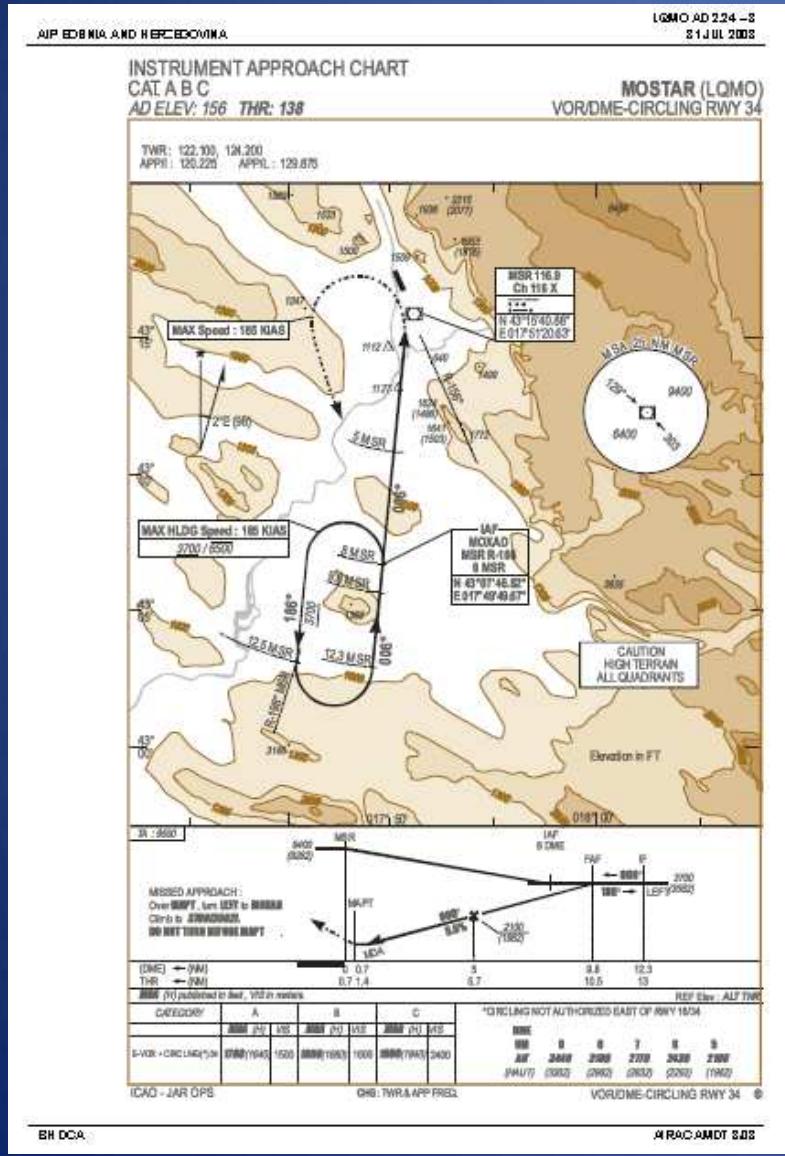


SAFETY CONSIDERATION SESSION

# ILS AT MOSTAR AND TUZLA AIRPORTS

Sarajevo, 12 May, 2009.

