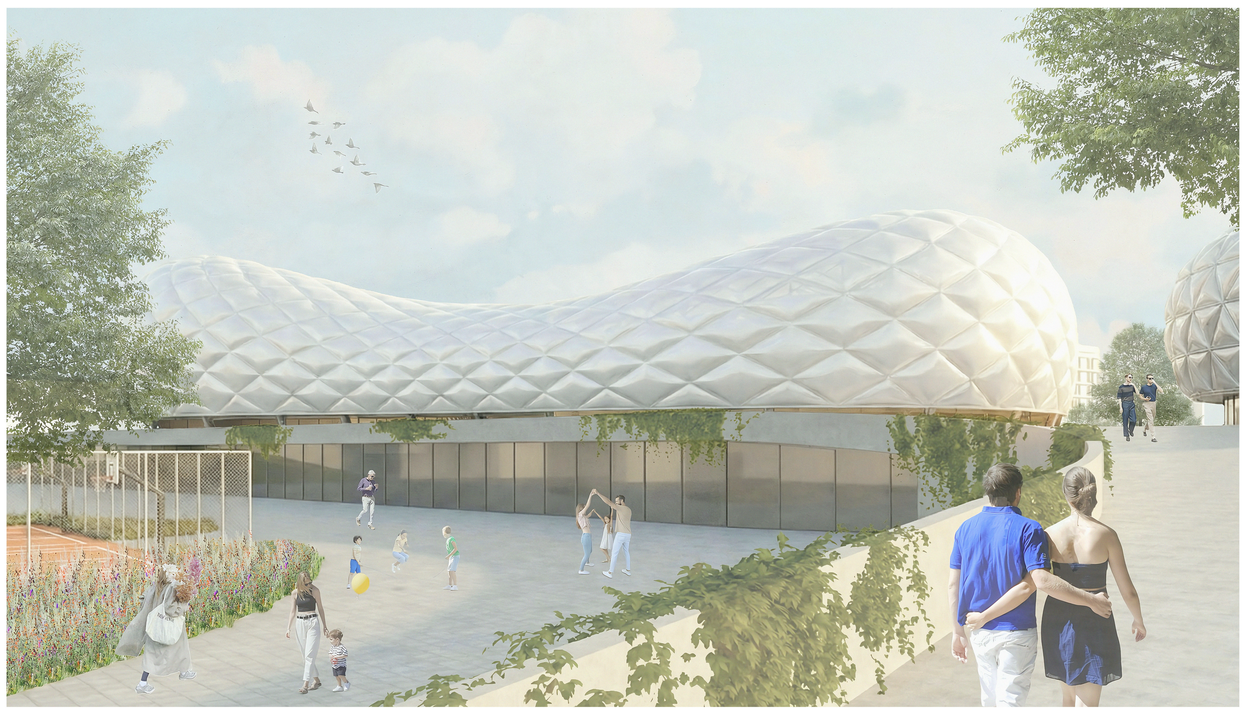
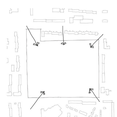
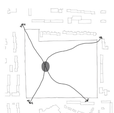


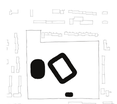
urban planning concept



A place that once divided now unites. The design in Mladá Boleslav replaces the fenced complex with an open urban landscape. Through maximum site permeability and emphasis on public space quality, we create a modern sports hub which is an open invitation to every city resident.



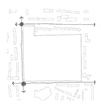
The core of the design is the intersection of two axes, defining a new site focal point. This occurs on two levels. While the elevated platform forms a grand entry plaza between the worlds of hockey and football, the ground level below breathes the daily life of a shopping arcade. This vertical functional stratification ensures the venue lives beyond match days, becoming a popular leisure space.



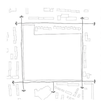
Building mass layout reacts to the surrounding built context and natural visitor flows. The football stadium sits at the maximum possible distance from residential blocks, minimizing local acoustic loads. Formal purity of the composition is defined by mutual rotation of objects, dynamically opening toward the city center. Sports landmarks are supplemented by a hotel building, completing the urban ensemble.

