

# Interview

## Civil engineering in the era of the Landscape Law

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**Osamu SHINOHARA**

Fellow, Professor, Graduate School of Engineering, University of Tokyo

### Historical significance of the Landscape Law

The Landscape Law was enacted in June and enforced in December 17, 2004. How should we, as civil engineers involved in city and nation building, accept this situation? Let's start with the historical background on the law.

The law concerning landscapes in Japan was only the National Parks Law (the current Natural Parks Law) enacted in 1931. The purpose of the law was to protect and appropriately use the natural environments and landscapes of the country. (The government geared to attract foreign tourists in those times.) It was the second earliest in the world after the U.S.A. In spite of this, landscaping was not characterized as the pillar of city planning.

The City Planning Act and Urban Buildings Act enacted in 1919 allowed scenic and aesthetic districts to be designated. Both acts limited districts to create urban landscapes by protecting forests under the former and regulating buildings under the latter. The City Planning Act designated countless districts and has accomplished certain results, but the districts deregulated by the postwar urban development were innumerable. The Urban Buildings Act designated only exceedingly exceptional districts (around the Imperial Palace in Tokyo and Midosuji in Osaka) in the face of opposition from landowners and developers. Until recently, the general feeling of the public that they wanted road and park construction projects but did not want to be subject to regulations had remained unchanged.

After World War II came the realization that

a gap in the scale of spaces between the City Planning Act on an entire city basis and the Building Standard Law on a lot basis was too large to maintain the integrity of towns and to create townscapes on an intermediate scale. Consequently, a district planning system, which was copied from Plan B in Germany, was introduced in 1980. However, since the application of the system was limited (applied only to newly developed residential areas) it was difficult to apply the system to the existing residential and urban areas. Landscaping problems had been left solely to the private sector, such as building and greening agreements concluded between landlords, before the system was introduced.

The local governments were those who suffered from the fact there were no stipulations pertaining to landscaping in national laws and rose against the national government to conserve and create urban landscapes. This move gained momentum from the early 1970s onward and the Kyoto City Urban Landscape Conservation Ordinance was enacted in 1978. On the prefectural level, the Ordinance to Protect and Nature Homeland Shiga was enacted in 1984. According to the statistics by the Ministry of Land, Infrastructure and Transport, the number of local governments that enacted ordinances for landscape conservation is 27 on a prefectural level and about 500 on a municipal level.

It is clear from the above-mentioned historical background that from the start, the national government had showed an indifferent attitude to urban landscaping. This may be taken for granted

because the concept of landscaping relates closely to the locational conditions and natural features. Particular attention was paid to historical legacies, such as the Ancient Cities Preservation Law (1966) and the Law Concerning Preservation of Important Traditional Buildings (1975) but remained in a viewpoint of cultural properties. I would have to say that the national government showed apathy concerning the beauty of cities.

Next, let's change the subject to a short-term move over the past one to two decades. Landscaping gained popularity during the economic bubble of the late 1980s. The Study Group on Introduction of Civic Design Technique comprising representatives from bureaus of civil works of the former Ministry of Construction and public corporations was established in 1989. The objective of the group was to study measures to raise the design level of public civil engineering facilities. The establishment of the study group was a landmark event considering the attitude of the Ministry of Construction that had prioritized efficiency by endorsing "average" designs since the end of the war. The group continued for three years; workshops were conducted for national and local officials at all the Regional Construction Bureaus in 1991, and training courses, including exercises in design, were introduced in Construction College in 1992 (currently suspended and will be restarted by the end of this fiscal year). Regrettably, I would have to say that the results were nothing much to look at. Only the relief cutouts at tunnel portals that confused landscape design with surface decorative finishes and bridge main pillars and pedestrian railings of garish design remained. Following the collapse of the speculation bubble, government offices entered the era of cost savings and the word "landscaping" was expelled from the mind of the personnel in charge. Landscape designers must have understood the experience of being troubled by government officials

who behaved only for cost-saving purposes for the past ten odd years. The cause of the failure was that the officials could not realize the importance of human resource networking and regime change. (This point is mentioned later.) They were young and optimistic.

