EAC
No.139-2

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FOREWORD

1. PURPOSE:

This Egyptian Advisory Circular (EAC) provides methods, standards, specifications and recommendations acceptable to the ECAA for showing compliance with the Aerodrome Certification Manual (ACM) requirements contained in Part 139 of the Egyptian Civil Aviation Regulations (ECAR). Consideration will be given to other methods of compliance, which the applicant may elect to present.

2. APPLICATION:

The Standards referenced herein are recommended by the Egyptian Civil Aviation Authority (ECAA) for application on all aerodromes. This material is intended for operators of airports that are required to have an Aerodrome Certificate (AC) for Aerodrome Certification Manual to serve scheduled or unscheduled operations of air carriers.

3. RELATED REFERENCES MATERIAL:

3.1 Regulatory References:

a. Egyptian Civil Aviation Regulation Part 139, Certification and Operations of International and National Land Aerodromes.
b. ECAA DOC. No. 2002-1, Airport Certification Program Handbook

3.2 Advisory Circulars and Variables:

a. EAC 139-1: Aerodrome Certification Procedures.
b. EAC 139-3: Airport Emergency Plan.
c. EAC 139-5: Safety Management System.
d. EAC 139-9: Runways.
e. EAC 139-10: Taxiways, Aprons and Holding Bays.
f. EAC 139-11: Pavements.
g. EAC 139-12: Visual Aids.
h. EAC 139-13: Electrical Systems.
i. EAC 139-15: Master Planning.
j. EAC 139-16: Land Use and Environmental Control.
k. EAC 139-18: Rescue and Fire Fighting.
l. EAC 139-19: Pavement Surface Conditions.
m. EAC 139-20: Bird Control and Reductions.
n. EAC 139-22: Removal of Disabled Aircraft.
o. EAC 139-23: Control of Obstacles.
p. EAC 139-24: Airport Emergency Planning.
q. EAC 139-25: Airport Operational Services.
r. EAC 139-26: Airport Maintenance Practices.

4. HOW TO ORDER:

Copies of these documents can be purchased from the ECAA, MOCA.

5. RELATED ECAR SECTIONS.

This EAC relates specifically to Subpart C, Aerodrome Certification Manual of Part 139, which is comprised of:

139.201	Preparation of aerodrome certification manual
139.203	Maintenance of aerodrome certification manual
139.205	Aerodrome certificate: Aerodrome certification manual
139.206	Structure of aerodrome certification manual
139.207	Contents of aerodrome certification manual
139.209	Reserved
139.211	Reserved
139.213	Amendment of aerodrome certification manual

6. RELATED READING MATERIAL.

The Advisory Circular (ACs), which will be particularly helpful in preparing required portions of the ACM will be found in Appendix 3. These ACs have been developed with

specific elements of Part 139, in mind. It contains additional technical information, which can be useful in the development of airport operations and maintenance systems and procedures for the ACM.

7. BACK GROUND:

ECAR Part 139 became effective on July 2001. The requirement of an Aerodrome Certification Manual with content and applicability limited to that material required for certification. This circular addresses the requirements for the revision of existing, or development of new ACM.

8. USE OF THIS CIRCULAR:

(a) This EAC discusses the requirements of a portion of the Egyptian Civil Aviation Regulations. In handling this subject matter it would be awkward, if not impossible, to avoid imperatives such as "must" or "require" - terms not normally welcome in an EAC. Where imperatives are used herein it is because they are associated with mandatory provisions of the Regulation itself.

(b) Where the term Section followed by a number is used, such as "Section 139.317", it is a reference to a specific provision of the Regulation.

(c) The number in brackets following a paragraph or statement such as "[.107(a)(3)]" is a cross-reference to the applicable Section of Part 139. The "139" is omitted to save space.

(d) The focus of this EAC is the airport operator - so that person is the "you" and "your" we are speaking to in these pages.

CHAPTER 1
Function And Form

1.1 FUNCTION AND AUTHORITY OF THE ACM:

If there is a single most important point to remember about the ACM it is that it functions as an extension of the Regulation. Because Part 139 is couched in terms broad enough for all airports covered by the Regulation, it cannot present the degree of specificity appropriate to each individual airport. The ACM provides the bridge between the requirements of the Regulation and their specific application for each airport, taking into account the airport's size, activity, and configuration. The language contained in Section 139.101(a),(b) establishes the enforceability of the ACM on a par with the Regulation itself. This brings us to two cardinal principles to be observed in the development of the ACM:

a. Be Comprehensive:

Include in the ACM all of the Part 139 requirements that apply to your airport. It is intended that the ACM provide, to personnel concerned with operating the airport, the information needed to comply with the Regulation.

b. Be Conservative:

Refrain from elaboration and detail beyond that necessary to show how regulatory compliance is to be achieved at your airport. Be watchful of the line between: essential statements of responsibility, authority, and procedure; and excessive levels of detail which can restrict flexibility to meet unforeseen circumstances, or even create unnecessary commitments under the Regulation.

1.2 PREPARATION (139.201):

The aerodrome certification manual shall: be typewritten or printed, and signed by the aerodrome operator; be in a format that is easy to revise; have a system for recording the currency of pages and amendments thereto, including a page for logging revisions; and be organized in a manner that will facilitate the preparation, review and acceptance/approval process.

The Regulation requires the ACM to have, in addition to the technical content, certain physical features of approval, organization, and dissemination. These are discussed in the following paragraphs. You may prepare your ACM yourself or have someone else do it. As you continue into this EAC you will see that a fundamental knowledge of all aspects of the airport's operation will be required to produce a satisfactory ACM. Accurate, concise, statements which speak directly to Part 139 requirements are preferable to glossy essays. Remember that no matter who prepares it, it becomes your document when it is approved by the ECAA.

a. Approval:

There are two levels of approval that are significant to the Regulation. There is the approval that you will give to the ACM before it is submitted to the ECAA, and there is the approval given by the ECAA which effectively establishes the document as an extension of Part 139 for your airport [139.107]:

(1) Airport Approval:

The Regulation requires that the ACM be signed by the Airport Operator. This means an official who has the authority to implement and enforce the provisions of the ACM whether or not "Airport Operator" is the Actual title. This approval can be accomplished on a signature page (or title page if there is a cosmetic cover over it) at the front of the ACM. The approval should identify the airport, the official, the document, and the date. When page revisions are sent to the ECAA for approval they should be transmitted formally by the same level of airport authority that is authorized to approve the ACM as a whole. The ECAA assumes that the approval is by the position, not the individual, so that the ACM continues unbroken in force if a change of airport management personnel takes place. If the new incumbent has reservations about any existing provision of the ACM, an early review is in order before its enforcement becomes an issue. [139.201, 139.203, 139.205].

(2) ECAA Approval:

The ECAA will require that each page show the date of approval, whether as part of the original document or as a later revision or addition. This requirement includes any other substantive item embodied in the ACM such as a grid map, table of organization, etc. It is a good idea to select a location on the page for the date and be consistent throughout - it is easier to catch mistakes or omissions in a standardized presentation. One method is a stamp the ECAA will place on each page which combines an approval mark with the date. Another method could be to agree with the ECAA on the date beforehand and have it printed on the page that the ECAA will mark with approval. The point is that the ACM becomes, upon approval, a document with considerable legal significance. Whatever methods are used upon it, it is imperative that all parts of it can be identified with an authority and a time frame [.203(b), .203(c)].

b. Organization:

There are three aspects of ACM organization that you will want to consider. One is concerned with the physical dimensions and layout of the document. Another is the mechanics of the assembly of the document. The third is the combination and sequencing of the substantive material you are placing into the document.

(1) Physical Layout – Design:

Since the ACM is to be a working document that reflects current airport realities, it should be easy to maintain and revise. A systematic page identification system is highly recommended. Note that in this EAC each page carries enough identification to easily determine the document it belongs to, its exact location in the document, and its date of approval. The same system is used in ECAA internal directives, which have, in authority and function, a lot in common with your ACM. You may wish to devise a comparable system. The Page Revision Log required for each ACM functions as an inventory of the current pages. This can simply be a sheet with columns of page numbers with space for a date alongside. This is a very useful device to verify the currency of a page in question without leafing through the entire document, and as a checklist for maintenance of the ACM tracking pages for revision, inserting changes, etc. [.201, .203].

(2) Assembly:

The Regulation requires that the ACM be typewritten (this includes other printing methods which produce a comparable result) but it is not as specific on the form or material. A loose leaf, standard size, black and white page assembly in a three ring binder is suggested (consider the potential problems with the reproduction, insertion, filing, and mailing of odd size or multicolor media, and comb or spiral bindings). Also, one side printing is recommended. While it does add bulk, it makes revision easier and lends itself to under the desk glass or bulletin board display of pages extracted for ready reference [.201(a), .201(d)].

