

APPENDICES

- Appendix 1 Member List of the Survey Team
- Appendix 2 Field Survey Schedule
- Appendix 3 List of Parties Concerned in the Recipient
Country

Appendix 1 Member List of the Survey Team

(1) Field Survey I (From 12th December, 2016 to 24th January, 2017)

	Name	In-charge	Affiliation
1	Shimpei Taguchi	Mission Leader	Human Development Department, JICA Headquarters
2	Hisafumi Michikawa	Project Manager / Architectural Planning	Mohri, Architect and Associates, Inc.
3	Tamiko Aramata	Deputy Project Manager / Architectural Design 2	Mohri, Architect and Associates, Inc.
4	Hiroyuki Yoshizawa	Architectural Design 1 / Natural Condition Survey	Mohri, Architect and Associates, Inc.
5	Yoshiaki Ichibagase	Construction Planning / Cost Estimation	Mohri, Architect and Associates, Inc.
6	Takeshi Takeshita	Architectural Design 3 / Mechanical and Electricity Planning	Mohri, Architect and Associates, Inc.
7	Takashi Morita	Equipment Planning 1	INTEM Consulting, Inc.
8	Misato Ohara	Procurement Planning / Cost Estimation	INTEM Consulting, Inc.
9	Akiko Hanaya	Education Planning / Equipment Planning 2	INTEM Consulting, Inc.
10	Junichi Kyoya	Architectural Design 4	Mohri, Architect and Associates, Inc.
11	Miki Yoshihara	Architectural Design 5 / Coordinator	Mohri, Architect and Associates, Inc.

(2) Field Survey I-2 (From 28th March, 2017 to 17th March, 2017)

	Name	In-charge	Affiliation
1	Hisafumi Michikawa	Project Manager / Architectural Planning	Mohri, Architect and Associates, Inc.
2	Tamiko Aramata	Deputy Project Manager / Architectural Design 2	Mohri, Architect and Associates, Inc.
3	Takashi Morita	Equipment Planning 1	INTEM Consulting, Inc.

(3) Field Survey I-3 (From 16th May, 2017 to 20th May, 2017)

	Name	In-charge	Affiliation
1	Hisafumi Michikawa	Project Manager / Architectural Planning	Mohri, Architect and Associates, Inc.

(4) Field Survey II (From 27th Aug, 2017 to 2nd Sept, 2017)

	Name	In-charge	Affiliation
1	Shimpei Taguchi	Mission Leader	Human Development Department, JICA Headquarters
2	Hisafumi Michikawa	Project Manager / Architectural Planning	Mohri, Architect and Associates, Inc.
3	Takashi Morita	Equipment Planning 1	INTEM Consulting, Inc.

Appendix 2 Field Survey Schedule

(1) Field Survey I (From 12th December, 2016 to 24th January, 2017)

			a		b		c		d		e		f		g		h		g		h		
			Team leader	Project Manager / Architectural Planning	Deputy Project Manager / Architectural Design 2	Architectural Design 1 / Natural Condition Survey	Construction Planning / Cost Estimation	Architectural Design 3 / Mechanical and Electricity Planning	Equipment Planning 1	Procurement Planning / Cost Estimation	Education Planning / Equipment Planning 2	Architectural Design 4	Architectural Design 5 / Coordinator										
			Mr. Shūmpei TAGUCHI 10 days	Mr. Hisafumi MICHIKAWA 28 days	Ms Tamiko ARAMATA 11 days	Mr. Hiroyuki YOSHIZAWA 35 days	Mr. Yoshiaki KUBOGASE 21 days	Mr. Takeshi TAKEISHITA 24 days	Mr. Tomohiro TAMAKI 28 days	Ms. Misato OHARA 21 days	Ms. Akiko HANAYA 21 days	Mr. Junichi KYOYA 7 days	Ms. Miki YOSHIMURA 35 days										
1	2016/12/12	Mon	Tokyo→Phnom Penh				Tokyo→Phnom Penh											Fukuoka→Phnom Penh			Tokyo→Phnom Penh		
2	2016/12/13	Tue	Meeting with JICA, Discussion with MoEYS				Accompany (a)												Accompany (a)			Accompany (a)	
3	2016/12/14	Wed	Discussion with MoEYS				Ditto												Ditto			Ditto	
4	2016/12/15	Thu	Minutes Discussion				Ditto												Ditto			Ditto	
5	2016/12/16	Fri	Phnom Penh→Battambang Site visit in Battambang				Ditto												Ditto			Ditto	
6	2016/12/17	Sat	Battambang→Phnom Penh				Ditto												Ditto			Ditto	
7	2016/12/18	Sun	Data Analysis				Ditto			Tokyo→Phnom Penh								Ditto			Ditto		
8	2016/12/19	Mon	Minutes Discussion, Minutes Signing				Ditto					Survey on ME	Survey on Equipment Planning	Survey on Equipment Procurement				Accompany (a)			Ditto		
9	2016/12/20	Tue	Report to EoJ, JICA Phnom Penh→	Report to EoJ, JICA Preparation of site survey			Ditto				Accompany (a)	Discussion with MoEYS						Survey on Education			Ditto		
10	2016/12/21	Wed	→Tokyo	Site survey in Phnom Penh			Ditto				Ditto	Ditto						Ditto			Ditto		
11	2016/12/22	Thu		Site survey in Phnom Penh			Ditto				Ditto	Accompany (a)	Accompany (a)					Ditto			Ditto		
12	2016/12/23	Fri		Site survey in Phnom Penh			Ditto				Ditto	Ditto	Ditto					Ditto			Ditto		
13	2016/12/24	Sat		Site survey in Phnom Penh			Ditto				Ditto	Ditto	Ditto					Ditto			Ditto		
14	2016/12/25	Sun		Data Analysis			Data Analysis			Data Analysis											Data Analysis		
15	2016/12/26	Mon	Phnom Penh→ Battambang	Site survey in Battambang			Accompany (a)				Accompany (a)	Accompany (a)	Accompany (a)					Survey on Education			Accompany (a)		
16	2016/12/27	Tue		Site survey in Battambang			Ditto				Ditto	Ditto	Ditto					Ditto			Ditto		
17	2016/12/28	Wed		Site survey in Battambang			Ditto				Ditto	Ditto	Ditto					Ditto			Ditto		
18	2016/12/29	Thu		Site survey in Battambang			Ditto				Ditto	Ditto	Ditto					Survey on Architecture			Ditto		
19	2016/12/30	Fri		Site survey in Battambang			Ditto				Ditto	Ditto	Ditto					Ditto			Ditto		
20	2016/12/31	Sat	Battambang→Phnom Penh				Ditto				Ditto	Ditto	Ditto					Survey on Education, Phnom Penh→		Ditto	Ditto		
21	2017/1/1	Sun		Data Analysis			Data Analysis			Data Analysis								→Fukuoka		Data Analysis	Data Analysis		
22	2017/1/2	Mon		Survey on Architecture			Accompany (a)				Survey on ME	Discussion with MoEYS	Survey on Equipment Agents					Accompany (a)			Accompany (a)		
23	2017/1/3	Tue		Ditto			Ditto				Ditto	Ditto	Ditto					Ditto			Ditto		
24	2017/1/4	Wed		Ditto	Tokyo→Phnom Penh		Ditto		Tokyo→Phnom Penh		Ditto	Ditto	Ditto					Ditto			Ditto		
25	2017/1/5	Thu		Ditto	Survey on Architecture		Ditto		Survey on Cost Estimation		Ditto		Survey on Equipment Planning					Ditto			Ditto		
26	2017/1/6	Fri		Ditto	Ditto		Ditto		Ditto		Ditto		Ditto					Survey on Equipment Agents, Phnom Penh→			Ditto		
27	2017/1/7	Sat		Member Discussion, Phnom Penh→	Member Discussion	Member Discussion	Member Discussion	Member Discussion	Member Discussion	Member Discussion	Member Discussion	Member Discussion	Member Discussion	→Tokyo							Member Discussion		
28	2017/1/8	Sun		→Tokyo	Data Analysis	Data Analysis	Data Analysis	Data Analysis	Data Analysis	Data Analysis	Data Analysis	Data Analysis	Data Analysis								Data Analysis		
29	2017/1/9	Mon			Preparing Technical Notes	Survey on Architecture	Phnom Penh→ Battambang	Survey on M/E, Phnom Penh→	Survey on M/E, Phnom Penh→	Accompany (b)											Accompany (c)		
30	2017/1/10	Tue			Preparing Technical Notes	Survey on Architecture	Survey on Cost Estimation	→Tokyo	Ditto												Ditto		
31	2017/1/11	Wed			Technical Notes Discussion, Survey on Architecture	Survey on Natural Condition	Ditto						Ditto								Ditto		
32	2017/1/12	Thu			Technical Notes Discussion, Survey on Architecture	Survey on Natural Condition	Battambang→Phnom Penh						Ditto								Ditto		
33	2017/1/13	Fri			Technical Notes Discussion & Signing Report to JICA, Phnom Penh→	Accompany (b)	Survey on Cost Estimation						Ditto								Ditto		
34	2017/1/14	Sat			→Tokyo	Survey on Natural Condition, Phnom Penh→	Ditto						→Tokyo								Phnom Penh→		
35	2017/1/15	Sun			→Tokyo	Data Analysis															→Tokyo		
36	2017/1/16	Mon																					
37	2017/1/17	Tue																					
38	2017/1/18	Wed																					
39	2017/1/19	Thu																					
40	2017/1/20	Fri																					
41	2017/1/21	Sat																					
42	2017/1/22	Sun																					
43	2017/1/23	Mon																					
44	2017/1/24	Tue																					

(2) Field Survey II (From 8th March, 2017 to 17th March, 2017)

			Project Manager/ Architectural Planning	Deputy Project Manager/ Architectural Design 2	Equipment Planning 1
			Hisafumi Michikawa	Tamiko Aramata	Takashi Morita
			8 days	10 days	10 days
1	2017/3/8	Wed	Tokyo → Phnom Penh (Public holiday)		
2	2017/3/9	Thu	Meeting with JICA Cambodia Office Meeting with MoEYS (TPAP TF, TTD, Const. Dept.) and E-TEC members		
3	2017/3/10	Fri	Meeting with MoEYS (TPAP TF, TTD, Const. Dept.) and E-TEC members Site meeting with Phnom Penh PTTC/RTTC, MoEYS (TTD and Const. Dept.) and CMAC		
4	2017/3/11	Sat	Team meeting and document preparation		
5	2017/3/12	Sun	Phnom Penh → Battambang		
6	2017/3/13	Mon	Site meeting with Battambang RTTC, MoEYS (TTD and Const. Dept.) and CMAC Site meeting with Battambang PTTC and MoEYS (TTD and Const. Dept.)		
7	2017/3/14	Tue	Battambang → Phnom Penh Prep. of Technical Notes Phnom Penh →	Battambang → Phnom Penh Preparation of Technical Notes	
8	2017/3/15	Wed	→ Tokyo	Discussion on Technical Notes	
9	2017/3/16	Thu		Discussion and signing on Technical Notes Report to JICA Cambodia Office Phnom Penh →	
10	2017/3/17	Fri		→ Tokyo	

(3) Field Survey I-3 (From 16th May, 2017 to 20th May, 2017)

			Project Manager/Architectural Planning		
			Hisafumi Michikawa		
			5 days		
1	2017/5/16	Tue	Tokyo → Phnom Penh		
2	2017/5/17	Wed	Meeting with JICA Cambodia Office Meeting with MoEYS (TPAP, TTD, Const. Dept.) and E-TEC members		
3	2017/5/18	Thu	Meeting with MoEYS (Secretary of state, TTD) Site survey at Phnom Penh TEC site, Survey of electric companies		
4	2017/5/19	Fri	Meeting with MoEYS (TTD) on Technical Notes Phnom Penh →		
5	2017/5/20	Sat	→ Tokyo		