# CURRENT SITUATION MOSTAR



# MOSTAR AIRPORT HAS A NON-PRECISION APPROACH:

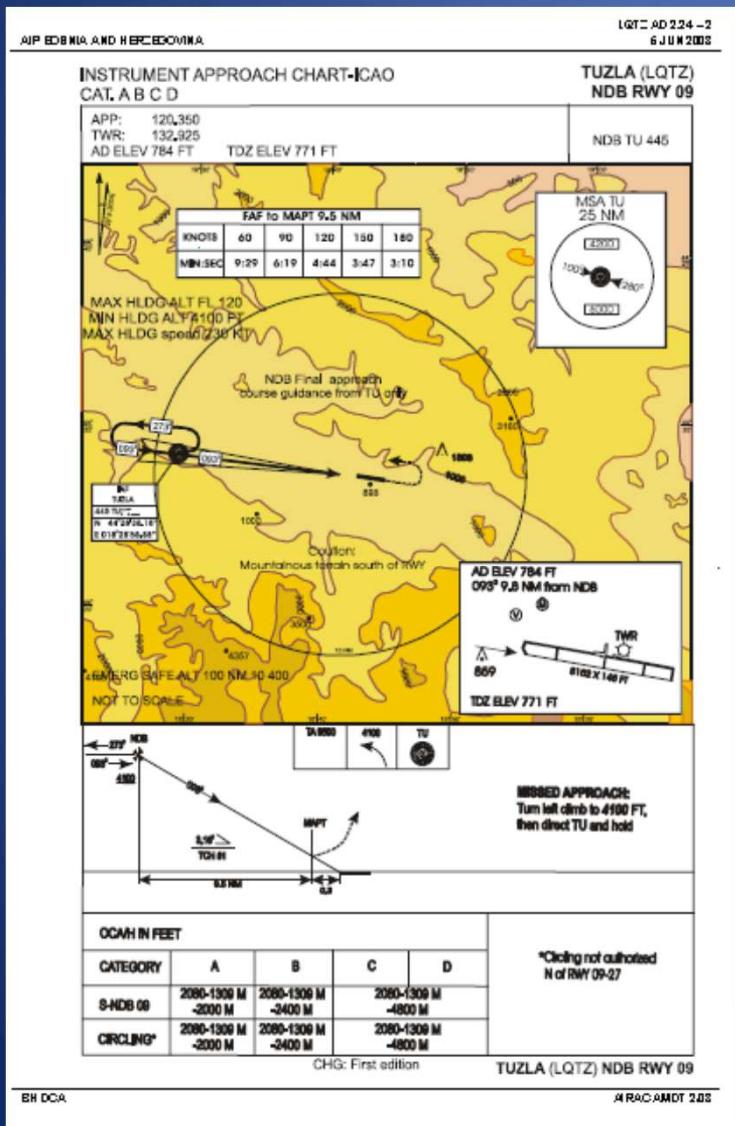
**-(VOR/DME CIRCLING RWY  
34**

**-NDBDME (VOR)  
CIRCLING RWY 34**

# AYOUT OF MOSTAR AIRPORT

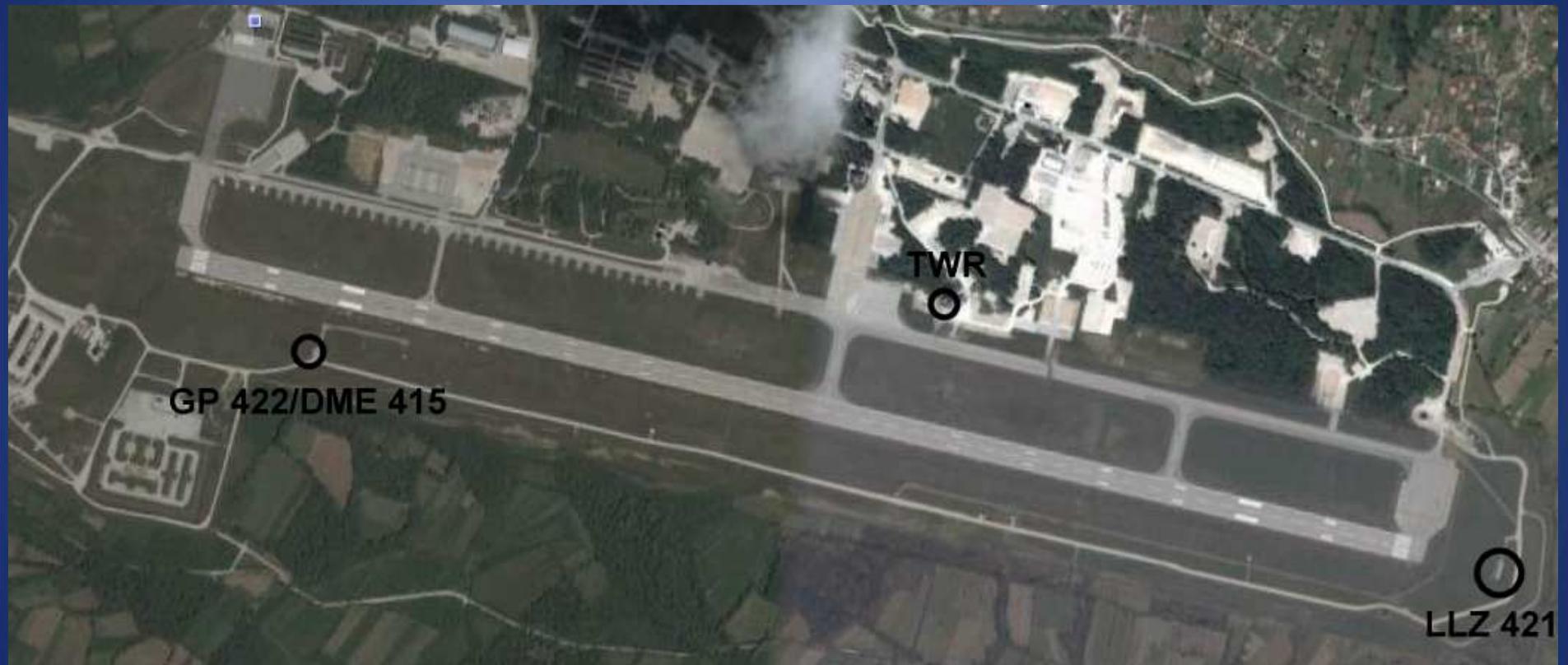


# CURRENT SITUATION TUZLA



# TUZLA AIRPORT HAS A NON-PRECISION APPROACH: NDB RWY 09

# LAYOUT OF TUZLA AIRPORT



# CHANGE

TO INTRODUCE ILS SYSTEMS AT MOSTAR AND TUZLA AIRPORTS

BENEFITS:

CURRENT NON-PRECISION APPROACH WILL BE REPLACED WITH PRECISION APPROACH

