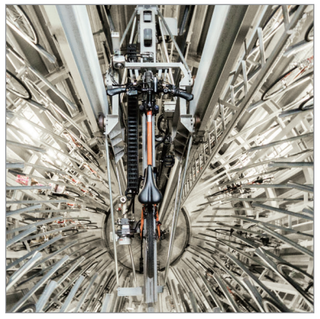
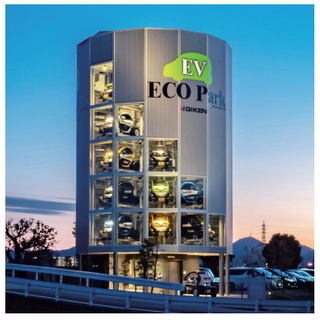
Achievements of Installation

GRIN Base™





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*All information is based on case studies from Japan.
*ECO Cycle is a registered trademark of GIKEN LTD. in Japan.
*ECO Park is a registered trademark of GIKEN LTD. in Japan.
*MOBILE ECO Cycle is a registered trademark of GIKEN LTD. in Japan.
*EV ECO Park is a registered trademark of GIKEN LTD. in Japan.

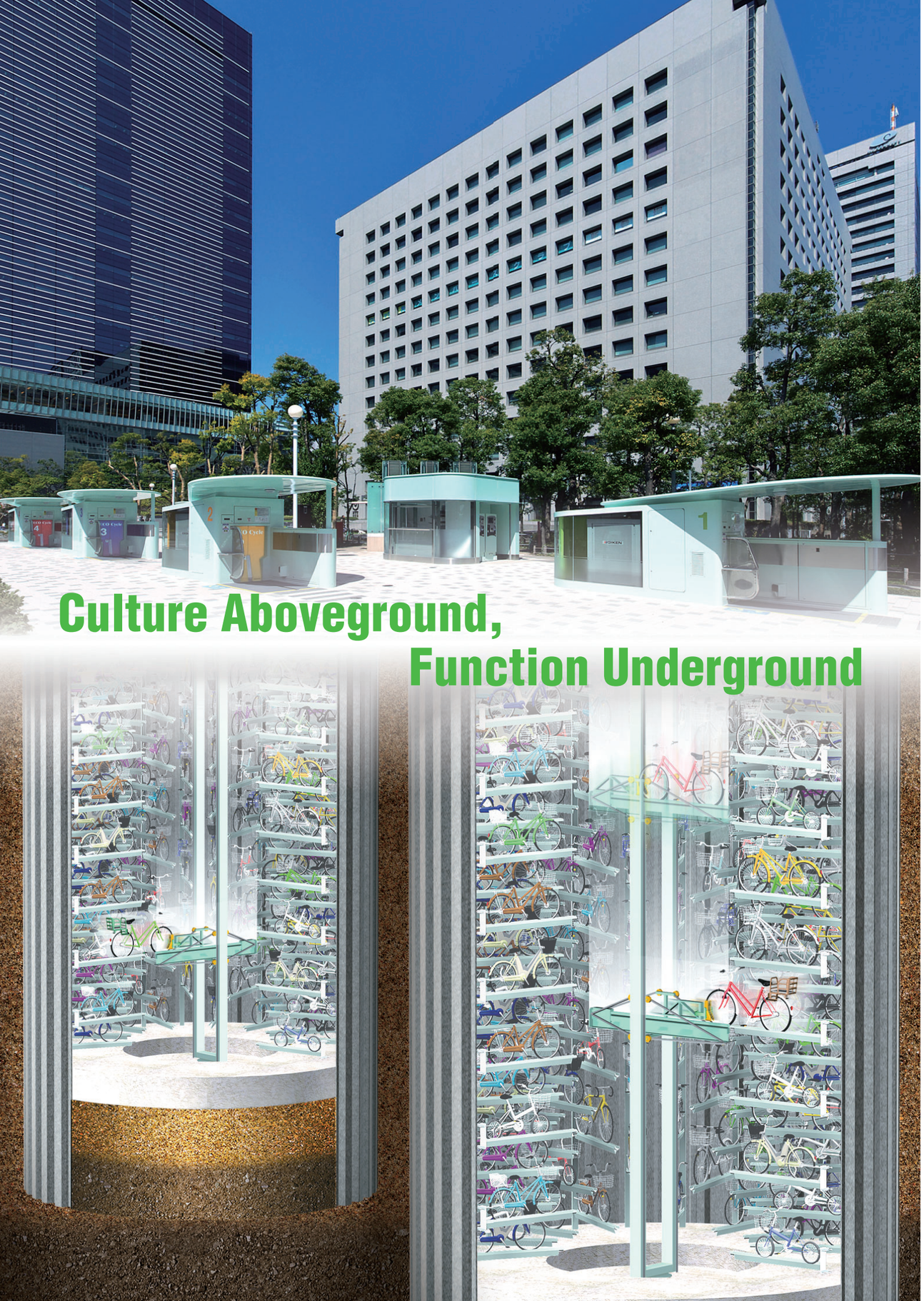
GIKEN Construction Solutions Company

www.giken.com

CONTACT US

Ver 5.0EN01 / 27 Jun 2025

GIKEN



GRIN Base™ | Achievements

Automated Bicycle Parking Facility

GRIN Base™ EC

Video

Automated Car Parking Facility

GRIN Base™ EP

Video

Movable Bicycle Parking System

GRIN Base™ MEC

Video

Automated Parking Facility for Ultra-compact Electric Vehicles

GRIN Base™ EVEP

Video

Scan for more information

Bicycle Parking in Complex Building at Wakayama

Location : Wakayama City, Wakayama
Completion : May 2008
Client : Private sector

Kansai region's first ECO Cycle in central Wakayama City

Installed in an office and condominium complex built in the centre of Wakayama City. It is used by tenant employees and apartment residents. The entrance booth has a new design style suited for the unique design of the building.

