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Ulaştırma Denizcilik ve  
Haberleşme Bakanlığı

Republic of Turkey  
Ministry of Transport, Maritime Affairs and Communications  
General Directorate of Infrastructure Investments



## ISTANBUL STRAIT ROAD TUBE CROSSING PROJECT “EURASIA TUNNEL”

PART 1 (5.4 km) Road Enlargement and Interchange Arrangements

PART 2 (5.4 km) Bosphorus Crossing

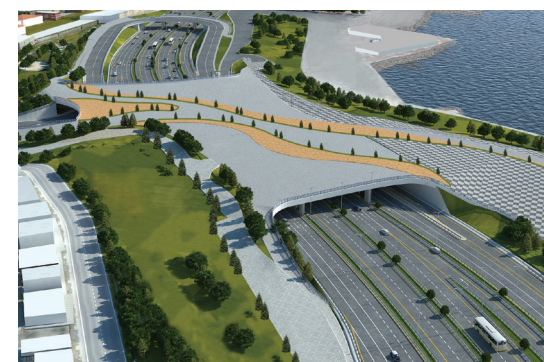
PART 3 (3.8 km) Road Enlargement and Interchange Arrangements



1- KAZLIÇEŞME U-TURN



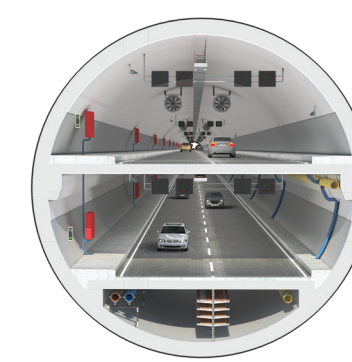
2- SAMATYA UNDERPASS



3- YENİKAPI UNDERPASS



4- EUROPEAN SIDE  
VENTILATION STACK



5- TBM TUNNEL



6- EYÜP AKSOY INTERCHANGE



7- OPERATION BUILDING

Project  
Hotline

0850  
222 80 20



## FINAL DESIGN DISCLOSURE DOCUMENT

### 1. Introduction

This document is drawn up for the purpose of announcing the completion of the design stage of the Eurasia Tunnel Project and sharing the details of the final design aspects, current status of Project construction and stakeholder engagement activities.

### 2. Project

The Eurasia Tunnel Project shall take place between the Cankurtaran coast on the European side and the D-100 Eyüp Aksoy Interchange on the Asian side. The project involves the construction of a double-decked tunnel at a length of 5.4 km passing under the Istanbul Strait (Part 2) and the expansion and improvement of the connection roads at a total length of 9.2 km on the line of Kennedy Street (Part 1) and the D-100 Istanbul-Ankara Highway (Part 3).

The Istanbul Strait Road Tube Crossing Project (Eurasia Tunnel Project) was tendered by the General Directorate of Infrastructure Investments of the Ministry of Transportation, Maritime Affairs and Communications (AYGM) with the Build-Operate-Transfer model in order to contribute to the strait road crossing in Istanbul. The project has been conducted by "Avrasya Tüneli İşletme İnşaat ve Yatırım A.Ş.", founded through the partnership of Yapı Merkezi İnşaat ve Sanayi A.Ş. (Turkey) and SK Engineering & Construction (South Korea).

Within the scope of the project, an Environmental and Social Impact Assessment (ESIA) requirement has been applied in accordance with the legislation and standards of the Turkish Republic and in line with international standards. All relevant ESIA studies are available at project website and at the ESIA Reading Room located in the main site office.

The project received the "Environmental and Social Best Practice Award" in 2015, presented by the European Bank for Reconstruction and Development (EBRD) for successful projects in this field of sustainability.

### 3. Project Design

The design of the Eurasia Tunnel (Part 2) was undertaken by Parsons Brinckerhoff International Inc. (PBI), which is one of most reputable companies in this field, and the design was certified by the firm HNTB as the independent design verifier.

The first and third parts of the project, which are at the length of 9.2 km to work in an integrated manner with the current traffic network of Istanbul as a result of consultations made with relevant public authorities (Istanbul Metropolitan Municipality (IMM), Istanbul Water and Sewage Administration (ISKİ) etc.).

A Coastal Park Reinstatement Plan was prepared in coordination with IMM as committed to in the ESIA Report for the restoration and improvement of the coastal park located on the European side of the Project (Part 1). This plan continues to be developed in accordance with the framework stipulated by the ESIA Report.

The project design was carried according to international standards for Design Change Management Procedure (DCMP). Accordingly, all changes performed on the design dealt with in the ESIA Report were reviewed by environmental and social experts for the project and the design team was guided in terms of possible effects of such design changes.

Some details of the key project design changes are provided below:

#### I. Kazlıçeşme U Turn

Kazlıçeşme underpass has been changed to an overpass for vehicles with pedestrian access. The pedestrian overpass will provide easier access to the seaside for pedestrians and cyclists. Also, the U turn has been shifted 75 metres to the west to minimize the visual impact to the Historic Peninsula (see picture no. 1 on front page).

#### II. Samatya and Yenikapı

The main road (Kennedy Street) was lowered to enhance pedestrian circulation at Samatya and Yenikapı, two at grade pedestrian crossings were created with a length of 50 and 180 metres respectively. In this way, pedestrian circulation capacity and ability to reach the coast, İDO Yenikapı Terminal and Yenikapı City Park, will be increased (see picture 2 and 3 on front page).

