

SPORTS COMPLEX MLADA BOLESLAV

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Mlada Boleslav

Sports complex

The Municipal Stadium in Mladá Boleslav (Lokotrans Aréna), home ground of the first-league club FK Mladá Boleslav, is a multi-purpose sports complex with a capacity of 5,000 spectators distributed across three stands. In addition to the main pitch with a heated turf, the complex includes an athletics stadium, an artificial turf pitch, a skating oval, and, since the end of 2025, the first FIFA Arena in the Czech Republic. During 2025, the complex underwent a partial modernization worth 10 million CZK, which brought new turnstiles, fence repairs, and improved facilities for players.

A major issue for the complex is its failure to meet the strict UEFA criteria for hosting European cup matches. Therefore, the club and the city are currently working with architectural studies and considering either an extensive expansion of the existing complex or the construction of a brand-new arena that would fully comply with modern European standards.



Analysis

Compositional axis from the city center

The urban planning analysis of broader relations reveals a strong spatial connection between the site and the wider center of Mladá Boleslav. A clearly defined compositional and visual axis originates in the city core, seamlessly penetrating the existing built environment and orienting itself directly towards the sports complex area.

This significant urban line functions as a natural orientation and connecting element within the site. Its route through the city naturally reaches a climax and finds its physical as well as visual termination precisely at the boundary of our area of interest. This firmly anchors the location within the city-wide urban context and highlights its strategic importance within the urban fabric.



Analysis

Site amenities

AMENITY GREEN SPACE



The area currently suffers from a lack of high-quality amenity green space combined with activities that support public life. The design reflects this issue and incorporates a large number of park areas supporting a diverse range of activities, ranging from relaxation and sports to meeting spaces and cultural events.

PUBLIC AMENITIES



The housing estate surrounding the complex is affected by the standard problem of a lack of high-quality public amenities and services. The design responds to this issue, helping the area to reduce this deficit.

TRANSPORT



In its current state, the sports complex forms an impenetrable barrier in the area. Making the complex permeable and supporting cycling routes will relieve the congested roads in the vicinity and help calm traffic. Outside of sports events, the high-capacity underground garages can be used for residential parking, thereby easing the pressure on the already overloaded parking areas of the housing estate.

CONCEPT



Concept

Overall concept of complex

Transformation and Revitalization

The core concept of the design is the complete revitalization of the existing area, transforming it into a modern urban hotspot. We are replacing the old site with a new, dynamic face that reflects Mladá Boleslav's ambitions as a technological and sports hub.

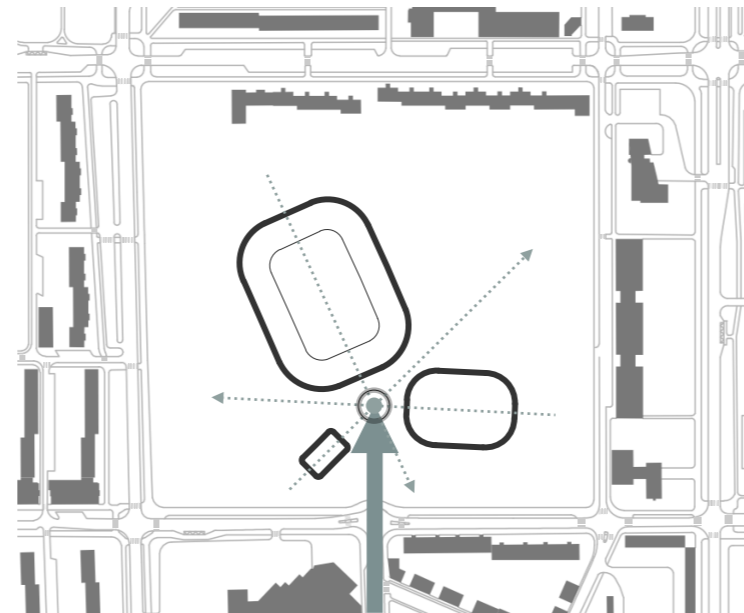
Compositional Axis and Circular

Arrangement The design directly extends the main compositional axis leading from the city center, seamlessly culminating in the very heart of the site. We respond to this central spine of the complex with a circular arrangement of the individual buildings. This configuration creates a natural space for a central atrium—a crossroads of movement and functions where all buildings axially converge, creating a visual and functional integration of the entire complex.

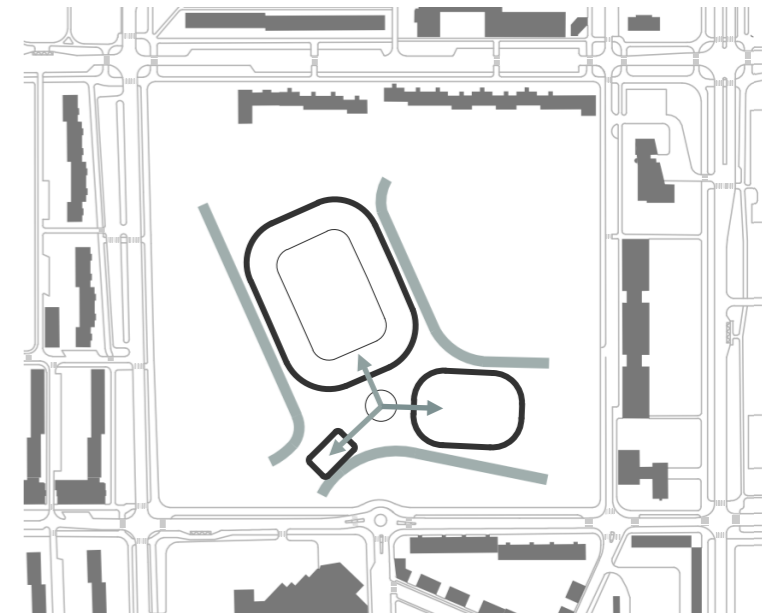
Year-Round Urban Vitality

Rather than just addressing sports infrastructure, the urban planning focuses on the life within the complex outside of major match days. By introducing public amenities and various leisure options, we open the site to the community throughout the entire year. The complex transforms into an organic extension of the city—a hub for social interaction, relaxation, and active leisure, buzzing with energy at all hours.

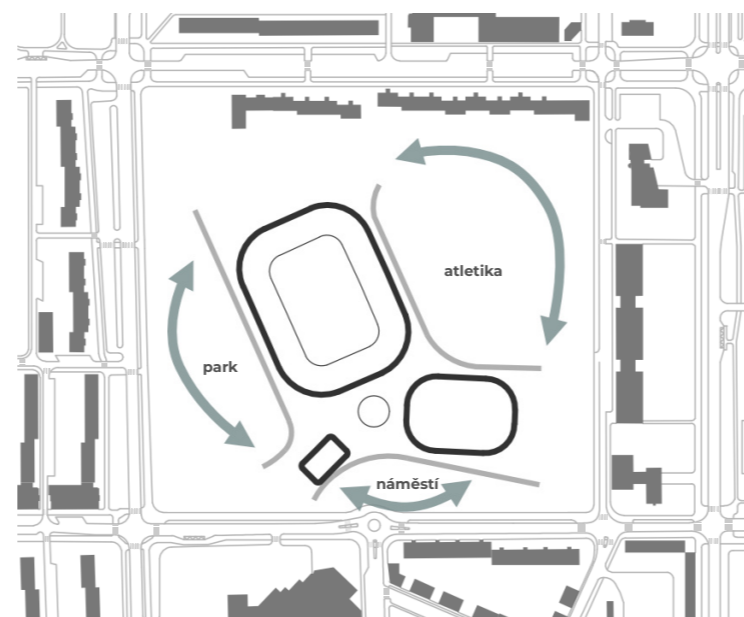
Main compositional axes - circular layout



