

Aerodrome Inspectors Workshop

Obstructions, Public Protection & Fencing

Location: Trinidad & Tobago, 9-13 JUN 2014

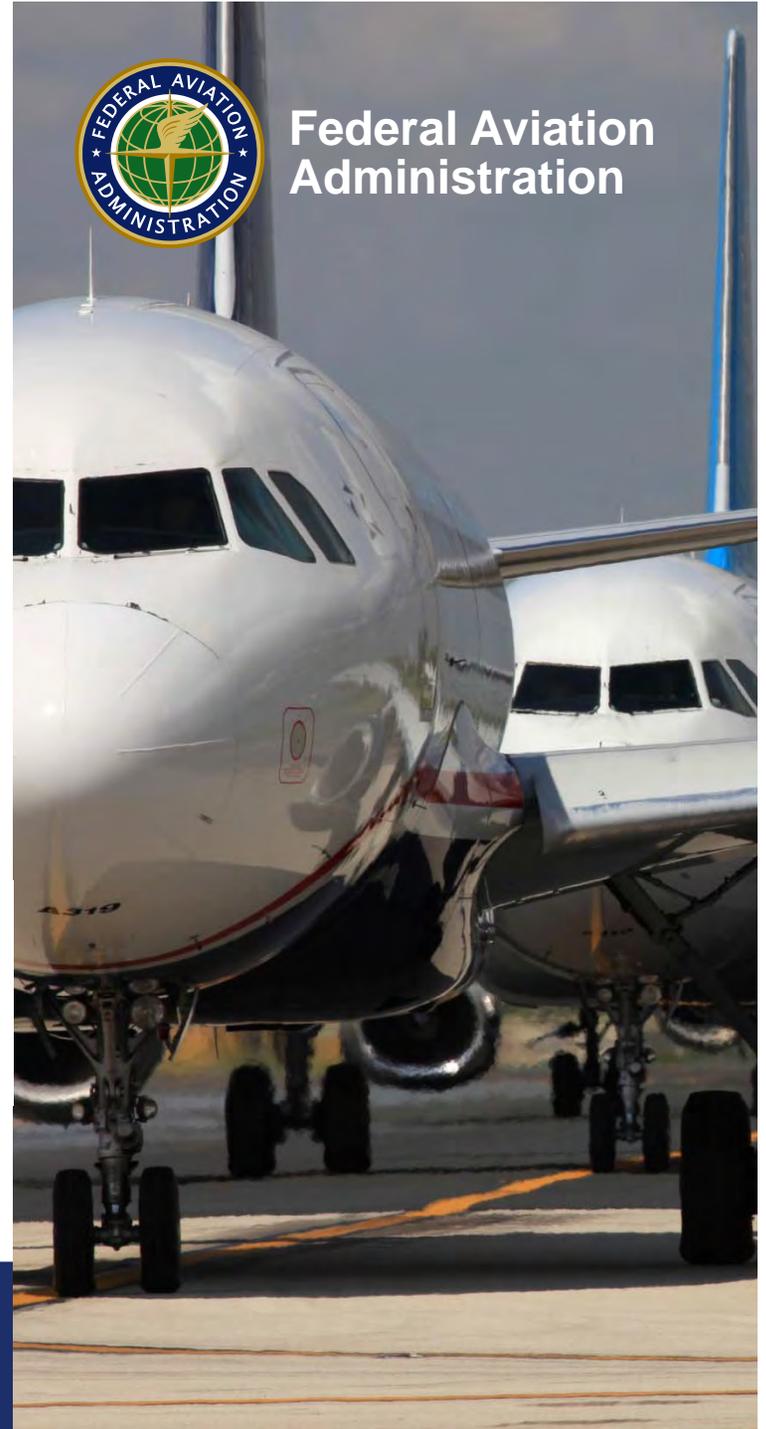
Presenter: Herman Smith, FAA ACSI

Date

Presentation Title



**Federal Aviation
Administration**



Obstructions and Public Protection

Objectives

- Gain understanding of Obstructions and Obstacle Surfaces
- Public Protection
- Fencing



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Obstructions

Aerodromes must evaluate all obstructions to determine if an obstruction create a hazard and safety issue for aerodrome operations.

