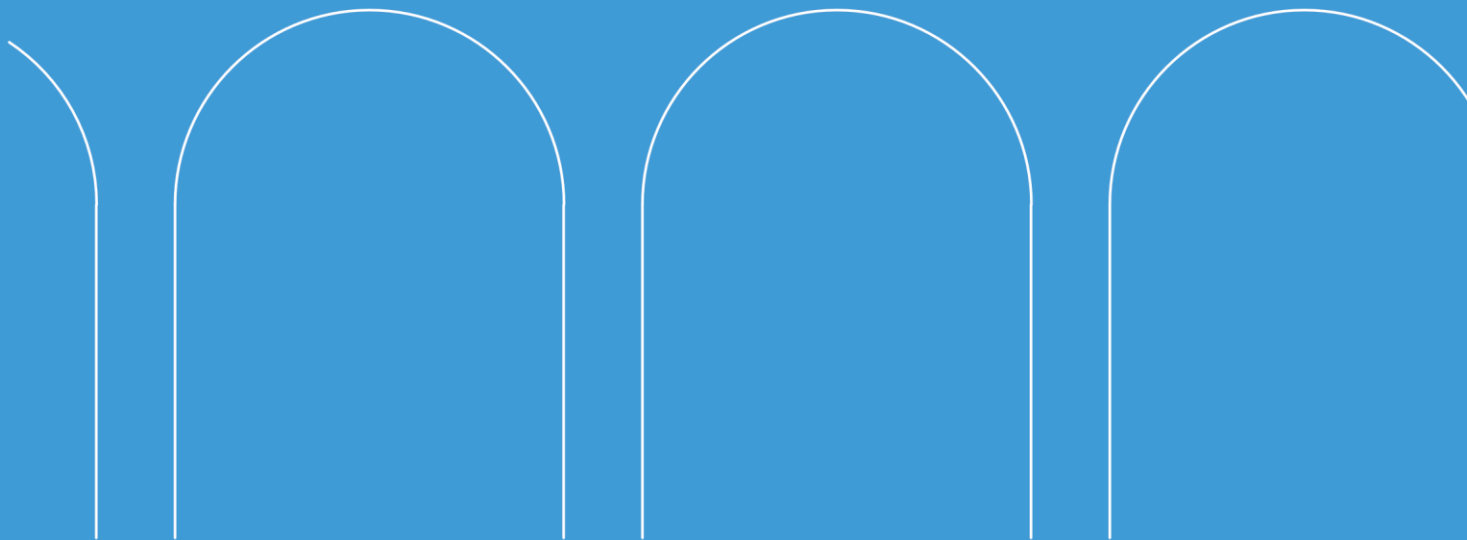
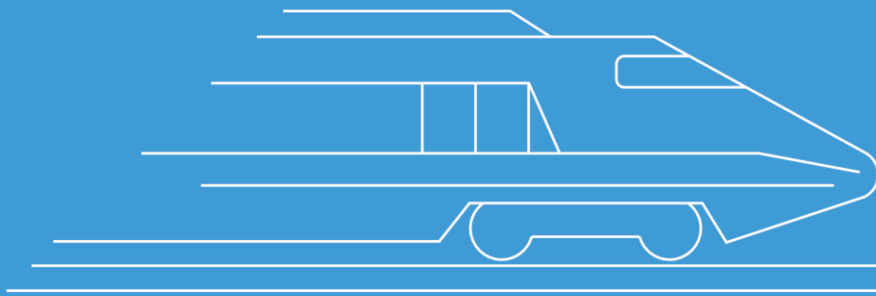

Jihlava VRT Terminal

Architectural design competition

P01 Competition Brief





P01 COMPETITION BRIEF

All the terms and conditions of the Contracting Authority specified in the Brief are set out as recommendations and their non-compliance is not a reason for elimination of the Competition Entry from consideration and for exclusion of the participant from the Competition. The quality and comprehensiveness of incorporation of these requirements into the Competition Entry will be evaluated in the Competition Entry under the evaluation criteria of Article 8 of the Competition Terms and Conditions. It is left to the inventiveness of the participants to solve aspects of the subject of the Competition not mentioned in the Brief.

The subject of the Competition is the elaboration of the architectural and urban design of the new railway terminal Jihlava VRT (Jihlava HSL) and related buildings, which will be part of the section of the high-speed line VRT Vysočina fáze II (HSL Highlands Phase II) from Světlá nad Sázavou to Velké Bíteš on the route from Prague to Brno.

The terminal will serve as a transfer hub between HSL and public transport and at the same time as a P+R point of the Vysočina Region for commuting to Prague, Brno, Berlin, Bratislava, Vienna or Budapešt.

With its architectural and technical design, the terminal should symbolise a new era of railway transport and infrastructure in the Czech Republic, which will be connected to the European railway network after the completion of the HSL.

