



NAUJININKAI PLACE

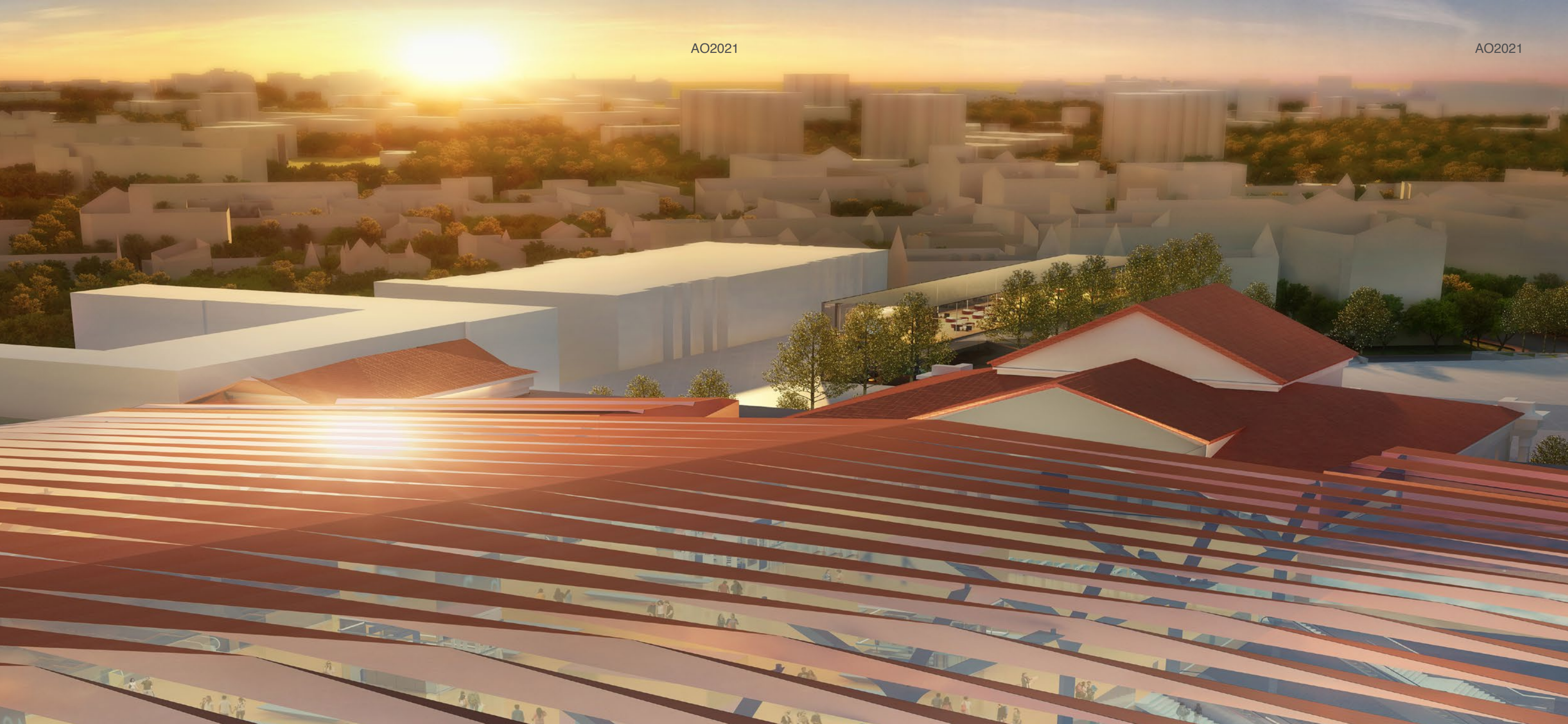


UGNIS



- Urban idea for Competition Territory and Naujininkai centre
- Architectural Idea : for Railway Station Complex, Stoties Square, PT Terminal and Naujininkai
- Description of Solutions of Railway Station Complex and Naujininkai
- Description of Stoties Square and PT Terminal solutions
- Compliance of Competition Territory, access areas, and buildings under design/ redevelopment with universal design principles
- Description of landscaping design solutions
- General indicators





## Urban idea for Competition Territory and Naujininkai centre

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The idea is to use this 'urban insert' opportunity to reconfigure Vilnius as the city attempts to seamlessly flow over an infrastructure bridge.

At an urban level, the masterplan offers a diverse program envisioned to form a vibrant district. It strives to create an inviting, inclusive, and sustainable environment, by bringing people and activities together to foster social interaction. It attempts to make the old station front, the stotis square, the new city center.

It focuses on the transformation of the Naujininkai district, south of the station, into a cosmopolitan and lively hub as Vilnius's new city centre.

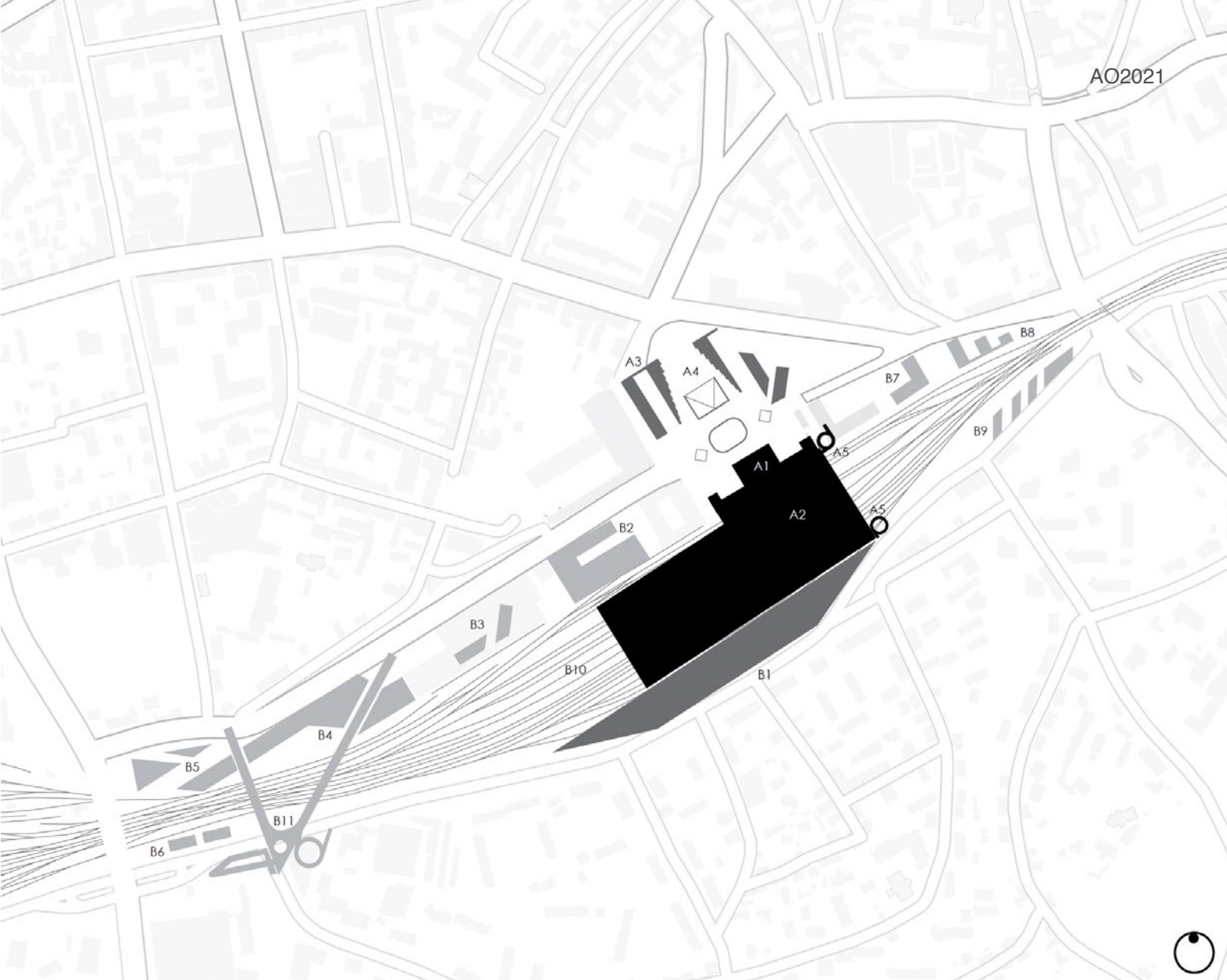
The built forms in the masterplan epitomise the concept of the past meeting the future with the

north side of the station following the material palette of terracotta as a dialogue with the heritage context of clay roofs. The modern developments in the South side, therefore, use glass as the primary building material. In transition spaces and interconnections these materials unify into one another as an embracing metaphor.