▼ Location Map

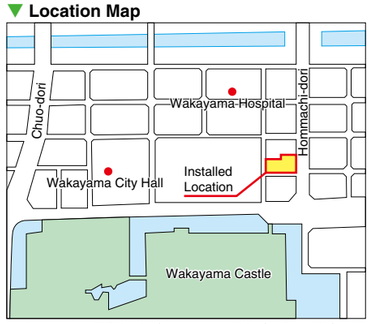


Image created by GIKEN based on fundamental geospatial data from Geospatial Information Authority of Japan (https://fgd.gsi.go.jp/download/menu.php)

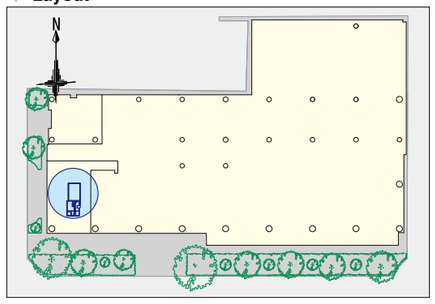
Complete view of building

ECO Cycle Specifications

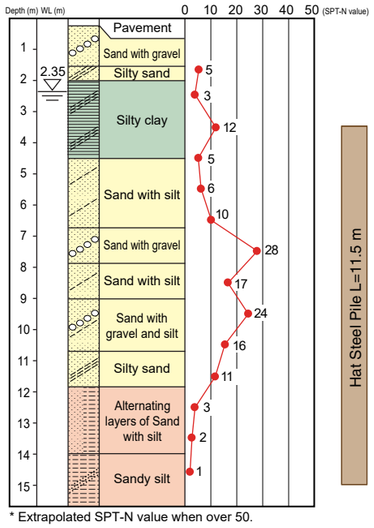
- Units : 1
- Total Capacity : 101 bicycles (101 × 1 unit)
- Usage : Monthly use
- Card Type : PET magnetic card (re-writable*)

*The gate number is printed on the card each time of use

▼ Layout



▼ Borehole Log

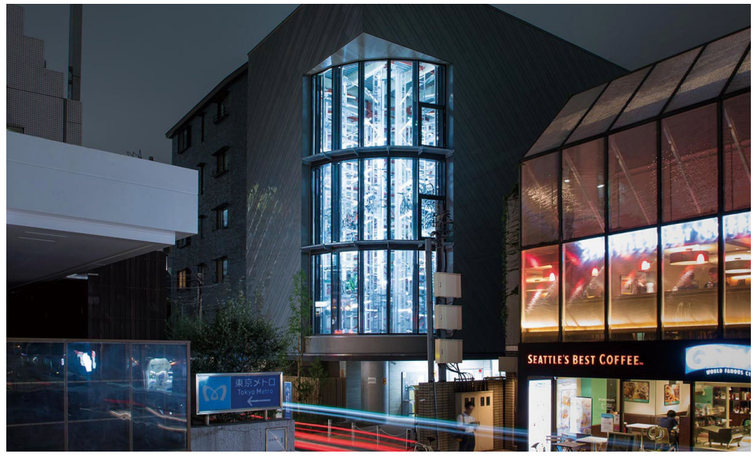


* Extrapolated SPT-N value when over 50.

Roppongi Station Aboveground Bicycle Parking

Location : Minato-ku, Tokyo
Completion : June 2017
Client : Minato-ku

Installed 2 units of aboveground ECO Cycle in Roppongi, Tokyo downtown.



2 units aboveground ECO Cycle have been installed inside of the rebuilt Minato City Housing. It became as a landmark "Charmed Bicycle Parking" which can change the impression of town more attractive by covering a part of ECO cycle exterior with glass, lighting up at night and showing the movement of the stored bicycle and mechanical device. It also makes possible for mutual usage with neighboring Mikawadai ECO Cycle Parking, and this is highly convenient environment in parking. This is 4th achievement in Minato-ku.

▼ Location Map

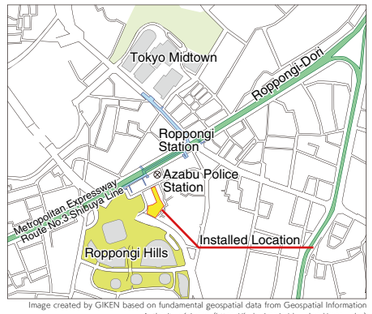
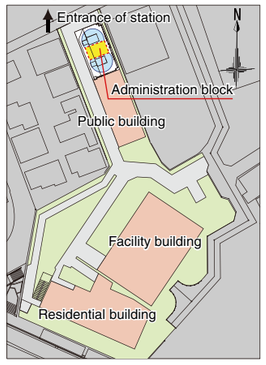


Image created by GIKEN based on fundamental geospatial data from Geospatial Information Authority of Japan (https://fgd.gsi.go.jp/download/menu.php)

ECO Cycle Specifications

- Units : 2
- Total Capacity : 408 bicycles (204 × 2 units)
- Usage : Monthly use
- Card Type : IC card

▼ Layout



Mechanical Underground Bicycle Parking, East Exit of Japan Railways Chiba Station

Location : Chiba City, Chiba
Completion : May 2009
Client : Chiba City

Japan's first case using underground space of a pedestrian walkway in front of a train station

For the first time in Japan, mechanical underground bicycle parking lot was installed on the street. The underground frame structure was built under the vehicle roadway and the pedestrian walkway to allow vehicles to pass over the ECO Cycle structure. Administration of the bicycle parking is controlled centrally at a nearby bicycle parking administration building.

