



**Report for 2019 Study Tour Grant  
Japan Society of Civil Engineers**

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2019 STG Participant

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## **I. INTRODUCTION**

### **1.1) About Japan Society of Civil Engineers ( JSCE)**

**Japan Society of Civil Engineers (JSCE)** was established as an incorporated association in 1914 entrusted with the mission to contribute to the advancement of scientific culture by promoting the field of civil engineering and the expansion of civil engineering activities. Since its establishment, JSCE has endeavored to achieve the above mission, through extensive activities including scientific exchange among members, researchers / promotion of science and technologies relating to the field of civil engineering, social involvement, etc. Over the years, the JSCE membership has increased significantly from the initial 443 members to approximately 39,000 members at present, and is currently engaged in various wide-ranged activities around the world.

With the birth of the 21st century, JSCE has reconfirmed its goals to exert perpetual efforts

- 1) to propose an idea for social infrastructure development in the future from civil engineers' perspective,
- 2) to acquire a steadfast relationship of mutual trust with the society,
- 3) to promote scientific and technological researches/studies with a high degree of transparency, and
- 4) to evaluate public works from a neutral standpoint, and to reach a social consensus on those proper standards.

### **1.2) About Study Tour Grant ( STG)**

**JSCE Study Tour Grant (STG)** is supported by International Scientific Exchange Fund (ISEF). STG is a unique program for young civil engineering who are nominated by the AOC societies in order to learn Japanese civil engineering technologies and projects for about one week in Japan. This program provides a chance to visit project sites and research institutes, meet leading civil engineering professionals and academics, and share their projects with other students as well as those experiences for applying in their countries.

**1.3) STG 2019 Participants**

Totally there are 7 participants from different countries as below:

No	Name	Country	Affiliation
1	Mr. Bao Lam NGUYEN	Vietnam	Road and Bridge Dept., Faculty of Civil Engineering, University of Transport and Communications
2	Mr. Munkhsaikhan Battumur	Mongolia	School of Construction and Architecture, Mongolian University of Science and Technology
3	Mr. Wai Yar Aung	Myanmar	Technical Research Engineer, Myanmar Earthquake Committee
4	Mr. Gul Pina Avci	Turkey	Civil Engineering Dept., Istanbul Technical University
5	Mr. Mark Allen T. Zapanta	Philippines	Aboitizland Inc. , Civil Engineering Major in Structural Engineering Tarlac State University
6	Mr. Washirawat Praphatsorn	Thailand	Dept. of Civil Engineering, Faculty of Engineering, Kasetsart University
7	Mr. Omar Faruque Hamim	Bangladesh	Master Student Civil and Structural Engineering, Bangladesh University of Engineering and Technology, Dept. of Civil Engineering

**Table 1. STG 2019 Participants**



**Figure 1. STG 2019 Participants**

**II. STUDY TOUR ACTIVITIES**

## 2.1) Itinerary

This year, the Study Tour Grants included visits to leading research facilities in Japan, construction sites, attending an international conferences in Kagawa, as well as visiting the memorial park of Hiroshima. The program schedule is shown in Table 2. below:

DAY	DATE	ACTIVITIES
1	September 1 <sup>st</sup> 2019	<ul style="list-style-type: none"> <li>• Arrive at Narita Airport</li> <li>• Go to Nishitetsu Inn Shinjuku</li> </ul>
2	September 2 <sup>nd</sup> 2019	<ul style="list-style-type: none"> <li>• KAJIMA Technical Research Institute</li> <li>• Tunnel Construction Site of Tokyo International Airport</li> <li>• Fly to Kagawa</li> </ul>
3	September 3 <sup>rd</sup> 2019	<ul style="list-style-type: none"> <li>• 21<sup>st</sup> International Summer Symposium JSCE Annual Meeting-Kagawa University</li> <li>• Takamatsu port – Ieura Port</li> <li>• Illegal Dumping Site, Teshima Island</li> <li>• IAC Networking Reception</li> </ul>
4	September 4 <sup>st</sup> 2019	<ul style="list-style-type: none"> <li>• Visit Kabagawa Dam Construction Site</li> <li>• Sanuki Mannou Park</li> <li>• Kurushima Kaikyo Bridge</li> <li>• Arrive in Hiroshima</li> </ul>
5	September 5 <sup>st</sup> 2019	<ul style="list-style-type: none"> <li>• Disaster Waste Disposal Sites, Damaged areas National Highway 31, Temporal Housing</li> <li>• Hiroshima Peace Memorial Park</li> <li>• Misawa River affected area + Torigoe Bridge</li> <li>• Go to Kobe</li> </ul>
6	September 6 <sup>st</sup> 2019	<ul style="list-style-type: none"> <li>• Visit Disaster Reduction and Human Renovation Institute in Kobe</li> <li>• Visit Akashi Kaikyo Bridge</li> </ul>
7	September 7 <sup>st</sup> 2019	<ul style="list-style-type: none"> <li>• Leave for Kansai Airport</li> <li>• Fly back to Vietnam</li> </ul>