(4) Field Survey II (From 27th Aug, 2017 to 2nd Sept, 2017)

			Team Leader	Project Manager/ Arch. Planning	Equipment Planning 1
			Shimpei Taguchi	Hisafumi Michikawa	Takashi Morita
			6 days	6 days	7 days
1	2017/8/27	Sun		Tokyo → Phnom Penh	
2	2017/8/28	Mon	Meeting with MEF, Meeting with MoEYS related departments		
3	2017/8/29	Tue	Meeting with E-TEC, Meeting with MoEYS related departments		
4	2017/8/30	Wed	Courtesy call to and discussion with secretary of state of MoEYS Report to JICA Cambodia Office		
5	2017/8/31	Thu	Signing on Minutes of Discussions, Report to Embassy of Japan		
6	2017/9/1	Fri	Add. survey, Team meeting, Doc. prep. Phnom Penh →	Add. survey, Team meeting, Doc. prep.	Add. survey, Team meeting, Doc. prep. Phnom Penh →
7	2017/9/2	Sat	→ Tokyo		→ Tokyo

Appendix 3 List of Parties Concerned in the Recipient Country

●Ministry of Education Youth and Sport

Name	Position	Organization
H.E. Dr. Hang Chuong Naron	Minister	
H.E. Dr Nath Bunroeun	Secretary of State	
H.E. Put Samith	Director General	Directorate General of Education
Dr.. Dy Samsideth	Deputy Director-General	Directorate General of Education
Mr. Ngor Penglong	Director	Teacher Training Department
Ms. Phan Sophea	Vice-chief office	Teacher Training Department
Ms. Koir Chhunchhhay	Staff	Teacher Training Department
Mr. Prak Polla	TA/ TPAP member	Teacher Training Department
Mr. Chum Sophal	Deputy Director	Primary Education Department
Mr. Vorng Phirun	Director & Envoy to Minister	Department of Construction
Mr. Tum Rithy	Engineer	Department of Construction
Mr. Ieng Lada	Officer	Department of Construction
Mr. Chea Sopheap	Staff	Department of Construction
Dr.. Bo Chankoulika	Member (Former chief of legislation dept.)	Education Research Council TPAP Taskforce
Mr. Near Sophan	Director	Personnel Department
Mr. Chan Tola	Vice chief	Personnel Department
Mr. Kem Promvirak	Chief HRMIS	Personnel Department
Mr. Oung Borat	Deputy Director-General	Policy & Planning
Mr. Suon Socheat	Chief Science	Curriculum Department
Mr. Mak Ngoy	Director General	Department General of Higher Education
Mr. Mam Sory	Assistant	Department General of Higher Education
H.E. Khieu Vicheanon	Deputy Inspector General	Inspectorate

●Ministry of Economy and Finance

Name	Position	Organization
D. Tauch Chan Kresna	Deputy Director-General	General Department of International Cooperation and Debt Management
Mr. Kim Keomoniroth	Deputy Director	Department of Bilateral Cooperation
Mr. Nou Phyrith	Official	Department of Bilateral Cooperation
Mr. Yos Sovanna	Deputy Chief	Office of Bilateral Cooperation 1

●Regional Teacher Training Centre of Phnom Penh

Name	Position	Organization
Mr. Dork Chea	Director	RTTC PP
Mr. Srey Vuth	Deputy Director	RTTC PP
Ms. Vanly Vadtheany	DP Director	RTTC PP
Mr. Srey Vutta	DP director	RTTC PP
Mr. Noy Chhom Ya	DP director	RTTC PP

●Provincial Teacher Training Centre of Phnom Penh

Name	Position	Organization
Mr. Vowg Savooun	Trainer	PTTC PP
Mr. Ishizawa Hiromichi	Science Adviser	CIESF

●Regional Teacher Training Centre of Battambang

Name	Position	Organization
Mr. Sok Hing	Director	RTTC BB
Mr. Cheap Chheangvitih	Deputy Director	RTTC BB
Mr. Sam Oeurt	Deputy Director	RTTC BB
Mr. Meas Satum	Deputy Head Study Office	RTTC BB
Ms. Heng Tola	Laboratory controler	RTTC BB
Ms. Samrith Panhchara	Financial Staff	RTTC BB

●Provincial Teacher Training Centre of Battambang

Name	Position	Organization
Mr. Rin Monivann	Director	PTTC BB
Mr. Lim Bouny	Deputy Director	PTTC BB
Mr. Srey Khivsokhom	Deputy Director	PTTC BB
Mr. Po Bunpiseth	Staff	PTTC BB

●Cambodian Mine Action Centre (CMAC) (Phnom Penh)

Name	Position	Organization
Mr. Chhin Bunran	Deputy Director	
Mr. Nour Samneng	Assistant Operations	

●Cambodian Mine Action Centre (CMAC) (Battambang)

Name	Position	Organization
Mr. Yeng Sokunthea	Deputy Director	
Mr. Dy Uanthy	Assistant Operations	

●Royal University of Phnom Penh

Name	Position	Organization
Dr. Sok Soth	Dean	Faculty of Education
Dr. Tao Nary	Deputy Dean	Faculty of Education
Dr. Sot Visal	BA+1 coordinator	Faculty of Education

●Institute of Technology of Cambodia

Name	Position	Organization
Dr. OM Romny	Director General	ITC

●Development Partners

Name	Position	Organization
Mr. Wim Voskuilen	Teacher Training Curriculum Adviser	VSO
Mr. Onno De Weerd	Education Programme Manager	VSO
Ms. Veerle Cnudde	Education Adviser	VVOB
Mr. Keo Mono	Deputy Programme Manager	VVOB
Ms. Sopha Ang	Programme Officer	UNESCO
Mr. John C. Friend-Pereira	Education Specialist	UNICEF
Mr. Nuom Sokhon	Education Officer	UNICEF
Mr. Chea Hout	Education Officer	UNICEF

●Embassy of Japan in Cambodia

Name	Position	Organization
Mr. Izumi Matsumoto	Second Secretary, Economic & ODA Section	Embassy of Japan

●JICA Cambodia Office

Name	Position	Organization
Adachi Itsu	Chief Representative	JICA Cambodia Office
Kojima Takeharu	Senior Representative	JICA Cambodia Office
Kishida Nami	Representative	JICA Cambodia Office
Pich Thyda	Programme Officer	JICA Cambodia Office

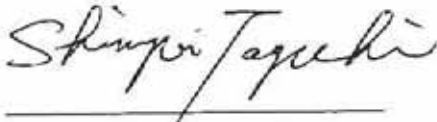
Appendix 4-a Minutes of Discussions (M/D)

(1) Minutes of Discussions (signed on December 19, 2016)

Minutes of Discussions
on the Preparatory Survey for the Project for
the Construction of Teacher Education Colleges

Based on the several preliminary discussions between the Government of Kingdom of Cambodia (hereinafter referred to as “Cambodia”) and the Cambodia office of Japan International Cooperation Agency (hereinafter referred to as “JICA”), JICA dispatched the Preparatory Survey Team for the Outline Design (hereinafter referred to as “the Team”) of the Project for the Construction of Teacher Education Colleges (hereinafter referred to as “the Project”) to Cambodia, headed by Shimpei Taguchi, Deputy Director, Basic Education Team 1, Basic Education Group, Human Development Department, JICA, from 12th December to 20th December, 2016. The Team held a series of discussions with the officials of the Government of Cambodia and conducted a field survey. In the course of the discussions, both sides have confirmed the main items described in the attached sheets.

Phnom Penh, 19th December, 2016



Mr. Shimpei Taguchi
Leader
Preparatory Survey Team
Japan International Cooperation Agency
Japan



H.E. Nath Bunroeun
Secretary of State
Ministry of Education, Youth and Sport
Royal Government of Cambodia
Kingdom of Cambodia

ATTACHMENT

1. Objective of the Project

The objective of the Project is to strengthen the basis for two Teacher Education Colleges (hereinafter referred to as "TEC") in Phnom Penh and Battambang to become four year degree awarding colleges by expanding the facilities of two existing Provincial Teacher Training Centers and Regional Teacher Training Centers in respective areas, and also providing equipment necessary for the teaching, thereby contributing to raising the quality of teachers in both primary and lower secondary schools.

2. Title of the Preparatory Survey

Both sides confirmed the title of the Preparatory Survey as "the Preparatory Survey for the Project for the Construction of Teacher Education Colleges".

3. Project site

Both sides confirmed that the sites of the Project are in Phnom Penh and Battambang, which are shown in Annex 1.

4. Responsible authority for the Project

Both sides confirmed the authorities responsible for the Project are as follows: Ministry of Education, Youth and Sport (hereinafter referred to as "MoEYS") will be the executing agency for the Project (hereinafter referred to as "the Executing Agency"). The Executing Agency shall coordinate with all the relevant authorities to ensure smooth implementation of the Project and ensure that the undertakings for the Project shall be managed by relevant authorities properly and on time. The organization chart is shown in Annex 2.

5. Items requested by the Government of Cambodia

As a result of discussions, both sides confirmed that the items requested by the Government of Cambodia are as follows:

- 5-1. Target groups of teachers are shown in Annex 3 with priorities. Both sides confirmed that Pre-primary teacher education is out of the scope because a great deal of uncertainty remains in procedures and strategies for establishing four year degree courses, and existing Provincial Teacher Training Centers shall be used to serve those teachers. In addition, both sides also confirmed that facilities only

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meant for in-service teacher training (hereinafter referred to as "INSET") shall not be considered in the Project because INSET which will be organized in TEC shall be organized in evening, weekend, and/or holidays, utilizing same classrooms for daytime students, although INSET itself should take place any time even in their schools as on-site trainings for continuous professional development.

- 5-2. Facilities requested are shown in Annex 4 with priorities.
- 5-3. Equipment requested is shown in Annex 5. The priorities of it will be described in technical notes according to criteria shown in Annex 6.
- 5-4. JICA will assess the feasibility of the above requested items through the survey and will report the findings to the Government of Japan. The final scope of the Project will be decided by the Government of Japan.
- 5-5. The Government of Cambodia shall submit an official request to the Government of Japan through a diplomatic channel before the appraisal of the Project, which is scheduled in February, 2017.

6. Procedures and Basic Principles of Japanese Grant

- 6-1. The Cambodian side agreed that the procedures and basic principles of Japanese Grant as described in Annex 7 shall be applied to the Project.
As for the monitoring of the implementation of the Project, JICA requires Cambodian side to submit the Project Monitoring Report, the form of which is attached as Annex 8.
- 6-2. The Cambodian side agreed to take the necessary measures, as described in Annex 9, for smooth implementation of the Project. The contents of the Annex 9 will be elaborated and refined during the Preparatory Survey and be agreed in the mission dispatched for explanation of the Draft Preparatory Survey Report. The contents of Annex 9 will be updated as the Preparatory Survey progresses, and eventually, will be used as an attachment to the Grant Agreement.

7. Schedule of the Survey

- 7-1. The Team will proceed with further survey in Cambodia until 24th January, 2017.
- 7-2. An official request to the Government of Japan will be submitted before the end of February, 2017.
- 7-3. JICA will prepare a draft Preparatory Survey Report in English and dispatch a mission to Cambodia in order to explain its contents around June 2017.
- 7-4. If the contents of the draft Preparatory Survey Report is accepted and the

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undertakings for the Project are fully agreed by the Cambodian side, JICA will finalize the Preparatory Survey Report and send it to Cambodia around September 2017.

