AIRCRAFT MANUAL

THE FUTURE OF THE AEROSPACE INDUSTRY

DUBAI AIRSHOW

13-17 NOVEMBER 2023

DWC, DUBAI AIRSHOW SITE

FLYING CONTROL COMMITTEE (FCC)	
Gen. S. Pilot Abdul Salam R Al Mehairbi	Chairman
Ibrahim Ahli	Deputy Chairman
Thani Al Thani	FCC Member
Capt Michael Schreiber	FCC Member (Emirates)
John Taylor	FCC Member (Park Director)
R.Lt.Col. Mohammed Al Zarouni	FCC Member
Ministry of Defence (MOD)	5 Members

Contents

1. INTRODUCTION

The 2023 edition of Dubai Airshow takes place at DWC – Al Maktoum International Airport from Monday 13th November to Friday 17th November 2023.

a. This manual covers the operation and regulation of aircraft for both flying and static display. It is intended for the use of pilots and exhibitors participating in the flying display activities of the Airshow. The manual complies with the UAE Civil Aviation Regulations (CARs) and Acceptable Means of Compliance (AMC) AMC-15 Flying Displays Standards.
b. Flying Displays will be held over and in the area of Al Maktoum International Airport (DWC). Procedures have been designed to enable participants to display their aircraft to the fullest. However, every precaution must be taken to protect the attendees from the inconvenience of noise and the risk of an accident.
c. The Flying Regulations and Air Forms for presenting aircraft at the Dubai Airshow can be downloaded from the official website www.dubaiairshow.aero

Pilots are advised to study this manual carefully and where queries arise, seek clarification from the Flying Control Committee (FCC) authorities who are contactable at the following email address:

FCCDAS23@dans.gov.ae

For queries regarding Static Aircraft Park contact:

Name: Aircraft Manager
Tel: +971 4 603 3339
Email: johnson.monteiro@dubai.aero

- For the avoidance of doubt, the use of words 'must' and 'shall' within this manual are to be understood as mandatory requirements.
- All 'time' mentioned in this manual are in Local Time (LT). UAE Local Time = UTC+4 Hour.
- Throughout this Manual, the Flying Control Committee will be referred to as the FCC.

2. TERMINOLOGY

The Event	Dubai Airshow 2023
Flying Display	Any flying activity deliberately performed for the purpose of providing an exhibition or entertainment at the event.
Crowd Line	The forward edge of the area is intended for spectators to which the public has access during a Flying Display.
Display Line	A line defining the closest a display aircraft should approach the Crowd Line.
FCC Chairman	The person responsible for the safe conduct of a Flying Display.
Display Pilot	A pilot who holds a Display Authorization or Exemption, issued by the appropriate national authority, which allows him to take part in a Flying Display.
Spectator	A person watching the Flying Display and remaining in the areas set aside for attendees.
Display Authorization	A national document detailing the types or groups of aircraft in which a pilot is authorized to display, together with any limitations and other specific endorsements.
Airside	The area of the airfield within which aircraft manoeuvring takes place and to which the attendees DO NOT have access.
Landside	The area of the airfield within which aircraft manoeuvring does not take place and the attendees may have access.
Event site	The area where the Chalets and Static Aircraft Displays are located.
Static Aircraft Park	A park for aircraft to which the attendees have access.
Maintenance Park	A park for aircraft to which the attendees have NO access.

3. GENERAL INFORMATION

3.1 APPLICATION FOR SLOTS

All flights arriving/departing Al Maktoum International Airport (DWC) for the Dubai Airshow event from 13–17 November 2023 and those planning in advance for demonstration flights, are required to have prior slot approval.

All flights related to Airshow arriving/departing Al Maktoum International Airport (DWC) before and after the Airshow should have prior approval.

No operator shall operate to or from Al Maktoum International Airport (DWC) without first obtaining confirmed slots from Airport Coordination Limited (ACL).

3.2 ACL SLOT AUTHORITY

Slot authority gives permission to operate at a specific date and a specific time which includes time on the ground. Slot times are on/off block times.

Slot requests for exhibitor's aircraft will be processed on a first come first served basis.

Requests should be sent to ACL's slot request email address, as detailed below using the IATA SSIM chapter 6 format. If you are not accustomed to SSIM please send a completed Slot Request Form to the email address below. Please be aware, the manual processing times of the Slot Request Form may result in lower priority of slot allocation. All requests must include arrival and departure information.

For further information, please contact ACL on:
Dubai Office: +971 4 504 5824
International Office: +44 208 5640 626

SSIM SLOT REQUESTS
Email: slots@acl-international.com

Website: http://www.acl-uk.org/acl-international/

QUERIES ON SLOTS

Any queries on slots can be sent to the below-given email:

dxbstaff@acl-international.com

3.3 AIRFORMS SUBMISSION

Exhibitors are required to submit the following Air forms by 6th September 2023 for presenting aircraft at the Dubai Airshow.

AIR FORMS DESCRIPTIONS	
AIR 1	Aircraft Information Application to present Air 1 form required for each aircraft being exhibited.
AIR 2	Aircraft Clearance and Flight Display. To be completed for all aircraft accepted for flying display and customer demonstration.
AIR 3	Aircraft maintenance part storage cabins. To be completed by Exhibitors to apply for maintenance area passes, storage cabins.
AIR 4	Confirmation of Aircraft insurance. To be completed for each aircraft being exhibited.
AIR 5	Aircraft security fencing. To be completed by exhibitors to apply for security fencing.

3.4 DESCRIPTION OF FLYING DISPLAY

Exhibitors presenting aircraft in the flying display must submit for each aircraft a full written description on Form Air 2 with an accompanying sketch of the flight manoeuvres and linking manoeuvres to be used in the proposed display in both good and bad weather conditions. Should it subsequently become necessary to change or reduce the length of the flight display, only those manoeuvres shown may be performed.

3.5 DEFINITION OF AEROBATIC MANOEUVRE

An aerobatic manoeuvre is defined as any manoeuvre exceeding 60° of roll or pitch.

3.6 CHANGES TO THE FLYING DISPLAY

The FCC has the authority to exclude any particular manoeuvre, manoeuvres or the complete flight display. In this event, a revised flight display form (FORM AIR 2) must be submitted and will have to be demonstrated to the satisfaction of the FCC before the aircraft can participate in the flying displays. Additionally, if the pilot wishes to alter his flight display, FORM AIR 2 must be amended with all new manoeuvres and linking manoeuvres not previously authorized on the Form.

All alterations must be signed by the pilot concerned and by a member of the FCC. The revised flight display will then have to be demonstrated to the satisfaction of the FCC before the aircraft is cleared to take part in the Flying Displays.

3.7 AIRCREW CURRENCY

Pilots must be in current flying practice on the type of aircraft they will be presenting. Pilots must be able to satisfy the FCC of their flying currency at the time of the Flying Display by presenting authenticated evidence of their flying hours on type during the previous three months, total flying hours and previous display experience. Civilian pilots must hold the appropriate National License/Authority to fly.

3.8 WEATHER CONDITIONS GOVERNING DISPLAY

Bad weather conditions, when the display is permitted, are defined as cloud base at or below 1500 feet and visibility less than 5000 meters. In all weather conditions pilots shall maintain 1,000 feet horizontally and vertically clear of clouds.

3.9 CONTROL OF THE PRESENTATION OF AIRCRAFT

Control of aircraft flying displays including all individual and combined rehearsals is vested by the Organisers in the Flying Control Committee (FCC). Exhibitors presenting aircraft and their pilots must comply with the Organiser's regulations governing the presentation and flying of aircraft and all subsequent instructions issued by the FCC. The Organisers reserve the right to change and interpret any regulation governing the presentation and flying of aircraft.

The FCC is empowered to withdraw the flight display approval of any pilot who willfully disregards instructions or disobeys the regulations.

3.10 BRIEFING/DEBRIEFING REQUIREMENT

During the period of the exhibition, and for the Dress Rehearsal, all pilots taking part in the flying display activities shall attend the daily briefing held at 12:00hr Local Time (LT) in the FCC briefing room. They are to sign the Display Authorization Sheet to signify that they have received and understood the Briefing.

Note: Pilots will not be allowed to participate in the day's display unless they have attended the Daily Briefing. Details of briefings will be informed once it is decided.

Debriefings will be conducted whenever the need arises. Pilots will be informed accordingly.

3.11 PRACTICE REQUIREMENTS – INDIVIDUAL PRACTICES & VALIDATIONS

To enable pilots to familiarize themselves with the display area, time will be allocated for individual practices. These practices may be conducted between 10:00hs – 12:00hr LT and 15:00hr to 17:00hr on Thursday 9th Nov, Friday 10th Nov and Saturday 11th Nov. The FCC will arrange individual practice times for pilots upon request, after the initial briefing.

Allocation of flying time slots for display aircraft during the practice and validation period will be strictly controlled by the FCC.

Participating pilots must ensure adherence to the slot procedures at all times.

To avoid disruption of commercial traffic at Al Maktoum International (DWC), the following procedures will apply.

a. Under normal circumstances, only one nominated pilot per display aircraft will be permitted and it is expected that each display pilot will require not more than 3 practices inclusive of a validation flight.
b. Approval to carry out additional practice flights and/or for additional pilots to fly will be dependent on the number of display aircraft participating in the event plus the total number of slots available.
c. Late arrival during the practice and validation period may result in insufficient practice slots available and render the aircraft/pilot ineligible to participate in the Flying Display.
d. Practice and/or validation flights are not permitted outside the times stated above.

Failure to complete a satisfactory validation will disqualify the pilot from participation in the Flying Displays.

Acceptance for Flying Display:

Participants will be advised in writing of the FCC's acceptance of their proposed flying displays upon successful completion of validation flights.

Pilot's undertakings:

After having their flight display approved by the FCC, pilots must undertake that their flight displays during the Flying Display will conform in every respect to the approved demonstration.

3.12 DRESS REHEARSAL

A dress rehearsal will take place on Sunday 12th November 2023 at Al Maktoum International Airport (DWC) between the 14:00hr–17:00hr LT.

3.13 FLYING DISPLAY

Flying Display will take place daily from Monday 13th to Friday 17th November 2023 at Al Maktoum International Airport between the 14:00hr–17:00hr LT.

3.14 STATIC AIRCRAFT

Static aircraft must be exhibited for the full period of the Dubai Airshow, i.e. Monday 13th to Friday 17th November 2023 inclusive.

3.15 ESSENTIAL CREW

Only essential aircrew will be approved by the FCC to fly during the demonstrations (i.e. no passengers).

3.16 CUSTOMER DEMONSTRATIONS

Pilots wishing to carry out demonstration flights will have access to the ATC Flight Briefing office located in the FCC block and must file a standard ICAO Flight Plan. Approval will be subject to the availability of slot times.

ATC flight briefing office can be contacted as given below:

Name: Amir AlMaeeni
Email: Amir.AlMaeeni@dans.gov.ae
Mobile: +971 50 6916696

Repositioning of aircraft must be arranged in advance with the Airside Airshow Senior Manager who is contactable at the following Email and telephone number:

Name: John Taylor
Email: John.Taylor@dubaiairports.ae
Mobile: +971 54 7782441

3.17 TOWBARS

Exhibitors are required to provide a tow bar for each aircraft presented, suitably identified and available for all of the aircraft's movements. Exhibitors are responsible for the connection and disconnection of tow bars and the pilot or a member of the Exhibitor's ground crew will be required to operate the aircraft's brakes during ground movements.

3.18 AIRCRAFT PARKING

Upon arrival, aircraft taking part in either or both of the Static and Flying Displays will be allocated a parking position within the Aircraft Park. Exhibitors are required to ensure that either a pilot or a member of the ground crew is contactable at all times if the FCC should require the aircraft to be moved. Exhibitors are also to ensure that aircraft are moved promptly and as directed by the Aircraft Park Officials of the FCC.

3.19 ARRIVAL PROCEDURE

Upon arrival, or at the first opportunity thereafter, the captain of each exhibited aircraft, whether for static display only and/or flying display, is to report to the FCC Office for registration and briefing. The office is located on the first floor of the air show control tower block and will be operational daily between the 0800hr–1800hr LT.

The Engineering Ground Crew of any aircraft operating from the Maintenance Area or in the Flying Display, are required to contact the Airside Airshow Senior Manager, to schedule a mandatory briefing upon arrival at the Airshow before any Maintenance is permitted on any Aircraft. The Chief Engineer will be responsible for ensuring that the information from the briefing is passed to all members of their team and for compliance with any procedures stated within the briefing.

3.20 IMMIGRATION AND CUSTOMS

After landing at DWC Al Maktoum, the Crew will be met by JETEX courtesy vehicles and escorted for Immigration and Customs formalities. There are no customs charges for Dubai Airshow exhibitors.

3.21 DEPARTURE PROCEDURE

Exhibited aircraft are required to remain in the Aircraft Park area until the show closes at 17:30hr LT on the last day of the Exhibition. Departures should be planned accordingly, and Flight Plans can be submitted to ATC through the Operations Room of the FCC.

After the exhibition day, all departures are to be planned after 11:00hr LT to avoid departure congestion at exit gates. The Dubai CTA will be busy with commercial OMDB and OMSJ departures between 07:00hr LT to 11:00hr LT.

3.22 SECURITY

Exhibitors are required to ensure that aircraft in the Static Park are attended to at all times during the Exhibition's open hours.

3.23 BIRD ACTIVITY

Flocks of gulls are active in the vicinity of the airport from November to March with maximum numbers between early December and mid-February.

Note: The information above is based on predicted activity from the Wildlife Hazard Management Study. The latest information can be obtained from AIP closer to the Airshow date. Bird Concentration Chart is provided in the UAE AIP OMDW AD2-85.

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3.24 UNMANNED ARIAL SYSTEM (UAS) DEMONSTRATIONS

Participants proposing to demonstrate UAS vehicles at the Event should advise the Organisers as soon as possible.

3.25 UAS VEHICLE FLYING TIMES

Specific times, to be advised, will be set aside for the flying of UAS vehicles during which all other aircraft flying movements will be suppressed.

3.26 PROPOSAL TO DISPLAY A UAS VEHICLE

Participants will be required to provide the following detailed information:

a. A technical description of the UAS including size, weights, speeds, control systems, emergency systems etc.
b. A detailed description of the proposed display flights including the planned heights, speeds and manoeuvres that will be carried out during the display.
c. A clear indication of how control of the UAS will be maintained during the launch, flying and recovery of the UAS.
d. A description of the various failure modes with the UAS and details on how public safety will be maintained throughout the described failure modes.
e. Details (including copies) of any license or certification held by the UAS operator and a resume of the operator's experience in operating UAS vehicles.
f. A risk assessment/safety case to specifically cover the UAS flying at a public event and to detail the mitigations to eliminate, as far as is reasonably practicable, any risk to the public by both normal flight conditions, failure modes and any possible emergency event.
g. How the participant plans to position the UAS into the Airshow area.
h. Any other information which the participant believes will be useful in determining the safety aspects of the planned display flight.
i. The FCC reserve the right to refuse to permit any UAS vehicle to fly at the Event if, in the opinion of the FCC, the appropriate level of public safety cannot be achieved.
j. UAS demonstrations will be required to validate the display for the FCC in the same manner as manned aircraft during the period.
k. UAS vehicle operators will be required to attend the daily pilot briefings.

3.27 ELECTRICAL VERTICAL TAKE-OFF AND LANDING (EVTOL)

As the world gathers here in Dubai, a global hub for technological advancement and visionary projects, we believe it is the perfect setting to unveil this groundbreaking technology. Electrical Vertical Takeoff and Landing (eVTOL) is a breakthrough in aircraft design, harnessing cutting-edge electric propulsion technology to achieve vertical takeoff and landing capabilities. It offers a new dimension of mobility and transforms the way we envision air transportation in the near future.

The potential applications of eVTOL aircraft are limitless. The Dubai Airshow will serve as a platform to showcase eVTOL prototypes, to discuss their technological advancements, and to allow productive collaboration with stakeholders from around the world. Dubai Airshow will bring interested parties together which will assist to shape the future of aviation and pioneer a new era of transportation that is safer, more efficient, and environmentally friendly.

4. FLYING CONTROL COMMITTEE (FCC) FACILITIES

The FCC shall provide the following facilities:

a. The link between display crews and all other functions for the purpose of display flights, validation flights and customer demonstration flights.
b. Allocation of slot times for Practice and Validation Flights and also customer demonstration flights.
c. Arranging facilities for self-briefing, flight briefing, meteorology, and matters about general flying.
d. Local NOTAMs, maps and charts (for reference).
e. The daily flying programme will be confirmed by 17:30hr LT on the preceding day and be published via the official airshow website.
f. A dedicated meteorological office will be situated in the FCC block. A meteorological briefing shall be included in the pilots briefing each day.

5. FLYING LIMITATIONS DURING FLYING DISPLAYS

5.1 FLIGHT SAFETY

a. During the Flying Display, it is the intention of the FCC to permit skillful and convincing displays, but flight safety and the safety of the attendees are of paramount importance. Only manoeuvres consistent with the design role of the aircraft will be permitted.

b. The display area has been graded by height and has a minimum height of 300 feet AGL

c. In the interest of the safety of the attendees, it is essential that the new parameters are adhered to at all times. The shape of the aerobatic boxes emphasises the rule that all aircraft must climb to 300 feet AGL before crossing the airfield boundary.

5.2 FLIGHT MANOEUVRE/HEIGHT RULES

These rules define the ultimate limits never to be exceeded. Aircrew must provide themselves with the necessary margin so as not to risk exceeding these rules.

These rules will be firmly enforced. The FCC has the authority to tailor these rules to each type of aircraft presented. The Committee is authorized to dictate particular constraints to certain types of aircraft.

Professionalism and flight discipline are essential. In particular, all manoeuvres contrary to the normal usage of the aircraft are prohibited.

a. Only manoeuvres that have been agreed by the FCC may be performed.
b. No manoeuvre is to be attempted which is likely to jeopardize the safety of spectators in the event of mishap or misjudgment.
c. Aircraft may not be turned towards the spectators unless the turn is completed north of the Display Line.
d. Aircraft are not to be flown outside the aircraft's proven limitations.
e. Aircraft are not to be flown under asymmetric power.
f. Aircraft are not to exceed a true airspeed of M=0.90.
g. Aircraft may not be flown closer to the spectators than the display line of the display. (See Appendix A. This is an approximate line and to be confirmed by closer to the date/FCC briefing).
h. Flying displays must be carried out at or above a minimum height of 300 feet AGL. After take-off, aircraft are to be climbed to that height or above, before any aerobatic manoeuvres are carried out.
i. Manoeuvres in the looping plane which involve pulling through, or recovery from, the vertical must be completed by 500 feet AGL.
j. All helicopter aerobatics must be executed and completed by 500 feet AGL.
k. Helicopter aerobatics are permitted only by those helicopters which have a certified capability proved to the satisfaction of the FCC.
l. Helicopters are not permitted to perform more than one rolling or looping manoeuvre during any one pass.
m. Due to the limitations of the flying display area, any proposals for helicopters to carry underslung loads during their display must be put forward to the FCC for consideration and possible approval.

Notes:

a. The above limitations do not affect any more stringent limitations imposed by national authorities, manufacturers or other operating authorities.
b. The FCC is empowered to impose increased limitations on individual aircraft at their discretion.

Dispensations will only be given in exceptional circumstances.

5.3 CARRIAGE OF LIVE ORDINANCE/ARMAMENT

No live ordnance/armament or radioactive material may be carried on aircraft during the flying display. No equipment transmitting powerful electromagnetic signals or lasers are to be operated during flight.

5.4 BREACH OF FLYING DISPLAYS

Breaches of flying discipline are liable, in the first instance, to result in the pilot being required to break off his display and land. It may also result in the aircraft being suspended from flying for the remaining period of the Exhibition.

6. ATC PROCEDURES AND FLYING DISPLAYS

6.1 DISPLAY AREA/AEROBATIC AREA

Special use area (SUA) restricted area around DWC, whose lateral and vertical limits are indicated in Appendix B (TBC), will be 'sterile' during rehearsal and display timings. (Refer to Special Use Airspace Restricted Area Appendix B). Aerobatic displays will be confined to an inner area called the 'Display box' indicated in Appendix C.

6.2 AIR TRAFFIC CONTROL

During the Flying Display, control will be exercised by the FCC at all times, on the discreet radio frequency allocated for this purpose. The authority of the FCC is absolute in that instructions given in the interest of safety, such as "abort take-off", "abort display", "clear the area", etc., are mandatory and must be complied with immediately.

Control of flying will be exercised by R/T using the English language and all pilots participating in the presentation of aircraft must be adequately fluent in this language.

6.3 R/T PHRASEOLOGY

Standard ICAO phraseology will be used. Limited R/T procedure for the purpose of the display will be defined at the daily briefings.

6.4 ORDER OF APPEARANCE

The order of appearance of flying display aircraft will be provided to participating pilots at the daily briefing.

6.5 TIMINGS

At the daily briefings, pilots will be informed of timings relevant to individual displays.

6.6 SEQUENCING PROCEDURE

Sequencing procedures will be defined daily at the pre-display briefing. Pilots must start up and taxi accordingly to make good their take-off times.

6.7 FUEL REQUIREMENTS

Whilst every effort will be made to sequence aircraft smoothly, disruptions may occur.

Pilots are required to carry sufficient fuel for their display and a minimum of 30 minutes reserve to cater for such disruptions. If, for any reason, this should not be possible or practical, the pilots concerned are to request an exemption to the rule from the FCC.

7. DIVERSION AERODROMES

In the unlikely event that the runway at Al Maktoum International Airport (DWC) is not available, then the primary diversion airfield for military aircraft will be Minhad Military Airfield (OMDM) and for civilian registered aircraft it will be Dubai International Airport (OMDB). If an aircraft is instructed to divert to Minhad, a radar control service will be provided by ATC, together with the weather and essential aerodrome information. Aerodrome data for both Minhad and Dubai International will be displayed in the FCC Operations room.

8. EJECTION AREA AND RESCUE FACILITIES

Any pilot with an emergency necessitating abandoning the aircraft but which is still controllable should set course for the Ejection Area shown in Appendix D (TBC -Subject to change)

a. Whenever possible aircraft should be abandoned in straight flight and clear of populated areas, provided that this does not jeopardise the chance of successful abandonment.
b. The pilot should set the aircraft controls to facilitate such that the aircraft impact in the designated area after he/she has abandoned it.
c. The pilot should give the maximum possible warning of ejection to improve the chances of rescue.
d. Rescue Facilities: A Search and Rescue helicopter will be on standby at Al Maktoum International Airport (DWC) throughout the period of the flying display to facilitate search and rescue requirements should they be needed.

9. AIRSPACE RESERVATION REQUEST - ARR

Units that represent airspace user entities that wish to utilize are identified as Approved Agencies (AAs) and are authorized by UAE Armed Forces GHQ.

Approved Agencies (AAs) are required to:

a. Plan submission of airspace use activities in advance so as to be able to notify their needs for airspace to the dans (d) Airspace Management Cell (dAMC) on the day before the activity.
b. Submit to the dAMC, on the day before the proposed activity (D -1), requests for airspace utilization and allocation.
c. Ensure, on the day of the activity, that the airspace usage is in accordance with the dAMC's airspace allocation.
d. Cancel any airspace allocation which is no longer required. Information is forwarded to the dAMC for the promulgation of an Updated Airspace Use Plan (UUP).
e. Change previously promulgated airspace allocation by coordinating with dAMC the promulgation of a UUP
f. Submit a new request for airspace allocation to the dAMC for the promulgation of a UUP.

10. SPECIAL EVENTS-SUA/TRA

In case of special events and/or special use airspace allocation requests, a promulgation of the allocated airspace into the Airspace Use Plan (AUP) is mandatory unless otherwise indicated by the Military Authority. The dAMC will book the airspace (SUA/TRA) on behalf of AAs and promulgate the planned activity as per AUP criteria. The below information shall be included:

- SUA Coordinates and related activity
- Vertical Limits
- Timing
- ATC unit of jurisdiction
- POC (Point of Contact)

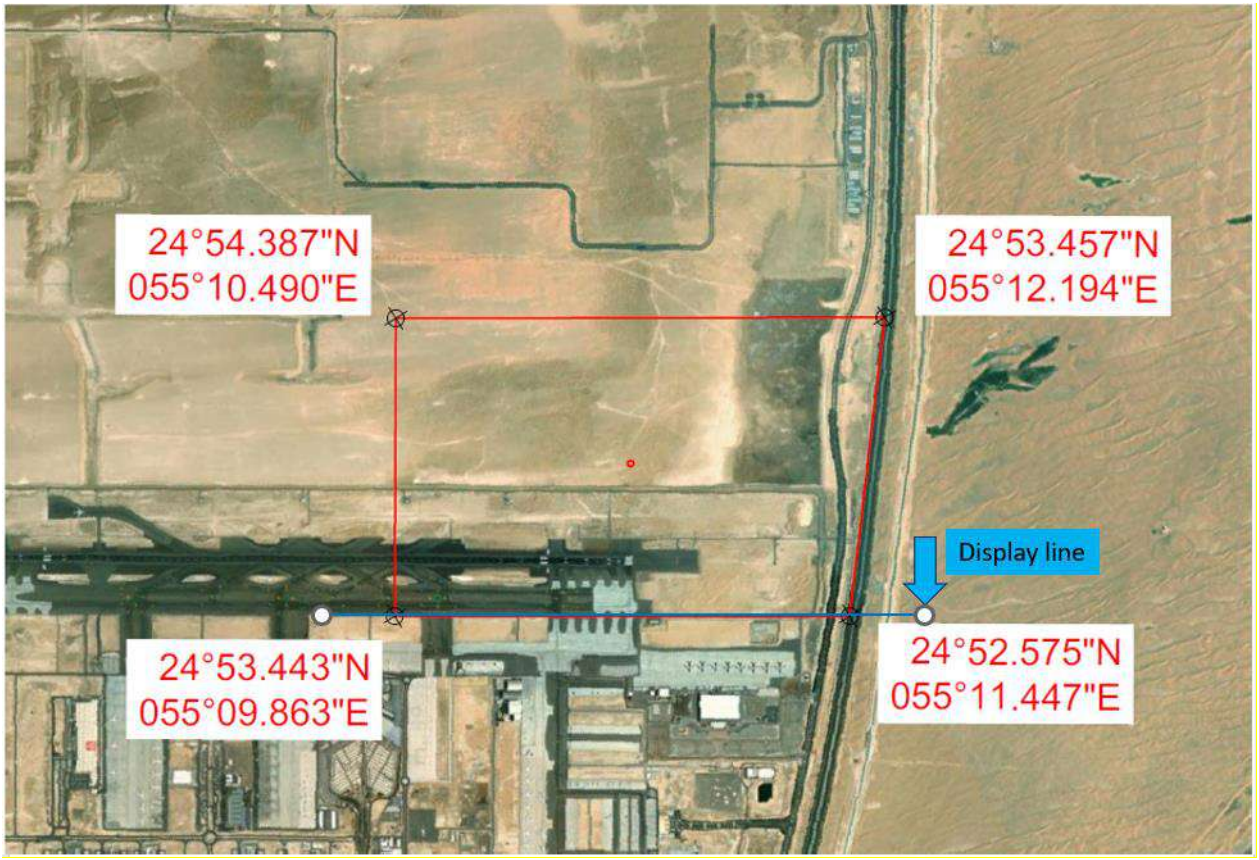
11. ABBREVIATIONS AND ACRONYMS

Abbreviations & Acronym	Description
AA	Approved Agencies
AGL	Above Ground Level
AIP	Aeronautical Information Publications
AMC	Acceptable Means of Compliance Are standards adopted by the GCAA to illustrate means to establish compliance with the CAR's. An entity/or a person wishing not to comply with the AMC must comply using other means accepted by the Authority
ATC	Air Traffic Control
ARR	Airspace Reservation Request
dAMC	dans Airspace Management Cell
AUP	Airspace Use Plan
CAR	Civil Aviation Regulations
DWC	Dubai World Central
eVTOL	Electric Vertical Take-Off and Landing

FCC	Flying Control Committee
GCAA	UAE General Civil Aviation Authority
hr	Hours
LT	Local Time
POC	Point of Contact
SUA	Special Used Airspace
TBC	To Be Confirmed
UUP	Updated (Airspace) Use Plan
UAS	Unmanned Ariel System

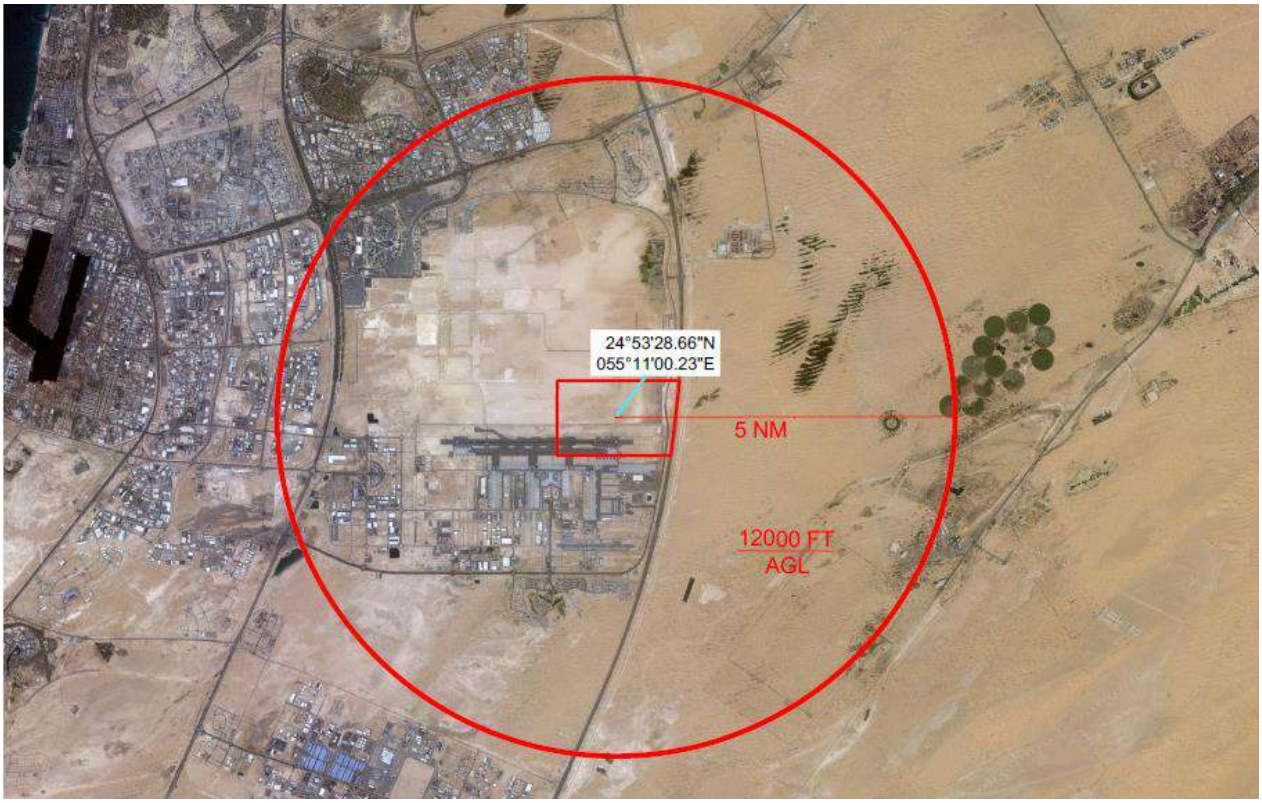
DISPLAY LINE

Appendix A (Subject to approval)



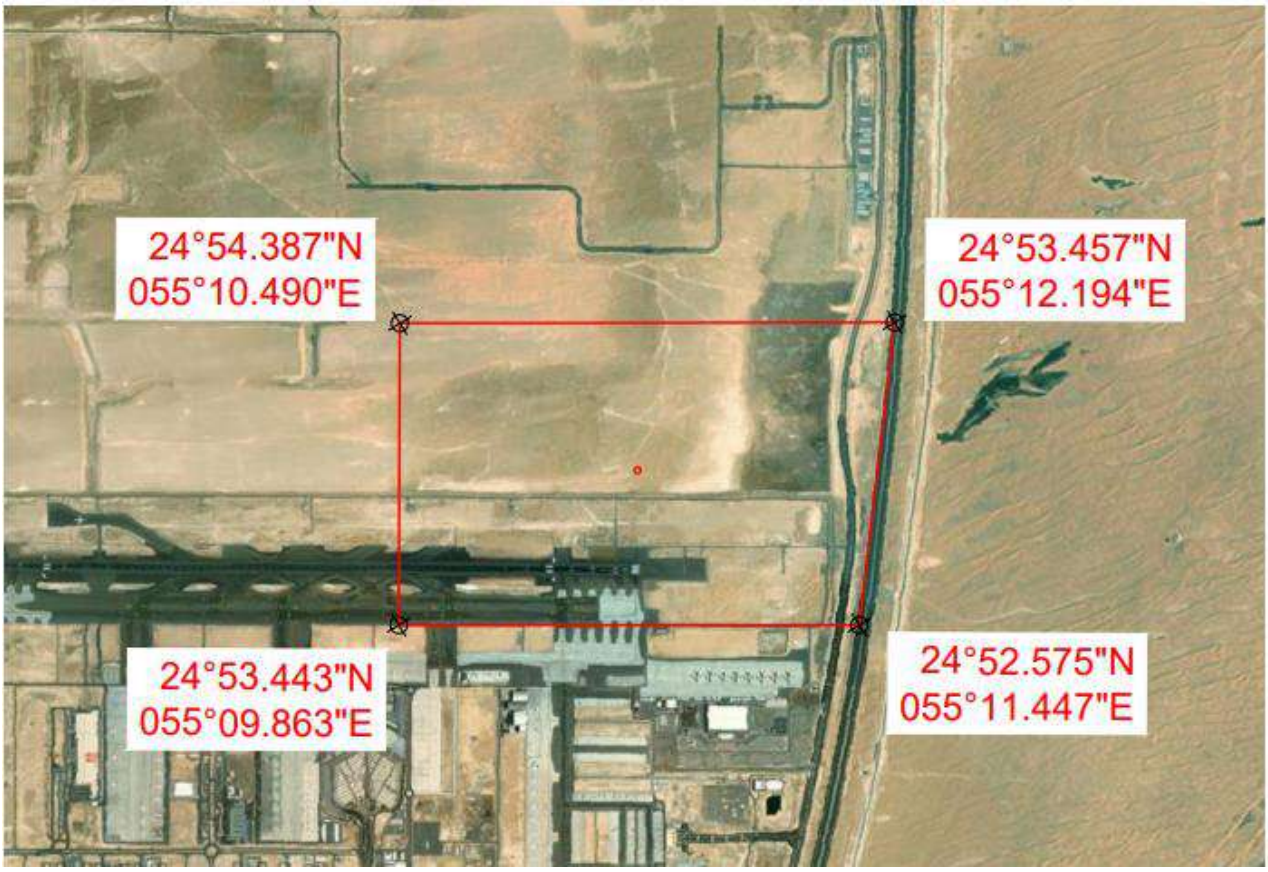
SPECIAL USE AIRSPACE

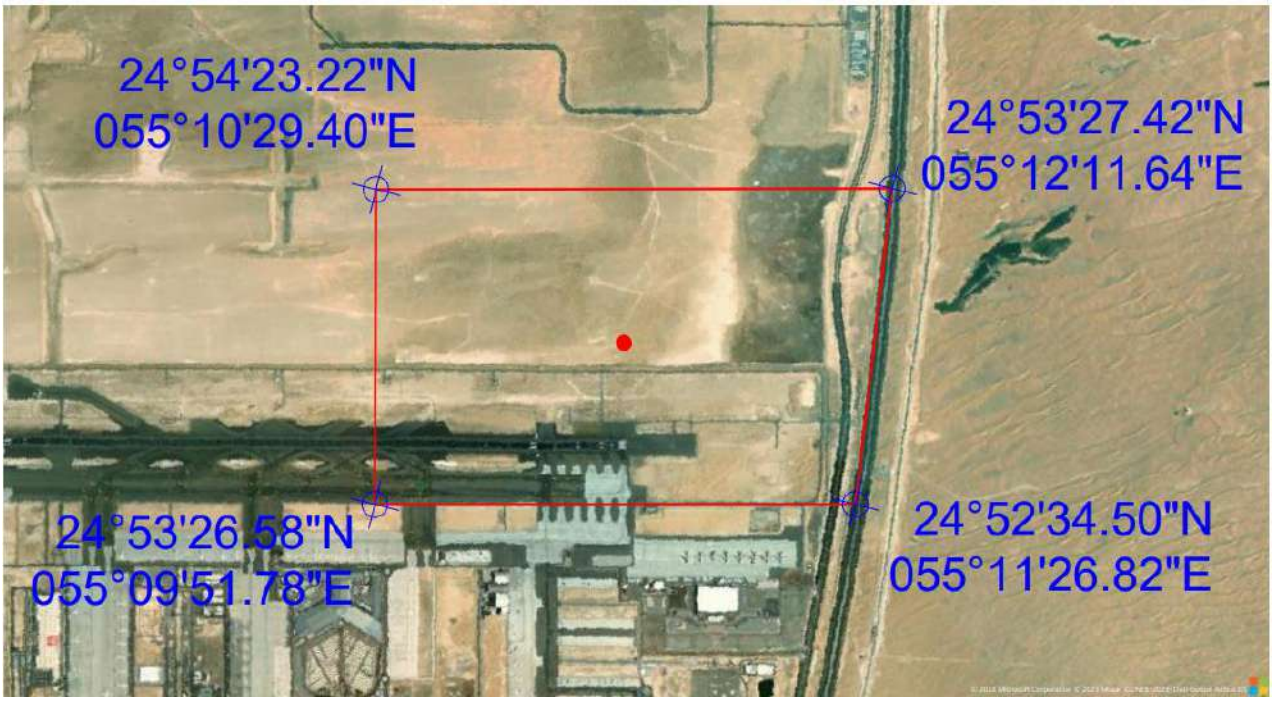
Appendix B



DISPLAY BOX

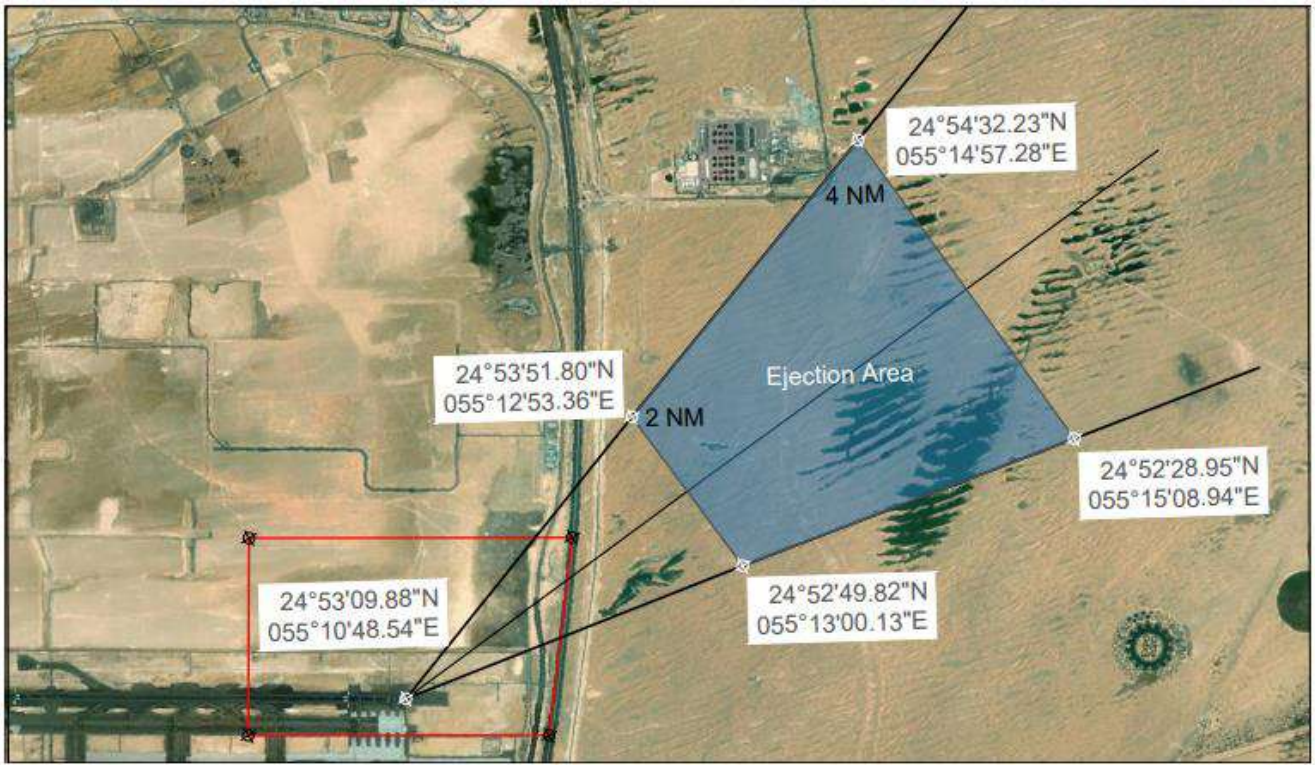
Appendix C





CONTROLLED EJECTION AREA

Appendix D (Subject to Change and TBC)



12. FUEL SUPPLIERS

COMPANY	NAME	TELEPHONE	MOBILE	EMAIL
Shell	Ziad Sousso	04-3035275	050-6533572	Ziad.soussou@shell.com
Shell	Mohamed El Fatatry	04-303 5279	056-4049771	Mohamed.Elfatatry@shell.com
Emarat	Lila Kazim Emojet Business Specialist	04-4061524 & 04-3434444		Laila_kazim@emarat.ae
Emarat	Salem Bin Suloom Senior Manager Aviation Sales	04-4061521	050-6449953	Salem_BinSuloom@emarat.ae
Chevron	Santosh Kumar	04-3133947	050-6402152	skumar@chevron.com
ENOC	Ms Tatev Avetikyan	04-3134641	050-2579008	Tatev.avetikyan@enoc.com
BP Middle East	Mr. Michel Saba	04-3079223	056-6034485	michel.saba@uk.bp.com
ADNOC	Mohamed Mahfoudh	02-6901420	050-6622273	mohamed.mahfoudh@adnocdistribution.ae
ADNOC	Hareb Khamis Al Dhaheri	02-6770469	050-6225536	Hareb.aldhaheri@adnoc-dist.ae
ADNOC	Mohd Ali Al Hosani	02-6766424 02-6901422	050-3298932	mohammed.ali@adnocdistribution.ae

13. GROUND SUPPORT EQUIPMENT, SERVICES & DETAILING (GPU/ACU/GSE):

AEM INTERNATIONAL & AEM LOGISTICS

Official Ground Support
Equipment provider for Aircraft Detailing
Mr Ulrich Koch
Email: ukoch@aeminternational.com & support@aemlogistics.com
Office: +1 514 695 1331
Mob: +1 514 887 0798

DUBAI AIRSHOW

AEM group
INTERNATIONAL | LOGISTICS
Est. 2003

DUBAI 2023 Airshow - Dubai, UAE.

