

# Hotel and Business-Centre Basra Sport City

Concept Plan

august 2011

RS | Roeleveld-Sikkens Architects

Den Haag / Budapest

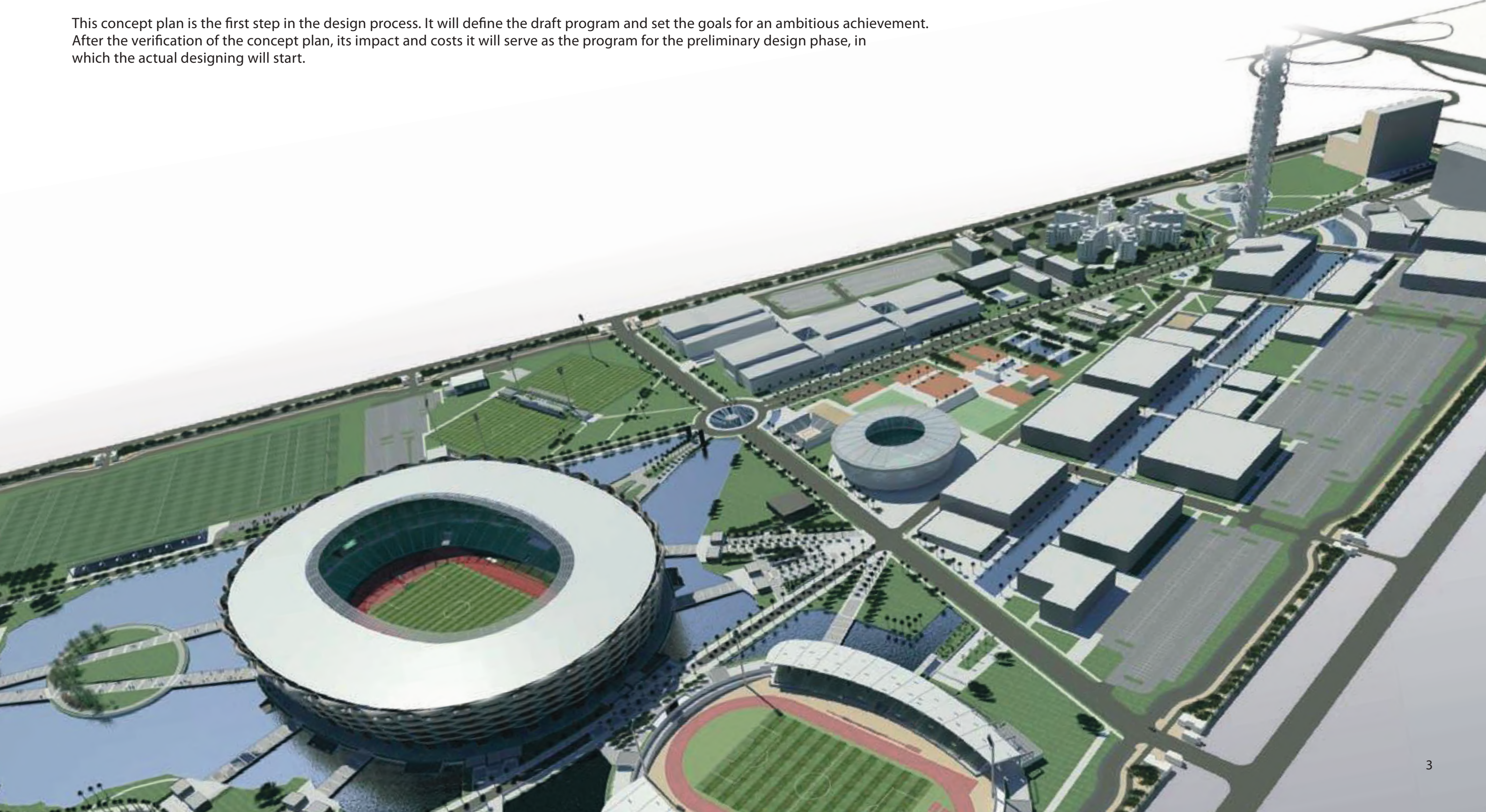


01	INTRODUCTION.....	3
02	LOCATION.....	5
03	BUILDING CONCEPT.....	9
	Schematic site drawing, scale 1:2000.....	
	Discription of the building concept.....	
	Schematic floor plans, scale 1:500 / Schematic key levels.....	
	Images and spheres of the building.....	
	Schematic cross-section.....	
04	REFERENCES.....	27
	Hotel.....	
	Hotelrooms.....	
	Ballrooms.....	
	Offices/Conference.....	
	Mall.....	
	Wellness.....	
05	SUSTAINABILITY.....	41
06	CONCEPT PROGRAM.....	47
	The methodology of the defining of the concept program.....	
	The function-groups with the proportions.....	
	Detailed area calculation.....	
	Total gross floor areas.....	
07	COST CALCULATION.....	53
	Concept cost calculation.....	
08	COOPERATION.....	57
	List of required consultants and specialists.....	
09	ABOUT US.....	60

This book presents the Concept Plan for the Hotel and Business-centre in Basra Sport City, Iraq. It will represent a worthy entrance to this astonishing development and emphasize faith in the future of a proud nation.

The plan consists of three mayor functions: a five star hotel, a state of the art business-centre and a luxury mall for leisure and shopping.

This concept plan is the first step in the design process. It will define the draft program and set the goals for an ambitious achievement. After the verification of the concept plan, its impact and costs it will serve as the program for the preliminary design phase, in which the actual designing will start.



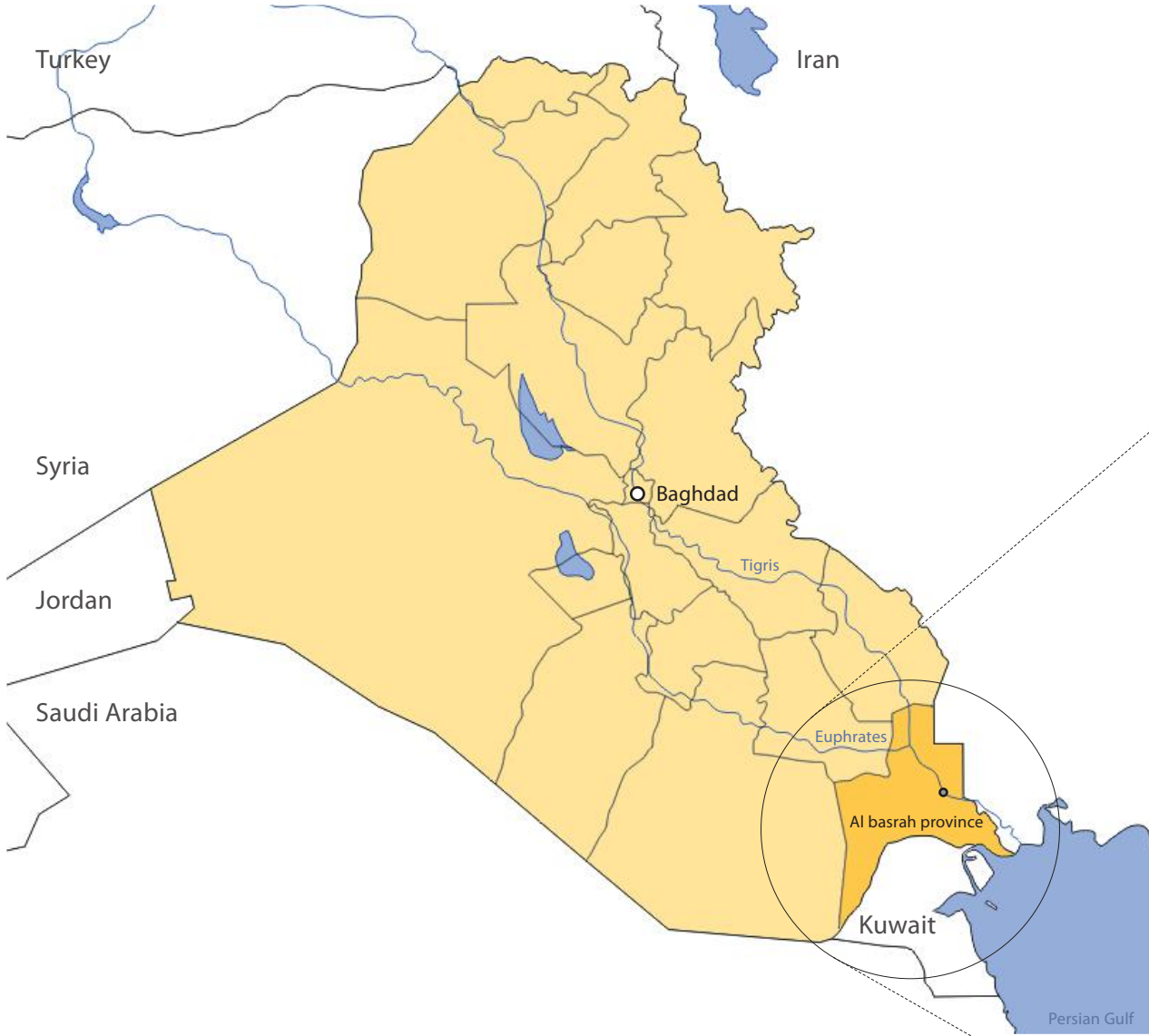




HOTEL AND BUSINESS-CENTRE **BASRA SPORT CITY**

# LOCATION

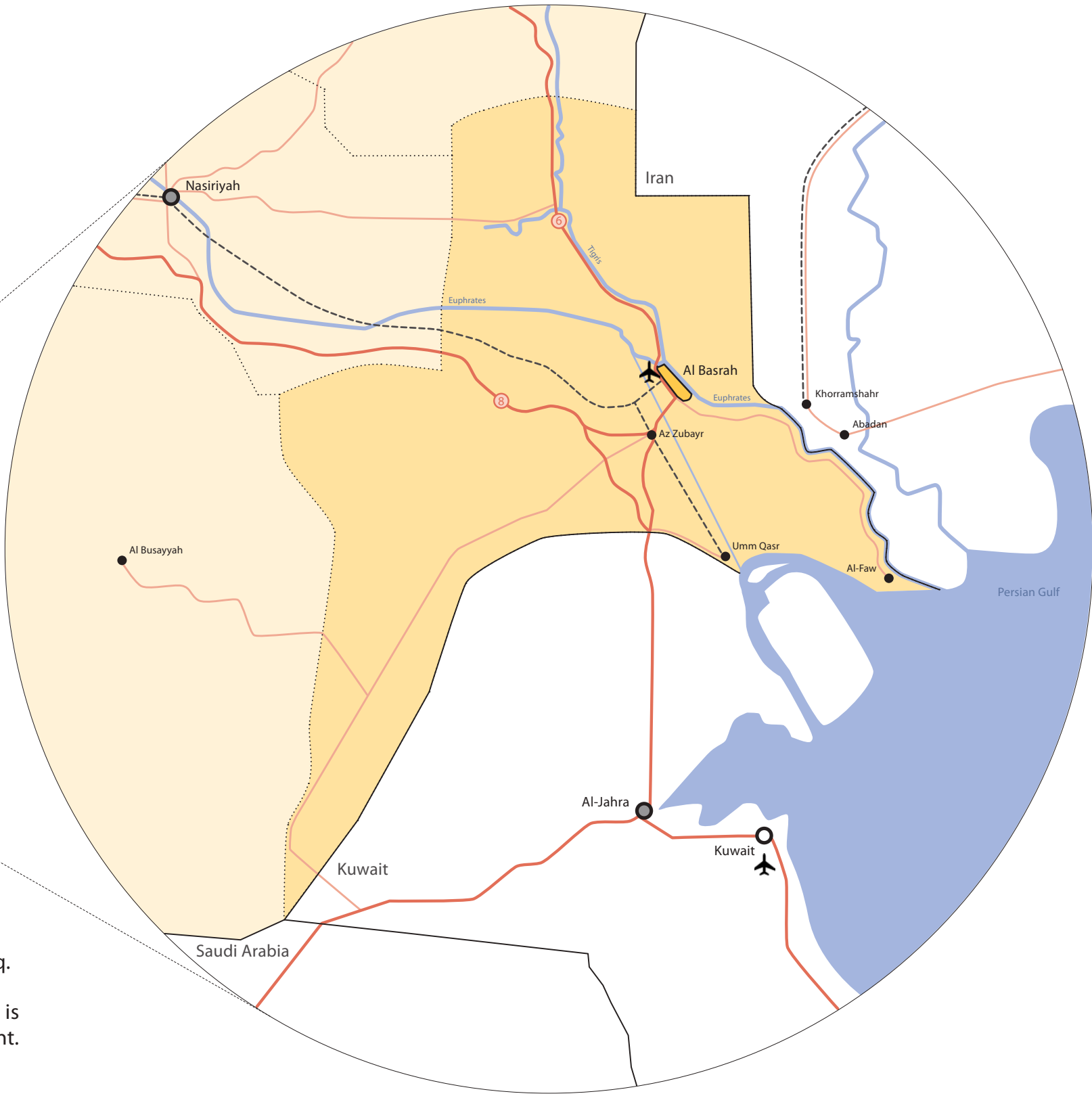




Basra Sports City is a major sports complex on the west side of the city of Basra, southern Iraq.

Basra Sport City, featuring stadiums, training areas, athlete housing amongst other amenities is under construction and scheduled for grand opening in 2013 to host the Gulf Cup tournament. The first phase of the multi-million sports complex is under construction.

The centrepiece of the complex will be a 65,000-seated stadium. Basra Sports City also will feature an adjoining 10,000 seat secondary stadium and practice facility designed to International Football Federation and Olympic athletics standards. The facility will also have four training areas, athlete housing, a fire station and a helipad.



# LOCATION

In addition to the sports stadiums, there will be training facilities for Iraqi athletes - including a full natatorium, a velodrome, and three smaller arenas for gymnastics, fencing and other indoor sports. A mosque, an amusement park and additional parking facilities will be built in phase two of the project.

After this phase the Hotel and Business-centre will be located at the entrance of Basra Sport City.

It can easily be reached from the city of Basra, the highways from Baghdad and Kuwait and Basra's international airport.



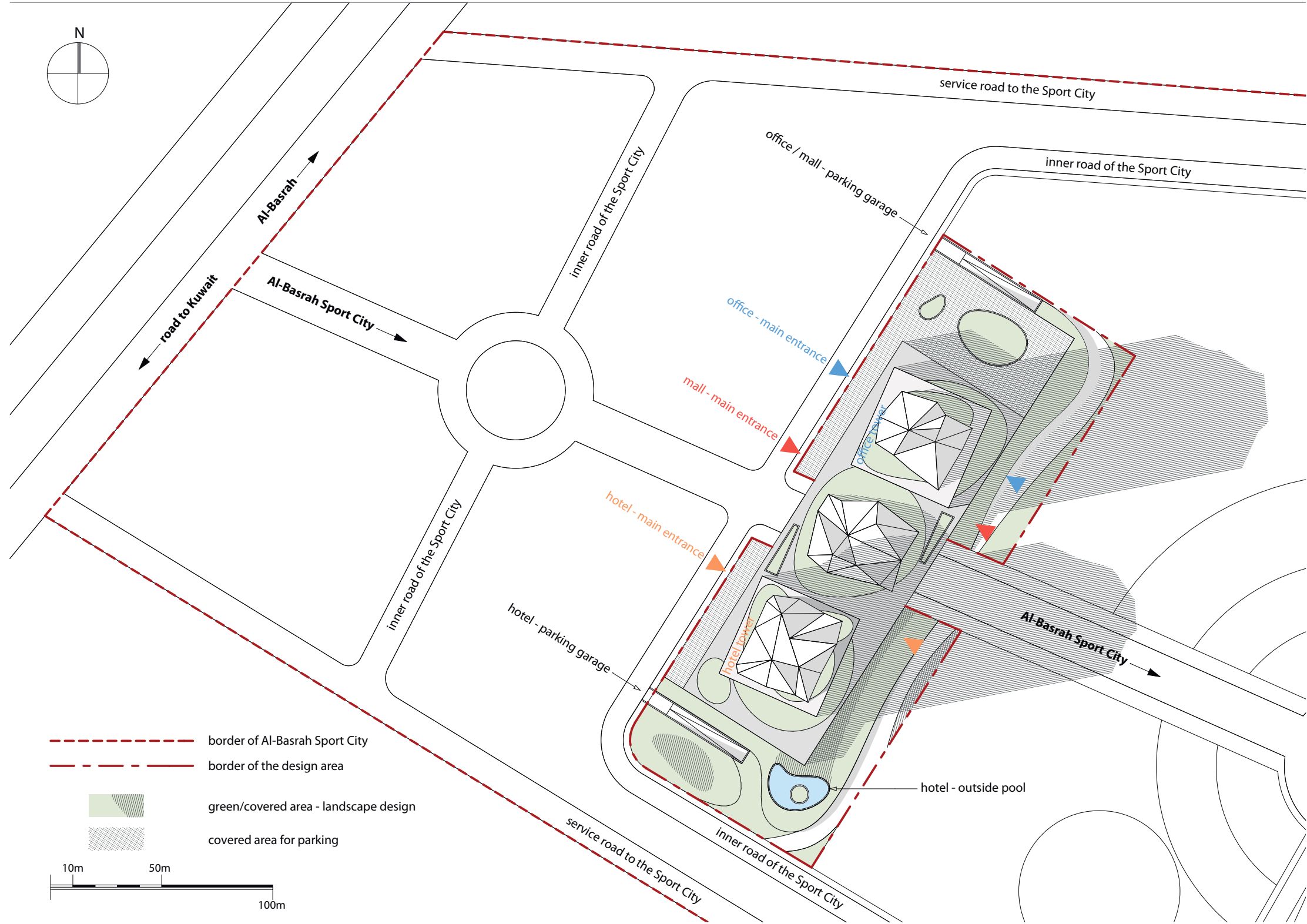




HOTEL AND BUSINESS-CENTRE **BASRA SPORT CITY**

# BUILDING CONCEPT





scale 1:2000

schematic site drawing

The concept shows a clear set-up both in logistics as in structure. It will represent a prosperous future and respects the rich history of its location.

