

INTERNATIONAL AIRPORT

TREATMENT PLANT

HANKYU RAIL WAY TAKARAZUKA LINE

HIGASHI-TOYONAKA RESIDENTIAL DISTRICT

GA-OKA RESIDENTIAL DISTRICT

NO-SUJI BOULEVARD

EXPRESS RAILWAY

TEXTILE INDUSTRIAL ESTATE

SENRI NEW TOWN

OSAKA UNIVERSITY

IBARAKI GOLF CLUB

EXPO MEMORIAL PARK

SUITA HIGHWAY INTERCHANGE

IBARAKI HIGHWAY
INTERCHANGE

MINOO PARK

SENRI NEW TOWN

OSAKA OUTER LOOP WAY

SHOJAKU TREATMENT PLANT

TOKAIDO TRUNK LINE

BASIC PLAN

In early 1960s in Osaka, there was increase of 180,000 persons in population every year with 40,000 houses being supplied yearly. Of the 40,000 houses, about 40% were constructed by public funds and aids.

The postwar population increase was concentrated in the suburbs and the sprawling of residential area was observed stretching along the track of suburban railways. As a result of the development works on a small scale made in disorder by public and civic undertakings, such city services as transportation of commuters, public facilities and waterworks and drainage system, etc., were insufficient.

To cope with this situation, it was urgently required that the low priced land must be sufficiently supplied to people by the public funds to construct their dwellings in the suburbs and that by controlling the existing

random development of the suburbs, a sound city environment should be created.

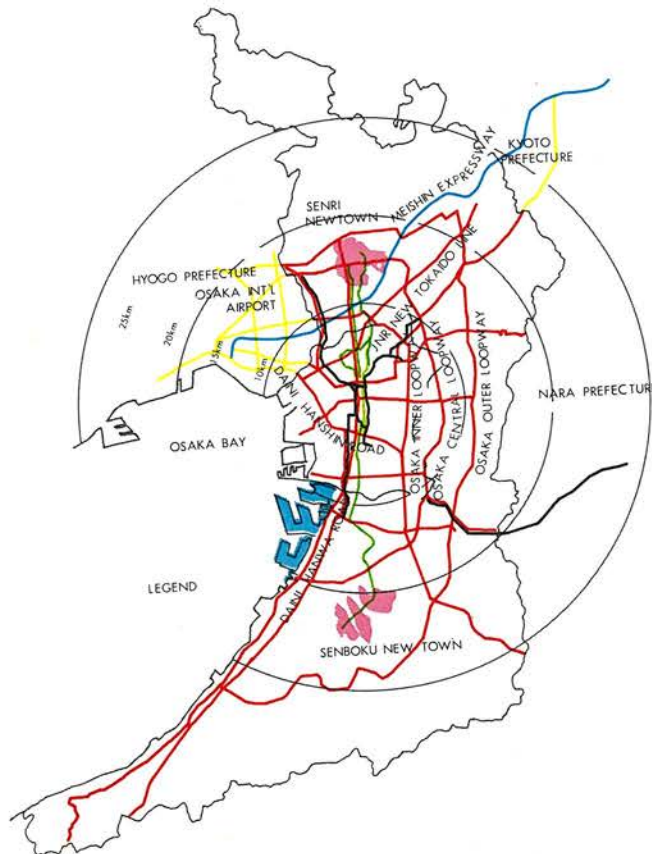
To realize this, it was necessary to develop a housing area on a large scale with a land lot of several hundred hectares as a unit using these land lot units as a core of the development plan of the environs.

The Osaka Prefectural Government began its development works of The Senri New Town in 1958. The purpose of this suburban housing development program, which took eleven years to complete, was not only to provide well equipped housing for the rising demand for housing but to prevent a random sprawling of the urban community.

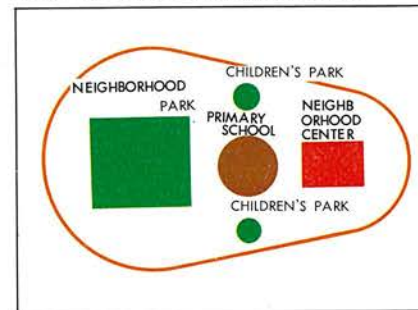
The Senri New Town is situated about 15km from the central area of Osaka City. The entire area was a hilly district of 3,000 ha with a gentle slope of hill approximately 30 to

130 meters high above sea level. This is surrounded by the national road No. 171 linking Kyoto with Kobe in the north and by the residential district of Toyonaka City in the west and the stretch of Suita City in the southeast through which the Japan National Railway (J.N.R.) Tokaido Line runs.