November 13-17, 2023.

GPU Reservation Sheet, Static Display

Your Order Information

Ground Power Units

Final billing will reflect an additional **$250** setup charge per unit.

	Company	Space #	Quantity	Price / Unit	Total
28V DC Unit 220V 3phase 25Amp **10 KVA (50 or 60Hz)**				**$3,950**	
AC 400hz Unit 380V 3phase 40Amp **30 KVA (50 or 60Hz)**				**$4,950**	

*ELECTRICAL POWER TO SUPPORT EACH UNIT WILL NEED TO BE ORDERED SEPARATELY.
PLEASE REFER TO THE ELECTRICAL ORDER FORM TO PLACE YOUR ELECTRICAL REQUIREMENTS FOR EACH UNIT

Your company Information

(or paste business card here)

Company Name:

Address:

Contact Name:

Phone Number:

Fax Number:

For order confirmation please attach completed Method of Payment Form.

Please email your order to ukoch@aeminternational.com before October 13, 2023.

Availability and price per unit is not guaranteed after October 13, 2023.

For further information please contact Ulrich Koch at (514) 695 1331 or email: ukoch@aeminternational.com

DUBAI AIRSHOW

AEM group
INTERNATIONAL I LOGISTICS
Est. 2003

Method Of Payment Form

NAME OF SHOW: _____

COMPANY NAME:_____ BOOTH:_____

ADDRESS:_____

_____

PHONE #:_____ EXT:_____ FAX #:_____ E-MAIL:_____

_____

Ensure all payments are received prior to the event

___ **COMPANY CHECK**

Please make check payable to: AEM Logistics. Checks must be in U.S. funds drawn on a U.S. or Canadian bank. (**"U.S. FUNDS"** MUST BE PRE-PRINTED on Canadian checks.)

___ **CREDIT CARD**

For your convenience, we will use this authorization to charge your credit card account for your advance orders, and any additional amounts incurred as a result of show site orders placed by your representative.

** **(VISA and Mastercard are <u>only</u> accepted)**

___ **BANK TRANSFER**

Royal Bank of Canada, 610 St. Jean Blvd., Pointe Claire, Quebec
Canada, H9R 3K2 - Institution number: # 003 - Transit: # 02755
Account # 07191-4001921 - ABA # 021000021

BIC/SWIFT* ROYCCAT2
Recipient: AEM Logistics Inc. (514) 695 1331

Please reference Name of Show and company name on all Bank Transfers so we may properly credit your account. <u>Note: Customers are responsible for any bank processing fees.</u>

MASTERCARD OR VISA

Account No:_____ Exp. Date:_____

Cardholder Name: (Print)_____ Signature:_____

Cardholder Billing Address:_____

City/State/Zip:_____

Total = ☐

DUBAI AIRSHOW

AEM group
INTERNATIONAL I LOGISTICS
Est. 2003

Static Electrical form

Deadline: October 13, 2023.

Stand name: .....

Invoice to
(Company Address) .....

.....

.....

.....

Contact: .....

Tel.: .....

Fax: .....

E-mail: .....

Return to:

AEM International
40 Place Madison, Hudson, QC,
Canada, J0P 1HP

Fax: **1 514 695 1344**
Tel.: 1 514 695 1331
E-mail: ukoch@aeminternational.com

Code	Refer to AEM's GPU-Aircon order forms for KVA requirements		Unit price Price until Oct. 13, 2023	Unit price After ① Oct. 13, 2023	Total
e321	**Main** Electrical service, including generator and connections for air-conditioners and GPU, per KVA	___KVA	**$195.00**	**$205.00**	_____
2EL-02134	**Additional Labor** ☐ Additional labor per hour		**$104.00**	**$124.00**	_____

① **Orders received after October 13, 2023 are subject to additional charges Additional**

② **Labor charges apply to equipment not supplied by AEM International**

Total electrical	$ _____
Total additional labor	$
Total amount	**$** _____

Date: ..... **Signature:** .....

DUBAI AIRSHOW

AEM group
INTERNATIONAL I LOGISTICS
Est. 2003

DUBAI 2023 Airshow - Dubai, UAE.

November 13-17, 2023.

Air Conditioning Reservation Sheet, For Static Display

Your Order Information

Air Conditioning Units

Final billing will reflect an additional **$250** setup charge per unit.

	Company	Space #	Quantity	Price / Unit	Total
3 Ton Unit 220V 1phase 30amp **10KVA (60Hz)**				**$3,950**	
5 Ton Unit 220V 1phase 30amp **10KVA (60Hz)**				**$4,950**	

*ELECTRICAL POWER TO SUPPORT EACH UNIT WILL NEED TO BE ORDERED SEPARATELY.
PLEASE REFER TO THE ELECTRICAL ORDER FORM TO PLACE YOUR ELECTRICAL REQUIREMENTS FOR EACH UNIT

Your company Information

(or paste business card here)

Company Name:

Address:

Contact Name:

Phone Number:

Fax Number:

For order confirmation please attach completed Method of Payment Form.

Please email your order to ukoch@aeminternational.com before October 13, 2023.

Availability and price per unit is not guaranteed after October 13, 2023.

For further information please contact Ulrich Koch at (514) 695 1331 or email: ukoch@aeminternational.com

DUBAI AIRSHOW

AEM group
INTERNATIONAL I LOGISTICS
Est. 2003

DAS2023: Aircraft Detailing Request Form

Aircraft Model	Services Requested	Price
	Total	

***Pricing provided is based on event, aircraft type and services requested.**

Show Cleaning Includes:

- Interior detail and vacuum, cockpit cleaning and exterior detail prior to event.
- Interior and exterior touch-ups during event.
- Interior touch-up at conclusion of event.

Additional Services Available:

Carpet Protection Film - replaced as needed during event.
Brightwork - polishing of leading edges and engine inlets.
Boots - to be cleaned and coated / shined.
Further services are available at your request.

Your company information:

Company Name:

Phone Number:

Fax Number:

***For order confirmation please attach completed Method of Payment Form.**

Please email tharper@aemlogistics.com for service requests.

For further info please contact us at (514) 695 1331 or email: support@aemlogistics.com

DUBAI AIRSHOW

AEM group
INTERNATIONAL I LOGISTICS
Est. 2003

DUBAI 2023 Airshow - Dubai, UAE.

November 13-17, 2023.

Air Conditioning Reservation Sheet, Static Display

Your Order Information

HIGH PRESSURE Air Conditioning Units

Final billing will reflect an additional **$250** setup charge per unit.

	Company	Space #	Quantity	Price / Unit	Total
50 Ton				**$19,900**	

High Pressure Unit

400V 3phase 100amp **70KVA (60Hz)**

*ELECTRICAL POWER TO SUPPORT EACH UNIT WILL NEED TO BE ORDERED SEPARATELY.
PLEASE REFER TO THE ELECTRICAL ORDER FORM TO PLACE YOUR ELECTRICAL REQUIREMENTS FOR EACH UNIT

Your company Information

(or paste business card here)

Company Name:

Address:

Contact Name:

Phone Number:

Fax Number:

For order confirmation please attach completed Method of Payment Form.

Please email your order to ukoch@aeminternational.com before October 13, 2023.

Availability and price per unit is not guaranteed after October 13, 2023.

For further information please contact Ulrich Koch at (514) 695 1331 or email: ukoch@aeminternational.com

DUBAI AIRSHOW

AEM group
INTERNATIONAL I LOGISTICS
Est. 2003

DUBAI 2023 Airshow - Dubai, UAE.
November 13-17, 2023.

Method Of Payment Form

NAME OF SHOW:

COMPANY NAME: BOOTH#:

ADDRESS:
(STREET) (P.O. BOX)

PHONE #: EXT.: FAX# : E-MAIL:

ORDERED BY: PRINT NAME: DATE:

Ensure all payments are received prior to the event

☐ **COMPANY CHECK**
Please make check payable to: AEM International. Checks must be in U.S. funds drawn on a U.S. or Canadian bank.(**"U.S. FUNDS"** MUST BE PRE-PRINTED on Canadian checks.)

☐ **CREDIT CARD**
For your convenience, we will use this authorization to charge your credit card account for your advance orders, and any additional amounts incurred as a result of show site orders placed by your representative.

Please complete the information requested below:

☐ **BANK TRANSFER**
Royal Bank of Canada (514)856 8900, 3131 Cote Vertu - Local F1
St-Laurent, Qc. Canada, H4R 1Y8 - Bank # 003 - Transit # 03051
■ **Account # 400-444-6 - ABA # 021000021**

■ **BIC/SWIFT* ROYCCAT2**

■ **Recipient: AEM International (450) 424 2202**

Please reference Name of Show and company name on all Bank Transfers so we may properly credit your account.
Note: Customers are responsible for any bank processing fees.

MASTERCARD **VISA**

Please add 4% for all credit card payments

Account No.: Exp. Date:
☐ Personal Credit Card ☐ Company Credit Card

Cardholder Name: (Print) Signature:

Cardholder Billing Address:

City/State/Zip:

E-mail Address for Invoice Notification:

Total =

Jetex Executive Aviation DWC LLC: (Official FBO Agent)

Ossama Al Azem, FBO Manager
+971 56 171 7060 ossama.azem@jetex.com

Anas Agassi, FBO Operations Manager
+971 56 990 4255 anas.agassi@jetex.com

Operation 24/7
+971 50 440 6400 fbo-dwc@jetex.com

DAS team, Airshow mobile 08:00 till 20:00
+971 56 171 7225 das2023@jetex.com

Avantika Murthi, AVP - Process Excellence
+971 50 494 2404 processexcellence@jetex.com

Kamran Mulla, Ramp Supervisor
+971 56 171 7065 kamran.moula@jetex.com

Osama Shibly, Pricing & Procurement Manager
+971 56 433 45111 pricing@jetex.com

Sufiyan Asif, Director - Fuel Division
+971 56 171 7062 sufiyan.asif@fuelex.aero

JETEX

A) DAS2023: Basic Ground Handling and Airport Services (all prices are in $USD):

Basic Ground Handling Charges	
MTOW in Ton	**Stay over flight**
0-4	515
4.1-13	1067
13.1-35	1360
35.1-50	1995
50.1-90	2900
90+	3500
Wide Bodied	4000
A380	4900
Airport Services	
Landing/Take-off	**Price per ton**
Up to 4.5	3.7
4.5-45	4.2
45+	4.7

B) DAS2023: Ramp Services and Equipment (all prices are in $USD):

Ramp Service Equipment		
Additional labor (skilled)	Per person/per hour	75
Additional labor (unskilled)	Per person/per hour	69
Airside passes	Per pass	300
Enhance Safety Fee	Per passenger	25
Assistance for visa issue	Per service	60
ASU: Aircraft N-Bodied	Per aircraft start	455
ASU: Aircraft W-Bodied	Per aircraft start	595
Conveyor belt	Per hour or part there of	375
Customs & immigration charges	Per service	232
Chocks	Per Day	250
Dolly-trolley	Per hour or part there of	67
Filing flight plan	Per service	20
Forklift (5 ton)	Per hour or part there of	300
Forklift (12 ton)	Per hour or part there of	365
Headset	Per service	125
Nitrogen cart	Per use	426
Oxygen cart	Per use	477
Passenger fee	Per passenger	39
Provision of Wing Walker	Per service	20
Push back	Per push	375
Slot application	Per application	35
Slot modification	Per service	15
Steps (inside static area)	Per day	2500
Toilet services N-Bodied	Per service	165
Toilet services W-Bodied	Per service	246
Towing (above 30 tons)	Per one way tow	595
Towing (below 30 tons)	Per one way tow	393
Tractor (with driver)	Per hour or part there of	191
Water services	Per service	193
Steps (outside static area)	Per hour or part there of	295
ACU N-Bodied (outside static area)	Per hour or part there of	400
ACU W-Bodied (outside static area)	Per hour or part there of	450
GPU N-Bodied (outside static area)	Per hour or part thereof	350
Airside Bus Transportation	Per way	250
Airside Transport	Per way	200

Other Terms and Conditions:

- A 9% disbursement fee will be added to all third party charges (for services not provided by Jetex)
- A 25% nighttime surcharge will be applied on ground handling charges for flights operating between 22:00 and 06:00 local time.
- FBO flight transfer charges: USD 750 per flight

HANDLING REQUEST FORM

Please complete and return all sections of this application form and return to das2023@jetex.com

Reservation Number: .....

Customer: ..... Operator: .....

Billing To : ..... Payment Method: □ Cash □ Credit

For handling confirmation, please advise the method of payment

---

Company Name: ..... Company Address: .....
(As it will appear on exhibitor listing)

Contact Person: ..... Job Title: .....

Tel.: ..... Fax: .....

Website: ..... Email: .....

Invoice Address: ..... Company Address: .....
(If different)

Contact Person: ..... Job Title: .....

Tel.: ..... Fax: .....

Website: ..... Email: .....

EXHIBITOR INFORMATION:

Additional Names: .....

Aircraft Type: ..... Registration: .....

Call Sign: ..... MTOW: .....

Schedule: ETA: ..... ETD: ..... Handler: .....

Static Stand Allocation Reference: .....

FOR OFFICE USE ONLY

Trip Number: ..... Payment Method: .....

TCE Number: .....

Jetex FBO Terminal, Dubai South Aviation District, Dubai, UAE, P.O. Box 54698.
+971 4 212 4900 128.575MHz fbo-dwc@jetex.com jetex.com

OMDW — DUBAI / AL MAKTOUM INTERNATIONAL

Note: The following sections in this chapter are intentionally left blank:
AD 2.21, AD 2.25.

OMDW AD 2.1 AERODROME LOCATION INDICATOR AND NAME

OMDW — DUBAI / AL MAKTOUM INTERNATIONAL

OMDW AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP coordinates and site at AD	245506N 0551032E At centre of existing and future RWYs, perpendicular to midpoint of RWY 12 / 30
2	Direction and distance from (city)	20 NM SW of Dubai city
3	Elevation/Reference temperature	171 FT / 44° C
4	Geoid undulation at AD ELEV PSN	-112 FT
5	MAG VAR/Annual change	2° E (2020) / 0.05° E
6	AD Administration, address, telephone, telefax, telex, AFS	Post: Dubai Airports P.O. BOX 2525 DUBAI UNITED ARAB EMIRATES AIRPORT OPERATIONS CONTROL CENTRE Tel: +971 4 504 5000 Email: aocc@dubaiairports.ae Post: EFTA OPERATIONS CONTROL CENTRE Tel: +971 4 813 3513 Tel: +971 50 106 0790 (Mobile) Email: eftaocc@emirates.com
7	Types of traffic permitted (IFR/VFR)	IFR / VFR
8	Remarks	OMDW operates as a IATA level 2 slot coordinated airport. No operator shall operate to or from OMDW without first obtaining clearance from Airport Coordination Limited (ACL) and subject to landing permission from the DCAA. Schedules should be sent in IATA SSIM format to ACL in the time scales specified by the IATA schedules calendar to the address below. Email: slots@acl-international.com FAX: +44 (0) 208 564 0691 Aircraft greater in size than ICAO Code F (Wingspan Greater than 80 M) must provide 72 hour advance notice to the aerodrome in addition to a slot request to ACL. Email: Safeguarding-aim@dubaiairports.ae EFTA operates to the South of OMDW RWY 12/30. EFTA RWY 13/31 is not available for commercial aircraft. Operators are to be aware of high intensity training activities in this area

OMDW AD 2.3 OPERATIONAL HOURS

1	AD Administration	H24
2	Customs and immigration	H24
3	Health and sanitation	H24
4	AIS Briefing Office	H24
5	ATS Reporting Office (ARO)	H24
6	MET Briefing Office	H24
7	ATS	H24
8	Fuelling	H24
9	Handling	H24
10	Security	H24
11	De-icing	NIL
12	Remarks	Prior approval required from EFTA Operations for non-EFTA flights. EFTA operates as per the below timings: 01 JAN – 31 MAY 0400 – 2000 UTC 01 JUN – 30 SEP 0200 – 1000 UTC and 1200 – 2000 UTC 01 OCT – 31 DEC 0300 – 1900 UTC Note: There will be no flying outside the above timings.

OMDW AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	Complete semi - automatic facilities
2	Fuel/oil types	Jet A1: Emojet, ENOC, Shell, Air BP, Total, Chevron *Note: Chevron fuel must be arranged in advance. H24 telephone +971 50 5526 712* Oil: All grades
3	Fuelling facilities/capacity	Hydrant fuelling available, on all stands with the exception of: S804-S812, G100-G103 and G3-G16, EFTA: 11E-14E, 11W-14W, 21E-24E, 21W-24W, 31E-34E, 31W-34W, 41E-44E, 41W-44W, 51E-54E and 51W-54W. Limited bowser service also available.
4	De-icing facilities	NIL
5	Hangar space for visiting aircraft	NIL
6	Repair facilities for visiting aircraft	Limited available on request
7	Remarks	NIL

OMDW AD 2.5 PASSENGER FACILITIES

1	Hotels	Hotel accommodation available in Dubai City and Jebel Ali
2	Restaurants	H24
3	Transportation	Taxis, buses and rental cars.
4	Medical facilities	Medical Centre at airport. Emirates Medical Centre (EFTA only). Hospitals in Dubai City and Jebel Ali.
5	Bank and Post Office	ATM available, Post Office N/A
6	Tourist Office	NIL
7	Remarks	Limited PAX handling capacity for diverted flight.

OMDW AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

	1	AD category for fire fighting	CAT 9 (CAT 10 on request). EFTA: CAT 3.
←	2	Rescue equipment	**Rescue & Firefighting Vehicles:** • 3 MFV • 1 ICV • 1 MICC • 1 Hose Layer Vehicle • 1 Rescue Stairs • EFTA: 1 MFV • 1 MFV for RFFS CAT 10 upgrades (available 24/7) • 2 MFV to cover maintenance and emergency breakdown resilience • 1 ICV to cover maintenance • EFTA: 1 Airside Fire Station in operation
	3	Capability for removal of disabled aircraft	Lifting and hydraulic jacks supplied through SLA (Service Level Agreement) with Emirates Airlines for aircraft sizes upto and including A380, 2 stored in the Main Fire Station (Airside)
	4	Remarks	NIL

OMDW AD 2.7 SEASONAL AVAILABILITY - CLEARING

1	Types of clearing equipment	NIL
2	Clearance priorities	NIL
3	Remarks	Aerodrome is available all season. There is no requirement for clearing.

OMDW AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA

1	Apron surface and strength	Refer Table 1 for Apron details
2	Taxiway width, surface and strength	Refer Table 2 for Taxiway details
3	Altimeter checkpoint location and elevation	Individual stands serve as altimeter checkpoint locations See AIRCRAFT PARKING/DOCKING CHARTS.
4	VOR checkpoints	NIL
5	INS checkpoints	see Parking /Docking Charts

6	Remarks	**Aircraft Code Restrictions / Engines Runs / Compass Swing / Speed Restrictions** • All taxiways/taxilanes are code F compliant except for taxiways TXL Z9, TXL Z10, TXL Z13, TXL Z14, TXL Z15, TXL Z16, TXL Z17, TXL Z20, TWY Z91 and TWY Z92 which are code C. • EFTA High Power Engine Runs: Stand 51W for Cirrus SR22 and TWY A for all other aircraft are the only permitted locations for high power engine runs. • Code D, E and F aircraft requiring access to TWY U4 for engine runs must do so under tow only. Powered movements are not allowed. Pilots must follow ATC instructions. • Pilots on code C and below aircraft must be aware that they will see ground markings late due to their size (for Code F aircraft). • All EFTA taxiways/taxilanes: Code B compliant except for TWY Z12S, which is Code A. • Code B aircraft not allowed to hold simultaneously at TWY A1 and TWY A2 and/or TWY A6 and TWY A7. • A compass swing testing area is provided on TWY U; however, Dubai Airports cannot provide assurance that the location continues to be free from any magnetic disturbance and the airlines operators assume any risks associated with performing compass swing tests on this area. • To aid in situational awareness and to improve identification and visual acuity of ground markings and signage, it is recommended that air operators not exceed 30 knots on linear taxiways and 10 knots on turns.
		Aircraft Turns: • Operators vacating RWY 12/30 at any RET are not to conduct 90 degree turns onto TWY V as there is no marking or lighting to allow this turn. Operators often confuse ATC instructions onto TWY W8 to TWY W15 with turning 90 degrees onto TWY V. • The manoeuvring area is a wide space with little environmental contrast therefore taxiway incursions are likely. Pilots must adhere to CL at all times. Turns greater than 90 degrees are NOT permitted. • Operators are to ensure that when vacating the RWY 12/30 on a Rapid Exit Taxiway that they do not inadvertently turn back on to the RWY 12/30 using the adjacent Rapid Exit Taxiway.
		Wingtip Clearance: • TWY Z minimum wingtip clearance reduced to 50.8 M abeam Stands S340-S348L and S440R- S448

Apron Designation	Surface	PCN	Notes
S2	Concrete	72/R/B/W/T	
S3	Concrete	90/R/A/W/T	Stand H1 available for Dubai Police Airwing helicopter operations only. Stands H2 and H3 available for Aerogulf Services only.
S4	Concrete	90/R/A/W/T	
S8	Concrete	90/R/A/W/T	
← G (1-20A)	Concrete	62/R/B/W/T	G10-G11; G14-G15 and G17-G20A box stands
G (100-103)	Concrete	86/R/B/W/T	Box stands
APRON 1	Interlock paving	6/R/B/Y/T	Aircraft can park on each stand either east or west.
APRON 2	Interlock paving	6/R/B/Y/T	Aircraft can park on each stand either east or west.
APRON 3	Interlock paving	6/R/B/Y/T	Aircraft can park on each stand either east or west.
APRON 4	Interlock paving	6/R/B/Y/T	Aircraft can park on each stand either east or west.
APRON 5	Interlock paving	6/R/B/Y/T	Aircraft can park on each stand either east or west.

Aprons Restrictions:

1. APRON 1 - APRON 5 are exclusive for EFTA use only, unless approved by Dubai Airports.

Table 1: Apron details

Designation	ICAO Code	Length (M)[1]	Width (M)	Shoulder either side (M)	Strip (M) (minimum)	Surface	PCN
TWY U	F	424	25	18	115	Asphalt	140/F/A/X/T
TWY U4	F	765	25	18	115	Asphalt	140/F/A/X/T
TWY V	F	4526	25	18	115	Asphalt	140/F/A/X/T
	F		25	18	115	Concrete	120/R/A/W/T
TWY V1	F	200	25	18	115	Asphalt	140/F/A/X/T
	F	83	25	18	115	Concrete	120/R/A/W/T
TWY V2	F	202	30	18	115	Asphalt	140/F/A/X/T
	F	84	30	18	115	Concrete	120/R/A/W/T
TWY V3	F	204	30	18	115	Asphalt	140/F/A/X/T
	F	84	30	18	115	Concrete	120/R/A/W/T
TWY V4	F	203	30	18	115	Asphalt	140/F/A/X/T
	F	84	30	18	115	Concrete	120/R/A/W/T
TWY V6	F	566	25	18	115	Asphalt	140/F/A/X/T
TWY V7	F	571	25	18	115	Asphalt	140/F/A/X/T
TWY V8	F	568	25	18	115	Asphalt	140/F/A/X/T
TWY V9	F	570	25	18	115	Asphalt	140/F/A/X/T
TWY V10	F	449	25	18	115	Asphalt	140/F/A/X/T
TWY V11	F	567	25	18	115	Asphalt	140/F/A/X/T
TWY V12	F	568	25	18	115	Asphalt	140/F/A/X/T
TWY V13	F	560	25	18	115	Asphalt	140/F/A/X/T
TWY V16	F	246	30	18	115	Asphalt	140/F/A/X/T
	F		30	18	115	Concrete	120/R/A/W/T
TWY V17	F	289	30	18	115	Asphalt	140/F/A/X/T
	F		30	18	115	Concrete	120/R/A/W/T
TWY V18	F	286	30	18	115	Asphalt	140/F/A/X/T
	F		30	18	115	Concrete	120/R/A/W/T
TWY V19	F	285	30	18	115	Asphalt	140/F/A/X/T
	F		30	18	115	Concrete	120/R/A/W/T
TWY V20	F	283	30	18	115	Asphalt	140/F/A/X/T
	F		30	18	115	Concrete	120/R/A/W/T
TWY V21	F	285	25	18	115	Asphalt	140/F/A/X/T
	F		25	18	115	Concrete	120/R/A/W/T
TWY W	F	4526	25	18	115	Asphalt	140/F/A/X/T
	F		25	18	115	Concrete	120/R/B/W/T
TWY W1	F	100	25	18	115	Concrete	140/R/B/W/T
TWY W2	F	100	55	18	115	Concrete	140/R/B/W/T
TWY W4	F	100	54	18	115	Concrete	140/R/B/W/T
TWY W7	F	413	25	18	115	Asphalt	140/F/A/X/T
TWY W8	F	412	25	18	115	Asphalt	140/F/A/X/T

** Crossover Taxiway

[1] Calculated Values: Taxiway lengths are measured along the surveyed taxiway centre lines, including around curves. Where the centre lines split into multiple curves at taxiway intersections, the straight parts of the centre lines may be extrapolated to the point of intersection with adjoining centre lines, and the lengths measured from these points.

Taxiways Restrictions:

1. TXL Z13 only available during special events or with prior approval from Dubai Airports.
2. Pilots who are unfamiliar with OMDW should advise ATC on first taxi.
3. There is a change in gradient of 2.5% when crossing TWY V from TWY W1 and between TWY W16, TWY W17 to TWY W21. Additional engine thrust may be required. Following aircraft should maintain a safe distance.
4. TWY A, TWY A1 to TWY A7, TWY Z12S and TXL L1 to TXL L6 are exclusive for EFTA use only, unless approved by Dubai Airports.
5. Aircraft are not permitted to carry 180° turn on a taxiway. In some circumstances, depending on aircraft type, taxiway width and location, Airside Operations may approve such manoeuvre with the assistance of a marshaller.
6. After landing, aircraft shall vacate and proceed straight on TWY V in direction of the landing runway. Acute turns from rapid exit taxiways towards the opposite landing direction are not allowed. See Table 3: Taxiway Turn Restrictions.

Table 2: Taxiway details

Designation	ICAO Code	Length (M)[1]	Width (M)	Shoulder either side (M)	Strip (M) (minimum)	Surface	PCN
TWY W9	F	100	54	18	115	Asphalt	140/F/A/X/T
TWY W10	F	413	25	18	115	Asphalt	140/F/A/X/T
TWY W11	F	413	25	18	115	Asphalt	140/F/A/X/T
TWY W12	F	100	54	18	115	Asphalt	140/F/A/X/T
TWY W13	F	100	54	18	115	Asphalt	140/F/A/X/T
TWY W14	F	413	25	18	115	Asphalt	140/F/A/X/T
TWY W15	F	413	25	18	115	Asphalt	140/F/A/X/T
TWY W16	F	184	25	18	115	Asphalt	140/F/A/X/T
	F	228	25	18	115	Concrete	140/R/A/W/T
TWY W17	F	185	37	18	115	Asphalt	140/F/A/X/T
	F	228	37	18	115	Concrete	140/R/A/W/T
TWY W18	F	84	38	18	115	Asphalt	140/F/A/X/T
	F	229	38	18	115	Concrete	140/R/A/W/T
TWY W19	F	313	37	18	115	Concrete	140/R/A/W/T
TWY W20	F	313	37	18	115	Concrete	140/R/A/W/T
TWY W21	F	413	25	18	115	Concrete	140/R/A/W/T
TWY Z	F	4544	25	18	115	Asphalt	140/F/A/X/T
	F		25	18	115	Concrete	90/R/A/W/T
TXL Z5	F	1213	25			Concrete	72/R/B/W/T
TXL Z6	F	1213	25			Concrete	90/R/A/W/T
TXL Z7	F	1212	25			Concrete	90/R/A/W/T
TXL Z8	F	1213	25			Concrete	90/R/A/W/T
TXL Z9	C	872	18			Concrete	86/R/B/W/T
TXL Z10	C	872	18			Concrete	86/R/B/W/T
TXL Z11	F	1514	25			Concrete	86/R/B/W/T
TXL Z12	F	1525	25			Asphalt	71/F/B/W/T
TXL Z13	C	443	18			Asphalt	55/F/B/W/T
TXL Z14	C	542	18			Asphalt	55/F/B/W/T
TXL Z15	C	573	18			Asphalt	55/F/B/W/T
TXL Z16	C	432	31			Asphalt	55/F/B/W/T
TXL Z17	C	432	31			Asphalt	55/F/B/W/T
TXL Z20	C	573	18			Asphalt	55/F/B/W/T
TXL Z21	F	100	54			Concrete	86/R/B/W/T
TXL Z22	F	100	54			Concrete	86/R/B/W/T
TXL Z23	F	100	54			Concrete	86/R/B/W/T
TXL Z24	F	100	26			Concrete	86/R/B/W/T
TWY Z51**	F	312	25	18		Concrete	72/R/B/W/T
TWY Z52**	F	312	25	18		Concrete	72/R/B/W/T
TWY Z53**	F	315	25	18		Concrete	72/R/B/W/T

** Crossover Taxiway

[1] Calculated Values: Taxiway lengths are measured along the surveyed taxiway centre lines, including around curves. Where the centre lines split into multiple curves at taxiway intersections, the straight parts of the centre lines may be extrapolated to the point of intersection with adjoining centre lines, and the lengths measured from these points.

Taxiways Restrictions:

1. TXL Z13 only available during special events or with prior approval from Dubai Airports.
2. Pilots who are unfamiliar with OMDW should advise ATC on first taxi.
3. There is a change in gradient of 2.5% when crossing TWY V from TWY W1 and between TWY W16, TWY W17 to TWY W21. Additional engine thrust may be required. Following aircraft should maintain a safe distance.
4. TWY A, TWY A1 to TWY A7, TWY Z12S and TXL L1 to TXL L6 are exclusive for EFTA use only, unless approved by Dubai Airports.
5. Aircraft are not permitted to carry 180° turn on a taxiway. In some circumstances, depending on aircraft type, taxiway width and location, Airside Operations may approve such manoeuvre with the assistance of a marshaller.
6. After landing, aircraft shall vacate and proceed straight on TWY V in direction of the landing runway. Acute turns from rapid exit taxiways towards the opposite landing direction are not allowed. See Table 3: Taxiway Turn Restrictions.

Table 2: Taxiway details

Designation	ICAO Code	Length (M)[1]	Width (M)	Shoulder either side (M)	Strip (M) (minimum)	Surface	PCN
TWY Z54**	F	315	25	18		Concrete	72/R/B/W/T
TWY Z71**	F	308	25	18		Concrete	90/R/B/W/T
TWY Z72**	F	308	25	18		Concrete	90/R/B/W/T
TWY Z73**	F	308	25	18		Concrete	90/R/B/W/T
TWY Z74**	F	308	25	18		Concrete	90/R/B/W/T
TWY Z91**	C	187	18	4		Concrete	86/R/B/W/T
TWY Z92**	C	185	18	4		Concrete	86/R/B/W/T
TWY A	B	1827	10	N/A	40	Asphalt	6/F/B/Y/T
TWY A1	B	121	10	N/A	31	Asphalt	6/F/B/Y/T
TWY A2	B	118	11	N/A	31	Asphalt	6/F/B/Y/T
TWY A3	B	201	11	N/A	40	Asphalt	6/F/B/Y/T
TWY A4	B	104	12	N/A	40	Asphalt	6/F/B/Y/T
TWY A5	B	201	11	N/A	40	Asphalt	6/F/B/Y/T
TWY A6	B	120	11	N/A	31	Asphalt	6/F/B/Y/T
TWY A7	B	120	10	N/A	31	Asphalt	6/F/B/Y/T
TWY Z12S	A	253	11	N/A	31	Asphalt	6/F/B/Y/T
TXL L1	B	116	24	N/A		Interlock paving	6/R/B/Y/T
TXL L2	B	116	27	N/A		Interlock paving	6/R/B/Y/T
TXL L3	B	116	34	N/A		Interlock paving	6/R/B/Y/T
TXL L4	B	116	25	N/A		Interlock paving	6/R/B/Y/T
TXL L5	B	131	32	N/A		Interlock paving	6/R/B/Y/T
TXL L6	B	116	24	N/A		Interlock paving	6/R/B/Y/T

** Crossover Taxiway

[1] Calculated Values: Taxiway lengths are measured along the surveyed taxiway centre lines, including around curves. Where the centre lines split into multiple curves at taxiway intersections, the straight parts of the centre lines may be extrapolated to the point of intersection with adjoining centre lines, and the lengths measured from these points.

Taxiways Restrictions:

1. TXL Z13 only available during special events or with prior approval from Dubai Airports.
2. Pilots who are unfamiliar with OMDW should advise ATC on first taxi.
3. There is a change in gradient of 2.5% when crossing TWY V from TWY W1 and between TWY W16, TWY W17 to TWY W21. Additional engine thrust may be required. Following aircraft should maintain a safe distance.
4. TWY A, TWY A1 to TWY A7, TWY Z12S and TXL L1 to TXL L6 are exclusive for EFTA use only, unless approved by Dubai Airports.
5. Aircraft are not permitted to carry 180° turn on a taxiway. In some circumstances, depending on aircraft type, taxiway width and location, Airside Operations may approve such manoeuvre with the assistance of a marshaller.
6. After landing, aircraft shall vacate and proceed straight on TWY V in direction of the landing runway. Acute turns from rapid exit taxiways towards the opposite landing direction are not allowed. See Table 3: Taxiway Turn Restrictions.

Table 2: Taxiway details

Designation	Turn Restrictions
TWY V4	Heading South right turn onto TWY V not AVBL
TWY V6	Heading West left turn onto TWY V not AVBL
TWY V7	Heading East right turn onto TWY V not AVBL
TWY V8	Heading West left turn onto TWY V not AVBL
TWY V9	Heading East right turn onto TWY V not AVBL
TWY V10	Heading West left turn onto TWY V not AVBL
TWY V11	Heading East right turn onto TWY V not AVBL
TWY V12	Heading West left turn onto TWY V not AVBL
TWY V13	Heading East right turn onto TWY V not AVBL
TWY W17	Heading North left turn onto TWY W not AVBL
	Heading North left/right turns onto TWY V not AVBL
	Heading South left turn onto TWY W not AVBL

Table 3: Taxiway Turn Restrictions

OMDW AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	See OMDW AD 2.23.3
2	RWY and TWY markings and lights	RWY 12/30 markings: Full ICAO runway designation, side stripes, pre-THR, transverse stripe, CL, TDZ, aiming point. RWY 13/31 markings: Full ICAO runway designation, side stripes, displaced THR, transverse stripe, CL, TDZ, aiming point. TWY markings: continuous yellow CL, double yellow edge lines and transverse yellow striping on corners and curves, excluding TWY A, TWY A1, TWY A2, TWY A3, TWY A4, TWY A5, TWY A6, TWY A7 and TWY Z12S no transverse striping on corners and curves. CAT II / III holding positions: Yellow pattern B CAT I holding positions: Yellow Pattern A IHP markings: Dashed Yellow TWY LGT: LIH yellow RETIL with 2 M lateral spacing at distances of 300 M (3 lights), 200 M (2 lights) and 100 M (1 light) from the RET point of tangency.
3	Stop bars and runway guard lights	Stop bar LGT: Variable intensity red uni-directional inset with additional pair of elevated edge lights are located at all lead-in TWYs and linked to intrusion sensor for RWY. RWY guard LGT: RWY holding positions are provided with a pair of yellow flashing lights on either side of the Stop bar. IHP LGT: A set of three variable intensity yellow inset lights are provided at all intermediate TWY holding positions.
4	Remarks	NIL

OMDW AD 2.10 AERODROME OBSTACLES

To acquire Area 2 electronic obstacle data, contact details are available in GEN 3.1.6

Electronic obstacle data for Area 3 are not available.

In approach/TKOF areas					
Obstacle ID / Designation	**Obstacle type**	**Obstacle Position**	**Elevation (FT) Height (FT)**	**Markings Lighting Type / Colour**	**Remarks**
OMDW 6183 / 30_LOC_FFM	NAVAID	245304.6N 0551058.1E	183 16	Yes NIL / NIL	12 TOCS
OMDW 2872 / 30_LOC	NAVAID	245431.4N 0550822.8E	125 14	Yes STD / RED	30 TOCS
OMDW 2873 / 30_LOC	NAVAID	245430.1N 0550821.9E	125 14	Yes STD / RED	30 TOCS
OMDW 6195 / 12_LOC_FFM	NAVAID	245431.0N 0550821.9E	126 15	Yes NIL / NIL	30 TOCS
OMDW 2887 / APPROACH_LIGHT	NAVAID	245141.9N 0551007.6E	162 3	No NIL / NIL	13 TOCS
OMDW 2890 / APPROACH_LIGHT	NAVAID	245216.1N 0550905.9E	162 16	No NIL / NIL	31 TOCS
OMDW 16136 / 31_LOC_NFM	NAVAID	245215.8N 0550906.4E	161 6	Yes NIL / NIL	31 TOCS

In circling area and at AD					
Obstacle ID / Designation	**Obstacle type**	**Obstacle Position**	**Elevation (FT) Height (FT)**	**Markings Lighting Type/Colour**	**Remarks**
OMDW AD 2713 / ATC_TOWER_AERIAL	BUILDING	245320.0N 0550926.2E	443 310	Yes STD / RED	NIL
OMDW AD 6184 / 12_GP_MAST	NAVAID	245424.0N 0550842.9E	172 59	Yes STD / RED	NIL
OMDW AD 6196 / 30_GP_MAST	NAVAID	245319.0N 0551040.4E	221 59	Yes STD / RED	NIL
OMDW AD 2574 / 31_GP_MAST	NAVAID	245154.3N 0550953.4E	207 53	Yes STD / RED	NIL
OMDW AD 2585 / TOWER_AERIAL	BUILDING	245203.4N 0550944.2E	229 71	Yes NIL / NIL	NIL
OMDW AD 2589 / FLOODLIGHT	POLE	245204.2N 0550942.8E	229 73	No STD / RED	NIL
OMDW AD 8875 / WINDSLEEVE	NAVAID	245209.7N 0550923.0E	174 20	Yes STD / RED	NIL
OMDW AD 8876 / WINDSLEEVE	NAVAID	245146.1N 0550954.5E	171 20	Yes STD / RED	NIL
OMDW AD 8877 / MET_MAST	NAVAID	245208.8N 0550923.8E	187 35	No STD / RED	NIL
OMDW AD 8879 / MET_MAST	NAVAID	245154.0N 0550950.9E	190 33	No STD / RED	NIL

OMDW AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	Dubai MET
2	Hours of service MET Office outside hours	H24 NIL
3	Office responsible for TAF preparation Periods of validity	Dubai MET 30 HR, issued every 6 HR
4	Trend forecast and Interval of issuance	TREND H24, issued every 1/2 HR
5	Briefing/consultation provided	T, D Internet
6	Flight documentation Language(s) used	C, TB English
7	Charts and other information available for briefing or consultation	P_{50-450}, SWH, SWM, SWL
8	Supplementary equipment available for providing information	Satellite Imagery, Weather Radar
9	ATS units provided with information	OMDW
10	Additional information (limitation of service, etc.)	Tel: +971 4 504 2990 Tel: +971 4 504 2987 Wind Shear Warnings. Refer to OMDW AD 2.23.6

Abbreviations (from Doc 8126)
P = Personal, T = Telephone, D = Self-Briefing Display, C = Charts,
TB = Tabular Data, P_{50-450} = Prognostic Upper Air Chart FL50-FL450,
SWH = Significant Weather High (Chart), SWM = Significant Weather Medium (Chart),
SWL = Significant Weather Low (Chart) Internet: www.avmet.ae - Registration required

Mean daily maximum and minimum temperatures (˚C) for each month of the year

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Maximum	25	27	30	35	40	42	44	44	42	37	31	27
Minimum	13	14	17	21	24	27	30	30	28	23	18	15

OMDW AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designations RWY NR	TRUE & MAG BRG	Dimensions of RWY(M)	Strength (PCN) and surface of RWY and SWY	THR coordinates RWY end coordinates THR geoid undulation	THR elevation and highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
12	121° / 119°	4500 x 60	140/F/A/X/T Asphalt	245425.74N 0550831.45E -111.5 FT	115.2 FT 118.4 FT
30	301° / 299°	4500 x 60	140/F/A/X/T Asphalt	245309.88N 0551048.54E -111.5 FT	170.7 FT 170.7 FT
13	121° / 119°	1838 x 30	6/F/B/Y/T Asphalt	245211.90N 0550913.41E 245143.45N 0551004.82E -111.5 FT	155.4 FT NIL
31	301° / 299°	1838 x 30	6/F/B/Y/T Asphalt	245145.98N 0551000.25E 245214.43N 0550908.84E -111.5 FT	155.4 FT 155.0 FT

Slope of RWY-SWY			SWY dimensions (M)	CWY dimensions (M)	Strip dimensions (M)	RESA (M)	Arresting system
7			8	9	10	11	12
12	+0.11% (first 1762.5 M) +0.5% (next 2737.5 M)	NIL	NIL	NIL	* x 280	240 x 150	Not Implemented
30	-0.5% (first 2737.5 M) -0.11% (next 1762.5 M)	NIL	NIL	NIL	* x 280	240 x 150	
13	0%	NIL	NIL	NIL	* x 140	120 x 80	
31		NIL	NIL	NIL	* x 140	120 x 80	

Obstacle Free Zone		Remarks
13		14
12 30 13 31	Provided in compliance with UAE Civil Aviation Regulations, Part IX, 4.18 - SAFEGUARDING OF AERODROME SURROUNDINGS and in accordance with ICAO Annex 14, Chapter 4 Compliant with PANS-OPS Volume II	1. RWY 12/30 will be closed for planned maintenance every Monday from 1100 to 1400 UTC 2. RWY 12/30: Aircraft up to and including B737/A320 size are permitted to carry out 180° turns. Any larger aircraft must vacate the runway and use taxiways as instructed for repositioning. 3. RWY 13/31 will be closed daily in accordance with the below timings: 01 JAN – 31 MAY 2000 – 0400 UTC 01 JUN – 30 SEP 2000 – 0200 UTC and from 1000 – 1200 UTC 01 OCT – 31 DEC 1900 – 0300 UTC 4. RWY 13/31 exclusively used for EFTA approved operations. 5. RWY strip surface for both runways are asphalt & compacted earth 6. RWY 13/31 THR displaced by 150 M 7. Strip dimensions RWY 12/30: * 280 M wide over full length extending to 60 M beyond each end of pavement. 8. Strip dimensions RWY 13/31: * 140 M wide over full length extending to 60 M beyond each end of pavement.