The masterplan acts as a framework for regeneration, offering a much needed bold new elongated face along the south side, as a modern entrance to the historic city. A vibrant cultural program featuring a performance center, an exhibition gallery, a sport and fitness court, co-working offices, restaurants and bars, is planned here.

Along the South-east periphery further ahead,





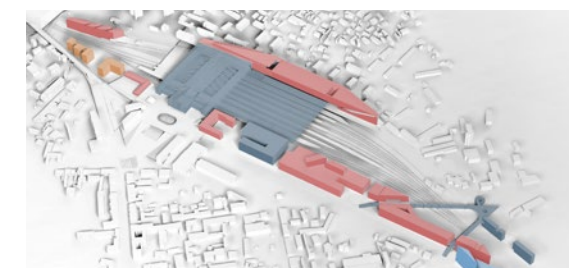
#### Vehicular Movement

- Private Vehicles
- Public Vehicles



#### Pedestrian Movement

- Cycle Loop
- Walkway



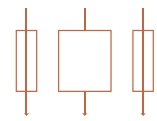
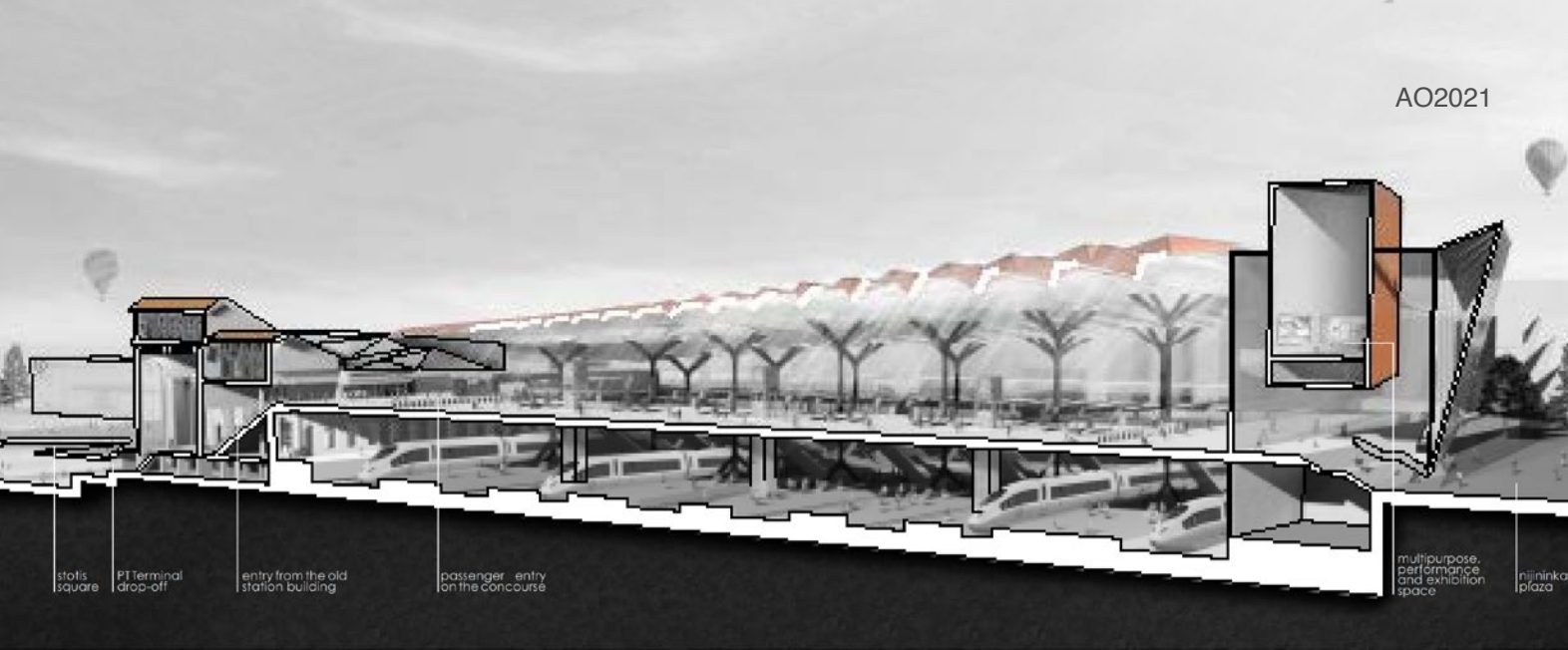
#### Landuse

- Private
- mixed use
- Public
- Infrastructure

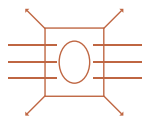
#### legend proposed building uses

A ARCHITECTURAL DETAIL AREAS	
1	existing station building
2	concourse with new south entry
3	public transport terminal
4	stotis square
5	cycle ramps
B THE URBAN CONCEPT AREAS	
1	<b>NAUJININKAI CENTRE:</b> commercial, service, catering, hotel, sports and other functions intended for local residents
2	<b>PUBLIC FACILITIES:</b> parking, commercial, hotel, services
3	<b>CULTURAL CENTRE:</b> cultural industries centre, start-up/ technological innovation centre or incubator, contemporary culture and entertainment centre, concert and event venue, education spaces, conference centre, commerce, gastronomy centre, etc
4	<b>ADMINISTRATIVE CENTRE:</b> public offices & commerce
5	<b>BUSINESS CENTRE:</b> office building, hotel, conference facilities etc
6	<b>Rail INRA:</b> non-residential ancillary, service, office buildings, functions related to the preparation for services to LTG travellers
7	<b>COMMERCIAL:</b> commercial and service functions
8	<b>RESIDENTIAL:</b> accommodation, services apartments & service functions
9	<b>COMMUNITY CENTRE:</b> local commerce and service centre, co-working spaces, office building, economy-class hotel, social and communal spaces and services, cafes, etc
TOTAL BUA	
10	station infrastructure
11	pedestrian & cycle connect





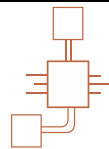
Planned as bridges for an uninterrupted flow.



Clear concourse



All under one roof



Entry concourse as clean volumes with functions planned enroute

## Architectural Idea :

### for Railway Station Complex, Stoties Square, PT Terminal and Naujininkai.

UGNIS (AGNI in Sanskrit) in Lithuanian language means fire signifying amber light, warmth, and the fired clay material of terracotta.

The idea of UGNIS is inspired by Lithuania's independent past, symbolized by the iconic fiery red roofs of Vilnius old town, which are the pride of the city. The project showcases the past meeting the future, vividly exhibited by a transition of materials from the age-old and naturally fired clay terracotta to modern and manmade glass, while connecting the historic city to the Naujininkai neighbourhood, the future hub of development.

Planned as a destination with amalgamated zones of the city plaza with an integrated multi-modal transport hub, the city platform as an urban square and the city place as a meeting point for cultural exchange, forms the architecture idea.

The nature of spaces are determined by the nature of interaction envisioned in the usage of this urban intervention by mapping journeys of various types of users - Passengers who want to catch a train, Passersby who want to cross over to the other side of the city and People who want to come to the city center to participate in various social activities.

In relation with the above, spatially the program divides itself into three zones -

**The City Plaza** - a place that appeals to the user's intuition - a park for unexpected and serendipitous encounters.

**The City Platform** - a place that accounts for the user's agenda - focussed and planned - a platform for catching a train.

**The City Place, Naujininkai** - a multipurpose place that fuels the user's ambition - for willing and casual meetings over a coffee, play, exhibition or a work meeting.