7-5. The above schedule is tentative and subject to change.

8. Environmental and Social Considerations

8-1. The Cambodian side confirmed to give due environmental and social considerations before and during implementation, and after completion of the Project, in accordance with the JICA Guidelines for Environmental and Social Considerations (April, 2010).

8-2. The Project is categorized as "C" from the following considerations:

Not located in a sensitive area, nor has it sensitive characteristics, nor falls it into sensitive sectors under the Guidelines, and its potential adverse impacts on the environment are not likely to be significant.

In case that EIA/IEE is required in Cambodia, the Cambodian side confirmed to conduct the necessary procedures concerning the environmental assessment (including stakeholder meetings, Environmental Impact Assessment(EIA) /Initial Environmental Examination (IEE) and information disclosure, etc.) and make EIA/IEE report of the Project. The EIA/IEE approval shall be received from the responsible authorities and submitted to JICA by November 2017.

9. Other Relevant Issues

9-1. Expected number of students and number of lecture rooms at each TEC

Cambodian side initially requested that expected capacity of each TEC shall be as follows:

- The number of students: 2,000 students in each TEC, based on the assumption that 100 students for Pre-Primary 4 year program, 250 students for Primary 4 year program, 100 students for lower secondary 4 year program, and 100 students for 2 year INSET program will be admitted at each TEC in each year.
- The number of lecture rooms: 80 lecture rooms in each TEC, based on the assumption that 25 students will be in one lecture room and thus 2,000 expected students will be divided by 25 students.

However, both sides agreed that expected number of students must be carefully examined with consideration of teacher demand and also the number of necessary lecture rooms and school facilities must be calculated and designed

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according to the tentative curriculum framework and also model curriculum, which is based on the one in National Institute of Education in Singapore. In addition, Pre-primary 4 year program is not in the project scope and also there is no need for lecture rooms only meant for INSET program students because they use same lecture rooms for daytime students in evening, weekend, and/or holidays, although INSET itself should take place any time even in their schools as on-site trainings for continuous professional development.

Therefore, both sides agreed to reconsider the number of lecture rooms and capacity of each TEC according to the above mentioned points and final decision will be made by the Government of Japan, considering the priorities by the Cambodian side for facilities and total budget limitation of Japanese Grant for the Project.

9-2. Rehabilitation of Existing Facilities

The scope of the Project shall be designed to utilize existing facilities as long as those facilities are still operational and thus some rehabilitation work will be required on those facilities. The Cambodian side agreed to undertake the rehabilitation of those existing buildings, and this rehabilitation work will be done after the Project completion.

9-3. Equipment stock

The Cambodian side shall avoid the duplication among the equipment to be procured by the Project, MoEYS and other donors.

9-4. Tentative Implementation Schedule

The team explained about the tentative implementation plan with possible options shown in Annex 10, and both sides agreed that the option A shall be the best option. However, considering availabilities of Japanese contractors and also total budget, final decision will be made by the Government of Japan.

Annex 1 Project Sites

Annex 2 Organization Charts

Annex 3 Target groups of teachers

Annex 4 Requested Facilities with Priorities

Annex 5 Requested Equipment

Annex 6 Criteria for Selecting Equipment

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Annex 7 Japanese Grant

Annex 8 Project Monitoring Report (template)

Annex 9 Major Undertakings to be taken by the Government of Cambodia

Annex 10 Tentative Implementation Schedule

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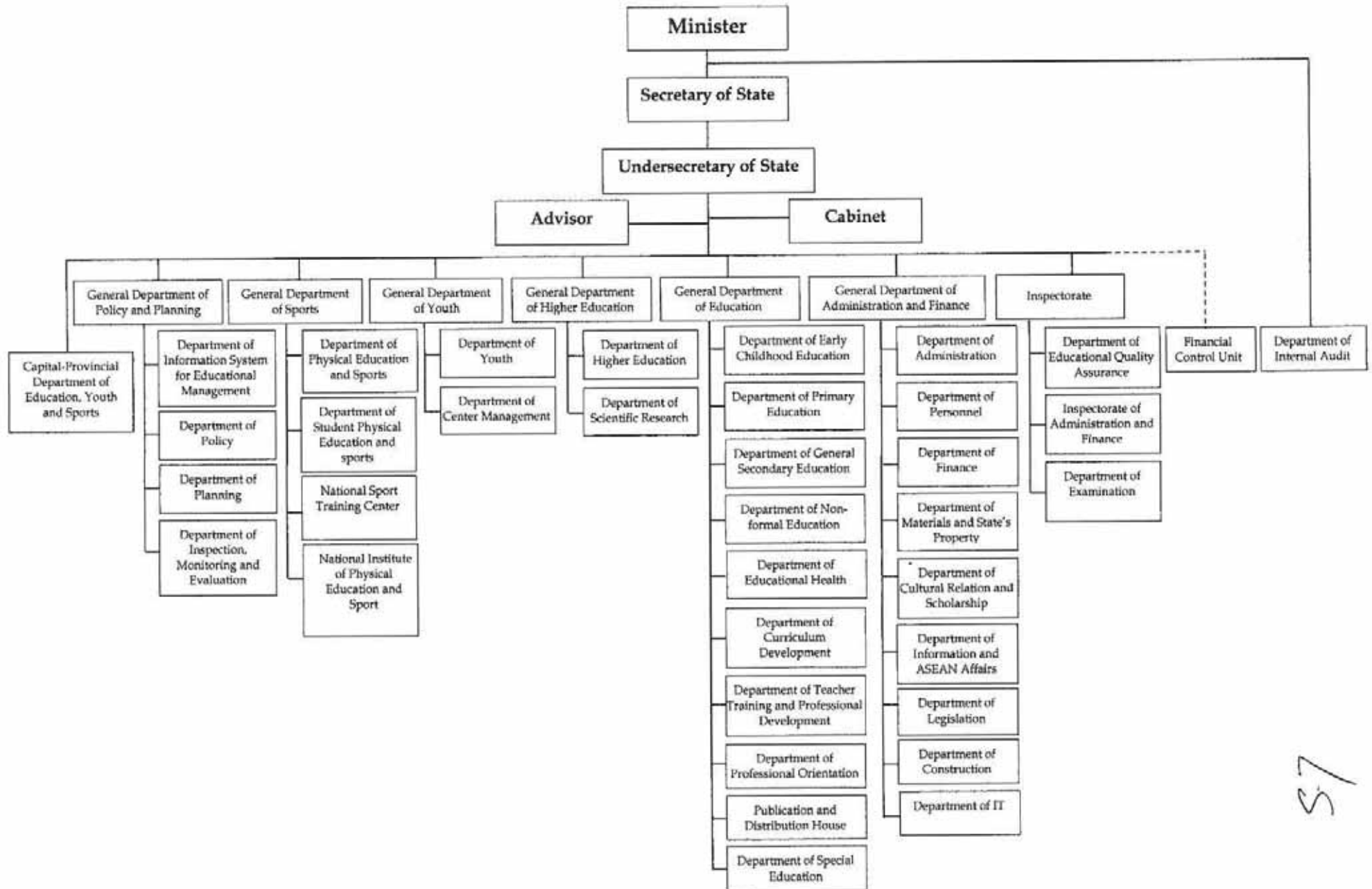
Annex 1: Project Sites



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Annex 2: Organization Charts of MoEYS



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Annex 3: Target groups of teachers

Target Groups of Teachers	Project Scope
Four year degree courses for Pre-service Teacher Education	-
Pre-Primary School Teacher Education	Out of Scope
Primary School Teacher Education	In Scope
Lower Secondary School Teacher Education	In Scope
All In-service teacher Education Training courses	Out of Scope*

* Facilities such as lecture rooms only meant for INSET shall not be considered in the Project because INSET shall be organized in evening, weekend, and/or holidays, utilizing same classrooms for daytime students.

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Annex 4: Requested Facilities with Priorities

(1) Phnom Penh TEC

Facilities	Priorities	Facilities with basic furniture ¹
Special lecture room block	1	Math/Physics laboratory with preparation room
		Chemistry laboratory with preparation room
		Biology laboratory with preparation room
		Music room
		Art room
		Carpenter room
		Home economics room
		ICT laboratory x2
		Students toilet
Academic block	2	Lecture room
		Research room for practicum x about 3
		Auditorium with 100 to 250 capacity
		Lecturers room for primary and lower secondary education with personal desks and lockers, and meeting space
		Pre-primary teachers room (Out of Scope)
Administration block	3	Director room
		Vice director room x 4
		Academic administration office
		Archive room x2
		Meeting room (L) for all lecturers
		Meeting room (M) for all administrators
		Student services
		First-aid room
		Staff toilet (M) and Staff toilet (F)
Library block	4	Library and Language laboratory
Assembly hall	5	500-600 students capacity
Cafeteria	6	

¹ Basic furniture such as normal desks and chairs are considered to be a part of school facilities, and other specific furniture such as laboratory desks and chairs are considered under the scope of equipment.

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(2) Battambang TEC

Facilities	Priorities	Facilities with basic furniture ²
Special lecture room block	1	Math/Physics laboratory with preparation room
		Chemistry laboratory with preparation room
		Biology laboratory with preparation room
		Music room
		Art room
		Carpenter room
		Home economics room
		ICT laboratory x2
		Students toilet
Academic block	2	Lecture room
		Research room for practicum x about 3
		Auditorium with 100 to 250 capacity
		Lecturers room for primary and lower secondary education with personal desks and lockers, and meeting space
		Pre-primary teachers room (Out of Scope)
Administration block	3	Director room
		Vice director room x 4
		Academic administration office
		Archive room x2
		Meeting room (L) for all lecturers
		Meeting room (M) for all administrators
		Student services
		First-aid room
		Staff toilet (M) and Staff toilet (F)
Library block	4	Library and Language laboratory
Assembly hall	5	500-600 students capacity
Dormitory	6	
Cafeteria	7	
Sports field		Out of Scope

² Basic furniture such as normal desks and chairs are considered to be a part of school facilities, and other specific furniture such as laboratory desks and chairs are considered under the scope of equipment.

