

European Union Aviation Safety Agency

Comment-Response Document 2020-10 Part 1 (CS-ADR-DSN)

RELATED NPA: 2020-10 - RMT.0591 - 29.3.2022

NOTE: PART 1 OF THIS CRD ADDRESSES THE COMMENTS SUBMITTED ON THE PROPOSED AMENDMENTS TO CS-ADR-DSN INCLUDED IN <u>NPA 2020-10</u>.

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1. Summary of the outcome of the consultation

NPA 2020-10 was published on 17 November 2020 and open for public consultation for a period of 3 months. Following a request received from one of the stakeholders, EASA decided to extend the public consultation of the NPA by 3 weeks until 10 March 2021.

In total, a number of 286 comments have been submitted by 31 stakeholders: 11 national competent authorities (NCA), 19 organisations representing the industry and 1 individual.



This NPA included proposed amendments to Commission Regulation (EU) No 139/2014 and its Acceptable Means of Compliance (AMC) and Guidance Material (GM), as well as to the CS&GM of CS-ADR-DSN:

- 196 comments on the proposed amendments to Commission Regulation (EU) No 139/2014 and its AMC/GM; and
- 90 comments on the proposed amendments to CS-ADR-DSN.

The distribution of comments is as follows:





A summary of the main comments received on the proposed amendments to CS-ADR-DSN and the most significant changes made compared with the text proposed in NPA 2020-10 is provided in Section 2.4 of the Explanatory Note to Decision 2022/006/R, while individual replies are provided in Section 2 of this CRD.



In responding to the comments, the following terminology has been applied to attest EASA's position:

- (a) **Accepted** EASA agrees with the comment and any proposed amendment is wholly transferred to the revised text.
- (b) **Partially accepted** EASA either partially agrees with the comment, or agrees with it but the proposed amendment is only partially transferred to the revised text.
- (c) **Noted** EASA acknowledges the comment, but no change to the existing text is considered to be necessary.
- (d) Not accepted The comment or proposed amendment is not agreed by EASA.

General Comments

(General Comments) -		
comment	8 comment by: <i>GdF</i>	
	The fact that the CRT still relies on Adobe Flash is highly regrettable. Please remember that this software will be deprecated at the end of 2020 and won't be available in the future.	
	Thank you for the high quality NPA.	
	Frohe Weihnachten und einen guten Rutsch!	
response	Noted.	
	EASA is currently working to improve the CRT.	
comment	20 comment by: ACI Europe	
	ACI welcomes this well drafted NPA which provides clear explanations and references aiding good readability of this draft regulation. However, due to the COVID-19 pandemic and the devastating effect on the aviation industry, many airports have been working with severely reduced staff levels. For this reason receiving feedback from ACI members has been limited. Extending the deadline for this RMT would be appreciated in order to allow for wider and more extensive commenting.	
	We suggest to bring include the new article on Alternative centre lines for aircraft stand taxilanes or apron taxiways (CS ADR-DSN.D.261) in this draft regulation.	
response	Noted.	
	EASA extended the consultation period, in order to give more time to aerodromes to provide their comments. Regarding the inclusion of alternative centre lines for	



aircraft stand taxi lanes, EASA is of the opinion that it is not mature enough to be included. comment 103 comment by: AOPA Sweden **AOPA** Sweden In this case it seems that the proposal does not concern general aviation to any greater extent so AOPA Sweden refrain from commenting on this NPA. Fredrik Brandel Member of the board **AOPA Sweden** Noted. response comment 138 comment by: Civil Aviation Authority the Netherlands The CAA the Netherlands welcomes the proposed changes to implement ICAO SARP's and improve safety. It is important that the ICAO SARP's and European regulations are in line with each other. Noted. response comment 142 comment by: FNAM FNAM (Fédération Nationale de l'Aviation Marchande) welcomes this Notice of Proposed Amendment and fully support comments and proposals from Airports Council International (ACI). response Noted. EASA would like to thank FNAM for their support. comment 148 comment by: ACI Europe Consider adding the following items that have not been included in NPA 2020-10: 1. CS ADR-DSN.D.325 Grading of taxiway strips referring to: (b) The centre portion of a taxiway strip should provide a graded area to a distance from the centre line of the taxiway of not less than that given by the following tabulation: (1) 10.25 m where the OMGWS is up to but not including 4.5 m; (2) 11 m where the OMGWS is 4.5 m up to but not including 6 m; (3) 12.50 m where the OMGWS is 6 m up to but not including 9 m; (4) 18.50 m where the OMGWS is 9 m up to but not including 15 m, where the code letter is D; (5) 19 m where the OMGWS is 9 m up to but not including 15 m, where the code letter is E;



(6) 22 m where the OMGWS is 9 m up to but not including 15 m, where the code letter is F.

Consider adding the above including:

The tabulation does not consider code C aircraft with a OMGWS greater than 9 m, such as the Q400. The missing specification should be added accordingly.

2. CS ADR-DSN.M.745 Runway guard lights (b) referring to:

As part of runway incursion prevention measures, runway guard lights, Configuration A or B, should be provided at each taxiway/runway intersection where runway incursion hot spots have been identified, and used under all weather conditions during day and night.

Consider adding and clarifying the above considering the following aspects:

In order to highlight the importance of the use of runway guard lights at all taxiway/runway intersections (not only at identified hot spots), the information regarding their operation (during day and night and under all weather conditions) could be highlighted clearer.

Example: "Where runway guard lights (configuration A or B) are provided, they should be used under all weather conditions during day and night."

See also GM1 ADR-DSN.D.240: "Stopbars and runway guard lights should be provided at all entrances, and preferably illuminated H24 and in all weather conditions."

3. CS.ADR-DSN.M.730 Stop bars (b) referring to:

Location: Stop bars should be located across the taxiway at the point where it is desired that traffic stop.

Consider adding the above considering the following aspects:

Compared to intermediate holding position lights, the location of inset stop bar lights in relation to the respective runway/intermediate holding position marking is not clearly defined.

The distance between intermediate holding position lights and markings is exactly defined in **CS ADR-DSN.M.735**: "Location: Intermediate holding position lights should be located along the intermediate holding position marking at a distance of 0.3 m prior to the marking."

response CS ADR-DSN.D.325 Grading of taxiway strips

Noted.

The issue will be addressed to ICAO for further assessment.

CS ADR-DSN.M.745 Runway guard lights (b)

Noted.

The proposed amendment to CS ADR-DSN.M.745 is in line with the corresponding SARP of ICAO Annex 14, Volume I.

CS.ADR-DSN.M.730 Stop bars (b) Noted.



The proposed amendment to CS ADR-DSN.M.745 is in line with the corresponding SARP of ICAO Annex 14, Volume I.

comment	241 comment by: AIRBUS
	General comment on Apron strength consideration within CS-ADR
	Comment:
	Airbus suggests adding considerations for assessing apron pavement strength and design in CS-ADR.
	Rationale:
	Annex 14 & related Doc 9157 provides considerations for assessing pavement strength and design. These guidelines are also applicable to Apron.
	CS-ADR only addresses runway and taxiway strength via ADR-DSN.B.085 and ADR-DSN.D.285 respectively.
response	Accepted.
	CS ADR-DSN.E.355 already contains the design specifications regarding the strength of aprons.
	For clarity, in GM1 ADR-DSN.E.355 two new paragraphs are added regarding the reference to ICAO Doc 9157, Part 3 and the reporting method for reporting the bearing strength of the pavement (in line with GM1 ADR-DSN.B.085 and GM1 ADR-DSN.D.285).

comment	287 comment by: Irish Aviation Authority
	Comment: Editorial. The terms 'aeroplane' and 'aircraft' are both used in this document. Since 'aircraft' is the most general term, it is suggested that this is used, unless an issue is specifically intended to apply to aeroplanes only.
response	Noted.
	The use of the terms 'aeroplane' and 'aircraft' is in line with ICAO Annex 14, Volume I.
comment	298 comment by: European Powered Flying Union
	European Powered Flying Union (EPFU) thanks the Agency for preparing this NPA.
response	Noted.

CS-ADR-DSN

3.2. CS-ADR-DSN - GM1 ADR-DSN.A.005 p.	29
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comment	276	comment by: AESA Spain
	Since there are y believe it should Code element 3	various requirements where the OMGWS is the key element, we be included as the third element of the ARC:
	Code number	Outer Main Gear Wheel Span (OMGWS)
	1	Up to but not including 4.5 m
	П	4.5 m up to but not including 6 m
	111	6 m up to but not including 9 m
	IV	9 m up to but not including 15 m.
response	Not accepted.	
	CS ADR-DSN.A.00	5 is in line with the corresponding SARP of ICAO Annex 14, Volume I.

3.2. CS-ADR-DSN - GM1 ADR-DSN.B.070

p. 29

comment	277	comment by: AESA Spain
	No comments as long as it remains GM. Spain would not agree with this GM becoming a CS.	
response	Noted.	

