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# *Corso Base in Aviation Safety Management System*

*Modulo: Risk Management &  
Safety Assessment*

*Casi Studio: International airport  
construction work*



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***Pagina bianca***

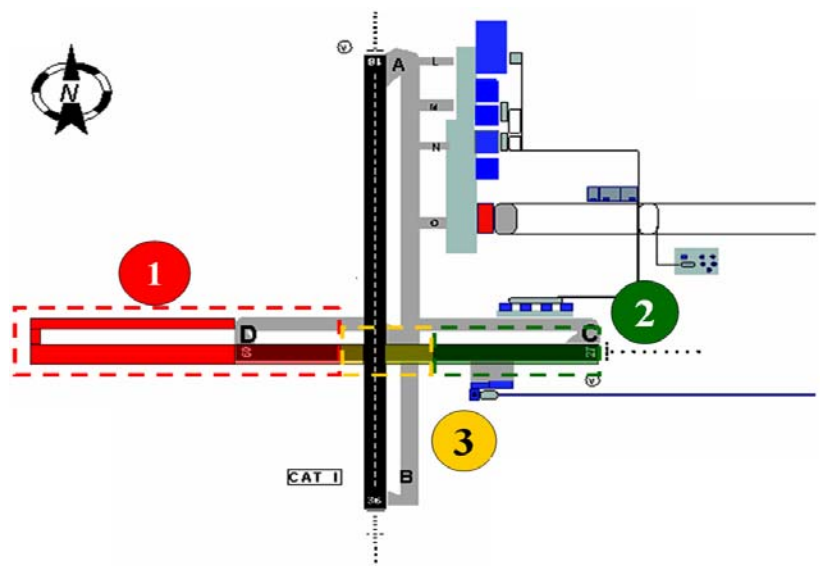
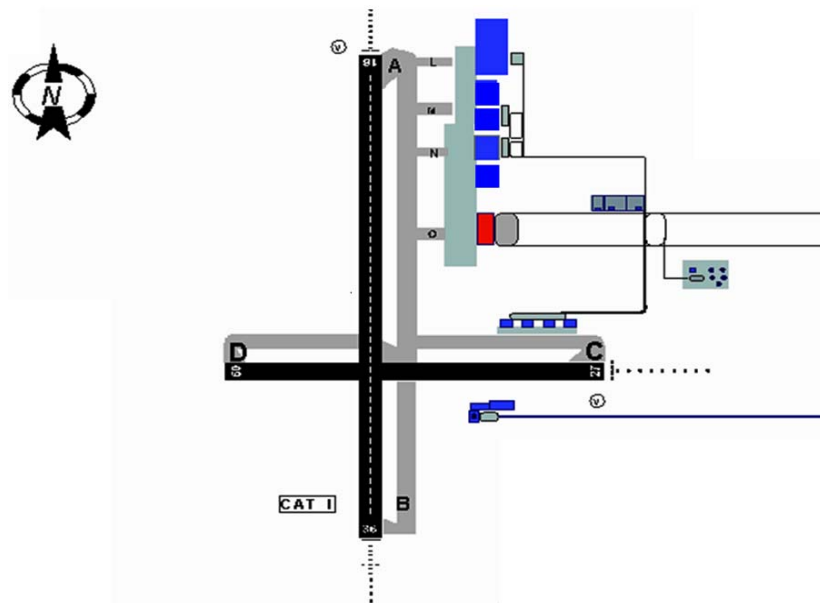


## SAFETY MANAGEMENT SYSTEMS (SMS) COURSE

### Exercise 04/01 – International airport construction work

#### Scenario

This is a construction project to repave one of the two crossing runways at an international airport (100,000 movements a year). It's a three-phase construction project.





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## Scope of the work

- **Phase 1:**
  - Extend the length of RWY 09-27 by 900 meters westward and width from 30 to 45 meters from intersection with RWY 18-36, and strengthen the runway extension (from asphalt to concrete) to increase its Pavement Classification Number (PCN).
  - Extend the length of TWY Delta by 900 meters westward.
  - Estimated time to complete the work: seven (7) months.
- **Phase 2:**
  - Construct and enlarge new threshold entrance and holding zone at TWY Charlie.
  - Extend the width of RWY 09-27 from 30 to 45 meters and strengthen (from asphalt to concrete) this part of the runway up to a point 200 m before intersection TWY A-B to increase its PCN.
  - Estimated time to complete the work: five (5) months.
- **Phase 3:**
  - Complete the construction work of RWY 09-27 for the central area of the last 350 m at the intersection of RWY 09-27 and RWY 18-36 (from asphalt to concrete), increase its width from 30 to 45 meters and its PCN.
  - Estimated time to complete the work: two (2) months.
- **Runway utilization during the construction work**
  - Continuous utilization of RWY 18-36 during the three-phase construction project.
  - RWY 18-36 length is 3.850 m and the distance available from threshold RWY 18 to intersection RWY 09-27 is 2.600 m.
  - Information must be provided to airport users.

