



ROYAL CANADIAN AIR CADETS
PROFICIENCY LEVEL ONE
INSTRUCTIONAL GUIDE



SECTION 1

EO M160.01 – IDENTIFY MAJOR AERODROME COMPONENTS

Total Time:	30 min
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PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instruction guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Photocopy and cut the game pieces located at Attachment B.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for TPs 1–3 as it allows the instructor to introduce basic information to the cadets.

An in-class activity was selected for TP 4 as it is an interactive way to confirm the cadets' comprehension of the material.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall identified the major components of an aerodrome.

IMPORTANCE

Knowing the various components of an aerodrome will assist cadets in identifying them during aviation and aerodrome operations activities.

Teaching Point 1**Define the terms aerodrome and airport.**

Time: 5 min

Method: Interactive Lecture

AERODROME

Around the world there is an intricate system of aeronautical facilities designed to facilitate the efficient movement of air traffic, called aerodrome. Many aerodromes vary widely in the facilities and the services they offer. However, there are certain standard features that apply to every aerodrome.

“An aerodrome is any area of land or water designed for the arrival, departure and movement of aircraft” (Macdonald, 2000).

AIRPORT

“An airport is a licensed aerodrome, which possesses a certificate stating it has met all airport safety standards” (Macdonald, 2000).

CONFIRMATION OF TEACHING POINT 1

QUESTIONS:

- Q1. What is the definition of an aerodrome?
Q2. What makes an airport different from an aerodrome?

ANTICIPATED ANSWERS:

- A1. An aerodrome is any area of land or water, designed for the arrival, departure and movement of aircraft.
A2. An airport possesses a certificate stating it has met all airport safety standards.
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Teaching Point 2**Explain components of the airside of an aerodrome.**

Time: 5 min

Method: Interactive Lecture



Images of the various parts of an aerodrome are located at Attachment A.

This section refers to runway, taxiway and apron.

RUNWAY

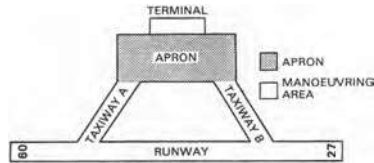
The runway is the area where aircraft take off and land. A runway may be made of pavement, grass, gravel, dirt or snow among other materials. Runways are identified by numbers and by the white lights that run along each side.

TAXIWAY

The taxiway is the area used by an aircraft to manoeuvre around the aerodrome between aprons and runways. Letters normally designates taxiways. At aerodromes with lighting, taxiways are defined by blue lights along each side.

APRON

The apron, also known as the tarmac or ramp area, is the part of an aerodrome intended to accommodate the loading and unloading of passengers and cargo. It is also the area used for refuelling, servicing and parking of aircraft.



Note. From Royal Canadian Air Cadet Manual, Proficiency Level One Handbook, Cadets Canada, 1998.

Figure 1 Aerodrome Movement Areas

CONFIRMATION OF TEACHING POINT 2

QUESTIONS:

- Q1. What colour lights identify the sides of the runway?
- Q2. What is the purpose of a taxiway?
- Q3. What other names are used to refer to the apron?

ANTICIPATED ANSWERS:

- A1. White lights.
- A2. The taxiway is the area used by an aircraft to move from the apron to the runway.
- A3. The apron can be referred to as the tarmac or the ramp area.

Teaching Point 3

Explain components of an aerodrome.

Time: 10 min

Method: Interactive Lecture



Images of the various parts of the aerodrome are located at Attachment A.

This section refers to control tower, terminal buildings, windsock, flying school and hangars.

CONTROL TOWER

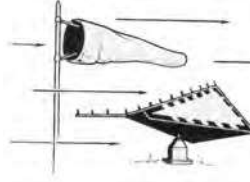
Some aerodromes have a control tower to ensure the safe and efficient movement of aircraft. The air traffic controllers in the tower are responsible for a number of procedures. These include take off and landing procedures, circuit procedures and ground manoeuvring of aircraft.

TERMINAL BUILDINGS

Terminal buildings are used for passengers arriving and departing. They are also used for baggage and cargo handling. Terminal buildings are located on the apron.

WINDSOCK

All aerodromes have at least one windsock or wind-t. The windsock is used by pilots to determine wind direction and speed. The approximate wind speed is indicated by the amount the windsock is extended. The wind-t is designed like an arrow whose small end points into the wind. They are found on the airfield, beside the runway.



Note. From The Ground Up: Millennium Edition, A.F. MacDonald, 2000.