▼ Location Map

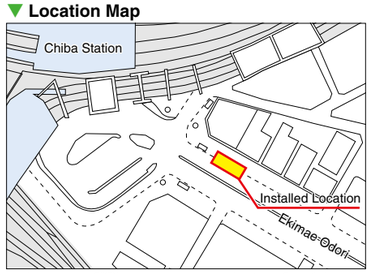
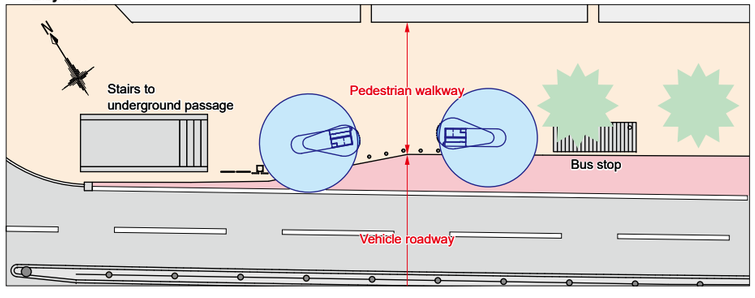


Image created by GIKEN based on fundamental geospatial data from Geospatial Information Authority of Japan (https://fgd.gsi.go.jp/download/menu.php)

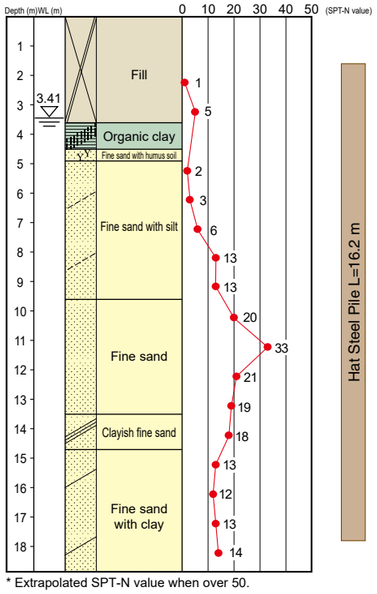
ECO Cycle Specifications

- Units : 2
- Total Capacity : 408 bicycles (204 × 2 units)
- Usage : Monthly use
- Card Type : IC card

▼ Layout



▼ Borehole Log



* Extrapolated SPT-N value when over 50.

Hachijoguchi West and Hachijoguchi East Bicycle Parking Areas of Kyoto Station

Location : Kyoto City, Kyoto
Completion : January 2015
Client : Kyoto City

Installation of mechanical underground bicycle parking in the community of Kyoto which is the doorway of an international, cultural and tourism city.

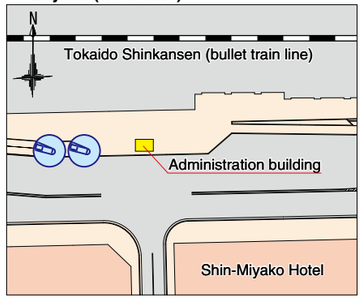
As part of the development project for the front square at the south exit of the Kyoto Station, three ECO Cycles were installed. They were installed facing a busy street, close to the track of the Shinkansen (bullet train) line. Construction with minimum influence on the surroundings was realized under a lot of constraint conditions. Previously part of the sidewalk had been exclusively used for bicycles. Effectively using the underground space at maximum with the ECO Cycles, landscape was not only improved, but a comfortable walking space was created. With the design harmonized with the landscape of the Kyoto Station front square, the bicycle parking/retrieval booths are melted into the street view.

▼ Before installation (west side)

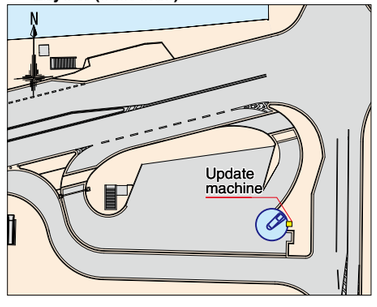
▼ After installation (west side)

▼ During construction

▼ Layout (west side)



▼ Layout (east side)



▼ Location Map

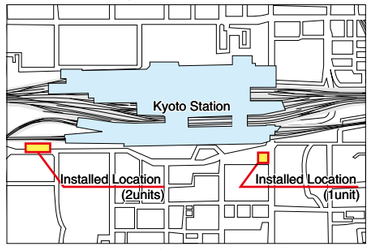
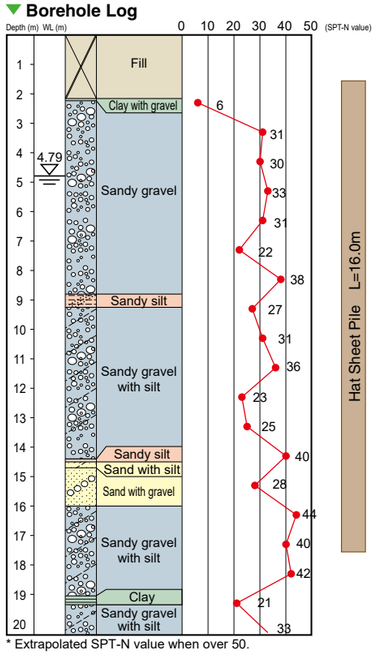


Image created by GIKEN based on fundamental geospatial data from Geospatial Information Authority of Japan (https://fgd.gsi.go.jp/download/menu.php)

ECO Cycle Specifications

- Units : 3
- Total Capacity : 612 bicycles (204 × 3 units)
- Usage : Monthly use
- Card Type : IC card

▼ Borehole Log



* Extrapolated SPT-N value when over 50.

Bicycle Parking, Konan Star Park

Location : Minato-ku, Tokyo
Completion : March 2010
Client : Minatu-ku

Utilise underground of an urban park very close to Shinagawa Station to accommodate 1020 bicycles.

Installed 5 ECO Cycle units under the urban park, situated in proximity to Shinagawa Station East Exit, which is currently being redeveloped. With its smart looking exterior that is above ground, ECO Cycle fits perfectly in the surrounding landscape and does not disturb the original functioning of parks, serving as urban facility that retains a balance between recreation and convenience.