**Table 2. STG 2019 Main Schedule**

## 2.2) Day 1-September 1<sup>st</sup> 2019

I arrived at Narita International Airport by 7 a.m September 26<sup>th</sup> 2019. After my arrival, I was guided to the shuttle bus to the city center along with Mr. Washirawat and Mr.Aung. It took more than 1 hour for us to reach Tokyo Shinjuku Station and we were greeted by Ms.Suzuki, who took us back to the hotel to check in. We were already excited about the programs ahead.



**Figure 2. Shinjuku view from the shuttle bus**

## 2.3) Day 2-September 2<sup>nd</sup> 2019

I met the rest of the STG Participants in the hotel lobby before we got in the charter bus to KAJIMA Technical Research Institute in Chofu, Tokyo. We were warmly welcomed by Mr. Yoshizawa and Ms.Umehara, who gave us a brief introduction about the KAJIMA Corporation and its Research Institute. We continued a tour of the Institute by visiting the following facilities:

- Vibration test Laboratory ( Shaking Table)
- Base isolation building with Soil Mechanics and Foundation Laboratory
- Concrete Research Laboratory
- Wind Tunnel Laboratory

In these facilities, we learnt a lot about the new technologies being studied and applied at KAJIMA and I was very impressed with their Wind Tunnel Laboratory, which has the largest wind tunnel among the Research Institution in Japan, with a maximum width of 4.3m. Actual models of

buildings were used to test the effect of constructing high building to the surrounding area, in term of wind effects.



**Figure 3. Participants in front of Wind Tunnel at KAJIMA Research Institute**



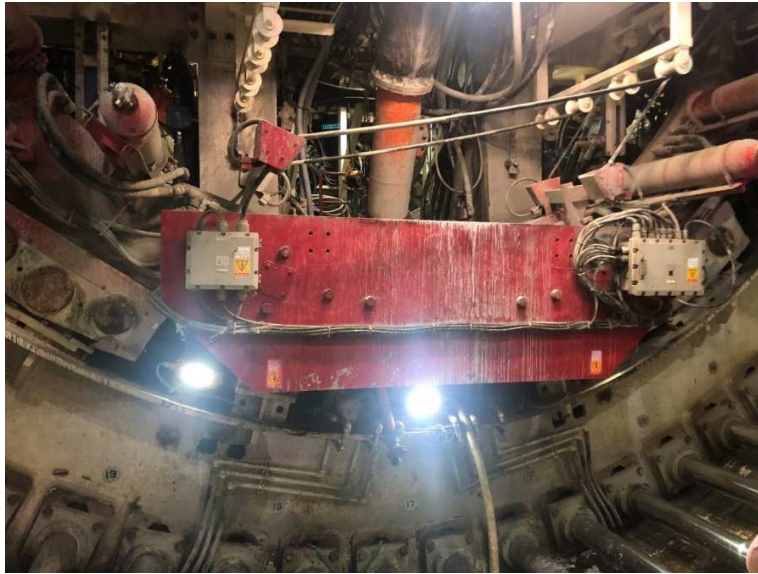
**Figure 4. Bento lunch at KAJIMA Research Institute**

We had lunch with bento at KAJIMA Research Institute before leaving for the Tunnel Construction Site in Tokyo International Airport. We were warmly greeted by the engineers working at the site, who gave us a brief presentation about the Tunnel Construction. The group was then joined by Ms. Wang and Mr. Zuo. I was especially impressed by the measure of the safety factor in a construction site in Japan and how the environment was well taken care of during construction. After that, we took a flight to Kagawa Pref. to prepare for the next morning's Symposium



**Figure 5. Photo with the engineers at the Tunnel Construction Site, Tokyo Airport**





**Figure 6. Photo inside the Tunnel Construction Site under Tokyo Airport  
2.4) Day 3-September 3<sup>rd</sup> 2019**

In the morning of our 3<sup>rd</sup> day of the Study Tour, we left early in the morning to Kagawa University to attend the 21<sup>th</sup> International Summer Symposium, organized by JSCE. We participants were divided into different venues to deliver our presentation. I was in the same auditorium as Ms. Gul and Mr. Omar. My presentation was “Bridge damages and maintenance methods in Vietnam”, in which I briefly introduced the data gathered about the damage types and effective methods currently being used in Vietnam to repair and replace the damaged areas. It was an excellent chance for me to discuss and share my experiences with the rest of the presenters and get to know some of them later.