3.2. CS-ADR-DSN - GM1 ADR-DSN.B.085

р. 29-30

comment	232 comment by: AIRBUS
	GM1 ADR-DSN.B.085 Runway strength, Paragraph (a)
	Comment:
	The guidance material to be used for assessing pavement bearing strength & design depends on the pavement reporting system considered (PCN or PCR) (refer to rationale below).
	GM1 ADR-DSN.B.085 should be updated to properly identify the guidance material to be considered.
	(a) Additional information on the bearing strength, the design and evaluation of pavements is given:
	(1) Until 27 November 2024: in the 2nd Edition of ICAO Doc 9157, Aerodrome Design Manual, Part 3, Pavements.
	(2) As of 28 November 2024: in the 3rd Edition of ICAO Doc 9157, Aerodrome Design Manual, Part 3, Pavements.
	Rationale:



Method for assessing the PCN is given in the 2nd Edition of ICAO Doc 9157, Aerodrome Design Manual, Part 3, Pavements.

Method for assessing the PCR is given in the <u>3rd Edition</u> of ICAO Doc 9157, Aerodrome Design Manual, Part 3, Pavements.

response Not accepted.

3.2. CS-ADR-DSN - GM1 ADR-DSN.B.095

р. 30

comment	290	comment by: Irish Aviation Authority	
	The proposed amendment is noted.		
	In addition, and with reference to ICAO Doo Runway Turn Pads, sub section 2.4.5 does p turn pad not provided in accordance with An	c. 9981 PANS-Aerodromes, Section 2.4 ermit the operation of an aircraft on a nex 14, Volume I specifications.	
	Given that some aerodromes have non-st beneficial to include this flexibility within impractical for such aerodromes to implem contained in CS-ADR-DSN.	andard turn pad shapes it would be the Guidance Material as it may be nent a turn pad to the specifications	
response	Noted.		
	CS ADR-DSN.B.095 is in line with the correspo ICAO Doc 9981 PANS-Aerodromes conta operational issues.	nding SARP of ICAO Annex 14, Volume I. ins procedures on how to address	

3.2. CS-ADR-DSN - CS ADR-DSN.B.125

р. 31-32

comment	278 comment by: AESA Spain
	According to CS ADR-DSN.B.045 a runway for OMGWS, from 9 m to up to but not including 15 m, shall be at least 45 m wide.
	According to CS ADR-DSN.B.125 (b) a code F runway, for OMGWS from 9 m to up to but not including 15, shall have shoulders.
	According to CS ADR-DSN.B.135 (c) runway shoulders should extend so that the overall width of the runway and its shoulders is not less than 75 m where the code letter is F with four (or more) engine aeroplanes.
	According to CS ADR-DSN.N.775, table N-1, perpendicular distance from defined runway pavement edge to near side of a sign is 8-15 m. In Spain we consider "the runway pavement edge" to be the same as runway edge.
	Therefore, considering all of the above, for a code F runway, for OMGWS from 9 m to up to but not including 15, shoulders shall be 15 m wide, so signs can be located



on the shoulder (or right on the edge). Shoulders receive jet blast as they are intended to do so, and such jet blast is more intense in runways during take off operations.

It would be interesting to discuss if this interpretation of "the runway pavement edge" to be the same as runway edge, is correct.

In addition we believe that having signs within the runway shoulders, where they can be affected by jet blast (specially during take off) is a bigger problem than having them further away, even though the distance is higher than indicated in CS ADR-DSN.N.775, table N-1. In case EASA agrees on this matter, a new requirement to correct this situation shall be issued.

response Noted.

> The certification specifications for the provision of shoulders as well as the ones for the positioning of signs are in line with the corresponding SARPs of ICAO Annex 14, Volume I.

> The commentator is invited to provide EASA with a proposal for amendment which will be further assessed and consulted with all affected stakeholders.

3.2. CS-ADR-DSN - GM1 ADR-DSN.B.150

p. 32-33

comment	97 comment by: Zurich Airport
	(c) and (d) The added text should be corrected or deleted, because it's confusing and doesn't make sense. At least it should be simplified.
response	Not accepted.
	NPA 2020-10 provides a detailed rationale for the proposed changes.
comment	152 comment by: ACI Europe
	Proposed change of items (c) and (d):
	(c) and (d) The added text should be corrected or deleted (or possibly simplified).
	Rationale:
	Text is not clear.
response	Not accepted.
	NPA 2020-10 provides a detailed rationale for the proposed changes.

3.2. CS-ADR-DSN - CS ADR-DSN.B.165

p. 33

comment 49 comment by: ACI Europe



	Clarification on item (b): Point (b) only refers to precision approach runways. What requirements regarding objects on runway strips should be met for non-precision approach runways and non-instrument runways?
response	Noted.
	CS ADR-DSN.B.165 is in line with the corresponding SARP of ICAO Annex 14, Volume I. Paragraph (b) of CS ADR-DSN.B.165 refers to precision instrument runways.
comment	279 comment by: AESA Spain
	In the proposed text there are no requirements for objects on the strip after the beginning of the balked landing surface (1800 m).
	Clarification is requested on what requirement applies in that area, after the change proposed.
response	Noted.
	EASA has decided that the proposed changes to CS ADR-DSN.B.165 are not going to be implemented in this issue of CS-ADR-DSN until further developments from ICAO.
comment	291 comment by: Irish Aviation Authority
	(b) No fixed object, other than visual aids required for air navigation or those required for aircraft safety purposes and which must be sited on the runway strip, and satisfying the relevant frangibility requirement in Chapter T, should be permitted on any part of a runway strip of a precision approach runway delineated by the lower edges of the inner transitional surfaces defined in Chapter H and Chapter J.
	EASA Rationale: The certification specification is proposed to be amended to clarify the areas where no fixed objects should be sited, taking into account the function of the inner transitional surface (see GM1 ADR-DSN.H.455(a)). Additionally, the proposed amendment reflects the reduction in Table J-1 of CS ADR-DSN.J.480 of the OFZ (obstacle free zone) width for code F from 155 m to 140 m following the publication of CS-ADR-DSN Issue 4 (see ED Decision 2017/021/R). CS ADR-DSN.B.165 is applicable to precision approach runways only.
	It has been noted that CS ADR-DSN.T.915 part (g) states: "Any equipment or installation required for air navigation or for aircraft safety purposes which should be located on the non-graded portion of a runway strip should be regarded as an obstacle and should be frangible and mounted as low as possible."
	This may be in conflict with the safety requirement to position navigational aids such as glide path antennas and their associated electrical equipment huts and shelters. Positioning the huts or shelters at greater distances from the antenna can cause signal degradation and maintenance issues and this may be an unintended consequence of the wording adopted here.
	Whilst the huts / shelters can be designed to be relatively frangible, the equipment that is located therein is not frangible and from an aviation safety standpoint, it



	would not be desirable to expose this equipment to risk from failure of the structure, etc.
	EASA could provide greater clarification as to the appropriate siting of non-frangible huts / shelters for navigational aids and or amend CS ADR-DSN.T.915 part (g) to address.
response	Noted.
	Paragraph (g) of CS ADR-DSN.T.915 is in line with the corresponding SARP of ICAO Annex 14, Volume I.
	Regulation (EU) 139/2014 provides the means for cases of non-compliances with the applicable certification specifications of CS-ADR-DSN.

3.2. CS-ADR-DSN - GM1 ADR-DSN.B.165 p. 33

comment	98 comment by: Zurich Airport
	The current requirement and definition regarding objects on runway strips should remain. No changes required.
response	Noted.
	EASA has decided that the proposed changes to CS ADR-DSN.B.165 are not going to be implemented in this issue of CS-ADR-DSN until further developments from ICAO.
comment	153 comment by: ACI Europe
	Proposed change to item (b): The current requirement and definition regarding objects on runway strips should remain. No changes required.
response	Noted.
	EASA has decided that the proposed changes to CS ADR-DSN.B.165 are not going to be implemented in this issue of CS-ADR-DSN until further developments from ICAO.

3.2. CS-ADR-DSN - CS ADR-DSN.B.200

196

comment

p. 34

comment by: FOCA Switzerland

Federal Office of Civil Aviation (FOCA; Swiss CAA):

ATTENTION: THIS PROPOSAL IS RELATED TO <u>CS ADR-DSN.B.195 CLEARWAYS</u> (d) (which is not included in this NPA)

• replace "(d) Width of clearways: A clearway should extend laterally to a distance of at least 75 m on each side of the extended centre line of the



res

	 runway" by "<u>d</u>) Width of clearways: A clearway should extend laterally on each side of the extended centre line of the runway, to a distance of at least: (1) 75 m for instrument runways; and (2) half of the width of the runway strip for non-instrument runways"
	Justification: The objective of this NPA is to to ensure alignment with Amendment 15 (ICAO State Letters AN/1.2.28- 20/35 of 3 April 2020) to ICAO Annex 14, Volume I. The change to the width of a CWY was unfortunately not considered.
ponse	Noted. EASA, will investigate the issue further when a full proposal for the obstacle limitation surfaces (OLS) is provided by ICAO. Although the objective of the proposal is to ensure alignment with Amendment 15 to ICAO Annex 14, this does not necessarily mean that all the proposed amendments will be adopted if EASA considers that there is no safety benefit, or the change is not justified adequately. In the specific case, it is noted that the distance to which a clearway (where provided) should extent laterally is proposed to be 'at least' half of the width of the runway strip prescribed for non-instrument runways. This seems on the one hand to contradict the rationale of the proposed change where it is stated that the change is proposed in order 'to avoid disparity between the runway strip width, the width of the inner edge of the corresponding OLS and the width of the potential clearway', and on the other hand to allow an option for a wider clearway, as is currently the case for those States which have already adopted and applied the relevant Annex 14 specifications.

