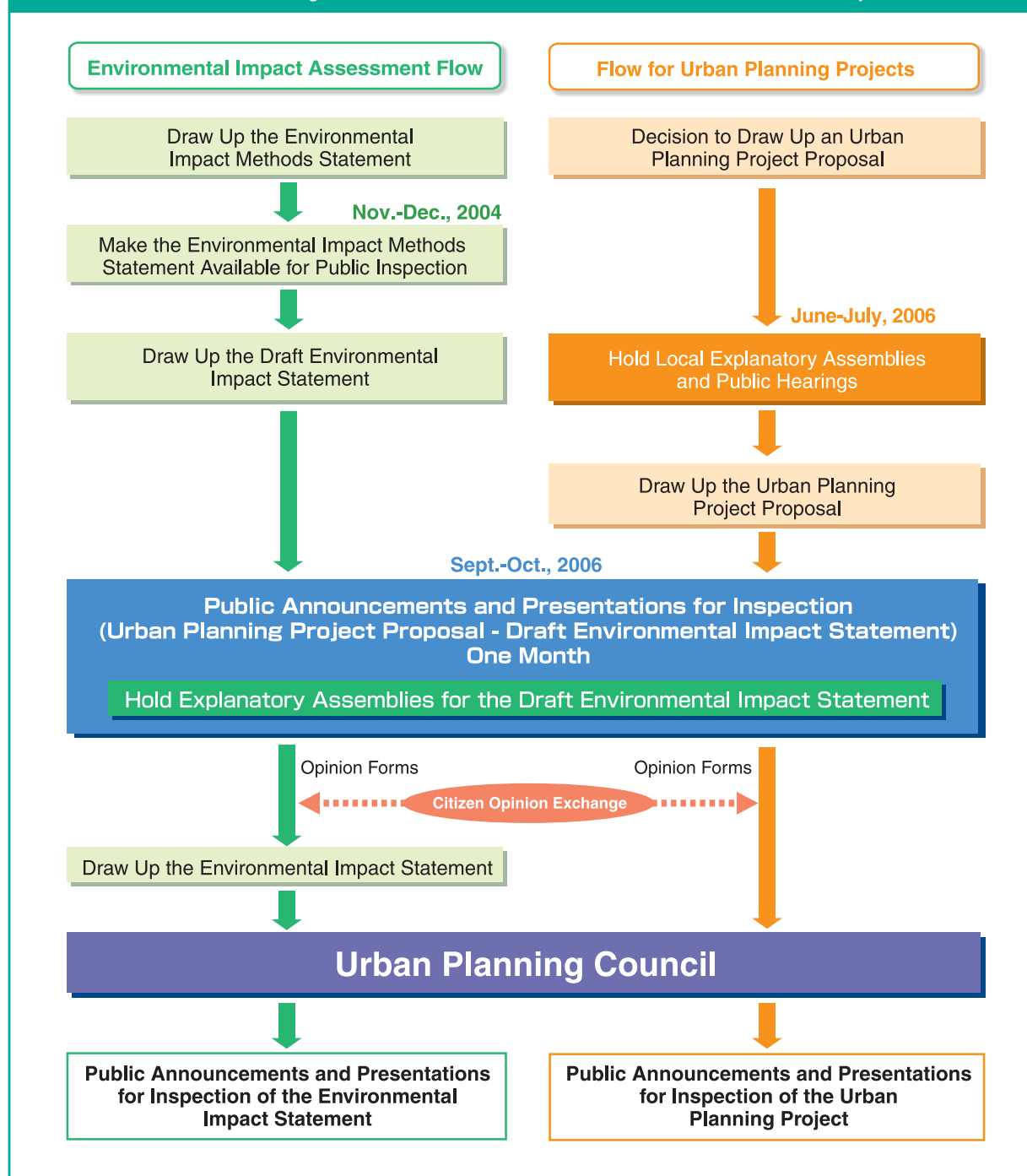
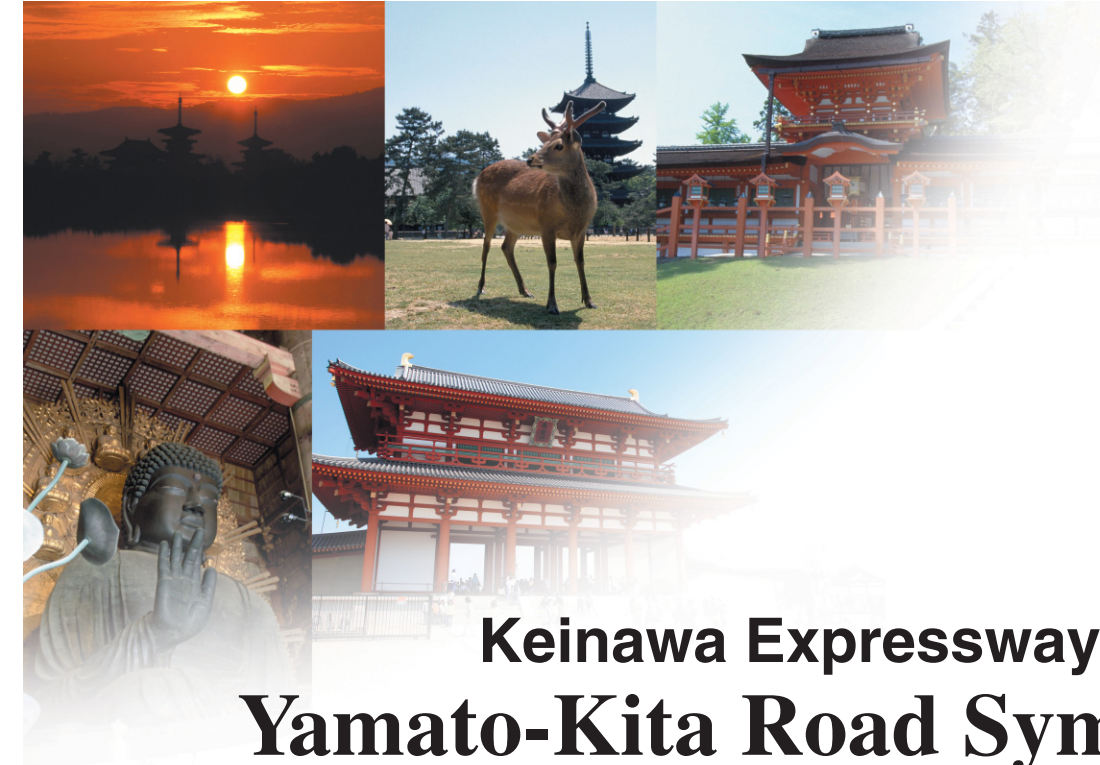


