

Tokyo Yamanote Line—Cityscape Mutations

Corinne Tiry

'Both for residents and visitors, the identity of a city is shaped by the means by which they move in and around it.'⁽¹⁾

A decade has passed since the privatization of Japanese National Railways (JNR) triggered urban redevelopment as a result of the sale of JNR's vacant lands. Although 10 years is a rather long cycle in the time scale of Japanese urban mutations, there have been fewer than expected changes in Japan's cityscapes due to the collapse of real-estate speculation when the economic bubble burst in the late 1980s. However, a few archetypal buildings are heralding a new cityscape.

Tokyo has been spreading into new areas since the 1960s due to continuous population expansion and a shortage of conventional building lands. Typical examples of new building areas are the gigantic Teleport Project (440 ha) at the Waterfront Subcentre on Tokyo Bay, and huge underground commercial spaces linked with new subways. Furthermore, relaxed city planning regulations are making the city conspicuously more vertical. Tokyo's future urban development looks set to be much more three dimensional. At the same time, localized urban lands are being rehabilitated, especially at the metropolitan fringes. The development of numerous lots near railway stations along the centenarian Yamanote Line is revitalizing and leading the metropolis to a new stage of its urban history.

The Current Portrait

The Yamanote Line has been a constant landmark of the central Tokyo cityscape, while providing daily transport for millions of commuters. It witnessed the growth of the metropolis, and now serves as part of a complex crowded mass transport system. It takes 1 hour to circle the 34.5-km length with 29 stations, 22 of

which serve as connections to 35 other railway and subway lines (Fig. 1). Thirty million people live within a 100-km radius of the Line. Living within 10 km of the Line is convenient, but many Tokyoites live 20 to 30 km from it, and some bed towns are 50 km or more away. People living closer to the Line pay higher rent and are viewed as having higher social status. This arrangement creates spatial and temporal divisions providing the city with inner and outer, daytime and night-time spaces.

After the JNR privatization, its surplus land assets were transferred to the JNR Settlement Corporation (JNRSC) for liquidation to settle the outstanding debt. Sixty-four

of the total of 169 hectares in the Metropolis remained unsold at the end of 1996. The collapse of the real-estate market has undermined the value and development potential of these prime locations, culminating in difficult sales. Despite having possession of such valuable and useful land for 10 years, nobody at JNRSC or in the government had any vision of using these assets as part of a genuine city planning policy. The only priority is to maximize the sales profits to offset the JNR debt. JR East (the heir to JNR in the eastern Honshu region) also has stations at prime development sites in Tokyo. Its strategy is to modernize the stations into cores of competitive urban poles.

Figure 1 Tokyo Metropolitan Railway and Subway Networks



(Adapted from JR Timetable)

* Due to copyright issues, the original Figure 1 has been replaced by the above map.