▼ Location Map

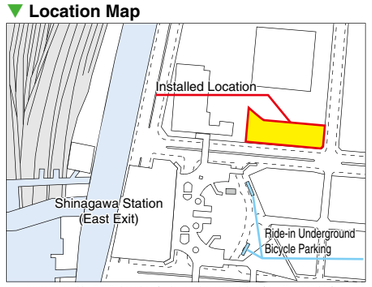
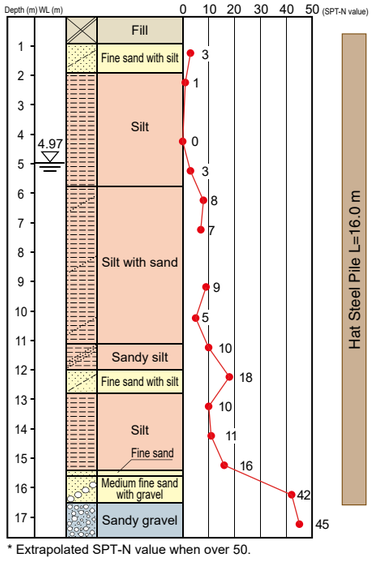


Image created by GIKEN based on fundamental geospatial data from Geospatial Information Authority of Japan (https://fgd.gsi.go.jp/download/menu.php)

ECO Cycle Specifications

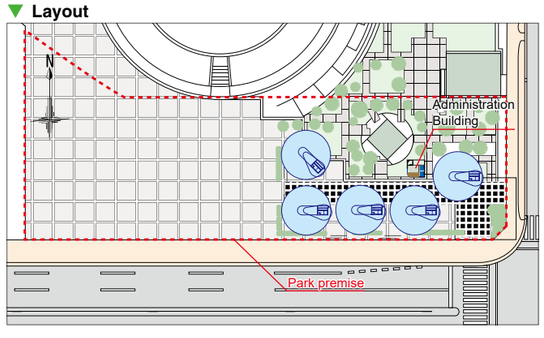
- Units : 5
- Total Capacity : 1020 bicycles (204 × 5 units)
- Usage : Monthly use
- Card Type : IC card

▼ Borehole Log



* Extrapolated SPT-N value when over 50.

▼ Layout



Administration building

Bicycle Parking, Ichinohashi Park

Location : Minato-ku, Tokyo
Completion : July 2023
Client : Minato-ku

Two ECO Cycle units installed as part of the redevelopment of the city park.

Two units of ECO Cycle were installed in Ichinohashi Park as a bicycle parking improvement project in the Azabu-juban Station area. Since the installation site was adjacent to a nearby housing complex and the Metropolitan Expressway, it was necessary to give due consideration to the surrounding environment, and the “press-in method” was highly evaluated for its safe and space-saving execution. Also, the facilities utilise a new specification to accommodate a greater number of bicycles equipped with child seats to cater for the increased number of users.

▼ Location Map

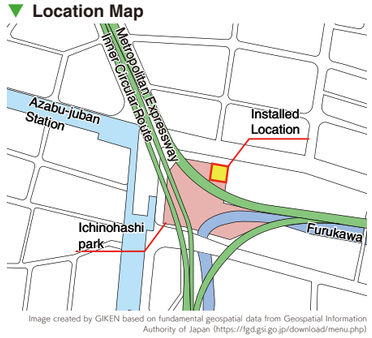
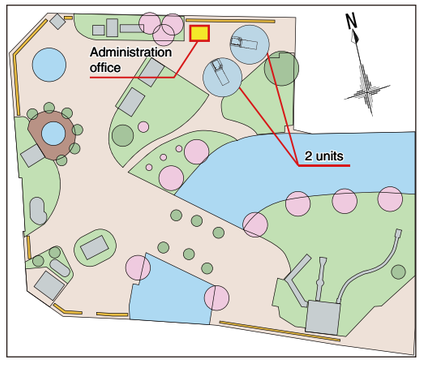


Image created by GIKEN based on fundamental geospatial data from Geospatial Information Authority of Japan (https://fgd.gsi.go.jp/download/menu.php)

ECO Cycle Specifications

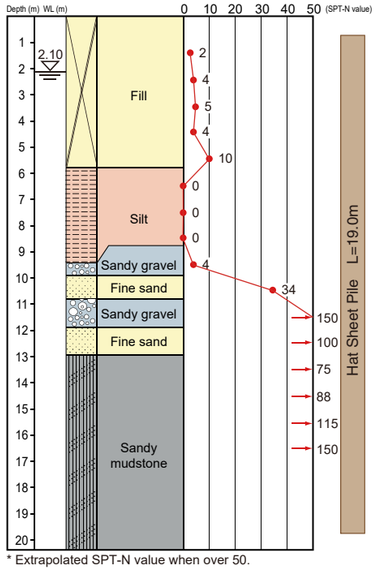
- Units : 2
- Total Capacity : 400 bicycles (200 × 2 units)
- Usage : Monthly or Hourly use
- Card Type : IC card

▼ Layout



▼ During construction

▼ Borehole Log



* Extrapolated SPT-N value when over 50.

Bicycle Parking, South Exit of Hachioji Station

Location　: Hachioji City, Tokyo
Completion : March 2010
Client　: The Hachioji City Housing and Urban Development Corporation

Installed ECO Cycle under the traffic circle in conjunction with the Hachioji Station South Exit Redevelopment Project

In conjunction with the Hachioji Station South-Exit Redevelopment Project, 6 ECO Cycle units were installed under the traffic circle of the South Exit. By building ECO Cycle under the convenient location of the Train Station's plaza area, it has allowed effective access from various directions, realising an ideal bicycle park for users.