(3) Organization of Content:

Your ACM's use as a reference guide by airport personnel should be encouraged. With this in mind, consider the functional assignments within your airport organization. This may influence the way you want to sectionalize the instructions in your ACM so that it lends itself to parceling out discrete portions to your personnel for their guidance. Generally, the subject sequencing of the Regulation itself provides a satisfactory outline for the ACM. This is particularly true for the review and updating processes, which flow more easily with the order of the elements as they are found in the Regulation [.201(d)].

c. Dissemination:

The Regulation requires that you furnish applicable portions of your ACM to the airport personnel who are responsible for their implementation. It is not intended that the portions of the ACM provide the total instructions on how to do a job. If the ACM is well prepared, however, it will provide information on how the job must be performed to maintain compliance with the Regulation [.203(c)].

1.3 INFORMATION TO BE INCLUDED IN THE AERODROME CERTIFICATION MANUAL (139.206):

a. The operator of a certified aerodrome must include the following particulars in an

aerodrome certification manual, to the extent that they are applicable to the aerodrome, under the following parts:

(i) Part 1: General information (see Appendix 1) on the purpose and scope of the aerodrome certification manual; the legal requirement for an aerodrome certificate and an aerodrome certification manual as prescribed in the national regulations; conditions for use of the aerodrome; the aeronautical information services available and the procedures for their promulgation; the system for recording aircraft movements and the obligations of the aerodrome operator.

(ii) Part 2: Particulars of the aerodrome site.

(iii) Part 3: Particulars of the aerodrome required to be reported to the aeronautical information service.

(iv) Part 4: The aerodrome operating procedures and safety measures. This may include references to air traffic procedures such as those relevant to low visibility operations. Air traffic management procedures are normally published in the air traffic services manual with a cross reference to the aerodrome certification manual.

(v) Part 5: Details of the aerodrome administration and the safety management system.

b. If, under regulation 139.111, the ECAA exempts the aerodrome operator from complying with any requirement set out in ECAR Part 139, the aerodrome certification manual must show the identifying number given to that exemption by the ECAA and the date the exemption came into effect and any conditions or procedures subject to which the exemption was granted.

c. If a particular is not included in the aerodrome certification manual because it is not applicable to the aerodrome, the aerodrome operator must state in the manual the reason for non-applicability of the particular.

d. The operator of a certified aerodrome must alter or amend the aerodrome certification manual, whenever necessary, in order to maintain the accuracy of the information in the manual.

e. To maintain the accuracy of the aerodrome certification manual, the ECAA may issue a written directive to an aerodrome operator requiring the operator to alter or amend the manual in accordance with that directive.

f. An aerodrome operator must notify the ECAA, as soon as practicable, of any changes that the operator wishes to make to the aerodrome certification manual.

CHAPTER 2
ACM Overview

2.1 CONTENTS FOR COMPLIANCE:

As a general rule the ACM must contain operating procedures, equipment descriptions, responsibility assignments, and other information needed by airport personnel to comply with the Regulation. The two kinds of material, which require compliance, are provisions of Part 139; and any other limitations, which are imposed by the ECAA [.207 (a)(1), .207 (a)(2)]:

a. Provisions of Part 139: Part 139 of the Regulation is the main body of requirements that an airport must meet to obtain and hold a Part 139 certificate. The ACM must address all of the required provisions of Part 139, which is comprised, of Sections 139.301 through 139.347. Note that not all of the Part 139 provisions are required for the ACM. Those that apply to the ACM are listed in Section 139.207. Part 139 provisions with explanations are listed in Appendix 1 for the ACM.

b. Limitations: In addition to the provisions of Part 139, any limitations placed on the airport by the ECAA must be addressed in the ACM. These are not frequently encountered. In most cases they have been included to deal with unusual operational characteristics of an airport, such as limiting air carrier operations to Short Takeoff and Landing (STOL) aircraft.

2.2 SPECIAL ELEMENTS OF COMPLIANCE:

The material discussed in paragraph 2.1 for procedures, equipment, responsibilities, etc. will vary from airport to airport. The Regulation also lists certain elements that must be in all ACM for compliance. These mandatory elements can be regarded, as the minimum detail required. Most of the Part 139 provisions will need more explanation than these elements specify. Most of the mandatory elements can conveniently fit into the Part 139 provisions as they come up. A few may lend themselves better to a separate figure (table, chart, etc) which can then be referenced in the discussion of the individual Part 139 provisions. For example, it may be simpler to draw up an organization chart and a table of the lines of succession and use them as references rather than repeat the information many times throughout the ACM. This listing is in Section 139.205(b). Note that some of the elements are listed "as required by Section..." That means that the element is necessary only if Section ... requires it. For example, if airport conditions do not trigger a requirement for a Wildlife Hazard Management Plan According to Section 139.345, none is needed for the ACM. There should, however, be a notation in the ACM for each of those special elements that is not included so that a complete accounting of all of the mandatory requirements is readily visible.

2.3 GUIDELINES FOR SPECIFICITY:

The central theme and purpose of the ACM is embodied in the language of Sections 139.205 and 139.213(a). It is to be a useful working document to assist airport personnel in maintaining compliance with the Regulation. This is where the two cardinal principles, mentioned in paragraph 1.1, come into play. The ideal ACM provides enough direction to achieve compliance with the Regulation but stops short of smothering detail. Approach the subject as if you, the airport operator, are leaving instructions for someone to carry out while you are absent. When you are writing your instructions you would be concerned with WHO is going to perform the tasks, WHAT the tasks consist of, any particular advice on HOW they are to be performed, and the timetable for performance to ensure that things happen WHEN you want them to. These points are discussed below:

a. Who: There are two aspects of WHO that deserve discussion. There is the WHO that normally operates away from your presence on a relatively autonomous basis - not outside your authority but at some distance, either physically or functionally. We shall call this WHO "Independent" for convenience. The key element here is that this WHO may have to make decisions and take actions to deal with abruptly changing situations without first checking with you, even if you are somewhere on the airport. The other WHO - the "Substitute" - is one who must step in and perform certain tasks for compliance with the Regulation when the usual chain of responsibility and authority has been temporarily interrupted. This WHO is essentially a substitute in a function and may or may not be completely familiar with the normal routine. The ACM should provide sufficient guidance for performing the function and, of course, instructions for calling for help if problems arise:

(1) The Independent WHO: As stated earlier, this WHO is probably not totally independent in authority or action - the key point is that certain significant actions may have to be taken without the opportunity for a routine request and approval process occurring between you. Therefore you, as airport operator, want to feel confident that this WHO knows: what is required from a regulatory standpoint; and can apply this knowledge to new situations as they arise, as well as to the daily routine. This can be accomplished with firm, clear instructions in the ACM. The Airport Rescue and Fire fighting (ARFF) function provides an illustration. Events can occur at the fire station that requires the urgent initiation of actions, which could have consequences somewhere else, upon someone else. For example if a piece of fire equipment becomes inoperative, some management action may have to be taken with respect to limiting air carrier operations, or at least initiating notification to air carrier users of the airport. If an emergency call is received a decision is often required about initiating all or part of the airport emergency plan. Do the ARFF personnel who are faced with these choices have clear, concise, and available information that will put the action on the right track? And, of course, it must also be clear which WHO is to be the one responsible for carrying out the instructions.

(2) The Substitute WHO: Keep in mind, which WHO may have to step forward to accomplish tasks if you or your regularly designated representative is absent. You would probably want to select in advance the individual most qualified to do the job. Let's use the airport self-inspection program as an example. Assuming that the individual is knowledgeable about airport operations, if not the fine points of Part 139, you would probably not have to start your instructions totally from scratch. However, the individual may not normally perform (or directly oversee) that particular function. Therefore, the ACM should be specific about critical aspects of the job, such as the course over the airport to be driven. Then again, since you are not there, there may be yet another person doing that chore, instead of the WHO you had planned for. If your electrician who usually checks the field lighting is out that day, will the substitute know what to look for? Will the substitute know where the switches are to turn on the lights in the first place? In other words, an instruction in the ACM that says, "Field lighting will be checked for compliance with applicable requirements" simply won't do it.

b. What and How: The WHAT and HOW of ACM instructions refers to the tasks assigned to various individuals or departments who are charged with achieving compliance with the Regulation. Unless all of the personnel assigned to the task are fully familiar with the regulatory requirement, the ACM should be structured to produce the desired result by providing guidance appropriate to the training and experience of the personnel. For example, it would be of questionable value to write instructions in the ACM that the grounds maintenance crew is to "Maintain all safety areas in accordance with the Regulation" unless the crew knows what Part 139 says about the surface of safety areas, the dates the various safety areas were established, and the ECAA dimensional standards that apply to each safety area. A better approach would be to identify the physical boundaries of the safety areas and state graphically what sort of surface conditions are to be maintained.

