

Vietnam Internship Program 2019-2020: Accumulate experience for the future

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Introduction

In the Vietnam Internship Program (VIP), a total of seven graduate students, five from construction management and two from structural divisions, stayed in Ho Chi Minh City (HCMC) from December 29, 2019 to January 11 2020. Each student stayed in both the Chan Phuong Engineering (CPE) and the Authentic Collaboration leads up to Sustainable Construction (ACSC) companies for one week each. This document describes the program objectives, expectations from both the author and the hosts, work experiences, cultural experiences and suggestions resulted from this internship of the author.

Program Objectives

Internship programs in Vietnam are provided by the Faculty of Construction, National Taiwan University and partners in Ho Chi Minh City - Vietnam with the goal of providing practical experience when working alongside The course they have taken in the University. This internship gives students the opportunity to learn by the direct and engaging approach in a real work environment, where they are supervised by an on-site expert and have the opportunity to achieve their own learning goal. This internship also provides an opportunity to work with students upon graduation.

The internship program is also an opportunity to explore careers. More specifically, this is a good way to learn about a career field from the inside and decide if this is a career area for students; work with a professional in the field of your chosen career, and this observes the workplace and see if it matches your expectations.

Personal and Host's Expectations

The contributions students can make to internships are :

- Introduction and cultural exchange between countries.
- Advertise the company's reputation and working environment.
- Introduce and share the learning and research environment at National Taiwan University in general and the Department of Construction in particular.

The benefits that internships can provide to students are :

- Practical work experience in the construction industry environment.
- Improve students' understanding of the real environment.
- Being exposed and working with experts in this field.
- Leadership and skills development.
- Connect and set up mentors and references : Meet new people and practice networking skills while setting up a professional network of contacts, mentors, and references; Open to advise on the next steps to go on career paths.
- Gain valuable experience and achievements to add to your resume and/or enhance your application to graduate school.

The expectations that colleagues in CPE and ACSC give me :

- Share my research experience and BIM experience.
- Sharing the learning environment in Taiwan in general and at National Taiwan University in particular.
- Connection and advertising of companies.

Work Experiences

For the Vietnam Internship program, I worked and studied in two companies: Chan Phuong (CPE) and Architects & Construction Service Corporation (ACSC) from December 30th, 2019 to January 10th, 2020.

(1) Authentic Collaboration leads up to Sustainable Contribution (ACSC) from Dec 30th 2019 to Jan 3rd 2020:

(1.1) Basic information:

ACSC established in 1976 with head office in the Ho Chi Minh City, formerly a state enterprise under the Ministry of Commerce (Now, the Ministry of Trade). Since 2004, ACSC has been the Ministry of Commerce (Now, the Ministry of Trade) allows conversion into Joint-Stock Companies in which the State holds 30 % of charter capital. By 2008, ACSC became a joint-stock company is no longer the State capital, activity according to the Business Law. With nearly 40 years of experience, ACSC was known as the Contractor with experience in the design and construction of all kinds of construction projects.

With the goal of satisfying the needs of customer and bringing the highest value to customers, now ACSC has applied high – tech technology in both the Design stage and Construction stage as: Building Information Modeling – BIM System applied in the Design, Construction method, Cost and Project Management.

Besides, modern technologies in the rough construction, rendering and plastering and finishing works (such as: Plaster by grouting machine or automatic plastering machine, STRIVING METHOD technology tile, etc.) is also applied to the construction of company projects.

With nearly 40 years of experience, ACSC has been involved in many domestic construction projects. Especially since 1994, ACSC has started to participate in construction projects with foreign investment (FDI- Japanese Foreign Direct Investment) in Tan Thuan Export Processing Zone, Ho Chi Minh City.

In 2008, there was an opportunity to attend BIM's International Conference on Project Management. Recognizing that BIM is a solution that can solve many of the challenges faced by design and project managers. In 2014, the Board of Directors of ACSC decided to invest in equipment and related software to set up BIM Center at ACSC. After one year of training and trial application, in May 2015, ACSC officially applied comprehensive BIM 3D to all designs that the company undertook, and began to apply BIM 4D and BIM 5D. By 2018, ACSC has applied BIM to more than 30 industrial and high-rise projects and many projects have been put into operation. At the end of 2017, ACSC registered with the Ministry of Construction in the pilot program of BIM application.

