



TANZANIA CIVIL AVIATION AUTHORITY
SAFETY REGULATION

Revision: 1

Document No.
TCAA/FRM/SR/AGA-27

CHECKLIST FOR INSPECTION OF SURFACE MOVEMENT GUIDANCE CONTROL SYSTEM (SMGCS)

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AERODROME NAME:	ICAO REFERENCE CODE:
TRAFFIC DENSITY CLASS: <i>(see Note 3)</i>	VISIBILITY CONDITION: <i>(see Note 3)</i>
AERODROME INSPECTOR:	DATE:

S/N	ICAO Annex 14 Ref	Items	Assessment			
			S	NS	NC	Remarks
	A	SURFACE MOVEMENT GUIDANCE CONTROL SYSTEM				
1	9.8.1	Does the surface movement guidance and control system (SMGCS) provided at an aerodrome. <i>Note 1: Inspector to check procedures and operator's facilities, equipment, services and installations</i>				
2	9.8.2	Does the design of an SMGCS take into account the air traffic density; visibility conditions; need for pilot orientation; complexity of the aerodrome layout; and movements of vehicles.				
3	9.8.3	Are visual aids components of an SMGCS including markings, lights and signs designed to conform with the Part XIII of the Civil Aviation (Aerodromes) Regulations 2016, respectively? <i>Note 2: Link this question with Checklist No. TCAA-FRM-SR-AGA-15 Checklist for Inspection of Visual Aids for Navigation</i>				



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S/N	ICAO Annex 14 Ref	Items	Assessment			
			S	NS	NC	Remarks
4	9.8.4	Does the SMGCS designed such that it can assist in the prevention of inadvertent incursions of aircraft and vehicles onto an active runway taking into account recommendations of the Runway Safety Team (RST) ?				
5	9.8.5	Does the SMGCS designed such that it can assist in the prevention of collisions between aircraft, and between aircraft and vehicles or objects, on any part of the movement area in line with RST objectives?				
6	9.8.6	Does the SMGCS is provided by selective switching of stop bars and taxiway centre line lights?				
7	9.8.6	In the event that the SMGCS is provided by selective switching of stop bars and taxiway centre line lights , are following requirements met by the aerodrome operator: <ul style="list-style-type: none"> a) taxiway routes which are indicated by illuminated taxiway centre line lights are capable of being terminated by an illuminated stop bar; b) the control circuits so arranged that when a stop bar located ahead of an aircraft is illuminated, the appropriate section of taxiway centre line lights beyond it is suppressed; and 				

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			S	NS	NC	Remarks
		c) the taxiway centre line lights are activated ahead of an aircraft when the stop bar is suppressed.				
8	9.8.7	In case, the runway visual range (RVR) conditions less than a value of 350 m, Does the Surface movement radar for the manoeuvring area provided at an aerodrome ?				
	B	APRON MANAGEMENT SERVICE				
10	9.5.2	Does the aerodrome control tower participate in the apron management service?				
11	9.5.2	In case, where the aerodrome control tower does not participate in the apron management service, are procedures established to facilitate the orderly transition of aircraft between the apron management unit and the aerodrome control tower?				
12	9.5.3	Does the apron management service provided with radiotelephony communications facilities?				
13	9.5.4	Are low visibilities procedures in effect at this aerodrome?				
14	9.5.4	In the event, where low visibility procedures are in effect, are persons and vehicles operating on an apron restricted to the essential minimum?				
15	9.5.5	Does the emergency vehicle responding to an emergency given priority over all other surface				