▼ Location Map

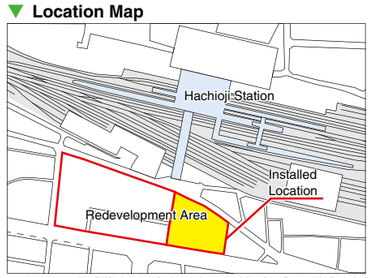
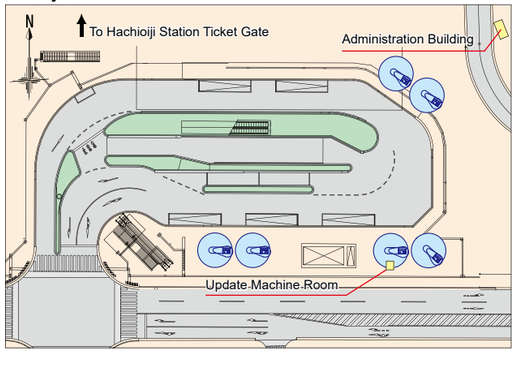


Image created by GIKEN based on fundamental geospatial data from Geospatial Information Authority of Japan (https://fgd.gsi.go.jp/download/menu.php)

ECO Cycle Specifications

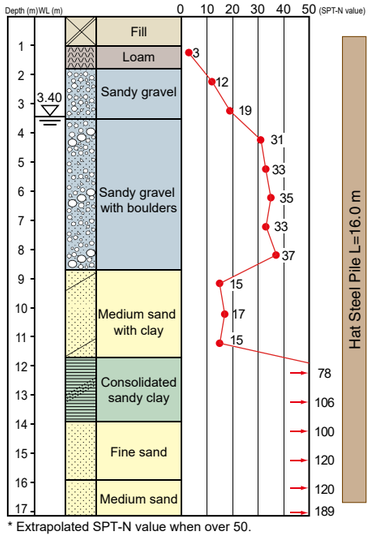
- Units　: 6
- Total Capacity　: 1224 bicycles (204 × 6 units)
- Usage　: Monthly use
- Card Type　: IC card

▼ Layout



Redeveloped Building

▼ Borehole Log



* Extrapolated SPT-N value when over 50.

Bicycle Parking, Shin-tsunashima Station

Location　: Yokohama City, Kanagawa
Completion : September 2023
Client　: Yokohama City

Two ECO Cycle machines installed near Shin-tsunashima Station on the Tokyu Shin-Yokohama Line

Two ECO Cycle facilities were installed as part of urban development projects triggered by the construction of Shin-Tsunashima Station on the Tokyu Shin-Yokohama Line. The facilities were installed near the new station using a press-in method that did not affect the surrounding environment. In addition to the construction method, the safety and maintainability of ECO Cycle were highly evaluated, leading to its adoption. This is the first automated bicycle parking facility in Yokohama City.

▼ Location Map

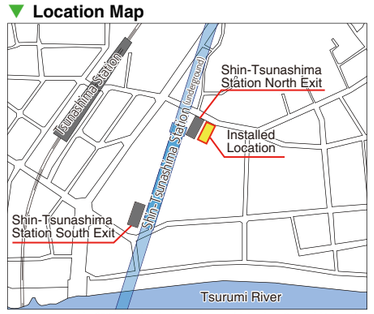
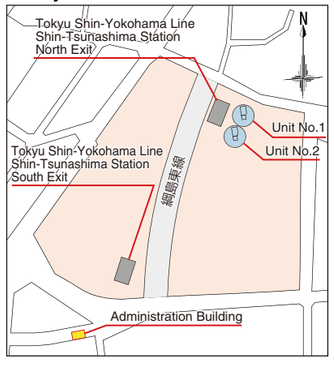


Image created by GIKEN based on fundamental geospatial data from Geospatial Information Authority of Japan (https://fgd.gsi.go.jp/download/menu.php)

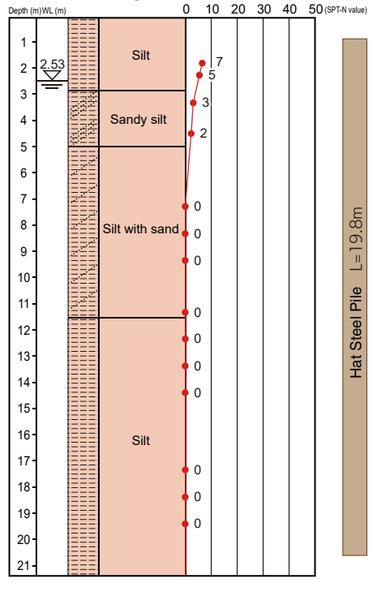
ECO Cycle Specifications

- Units　: 2
- Total Capacity　: 504 bicycles (252 × 2 units)
- Usage　: Monthly use
- Card Type　: IC card

▼ Layout



▼ Borehole Log



GIKEN LTD. Kochi Head Office Car Parking

Location : Kochi City, Kochi
Completion : August 2018
Owner : GIKEN LTD.

Renovation works completed at head office ECO Park

The first ECO Park was constructed in 1994 at Giken's Kochi office. Despite experiencing the strong earthquakes in 1995 (Hanshin-Awaji) and 2001 (Geiyo), the ECO Park withstood the seismic events and there was no damage to the underground structure.
To meet the needs and trends of a changing automotive industry, the ECO Park has recently undergone renovation works. Retaining the main underground structure, the systems and mechanical components were refitted with the latest ECO Park designs. One example is the two-sided sliding doors which reduces the entry / exit opening to the minimum.
With an upgraded control system, this latest ECO Park model vastly reduces the average retrieval time to 29 seconds, which is 9 seconds faster than the models previously installed.
The installation embodies Giken's concept of "Cultural Aboveground and Function Underground"

Before renovation

After

▼ Location Map

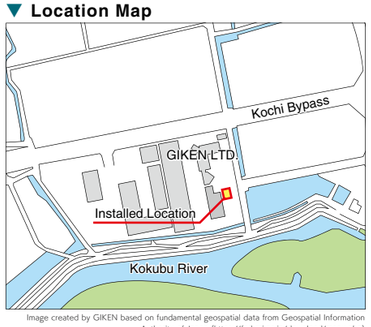
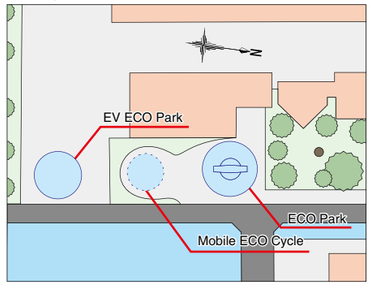


Image created by GIKEN based on fundamental geospatial data from Geospatial Information Authority of Japan (https://fgd.gsi.go.jp/download/menu.php)

