ZHHH AD 2.1 机场地名代码和名称 Aerodrome location indicator and name

ZHHH-武汉/天河 WUHAN/Tianhe

ZHHH AD 2.2 机场地理位置和管理资料 Aerodrome geographical and administrative data

1	机场基准点坐标及其在机场的位置 ARP coordinates and site at AD	N30°47.1' E114°12.4' Center of RWY04L/22R
2	方向、距离 Direction and distance from city	344°GEO, 26km from Wuhan Yangzi River Bridge
3	标高/参考气温 Elevation / Reference temperature	34.5m/33.0℃(JUL)
4	机场标高位置/大地水准面波幅 AD ELEV PSN / geoid undulation	400m inwards THR22R/-
5	磁差/年变率 MAG VAR/ Annual change	4°14′W(2015)/-
6	机场管理部门、地址、电话、传真、AFS、电子邮箱、网址 AD administration, address, telephone,telefax, AFS, E - mail, website	Wuhan Tianhe Airport CO. LTD Wuhan Tianhe Airport, Tianhe town, Huangpi district, Wuhan, Hubei province, China Post code:430302 TEL:86-27-85818885 FAX:86-27-85818785 AFS:ZHHHYDYX Website:www.whairport.com
7	允许飞行种类 Types of traffic permitted(IFR / VFR)	IFR/VFR
8	机场性质/飞行区指标 Military or civil airport &Reference code	CIVIL/4F
9	备注 Remarks	Nil

ZHHH AD 2.3 工作时间 Operational hours

1	机场当局(机场开放时间) AD Administration (AD operational hours)	H24
2	海关和移民 Customs and immigration	HO
3	卫生健康部门	HO

	Health and sanitation	
4	航行情报服务讲解室 AIS Briefing Office	H24
5	空中交通服务报告室 ATS Reporting Office (ARO)	H24
6	气象讲解室 MET Briefing Office	H24
7	空中交通服务 ATS	H24
8	加油 Fuelling	H24
9	地勤服务 Handling	H24
10	保安 Security	H24
11	除冰 De-icing	H24
12	备注 Remarks	Nil

ZHHH AD 2.4 地勤服务和设施 Handling services and facilities

1	货物装卸设施 Cargo-handling facilities	Elevation platform truck, fork, conveyor belt truck
2	燃油/滑油牌号 Fuel/oil types	Nr.3 jet fuel
3	加油设施/能力 Fuelling facilities/capacity	Rush hour piping system refueling capacity: 233L/s; Hydrant dispenser:25L/s(single pipe); 45L/s(double pipes)
4	除冰设施 De-icing facilities	De-icer(include A380 dedicated de-icer), de-icing fluid(KCY-1A, FCY-2)
5	过站航空器机库 Hangar space for visiting aircraft	Available for B757/737NG
6	过站航空器的维修设施 Repair facilities for visiting aircraft	Line maintenance available for aircraft type of B737-300/400/700/800/900, B757-200, A319-100/A320-200/A321, CRJ-200, EMB-145 on request.

		General maintennance, spare parts and other maintenance work by prior arrangement.
7	备注 Remarks	Ground power unit, ground air supply unit, towing vehicle,ground air preconditioning unit

ZHHH AD 2.5 旅客设施 Passenger facilities

1	宾馆 Hotels	At AD
2	餐馆 Restaurants	At AD
3	交通工具 Transportation	Passenger’s coaches, taxis
4	医疗设施 Medical facilities	At AD
5	银行和邮局 Bank and Post Office	At AD
6	旅行社 Tourist Office	Nil
7	备注 Remarks	Nil

ZHHH AD 2.6 援救与消防服务 Rescue and fire fighting services

1	机场消防等级 AD category for fire fighting	CAT 9
2	援救设备 Rescue equipment	Fire fighting facilities: rapid reaction truck, primary foam tender, heavy foam tender, rescue vehicle, fire fighting command truck, logisics truck; Rescue equipment: crane, fork, activities surface, tow truck, uplift air cushion, tethered hoisting equipment, rubber blanket, towing equipment.
3	搬移受损航空器的能力 Capability for removal of disabled aircraft	MTWA up to B747-400
4	备注 Remarks	Nil

ZHHH AD 2.7 可用季节- 扫雪 Seasonal availability-clearing

1	可用季节及扫雪设备类型	All seasons snow blower, snow pusher, snow slingers, sweeper

	Types of clearing equipment	
2	扫雪顺序 Clearance priorities	RWY04L/22R→RWY end connection taxiway→parallel taxiway→Apron connections→Apron RWY04R/22L→RWY end connection taxiway→parallel taxiway→Apron connections→Apron Other connection taxiways.
3	备注 Remarks	Nil

ZHHH AD 2.8 停机坪、滑行道及校正位置数据 Aprons, taxiways and check locations data

1	停机坪道面和强度 Apron surface and strength	Surface:	CONC
		Strength:	PCN 90/R/B/W/T(216, 221-224) PCN 83/R/B/W/T(301-361, 331L/R, 332L/R, de-icing apron, isolated stands) PCN 80/R/B/W/T(515-523, 523L/R) PCN 74/R/B/W/T(101-104, 501-512, 531-537) PCN 71/R/B/W/T(207-210, 215) PCN 55/R/B/W/T(201-206, 211-214, 217-220)
2	滑行道宽度、道面和强度 Taxiway width, surface and strength	Width:	79m: H1; 70m: C6-C10, H2; 61m: C11; 58m: M1, M2; 56m: D3, D5-D12, D14, M3; 52m: C1-C5, C12; 50m: D16, G3, G4; 44m: E3, E14; 43m: G1; 41m: D1; 40m: P10; 36m: K1; 34m: E1, E16, K2; 33m: C13, K3; 30m: H3, H4; 29m: B9; 28.5m: B12; 28m: B4, B10;

			27.9m: B1; 25m: D, E, E5-E7, E10-E12, K, M（east of M1（inclusive））; 23m: B, B5, B8, C, G, G2, H, J, M（west of M1（exclusive））, P12
		Surface:	Cement concrete, Asphalt concrete(Taxiway bridges G, H, TWY B4, B5, B8, B9)
		Strength:	PCN 99/F/B/W/T(B9) PCN 93/F/B/W/T(B5, B8) PCN 92/R/B/W/T(B1, B12) PCN 83/R/B/W/T(C6-C8, C10, C13, D, D1, D3, D5-D12, D14, D16, E, E1, E3, E14, E16, G, G1-G4, H, H1-H4, J, K, K1-K3, M, M1-M3, P12) PCN 80/R/B/W/T(C11, C12) PCN 74/R/B/W/T(B, B10, C, C1-C5, C9, P10) PCN 73/F/B/W/T(B4) PCN 66/R/B/W/T(E5-E7, E10-E12)
3	高度表校正点的位置及其标高 ACL location and elevation	Nil	
4	VOR/INS 校正点 VOR/INS checkpoints	Nil	
5	备注 Remarks	Nil	

ZHHH AD 2.9 地面活动引导和管制系统与标识
Surface movement guidance and control system and markings

1	航空器机位号码标记牌、滑行道引导线、航空器目视停靠引导系统的使用 Use of aircraft stand ID signs, TWY guide lines and visual docking / parking guidance system of aircraft stands	Taxiing guidance signs at all intersections of TWY and RWY and at all holding positions. Guide lines at all TWYs and aprons. Aircraft stand identification sign board at all stands. Stands Nr. 201-220 and Nr.301-304, 307, 308, 310-319, 321, 322, 324-340, 342, 343, 345-354, 356, 357, 359-361 refer AD1.1 for Visual Docking Guidance System; Marshaller guidance at other stands.	
2	跑道和滑行道标志及灯光 RWY and TWY marking and LGT	RWY markings	RWY designation, TDZ, THR, centerline, edge line, aiming point
		RWY lights	Center line, edge line, TDZ(THR04L/R), THR, RWY end, THR wing bar

		TWY markings	Center line, edge line, RWY holding positions, No-entry marking(TWYs B4, B5, B8, B9, E5-E7, E10-E12), intermediate holding positions
		TWY lights	Edge line, center line, rapid exit taxiway indicator(E5-E7, E10-E12), intermediate holding positions, RWY guard light(TWYs B1, B10, B12, E1, E3, E14, E16), No-entry bars(TWYs B4, B5, B8, B9, E5-E7, E10-E12)
3	停止排灯 Stop bars	At TWYs B1, E1, E3, E14, E16	
4	备注 Remarks	Blue apron edge line lights, yellow intermediate holding position lights at apron Nr.2(P1-P5) and TWYs D, E, G, H, J, K, M.	

ZHHH AD 2.10 机场障碍物 Aerodrome obstacles

Obstacles within a circle with a radius of 15km centered on the center of ARP						
序号 Serial Nr.	障碍物类型(*代表有灯光) Obstacle type(*Lighted)	磁方位 BRG (MAG)(degree)	距离 DIST(m)	海拔高度 Elevation(m)	影响的飞行程序及起飞航径区 Flight procedure / take - off flight path area affected	备注 Remarks
1	BLDG	032	4597	50.3		
2	BLDG	038	2608	48.6	RWY04L Take-off path	
3	MT	043	10679	78.0		
4	BLDG	044	2077	38.4	RWY04L Take-off path	
5	*LOC Antenna	046	1928	36.2	RWY04L Take-off path;	
6	*Iron TWR	046	5591	75.9	RWY04L Take-off path	
7	MT	051	11951	71.1		
8	*Lightning Rod	111	1016	92.1		
9	*Antenna	121	798	79.0		
10	*Control TWR	147	944	148.2	Circling; RWY04L GP INOP	

Obstacles within a circle with a radius of 15km centered on the center of ARP						
序号 Serial Nr.	障碍物类型(*代表有灯光) Obstacle type(*Lighted)	磁方位 BRG (MAG)(degree)	距离 DIST(m)	海拔高度 Elevation(m)	影响的飞行程序及起飞航径区 Flight procedure / take - off flight path area affected	备注 Remarks
					missed approach	
11	BLDG	150	6616	82.5		
12	BLDG	157	5346	82.1		
13	BLDG	157	7083	95.5		
14	MT	173	9128	98.5		
15	BLDG	191	5132	57.3		
16	*TWR	192	4873	66.6	RWY22L Take-off path;	
17	*TWR	196	5851	64.8	RWY22L Take-off path	
18	*TWR	202	4893	66.4	RWY22L Take-off path	
19	*LOC Antenna	226	1927	30.9	RWY22R Take-off path	
20	*MM Antenna	226	2702	43.7	RWY22R Take-off path	
21	*GP Antenna	231	1419	43.0	RWY04L ILS/DME approach	
22	*Antenna	262	351	43.0		
Others:						

Obstacles between two circles with the radius of 15km and 50km centered on the center of ARP						
序号 Serial Nr.	障碍物类型(*代表有灯光) Obstacle type(*Lighted)	磁方位 BRG (MAG)(degree)	距离 DIST(m)	海拔高度 Elevation(m)	影响的飞行程序及起飞航径区 Flight procedure / take - off flight path area affected	备注 Remarks
1	MT	001	48600	873	Minimum surveillance	

Obstacles between two circles with the radius of 15km and 50km centered on the center of ARP						
序号 Serial Nr.	障碍物类型(*代表有灯光) Obstacle type(*Lighted)	磁方位 BRG (MAG)(degree)	距离 DIST(m)	海拔高度 Elevation(m)	影响的飞行程序及起飞航径区 Flight procedure / take - off flight path area affected	备注 Remarks
					altitude sector Nr.3	
2	MT	002	48538	874	Sector	
3	TWR	009	39512	730		
4	MT	022	39206	300		
5	TWR	032	37470	600	RWY22L/R initial approach Minimum surveillance altitude sector Nr.4	
6	BLDG	032	37610	583		
7	MT	039	36521	436		
8	BLDG	050	19872	113	RWY22R GP INOP final approach	
9	MT	051	35924	304		
10	BLDG	059	18174	139	RWY22L GP INOP final approach	
11	MT	063	130600	1315	Minimum surveillance altitude sector Nr.5	
12	MT	090	86500	635	Minimum surveillance altitude sector Nr.6	
13	Chimney	111	33500	272	Minimum surveillance altitude sector Nr.1	
14	MT	138	91400	486	Minimum surveillance altitude sector Nr.7	
15	BLDG	155	15800	263		
16	TV TWR	171	25851	312		
17	BLDG	176	23826	356		
18	BLDG	177	20959	458	Sector; Departure;	