- **Conduct an aeronautical study to identify a hazard (cell tower raise appch minimums).**
- **Provide written determination once study is complete; such as hazard or no hazard.**



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Obstacle Limitation Surfaces

Obstacle:

All fixed (temporary or permanent) and mobile objects or parts thereof that are located on an area intended for the surface movement of aircraft or that extend above a defined surface intended to protect aircraft in flight.



Obstructions

There are three sets of standards that cover aerodrome obstructions.

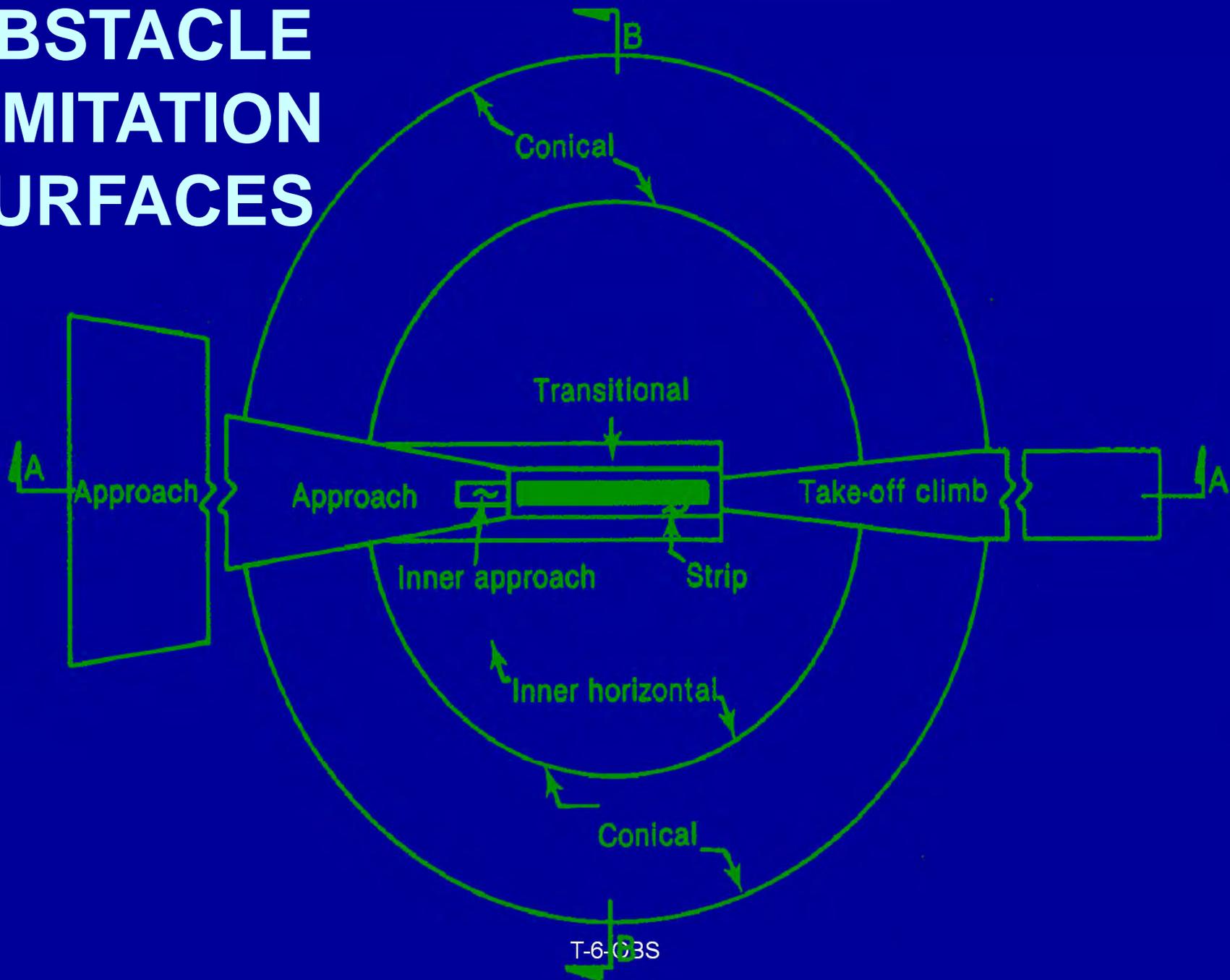
- **ICAO.**

- Identify 8 obstacle surfaces: Conical, Inner Horizontal, Approach, Inner Approach, Transitional, Inner Transitional, Balked Landing, and Take-off Climb