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Annex 5: Requested Equipment

Science Lab Equipment for Primary Education		Quantity
1	Scale balance	25
2	Electronic balance	4
3	Thermograph	1
4	DC ammeter	4
5	Magnetizing coil	1
6	Aquarium set	1
7	Astronomical telescope	1
8	Lunar globe	1
9	Solar light source apparatus	1
10	Binoculars	8
11	Pendulum apparatus	4
12	Instrument shelter	1
13	Experimental lever	25
14	Air extraction kit	25
15	Microscope	25
16	Binocular stereomicroscope	25
17	Chemical locker	1
18	Iron support	8
19	DC power supply	4
20	Desktop cork borer	1
21	Igneous rock specimens	4
22	Sedimentary rock specimens	4
23	Fossil specimens	4
24	Pyroclastic form specimens	4
25	Arm joint model	4
26	Skeleton model of human body	1
27	Anatomical model of human body	1
28	Glass tool set	4
29	Experimental tool set	4
30	Laboratory table for student	3
31	Laboratory table for teacher	1
32	Stool	25
33	Chair	1
Mathematics Equipment for Primary Education		
34	Plotting blackboard	1
35	Triangle set for blackboard	1
36	Ruler set for blackboard	1
37	Compass for blackboard	1
38	Protractor for blackboard	1
39	calculation practice card for demonstration	1
40	Tape for explanation	1

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41	number line sheet	1
42	Explanation kit for fraction (apple model)	1
43	Explanation kit for fraction (circular model)	1
44	Explanation kit for scale reading	1
45	Explanation kit for metric measurement	1
46	Explanation kit for superficial measure of triangle and tetragon	1
47	Weight set	1
48	Explanation kit for polygon	1
49	Explanation kit for sum of the internal angles	1
50	Diagram congruity model	1
51	teaching board for line plot/graph	1
52	teaching board for circle/pie graph	1
53	teaching board for band/column graph	1
54	teaching board for histogram/bar chart	1
55	teaching board for graph of proportion and inverse proportion	1
56	Study kit for volume	13
57	Liter square/measure	13
58	Diagram congruity model	13
Social Study Equipment for Primary Education		Quantity
59	World map	1
60	Southeast Asia map	1
61	Cambodia map	1
62	Globe	6
Science Lab Equipment for Lower Secondary Education		
63	Electronic balance	6
64	Experimental apparatus of slope	6
65	Dynamic movement apparatus	1
66	Pulley	1
67	Dolly	6
68	Vacuum apparatus for falling experiment	1
69	Experimental apparatus for dynamics(slope)	1
70	Stroboscope	1
71	Semiconductor laser	1
72	Optical bench and experimental apparatus	1
73	School Oscilloscope	1
74	Tuning fork for resonance	1
75	Low wave generator	1
76	Resonant apparatus in the air column	1
77	Vacuum apparatus with bell	1
78	primary and secondary coils	6
79	DC AC power supply	6
80	Magnetizing coil	1
81	Induction coils	1
82	Cross vacuum gauge	1

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83	Discharge tube	1
84	Crookes tubes	1
85	Variable autotransformer	1
86	Ferrite magnetic motor for experiment	1
87	Electric magnet	1
88	Study plate of electricity for blackboard	1
89	Van de Graaff generator	1
90	Aquarium set	1
91	Mendel's laws experiment machine	6
92	Tripartite model	1
93	Astronomical telescope	1
94	Moon model	1
95	Transparent celestial globe	1
96	Aneroid barometer	1
97	Rain gauge	1
98	Weather observation system	1
99	Experimental apparatus for front models	1
100	Thermograph	1
101	Instrument shelter	1
102	Weather chart blackboard	6
103	Experimental vacuum apparatus	1
104	Magdeburg hemispheres	1
105	Experimental apparatus for dynamics(with pendulum)	6
106	Collision balls	1
107	Experimental apparatus for energy conversion	1
108	Luxmeter/illuminometer	1
109	Radiation detector	1
110	Microscope	25
111	Binocular stereomicroscope	25
112	Digital microscope	1
113	digital binocular stereomicroscope	1
114	Microscope for researchers/mineralogy	1
115	Magnifying mirror with polarization	25
116	Digital camera system for microscope	1
117	Magnetic stirrer	6
118	Chemical locker	6
119	Microscope cabinet	4
120	Laboratory wagon	2
121	Drying oven	1
122	Ice maker	1
123	Desktop cork borer	6
124	Cylinder microtome	6
125	Rotary vacuum pump	1
126	Fume cupboard	2

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127	Iron support	25
128	Magnifier for field	1
129	Binoculars(high spec model)	1
130	Sedimentary rock specimens	1
131	Igneous rock specimens	1
132	Mineral specimens	1
133	Rock-forming mineral specimens	1
134	Specimens of fossil animals	1
135	Specimens of fossil plants	1
136	Index fossil specimens	6
137	Skelton of vertebrates	1
138	Anatomy of Vertebrate specimens	1
139	Anatomy of invertebrate specimens	1
140	Mitosis model	1
141	Anatomical model of human body	1
142	Heart model	1
143	Skelton model of human body	1
144	Eyeball model	1
145	Ear model	1
146	brain model	1
147	Pumping heart model	1
148	Kidney model	1
149	Arm joint model	1
150	Model of respiratory organs	1
151	Glass tool set	6
152	Experimental tool set	6
153	Laboratory table for student(Physics)	3
154	Laboratory table for teacher(Physics)	1
155	Laboratory table for student(Biology)	3
156	Laboratory table for teacher(Biology)	1
157	Laboratory table for student(Chemistry)	3
158	Laboratory table for teacher(Chemistry)	1
159	Stool	75
160	Chair	3
Mathematics Equipment for Lower Secondary Education		Quantity
161	Plotting blackboard	1
162	Triangle set for blackboard	1
163	Ruler set for blackboard	1
164	Compass for blackboard	1
165	Protractor for blackboard	1
166	Development model of formula	1
167	Diagram congruity model	13
168	Plane parallel study apparatus	13
169	Solid model	13

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170	Three dimensional model	13
171	Pythagorean theorem experiment kit	13
172	Graph calculator	26
Social Study Equipment for Lower Secondary Education		
173	World map	1
174	Southeast Asia map	1
175	Cambodia map	1
176	Globe	6
Music Education Instruments and Equipment		
177	Electronic piano	13
178	Chair	26
179	Percussion instrument set	13
180	CD radio-cassette recorder	1
181	Metronome	13
Art Education Equipment		
182	Drawing board	25
183	Art desk for student	6
184	Art desk for teacher	1
185	Stool	25
186	Chair	1
Technical Arts Education Equipment		Quantity
187	Tool set for woodwork	26
188	Screw driver set	26
189	Electric jig saw	2
190	Bench-top drilling machine	2
191	Belt disc sander	2
192	Worktable for teacher	6
193	Worktable for student	1
194	Vise for woodwork	12
195	Stool	25
196	Chair	1
Clothing Education Equipment		
197	Sewing machine	12
198	Lock sewing machine	2
199	Sewing kit	26
200	Ruler set for sewing	12
201	Torso set	6
202	Clothing table for student	6
203	Clothing table for teacher	1
204	Stool	25
205	Chair	1
206	Iron	12
207	Ironing board	12
208	Washing machine	1

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Cooking Education Equipment		
209	Cooking table for student	6
210	Cooking table for teacher	1
211	Gas cooker	7
212	Refrigerator	1
213	Pot set	7
214	Utensil set	7
215	Stand for cutting board	1
216	Scale	7
217	Tableware set	25
218	Stool	25
219	Chair	1
IT Lab Equipment		Quantity
220	Desktop computer	50
221	Laptop computer	2
222	Switching hub	6
223	Computer desk	52
224	Chair	52
225	Printer	2
226	Projector	2
227	Screen	2
Library Equipment		
228	Desktop computer	20
229	Liquid crystal display	1
230	Computer desk	20
231	Chair	20
232	Printer	1
233	Switching hub	2
Assembly Hall Equipment		
234	Sound equipment set	1
235	Projector	1
236	Screen	1
Physical Education Equipment		
237	Exercise equipment set	1
238	Soccer ball/football	10
239	Volleyball	10
240	Cage for ball keeping	2
241	Inflator/air pump	2
Dispensary Equipment		
242	Bed	3
243	Bed clothing set	3
244	Examination table	1
245	Height scale	1
246	Weight scale	1

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247	Sphygmomanometer	1
248	Medicine cabinet	1
249	Refrigerator for medicine	1
250	Autoclave	1
251	Dressing cart	1
252	Examination equipment set	1
253	Cast	1
254	Sanitary box	1
255	Desk	1
256	Chair	1
257	Stool	1
Conference Room Equipment		
258	Projector	1
259	Screen	1

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Annex 6: Criteria for Selecting Equipment

The equipment will be narrowed down based on the following selection criteria.

1. Consistency with curriculum and syllabus of TEC future plan
2. The number of students and the number of lessons in curriculum
3. Consistency with maintenance and management policy which is drawn based on budget allocation in the current or future plans
4. Technical level of equipment – not too much advanced equipment
5. Possibilities of purchasing consumables and spare parts in local market in TEC budget (sustainability)
6. Obsolescence
7. Durability
8. Purpose – main purpose of providing equipment is not for administration but for teaching

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JAPANESE GRANT

The Japanese Grant is non-reimbursable fund provided to a recipient country (hereinafter referred to as "the Recipient") to purchase the products and/or services (engineering services and transportation of the products, etc.) for its economic and social development in accordance with the relevant laws and regulations of Japan. Followings are the basic features of the project grants operated by JICA (hereinafter referred to as "Project Grants").

1. Procedures of Project Grants

Project Grants are conducted through following procedures (See "PROCEDURES OF JAPANESE GRANT" for details):

(1) Preparation

- The Preparatory Survey (hereinafter referred to as "the Survey") conducted by JICA

(2) Appraisal

- Appraisal by the government of Japan (hereinafter referred to as "GOJ") and JICA, and Approval by the Japanese Cabinet

(3) Implementation

Exchange of Notes

- The Notes exchanged between the GOJ and the government of the Recipient

Grant Agreement (hereinafter referred to as "the G/A")

- Agreement concluded between JICA and the Recipient

Banking Arrangement (hereinafter referred to as "the B/A")

- Opening of bank account by the Recipient in a bank in Japan (hereinafter referred to as "the Bank") to receive the grant

Construction works/procurement

- Implementation of the project (hereinafter referred to as "the Project") on the basis of the G/A

(4) Ex-post Monitoring and Evaluation

- Monitoring and evaluation at post-implementation stage

2. Preparatory Survey

(1) Contents of the Survey

The aim of the Survey is to provide basic documents necessary for the appraisal of the the Project made by the GOJ and JICA. The contents of the Survey are as follows:

- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of

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relevant agencies of the Recipient necessary for the implementation of the Project.

- Evaluation of the feasibility of the Project to be implemented under the Japanese Grant from a technical, financial, social and economic point of view.
- Confirmation of items agreed between both parties concerning the basic concept of the Project.
- Preparation of an outline design of the Project.
- Estimation of costs of the Project.
- Confirmation of Environmental and Social Considerations

The contents of the original request by the Recipient are not necessarily approved in their initial form. The Outline Design of the Project is confirmed based on the guidelines of the Japanese Grant.

JICA requests the Recipient to take measures necessary to achieve its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the executing agency of the Project. Therefore, the contents of the Project are confirmed by all relevant organizations of the Recipient based on the Minutes of Discussions.

(2) Selection of Consultants

For smooth implementation of the Survey, JICA contracts with (a) consulting firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms.

(3) Result of the Survey

JICA reviews the report on the results of the Survey and recommends the GOJ to appraise the implementation of the Project after confirming the feasibility of the Project.

3. Basic Principles of Project Grants

(1) Implementation Stage

1) The E/N and the G/A

After the Project is approved by the Cabinet of Japan, the Exchange of Notes (hereinafter referred to as "the E/N") will be signed between the GOJ and the Government of the Recipient to make a pledge for assistance, which is followed by the conclusion of the G/A between JICA and the Recipient to define the necessary articles, in accordance with the E/N, to implement the Project, such as conditions of disbursement, responsibilities of the Recipient, and procurement conditions. The terms and conditions generally applicable to the Japanese Grant are stipulated in the "General Terms and Conditions for Japanese Grant (January 2016)."

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2) Banking Arrangements (B/A) (See "Financial Flow of Japanese Grant (A/P Type)" for details)

- a) The Recipient shall open an account or shall cause its designated authority to open an account under the name of the Recipient in the Bank, in principle. JICA will disburse the Japanese Grant in Japanese yen for the Recipient to cover the obligations incurred by the Recipient under the verified contracts.
- b) The Japanese Grant will be disbursed when payment requests are submitted by the Bank to JICA under an Authorization to Pay (A/P) issued by the Recipient.

3) Procurement Procedure

The products and/or services necessary for the implementation of the Project shall be procured in accordance with JICA's procurement guidelines as stipulated in the G/A.

4) Selection of Consultants

In order to maintain technical consistency, the consulting firm(s) which conducted the Survey will be recommended by JICA to the Recipient to continue to work on the Project's implementation after the E/N and G/A.