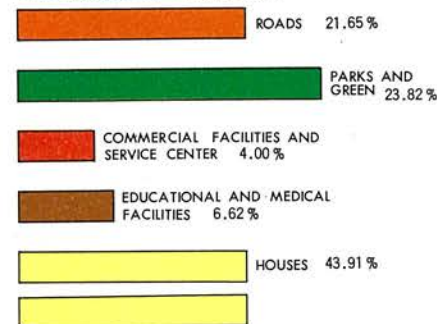
This district was covered by bamboo thickets and pine forests, and agricultural land in valleys occupied about a half of the total area. There was an agricultural village of Kami-Shinden consisting of 300 farm houses and Osaka Municipal Social Welfare Center of Kohsaiin for the aged and handicapped children. An area of 1,160ha in Senri hilly district was designated as a site for the program, and about 37,300 dwellings and such public facilities as educational and medical institutions and commercial establishment were constructed in



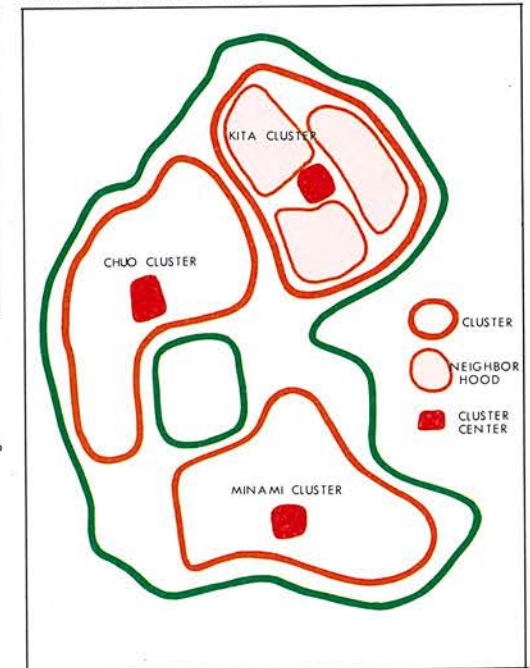
NEIGHBORHOOD ORGANIZATION



THE RATIO OF LAND USE



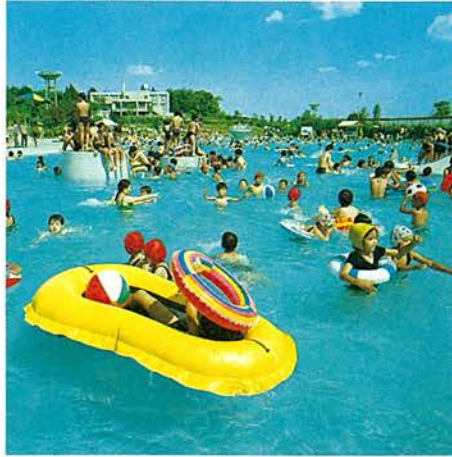
CLUSTER ORGANIZATION



PARKS AND GREEN AREAS



Senri Minami Park



Children's Park



Senri Kita Park

* Open space:

Perhaps the most conspicuous feature of Senri New Town is that its environmental organization plan calls for about 24% of the town's area to be devoted to parks and green areas.

* Three Local Parks

Each of the three clusters has a local park. These parks have been named the Kita Chuo and Minami Parks and each covers an area of from 10 to 25 hectares.

* Neighborhood Parks

Each neighborhood has one or two smaller parks of from 2 to 6 hectares. An effort has been made to preserve the original highland landscape, and the rich greenery of these parks provides an accommodating place to stroll and relax. The overall design of these refreshing areas emphasizes the preservation of nature for the health and enjoyment of those living in Senri New Town. Although most of the parks are designed to maintain the original contour of the area, some of them have been leveled in order to provide recreational facilities, athletic fields and swimming pools.

* Parks for Children

Over and above these facilities, each neighborhood unit is also equipped with two children's parks. These parks cover an average area of .25 hectares and have swings, sliding boards and other recreational facilities for small children. They have been designed to provide maximum outdoor fun for primary school youngsters.

* Play Lot:

With a ratio of approximately one play area for each 100 to 200 houses, ample space has also been arranged for pre-schoolers from 2 to 6 years old. These play areas cover about 300 square meters and also have swings, slides, seesaws and sand boxes.

* Green Belts

The Senri New Town has an attractive green belt that completely encircles it. This belt has the twofold purpose of preserving the natural landscape of the area and also of preventing the random sprawl of the residential area and the encroachment of neighboring urban development.

WATER WORKS AND SEWERAGE

* Water Supply

Water is supplied to the Senri New Town from a prefectural water distribution plant. This water is purified and treated in a chlorine sterilization plant. It is then stored in a reservoir and subsequently supplied to individual houses by pump or gravitation system.