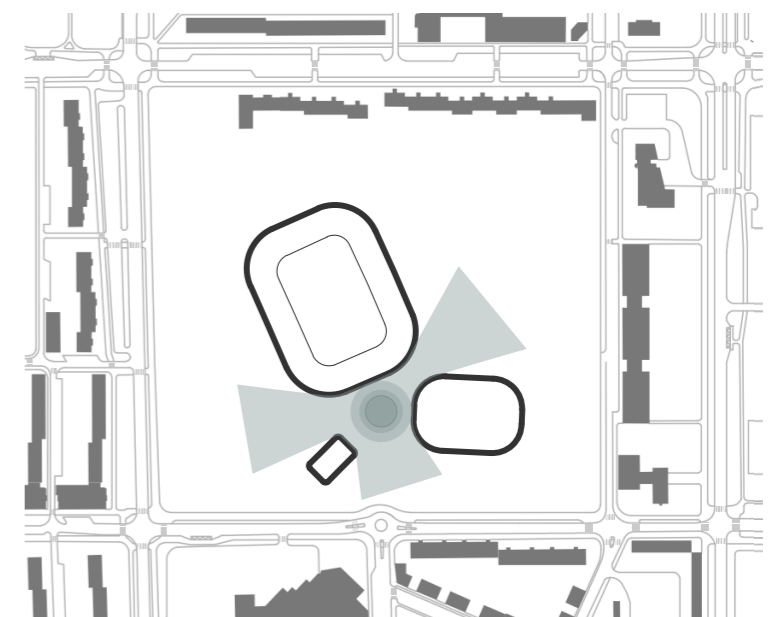
Connecting the objects via a platform



Added value of the complex - leisure activities



Facade concept - response to the center of gravity

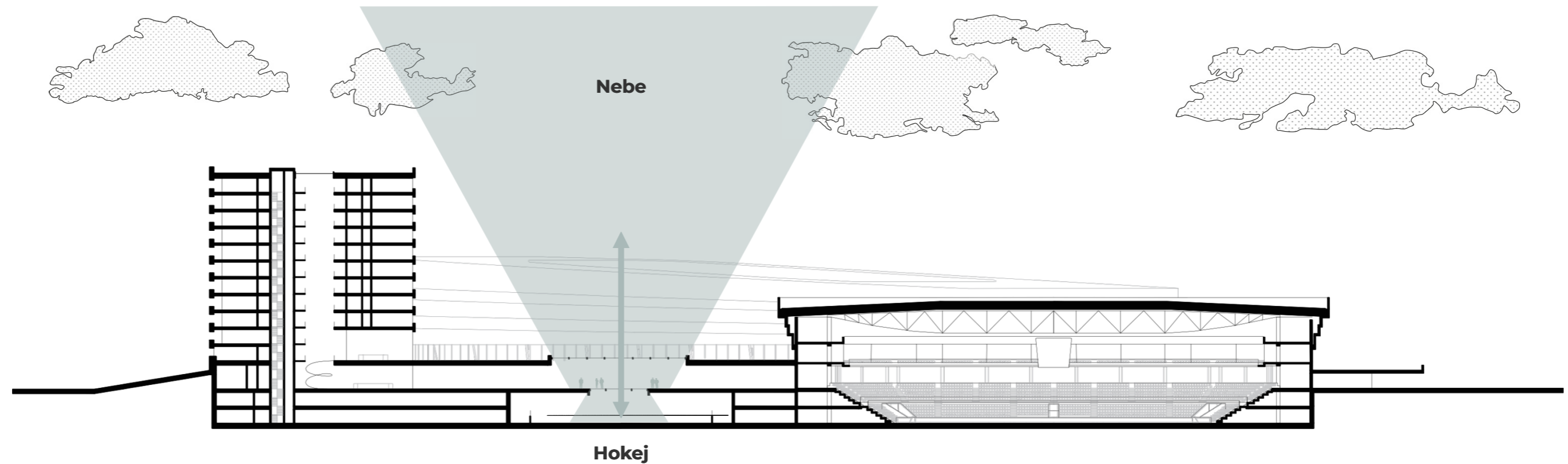


Concept

Ice and sky

The heart of the complex is the main atrium, which works as a vertical axis connecting two worlds. This is the strongest element of the design, creating a unique visual tension: looking up towards the open sky gives a feeling of lightness and open space, while looking down pulls you straight into the energy of ice hockey training.

“This is a place where the quiet meets the physical. The visitor stands at the centre of it all — at the point where light from above falls directly onto the ice surface. This sightline is not just an architectural feature; it is a metaphor for the journey in sport, from hard work on the ice to the highest ambitions under an open sky. The atrium gives the building depth and soul, and is a constant reminder that sport is about the connection between discipline and freedom.”



Concept

Facade - Motion Design

The facade of the Mladá Boleslav sports complex is built on the idea of translating movement and airflow into a fixed architectural form. The design directly reflects the dynamics of sport and the flow of air (wind-flow), creating a strong visual link to the identity of a modern sports venue and to the local industrial tradition.

Converging facade planes respond to the centre of gravity of the complex, where the solid concrete surface breaks down into a lighter, more dynamic arrangement of aluminium louvres.

1. Aluminium louvres

Standard aluminium profiles with powder coating in a bespoke RAL shade

Colour scheme

The colour palette of the complex combines football blue with hockey green. The resulting petrol tone represents the sporting unity of Mladá Boleslav



2. LED systems

Programmable LED linear profiles with opal diffusers, integrated into the louvre system



3. GRC technology

Thin-wall facade panels made from glass fibre reinforced concrete with a smooth surface finish