At present, the procedures for the urban planning and the Environmental Impact Assessment for the Yamato-Kita Road are being promoted.

Flow Chart for Urban Planning Decisions and the Procedures for the Environmental Impact Assessment



Contact: Nara National Highway Office
Kinki Regional Development Bureau
Ministry of Land, Infrastructure and Transport
3-5-11, Omiya-cho, Nara City 630-8115
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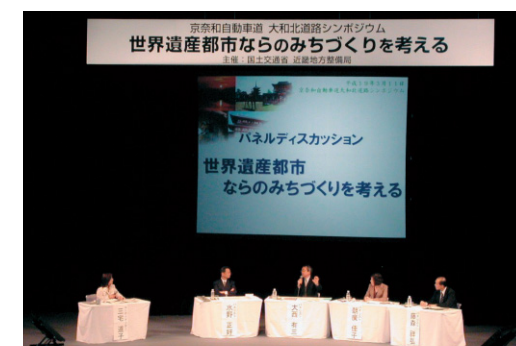


Keinawa Expressway Yamato-Kita Road Symposium

Considering Road Planning in the World Heritage City of Nara

Date: March 11, 2007

Location: Nara Prefectural Cultural Hall,
International Hall (lecture hall)



Sponsor: Kinki Regional Development Bureau,
Ministry of Land, Infrastructure and Transport

Keynote Presentation

The Nara Capital Site and Roads - Harmony Between Development and Cultural Properties -

Ikuo Tanabe: Director of the Nara National Research Institute for Cultural Properties

Road planning is the foundation for the Nara Capital Site

The fundamental policy for the Nara Capital Site called for roads that were arranged in a right-angled grid. Road planning featuring straight roads was one characteristic of the public roads in ancient periods. There was a strong influence from the concept of heading straight towards an objective. The roads of the ancient Roman Empire had the same characteristic approach. At the Nara Capital Site, there are many remnants of theses planned roads left in a notable form underground. This is the main point we should consider.

Harmony between development and buried cultural properties

I believe it is necessary to consider two facets of this issue. The first is the question of whether or not it is possible to achieve harmony between the "preservation and development" of ancient remnants. During periods of high level of economic growth, development took the upper hand and preservation was placed at a lower level of priority. Development went ahead while we were discussing the issues involved. Still, while the development proceeded, more and more excavation data became available, which encouraged even more excavations.

That was true for the past several tens of years. Now, there are almost 10,000 excavations conducted every year, and almost all of these are related to excavation studies for development. That gives you a glimpse of the deep relationship between development and buried cultural properties.

Next, there is the issue of "harmony and vitalization." For example, the Suzakumon Gate and the Daigokuden Hall have been reconstructed at the Nara Capital Site, but it is necessary to consider how to achieve harmony between the preservation and development of such historic sites as the Nara Capital Site and development in the peripheral areas. The question that has arisen here, at present, is the important theme of how to go about and achieve harmony in the development of tourism related to these sites.

In any case, there is a demand for both harmony and vitalization, but at the foundation of this issue is the fact that "the value of buried cultural properties lays underground," and any "harmony" that damages that value cannot be accepted.

The Yamato-Kita Road and the Nara Capital Site

Here, in a concrete example, there is the relationship between the Yamato-Kita Road and the Nara Capital Site. How should we look at this relationship?



Ikuo Tanabe

Director of the National Research Institute for Cultural Properties, Nara (presently the Nara National Research Institute for Cultural Properties)

Mr. Tanabe graduated from Keio University, Faculty of Letters, Department of History in 1968. He later enrolled in the master's course at the Graduate School at Kyoto University. Mr. Tanabe has held the posts of the Chief of the Fine Arts Division in the Cultural Properties Protection Department at the Agency for Cultural Affairs, Senior Specialist for Cultural Properties, the Director of the Archaeology Division of the Cultural Department at the Tokyo National Museum, and the Director of the Department of Heijo Palace Site Investigations at the Nara National Cultural Properties Research Institute (presently the National Research Institute for Cultural Properties, Nara), etc. In 2001, he was appointed as the Director of the Department of Asuka/Fujiwara Palace Site Investigations at the National Research Institute for Cultural Properties, Nara. Mr. Tanabe assumed his current post in 2005. He has written several books, including *Excavating the Nara Capital Site and Life at the Nara Capital*.

When we are talking about putting a road through the area, one major consideration is the fact that the World Heritage property in Nara is deeply integrated with the natural landscape, so an elevated road is quite unreasonable. That leaves us with a tunnel underground. In that case, almost all of the ancient remnants are located no deeper than a few meters underground, so normally if a tunnel is about 40 meters underground, there will be no direct issue with the preservation of the remnants.