OMDW AD 2.13 DECLARED DISTANCES

RWY Designator	TORA (M)	TODA (M)	ASDA (M)	LDA (M)	Remarks
1	2	3	4	5	6
12	4500	4500	4500	4500	NIL
30	4500	4500	4500	4500	NIL
12	4452	4452	4452		Take-off from V2
12	4352	4352	4352		Take-off from V3
12	4252	4252	4252		Take-off from V4
12	3030	3030	3030		Take-off from V6
12	3030	3030	3030		Take-off from U4
12	2122	2122	2122		Take-off from V10*
30	4390	4390	4390		Take-off from V20
30	4288	4288	4288		Take-off from V19
30	4188	4188	4188		Take-off from V18
30	4088	4088	4088		Take-off from V17
30	3995	3995	3995		Take-off from V16
30	2980	2980	2980		Take-off from V13
30	1622	1622	1622		Take-off from V7*
13	1838	1838	1838	1688	EFTA
31	1838	1838	1838	1688	EFTA
13	1804	1804	1804		Take-off from A2 EFTA
31	1804	1804	1804		Take-off from A6 EFTA

* No TORA sign. For EFTA base aircraft and helicopter departures only.

OMDW AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY Designator	APCH LGT Type LEN INTST	THR LGT Colour WBAR	VASIS (MEHT) PAPI	TDZ, LGT LEN	RWY Centre Line LGT Length, spacing, Colour, INTST	RWY edge LGT LEN, spacing, Colour INTST	RWY End LGT Colour WBAR	SWY LGT LEN (M) Colour	Remarks
1	2	3	4	5	6	7	8	9	10
12	ICAO CAT III LIH precision approach lighting system including distance coded CL with sequence flashing lights from 900 M to 330 M. Flashing RTIL	LIH uni - directional green with wing bars	PAPI 3˚, PAPI / ILS disharmony - on slope ILS flight may show fly up PAPI indications	LIH white uni - directional 900 M long, 30 M spacing	LIH bi - directional, 15 M spacing, first 3600 M white, next 600 M alternate red / white, last 300 M red	LIH bi - directional, 60 M spacing, first 3900 M white, last 600 M yellow	11 LIH uni - directional red lights, spaced 6 M across RWY end	NIL	Side row lights - red side row barrettes extending 270 M from THR.
30	ICAO CAT III LIH precision approach lighting system including distance coded CL with sequence flashing lights from 900 M to 330 M. Flashing RTIL	LIH uni - directional green with wing bars	PAPI 3˚, PAPI / ILS disharmony - on slope ILS flight may show fly up PAPI indications	LIH white uni - directional 900 M long, 30 M spacing	LIH bi - directional, 15 M spacing, first 3600 M white, next 600 M alternate red / white, last 300 M red	LIH bi - directional, 60 M spacing, first 3900 M white, last 600 M yellow	11 LIH uni - directional red lights, spaced 6 M across RWY end	NIL	Side row lights - red side row barrettes extending 270 M from THR. Rapid exit taxiways V17 to V20 are not lit in the direction viewed from the runway.
13	ICAO SALS, 420 M LIH.	LIH Uni - directional green	PAPI 3˚ LEFT only	NIL	NIL	LIH bi - directional, 60 M spacing, first 150 M red, white until 600 M from RWY end, last 600 M yellow	6 LIH uni - directional red lights, spaced 4.4 M across RWY end	NIL	DTHR identification lights not provided.
31	ICAO SALS CAT I, 420 M LIH.	LIH Uni - directional green with wing bars	PAPI 3˚ LEFT only	NIL	NIL	LIH bi - directional, 60 M spacing, first 150 M red, white until 600 M from RWY end, last 600 M yellow	6 LIH uni - directional red lights, spaced 4.4 M across RWY end	NIL	DTHR identification lights not provided.

OMDW AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and operational hours	NIL
← 2	LDI location and LGT Anemometer location and LGT WDI	NIL Anemometers RWY 12/30 installed mid - point of the RWY located 220 M (N) of RWY CL, LGTD. AWOS (Anemometer) RWY 13 DTHR: located 71 M from the RWY CL on the left side (N) and 300 M beyond the DTHR, LGTD. AWOS (Anemometer) RWY 31 DTHR: located 75 M from the RWY CL on the right side (N) and 351 M beyond the DTHR, LGTD . WDIs: Illuminated, fabric orange cone and obstruction light. WDI RWY 12 THR: located 120.57 M from the RWY CL on the left side (N) and 355 M beyond the THR. WDI RWY 30 THR: located 120.27 M from the RWY CL on the right side (N) and 367.53 M beyond the THR abeam to TWY V18. WDI FATO H12/H30: located 122.09 M from TWY Z CL on (N) side and 244.36 M beyond THR H12 and 183.53 M beyond THR H30 . WDI RWY 13 DTHR: located 80.01 M from the RWY CL on the left side (N) and 264.92 M beyond the DTHR. WDI RWY 31 DTHR: located 80.25 M from the RWY CL on the left side (S) and 139.75 M beyond the DTHR.
3	TWY edge and centre line lights	Edge LGT: Variable intensity blue Omni directional inset lights only at intersections and turns, excluding TXL Z9 and TXL Z10. EFTA: blue Omni directional elevated fittings. CL LGT: Variable intensity green bi-directional lights are provided for all taxiways except exit taxiways; 15 M spacing on straight sections, 7.5 M spacing on curved sections; Exit taxiways provided with variable intensity alternate Green / Yellow lights from the beginning near the runway centre line to the perimeter of the ILS critical / sensitive area; The light nearest the perimeter always shows yellow. EFTA: taxiways are not provided with centre line or exit taxiway lighting,except TXL L1 - L6 provided with green omnidirectional inset lights.
4	Secondary power supply/switch-over time	Conforms fully with the requirements of CAR Part IX, Appendix 10 and ICAO Annex 14, chapter 8 for CAT III operations and CAT I for EFTA operations.
5	Remarks	Apron: High mast floodlights EFTA aprons: Canopy lighting.

OMDW AD 2.16 HELICOPTER LANDING AREA

1	Coordinates TLOF or THR of FATO Geoid undulation	THR H12: 245345.7N 0550900.7E THR H30: 245338.5N 0550913.7E TLOF: NIL -112 FT
2	TLOF and/or FATO elevation M/FT	TLOF: NIL FATO: THR H12: 35.8 M / 117 FT THR H30: 37.1 M / 122 FT
3	TLOF and FATO area dimensions, surface, strength, marking	TLOF: NIL FATO: 428 M x 20 M, Concrete, PCN 90/R/A/W/T FATO marking, Heliport identification
4	True BRG of FATO	H12: 121° H30: 301°
5	Declared distance available	TODAH = 428 M RTODAH = 428 M LDAH = 428 M
6	APP and FATO lighting	No FATO lighting, use green centre line lights of TWY Z for orientation
7	Remarks	Helicopter operations at FATO H12/H30 to be used by Dubai Police Airwing and Aerogulf Services helicopters only, as directed by ATC Helicopter operations at EFTA require pre-approval from the airport authority. MEDEVAC can expect landing at TWY A.

OMDW AD 2.17 ATS AIRSPACE

1	Designation and lateral limits	AL MAKTOUM CTR 1: 250143N 0550744E 245552N 0551819E Clockwise arc radius 7.3 NM with centre at 245310N 0551049E till 244551N 0551143E 245145N 0550103E Clockwise arc radius 7.3 NM with centre at 245426N 0550831E till 250143N 0550744E AL MAKTOUM CTR 2: 250241N 0550558E 250143N 0550744E Counter clockwise arc radius 7.3 NM with centre at 245426N 0550831E till 245145N 0550103E 245244N 0545917E Clockwise arc radius 7.3 NM with centre at 245524N 0550645E till 250241N 0550558E
2	Vertical limits	CTR 1: 1,500 FT AMSL / GND CTR 2: 1,500 FT AMSL / 1,000 FT AMSL
3	Airspace classification	D
4	ATS unit call sign Language(s)	AL MAKTOUM TOWER English
5	Transition altitude	13,000 FT
6	Remarks	NIL

OMDW AD 2.18 ATS COMMUNICATION FACILITIES

Service designation	Call sign	Frequency	SATVOICE	Logon address	Hours of operation	Remarks
1	2	3	4	5	6	7
APP	AL MAKTOUM RADAR	Primary 124.025 MHz	Not Implemented	Not Implemented	H24	EMERG 121.500 MHz
		Secondary 126.025 MHz				
	DUBAI DEPARTURES NORTH	Primary 126.200 MHz			H24	EMERG 121.500 MHz
		Secondary 124.450 MHz				
	DUBAI DEPARTURES SOUTH	Primary 121.025 MHz			H24	EMERG 121.500 MHz
		Secondary 124.450 MHz				
	DUBAI SOUTH RADAR	Primary 120.400 MHz			H24	EMERG 121.500 MHz FREQ MNT by AL MAKTOUM RADAR BTN 1800-0200
		Secondary 126.025 MHz				
	MINHAD APPROACH	Primary 122.500 MHz			H24	EMERG 121.500 MHz
		Secondary 126.025 MHz				
TWR	AL MAKTOUM TOWER	Primary 118.625 MHz			H24	EMERG 121.500 MHz
		Secondary 118.725 MHz				
GND	AL MAKTOUM GROUND	Primary 118.375 MHz			H24	EMERG 121.500 MHz
		Secondary 118.725 MHz				
ATIS	AL MAKTOUM INTERNATIONAL	DEP 126.475 MHz			H24	NIL
		ARR 123.175 MHz				
EFTA TWR	ACADEMY TOWER	Primary 118.775 MHz			See Note	EMERG 121.500 MHz
		Secondary 119.000 MHz				
EFTA APRON	ACADEMY APRON INFORMATION	118.700 MHz				EMERG 121.500 MHz

Note :
01 JAN – 31 MAY 0400 – 2000 UTC
01 JUN – 30 SEP 0200 - 1000 UTC and 1200 – 2000 UTC
01 OCT – 31 DEC 0300 – 1900 UTC

OMDW AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of aid, MAG VAR, Type of supported OPS (For VOR/ILS/MLS, give declination)	ID	Frequency	Hours of operation	Position of transmitting antenna coordinates	Elevation of DME transmitting antenna	Service volume radius from the GBAS reference point	Remarks
1	2	3	4	5	6	7	8
LOC RWY 12 (2° E/2020) ILS CAT III	IJEA	111.750 MHz	H24	245304.9N 0551057.6E			MAINT on runway closure
GP RWY 12		333.350 MHz	H24	245424.1N 0550842.8E			Angle 3°, RDH 50 FT, MAINT on runway closure
DME RWY 12	IJEA	CH 54Y	H24	245424.1N 0550842.8E	134 FT		Co - located with GP; Zero indication at TDZ
LOC RWY 30 (2° E/2020) ILS CAT III	IJWA	109.750 MHz	H24	245430.8N 0550822.4E			MAINT on runway closure
GP RWY 30		333.050 MHz	H24	245319.0N 0551040.5E			Angle 3°, RDH 50 FT, MAINT on runway closure
DME RWY 30	IJWA	CH 34Y	H24	245319.0N 0551040.5E	184 FT		Co - located with GP; Zero indication at TDZ
LOC RWY 31 (2° E/2020) ILS CAT I	IDEF	110.550 MHz	H24	245217.5N 0550903.3E			Exclusive use for EFTA aircraft.
GP RWY 31		329.450 MHz	H24	245154.3N 0550953.5E			Angle 3°,RDH 53 FT Exclusive use for EFTA aircraft.
DME RWY 31	IDEF	CH 42Y	H24	245154.4N 0550953.5E	179 FT		Exclusive use for EFTA aircraft.

OMDW AD 2.20 LOCAL TRAFFIC REGULATIONS

2.20.1 Local VFR Regulations

2.20.1.1 Maximum speed on published VFR routes is 125 KIAS.

2.20.1.2 When the reported MET Visibility falls below 5000 M and / or the cloud ceiling is below 1500 FT, flight according to VFR is not permitted. Special VFR clearance may be issued.

2.20.1.3 Due to limited availability of Visual Reference Points (VRP) Special VFR clearances to enter the AL MAKTOUM CTR (I) may be withheld for separation purposes.

2.20.1.4 Clearance for VFR flight within the AL MAKTOUM CTR (I) will be limited to the following:

- Flights inbound to or outbound from OMDW/EFTA
- Flights inbound to or outbound from a landing site within the AL MAKTOUM CTR (I)
- Flights with an operational requirement to operate within the AL MAKTOUM CTR (I) e.g. Police patrol, aerial survey etc.
- Training flights carrying out practice instrument procedures or visual circuits at OMDW/EFTA

2.20.1.5 VFR flights not included in the above criteria must plan a route that remains clear of the AL MAKTOUM CTR (I). In addition, pilots of such flights are requested not to establish communications with AL MAKTOUM TOWER or ACADEMY TOWER unless an emergency situation requires otherwise.

2.20.2. Visual and instrument training at DUBAI / AL MAKTOUM INTERNATIONAL is subject to prior ATC approval as follows:

- MON - SUN: Training requests shall be submitted to the DAMC one day prior to the intended day of the activity (DAY-1) not later than 0700.
- DAMC contact details:

  Email: damc@dans.gov.ae
  Tel: +971 4 877 1232
  Tel: +971 50 648 7537 (Mobile)
  Fax: +971 4 887 9866

2.20.2.1 Visual and instrument training at EFTA subject to approval by EFTA operations.

2.20.3 Minimum Runway Occupancy:

a. Arrivals

- Rapid exit from the runway enables the achievement of maximum runway utilisation. On exiting the RWY pilots are reminded not to stop until the entire aircraft has passed the runway holding point.
- Pilots should anticipate joining TWY V in the same direction as arrival unless otherwise instructed.
- Pilots are reminded to pay particular attention to ATC taxiing instruction when vacating to avoid deviations from clearance resulting in taxiway incursions.

b. Departures

- eWTS time based wake turbulence separation may be applied (refer to OMDW AD 2.22.12.2) subject to other departure restrictions e.g. flow control releases.
- Pilots are reminded to pay particular attention to conditional line up clearances to avoid RWY incursions.
- Aircraft are assumed to be ready for departure on reaching the holding point unless otherwise stated.
- If pilots require more separation than the eWTS time-based standard, or extra time for any other reason, they must advise ATC early PRIOR to entering the runway, NOT when on the runway. When informed, ATC may be able to make changes in the departure sequence, if necessary, to minimise delays to other succeeding departures.
- Cockpit checks shall be completed prior to completing the line up so that take-off roll can be commenced without delay.
- Once ATC issues a take-off clearance, if there is any unreasonable delay in the aircraft commencing the take-off roll, ATC may cancel the take-off clearance and reposition the aircraft in the departure sequence. When cleared for take- off, ATC will expect and will have planned on seeing movement within 8 to 10 seconds of the take-off clearance being issued.

Note: Aircraft that cannot comply with these requirements are to notify ATC as soon as possible.

2.20.4. When on approach to RWY 30 and RWY 12, pilots shall reconfirm DME/GP information and ensure that they have correctly identified the landing runway. Do not confuse with EFTA RWY 13 and RWY 31 in close proximity approximately 1.6 NM South of OMDW.

2.20.4.1 When on an ILS approach to RWY 31, pilots shall reconfirm DME/GP information and ensure that they have correctly identified the landing runway. Do not confuse with OMDW RWY 30 in close proximity, approximately 1.6 NM North of EFTA.

2.20.4.2 When on a GNSS approach to EFTA RWY 31 and RWY 13, pilots shall ensure that they have correctly identified the landing runway. Do not confuse with OMDW RWY 30 and RWY 12 in close proximity, approximately 1.6 NM North of EFTA.

2.20.5 Pilots to exercise caution as High intensity VFR traffic to the South East of the AL MAKTOUM CTR transiting between OMR 53 and EFTA.

2.20.6 Before entering AL MAKTOUM CTR-Class D airspace, the pilot in command of a VFR or SVFR aircraft shall establish two-way radio communication as follows:

a. Traffic approaching AL MAKTOUM CTR from the South between during the EFTA operations timings (Refer to OMDW AD 2.3) shall establish contact with the ACADEMY TOWER on 118.775 MHz and shall maintain contact while in Class D airspace unless otherwise advised. Outside of these hours contact shall be established with AL MAKTOUM TOWER on 118.625 MHz.

b. Traffic approaching AL MAKTOUM CTR from the North shall establish contact with AL MAKTOUM TOWER on 118.625 MHz H24 and shall maintain contact while in Class D airspace unless otherwise advised.

Note: Radio contact must be initiated far enough from the Class D airspace boundary to preclude entering the Class D airspace before two-way radio communication is established. If the controller responds with instructions to enter the CTR then radio communications have been established and the pilot may enter the Class D airspace.

OMDW AD 2.22 FLIGHT PROCEDURES

2.22.1 RNAV 1 performance required for IFR flights

Note: Aircraft flying IFR shall be certified for RNAV 1 with GNSS operations.

2.22.2 Initial Ground Contact - IFR

2.22.2.1 Prior to requesting a pushback clearance from OMDW ATC, flight crews are instructed to contact the GMC frequency on 118.375 MHz. Departing aircraft shall establish contact no more than 10 minutes prior to startup and obtain an ATC clearance. The following information will be required:

a. Aircraft callsign

b. Aircraft type

c. Parking stand

d. Destination

e. DUBAI CTA exit point

f. ATIS letter & QNH

2.22.2.2 EFTA Operations: - prior to requesting a start or taxi clearance from EFTA ATC, flight crews are instructed to contact EFTA ATC on frequency on 118.775 MHz. Departing aircraft shall establish contact no more than 10 minutes prior to startup and obtain an ATC clearance. The following information will be required:

a. Aircraft callsign

b. Aircraft type

c. Parking stand

d. Destination

e. DUBAI CTA exit point

f. QNH

2.22.3 Initial contact instructions-Airborne

2.22.3.1 On initial call, departing IFR aircraft shall pass the following information to DUBAI DEPARTURES:

a. Aircraft callsign

b. Passing level

2.22.3.2 On initial call, arriving IFR aircraft shall pass the following information to DUBAI ARRIVALS:

a. Aircraft callsign

b. Passing level

c. Aircraft Type, including series

Note: Inbound traffic shall advise DUBAI ARRIVALS on first contact if full runway length is required.

2.22.4 RNP Approaches to RWY 12/30 and EFTA RWY 13/31

2.22.4.1 These procedures may only be flown using significant position co - ordinates that are stored in the aircraft's navigational data base.

2.22.4.2 Significant points are published in ENR 4.4

2.22.5 Standard Instrument Departures (SID)

2.22.5.1 ATC clearances issued to IFR traffic departing from OMDW will normally include Standard Instrument Departure.

2.22.5.2 Initial climb is restricted to 3000 FT for departures from RWY 12 / 30. Further climb clearance as instructed by AL MAKTOUM RADAR.

Note: See ENR 1.6.1.3 for action in the event of radio failure.

2.22.5.3 Departing IFR traffic leaving DUBAI CTA while on SID or under radar control are required to:

a. Climb at a minimum gradient of 5.0% to 8,000 FT (300 FT per NM)

b. Observe a maximum 250 KIAS whilst below 10000 FT

c. Carry out all turns with a 25° angle of bank.

d. Advise ATC at start-up if unable to comply with the above, and with any part of the SID requirements and restrictions.

Note: Special speed restrictions apply on some SID and STAR.

2.22.5.4 Special navigation performance requirements:
Aircraft flying SIDs shall be certified for RNAV 1 with GNSS operations.

2.22.6 SID FMS coding tables

2.22.6.1 Significant point co-ordinates are published in ENR 4.4

2.22.6.2 SID RWY 12

i) **ANVIX 6J (RNAV 1 SID RWY 12)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit (KT)
RWY12	CA		119 (121.3)		+570		
DW452	DF	No			+2000		
DW456	TF	No	119 (121.4)		+5000	8.4	-220
DW479	TF	No	069 (071.2)		+6000	3.4	
DW458	TF	No	069 (071.2)			9.5	
LOPUV	TF	No	080 (082.2)			10.9	
ANVIX	TF	No	125 (126.6)		+10000	6.0	

ii) **DAVMO 5J (RNAV 1 SID RWY 12)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit (KT)
RWY12	CA		119 (121.3)		+570		
DW452	DF	No			+2000		
DW456	TF	No	119 (121.4)		+5000	8.4	-220
DW459	TF	No	029 (031.2)	Left	+6000	4.9	
DW460	TF	No	300 (302.2)	Left	+7000	5.4	-220
DW473	TF	No	299 (301.3)			3.0	
DW406	TF	No	299 (301.3)			7.5	
DW478	TF	No	271 (272.9)			4.4	
KIRUK	TF	No	271 (272.8)		+7000	6.1	
XARTA	TF	No	299 (301.2)		+8000	6.9	
GINLA	TF	No	358 (360.0)		+10000	6.9	
DW467	TF	No	047 (049.2)		+12000	9.2	
MITIX	TF	No	047 (049.2)		+13000	5.0	
LOVEM	TF	No	034 (036.0)		+FL 150	11.1	
OBROG	TF	No	038 (040.2)			17.4	
DAVMO	TF	No	041 (043.6)			15.6	

iii) **EMERU 3J (RNAV 1 SID RWY 12)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit (KT)
RWY12	CA		119 (121.3)		+570		
DW452	DF	No			+2000		
DW456	TF	No	119 (121.4)		+5000	8.4	-220
DW459	TF	No	029 (031.2)	Left	+6000	4.9	
DW460	TF	No	300 (302.2)	Left	+7000	5.4	-220
DW473	TF	No	299 (301.3)			3.0	
DW406	TF	No	299 (301.3)			7.5	
DW478	TF	No	271 (272.9)			4.4	
EMERU	TF	No	208 (209.9)			10.6	

iv) **KUTLI 4J (RNAV 1 SID RWY 12)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit (KT)
RWY12	CA		119 (121.3)		+570		
DW452	DF	No			+2000		
DW456	TF	No	119 (121.4)		+5000	8.4	-220
DW459	TF	No	029 (031.2)	Left	+6000	4.9	
DW460	TF	No	300 (302.2)	Left	+7000	5.4	-220
DW473	TF	No	299 (301.3)			3.0	
DW406	TF	No	299 (301.3)			7.5	
DW478	TF	No	271 (272.9)			4.4	
KIRUK	TF	No	271 (272.8)		+7000	6.1	
KUTLI	TF	No	219 (220.8)		+8000	8.1	

v) **MIROT 4J (RNAV 1 SID RWY 12)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit (KT)
RWY12	CA		119 (121.3)		+570		
DW452	DF	No			+2000		
DW456	TF	No	119 (121.4)		+5000	8.4	-220
DW459	TF	No	029 (031.2)	Left	+6000	4.9	
DW460	TF	No	300 (302.2)	Left	+7000	5.4	-220
DW473	TF	No	299 (301.3)			3.0	
DW406	TF	No	299 (301.3)			7.5	
DW478	TF	No	271 (272.9)			4.4	
KIRUK	TF	No	271 (272.8)		+7000	6.1	
XARTA	TF	No	299 (301.2)		+8000	6.9	
DW412	TF	No	299 (301.0)			5.0	
ORGUR	TF	No	299 (301.3)			4.0	
MIROT	TF	No	268 (269.7)			14.8	

vi) **NABIX 4J (RNAV 1 SID RWY 12)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit (KT)
RWY12	CA		119 (121.3)		+570		
DW452	DF	No			+2000		
DW456	TF	No	119 (121.4)		+5000	8.4	-220
DW459	TF	No	029 (031.2)	Left	+6000	4.9	
DW460	TF	No	300 (302.2)	Left	+7000	5.4	-220
DW473	TF	No	299 (301.3)			3.0	
DW406	TF	No	299 (301.3)			7.5	
DW478	TF	No	271 (272.9)			4.4	
KIRUK	TF	No	271 (272.8)		+7000	6.1	
XARTA	TF	No	299 (301.2)		+8000	6.9	
DW412	TF	No	299 (301.0)			5.0	
ORGUR	TF	No	299 (301.3)			4.0	
NABIX	TF	No	293 (294.8)			15.4	

vii) **NOLSU 3J (RNAV 1 SID RWY 12)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit (KT)
RWY12	CA		119 (121.3)		+570		
DW452	DF	No			+2000		
DW456	TF	No	119 (121.4)		+5000	8.4	-220
DW459	TF	No	029 (031.2)	Left	+6000	4.9	
DW460	TF	No	300 (302.2)	Left	+7000	5.4	-220
IMGIL	TF	No	006 (007.6)		+9000	6.3	
ULADO	TF	No	068 (069.6)		+11000	8.5	
DW474	TF	No	068 (069.6)			7.7	
DW475	TF	No	068 (069.7)		+12000	7.1	
NOLSU	TF	No	068 (069.8)		+FL 150	18.5	

viii) **RIDAP 4J (RNAV 1 SID RWY 12)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit (KT)
RWY12	CA		119 (121.3)		+570		
DW452	DF	No			+2000		
DW456	TF	No	119 (121.4)		+5000	8.4	-220
DW459	TF	No	029 (031.2)	Left	+6000	4.9	
DW460	TF	No	300 (302.2)	Left	+7000	5.4	-220
DW473	TF	No	299 (301.3)			3.0	
DW406	TF	No	299 (301.3)			7.5	
DW478	TF	No	271 (272.9)			4.4	
KIRUK	TF	No	271 (272.8)		+7000	6.1	
XARTA	TF	No	299 (301.2)		+8000	6.9	
DW412	TF	No	299 (301.0)			5.0	
ORGUR	TF	No	299 (301.3)			4.0	
LOPAP	TF	No	346 (348.5)			5.8	
IVILI	TF	No	346 (348.5)			5.0	
KIXOG	TF	No	346 (348.4)			7.5	
RIDAP	TF	No	285 (287.4)			5.8	

ix) **SENPA 4J (RNAV 1 SID RWY 12)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit (KT)
RWY12	CA		119 (121.3)		+570		
DW452	DF	No			+2000		
DW456	TF	No	119 (121.4)		+5000	8.4	-220
DW459	TF	No	029 (031.2)	Left	+6000	4.9	
DW460	TF	No	300 (302.2)	Left	+7000	5.4	-220
DW473	TF	No	299 (301.3)			3.0	
DW406	TF	No	299 (301.3)			7.5	
DW478	TF	No	271 (272.9)			4.4	
KIRUK	TF	No	271 (272.8)		+7000	6.1	
XARTA	TF	No	299 (301.2)		+8000	6.9	
DW412	TF	No	299 (301.0)			5.0	
ORGUR	TF	No	299 (301.3)			4.0	
LOPAP	TF	No	346 (348.5)			5.8	
IVILI	TF	No	346 (348.5)			5.0	
SENPA	TF	No	283 (285.5)			11.9	

2.22.6.3 SID RWY 30

i) **ANVIX 4L (RNAV 1 SID RWY 30)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit (KT)
RWY30	CA		299 (301.2)		+520		
KIRUK	DF	No			+2000		
DW552	TF	No	209 (211.2)	Left	+3000	5.0	
DW465	TF	No	119 (121.2)	Left	+4000	4.0	-220
DW423	TF	No	076 (077.7)			7.3	
DW466	TF	No	066 (067.9)		+7000	5.0	
IMGIL	TF	No	066 (067.9)		+10000	8.4	
ULADO	TF	No	068 (069.6)		+11000	8.5	
RAPMO	TF	No	119 (120.7)		+13000	9.2	
LOPUV	TF	No	124 (126.0)			10.1	
ANVIX	TF	No	125 (126.6)			6.0	

ii) **DAVMO 4L (RNAV 1 SID RWY 30)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit (KT)
RWY30	CA		299 (301.2)		+520		
KIRUK	DF	No			+2000		
XARTA	TF	No	299 (301.2)			6.9	-220
GINLA	TF	No	358 (360.0)			6.9	
DW467	TF	No	047 (049.2)		+10000	9.2	
MITIX	TF	No	047 (049.2)		+11000	5.0	
LOVEM	TF	No	034 (036.0)		+FL 150	11.1	
OBROG	TF	No	038 (040.2)			17.4	
DAVMO	TF	No	041 (043.6)			15.6	

iii) **EMERU 1L (RNAV 1 SID RWY 30)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit (KT)
RWY30	CA		299 (301.2)		+520		
KIRUK	DF	No			+2000		
DW552	TF	No	209 (211.2)	Left	+3000	5.0	
DW465	TF	No	119 (121.2)	Left	+4000	4.0	-220
EMERU	TF	No	178 (179.5)			3.1	

iv) **KUTLI 3L (RNAV 1 SID RWY 30)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit (KT)
RWY30	CA		299 (301.2)		+520		
KIRUK	DF	No			+2000		
XARTA	TF	No	299 (301.2)			6.9	-220
TATMO	TF	No	209 (211.2)	Left		5.0	-220
KUTLI	TF	No	147 (149.1)		+8000	6.3	

v) **MIROT 3L (RNAV 1 SID RWY 30)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit (KT)
RWY30	CA		299 (301.2)		+520		
KIRUK	DF	No			+2000		
XARTA	TF	No	299 (301.2)			6.9	-220
ORGUR	TF	No	299 (301.1)			9.0	
MIROT	TF	No	268 (269.7)			14.8	

vi) **NABIX 3L (RNAV 1 SID RWY 30)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit (KT)
RWY30	CA		299 (301.2)		+520		
KIRUK	DF	No			+2000		
XARTA	TF	No	299 (301.2)			6.9	-220
ORGUR	TF	No	299 (301.1)			9.0	
NABIX	TF	No	293 (294.8)			15.4	

vii) **NOLSU 3L (RNAV 1 SID RWY 30)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit (KT)
RWY30	CA		299 (301.2)		+520		
KIRUK	DF	No			+2000		
DW552	TF	No	209 (211.2)	Left	+3000	5.0	
DW465	TF	No	119 (121.2)	Left	+4000	4.0	-220
DW423	TF	No	076 (077.7)			7.3	
DW466	TF	No	066 (067.9)		+7000	5.0	
IMGIL	TF	No	066 (067.9)		+10000	8.4	
ULADO	TF	No	068 (069.6)		+11000	8.5	
DW474	TF	No	068 (069.6)			7.7	
DW475	TF	No	068 (069.7)		+12000	7.1	
NOLSU	TF	No	068 (069.8)		+FL 150	18.5	

viii) **RIDAP 3L (RNAV 1 SID RWY 30)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit (KT)
RWY30	CA		299 (301.2)		+520		
KIRUK	DF	No			+2000		
XARTA	TF	No	299 (301.2)			6.9	-220
ORGUR	TF	No	299 (301.1)			9.0	
LOPAP	TF	No	346 (348.5)			5.8	
IVILI	TF	No	346 (348.5)			5.0	
KIXOG	TF	No	346 (348.4)			7.5	
RIDAP	TF	No	285 (287.4)			5.8	

ix) **SENPA 3L (RNAV 1 SID RWY 30)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit (KT)
RWY30	CA		299 (301.2)		+520		
KIRUK	DF	No			+2000		
XARTA	TF	No	299 (301.2)			6.9	-220
ORGUR	TF	No	299 (301.1)			9.0	
LOPAP	TF	No	346 (348.5)			5.8	
IVILI	TF	No	346 (348.5)			5.0	
SENPA	TF	No	283 (285.5)			11.9	

2.22.6.4 SID RWY 13

i) **ANVIX 2N (RNAV 1 SID RWY 13)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit (KT)
RWY13	CA		119 (121.2)		+570		
EF801	DF	Yes					
EF802	TF	No	150 (151.6)			4.8	
EF803	TF	No	119 (121.3)			9.4	
DW456	TF	No	029 (031.2)	Left	+5000	4.0	-220
DW479	TF	No	069 (071.2)		+6000	3.4	
DW458	TF	No	069 (071.2)			9.5	
LOPUV	TF	No	080 (082.2)			10.9	
ANVIX	TF	No	125 (126.6)		+10000	6.0	

ii) **MIROT 1N (RNAV 1 SID RWY 13)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit (KT)
RWY13	CA		119 (121.2)		+570		
EF801	DF	Yes					
EF802	TF	No	150 (151.6)			4.8	
EF803	TF	No	119 (121.3)			9.4	
DW456	TF	No	029 (031.2)	Left	+5000	4.0	-220
DW459	TF	No	029 (031.2)		+6000	4.9	
DW460	TF	No	300 (302.2)	Left	+7000	5.4	
DW473	TF	No	299 (301.3)			3.0	
DW406	TF	No	299 (301.3)			7.5	
DW478	TF	No	271 (272.9)			4.4	
KIRUK	TF	No	271 (272.8)		+7000	6.1	
XARTA	TF	No	299 (301.2)		+8000	6.9	
DW412	TF	No	299 (301.0)			5.0	
ORGUR	TF	No	299 (301.3)			4.0	
MIROT	TF	No	268 (269.7)			14.8	

iii) **NABIX 1N (RNAV 1 SID RWY 13)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit (KT)
RWY13	CA		119 (121.2)		+570		
EF801	DF	Yes					
EF802	TF	No	150 (151.6)			4.8	
EF803	TF	No	119 (121.3)			9.4	
DW456	TF	No	029 (031.2)	Left	+5000	4.0	-220
DW459	TF	No	029 (031.2)		+6000	4.9	
DW460	TF	No	300 (302.2)	Left	+7000	5.4	
DW473	TF	No	299 (301.3)			3.0	
DW406	TF	No	299 (301.3)			7.5	
DW478	TF	No	271 (272.9)			4.4	
KIRUK	TF	No	271 (272.8)		+7000	6.1	
XARTA	TF	No	299 (301.2)		+8000	6.9	
DW412	TF	No	299 (301.0)			5.0	
ORGUR	TF	No	299 (301.3)			4.0	
NABIX	TF	No	293 (294.8)			15.4	

2.22.6.5 SID RWY 31

i) **ANVIX 1P (RNAV 1 SID RWY 31)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit(KT)
RWY31	CA		299 (301.2)		+570		
EF851	DF	Yes					
EF852	TF	No	262 (264.5)			4.1	-130
EF853	TF	No	210 (212.2)			2.0	-130
EF854	TF	No	119 (121.2)	Left		6.4	-220
EF855	TF	No	066 (067.7)		+7000	9.8	
IMGIL	TF	No	043 (044.7)		+10000	9.1	
ULADO	TF	No	068 (069.6)		+11000	8.5	
RAPMO	TF	No	119 (120.7)		+13000	9.2	
LOPUV	TF	No	124 (126.0)			10.1	
ANVIX	TF	No	125 (126.6)			6.0	

ii) **MIROT 1P (RNAV 1 SID RWY 31)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit(KT)
RWY31	CA		299 (301.2)		+570		
EF851	DF	Yes					
EF852	TF	No	262 (264.5)			4.1	-130
DW552	TF	No	280 (282.4)			3.1	
TATMO	TF	No	299 (300.9)			6.9	-220
EF856	TF	No	304 (306.2)			9.0	
MIROT	TF	No	283 (285.6)			13.1	

iii) **NABIX 1P (RNAV 1 SID RWY 31)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit(KT)
RWY31	CA		299 (301.2)		+570		
EF851	DF	Yes					
EF852	TF	No	262 (264.5)			4.1	-130
DW552	TF	No	280 (282.4)			3.1	
TATMO	TF	No	299 (300.9)			6.9	-220
EF856	TF	No	304 (306.2)			9.0	
NABIX	TF	No	308 (310.5)			15.5	

2.22.7 Standard Instrument Arrivals (STAR)

2.22.7.1 Aircraft flying STARs shall be certified for RNAV 1 with GNSS operations.

2.22.7.2 STAR FMS coding tables below. Significant point co-ordinates are published in ENR 4.4 .
Speed control points depicted in STAR coding tables and on STAR charts are mandatory unless instructed by ATC.

2.22.7.2.1 STAR RWY 12/13

i) **DATOB 5Y (RNAV 1 STAR RWY 12/13)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit (KT)
DATOB	IF	No			-FL 160		@230
DW426	TF	No	107 (109.6)			12.7	
MITIX	TF	No	141 (143.2)		-FL 150	11.0	
DW427	TF	No	138 (140.5)		+10000	16.2	
DW406	TF	No	209 (211.3)		-10000	9.1	
DW423	TF	No	209 (211.2)			5.0	
DEDAX	TF	No	209 (211.2)	Right	-8000	5.0	@210
ORPAT	TF	No	299 (301.1)		-6000	7.4	
IVOPU	TF	No	299 (301.2)			5.7	
DW400	TF	No	299 (301.1)	Right		8.0	@185
DW412	TF	No	029 (031.1)	Right		5.0	
NITRI	TF	No	119 (121.0)		+3000	4.0	

ii) **ELOVU 3Y (RNAV 1 STAR RWY 12/13)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit (KT)
ELOVU	IF	No			-12000		@230
MISOL	TF	No	118 (120.5)			7.2	
LORID	TF	No	077 (078.7)		-9000	11.1	@210
TOVLA	TF	No	050 (052.2)		-7000	4.0	
DW400	TF	No	072 (073.6)			5.3	@185
DW412	TF	No	029 (031.1)	Right		5.0	
NITRI	TF	No	119 (121.0)		+3000	4.0	

iii) **GERUL 3Y (RNAV 1 STAR RWY 12/13)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit (KT)
GERUL	IF	No			-10000		@210
TOVLA	TF	No	095 (096.7)		-7000	14.5	
DW400	TF	No	072 (073.6)			5.3	@185
DW412	TF	No	029 (031.1)	Right		5.0	
NITRI	TF	No	119 (121.0)		+3000	4.0	

iv) **GIDIS 5Y (RNAV 1 STAR RWY 12/13)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit (KT)
GIDIS	IF	No			-12000		@230
RERAG	TF	No	304 (306.3)		-10000	6.8	@230
SINPU	TF	No	268 (270.0)			12.9	
DW416	TF	No	265 (266.8)			10.0	
DEDAX	TF	No	299 (301.2)		-8000	18.1	@210
ORPAT	TF	No	299 (301.1)		-6000	7.4	
IVOPU	TF	No	299 (301.2)			5.7	
DW400	TF	No	299 (301.1)	Right		8.0	@185
DW412	TF	No	029 (031.1)	Right		5.0	
NITRI	TF	No	119 (121.0)		+3000	4.0	

v) **GONVI 5Y (RNAV 1 STAR RWY 12/13)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit (KT)
GONVI	IF	No			-FL 160		@230
ALRAR	TF	No	107 (109.4)			5.1	
LOVEM	TF	No	139 (140.7)		-FL 150	18.3	
DW427	TF	No	168 (170.0)		+10000	21.8	
DW406	TF	No	209 (211.3)		-10000	9.1	
DW423	TF	No	209 (211.2)			5.0	
DEDAX	TF	No	209 (211.2)	Right	-8000	5.0	@210
ORPAT	TF	No	299 (301.1)		-6000	7.4	
IVOPU	TF	No	299 (301.2)			5.7	
DW400	TF	No	299 (301.1)	Right		8.0	@185
DW412	TF	No	029 (031.1)	Right		5.0	
NITRI	TF	No	119 (121.0)		+3000	4.0	

vi) **LORID 3Y (RNAV 1 STAR RWY 12/13)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit (KT)
LORID	IF	No			-9000		@210
TOVLA	TF	No	050 (052.2)		-7000	4.0	
DW400	TF	No	072 (073.6)			5.3	@185
DW412	TF	No	029 (031.1)	Right		5.0	
NITRI	TF	No	119 (121.0)		+3000	4.0	

vii) **PUVAL 6Y (RNAV 1 STAR RWY 12/13)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit (KT)
PUVAL	IF	No			-FL 160		@230
DETGU	TF	No	211 (213.1)		-FL 150	11.4	
SERSA	TF	No	211 (213.1)			7.9	
IVOXI	TF	No	216 (217.9)			9.0	
DW427	TF	No	216 (217.9)		+10000	9.4	
DW406	TF	No	209 (211.3)		-10000	9.1	
DW423	TF	No	209 (211.2)			5.0	
DEDAX	TF	No	209 (211.2)	Right	-8000	5.0	@210
ORPAT	TF	No	299 (301.1)		-6000	7.4	
IVOPU	TF	No	299 (301.2)			5.7	
DW400	TF	No	299 (301.1)	Right		8.0	@185
DW412	TF	No	029 (031.1)	Right		5.0	
NITRI	TF	No	119 (121.0)		+3000	4.0	

viii) **UMAMI 4Y (RNAV 1 STAR RWY 12/13)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit (KT)
UMAMI	IF	No			-12000		@230
DW422	TF	No	303 (305.3)			4.5	
DW425	TF	No	234 (236.1)		-10000	9.9	
SINPU	TF	No	234 (236.1)			14.8	
DW416	TF	No	265 (266.8)			10.0	
DEDAX	TF	No	299 (301.2)		-8000	18.1	@210
ORPAT	TF	No	299 (301.1)		-6000	7.4	
IVOPU	TF	No	299 (301.2)			5.7	
DW400	TF	No	299 (301.1)	Right		8.0	@185
DW412	TF	No	029 (031.1)	Right		5.0	
NITRI	TF	No	119 (121.0)		+3000	4.0	

2.22.7.2.2 STAR RWY 30/31

i) **DATOB 5Z (RNAV 1 STAR RWY 30/31)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit (KT)
DATOB	IF	No			-FL 160		@230
DW426	TF	No	107 (109.6)			12.7	
MITIX	TF	No	141 (143.2)		-FL 150	11.0	
DW427	TF	No	138 (140.5)		+10000	16.2	
DW406	TF	No	209 (211.3)		-10000	9.1	
DW423	TF	No	209 (211.2)			5.0	
DEDAX	TF	No	209 (211.2)	Left	-8000	5.0	@210
SIBVA	TF	No	119 (121.3)			5.3	
ODGAK	TF	No	119 (121.3)			5.3	
SOBOB	TF	No	119 (121.4)	Left		6.0	@185
UKSUL	TF	No	029 (031.4)	Left		5.0	@185
GEXIK	TF	No	299 (301.2)		+3000	3.8	

ii) **ELOVU 3Z (RNAV 1 STAR RWY 30/31)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit (KT)
ELOVU	IF				-12000		@230
MISOL	TF	No	118 (120.5)			7.2	
LORID	TF	No	077 (078.7)		-11000	11.1	@230
TOVLA	TF	No	050 (052.2)		-10000	4.0	
TATMO	TF	No	095 (096.8)			9.3	
ORPAT	TF	No	119 (121.1)			8.7	
DEDAX	TF	No	119 (121.2)		-8000	7.4	@210
SIBVA	TF	No	119 (121.3)			5.3	
ODGAK	TF	No	119 (121.3)			5.3	
SOBOB	TF	No	119 (121.4)	Left		6.0	@185
UKSUL	TF	No	029 (031.4)	Left		5.0	@185
GEXIK	TF	No	299 (301.2)		+3000	3.8	

iii) **GERUL 3Z (RNAV 1 STAR RWY 30/31)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit (KT)
GERUL	IF	No			-11000		@230
TOVLA	TF	No	095 (096.7)		-10000	14.5	
TATMO	TF	No	095 (096.8)			9.3	
ORPAT	TF	No	119 (121.1)			8.7	
DEDAX	TF	No	119 (121.2)		-8000	7.4	@210
SIBVA	TF	No	119 (121.3)			5.3	
ODGAK	TF	No	119 (121.3)			5.3	
SOBOB	TF	No	119 (121.4)	Left		6.0	@185
UKSUL	TF	No	029 (031.4)	Left		5.0	@185
GEXIK	TF	No	299 (301.2)		+3000	3.8	

iv) **GIDIS 5Z (RNAV 1 STAR RWY 30/31)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit (KT)
GIDIS	IF	No			-11000		@230
RERAG	TF	No	304 (306.3)		-10000	6.8	@230
SINPU	TF	No	268 (270.0)		-7000	12.9	@210
UKSUL	TF	No	296 (297.6)			9.8	@185
GEXIK	TF	No	299 (301.2)		+3000	3.8	

v) **GONVI 5Z (RNAV 1 STAR RWY 30/31)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit (KT)
GONVI	IF	No			-FL 160		@230
ALRAR	TF	No	107 (109.4)			5.1	
LOVEM	TF	No	139 (140.7)		-FL 150	18.3	
DW427	TF	No	168 (170.0)		+10000	21.8	
DW406	TF	No	209 (211.3)		-10000	9.1	
DW423	TF	No	209 (211.2)			5.0	
DEDAX	TF	No	209 (211.2)	Left	-8000	5.0	@210
SIBVA	TF	No	119 (121.3)			5.3	
ODGAK	TF	No	119 (121.3)			5.3	
SOBOB	TF	No	119 (121.4)	Left		6.0	@185
UKSUL	TF	No	029 (031.4)	Left		5.0	@185
GEXIK	TF	No	299 (301.2)		+3000	3.8	

vi) **LORID 3Z (RNAV 1 STAR RWY 30/31)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit (KT)
LORID	IF	No			-11000		@230
TOVLA	TF	No	050 (052.2)		-10000	4.0	
TATMO	TF	No	095 (096.8)			9.3	
ORPAT	TF	No	119 (121.1)			8.7	
DEDAX	TF	No	119 (121.2)		-8000	7.4	@210
SIBVA	TF	No	119 (121.3)			5.3	
ODGAK	TF	No	119 (121.3)			5.3	
SOBOB	TF	No	119 (121.4)	Left		6.0	@185
UKSUL	TF	No	029 (031.4)	Left		5.0	@185
GEXIK	TF	No	299 (301.2)		+3000	3.8	

vii) **PUVAL 6Z (RNAV 1 STAR RWY 30/31)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit (KT)
PUVAL	IF	No			-FL 160		@230
DETGU	TF	No	211 (213.1)		-FL 150	11.4	
SERSA	TF	No	211 (213.1)			7.9	
IVOXI	TF	No	216 (217.9)			9.0	
DW427	TF	No	216 (217.9)		+10000	9.4	
DW406	TF	No	209 (211.3)		-10000	9.1	
DW423	TF	No	209 (211.2)			5.0	
DEDAX	TF	No	209 (211.2)	Left	-8000	5.0	@210
SIBVA	TF	No	119 (121.3)			5.3	
ODGAK	TF	No	119 (121.3)			5.3	
SOBOB	TF	No	119 (121.4)	Left		6.0	@185
UKSUL	TF	No	029 (031.4)	Left		5.0	@185
GEXIK	TF	No	299 (301.2)		+3000	3.8	

viii) **UMAMI 4Z (RNAV 1 STAR RWY 30/31)**

Waypoint ID	P/T	Fly-Over	Course / Track ˚M(˚T)	Turn Direction	Altitude (FT)	Distance (NM)	Speed Limit (KT)
UMAMI	IF	No			-12000		@230
DW422	TF	No	303 (305.3)			4.5	
DW425	TF	No	234 (236.1)		-10000	9.9	
SINPU	TF	No	234 (236.1)		-7000	14.8	@210
UKSUL	TF	No	296 (297.6)			9.8	@185
GEXIK	TF	No	299 (301.2)		+3000	3.8	

2.22.8 VFR routes

2.22.8.1 For VFR routes defined within DUBAI CTA including detailed information regarding the VFR reporting points established on those VFR routes, see charts ENR 6-4.1 and ENR 6-4.2.

