

NEW LANDMARK FOR 1964 OLYMPIC YEAR

R.W. GRIPE



HITACHI-ALWEG MONORAIL



NIPPON KOKA DENTETSU COMPANY LTD.



NEED FOR MONORAIL SYSTEM

Tokyo's traffic is getting worse these days, particularly on the main highways leading to the central business areas of Tokyo. During peak hours, it takes international travelers more than one hour by bus or motorcar to reach their downtown hotels from Tokyo International Airport.

The traffic congestion in Tokyo calls for a new urban transportation system to alleviate it. The monorail system meets this requirement.

The Nippon Koka Dentetsu Company, Ltd. will complete the world's longest monorail line in time for the 1964 Tokyo Olympic Games. After several years' research on Tokyo traffic congestion the NKD now plans to build four trunk lines in and around Tokyo.

1. Haneda Line: Tokyo International Airport—Hamamatsucho Station
2. Kamata Line: TIA—Kamata Station
3. Yokohama Line: TIA—Yokohama City
4. Atami Line: Yokohama—Atami (world-famous hot-spring resort on the Riviera of the Orient), Shizuoka Pref.

The initial trunk line will be built between Tokyo International Airport at Haneda and Hamamatsucho, which is near the worldfamous Ginza-Shimbashi area.

It will take only 14 minutes from Haneda to Hamamatsucho by the projected monorail express.



Tokyo traffic congestion which Monorail will alleviate.

PROJECTED HANEDA LINE - WORLD'S LONGEST MONORAIL

The Haneda Line will start from the basement of the Tokyo International Airport Terminal Building and pass through a tunnel beneath the runways. Then the line will extend over the shallow of Tokyo Bay along the Shinagawa shore and end at Hamamatsucho Monorail Terminal which connects directly with National Railways' Hamamatsucho Station.

Total length of the Haneda Line is 13.3 kilometers (9.26 miles) making it the world's longest monorail line.

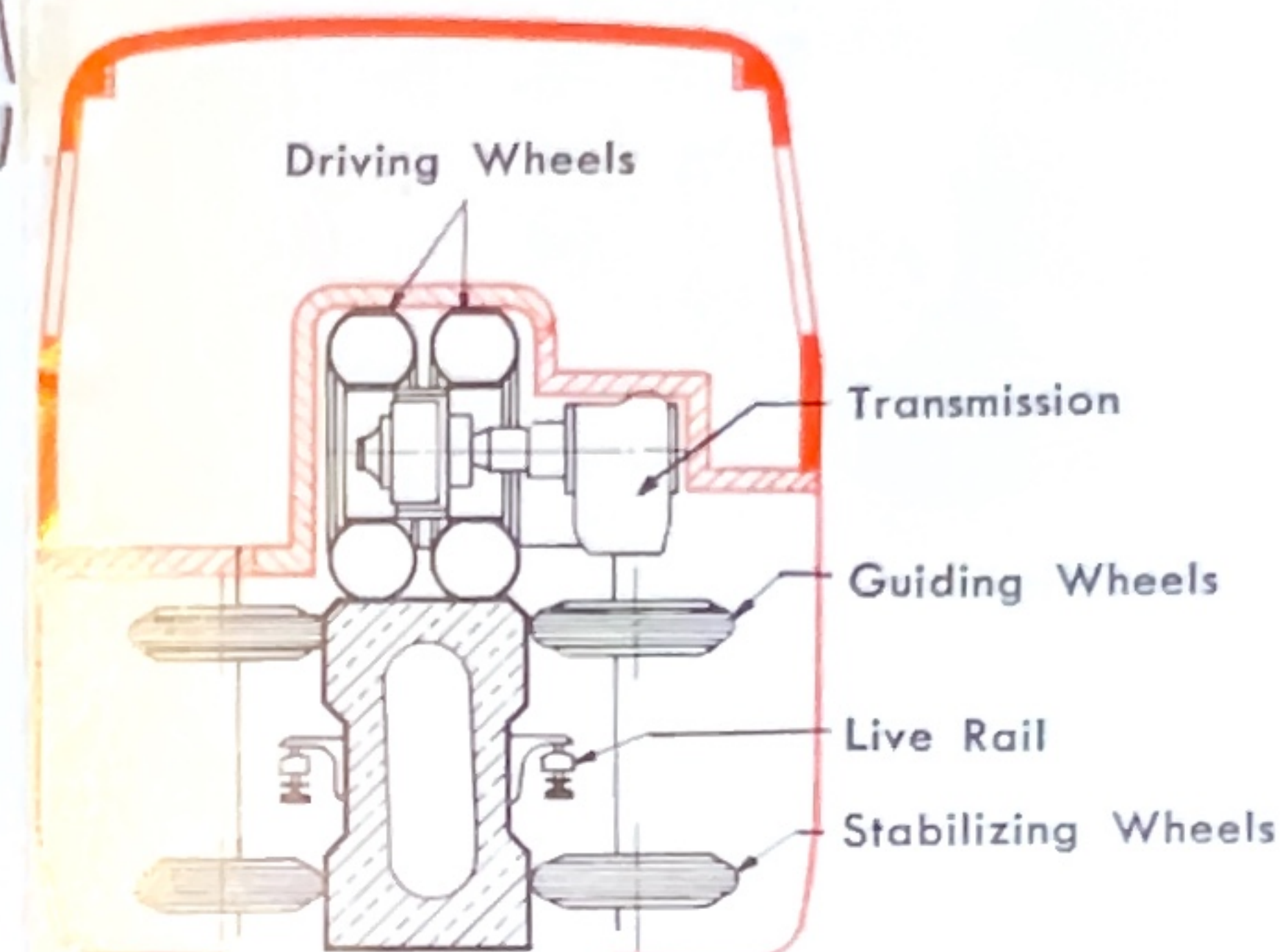
Estimated number of passengers: 60,000 per day.