AS A RESULT THE PILOT'S WORKLOAD WILL BE REDUCED DURING THE APPROACH

LOWER OPERATIONAL MINIMA WILL BE PUT IN PLACE

# ILS COMPONENTS

- LLZ 421 Transmitter 1F Dual with Antenna
- GP 422 Transmitter 2F Dual with Antenna
- DME 415 Dual with Antenna Collocated with GP 422
- Remote Control Status Equipment RCSE 443
- Control Tower Unit CTU
- **Spare Parts and Test Equipment**

# MOSTAR AIRPORT TWO CONFIGURATION OPTIONS

## FIRST OPTION

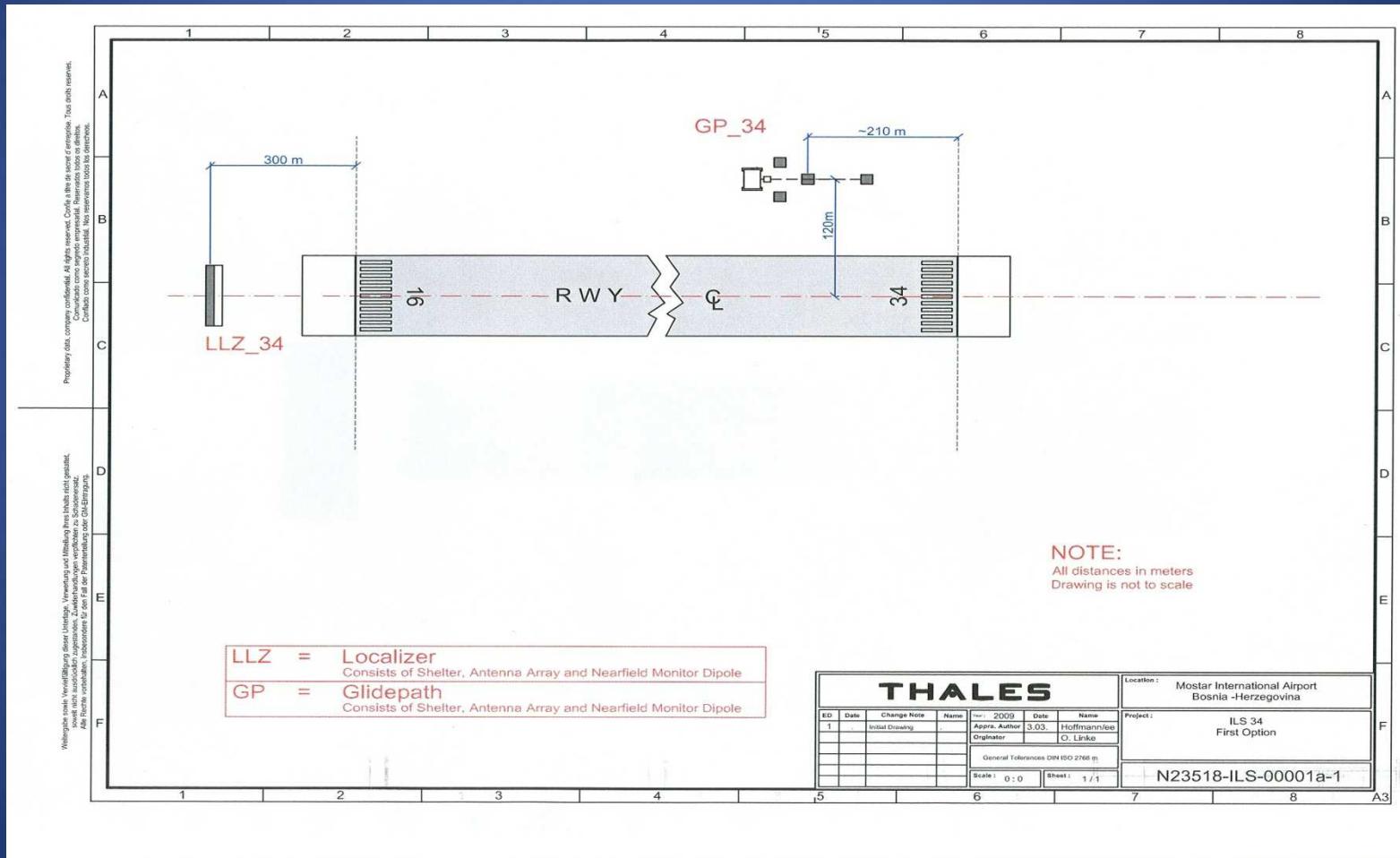
- STRAIGHT IN APPROACH using steep Glide Angle