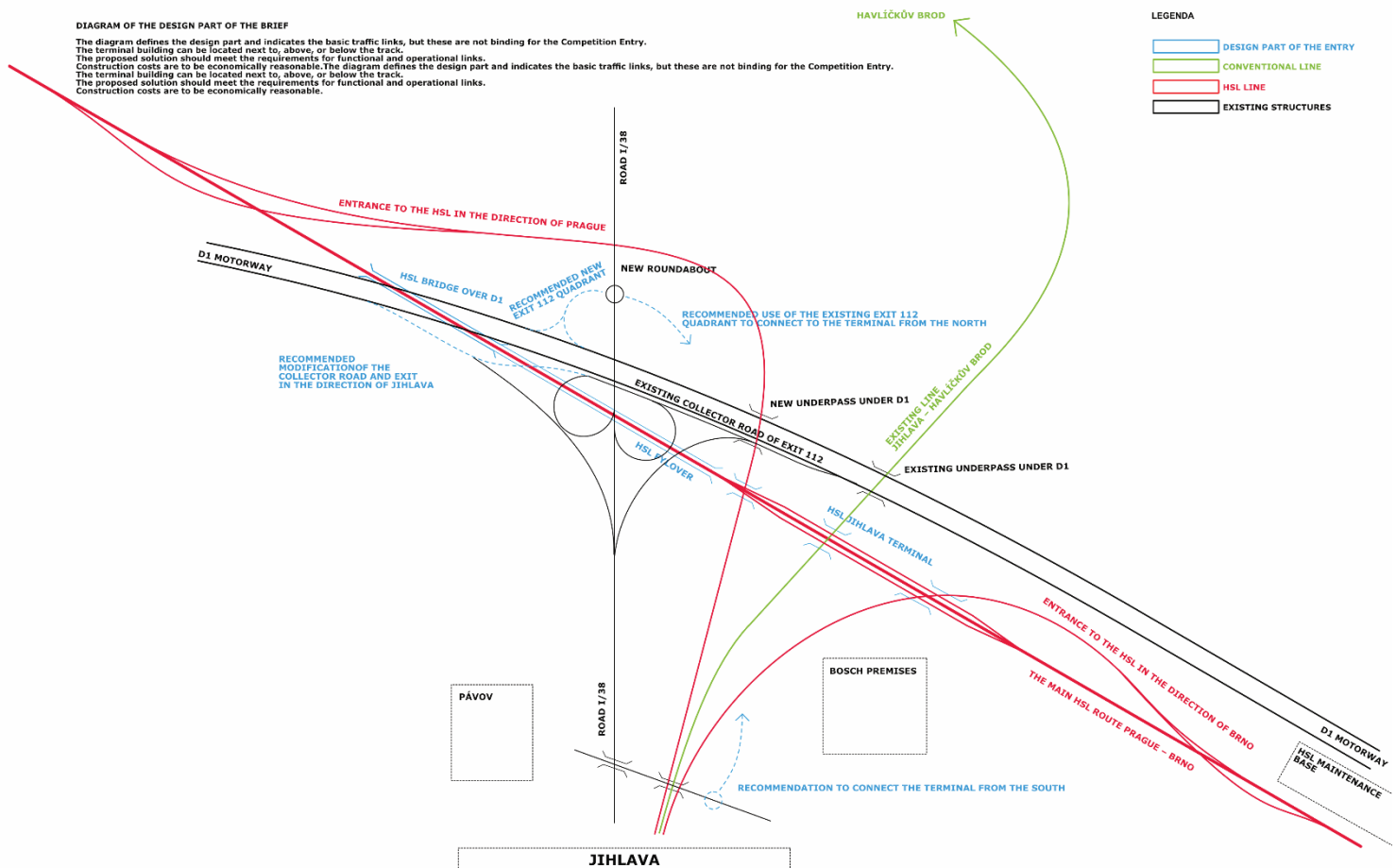


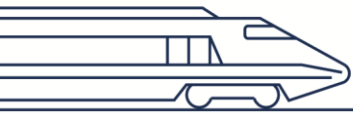
The design competition will address the area and buildings in two parts (project and conceptual).

PROJECT PART OF THE COMPETITION ENTRY

Design concept of urban, architectural, technical, transport and landscape design of the Terminal and related buildings, consisting of:

- Terminal:
 - of the terminal building;
 - access to the platform and roofing of the platform;
 - parking house, parking lot, bus, taxi and bicycle parking, including all related roads, paved and unpaved areas in the terminal area;
 - public space and landscaping in the terminal area and its integration into the landscape;
- Flyovers:
 - large-span HSL bridge over the D1 motorway;
 - connecting flyover between HSL bridge and terminal;
- Related structures:
 - related technical infrastructure in the extent of the Concerned Area;
 - road connection to the Terminal in the scope of the Concerned Area;
 - technological structures of the railway (HSL and conventional).





CONCEPTUAL PART OF THE COMPETITION ENTRY

Concept of urban, architectural, technical, transport, landscape and environmental solutions for the possible functional and spatial use of the buildable and non-buildable area in the wider concerned area (develop the potential of the project part), including the related technical infrastructure.

At present, there is no spatial planning documentation or other strategic document that addresses the development of the wider concerned area around the HSL Jihlava Terminal. On the basis of foreign experience and with regard to the location of the project in an exposed position on the D1 motorway near the regional town, it can be assumed that further development of the area is likely to occur after its completion. At the moment it is not possible to predict how and to what extent it will be developed and the aim of the conceptual part should be to examine the possible urban and landscape limits in the area, which can serve as an input to further discussion for the preparation of a zoning study or changes to the territorial plan.

For the city of Jihlava, however, the new terminal is seen as an opportunity to create a memorable building with a strong visual identity (landmark) on the northern approach to the city, which should remain visible in the future urban and landscape framework of the wider surroundings.