Sustainability and culture form the core of this expansive urban intervention with user experience at the heart of the architectural concept. This mix of people and programmatic interventions, makes the complex, warm and welcoming.

The old station's roof has been restored to terracotta and the same clay materiality continues in its modern adaptation over the concourse through a ridge inspired by pitch roofs of the old town. The gradual incline follows the site levels to create a volumetric dialogue in the space quality beneath. The roof progresses to glass as it elevates into its modern avatar - culminating into a transparent structure on the south side entrance - making a nostalgic yet futuristic statement that resonates the ambition of Vilnius city of preserving its heritage identity while marking its stature as a contemporary city, which is the center of the European continent.







## Description of Solutions of Railway Station Complex and Naujininkai.

### I- Functional arrangement of the buildings under design and redevelopment

The old station building serves multiple functions. The historic central hall is planned as a transition space for passengers to the concourse. On the ground floor, the left wing opens up as a shop to the plaza and the right wing extends as a restaurant. Upper floors are utilized for station offices.

Passengers can choose to enter the station through the lower ground (an existing basement) or ground level and transition to the new concourse envisioned atop the platforms.

The concourse acts as a city square connecting the two distinctive and accessible entrances of the station brought together with an iconic roof. Planned as an inside out space, the roof lends to the poetics of space with a play of light and volume. From the station concourse, passengers get an uninterrupted view of the Railway tracks and platforms. The glass walls provide a panoramic view of the city on both sides. Taking into account the Rail Baltic link-up, the concourse features an efficient layout with flexibility for future growth. The openness of the interior provides a clear line of sight ensuring orientation and clear navigation. A business center, waiting lounge, ticketing, shops and cafes dot the concourse at strategic locations without cluttering the central

space. The city platform forms the heart of the station as it offers an uninterrupted experience for the various users of this urban infrastructure project.

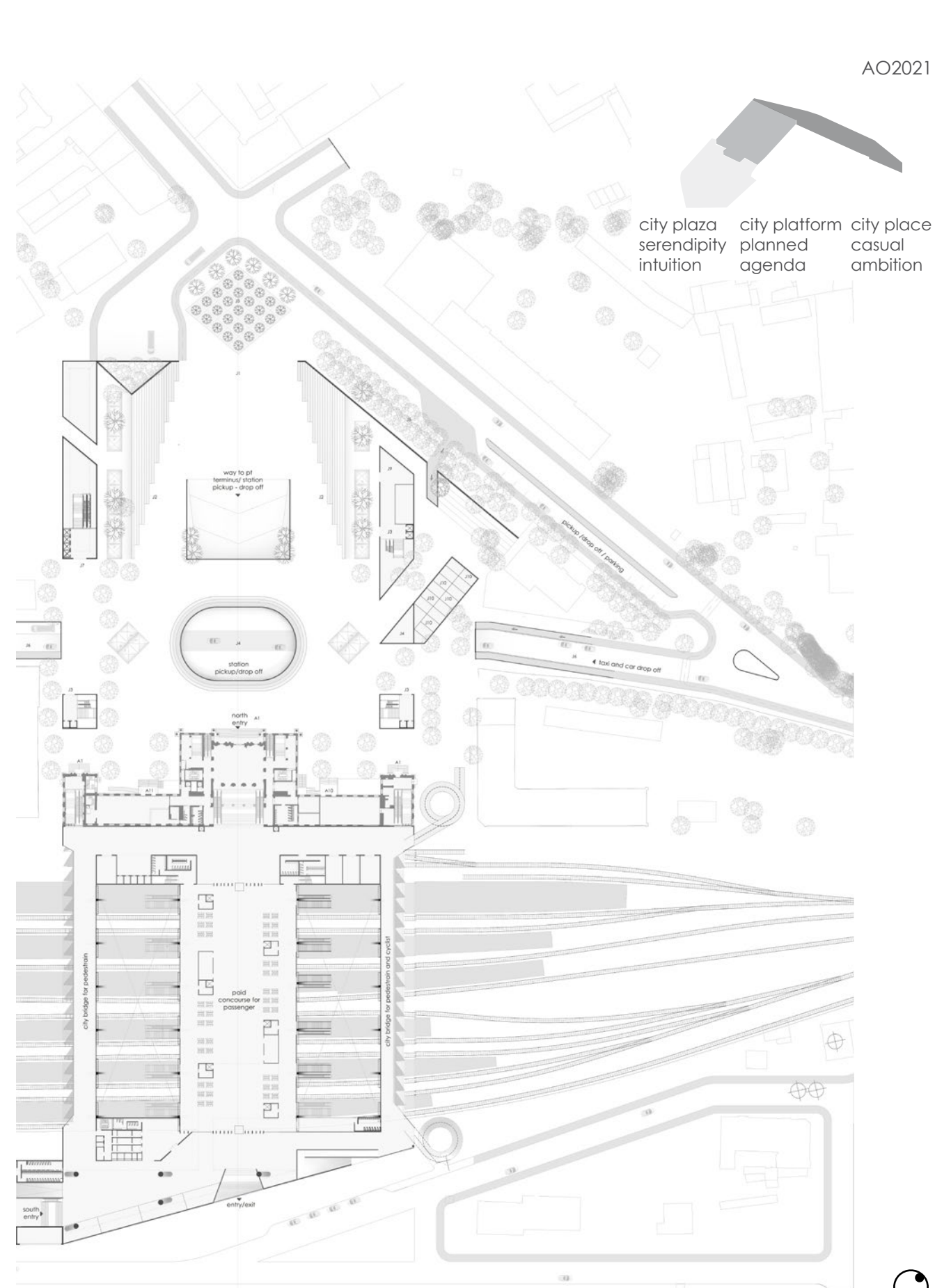
#### Flexibility of open & segregated zones

The open layout & the span of the concourse plaza can enable a physical segregation at the rail baltica platforms. It can allow 7-14 m wide lobby with independent lift for the respective platforms, without disturbing the central grid of the plaza while still maintaining the openness of the plaza.

The customs zone and the rail baltica waiting lounge at the arrival / departure zone of the south side is also located such that it can be connected directly to the dedicated lobby for the rail baltica platforms.

Similarly, the segregated traveller zone (paid zone) at the discretion of the railways / management can be open without the intended security controls.

The concourse which is divided into 3 aisles, has the possibility of being reduced to a single aisle in the centre. The already 48m wide central aisle still allows further distribution of 12 m on either side for passengers leaving a good 24 m in the centre for the city pedestrians and cyclist.



Entry level plan with station concourse and stotis square



Section

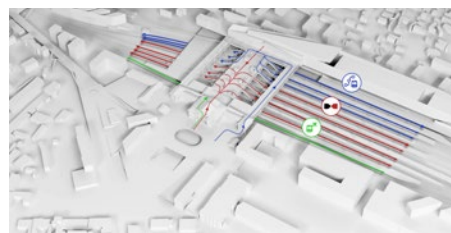




## II- Diagrams and description of the movement of different types of Railway Station travellers and the distribution of their flows