2.22.8.2 The following procedures apply to VFR aircraft experiencing transmitter, or complete radio failure, intending to land at OMDW (See: AD 2.22.11 for EFTA RCF Procedures):

VFR traffic operating to the North of OMDW:

1. Squawk 7600;
2. Proceed to the Bird Cage (BC) VRP and hold for 5 minutes, if able;
3. Ascertain the runway in use by ATIS or observing other aircraft;
4. Join the northern visual circuit in the downwind position, proceed to final and land;
5. After landing, vacate the runway at the earliest opportunity, hold on the taxiway and await a Follow-Me vehicle.

VFR traffic operating to the South of OMDW:

1. Squawk 7600;
2. Proceed to Industrial City Offices (IC) VRP and hold for 5 minutes, if able;
3. Ascertain the runway in use by ATIS or observing other aircraft;
4. Join the southern visual circuit in the downwind position, proceed to final and land;
5. After landing, vacate the runway at the earliest opportunity, hold on the taxiway and await a Follow-Me vehicle.

2.22.9 Approach Procedures

2.22.9.1 These procedures may only be flown using significant position co-ordinates that are stored in the aircrafts navigational data base. Significant point co-ordinates are published in ENR 4.4

2.22.9.2 RNP Approach Procedure Coding

2.22.9.2.1 **RNP RWY 12 (LNAV/Baro-VNAV) VPA 2.8°**

Waypoint ID	P/T	Fly-Over	Distance (NM)	Course (°T)	Turn Direction	Altitude (FT)	Speed Limit (KT)
NITRI	IF	N				+3000	-185
PUSVO	TF	N	4.00	121.20		+3000	
DW660	TF	N	4.50	121.24		@2000	
RWY12	TF	Y	6.18	121.23			
REVUL	DF	Y				@3000	-210
REVUL	HM	Y	1 MIN	301.33	Left	@3000	-210

2.22.9.2.2 **RNP RWY 30 (LNAV/Baro-VNAV) VPA 2.8°**

Waypoint ID	P/T	Fly-Over	Distance (NM)	Course (°T)	Turn Direction	Altitude (FT)	Speed Limit (KT)
GEXIK	IF	N				+3000	-185
REVUL	TF	N	2.19	301.33		+3000	
DW760	TF	N	4.52	301.28		@2000	
RWY30	TF	Y	5.99	301.25			
LADMO	DF	Y				@3000	-210
LADMO	HM	Y	1 MIN	121.25	Left	@3000	-230

2.22.9.2.3 **RNP RWY 13 (LNAV/Baro-VNAV) VPA 2.8°**

Waypoint ID	P/T	Fly-Over	Distance (NM)	Course (˚T)	Turn Direction	Altitude (FT)	Speed Limit (KT)
ORPAT	IF	N					
IVOPU	TF	N	5.68	301.15			
EF670	TF	N	4.00	301.13	Right	@2000	
EF671	TF	N	3.43	031.17	Right	@2000	
EF672	TF	N	4.00	121.19		@2000	

Waypoint ID	P/T	Fly-Over	Distance (NM)	Course (˚T)	Turn Direction	Altitude (FT)	Speed Limit (KT)
TOVLA	IF	N					
DW400	TF	N	5.25	073.58		@2000	
EF671	TF	N	5.27	080.47		@2000	
EF672	TF	N	4.00	121.19		@2000	

Waypoint ID	P/T	Fly-Over	Distance (NM)	Course (˚T)	Turn Direction	Altitude (FT)	Speed Limit (KT)
EF672	IF	N				@2000	
EF667	TF	N	6.34	121.23		@2000	
RWY13	TF	Y	6.03	121.24			
EF673	DF	N					
SEVNU	TF	Y	4.54	170.12		@2000	-130
SEVNU	HM	Y	1 MIN	301.00	Left	@2000	-150

2.22.9.2.4 **RNP RWY 31 (LNAV/Baro-VNAV) VPA 2.8°**

Waypoint ID	P/T	Fly-Over	Distance (NM)	Course (˚T)	Turn Direction	Altitude (FT)	Speed Limit (KT)
SIBVA	IF	Y				+2000	
ODGAK	TF	N	5.26	121.32		+2000	
EF870	TF	N	3.61	121.37	Left	@2000	
PEBER	TF	N	3.44	031.34	Left	@2000	
EF871	TF	N	3.61	301.27		@2000	

Waypoint ID	P/T	Fly-Over	Distance (NM)	Course (˚T)	Turn Direction	Altitude (FT)	Speed Limit (KT)
KUKPO	IF	Y				+3000	
EF870	TF	N	7.38	002.73		@2000	
PEBER	TF	N	3.44	031.34	Left	@2000	
EF871	TF	N	3.61	301.27		@2000	

Waypoint ID	P/T	Fly-Over	Distance (NM)	Course (˚T)	Turn Direction	Altitude (FT)	Speed Limit (KT)
SINPU	IF	N				-7000	
EF869	TF	N	6.55	281.63			
PEBER	TF	N	5.97	301.29		@2000	
EF871	TF	N	3.61	301.27		@2000	

Waypoint ID	P/T	Fly-Over	Distance (NM)	Course (˚T)	Turn Direction	Altitude (FT)	Speed Limit (KT)
EF871	IF	N				@2000	
EF866	TF	N	4.39	301.24		@2000	
RWY31	TF	Y	6.03	301.24			
EF868	DF	N			Left		
EF872	TF	N	2.98	211.21			
SIBVA	TF	Y	8.25	124.40		@2000	-130
SIBVA	HM	Y	1 MIN	121.32	Right	@2000	-150
KUKPO	HM	Y	1 MIN	090.95	Right	-4000 +3000	-150

2.22.9.3 ILS Approach Procedure Coding

2.22.9.3.1 **RWY 12 ILS**

Waypoint ID	P/T	Fly-Over	Distance (NM)	Course (°T)	Turn Direction	Altitude (FT)	Speed Limit (KT)
NITRI	IF	N				+3000	-185
PUSVO	TF	N	4.00	121.20		+3000	
DW661	CF	N	5.00	121.19		@2000	
RWY12	CF	Y	5.68	121.23			
REVUL	DF	Y				@3000	-210
REVUL	HM	Y	1 MIN	301.33	Left	@3000	-210

2.22.9.3.2 **RWY 30 ILS**

Waypoint ID	P/T	Fly-Over	Distance (NM)	Course (°T)	Turn Direction	Altitude (FT)	Speed Limit (KT)
GEXIK	IF	N				+3000	-185
REVUL	TF	N	2.19	301.33		+3000	
DW761	CF	N	5.00	301.29		@2000	
RWY30	CF	Y	5.51	301.25			
LADMO	DF	Y				@3000	-210
LADMO	HM	Y	1 MIN	121.25	Left	@3000	-230

2.22.9.3.3 **RWY 31 ILS**

Waypoint ID	P/T	Fly-Over	Distance (NM)	Course (˚T)	Turn Direction	Altitude (FT)	Speed Limit (KT)
SIBVA	IF	Y				+2000	
ODGAK	TF	N	5.26	121.32		+2000	
EF870	TF	N	3.61	121.37	Left	@2000	
PEBER	TF	N	3.44	031.34	Left	@2000	
EF871	TF	N	3.61	301.27		@2000	

Waypoint ID	P/T	Fly-Over	Distance (NM)	Course (˚T)	Turn Direction	Altitude (FT)	Speed Limit (KT)
KUKPO	IF	Y				+3000	
EF870	TF	N	7.38	002.73		@2000	
PEBER	TF	N	3.44	031.34	Left	@2000	
EF871	TF	N	3.61	301.27		@2000	

Waypoint ID	P/T	Fly-Over	Distance (NM)	Course (˚T)	Turn Direction	Altitude (FT)	Speed Limit (KT)
SINPU	IF	N				-7000	
EF869	TF	N	6.55	281.63			
PEBER	TF	N	5.97	301.29		@2000	
EF871	TF	N	3.61	301.27		@2000	

Waypoint ID	P/T	Fly-Over	Distance (NM)	Course (˚T)	Turn Direction	Altitude (FT)	Speed Limit (KT)
EF871	IF	N				@2000	
EF813	CF	N	4.79	301.27		@2000	
RWY31	CF	Y	5.63	301.24			
EF868	DF	N			Left		
EF872	TF	N	2.98	211.21			
SIBVA	TF	Y	8.25	124.40		@2000	-130
SIBVA	HM	Y	1 MIN	121.32	Right	@2000	-150
KUKPO	HM	Y	1 MIN	090.95	Right	-4000 +3000	-150

2.22.10 Ground Movement Surveillance - Transponders Operation

2.22.10.1 In addition to the transponder requirements specified in GEN 1.5.4 aircraft are required to switch on transponders when commencing push-back.

2.22.10.2 Aircraft not requiring push-back shall switch on transponders prior to commencing taxiing.

2.22.10.3 Arriving aircraft shall ensure that transponders remain switched on and transmit last assigned code until parked on stand.

2.22.11 EFTA Radio Failure Procedures

2.22.11.1 The following procedures apply to EFTA aircraft experiencing transmitter, or complete radio failure, intending to land at EFTA :

2.22.11.2 Traffic operating in the EFTA local circuit shall:

a. Squawk 7600
b. Maintain circuit altitude
c. Overfly the RWY
d. Complete a standard EFTA local circuit, while observing EFTA local circuit traffic
e. Carry out a full stop landing
f. After landing, vacate the runway at the earliest opportunity (Except TWY A4), taxi to hold short of TXL L1 or TXL L6 and await a Follow-Me vehicle.

2.22.11.3 VFR Departures EFTA RWY 13/31.

2.22.11.3.1 If no radio contact is established with DUBAI APPROACH (AL MAKTOUM RADAR 124.025 MHz or DUBAI SOUTH RADAR 120.400 MHz), pilots are to remain within the confines of the EFTA Tower area of responsibility and to immediately return to the ACADEMY TOWER frequency for assistance. If no contact is established with the ACADEMY TOWER, pilots are to follow the procedures as per AD 2.22.11.2.

2.22.11.3.2 VFR Cross country flights (East) or flights departing to the below areas, i) to iv), shall comply with below procedures, a) to f).

AREAS:

i. General flying areas
ii. Areas requiring to be in contact with ABU DHABI INFORMATION
iii. MBZ 2 - JUMEIRAH B
iv. MBZ 2 - JUMEIRAH C

PROCEDURES:

a. Squawk 7600
b. Maintain 1500 FT; proceed to CONMIX Factory (CM) VRP clear of controlled airspace
c. If able, orbit at (CM) VRP for 5 minutes
d. Endeavour to ascertain the runway in use by observing other aircraft
e. Join the "Outer circuit", then standard circuit, proceed to final and land
f. After landing, vacate the runway at the earliest opportunity (Except TWY A4), taxi to hold short of TXL L1 or TXL L6 and await a Follow-Me vehicle.

2.22.11.4 IFR departure EFTA RWY 13/31

2.22.11.4.1 As per ENR 1.6.1.3 Radio and radar failure procedures.

2.22.11.5 VFR arrivals EFTA RWY 13/31.

2.22.11.5.1 Traffic arriving from the areas in AD 2.22.11.3.2 i) to iv), shall comply with procedures, AD 2.22.11.3.2 a) to f).

2.22.11.6 IFR arrivals EFTA RWY 13/31

2.22.11.6.1 IFR arrivals shall follow ENR-1.6.1.3 Radio and radar failure procedure. Once established on final approach, carry out a full-stop landing and comply with AD 2.22.11.2 f).

2.22.12 Enhanced Wake Turbulence Separation (eWTS).

2.22.12.1 The ICAO unified eWTS minima RECAT system is applied within DUBAI CTA and airspace controlled by Dubai Approach. It distinguishes seven (A to G) Wake Turbulence Groups (WTG) of aircraft based on wake generation and resistance characteristics of the aircraft depending primarily on maximum certificated take-off mass, wing characteristics and speeds.

2.22.12.2 The eWTS system includes distance-based Wake Turbulence Separation minima for aircraft being provided with an ATS surveillance service in the approach and departure phases of flight and time-based separations on departure for the takeoff phase of flight (Refer ICAO Doc 4444 PANS - ATM, Chapters 4,5 and 8).

2.22.12.3 In order to benefit from this reduction of separation minima, pilots are to fully comply with assigned speeds, particularly on final approach, and to minimise runway occupancy time. When crews are unable to maintain any assigned speeds, they must inform ATC as soon as possible.

2.22.12.4 The implementation of the ICAO eWTS scheme does not change the format for completion or filling out a flight plan. The WTC designator on the ICAO flight plan does not change. Pilots are to continue to fill in the flight plan WTC in item 9 with the ICAO aircraft category, H, M or L, and J for SUPER HEAVY category.

2.22.12.5 All aircraft operating within the DUBAI CTA must enter the appropriate aircraft type designator, as per ICAO document 8643, in item 9 of their flight plan. The use of incorrect aircraft type designator may result in possible delays due to RDR system flight plan rejection or system allocation of an unknown aircraft type resulting in larger separation application by ATC.

2.22.12.6 For aircraft in the ICAO SUPER or HEAVY WTC, the suffix of ‘SUPER’ or ‘HEAVY’ does not change. On first transmission, the word “SUPER” or “HEAVY” shall still be included, as appropriate, immediately after the aircraft call sign in the initial radiotelephony contact between such aircraft and the ATS units.

OMDW AD 2.23 ADDITIONAL INFORMATION

2.23.1 Bird activity

2.23.1.1 Bird hazard exists; activity in the vicinity of the aerodrome increases from October to March with maximum numbers between early December and mid-February.

2.23.2 Low visibility procedures

2.23.2.1 Low visibility operations shall commence when:

a. Touchdown IRVR readings indicate a visibility of 600 M or less;

b. The reported meteorological visibility indicates 800 M or less (if IRVR is not available);

c. The reported cloud base is less than 300 FT.

2.23.2.2 Regulations require serviceable surface movement radar for operations to continue when meteorological visibility or IRVR is less than 300 M. Any unserviceability may result in delays in the affected areas of coverage.

2.23.2.3 Arriving aircraft shall delay reporting "Runway vacated" until the aircraft has completely passed the end of the green / yellow coded TWY CL lights.

2.23.2.4 TXL Z11, TXL Z12, TXL Z13, TXL Z14, TXL Z15, TXL Z16, TXL Z17, TXL Z20,TXL Z21, TXL Z22, TXL Z23 and TXL Z24 restricted to CAT II during LVO. Refer to local procedures.

2.23.2.5 EFTA RWY 31 CAT I with minimum RVR 1000 M / DH 270 FT/ Cloud Base 230 FT only. RWY 13 NPA with 1500 M MET visibility.

2.23.2.6 Airborne EFTA aircraft will be required to divert to RWY 12/30 in the event conditions falls below those mentioned in AD 2.23.2.5.

2.23.3 Surface movement guidance and control system and markings

Note: Long range radar available (H24).

2.23.3.1 Arrival Procedures

2.23.3.1.1 Nose-wheel guidelines on taxiways and aprons, except box stands.

2.23.3.1.2 Nose-in parking is mandatory, exemptions only given in special cases with specific authorisation from the airport authority.

2.23.3.1.3 Turn onto stand when the nose-wheel is approximately in line with the stand centre line marking. Operators are not permitted to self manoeuvre off stand centre line. In the event an operator enters the wrong stand, hold position and contact ATC.

2.23.3.1.4 Parking stands are equipped with VDGS except for G100 - G102 and G3 – G8 and EFTA stands located on APRON 1 to APRON 5, aircraft must be marshalled (excluding EFTA).

Note 1: Pilots should not enter an aircraft stand unless the VDGS is illuminated or a marshaller has signalled clearance to proceed. In the event of there being no activated VDGS displayed upon approach to the stand, flight crews should contact ATC to request marshalling assistance. Aircrew must not attempt to self park if the VDGS is not illuminated or calibrated for their aircraft type.

Note 2: VDGS units used at OMDW will not operate below CAT III conditions (visibility down to 175 M), if VDGS unit is not illuminated or failing to capture aircraft, aircrew must stop and request marshalling assistance from ATC.

2.23.3.1.5 VDGS is not suitable for all aircraft types; a marshaller is provided in these cases.

2.23.3.1.6 Aircraft taxiing on Taxilane Z16 and Taxilane Z17 must use no more than idle power. If aircraft is stopped prior to docking on stands G1 - G9, G12, G13 and G16, docking must be completed under tow.

2.23.3.1.7 **VDGS**

a. The VDGS system is installed for the CL of all stands except for L & R Multiple Aircraft Ramp System stands. It displays to pilots on large LED Board azimuth and distance - to - go information to position arriving aircraft accurately to the pre-set aircraft stop position in the parking stand.

b. The Aircraft docking guidance system consists of an LED Board to display real time docking guidance information to pilots, a microprocessor Control Unit, a Laser Scanning Unit and an operator Control Panel with real time information display.

c. Pilots should follow the taxilane lead-in ground marking to initiate the turn into the parking stand. The VDGS unit will be set to capture mode prior to the aircraft arrival. The capture mode will display on LED Board the aircraft type with floating areas (^) below (as shown in OMDW VDGS AD 2.23.3.1.9). The docking system will capture the aircraft about 20 degrees from the CL.

d. Check aircraft type displayed is correct.

e. Once the VDGS captures the aircraft, the display will change to tracking mode which displays the azimuth guidance on LED Board which shows the relative position of the aircraft (↑) from the CL (T). A flashing red arrow (>) on the LED Board

indicates the direction of turn to align the aircraft nose-wheel with the CL of the parking stand (as shown in OMDW AD 2.23.3.1.9).

f. The VDGS will display the final closing rate information in meters, which is shown 20 M from the STOP position and rows of light gets extinguished from 20 M. The closing rate is also shown graphically by gradual shortening of the (T) symbol. Slow down the aircraft speed to halt at the STOP position (as shown in 2.23.3.1.9)

Note: Aircrew must not proceed unless the floating arrows have been superseded by the closing rate bar.

g. When the aircraft nose-wheel reaches the correct STOP position, distance - to - go reading reaches zero and the "STOP" signal and red lights are displayed on the LED board to halt the aircraft from any further movement.

h. The "STOP" will change to an "OK" signal on the LED Board to indicate the aircraft is correctly parked. If the aircraft has overshot the STOP position, "TOO FAR" signal will be displayed on the LED Board.

i. The VDGS should be approached at speed not exceeding 3 M per second (5.83 KT) at distance of 10 – 20 M before stop position and 2 M per second (3.89 KT) at distance of 0 – 10 M before stop position.

j. The VDGS units are controlled and monitored from a central workstation. No Marshaller will be present in stands equipped with fully automatic VDGS.

k. In the event of malfunction of VDGS, pilots should hold position and inform ATC.

2.23.3.1.8 A follow me vehicle will be provided for all non - standard parking.

2.23.3.1.9 LED Board Display – When VDGS is functioning optimally

Mode	Display	Description
Not scheduled and not activated		• If only stand number is shown, it means VDGS is not activated. • Aircraft should not enter stand.
Scheduled but not activated		• The aircraft is allocated to the stand and hence call sign and a figure shows EIBT with countdown timer appears on the VDGS. • However VDGS is not yet activated, as vertical floating arrows are missing. • Report to ATC if VDGS not activated. • Wait for the vertical floating arrows to enter the stand.
Capture		• The vertical floating arrows indicate that the system is activated and is in Capture mode and searching for an approaching aircraft. • Pilots shall check that the correct aircraft type is displayed. • Pilot must not proceed beyond the boarding bridge unless the vertical floating arrows are superseded by yellow Closing Rate Bar.
Tracking		• When the aircraft has been caught by the laser, the vertical floating arrows is replaced by the yellow Closing Rate Bar. • If a flashing red indicator is displayed, then this is indicating the direction of turn required to be taken to align onto the lead-in line.
Closing Rate (digital)		This is the digital count down from a specific distance to the stop position.

2.23.3.1.10 LED Board Display – Examples of VDGS Failures

Failure Type	Display	Description
OVERSHOOT		If the aircraft has overshot the stop-position, 'TOO FAR' will be displayed.
STOP SHORT		If the aircraft is found standing still but has not reached the intended stop position, the message 'STOP, OK' will be shown after a pre- configured time.
AIRCRAFT VERIFICATION FAILURE		During entry into the Stand, the aircraft geometry is being checked. If, for any reason, aircraft verification is not made 12 M before the stop-position, the display will first show 'WAIT' and make a second verification check. If this fails, 'STOP' and 'ID FAIL' will be displayed.
GATE BLOCKED		If an object is found blocking the approach to gate/apron view from the safedock to the planned stop position for the aircraft, the docking procedure will be halted with a 'WAIT' and 'GATE BLOCK' message.

2.23.3.2 Engine runs on stand are permitted for single engine at idle power, for a duration of 5 minutes. Requests shall be made via telephone to the Operations Duty Manager Airside (+971 56 788 2374) for OMDW operations and EFTA Officer Airside (+971 56 508 7924) for EFTA operations. Requests for any engine runs that will be required above idle, longer than 5 minutes or for multiple engines, are subject to assessment by the respective Airside in-charge. The airport operator reserves the right to refuse a request for operational or safety reasons. ATC are to be notified prior to the commencement of the run.

2.23.3.3 Aircraft operators that arrive at OMDW with an unknown departure time or a departure time greater than 12 hours are restricted from refueling their tanks above 85%. This is to prevent fuel expansion which results in fuel spillage. Aircraft operators can fill their remaining requirements within 3 hours of departure.

2.23.3.4 Start-up and Push-back approval procedures.

2.23.3.4.1 Aircraft are expected to start-up during push-back unless otherwise advised by ATC. Aircraft wishing to start engines either before or after push-back should notify ATC.

2.23.3.4.2 Engine starts on the stand using more than idle power are prohibited. Aircraft requiring cross bleed start are required to request via ATC and be pushed back prior to the commencement of cross bleed.

2.23.3.4.3 Push-backs are onto active taxiways and can only be obtained from AL MAKTOUM GROUND. Approval to start on stand does not imply an approval to push-back.

2.23.3.4.4 DNATA and certain operating companies with trained drivers, are the only approved agencies for executing push-backs. Their procedures are mandatory. However, it is the pilots responsibility to obtain push-back approval from ATC and relay the same to their ground engineers prior to commencing push-back.

2.23.3.4.5 Self-push-backs (reverse thrust) and self-manoeuvring on stand is not permitted unless approval is given from the airport authority. It is the Ground Handlers responsibility to ensure that the correct facilities and equipment are available for the aircraft type prior to acceptance.

2.23.3.4.6 Pushbacks are only permitted to the taxiway closest to the stand. Pushbacks to outer taxiways are prohibited.

2.23.3.5 Start-up approval procedures(EFTA)

2.23.3.5.1 Aircraft operating at EFTA are to request start-up and initial taxi instructions from the EFTA Operations Centre. Start-up is expected on the stand and to taxi forward (pushback not required).

2.23.3.5.2 Aircraft operating at EFTA are to contact ACADEMY TOWER upon reaching L1, L2, L3, L4, L5 and L6 ITHP. Entry onto TWY A requires ATC approval.

2.23.4 Runway visual range

2.23.4.1 Transmissometers are available for reporting RVR. For locations see Charts OMDW AD 2-21A and OMDW AD 2-21C.

2.23.4.2 For radio transmission purposes the locations on RWY 12 / 30 will be designated as:

ALPHA: Touchdown

BRAVO: Mid-point

CHARLIE: Stop end

2.23.4.3 For radio transmission purposes the locations on RWY 13/31 will be designated as:

ALPHA : touchdown

BRAVO: STOP end

2.23.4.4 Visibility below 2000 M is reported in the following incremental steps:

a) RWY 12 / 30

50 M to 400 M: 25 M

400 M to 800 M: 50 M

800 M to 2000 M: 100 M

b) RWY 13/31

800 M to 2000 M: 100 M

Note: See GEN 3.5.3.5 for reporting procedures

2.23.4.5 For low visibility departures all IRVR for the departure RWY shall be serviceable except that the THR IRVR is not required when the reported meteorological visibility is more than 150 M.

2.23.5 Reduced Runway Separation Minima (RRSM)

2.23.5.1 When conditions permit, special landing and departing procedures may be used at DUBAI / AL MAKTOUM INTERNATIONAL for RWY 12/30, subject to the procedures and conditions shown hereunder:

2.23.5.2 Landing following landing

When the runway in use is temporarily occupied by the previous landing traffic, a landing clearance may be issued to the next landing aircraft provided that ATC has reasonable assurance that the following separation distance will be met when the landing aircraft crosses the runway threshold:

a. RWY 12
The preceding landing aircraft has landed and has vacated the runway or has passed a point at least 2400 M from the threshold (abeam TWY W12); and is in motion and will vacate the runway without stopping and/or backtracking.

b. RWY 30
The preceding landing aircraft has landed and has vacated the runway or has passed a point at least 2400 M from the threshold (abeam TWY W10); and is in motion and will vacate the runway without stopping and/or backtracking.

2.23.5.3 Landing following departure

When the runway in use is temporarily occupied by a previous departing aircraft, a landing clearance may be issued provided that ATC has reasonable assurance that the following separation distance will be met when the landing aircraft crosses the runway threshold:

a. RWY 12
The preceding departing aircraft is, or will be, airborne and has passed a point at least 2400 M from the threshold (abeam TWY W12).

b. RWY 30
The preceding departing aircraft is, or will be, airborne and has passed a point at least 2400 M from the threshold (abeam TWY W10).

2.23.5.4 Departure following a departure

Take-off clearance may be issued to a departing aircraft, commencing its take-off roll from the threshold (TWY V1 or TWY V21) before the preceding departing aircraft has passed the upwind end of the runway, provided that:

a. RWY 12
The preceding aircraft is airborne and has passed a point at least 2450 M from the threshold (abeam TWY W12) and increasing separation continues to exist between the two aircraft immediately after take-off of the second.

b. RWY 30
The preceding aircraft is airborne and has passed a point at least 2400 M from the threshold (abeam TWY W10) and increasing separation continues to exist between the two aircraft immediately after take-off of the second.

2.23.5.5 Conditions for the Application of RRSM

RRSM may be applied by day only between:

a. A departing aircraft and a succeeding landing aircraft; or
b. Two successive landing aircraft; or
c. Two successive departing aircraft.

Provided that:

i. Tail wind does not exceed 5 KTS, and there are no reports of wind shear;
ii. MET visibility shall be equal to or greater than 5 KM and the cloud ceiling shall not be lower than 1000 FT and the Air Traffic Controller is satisfied that the pilot of the following aircraft will be able to observe the relevant traffic clearly and continuously;
iii. The pilot of the following aircraft is provided with traffic information;
iv. The runway is dry and there is no evidence that the braking action may be adversely affected;
v. The controller is able to assess separation visually or by radar derived information;
vi. Wake turbulence separation minima shall be applied;
vii. Minimum separation continues to exist between two departing aircraft immediately after takeoff of the second aircraft.

2.23.5.6 Traffic Information Phraseology for pilot of following aircraft

When applying RRSM in a scenario where the runway is temporarily occupied by a previously landed or departing aircraft, ATC shall provide a warning (traffic information) to the following aircraft when issuing the landing clearance or departure clearance.

The following examples illustrate ICAO standard phraseology that will be used:

a. Landing Clearance Phraseology
"(Call sign) (traffic information e.g. aircraft type & vacating point), wind (direction (.) / speed (knots)), Runway (number) cleared to land"

"(Call sign) (traffic information e.g. aircraft type departing ahead), wind (direction (.) / speed (knots)), Runway (number) cleared to land"

b. Departing Clearance Phraseology
"(Call sign) (traffic information e.g. aircraft type departing ahead), wind (direction (.) /speed (knots)), Runway (number) cleared for take-off"

2.23.6 Wind Shear Warnings

2.23.6.1 General

Wind Shear reports added to a METAR shall be as per ICAO Annex 3, Appendix 3, Table A3-2.

2.23.6.2 Wind Shear reports passed by ATC

i. On receipt of any report of wind shear, ATC will:

- Immediately relay the report to other aircraft potentially affected;
- Pass the full report to the MET Office; and
- Pass the information to other ATC units that may be affected;

ii. Wind shear reports that are relayed by to other aircraft will contain as many of the following details as possible:

- Aircraft type that reported the wind shear;
- Description of event (e.g. light/moderate severe, or positive/negative);
- Height/altitude wind shear encountered;
- Phase of flight;
- Runway;
- Time of encounter;
- MET/operational information as received from the reporting pilot;
- Effect on aircraft and/or action taken by the pilot.

iii. Examples of the phraseology used by ATC to pass on wind shear reports:

a. “CAUTION WIND SHEAR. AT (TIME) (AIRCRAFT TYPE) REPORTED STRONG WIND AT (HEIGHT/ALTITUDE) FEET ON APPROACH RWY (DESIGNATOR). MAX THRUST WAS REQUIRED”.
b. "CAUTION WIND SHEAR. AT (TIME) (AIRCRAFT TYPE) REPORTED AFTER DEPARTING RUNWAY (DESIGNATOR) AT (HEIGHT/ALTITUDE) FEET AIRSPEED LOSS OF(NUMBER) KNOTS, STRONG (LEFT/RIGHT) DRIFT".

2.23.6.3 Wind Shear Warnings on ATIS

i. Wind shear warning issued by NCM or received from an aircraft will be broadcast on the ATIS.
ii. Regardless of any relevant information being broadcast on the ATIS, during final approach and prior to take-off, ATC will transmit to aircraft without delay:

- The latest information, on wind shear in the approach, final approach, take-off and climb-out area; and
- Any significant variations in the current surface wind, expressed in terms of minimum and maximum values.

2.23.6.4 Pilot Reports of Wind Shear

i. For the benefit of subsequent aircraft and for validation and further enhancement of the low-level wind shear warning, pilots are requested to inform ATC if they experience any wind shear on arrival or departure, irrespective of whether a warning has been given. ATC will pass such reports to following aircraft and the MET Office. Pilot reports should conform to the requirements of ICAO Annex 3, Appendix 4, section 4.1.
ii. Wind shear reports will continue to be passed by ATC to pilots likely to be affected until it is confirmed, either by subsequent aircraft reports or by advice from the MET Office that conditions are no longer a hazard to the operations.

2.23.6.5 1000 FT and Below Winds

If a Wind Shear Warning has been issued, aircraft may be requested by ATC to state the 1000 FT and below winds when able. ATC will then subsequently pass this information onto following aircraft whilst the Wind Shear Warning is in force.

OMDW AD 2.24 CHARTS RELATED TO AERODROME

OMDW AD 2.25 VISUAL SEGMENT SURFACE (VSS) PENETRATION

NIL (not applicable).

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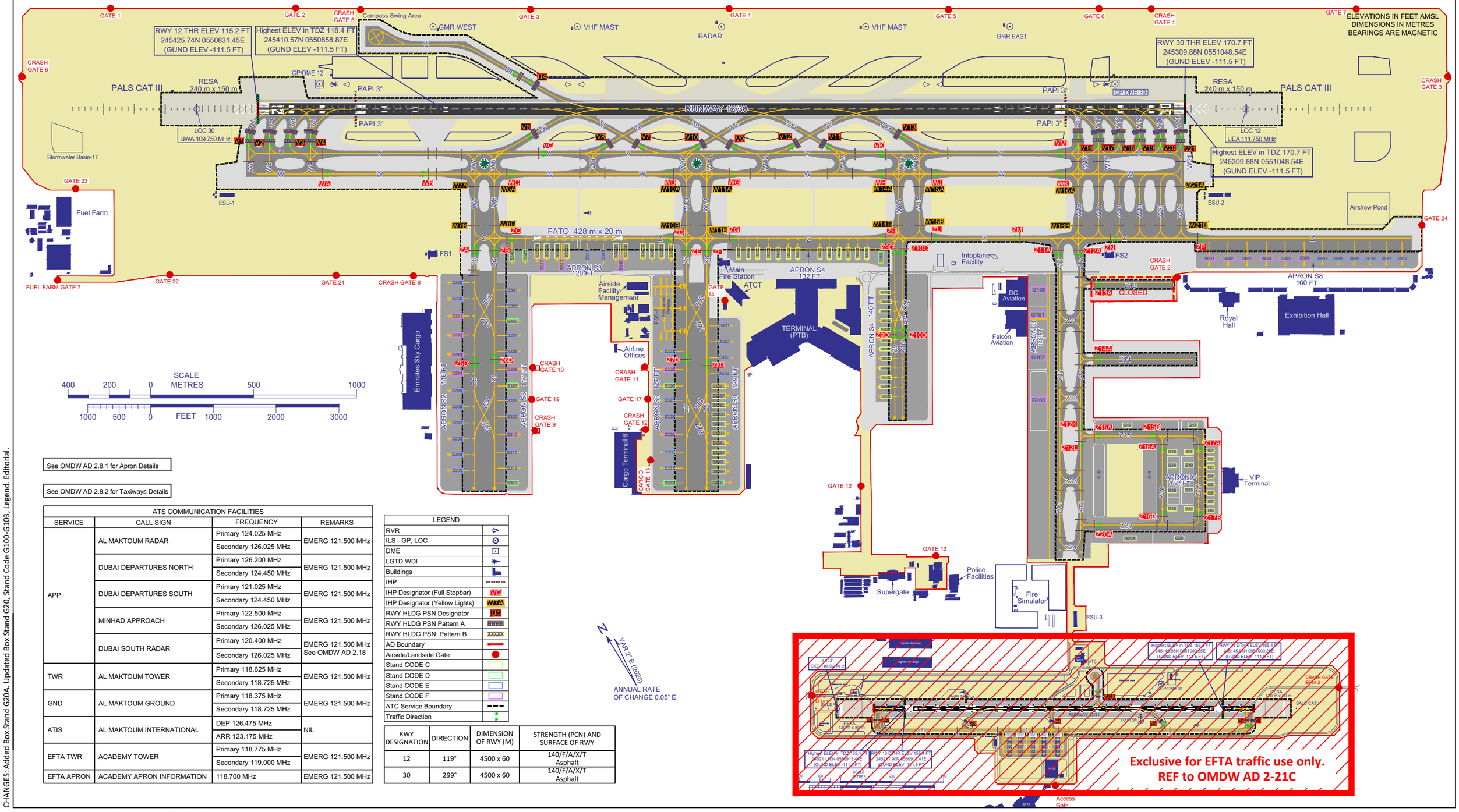
AERODROME CHART - ICAO	ARP 245506N 0551032E	AD ELEV 171 FT	DUBAI / AL MAKTOUM INTL. UNITED ARAB EMIRATES



See OMDW AD 2.8.1 for Apron Details

See OMDW AD 2.8.2 for Taxiways Details

ATS COMMUNICATION FACILITIES			
SERVICE	CALL SIGN	FREQUENCY	REMARKS
APP	AL MAKTOUM RADAR	Primary 124.025 MHz	EMERG 121.500 MHz
		Secondary 126.025 MHz	
	DUBAI DEPARTURES NORTH	Primary 126.200 MHz	EMERG 121.500 MHz
		Secondary 124.450 MHz	
	DUBAI DEPARTURES SOUTH	Primary 121.025 MHz	EMERG 121.500 MHz
		Secondary 124.450 MHz	
	MINHAD APPROACH	Primary 122.500 MHz	EMERG 121.500 MHz
		Secondary 126.025 MHz	
	DUBAI SOUTH RADAR	Primary 120.400 MHz	EMERG 121.500 MHz See OMDW AD 2.18
		Secondary 126.025 MHz	
TWR	AL MAKTOUM TOWER	Primary 118.625 MHz	EMERG 121.500 MHz
		Secondary 118.725 MHz	
GND	AL MAKTOUM GROUND	Primary 118.375 MHz	EMERG 121.500 MHz
		Secondary 118.725 MHz	
ATIS	AL MAKTOUM INTERNATIONAL	DEP 126.475 MHz	NIL
		ARR 123.175 MHz	
EFTA TWR	ACADEMY TOWER	Primary 118.775 MHz	EMERG 121.500 MHz
		Secondary 119.000 MHz	
EFTA APRON	ACADEMY APRON INFORMATION	118.700 MHz	EMERG 121.500 MHz

LEGEND	
RVR	
ILS - GP, LOC	
DME	
LGTD WDI	
Buildings	
IHP	
IHP Designator (Full Stopbar)	VC
IHP Designator (Yellow Lights)	W7A
RWY HLDG PSN Designator	U4
RWY HLDG PSN Pattern A	
RWY HLDG PSN Pattern B	
AD Boundary	
Airside/Landside Gate	
Stand CODE C	
Stand CODE D	
Stand CODE E	
Stand CODE F	
ATC Service Boundary	
Traffic Direction	

RWY DESIGNATION	DIRECTION	DIMENSION OF RWY (M)	STRENGTH (PCN) AND SURFACE OF RWY
12	119°	4500 x 60	140/F/A/X/T Asphalt
30	299°	4500 x 60	140/F/A/X/T Asphalt

CHANGES: Added Box Stand G20A. Updated Box Stand G20, Stand Code G100-G103, Legend. Editorial.