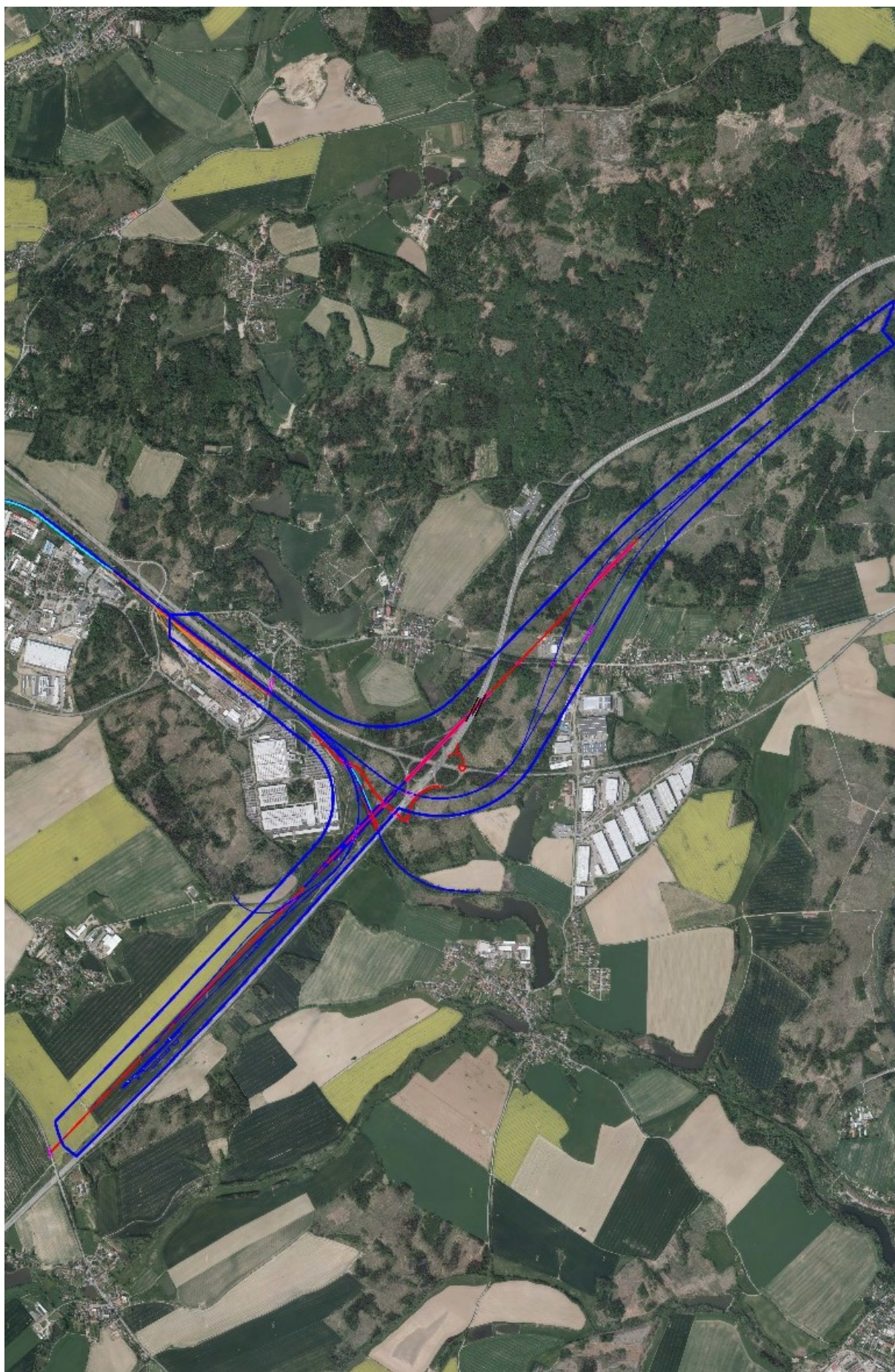
DELIMITATION OF THE CONCERNED AREA

The area is located in the cadastre of the municipalities of Jihlava (50,108 inhabitants / 87.87 km² / 523 m above sea level) and Střítež (457 inhabitants / 7.46 km² / 483 m above sea level) in the Jihlava district. The building plot for the terminal location has a location defined by the location of the station in the project of the new construction of the HSL Highlands Phase II (Světlá nad Sázavou – Velká Bíteš lines) and is located in close proximity to the D1 motorway. The land is flat and the line is laid on an embankment approximately 16m high above the level of the existing line and approximately 8m above the level of the D1 motorway. In the station location, a total of 4 tracks are designed on the HSL, of which the two outermost tracks are equipped with side platforms. On the conventional line Jihlava – Havlíčkův Brod, which passes approximately perpendicularly under the HSL, two through tracks and one single track are designed, all with side or semi-island platforms.

The Contracting Authority recommends the location of the Terminal facility in the area indicated in Annex P02 to the Competition Terms and Conditions. Related road and infrastructure structures may be located outside the Concerned Area.

The Contracting Authority recommends not to interfere with the Bosch Diesel premises.

Outside the Concerned Area, the conceptual part of the Entry can suggest the integration of the terminal and the railway line into the landscape, and in a broader context the concept of the urban development of the entire site, taking into account the spatial plans of the surrounding municipalities and the possible expected future development of the site around the newly built terminal.





NEW CONSTRUCTION OF THE LINE VRT VYSOČINA FÁZE II (HSL HIGHLANDS PHASE II) SVĚTLÁ NAD SÁZAVOU – VELKÁ BÍTEŠ

The HSL line section is designed as a double-track line in the scope and configuration according to the attached site plan. The maximum operating speed **is assumed to be 320 km/h (design speed 350 km/h) and the minimum speed 200 km/h. The line will be dimensioned for the operation of train units and trainsets consisting of locomotives and wagons.**

After completion of the HSL network in the Czech Republic, trains are expected to operate primarily in the following directions:

- Praha hl. n. – HSL Jihlava – Brno (high-speed trains for the speed of 320 km/h) with a connection to Germany, Slovakia, Austria and Hungary;
- Praha hl. n. – HSL Jihlava – Jihlava City (conventional trains for speeds above 200 km/h).

In addition, the conventional platform at the terminal will allow connections in the following directions:

- Havlíčkův Brod – HSL Jihlava – Jihlava City – Slavonice (local trains from the conventional part of the station);
- Havlíčkův Brod – HSL Jihlava – Jihlava City – Třebíč / Znojmo (local trains from the conventional part of the station);

The track connections will also enable the supply of the maintenance base from the conventional line and the passage of working mechanisms from the maintenance base to the HSL. In the event of operational emergency, the rail connections will also enable, for example, the HSL unit to be towed by conventional railway to the Jihlava station.

It is planned to remove today's railway stop Jihlava – Bosch Diesel and move the stopping point on the conventional line to the HSL Jihlava terminal.

The location of the track, dimensions and position of the platform edges are in Annex **P02_Concerned Area.**

The limits of the clearance profiles and the required buffers are in Annex **P03_Profiles and Sections.**

Map documents for the Concerned Area are in Annex **P04_Map Documents.**

Further information on the HSL concept can be found in Annex **P05_HSL Documentation.**

The high-speed line Prague – Brno – Břeclav has been examined by a feasibility study and approved in the SK4 variant by the central commission of the Ministry of Transport. The full study is available on the website of Správa železnic at <https://www.spravazeleznic.cz/vrt/praha-brno-ostava-a-brno-breclav/studie-proveditelnosti>

In the area of the terminal and its surroundings, the Brief differs from the solution shown in the Feasibility Study. It is recommended to follow the solution provided in the Brief and to use the Feasibility Study only as a possible basis for the broader context of the HSL routing between Prague and Brno.