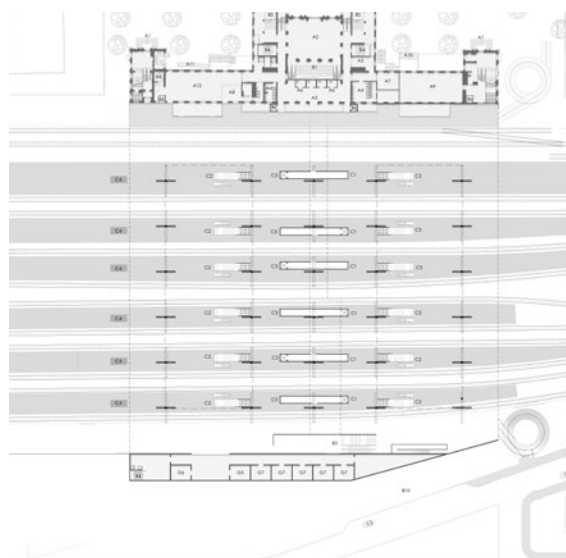


Pedestrian Circulation

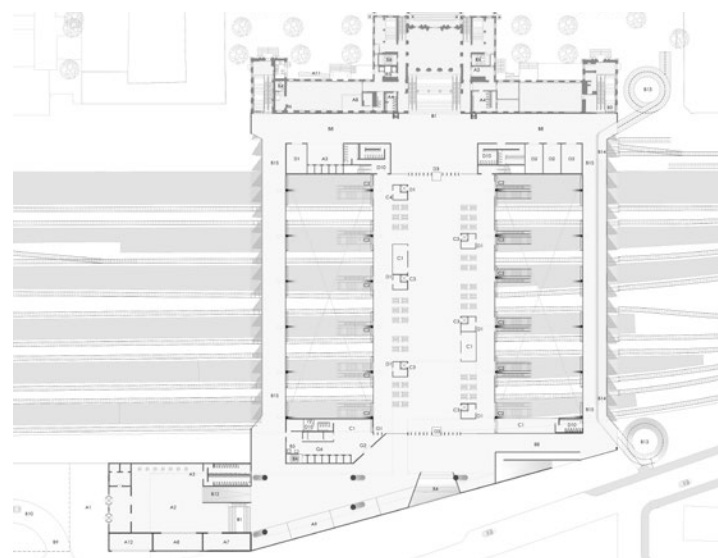


Railway Corridors

- Rail Baltica
- Airport Express
- Domestic



platform level plan - p1



concourse level plan - p2

## III- Materiality of the buildings under design and redevelopment

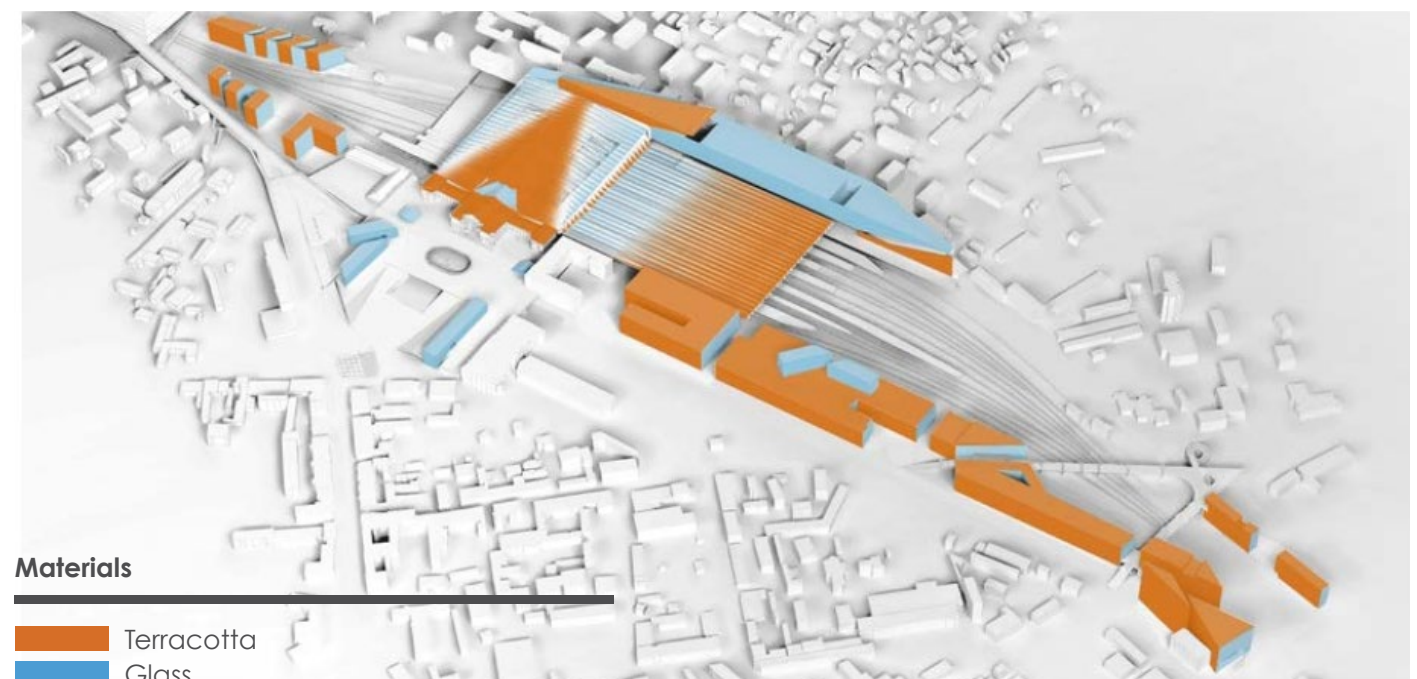
The historic station's roof has been restored to terracotta, however the main structure remains untouched. The same clay materiality continues in its modern adaptation over the concourse through a ridge like the pitch roofs of the old town. The undulating, functional roof structure acts as an absorbent for light, sun and energy on the outside with terracotta, glass and solar panels. Daylighting from the roof is a wayfinding device in space.

The interiors employ pinewood for sustainability, functionality and as a gesture to the amber producing trees found in the Baltic region. The

tree-like steel and wood columns support the roof structure above. The form reflects and responds to the regionality of the sun, snow and the servicing.

Countering the cold climate, the material palette is an amalgamation of warmth and transparency with terracotta, wood and glass. While natural materials are incorporated for energy efficiency and sustainability of their production and use, glass is used for maximizing daylight penetration. A yellow terrazzo floor reflects the resin hues of the region while lending warmth to this infrastructure intervention.

The project focuses on an optimal thermal envelope in which the entire floor of the concourse is heated, giving an ambient micro climate, while offering fully heated zones for waiting and other amenities.



Materials

- Terracotta
- Glass



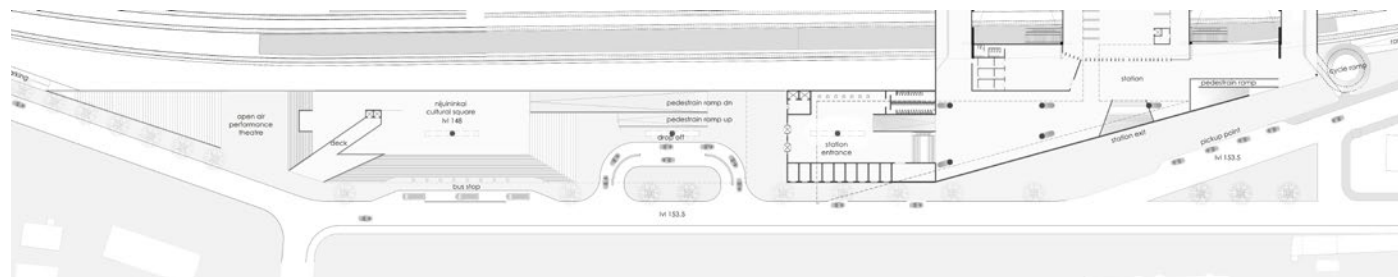
## The Naujininkai City place

The Naujininkai City place is a striking and unfaltering new south threshold to Vilnius city. The square in front of the grand south entrance, helps to orient people to this new city center. Envisioned as a true cultural exchange hub, it features a performing arts centre, an art gallery, a multipurpose sports and fitness facility, a co-

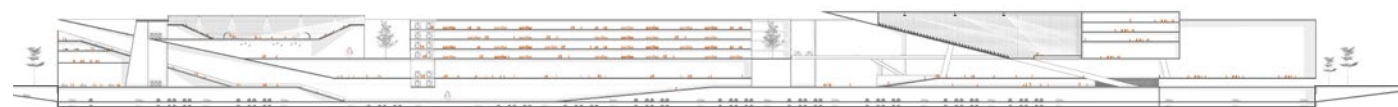
working space supported with restaurants and bars. It makes this place a truly viable urban center strategically opening up and embracing the Naujininkai neighbourhood, which was once considered as a desolate suburb.



