



State Of Palestine  
Ministry Of Transport

# Training of Trainers Workshop

on Traffic Impact Studies of Commercial Buildings and  
Facilities in Palestinian Cities.

30 November 2020 – 3 December 2020

Economic and Social Commission for Western Asia



UNITED NATIONS

الأمم المتحدة

ESCWA

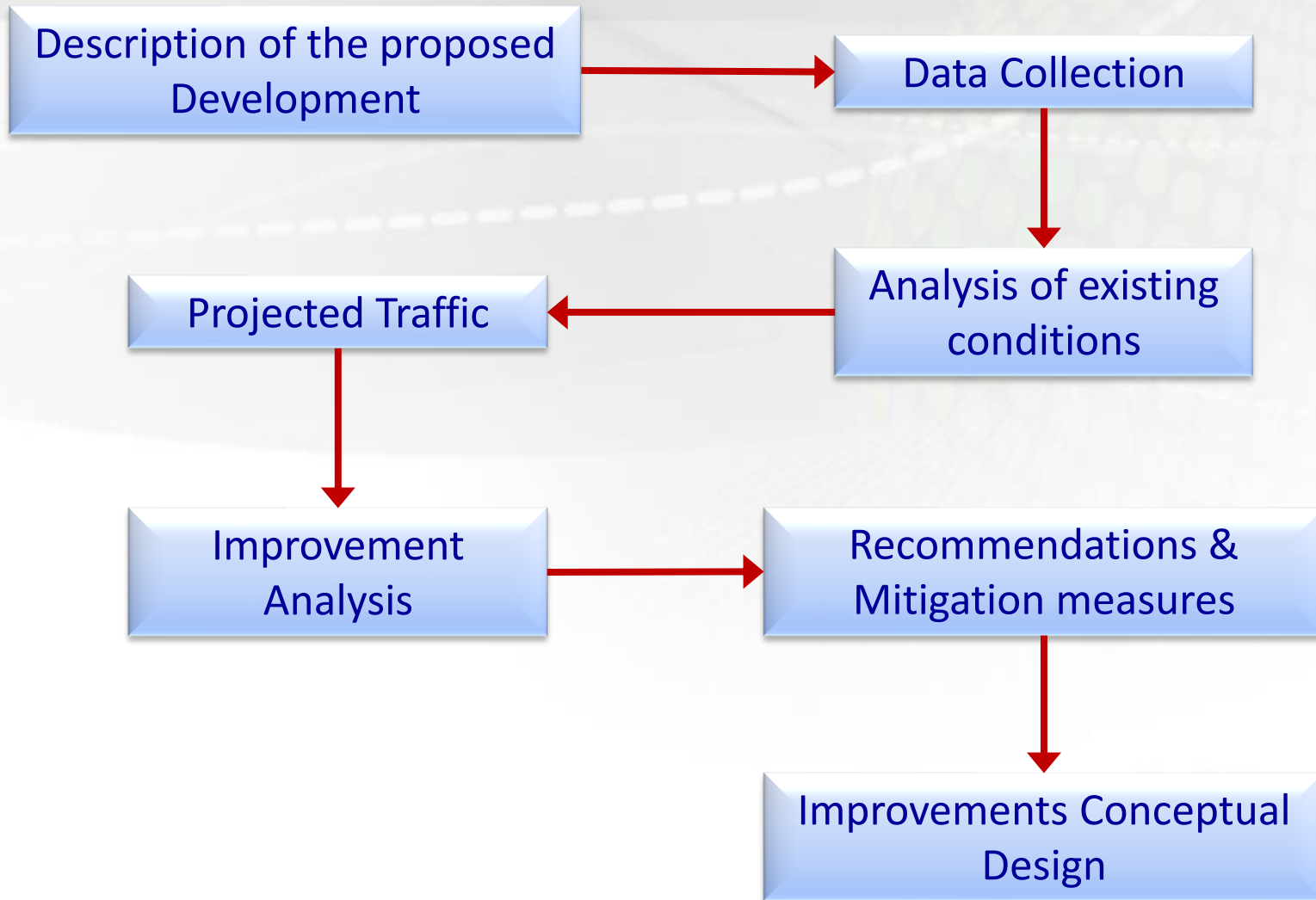
## ROAD MAP FOR TRAFFIC IMPACT STUDY IMPLEMENTATION

Eng. Rayane Wehbe

# CONTENT

- ① Methodology
- ① Introduction
- ① Recommendations
- ① Projects levels
- ① Projects implementation process
- ① Checking conflicts
- ① Adequacy of projects
- ① Additional studies
- ① Implementation timeline
- ① Projects funding

# Methodology



# INTRODUCTION

- ◎ The traffic impact study aims to evaluate the impact of the development on the surrounding road network and to propose the needed mitigation measures accordingly.
- ◎ The traffic impact study recommendations should take into consideration the vision of the city/country or any existing Master Plan.