What happened recently was a sharp turn: the Policies for Creating Beautiful Nation was established in July 2003 and the Landscape Law was enacted in June 2004. How should we civil engineers accept this situation? It is no wonder that not only the majority of civil engineers but also prefectural and municipal employees feel confused.

### **The Policies for Creating Beautiful Nation and civil engineers**

In any event, the helm had shifted. Years 2003 and 2004 would be memorable in the history of urban development and nation building of the modern Japan since the Meiji era. The Policies declares that the objective of public works is to preserve beauty (that is, not an auxiliary but main objective), and the Landscape Law stipulates that the act of city planning cannot be performed without landscaping.

The literal meaning of this is that knowledge of landscaping, design sense of public facilities and structure, and the ability to make decisions will become prerequisites for civil engineers involved in urban development and nation building.

First, let's consider how the public works on a national level was changed by the Policies. The Ministry of Land, Infrastructure and Transport went further into the design system that was left untouched at the time of the Study Group. Personnel in charge of landscaping (project landscape administrator) were assigned at Regional Bureaus of the Ministry, a landscape assessment advisory panel comprising of scholars was set up, pilot projects were carried out under the planning and design guidance of the advisory panel (44 pilot projects across the country). It

is a three-piece set of reform. If the expansion and generalization of proposals and competitions that have been conducted on trial are added to the reform, the establishment of a framework for the reform is complete. The challenge for the future is its contents. That is, the point is whether or not good landscapes that would become stocks in the future will be designed and constructed. Because humans do the planning and the design, the skills of architects and consultant engineers who implement the planning and design and the judgment of engineers at competent authorities are the key to the success of the reform. However, the reality is there is shortage in human resources. The very persons for bridges, roads, rivers, ports and harbors are very limited. There are shortages of qualified designers, planners, officials, and scholars as advisors.

There is no other alternative than to manage by the limited human resources for the time being. Development of human resources with an eye toward one to two decades from now is an urgent issue. Training at government offices, fostering of experts, and enrichment of landscaping-related education (lectures and design practices) at education institutions are required.

At universities, the fostering of teachers of landscape design before educating students will become an urgent matter. It takes time to cultivate human resources. Implementation of design competitions that give incentive (to consultants and students) will be effective in accelerating the development of human resources. In any event, do not repeat the stupid mistake that gave currency to dilettantism during the bubble period. It will become important to bring individuals to the surface, regardless of architect offices, consultants, government offices, and universities, assess their track record, and make clear their responsibilities. To that end, it is not desirable to change consultants as often

as the preliminary and detailed design phases (for bridge construction projects for example). Further, the design supervision during construction needs to be entrusted to designers.

### **The Landscape Law and civil engineers**

The Landscape Law specifies that entities that formulate a plan, designate districts and carry out regulations are cities above a certain size and municipalities authorized by governors, and governors have the authority to execute other items than mentioned above. Challenges for municipalities and prefectures are harsher than the national government because there are too many challenges besides landscaping. To cite a few examples, financial difficulties, aging of society, welfare, depopulation, collapse of central cities, shortfall of human resources, and recent consolidation of municipalities. Their honest feeling is that they never think of urban landscapes. Objects are not specific, like bridges or rivers. They have to know where to begin and begin with the setting of targets. Furthermore, the reality is ignored if only urban landscapes are taken out for study: that is, the landscapes need to be considered along with the revitalization, welfare, and financial affairs of towns. The challenges before individual landscape designs are important.

Accordingly, what is required on a municipality level are abilities to come up with conceptual ideas by considering all the various factors together, collect and send information about useful techniques and human resources, and coordinate to bring together all matters totally. Those who are responsible for the coordination of these tasks may be officials, consultants, NPO staff, or university teachers. Because civil engineers must gain experience as coordinators in various phases, such as project implementation and construction phases, they seem to be suited for the tasks. The problem is how to

develop the abilities as occupations. The development of communities and the construction of landscapes will have a minimal chance of success if the abilities are developed to provide services to receive orders for construction and design as is conventionally done.