The complex represents in fact a contemporary caravanserai with a symbolic central single wide portal giving access to Basra Sport City and the modern equivalent of a place for temporary stay and trade. As a caravanserai offered travellers a place to rest and recover, supported the flow of commerce, information, and people, this complex offers it all: a luxury five star hotel, a state of the art business-centre and a fully equipped modern hypermarket or mall.

A double floor underground parking garage for save and sun free parking of cars for guest, visitors and employees keeps the plot free for landscaping and luxury accesses to main entries.

The lower floors of the building hold the general functions of the three main programs: the hotel, the business-centre and the mall. Crossing the central access road to the Sport City it connects the programs in a way they benefit from each other.

The mall, mainly situated on the first floor above the road, will be accessible from both the hotel and the business-centre side. It will offer a hypermarket and luxury shopping and leisure area.

On the second floor the conference centre and ballroom area is situated. This gives the opportunity for synergy use of these facilities from both sides also. If required even with it's own access. The position of the grand ballroom in the centre makes a beautiful space possible without columns.

The towers function as a central landmark in the dessert silhouette being an iconic representation of the importance of the whole development of Basra Sport City. They will catch the eye from a far distance when you approach the facilities by car from the high way or by plane heading for landing at Basra's international airport. Both towers are organised around a central core, the reinterpretation of the traditional sahn. Their appearance will be especially designed in a way they represent Iraqi's proud and uniqueness. Different from the kind of global architecture that can be found around the world anywhere nowadays, a more sophisticated modern architecture will put Basra and its Sport City on the global map though.

The aesthetic robust shape of the square towers is softened by the lightness of glass and the carefully designed proportions and plasticity of holes in their volumes to ensures a proper appearance into its unique setting. Discreet modern smart sustainable facades in which the holes can be seen as reversed Mashrabiyyas or Shanasheels will wrap the tower floors. They will serve for special functions such as terraces, hanging gardens, executive meeting areas and viewpoints. One can feel the wind here or experience the scenery. They also enable the filtered sunlight to enter the sahn.

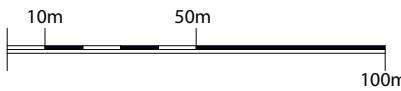
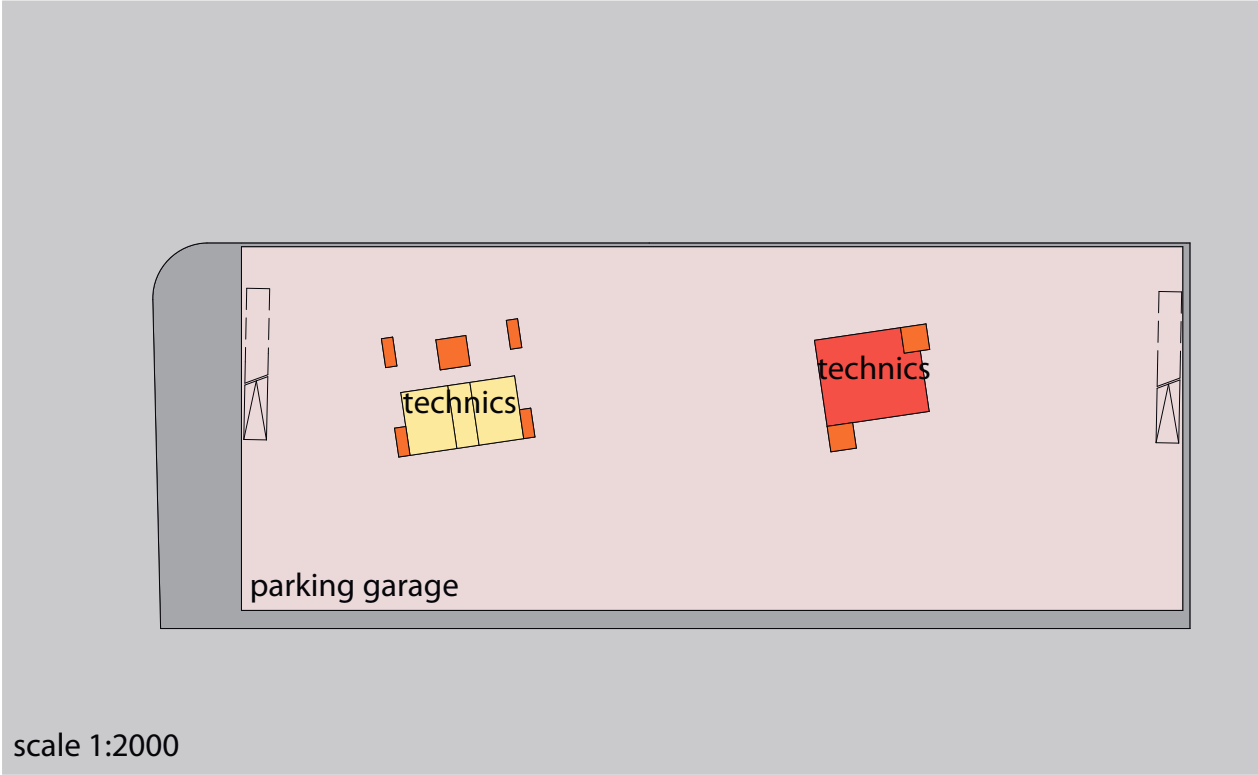
Three glass diamonds, two on both towers and one on the central grand ballroom, emphasizing prosperity and faith in the future of Iraq, will literally crown the plan.



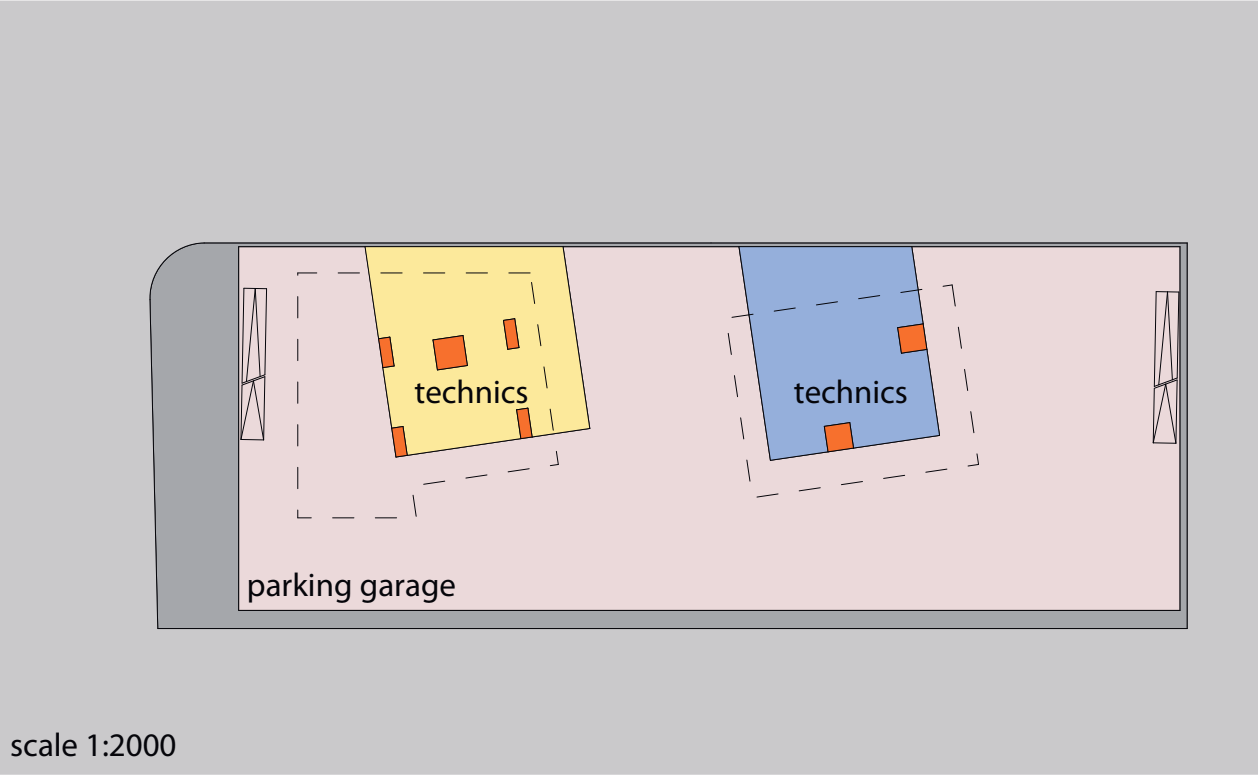
photo Biasin



-2nd floor



-1st floor

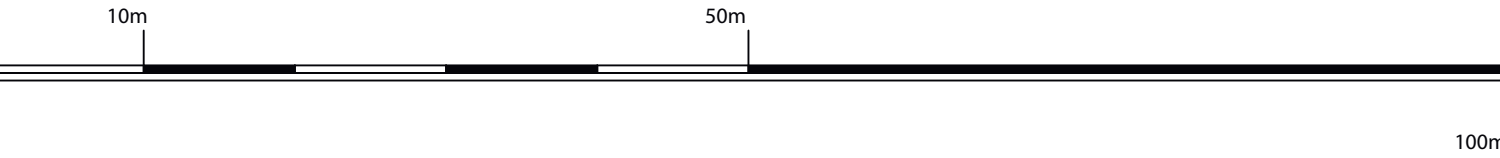
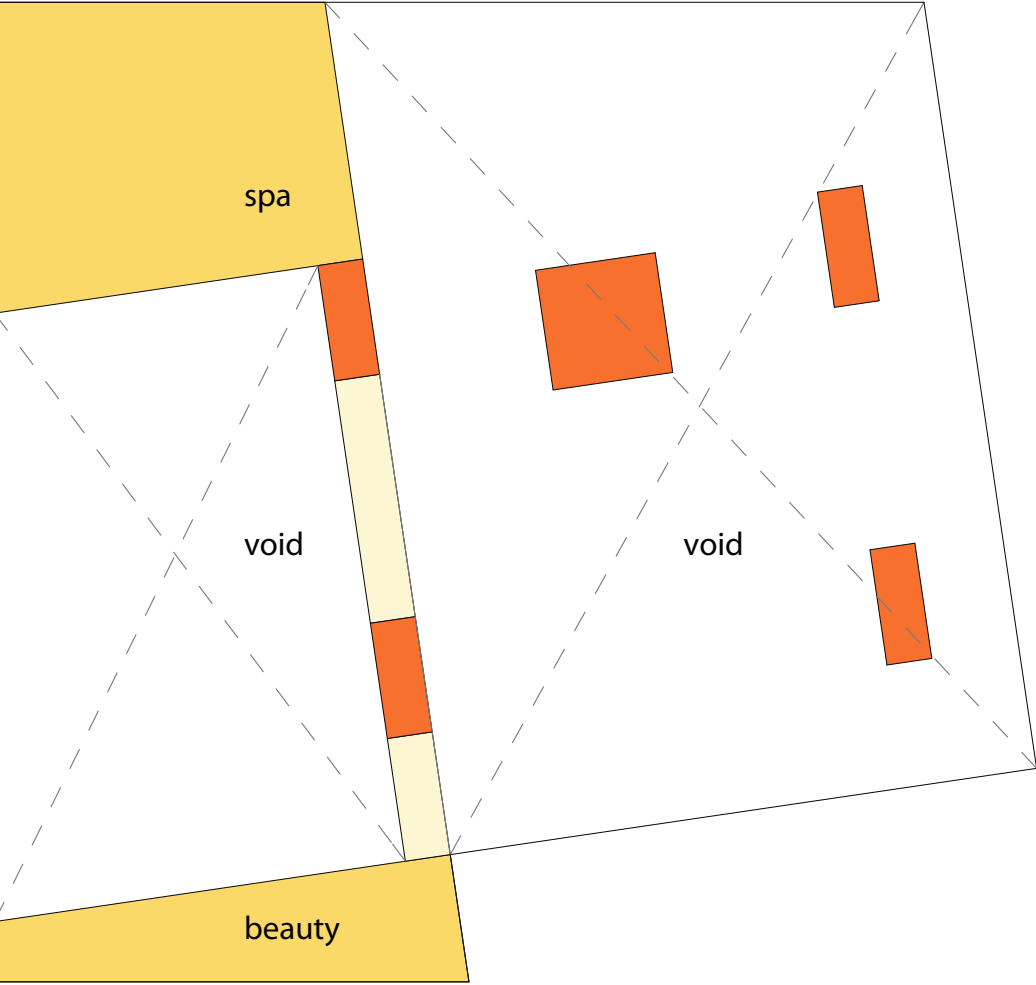