Examples of excavated mokkan
Reference: Nara Research News, Edition 9 - National Research Institute for Cultural Properties, Nara

There will also be no problems with the landscape, so a tunnel is not a bad choice at all. However, the problem here, in the case of the Nara Capital Site, there are a very large number of *mokkan* (ancient wooden written tablets) buried underground. From an archaeological point of view, these ancient remnants are first class historical documents. So, there is the issue of what are the conditions in which *mokkan* are preserved underground? When dealing with remnants made of wood, it is normal for wood to dry up, oxidize and rot when buried underground. Basically, these remnants have survived because they reside in an environment with a lot of water, a characteristic of the *mokkan*. If the groundwater is sufficient, the *mokkan* will always remain. So, if we put a tunnel through the ground under the locations where the *mokkan* exist, will there be fluctuations in the level of the groundwater? That is the important issue that has arisen here. Thus, in order to consider whether it would be possible to attain any related concrete or objective data on this issue, the Yamato-Kita Road Groundwater Monitoring Study Committee was established to monitor the groundwater level, and the committee has already started to conduct studies on this subject. These studies include studies on the state of the groundwater level, the state of the water and the soil, and their effect on the wooden buried cultural properties, such as *mokkan*.

Greetings from the sponsor

Yoshihiro Fujimori

Director, Road Department,
Kinki Regional Development Bureau,
Ministry of Land, Infrastructure and Transport

More than 13 million tourists visit Nara City every year. I believe they come because there many historical buildings and a rich historical landscape in the area, including a World Heritage property, the Historic Monuments of Ancient Nara.

However, on the other hand, I would like to ask you to consider the traffic problems that figure represents for ordinary daily life. The main trunk roads running north and south through Nara City are limited to two National Highways, Route 24 and Route 169, and both of these roads get very congested in the mornings and evenings.

In addition, during the Omizutori Festival at Todai-ji Temple and the tourist seasons in the spring and fall, the congestion is so bad that traffic doesn't move at all. Furthermore, since many drivers want to get off the congested trunk roads and either get into Nara City as fast as possible, or the opposite, out of

Nara City as soon as they can, many vehicles enter the narrow streets in the residential districts hoping to avoid the congestion. As one method to resolve or mitigate this issue, the Ministry of Land, Infrastructure and Transport is now planning the construction of the Yamato-Kita Road, part of the Keinawa Expressway. Of course, not all aspects of this problem will be solved by the construction of this road. We will have to consider a variety of related issues and factors, and other solutions. That is one reason we have held this symposium here today. Still, we must consider that there are many World Heritage properties in Nara. World Heritage properties are very important properties for humanity, and harmony between these properties and road construction must be maintained. Through this symposium, we sincerely hope that you all achieve a deeper understanding of the issues involved related to the theme of "Urban Planning in the World Heritage City of Nara" and also the construction of the Keinawa Expressway.

In terms of harmony between preservation and development, there are no precedents and this is the first such attempt.

What are the conditions for buried cultural properties that will ensure or preclude preservation? No such studies have been performed up to the present. Thus, on this occasion, the construction of this road, we and the Ministry of Land, Infrastructure and Transport have begun to cooperate on these studies on preservation. To date, we have gathered data on the ground under the Nara Palace Site, but we didn't know how to employ this data, or even if we could employ it, and this lack of knowledge meant that we haven't used that data. Now, on this occasion, we believe we will be able to initiate studies that will clarify how this data should be employed, and the conditions that will allow or preclude preservation of the *mokkan*.



A simulation of the ancient roads asleep underground at the Nara Capital Site, imposed on a modern picture

New horizons for the preservation of cultural properties

At present in Japan, there are approximately 440,000 historic sites with remains, and a lot of people are living at these locations. We can't just have everyone clear these areas just to ensure preservation of the remains. Furthermore, such preservation is meaningless. The reason we work to preserve remains and cultural properties is to ensure that they are useful to us both in the present and in the future, so we cannot sacrifice the livelihood of so many people just for preservation alone.

The question of how to achieve harmony between our present life style and the cultural properties is certainly a major theme in society today.

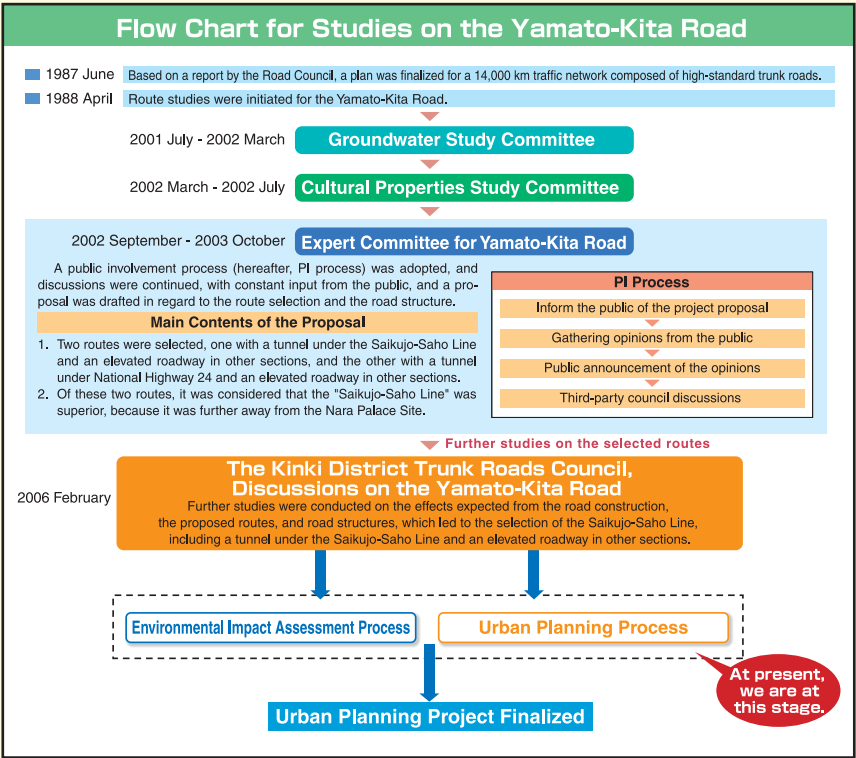
Accordingly, on this occasion, through the groundwater monitoring work, and the concept of achieving harmony between the construction of the Yamato-Kita Road and the preservation of the Nara Palace Site, and the *mokkan*, if we can evolve some new technology, we feel that this will lead to new developments related to the theme of harmony between cultural properties and development.