c. When: The best instructions will not produce satisfactory results if they are not put into action. Is the instruction "The ARFF unit will inspect the fueling areas each day" specific enough? Is there going to be a lapse in accomplishment because the first shift thought the second was to do it, and the second shift thought the first one surely had done it? The WHEN may also be triggered by circumstances, such as a certain depth of water accumulation or a specific temperature drop. Can the individual who must take some action read a clear and precise WHEN message in the ACM, or there some nebulous statements like "When weather conditions dictate"? And while you are at it, don't forget that someone has to measure the water or read the temperature. A WHO question can arise here as well as a WHAT and HOW if certain procedures or equipment must be specified for use. In fact, it should be obvious now that WHO, WHAT, HOW, and WHEN, are usually going to be closely intertwined, and that most instructions will have to satisfy the needs of them all.

d. 2.4 EXEMPTIONS: An exemption, if you have one, occupies its own niche in the compliance picture for your airport. It is important to understand what an exemption is and what it does, and how you may fit it into your ACM.

a. An Exemption Described: When you ask for an exemption you find that there are a host of procedural requirements to be met, and it doesn't seem to make any difference if the request is for a "little" or "big" exemption. The reason is that a request for an exemption is a Rulemaking Action. An exemption from a provision of Part 139 is not a Deviation, or a relaxation of Part 139. An exemption issued to you effectively changes, for its duration, the manner in which you comply with the terms of your Part 139 Airport Operating Certificate. That, in part, explains why the exemption can only be approved at the same level of authority that issued your certificate. The fact that a Rulemaking Action is generated also explains why an exemption request normally requires action by the legal staff of the ECAA [.111].

b. The Exemption in Your ACM: Since each exemption applies to a specific section of the Regulation and affects the way in which compliance with that section is accomplished, it makes sense to include a copy of the exemption in the part of the ACM that deals with that subject. Then, when that provision of the Regulation as it applies to your airport is being examined, the whole picture is there in one place. At the same time it is useful to have a list of all current exemptions for your airport at one point to provide reference without having to page through the entire ACM. It is recommended that such a list, with the subject and Part 139 reference shown, be placed in your ACM at some point, or added as an appendix. Copies of the exemptions can then be inserted at the appropriate places in the ACM where the subjects are covered. [.207(b)(2)].

2.5 LIMITATIONS:

Limitations are infrequently imposed on certificated airports. When they are, their impact is usually over a range of regulatory provisions. Any limitations imposed on your airport by the ECAA must be copied in your ACM. Because of the primacy of a limitation it should have a section devoted to it in the earliest part of your ACM. It may also be useful to reference it in the discussions of the related provisions of the Regulation [.207(b)(3)].

2.6 DEVIATIONS:

It is often found that the Deviation is a misunderstood resident in the Regulation. It is not associated with any particular section of Part 139, but in fact could become a factor in the performance of any one of them. A foolproof definition is difficult, but some examples may help [.113].

a. Examples of Deviations: These examples assume that the proper notifications to the ECAA are accomplished:

(1) Giving permission to an air carrier aircraft with an in-flight emergency to land at your airport, even though the size of the aircraft is beyond your ARFF Aerodrome Category, is a Deviation. There is no violation of Part 139.

(2) You have removed your only air carrier runway from service over a non-traffic period to repair the pavement. An air carrier contacts you and states that a fuel emergency makes a landing at your airport imperative. Although the pavement does not comply with the requirements of your ACM, you pull your equipment off the runway and permit the landing. No violation.

(3) You send your ARFF capability off the airport to assist in a life threatening fire on a passenger train. You permit normal air carrier operations during that period. That is a violation, not a Deviation. The point is, the emergency must be associated with your responsibilities under the Regulation that you are deviating from.

b. Coverage in the ACM: A Deviation is a serious business and should receive your highest management attention. Your ACM should reflect how you want the notification of a possible Deviation to flow. Considering the possibility of a Part 139 violation in case of a mistake, you will want to make this item a highly visible one.

2.7 AIRPORT AUTHORITY LIMITS:

A few of the provisions of Part 139 of the Regulation deal with matters which can be outside of the authority of most airport operators. Examples are obstruction lights outside airport boundaries, and medical assistance and transportation from community sources. Note the qualifying language used in those instances, such as "to the extent practicable" or "which agrees to provide." The Regulation does not demand actions beyond the authority of the airport operator. It does require, in certain instances such as those mentioned above, that an attempt me made to achieve the desired result, and even negative results must be documented in the ACM.

CHAPTER 3
ACM Review And Revision

3.1 REVIEW REQUIREMENTS:

The Regulation requires the ACM to be kept current at all times. This can be an awesome workload or a relatively minor routine chore. The difference is largely in how you prepare for the review and revision process [.203(a), .213(a)].

a. Lay the Groundwork: Add the review and revision process to the list of things to be kept in mind when you design your ACM. Plan the document so that it lends itself to parceling out self-contained segments for review by persons knowledgeable in that area. If that sounds familiar, it is because we said just about the same thing in paragraph 1.2(b)(3) concerning the parceling out of portions of the ACM to airport personnel for their operational guidance. If you have done that, you have already begun the groundwork for the review process. Next you will want to identify who is to accomplish the review of the various parts of the ACM and when they are to do it. Set a schedule and keep to it. This cannot be overemphasized. You may wish to schedule portions of the ACM on a staggered basis so that there is not an enormous workload accumulated at one time.

b. Establish the Process: Once you have decided how, by whom, and when the review process is going to happen, write it down where all those who have tasks to perform can be reminded of them. And the best place to write it down is in the ACM itself. Use the WHO, WHAT and HOW, and WHEN guidelines. You will also want to establish procedures for injecting changes or additions into the ACM in between regularly scheduled reviews. You will probably be in the best position to see most of those situations develop, and can initiate a timely amendment to the ACM.

3.2 REVISION AND FOLLOWUP:

The Regulation considers a timely amendment to be one which was filed with the ECAA 30 days prior to the effective date. You should contact your credential ECAA certification inspector if you will not be able to make that schedule. The inspector will work with you to accomplish the change as expeditiously as possible to keep your airport in compliance with the Regulation. It is a good idea, especially in the case of lengthy or complicated changes, to provide your inspector with a draft for early review and discussion. When the revision to your ACM is effective, you should place special management emphasis on any area of the airport operation which was affected. Usually, a change in a working procedure or other requirement is easier to implement if those who must make the changes had a role in the formulation of the changes. [.213(a), and (b)]

CHAPTER 4
Information Of The Aerodrome Certification Manual

4.1 PART 1: GENERAL

General information, including the following:

(a) Purpose and scope of the aerodrome certification manual;
(b) The legal requirement for an aerodrome certificate and an aerodrome certification manual as prescribed in ECAR 139;
(c) Conditions for use of the aerodrome: a statement to indicate that the aerodrome shall at all times, when it is available for the take off and landing of aircraft, be so available to all persons on equal terms and conditions;
(d) The available aeronautical information system and procedures for its promulgation;
(e) The system for recording aircraft movements; and
(f) Obligations of the aerodrome operator.

4.2 PART 2: PARTICULARS OF THE AERODROME SITE

General information, including the following:

(a) A plan of the aerodrome showing the main aerodrome facilities for the operation of the aerodrome including, particularly, the location of each wind direction indicator;
(b) A plan of the aerodrome showing the aerodrome boundaries;
(c) A plan showing the distance of the aerodrome from the nearest city, town or other populous area, and the location of any aerodrome facilities and equipment outside the boundaries of the aerodrome; and
(d) Particulars of the title of the aerodrome site. If the boundaries of the aerodrome are not defined in the title documents particulars of the title to, or interest in, the property on which the aerodrome is located and a plan showing the boundaries and position of the aerodrome.

4.3 PART 3: PARTICULARS OF THE AERODROME REQUIRED TO BE REPORTED TO THE AERONAUTICAL INFORMATION SERVICE (AIS)

4.3.1 General Information:

(a) The name of the aerodrome;
(b) The location of the aerodrome;
(c) The geographical coordinates of the aerodrome reference point determined in terms of the World Geodetic System 1984 (WGS 84) reference datum;
(d) The aerodrome elevation and geoid undulation;
(e) The elevation of each threshold and geoid undulation, the elevation of the runway end and any significant high and low points along the runway, and the highest elevation of the touchdown zone of a precision approach runway;
(f) The aerodrome reference temperature;
(g) Details of the aerodrome beacon; and
(h) The name of the aerodrome operator and the address and telephone numbers at which the aerodrome operator may be contacted at all times.