ECO Park Specification

- Units : 1
- Total Capacity : 32 vehicles (32 × 1 unit)
- Usage Method : By registration
- Ticketing Method : RFID card

▼ Layout



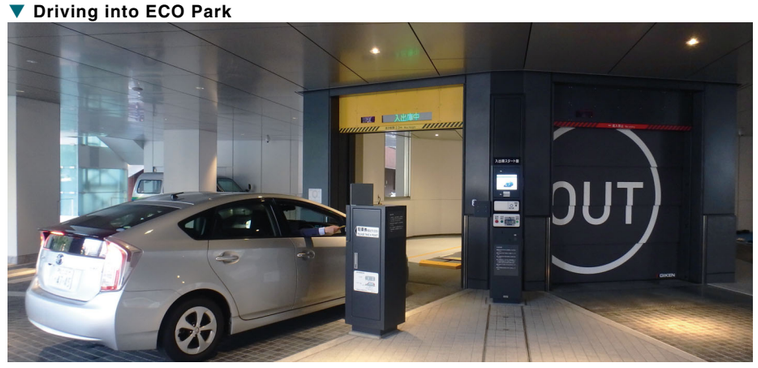
Park24 Group Head Office Building

Location : Shinagawa-ku, Tokyo
Completion : March 2019
Owner : Private Sector

Two ECO Park completed at new Park24 Building

ECO Park was selected to achieve Park24's vision of "harmony of people and cars".
To meet the trends of latest automotive industry, various types of vehicles are accommodated including SUVs. The installation works of ECO park was done simultaneously during the construction of the office building.
The two ECO Parks accommodate a total of 100 vehicles, 50 of which will be open to the public on an hourly basis as well as to use by rental and car-sharing companies.
Installed directly under Park24's new office building, the installation embodies Giken's concept of "Cultural Aboveground, Function Underground".

▼ Driving into ECO Park



▼ Location map

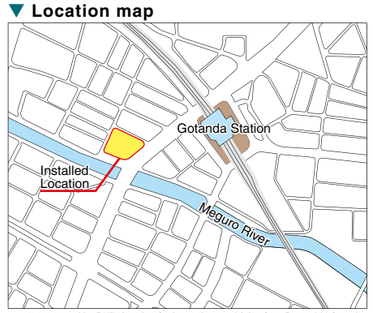


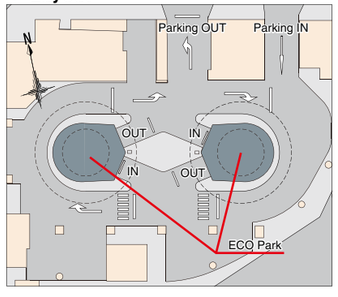
Image created by GIKEN based on fundamental geospatial data from Geospatial Information Authority of Japan (https://fgd.gsi.go.jp/download/menu.php)

▼ Light-up at night

ECO Park Specification

- Units : 2
- Total Capacity : 100 vehicles (50 × 2 unit)
- Usage Method : 1 unit open to general public for temporary parking [Open 24H]
  1 unit operated by Car Sharing Company
- Ticketing Method : RFID card

▼ Layout



▼ Overview of the building

GIKEN LTD. Kochi Head Office Bicycle Parking

Location : Kochi City, Kochi
Installed : August 2012 (Unit No.1)
March 2019 (Unit No.2)

Bicycle parking units built at Kochi Head Office to demonstrate the underground facility development

▼ Unit No.1

The first bicycle parking unit was built in August 2012 for employee parking and promotional use, with the second unit built in March 2019 in response to expansion of the new office building. The facilities have operated without trouble over these seven years despite several typhoons hitting the area. With one using passwords and one using IC cards, they enable visitors to experience two separate authentication methods. Also, unit No.2 is included in the standard head office tour so that visitors can experience an underground system as well as the adjacent ECO Park system.

▼ Unit No.2

▼ Location Map

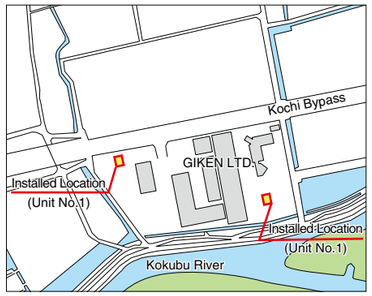
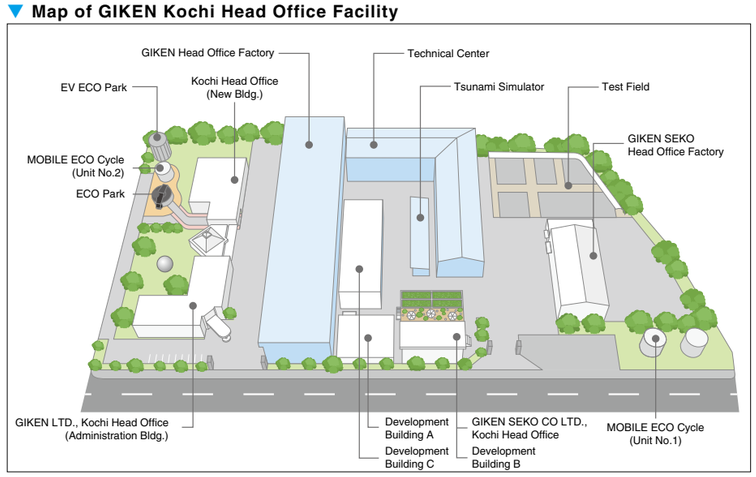


Image created by GIKEN based on fundamental geospatial data from Geospatial Information Authority of Japan (https://fgd.gsi.go.jp/download/menu.php)

Mobile ECO Cycle Specifications

- Units : 2
- Total Capacity : 116 bicycles (58 × 2 units)
- Usage : Registration system
- Authentication method : Password (Unit No.1)
  IC card (Unit No.2)

▼ Map of GIKEN Kochi Head Office Facility



VELO-CITY GLOBAL 2016

Location : Taipei City, Taiwan
Completion : February 2016

Actual system exhibited at the world's largest international cycling conference in Taipei, Taiwan

GIKEN exhibited an actual MOBILE ECO Cycle system (a movable bicycle parking system) at Velo-city Global 2016, the world's largest international cycling conference.
With storage and retrieval demonstrated on an actual system, there was a lot of interest among experts from around the world who were participating in the conference.
Nighttime lighting and other design features created an attractive bicycle parking facility that brightens up urban environments.
Embodying the MOBILE ECO Cycle concept, the system is easy to setup and remove, enabling people to easily use bicycles anywhere and anytime.