* Sewerage:

The sewerage for the entire town is controlled by the prefectural government. Sewage flows into two separate systems, a sanitary sewage pipe line and a storm sewage pipe line. Water generated by rainfall is quickly drained off through the storm sewage pipe line; sewage from flush toilets, kitchen usage and other household waste is handled by the sanitary sewage pipe line. The drainage system is divided into two sections and is routed along the Toyonaka and Suita city boundary lines. Both of these drainage systems are equipped with their own sewage treatment plants. The storm sewage pipe line is broken down into four complete drainage sections. Rain water is drained off into four different rivers including the nearby Shojaku river.

* Flood Control along the Rivers

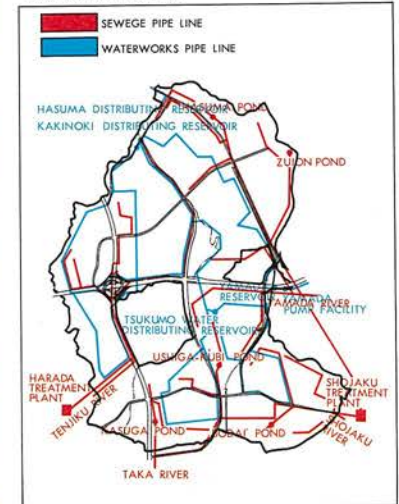
Rain water flows through the storm sewage pipe line to the Taka, Yamada, Tenjiku and Shojaku rivers. In conjunction with the progress of Senri New Town the banks of all four of these rivers were reinforced or changed their courses to prevent floods.



Reinforced River



WATERWORKS AND SEWERAGE TREATMENT PLANTS



parallel with consolidation of roads and public services.

The total population of Senri, which is now 120,000, is expected to reach 150,000 in the future according to the standard of population density of 130 persons per hectare.

Regarding the residents of the area, the families of the so-called "white collars" who have places of their work in the central area of Osaka City and hold the majority, namely 85% of the total workers are commuters to and from Osaka City. The families of the "blue collars" who attend to their factories in the southern industrial areas are also included in the figure. Therefore, it is absolutely necessary to provide a mass transportation system, directly connecting Senri with Osaka. As for the construction of trunk road in this regional planning, the Midoo-suji Boulevard which is one of the main radial trunk roads of Osaka City runs through Shin Osaka station to the western part of Senri. In addition, the outer loop road of the Central Loop Way encircling Osaka City traverses the center of Senri. The Kita-Osaka Express Railway extending from Osaka Municipal Subway runs in the western part of the Town in parallel with the Midoo-suji Boulevard, and Hankyu Electric Railway Senriyama line extends to the east of Senri. This advanced road network connects Senri with Osaka International Airport in less than fifteen minutes by car. By train, the terminal area of Osaka is within 30 minutes from Senri. The life of the residents of suburban towns depends mostly on the terminal areas of Osaka not only in their work but also in daily activities of shopping and leisure and entertainment. Accordingly, their concern about the community life is liable to be lost while their consciousness of urban life increases.

In the New Town, various kinds of facilities for

public amenities are provided to promote resident's community activities and create a comfortable environment.

To realize this, a residential neighborhood unit having 10,000 population was set up. Each neighborhood has a neighborhood center with shops and market, clinic, meeting room, post office, police station and other public facilities. In principle, it has a primary school, a nursery, a kindergarten and a neighborhood park and two children's parks. Each of twelve neighborhood residential unit consists of 2,500 - 3,500 households or 10,000 - 14,000 persons and its area is 40 - 50ha.

Three to five neighborhood units form a cluster whose center has a railway station, bus terminal, a branch of municipal office, bank and speciality shops.

In Senri, there are three clusters - Chuo, Kita and Minami Clusters, each of which consists of four, three and five neighborhood units respectively.

It is desirable the new community is composed of residents of various social levels in terms of age, income and profession to maintain its independence as a residential community. This balance of community with proper mixture of people from various social levels would be achieved by supplying many different types of houses in each neighborhood.

Different types of houses are constructed by the Prefectural Government (10,382 units), the Japan Housing Corporation (10,292 units), the Osaka Housing Supply Association (5,863 units), firm houses (4,720 units) as well as detached houses for sale including lot for sale (6,073 units). One of the most significant features of this type of community planning is that ample open space has been allotted for public use including roads and parks.



* HOUSING CONSTRUCTION BY TYPE AND YEAR

CLASSIFICATION \ YEARS	1961	1962	1963	1964	1965	1966	1967	1968	1969	Total
P.H.	750	1,252	1,500	2,022	1,998	1,500	720	340	300	10,382
P.H.S.A.	150	350	550	700	1,121	610	400	1,307	675	5,863
J.H.C.			930	1,826	2,419	1,617	600	1,760	1,140	10,292
F.H.E.		58	824	270	360	428	260	849	1,671	4,720
H.S.	110	822	975	319	1,157	751	710	191	1,038	6,073
TOTAL	1,010	2,482	4,779	5,137	7,055	4,906	2,690	4,447	4,824	37,330

Note: Prefectural Housing (P.H.)
 Prefectural Housing Supply Association (P.H.S.A.)
 Japan Housing Corporation (J.H.C.)
 Firm Houses for Employee (F.H.E.)
 House for Sale (Mostly Detached House) (H.S.)

