

Reflection on Guigang Working Trip (25th - 26th February, 2017)

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The feasibility stage of extension of Duling Primary School has basically completed in January 2017, a trip to Guigang was then organized by Department of Civil Engineering to conduct architectural survey and structural survey for the coming preliminary design stage. This is the third time I participated in working trips organized by Project Mingde. Prior to this trip, two meetings were held to discuss issues to be considered in this trip. Questionnaires and checklist have been prepared to ensure all the work could be carried out on time and successfully.

Originally, I was responsible for the extension of Changcheng Primary School, but now I could also participate and familiar with the details in extension of Duling Primary School. It was quite fortunate that I could have an opportunity to participate in this project. I could learnt from these two projects simultaneously which could really help me to develop my engineering sense.

In this two-day trip, Dr. Ray Su conducted structural survey with students from the University of Hong Kong and South China University of Technology to investigate and inspect the stability of the existing two connected academic building block. I was so excited that Dr. Ray Su could participate in this working trip and give his precious advice on the cracking problem within the building block. Dr. Ray Su did give us a detailed and comprehensive lesson on methods and procedures in structural analysis. We first investigated the stability of structure by inspecting the external elements of the structure. After that, we analyzed and sketched the location of the cracks such that the formation mechanism of cracks could be known. The crack width of major cracks were measured to evaluate the severity of damage. Most cracks were located on the wall between rooftop and first floor of the existing academic building which indicates the cracks might be formed due to thermal expansion. Since the number of cracks on the wall between the ground and first floor was much less than that on first floor. The possibility of differential settlement was likely to be lower. Some cracks were found around the slab. These minor cracks are due to poor connection between precast concrete beam and slab but this would not induce any risk affecting the stability of the existing building.

The trip was really an unforgettable and meaningful trip for me to learn about practical and technical knowledge in civil engineering.