



# Newsletter

No. 9 December 2002

## **“Civil Engineering” Oct. 2002 Feature Article: “A Consideration for Civil Engineering Landscape Design” (Summary)**

It has already been 14 years since “Civil Engineering” featured the article on “Civic Designs”<sup>1</sup> in October 1988. In those bubble days, “civic designs” and “landscape designs” started to attract considerable attention in the civil engineering industry. Recently, however, after a big turnaround in the economic conditions, it seems as though “landscape” is no longer a keyword for the age.

Are “civic designs” and “landscape designs” now obsolete? The answer is “no.” In the Japanese civil engineering industry, approach toward civic designs and landscapes have steadily taken root over the last ten years. The society now calls for a broader approach to that includes the “global environment” as well.

This feature article will introduce the paths taken in landscape designs over the last ten years, as well as offer views on future landscape planning. The purpose is to point out that these endeavours toward civic designs and landscape development are not temporal, nor extraordinary, so that the readers can also ponder over the relationship between civil engineers and the creation of beautiful land.

Landscape can be viewed as infrastructure development under a cultural strategy within the global community. We often speak of culture as the traditional performing arts like kabuki, arts, or theatrical performances. Nevertheless, we should not forget that lifestyle itself is a culture. In the international community, true cultural exchange is to share one’s natural lifestyle. In that sense, it is the civil engineers’ mission to create urban and natural landscapes that symbolize our lifestyle in a comprehensive way. For that, we need engineering architects to take command of skills merged from culture and technology.

---

<sup>1</sup> “Civic Design” is a term used in Japan defined as “planning and designing of attractive and easy-to-use public structure facilities, with consideration to the history, culture, and ecosystem of the region.”

Looking over the past ten years, civil engineers who have earnestly worked to improve landscape designs have continued diligently to clear all gross misconceptions that “excessive designs = landscape design.” Also, comments from building construction architects, river restoration advisors, landscape architects, replanting engineers, etc., have proven very helpful indeed. Some claim that small structures that daily meet our eyes are the ones that should be designed with a fine-tooth comb. Others ask whether the ultimate goal of civil engineers should be the creation of structure or the delivery of drawings. More point out that civil engineers are very enthusiastic about constructing a safe structure but have little interest in spatial designs, and still others underscore the importance of the balance between design and engineering. These remarks from non-civil engineers’ perspectives should serve as a stimulus to many civil engineers, for they represent views that go unnoticed in their daily routines.

The key to future discussions will be the establishment of educational systems, and implementation of the proposal method design bidding system that emphasizes landscape design. Since there intellectual property rights issues under the present design system for public civil engineering facilities, we must urgently establish a status for civil engineering designers so that many young scholars would aspire to the career.

In contrast to the European method where a single distinguished architect handles every design, it may be more efficient to adopt the “collaboration” method in Japan, since it is known for its organizational strength.

In any case, most of the visible non-architectural structures are civil engineering facilities, and they are important elements of that particular space. We must never forget the fact that we, civil engineers have a big hand in creating high-quality public space through planning, design, and construction of civil engineering facilities.

*Summary by Editorial Committee on  
“Civil Engineering” (Group A)*

## 57<sup>th</sup> JSCE Annual Meeting in Sapporo



*Roundtable Discussion*

The 57<sup>th</sup> JSCE Annual Meeting was held Sep. 25 – 27 in Sapporo, Hokkaido on the beautiful campus of Hokkaido University. It enjoyed a great turnout with registered participants counting more than 6,800. Overseas attendance included delegations from The Korean Society of Civil Engineers, The Chinese Institute of Civil and Hydraulic Engineering, Philippine Institute of Civil Engineers, and also The Institution of Engineers, India (President: Prof. (Dr.) Samiran Choudhuri) which concluded the 22<sup>nd</sup> Agreement of Cooperation with JSCE during the Meeting. All delegations took part in fruitful discussions at the Roundtable, and enjoyed socializing with each other in the Welcome Reception

### Summary of Panel Discussion

**Title:** Improvement of Urban Transportation Environment in Eastern Asia

**Date:** 25<sup>th</sup> September 2002

**Venue:** Hokkaido University

**Coordinator:** Eiichi Taniguchi,  
Kyoto University, Japan

**Panellists:**

Primitivo C. Cal (Philippine University, Philippine), Atsushi Fukuda (Nihon University, Japan), A. R. M. M. Chowdhury (Hokkaido University (Bangladesh)), Chamroon Tangpaislkit, The Commission for the Management of Land Traffic (Thailand)