#### III. Location and Dimension of Ventilation Stacks

Longitudinal ventilation is used in the Eurasia Tunnel and the gases inside the tunnel shall be discharged at high speed in a controlled manner through the ventilation stacks located on the European and Asian sides. The ventilation stack on the European side was designed as 5 metres in such a way that it would not affect the silhouette of the Historic Peninsula, whereas the ventilation stack on the Asian side was designed as 25 metres. The ventilation system of the tunnel was designed so that it would minimize any negative effects of the tunnel on air quality and comply with international ambient air quality standards (see picture no. 4 on front page).

#### IV. Tunnel Design

A detailed ground survey was performed on the route where the tunnel would pass through and tunnel design safety was ensured in accordance with the results obtained from this survey. The precautions to minimize probable risks of earthquake and tsunamis (seismic joints, tsunami walls, etc.) were included in the project design. The tunnel internal diameter has been increased to 12 metres to ensure static, comfortable driving and driving safety (see picture no. 5 on front page).

#### V. Operation Building and Toll Plazas

Half of the toll gate structures of the Eurasia Tunnel, as well as the operation building, were relocated from the European to Asian side to minimize the structures in the Historic Peninsula. Toll plazas were designed to operate Automatic Toll Collection System (OGS) and Fast Transit System (HGS) in an integrated manner so that the dimensions of such structures were minimized in order not to have any impact to the silhouette of the Historic Peninsula, in compliance with the local Heritage Council requirements (see picture no. 6 and 7 on front page).

#### VI. Marble Tower

The Marble Tower, "Mermer Kule", which is located at Kazlıçeşme and is currently separated from the Historical Land Walls by Kennedy Street, shall be reunited with the Historical Land Wall by shifting Kennedy Street to the south of the Marble Tower. Approximately 5,000 square metre of land to accommodate the new Kennedy Street alignment is planned to be undertaken by IMM.

#### VII. Koşuyolu Overpass

The pedestrian overpass located in Koşuyolu and planned to be reconstructed for the same function within the scope of the project was designed for both pedestrians and vehicles in order to facilitate the access of ambulances to Yeditepe University Hospital. The overpass is being constructed by Yeditepe University.

#### VIII. Medeniyet University Overpass

A side road was designed upon the request of university management and IMM in order to facilitate access to Istanbul Medeniyet University, which has been put into operation on the D-100 Road, Göztepe. Additionally, the pedestrian overpass providing pedestrian circulation between the campuses of the university shall be demolished and reconstructed so that there is convenient disabled access as well.

### 4. Construction Progress

The construction of the Eurasia Tunnel Project commenced on 30<sup>th</sup> January 2013 and the construction period is 55 months. General project progression as of 29<sup>th</sup> February 2016 is at approximately 74%.

The double deck tunnel excavation phase of the project was performed by a tunnel boring machine (TBM). Started in April 2014, the excavation works were successfully completed in August 2015. Other tunnel excavations performed with conventional methods were also completed in May 2015. Interior structures and electromechanical works of the tunnel are still ongoing.

Construction sites were established in Kazlıçeşme, Samatya, Yenikapı and Çatladıkapı on the European side and at Haydarpaşa, Eyüp Aksoy Interchange and Koşuyolu on the Asian side for the access roads. Additionally, road works are ongoing along the Project route.

### 5. Stakeholder Engagement Activities

This chapter of the document summarizes the stakeholder engagement activities since the Final ESIA Report disclosure in 2011.

- The Project designed a transparent and proactive communication strategy. Invitations and requests from institutions were always welcomed, including:

- o Hundreds of national and international universities, authorities and private companies have visited the construction site.
- o Tens of national and international conference invitations have been accepted.
- o Tens of meeting requests have been received from local communities and NGO's such as Professional Chambers and UNESCO World Heritage Centre (WHC). Relevant information has been provided on time.

- As requested by UNESCO WHC, a Heritage Impact Assessment in accordance with ICOMOS Guidelines was prepared in 2014 and provided to UNESCO WHC. Results of this report were reflected in the Project design and construction.

- As local communities on the European side were concerned about the air quality impact of the Project, an additional air quality assessment was conducted by independent experts and a report prepared. The result of this report was provided to concerned stakeholders.

- Active monitoring of neighbouring projects such as the new Kumkapı fish stalls and wholesale fish market is guaranteed. Support and assistance have been given to the relevant authorities and affected people.

- On the Project route, Yaşar Kemal and Turk-Turkmenistan Peace Monument were relocated in consultation with the artists, NGOs and relevant authorities.

- Project work programs and construction methods were managed in accordance with the comments and complaints of the public.

- An ESIA Reading Room, established at the Main Office of EPC Contractor at Haydarpaşa, is open on weekdays from 8 a.m. to 6 p.m., Saturdays from 9 a.m. to 5 p.m. and Sundays from 10 a.m. to 2 p.m.

- The Final Design Disclosure Document is available at the Muhtar's offices along the Project route.

A Project hotline (+90 850 222 8020) was established and all queries and complaints were responded to in accordance with the independent grievance mechanism of the Project (Please see Stakeholder Engagement Plan for Grievance Mechanism details, available on the Project Website).

## Contact Details of the Project

You can contact us through the following communication channels for accessing all ESIA documents and this report or conveying your queries or complaints.

Project Website: [www.avrasyatuneli.com](http://www.avrasyatuneli.com)

Project Hotline: +90 850 222 8020

ESIA Reading Room: Burhan Felek Cad. 1.Çevreyolu Sokak

Main Site Office of the Eurasia Tunnel Project

Haydarpaşa, İstanbul



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Final Design Disclosure Document, March 2016  
Avrasya Tüneli İşletme İnşaat ve Yatırım A.Ş.



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