Sports complex Mlada Boleslav

Football stadium viewed from the athletic track

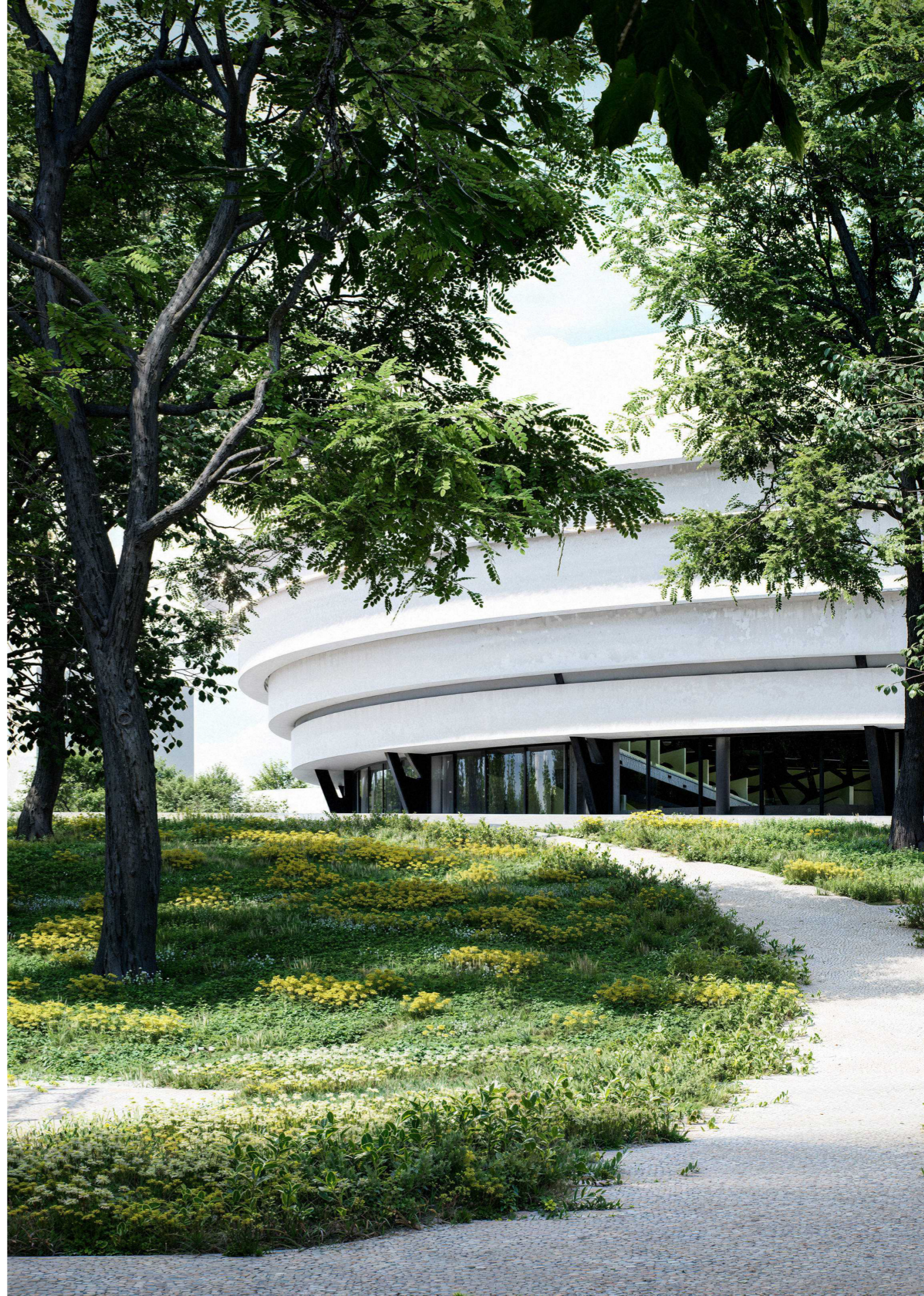


Sports complex Mlada Boleslav

The new face of sport in Mlada Boleslav

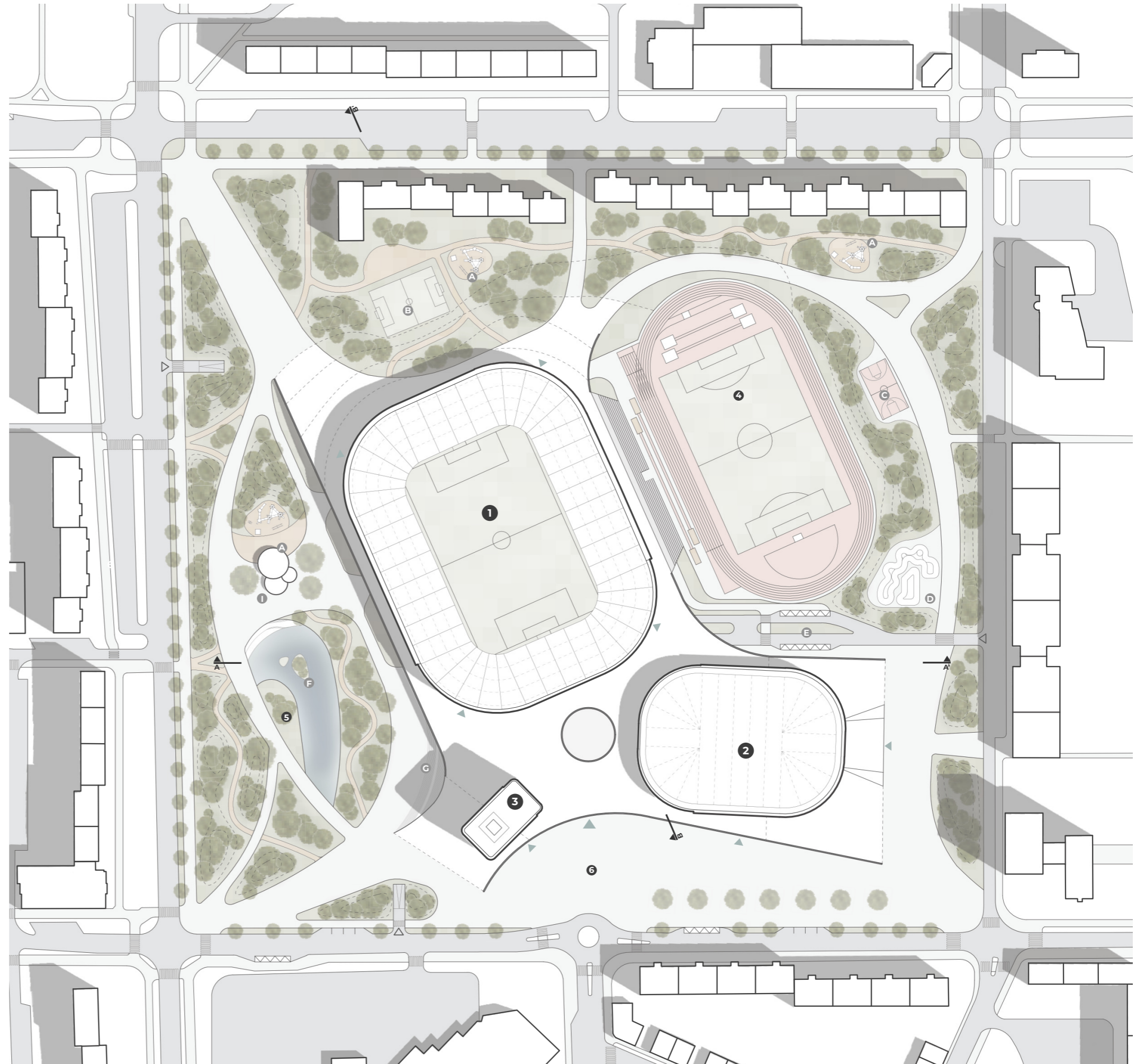


DESIGN



Site plan

- 1 football stadium
- 2 hockey stadium
- 3 hotel
- 4 athletic track
- 5 park areas
- 6 entrance plaza
- A children's playgrounds
- B football field
- C basketball court
- D skatepark
- E drop-off area for club buses
- F water area
- G seating staircase / amphitheater
- I additional building

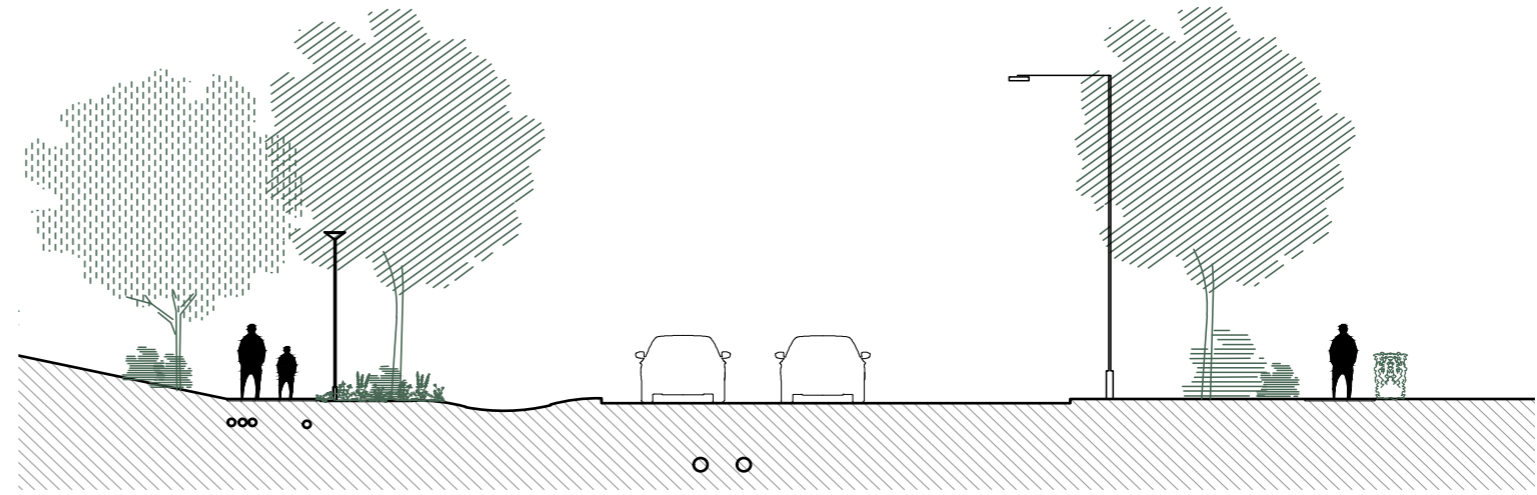


Typical street profile

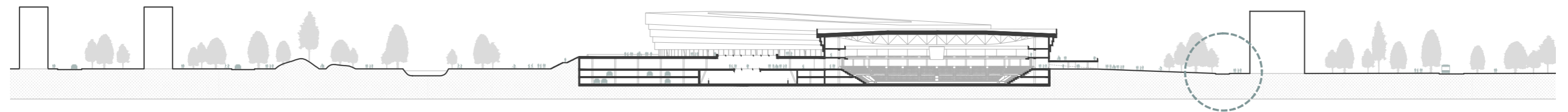
Human scale

The design of street profiles in the immediate vicinity of the complex places a primary emphasis on the human scale, permeability of the area, and the promotion of active mobility. Generously widened sidewalks, complemented by linear alleys of trees and elements of street furniture, create a safe and comfortable pedestrian corridor that is naturally segregated from vehicular traffic.

