2010 OCEA Award
(Outstanding Civil Engineering Achievement Award)

◆Group Ⅱ

This award is presented to milestone projects that made an outstanding contribution to the development of civil engineering technology.

Restoration Work of Collapsed Road Embankment by Earthquake, Tomei Expressway - Makinohara Area

Tokyo Branch, NEXCO-Central Co., Ltd./ OBAYASHI Corp.

Summary

The project is the restoration works of the road embankment (Tomei Expressway-Makinohara Area) collapsed by Suruga-wan Earthquake occurred on 11 August 2009. The expressway is the most major way between east and west region, therefore it is strongly required to complete the work and re-open to the public immediately. Although the site condition and schedule are very tight, the work can be completed on schedule without any accidents and incidents.

From the event, some important matters of the anti-disaster ground engineering are realized such as; the embankment structure might be deteriorated due to slaking material, the accountability of the restoration work to the public is very important, and so on.

Since the project contributes to the development of the civil engineering technology, a Technological Prize is awarded to the project.

Development and service of Super hub ports “Hanshin port”
-Large-scale container terminal in western Japan to support the vitality-

Ministry of Land, Infrastructure, Transport and Tourism, Kinki Regional Development Bureau Kobe Ports and Harbors Office/ Ministry of Land, Infrastructure, Transport and Tourism, Kinki Regional Development Bureau Osaka Port and Airport Office

Summary

Under the decreasing relative positions of Japanese ports, Kobe Port and Osaka Port ware designated Super hub ports "Hanshin Port" in July 2004, pursued efforts many to enhance their international competitiveness. In particular, by the public-private partnerships, we have worked comprehensive policies that integrated hardware and software such as the development of next generation high quality container terminal, unifying the ports in Osaka Bay into Hanshin port and reduction of harbor charge.

The project has contributed greatly to social and economic revitalization of the Kansai region as well as the entire western Japan.

Opening of the complete Tohoku Shinkansen
-Construction of Tohoku Shinkansen(Hachinohe-Shin-Aomori section), a new key line on high-speed railway network-

Japan Railway Construction, Transport and Technology Agency - Railway Construction Headquarters-Tohoku Shinkansen Construction Bureau/ East Japan Railway Co. - Tohoku Construction Office

Summary

The Tohoku Shinkansen is a high-speed railway linking the Tohoku region with the capital region, the approximately 675-km line running from Tokyo station to Shin-Aomori station. With the opening of the final Hachinohe－Shin-Aomori section(81.8km),the line can now offer service on the whole line, 39 years after the start of the construction.

In this section, reduction of the construction cost and two years shortening of the construction period were achieved by various technical developments and ideas. The shortening of the period brought development effects of the line earlier such as economic grouth in the Tohoku region.

The technical success of this project has been highly-appraised for its significant contribution to development ofcivil engineering.

D-runway of the Tokyo International Airport

-Design and construction of the new runway applying the hybrid structures consists of reclamation and pier structures-

Tokyo Airport Construction Office,Kanto Regional Development Bureau,Ministry of Land, Infrastructure, Transport and Tourism

羽田再拡張D滑走路建設工事共同企業体

（鹿島・あおみ・大林・五洋・清水・新日鉄エンジ・JFE エンジ・大成・東亜・東洋・西松・前田・三菱重工・みらい・若築異工種建設工事共同企業体）

Summary

D-runway of the Tokyo International Airport was built on the sea at the south of existing airport. The hybrid structures consisted of reclamation and pier structures were applied to sustain the flow of the Tama River. This project is playing a major role in the formation of the domestic and foreign airlines network and strengthening the foundation of the global competitiveness of our country.

Although, the construction of this project was under the special and strict conditions, it was accomplished in a short term of the construction period of 41 months by gathering cutting-edge technologies in the civil engineering.

Doto Expressway between Yubari IC and Shimukappu IC
-Construction of Long Tunnels Passing through Weak Serpentinite-

East Nippon Expressway Co., Ltd./ Toda Corp.・Toa Corp.・JDC Corp.JV/ Obayashi Corp.・Asanuma Corp.・JFE Engineering Corp.JV/ Kajima Corp.・Kumagai Gumi Co., Ltd.・Mirai Construction Co., Ltd.JV/ Konoike Construction Co., Ltd.、Konoike Construction Co., Ltd.・Tobishima Corp.JV/ Shimizu Corp.・Kabuki Construction Co., Ltd.JV/ Sumitomo Mitsui Construction Co., Ltd.・Sato Kogyo Co., Ltd.JV/ Maeda Corp.・Nittoc Construction Co., Ltd.JV/ Maeda Corp.・Itogumi Construction Co., Ltd.JV

Summary

11 long tunnels in Doto Expressway between Yubari IC and Shimukappu IC pass through weak squeezing ground in steep mountainous area of central Hokkaido. Especially, some tunnels through weak geological formations expressing short stand up time which consist of clay like serpentinite were constructed with new tunnel technologies comprised of early closed inverts and high strength double support structures which enable control large deformation and stabilization of the tunnel. Additionally, adoption of high early strength shotcrete technology is very efficient for control looseness of ground in the first step of tunnel excavation.

The Elevated Railway Project for JR Chuo Line between Mitaka and Tachikawa Stations

Tokyo Metropolitan Government/ East Japan Railway Company

Summary

This project is intended to construct a total length of 9 kilometers Viaduct between Mitaka and Tachikawa Stations and the Viaduct for the urban planning road at the 9 locations, at the same time, to replace rail crossing at 18 point. With the completion of the elevated railway and the rail crossing removal, it has been expected to reduce travel time significantly and to advance a town development.

Various new technologies have been developed by East Japan Railway Company, in order to construct the Viadcut in narrow spaces in urban areas.

Due to the above developments, a significant cost saving and shortening construction period have been achieved.

THE NARITA SKY-ACCESS LINE PROJECT

-The creation of a new high speed Airport access railway-

Tokyo Metropolitan Government/ East Japan Railway Company

Summary

Skyliner, the newly designed high-speed train, which connects Narita International Airport and Nippori (the downtown of Tokyo) in 36minutes, went into service on July 17, 2010.

The project was successfully completed in 4 years due to our effort in building a good relationship with the local residents, and also to the effective construction approach. By preceding the railroad construction for Skyliner together with the Kita-Chiba roads construction projects, the construction cost was reduced by approximately 15%.

The project also paid much attention to save the environment of the natural parks. Based on these facts, the project was regarded highly as an excellent model in infrastructure development and received the Technology Award.