Figure 2 Windsock and Wind-T

FLYING SCHOOL

Flying schools are used as training facilities for current pilots and those that want to learn how to fly.

HANGARS

Hangars are used to store aircraft to protect them from weather conditions that might damage their components. Hangars are also used to facilitate work while conducting maintenance tasks on the aircrafts.

CONFIRMATION OF TEACHING POINT 3

QUESTIONS:

- Q1. What is the purpose of the control tower?
- Q2. What does a windsock indicate?
- Q3. What is the importance of flying schools?

ANTICIPATED ANSWERS:

- A1. The purpose of the control tower is ensuring the safe and efficient movement of aircraft, through use of the air traffic controllers working within the tower.
- A2. A windsock indicates wind direction and speed.
- A3. Flying schools are used as training facilities for current pilots and those that wish to learn how to fly.

Teaching Point 4

Have the cadets identify components of an aerodrome.

Time: 5 min

Method: In-Class Activity

ACTIVITY

OBJECTIVE

The objective of this activity is to confirm that the cadets are able to correctly identify various components of an aerodrome.

RESOURCES

Nil.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

1. Divide the cadets into groups of four.
2. Distribute to the cadets the games pieces located at Attachment B.
3. Have the cadets match the different components of the aerodrome with their names and short definition.
4. Supervise the cadets as they are completing the activity.
5. Once the cadets have completed the activity, confirm the matches made by the cadets using the answer key located at Attachment C.

SAFETY

Nil.

CONFIRMATION OF TEACHING POINT 4

The cadets' participation in the activity will serve as the confirmation of this TP.

END OF LESSON CONFIRMATION

The cadets' participation in the activity will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

The various areas of an aerodrome serve different purposes. As cadets, knowing the various components of an aerodrome will assist in identifying the components during aviation and airport operations activities.

INSTRUCTOR NOTES / REMARKS

Nil.

REFERENCES

A3-001 A-CR-CCP-263/PT-001 *From the ground up: Millennium edition* (2000). Ottawa, ON: Aviation Publishers Co. Limited.

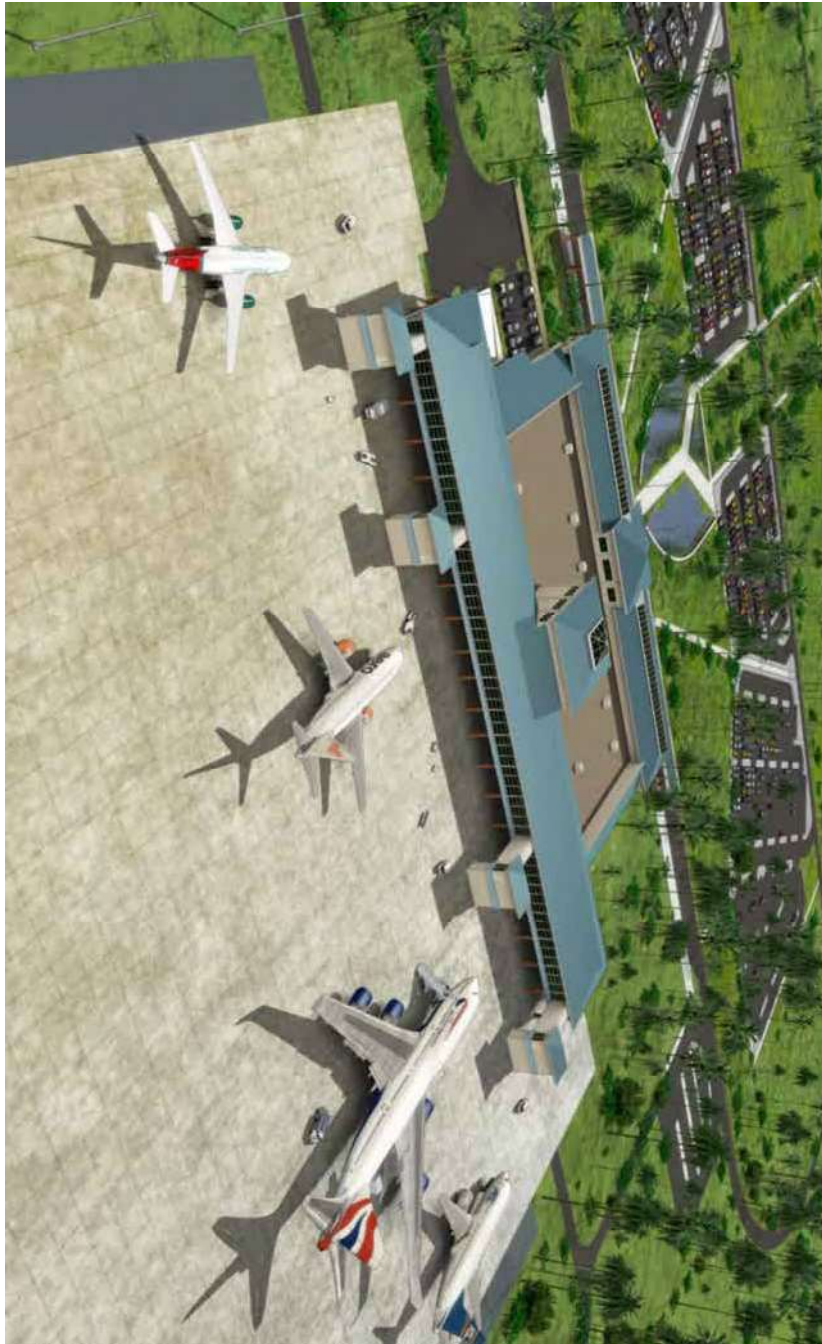
C3-022 ISBN 0-19-541731-3 *The Canadian Oxford dictionary* (2001). Don Mills, ON: Oxford University Press.