4.3.2 Aerodrome Dimensions and Related Information: General information,

including the following:

(a) Runway: true bearing, designation number, length, width, displaced threshold location, slope, surface type, type of runway and, for a precision approach runway, the existence of an obstacle free zone;
(b) Length, width and surface type of strip, runway end safety areas, stopways;
(c) Length, width and surface type of taxiways;
(d) Apron surface type and aircraft stands;
(e) Clearway length and ground profile;
(f) Visual aids for approach procedures, viz. approach lighting type and visual approach slope indicator system (PAPI/APAP1 and T-VASIS/AT-VASIS); marking and lighting of runways, taxiways, and aprons; other visual guidance and control aids on taxiways (including runway holding positions, intermediate holding positions and stop bars) and aprons, location and type of visual docking guidance system; availability of standby power for lighting;
(g) The location and radio frequency of VOR aerodrome checkpoints;

(h) The location and designation of standard taxi routes;
(i) The geographical coordinates of each threshold;
(j) The geographical coordinates of appropriate taxiway centre line points;
(k) The geographical coordinates of each aircraft stand;
(1) The geographical coordinates and the top elevation of significant obstacles in the approach and take off areas, in the circling area and in the vicinity of the aerodrome. (This information may best be shown in the form of charts such as those required for the preparation of aeronautical information publications, as specified in ECAR Part 173);
(m) Pavement surface type and bearing strength using the Aircraft Classification Number - Pavement Classification Number (CAN-PCN) method;
(n) One or more pre-flight altimeter check locations established on an apron and their elevation;
(o) Declared distances: take-off run available (TORA), take-off distance available (TODA), accelerate-Stop distance available (ASDA), landing distance available (LDA);
(p) Disabled aircraft removal plan: the telephone/telex/ facsimile numbers and e-mail address of the aerodrome coordinator for the removal of a disabled aircraft on or adjacent to the movement area, information on the capability to remove a disabled aircraft, expressed in terms of the largest type of aircraft which the aerodrome is equipped to remove; and
(q) Rescue and fire-fighting: the level of protection provided, expressed in terms of the category of the rescue and fire-fighting services, which should be in accordance with the longest aero plane normally using the aerodrome and the type and amounts of extinguishing agents normally available at the aerodrome.

4.4 PART 4: PARTICULARS OF THE AERODROME OPERATING PROCEDURES AND SAFETY MEASURES

4.4.1 Aerodrome Reporting:

Particulars of the procedures for reporting any changes to the aerodrome information set out in the AIP and procedures for requesting the issue of NOTAMs, including the following:

(a) Arrangements for reporting any changes to the ECAA and recording the reporting of changes during and outside the normal hours of aerodrome operations;
(b) The names and roles of persons responsible for notifying the changes, and their telephone numbers during and outside the normal hours of aerodrome operations; and
(c) The address and telephone numbers, as provided by the ECAA, of the place where changes are to be reported to the ECAA.

4.4.2 Access to the Aerodrome Movement Area:

Particulars of the procedures that have been developed and are to be followed in coordination with the agency responsible for preventing unlawful interference in civil aviation at the aerodrome and for preventing unauthorized entry of persons, vehicles, equipment, animals or other things into the movement area, including the following:

(a) The role of the aerodrome operator, the aircraft operator, aerodrome fixed base operators, the aerodrome security entity, the ECAA and other government departments, as applicable; and
(b) The names and roles of the personnel responsible for controlling access to the aerodrome, and the telephone numbers for contacting them during and after working hours.

4.4.3 Aerodrome Emergency Plan:

Particulars of the aerodrome emergency plan, including the following:

(a) Plans for dealing with emergencies occurring at the aerodrome or in its vicinity, including the malfunction of aircraft in flight; structural fires; sabotage, including bomb threats (aircraft or structure); unlawful seizure of aircraft; and incidents on the airport covering "during the emergency" and "after the emergency" considerations;

(b) Details of tests for aerodrome facilities and equipment to be used in emergencies, including the frequency of those tests;
(c) Details of exercises to test emergency plans, including the frequency of those exercises;
(d) A list of organizations, agencies and persons of authority, both on and off airport, for site roles; their telephone and facsimile numbers, e-mail and SITA addresses and the radio frequencies of their offices;
(e) The establishment of an aerodrome emergency committee to organize training and other preparations for dealing with emergencies; and
(f) The appointment of an on scene commander for the overall emergency operation.

4.4.4 Rescue and Fire Fighting:

Particulars of the facilities, equipment, personnel and procedures for meeting the rescue and fire-fighting requirements, including the names and roles of the persons responsible for dealing with the rescue and fire-fighting services at the aerodrome.
Note: This subject should also be covered in appropriate detail in the aerodrome emergency plan.

4.4.5 Inspection of the Aerodrome Movement Area and Obstacle Limitation Surface by the Aerodrome Operator:

Particulars of the procedures for the inspection of the aerodrome movement area and obstacle limitation surfaces, including the following:
(a) Arrangements for carrying out inspections, including runway friction and water depth measurements on runways and taxiways, during and outside the normal hours of aerodrome operations;
(b) Arrangements and means of communicating with air traffic control during an inspection;
(c) Arrangements for keeping an inspection logbook, and the location of the logbook; details of inspection intervals and times;
(d) Inspection checklist;
(e) Arrangements for reporting the results of inspections and for taking prompt follow up actions to ensure correction of unsafe conditions; and
(f) The names and roles of persons responsible for carrying out inspections, and their telephone numbers during and after working hours.

4.4.6 Visual Aids and Aerodrome Electrical Systems:

Particulars of the procedures for the inspection and maintenance of aeronautical lights (including obstacle lighting), signs, markers and aerodrome electrical systems, including the following:
(a) Arrangements for carrying out inspections during and outside the normal hours of aerodrome operation, and the checklist for such inspections;
(b) Arrangements for recording the result of inspections and for taking follow up action to correct deficiencies;
(c) Arrangements for carrying out routine maintenance and emergency maintenance;
(d) Arrangements for secondary power supplies, if any, and, if applicable, the particulars of any other method of dealing with partial or total system failure; and
(e) The names and roles of the persons responsible for the inspection and maintenance of the lighting, and the telephone numbers for contacting those persons during and after working hours.

4.4.7 Maintenance of the Movement Area:

Particulars of the facilities and procedures for the maintenance of the movement area, including:
(a) Arrangements for maintaining the paved areas;
(b) Arrangements for periodic assessment of pavement classification number is carried out related to number of air traffic movements to assure the currency of the published data. ;
(c) Arrangements for maintaining the runway and taxiway strips; and
(d) Arrangements for the maintenance of aerodrome drainage.

4.4.8 Aerodrome Works Safety:

Particulars of the procedures for planning and carrying out construction and maintenance work safely (including work that may have to be carried out at short notice) on or in the vicinity of the movement area which may extend above an obstacle limitation surface, including the following:

(a) Arrangements for communicating with air traffic control during the progress of such work;
(b) The names, telephone numbers and roles of the persons and organizations responsible for planning and carrying out the work, and arrangements for contacting those persons and organizations at all times
(c) The names and telephone numbers, during and after working hours, of the aerodrome fixed base operators, ground handling agents and aircraft operators who are to be notified of the work;
(d) A distribution list for work plans, if required.

4.4.9 Apron Management:

Particulars of the apron management procedures, including the following:

(a) Arrangements between air traffic control and the apron management unit;
(b) Arrangements for allocating aircraft parking positions;
(c) Arrangements for initiating engine start and ensuring clearance of aircraft push back;
(d) Marshalling service; and
(e) Leader (van) service.

4.4.10 Apron Safety Management:

Procedures to ensure apron safety, including:

(a) Protection from jet blasts;
(b) Enforcement of safety precautions during aircraft refueling operations;
(c) Apron sweeping;
(d) Apron cleaning;
(e) Arrangements for reporting incidents and accidents on an apron; and
(f) Arrangements for auditing the safety compliance of all personnel working on the apron.

4.4.11 Airside Vehicle Control:

Particulars of the procedure for the control of surface vehicles operating on or in the vicinity of the movement area, including the following:

(a) Details of the applicable traffic rules (including speed limits and the means of enforcing the rules) and
(b) The method of issuing driving permits for operating vehicles in the movement area.

4.4.12 Wildlife Hazard Management:

Particulars of the procedures to deal with the danger posed to aircraft operations by the presence of birds or mammals in the aerodrome flight pattern or movement area, including the following:

(a) Arrangements for assessing wildlife hazards;
(b) Arrangements for implementing wildlife control programs; and
(c) The names and roles of the persons responsible for dealing with wildlife hazards, and their telephone numbers during and after working hours.

4.4.13 Obstacle Control:

Particulars setting out the procedures for:

(a) Monitoring the obstacle limitation surfaces and Type A Chart for obstacles in the take off surface;
(b) Controlling obstacles within the authority of the operator;
(c) Monitoring the height of buildings or structures within the boundaries of the obstacle limitation surfaces;
(d) Controlling new developments in the vicinity of aerodromes; and
(e) Notifying the ECAA of the nature and location of obstacles and any subsequent addition or removal of obstacles for action as necessary, including amendment of

the AIS publications.