5) Eligible source country

In using the Japanese Grant disbursed by JICA for the purchase of products and/or services, the eligible source countries of such products and/or services shall be Japan and/or the Recipient. The Japanese Grant may be used for the purchase of the products and/or services of a third country as eligible, if necessary, taking into account the quality, competitiveness and economic rationality of products and/or services necessary for achieving the objective of the Project. However, the prime contractors, namely, constructing and procurement firms, and the prime consulting firm, which enter into contracts with the Recipient, are limited to "Japanese nationals", in principle.

6) Contracts and Concurrence by JICA

The Recipient will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be concurred by JICA in order to be verified as eligible for using the Japanese Grant.

7) Monitoring

The Recipient is required to take their initiative to carefully monitor the progress of the Project in order to ensure its smooth implementation as part of their responsibility in the G/A, and to regularly report to JICA about its status by using the Project Monitoring Report (PMR).

8) Safety Measures

The Recipient must ensure that the safety is highly observed during the implementation of the Project.

9) Construction Quality Control Meeting

Construction Quality Control Meeting (hereinafter referred to as the "Meeting") will be held for quality assurance and smooth implementation of the Works at each stage of the Works. The member of the Meeting will be composed by the

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Recipient (or executing agency), the Consultant, the Contractor and JICA. The functions of the Meeting are as followings:

- a) Sharing information on the objective, concept and conditions of design from the Contractor, before start of construction.
- b) Discussing the issues affecting the Works such as modification of the design, test, inspection, safety control and the Client's obligation, during of construction.

(2) Ex-post Monitoring and Evaluation Stage

- 1) After the project completion, JICA will continue to keep in close contact with the Recipient in order to monitor that the outputs of the Project is used and maintained properly to attain its expected outcomes.
- 2) In principle, JICA will conduct ex-post evaluation of the Project after three years from the completion. It is required for the Recipient to furnish any necessary information as JICA may reasonably request.

(3) Others

1) Environmental and Social Considerations

The Recipient shall carefully consider environmental and social impacts by the Project and must comply with the environmental regulations of the Recipient and JICA Guidelines for Environmental and Social Considerations (April, 2010).

2) Major undertakings to be taken by the Government of the Recipient

For the smooth and proper implementation of the Project, the Recipient is required to undertake necessary measures including land acquisition, and bear an advising commission of the A/P and payment commissions paid to the Bank as agreed with the GOJ and/or JICA. The Government of the Recipient shall ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the Recipient with respect to the purchase of the Products and/or the Services be exempted or be borne by its designated authority without using the Grant and its accrued interest, since the grant fund comes from the Japanese taxpayers.

3) Proper Use

The Recipient is required to maintain and use properly and effectively the products and/or services under the Project (including the facilities constructed and the equipment purchased), to assign staff necessary for this operation and maintenance and to bear all the expenses other than those covered by the Japanese Grant.

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4) Export and Re-export

The products purchased under the Japanese Grant should not be exported or re-exported from the Recipient.

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PROCEDURES OF JAPANESE GRANT

Stage	Procedures	Remarks	Recipient Government	Japanese Government	JICA	Consultants	Contractors	Agent Bank
Official Request	Request for grants through diplomatic channel	Request shall be submitted before appraisal stage.	x	x				
1. Preparation	(1) Preparatory Survey Preparation of outline design and cost estimate		x		x	x		
	(2) Preparatory Survey Explanation of draft outline design, including cost estimate, undertakings, etc.		x		x	x		
2. Appraisal	(3) Agreement on conditions for implementation	Conditions will be explained with the draft notes (E/N) and Grant Agreement (G/A) which will be signed before approval by Japanese government.	x	x (E/N)	x (G/A)			
	(4) Approval by the Japanese cabinet			x				
3. Implementation	(5) Exchange of Notes (E/N)		x	x				
	(6) Signing of Grant Agreement (G/A)		x		x			
	(7) Banking Arrangement (B/A)	Need to be informed to JICA	x					x
	(8) Contracting with consultant and issuance of Authorization to Pay (A/P)	Concurrence by JICA is required	x			x		x
	(9) Detail design (D/D)		x			x		
	(10) Preparation of bidding documents	Concurrence by JICA is required	x			x		
	(11) Bidding	Concurrence by JICA is required	x			x	x	
	(12) Contracting with contractor/supplier and issuance of A/P	Concurrence by JICA is required	x				x	x
	(13) Construction works/procurement	Concurrence by JICA is required for major modification of design and amendment of contracts.	x			x	x	
	(14) Completion certificate		x			x	x	
4. Ex-post monitoring & evaluation	(15) Ex-post monitoring	To be implemented generally after 1, 3, 10 years of completion, subject to change	x		x			
	(16) Ex-post evaluation	To be implemented basically after 3 years of completion	x		x			

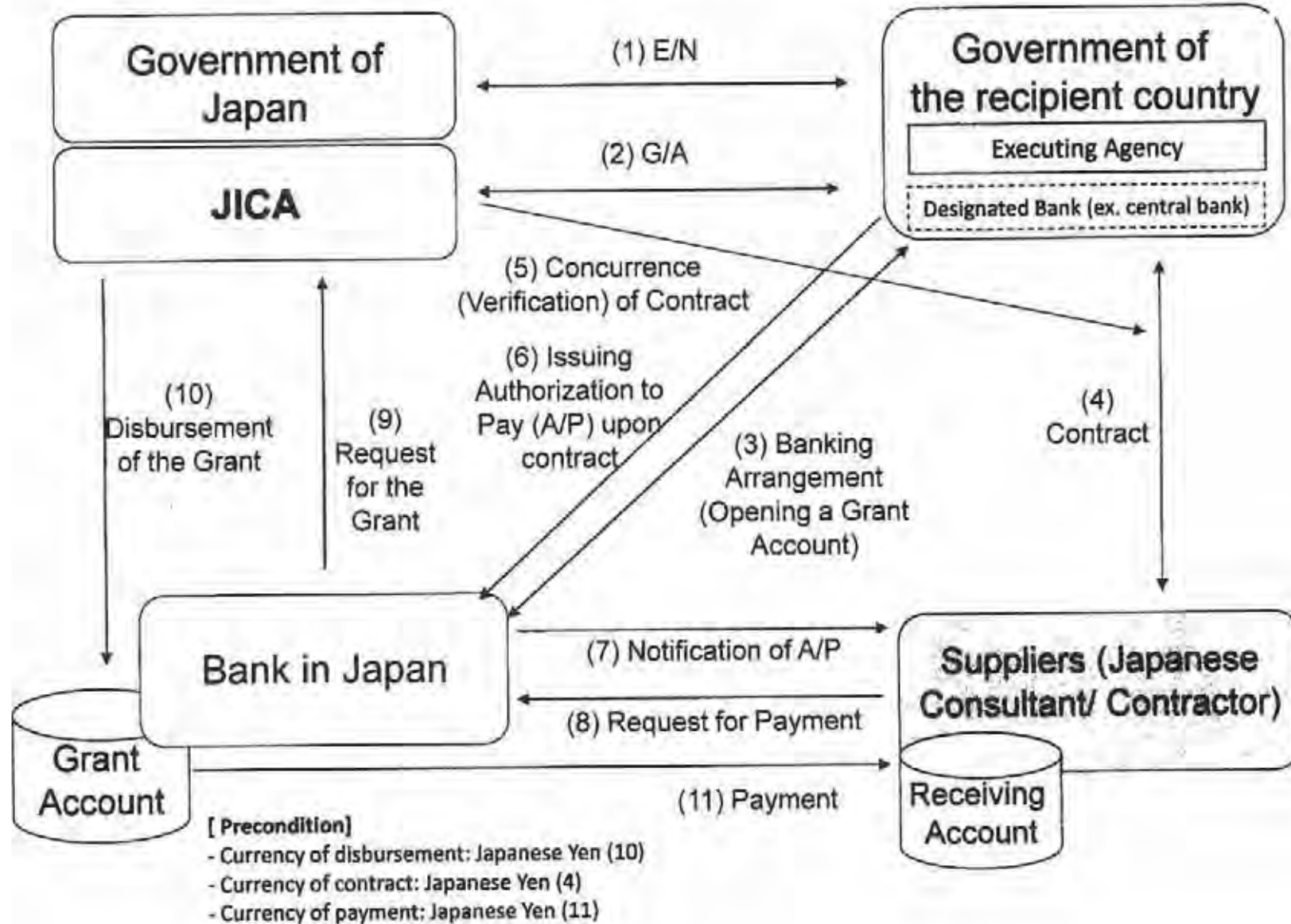
notes:

1. Project Monitoring Report and Report for Project Completion shall be submitted to JICA as agreed in the G/A.
2. Concurrence by JICA is required for allocation of grant for remaining amount and/or contingencies as agreed in the G/A.

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Financial Flow of Japanese Grant (A/P Type)



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Project Monitoring Report
on
Project Name
Grant Agreement No. XXXXXXXX
 20XX, Month

Organizational Information

Signer of the G/A (Recipient)	_____ Person in Charge (Designation) _____ _____ Contacts Address: _____ Phone/FAX: _____ Email: _____
Executing Agency	_____ Person in Charge (Designation) _____ _____ Contacts Address: _____ Phone/FAX: _____ Email: _____
Line Ministry	_____ Person in Charge (Designation) _____ _____ Contacts Address: _____ Phone/FAX: _____ Email: _____

General Information:

Project Title	
E/N	Signed date: Duration:
G/A	Signed date: Duration:
Source of Finance	Government of Japan: Not exceeding JPY _____ mil. Government of (_____): _____

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1: Project Description	
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1-1 Project Objective

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1-2 Project Rationale

- Higher-level objectives to which the project contributes (national/regional/sectoral policies and strategies)
- Situation of the target groups to which the project addresses

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1-3 Indicators for measurement of "Effectiveness"

Quantitative indicators to measure the attainment of project objectives		
Indicators	Original (Yr)	Target (Yr)
Qualitative indicators to measure the attainment of project objectives		

2: Details of the Project

2-1 Location

Components	Original <i>(proposed in the outline design)</i>	Actual
1.		

2-2 Scope of the work

Components	Original* <i>(proposed in the outline design)</i>	Actual*
1.		

Reasons for modification of scope (if any).

(PMR)

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2-3 Implementation Schedule

Items	Original		Actual
	<i>(proposed in the outline design)</i>	<i>(at the time of signing the Grant Agreement)</i>	

Reasons for any changes of the schedule, and their effects on the project (if any)

--

2-4 Obligations by the Recipient

2-4-1 Progress of Specific Obligations

See Attachment 2.

2-4-2 Activities

See Attachment 3.

2-4-3 Report on RD

See Attachment 11.

2-5 Project Cost

2-5-1 Cost borne by the Grant(Confidential until the Bidding)

Components			Cost (Million Yen)	
	Original <i>(proposed in the outline design)</i>	Actual <i>(in case of any modification)</i>	Original ^{1),2)} <i>(proposed in the outline design)</i>	Actual
	1.			
Total				

Note: 1) Date of estimation:

2) Exchange rate: 1 US Dollar = Yen

2-5-2 Cost borne by the Recipient

Components			Cost (1,000 Taka)	
	Original <i>(proposed in the outline design)</i>	Actual <i>(in case of any modification)</i>	Original ^{1),2)} <i>(proposed in the outline design)</i>	Actual
	1.			

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- Note: 1) Date of estimation:
2) Exchange rate: 1 US Dollar =

Reasons for the remarkable gaps between the original and actual cost, and the countermeasures (if any)

(PMR)

2-6 Executing Agency

- Organization's role, financial position, capacity, cost recovery etc,
- Organization Chart including the unit in charge of the implementation and number of employees.