3.2. CS-ADR-DSN - GM1 ADR-DSN.B.200

p. 34-35

comment	114 comment by: BMVI (LF 15)	
	New subitem should be named (d).	
response	Accepted.	
	The numbering of the paragraph is changed accordingly.	

3.2. CS-ADR-DSN - CS ADR-DSN.C.236

p. 36-37

comment55comment by: Aerodrome safety regulation departementAlthough it comes from ICAO Doc 9157, Aerodrome Design Manual, part 1, Ruways,
CS ADR-DSN.236 a)12) needs to be clarified so as to better understand the scope of
such a requirement. In particular, it would be useful to explain in a GM that this
provision does not mean that the maximum applicable slope on the AAS stemming
from CS ADR-DSN.230 is always applicable.
Indeed, on several existing arresting systems, the slopes at the rear and on the side
of the EMAS exceed 5%. In these existing situations, it might be extremely



response

stakeholders.

demanding to adjust the systems, due to environmental constraints (proximity of dropping for instance at the rear), modifications of the systems would lead to an extension of the bevel to the detriment of the flat part of the stop bed with no safety gain as regards the risk of undershoot. If a)12) implies that maximum slopes applicable to RESA are equally applicable to RESA, we suggest either the following alternative wording to handle the issue of slope at the rear of existing AAS : (12) not be regarded as an obstacle in the runway strip or in the runway end safety area for clearing and grading requirements; This doesn't mean that requirements regarding slopes on runway end safety areas are applicable in particular at the back of the aircraft arresting systems. or to transfer this requirement to the corresponding GM. Not accepted. CS ADR-DSN.236 provides the flexibility regarding the slopes in an EMAS. The commentator is invited to provide EASA with a proposal for additional guidance material which will be further assessed and discussed with all the affected

comment	115	comment by: BMVI (LF 15)
	Subitem (b) is missing.	
response	Noted.	

CS-ADR-DSN.C.236 and CS-ADR-DSN.C.237 have been merged.

comment	197	comment by: FOCA Switzerland
	Federa	Office of Civil Aviation (FOCA; Swiss CAA):
	•	On CS ADR-DSN.C.236 (a) (7): replace "together with its surroundings, allow ice and snow removal and prevent water accumulation;" by "together with its surroundings, prevent water accumulation;" (Justification : Ice and snow removal not possible on top of today known systems. See GM1 ADR-DSN.C.236 (e): "An aircraft arresting system is not intended to support vehicular traffic for maintenance or normal operating purposes). On CS ADR-DSN.C.236 (c) and (d): replace " (c) An aircraft arresting system should not be considered to meet the definition of a stopway as provided in CS ADR-DSN.A.002. (d) An aircraft arresting system should have an established maintenance programme as defined in the relevant Part-Ops" by "(b) An aircraft arresting system should not be considered to meet the definition of a stopway as provided in CS ADR-DSN.A.002. (c) An aircraft arresting system should have an established maintenance programme as defined in the relevant Part-Ops" by "(b) An aircraft arresting system should have an established maintenance programme as defined in the relevant Part-Ops" by "(b) An aircraft arresting system should have an established maintenance programme as defined in the relevant Part-Ops." (Justification: Wrong numbering. No (b) in the proposed text. Please indicate reference to the relevant Part-Ops).

response	CS ADR-DSN.C.236 (a) (7): Not accepted. The removal of ice and snow is in line with the corresponding provision of ICAO Doc 9157, P1.
	CS ADR-DSN.C.236 (c) and (d): Noted. CS-ADR-DSN.C.236 and CS-ADR-DSN.C.237 have been merged and the text is
	amended accordingly.
comment	280 comment by: AESA Spain
	The proposed NPA includes requirements for Aircraft Arresting Systems (CS ADR-DSN.C.236) and for EMAS (CS ADR-DSN.C.236).
	It should be taken into consideration that ICAO Guidance Material for Aircraf Arresting Systems (included in Doc 9157 Part 1, Annex 5), has been updated since the draft version, and in the latest version all the requirements are linked to the EMAS specifically, and not to a generic Aircraft Arresting System.
	In addition, and the ICAO GM establishes that, although the EMAS is not regarded as an obstacle on the runway strip or in the RESA for clearing and grading requirements, they are required to be frangible, and be mounted as low as possible with ramps provided to avoid vertical surface, wherever feasible. This could be taken into consideration in the CS. In conclusion, the proposed NPA should be in accordance with the lattest version of the ICAO Guidance Material for Aircraf Arresting Systems, included in Doc 9157 Part 1, Annex 5.
response	Accepted.
	CS-ADR-DSN.C.236 and CS-ADR-DSN.C.237 have been merged and the text is amended accordingly.
comment	292 comment by: Irish Aviation Authority
	(a)(5): use materials which would not generate nor worsen fire hazards to an incoming aircraft. The materials should be non-sparking, non-flammable, not promote combustion and not emit toxic or malodorous fumes in a fire environment after installation, according to sectorial regulations;
	The CS could further reference the potential risk posed by gravel type arrester bed materials. It has been noted that early attempts at installing arrester beds of gravel at the end of runways proved to create a fire hazard comparable to that of an extended overrun. This was because the hard material thrown up from the gravel bed tended to puncture wing fuel tanks and start a fire, which was then very difficult to extinguish because leaking fuel seeped into the gravel bed from where it continued to feed the fire from below.
response	Noted.



Paragraph (c)(5) of CS ADR-DSN.C.236 already contains specifications for the non-promotion of combustion.

3.2. CS-ADR-DSN - GM1 ADR-DSN.C.236 p. 37-39

comment	203 comment by: Fraport AG
	sugegstion for (b)(5)(i): delete "salt"
	Rationale:
	Salt is not allowed als deicing method within the movement area because of the corrosion of aircraft parts. So even on service roards within the movement area salt is forbidden to prevent a salt contamination of aircrafts.
response	Not accepted.
	'Salt' does not mean that this de-icing material could be used. It is used just as a reference.

3.2. CS-ADR-DSN - CS ADR-DSN.C.237

р. 39

comment	16 comment by: Belgian CAA
	In contradiction to CS ADR-DSN.C.236 where the application of an arresting system is determined by CS ADR-DSN.C.215, The EMAS CS ADR-DSN.C.237 is missing this applicability and thus could be considered mandatory. It is advised to add a applicability reference to this CS.
response	Accepted.
	CS ADR-DSN.C.236 and CS ADR-DSN.C.237 have been merged. See the response to comment #280.
comment	25 comment by: ACI Europe
	Proposed change: Consider changed wording across the document to " <i>RFFS</i> " instead of RFF, c.f. p.37, p.103, p.107.
response	Accepted.
	The text is amended accordingly.
comment	204 comment by: Fraport AG
	Suggestion for (c)(8): replace RFF by <u>RFFS</u>
	Rationale:



	The standard abbreviation is RFFS.
response	Accepted.
	The text is amended accordingly.
comment	281 comment by: AESA Spain
comment	281 Comment by. ALSA Spuin
	The proposed NPA should be in accordance with the lattest version of the ICAO Guidance Material for Aircraf Arresting Systems, included in Doc 9157 Part 1, Annex 5.
	In this regard, the CS ADR-DSN.C.237 (c)(5) requires an exit speed not lower than 40 knots, this requirement beeing additional to the ones included in the ICAO guidance material.
response	Accepted.
	CS ADR-DSN.C.236 and CS ADR-DSN.C.237 have been merged and the text is amended. The specification is accordingly.

3.2. CS-ADR-DSN - GM1 ADR-DSN.C.237

p. 40-41

comment	143 comment by: ACI Europe
	<u>Remark:</u> The relatively higher probability of undershoots/overshoots during visual approaches on shorter runways might be a limiting factor for the minimum setback distance.
	Request for Clarification: Does the setback distance of 60 m also consider non-instrument code 1 runways?
response	Noted.
	In accordance with Recommendation 3.5.4 of ICAO Annex 14, Volume I, the length of the runway end safety area (RESA) for a non-instrument runway code 1 or 2 cannot be reduced by installing an arresting system.
	Therefore, an amendment to paragraph (b) of CS ADR-DSN.C.215 will be proposed with the next regular update of the aerodrome rules in line with the corresponding SARP of ICAO Annex 14, Volume I with regard to the reduction of runway end safety area where an arresting system is installed for code 3 and 4 runways and instrument
	runways code 1 and 2.

3.2. CS-ADR-DSN - GM1 ADR-DSN.D.240

p. 41

comment 293

comment by: Irish Aviation Authority



(I) Additional Gguidance on layout and standardised nomenclature of taxiways is given in ICAO Doc 9157, Aerodrome Design Manual, Part 2, Taxiways, Aprons and Holding Bays.

This sentence may be slightly erroneous as standardised nomenclature of taxiways does not appear to be referenced within ICAO Doc. 9157.

response Not accepted.