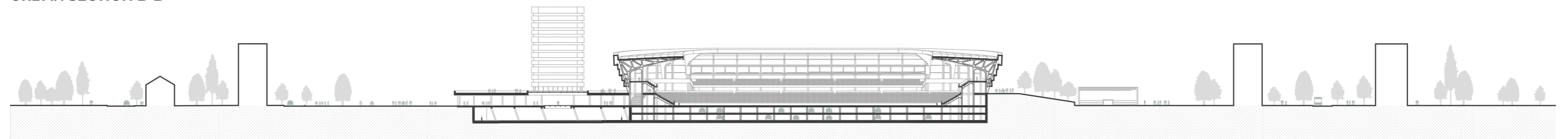
This spatial layout helps to calm the adjacent roadways and both visually and functionally integrates the new development into the context of the existing housing estate. In this concept, the street serves not merely as a transit artery, but functions as a fully fledged, representative public space that seamlessly draws both visitors and local residents into the heart of the sports action.



URBAN SECTION A-A

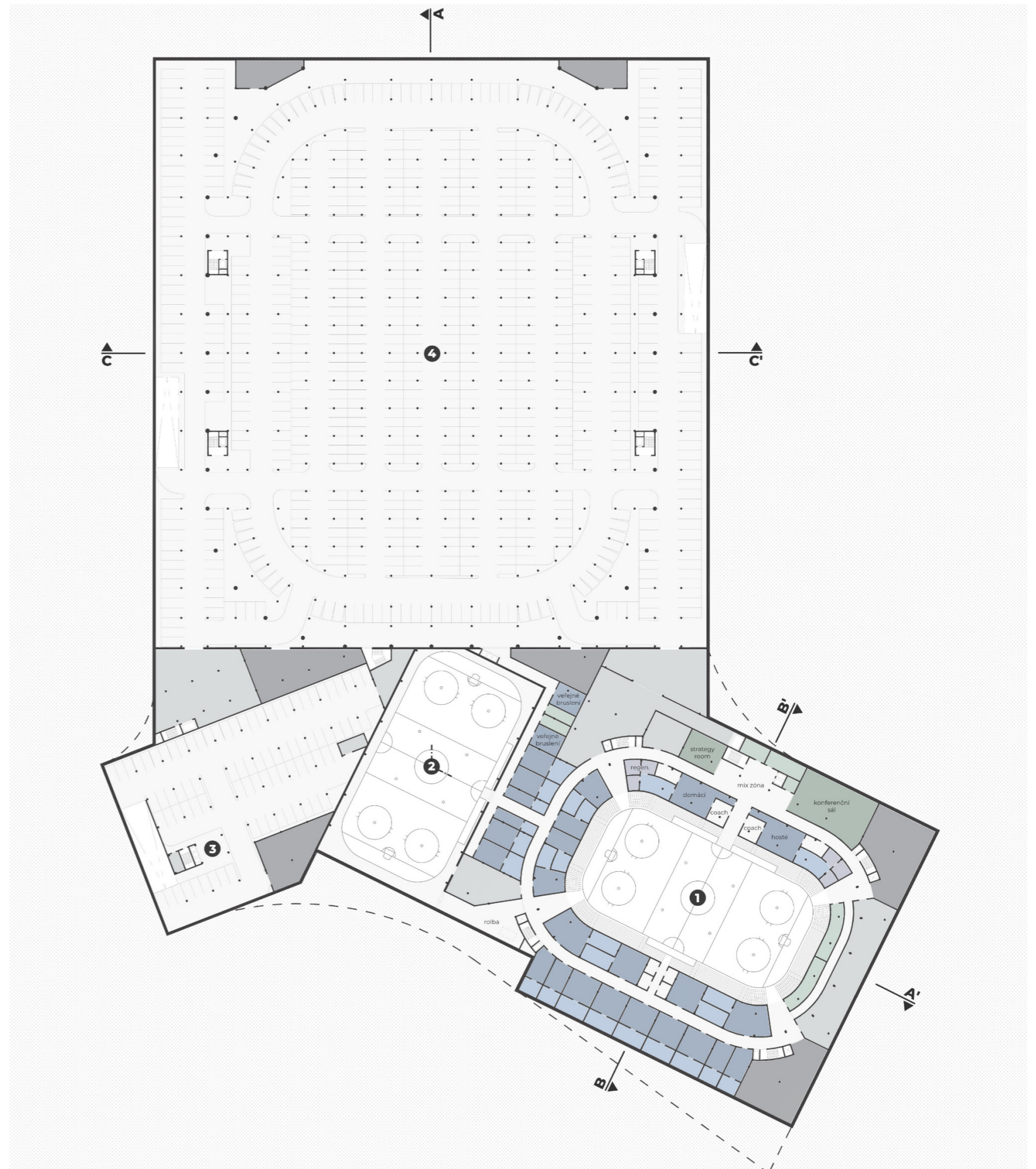


URBAN SECTION B-B



Floorplan 2nd lower level

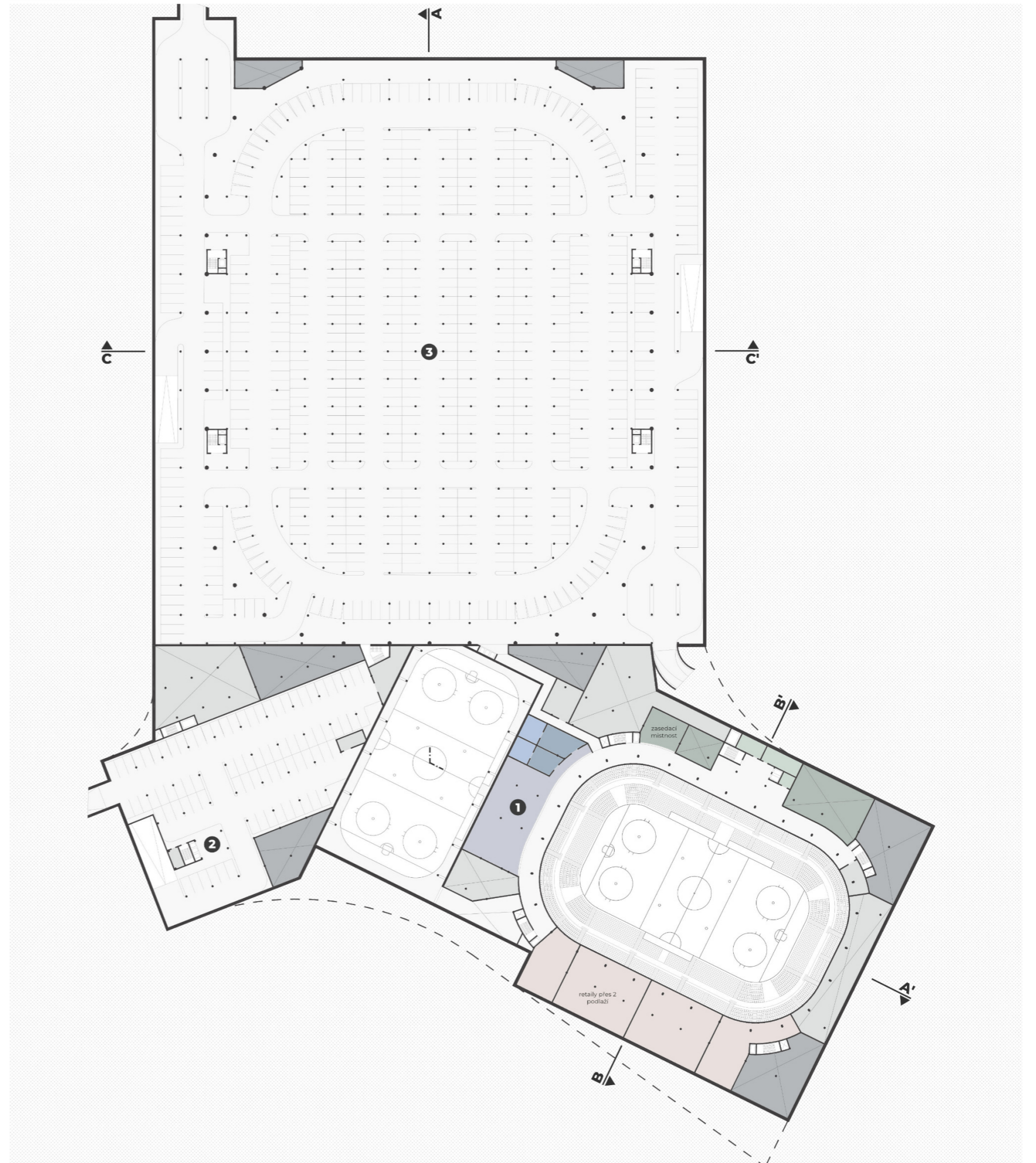
- 1 main ice rink
- 2 practice ice rink
- 3 underground parking - hotel
- 4 underground parking - stadium
- changing rooms
- sanitary facilities
- toilettes
- conference room
- storage
- technology room



