REQUEST FOR PROPOSAL

Consultant Services for the Development and Implementation of a Quality Assurance Audit Program

March, 2019

North Bay Jack Garland Airport Corporation
50 Terminal St., Suite #1
North Bay, Ontario
P1B 8G2
dan.booth@yyb.ca
www.yyb.ca

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1.0 INTRODUCTION

1.1 Purpose

The Terms of Reference defines the scope of work required from the Consultant for the Development and Implementation of a Quality Assurance Audit Program that encompasses all activities authorized under the airport certificate, including all aspects of the airport's Safety Management System, as required by the Canadian Aviation Regulations.

This request for proposal will be for a period required to implement and complete this project.

1.2 Background

(1) In *Flight 2005: A Civil Aviation Safety Framework for Canada*, Transport Canada (TC) committed to the implementation of SMS in civil aviation organizations. Safety management is a principal element of a sound aviation management program, and a prime factor in the achievement of the goals set out in *Flight 2005*: the reduction of accidents and incidents, and an increased level of public confidence in Canada's air transportation system. The aim is to improve safety through proactive management rather than reactive compliance with regulatory requirements.

(2) TC, through the Canadian Aviation Regulation Advisory Council (CARAC), has developed a series of rule changes to introduce the regulatory requirements for SMS in civil aviation organizations. Rules affecting airport certificate holders in Part III, Subpart 2 of the CARs came into force in 2008.

(3) A required component of the SMS is a Quality Assurance program including an operational independent audit function.

2.0 OBJECTIVES

2.1 General

The objectives are to provide professional consulting services to:

a. Develop a Quality Assurance Audit Plan and conduct a Quality Assurance Audit of all activities authorized under the airport certificate; and,
b. Ensure the Quality Assurance Program meets the requirements of the Canadian Aviation Regulations

2.2 The quality assurance program will need to reflect the size and complexity of the airport. Airports vary in size, type of operation, number of personnel, geography, climate and economic environment. These and other factors will influence the scope of an airport's program.

To be effective the quality assurance program must be tailored to the size, nature and complexity of the operation and activities. The quality assurance program does not need to be more complex than required.

2.3 These services will be broken down into 3 defined phases which include 7 components identified in section 2.4.

Phase 1 - Planning the Audit

The consultant will develop an Audit Planning Schedule for the initial Quality Assurance Audit covering all components required to be audited.

Phase 2 - Conducting the Audit

During this phase, between September 3rd and no later than October 25th, 2019 the consultant will complete a Quality Assurance Audit covering all areas listed in the Quality Assurance Audit Planning Schedule.

Phase 3 - Audit Reports

Upon completion of the Quality Assurance Audit the consultant will prepare a report incorporating audit findings and supporting facts. Corrective action plans will be developed by the airport and not by the consultant.

2.4 Components

Table A—Quality Assurance Program Areas
Component
1.Airport Operations Manual
2.Emergency Response Plan
3.Obligations of the operator
4.Safety Management System
5.TP312
6.Wildlife Management Program
7.Winter Maintenance

All components are to be reviewed to meet the latest version of Canadian Aviation Regulations and related standards affecting aerodrome operations.

See Annex “A” through “G” for North Bay Jack Garland Airport Audit Checklists

TP312 5th edition is current at this time.

3.0 SCOPE OF CONSULTING SERVICES

3.1 General Requirements

In completing the above noted projects, the following is a brief description of the general requirements of work to be undertaken:

- Meeting with the airport to review details of the project and establish priorities.
- Plan and conduct the audit.
- Prepare a report with findings and recommendations.

4.0 PROJECT SCHEDULING

It is intended that the Consultant retained will enter into a Contract for the provision of services.

The Consultant will work with Airport Staff in establishing priorities and identifying requirements to meet the following completion schedule for each phase.

Full Quality Assurance Audit Completion
No Later Than November 29, 2019

5.0 PROJECT REQUIREMENTS

Proponents are asked to provide services generally referred to as "Consulting Services" for the purpose of the RFP. The successful proponent will be awarded a Contract and be referred to as "Consultant" to the Airport.

5.1 Completion deliverables per phase

i) At the completion of Phase 1 and Phase 3 provide the Airport two hard copies of the completed phase of the QA Audit program and an electronic copy.

ii) Electronic format to be PDF.

5.2 Regulation Compliance

Consultant shall review all relevant standards, recommended practices, regulations and publications applicable to the development and implementation of an SMS Program and the quality assurance there within.

6.0 INSTRUCTIONS TO PROPONENTS

6.1 General

Eligible proponents must provide with their proposal:

1. Letter of good standing with the Workplace Safety & Insurance Board.
2. Letter from Insurance Company stating availability of Professional Liability Insurance.
3. Proof of General Liability and Comprehensive Automobile Insurance for all owned vehicles, non-owned vehicles and leased.

The information contained in the proposal must be organized under the same headings and in the same order as outlined in the following section entitled "Mandatory Proposal Components".

6.2 Mandatory Proposal Components

Please order proposal as follows:

1.0 Introduction (Including the following):

1.1 Introductory letter describing the proponent's team and indicating the firm's commitment to the project signed and sealed as outlined above.

1.2 Letter of good standing with the Workplace Safety and Insurance Board.

1.3 Letter from Insurance Company stating availability of an Aviation Professional Liability Insurance specific to this job, the successful Consultant will be required to carry a minimum of $2,000,000 per occurrence in professional liability insurance and $5,000,000 in general liability. The insurance coverage cannot be modified without written consent of the Owner. Clauses that limit the liability of the Consultant or the insurance company to the value of the fees paid/payable will not be considered.

1.4 Proof of General Liability and Automobile Liability Insurance.

2.0 Corporate Overview (Proponent and Sub-consultants)

2.1 History of Firm(s) and experience in general.

2.2 Size of firm – Number of full time and part time employees, associate sub-consultants.

2.3 Related Experience – A summary of relevant experience of the proposed project team including prime and sub-consultants, in completing assignments of this type in a similar size, scope, and complexity. The relevant experience should include work in the following areas:

- Safety Management Systems for Aviation Industry and Airports
- Familiarity with Transport Canada
- Experience and work related to the Canadian Aviation Regulations & Standards
  - Provide details of related projects including names, positions and telephone numbers of client references for at least three (3) relevant projects. Consultant must have completed similar services for a minimum of three (3) projects within the last three (3) years.

2.4 Statement of ability to handle this work in conjunction with any existing workloads and established deadlines.

3.0 Project Team Members

3.1 A description of the experience and capabilities of each team member, number of years at the firm, and their role and responsibility during this project (limit one page/member). The relevant experience should be limited to work in the areas indicated above. Team leaders must be involved in projects completed in last 3 years.

4.0 Organization and Methodology

4.1 Provide a schedule to organize the work and the project.

5.0 Submission of Price and Terms of Payment

The Consultant is to provide a cost proposal excluding travel and accommodations.

The Consultant is to provide in the cost proposal a breakdown of the base fee, anticipated disbursements i.e. travel, lodging, and cost per hour of any additional requested work.

6.0 Ownership

All documentation or materials produced pursuant to these Terms of Reference or the Contract Document will become the property of the airport.

7.0 PROPOSAL EVALUATION CRITERIA

The Consultant's proposal shall be evaluated in accordance with the following criteria.

Proposals will be evaluated by the airport on the basis of perceived "best value", as such the lowest price may not mean award. The airport reserves the right to select and award using its sole discretion and to reject any and all proposals as it sees fit.

The Airport Management team will carry out a project assessment and make recommendations. The evaluation will use the criteria set out as outlined below.

Review Process- **Total Value 85 points**

- Proposal Quality — 10 points
  -overall organization, quality of proposal
- Understanding of the Assignment — 10 points
  - Demonstrated understanding of the assignment
- Project Team — 10 points
  - Qualifications and experience of firm & personnel and
- Project Manager — 10 points
  - Experience, familiarity with issues, time commitment
- Methodology — 15 points
  - Depth, detail, clarity of the submission
  - Understanding of local issues
- Control — 10 points
  - Cost control, reporting and quality control
- Fee proposal — 20 points

8.0 SUBMISSION INSTRUCTIONS

8.1 Address for Submission of Proposals

Address for submittal of Proposals: North Bay Jack Garland Airport Corporation
50 Terminal St., Suite #1
North Bay, Ontario
P1B 8G2

Email address: dan.booth@yyb.ca

Clearly mark sealed packages:

PROPOSAL SUBMISSION FOR: North Bay Jack Garland Airport Quality Assurance Program

8.2 Closing Time for Submission of Proposals

Proposals must be received no later than:

3:00 pm, Eastern Standard Time, Monday May 1st, 2019

8.3 Form of Submission

Two (2) bound copies of the Proposal are to be sealed in an envelope clearly marked as noted in item 8.1 above. Proposal will also be accepted in an electronic format as noted in item 8.1 above.

No late deliveries or fax transmissions will be accepted.

8.4 Enquiries from Consultants

Consultants are to direct enquiries during the proposal call period to:

Dan Booth, Operations/SMS Manager
(705) 474-3026 ext. 5306
dan.booth@yyb.ca

8.5 Anticipated Respondent Selection Date – **June 03, 2019**

ANNEX "A"

Safety Management System (SMS)

Airport Operations Manual Checklist

Name of Airport	CYYB North Bay Jack Garland Airport
Airport Manager/AE	Mr. Jack Santerre
SMS Manager	Mr. Dan Booth

Date of Audit	Month DD, YYYY

Lead Auditor	Mr./Mrs First Name, Last Name
Audit Team	Company Name
Address	Street No./Name
	City, Province
	Postal Code
	Phone Number

Sections Covered

302.08					

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		Airport Operations Manual						
	302.08 (1)	The operator of an airport shall;						
1	(a)	on the issuance of an airport certificate, provide the Minister with a copy of the airport operations manual, as approved by the Minister pursuant to subsection 302.03(2), and distribute copies of the applicable portions to the persons and institutions referred to in the airport operations manual;						
2	(b)	maintain the airport operations manual; and						
3	(c)	submit to the Minister for approval any proposed amendment to the airport operations manual.						
	302.08 (2)	The provisions of this Subpart that apply in respect of the making of an airport operations manual also apply in respect of any amendment to an airport operations manual.						
4	302.08 (3)	An airport operations manual shall set out the standards to be met and the services to be provided by an airport operator.						
	302.08 (4)	An airport operations manual shall contain						
5	(a)	a table of contents;						
	(b)	any information relating to the administration of the airport, including;						
6	(b)(i)	a record of any amendments to the airport operations manual,						
7	(b)(ii)	a list of holders of copies of the airport operations manual or of portions thereof,						
8	(b)(iii)	a description of the procedure for amendment of the airport operations manual,						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
9	(b)(iv)	a description of the organizational structure and operational procedures of the airport management,						
10	(b)(v)	an enumeration of the obligations of the operator referred to in Section 302.07,						
11	(b)(vi)	an undertaking, signed by the operator, in respect of the operator's obligations under paragraphs 302.07(1)(c) and (d),						
12	(b)(vii)	a statement, signed by the operator, certifying that the airport operations manual is complete and accurate, and that the operator agrees to comply with all of the conditions and specifications referred to therein,						
13	(b)(iii)	a statement, signed by the Minister, that the Minister has approved the airport operations manual and any amendments thereto, and						
14	(b)(ix)	a copy of any agreement or memorandum of understanding that affects the operation of the airport;						
	(c)	all of the information necessary to verify that the airport meets the applicable standards set out in the aerodrome standards and recommended practices publications, as they read on the date on which the airport certificate was issued, and satisfies any conditions specified by the Minister pursuant to subsection 302.03(3) in respect of;						
15	(c)(i)	physical characteristics,						
16	(c)(ii)	obstacle limitation surfaces,						
17	(c)(iii)	declared distances,						
18	(c)(iv)	lighting,						
19	(c)(v)	markers,						
20	(c)(vi)	markings,						
21	(c)(vii)	signs,						
22	(c)(viii)	emergency response measures,						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
23	(c)(ix)	airport safety measures,						
24	(c)(x)	access to the movement area and control procedures, and						
25	(c)(xi)	apron management plans and apron safety plans;						
26	(d)	an enumeration of the facilities and services provided and the measures in effect at the airport, including; (i) movement area maintenance services, (ii) measures for the removal of disabled aircraft, (iii) air traffic services and aeronautical information and communication services, (iv) navigation aids, and (v) aviation weather services;						
27	(e)	a description of movement area services and facilities provided at the discretion of the operator; and						
28	(f)	with respect to the safety management system required under section 107.02, (amended 2008/01/01; no previous version) (i) a description of the system's components specified in section 302.502, and (ii) a list of the titles, dates and locations of any documents that are not in the airport operations manual and that describe how the operator is meeting its obligations with respect to the safety management system.						
29	302.08 (5)	The operator of an airport shall operate the airport in accordance with the airport operations manual.						

ANNEX "B"

Safety Management System (SMS)

Emergency Plan Checklist

Name of Airport	CYYB North Bay Jack Garland Airport
Airport Manager/AE	Mr. Jack Santerre
SMS Manager	Mr. Dan Booth

Date of Audit	Month DD, YYYY

Lead Auditor	Mr./Mrs. First Name, Last Name
Audit Team	Company Name
Address	Street No./Name
	City, Province
	Postal Code
	Phone Number

Regulations Covered

302.202	302.207				
302.203	302.208				
302.204	302.209				
302.205					
302.206					

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		Airport Emergency Plan						
		General						
	302.202 (1)	After consultation with a representative sample of the air operators that use the airport and with community organizations that may be of assistance during emergency operations at the airport or in its vicinity, the operator of an airport shall develop and maintain an emergency plan for the purpose of identifying						
1	(a)	the emergencies that can reasonably be expected to occur at the airport or in its vicinity and that could be a threat to the safety of persons or to the operation of the airport;						
2	(b)	the measures to activate the emergency plan for each type of emergency;						
3	(c)	the community organizations capable of providing assistance in an emergency; and						
4	(d)	any additional resources available at the airport and in the surrounding area.						
5	302.202 (2)	The operator of an airport shall establish a degree of supervision and control sufficient to manage the size and complexity of an emergency.						
	302.202 (3)	The operator of an airport shall						
6	(a)	maintain at the airport, in the format of a manual, a copy of an updated version of the emergency plan; and						
7	(b)	provide a copy to the Minister on request.						
	302.202 (4)	The operator of an airport shall						
8	(a)	update the emergency plan as necessary to						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		ensure its effectiveness in emergency operations; and						
9	(b)	review the plan and make any required updates at least once a year after consultation with a representative sample of the air operators that use the airport and the community organizations identified in the plan.						
		Content						
	302.203 (1)	In an emergency plan, the operator of an airport shall, at a minimum,						
10	(a)	identify the potential emergencies, including						
		(i) an aircraft accident or incident (A) within the airport boundaries, and (B) within a critical rescue and fire-fighting access area that extends 1000m beyond the ends of a runway and 150m at 90° outwards from the centreline of the runway, including any part of that area outside the airport boundaries,						
		(ii) an aircraft emergency declared by either air traffic services or a pilot,						
		(iii) a fuel spill that spreads at least 1.5m in any direction or exceeds 12mm in depth,						
		(iv) a medical emergency,						
		(v) a fire in which airport operations or passenger safety is threatened,						
		(vi) an emergency that is related to a special aviation event and that might have an impact on airport operations,						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		(vii) a natural disaster, and						
		(viii) any other emergency that is a threat or is likely to be a threat to the safety of persons or to the operation of the airport;						
11	(b)	identify the organizations at the airport and the community organizations that are capable of providing assistance during an emergency at an airport or in its vicinity, provide the telephone numbers and other contact information for each organization and describe the type of assistance each can provide;						
12	(c)	identify the other resources available at the airport and in the surrounding communities for use during emergency response or recovery operations and provide their telephone numbers and other contact information;						
13	(d)	describe for emergency situations the lines of authority and the relationships between the organizations identified in the emergency plan and describe how actions will be coordinated among all and within each of the organizations;						
14	(e)	identify for emergency situations the supervisors and describe the responsibilities of each;						
15	(f)	specify the positions occupied by the airport personnel who will respond to an emergency and describe the specific emergency response duties of each;						
16	(g)	identify the on-scene controller and describe the						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		controller's emergency response duties;						
17	(h)	provide authorization for a person to act as an on-scene controller or a supervisor if they are not airport personnel;						
18	(i)	set out the criteria to be used for positioning the on-scene controller within visual range of an emergency scene;						
19	(j)	set out the measures to be taken to make the on-scene controller easily identifiable at all times by all persons responding to an emergency;						
20	(k)	if initial on-scene control has been assumed by a person from a responding organization, describe the procedure for transferring control to the on-scene controller;						
21	(l)	describe any training and qualifications required for the on-scene controller and the airport personnel identified in the emergency plan;						
22	(m)	describe the method for recording any training provided to the on-scene controller and airport personnel;						
23	(n)	describe the communication procedures and specify the radio frequencies to be used to link the operator of the airport with						
		(i) the on-scene controller, and						
		(ii) the providers of ground traffic control services and air traffic control services at the airport;						
24	(o)	describe the communication procedures allowing						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		the on-scene controller to communicate with the organizations identified in the emergency plan;						
25	(p)	identify the alerting procedures that						
		(i) activate the emergency plan,						
		(ii) establish the necessary level of response,						
		(iii) allow immediate communication with the organizations identified in the emergency plan in accordance with the required level of response,						
		(iv) if applicable, confirm the dispatch of each responding organization,						
		(v) establish the use of standard terminology in communications, and						
		(vi) establish the use of the appropriate radio frequencies as set out in the emergency plan;						
26	(p)(q)	specify						
		(i) the airport communication equipment testing procedures,						
		(ii) a schedule for the testing, and						
		(iii) the method of keeping records of the tests;						
27	(r)	for airports designated under Subpart 3, specify the location of the emergency coordination centre used to provide support to the on-scene controller;						
28	(s)	describe the measures for dealing with adverse						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		climatic conditions and darkness for each potential emergency set out in paragraph (a);						
29	(t)	describe the procedures to assist persons who have been evacuated if their safety is threatened or airside operations are affected;						
30	(u)	describe the procedures respecting the review and confirmation of the following to permit the return of the airport to operational status after an emergency situation:						
		(i) emergency status reports,						
		(ii) coordination with the coroner and the investigator designated by the Transportation Safety Board of Canada regarding the accident site conditions,						
		(iii) disabled aircraft removal,						
		(iv) airside inspection results,						
		(v) accident or incident site conditions, and						
		(vi) air traffic services and NOTAM coordination;						
		(vii) describe the procedures for controlling vehicular flow during an emergency to ensure the safety of vehicles, aircraft and persons;						
31	(w)	specify the procedures for issuing a NOTAM in the event of						
		(i) an emergency affecting the critical category for firefighting required under section 303.07, or						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		(ii) changes or restrictions in facilities or services at the airport during and after an emergency;						
32	(x)	describe the procedures for preserving evidence as it relates to						
		(i) aircraft or aircraft part removal, and						
		(ii) the site of the accident or incident in accordance with the *Canadian Transportation Accident Investigation and Safety Board Act*;						
33	(y)	describe the procedures to be followed, after any exercise set out in section 302.208 or the activation of the plan for an emergency that requires a full emergency standby, in the following cases:						
		(i) a post-emergency debriefing session with all participating organizations,						
		(ii) the recording of the minutes of the debriefing session,						
		(iii) an evaluation of the effectiveness of the emergency plan to identify deficiencies,						
		(iv) changes, if any, to be made in the emergency plan, and						
		(v) partial testing subsequent to the modification of an emergency plan;						
34	(z)	describe						
		(i) the process for an annual review and update						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		of the emergency plan, and						
		(ii) the administrative procedure for the distribution of copies of an updated version of the emergency plan to the airport personnel who require them and to the community organizations identified in the plan; and						
		(iii) *(z.1)* describe the procedures to assist in locating an aircraft when the airport receives notification that an ELT has been activated.						
	302.203 (2)	The operator of an airport shall include a copy of the following documents in the emergency plan:						
35	(a)	the signed agreements, if any, between the airport operator and the community organizations that provide emergency response services to the airport; and						
36	(b)	an airport grid map.						
		On-Scene Controller						
37	302.204	The on-scene controller shall be at the emergency site and shall not have other duties during an emergency, unless the life of a person is in danger nearby and the on-scene controller is alone and has the ability to assist the person.						
38	302.205	The operator of an airport shall establish procedures that make the on-scene controller easily identifiable by all persons responding to an emergency.						
		Aircraft Crash Charts and Airport Grid Maps						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
	302.206 (1)	For aircraft operating in a passenger or cargo configuration, the operator of an airport shall make available to the emergency coordination centre aircraft crash charts specific to the aircraft used by the air operators that use the airport, and shall provide copies of the charts to						
39	(a)	the organizations responsible for fire-fighting services that are identified in the emergency plan; and						
40	(b)	the on-scene controller.						
41	302.206 (2)	In the case of aircraft that have or may have a seating configuration of not more than nine passenger seats, the operator of an airport may use, instead of the aircraft crash charts referred to in subsection (1), other documents containing equivalent information.						
	302.206 (3)	The operator of an airport shall develop and review and update annually, if necessary, an airport grid map that includes a minimum of						
42	(a)	an area covering at least one kilometre around each runway;						
43	(b)	the airport access roads and gates; and						
44	(c)	the location of rendezvous points to which persons and vehicles that are responding to an emergency situation proceed in order to receive instructions.						
45	302.206 (4)	The operator of an airport shall provide copies of the airport grid map to the airport personnel who						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		must have one and the organizations identified in the emergency plan.						
		Personnel and Training						
46	302.207 (1)	The operator of an airport shall assign specific emergency response duties, other than those of an on-scene controller or a supervisor, only to those airport personnel who are identified in the emergency plan and who						
47	(a)	are knowledgeable of their duties as described in the plan; and						
48	(b)	have the skills to carry out their duties.						
49	302.207 (2)	The operator of an airport shall assign to act as an on-scene controller or a supervisor only those airport personnel, or other persons authorized by the operator in the emergency plan, who are						
50	(a)	knowledgeable about the contents of the emergency plan;						
51	(b)	familiar with the procedures for the overall coordination of emergency operations at an emergency site; and						
52	(c)	trained for the particular role that they perform.						
	302.207 (3)	The operator of an airport shall						
53	(a)	keep records of the training that was received by persons to meet the requirements of subsections (1) and (2);						
54	(b)	preserve the records of training for three years						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		after the day on which the training was received; and						
55	(c)	submit a copy of the training records to the Minister on request.						
		Testing of the Emergency Plan						
	302.208 (1)	In this section, "international service" has the same meaning as in subsection 55(1) of the *Canada Transportation Act*.						
	302.208 (2)	The operator of an airport shall test the emergency plan by conducting a full-scale exercise						
56	(a)	for the airports designated by the Minister in the *Canada Flight Supplement* to be used by international service, at intervals not exceeding two years; and						
57	(b)	for other airports, at intervals not exceeding four years.						
58	302.208 (3)	The operator of an airport shall conduct full-scale exercises based on scenarios that relate to a major aircraft accident and, at a minimum; the exercises shall include the assembly and deployment of fire-fighting, policing and medical services organizations.						
59	302.208 (4)	The operator of an airport shall conduct a table top exercise each year in which no full-scale exercise is conducted.						
	302.208 (5)	The operator of an airport, when conducting a						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		table top exercise, shall have						
60	(a)	an up-to-date list of the participants and their telephone numbers and the radio frequencies used to communicate;						
61	(b)	fully operational communication equipment; and						
62	(c)	a copy of the airport grid map.						
63	302.208 (6)	The operator of an airport shall base the table top exercises on scenarios that include an aircraft accident or incident.						
64	302.208 (7)	The operator of an airport shall provide the Minister with a notice in writing of the date and time when a table top or full-scale exercise is to be carried out at least 60 days before the day of the exercise.						
	302.208 (8)	The Minister may observe the testing of an emergency plan.						
65	302.208 (9)	After each exercise, the operator of an airport shall conduct a debriefing with all the organizations identified in the plan and a representative of the airport personnel who participated to evaluate the effectiveness of the emergency plan and identify deficiencies.						
66	302.208 (10)	The operator of an airport shall implement an action plan to correct any deficiencies in the emergency plan that were identified during a debriefing session.						
67	302.208 (11)	The operator of an airport shall conduct partial exercises to assess proposed changes in the plan						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		in order to correct deficiencies.						
	302.208 (12)	The operator of an airport shall record						
68	(a)	the date of an exercise;						
69	(b)	the type of exercise;						
70	(c)	the minutes of the debriefing session after the exercise; and						
71	(d)	any action plans to correct deficiencies that were identified during a debriefing session.						
72	302.208 (13)	The operator of an airport shall keep an exercise record for 10 years after the day on which the record is made.						
73	302.208 (14)	The operator of an airport shall submit debriefing minutes and corrective action plans relating to an exercise to the Minister on request.						
		Authorization						
	302.209	The Minister may, on application by the operator of an airport, provide to the operator written authorization not to conduct the full-scale exercise during an interval set out in paragraph 302.208(2)(a) or (b) if the operator demonstrates that the testing requirements for a full-scale exercise have been met through an activation of the emergency plan in response to an emergency during that interval.						