TRAFFIC

* Roads

Regional roads:

The Town's road system falls into two types; regional and local. There are two regional roads; the Midoo-suji Boulevard which plays a vital role in the traffic network connecting Senri with the terminal area of Osaka City, and the Central Loop Way which links Senri with other suburban cities in the Prefecture running from Osaka International Airport to Higashi Osaka and Sakai Cities.

Local roads include Senri Chuo Road and Senri Roads No.1 - No.4.

The connection of three cluster centers with each neighborhood is made by the main loop roads together with the network of bus.

Inner distributor road:

Inside a residential unit, a systematic network of roads measuring 12.5 to 18 meters wide has been laid out to join it with the trunk roads mentioned above so that a smooth flow of traffic can be realized at all times.

Collector road:

Each neighborhood unit has a sufficient number of collector roads of 5.5 to 6.5 meter width that lead to residential areas and individual houses.

Pedestrian walks:

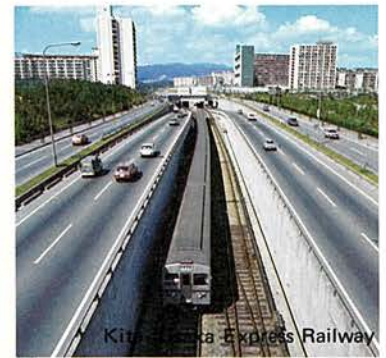
A system of main pedestrian ways extends throughout the Town so that students, commuters and shoppers can walk with complete safety. Both overhead bridges and underground ways protect the people from traffic danger and keep the environment comfort. On both sides of Senri Chuo Road a 15 meter wide green belt for pedestrians has also been included. This provides a pleasant and relaxing stroll to the Minami Park and the Chuo Park of the Senri New Town.

* Railway and bus:

The Hankyu Railway and the Kita Osaka Express Railway connect Senri New Town with the main areas of Osaka City. Both have two stations; the former are in the north and south of the Town, and the latter are in the central of the Town and in Momoyamadai. Both railways rush their passengers to central points of Osaka in approximately 30 minutes. Another added convenience is the Hankyu bus system which connects the Senri New Town with the business centers of neighboring areas.



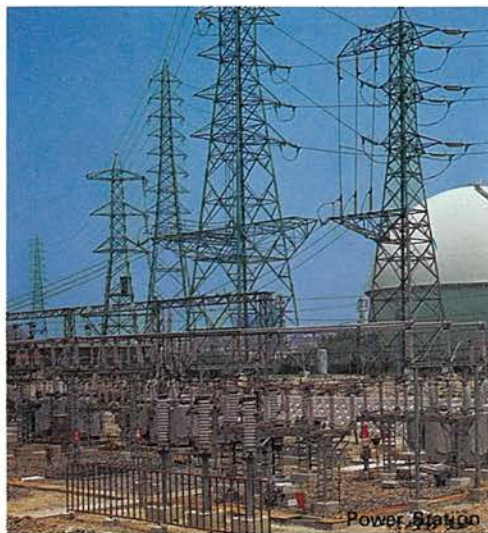
Senri Higashi Road



Kita Osaka Express Railway



POWER GAS AND TELEPHONE SERVICE



Power Station



Post office and main telephone office



Fire Station

* Service Center

A convenient service center has been established in the central area of Senri New Town. This center offers to the residents a number of indispensable aids which include a main telephone office, an automobile repair service shop, a food center, laundry service, a forwarding service agent and a distribution center for department stores. All of these facilities are gathered together at the service center. There is also a house maintenance shop which provides the people with parts and service for house repairs.

* Post Office and Main Telephone Office

Since Senri New Town stretches over a comparatively wide area from Toyonaka to Suita Cities, it was essential to provide the residents with a quick and efficient postal and telephone service. Within the strategically located service center in the middle of the town are a collection and delivery Post Office and a telephone and telegram office that operates four central telephone lines.