Figure 2 Evolution of Yamanote Line

Source: *Yamanote sen hyaku nen*

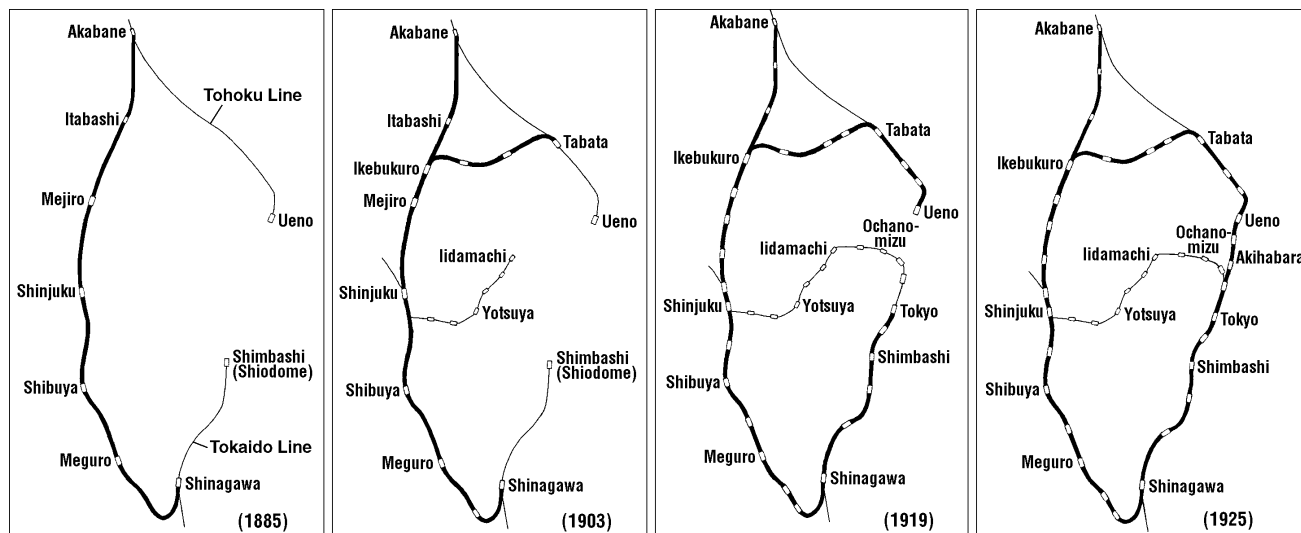
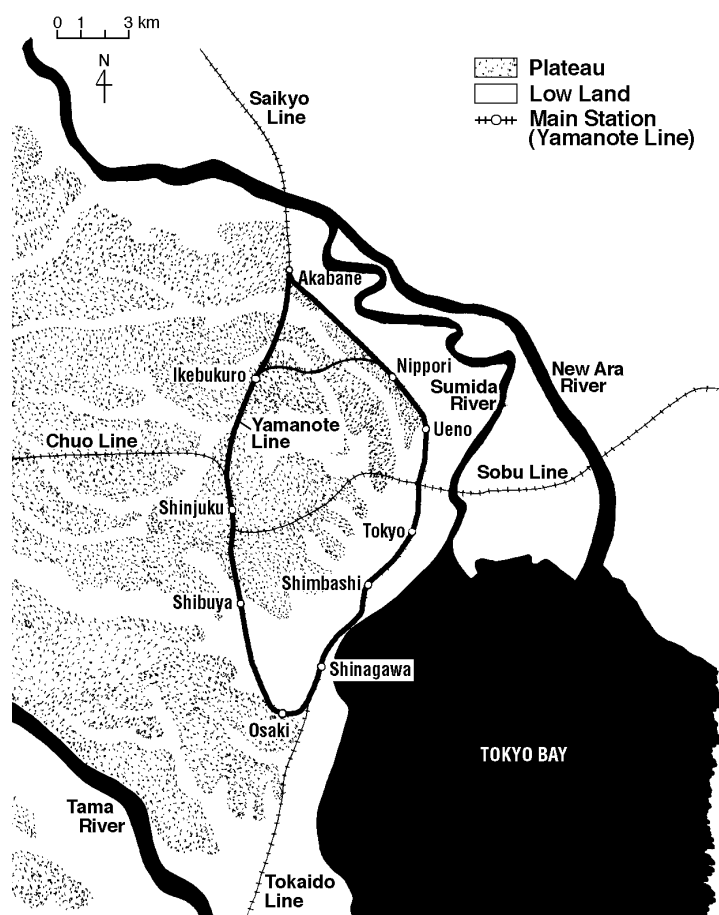


Figure 3 Tokyo Topography and Yamanote Line

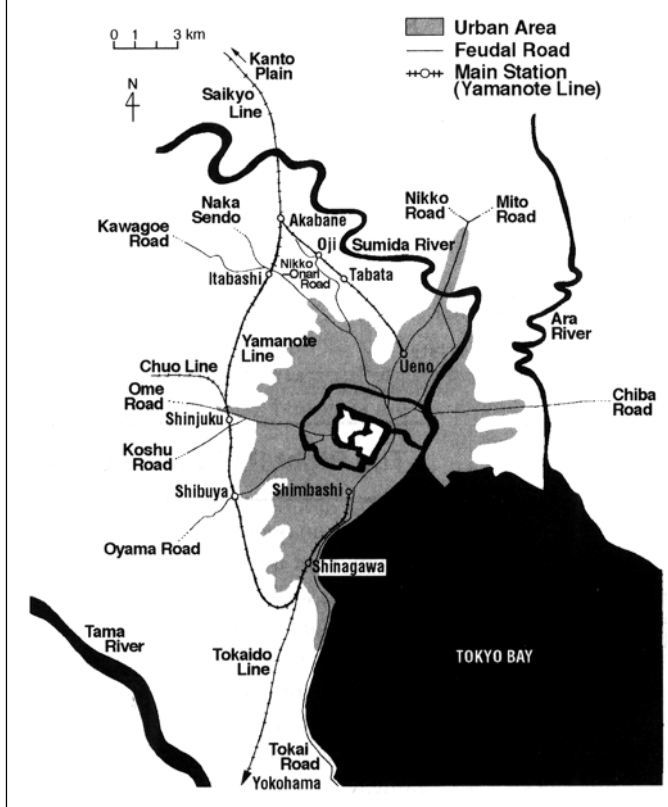


(Author)