In the future, as we consider these issues, and always keeping urban planning for Nara in mind, it will be ever the more necessary to have some definite concepts to work from, such as, "How should we proceed as citizens of Nara?" or "What do we want to achieve?" As we proceed in a resolute manner, we will find solutions to the question, "How should cultural properties be included in vitalization efforts?" The question of whether or not we can assume this stance is important, and it will lead to technical solutions as well.



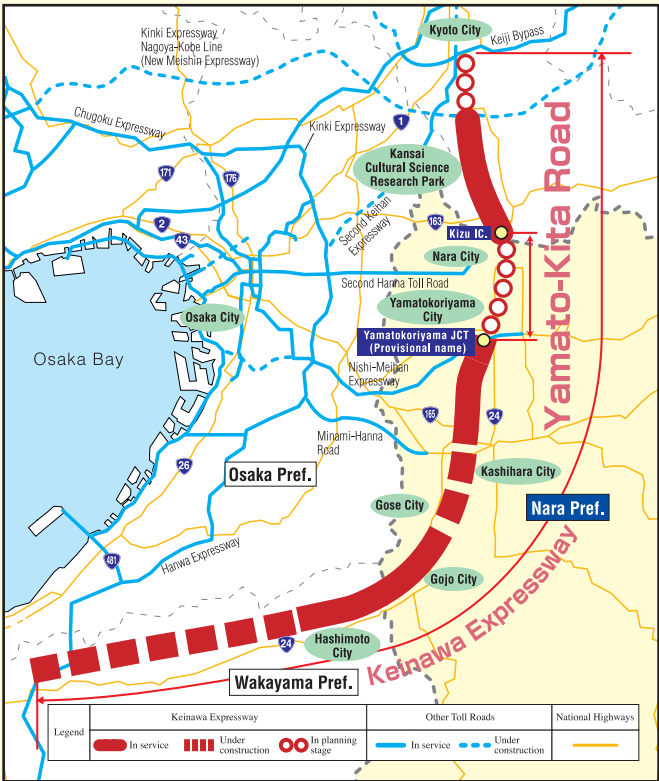
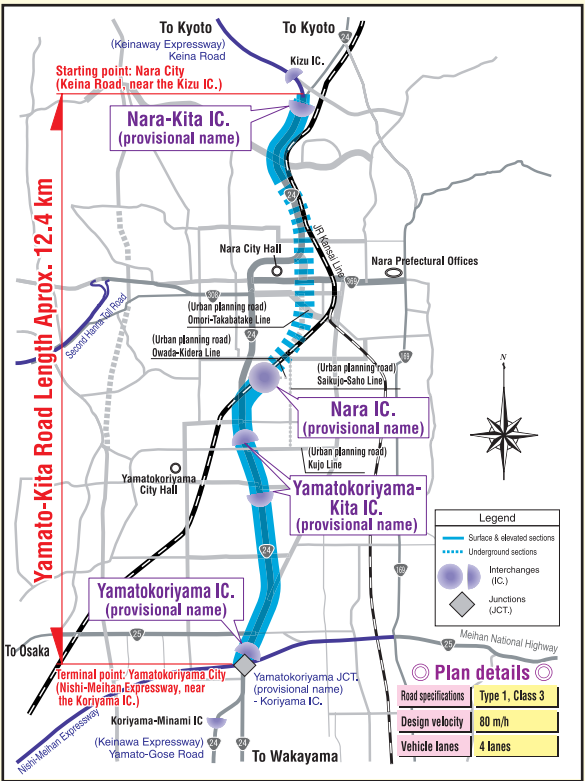
The Keinawa Expressway and the Yamato-Kita Road
An outline of the plan and present conditions

After Mr. Tanabe's keynote presentation, Mr. Shigeo Murata, the Director of the Nara National Highway Office, presented an outline of the plans for the Yamato-Kita Road and explained the current conditions to all who attended the symposium.



Shigeo Murata
General Manager of the Nara National Highway Office
Ministry of Land, Infrastructure and Transport

Joined the Ministry of Construction (presently the Ministry of Land, Infrastructure and Transport) in April of 1993. After holding a position at the Public Works Research Institute, a position as Senior researcher of the Advanced Road Design and Safety Division in the Road Department of the National Institute for Land and Infrastructure Management, and the Deputy Director of the Road Administration Division in the Road Bureau of the Ministry of Land, Infrastructure and Transport, he assumed his present position in December of 2006.



Panel Discussion

Considering Road Planning in the World Heritage City of Nara

Panelists

Yuzo Onishi

Kyoto University, School of Urban and Environment Engineering, Professor

Masayoshi Mizuno

Nara University, Professor Emeritus; All-Japan Buried Cultural Properties Corporation, Liaison Council, Chairperson

Yoshiko Asahiro

Representative Director of Yomiuri Nara Life (Corp.), and the editor of the local information magazine "Yomikko."