The design tackles the wider green space deficit surrounding the facility with a new city park. It forms a soft link between architecture and the city, forming an inclusive mixed-use complex. The project thus becomes a place for everyone: from sports lovers to active athletes, down to families with children or shopping arcade visitors. The park is a top destination, not just an add-on.

site analysis

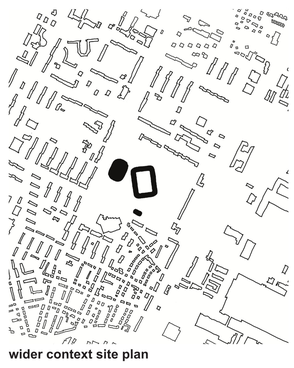


Main traffic arteries and the busiest junctions in close proximity to the site. These roads connect the city center with the Škoda Auto campus.



Main pedestrian routes where the site forms an urban barrier. These paths, supplemented by cycle lanes, connect the city center to the housing estate.

Public transport stops near the site. It is evident that the sports complex has good public transport access, which can help ease the road traffic load during sports events.

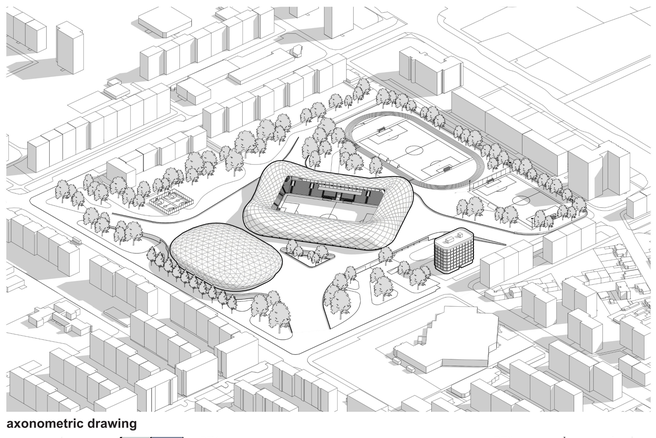


wider context site plan

site plan I 1:1500

legend

1 ice-hockey arena
2 football stadium
3 shopping center
4 hotel
5 training center
6 public park



axonometric drawing

architectural concept

archetype

Seeking the leitmotif, I use the elementary geometry of the hockey puck, perceived as a symbol of concentrated energy and movement. This architectural sculpture, sensitively set into the city's urban fabric, maintains a steady dialogue with its surroundings: at times humbly veiling itself in surrounding greenery, only to then confidently expose its pure form in key vistas. I decided to develop the theme of a simple but uncompromising form, holding internal dynamics and the flow of time, thus becoming a firm anchor point in the changing fabric of the city.

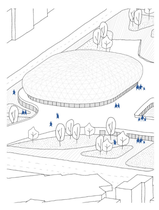
form dynamics

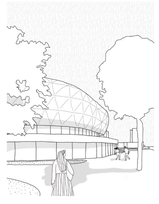
In reaction to the site's functional program, I subject the basic disc geometry to a kinetic transformation. In my concept, the puck becomes a trajectory, stretching the mass on one axis captures a high-speed moment where a fixed point visually shifts into a dynamic oval. This morphological shift is not arbitrary, it lets us organically integrate all required programming while keeping a slim silhouette. On the ground floor, this dynamics translates into a grand glazed corridor. The facade stops being a barrier and becomes a membrane, bringing natural light indoors, opening up spaces for spectator flow.

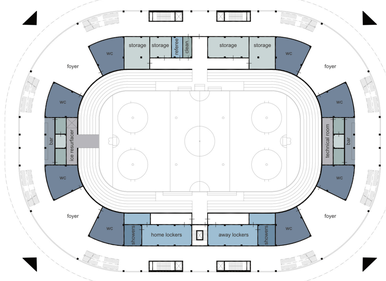
luminous monolith

The entire functional program is integrated into a single, compact monoblock, which seeks no shelter in the urban fabric, but proudly declares its presence. The object becomes a confident artifact – a white, pure entity evoking a snowball brought into the city center dynamics. I achieve this ethereal expression by applying ETFE foil, lending the facade a unique texture, softness, and semi-transparent depth. The structure thus becomes an elegant luminous object, cultivating the surrounding space with its purity and naturally inviting interaction through its aesthetic integrity.