The Right Railway by Design

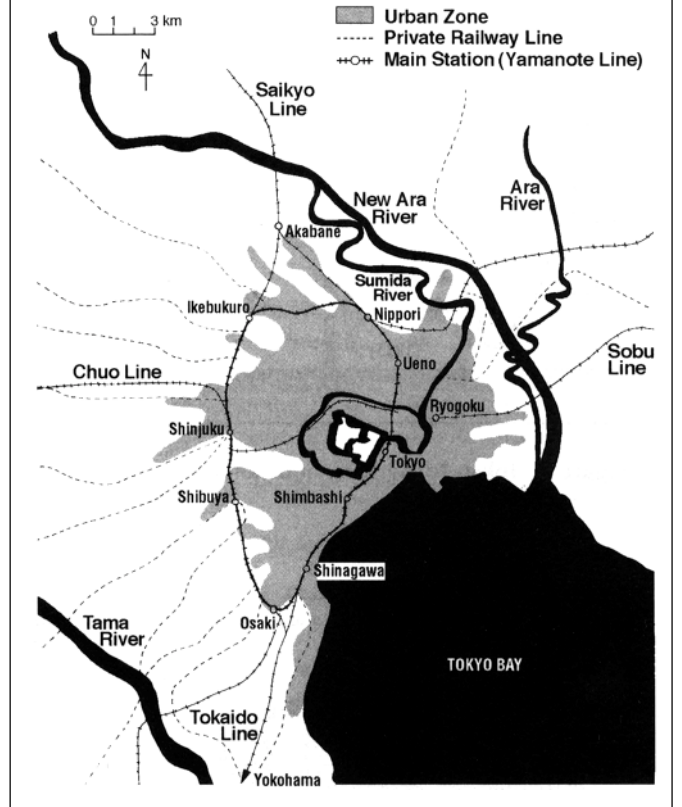
When Japan opened up to the West at the beginning of the Meiji Era (1868–1912), its leaders took on the task of modernizing Edo, the feudal capital, later renamed Tokyo. An important step was establishing a transportation network worthy of a metropolis to compete with Paris or London. The government and the national railways of the time started building the Yamanote Line, opening the first North-South section in 1885 and closing the circle in 1925 (Fig. 2). Originally, the system connected the northern Tohoku trunkline with the Tokaido trunkline and Yokohama Port in the south, where most commodities and manufactured goods were imported and exported. This economic function explains its original route through the then city outskirts as well as the numerous pockets of land (marshalling yards, depots, termini, etc.) that remained nonurbanized along the line. Although the Ringbahn in Berlin served as the model for the Tokyo railway system, the layout of the Line nevertheless reflects the feudal topography and urban conditions. Two rules governed the evolution of the route. First, the line roughly followed the higher, more residential area (*Yamanote*) and left aside the older bus-

Figure 4a Main Stations Developed where Yamanote Line Crossed Feudal Roads



(Author)

Figure 4b Western Spread of Private Railways Lines from Yamanote Stations



(Author)

ting merchant areas (*shitamachi*) in the east (Fig. 3). Second, it crossed the main roads (*kaido*) converging on the old feudal Edo Castle. Railway crossings subsumed the former post stations, giving birth to the huge poles of Shinjuku, Shibuya, Shinagawa, Ueno (Fig. 4a). Notwithstanding this, urban Tokyo was not yet incorporated into this new infrastructure. As the growing Yamanote Line system enclosed the city, it offered passengers scenic routes to the west, urban routes to the east, and seascapes to the south-east along Tokyo Bay.