NPO Corporation NARA TO-KAE no KAI, Former Director

Yoshihiro Fujimori

Director, Road Department, Kinki Regional Development Bureau, Ministry of Land, Infrastructure and Transport

Coordinator

Michiko Miyake

Free Announcer

Bring Healing and Peace of Mind to Nara Through Close Cooperation Between Road Planning and District Development



Michiko Miyake (Coordinator)

Free Announcer

Born in Nara Prefecture. Including the NHK Evening Network program, Ms. Miyake has appeared on several programs as a newscaster, mainly in the Kinki region. She has appeared on Kansai Television's World Uplink Osaka show, Nara Television Broadcast's News On Stage, and others. She is also active as a coordinator for lecture meetings and symposiums.

Ms. Miyake: In the past, we had the image that roads just appeared, constructed under the guidance of the administration of the government. In recent years, however, discussions have been held in a variety of forums, and road planning has been conducted not simply as road construction alone, but rather as part of the district development planning in close cooperation with the local districts.

In the panel discussion we will hold here today, we will hear the panelists speak on the theme of the form "District Development and Road Planning" should assume, as a social asset, while vitalizing the existence of the World Heritage properties.

Mr. Mizuno: The Omizutori Festival has continued uninterrupted for 1,256 years from the time Emperor Shomu held the first ceremony to consecrate the Great Buddha statue. Furthermore, the Shosoin Exhibition now attracts more than two hundred thousand people. Thus, structures constructed in the Nara Capital period are still in existence today, and functioning in a very visible manner. The Nara Capital is deeply moving and the source of strong emotions, even for people in this modern age.

"It is necessary for everyone to consider the balance between convenience in daily life for the citizens in the prefecture and the cultural properties."



Masayoshi Mizuno (Panelist)

Nara University, Professor Emeritus
All-Japan Buried Cultural Properties Corporation,
Liaison Council, Chairperson

Mr. Mizuno graduated from Osaka Kyoiku University (formally the Osaka Gakugei University) in 1957. Employed by Shiga Prefecture, the Osaka Prefectural Board of Education, and the Agency for Cultural Affairs in the administration of cultural properties. He joined Nara University in 1979, and after holding the position of the Dean of the Department of Literature, and the Dean of the University, at present he is a Professor Emeritus at Nara University, the Director of the Osaka Prefecture Cultural Properties Center (incorporated foundation), the Chairperson of the All-Japan Buried Cultural Properties Corporation, Liaison Council, and a member of Nara Prefecture's Committee for the Preservation of the Ancient Capital. He has written several books, including, *The Origin Of The Island Country (Shimaguni no Genzo)*, *The Primitive Art and Clay Figures of Japan (Nihon no Genshi Bijutsu - Dogu)*, *Considerations on the Ancient Ages - Kawachi Asuka (Kodai o Kangaeru - Kawachi Asuka)*, and *Considerations on the Ancient Ages - Oumi (Kodai o Kangaeru - Oumi)*, etc.

Now, we are involved in the planning for the construction of a new road in the area near the Nara Capital Site, and we have, over an extended period, conducted study after study on the subject. The strong desire to have the road go underground has been answered. Next, the issue of any possible impact on the groundwater was studied, and as a result, it was determined to build a deep tunnel, at a depth of about 40 meters, which is a relief as we know that a deep tunnel like this will mitigate any possible impact.

In an effort to reduce the impact on the Nara Palace Site, the route for the road was shifted away from the inscribed site, so that it runs through the buffer zone. Now it is our desire to see the establishment of a continuous monitoring system for the preservation measures and preservation conditions that will assure that, in the

"Our goal here is to achieve a model case providing preservation through cooperation and coexistence between civil engineering and archaeology."



Yuzo Onishi (Panelist)

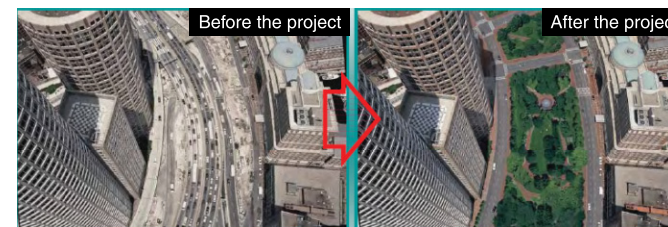
Kyoto University, School of Urban and Environment Engineering, Professor

Graduated in 1968 from Kyoto University, Faculty of Engineering, School of Civil Engineering. In 1973, he completed a doctoral course at the University of California at Berkeley. After working as a research assistant at the Lawrence Berkley National Laboratory, which is affiliated with the University of California, and as an assistant in the School of Civil Engineering at Kyoto University, he assumed the post of assistant professor in 1977, the post of assistant professor in the graduate program in the School of Environment and Global Engineering at Kyoto University, in 1991, and the post of professor at the School of Traffic and Civil Engineering at Kyoto University, in 1994. After a post as a visiting professor in Switzerland in 2000, at the Swiss Federal Institute of Technology (EPFL) Lausanne, he assumed his present post in April of 2003.

future, there are no detrimental effects, such as an impact on the preservation situation of ancient relics, like the mokkan, or any impact on the preservation situation of the groundwater.

Mr. Onishi: We have been involved in studies on the ground and the groundwater in Nara for the last ten years or so.

In the past, civil engineering in Japan put an emphasis on development, and it was considered a field in opposition to archaeology. However, in English, the literal meaning of civil engineering is "engineering for the citizens," and thus it means the construction and maintenance of the infrastructure of the society, such as the structures and roads, etc. that are used by the public. So civil engineering should contribute to the environment of the citizens. In fact, on a world-wide basis, there have been many case where, through technology, the contribution of civil engineering to the urban environment has been put to the test.



An example of a road turned into a tunnel underground (America, Boston)
Reference material: Journal of the Japan Society of Civil Engineers, Vol. 87

For example, in Boston, in the United States of America, a road was moved underground in order to mitigate congestion on an expressway, and the area above the tunnel was turned into a park. There are many old atmospheric street scenes in Boston, and the sea is very close by, so through unification of the places of recreation and relaxation on the coast with commercial facilities, the project was very successful. This was a trial for the use of civil engineering technology in order to achieve environmental-friendly construction resulting in amenity for the citizens of the city, and a call to people to visit the city.

