INSTITUTE
GIPROSTROYMOST
SAINT-PETERSBURG








FOOTBRIDGES

JSC Institute Giprostroymost –
Saint Petersburg

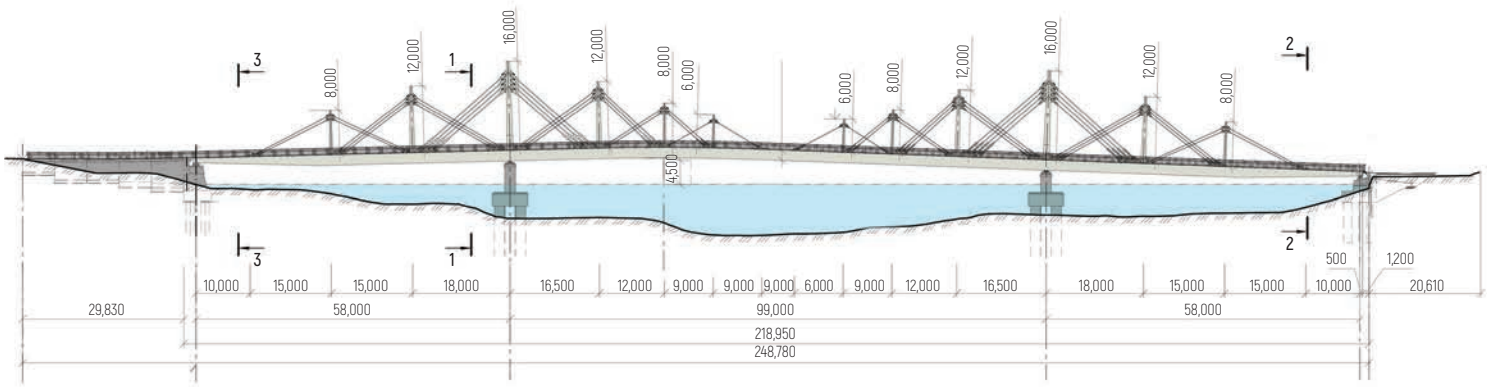
Since 1968

A rational engineering solution is at the heart of all projects developed and implemented by the Institute. Combining the expertise of both structure and technology developers, the Institute solidified its leading position among its peers in the industry.

JSC Institute Giprostroymost – St. Petersburg is widely recognized for solution of complex challenges with a lot of ingenuity involved. For each project development innovative solutions are implemented, which then often become the mainstay of transport infrastructure construction. Such an innovative approach produces truly unique structures that combine cutting-edge technologies, economic effectiveness and a distinctive architectural appearance.

INSTITUTE
GIPROSTROYMOST
SAINT-PETERSBURG

PEDESTRIAN CROSSING OVER **NAGATINSKY** ZATON, MOSCOW



PROJECT DESCRIPTION

Our pedestrian bridge is located within the Southern Administrative District of Moscow, between the historical waterway bed and that modern part of the Moscow River which is suitable for navigation nowadays.

Bridge structure crosses the area of the being designed 'Nagatinsky Zaton Transportation Hub' in close proximity to the metro station exit being under construction on the East Side of Nagatinsky Bay and the residential buildings under construction on Korabelnaya Street, which is reckoned as a part of the construction Stage-II of the 'River Park Residential Complex' on the West Side.

The bridge crossing over the Nagatinsky Bay connects Korabelnaya Street from the Western bank with Kolomenskaya Street from the Eastern bank and provides 2.0 meters per bicycle passage plus 4.5 meters for pedestrians including handicaps. Recreation areas are available as well.

Original structural system is a 'Fink Truss', i.e. mast heads are always connected to adjacent mast legs and vice versa.

Design of Nagatinsky Pedestrian Crossing is being conceived as an inverted Fink Truss. In addition, the redundant diagonals connecting the second and subsequent masts are omitted.

- bridge schema: 58+99+58 m
- length of the bridge – 218.95 m
- width of pedestrian lane – 4.5 m
- bicycle lane– 2 m
- bridge clearance – 10x4.5 m

WORK ON THE PROJECT

Project documentation Stage:

- the entire cycle of engineering survey
- hydrological calculation
- air dynamic test
- full range of design work on main structures with proper calculations
- traffic management design
- reconstruction of utilities
- design of outdoor illumination with architectural lighting, power supply, water drainage and navigation lights installation
- design of structures included in the infrastructure of a linear facility
- construction organization design
- environment safety design
- fire safety design
- structural monitoring for the period of construction as well as per period of site service
- maintenance design for the period of service
- estimate documentation design

CLIENT

Moscow Federal Enterprise 'Roads and Bridges Construction Department'

DESIGN PERIOD

2022 – 2023

CONSTRUCTION PERIOD

2023 – 2024

UNDERGROUND PASSAGE NEAR BIRZHEVOY BRIDGE, **SAINT PETERSBURG,** RUSSIA

PROJECT DESCRIPTION

Our underground passage is being located in historical area of Saint Petersburg city center within gorgeous landscape design. The above project should provide more comfortable promenade along the Mitninskaya Embankment for local public with link to 'Tuchkov Buyan Island' as well ramps to be arranged for the convenience of handicaps.

The structure composed of the following:

- section of tunnel part
- two ramps
- segment of service structures

TECHNICAL FEATURES

Total area of the structure: - 582.1 m^2 Including the following:

- tunnel area -166.4 m^2
- ramps area - 357.5 m^2
- total area of service structures - 56.7 m^2
- air duct area (overland) - 1.5 m^2
- volume of service structures – 146.4m^3
- stories quantity - 1 (underground)

WORK ON THE PROJECT

Stages DD & WD:

- general design

CLIENT

JSC Vozrozhdenie

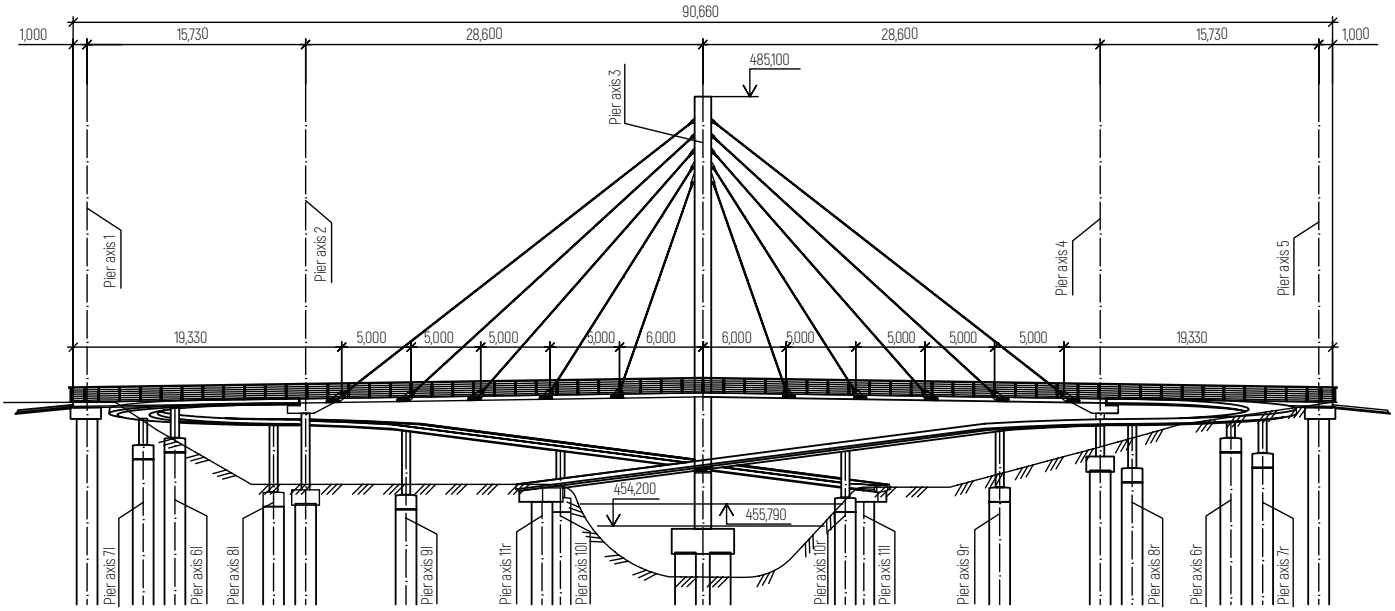
DESIGN PERIOD

2022 – 2023

CONSTRUCTION PERIOD

2022 – 2024

CABLE-STAYED FOOTBRIDGE IN TASHKENT NAVRUZ PARK, **UZBEKISTAN**



PROJECT DESCRIPTION

First cable suspension bridge for pedestrians in Uzbekistan is located above the Anhor Channel within Navruz recreation park zone on the border of Unosabadsky and Shaihantahursky districts of Tashkent City.

- bridge schema: 15.7+28.6×2+15.7 m
- approaches: 2x(10.2+12.8x2+10.2+14.4+13.3+16) m
- total bridge length – 90.6 m
- length of each approach – 89.7 m
- pylon height – 31.1 m