sketches

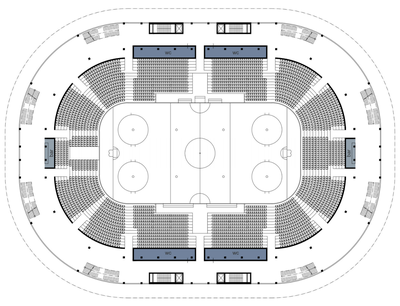






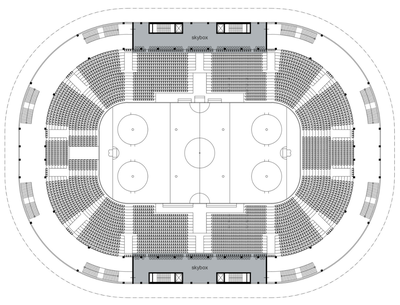
first floor plan I 1:550

program legend
- locker rooms
- showers & restroom
- toilets
- bar
- storages
- technical zones
- other



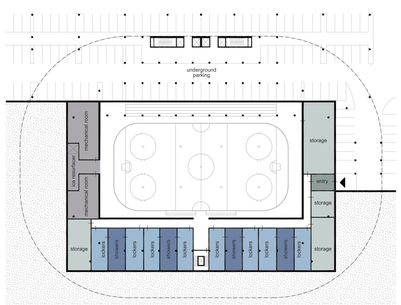
second floor plan I 1:550

program legend
- toilets
- bar



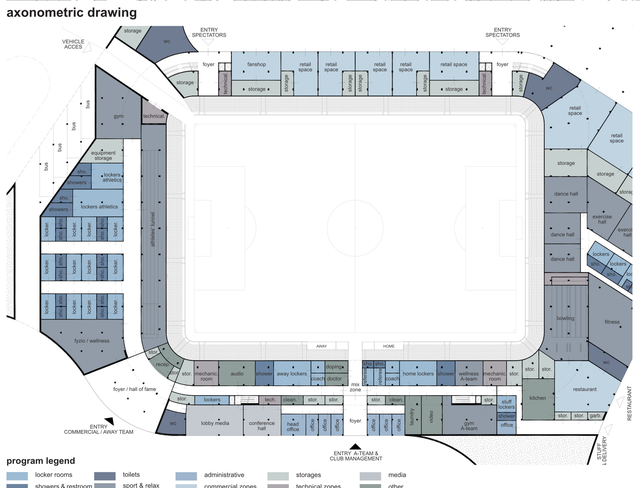
third floor plan I 1:550

program legend
- skyboxes (VIP)



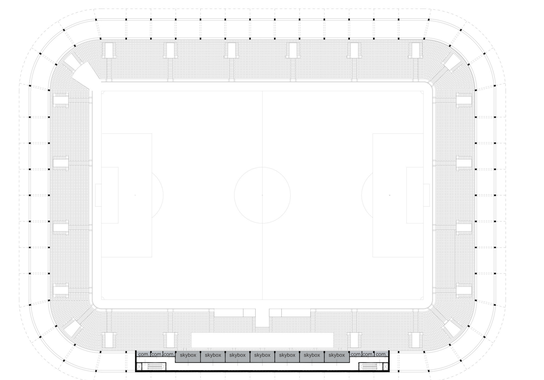
lower fround floor plan I 1:550

program legend
- locker rooms
- showers & restroom
- storages
- technical zones
- other