Ms. Asahiro: The NARA TO-KAE is a new summer tourist event that was started in 1999. Citizen volunteers light 20,000 candles in Nara Park. The fantasy aspects of the plan have been well received, and now, about 700,000 visitors gather during the 10 days of the event.

One of the reasons for the success of the event is of course, the man-power of the citizens, but aside from that, the other major reason is the natural environment of Nara Park and the homey atmosphere at the historic sites in the area, such as the World Heritage properties at Todaj-ji Temple, Kasuga-Taisha Shrine, and Kofuku-ji Temple. Even though it is located in the middle of a city, the natural environment of Nara Park retains a

"Through making information available on a wide-scale basis, I would like to see more discussion involving the citizens."



Yoshiko Asahiro (Panelist)

Representative Director of Yomiuri Nara Life (Corp.), and the editor of the local information magazine "Yomikko," also the former Director of the NPO Corporation NARA TO-KAE no KAI.

In 1993, Ms. Asahiro accepted an appointment as a Representative Director of Yomiuri Nara Life (Corp.). She was responsible for carrying out the "Countdown 2000 in Nara" event as the 40th chairperson of the board of directors of the Junior Chamber International Nara. The NARA TO-KAE organization was started in the same year, and she held the post of chairperson of the executive committee. In 2000, the NARA TO-KAE no KAI was established as a private organization (attaining NPO status in 2004), and she held the post of Director of the organization until 2004. In 2005, she held the post of chairperson of the executive committee for the Nara Sentosai festival. She was also selected by the Ministry of Land, Infrastructure and Transport as a member of the honorary group Tourism Charisma for her efforts in promoting tourism.

first-class natural environment. What the people who come to Nara want is undoubtedly history and a natural environment, and that is what provides the healing and peace of mind.

However, the other side of the coin is that about 40% of the tourists who come to Nara do so by automobile. It seems that many people have the fixed idea that it is quite inconvenient not to have a car when you



Todaj-ji Temple Omizutori



NARA TO-KAE

go to Nara. That doesn't mean that we need a new road because there are so many vehicles, but given these conditions, there will be even more congestion if we attract more tourists.

You know, we actually conducted a questionnaire study that include about 100 people either living in Nara or commuting to work here and asked their opinions on several subjects. As a result, about 80% of those who answered the questionnaire said the road was necessary and about 15% said it was not necessary.

As the reason they thought the road was necessary, the answers included, too much congestion, the roads are too narrow, hope for more chances to enjoy tourism, and safety for pedestrians and people riding bicycles. Those who thought the road was not necessary said it was not required because the old roads in Nara have a more Nara-like atmosphere, and other reasons.

"In the next stages, we will continue to provide information of a wide basis as we continue to promote road planning and local district development."



Yoshihiro Fujimori (Panelist)

Director, Road Department,
Kinki Regional Development Bureau,
Ministry of Land, Infrastructure and Transport

Graduated from Tokyo University, School of Engineering, Department of Civil Engineering, and joined the Ministry of Construction (presently the Ministry of Land, Infrastructure and Transport) in April of the same year, 1978. Completed a course in economics in Department of Economics (Traffic economy) at the University Lumière Lyon 2. After hold a variety of posts, including the Traffic Economist at the World Bank's West-Central Africa Bureau, General Manager of the Shuto National Highway Work Office (presently the Shuto National Highway Office) in the Kanto Regional Construction Bureau (presently the Kanto Regional Development Bureau), Director for Toll Road Coordination at the Road Bureau, Chief of the International Construction Division of the Policy Bureau, and as a Councilor for the Minister's Secretariat (International Construction), he assumed his present post in April of 2005.

Mr. Fujimori: In the past, a lot of people and produce came here to the Nara Capital Site. While Suzakuoji Road was a bustling site, I believe that large packages were probably unloaded from horses or cows outside of the capital, and carried into the city by hand. There were some horse tying rails at some of the larger shrines and temples, and that is where people redid their packages. However, we have no such facilities in modern Nara.



Vehicles using the residential streets near National Highway Route 24 and school children on the way to school (Near Nishinokyo-cho, Nara City)

we would provide facilities for people that intend to actually visit the districts where the World Heritage properties are located to get out of their automobiles in the peripheries of the area, and transfer to buses or bicycles, so they could take their time and really enjoy the World Heritage properties. I believe this type of system would play a contributory role in the vitalization of the World Heritage properties and the economy in Nara City.

Road Construction Easy on Districts with World Heritage Properties Through Harmony Between the Needs of the Residents and the Tourists

Ms. Miyake: When you are talking about urban planning that will vitalize the World Heritage properties, it is important to carefully consider the effects of the urban planning, isn't it?

Mr. Mizuno: In ancient times, when a capital was constructed, first the roads were built, and then the city was constructed in turn. When the capital was transferred, that was also the case, with new roads constructed first. That was very rational. We can't achieve that today. We cannot just consider the visitors coming to Nara and build good roads for them, as it is also necessary to build good roads that are convenient for the residents of the city. The east-west traffic facilities in Nara have been developed, but there is a very serious deficiency in the north-south facilities.

On this occasion, if we can construct a new road, we will have the opportunity to reevaluate Nara, and also reconsider how we should proceed to preserve the cultural properties. If we go on in the present state of affairs, Nara will be no more than another ordinary regional, tourist city.

Nara is the very root of Japan. We have a lot of excellent cultural properties and furthermore, there are many examples right in front of our eyes that go back all the way to the Nara Period itself. So in order to vitalize these aspects, it is going to take a considerable amount of thought on roads appropriate for Nara and some very good and appropriate proposals, isn't it?