**Figure 7. Photo at the Symposium, Kagawa University**



**Figure 8. Presentation by me at the Symposium**

In the afternoon we went on a yacht to Teshima Island to visit the Illegal Dumping Site here, where we were told the origin and the crime against the environment as well as the protest of the people living here.



**Figure 9. A fraction of the wall made from dumping waste**

After the tour, we head back to the Kagawa University, where we attended the Networking Reception Dinner with members of JSCE and affiliates from different countries, as well as the other presenters. We had a great time getting to know with some of them and for future networking.



**Figure 10. The Networking Reception Dinner, Kagawa University**

### **2.5) Day 4-September 4<sup>th</sup> 2019**

After having breakfast, we got on the Technical Tour Bus with other members of the JSCE to visit the construction site of Kabagawa Dam in Takamatsu, Nagawa. We were introduced the construction method and expected time till completion of the dam. I was impressed by the grand scale of the construction site.



**Figure 12. Kabagawa Dam Construction Site, Takamatsu, Nagawa**



**Figure 13. Technical Tour Bus group photo, Kabagawa Dam**

Then, the bus went to the Sanuki Mannou Park, which was an astonishing and beautiful park in Nagawa. For lunch, we had Udon traditional way. Everyone was enjoying themselves very much. After that, we headed for Hiroshima and took some pictures at Kurushima Kaikyo Bridge.



**Figure 14. Udon restaurant**



**Figure 14. Kurushima Kaikyo Bridge**

### **2.6) Day 5-September 5<sup>th</sup> 2019**

The day was packed with tight schedule, we visited 6 different locations including Disaster Waste Disposal Sites, Area affected by Sediment-Related Disasters, Damaged areas on National Highway 31, Temporal Housing in Sakacho, Misawa river damage affected areas and Torigoe Bridge and Water and Sewage Pipes. In the afternoon we also visited Hiroshima Peace Memorial Park, where I learned a lot from the Atomic Bombing Incident and the tragedy people had to suffer.



**Figure 15. Misawa River damaged affected areas**



**Figure 16. A dome damaged by the Atomic bomb**

In the late afternoon, we were excited to take the Shinkansen to Kobe, where we would spend the last day in Japan. After we arrived in Kobe, Mr.Arai invited us dinner in which we tried a lot of Japanese traditional dishes such as sushi, sashimi, tempura,...



**Figure 17. Sanyo Shinkansen, Hiroshima station**

**2.7) Day 6-September 6<sup>st</sup> 2019**

In the morning Ms.Suzuki and Mr.Arai took the group to the Disaster Reduction and the Human Renovation Institution in Kobe, where we learned the story of the Great Hannshin-Awaji Earthquake in 1995, how it happened and life after the incident.



**Figure 18. A figure of life after the Earthquake**

After lunch, we went to visit the Akashi Kaikyo Bridge, which had the longest central span of any suspension bridge. I had learned about the bridge when I was taking course in University and I was very excited to see the bridge with my own eyes. In the late afternoon we had free time so I packed my luggages and prepared for the flight the day after.



**Figure 19. Akashi Kaikyo Bridge, Kobe**

**2.8) Day 7-September 7<sup>st</sup> 2019**

The shuttle bus left early from the hotel to the airport early in the morning. Saying goodbye to Japan, I took my plane back to Vietnam, with a full heart.

**III. GRATITUDE AND ACCOMPLISHMENT**

Firstly, I would like to express my gratitude to Japan Society of Civil Engineering (JSCE) for this Study Tour Grant. I would like to thank all JSCE staffs for their effort in making all the necessary arrangements during my trip. This Study Tour Grant has given me a chance to get to know with young, talented engineers from different countries who are also interested in civil engineering in Japan.

I would like to say my special thanks to Mr. Yamamura, Ms. Suzuki, Dr. Dang, Mr. Shimooka, Ms. Shibuya, Mr. Arai, and Dr. Ishiwatari for their tremendous helps before and during my trip to Japan. I would like to express my gratitude to Kajima Technical Research Institute, Tokyo International Airport Tunnel Construction Site, Kabagawa Dam Construction Site, Hiroshima Peace Memorial Park, Disaster Reduction and Human Renovation Institution Kobe and others remaining organizations and officers who enthusiastically explained to us about their works during our site visits.

At the same time, I would like to express my gratitude to Dr. Pham Hoang Kien of University of Transport and Communications of Hanoi, Vietnam for nominating me. I believe with the experiences and ideas gained from this trip, I would be able to widen and improve my knowledge of civil engineering. As a result from this trip, I would also look for the chance to pursuit my higher study or career opportunities in Japan in the near future.