 6000ft, LFN MEA).
COM FAILURE PROC squawk 7600	Cross LS110 / VIBAX climbing to / at last received ALT or FL but not below MCA. Continue climb to FPL ALT/FL.

RMK:

COPTER RNAV SID **LS110 1K** not available for civil HEL Operators during WEF 2019.