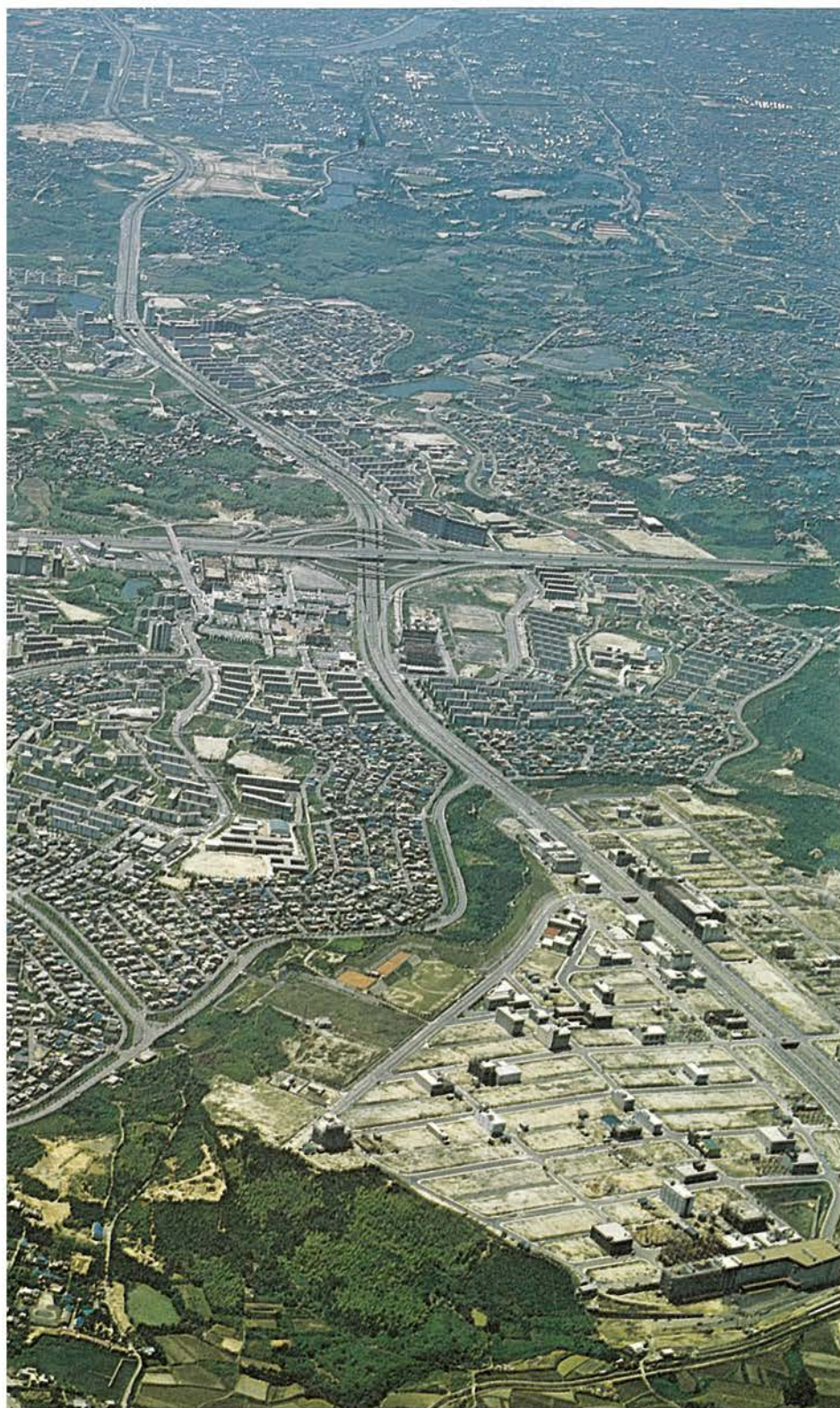
* Fire Stations

There are two fire stations in Senri New Town, one in Suita City and the other in Toyonaka City.

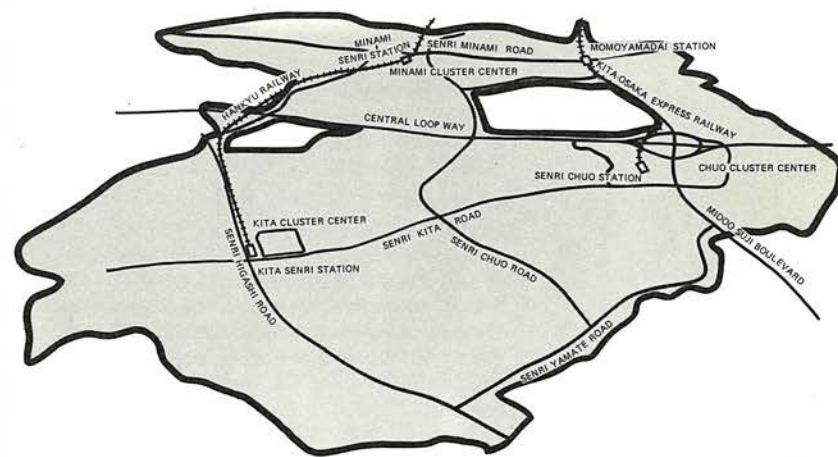
* Power and Gas

A power station has been constructed at the Higashi service center of the Town to supply electricity for the whole community. Close to the power station are the facilities for supplying gas to all of the homes. Electrical service wires that run parallel to the trunk roads are underground. In other areas electrical poles have been placed away from the roads and outside the drainage ditches to provide a maximum amount of road space.