Accordingly, ACSC has expanded to other industrial zones in many different localities such as:

- Tan Thuan Export Processing Zone, Linh Trung Export Processing Zone, Vinh Loc Industrial Park, The Industrials Park...in Ho Chi Minh City.
- Bien Hoa 1 Industrial Park, Bien Hoa 2 Industrial Park, AMATA Industrial Park, LOTEKO Industrial Park, Ho Nai Industrial Park, Long Duc Industrial Park (LDIP), Long Thanh Industrial Park,... in Dong Nai Province.
- My Xuan B1 Industrial Park, My Xuan AII Industrial Park, Dong Xuyen Industrial Park, Phu My 1 Industrial Park,... in Ba Ria Vung Tau Province.
- Some civil projects such as: High Building ACSC, Cong Hoa Garden,...

ACSC's customers in the FDI segment include investors, design consultants and construction contractors from Japan, Taiwan, Singapore, Malaysia, South Korea, China, Thailand, Philippines, Australia, Germany, etc.

(1.2) Work Experience in ACSC

(1.2.1) December 31th, 2019

- Working at Project Management Division, BIM Team
- Reading company's documentaries and Company current projects reviewing
- Learning about BIM process of construction project

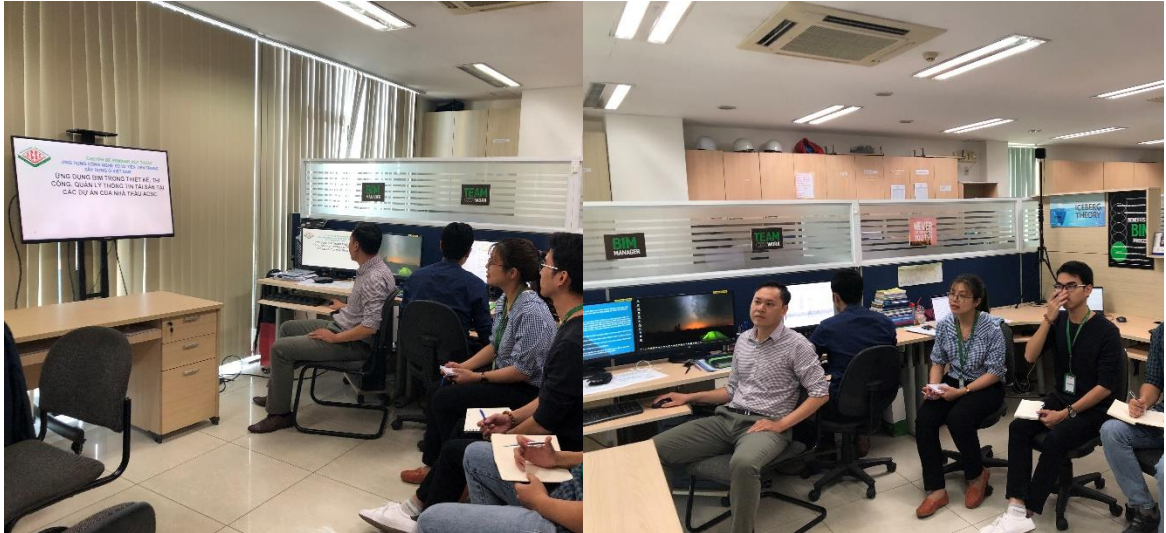


Figure 1: Learning about BIM process of construction project

(1.2.2) January 2nd, 2020: Site visit at Tho Phat Project – Cai Be District

Tho Phat Project is a Design-Build project constructed and designed by ACSC company with construction cost around 200 billion VND (260 million NTD) and planned to finish in February 2020. This is a food manufacturing company; which owner is Tho Phat industry. The project located in Cai Be District, HCM city with a total area of 22,7 hectares. With a total construction area of 12 hectares include one main factory, four auxiliary areas, and equipped with cutting-edge technology, this factory will be the largest dumping producing factory in Vietnam after its finish.