Obstacles between two circles with the radius of 15km and 50km centered on the center of ARP						
序号 Serial Nr.	障碍物类型(*代表有灯光) Obstacle type(*Lighted)	磁方位 BRG (MAG)(degree)	距离 DIST(m)	海拔高度 Elevation(m)	影响的飞行程序及起飞航径区 Flight procedure / take - off flight path area affected	备注 Remarks
					Minimum surveillance altitude sector Nr.8	
19	BLDG	215	19160	167	RWY04R GP INOP final approach	
20	BLDG	223	21534	128		
21	TV TWR	224	43000	354	RWY04L/R Initial approach	
22	BLDG	225	22614	135	RWY04L intermediate approach	
23	MT	340	82900	329	Minimum surveillance altitude sector Nr.2	
Others:						

ZHHH AD 2.11 提供的气象信息、机场观测与报告
Meteorological information provided & aerodrome observations and reports

1	相关气象台的名称 Associated MET Office	Hubei ATMB MET Office
2	气象服务时间；服务时间以外的责任气象台 Hours of service, MET Office outside hours	H24
3	负责编发 TAF 的办公室;有效期 Office responsible for TAF preparation,Periods of validity	Hubei ATMB MET Office 9HR, 24HR; 3HR, 6HR
4	趋势预报发布间隔 Type of landing forecast, Interval of issuance	1 HR
5	所提供的讲解/咨询服务 Briefing/consultation provided	P, T
6	飞行文件及其使用语言 Flight documentation, Languages used	Chart, International MET Codes, Abbreviated Plain Language Text Ch, En

7	讲解/咨询服务时可利用的图表和其它信息 Charts and other information available for briefing or consultation	Synoptic charts, significant weather charts, upper W/T charts, satellite and radar material, AWOS real-time data
8	提供信息的辅助设备 Supplementary equipment available for providing information	MET information service system
9	提供气象情报的空中交通服务单位 ATS units provided with information	ACC, APP, TWR
10	观测类型与频率/自动观测设备 Type & frequency of observation/Automatic observation equipment	Hourly plus special observation/Yes
11	气象报告类型及所包含的补充资料 Type of MET Report & supplementary information included	METAR, SPECI
12	观测系统及位置 Observation System & Site(s)	RVR EQPT A: 120m W of RCL, 315m inward THR04L B: 120m W of RCL, 1770m inward THR04L C: 120m W of RCL, 345m inward THR22R D: 115m E of RCL, 355m inward THR04R E: 115m E of RCL, 1725m inward THR22L F: 115m E of RCL, 315m inward THR22L SFC wind sensors 04L: 120m W of RCL, 355m inward THR04L 04L/22R Center: 120m W of RCL, 1810m inward THR04L 22R: 120m W of RCL, 355m inward THR22R 04R: 120m E of RCL, 365m inward THR04R 04R/22L Center: 120m E of RCL, 1830m inward THR04R 22L: 120m E of RCL, 355m inward THR22L Ceilometer 04L: on the extension of RCL, 905m outward THR04L 22R: on the extension of RCL, 905m outward THR22R 04R: 120m E of RCL, 368m inward THR04R 22L: 120m E of RCL, 368m inward THR22L
13	气象观测系统的工作时间 Hours of operation for meteorological	H24

	observation system	
14	气候资料 Climatological information	Climatological tables AVBL
15	其他信息 Additional information	Nil

ZHHH AD 2.12 跑道物理特征 Runway physical characteristics

跑道号码 Designations RWY NR	真方位和磁方位 TRUE &MAG BRG	跑道长宽 Dimensions of RWY(m)	跑道强度(PCN), 跑道道面/ 停止道道面 RWY strength (PCN), RWY surface / SWYsurface	着陆入口坐标及高程异常 THR coordinates and geoid undulation	跑道入口标高,精密进近跑道接地带最高标高 THR elevation and highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
04L	042 °GEO 046 °MAG	3400×45	102/F/B/W/T (0-500m) ASPH 83/F/B/W/T (500-2600m) ASPH 102/F/B/W/T (2600-3400m) ASPH/-	Nil	THR28.9m
22R	222 °GEO 226 °MAG	3400×45	102/F/B/W/T (2900-3400m) ASPH 83/F/B/W/T (800-2900m) ASPH 102/F/B/W/T (0-800m) ASPH/-	Nil	THR34.3m
04R	042 °GEO 046 °MAG	3600×60	83/R/B/W/T (0-800m)	Nil	THR29.6m

			CONC 66/R/B/W/T (800-2800m) CONC 83/R/B/W/T (2800-3600m) CONC/-		
22L	222°GEO 226°MAG	3600×60	83/R/B/W/T (2800-3600m) CONC 66/R/B/W/T (800-2800m) CONC 83/R/B/W/T (0-800m) CONC/-	Nil	THR29.6m
跑道-停止道坡度 Slope of RWY-SWY	停止道长宽 SWY dimensions(m)	净空道长宽 CWY dimensions(m)	升降带长宽 Strip dimensions(m)	无障碍物区 OFZ	跑道端安全区长宽 RWY end safety area dimensions(m)
7	8	9	10	11	12
See AOC	Nil	70×150	3520×300	Nil	160×150
See AOC	Nil	110×150	3520×300	Nil	160×150
See AOC	Nil	Nil	3720×300	Nil	240×150
See AOC	Nil	Nil	3720×300	Nil	240×150

Remark:

1. RWY04L/22R shoulder: 15m on each side, RWY04R/22L shoulder: 7.5m on each side.
2. RWY04R/22L grooved: 6mm×6mm×32mm.
3. Distance between RCL of RWY04L/22R and RCL of RWY04R/22L is 2100m; THR04R is 300m away from the south of THR04L; THR22L is 100m away from the south of THR22R.
4. Forced landing area (soil lawn) located at west of RWY04L/22R: 3400×50m.

ZHHH AD 2.13 公布距离 Declared distances

跑道号码 RWY Designator	可用起飞滑跑距离 TORA(m)	可用起飞距离 TODA(m)	可用加速停止距离 ASDA(m)	可用着陆距离 LDA(m)	备注 Remarks
1	2	3	4	5	6

跑道号码 RWY Designator	可用起飞滑跑距离 TORA(m)	可用起飞距离 TODA(m)	可用加速停止距离 ASDA(m)	可用着陆距离 LDA(m)	备注 Remarks
04L	3400	3470	3400	3400	Nil
22R	3400	3510	3400	3400	Nil
22R	3000	3110	3000	3400	FM B10
04R	3600	3600	3600	3600	Nil
04R	3380	3380	3380	3600	FM E3
22L	3600	3600	3600	3600	Nil
22L	3380	3380	3380	3600	FM E14
Remarks:					

ZHHH AD 2.14 进近和跑道灯光 Approach and runway lighting

跑道代号 RWY Designator	进近灯类型、长度、强度 APCH LGT type LEN INTST	入口灯颜色、翼排灯 THR LGT colour WBAR	目视进近坡度指示系统(跑道入口最低眼高), 精密进近航道指示器 VASIS (MEHT) PAPI	接地地带灯长度 TDZ LGT LEN	跑道中心线灯长度、间隔、颜色、强度 RWY Center line LGT LEN, spacing, colour, INTST	跑道边灯长度、间隔、颜色、强度 RWY edge LGT LEN, spacing, colour, INTST	跑道末端灯颜色 RWY end LGT colour	停止道灯长度、颜色 SWY LGT LEN, colour
1	2	3	4	5	6	7	8	9
04L	PALS CAT II* 900m LIH	GREEN Yes	PAPI LEFT/3° 18m	900m	3400m** spacing 30m	3400m**** spacing 60m	RED	Nil
22R	PALS CAT I* 900m LIH	GREEN Yes	PAPI LEFT/3° 18m	Nil	3400m** spacing 30m	3400m**** spacing 60m	RED	Nil
04R	PALS CAT III* 900m	GREEN Yes	PAPI LEFT/3°	900m	3600m*** spacing 15m	3600m***** spacing 60m	RED	Nil

跑道代号 RWY Designator	进近灯类型、长度、强度 APCH LGT type LEN INTST	入口灯颜色、翼排灯 THR LGT colour WBAR	目视进近坡度指示系统(跑道入口最低眼高), 精密进近航道指示器 VASIS (MEHT) PAPI	接地地带灯长度 TDZ LGT LEN	跑道中心线灯长度、间隔、颜色、强度 RWY Center line LGT LEN, spacing, colour, INTST	跑道边灯长度、间隔、颜色、强度 RWY edge LGT LEN, spacing, colour, INTST	跑道末端灯颜色 RWY end LGT colour	停止道灯长度、颜色 SWY LGT LEN, colour
	LIH							
22L	PALS CAT I* 900m LIH	GREEN Yes	PAPI LEFT/3°	Nil	3600m*** spacing 15m	3600m***** spacing 60m	RED	Nil

Remarks:

PALS CAT II for RWY 04L degrated to PALS CAT I

*SFL

**up to 2500m WHITE VRB LIH, 2500-3100m RED/WHITE VRB LIH, 3100-3400m RED VRB LIH

***up to 2700m WHITE VRB LIH, 2700-3300m RED/WHITE VRB LIH, 3300-3600m RED VRB LIH

****up to 2800m WHITE VRB LIH, 2800-3400m YELLOW VRB LIH

*****up to 3000m WHITE VRB LIH, 3000-3600m YELLOW VRB LIH

ZHHH AD 2.15 其它灯光,备份电源 Other lighting, secondary power supply

1	机场灯标/识别灯标位置、特性和工作时间 ABN/IBN location, characteristics and hours of operation	Nil
2	着陆方向标/风向标位置和灯光 LDI/WDI location and LGT	WDI: 04L:83m W of RCL, 410m inwards 04L, LGTD 22R:83m W of RCL, 410m inwards 22R, LGTD 04R:85m W of RCL, 422m inwards 04R, LGTD 22L:85m E of RCL, 422m inwards 22L, LGTD
3	滑行道边灯和中线灯 TWY edge and center line lighting	All TWYs: 1. Flash stick: main TWY B; 2. TWY center line lights for TWY connected with RWY in yellow and green alternately.
4	备份电源/转换时间	Secondary power supply available/＜1sec

	Secondary power supply/switch-over time	Diesel generator/≤15sec
5	备注 Remarks	Uninterrupted Power System (UPS) has been equipped with Navigation Aids Lighting Power System.