EXPECTED TRAFFIC FLOWS

Although the planned values will not be achieved until after the completion of the connecting lines, it is assumed that the project and the construction of the terminal will take place in one complete construction phase, with the exception of the car park.

- The final expected capacity of the terminal according to the feasibility study is approximately 5,500 to 6,000 passengers per day (boarding/departing)
- Total number of HSL trains: 118 per day
- Number of stopping trains: 2 per hour at peak / 16 more pass (projected 2050 target)
- Passenger turnover on HSL platforms at peak times: (250 to 300 passengers / boarding edge / hour)
- Turnover of individual car traffic to the car park up to 2,000 cars / day (In the stations Jihlava City and Havlíčkův Brod there will not be sufficient parking capacity for individual automobile traffic – these are existing stations in the development. A large part of individual automobile traffic will use the new terminal for transfer to HSL)

HSL JIHLAVA TERMINAL

The HSL Jihlava Terminal will serve to access the high-speed railway for the Vysočina Region. It is expected to be used for long-distance trips within the Czech Republic and abroad, as well as for daily commuting to Prague, Brno and as a P+R of Jihlava itself. For this reason, the terminal must be designed for both long-distance passengers and daily commuters. The transport model also assumes the use of the terminal for changing between train lines, especially between the direction Havlíčkův Brod – Jihlava and HSL towards Prague and Brno, and bus connections within the region.

The terminal building will consist of a public part (check-in hall with a waiting room and sanitary facilities for passengers, commercial units, shops of carriers and information), a non-public part (station dispatcher room, security and facilities for staff) and a technological part (construction technology).

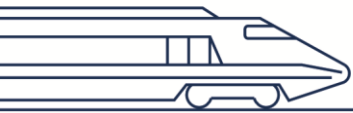
Access to the platforms and the platforms themselves will be barrier-free and covered. A capacity parking lot (surface or in the form of a parking house) will be designed in the vicinity of the terminal, as well as a bus stop, trolleybus, taxi stand and bicycle parking. Due to the extent of paved areas, a solution using blue-green infrastructure elements is envisaged.

Public spaces should be designed for maximum clarity. The efficiency of passenger flow should be taken into account. Spaces should support natural orientation, both for passengers with reduced mobility and orientation and for ordinary passengers.

Requirements for individual parts and structures of the terminal

PUBLIC AREAS OF THE TERMINAL

Terminal dimensions: The terminal is expected to handle approximately 5,500 to 6,000 passengers per day. This is roughly comparable to the turnover at the Prague railway stations Praha-Libeň, Praha-Vršovice or Praha-Radotín, which in terms of turnover range between 5,500 and 7,200 passengers per day. Its dimensions and equipment should also correspond to this. It is recommended that the terminal be sized with regard to proximity to the city as an area-efficient solution.



Terminal location:	The terminal building can be located next to the line or directly above or below the line. In the case of the location of the building above the track, it is necessary to take into account the maintenance of the facades and roof of the terminal (especially the glazed parts). The proposed solution should primarily meet the requirements for functional and operational links, taking into account the expected construction and operating costs. Publicly accessible spaces should be clear, allow for natural wayfinding and reduce opportunities for crime.
Check-in hall:	Publicly accessible 24/7. It is not foreseen to have a special area for passenger check-in in the terminal building in the sense of checking passengers before boarding the train, but the Competition Entry should allow for this possibility. It is recommended to separate the entrance to the platform or a separate waiting area by a turnstile system with camera surveillance.
Waiting room:	A waiting room or a place suitable for waiting. It is possible to think of it as a separate room or space in the hall. Visual contact with the platform is recommended. Smaller separate waiting rooms can also be placed on the platform.
WC:	Men, women, cubicles and changing tables with sufficient capacity.
Selling points:	1x common area of approx. 25m ² with counter sales and information accessible from the hall, or it can be part of it.
Sales premises:	3–5x separate units ranging in size from approx. 15 to 30 m ² to approx. 100 to 150 m ² with the possibility of future variable arrangement (newsagent, bakery, etc.), with common facilities. Supply is possible via the hall or separately from the outside. As one of the units it is possible to place a self-service store with an area of up to 1,000 m ²
Others:	3–5 ticket machines in the hall; 1–2 ATMs; Information system panel; Advertising panels; Parcel service outlets.

NON-PUBLIC AREAS OF THE TERMINAL

Facilities for SZCZ employees:	Station dispatcher room of approx. 15m ² for emergencies and management (maximum 2 employees), – will not be occupied permanently.
Facilities for employees	Security room approx. 15m ² , – will be occupied permanently. Common day room, cloakrooms, toilets, kitchen for employees.
Cleaning and warehouses:	A maintenance room, a room for cleaning machines, a cleaning room, a warehouse for material and technical support, a warehouse for replacing lighting and a high-lift platform.

PLATFORM AND TERMINAL FORECOURT

Platform:	The dimensions and position of the boarding edges are shown in Annex P02 The Concerned Area and it is recommended to observe them. The height of the platform is 550 mm above the top of the rails, which are at an absolute height of 507,000 m above sea level.
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The construction of the platform and the composition of the base layers is not part of the Competition Entry. The material solution of the platform surface (pavement) is part of the design, including signal, guiding and safety strips.

Standard lighting and an information and orientation system are expected on the platform.

Access to the platform:

Footbridges, staircases, lifts, access walkways (ramps), escalators or moving walkways are foreseen and it is recommended to design them to respect the line cross-sections and protection areas specified in Annex **P03 Profiles and Sections**.

It is further recommended to design this capacity:

In normal operation, passengers are to leave the HSL platform in a time not significantly exceeding 30 seconds (not including the journey on the platform). Under normal circumstances, each platform must be equipped with an access staircase with a width allowing the passage of 240 persons per minute or adequate escalator, lift and ramp capacity.

