

**Metropolitan Expressway Co., Ltd.**  
**Corporate profile**

**2015**



# Networking People, Communities, and Daily Lives



## Greetings

We at Metropolitan Expressway Company Limited (Shutoko) are involved day and night in the construction, upkeep and management of the Metropolitan Expressway, one of the metropolitan area's major arterials.

The Central Circular Route of the Metropolitan Expressway was fully opened on March 7, 2015, and currently a combined length of more than 310km is available, accommodating some 940,000 vehicles on average each day. Therefore to ensure continuous safety and satisfaction for all our customers, we make it our mission to always observe things from the driver's perspective in order to offer a higher-quality service.

Moreover, since about five times more heavy vehicles use our expressway network compared to local roads in the 23 wards of Tokyo, we have been engaged in thorough inspection and repair of our facilities. Moving forward, we will accurately carry out renewal and repair of aging facilities. – therefore, more than ever before, we are working on a diverse range of tasks, such as thoroughly inspecting and repairing facilities, embarking on large-scale renewals and overhauls of aging expressway sections as well as organizing the network, contending against traffic jams and implementing road safety measures to ensure safe, comfortable driving for all our customers.

Shutoko pledges to continue uniting people, places and lifestyles in the metropolitan area to contribute to the creation of an affluent and comfortable society. To that end, we hope you will continue to understand and support us. Thank you.



菅原 秀光  
Hideo Sugawara, President



## Corporate Profile (as of June 26, 2015)

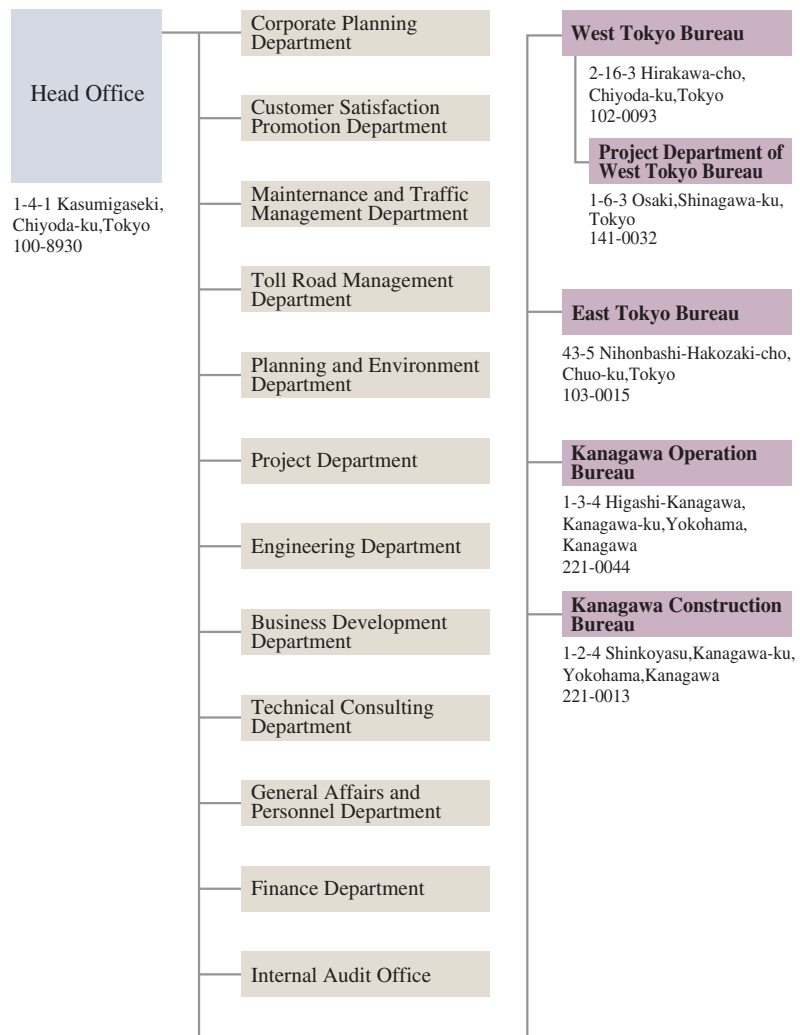
Company Name: Metropolitan Expressway Company Limited
Representative: President Hideo Sugawara
Location: 1-4-1 Kasumigaseki, Chiyoda-ku, Tokyo
Date of Establishment: October 1, 2005
Capital: ¥13.5 billion
Summary of Business: <ul style="list-style-type: none"> <li>• New construction, renovation, maintenance, repair, post-disaster restoration, and other express highway management and co-ordination work</li> <li>• New road construction, renovation, maintenance, repair, and other work on consignment from the national government, local governments, and other entities</li> <li>• Operation, management, and other aspects of parking lots, expressway rest areas, and rental facilities located under elevated sections of highways.</li> </ul>
Employees: 1,069 people (as of March 31, 2015)



**Triangular Stream Logo**

This logo symbolizes the Metropolitan Expressway network that spreads out in three different directions from Tokyo to encompass Kanagawa, Chiba and Saitama prefectures. It also represents the company's stance with regard to supporting people, communities and daily lives through network creation.

## Organization (as of July 1, 2015)





# SHUTOKO NETWORK

Routes in service 310.7km

Routes under construction 18.9km

Ring roads Other routes





Route Mark	Route Name	Segment	Opening Date
C1	Inner Circular Route		July 4, 1967
C2	Central Circular Route	Oi JCT~Kasai JCT	March 7, 2015
1	Route 1(Ueno Line)	Edobashi JCT~Iriya	May 31, 1969
1	Route 1(Haneda Line)	Hamazakibashi JCT~Haneda	December 21, 1966
2	Route 2 (Meguro Line)	Ichinohashi JCT~Togoshi	September 30, 1967
3	Route 3 (Shibuya Line)	Tanimachi JCT~Yoga	December 21, 1971
4	Route 4 (Shinjuku Line)	Miyakezaka JCT~Takaido	May 18, 1976
5	Route 5 (Ikebukuro Line)	Takebashi JCT~Bijogi JCT	October 26, 1993
6	Route 6 (Mukojima Line)	Edobashi JCT~Horikiri JCT	March 30, 1982
6	Route 6 (Misato Line)	Kosuge JCT~Misato JCT	January 24, 1985
7	Route 7 (Komatsugawa Line)	Ryogoku JCT~Yagochi	March 21, 1971
9	Route 9 (Fukagawa Line)	Hakozaki JCT~Tatsumi JCT	February 5, 1980
10	Route 10 (Harumi Line)	Toyosu~Shinonome JCT	February 11, 2009
11	Route 11(Daiba Line)	Shibaura JCT~Ariake JCT	August 26, 1993
Y	Yaesu Route	Kandabashi JCT~Shiodome JCT	February 15, 1973
B	Bay Shore Route	Namiki~Koya	October 22, 2001
B	Bay Shore Branch Route	Showajima JCT~Tokai JCT	February 24, 1983

Route Mark	Route Name	Segment	Opening Date
K1	Route 1 (Yokohane Line)	Haneda~Ishikawa-cho JCT	February 2, 1984
K2	Route 2 (Mitsuzawa Line)	Kinko JCT~Mitsuzawa	March 7, 1978
K3	Route 3 (Kariba Line)	Honmoku JCT~Kariba JCT	March 20, 1990
K5	Route 5 (Daikoku Line)	Namamugi JCT~Daikoku JCT	September 27, 1989
K6	Route 6 (Kawasaki Line)	Kawasaki-Ukishima JCT~Daishi JCT	October 20, 2010
S1	Kawaguchi Route	Kohoku JCT~Kawaguchi JCT	September 9, 1987
S2	Saitama Shintoshin Route	Yono~Saitama-Minuma	August 4, 2006
S5	Saitama Omiya Route	Bijogi JCT~Yono	May 18, 1998

Routes in service (as of July 1, 2015) total **310.7km**

#### Basic Charges for ETC Vehicles

Basic Charge	Vehicle Type Classification	Charging Distances				
		Up to 6.0 km	6.1 km to 12.0 km	12.1 km to 18.0 km	18.1 km to 24.0 km	24.1 km or further
	Standard size car	¥ 510	¥ 610	¥ 720	¥ 820	¥ 930
Heavy vehicles	¥ 1,030	¥ 1,230	¥ 1,440	¥ 1,650	¥ 1,850	

※ If paying by cash, toll charges are ¥930 for a standard size car and ¥1,850 for a heavy vehicle (excluding certain section(s))

※ As of July 1, 2015

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# Management Plan

## Fundamental Principle

**With safe and smooth metropolitan expressway networks, we connect people, communities and lifestyles within the metropolitan area to contribute to the affluent and comfortable advancement of society.**

## Management Principles

### Customers first

In pursuit of safety and comfort, we provide high-quality services that guarantee customer satisfaction.

### Coexistence with local communities

Our goal is to create a better environment and to develop local communities by working together with community members.

### Social responsibility

We build relationships of trust with our customers, community members and investors through our strong ethical perspective and high level of transparency.

### Autonomous management

We manage our business efficiently and soundly, and aggressively expand our operations into new business fields.

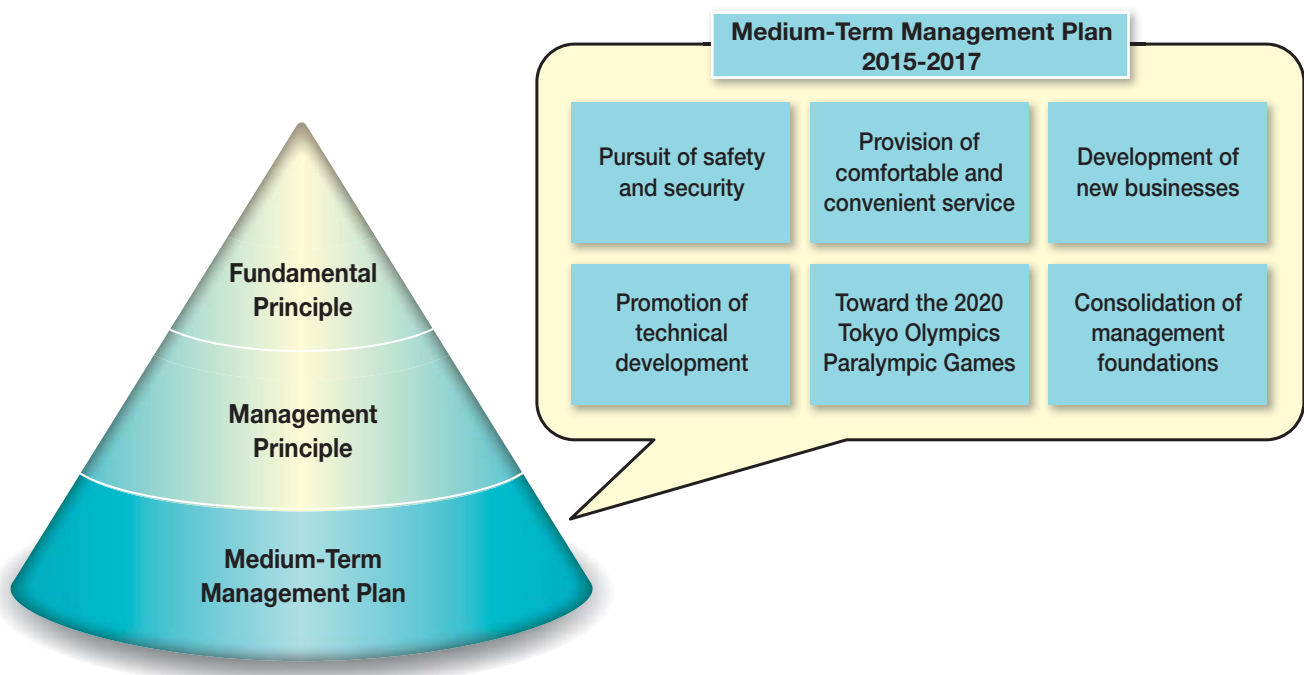
### A vibrant work environment for employees

We create a work environment in which our employees are able to develop their own abilities, allowing them to develop a sense of pride and achievement.

## Medium-Term Management Plan (2015 to 2017)

As part of the 10th anniversary of our incorporation, we established our “Medium-Term Management Plan 2015-2017”. We will pursue safety, security and comfort, and always support people, communities and lives in Tokyo with the keywords “Safety, Security, and Comfort” and “People, Community, and Lives” through returning to our fundamental principles.

The entire Metropolitan Expressway Group will provide a safe, secure, and comfortable Metropolitan Expressway by promoting the policies stipulated in the Medium-Term Management Plan.