AERIAL VIEW OF SENRI NEW TOWN



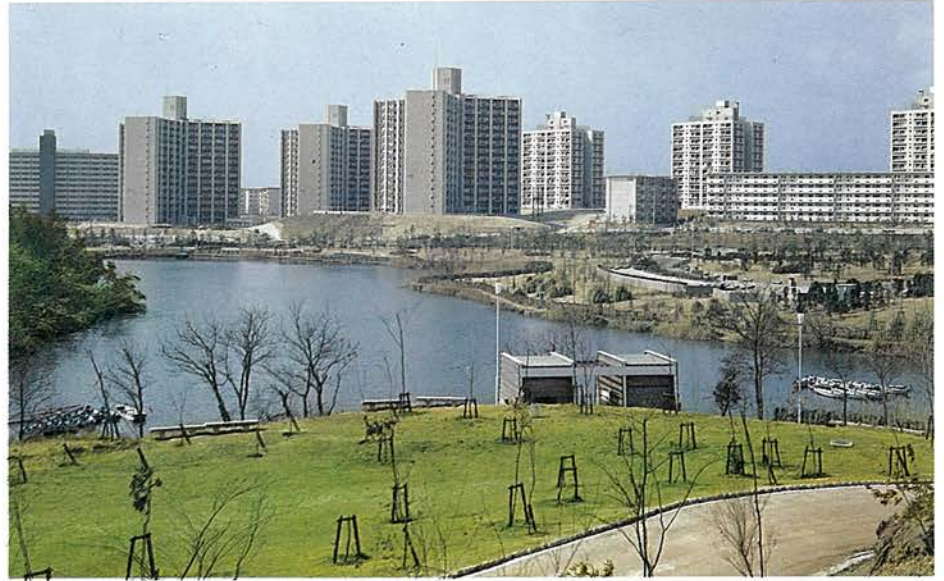
HOUSING

* Housing Program:

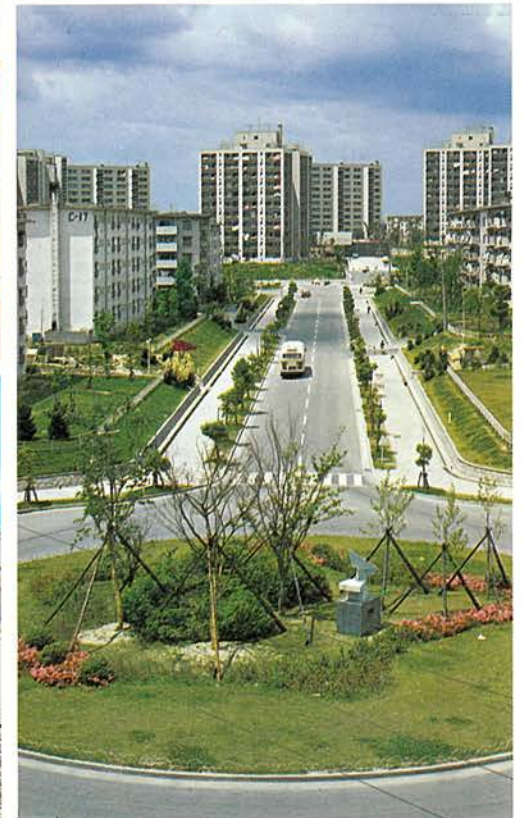
It can be generally stated that a modern community should be made up of people from various social classes. To realize this desired social diversification and to avoid as much as possible a monotonous environmental atmosphere, various types of houses were included in the residential development program. In addition to rented houses provided by the Prefectural Housing, the Japan Housing Corporation and Prefectural Housing Supply Association various types of housing for private ownership were also constructed including apartments, flats, ordinary houses for sale, dormitories and other houses owned by individuals and private companies.

The layout of housing has been strictly regulated so that densely populated multi-storied apartment houses are built around the cluster center and the neighborhood center. Areas with a relatively small population density, including flats or two-storied houses, surround these apartment areas. With this design, the inhabitants are assured of efficient use of the service facilities such as town center and neighborhood center.

During the original programming of the community great importance was attached to the care and layout of apartment houses where a large number of families are centered. Making full use of the gently sloping landscape, a group of multi-storied apartment houses have been constructed to surround a spacious open area. These open areas provide an abundance of space for the rest and relaxation of the apartment dwellers. It also provides them with an opportunity to become friendly with each other by sharing a common recreational space. And in order to avoid the monotony of a simple parallel layout, apartments are artificially arranged in a variety of ways, producing a number of naturally delicate effects through visible complexity. Over and above the variety of arrangements, the colors of the buildings also yield a pleasant and relaxing atmosphere. A great deal of care was also taken to be sure that an ideal living environment with an abundance of calm and peace is provided for each privately owned home.