Floorplan 1st lower level

- ❶ main ice rink
- ❷ practice ice rink
- ❸ underground parking - hotel

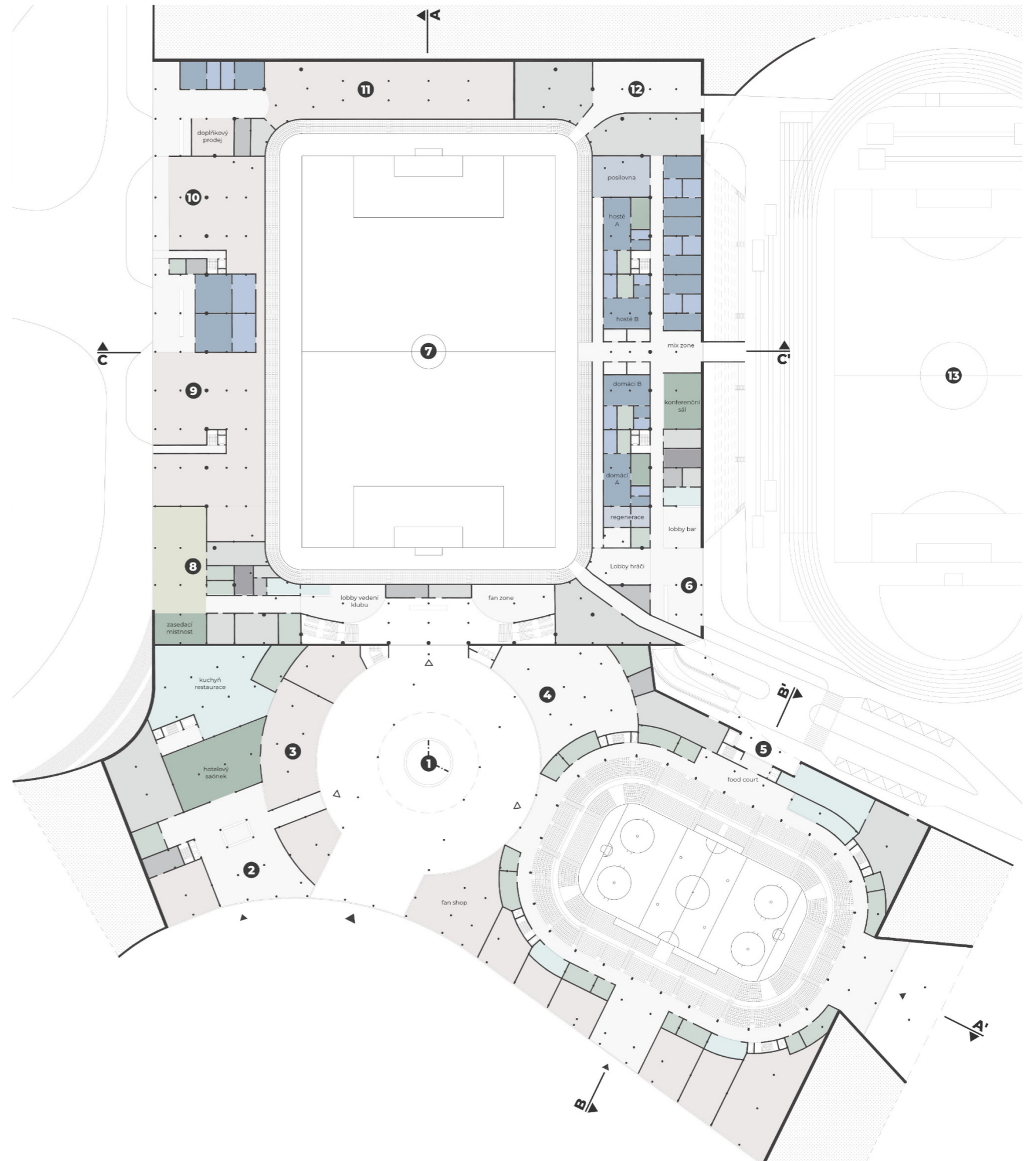
- changing rooms
- sanitary facilities
- recovery / gym
- toilettes
- conference room
- storage
- technology room
- retail spaces



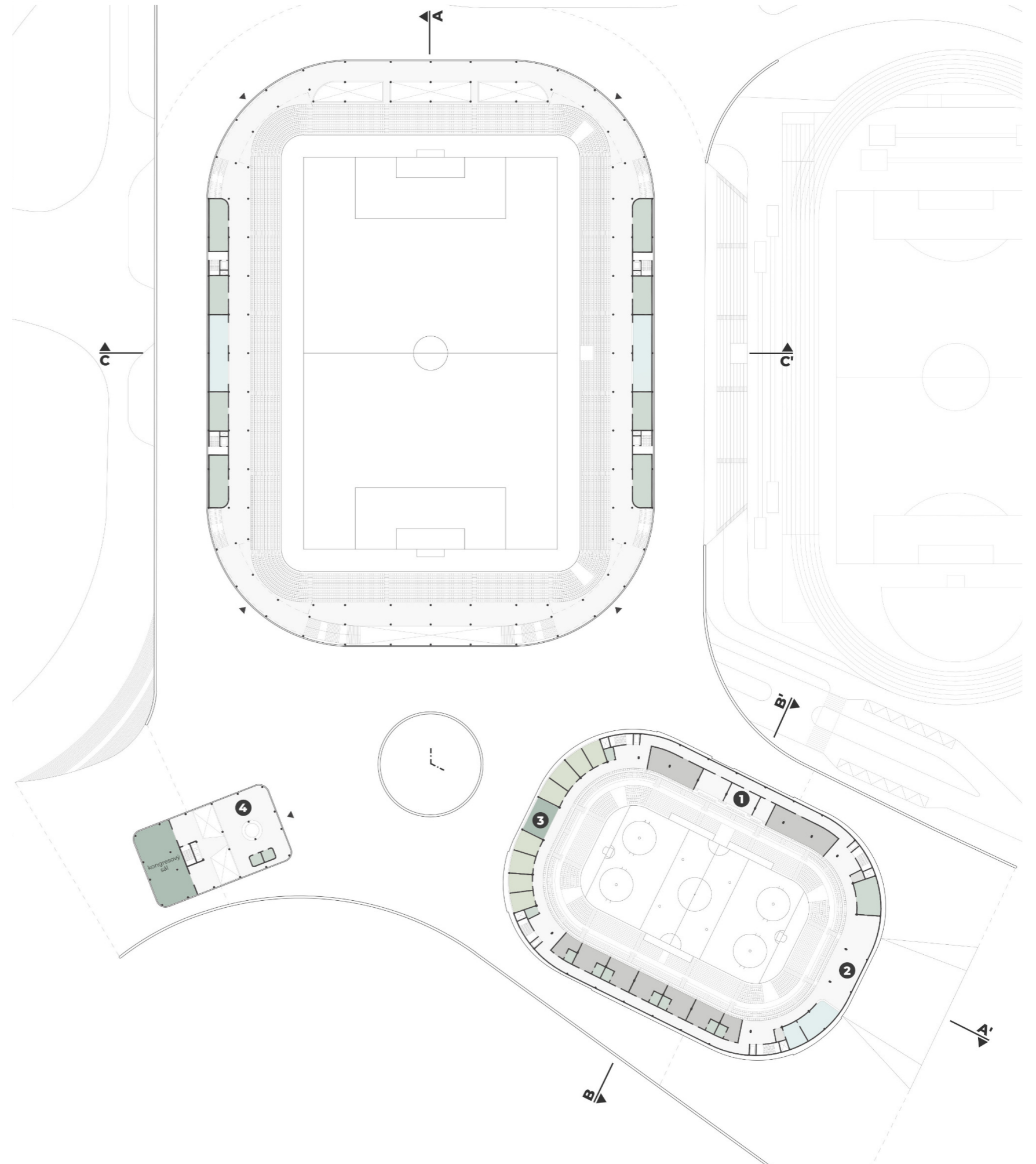
Floorplan 1st floor

- 1 main foyer
- 2 hotel lobby
- 3 restaurant
- 4 hall of fame
- 5 hockey players entrance
- 6 football players entrance
- 7 main football field
- 8 football club management
- 9 public gym
- 10 wellness
- 11 climbing / bouldering wall
- 12 grass maintenance facilities
- 13 athletic track and football practice field