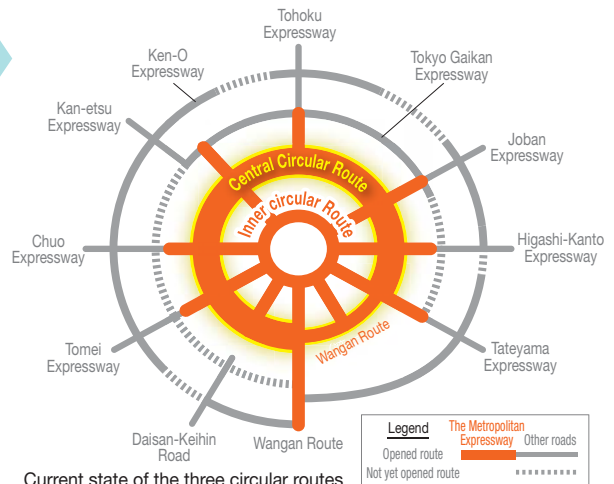


# Opening of the Entire Central Circular Route

## “The First Ring of The Three Circular Routes” Finally Completed!

The Central Circular Route, together with the Ken-O Expressway (the Metropolitan Inter-City Expressway) and the Tokyo-Gaikan Expressway (the Tokyo Outer Ring Road), forms the metropolitan three circular routes. It is the innermost circular route of the three, located within an 8km radius from the center, and it has a length of about 47km.

Linking sub-centers, such as Shinjuku and Shibuya, as well as the bay area is expected to reinforce these regions and lead to strengthened international competitiveness for the Metropolis. The last part of the Central Circular Route, 9.4km between Ohashi JCT and Oi JCT, opened on March 7, 2015. With this, the first ring of the three circular routes was completed half a century after it was conceived and planned, and 33 years from the initial opening in 1982.



## Main Effects of Opening the Route

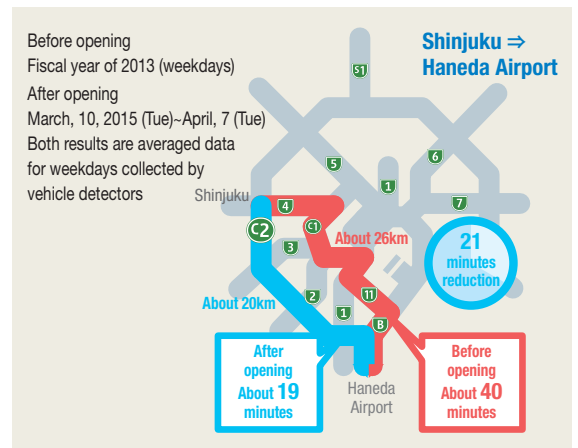
### Time Savings

#### Haneda Airport becomes more accessible

Access to Haneda Airport from city sub-centers such as Shinjuku and Shibuya, as well as from Kan-etsu Expressway/Tohoku Expressway, is dramatically improved.

During the month after opening, the average time (from 11:00am to before noon during weekdays) required from Shinjuku to Haneda Airport was 19 minutes - 21 minutes shorter than prior to its opening.

※The average time is from Nishi-Shinjuku JCT to Airport Chuo Exit. These results were taken from observations by vehicle detectors, and they may differ from the actual time.



As a result of improved access to Haneda Airport, some positive economic effects have already appeared, such as timetable revisions for buses to and from the airport due to expected time savings, as well as partial reductions in flat rate fares for taxis connecting Haneda Airport and Tokyo.

### Access is Improved

#### Leisure facilities in the bay area are now within arm's reach.

There are a number of leisure and commercial facilities along the Wangan Route, which is linked to the Central Circular Route. Using the Central Circular Route from Tomei Expressway/Chuo Expressway/Kan-etsu Expressway/Tohoku Expressway makes those facilities accessible.

#### Tourist destinations are now accessible - not only in the metropolitan area, but all over Japan.

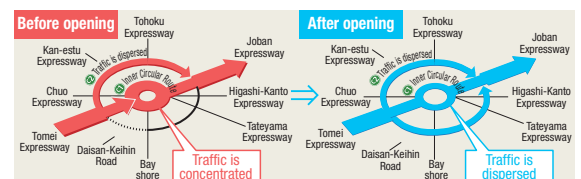
Since the Central Circular Route is linked to Tomei Expressway/Chuo Expressway/Tohoku Expressway, which reach all over Japan, more tourist destinations and one-day trips are now available via expressways.

### Alleviation of Congestion

#### Through traffic on the inner side of the Central Circular Route is dispersed.

Through traffic which is concentrated in the center of Tokyo is dispersed due to the opening of the entire Central Circular Route, resulting in reduced congestion and overcrowding in the center of the city.

During the month after opening, the traffic volume on the Inner Circular Route was reduced by 5% and time lost to congestion \*2 on inner roads of the Central Circular Route \*1 was reduced by 50% compared with the situation prior to opening.



Before opening March 10, 2014 (Mon) to April 7 (Mon)  
 After opening Average data on weekdays from vehicle detectors from March 10, 2015 (Tue) to April 7 (Tue)  
 ※1 Central Circular Route and Wangan Route are not included.  
 ※2 Length of delays due to traffic compared to expected driving time at the speed limit

### Opening ceremony of the entire Central Circular Route was held on a grand scale in Yamate Tunnel.

The opening ceremony for the Central Circular Route (Ohashi JCT to Oi JCT) was held near the Gotanda Exit in Yamate Tunnel with the theme being a “Ceremony to connect expectation, joy and gratitude.”

At the opening ceremony, many primary school students and their families participated in ribbon-cutting, opening a decorated paper ball, and riding for the ‘first pass’. During the first pass, famous cars and next-generation cars representing the 50-year-history of the Metropolitan Expressway, as well as limousines/tour buses and trucks symbolizing improved access to Haneda Airport/Tokyo Port and consolidation of logistics, appeared one by one, resulting in a very successful ceremony.



The opening ceremony for the Central Circular Route

# Renewal Plan for the Metropolitan Expressway

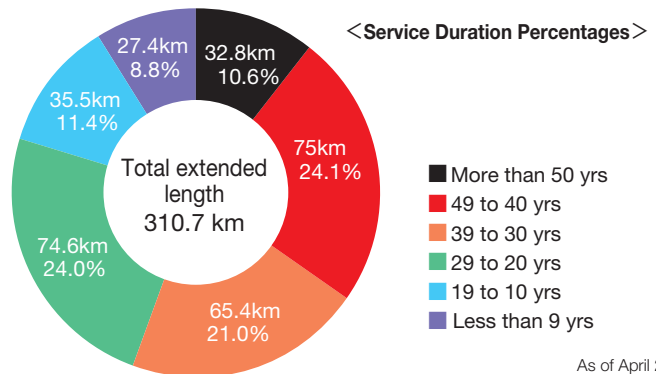
## Efforts toward implementing the Large-scale Structural Renewal of the Metropolitan Expressway

### Our Status at Present

#### Progressive Aging

■ **Approximately 50% of routes have been in use for more than 30 years.**

Of the route network extending about 310 km, some 40% (approximately 110 km) has been in service for more than 40 years while some 60% (approximately 170 km) has been in service for 30 years, which means the expressway is getting old.

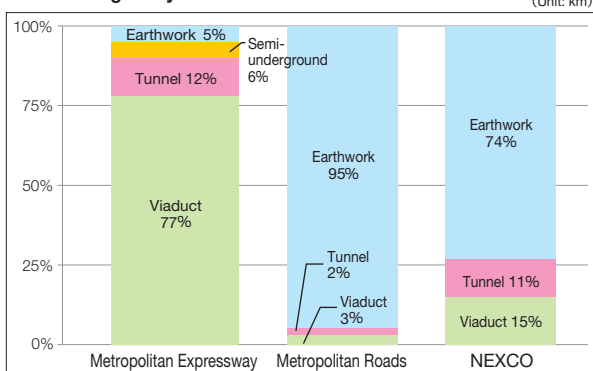


#### Extremely Detailed Maintenance Management Required

■ **High Percentage of Structured Expressway**

Some 95% of the Metropolitan Expressway (Shutoko) is taken up by structures including viaducts and tunnels requiring extremely detailed maintenance, which is a percentage markedly more than other roads.

**<Road Lengths by Structure>**

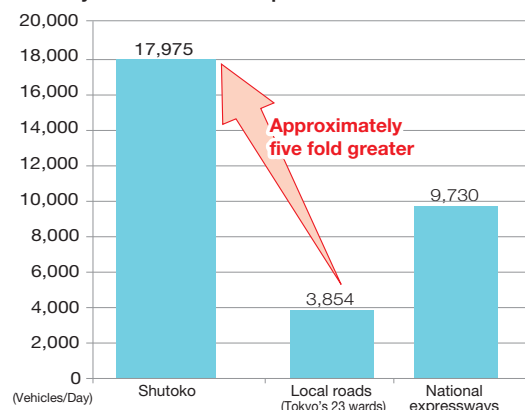


Shutoko : As of April 2015  
 Metropolitan roads : As of April 2007  
 (according to the homepage of Tokyo Metropolitan Government Bureau of Construction)  
 NEXCO : According to the Handbook of Expressways 2013 (FY of 2013)

#### Harsh Usage Status

Shutoko is exposed to harsh treatment with a “through the day” average of some 940,000 vehicles using it every day (FY2014), and heavy vehicle traffic reaching five times that of the heavy vehicles on the roads of Tokyo’s 23 wards.

**<Heavy Vehicle Traffic Comparisons>**



Source : Road Traffic Census (2010)  
 Spot checks of heavy vehicle traffic volume on any given weekday for Shutoko, local roads and national expressways  
 (Figures derived by dividing total of heavy vehicle traveler kilometers over 24 hours on a weekday by overall road length)

### Inspections and Repairs

**Accurate inspections and repairs are the keynotes to ensuring safety and peace of mind**

#### ■ Implementing Planned Repairs

For damage discovered by inspection, types that could affect the overall structure of the road and/or those that represent a risk of injury to third parties (A rank damage) are immediately and permanently dealt with to ensure safety. Damage not requiring an immediate response but still requiring repair/reinforcement and/or further investigation (B rank damage) is reviewed to prioritize the order of repair and then planned repairs are implemented. As well as, taking into consideration the affect on traffic from repairs, actual road work is conducted at times when traffic is light, with lane and hard shoulder restrictions put in place, and work conducted within a limited time frame.



Resurfacing Work



Expansion Joint Replacement





## Renewal Plan

### Large-scale renewals and large-scale repairs that ensure safety and satisfaction on Shutoko over prolonged periods

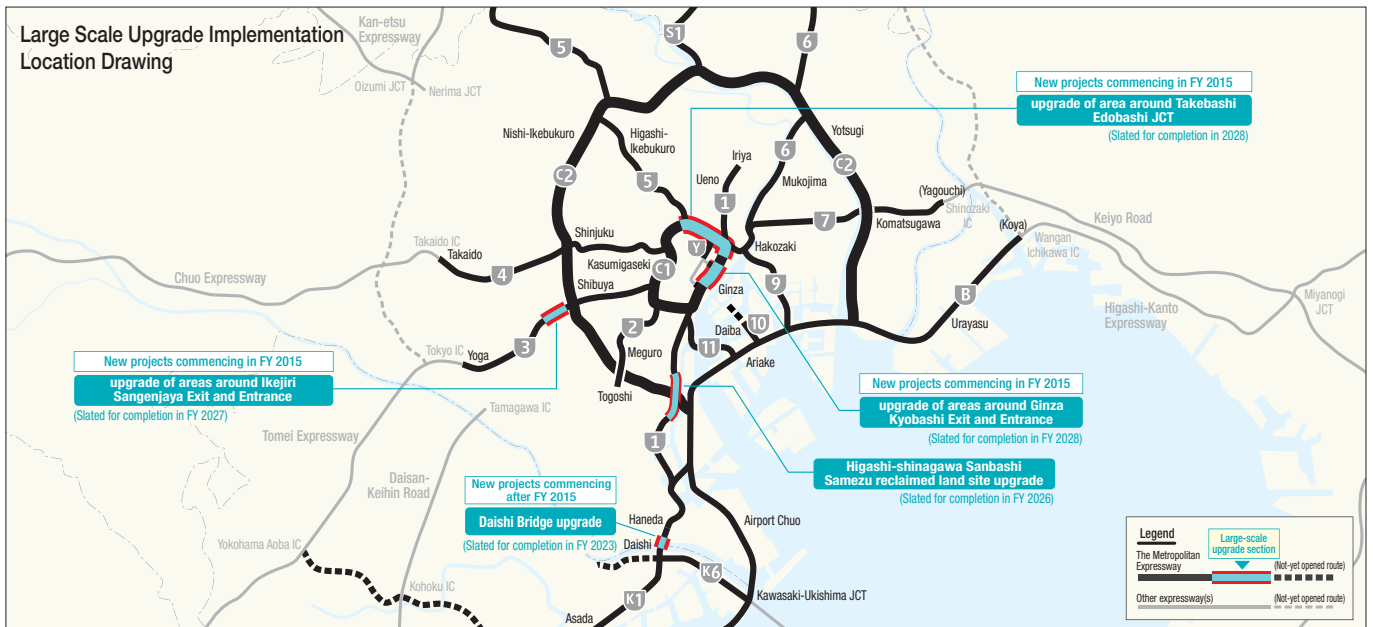
To keep structures on the Metropolitan Expressway safe, we employ various methods to meticulously inspect day and night and then implement repairs according to the results of inspections. However, we are finding more and more damage due to aging and harsh use, and we are at a juncture where we are also discovering critical damage.