3.2. CS-ADR-DSN - GM1 ADR-DSN.D.285

p. 41-42

comment	233 comment by: AIRBUS
	GM1 ADR-DSN.D.285 Strength of taxiways, Paragraph (a)
	Comment:
	Paragraph (a) of GM1 ADR-DSN.D.285 is proposed to be updated as follows:
	(a) Due consideration should be being given to the fact that a taxiway should be subjected to a greater density of traffic and as a result of slow moving and stationary aeroplanes, to higher stresses than the runway it serves.
	Rationale:
	It seems there is a typo in Paragraph (a) GM1 ADR-DSN.D.285
response	Accepted.
	GM1 ADR-DSN.D.285 is amended accordingly.
commont	224 commont by: AIPPLIS
comment	GM1 ADR-DSN.D.285 Strength of taxiways. Paragraph (c)
	Comment:
	The guidance material to be used for assessing pavement bearing strength & design depends on the pavement reporting system considered (PCN or PCR) (refer to
	rationale below). GM1 ADR-DSN.B.285 should be updated to properly identify the guidance material to be considered.
	 rationale below). GM1 ADR-DSN.B.285 should be updated to properly identify the guidance material to be considered. (c) Additional information on the bearing strength, the design and evaluation of pavements is given: (1) Until 27 November 2024: in the 2nd Edition of ICAO Doc 9157,
	 rationale below). GM1 ADR-DSN.B.285 should be updated to properly identify the guidance material to be considered. (c) Additional information on the bearing strength, the design and evaluation of pavements is given: (1) Until 27 November 2024: in the 2nd Edition of ICAO Doc 9157, Aerodrome Design Manual, Part 3, Pavements.



Rationale:

Method for assessing the PCN is given in the 2nd Edition of ICAO Doc 9157, Aerodrome Design Manual, Part 3, Pavements.

Method for assessing the PCR is given in the <u>3rd Edition</u> of ICAO Doc 9157, Aerodrome Design Manual, Part 3, Pavements.

response Not accepted.

3.2. CS-ADR-DSN - CS ADR-DSN.D.340

p. 42-43

comment	17 comment by: Belgian CAA
	The references c & d, and the note 3, where the "3" is missing, defer from ICAO annex 14 Table 3-2. This is not advisable.
response	Noted.
	The rationale included in NPA 2020-10 for CS ADR-DSN.D.340 provides clarification on the proposed changes.
comment	56 comment by: Aerodrome safety regulation departement
	The wording proposed in Point c of the table D-2 does not take into account the possibility to reduce OFZ inner edge to 120m depending on the avionic of the aircrafts.
	Could you give some precisions about the choice not to align footnote c. of D.340 and footnote e. of table J-1 with Annex 14 vol I ?
response	Noted.
	The commentator is invited to provide EASA with a proposal for amendment which will be further assessed and consulted with all affected stakeholders.
commont.	
comment	Table D-2 c. Note
	Since the wingspan (which is now solely connected to the code letter) is less relevant in this case, we suggest adapting the text for the note according to ICAO Annex 14:
	"For code number 4 where the width of the inner edge of the inner approach surface is more than 120 m, a distance greater than 90 m may be necessary to ensure that a holding aircraft is clear of the obstacle free zone. For example, a distance of 100 m is based on an aircraft with a tail height of 24 m, a distance from the nose to the highest part of the tail of 62.2 m and a nose height of 10 m holding at an angle of 45° or more with respect to the runway centre line, being clear of the obstacle free zone."



response Not accepted.

The rationale included in NPA 2020-10 for CS ADR-DSN.D.340 provides clarification on the proposed changes.

3.2. CS-ADR-DSN - GM1 ADR-DSN.E.360

p. 43

comment	26 comment by: ACI Europe
	Proposed change: Replace airplane with <i>aeroplane</i> throughout the document for consistency.
response	Noted.
	See comment #156.
comment	156 comment by: Europe Air Sports
	Page 43 GM1 ADR-DSN.E.360 Slopes on aprons
	Comment:
	(b) we suggest that "aeroplane" is replaced by "aircraft". (4 occurrences)
	Rationale: Slopes on aprons also affect large rotorcraft which are "aircraft", and not only "aeroplanes" with fixed wings.
response	Accepted.
	GM1 ADR-DSN.E.360 is amended accordingly.
comment	205 comment by: Fraport AG
	Suggestion: Substitude "aeroplane stands" by " <u>aircraft stands</u> "
	Rationale: To have of constiency with CSs on aircraft stands.
response	Accepted.
	GM1 ADR-DSN.E.360 is amended accordingly.
comment	302 comment by: European Powered Flying Union
	(b) Please replace "aeroplane" by "aircraft".
	Rationale: Large rotorcraft are affected by slopes.



response Acc

Accepted.

GM1 ADR-DSN.E.360 is amended accordingly.

3.2. CS-ADR-DSN - CS ADR-DSN.G.380

p. 44

p. 46

comment	170	comment by: Europe Air Sports
	CS ADR-DSN.G.380 Location	
	GM1 ADR-DSN.G.400 Clearance distances	
	Please replace "aeroplane" with "aircraft".	
	Rationale: Large rotorcraft may also require de-icing	g and anti-icing pads.
response	Accepted.	
	GM1 ADR-DSN.G.400 is amended accordingly.	

3.2. CS-ADR-DSN - CS ADR-DSN.M.650

 comment
 206
 comment by: Fraport AG

 Suggestion to a.:
 Substitude "aircrafts" by "aeroplanes"

 Rationale:
 To have concistancy.

 response
 Accepted.

 CS ADR-DSN.M.650 is amended accordingly.

3.2. CS-ADR-DSN - CS ADR-DSN.M.710

p. 47-48

comment | 164

comment by: Riga International Airport

Changes proposed to CS ADR-DSN.M.710 (a) and CS ADR-DSN.M.715 (a) remove the reduced visibility condition which is not directly replicated in paragraph (b) of the same CS. This may pose a situation in which provision and operation of taxiway centre line lights during day when RVR is 350 m or greater will require an approval of a new flexibility provison ELoS or SC for an aerodrome, where taxiway centre line lights are not specified as components of an advanced surface movement guidance and control system in such a manner as to provide continuous guidance between the runway centre line and aircraft stands. Please consider reframing the requirement so that the safety benefit that was emanating from using the taxiway centre line lights in reduced visibility conditions (e.g. during typical CAT II LVP when RVR < 550 m) may



also be preserved in the future without encumberances for which only cursory rationale at this stage is provided (a similar change to CS ADR-DSN.M.690 (a), although possible, is not proposed).

response Not accepted

Paragraph (a) is providing a safety objective in line with the applicability. The term 'reduced visibility conditions' is not a term used in ICAO Annex 14, Vol I, Aerodromes. The CS is providing the minimum design provisions. The implementation of higher requirements by the aerodrome operator, than those provided in the CS, can be performed without 'flexibility provisions' and without endangering the safety of aerodrome operations.

Considering the same term, 'reduced visibility conditions', provided as a safety objective in paragraph (a) of CS ADR-DSN.M.690 is amended in the same manner.

comment	207	comment by: Fraport AG
	Suggestion to (a): Substitue aircrafts by " <u>aeroplanes</u> ".	
	Rationale: To have concistancy.	
response	Not accepted.	
	Taxiways can be used by aircraft (aeroplanes and helicopt	ers).

3.2. CS-ADR-DSN - CS ADR-DSN.M.715

p. 48

comment	57 comment by: Aerodrome safety regulation departement
	This change apparently editorial introduces several modification in the scope of the CS :
	 the use at night is mentionned nowhere in the following paragraphs of the CS, The scope of concerned infrastructures is modified : for example, the new wording excludes runways from the scope of applicability of CS M.715 for instance.
	We suggest to give up this modification.
response	Not accepted
	Paragraph (a) is providing a safety objective in line with the applicability. The term 'reduced visibility conditions' is not a term used in ICAO Annex 14, Vol I, Aerodromes. The CS is providing the minimum design provisions. The implementation of higher requirements by the aerodrome operator, than those provided in the CS, can be performed without 'flexibility provisions' and without endangering the safety of aerodrome operations. Considering the same term, 'reduced visibility conditions', provided as a safety objective in paragraph (a) of CS ADR-DSN.M.690 is amended in the same manner.



comment	t 165 comment by: Riga	International Airport
	Changes proposed to CS ADR-DSN.M.710 (a) and CS ADR-DSN. reduced visibility condition which is not directly replicated in same CS. This may pose a situation in which provision and centre line lights during day when RVR is 350 m or greater will a new flexibility provison ELoS or SC for an aerodrome, when lights are not specified as components of an advanced surface and control system in such a manner as to provide continuous a runway centre line and aircraft stands. Please consider reframi that the safety benefit that was emanating from using the tax in reduced visibility conditions (e.g. during typical CAT II LVP we also be preserved in the future without encumberances for rationale at this stage is provided.	M.715 (a) remove the paragraph (b) of the operation of taxiway require an approval of re taxiway centre line e movement guidance guidance between the ng the requirement so iway centre line lights hen RVR < 550 m) may r which only cursory
response	e Not accepted	
	Paragraph (a) is providing a safety objective in line with the a 'reduced visibility conditions' is not a term used in ICAO Annex. The CS is providing the minimum design provisions. The imple requirements by the aerodrome operator, than those provid performed without 'flexibility provisions' and without endat aerodrome operations. Considering the same term, 'reduced visibility conditions', pro- objective in paragraph (a) of CS ADR-DSN.M.690 is amended in	applicability. The term 14, Vol I, Aerodromes. lementation of higher ded in the CS, can be ngering the safety of vided as a safety of the same manner.
commont	+ 200	mont by: Francet AC
comment	Suggestion to (a): Substitue aircrafts by " <u>aeroplanes</u> ". Rationale: To have concistancy.	ment by. Fuport AG
response	e Not accepted.	
	Taxiways can be used by aircraft.	