4.4.14 Removal of Disabled Aircraft:

Particulars of the procedures for removing a disabled aircraft on or adjacent to the movement area, including the following:

(a) The roles of the aerodrome operator and the holder of the aircraft certificate of registration;
(b) Arrangements for notifying the holder of the certificate of registration;
(c) Arrangements for liaising with the air traffic control unit;
(d) Arrangements for obtaining equipment and personnel to remove the disabled aircraft; and
(e) The names, role and telephone numbers of persons responsible for arranging for the removal of disabled aircraft.

4.4.15 Handling of Hazardous Materials:

Particulars of the procedures for the safe handling and storage of hazardous materials on the aerodrome, including the following:

(a) Arrangements for special areas on the aerodrome to be set up for the storage of inflammable liquids (including aviation fuels) and any other hazardous materials; and
(b) The method to be followed for the delivery, storage, dispensing and handling of hazardous materials.

Note: Hazardous materials include inflammable liquids and solids, corrosive liquids, compressed gases and magnetized or radioactive materials. Arrangements for dealing with the accidental spillage of hazardous materials should be included in the aerodrome emergency plan.

4.4.16 Low Visibility Operations:

Particulars of procedures to be introduced for low visibility operations, including the measurement and reporting of runway visual range as and when required, and the names and telephone numbers, during and after working hours, of the persons responsible for measuring the runway visual range.

4.4.17 Protection of Sites for Radar and Navigational Aids:

Particulars of the procedures for the protection of sites for radar and radio navigational aids located on the aerodrome to ensure that their performance will not be degraded, including the following:

(a) Arrangements for the control of activities in the vicinity of radar and navaids installations;
(b) Arrangements for ground maintenance in the vicinity of these installations; and
(c) Arrangements for the supply and installation of signs warning of hazardous microwave radiation.

Note 1: In writing the procedures for each category, clear and precise information should be included on: When, or in what circumstances, an operating procedure is to be activated; How an operating procedure is to be activated; Actions to be taken; The persons who are to carry out the actions; and The equipment necessary for carrying out the actions, and access to such equipment.

Note 2: If any of the procedures specified above are not relevant or applicable, the reason should be given.

4.5 PART 5: AERODROME ADMINISTRATION AND SAFETY MANAGEMENT SYSTEM:

4.5.1 Aerodrome Administration:

Particulars of the aerodrome administration, including the following:

(a) An aerodrome organizational chart showing the names and positions of key personnel, including their responsibilities;
(b) The name, position and telephone number of the person who has overall responsibility for aerodrome safety; and
(c) Airport committees.

4.5.2 Safety Management System (SMS):

Particulars of the safety management system established for ensuring compliance with all safety requirements and achieving continuous improvement in safety performance, the essential features being:

(a) The safety policy, insofar as applicable, on the safety management process and its relation to the operational and maintenance process;
(b) The structure or organization of the SMS, including staffing and the assignment of individual and group responsibilities for safety issues;
(c) SMS strategy and planning, such as setting safety performance targets, allocating priorities for implementing safety initiatives and providing a framework for controlling the risks to as low a level as is reasonably practicable keeping always in view the requirements of the Standards and Recommended Practices in ECAR Part 139, standards, rules or orders;
(d) SMS implementation, including facilities, methods and procedures for the effective communication of safety messages and the enforcement of safety requirements;
(e) A system for the implementation of, and action on, critical safety areas which require a higher level of safety management integrity (safety measures program);
(f) Measures for safety promotion and accident prevention and a system for risk control involving analysis and handling of accidents, incidents, complaints, defects, faults, discrepancies and failures, and continuing safety monitoring;
(g) The internal safety audit and review system detailing the systems and programs for quality control of safety;
(h) The system for documenting all safety related airport facilities as well as airport operational and maintenance records, including information on the design and construction of aircraft pavements and aerodrome lighting. The system should enable easy retrieval of records including charts;
(i) Staff training and competency, including the review and evaluation of the adequacy of training provided to staff on safety related duties and of the certification system for testing their competency; and
(j) The incorporation and enforcement of safety related clauses in the contracts for construction work at the aerodrome.

APPENDIX 1
Content Of The ACM

1. PURPOSE OF THIS LISTING:

All of the provisions of Part 139 of the Regulation apply to airports with a full certificate. Those airports prepare and maintain an ACM which reflects the manner in which the airport complies with the requirements of Part 139. All of the Part 139 section headings are listed below with amplifying remarks or examples. The order of presentation follows the sequence found in the Regulation. The Regulation also requires the ACM to show how the airport complies with any limitations placed upon the airport by the ECAA. Such limitations are rare and, in any case, are based on unique circumstances at a particular airport. Therefore, this Appendix does not address compliance with limitations [.207(b)(3)].

2. ABOUT THIS LISTING:

Except for the requirements of a purely administrative nature, all of the items should be written to satisfy the questions WHO, WHAT, HOW, and WHEN as discussed in paragraph 2.3 of this EAC. There are also the Special Elements of Compliance to be considered - refer to paragraph 2.2. The discussions and examples presented in this listing cannot cover all possible airport situations. Omission of some aspect of Part 139 does not mean it is not required or is of lesser importance. Any questions you may have concerning the application of these discussions or examples to your own airport should be resolved with your certification inspector.

3. SECTIONS OF PART 139:

3.1 Section 139.105 Inspection Authority:

This should be mentioned in your ACM so that whoever is in charge of the airport in your absence is aware that a credential ECAA airport certification inspector has authority to inspect for compliance with the Regulation.

3.2 Section 139.303 Personnel:

Except for those areas where the Regulation requires specific training or performance documentation, the ECAA normally assumes that a function well performed indicates sufficient qualified personnel. Remember that this requirement includes airport management and supervisory personnel as well. In this regard a chart or table showing the lines of succession of airport operational responsibility would be helpful to demonstrate accountability under this Section, and would also satisfy one of the special elements of compliance [.207(b)(1)].

3.3 Section 139.307(i) Airport Condition Reporting:

Remember that the NOTAM system is often not the complete solution to adequate notification of air carrier users of your airport. Many airports have internal communications systems that extend into air carrier agent offices. These vary from the old but still useful to writers, to telephones, to data processing systems with remote terminals or data drops. On some of these systems the air carrier, through their local station agents are able to receive field condition information from airport management before the NOTAM hits the wires. Then, there sometimes are field situations that may be of interest to air carrier users of your airport, but which are not eligible for the NOTAM system coverage you would prefer. Here again your condition reporting responsibility can often be met with your local communications network. Work with your airline tenants to devise a satisfactory system of information flow and document it in your ACM [.207(b)(11)].

3.4 Section 139.309 thru 139.315 Physical Characteristics:

3.4.1 Paved Areas:

This and other extensive maintenance type requirements will probably have similar patterns in your ACM. Refer to paragraph 2.3 of this EAC and cover those areas of WHO, WHAT, HOW, and WHEN. (See Appendix 4 for an example of what this portion of an ACM might look like.) The Regulation contains several specific requirements for paved areas that are available for air carrier use. The requirements are stated in results oriented terms and are not so lengthy that they could not be handily repeated in the ACM. This not only meets the

requirement of Section 139.207(a) for including procedures, etc., needed by your personnel, it also serves as a reminder directed specifically toward that maintenance activity. This portion of your ACM may also be a good location for the description of movement areas that are available for air carrier use. Note that this description does not include other paved or unpaved areas on your airport (ramps, parking areas, etc.) which, while usable by air carriers, do not fall within the definition of movement area. You should be aware that the movement area definition found in various Air Traffic Control manuals, includes the provision that on a towered airport an air traffic clearance is required to enter a movement area. This latter definition will be the one used in any letters of agreement that may be needed between you and the Airport Traffic Control Tower (ATCT) concerning movement areas. If such agreements result in removal of certain pavement segments from the controlled movement areas, that should be described in the ACM [.207(b)(7), (12), (13), (14), and (15)].

3.4.2 Runway Strips and Taxiway Strips (Safety Areas):

It is important that the location and obligatory dimensions be clearly and accurately described. The application of the Regulation hinges, in many respects, on the precise delineation of those areas. The dimensions of a safety area on your airport frame the obligations you have with respect to its maintenance. The description of a safety area is only complete if the dimensional data is accompanied by the date those dimensions were established in accordance with the Regulation. Here again the use of a map or diagram is helpful, especially when describing a runway safety area that has different dimensions for each end. In this regard a graphic supplement to the narrative description is invaluable. If you have a basic, uncluttered grid map as a starting point, it may be of use for this purpose. Because of the wide usage this sort of figure frequently receives, it is an appropriate candidate for an appendix [.207(b)(7), (12), (13), (14), and (15)].