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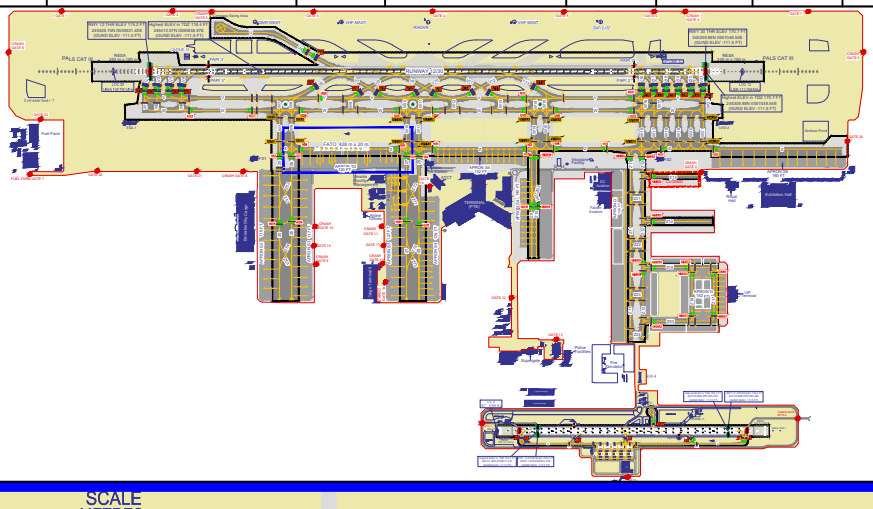
HELIPORT CHART - ICAO	ARP 245506N 0551032E	AD ELEV 171 FT	DUBAI/ AL MAKTOUM INTL. UNITED ARAB EMIRATES

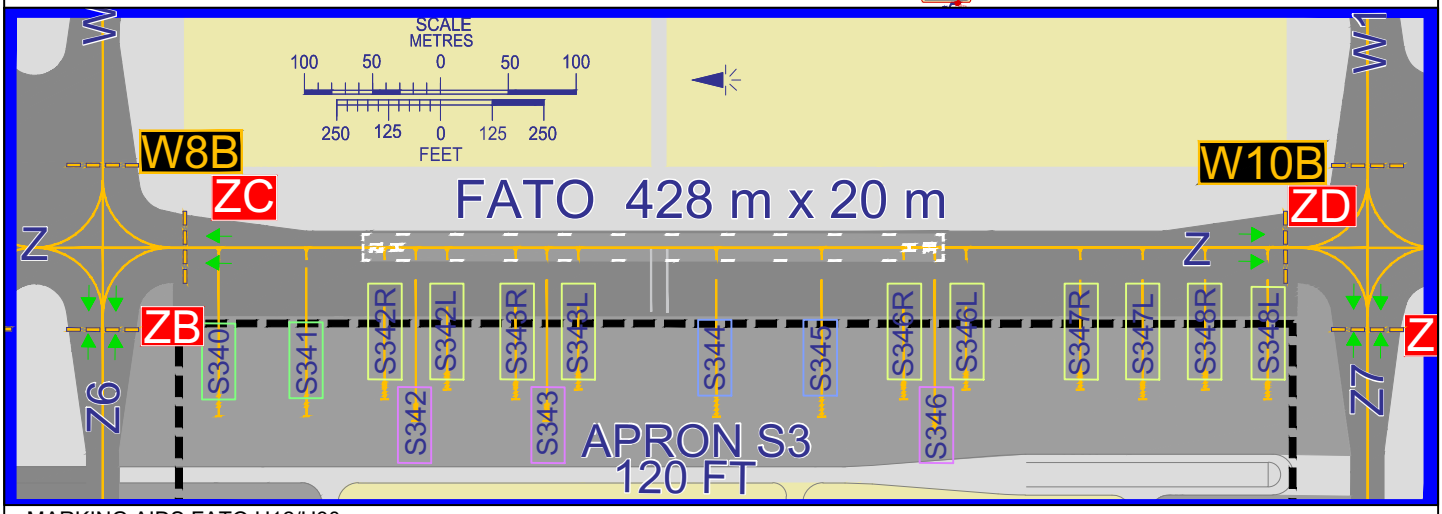
ELEVATIONS ARE AMSL

FATO	BRG (TRUE)	ELEV	THR COORD	TLOF COORD	SURFACE, STRENGTH	DECLARED DISTANCES (M)			TWY AND APRON
						TODAH	RTODAH	LDAH	
H12	121°	35.8 M / 117 FT	245345.7N 0550900.7E	NIL	CONCRETE PCN 90/R/A/W/T	428	428	428	TWY Z WIDTH = 25 M CONC, PCN 90/R/A/W/T
H30	301°	37.1 M / 122 FT	245338.5N 0550913.7E						

LEGEND	
RVR	
ILS - GP, LOC	
DME	
LGTD WDI	
Buildings	
IHP	
IHP Designator (Full Stopbar)	VC
IHP Designator (Yellow Lights)	W7A
RWY HLDG PSN Designator	U4
RWY HLDG PSN Pattern A	
RWY HLDG PSN Pattern B	
AD Boundary	
Airside/Landside Gate	
Stand CODE C	
Stand CODE D	
Stand CODE E	
Stand CODE F	
ATC Service Boundary	
Traffic Direction	



NOT TO SCALE



MARKING AIDS FATO H12/H30

NO FATO LIGHTING - use green centre line lights of TWY Z for orientation

NOTES-REMARKS

- SAFETY AREA 435 M x 40 M
- SLOPE 0%

Helicopter operations at FATO H12/H30 to be used by Dubai Police Airwing and Aerogulf Services helicopters only, as directed by ATC.

ATS COMMUNICATION FACILITIES			
SERVICE	CALL SIGN	FREQUENCY	REMARKS
APP	AL MAKTOUM RADAR	Primary 124.025 MHz Secondary 126.025 MHz	EMERG 121.500 MHz
	DUBAI DEPARTURES NORTH	Primary 126.200 MHz Secondary 124.450 MHz	EMERG 121.500 MHz
	DUBAI DEPARTURES SOUTH	Primary 121.025 MHz Secondary 124.450 MHz	EMERG 121.500 MHz
	MINHAD APPROACH	Primary 122.500 MHz Secondary 126.025 MHz	EMERG 121.500 MHz
	DUBAI SOUTH RADAR	Primary 120.400 MHz Secondary 126.025 MHz	EMERG 121.500 MHz See OMDW AD 2.18
TWR	AL MAKTOUM TOWER	Primary 118.625 MHz Secondary 118.725 MHz	EMERG 121.500 MHz
GND	AL MAKTOUM GROUND	Primary 118.375 MHz Secondary 118.725 MHz	EMERG 121.500 MHz
ATIS	AL MAKTOUM INTERNATIONAL	DEP 126.475 MHz ARR 123.175 MHz	NIL
EFTA TWR	ACADEMY TOWER	Primary 118.775 MHz Secondary 119.000 MHz	EMERG 121.500 MHz
EFTA APRON	ACADEMY APRON INFORMATION	118.700 MHz	EMERG 121.500 MHz

CHANGES: Added Box Stand G20A. Updated Box Stand G20, Legend. Editorial.

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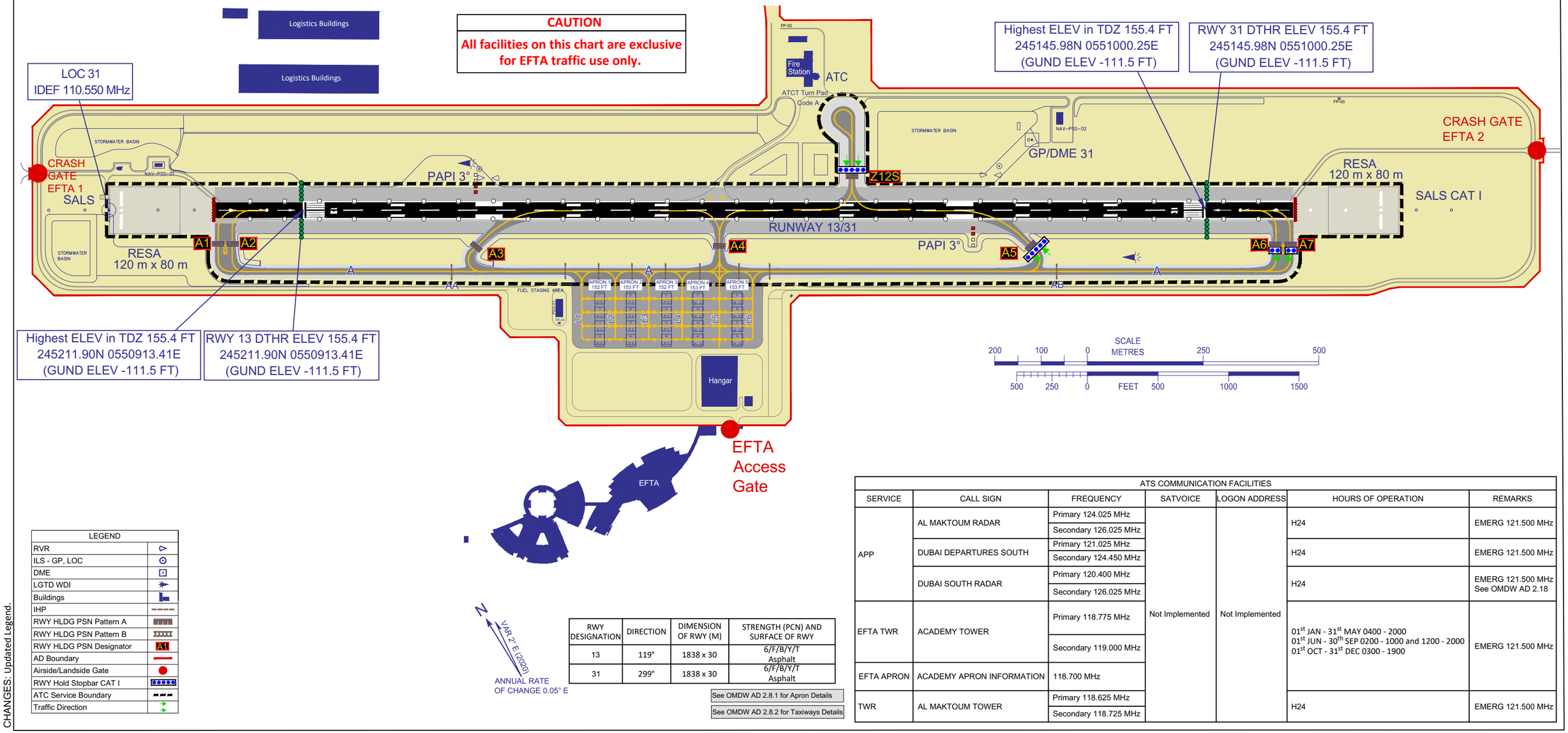
ARP 245506N 0551032E	AD ELEV 171 FT

ELEVATIONS IN FEET AMSL
DIMENSIONS IN METRES
BEARINGS ARE MAGNETIC



LEGEND	
RVR	
ILS - GP, LOC	
DME	
LGTD WDI	
Buildings	
IHP	
RWY HLDG PSN Pattern A	
RWY HLDG PSN Pattern B	
RWY HLDG PSN Designator	A1
AD Boundary	
Airside/Landside Gate	
RWY Hold Stopbar CAT I	
ATC Service Boundary	
Traffic Direction	

CHANGES: Updated Legend.

N
VAR 2° E (2020)
ANNUAL RATE OF CHANGE 0.05° E

RWY DESIGNATION	DIRECTION	DIMENSION OF RWY (M)	STRENGTH (PCN) AND SURFACE OF RWY
13	119°	1838 x 30	6/F/B/Y/T Asphalt
31	299°	1838 x 30	6/F/B/Y/T Asphalt

See OMDW AD 2.8.1 for Apron Details
See OMDW AD 2.8.2 for Taxiways Details

ATS COMMUNICATION FACILITIES

SERVICE	CALL SIGN	FREQUENCY	SATVOICE	LOGON ADDRESS	HOURS OF OPERATION	REMARKS
APP	AL MAKTOUM RADAR	Primary 124.025 MHz Secondary 126.025 MHz	Not Implemented	Not Implemented	H24	EMERG 121.500 MHz
	DUBAI DEPARTURES SOUTH	Primary 121.025 MHz Secondary 124.450 MHz			H24	EMERG 121.500 MHz
	DUBAI SOUTH RADAR	Primary 120.400 MHz Secondary 126.025 MHz			H24	EMERG 121.500 MHz See OMDW AD 2.18
EFTA TWR	ACADEMY TOWER	Primary 118.775 MHz Secondary 119.000 MHz			01st JAN - 31st MAY 0400 - 2000 01st JUN - 30th SEP 0200 - 1000 and 1200 - 2000 01st OCT - 31st DEC 0300 - 1900	EMERG 121.500 MHz
EFTA APRON	ACADEMY APRON INFORMATION	118.700 MHz				
TWR	AL MAKTOUM TOWER	Primary 118.625 MHz Secondary 118.725 MHz			H24	EMERG 121.500 MHz

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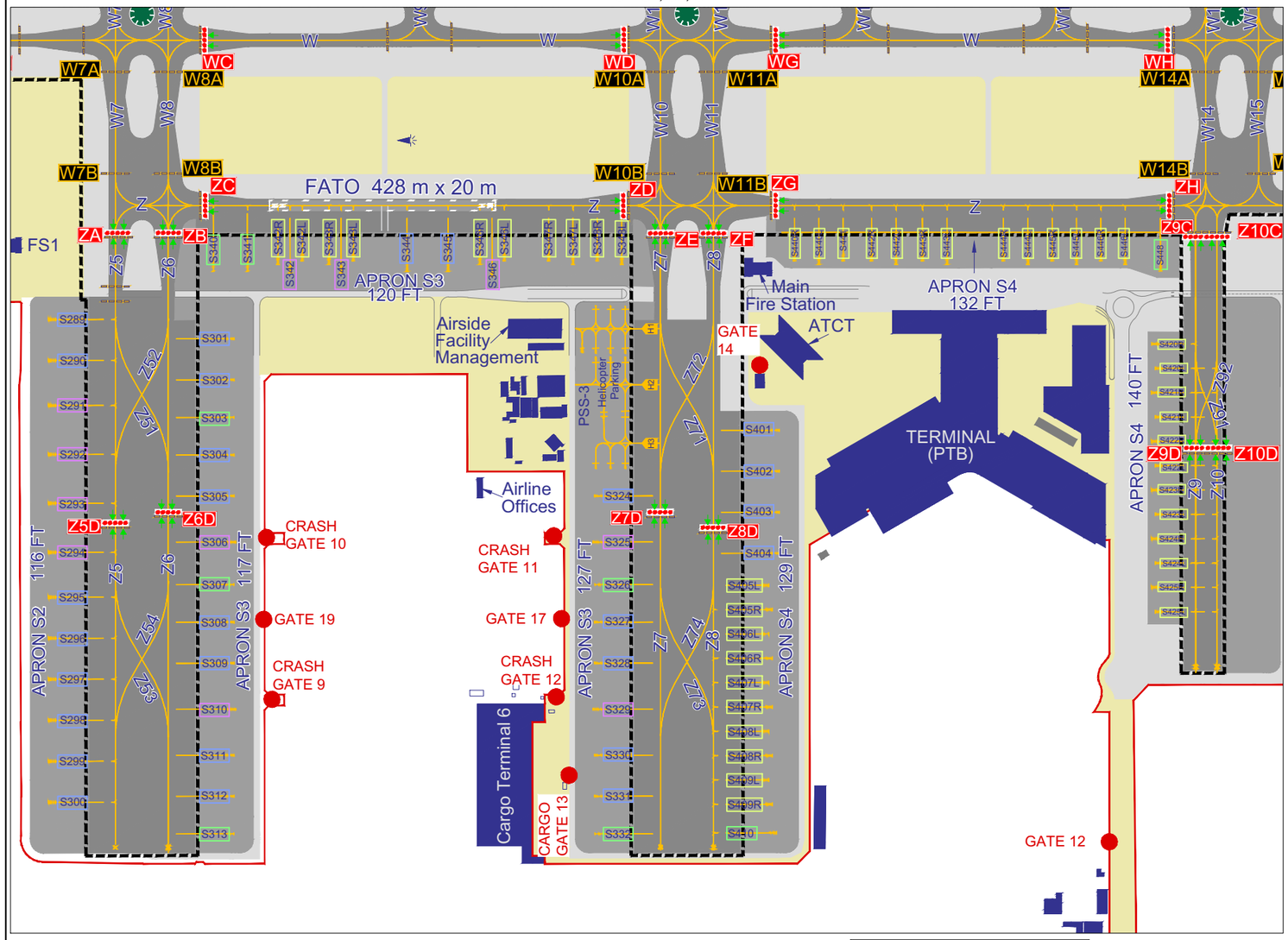
AIRCRAFT PARKING/DOCKING CHART - ICAO
Aprons - S2, S3, S4, S8

ARP	AD ELEV
245506N 0551032E	171 FT

DUBAI / AL MAKTOUM INTL.
UNITED ARAB EMIRATES

APRON S2, S3, S4



APRON S3			
STAND	LATITUDE	LONGITUDE	ELEV (FT)
S301	245339.85N	0550853.98E	117.3
S302	245337.70N	0550852.55E	117.3
S303	245335.73N	0550851.22E	117.3
S304	245333.75N	0550849.93E	117.3
S305	245331.60N	0550848.49E	117.3
S306	245329.13N	0550846.98E	117.3
S307	245326.95N	0550845.38E	117.3
S308	245324.97N	0550844.09E	117.3
S309	245322.82N	0550842.66E	117.3
S310	245320.35N	0550841.14E	117.3
S311	245317.98N	0550839.44E	117.3
S312	245315.83N	0550838.01E	117.3
S313	245313.86N	0550836.68E	117.3
S324	245320.11N	0550909.26E	127.8
S325	245317.74N	0550907.56E	127.8
S326	245315.44N	0550906.18E	127.7
S327	245313.48N	0550904.86E	127.7
S328	245311.33N	0550903.42E	127.8
S329	245308.96N	0550901.72E	127.8
S330	245306.49N	0550900.21E	127.6
S331	245304.34N	0550858.78E	127.8
S332	245302.36N	0550857.48E	127.7
S340	245344.07N	0550855.15E	116.8
S341	245342.98N	0550857.12E	117.5
S342	245341.53N	0550859.50E	118.3
S342L	245341.78N	0550900.63E	118.2
S342R	245342.36N	0550859.10E	117.9
S343	245339.90N	0550902.44E	119.3
S343L	245340.15N	0550903.57E	119.2
S343R	245340.73N	0550902.04E	118.8
S344	245337.88N	0550906.30E	120.4
S345	245336.58N	0550908.66E	121.2
S346	245334.91N	0550911.02E	122.3
S346L	245335.34N	0550912.26E	122.0
S346R	245335.92N	0550910.73E	121.6
S347L	245332.95N	0550916.10E	123.4
S347R	245333.92N	0550914.82E	122.8
S348L	245331.40N	0550918.90E	124.2
S348R	245332.37N	0550917.63E	123.7
H1	245328.93N	0550917.55E	126.4
	245329.40N	0550916.70E	126.6
	245329.87N	0550915.84E	127.0
	245328.26N	0550913.71E	128.1
	245327.84N	0550914.48E	127.8
	245327.37N	0550915.34E	127.2
	245326.89N	0550916.19E	126.8
H2	245326.14N	0550915.70E	126.8
	245326.62N	0550914.84E	127.3
	245327.09N	0550914.00E	127.7
	245324.22N	0550912.73E	127.7
	245323.58N	0550913.99E	126.8
H3	245324.00N	0550912.58E	127.7
	245323.27N	0550913.79E	126.8
	245321.79N	0550910.47E	127.7
	245321.32N	0550911.32E	127.2
	245320.85N	0550912.18E	126.8

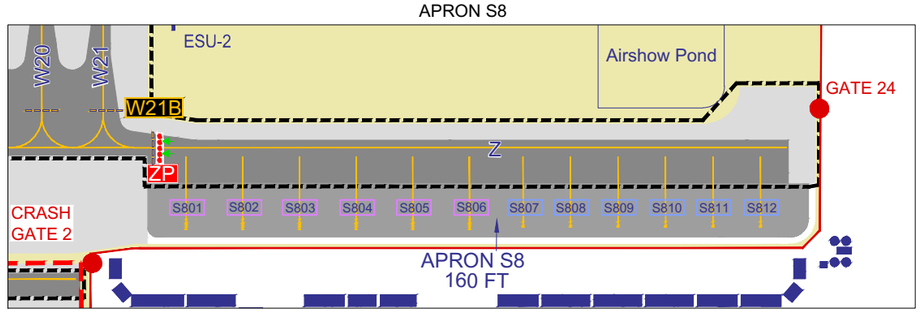
APRON S2			
STAND	LATITUDE	LONGITUDE	ELEV (FT)
S289	245346.78N	0550843.96E	114.7
S290	245344.63N	0550842.53E	116.2
S291	245342.27N	0550840.96E	116.5
S292	245339.70N	0550839.25E	116.4
S293	245337.13N	0550837.54E	116.4
S294	245334.56N	0550835.83E	116.5
S295	245332.19N	0550834.26E	116.4
S296	245330.04N	0550832.83E	116.5
S297	245327.89N	0550831.40E	116.3
S298	245325.73N	0550829.97E	116.4
S299	245323.58N	0550828.54E	116.5
S300	245321.43N	0550827.10E	116.5

APRON S8			
STAND	LATITUDE	LONGITUDE	ELEV (FT)
S801	245246.79N	0551038.04E	161.8
S802	245245.23N	0551040.86E	161.0
S803	245243.67N	0551043.67E	160.2
S804	245242.11N	0551046.49E	159.5
S805	245240.55N	0551049.31E	158.7
S806	245238.99N	0551052.13E	157.9
S807	245237.62N	0551054.86E	157.1
S808	245236.31N	0551057.22E	156.4
S809	245235.01N	0551059.58E	155.8
S810	245233.70N	0551101.94E	155.3
S811	245232.39N	0551104.30E	156.0
S812	245231.09N	0551106.66E	157.3

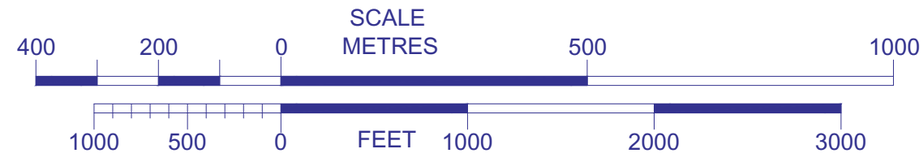
APRON S4			
STAND	LATITUDE	LONGITUDE	ELEV (FT)
S401	245317.67N	0550922.19E	129.5
S402	245315.52N	0550920.76E	129.4
S403	245313.37N	0550919.33E	129.4
S404	245311.21N	0550917.89E	129.4
S405L	245309.87N	0550916.17E	129.2
S405R	245308.48N	0550915.53E	129.3
S406L	245307.32N	0550914.46E	129.1
S406R	245305.92N	0550913.83E	129.3
S407L	245304.76N	0550912.76E	129.2
S407R	245303.36N	0550912.13E	129.3
S408L	245302.20N	0550911.06E	129.2
S408R	245300.81N	0550910.43E	129.3
S409L	245259.65N	0550909.37E	129.1
S409R	245258.25N	0550908.73E	129.3
S410	245256.62N	0550907.98E	129.3
S420L	245308.95N	0550946.01E	138.8
S420R	245310.34N	0550946.65E	138.2
S421L	245306.39N	0550944.31E	140.1
S421R	245307.78N	0550944.95E	139.6
S422L	245303.83N	0550942.61E	141.6
S422R	245305.23N	0550943.25E	141.0
S423L	245301.28N	0550940.91E	141.7
S423R	245302.67N	0550941.55E	141.9
S424L	245258.72N	0550939.21E	141.7
S424R	245300.12N	0550939.85E	141.8
S425L	245256.16N	0550937.51E	141.7
S425R	245257.56N	0550938.15E	141.8
S440L	245325.12N	0550930.26E	127.9
S440R	245326.09N	0550928.99E	127.4
S441	245324.54N	0550931.79E	128.2
S442L	245322.66N	0550934.71E	129.3
S442R	245323.64N	0550933.42E	128.8
S443L	245321.03N	0550937.65E	130.3
S443R	245322.01N	0550936.36E	129.7
S444L	245318.45N	0550942.30E	131.9
S444R	245319.43N	0550941.01E	131.3
S445L	245316.90N	0550945.10E	133.5
S445R	245317.87N	0550943.83E	132.3
S446L	245315.35N	0550947.91E	135.7
S446R	245316.32N	0550946.63E	134.4
S448	245313.88N	0550949.71E	137.3

APRON DATA		
DESCRIPTION	SURFACE	STRENGTH (Stands)
APRON S2	Concrete	PCN 72/R/B/W/T (S289 - S300)
APRON S3	Concrete	PCN 90/R/A/W/T (S301 - S313) PCN 90/R/A/W/T (S324 - S332) PCN 90/R/A/W/T (S340 - S348L) PCN 90/R/A/W/T (H1 - H3)
APRON S4	Concrete	PCN 90/R/A/W/T (S401 - S410) PCN 90/R/A/W/T (S420R - S425L) PCN 90/R/A/W/T (S440R - S448)
APRON S8	Concrete	PCN 90/R/A/W/T (S801 - S812)

APRON S8



LEGEND	
LGTD WDI	
Buildings	
IHP	
IHP Designator (Full Stopbar)	VG
IHP Designator (Yellow Lights)	W7A
ITHP Stopbar	
Traffic Direction	
AD Boundary	
Airside/Landside Gate	
Stand CODE C	
Stand CODE D	
Stand CODE E	
Stand CODE F	
ATC Service Boundary	



For ATS Communication facilities refer to OMDW-AD-2-21A

CHANGES: Updated Legend. Editorial.

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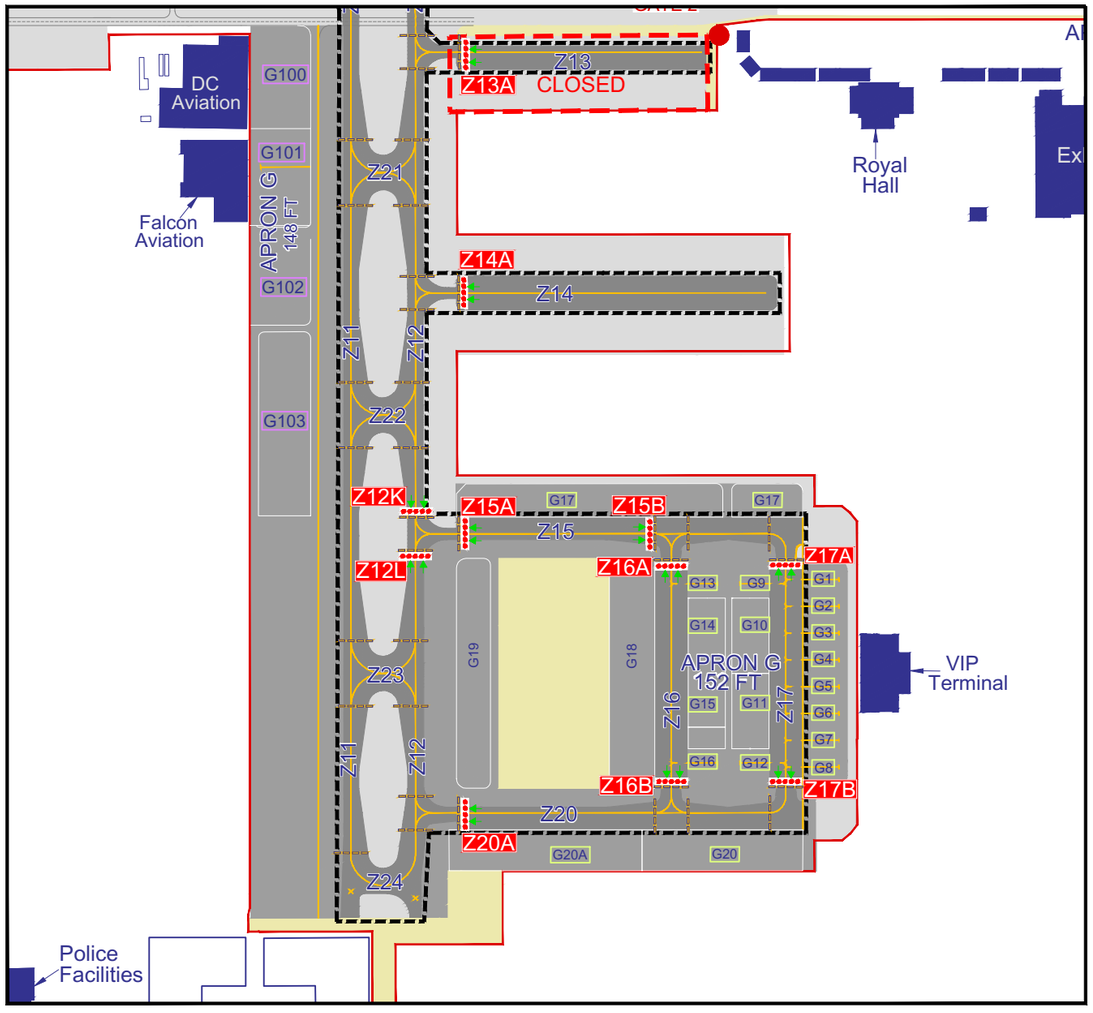
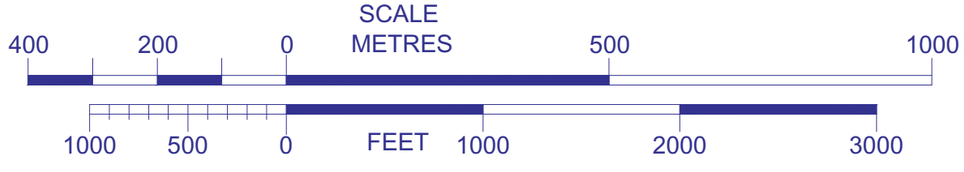
AIRCRAFT PARKING/DOCKING CHART - ICAO
Apron - G

ARP	AD ELEV
245506N 0551032E	171 FT

DUBAI / AL MAKTOUM INTL.
UNITED ARAB EMIRATES





APRON G			
STAND	LATITUDE	LONGITUDE	ELEV (FT)
G1	245221.30N	0551022.44E	152.3
G2	245220.14N	0551021.67E	152.4
G3	245218.99N	0551020.91E	152.4
G4	245217.84N	0551020.14E	152.4
G5	245216.69N	0551019.37E	152.4
G6	245215.53N	0551018.60E	152.4
G7	245214.38N	0551017.84E	152.4
G8	245213.23N	0551017.07E	152.4
G9	245223.70N	0551017.65E	151.8
G12	245215.99N	0551012.52E	151.8
G13	245224.29N	0551016.58E	151.8
G16	245216.58N	0551011.45E	151.8
BOX STANDS	LATITUDE	LONGITUDE	ELEV (FT)
G10	Box Stand Parking		
G11	Box Stand Parking		
G14	Box Stand Parking		
G15	Box Stand Parking		
G17	Box Stand Parking		
G18	Box Stand Parking		
G19	Box Stand Parking		
G20	Box Stand Parking		
G20A	Box Stand Parking		
G100	245258.76N	0551009.65E	148.5
G101	245254.14N	0551006.96E	148.3
G102	Box Stand Parking		
G103	Box Stand Parking		

APRON DATA		
DESCRIPTION	SURFACE	STRENGTH (Stands)
APRON G	Concrete	PCN 62/R/B/W/T (G1 - G8) PCN 62/R/B/W/T (G9 - G16) PCN 62/R/B/W/T (G17 - G20A) PCN 86/R/B/W/T (G100 - G103)

LEGEND	
Buildings	
IHP	
IHP Designator (Full Stopbar)	VC
ITHP Stopbar	
Traffic Direction	
AD Boundary	
Airside/Landside Gate	
Stand CODE C	
Stand CODE F	
ATC Service Boundary	

CHANGES: Added Box Stand G20A. Updated Apron Data Table, Box Stand G20, Stand Code G100-G103, Legend.

For ATS Communication facilities refer to OMDW-AD-2-21A

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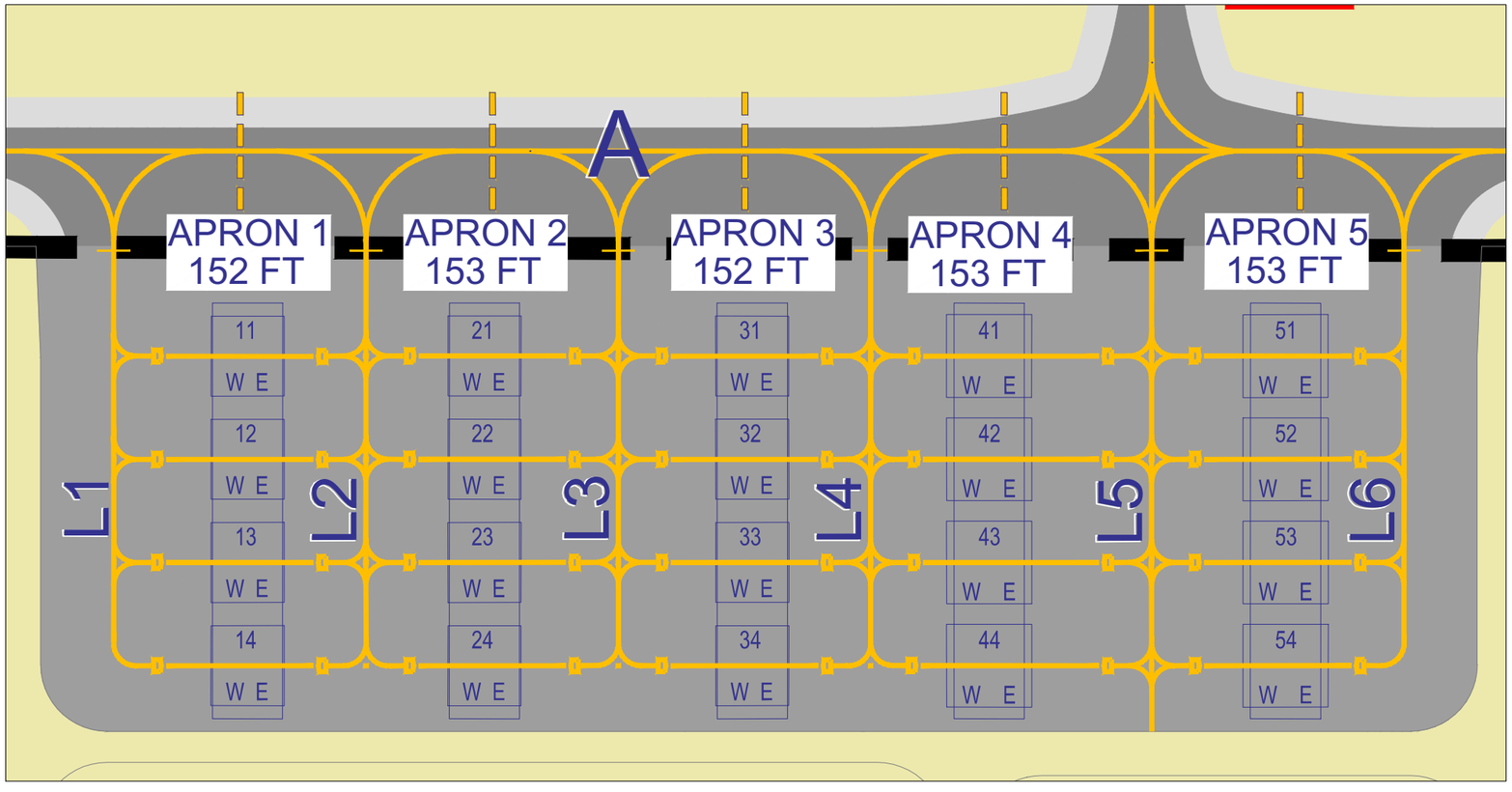
AIRCRAFT PARKING/DOCKING CHART - ICAO
EFTA Aprons 1, 2, 3, 4, 5

ARP	AD ELEV
245506N 0551032E	171 FT

DUBAI / AL MAKTOUM INTL.
UNITED ARAB EMIRATES

CAUTION
All facilities on this chart are exclusive for EFTA traffic use only.



APRON 1

STAND	LATITUDE	LONGITUDE	ELEV (FT)
11 E	245159.15N	0550926.09E	151.8
11 W	245159.23N	0550925.95E	151.9
12 E	245158.50N	0550925.66E	152.3
12 W	245158.58N	0550925.52E	152.3
13 E	245157.86N	0550925.23E	152.7
13 W	245157.93N	0550925.09E	152.7
14 E	245157.21N	0550924.80E	153.1
14 W	245157.29N	0550924.66E	153.1

APRON 2

STAND	LATITUDE	LONGITUDE	ELEV (FT)
21 E	245158.25N	0550927.72E	151.9
21 W	245158.33N	0550927.58E	151.9
22 E	245157.60N	0550927.29E	152.4
22 W	245157.68N	0550927.15E	152.3
23 E	245156.95N	0550926.86E	152.7
23 W	245157.03N	0550926.72E	152.7
24 E	245156.31N	0550926.43E	153.2
24 W	245156.38N	0550926.29E	153.2

APRON 3

STAND	LATITUDE	LONGITUDE	ELEV (FT)
31 E	245157.23N	0550929.56E	151.8
31 W	245157.31N	0550929.42E	151.9
32 E	245156.58N	0550929.13E	152.3
32 W	245156.66N	0550928.99E	152.3
33 E	245155.93N	0550928.70E	152.7
33 W	245156.01N	0550928.56E	152.7
34 E	245155.29N	0550928.27E	153.1
34 W	245155.36N	0550928.13E	153.1

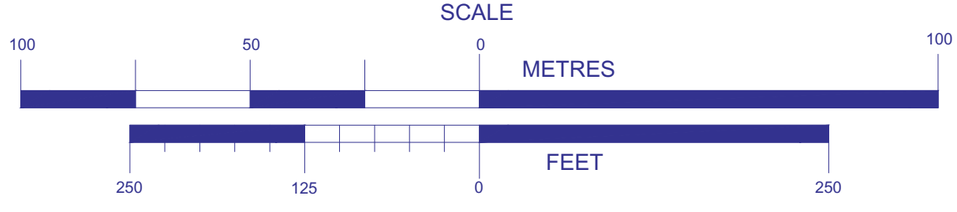
APRON 4

STAND	LATITUDE	LONGITUDE	ELEV (FT)
41 E	245156.29N	0550931.27E	152.0
41 W	245156.45N	0550930.98E	152.0
42 E	245155.64N	0550930.84E	152.4
42 W	245155.80N	0550930.55E	152.5
43 E	245154.99N	0550930.41E	152.9
43 W	245155.15N	0550930.12E	152.8
44 E	245154.34N	0550929.98E	153.4
44 W	245154.50N	0550929.69E	153.3

APRON 5

STAND	LATITUDE	LONGITUDE	ELEV (FT)
51 E	245155.16N	0550933.31E	151.9
51 W	245155.32N	0550933.02E	152.0
52 E	245154.51N	0550932.88E	152.3
52 W	245154.67N	0550932.59E	152.4
53 E	245153.86N	0550932.45E	152.8
53 W	245154.02N	0550932.16E	152.9
54 E	245153.21N	0550932.02E	153.3
54 W	245153.38N	0550931.73E	153.4

LEGEND	
IHP	- - - -
ATC Service Boundary	▬ ▬ ▬



APRON DATA

DESCRIPTION	SURFACE	STRENGTH (Stands)
APRON 1	Interlock Paving	PCN 6/R/B/Y/T
APRON 2	Interlock Paving	PCN 6/R/B/Y/T
APRON 3	Interlock Paving	PCN 6/R/B/Y/T
APRON 4	Interlock Paving	PCN 6/R/B/Y/T
APRON 5	Interlock Paving	PCN 6/R/B/Y/T

For ATS Communication facilities refer to OMDW-AD-2-21C

CHANGES: Updated Legend, Apron ELEV.

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RUNWAY INCURSION HOT SPOT AREAS

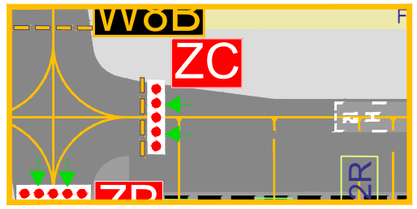
ARP 245506N 0551032E

AD ELEV 171 FT

DUBAI / AL MAKTOUM INTL.
UNITED ARAB EMIRATES

ELEVATIONS IN FEET AMSL
DIMENSIONS IN METRES

A



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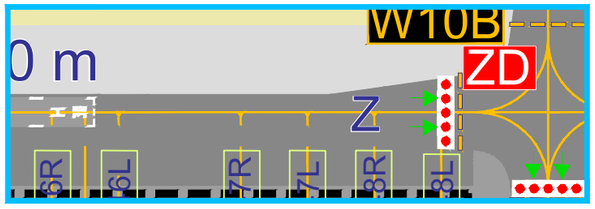

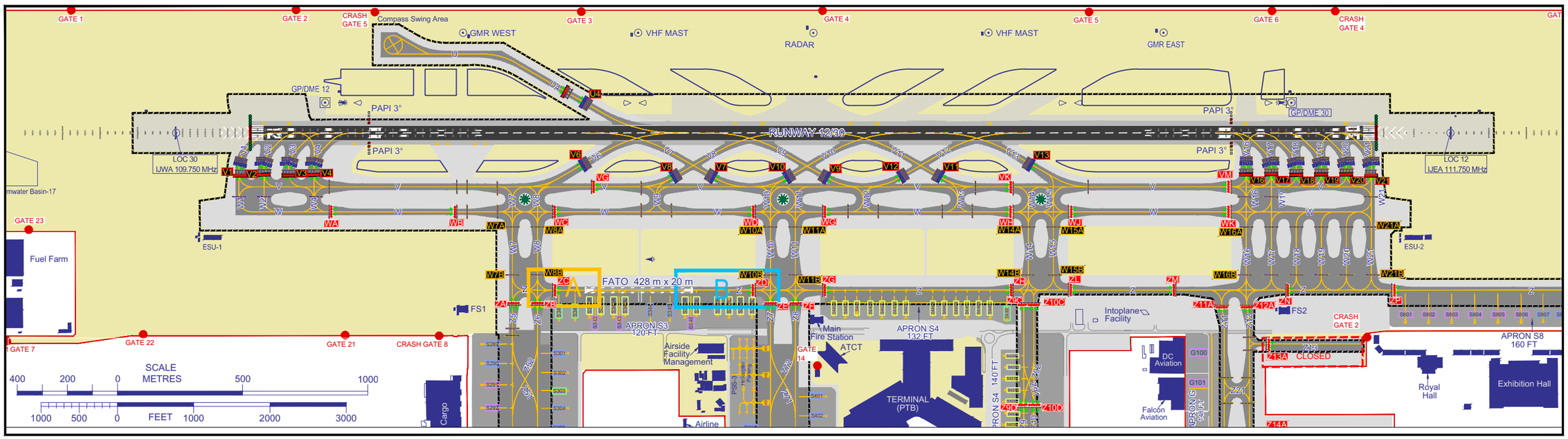

LEGEND			
RVR		ITHP Stopbar	
ILS - GP, LOC		RWY Hold Stopbar CAT I	
DME		RWY Hold Stopbar CAT II/III	
LGTD WDI		Airside/Landside Gate	
Buildings		Stand CODE C	
IHP		Stand CODE D	
IHP Designator (Full Stopbar)	VC	Stand CODE E	
IHP Designator (Yellow Lights)	W7A	Stand CODE F	
RWY HLDG PSN Designator	U4	Traffic Direction	
RWY HLDG PSN Pattern A		ATC Service Boundary	
RWY HLDG PSN Pattern B		AD Boundary	

NOTE 1

HOT SPOT LOCATIONS	ADDITIONAL INFORMATION ON HOT SPOT AREA
A, B	Operators are to be aware of Final Approach and Takeoff (FATO) H12/H30 used for helicopter operations located between IHP ZD and IHP ZC on TWY Z. ATC clearance is required to enter this area (Between IHP ZD and IHP ZC).