# INTRODUCTION

- ◎ Responsible authorities should ensure that there is no conflict between the proposed mitigation measures and recommendations of all TIS reports.
- ◎ The aim of a TIS is to reduce or to eliminate the impact of the studied development on its surrounding network



# RECOMMENDATIONS

Items to be reviewed and improved if necessary:

- ◎ Accessibility
- ◎ Traffic circulation within the study area
- ◎ Road Safety for vehicles and soft modes (bicycles, pedestrians, ...)
- ◎ Parking design and operation



# PROJECT LEVELS

Based on the impact of the development, the proposed recommendations can be categories in three levels:

- ◎ Low-cost Projects
- ◎ Medium cost Projects
- ◎ High-cost Projects



# LOW-COST PROJECTS

Small projects usually have the lowest cost and need the shortest implementation time, such as:

- ⦿ Traffic intersection management modifications (traffic lights, direction modification...).
- ⦿ Partial additional traffic lane.
- ⦿ On-Street parking regulation modifications.
- ⦿ Traffic circulation modifications.
- ⦿ .....





# MEDIUM COST PROJECTS

Medium projects are more complex project with a higher cost than the small projects, such as:

- ⦿ Construction of an underpass or overpass.
- ⦿ Additional parking spaces inside the development.
- ⦿ Project Accesses modifications.
- ⦿ Adding a moving Lane.
- ⦿ Adding a bus stop.
- ⦿ ....



# HIGH-COST PROJECTS

Heavy projects are the most complex and expensive projects, such as:

- ◎ Interchanges, tunnels, and bridges construction.
- ◎ Implementation of a new type of transportation (New PT lane)
- ◎ Adding a new metro or railway station
- ◎ Infrastructure needs expropriation
- ◎ ...



# PROJECTS IMPLEMENTATION PROCESS

Checking available conflicts between the recommended projects in the same city




Ensuring adequate interconnections between all recommended projects



Scheduling the projects implementations based on the development's construction period



Analyzing the cost and the environmental impacts



Defining the funding sources

# CHECKING CONFLICTS

- ⦿ Usually traffic impact studies are performed by different Consultants, and the proposed recommendations could not be matching the others proposed projects in the same City.



- ⦿ All recommended projects in the same study area should be compared, and a common solution that serves the urban development plan and vision of the city should be implemented.

# ADEQUACY OF PROJECTS

All given recommendation should be adequate with:

- ◎ City transport vision
- ◎ Urban planning development strategy
- ◎ Transportation Master Plan
- ◎ Urban Master Plan
- ◎ City Strategy



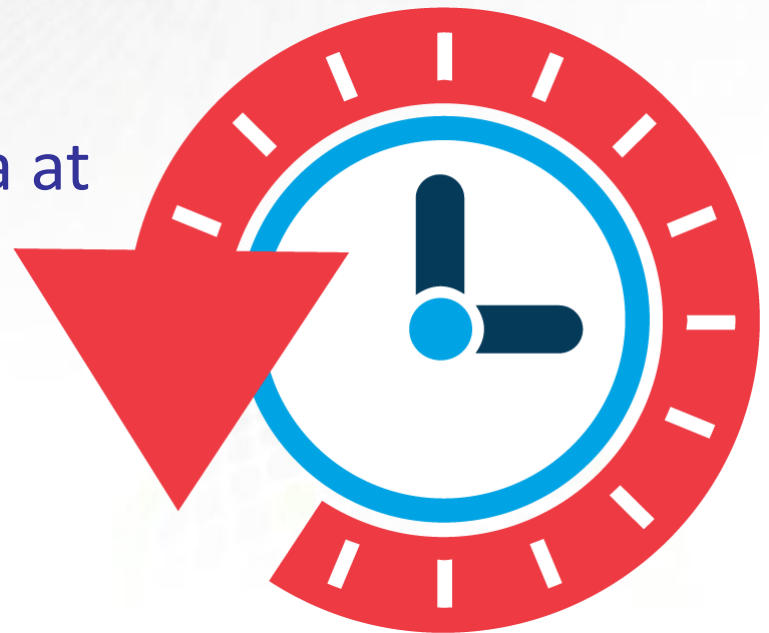
# ADDITIONAL STUDIES

Additional studies could be required to ensure the implementation of the proposed recommendations, such as:

- ⦿ Economical Factors (i.e. budgeting and funding of the project, cost benefit analysis)
- ⦿ Social Factors (i.e. community adaptation of the project)
- ⦿ Political Factors (i.e. local authorities' interference)
- ⦿ Environmental Factors (i.e. areas availability for the project)
- ⦿ Current Situation (i.e. available infrastructure conditions and previous studies)

# IMPLEMENTATION TIMELINE

- ◎ Each development has a timeline for the execution of the proposed recommendations, those should be coordinated together in order to prepare a common timeline for the implementation of the projects
- ◎ Avoiding any possible conflict at the execution time
- ◎ Optimization of projects implementing in the same area at different periods.