ZHHH AD 2.16 直升机着陆区域 Helicopter landing area

1	TLOF 坐标或 FATO 入口坐标及大地水准面波幅 Coordinates TLOF or THR of FATO Geoid undulation	Nil
2	TLOF 和/或 FATO 标高（m/ft） TLOF and/or FATO elevation (m/ft)	Nil
3	TLOF 和 FATO 区域范围、道面、强度和标志 TLOF and FATO area dimensions,surface, strength, marking	Nil
4	FATO 的真方位和磁方位 True and MAG BRG of FATO	Nil
5	公布距离 Declared distance available	Nil
6	进近灯光和 FATO 灯光 APP and FATO lighting	Nil
7	备注 Remarks	Nil

ZHHH AD 2.17 空中交通服务空域 ATS airspace

名称 Designation	水平范围 Lateral limits	垂直范围 Vertical limits	备注 Remarks
Wuhan aerodrome control zone	A circuit, 4 arcs with radius 13km centered at centers of all RWY THRs and 4 lines tangential to the adjacent 2 arcs.	600m(QNH) or below	
TWR control area	Same as Wuhan areadrome control zone		

名称 Designation	水平范围 Lateral limits	垂直范围 Vertical limits	备注 Remarks
Fuel dumping area	N300600E1145800- N295000E1151200- N290200E1143300- N293200E1140300- N300600E1145800	Above 4000m	See Fuel Dumping Area Chart
Altimeter setting region and TL/TA	Same as Wuhan APP area	TL 3600 TA 3000 3300(QNH≥1031hPa) 2700(QNH≤979hPa)	

ZHHH AD 2.18 空中交通服务通信设施 ATS communication facilities

服务名称 Service Designation	呼号 Call sign	频率 Frequency (MHz)	工作时间 Hours of operation	备注 Remarks
1	2	3	4	5
ATIS		126.6ARR	H24	D-ATIS available
ATIS		126.2DEP	H24	D-ATIS available
APP	Wuhan Approach	121.2(119.15)APP01	H24	
APP	Wuhan Approach	126.3(125.6)APP02	0000-1430	Contact ZHHH APP01 when ZHHH APP02 U/S.
APP	Wuhan Approach	119.575(119.15)APP03	by ATC	RWY04L/R in use, when APP03 U/S. contact APP01; RWY22L/R in use, when APP03 U/S. contact APP02
TWR	Wuhan Tower	124.35(118.1)TWR01	H24	RWY04L/22R
TWR	Wuhan Tower	118.025(118.1)TWR02	HO	RWY04R/22L
GND	Wuhan Ground	121.65(130.0)GND01(W)	HO	RWY04L/22R GND U/S, contact TWR
GND	Wuhan Ground	121.975GND02(E)	HO	RWY04R/22L GND U/S, contact TWR
GND	Wuhan Delivery	121.8	HO	According to ATIS

服务名称 Service Designation	呼号 Call sign	频率 Frequency (MHz)	工作时间 Hours of operation	备注 Remarks
				DCL available
APN	Wuhan Apron	121.6APN01(W)	H24	
APN	Wuhan Apron	121.725APN02(E)	By Apron Control	
EMG		121.5	H24	

ZHHH AD 2.19 无线电导航和着陆设施 Radio navigation and landing aids

设施名称和类型 Name and type of aid	识别 ID	频率 Frequency	发射天线位置、坐标 Antenna site coordinates	DME 发射天线标高 Elevation of DME transmitting antenna	备注 Remarks
1	2	3	4	5	6
Huangpi VOR/DME	DHP	113.75MHz CH84Y	N30 °52.2' E114 °28.2' 074 °MAG/ 27038m FM ARP	55m	
Caidian VOR/DME	DCD	114.25MHz CH89Y	N30 °26.4' E114 °09.5' 192 °MAG/ 38316m FM ARP	50m	
Tianhe VOR/DME	WHA	112.2MHz CH59X	N30°46.9′ E114°12.2′ 263 °MAG/ 351m FM ARP	43m	
Hebaohu VOR/DME	DHB	114.45MHz CH91Y	N30°41.9′ E113°58.3′ 252 °MAG/ 24541m FM ARP	100m	
Tianhe NDB	HG	254kHz	N30°55.5′ E114°21.0′ 046 °MAG/19.4km FM THR22R		Range: 25-150km BRG 360 °-030 ° clockwise U/S

设施名称和类型 Name and type of aid	识别 ID	频率 Frequency	发射天线位置、坐标 Antenna site coordinates	DME 发射天线标高 Elevation of DME transmitting antenna	备注 Remarks
LOC 04L ILS CAT I	IHN	109.3MHz	046 °MAG/ 228m FM RWY04L end		
GP 04L		332.0MHz	124m W of RCL, 286m inward THR04L		Angle 3 °,RDH 15m
DME 04L	IHN	CH30X (109.3MHz)		37m	Co-located with GP 04L
IM 04R		75MHz	226 °MAG/ 340m FM THR04R		
LOC 04R ILS CAT III	IWF	111.5MHz	046 °MAG/ 310m FM RWY04R end		In operation CAT I
GP 04R		332.9MHz	125m E of RCL, 297m inward THR04R		Angle 3 °,RDH 15m
DME 04R	IWF	CH52X (111.5MHz)		36m	Co-located with GP 04R
LOC 22L ILS CAT I	IUT	111.1MHz	226 °MAG/ 310m FM RWY22L end		
GP 22L		331.7MHz	125m E of RCL 297m inward THR22L		Angle 3 °, RDH 15m
DME 22L	IUT	CH48X (111.1MHz)		36m	Co-located with GP 22L
LOC 22R ILS CAT I	ITS	108.5MHz	226 °MAG/ 228m FM RWY22R end		
GP 22R		329.9MHz	120m W of RCL 306m inward THR22R		Angle 3 °, RDH 15m
DME 22R	ITS	CH22X (108.5MHz)		41m	Co-located with GP 22R

ZHHH AD 2.20 本场飞行规定 ZHHH AD 2.20 Local traffic regulations

1. 机场使用规定

1.1 禁止未安装二次雷达应答机的航空器起降，在特殊情况下，可允许无二次雷达应答机的航空器起降；

1.2 所有技术试飞需事先申请，并在得到空中交通管制部门批准后方可进行；

1.3 可使用最大机型:A380 及其同类机型。

1.Airport operations regulations

1.1 Take off/landing of aircraft without SSR transponder are forbidden unless under exceptional circumstances;

1.2 All the technical test flights are required to obtain prior clearance from ATC;

1.3 Maximum aircraft to be available: A380 and equivalent.

2. 跑道和滑行道的使用

2.1 可以通过地面管制申请引导车和拖车服务；

2.2 禁止航空器在跑道上做 180 度转弯；

2.3 航空器在障碍物附近滑行时,速度应减到 15 千米/小时以下；

2.4 跑道使用规则

2.4.1 04L/22R 跑道允许 B747-400 及以下航空器起降，可接收 A380 备降。A380 备降时按相应地面运行规则执行；

2. Use of runways and taxiways

2.1 Follow-me vehicle service and towing service are available via Ground Control;

2.2 Aircraft is forbidden to 180° turnaround on RWY;

2.3 Taxiing speed shall be slowed down to 15km/h and below, while aircraft is taxiing near the obstacles;

2.4 General rules for the use of runways

2.4.1 RWY04L/22R is used for aircraft type B747-400 and below , and also can receive A380 alternate flight. A380 alternate flight shall execute the corresponding ground operation rules;

2.4.2 04R/22L 跑道允许 A380-800 及以下航空器起降；

2.4.2 RWY04R/22L is used for aircraft type A380-800 and below;

2.5 更换跑道运行方向的过程中，当跑道顺风分量超过 3m/s 但不大于 5m/s 时，管制员可以短时指挥航空器顺风起飞或着陆；当航空器驾驶员根据机型性能或者运行手册不能执行顺风起飞或着陆，离场航空器应在推出前告知机坪管制员，进场航空器应及时告知进近管制员；

2.5 When aircraft change direction of runway in use, if downwind speed is more than 3m/s but not exceeding 5m/s, ATC controller can instruct aircraft to take-off or land on downwind runway for short time; If pilot consider that aircraft will not take off or land on downwind runway allocated according to the aircraft performance or operation handbook, departure aircraft shall inform APN prior to push-back, arrival aircraft shall inform APP immediately;

2.6 非全跑道起飞运行规定

2.6 Partial runway taking-off regulations

2.6.1 机组提出非全跑道起飞申请，征得管制员同意后，可实施非全跑道起飞管制程序；

2.6.1 It is available to use partial runway to take-off when flight crew get permission from ATC;

2.6.2 根据跑道实际运行情况，管制员在征得航空器同意后，可实施非全跑道起飞管制程序；

2.6.2 In accordance with the runway actual operation situation, it is available to use partial runway to take-off when ATC get permission from flight crew;

2.6.3 04L/22R 跑道

（1）机身限制：04L/22R 跑道允许翼展小于 65 米（不含）的 E 类及其以下航空器实施非全跑道起飞。

（2）地面运行限制：22R 跑道实施非全跑道起飞时，B 滑上滑行的航空器应在 B10 滑道口前的中间等待位置等待，直至 B10 滑上航空器完全进入

2.6.3 RWY 04L/22R

(1) Aircraft limits: RWY 04L/22R are available to conduct intersection departure with aircraft CAT E and below with wing span less than 65m.

(2) Ground operation limits: when conducting intersection departure on RWY22R, aircraft on TWY B shall taxi to holding positions of B10 and hold

22R 跑道，方可穿越 B10 滑道口，继续滑行。

short of RWY, until the intersection departure aircraft fully entered into RWY22R, then cross B10 and continue taxi.

2.6.4 04R/22L 跑道

（1）机型限制：04R/22L 跑道允许翼展小于 80 米(不含)的 F 类及其以下航空器实施非全跑道起飞。

（2）地面运行限制：04R 跑道实施非全跑道起飞时，E 滑上滑行的航空器应在 E3 滑道口前的中间等待位置等待，直至 E3 滑上航空器完全进入 04R 跑道，方可穿越 E3 滑道口，继续滑行。

22L 跑道实施非全跑道起飞时，E 滑上滑行的航空器应在 E14 滑道口前的中间等待位置等待，直至 E14 滑上航空器完全进入 22L 跑道，方可穿越 E14 滑道口，继续滑行。

2.6.4 RWY 04R /22L

(1) Aircraft limits: RWY 04R /22L are available to conduct intersection departure with aircraft CAT F and below with wing span less than 80m.

(2) Ground operation limits: when conducting intersection departure on RWY04R, aircraft on TWY E shall taxi to holding positions of E3 and hold short of RWY, until the intersection departure aircraft fully entered into RWY04R, then cross E3 and continue taxi.

When conducting intersection departure on RWY22L, aircraft on TWY E shall taxi to holding positions of E14 and hold short of RWY, until the intersection departure aircraft fully entered into RWY22L, then cross E14 and continue taxi.

2.6.5 其他运行限制

（1）本场 04L/22R、04R/22L 跑道使用非全跑道起飞时，飞机基准飞行场地长度不满足部分大飞机使用要求。

（2）能见度小于 2 千米或低至塔台管制员对相应机动区无法保持目视监控时，严禁使用非全跑道起飞。

（3）在顺风大于 3 米/秒或大侧风条件下，不得实施非全跑道起飞。

2.6.5 Other operation limitations.

(1) When conducting intersection departure on the RWY 04L/22R and RWY 04 R /22 L, flight standards flight field length is not satisfied with some large aircraft requirements.

(2) No intersection departure is permitted when visibility less than 2km or the manoeuvring area cannot be visual monitoring by TWR controllers.

(3) No intersection departure is permitted when head

（4）带有任何影响减速性能故障保留的航空器不得申请非全跑道起飞。

（5）飞机机组实施非全跑道起飞时，起飞襟翼必须设置为正常起飞襟翼位置。

wind more than 3m/s or heavy cross wind prevails.

(4) No intersection departure is permitted with aircraft retaining any slow-down function failure.

(5) When conducting intersection departure, takeoff flap shall set as the same as the normal takeoff flap position.