Detached House



TOWN CENTER



Chuo Cluster Center



Entertainment Center



Kita Cluster Center



Minami Cluster Center



* Cluster Center

The cluster centers in Senri New Town have three distinct functions:

First, they act as centers for the traffic system which includes express railway and long distance bus service. Since these facilities connect the neighborhood units with outside areas, they are vital to students, commuters and housewives who frequently go shopping for daily necessities. Stations are therefore conveniently connected with roads, pedestrian walks and circulation bus lines in the town.

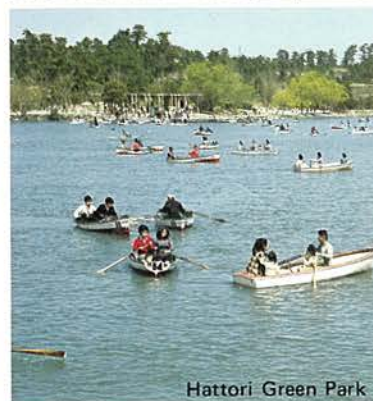
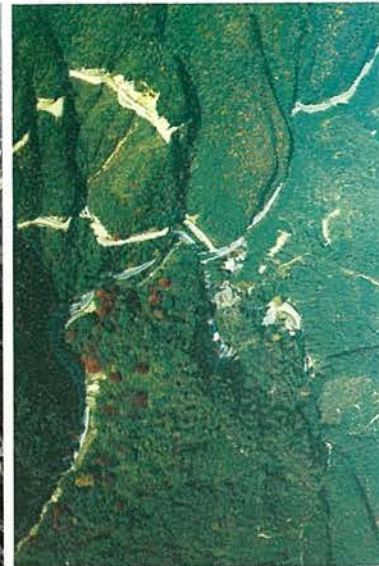
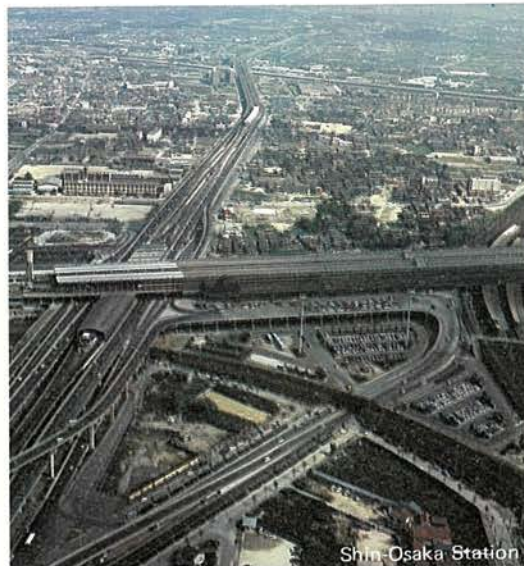
Secondly, the cluster centers provide convenient shopping facilities for each zone. A market and a number of speciality shops including textile shops, stores for toiletries and other shops have been established. There is also a public service quarter consisting of a municipal branch office, a bank, a Post Office and a meeting room.

Each cluster has been provided with a cluster center so that Senri New Town has three cluster centers: Minami Cluster Center located at the Hankyu Railway Minami Senri Station, Kita Cluster Center at the Hankyu Railway Kita Senri Station and Chuo Cluster Center at the Kita-Osaka Express Railway Senri-Chuo Station. The Chuo Cluster Center, the mainstay of Senri New Town, is also the hub of the entire traffic network of northern Osaka. For this reason, it has the function as sub-terminal for northern Osaka with the subway station which is accommodated in a large terminal building that also houses an extensive supermarket, a department store, an entertainment center, a hotel and a parking lot that can hold more than 1,000 cars. The entire terminal building is completely air conditioned by a central air conditioning plant. In the future, a business area will be established in this center.

VICINITY OF SENRI NEW TOWN

* Hattori Green Park

This green zone located in Toyonaka City in the northern part of Osaka extends along the southwestern boundary of Senri New Town. Its green hills, ponds and wooden cottages have been well preserved and display the local living style and architecture of the area. This area covers 129 hectares. It also provides the people with sports and entertainment facilities that include a 400 meter track field, 3 swimming pools, 20 tennis courts, 4 baseball diamonds and a youth hostel. More than 1.7 million people visit this park every year.