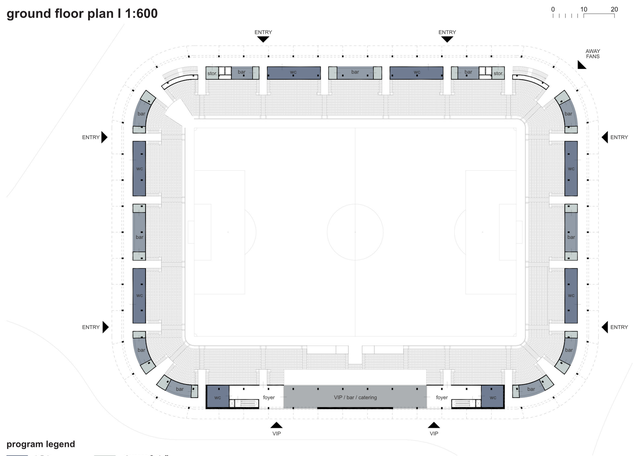
program legend
- locker rooms
- showers & restroom
- toilets
- sport & relax
- administrative
- commercial zones
- storages
- technical zones
- media
- other

ground floor plan I 1:600



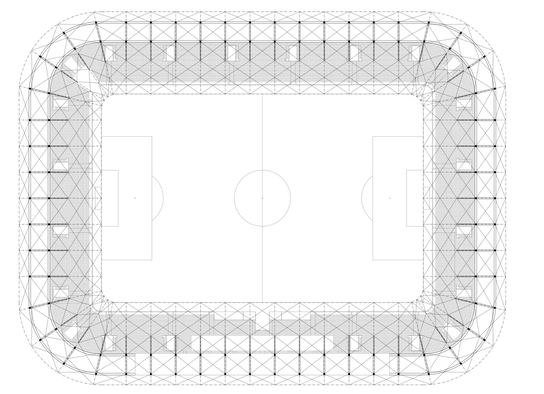
program legend
- skyboxes
- media

second floor plan I 1:600

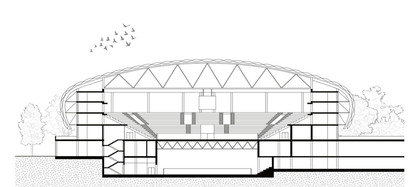


program legend
- toilets
- bar a refreshment
- storages & stuff
- VIP zone

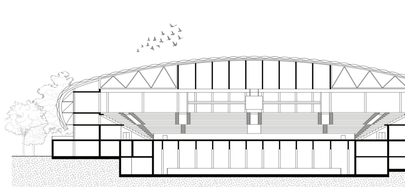
first floor plan I 1:600



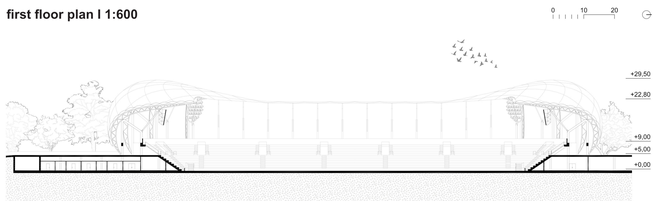
roof plan & grandstand structure I 1:600