Our response at Shutoko is unfolding in ongoing deliberations on an expressway renewal plan as we carefully examine the problems that come with maintenance management of structures and the actual damage status, so as to continue providing a reassuring expressway network built on the foundations of safety, so that Shutoko will still be a highly important and resilient expressway network serving the international city of Tokyo even in a hundred years time.

### Shutoko Renewal Plan

At Shutoko, we have taken on board the recommendations (January 15, 2013) made by the research committee tasked with reviewing approaches to large-scale renewal of Shutoko structures, and have deliberated over the expressway renewal plan (large-scale renewals and large-scale repairs).

On December 25, 2013, based on the above recommendations, we again carefully investigated the state of problems and damage related to structures and the maintenance management efforts. In particular, the discovery of major damage. And, as a result of investigating locations that should be renewed or repaired on a large scale, we have put together a plan – “The Metropolitan Expressway Renewal Plan (draft)”.



### Example of Large-scale Renewal

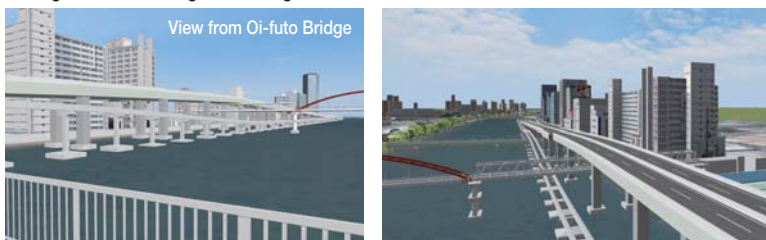
#### ■ Section between No.1 Haneda Route Higashi-Shinagawa Sanbashi and Samezu Reclaimed Land

On No. 1 Haneda Route (Higashi-Shinagawa Wharf), which is built over seawater, there is very little space between the sea and the bridge girders, so inspections and repairs are extremely difficult, and various points of large scale damage, including crumbling concrete and corroding metal brought on by the corrosive environment, have been discovered.

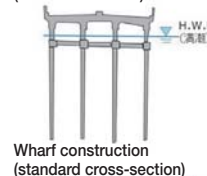
Again, on No. 1 Haneda Route (Samezu reclaimed land area), the structure is the equivalent of temporary construction, and is showing major signs of road surface subsidence.

Both of these locations require large-scale renewal work due to their damage and to the fact that their structures are not suitable for prolonged use.

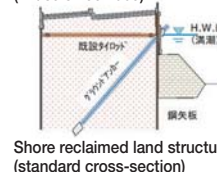
<Image of renewed Higashi-Shinagawa Sanbashi/Samezu reclaimed land on Haneda Route 1>



Higashi Shinagawa Wharf (in use since 1963)



Samezu reclaimed land (in use since 1963)





## Developing the Network

Developing the Network and Implementing Countermeasures against Bottlenecks for the Smooth Flow of Traffic in the Metropolitan Area



# Pushing Ahead with Congestion Countermeasures to make the Metropolitan Expressway a Smooth, Comfortable Drive

## Shutoko Congestion Countermeasures

Although the network adjustments we have conducted up until now has reduced congestion, mainly in the Inner Circular Route, issues still remain, such as increasing congestion around the Central Circular Route.

Therefore we will aim to provide a smooth and comfortable Metropolitan Expressway by establishing the “Metropolitan Expressway Vision for Enjoyable Driving”, a comprehensive plan which includes features such as advanced traffic information, improved traffic signs, and lane marking, as well as measures to alleviate bottlenecks, such as road network adjustments and increasing traffic lanes by widening routes.

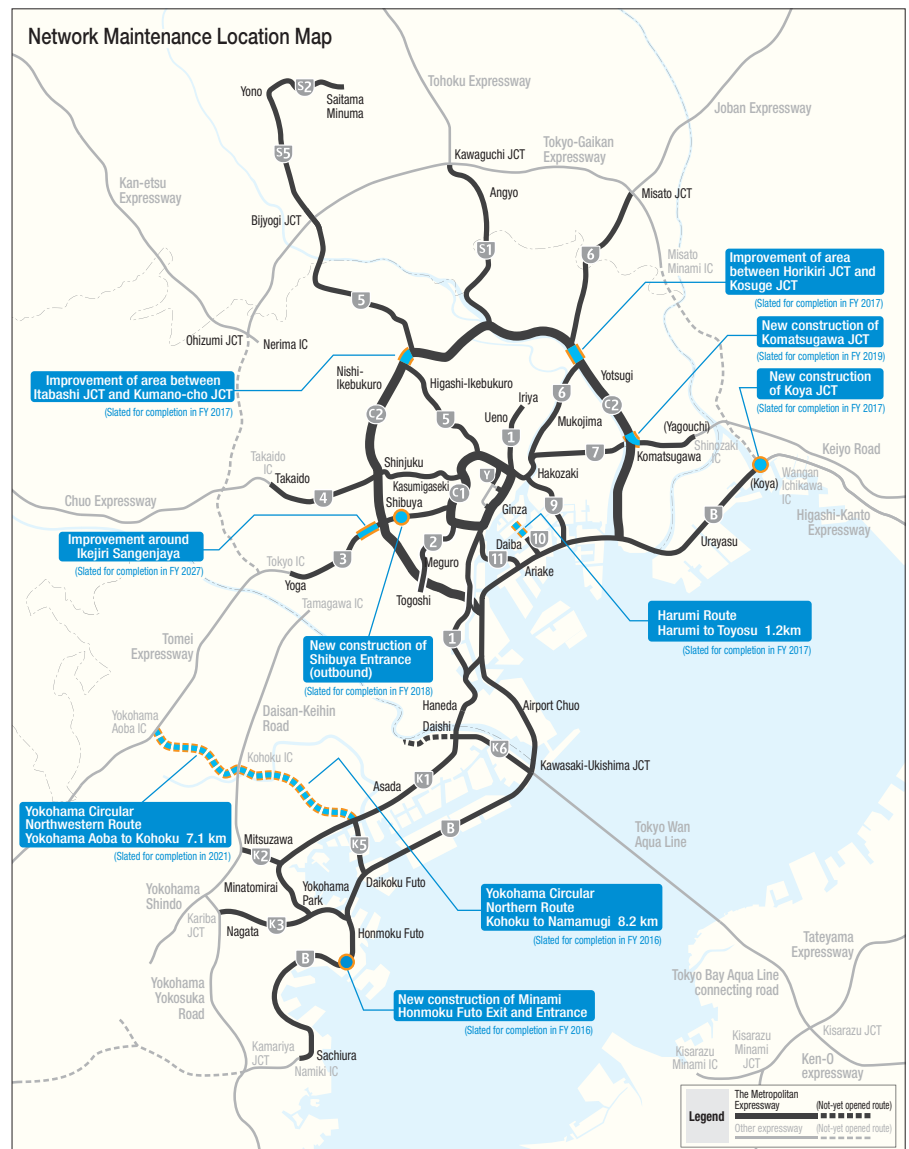
Types of Congestion	Traffic reduction measures		
Congestion due to concentrated traffic (85%)	<b>Measures to alleviate reduced uphill speeds.</b> <ul style="list-style-type: none"> <li>Establishment of additional lanes</li> <li>Warnings via signs and road markings.</li> <li>Prevention of speed reduction due to escort lights</li> <li>Display of messages encouraging speed recovery</li> </ul>	<b>Measures against concentrated traffic</b> <ul style="list-style-type: none"> <li>Network facilities that are under construction</li> <li>Provision of wide-area traffic information</li> <li>Announcement of high-traffic days utilizing a traffic prediction calendar</li> </ul>	<b>Junction-related measures</b> <ul style="list-style-type: none"> <li>Increase in lanes through widening</li> <li>Operational changes at junctions according to changing traffic demands over time. (controllable channelization)</li> <li>Improvement of lane markings according to traffic conditions</li> <li>Coordination of inflow at entrances</li> </ul>
Congestion due to accidents and broken-down cars (11%)	<ul style="list-style-type: none"> <li>Rapid removal of crashed/broken-down vehicles</li> </ul>		
Congestion due to road construction (4%)	<ul style="list-style-type: none"> <li>Increased efficiency and grouping of road construction, expanded detouring around construction sites</li> </ul>		

## Expressway Network Development

We will conduct adjustments of our road network, such as the Yokohama Circular Northern and Northwestern Routes, where we will strengthen the link between Northwest Yokohama and the center/bay area of Yokohama.

## Bottleneck Countermeasures

To improve functions of the Central Circular Route, such as the rerouting and dispersing of traffic, we will make improvements between Itabashi JCT and Kumano-cho JCT as well as Horikiri JCT and Kosuge JCT.



# Perennial Pursuit of a Metropolitan Expressway That Is Convenient,

## Network under Construction

### ■ Harumi Route

The Harumi Route is expected to contribute greatly to alleviation of Inner Circular Route congestion.

Construction of the route began in 2001, and the area between the Toyosu exit and entrance and Shinonome JCT opened in February 2009. We are continuing construction with an eye towards early completion in the area between Harumi and Toyosu.

In 2015, we will carry out construction on the substructure and superstructure of an elevated bridge between Harumi and Toyosu.



Harumi Route Foundation construction



Harumi Route Lift-up barge construction

### ■ Yokohama Circular Northern Route

The Yokohama Circular Northern Route is a route forming the northern part of the Yokohama Circular Route.

Full networking with the metropolitan expressways in Yokohama is expected to contribute greatly to revitalization of the Shin-Yokohama, Yokohama Port, and Keihin Bay areas.

In 2015, we will begin construction of internal facilities for a shield tunnel and superstructure work for Namamugi JCT and Kohoku JCT.



Northern Route Shield tunnel interior



Northern Route Complete view of Namamugi JCT

### ■ Yokohama Circular Northwestern Route

The Yokohama Circular Northwestern Route is a route connecting the Tomei Expressway (Yokohama Aoba IC) and Yokohama Circular Northern Route/Daisan-Keihin Road (Kohoku IC). The completion of this route and the Yokohama Circular Northern Route forms a single route and increases convenience for a wide range of traffic by connecting the northwest part of Yokohama, the Tomei Expressway and sub-centers of Yokohama, Haneda Airport, and Tokyo Wan Aqua Line.

In 2015, we will acquire land and begin substructure and superstructure work for Kohoku JCT and substructure work for Yokohama Aoba IC/JCT.



Northwestern Route Visualization of completion (around Yokohama Aoba IC)

### Word from Our Staff

#### Inoue Daisuke

Design Department of Kanagawa Construction Bureau

I'm mainly engaged in design work for bridges on the Yokohama Circular Northern and Northwestern Routes. I do my work feeling a sense of fulfillment, accomplishment and responsibility because the results of my work each day is directly reflected in the structure. I'm personally looking forward to the completion of the Yokohama Circular Route. I want to contribute to a Metropolitan Expressway which drivers can use with "safety, security and comfort" by devoting myself to my studies and work.





# Comfortable, and Eco-friendly

## Bottleneck Improvement

● In order to improve efficiency provided by the Central Circular Route network, we will promote projects that enhance its function.

### Improvement of the area between Itabashi and Kumanochō JCT

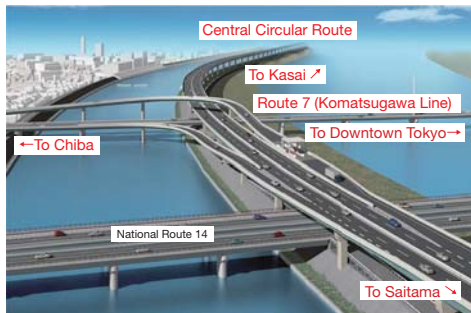
Since there are merging and separation points in a short section between Itabashi JCT and Kumanochō JCT where the Route 5 Ikebukuro line and the Central Circular Route connect, the traffic intersects and generates congestion in three lanes on one side depending on the time of day. This project is intended to alleviate the congestion by widening the road at this section to four lanes on one side. In 2015, substructure work and bridge pier work will begin. Due to this construction, evening lane restrictions will be implemented up to and through-out the summer of 2016.