ground floor



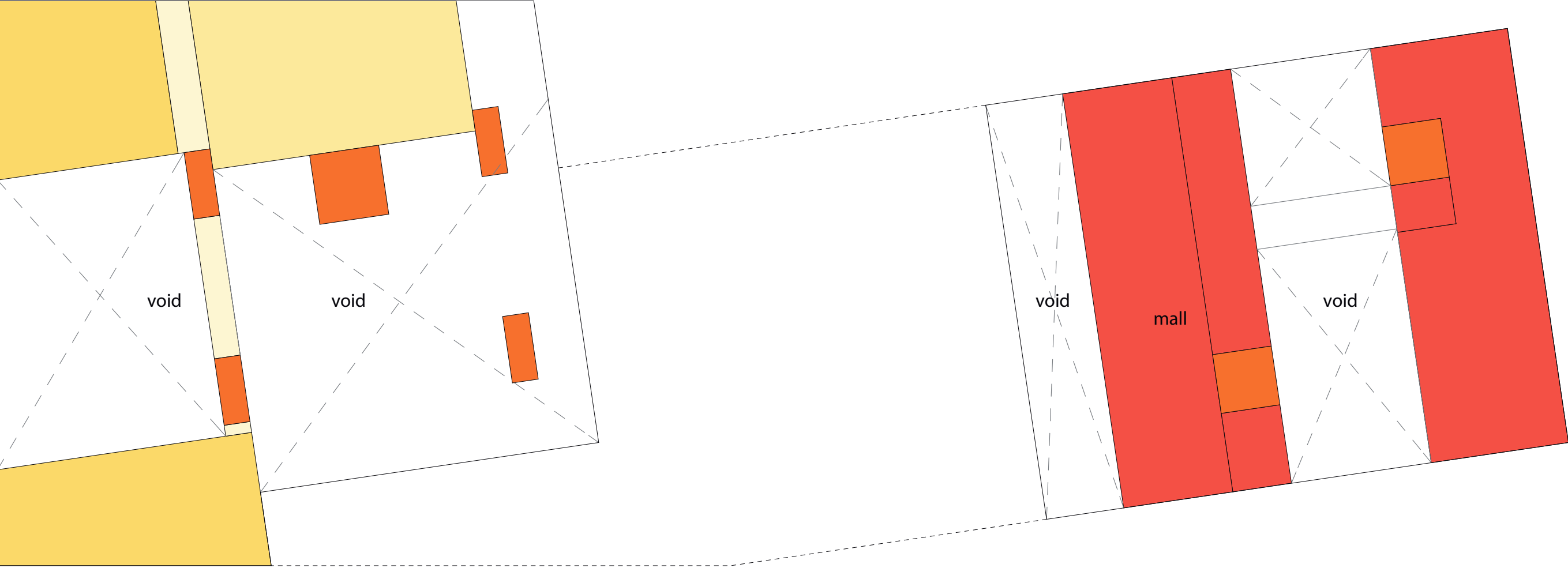


mezzanine 1



scale 1:500

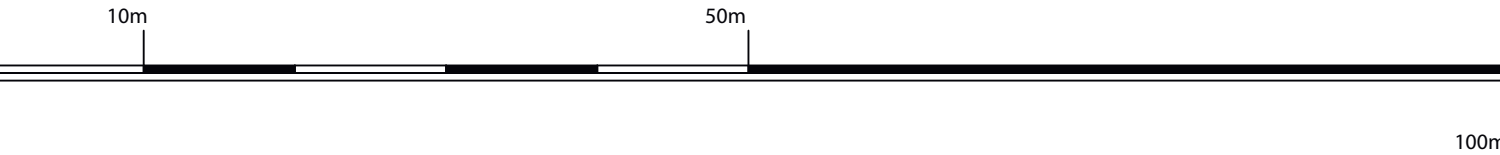
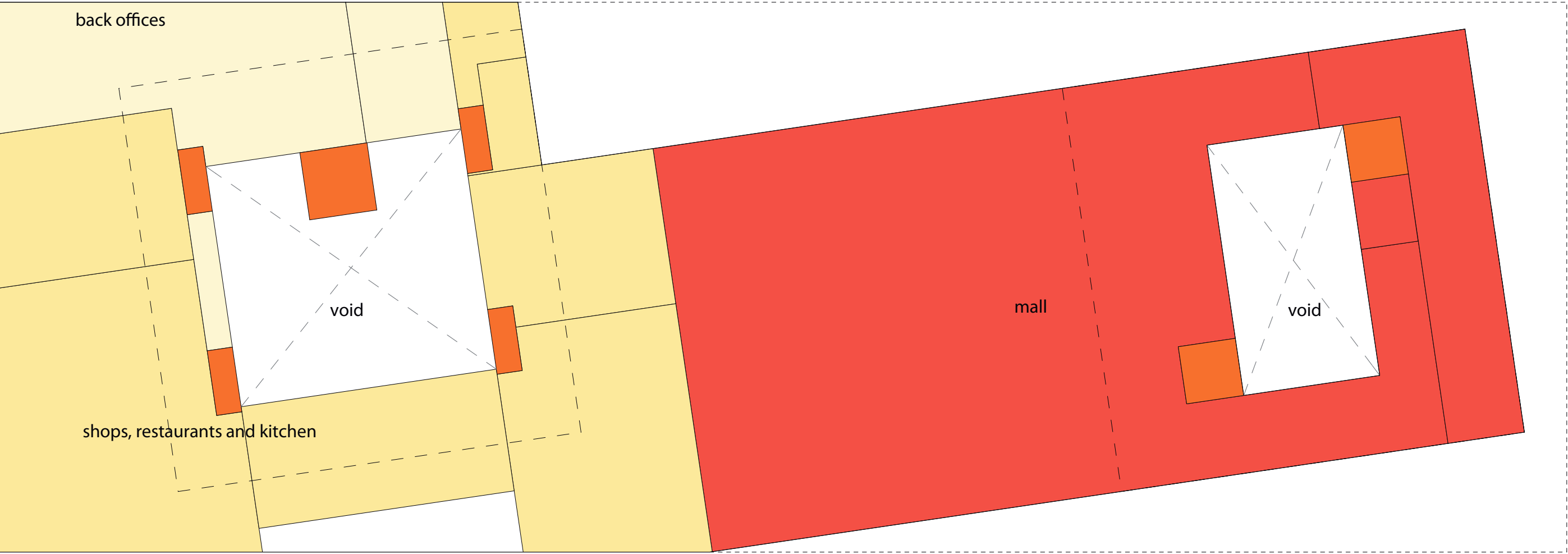
mezzanine 2



scale 1:500

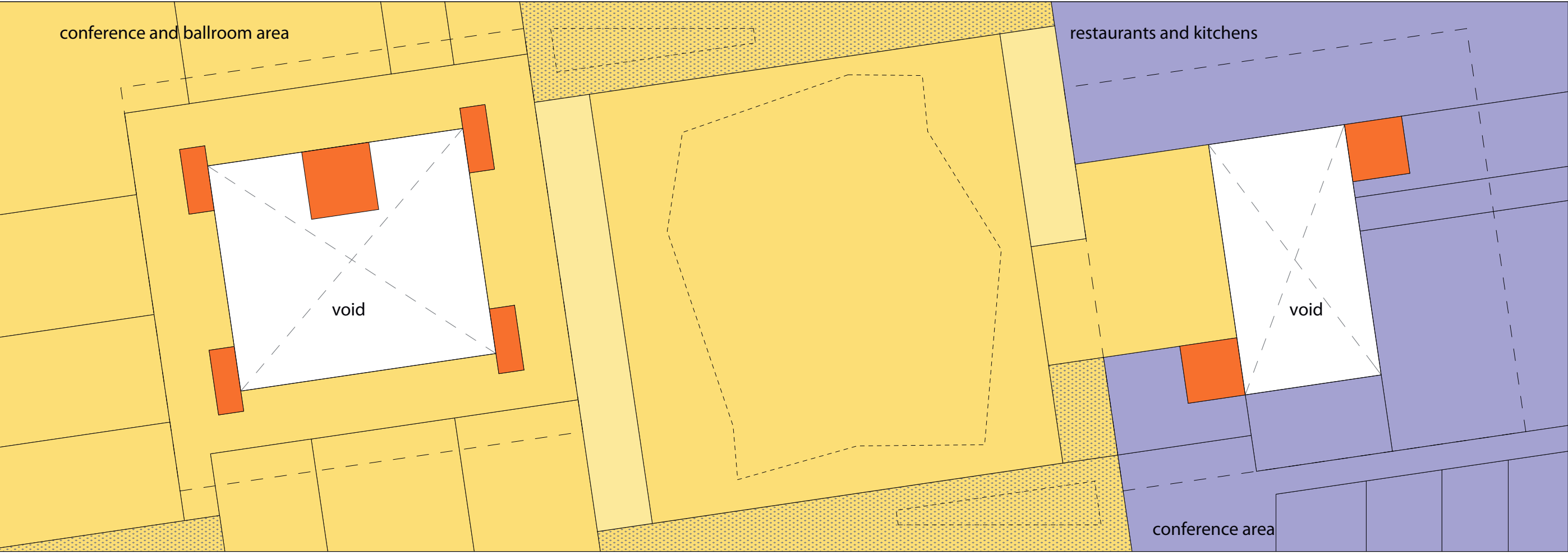


1st floor



scale 1:500

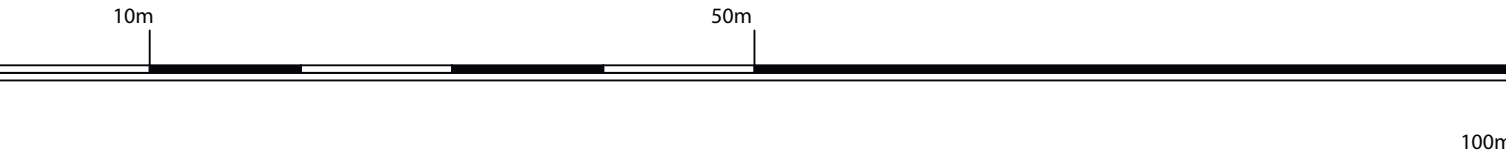
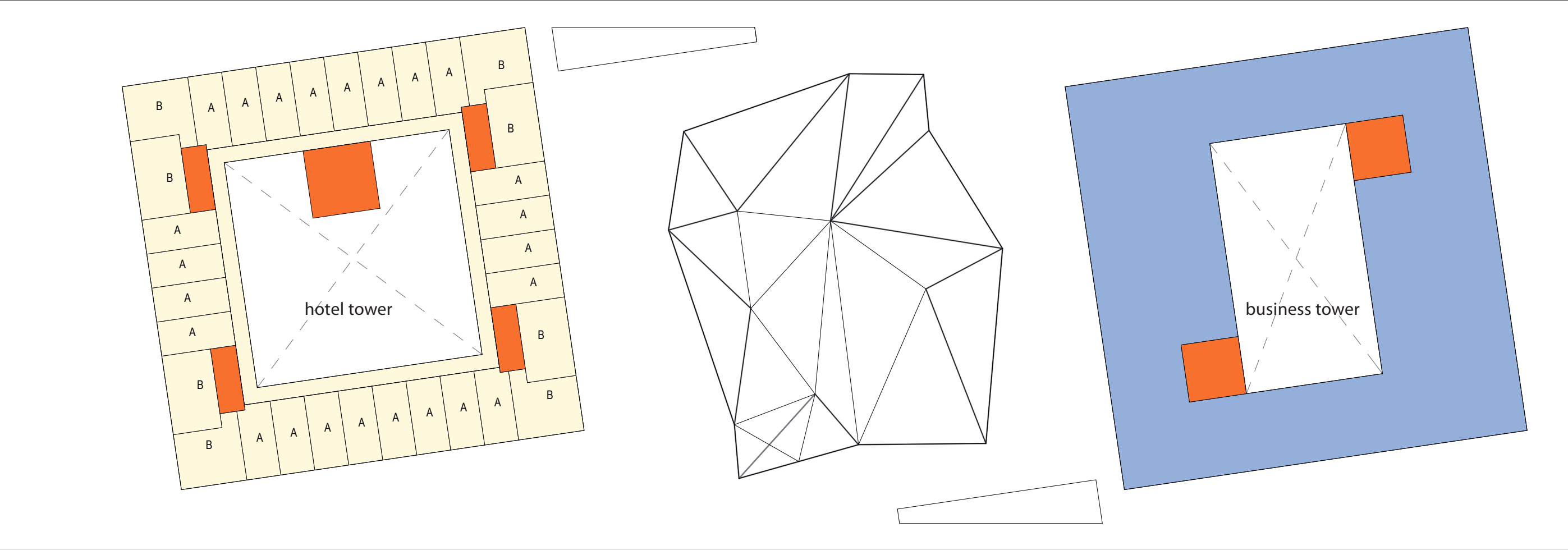
2nd floor