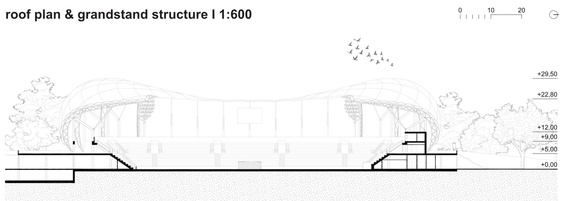
cross section I 1:550



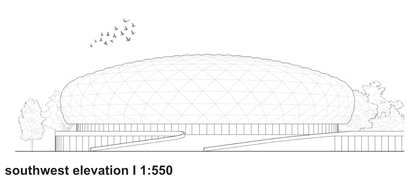
longitudinal section I 1:550



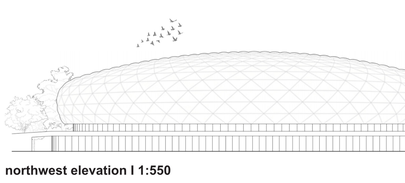
longitudinal section I 1:600



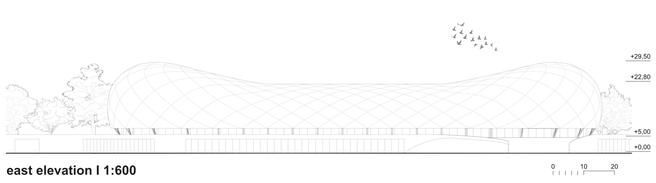
cross section I 1:600



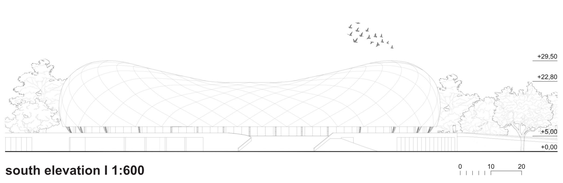
southwest elevation I 1:550



northwest elevation I 1:550



east elevation I 1:600



south elevation I 1:600

architectural concept

archetype

The design transforms the planar archetype of a football pitch into a 3D stadium volume. The resulting massing directly reflects normative playing field dimensions, thus defining its spatial identity. The structure becomes a new symbol of Bolesiav football with an over 120-year club tradition. The goal is a modern representative look that integrates premium facilities and training infrastructure, increasing the site's appeal for players and the general public.

spectator flow

The orthogonal geometry of the base mass, derived from pitch proportions, undergoes a targeted morphological transformation. Rounded corners respond to anticipated intense visitor flows, enabling smooth human circulation in the stadium's exterior and interior. This form adjustment eliminates movement barriers, respects natural trajectories, and contributes to intuitive orientation across the whole site, thereby improving safety and overall user comfort.

corner gradation

Height gradation toward corners defines a unique stadium silhouette, purposely deviating from typical football typologies. The dynamic principle offers clear visual contrast to the neighboring hockey arena with its regular enclosed shape. The result infuses public space with needed vitality and playfulness.This forms a memorable shape, its plasticity enriches the urban context, becoming an iconic landmark for the sports venue and the whole city.

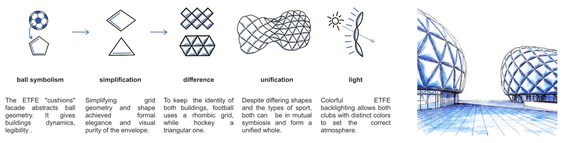
lighting

Artificial light shapes the iconic face of the building in the city's night skyline. Oval floodlights in the raised corners are the main light sources, directly underlining dynamic structural morphology. The design cites "classic" floodlights, which often define the authentic stadium character and the specific match atmosphere. Artificial light marks the facade design; its variable backlighting allows for club color displays and defines the structure's unmistakable expression.

historical axis

The design follows the urban vision expecting a major landmark here- a church. The central axis of the site forms a visual link with the historic promenade leading to the square and the castle. The project reacts to this fact by stadium corner gradation, creating a strong visual accent in distant views. This form returns the missing verticality vision to the site and defines a modern sports "sanctuary", which by its form integrates the broader city context.

facade concept



ball symbolism

The ETFE "cushions" facade abstracts ball geometry. It gives buildings dynamics, legibility.

simplification

Simplifying grid geometry and shape formal achieved elegance and visual purity of the envelope.

difference

To keep the identity of both buildings, football uses a rhombic grid, while hockey a triangular one.

unification

Despite differing shapes and the types of sport, both can be in mutual a symbiosis and form a unified whole.

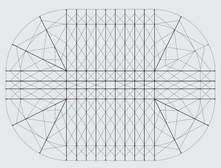
light

Colorful ETFE backlighting allows both clubs with distinct colors to set the correct atmosphere.

roof structure scheme

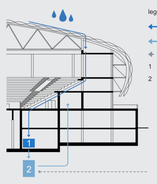
The load-bearing roof structure is designed as a system of steel trusses, which effectively span the large hall layout without internal supports. The geometry derives from the oval arena floor plan, combining linear and radial element arrangement to achieve an optimal transfer of forces to the perimeter walls.