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S/N	ICAO Annex 14 Ref	Items	Assessment			
			S	NS	NC	Remarks
		movement traffic?				
16	9.5.6	Is any vehicle operating on an apron : a) give way to an emergency vehicle ; an aircraft taxiing, about to taxi, or being pushed or towed ; and b) give way to other vehicles in accordance with local regulations .				
17	9.5.7	Is the aircraft stand visually monitored to ensure that the recommended clearance distances are provided to an aircraft using the stand?				
C AERODROME VEHICLE OPERATIONS						
18	9.7.1	Are vehicles operated on a manoeuvring area only as authorized by the aerodrome control tower?				
19	9.7.1	Are vehicles operated on an apron only as authorized by the appropriate designated authority?				
20	9.7.2	Does the driver of a vehicle on the movement area comply with all mandatory instructions conveyed by markings and signs unless otherwise authorized by the aerodrome control tower when on the manoeuvring area?				
21	9.7.2	Does the driver of a vehicle on the movement area comply with all mandatory instructions conveyed by markings and signs unless otherwise authorized				

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			S	NS	NC	Remarks
		by the appropriate designated authority when on the apron?				
22	9.7.3	Does the driver of a vehicle on the movement area comply with all mandatory instructions conveyed by lights ?				
23	9.7.4	Does the driver of a vehicle on the movement area appropriately trained for the tasks to be performed and comply with the instructions issued by the aerodrome control tower , when on the manoeuvring area ?				
24	9.7.4	Does the driver of a vehicle on the movement area appropriately trained for the tasks to be performed and comply with the instructions issued by the appropriate designated authority , when on the apron ?				
25	9.7.5	Does the driver of a radio-equipped vehicle establish satisfactory two-way radio communication with the aerodrome control tower before entering the manoeuvring area?				
26	9.7.5	Does the driver of a radio-equipped vehicle establish satisfactory two-way radio communication with the appropriate designated authority before entering the apron.				

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S/N	ICAO Annex 14 Ref	Items	Assessment			
			S	NS	NC	Remarks
27	9.7.5	Does the airside driver maintain a continuous listening watch on the assigned frequency when on the movement area?				
D CONDITION OF THE MOVEMENT AREAS AND RELATED FACILITIES						
28	2.9.1	Is Information on the condition of the movement area and the operational status of related facilities provided to the AIS and ATM, to enable those units to provide the necessary information to arriving and departing aircraft?				
29	2.9.1	Are information up to date and normally changes in conditions reported without delay?				
30	2.9.3	Are inspections of the movement area carried out each day at least once where the code number is 1 or 2 and at least twice where the code number is 3 or 4?				
		REMARKS				

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			S	NS	NC	Remarks			
		<p>Note 3: Criteria for classifying Aerodrome's SMGCS (see Table 1 and 2 below)</p> <p>A: Traffic Density (from ICAO Doc 9476, SMGCS Manual)</p> <p>Defined as Light (L), Medium (M) or Heavy (H), as measured in the mean busy hour:</p> <p>Light: Not greater than 15 movements per runway or typically less than 20 total aerodrome movements.</p> <p>Medium: Of the order of 16 to 25 movements per runway or typically between 20 to 35 total aerodrome movements.</p> <p>Heavy: Of the order of 26 or more movements per runway or typically more than 35 total aerodrome movements.</p> <p>B: Visibility Conditions</p> <p>1 = Visibility sufficient for the pilot to taxi and to avoid collision with other traffic on taxiways and at intersections by visual reference, and for personnel of control units to exercise control over all traffic on the basis of visual surveillance;</p> <p>2 = Visibility sufficient for the pilot to taxi and to avoid collision with other traffic on taxiways and at intersections by visual reference, but insufficient for personnel of control units to exercise control over all traffic on the basis of visual surveillance; and</p> <p>3 = Visibility less than 400 m RVR (low visibility operations)</p> <p>Reference: ICAO Doc 9476, SMGCS Manual and Doc 9830, Advanced SMGCS Manual</p>							