### RECOMMENDATION:

- LLZ Antenna located about 300 metars from threshold 16
- GP Antenna at the location of 120 m right hand side (in approach direction) from RWY CL and about 210 m from threshold 34

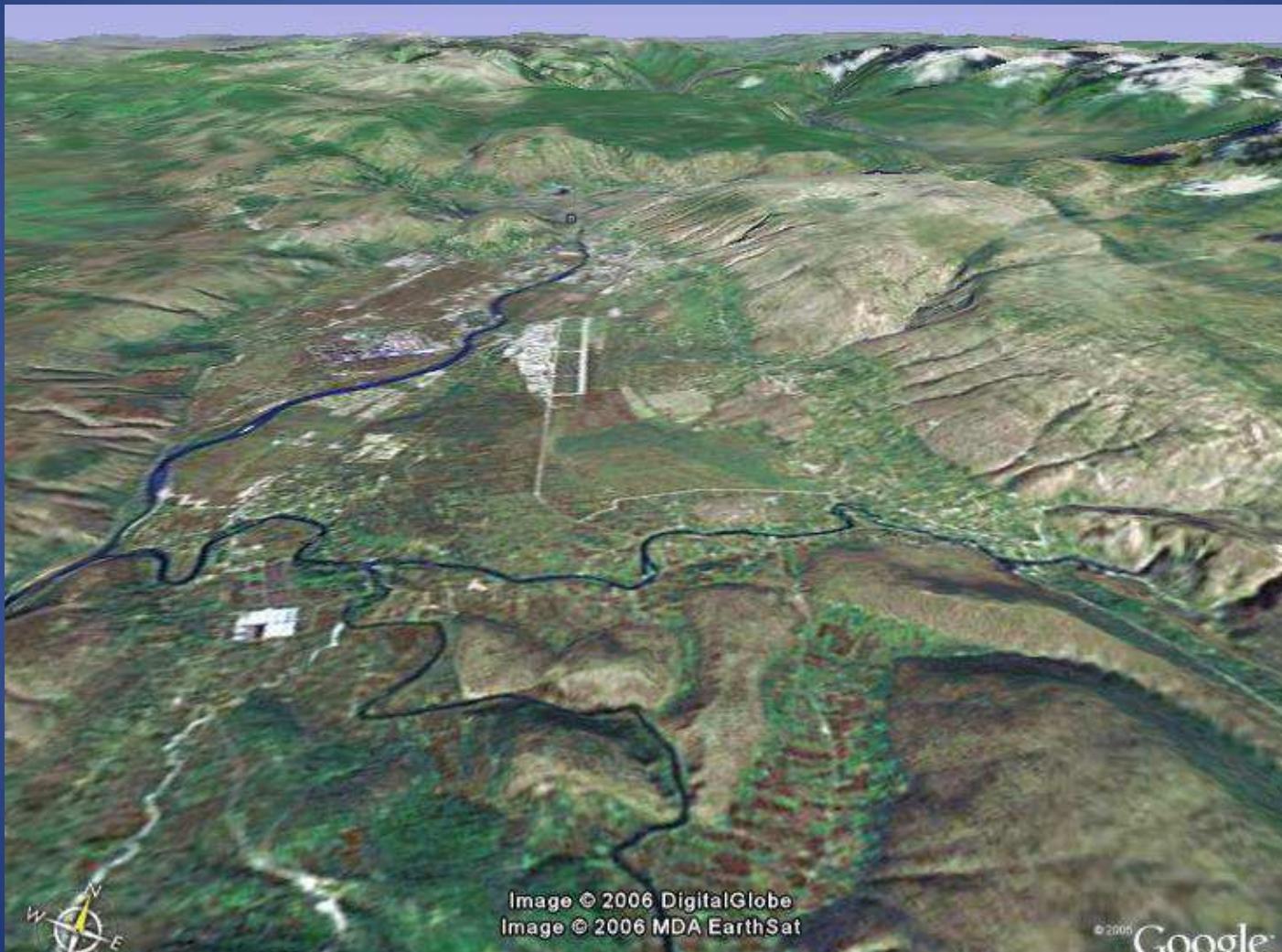
# MOSTAR AIRPORT

## ILS 34 Straight in Approach



# MOSTAR AIRPORT

## ILS 34 Straight in Approach



Complex surrounding topography

# MOSTAR AIRPORT TWO CONFIGURATION OPTIONS

## SECOND OPTION

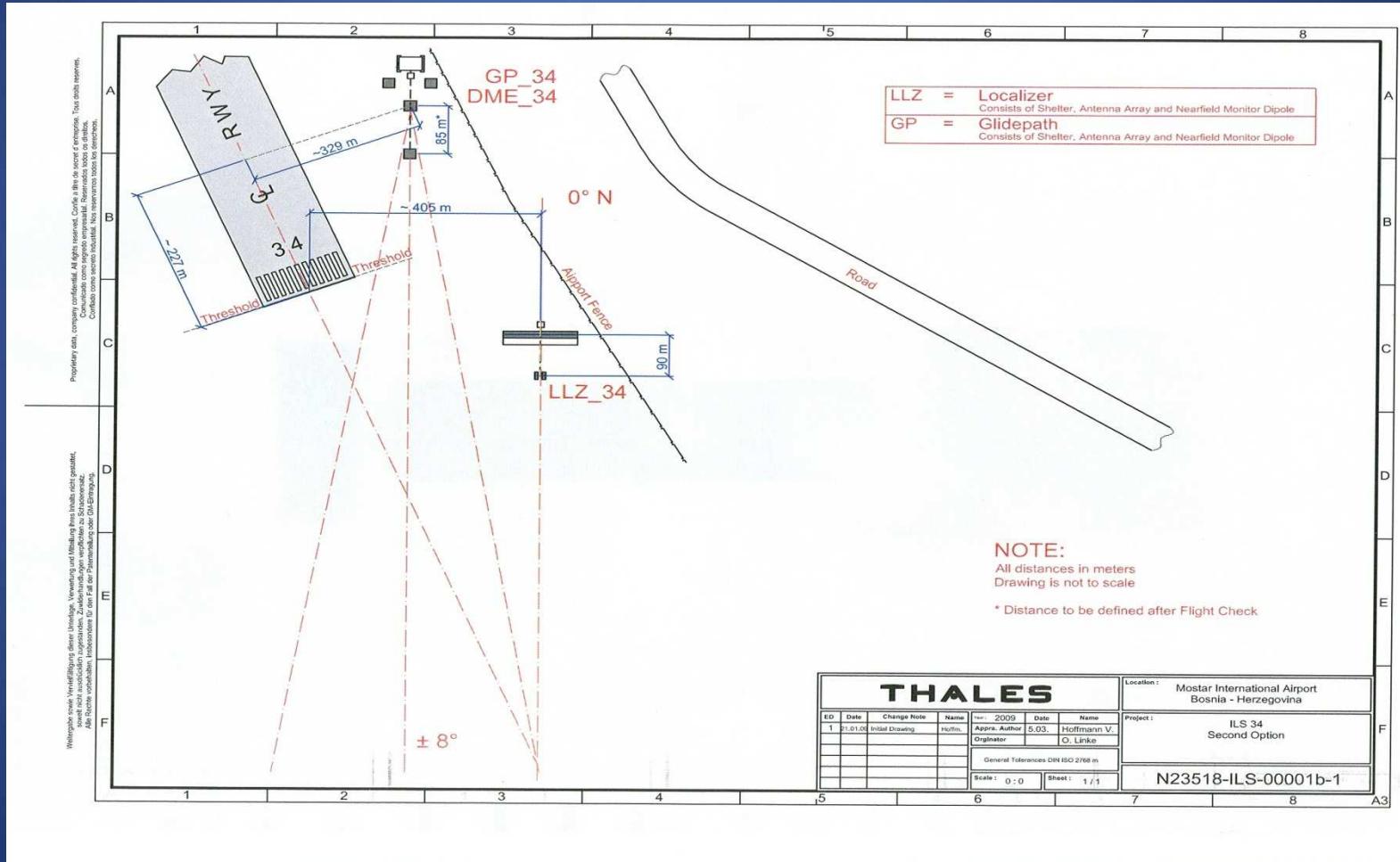
- OFFSET APPROACH using approx. 3,2° Glide Angle

### RECOMMENDATION:

- LLZ Antenna located rectangular on a virtual extended centre line from the DVOR to the North near (inside) the airport fence
- GP Antenna at the location of 227 m from threshold 34 and about 329 m right hand side (in approach direction) from the RWY CL