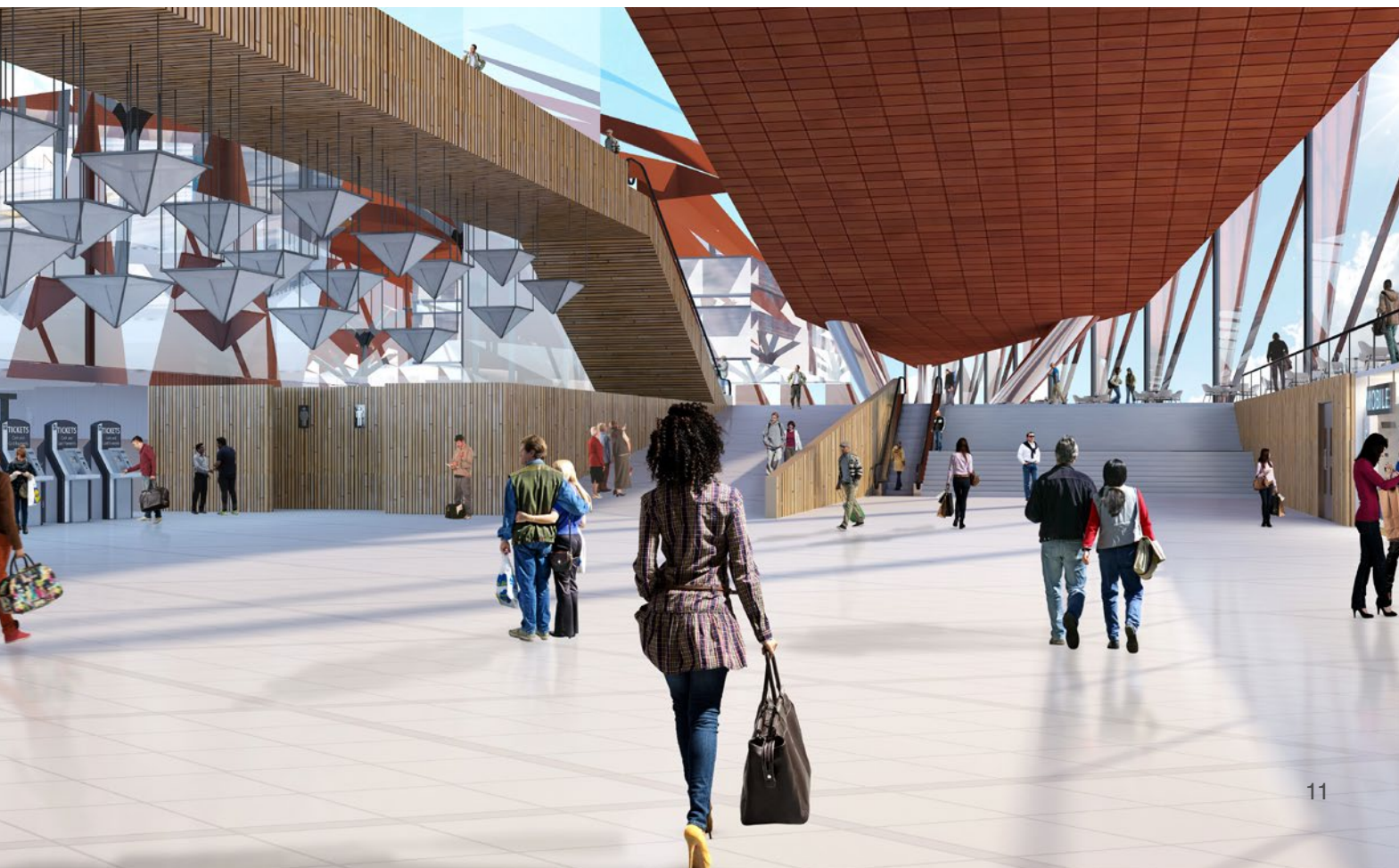
South Elevation



Ground Floor Plan



Sport Centre Business Centre Performance and Exhibition Station Complex



## IV- The use of essential green solutions for the buildings under design and redevelopment, conceptual engineering solutions

For building design to embody this ethic of sustainable development, it ought not only to enable reduced resource consumption but also foster environmental awareness on the part of building occupants and society at large – particularly in the context of a public building such as such an important train station. Technology provides one leg towards such an approach; however, aspects such as passive design and sufficiency are as important to accomplish the aspirations. Passive Design strategies optimize environmental quality in the various program areas; in specific areas supplemented by active systems, which operate based on renewable energy sources such as solar and a geothermal heat exchange.

## Environmental Design Strategies:

design and sufficiency are as important to accomplish the aspirations. Passive Design strategies optimize environmental quality in the various program areas; in specific areas supplemented by active systems, which operate based on renewable energy sources such as solar and a geothermal heat exchange.

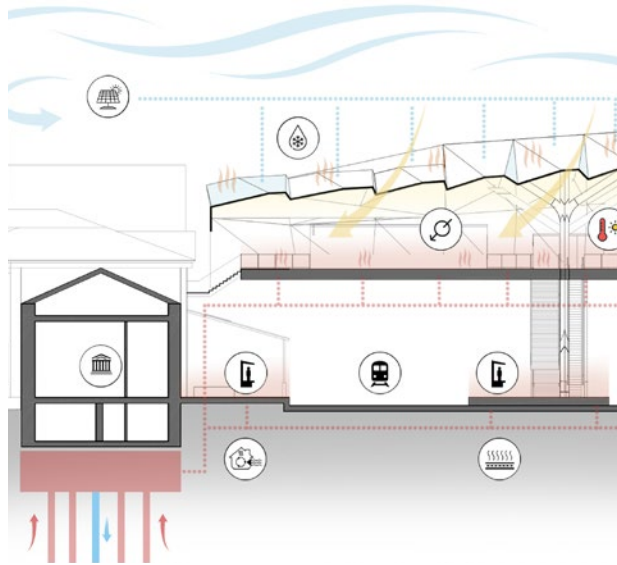
## Geothermal Heat Exchange:

This tempering system is improving thermal comfort and can also be used for snow melting. The geothermal heat exchanger is used as a seasonal heat storage. The concrete platform is used as a solar collector in summertime. The absorbed heat is utilized in the ground heat exchanger in order to balance the annual heat exchange. An additional heat pump is providing a higher temperature level required for the floor heating used in the concourse.



## Concourse:

The concourse has an increased balustrade to provide wind protection and a floor heating system in order to achieve around 12-15°C operative temperature in wintertime. Enclosed waiting areas can be heated to 18-20°C. The glass facade to the south and in the roof cladding is providing daylight and passive solar heat gains in wintertime. The transparent roof cladding distinguishes between diffuse- and direct daylight utilization. A controlled natural ventilation is used to avoid overheating on hot summer days.



## PT Terminal

Openings in the deck above the bus terminal provide daylight. A bright floor finish reflects the same to the underside of the ceiling. The ceiling is partially covered with reflective metal panels, which are also used to utilize artificial light, offering a friendly and comfortable space.

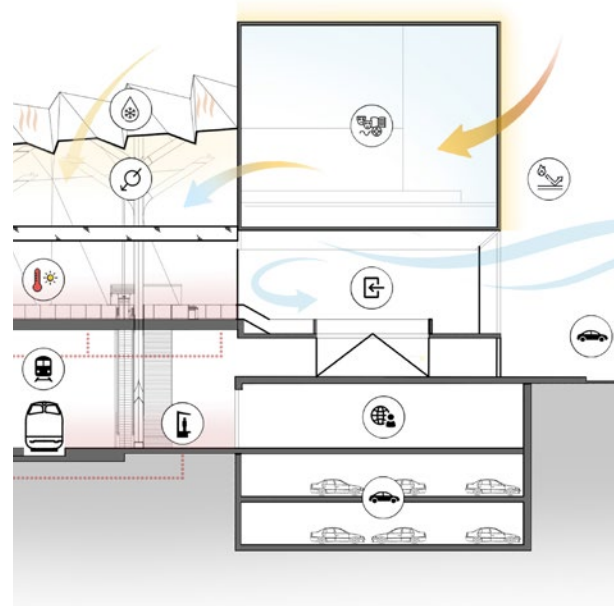


## Photovoltaic:

The roof above the tracks can be used - e.g. by a contractor - for solar power generation. The already given roof structure would lead to an economic PV application, an asset that elevates and enables solar farming in the heart of the city.