If the only escape from the platform is off-grade or otherwise spatially restricted and escape is excluded, e.g. down the slope of a cut or embankment (e.g. island platforms), it is recommended to check the capacity of the emergency roads:

In an emergency situation, the arrivals to the platform should provide sufficient capacity for the safe departure of passengers. On the side platform of the HSL, a free space of at least 2,000m² is required. This area does not include the 0.9 m wide strip from the platform edge. The access is to allow 2,000 people to leave the platform within 3 minutes.

Considered staircase capacity in both directions:

40 persons/min/meter width

Considered escalator capacity:

down: 60 persons/min/meter width

up: 50 persons/min/meter width

Considered capacity of corridors and ramps:

40 persons/min/meter width

It is not recommended to design any form of level crossing over the tracks.

Accessibility requirements:

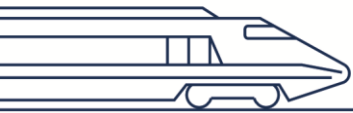
It is recommended to respect the standards of TSI 2.2.1 of the Annex to COMMISSION REGULATION (EU) No 1300/2014

<https://eur-lex.europa.eu/legal-content/cs/TXT/?uri=CELEX%3A32014R1300>

Roofing of the platform:

It is recommended to roof the entire width of the platform (between the platform edges or between the platform edge and the platform edge) and the entire length of the platform (standard length of one train). The design of the roofing should take into account the possibility of safe maintenance in the vicinity of the traction catenary lines. The use of green roofs is not recommended for platform roofing.

It is possible to design a roofing connected to the terminal or a separate roofing for each platform. The height and location of supports is



recommended to respect the line cross sections and the buffer zone specified in Annex **P03 Profiles and Sections**.

Dispersal space:	For the protection of soft targets, the dispersal area in front of the main passenger entrance in the area in front of the terminal should be separated by mechanical barriers to prevent vehicles from ramming into evacuees.
Operating room:	The terminal building should be approached by an access road allowing fire vehicles to enter at least 20m from all entrances to the building through which firefighting is expected to be conducted, unless these buildings require a boarding area or internal intervention routes according to the requirements specified in the building fire safety standards.
Furniture:	It is possible to use standard or design atypical furniture with reasonable costs for its production and maintenance (in the minimum set a bench with backrest, a bench without backrest, a waste bin, a waste bin, an information panel).
Lighting:	It is planned to illuminate the entire area with standard lighting to minimise light smog.

CONSTRUCTION TECHNOLOGICAL EQUIPMENT OF THE TERMINAL

HVAC engine room:	Ventilation, cooling, heating sized according to the volume of the building.
Electrical, FAS, MaR:	Switchboards and connection points sized according to the volume of the building.
Water, sewage:	Connections and connection points sized according to the volume of the building.

For the purposes of the competition, the connection points of the technical infrastructure are assumed in the axis of the Pávovská street connecting Pávov with Jihlava.

RAILWAY TECHNOLOGICAL EQUIPMENT IN THE TERMINAL

Transformer	25kV/400V for supplying the terminal from the main power distribution system (can be located outside the terminal building). It may be located in or near the terminal building to allow for installation and maintenance.
Substation:	20m ²
Technology rooms:	3x20m ²
A low-current substation:	For the operation of the information system and other technologies of the terminal of about 50m ²
Stand-by supply source:	Battery or Diesel as required e.g. evacuation.
Cable duct:	It is routed in the track area and will be connected to the Low Current Substation.

TRANSPORT AT THE TERMINAL

In the terminal area, a transport solution is envisaged that includes all modes of transport with regard to the flow and safety of traffic. The management of pedestrian and cycling routes should

take into account the connections to the expected main routes to Střítež, Pávov and the adjacent industrial area.

Transport connections to the terminal:

HSL terminals should ideally be connected on two sides.

From the south side, we recommend connecting the Terminal to Pávovská Street near the bridge between the railway line and the I/38 road. From the north side, we recommend connecting the terminal via an underpass under D1 and then using the current D1 exit ramp to the planned roundabout. This connection includes moving the northern half of the exit to an unused quadrant of the fly-over intersection.

It is recommended to use both connections.

Parking P+R: The target capacity is approximately 3,000 parking spaces in the P+R system as well as long-term parking. In the overall context of the design, it is possible to design surface, overground and possibly underground parking. The use of foundation piles is not recommended.

It is recommended to design the car park so that the distance to the terminal is as short as possible.

The parking lot should allow for phasing of construction in logical steps. In the first phase, we recommend a capacity of at least 700 spaces.

K+R station: 5 places near the entrance, covered, illuminated

TAXI station: 5 places near the entrance, covered, illuminated

BUS station: 4x parking spaces for articulated, 18m long bus/trolleybus, covered, illuminated, 4x parking spaces with simple sanitary facilities for the driver

Staff: 2x reserved parking space for supply, security and maintenance of the building

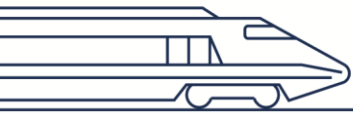
Bikes: indoor bicycle parking with a capacity of 300 places with the possibility of further expansion, part of the racks is recommended to be designed with a higher level of security, part of the places should allow charging (for electric bicycles)

OTHER REQUIREMENTS

Retaining walls: The sloping cut of the line can be supplemented with a retaining wall locally to reduce the span if necessary. Its construction is not to interfere with the clearance and protection area.

Integration into the landscape: In the wider concerned area, it is assumed that the current biocorridors and biocentres will be incorporated and connected according to the Territorial Plan in Annex **P07 Territorial Plan**.

Rainwater management: Design a system for the use of rainwater from buildings and seepage from paved areas, taking into account geological conditions. The possibility of using the composition of a green roof.



HSL FLYOVER

The terminal will be connected to the flyover in the direction to Prague with a large span bridge (approx. 150m), which will carry the high-speed line over the D1 and I/38 road fly-over junction and the D1 motorway via the large span bridge at the end of the flyover.