Original (at the time of outline design) name: role: financial situation: institutional and organizational arrangement (organogram): human resources (number and ability of staff):
Actual (PMR)

2-7 Environmental and Social Impacts

- The results of environmental monitoring based on Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).
- The results of social monitoring based on in Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).
- Disclosed information related to results of environmental and social monitoring to local stakeholders (whenever applicable).

3: Operation and Maintenance (O&M)

3-1 Physical Arrangement

- Plan for O&M (number and skills of the staff in the responsible division or section, availability of manuals and guidelines, availability of spareparts, etc.)

Original (at the time of outline design)
Actual (PMR)

3-2 Budgetary Arrangement

- Required O&M cost and actual budget allocation for O&M

Original (at the time of outline design)

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Actual (PMR)

4: Potential Risks and Mitigation Measures

- Potential risks which may affect the project implementation, attainment of objectives, sustainability
- Mitigation measures corresponding to the potential risks

Assessment of Potential Risks (at the time of outline design)

Potential Risks	Assessment
1. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
2. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
3. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:

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	Contingency Plan (if applicable):
Actual Situation and Countermeasures (PMR)	

5: Evaluation and Monitoring Plan (after the work completion)

5-1 Overall evaluation

Please describe your overall evaluation on the project.

5-2 Lessons Learnt and Recommendations

Please raise any lessons learned from the project experience, which might be valuable for the future assistance or similar type of projects, as well as any recommendations, which might be beneficial for better realization of the project effect, impact and assurance of sustainability.

5-3 Monitoring Plan of the Indicators for Post-Evaluation

Please describe monitoring methods, section(s)/department(s) in charge of monitoring, frequency, the term to monitor the indicators stipulated in 1-3.

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Attachment

1. Project Location Map
2. Specific obligations of the Recipient which will not be funded with the Grant
3. Monthly Report submitted by the Consultant
- Appendix - Photocopy of Contractor's Progress Report (if any)
 - Consultant Member List
 - Contractor's Main Staff List
4. Check list for the Contract (including Record of Amendment of the Contract/Agreement and Schedule of Payment)
5. Environmental Monitoring Form / Social Monitoring Form
6. Monitoring sheet on price of specified materials (Quarterly)
7. Report on Proportion of Procurement (Recipient Country, Japan and Third Countries) (PMR (final) only)
8. Pictures (by JPEG style by CD-R) (PMR (final) only)
9. Equipment List (PMR (final) only)
10. Drawing (PMR (final) only)
11. Report on RD (After project)

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Monitoring sheet on price of specified materials

1. Initial Conditions (Confirmed)

	Items of Specified Materials	Initial Volume A	Initial Unit Price (¥) B	Initial total Price C=A×B	1% of Contract Price D	Condition of payment	
						Price (Decreased) E=C-D	Price (Increased) F=C+D
1	Item 1	●●t	●	●	●	●	●
2	Item 2	●●t	●	●	●		
3	Item 3						
4	Item 4						
5	Item 5						

2. Monitoring of the Unit Price of Specified Materials

(1) Method of Monitoring : ●●

(2) Result of the Monitoring Survey on Unit Price for each specified materials

	Items of Specified Materials	1st ●month, 2015	2nd ●month, 2015	3rd ●month, 2015	4th	5th	6th
1	Item 1						
2	Item 2						
3	Item 3						
4	Item 4						
5	Item 5						

(3) Summary of Discussion with Contractor (if necessary)

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Report on Proportion of Procurement (Recipient Country, Japan and Third Countries)
 (Actual Expenditure by Construction and Equipment each)

	Domestic Procurement (Recipient Country) A	Foreign Procurement (Japan) B	Foreign Procurement (Third Countries) C	Total D
Construction Cost	(A/D%)	(B/D%)	(C/D%)	
Direct Construction Cost	(A/D%)	(B/D%)	(C/D%)	
others	(A/D%)	(B/D%)	(C/D%)	
Equipment Cost	(A/D%)	(B/D%)	(C/D%)	
Design and Supervision Cost	(A/D%)	(B/D%)	(C/D%)	
Total	(A/D%)	(B/D%)	(C/D%)	

Major Undertakings to be taken by the Government of Cambodia

1. Specific obligations of the Government of Cambodia which will not be funded with the Grant

(1) Before the Tender

NO	Items	Deadline	In charge	Estimated Cost (USD)	Ref.
1	To prepare budget for the Project for FY 2017 and onward	by the end of, July 2017	MoEYS/MEF		
2	To open bank account (B/A)	within 1 month after the signing of the G/A	MoEYS/MEF		
3	To issue A/P to a bank in Japan (the Agent Bank) for the payment to the consultant	within 1 month after the signing of the contract	MoEYS/MEF		
4	To bear the following commissions to a bank in Japan for the banking services based upon the B/A	within 1 month after the signing of the contract	MoEYS/MEF		
	1) Advising commission of A/P	every payment			
5	To approve IEE/EIA (Conditions of approval should be fulfilled, if any) and secure the necessary budget for the implementation of IEE/EIA.	within 1 month after the signing of the G/A	MoEYS		
6	To secure and clear the following lands	before notice of the bidding document	MoEYS		
	1) Project area: remove obstacles such as trees 2) stock yard and route: secure area for material stock and transmission				
7	To obtain building permit	before the notice of bidding document	MoEYS		
8	To obtain the certificate of clearance of land mine If necessary, carry out detection and removal of landmines and unexploded ordnance within the project site (depth 0-2m, 2-4m respectively)				
9	To submit Project Monitoring Report (with the result of Detail Design)	before the preparation of bidding documents	MoEYS		

(B/A: Banking Arrangement, A/P: Authorization to pay, N/A: Not Applicable)

(2) During the Project Implementation

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NO	Items	Deadline	In charge	Estimated Cost (USD)	Ref.
1	To issue A/P to a bank in Japan (the Agent Bank) for the payment to the Contractor(s) and Supplier(s)	within 1 month after the signing of the contract(s)	MoEYS/MEF		
2	To bear the following commissions to a bank in Japan for the banking services based upon the B/A	within 1 month after the signing of the contract(s)	MoEYS/MEF		
	1) Advising commission of A/P	every payment			
3	To ensure prompt unloading and customs clearance at ports of disembarkation in recipient country and to assist the Supplier(s) with internal transportation therein	during the Project	MoEYS/MEF		
4	To accord Japanese nationals and/or physical persons of third countries whose services may be required in connection with the supply of the products and the services such facilities as may be necessary for their entry into the country of the Recipient and stay therein for the performance of their work	during the Project	MoEYS		
5	To ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the country of the Recipient with respect to the purchase of the products and/or the services be exempted.	during the Project	MoEYS/MEF		
6	To bear all the expenses, other than those covered by the Grant, necessary for the implementation of the Project	during the Project	MoEYS		
7	1) To submit Project Monitoring Report	1) every month	MoEYS		
	2) To submit Project Monitoring Report (final)	2) within one month after signing of Certificate of Completion for the works under the contract(s)			
8	To submit a report concerning completion of the Project	within six months after completion of the Project	MoEYS		
9	To provide facilities for distribution of electricity, water supply and drainage and other incidental facilities necessary for the implementation of the Project outside the site(s)		MoEYS		
	1) Water Supply	1 months before the completion of the construction			
	2) Electricity	1 month before the completion of the construction			
	3) Drainage	1 month before the completion of the construction			
4) Other incidental facilities	1 month before the completion of the construction				

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(3) After the Project

NO	Items	Deadline	In charge	Estimated Cost (USD)	Ref.
1	To renovate existing facilities 1) Renovation work 2) Supply additional furniture	After the completion of the construction	MoEYS		
2	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid 1) Allocation of maintenance cost 2) Operation and maintenance structure 3) Routine check/Periodic inspection	After completion of the construction	MoEYS		
3	To allocate lecturers and staffs required for school management	After completion of the construction	MoEYS		

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2. Other obligations of the Government of Cambodia funded with the Grant

NO	Items	Deadline	Amount (Million Japanese Yen)*
1	1) To construct/expand facilities with basic furniture 2) To provide facilities for the distribution of electricity, water supply, drainage and other incidental facilities within the project site 3) To procure equipment and conduct the following transportation - Marine (Air) transportation of products from Japan or third country to Cambodia - Internal transportation from the port of disembarkation to the project site		
2	To implement detailed design, support bidding process and supervise construction (Consulting Service)		
Total			

*The Amount is provisional. This is subject to the approval of the Government of Japan.

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Annex 10: Tentative Implementation Schedule with Options

		2017			2018												2019												2020												2021		
		10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3												
Option A	Cabinet Approval/ EN - GA	█																																									
	Detail Design/ Tender		█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█												
	Building Construction													█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█												
	Equipment Procurement																						█	█	█	█	█	█	█	█	█												
Option B	Cabinet Approval/ EN - GA	█																																									
	Detail Design/ Tender		█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█											
	Building Construction													█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█											
	Equipment Procurement																						█	█	█	█	█	█	█	█	█	█											
Option C	Cabinet Approval/ EN - GA	█																																									
	Detail Design/ Tender		█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█											
	Building Construction				█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█										
	Equipment Procurement																						█	█	█	█	█	█	█	█	█	█											
Option D	Cabinet Approval/ EN - GA	█															█																										
	Detail Design/ Tender		█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█										
	Building Construction				█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█										
	Equipment Procurement																						█	█	█	█	█	█	█	█	█	█	█										

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Appendix 4-b Minutes of Discussions (M/D)

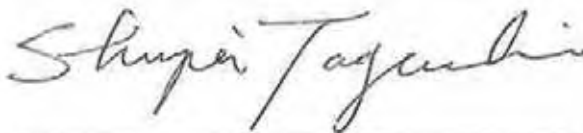
(2) Minutes of Discussions (signed on August 31, 2017)

Minutes of Discussions
on the Preparatory Survey for the Project for
the Construction of Teacher Education Colleges
(Explanation on Draft Preparatory Survey Report)

With reference to the minutes of discussions signed between the Ministry of Education, Youth and Sport and the Japan International Cooperation Agency (hereinafter referred to as "JICA") on 19th December, 2016 and in response to the request from the Royal Government of Cambodia (hereinafter referred to as "Cambodia") dated 26th May, 2017, JICA dispatched the Preparatory Survey Team (hereinafter referred to as "the Team") for the explanation of Draft Preparatory Survey Report (hereinafter referred to as "the Draft Report") for the Project for the Construction of Teacher Education Colleges (hereinafter referred to as "the Project"), headed by Shimpei Taguchi, Deputy Director, Basic Education Team 1, Basic Education Group, Human Development Department, JICA, from 28th August to 31st August, 2017.

As a result of the discussions, both sides agreed on the main items described in the attached sheets.

Phnom Penh, 31st August, 2017



Mr. Shimpei Taguchi
Leader
Preparatory Survey Team
Japan International Cooperation Agency
Japan



H.E. Nath Bunroeun
Secretary of State
Ministry of Education, Youth and Sport
Royal Government of Cambodia
Kingdom of Cambodia

ATTACHMENT

1. Objective of the Project

The objective of the Project is to strengthen the basis for two Teacher Education Colleges (hereinafter referred to as "TEC") in Phnom Penh and Battambang to become four-year degree awarding colleges by expanding the facilities of two existing Provincial Teacher Training Centers and Regional Teacher Training Centers in respective areas, and also providing equipment necessary for the teaching, thereby contributing to raising the quality of teachers in both primary and lower secondary schools.

2. Responsible authority for the Project

Both sides confirmed the authorities responsible for the Project are as follows:

Ministry of Education, Youth and Sport (hereinafter referred to as "MoEYS") will be the executing agency for the Project (hereinafter referred to as "the Executing Agency"). The Executing Agency shall coordinate with all the relevant authorities to ensure smooth implementation of the Project and ensure that the undertakings for the Project shall be managed by relevant authorities properly and on time. The organization chart is shown in Annex 1.