The structure's central part forms a grid of parallel transverse beams ensuring stability in the main hall. In the rounded ends, radial segmentation seamlessly follows, where trusses converge into main nodal points.



rainwater management system

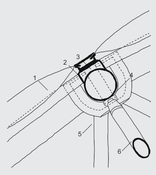
The structure effectively uses roof rainwater for cleaning and WC flushing, vastly reducing drinking water consumption. Rainwater from downpipes is led via a filtration station to remove impurities into a large-capacity storage tank, from where it is then distributed by the utility water network. To guarantee continuous operation even in dry periods, the system is connected to the public water main, which automatically tops up any demand in case of tank shortages.



legend
- rainwater
- treated water
- municipal water
1 filtration unit
2 storage tank

ETFE foil facade

The cladding is designed as a light, transparent membrane formed by multi-layer ETFE cushions, which are anchored to a secondary steel structure. Individual segments are fixed along the perimeter using aluminum clamping profiles (cuffs) with integrated seals, ensuring mechanical foil tension and joint watertightness. This system creates an articulated, spatially plastic surface with high structural elegance. The cushions are permanently stabilized by low air overpressure from the compressor unit, giving the facade a dynamic volume.



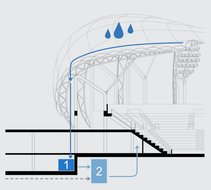
legend
1 ETFE cushions
2 aluminum clamping profile
3 sealing profile
4 steel section
5 steel joint
6 diagonal steel profile

individual sectors

Seating layout is based on operational segregation of viewer groups. Most capacity comprises standard spectator sectors (in blue shades), which wrap the playing field and ensure continuity of the home "cauldron". Standard capacity is supplemented on the main stand by a separate VIP Silver zone and media space, while peak comfort is given by private VIP Gold skyboxes. For safety reasons, the guest sector is strategically isolated in the northwest corner. The service concourse along the stand perimeter with integrated gastro facilities and sanitary nodes is linked directly via stairs to the mall a floor below.

rainwater management system

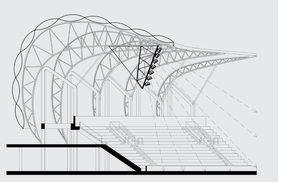
The building's environmental concept is based on the effective utilization of rainwater. Roof drainage is handled by gutters integrated into the facade grid, from where water is led via a filter unit to a large-capacity storage tank. The harvested utility water supplies sanitary units and serves for technical building maintenance, vastly reducing drinking water consumption. Operational system stability is ensured by auto refilling from pub. water main during rainfall deficits. The solution is designed to offer operational savings, fulfill a retention role and relieve the public sewers.

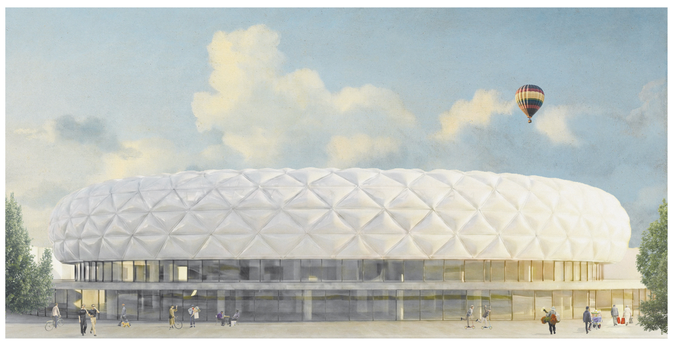


legend
- rainwater
- treated water
- municipal water
1 filtration unit
2 storage tank

football pitch lighting

Artificial lighting forms an integral part of stadium tectonics, directly reacting to the roof morphology, which graduates in height towards corners. Here, elliptic steel grids bearing main floodlights hang from the main load-bearing roof structure. The geometry of these elements draws on the logo of FK Mladá Boleslav. Technical gear thus gains an identical face, becoming a visual landmark of the stadium interior. Primary floodlights are supplemented by linear fixtures along the roof perimeter. By night, dominant lights create an effect of clear levitating ellipses, defining a unique stadium night scenery.





MLADÁ BOLESLAV ICE-HOCKEY ARENA

MIROSLAV MARKOV
MGA1 ZS 2025/2026
KOPŘIVA, VANĚK, ŽDÁRA

MLADÁ BOLESLAV FOOTBALL STADIUM

VOJTĚCH ŠAŠEK
AMG1 ZS 2025/2026
KOPŘIVA, VANĚK, ŽDÁRA