Runway



Taxiway



Apron



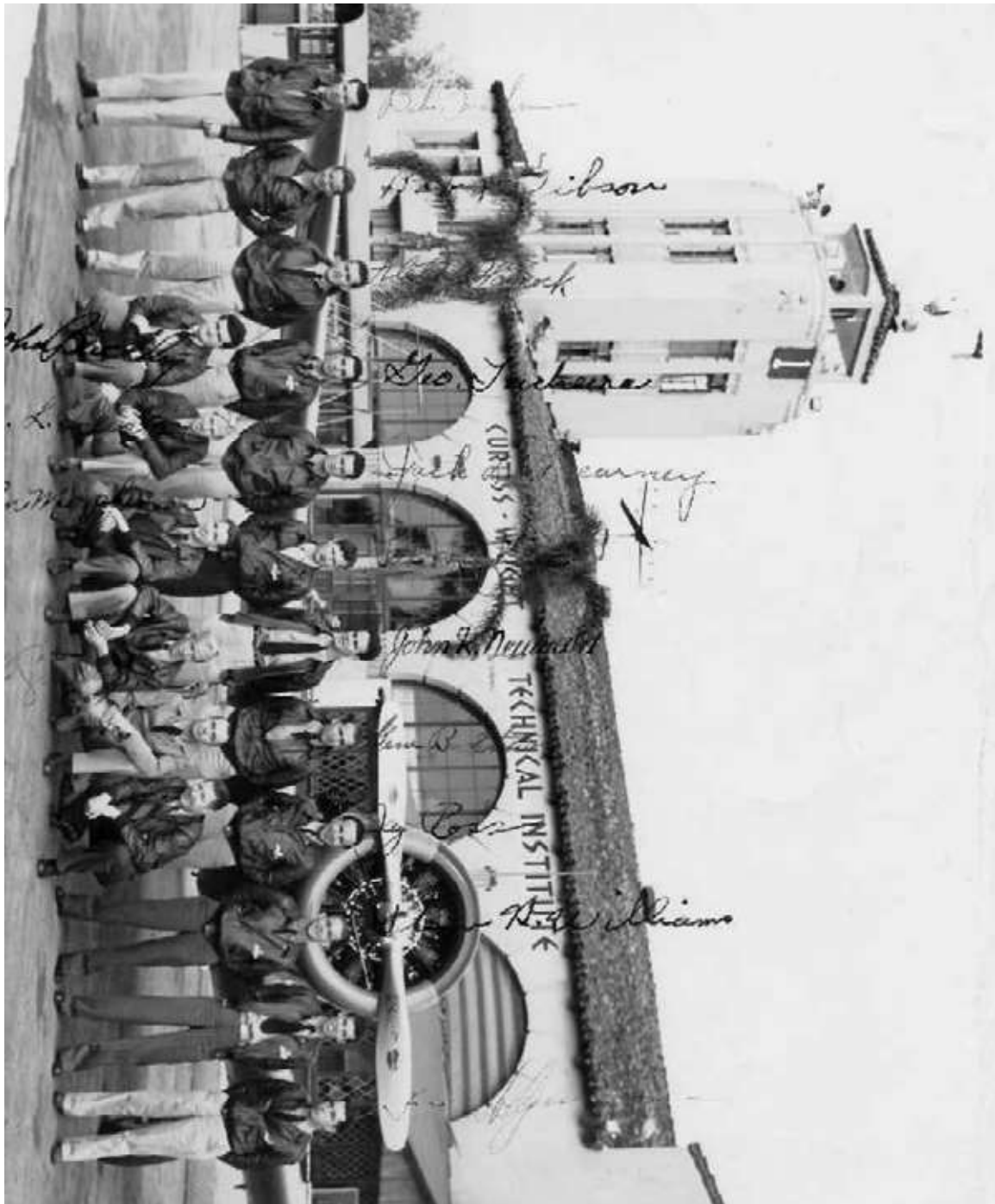
Control Tower

Terminal Building





Windsock

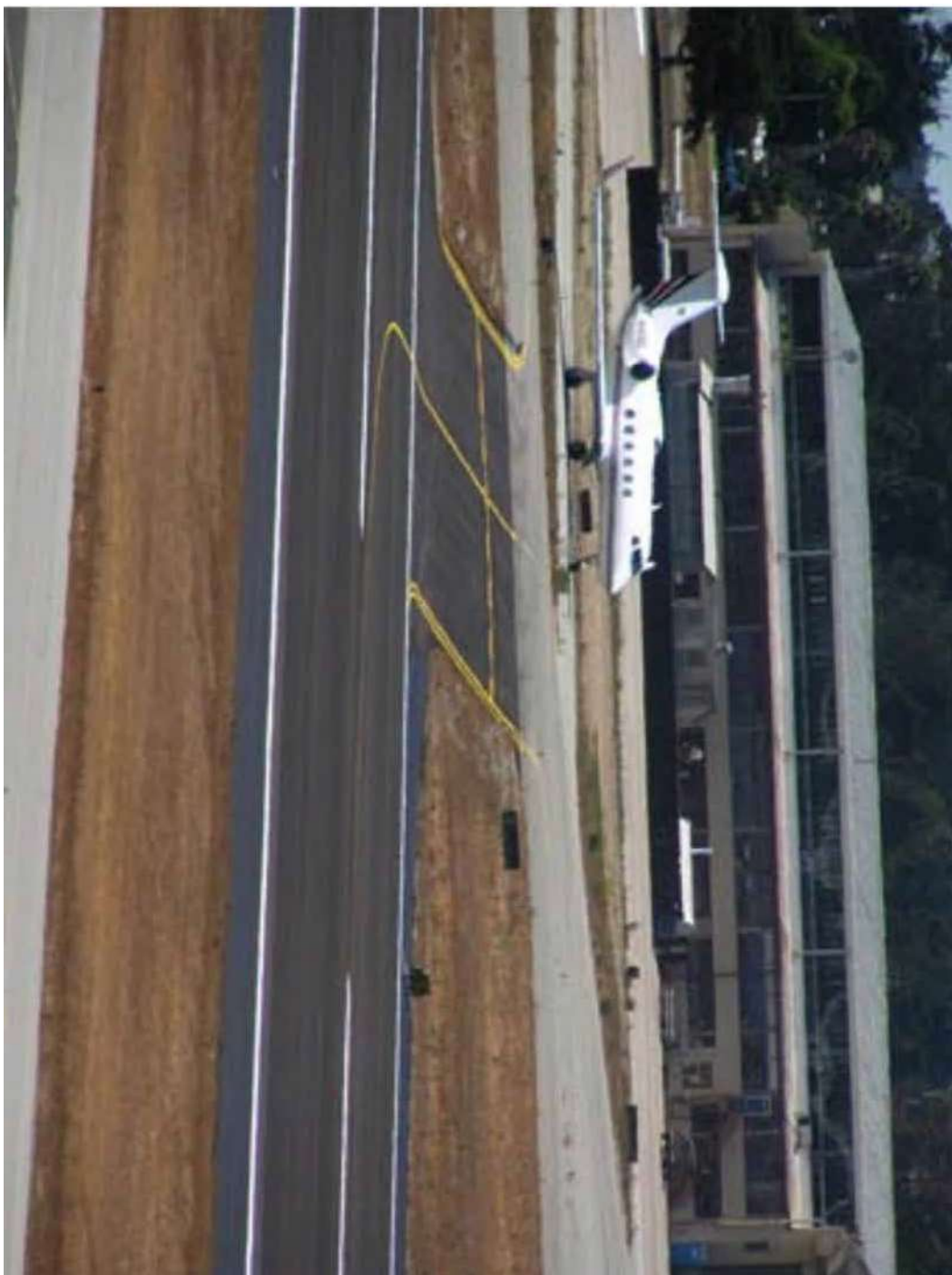


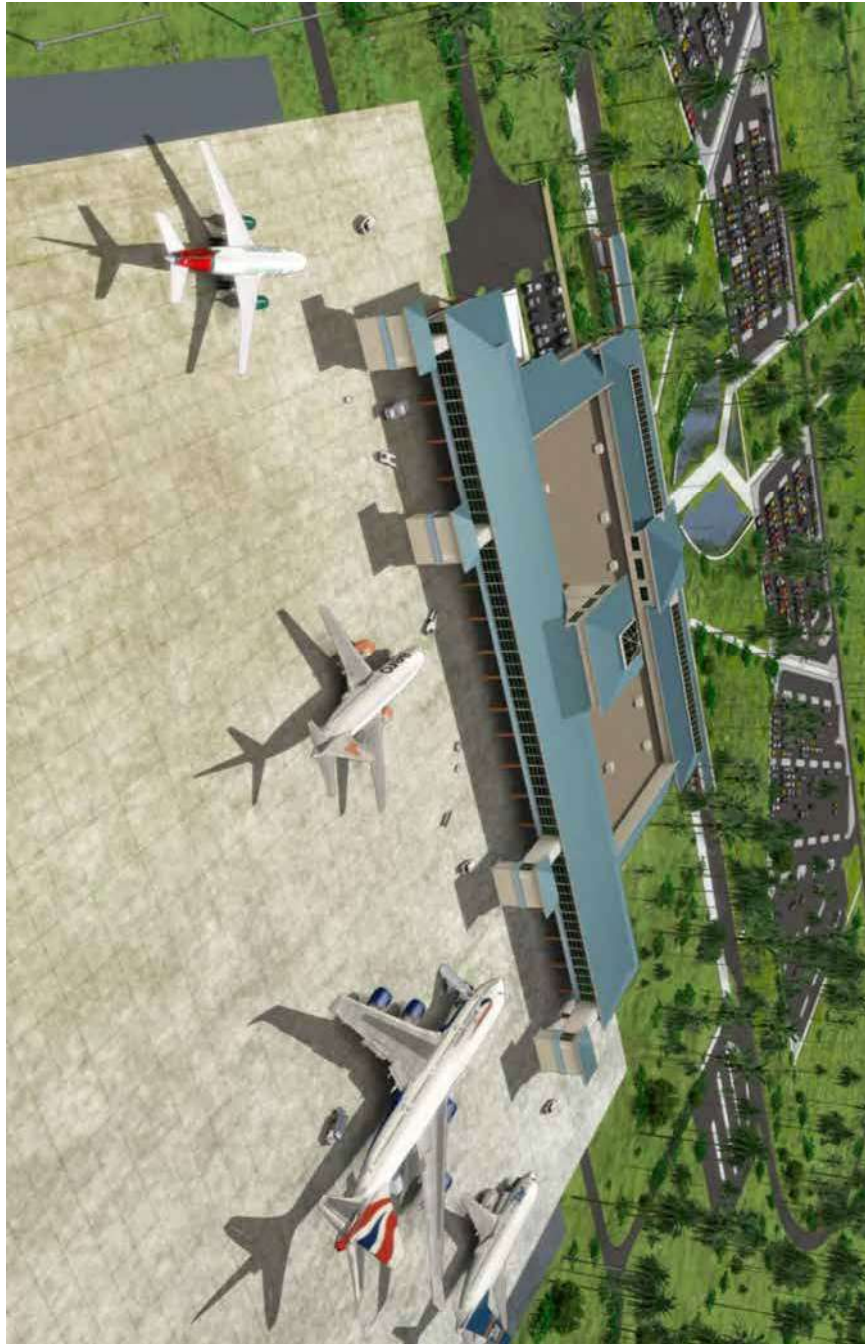
Flying School



Hangar



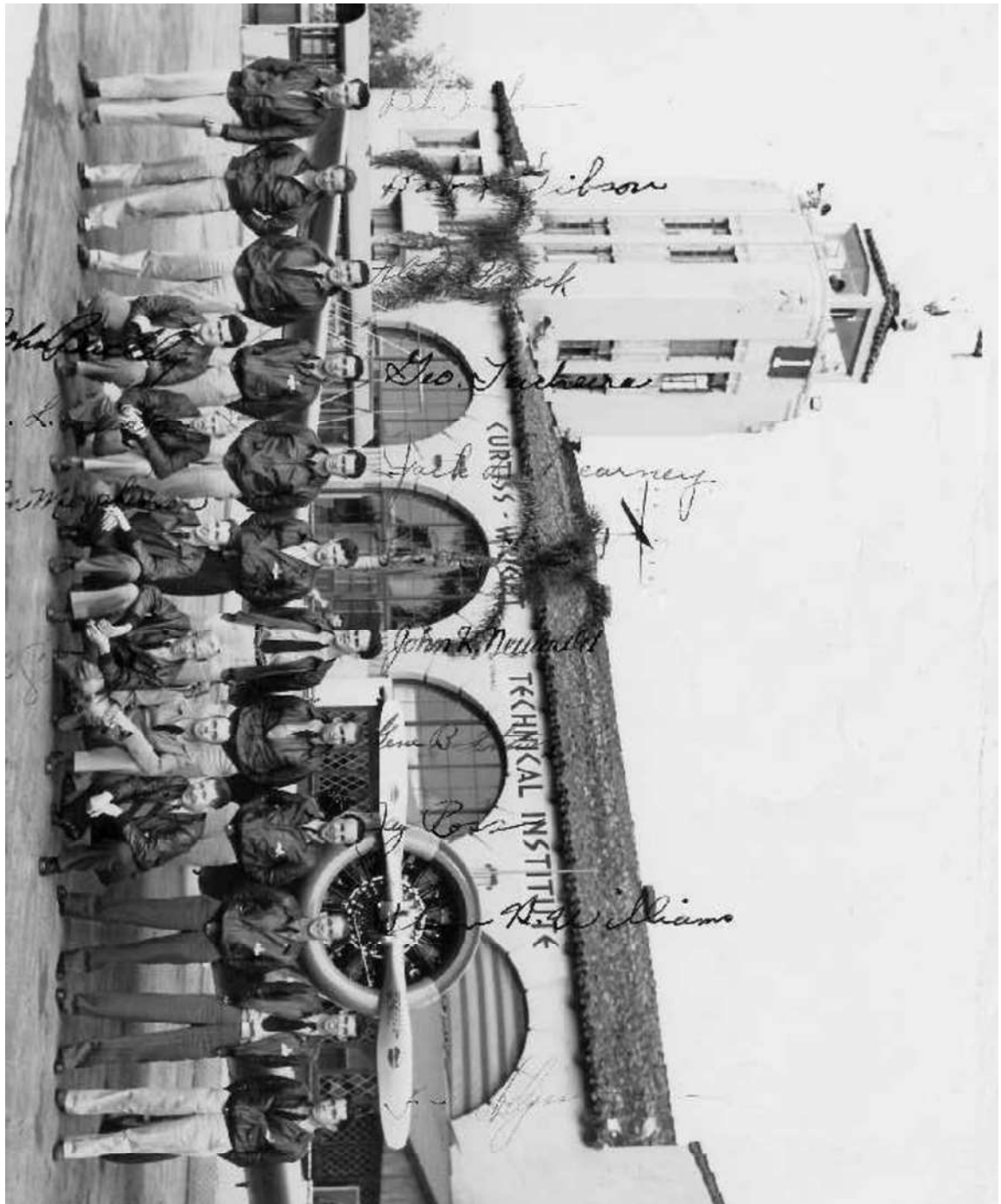














RUNWAY

APRON

TAXIWAY

FLYING SCHOOL

WINDSOCK

HANGAR

TERMINAL

CONTROL TOWER

Where the aircraft lands and takes off.

Designated by letters.

Used for refuelling, servicing and parking.

Used for passenger arrivals and departures.

Indicates the direction and speed of the wind.

Where to learn how to fly.

Used to protect the aircraft from the elements.

Location of those responsible for a number of procedures on the ground and in the air.

ANSWER KEY



Runway

Where the aircraft lands and takes off.



Taxiway

Designated by letters



Apron

Used for refuelling, servicing and parking.



Control Tower

Location of those responsible for a number of procedures on the ground and in the air.



Terminal

Used for passenger arrivals and departures.



Windsock

Indicates the direction and speed of the wind.



Flying school

Where to learn how to fly.



Hangar

Used to protect the aircraft from the elements.