3. Contents of the Draft Report

After the explanation of the contents of the Draft Report by the Team, the Cambodian side agreed to its contents, main components of which are described in Annex 2, Summary of Project Scope.

4. Cost estimate

Both sides confirmed that the cost estimate including the contingency described in the Annex 3, Major Undertakings to be taken by the Royal Government of Cambodia, is provisional and will be examined further by the Government of Japan for its approval. The contingency would cover the additional cost against natural disaster, unexpected natural conditions, etc.

5. Confidentiality of the cost estimate and technical specifications

Both sides confirmed that the cost estimate and technical specifications in the Draft Report should never be duplicated or disclosed to any third parties until all the contracts under the Project are concluded.

6. Timeline for the project implementation

The Team explained to the Cambodian side that the expected timeline for the project implementation is as attached in Annex 4.

7. Expected outcomes and indicators

Both sides agreed that key indicators for expected outcomes are as follows. The Cambodian side will be responsible for the achievement of agreed key indicators targeted in year 2023 and shall monitor the progress based on those indicators.

[Quantitative indicators]

The number of degree holders from Phnom Penh TEC and Battambang TEC

[Qualitative indicators]

The quality of teachers in both primary and lower secondary schools

8. Undertakings of the Project

Both sides confirmed the undertakings of the Project as described in Annex 3. With regard to exemption of customs duties, internal taxes and other fiscal levies as stipulated in clause 5 under 1.(2) of Annex 3, both sides confirmed that such customs duties, internal taxes and other fiscal levies include VAT, commercial tax, income tax and corporate tax, which shall be clarified in the bid documents by Ministry of Education, Youth and Sport during the implementation stage of the Project.

The Cambodian side assured to take the necessary measures and coordination including allocation of the necessary budget which are preconditions of implementation of the Project. It is further agreed that the costs are indicative, i.e. at Outline Design level. More accurate costs will be calculated at the Detailed Design stage.

Both sides also confirmed that the Annex 3 will be used as an attachment of G/A.

9. Monitoring during the implementation

The Project will be monitored by the Executing Agency and reported to JICA by using the form of Project Monitoring Report (PMR) attached as Annex 5. The timing of submission of the PMR is described in Annex 3.

10. Project completion

Both sides confirmed that the project completes when all the facilities constructed

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and equipment procured by the grant are in operation. The completion of the Project will be reported to JICA promptly, but in any event not later than six months after completion of the Project.

11. Ex-Post Evaluation

JICA will conduct ex-post evaluation after three (3) years from the project completion, in principle, with respect to five evaluation criteria (Relevance, Effectiveness, Efficiency, Impact, and Sustainability). The result of the evaluation will be publicized. The Cambodian side is required to provide necessary support for the data collection.

12. Schedule of the Study

JICA will finalize the Preparatory Survey Report based on the confirmed items. The report will be sent to the Cambodian side around January, 2018.

13. Environmental and Social Considerations

The Team explained that 'JICA Guidelines for Environmental and Social Considerations (April 2010)' (hereinafter referred to as "the Guidelines") is applicable for the Project. The Project is categorized as C because the Project is likely to have minimal adverse impact on the environment under the Guidelines.

14. Other Relevant Issues

14-1. Disclosure of Information

Both sides confirmed that the Preparatory Survey Report from which project cost is excluded will be disclosed to the public after completion of the Preparatory Survey. The comprehensive report including the project cost will be disclosed to the public after all the contracts under the Project are concluded.

14-2. Issuance of Prakas on the TEC degree

Sub-Decrees 72 and 73 issued by MoEYS on 22nd May, 2017 define TEC as an Institute that offers a teaching professional degree. MoEYS agreed to issue a new Prakas which mentions that the graduates from TEC will be awarded a qualification which is equivalent to a bachelor's degree stipulated in the Cambodian National Qualification Framework by the middle of September.

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14-3. Cost to be borne by Cambodian side

To meet with the obligations of Cambodian side stipulated in Annex 3, Cambodian side agreed to budget 109,400USD for 2018 fiscal year and 58,600USD for 2019 fiscal year.

14-4. UXO and Landmine Clearance

With respect to Battambang TEC, although the clearance had been done once before, there are still some construction areas yet to be cleared. The clearance certificate for Battambang TEC has not fully covered the construction areas for the Project. Thus, Cambodian side agreed to conduct an additional detection survey before tendering scheduled in June, 2018.

In addition, Cambodian side also agreed that CMAC detections will also be conducted in the area where existing buildings stand after demolishing those buildings for the utmost consideration to safety. The areas for the additional detection survey are shown in Annex 6.

14-5. Land Ownership Documents

Land ownership documents for the access road to Phnom Penh TEC and the dormitory construction area at Battambang TEC have not been submitted yet to JICA. Thus, Cambodian side agreed to submit documents that certify those areas belong to MoEYS by the end of 2017.

14-6. Supervision of TEC

Directorate General of Education is responsible for the quality of education at TEC, and Teacher Training Department (TTD) manages the process of establishing TEC, while Directorate General of Higher Education oversees TEC as a higher education institution.

14-7. Renovation works for existing buildings

Some of existing buildings in Phnom Penh TEC, five academic buildings and special lecture room building, are functionally usable in their current conditions without any repair. Therefore, the Project will consider any work on those buildings as out of project scope. However, Cambodian side intends to renovate the buildings' interior and exterior by re-painting etc. Thus, the renovation work may be done by Cambodian side in the future.

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14-8. Existing furniture and equipment

Cambodian side agreed to move and store necessary furniture and equipment from buildings which will be demolished by the Project.

14-9. Procedures on Tax Exemption

With regard to tax exemptions, Cambodian side, including Ministry of Economic and Finance, agreed to take any necessary measures in timely manner.

14-10. Coordination with other donors

Cambodian side agreed to coordinate with other donors and to avoid any duplication of work. It is also agreed that proposed construction areas for the Project shall be secured and that construction period shall not coincide with other construction plans for the smooth implementation of the Project.

14-11. Female dormitory building in Battambang RTTC

Current female dormitory building (BRE-9) located at North West corner of Battambang RTTC is in unsafe condition and recommended to be demolished, and the area for this female dormitory is necessary for the construction work under the Project. Therefore, Cambodian side agreed to demolish this female dormitory by the Project.

14-12. Affiliated Lower Secondary School in Battambang TEC

Cambodian side confirmed that the affiliated lower secondary school in the current Battambang RTTC site will be temporarily transferred out of the site during construction of TEC.

Annex 1 Organization Chart

Annex 2 Summary of Project Scope

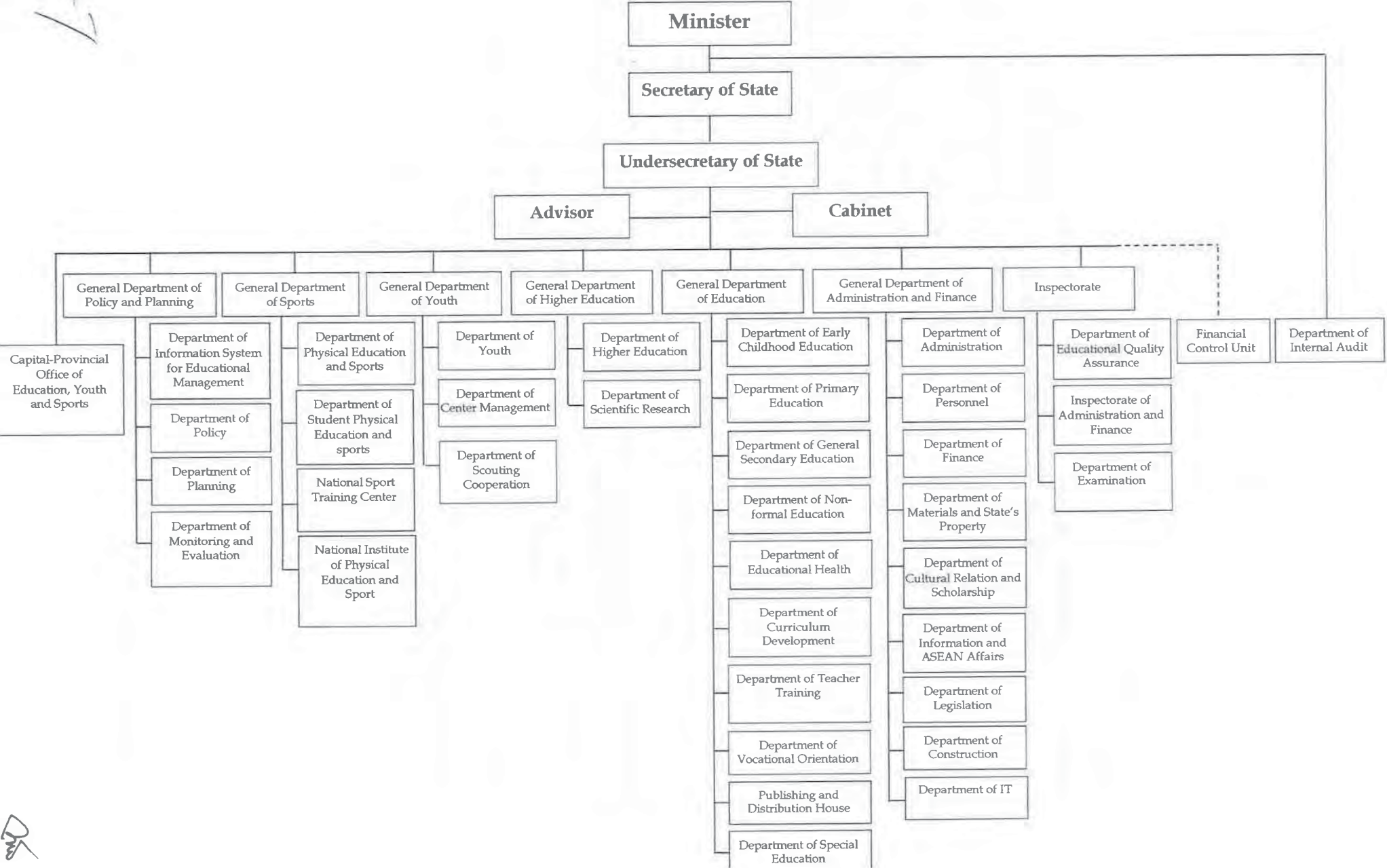
Annex 3 Major Undertakings to be taken by the Royal Government of Cambodia

Annex 4 Project Implementation Schedule

Annex 5 Project Monitoring Report (template)