ANNEX "C"

Safety Management System (SMS)

Obligations of the Operator Checklist

Name of Airport	CYYB North Bay Jack Garland Airport
Airport Manager/AE1. Letter of good standing with the Workplace Safety & Insurance Board. 2. Letter from Insurance Company stating availability of Professional Liability Insurance. 3. Proof of General Liability and Comprehensive Automobile Insurance for all owned vehicles, non-owned vehicles and leased.	Mr. Jack Santerre

SMS Manager	Mr. Dan Booth

Date of Audit	Month DD, YYYY

Lead Auditor	Mr./Mrs. First Name, Last Name
Audit Team	Company Name
Address	Street No./Name
	City, Province
	Postal Code
	Phone Number

Sections Covered

302.07					

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		Obligations of the Operator						
	302.07 (1)	The operator of an airport shall;						
1	(a)	Comply; (i) subject to subparagraph (ii), with the standards set out in the aerodrome standards and recommended practices publications, as they read on the date on which the airport certificate was issued, (ii) in respect of any part or facility of the airport that has been replaced or improved, with the standards set out in the aerodrome standards and recommended practices publications, as they read on the date on which the part or facility was returned to service, and (iii) with any conditions specified in the airport certificate by the Minister pursuant to subsection 302.03(3);						
2	(b)	without charge, at the request of a Department of Transport inspector, allow access to airport facilities and provide the equipment necessary to conduct an inspection of the airport;						
3	(c)	review each issue of each aeronautical information publication on receipt thereof and, immediately after such review, notify the Minister of any inaccurate information contained therein that pertains to the airport;						
4	(d)	notify the Minister in writing at least 14 days before any change to the airport, the airport facilities or the level of service at the airport that has been planned in advance and that is likely to affect the accuracy of the information contained in an aeronautical information publication;						
5	(e)	as the circumstances require for the purpose of						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		ensuring aviation safety, inspect the airport (i) as soon as practicable after any aviation occurrence, as that term is defined in Section 2 of the *Canadian Transportation Accident Investigation and Safety Board Act*, (ii) during any period of construction or repair of the airport or of airport facilities that are designated in the airport certificate, (iii) at any other time when there are conditions at the airport that could be hazardous to aviation safety;						
6	(f)	subject to paragraph (d), notify the Minister in writing of any change in airport operations within 14 days after the date of the change; and						
7	(g)	assign duties on the movement area and any other area set aside for the safe operation of aircraft, including obstacle limitation surfaces, at the airport, which are described in the airport operations manual, only to employees who have successfully completed a safety-related initial training course on human and organizational factors.						
	302.07 (2)	Subject to subsection (3), the operator of an airport shall give to the Minister, and cause to be received at the appropriate air traffic control unit or flight service station, immediate notice of any of the following circumstances of which the operator has knowledge:						
8	(a)	any projection by an object through an obstacle limitation surface relating to the airport;						
9	(b)	the existence of any obstruction or hazardous condition affecting aviation safety at or in the vicinity of the airport;						
10	(c)	any reduction in the level of services at the airport that are set out in an aeronautical information publication;						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
11	(d)	the closure of any part of the maneuvering area of the airport; and						
12	(e)	any other conditions that could be hazardous to aviation safety at the airport and against which precautions are warranted.						
13	302.07 (3)	Where it is not feasible for an operator to cause notice of a circumstance referred to in subsection (2) to be received at the appropriate air traffic control unit or flight service station, the operator shall give immediate notice directly to the pilots who may be affected by that circumstance.						

ANNEX "D"

Safety Management System (SMS)

SMS Checklist

Name of Airport	CYYB North Bay Jack Garland Airport
Airport Manager/AE	Mr. Jack Santerre
SMS Manager	Mr. Dan Booth

Date of Audit	Month DD, YYYY

Lead Auditor	Mr./Mrs. First Name, Last Name
Audit Team	Company Name
Address	Street No./Name
	City, Province
	Postal Code
	Phone Number

Regulations Covered

106.01	107.03	302.504			
106.02	107.04	302.505			
106.03	302.501				
106.04	302.502				
107.02	302.503				

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		Accountable Executive Appointment and Acceptance						
	106.01 and 106.02 (1)	The applicant for, or the holder of, a certificate issued under section 302.03 shall						
1	(a)	appoint an individual as accountable executive to be responsible for operations or activities authorized under the certificate and accountable on their behalf for meeting the requirements of these Regulations;						
2	(b)	notify the Minister of the name of the person appointed; and						
3	(c)	ensure that the accountable executive submits to the Minister a signed statement that they accept the responsibilities of their position within 30 days after their appointment.						
4	(2)	No person shall be appointed under subsection (1) unless they have control of the financial and human resources that are necessary for the activities and operations authorized under the certificate.						
		Accountability						
5	106.03	The responsibility and accountability of the accountable executive appointed under subsection 106.02(1) are not affected by the existence of						
	(a)	a person responsible for the maintenance control system appointed under paragraph 406.19(1)(a) or 706.03(1)(a);						
	(b)	a person responsible for maintenance appointed						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		under paragraph 573.03(1)(a);						
	(c)	an operations manager referred to in section 702.07, 703.07, 704.07 or 705.07; or						
	(d)	a maintenance manager referred to in section 702.07, 703.07, 704.07 or 705.07.						
		More Than One Certificate						
6	106.04	If a certificate holder is the holder of more than one certificate referred to in section 106.01, only one accountable executive shall be appointed under paragraph 106.02(1)(a) to be responsible for the operations or activities authorized under the certificates.						
		Establishing a Safety Management System						
7	107.02	The applicant for, or the holder of, a certificate referred to in section 107.01, which applies to an applicant for, or the holder of, an airport certificate issued under section 302.03, shall establish, maintain and adhere to a safety management system.						
		Safety Management System						
	107.03	A safety management system shall include						
8	(a)	a safety policy on which the system is based;						
9	(b)	a process for setting goals for the improvement of aviation safety and for measuring the attainment of those goals;						
10	(c)	a process for identifying hazards to aviation safety and for evaluating and managing the associated risks;						
11	(d)	a process for ensuring that personnel are trained and competent to perform their duties;						
12	(e)	a process for the internal reporting and analyzing of hazards, incidents and accidents and for taking corrective actions to prevent their recurrence;						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
13	(f)	a document containing all safety management system processes and a process for making personnel aware of their responsibilities with respect to them;						
14	(g)	a quality assurance program;						
15	(h)	a process for conducting periodic reviews or audits of the safety management system and reviews or audits, for cause, of the safety management system; and						
16	(i)	any additional requirements for the safety management system that are prescribed under these Regulations.						
		Size						
17	107.04	A safety management system shall correspond to the size, nature and complexity of the operations, activities, hazards and risks associated with the operations of the holder of a certificate referred to in section 107.01.						
		Safety Management System Requirements						
	302.501	The safety management system required under section 107.02 in respect of an applicant for, or a holder of, an airport certificate shall						
18	(a)	meet the requirements of Subpart 7 of Part 1 and Section 302.05; and						
19	(b)	be under the control of the accountable executive appointed under paragraph 106.02(1)(a).						
		Components of the Safety Management System						
	302.502	The safety management system shall include, among others, the following components:						
20	(a)	a safety management plan that includes						
		(i) a safety policy that the accountable executive						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		has approved and communicated to all employees,						
		(ii) the roles and responsibilities of personnel assigned duties under the safety management system,						
		(iii) performance goals and a means of measuring attainment of those goals,						
		(iv) a policy for the internal reporting of hazards, incidents and accidents, including the conditions under which immunity from disciplinary action will be granted, and						
		(v) a process for reviewing the safety management system to determine its effectiveness;						
21	(b)	procedures for reporting hazards, incidents and accidents to the appropriate manager;						
22	(c)	procedures for the collection of data relating to hazards, incidents and accidents;						
23	(d)	procedures for the exchange of information in respect of hazards, incidents and accidents among the operators of aircraft and the provider of air traffic services at the airport and the airport operator;						
24	(e)	procedures for analysing data obtained under paragraph (c) and during an audit conducted under a quality assurance program required under paragraph 107.03(g) and for taking corrective actions;						
25	(f)	training requirements for the person managing the safety management system and for personnel assigned duties under the safety management system;						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
26	(g)	procedures for making progress reports to the accountable executive at intervals determined by the accountable executive and other reports as needed in urgent cases; and						
27	(h)	procedures for involving employees in the implementation and ongoing development of the safety management system.						
		Quality Assurance Program						
28	302.503 (1)	The quality assurance program required under paragraph 107.03(g) in respect of an applicant for, or a holder of, an airport certificate shall include a process for quality assurance that includes periodic reviews or audits of the activities authorized under a certificate and reviews or audits, for cause, of those activities.						
29	302.503 (2)	The holder of an airport certificate shall ensure that records relating to the findings resulting from the quality assurance program are distributed to the appropriate manager for corrective action and follow-up in accordance with the policies and procedures specified in the airport operations manual.						
	302.503 (3)	The holder of an airport certificate shall establish an audit system in respect of the quality assurance program that consists of the following:						
30	(a)	an initial audit conducted within 12 months after						
		(i) in the case of an airport specified in subsection 302.500(1), the later of January 1, 2008 and the day on which the airport certificate is issued, and						
		(ii) in the case of any other airport, the later of						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		January 1, 2009 and the day on which the airport certificate is issued;						
31	(b)	an audit of the entire quality assurance program carried out every three years, calculated from the initial audit, in one of the following ways:						
		(i) a complete audit, or						
		(ii) a series of audits conducted at intervals set out in the airport operations manual;						
32	(c)	checklists of all activities controlled by the airport operations manual;						
33	(d)	a record of each occurrence of compliance or non-compliance with the airport operations manual found during an audit referred to in paragraph (a) or (b);						
34	(e)	procedures for ensuring that each finding of an audit is communicated to the accountable executive;						
35	(f)	follow-up procedures for ensuring that corrective actions are effective; and						
36	(g)	a system for recording the findings of an audit referred to in paragraph (a) or (b), corrective actions and follow-ups.						
	302.503 (4)	The records resulting from a system required under paragraph (3)(g) shall be retained for the greater of						
37	(a)	two audit cycles, and						
38	(b)	two years						
39	302.503 (5)	The duties related to the quality assurance program that involve specific tasks or activities among the activities of an airport shall be fulfilled by persons who are not responsible for carrying out those tasks or activities unless						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
	(a)	the size, nature and complexity of the operations and activities authorized under the airport certificate justify the fulfilling of those duties by the person responsible for carrying out those tasks or activities;						
	(b)	the holder of the airport certificate demonstrates to the Minister, by means of a risk analysis, that the fulfilling of those duties by the person responsible for carrying out those tasks or activities will not result in an unacceptable risk to aviation safety; and						
	(c)	the holder of the airport certificate provides the Minister, in writing, with the information required under paragraphs (a) and (b).						
		Duties of the Certificate Holder						
	302.504	The holder of an airport certificate shall						
40	(a)	ensure that corrective actions are taken in respect of any findings resulting from the safety management system referred to in section 302.501;						
41	(b)	appoint a person to manage the safety management system; and						
42	(c)	ensure that the person managing the safety management system performs the duties required under section 302.505.						
		Person Managing the Safety Management System						
	302.505 (1)	The person managing the safety management system shall						
43	(a)	establish and maintain a reporting system to ensure the timely collection of information related to hazards, incidents and accidents that may adversely affect safety;						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
44	(b)	identify hazards and carry out risk management analyses of those hazards;						
45	(c)	investigate, analyze and identify the cause or probable cause of all hazards, incidents and accidents identified under the safety management system;						
46	(d)	establish and maintain a safety data system, by either electronic or other means, to monitor and analyze trends in hazards, incidents and accidents;						
47	(e)	monitor and evaluate the results of corrective actions with respect to hazards, incidents and accidents;						
48	(f)	monitor the concerns of the civil aviation industry in respect of safety and their perceived effect on the holder of the airport certificate; and						
49	(g)	determine the adequacy of the training required by paragraph 302.502(f).						
	302.505 (2)	The person managing the safety management system shall, if a finding resulting from the safety management system referred to in section 302.501 is reported to them,						
50	(a)	determine what, if any, corrective actions are required and carry out those actions;						
51	(b)	keep a record of any determination made under paragraph (a) and the reason for it;						
52	(c)	if management functions have been assigned to another person under subsection (3), communicate any determination regarding a corrective action to that person; and						
53	(d)	notify the certificate holder of any systemic deficiency and of the corrective action taken.						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
54	302.505 (3)	The person managing the safety management system may assign the management functions for the safety management system referred to in section 302.501 to another person if the assignment and its scope are described in the airport operations manual.						
55	302.505 (4)	The person to whom management functions have been assigned under subsection (3) shall notify the person managing the safety management system of any systemic deficiency and of the corrective action taken.						
56	302.505 (5)	The responsibility of the accountable executive is not affected by the appointment of a person to manage the safety management system under paragraph 302.504(b) or the assignment of management functions to another person under subsection (3).						

ANNEX "E"

Safety Management System (SMS)

TP312 Inspection Checklist

Name of Airport	(Airport Identifier) Airport Name
Airport Manager/AE	Mr./Mrs. First Name, Last Name
SMS Manager	Mr./Mrs. First Name, Last Name

Date of Audit	Month DD, YYYY

Lead Auditor	Mr./Mrs. First Name, Last Name
Audit Team	Company Name
Address	Street No./Name
	City, Province
	Postal Code
	Phone Number

Sections Covered

2.1	3.1	3.6	5.2	6.2	7.4	8.7	9.4
2.2	3.2	4.1	5.3	6.3	8.1	8.8	9.6
2.3	3.3	4.2	5.4	7.1	8.3	8.9	9.7
2.4	3.4	4.3	5.5	7.2	8.5	9.1	
2.5	3.5	5.1	6.1	7.3	8.6	9.3	

