

An aerial night photograph of a cable-stayed bridge, likely the San Francisco-Oakland Bay Bridge, showing traffic light trails and illuminated towers. The bridge spans a body of water and connects to a highway on a hillside. The scene is dominated by blue tones from the night sky and water, with warm orange and white lights from the bridge and traffic.

# ICA

**2018  
NATIONAL  
REPORT**

# Abbreviation

T.C: Republic of Turkey

KGM: General Directorate of Highways

PPP: Public- Private Partnership

BOT: Built-Operate-Transfer

#: Number

TL: Turkish Liras (Turkey Currency)

ETC: Electronic Toll Collection

OGS: Auto-Pass System with active label

HGS: Fast-Pass System with passive label (sticker)

Contents

Introduction ..... 4

The Network ..... 4

Investments..... 5

    FEATURES OF THE “MENEMEN- ALIĞA- ÇANDARLI” MOTORWAY;..... 6

Financing ..... 6

Traffic ..... 6

Vehicle Classification..... 7

    KEY HIGHLIGHTS..... 7

Tolling system and tolling technologies used ..... 7

Safety ..... 8

MAIN ASECAP KEY FIGURES ..... 9

# Introduction

General Directorate of Highways is the policy & decision maker related to issues about all the access road including motorways in Turkey. Most of the motorways and most of the public roads are operated by General Directorate of Highway on behalf of Republic of Turkey (Municipalities have also control over the public roads). 14% of the motorways, which corresponds to 373 over 2.655 km, are operated by private sector as of 01 January 2019. Since 2012, private sector has started to participate in motorway concession with PPP projects in which BOT business model is preferred. Together with private sector participation, the burden of new infrastructure investments has shared between public-and private sector. Accordingly, new infrastructure investments by private sector has accelerated the amount of investment whereas shortened the period for investments. Still the length of the motorways in Turkey is not adequate and is far beyond the European average. This simply means that, investments on infrastructure especially on transportation will continue with a sharper increase.

# The Network

As of December 18, the length of the Public Roads including both tolled motorways and state roads were 67.620 km. In 2018, total length reached to 68.034 km. Total Motorway length is 2655 km and 373 out of 2655 km are privately operated.



**Figure 1:** Republic of Turkey Road Map

Roads	2018	Under Construction
Total lenght of national roads (km.)	68.034	
Motorway (tolled+untolled)	2.655	
Tolled Motorway by KGM	2.195	
Tolled Motorway conceded by private sector with BOT	373	777

**Table 1:** Length of Motorways



Figure 2: Motorways in Turkey

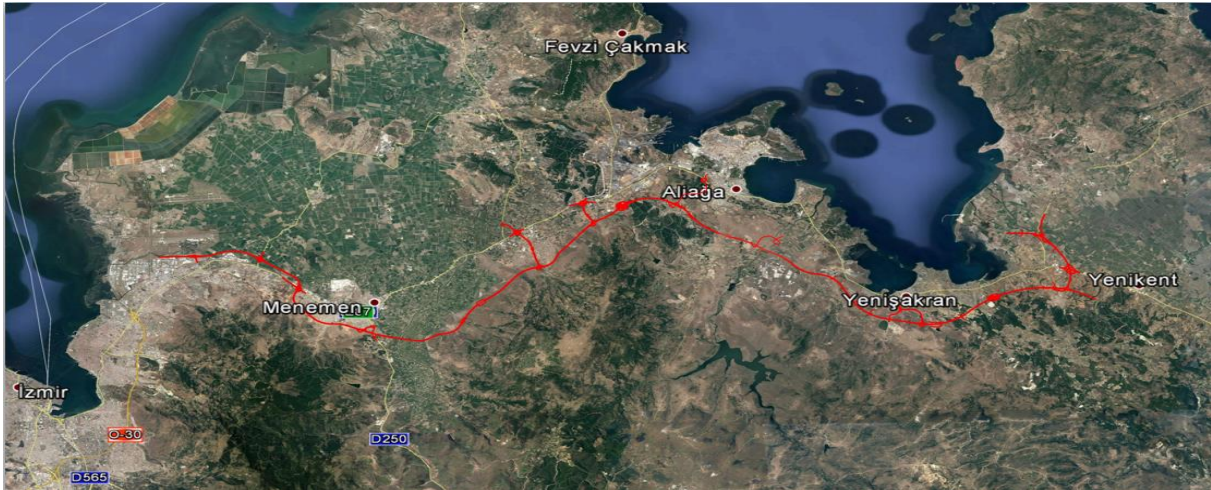
- Tolled Motorways
- Motorways on Construction with BOT Business Model (683.5 km)
- Under Construction Projects (330 km)
- Planned Projects for 2023 (1386 km)

## Investments

ICA continues to its investments with the additional highway section “Hüseyinli - Şile” of the Northern Marmara Motorway. This part is 14 km (including inter connections) long and started to operate in 2018.