3.5 Section 139.317 Obstructions:

The location of lighted obstructions that fall within your airport's authority and responsibility must be included in your ACM. The narrative description may be enhanced by locating the objects on a map and keying them to the description. An airport can have a confusing array of obstruction lights with different parties responsible according to various lease agreements, contract services, etc. Be specific in your ACM which ones are your maintenance responsibilities and which ones are the responsibilities of others. You should also include explanation of who is to contact them in case of an outage, and how they are to do it.

You should identify in your ACM each object within your authority that qualifies as an obstruction, but which has been determined to be "no hazard" by an ECAA aeronautical study. This information should include the study file reference so it can be retrieved if necessary. This can save a lot of motion later on and might even eliminate the need to do a study where one had been done but had been forgotten or lost. Remember that an Airport Layout Plan (ALP) approval by the ECAA carries the same weight as an aeronautical study with respect to those objects depicted on it. We suggest that you designate, in the ACM, an individual or position to monitor the obstruction situation on your airport. Obstructions have a way of appearing on airports when one isn't looking [.207(b)(16)].

3.6 Section 139.319 Traffic and Wind Direction Indicators:

Your ACM should contain a description of those facilities required at your airport, and procedures and responsibilities for maintaining them [.205(b)(17)].

3.7 Section 139.321 thru 139.327 Marking and Lighting:

The pattern of the example in Appendix 4 for paved area maintenance provides a good base for your instructions here. Generally speaking, the maintenance task is to fix or replace the broken or missing item in kind. However there are a few additional points to be considered. If the light is burned out it should be a simple matter to replace the bulb. But if the light has been smashed out of recognizable existence or stolen, you need to be sure that whoever replaces it knows what kind of fixture to use. Well written instructions supplemented by an airport diagram are valuable insurance against slipups like an edge light in the last 600 meter of an instrument runway without a yellow side. You should also include clear

instructions on just how many, and in what sequence, lights may be out before the system is considered inoperative. Guidance on this is in EAC 139-12, Visual Aid .

This is an appropriate place to describe your runway and taxiway system of identification. In addition to the system description it is recommended that a runway (RWY) and taxiway (TWY) diagram be provided, especially if your identification system varies from the norm or is otherwise complicated. You should also know who is responsible for the approach lights at your airport and include the means of contacting them [.207(b)(18) to .207(b)(21)].

3.8 Section 139.331 Visual Aids for Denoting Restricted Use Areas:

Periods of construction and maintenance on an airport present special problems in keeping aircraft and construction machinery and personnel safely apart. Normal routes for aircraft taxiing and maneuvering are often disrupted or modified, and standard signing and marking can become temporarily ineffective or even misleading. Obtaining Contractor cooperation in this matter at the beginning is much easier than trying to catch up later. Provide instructions for early input so that the marking and lighting requirement; can be built into the construction plans (and costs) at the outset. And, of course, keep the air carrier users of your airport up-to-date by the NOTAMs and any other appropriate means at your disposal. Build these responsibilities and functions into your ACM so that the responsible parties can know what is expected [.207(b)(23)].

Planning for construction projects should always include avoidance of damage to utilities. The importance of the utilities that serve NAVAIDs and other air carrier facilities calls for special attention to their protection. Approach this requirement by designating, in your ACM, a responsible position in your organization for assuring compatibility of the construction plans with protection of these critical utilities. The position you charge with this responsibility should have enough authority to require revision of the plans or suspension of the work activity if necessary [.207(b)(8)].

3.9 Section 139.335g Ground Vehicles:

Tight control of ground vehicles can forestall a lot of problems on your movement and safety areas, and clear and precise procedures in your ACM can help ensure that control. It is suggested that your airport rules for vehicle operation be included in an appendix to the ACM for ready reference. If your airport is towered your ACM should also contain any procedures or rules that you have jointly agreed to including radio or other communications arrangements. If you have special written agreements with your tenants concerning vehicle discipline in compliance with the Regulation, they should be an appendix to your ACM for guidance of airport personnel tasked with their enforcement [.207(b)(31)].

3.10 Section 139.335(a) Airport Emergency Plan:

The EAC on airport emergency plans contains technical information that will help you develop the AEP required by the Regulation. For that reason it is not discussed in depth in this circular. The AEP is, however, a mandatory part of your ACM and the guidelines for specific statements in paragraph 2.3 regarding responsibility and function apply [.207(b)(25)].

3.11 Section 139.335(b) Aircraft Rescue and Firefighting:

3.11.1 Aerodrome Category Determination:

State what your airport's Aerodrome Category is and explain what it means in terms of aircraft length. It would be a good idea to name the longest aircraft that the Aerodrome Category can serve because sooner or later the question is bound to arise. It is not unknown for air carrier personnel, planning an operation into certificated airports, to be unaware of the ARFF Aerodrome Category requirements of their aircraft. According to your Aerodrome Category, it would be well to state the longest air carrier aircraft that could use your airport if one or more of your ARFF vehicles were removed from service. This will be a useful piece of information to have readily available if you need to notify your air carrier station agents in a hurry.

3.11.2 Equipment and Agents:

List the equipment you have and the type and amount of agent they hold. Don't neglect the portable extinguishers they carry because that can have a bearing on what Aerodrome Category you can maintain if there is an equipment outage [.207(b)(26)].

3.11.3 Operational Requirements:

This is one of the most critical areas to write into your ACM. The basic ingredients are much the same - the familiar WHO, WHAT, HOW, and WHEN still highlight the requirements. This is an area where you probably have the Independent WHO to deal with, (see paragraph 2.3) and a few other problems unique to the ARFF situation.

Do you have full control over the operation of the ARFF unit that provides your service? How much latitude does it have before it must request your approval? Can the vehicles be dispatched off-airport without your permission? Are you reliably informed whenever an element of your ARFF becomes inoperative or unavailable for any reason? These are basic questions you should have answers to before you can write a useful ARFF section for your ACM. If you have full and firm control your task is a lot easier. You will want to allow your ARFF as much flexibility as possible within the scope of their mission, but you will also want to build into your ACM procedures a fast and reliable information system so that you know when you are at a decision point concerning air carrier operations. If you do not have full authority over your ARFF as sometimes happens when the unit is controlled by a municipal fire department, your information needs are even more critical to your compliance with Part 139. In that case you will want to insist on immediate reports on the disposition of the equipment - if this takes a formal letter of agreement with the fire department that should be copied in the ACM.

The tower on your airport can be of great assistance to your ARFF operation but they are permitted to go only so ECAR by ECAA policy and directive. You should make it high on your order of business to discuss, with the ATCT manager and the crew, the role of the ATCT in emergency operations and the particulars of its interface with the ARFF unit and the airport management. Then, write this into your ACM. Include in your instructions the limits beyond which the ATCT is not able to operate, to avoid misunderstandings and lost motion during an actual ARFF action. It is sometimes mutually beneficial to enter into a letter of agreement with the ATCT to cover certain activities peculiar to your airport. If you do so, copy that agreement in your ACM, either in this section or as an appendix with appropriate extracts or references in this section.

The Regulation permits a temporary reduction in ARFF presence during periods of shorter air carrier aircraft activity. Certain conditions must be met, however, some of which involve language in your ACM. The individual or position with the authority to implement the reduction must be identified in the ACM along with the procedures to be followed. There must also be a system in place for the recall of the full-required complement of ARFF personnel and equipment, and this is a mandatory item for the ACM. There is a requirement for the notification of air carrier users of your airport prior to the implementation of this procedure, and the particulars of that action, with appropriate responsibilities and authorities must be detailed in the ACM.

Place instructions for even the simplest communications systems in your ACM. If your ARFF unit must deal with additional channels for a municipal dispatch facility, the opportunities for communications errors increase dramatically, especially in the heat of an emergency.

It is suggested that a grid map of your airport be organized as one of the appendices to the ACM. When designing this map, check with the emergency organizations in your area - sometimes a county disaster management unit, or similar body, will already have a grid map in use that includes your geographic area. If so, you may wish to adopt their grid system or, at least, consider the ramifications of having separate systems. You will probably also want to include the map as part of your Airport Emergency Plan (AEP), and it can be very useful in other applications as well. A well-drawn basic map which is not overburdened with detail can provide the common basis for the grid map and for depicting

other elements required for the ACM. Runway and taxiway designations, location of obstructions to be lighted, and identification of safety areas can often be developed from the same basic map. Note that a grid map, as such, is not required by the Regulation if another means of identifying significant terrain features, satisfactory to the ECAA, is employed for emergency operations.

The inoperative vehicle potential needs careful attention in your ACM. To begin with there should be an explanation of what "inoperative" means in the context of the Regulation. That explanation in the Regulation is not to be stretched. Inoperative means that the vehicle is unable to perform all of the functions required of it by the Regulation. It does not mean that the vehicle has been sent off-airport and is therefore not available for airport emergencies. There should be clear instructions for the procedures to be followed, and who is to accomplish them, when a required piece of ARFF equipment becomes inoperative. This is one of those areas where you, as airport operator, must have prompt and accurate knowledge of the status of your ARFF readiness so that you are able to discharge your other responsibilities for air carrier notification and limitations.