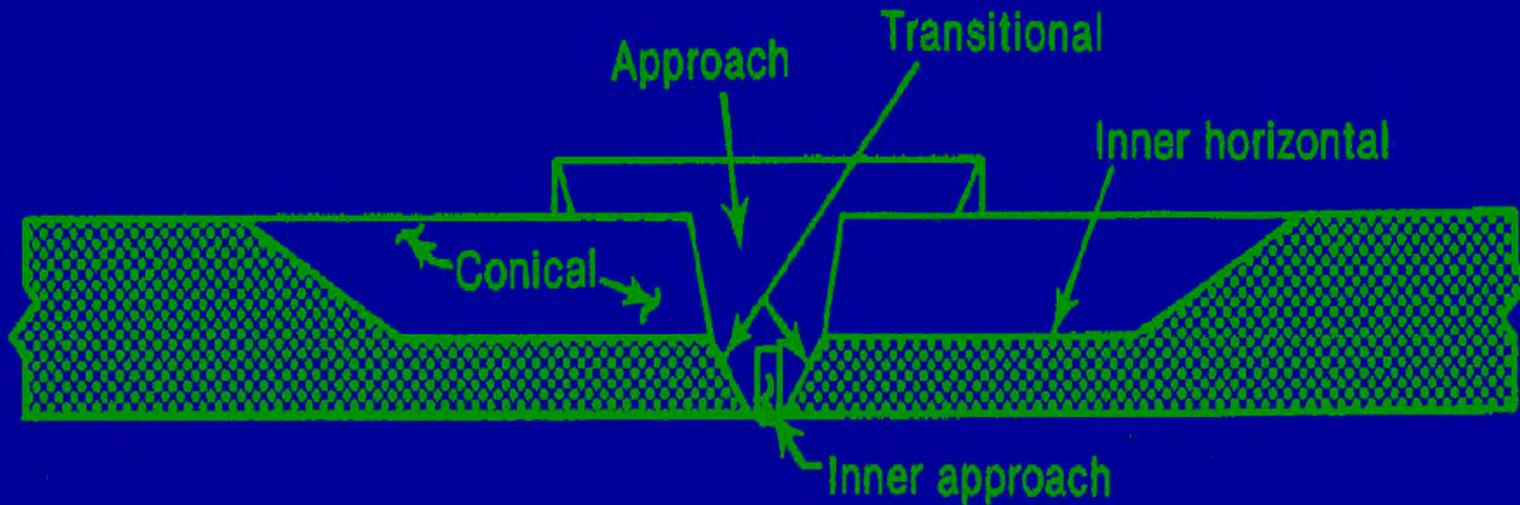
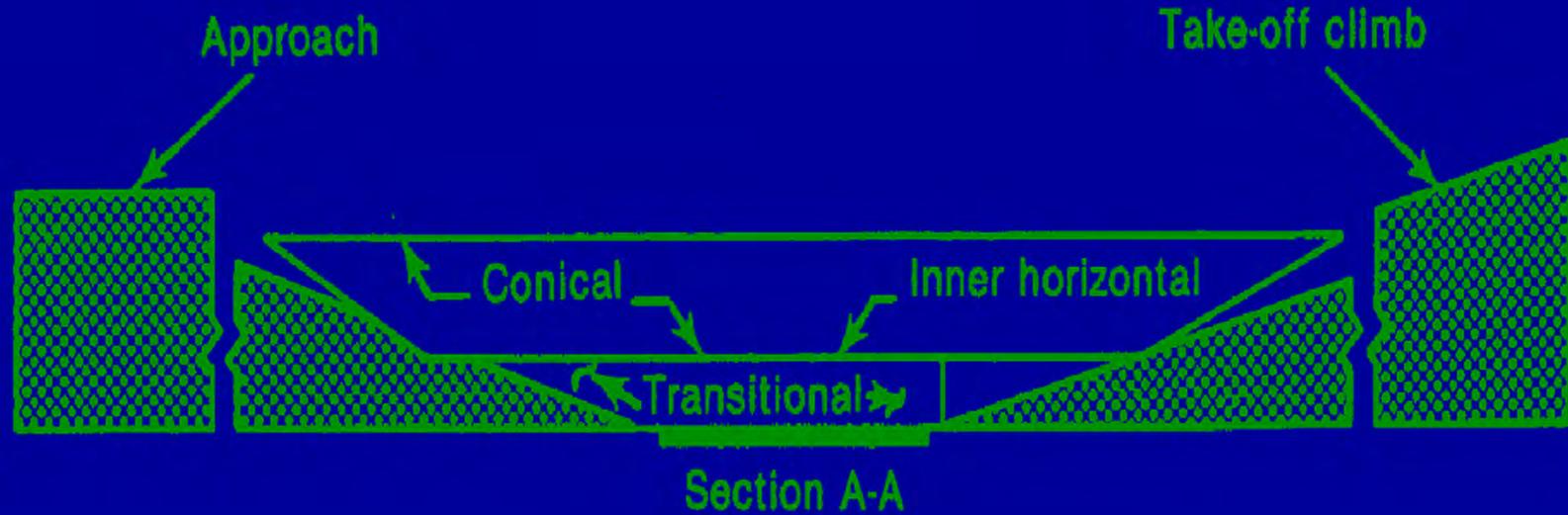