Beside the Yavuz Sultan Selim Bosphorus Bridge and Northern Marmara Motorway, ICA has been constructing a new motorway project named “Menemen-Aliğa-Çandarlı Motorway” that just won the bid with Build-Operate-Transfer business model tendered for 10 years of concession including the construction phase. Project will cost about 400 million Euros. Project is planned to be finished in 2019 and remaining 8 years will be concession period. The project, which will link İzmir, Aliğa and Çandarlı Port with high quality roads, will also serve the north-south direction heavy vehicle traffic provided on the existing city roads and will relieve the urban traffic of İzmir. When the project starts operation, the northern axis of İzmir’s peripheral roads will be completed and the Istanbul - Bursa - İzmir Highway will be used more effectively.





**Figure 3: Menemen-Aliğa-Çandarlı Motorway Route**

### FEATURES OF THE “MENEMEN- ALIĞA- ÇANDARLI” MOTORWAY;

14 junction points,

3 service areas,

7 toll collection plaza,

10 viaducts and 11 bridges

Highway Strips: Main road 2x3 lane, connecting road 2x2 lane

Motorway length: 78 km (including connection roads)

## Financing

ICA YSS Bridge & Northern Marmara Motorway is financed by loans and shareholder’s equity. Project also includes government traffic guarantee for both bridge and the motorway sections.

Similar to ICA, most of the motorway projects operated by private sector in Turkey are guaranteed for vehicle passage. In case of a deficiency of vehicle pass, government compensates the difference between projected and realized pass.

## Traffic

The AADT of ICA given below is prepared in accordance with the method that all the other ASECAP Members apply as well. This method provides more consistent, sensible and comparable datas.

<b>Annual Average Daily Traffic</b>	36.325
Light Vehicles	16.574
Heavy Vehicles	19.752

**Table 1: Traffic Data**

Vehicle Classes 1-2 is considered according to KGM as; Light Vehicles (LV)

Vehicle Classes 3-4-5 is considered according to KGM as: Heavy Good Vehicles (HGV)

## Vehicle Classification

VEHICLE CLASS	VEHICLE TYPE
1	TWO AXLE VEHICLES WHOSE AXLE SPACE IS SMALLER THAN 3.20m
2	INCLUDING EVERY KIND OF 2 AXLE VEHICLES OF WHOSE AXLE SPACE IS GREATER THAN 3.20m
3	EVERY KIND OF 3 AXLE VEHICLES
4	EVERY KIND 4 AND 5 AXLE VEHICLES
5	6 and OVER AXLE VEHICLES
6	MOTORCYCLES (ONLY FOR HGS CUSTOMERS)

**Table 2:** Vehicle Types vs Vehicle Classes

### KEY HIGHLIGHTS

VAT for Bosphorus Bridges (Yavuz Sultan Selim, 15 Temmuz Şehitler Köprüsü, FSM Bridge) and for other bridges is 8 %

VAT for the motorways in Turkey is 18 %

Motorcycles who have 6th class HGS-OGS account pay half of 1st class vehicle's fee.

Class 3-4-5 vehicles are prohibited to use 15 Temmuz Şehitler and Fatih Sultan Mehmet Bridge for Bosphorus crossing

Class 2 vehicle is prohibited to use 15 Temmuz Bridge for Bosphorus crossing.

As the toll rates are determined by the KGM with regard to PPP contracts, ICA has no authority for price arrangement.

## Tolling system and tolling technologies used

As mentioned in the introduction part, almost 90 % of the motorways are conceded by KGM. For those motorways, revenue collection is completely carried out only by the ETC system so there is no cash collection toll plaza. It is a mandatory to use ETC System. Because of the explained situation, ETC system usage is a requirements and subscriber number reached **13.230.000** in number.

### ETC Subscriber

ETC Subscribers for tolled motorways in Turkey have reached to **13.230.000** as of 01.01.2019.

There are two kinds of ETC systems available in Turkey which are OGS system that is operated by KGM with the authorized banks and the HGS system that is operated by KGM with the PTT.