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		Aerodrome Data						
	2.1	**General**						
	2.1.1	**Units Of Measurement**						
1	2.1.1.1	Except as specified, elevations shall be given to the nearest foot (0.5 meter).						
2	2.1.1.2	Except as specified, linear dimensions shall be given to the nearest one-half metre.						
3	2.1.1.3	Except as specified, geographic coordinates shall be given in latitude and longitude to the nearest second.						
4	2.1.1.4	Geographic coordinates shall be measured in accordance with the NAD 83 reference datum.						
5	2.1.1.5	Except as specified, bearings shall be given to the nearest degree.						
	2.2	**Geographic Data**						
	2.2.1	**Aerodrome Reference Point**						
6	2.2.1.1	An aerodrome reference point shall be established for an aerodrome where an outer surface is established.						
7	2.2.1.2	The aerodrome reference point shall be located near the initial or planned geometric centre of the aerodrome and shall normally remain where first established.						
	2.2.2	**Geometric Centre**						
8	2.2.2.1	The geometric centre shall be determined for an aerodrome to the nearest 1/10 second.						
9	2.2.2.2	The geometric centre shall be re-determined if an aerodrome changes its physical characteristics by new runway construction, a runway closure, or altering the length of an existing runway.						
	2.2.3	**Runway Threshold Coordinates**						
10	2.2.3.1	The geographic coordinates of the runway threshold at the centre line shall be determined						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		to the nearest 1/10th of a second and given for each instrument runway.						
11	2.2.3.2	Where the threshold of an instrument runway has been permanently displaced, the coordinates of the displaced threshold at the centre line as well as the threshold at the runway extremity (defined by the beginning of the full strength pavement suitable for aircraft use) shall be determined and given to the nearest 1/10th of a second.						
12	2.2.3.5	The geographic coordinates of the runway end at the centre line shall be determined to the nearest 1/10th of a second and given for each instrument runway.						
	2.2.4	**Aerodrome and Runway Elevations**						
13	2.2.4.1	The aerodrome elevation shall be measured and given.						
14	2.2.4.2	For each instrument runway, the elevation of each threshold and any significant high or low points along the runway shall be measured and given.						
15	2.2.4.3	For each precision approach runway, the highest elevation within 915m beyond the landing threshold shall be measured and given.						
	2.2.5	**Aerodrome Magnetic Variation**						
16	2.2.5.1	The magnetic variation for the aerodrome geometric centre shall be determined and given to the nearest degree from magnetic north.						
	2.2.6	**Aerodrome Reference Temperature**						
17	2.2.6.1	An aerodrome reference temperature shall be determined for an aerodrome in degrees Celsius.						
	2.2.7	**Electronic Navigation Aids**						
	2.2.7.1	Where electronic navigation aids are installed on an aerodrome, the following information shall be determined and given:						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
18	(a)	The geographic coordinates of the antenna or radiating centre to the nearest 1/10 second;						
19	(b)	the elevation of the antenna or radiating centre; and						
20	(c)	the bearing of any unidirectional navigation signal (eg. ILS localizer course).						
	2.3	**Aerodrome Dimensions and Related Information**						
	2.3.1	**General**						
	2.3.1.1	The following data shall be measured or described, as appropriate, for each facility provided on an aerodrome:						
21	(a)	runway - true bearing, designation number, length, width, displaced threshold location, slope, surface type, and type of runway;						
22	(b)	runway strip, runway end safety area, and stopway length, width, and surface type.						
23	(c)	taxiway - designation, width, surface type;						
24	(d)	apron - surface type, aircraft stands;						
25	(e)	clearway - length, ground profile;						
26	(f)	significant obstacles on and in the vicinity of the aerodrome - location, top elevation to the nearest (next higher) foot, type;						
27	(g)	visual aids for approach procedures, marking and lighting of runways, taxiways and aprons, other visual guidance and control aids on taxiways and aprons, including taxi-holding positions and stopbars;						
28	(h)	location and radio frequency of any VOR aerodrome checkpoint; and						
29	(i)	location and designation of standard taxi routes.						
30	2.3.1.2	The geographical coordinates of each aircraft stand shall be measured and given to at least one-tenth of a minute.						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
	2.3.2	**Declared Distances**						
	2.3.2.1	The following distances shall be calculated for each runway where the code number is 3 or 4 and for each instrument runway where the code number is 1 or 2:						
31	(a)	take-off run available;						
32	(b)	take-off distance available;						
33	(c)	accelerate-stop distance available; and						
34	(d)	landing distance available.						
35	2.3.2.3	The calculation and reporting of declared distances shall be to the nearest foot.						
36	2.3.2.4	The calculation of declared distances shall be as illustrated in Figure 2-1.						
37	2.3.2.6	Where a runway is provided with a clearway, then the Take-off Distance Available shall include the length of the clearway as shown in Figure 2-1.						
38	2.3.2.7	Where a runway is provided with a stopway, then the Accelerate-stop Distance Available shall include the length of the stopway as shown in Figure 2-1.						
39	2.3.2.8	Where a runway has a displaced threshold, the Landing Distance Available shall be reduced by the distance between the displaced threshold and the extremity of the runway as shown in Figure 2-1.						
	2.3.4	**ICAO Type "A" Obstacle Charts**						
40	2.3.4.1	Information required to compile ICAO Type A obstacle charts shall be provided to the Certifying Authority for all runways identified in the ICAO Regional Air Navigation Plan at an International Airport.						
	2.3.4.2	The following information shall be provided for each runway:						
41	(a)	runway designation, true bearing, length,						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		width, and surface type;						
42	(b)	length and width of the clearway, if provided;						
43	(c)	dimensions of the take-off flight path area;						
44	(d)	runway threshold and departure end elevations;						
45	(e)	location, height above mean sea level, and nature of objects within the take-off flight path area identified as obstacles;						
46	(f)	the date the obstacle survey was completed.						
47	2.3.4.3	Any new activity resulting in a change to any of the items required in 2.3.4.2 shall be reported to the Certifying Authority.						
48	2.3.4.4	Obstacle information shall be determined by a survey of the take-off flight path area. Except as specified in 2.3.4.5, the survey shall be repeated at a frequency approved by the Certifying Authority upon consideration of the level of building activity in the runway departure area and shall not exceed 5 years between surveys.						
49	2.3.4.5	A survey shall not be required if it can be ascertained that there are no new obstacles in the take-off flight path area and a report is made to the Certifying Authority to this effect.						
50	2.3.4.6	The take-off flight path area shall consist of a quadrilateral area on the surface of the earth lying directly below, and symmetrically disposed about, the take-off flight path. The area shall commence at the end of the area declared suitable for take-off (ie. at the end of the runway or clearway as appropriate) and extend to the point beyond which no significant obstacles exist or to a distance of 10.0km whichever is the lesser. The width at the point of origin shall be 180m and increase at the rate of 0.25D to a maximum of 1800m, where D is the distance from the point of origin.						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
51	2.3.4.7	Objects in the take-off flight path area which project above a plane surface having a 1.2% slope and having a common origin with the take-off flight path area shall be regarded as obstacles. Mobile obstacles such as boats, trains, trucks, etc. which may project above the 1.2% slope shall be considered obstacles. As a minimum, 4.3m shall be allowed above the crown of a road and for a railway, 6m above the top of the rails. The height to be allowed above a waterway, river, canal, etc. shall be established by Aeronautical Study.						
	2.4	**Strength of Pavements**						
	2.4.1	**General**						
52	2.4.1.1	The bearing strength of a pavement shall be determined.						
53	2.4.1.2	The bearing strength of a pavement at an International Airport intended for aircraft of apron (ramp) mass greater than 5700kg shall be made available using the aircraft classification number - pavement classification number (ACN-PCN) method by reporting all of the following information:						
	(a)	the pavement classification number (PCN);						
	(b)	pavement type for ACN-PCN determination;						
	(c)	subgrade strength category;						
	(d)	maximum allowable tire pressure category or maximum allowable tire pressure value; and						
	(e)	evaluation method.						
	2.4.2	**ACN-PCN Method of Reporting**						
54	2.4.2.1	The pavement classification number (PCN) reported shall indicate that an aircraft with an aircraft classification number (ACN) equal to or less than the reported PCN can operate on the pavement subject to any limitation on the tire						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		pressure, or aircraft all-up mass for specified aircraft type(s).						
55	2.4.2.2	For the purposes of determining the ACN, the behaviour of a pavement shall be classified as equivalent to a rigid or flexible construction.						
56	2.4.2.3	Information on pavement type for ACN-PCN determination, subgrade strength category, maximum allowable tire pressure category and evaluation method shall be reported using the codes specified in Table 2-1.						
	2.5	**Condition of the Movement Area and Related Facilities**						
	2.5.1	**General**						
57	2.5.1.1	Information on the condition of the movement area and the operational status of related facilities shall be provided to the appropriate aeronautical information service units, and similar information of operational significance to the air traffic services units, to enable those units to provide the necessary information to arriving and departing aircraft. The information shall be kept up to date and changes in conditions reported without delay.						
58	2.5.1.2	The condition of the movement area and the operational status of related facilities shall be monitored and reports on matters of operational significance or affecting aircraft performance given, particularly in respect of the following:						
	(a)	construction or maintenance work;						
	(b)	rough or broken surfaces on a runway, a taxiway or an apron;						
	(c)	snow, slush or ice on a runway, a taxiway or an apron;						
	(d)	standing - water on a runway, a taxiway or an apron;						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
	(e)	snow banks or drifts adjacent to a runway, a taxiway or an apron;						
	(f)	anti-icing or de-icing liquid chemicals on a runway or a taxiway;						
	(g)	other temporary hazards, including parked aircraft;						
	(h)	failure or irregular operation of part or all of the aerodrome visual aids; and						
	(i)	failure of the normal or secondary power supply.						
	2.5.2	**Runway Surface Condition Reporting**						
59	2.5.2.1	Information that a runway or portion thereof may be slippery when wet shall be made available.						
	2.5.3	**Rescue and Fire Fighting**						
60	2.5.3.1	Information concerning the level of protection provided at an aerodrome for aircraft rescue and fire fighting purposes shall be made available.						
61	2.5.3.3	Significant changes in the level of protection normally available at an aerodrome for rescue and fire fighting shall be notified to the appropriate air traffic services units and aeronautical information units to enable those units to provide the necessary information to arriving and departing aircraft. When such a change has been corrected, the above units shall be advised accordingly.						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		Physical Characteristics						
	3.1	**Runways**						
	3.1.1	**General**						
62	3.1.1.11	Where parallel runways are provided for simultaneous use under visual meteorological conditions only, the minimum distance between their centre lines shall be: • 210m where the higher code number is 3 or 4; • 150m where the higher code number is 2; and • 120m where the higher code number 1.						
63	3.1.1.12	Where parallel runways are provided for simultaneous operations under instrument meteorological conditions, the minimum separation distance between their centre lines shall be: • 1300m for independent parallel approaches; • 760m for dependent parallel approaches; • 760m for independent parallel departures; • 760m for segregated parallel operations; except that for segregated parallel operations the specified separation distance:						
	(a)	may be decreased by 30m for each 150m that the arrival runway is staggered toward the arriving aircraft, to a minimum of 300m; and						
	(b)	shall be increased by 30m for each 150m that the arrival runway is staggered away from the arriving aircraft.						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
	3.1.2	**Slopes on Runways**						
64	3.1.2.1	The slope computed by dividing the difference between the maximum and minimum elevation along the runway centre line by the runway length shall not exceed: • 1.5 per cent where the code number is 3 or 4; and • 2.5 per cent where the code number is 1 or 2.						
65	3.1.2.3	Along no portion of a runway shall the longitudinal slope exceed: • 1.25 per cent where the code number is 4, except that for the first and last quarter of the length of the runway the longitudinal slope should not exceed 0.8 per cent; • 1.5 per cent where the code number is 3, except that for the first and last quarter of the length of a precision approach runway category II or III the longitudinal slope should not exceed 0.8 per cent; and • 2 per cent where the code number is 1 or 2.						
	3.1.4	**Surface of Runways**						
66	3.1.4.1	The surface of a runway shall be constructed without irregularities that would result in loss in friction characteristics or otherwise adversely affect the take–off or landing of an aeroplane.						
67	3.1.4.2	The surface of a paved runway shall be so constructed as to provide good friction characteristics when the runway is wet.						
	3.1.6	**Runway Strips**						
68	3.1.6.1	A runway and any associated stopways shall be included in a strip.						
69	3.1.6.2	A strip shall extend before the threshold and						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		beyond the end of the runway or stopway for a distance of at least: • 60m where the code number is 2, 3 or 4; • 60m where the code number is 1 and the runway is an instrument one; and • 30m where the code number is 1 and the runway is a non–instrument one.						
70	3.1.6.3	A strip including a precision approach runway shall extend laterally to a distance of at least: • 150m where the code number is 3 or 4; and • 75m where the code number is 1 or 2; on each side of the centre line of the runway and its extended centre line throughout the length of the strip.						
71	3.1.6.4	A strip including a non-precision approach runway shall extend laterally to a distance of at least: • 150m where the code number is 4; • 75m where the code number is 3; and • 45m when the code number is 1 or 2; on each side of the centre line of the runway and its extended centre line throughout the length of the strip.						
72	3.1.6.5	strip including a non–instrument runway shall extend on each side of the centre line of the runway and its extended centre line throughout the length of the strip, to a distance of at least: • 75m where the code number is 4; • 45m where the code number is 3; and						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		• 30m where the code number is 1 or 2.						
73	3.1.6.7	No fixed object, other than visual aids required for air navigation purposes and satisfying the relevant frangibility requirement in Chapter 5, shall be permitted on a runway strip:						
	(a)	within 60m of the runway centre line of a precision approach runway category I, II or III where the code number is 3 or 4; or						
	(b)	within 45m of the runway centre line of a precision approach runway category I where the code number is 1 or 2.						
74	3.1.6.8	No mobile object shall be permitted on the part of the runway strip specified in 3.1.6.7 during the use of the runway for landing or take–off except that equipment and radio equipped personnel associated with in-flight inspections of navigation and landing aids are permitted on a runway strip within graded areas while flight inspections are being carried out.						
75	3.1.6.9	That portion of a strip of a precision approach runway within a distance of at least: • 90m where the code number is 4; • 75m where the code number is 3; • 45m where the code number is 2; and • 30m where the code number is 1; from the centre line of the runway and its extended centre line shall provide a graded area for aeroplanes which the runway is intended to serve in the event of an aeroplane running off the runway.						
76	3.1.6.10	That portion of a strip of a non–precision approach runway within a						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		distance of at least: • 75m where the code number is 4; • 45m where the code number is 3; and • 23m where the code number is 1 or 2; from the centre line of the runway and its extended centre line shall provide a graded area for aeroplanes which the runway is intended to serve in the event of an aeroplane running off the runway.						
77	3.1.6.11	That portion of a strip of a non–instrument runway within a distance of at least: • 60m where the code number is 4; • 40m where the code number is 3; • 23m where the code number is 2; and • 19m where the code number is 1; from the centre line of the runway and its extended centre line shall provide a graded area for aeroplanes which the runway is intended to serve in the event of an aeroplane running off the runway.						
78	3.1.6.12	The surface of that portion of a strip that abuts a runway, shoulder or stopway shall be flush with the surface of the runway, shoulder or stopway.						
79	3.1.6.19	Drainage ditches, shall not be located within the graded portion of the strip. Where drainage ditches are located at the edge of the graded area, they shall be contoured in order to reduce structural damage in the event an aeroplane overruns the ditch.						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
	3.2	**Clearways**						
	3.2.2	**Length of Clearways**						
80	3.2.2.1	The length of a clearway shall not exceed:						
	(a)	300m;						
	(b)	the distance to the first object other than approach lights or other light weight frangibly mounted objects such as radio signal monitors that project above the slope of the clearway; or						
	(c)	the distance to the point where the ground projects above the slope of the clearway.						
	3.2.3	**Width of Clearways**						
81	3.2.3.1	A clearway shall extend laterally to a distance of at least 75m on each side of the extended centre line of the runway or the width of the strip whichever is less.						
	3.2.4	**Slopes on Clearways**						
82	3.2.4.1	The ground in a clearway shall not project above a plane having an upward slope of 1.25 per cent, the lower limit of this plane being a horizontal line which:						
	(a)	is perpendicular to the vertical plane containing the runway centre line; and						
	(b)	passes through a point located on the runway centre line at the end of the take–off run available.						
	3.2.5	**Objects on Clearways**						
83	3.2.5.1	The take–off distance available (TODA) shall be recalculated when an established clearway is infringed by a new object other than one specified in para 3.2.2.1(b).						
	3.3	**Stopways**						
	3.3.1	**Width of Stopways**						
84	3.3.1.1	A stopway shall have the same width as the runway with which it is associated.						
	3.3.2	**Slopes on Stopways**						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
85	3.3.2.1	Slopes and changes in slope on a stopway, and the transition from a runway to a stopway, shall comply with the specifications of 3.1.2.1 to 3.1.2.8 for the runway with which the stopway is associated except that:						
	(a)	the limitation in 3.1.2.3 of a 0.8 per cent slope for the first and last quarter of the length of a runway need not be applied to the stopway; and						
	(b)	at the junction of the stopway and runway and along the stopway the maximum rate of slope change may be 0.3 per cent 30m (minimum radius of curvature of 10,000m) for a runway where the code number is 3 or 4.						
	3.3.3	**Strength of Stopways**						
86	3.3.3.1	A stopway shall be prepared or constructed so as to be capable, in the event of an abandoned take–off, of supporting the aircraft which the stopway is intended to serve without inducing structural damage to the aircraft.						
	3.3.5	**Objects on Stopways**						
87	3.3.5.1	Equipment or installations shall not be located on a stopway if it would endanger an aircraft unless its function requires it to be there for air navigation purposes.						
88	3.3.5.2	Equipment or installations located on a stopway shall meet the requirements of para 3.2.5.1.						
	3.4	**Taxiways**						
	3.4.4	**Surface of Taxiways**						
89	3.4.4.1	The surface of a taxiway shall not have irregularities that may cause damage to aeroplane structures.						
	3.4.6	**Taxiways on Bridges**						
90	3.4.6.1	The width of that portion of a taxiway bridge capable of supporting aeroplanes, as measured perpendicularly to the taxiway centre line, shall						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		not be less than the width of the graded area of the strip provided for that taxiway, unless a method of lateral restraint is provided which shall not be hazardous for aeroplanes for which the taxiway is intended.						
	3.4.7	**Taxiway Shoulders**						
91	3.4.7.3	When a taxiway is intended to be used by turbine–engine aeroplanes, the surface of the taxiway shoulder shall be so prepared as to resist erosion and the ingestion of the surface material by aeroplane engines.						
	3.4.8	**Taxiway Strips**						
92	3.4.8.1	A taxiway shall be included in a strip.						
	3.5	**Holding Bays, Taxi-Holding Positions and Road-Holding Positions**						
	3.5.1	**Holding Bays**						
93	3.5.1.2	The distance between the nearest edge of a holding bay and the centre line of a runway shall be not less than the appropriate dimension specified in Table 3–2, and in the case of a precision approach runway, such that a holding aircraft will not interfere with the operation of radio navigation aids.						
	3.5.2	**Taxi-Holding Positions**						
94	3.5.2.1	A taxi–holding position or positions shall be established:						
	(a)	at an intersection of a taxiway with a runway;						
	(b)	at an intersection of a runway with another runway when the former runway is part of a standard taxi–route; and						
	(c)	at an intersection of a runway with a runway where the runway is used for simultaneous intersecting runway operations.						
95	3.5.2.2	Except as specified in para 3.5.2.3, the distance between a taxi-holding position established at a						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		taxiway/runway intersection and the centre line of a runway shall be not less than the appropriate dimension specified in Table 3–2, and in the case of a precision approach runway, such that a holding aircraft or vehicle will not interfere with the operation of radio navigation aids.						
96	3.5.2.4	A taxi–holding position at a runway/runway intersection shall be located at a distance not less than 60m from the nearest edge of the intersecting runway.						
	3.5.3	**Road-Holding Positions**						
97	3.5.3.1	A road–holding position shall be established at an intersection of a road with a runway.						
98	3.5.3.2	The distance between a road–holding position and the centre line of a runway shall be not less than the appropriate dimension specified in Table 3–2, and in the case of a precision approach runway, such that a holding vehicle will not interfere with the operation of radio navigation aids.						
	3.6	**Aprons**						
	3.6.3	**Strength of Aprons**						
99	3.6.3.1	Each part of an apron shall be capable of withstanding the traffic of the aircraft it is intended to serve, due consideration being given to the fact that some portions of the apron will be subjected to a higher density of traffic and, as a result of slow moving or stationary aircraft, to higher stresses than a runway.						
	3.6.7	**Isolated Aircraft Parking Position**						
100	3.6.7.1	At an International Airport, an isolated aircraft parking position shall be designated or the aerodrome control tower shall						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		be advised of an area or areas suitable for the parking of an aircraft which is known or believed to be the subject of unlawful interference, or which for other reasons needs isolation from normal aerodrome activities.						
101	3.6.7.2	The isolated aircraft parking position shall be located at least 100m from other parking positions, buildings, or public use areas.						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		Obstacle Restriction and Removal						
	4.1	**Obstacle Limitation Surfaces**						
	4.1.1	**Outer Surface**						
102	4.1.1.1	The limits of an Outer Surface shall comprise a common plane established at a constant elevation above the assigned elevation of the aerodrome reference point and extending over a horizontal distance: • of at least 4000m where the code number is 1, 2 or 3; • to be determined by an aeronautical study where the code number is 4, but never less than 4000m; measured from the designated aerodrome reference point or points and extending over an area not less than 180° sector along the runway centre line.						
103	4.1.1.3	An outer surface shall be established at 45m above the assigned elevation of the aerodrome reference point except, when the common plane is less than 9m above the ground, an imaginary surface shall be established 9 m above the surface of the ground. (see Figure 4-1)						
	4.1.2	**Take-Off /Approach Surface**						
104	4.1.2.1	The limits of the take–off/approach surface shall comprise:						
	(a)	an inner edge of specified length perpendicular to and evenly divided on each side of the extended centre line of the runway, beginning at the end of the runway strip;						
	(b)	two sides originating at the ends of the inner						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		edge, diverging uniformly at a specified rate in the direction of take–off, terminating at the outer edge; and						
	(c)	an outer edge parallel to the inner edge at a specified length from the inner edge.						
105	4.1.2.2	Where a threshold has been displaced, the inner edge shall be located at the point of displacement. In this event the landing distance available will be reduced by an amount equal to the displacement and it will be necessary to recalculate the declared distance information for the aerodrome.						
106	4.1.2.3	The elevation of the inner edge shall be equal to the elevation of the threshold.						
107	4.1.2.5	The slope(s) of the take–off/approach surface shall be measured in the vertical plane containing the centre line of the runway, and shall be of a constant gradient.						
108	4.1.2.6	The widths and lengths of the take–off/approach surfaces shall be measured in the horizontal plane.						
	4.1.3	**Transitional Surface**						
109	4.1.3.1	The limits of the transitional surface shall comprise:						
	(a)	a lower edge beginning at the intersection of the side of the approach surface with the outer surface and extending down the side of the approach surface to the inner edge of the approach surface and from there along the edge of the strip; and						
	(b)	an upper edge located in the plane of the outer surface or 45m above airport assigned elevation if no outer surface has been established.						
110	4.1.3.2	The elevation of a point on the lower edge shall be:						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
	(a)	along the side of the take–off/approach surface prescribed in this chapter; equal to the elevation of the take–off/approach surface at that point; and,						
	(b)	along the runway strip; equal to the elevation of the nearest point on the centre line of the runway or its extension, to the edge of the graded area.						
111	4.1.3.4	The slope of a transitional surface shall be measured in a vertical plane perpendicular to the extended centre line of each runway.						
	4.2	**Obstacle Limitation Requirements**						
	4.2.1	**General**						
112	4.2.1.1	An outer surface shall be established where required for the protection of airspace for aircraft conducting a circling procedure or manoeuvring in the vicinity of an aerodrome.						
	4.2.2	**Non-Instrument Runways**						
113	4.2.2.1	The following obstacle limitation surfaces shall be established for all non–instrument runways: • take–off/approach surfaces; and • transitional surfaces, except as specified in 4.2.2.4 (c).						
114	4.2.2.2	An outer surface shall be established for a runway which does not have a straight–in instrument approach but where there is a published circling approach procedure to that runway or where it is necessary, in the view of the certifying authority, to protect airspace for aircraft manoeuvring in the vicinity of the airport.						
115	4.2.2.3	The heights of these surfaces shall not be greater than, and their other dimensions not less than, those specified in Table 4–1, except in the case of the outer surface.						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
116	4.2.2.4	The slope of the transitional surface where the code number is 1 or 2 shall not exceed the appropriate value shown in Table 4-1 except where:						
	(a)	the slope cannot be established due to topographic or unavoidable natural obstructions;						
	(b)	the aerodrome is used only in VMC; and						
	(c)	one of the following measures is undertaken and approved by the certifying authority: i) the width of the runway strip is increased to at least 45m from the centre line of the runway and a transitional surface is established with a slope not exceeding 33% (1:3); or ii) the width of the runway strip is increased to at least 60m from the centre line of the runway where the code number is 2 and a transitional surface is established with a slope not exceeding 50% (1:2); or iii) the width of the runway strip is increased to at least: ▪ 60m from the centre line of the runway where the code number is 1; ▪ 75m from the centre line of the runway where the code number is 2.						
117	4.2.2.5	The slope of the transitional surface where the code number is 3 or 4 shall not exceed the appropriate value shown in Table 4-1.						
118	4.2.2.6	New objects or extensions of existing objects shall not be permitted above a take-off/approach or transitional surface except when, in the opinion of the certifying authority, the new object or extension would be shielded by an existing immovable object.						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
	4.2.3	**Non-Precision Approach Runways**						
119	4.2.3.1	The following obstacle limitation surfaces shall be established for a non–precision approach runway: • outer surface; • take–off/approach surface; and • transitional surfaces.						
120	4.2.3.2	The heights and slopes of the surfaces shall not be greater than, and their other dimensions not less than, those specified in Table 4–1.						
121	4.2.3.4	New objects or extensions of existing objects shall not be permitted above a take-off/approach surface within 3000m of the inner edge or above a transitional surface except when, in the opinion of the certifying authority, the new object or extension would be shielded by an existing immovable object.						
	4.2.4	**Precision Approach Runways**						
122	4.2.4.1	The following obstacle limitation surfaces shall be established for a precision approach runway category I: • outer surface; • take–off/approach surface; and • transitional surfaces.						
123	4.2.4.2	The heights and slopes of the surfaces shall not be greater than, and their other dimensions not less than, those specified in Table 4–1.						
124	4.2.4.4	Fixed objects shall not be permitted above the take–off/approach surface, or the transitional surface, except for frangibly mounted objects which because of their function must be located on the strip. Mobile objects shall not be permitted above these surfaces during the use of						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		the runway for landing.						
125	4.2.4.5	New objects or extensions of existing objects shall not be permitted above a take-off/approach surface or a transitional surface except when, in the opinion of the certifying authority, the new object or extension would be shielded by an existing immovable object.						
	4.3	**Other Objects**						
	4.3.1	**General**						
126	4.3.1.3	Any transportation corridor underlying an Obstacle Limitation Surface shall be considered as an object. As a minimum, 4.3m shall be allowed above the crown of a road and for a railway, 6m above the top of the rails. The height to be allowed above a waterway, river, canal, etc. shall be established by Aeronautical Study.						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		Visual Aids for Navigation						
	5.1	**Indicators and Signalling Devices**						
	5.1.1	**Wind Direction Indicators**						
127	5.1.1.1	An aerodrome shall be equipped with at least one wind direction indicator.						
128	5.1.1.2	A wind direction indicator shall be located so as to be visible from aircraft in flight or on the movement area and in such a way as to be free from the effects of air disturbances caused by nearby objects.						
129	5.1.1.5	The height of wind direction indicators shall not exceed a height of 7.5m when located in the runway strip.						
130	5.1.1.7	Provision shall be made for illuminating at least one wind indicator at an aerodrome intended for use at night.						
	5.2	**Markings**						
	5.2.1	**General**						
131	5.2.1.1	At an intersection of two (or more) runways the marking of the more important runway, except for the runway side stripe marking, shall be displayed and the markings of the other runway(s) shall be interrupted. The runway side stripe marking of the more important runway may be either continued across the intersection or interrupted.						
132	5.2.1.2	The order of importance of runways for the display of runway markings shall be as follows: • 1st – precision approach runway; • 2nd – non–precision approach runway; and • 3rd – non–instrument runway.						
133	5.2.1.3	At an intersection of a runway and taxiway the markings of the runway shall be displayed and						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		the markings of the taxiway interrupted, except that runway side stripe markings may be interrupted.						
134	5.2.1.4	Runway markings shall be white						
135	5.2.1.5	Taxiway markings, apron taxiway markings, and aircraft stand taxilane markings shall be yellow.						
136	5.2.1.7	Markings are described in this chapter as solid areas. They may consist of either solid colour or striated, employing a series of longitudinal painted lines. Where striated markings are used they shall cover the same area as described for the solid marking and the width of the paint lines and the spacing between them should be of approximately the same size giving an overall effect of at least 50% paint coverage.						
	5.2.2	**Runway Designation Markings**						
137	5.2.2.1	A runway designation marking shall be provided at the threshold of a paved runway.						
138	5.2.2.3	A runway designation marking shall be located beyond the threshold as shown in Figure 5–5 as appropriate.						
139	5.2.2.4	A runway designation marking shall consist of a two–digit number and on parallel runways shall be supplemented with a letter. On a single runway, dual parallel runways and triple parallel runways the two–digit number shall be the whole number nearest the one–tenth of the magnetic North when viewed from the direction of approach. On four or more parallel runways, one set of adjacent runways shall be numbered to the nearest one–tenth magnetic azimuth and the other set of adjacent runways numbered to the next nearest one–tenth of the magnetic azimuth. When the above rule would give a single digit number, it shall be preceded by						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		a zero.						
140	5.2.2.5	In cases of airports located within the area of compass unreliability the runway designation requirements prescribed in para. 5.2.2.4 shall apply except that TRUE azimuth rather than magnetic azimuth shall be used.						
141	5.2.2.6	In the case of parallel runways, each runway designation number shall be supplemented by a letter as follows, in the order shown from left to right when viewed from the direction of approach: • for two parallel runways: "L" "R"; • for three parallel runways: "L" "C" "R"; • for four parallel runways: "L" "R" "L" "R"						
142	5.2.2.7	The numbers and letters shall be in the form and proportion shown in Figure 5–2. The dimensions shall be not less than those shown in Figure 5–2.						
	5.2.3	**Runway Centre Line Marking**						
143	5.2.3.1	A runway centre line marking shall be provided on a paved runway.						
144	5.2.3.2	A runway centre line marking shall be located along the centre line of the runway between the runway designation markings as shown in Figure 5–5, except when interrupted in compliance with 5.2.1.1.						
145	5.2.3.3	A runway centre line marking shall consist of a line of uniformly spaced stripes and gaps. The length of a stripe plus a gap shall be not less 50m or more than 75m. The length of each stripe shall be at least equal to the length of the gap or 30m, whichever is greater.						
146	5.2.3.5	The width of the stripes shall be at least 0.9m.						
	5.2.4	**Threshold Marking**						
147	5.2.4.1	A threshold marking shall be provided at the						

<table>
<tr><th rowspan="2">Audit Selection</th><th rowspan="2">Regulation</th><th rowspan="2">Section</th><th colspan="4">Comply?</th><th rowspan="2">Audit # / Identifier</th><th rowspan="2">Comments</th></tr>
<tr><th>Yes</th><th>No</th><th>N/A</th><th>N/C</th></tr>
<tr><td></td><td></td><td>threshold of a paved runway where the width is 23m or greater.</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>148</td><td>5.2.4.4</td><td>The stripes of the threshold marking shall commence 6 m from the threshold.</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>149</td><td>5.2.4.5</td><td>Where a runway threshold is located on another runway (for example a "T" configuration), the threshold marking shall be located at a distance from the threshold equal to the width of the other runway.</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>150</td><td>5.2.4.6</td><td>A runway threshold marking shall consist of a pattern of longitudinal stripes of uniform dimensions disposed symmetrically about the centre line of a runway as shown in Figure 5–3. The number of stripes shall be in accordance with the runway width as follows:
<table>
<tr><th>Runway width</th><th>Number of stripes</th></tr>
<tr><td>18m</td><td>4</td></tr>
<tr><td>23m</td><td>6</td></tr>
<tr><td>30m</td><td>8</td></tr>
<tr><td>45m</td><td>12</td></tr>
<tr><td>60m</td><td>16</td></tr>
</table></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>151</td><td>5.2.4.7</td><td>The stripes shall extend laterally to within 3m of the edge the runway. The stripes shall be separated into two groups separated by at least 3.6m. The stripes shall be 30m long and approximately 1.80m wide with spacings of approximately 1.80m between them.</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>152</td><td>5.2.4.8</td><td>Where the extremity of a runway is not square with the runway centre line or where a runway threshold is permanently displaced from the extremity of a runway, a transverse stripe as shown in Figure 5–4 shall be added to the threshold marking.</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>153</td><td>5.2.4.10</td><td>A transverse stripe shall be not less than 1.80m wide.</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
</table>

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
154	5.2.4.11	Where a runway threshold is permanently displaced arrows conforming to Figure 5–4 shall be provided on the portion of the runway before the displaced threshold except that:						
	(a)	when the portion of the runway is unfit for the surface movement of aircraft, closed markings as described in 7.1.1 shall be provided; or						
	(b)	when the portion of the runway is intended to be maintained as a stopway, chevron markings as described in 7.3.1 shall be provided.						
155	5.2.4.12	When a runway threshold is temporarily displaced from the normal position, it shall be marked as shown in Figure 5–4. All markings prior to the displaced threshold shall be obscured and the runway centre line marking converted to arrows except that when the portion of the runway is unfit for the surface movement of aircraft, closed markings as described in 7.1.1 shall be provided.						
	5.2.5	**Aiming Point Marking**						
156	5.2.5.1	An aiming point marking shall be provided at each end of a paved runway where the code number is 3 or 4.						
157	5.2.5.3	The aiming point marking shall commence no closer to the threshold than the distance indicated in the appropriate column of Table 5–1.						
158	5.2.5.4	An aiming point marking shall consist of two conspicuous stripes. The dimensions of the stripes and the lateral spacing between their inner sides should be in accordance with the provisions of the appropriate column of Table 5–1.						
	5.2.6	**Touchdown Zone Marking**						
159	5.2.6.1	A touchdown zone marking shall be provided at each end of a paved runway where the code						