- changing rooms
- sanitary facilities
- recovery / gym
- conference room
- offices
- toilettes
- buffet / kitchen
- storage
- staff facilities
- technology room
- retail spaces



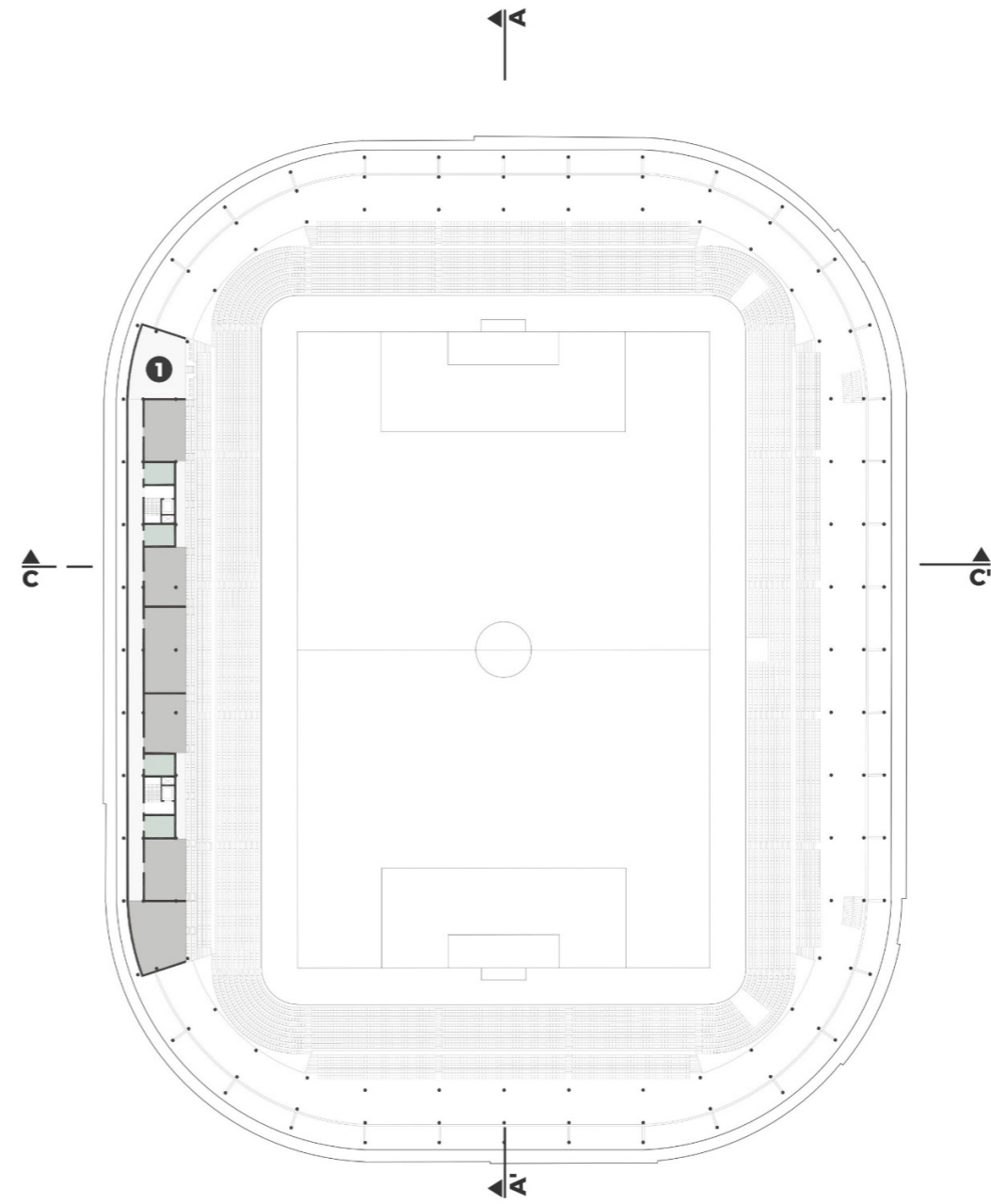
Floorplan 2nd floor



- 1 commentary box
- 2 vip bar
- 3 hockey club management
- 4 hotel coffeshop / bar
- skyboxes
- offices
- conference room
- toilettes
- buffet / kitchen



Floorplan 4th floor



1 commentary box

● skyboxes

● toilettes

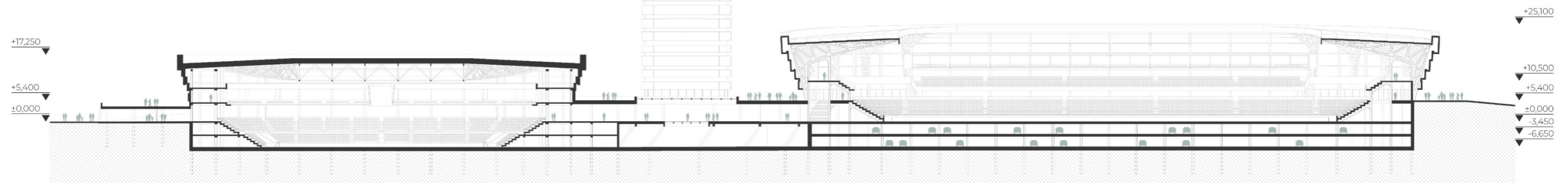


Sections / Elevation

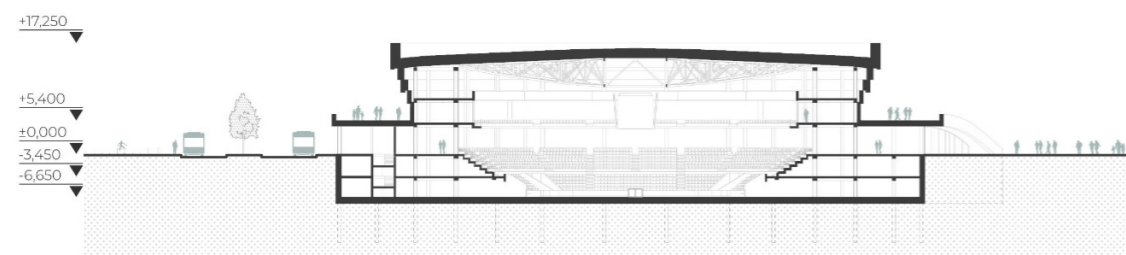
EAST ELEVATION



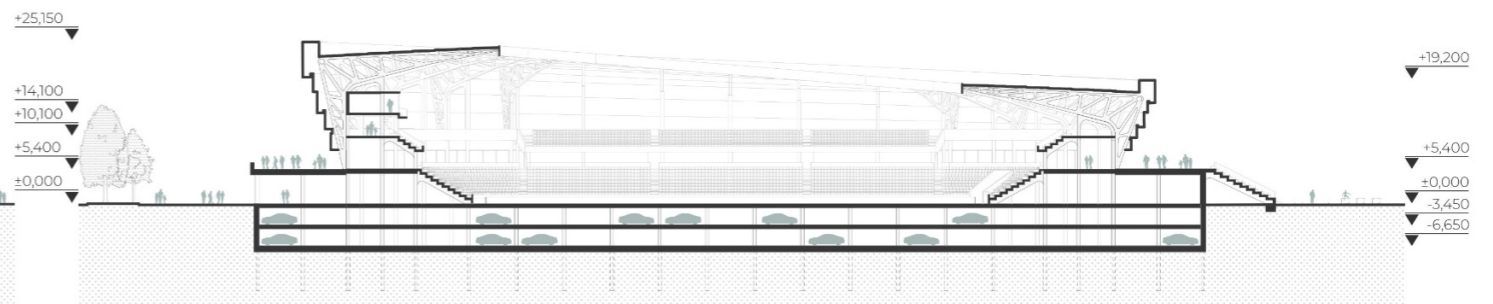
SECTION A-A'