2.7 在使用 04L 落地脱离跑道并接收到转频指令后尽早联系地面管制获得滑行指令；

2.7 Flight crew shall obtain taxiing instructions from GND ATC as soon as possible after vacating RWY04L and receiving FREQ changing instructions;

2.8 滑行道使用限制/TWYs limits:

滑行道/TWYs	航空器翼展限制/Wing span limits for aircraft	备注/Remarks
D, D1, D3, D5-D12, D14, D16, E, E1, E3, E5-E7, E10-E12, E14, E16, G3, G4, K, K1-K3, M(east of M1(inclusive)), M1-M3	<80m	
B, B1, B4, B5, B8-B10, B12, C, C1-C13, G1, G2, H1-H4, M(west of M1(exclusive)), P2, P12, Z6	<65m	A380 alternate flight is allowed to taxi on TWY B, B1, B12, C1, C9, C11, and shall follow the relevant operation rules;
C12(including connections BTN stands), G, H, J, P9	<65m	
C11(including connections BTN stands)	<65m	A380 is allowed to taxi on TWY C11 when A380 alternate flight is parking at stand Nr.101A, and shall follow the relevant operation rules;

P1(NE of stand Nr.224)	≤60.9m	A380 is allowed to taxi on TWY P1 when A380 alternate flight is parking at stand Nr.223A, and shall follow the relevant operation rules;
P1(NE of BTN stands Nr.221 and stand Nr.223), P3, P4, P10, P11	<52m	
P5-P8, Z7, Z8	<36m	
P13, P14	<24m	

2.9 管制范围规定如下：

西地面管制：东西跑道中间平行跑道方向为界以西至平行滑行道 B 全部机动区；
东地面管制：东西跑道中间平行跑道方向为界以东至平行滑行道 E 全部机动区；
机坪管制区范围见 ZHHH AD2.24-1A;
具体管制移交点及移交方式听从管制员指令执行。

2.9 GND ATC divided into east and west sectors, the rules of ATC scope as follows:

GND01 (W): maneuvering area(west from the middle boundary of both runways to the parallel B);
GND02 (E): maneuvering area(east from the middle boundary of both runways to the parallel E);
Apron Control Area refers to ZHHH AD2.24-1A;
The specific hand-over point and mode shall be instructed by ATC.

2.10 C 滑行道（C4 以南）、B 滑行道（C4 以南）部分区域处于塔台视野盲区，机组在该区域滑行时注意观察并严格执行管制指令；

2.10 Most of the TWYs B(south of C4) and C(south of C4) are in the TWR blind zone, flight crew taxing in this area shall follow the ATC instructions strictly;

2.11 机场冲突多发地带运行要求

为减少运行差错，降低地面冲突和跑道入侵事件的发生概率，在机场活动区内运行的航空器需严格按照下述的要求运行：

2.11 Hot spot procedure

For the purpose of reducing errors that lead to ground conflicts and runway incursions, aircraft operating within the maneuvering area must follow

the requirements below:

HS1：B9 和 B 滑行道交叉区域
在 B 滑行道上滑行的航空器，若观察到 B9 有航空器脱离，应在 B9 前等待，避让脱离的航空器；

HS1: Intersections of TWYs B9 and B
A/C taxiing on TWY B shall hold short in front of TWY B9, when other A/C is vacating runway via TWY B9;

HS2：C9、B 及 C 滑行道交叉区域
在 C 滑行道或者 B 滑行道上滑行的航空器，若观察到 C9 道口有滑出停机坪的航空器，应主动在 C9 前等待，避让滑出的航空器；

HS2: Intersections of TWYs C9, B and C
A/C taxiing on TWY B or C shall hold short in front of TWY C9, when other A/C is exiting apron via TWY C9;

HS3：C5、B、C 及 P5 滑行道交叉区域
在 B 滑行道上滑行的航空器，若观察到 C5 滑有滑出停机坪的航空器，应主动在 C5 前等待，避让滑出的航空器；
在 C 滑行道上滑行的航空器，若观察到 C5 滑有滑出停机坪的航空器，应主动在 P5 前等待，避让滑出的航空器；

HS3: Intersections of TWYs C5, B, C and P5
A/C taxiing on TWY B shall hold short in front of TWY C5, when other A/C is exiting apron via TWY C5;
A/C taxiing on TWY C shall hold short in front of TWY P5, when other A/C is exiting apron via TWY C5;

HS4：C3、C4、B、C 及 B4 滑行道围成的区域
在 C 或者 B 滑行道上滑行的航空器，若观察到 C3 滑有滑出停机坪的航空器，应主动避让；若观察到 B4 有航空器脱离跑道时，应主动避让；

HS4: Area enclosed by TWYs C3, C4, B, C and B4
A/C taxiing on TWY B or C shall take evasive action, when other A/C is exiting apron via TWY C3 or vacating runway via TWY B4;

HS5：C2、C1、B 及 C 滑行道交叉区域
若观察到 C1、C2 滑有滑出停机坪的航空器，在 B 滑行道上向西南方向滑行的航空器，应主动在 C2 前等待；从 H 滑行道转向 C 滑行道上向东北方向滑行的航空器，应主动在 H1 前等待引导车，如未

HS5: Intersections of TWYs C1, C2, B and C
A/C taxiing towards southwest on TWY B shall hold short in front of TWY C2, when other A/C is exiting apron via TWY C1,C2; A/C taxiing towards northeast from TWY H to TWY C shall wait for

看到引导车则需在 HP10 等待或向塔台索取指令；

follow-me vehicle in front of TWY H1, if can not observe follow-me vehicle, A/C shall hold short at HP10 or contact TWR ATC;

HS6：H、G 滑行道与 B、C 滑行道相交的区域
航空器在此区域滑行时应当注意观察道口和标识牌，避免连续滑行误入跑道，造成跑道侵入；

HS6: Intersections of TWYs H, G and B, C
A/C taxiing in this area shall observe crossing and signal board, in order to avoid taxiing in the wrong way continuously, causing runway incursion;

HS7：G1、D 及 E 滑行道交叉的区域
航空器在此区域滑行时应当注意观察道口和标识牌，避免连续滑行误入跑道，造成跑道侵入；

HS7: Intersections of TWYs G1, D and E
A/C taxiing in this area shall observe crossing and signal board, in order to avoid taxiing in the wrong way continuously, causing runway incursion;

HS8：C12 与 B 滑行道交叉区域
由于 P10 滑行道存在翼展限制，导致翼展 52m 含以上航空器需从 C12 进入 5 号机坪，因此在 B 上易产生对头滑行冲突，在 C12 滑出的航空器因提前观察再上 B 滑行道，发现冲突时及时告知管制员；

HS8: Intersections of TWYs C12 and B
Due to the TWY P10 wingspan limitation, A/C with wingspan more than 52m shall enter apron Nr.5 via C12, which is easy to cause conflict. A/C taxiing on TWY C12 shall hold short in front of TWY B and inform ATC immediately when the conflict occurs;

2.12 为提高跑道容量,作如下要求(湿跑道或污染跑道除外):

2.12 For increase runway operation capacity, requirement as follows except for wet or contaminated runway:

2.12.1 起飞航空器
起飞的航空器从接到管制员进跑道指令至对正跑道时间应控制在 60 秒以内；
如机组认为无法在上述要求的时间内完成,须在到达跑道外等待点之前向塔台管制员说明；

2.12.1 For departure aircraft
Departure aircraft shall finish runway alignment within 60 seconds after receiving ATC instructions of entering runway;
If flight crew consider that they can not fulfill the

process within the required time, pilot shall inform TWR ATC controller before reaching the runway holding point.

2.12.2 落地航空器

落地航空器应尽快退出跑道,从接地到滑出跑道时间应控制在 50 秒以内;

如机组认为无法在上述要求的时间内完成,须在建立航向道前通知进近管制员;

2.12.2 For landing aircraft

Aircraft shall fully vacate runway within 50 seconds after touching down;

If flight crew consider that they can not fulfill the process within the required time, pilot shall inform APP ATC controller before the localizer is established;

2.13 着陆航空器脱离跑道后均在指定道口由引导车引导进入停机位。对停机位有任何疑问，应向地面管制或机坪管制证实;

2.13 Landing A/C shall enter the stands following the Follow-me vehicle at the specified position after vacating RWY. Flight crew shall verify the questions about stands via GND ATC or APN ATC;

2.14 塔台数字化放行

2.14 Tower Departure Clearance (DCL)

2.14.1 预计撤轮挡时间(EOBT)前 30 分钟至 10 分钟,航空器驾驶员应当优先使用数字化放行系统(DCL)向空中交通管制部门(ATC)申请放行许可;

2.14.1 Within 10-30 minutes before Estimated Off-block Time (EOBT), pilot shall use DCL to require ATC clearance in priority;

2.14.2 首次联系 ATC 时,完成 DCL 服务的机组必须向 ATC 复述使用跑道代号和起始爬升高度;

2.14.2 At the first contact with ATC, pilot shall repeat runway designator in use and initial climb altitude to controller after successful DCL service;

2.14.3 当 DCL 无法完成放行许可的申请或发布时,将转为话音方式申请或发布放行许可;

2.14.3 If the DCL service is not available, pilots shall contact controller for verbal ATC clearance;

2.14.4 航空器的推出开车应向机场机坪管制室申

2.14.4 Departing aircraft shall contact APN for

请。

2.15 A380 航空器运行规则

（1）A380 在满足条件的区域运行时需按管制员指令滑行；

（2）A380 进港航空器脱离跑道后由引导车引导至机位，出港航空器不提供引导车引导服务；

（3）A380 进入 B 滑行道时，C 滑仅允许 C 类（翼展<36m)及以下航空器运行；

（4）A380 航空器机位停放要求：

a.停靠 223A 临时组合机位时，关闭 C1，P1 滑行道，禁止其他机型航空器滑入；216-222 机位正常使用，均从 P2-C2 滑行道进出。

b.停靠 101A 临时组合机位时，需关闭 103 机位。

c.从 101A 临时组合机位推出前，需向现场运行指挥中心申请暂停使用 103 机位，（航空公司机务须清理 103 机位）确保无任何影响航空器推出的障碍物。

d.停靠 331、332 机位，按正常机位保障，自滑进，顶推出。

e.停靠除冰坪 02 除冰机位，自滑进出。

push-back and start-up clearance.

2.15 Operational Rules for A380

(1) When operating within permitted area, A380 shall taxi by ATC instructions;

(2) Landing A380 shall be guided by Follow-me vehicle into stands. Follow-me vehicle is not available for departure A380;

(3) When A380 taxiing on TWY B , the wing span limit for TWY C is less than 36m;

(4) Parking rules for A380

a.TWYs C1, P1 are closed for other a/c types when A380 is parking at stands Nr.223A; Stands 216-222 are in normal use, taxi in and out via TWY P2-C2.

b.Stands Nr.103 shall be closed when A380 is parking at stand Nr.101A.

c.Flight crew shall obtain the clearance via operation control center before A380 pushed-back on stand Nr.101A, and make sure stands Nr.103 is clear, no obstacles affecting aircraft push-back.

d.Aircraft shall taxi in and be pushed back when parking at stands Nr.331, 332; These stands shall be supported as normal stands.

e.Aircraft shall taxi in and out by itself when parking at de-incing stand Nr.02.

2.15.1 04L/22R 跑道（备降）

2.15.1 RWY04L/22R (for A380 alternate flight)

2.15.1.1 A380 运行区域

2.15.1.1 Operational areas for A380

（1）跑道：04L/22R 号跑道

（2）滑行道：B、B1、B12、C1、C9、C11、D、G3、G4、K、K1、K2

（3）停机位：331、332 机位，101A、223A 临时组合机位，除冰坪 02 除冰机位

（4）除上述区域外，其他区域禁止 A380 运行。

(1)RWY: RWY 04L/22R

(2) TWYs: B, B1, B12, C1, C9, C11, D, G3, G4, K, K1, K2

(3) Stands Nr.331, 332, temporary combined stands Nr.101A,223A, de-icing stands Nr.02

(4) Except above areas, other areas are forbidden to operate A380.

2.15.1.2 A380 滑行线路详见机场图 AD2.24-1A；

2.15.1.2 Taxiing routes for A380 refer AD2.24-1A;

2.15.2 04R/22L 跑道

2.15.2 RWY04R/22L

2.15.2.1 A380 运行区域

2.15.2.1 Operational areas for A380

（1）跑道：04R/22L 号跑道

（2）滑行道：D、D1-D16、E、E1-E16、G3、G4、K、K1-K2、M（M1（含）以东段）、M1-M3。停靠临时组合机位 101A、223A 时，B 滑、C1 滑，C9 滑，C11 滑可以通行 A380

（3）停机位：331、332 机位，101A、223A 临时组合机位，除冰坪 02 除冰机位

（4）除上述区域外，其他区域禁止 A380 运行。

(1) RWY: RWY 04R/22L

(2) TWYs: D, D1-D16, E, E1-E16, G3,G4, K, K1-K2, M(east of M1(inclusive)), M1-M3.When A380 parking at temporary combined stands Nr.101A,223A, TWY B, C1, C9, C11 are available.