WORK ON THE PROJECT

- basic structures design
- design of technological structures

CLIENT

GAFS

CONTRACTOR

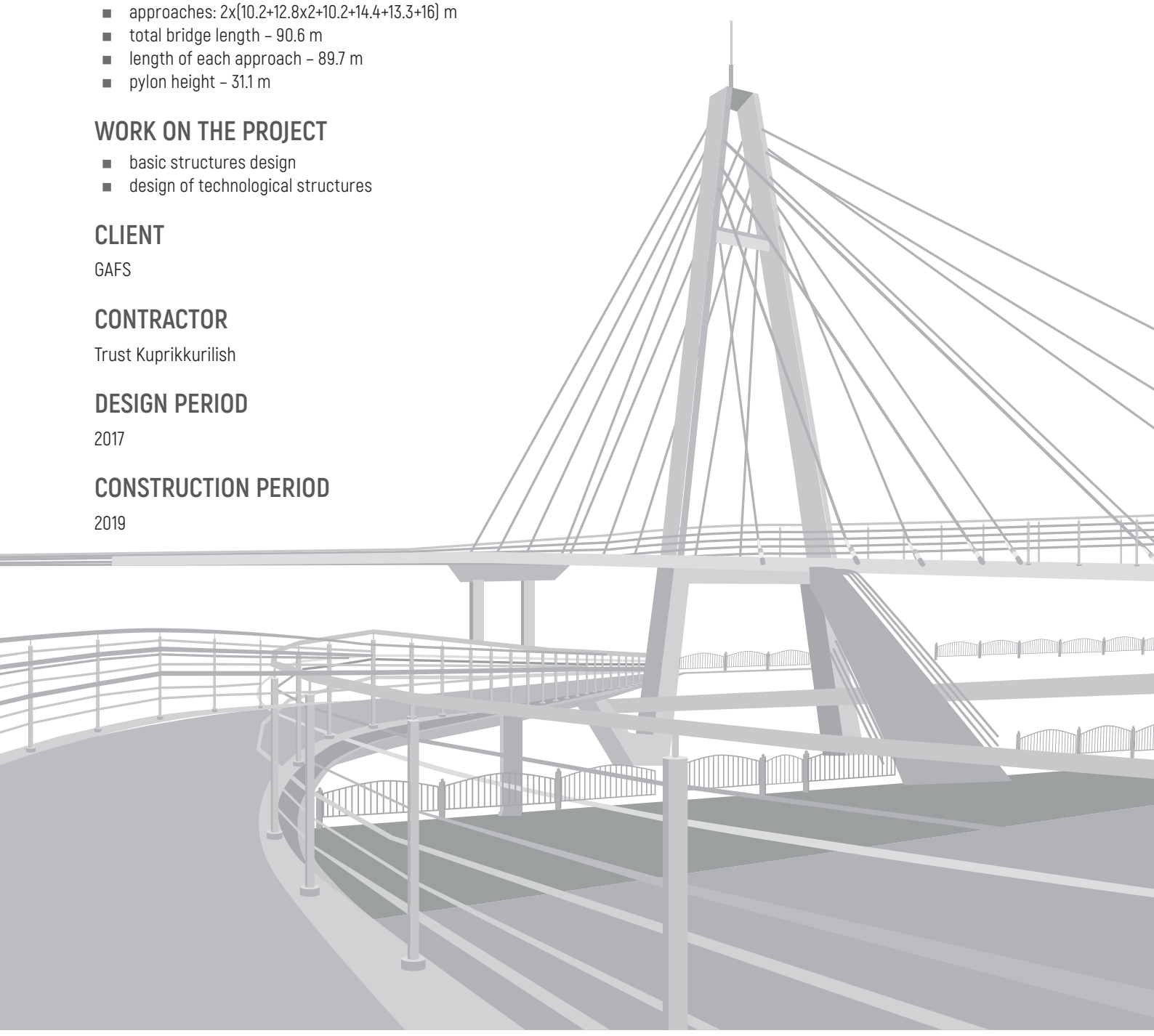
Trust Kuprikkurilish

DESIGN PERIOD

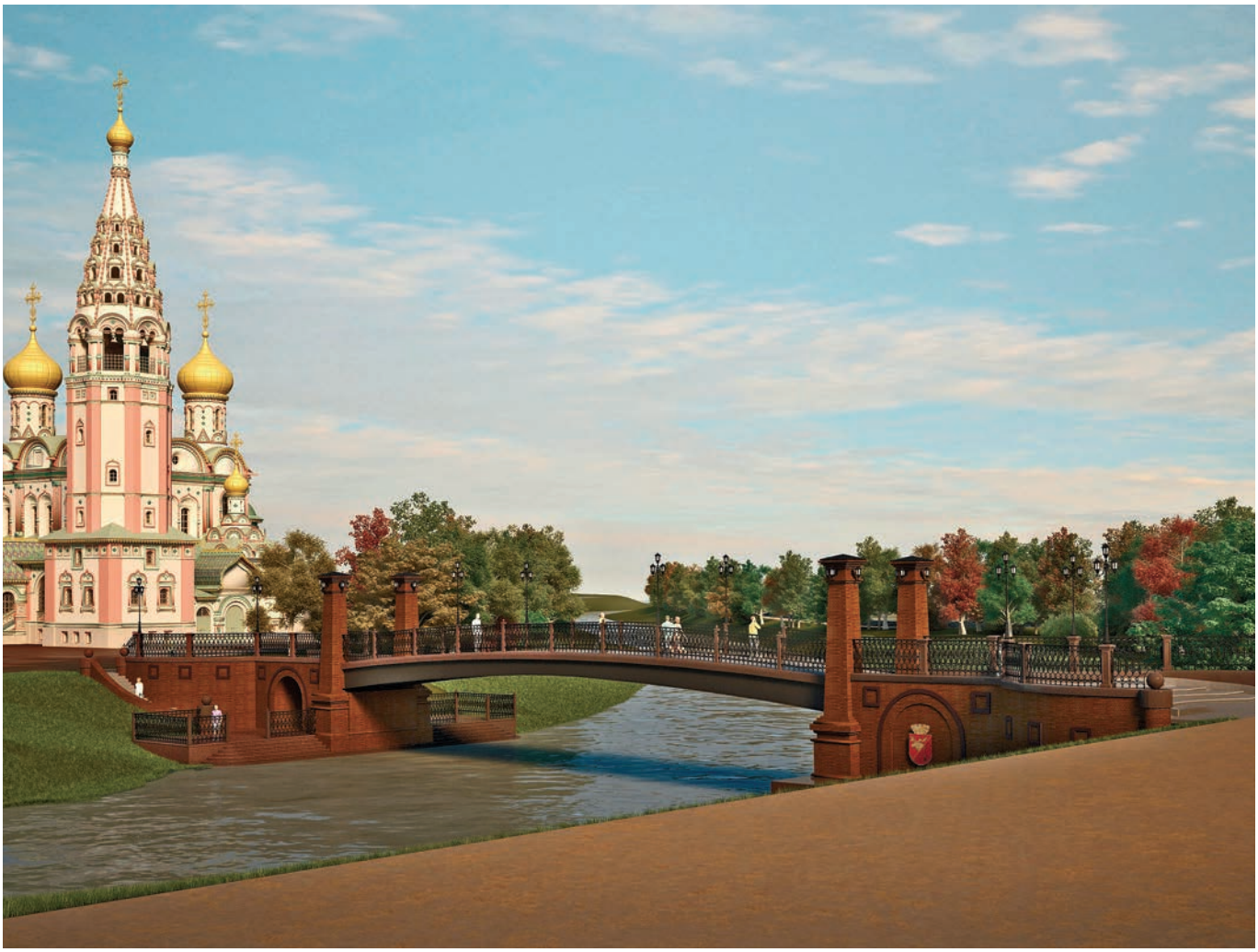
2017

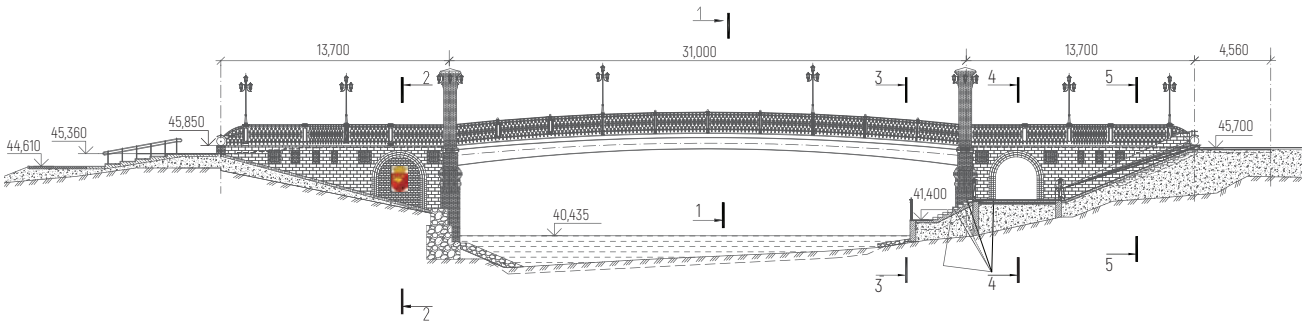
CONSTRUCTION PERIOD

2019



PEDESTRIAN BRIDGE OVER THE PISSA RIVER, IN **GUSEV TOWN**, RUSSIA





PROJECT DESCRIPTION

Being designed pedestrian crossing is situated in Gusev Town, Kaliningrad region

- piers of solid RC on piled foundation
- foundation of prism piles of 35×35 cm cross-section
- pier body of composite RC
- per each approach side RC retaining wall should be installed
- span should be formed as a girder arch structure
- total span length 31.6 m
- cross-section to be composed of four H-girders per distance of 36 m
- girder height per middle span is being considered from 0.89 m up to 0.7 m

WORK ON THE PROJECT

- initial paperwork design
- technical supervision

CLIENT

Central Complex Design
Municipal Administration, Gusev Town

DESIGN

Central Complex Design

CONSTRUCTION

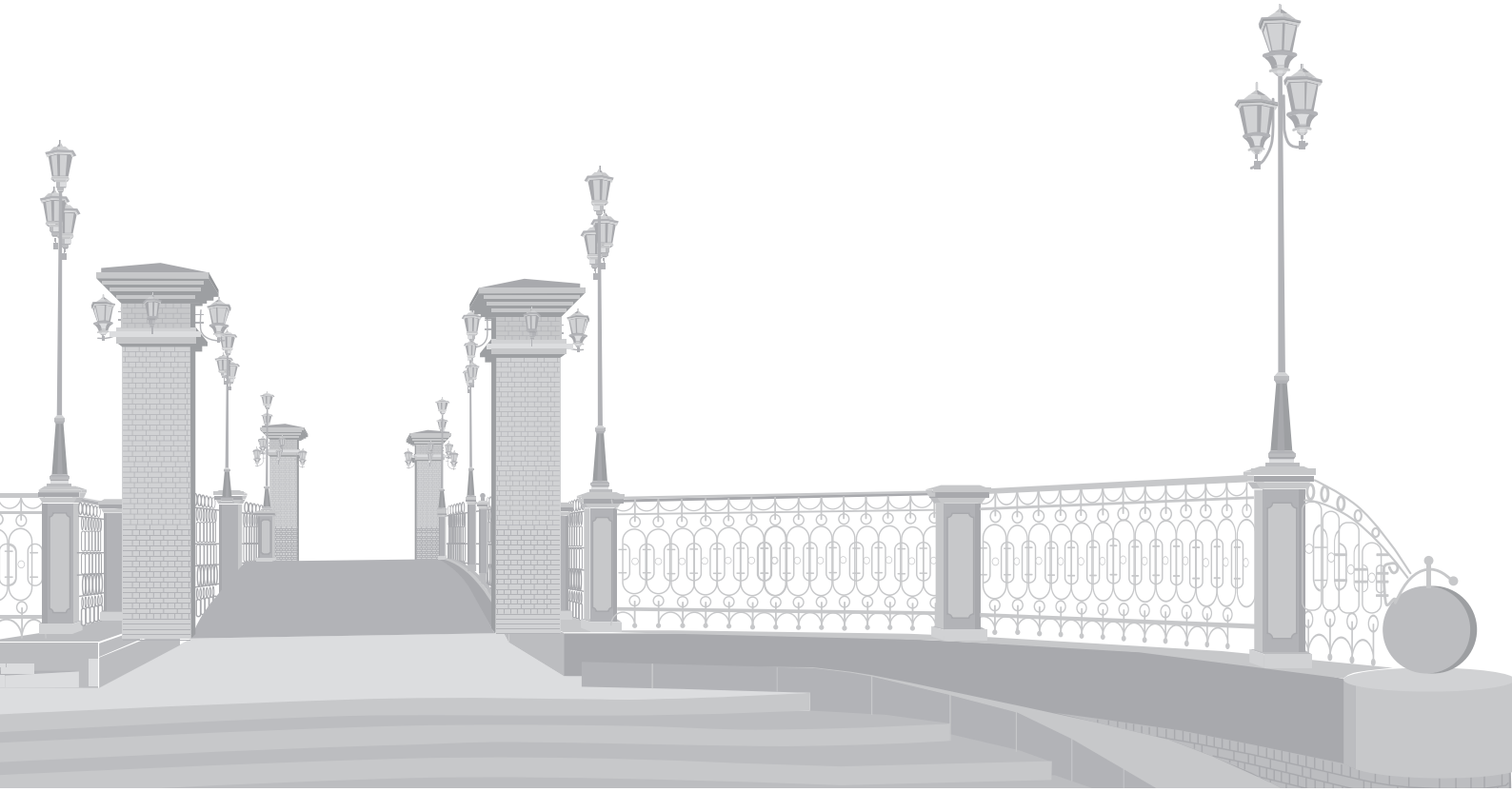
MostDetal

DESIGN PERIOD

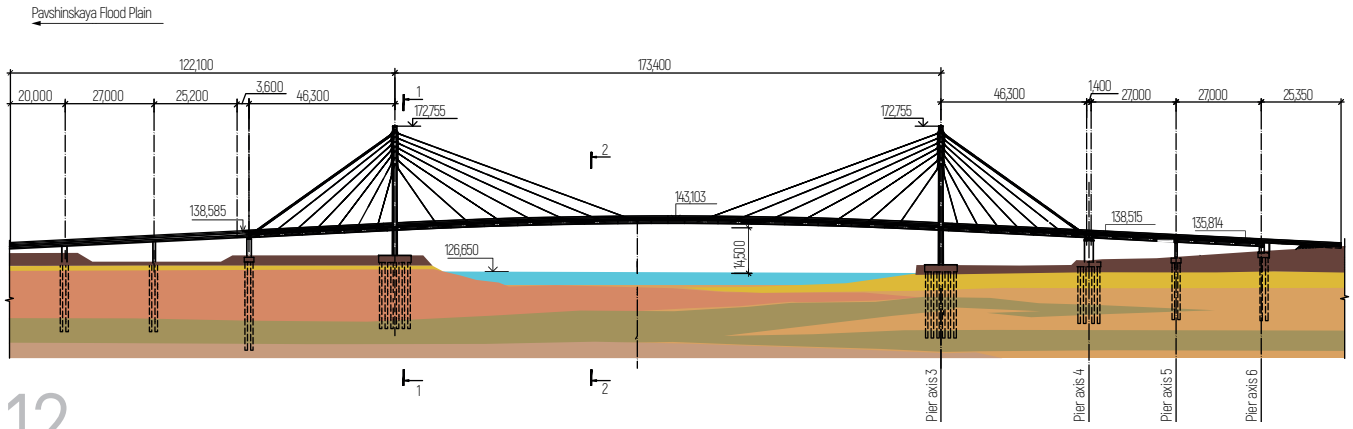
2016

CONSTRUCTION PERIOD

2016 – 2017



CABLE-STAYED FOOTBRIDGE ACROSS THE MOSKVA RIVER, **KRASNOGORSK**, RUSSIA



PROJECT DESCRIPTION

The foodbridge crossing is located between Myakininskaya and Pavshinskaya flood plain not far from Moscow Ring Road (MKAD) near the exhibition center Crocus Expo.

The foodbridge crossing fulfilled via stay-cable system makes inhabitants comfortable approach to Myakinino metro station.

- scheme: 27+25.2+3.6+46.3+173.4+46.3+1.4+27+27
- total bridge length – 377.2 m
- full length (including retaining walls) – 422.55 m
- width – 6,756 m
- area – 2,548.36 m^2
- length of retaining walls – 45.35 m
- main walkway width – 5.0 m
- pedestrian lane longitudinal inclination – 5%
- footbridge lane transversal inclination – 20%
- underbridge clearance – 14.5 m
- total weight of steel (superstructures, pylons, cable stays) – 1,221.3 t
- pylon height – 41 m

WORK ON THE PROJECT

- formulation of the concept of pedestrian crossing
- development of architectural solutions
- design of main structures
- design of construction technology
- design of SAC&D

CLIENT

Krokus, CJSC

GENERAL CONTRACTOR

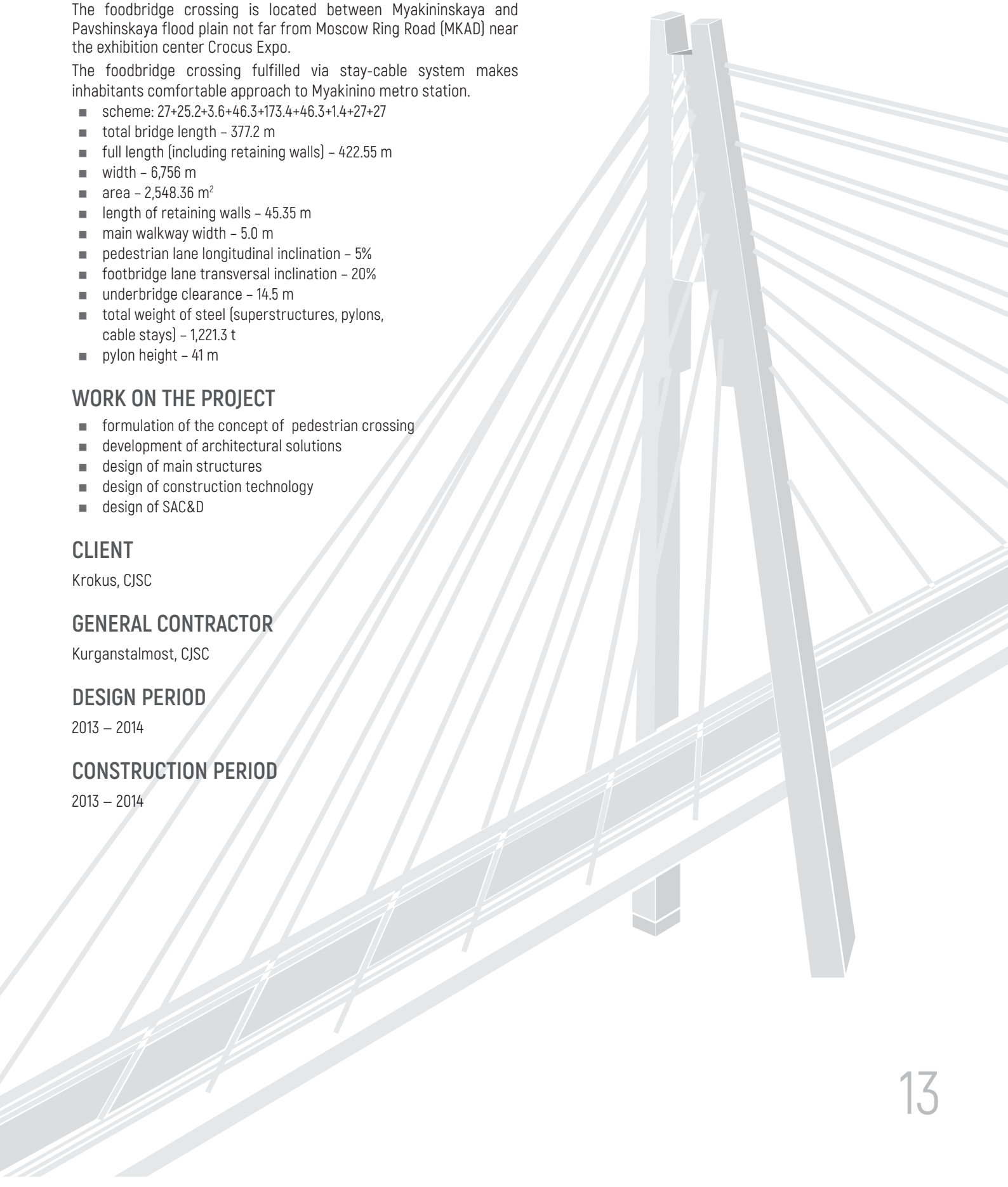
Kurganstalmost, CJSC

DESIGN PERIOD

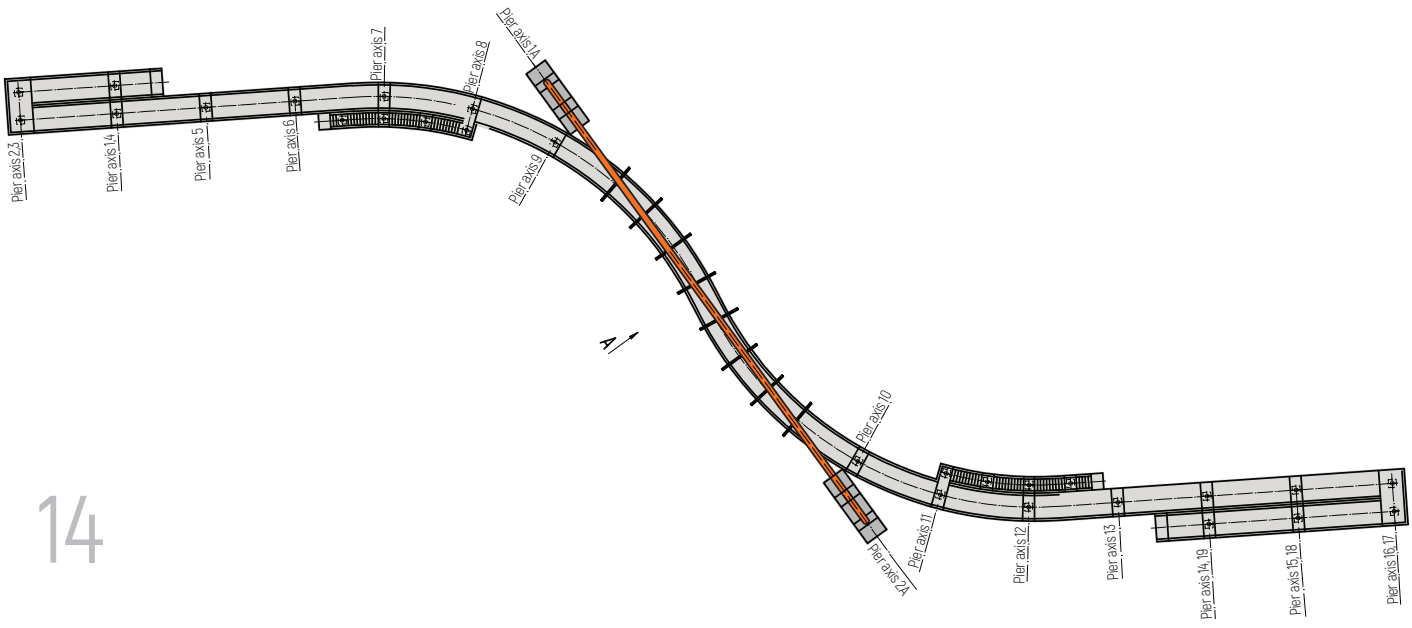
2013 – 2014

CONSTRUCTION PERIOD

2013 – 2014



FOOTBRIDGE ON **TALLINNSKOE** HIGHWAY **IN ST. PETERSBURG**, RUSSIA



PROJECT DESCRIPTION

The structure is located on Tallinnskoe Shosse motorway, St. Petersburg. Landmark is presented as Z-shaped constitution with curved main span out of two bows per 47 meters each one plus two ramps parallel to each other with turns per 180°.