SECTION B-B'



SECTION C-C'



Sports complex Mlada Boleslav

Ice hockey arena from the main square of the complex



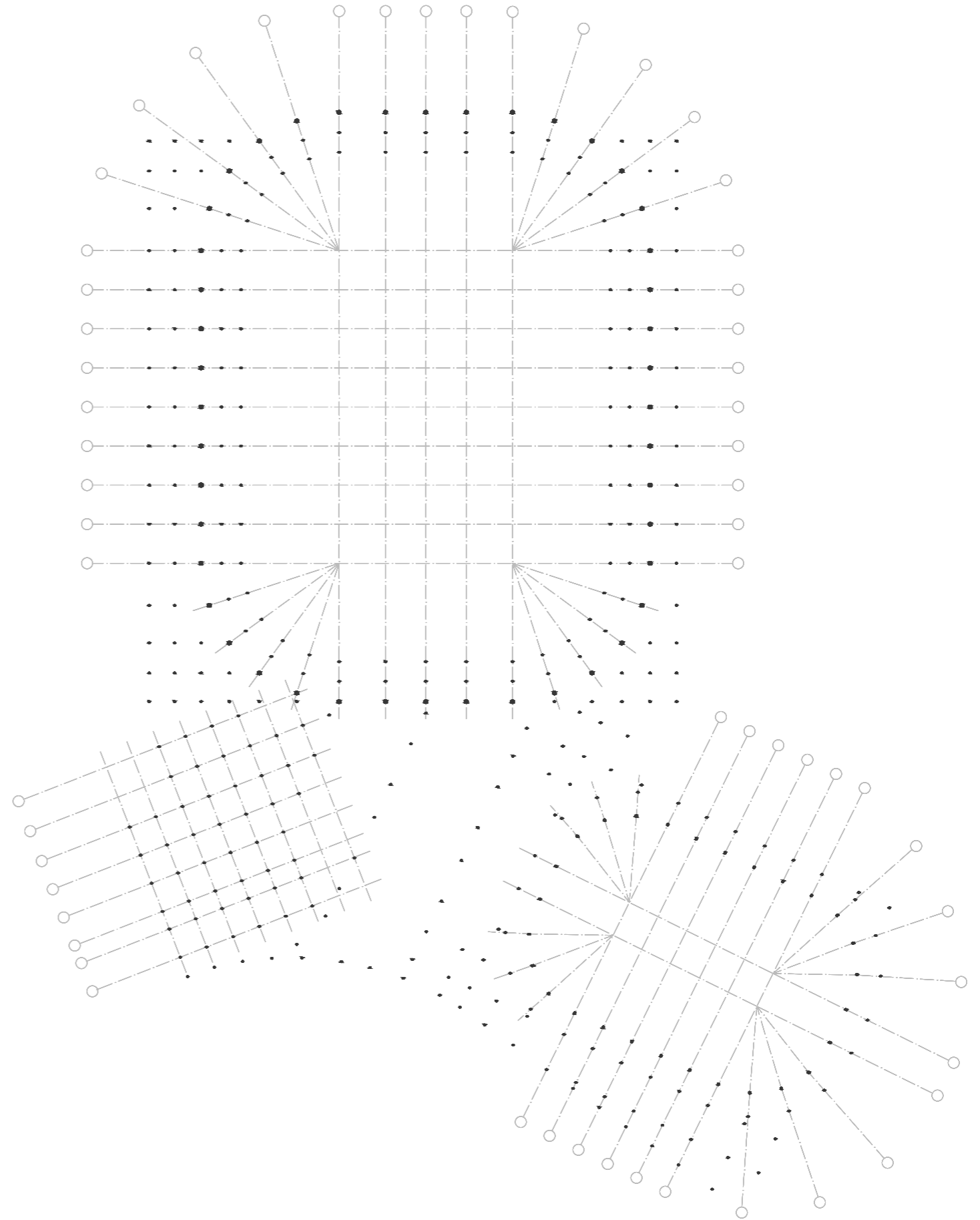




Structural scheme

Reinforced concrete skeleton

The primary load-bearing structure is a monolithic reinforced concrete frame that provides rigidity across all operational levels. Vertical columns on a modular grid transfer loads to the base slab, designed as a waterproof white-tub construction. The system allows a high degree of flexibility in the internal layout and integrates the main circulation cores and service distribution. The frame acts as the structural backbone of the complex, connecting the above-ground halls with the technical areas below ground.



Structural scheme

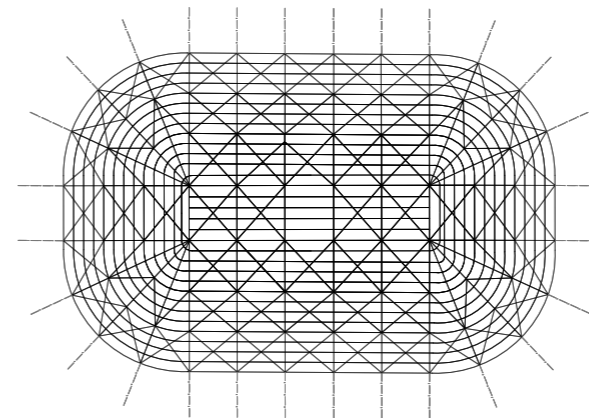
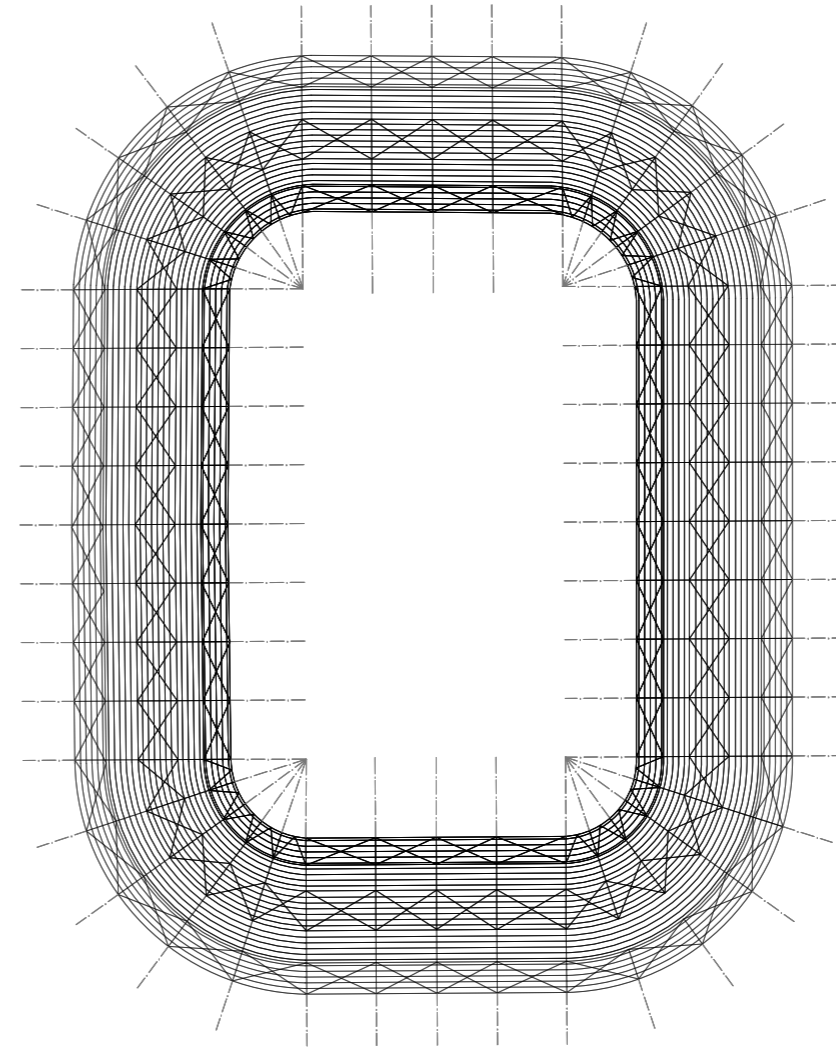
Stadium a hall

Football stadium

The stadium roof uses a large-span steel truss that ensures structural stability and protects the stands. A secondary layer carries the louvre system and lightweight panels that form the unified aerodynamic cladding of the complex. The design ensures good natural light on the playing surface and directs rainwater away from the spectator areas. The structure also serves as an integrated support for the lighting and sound systems.

