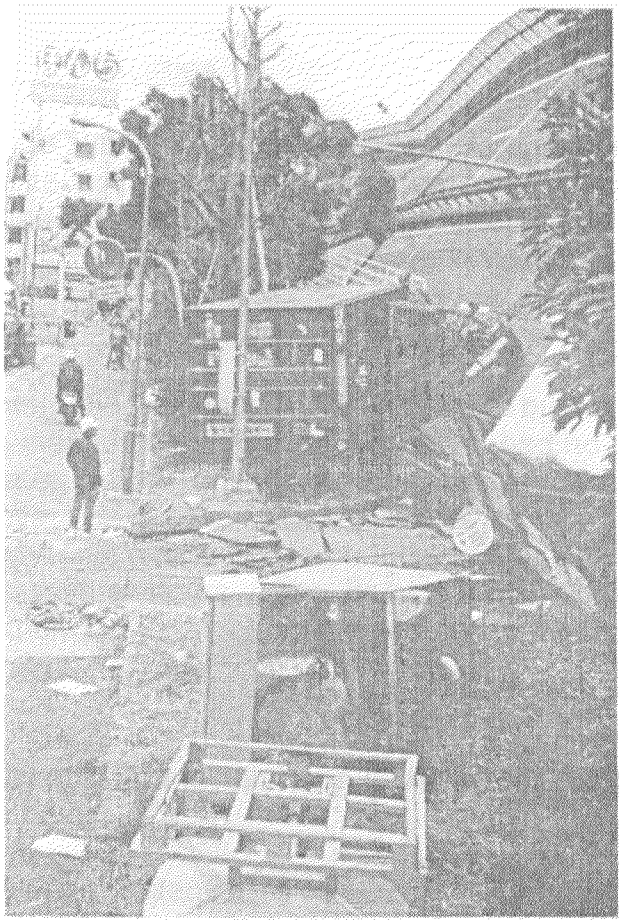

Photo 12 Highway Tilted and Trucks Thrown Off
Elevated highways suffered structural damage.
Kobe Municipal Office

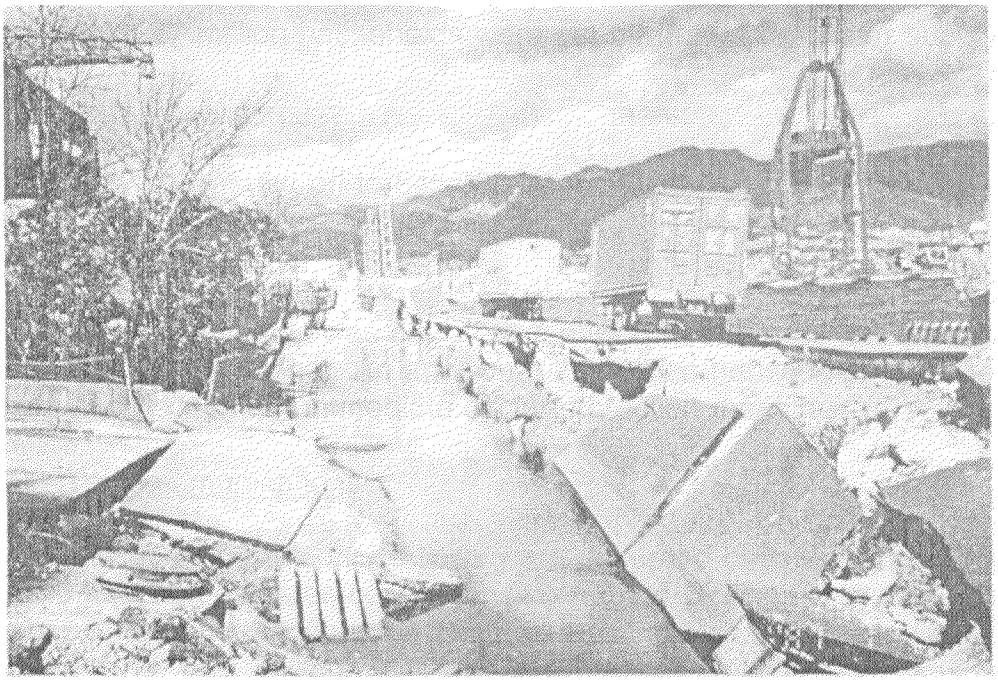

Photo 13 Damage to Port of Kobe
Berths and cranes damaged.
photo by Yokohama Municipal Office

3) Damage to port facilities

The Port of Kobe suffered serious damage. Warehouses and container cranes were tilted and twisted, quays were damaged, and container berths became inoperational. Ground liquefaction was widely observed in port districts and on reclaimed land.

4) Damage to airports

The Kansai International Airport, which had been built on newly reclaimed land and which had been inaugurated in September 1994, had no structural damage and was able to operate. The anti-liquefaction construction method proved its effectiveness. However, the access expressway was closed 35 minutes for structural checks, and the railway link initially had to be halted. This halt disrupted and delayed flight departures for several hours. The Itami (Osaka) Airport did not have any structural damage either. However, as mentioned previously, access by rail and artery roads was greatly disrupted.

E. Damage to Urban Lifeline Systems (Gas, Water, Electricity and Telecommunications)

Life in modern metropolitan areas can never be carried on without urban lifeline systems. The earthquake ruptured underground pipes, brought down overhead wiring and left the metropolitan area without these basic urban lifelines.

1) Water

Initially, 1.27 million households were cut off from a tap water supply.

2) Gas

Gas service was cut off to 845,000 households.

3) Electricity

The electricity supply was cut off to 1 million households because of damage to power systems and wiring. An additional 2.6 million households were temporarily without service because of immediate circuit-protection measures.

4) Telecommunications

Initially, 285,000 telephone lines were disrupted because of damage to NTT (nationwide telephone service company) switchboard facilities and wiring cuts. Also, the number of calls coming into the affected area rose sharply immediately after the earthquake, and the switchboard circuit-protection mechanism was activated. Overcongestion caused by an abnormal increase in calls (50 times more than usual) lasted longer than the initial 12 hours and this also made it difficult to reach people by telephone.