It is recommended that the bridge structures over the motorway be constructed as a single span without a central support across the through lanes of the D1 motorway. It is recommended that the collector strip on the south side of the motorway be relocated to reduce the bridge span and the southwest quadrant of the fly-over intersection be realigned in conjunction with this.

Placing the pillar in the central strip of the motorway would require the relocation of the northern half of the motorway for approximately 700m and the modification of two bridge structures on the D1 motorway, which was assessed as a more costly option and therefore this solution is not recommended.

A sample bridge deck cross-section is shown in Annex **P04 Profiles and Sections**.

REQUIREMENTS FOR INDIVIDUAL PARTS OF THE HSL FLYOVER

Carrying capacity:	<p>The standard load capacity for the railway line of category D4 is assumed. Operation of trains with axle pressure 22,5 t up to 230 km/h and 17 t up to 350 km/h</p> <p>The design and assessment of the steel structures will be carried out according to the set of standards and ČSN EN 199x, it is a bridge structure of the high-speed railway system (HR) (ČSN EN 1991-2/Z4), all details of the steel structure must allow for proper implementation of corrosion protection with a service life of VV (more than 25 years) and its renewal, it must allow for smooth water drainage and prevent the collection of dirt – the recommendations and requirements of the standards ČSN EN 15520 and ČSN EN ISO 12944-3 will be observed,</p>
Width:	<p>The minimum width should allow for a two-way HSL rail line. The transverse profile of the line on the flyover is specified in Annex P03 Profiles and Sections. The axial distance of the tracks on the HSL is 4.5 m</p>
Structure:	<p>The structural design of the flyover should be consistent with the overall urban and architectural design of the terminal. It is recommended that the height of the structure and the location of the supports be designed to respect the line cross sections and the protective spaces specified in Annex P03 Profiles and Sections.</p>
Passing space:	<p>It is recommended to keep the following dimensions of the opening under the bridge:</p> <p>The clearance height of the underpass under the bridge should be at least 5.5 m above the roadway in the section from Exit 112 in the direction to Prague and 8.0m from Exit 112 in the direction to Brno.</p> <p>The clear width of the underpass under the bridge should be at least 33.5m in the direction perpendicular to the D1 motorway.</p>
Other requirements:	<p>It is not recommended to place traction gates on HSL bridges, only separate traction poles.</p>

The traction pylons on the bridge approach the HSL axis. The cross sections of the lines and the protection areas are specified in Annex **P03 Profiles and Sections**.

RELATED STRUCTURES

The terminal will be connected to the existing road infrastructure by new roads. The new roads should ensure the existing level of permeability of the landscape and at the same time the connection of the new buildings should not burden the residential parts of the municipalities with traffic. For the purposes of the competition, the necessary technical infrastructure connections are assumed to be located on the border of the concerned area in the direction from Jihlava.

ROAD UNDERPASS / BRIDGE OF THE TERMINAL SERVICE ROAD OVER THE RAILWAY LINE AND D1 MOTORWAY

Carrying capacity:	The standard load capacity for a third class road of category S 7.5/50 is assumed
Width:	The minimum width should allow for a 7.5 metre wide dual carriageway and a pedestrian footway and a dual carriageway cycleway.
Structure:	The structural design of the underpass/bridge should be consistent with the overall urban and architectural design of the terminal. It is recommended that the height of the structure and the location of the supports be designed to respect the line cross sections and the protective spaces specified in Annex P03 Profiles and Sections .

OTHER TECHNOLOGICAL STRUCTURES

Central Signal Box:	A Central Signal Box should be located on both deviated tracks of the HSL station near the switches (it can be integrated into another nearby structure). The structure is going to be controlled remotely.
Contains:	Central Signal Boxl approx. 20m2 Transformer 25kV/400V Substation 20m2

ESTIMATED INVESTMENT COSTS

Estimated investment costs for the construction of all structures and landscaping of the area within the scope of the Competition are CZK 2,750,000,000 – excluding VAT (Q2/2023).

TERMINAL BUILDING	CZK 1,010,000,000 excluding VAT
PLATFORM	CZK 200,000,000 excluding VAT
FLYOVER	CZK 360,000,000 excluding VAT
PARKING	CZK 640,000,000 excluding VAT
ROAD	CZK 260,000,000 excluding VAT
INFRASTRUCTURE	CZK 280,000,000 excluding VAT



TERRITORIAL PLANNING DOCUMENTATION AND MUNICIPAL REQUIREMENTS

In the Competition Entry it is generally recommended to respect all functional areas in the wider concerned area, especially the transport infrastructure areas, and to link the transport service and connection to the terminal to them.

PRINCIPLES OF TERRITORIAL DEVELOPMENT OF THE VYSOČINA REGION

The adjustment of the high-speed railway routing on the territory of the Vysočina Region will be part of the 10th update of the territorial development principles.

TERRITORIAL PLAN OF THE MUNICIPALITY OF JIHLAVA

The corridor for the location of the high-speed railway line and associated buildings is not defined in the territorial plan.

The Jihlava territorial plan does not currently reflect the high-speed line and therefore its respect is not recommended. However, it is recommended that it is taken into account in the wider concerned area to ensure continuity with future development.

The valid territorial planning documentation can be found in Annex **P07 Zoning Plan**.

The complete territorial plan is available on the Vysočina Region website:

<https://pupo.kr-vysocina.cz/up/global-search/586846>

TERRITORIAL PLAN OF THE MUNICIPALITY OF STŘÍTEŽ

The corridor for the location of the high-speed railway line and associated buildings is not defined in the territorial plan.

It is recommended to respect the Strážnice territorial plan in the area north of the D1 motorway.

The valid territorial planning documentation can be found in Annex **P07 Zoning Plan**.

The complete territorial plan is available on the Vysočina Region website:

<https://pupo.kr-vysocina.cz/up/global-search/587958>

TERRITORIAL STUDY OF THE LANDSCAPE AROUND JIHLAVA

For Jihlava and its surroundings, a landscape study has been prepared. The corridor for the location of the high-speed line and associated structures is not considered in the study. It is recommended that the study be considered within the wider concerned area to ensure continuity with other landscape features.