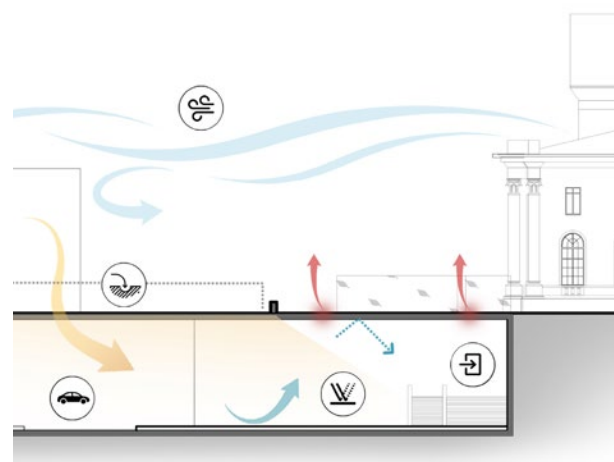
## Multipurpose Space & Offices:

Each glass surface of the triangulated office facade provides a different function. The southern facing facade is tilted and therefore minimizes solar heat gains in summer. A neutral sun protection coating is utilizing sufficient daylight into the office space. East and west facing panel is using a mix of sun protection coating and fritting in order to minimize solar heat gain in summer.



## Stoties Square

The surrounding buildings provide wind protection for the main square; especially against the southern wind in wintertime and intermediate season. Specific spots are supplemented by a tempered floor, supplied by a geothermal system under the building. A retractable shading device is minimizing heat radiation to the sky and provides local shading in summer.



## V- Essential structural solutions for the buildings under design and redevelopment

### Concourse roof

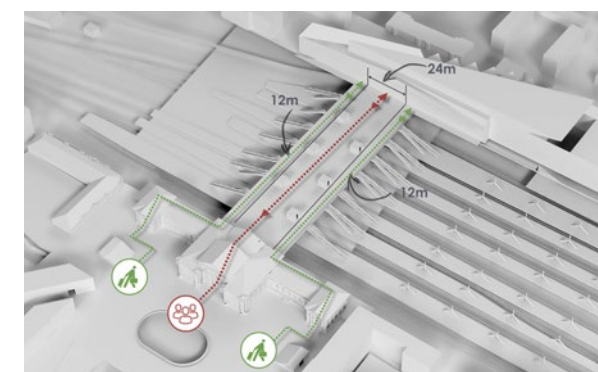
The distinctive and elegant roof of the station concourse will be made from a grid of various steel beams and girders which will be supported on top of the branches of the main steel columns. The glass and ceramic faces of the roof will rest on diagonally oriented secondary steel beams. With well developed structural joints it will be a durable and outstanding solution.

### Concourse slab

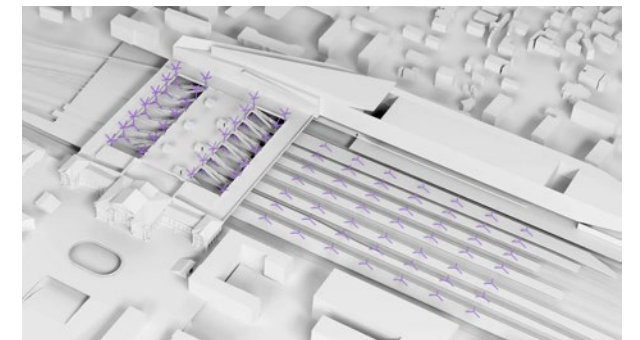
The main floor slab of the concourse will be a system of precast or cast-in-place and post-tensioned reinforced concrete box beams and slabs. Chosen solution is suitable to allow construction in phases and ensure constant functioning of the existing railway lines.

## VI- Essential safety solutions for the buildings under design and redevelopment.

With most of the auxiliary functions located in the old station building, the concourse, spanning a width of 48m, creates an open plan layout, which forms an essential safety measure for fire prevention and management. In addition, the 2 connections at the side wings for the city pedestrians & cyclists which is completely detached & separated from the main station entry not only segregates the different users but also ensures multiple and easy access into & out of the building. The existing tunnel is proposed to function as a utility corridor for emergency evacuation from the platforms in the event of any fire on the concourse. To enable this complete easy exit to the plaza levels on both the north & south side of the station, the existing tunnel is proposed to be extended till the new platforms and until the new south station building.

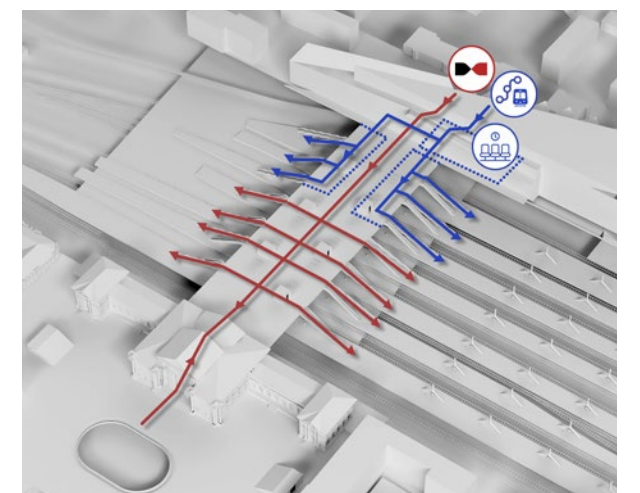


Possible senario for area reduction A

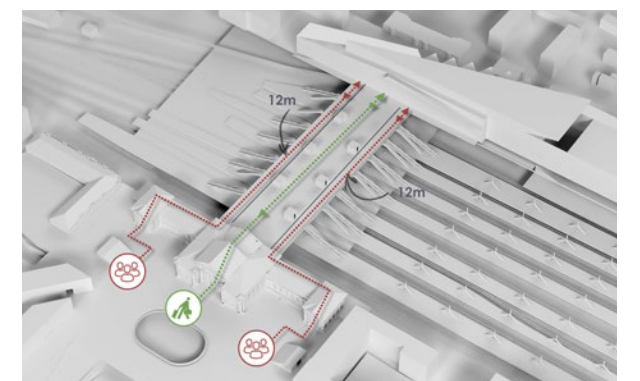


### Columns

The main columns in the station concourse will be custom profiled steel columns. The columns will branch out at the top to arrange a grid of supports for the roof structures creating a visually pleasant structure that is inspired from nature.



Zone Segregation



Possible senario for area reduction B





## Description of Stoties Square and PT Terminal solutions:

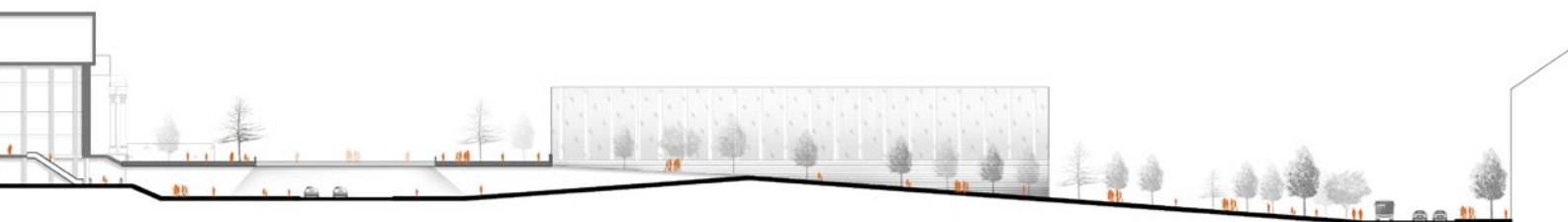
### I- Functional arrangement of the buildings under design and redevelopment, public spaces.

The City plaza offers a consolidated multi-modal transport hub for an uninterrupted passenger flow along with an expansive public plaza for pedestrians and cyclists, that visually frames the historic station.

Three visibly recognizable glass box structures mark the station as a cultural hub by sensitively assimilating several public functions at ground level, a rooftop restaurant, an information center and a shopping strip.