<table>
<tr><th rowspan="2">Audit Selection</th><th rowspan="2">Regulation</th><th rowspan="2">Section</th><th colspan="4">Comply?</th><th rowspan="2">Audit # / Identifier</th><th rowspan="2">Comments</th></tr>
<tr><th>Yes</th><th>No</th><th>N/A</th><th>N/C</th></tr>
<tr><td></td><td></td><td>number is 3 or 4.</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>160</td><td>5.2.6.2</td><td>A touchdown zone marking shall be provided at each end of a paved precision approach runway where the code number is 2.</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>161</td><td>5.2.6.3</td><td>A touchdown zone marking shall consist of pairs of rectangular markings symmetrically disposed about the runway centre line with the number of such pairs related to the landing distance available and, where the marking is to be displayed at both the approach directions of a runway, the distance between the thresholds, as follows:
<table>
<tr><th>Runway length</th><th>Pair(s) of markings</th></tr>
<tr><td>Less than 900m</td><td>1</td></tr>
<tr><td>900m up to but not including 1200m</td><td>2</td></tr>
<tr><td>1200m up to but not including 1500m</td><td>3</td></tr>
<tr><td>1500m up to but not including 2400m</td><td>4</td></tr>
<tr><td>2400m or more</td><td>6</td></tr>
</table></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>162</td><td>5.2.6.4</td><td>A touchdown zone marking shall conform to the pattern shown in Figure 5–5. The markings shall not be less than 22.5m long and 3m wide. The lateral spacing between the inner sides of the rectangles shall be equal to that of the aiming point marking where provided. Where an aiming point is not provided, the lateral spacing between the inner sides of the rectangles shall correspond to the lateral spacing specified for the aiming point marking in Table 5–1. The pairs of markings shall be provided at longitudinal spacing’s of 150m beginning from the threshold except that pairs of touchdown zone markings</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
</table>