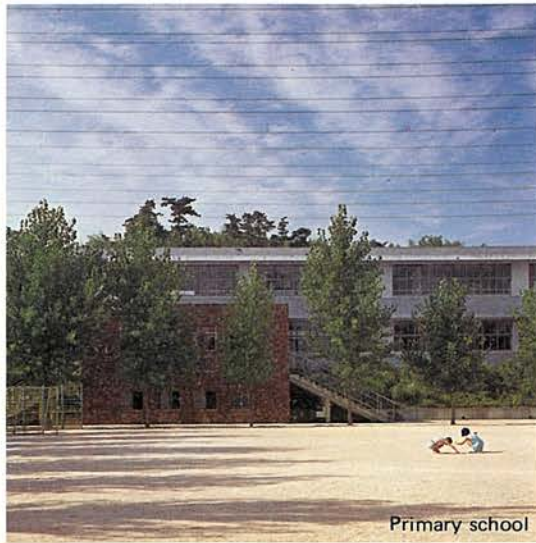
* Shin-Osaka Station and Osaka International Airport

Construction for Shin-Osaka Station was completed in October, 1963. This station is a main terminal for the New Tokaido Line. It handles a quarter of a million passengers daily. Acting as a gateway to Osaka, the station is strategically located midway between Osaka Station and Senri New Town. It is conveniently linked to Osaka City and Senri New Town by the Kita Osaka Express Railway and Midoo Suji Boulevard. Osaka International Airport links Osaka with other parts of the country and with the outside world. Its facilities favorably compare with those of Tokyo International Airport. Within an area of 317 hectares, more than 400 planes land and take off every day. In 1970, a 3,000 meter runway was constructed. This international airport is connected to Senri New Town by the Central Loopway. Both the airport and Shin-Osaka Station can be reached by car from Senri New Town in about 15 minutes.

* Expo Memorial Park

The Japan World Exposition (Expo' 70) with the theme "Progress and Harmony for Mankind" was successfully held for the first time in an Asian country from March 15, 1970. It lasted for six months and the site chosen for this great fair was close by Senri New Town. A total area of 330 hectares was used for the exposition and a large number of pavilions from countries all over the world attracted millions with their originality and attractiveness. Within the Expo grounds, a large number of entertainment facilities such as parks, artificial lakes and a Japanese garden were constructed. Most of these facilities were left in tact and now comprise the Japanese Memorial Garden which is open to both citizens and visitors.

EDUCATIONAL AND MEDICAL FACILITIES



Primary school



Senior high school



Shin Senri Hospital

* Educational Institutions

Each neighborhood unit has either one or two kindergartens and a primary school. There are 12 primary schools in the town. A junior high school is provided for every other neighborhood unit. There are 6 junior high schools in the town. Senri New Town also has 3 senior high schools.

Since the primary school forms the core for each neighborhood unit it is strategically located in the center of the unit.

In order to avoid traffic accidents, primary schools are conveniently situated close to pedestrian walks. Pedestrian walks connecting the primary schools with living quarters run parallel to the main roads.

Another educational advantage is the well preserved landscape with its abundant supply of greenery. This feature of Senri New Town plays an important role in the mental and physical growth of the children.

In the junior high schools, emphasis has been placed on a rational arrangement of classrooms, laboratories and administrative offices to facilitate educational programs and student activities.

Eight nursery schools, both public and private, have also been provided for each zone.

* Medical Institutions

Each neighborhood unit has a clinic where at least four trained specialists provide the people with adequate medical treatment and consultation. These specialists include physicians, surgeons, pediatricians, gynecologists, dentists, oculists and others.

In addition to these clinics, the Shin Senri Hospital has been built to the north of the Minami Cluster Center.

An "open system" of administration is employed at this hospital which links it as the center for all branch clinics. This method has proved especially effective in facilitating a smooth and efficient medical program and for emergency cases. All of the branch clinics are also closely connected with each other so that there exists a full exchange of medical experts and mutual assistance. If the treatment of a patient at one medical clinic requires consultation or assistance of an expert from another branch clinic, it is readily available through the "open system."

NEIGHBORHOOD CENTER

* The Neighborhood Center

One or two neighborhood centers have been established in each of the neighborhood units in order to supply daily living necessities to the people. The neighborhood center can be divided into two sections: one consisting of a shopping area comprising a market and smaller stores and the other for various public services including a Post Office, a police station, a meeting room and administrative offices. The market is a retail market or supermarket, depending on the type of the unit. These food stores mainly supply vegetables, fish and other fresh food. The size of the markets range from 500 to 1,000 square meters. Twenty retail stores selling a variety of goods are accommodated in 30 rooms in each of the markets. Housing space and facilities are allotted to each shop owner, and 10 to 15 shops have been constructed in a single row. Retail stores such as drug stores, cosmetic shops, etc. that have comparatively long business hours plus other speciality stores such as textile shops, tailors, electrical appliance stores, beauty shops, rice stores, etc. are all accommodated together in these shopping quarters.

Clinics, nursery schools, children's parks and other public service facilities surround the neighborhood centers.

In addition to the neighborhood center, an additional drug store has also been provided for those whose houses are somewhat separated from the center. There is also a newspaper distribution branch for every 2 or 3 neighborhood units.



FLOW SYSTEM OF NEIGHBORHOOD CENTER