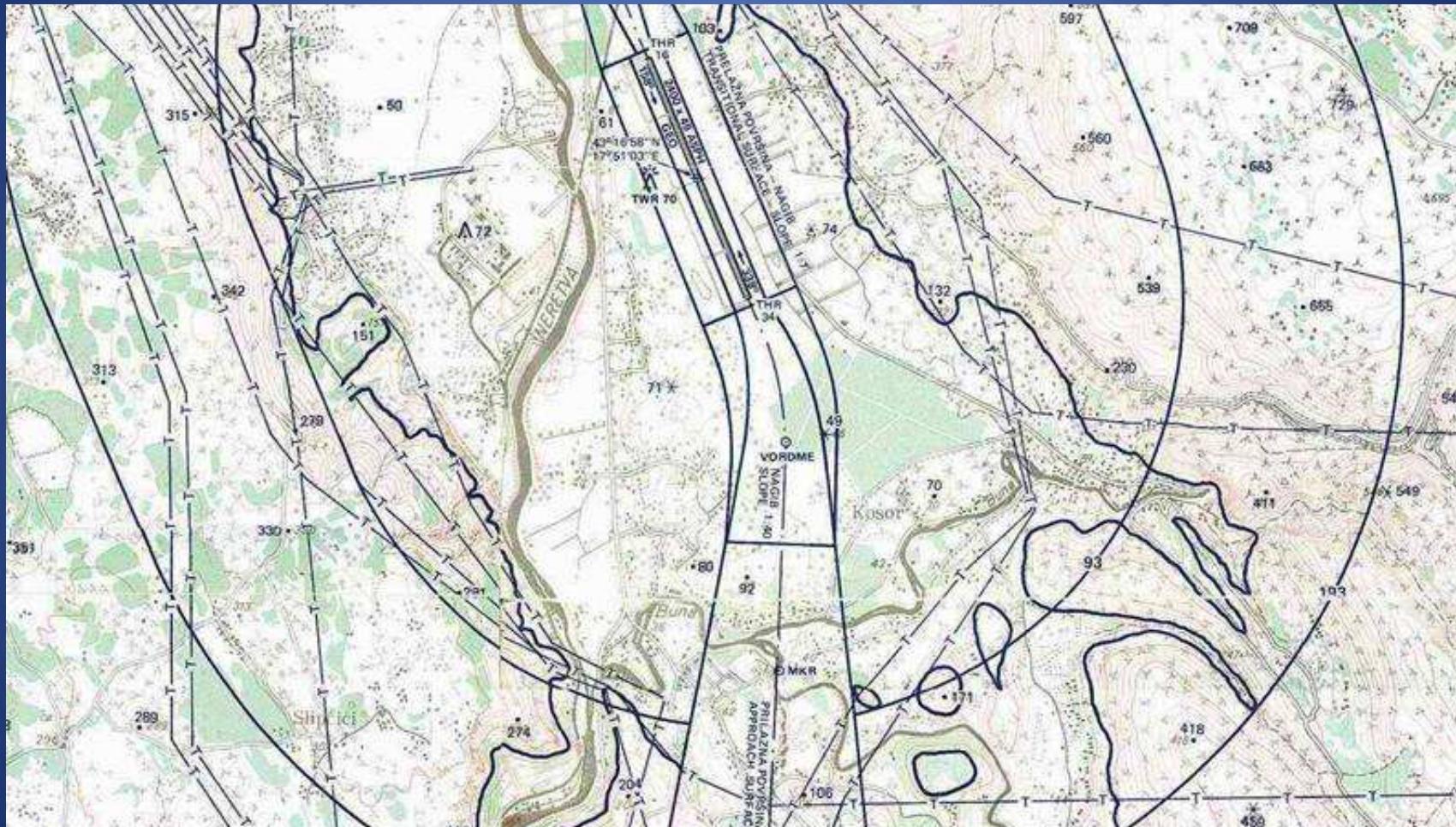
# MOSTAR AIRPORT

## ILS 34 Offset Approach



# MOSTAR AIRPORT

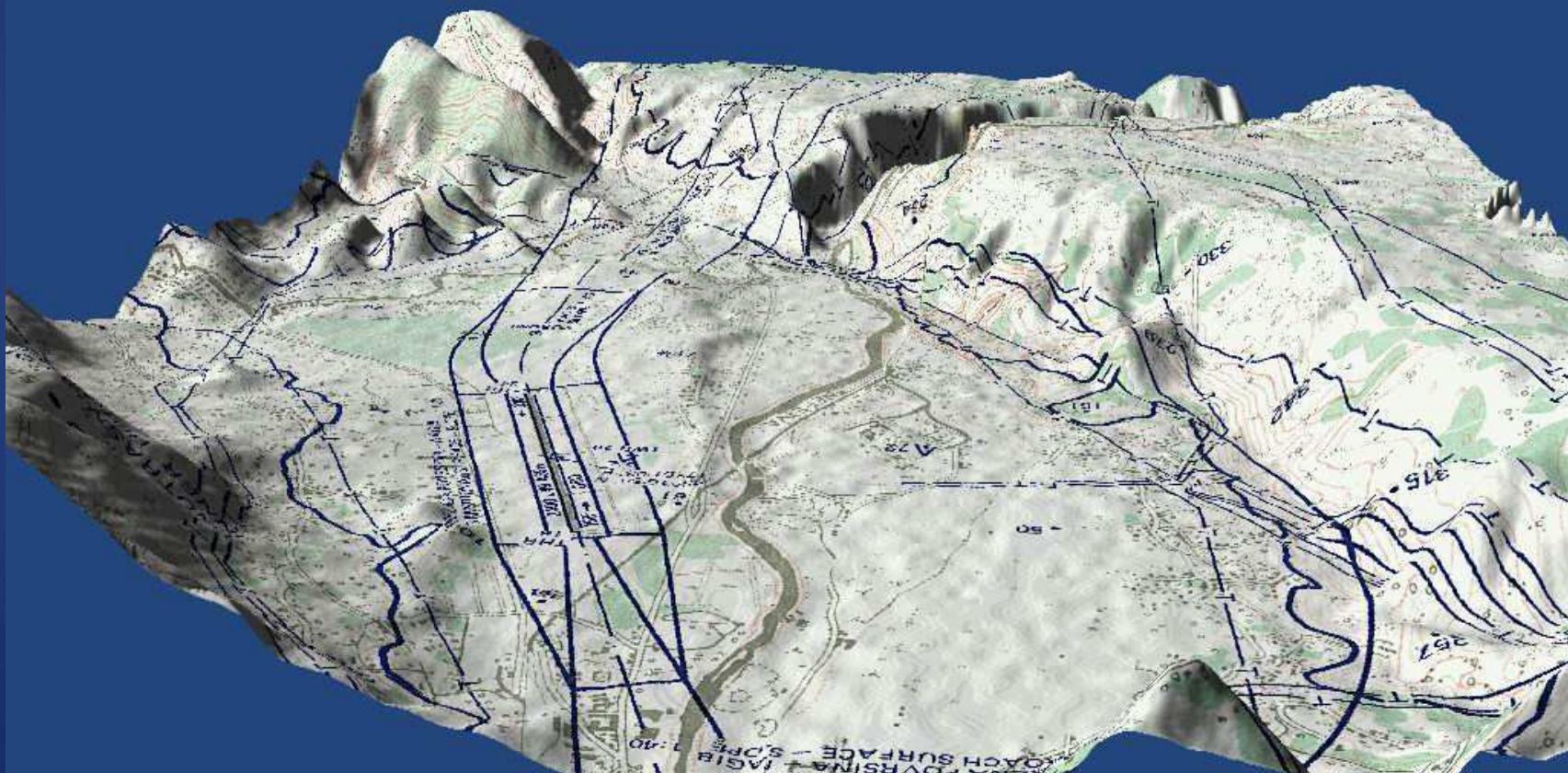
## ILS 34 Offset Approach



# Mostar Airport - Obstacle Chart

# MOSTAR AIRPORT

## ILS 34 Offset Approach