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TABLE 1 - GUIDANCE FOR SELECTING SMGCS SYSTEM AIDS

Aid	Traffic condition — Visibility condition —			Light			Medium			Heavy			ICAO DOCUMENT REFERENCE*
	1	2	3	1	2	3	1	2	3				
Apron markings	x	x	x	x	x	x	x	x	x	x	x	Annex 14, Chapter 5; <i>Aerodrome Design Manual</i> , Part 4, Chapter 2	
Runway centre line marking	x	x	x	x	x	x	x	x	x	x	x	Annex 14, Chapter 5	
Taxiway centre line marking	x	x	x	x	x	x	x	x	x	x	x	Annex 14, Chapter 5	
Taxi-holding position marking	x	x	x	x	x	x	x	x	x	x	x	Annex 14, Chapter 5	
Visual aids for denoting restricted use areas	x	x	x	x	x	x	x	x	x	x	x	Annex 14, Chapter 7	
Runway edge lights	x	x	x	x	x	x	x	x	x	x	x	Annex 14, Chapter 5; <i>Aerodrome Design Manual</i> , Part 5, Chapter 3	
Taxiway edge lights	x	x	x	x	x	x	x	x	x	x	x	Annex 14, Chapter 5; <i>Aerodrome Design Manual</i> , Part 5, Chapter 3	
Obstacle lighting	x	x	x	x	x	x	x	x	x	x	x	Annex 14, Chapter 6; <i>Aerodrome Design Manual</i> , Part 4, Chapter 14	
Signs	x	x	x	x	x	x	x	x	x	x	x	Annex 14, Chapter 5; <i>Aerodrome Design Manual</i> , Part 4, Chapter 11	
Taxiway intersection marking	x	x	x	x	x	x	x	x	x	x	x	Annex 14, Chapter 5	
Charts (aerodrome, movement, apron)	x	x	x	x	x	x	x	x	x	x	x	Annex 4, Chapters 13, 14 and 15	
Aerodrome control service	x	x	x	x	x	x	x	x	x	x	x	Annex 11, PANS-RAC	
Signalling lamp	x	x	x	x	x	x	x	x	x	x	x	Annex 14, Chapter 5	
Radiotelephony equipment	x	x	x	x	x	x	x	x	x	x	x	Annex 11, Chapter 6	
Taxi-holding position lights			x		x	x	x	x	x	x	x	Annex 14, Chapter 5	
Clearance bars			x		x	x		x	x	x	x	Annex 14, Chapter 5	
Electrical monitoring system for lights		x	x		x	x	x	x	x	x	x	Annex 14, Chapter 8; <i>Aerodrome Design Manual</i> , Part 5, Chapter 3	
Taxiway centre line lights			x			x				x	x	Annex 14, Chapter 5; <i>Aerodrome Design Manual</i> , Part 5, Chapter 3	
Stop bars			x		x	x		x	x	x	x	Annex 14, Chapter 5; <i>Aerodrome Design Manual</i> , Part 5, Chapter 3	
Selective switching capability for taxiway centre line lights						x				x	x	<i>Aerodrome Design Manual</i> , Part 4, Chapter 10 and Part 5, Chapter 3	
Selective switching capability for apron taxiway centre line lights						x				x	x	<i>Aerodrome Design Manual</i> , Part 4, Chapter 10 and Part 5, Chapter 3	
Surface movement radar (SMR)						x		x	x	x	x	<i>Air Traffic Services Planning Manual</i>	
Aircraft stand manoeuvring guidance lights			x			x				x	x	Annex 14, Chapter 5	
Runway clearance aid			x			x		x	x	x	x	Annex 14, Chapter 5	
Secondary power supply			x		x	x		x	x	x	x	Annex 14, Chapter 8; <i>Aerodrome Design Manual</i> , Part 5, Chapter 2	
Visual docking guidance system						x		x	x	x	x	Annex 14, Chapter 5; <i>Aerodrome Design Manual</i> , Part 4, Chapter 12	