One aspect of your response posture that is sometimes misunderstood, and which should be covered in your ACM, is the requirement for coverage during "air carrier operations. Your instructions in the ACM should explain that each air carrier operation is treated separately when figuring the response period. This means that your ARFF unit must be instructed to maintain a response posture for at least the half-hour period bracketing the operation - 15 minutes before to 15 minutes after. If your ARFF is a 24-hour 365-day establishment, you probably have less potential for problems of coordination than the airport operator who must call in the ARFF coverage from an off-airport location. It would be well to impress upon the air carrier station agents the importance of keeping you or the ARFF unit apprised of changes in their flight schedules, and to provide instructions in your ACM for contacting those agents for information on late flights or second sections.

Your ACM should contain a description of the alarm system for ARFF response and a requirement for a daily test. The ATCT role in the alarm system, and the test, should be included.

At least one person trained in basic emergency medical care must be available during air carrier operations. This person need not be an actual member of the ARFF crew, but does have to be available within a reasonable time for an airport emergency. The ACM should reflect this person's availability.

If any roads are designated as Emergency access Roads they should be identified. You may wish to describe here any instructions for their use to ensure the best possible opportunity for the ARFF response to succeed. A word of caution here. Be sure that you understand the obligations that go along with a designated road. You may want to consider other alternative means of meeting the ARFF response time, such as secondary ARFF stations or vehicle standby areas [.207(b)(4), (7), and (31)].

3.12 Section 139.337 Handling and Storing of Hazardous Substances and Materials:

There are two rather different situations covered by this portion of the Regulation - one concerning hazardous materials as aircraft cargo, and the other concerning hazardous materials in the form of fuels, lubricants, etc. that are for the operation of the aircraft and are not considered cargo. For convenience the former will be referred to here as hazardous materials (HAZMAT) and the latter as simply "fuel" [.207(b)(32)].

When the HAZMAT agent is other than the airport operator, the Hazardous Materials Regulations apply solely and no inclusion in the ACM is necessary. The ECAA Aviation Security personnel administer that program. In the infrequent cases where the airport operator is the HAZMAT agent the ACM must contain procedures covering the designations and assurances listed in the Regulation.

The establishment of fueling safety standards is required of the airport operator for whoever is a fueling agent on the airport. The standards themselves should be copied in an

appendix of your ACM. The ACM should describe how you accomplish the 3-month inspection of tenant fueling facilities and the procedures to be initiated should noncompliance with the standards be discovered. You should discuss the notification of the ECAA requirement with your ECAA airport certification inspector and agree upon the instructions to be placed in your ACM.

3.13 Section 139.339 Self-Inspection Program:

This activity is very important because it impacts so many other areas of compliance with the Regulation. The self-inspection function enables you to monitor many airport conditions to assist you with compliance with other requirements of the Regulation. The guidelines of paragraph 2.3 of this EAC should be applied so that all of the elements of an effective inspection program are accomplished. Note that daily inspections are not absolutely required if there is no air carrier activity, but be wary of a long interval between inspections. In any event the schedule of inspections and the concomitant responsibilities should be included in your ACM [.207(b)(33)].

3.14 Section 139.341 Protections of NAVAIDs:

This is another area where the ACM should reflect the assignment of a person or position to be alert to activity that may derogate the guidance from a NAVAID.

Depending on the placement of the NAVAIDs, there may also be a need to write procedures and assignments into the ACM for security patrols, fence maintenance, etc. [.207(b)(34)].

3.15 Section 139.343 Public Protection:

The requirements of Part 139 pertaining to this subject are oriented toward inadvertent entry into an area containing hazards for the unwary trespasser. The prevention of intentional infiltration of airport security areas is within the purview of the regulation on airport security, ECAR Part 107. The coverage in your ACM should describe the measures taken at your airport to prevent inadvertent entry by persons or vehicles. Fencing is an obvious method, and conspicuous signing is another. Neither one is much good if the fence gates are left invitingly open or the signs are faded or otherwise obscured. The ACM should provide for continuing surveillance of all of the safeguards on your airport for compliance with this provision of Part 139 [.205(b)(35)].

3.16 Section 139.345 Wildlife Hazard Management:

In addressing wildlife hazards at your airport, one of three types of entries are needed in your ACM: a statement of negative activity; a brief statement of the no-hazard findings of an ecological study; or a wildlife hazard management plan. In any case, there should also be instructions to your airport personnel for reporting wildlife activity, should any be observed [.207(b)(36)].

If there is no wildlife activity at your airport, or at least no activity that triggers the ecological study, a statement in your ACM to that effect is needed. If wildlife activity at your airport triggered an ecological study, and it was subsequently determined that a wildlife hazard management plan is not required, your ACM should contain a brief statement that identifies the type and extent of the activity that triggered the study. This will serve as an approximate gauge for comparison with subsequent wildlife observations for re-evaluation of the situation. In this case you can probably draw on the study to include some specifics on the type of wildlife activity likely to be observed, and some helpful guidance on when the activity may be approaching the limit of acceptability.

If it has been determined that your airport must have a Wildlife Hazard Management Plan, it becomes a permanent part of your ACM unless a subsequent determination removes that requirement. The plan itself should normally be an appendix to the ACM. You should also follow the guidance in paragraph 2.3 of this EAC to assure the appropriate level of specific instruction and guidance for airport personnel.

3.17 Section 139.347 Non-complying Conditions:

The best way to avoid non-complying conditions is to build into your ACM, from the very beginning, the mechanisms to provide you, the airport operator, with the timely and accurate information you need to take action to comply with each section of the Regulation. Your personnel need to be provided with clear instructions so that you are informed of any circumstances that require your timely action to maintain compliance with the Regulation. If you delegate responsibility to others, or if tasks may fall on someone else as a result of the application of the line of succession, your best friend will be an ACM that provides the information and guidance needed by your airport personnel to maintain safe airport operations in compliance with the provisions of Part 139.

Should it happen that some element of Part 139 is not met to the extent that an uncorrected unsafe condition exists on your airport, air carrier activity on that area must be halted. Your ACM should carry this message clearly to all airport personnel, so that if someone discovers such a condition they will know that, at the very least, that the information must be passed to a specific level of airport authority without delay.

APPENDIX 3
Advisory Circular Listing

1. PURPOSE OF THIS LISTING:

This listing, selected from the library of airport related ACs, should be helpful to airport operators who are developing or revising an ACM to meet the requirements of Part 139. This is not intended to be a listing of all ACs which may be of use to operators of certificated airports. The criterion for this listing was weighted toward operational applicability. There are many other useful ACs which are devoted to airport design and construction subjects.

2. ABOUT THIS LISTING:

The listing is divided into groups according, as nearly as possible, to sections of the Regulation. They are of particular utility in the preparation of an ACM because they were developed, at least to some degree, with Part 139 in mind. The other ACs in this listing have application to Part 139 and ACM development due to their technical subject matter, but there may be some overlaps of coverage, and some gaps.

3. AIRPORT CONDITION REPORTING [.307(i)]:

- AC 150/5200-28, Notices to Airmen (NOTAMs) for Airport Operators

4. PAVED AREAS AND RUNWAY AND TAXIWAY STRIPS (SAFETY AREAS) [.309 thru .315]:

- AC 150/5320-6C, Airport Pavement Design and Evaluation.
- AC 150/5300-12, Airport Design Standards - Transport Airports.
- AC 150/5320-5B, Airport Drainage.

5. OBSTRUCTIONS [.317]:

- AC 70/7460-1G, Obstruction Marking and Lighting.

6. TRAFFIC AND WIND DIRECTION INDICATORS [.319]:

- AC 150/5340-5B, Segmented Circle Airport Marker System.
- AC 150/5340-23A, Supplemental Wind Cones.
- AC 150/5345-27C, Specification for Wind Cone Assemblies.

7. MARKING AND LIGHTING [.321 Thru .327]:

- AC 70/7460-1G, Obstruction Marking and Lighting
- AC 150/5340-1F, Marking of Paved Areas on Airports.
- AC 150/5340-4C, Installation Details for Runway Centerline Touchdown Zone Lighting Systems.
- AC 150/5340-1H, Standard for Airport Markings.
- AC 150/5340-5B, Segmented Circle Airport Marker System.
- AC 150/5340-14B, Economy Approach Lighting Aids.
- AC 150/5340-17B, Standby Power for Non FAA Airport Lighting Systems.
- AC 150/5340-18B, Standards for Airport Sign Systems.
- AC 150/5340-19, Taxiway Centerline Lighting Systems.
- AC 150/5340-26, Maintenance of Airport Visual Aid Facilities.
- AC 150/5340-28, Low Visibility Taxiway Lighting System.