# Mostar Airport - Obstacle Chart

# MOSTAR AIRPORT

## Power supply and signal cabling

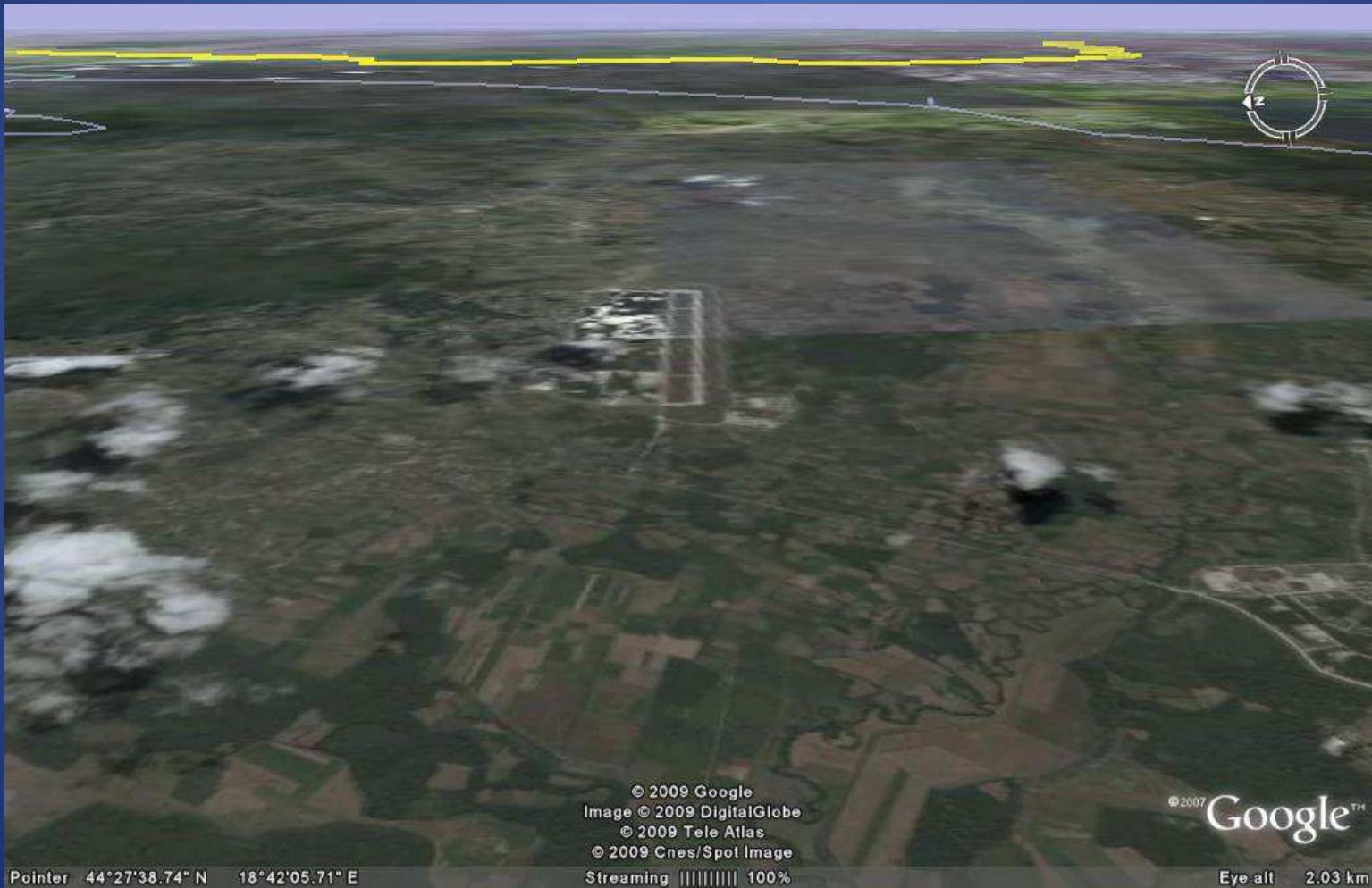


### LEGEND:

- NEW POWER SUPPLY CABLE (cca 2.5 km) (THALES REQUEST)
- NEW SIGNAL CABLE 20x2x0.6 (cca 2.5 km) (THALES REQUEST)