Part of deck was fulfilled as a RC structure fixed to arch. Carriageway was designed for low temperatures and completed from waterproofing and frost-resistance durable materials.

- schema of the structure: (7,176+12.4)12.4+11.5x5+57,523+11.5x5+12.4(12.4+11.5+7,845)m
- 2 ramps for handicaps
- ramps inclinations – 8%
- height of the structure – 5.5 m
- designed per live load – 400 kg/m^2
- staircases width – 3.0m
- total length of the footbridge façade – 197.3 m
- total length along the middle axis – 248.6 m
- arch span – 56 m
- deck presented as a girder cage of three main girders with transversal beams on the distance of 5.5 m
- longitudinal and transversals are fulfilled out of rectangular pipes as follows: 350x300x12

WORK ON THE PROJECT

- general design
- concept of footbridge
- architectural design
- design of main footbridge structures
- construction technology design
- design of SAC&D
- detailed project of construction
- construction of footbridge

CLIENT

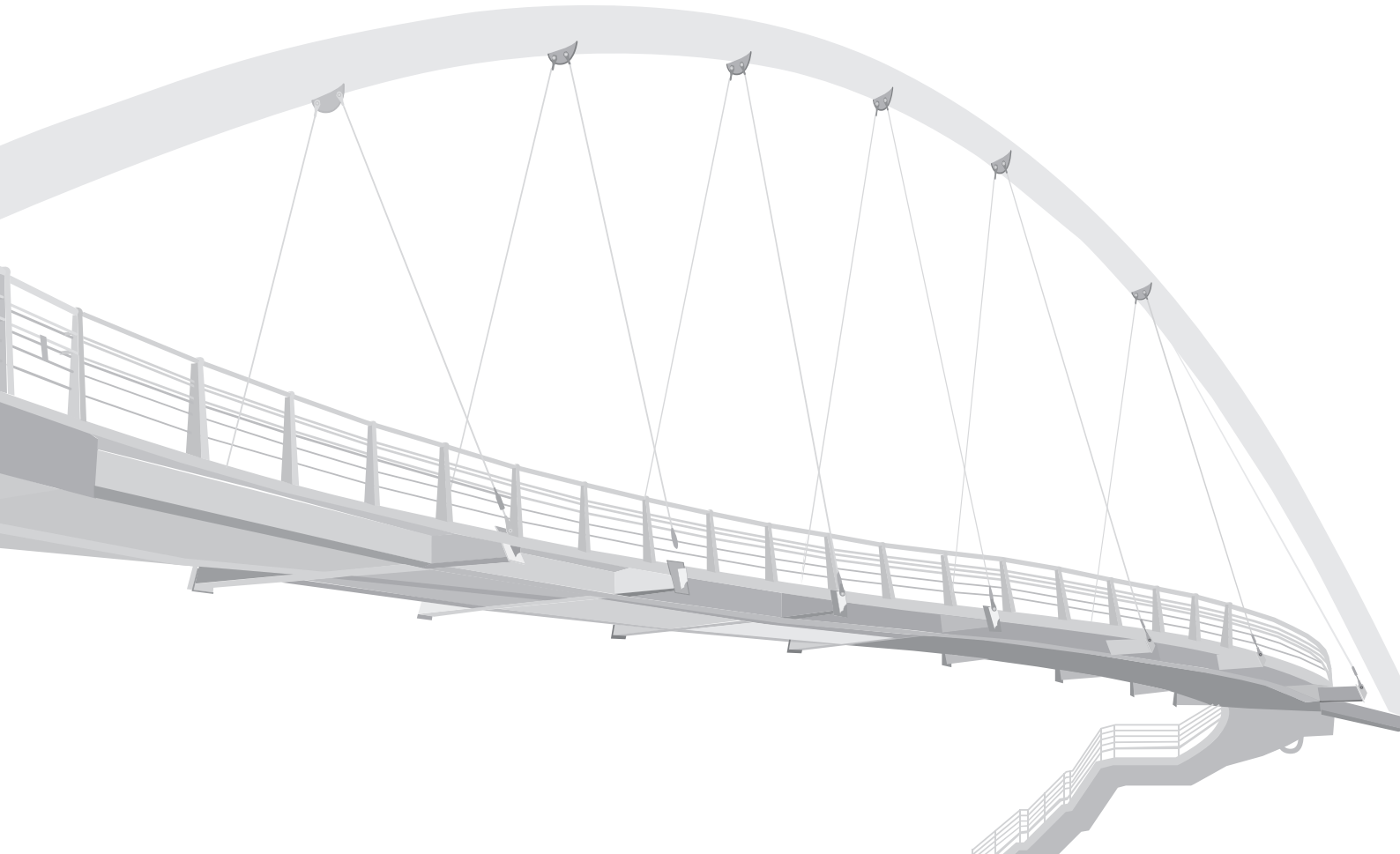
Directory of transportation of St. Petersburg

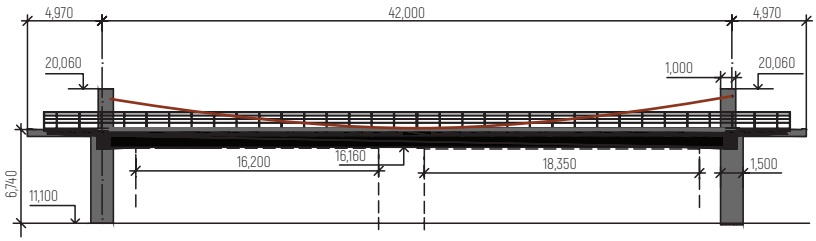
DESIGN PERIOD

2011 – 2012

CONSTRUCTION PERIOD

2013

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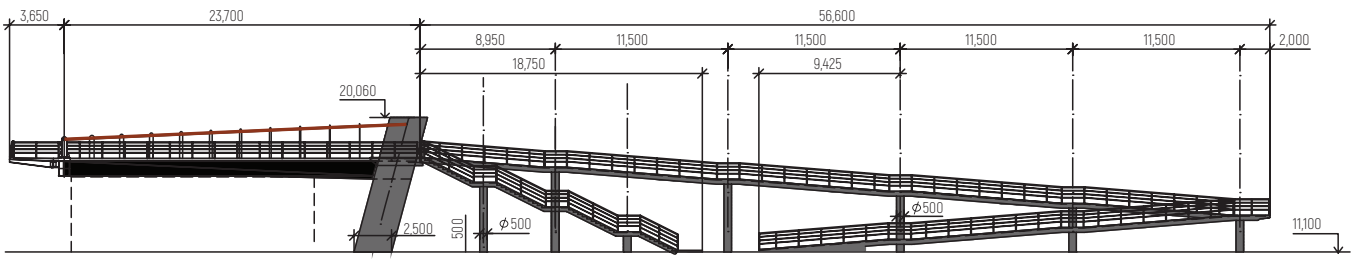
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FOOTBRIDGE ON PROSPECT **SLAVI** & STREET **BELGRADSKAYA** IN **ST. PETERSBURG**, RUSSIA

PROJECT DESCRIPTION

Revolutionary footbridge crossing is located at the intersection of Prospect Slavy and Belgradskaya Street.

Project was fulfilled by RC girder structure. The cross-section fulfilled as a box girder unified with RC slabs of carriageway. Main girder is supported via embedded cables.

Entire ramps were completed from solid reinforced concrete. Ramps were designed together with staircases comfortable for pedestrians.

BASIC FEATURES OF THE FOOTBRIDGE

- deck schema – 1x65.0 m
- length along the facade – 75.7 m
- width – 77 m
- middle part length – 65 m
- deck construction height – 1.23 m
- height of the structure – 5.0 m
- width of pedestrian lane – 3 m
- ramp width – 1.8 m
- live load design per 400kg/m^2

WORK ON THE PROJECT

- general design
- concept of footbridge
- architectural design
- design of main footbridge structures
- issue of construction technology
- development of SAC&D
- MS issue
- construction of footbridge

CLIENT

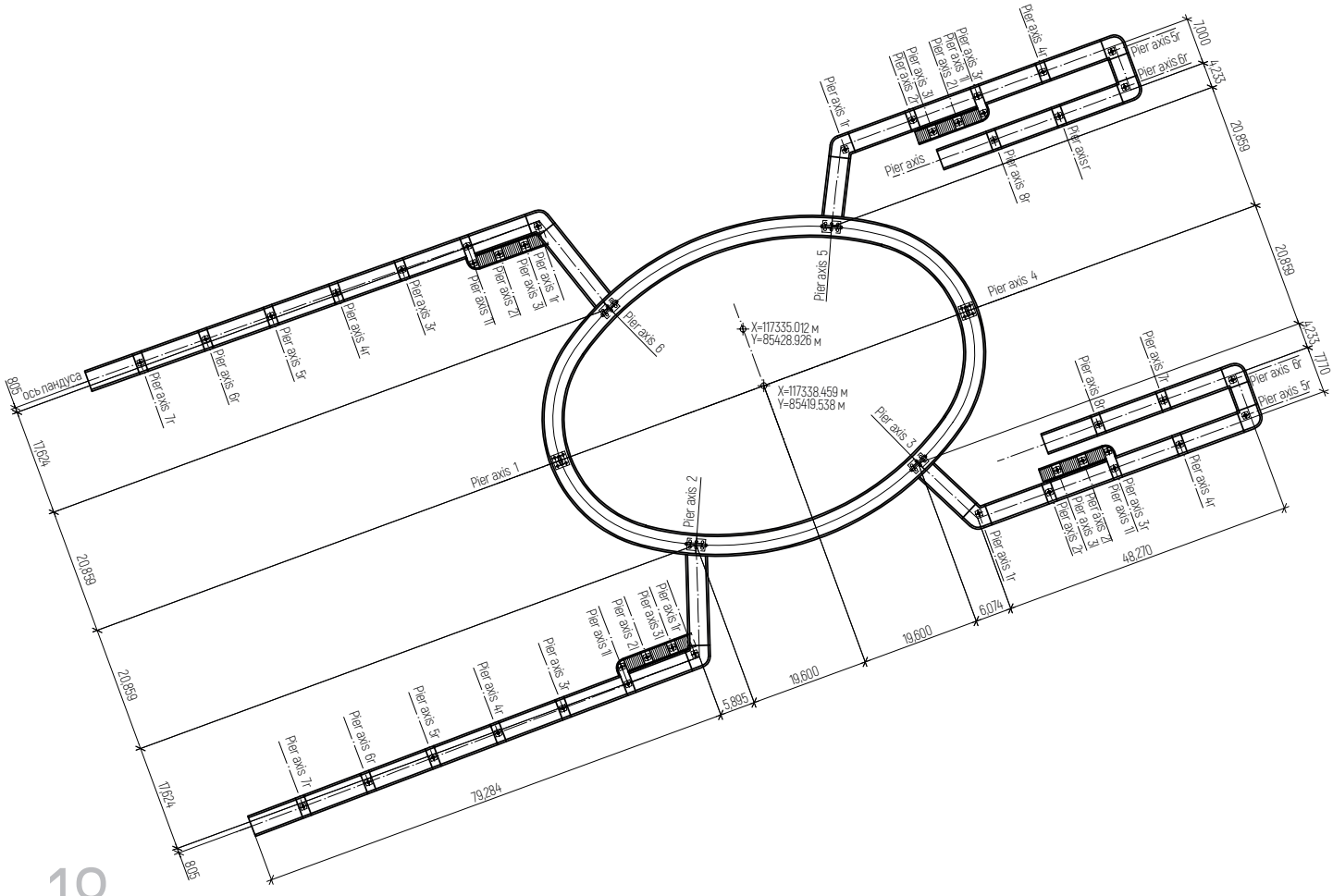
Directory of transportation construction of Saint-Petersburg

DESIGN PERIOD

2011 – 2012

CONSTRUCTION PERIOD

2013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Pier axis 3r
Pier axis 4r
Pier axis 5r
Pier axis 6r
Pier axis 7r
Pier axis 1l
Pier axis 2l
Pier axis 3l
Pier axis 4l
Pier axis 5l
Pier axis 6l
Pier axis 7l

FOOTBRIDGE CROSSING OF PROSPECT **SLAVY AND BUDAPESHTSKAYA** STREET, **SAINT-PETERSBURG**, RUSSIA

PROJECT DESCRIPTION

Futuristic outstanding footbridge crossing is located at the intersection of Prospect Slavy and Budapeshtskaya Street. The cross-section of this crossing looks like ellipse from the top view. It is supported by six piers above the intersection of foresaid streets of St. Petersburg.

Comfortable approaches for pedestrians as well as for handicapped people to the landmark were arranged by four ramps together with staircases. Deck structure was conceived as RC slab consists of triangle truss with three girths fulfilled out of steel pipes.