NOTE 2

Operators are to be vigilant when complying with ATC instructions and to be observant of Holding points markings, Stop Bar lights and Signs. All Runways and the FATO require ATC clearance to enter or cross.

CHANGES: Updated Stand Code G100 and G101, Legend. Editorial.

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TAXIWAY INCURSION HOT SPOT AREAS

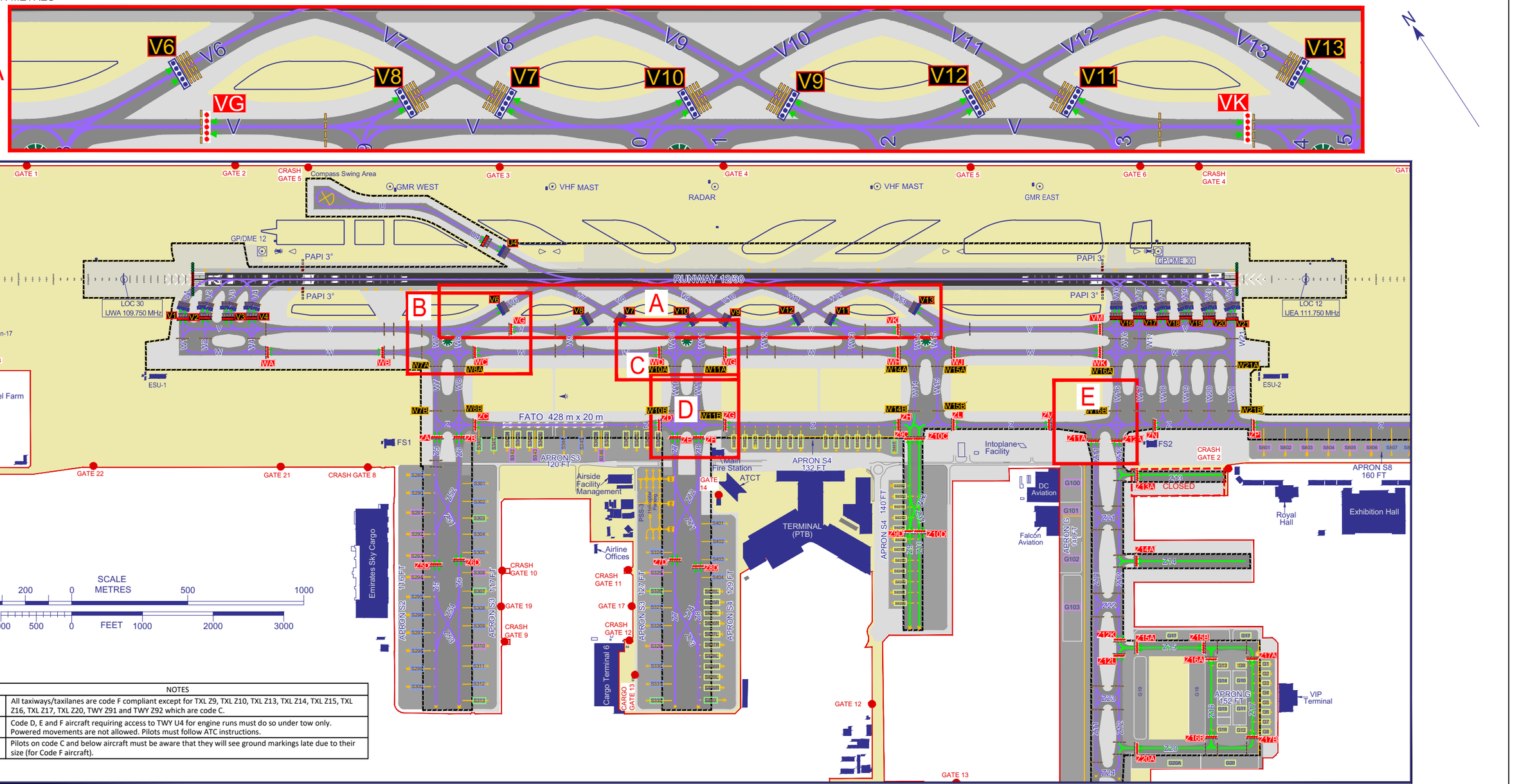
ARP 245506N 0551032E

AD ELEV 171 FT

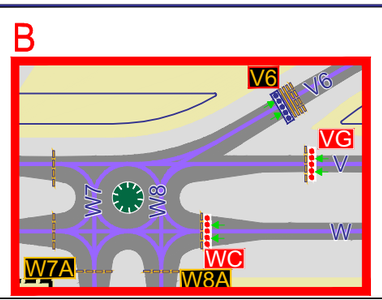
DUBAI / AL MAKTOUM INTL.
UNITED ARAB EMIRATES

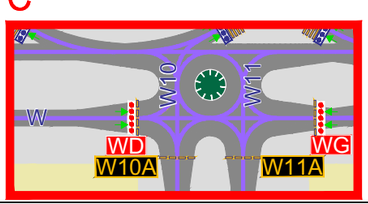
ELEVATIONS IN FEET AMSL
DIMENSIONS IN METRES

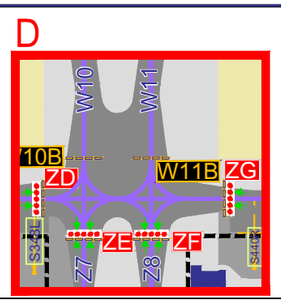
Note: See details in subsequent text page(s).

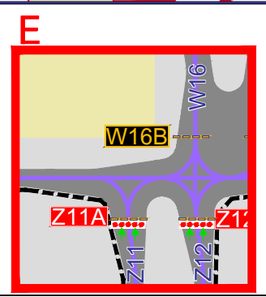


NOTES	
1	All taxiways/taxilanes are code F compliant except for TXL Z9, TXL Z10, TXL Z13, TXL Z14, TXL Z15, TXL Z16, TXL Z17, TXL Z20, TWY Z91 and TWY Z92 which are code C.
2	Code D, E and F aircraft requiring access to TWY U4 for engine runs must do so under tow only. Powered movements are not allowed. Pilots must follow ATC instructions.
3	Pilots on code C and below aircraft must be aware that they will see ground markings late due to their size (for Code F aircraft).









LEGEND			
RVR		ITHP Stopbar	
ILS - GP, LOC		RWY Hold Stopbar CAT I	
DME		RWY Hold Stopbar CAT II/III	
LGTD WDI		Stand CODE C	
Buildings		Stand CODE D	
IHP		Stand CODE E	
IHP Designator (Full Stopbar)	VC	Stand CODE F	
IHP Designator (Yellow Lights)	W7A	Traffic Direction	
RWY HLDG PSN Designator	U4	Code C (and below) Operations	
RWY HLDG PSN Pattern A		Code F (and below) Operations	
RWY HLDG PSN Pattern B		Hot Spot Areas	
Airside/Landside Gate		ATC Service Boundary	
AD Boundary			

CHANGES: Added Box Stand G20A. Updated Box Stand G20, Stand Code G100-G103, Legend. Editorial.

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TWY INCURSION HOT SPOT LOCATION	ADDITIONAL INFORMATION ON TAXIWAY INCURSION HOT SPOT AREAS
A	The manoeuvring area is a wide space with little environmental contrast therefore taxiway incursions are likely. Pilots must adhere to CL at all times. Turns greater than 90 degrees are NOT permitted.
B	Taxiing to TWY W7 from TWY V6 involves a slight right turn onto TWY V before taking a 90 degrees left turn on TWY W7. Operators should be aware that when taxiing on TWY W (westbound), TWY W8 is the first left and TWY W7 is the second left.
C	The centre is painted green to aid. Departures regularly miss the turn onto TWY W. This area is high risk for arrivals on all sides of quadrangle. Operators should be aware that when vacating TWY V10, TWY V is to the right and TWY W10 is southbound. Additionally, while taxiing on TWY W10 there is no Taxiway Guidance Signboard available for TWY W (East/West).
D	Arrivals will be on TWY W10 for less than 1 min before needing to turn left for TWY Z or TXL Z8 (Left on TWY Z followed by an immediate right turn).
E	Arrival aircraft on TWY Z turn too early for TXL Z11 –TXL Z12 is the second taxiway after the hangar. For arrival aircraft on TWY W16, TWY W16 becomes TXL Z12. Departure aircraft on TXL Z12 instructed to taxi onto TWY Z/TWY W17-TWY W21 need to turn as they pass the fire station (on their right).

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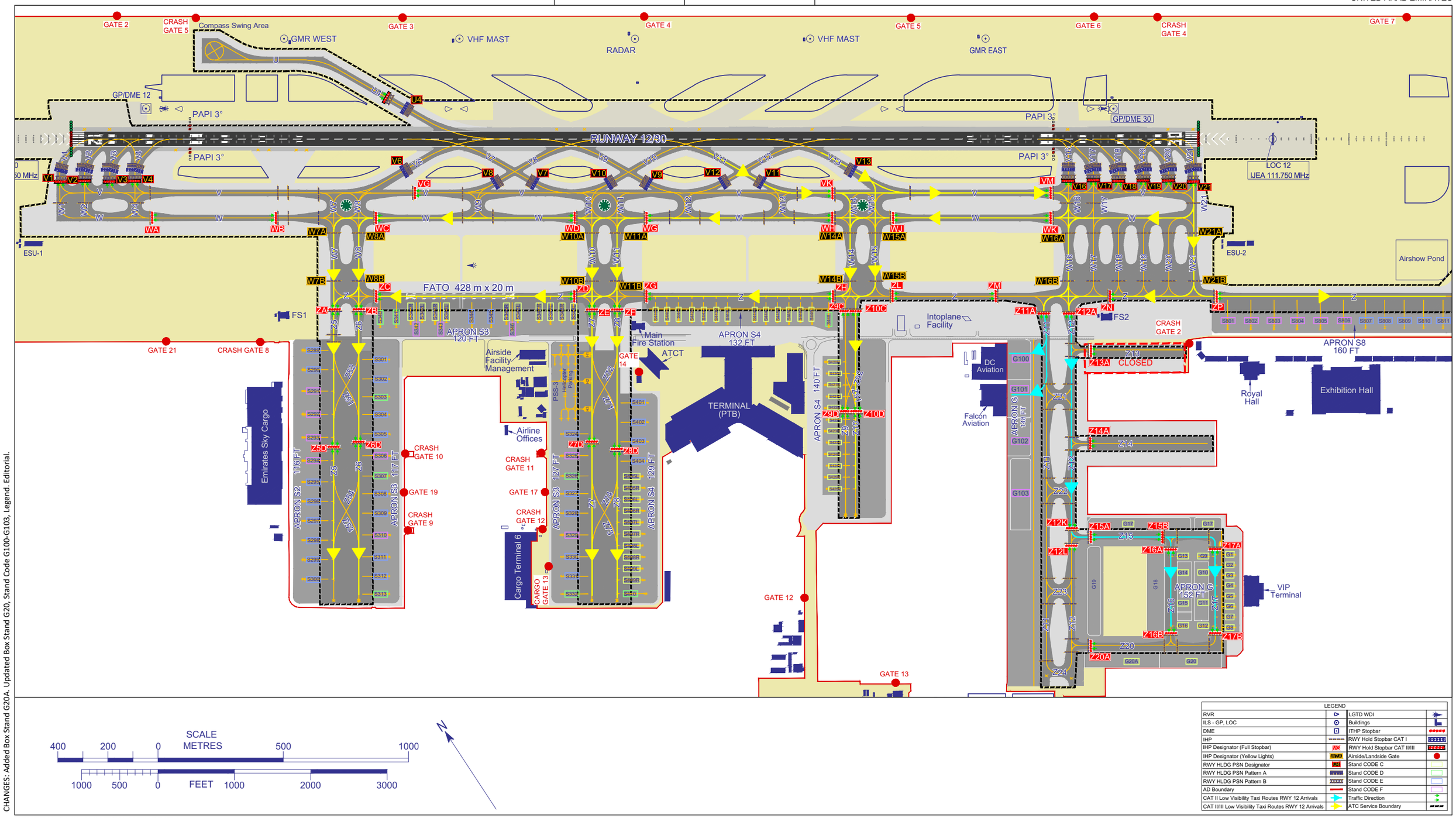
Low Visibility Taxi Routes - Arrivals RWY 12

ARP	245506N 0551032E	AD ELEV 171 FT

DUBAI / AL MAKTOUM INTL.
UNITED ARAB EMIRATES



LEGEND			
RVR		LGTD WDI	
ILS - GP, LOC		Buildings	
DME		ITHP Stopbar	
IHP		RWY Hold Stopbar CAT I	
IHP Designator (Full Stopbar)		RWY Hold Stopbar CAT II/III	
IHP Designator (Yellow Lights)		Airside/Landside Gate	
RWY HLDG PSN Designator		Stand CODE C	
RWY HLDG PSN Pattern A		Stand CODE D	
RWY HLDG PSN Pattern B		Stand CODE E	
AD Boundary		Stand CODE F	
CAT II Low Visibility Taxi Routes RWY 12 Arrivals		Traffic Direction	
CAT II/III Low Visibility Taxi Routes RWY 12 Arrivals		ATC Service Boundary	

CHANGES: Added Box Stand G20A. Updated Box Stand G20, Stand Code G100-G103, Legend. Editorial.

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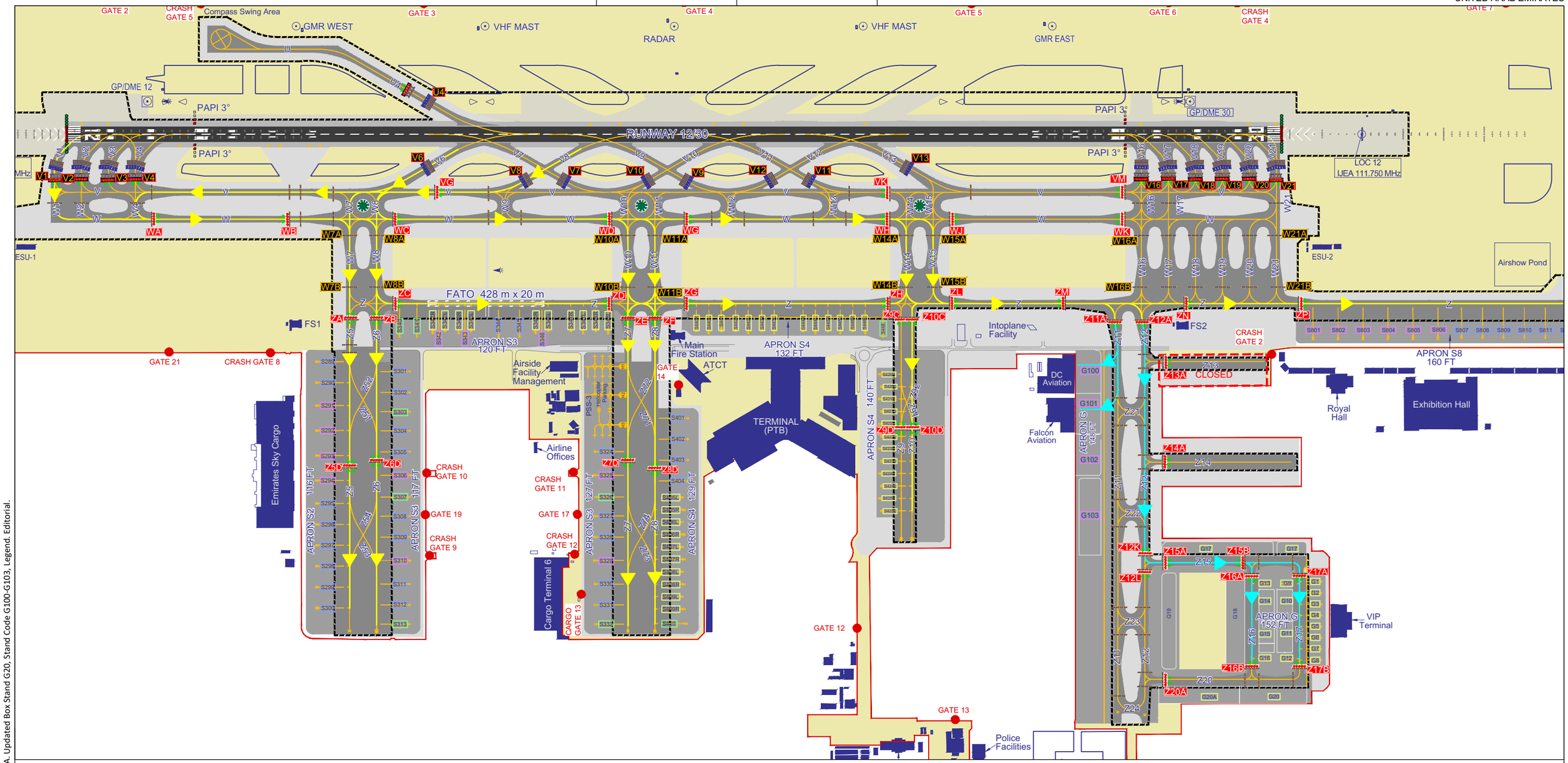
Low Visibility Taxi Routes - Arrivals RWY 30

ARP	AD ELEV
245506N 0551032E	171 FT

DUBAI / AL MAKTOUM INTL.
UNITED ARAB EMIRATES



LEGEND			
RVR		LGTD WDI	
ILS - GP, LOC		Buildings	
DME		ITHP Stopbar	
IHP		RWY Hold Stopbar CAT I	
IHP Designator (Full Stopbar)		RWY Hold Stopbar CAT II/III	
IHP Designator (Yellow Lights)		Airside/Landside Gate	
RWY HLDG PSN Designator		Stand CODE C	
RWY HLDG PSN Pattern A		Stand CODE D	
RWY HLDG PSN Pattern B		Stand CODE E	
AD Boundary		Stand CODE F	
CAT II Low Visibility Taxi Toutes RWY 30 Arrivals		Traffic Direction	
CAT II/III Low Visibility Taxi Routes RWY 30 Arrivals		ATC Service Boundary	

CHANGES: Added Box Stand G20A. Updated Box Stand G20, Stand Code G100-G103, Legend. Editorial.

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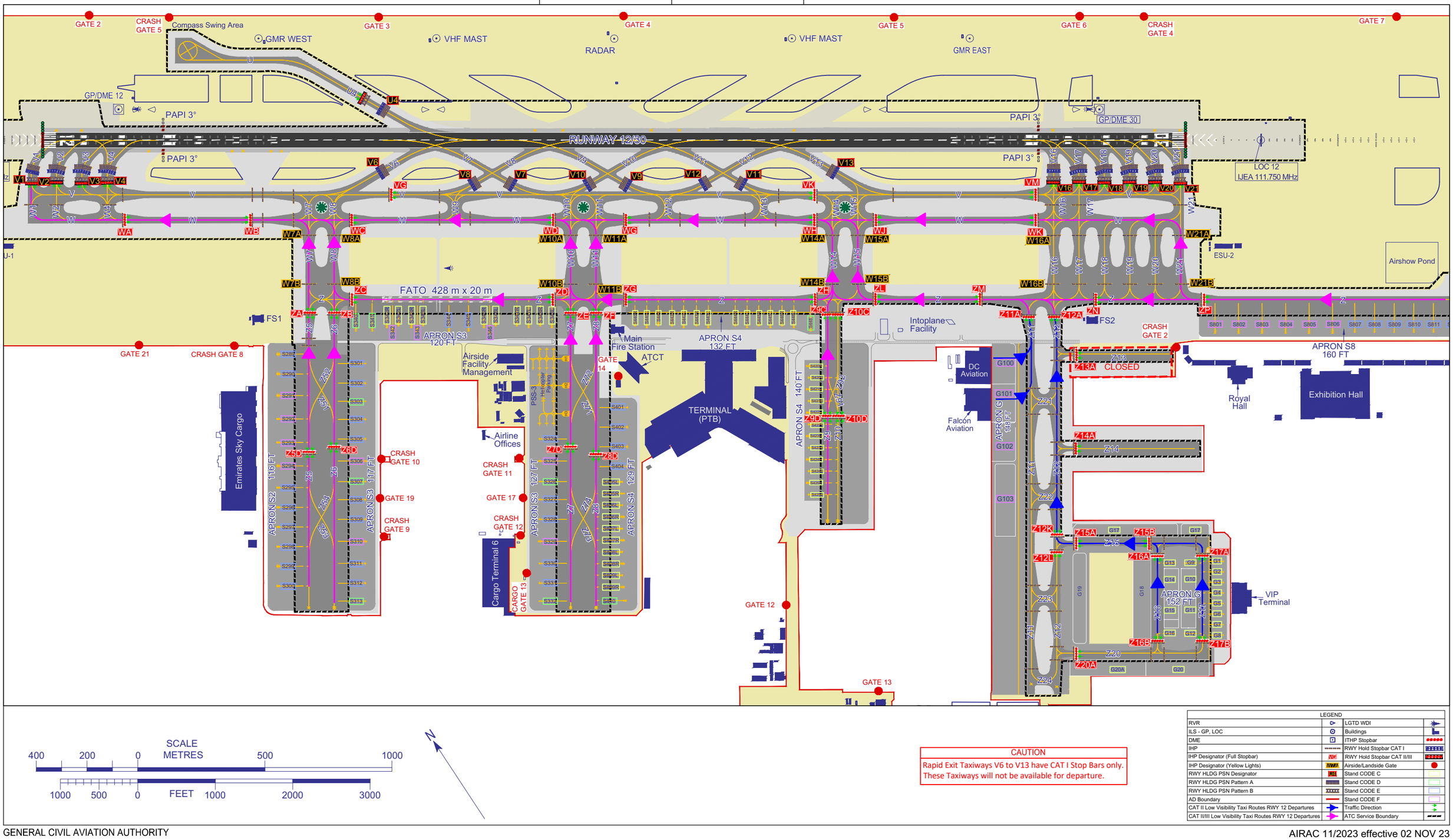
Low Visibility Taxi Routes - Departures RWY 12

ARP	AD ELEV
245506N 0551032E	171 FT

DUBAI / AL MAKTOUM INTL.
UNITED ARAB EMIRATES



CHANGES: Added Box Stand G20A. Updated Box Stand G20, Stand Code G100-G103, Legend. Editorial.

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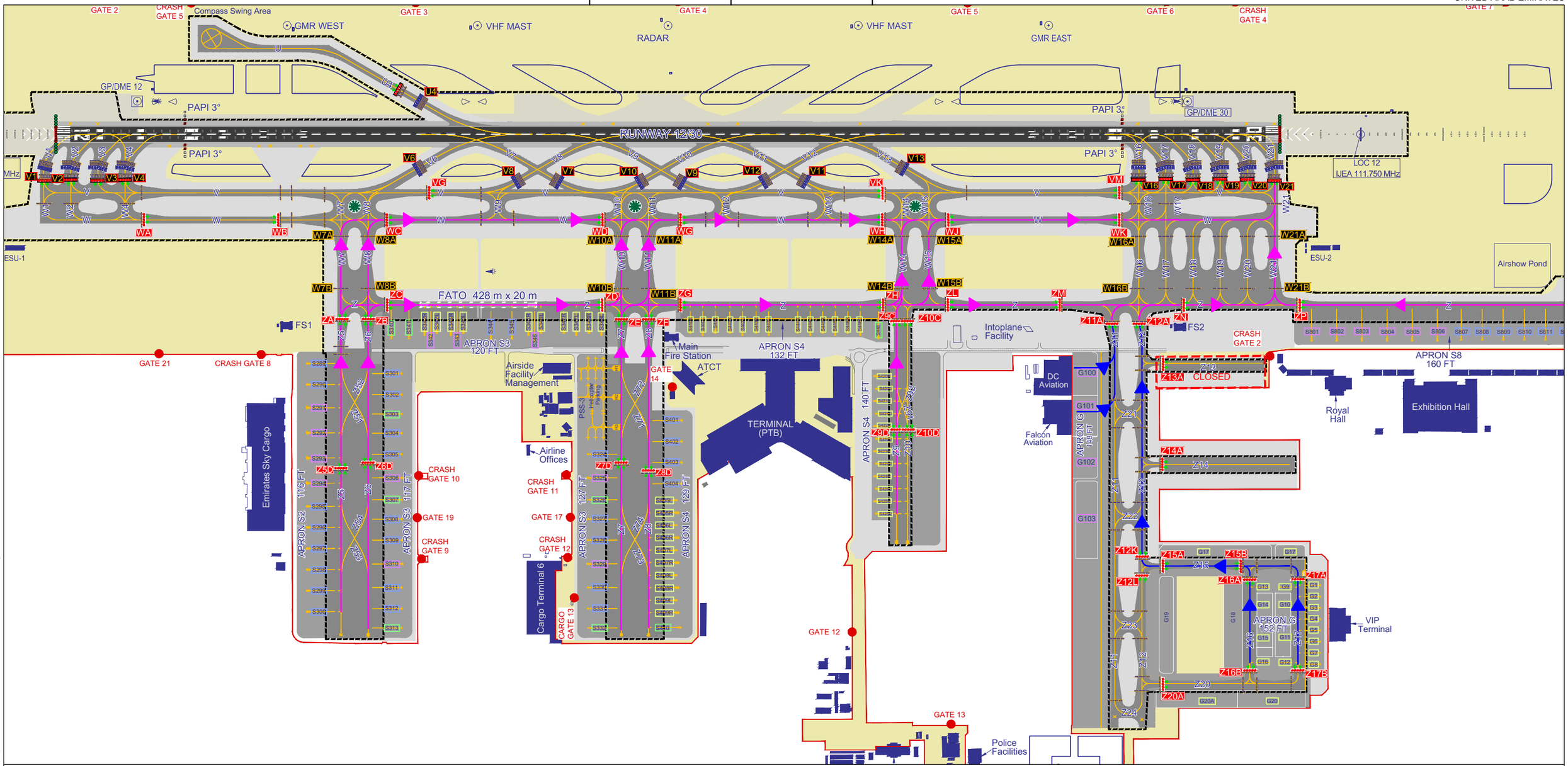
Low Visibility Taxi Routes - Departures RWY 30

ARP 245506N 0551032E

AD ELEV 171 FT

DUBAI / AL MAKTOUM INTL.
UNITED ARAB EMIRATES



SCALE METRES
400 200 0 500 1000

FEET
1000 500 0 1000 2000 3000

N

CAUTION

Rapid Exit Taxiways V6 to V13 have CAT I Stop Bars only.
These Taxiways will not be available for departure.

LEGEND			
RVR		LGTD WDI	
ILS - GP, LOC		Buildings	
DME		ITHP Stopbar	
IHP		RWY Hold Stopbar CAT I	
IHP Designator (Full Stopbar)		RWY Hold Stopbar CAT II/III	
IHP Designator (Yellow Lights)		Airside/Landside Gate	
RWY HLDG PSN Designator		Stand CODE C	
RWY HLDG PSN Pattern A		Stand CODE D	
RWY HLDG PSN Pattern B		Stand CODE E	
AD Boundary		Stand CODE F	
CAT II Low Visibility Taxi Routes RWY 30 Departures		Traffic Direction	
CAT II/III Low Visibility Taxi Routes RWY 30 Departures		ATC Service Boundary	

CHANGES: Added Box Stand G20A. Updated Box Stand G20, Stand Code G100-G103, Legend. Editorial.

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ELEVATIONS IN FEET
ALL OTHER DIMENSIONS IN METRES
BEARINGS ARE MAGNETIC

AERODROME OBSTACLE CHART - ICAO

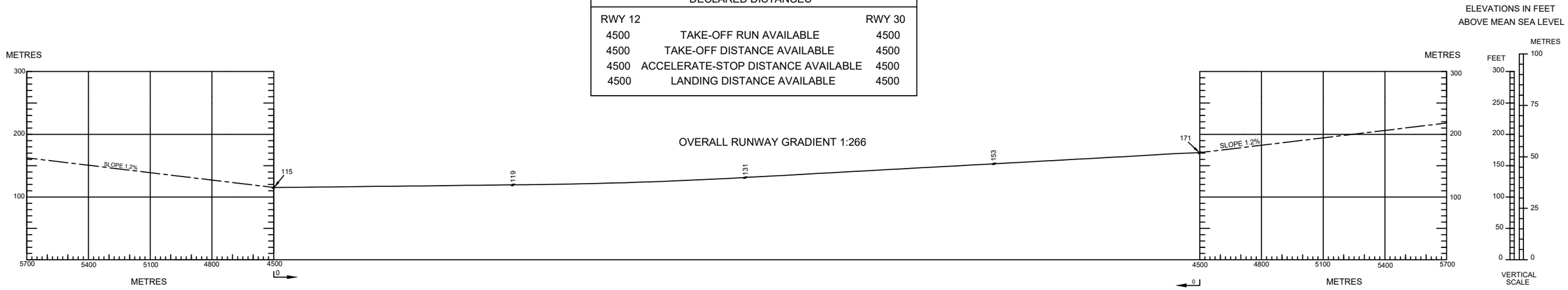
TYPE A - OPERATING LIMITATIONS

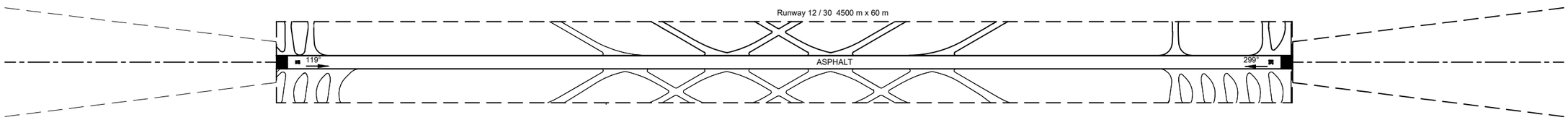
DUBAI / Al Maktoum Intl.
UNITED ARAB EMIRATES
RWY 12/30

MAGNETIC VARIATION 2° E (2020)

RUNWAY 12/30

DECLARED DISTANCES		
RWY 12		RWY 30
4500	TAKE-OFF RUN AVAILABLE	4500
4500	TAKE-OFF DISTANCE AVAILABLE	4500
4500	ACCELERATE-STOP DISTANCE AVAILABLE	4500
4500	LANDING DISTANCE AVAILABLE	4500

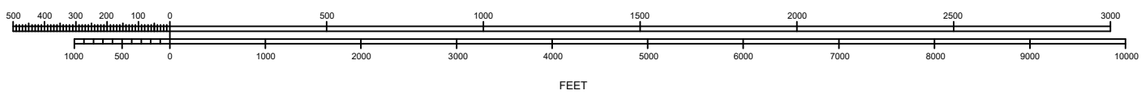




LEGEND

		PROFILE
IDENTIFICATION NUMBER	(10)	
HEIGHT AMSL	25	
BUILDING	■	(13)
TREE / BUSH	*	
POLE, AERIAL, TOWER, ETC	◉	
MOBILE OBSTACLE	=○=	

HORIZONTAL SCALE



ORDER OF ACCURACY:Horizontal 3 M; Vertical 1 FT

CHANGES: Amended MAG VAR Year. Editorial.

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ELEVATIONS IN FEET AMSL
ALL OTHER DIMENSIONS IN METRES
BEARINGS ARE MAGNETIC

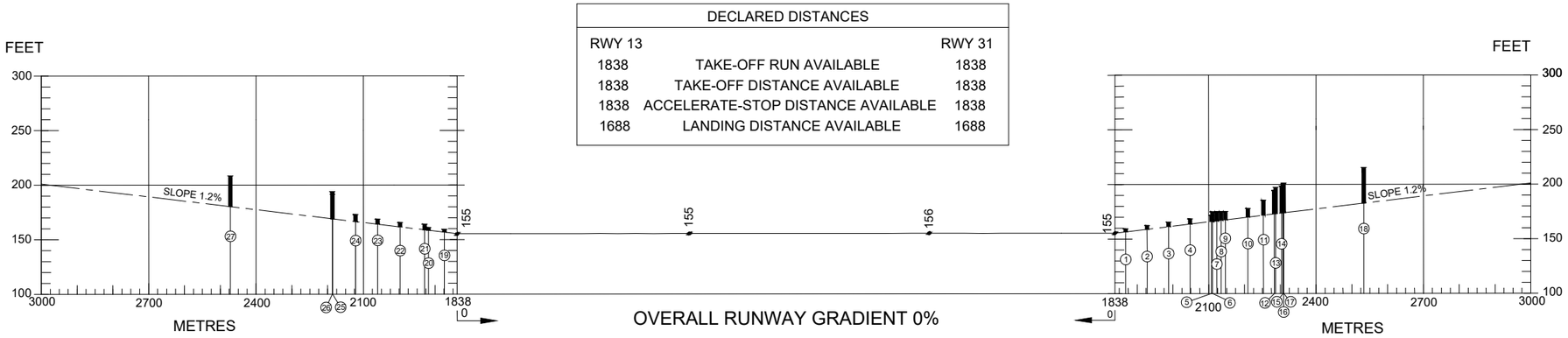
AERODROME OBSTACLE CHART - ICAO

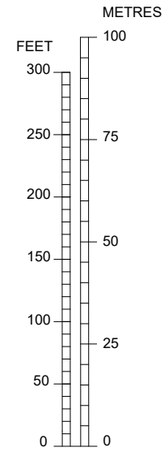
TYPE A - OPERATING LIMITATIONS

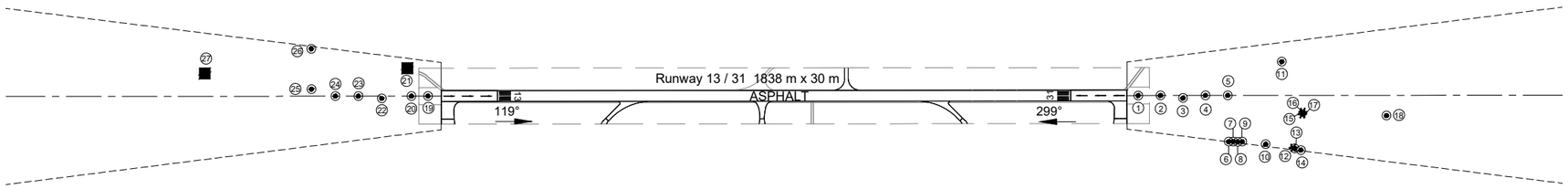
DUBAI / Al Maktoum Intl.
UNITED ARAB EMIRATES
RWY 13/31

MAGNETIC VARIATION 2° E (2020)
ORDER OF ACCURACY: Horizontal 3M; Vertical 1FT

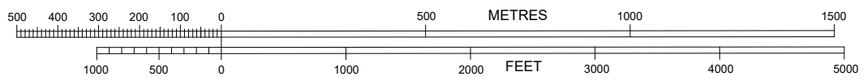
DECLARED DISTANCES		
RWY 13		RWY 31
1838	TAKE-OFF RUN AVAILABLE	1838
1838	TAKE-OFF DISTANCE AVAILABLE	1838
1838	ACCELERATE-STOP DISTANCE AVAILABLE	1838
1688	LANDING DISTANCE AVAILABLE	1688







HORIZONTAL SCALE 1:15,000



CAUTION

EXCLUSIVE USE FOR EFTA AIRCRAFT ONLY

CHANGES: Updated OBST. Editorial.

LEGEND		PROFILE
IDENTIFICATION NUMBER	⑩	
HEIGHT AMSL	25	
BUILDING	■	⑬
TREE / BUSH	*	
POLE, AERIAL, TOWER, ETC	◉	
LOCALISER		

#	Description	WGS-84 Coordinates		ELEV AMSL	Survey Ref #
		Latitude	Longitude	FT	
1	APPROACH_LIGHT	245142.9469N	0551005.7261E	159.25	2888
2	APPROACH_LIGHT	245141.9346N	0551007.5551E	162.29	2887
3	APPROACH_LIGHT	245140.7324N	0551009.2512E	165.42	2879
4	APPROACH_LIGHT	245139.9105N	0551011.2115E	168.39	2875
5	APPROACH_LIGHT	245138.9009N	0551013.0370E	171.43	2874
6	STREETLIGHT	245135.4140N	0551010.8300E	174.81	2542
7	STREETLIGHT	245135.2243N	0551011.1991E	175.06	2541
8	STREETLIGHT	245134.9924N	0551011.5511E	175.30	2540
9	STREETLIGHT	245134.8082N	0551011.9270E	175.31	2539
10	FENCE	245133.5521N	0551013.7163E	177.88	2551
11	STREETLIGHT	245138.9683N	0551019.1222E	185.33	2526
12	TREE	245132.0232N	0551015.7691E	194.30	34026
13	STREETLIGHT	245131.9331N	0551015.8668E	197.19	2005
14	STREETLIGHT	245131.5132N	0551016.2918E	198.45	2094

#	Description	WGS-84 Coordinates		ELEV AMSL	Survey Ref #
		Latitude	Longitude	FT	
15	TREE	245134.1148N	0551018.1689E	200.04	34009
16	TREE	245134.1311N	0551018.2378E	200.28	34008
17	TREE	245134.2588N	0551018.3465E	201.18	34007
18	ROADSIGN	245130.2194N	0551024.9898E	215.26	31606
19	APPROACH_LIGHT	245215.0316N	0550907.7520E	159.25	2889
20	31_LOC_NFM	245215.7764N	0550906.4004E	160.96	16136
21	LIGHTNING_CONDUCTOR	245218.0396N	0550907.4578E	164.24	2905
22	APPROACH_LIGHT	245216.9273N	0550903.8483E	165.56	2894
23	APPROACH_LT	245218.1773N	0550902.0711E	168.69	2623
24	APPROACH_LT	245219.2114N	0550900.1934E	172.92	2624
25	STREETLIGHT	245220.8179N	0550858.5760E	191.47	2656
26	STREETLIGHT	245223.8223N	0550900.5596E	194.02	2658
27	BUILDING	245226.8090N	0550850.6638E	208.45	33131

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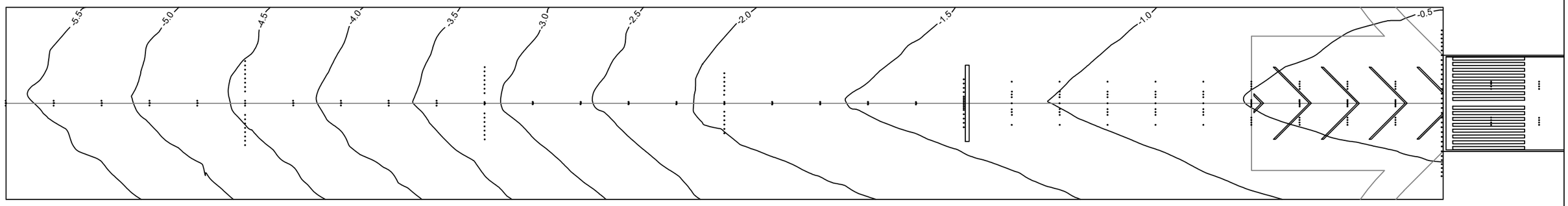
ELEVATIONS AND HEIGHTS ARE IN METERS/FEET.
DISTANCES IN METERS

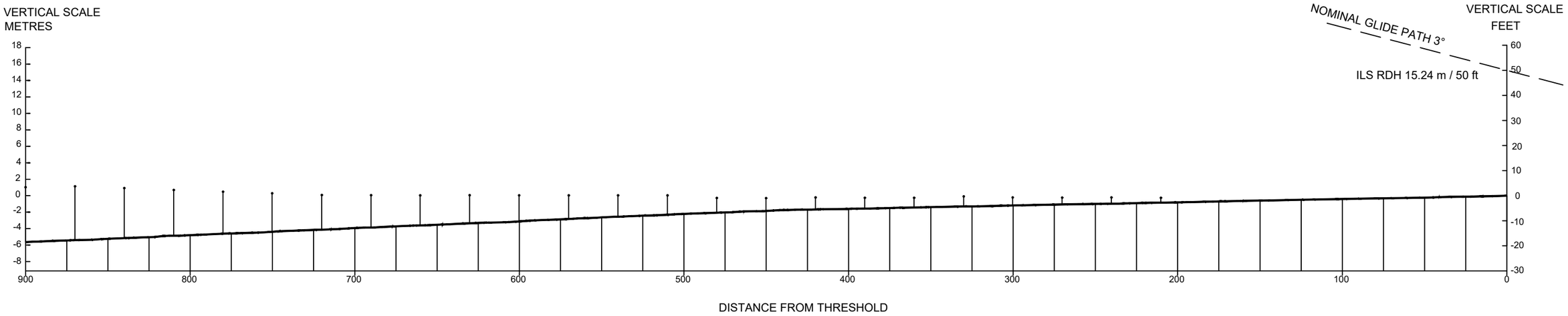
PRECISION APPROACH TERRAIN CHART - ICAO

DUBAI / AL MAKTOUM INTL.
UNITED ARAB EMIRATES
RWY 12



RWY 12 THR ELEV 35.1 m / 115.2 ft AMSL

Maximum heights within first 900 m from RWY 12 THR ELEV



LEGEND	
CENTRELINE PROFILE	
APPROACH LIGHT	
CONTOUR	-20

HORIZONTAL SCALE 1:2500
VERTICAL SCALE 1:500
CONTOURS AND HEIGHTS ARE RELATED TO ELEVATION OF RUNWAY THRESHOLD

CHANGES: Updated Legend. Editorial.