3.2. CS-ADR-DSN - CS ADR-DSN.M.745

p. 48-49

comment	18 comment by: Belgian CAA
	Item (b) (4) this change will have a major impact on the aerodromes infrastructure, EASA and the EU should expect a gradual implementation of this CS.
response	Noted.
	The proposed change in paragraph (b)(4) of CS ADR-DSN.M.745 is in line with the corresponding SARP of ICAO Annex 14, Volume I.



comment	27 comment by: ACI Europe
	Proposed change to item (a): Following the structure of EASA CSs, (a) could start like: "The safety objective of".
	<u>Clarification</u> : Does the deletion of the term "active" imply the requirement always to operate the runway guard lights, independently of the status of the runway?
response	Proposed change to item (a): Accepted.
	The text is amended accordingly. Furthermore, the proposed change in paragraph (a) of CS ADR-DSN.M.745 is in line with the corresponding SARP of ICAO Annex 14, Volume I.
comment	50 comment by: ACI Europe
	Proposed change: In points (c)(1) and (c)(2) the proposed location for RGL units is 'on the holding side of the runway-holding position marking.' This is a rather precise location that may not be the actual location of the RGLs at many aerodromes. The objective of RGLs is to warn pilots, thus the location of RGLs should preferably be in line with the runway-holding position marking or even in front of it. In any case not behind the runway-holding position marking. When RGLs are located one or several meters in front of the runway-holding position the safety objective is also met. It is therefore unnecessary to prescribe the location of RGLs in a precise manner.
	It is suggested to change the description of the location of RGLs in point (c)(1) and (c)(2) so that it better fits the objective of RGLs.
	Proposed text for point (c)(1): "Runway guard lights, Configuration A, should be located at each side of the taxiway in line with the runway-holding position marking." Proposed text for point (c)(2): "Runway guard lights, Configuration B, should be located across the taxiway in line with the runway-holding position marking."
	<u>Clarification</u> : What is the exact definition of the holding side? The marking has a depth of up to 2.1m. Does it mean in front of the marking, within the first half of the marking (continuous lines), just not behind the marking etc.?
response	Partly accepted.
	Paragraphs (c)(1) and (c)(2) of CS ADR-DSN.M.745 are amended to provide flexibility.
comment	137 comment by: <i>Civil Aviation Authority the Netherlands</i>
	Comment on CS ADR-DSN.M.745 Runway guard lights, (c) Location:
	In points (c)(1) and (c)(2) the proposed location for RGL units is 'on the holding side of the runway-holding position marking.' This is a rather precise location that may not be the actual location of the RGLs at many aerodromes. The objective of RGLs is to warn pilots, thus the location of RGLs



should preferably be in line with the runway-holding position marking or even in front of it. In any case not behind the runway-holding position marking. When RGLs are located one or several meters in front of the runway-holding position, the safety objective is also met. It is therefore not necessary to prescribe the location of RGLs in a precise manner.

It is suggested to change the description of the location of RGLs in point (c)(1) and (c)(2) in such a way that it better fits the objective of RGLs.

Proposed text for point (c)(1): "Runway guard lights, Configuration A, should be located at each side of the taxiway in line with the runway-holding position marking." Proposed text for point (c)(2): "Runway guard lights, Configuration B, should be located across the taxiway in line with the runway-holding position marking."

response Partly accepted.

Paragraphs (c)(1) and (c)(2) of CS ADR-DSN.M.745 are amended to provide flexibility.

comment	139 comment by: Finavia
	Finavia suggests the following points to be changed as follows:
	 (b)Applicability: (4) Where more than one runway-holding positions exist at a runway/taxiway intersection and STOP BAR lights are installed on more than one runway holding position, only the set of runway guard lights associated with the operational runway-holding position should be illuminated.
	(c)Location: (1) Runway guard lights, Configuration A, should be located at each side of the taxiway on the runway holding side of the innermost runway-holding position marking and as close as practical considering visual and winter maintenance factors and at the same distance as the runway holding position marking.
	Explanation:
	RGLs can never be a primary device for preventing RWY incursions nor a primary device for establishing runway holding positions.
	Primary devices for preventing RWY incursions are lit STOP BARs because they convey the message whether or not there is a clearance to enter the RWY (via this taxiway). An RGL only indicates the presence of a RWY in use. Many RWY incursions happen with pilots/drivers aware they are entering a runway without clearance but believing they have a clearance.
	Primary devices for indicating a RWY holding position are mandatory signs because they include information of location, RWY id, TWY id and inner or outer holding position.
	Co-locating RGLs and STOP BARs with elevated lights is incompatible in two ways:



	• RGLs are a more powerful visual effect due to light intensity and flashing than STOP BAR lights. Co-locating these diminishes the visual effect of lit STOP BARs and increases risk of pilots/drivers passing a lit STOP BAR.
	 in northern climate elevated lights need to be located in one line along the edge of a taxiway for mechanical removal of snow. Installing elevated STOP BARs and RGLs in a group perpendicular to the taxiway edge prevents this and leaves them all covered with snow.
	On taxiways with inner and outer (CAT II/III) holding positions vehicles may operate for extended periods between holding positions but not cleared to the runway. STOP BARs are often installed only for the outer holding position or in case both installed, outer STOP BARs are in operation. In this case RGLs are useful only when installed inside the inner holding positions.
	On wide taxiways with STOP BARs, RGL type A does not perform well and RGL type B is can not be co-located with STOP BAR lights.
	As a conclusion our opinion is that RGLs type A are best installed separated from STOP BARs some 15-20 meters preferably between the holding position and the RWY.
	We have indication that some professional pilots associate a runway holding position primarily with RGLs and pay less attention to mandatory signs, holding position markings and STOP BARs. This should be corrected by refresher training, not by adapting airport infrastructure to such misunderstanding.
response	Proposal to change (b)(4): Not accepted. The proposed change in paragraph (b)(4) of CS ADR-DSN.M.745 is in line with the corresponding SARP of ICAO Annex 14, Volume I.
	Proposal to change (c)(1): Partly accepted. Paragraphs (c)(1) and (c)(2) of CS ADR-DSN.M.745 are amended to provide flexibility.
comment	144 comment by: ACI Europe
	Proposed correction of typo at (b)(4): "Where more than one runway-holding position exists at"
response	Accepted.
	Paragraphs (b)(4) of CS ADR-DSN.M.745 is amended accordingly.
comment	145 comment by: ACI Europe
	Proposed changes to item (c)(1):

	The specification does not include geometric limits of the location, that is the distance from the runway guard lights, Configuration A, to the pavement/taxiway edge and to the runway-holding position marking across the taxiway. These details should be added in order to avoid runway guard lights being installed at a disadvantageous distance (i.e. outside the pilot's field of view).
	 Examplary phrasing can be found in section 9.99 of the Australian Part 139 (Aerodromes) Manual of Standards: (3) Elevated runway guard lights must be located: (a) on both sides of the taxiway at the runway holding position closest to the runway, and (b) equidistant from the taxiway centreline: and
	(c) not less than 3 m, and not more than 5 m, outside the edge of the taxiway.
	Proposed changes to item (c)(2): The specification does not include geometric limits of the location, that is the distance from the runway guard lights, Configuration B, to the runway-holding position marking.
	These details should be added in order to avoid runway guard lights being installed at a disadvantageous distance (i.e. too far from the actual runway-holding position leading to potential penetration of protection surfaces by the holding aircraft).
	Proposed changes to item (c)(3): A runway-holding position can be approached from two sides, but the runway guard lights are intended to warn outbound/departing pilots on taxiways. The "direction of approach" in this specification should be clearly defined.
response	Proposed changes to item (c)(1) Noted.
	Proposed changes to item (c)(2):
	Paragraphs (c)(1) and (c)(2) of CS ADR-DSN.M.745 are amended to provide flexibility.
	Proposed changes to item (c)(3): Not accepted.
	EASA understands the proposal refers to the changes in paragraph (d)(3). The proposed change in paragraph (d)(3) of CS ADR-DSN.M.745 is in line with the corresponding SARP of ICAO Annex 14, Volume I.
	Furthermore, in accordance with paragraph (a) of CS ADR-DSN.M.745 'Runway guard lights warn pilots and drivers of vehicles, when operating on taxiways, that they are about to enter a runway'.
comment	167 comment by: Riga International Airport
	The change is worded in such a way that seemingly all aerodromes will be required to change the position of the runway guard lights, because the new requirement "on

to change the position of the runway guard lights, because the new requirement "on the holding side of the runway-holding position marking" cannot be complied when complying with the old requirement "at the same distance as the runway-holding position marking", as the criterion for determining the distance of the RHP marking is not the holding side but the runway vacated side instead. If the change is to be