Below are some pictures of internships student in this site visit



Figure 1: At the main entrance of Tho Phat Project



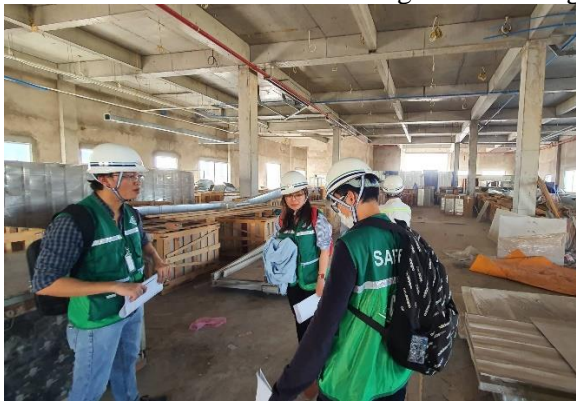
Figure 2: At the import area of main factory



Figure 3: At the office area of main factory



Figure 4: Visiting factory



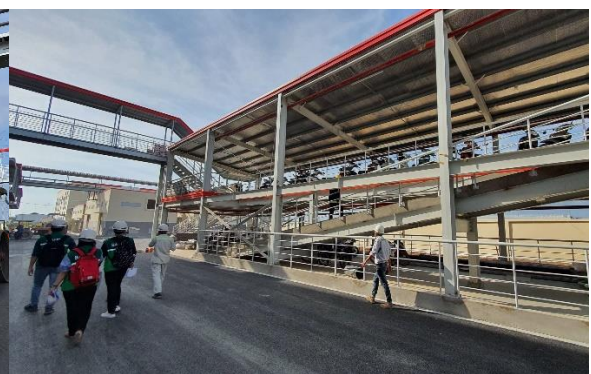
Inside Automated area, where dumping are automatically produced



Front view of maintenance area



Boiler area



Parking for Workers

(1.2.3) January 3rd, 2020: Site visit at SAITEX Project – Dong Nai Province

Located in Nhon Trach Industrial Zone, Dong Nai Province (100km from HCM city center), SAITEX project is a fabric manufacturing factory owned by India investor with ACSC as the main contractor. This is a Design-Build project with a total area is 10 hectares, 4 mains warehouse, 1 headquarter, 2 eco-lake and green background. It was certificated as the Gold level of Green Building by LEED (USGBC). This project was first planned to finish in December 2019, however, due to delaying in technology changes, it going to

finish in October 2020. The total construction cost of this project estimated around 300 billion VND (400 million NTD).

Below are some pictures of internships student in this site visit



Figure 1: At the under-construction Headquarter of SAITEX Project



Figure 2: At the Project Management room



Figure 3: In the Warehouse of Project



Figure 4: Warehouse of Project



Figure 5: Overview of SAITEX Project



Figure 6: On the 2nd slab of Weaving

(2) Authentic Collaboration leads up to Sustainable Contribution (ACSC) from Dec 30th 2019 to Jan 3rd 2020:

(2.1) Basic information:

Chan Phuong Engineering (CPE) was founded in 1993. With a team of the experienced construction engineers and architects, we are fully confident to offer the full services to create the big and professional projects with the scope of works as Project Management, Surveying, Design: Planning, Architecture,

Structure, MEP, Cost Management and Tender, Construction Permitting for the Foreign Investors and Local Clients.

After many years of operation, we have accumulated good knowledge in the field of construction design, along with the passion and enthusiasm in the work of the staff, we always put the benefit of Customers as the aim to strive and satisfy customers in each project undertaken by us.

CPE has honorably cooperated with customers who are reputable companies in Vietnam such as: Pepsi, Cocacola, Vina Kyoei, First Solar, Four Season The Nam Hai Resort, Sadora Sala, The Everrich, etc.

During the years of operation, CPE has implemented and completed many high-quality projects in many fields such as industrial factories, commercial areas - supermarkets, offices, apartments, schools, hotels, medical, etc. Some typical construction projects of the CPE such as:

- Oai Hung Pharmaceutical & food packing factory in Tan Binh IZ, Cadici Saigon factory – phase 2 in Tan Phu Trung IZ, High-precision mechanical products factory in District 9,... in Ho Chi Minh City.
- Chan Sinh factory, Saf-Viet factory, ... in Long An province.
- Bel Vietnam factory in Binh Duong Province and Marubeni paperboard factory in Ba Ria – Vung Tau Province.
- New factories for galvanized sheet, Ducati factory, AB Mauri factory, Akzonobel factory,... in Dong Nai province.