### OGS System

OGS (Auto-Pass System) Subscribers: 1.960.000  
OGS is the acronym of DSRC toll collection systems.

### HGS System

HGS (Fast-Pass System) Subscribers: 11.270.000  
HGS is the acronym of RFID toll collection systems

### ETC Pay Toll system – Technology

ETC is used for collecting tolls from motorways and bridges.

Based on DSRC (Dedicated Short Range Communications) technology

Implemented for pre-paid, post-paid and exempted users

Payment without stopping for all vehicle categories for free-flow transactions

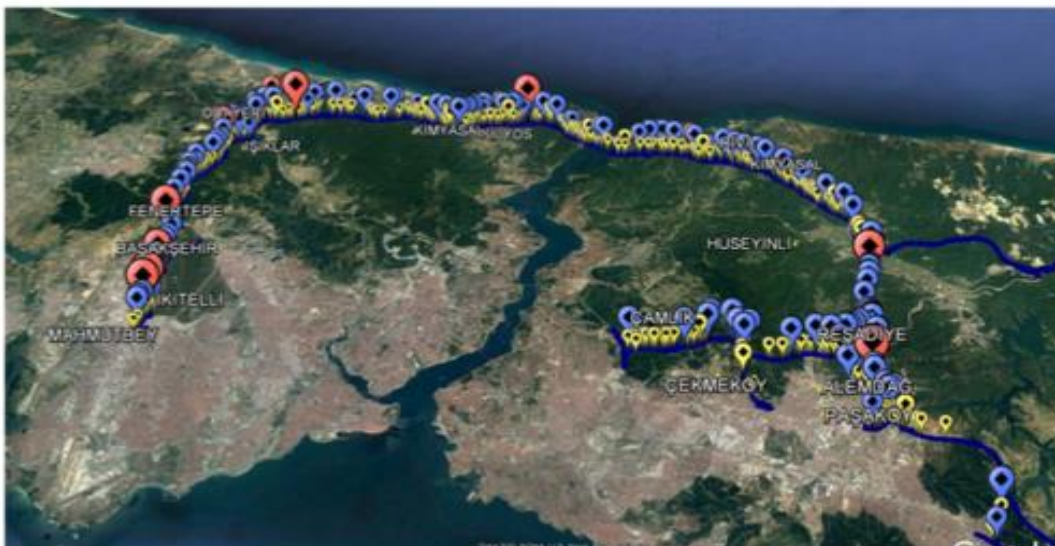
The speed of passing vehicles is limited to 30 km / h for safety reasons

## Safety

Facts related to safety issues on the YSS Bridge and Northern Marmara Motorway are as follows;

Accidents	#
With Property Damage	710
With Injuries	153
With Fatalities	9

Motorway accident statistics are recorded and marked with GIS (Geographical Information Systems) in order to evaluate the accident datas. The frequency of the accidents on the specific location can easily be detected. Periodically, this accident statistics are evaluated and required mitigation measures and precautions are taken to minimize contingency of accidents by traffic management department.





# MAIN ASECAP KEY FIGURES

Country / Year	Turkey 2018
Network length (km)	156.1
1 x 1 lanes (km)	20.6
2 x 1 lanes (km)	46
2 x 2 lanes (km)	13.9
2 x 3 lanes (km)	2.9
2 x 4 lanes (km)	108.1
No. of km in construction	0
VAT %	%8 for Bridge %18 for Motorway
Permanent staff	555
Average daily traffic (LV)	16.085
Average daily traffic (HV)	13.365
Average daily traffic (LV+HV)	29.450
Total number of accidents	710
No. of personal injury accidents	153
No. of dead	6
Fatality rate (No of dead/per km)	$5 \cdot 10^{-7}$
Km travelled (106 x km)	631,7
Number of toll transactions (Total)	23.225.048
Number of free-flow transactions (Total)	84.289.221
Number of toll transactions (Light vehicles)	17.152.248
Number of toll transactions (Heavy vehicles)	6.072.800
No. of toll stations	12
No. of toll lanes	79
No. of ETC lanes	75
No. of ETC subscribers (Total)	N.A
No of service areas(equipped with petrol stations)	6
No. of restaurants	13

An aerial night photograph of a cable-stayed bridge spanning a body of water. The bridge's two tall, white pylons are illuminated, and numerous stay cables fan out to support the deck. The bridge deck is filled with traffic, creating long, glowing light trails in orange and white. The surrounding landscape is dark, with some distant city lights visible on the horizon under a deep blue night sky.

# ICA

**2018  
NATIONAL  
REPORT**