	effected, it is necessary to provide for a transitional period for such a change during which both solutions will be compliant, in order to avoid unnecessary noncompliances in a situation for which no flexibility provision (ELOS or SC) may be applicable.
response	Noted. Paragraphs (c)(1) and (c)(2) of CS ADR-DSN.M.745 are amended to provide flexibility.
comment	213 comment by: Flughafen Berlin Brandenburg GmbH
	With the current wording the actual location of runway guard lights depends on the runway holding position marking and thus, has a range of approx. 2.1m. This is derived from the distance between the closest and farthest edge of that marking. (see Figure L-7 for the dimensions of the runway holding position marking). In practice, RGLs are often installed on the marking edge closest to the runway or at the midpoint (longitudinal) of the marking.
	The proposed wording does not define the desired distance between runway-holding position marking and location of the runway guard lights. Hence, with the proposed wording it would be permissible to install runway guard lights at a significant distance to the runway-holding position marking - as long as that location is on "on the holding side" The current requirements are more precise.
	Furthermore, the actual stopping position of an aircraft in front of a runway-holding position depends on the aircraft characteristics (i.e. eye height, cockpit cut-off line) and on the individual steering actions of the relevant flight crew. In this context the current range of 2.1m for the actual location of the runway guard lights in relation to the runway-holding position marking is sufficient.
	Finally, there are no visibility conditions in daily operations where approx. 2m would have an safety-increasing impact on the visibility of the runway guard lights.
	Hence, FBB advocates to: either keep section c) unchanged and to introduce additional guidance material which explains that a deviation towards the holding side of the runway-holding position marking is permissible
	specifying that RGLs should be installed (e.g.) "in line with the runway-holding position marking" (see CS ADR-DSN.N.785 (b)(2), similar wording)
response	Noted. Paragraphs (c)(1) and (c)(2) of CS ADR-DSN.M.745 are amended to provide flexibility.
comment	282 comment by: AESA Spain
	Regulation should consider the provisions in the last Annex 14 amendment (15).
	It would be interesting to clarify the desired configuration required for exit only taxiways: - No entry bar only - No entry bar + runway guard lights



	 No entry bar + runway guard lights + runway holding position marking 		
	If the goal is to be flexible in the use of taxiways it might be convenient to set two different requirements, for taxiways that need to be flexible and for those that do not. That way taxiways which have no intention of having a flexible used do not require unnecessary elements (such as runway holding position marking).		
response	Noted.		
	The proposed changes to CS ADR-DSN.M.745 are in line with the changes introduced by Amendment 15 to the corresponding SARP of ICAO Annex 14, Volume I. If deemed necessary, the commentator is invited to provide EASA with further clarifications.		
comment	294 comment by: Irish Aviation Authority		
	4) Where more than one runway-holding positions exist at a runway/taxiwa intersection, only the set of runway guard lights associated with the operation runway-holding position should be illuminated.		
	Ireland welcomes this proposed amendment as a runway incursion preventive measure. Operators approaching a runway should be presented with as many visual aids to heighten awareness of a runway ahead, irrespective of whether the runway is active or not. The IAA agrees that removing the term 'active' should remove any ambiguity related to the operation of RGLs.		
	The Agency should consider the necessity of paragraph (f), formerly (e) related to "Active runway" on the basis that the term will no longer be used in the CS.		
response	Accepted.		
	This paragraph is removed from GM1 ADR-DSN.M.745.		

3.2. CS-ADR-DSN - GM1 ADR-DSN.M.745

р. 49-50

comment146comment by: ACI EuropeProposed change/clairifcation to item (b):
Taxiways will exceed the standard widths as soon as they are not straight. Therefore,
more guidance on when to apply Configuration B would be helpful, e.g. for taxiways
with a width > 60 m as also refered to in CS-ADR-DSN.L.605 (a)(2):
"On taxiways exceeding 60 m in width, or to assist in the prevention of a runway
incursion, a mandatory instruction sign should be supplemented by a mandatory
instruction marking."Comment regarding item (b):
The wording in CS ADR-DSN.M.745 suggests that only one configuration type should
be used which would contradict with GM1 ADR-DSN.M.745.

Proposed change to item (b):



Add "Both Configuration A and B can be used together when increased conspicuity of the taxiway/runway intersection is required." to CS ADR-DSN.M.745 (b)(2) with a reference to GM1 ADR-DSN-M.745.

See section 9.99 of the Australian Part 139 (Aerodromes) Manual of Standards as reference.

response Proposed change/clarification to item (b), Comment regarding item (b) and Proposed change to item (b):

Not accepted.

Paragraph (b) of CS ADR-DSN.M.745 is in line with the note of the corresponding SARP of ICAO Annex 14, Volume I.

Paragraph (b) of GM1 ADR-DSN.M.745 provides additional guidance on the cases where runway guard lights Configuration A may be supplemented by runway guard lights Configuration B.

comment	211
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comment by: Fraport AG

Suggestion to (C) (1) an (2):

... the taxiway in close combination with the runway-holding position marking, preferably on the holding side of the runway-holding position marking

Ratinoale:

ICAO has also used the new proposed text as EASA did. Unfortunately RGL are locaded on a couple of aerodormes not on the hoding side. The idea of the RGL is that, if a pilot will hold short of the runway holding position he must still be able to see the RGLs. Because of a narrow but still conform spacing between the runway and a parallel taxiway it might be necessary that aeroplanes should be hold as close to the runway holding position as possible to allow passing aeroplan traffic behind the hoding aeroplane on the parallel taxiway.

Based on this intension RGL are often located only in close combination with the runway-holding position marking but slightly on the runway side of the runway-holding position marking. To improve the situation in the thinking of ICAO and EASA but still allow unaffected taxi operation under CAT I weather conditions, RGL shouldn'd replaced to the holding side of the compleate runway-holding position marking.

The proposed text will give the aerodromes more flexibility for the ground operation without reducing the safety in terms of runway incursion prevention.

In addition the "holding side" shoud be specified and defined as the reference line of the runway-holding position marking, which is the first dashed line at the runway side of the runway-holding position marking.

response Noted.

Paragraphs (c)(1) and (c)(2) of CS ADR-DSN.M.745 are amended to provide flexibility.

3.2. CS-ADR-DSN - CS ADR-DSN.M.771

p. 50



comment	168 comment by: Riga International Airport
	The proposed changes no longer require no-entry bars to be switchable selectively but the rationale remark "the no-entry bars should not be switchable in operational situations" is not included in the CS text. This leaves too much room for interpretation, including one where taxiways used by vehicles in both directions may not be considered as "exit only taxiways". It is desirable to clarify the relevant CS for taxiways which are to be used as 'exit only' by aircraft and may be used in both directions by vehicles. The clarified requirement has to cater for a need to: a) perform snow clearing on the exit only taxiway by a group of vehicles during winter operations by driving in any of the directions without crossing an illuminated no-entry bar; b) inspect or sweep the exit only taxiway with a vehicle up to the distance stipulated in ADR.OPS.B.027 (e)(1) without using the runway and without crossing an illuminated no-entry bar.
	Guidance provided in the rationale section, which states both that no-entry bars should not be switchable and that switching might be useful, is somewhat confusing and we suggest to provide additional comment or guidance regarding an option for no-entry bars to be switchable in order to allow maintenance and snow clearing vehicles to enter such taxiway in the direction towards runway. Vehicle operations is also the reason why we disagree with the proposed rationale that there is no reason to have a stop-bar beyond a no-entry bar. CS ADR-DSN.D.335 (b)(2) still mandates that a RHP and eventually a stop-bar is provided on the taxiway, at the intersection of a taxiway and a runway.
	The new location specification (b)(2) should be commented or supplemented with a guidance material clarifying that collocation of a no-entry bar may include being located both before or after the no-entry marking.
response	Noted.
	The proposed changes to CS ADR-DSN.M.771 and GM1 ADR-DSN.M.771 are in line with the corresponding SARP of ICAO Annex 14, Volume I.
comment	192 comment by: Romanian CAA
	- The NO ENTRY marking should be refered in CS ADR-DSN.L.605 as "no-entry marking" and the NO ENTRY sign should be refered in CS ADR-DSN.N.775 and CS ADR-DSN.N.780 as "no-entry sign" for consistency with the proposed change "collocated with a no-entry sign and/or a no-entry marking".
response	Accepted.
	CS ADR-DSN.L.605 and CS ADR-DSN.N.780 are amended accordingly.
	210
comment	218 comment by: daa
	Proposed text (b) clarification required to the relationship between items 1 & 2. Does item 2 imply that with a no-entry bar, do you need to install a no-entry sign and/or a no-entry marking.



