

Korea High Speed Rail



Location:

Republic of Korea

Client:

Korea High Speed Rail
Construction Authority

Scope of Services:

Project Management

Project Duration:

1991 - 2002

Total Installed Cost:

\$16 billion

Significant Features/ Accomplishments

- Construction of 255 miles (412 kilometers) of high speed rail line and six stations
- Nearly half of route is in tunnel, 27% on viaduct, 27% at-grade
- Development of project-specific cost and schedule monitoring system
- Completion of test track ahead of schedule; successful tests of new trains in December 1999
- Monitoring 4,400 activities listed in the Integrated Project Schedule
- Use of computer simulations for bilateral design reviews and test runs



Korea High Speed Rail

The \$16 billion Korea High Speed Rail (KHSR) Project was the largest single project underway in Korea. The line runs between Seoul, in the north west part of the country, and Pusan, a major port city in the south eastern part of the Korean peninsula. The corridor is the most densely populated in the Republic of Korea, home to 70 percent of the nation's population, and carrying 65 percent of its passenger traffic and 70 percent of its freight traffic.

Project parameters include:

- 255 miles (412 kilometers) of high speed rail line. The route is completely grade-separated and is nearly half in tunnels, 27 percent on viaduct, and 27 percent at-grade alignment
- Six stations. New stations at NamSeoul, Chonan, Taejan, Taegu, Kyongju, and Pusan. The existing Seoul Station of the Korean National Railroad was expanded for KHSR service.
- Trains are approx. 1,312 feet long and carry 1,000 passengers.
- Trains operate at 186 miles (300 kilometers) per hour, cutting the travel time between Seoul and Pusan in half, to two hours.
- Rolling stock consists of 46 high speed trainsets, 12 of them manufactured in France and 34 manufactured in Korea by local Korean companies.

The KHSR project reached a major milestone in December 1999, with successful tests of its new Korea Train Express high speed trains.

Bechtel provided project management services, working with Korea High Speed Rail Construction Authority (KHRC) as part of an Integrated Project Management Organization (IPMO). The company's team members were involved in nearly all phases of the IPMO, closely integrating efforts with their Korean counterparts. Bechtel's work includes design management, railway operations, quality control, safety, and cost and schedule management. That means there were thousands of project activities which must be carefully monitored – over 4,400 activities are listed in the integrated project schedule used for overall project control.