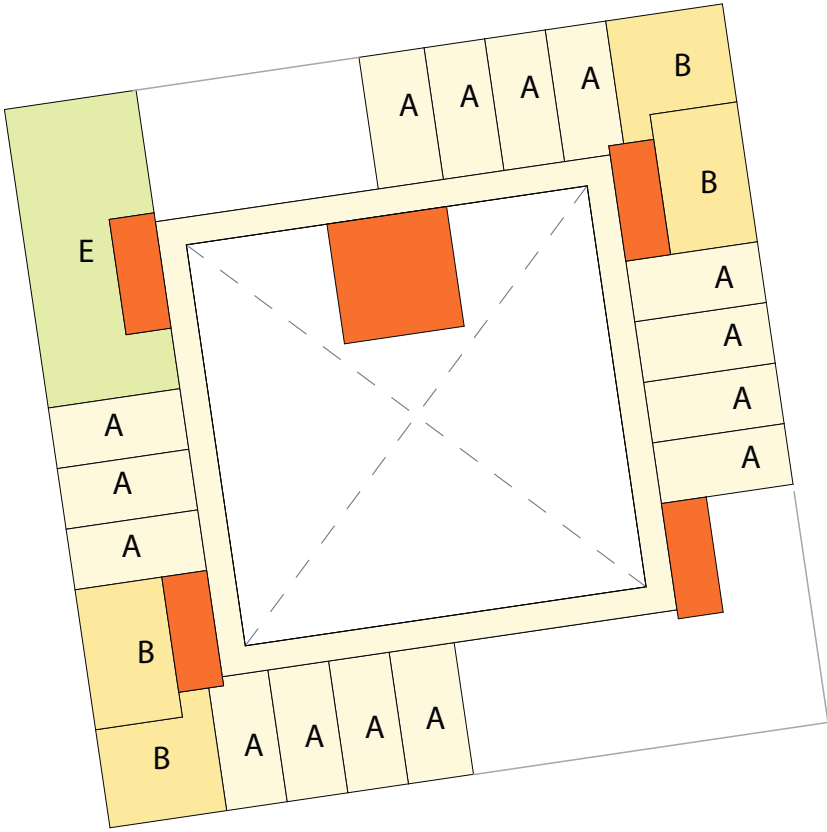
scale 1:500



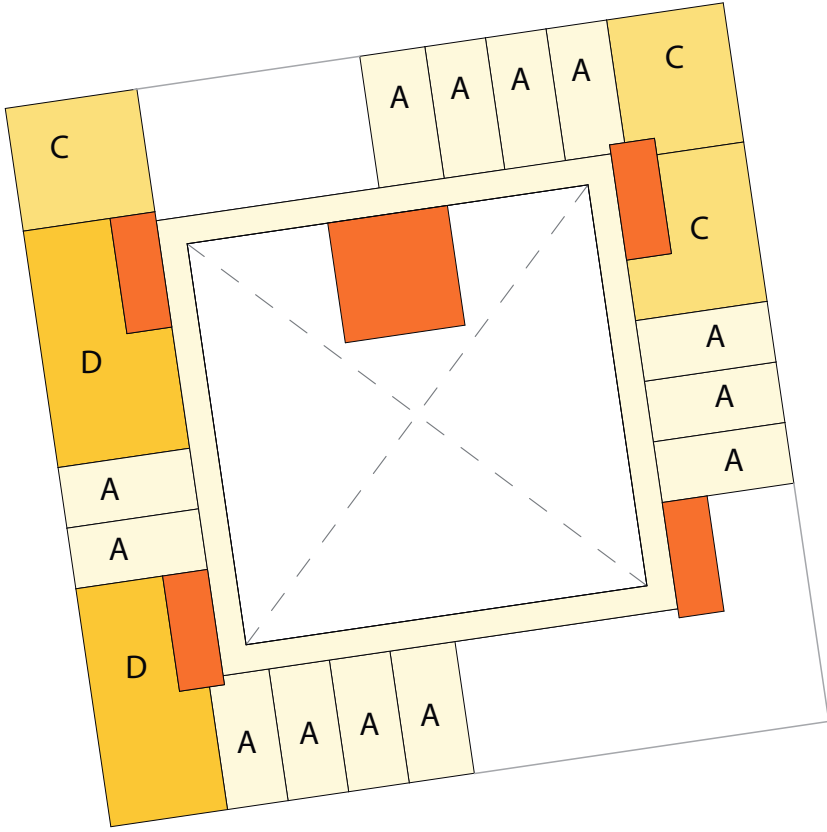
3rd floor



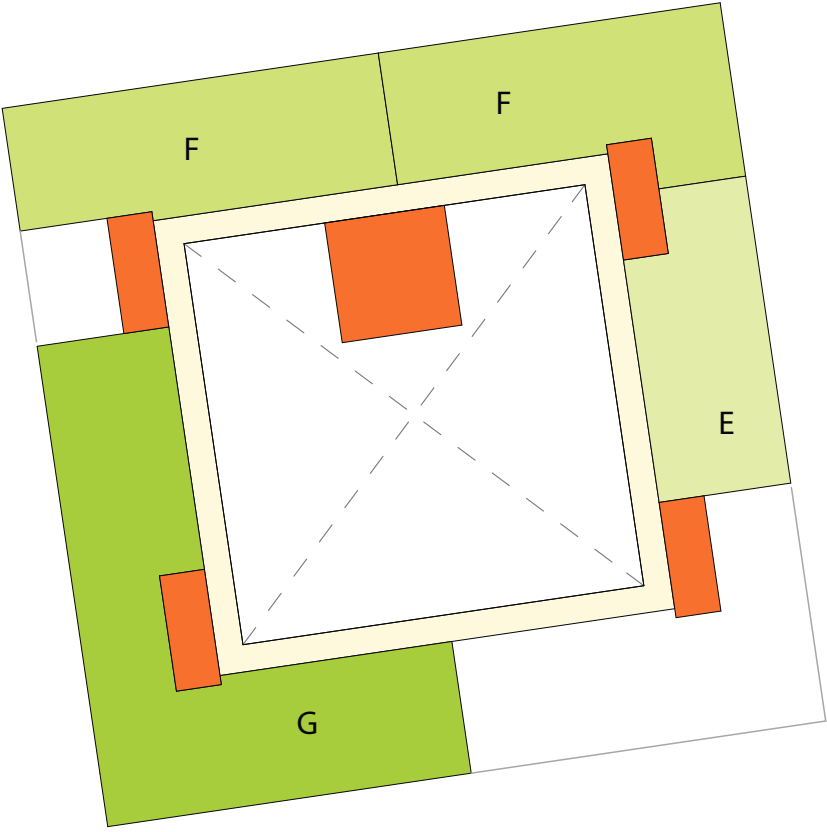
schematic key levels



typical hotel room floor



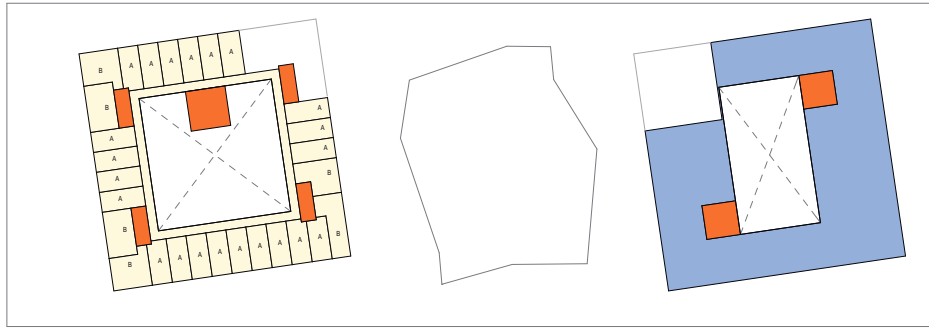
typical hotel room floor



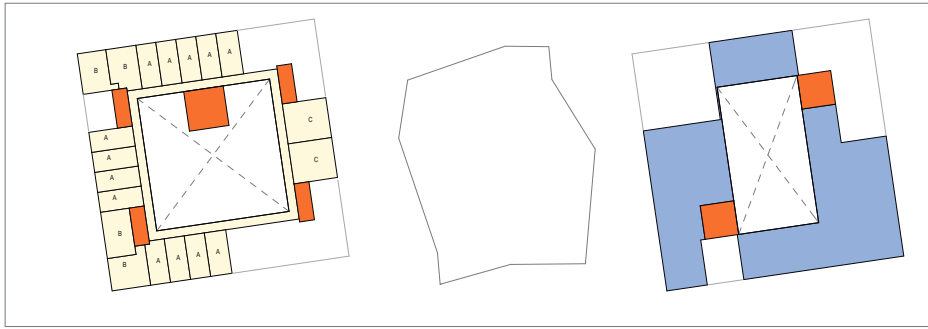
executive hotel room floor



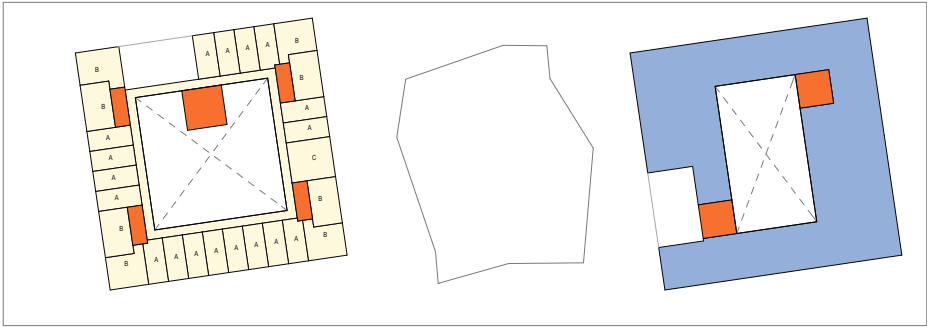
4th floor



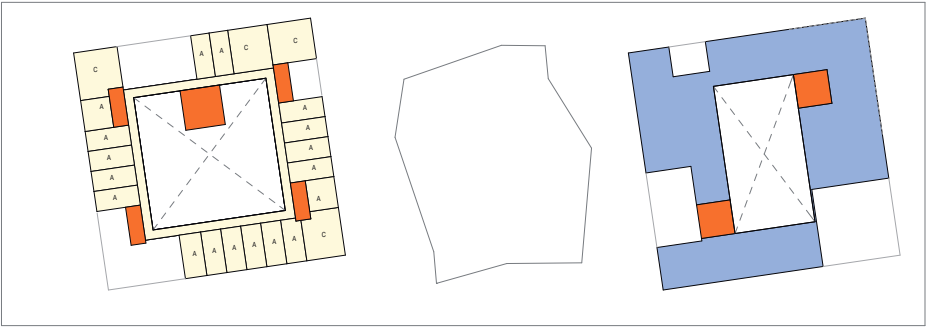
8th floor



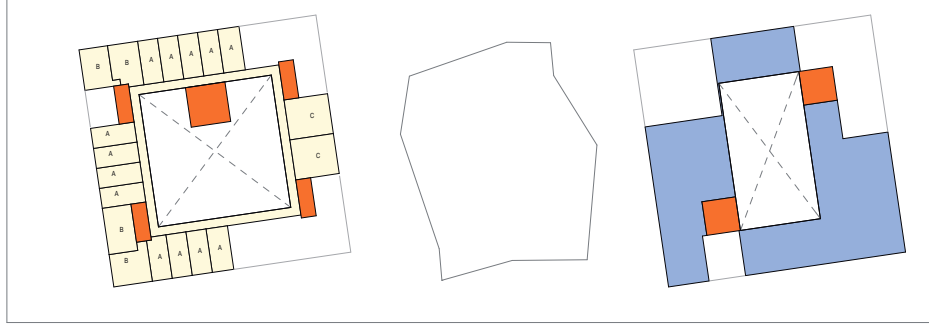
12th floor



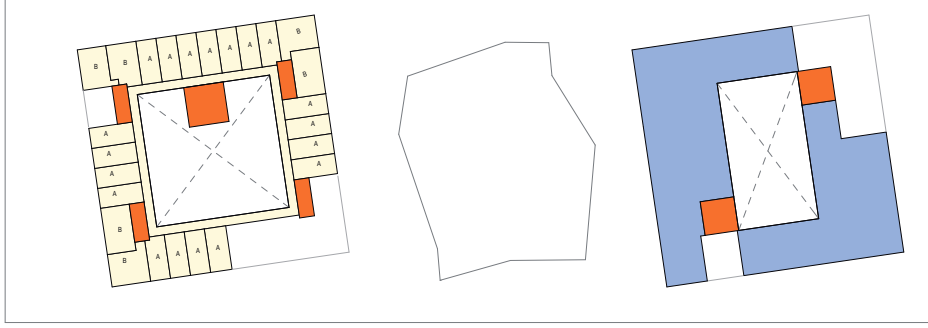
16th floor



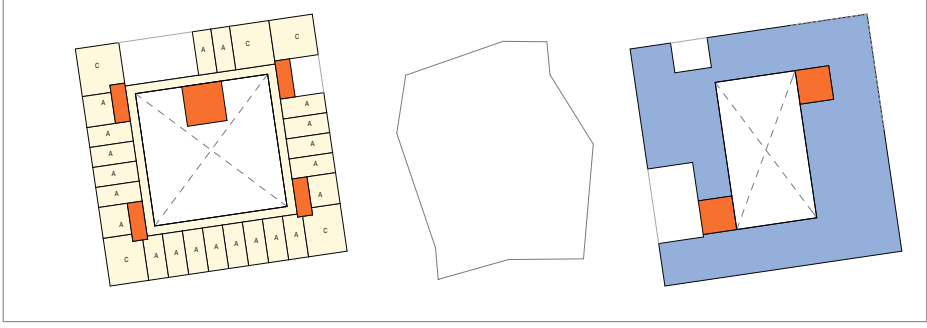
5th floor



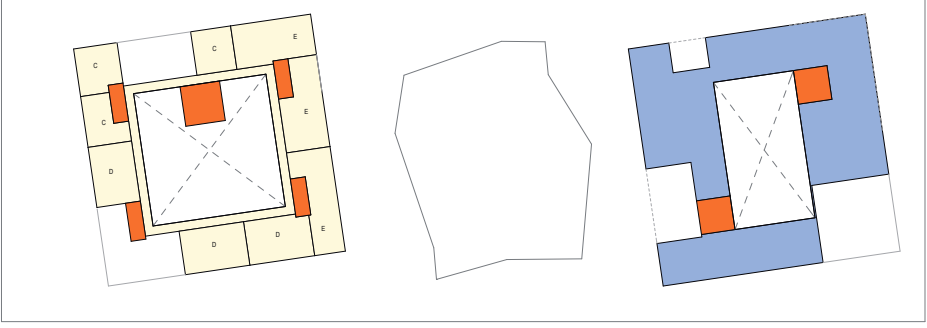
9th floor



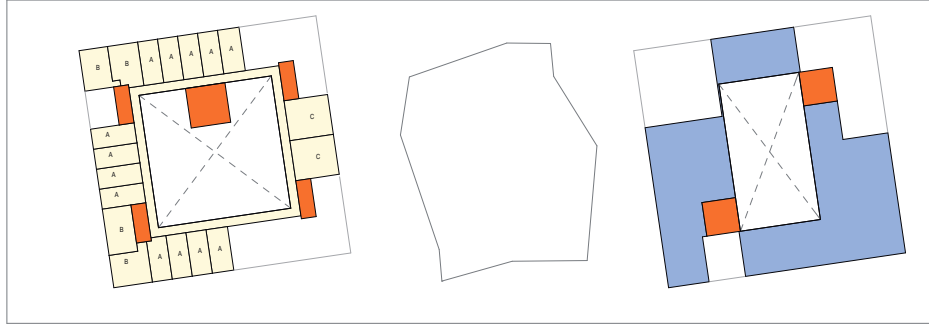
13th floor



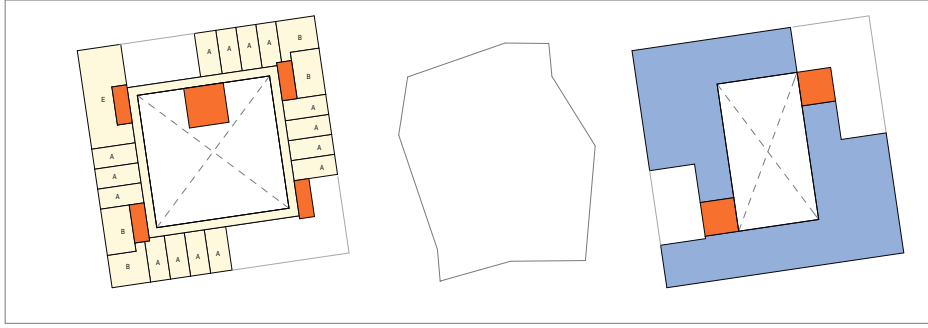
17th floor



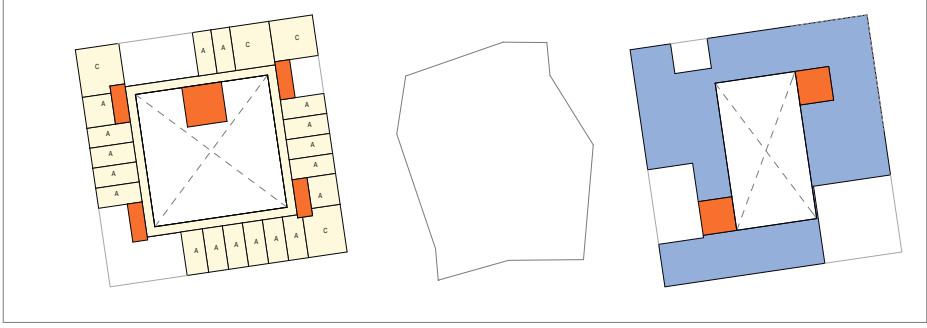
6th floor



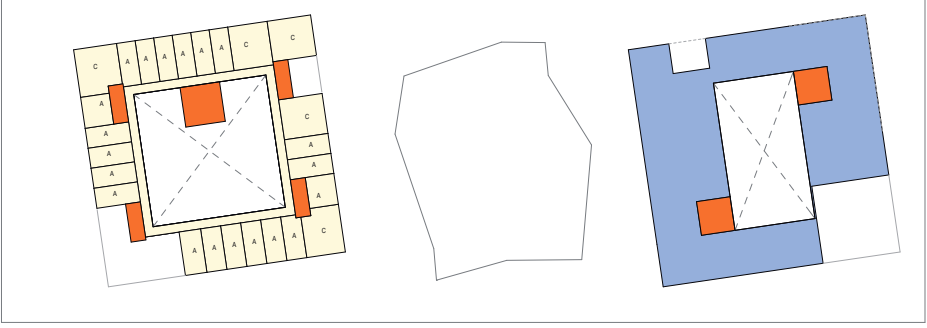
10th floor



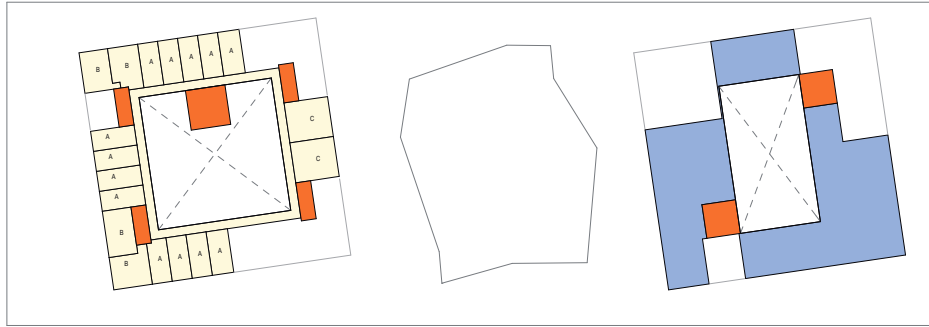
14th floor



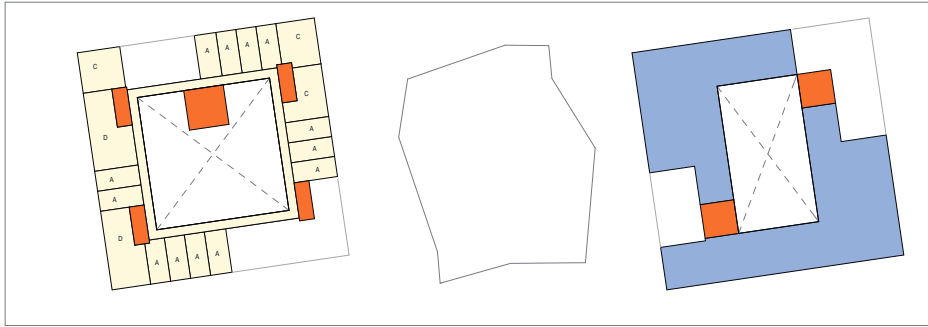
18th floor



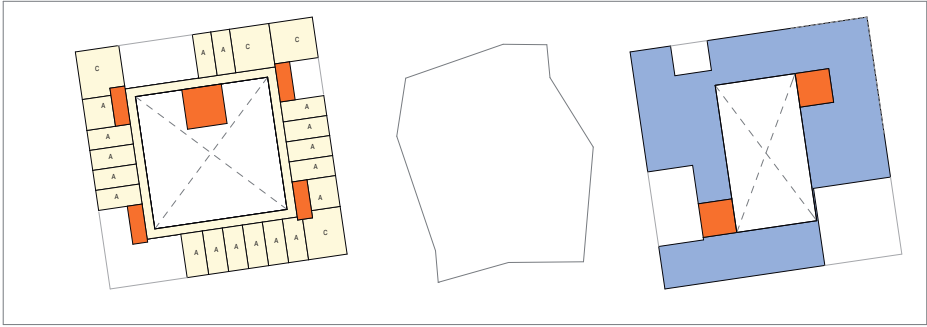
7th floor



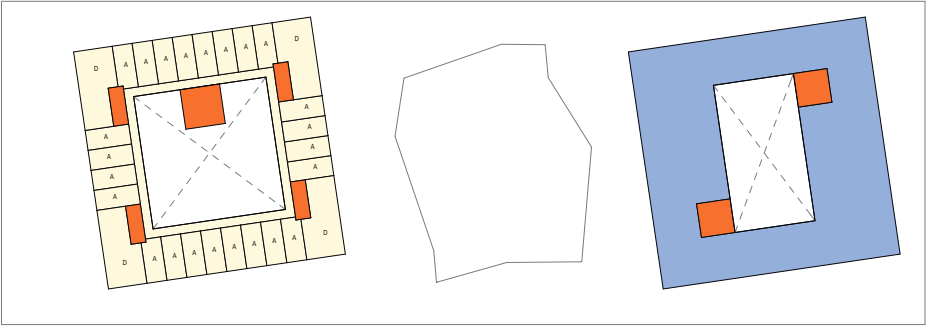
11th floor



15th floor

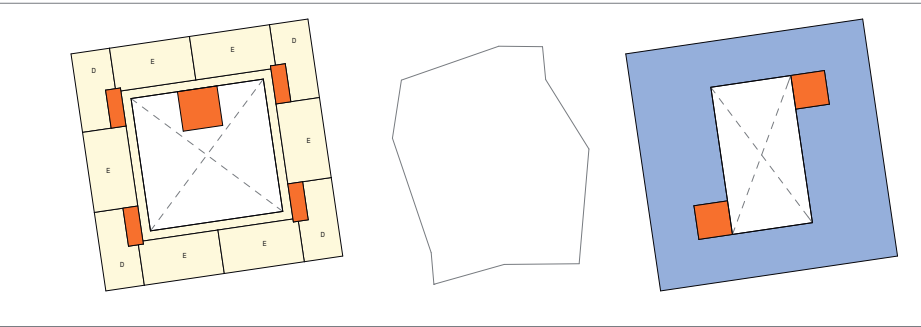


19th floor

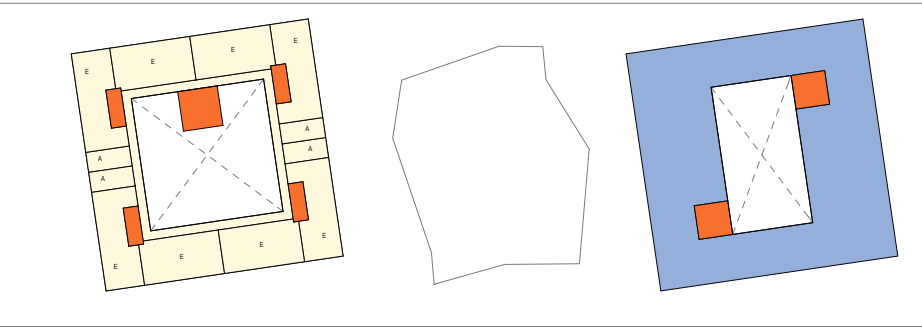