# TUZLA AIRPORT

## ILS 09 Straight in Approach



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Streaming ||||||| 100%

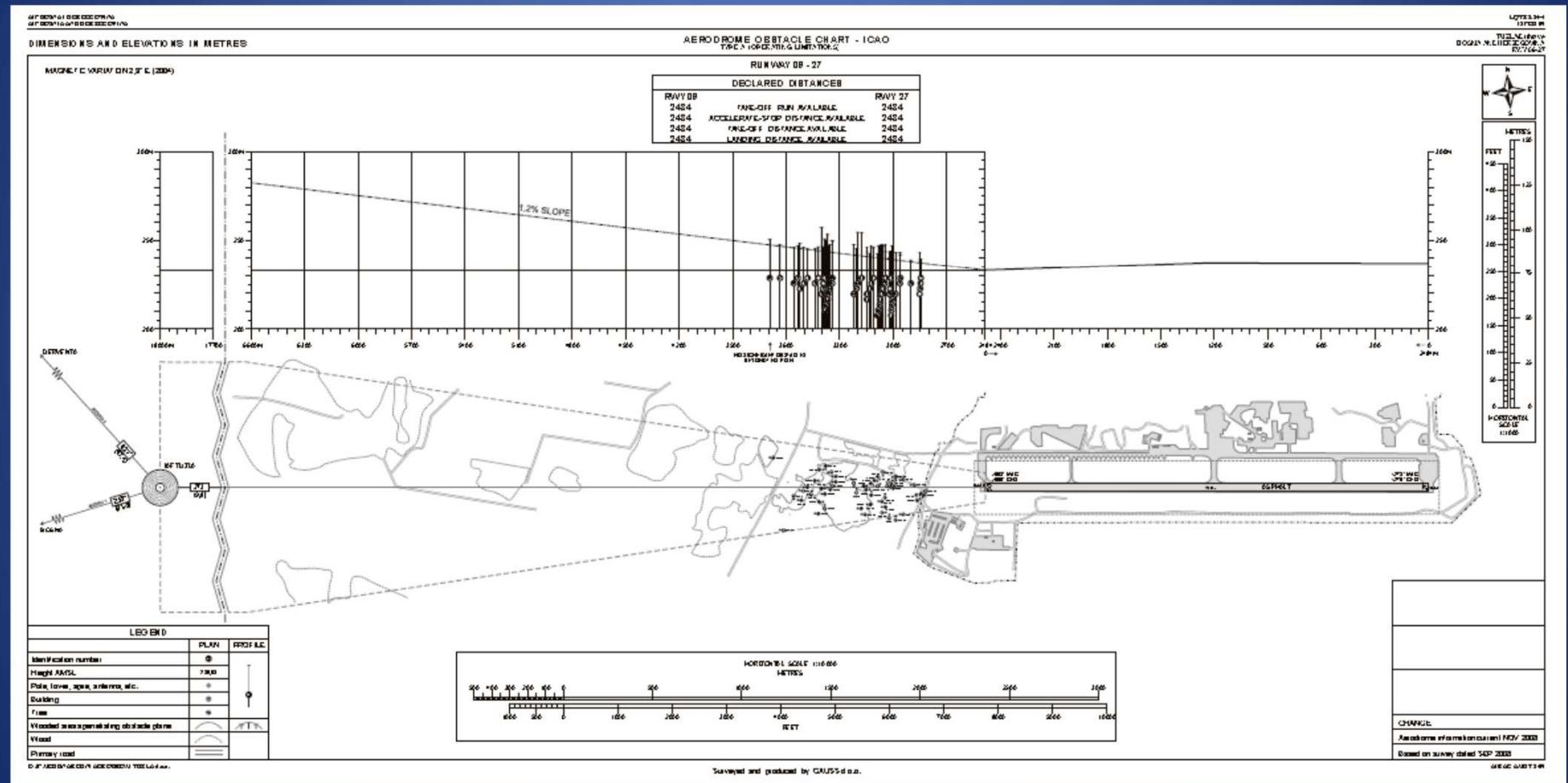
©2007 Google™

Pointer 44°27'38.74" N 18°42'05.71" E

Eye alt 2.03 km

# TUZLA AIRPORT

## ILS 09 Straight in Approach



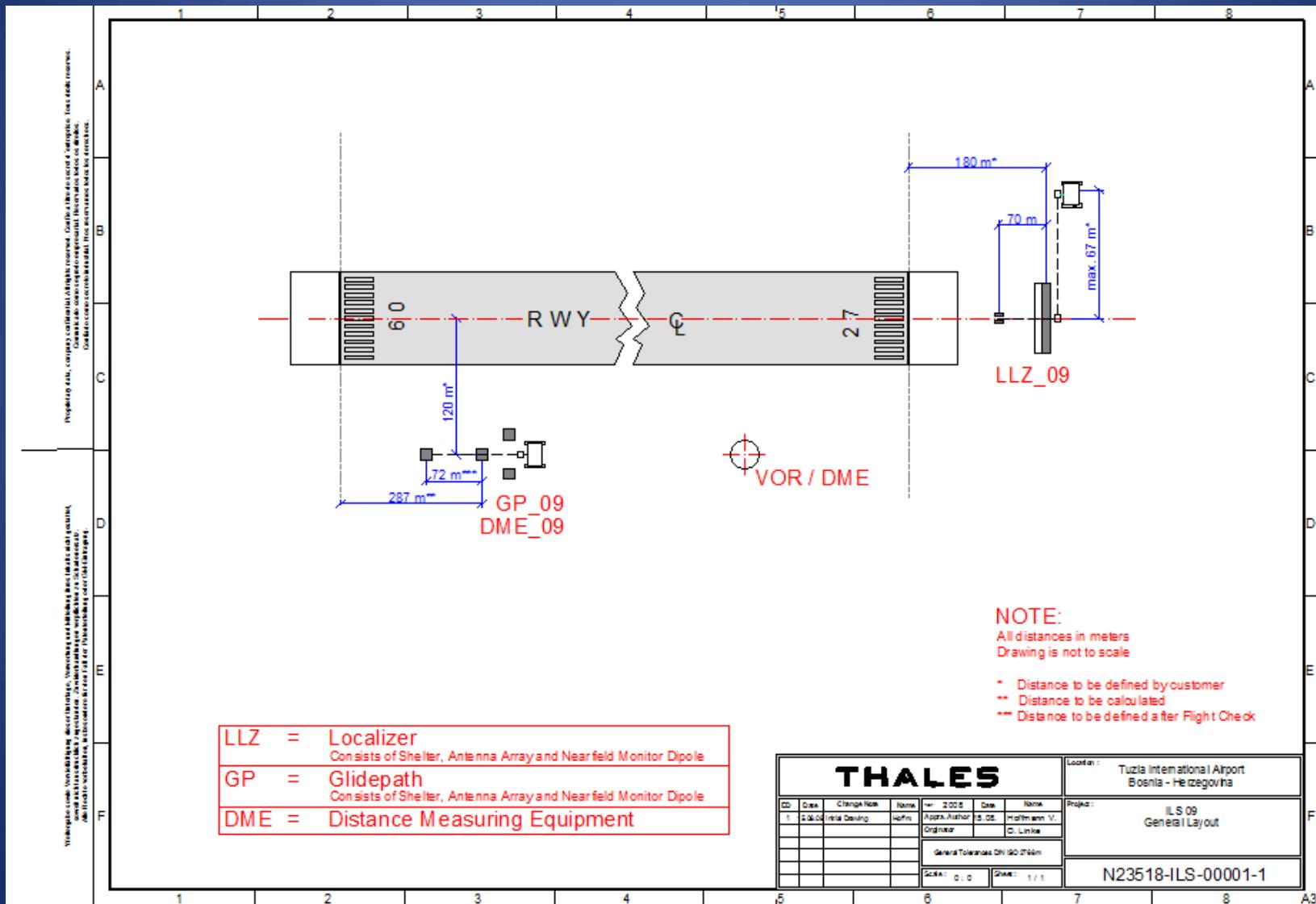
# Tuzla Airport - Obstacle Chart

# TUZLA AIRPORT RECOMMENDATION FOR STRAIGHT IN APPROACH USING 3° GLIDE ANGLE

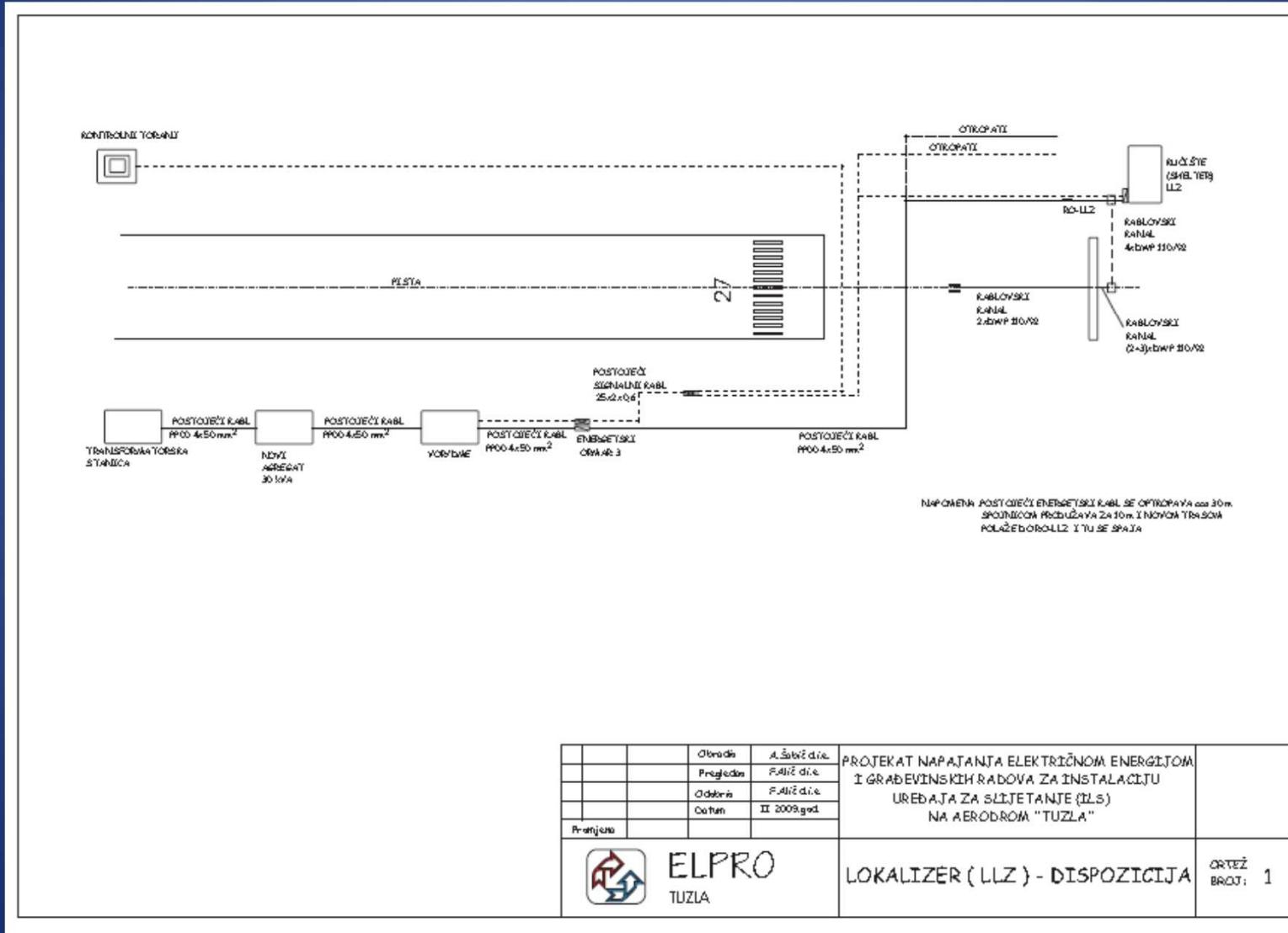
- LLZ Antenna located 180 m from treshold 27
- GP Antenna at the location of 120 m right hand side (in approach direction) from RWY CL and 287 m from treshold 09

# TUZLA AIRPORT

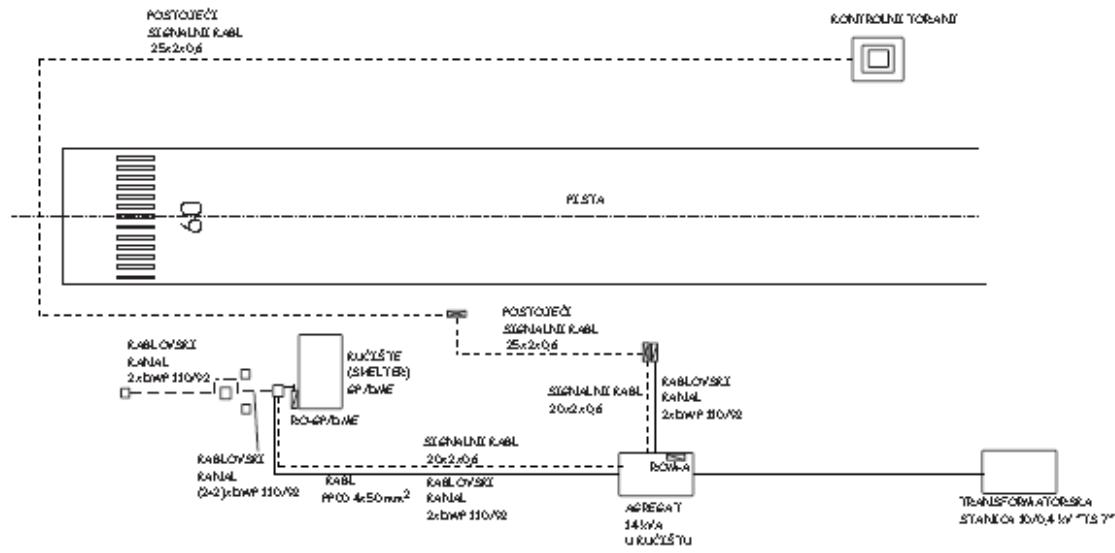
## ILS 09 PROPOSED CONFIGURATION



# TUZLA AIRPORT POWER SUPPLY AND SIGNAL CABLING - LLZ



# TUZLA AIRPORT POWER SUPPLY AND SIGNAL CABLING – GP/DME



		Obrada	A. Štampljat	PROJEKT NAPAJANJA ELEKTRIČNOM ENERGIJOM I GRADJEVINSKIH RADOVA ZA INSTALACIJU UREĐAJA ZA SLJETETANJE (ILS) NA AERODROMU "TUZLA"	
		Pregledat	F. Štampljat		
		Održat	F. Štampljat		
		Ostavat	II. 2009. god.		
Projektno					