Itabashi Kumanochō Bridge pier work

### Komatsugawa JCT construction

There is no road near Nishikomatsugawamachi in Edogawa-ku that provides access to either the Route 7 (Komatsugawa Line) or the Central Circular Route that intersect at that area. In order to respond to this issue, a road will be constructed that will connect the northern part of Tokyo (toward Saitama) with the southern part of Tokyo (toward Chiba). This project expects the central circular route to be fully functional and be able to promote diverting and breaking up of traffic which tends to concentrate in the center, as well as being able to alleviate the congestion. In FY 2015, we will perform substructure and bridge pier work on the land section and substructure and superstructure works on the river section.



Rendering of the completed project

### Improvement of the area between Horikiri JCT and Kosuge JCT

The area between Horikiri JCT and Kosuge JCT on the Central Circular Route (inner lanes) currently generates chronic congestion on three lanes on one side because of heavy use and because of merging and separation points in a short span causing traffic to intersect. This project is intended to alleviate congestion by widening the road at this section to four lanes on one side. In 2015, we will perform substructure work and bridge pier reinforcement work.



Rendering of the completed project



**A Word from Our Staff**

**Suzuki Yuya**

Design Division of Kanagawa Construction Bureau

I am engaged in design work for a tunnel alarm panel on the Yokohama Circular Northern Route. This is an important facility for blocking entry into the tunnel and preventing secondary disasters by informing drivers about accidents such as fires. I am dedicated to designing the facilities each day from the driver's perspective so drivers can use the Metropolitan Expressways with no concerns. I strive to provide the "safety, security and comfort" for the Metropolitan Expressway that drivers have become so familiar with.





# Maintenance and Management

Working around the Clock 365 Days a Year to  
Ensure the Safety and Comfort of Customers



# Nonstop Maintenance—The Cornerstone of Road Safety

## Precise Inspection and 24-hour System Maintenance

Inspection is the key to maintaining the Metropolitan Expressway. By performing inspections, damage to structures can be detected in advance and decisions to make repairs can be made based on inspection results. It would be unacceptable if the expressway facility functions that allow smooth operation were to stop. With a permanently stationed staff, we monitor, operate and maintain around the clock all the systems involved in traffic control, facility control, toll collection, tunnel disaster prevention and multiplex communication.



Tunnel inspections using boom lifts



Detailed inspection work

## Road Cleaning Operations

The garbage and silt collected annually by Shutoko amounts to approximately 2,000 tons. Even a single empty can left on a road may cause a major accident. To ensure the safety of all drivers on all routes, regular cleaning operations are performed on road surfaces throughout the Metropolitan Expressway as well as parking areas and other road facilities to support the more reassuring and satisfying use of those infrastructures.



Tile cleaning inside a tunnel

## Structures and Preventative Maintenance

A variety of repair and construction reinforcement activities is being carried out on expressway structures to ensure safety. Metropolitan Expressway is extending the life of its structures by not only repairing damaged structures but also adopting preventative repair methods. To implement the proper maintenance of road assets, we also make full use of inspection data, to pick out locations to be prioritized for repair as well as implement planned, efficient repairs in order to properly conduct maintenance management of our expressway asset.



Eliminating expansion joints

## Emergency Response System

An emergency response system is in operation around the clock 365 days a year to take care of road repairs and damage to facilities due to traffic accidents, retrieve fallen objects that obstruct traffic, and conduct other work vital to keeping the expressway network safe and functioning.



Emergency repair work

# Scrupulous Safety Measures Implemented from All Possible

## Executing Steel Structure Inspections and Fatigue Damage Countermeasures

The Metropolitan Expressway is battered from long, harsh use, and some of its structures, such as steel girders, steel floor plates and steel piers, are showing signs of fatigue damage. In addition to visual checks, such damage is discovered through magnetic particle examination, ultrasonic testing, and other nondestructive inspections. To ensure the safety of roads which are subjected to increased heavy vehicle traffic and other harsh conditions, we will make concerted efforts to detect damage at an early stage, and make repairs and reinforcements as the need arises, to proactively implement countermeasures against steel-structure fatigue.



Laying down SFRC pavement as a plate deck fatigue countermeasure

Ultrasonic testing on steel base plates

Magnetic particle examination conducted on steel girders



### A Word from Our Staff

#### Yamamoto Hiroki

Maintenance Design Division No. 2 of East Tokyo Operations Bureau

I am engaged in repair and maintenance design for worn-out tollgates and parking lots as well as earthquake resistance inspections of control facilities for roads. In my design work, I devote myself not only to maintaining the safety and security of the Metropolitan Expressway but also to creating a space that drivers can comfortably use. In the future, I want to make the Metropolitan Expressway more friendly and attractive by improving environmental and scenic aspects in addition to further safety, security and comfort measures.

## Enacting Metropolitan Expressway Facilities Safety Month

Each June has been designated as “the Metropolitan Expressway Facilities Safety Month”. All employees participate in activities to raise their safety awareness, such as Metropolitan Expressway viewings where employees inspect under elevated roads, as well as inspection/repairing demonstrations during which they actually touch inspection equipment at repair work sites.



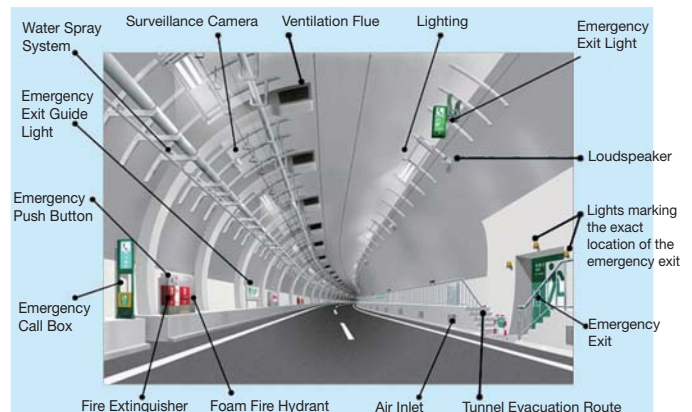
Metropolitan Expressway Watching in progress

## Tunnel Disaster Prevention and Safety Measures

We install various disaster prevention facilities into our tunnels to ensure that customers can safely evacuate if by chance there is a tunnel fire. We also watch over our customers 24 hours a day from our control center. We have also introduced the Shutoko Emergency Motorbike Team, the first ever designated two-wheel emergency unit run by a private enterprise in Japan, to swiftly take the initial response when an accident occurs in the Yamate tunnel, and, thanks to the team, safety in the city’s long, big tunnel is getting even better.



Metropolitan Expressway motorcycle patrol



Yamate Tunnel disaster prevention equipment



## Traffic Safety Measures

So that drivers can use the Metropolitan Expressway safely, warnings are provided with information on road shapes and traffic conditions ahead using colored pavement, thin surfacing, striped curve warning signs, and large warning signs. Every effort is made to prevent serious accidents caused by pedestrian entry or drivers on the wrong side of the road. In addition to “No Entry” boards located at all entrances and exits, there are road signs placed at entrances that designate an expressway; road arrows at exits to prevent entrances from the wrong direction; warning signs, rubber poles, and LED no-entry signs which flicker at night; large-sized warning signs; and trial operations have begun for a “pedestrian entry/reverse driving detection/warning system”. Furthermore, starting in 2015, high brightness arrow boards will be installed as strengthened measures against U-turns and driving in reverse at merging sections such as JCTs and entrances.



Signboards and road surface classified by color according to direction of travel (Ohashi JCT)



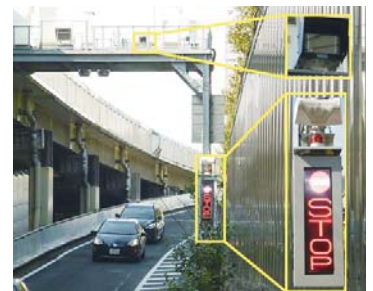
Measures against pedestrian entry (Shibuya Exit of Route 3 Shibuya Line)



Colored warning pavement (Around Kiba of Route 9 Fukagawa Line)



Large warning signs



Pedestrian entry/reverse driving detection warning system

## Safe Driving Support and Enlightenment

We have conducted awareness-raising activities related to traffic safety, such as campaigns and workshops. In addition to addressing safe driving and fall prevention with brochures, posters, and traffic safety campaigns, we collaborate with relevant organizations such as the highway patrol and police to combat violators of vehicle regulations and reckless drivers 24 hours a day. Additionally, in August 2007, we started the “Tokyo Smart Driver Project” which intends to reduce the accidents on the Metropolitan Expressway using the power of communication, and have promoted the benefits of traffic safety by participating in events and implementing campaigns.



Traffic Safety Campaign (Kawaguchi PA)



Traffic Safety Event at Ginza Willow Festival



“Home Pato,” a patrol car for praising good driving



**A** Word from Our Staff

**Yoshikawa Mao**

Planning and Environment Department of Kanagawa Operation Bureau

I am engaged in planning of traffic signs/traffic lanes and traffic safety/remedial measures for congestion in the Kanagawa area. Since drivers have many different destinations, we are contemplating how to make our information signs located on major and local roads as easy to understand as possible so that everyone can drive with peace of mind. I will continue to strive to enable drivers to use the Metropolitan Expressway in greater comfort and safety.



# Driving Support

Providing Support to Drivers for  
Greater Comfort and Convenience



# Providing Traffic Information for Comfortable Driving.

## Traffic Control and the Provision of Information

In order for drivers to use our network in safety, security and comfort, we strive to handle car accidents and collect falling objects rapidly by patrol car, as well as operating our traffic control system 24 hours a day, 365 days a year.

Traffic information is provided to drivers in real time by processing continuously updated data rapidly using our traffic control system. The information is provided through various media depending on the location. On our website and mobile website (toll and route pages), drivers can find out the time needed to get their destinations using route and statistical data.



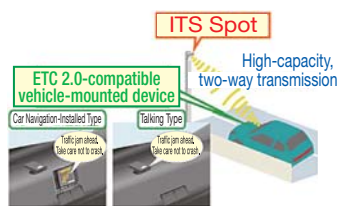
Graphical information board

## ETC 2.0 on the Metropolitan Expressway

Services provided in approximately 170 locations across all the Metropolitan Expressway

[ ETC 2.0 is.... ]

A service which provides information via high-speed/high-capacity transmission between ITS spots on the roadside and ETC 2.0-compatible vehicle-mounted device/car navigation mounted on cars.



The service allows transmission of extensive traffic information making it possible to choose routes wisely, and reduce scary moments while driving by giving prior warning of approaching sharp curves.

### [Example] Chuo expressway ⇒ Kasumigaseki (4) Inbound

### Collecting Information

Road patrol car

Vehicle detector

Motorbike Team

Traffic control TV camera

### Processing Information

Traffic control room

### Providing Information

display in turn

Alternating displays of congestion distance and travel time

Sign displaying travel times

“Metropolitan Expressway Navi” at a parking area.

Toll and Route Guide

ETC2.0

# Improvement for Even More Appealing Parking Areas



Yoyogi Parking Area



Power generating equipment that uses natural energy(Yoyogi Parking Area)



Renewed Daikoku Parking Area No. 2 Hall



Renewed Heiwajima (Inbound) Parking Area Cafe

## Parking Areas

We manage 20 parking areas so that our customers can enjoy driving on the Metropolitan Expressway. In addition to providing each parking area with restrooms, a rest area, and an information corner, we have installed handicapped parking and multipurpose restrooms as part of our efforts to create barrier-free facilities. Consideration is given to the use of colorful decorations and associated designs, as well as universal design, the environment, and other areas to make each parking area safe and pleasurable for all customers. Additionally, we are promoting the use of natural energy to lighten environmental impact.

We are introducing highly approachable urban-style parking areas, such as building patio. next to parking area stores to make drivers feel relaxed as well as providing 24-hour services with automatic super delices (ASD).

※ASD stands for "Automatic Super Delice." It is a new automatic convenience system providing the convenience and enjoyment of shopping that customers receive at a convenience store but which has the ease-of-use of a vending machine.

### Metropolitan Expressway Parking Areas

	Restaurants / Snack Bars
	Information Corner
	Shops (e.g., convenience stores)

All parking areas have the following facilities.

- Restrooms
- Multipurpose restrooms
- Pay phones
- Vending machines
- Handicapped parking
- Printer for issuing ETC usage details

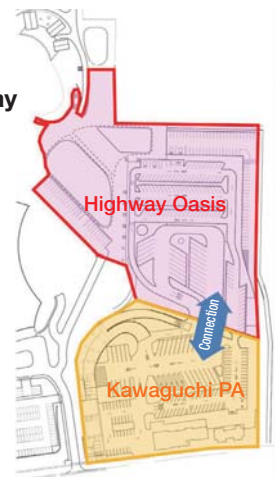
### Track Record for Highway Bus & Rail Rides

For highway bus users, we are offering the opportunity to transfer from highway bus to train at a reduced fare which is an innovative transport concept to help passengers overcome traffic build up along the way and to reach their destinations punctually. We are implementing this system at Yashio and Yoga parking areas.