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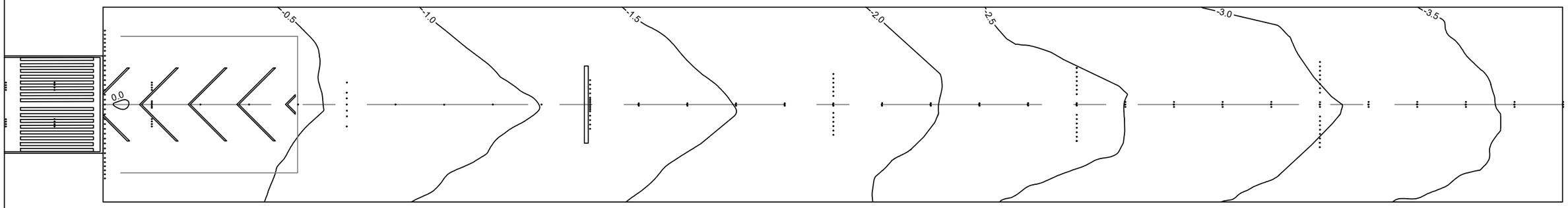
ELEVATIONS AND HEIGHTS ARE IN METERS/FEET.
DISTANCES IN METERS

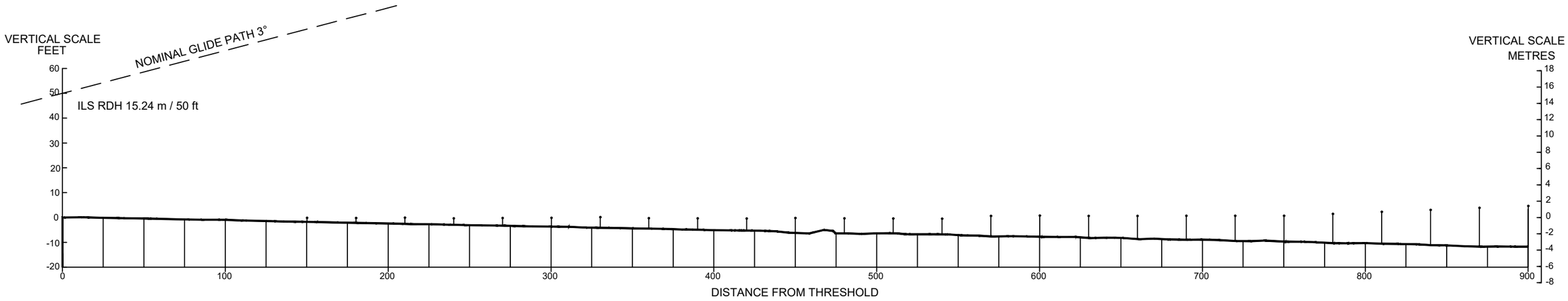
PRECISION APPROACH TERRAIN CHART - ICAO

DUBAI / AL MAKTOUM INTL.
UNITED ARAB EMIRATES
RWY 30



RWY 30 THR ELEV 52.0 m / 170.7 ft AMSL

Maximum heights within first 900 m from RWY 30 THR ELEV



CHANGES: Updated Legend. Editorial.

LEGEND	
CENTRELINE PROFILE	
APPROACH LIGHT	
CONTOUR	20

HORIZONTAL SCALE 1:2500
VERTICAL SCALE 1:500
CONTOURS AND HEIGHTS ARE RELATED TO ELEVATION OF RUNWAY THRESHOLD

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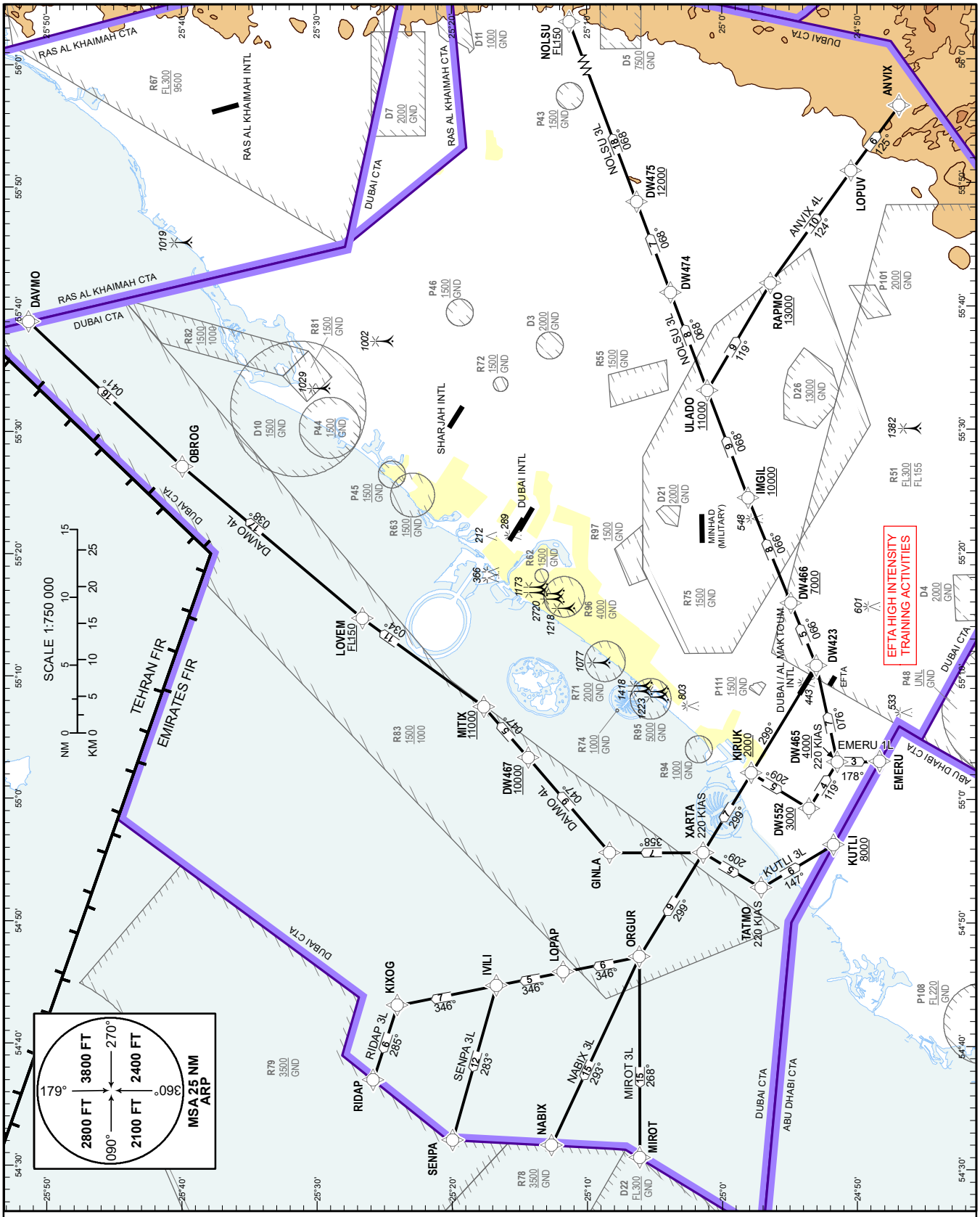
STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

AD ELEV 171 FT

DUBAI / AL MAKTOUM INTL

RNAV 1 SID RWY 30

ANVIX 4L, DAVMO 4L, EMERU 1L, KUTLI 3L, MIROT 3L, NABIX 3L, NOLSU 3L, RIDAP 3L, SENPA 3L



AL MAKTOUM INTL	126.475	DEP
AL MAKTOUM RDR	124.025	PRI
DUBAI DEP N	126.200	PRI
DUBAI DEP S	121.025	PRI
AL MAKTOUM TWR	118.625	PRI
AL MAKTOUM GND	118.375	PRI

CHANGES: Added P111, R74.

FOR ROUTE DESCRIPTION SEE OMDW AD 2.22

TRANSITION ALTITUDE 13000 FT

VAR 2°E-2017

DIST IN NM
BEARINGS ARE MAGNETIC
ELEV, ALT, HGT IN FEET
SPEEDS ARE MAXIMUM
Refer ENR 5.1 for vertical limits details

Contour Legend: 6000 5000 4000 3000 2000 1000

NOTES

Do not climb above ATC cleared level.

RESTRICTIONS

RNAV 1 (GNSS) REQUIRED
MAX 250 KIAS below 10000 FT
25° angle of bank required on all turns
MNM (ATC) required climb gradient 5.0% to 8000 FT (300 FT per NM)
MNM (ATC) required climb gradient 6.4% to 8000 FT (390 FT per NM) for DAVMO 4L.

CAUTION: INDEPENDENT HIGH INTENSITY CIRCUIT TRAINING TRAFFIC SOUTH OF THE AIRFIELD

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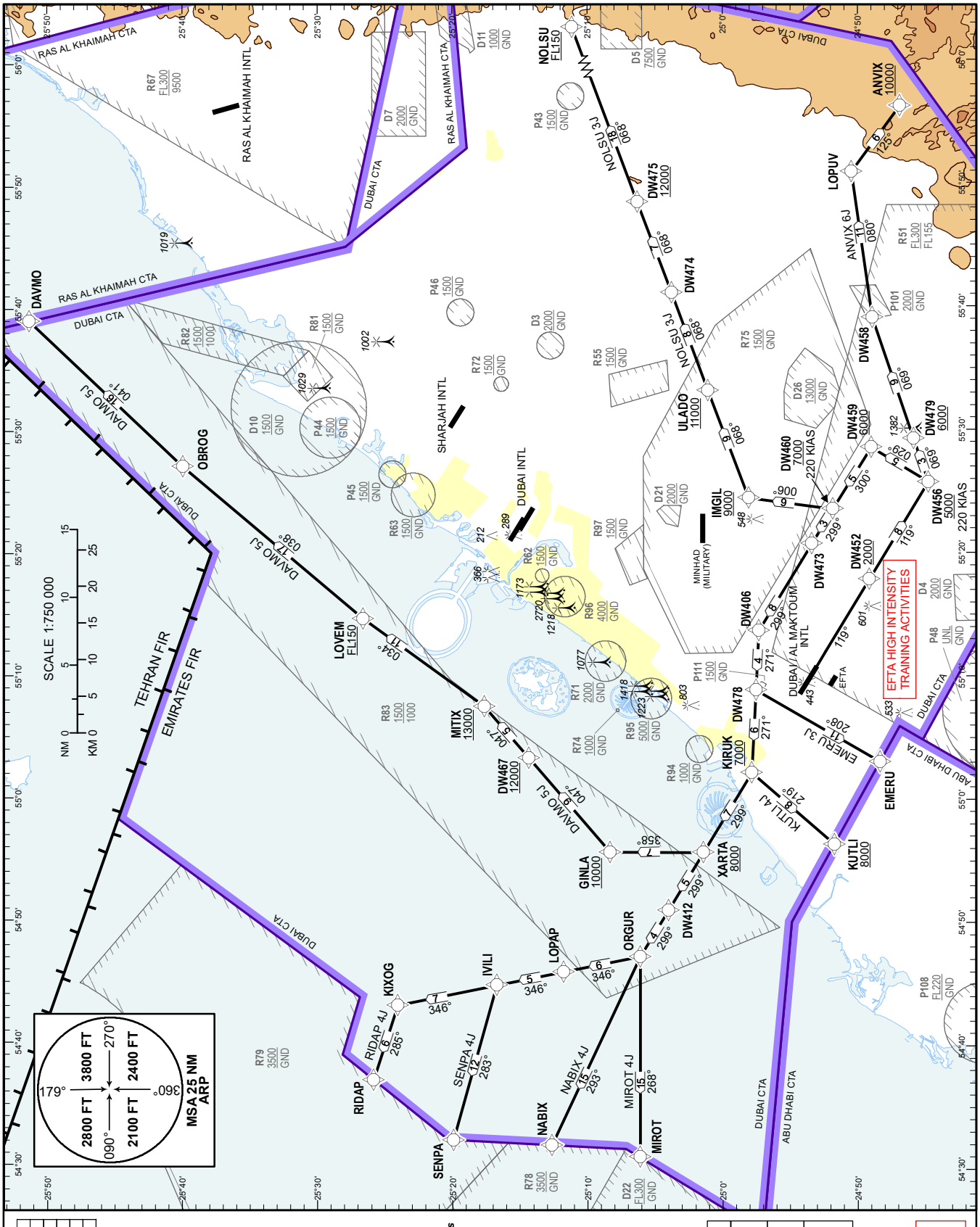
STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

AD ELEV 171 FT

DUBAI / AL MAKTOUM INTL

RNAV 1 SID RWY 12

ANVIX 6J, DAVMO 5J, EMERU 3J, KUTLI 4J, MIROT 4J, NABIX 4J, NOLSU 3J, RIDAP 4J, SENPA 4J



AL MAKTOUM INTL	126.475	DEP
AL MAKTOUM RDR	124.025	PRI
DUBAI DEP N	126.200	PRI
DUBAI DEP S	121.025	PRI
AL MAKTOUM TWR	118.625	PRI
AL MAKTOUM GND	118.375	PRI

FOR ROUTE DESCRIPTION SEE OMDW AD 2.22

TRANSITION ALTITUDE 13000 FT

VAR 2°E-2017

DIST IN NM
BEARINGS ARE MAGNETIC
ELEV, ALT, HGT IN FEET
SPEEDS ARE MAXIMUM
Refer ENR 5.1 for vertical limits details

Contour Legend 6000 5000 4000 3000 2000 1000

NOTES

Do not climb above ATC cleared level.

RESTRICTIONS

RNAV 1 (GNSS) REQUIRED
MAX 250 KIAS below 10000 FT
25° angle of bank required on all turns
MNM (ATC) required climb gradient 5.0% to 8000 FT (300 FT per NM)

CAUTION: INDEPENDENT HIGH INTENSITY CIRCUIT TRAINING TRAFFIC SOUTH OF THE AIRFIELD

CHANGES: Added P111, R74. Editorial.

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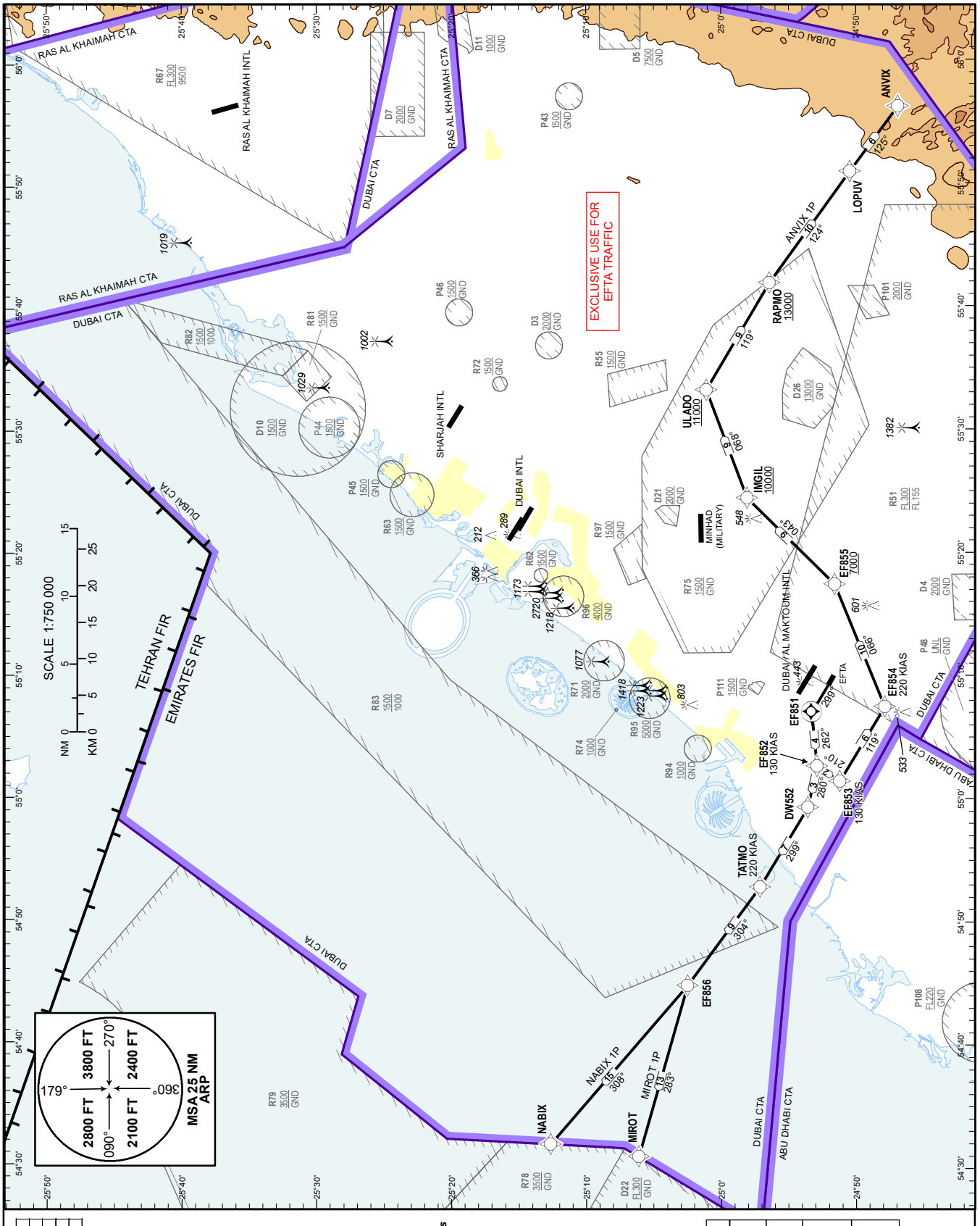
STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

AD ELEV 171 FT

DUBAI / AL MAKTOUM INTL

RNAV 1 SID RWY 31 (CAT A–B)

ANVIX 1P, MIROT 1P, NABIX 1P



AL MAKTOUM INTL	126.475	DEP
AL MAKTOUM RDR	124.025	PRI
DUBAI DEP N	126.200	PRI
DUBAI DEP S	121.025	PRI
ACADEMY TWR	118.775	PRI

FOR ROUTE DESCRIPTION SEE OMDW AD 2.22

TRANSITION ALTITUDE 13000 FT

VAR 2°E-2018

DIST IN NM
BEARINGS ARE MAGNETIC
ELEV, ALT, HGT IN FEET
SPEEDS ARE MAXIMUM
Refer ENR 5.1 for vertical limits details

Contour Legend 6000 5000 4000 3000 2000 1000

NOTES

Do not climb above ATC cleared level.

RESTRICTIONS
RNAV 1 (GNSS) REQUIRED
MAX 250 KIAS below 10000 FT
25° angle of bank required on all turns
MNM (ATC) required climb gradient 5.0% to 8000 FT (300 FT per NM)
Initial climb limited to 2000 FT. Further climb when instructed by ATC.

CHANGES: Added P111, R74.

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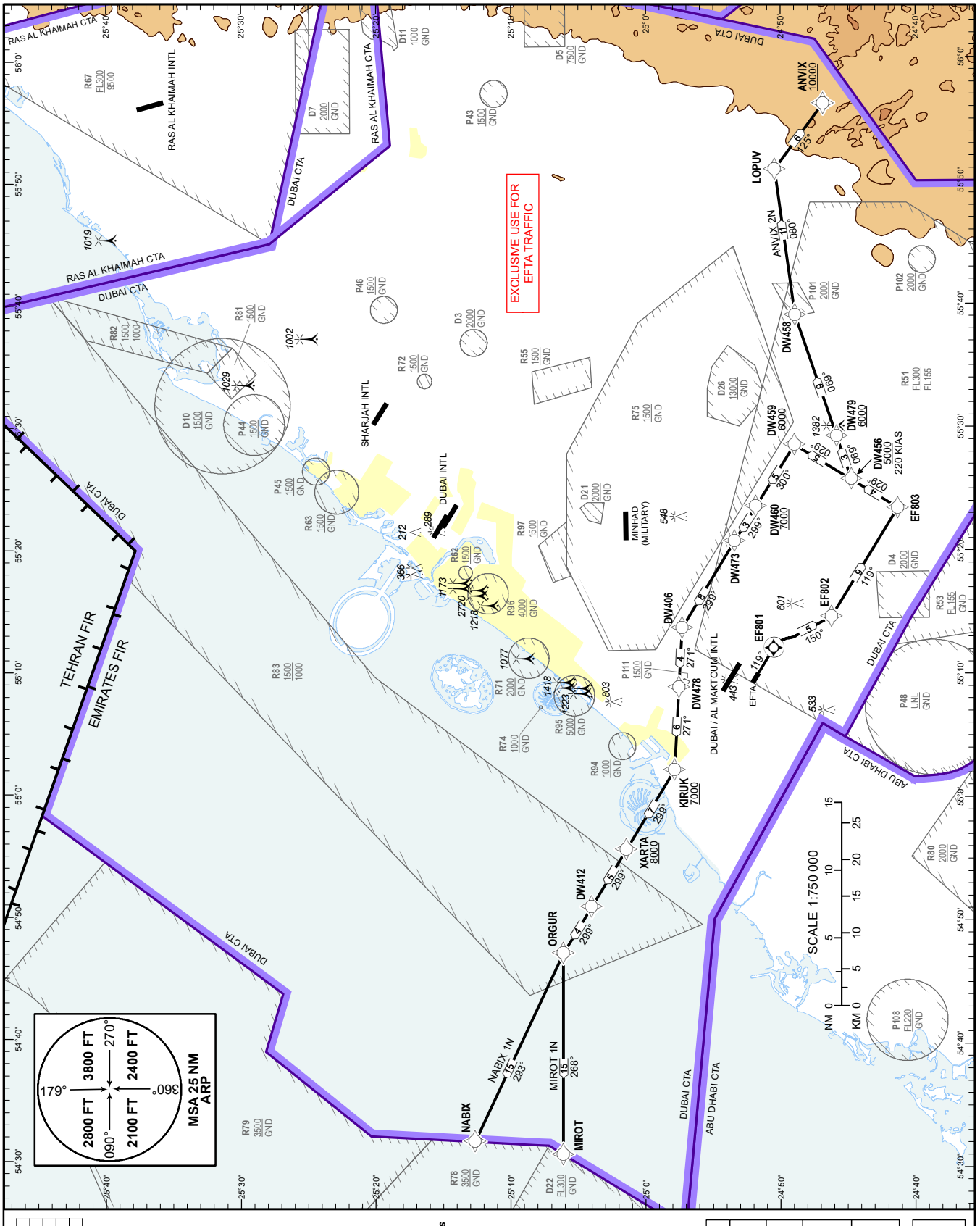
STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

AD ELEV 171 FT

DUBAI / AL MAKTOUM INTL

RNAV 1 SID RWY 13 (CAT A–B)

ANVIX 2N, MIROT 1N, NABIX 1N



AL MAKTOUM INTL	126.475	DEP
AL MAKTOUM RDR	124.025	PRI
DUBAI DEP N	126.200	PRI
DUBAI DEP S	121.025	PRI
ACADEMY TWR	118.775	PRI

FOR ROUTE DESCRIPTION SEE OMDW AD 2.22

TRANSITION ALTITUDE 13000 FT

VAR 2°E-2018

DIST IN NM
BEARINGS ARE MAGNETIC
ELEV, ALT, HGT IN FEET
SPEEDS ARE MAXIMUM
Refer ENR 5.1 for vertical limits details

Contour Legend: 6000, 5000, 4000, 3000, 2000, 1000

NOTES

Do not climb above ATC cleared level.

RESTRICTIONS

- RNAV 1 (GNSS) REQUIRED
- MAX 250 KIAS below 10000 FT
- 25° angle of bank required on all turns
- MNM (ATC) required climb gradient 5.0% to 8000 FT (300 FT per NM)
- Initial climb limited to 2000 FT. Further climb when instructed by ATC.

CLOSE-IN OBSTACLES

RWY 13 - POLE LIGHT 70m ALT, 439 m from departure end.

CHANGES: Added P111, R74. Editorial.

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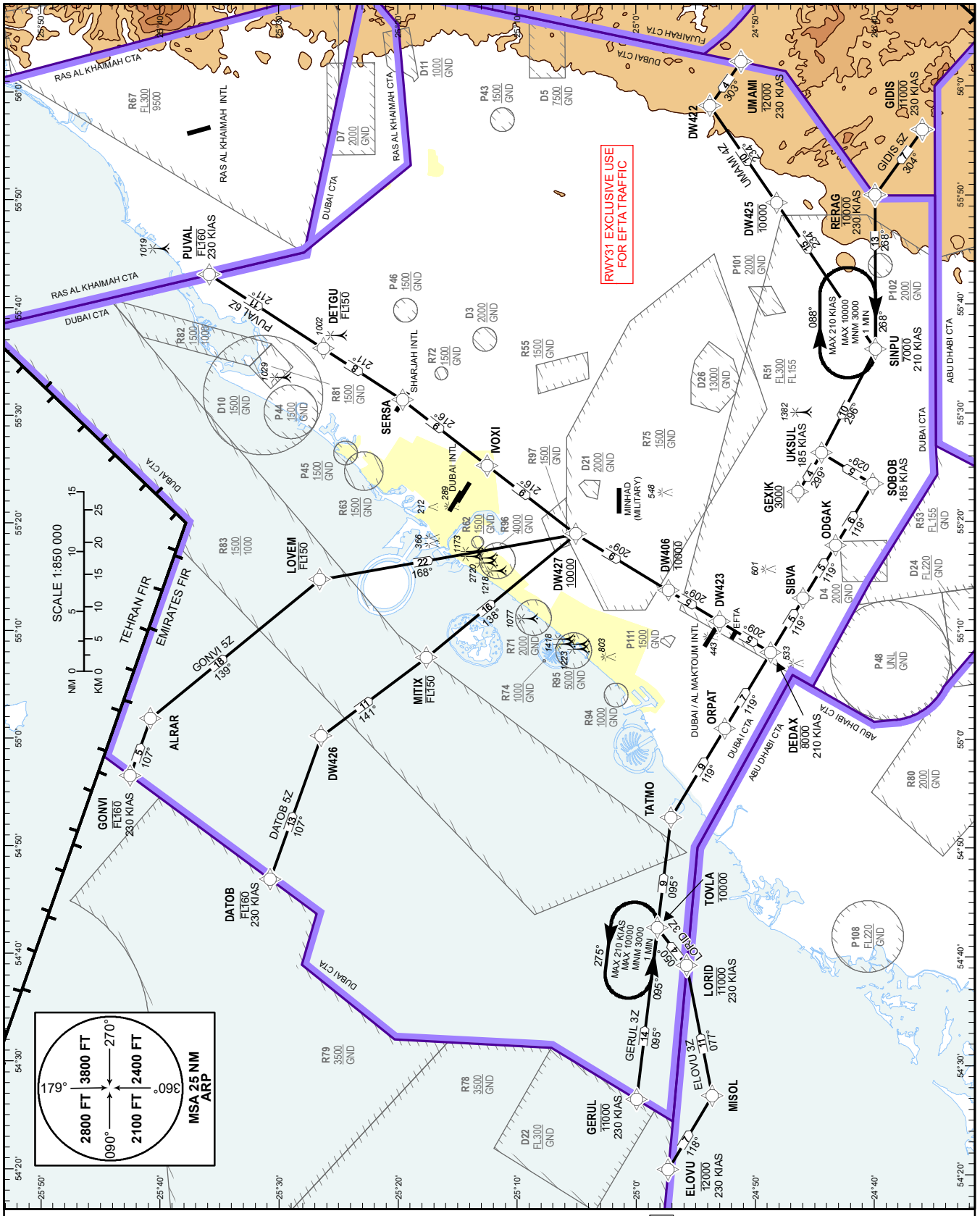
STANDARD ARRIVAL CHART-INSTRUMENT (STAR) - ICAO

AD ELEV 171 FT

DUBAI / AL MAKTOUM INTL

RNAV 1 STAR RWY 30 / 31

DATOB 5Z, ELOVU 3Z, GERUL 3Z, GIDIS 5Z, GONVI 5Z, LORID 3Z, PUVAL 6Z, UMAMI 4Z



AL MAKTOUM INTL	123.175	ARR
AL MAKTOUM RDR	124.025	PRI
DUBAI DEP N	126.200	PRI
DUBAI DEP S	121.025	PRI
DUBAI S RDR	120.400	PRI
AL MAKTOUM TWR	118.625	PRI
AL MAKTOUM GND	118.375	PRI
ACADEMY TWR	118.775	PRI

FOR ROUTE DESCRIPTION SEE OMDW AD 2.22

TRANSITION ALTITUDE 13000 FT

VAR 2°E-2018

DIST IN NM
BEARINGS ARE MAGNETIC
ELEV, ALT, HGT IN FEET
SPEEDS INTENDED TO BE "AT"
Refer ENR 5.1 for vertical limits details

Contour Legend 6000 5000 4000 3000 2000 1000

RESTRICTIONS

RNAV 1 (GNSS) REQUIRED

NOTES

Do not descend below ATC cleared level.

CAUTION: INDEPENDENT HIGH INTENSITY CIRCUIT TRAINING TRAFFIC SOUTH OF THE AIRFIELD

CHANGES: Added P111, R74.

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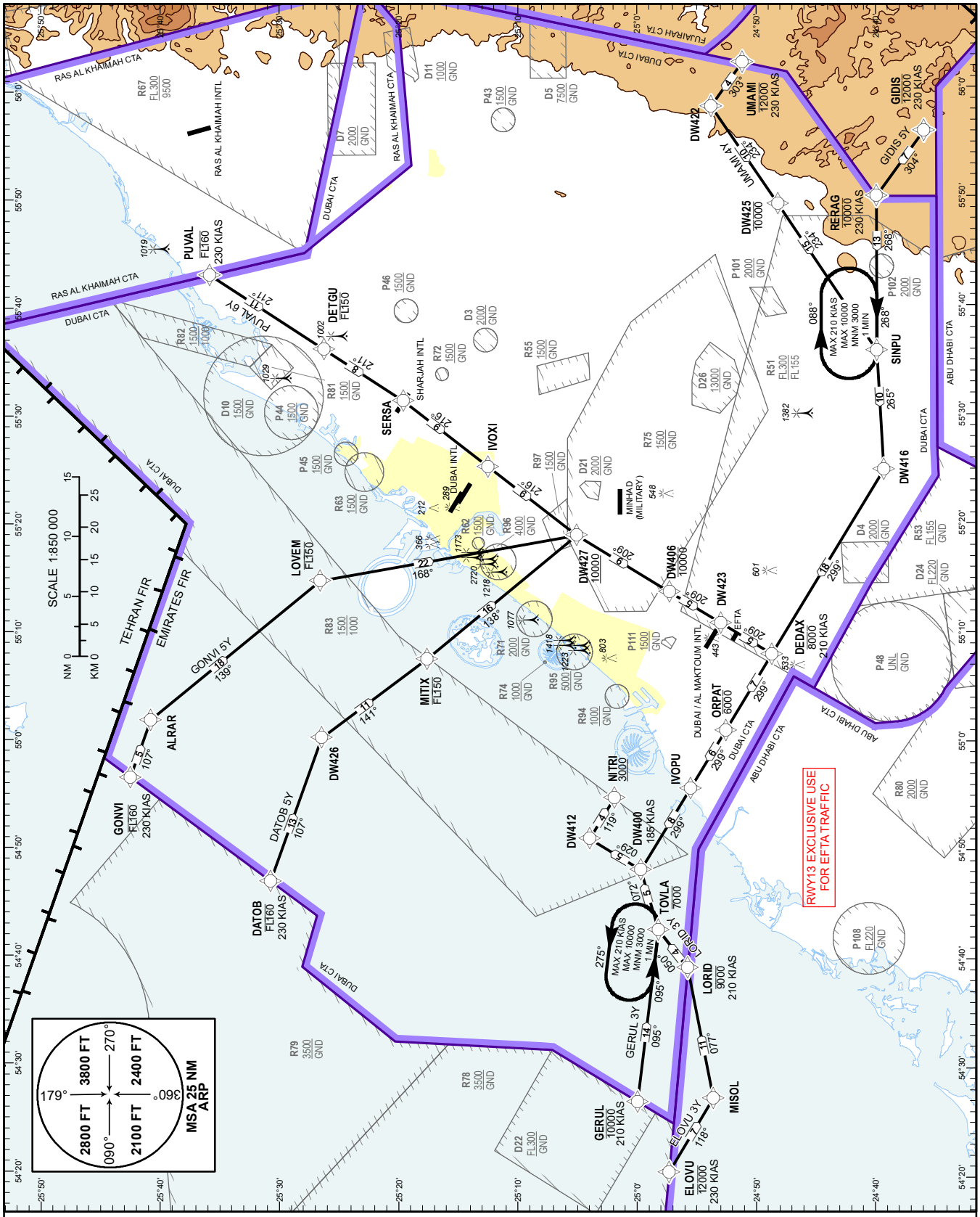
STANDARD ARRIVAL CHART-INSTRUMENT (STAR) - ICAO

AD ELEV 171 FT

DUBAI / AL MAKTOUM INTL

RNAV 1 STAR RWY 12 / 13

DATOB 5Y, ELOVU 3Y, GERUL 3Y, GIDIS 5Y, GONVI 5Y, LORID 3Y, PUVAL 6Y, UMAMI 4Y



AL MAKTOUM INTL	123.175	ARR
AL MAKTOUM RDR	124.025	PRI
DUBAI DEP N	126.200	PRI
DUBAI DEP S	121.025	PRI
DUBAI S RDR	120.400	PRI
AL MAKTOUM TWR	118.625	PRI
AL MAKTOUM GND	118.375	PRI
ACADEMY TWR	118.775	PRI

FOR ROUTE DESCRIPTION SEE OMDW AD 2.22

TRANSITION ALTITUDE 13000 FT

VAR 2°E-2018

DIST IN NM
BEARINGS ARE MAGNETIC
ELEV, ALT, HGT IN FEET
SPEEDS INTENDED TO BE "AT"
Refer ENR 5.1 for vertical limits details

Contour Legend 6000 5000 4000 3000 2000 1000

RESTRICTIONS

RNAV 1 (GNSS) REQUIRED

NOTES

Do not descend below ATC cleared level.

CAUTION: INDEPENDENT HIGH INTENSITY CIRCUIT TRAINING TRAFFIC SOUTH OF THE AIRFIELD

CHANGES: Added P111, R74. Editorial.

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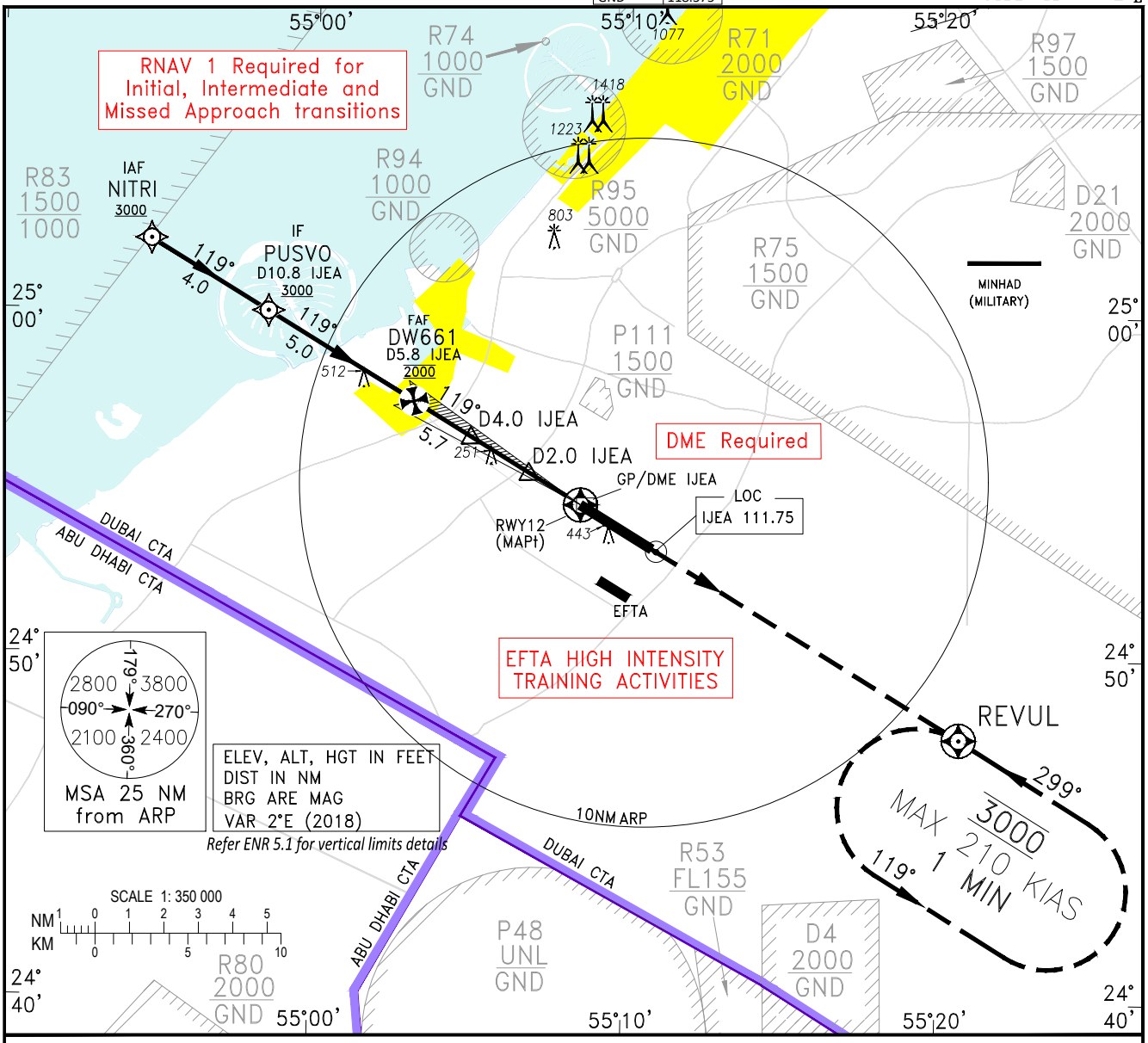
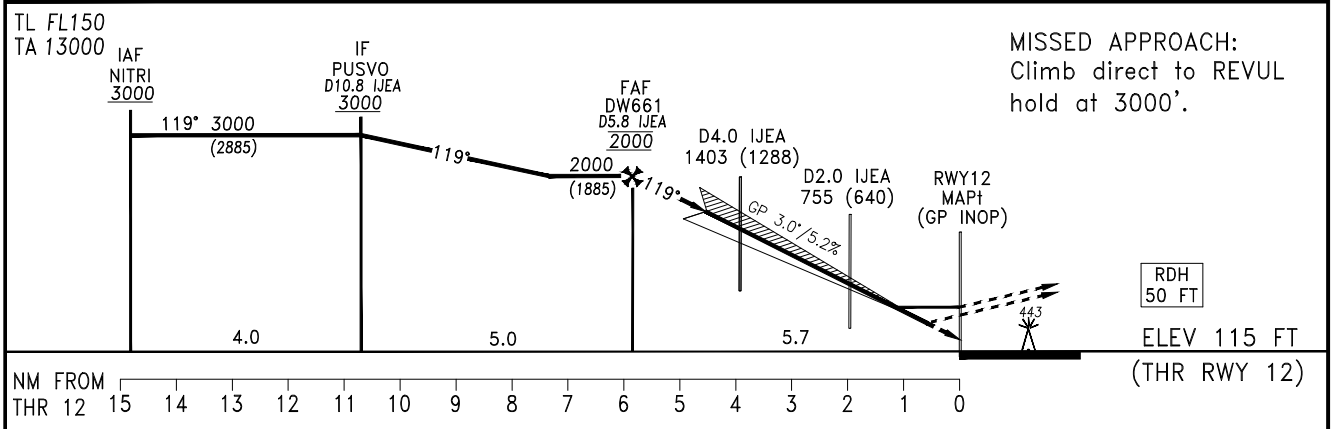
INSTRUMENT APPROACH CHART–ICAO

AD ELEV 171 FT
HEIGHTS RELATED TO THR RWY 12 ELEV 115 FT

ATIS (ARR)	123.175
AMR	124.025
DEP (N)	126.200
DEP (S)	121.025
DSR	120.400
TWR	118.625
GND	118.375

DUBAI/Al Maktoum Intl.
ILS RWY 12
CAT A – D_L





OCA/H		A	B	C	D	D_L
Straight–in Approach	ILS CAT I① MACG 3.0%	302 (187)	315 (200)	323 (208)	333 (218)	333 (218)
	ILS CAT II② MACG 3.0%	176 (61)	193 (78)	205 (90)	220 (105)	220 (105)
	GP INOP MACG 3.0%	520 (405)				
Circling		N/A				

ILS CAT III available MNM RVR 50M
①MNM DH CAT I A – 200FT
②MNM DH CAT II A, B, C – 100FT

Distance from IJEA	NM	5.8	4.8	3.8	2.8	1.8	0.8
Altitude	FT	1940	1630	1310	1000	680	370
Ground Speed	KT	80	100	120	140	160	180
Rate of Descent	FT/MIN	430	540	650	760	870	980

CHANGES: Added P111, R74. Editorial.