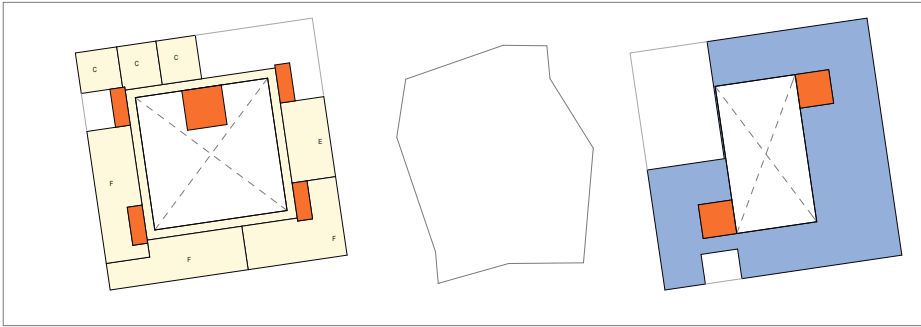
20th floor



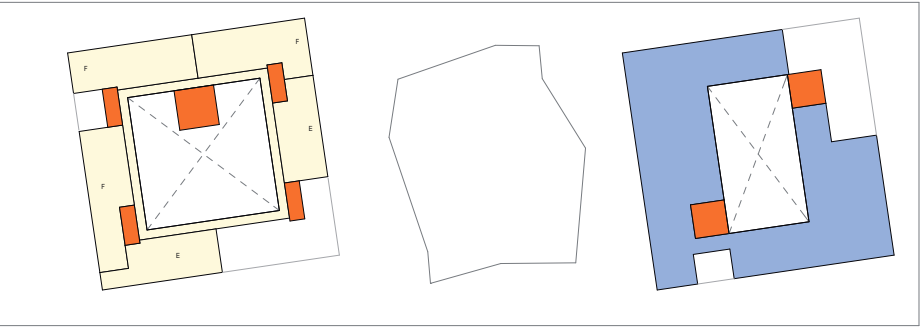
24th floor



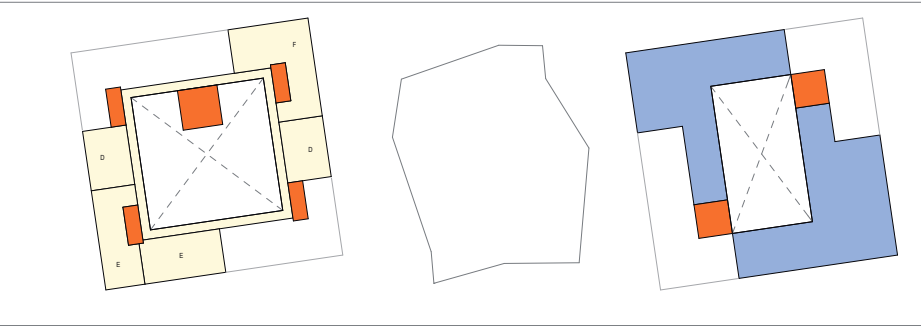
28th floor



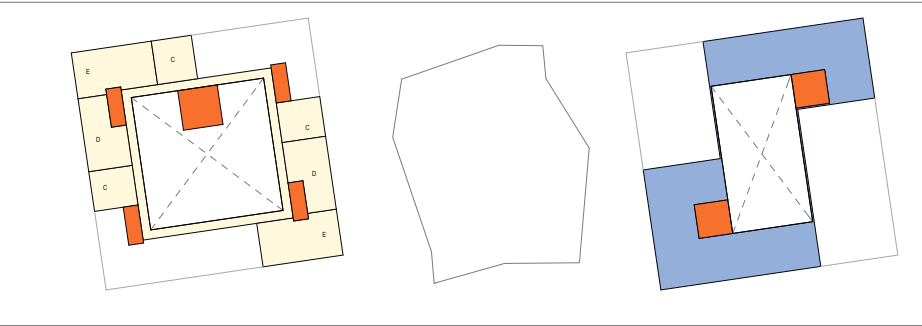
32th floor



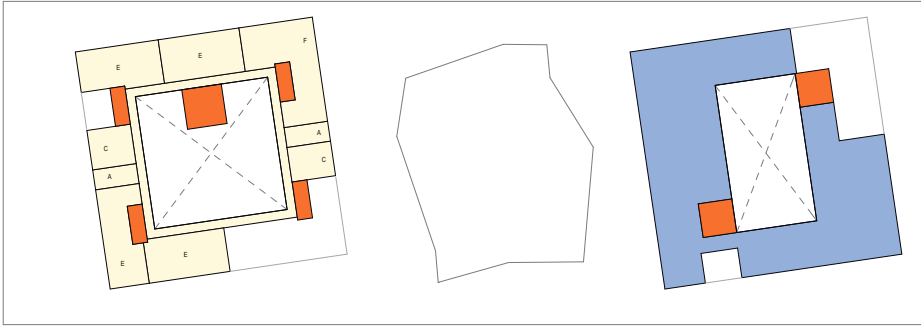
21th floor



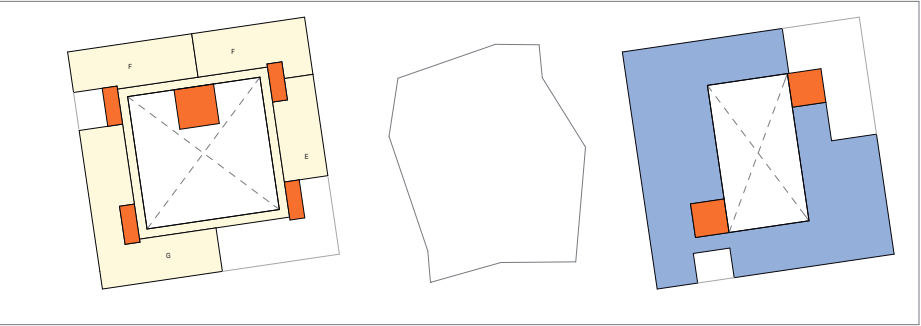
25th floor



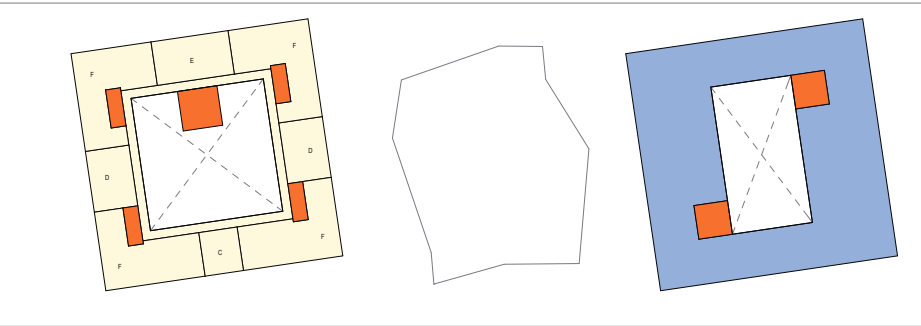
29th floor



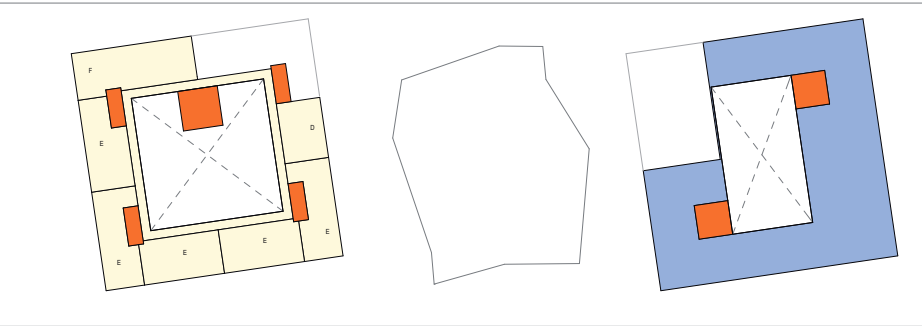
33th floor



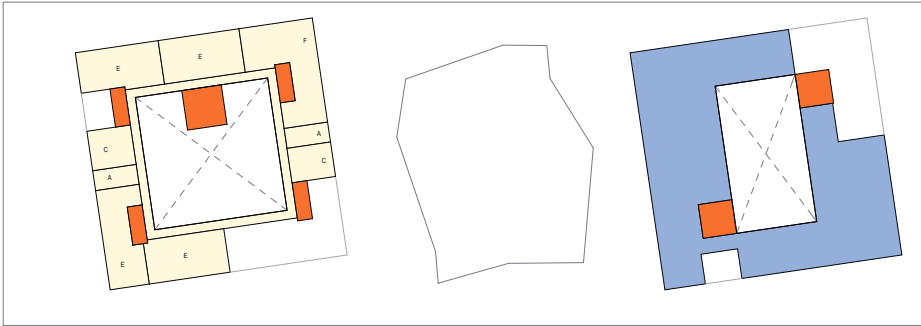
22th floor



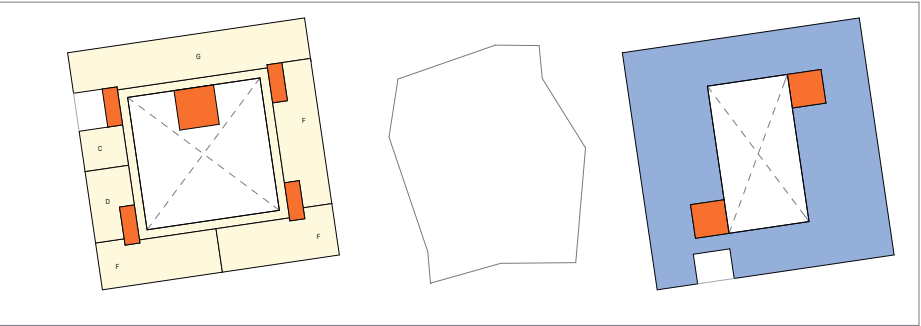
26th floor



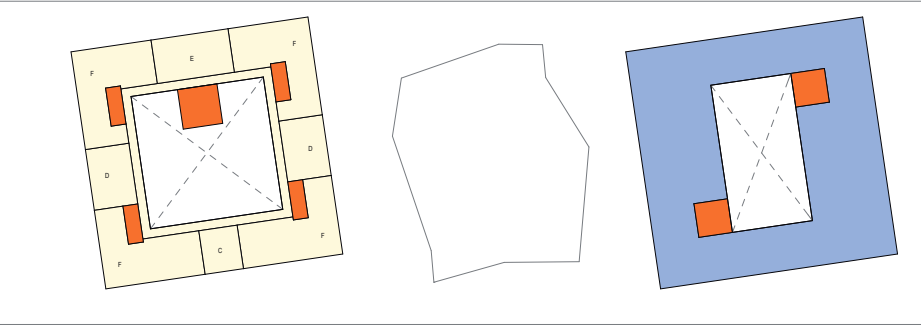
30th floor



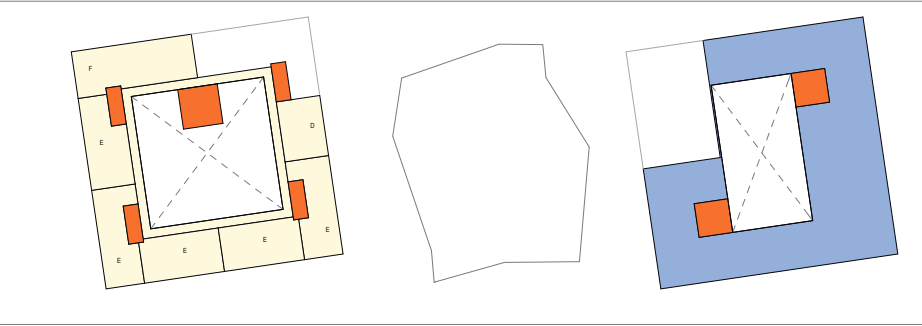
34th floor



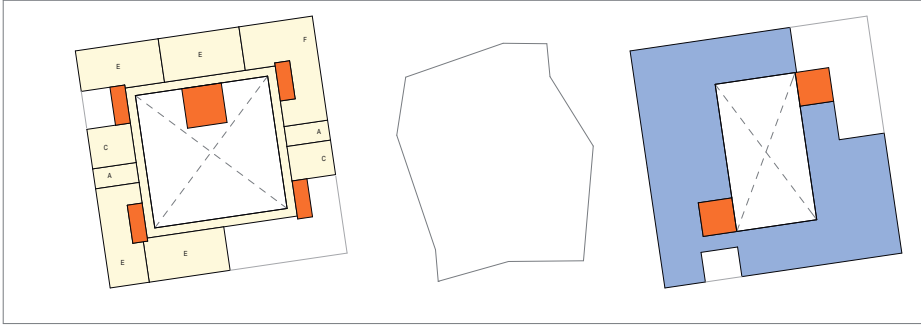
23th floor



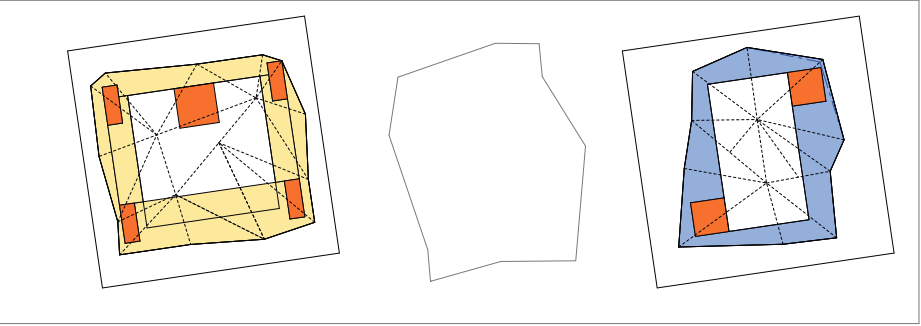
27th floor



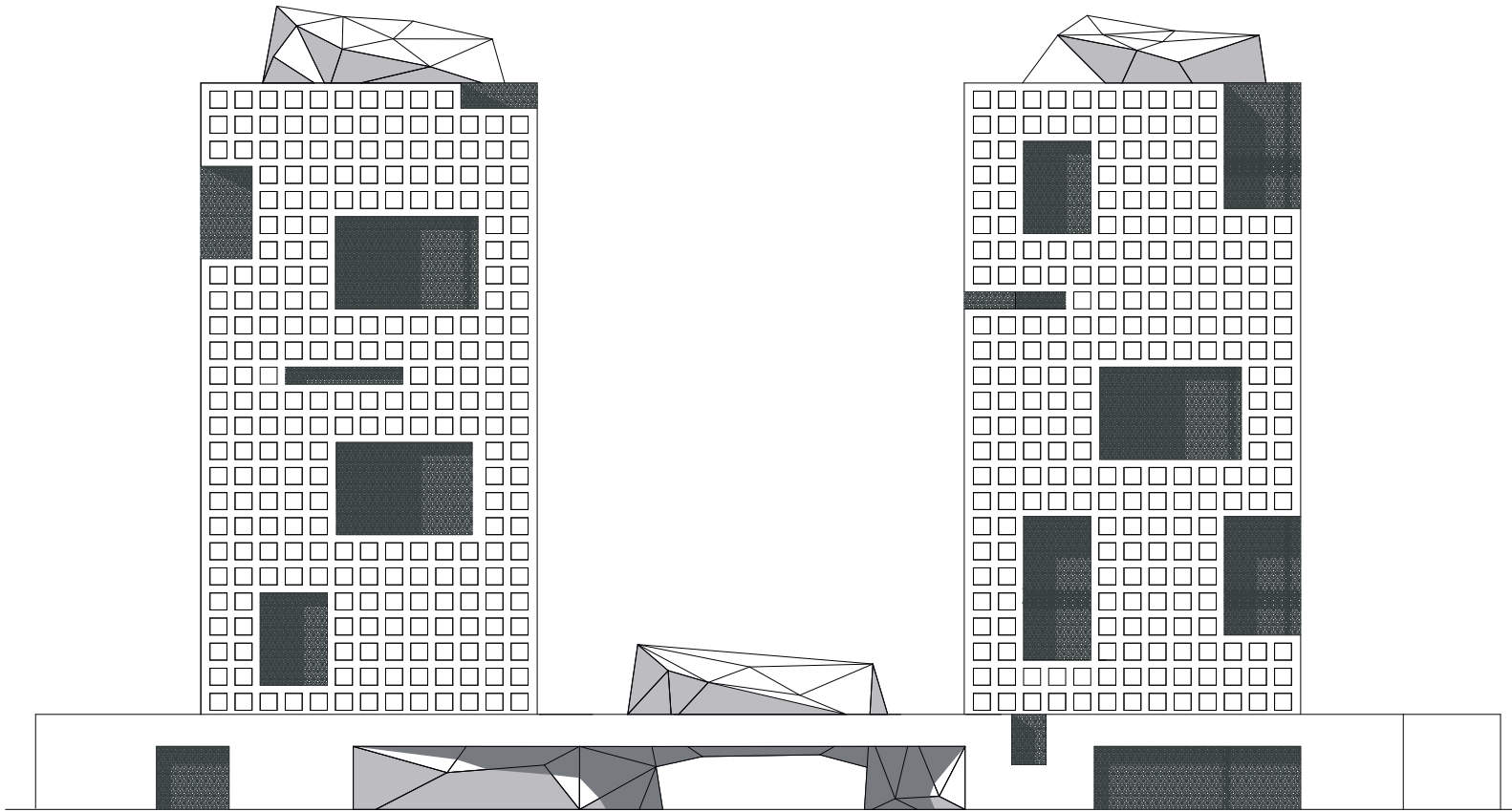
31th floor



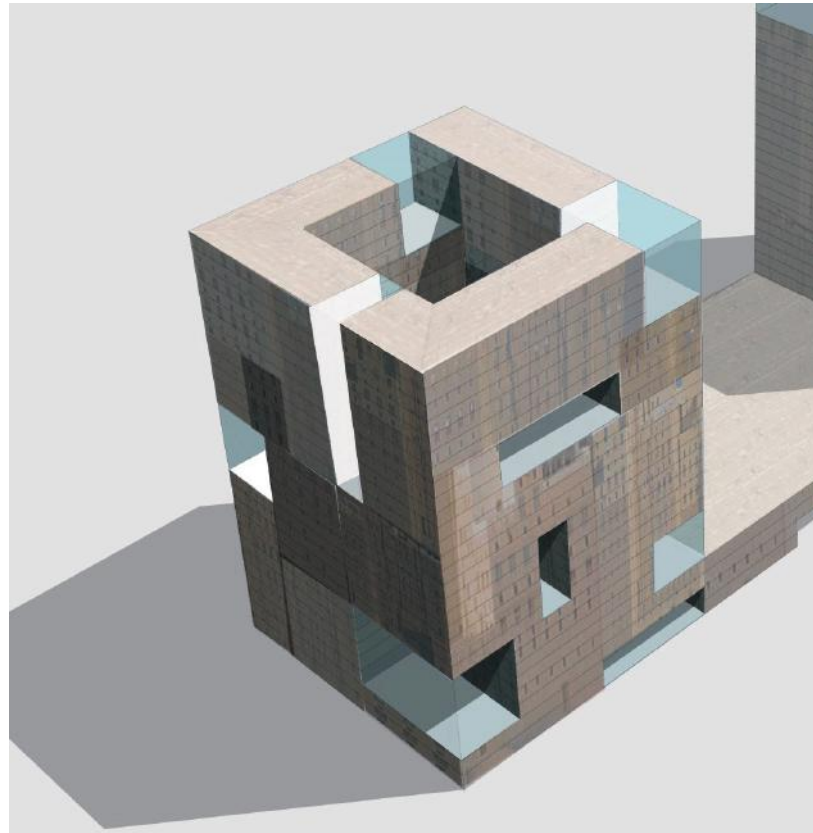
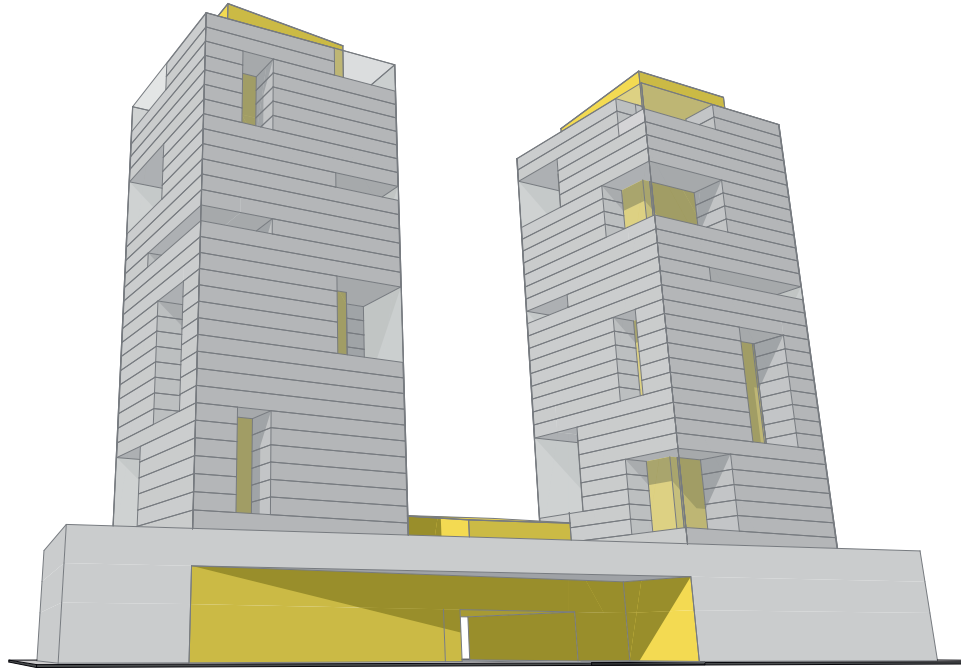
35th floor



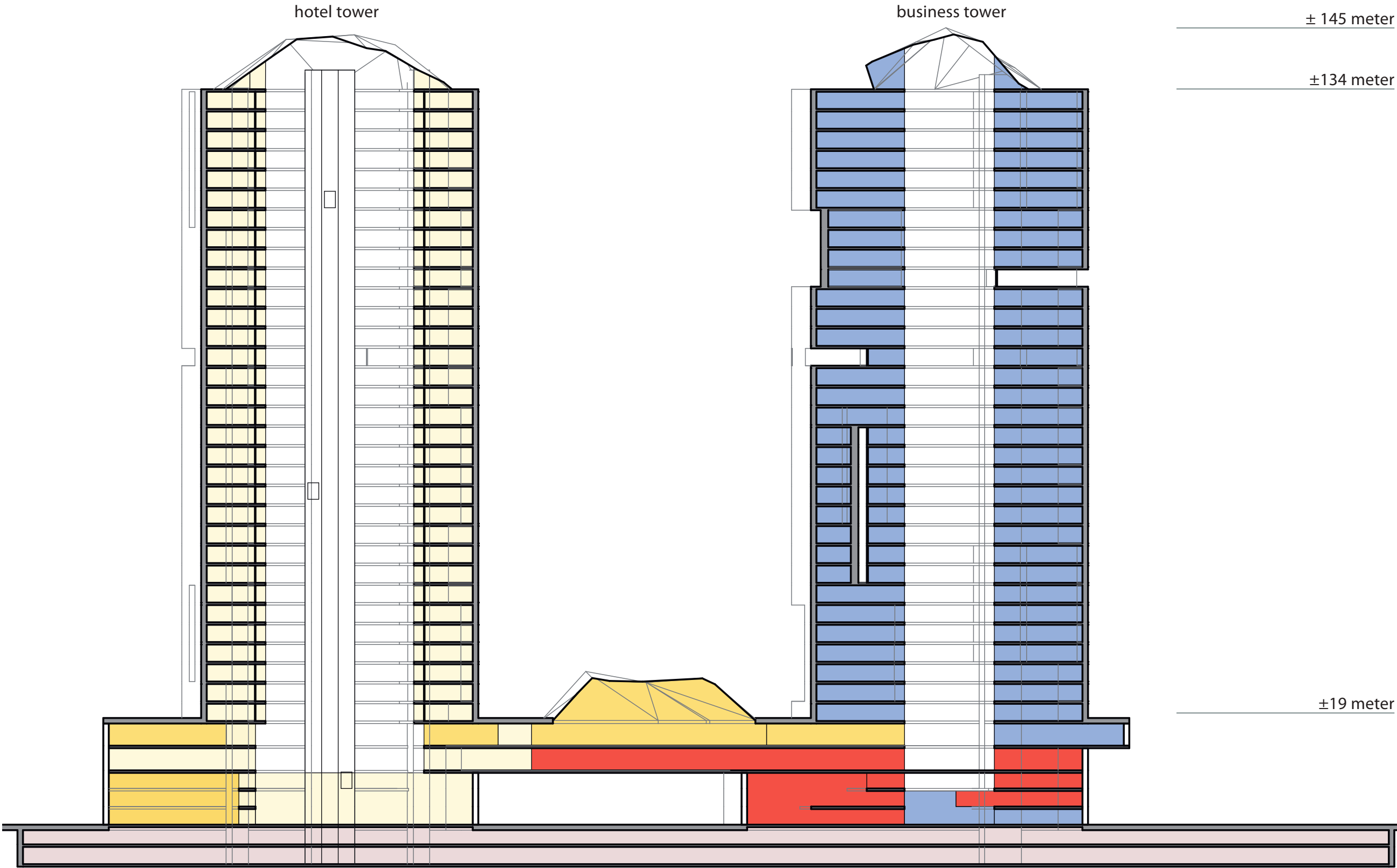




images and spheres of the building



cross-section

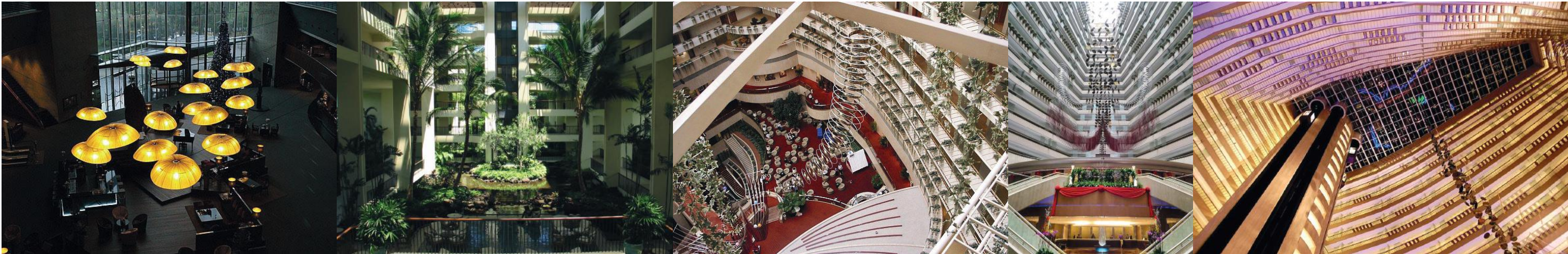






# REFERENCES





atrium



lobby



hotelrooms

# HOTEL



lounges

restaurants