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TABLE 2 - GUIDANCE FOR SELECTING SMGCS SYSTEM PROCEDURES

Procedure	Traffic condition —	Light			Medium			Heavy			ICAO DOCUMENT REFERENCE*
	Visibility condition —	1	2	3	1	2	3	1	2	3	
Aerodrome authority											
Periodic electrical monitoring of SMGC aids		x	x	x	x	x	x	x	x	x	Annex 14, Chapter 8 and Chapter 3 of this manual
Designation of taxiways		x	x	x	x	x	x	x	x	x	See Chapter 3 of this manual
Movement area inspections and reporting		x	x	x	x	x	x	x	x	x	Annex 14, Chapter 2 and Chapter 3 of this manual
Regulation of ground staff conduct on the movement area		x	x	x	x	x	x	x	x	x	See Chapter 3 of this manual
Initiation of amendment of aerodrome charts as necessary		x	x	x	x	x	x	x	x	x	See Chapter 6 of this manual
Regulation of ground staff radiotelephony procedures		x	x	x	x	x	x	x	x	x	Annex 10, PANS-RAC
Establishment of standard taxi routes				x		x		x		x	See Chapters 3 and 6 of this manual
Low visibility movement area protection measures				x				x		x	See Chapter 5 of this manual
Continual electrical monitoring of SMGC aids				x				x		x	Annex 14, Chapter 8 and Chapter 3 of this manual
ATS											
Visual monitoring of SMGC aids		x	x	x	x	x	x	x	x	x	Annex 11, Chapter 7 and Chapter 3 of this manual
Use of radiotelephony procedures and phraseology		x	x	x	x	x	x	x	x	x	Annex 10, PANS-RAC, Part 9 and the <i>Manual of Radiotelephony</i>
Use of signalling lamp		x	x	x	x	x	x	x	x	x	Annex 2, Appendix A
Control of other than aircraft traffic on the manoeuvring area		x	x	x	x	x	x	x	x	x	PANS-RAC, Part 5
Operation of lighting aids		x	x	x	x	x	x	x	x	x	PANS-RAC, Part 5
Determination of the taxiway route to be followed				x		x		x		x	PANS-RAC, Part 5 and Chapter 3 of this manual
Application of sequencing procedure				x	x	x	x	x	x	x	See Chapter 4 of this manual
Initiation and termination of low visibility procedures				x				x		x	PANS-RAC, Part 5 and Chapter 5 of this manual
Application of separation criteria				x				x		x	PANS-RAC, Part 5, and Chapter 4 of this manual
Continual electrical monitoring of SMGC aids				x				x		x	Annex 11, Chapter 7 and Chapter 3 of this manual
Monitoring of surface movement on SMR								x		x	See Chapter 4 of this manual
Selective switching of taxiway centre line lights								x		x	<i>Aerodrome Design Manual</i> , Part 4 and PANS-RAC, Part 5
Selective switching of stop bars				x		x	x		x	x	<i>Aerodrome Design Manual</i> , Part 4 and PANS-RAC, Part 5

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TABLE 2 - GUIDANCE FOR SELECTING SMGCS SYSTEM PROCEDURES (cont)

Procedure	Traffic condition —	Light			Medium			Heavy			ICAO DOCUMENT REFERENCE*
	Visibility condition —	1	2	3	1	2	3	1	2	3	
Adherence to ground movement traffic rules and regulations		x	x	x	x	x	x	x	x	x	Annex 2, PANS-RAC
Use of radiotelephony procedures and phraseology		x	x	x	x	x	x	x	x	x	Annex 10, PANS-RAC and the <i>Manual of Radiotelephony</i>
<i>Apron management</i>											
Apron regulations and procedures		x	x	x	x	x	x	x	x	x	Annex 14, Chapter 9 and Chapter 8 of this manual
Emergency procedures		x	x	x	x	x	x	x	x	x	Chapters 5 and 8 of this manual
Communication procedures with ATS		x	x	x	x	x	x	x	x	x	Chapters 4 and 8 of this manual
Stand allocation and information		x	x	x	x	x	x	x	x	x	Chapter 8 of this manual
Apron security procedures		x	x	x	x	x	x	x	x	x	Chapter 8 of this manual
Operation of lighting and docking aids				x			x			x	Chapter 8 of this manual
Provision of discrete RTF channel							x	x	x	x	Chapter 8 of this manual
Low visibility procedures				x			x			x	Chapter 5 of this manual

* See Appendix A for further information on visual aids