# PROJECTS FUNDING

- ⦿ Preparing the projects funding is essential before the implementation phase.
- ⦿ Different sources of funding could be considered as per the municipal/governmental decision:
  - ✓ Governmental or municipal funding (public funding or loans)
  - ✓ Development's owner funding (full or partial funding)





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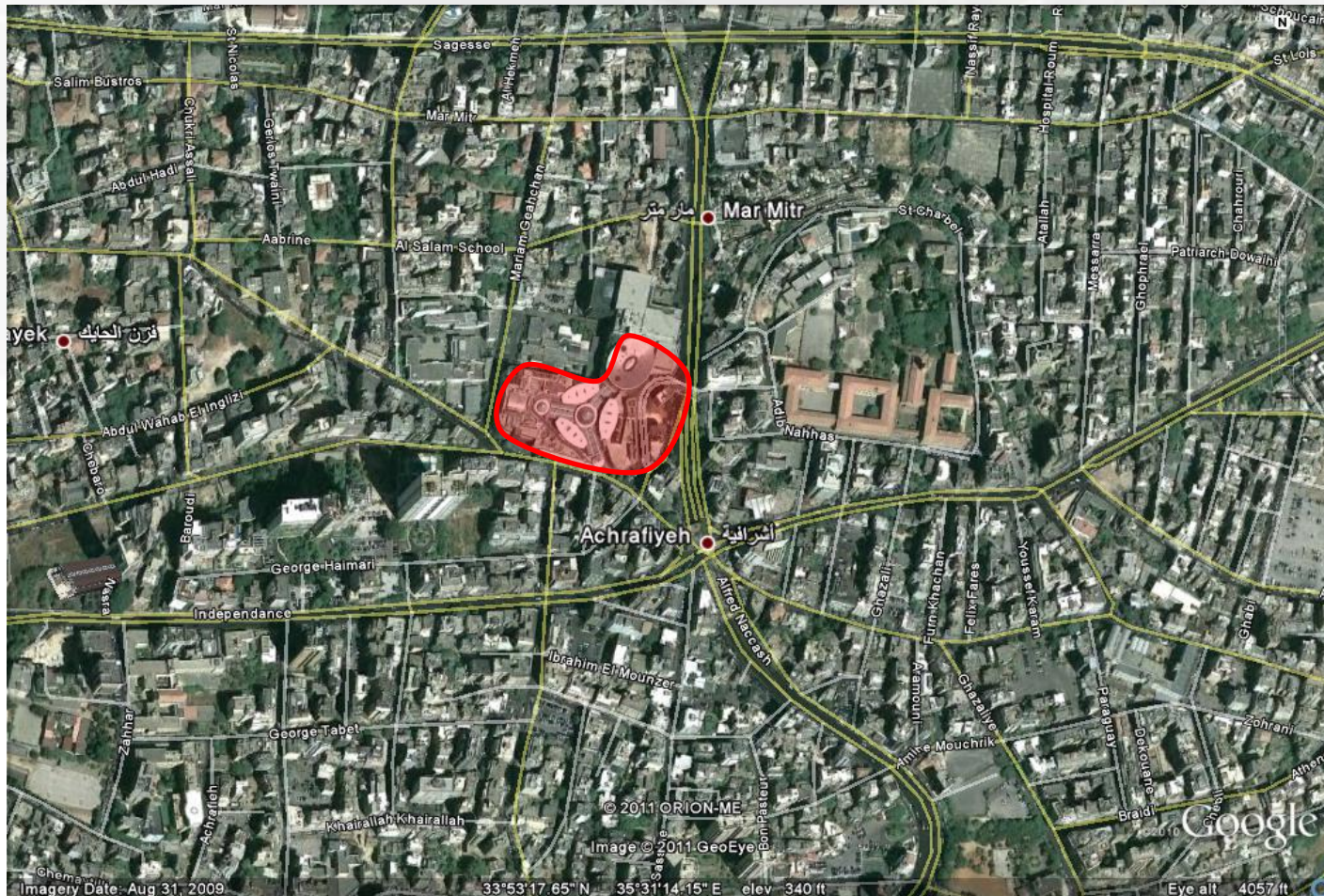
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## CASE & EXAMPLES