## Group activity

A facilitator will be appointed, who will coordinate the discussion. A summary of the discussion will be written on flip charts, and a member of the group will brief on their findings in a plenary session.

## Your task

1. Identify the hazards using brainstorming techniques.
  - a. Brainstorm a list of possible hazards (use a flip chart).
  - b. Make sure they are hazards, not risks.
2. Complete the attached log (Table 04/01) as follows:
  - a. List type of operation or activity
  - b. State the generic hazard (hazard statement)
  - c. Identify specific components of the hazard
  - d. Identify specific forms of hazards
3. It is recommended to conduct the analysis per phase of construction.



**TABLE 04/01 – HAZARD IDENTIFICATION**

N°	Type of <u>operation</u> or activity	State the <u>generic hazard</u> (hazard statement)	Identify <u>specific components</u> of the hazard	Identify <u>specific forms</u> of the hazard
1	Air Traffic Services	Air traffic considerations associated with single runway operation.	<ul style="list-style-type: none"> <li>- Increased volume of traffic</li> <li>- Separation issues</li> <li>- Runway congestion</li> <li>- Controller workload</li> <li>- ...</li> </ul>	<ul style="list-style-type: none"> <li>- Collisione tra velivoli in volo</li> <li>- Collisioni tra velivoli e mezzi sul terreno</li> <li>- .....</li> </ul>
2				
3				
4				
5				
6				



N°	Type of <u>operation</u> or activity	State the <u>generic hazard</u> (hazard statement)	Identify <u>specific components</u> of the hazard	Identify <u>specific forms</u> of the hazard
7				
8				