Single-orientated growth

The asymmetric route of the Line became more marked during the period of strong urban growth in the Taisho Era (1912–

1925), when Tokyo reached real metropolitan structure and scale. The rural Musashino district on the west side (*Yamanote*), was soon served by a dense network of private railways (Fig. 4b). This external network developed as a result of simultaneous radial and suburban growths, while the central area inside the Yamanote Line remained almost the private reserve of the city tram, and later, the subway. Conversely to the east, the waterways and population concentration curbed the development of new lines. The radial railways in the metropolitan area took over the function of the feudal roads. Urban growth to the west and south was stimulated by the vacant area of Musashino, the dynamism of Yokohama Port, and by property-development activi-

ties of the private railways companies^{(2),(3)}. The city and suburbs were interfaced at the branch stations on the Yamanote Line, which developed new attractions where commercial activities concentrated. These parallel activities of private railway companies have only finally become accessible to the new JRs after the JNR privatization.

Since the postwar period of high economic growth, the visual cityscape alternates from attractive urban zones around the station buildings⁽⁴⁾ (*eki biru*) to residential neutral zones sandwiched between stations. The nightscape is intermittently saturated with neon lights and pitch dark, giving the traveller a glimpse of Tokyo's dualism, intimately related to the railways and stations.

Official Multipolarization

The connections of the private railways to the Yamanote Line at the branch stations form five of the seven Subcentres in Tokyo defined at the Promotion Conference for the Development of a Balanced City in 1992 (Fig. 5).

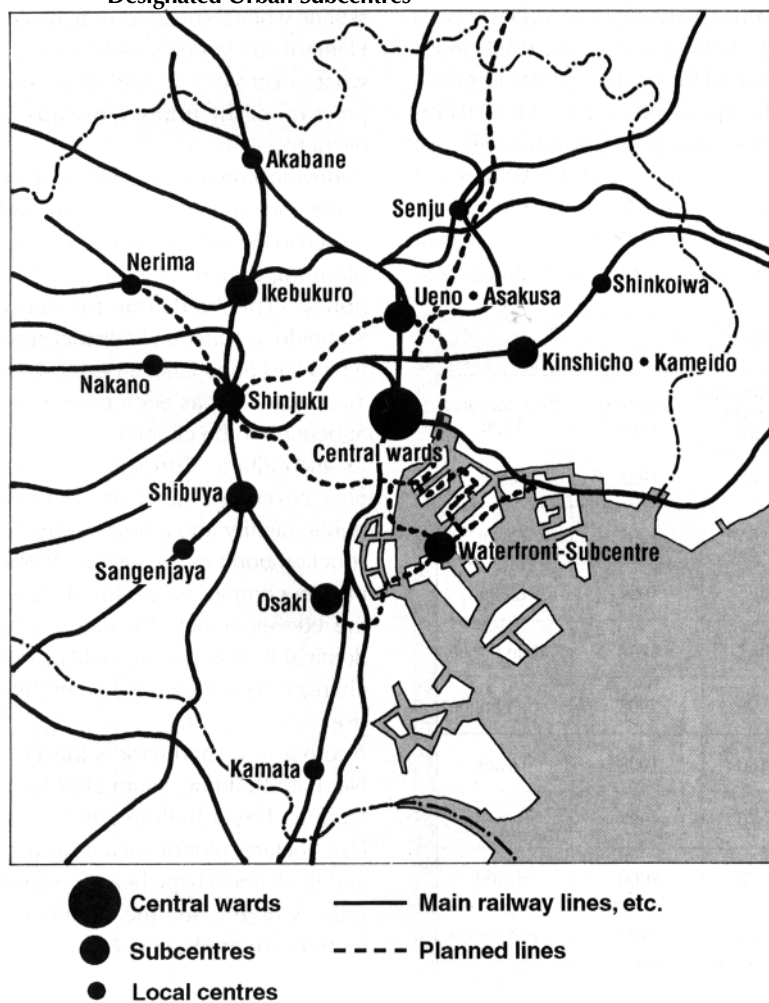
Acknowledgment of a multipolar role for the railway system aims at a more balanced distribution of the capital's activities and services, which are still heavily

concentrated in the city centre. If the centre reserves the specific character of an international capital for itself, the Subcentres constitute peripheral poles that consolidate the commercial, administrative, cultural and information functions of the capital. The future economic weights and roles of these Subcentres as urban prime movers are undeniable; 30% of the city's consumers congregate in Shinjuku, the most important Subcentre on the Yamanote Line⁽⁵⁾.