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# ABC MALL - ASHRAFIEH

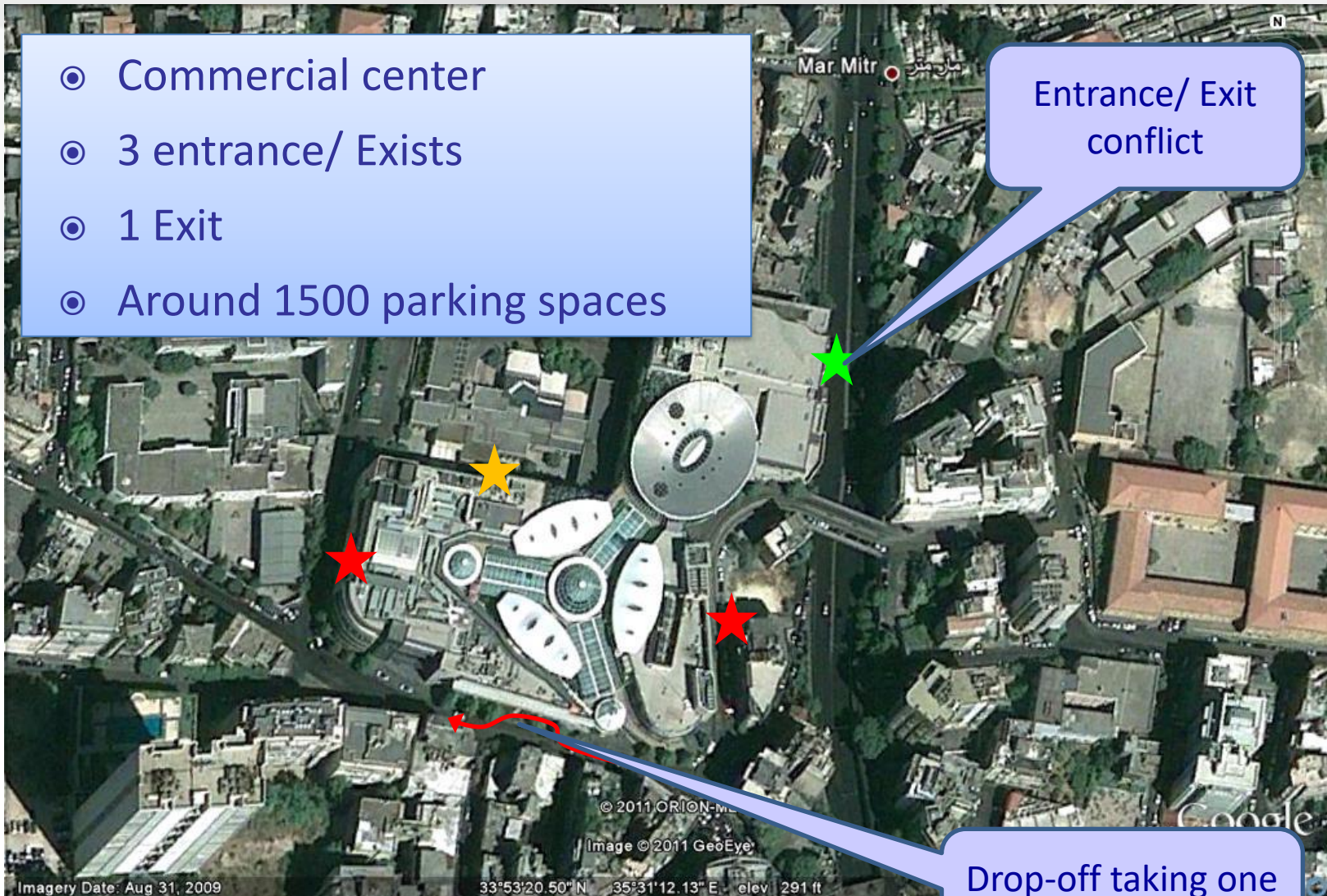


# ABC MALL - ASHRAFIEH

- ⦿ Commercial center
- ⦿ 3 entrance/ Exits
- ⦿ 1 Exit
- ⦿ Around 1500 parking spaces