- schema of the structure: 2x28.2m+40.4m+2x28.2m+40.4 m
- length along the middle axis – 193.6 m
- width – 3.6 m
- live load design per 400 kg/m^2
- deck height – 1.12 m
- carriageway RC slab thickness – 0.08 m
- deck RC slab width – 3.6 m
- height of the structure – 5.5 m

WORK ON THE PROJECT

- general design
- concept of footbridge
- architectural design
- design of main footbridge structures
- issue of construction technology
- design of SAC&D
- method statement design
- construction of footbridge

CLIENT

Directory of transportation construction of St. Petersburg

DESIGN PERIOD

2011 – 2012

CONSTRUCTION PERIOD

2014

UNDERGROUND **PEDESTRIAN CROSSING** PROSPECT OKTYABRYA, CITY OF **UFA**

PROJECT DESCRIPTION

Monolithic underground pedestrian crossing is located at municipal transport stop Boulevard Slavy in Ufa City with main features as follows:

- transversal schema – 4.35+4.35 m
- RC slabs with width of 150 mm
- length of tunnel – 37 m
- tunnel width dimensions – 4.0 x 2 m
- longitudinal inclination of tunnel – 5%
- tunnel height – 2.5 m
- entire length – 68.2 m
- approaches for handicaps – 3 pcs per 1.5 m
- minimum height – 2.5 m

WORK ON THE PROJECT

- general design

The stage of 'Project Documentation':

- technology of construction design
- SAC&D design
- development of method statements
- expertise fulfillment

CLIENT

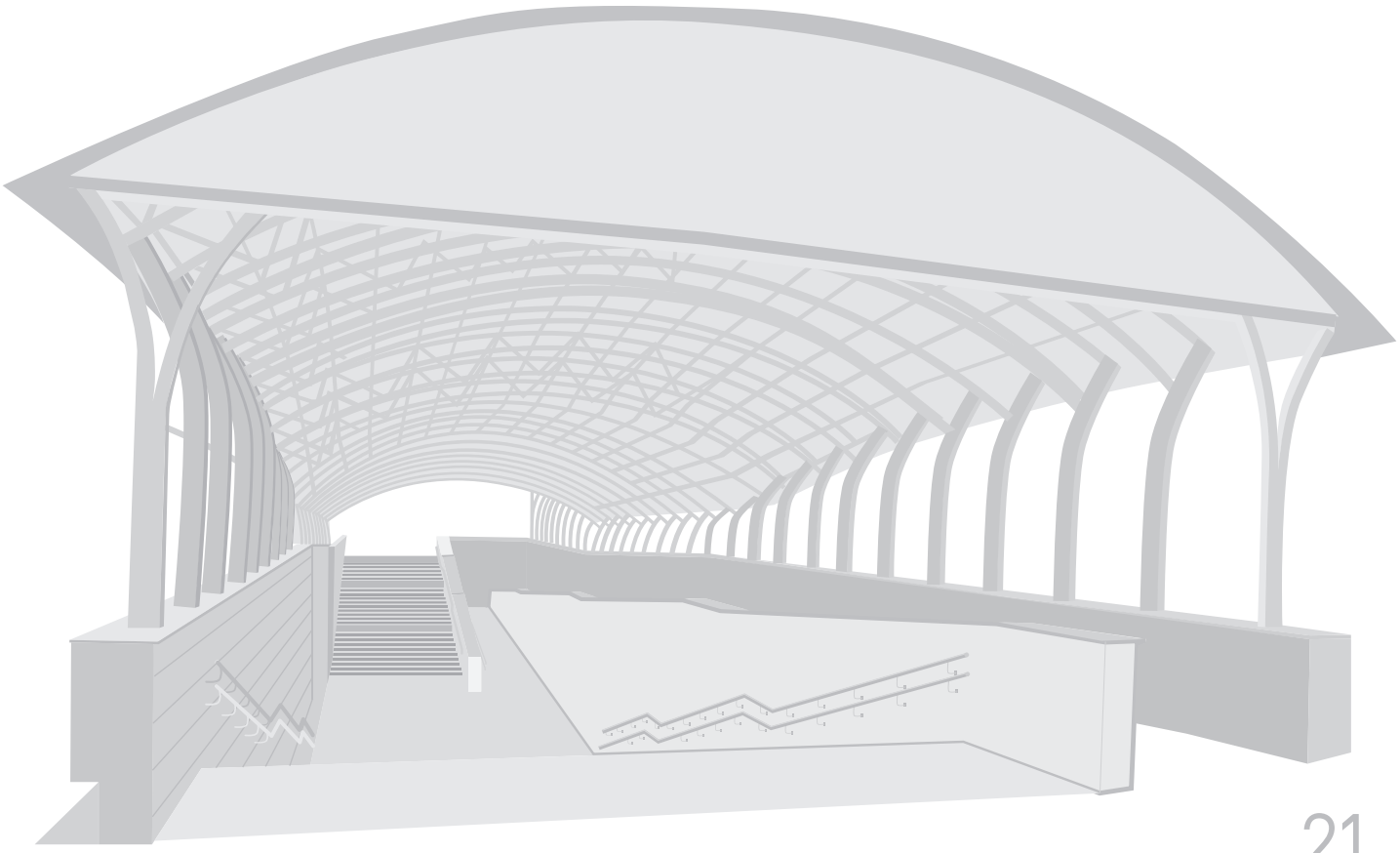
Authority of UFA City

DESIGN PERIOD

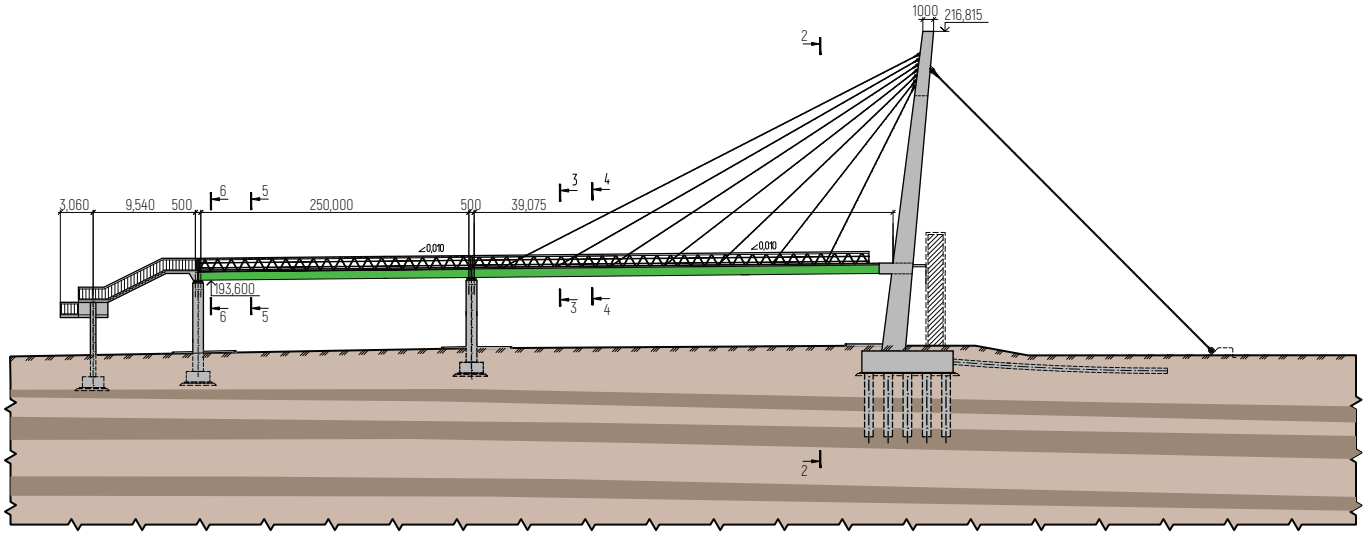
2011

CONSTRUCTION PERIOD:

2012 – 2013



FOOTBRIDGE CROSSING NEAR MENDELEEV STREET, **UFA** CITY,



PROJECT DESCRIPTION

Remarkable footbridge crossing near Mendeleev Street in Ufa City on but stop 'Tramplin' in Oktyabrskiy District of the City of Ufa. Our landmark was designed as a single pylon composite reinforced concrete cable stayed structure.

- bridge schema: 2x40+25+27 m
- total bridge length – 240 m
- entire length – 131 m
- width of deck – 3 m
- deck clearance – 7 m
- pavement longitudinal inclination – 10%
- total area of pedestrian crossing – 691 m^2
- pylon height – 30 m
- total steel weight – 86 tons
- entire weight of RC – 980 m^3
- number of staircases – 5 pcs
- elevators – 4 pcs

WORK ON THE PROJECT

- general design
- development of architectural solutions
- main structure design
- development of construction technology
- issue of SAC&D

CLIENT

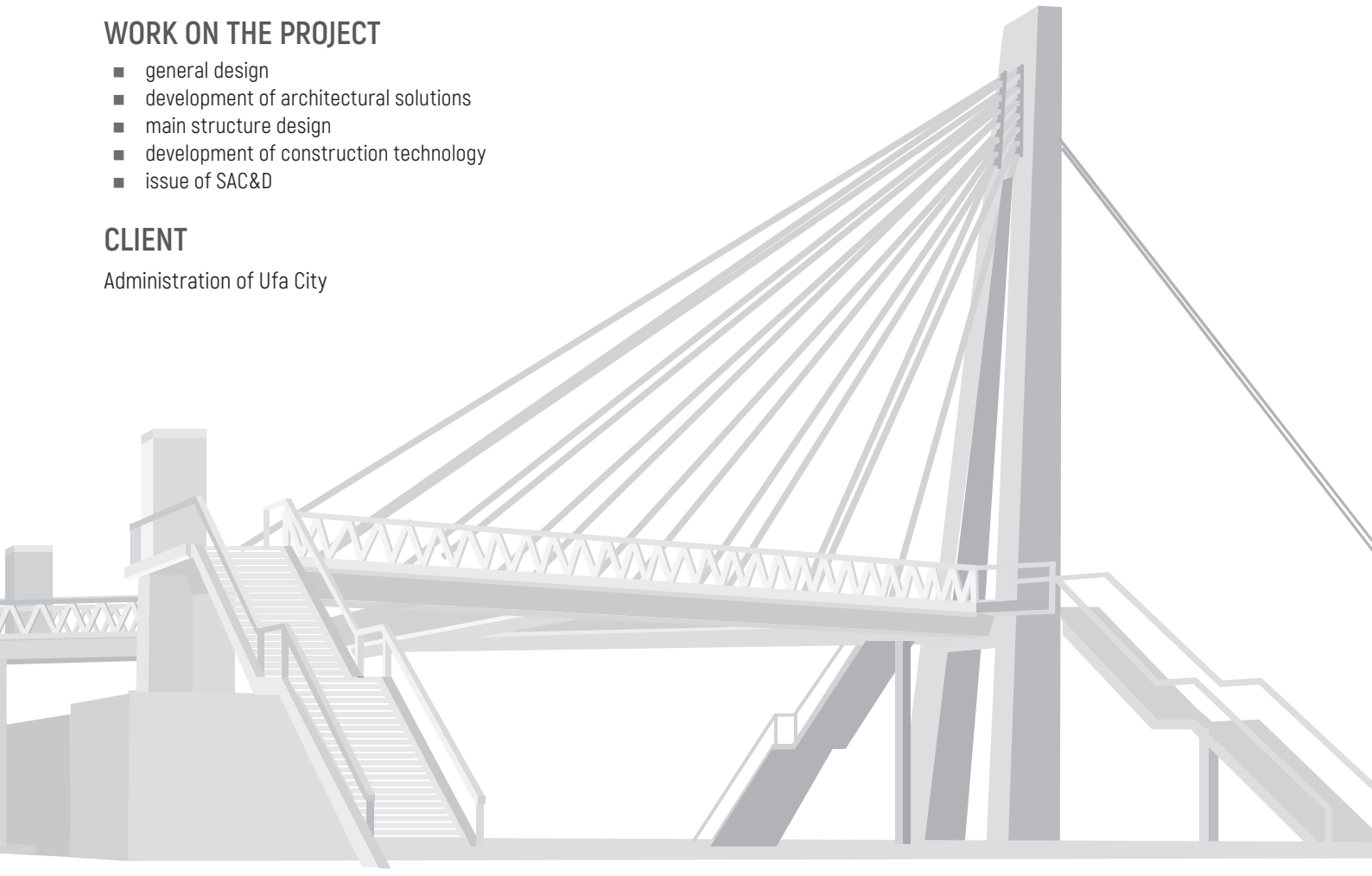
Administration of Ufa City

DESIGN PERIOD

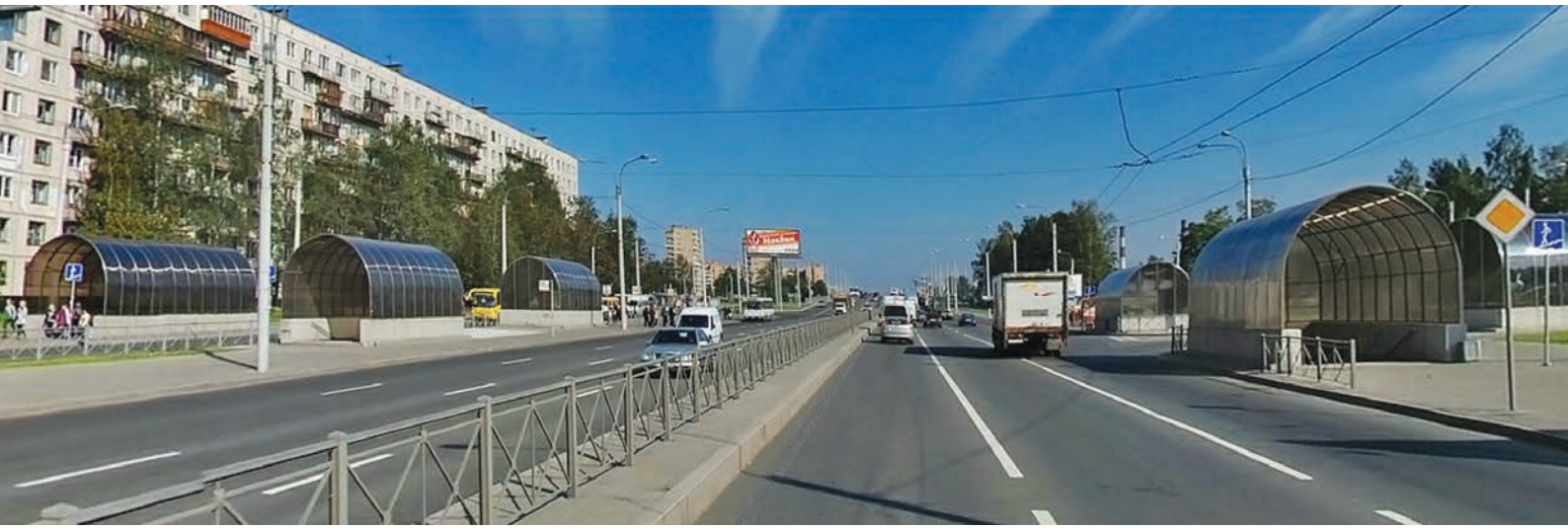
2012

CONSTRUCTION PERIOD

2015



UNDERGROUND PEDESTRIAN **CROSSING PISKAREVSKIY** PROSPECT **ST. PETERSBURG**, RUSSIA



PROJECT DESCRIPTION

Underground pedestrian crossing Piskarevskiy Prospect is located near Kurakina Street in St. Petersburg.