8. VISUAL AIDS FOR DENOTING RESTRICTED USE AREAS [.331]:

- AC 150/5340-1F, Marking of Paved Areas on Airports
- AC 150/5370-2C, Operational Safety on Airports during Construction.
- AC 150/5200-28 Notices to Airmen (NOTAMs) for Airport Operators.

9. GROUND VEHICLES [.335g]:

- AC 150/5210-5B, Painting, Marking, and Lighting of Vehicles Used on an Airport
- AC 150/5370-2C, Operational Safety on Airports during Construction

10. AIRPORT EMERGENCY PLAN [.335a]:

- AC 150/5210-2A, Airport Emergency Medical Facilities and Services

11. AIRCRAFT RESCUE AND FIREFIGHTING [.335b]:

- AC 150/5200-12A, Fire Department Responsibility in Protecting Evidence at the Scene of an Aircraft Accident.
- AC 150/5210-6C, Aircraft Fire and Rescue Facilities and Extinguishing Agents.
- AC 150/5210-7B, Aircraft Fire and Rescue Communications.
- AC 150/5210-15, Airport Rescue and Firefighting Station Building Design.
- AC 150/5210-12, Fire and Rescue Service for Certificated Airports.
- AC 150/5210-13, Water Rescue Plans, Facilities, and Equipment.
- AC 150/5210-14, Airport Fire and Rescue Personnel Protective Clothing.
- AC 150/5210-7C, Aircraft Rescue and Firefighting Communications.
- AC 150/5210-17, Programs for Training of Aircraft Rescue and Firefighting Personnel.

12. HAZARDOUS MATERIALS [.337]:

- AC 20-43C, Aircraft Fuel Control.
- AC 150/5230-4, Aircraft Fuel Storage, Handling, and Dispensing on Airports.
- AC 150/5380-5B, Debris Hazards at Civil Airports.

13. SELF-INSPECTION PROGRAM [.339]:

- AC 150/5200-18B, Airport Safety Self-Inspection.

14. PROTECTION OF NAVAIDs [.341]:

- AC 150/5300-2D, Airport Design Standards - Site Requirements for Terminal Navigational Facilities.
- AC 150/5340-1F, Marking of Paved Areas on Airports.

15. PUBLIC PROTECTION [.343]:

- AC 150/5335-2, Airport Aprons.

16. WILDLIFE HAZARD MANAGEMENT [.345]:

- AC 150/5200, Airport Wildlife Hazard Management.

APPENDIX 4
Example Of ACM Entry

1. SELECTION OF AN EXAMPLE:

The requirement in Section 139.309 thru 139.315 of Part 139 for the maintenance and repair of paved surfaces on the airport embodies all of the points of WHOM, WHAT and HOW, and WHEN, of paragraph 2.3 of this EAC. It is also equally applicable to the ACM and the EAC. The various pieces of information that have been included in the example are, in this hypothetical instance, deemed to be necessary to impart the desired instructions to the airport personnel. In your own situation you may need to include more or less, or different, information in your ACM. In any event the test is, does the ACM satisfy the WHO, WHAT and HOW, and the WHEN.

2. SCENARIO FOR THE EXAMPLE:

This is an airport with a few craft oriented maintenance shops under the supervision of an Airport Engineer. All of the paved areas for aircraft use are the responsibility of the Airport Engineer (the access road and vehicle parking lot are maintained by the City road crews) except the apron which is maintained by the Contractor. The Contractor's contract with the City requires the Contractor to maintain the apron to Part 139 requirements (it is available to air carriers) and to allow its inspection by airport personnel.

When the Airport Engineer is absent the shop foremen act in that capacity in their order of seniority. A line of succession table and an organization chart appended to the ACM documents this chain of responsibility. There are similar provisions in these documents for alternates to act for the Airport Manager when that individual is absent. When there is reference to the Airport Manager or the Airport Engineer in this example, the reference applies to the alternate as well.

The airport has developed a Paving Repair Guide for its own use which contains technical instructions, some of which came from the EACs listed in this EAC, for the maintenance force. That level of task performance detail is not included in the ACM.

The daily airport inspections are normally performed by Designated Inspectors who are trained to reliably identify and describe Part 139 pavement deficiencies. Therefore, the Airport Engineer customarily relies on their reports for initiating Work Orders without personal inspection of the problem. The Work Order forms contain a block which the inspector checks to denote a Part 139 critical maintenance item. This device flags the Work Order as a priority activity, and later directs the completed record to the appropriate filing location.

The Airport Engineer has standing instructions to notify the Airport Manager (AMGR) of any delay in correction of a Part 139 deficiency so that the need for adjustment of air carrier service can be evaluated. Scheduled air carrier service ends at 1600 Saturday and does not resume until Monday morning. The airport is published "closed" in the Airport/Facilities Directory to air carriers during that period except for special permission. The maintenance work crew complement is reduced during that period to save money, but this also tends to slow down the work accomplishment. Therefore the Airport Engineer must keep the AMGR currently informed on the maintenance progress in case a charter air carrier flight calls for permission for an off-hours operation.

When the work is completed, the Work Order is signed off and filed with the daily inspection reports to complete the records retention required by the Regulation.

This statement was prepared for the ACM, but was also structured so that it was a self-contained except for the information and guidance of airport personnel. Note the use of references to the figures in appendices to the ACM without repeating the information each time it is needed.

3. EXAMPLE OF THE ACM ITEM:

3.1 Pavement Maintenance Summary:

This statement summarizes the responsibilities and standards for pavement maintenance at the = = = Airport. A copy of this summary is to be posted on the Maintenance Control Board in Building #16 and on the ARFF bulletin board. These responsibilities and standards are mandatory for compliance with Egyptian Civil Aviation Regulation Part 139.

All work will be accomplished in Accordance with the = = = Airport Pavement Maintenance Guide.

3.2 Responsibilities:

The maintenance of all paved surfaces on the airside of the terminal is, with the exception noted below, the responsibility of the Airport Engineer (AE).

Exception: The aircraft parking apron served by TWY B in front of Contractor = = = hangars (see Airport Map, Appendix = = =) is maintained by that Contractor. The terms of the Contractor contract guarantee maintenance to Part 139 requirements. The AE is authorized to inspect the apron at any time and to order repairs by the Contractor. Any such orders shall be reported to the Airport Manager (AMGR) within 4 workday hours.

3.3 Delegations And Successions:

The title AE is used herein as the party responsible for the accomplishment of pavement maintenance. In the absence of the AE from the airport, the senior foreman assumes those responsibilities unless specifically relieved of all or a portion of them by the AMGR; see the Airport Organization chart, Appendix = = =.

The foreman assuming those responsibilities is automatically vested with the same authority as the AE to order labor and materials from any airport shops, or from vendors, as are necessary to effect repairs to meet Part 139 requirements, except that obligations to vendors may not exceed L.E. = = = without approval by the AE or the AMGR.

3.4 Part 139 Maintenance Standards and Application:

The Part 139 requirements for pavement maintenance are listed below:

1. **Pavement edges:** May not exceed 8 cm (3 inches) difference between: abutting pavement sections; full strength pavement and abutting shoulders.
2. **Pavement hole:** None may exceed 8 cm (3 inches) in depth nor have a slope which, from any point in the hole to the nearest lip, is or exceeds 45 degrees measured from the surface plane, unless the hole can be covered by a five-inch diameter circle.
3. **Cracks and surface variations:** None which could impair directional control of air carrier aircraft.
4. **Surface debris and contaminants:** Remove promptly and completely as practicable.
5. **Chemical cleaning solvents:** Remove as soon as possible consistent with manufacturer's instructions.
6. **Pounding:** Maintain drainage and slope to prevent pounding that obscures markings or impairs safe aircraft operations.

PROCEDURES:

The AE shall initiate airport maintenance Work Order (WO), with the Part 139 block checked, for all work needed to restore pavement to Part 139 requirements. If the Part 139 pavement deficiency was reported by a Designated Inspector, the WO will be initiated immediately upon receipt of the daily inspection report. If the daily inspection was performed by other than a Designated Inspector, or if a report of a Part 139 type pavement deficiency came from some other source, the AE shall have the deficiency evaluated immediately by a qualified maintenance specialist and, if the condition is verified, initiate the WO.

If for any reason a WO for a Part 139 repair cannot be put under work immediately or if it appears that a delay in the completion of the work will occur, the AE shall notify the AMGR. The only exception is if the deficiency is reported after 1600 Saturday and before 2000 Sunday, and the work can be completed prior to 2000 Sunday. In that case, however, the airport Operations Duty Officer must be notified of the existing Part 139 deficiency.
The signed-off copy of a Part 139 WO shall be sent to the airport Operations Section for filing with the daily inspection reports. The check in the Part 139 block of the AE's desk copy shows its location should it be needed.