Typical and unique guestroom layouts Guestroom plans. (A) Economy queen room, 220 ft<sup>2</sup> (20.5m<sup>2</sup>) save space with sink/vanity outside bathroom and one bed. (B) Mid-scale king room, 320 ft<sup>2</sup> (30m<sup>2</sup>) shows how placing the bad against the bathroom wall increases useable space. (C) First-class double room, 365 ft<sup>2</sup> (34m<sup>2</sup>) with typical furnishings. (D) Three-bay conference suite, 1,160 ft<sup>2</sup> (180m<sup>2</sup>) combines a two-bay public area with wall-bed, lounge seating, work area, full bathroom and wet bar with a typical guestroom, and second connection room. (E) Luxury resort room 550 ft<sup>2</sup> (51m<sup>2</sup>) introduces five-fixture bathroom and fireplace (Four Seasons, Scottsdale). (F) International luxury guestroom, 530 ft<sup>2</sup> (49m<sup>2</sup>) features carefully detailed built-in storage, sliding doors, and glass partitions for an open effect (Park Hyatt, Hamburg). (G) Luxury casino-hotel room, 665 ft<sup>2</sup> (62m<sup>2</sup>) features large bathroom, queen-queen beds, and separate living area (the Venetian, Las Vegas). (H) Rotated room configuration, 530 ft<sup>2</sup> (49m<sup>2</sup>) places whirlpool tub on the exterior wall of spacious bathroom and features unusually wide guestroom space (The Ritz-Carlton Millenia, Singapore).