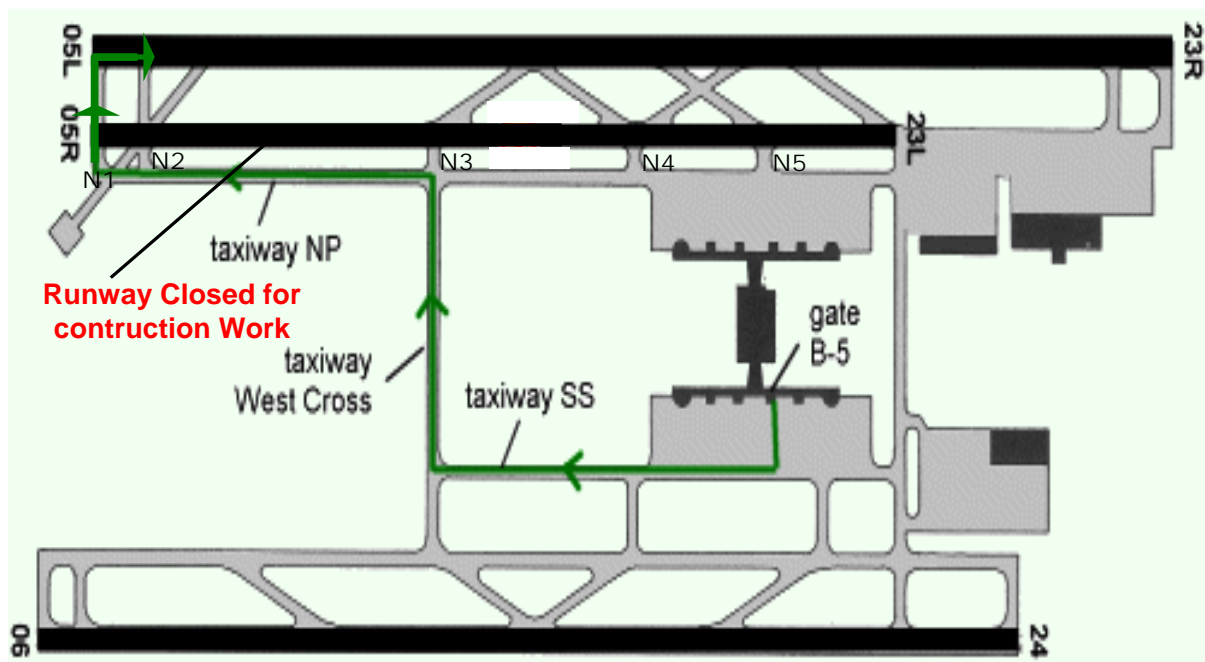
## SAFETY MANAGEMENT SYSTEMS (SMS) COURSE

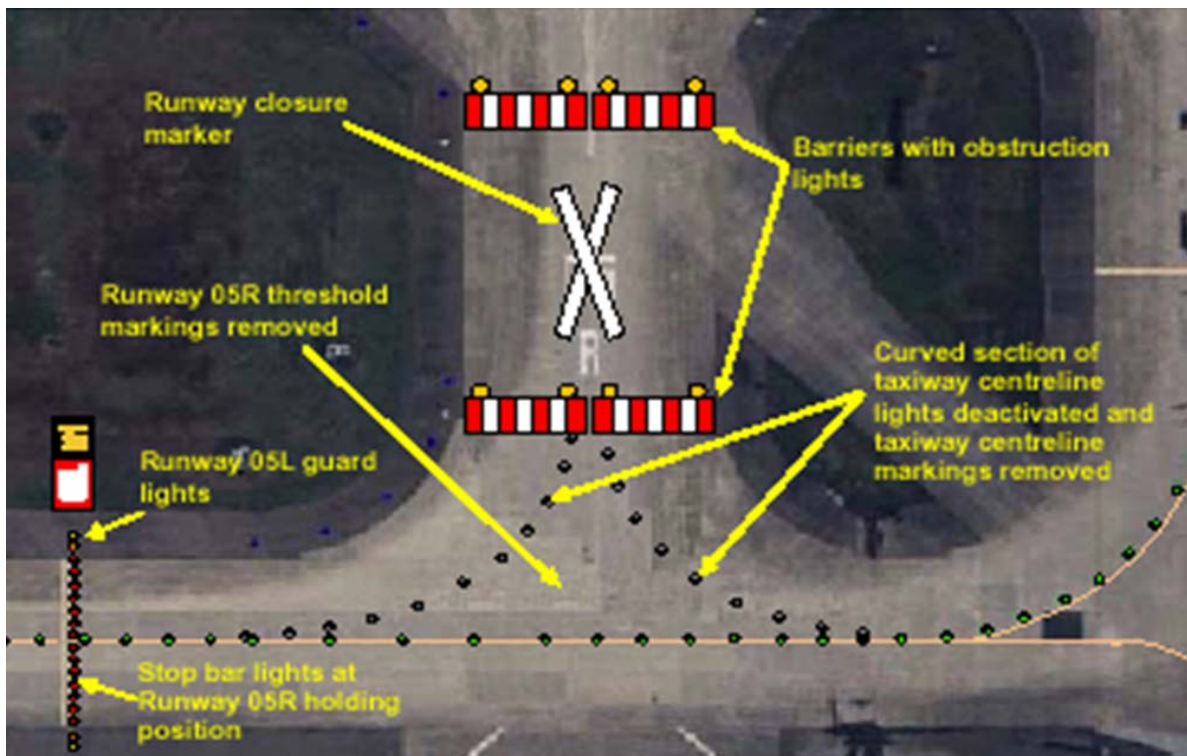
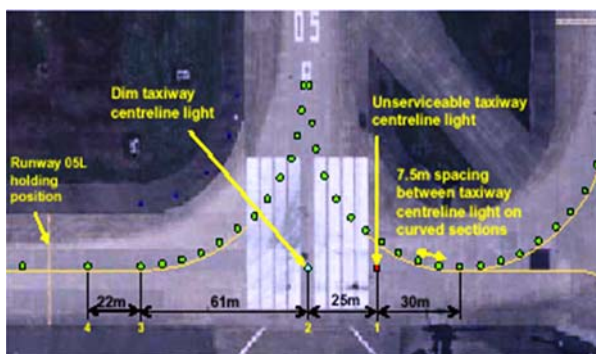
### *Exercise 04/02 – International airport construction work*