### Shutoko's First Highway Oasis Underway

To enhance facility convenience, we are cooperating with Kawaguchi City to promote a "highway oasis" project to link up and integrate Kawaguchi Parking Area with local park land to create a leisurely walk path where there is no need to leave the Metropolitan Expressway.





# Working with Customers and Local Communities to Make Pleasant Driving

## We Actively Publish ‘Excursions’ That Utilize the Metropolitan Expressway.

We provide information via web and radio on recommended local drives and unique promotions taking place seasonally as well as by location. In 2015, we will continue to link up with local economies to assertively promote the “advantages” and “comfort” and “attraction of driving” by using the Metropolitan Expressway to visit local places of interests.

### Campaign

We carry out campaigns providing suggestions for enjoyable drives for each season throughout the year.

In these campaigns, we provide discount coupons in cooperation with local governments, tourist associations, and tourist facilities around the Kanto Area.

During the campaign, we hold related events at locations such as the Daikoku and Kawaguchi Parking Areas, and actively publish driving information.

### Tokyo 100-Carat Campaign from November 2014 to January 2015

In cooperation with the Tokyo Seaside Sub-Center Development Committee (a general incorporated association) we introduced a selection of attractive lit-up locations in the Odaiba Area. Also during the campaign, we lit up Rainbow Bridge with special rainbow colors and arranged a lighting ceremony.



The Metropolitan Expressway  
Jalan for Spring, Summer,  
Autumn, and Winter 2014  
Outdoor Leisure (April)  
Experiencing Nature (July)  
Gourmet Drive (October)  
Boso (January)  
Special editions published



Spotlighting seasonal areas and themes and introducing local cuisine and enjoyable driving spots.

### Working Together with Local Authorities and Tourist Spots

To offer some enjoyment in a journey, we provide destination experiences for people on excursions by retailing famed local products like fruits and vegetables from localities like Yamanashi and Tochigi at our parking areas.

#### Tourism product exhibition at a Metropolitan Expressway PA

In conjunction with in any given campaign, we sell agricultural produce and other local delicacies that are delivered directly from the campaign area to our Shutoko parking areas, where they are sold. In addition to produce sales, we also offer tourist information on the local campaign regions.



Yokosuka Tourism/Product Exhibition (Daikoku Parking Area)

#### Central Circular Route Full Opening Campaign

The Central Circular Route Full Opening Campaign was held at commercial facilities in Saitama. We introduced the Boso and Miura peninsulas, which people can easily access from Saitama via Yamate Tunnel on the Central Circular Route.



### Delivering fun and beneficial information at all times!

At our Shutoko Drivers Site, we offer straightforward information on driving spots, routes and nighttime vistas as well as the enjoyment to be had there with privileges included.



# Responding Sincerely to Customers' Voices by Providing

## Responding to Feedback from Customers

According to a customer satisfaction survey (11,000 respondents) in FY 2014, the general satisfaction rate was 3.4 out of 5, as with the previous year.

We want to continue working harder in areas that need improvement and to listen carefully to customer feedback on a daily basis. By achieving improvements, we will meet expectations and enhance customer satisfaction.

### ■ Improvement example (1)

Customer's voice :

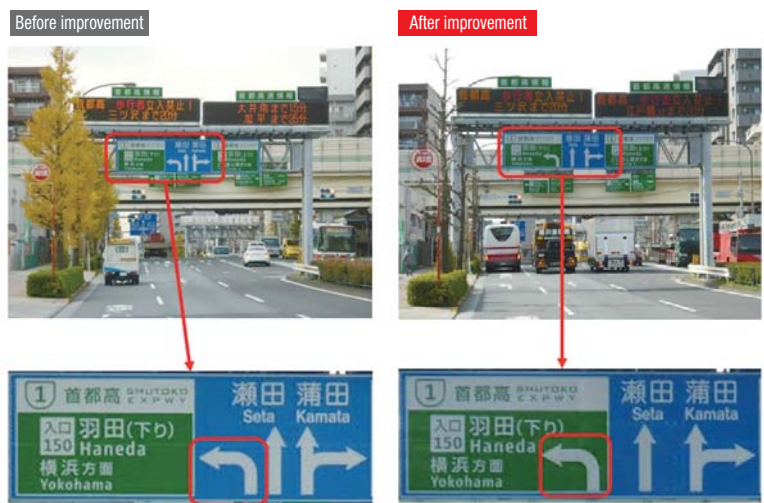
A left turn arrow on a sign implied that the road is linked to a local road, although it is only for the entrance to the expressway. I want it to be changed so it's clear that you can't get to that road even if you turn left.

Location :

On a road near the Haneda Entrance of Route 1 Haneda Line (outbound)

Our Response :

We modified the sign to show that the left turn is only for the Metropolitan Expressway.



### ■ Improvement example (2)

Customer's voice :

I want the company to raise driver awareness that vehicles should merge one at a time on merge sections.

Location :

Merging section before Ryogoku JCT of Route 7 Komatsugawa Line (inbound) and of Route 6 Mukojima Line (inbound)

Our Response :

In order to prevent careless merging, we installed signs to improve behavior, with messages such as "GIVE WAY TO OTHERS", on Route 6 Mukojima Line (inbound) and Route 7 Komatsugawa Line (inbound).



**A** Word  
from  
Our Staff

**Ishizuka Yukiko**

Sales Division, Sales Promotion Department

We deliver driving information via informational magazines and radio, and hold events at parking areas so that more drivers will utilize the Metropolitan Expressway. We are especially dedicated to delivering driving information suitable for each time and season in a way that drivers can easily understand and cooperating with local communities by producing various ideas. I hope to work to achieve a Metropolitan Expressway that will continue to be convenient, comfortable and enjoyable.

# High - Quality Service

## Shutoko Customer Center

All customer affairs regarding the Metropolitan Expressway are processed at the Shutoko Customer Center, the central contact point for such inquiries. Prompt answers are given to questions about traffic congestion, time required to drive to particular destinations, routes, and numerous other concerns.

There is a dedicated fax line for customers with hearing impairments. In addition, the center mails out maps of the Metropolitan Expressway.

### Shutoko Customer Center

**Office Hours:** 7:00 a.m.–8:00 p.m. (Monday through Sunday)

**Tel:** 03-6667-5855

**Fax:** 03-3249-1161 (exclusively for the hearing impaired)

## Expressway Emergency Dial: #9910

This is an around the clock nationwide service offering free-dial to #9910 to enable drivers to report any emergency on the expressway, such as irregularities, damage, accidents, breakdowns and debris or objects on the road.

### How to Make a Call

- Dial #9910 (free of charge and same number nationwide)
- Follow the audio guidance, first selecting route number and then "1" for an emergency call related to the Metropolitan Expressway.
- You will be put through to Shutoko Traffic Control Center.

※ Calls also can be made from the emergency phones for emergencies on the Metropolitan Expressway.

## Shutoko ETC Call Center

The Shutoko ETC Call Center is the exclusive contact point for inquiries concerning the Shutoko electronic toll collection (ETC) system. The call center answers questions about various ETC services, such as toll discounts for ETC users.

### Shutoko ETC Call Center

**Office Hours:** 9:00 a.m.–6:00 p.m. (Monday through Sunday)

**Tel:** 03-6667-5859

## We Provide Information on Our Website.

In conjunction with road traffic reports, our Shutoko website provides plenty of other information that makes driving on the Metropolitan Expressway a relaxed, convenient affair, such as route guidance to destination and toll cost search.

### Shutoko Website

- Driver's site: <http://www.shutoko.jp/>
- Corporate Info Site: <http://www.shutoko.co.jp/>

### Shutoko Mobile

- Smartphone site is the same URL as the driver's site
- Mobile phone users should go to <http://www.shutoko.jp/>

## Efforts toward Improving Safety, Security, and Comfort

### ■ Protecting drivers from snow and ice

We implement snow and ice countermeasures in order to provide customers with a safe, secure, and comfortable driving experience including during the winter season.

Winter (December 1 to March 31) is designated as Snow Accumulation/Freezing Prevention Period. We sprinkle anti-freezing agents and clear and remove snow as the situation requires.

- Perform road surface condition checks
- Scattering of deicing agent
- Snow removal
- Enforcement of traffic control due to snowfall
- Provide information on road conditions



Scattering deicing agent (salt water) on the road surface

積雪あり！夏タイヤ走行不可

路面凍結時は#9910へ通報！

Examples of display notifications

### ■ Dealing with illegally modified vehicles

We will reinforce our approach to dealing with illegal vehicles as per the Road Traffic Act (cabinet order on vehicle restriction)

With a view towards protecting road construction and preventing dangerous traffic, we conjointly work with related organizations such as the police and other road management personnel to educate and remove on road traffic law (cabinet order on vehicle restriction) violators at our tollgates.

In particular, we have strengthened our regulation of heavy vehicles, which contribute to the damage of the Metropolitan Expressway, and deal with them strictly, including ordering serious violators to reduce their loads. We are also providing guidance at lectures and with direct private visits to carriers that repeatedly violate the aforementioned restrictions, and report them to law enforcement if they do not improve their behavior. We will continue to work towards the removal of drivers who violate the Road Traffic Act.



Scene from a check on violations as per Road Traffic Act (cabinet order on vehicle restriction)





## Related Business

Engaging in a Wide Range of Businesses  
Making Use of All Kinds of Ideas and Technology



# Putting More Effort into Parking Lots and Rest Areas

While establishing a firm resilient business base with a focus on parking lots and rest areas together with related companies, we are working to conduct business appropriately by following new measures in order to contribute to the lives of people in the community by maintaining a customer perspective.

## ① Five City Planning Parking Lots

We will endeavor to place more effort into the five city planning parking lots in the city, which are the foundations of our activities.

- Shiodome Parking Lot (455 spaces)
- Kabutocho Parking Lot (939 spaces)
- Honcho Parking Lot (306 spaces)
- Shirauobashi Parking Lot (226 spaces)
- Sendagaya Parking Lot (236 spaces)



City Planning Parking Lot Map

## ② Using Space under Viaducts to create Parking Lots

We operate and maintain some 60 parking lots (5,200 spaces) that utilizes space under Metropolitan Expressway viaducts. We are taking measures which include installing security cameras and enabling electronic money devices so that drivers can safely and comfortably utilize our parking lots.



Ohashi Junction



Parking Lot Entrance

## ③ Rest Area Business

At parking areas with restaurants, we are offering seasonal menu fairs and creating new menus to offer. In FY 2014, we had the “Summer Don! Don! Don Fair” and the “Winter Hot Tsukemen! Fair”.



Summer Don! Don! Don Fair  
(Kahei Parking Area)



Winter Hot Tsukemen! Fair  
(Daikoku Parking Area)

# Seeking to Develop a Wide Range of Businesses

## Developing Advertising Information Business

Credit card businesses as well as advertising and communications businesses are the focus of development in this area.

### Credit Card Business

We have been advertising for people to become members of the “AEON Metropolitan Expressway Card (with WAON) since January 2011, allowing them to utilize the expressway at discounted prices.

With the AEON Metropolitan Expressway Card (with WAON), we can offer unique privileges such as a 5% discount from tolls when using the card exclusively for ETCs on Sundays.

The card also has electronic money (WAON) functions and can be utilized like an AEON card to obtain shopping discounts and earning double points.



### Advertising and Communications Businesses

We are using Metropolitan Expressway facilities in the development of public interest advertising businesses that increase the city's appeal and motivates interpersonal communication. In addition, we will be developing advertising businesses utilizing Web sites and other media.



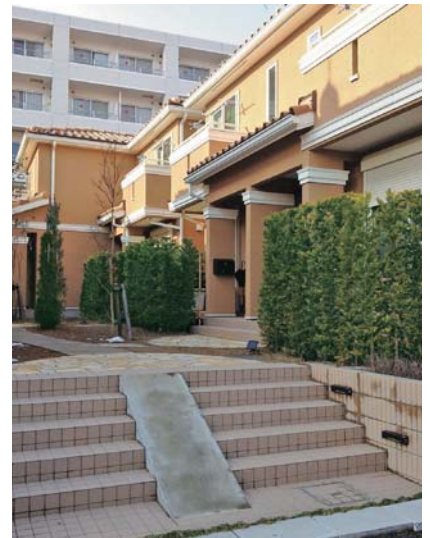
Rainbow Bridge  
(advert supporting Olympic invite)



Rainbow Bridge (Pink Ribbon Festival light up)

## Developing Real Estate Business

As part of real estate rental business that utilizes sites of former company dwellings, we administer real estate duties for “Trias Shin-Yurigaoka”. This housing complex has been built on the concepts of “safe and carefree design, construction and maintenance”, “local environmental friendliness”, and “eco-friendly measures for realizing a low-carbon society”. This complex vaunts solar panels for outside lights and large outdoor spaces providing consideration to the environment.