Hotel Design Planning and Development, Rutes, Penner, Adams

# REFERENCES

# HOTEL ROOMS





# REFERENCES



# BALLROOMS





offices



# REFERENCES

# OFFICES / CONFERENCE



conferencerooms





interior and shops



hypermarket



mall

MALL







spa



fitness

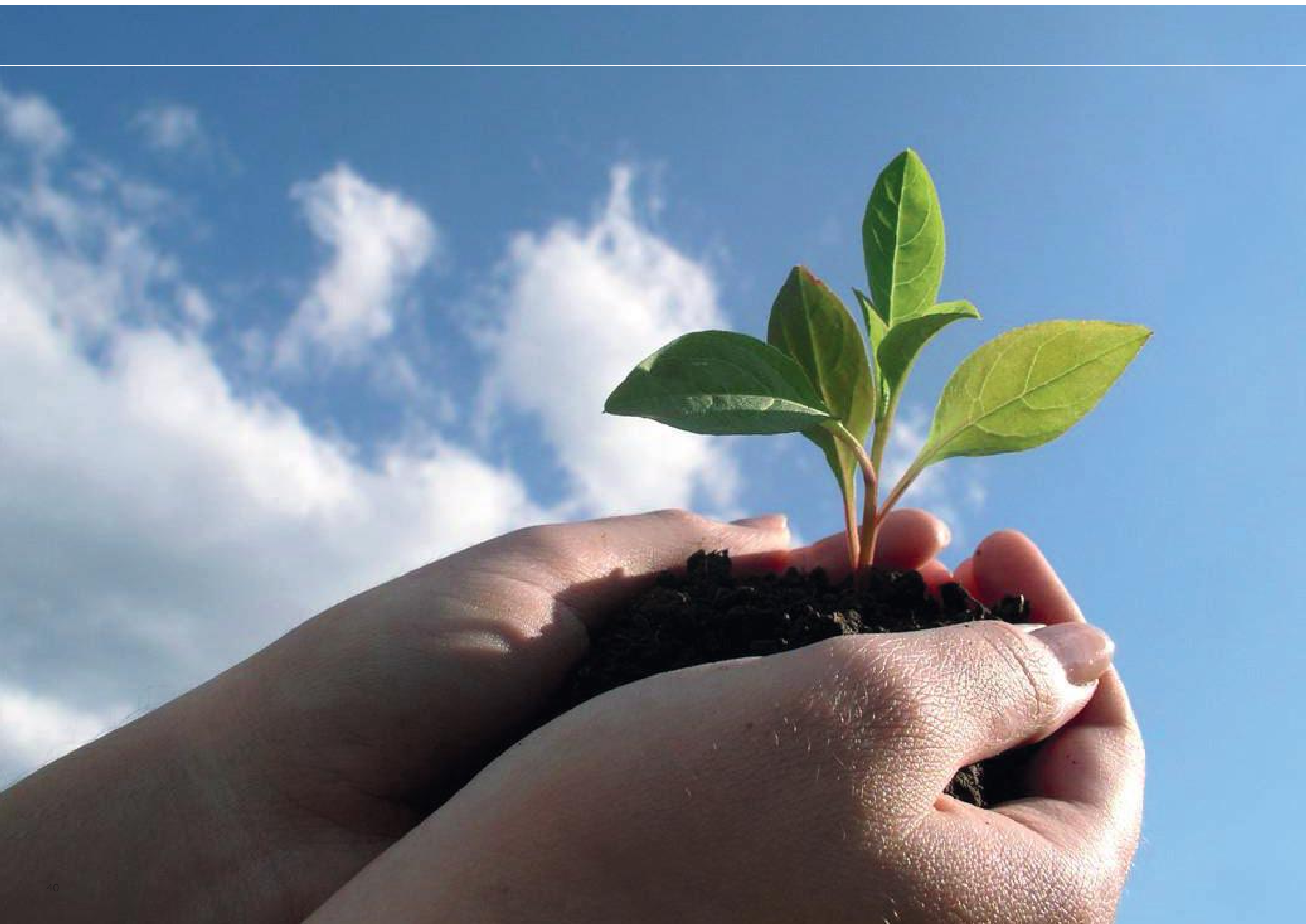


swimming pools

# REFERENCES

# WELLNESS





# SUSTAINABILITY



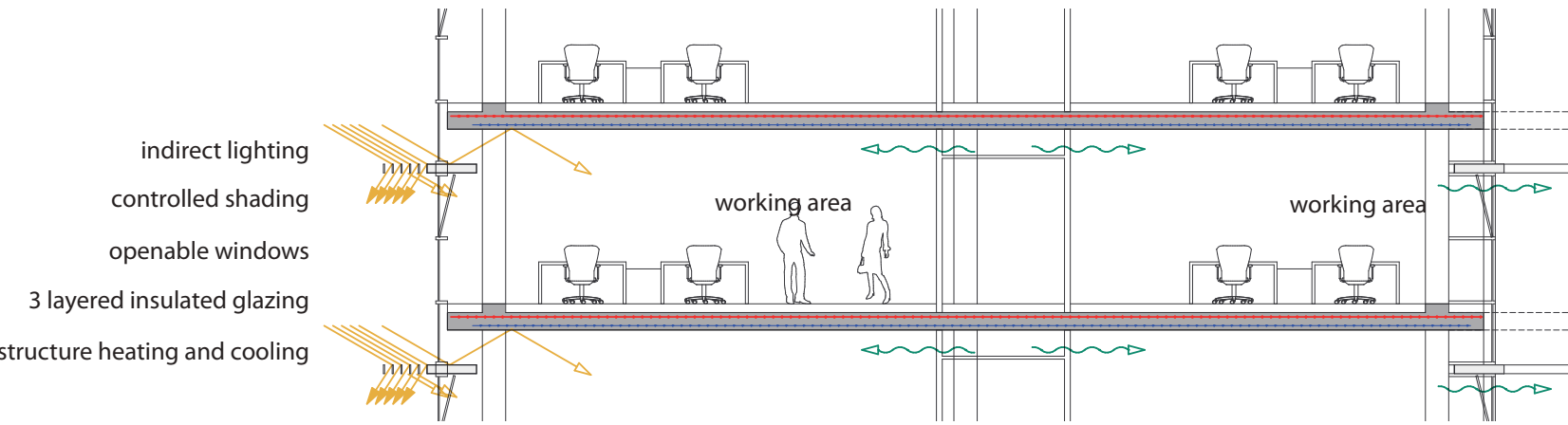
VISION ON SUSTAINABILITY

We are acutely aware that architecture is more than making a building. The building will always be part of the public space. By its dimensions and materials it has effect on the different scale levels of its surroundings. We deal respectfully with the existing qualities of the context. The location and its history are an important source of inspiration for the design. We are not interested in a certain 'form for form'; our designs are always inspired by function, location and perception. In our ambition we strive for a high degree of functional, social and aesthetic sustainability. A building that owns a timeless beauty, at the same time fits beautiful in its urban context and also possesses a high degree of future flexibility, we consider much more sustainable than a building given attention to the sustainability use of materials alone.

Aware of the qualities of the site, we carefully study function, orientation, perception, views and the use of sunlight. After this, focused on the commission, specific projects are designed in clear concepts with optimised typologies. Within available budgets, administrative possibilities and our social responsibility, studies of spatial programs lead to clear sustainable concepts. The welfare of the occupants for us always prevails. Our architecture is characterized by the use of daylight and space. A thoughtful layout, taking into account the right perception and sun lighting enhance the value for the occupants.

Terms such as sustainable energy, heat pumps, green roofs and intelligent building are important components of the formulation of professional approach. With thoughtful installation concepts, we eliminate the CO2-emissions and the use of fossil fuels and at the same time raise the comfort.

Bright durable materials and colours enhance the expressiveness, spare the environment and respect the maintenance budget of our client. We attempt a certain restraint and do not opt for redundant effects. Spaciousness, high quality materials and composition of the façade and mass will give our architecture a certain purity and timelessness.



AMBITION ON SUSTAINABILITY

Our aim is to realize a Hotel and Business-Centre that is using fossil resources at a minimum. We emphasize the use of sunlight. Heating and cooling of modern buildings use less energy these days, so the share of the lighting is playing a substantial role in the total energy use (sometimes up to 40% of the total). The building will (if the location is suitable) generate it's own energy and store it in the ground, where it will be available on demand. Solar panels can take care of the additional demands for energy. It will not be the use of a single technology, but the sum of the technologies we propose which will be used in an advanced and efficient combination that will make the difference. Most of these technologies are already very common in contemporary building engineering.

In the slabs we propose structure cooling and heating: in the lower part cooling and in the upper part low temperature floor heating. Above the concrete structure in the false floor (15 cm) is room for all the other installations needed. So ventilation, electricity, data cables will be out of sight and always reachable. This position of the installation gives the opportunity for the flexible arrangement of the offices for example.

Via the floors we bring in fresh air. The used air will automatically flow by overpressure to the atrium. The cooling and heating of the atriums will cost no additional energy this way. On top of the atrium the air will leave the building. Before doing so the heat or cold of this air will be re-used for heating or cooling the fresh air we bring in.

The structural solution of the complex is monolithic reinforced concrete or prefab; pillar framed (grid raster: 8,1m x 8,1m) flat floor structure, where the walls of internal vertical transport blocks ensure bracing. During the distribution of the structure the possibility of the optimal arrangement of offices, hotel rooms and the distribution of parking lots and service roads is considered.

On the scale of this project saving floor heights is very interesting both in economical and ecological aspects. Considering the possibility of using less structure in combination with maximum use of space and flexibility we like to propose a floor system with a minimum height. This will also save a lot of costs on the facades: often one of the most expensive elements of a building. The reducing of the slab height will enable us to make the maximum numbers of floors. So the building height can be reduced and at the same time the inner space can be optimised. The rooms can be minimum of 3 meters height.








Thanks to the glass-roof the complex is extremely light. The large-scale of natural light creates a pleasant environment all year round. The panels of the glass-roof can have integrated solar cells. These take part in the utilization of solar energy and the shading of the space below as well.

The underground parking garage makes the lot partly unavailable for direct penetration of rainwater. Although the climate is very dry for an effective and environmental friendly HVAC system we like to integrate extensive green roofs on top of the building. When it is raining these roofs will hold storm water, which can be re-used for watering the green in the atriums. The rest will be send to the sewerage with delay not to overload the drain system at that moment.

The façade will be engineered for the extreme climate. To keep the heat out and let the filtered light in a double façade system with glass and possible green will give the building its unique appearance.



FACTORS TO BE TAKEN INTO CONSIDERATION

- Surroundings and location  
(Basra Sport City, plot orientation) 
- Water efficiency  
(e.g. usage of rainwater) 
- Energy and Atmosphere  
(renewable energy sources) 
- Construction materials  
(glazing, slab construction...) 
- Indoor climatic conditions and health 
- Innovation process: management 
- Mobility  
(easily accessible area) 



INDOOR ENVIRONMENTAL QUALITY GOALS, WORKING ENVIRONMENT

Relationship between productivity and working environment

Influence factors:

- Temperature: the productivity is the best between 20-25 °C
- Number of work desks per office-room has influences on the efficiency
- Dirty ventilation and air-co filters reduce the productivity by 8 %
- High humidification reduces the productivity by 3 %
- Recirculation of the used air reduces the productivity by 2,5%
- Emission of chemical gasses reduces the productivity by 5 %
- No openable windows decreases the productivity by 2 %
- Orientation of the office spaces:  
in summer the productivity is 3 % higher in north oriented offices
- Personal control of temperature increases the productivity by 5-15%
- A console to control the temperature, air speed and fresh air improves the productivity by 12,5 %



What people like:

- High heat-preserving capability of partition walls and ceilings (heavy walls and slabs without suspended ceilings)
- Temperature sensation of the office-staff: people prefer higher temperature (heating) by foot, lower temperature (cooling) by head
- In winter the higher surface-temperature of floors, walls and furniture compensates the lower air temperature
- In summer the lower surface-temperature compensates the higher temperature of the air.
- Openable windows
- Personal control of temperature, air speed and fresh air

# SUSTAINABILITY

ENERGY AND ATMOSPHERE GOALS

- Architectural goals: flexible usage of surfaces (floors, walls, ceilings)
- Efficient installation systems (HVAC: Heating, Ventilation and Air-Conditioning)
- Usage of sustainable energy, natural sources

DESIGN

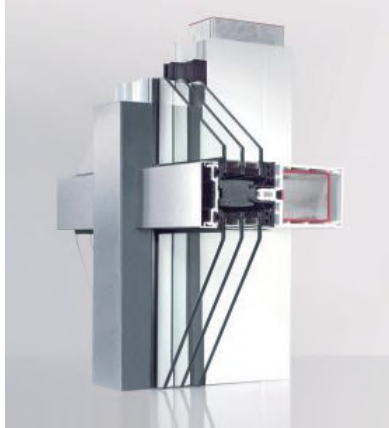
- Windows: insulated 3 layer-glass ( $U_w < 1,1 \text{ W/m}^2\text{K}$ )
- Outside walls: insulated cavity walls ( $U_w < 0,25 \text{ W/m}^2\text{K}$ )
- Position and orientation of the building
- Energy-save, economical equipments: computers, lighting (led-lighting) etc.
- Usage of glass surfaces in the elevation, to get more indirect daylight
- Shading with light control function to get less direct sunlight

SUSTAINABLE ENERGY, NATURAL SOURCES

- Warm and cool storage
- Solar-energy
- Wind-energy
- Usage of waste-heat energy
- Soil-energy, ground-heat



structure heating & cooling



3 layered insulated glazing

MAIN ADVANTAGES OF THE STRUCTURE HEATING AND COOLING

- Low investment and operation costs
- Favourable building temperature profile
- Little air flow and disturbance of dust
- No Sick-Building syndrome
- Possible use of renewable-energies and alternative cool-hot water preparation equipments  
(solar-panels, earth-heat pumps)
- Energetically optional, low temperature in the system (40°C)
- High quality of comfort
- Free use of the floor space by integration of the heating in the concrete floor  
(floor, wall, ceiling without equipments)
- Rugged, long-lived





# CONCEPT PROGRAM



01. The methodology of the defining of the concept program

**1. step:** determining the proportion of the main functions and the services / other functions.

Hotel:

about 60% main function ( hotelrooms / housemaid rooms / corridors on the upper floors )  
about 40% other function ( entertainment / service / operation )

Office:

about 85% main function ( office areas with wet zones )  
about 15% other function ( service and operation )

Mall:

Our first area calculation for mall function is 8.500 sqm.

**2. step:** defining of the function-groups and the proportion of them.

**3. step:** checking the proportion by advisors - modifying the data

**4. step:** determining the areas of the rooms, according to the proportion of the function-groups.

02. The function-groups with the proportions

Hotel			
sign of function-groups	function-groups	gross area ( m <sup>2</sup> )	proportion
h-1	hotelrooms & housemaid rooms & corridors	40120	62,4%
h-2	vertical circulation	3200	5,0%
h-3	common spaces for guests, entrances, foyer	2900	4,5%
h-4	restaurants, bars	2600	4,0%
h-5	conference spaces	7070	11,0%
h-6	service areas ( kitchens, storages, laundry...etc.)	2250	3,5%
h-7	administration ( direction, back office...etc.)	643	1,0%
h-8	installation, electricity	2500	3,9%
h-9	shops, entertainment, casino, sport functions	3022	4,7%
total gross area of hotel functions without garage		64.305	100,0%
h-10	parking garage ( on the -1 and -2 underground floor )	14200	
h-11	outside parking and landscape	7200	

Office			
sign of function-groups	function-groups	gross area ( m <sup>2</sup> )	proportion
o-1	office area, wet zones	48960	81,9%
o-2	stairs, elevators, storages	1545	2,6%
o-3	common areas ( hall, lobby, reception )	1170	2,0%
o-4	restaurants	1841	3,1%
o-5	conference spaces	2972	5,0%
o-6	service areas ( kitchens, storages...etc.)	530	0,9%
o-7	other functions ( operation, library, post etc...)	410	0,7%
o-8	installation, electricity	2340	3,9%
total gross area of office functions without garage		59768	100,0%
o-8	parking garage ( on the -2nd underground floor )	27500	
o-9	outside parking and landscape	3300	

Mall			
sign of function-groups	function-groups	net area ( m <sup>2</sup> )	proportion
m-1	common customer places	6800	80,0%
m-2	storages	680	8,0%
m-3	employee's function, administration	425	5,0%
m-4	installation, electricity	595	7,0%
total gross area of mall function without garage		8500	100,0%
m-5	outside parking and landscape	4700	

03. Detailed area calculation

Determining the areas of the rooms in the hotel.

	Hotel	pieces	m2/pc	total m2
h-1 A	double room	300	36	10800
h-1 B	executive room	50	54	2700
h-1 C	suite	50	72	3600
h-1 D	executive suite	25	108	2700
h-1 E	double suite	50	144	7200
h-1 F	executive double suite	25	216	5400
h-1 G	presidential suite	2	400	800
h-1	maid room (room service)	32	16,25	520
h-1	storages for linnen, vending, ice			
h-1	storages for cleaning			
h-1	corridors			6400
h-1	total			40120

h-2	elevators, stairs for guests			2400
h-2	elevators, stairs for staff			800
h-2	total			3200

h-3	hotel entrance			100
h-3	lobby			1000
h-3	reception			400
h-3	wifi, silence areas, private rooms for business			500
h-3	audio/visuals, ICT			400
h-3	public toilets (lobby, restaurant, bars)			500
h-3	total			2900

h-4	restaurant1 (300 people)			800
h-4	restaurant2 (200 people)			450
h-4	bar (100 people)	2	75	150
h-4	restaurant 3 Sky deck (200 people)			600
h-4	club (400 people)			600
h-4	total			2600

h-5	conference room 1 (300 people)	6	250	1500
h-5	conference room 2 (100 people)	4	150	600
h-5	conference room 3 (50 people)	2	60	120
h-5	ballroom			2500
h-5	break out	12		1200
h-6	cloakroom	12		150
h-5	terraces			1000
h-5	total			7070

Determining the areas of the rooms in the hotel.

h-6	catering, kitchen, storages for restaurant 1			400
h-6	catering, kitchen, storages for restaurant 2			250
h-6	catering, kitchen, storages for restaurant 3			250
h-6	catering, kitchen, storages for bars			100
h-6	laundry and storage			210
h-6	furniture storage			100
h-6	employee's restroom + lockers			300
h-6	employee's break room			100
h-6	first aid			40
h-6	expedition			150
h-6	corridors			350
h-6	total			2250

h-7	director's office	1		70
h-7	administration	5	45	225
h-7	meeting room	2	30	60
h-7	back office	3	50	150
h-7	monitoring	1		66
h-7	corridors			72
h-7	total			643

h-8	installations - ventilation			850
h-8	installations - heating			500
h-8	installations - cooling			550
h-8	electricity			400
h-8	workshop			200
h-8	total			2500

h-9	shops			400
h-9	Spa, swimming pool			1600
h-9	massage, fitness			400
h-9	beauty			250
h-9	lockerrooms			372
h-9	total			3022

h-10	hotel parking garage	528	27,5	14520
h-10	total			14520

total gross floor area of the hotel function				78825
--	--	--	--	-------

h-11	outside parking			800
h-11	taxi, bus parking			800
h-11	outside spa			3000
h-11	roads, garden			2600
h-11	total outside area of the hotel			7200



Determining the areas of the rooms in the office-part.

	Office			
		pieces	m2/pc	total m2
o-1	office areas			47585
o-1	wet zones			1375
o-1	total			48960
o-2	elevators, stairs			585
o-2	storages			960
o-2	total			1545
o-3	office entrance			100
o-3	lobby			505
o-3	receptions			245
o-3	public toilets			160
o-3	communiaction center			160
o-3	roofterrace			
o-3	total			1170
o-4	restaurant1			900
o-4	restaurant2			650
o-4	public toilets for restaurants			291
o-4	total			1841
o-5	conference room	4	80	320
o-5	break out	4		260
o-5	cloakroom	4		60
o-5	terraces			200
o-5	total			2972
o-6	catering, kitchen, storages for restaurant 1			180
o-6	catering, kitchen, storages for restaurant 2			100
o-6	storages for cleaning stuffs			80
o-6	expedition			30
o-6	employee's restroom + lockers			60
o-6	employee's break room			20
o-6	first aid			20
o-6	corridors			40
o-6	total			530
o-7	post			61
o-7	operation rooms			90
o-7	monitoring			160
o-7	back offices	3	33	99
o-7	total			410
o-8	installations - ventilation			1000
o-8	installations - heating			300
o-8	installations - cooling			600
o-8	electricity			340
o-8	workshop			100
o-8	total			2340
o-9	parking garage	1000	27,5	27500
o-9	total			27500
total gross floor area of the office function				87268

Determining the areas of the rooms in the office-part.

o-9	outside parking			650
o-9	taxi			650
o-9	roads, garden			2000
o-9	total outside area of the office function			3300

Determining the areas of the rooms in the mall.