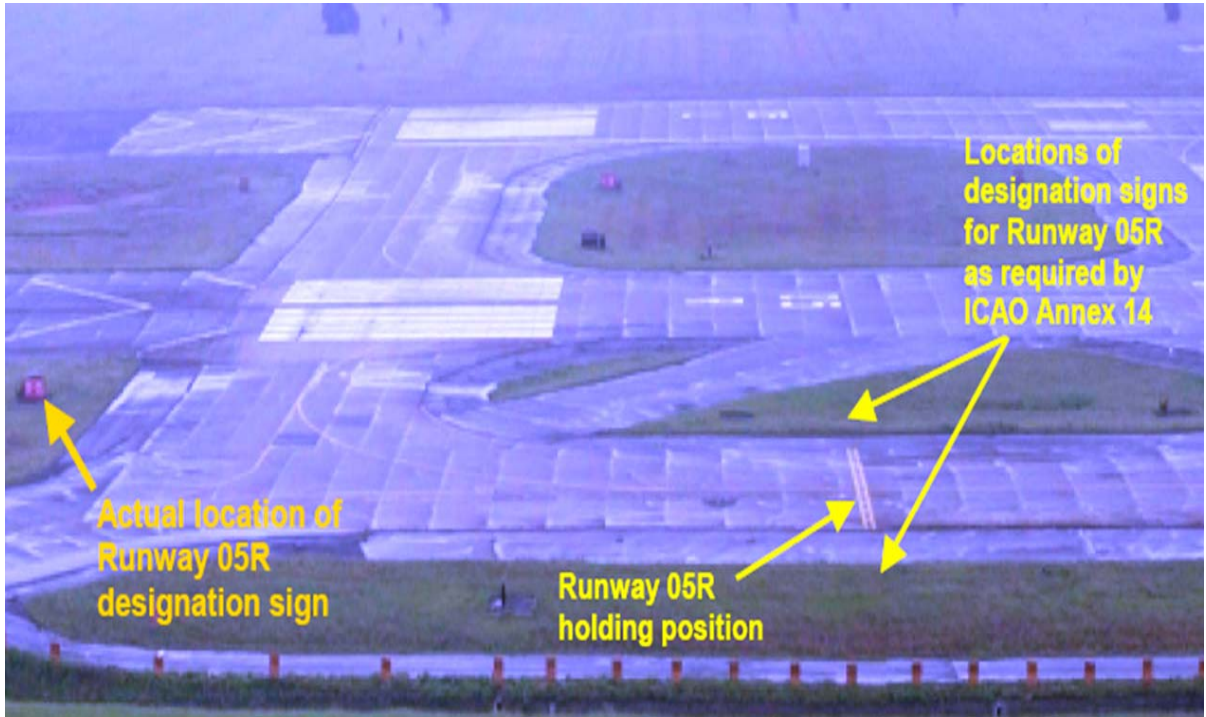
#### Scenario

This is undergoing a repaving of one of the two parallel runways at an international airport (100,000 movements a year). The runway **05R** is closed for take-off and landing, and part of runway **05R** is only available for taxi.

Develop the preliminary Risk Assessment associated with the closure of the runway and the associated taxing procedure, as described below. Ensure that the procedure, signals and all other measures of safety have are able to ensure a reliable and safe operation process, by defining Hazards and related Risks.









**TABLE 04/01 – HAZARD IDENTIFICATION**

N°	Type of <u>operation</u> or activity	State the <u>generic hazard</u> (hazard statement)	Identify <u>specific components</u> of the hazard	Identify <u>specific forms</u> of the hazard
1	<i>Air Traffic Services</i>	<i>Air traffic considerations associated with single runway operation.</i>	<ul style="list-style-type: none"> <li>- <i>Increased volume of traffic</i></li> <li>- <i>Separation issues</i></li> <li>- <i>Runway congestion</i></li> <li>- <i>Controller workload</i></li> <li>- ...</li> </ul>	<ul style="list-style-type: none"> <li>- <i>Collisione tra velivoli in volo</i></li> <li>- <i>Collisioni tra velivoli e mezzi sul terreno</i></li> <li>- .....</li> </ul>
2				
3				
4				



N°	Type of <u>operation</u> or activity	State the <u>generic hazard</u> (hazard statement)	Identify <u>specific components</u> of the hazard	Identify <u>specific forms</u> of the hazard
5				
6				
7				
8				