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		coincident with or located within 50m of an aiming point marking shall be deleted from the pattern.						
	5.2.7	**Runway Side Stripe Marking**						
163	5.2.7.1	A runway side stripe marking shall be provided between the thresholds of a paved runway where there is a lack of contrast between the runway edges and the shoulders or the surrounding terrain.						
164	5.2.7.2	A runway side stripe marking shall consist of a stripe placed along each edge of the runway. For runways 60m and less in width, the marking shall be placed with the outer edge of each stripe approximately on the edge of the runway.						
	5.2.8	**Taxiway Centre Line Marking**						
165	5.2.8.1	A taxiway centre line marking shall be provided on a paved taxiway where the code number is 3 or 4 in such a way as to provide guidance from the runway centre line to a point on the apron where aircraft stand markings commence.						
166	5.2.8.3	Taxiway centre line marking shall be provided on a paved runway when the runway is part of a standard taxi route, and where the taxiway centre line is not coincident with the runway centre line.						
167	5.2.8.4	On a straight section of taxiway, the taxiway centre line marking shall be located along the taxiway centre line. On a taxiway curve the marking shall continue from the straight portion of the taxiway at a constant distance from the outside edge of the curve.						
168	5.2.8.7	A taxiway centre line marking shall be at least 15cm in width and continuous in length except where it intersects a taxi–holding position marking or taxiway intersection marking as						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		shown in Figure 5-6, or when interrupted by information marking (see 5.2.16.6).						
	5.2.9	**Taxi-Holding Position Marking**						
169	5.2.9.1	A taxi–holding position marking shall be displayed along a taxi-holding position.						
170	5.2.9.2	A taxi holding position marking at a taxiway/runway intersection shall be located at a distance from the runway centre line as specified in Table 3.2 or 3.3.						
171	5.2.9.3	A taxi–holding position marking at a runway/runway intersection shall be located at a distance from the runway edge as specified in 3.5.2.4.						
172	5.2.9.4	At an intersection of a taxiway and a non-instrument, non–precision approach, precision approach category I or take–off runway, the taxi-holding position marking shall be as shown in Figure 5–6, pattern A.						
173	5.2.9.5	Where a single taxiholding position is provided at an intersection of a taxiway and a precision approach runway category II or III, the taxi–holding position marking shall be as shown in Figure 5–6, pattern A. Where two or three taxi–holding positions are provided at such an intersection, the taxi–holding position marking closest to the runway shall be as shown in Figure 5–6, pattern A and the markings furthest from the runway shall be shown in Figure 5-6, pattern B.						
174	5.2.9.7	The taxi–holding position marking displayed at a runway/runway intersection shall be as shown in Figure 5–6, pattern A.						
175	5.2.9.8	The taxi–holding position marking shall be at right angles to the taxiway centre line.						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
	5.2.10	**Taxiway Intersection Marking**						
176	5.2.10.3	A taxiway intersection marking shall consist of a single broken line as shown in Figure 5–6.						
	5.2.11	**Aircraft Stand Taxilane Marking**						
177	5.2.11.1	An aircraft stand taxilane marking shall be provided on an aircraft stand taxilane in such a way as to provide guidance from the taxiway centre line to a point on the apron where aircraft stand markings commence.						
178	5.2.11.2	On a straight section of aircraft stand taxilane, the marking shall be located along the centre line of the aircraft stand taxilane. On a curved portion, the marking shall continue from the straight portion of the taxilane at a constant distance from the outside edge of the curve.						
179	5.2.11.3	An aircraft stand taxilane marking shall be at least 15cm in width and continuous in length except when interrupted by an information marking (see 5.2.16.6).						
	5.2.13	**Apron Safety Lines**						
180	5.2.13.2	Apron safety lines shall be located so as to define the areas intended for use by ground vehicles and other aircraft servicing equipment, etc., to provide safe separation from aircraft.						
181	5.2.13.5	An apron safety line shall not be coloured red where an aircraft will cross the line (eg. vehicle corridors).						
	5.2.15	**Road-Holding Position Marking**						
182	5.2.15.1	A road–holding position marking shall be provided at all paved road entrances to a runway.						
182	5.2.15.3	The road–holding position marking shall be located across the road at the holding position.						
183	5.2.15.4	The road–holding position marking shall be in accordance with the local traffic regulations.						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
	5.2.16	**Information Marking**						
184	5.2.16.4	The marking shall be yellow.						
	5.3	**Lights**						
	5.3.1	**General**						
184	5.3.1.1	A non–aeronautical ground light near an aerodrome which might endanger the safety of aircraft shall be extinguished, screened or otherwise modified so as to eliminate the source of danger.						
186	5.3.1.3	Elevated approach lights and their supporting structures within 300m from the threshold (but not including the 300m crossbar), or up to a distance from the runway end where the approach lights no longer constitute the major hazard to an aircraft overrunning the runway end to an airborne aircraft inadvertently striking them, whichever distance is less, shall be frangible.						
187	5.3.1.5	An elevated approach light fixture shall not penetrate an obstacle limitation surface.						
188	5.3.1.6	When an approach light fixture or supporting structure is not in itself sufficiently conspicuous, it shall be suitably marked in accordance with Standards Obstruction Markings, TP 382.						
189	5.3.1.7	Elevated runway, stopway and taxiway lights shall be frangible. Their height shall be sufficiently low to preserve clearance for propellers and for the engine pods of jet aircraft.						
190	5.3.1.8	Light fixtures inset in the surface of runways, stopways, taxiways and aprons shall be so designed and fitted as to withstand being run over by the wheels of an aircraft without damage either to the aircraft or to the lights themselves.						
191	5.3.1.10	The intensity of runway lighting shall be adequate for the minimum conditions of visibility						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		and ambient light in which use of the runway is intended, and compatible with that of the nearest section of the approach lighting system when provided.						
192	5.3.1.11	Where a medium or high–intensity lighting system is provided, a suitable intensity control shall be incorporated to allow for adjustment of the light intensity to meet the prevailing conditions. Separate intensity controls or other suitable methods shall be provided to ensure that the following systems when installed, can be operated at compatible intensities: • approach lighting system; • runway edge lights; • runway threshold and wing bar lights; • runway end lights; • runway centre line lights; • runway touchdown zone lights; and • taxiway centre line lights.						
193	5.3.1.12	On the perimeter of and within the ellipse defining the main beam in Appendix B, Figures B-1 to B-11, the maximum light intensity value shall not be greater than three times the minimum light intensity value measured in accordance with Appendix B, section B.1.12.						
194	5.3.1.13	On the perimeter of and within the rectangle defining the main beam in Appendix B, Figures B-13 to B-17, the maximum light intensity value shall not be greater than three times the minimum light intensity value measured in accordance with Appendix B, section B.2.7.						
	5.3.3	**Aerodrome Beacon**						
195	5.3.3.1	An aerodrome beacon shall be provided at each						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		aerodrome intended for use at night, except when, in special circumstances, the beacon is considered by the Certifying Authority as unnecessary upon determination that it is not required by one or more of the following conditions:						
	(a)	the aerodrome is located on or near a frequently used night VFR route.						
	(b)	the aerodrome is frequently used by aircraft navigating visually during periods of reduced visibility.						
	(c)	it is difficult to locate the aerodrome from the air due to surrounding lights or terrain.						
196	5.3.3.2	The aerodrome beacon shall be located on or adjacent to the aerodrome in an area of low ambient background lighting.						
197	5.3.3.4	The aerodrome beacon shall show white flashes. The frequency of total flashes shall be from 20 to 30 per minute.						
198	5.3.3.5	The light from the beacon shall show at all angles of azimuth. The vertical light distribution shall extend upwards from an elevation of not more than 1° The effective intensity of the flash in white shall not be less than 2000cd.						
	5.3.5	**Approach Lighting System**						
199	5.3.5.1	Where physically practicable, a precision approach category I lighting system as specified in 5.3.5.14 to 5.3.5.26 shall be provided to serve a precision approach runway category I. Precision approach runway category II and III lighting systems as specified in 5.3.5.27 to 5.3.5.48 shall be provided to serve a precision approach runway category II or III.						
200	5.3.5.2	A simple approach lighting system shall consist of						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		a minimum of 5 lights installed on the extended centre line of the runway extending over a distance of 450m and two light units, one each abeam the runway threshold as shown in Figure 5–9.						
201	5.3.5.3	The lights forming the centre line shall be placed at longitudinal intervals of 90m. The innermost light shall be located 90m from the threshold.						
202	5.3.5.4	The two lights installed abeam the runway threshold shall be placed at a lateral distance of 12m from the runway edge and a longitudinal distance not greater than 30m from the runway threshold.						
203	5.3.5.6	The system shall lie as nearly as practicable in the horizontal plane passing through the threshold, provided that:						
	(a)	no light shall be screened from an approaching aircraft; and						
	(b)	as far as possible, no object shall protrude through the plane of lights within a distance of 60 m from the centre line of the system. Where this is unavoidable, as in the case of a single isolated object protruding through the plane of lights the object shall be treated as an obstacle and marked and lighted accordingly.						
204	5.3.5.7	Where it is necessary, due to terrain features or to minimize the height of supporting structures, to install the light centres in a sloping plane, the maximum slope shall not exceed +2˚ or -2˚.						
205	5.3.5.8	The lights forming the centre line shall have a longitudinal installation tolerance of not more than ±7.5m and a lateral installation tolerance of ±1m from the runway centre line.						
206	5.3.5.9	The two runway threshold light units shall be installed within a vertical tolerance of + 0.5m to –						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		0.5m from the crown of the runway end elevation						
207	5.3.5.10	The lights of a simple approach lighting system shall consist of single omni–directional variable white flashing capacitor discharge light units.						
208	5.3.5.11	Each capacitor discharge light shall be flashed in sequence, beginning with the outermost light and progressing toward the threshold to the innermost light of the system. The centre line lights shall be sequenced 1 though 5 with 1/15 second interval between flashes. The 2 runway threshold units shall flash simultaneously 4/15 seconds after the innermost centre line light. The cycle begins again 7/15 secs after the flash of the two runway threshold lights giving an overall rate of 60 cycles per minute ±10%.						
209	5.3.5.12	The intensity of the white lights shall be in accordance with the specifications of Table 5–2.						
210	5.3.5.14	A precision approach category I lighting system shall be installed on the extended centre line of the runway extending over a distance of 720m as shown in Figure 5–10 and shall consist of:						
	(a)	seven centre line barrettes, placed at longitudinal intervals of 60m with the innermost barrette located 60m from the threshold;						
	(b)	a cross bar located at 300m from the runway threshold in line with the centre line barrette. The cross bar contains two side barrettes centred 7.5m from the extended runway centre line; and						
	(c)	five sequenced flashing capacitor discharge lights placed at longitudinal intervals of 60m with the innermost light located 60m beyond the outermost centre line barrette (480m from the threshold).						
211	5.3.5.15	The system light centres shall lie as nearly as						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		practicable in the horizontal plane passing through the threshold, provided that:						
	(a)	no lights shall be screened from an approaching aircraft; and						
	(b)	as far as possible, no object shall protrude through the plane of the approach lights within a distance of 60m from the centre line of the system. Where this is unavoidable, as in the case of a single isolated object protruding through the plane of the lights, the object shall be treated as an obstacle and marked and lighted accordingly.						
212	5.3.5.16	Any transportation corridor passing through the approach light area shall be considered as an object. As a minimum, 4.3m shall be allowed above the crown of a road and for a railway, 6 m above the top of the rails. The height to be allowed above a waterway, river, canal, etc. shall be established by Aeronautical Study.						
213	5.3.5.17	Where it is necessary for the system to deviate from the horizontal plane due to terrain features, to minimize the height of supporting structures, or to achieve clearance over an object, sloping segments shall be permitted provided that:						
	(a)	the slope starts not less than 90m outwards from the runway threshold;						
	(b)	only one rising gradient segment is permitted;						
	(c)	only three changes in profile gradient are permitted;						
	(d)	the slope gradient is kept to a minimum and does not exceed a rising gradient of 2%, nor a falling gradient of 1.0% to a point 420m from the threshold, and from this point, the falling gradient shall not exceed 2.5%;						
	(e)	the slope segment extends over a minimum of 3 light units and starts and ends at a light unit; and						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
	(f)	the sloping segment continues to the end of the approach light system, reverts to the horizontal, or begins a falling gradient provided that the final segment extends over a distance of three light units.						
214	5.3.5.18	The longitudinal tolerances for a precision approach category I lighting system shall not exceed those shown in Figure 5–10.						
215	5.3.5.20	The transverse tolerance for the installed position of an individual barrette centre shall be ±15cm.						
216	5.3.5.21	The centre line barrettes and crossbar lights of a precision approach category I lighting system as described in 5.3.5.14 a) and b) shall be fixed lights showing variable white. Each centre line barrette shall consist of 5 lights arranged 4 m in length. Each crossbar unit shall consist of a barrette 6m in length containing 5 lights.						
217	5.3.5.22	Each light within a centre line barrette shall be spaced at 1.0m ±3.0cm. Each light within a cross bar barrette shall be spaced at 1.5 m ±3.0cm. The vertical and lateral tolerance with respect to an individual light centre within a barrette shall be ±3.0cm.						
218	5.3.5.23	Each sequenced flashing capacitor discharge light described in 5.3.5.14 c) shall be flashed twice in a second with a time interval between flashes of adjacent units of 35 milli–seconds beginning with the outermost light and progressing toward the threshold to the innermost light of the system. The design of the triggering circuit shall be such that failure of one or more of the flash units does not effect operation of the remaining units. The design of the electrical circuit shall be such that the capacitor discharge lights can be operated						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		independently of the other lights of the approach lighting system.						
219	5.3.5.24	The lights shall be in accordance with the specifications of Appendix B, section B.1.1.						
220	5.3.5.25	The lights shall be aligned laterally with their beam axis parallel to the extended runway centre line. The vertical alignment of lights shall be in accordance with Table 5-3 and Figure 5–14.						
221	5.3.5.26	The precision approach category I lighting system shall have a variable intensity control, either medium (3 intensity settings) or high (5 intensity settings) in accordance with the specifications of Table 5–2.						
222	5.3.5.27	A precision approach category II or III lighting system shall be installed on the extended centre line of the runway extending over a distance of 720m as shown in Figure 5-12 and shall consist of:						
	(a)	24 centre line barrettes placed at longitudinal intervals of 30m with the innermost barrette located 30m from the threshold;						
	(b)	9 side row light barrettes placed on each side of, and aligned with the first 9 centre line barrettes described in (a). The lateral spacing (or gauge) between the innermost light of the side row shall be not less than 18m nor more than 22.5m ,and preferably 18m, but in any event shall be equal to that of the touchdown zone lighting.						
	(c)	crossbars located 150m and 300m from the runway threshold; and						
	(d)	15 sequenced flashing capacitor discharge lights located on the extended runway centre line with each one mounted no greater than 1.5m in front of a centre line barrette as described in (a), and with the innermost located with the barrette						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		300m from the threshold.						
223	5.3.5.28	The cross bar barrettes provided at 150m from the threshold shall be located equidistant between, and coincident with, the centre line barrettes and side row barrettes.						
224	5.3.5.29	The cross bar barrettes provided at 300m shall extend on both sides of, and coincident with, the centre line barrette. They shall be positioned with their innermost lights centred 4.5m from the extended runway centre line.						
225	5.3.5.30	The system light centres shall lie as nearly as practicable in the horizontal plane passing through the threshold, provided that:						
	(a)	no lights shall be screened from an approaching aeroplane; and						
	(b)	as far as possible, no object shall protrude through the plane of the approach lights within a distance of 60m from the centre line of the system. Where this is unavoidable, as in the case of a single isolated object protruding through the plane of the lights, the object shall be treated as an obstacle and marked and lighted accordingly.						
226	5.3.5.31	Any transportation corridor passing through the approach light area shall be considered as an object. As a minimum, 4.3m shall be allowed above the crown of a road and for a railway, 6m above the top of the rails. The height to be allowed above a waterway, river, canal, etc. shall be established by Aeronautical Study.						
227	5.3.5.32	Where it is necessary for the system to deviate from the horizontal plane due to terrain features, to minimize the height of supporting structures, or to achieve clearance over an object, a sloping segment shall be permitted provided that:						
	(a)	the slope starts not less than 90m outwards from						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		the runway threshold;						
	(b)	only one sloping segment is permitted;						
	(c)	the slope gradient is kept to a minimum and does not exceed a rising gradient of 2%, nor a falling gradient of 1% except that a falling gradient is not permitted in the inner 450m;						
	(d)	the slope segment extends over a minimum of 4 light units and starts and ends at a light unit; and						
	(e)	the sloping segment may continue to the end of the approach light system or may revert to the horizontal provided that the horizontal segment extends over a distance of three light units.						
228	5.3.5.33	Each capacitor discharge light shall be mounted with the beam centre no higher than the beam centres of the steady burning lights of the associated centre line barrette, and not lower than 1.2m below the plane established by the beam centres of the steady burning lights.						
229	5.3.5.34	The longitudinal tolerances for a precision approach category II and III lighting system shall not exceed those shown in Figure 5–12.						
230	5.3.5.36	The transverse tolerance for the installed position of an individual barrette centre shall be±8 cm.						
231	5.3.5.37	Each centre line barrette within a precision approach category II and III lighting system shall contain 5 lights with centres 1.0m apart having an overall width of 4m.						
232	5.3.5.38	Each side row barrette within a precision approach category II and III lighting system shall contain 3 lights with centres 1.5m apart, having an overall width of 3m.						
233	5.3.5.39	The cross bar barrettes located 150m from the runway threshold shall each contain 4 lights with centres 1.5 m apart, having an overall width of						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		4.5m.						
234	5.3.5.40	The cross bar located 300m from the runway threshold shall consist of the centre line barrette and two side barrettes. Each side barrette shall contain 9 lights with centres 1.5m apart having an overall width of 12m.						
235	5.3.5.41	The vertical and lateral tolerance with respect to an individual light centre within a barrette shall be ±3.0cm.						
236	5.3.5.42	The centre line barrettes and cross bar lights of a precision approach category II and III lighting system as described in 5.3.5.27 a) and c) shall be fixed white lights showing variable white. The side row lights as described in 5.3.5.27 b) shall be fixed lights showing variable red.						
237	5.3.5.43	Each sequenced flashing capacitor discharge light described in 5.3.5.27d) shall be flashed twice a second in sequence, beginning with the outermost light in the system progressing toward the threshold to the innermost light of the system. The design of the triggering circuit shall be such that failure of one or more of the flashed units does not affect operation of the remaining units. The design of the electrical circuit shall be such that these lights can be operated independently of the other lights of the approach lighting system.						
238	5.3.5.44	The lights shall be in accordance with the specifications of Appendix B, Sections B.1.1 and B.1.2.						
239	5.3.5.45	The lights shall be aligned laterally with their beam axis parallel to the extended runway centre line. The vertical alignment of lights shall be in accordance with Table 5-4 and Figure 5–14.						
240	5.3.5.46	The precision approach category II and III lighting						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		system shall have a variable intensity control with 5 settings in accordance with the specifications of Table 5–2.						
241	5.3.5.48	Where the control circuit permits the configuration change specified in 5.3.5.47, the resulting light configuration shall conform to the specifications contained in 5.3.5.14 to 5.3.5.26 for a precision approach category I lighting system.						
	5.3.6	**Visual Approach Slope Indicator Systems**						
242	5.3.6.1	A visual approach slope indicator system shall be provided to serve the approach to a runway where one or more of the following conditions exists:						
	(a)	the runway is not served by an electronic glide path and the runway is used by turbojet or other aircraft with similar approach guidance requirements;						
	(b)	the pilot of any type of aircraft may have difficulty in judging the approach due to: i) inadequate visual guidance such as is experienced during an approach over water or featureless terrain by day or in the absence of sufficient extraneous lights in the approach area by night, or ii) misleading information such as is produced by deceptive surrounding terrain or runway slopes;						
	(c)	the presence of objects in the approach area may involve serious hazard if an aircraft descends below the normal approach path, particularly if there are no non–visual or other visual aids to give warning of such objects;						
	(d)	physical conditions at either end of the runway						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		present a serious hazard in the event of an aircraft under shooting or overrunning the runway; and						
	(e)	terrain or prevalent meteorological conditions are such that the aircraft may be subjected to unusual turbulence during approach.						
243	5.3.6.3	The standard visual approach slope indicator systems shall consist of PAPI and APAPI systems conforming to the specifications contained in 5.3.6.6 to 5.3.6.23 inclusive; as shown in Figures 5–15 and 5-16.						
244	5.3.6.4	Visual approach slope indicator systems that do not conform to the specifications in 5.3.6 shall not be described by the abbreviations in 5.3.6.3.						
245	5.3.6.5	PAPI or APAPI shall be provided when one or more of the conditions specified in 5.3.6.1 exist in accordance with the following:						
	(a)	PAPI shall be installed where the code number is 3 or 4.						
	(b)	PAPI or APAPI shall be installed where the code number is 1 or 2.						
246	5.3.6.6	The PAPI system shall consist of a wing bar of 4 sharp transition multi–lamp (or paired single lamp) units equally spaced. The system shall be located on the left side of the runway unless it is physically impracticable to do so.						
247	5.3.6.7	The wing bar of a PAPI shall be constructed and arranged in such a manner that a pilot making an approach will:						
	(a)	when on or close to the approach slope, see the two units nearest the runway as red and the two units farthest from the runway as white;						
	(b)	when above the approach slope, see the one unit nearest the runway as red and the three units farthest from the runway as white; and when						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		further above the approach slope, see all units, as white; and						
	(c)	when below the approach slope, see the three units nearest the runway as red and the unit farthest from the runway as white; and when further below the approach slope, see all units as red.						
248	5.3.6.8	The APAPI system shall consist of a wing bar of 2 sharp transition multi–lamp (or paired single lamp) units. The system shall be located on the left side of the runway unless it is physically impracticable to do so.						
249	5.3.6.9	The wing bar of an APAPI shall be constructed and arranged in such a manner that a pilot marking an approach will:						
	(a)	when on or close to the approach slope, see the unit nearer the runway as red and the unit farther from the runway as white;						
	(b)	when above the approach slope, see both the units as white; and						
	(c)	when below the approach slope, see both the units as red.						
250	5.3.6.10	The light units shall be located as in the basic configuration illustrated in Figure 5–15 for PAPI and Figure 5-16 for APAPI, subject to the installation tolerances given therein. The units forming a wing bar shall be mounted so as to appear to the pilot of an approaching aircraft to be substantially in a horizontal line. The light units shall be mounted as low as possible and shall be sufficiently light and frangible not to constitute a hazard to aircraft.						
251	5.3.6.11	The light units shall be located so as to provide the minimum wheel clearance over the threshold specified in Table 5-5 for the most demanding						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		aircraft using the runway.						
252	5.3.6.12	The system shall be suitable for both day and night operations.						
253	5.3.6.13	The colour transition from red to white in the vertical plane shall be such as to appear to an observer, at a distance of not less than 300m, to occur within a vertical angle of not more than 3 minutes of arc.						
254	5.3.6.14	The light intensity distribution of the light units shall be as shown in Appendix B, section B.3.1.						
255	5.3.6.16	Each light unit shall be capable of adjustment in elevation so that the lower limit of the white part of the beam may be fixed at any desired angle of elevation between 1°30′ and at least 4°30′ above the horizontal.						
256	5.3.6.17	The light units shall be so designed that deposits of condensation, snow, ice, dirt, etc., on optically transmitting or reflecting surfaces shall interfere to the least possible extent with the light signals and shall not affect the contrast between the red and white signals and the elevation of the transition sector.						
257	5.3.6.18	The standard approach slope shall be 3.0 degrees.						
258	5.3.6.19	When the runway is equipped with an ILS, the siting and the angle of elevation of the light units shall be such that the visual approach slope conforms as closely as possible with the glide path of the ILS.						
259	5.3.6.20	The angle of elevation settings of the light units in a PAPI wing bar shall be as depicted in Figure 5-15 and such that, during an approach, the pilot of an aircraft observing a signal of one white and three reds will clear all objects in the approach area by a safe margin.						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
260	5.3.6.21	The angle of elevation settings of the light units in an APAPI wing bar shall be as depicted in Figure 5-16 and such that, during an approach, the pilot of an aircraft observing the lowest on slope signal, i.e. one white and one red, will clear all objects in the approach area by a safe margin.						
261	5.3.6.22	The azimuth spread of the light beam shall be suitably restricted where an object located outside the obstacle protection surface of the PAPI or APAPI system, but within the lateral limits of its light beam, is found to extend above the plane of the obstacle protection surface and an aeronautical study indicates that the object could adversely affect the safety of operations. The extent of the restriction shall be such that the object remains outside the confines of the light beam.						
262	5.3.6.23	An obstacle protection surface shall be established when it is intended to provide a visual approach slope indicator system.						
263	5.3.6.24	The characteristics of the obstacle protection surface, i.e. origin, divergence, length and slope shall correspond to those specified in the relevant column of Table 5–7 and in Figure 5–17.						
264	5.3.6.25	New objects or extensions of existing objects shall not be permitted above an obstacle protection surface except when, in the opinion of the certifying authority, the new object or extension would be shielded by an existing immovable object.						
265	5.3.6.26	Existing objects above an obstacle protection surface shall be removed except when, in the opinion of the certifying authority, the object is shielded by an existing immovable object, or after aeronautical study it is determined that the						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		object would not adversely affect the safety of operations of aeroplanes.						
266	5.3.6.27	Where an aeronautical study indicates that an existing object extending above an obstacle protection surface could adversely affect the safety of operations of aircraft one or more of the following measures shall be taken:						
	(a)	suitably raise the approach slope of the system;						
	(b)	reduce the azimuth spread of the system so that the object is outside the confines of the beam;						
	(c)	displace the axis of the system and its associated obstacle protection surface by no more than 5°;						
	(d)	suitably displace the threshold; and						
	(e)	where (d) is found to be impracticable, suitably displace the system upwind of the threshold to provide an increase in threshold crossing height equal to the height of the object penetration.						
	5.3.7	**Aerodrome Flight Manoeuvring Area Hazard Lights**						
267	5.3.7.1	The dimensions of the flight manoeuvring area shall permit the critical aircraft arriving and departing the airport to manoeuvre safely in both the all engine operating or one engine out configuration.						
268	5.3.7.2	The obstacle free area shall be determined by drawing arcs of a radius of 2 .3NM centred on each runway threshold and joining those arcs with tangent lines and shall provide a minimum of 100m vertical obstacle clearance (see Figure 5—18).						
269	5.3.7.4	The lights shall be located so as to be visible to aircraft operating in IMC at the highest authorized circling minimum descent altitude and for aircraft operating in VMC from any position within the traffic pattern.						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
270	5.3.7.6	Each aerodrome flight manoeuvring area hazard beacon system shall consist of a group of lights positioned so as to define the extent of the safe manoeuvring area and so that each light in the system can be seen from the preceding one. Where appropriate, the lights of cities, towns etc may be included for aiding in the determination of the safe flight manoeuvring area.						
271	5.3.7.7	The aerodrome flight manoeuvring area hazard lights shall be omni–directional, medium intensity flashing red light or white flashing capacitor discharge light with an effective intensity in white of 2000cd for night operation.						
	5.3.9	**Runway Identification Lights (RILS)**						
272	5.3.9.2	Runway identification lights shall be located symmetrically about the runway centre line at a lateral distance of 12m from the runway edge.						
273	5.3.9.3	Runway identification lights shall be located at a longitudinal distance not greater than 30 m in front of the runway threshold.						
274	5.3.9.5	The top of the light units shall not exceed a height of 1m above the runway threshold.						
275	5.3.9.6	Runway identification lights shall be flashing white lights with a flash frequency between 80 and 120 per minute.						
276	5.3.9.7	Runway identification lights shall be aligned at an angle of 20° outward from the longitudinal axis of the runway and at an angle of 7.5° above the horizontal so as to be visible only in the direction of approach to the runway.						
	5.3.10	**Runway Edge Lights**						
277	5.3.10.1	Low intensity runway edge lights shall be provided for a runway intended for use at night where the code number is 1 or 2.						
278	5.3.10.3	Medium intensity runway edge lights shall be						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		provided for a runway intended for use at night where the code number is 3 or 4.						
279	5.3.10.5	High intensity runway edge lights shall be provided for a precision approach runway intended for use by day or night.						
280	5.3.10.7	Runway edge lights shall be placed along the full length of the runway and shall be in two parallel rows equidistant from the centre line.						
281	5.3.10.8	Runway edge lights shall be placed along the edges of the area declared for use as the runway or outside the edges of the area at a distance of up to 1.5m. Where the accumulation of snow at the runway edge creates maintenance problems the lights may be located up to 3m from the runway edge.						
282	5.3.10.10	The lights shall be uniformly spaced in rows at intervals of not more than 60m. The lights on opposite sides of the runway axis shall be on lines at right angles to that axis. At intersections with runways or taxiways, lights may be spaced irregularly or omitted, provided that adequate guidance remains available to the pilot and the spacing is not greater than 120m.						
283	5.3.10.11	Runway edge lights shall be fixed lights showing variable white, except that:						
	(a)	in the case of a displaced threshold, the lights between the beginning of the runway and the displaced threshold shall show blue; and						
	(b)	a section of the lights 600m or one–third of the runway length, whichever is the less, at the remote end of the runway from the end at which the take–off run is started, may show yellow.						
284	5.3.10.12	The runway edge lights shall show at all angles in azimuth necessary to provide guidance to a pilot landing or taking off in either direction. When the						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		runway edge lights are intended to provide circling guidance, they shall show at all angles in azimuth.						
285	5.3.10.13	In all angles of azimuth required in 5.3.10.12, runway edge lights shall show at angles up to 15° above the horizontal with an intensity adequate for the conditions of visibility and ambient light in which use of the runway for take–off or landing is intended. In any case, the intensity shall be at least 50cd except that at an aerodrome without extraneous lighting the intensity of the lights may be reduced to not less than 25cd to avoid dazzling the pilot.						
286	5.3.10.14	Runway edge lights on a precision approach runway shall be in accordance with the specifications of Appendix B, Sections B.1.10 or B.1.11.						
287	5.3.10.15	Runway edge lights shall be mounted to a maximum height of 35cm above the runway edge except they may be raised to a maximum height of 75cm when located 3m from the runway edge using a ratio of 1 cm per 3.75cm as the light is moved out from the 1.5m to the 3m position (see Figure 5–18). In areas with special maintenance problems, such as high snow fall, runway edge light mounting heights in excess of the values given shall require the approval of the Certifying Authority. In all cases a minimum clearance of 15cm shall be provided between the light and any overhanging part of the aircraft expected to use the runway when its main landing gear is located at the edge of the pavement.						
288	5.3.10.16	Runway edge light mountings shall be frangible.						
	5.3.11	**Runway Threshold and Wing Bar Lights**						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
289	5.3.11.1	Runway threshold lights shall be provided for a runway equipped with runway edge lights except on a non–instrument or non–precision approach runway where the threshold is displaced and wing bar lights are provided.						
290	5.3.11.2	Runway threshold lights shall consist of:						
	(a)	on a runway less than 45m in width, six lights arranged in two groups, and on a runway 45m and greater in width, eight lights arranged in two groups;						
	(b)	in addition to those lights required by (a) above, when a precision approach runway category I lighting system is installed, additional lights as required to achieve a maximum spacing of 3m between individual lights; and						
	(c)	in addition to those lights required by (a) and (b) above, on a precision approach runway category II or III, additional lights as required to achieve a maximum spacing of 1.5m between individual lights.						
291	5.3.11.3	When a threshold is at the extremity of a runway, the threshold lights shall be placed in a row at right angles to the runway axis as near to the extremity of the runway as possible and, in any case, not more than 3 m outside the extremity.						
292	5.3.11.4	When a threshold is displaced from the extremity of a runway, threshold lights shall be placed in a row at right angles to the runway axis at the displaced threshold.						
293	5.3.11.5	The runway threshold lights described in 5.3.11.2 (a), shall be placed in two groups symmetrically disposed about the runway centre line with the outermost runway threshold lights positioned to align with the runway edge lights and the remainder spaced at intervals of 3m.						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
294	5.3.11.6	On a precision approach runway category I, those additional lights described in 5.3.11.2 (b), shall be placed between the inner most lights described in 5.3.11.5 and spaced at uniform intervals not to exceed 3m.						
295	5.3.11.7	On a precision approach runway category II or III, those additional lights described in 5.3.11.2 (b), shall be placed between the lights described in 5.3.11.5 and 5.3.11.6 so as to achieve a uniform spacing of 1.5m between individual lights.						
296	5.3.11.8	Wing bar lights shall be provided on a runway where the threshold is displaced to indicate the location of the displaced threshold.						
297	5.3.11.9	Wing bar lights shall be provided on a precision approach runway category II or III.						
298	5.3.11.10	Wing bar lights shall consist of two groups of lights (ie. wing bars) each consisting of;						
	(a)	three lights when used to mark the location of a displaced threshold for a runway 30m or less in width;						
	(b)	four lights when used to mark the location of a displaced threshold for a runway greater than 30m in width but not greater than 45m in width;						
	(c)	five lights when used to mark the location of a displaced threshold for a runway greater than 45m in width; and						
	(d)	seven or eight lights when provided on a precision approach runway category II or III.						
299	5.3.11.11	To indicate the location of a displaced threshold, wing bar lights shall be symmetrically disposed on each side of the runway at the displaced threshold. Each wing bar shall be at right angles to the line of runway edge lights with the innermost light located 3m outside the line of runway edge lights and the remainder spaced at						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		intervals of 3m.						
300	5.3.11.13	For a precision approach runway category II or III, wing bar lights shall be symmetrically disposed on each side of the runway threshold lights, extending to 13.5m from the runway edge with uniform spacing between each light of 1.5m.						
301	5.3.11.14	Runway threshold and wing bar lights shall be fixed unidirectional lights showing green in the direction of approach to the runway (see Figure 5–20). The intensity and beam spread of the lights shall be adequate for the conditions of visibility and ambient light in which use of the runway is intended.						
302	5.3.11.15	The lights required by 5.3.11.2 (a) and 5.3.11.8 shall be configured to be illuminated with the runway edge lights at a compatible intensity.						
303	5.3.11.16	The lights required by 5.3.11.2 (b) shall be configured to be illuminated with the precision approach category I lighting system at a compatible intensity.						
304	5.3.11.17	The lights required by 5.3.11.2 (c) and 5.2.11.9 shall be configured to be illuminated with the precision approach category II and III lighting system at a compatible intensity.						
305	5.3.11.18	Runway threshold lights on a precision approach runway shall be in accordance with the specifications of Appendix B, section B.1.3.						
306	5.3.11.19	Wing bar lights on a precision approach runway shall be in accordance with the specifications of Appendix B, section B.1.4.						
307	5.3.11.20	Threshold and wing bar lights using high intensity fixtures (PAR 56 lamps) shall be aligned vertically with an angle of elevation 6.1 degrees.						
308	5.3.11.21	Threshold lights using medium intensity fixtures (PAR 38 lamps) shall be aligned vertically with an						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		angle of elevation 3.1 degrees.						
309	5.3.11.22	Runway threshold and wing bar light shall be aligned laterally with their beam axis parallel to the runway centre line.						
310	5.3.11.23	Runway threshold and wing bar light mountings shall be frangible.						
	5.3.12	**Runway End Lights**						
311	5.3.12.1	Runway end lights shall be provided for a runway equipped with runway edge lights.						
312	5.3.12.2	Runway end lights on a runway less than 45m in width shall consist of six lights arranged in two groups, and on a runway 45m and greater in width, eight lights arranged in two groups.						
313	5.3.12.3	Runway end lights shall be placed on a line at right angles to the runway axis as near to the end of the runway as possible and, in any case, not more than 3m outside of the end.						
314	5.3.12.4	Runway end lighting shall be placed in two groups symmetrically disposed about the runway centre line with the outermost runway end lights positioned to align with the runway edge lights and the remainder spaced at intervals of 3m.						
315	5.3.12.5	Runway end lights shall be fixed unidirectional lights showing red in the direction of the runway. The intensity and beam spread of the lights shall be adequate for the conditions of visibility and ambient light in which use of the runway is intended.						
316	5.3.12.6	Runway end lights on a precision approach runway shall be in accordance with the specifications of Appendix B, section B.1.9.						
317	5.3.12.7	Runway end light mountings shall be frangible.						
	5.3.13	**Runway Centre Line Lights**						
318	5.3.13.1	Runway centre line lights shall be provided on a precision approach runway category II or III.						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
319	5.3.13.3	Runway centre line lights shall be provided on a runway intended to be used for take–off with an operating minimum below an RVR of the order of 1400ft (400m).						
320	5.3.13.6	Runway centre line lights shall be located along the centre line of the runway, except that the lights may be uniformly offset to the same side of the runway centre line by not more than 60cm where it is not practicable to locate them along the centre line. The lights shall be located from the threshold to the end at a longitudinal spacing approximately: • 7.5m or 15m on a precision approach runway category III; • 15m on a precision approach runway category II or on runways intended to be used for take–off with an operating minimum below an RVR of the order of 1400ft (400m); and • 15m or 30m on a precision approach runway category I or other runways on which lights are provided.						
321	5.3.13.7	Runway centre line lights shall be fixed lights showing variable white from the threshold to the point 900m from the runway end; alternate red and variable white from 900m to 300m from the runway end; and red from 300m to the runway end, except that:						
	(a)	where the runway centre line lights are spaced at 7.5m intervals, alternate pairs of red and variable white lights shall be used on the section from 900m to 300m from the runway end; and						
	(b)	for runways less than 1800m in length, the alternate red and variable white lights shall						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		extend from the mid-point of the runway usable for landing to 300m from the runway end.						
322	5.3.13.8	Runway centre line lights shall be in accordance with the specifications of Appendix B, Sections B.1.6, B.1.7, or B.1.8.						
323	5.3.13.9	Where necessary, provision shall be made to extinguish those centre line lights specified in 5.3.13.5 (b) or reset the intensity of the approach lighting system or barrettes when the runway is being used for landing.						
	5.3.14	**Runway Touchdown Zone Lights**						
324	5.3.14.1	Touchdown zone lights shall be provided in the touchdown zone of a precision approach runway category II or III.						
325	5.3.14.2	Touchdown zone lights shall extend from the threshold for a longitudinal distance of 900m, except that, on runways less than 1800m in length, the system shall be shortened so that it does not extend beyond the midpoint of the runway. The pattern shall be formed by pairs of barrettes symmetrically located about the runway centre line. The lateral spacing between the innermost lights of a pair of barrettes shall be equal to the lateral spacing selected for the touchdown zone marking. The longitudinal spacing between pairs of barrettes shall be 30m.						
326	5.3.14.3	A barrette shall be composed of at least three lights with a spacing between the lights of not more than 1.5m.						
327	5.3.14.4	A barrette should be not less than 3m nor more than 4.5m in length.						
328	5.3.14.5	Touchdown zone lights shall be fixed unidirectional lights showing variable white.						
329	5.3.14.6	Touchdown zone lights shall be in accordance						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		with the specifications of Appendix B, section B.1.5.						
	5.3.15	**Stopway Lights**						
330	5.3.15.1	Stopway lights shall be provided for a stopway intended for use at night.						
331	5.3.15.2	Stopway lights shall be placed along the full length of the stopway and shall be in two parallel rows that are equidistant from the centre line and coincident with the rows of the runway edge lights. Stopway lights shall also be provided across the end of a stopway on a line at right angles to the stopway axis as near to the end of the stopway as possible and, in any case, not more than 3m outside the end.						
332	5.3.15.3	Stopway lights shall be fixed unidirectional lights showing red in the direction of the runway.						
333	5.3.15.4	Stopway light mountings shall be frangible.						
	5.3.16	**Taxiway Centre Line Lights**						
334	5.3.16.1	Taxiway centre line lights shall be provided on an exit taxiway, taxiway, apron, and apron stand taxilane intended for use in runway visual range conditions less than a value of the order of 1400ft (400m), in such a manner as to provide continuous guidance between the runway centre line and the point on the apron where aircraft commence manoeuvring for parking, except that these lights need not be provided where there is a low volume of traffic and taxiway edge lights and centre line marking provide adequate guidance.						
335	5.3.16.3	Taxiway centre line lights shall be provided on a runway forming part of a standard taxi–route and intended for taxiing in runway visual range conditions less than a value of the order of 1400ft (400m) except that these lights need not						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		be provided where there is a low volume of traffic and taxiway edge lights and centre line marking provide adequate guidance.						
336	5.3.16.4	With the exception of an exit taxiway, taxiway centre line lights on a taxiway and on a runway forming part of a recognized taxi–route, shall be fixed lights showing green with beam dimensions such that the light is visible only from aircraft on or in the vicinity of the taxiway.						
337	5.3.16.5	Where aircraft follow the same centreline in both directions the centreline lights shall be bidirectional.						
338	5.3.16.6	Taxiway centre line lights on an exit taxiway shall be fixed lights. Alternate taxiway centre line lights shall show green and yellow from their beginning near the runway centre line to the outer perimeter of the ILS/MLS critical/sensitive area or the taxi-holding position, whichever is farthest from the runway; and thereafter all lights shall show green. (See Figure 5–21). The light nearest to the perimeter shall always show yellow. Where aircraft may follow the same centre line in both directions, all the centre line lights shall show green to aircraft approaching the runway.						
339	5.3.16.7	Taxiway centre line lights shall be in accordance with the specifications of:						
	(a)	Appendix B, section B.2.1, B.2.2 or B.2.3 for taxiways intended for use in runway visual range conditions of less than a value of the order of 1400ft (400m); and						
	(b)	Appendix B, section B.2.4 or B.2.5 for other taxiways.						
340	5.3.16.9	Taxiway centre line lights on a straight section of a taxiway shall be spaced at longitudinal intervals						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		of not more than 30m, except that:						
	(a)	on a taxiway intended for use in RVR conditions of less than a value of the order of 1400ft (400m), the longitudinal spacing shall not exceed 15m.						
	(b)	larger intervals not exceeding 60m may be used where, because of the prevailing meteorological conditions, adequate guidance is provided by such spacing; and						
	(c)	intervals less than 30m should be provided on short straight sections.						
341	5.3.16.10	Taxiway centre line lights on a taxiway curve shall continue from the straight portion of the taxiway at a constant distance from the outside edge of the taxiway curve. The lights shall be spaced at intervals such that a clear indication of the curve is provided.						
342	5.3.16.11	On a taxiway intended for use in RVR conditions of less than a value of the order of 1400ft (400m), the lights on a curve shall not exceed a spacing of 15m and on a curve of less than 400m radius the lights shall be spaced at intervals of not greater than 7.5m. This spacing should extend for 60m before and after the curve.						
343	5.3.16.13	Taxiway centre line lights on a rapid exit taxiway shall commence at a point at least 60 m before the beginning of the taxiway centre line curve and continue beyond the end of the curve to a point on the centre line of the taxiway where an aircraft can be expected to reach normal taxiing speed. The lights on that portion parallel to the runway centre line should always be at least 60 cm from any row of runway centre line lights, as shown in Figure 5–21.						
344	5.3.16.14	The lights should be spaced at longitudinal						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		intervals of not more than 15m.						
	5.3.17	**Taxiway Edge Lights**						
345	5.3.17.1	Taxiway edge lights shall be provided on a holding bay, apron, etc. intended for use at night and on a taxiway not provided with taxiway centre line lights and intended for use at night, except that:						
	(a)	taxiway edge lights need not be provided on taxiways intended for use at night in association with non-instrument runways where the code number is 1 or 2 provided that retro-reflective taxiway edge markers are installed.						
	(b)	taxiway edge lights need not be provided on aprons where considering the nature of the operations, adequate guidance can be achieved by surface illumination of taxiway edge markers.						
	(c)	retro-reflective markers may be used in lieu of taxiway edge lights on private taxiways and aprons.						