The main drawing of the landscape study is in Annex **P07 The Territorial Plan**.

The complete study is available on the Jihlava website:

<https://www.jihlava.cz/uzemni-studie-krajiny-okoli-jihlavy/d-555765>

OTHER REQUIREMENTS OF THE VYSOČINA REGION

It is recommended to respect the following requirements of the Vysočina Region in the Competition Entry:

1. Short connection between the regional part of the railway terminal (platform in the direction of Jihlava and Havlíčkův Brod) and the regional part of the bus terminal with the

Bosch Diesel industrial premises by pedestrian and cycling transport (possibility of cancelling the railway stop Jihlava-Bosch Diesel and replacing it with service from the HSL Jihlava terminal).

2. Short connections of the bus terminal to D1, to the I/38 road in the direction of Havlíčkův Brod and Jihlava and to Pávovská Street. Most regional bus lines will not terminate at the HSL Jihlava Terminal, they will continue to Jihlava to the City Terminal. These will be bus lines e.g.

Velké Meziříčí – Měříň – (D1) – Jihlava VRT (HSL Terminal) – Jihlava City Terminal;

Humpolec – (D1) – Jihlava VRT Terminal (HSL Terminal) – Jihlava City Terminal;

Štoky – Jihlava VRT (HSL Terminal) – Jihlava City Terminal.

A part of passengers will get off at the Jihlava VRT (HSL Terminal), but a large part of passengers will continue to the City Terminal, and for them the detour to the Jihlava VRT (HSL Terminal) may not be significantly time-consuming.

OTHER REQUIREMENTS OF THE CITY OF JIHLAVA

The following requirements of the City of Jihlava are recommended to be respected in the Competition Entry:

- the visual appearance of the terminal (including views from vehicles travelling on the D1 motorway and trains passing on the HSL) should make it obvious at first sight that it is located in the most important city on the route between Prague and Brno, it is desirable that it is a highly visible and memorable building;
- connection for individual automobile traffic, primarily from D1 and I/38;
- possibility of fast exit and entry of regular buses from and to D1 and I/38;
- connection of trolleybuses in the direction from Pávovská Street, can be solved from the west and east side of the Bosch / Automotive lighting premises;
 - in the case of the western variant, it is assumed that the existing Bosch Pávov stops will be replaced by new ones in positions close to the employee entrances, probably also the transfer of regular buses, including the terminal;
 - in both variants it is necessary to solve the capacity connection to Pávovská Street so as to avoid delays of public transport connections (dedicated BUS lanes and off-street connections...), even during peak periods during shift changes;
 - free passage of individual automobile traffic through the future terminal (as a shortcut between Pávovská Street and the motorway on-ramp) is undesirable (if it is allowed, the traffic solution must be designed so that even in peak hours there is no delay of public transport connections and no crossing of the individual automobile traffic route with pedestrian movements within the terminal);
- the connection of the trolleybus terminal (accessible from Pávovská Street) and the bus terminal (accessible from D1 and I/38) for the passage of vehicles is not necessary (if there will be a pedestrian connection for the purpose of transfers);
- trolleybus and bus stops to be located so that pedestrian access to the terminal does not cross with car transport routes (including K+R and Taxi).

For your information:

- the implementation of a dedicated lane for public transport on Pávovská Street in the direction from the turn-off to Bosch Diesel to the roundabout;



- The territorial plan of Jihlava is non-binding for the purposes of the competition;
- comprehensive land modifications are underway in the cadastral territory of Heroltice.

Possible future directions of bus lines with connections to the HSL Terminal:

- Humpolec;
- Velké Meziříčí;
- Polná;
- long-distance Prague – Brno;
- express public transport from the centre of Jihlava;
- Bosch diesel shuttle buses can be rerouted / terminated at the HSL Terminal.

OTHER REQUIREMENTS OF THE MUNICIPALITY OF STŘÍTEŽ

The following requirements of the municipality of Střítež are recommended to be respected in the Competition Entry:

1. Create a quality pedestrian and cycling connection of the terminal to the municipality of Střítež.

HSL MAINTENANCE BASE

THE STUDY AND DOCUMENTATION OF THE MAINTENANCE BASE BUILDING MAY BE PART OF THE ENSUING CONTRACT, BUT IS NOT THE SUBJECT OF THE PROJECT OR CONCEPTUAL PART OF THE COMPETITION ENTRY. THE SCOPE OF THIS CONTRACT WILL BE SPECIFIED IN THE FOLLOW-UP NPWP.

A HSL maintenance base will be located near the terminal. The maintenance base will be permanently staffed with HSL continuous maintenance personnel and will be occasionally augmented with periodic maintenance personnel. The maintenance base will consist of a building for workers, workshops, warehouses, cable park, storage area, storage of railway superstructure components, rolling stock maintenance hall and fuel filling station. The maintenance base also includes a service track.

HSL MAINTENANCE BASE

When designing the maintenance base, it is recommended to refer to the maintenance base site plan in Annex **P05.1 Reference Projects**

The solution of the maintenance base is recommended to be taken from Annex **P02 Concerned Area**

The staffing of the maintenance base assumes two types of staff. Stable employees who work at the base every day and occasional employees who commute to the base for specific or major maintenance/reconstruction work where capacity is at 100%. The sizing of the base should take into account standard operations with up to 61 permanent daily HSL maintenance personnel, allowing for a total occupancy of up to 90 maintenance personnel (at reduced comfort). All this is supplemented by support staff (about 6 people – catering, cleaning, security, etc.).

The 47 HSL daily maintenance staff will use only the locker room, 7 people will use both the locker room and the office, and 7 people will be in a purely office position. The staff is divided into directors and managers, technical experts and 3 working groups:

- maintenance group for the superstructure and substructure (25 + 3 foremen);
- signalling and communication equipment maintenance group (13 + 2 foremen);
- overhead line and power supply maintenance group (9 + 1 foreman).

Groups work in shifts (1 to 3 weeks night shift, 1 week day shift) according to focus and need.