(3) Stands Nr.331, 332, temporary combined stands Nr.101A,223A, de-icing stands Nr.02

(4) Except above areas, other areas are forbidden to operate A380.

2.16 跑道等待位置标志

2.16 Runway-holding position marking

2.16.1 航空器在进入跑道前必须在指定的跑道等待位置处等待机场管制塔台的指令；

2.16.1 Aircraft shall stop and wait for the instruction of TWR Control at the relative runway-holding positions;

2.16.2 航空器在跑道等待位置等待时,机头应尽量

2.16.2 The nose of A/C shall get close to the runway

靠近跑道等待位置标志,但不能超过此标识。机场设置 A 型等待位置和 B 型等待位置,当I类运行时,航空器应停放在“A 型等待位置标志”处;

holding position marking without exceeding it. There are type A holding position and type B holding position, when A/C is waiting at the RWY holding position, and Pattern A for CAT I operation;

2.17 中间等待位置标志

2.17 Intermediate holding position marking

本场公布 9 个中间等待位置标志。其中 HP1、HP2、HP3、HP4、HP10 等待点的使用依据塔台指令等待,航空器经过 HP5、HP6、HP7、HP8 等待点时需听从机场管制塔台指令转频。参见 AD2.24-2;

9 Intermediate holding position markings are established. Aircraft holding at HP1,HP2, HP3, HP4, HP10 shall follow the instructions of TWR ATC. Aircraft holding at HP5, HP6, HP7, HP8 shall follow the instructions of ATC to change frequency. Refer to AD2.24-2;

等待位置 Holding point	滑行方向 Taxiing direction	等待位置 Holding point	滑行方向 Taxiing direction
HP1	N to S& S to N	HP2	N to S& S to N
HP3	N to S& S to N	HP4	N to S& S to N
HP5	E to W& W to E	HP6	E to W& W to E
HP7	E to W& W to E	HP8	E to W& W to E
HP10	SE to NW		

3. 机坪和机位的使用

3. Use of aprons and parking stands

3.1 着陆航空器脱离跑道后均按照管制指令在相应位置由引导车引导进入停机位;

3.1 Landing aircraft shall taxi to the relevant position according to the ATC instructions after vacating RWY and follow the guidance of follow-me vehicle to taxi into the parking stands;

3.2 发动机试车规定

3.2.1 本场 1 号、2 号、3 号、5 号机坪的停机位除 215、216、306-309、320-323、341-344、355-358 机位外，其他停机位均可进行慢车试车；本场在 1 号坪 101-103 机位区域设置标准试车位，可供 B747 及以下机型的航空器试大车使用。原则上，本场其他区域禁止试大车；

3.2.2 发动机试车前，需向运行指挥室申请，许可后，再向机坪管制室申请，再次许可后，方可在指定的地点试车；试车时需与机坪管制室保持通信畅通；

3.2.3 在规定的试车位以外，发动机试车须经现场运行指挥中心和塔台同意，在塔台指定的临时地点(如 B 滑、D 滑、P12 滑、隔离机位、除冰坪等)、指定的时间，在保证安全的前提下进行；

3.2 Rules of engine run-ups

3.2.1 All parking stands (except stands Nr. 215, 216, 306-309, 320-323, 341-344, 355-358) on apron Nr.1, 2, 3, 5 can be used for engine idle test. Engine run-ups stands set at Nr.101-103 on apron Nr.1 are available for A/C type B747 and below. In principle, engine run-ups is strictly forbidden at other stands;

3.2.2 Before engine run-ups, flight crew shall apply for operation control office clearance, and then apply for APN clearance, engine run-ups shall be carried out at a designated location. Flight crew shall monitor APN frequency during engine run-ups;

3.2.3 Under ensuring security preconditon, except for the designated engine run-ups location, engine run-ups shall be executed at the temporary location (e.g. TWY B, D, P12, isolated stands, de-icing stands) subject to AOC and TWR approval during the designated time.

3.3 机位限制/Limits for aircraft parking on the following stands:

停机位/Stands	航空器翼展限制/Wing span limits for aircraft(m)	机身长度限制/Fuselage limits for aircraft(m)	滑入滑出方式/Enter and exit by
Nr.331-332	80	80	taxi in, push back
Nr.327, 329, 334, 335, 338, 358-360	65	76	taxi in, push back
Nr.216	65	74.5	taxi in, push back

Nr.521-523	65	72.2	taxi in, push back
Nr.224	60.9	64.0	taxi in, push back
Nr.207-209, 328, 336	52	66	taxi in, push back
Nr.221, 222	52	60.75	taxi in, push back
Nr.508-512	44.8	55	taxi in, push back
Nr.210	38	61.75	taxi in, push back
Nr.212, 214, 215, 220, 223, 306-309, 320-326, 330, 331L, 331R, 332L, 332R, 333, 337, 339-344, 355-357, 361, 506-507, 519, 520, 523L, 523R	36	56	taxi in, push back
Nr.201-206, 211, 213, 217-219, 301-305, 310-319, 345-354	36	47	taxi in, push back
Nr.516-518	36	44.5	taxi in, push back
Nr.101-104	36	42.1	taxi in, push back
Nr.515	29	41.5	taxi in, push back
Nr.501-505	20	32	taxi in and out
Nr.531	19.2	16	taxi in and out
Nr.532, 533	18.2	15.24	taxi in and out
Nr.101A, 223A	for A380-800 alternate		taxi in, push back
de-icing stand Nr.02	80	90	taxi in and out
de-icing stands Nr.01, 03	36	60	taxi in and out
Remarks: 1. Stands Nr.331L, 331R are not available when stands Nr.331 is in use; Stands Nr.331L, 331R cannot get ground support simultaneously; 2. Stands Nr.332L, 332R are not available when stands Nr.332 is in use;			

3. Stands Nr.523L, 523R are not available when stands Nr.523 is in use;

4. Stands Nr.101-103 are not available when engine run-ups stand is in use;

5.Stands Nr.101A, 223A are only available for A380 alternate flight;

6. For A/C type A300-600, stands Nr.508-512 are just available for no-load parking;

7. Stand Nr.531 is available for A/C type Y12E and below;

8. Stands Nr.532, 533 are available for A/C type Y5 and below;

9. A/C type G550 and below and BBJ-1 business flight shall taxi in stand Nr.512 and out by itself;

10. Due to short of parking stands or other reasons, there is a necessary to use combined stands, cannot conduct ground support for both departure and arrival aircraft;

10. Stands Nr.221-224, 508-512, 515-518 are available for A/C cleaning; Nr.101-104 are available for A/C maintenance;

11. The same side stands of one airside concourse and adjacent stands on apron Nr.3 shall not be pushed back at the same time.

3.4 207-224 号停机位处于塔台的视野盲区，机组在该区域滑行时应严格执行管制指令。停靠在该区域的航空器推出前，必须联系 AOC（呼号：天河，频率：121.9MHz）。未经许可，严禁航空器擅自推出；在获得地面管制的开车指令后 5min 内必须推出，否则指令失效，并且航空器驾驶员须报告地面管制员。

3.4 Stands Nr.207-224 are in the TWR blind zone, flight crew taxing in this zone shall follow the ATC instructions strictly. Aircraft parking at these stands shall apply for clearance from AOC(call sign: TIANHE, frequency: 121.9MHz) before push-back. Push-back without AOC clearance is strictly forbidden; A/C shall follow the instruction after obtain the clearance of push back from GND control in 5min, otherwise the clearance is invalid, and pilot shall report to GND controller.

3.5 隔离机位的使用

3.5 Use of isolated stands for A/C

3.5.1 04L/22R 跑道：无专用隔离机位。

3.5.1 RWY04L/22R: No dedicated isolated stands;

3.5.2 04R/22L 跑道：有隔离机位，设置在 D 平滑北端，可供 A380 及以下航空器（翼展＜80 米）隔离使用。

3.5.2 RWY04R/22L: Isolated stands set at north of TWY main D, and it is available for A/C type A380(wingspan＜80m) and below.

3.5.3 除冰机坪 02 除冰机位可作为临时隔离机位使用。

3.5.3 De-icing stand Nr.02 can be used as a temporary isolated stand .

3.6 为降低碳排放及噪音，停靠 301-361 号停机位的航空器（A380 除外）关闭 APU，接驳地面电源及空调系统。

3.6 Aircraft (except A380) parking on stands Nr.301-361 should close APU, and use ground power unit and air conditioning systems, so as to reduce carbon emission and noise.

4. 进、离场管制规定

4. Air traffic control regulations

无

Nil

5. 机场的 II/III 类运行

5. CAT II/III operations at AD

5.1 低能见度标准运行的运行条件及可使用跑道/ LVP Conditions and Available RWYs:

运行标准种类/ Types of Operation Standards	运行条件/ Operation Conditions		可使用的跑道/ Available RWYs
	天气标准(RVR 或云高)/ Weather Conditions (RVR or Ceiling)(m)	是否需实施低能见度运行程序/ LVP Requirement	
HUD ILS SA CAT I	450≤RVR<550 or 45≤Ceiling<60	YES	RWY04L/22R RWY04R/22L
HUD ILS SA CAT II	350≤RVR<450 or 30≤Ceiling<45	YES	RWY04R
Standard ILS CAT II (Autopilot to (DH) and below)	Type A, B, C, D: 300≤RVR<550 30≤Ceiling<60	YES	RWY04R

Standard ILS CAT II (Manual Operation below (DH))	Type A, B, C: 300≤RVR<550 Type D: 350≤RVR<550 30≤Ceiling<60	YES	RWY04R
Low visibility take-off	Type A, B, C: RVR200 Type D: RVR250	YES	RWY04R/22L
Low visibility take-off based on HUD	RVR150	YES	RWY04R/22L

5.2 信息发布及申请

5.2.1 只有获得所在国民航有关部门运行批准，具备使用 HUD 实施特殊 I/II 类运行及 HUD RVR150m 起飞资格的航空器运营人，才能运行武汉天河国际机场特殊 I/II 类及 HUD RVR150 起飞标准；

5.2.2 机组如需执行 HUD 特殊 I/II 类、标准 II 类、低能见度起飞运行标准，应主动向管制员报告，经批准后方可实施；

5.2.3 准备实 II 类进近的机组应在与进近管制的首次联系中提出申请；

5.2.4 由空管通过 D-ATIS、ATIS、VHF 发布信息，宣布低能见度运行程序启动和结束。

5.3 低能见度运行程序启动与结束

5.2 Information Issuance and Application

5.2.1 A/C operator who is capable of HUD special CAT I /II or HUD RVR150m take-off shall get the authorization from the applicable foreign regulatory authority to conduct special CAT I /II or HUD RVR150m in WUHAN/Tianhe airport;

5.2.2 Flight crew shall conduct HUD special CAT I /II, standard CAT II or LVP take-off after reporting to ATC and getting permission;

5.2.3 Apply for CAT II approach at the first contact with APP ATC when prepare to commence CAT II approach;

5.2.4 LVP is commenced and terminated by ATC issuing through D-ATIS, ATIS and VHF.

5.3 LVP Commencement and Termination

5.3.1 启动阶段

（1）当跑道视程（RVR）测报值大于等于 150m，小于 600m；

（2）云高测报值大于等于 30m，小于 60m；

（3）经空管确认，机场和空管具备低能见度程序保障能力；

5.3.1 Commencement

（1）When predicted RVR is 150m or greater, and less than 600m;

（2）When predicted ceiling is 30m or greater, and less than 60m;

（3）Confirmed by ATC, aerodrome and ATC have the capabilities of LVP;

5.3.2 结束阶段

（1）当跑道视程（RVR）测报值上升至 800m，且云高抬升至 90m，并预计有好转趋势或稳定 20min 后；

（2）跑道视程（RVR）测报值小于 150m，或云高小于 30m 时，并且预计未来 1h 以上无法转好；

（3）在低能见度程序运行期间因设备或其他原因不具备低能见度程序保障能力时。

5.3.2 Termination

（1）When predicted RVR is going up to 800m, and ceiling is going up to 90m, and the trend is getting better or stable in 20min;

（2）When predicted RVR is less than 150m, or ceiling is less than 30m, and the trend is not getting better in 1 hour;

（3）Due to equipment or other reasons that there is no capability of LVP.