Hockey hall

The roof structure consists of a primary large-span steel truss without internal supports. A secondary grid fixes the parametric cladding and aluminium louvres that define the aerodynamic profile of the building. The roof geometry is optimised for efficient rainwater drainage and visually reflects the kinetics of movement on the ice. The entire system is modular, allowing integration of building services and a smooth transition to the atrium facade.



Exploded axonometric

STRUCTURE

The upper level consists of an advanced roof structure with a primary large-span steel truss system. This supporting framework carries a secondary grid for fixing the parametrically shaped cladding and the aluminium louvre system that defines the aerodynamic profile of the building. The roof geometry is optimised for efficient rainwater drainage and to reduce wind loads on the more delicate facade elements.

The material combination of lightweight composite panels with anodised aluminium ensures a long service life and low maintenance requirements in demanding weather conditions. The entire system is designed as modular, allowing precise installation of complex curved surfaces and integration of linear LED elements for night-time lighting. The structure serves both as an aesthetic cladding layer and as a high-performance protective envelope for the whole complex.

PLATFORM

The platform level is the key urban and distribution node that ties all the buildings of the complex into a single functioning whole. Structurally, it is a large reinforced concrete slab that levels out the site topography and integrates the horizontal distribution of technical infrastructure. The surface finish combines exposed concrete with high-strength glass fibre reinforced concrete panels (GRC), which continue fluidly into the vertical parts of the facades and give the base of the complex a unified character.

This level is designed for heavy operational use and offers flexible areas for additional civic amenities and public leisure activities. The architectural approach to the platform emphasises step-free access and a clear connection to the city's main compositional axis. Strategically placed atria bring natural daylight to the lower floors and provide visual contact with the training areas, creating a vertical connection between all operational levels.

2.ND FLOOR

The main above-ground floor serves as the primary point of contact for visitors and forms the entrance hall of the whole complex. The layout is organised around the central atrium, which acts as the main vertical circulation connecting the grandstands, VIP areas, and retail passages. The structural system uses a reinforced concrete frame with lightweight infill construction, allowing a high degree of transparency and openness toward the central glazed core.

At this level, the main circulation nodes strictly separate spectator flows from the operational routes used by athletes and staff. The facade cladding consists of a fine grid of louvres that control heat gain while offering panoramic views across the urban landscape of Mladá Boleslav. The interior design follows directly from the technological character of the exterior, using industrial materials and dynamic lighting to reinforce the energy of the sporting environment.

1.ST LOWER FLOOR

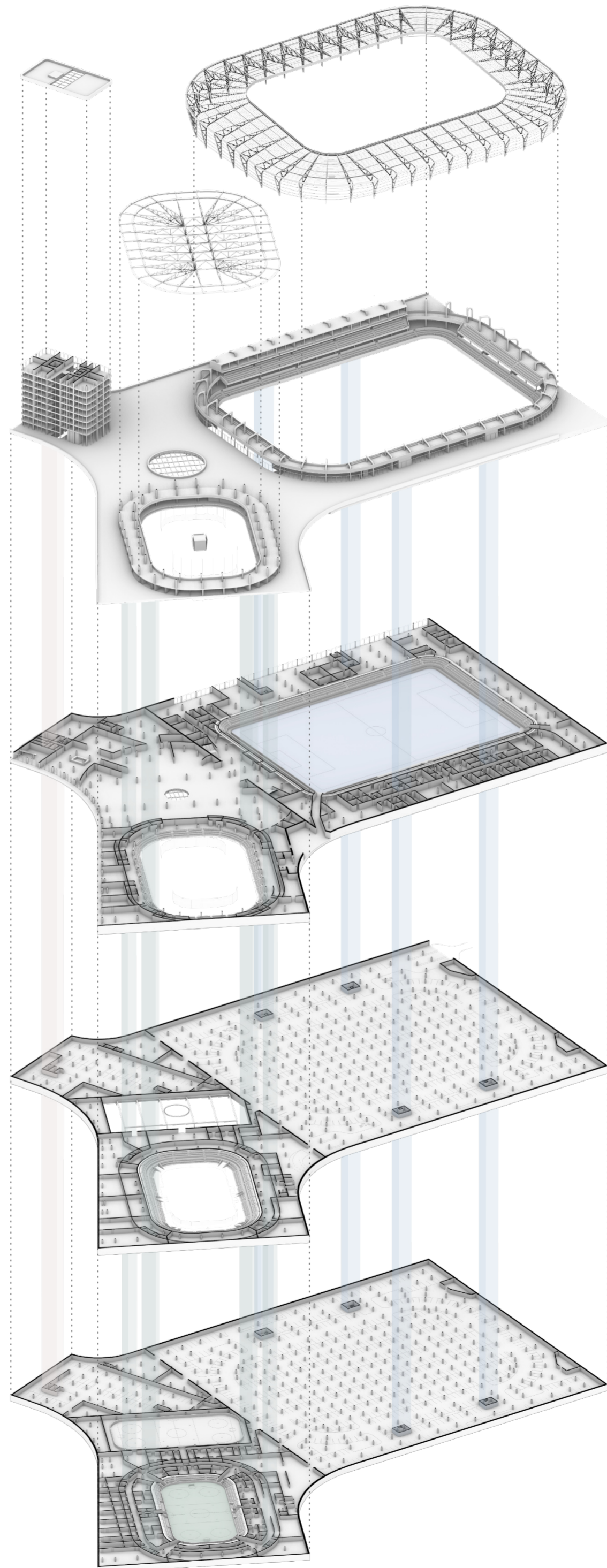
The first basement level forms the operational core of the complex, housing the main ice arena, a training rink, and complete facilities for the teams. This level contains locker rooms, recovery areas, spaces for ice maintenance, and equipment storage. The structure is designed as a reinforced concrete white-tub waterproof construction that resists hydrostatic pressure and ensures the stability of the entire building in the demanding geological conditions of the site. This level is optimised for operational efficiency, with a clear separation between the sporting areas and service corridors.

The key architectural element is the central glazed atrium, which brings natural daylight through all floors down to the level of the ice surface. This allows visitors to watch activity on the ice directly from the platform level, making athletic performance a visible part of the public space. The interior material specification uses highly durable surfaces suited to operation in an environment with reduced temperature and elevated humidity.

2.ND LOWER FLOOR

The second basement level is designed as the primary technical and logistics zone, providing the energy supply for the whole complex. The majority of this floor is taken up by a large-capacity car park for visitors, connected to the vertical circulation cores leading to the entrance areas. The lower level of the white-tub waterproof structure is designed for high structural loads and incorporates a monitoring system for the integrity of expansion joints and service penetrations.

This level also houses the main energy centre, including the ice refrigeration plant and the central air handling units. The energy system works on the principle of active heat recovery: waste heat from the refrigeration process is captured and reused to heat the building and supply hot water. Locating these systems at the lowest level minimises acoustic emissions toward the public areas above and ensures sustainable operation of the sports infrastructure.



Water management

In the design of the sports complex, the blue-green infrastructure actively manages runoff from the stadium roofs and extensive paved areas. Rain gardens and bioswales, integrated along the main compositional axis and access routes, ensure water retention directly within the site. The combination of permeable surfaces and structural substrates for the tree alleys on the piazzetta enables natural infiltration and subsequent evaporation. This system effectively eliminates the heat island effect of the massive paved surfaces, relieves the municipal sewerage system, and seamlessly connects the sports facilities with the surrounding park, both visually and functionally.