I believe this road will help with the reorganization of Nara as we head on into the 21st century.

Mr. Onishi: As is the case for the Kyoto basin, there is a very large quantity of groundwater underground in the Nara basin. There are several alternating impervious layers of clay and permeable layers composed of either sand or gravel. The groundwater flows from the north to the south through these sand or gravel layers. The flow of the groundwater is very slow as it passes to the south. The rain that falls takes at least several tens of years, and sometimes even 100 or 200 years to flow out of the basin.

Many people have asked me why won't there be an effect on groundwater if a tunnel is constructed.

In the past, tunnels were constructed by excavations going downward from the surface. However, recently, due to considerations related to the possibility of any impact on the environment or any impact on the groundwater, the methods employed for tunnel construction have changed to include the use of shield tunnel methods. Down below several layers in the ground, about 40 meters deep, two tunnels about 10 meters in diameter will be constructed. The Trans Tokyo Bay Highway is an example of a tunnel constructed employing this shield tunnel method. No water at all comes into the tunnel.



Trans Tokyo Bay Highway (Aqualine)
Upper picture: Inside the shield tunnel
Lower picture: Shield machinery

The groundwater still flows through the sand or the gravel layers above the tunnel, and we consider that there is almost no impact at all.

Rather, what we are afraid of is that there are no regulations on the use of groundwater drawn from wells in the Nara basin. Almost all of the other large metropolitan cities have regulations requiring permission for the use of wells, but there are no such regulations in effect in Nara, so we think that the groundwater level has probably decreased a lot up to the present.

Furthermore, there are several large-scale residential development areas that have sprung up to the north and the west of the Nara Palace site. These have caused the rainfall to flow at the ground level into the rivers or the drainage system. That rainfall doesn't get underground, and that will also be a cause of a decrease in the groundwater level. So including these types of impacts, it was

recognized that it would be necessary to monitor the groundwater as time goes on, and we established the Yamato-Kita Road Groundwater Monitoring Study Committee.

We consider it the duty of the committee to sufficiently study the current groundwater situation, including any trends or changes, and consider the possibility of an impact on the construction of the road.

Ms. Miyake: So that means we have to consider the impact due to residential or urban development and also that due to the use of wells that drain the groundwater. How about the expectations for the effects of the road construction?

Ms. Asahiro: I also expect that the road will mitigate traffic congestion and increase the number of tourists coming to Nara, but rather than just these primary functions, I expect that the road itself will be directly tied to tourism, that it will become a tourism asset.

The road will command a sweeping view of the Yamato plains, Mt. Wakakusa and Yakushi-ji Temple, the mountains of Asuka and Katsuragi, and the sunsets in Ikoma. It has the attractive appeal of creating a space where one can enjoy those views at leisure. So I expect that people will want to take that road and come to Nara, won't they?

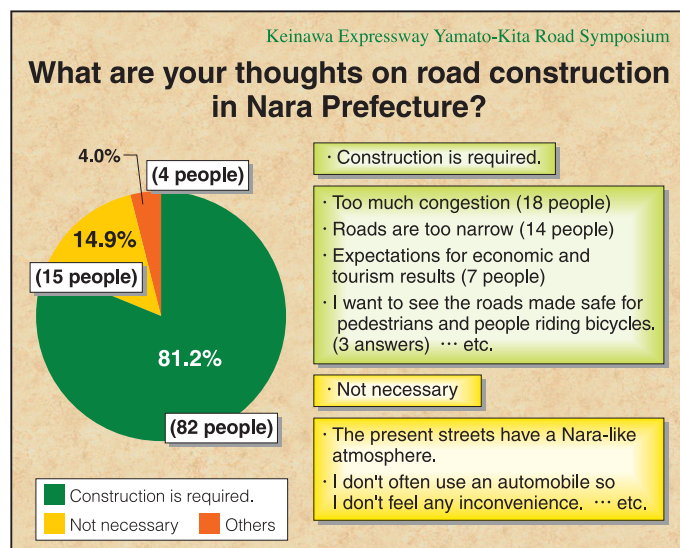
In addition, we can expect that the road will also affect people by making them want to get off the expressway, rather than just pass Nara by. For example, if there are facilities, like a park and ride base close by, that would make it easy to change the mode of transportation.



The exclusive bicycle port, at the University of Lyon (France)
Reference : Bicycle Culture Center Home Page

Mr. Fujimori: This year, at the World Heritage site Shirakawa Go, in the famous Shirakawa Village in Gifu Prefecture, a new high speed highway running between Nagoya and Toyama was opened to service, the Tokai-Hokuriku Expressway. With a population of only 1,700 people, Shirakawa Village expects the number of tourists to visit the site will be about 1 million. Prior to the opening of the expressway, a social experiment was conducted in 2001.

The roads going into the World Heritage site are, fundamentally, one-way dead ends. Only electric vehi-



In Nara, you will run into a World Heritage property wherever you go, and people come from north and south to Nara by car, etc. Some people come into Nara without any specific reason, they are just passing through the city. National Highway Route 24 gets very congested, and many cars turn off the trunk road onto the narrow residential areas, which causes a danger for the schoolboys and schoolgirls on the streets.

At the Ministry of Land, Infrastructure and Transport, we would like to take care of the through-traffic passing by on the north and south axis, and either divert vehicles that have no business in Nara away from the city or direct them underground. Then,



cles are allowed in the area. So the tourists must stop at a parking lot and transfer to buses or bicycles. This was very popular with the local citizens but not with the tourists. However, in areas where there are World Heritage sites, I believe it is necessary to strive on both sides for harmony between the needs of the local populace and those of the tourists.