5.4 低能见度地面运行规定

5.4 LVP Ground operational regulation

5.4.1 在实施低能见度运行时，所有进离港航空器在停机坪区滑行必须全程引导车引导，塔台管制地带内根据机组需求提供引导车引导；

5.4.1 When operating LVP, all the arrival and departure A/C shall follow follow-me vehicle when taxiing on apron. And follow-me vehicle is provided when flight crew request within the Tower Control Zone;

5.4.2 II 类运行时，离场航空器应听从管制员指挥在指定滑行道的 II 类等待位置等待，未经许可，禁止越过等待线，避免进入仪表着陆系统敏感区；

5.4.2 When conducting CAT II operation, departure A/C shall follow ATC instructions and hold at designated TWY CAT II holding positions, and

进场航空器进入主滑行道后表明已离开仪表着陆系统敏感区，此时必须向塔台管制室报告“已脱离跑道”；

prohibit to cross holding line without permission, for avoiding entering the ILS sensitive area. Arrival A/C have leave ILS sensitive area once entering the main TWYs, then report to TWR: RWY vacated;

5.4.3 在实施低能见度运行期间，E 类（含以下）机型在04R跑道等待点位置为B型跑道等待位置；F 类机型在 04R 跑道等待点位置为 D 滑与 D1 滑交叉道口前。

5.4.3 During LVP in operation, when A/C type E or less operate on RWYs, holding position on RWY04R is holding position pattern B. For A/C type F, holding position on RWY04R is before intersection of TWY D and TWY D1.

5.5 其他特殊要求在实施低能见度运行期间，当获知地面保障条件发生变化，不能满足低能见度运行程序需求时，塔台应立即宣布结束低能见度运行程序运行。管制员需指挥正在实施特殊 II 类进近航空器立即终止进近。如因 RVR 发生变化，低于当时实施的低能见度运行标准时，塔台管制员应及时通知机组当前的 RVR 数值，由机组决定继续进近还是终止进近。

5.5 Other Special RequirementsWhen know the change of ground service conditions and it is not satisfied with the LVP procedures requirements, TWR shall issue termination of LVP immediately during conducting LVP. ATC shall direct SA CAT II approaching A/C to terminate. If RVR changed and it is lower than LVP standards, TWR shall inform flight crew the current RVR immediately and it depends on flight crew to continue or not.

6. 除冰规则

6. Rules for deicing

6.1 需除冰的航空器,在推出前向现场指挥中心申请；

6.1 A/C shall contact AOC before pushed-back for de-icing;

6.2 本场在 D 滑西侧南端设置专用除冰位（01(C 类)、02(F 类)、03(C 类)三个除冰位)可满足 A380 及其以下航空器在冬季除冰的需求；

6.2 De-icing stands Nr. 01(CAT C), 02(CAT F), 03(CAT C) are set at the northwest of TWY D, and these stands are available for A/C type A380 and below;

6.3 航空器使用专用除冰位时，应按照塔台的指挥，经 D 滑，滑行/牵引进入除冰位。D 类及以上航空器停靠 02 除冰位进行除冰作业；C 类及以下航空器除冰作业，可同时安排两架进行，分别停靠 01、03 除冰位。

6.3 A/C shall be pulled into de-icing stands via TWY D. De-icing stand Nr.02 is available for A/C CAT D and above; De-icing stands Nr.01 and 03 could de-icing simultaneously for A/C CAT C and below;

7. 平行跑道同时仪表运行

7. Simultaneous operations on parallel runways

7.1 根据实际情况,武汉天河机场采用单跑道运行或双跑道隔离平行运行。

7.1 According to the actual situation, single runway operations or segregated parallel approaches/ departures can be implemented in Wuhan/ Tianhe airport.

8. 警告

8. Warning

8.1 邻近机场较多,飞行活动频繁,进出本机场的航空器,严格保持航迹和高度,并听从 ATC 指挥;

8.1 Several airports near Wuhan/Tianhe airport, many flights exist around the airport, the departing/landing aircraft shall strictly keep the flight track and altitudes, and follow ATC instructions;

8.2 武汉机场为平行宽距双跑道,跑道编号按左右划分,机组和管制员在使用跑道时注意辨别、提醒。

8.2 Two runways are parallel with wide-distance in Wuhan/Tianhe airport, the runway designator is supplemented with “L” or “R”, pilots and controller shall pay attention to identify.

9. 直升机飞行限制，直升机停靠区

9. Helicopter operation restrictions and helicopter parking / docking area

无

Nil

ZHHH AD 2.21 噪音限制规定及减噪程序

ZHHH AD 2.21 Noise restrictions and Noise

abatement procedures

1 起飞减噪程序

在保证安全超障和飞行程序最低爬升梯度的条件下,执行如下起飞减噪程序。由于非管制原因不执行减噪程序,飞行员必须在起飞前告知管制员并说明原因(特殊飞行除外)。

1.1 在航空器起飞性能运行允许的情况下,尽可能使用减推力起飞;

1.2 在高度 450 米时,起始爬升速度 V2+20km/h(10 海里/小时),减小功率和俯仰角,保持可靠襟翼和速度继续爬升;

1.3 高度 900 米以上时,平稳加速至航路爬升速度,按规定收襟翼/缝翼。

1 Noise abatement procedures for departure

In condition of complying with the requirements of obstacle clearance and climb gradient required by flight procedure, the following noise abatement climb procedures shall be implemented. If the procedures can not be implemented due to any reason except ATC, pilot shall inform the controller with a reasonable explanation(except for special flight).

1.1 The derated take-off is strongly recommended if the take-off performance of aircraft permit;

1.2 At altitude 450m, with a climb speed of V2 plus 20km/h(10kt), reduce engine power/thrust and angle of pitch, maintain a speed with flaps and slats in the take-off configuration;

1.3 At altitude 900m or above, maintain a positive rate of climb, accelerate smoothly to en-route climb speed and retract flaps/slats on schedule.

ZHHH AD 2.22 飞行程序

ZHHH AD 2.22 Flight procedures

1. 总则

除经塔台特殊许可外,在塔台管制区内的飞行,均需按照仪表飞行规则进行。

1. General

Flights within Tower Control Area shall operate under IFR unless special clearance has been obtained

from Tower Control.

2. 起落航线

04L/22R 号跑道起落航线在跑道西北侧，高度 450-700 米；
04R/22L 号跑道起落航线在跑道东南侧，高度 450-700 米；

2. Traffic circuits

RWY04L/22R: Traffic circuits shall be made to the northwest of RWY, at the altitudes of 450-700m;
RWY04R/22L: Traffic circuits shall be made to the southeast of RWY, at the altitudes of 450-700m.

3. 仪表飞行程序

3.1 严格按照航图中公布的进、离场程序飞行。如果需要，航空器可在空中交通管制部门指定的航路、导航台或定位点上空等待或做机动飞行；

3. IFR flight procedures

3.1 Strict adherence is required to the relevant arrival/departure procedures published in the aeronautical charts. Aircraft may, if necessary, hold or maneuver on an airway, over a navigation facility or a fix designated by ATC;

3.2 本场 24 小时实行 RNP1 进离场程序，不能执行 RNP1 程序的航空器驾驶员应在首次联系武汉塔台或武汉进近时报告。

3.2 RNP1 procedures are implemented in the Wuhan/Tianhe airport for the whole day. If A/C can not fulfill the requirements of the RNP1 procedures operation, pilot shall inform the controller at the first contact or during approaching.

4. 雷达程序和/或 ADS-B 程序

4.1 武汉进近管制区域内实施雷达管制。航空器最小水平间隔为 6 千米,最小垂直间隔为 300 米;

4. Radar procedures and/or ADS-B procedures

4.1 Radar control within Wuhan APP has been implemented. The minimum horizontal radar separation is 6km, the minimum vertical radar separation is 300m;

4.2 雷达引导与排序

4.2 Radar vectoring and sequencing

4.2.1 通常，航空器从 N310545 E1122356— N321939 E1133646— N320730 E1140412— N323223 E1145929— N322728 E1154958— N300500 E1155600— N290200 E1143400— N292300 E1130712— N292352 E1124300— N301718 E1121618— N310545 E1122356 或管制移交点得到进近雷达引导和排序,直至相应的最后进近航迹或目视跑道。根据航空器性能或管制规定,发布雷达引导、上升或下降高度及速度调整的指令,使航空器之间保持规定的雷达间隔或尾流间隔;

4.2.1 Normally, aircraft will be vectored and sequenced within N310545 E1122356— N321939 E1133646— N320730 E1140412— N323223 E1145929— N322728 E1154958— N300500 E1155600— N290200 E1143400— N292300 E1130712— N292352 E1124300— N301718 E1121618— N310545 E1122356 or ATC hand-over Fix to the appropriate final approach track or to the time when RWY is in sight. Instructions about radar vectors, ascent/descent altitudes or speed adjustment will be issued for spacing and separating the aircraft so that stipulated radar intervals and wake intervals are maintained, taking into account aircraft characteristics or control regulations;

4.2.2 离场航空器在起飞前收到 ATC 放行或塔台管制员给出起飞限制条件，起飞后可由管制员雷达引导离场。

4.2.2 If the departure aircraft receive take-off limits from controller, then it will be vectored to join in the standard departure routes by radar controller.

4.3 最低监视引导高度扇区

4.3 Surveillance Minimum Altitude Sectors

4.3.1 扇区位置点坐标

4.3.1 Coordinates of sector location point

Location Point	Coordinate	Location Point	Coordinate	Location Point	Coordinate
1A	N310800 E1133402	1K	N303824 E1130830	5A	N313018 E1151712
1B	N310800	2A	N311600	5B	N304540

	E1140000		E1134100		E1151634
1C	N305600 E1140000	2B	N312712 E1140000	5C	N304540 E1145532
1D	N305600 E1144955	3A	N314318 E1142803	6A	N303930 E1151631
1E	N302100 E1144955	3B	N313615 E1145532	6B	N303930 E1144955
1F	N302100 E1142353	3C	N312553 E1145532	7A	N302612 E1151601
1G	N303934 E1142353	3D	N312553 E1142040	7B	N295300 E1141700
1H	N303934 E1141010	3E	N310438 E1142040	8A	N295430 E1134124
1 I	N303618 E1141010	3F	N310438 E1140000	8B	N301300 E1131108
1J	N303618 E1130838	4A	N305600 E1145532		

4.3.2 扇区范围及最低引导高度

4.3.2 Range of sectors and minimum altitude limits

Sector 1	ALT limit: 600m or above
1A-1B-1C-1D-1E-1F-1G-1H-1 I-1J-1K-1A	
Sector 2	ALT limit: 650m or above
2A-2B-1B-1A-2A	
Sector 3	ALT limit: 1200m or above
3A-3B-3C-3D-3E-3F-2B-3A	
Sector 4	ALT limit: 900m or above

4A-1C-3F-3E-3D-3C-4A	
Sector 5	ALT limit: 1950m or above
5A-5B-5C-3B-5A	
Sector 6	ALT limit: 1000m or above
6A-6B-1D-4A-5C-5B-6A	
Sector 7	ALT limit: 850m or above
7A-7B-1F-1E-6B-6A-7A	
Sector 8	ALT limit: 800m or above
8A-8B-1J-1 I-1H-1G-1F-7B-8A	