And projects in this localities but not in the Industrial Park,...

(2.2) Work Experience in CPE

(2.2.1) January 06th, 2020

- Working at Project Management Division.
- Reading company's documentaries.
- Company current projects reviewing.

(2.2.2) January 07th, 2020

- Working at Project Management Division.
- Reading company's documentaries and company current projects reviewing.
- Project management Training about the process of project construction by Mr. Le Duc Van Trinh – Chairman of CPE: the session gave a brief introduction on concepts such as project life cycle, stages of construction projects. Thereby Mr Trinh also presented the current situation of the construction industry in Vietnam and the development trend for the future of the company when focusing on industrial construction works.
- Discussion about the list of as-built acceptance documents of project with Mr. Nguyen Duy Tan – project Coordinator: Mr. Nguyen Duy Tan introduced all the needed documents for every step of a typical project. He also took a real project as an example, the Everrich 1 Project of CPE. After the session, we fully understand the huge work of documents required in a project, which not just a paper of one or two but actually a whole Matrix of SOW. Full period of documents obtain can up to years with even bigger projects. He also introduced about the proudest project of CPE – The First Solar Project.

(2.2.3) January 08th, 2020

- Working at Project Management Division.
- Overview of Project management.
- Discussion about bidding, contracts in construction with Mr. Tran Van Thong – Tender and Procurement Management: The discussion gave practical evidence about the process as well as the value of Project Management activities brought from the implemented projects through which together find common ground in Project Management activities past and present. It is not only a matter of technical thinking but also a matter of efficiency brought about from practical value. There are old values that still apply to the present, but depending on the type of project, the manager can actively calculate to bring the best project performance possible. Besides, it is important to know the laws first when implementing a Project. Then there must be Ethics because without Ethics, the values brought are meaningless. Because simply in any field, people who are ethical and know the law will have the right direction and avoid unnecessary risks.

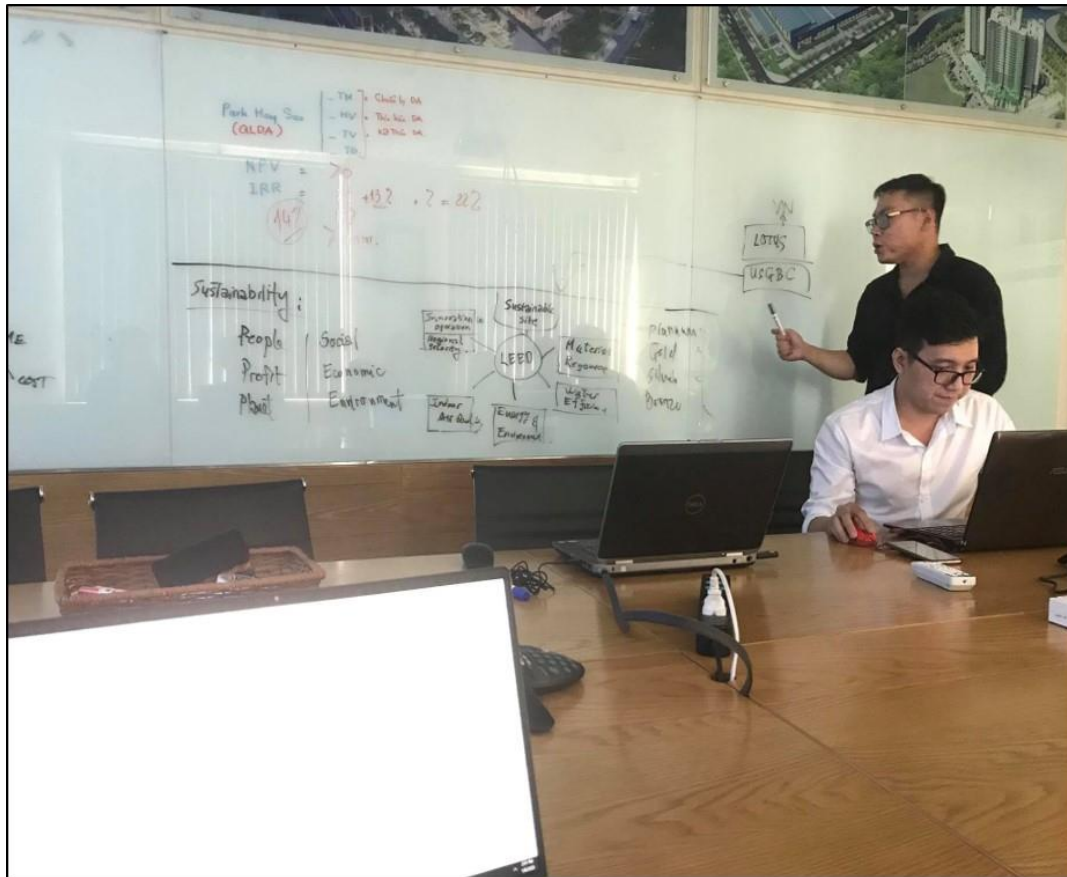
Below are some pictures of internships student in the discussion



