ON-LAND CIVIL ENGINEERING

Operations

On-land Civil Engineering

Through its dredging and reclamation business to create industrial zones, TOA has accumulated a lot of technical know-hows and has achieved to take long strides for on-land civil engineering businesses. We have completed many construction projects of roads, water supply and drainage, bridges, railway bridges and land development for plants and housing with its highest level of technology and abundant experiences. All of these are considered to harmonize with the natural environment so that people can enjoy their richness in life as well. Each and every project has different characteristics, such as remarkable contents representing change in time, newly required concepts on new infrastructure, and satisfaction of new functions.

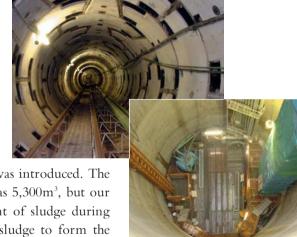
We are expecting that projects for all-round development, which require our integrated power of technology, planning and execution, will be born in both domestic and global markets in the future. Toward these projects in the near future, TOA continues to strive to create an ideal relationship between our corporate companies.

Shibakawa Tunnel

The Shibakawa River suffered from a deteriorating quality of water mainly caused by the waste water from various sources and being unable to clear this due to the lack of headspring. In order to ensure the quality of water in the river, clean water had to be introduced from Ariake River. This could only be achieved by constructing a 2,300m tunnel to connect the two rivers.

The construction work was hampered due to the amount of sludge that was being generated by the river. In order to overcome this problem, TOA utilized its technology, where a specialized

equipment to recycle this sludge into suitable material for banking was introduced. The amount of sludge generated and recycled during the construction was 5,300m³, but our technology and specialized equipment easily coped with this amount of sludge during construction. Due to the ability to successfully utilize the recycled sludge to form the embankments allowed the reduction of both time and cost for the client.



2nd Magsaysay Bridge & Butuan City Bypass Road



Toa Corporation completed the construction of the bypass road extending 8100m, two installation roads extending 1330m and 1640m, a steel-made cable stayed bridge of 360m in length, elevated bridges for approaching the main bridge which extends 372m to the east

and 150m to the west, and their related facilities. The Company has been engaged in this project since May 1, 2005 to May 20, 2007 which was ordered by the

Department of Public Works and Highways of the Philippines.

Drainage Work in Chiyoda Ward, Tokyo

Sewerage in Tokyo Metropolitan area has been consolidated since 1884. Ever since then, Tokyo has been urbanized. In other words, the grounds are covered with asphalt and housings have become high-rised, hence the total amount of sewerage increased immensely. In intensive rain, rainwater pours into rivers or waterways at a burst, sometimes resulting in damage by flooding. By the reconstruction of channel facilities for storing rainwater from local areas in Chiyoda Ward, the completed project copes with increased rainwater that are poured into sewerage.



Seisho Bypass Improvement Work

The Seisho Bypass Improvement Work, commissioned from Japan Highway Public Corporation, was completed within the scheduled construction period and without accidents. The project was to extend the existing Seisho Bypass along the coastal route in order to alleviate the traffic congestion in Odawara City, Kanagawa Prefecture. As for the topography around the site, there is a hill with steep slopes. Along the entire length of 1,900m extension, TOA was in charge of the work area of 366m and the substructure section of the Hayakawa Bridge.



Denpasar Sewerage Development

Our efforts were well awarded when the new sewage treatment facility was successfully completed and introduced to the Denpasar City in Indonesia in the year 2007 after overcoming a multitude of cares. As being a famed tourist spot, careful study was conducted through out the project period in order to give priority on environmental preservation measures. A 47km long sewer culvert was laid within city limits, and great consideration had to be given to the environment in the residential areas.



Newly Completed Projects

Plum Village Tunnel



On October 3, 2007, the Company completed the construction of the tunnel to connect two districts well known as plum sources. The tunnel, extending 2,159m in length, was constructed by NATM method that is most suitable to precipitous site and severe weather. This project, ordered by West Japan Highway Co., Ltd., a former Japan Highway Public Corporation, Kansai Branch, had started since September 29, 2004 and completed in approximately three year construction period. During this time, we put our best effort to carry out the civil engineering work most vigilantly to prevent accidents and disasters.