Next, let's consider how the municipalities will operate under the Landscape Law. When dividing landscape administration broadly into maintenance and creation systems, the maintenance system will work accordingly. The reason is that there is a track record of designation of the important traditional buildings preservation district, historic buildings are situated in front of one's eyes, target images are clear, and it is easy to obtain consensus. What is difficult is how to plan and design the creative system, i.e. how to reconstruct downtown areas, areas around train stations and municipal rivers that are important for municipalities. It is not easy to set target images. In addition, the contents of the creative system are greatly affected by the skills of engineers, designers, and planners who are engaged in the system. It is naturally important to hire good manpower for the design of landscapes. What is more important is the task of organizing individual designs in totality toward the goal of comprehensive formation of landscapes. To be more specific, the collaboration of experts on civil engineering, city planning, gardening, design, and history is indispensable.

Team design toward the goal of spaces in totality has been done for the last decade.<sup>1)</sup> From an experience point of view, two approaches are possible. One is an integrated project design level. This is a system in which multiple planning and design activities in a space of certain dimensions are placed on a big table and experts from various fields gather around the table to discuss the planning and design. For the consecutive railroad crossing project at Hyuga Station, the project members of Miyazaki Prefecture, Hyuga City, and Kyushu Railway Company and the

experts on city planning, civil engineering, architecture and design had met to discuss the project matters and develop designs consensually. Otherwise project entities would develop designs individually (without mutual interference) under the conventional system of placing orders and as a result urban landscapes around the station would be disorganized. This system was implemented at Asahikawa Station, Kochi Station, and Horikawa in Nichinan City in Miyazaki Prefecture. The results of the system will be obvious in three to four years.

The other is a system in which when the works of planning, design, and investigation of community renovation are commissioned from municipalities, experts from various areas meet to form a design team for the works. The team takes the responsibility for the works from the investigation and planning through construction supervision until completion. (In reality the team does not take the responsibility under the current contract, but only in substance rather than in form).

In Katsuyama City Fukui Prefecture, the restoration of water channels along Honmachi Street and Kawaramachi Street, the maintenance of Oshimizu water channel (springwater), plaza and former machinery plant, and the survey, planning and design of a park and plaza in front of the station that uses the water channel are under way. They are situated in important districts in the center of the city. The system is adopted in Toba City in Mie Prefecture and Kaga City in Ishikawa Prefecture. What is considered important for the projects is not only citizen's participation but also the use of local materials (stone, brick, wood, casting, and others), the participation of local craftsmen, and designs that foster local industries. These motivate people in regional towns and cities and raise their awareness. Regional communities will be futureless without changes in consciousness.

The above-mentioned two approaches are the contents of construction of landscapes in municipalities required by the Landscape Law. What should be reformed is the current system of placing orders for works. Experts gather under the leadership of a coordinator. If an order for all the planning and design works is placed in a lump sum with the design team, the works will be carried out smoothly and the responsibilities for the works will be made clear.

who has been taking a firm stand on landscaping over the years. Read through this article along with the special feature article. (Editorial Committee of the JSCE Journals)

### **Landscape civil engineering in the era of the Landscape Law**

Government officials often say that the three-letter law of the *Kei-kan-hou* (Landscape Law) is an important law after the two-letter laws of the *Min-pou* (Civil Law) and the *Sho-hou* (Business Law). That is, it ties with the Road Law (1919) and the River Law (1897). Taking a look back in history, the enactment of the City Planning Law developed urban civil engineering in the field of civil engineering to cover areas other than rivers and roads. The landscape civil engineering will become an important area for the future civil engineering because it broadens its horizons, although its objects are not so clear as urban civil engineering. As the Policies states, beauty is vital to all public works because the Landscape Law brings about a relation neither too close to nor too remote from between city planning and landscaping.

### **References**

- 1) Osamu Shinohara, Present State of Civil Engineering Design + Collaboration, Visual Architecture, 301, 2003
- 2) Hiroshi Naito, Groundscape Declaration, Maruzen Co., Ltd., 2004

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The Committee, instead of conducting an interview, received this article on how civil engineers should make the most of the enacted Landscape Law from Professor Osamu Shinohara, University of Tokyo,