- length of the structure – 60.8 m
- width – 8.7 m
- exits – 7
- height – 2.5 – 2.76 m

WORK ON THE PROJECT

- general design
- design of main structures
- technology of construction design
- SAC&D design
- development of method statements
- field supervision

CLIENT

Directory of transportation construction of St. Petersburg

GENERAL DESIGNER

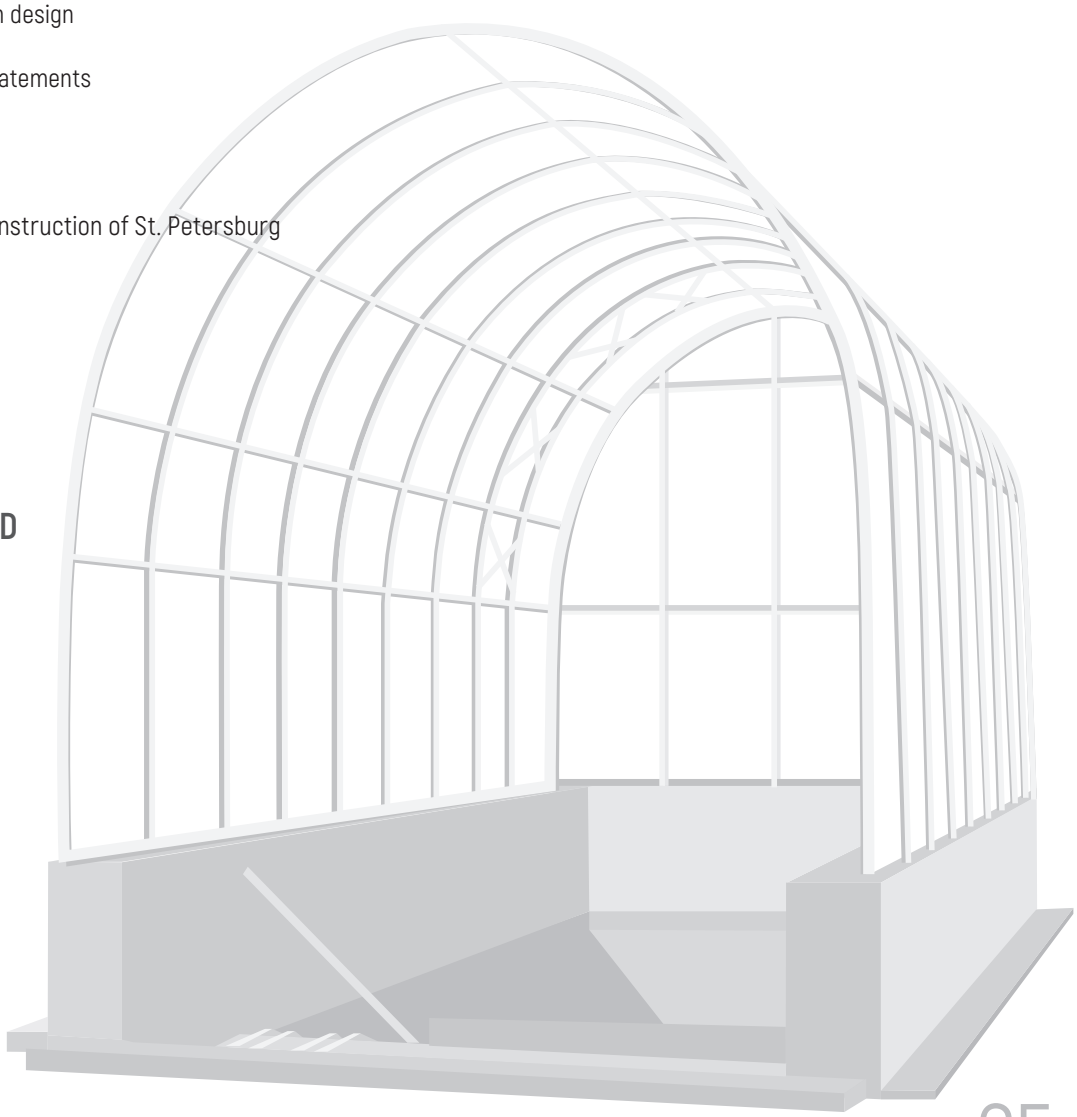
SC Trest Lenmostostroy

DESIGN PERIOD

2005 – 2006

CONSTRUCTION PERIOD

2006 – 2007



PEDESTRIAN OVERPASS ACROSS THE **RING ROAD**, **ST. PETERSBURG**, RUSSIA

PROJECT DESCRIPTION

This structure was design as a pedestrian crossing prestressed deck with intermediate pier connected to deck via truss girder. Temperature gradient was considered within abutments located on the ground areas. Pedestrian viaduct was completed by concreting procedures on service bridge as a solid prestressed RC structure with protective layer of polycarbonate.

- overpass schema: 27.5+25.3 m
- total length – 62.8 m
- deck girder height – 1.2 m
- deck girder width – 4.15 m

WORK ON THE PROJECT

- footbridge crossing conception detection
- design of architectural decision
- main structures design
- technology design
- field supervision

CLIENTS

DSTO

SC Petersburg – Dorservis

GENERAL CONTRACTOR

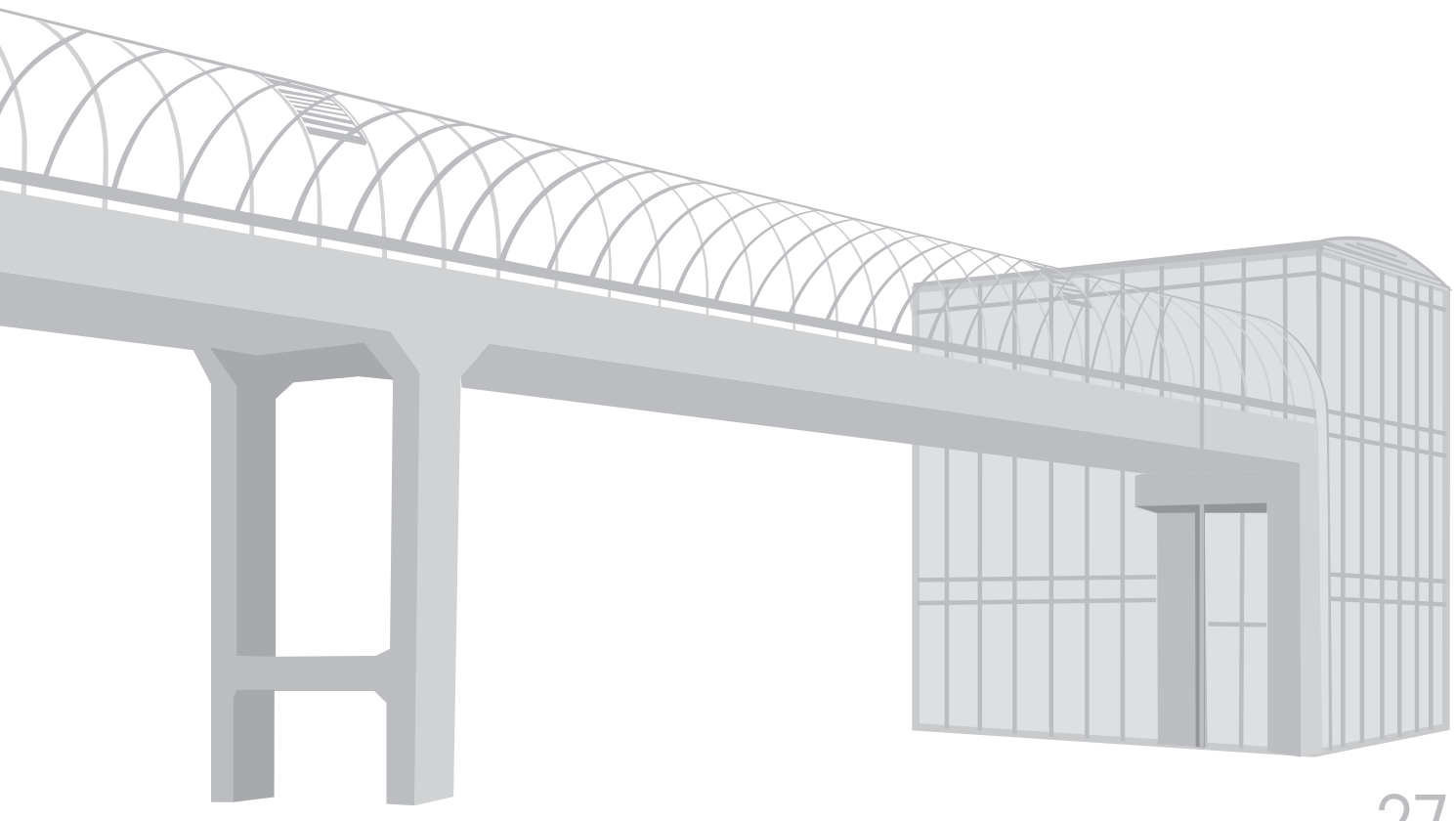
Company Limited MBM

DESIGN PERIOD:

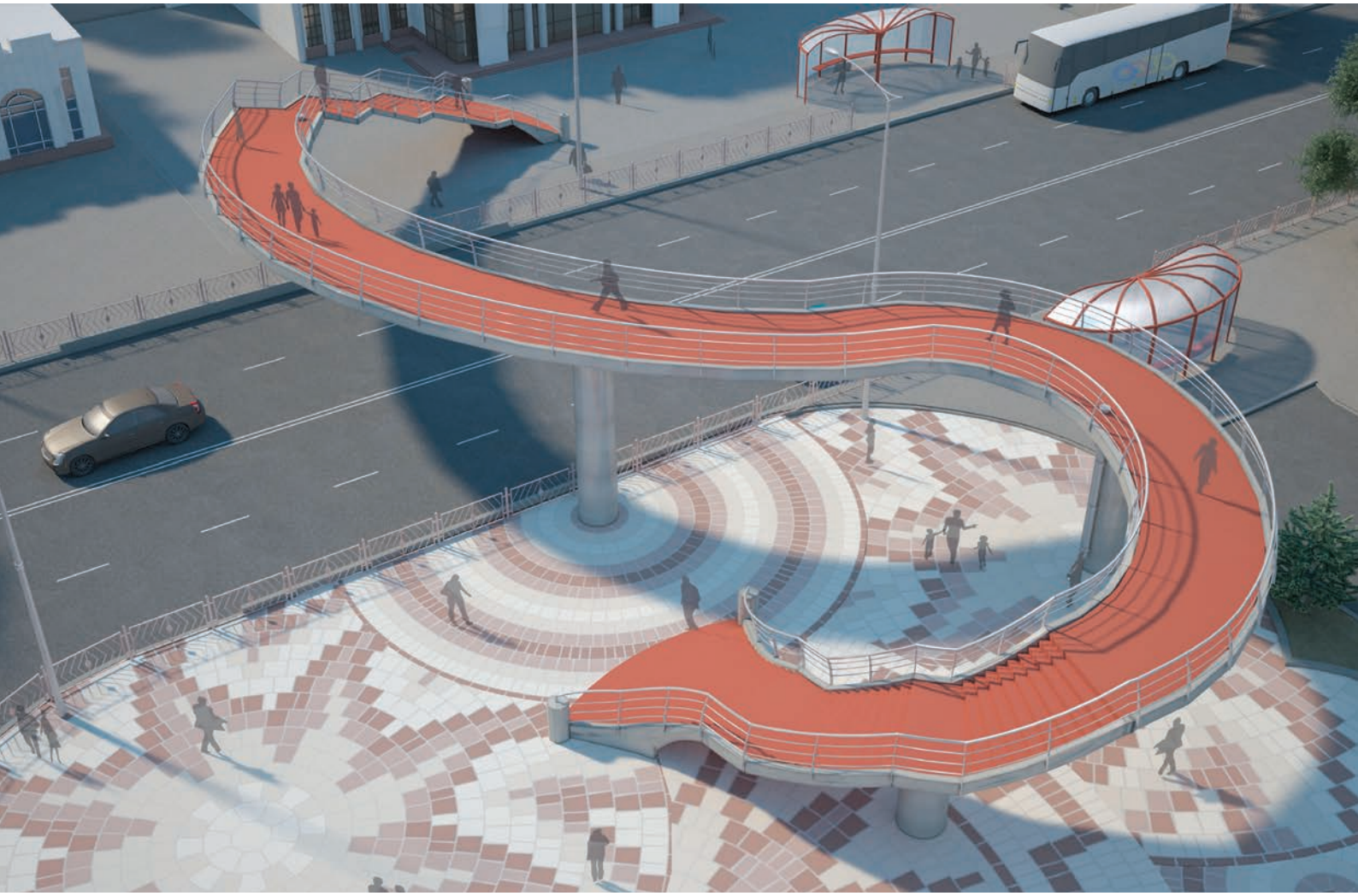
2005 – 2006

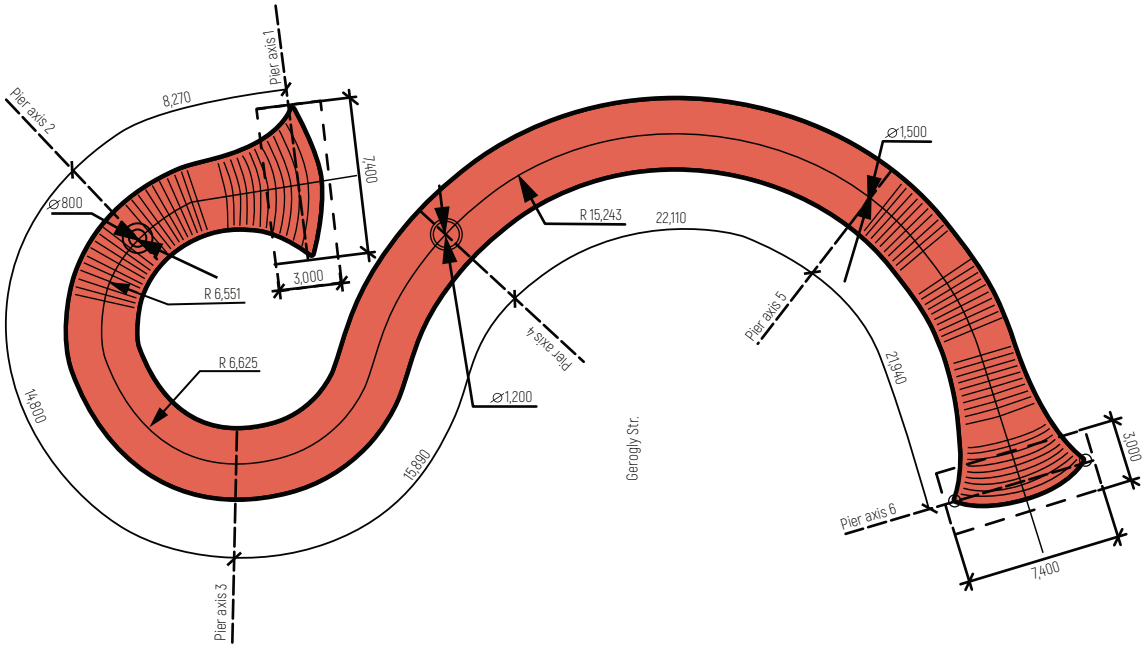
CONSTRUCTION PERIOD:

Completed on March 2006



DESIGN OPTION





FOOTBRIDGE CROSSING NEAR GEROGLY STREET & MOVIE **CENTER VATAN** IN ASHKHABAD CITY, **TURKMENISTAN**

PROJECT DESCRIPTION

Outstanding pedestrian crossing near Gerogly Street and movie center Vatan in Ashkhabad City, Turkmenistan.