In addition, in France, at the city of Lyon, there is a hill that is a World Heritage site, and here, the French built a number of cycle ports within the urban zones. At these ports you can buy a ticket and use the community bicycles provided by the community cycle system known as "Velove." This word comes from a combination of the English word "love" and the French word "velo" for bicycle.

This type of "soft" infrastructure measure, in combination with the hardware, the construction of the expressway, can be employed in Nara as well, and I believe this approach is necessary.

Mr. Mizuno: I still do not feel there is a Nara-wide, large-scale system geared toward dealing with the World Heritage properties, and I also believe that the citizens are still not thinking about how we should proceed with vitalization. Each of the temples conduct their own maintenance, so I think most people just consider it

sufficient to leave the traffic matters to the Nara traffic bureau. So the Prefecture and the City will have to come up with some more dramatic and innovative proposals. If we could develop a comprehensive traffic system as we have been touching on here today, the tourism industry in Nara will benefit through more development, and preservation of the historical elements will proceed at a smoother pace. At present, all the measures are in bits and pieces.

Since we are talking about a city with the atmosphere of World Heritage properties, I would like to see the construction of a traffic system that is on the same high level as others around the world. That's how I feel about this issue.

District Development and Urban Planning in Harmony with the Cultural Properties, Vitalizing the Past in the Present

Ms. Miyake: So the question becomes, how should we proceed with urban planning and road planning in Nara?

Mr. Mizuno: One important question here is whether or not this road will be a plus or not for the citizens of Nara. That is the most important point. What that means is that through the use of this road, what are the changes we can expect, in a variety of aspects? In what ways does life become more convenient?

Another point is that Nara is an urban city that attracts visitors. It is a place that has a historical environment that should be made known to a lot of people. It is still not a completely modern city like Kyoto. There is a wide space occupied by temples, so the air is different. In this day and age, we often hear the phrase "returning to the source," and if you come to Nara, that is exactly what you will find, the source of all that is Japan. There

is no doubt that Japan started in Nara. When considering just how to pass this fact on to others, I would like to see the wonderful aspects of Nara, and this road, made known all over Japan, as well as the rest of the world.

Mr. Onishi: After being involved in this project in a variety of positions, I have reached the conclusion that, up to the present, civil engineering has been far removed from and uninterested in archaeology. It has only been recently that we have seen cooperation between civil engineering and archaeology, and the employment of the knowledge and technology in the field of civil engineering for archaeological purposes. A good example of that cooperation was a study using a man-made satellite to investigate the grave of an Egyptian Pharaoh.

Even in Nara, the latest test equipment was employed in the pre-project studies, in order to study the ground, which is normally invisible. I would like to see this civil engineering knowledge used well and to advantage from an archaeological standpoint. In fact, if the demand for such cooperation comes from the archaeology side, we can then provide the technology that will meet that demand. We can understand the conditions underground, and devise appropriate measures. With the merging of these two fields of knowledge, and the correct orientation, I believe we can expect some very good results. I believe that this is the opportunity to realize this goal.

Ms. Asahiro: On this occasion, the construction of the Yamato-Kita Road, first, the citizens of Nara should seriously consider the kind of city they want their city, Nara, to be in the future, and how they are going to express hospitality to the visitors coming to Nara. I would like to see them enjoy this process as they think about these kind of things.

In order to achieve that goal, I think there is a need to listen to the citizens even more. Even if an idea sounds unreasonable at first, the related organizations should listen carefully, and through a sharing of knowledge, we will first acquire fondness for the project and then a sense of pride in our accomplishments.

This road will go through the World Heritage city of Nara, the source of all that is Japan, and we would like to have all who visit Nara experience that legacy. I believe it is important that, first, the citizens of Nara should embrace that emotional attitude, as we proceed with the creation of a special Nara-like road.

In conclusion, there is a poster that has appeared recently, with the phrase, "It is nice to know that Kyoto exists in Japan," but I want to express the concept, "It is nice to know that the source of all that is Japan is Nara." I will do my best to ensure that people all over the nation can hear and believe that concept.

Mr. Fujimori: The Yamato-Kita Road is now in the planning stage, and the present plan calls for the road to

run through the urban section of the city through a tunnel underground. In regard to the *mokkan*, which have been the subject of some concern, the Yamato-Kita Road Groundwater Monitoring Study Committee was established to conduct studies on this subject, how the *mokkan* are preserved and under what conditions would the *mokkan* be placed in danger, and following their suggestions and directives, we will take all possible measures to ensure their preservation.

The Yamato-Kita Road is, in the final analysis, a road that will be constructed through the efforts of the citizens of Nara as they contribute to the urban planning of their own city.

From the viewpoint of how should we vitalize the World Heritage properties and gain returns, I believe that we should give priority to the opinions of the citizens of Nara. In that regard, the local citizens and NPO, along with the Nara Prefectural government and local municipalities should consolidate their opinions, and we will provide our best efforts in support.

We would like to proceed with local district development and road planning based on frank, extensive opinions from the local people and organizations, and also provide information on a wide base as we proceed. We will also do our best to provide the opportunity for such opinions to be expressed,

Ms. Miyake: I would like to sincerely express my thanks to all of the panelists. We were very lucky to have received such important viewpoints from such a wide range of fields. I would like to hear the impression of the many people who attended this symposium here today.

All of us carry out our daily activities in the field of our past legacies. I deeply believe that proceeding with local district development and road planning in harmony with these historical and cultural properties is the key to vitalization of both our past and our future.

Through this symposium, I believe that we have provided the opportunity for everyone attending to deepen their understanding of the circumstances to date and the prospects for the future in regard to the Yamato-Kita Road. Thank you so very much for your attendance.

One example of the 100 questionnaire surveys conducted by Ms. Asahiro.

It is easy to understand that the circumstances of the Yamato-Kita Road are still not well known to the public.