▼ Location Map

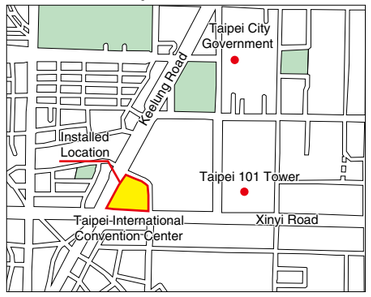
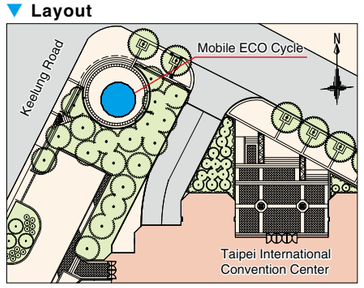


Image created by GIKEN based on fundamental geospatial data from Geospatial Information Authority of Japan (https://fgd.gsi.go.jp/download/menu.php)

▼ Media event

▼ Nighttime lighting

▼ Layout



Interior

Mobile ECO Cycle Specifications

- Units : 1
- Total Capacity : 58 bicycles (58 × 1 units)
- Card Type : IC card

▼ Attractive bicycle parking to brighten up urban environments

Kamiyama Marugoto College

Location : Kamiyama-cho, Myozai-gun, Tokushima

Completion : January 2025

Collaboration between schools and companies to co-create new values in manufacturing

In January 2025, we installed a MOBILE ECO Cycle at the school as part of our educational support, in agreement with the school's future-oriented philosophy of nurturing “people who create things and make things happen”.
It has started operating as a bicycle parking lot and rental bicycle port on campus, contributing to improved convenience.
The exterior design was decided through a design competition among students, taking advantage of the product's feature that it is possible to design the exterior to match the concept and surrounding landscape.

▼ Location map

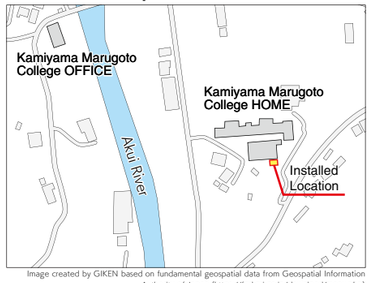


Image created by GIKEN based on fundamental geospatial data from Geospatial Information Authority of Japan (https://fgd.gsi.go.jp/download/menu.php)

Mobile ECO Cycle Specifications

- Units : 1
- Total Capacity : 58 bicycles (58 × 1 units)
- Usage : Registration system (Rental bicycle available)

▼ Students who use MOBILE ECO Cycle

▼ Exterior designed by students

GIKEN LTD. Kochi Head Office EV ECO Park

Location : Kochi City, Kochi

Completion : April 2022

World-First*1 Mechanical Parking System for Ultra-Compact EVs

GIKEN developed this system in anticipation of future demand and amid efforts toward the Sustainable Development Goals (SDGs) and carbon neutrality. In addition to the normal features of ECO Park facilities, including space-saving, large-capacity, and fast deposit/retrieval, this new system includes the full array of chargers as well. It will solve, all at once, issues with availability of charging facilities, which is hindering take-up of EVs, and lack of parking spaces. The system is being used by GIKEN employees when commuting and conducting other travel.
It can be adapted to a range of applications, from car sharing to delivery and courtesy transportation as part of new urban developments.

*1 According to research by GIKEN.

▼ Location Map

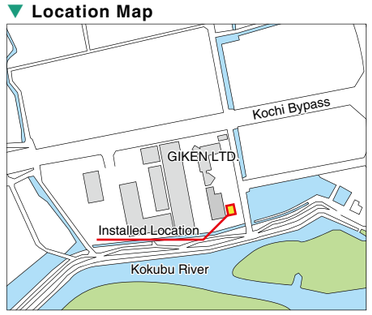


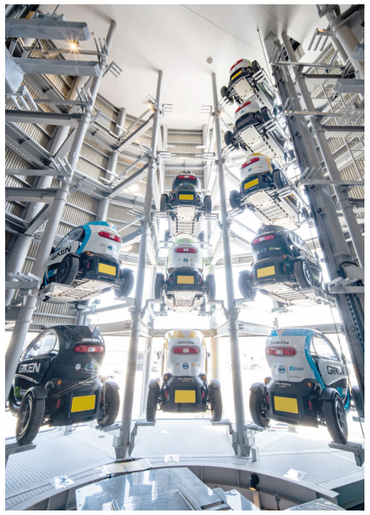
Image created by GIKEN based on fundamental geospatial data from Geospatial Information Authority of Japan (https://fgd.gsi.go.jp/download/menu.php)

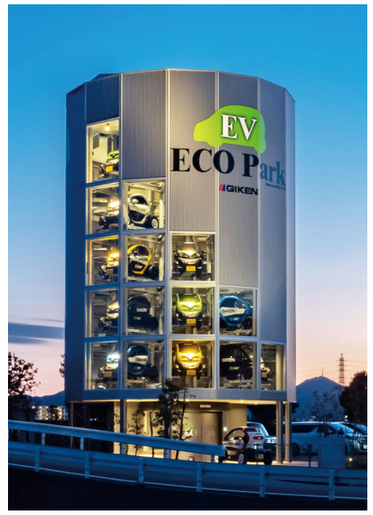
EV ECO Park Specifications

- Units : 1
- Total Capacity : 40 vehicles (40 × 1 unit)
- Authentication method : IC tag, IC card

▼ Ultra-compact EV

▼ Chargers





The world's first office building with an anti-seismic foundation that "makes money"!