	Proposed/amended text (c) 2. Deletion of minimum distance for centreline to be extinguished makes the compliance of this clause subjectable.	
response	Noted.	
	The proposed changes to CS ADR-DSN.M.771 and GM1 ADR-DSN.M.771 are in line with the corresponding SARP of ICAO Annex 14, Volume I. Paragraph (b)(2) implies the installation of a no-entry sign and/or a no-entry marking.	
comment	250 comment by: SinaJobstHAM	
	(c) (2) Since there are multiple options, where no-entry signs can be installed (e.g. close to the runway or further away, paragraph (iii) should be kept and amended: When a no- entry bar is installed in close proximity to a stop bar and illuminated, any stop bar installed between the no-entry bar and the runway should be extinguished. Rationale: There are cases, where the no-entry bar is located distant from the respective runway or runway system. Allowing in these cases the illumination of stop bars at the runway is desirable for safety reasons. If the no entry bar is installed in close proximity to a stop bar, only the no entry bar should be illuminated to avoid ambiguities.	
response	Noted.	
	The proposed changes to CS ADR-DSN.M.771 and GM1 ADR-DSN.M.771 are in line with the corresponding SARP of ICAO Annex 14, Volume I.	
comment	The proposed changes to CS ADR-DSN.M.771 and GM1 ADR-DSN.M.771 are in line with the corresponding SARP of ICAO Annex 14, Volume I. 283	
comment	The proposed changes to CS ADR-DSN.M.771 and GM1 ADR-DSN.M.771 are in line with the corresponding SARP of ICAO Annex 14, Volume I. 283 comment by: AESA Spain It would be convenient to specify more clearly the application of no-entry bars: - Are they intended to be located on every exit only taxiway ? - Are they only applicable under specific RVR conditions (like stop bars)? - Can their application be based on operational criteria so they are only located in those taxiways where runway incursions occur? Related to GM1 ADR-DSN.M.771 (h): It would be convenient to include additional power supply requirements for the no- entry bar lights, similar to those required for the stop bars: - Secondary power supply (CS ADR-DSN.S.880) - Maximum switch-over time (table S-1) - Serviceability levels (CS ADR-DSN.S.895) If the intention is to not have those requirements applying to no entry bars, that should be clarified on the GM	



The proposed changes to CS ADR-DSN.M.771 and GM1 ADR-DSN.M.771 are in line with the corresponding SARP of ICAO Annex 14, Volume I. The commentator is invited to provide EASA with a proposal for amendment

regarding the applicability and power supplies for no-entry bars which will be further assessed and consulted with affected stakeholders.

comment	284 comment by: AESA Spain	
	Lights before the no-entry bar should not be visible, the same as those beyond. Even though this is ICAO's text, the last sentence should indicate something like this: "Taxiway centre line lights installed in an exit only taxiway should not be visible when viewed from the taxiway".	
response	Noted.	
	The proposed changes to CS ADR-DSN.M.771 and GM1 ADR-DSN.M.771 are in line with the corresponding SARP of ICAO Annex 14, Volume I.	

3.2. CS-ADR-DSN - GM1 ADR-DSN.M.771

p. !	51
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comment	219 comment by: daa
	The proposed amendment includes the deletion of a) "A no-entry bar is intended to be controlled either manually or automatically by air traffic services".
	Clarification on this proposal is sought as it will limit the options for both standard taxi routing and LVP routing. Operational scenarios will dictate the use of a taxiway in either entry / exit only configuration or dual configuration.
	A review of this proposed amendment to the current operational use of No-entry bars is recommended.
response	Noted. The proposed changes to CS ADR-DSN.M.771 and GM1 ADR-DSN.M.771 are in line with the corresponding SARP of ICAO Annex 14, Volume I.
comment	295 comment by: Irish Aviation Authority
	The provision of a no-entry har on a taxiway intended to be used as an exit taxiway
	is accorded on the basis that its primary objective is to provent the inadvertent entry
	by an aircraft onto the taxiway from the opposite direction. However, such a taxiway
	is subject to inspection by the aerodrome operator to ensure the payement and
	visual aids in place are fully serviceable or to facilitate maintenance works.
	This requires that the no-entry bar be extinguished to permit a vehicle operator enter the taxiway to complete their activities. As such, paragraph (a) in GM ADR-DSN.M771 should be retained as Air Traffic Services will control the operation of the lights. To permit the continued operation of the runway, a stop bar or runway holding position should be installed at the appropriate location to ensure the vehicle operator



remains clear of the runway. The removal of the above section could result in confusion.

EASA's rationale is ambiguous in that it is stated that no entry bars should not be switchable in operational situations but may be required to be switchable for maintenance purposes.

response Noted.

The proposed changes to CS ADR-DSN.M.771 and GM1 ADR-DSN.M.771 are in line with the corresponding SARP of ICAO Annex 14, Volume I.

3.2. CS-ADR-DSN - CS ADR-DSN.N.775

p. 51-55

comment 28 comment by: ACI Europe Clarifications to items (7) and (8): In points (7) and (8) of the proposed text of CS ADR-DSN.775 the term 'taxiing guidance signs' is used. This term is not defined or specified in CS-ADR-DSN. It is therefore unclear what signs are meant. It is assumed that 'taxiing guidance signs' refer to information signs, but based on point (8) runway exit signs are excluded from this term. It can be assumed that points (7) and (8) refer to location signs, direction signs, intersection take-off signs and mandatory instruction signs. It is suggested to clarify the term 'taxiing guidance signs' or – preferably – to use the existing terminology included in CS-ADR-DSN ('information signs' and 'mandatory instruction signs'). Proposed change to items (c)(8) Table N-1 and (c)(17): With the last version of ICAO Annex 14, reduced min. face heights of signs where introduced. In accordance with EASA's objective of harmonisation between EASA CS-ADR-DSN and SARPs of ICAO Annex 14 ACI strongly recommend that the min. face heights adopted in State Letters 2018 103 and 2020 35 (Table 5-5) are maintained in this update of ADR rules. The changes suggested in NPA 2020-10 would require significant cost and investment to replace existing signs and might require the filing of differences with ICAO for no clear safety benefit. We therefore propose for "Table N-1. Location distances for taxiing guidance signs including runway exit signs" to maintain the minimum hights as follows (reference ICAO State Letters 2018 103 and 2020 35 Table 5-5): Sign height (min) Code number Legend Face (min) 1 or 2 200 300 1 or 2 450 300 3 or 4 450 300 3 or 4 400 600



Clarification on item (11)(i): In sub (i) of point (11) the dimensions of an arrow are listed with reference to the legend height. The table under sub (i) however only mentions the word 'stroke'. It is therefore unclear what dimensions are required when using an arrow on an information sign.

Clarification / proposed deletion with ref. to item (17): What is the a rationale for defining min. face and legend heights both in table N-1 and in this paragraph? Consider removal of this paragraph to avoid duplication (also seeproposal regarding min. face heights above).

Clarifications to items (7) and (8): response

Noted.

The wording (and not a term) 'taxiing guidance sign' has been used in Table N-1 since the initial issue of CS-ADR-DSN. This wording is also used by ICAO in Annex 14, Volume I. The title of Table N-1 is 'Location distances for taxiing guidance signs including runway exit signs', which is in line with the wording used in point (c)(8).

Proposed change to items (c)(8) Table N-1 and (c)(17):

Not accepted

The rationale of the proposed change as provided by ICAO was only to facilitate compliance of the States which had filed differences with ICAO. The current EU specifications reflect the existing Annex 14 provisions, and, since there is no safety benefit, as EASA had already notified the States, it does not plan to change the specifications. Furthermore, there is no need for EU Member States to file a difference since the existing provisions in Annex 14 are more demanding than the proposed amendment.

Clarification on item (11)(i):

Noted.

The tables provided in point (c)(11) are in line with the corresponding ones of ICAO Annex 14, Volume I.

Clarification / proposed deletion with ref. to item (17):

Not accepted.

Table N-1 and paragraph (17) are in line with the corresponding SARP of ICAO Annex 14, Volume I.

comment	<i>117</i> comment by: <i>BMVI (LF 15)</i>
	ADR-DSN.N.775 (c) (17)
	The amendment 15 to ICAO Annex 14, Chapter 5.4.1. table 5-5 has to be adopted in order to be in line with ICAO Annex 14. According to this ICAO amendment the minimum height of signs in relation to the inscription may be reduced.
response	Not accepted
	The rationale of the proposed change as provided by ICAO was only to facilitate compliance of the States which had filed difference with ICAO. The current EU specifications reflect the existing Annex 14 provisions. Since there is no safety



benefit, EASA does not plan to change the specifications and it had already notified the EU Member States in this regard. Furthermore, there is no need for EU Member States to file a difference since the existing provisions in Annex 14 are more demanding than the proposed amendment. 147 comment comment by: ACI Europe **Request for Clarification on table N-2:** What is compliant? Is a character height of e.g. 450 mm compliant for code number 3/4? **Proposed change for table N-2:** Clarify the wording for "minimum" response Noted. Table N-2 is in line with the corresponding table of ICAO Annex 14, Volume I and provides the minimum character height. comment 214 comment by: Flughafen Berlin Brandenburg GmbH FBB advocates for close alignment with ICAO SARPS on European Level - the harmonization of requirements is beneficial. All values within the column Face (min) have been amended within the newest revision of ICAO Annex 14, resulting in a minimum face height of 600 mm even when 400 mm legend height is applied (code 3 or 4). From FBB's perspective ICAO Annex 14 provisions should be followed, unless there is evidence that these provisions can be considered unsafe. Should EASA have identified face heights of 600 mm with a 400 mm legend height as contributing or root cause(s) for any safety-relevant events, could you kindly present these within the CRD? Ongoing conversion projects (already started during initial certification) that are related to signage could be stopped and hence, significant savings could be realized within the aerodrome domain. In the current economic circumstances this an important aspect that should not be neglected. Not accepted response The rationale of the proposed change as provided by ICAO was only to facilitate compliance of the States which had filed difference with ICAO. The current EU specifications reflect the existing Annex 14 provisions. Since there is no safety benefit, EASA does not plan to change the specifications and it had already notified the EU Member States in this regard. Furthermore, there is no need for EU Member States to file a difference since the existing provisions in Annex 14 are more demanding than the proposed amendment.