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OBSTACLE LIMITATION SURFACES



OBSTACLE LIMITATION SURFACES



Section B-B

T-7 OPS

Obstructions Continued

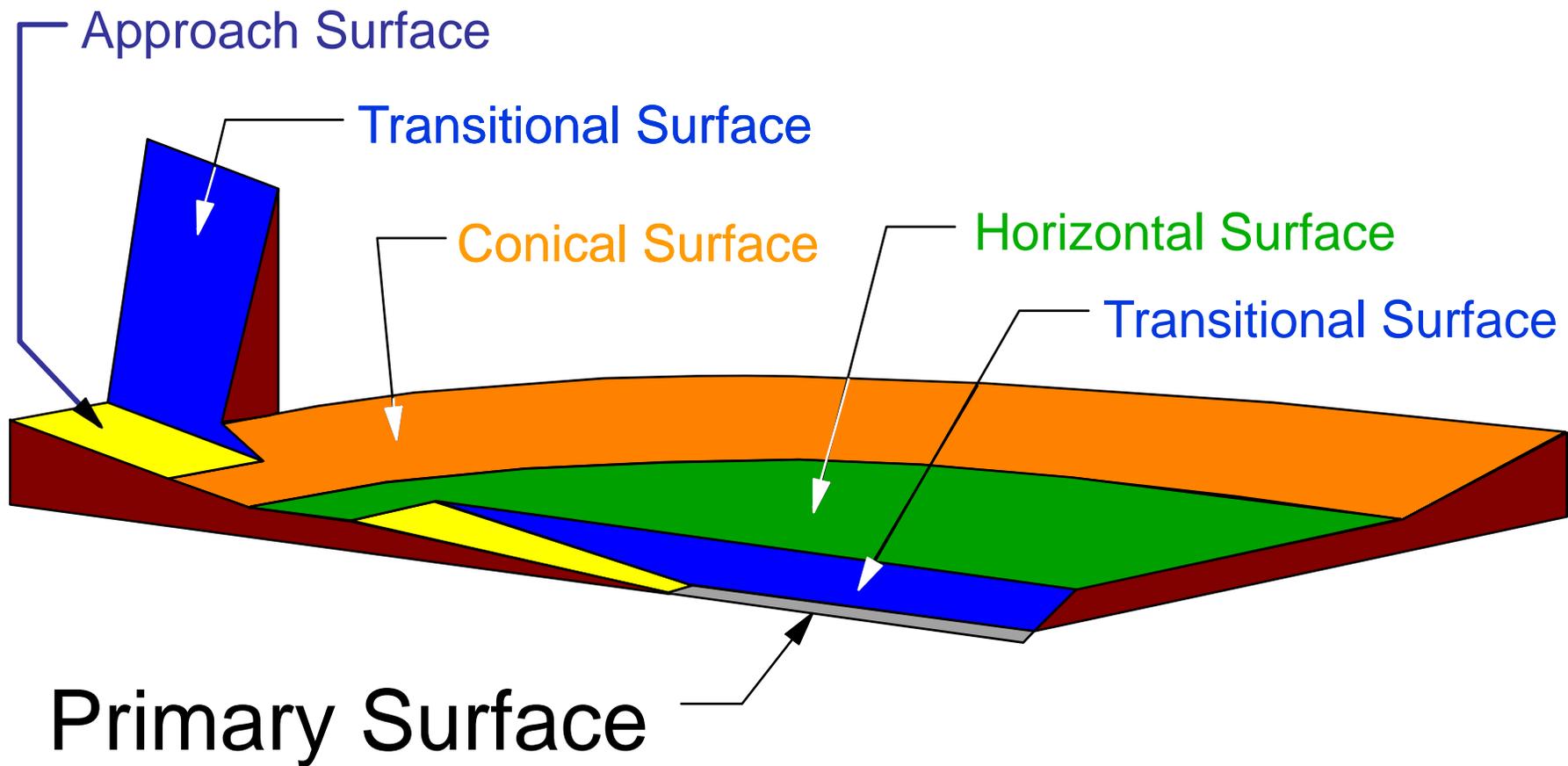
- **CFR Part 77 (U.S.).**
 - Identify 5 obstacle surfaces: Conical, Horizontal, Primary, Approach, and Transitional.