Entrance/ Exit conflict

Drop-off taking one circulation lane



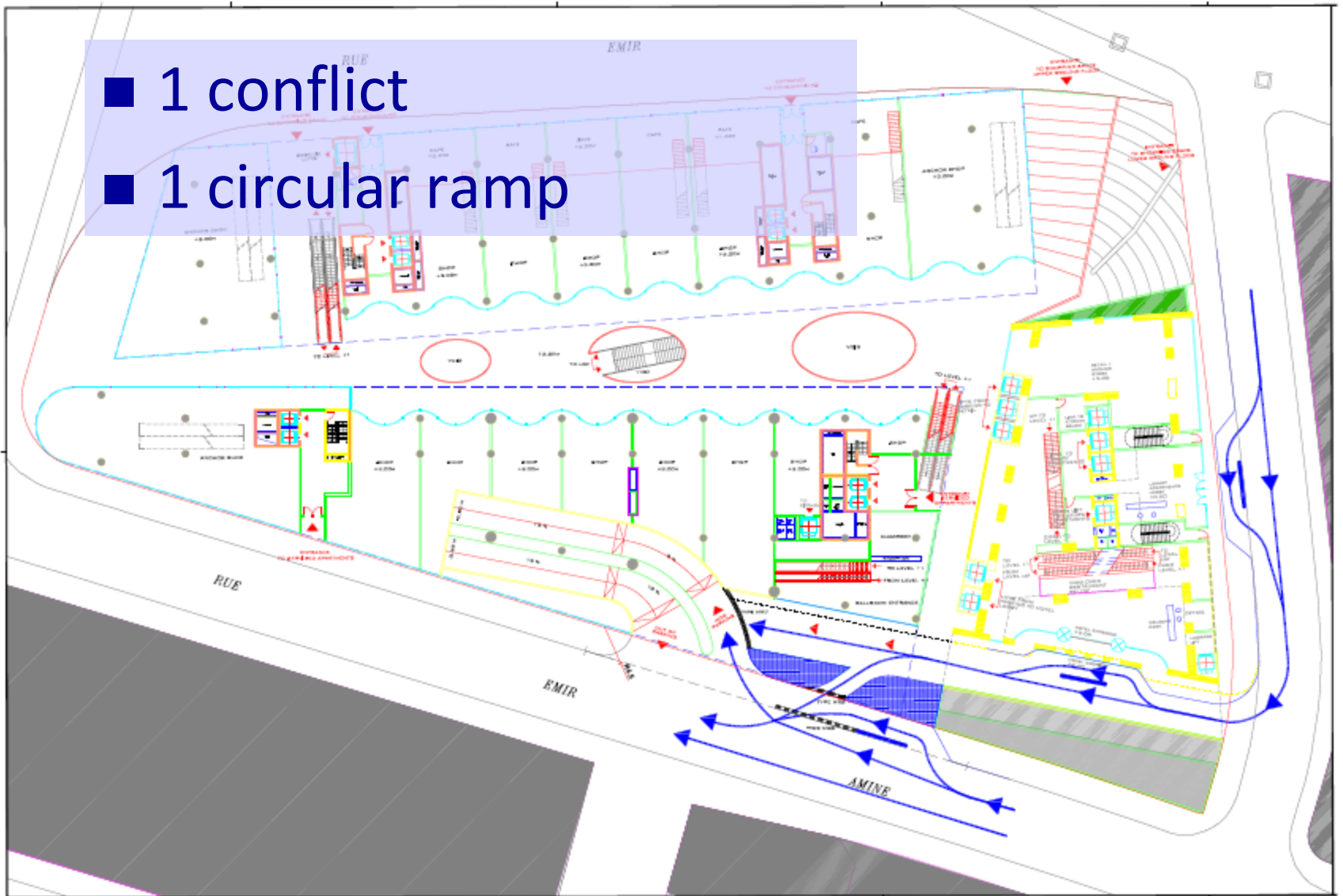
# LANDMARK





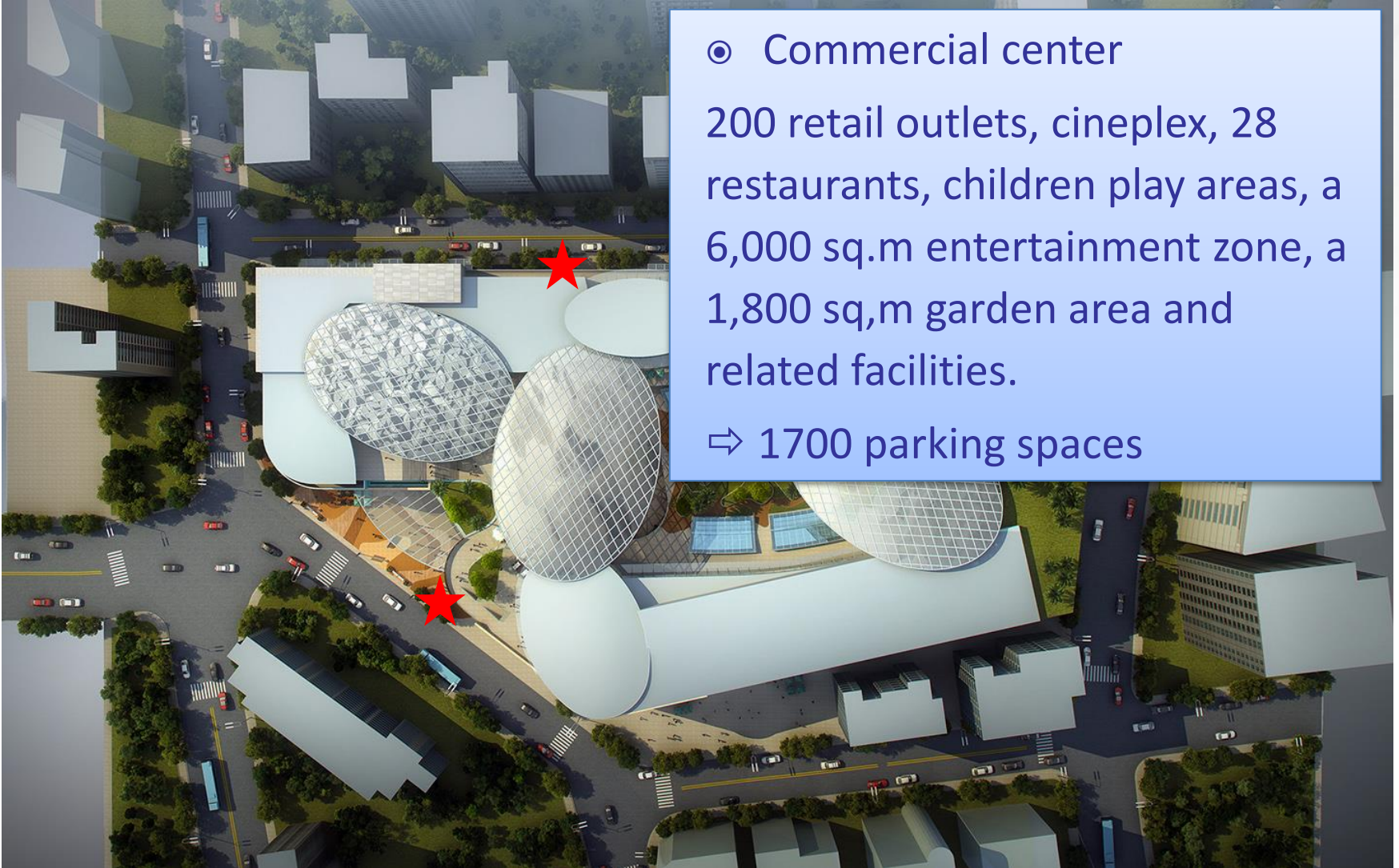
- ◎ High rise building at the entrance of the BCD
- ◎ Mixed use : Hotel, restaurants, cinemas, furnished apartments, etc
- ◎ Around 900 parking spaces

- 1 conflict
- 1 circular ramp



# ABC MALL - VERDUN

- ◎ Commercial center  
200 retail outlets, cineplex, 28 restaurants, children play areas, a 6,000 sq.m entertainment zone, a 1,800 sq,m garden area and related facilities.
- ⇒ 1700 parking spaces