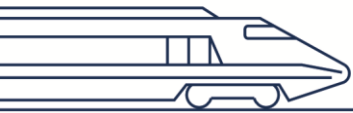
BUILDINGS IN THE HSL MAINTENANCE BASE

Office building: (approx. 1,800 to 2,200 m² gross floor area). The position of the building in relation to the storage area is recommended to be taken from Annex **P02 Concerned Area**

staff facilities (changing rooms, sanitary facilities, tea kitchen); canteen/cafeteria (food delivery + small kitchen for warming food and preparing cold food); offices for 20 people (2 to 4 people per office; supplemented by sanitary facilities and tea kitchen) and meeting rooms: meeting room for up to 20 persons adjacent to offices (clean operation), common room for up to 30 persons adjacent to workshops (dirty operation); hall for monitoring, control and coordination of maintenance work; 10 accommodation units for two persons each for travelling employees (e.g. 5 x two-room apartment with bathroom and small kitchen of approx. 40m² each).

Another space will be left free (shell and core) for a future administrator to subdivide this space.

Workshops and warehouses: (approx. 1,700 m²), 3 workshops (approx. 20 x 16 m), 4 material warehouses (approx. 12 x 16 m), height of warehouses and workshops approx. 6m. Premises with access by segmented garage doors



from the warehouse area. Workshops and warehouses should be connected to the office building or its dirty operation.

Garages / Hangars: (approx. 200m²), a ground floor building allowing the parking of three maintenance, service and road freight vehicles (e.g. a three-axle truck crane) (total minimum size of one warehouse = approx. 12 x 16m, height approx. 6m). Each parking should have its own entrance, or the building can be designed as a shelter (without walls and gates).

Workshop with inspection pit: (50 to 55 x 8 m) passable on one end piece of track, for two universal machines or tampers, pit length 20 to 30m, width 3.6m, access to the pit by stairs, depth approx. 1.5m, illumination by LED luminaires, arrangement of compressed air stations – connection points at 10 to 12m intervals, 230V and 400V electrical sockets at 10 to 12m intervals, 3 drainage troughs to catch used oil (one on each side of the room and one in the middle, leading to a 3 000 litre underground tank located outside the main building), up to 14 movable lifting stands (14 for a 54m train/machine, 8 for a 32m train/machine) on a reinforced concrete slab (load capacity per stand ranges from 15 to 22.5 tonnes).

Pumping stations: A building (the facility may be uncovered; approx. 4 x 7m) located on a concrete slab in a slope with a drainage trough in the middle draining into an underground tank used to catch diesel leaks located on one end piece of track in front of the workshop with a control pit to which it will be connected. The dispenser will be in suction version. No separation of diesel intake and output is envisaged, nor is there a connection to the card receiving/output cabling.

TRACKS AND AREAS IN THE HSL MAINTENANCE BASE

Service tracks The track of the fully equipped maintenance centre consists mainly of:

- 2 service tracks with a recommended useful length of 300m (exceptionally 200m), one of which includes a building with a control pit;
- 1 to 2 service tracks of at least 150m in length (at least 1 of them equipped with a front and side ramp of at least 5m in width and at least 15m in length for loading and unloading maintenance equipment and spare infrastructure components onto work trains);
- re-railing areas for two-way vehicles.

The service tracks are connected by track couplers to facilitate the handling of rolling stock and for more flexible formation of work trains. They are designed without tarring, due to their intended use – handling of cargo and material by automotive cranes, crane booms of cranes or road loaders, which excludes the placement of any equipment above them.

Storage area The area (approx. 20m wide) is proposed along the entire useful length of the service tracks. This is the main storage and work area of the maintenance base. The Warehouse area is connected to garages, hangars, workshops and warehouses, as well as a ramp at the service tracks. It is recommended to design the frequently travelled parts of the warehouse area (by the ramp and buildings) with asphalt cover, the rest of the area with unpaved surface.

Vehicle Wash Area (approx. 32 x 8m) reserved for hand washing of vehicles. The washer always includes a drain trough for catching oil or antifreeze with a drain to the tank. In front of and behind the washer area, a track of

approximately 30 metres without any additional equipment needs to be designed.

Secured cable park

The fenced and possibly also roofed area (approx. 16 x 25m) protected by an alarm device and a camera is used mainly for storage of communication cables and material for TV repairs in case of an emergency. We recommend that the park be located so that it is in visual contact with the office building.

Parking areas for staff and visitors

35 uncovered parking spaces at the office building, the part adjacent to the buildings equipped with stands for charging electric vehicles;

25 covered parking spaces, part adjacent to the buildings equipped with stands for charging electric vehicles;

approx. 20 covered bicycle parking spaces.

Parking areas for service vehicles including two-way

The parking area for oversized machines, e.g. two-way excavators (approx. 100m²) is proposed as uncovered (except for approx. 3 parking spaces in the garage). It can be part of the storage area.

Flexible fire reserve

It is proposed only if no other sufficient source can be secured, and only in the vicinity of the fuel tank. It can be designed as a fenced area with a PVC fire bag with water (approx. 50m³).

Retention tank

The design of the detention basin will be based on rainwater management requirements.

Zone with waste containers and tanks for used oil from workshops

The area (approx. 380m²) is mainly used for the placement of: waste containers on an area of approx. 300m²; tanks for used oil, antifreeze, etc. (volume of 3,000 litres, area of approx. 80m²).

Gravel and ballast chipping storage

It is proposed within the warehouse area along the service track.

Lighting of the area

It is planned to illuminate the entire area with standard lighting to minimise light smog.

Roads and other service areas

The roads and areas are designed for standard truck loads. The surface of regularly travelled areas and roads is proposed to be made of asphalt concrete, other areas can be made of unpaved covers.

Fencing of the area

The maintenance bases are fenced. The fencing is designed to be 2m above the walking surface or ground and its construction should make it difficult to overcome and, if necessary, resist attempts to do so. The uncovered cable storage is proposed with opaque fencing and security against unauthorised entry (barbed wire).