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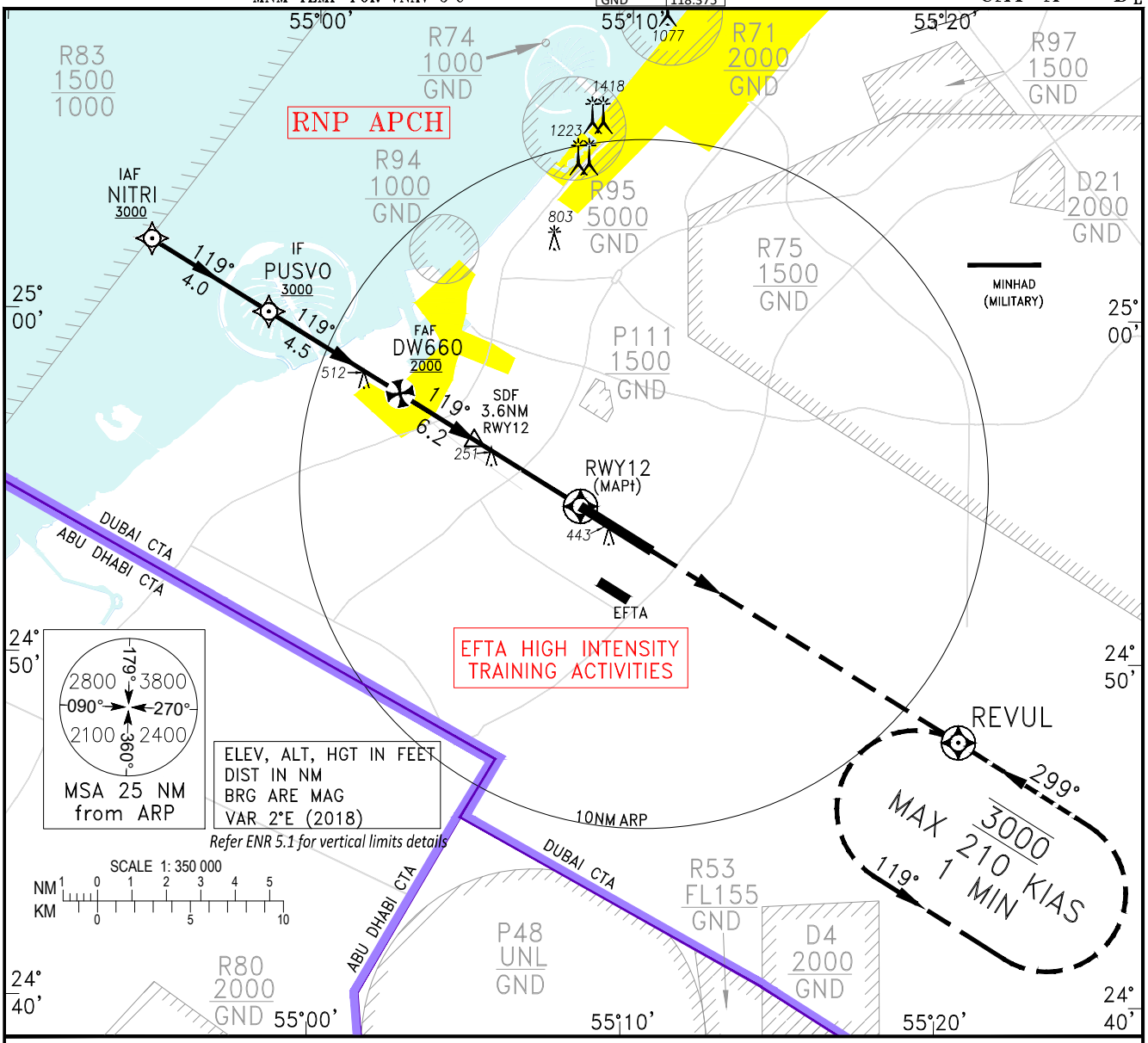
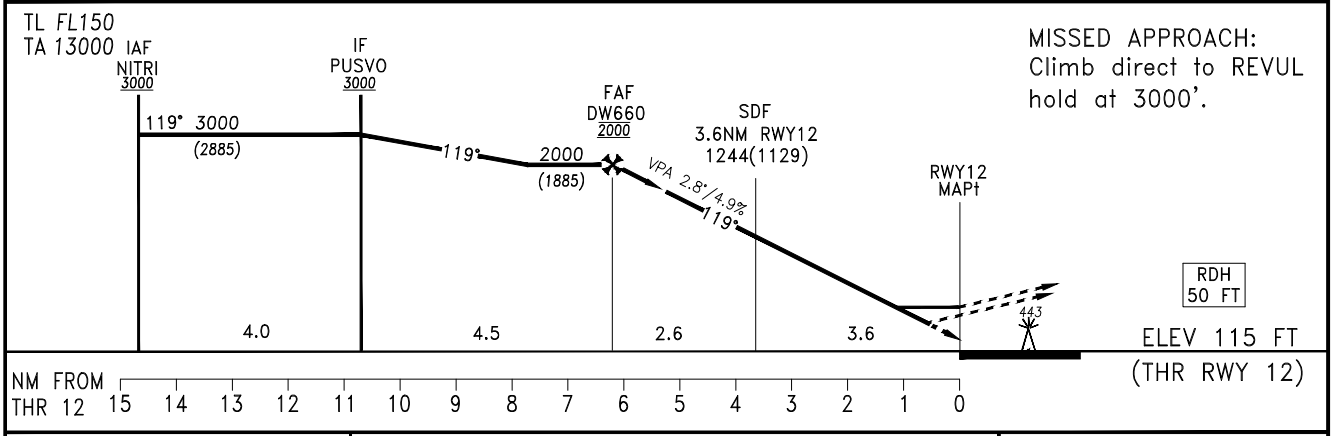
INSTRUMENT APPROACH CHART–ICAO

AD ELEV 171 FT
HEIGHTS RELATED TO THR RWY 12 ELEV 115 FT
MNM TEMP FOR VNAV 5°C

ATIS (ARR)	123.175
AMR	124.025
DEP (N)	126.200
DEP (S)	121.025
DSR	120.400
TWR	118.625
GND	118.375

DUBAI/Al Maktoum Intl.
RNP RWY 12
CAT A – D_L





OCA/H		A	B	C	D	D_L
Straight–in Approach	LNAV/VNAV MACG 3.00%	466 (351)	475 (360)	480 (365)	487 (372)	487 (372)
	LNAV MACG 3.00%	550 (435)				
Circling		N/A				

Distance from RWY12	NM	6.1	5.1	4.1	3.1	2.1	1.1
Altitude	FT	1970	1680	1380	1080	780	490
Ground Speed	KT	80	100	120	140	160	180
Rate of Descent	FT/MIN	400	500	610	710	810	910

CHANGES: Added P111, R74. Editorial.

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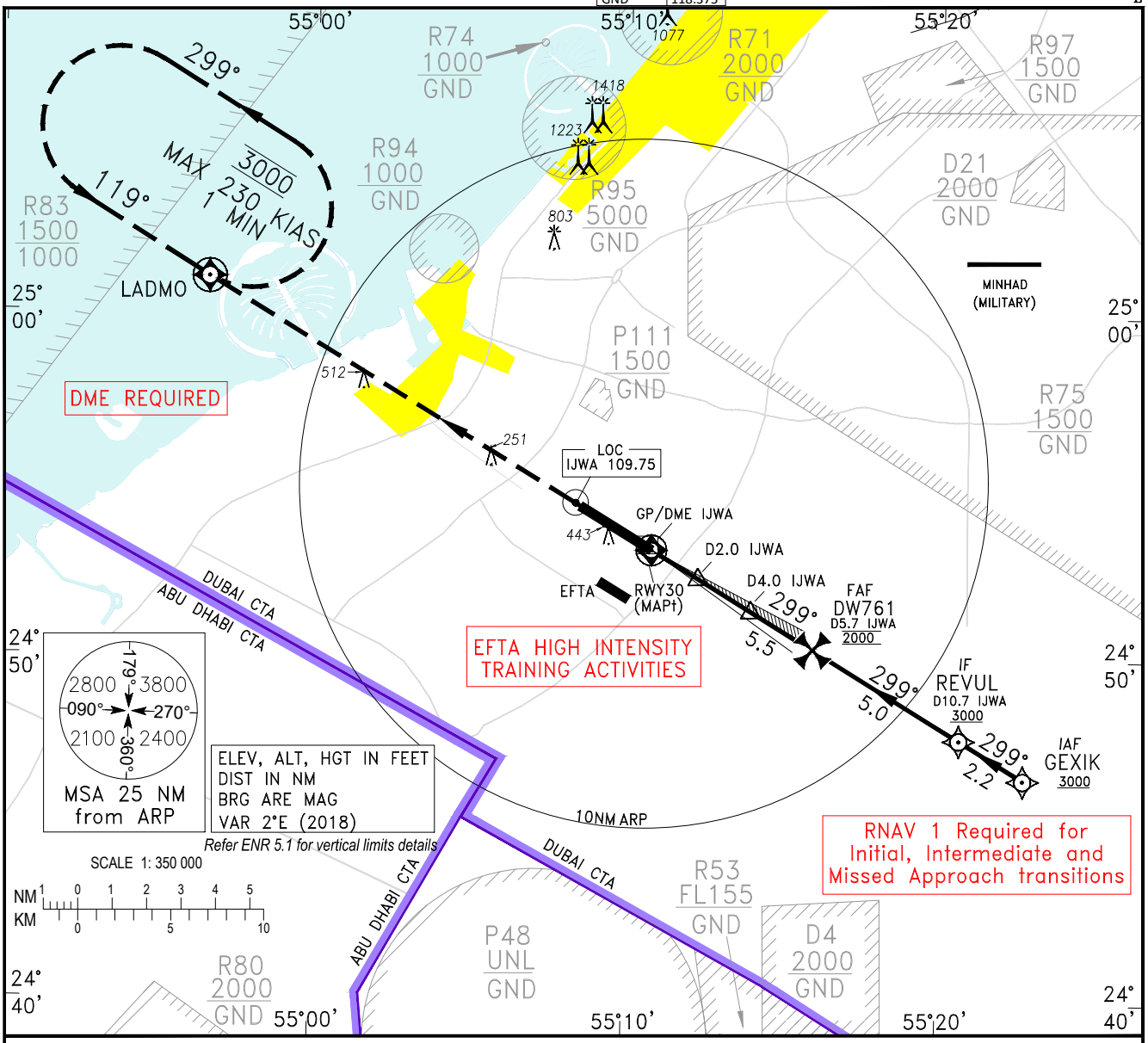
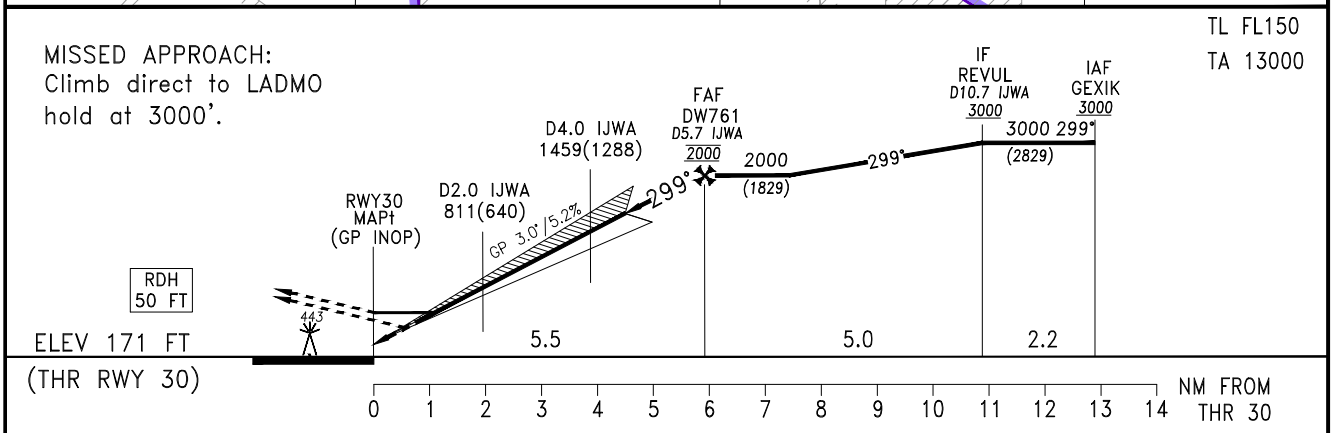
INSTRUMENT APPROACH CHART–ICAO

AD ELEV 171 FT
HEIGHTS RELATED TO THR RWY 30 ELEV 171 FT

ATIS (ARR)	123.175
AMR	124.025
DEP (N)	126.200
DEP (S)	121.025
DSR	120.400
TWR	118.625
GND	118.375

DUBAI/Al Maktoum Intl.
ILS RWY 30
CAT A – D_L





OCA/H		A	B	C	D	D_L
Straight-in Approach	ILS CAT I① MACG 3.0%	326 (155)	339 (168)	347 (176)	357 (186)	357 (186)
	ILS CAT II② MACG 3.0%	238 (67)	256 (85)	267 (96)	282 (111)	282 (111)
	GP INOP MACG 3.0%	480 (309)				
Circling		N/A				

ILS CAT III available MNM RVR 50M
① MNM DH CAT I A,B,C,D,D_L – 200FT
② MNM DH CAT II A,B,C – 100FT

Distance from IJWA	NM	5.7	4.7	3.7	2.7	1.7	0.7
Altitude	FT	1990	1670	1350	1030	710	400
Ground Speed	KT	80	100	120	140	160	180
Rate of Descent	FT/MIN	440	550	660	770	880	990

CHANGES: Added P111, R74. Editorial.

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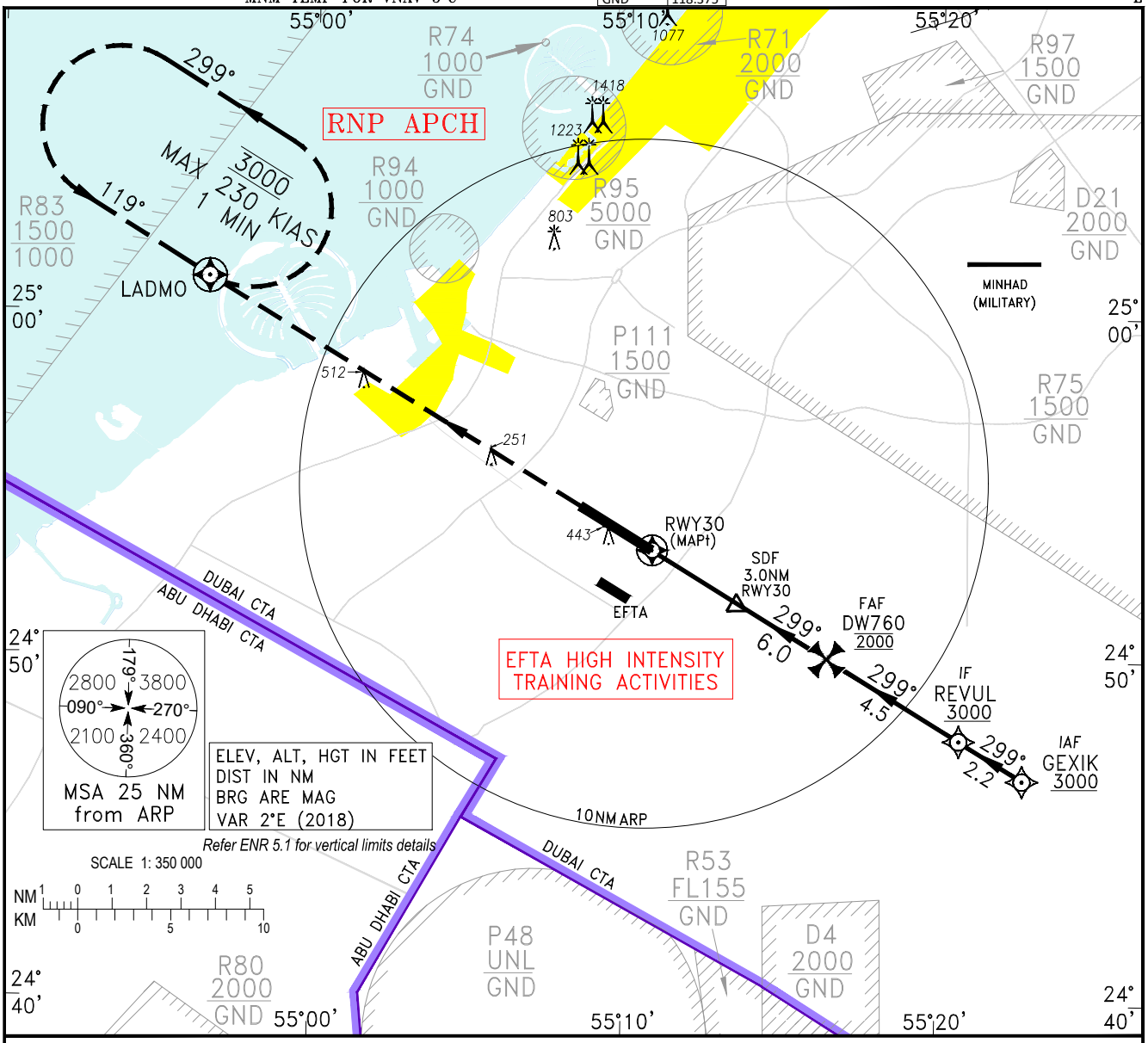
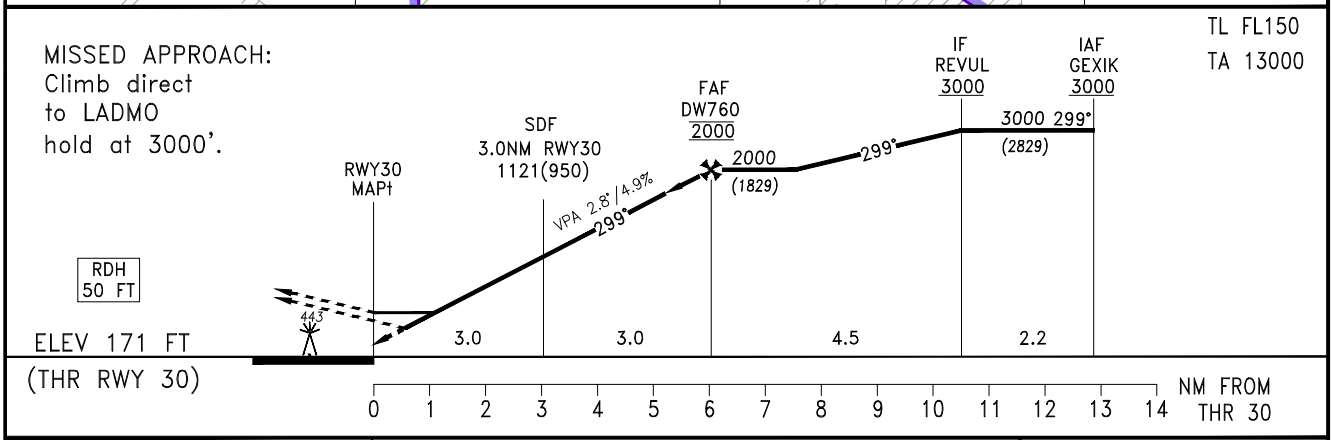
INSTRUMENT APPROACH CHART–ICAO

AD ELEV 171 FT
HEIGHTS RELATED TO THR RWY 30 ELEV 171 FT
MNM TEMP FOR VNAV 5°C

ATIS (ARR)	123.175
AMR	124.025
DEP (N)	126.200
DEP (S)	121.025
DSR	120.400
TWR	118.625
GND	118.375

DUBAI/Al Maktoum Intl.
RNP RWY 30
CAT A – D_L





OCA/H		A	B	C	D	D_L
Straight–in Approach	LNAV/VNAV① MACG 3.00%	404 (233)	416 (245)	428 (257)	457 (286)	457 (286)
	LNAV MACG 3.00%	570 (399)				
Circling		N/A				

①LNAV/VNAV DH 250 FT ACFT CAT A,B.

Distance from RWY30	NM	5.9	4.9	3.9	2.9	1.9	0.9
Altitude	FT	1970	1670	1370	1080	780	480
Ground Speed	KT	80	100	120	140	160	180
Rate of Descent	FT/MIN	400	500	610	710	810	910

CHANGES: Added P111, R74. Editorial.

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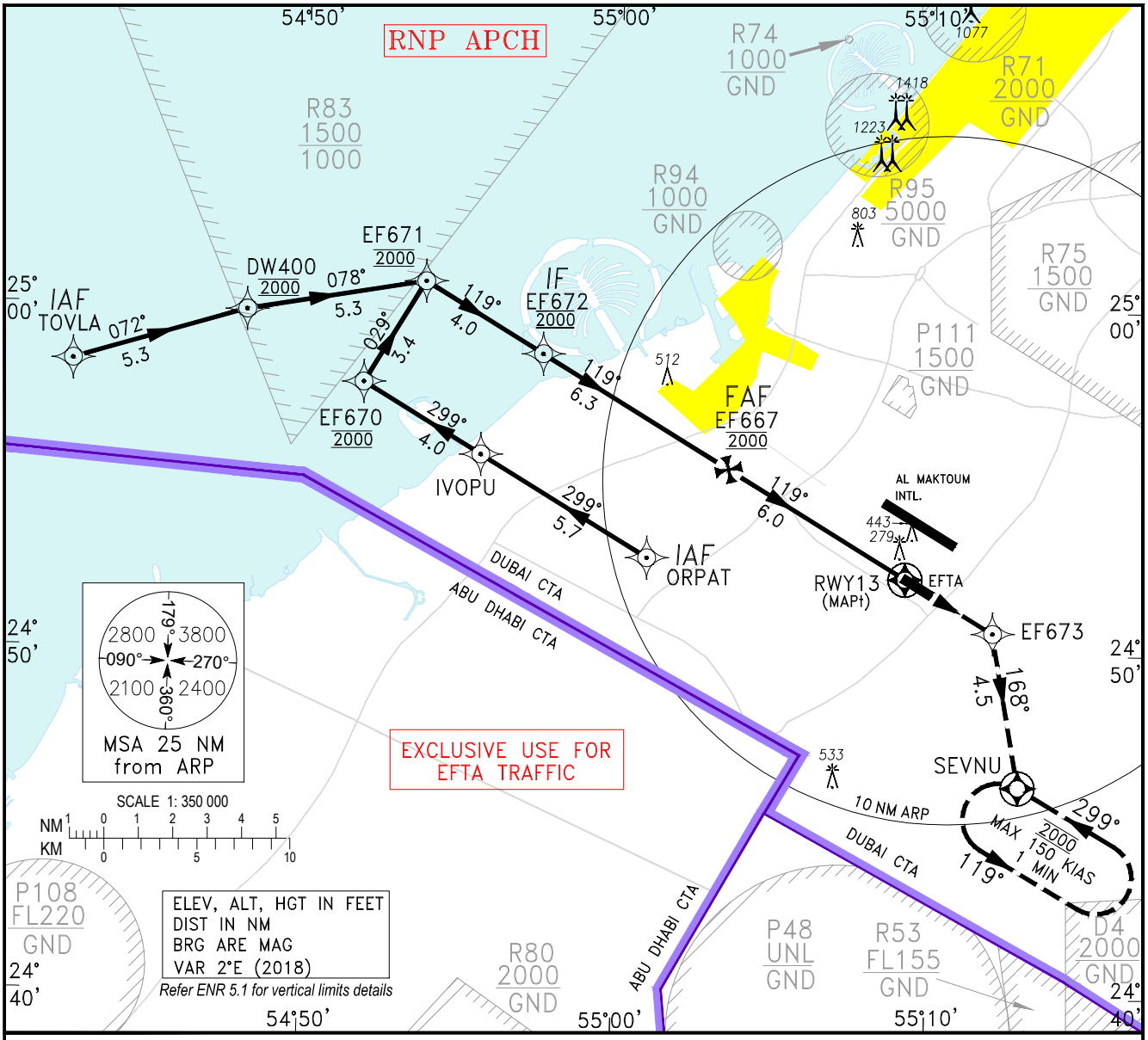
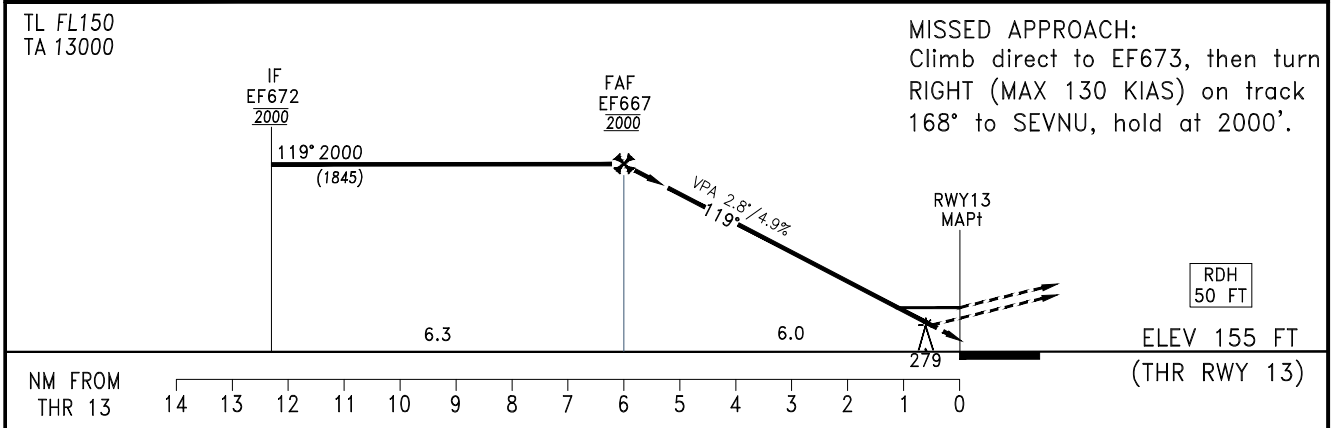
INSTRUMENT APPROACH CHART-ICAO

AD ELEV 171 FT
HEIGHTS RELATED TO THR RWY 13 ELEV 155FT
MNM TEMP FOR VNAV 5°C

AMR	124.025
DSR	120.400
EFTA TWR	118.775

DUBAI/Al Maktoum Intl.
RNP RWY 13
CAT A - B

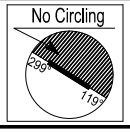




MISSED APPROACH:
Climb direct to EF673, then turn RIGHT (MAX 130 KIAS) on track 168° to SEVNU, hold at 2000'.

OCA/H		A	B
Straight-in Approach	LNAV/VNAV MACG 3.50%	409 (254)	421 (266)
	LNAV MACG 3.50%	530 (375)	
Circling (1)		740 (569)	

(1) Circling not authorised N of the runway centreline



Distance from RWY13	NM	6.0	5.0	4.0	3.0	2.0	1.0
Altitude	FT	1990	1690	1390	1090	800	500
Ground Speed	KT	80	100	120	140		
Rate of Descent	FT/MIN	400	500	610	710		

CHANGES: Added P111, R74. Editorial.

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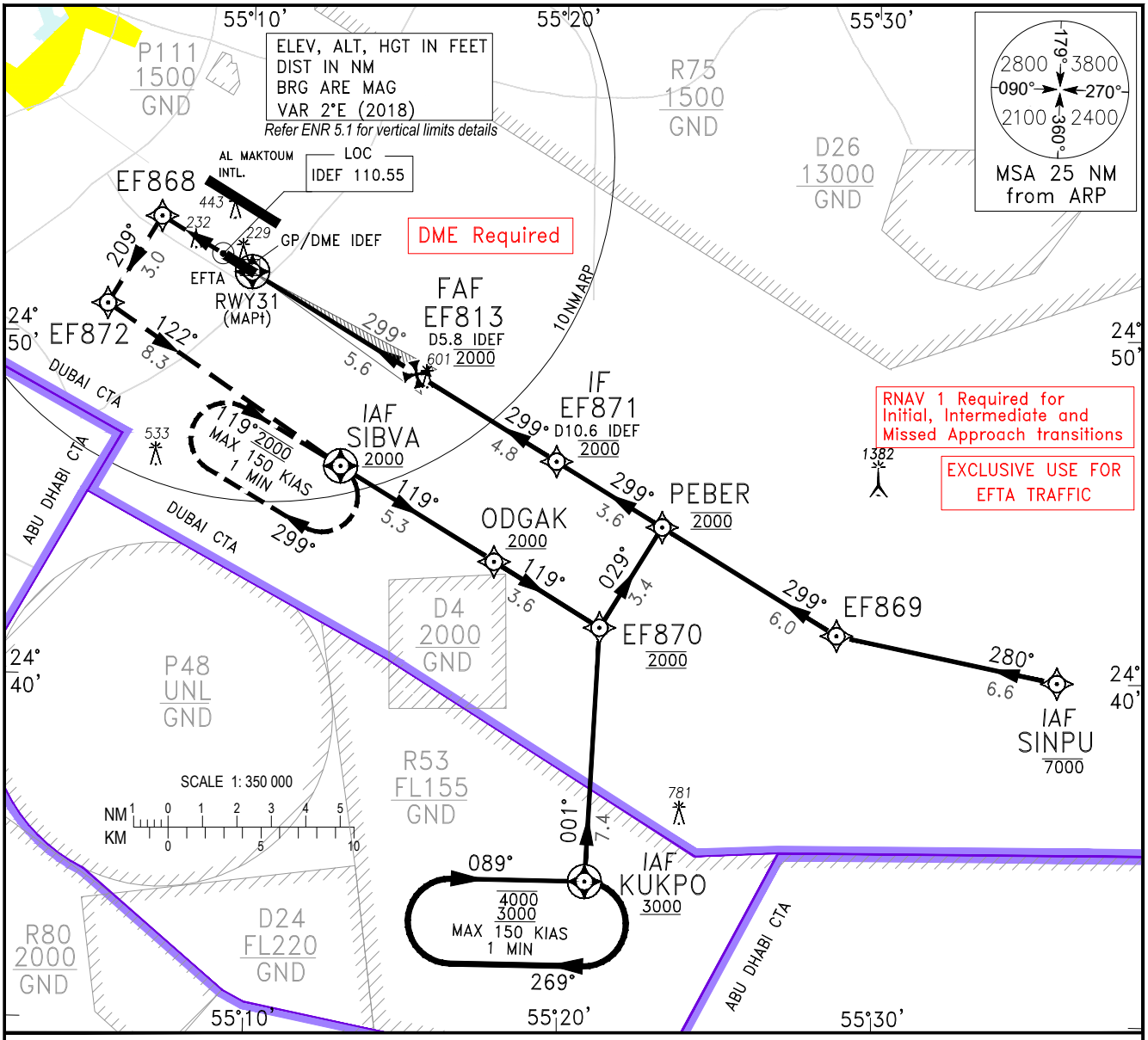
INSTRUMENT APPROACH CHART-ICAO

AD ELEV 171 FT
HEIGHTS RELATED TO
THR RWY 31 ELEV 155FT

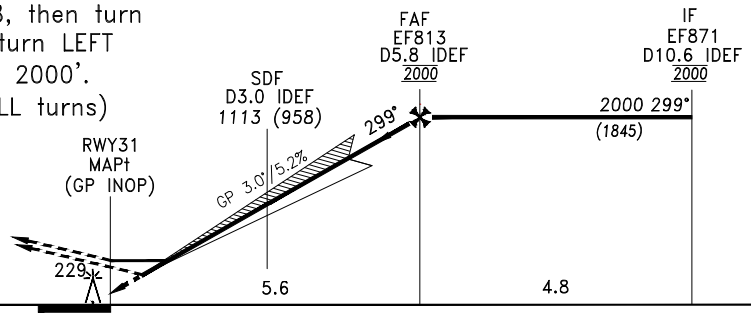
AMR	124.025
DSR	120.400
EFTA TWR	118.775

DUBAI/Al Maktoum Intl.
ILS RWY 31
CAT A - B



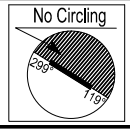
MISSED APPROACH:
Climb direct to EF868, then turn LEFT to EF872, then turn LEFT to SIBVA and hold at 2000'.
(MAX 130 KIAS for ALL turns)

TL FL150
TA 13000



OCA/H		A	B
Straight-in Approach	ILS CAT I	360 (205)	372 (217)
	GP INOP	480 (325)	
Circling		740 (569)	

(1) Circling not authorised N of the runway centreline



Distance from IDEF	NM	5.8	4.8	3.8	2.8	1.8	0.8
Altitude	FT	1990	1670	1350	1040	720	400
Ground Speed	KT	80	100	120	140		
Rate of Descent	FT/MIN	420	530	630	740		

CHANGES: Added P111. Editorial.

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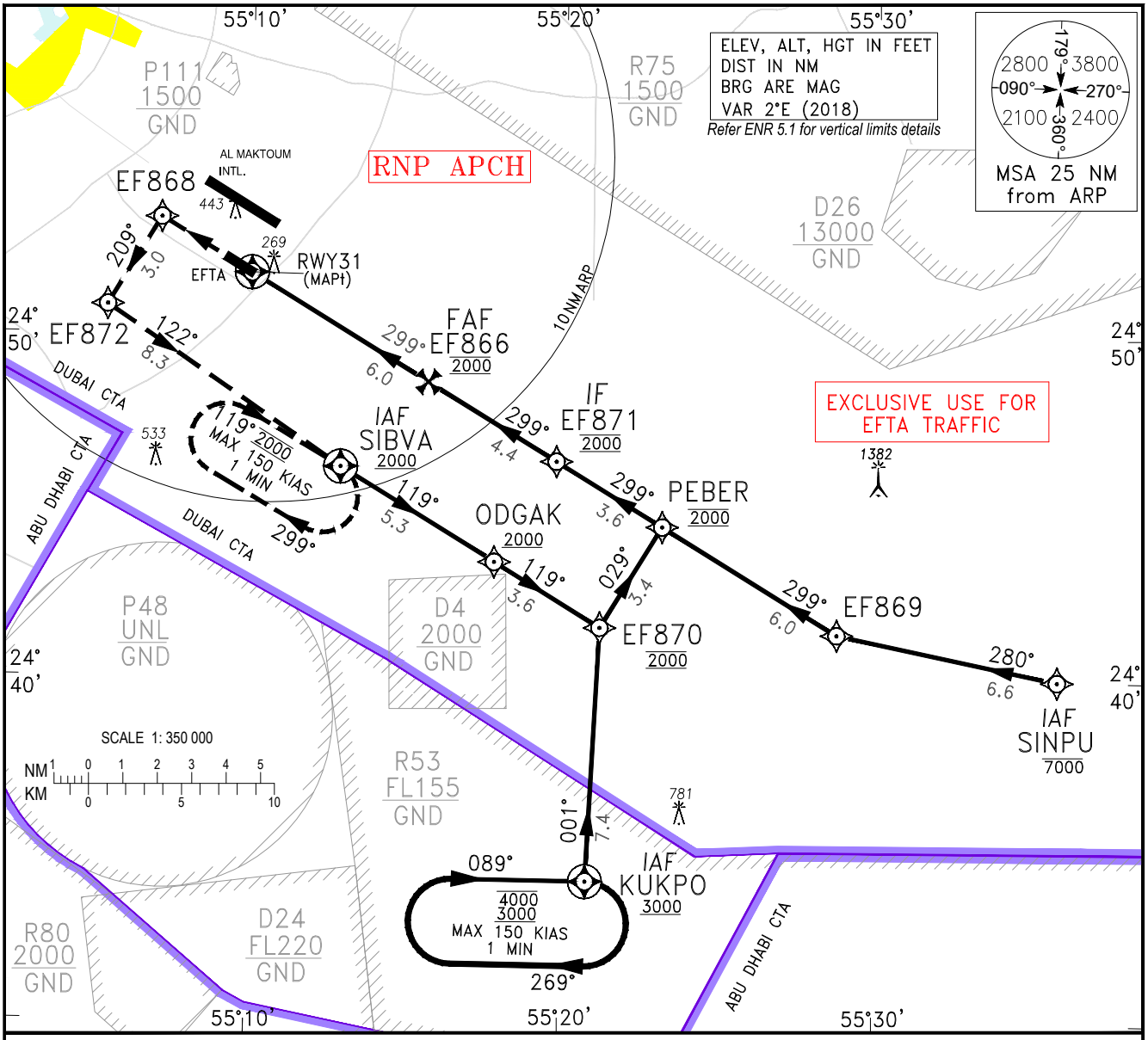
INSTRUMENT APPROACH CHART-ICAO

AD ELEV 171 FT
HEIGHTS RELATED TO THR RWY 31 ELEV 155FT
MNM TEMP FOR VNAV 5°C

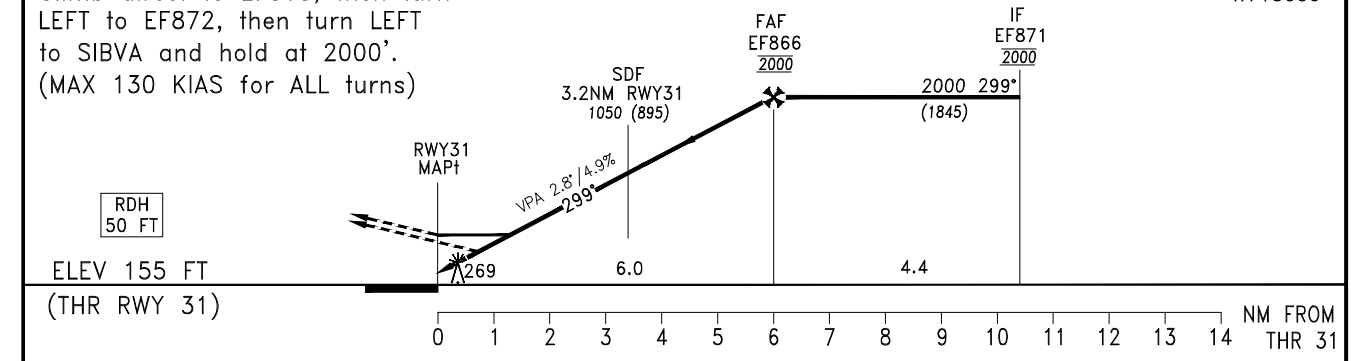
AMR	124.025
DSR	120.400
EFTA TWR	118.775

DUBAI/Al Maktoum Intl.
RNP RWY 31
CAT A - B



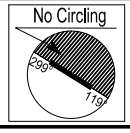
MISSED APPROACH:
Climb direct to EF868, then turn LEFT to EF872, then turn LEFT to SIBVA and hold at 2000'.
(MAX 130 KIAS for ALL turns)

TL FL150
TA 13000



OCA/H		A	B
Straight-in Approach	LNAV/VNAV MACG 4.00%	405 (250)	411 (256)
	LNAV MACG 4.00%	520 (365)	
Circling		740 (569)	

(1) Circling not authorised N of the runway centreline



Distance from RWY31	NM	6.0	5.0	4.0	3.0	2.0	1.0
Altitude	FT	1990	1690	1390	1090	800	500
Ground Speed	KT	80	100	120	140		
Rate of Descent	FT/MIN	400	500	610	710		

CHANGES: Added P111. Editorial.

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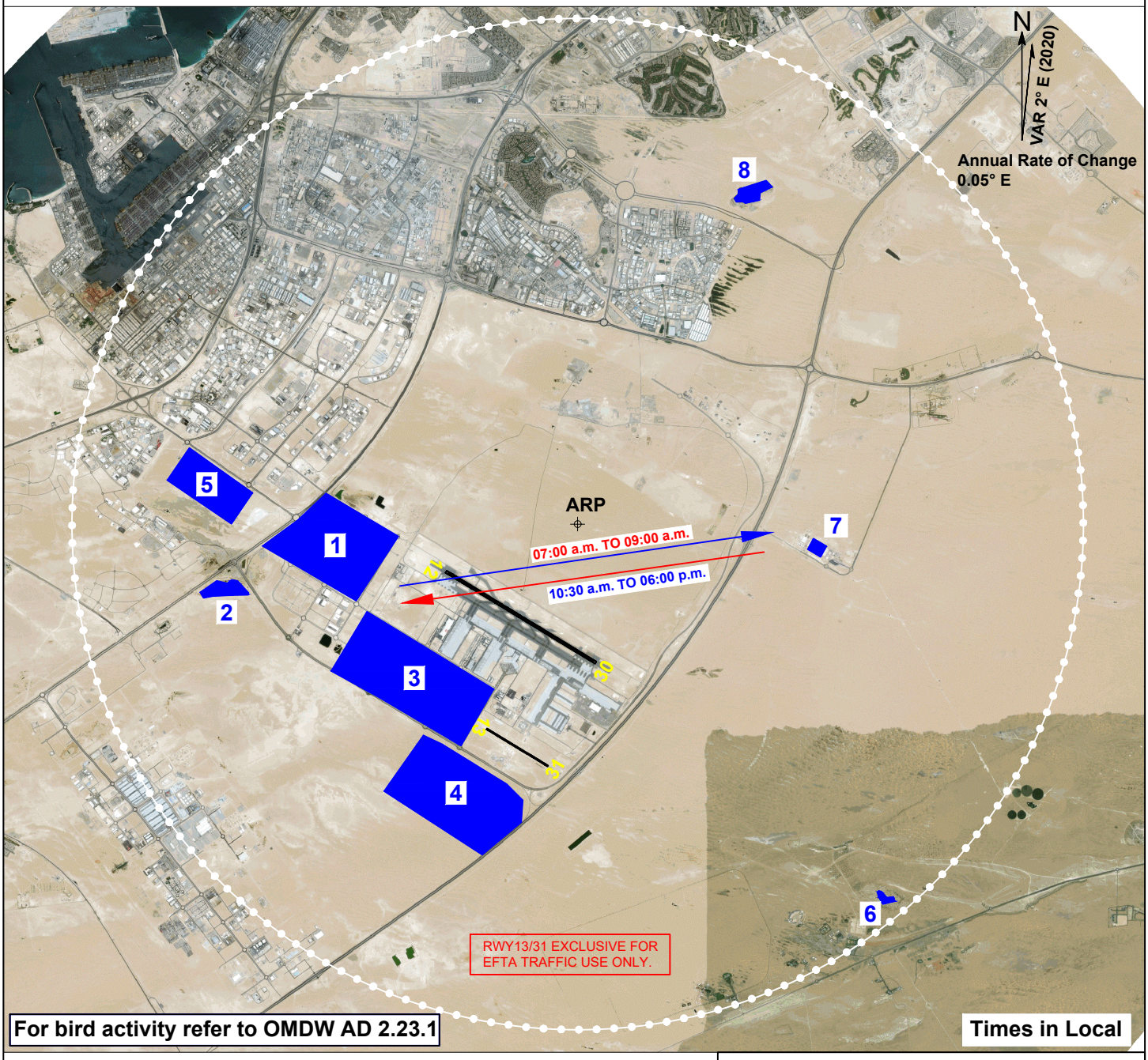
BIRD CONCENTRATION CHART

DUBAI / Al Maktoum Intl.



LEGEND

- 13 KM RADIUS FROM ARP
- SPECIAL BIRD HAZARD ZONE
- 1 DUBAI SOUTH HQ
- 2 DUBAI SOUTH WATER STORAGE PONDS
- 3 LOGISTICS CITY
- 4 EMAAR SOUTH
- 5 DUBAI MUNICIPALITY WASTE PLANT (DMWP)
- 6 SAIH AL SALAM LAKE
- 7 DEWA WASTE PLANT
- 8 DIP LAKE
- BIRD MOVEMENT

NOT TO SCALE

CHANGES: Editorial.

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