IKONOGRA 10. Vilniaus geležinkelio stotis iš oro, 1917-04-09.  
a tribute to the old traffic island in size and scale as light below



## II- Transport flow and parking solutions. Provide diagrams of the flow of transport, non-engine-driven transport and passengers in Stoties Square territory

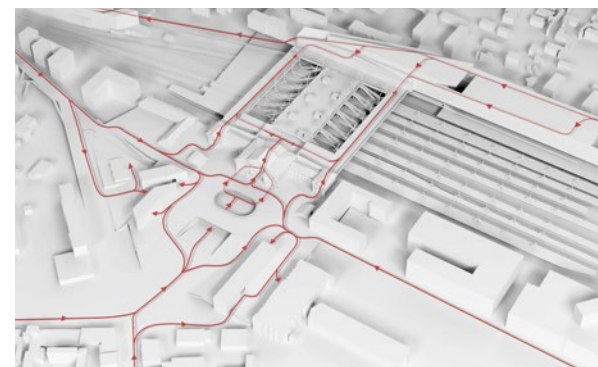


### Vehicular Movement

- Private Vehicles
- Public Vehicles



### Cycle Track



### Pedestrian Movement



### Passenger Movement



### III- Stoties Square coverings concept. Describe materiality solutions and provide visual analogues. Suggest details of Stoties Square architectural profile

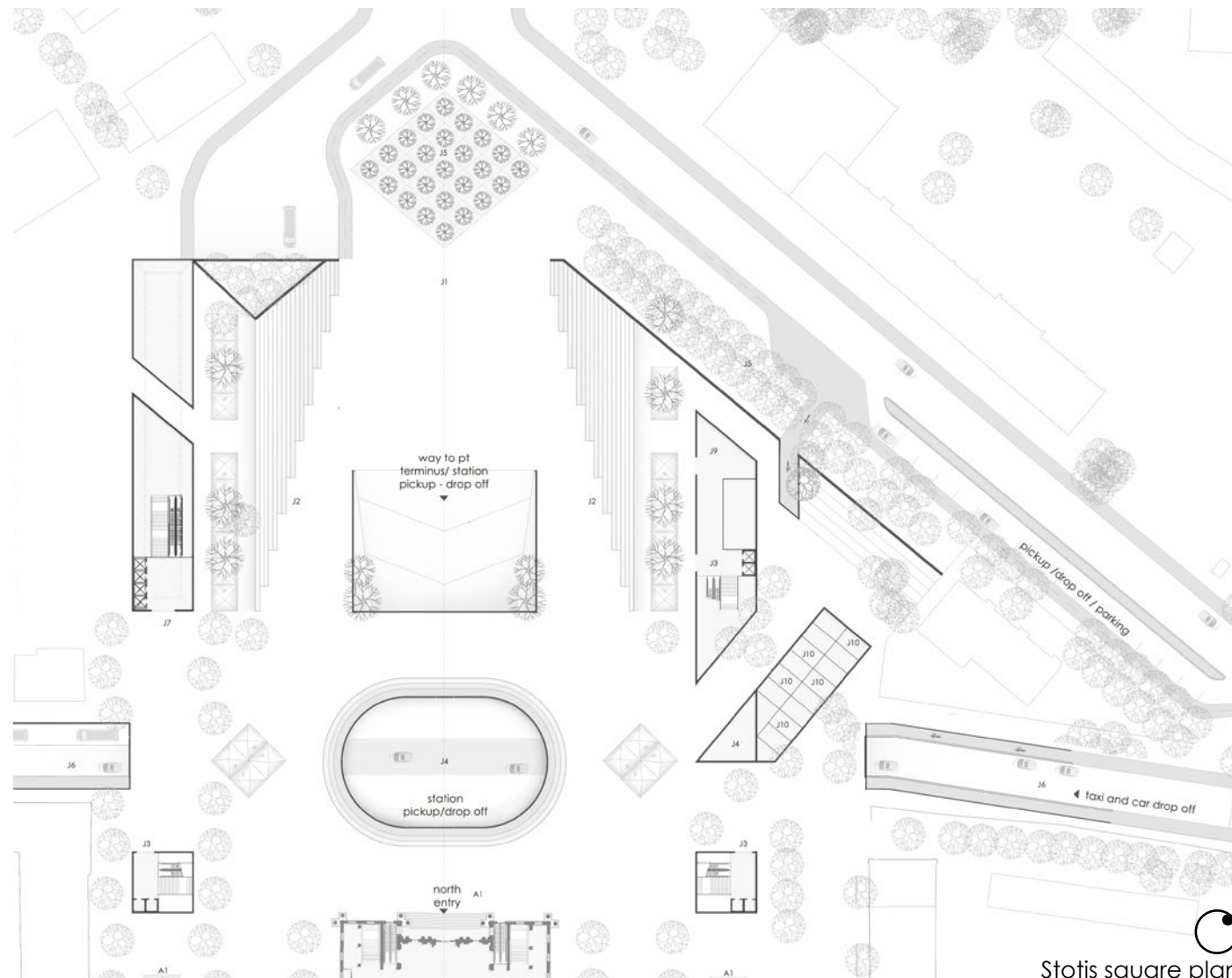
The station square is an expansive urban plaza, opened up to bring monumentality to the edifice. A sunken multi-modal hub is planned, to respect the heritage context. This transport hub includes a car park, a large cycle station and an intercity PTT bus terminus that rises to the plaza above as a glass box to bring in the required light and volume to the space. The rooftop features a modern restaurant offering a breathtaking view of the station precinct. The multi modal space attempts to be a column-free structure with integrated colour-coded wayfinding and lightwells that bring daylight to the lower ground. The big void in front of the station marks a tribute to the original traffic island, in placement and dimensions.

A glass information center is planned on the ground level on the opposite side to frame the view of the historic station complex. In the center there is an amphitheatre along with

an external 'pirtis', a micro climate with a hot mist feature. Inspired by Lithuanian saunas, indigenous to the Baltic region, this feature helps to keep temperatures moderate in winters. With the old station as a backdrop, the steams adds to the theatrics of space making, acknowledging the historic station as the protagonist of the scheme.

Along the information center, is a shopping stretch oriented at an angle to align to the existing green heritage of trees. This plaza also creates a vista that symbolically gestures towards the geographical center of Europe marked north of the station, punctuated by a sculpture.

All pedestrian plazas render a light grey cobble, to prioritize the pedestrian and offer a carpet entry into this lively cultural space. The traffic and vehicle floors employ dark grey concrete pavers.



Stotis square plan  
17

### IV- Stoties Square green areas and green area groups arrangement solutions. Include planting concept diagram

The landscape plaza is north facing and therefore shadow loving plants, deciduous trees, perennials and mid sized shrubs are proposed. List of common trees and shrubs used in the Baltic region for outdoor landscape

The plaza respects the monumentality of the station building and the heritage trees lining the cross roads.

Plazas are kept open and flexible to adapt to people and programs

#### Trees:

1. Sorbus Aucupaia
2. Sorbus commixta
3. Tilia cordata
4. Tilia platyphyllos
5. Populus tremula 'Erecta'
6. Aesculus hippocastanum
7. Betula pendula
8. Taxus baccata



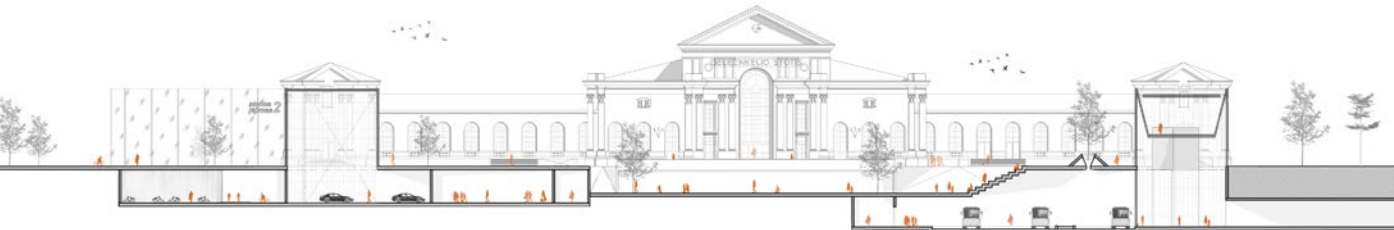


V- Illumination solutions. Provide visual solutions of daily and festive illumination scenarios



VI- Essential solutions for PT Terminal structures.