Obstructions

- **Objects which penetrate the obstacle limitation surfaces contained in this chapter may in certain circumstances cause an increase in the obstacle clearance altitude/height for an instrument approach procedure or any associated visual circling procedure. Criteria for evaluating obstacles are contained in Procedures for Air Navigation Services – Aircraft Operations (PANS-OPS) (Doc 8168)**



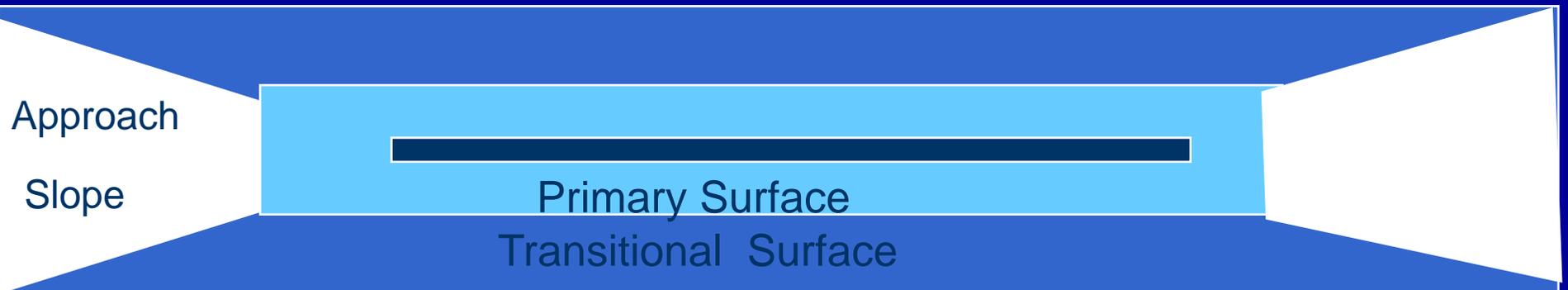


FAR 77 IMAGINARY SURFACES (Cut-Away View)



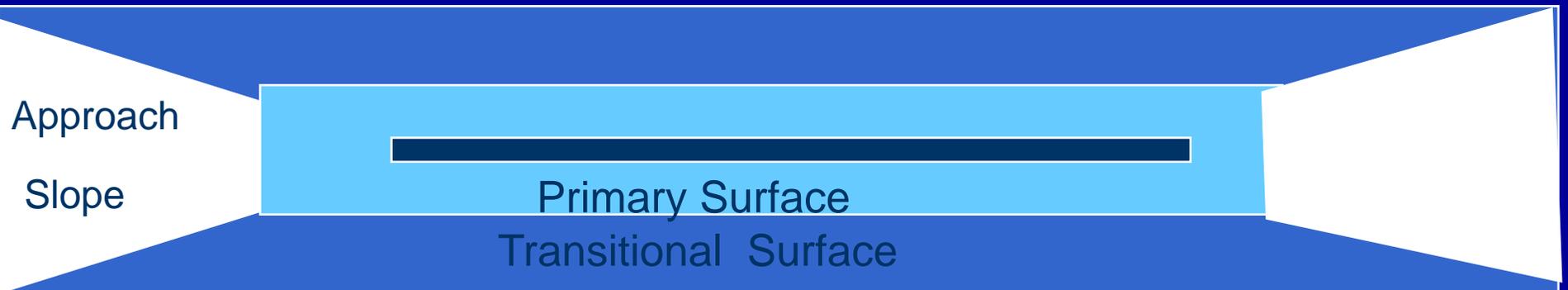
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PART 77 IMAGINARY SURFACES