(2.2.4) January 09th, 2020

- Working at Project Management Division.
- BIM process Sharing
- Construction Management Experiences and discussion about LEED certificate for Green Building in Vietnam Construction.
- Discussion about practical theory and application of BIM in project management in Vietnam construction.

Below are some pictures of internships student in the discussion



Cultural Experiences

Ho Chi Minh City (formerly known as Saigon) is the most populous city and the important center of economy, culture and education in Vietnam. On the basis of the existing urban area, Ho Chi Minh City is Vietnam's largest urban. Currently, Ho Chi Minh City and Hanoi are special kinds of urban in Vietnam. Ho Chi Minh City also owns a diverse system of shopping centers, supermarkets, shopping malls, and markets. Ben Thanh Market has been a symbol of trade exchange. In recent decades, many modern commercial centers appear, namely Saigon Trade Centre, Diamond Plaza... Ho Chi Minh City is the largest tourism center in Vietnam, annually attracting more than 70% of international tourists to the country. Tourist attractions in Ho Chi Minh are extremely diverse and attractive. With the system of 11 museums, mainly on history, Ho Chi Minh City ranks No.1 in the number of museums. The biggest and oldest museum is Vietnam history Museum, Ho Chi Minh City with more than 30,000 artifacts. Besides, War Remnants Museum, Ho Chi Minh Museum also have great appeal for tourists. In addition, Ho Chi Minh City is a metropolis of religious diversity. The biggest and most famous of the city is Saigon Notre-Dame Basilica in District 1. The colonial period has left many important architectural works, namely Municipal People's Council, Saigon Opera House, Saigon Central Post Office, Nha Rong Wharf... Reunification Palace, Saigon General Sciences Library was built under Republic of Vietnam. Modern architecture noted in buildings, hotels, commercial centers such as Diamond Plaza, Saigon Trade Centre... Besides, outside the center area, Cu Chi Tunnels, Can Gio mangroves, Thu Duc stork garden are remarkable tourist attractions. Ho Chi Minh City is also a center for shopping and entertainment. Besides music tearooms, bars, discos, theaters, the city owns plenty of amusement parks such as Dam Sen Cultural Park, Suoi Tien, and Zoo... In addition, shopping malls, namely Ben Thanh Market, Diamond Plaza, the chain of restaurants, cafes are also the strength of Ho Chi Minh tourism.

Around 70 km on the North of Ho Chi Minh city, The tunnels of Củ Chi are an immense network of connecting tunnels located in the Củ Chi District of Ho Chi Minh City (Saigon), Vietnam, and are part of a much larger network of tunnels that underlie much of the country. The Củ Chi tunnels were the location of several military campaigns during the Vietnam War and were the Viet Cong's base of operations for the Tết Offensive in 1968.

Following are some pictures of Ho Chi Minh culture and tourist destinations :



Ben Thanh Market



American tank in Cu Chi tunnels



Statue of Ho Chi Minh and Peoples Committee Building



Sai Gon River

Suggestions

From a personality perspective, Vietnam Internship Program 2019/2020 was successful and it opened further work opportunities in the future. For a better internship program, the following are some suggestions:

- More detail schedule for the program
- The time table for the internship should be changed to the other time in order to have more candidates.
- Besides studying in the companies, students should work as the staffs and have a contribution to the industry by the actual value
- Extend the period of time.