346	5.3.17.2	Taxiway edge lights shall be provided on a runway forming part of a standard taxi–route and intended for taxiing at night where the runway is not provided with taxiway centre lights, except that taxiway edge lights need not be provided where, considering the nature of the operations, adequate guidance can be achieved by surface illumination or other means.						
347	5.3.17.3	Taxiway edge lights on a straight section of a taxiway and on a runway forming part of a recognized taxi route shall be spaced at uniform longitudinal intervals of not more than 60m.						
348	5.3.17.6	The intersection of a taxiway with a runway shall be indicated by placing two blue edge lights on each side of and adjacent to the taxiway/runway intersection.						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
349	5.3.17.7	The intersection of a taxiway with an apron shall be indicated by placing two yellow edge lights on each side of and adjacent to the taxiway/apron intersection.						
350	5.3.17.8	The two lights provided in accordance with 5.3.17.6 and 5.3.17.7 shall be located so that one light is positioned in line with the other edge lights. The second shall be positioned not more than 0.6m from the first, and aligned to be equidistant from the edge(s) of the pavement on each side of the first light.						
351	5.3.17.9	Taxiway edge lights shall be fixed lights showing blue. The lights shall show up to at least 30° above the horizontal and at all angles in azimuth necessary to provide guidance to a pilot taxiing in either direction. At an intersection, exit or curve the lights shall be shielded as far as practicable so that they cannot be seen in angles of azimuth in which they may be confused with other lights.						
352	5.3.17.10	Taxiway edge light mountings shall be frangible						
	5.3.18	**Stop Bars**						
353	5.3.18.1	A stop bar shall be provided at every taxi–holding position serving a runway when it is intended that the runway will be used in runway visual range conditions less than a value of the order of 1400ft (400m) except where operational procedures exist to limit to one at any time the number of aircraft on the manoeuvring area.						
354	5.3.18.5	Stop bars shall be located across the taxiway at the point where it is desired that traffic stop. Where the additional lights specified in 5.3.18.4 are provided, these lights shall be located not less than 3m from the taxiway edge.						
355	5.3.18.6	Stop bars shall consist of lights spaced at intervals of 3m across the taxiway showing red in						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		the intended direction(s) of approach to the intersection or taxi–holding position.						
356	5.3.18.7	Stop bars installed at a taxi–holding position shall be unidirectional and shall show red in the direction of approach to the runway.						
357	5.3.18.8	Where the additional lights specified in 5.3.18.4 are provided, these lights shall have the same characteristics as the lights in the stop bar, but shall be visible to approaching aircraft up to the stop bar position.						
358	5.3.18.9	Selectively switchable stop bars at a taxi-holding position shall be installed in conjunction with taxiway centre line lights extending from the stop bar to the runway centreline in accordance with the specifications contained in 5.3.16.15.						
359	5.3.18.10	Selectively switchable stop bars other than at a taxi-holding position shall be installed in conjunction with at least three taxiway centre line lights (extending for at least 90m from the stop bar) in the direction that it is intended for an aircraft to proceed from the stop bar.						
360	5.3.18.12	The lighting circuit shall be designed so that:						
	(a)	stop bars located across entrance taxiways are selectively switchable;						
	(b)	stop bars located across taxiways intended to be used only as exit taxiways are switchable selectively or in groups;						
	(c)	when a stop bar is illuminated, the taxiway centre line lights specified in 5.3.18.8 and 5.3.18.9 installed beyond the stop bar shall be extinguished; and						
	(d)	stop bars shall be interlocked with the taxiway centre line lights so that when the centre line lights beyond the stop bar are illuminated the stop bar is extinguished and vice versa.						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
	5.3.19	**Taxiway Intersection Lights**						
361	5.3.19.2	Taxiway intersection lights shall be located in line with the taxiway intersection marking. Where there is no taxiway intersection marking, the lights shall be installed at least 60m from the centreline of the intersecting taxiway where the code number is 3 or 4 and at least 40m where the code number is 1 or 2.						
362	5.3.19.3	Taxiway intersection lighting shall consist of at least three fixed unidirectional lights showing yellow in the direction of approach to the intersection with a light distribution similar to taxiway centre line lights if provided. The lights shall be disposed symmetrically about, and at 90° to, the taxiway centre line, with individual lights spaced 1.5m apart.						
	5.3.20	Runway Guard Lights						
363	5.3.20.1	Runway guard lights, Configuration A, shall be provided at each taxiway/runway intersection associated with a runway intended for use in :						
	(a)	runway visual range conditions less than a value of the order of 2600ft (800m) where a stop bar is not installed; and						
	(b)	runway visual range conditions of values between the order of 2600ft (800m) and 4000ft (1 200m) where the traffic density is high.						
364	5.3.20.4	Runway guard lights, configuration B shall not be collocated with a stop bar.						
365	5.3.20.5	Runway guard lights, configuration A, shall be located at each side of the taxiway at a distance from the runway centre line not less than that specified for a take–off runway in Table 3–2						
366	5.3.20.6	Runway guard lights, configuration B, shall be located across the taxiway at a distance from the runway centre line not less than that specified						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		for a take–off runway in Table 3–2						
367	5.3.20.7	Runway guard lights, configuration A, shall consist of two pairs of yellow lights.						
368	5.3.20.8	Runway guard lights, configuration B, shall consist of yellow lights spaced at intervals of 3m across the taxiway.						
369	5.3.20.9	The light beam shall be unidirectional and aligned so as to be visible to the pilot of an aircraft taxiing to the holding position.						
370	5.3.20.12	The lights in each unit of configuration A shall be illuminated alternately.						
371	5.3.20.13	For configuration B, adjacent lights shall be alternately illuminated and alternative lights shall be illuminated in unison.						
372	5.3.20.14	The lights shall be illuminated between 30 and 60 cycles per minute and the light suppression and illumination periods shall be equal and opposite in each light.						
	5.3.21	Apron Floodlighting						
373	5.3.21.3	The spectral distribution of apron floodlights shall be such that the colours used for aircraft marking connected with routine servicing, and/or surface and obstacle marking, can be correctly identified.						
	5.3.22	**Visual Docking Guidance System**						
374	5.3.22.2	The provisions of paragraphs 5.3.22.3 to 5.3.22.7, 5.3.22.9 to 5.3.22.12 and 5.3.22.16 and 5.3.22.18 shall not require the replacement of existing installations before January 01, 2005.						
375	5.3.22.3	The system shall provide both azimuth and stopping guidance.						
376	5.3.22.4	The azimuth guidance unit and the stopping position indicator shall be adequate for use in all weather, visibility, background lighting, and pavement conditions for which the system is						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		intended both by day and night, but shall not dazzle the pilot.						
378	5.3.22.5	The azimuth guidance unit and the stopping position indicator shall be of a design such that:						
	(a)	a clear indication of malfunction of either or both is available to the pilot; and						
	(b)	they can be turned off.						
379	5.3.22.6	The azimuth guidance unit and the stopping position indicator shall be located in such a way that there is continuity of guidance between the aircraft stand markings, the aircraft stand manoeuvring guidance lights, if present, and the visual docking guidance system.						
380	5.3.22.7	The accuracy of the system shall be adequate for the type of loading bridge and fixed aircraft servicing installations with which it is to be used.						
381	5.3.22.9	If selective operation is required to prepare the system for use by a particular type of aircraft, then the system shall provide an identification of the selected aircraft type to both the pilot and the system operator as a means of ensuring that the system has been set properly.						
382	5.3.22.10	The azimuth guidance unit shall be located on or close to the extension of the stand centre line ahead of the aircraft so that its signals are visible from the cockpit of an aircraft throughout the docking manoeuvre and aligned for use by the pilot occupying the left seat.						
383	5.3.22.11	The azimuth guidance unit shall provide unambiguous left/right guidance which enables the pilot to acquire and maintain the lead–in line without over–controlling.						
384	5.3.22.12	When azimuth guidance is indicated by colour change, green shall be used to identify the centre line and red for deviations from the centre line.						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
385	5.3.22.14	The stopping position indicator shall be usable at least by the pilot occupying the left seat.						
386	5.3.22.15	The stopping position information provided by the indicator for a particular aircraft type shall account for the anticipated range of variations in pilot eye height and/or viewing angle.						
387	5.3.22.16	The stopping position indicator shall show the stopping position for the aircraft for which guidance is being provided, and shall provide closing rate information to enable the pilot to gradually decelerate the aircraft to a full stop at the intended stopping position .						
388	5.3.22.18	When stopping guidance is indicated by colour change, green shall be used to show that the aircraft can proceed and red to show that the stop point has been reached except that for a short distance prior to the stop point a third colour may be used to warn that the stopping point is close.						
	5.3.23	**Aircraft Stand Maneuvering Guidance Lights**						
389	5.3.23.2	Aircraft stand manoeuvring guidance lights shall be collocated with the aircraft stand markings, except that the lights may be uniformly offset by not more than 30 cm where it is not practical to locate them along the centreline.						
390	5.3.23.3	Aircraft stand manoeuvring guidance lights, other than those indicating a stop position shall be fixed yellow lights, visible throughout the segments within which they are intended to provide guidance.						
391	5.3.23.5	The lights indicating a stop position shall be fixed, unidirectional lights, showing red.						
	5.3.24	**Road-Holding Position Light**						
392	5.3.24.1	A road–holding position light shall be provided at each road-holding position serving a runway						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		when it is intended that the runway will be used in runway visual range conditions less than a value of the order of 1400ft (400m).						
393	5.3.24.3	A road–holding position light shall be located adjacent to the holding position marking 1.5m from the right hand edge of the road.						
394	5.3.24.4	The road–holding position light shall comprise:						
	(a)	a controllable red (stop)/green (go) traffic light; or						
	(b)	a flashing red light.						
395	5.3.24.5	The road–holding position light beam shall be unidirectional and aligned so as to be visible to the driver of a vehicle approaching the holding position.						
396	5.3.24.6	The intensity of the light beam shall be adequate for the conditions of visibility and ambient light in which the use of the holding position is intended, but shall not dazzle the driver.						
397	5.3.24.7	The flash frequency of flashing red light shall be between 30 and 60 per minute with the lamp illuminated approximately 50 per cent of the time.						
	5.4	**Signs**						
	5.4.1	**General**						
398	5.4.1.1	Signs shall be provided to convey, a mandatory instruction, information on a specific location or destination on a movement area or to provide other information to meet the requirements of section 8.8 (Surface Movement Guidance and Control System).						
399	5.4.1.2	Signs shall be frangible. Those located near a runway or taxiway shall be sufficiently low to preserve clearance for propellers and the engine pods of jet aircraft.						
400	5.4.1.3	Signs shall be rectangular, with the longer side						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		horizontal.						
401	5.4.1.4	The only signs on the movement area utilizing red shall be mandatory instruction signs.						
402	5.4.1.5	The inscriptions on a sign shall be in accordance with Table 5-8 and Appendix C.						
403	5.4.1.6	Where signs of differing minimum character heights are located together to form an array, the signs shall be of uniform dimensions, conforming to the larger of the character heights (eg. location sign collocated with a runway designation sign).						
404	5.4.1.7	Signs shall be illuminated, when intended for use:						
	(a)	in conditions of visibility in the order of 400m or less; or						
	(b)	at night in association with instrument runways; or						
	(c)	at night in association with non-instrument runways where the code number is 3 or 4.						
405	5.4.1.8	Signs shall be retro-reflective and/or illuminated when intended for use at night in association with non-instrument runways where the code number is 1 or 2.						
406	5.4.1.10	A sign illuminated in accordance with 5.4.1.7 and 5.4.1.8 shall be visible over a distance of at least 250 m and legible at a distance of 180m on a clear night.						
407	5.4.1.11	Signs intended for use in conditions of visibility in the order of 400m or less shall be illuminated so as to be visible over a distance of 250m and legible at a distance 180m when the RVR is 1400ft (400m) or greater.						
408	5.4.1.12	The luminance values shall be uniform over the face of internally and externally illuminated signs.						
409	5.4.1.13	The characters on a sign lighted using imbedded fibreoptic elements shall be illuminated such						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		that:						
	(a)	the characters on mandatory instruction signs shall show red;						
	(b)	the characters on information signs shall show white except that the characters on a location sign shall show yellow;						
	(c)	the sign shall be legible when viewed from angles up to 80° from the optical axis; and						
	(d)	a single lamp failure shall not result in the character or any portion of the character being extinguished.						
	5.4.2	**Mandatory Instruction Signs**						
410	5.4.2.1	A mandatory instruction sign shall be provided to identify a location beyond which an aircraft taxiing or vehicle shall not proceed unless:						
	(a)	authorized by the aerodrome control tower where provided; or						
	(b)	the pilot or vehicle operator has verified that the runway is clear.						
411	5.4.2.2	Mandatory instruction signs shall include:						
	(a)	runway designation signs;						
	(b)	Category I, Category II, Category III or Category II/III holding position signs; and						
	(c)	no entry signs.						
412	5.4.2.3	A pattern "A" taxi-holding position marking shall be supplemented with a runway designation sign.						
413	5.4.2.4	A pattern "B" taxi-holding position marking shall be supplemented with a Category I, Category II, Category III or Category II/III holding position sign.						
414	5.4.2.5	A runway designation sign at a taxiway/runway intersection shall be supplemented with a location sign in the outboard (furthest from the taxiway) position.						
415	5.4.2.6	A no entry sign shall be provided when entry into						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		an area is prohibited.						
416	5.4.2.7	A runway designation sign at a taxiway/runway intersection shall face the direction of approach to the runway and be located:						
	(a)	on each side of a taxiway associated with a precision approach runway;						
	(b)	on each side of a taxiway where the taxiway width (including where appropriate, a holding bay) is 45m or greater; and						
	(c)	at least on the left side of a taxiway associated with a non-precision or non-instrument runway. Where practicable a runway designation sign should be located on each side of the taxiway.						
417	5.4.2.8	A runway designation sign at a runway/ runway intersection shall be located on each side of the runway except where an aeronautical study indicates one sign would be adequate.						
418	5.4.2.9	A Category II, Category III or Category II/III holding position sign shall be located on each side of the holding position marking facing the direction of approach to the critical area.						
419	5.4.2.10	A no entry sign shall be located at the beginning of the area to which entrance is prohibited at least on the left hand side of the taxiway as viewed by the pilot. Where practicable, a no entry sign shall be located on each side of the taxiway.						
420	5.4.2.11	Mandatory instruction signs shall be located at a perpendicular distance from the taxiway or runway in accordance with Table 5-8.						
421	5.4.2.12	A mandatory instruction sign shall consist of an inscription in white on a red background.						
422	5.4.2.13	The inscription on a runway designation sign shall consist of the runway designation of the intersecting runway properly oriented with						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		respect to the viewing position of the sign, except that a runway designation sign installed in the vicinity of a runway extremity may show the runway designation of the concerned runway extremity only. In cases of airports located within the area of compass unreliability, the inscription on a runway designation sign shall consist of the exact runway azimuth as a three-digit number in degrees TRUE, properly oriented with respect to the viewing position of the sign (i.e., 258T - 078T).						
423	5.4.2.14	The inscription on a Category II or III holding position sign shall consist of the runway designator of the runway for which the holding position is established followed by the CAT II, CAT III or CAT II/III designation as appropriate.						
424	5.4.2.15	The inscription on a no entry sign shall be in accordance with Table 5-9 and Appendix C.						
425	5.4.2.16	Where appropriate, the inscriptions/symbols depicted in Table 5-9 shall be used.						
	5.4.3	**Information Signs**						
426	5.4.3.1	An information sign shall be provided where there is an operational need to identify by a sign, a specific location, or routing information.						
427	5.4.3.2	Information signs shall include direction signs, location signs, destination signs, and runway exit signs.						
428	5.4.3.3	A runway exit sign shall be provided at all taxiway exits from runways except that signs may be omitted:						
	(a)	where entry to the taxiway is not permitted; or						
	(b)	where aircraft exiting the runway do not normally proceed in that direction.						
429	5.4.3.5	A combined location and direction sign shall be provided when it is intended to indicate routing						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		information prior to a taxiway intersection.						
430	5.4.3.6	A direction sign shall be provided when there is an operational need to identify the designation and direction of taxiways at an intersection.						
431	5.4.3.7	A location sign shall be provided in conjunction with a direction sign or a runway designation sign located at a taxiing/ runway intersection except that it may be omitted where an aeronautical study indicates that it is not needed.						
432	5.4.3.10	Except as specified in para 5.4.3.12 and 5.4.3.17, information signs shall, wherever practicable, be located on the lefthand side of the taxiway in accordance with Table 5-9.						
433	5.4.3.11	At a taxiway intersection, information signs shall be located prior to the intersection and in line with the taxiway intersection marking. Where there is no taxiway intersection marking, the signs shall be installed at least 60m from the centre line of the intersecting taxiway where the code number is 3 or 4 and at least 40m where the code number is 1 or 2.						
434	5.4.3.12	A runway exit sign shall be located on the same side of the runway (left or right) as the exit and positioned in accordance with Table 5-8.						
435	5.4.3.13	A runway exit sign shall be located prior to the runway exit point in line with a position at least 60m prior to the point of tangency where the code number is 3 or 4, and at least 30m where the code number is 1 or 2.						
436	5.4.3.14	A taxiway location sign installed in conjunction with a runway designation sign shall be positioned outboard of the runway designation sign.						
437	5.4.3.16	An information sign other than a location sign shall not be collocated with a mandatory						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		instruction sign.						
438	5.4.3.18	An information sign shall consist of an inscription in black on a yellow background except that a location sign shall consist of an inscription in yellow on a black background.						
439	5.4.3.19	The inscription on a runway exit sign shall consist of the designator of the exit taxiway and an arrow indicating the direction to follow.						
440	5.4.3.20	The inscription on a destination sign shall comprise an alpha, alpha numeric or numeric message identifying the destination plus an arrow indicating the direction to proceed.						
441	5.4.3.21	The inscriptions on a direction sign shall comprise an alpha or alpha/numeric message identifying the route plus an arrow or arrows appropriately oriented.						
442	5.4.3.22	The inscription on a location sign shall comprise the designation of the location, taxiway, or other pavement the aircraft is on or is entering and shall not contain arrows.						
443	5.4.3.23	Where a location sign and direction signs are used in combination to provide routing guidance:						
	(a)	all direction signs related to left turns shall be located to the left of the location sign and all direction signs related to right turns shall be located to the right of the location sign except that where the junction consists of one intersecting taxiway, the location sign may alternatively be placed in the outboard position;						
	(b)	the direction signs shall be placed such that the direction of the arrows departs increasingly from the vertical with increasing deviation of the corresponding taxiway;						
	(c)	an appropriate direction sign shall be placed next to the location sign where the direction of the						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		location taxiway changes more than 25° beyond the intersection; and						
	(d)	adjacent direction signs shall be delineated by a vertical black line as shown in Figure 5-23.						
444	5.4.3.24	A taxiway shall be identified by a designator comprising a letter, letters or a combination of letters followed by a number.						
445	5.4.3.26	Rapid exit taxiways shall use an alpha/numeric system, i.e., A1, A2, etc., identified with the taxiway to which they are connected. The numeric portion of the coding shall be odd numbers for exits serving easterly runways (01 to 18) and even numbers for westerly runways (19 to 36).						
446	5.4.3.27	Where required, apron areas shall be identified with signs having Roman numerals.						
447	5.4.3.29	The use of numbers alone on the manoeuvring area shall be reserved for the designation of runways						
	5.4.4	**Mandatory Frequency/Aerodrome Traffic Frequency Signs**						
448	5.4.4.2	An MF/ATF sign shall not be collocated with a runway designation sign.						
449	5.4.4.5	An MF/ATF sign shall consist of an inscription in black on a yellow background.						
450	5.4.4.6	The inscription on an MF or ATF sign shall be in accordance with Figure 5-26 and Appendix C.						
	5.4.5	**Aerodrome Identification Sign**						
451	5.4.5.3	The aerodrome identification sign shall consist of the name of the aerodrome.						
	5.4.6	**Aircraft Stand Identification Signs**						
452	5.4.6.3	An aircraft stand identification sign shall consist of an inscription in black on a yellow background.						
	5.4.7	**Road-Holding Position Sign**						
453	5.4.7.1	A road-holding position sign shall be provided at						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		all road entrances to a runway.						
454	5.4.7.2	The inscriptions on a road-holding position sign shall be in the local language(s) and shall include the following:						
	(a)	a requirement to stop. This shall be in conformity with the local traffic convention;						
	(b)	a requirement to obtain ATC clearance to cross the runway; and						
	(c)	location designator.						
455	5.4.7.4	A road-holding position sign intended for night use shall be retro-reflective or illuminated.						
	5.5	**Markers**						
	5.5.1	**General**						
456	5.5.1.1	Markers shall be lightweight and frangibly mounted. Those located near a runway or taxiway shall be sufficiently low to preserve clearance for propellers and for the engine pods of jet aircraft						
	5.5.3	**Stopway Edge Markers**						
457	5.5.3.2	The stopway edge markers shall be sufficiently different from any runway edge markers used to ensure that the two types of markers cannot be confused.						
	5.5.5	**Taxiway Edge Markers**						
458	5.5.5.3	A taxiway edge marker shall be retro-reflective blue.						
459	5.5.5.5	Taxiway edge markers shall be light weight and frangible. Their height shall be sufficiently low to preserve clearance for propellers and for the engine pods of jet aircraft.						
	5.5.6	**Taxiway Centre Line Markers**						
460	5.5.6.5	A taxiway centre line marker shall be retro-reflective green.						
461	5.5.6.7	Taxiway centre line markers shall be so designed and fitted as to withstand being run over by the						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		wheels of an aircraft without damage either to the aircraft or to the markers themselves.						
	5.5.8	**Boundary Markers**						
462	5.5.8.1	Boundary markers shall be provided at an aerodrome where the landing area has no runway.						
463	5.5.8.2	Boundary markers shall be spaced along the boundary of the landing area at intervals of not more than 200m, if a pyramid type is used, or approximately 90m, if a conical type is used, with a marker at any corner.						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		Visual Aids for Denoting Obstacles						
	6.1	**Objects to be Marked and/or Lighted**						
	6.1.1	**Objects On Movement Areas**						
464	6.1.1.1	Vehicles and other mobile objects, excluding aircraft, on the manoeuvring area of an aerodrome are obstacles and shall be marked and, if the vehicle and aerodrome are used at night or in conditions of low visibility, lighted.						
465	6.1.1.3	Elevated aeronautical ground lights within the movement area shall be marked so as to be conspicuous by day.						
	6.1.2	**Objects On Runway Strips**						
466	6.1.2.1	A fixed object located on a runway strip shall be marked and if the aerodrome is used at night, lighted, excluding visual aids that are by their nature visually conspicuous.						
	6.1.3	**Other Objects**						
467	6.1.3.4	A fixed object that extends above an obstacle protection surface shall be marked and, if the runway is used at night, lighted.						
468	6.1.3.5	All elevated objects within the distance specified in Table 3–1, column 5 from the centre line of a taxiway or an apron taxiway shall be marked and, if the taxiway or apron taxiway is used at night, lighted.						
469	6.1.3.6	All elevated objects within the distance specified in 3.6.6.1 from the centre line of an aircraft stand taxilane shall be marked and, if the aircraft stand taxilane is used at night, lighted.						
	6.2	**Marking Of Objects**						
470	6.2.1.1	All fixed objects to be marked shall, whenever possible, be coloured but if this is not possible, markers or flags shall be displayed on or above						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		them, except that objects that are sufficiently conspicuous by their shape, size, or colour need not otherwise be marked.						
471	6.2.1.2	The colour and form of marking displayed on objects shall be in accordance with TP 382E, Standard Obstruction Marking.						
472	6.2.1.3	Markers displayed on or adjacent to objects shall be located in conspicuous positions so as to retain the general definition of the object, and shall be recognizable in clear weather from a distance of at least 1000m for an object to be viewed from the air and 300m for an object to be viewed from the ground in all directions in which an aircraft is likely to approach the object. The shape of markers shall be distinctive to the extent necessary to ensure that they are not mistaken for markers employed to convey other information, and they shall be such that the hazard presented by the object they mark is not increased.						
473	6.2.1.4	Markers displayed on overhead wires, catenaries, etc. shall be in accordance with TP 382E, Standard Obstruction Marking.						
474	6.2.1.6	Flags used to mark fixed objects shall be displayed around, on top of, or around the highest edge of, an object. When flags are used to mark extensive objects or groups of closely spaced objects, they shall be displayed at least every 15m. Flags shall not increase the hazard presented by the object they mark						
	6.2.2	**Mobile Objects**						
475	6.2.2.1	All mobile objects to be marked shall be coloured or display flags.						
476	6.2.2.3	Flags used to mark mobile objects shall be rectangular and not less						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		than 0.9m on a side.						
477	6.2.2.4	Flags used to mark mobile objects shall consist of a chequered pattern, each square having sides of not less than 0.3m. The colours of the pattern shall contrast with each other and with the background against which they will be seen. Orange and white, or alternately, red and white shall be used, except where such colours merge with the background.						
	6.3	**Lighting Of Objects**						
478	6.3.1.1	All fixed objects to be lighted shall be lighted in accordance with the standards contained within Transport Canada publication, TP 382E, Standard Obstruction Markings Manual.						
	6.3.2	**Mobile Objects**						
479	6.3.2.1	Mobile objects to be lighted shall display flashing yellow lights except for vehicles associated with an emergency which shall display flashing red, or flashing red and flashing yellow. The flash frequency shall be between 60 and 90 per minute. The effective intensity of the flash shall be not less than 40cd of red or yellow light.						
480	6.3.2.2	Objects with limited mobility such as aerobridges shall be marked with steady red low intensity obstruction lighting.						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		Visual Aids for Denoting Restricted Use Areas						
	7.1	**Closed Runways And Taxiways Or Parts Thereof**						
	7.1.1	**Closed Markings**						
481	7.1.1.1	A closed marking shall be displayed on a runway or taxiway, or portion thereof, which is permanently closed to the use of all aircraft.						
482	7.1.1.3	On a runway a closed marking shall be placed at each end of the runway, or portion thereof, declared closed, and additional markings shall be so placed that the maximum interval between markings does not exceed 300m. On a taxiway a closed marking shall be placed at least at each end of the taxiway or portion thereof closed.						
483	7.1.1.4	The closed marking shall be of the form and proportions as detailed in Figure 7–1, Illustration A, when displayed on a runway, and proportions as detailed in Figure 7–1, Illustration B when displayed on a taxiway. The marking shall be white when displayed on a runway and shall be yellow when displayed on a taxiway.						
484	7.1.1.5	When a runway or taxiway or portion thereof is permanently closed, all normal runway and taxiway markings shall be obliterated.						
	7.1.2	**Lighting**						
485	7.1.2.1	Lighting on a closed runway or taxiway or portion thereof shall not be operated, except as required for maintenance purposes.						
486	7.1.2.2	In addition to closed markings, when the runway or taxiway or portion thereof closed is intercepted by a usable runway or taxiway which is used at night, unserviceability lights shall be placed across the entrance to the closed area at intervals not exceeding 3m (see 7.4.2).						
	7.2	**Non-Load Bearing Surfaces**						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
	7.2.1	**Taxi Side Stripe Marking**						
487	7.2.1.1	Shoulders for taxiways, holding bays and aprons and other non load–bearing surfaces which cannot readily be distinguished from load-bearing surfaces and which, if used by aircraft, might result in damage to the aircraft shall have the boundary between such areas and the load–bearing surface marked by a taxi side stripe marking.						
	7.3	**Pre-Threshold Areas**						
	7.3.1	**Chevron Marking**						
488	7.3.1.1	When the surface before a threshold is paved and exceeds 60m in length and is not suitable for normal use by aircraft, the entire length before the threshold shall be marked with a chevron marking.						
489	7.3.1.3	Where chevron markings have been applied, the runway threshold shall be identified by a transverse stripe as detailed in 5.2.4.8 to 5.2.4.10.						
490	7.3.1.4	A chevron marking shall point in the direction of the runway and originate at the threshold as shown in Figure 7–2.						
491	7.3.1.5	The maximum interval between individual chevrons shall be 30m and the minimum interval shall be 15m.						
492	7.3.1.7	A chevron marking shall be yellow.						
	7.4	**Unserviceable Areas**						
	7.4.1	**Unserviceability Markers**						
493	7.4.1.1	Unserviceability markers shall be displayed wherever any portion of a taxiway, apron or holding bay is unfit for the movement of aircraft but it is still possible for aircraft to bypass the area safely.						
494	7.4.1.2	Unserviceability markers shall be placed at						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		intervals sufficiently close so as to delineate the unserviceable area.						
495	7.4.1.3	Unserviceability markers shall consist of conspicuous upstanding devices such as flags, cones, or marker boards.						
	7.4.2	**Unserviceability Lights**						
496	7.4.2.1	Unserviceability lights shall be displayed wherever any portion of a taxiway, apron or holding bay used at night is unfit for the movement of aircraft but it is still possible for aircraft to bypass the area safely.						
497	7.4.2.2	Un-serviceability lights shall be placed at intervals sufficiently close so as to delineate the unserviceable area.						
498	7.4.2.3	An un-serviceability light shall consist of a red fixed light. The red fixed light shall have an intensity sufficient to ensure conspicuity considering the intensity of the adjacent lights and the general level of illumination against which it would normally be viewed. In no case shall the intensity be less than 10cd of red light.						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		Equipment, Installations and Operations						
	8.1	**Electrical Systems**						
	8.1.1	**Secondary Power Supply**						
499	8.1.1.4	Requirements for a secondary power supply shall be met by either of the following: • independent public power, which is a source of power supplying the aerodrome service from a substation other than the normal substation through a transmission line following a route different from the normal power supply route and such that the possibility of a simultaneous failure of the normal and independent public power supplies is extremely remote; or • standby power unit(s), which are engine generators, batteries, etc., from which electric power can be obtained.						
500	8.1.1.7	For a precision approach runway, a secondary power supply capable of meeting the requirements of Table 8-1 for the appropriate category of precision approach runway shall be provided.						
501	8.1.1.8	For a runway intended to be used for take-off with an operating minimum below an RVR of the order of 1400ft (400m), a secondary power supply capable of meeting the relevant requirements of Table 8-1 shall be provided.						
502	8.1.1.9	Where secondary power is provided, the following aerodrome visual aids shall be provided with a secondary power source:						
	(a)	Precision approach category I lighting systems;						
	(b)	Precision approach category II and III lighting systems;						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
	(c)	Runway and taxiway centre line lights;						
	(d)	Touchdown zone lights;						
	(e)	Runway edge lights; and						
	(f)	apron lighting – those luminaires that provide illumination to the apron areas over which passengers will walk from the aircraft to the terminal except that it is not required when deplaning is by means of passenger loading bridges or passenger transport vehicles.						
	8.1.2	**Circuit Design**						
503	8.1.2.1	For a precision approach runway and a take-off runway intended for use in runway visual range conditions less than a value of the order of 2600ft (800m), the electrical circuits for the power supply, lighting and control of the lighting systems included in Table 8-1 shall be so designed that the failure of one circuit will not leave the pilot without visual guidance or will not result in a misleading or inadequate pattern.						
504	8.1.2.2	Where a runway forming part of a standard taxi-route is provided with runway lighting and taxiway lighting, the lighting systems shall be interlocked to preclude the possibility of simultaneous operation of both forms of lighting.						
505	8.1.2.3	Where the secondary power supply of an aerodrome is provided by the use of duplicate feeders, such supplies shall be physically and electrically separate so as to ensure the required level of availability and independence.						
	8.3	**Monitoring**						
	8.3.1	**Visual Aids**						
506	8.3.1.2	APAPI installations shall be inspected on a daily basis to detect an out of level condition or, alternately, shall be fitted with an automatic shut-off switch which will extinguish both units in						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		the event of a misalignment on one or both units.						
507	8.3.1.3	Where lighting systems are used for aircraft control purposes, such systems shall be monitored automatically so as to provide an immediate indication of any fault which may affect the control functions. This information shall be automatically relayed to the air traffic service unit.						
	8.5	**Operation And Control of Aerodrome Lighting Systems**						
	8.5.1	**General**						
508	8.5.1.1	Except for aerodromes utilizing ARCAL as specified in sub-section 8.5.2, aerodrome lighting shall be operated as specified in 8.5.1.2 to 8.5.1.18, or as requested by the pilot, or as required to facilitate and safeguard aerodrome traffic.						
509	8.5.1.2	Where aerodrome light systems are to be operated continuously during the night, this shall be considered to be between evening and morning civil twilight.						
510	8.5.1.4	Where provided, aerodrome flight manoeuvring area hazard lights shall operate continuously at night.						
511	8.5.1.5	Where aerodrome lighting systems are controlled manually, the light intensity settings shall be selected in accordance with Table 8-2.						
512	8.5.1.6	Approach lighting shall be operated at night or in daytime IMC conditions for an arriving aircraft;						
	(a)	for not less than 5 minutes prior to the ETA of the aircraft; and						
	(b)	until the aircraft has landed.						
513	8.5.1.7	Runway identification lights shall be operated for an arriving aircraft when;						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
	(a)	the visibility is 5 miles or less; or						
	(b)	the ceiling is 1000ft or less.						
514	8.5.1.8	Runway edge, runway centreline and touchdown zone lighting shall be operated at night or in daytime IMC condition for an arriving aircraft:						
	(a)	for not less than 5 minutes prior to the ETA of the aircraft; and						
	(b)	until the aircraft has taxied clear of the runway.						
515	8.5.1.9	Runway edge and runway centreline lighting shall be operated at night or in daytime IMC condition for a departing aircraft:						
	(a)	before the aircraft enters the runway; and						
	(b)	until at least 3 minutes after the aircraft has departed.						
516	8.5.1.10	Visual approach slope indicator systems shall be operated when the runway is in use except that the system shall not be operated when:						
	(a)	an aircraft is conducting a precision approach; and						
	(b)	weather conditions are less than a ceiling of 500ft or the visibility is less than 1 mile.						
517	8.5.1.11	Taxiway edge, taxiway centre line lights and apron edge lights shall be operated such that a continuous indication of the taxi route is presented.						
518	8.5.1.12	Stop bars shall be operated in runway visual range conditions of a value of 2600ft (800m) or less whenever a vehicle or aircraft is operating on the manoeuvring area.						
519	8.5.1.13	Runway guard lights shall be operated in runway visual range conditions of a value of 2600ft (800m) or less whenever a vehicle or aircraft is operating on the manoeuvring area.						
520	8.5.1.15	Obstruction lights shall be operated:						
	(a)	continuously at night; and						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
	(b)	during the day when the visibility is 3 miles or less.						
521	8.5.1.16	Road hold position lights shall be operated in runway visual range conditions of a value of 2600ft (800m) or less whenever a vehicle is operating on the manoeuvring area.						
522	8.5.1.18	Where a light system has been provided with intensity control in accordance with 5.3.1.11, the selection of intensity shall be suitable for prevailing conditions and be in accordance with Table 8-2 except that any selection may be made at the request of a pilot using the visual aid.						
	8.5.2	Aircraft Radio Control Of Aerodrome Lighting (ARCAL)						
523	8.5.2.2	Aerodrome flight manoeuvring area hazard lights shall not be operated by an ARCAL system.						
524	8.5.2.3	An ARCAL system shall operate 24 hours per day except that at aerodromes where air traffic services are provided by a control tower, flight service station or community airport radio station, the system shall not operate during the hours when the services are provided.						
525	8.5.2.4	Where it is intended that an ARCAL system is to operate a precision approach category I lighting system and associated medium or high intensity runway lighting, the ARCAL system shall be capable of selection of at least three intensity settings (eg. ARCAL type K).						
526	8.5.2.5	At aerodromes where air traffic services are provided the ARCAL system shall operate on the published Mandatory Frequency (MF).						
527	8.5.2.7	The radio receiver equipment shall control the aerodrome visual aids by decoding a series of radio transmissions generated by keying of the aircraft transmitter microphone a specified						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		number of times within a 5 second period.						
528	8.5.2.8	Except for runway identification lights and the sequenced flashing lights on precision approach category I light systems, ARCAL systems shall only be capable of automatic shut off not less than 15 minutes after being activated. The 15 minute time period shall recommence every time an operation or brightness selection is made.						
529	8.5.2.9	At aerodromes where there is no intensity control of aerodrome lighting, keying the microphone 5 times shall activate the ground system.						
530	8.5.2.10	The ARCAL selection of light intensity shall be in accordance with Table 8-3.						
	8.6	**Siting And Construction Of Installations On Operational Areas**						
	8.6.1	**General**						
531	8.6.1.1	Unless its function requires it to be there for air navigation purposes, no equipment or installation shall be:						
	(a)	on a runway strip, a runway end safety area, a taxiway strip or within the distances specified in Table 3-1, column 4, if it would endanger an aircraft; or						
	(b)	on a clearway if it would endanger an aircraft in the air.						
532	8.6.1.3	Any equipment or installation required for air navigation purposes which must be located on or near a strip of a precision approach runway and which:						
	(a)	is situated on that portion of the strip within: i) 60m of the runway centre line where the code number is 3 or 4; or ii) 45m of the runway centre line where the						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		code number is 1 or 2; or						
	(b)	penetrates the take-off/approach surface or the inner transitional surface;						
		shall be of minimum practical mass and height, be frangible, and sited in such a manner as to reduce the hazard to aircraft to a minimum.						
	8.7	**Aerodrome Vehicle Operation**						
	8.7.1	**General**						
533	8.7.1.1	A vehicle shall be operated:						
	(a)	on the manoeuvring area only as authorized by the air traffic services unit, airport operator or designate; and						
	(b)	on the apron only as authorized by the appropriate designated authority.						
534	8.7.1.2	At aerodromes where air traffic services, an authorized approach unicom, or community airport radio station (CARS), are provided, vehicles operating on the manoeuvring area shall be equipped with suitable two way radio communication or be accompanied by a vehicle or person with appropriate radio communication equipment.						
535	8.7.1.3	The driver of a vehicle on the movement area shall comply with all mandatory instructions conveyed by marking and signs unless:						
	(a)	otherwise authorized by the air traffic services unit, airport operator or designate when on the manoeuvring area;						
	(b)	otherwise authorized by the appropriate designated authority when on the apron; or						
	(c)	giving way to aircraft.						
536	8.7.1.4	The driver of a vehicle on the movement area shall comply with all mandatory instructions conveyed by lights.						
537	8.7.1.5	The driver of a vehicle on the movement area						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		shall be appropriately trained for the tasks to be performed and shall comply with the instructions issued by:						
	(a)	the air traffic services unit, airport operator or designate when on the manoeuvring area; and						
	(b)	the appropriate designated authority, when on the apron.						
538	8.7.1.6	Where air traffic services, an authorized approach unicom, or community airport radio station (CARS), are provided, the driver of a radio equipped vehicle shall establish satisfactory two-way radio communication with the unit on the mandatory frequency or air traffic frequency, as appropriate, before entering the manoeuvring area.						
539	8.7.1.7	Where the services specified in 8.7.1.6 are not provided, or during any period that the services specified in 8.7.1.6 are not available (eg. less than 24 hour operation), the driver of a radio equipped vehicle shall;						
	(a)	prior to entering or changing location on the manoeuvring area broadcast position and intentions on the mandatory frequency or air traffic frequency, as appropriate;						
	(b)	when on the manoeuvring area advise pilots of their position and intentions;						
	(c)	when requested, provide runway condition reports and the location of other known ground traffic on the manoeuvring area; and						
	(d)	give way to aircraft at all times.						
540	8.7.1.8	The driver of a radio equipped vehicle shall maintain a continuous listening watch on the appropriate frequency when on the movement area.						
	8.8	**Surface Movement Guidance And Control**						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		Systems						
	8.8.1	**General**						
541	8.8.1.1	A surface movement guidance and control system shall be provided at an aerodrome intended to be used in runway visual range conditions less than a value of the order of 1400ft (400m).						
	8.8.2	**Visual Aids**						
542	8.8.2.4	Where a surface movement guidance and control system is provided by selective switching of stop bars and taxiway centre line lights, the following requirements shall be met:						
	(a)	taxiway routes which are indicated by illuminated taxiway centre line lights shall be capable of being terminated by an illuminated stop bar;						
	(b)	the control circuits shall be so arranged that when a stop bar located in the direction of movement is illuminated, the appropriate section of taxiway centre line lights beyond it is suppressed; and						
	(c)	the taxiway centre line lights are activated in the intended direction of movement of the aircraft when the stop bar (if any) is suppressed.						
	8.9	**Simultaneous Intersecting Runway Operations**						
	8.9.1	**General**						
543	8.9.1.1	Where SIRO procedures are authorized, the following shall be provided on the intersected runway where aircraft will hold short of, and prior to, an intersecting runway:						
	(a)	a taxi-hold position marking as described in 5.2.9 to indicate the hold short position; and						
	(b)	mandatory instruction signs as described in 5.4.2 on each side of, and adjacent to, the taxi-holding position marking.						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
544	8.9.1.2	The taxi-holding position marking specified in 8.9.1.1(a) shall be 90° to the intersected runway centre line and located at a distance not less than 60m from the nearest edge of the intersecting runway.						
545	8.9.1.3	Where SIRO operations are authorized at night, the signs required in 8.9.1.1(b) shall be illuminated in accordance with 5.4.1.7 and 5.4.1.10.						
546	8.9.1.5	Stop bars installed in accordance with 8.9.1.4 shall be capable of being switched on or off by air traffic services.						
547	8.9.1.6	Stop bars installed in accordance with 8.9.1.4 shall not be illuminated during periods when the full length of the runway is available.						
548	8.9.1.7	When SIRO procedures are authorized, the reduced landing distance available (LDA) on the intersected runway, shall be determined as the distance between the threshold or displaced threshold as applicable, and the taxi-holding position marking.						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		Emergency and Other Services						
	9.1	**Aerodrome Emergency Planning**						
		(Refer to CAR)						
	9.3	**Disabled Aircraft Removal**						
	9.3.2	**Removal Of Disabled Aircraft From Operational Areas**						
549	9.3.2.1	Where a disabled aircraft is on a part of an aerodrome that interferes with the movement of other aircraft, the disabled aircraft shall be moved as quickly as is consistent with the safety of life and property.						
	9.4	**Maintenance**						
	9.4.1	**General**						
550	9.4.1.1	A maintenance programme including preventive maintenance where appropriate shall be established at an aerodrome to maintain facilities in a condition which does not impair the safety, regularity or efficiency of air navigation.						
	9.4.2	**Pavements**						
551	9.4.2.3	For a runway serving turbojet aeroplanes, measurements of the friction characteristics of a runway surface shall be made periodically with a continuous friction measuring device using self-wetting features.						
552	9.4.2.4	Corrective maintenance action shall be taken when:						
	(a)	the average coefficient of friction for the entire runway is below 0.50; or						
	(b)	any areas of a runway surface that are 100 metres or greater in length have an average coefficient of friction less than 0.30.						
553	9.4.2.5	Corrective maintenance action shall be						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		programmed when:						
	(a)	the average coefficient of friction for the entire runway is below 0.60; or						
	(b)	any areas of a runway surface that are 100 metres or greater in length have an average coefficient of friction less than 0.50.						
554	9.4.2.15	The longitudinal slope of the temporary ramp shall not exceed 1.0 per cent measured with reference to the existing runway surface or previous overlay course.						
555	9.4.2.18	Before a runway being overlaid is returned to a temporary operational status, a runway centre line marking conforming to the specifications in Section 5.2.3 shall be provided. Additionally, the location of any temporary threshold shall be identified by a 3.6m wide transverse stripe.						
	9.4.3	**Visual Aids**						
556	9.4.3.1	A system of preventive maintenance of visual aids shall be employed to ensure lighting and marking system reliability.						
	9.6	**Apron Management Service**						
	9.6.1	**General**						
557	9.6.1.3	An apron management service shall be provided with radiotelephony communications facilities.						
558	9.6.1.4	Where low visibility procedures are in effect, persons and vehicles operating on an apron shall be restricted to the essential minimum.						
559	9.6.1.5	An emergency vehicle responding to an emergency shall be given priority over all other surface movement traffic.						
560	9.6.1.6	A vehicle operating on an apron shall:						
	(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						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		local regulations.						
561	9.6.1.7	An aircraft stand shall be visually monitored to ensure that the recommended clearances distances are provided to an aircraft using the stand.						
	9.7	**Ground Servicing Of Aircraft**						
	9.7.1	**General**						
562	9.7.1.1	Fire extinguishing equipment suitable for at least initial intervention in the event of a fuel fire and personnel trained in its use shall be readily available during the ground servicing of an aircraft, and there shall be a means of quickly summoning the emergency response service in the event of a fire or major fuel spill.						
563	9.7.1.2	When aircraft refueling operations take place while passengers are embarking, on board or disembarking, ground equipment shall be positioned so as to allow:						
	(a)	the use of a sufficient number of exits for expeditious evacuation; and						
	(b)	a ready escape route from each of the exits to be used in an emergency.						