	ELPRO TUZLA		GLIDE PATH (GP) I DISTANCE MEASURING EQUIPMENT (DME) - GP/DME - DISPOZICIJA		ORTEZ BROJ: 2

# ILS AT MOSTAR AND TUZLA AIRPORTS

## Implementation so far

- Preparation of Technical Specification
- Public Announcement
- Contract award
- Manufacturing of the Equipment
- FAT
- Kick-off meeting on site
- Delivery of specification of CW
- Delivery of user's documentation
- Factory training
- Public Announcement (CW Tuzla)

# ILS AT MOSTAR AND TUZLA AIRPORTS

## What needs to be done?

- Flight procedures -ILS approach Tuzla and Mostar (BH DCA responsibility)
- CW Tuzla (FED CAD under THALES supervision of Mechanical & Electrical Installation
- ILS Installation Tuzla (THALES and FED CAD)
- Commissioning and SAT Tuzla (THALES and FED CAD)
- Flight Check Tuzla (FED CAD)
- Public Announcement CW Mostar – FED CAD
- ILS Installation Mostar (THALES and FED CAD)
- CW Mostar (FED CAD under THALES supervision of Mechanical & Electrical Installation
- Commissioning and SAT Mostar (THALES and FED CAD)
- Flight Check Mostar (FED CAD)

SAFETY CONSIDERATION SESSION

# ILS AT MOSTAR AND TUZLA AIRPORTS

questions?

Sarajevo, 12 May, 2009.