The plaza and it's underground bus terminal will be built from cast in place concrete structures, the large-span roof of the terminal will have to be made as an inverted roof and might need to be post-tensioned in order for the structures to take up less vertical space and allow more generous space below the plaza.



Compliance of Competition Territory, access areas, and buildings under design/ redevelopment with universal design principles

legend	proposed building uses	total area (in sqm)	proposed height (in m)
<b>A ARCHITECTURAL DETAIL AREAS</b>			
1	existing station building	8,205.00	25.0
2	concourse with new south entry	21,754.00	25.0
3	public transport terminal	7,840.00	12.0
<b>TOTAL BUA</b>		<b>37,799.00</b>	
4	statis square	34,793.00	-
5	cycle ramps	1,050.00	-
<b>B THE URBAN CONCEPT AREAS</b>			
1	<b>NAUJININKAI CENTRE:</b> commercial, service, catering, hotel, sports and other functions intended for local residents	23,145.60	25.0
2	<b>PUBLIC FACILITIES:</b> parking, commercial, hotel, services	24,051.00	21.0
3	<b>CULTURAL CENTRE:</b> cultural industries centre, start-up/ technological innovation centre or incubator, contemporary culture and entertainment centre, concert and event venue, education spaces, conference centre, commerce, gastronomy centre, etc	38,094.00	24.0
4	<b>ADMINISTRATIVE CENTRE:</b> public offices & commerce	40,965.00	28.0
5	<b>BUSINESS CENTRE:</b> office building, hotel, conference facilities etc	28,227.00	35.0
6	<b>Rail INRA:</b> non-residential ancillary, service, office buildings, functions related to the preparation for services to LTG travellers	2,727.00	20.0
7	<b>COMMERCIAL:</b> commercial and service functions	10,136.00	20.0
8	<b>RESIDENTIAL:</b> accommodation, services apartments & service functions	6,974.00	20.0
9	<b>COMMUNITY CENTRE:</b> local commerce and service centre, co-working spaces, office building, economy-class hotel, social and communal spaces and services, cafes, etc	11,457.50	25.0
<b>TOTAL BUA</b>		<b>185,777.10</b>	
10	station infrastructure	105,653.00	-
11	pedestrian & cycle connect	5,500.00	-

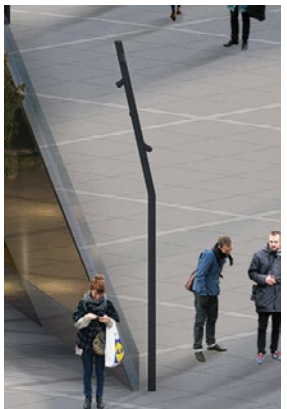
Description of landscaping design solutions



infomation panels



dustbins



street light



planters

V- The use of the essential green (sustainable) solutions for Stoties Square, conceptual engineering solutions (if any).

**Bus Terminal:** Openings in the deck above the bus terminal provide access to daylight. A bright floor finish is reflecting daylight to the underside of the ceiling. The ceiling itself is partially covered with reflective metal panels, which are also used to utilize artificial light. Due to a bright ceiling the space appears friendly and comfortable. The cover above ensures a comfortable embarking and disembarking space. The environmentally conscious busses ensure a clean and healthy ambience.

**Plaza:** The surrounding buildings provide wind protection for the main square; especially against the southern wind in wintertime and intermediate season. Specific spots are supplemented by a tempered floor, supplied by a geothermal system under the building. A retractable shading device is minimizing heat radiation to the sky and provides local shading in summer.



General indicators

Vilnius station square and Public Transport Terminal

sl no	area	basement	ground	first	total
2B vilnius public transport terminal					
	bus parking	3,650.00			3,650.00
	waiting, ticketing, v circulation	1,040.00			1,040.00
	commercial-super market	370.00			370.00
	small commercial -cafes & coffee shops		500.00	500.00	1,000.00
	logistics office	140.00			140.00
	hygiene facilities	20.00			20.00
	restaurant		1,000.00		1,000.00
	tourist information centre		620.00		620.00
2A vilnius station square					
	driveway / v circulation/ramps/cycle tracks	6,440.00			6,440.00
	arrival / departure lobby	1,500.00			1,500.00
	light wells		560.00		560.00
	commercial - cafes & coffee shops	200.00			200.00
					-
	bike storage (600 nos)	645.00			645.00
	total BUA				9,345.00
	main plaza-external development		25,448.00		25,448.00

Station complex proposal

sl no	description	proposed area (in sqm)	proposed built %
1	existing station building (north)	9,005.00	
2	new concourse	11,680.00	
3	new station building (south)	10,074.00	
		30,759.00	
1	arrival - departure zones	5,380.00	17%
2	passenger terminal zones	4,631.00	15%
3	Transit zones (movement spaces, connections, corridors, tunnels)	5,365.00	17%
4	Traveller service zones	9,208.00	30%
5	commercial & services spaces	6204.00	20%
6	cultural, leisure & entertainment	3004.00	10%
7			
8	Office, auxiliary and technical zones	4,535.00	15%
9	Border control zone featuring customs office	1,640.00	5%
		30,759.00	100%

Vilnius railway station complex

	programs	newly-designed above-the-rails structure	the newly-designed structure on the side of pelesos str	vilnius railway station building redevelopment	total proposed
A. arrival - departure zones	arrival departure halls		2,260.00	550.00	
	information counter & ticketing machines	160.00	120.00	80.00	
	Hygiene facilities		160.00	150.00	
	retail /shops			280.00	
	restaurants, bars, cafes, other catering services			270.00	
	Auxiliary and storage facilities for catering services			700.00	
	Airport check-in zone			230.00	
	small food & retail outlets			130.00	
	Baggage trolley zones, baggage storage facilities;		160.00	130.00	
	TOTAL	160.00	2,700.00	2,520.00	5,380.00
Transit zones (movement spaces, connections, corridors, tunnels)	lift /escalator/stairs	120.00	950.00	1,150.00	
	cycle path& pedestrian path	1,560.00	785.00		
	TOTAL	1,680.00	1,735.00	1,950.00	5,365.00
passenger terminal zones	waiting & rest for transit travellers	4,631.00			
	TOTAL	4,631.00	-	-	4,631.00
traveller services zones	Tourism and service information points featuring an information infrastructure zone	1,670.00	160.00		
	Hygiene facilities	580.00			
	large shops	350.00			
	kiosks/ shops	189.00	475.00		
	sleeping capsules, temporary resting spaces, etc.	490.00	-		
	silence zones & secure retreat spaces	490.00			
	waiting lounge for rail baltica		330.00		
	Zone for business class (first class) clients	720.00			
	Conference facilities/ co-working space	720.00			
	Co-working space(s)		190.00		
	TOTAL	5,209.00	995.00	-	6,204.00
cultural, leisure & entertainment	theatre		2,624.00		
	art gallery		190.00		
	green rooms & auxiliary rooms for cultural events		190.00		
		-	3,004.00	-	3,004.00
office, auxiliary and technical zones	conductors' room			200.00	
	offices			465.00	
	other personnel & staff rest areas (watchman's room , care taker room etc)			200.00	
	LTG LINK management offices			1,100.00	
	Traffic control and related system equipment premises (also including the prospective Rail Baltica ETCS systems)			610.00	
	auxiliary premises for servicing the main premises			560.00	
	technical premises			1,200.00	
	Hygiene facilities			200.00	
	TOTAL	-	-	4,535.00	4,535.00
Border control zone featuring customs office	Border checkpoints		220.00		
	Entry/Exit System for registering passengers arriving to the European Union for the first time				
	Customs zone and premises		150.00		
	Hygiene facilities		70.00		
	Temporary custody facilities		1,200.00		
	Other premises				
	TOTAL	-	1,640.00	-	1,640.00
total of proposed areas for each		11,680.00	10,074.00	9,005.00	30,759.00