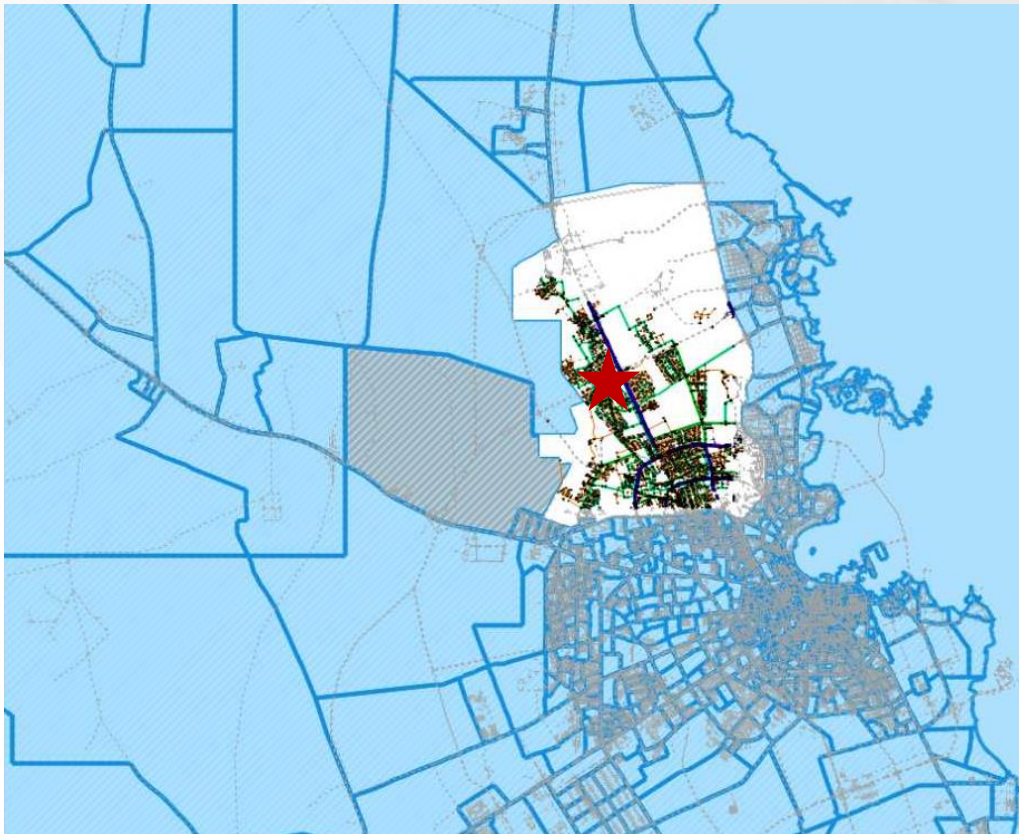


# NORTHGATE - Qatar





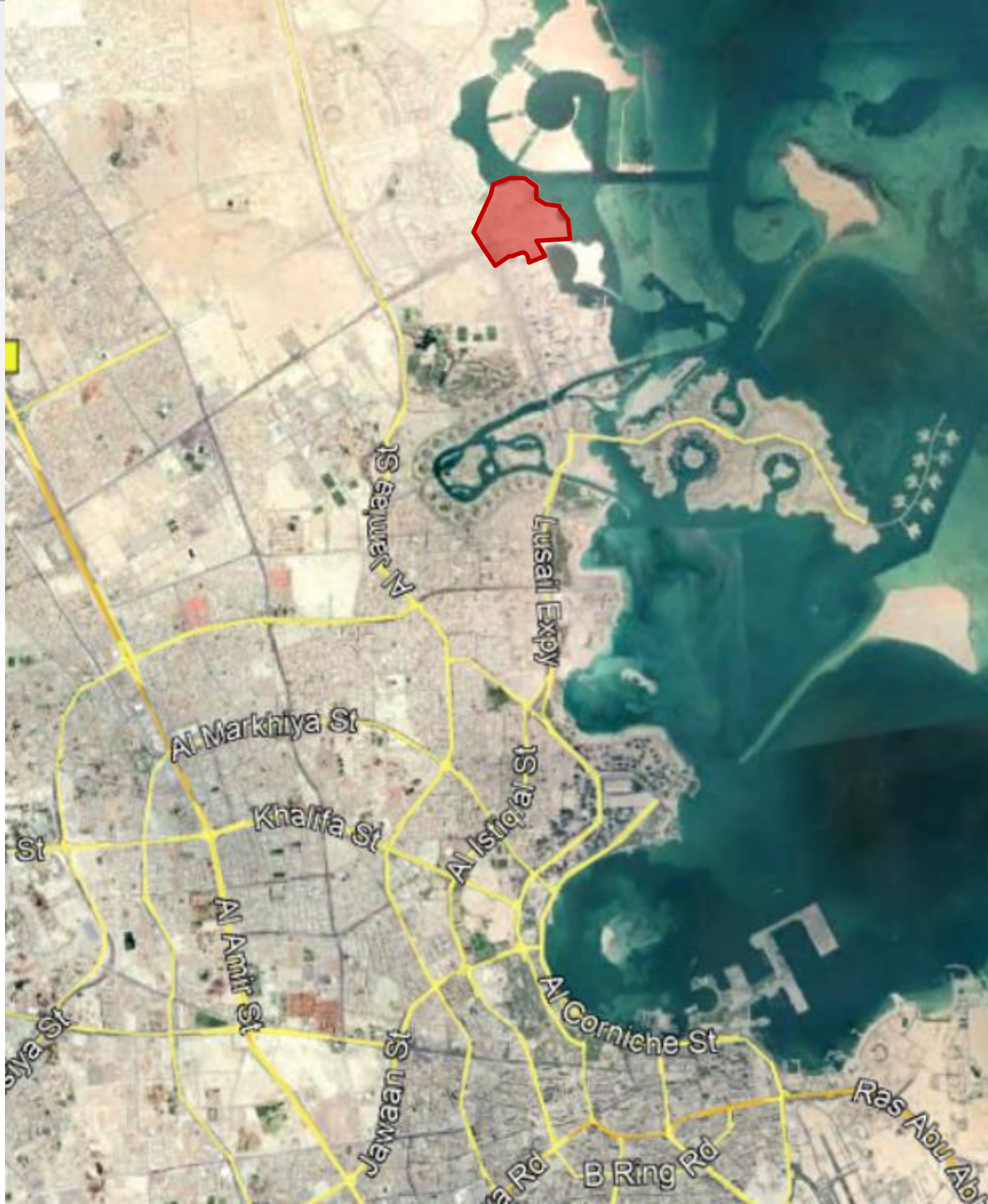
# NORTHGATE - Qatar



- ⦿ Mixed use:
  - Shopping mall: 138 000 sqm
  - Retails: 5300 sqm
  - Offices: 60 500 sqm
  - Residential: 82 000 sqm
- ⇒ Around 5000 parking spaces
- ⦿ Phase 1: 5 Entrances/Exits
- ⦿ Phase 2: 2 Entrances/Exits