comment 215

comment by: Flughafen Berlin Brandenburg GmbH



	Outdated cross-reference within section 12 - "sign luminance" due to re-numbering of CS ADR-DSN.N.775 (c). Should read "in accordance with CS ADR-DSN.N.775(c)(4)(ii) and (c)(5)" instead of "in accordance with CS ADR-DSN.N.775(c)(5)(ii) and (c)(6)".	
response	Accepted.	
	The reference is amended accordingly.	
comment	222 comment by: Fraport AG	
	Attachment <u>#2</u>	
	Suggestion for (c)(8) Table N-1 column 3 and (C)(17): Use the minimum face height given in ICAO state letter 2018/103 and 2020/35 Table 5-5.	
	Rationale: Be in line with ICAO state letter 2020/35.	
	Suggestion for (C)(11) (i): replace "Stroke" by "Arrow" in the table.	
	Rationale: harmonizing the wording for what the dimensions should be about.	
response Suggestion for (c)(8) Table N-1 column 3 and (C)(17): Not accepted		
	The rationale of the proposed change as provided by ICAO was only to facilitate compliance of the States which had filed difference with ICAO. The current EU specifications reflect the existing Annex 14 provisions. Since there is no safety benefit, EASA does not plan to change the specifications and it had already notified the EU Member States in this regard. Furthermore, there is no need for EU Member States to file a difference since the existing provisions in Annex 14 are more demanding than the proposed amendment.	
	Suggestion for (C)(11)(i): Not accepted.	
	The table is in line with the corresponding SARP of ICAO Annex 14, Volume I.	
comment	251 comment by: Sing JobstHAM	
	The table under point (17) should be omitted to avoid duplications. The values shown are already presented in table n1.	
response	Not accepted.	
	The table of point (17) is in line with the corresponding SARP of ICAO Annex 14, Volume I.	



3.2. CS-ADR-D	p. 55-56
comment	7 comment by: <i>GdF</i>
	A taxiway should be identified by a designator that is used only once on an aerodrome and comprising a single letter, two letters, or a combination of a letter or letters followed by a number.
	"comprising" is a difficult word and even dictionaries don't agree if it should/could be "comprising of". Please consider using "consisting of" or similar.
	Request clarification of "combination of a letter or letters followed by a number". How many letters would be allowed in this case? More than two? Is the number of digits limited in any way?
response	Not accepted.
	The wording of paragraph (c)(11) is in line with the corresponding SARP of ICAO
	Annex 14, Volume I. The taxiway should be identified by a designator 'comprising a single letter, two letters, or a combination of a letter or letters followed by a number.'
comment	19 comment by: Belgian CAA
	Item (c) (12) (ii) "the use of words such as 'inner' and 'outer' should be avoided wherever possible." If a annex14 recommendation and its corresponding wording is copied into a EU standard, the wording should be adapted. A CS stating to "avoid wherever possible" leads to applicability issues.
response	Noted.
	The wording of paragraph (c)(12) is in line with the corresponding SARP of ICAO Annex 14, Volume I.
comment	58 comment by: Aerodrome safety regulation departement
	Additional point 15) should be renumbered 14)
response	Accepted.
	The paragraph is renumbered accordingly.
	242
comment	242 comment by: IAOPA Europe
	IAOPA Europe works to improve safety in operation within the GA Field. In this connection we have become aware of a lack of standization and consistent implementation in Europe when it comes to information signs indicating remaining runway and particularly a half-way runway marker sign.



	Particularly on shorter runways and in GA operations it can be of significant value to alert the pilot when passing the half-way point of the runway. It allows the pilot to make an assessment if the take-off is progressing as expected and if sufficient speed has been achieved at this point.
	As part of our safety work we are trying to promote among GA pilots the rule that at least 70% of the aircraft lift off speed shall be achieved at the 1/2 runway mark as a simple and practical tool in a single pilot concept. This allows the pilot to detect problems that the performance calculation could not take into account. For instance an engine that produces less power than expected, more friction from surface, a hanging brake etc.
	Looking at accidents involving GA flights in recent years we are convinced that a ½- way runway sign in combination with increased pilot awareness about using the sign could have prevented several fatal accidents.
	We are therefore working with airports to introduce ½-way signs.
	One of the obstacles is that there is no clear ICAO or European standard for such a sign. Germany has a national standard where "½" is written in black on a yellow background, but that is not widely adopted in the rest of Europe.
	In the US the FAA has a standard where "½" is written with white letters on a black backgorund. See figure 21 and 2-2 in FAA AC 150/5340-18G
	https://www.faa.gov/documentLibrary/media/Advisory_Circular/150-5340-18G- Chg-1-Airport-Signs.pdf
	Whereas not an ICAO standard per se, it has good support in existing ICAO logic for airport signs. The black background is used on signs indicating present position and the white numbers as text is used on runway marking signs.
	The standard of white text on black background is also already common in Europe on combined civil and military airfields as 1.000 ft markers where the numbers are giving the remaining distance to the runway end in 1.000 FT increments.
	We suggest therefore to adopt the FAA standard as a recommendation for airports that wishes to introduce ½-way markers. Airports with existing markers using alternative national standards should not be required to change these since they are in any case easy for the pilot to decode.
response	Noted.
	ICAO is currently working on the runway distance-remaining signs for which EASA is following the developments and will review the outcome of ICAO's work.
comment	303 comment by: European Powered Flvina Union

We fully agree with the Agency's proposal.



Rationale: The precise provision reduces confusion when charts and radio calls have to be interpreted.

Noted. response

3.2. CS-ADR-DSN - CS ADR-DSN.Q.852

p. 58

comment	171	comment by: Europe Air Sports	
	Page 58/118 CS ADR-DSN.Q.852 Ma	arking and lighting of overhead wires, cables	
	We strongly suggest to cables on or near the	o add a wording discouraging the use of any overhead wires or operationally used areas of an aerodrome.	
	Rationale: Several safety occurre	nces over the years.	
response	Noted.		
	The comment will be regarding the aerodro	further evaluated once a rulemaking task has been initiated me surroundings.	
comment	304	comment by: European Powered Flying Union	
	No overhead wires and cables must be tolerated anywhere directly ove operationally used surfaces, please!		
	Rationale: Cables are t after 35 years of grou landing sites, the larg Swiss Alps, and after destroying landing rot	raps, be they lighted or unlighted. This is a personal conclusion and operations activities at many aerodromes and rotorcraft est being London Heathrow, the smallest Ulrichen (VS) in the knowing about several cable-induced accidents damaging or orcraft.	
response	Noted.		
	The comment will be regarding the aerodro	further evaluated once a rulemaking task has been initiated me surroundings.	

3.2. CS-ADR-DSN - CS ADR-DSN.T.915

p. 61

comment 285 comment by: AESA Spain

On this provision, we identify the following problem (the same happens with ICAO Annex 14, 9.9.5):



By imposing a set distance of 240 m in CS ADR-DSN.T.915 (e)(2), frangibility requirements are being established for objects that, depending on the aerodrome, could be outside the RESA/radio altimeter operating area in the case of a CAT I runway or, to the contrary, that would comply with the minimun dimensions established in the applicable CS, but that could not comply with the recommended distances. In these cases, it is possible that the requirement imposed by CS ADR-DSN.T.915 might not be achievable. For all of these reasons, it appears to be an inconsistency in the latest proposed version of CS ADR-DSN.T.915, with the requirements for the RESA and the radio altimeter operating area. This could be solved by additionally linking that requirement to the infringement of the OFZ.

This is a fact that is going to happen also in airports where recommended RESA provisions are being met with arresting systems. It could happen, in these cases, that the requirements for the recommended RESA would be in compliance, but the requirement T.915 would be a non-compliance, due to the RESA not having a 240m length.

response Noted.

The proposed change to CS ADR-DSN.T.915 is in line with the corresponding SARP of ICAO Annex 14, Volume I.

3.2. CS-ADR-DSN - GM1 ADR-DSN.T.915

p. 61-62

comment	99	comment by: Zurich Airport
	rangibility criteria should apply just for objects within 77.5m.	
response	Not accepted.	
	Paragraph (e)(1) of CS ADR-DSN.T.915 is in line with the corresponding SARP of ICAO Annex 14, Volume I.	
	Г	
comment	154	comment by: ACI Europe
	Proposed change to deleted item 1: Frangibility criteria should apply just for objects within 77.5m.	
response	ot accepted.	
	Paragraph (e)(1) of CS ADR-DSN.T.915 is in line with the corresponding SARP of ICAO Annex 14, Volume I.	



Appendix A - Attachments

MPA 2020-10 Figure.png Attachment #1 to comment #194

ICAO State Letter 2020.35. Annex 14 Vol I - adoption of amendment 15.pdf Attachment #2 to comment <u>#222</u>