As in the past, today's urban regeneration

springs from railway poles. The new status of the Subcentres is generating stiff competition among them. They are expanding the same core commercial activities while trying to establish their own unique identity in business, culture, or information. The competition has been inflamed further by the JNRSC sale of nearby prime real estate. Shinjuku is a good example. In the 1970s, a number of large companies moved their head offices to the west side of the station. The Tokyo Metropolitan Government (TMG) also moved its office to a new building there in 1991. Another development called Times Square opened 5 years later on the site of an old JNR freight yard sold by auction in 1991. These two huge developments have rejuvenated the district. Times Square is a large scale commercial operation with 175,000 m² on 14 floors containing three department stores, leisure areas, and a pedestrian deck near the tracks. It has instilled new life into this previously forsaken district. Two new high-rise towers, each of about 150 meters high, on the other side of the tracks house the future JR East headquarters (28 floors), and the Odakyu Electric Railway Company complex including a hotel, offices and shops. JR East and the Odakyu are jointly building a T-shaped pedestrian deck over the tracks to create a public space between the three buildings and the main station. Although expensive, similar schemes to create public area using partial roofing of tracks are on the increase in Tokyo, paradoxically increasing the city density, but relieving congestion. This trend is giving birth to new pedestrian urban space on artificial ground with streets and passageways lined by shops, trees and plants. In terms of the cityscape, these new public spaces orientate the station buildings toward the tracks, in contrast to the earlier period when they turned their back on the tracks to focus on the square in front of the station (*ekimae hiroba*) (Fig. 6a, b).

Figure 5 Yamanote Line stations Form the Cores of Designated Urban Subcentres



Source: Planning of Tokyo 1996

Two Types of Sites and Projects

Although the recent transformations of the Tokyo cityscape on the Yamanote Line appear at the branch-station level, various recently-completed schemes, or projects still under construction, allow us to anticipate the future profile. There are two types of projects organized by two different groups: reconversion of vacant railway lands sold or managed by JNRSC, and station renovation, led by JR East (Table 1). These two different separate levels of intervention correspond to the original double role of the Yamanote Line—in other words, freight and passenger transport. However, although these operations were not jointly planned, their respective effects on the present and future transformations of the cityscape are similar.

The close association by juxtaposition or superposition of these empty lots with the railway infrastructure, creates a high impact amidst the cramped Tokyo cityscape.

The huge size of these lots contrasts with the small land parcels comprising the contemporary Japanese city. These sites are easily developed because they are either vacant as in the case of the lots held by JNRSC, or new space over tracks as in the case of JR East stations⁽⁶⁾. Alteration in the land use permits building at higher floor area ratios^{(7),(8)}, stimulating investment and generating better profitability. These factors precipitate high-rise urban frontages next to tracks.

JNRSC—Shiodome, Kinshicho-Kameido, Ebisu

Shiodome, the 20-ha site of a former JNR marshalling yard close to Tokyo Bay, is presently held by JNRSC, but is still empty. Alteration of the land usage has just been partially approved by the TMG. Its remarkable central location near JR East Shimbashi Station and the Waterfront Subcentre served by a new railway line, and soon, by a new subway line, constitutes the largest and most highly-prized

vacant lot in the capital. It will become a multifunctional urban zone and transport node under the master plan approved in 1995 by the TMG. The site has been split into four equal parts: one quarter was purchased in early 1997 by a consortium of private companies planning to build their headquarters on it; another quarter was sold to the TMG which will build a shopping-office-housing complex and a park. A further quarter will have cultural, tourist, and leisure facilities, while the last quarter will be used for offices and housing. The *Development Guidelines for the Shiodome Site*, stipulates that '...buildings on blocks near Ginza and Hamamatsuchō Station should form a relatively high skyline while those on central blocks near Hamarikyu Garden should form a somewhat lower skyline.' and gives some impression of the future cityscape in that district.

Redevelopment of vacant land located within the sphere of a Subcentre and connected to the railway system reinforces the planning dynamics of the TMG urban policy. This holds true for Kinshicho-Kameido, a *shitamachi* district served by the JR East Sobu Line, an extension of the Yamanote. It has been designated as a Subcentre to be characterized by industry and culture. Currently, a mixed complex, covering 3 ha, of offices, housing, a public facility and a hotel, is under construction north of the station. JNRSC and private companies are jointly financing the redevelopment. The image of the predominantly low-rise area will be radically changed by the emergence of this high-rise fringe (Fig. 7).

Another new landmark is the 19-storey Neonato Building, south of JR East Ebisu Station. It was built in 1994 on a small (1/2 hectare) plot of vacant railway land and its slender shape bears witness to the railway origin, and the developer's will to optimize profits (Fig. 8).