- basic features of the footbridge:
- bridge schema: 14.8m + 15.89m + 22.11m + 21.94 m
- length – 71.74 m
- dimensions – 16 m x 5 m
- width of stairs – 3m
- total step length – 0.3 m
- step height – 0.15 m
- pedestrian lane – 3 m
- height of banister – 1.1 m
- footbridge height from carriageway up to deck bottom – 5.5 m

WORK ON THE PROJECT

- participation in tender for viaduct construction
- agenda of tender: architectural solutions design
- design of construction decisions
- cost calculation

CLIENT

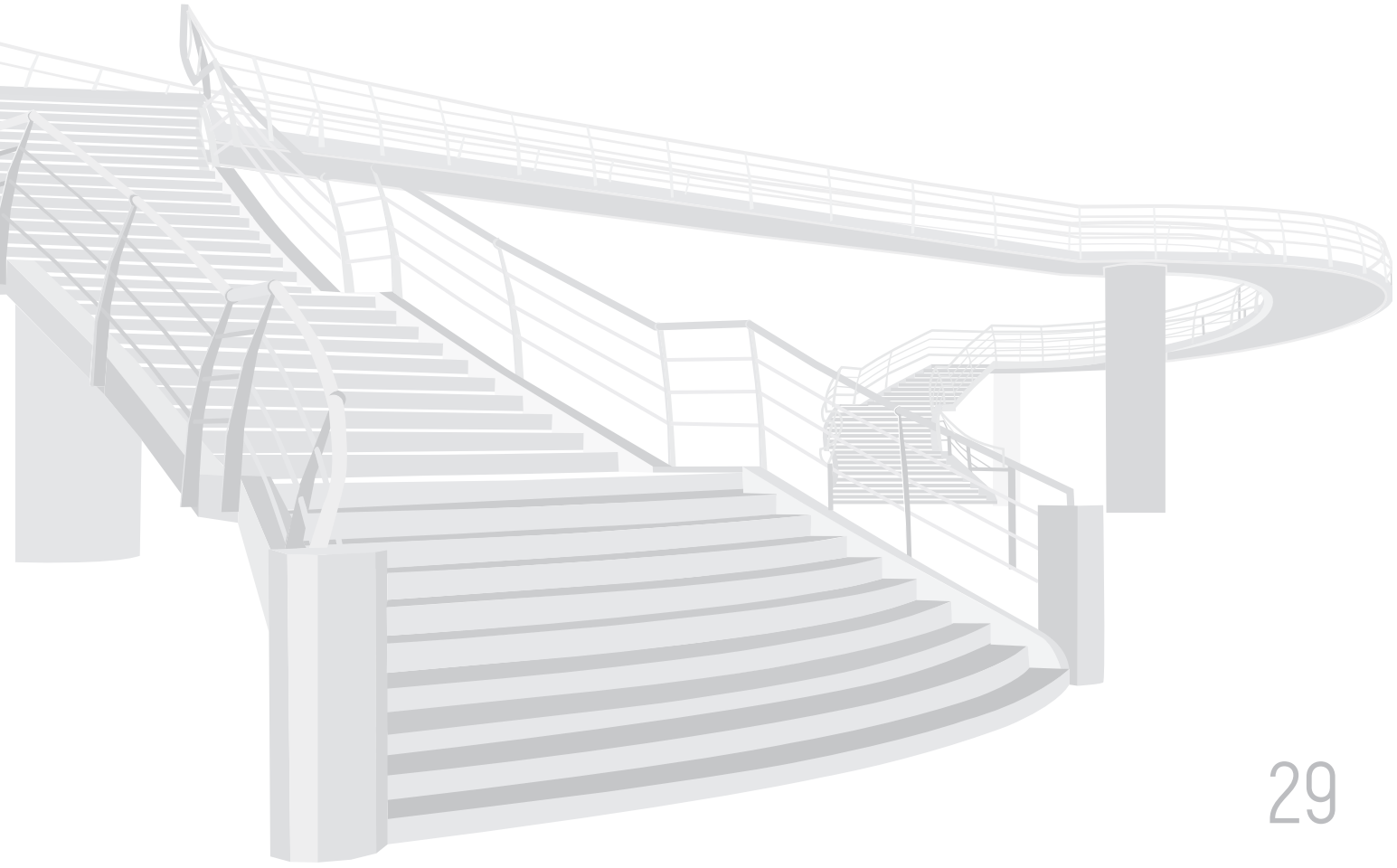
City Hall of Ashkhabad City

DESIGN PERIOD

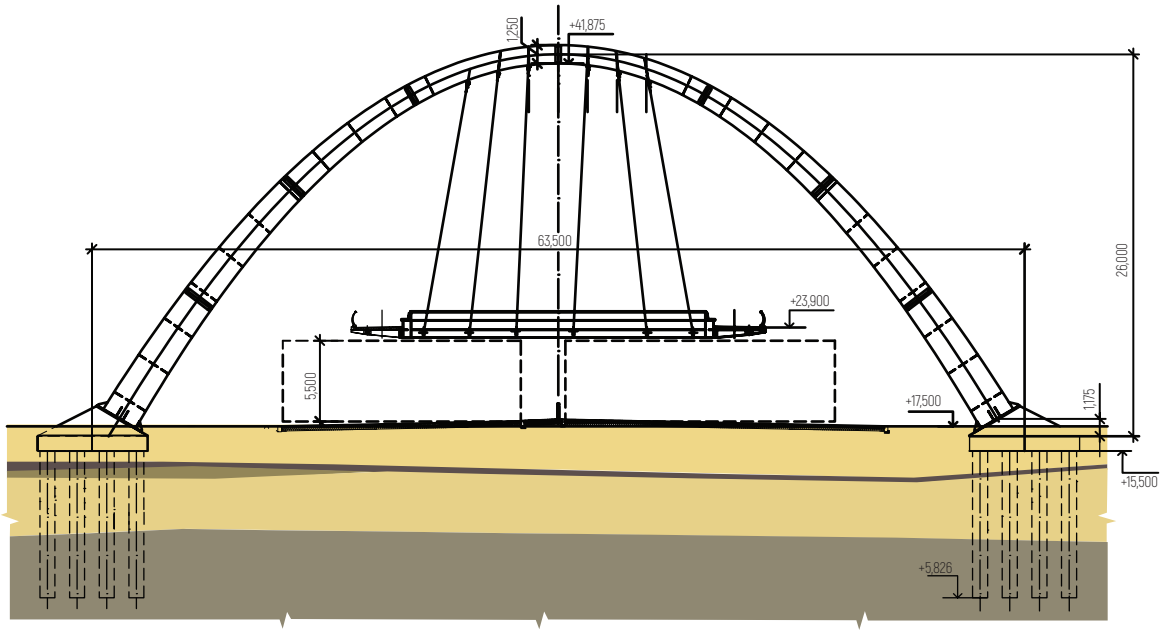
2012

DESIGN OPTION

2012



DESIGN OPTION



FOOTBRIDGE CROSSING OF **CHICHERINA** & KRASNOZNAMENNAYA STREETS, **USSURIYSK**, RUSSIA

PROJECT DESCRIPTION

Beautiful urban footbridge crossing is conceived at the intersection of Chicherina Street and Krasnoznamennaya Street in Ussuriysk. The structure is designed with ramps being combined with staircases for the comfortable approach of the city inhabitants. Cross-section of the viaduct is presented as a ring with an arch.

- arch height – 25 m
- deck ring diameter – 14 m
- ramp inclination – 8%
- parts of staircases per – 10 m
- total ramp length – 90 m

WORK ON THE PROJECT

- general design
- concept of footbridge
- architectural design

'Project Documentation' stage:

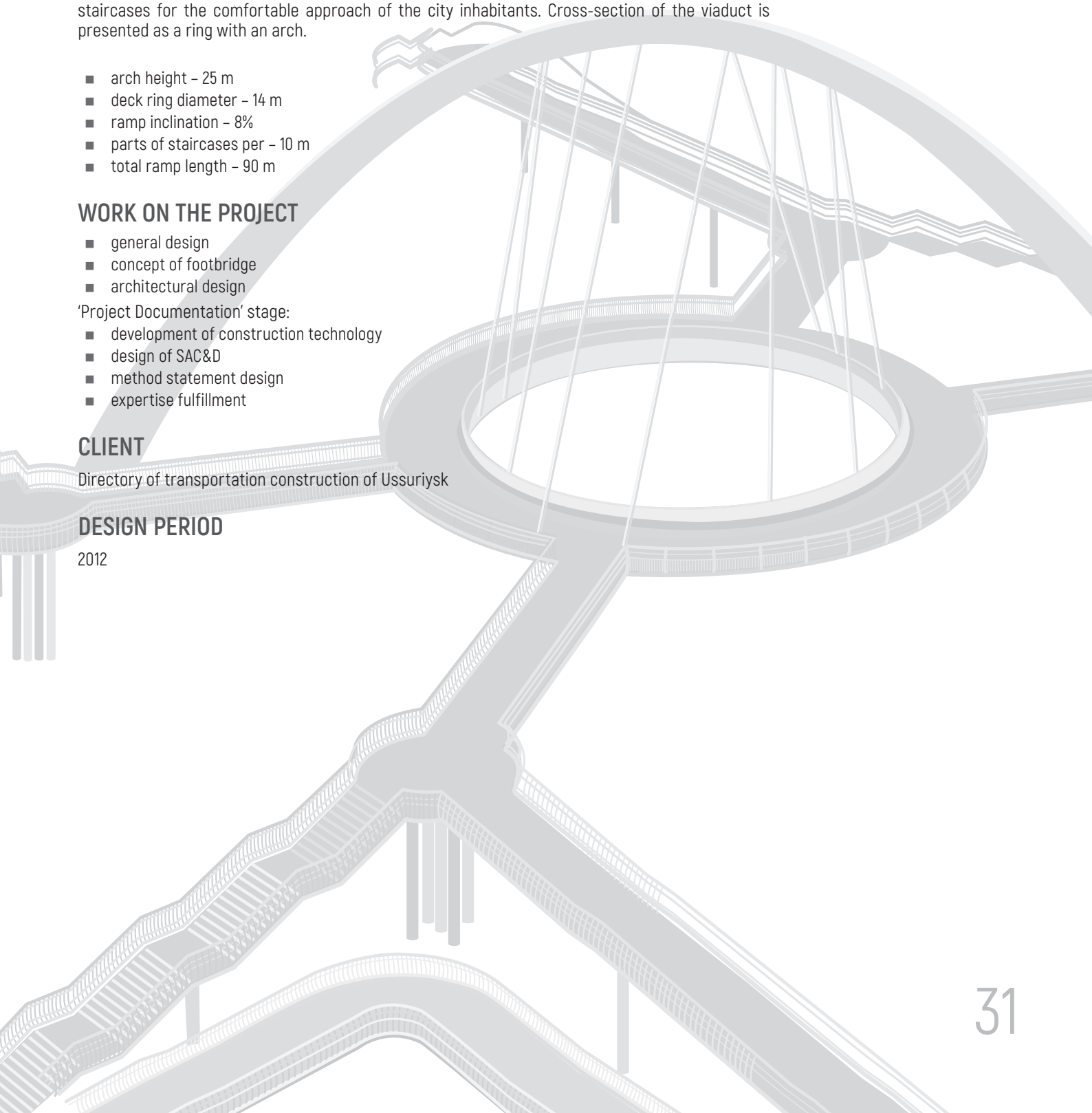
- development of construction technology
- design of SAC&D
- method statement design
- expertise fulfillment

CLIENT

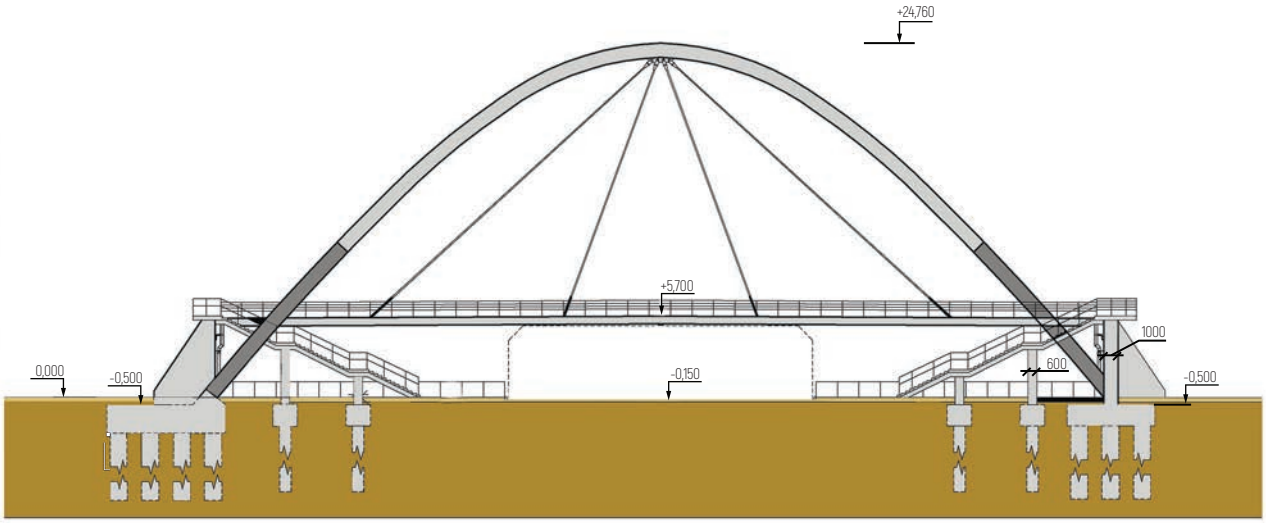
Directory of transportation construction of Ussuriysk

DESIGN PERIOD

2012



DESIGN OPTION



FOOTBRIDGE CROSSING NEAR GEROGLY STREET AND **GOVSHUDOVA** STREET IN **ASHKHABAD CITY**

PROJECT DESCRIPTION

Amazing pedestrian crossing near Gerogly Street and Govshudova Street in Ashkhabad City, Turkmenistan.

- bridge schema – 16.75m + 32,035m + 16.75 m
- length – 65.55 m
- dimensions – 21.25m x 5.15 m

Features of staircases:

- width of stairs – 2.2 m
- step length – 0.3 m
- step height – 0.15 m
- pedestrian lane – 2.2 m
- height of banister – 1.1 m
- footbridge height from carriageway up to deck bottom – 5.5 m

WORK ON THE PROJECT

Participation in tender for pedestrian viaduct construction near Gerogly Street and Govshudova Street in Ashkhabad City, Turkmenistan.