ANNEX "F"

Safety Management System (SMS)

Airport Wildlife Planning and Management Checklist

Name of Airport	CYYB North Bay Jack Garland Airport
Airport Manager/AE	Mr. Jack Santerre
SMS Manager	Mr. Dan Booth

Date of Audit	Month DD, YYYY

Lead Auditor	mr./Mrs. First Name, Last Name
Audit Team	Company Name
Address	Street No./Name
	City, Province
	Postal Code
	Phone Number

Sections Covered

302.302	302.307	322.308			
302.303	302.308				
302.304	322.305				
302.305	322.306				
302.306	322.307				

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		Airport Wildlife Planning and Management						
	302.302 (1)	Subject to subsection (2), this Division applies to airports						
	(a)	that, within the preceding calendar year, had 2 800 movements of commercial passenger-carrying aircraft operating under Subpart 4 or 5 of Part VII;						
	(b)	that are located within a built-up area;						
	(c)	that have a waste disposal facility within 15 km of the geometric centre of the airport;						
	(d)	that had an incident where a turbine-powered aircraft collided with wildlife other than a bird and suffered damage, collided with more than one bird or ingested a bird through an engine; or						
	(e)	where the presence of wildlife hazards, including those referred to in section 322.302 of the *Airport Standards—Airport Wildlife Planning and Management*, has been observed in an airport flight pattern or movement area.						
		(2) Section 302.303 applies to all airports.						
		Wildlife Strikes						
	302.303 (1)	The operator of an airport shall keep records of all wildlife strikes at the airport, including those reported by						
1	(a)	pilots;						
2	(b)	ground personnel; and						
3	(c)	aircraft maintenance personnel when they identify damage to an aircraft as having been caused by a wildlife strike.						
4	302.303 (2)	Wildlife remains that are found within 200 feet of a runway or an airside pavement area are presumed to be a wildlife strike unless another cause of death is identified.						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
	302.303 (3)	The operator of the airport shall submit a written and dated report to the Minister						
5	(a)	for each wildlife strike, within 30 days of its occurrence; or						
6	(b)	for all wildlife strikes that occur in a calendar year, before March 1 of the following calendar year.						
		Risk Analysis						
7	302.304 (1)	The operator of an airport shall collect information in respect of the requirements set out in section 322.304 of the *Airport Standards—Airport Wildlife Planning and Management.*						
8	302.304 (2)	The operator of the airport shall, after consultation with a representative sample of the operators in respect of an aircraft, air operators and private operators that use the airport, conduct a risk analysis that evaluates the collected information.						
	302.304 (3)	The risk analysis shall be in writing and include						
9	(a)	an analysis of the risks associated with the wildlife hazards, including those referred to in section 322.302 of the *Airport Standards—Airport Wildlife Planning and Management;* and						
10	(b)	the measures that are necessary to manage or remove the hazards or to manage or mitigate the risks.						
11	302.304 (4)	The operator of the airport shall, at the request of the Minister, make the risk analysis available for inspection.						
		General						
12	302.305 (1)	The operator of an airport shall develop an airport wildlife management plan in accordance with section 322.305 of the *Airport Standards—Airport Wildlife Planning and Management.*						
	322.305 (1)	Pursuant to section 302.305 of the *Canadian*						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		Aviation Regulations, the operator shall, in developing an airport wildlife management plan, use for guidance the following documents, as appropriate:						
13	(a)	*Land Use In The Vicinity of Airports* (TP1247),						
14	(b)	*Wildlife Control Procedures Manual* (TP11500),						
15	(c)	*Evaluation of the Efficacy of Various Deer Exclusion Devices and Deterrent Techniques for use at Airports*,						
16	(d)	*Sharing the Skies-An Aviation Industry Guide to the Management of Wildlife Hazards* (TP 13549), and						
17	(e)	*Evaluation of the Efficacy of Products and Techniques for Airport Bird Control*; and						
18	322.305 (2)	Pursuant to subsection 302.305 of the *Canadian Aviation Regulations*, the operator shall submit the airport wildlife management plan in the form of a manual and in duplicate to the Minister.						
19	302.305 (2)	The operator of the airport shall submit the plan to the Minister, on request by the Minister, in accordance with the requirements set out in subsection 322.305(2) of the *Airport Standards—Airport Wildlife Planning and Management.*						
20	302.305 (3)	The operator of the airport shall keep a copy of the plan at the airport and it shall, on request by the Minister, be made available to the Minister.						
21	302.305 (4)	The operator of the airport shall implement the plan.						
22	302.305 (5)	The operator of the airport shall review the plan every two years.						
	302.305 (6)	The operator of the airport shall amend the plan and submit the amended plan to the Minister within 30 days of the amendment if						
23	(a)	the amendment is necessary as a result of the review conducted under subsection (5);						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
24	(b)	an incident has occurred in which a turbine-powered aircraft collided with wildlife other than a bird and suffered damage, collided with more than one bird or ingested a bird through an engine;						
25	(c)	a variation in the presence of wildlife hazards, including those referred to in section 322.302 of the *Airport Standards—Airport Wildlife Planning and Management*, has been observed in an airport flight pattern or movement area; or						
26	(d)	there has been a change						
		(i) in the wildlife management procedures or in the methods used to manage or mitigate wildlife hazards,						
		(ii) in the types of aircraft at the airport, or						
		(iii) in the types of aircraft operations at the airport.						
		Content						
	302.306	An airport wildlife management plan shall						
27	(a)	identify and describe the risks associated with all wildlife hazards, including those referred to in section 322.302 of the *Airport Standards—Airport Wildlife Planning and Management*, at or near the airport that might affect the safe operation of aircraft, including the proximity of any waste disposal facility or migration route affecting wildlife populations near the airport;						
28	(b)	specify the particular measures that are used by the operator of the airport to manage or mitigate the risks;						
29	(c)	identify and describe the actions that are used by the operator of the airport to satisfy the requirements set out in section 322.306 of the *Airport Standards—Airport Wildlife Planning and*						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		Management in respect of firearm certificates and permits, wildlife control permits, wildlife strikes, wildlife management logs, and evaluations of habitats, land uses and food sources at or near the airport;						
30	(d)	set out a policy for the management of airport habitats that might attract wildlife;						
31	(e)	set out a policy that prohibits the feeding of wildlife and the exposure of food wastes;						
32	(f)	set out a procedure to ensure that all endangered or protected wildlife at the airport are inventoried;						
33	(g)	identify the role of the personnel and agencies involved in wildlife management issues and provide the contact numbers for each; and						
34	(h)	provide details of any wildlife hazard awareness program.						
	322.306	Pursuant to paragraph 302.306(c) of the *Canadian Aviation Regulations*, the requirements that shall be contained in an airport wildlife management plan are:						
35	(a)	the acquisition of the appropriate firearm certificates and permits;						
36	(b)	the acquisition of wildlife control permits from federal, provincial, and local agencies;						
37	(c)	the identification of the species of any wildlife struck by aircraft; species; and						
38	(d)	the regular maintenance of wildlife management logs indicating management activities, environmental changes; wildlife interactions and animal remains identified by						
39	(e)	the evaluation of habitats, land uses and food sources, located at or near the airport, that might attract wildlife which may affect the safe						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		operation of the airport including, if needed, arrangements for assessments, studies and monitoring.						
		Training						
	302.307 (1)	The operator of an airport shall						
40	(a)	provide training for any person who has duties in respect of the airport wildlife management plan at least once every five years regarding their assigned duties and the matters set out in section 322.307 of the *Airport Standards—Airport Wildlife Planning and Management;* and						
41	(b)	ensure that any person who has duties in respect of the airport wildlife management plan holds any required firearm permit.						
42	302.307 (2)	the operator of the airport shall maintain a record of each person's training for a period of five years and provide the Minister with a copy of any record, if requested.						
	322.307	Pursuant to section 302.307 of the *Canadian Aviation Regulations*, the following constitutes the matters in which the operator shall provide training to persons having duties in respect of the airport wildlife management plan:						
43	(a)	nature and extent of the wildlife management problem;						
44	(b)	regulations, standards and guidance material related to airport wildlife management programs;						
45	(c)	bird ecology and biology;						
46	(d)	bird identification, including the use of field guides;						
47	(e)	mammal ecology and biology;						
48	(f)	mammal identification, including the use of field guides;						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
49	(g)	any matter covered in the *Wildlife Control Procedures Manual* (TP 11500);						
50	(h)	any matter covered in the *Sharing the Skies-An Aviation Industry Guide to the Management of Wildlife Hazards document* (TP 13549);						
51	(i)	rare and endangered species and species of special concern, including related regulations and policies;						
52	(j)	habitat management;						
53	(k)	off-airport land use issues;						
54	(l)	active wildlife control measures;						
55	(m)	wildlife removal techniques;						
56	(n)	firearm safety;						
57	(o)	wildlife management planning; and						
58	(p)	development of awareness programs.						
		Communication and Alerting procedure						
59	302.308	The operator of an airport shall establish a communication and alerting procedure for wildlife management personnel in accordance with section 322.308 of the *Airport Standards—Airport Wildlife Planning and Management* to alert pilots as soon as possible of the wildlife hazards at the airport and the risks associated with those hazards.						
	322.308	Pursuant to section 302.308 of the *Canadian Aviation Regulations*, the communication and alerting procedure to be used in order to alert pilots as soon as possible of the wildlife hazards at the airport and associated risks may include:						
60	(a)	where the airport has air traffic services (ATS), bilateral radio communications or broadcast of airport advisories;						
61	(b)	if an immediate alert is required, direct radio contact can be used through such means as a						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		community airport radio station or universal communications (UNICOM); or						
62	(c)	publication of a NOTAM in respect of the airport, whether in combination or not with the procedure referred to in paragraph (a) or (b).						