5. 无线电通信失效程序

无

5. Radio communication failure procedures

Nil

6. 目视飞行程序

6.1 当武汉天河机场能见度不小于 5 千米，云高不低于 600 米时，可以发布实施目视进近；

6.2 目视飞行的等待：在机场上空按起落航线进行等待。

6. Procedures for VFR flights

6.1 When VIS is no less than 5km and ceiling no lower than 600m, visual approach can be implemented;

6.2 Holding: aircraft shall hold following the traffic circuits mentioned above.

7. 目视飞行航线

无

7. VFR route

Nil

8. 目视参考点

无

8. Visual reference point

Nil

9. 其它规定

9.1 对机组的要求

9.1.1 从停机位推出时,向机坪管制员证实使用跑道、推出方向;

9.1.2 在脱离跑道首次与地面管制联系时，尤其是在低能见度的情况下，必须向地面管制员报告脱离跑道和所在滑行道等具体位置;

9.1.3 如在地面管制扇区之间移交时出现联系不畅,应在交界点停止滑行,并向原先联系的扇区报告;

9.1.4 专机滑行路线以管制员通知为准;

9.1.5 当机组误操作滑错方向时，应该立即停止滑行并向管制员报告;

9.1.6 听清并重复管制员的滑行指令，尤其是界限性指令，发现疑问及时证实;

9.1.7 机组如在机坪管制与地面管制扇区移交后联系不畅,应在移交等待线前等待,并应向原管制扇区报告。

9. Other regulations

9.1 Requirements for flight crew:

9.1.1 While pushed back from parking stand, verify the pushing direction and the approved RWY designation to APN Control;

9.1.2 A/C shall inform ATC the position at the first contact when vacate RWY via TWYs, especially the visibility is poor;

9.1.3 If failure to change the assigned GND frequency, stop prior to the intersection of the two GND sectors and contact the original GND frequency;

9.1.4 Taxiing routes of special flight will be instructed by ATC;

9.1.5 When taxiing to the wrong direction by mistake, stop immediately and report ATC;

9.1.6 Repeat the whole taxiing instructions issued by ATC , especially the boundary instructions, and make it clear when there is a doubt;

9.1.7 If failed to change the frequency between APN and GND, holding at the prior hand-over line and contact the original frequency.

10. 区域导航飞行程序相关数据 **10. Data for RNAV flight procedures**

Waypoint list

ID	COORDINATES(WGS-84)	ID	COORDINATES(WGS-84)
HH402	N303337 E1135849	HH502	N305954 E1142728
HH403	N303723 E1135352	HH503	N305611 E1143219
HH404	N305041 E1140724	HH504	N303804 E1141342
HH405	N310929 E1142641	HH505	N302624 E1140149
HH406	N304804 E1143604	HH507	N310305 E1143045
HH407	N303342 E1150224	HH508	N310442 E1143038
HH410	N302253 E1134757	HH512	N310039 E1142628
HH412	N303252 E1135948	HH513	N310427 E1142130
HH413	N302911 E1140438	HH514	N303619 E1142613
HH414	N304227 E1141812	HH515	N302934 E1145935
HH415	N302849 E1135540	HH516	N303748 E1150811
HH416	N302445 E1135133	HH517	N310512 E1144924
HH417	N302041 E1134726	HH518	N302604 E1133225
HH418	N305858 E1141553	HH519	N301240 E1134753
HH420	N302830 E1133811	HH521	N311418 E1142958
HH421	N303128 E1134324	HH522	N310251 E1142844
HH422	N303426 E1134838	HH551	N303428 E1141735
HH423	N303218 E1140750	HH552	N305609 E1143953
HH424	N304031 E1135703	HH553	N303021 E1141323
HH425	N303600 E1140259	HH554	N303802 E1140319
HH428	N302933 E1135442	HH556	N305008 E1135830
HH429	N302529 E1135035	HH558	N301248 E1133929
HH451	N310624 E1143224	HH559	N301420 E1133919
HH452	N310630 E1143416	HH560	N303717 E1140418

HH453	N310828 E1143431	HH561	N312253 E1144204
HH454	N305844 E1140716	HH562	N304026 E1140945
HH455	N304523 E1135339	HH563	N304337 E1140704
HH456	N310247 E1141125	DCD	N3026.4 E11409.5
HH457	N304411 E1142733	DHB	N3041.9 E11358.3
HH458	N303515 E1141823	DHP	N3052.2 E11428.2
HH459	N302938 E1142442	HOK	N3119.5 E11425.8
HH460	N305525 E1142105	LKO	N2954.4 E11341.5
HH461	N302725 E1145821	WTM	N3038.3 E11308.6
HH462	N312138 E1143611	XSH	N3026.1 E11516.0
HH463	N304113 E1134926	BIVIP	N3107.7 E11516.8
HH464	N305439 E1142205	GUGAM	N3013.0 E11311.1
HH465	N305214 E1141548	ONIXO	N3146.7 E11423.7
HH466	N305008 E1141947	UBGIV	N3141.8 E11430.1

Path Terminator	Waypoint ID	Fly over	Magnetic Course (°)	Turn Direction	Altitude (m)	IAS (km/h)	VPA/ TCH	Navigation Specification
RWY04L SID WTM-09D								
VA			046		170			RNP1
CF	HH465		031		↑350	MAX390		RNP1
TF	HH454				↓1800			RNP1
TF	HH455							RNP1
TF	HH463							RNP1
TF	WTM							RNP1
RWY04L SID LKO-07D								
VA			046		170			RNP1

CF	HH465		031		↑350	MAX390		RNP1
TF	HH454				↓1800			RNP1
TF	HH455							RNP1
TF	HH463							RNP1
TF	LKO							RNP1
RWY04L SID LKO-09D(by ATC)								
VA			046		170			RNP1
DF	HH460				↑500	MAX390		RNP1
TF	DHP							RNP1
TF	HH457							RNP1
TF	HH458							RNP1
TF	DCD				↑3600			RNP1
TF	LKO							RNP1
RWY04L SID XSH-05D								
VA			046		170			RNP1
CF	HH465		031		↑350	MAX390		RNP1
TF	HH454				↓1800			RNP1
TF	HH455							RNP1
TF	DHB							RNP1
TF	HH459				↑3600			RNP1
TF	HH461							RNP1
TF	XSH							RNP1
RWY04L SID XSH-07D(by ATC)								
VA			046		170			RNP1
DF	HH460				↑500	MAX390		RNP1
TF	DHP							RNP1
TF	HH457							RNP1

TF	HH461							RNP1
TF	XSH							RNP1
RWY04L SID XSH-09D								
VA			046		170			RNP1
DF	HH460				↑500	MAX390		RNP1
TF	DHP							RNP1
TF	HH457							RNP1
TF	HH458							RNP1
TF	HH459				↑3600			RNP1
TF	HH461							RNP1
TF	XSH							RNP1
RWY04L SID BIVIP-07D(by ATC)								
VA			046		170			RNP1
DF	HH460				↑500	MAX390		RNP1
TF	DHP							RNP1
TF	BIVIP							RNP1
RWY04L SID BIVIP-09D								
VA			046		170			RNP1
DF	HH460				↑500			RNP1
TF	HH451				↑3600			RNP1
TF	BIVIP							RNP1
RWY04L SID UBGIV-07D								
VA			046		170			RNP1
DF	HH460				↑500			RNP1
TF	HH453							RNP1
TF	HH462							RNP1
TF	UBGIV							RNP1

RWY04L SID UBGIV-09D								
VA			046		170			RNP1
CF	HH465		031		↑350	MAX390		RNP1
TF	HH454				↓1800			RNP1
TF	HH456							RNP1
TF	UBGIV							RNP1
RWY04R SID WTM-08D								
VA			046		150			RNP1
DF	HH464				↑500	MAX390		RNP1
TF	HH456				↓1800			RNP1
TF	HH455							RNP1
TF	HH463							RNP1
TF	WTM							RNP1
RWY04R SID LKO-06D								
VA			046		150			RNP1
DF	HH464				↑500	MAX390		RNP1
TF	HH456				↓1800			RNP1
TF	HH455							RNP1
TF	HH463							RNP1
TF	LKO							RNP1
RWY04R SID LKO-08D(by ATC)								
VA			046		150			RNP1
CF	HH466		061		↑400	MAX390		RNP1
TF	HH457							RNP1
TF	HH458							RNP1
TF	DCD				↑3600			RNP1
TF	LKO							RNP1

RWY04R SID XSH-04D								
VA			046		150			RNP1
DF	HH464				↑500	MAX390		RNP1
TF	HH456				↓1800			RNP1
TF	HH455							RNP1
TF	DHB							RNP1
TF	HH459				↑3600			RNP1
TF	HH461							RNP1
TF	XSH							RNP1
RWY04R SID XSH-06D(by ATC)								
VA			046		150			RNP1
CF	HH466		061		↑400	MAX390		RNP1
TF	HH457							RNP1
TF	HH461							RNP1
TF	XSH							RNP1
RWY04R SID XSH-08D								
VA			046		150			RNP1
CF	HH466		061		↑400	MAX390		RNP1
TF	HH457							RNP1
TF	HH458							RNP1
TF	HH459				↑3600			RNP1
TF	HH461							RNP1
TF	XSH							RNP1
RWY04R SID BIVIP-06D(by ATC)								
VA			046		150			RNP1
CF	HH466		061		↑400	MAX390		RNP1
TF	DHP							RNP1

TF	BIVIP							RNP1
RWY04R SID BIVIP-08D								
VA			046		150			RNP1
DF	HH464				↑500			RNP1
TF	HH452				↑3600			RNP1
TF	BIVIP							RNP1
RWY04R SID UBGIV-06D								
VA			046		150			RNP1
DF	HH464				↑500			RNP1
TF	HH452							RNP1
TF	HH462							RNP1
TF	UBGIV							RNP1
RWY04R SID UBGIV-08D								
VA			046		150			RNP1
DF	HH464				↑500	MAX390		RNP1
TF	HH456				↓1800			RNP1
TF	UBGIV							RNP1
RWY22L SID WTM-18D								
VA			226		150			RNP1
DF	HH560				↑550	MAX390		RNP1
TF	DHB							RNP1
TF	WTM							RNP1
RWY22L SID LKO-16D								
VA			226		150			RNP1
DF	HH560				↑550			RNP1
TF	HH558							RNP1
TF	LKO							RNP1

RWY22L SID LKO-18D(by ATC)								
VA			226		150			RNP1
CF	HH562		211		↑400	MAX390		RNP1
TF	DCD							RNP1
TF	LKO							RNP1
RWY22L SID XSH-16D								
VA			226		150			RNP1
DF	HH560				↑550	MAX390		RNP1
TF	HH455				↓1800			RNP1
TF	HH456				↑3600			RNP1
TF	HH552							RNP1
TF	XSH							RNP1
RWY22L SID XSH-18D(by ATC)								
VA			226		150			RNP1
CF	HH562		211		↑400	MAX390		RNP1
TF	HH553							RNP1
TF	XSH							RNP1
RWY22L SID BIVIP-16D								
VA			226		150			RNP1
DF	HH560				↑550	MAX390		RNP1
TF	HH455				↓1800			RNP1
TF	HH456				↑3600			RNP1
TF	HH552							RNP1
TF	BIVIP							RNP1
RWY22L SID BIVIP-18D(by ATC)								
VA			226		150			RNP1
CF	HH562		211		↑400	MAX390		RNP1