Trias Shin-Yurigaoka

## Life Services Business Development

### Yono Utility Promotion Facility Business Development

For people utilizing the expressway, Yono Utility Promotion Facility offers a carpark, an information house with a free resting facility, toilets, a convenience store, as well as an event space used by a model home complex themed on “creating a beautiful and luxurious townscape”, providing an enjoyable detour for a carefree excursion.



Overview of Yono Junction



Yono Utility Promotion Facility



## Developing Businesses in Lifestyle Services

We are expanding into businesses centering on operations such as self-storage (a.k.a. 'trunk rooms').

### Storage Room Businesses

The "Ebisu Trunk Room" contributes to establishing a more desirable living environment and realizing a rich and comfortable life by providing local residents with a place utilizing space under the Metropolitan Expressway to store household possessions. We have also covered building walls with greenery for significant environmental friendliness.



Shutoko Storage Room at Ebisu

### Temporary-Staffing Businesses

The Shutoko Group's integrated personnel services company is engaged in the temporary-locum personnel business. Group affiliate Shutoko Partners Company Limited offers meticulous personnel services that enable the optimum matching of temporary locum with corporate employers.

### Insurance Agency Businesses

The Shutoko Group operates an insurance company as its official agent. Shutoko Insurance Support Company Limited is one of our group companies, in which it is expanding its chain of insurance agencies, to offer the highest of quality in safety and assurance to meet the insurance needs of customers.

### Circulation Shutoko

Circulation Shutoko is a recycling project that utilizes waste materials effectively as part of a considerate approach to the environment. We are collaborating with people who consented to this project in order to develop recycled products.



#### The first product : HATARAKU TOTE

A functional and stylish tote bag made from a banner that was hung on the expressway but removed after an extended period of time.



HATARAKU TOTE



#### The second product : Hi-W8

A cruiser skateboard made from a construction sign used to announce construction and road closures that was installed on streetlights and at expressway entrances and exits.



Hi-W8



#### The third product : aruku-tire

Heavy and strong sandals produced from a combination of a recycled vehicle tire and a tube and a used expressway banner.



aruku-tire



#### The fourth product : Rebirth tool gear

A series of simple shoulder bags and handbags constructed from a banner, usable by people of all ages and genders.



REBIRTH TOOL GEAR

# Seeking to Develop a Wide Range of Businesses

## Technical Consulting Business Development

Promoting a technological consulting business that fully utilizes the Shutoko Group's accumulated expertise.

In collaboration with our group companies, we are providing technical consulting services related to inspection and maintenance management of expressway facilities for road managing agencies, such as national and local authorities. (Orders received in FY 2014: 39 orders)

- We broadly contribute to maintenance management of socially important infrastructure through techniques and knowhow learned from construction and maintenance management of the expressway.
- We are developing a consulting business where we make use of our group's specialized expertise as well as our construction and maintenance management techniques for narrow urban areas.
- Ensure high-quality business results utilizing our knowledge based upon our experience and accomplishments from operating the Metropolitan Expressway 24 hours a day, 365 days a year.

Technical consulting services that the Metropolitan Expressway Company provides (civil engineering/construction)



- Inspections, assessments, repair design, earthquake resistance strengthening design, repair work, and construction management for road structures.
- Investigation/examination of traffic planning/traffic control (ITS)
- Safety assessments for construction near Metropolitan Expressway structures
- Technical support through dispatching professional engineers
- Structure earthquake resistance assessments/strengthening design

### Bridge Maintenance Technology Workshop

Since 2009, we have been cooperating with the technical personnel of authorities involved in maintaining and operating bridges and viaducts to deliver workshops aimed at raising technical excellence and achieving a lateral spread of knowledge.

The workshops aim at the mutual improvement of technical capabilities by focusing on Shutoko Group bridge maintenance case studies, examining local government efforts, and other similar means.

Site inspection of Yokohama Bay Bridge of Wangan Road 13 groups comprising 43 people, including associated local authorities, participated in this event (October 3, 2014)



## Developing Seismic Diagnosis and Reinforcing Design Business

We are promoting the seismic diagnosis of buildings, particularly those adjacent to expressways.

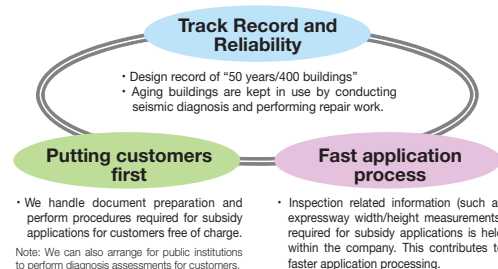
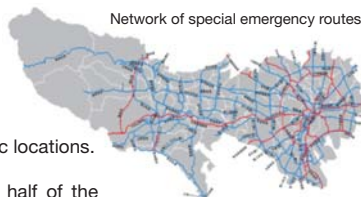
As a Class 1 architecture firm, we make use of our technical strength acquired from over 50 years of design, construction, and management experience with offices and parking areas to promote evaluation of and design for earthquake resistance for buildings with the goal of turning Tokyo and Yokohama into highly disaster resistant cities by taking advantage of the establishment of the Ordinance for the Promotion of Earthquake-resistant Buildings along Emergency Routes in Tokyo.

### Obligation to evaluate earthquake resistance of structures

Seismic diagnosis is mandatory for all buildings in the Tokyo metropolitan area that fall under any of the categories listed below. As a general rule, seismic diagnosis costs are completely subsidized.

1. Buildings that border emergency routes at specific locations.
2. Buildings constructed before May 1981.
3. Buildings capable of extending over more than half of the height of special emergency routes when collapsed.

Note : Metropolitan Expressway is specified as one of the special emergency routes in the Tokyo metropolitan area. (Yokohama also has a similar decree.)



## Related Street Businesses

We undertake the construction, renovation, etc., of ordinary streets for regional public organizations on a contract basis. Main projects currently in progress are as follows:

**Tunnel renovation project on Circular Route 2**

**Kishiya-Namamugi Line Construction Project (Yokohama Circular Northern Route)**

**Minami-Honmoku-futo Connecting Harbor Road Construction Project (Bay Route Ramp)**



Range of Circular Route 2 renovation

## Forging Ahead with International Contributions

### We have targeted developing countries for long-term dispatches of specialists and accepted trainees from nations around the globe.

Through Japan International Cooperation Agency (JICA), we have targeted governmental organizations for long-term dispatches of specialists to cooperate in giving technical guidance and fostering human resources. We also actively participate in programs run by JICA, and we have many trainees studying and training at our facilities and construction sites. We accept many visitors annually, including government officials wishing to tour the Metropolitan Expressway.



Visit from the Nepalese Minister of Physical Infrastructure and Transport (Traffic Control Room)

### Forging Ahead with Technical Cooperation with Overseas Road Agencies

In addition to concluding agreements with the Ministry of Public Works and Transport of Cambodia in August 2009, we have entered into a "Memorandum of Technical Cooperation" with government agencies and expressway companies in Thailand, Indonesia, France and Myanmar. We will continue to promote technical cooperation with related organizations from overseas by making use of the expertise, knowledge and experience refined at Shutoko.



Promotion of technical cooperation (Visit from the president and executives of Indonesia MMS)

## Expanding into Overseas Activities

### Expanding Our Consulting Businesses Overseas

Since becoming a consultant for JICA in February 2010, we have been expanding our consulting businesses overseas. In January 2013, we received an order to perform overseas consulting work directly from Don Muang Tollway Public Company Limited in Thailand. We will continue to expand the practical use of our broad variety of technologies and knowhow accumulated over half a century of involvement in planning, constructing, operating and management of expressways.

### We have established a Representative Office in Bangkok and are promoting overseas development.

With the purpose of actively promoting international contributions and overseas business, we have been establishing overseas representative offices since June 2011. We will continue to promote overseas development in the fields of maintenance management, traffic control, and ITS, focusing on Thailand and nearby countries.

### We will continue to promote overseas road investment business.

We have established JEXWAY (Japan International Expressway Company Limited) through a joint investment from the three NEXCO companies as well as the Hanshin Expressway Co.,Ltd. in September 2011. The company acquired stocks of BSD (a toll road operating company) in Indonesia in December 2014 and participated in the toll road business for the first time. We will continue to participate in the overseas expressway business through JEXWAY.



JICA project: "Preparatory Survey for Tunnel Construction at Nagdhunga Pass" (Nepal)



Bridge inspection training (Thailand)





## Environment

Contributing to Improving the Roadside Environment  
and the Growth of Regional Communities



# Making an Effort to Improve the Environment and Co-Exist in Harmony with Regional Communities.

## Environmental Protection Measures

### Proactive Use of Technology to Protect the Roadside and Global Environment

#### Using an Eco-Friendly Tunnel Design

A tunnel structure has the beneficial effects of “not transmitting noise and vibration from vehicles” and “minimizing the impact of exhaust gas from vehicles in locations along the road side”.

In order to further mitigate environmental impact, SPM filters and low concentration denitration equipment are installed on the Central Circular Route (Yamate Tunnel) and Kanagawa's Kawasaki Route 6 (Daishi Tunnel).



Yamate Tunnel ventilating tower.

#### Various Measures to Improve the Roadside Environment

Sound barriers have been put up to block the noise from expressways leaking out into the surrounding environment, and sound absorbing boards are used on the underside of viaducts to dampen the reflection of sound from the surrounding area. Measures are also taken to reduce sound and vibrations coming from the surface of roads, through the utilization of construction methods to make bridges seamless, and high-performance, low noise pavement with good drainage.



Noise barriers on the expressway

#### Creating an Environment Conducive to the Adoption of Low Carbon Vehicles

As part of supporting the adoption of low carbon vehicles so that electric car drivers can travel confidently, and with consideration for balance in the Metropolitan Expressway network, we have installed fast chargers for electric cars at eight of our parking areas; they are Heiwajima (inbound), Yoga, Yoyogi, Shimura, Yashio, Ichikawa, Daikoku, and Kawaguchi.



Fast charger for electric cars (Daikoku Parking Area)

### We will promote site maintenance and communication of information with the goal of coexisting with local communities

#### Ohashi “Green” Junction

We are actively involved in creating the “Three Greens” of “natural renewal”, “parks” and “townscapes” at Ohashi JCT, which links Shibuya Route 3 and the Central Circular Route (Yamate Tunnel).

“Ohashi Sato no Mori,” embodying the Green of “regeneration of nature”, is a green space on the roof of Ohashi Ventilating Station reproducing the area’s original landscape. At the rice field here, primary school students experience traditional rice farming.



Full view of Ohashi Junction rooftop

#### Metropolitan Expressway Biotope in Minuma Rice Field

We are preparing and fostering a biotope with a length of 1.7 km and an area of 6.3 ha under the Metropolitan Expressway viaduct in order to regenerate Minuma rice field’s particular ecosystem, working towards “a new urban expressway that coexists with nature”

We also hold nature observation classes where local kindergarteners can interact with familiar creatures.

※Biotope : a place where indigenous creatures live



Metropolitan Expressway Biotope in the Minuma Rice Fields

#### Communicating Information on the Environment

We are actively publishing the Metropolitan Expressway’s environmental initiatives on our website in the hopes that it will become an opportunity for drivers to think about the environment.



Promotion Work at an Environment Event

# Making an Effort to Co-Exist in Harmony with Regional

## Harmony with Urban Scenery and a Comfortable Driving Environment

Aiming to make the Metropolitan Expressway suitable for the urban environment, we are undertaking measures to improve its scenery. In particular, for routes in service, we established an “Action Program for Scenery Improvement” to focus on, making beautification efforts such as repainting elevated bridges and improving the driving environment in tunnels.

We will make further efforts to improve the scenery and comfort of our network to provide “Hospitality” appropriate for the site where the Tokyo 2020 Olympic and Paralympic Games will be held.



Repainting of an elevated bridge near Tsutsumi-Dori on Route 6 Mukojima Line



Installation of white tile panels on the wall of Chiyoda Tunnel on the Inner Circular Route

## Planting Trees along Roads to Improve the Landscape

Trees are being planted along roads to create a safe and pleasant environment for driving in. They also act as a countermeasure against the heat island effect, and contribute toward prevention of global warming.



Greening of Yoyogi Parking Area wall



Greening of Daishi Junction



Greening of girders at Nishi-Shinjuku Junction



# Communities

## Implementation of Social Service Activities

We implement various social service activities together with community members to contribute to improving the environment and growth of regional communities.

### ■ Shutoko Children Support Project

Continuing on from last year, once again, we conducted the Shutoko Children Support Project, inviting to Tokyo some elementary school children from a region affected by the Great East Japan Earthquake. In FY 2014, we invited 20 pairs of students and their parents (40 people) from a primary school in Rikuzentakata, Iwate to guide them around our traffic control system and a Central Circular Route Shinagawa construction site so they can experience our technical ability and cutting-edge traffic management. (Jointly sponsored by the Metropolitan Expressway Association)

### ■ Activities Undertaken with Local Communities

#### ○ Cleaning in the Community

With the purpose of coexisting with local communities and encouraging road tidiness, four times each fiscal year, we clean under Shutoko viaducts as well as around company offices and city planning parking lots.