ANNEX "G"

Safety Management System (SMS)

Winter Maintenance Checklist

Name of Airport	CYYB North Bay Jack Garland Airport
Airport Manager	Mr. Jack Santerre
SMS Manager	Mr. Dan Booth

Date of Audit	Month DD, YYYY

Lead Auditor	Mr./Mrs. First Name, Last Name
Audit Team	Company Name
Address	Street No./Name
	City, Province
	Postal Code
	Phone Number

Sections Covered

302.402	302.407	322.403	322.408		
302.403	302.408	322.404	322.409		
302.404	302.409	322.405			
302.405	302.410	322.406			
302.406	302.411	322.407			

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		Airport Winter Maintenance and Planning						
	302.402 (1)	Sections 302.403 to 302.410 apply in respect of airports where aircraft are operated in an air transport service under Subpart 4 or 5 of Part VII.						
	302.402 (2)	Sections 302.403 to 302.410 do not apply in respect of an airport that is certified						
	(a)	as a result of its location in a built-up area; or						
	(b)	in the public interest.						
	302.402 (3)	Despite subsection (2), sections 302.403 to 302.410 apply in respect of airports referred to in subsection (2) where aircraft are operated in an air transport service under Subpart 4 or 5 of Part VII.						
		Airport Winter Maintenance Plan						
1	302.403 (1)	The operator of an airport shall, after consultation with a representative sample of the air operators that use the airport, develop and maintain an airport winter maintenance plan.						
	302.403 (2)	The operator of the airport shall						
2	(a)	keep at the airport, in the format of a manual, a copy of an updated version of its airport winter maintenance plan; and						
3	(b)	make a copy of it available to the Minister on request by the Minister.						
	302.403 (3)	The operator of the airport shall						
4	(a)	review the airport winter maintenance plan every year;						
5	(b)	amend it as necessary, after consultation with a representative sample of the air operators that use the airport; and						
6	(c)	submit any amendments made under paragraph (*b*) to the Minister, on request by the Minister.						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
	302.404	In an airport winter maintenance plan, the operator of an airport shall						
7	(a)	identify priority 1 areas, priority 2 areas and priority 3 areas and describe the winter maintenance operations for those areas in accordance with paragraphs 322.404(1)(*a*) to (*c*) of the *Airport Standards — Airport Winter Maintenance and Planning*;						
8	(b)	set out communication procedures in accordance with subsection 322.404(3) of the *Airport Standards — Airport Winter Maintenance and Planning*;						
9	(c)	set out procedures for the publication of a NOTAM in the event of winter conditions that might be hazardous to aircraft operations or affect the use of movement areas and facilities used to provide services relating to aeronautics;						
10	(d)	set out safety procedures for controlling the flow of ground vehicles during winter maintenance operations in order to ensure the safety of persons, other vehicles and aircraft;						
11	(e)	set out procedures to minimize the risk of ice control chemicals, other than the ice control chemicals specified in subsection 322.406(1) of the *Airport Standards — Airport Winter Maintenance and Planning*, from being tracked onto airside;						
12	(f)	describe the lines of authority and organizational relationships with respect to winter maintenance, including contact names and telephone numbers;						
13	(g)	describe how actions undertaken as part of winter maintenance will be coordinated;						
14	(h)	describe the arrangements for snow clearance;						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
15	(i)	describe the process for the review and amendment of the plan;						
16	(j)	describe the administrative procedure for the distribution of the plan and amendments to it; and						
17	(k)	specify and include the signed copies of any agreements between the operator of the airport and the aeronautical information service provider at the airport respecting the provision of winter maintenance services for navigation aids.						
		Clearance of Priority Areas						
18	302.405	The operator of an airport shall keep priority 1 areas, priority 2 areas and priority 3 areas clear in accordance with its airport winter maintenance plan.						
		Ice Control Chemicals and Sand						
	302.406 (1)	The operator of an airport shall, on movement areas, use only						
19	(a)	the ice control chemicals specified in subsection 322.406(1) of the *Airport Standards — Airport Winter Maintenance and Planning*; and						
20	(b)	sand that meets the requirements specified in subsection 322.406(2) of the *Airport Standards — Airport Winter Maintenance and Planning*.						
21	302.406 (2)	Except in the case of gravel runways, the operator of the airport shall remove sand rapidly and completely from movement areas when it is no longer required.						
		Friction Measurement						
22	302.407 (1)	Subject to subsections (2) and (3), the operator of an airport shall conduct CRFI measurements and provide a CRFI in accordance with its airport winter maintenance plan and section 322.407 of						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		the *Airport Standards — Airport Winter Maintenance and Planning*.						
23	302.407 (2)	The operator of an airport is not required to conduct CRFI measurements and provide a CRFI at an airport where aircraft are operated in an air transport service under Subpart 4 of Part VII.						
	302.407 (3)	The operator of an airport is not required to conduct CRFI measurements and provide a CRFI at an airport						
24	(a)	where aircraft are operated in an air transport service under Subpart 5 of Part VII;						
25	(b)	where all the runways are gravel; and						
26	(c)	that does not receive turbo-jet-powered aeroplanes.						
	302.407 (4)	The operator of an airport shall use only friction measurement equipment that meets the requirements specified in section 322.407 of the *Airport Standards — Airport Winter Maintenance and Planning* with respect to						
27	(a)	vehicles;						
28	(b)	the use of the equipment; and						
29	(c)	maintenance.						
		Movement Area Inspections and Reports						
	302.408 (1)	The operator of an airport shall						
30	(a)	conduct an inspection of movement areas and prepare an AMSCR in accordance with section 322.408 of the *Airport Standards — Airport Winter Maintenance and Planning*;						
31	(b)	include a CRFI in the AMSCR if the operator is required to conduct CRFI measurements and provide a CRFI under section 302.407;						
32	(c)	forward the AMSCR to the air navigation services provider in a manner that will permit its prompt						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		dissemination to aircraft operators;						
33	(d)	provide airport information about the availability of CRFIs and AMSCRs for publication in the *Canada Flight Supplement*; and						
34	(e)	include in the airport operations manual airport information about the availability of CRFIs and AMSCRs.						
35	302.408 (2)	Despite paragraph (1)(*b*), the operator of the airport shall not include in the AMSCR friction readings obtained for a runway with a decelerometer if any of the following runway surface conditions are present:						
	(a)	it is wet with water;						
	(b)	it is damp;						
	(c)	there is slush; or						
	(d)	there is loose snow that exceeds 2.5 cm (1 inch) in depth.						
		Training						
36	302.409 (1)	Before assigning duties in respect of its airport winter maintenance plan to a person, the operator of an airport shall provide the person with training on their duties and the matters set out in subsection 322.409(1) of the *Airport Standards — Airport Winter Maintenance and Planning*.						
37	302.409 (2)	The operator of the airport shall not assign duties in respect of its airport winter maintenance plan to a person unless the person successfully completes that training.						
38	302.409 (3)	The operator of the airport shall not assign supervisory duties in respect of its airport winter maintenance plan to a person unless the person has received training on their supervisory duties						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		and is knowledgeable about the entire airport winter maintenance plan.						
	302.409 (4)	Before winter maintenance operations start each winter, the operator of the airport						
39	(a)	shall provide persons who will be assigned duties in respect of its airport winter maintenance plan with training on any amendments to the plan that have been made since the previous winter;						
40	(b)	shall review the competency of persons who will be assigned duties in respect of its airport winter maintenance plan; and						
41	(c)	shall not assign duties in respect of its airport winter maintenance plan to any person who requires remedial training on any of their duties or on any of the matters set out in subsection 322.409(1) of the *Airport Standards — Airport Winter Maintenance and Planning* until the person successfully completes the remedial training.						
	302.409 (5)	Training provided under this section shall						
42	(a)	be competency-based with an emphasis on performance; and						
43	(b)	include written or practical examinations.						
	302.409 (6)	The operator of the airport may issue certificates to persons who successfully complete any training under this section if the certificates include the information set out in subsection 322.409(2) of the *Airport Standards — Airport Winter Maintenance and Planning*.						
44	302.409 (7)	The operator of the airport shall assign training duties under this section only to persons who are qualified based on an assessment by the operator of						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
	(a)	the person's experience;						
	(b)	the person's formal technical training; or						
	(c)	a combination of the person's experience and formal technical training.						
		Training Records						
	302.410 (1)	The operator of an airport shall						
45	(a)	keep and maintain a training record for each person who receives any training under section 302.409;						
46	(b)	preserve each record for five years after the day on which the training was received; and						
47	(c)	submit a copy of a record to the Minister, on request by the Minister.						
48	302.410 (2)	A training record shall contain the confirmations and the annotation set out in section 322.410 of the *Airport Standards — Airport Winter Maintenance and Planning*.						
		Alternative Winter Maintenance Measures						
	302.411	After consultation with a representative sample of the air operators that use the airport, the operator of an airport referred to in subsection 302.402(2) shall						
49	(a)	establish the level and availability of winter maintenance to be provided;						
50	(b)	provide, for publication in the *Canada Flight Supplement*, information about the level and availability of winter maintenance to be provided to air navigation services; and						
51	(c)	include in the airport operations manual information about the level and availability of winter maintenance to be provided.						
		Winter Maintenance and Planning Standards						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		General Requirements						
	322.403 (1)	The following priority areas shall be established:						
52	(a)	Priority I Area - a primary runway system that shall be cleared throughout a storm to maintain operational capability of the airport.						
53	(b)	Priority II Area - secondary airside areas that shall be cleared as soon as practicable, in order to provide the availability of additional runway(s) should wind conditions change or for other operational requirements.						
54	(c)	Priority III Area - those remaining airside areas that shall be cleared after a storm in order to return the airport to full operational use.						
	322.403 (2)	The plan shall include a description of the winter maintenance of the Priority Areas as follows:						
55	(a)	Priority I Area - Primary Runway System winter maintenance shall include the following: (i) the full length of the primary runway; (ii) the width of the primary runway required to support the operational requirement of the airport movements during the storm; (iii) taxiways, including entrance and exit access areas, to accommodate traffic to and from the primary runway; (iv) deicing pads or areas, including entrance and exit access to accommodate to the primary runway and from the apron; (v) apron areas necessary for aircraft, passengers and the cargo requirements; (vi) access roads, groundside and airside, to accommodate emergency vehicles to the runway, taxiways and apron identified above;						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		(vii) visibility of lights installed as visual aids associated with the primary runway; (viii) visibility and legibility of mandatory signs on taxiways(s) in (iii); and (ix) the approach aids, including glide path site.						
56	(b)	Priority II Areas - Secondary Runway System winter maintenance shall include the following: (i) the full length of at least one secondary runway; (ii) the width of the secondary runway(s) required to support the operational requirement of the airport movements during the storm; (iii) taxiway(s), including entrance and exit access areas, to accommodate traffic to and from the secondary runway(s); (iv) visibility of lights installed as visual aids associated with the secondary runway(s) and taxiways; and (v) visibility and legibility of mandatory signs on the additional taxiways(s) in (iii).						
57	(c)	Priority III Areas - as soon as ground conditions permit, post-storm winter maintenance shall include the following,: (i) Pre- threshold Areas (A) Width - the width of the runway plus the profile outlined in Diagram I; (B) Length - the distance from the end of						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		the runway shall be in accordance with Diagram II and as follows: · 30m for non-instrument runways less than 800m in length; and · 60m for all other runways; (C) Slope - Snow, ice or any other object shall not project above a plane having an upward slope in accordance with Diagram II and as follows: Runway length (m) Slope (%) less than 1200 2.0 1200 to 1799 1.5 1800 and up 1.25 (ii) Remaining Areas (A) runway and taxiway shoulder areas in accordance with Diagram I; (B) apron shoulder areas; (C) airside service roads including access roads to approaches, emergency vehicle and personnel gates; (D) other aircraft movement areas identified in the airport's Winter Maintenance Plan; and (E) remaining airside signage and lights						
	322.403 (3)	The plan shall						
58	(a)	identify all parties involved in winter maintenance operations at the airport with telephone numbers or other contact information;						
59	(b)	describe lines of authority and organizational relationships including how all actions will be coordinated for all participating parties during winter maintenance operations;						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
60	(c)	where applicable, the plan shall include signed copies of any written agreements between the airport operator and the navigational aid provider for the provision of winter maintenance services by the airport operator for navigational aids under that provider's jurisdiction;						
61	(d)	be reviewed, on an annual basis, and updated, if necessary, by the airport operator, after consultation with the air operators that regularly use the airport; and						
62	(e)	specify the administrative procedures governing the distribution, the amendment of the plan and the associated record keeping.						
		Approval of Winter Maintenance Plan						
63	322.404	Amendments, names or telephone numbers, or other contact information required in 302.403(b), need not be approved prior to implementation, but shall be submitted to the Minister within fourteen (14) days of drafting of the amendment as information.						
		Frequency of Movement Area Inspections and Reports						
64	322.405 (1)	Daily inspections shall be conducted at the commencement of, and at the end of, Aircraft Movement Surface Condition Reporting (AMSCR) hours published in the Canada Flight Supplement (CFS).						
	322.405 (2)	When winter contaminants are present on the movement areas, AMSCR shall be made available during the published AMSCR hours as follows:						
65	(a)	at the commencement of published AMSCR hours;						
66	(b)	a minimum of once every eight hours thereafter;						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
67	(c)	if a significant change in the runway surface condition occurs;						
68	(d)	following every accident or incident in which winter conditions may have been a factor; and						
69	(e)	whenever the cleared width falls below full width.						
	322.405 (3)	Airport information concerning the availability of inspections and reporting of AMSCR and CRFI shall be published in the CFS and the Airport Operations Manual (AOM) as follows:						
70	(a)	the hours during which AMSCR and CRFI are available;						
71	(b)	arrangements for AMSCR and CRFI outside those hours shall be through the airport operator and shall be annotated as O/T (other times); and						
72	(c)	prior notice requirements for (b) shall also be published.						
		Chemicals and Sand						
	322.406 (1)	The airport operator shall use the following ice-control chemicals on the movement areas :						
73	(a)	those which comply with the most current applicable SAE Aerospace Materials Specifications; or						
74	(b)	Urea.						
	322.406 (2)	Sand shall meet the following requirements:						
75	(a)	abrasive material for airside ice control consisting of either crushed angular mineral aggregate or natural sand;						
76	(b)	be free from chlorides and corrosive materials, clays, debris, cementation, organic matter and other non-friction material;						
77	(c)	not be softer that 3.5 nor harder than 7 on the						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		Mohs hardness scale; and						
78	(d)	within the following parameters: Sieve Size (U.S. Standard) — Percent Passing by Weight No. 4 (4.75 mm) — 100 No. 80 (180 mm) — 0-2						
79	322.406 (3)	Except for gravel runways, sand shall be removed as rapidly and completely as practicable.						
80	322.406 (4)	The airport operator shall develop procedures to minimize the risk of chemicals that do not meet the requirements of (1)(a) from being tracked onto airside.						
		Friction Measurement						
81	322.407 (1)	A CRFI shall be provided when the area within 10m of either side of centreline, for the full length of the runway has more than 25% of its surface contaminated.						
	322.407 (2)	The vehicles used shall meet the following criteria:						
82	(a)	The mounting of the friction test instrument is restricted to the following vehicle types: (i) sedan, station wagon, intermediate or full-size automobiles; (ii) utility and passenger/cargo pick-up trucks; (iii) mini-vans; and (iv) other vehicles as approved by the Minister.						
83	(b)	Friction measurements shall not be taken with four-wheel Anti-lock Braking System (ABS) engaged.						
	322.407 (3)	In order to consistently provide accurate decelerometer readings, the airport operator shall ensure that the vehicles are equipped as						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		follows:						
84	(a)	all four tires should be of the same type of construction;						
85	(b)	both front tires shall be of the same tread configuration and both rear tires shall be of the same tread configuration;						
86	(c)	studded tires shall not be used;						
87	(d)	tires shall be replaced when the tread wear exceeds 75%;						
88	(e)	wear on all four tires shall be the same;						
89	(f)	tires shall be inflated to the tire manufacturer's specification;						
90	(g)	shock absorbers are to be used are of heavy duty type and in good condition; and						
91	(h)	brakes shall be tested frequently to ensure operation in accordance with manufacturer's specifications.						
	322.407 (4)	The use of friction measurement equipment shall be as follows:						
92	(a)	to provide a CRFI is limited to the following surface conditions: (i) ice on runway; (ii) wet ice on runway surface (thin film of water on ice); (iii) compacted snow on runway surface; (iv) slush on ice; (v) loose snow on runway surface not exceeding 1 inch (2.5 cm) in depth; (vi) deicing chemical solution on ice; and (vii) frost						
93	(b)	friction readings with decelerometers shall not be included in the aircraft movement surface						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		condition report where any of the following surface conditions exist: (i) wet runway surface (water); (ii) damp runway surface; (iii) slush on runway surface; or (iv) loose snow on runway exceeding 1 inch (2.5 cm) in depth.						
94	(c)	measurements of the rate of deceleration are to be taken either (i) at 300m intervals within 10m from each side of the runway centerline at that distance from the centreline where the majority of aircraft operations take place; or (ii) an airport operator electing to use the alternating side method shall do so in accordance with the following: (A) For operational purposes the alternating side method shall only be conducted when the contaminated runway surface conditions are uniform on both sides of the runway centerline and where it has been demonstrated by means of the comparative tests of section (F) that the alternating side method results are the same as those obtained (+ or - .04) using the standard method. (B) The alternating side method shall not be used on runways exhibiting patchy surface conditions. (C) Decelerometer readings shall be obtained at approximately 300m intervals (longitudinally) along the full						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		length of the runway. (D) Where a decelerometer reading is cancelled or rejected, the friction reading at the cancellation spot shall be retaken to maintain a minimum reading interval of 300m. (E) As the vehicle is traversed diagonally from one side of the runway to the other, the driver shall ensure that the vehicle is aligned parallel to the runway centre-line prior to bringing the vehicle to a four-wheel lock-up; and that no diagonal/side forces shall be acting on the decelerometer when a reading is taken. (F) The airport operator shall perform and document a minimum of one set of comparative tests utilizing both methods for each type of winter contaminated surface conditions under which the alternating side method will be used. (G) The documentation shall include: (I) the date and time of the test; (II) the CRFI test results from both methods; (III) the surface condition, temperature, type of equipment, vehicle identification and the technique utilized for the each test; and (H) The documentation in (G) shall be included in the AOM.						
95	(d)	the readings taken are to be averaged and						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
		reported as the CRFI number; and						
96	(e)	if significant patches of contaminants cause lower readings than the average, their distance from the threshold of one end of the runway is to be reported in the remarks section of the AMSCR.						
97	322.407 (5)	The calibration of each instrument shall be checked prior to the commencement of each winter season and re-calibrated in accordance with the manufacturer's recommendation, at time of purchase.						
	322.407 (6)	The airport operator shall report aircraft movement surface conditions as follows:						
98	(a)	the form provided in Appendix 1 "Aircraft Movement Surface Condition Report" shall be used; and						
99	(b)	an AMSCR with the RSC data section completed shall be provided for each CRFI measurement submitted.						
		Training of Personnel and Training Records						
	322.408 (1)	The airport operator shall ensure that key airport personnel identified in the plan for specific Winter Maintenance duties						
100	(a)	are knowledgeable of their respective functions as described in the plan; and						
101	(b)	have the skills to carry out their assigned functions						
	322.408 (2)	The airport operator shall ensure that personnel who are expected to be assigned to supervisory roles are						
102	(a)	knowledgeable of the Airport Winter Maintenance Plan; and						
103	(b)	trained for the particular supervisory roles they are expected to perform						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
	322.408 (3)	The airport operator shall provide training on the following:						
104	(a)	safe use of vehicles;						
105	(b)	radio communication;						
106	(c)	airport orientation;						
107	(d)	inspection, storage and application of airside ice control chemicals and sand;						
108	(e)	Aircraft Movement Surface Condition Reporting (AMSCR) procedures including: (i) observing; (ii) recording; (iii) forwarding reports to Air Traffic Services; (iv) friction testing; and						
109	(f)	snow and ice control for airside lighting, markers and signage.						
110	322.408 (4)	The airport operator shall ensure that personnel providing training are qualified through assessment of the person's experience, formal technical training or a combination of both.						
	322.408 (5)	The airport operator shall provide						
111	(a)	training that is competency-based with emphasis on performance;						
112	(b)	initial training for winter maintenance personnel prior to assignment to winter maintenance duties; and						
113	(c)	recurrent and remedial training as outlined in (7).						
114	322.408 (6)	The airport operator shall ensure that testing is designed in a manner to confirm knowledge and competence in all aspects of the subjects for which training was provided.						
	322.408 (7)	Recurrent and Remedial Training						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
115	(a)	Where the airport operator has provided recurrent or refresher training, the airport operator shall annotate in the individual training record of those receiving the training.						
116	(b)	Where the airport operator has determined a need for remedial training, the airport operator shall provide the re-training necessary to rectify the deficient areas. Those areas shall be annotated in the individual training records by the airport operator.						
117	322.408 (8)	The airport operator shall retain training records including confirmation of competency testing of personnel assigned duties for winter maintenance activities.						
118	322.408 (9)	Where the airport operator issues a certificate of competency, it shall specify the following:						
	(a)	the title of the certificate;						
	(b)	the persons name;						
	(c)	the location of the training; and						
	(d)	the date of certification.						
		Communication Procedures						
	322.409 (1)	The plan shall identify communication procedures to						
119	(a)	link the airport operator and those assigned winter maintenance duties with: (i) the air traffic service unit; (ii) community aerodrome radio station (CARS); (iii) unicom; or (iv) where no ground radio station is provided on the airport, the airport traffic frequency (ATF);						

Audit Selection	Regulation	Section	Comply?				Audit # / Identifier	Comments
			Yes	No	N/A	N/C		
120	(b)	ensure the identification and use of the applicable radio frequencies;						
121	(c)	ensure that standard terminology is established to transmit information; and						
122	(d)	immediately forward CFRI readings of 0.30 or less to the communications provider referred to in (a).						
123	322.409 (2)	The plan shall establish procedures to control the flow of vehicles, during Winter Maintenance operations at the airport, that ensures the safety of other vehicles, aircraft and individuals.						