TF	HH551							RNP1
TF	HH552							RNP1
TF	BIVIP							RNP1
RWY22L SID UBGIV-16D(by ATC)								
VA			226		150			RNP1
CF	HH562		211		↑400	MAX390		RNP1
TF	HH551							RNP1
TF	HH552							RNP1
TF	HH561							RNP1
TF	UBGIV							RNP1
RWY22L SID UBGIV-18D								
VA			226		150			RNP1
DF	HH560				↑550	MAX390		RNP1
TF	HH455				↓1800			RNP1
TF	HH456							RNP1
TF	UBGIV							RNP1
RWY22R SID WTM-19D								
VA			226		150			RNP1
CF	HH563		241		↑350	MAX390		RNP1
TF	DHB							RNP1
TF	WTM							RNP1
RWY22R SID LKO-17D								
VA			226		150			RNP1
DF	HH554				↑550			RNP1
TF	HH559							RNP1
TF	LKO							RNP1
RWY22R SID LKO-19D(by ATC)								

VA			226		150			RNP1
DF	HH554				↑550	MAX390		RNP1
TF	DCD							RNP1
TF	LKO							RNP1
RWY22R SID XSH-17D								
VA			226		150			RNP1
CF	HH563		241		↑350	MAX390		RNP1
TF	HH556				↓1800			RNP1
TF	HH456				↑3600			RNP1
TF	HH552							RNP1
TF	XSH							RNP1
RWY22R SID XSH-19D(by ATC)								
VA			226		150			RNP1
DF	HH554				↑550	MAX390		RNP1
TF	HH553							RNP1
TF	XSH							RNP1
RWY22R SID BIVIP-17D								
VA			226		150			RNP1
CF	HH563		241		↑350	MAX390		RNP1
TF	HH556				↓1800			RNP1
TF	HH456				↑3600			RNP1
TF	HH552							RNP1
TF	BIVIP							RNP1
RWY22R SID BIVIP-19D(by ATC)								
VA			226		150			RNP1
DF	HH554				↑550	MAX390		RNP1
TF	HH553							RNP1

TF	HH552							RNP1
TF	BIVIP							RNP1
RWY22R SID UBGIV-19D								
VA			226		150			RNP1
CF	HH563		241		↑350	MAX390		RNP1
TF	HH556				↓1800			RNP1
TF	HH456							RNP1
TF	UBGIV							RNP1
RWY04L/R STAR ONIXO-08A								
IF	ONIXO							RNP1
TF	HOK							RNP1
TF	HH405				↑3600			RNP1
TF	DHP							RNP1
TF	HH414				↑2400			RNP1
TF	HH413				900 or ↑1200	MAX380		RNP1
RWY04L/R STAR ONIXO-09A								
IF	ONIXO							RNP1
TF	HOK							RNP1
TF	HH405				↑3600			RNP1
TF	HH418							RNP1
TF	HH404				↑2400			RNP1
TF	HH403				900 or ↑1200	MAX380		RNP1
RWY04L/R STAR GUGAM-09A								
IF	GUGAM							RNP1
TF	HH420				↑2100			RNP1

TF	HH421							RNP1
TF	HH422							RNP1
TF	HH403				900 or ↑1200	MAX380		RNP1
RWY04L/R STAR LKO-09A								
IF	LKO							RNP1
TF	HH417				↑2100	MAX380		RNP1
RWY04L/R STAR XSH-08A								
IF	XSH							RNP1
TF	HH407							RNP1
TF	HH406				↑3600			RNP1
TF	DHP							RNP1
TF	HH418							RNP1
TF	HH404				↑2400			RNP1
TF	HH403				900 or ↑1200	MAX380		RNP1
RWY04L/R STAR XSH-09A								
IF	XSH							RNP1
TF	HH407							RNP1
TF	HH406				↑3600			RNP1
TF	DHP							RNP1
TF	HH414				↑2400			RNP1
TF	HH413				900 or ↑1200	MAX380		RNP1
RWY22L/R STAR ONIXO-19A								
IF	ONIXO							RNP1
TF	HOK							RNP1
TF	HH521				↑2100	MAX380		RNP1

RWY22L/R STAR GUGAM-18A								
IF	GUGAM							RNP1
TF	HH518				↑2700			RNP1
TF	HH505							RNP1
TF	HH504							RNP1
TF	HH414				↑2400			RNP1
TF	HH503				900 or ↑1200	MAX380		RNP1
RWY22L/R STAR GUGAM-19A								
IF	GUGAM							RNP1
TF	HH518				↑2700			RNP1
TF	DHB							RNP1
TF	HH404				↑2400			RNP1
TF	HH513				↑1200	MAX380		RNP1
RWY22L/R STAR LKO-18A								
IF	LKO							RNP1
TF	HH519				↑2700			RNP1
TF	HH505							RNP1
TF	HH504							RNP1
TF	HH414				↑2400			RNP1
TF	HH503				900 or ↑1200	MAX380		RNP1
RWY22L/R STAR LKO-19A								
IF	LKO							RNP1
TF	HH519				↑2700			RNP1
TF	DHB							RNP1
TF	HH404				↑2400			RNP1

TF	HH513				↑1200	MAX380		RNP1
RWY22L/R STAR XSH-17A(by ATC)								
IF	XSH							RNP1
TF	HH461							RNP1
TF	HH459				↑3600			RNP1
TF	HH504							RNP1
TF	HH414				↑2400			RNP1
TF	HH503				900 or ↑1200	MAX380		RNP1
RWY22L/R STAR XSH-18A(by ATC)								
IF	XSH							RNP1
TF	HH516							RNP1
TF	HH517				↑2400	MAX380		RNP1
RWY22L/R STAR XSH-19A								
IF	XSH							RNP1
TF	HH515							RNP1
TF	HH514				↑3600	MAX445		RNP1
TF	HH414				↑2400			RNP1
TF	HH503				900 or ↑1200	MAX380		RNP1
RWY04L/R Holding (outbound time: 1min)								
HM	HH420	Y	062	L	2700	MAX380		RNP1
HM	HH417	Y	016	L	2700	MAX380		RNP1
HM	HH407	Y	307	R	3600	MAX410		RNP1
HM	HH405	Y	180	R	3600	MAX410		RNP1
RWY22L/R Holding (outbound time: 1min)								
HM	HH515	Y	288	R	3600	MAX410		RNP1

HM	HH516	Y	334	R	3600	MAX410		RNP1
HM	HH461	Y	279	R	3600	MAX410		RNP1
HM	HH518	Y	060	L	2700	MAX380		RNP1
HM	HH519	Y	021	L	2700	MAX380		RNP1
HM	HH521	Y	181	L	2100	MAX380		RNP1
RWY04L Approach Transition (From HH403)								
IF	HH403				900	MAX380		RNP1
TF	HH402				900			RNP1
RWY04L Approach Transition (From HH417)								
IF	HH417				↑2100	MAX380		RNP1
TF	HH410							RNP1
TF	HH429							RNP1
TF	HH428				900			RNP1
TF	HH402				900			RNP1
RWY04L Approach Transition (From HH413)								
IF	HH413				900	MAX380		RNP1
TF	HH402				900			RNP1
RWY04L Missed Approach								
CA			046		200			RNP1
DF	HH404			L		MAX380		RNP1
TF	HH403				900			RNP1
TF	HH420				2100			RNP1
RWY04R Approach Transition (From HH403)								
IF	HH403				↑1200	MAX380		RNP1
TF	HH412				1200			RNP1
RWY04R Approach Transition (From HH417)								
IF	HH417				↑2100	MAX380		RNP1

TF	HH416							RNP1
TF	HH415							RNP1
TF	HH412				1200			RNP1
RWY04R Approach Transition (From HH413)								
IF	HH413				↑1200	MAX380		RNP1
TF	HH412				1200			RNP1
RWY04R Missed Approach								
CA			046		250			RNP1
DF	HH414			R	↑650	MAX380		RNP1
TF	DCD				900			RNP1
TF	HH417				2100			RNP1
RWY22L Approach Transition (From HH513)								
IF	HH513				↑1200	MAX380		RNP1
TF	HH502				900			RNP1
RWY22L Approach Transition (From HH503)								
IF	HH503				900	MAX380		RNP1
TF	HH502				900			RNP1
RWY22L Approach Transition (From HH517)								
IF	HH517				↑2400	MAX380		RNP1
TF	HH507				900			RNP1
TF	HH502				900			RNP1
RWY22L Approach Transition (From HH521)								
IF	HH521				↑2100	MAX380		RNP1
TF	HH507				900			RNP1
TF	HH502				900			RNP1
RWY22L Missed Approach								
CA			226		250			RNP1

DF	HH414			L		MAX380		RNP1
TF	DHP				1200			RNP1
RWY22L Holding (outbound time: 1min)								
HM	DHP	Y	046	R	1200	MAX380		RNP1
RWY22R Approach Transition (From HH513)								
IF	HH513				↑1200	MAX380		RNP1
TF	HH512				1200			RNP1
RWY22R Approach Transition (From HH503)								
IF	HH503				↑1200	MAX380		RNP1
TF	HH512				1200			RNP1
RWY22R Approach Transition (From HH517)								
IF	HH517				↑2400	MAX380		RNP1
TF	HH522							RNP1
TF	HH512				1200			RNP1
RWY22R Approach Transition (From HH521)								
IF	HH521				↑2100	MAX380		RNP1
TF	HH508							RNP1
TF	HH512				1200			RNP1
RWY22R Missed Approach								
CA			226		200			RNP1
DF	HH404			R		MAX380		RNP1
TF	HH513				1200			RNP1
RWY04R STAR ONIXO-05A(by ATC)								
IF	ONIXO							RNP1
TF	HOK							RNP1
TF	HH405				↑3600			RNP1

TF	DHP							RNP1
TF	HH414				↑2400			RNP1
TF	HH423				↑1200	MAX380		RNP1
RWY04R STAR ONIXO-06A(by ATC)								
IF	ONIXO							RNP1
TF	HOK							RNP1
TF	HH405				↑3600			RNP1
TF	HH418							RNP1
TF	HH404				↑2400			RNP1
TF	HH424				↑1200	MAX380		RNP1
RWY04R STAR GUGAM-06A(by ATC)								
IF	GUGAM							RNP1
TF	HH420				↑2100			RNP1
TF	HH421							RNP1
TF	HH422							RNP1
TF	HH424				↑1200	MAX380		RNP1
RWY04R STAR XSH-05A(by ATC)								
IF	XSH							RNP1
TF	HH407							RNP1
TF	HH406				↑3600			RNP1
TF	DHP							RNP1
TF	HH414				↑2400			RNP1
TF	HH423				↑1200	MAX380		RNP1
RWY04R STAR XSH-06A(by ATC)								
IF	XSH							RNP1
TF	HH407							RNP1
TF	HH406				↑3600			RNP1

TF	DHP							RNP1
TF	HH418							RNP1
TF	HH404				↑2400			RNP1
TF	HH424				↑1200	MAX380		RNP1
RWY04R Approach Transition (From HH424) (by ATC)								
IF	HH424				↑1200	MAX380		RNP1
TF	HH425				900			RNP1
RWY04R Approach Transition (From HH423) (by ATC)								
IF	HH423				↑1200	MAX380		RNP1
TF	HH425				900			RNP1
RWY04R Approach Transition (From HH417) (by ATC)								
IF	HH417				↑2100	MAX380		RNP1
TF	HH416							RNP1
TF	HH415							RNP1
TF	HH425				900			RNP1

ZHHH AD 2.23 其它资料

全年有鸟类活动。机场配备了驱鸟设备，并采取了驱赶措施以减少鸟群活动。鸟的活动情况如下：

ZHHH AD 2.23 Other information

Activities of bird flocks are found all the year round. Aerodrome is equipped with bird dispersal equipment, and Aerodrome Authority resorts to dispersal methods to reduce bird activities. The details of bird activities as follows:

Bird name	Activity season	Activity time	Flight height
Lanius schach	All seasons	23:00-10:00	2-10m
Common Snipe	Spring and summer	23:00-10:00	1-5m
Little egret	Summer and Autumn	22:00-11:00	10-30m

Woodcock	Winter	23:00-10:00	1-10m
Streptopelia chinensis	All seasons	22:00-10:00	2-10m