Construction cost: Approximately 13,500 million yen (\$37,500,000).

Cost per kilometer: 900 million yen (\$2,500,000). The cost is slightly higher because of the necessity to construct a tunnel under the runways at Tokyo International Airport and of very bad ground condition along the line.



Cutaway showing how Monorail car is built.



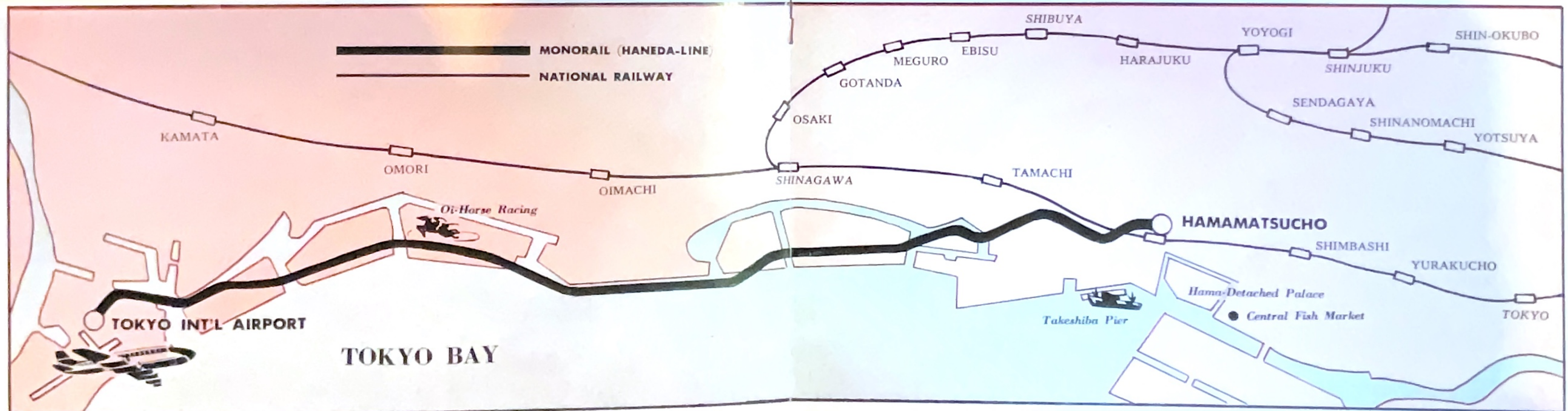
Cross-section of Monorail car.

ADVANTAGES OF MONORAIL

The Monorail system offers the advantages of a track elevated mass transportation system which:

- relieves the roads from congestion of public transportation;
- eliminates delays by transverse traffic;
- high speed commercial and passenger-carrying capacity;
- reliable and punctual; and
- carrying large numbers in trains.

The undercarriage of the vehicle straddles the beam in such a way so that the pneumatic rubber tires of the supporting wheels run on the upper surface and the guiding and stabilizing wheels, which are likewise equipped with pneumatic rubber tires, move along the lateral surfaces of the beam. This arrangement permits high speeds with minimum operating noise and offers absolute security against derailment. Furthermore, the Monorail system requires comparatively low capital investment.





Monorail at Cologne, Germany.



Monorail at Inuyama Park, Aichi Prefecture, about 13 miles north of Nagoya, Japan.



Monorail swings around curve in downtown Seattle, Washington.

HITACHI-ALWEG

There are a number of Monorail types. The Nippon Koka Dentetsu Company, Ltd. has selected the **HITACHI-ALWEG** type which hugs the permanent way because it is the safest, fastest and smartest-looking among the monorails now available.

The three-car trains are built by Hitachi Ltd., Japan's largest industrial corporation. The trains carry 300 passengers at mean speed of about 60 kilometers (37.3 miles) per hour. Maximum speed is 80 kilometers (49.7 miles) per hour.

Train run at five-minute intervals. If necessary, trains can be formed of nine cars to accommodate 900 passengers.

Each car is built in a self-supporting framework with an over-all length of 30.28 meters (99.3 feet), width of 3.0 meters (8.9 feet) and height of 4.40 meters (14.4 feet).

To ensure maximum safety and comfort, the monorail cars are equipped with driving wheels, guiding wheels and stabilizing wheels. In addition, there is a solid rubber tire as an emergency safety device.

The permanent way on which the car run is constructed with two major parts—hollow beams and pylons. The hollow beams are pre-cast with pre-stressed reinforced concrete pieces 20 meters (65.5 feet) in length, 0.8 meter (2.6 feet) in width, and 1.4 meters (4.6 feet) in height. The pylons supporting these beams are T-shaped and are made of reinforced concrete and range in height from six meters (19.7 feet) to 15 meters (49.2 feet).

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Can you visualize it? Only 14 minutes by monorail from Tokyo International Airport to the center of the city in 1964. In addition, the monorail will offer a panoramic view of Tokyo with Mt. Fuji in the distance—something no other means of transportation afforded before.



NIPPON KOKA DENTETSU COMPANY, LTD.

(HITACHI-ALWEG MONORAIL)

President: T. Inumaru

Final Capitalization: ¥6,500,000,000 (\$18,555,000)

Capitalization: ¥1,400,000,000 (\$3,889,000)

Capital (paid up): ¥350,000,000 (\$972,000)

Founded: August 7, 1959

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