#### ○ Running Site Tours

We conduct site tours of our construction sites, such as on the Central Circular Route Shinagawa and the Yokohama Circular Northern Route, as well as our traffic control system for business operators and local residents.

### ■ Support for Training

#### ○ Cooperating in General Training

We energetically support students in which, we hold a nature observation workshop and provide part of Daikoku Parking Area on the Wangan Route for students to plant flowers during gardening activities.



Shutoko Children Support Project



Community cleaning



Parent and Child Tour during Summer Vacation (Worksite tour)



Daikoku parking area garden activities



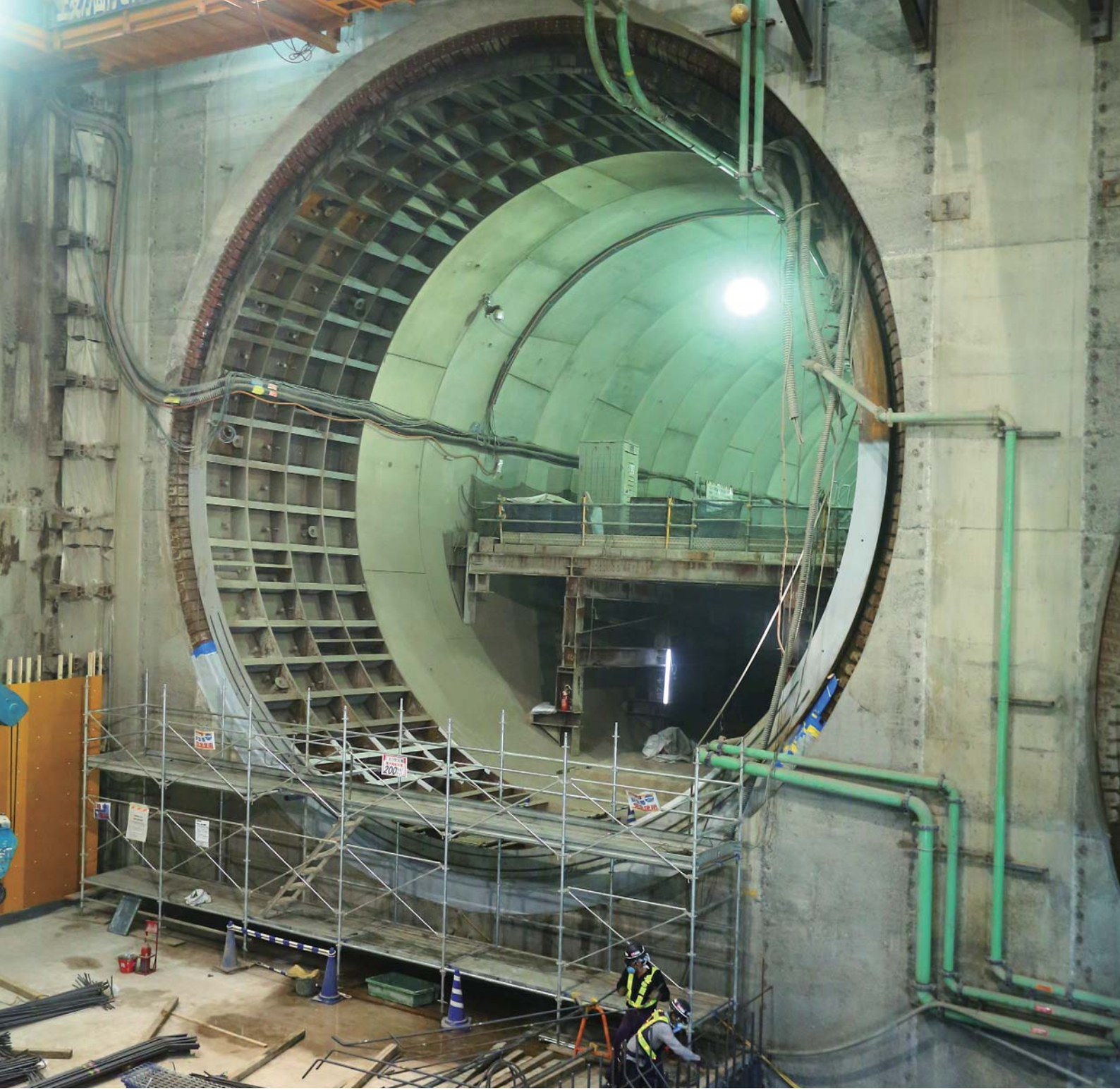
### A Word from Our Staff

#### Nakano Takahiro

Road Management Department, West Tokyo Operation Bureau

I am engaged in social contribution activities in West Tokyo area. Primarily, I focus on cleaning activities alongside the Metropolitan Expressway and supporting employment in weeding tasks in cooperation with a disability support group. I am satisfied that I can work not only as an employee of a road management company but also as a person in the local community. I will continue to work hard and take responsibility so that the Metropolitan Expressway can contribute to the development of local society.





# Human Resource & Technology

Boosting organization expertise by nurturing professionals to underpin our work

# Creating an Environment to Support Employees' Ambitions

## Promotion of Human Resource Development

We have been promoting human resource development using OJT, OFF-JT, self-development support, and feedback interviews during personnel evaluations.

We stipulated the ideal type of employee as “an employee who can work with and support others as he/she performs his/her tasks with a sense of responsibility in order to provide high-quality services that satisfy customers, and who is ready to try any task in order to improve his/her ability”, furthermore we promote human resource development based on OJT, OFF-JT, self-development support and the feedback interviews during personnel evaluations.

### (1) OJT

We have a system to systematically nurture employees by naming young employees as OJT leaders with instructional roles ; we define OJT as “bosses/seniors and subordinates/juniors teaching, being taught, learning and growing together to improve the company’s productivity as well as their independence, growth and self-reliance as they perform their duties each day”, and we assign tasks connected to OJT’s importance and necessity in training programs for each level of employee.



OJT

### (3) Self-development Support

We assist with correspondence education lecture fees and provide financial incentives for employees who acquire recommended qualifications.

OFF-JT

Self-development Support

Used in training instruction

Personnel Evaluation



### (2) OFF-JT

We carry out “Common Training” to improve abilities as expected from each level of employee, “Training by Department” for acquisition of specialized knowledge, abilities, and techniques by each department, and “Dispatch Training” to send employees to training conducted by outside agencies to acquire expertise.

In particular, for young employees, we conduct training wherein we dispatch them to our group companies and have them experience administrative tasks with employees there to improve on-site capabilities.

### (4) Personnel Evaluation Feedback Interviews

We put a high value on personnel evaluation feedback interviews as important tools for developing human resources.

By giving personnel evaluation results feedback to each employee, and through sharing strengths and weaknesses with superiors, we seek to train and nurture our employees.

Additionally, each year, we strive to improve evaluators’ skills by conducting evaluator training.



## Improvement of Technical Abilities and Passing down Techniques

### Nurturing a Group of Road-building Professionals to Promote Business

Our collective efforts over the last half century, with three exceptional technological capabilities – “build, utilize and protect” supporting the expressways running through the metropolitan area – have received many plaudits both from home and abroad. Furthermore, in order to nurture our road-building professional organization, we endeavour to make use of the vast knowledge gained through work in the efforts we make and the technology we refine, to contribute to the development of personnel, who will succeed with the task of further enhancing our technologies.



Training



#### ■ Specialist technical training

For fields closely related to our business, such as “Planning & Environment”, “Design & Building”, “Operation & Maintenance” and “Quality control”, we strive to improve specialist knowledge and technical skills by implementing training in accordance with employee hierarchy.

#### ■ Encouraging and supporting acquisition of qualifications

We encourage and support the acquisition of qualifications necessary for work – such as: the Professional Engineers, the First-Class Architects, the First-Class Civil Engineering Works Execution Managing Engineer, the Value-Engineering Leader and Real Estate Transaction Specialist. (Qualified personnel : 64 Technicians and 23 1st-class architects, as of end of March 2015)

#### ■ Studying abroad program

We have established systems for trainees to study in universities overseas and to study in universities in Japan, in order to develop the capabilities of employees so they can deal with a diverse range of business opportunities and to support the expressway business.

### Making the Most of Technology and Developing New Technology

With regard to construction and maintenance operations for Metropolitan Expressways, over and above the diversification of structures and construction work that coincides with ongoing deterioration of existing buildings, we are required to earnestly assure safety, usability and durability.

For this reason, in addition to our own technology, we make full use of technology and knowhow related to the various fields of the specialties of universities, research institutes and other enterprises, to proactively take on board the latest knowledge. Thus, we carry out collective research in order to effectively and efficiently develop sophisticated technologies.

#### ■ Social action works by making the most of fully trained professionals

We support society by making the most of the professionals we have nurtured, sending them to teach at universities as part-time lecturers and involving them in similar educational efforts.

(Universities that our staff attended as part-time lecturers in FY2014 : Yokohama National University, Nihon University)

#### ■ Joint research themes implemented in recent years

[ Joint research with universities ]

- Renewable engineering of urban infrastructure facilities advancing development of the Metropolitan Expressway's inspection/diagnostic techniques (Tokyo City University)
- Development of damage assessment support techniques utilizing image assessment techniques (University of Tokyo)

[ Joint research with private companies ]

- Research on rapid construction and renovation techniques for existing RC floor slabs
- Research on widening structures of existing PC floor slabs
- Research on improving earthquake resistance of existing bridges

[ Joint research with the Metropolitan Expressway Group ]

- Research on methods for increasing pressure on the upper surface of floor slabs

### In 2014, as with previous years Shutoko technology was also awarded prizes such as the Environmental Award of the Japan Society of Civil Engineers.

(as of 1 July 2015)

No.	Name	Award Details	Date
1	The Illuminating Engineering Institute of Japan Good Lighting Award	Meguro Sky Garden's O-path Yume Hiroba (prize shared with Meguro Ward)	29 May 2014
2	Environmental Award of the Japan Society of Civil Engineers	For creation and completion of "Ohashi 'Green' Junction" working toward a balanced city environment	13 June 2014
3	Tanaka Award (produced work category), Japan Society of Civil Engineers	Metropolitan Expressway Yaesu Route, Shiodome viaduct (award shared with Tokyo)	13 June 2014
4	Zenken Award of Japan Construction Engineers' Association	Replacement of viaduct on Yaesu Route of Metropolitan Expressway (award shared with Tokyo)	27 June 2014

No.	Name	Award Details	Date
5	The Japan Society of Civil Engineers Technology Award ( I group)	Construction of separation and merging points for large cross-section shield tunnels using advanced underground widening methods. (Construction of the Ohashi connecting road on the Central Circular Route Shinagawa Line of the Metropolitan Expressway) (Award shared with the Hazama Ando Corporation (KK))	12 June 2015
6	The Japan Society of Civil Engineers Technology Award ( II group)	Construction of Yamate Tunnel (Wangan Route to Route 3 Shibuya Line) on the Central Circular Route (First full opening among the three metropolitan circular routes) (Award shared with the Tokyama Construction Bureau)	12 June 2015
7	The Japan Society of Civil Engineers Technology Development Award	Development of a non-open cut method (Pipe Roof Arch Method) to eliminate the need for temporary timbering ( Metropolitan Expressway Company Limited ) ( Yuichi Sakurai, Masahiro Ishibashi ) ( Kajima Corporation (KK) )	12 June 2015

(Please see <http://www.shutoko.jp/ss/tech-shutoko/jyusyou/> for details of previous awards.)

# FY2014 Financial Statements

## ■ Consolidated financial statement

### ● Consolidated balance sheet (March 31, 2015)

(Unit: ¥100 million)

Item	Amount	Item	Amount
Highway assets in process	3,015	Outstanding payments	561
Other current assets	1,500	Other current liabilities	250
<b>Total current assets</b>	<b>4,516</b>	<b>Total current liabilities</b>	<b>812</b>
Property, plant and equipment	625	Corporate debenture related to road construction	1,206
Intangible assets	13	Long-term debt related to road construction	2,274
Investments and other assets	21	Other fixed liabilities	456
<b>Total fixed assets</b>	<b>660</b>	<b>Total fixed liabilities</b>	<b>3,938</b>
		<b>Total liabilities</b>	<b>4,750</b>
		Capital	135
		Capital surplus	135
		Earned surplus	156
		Other comprehensive income accumulated	△ 3
		Minority interests	3
		<b>Total net assets</b>	<b>426</b>
<b>Total assets</b>	<b>5,177</b>	<b>Total liabilities and net assets</b>	<b>5,177</b>

※ Some amounts in the table above may not be fully accurate as fractional amounts under 100 million yen have been rounded down.