The panellists presented issues and measures on the urban transport and the environment in Eastern Asian cities, particularly focusing on urban freight transport. Many cities in the area suffer from traffic congestion, traffic accidents, environmental problems of air pollution, noise, as well as high energy consumption. Economic developments of urban areas are also required. For solving these complicated problems

toward sustainable cities, some cities have implemented measures including developing ring roads and public logistics terminals in Tokyo and Osaka, heavy truck ban in Manila and relocating freight terminals in Bangkok. Large cities in Eastern Asia basically need more transport infrastructure for meeting increasing demands of goods movement and decreasing negative impacts on the environment. We need comprehensive strategies for planning, design, construction and maintenance of infrastructure for sustainable and liveable cities. The panel discussion also highlighted the coordination of public private partnership in the planning and management of transport infrastructure. In particular private financing initiatives are important schemes for quickly providing better services for road users. We also need to exchange the knowledge and experience of transport policy, planning and management in each country and establish a kind of platform to discuss these essential issues in Eastern Asian region.

*By Eiichi Taniguchi (Kyoto University)*

### 22<sup>nd</sup> Agreement of Cooperation with IEI

The Institution of Engineers (India) President Prof. (Dr.) Samiran Choudhuri and Past President Prof. G. P. Lal attended the signing ceremony on Sept. 26 in the Sapporo Grand Hotel in Hokkaido. JSCE representatives included President Kishi, Executive Director Mr. Furuki, IAC Chair Prof. Miki, IAC Secretary General Prof. Taniguchi

### 4<sup>th</sup> International Summer Symposium

The 4<sup>th</sup> International Summer Symposium took place on Aug. 3 at Kyoto University, Department of Civil Engineering to provide a platform for students and engineers to present, discuss and exchange their research interest in English. It featured 87 paper presentations, a key lecture by Prof. Yuzo Onishi (Kyoto Univ.), and a special lecture by Dr. Fuminao Okumura (Railway Technical Research Institute). The event attracted 130 participants in total. Awards were presented to 13 students with excellent papers at the banquet held in the evening. (Winners list can be found in the website.) On the following day on Aug. 4, Kyoto University student volunteers organized the “Kyoto Walks” for the participating international students for a tour around the long-established city to tap into the traditional Japanese culture.

## Reconnaissance of the Damage caused by the Earthquakes in Peru and Iran



*Fallen statue, Moquega*

### (1) the June 23, 2001, Atico Earthquake, Peru

Peru, the third largest country in South America bordering on the South Pacific Ocean, is a land of contrast: high mountains, dense jungles, and barren deserts are all found in close proximity. Atico Earthquake occurred off the coast of southern Peru, about 175km west of Arequipa or about 595km southeast of Lima at 4:33 PM EDT on Jun 23, 2001 (3:33 PM local time in Peru). A revised moment magnitude of 8.4 (Harvard) was computed for this earthquake, making this the largest earthquake to occur anywhere in the world in the past 25 years. The hardest hits by this earthquake included Moquega located on a plateau with an elevation of about 1400m or more. The plateau is for the most part barren though it lies just south of equator, and therefore surface soils are mostly dried up and cemented stiff excluding those found at some oases scattering along some rivers. At some places, local site effects seem to have been responsible for amplifying seismic motions to some considerable extent causing serious destructions of adobe dwellings. One of the most spectacular aspects of this earthquake was damage caused by a tsunami, which surged 1km inland at Camana causing over 2000 structures to be damaged and 2000 hectares of farmland to be flooded.

Japan Society of Civil Engineers (JSCE) decided that it would dispatch an investigation team to Peru. Though JSCE covers a quite vast area of interest, the reconnaissance team, which was a small party of 11 experts, had little chance to thoroughly investigate every special field of civil engineering during their short stay (July 16-20). The team, however, was fully supported by experts from the team's Peruvian counterpart, CISMID (Japan-Peru Center for Earthquake Engineering

and Disaster Mitigation), and the survey went on smoothly. Though tragic, the death toll of 77 was fairly light considering the magnitude of this earthquake, and the damage seemed to be greatly localized even in a small area. The survey of the JSCE team was thus performed in such a way that spatial distributions of the earthquake effects could be clarified. For this, the team members measured microtremors, cracks on utility poles, which can be found everywhere, and analyzed nighttime imageries from satellites.

### (2) the June 22, 2002, Changureh (Avaj) Earthquake, Iran

Dry and barren plateau dominates most of Iran that lies in southwestern Asia. The plateau, lying at height of 900 to 1,500 m above the sea level, has a continental climate, with cold winters and hot summers. An intense earthquake occurred in western Iran, about 225 km west of Tehran at 7:28 local time, June 22, 2002. Though the moderate moment magnitude of 6.4 (ERI, University of Tokyo) – 6.5 (USGS) calculated for this earthquake was not surprisingly large as contrasted with the major earthquakes that ever occurred in this country, seriously ravaged villages were found along east-west oriented valley in the west of Abegarm, and 261 people were reportedly killed and 1,300 injured.