Agenda of tender

- architectural solutions design
- design of construction decisions
- cost calculation

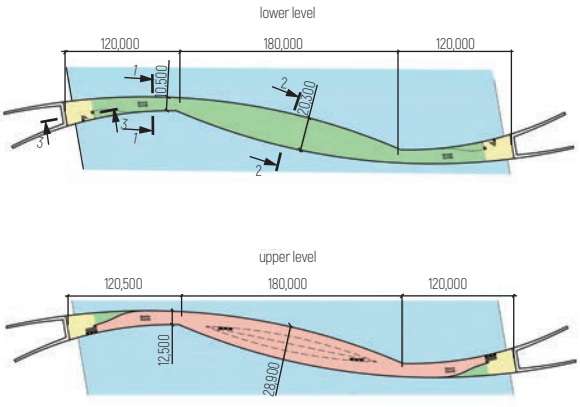
CLIENT

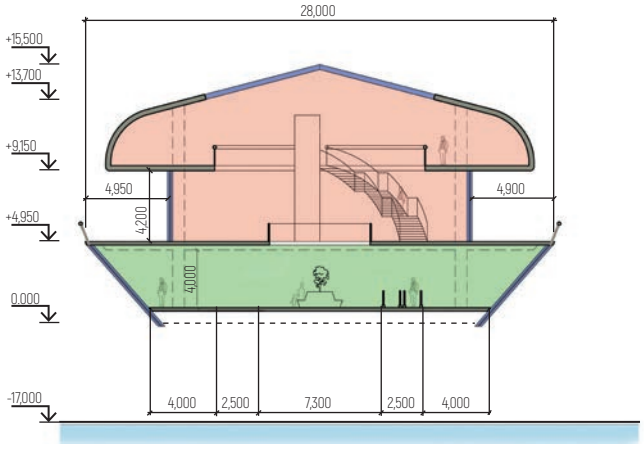
City Hall of Ashkhabad City

DESIGN PERIOD

2012

DESIGN OPTION



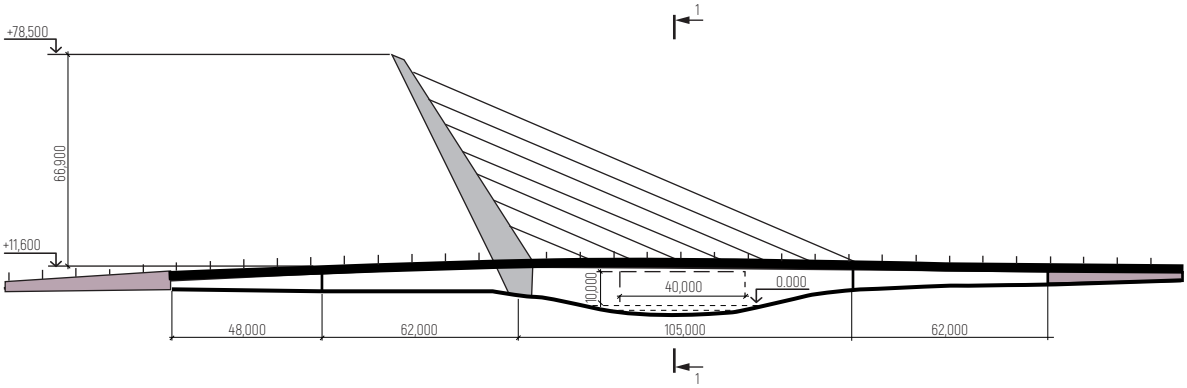


PEDESTRIAN BRIDGE OVER THE **BOLSHAYA NEVKA** RIVER, **ST. PETERSBURG**, RUSSIA

WORK ON THE PROJECT

- Architectural conception development

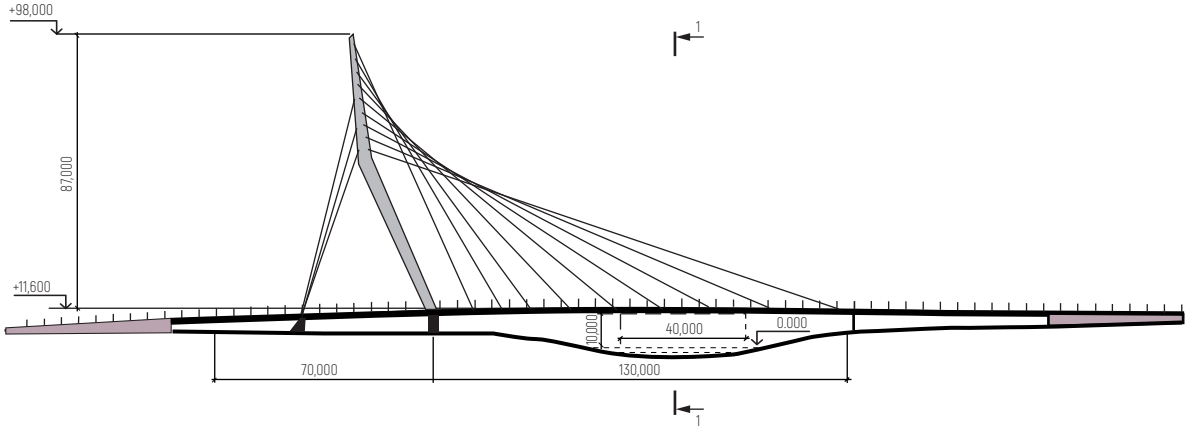
DESIGN OPTION



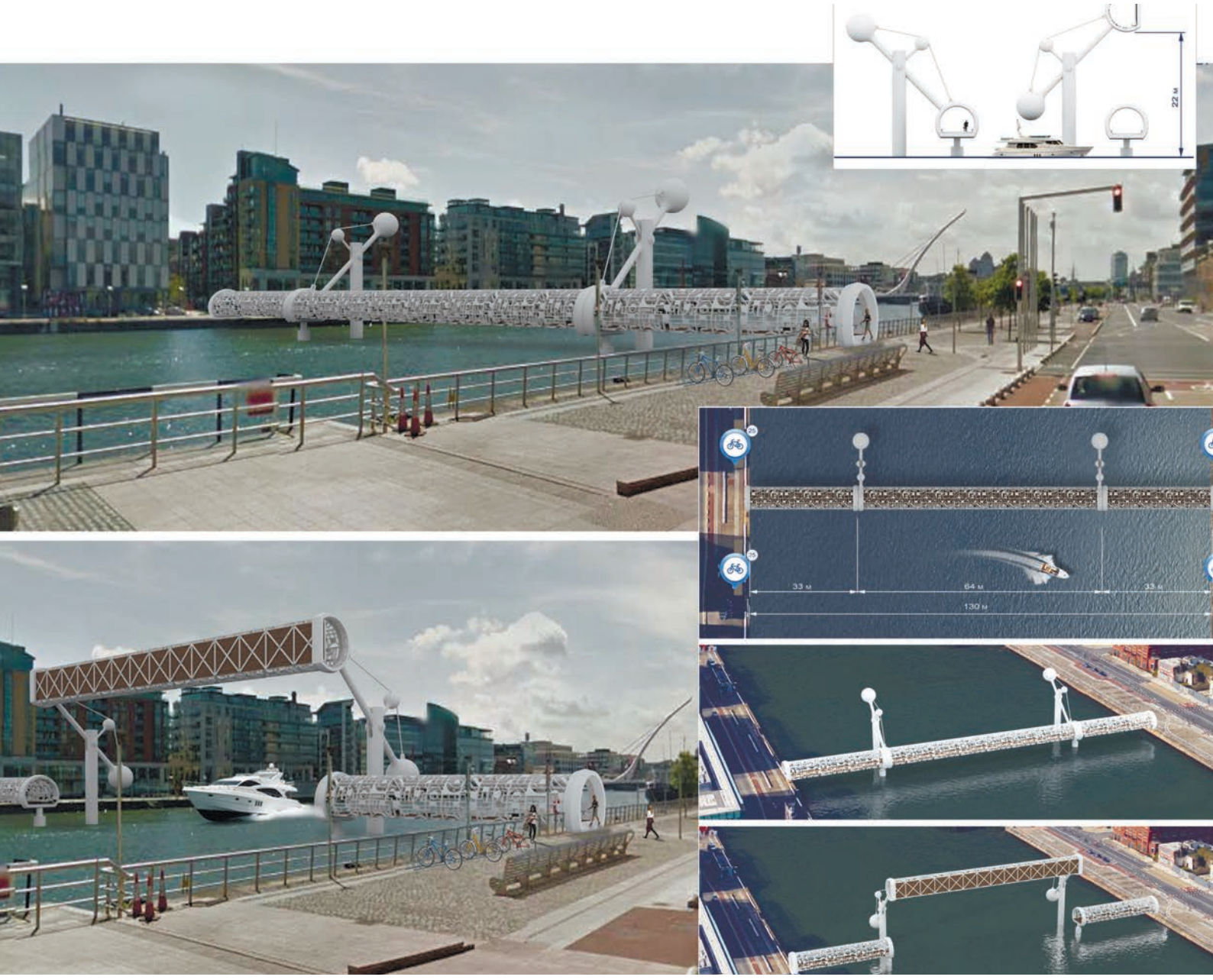
PEDESTRIAN BRIDGE OVER THE PREGOLYA RIVER BY **GRIGA STREET**, **KALININGRAD**, RUSSIA