Revenue-earning Seismic Resistant Structural Foundations

Daido Shinagawa Building (Minato-ku, Tokyo)

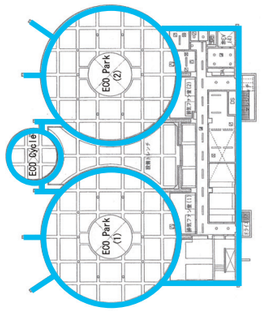
Location : Minato-ku, Tokyo
Completion : December 2003
Client : Private sector

Daido Shinagawa Building

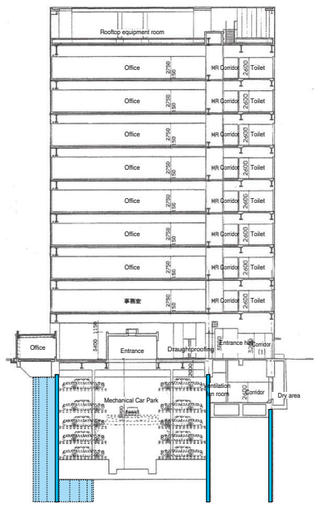
In December 2003, the world's first office block with "revenue-earning seismic resistant foundations" was completed in the vicinity of Tokyo's Shinagawa station. The earthquake-resistant foundations which support the 9-floor superstructure are made up of two ECO Park units and one ECO Cycle unit, together with an underground chamber. The anti-seismic walls reach down to the Tokyo Gravel layer, which is the supporting stratum.

- No. of stories: 1 floor underground, 9 floors above ground, 1 floor penthouse
- Foundation: Steel frame column structure installed with the press-in method(Supporting layer: Tokyo Gravel)
- Land Area: 1,653m²
- Building Area: 1,219m²
- Parking Area: 2,468m²
- Parking Capacity: 100 vehicles (2 ECO Park units)
- Parking Capacity: 144 bicycles (1 ECO Cycle unit)

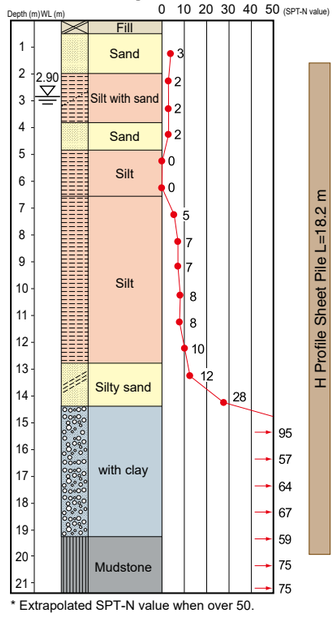
▼ Ground Plan



▼ Front Elevation

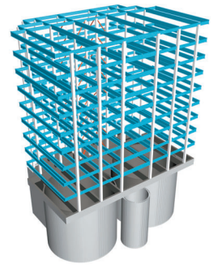


▼ Borehole Log



* Extrapolated SPT-N value when over 50.

▼ Structure



"Revenue-earning Seismic Resistant Structural Foundations"

The pile foundations of a building exist to support the weight of the superstructure and to withstand earthquakes and strong winds. However, a structure which only supports the building does not make full use of the underground space. So GIKEN created a continuous pressed-in pile wall in a dynamically stable cylindrical shape, to achieve a large-diameter underground structure which has even stronger earthquake resistance than conventional pile foundations. Using the internal space for car and bicycle parking gave rise to the "Revenue-earning Seismic Resistant Structural Foundations" which provide other functions apart from their basic structural role.

Revenue-earning Seismic Resistant Structural Foundations — GRIN Base™ EP

Underground Car Parking System at Office Building

3rd Japan Best Parking Prizes Special Prize : Winner
Japan Parking Facilities Promotion Organization

Pilotis (Entrance booths : Car Park 1 (foreground) and Car Park 2 (background))

Two different entry/exit systems to aid the flow of vehicles

Two ECO Park (L-Type) units have been installed to provide underground parking for 100 cars. The upper two floors of the five-story structure are compatible with high-roof vehicles (20 vehicles per unit). To achieve efficient use of floor space and smooth entry and exit, a "drive-through system" with the entry and exit doors positioned on the same straight line was adopted for the ECO Park 1 on the front side, while a "free system" with side-by-side entry and exit doors was used for the ECO Park 2 on the rear side.

Underground part

Car Park 1 exit (drive-through system)

Car Park 2 entry & exit (free system)

ECO Park Specifications

- Units : 2 (L type)
- Total Capacity : 100 vehicles (50 x 2 units)
  * including spaces for 40 high-roof
- Usage : Monthly or Pay-by-hour
- Card Type : PET magnetic card (Monthly)
  Paper magnetic card (Pay-by-hour)

Revenue-earning Seismic Resistant Structural Foundations — GRIN Base™ EC

Underground Bicycle Parking System at Office Building

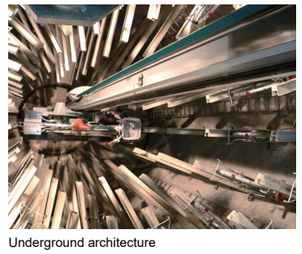
Entrance Booth

Automatic charging function for Electric assist bicycles

Underground parking lot for 144 bicycles. Charging devices are installed in the upper two floors of the eight-storey structure, providing a facility for automatically recharging electric assist bicycles while they are parked. The glass-panelled entrance booth allows users to watch their cycle being lowered, rotated and raised by the system.

Electric assist bicycle compatible with automatic charging system

Side of booth with glass panelling



Underground architecture

ECO Cycle Specifications

- Units : 1
- Total Capacity : 144 bicycles (144 × 1 unit)
- Usage : Monthly use (combined with rental cycle)
- Card Type : Plastic JIS-spec magnetic card