### ● Consolidated profit and loss statement (1 April 2014 to 31 March 2015)

(Unit: ¥100 million)

Item	Amount
Operating revenue	5,533
Rent expenses on highway assets	1,888
Administration costs of highway business and cost of sales	3,529
Selling, general and administrative expenses	82
<b>Operating income</b>	<b>32</b>
Non-operating income	4
Non-operating expenses	1
<b>Ordinary income</b>	<b>35</b>
Extraordinary profit	2
Extraordinary loss	3
<b>Pretax profit of the current period</b>	<b>33</b>
Corporation tax and other taxes	15
Minority stockholders' loss	0
<b>Net profit for the year</b>	<b>18</b>

※ Some amounts in the table above may not be fully accurate as fractional amounts under 100 million yen have been rounded down.

## ■ Individual financial statements

### ● Balance sheet (March 31, 2015)

(Unit: ¥100 million)

Item	Amount	Item	Amount
Highway assets in process	3,011	Outstanding payments	575
Other current assets	1,401	Other current liabilities	217
<b>Total current assets</b>	<b>4,413</b>	<b>Total current liabilities</b>	<b>793</b>
Property, plant and equipment	592	Corporate debenture related to road construction	1,206
Intangible assets	10	Long-term debt related to road construction	2,274
Investments and other assets	23	Other fixed liabilities	429
<b>Total fixed assets</b>	<b>626</b>	<b>Total fixed liabilities</b>	<b>3,911</b>
		<b>Total liabilities</b>	<b>4,704</b>
		Capital	135
		Capital surplus	135
		Earned surplus	65
		<b>Total net assets</b>	<b>335</b>
<b>Total assets</b>	<b>5,040</b>	<b>Total liabilities and net assets</b>	<b>5,040</b>

※ Some amounts in the table above may not be fully accurate as fractional amounts under 100 million yen have been rounded down.

### ● Profit and loss statement (April 1, 2014 to March 31, 2015)

(Unit: ¥100 million)

Item	Amount
Toll revenue and other sales	2,508
Highway asset completion sale	2,731
Rent expenses on highway assets	1,888
Highway asset completion cost	2,731
Operating expenses	613
<b>Operating profit of the expressway business</b>	<b>7</b>
Related business revenue	261
Related business expenses	258
<b>Related business operating profit</b>	<b>3</b>
<b>Operating profit of all businesses</b>	<b>10</b>
Non-operating income	7
Non-operating expenses	1
<b>Ordinary profit</b>	<b>15</b>
Extraordinary profit	2
Extraordinary loss	2
<b>Pretax net profit for the year</b>	<b>15</b>
Corporation tax and other taxes	6
<b>Net profit for the year</b>	<b>9</b>

※ Some amounts in the table above may not be fully accurate as fractional amounts under 100 million yen have been rounded down.

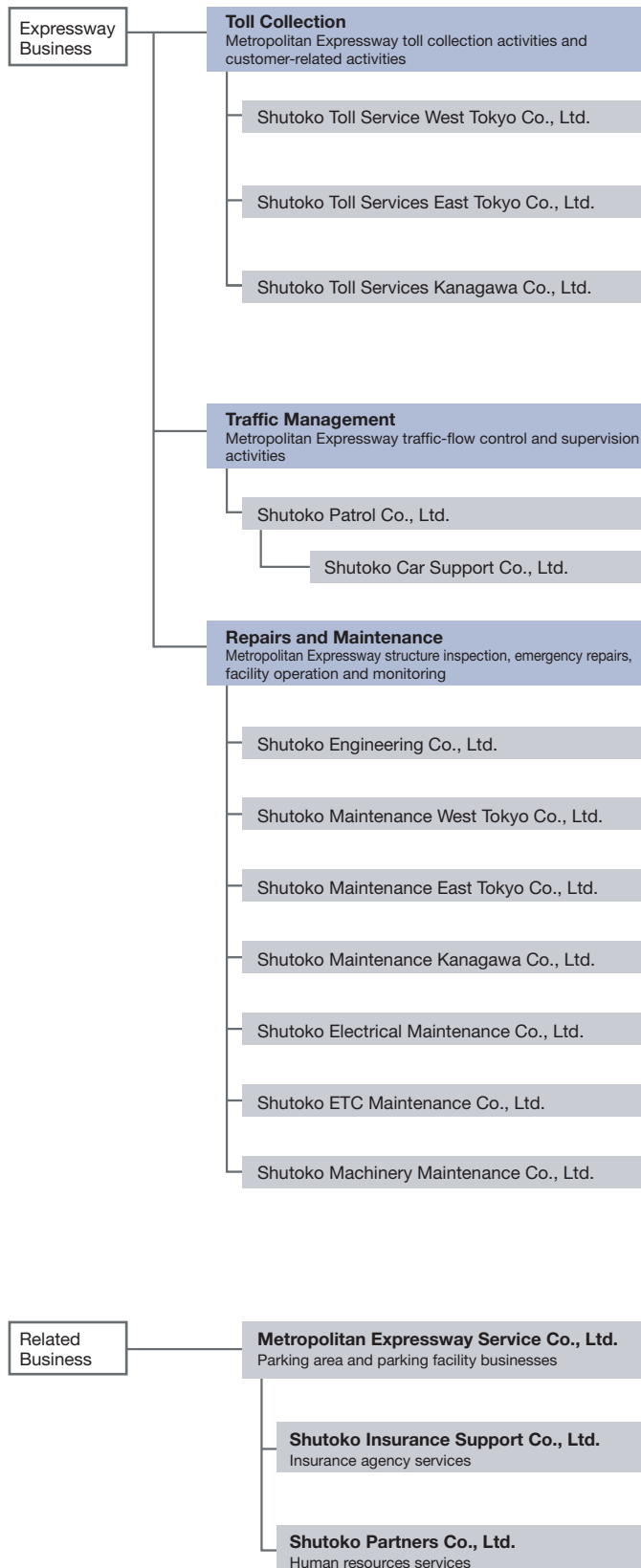


# Company History

June 17, 1959	Metropolitan Expressway Public Corporation (MEPC) is established to ease chronic traffic congestion.
December 20, 1962	First section of Metropolitan Expressway opened. (a 4.5-km section of Route 1 Haneda Line between Kyobashi and Shibaura on Inner Circular Route)
July 4, 1967	The Inner Circular Route is finalized upon completion of the section between Shiba Koen and Kasumigaseki.
July 19, 1968	First section of Kanagawa Route opened (Yokohane Route between Asada and Higashi-Kanagawa); also, total length of expressway reaches 50 km.
March 21, 1971	The section between Edobashi JCT on No. 6 Mukojima Route and Yagochi on No. 7 Komatsugawa Route opened, and is connected with Keiyo Road.
December 21, 1971	Shibuya Line of Route 3 opens between Shibuya and Yoga and is connected with Tomei Expressway.
February 15, 1973	Yaesu Route opens. Total length exceeds 100 km.
May 18, 1976	Shinjuku Line of Route 4 is connected with Chuo Expressway.
January 20, 1978	Bay Shore Route opens between Shin-Kiba and Urayasu as the first Metropolitan Expressway in Chiba Prefecture.
January 24, 1985	Misato Line of Route 6 opens between Kosuge JCT and Misato JCT as the first Metropolitan Expressway in Saitama Prefecture. This section is connected with Joban Expressway.
December 24, 1986	Daily traffic volume exceeds one million vehicles.
September 9, 1987	Central Circular Route opens between Yotsugi and Kasai JCT, and the section between Senju-Shinbashi on the Central Circular Route and Kawaguchi JCT on the Kawaguchi Line opens and is connected with Tohoku Expressway. Total length exceeds 200 km.
September 27, 1989	Yokohama Bay Bridge on the Bay Shore Route opens.
November 9, 1991	Metropolitan Expressway is completely closed for the first time for repair work on the Komatsugawa Line of Route 7.
August 26, 1993	Rainbow Bridge on the Daiba Line of Route 11 opens.
October 26, 1993	Ikebukuro Line of Route 5 is connected with Tokyo Gaikan Expressway.
December 21, 1994	Bay Shore Route between Haneda Airport and Daikoku JCT opens. Tsurumi Tsubasa Bridge opens.
May 19, 1995	Learning lessons from the Great Hanshin-Awaji Earthquake in January, MEPC starts the reinforcement of bridge piers.
December 18, 1997	Ukishima JCT is connected with Tokyo Wan Aqua Line.
May 18, 1998	Saitama Omiya Route (between Bijogi JCT and Yono) opens.
April 24, 2000	Trial operation of ETC starts.
March 24, 2001	Multiplying traffic exceeds 10 billion vehicles.
March 30, 2001	ETC service starts. (installed at 11 tollgates)
October 22, 2001	Entire Bay Shore Route opens.
April 30, 2002	Kawasaki Route (between Ukishima JCT and Tonomachi) opens.
December 25, 2002	Central Circular Route (between Itabashi JCT and Kohoku JCT) opens.
May 26, 2004	Saitama Shintoshin Route (between Shintoshin-Nishi and Shintoshin) opens.
October 1, 2005	Metropolitan Expressway Co., Ltd. is established.
February 14, 2006	Metropolitan Expressway Service Co., Ltd. is established. (start of business: April 1)
March 31, 2006	Agreement with Japan Expressway Holding and Debt Repayment Agency is concluded, and license to operate is granted by the Minister of Land, Infrastructure, and Transport.
August 4, 2006	Saitama-Shintoshin Route (Shintoshin to Saitama-Minuma) opens.
September 21, 2006	Shutoko Insurance Support Co., Ltd. is established (start of business: December 1). Shutoko Partners Co., Ltd. is established. (start of business: January 4)
March 30, 2007	Daily ETC traffic volume exceeds one million vehicles.
April 3, 2007	Shutoko Maintenance West Tokyo Co., Ltd. and four other repair and maintenance companies are established. (start of business: July 13)
November 6, 2007	ETC rate of utilization surpasses 80%.
November 21, 2007	Yokohane Line's Yokohama Park off-ramp opens.
December 22, 2007	Name of Bay Shore Route Jusangochi on-/off-ramp is changed to Rinkai-fukutoshin.
December 22, 2007	Central Circular Route linking Route 4 (Shinjuku Line) and Route 5 (Ikebukuro Line) opens.
February 25, 2008	The total number of ETC traffic volume exceeds 1 billion vehicles.
March 7, 2008	Shutoko Machinery Maintenance Co., Ltd. is established. (start of business: July 1)
March 17, 2008	Eastbound Bay Shore Route between Ariake JCT and Tatsumi JCT is widened to four lanes.
June 6, 2008	Shutoko Engineering Co., Ltd. is established. (start of business: July 1)
July 1, 2008	Eight toll collection companies are merged into three companies—Shutoko Toll Services West Tokyo, Shutoko Toll Services East Tokyo, and Shutoko Toll Services Kanagawa. Shutoko Car Support Co., Ltd. is established. (start of business: October 1)
February 11, 2009	No. 10 Harumi Route (between Toyosu and Shinonome JCT) opens.
March 29, 2009	Daishi JCT (Yokohama direction) on Yokohane Line opened.
March 28, 2010	Central Circular Route linking Route 3 (Shibuya Line) and Route 4 (Shinjuku Line) opens.
October 20, 2010	Kawasaki Line (between Tonomachi and Daishi JCT) opens. / Total length exceeds 300 km.
January 1, 2012	Shift from unified toll to single-distance toll.
December 20, 2012	Metropolitan Expressway 50th anniversary.
January 15, 2013	Proposals made by the Investigative Committee for the Effective Implementation of the Large-scale Structural Renewal of the Metropolitan Expressway.
August 26, 2013	20th anniversary of Rainbow Bridge opening.
December 25, 2013	Announcement of Metropolitan Expressway Renewal Plan (draft).
September 27, 2014	25th anniversary of Yokohama Bay Bridge opening.
November 20, 2014	Metropolitan Expressway renovation project, project approval from the Minister of Land, Infrastructure and Transport.
December 21, 2014	20th anniversary of Tsurumi Tsubasa Bridge opening.
March 7, 2015	The Central Circular Route opens (between the Wangan Route and Shibuya Line Route 3), the Central Circular Route is fully opened.
March 29, 2015	The "Oji-Minami Exit and Entrance" on the Central Circular Route opens.

# Shutoko Group Companies

(As of April 1, 2015)



# Usage Conditions

(1 April 2014 to 31 March 2015)

## Traffic Volume

(Unit: Thousand vehicles)

Category		All Routes
Total		344,499
Vehicle Type	Ordinary vehicle	308,373
	Large vehicle	36,126

## Toll revenue

(Unit: ¥1 million, tax excluded)

Category	All Routes
Total	250,849

## ETC utilization rate

(Unit: %)

Utilization rate (March 2015)	92.7
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**METROPOLITAN EXPRESSWAY CO., LTD.**

[www.shutoko.co.jp/english/](http://www.shutoko.co.jp/english/)