Table 1 Key Developments on Yamanote Line

Sites	Scheme & Plan	Lot Area (ha)	Net Floor Area (m ²)	Maximum Height (m)	Opening Date	Architectural Type
JNRSC	Shinjuku Times Square (S, PK)	2	175,000	82	1996	Block
	Shinjuku Maynds Tower (O, PK)	1.1	103,000	161	1996	Tower
	Ebisu Neonato (O, S, PK)	0.5	31,000	85	1994	Blade
	Shinagawa Inter City (O, S, C, PK)	3.5	337,000	145	1998	Urban Fringe
	Kinshicho-Kameido Kinshicho (O, S, C, H, PK)	3	297,000	95	1998	Urban Fringe
JR East	Shinjuku JR East Head Office (O, PK)	1.1	79,000	150	1998	Tower
	Ebisu Station Building (ST, O, S, PK)	1.8	65,000	70	1997	Hybrid
	Meguro Station Building (ST, O, S, PK)	1.1	55,000	76	2000	Hybrid
	Shinagawa Pedestrian area (PB)	0.6	6,270	15	1997	Living Bridge

S = Shops, PK = Parking, O = Offices, C = Cultural Facilities, H = Housing, ST = Station, PB = Pedestrian Bridge



Figure 6a District South of Shinjuku Station in 1994

(Rail City East Development Co., Ltd.)



Figure 6b Artist's Impression of Completed Shinjuku Redevelopment

(JR East)

JR East— Ebisu, Meguro, Shinagawa

The Yamanote Line stations are surrounded by high-density urban development, confronting them with space problems impeding their economic development and modernization. Moreover, since the privatization in 1987, the JRs need more area to diversify their business into tourism, real estate, department stores, etc. Although there are vacant lots near tracks, these are actually held by JNRSC, a problem summarized by an executive of the Property Development Headquarters as, 'Theoretically, JR has no land.', and forcing JR East to focus on maximizing use of existing *eki biru*.

The method for augmenting some JR East stations specifically addresses this lack of land resources; the space over rails has been utilized by building the *eki biru* on bridges to form a multi-level structure with a diversity of business functions. Although costly and difficult to construct, the long-term profits are high. This over-the-track augmentation is generally used in suburban areas where the density is lower, but there are some examples under construction on the Yamanote Line.

Although the new *eki biru* project at JR East Ebisu station only covers about 1.8 ha, the main station building of 15 storeys also houses businesses, shops and offices, and the second building has shops on 7 levels. The two monolithic structures with trains running through them above street level stamp their character on the district. Their juxtaposition with the slender Neonato Building and proximity to Ebisu Garden City, another development, symbolize the evolution of new urban poles on the Yamanote Line.

JR East Meguro *eki biru* is another over-the-rails project. Its joint-venture basis is strategically more complex than the Ebisu project, but it is technically simpler because the tracks are already in cuttings. In addition to augmenting the JR East sta-

Figure 7 Artist's Impression of Kinshicho-Kameido Development



(Kinshicho Eki Kitaguchi Saikaihatsu)

tion, it will renovate the terminal of the Tokyu Mekama Line—a private railway company in the western suburbs. The new *eki biru* consists of two buildings: the main 76-m high building consolidates the station, shops and offices on 16 levels, while the second building has four parking levels. A plaza and a mini-park north and west of the complex form two small public spaces.

These two examples illustrate the emergence of a new generation of *eki biru*, combining three architectural forms: the shopping mall (block), the office building (tower) and the communications node (platform).

Modernizations at Ueno and Shinagawa stations represent the emergence of another type of station, mixing transport activities and public space for pedestrians. Shinagawa appears to be particularly representative of the type.

In addition to the refittings inherent in the station modernization, an overhead public space—the *Jiyu Tsuru* (free passageway)—sweeps imposingly through the

station building, becoming pivotal in the transformation of the entire east part of the district. This east-west axis will connect Shinagawa Station to a new shinkansen station, an urban scheme consisting of a public square on 3.5 ha of JNRSC-held land, a bus terminal on 1.4

ha of land owned by the local municipal government (Minato Ward), and a complex of private company headquarters (Figs. 9a, b). Shinagawa Station promises to play a major role as a new pole on the Yamanote Line.