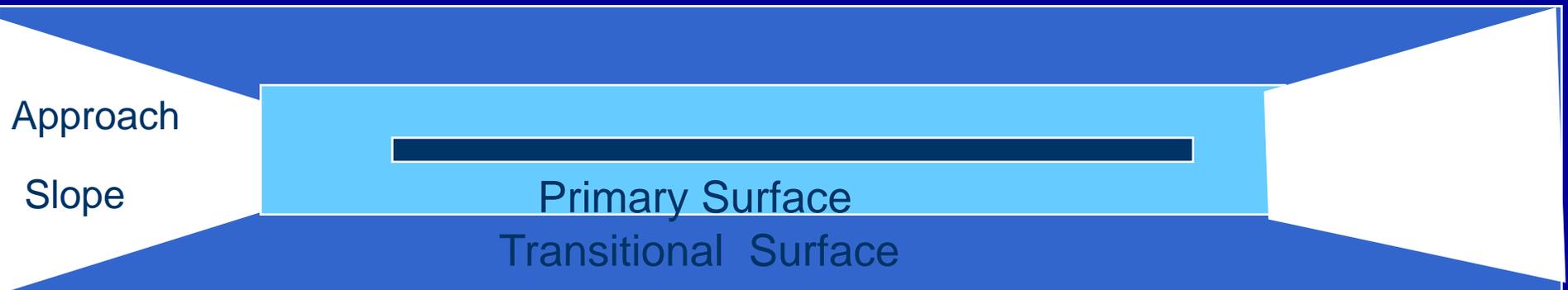
- **Approach surface**
- **Primary surface**
- **Transitional surface**

PART 77 IMAGINARY SURFACES



- **Approach surface**
- **Primary surface**
- **Transitional surface**

PART 77 IMAGINARY SURFACES



- **Approach Surface:**

	V	NC	PIR
Slope:	20:1,	34:1,	50:1
Length:	5000',	10,000',	50,000'

Obstructions Continued

■ Aerodrome Design Criteria

- ICAO uses Annex 14/recommended practices and national standards for aerodrome design criteria as it relates to evaluation of objects.
- U.S. uses FAA AC 150/5300-13 in conjunction with CFR Part 77 for evaluating objects as hazards and making a determination for an aeronautical study.
- Determination=mark/light/remove/no hazard.



Obstructions Continued

■ Obstruction Evaluation System

- ICAO DOC 9774 require each member state to develop a system and procedures for evaluating and making determinations for objects that impact aeronautical activities.
- U.S. uses the Obstruction Evaluation/Airport Airspace Analysis (OE/AAA) program for the evaluation of objects/making a determination for an aeronautical study.



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Obstructions Continued

■ Obstruction Evaluation System

- OE/AAA data base consist of CFR Part 77, AC 150/5300-13, and 5010 Airport Master Record.
- OE/AAA program also allow different functional areas to coordinate on aeronautical study before a final determination is made.
- OE/AAA program include all form letters for addressing/sending responses an aerodrome.



Obstructions Continued

- **OE/AAA program demonstration via internet (about 5 mins.)**
 - Share with participants a known/effective system for evaluating objects/making determination.
 - Solicit feedback from participants on systems used within Africa.



Obstruction Photo



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Obstruction Photo



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Obstruction Photo



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Public Protection

- **ICAO DOC 9774 and U.S. CFR Part 139 mandates safeguards:**
 - prevent inadvertent access into the movement area by persons or vehicles.
 - Provide reasonable protection of persons and property from aircraft blast.
 - Fencing or natural barriers that prevent unauthorized access by vehicles, persons or wildlife.



Public Protection



Public Protection



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Public Protection



ICAO ANNEX 14

Fencing

- **9.10.3 Recommendation.** – A fence or other suitable barrier should be provided on a aerodrome to deter the inadvertent or premeditated access of an unauthorized person onto a non-public area of the aerodrome.



ICAO ANNEX 14

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- **9.10.7 Recommendation.** – The fence or barrier should be located so as to separate the movement area and other facilities or zones on the aerodrome vital to the safe operations of aircraft area open to public access



ICAO ANNEX 14

Fencing

- **9.10.9 Recommendation.** – When greater security is thought necessary, a cleared area should be provided on both sides of the fence or barrier to facilitate the work of patrols and to make trespassing more difficult. Consideration should be given to the provision of a perimeter road inside the aerodrome fencing for the use of both maintenance personnel and security patrols.



Questions?



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