	Mall			
		pieces	m2/pc	total m2
m-1	customer space			4800
m-1	buffets			975
m-1	restaurants			525
m-1	bars			300
m-1	public toilets			200
m-1	total			6800
m-2	storages			680
m-3	administration			275
m-3	employee's restroom + lockers			75
m-3	employee's break room			75
m-3	total			425
m-4	installations - ventilation			200
m-4	installations - heating			145
m-4	installations - cooling			200
m-4	electricity			50
m-4	total			595
total gross floor area of the mall function				8500
m-5	outside parking			3000
m-5	roads, garden			1700
m-5	total outside area of the mall			4700

04. Total gross floor areas

gross floor area of the hotel function	64305
gross floor area of hotel parking garage	14520
total gross floor area of the hotel function	78825
gross floor area of the office function	59768
gross floor area of hotel office parking garage	27500
total gross floor area of the office function	87268
total gross floor area of the mall function	8500
total gross floor area of the building-complex (sqm)	174593
terrain hotel function	7200
terrain office function	3300
terrain mall function	4700
total terrain gross area outside the complex	15200



# COST CALCULATION



CONCEPT COST CALCULATION

**Initial approximation of the overall construction costs based on the estimated concept program in gross area in square meters.**

Parking and technical installations:

- 23.400 m² parking garage level –2;
- 18.500 m² parking garage, 4.900 m² installations level –1.

5 star hotel:

- 6.200 m² ground floor and mezzanine (common spaces for guests, entrance, lobby, restaurant, bar, kitchen, storages, administration, shops, spa, swimming);
- 3.900 m² first floor (shops, bars, club);
- 7.800 m² second floor (ballrooms and conference etc. – inclusive of terraces);
- 43.900 m² tower in 32 floors (34.300 m² room area + 6.400 m² corridors + 3.200 m² elevators, stairs).

Mall:

- 3.500 m² ground floor and mezzanine (2.000 m² + 1.000 m²);
- 5.000 m² first floor.

Business centre (offices):

- 1.700 m² ground floor and mezzanine;
- 300 m² first floor (operation, back offices);
- 2.600 m² second floor (conference etc – inclusive of terraces);
- 52.800 m² tower in 32 floors (32 x 1.560 m² gross office space and 90 m² circulation space).

Terrain

- 7.200 m² hotel site (entrance roads, parking, gardens, outside pools and recreation);
- 8.000 m² business site (entrance roads, parking for the mall, garden).

**Please notice this is a first rough estimation of the hard cost and subject to changes with the plan being in progress and in need of updating in every step.**

Not included in the hard cost at this moment:

-infra, terrain, swimming pools, wetzones, interiors and unsuspected costs.

The overall construction costs refer to a modern West European building with a modern Middle East interior and finishing.

Costs can easily vary much depending on local influences, the desired level of design and workmanship. Also the building method, technics and choosen materials will influence the costs. The difference can be big between local and imported materials and knowlegde.

Not included are the soft cost such as:

- fees;
- permit cost;
- taxes;
- advisors.

**All cost are in Euro's.**

# COST CALCULATION

**10099 TOTAAL COMPLEX  
RECAPITULATIE**

PROJECTNUMBER: 10099  
NAME: TOTAAL COMPLEX  
CLIENT: Rooleveld-Sikkens Architects  
FASE: CONCEPT DESIGN-PROGRAM  
DATE OF PRICE LEVEL: 1-7-2011

FUNCTION: Combination of various buildings  
TYPE: Parking, mall, hotel and office  
SORT: New development  
CHARACTERISTIC: -  
UNDER GROUND: 2,00 floors  
ABOVE GROUND: 35,00 floors  
FOUNDATION: multi-storey parking garage, concrete  
STRUCTURE: concrete / steel  
FACADE: double facade  
FINISHING: high-grade  
INSTALLATION: high-grade

PROGRAM IN GROSS AREA					
GFA:	Gross floor area	175.000	m²	GFA/unit:	-
UFA:	Usefull floor area	142.630	m²	UFA/GFA:	0.82
GVO	Gross volume	526.405	m³	GVO/GFA:	3.01
GBA	Gross built area	22.000	m²	GBA/GFA:	0.13
GWA:	Gross wall area	78.427	m²	GWA/GFA:	0.45
GCW	Gross closed wall	39.213	m²	GCW/GWA:	0.50
GOW	Gross open wall	39.213	m²	GOW/GWA:	0.50
GRA	Gross roof area	20.963	m²	GRA/GFA:	0.12

COST OF CONSTRUCTION		qty	unit	€ / unit	subtotal	total	€ / GFA	% total
2	BUILDING WORKS							
2.A	Ground, substructure	22.000	m²	515	11.326.089		64,72	3,5%
2.B	Structure, primary elements	175.000	m²	221	38.691.249		221,09	12,0%
2.C	External walls	78.427	m²	1.090	85.513.568		488,65	26,5%
2.D	Roof and external ceilings	20.963	m²	620	12.990.386		74,23	4,0%
2.E	Secondary elements to structure	175.000	m²	81	14.124.533		80,71	4,4%
2.F	Finishes to structure	175.000	m²	126	22.108.342		126,33	6,8%
2.G	Other building works	175.000	m²	5	875.000		5,00	0,3%
TOTAL BUILDING WORKS					185.629.167	1.060,74		57,5%
3	BUILDING SERVICES							
3.A	Services mainly piped	175.000	m²	63	11.073.372		63,28	3,4%
3.B	Services climate	175.000	m²	180	31.511.133		180,06	9,8%
3.C	Services mainly electrical	175.000	m²	73	12.729.560		72,74	3,9%
3.D	Transport	175.000	m²	68	11.871.268		67,84	3,7%
TOTAL BUILDING SERVICES					67.185.334	383,92		20,8%
4	FIXED FITTINGS							
4.A	Fixed fittings	175.000	m²	1	98.860		0,56	0,0%
TOTAL FIXED FITTINGS					98.860	0,56		0,0%
5	EXTERNAL ELEMENTS							
5.A	External elements	18.988	m²	72	1.368.000		7,82	0,4%
TOTAL EXTERNAL ELEMENTS					1.368.000	7,82		0,4%
6	INDIRECT CONSTRUCTION COST							
6.A	General requirements for contractor	10,00%	over	254.281.361	25.428.136		145,30	7,9%
6.B	General costs and Profits / Risks	10,00%	over	279.709.497	27.970.950		159,83	8,7%
6.C	Special cost contractor	5,00%	over	307.680.447	15.384.022		87,91	4,8%
TOTAL INDIRECT CONSTRUCTION COST					68.783.108	393,05		21,3%
TOTAL COST OF CONSTRUCTION EUROPE					323.064.469	1.846,08		100,0%



INTERNATIONAL BUILDING COST							
- the above cost/expenses are a estimation for the total cost of construction within europe							
- total cost of construction in Iraq is expected to be lower then in the Europe							
INDICATION BUILDING COST IRAQ		qty	unit	subtotal	total	€ / GFA	% total
1	<b>PARKING GARAGE</b>						
1.A	Parking garage total 2 layers	1	pst	32.280.545		816,32	12,5%
<b>TOTAL PARKING GARAGE</b>					<b>32.280.545</b>		
2	<b>MALL</b>						
2.A	Mall total	1	pst	38.327.780		1.388,24	14,8%
<b>TOTAL MALL</b>					<b>38.327.780</b>		
3	<b>HOTEL</b>						
3.A	Hotel total	1	pst	102.826.445		2.080,25	39,8%
<b>TOTAL HOTEL</b>					<b>102.826.445</b>		
4	<b>OFFICE</b>						
4.A	Office total	1	pst	85.016.805		1.455,33	32,9%
<b>TOTAL OFFICE</b>					<b>85.016.805</b>		
<b>TOTAL INDICATION BUILDING COST IRAQ</b>					<b>258.451.575</b>	<b>1.476,87</b>	<b>100,0%</b>
<b>TOTAL COST OF CONSTRUCTION EUROPE</b>					<b>323.064.469</b>	<b>1.846,08</b>	<b>100,0%</b>
<b>TOTAL INDICATION BUILDING COST IRAQ</b>					<b>258.451.575</b>	<b>1.476,87</b>	<b>80,0%</b>
<b>TOTAL DIFFERENCE</b>					<b>64.612.894</b>	<b>369,22</b>	<b>20,0%</b>







# COOPERATION



LIST OF REQUIRED CONSULTANTS AND SPECIALISTS

**Architecture:**

- Architect
- Interior architect
- Landscape architect

**Design consultancy (e.g. logistics, marketing and design):**

- Hotel consultant
- Mall consultant
- Sport and Leisure consultant (e.g. pools, spa, fitness)

**Engineering:**

- Structural engineer
- Mechanical engineer
- Electrical engineer
- Building physics and energetic consultant
- Structural expert (e.g. heat and water isolation, green roofs)
- Façade expert

**Project management:**

- Project manager
- Planner
- Cost control
- Quantity surveyor
- Site supervisor
- Site surveyor

**Location and Soil:**

- Public utility consultant
- Geodesic surveyor
- Soil Mechanics consultant
- Earthquake specialist
- Environmental consultant (in case of Environmental Impact Assessment)
- Traffic consultant
- Urban designer

**Special techniques:**

- Lightning expert
- Acoustic consultant
- Audio-visual consultant
- ICT (Information and Communication Technologies)
- Elevator consultant
- Building management systems (BMS)
- Kitchen technology designer

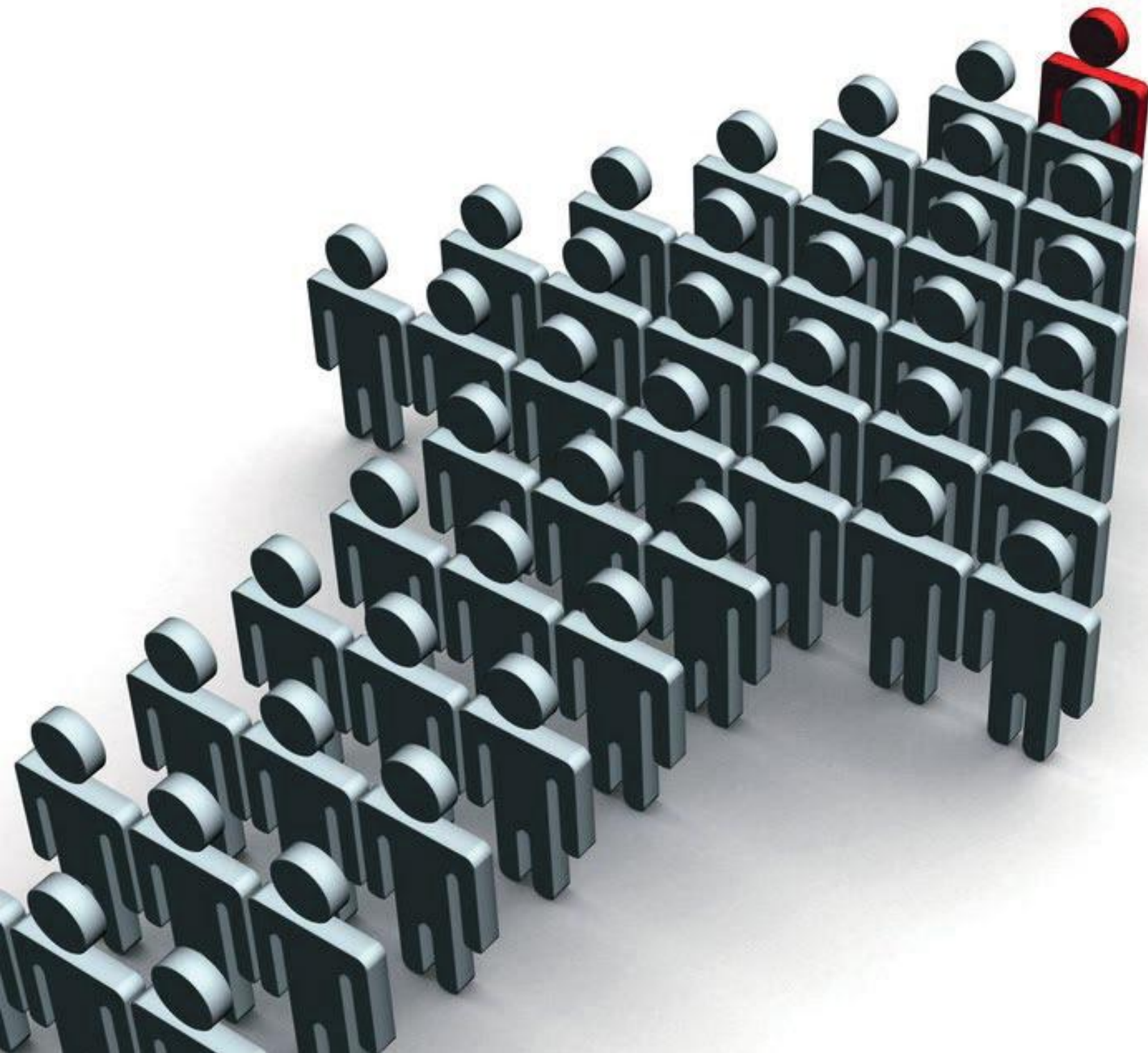
**Safety:**

- Fire protection consultant
- Fire alarm engineer
- Sprinkler engineer
- Health insurance and safety plan
- Medical technology

**Promotion and Sales:**

- Visualisation (3D images, renderings, movies)
- Real estate agent
- Marketing consultant

For a successful realisation of a project like this a professional project organisation needs to be formed. Beside the architectural disciplines a serious number of professional consultants and specialist have to cooperate and be part of the team. Local and international knowledge will be joined to come to a smooth and efficient process. Realistic and professional design brief, budget and time schedule are essential ingredients to start this development. Logistics and legal factors should not be underestimated. The realisation of this Hotel and Business-Centre project will be an astonishing challenging development. With the right firms and people involved and the right understanding of goals and expectations it will be a beautiful achievement.





RS I ROELEVELD-SIKKES ARCHITECTS

RS I Roeleveld-Sikkès Architects is an all-round, internationally operating architectural firm with offices in The Hague and Budapest. Our firm is characterized by a careful approach to the design task and a clear vision on design strategy.

We are designing in the field of urban planning and architecture. For urban planning we make plans on different scales, e.g. for the city of Timisoara we made a master plan for the total city of 350.000 inhabitants. This plan gives a vision for the coming 20 years. Besides that we design urban plans on district scale as well. In the field of architecture we made designs for huge office buildings, retail, hotels, apartments, etc.

Our approach to come to good design is always based on a careful interpretation of the brief (design program) and a thorough analysis of the site. Good design provides positive internal and external planning and a building that contributes to the business or user organization, fits well into the neighbourhood, is safe to build and use, is adaptable and sustainable, has low maintenance and operating costs, attractive materials and finishes, cost effective systems and improved effectiveness for the users.

We are convinced that architecture is more than making a building. The building is always part of the public space and its size and materialization have effect on the different levels of the environment. We design with respect to the existing qualities and at the same time location and history are a source of inspiration for the design. It is not about 'form to form'; our designs are always inspired by function, location and perception.

Sustainability is one of the important components of the formula of our subject-specific concept. During the materialization we also pursue sustainable solutions. We attempt a certain restraint and do not opt for redundant effects. Spaciousness, high quality materials and composition of façade and mass are important to us, as is a certain purity of the architecture.

Although RS I Roeleveld-Sikkès Architects is a large firm, with about 40 employees, the lines in our organization are short. Our project team includes experts in designing, managing and supervision of urban and architectural plan on a big variety of scale. The professional organization of our team ensures a smooth continuous process and a fine structured progress of the project. Cooperation and an enthusiastic atmosphere are highly valued, not only in internal communications. We have extensive experience in participating in design teams, in which the ability to enthuse participants is our strength. To strengthen the cooperation within a network organisation, we use a drawing system suitable for BIM. BIM is a solution that saves, uses and manages all relevant information throughout the construction process in a digital model that is available to all parties.

The quality of our work process is objectively evaluated and assessed at any time as a result of our quality control system. We therefore fulfil the European ISO-standard for process quality. Because of years of experience and expertise we are also very adept at cost aware planning and building. Over the years we have gained a lot of insight into cost consequences of choices for structural systems, detailing, materials and the finishing application level. Due to the fact that we emphasize the programmatic concept and quality of use of each design, it is possible for us to make a customized suit for each user. Our comprehensive orientation, all-round expertise and fresh approach to every task we see, enables us to constantly realize innovative and astonishing solutions.





This book is a non commercial document intended exclusively for communication with our client. For this purpose we used some photographic materials available on the internet. We did not mean to violate the copyrights of the photographers.

1072 |



**RS** | **Roeleveld-Sikkés Architects**

**Den Haag / Budapest**

Parkstraat 99  
2514 JH The Hague  
The Netherlands

T +31 (0) 70 346 9508

1074 Budapest  
Rákóczi út 80. II./1.  
Hungary

T +36 1 327 0230

[www.roeleveld-sikkés.eu](http://www.roeleveld-sikkés.eu)  
[office@roeleveld-sikkés.eu](mailto:office@roeleveld-sikkés.eu)