# LUSAIL ENTERTAINEMENT - Qatar





Al Markhiya St

Al Amr St

Al Corniche St

B Ring Rd

Ras Abu Abh

Al Markhiya St

Al Amr St

Al Corniche St

B Ring Rd

Ras Abu Abh

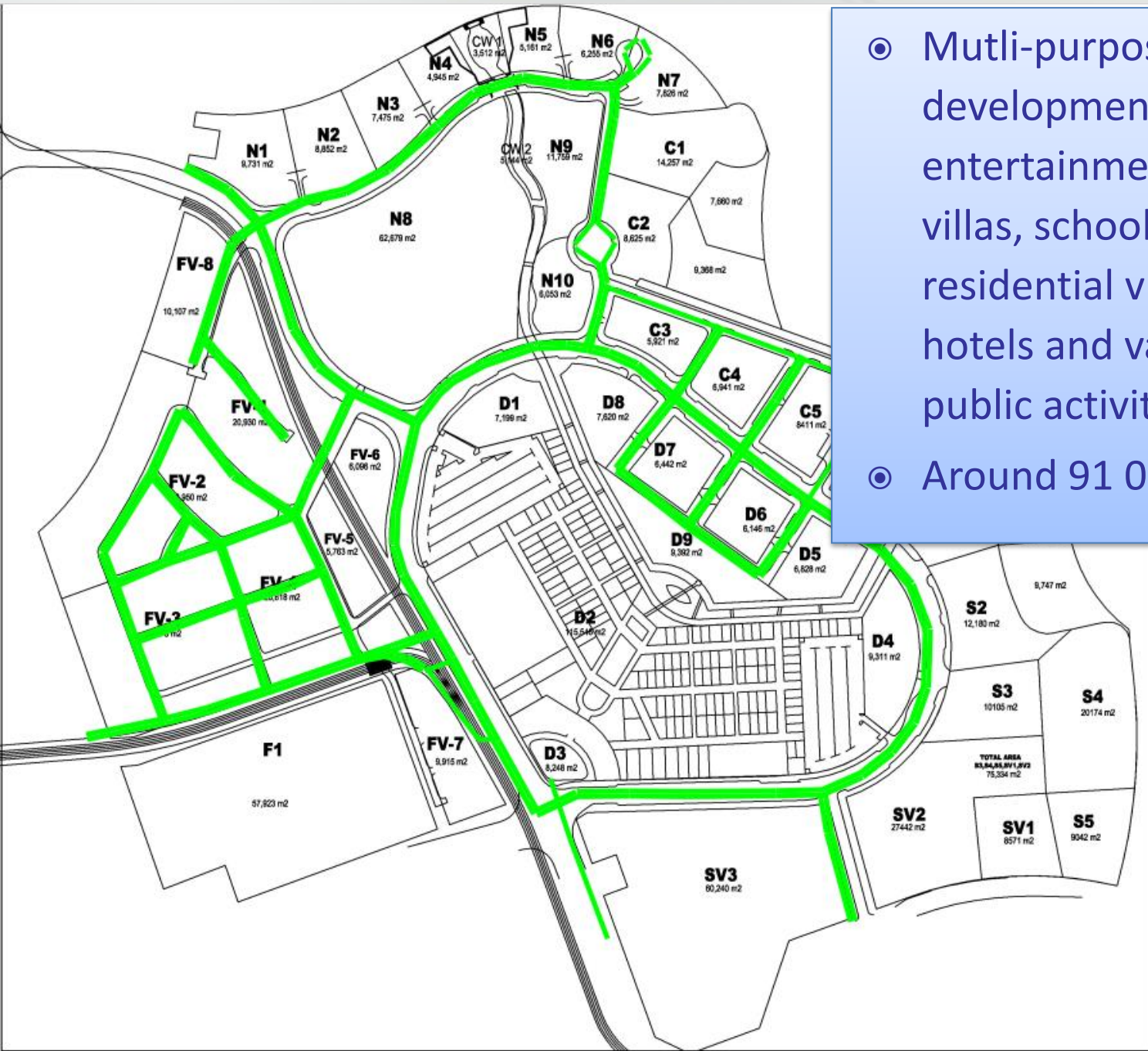
Al Markhiya St

Al Amr St

Al Corniche St

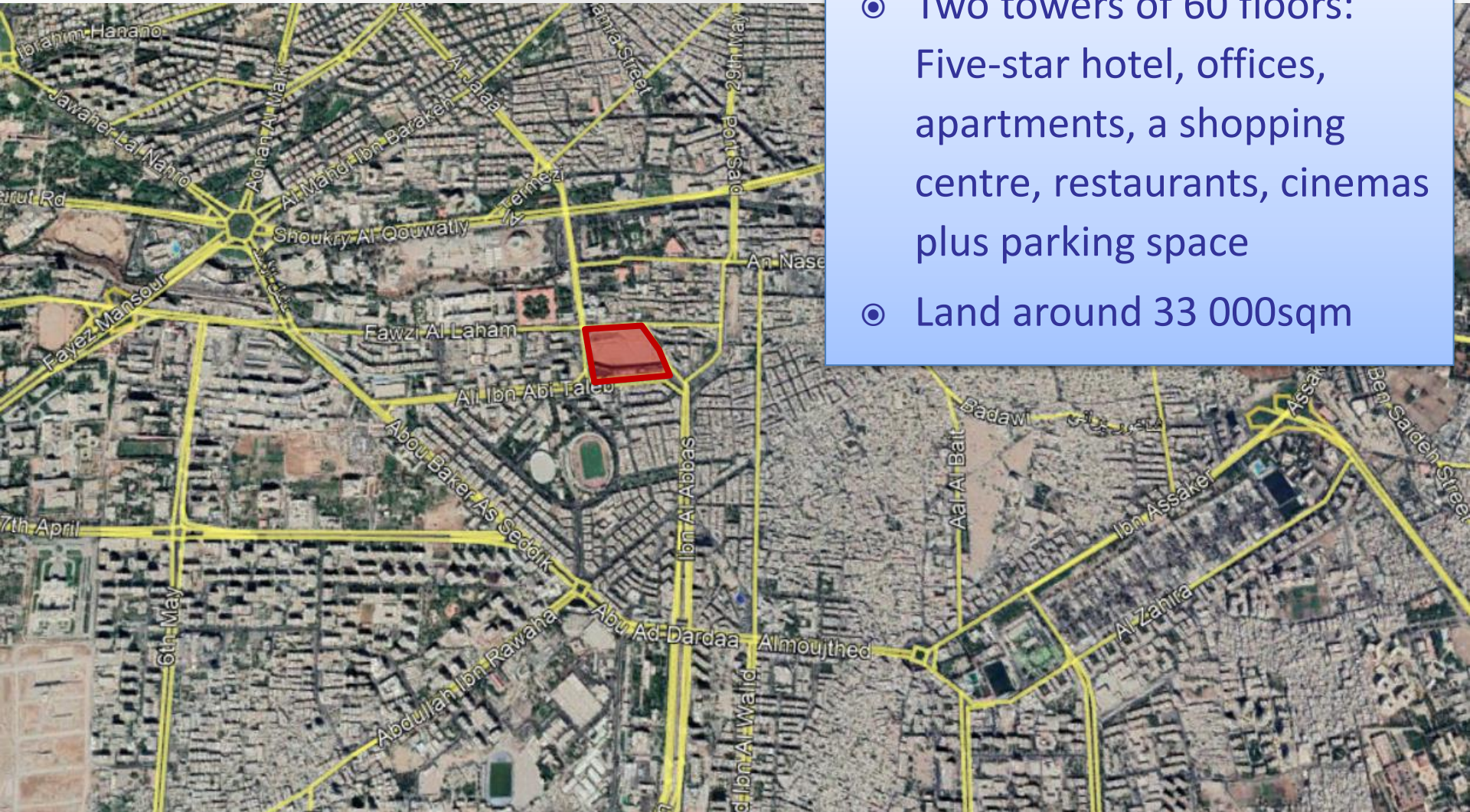
B Ring Rd

Ras Abu Abh



- Mutli-purpose development: leisure, entertainment, luxurious villas, school, apartments, residential villages, resort hotels and various attractive public activities
- Around 91 000GA sqm

# SYRIA TOWERS



- Two towers of 60 floors:  
Five-star hotel, offices,  
apartments, a shopping  
centre, restaurants, cinemas  
plus parking space
- Land around 33 000sqm

# SYRIA TOWERS



# SYRIA TOWERS



Thank You | شكراً