WORK ON THE PROJECT

- Architectural conception development



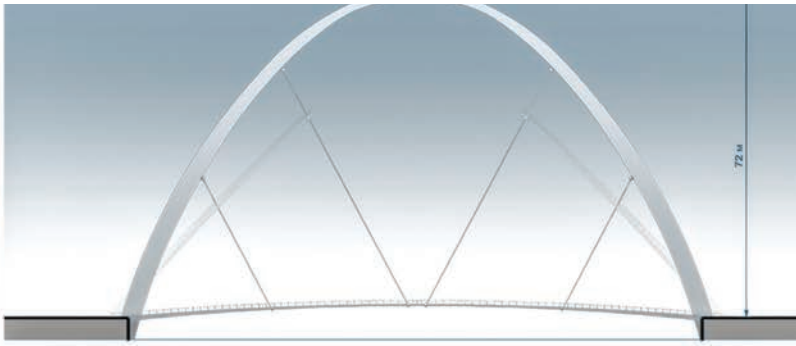
DESIGN OPTION

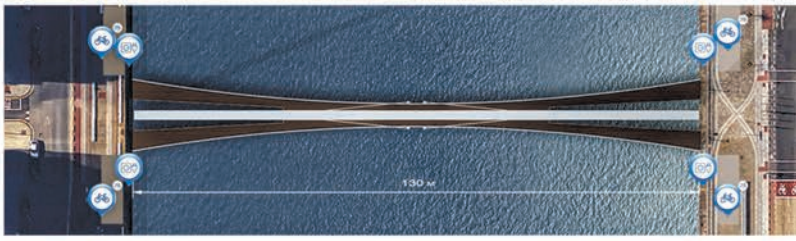


PEDESTRIAN BRIDGE IN DUBLIN, IRELAND

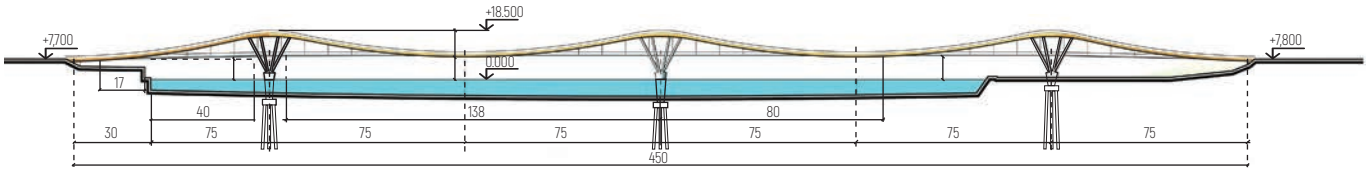
WORK ON THE PROJECT

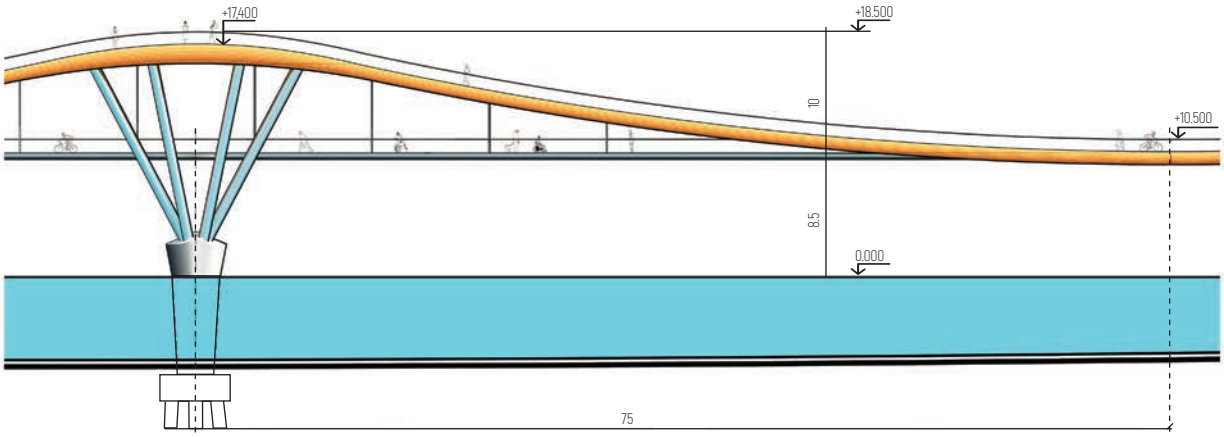
- Architectural conception development





DESIGN OPTION



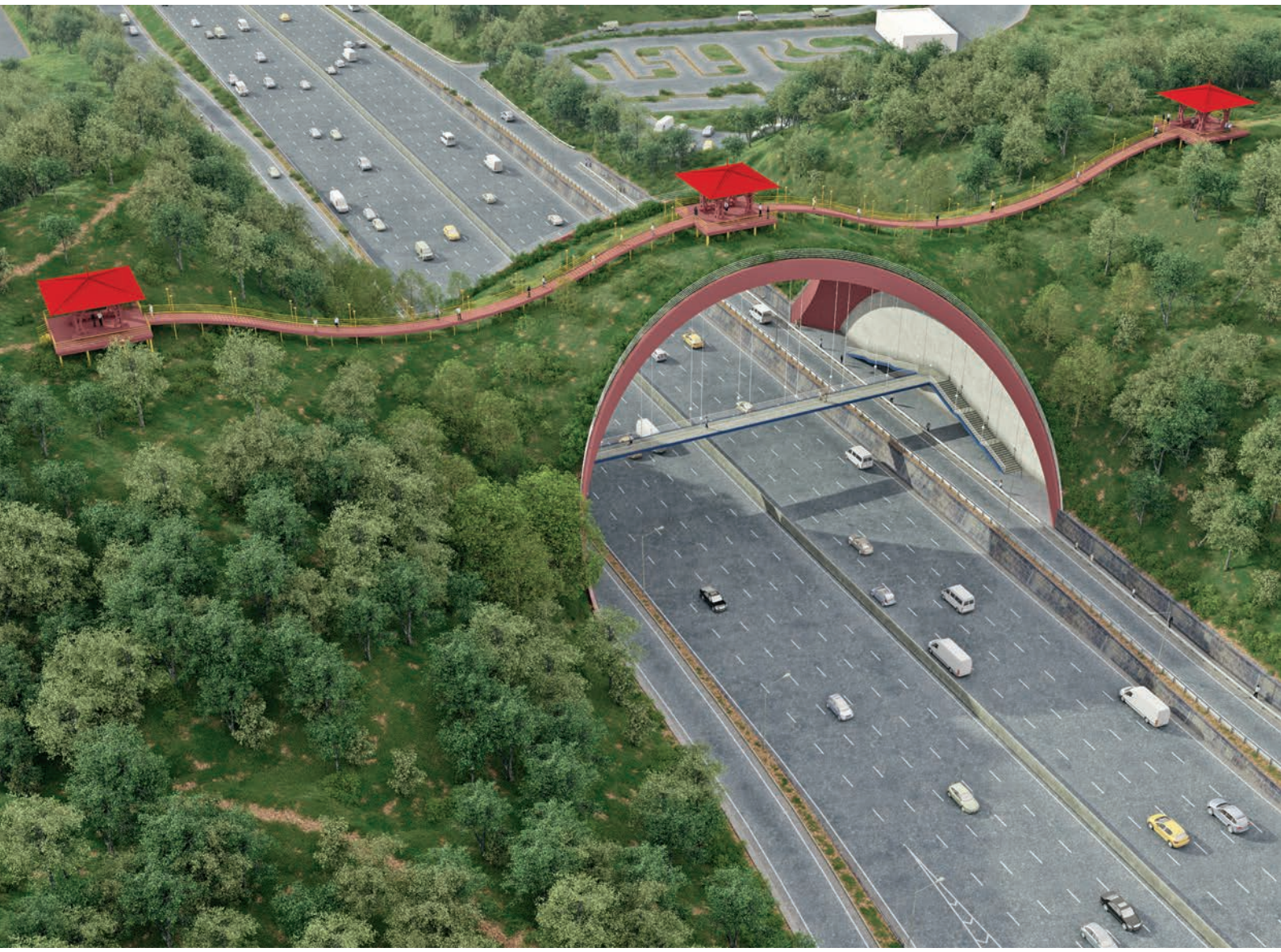


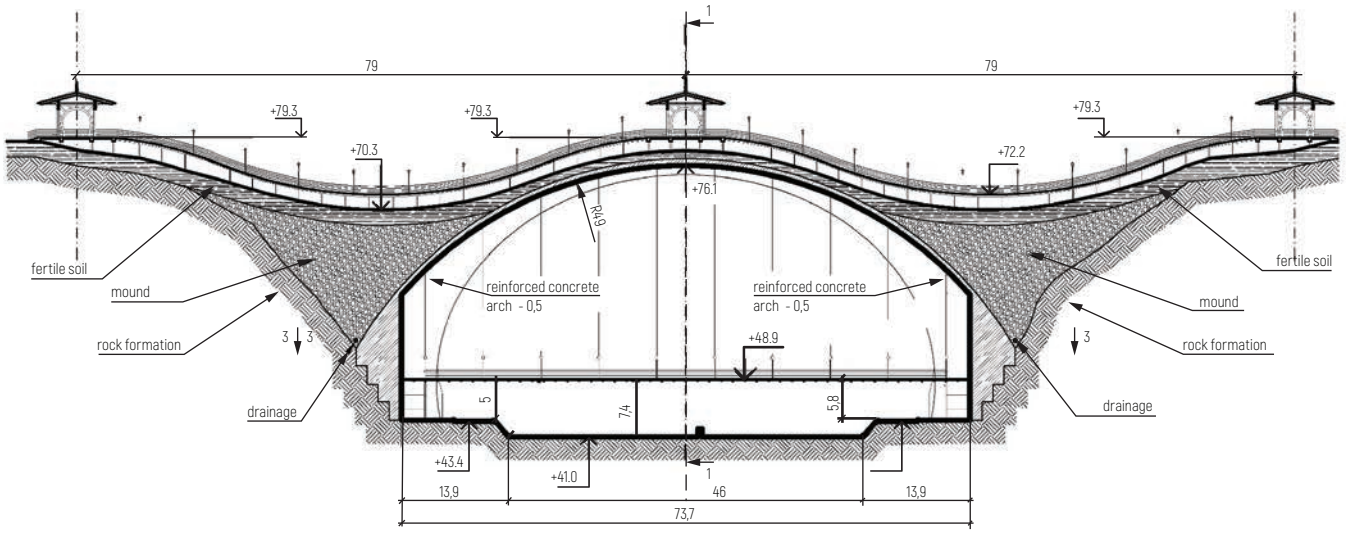
PEDESTRIAN BRIDGE IN WARSAW, POLAND

WORK ON THE PROJECT

- Architectural conception development

DESIGN OPTION





PEDESTRIAN BRIDGE IN SEOUL, **SOUTH KOREA**

WORK ON THE PROJECT

- Architectural conception development

FAR EAST

OVERPASS FOR PEDESTRIANS **IN VLADIVOSTOK**, RUSSIA

WORK ON THE PROJECT

- Architectural conception development

ST. PETERSBURG

PEDESTRIAN BRIDGE OVER THE BAY OF VINNOVKY RIVER BETWEEN **ISLANDS BICHY** & BEZIMYANNY, **ST. PETERSBURG**, RUSSIA

WORK ON THE PROJECT

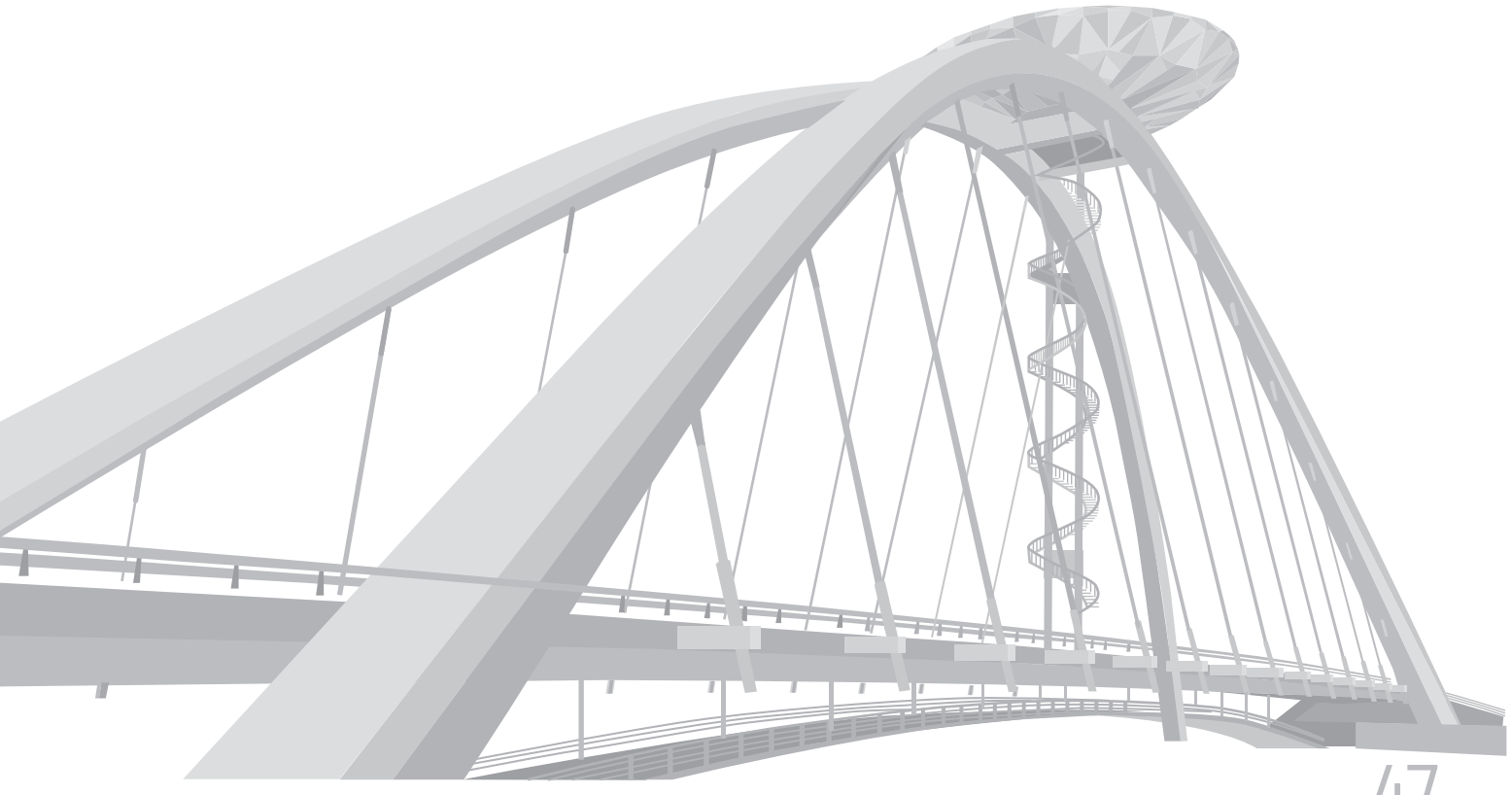
- Architectural conception develop ment

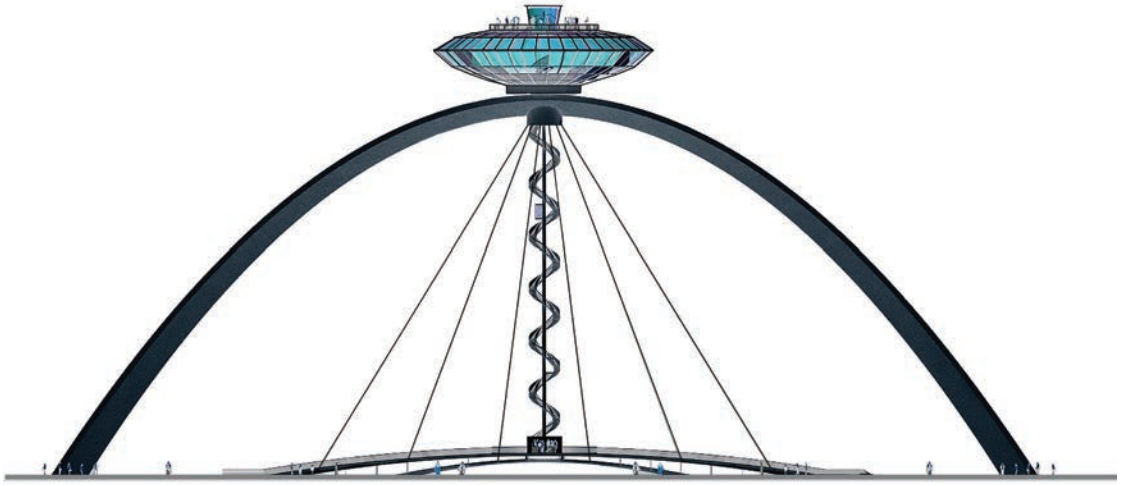
DESIGN OPTION

LANDSCAPING OF KARAKUM RIVER **EMBANKMENT IN ASHKHABAD,** TURKMENISTAN

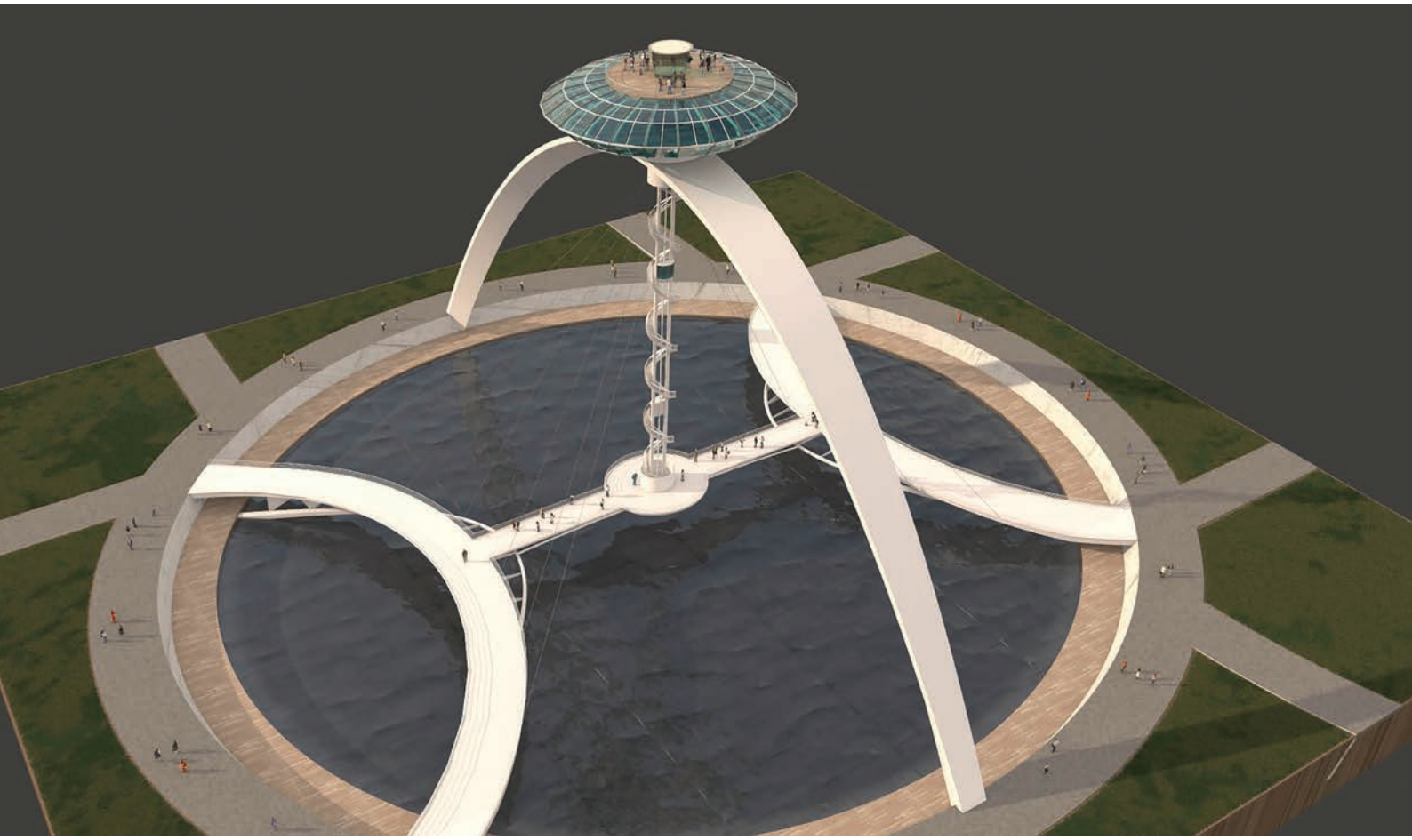
WORK ON THE PROJECT

- Architectural conception development





EMBANKMENT OF THE MIAS RIVER, **CHELYABINSK**, RUSSIA



OUR EXPERTISE




DESIGN

- highway bridges
- railway bridges
- combined bridges
- highways & streets
- road interchanges
- viaducts & flyovers
- footbridges
- transportation tunnels
- underground structures
- embankments & mooring berths
- retaining walls
- reinforced mounds
- buildings & structures of different heights
- sophisticated floors of buildings and structures
- foundations in complex environment status

FULFILLMENT

- general design
- sophisticated engineering analysis
- aerodynamic analysis
- financial estimates completion
- engineering supervision
- protection of intellectual property
- engineering geodetic, geological, meteorological, environment survey
- economic survey
- implementation of research on the construction, repair and maintenance of highways
- design and survey works in concerning of reconstruction and maintenance of any engineering networks and communications
- transportation status modeling
- optimization of public passenger transportation route networks
- macroeconomic analysis for large interregional transport projects
- technological and price audit of DD
- estimation of capital and operating costs for transport facilities
- diagnostics and assessment of the technical condition of roads as well as artificial structures
- certification and inventory of highways
- planning and distribution of needed materials, technical and financial costs for the repair and maintenance of motorways by means of cutting edge automated customized software systems

DEVELOPMENT

- architectural concepts of construction and improvement of embankments, industrial and residential buildings, sports, scientific, concert complexes;
- construction technology of bridge crossings and transportation structures
- projects regarding special auxiliary construction and devices (SAC&D)
- method statements (MS)
- construction method statements (CMS)
- projects for structural renovation, bridge maintenance and transport structures
- traffic management projects
- road maintenance projects
- design of monitoring systems for civil engineering structures
- technical and economic feasibility study
- design and proof of nuclear defense measures
- measures relating environment safety
- measures regarding fire safety
- measures concerning civil defense in case of force majeure
- measures regarding transportation safety
- measures to improve road safety
- strategies, concepts and programs for the development of transportation infrastructure
- integrated traffic management schemes
- concepts of toll collection system for toll roads and development of tariff policies in transport
- financial and economic models

PREPARATION

- tender documentation
- methodological guidelines, recommendations, regulatory and technical documentation
- technological solutions for the protection of nuclear and energy facilities

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