On July 5, Japan Society of Civil Engineers (JSCE) decided that it would dispatch an investigation team to Iran. Though JSCE covers a quite vast area of interest, the reconnaissance team, which was a small party of 7 experts, had little chance to thoroughly investigate every special field of civil engineering during their short stay (July 22-July 31) in Iran. The preliminary strategy of the JSCE team was thus to make a first reconnaissance laying stress on the damage to dwellings etc, to describe the damage in terms of the location with respect to the activated fault, and to discuss with Iranian specialists about possible future collaborations which could be beneficial for both Iranian and Japanese sides.

Dr. Rahimian, Vice-Chancellor of Tehran University, Mr. Rasool Zargar, Counsellor of Tehran Mayor in Disaster Management, and Mr. A.A. Moinfar, executive advisor of the Center of Earthquake & Environmental Studies of Tehran (CEST), kindly made every arrangement for the team's reconnaissance trip, coordinating the schedules of specialists and officials in charge.

The Atico Earthquake report and Changureh (Avaj) Earthquake provisional report of the JSCE team are now available at the following URL: <http://www.jsce-int.org/>

By Kazuo Konagai (The University of Tokyo)

## Voice from the Students:



Kohei Nagai

### Let's Create a Meaningful Co-existence!

The Graduate School of Engineering of Hokkaido University established a special program called "English Graduate Program in Socio-Environmental Engineering (EGPSEE)" in 2000. I am the first and only Japanese student in this doctoral program.

In daily school life, I often ponder, "What significance does the presence of foreign students have to the Japanese students?" because I feel that communication between international and Japanese students is not enough to comprehend each other. I think most Japanese students are missing out on their chance to learn from them.

For international students, support from Japanese students is vital to conduct research in the laboratory because their supervisor cannot support everything. Furthermore, the University's system is not designed for non-Japanese, for example, most University documents are written in Japanese only. On the other hand, what international students can do for the laboratory is limited. As a result, an equal relationship between international and Japanese students in the laboratory work cannot be established. Japanese students who often have to help them may think, "Why do I have to help them?" This is not what international exchange activity is supposed to be.

More international students will come to Japan under the name of "internationalization". To make it meaningful to both, I think the way of thinking of Japanese students should be changed -- from a mere provider or host to an equal partner, needless to mention the improvement of the University system.

We Japanese students can learn many things, English, foreign cultures, ways of thinking and so on from having these international students in our country. In my case, though I often help them in my laboratory, I believe our relation is on an even term. We should recognize this fact and develop an international mind.

*Kohei Nagai  
Division of Structural & Geotechnical Engineering  
Graduate School of Engineering  
Hokkaido University*

## The Int'l Symposium on Construction & Project Management: Human Resources Development under "Glocalization"

The International Symposium on Construction & Project Management - the human resources development under "Glocalization"- will be held 16 - 17 October 2003, Tokyo, Japan, organized by Construction Management Committee in JSCE.

The objective of this international symposium is to disseminate its findings of efficient and effective management systems in the construction industry and to strengthen the linkage with foreign countries, especially in the Asian region. The Competition in construction business and procurement of various resources will be even more globalized with the concern of local practice in the future. Therefore, it is important to develop human resources that can understand, appreciate, and practice both the global and local standards in the construction sector.

### CALL FOR PAPERS

Please send extended abstracts to the secretariat by e-mail ([iscpm@ctie.co.jp](mailto:iscpm@ctie.co.jp)) or by facsimile (+81-3-3663-3637). We can accept any Microsoft Word and ascii (text) formats. Details available from: [http://cmis10.t.u-tokyo.ac.jp/iscpm/iscpm\\_callforpapers.htm](http://cmis10.t.u-tokyo.ac.jp/iscpm/iscpm_callforpapers.htm)

### IMPORTANT DATES

31 Jan. 2003	Deadline for extended abstracts
31 Mar. 2003	Notification of acceptance
31 Jul. 2003	Deadline for final paper

### Publications

#### ARTICLES (From September to November 2002)

Structural Engineering Earthquake Engineering  
Vol.19 No.2, JSCE, October 2002, 252 pages,  
Price: ¥2,039 (US\$27.00), ISSN 0289-8063

#### For all orders, contact:

MARUZEN Co. Ltd., Export Department  
P.O. Box 5050 Tokyo 100-3199 Japan  
Fax: +81-3-3278-9256  
E-mail: [k\\_itoh@maruzen.co.jp](mailto:k_itoh@maruzen.co.jp)

Send your comments, suggestions and contributions to: [iad@jsce.or.jp](mailto:iad@jsce.or.jp)  
JSCE Website: <http://www.jsce.or.jp>

#### Editorial Board:

Public Relations Subcommittee,  
International Activities Committee, JSCE