Figure 8 Aerial Shot of Ebisu Showing Juxtaposition of New Station Building and Neonato Building (to right of station)

(H. Mizuguchi)



Figure 9a Aerial Shot of Infrastructure and Vacant Railway Land East of Shinagawa Station
(JR East)

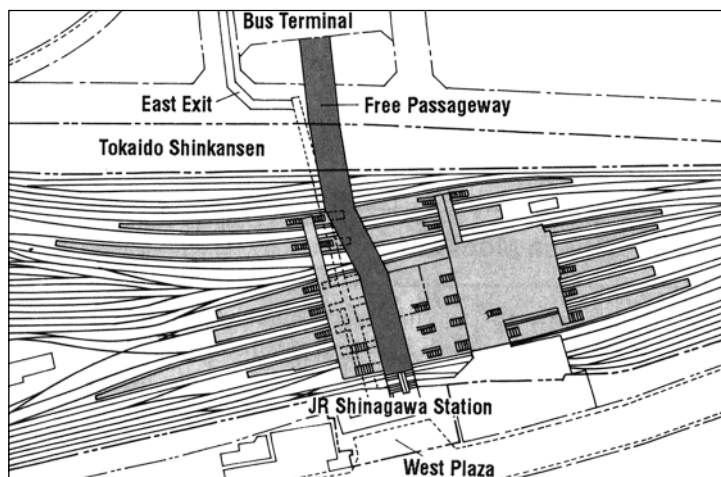


Figure 9b Plan of Jiyu Tsuru in JR Shinagawa Station

(JR East)

Mutations and Permanency

A new generation of buildings is emerging and enriching the urban centres along the Yamanote Line.

Often open and elevated, the station platforms had always offered windows of discovery onto the capital's urban space. If increasing the urban density rationalizes and diversifies the activities of each transport node, transforming the station buildings will nonetheless change our spatial relationship with the city. Yesterday's Tokyo with alternation of high-rise zones around the *eki-biru* and low-rise neutral residential zones is giving way to a series of high-rise urban fronts, facing the tracks, and creating new inner fringes.

The Yamanote Line has been a dynamic axis of communication supporting and stimulating the modernization of urban Tokyo since the late 19th century. At the end of our century, it continues to play a profound role in the city's mutation towards radical verticalization linked with the appearance of new urban poles. But its very permanency as a landmark provides a baseline for measuring the transformation of the Tokyo cityscape. ■

Notes

- (1) Deyan Sudjic, *The 100 Mile City*, E. André Deutsch Ltd., London, 1992.
- (2) This trend was accentuated after the Great Kanto Earthquake in 1923, when many residents moved from the badly damaged *shitamachi* areas to the safer western suburbs.
- (3) For the development strategies of the private railway companies, see the following article. Japan; a disoriented modernity, by Naomichi Kurata in *Casabella*, volume 608/609, 1994.
- (4) In Japan, the railway station is neither monofunctional nor isolated from the urban fabric. It concentrates many activities parallel with passenger transport, and develops a hybrid architectural style, mixing department-store (block) style and the communications-node (platform) style.
- (5) *The Japan Times*, 04.10.96. Shinjuku Station handles a daily average of 1.362 million passengers on the JR East system and 1.389 million on the private lines.

(6) The Redevelopment Area Plan in *Planning of Tokyo 1996*, Tokyo Metropolitan Government'...aims at the high-level use of land and renewal of city functions through inducements for large-scale redevelopment of consolidated areas of unused or underutilized land such as former factory sites'.

(7) The Floor Area Ratio system of Tokyo Metropolitan Government'...restricts the ratio of the total floor area of buildings to the site area in order to provide comfortable town spaces in the city... it is used to designate the various types of usage zones'.

(8) *Development Guidelines for the Shiodome Site*, JNRSC, 1996.

For example, on the first quarter of the site, where the specifications recommend high-rise buildings, the 400% initial Floor Area Ratio was boosted to 1200%.



Corinne Tiry

Corinne Tiry is a French architect-researcher. She attended Kyoto University from 1994 to 1996 as a research worker on a scholarship from the Japanese Ministry of Education, Science and Culture. She received an AFAA grant from the French Ministry of Foreign Affairs to study in Tokyo as a freelance architect-researcher from 1996 to 1997. She published 'Panser ou repenser Kobe' (Bandaging or rethinking Kobe) in *Urbanisme*, 1996, and 'Villes, logements, exclusions' (Cities, housings, exclusions) in *European Community*, 1993, edited by Y. Tsiomis.