Annex 6 Areas to be detected by CMAC

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Summary of Project Scope

(1) Summary of Facilities to be provided by the Project

Item	Phnom Penh TEC	Battambang TEC		
Facilities (by function)				
Special lecture room block	(PE ¹) Science lab, Music room, Art room and Preparation room for each	(PE) Science lab, Music room, Art room and Preparation room for each		
	(LSE ²) Chemistry lab, Biology lab and Preparation room for each	(LSE) Chemistry lab, Biology lab, Music room, Art room and Preparation room for each		
	(PE and LSE) Home economics room, ICT room, Storage and Toilet	(PE and LSE) Home economics room, ICT room, Storage and Toilet		
Academic block	Auditorium, Storage, and Toilet	Auditorium, Lecture room, Research room, Department office, Storage and Toilet		
Administration block	Director's room, Vice director's room, Advisor and secretary room, Admin. Office (admin. and human resource), Admin. Office (finance and planning), Admin. Office (academic, student affairs, relation and job), Archive room, Meeting room, First-aid room, Storage and Toilet	Director's room, Vice director's room, Advisor and secretary room, Admin. Office (admin. and human resource), Admin. Office (finance and planning), Admin. Office (academic, student affairs, relation and job), Archive room, Meeting room, First-aid room, Storage and Toilet		
Library block	Library (incl. Self-study space), ICT room for self-study, Library office, Storage and Toilet	Library (incl. Self-study space), ICT room for self-study, Library office, Storage and Toilet		
Assembly hall	Hall, Stage, Control room, Locker room, Storage and Toilet	Hall, Stage, Control room, Locker room, Storage and Toilet		
Dormitory		Dormitory room, Kitchen, Shower room and Toilet		
Facilities (by building)				
	Special lecture room bldg.	1,709.60 m ²	Special lec./academic bldg.	3,086.40 m ²
	Admin. bldg.	2,045.14 m ²	Admin. bldg.	3,026.90 m ²
	Library bldg.	1,352.25 m ²	Library bldg.	1,958.02 m ²
	Assembly hall	1,661.42 m ²	Assembly hall	1,398.73 m ²
	Others (conn. bridge, etc.)	10.00 m ²	Dormitory bldg.	2,239.45 m ²
			Others (conn. bridge, etc.)	22.80 m ²
Total floor area	6,778.41 m ²		11,732.30 m ²	

¹ PE: for Primary Education Course

² LSE: for Lower Secondary Education Course

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(2) Summary of Equipment to be provided by the Project

Item	Equipment Name	Planned Quantity			
		Phnom Penh	Battambang	Total	
Science, primary					
1	PSC-1	Scale balance	16	16	32
2	PSC-2	Electronic balance	8	9	17
3	PSC-3	DC ammeter	3	9	12
4	PSC-4	DC voltmeter	5	9	14
5	PSC-5	Magnetizing coil	1	1	2
6	PSC-6	Astronomical telescope	1	0	1
7	PSC-7	Tripartite model	0	1	1
8	PSC-8	Binoculars	9	9	18
9	PSC-9	Pendulum apparatus	9	9	18
10	PSC-10	Instrument shelter	1	1	2
11	PSC-11	Experimental lever	16	16	32
12	PSC-12	Air extraction kit	16	16	32
13	PSC-13	Microscope	6	3	9
14	PSC-14	Binocular stereomicroscope	12	16	28
15	PSC-15	Chemical locker	1	1	2
16	PSC-16	Iron support	4	9	13
17	PSC-17	DC power supply	9	9	18
18	PSC-18	Specimen set	2	2	4
19	PSC-19	Arm joint model	1	1	2
20	PSC-20	Skeleton model of human body	1	1	2
21	PSC-21	Anatomical model of human body	0	1	1
22	PSC-22	Eyeball model	1	1	2
23	PSC-23	Ear model	1	1	2
24	PSC-24	Glass tool set	5	4	9
25	PSC-25	Experimental tool set	9	9	18
26	PSC-26	Laboratory table (Biology) for student with stool	8	8	16
27	PSC-27	Laboratory table (Biology) for lecturer with stool	2	2	4
28	PSC-28	Laboratory table (General Science) for student with stool	0	8	8
29	PSC-29	Laboratory table (General Science) for lecturer with stool	0	2	2
30	PSC-30	Pulley	10	6	16
31	PSC-31	Laptop computer	2	2	4
32	PSC-32	Projector	2	2	4
33	PSC-33	Cabinet set	2	2	4
Mathematics, primary					
34	PMA-1	Plotting blackboard	1	1	2
35	PMA-2	Calculation practice card for demonstration	0	1	1
36	PMA-3	Tape for explanation	1	1	2
37	PMA-4	Number line sheet	1	1	2
38	PMA-5	Explanation kit for superficial measure of triangle and tetragon	1	1	2
39	PMA-6	Weight set	1	1	2
40	PMA-7	Explanation kit for polygon	1	1	2
41	PMA-8	Explanation kit for sum of the internal angles	1	1	2
42	PMA-9	Diagram congruity model	9	9	18
43	PMA-10	Study kit for volume	9	9	18
44	PMA-11	Liter square/measure	9	9	18
45	PMA-12	Cabinet set	1	1	2

Item	Equipment Name	Planned Quantity			
		Phnom Penh	Battambang	Total	
Social Science, primary					
46	PSO-1	Map and globe set	1	1	2
Mathematics, lower secondary					
47	LMA-1	Plotting blackboard	1	1	2
48	LMA-2	Development model of formula	1	1	2
49	LMA-3	Diagram congruity model	9	9	18
50	LMA-4	Plane parallel study apparatus	9	9	18
51	LMA-5	Solid model	9	9	18
52	LMA-6	Three dimensional model	9	9	18
53	LMA-7	Pythagorean theorem experiment kit	9	9	18
Physics, lower secondary					
54	LPH-1	Experimental apparatus of slope	9	9	18
55	LPH-2	Dynamic movement apparatus	1	1	2
56	LPH-3	Pulley	1	1	2
57	LPH-4	Experimental lever	9	5	14
58	LPH-5	Vacuum apparatus set	1	0	1
59	LPH-6	Experimental apparatus for dynamics (slope)	1	1	2
60	LPH-7	Semiconductor laser	0	1	1
61	LPH-8	Optical bench and experimental apparatus	1	1	2
62	LPH-9	School Oscilloscope	1	1	2
63	LPH-10	Resonant apparatus in the air column	1	1	2
64	LPH-11	Primary and secondary coils	9	9	18
65	LPH-12	DC AC power supply	9	9	18
66	LPH-13	Instrument set for electrical current and magnetic field	1	1	2
67	LPH-15	Experimental apparatus for dynamics	9	9	18
68	LPH-16	Collision balls	1	1	2
69	LPH-17	Experimental apparatus for energy conversion	1	1	2
70	LPH-18	Laboratory table (Physics) for student with stool	6	0	6
71	LPH-19	Laboratory table (Physics) for lecturer with stool	1	0	1
72	LPH-20	Laptop computer	1	1	2
73	LPH-21	Projector	1	1	2
74	LPH-22	Cabinet set	1	1	2
Chemistry, lower secondary					
75	LCH-1	Electronic balance	9	9	18
76	LCH-2	Magnetic stirrer	9	9	18
77	LCH-3	Chemical locker	2	2	4
78	LCH-4	Refrigerator-Freezer	1	1	2
79	LCH-5	Iron support	9	9	18
80	LCH-6	Glass tool set	3	3	6
81	LCH-7	Experimental tool set	9	9	18
82	LCH-8	Laboratory table (Chemistry) for student with stool	4	4	8
83	LCH-9	Laboratory table (Chemistry) for lecturer with stool	1	1	2
84	LCH-10	Laptop computer	1	1	2
85	LCH-11	Projector	1	1	2
86	LCH-12	Cabinet set	1	1	2
87	LCH-13	Distillator	1	1	2
Biology, lower secondary					
88	LBI-1	Mendel's laws experiment machine	9	9	18
89	LBI-2	Microscope	16	0	16
90	LBI-3	Binocular stereomicroscope	16	10	26
91	LBI-4	Magnifying mirror with polarization	9	9	18

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Item		Equipment Name	Planned Quantity		
			Phnom Penh	Battambang	Total
92	LBI-5	Digital camera system for microscope	1	1	2
93	LBI-6	Microscope cabinet	2	2	4
94	LBI-7	Laboratory wagon	2	2	4
95	LBI-8	Cylinder microtome	2	2	4
96	LBI-9	Magnifier for field	1	1	2
97	LBI-10	Skeleton of vertebrates	1	1	2
98	LBI-11	Anatomy of (in)vertebrate specimens	1	1	2
99	LBI-12	Cell division model	1	1	2
100	LBI-13	Skeleton and organ structure model set A	1	0	1
101	LBI-14	Skeleton and organ structure model set B	0	1	1
102	LBI-15	Laboratory table (Biology) for student with stool	4	4	8
103	LBI-16	Laboratory table (Biology) for lecturer with stool	1	1	2
104	LBI-17	Laptop computer	1	1	2
105	LBI-18	Projector	1	1	2
106	LBI-19	Cabinet set	1	1	2
Earth Science, lower secondary					
107	LEA-1	Tripartite model	1	1	2
108	LEA-2	Transparent celestial globe	1	0	1
109	LEA-3	Rain gauge	1	1	2
110	LEA-4	Specimens set of rock, mineral and fossil	1	1	2
111	LEA-5	Laboratory table (Earth Science) for student with stool	4	0	4
112	LEA-6	Laboratory table (Earth Science) for lecturer with stool	1	0	1
113	LEA-7	Laptop computer	1	1	2
114	LEA-8	Projector	1	1	2
115	LEA-9	Cabinet set	1	1	2
Social Science, lower secondary					
116	LSO-1	Map and globe set	1	1	2
Music, primary					
117	PMU-1	Electronic piano for primary education	23	21	44
118	PMU-2	Music instrument set for primary education	1	1	2
119	PMU-3	CD radio-cassette recorder for primary education	1	1	2
120	PMU-4	Cabinet set for primary education (Music)	1	1	2
Music, lower secondary					
121	LMU-1	Electronic piano for lower secondary education	13	7	20
122	LMU-2	Music instrument set for lower secondary education	1	1	2
123	LMU-3	CD radio-cassette recorder for lower secondary education	1	1	2
124	LMU-4	Cabinet set for lower secondary education	1	1	2
Art, primary					
125	PAT-1	Drawing board for primary education	61	61	122
126	PAT-2	Art desk for student with stool for primary education	12	12	24
127	PAT-3	Art desk for lecturer with stool for primary education	1	1	2
Art, lower secondary					
128	LAT-1	Drawing board for lower secondary education	31	31	62
129	LAT-2	Art desk for student with stool for lower secondary education	6	6	12
130	LAT-3	Art desk for lecturer with stool for lower	1	1	2

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Item	Equipment Name	Planned Quantity			
		Phnom Penh	Battambang	Total	
	secondary education				
Workshop					
131	WOK-1	Processing tool set for woodwork	4	4	8
132	WOK-2	Fabricating equipment for woodwork	4	4	8
133	WOK-3	Worktable with stool	0	2	2
134	WOK-4	Cabinet set	1	1	2
Home Economics					
135	HOE-1	Refrigerator	1	1	2
136	HOE-2	Utensil set	6	6	12
137	HOE-3	Tableware set	31	31	62
138	HOE-4	Sewing machine	6	6	12
139	HOE-5	Sewing kit	31	31	62
140	HOE-6	Torso set	1	1	2
141	HOE-7	Iron	6	6	12
142	HOE-8	Cooking/Clothing table for student	5	5	10
143	HOE-9	Cooking/Clothing table for lecturer	1	1	2
144	HOE-10	Cabinet set for Home Economics	1	1	2
ICT					
145	ICT-1	Computer network system for ICT Lab	2	2	4
146	ICT-2	Laptop computer	4	4	8
147	ICT-3	Computer desk and chair set	4	4	8
148	ICT-4	Printer	4	4	8
149	ICT-5	Projector	4	4	8
Library (ICT for Self-study)					
150	LIB-1	Computer network system for library	1	1	2
151	LIB-2	Computer desk and chair set	1	1	2
152	LIB-3	Printer	2	2	4
Assembly Hall					
153	ASB-1	Sound equipment set	1	1	2
154	ASB-2	Projector	1	1	2
155	ASB-3	White board	2	2	4
Physical Education					
156	PHS-1	Sports equipment set	1	1	2
157	PHS-2	Ball set	1	1	2
First-Aid					
158	FIA-1	Equipment for dispensary room	1	1	2
Auditorium					
159	AUD-1	Projector	2	1	3
160	AUD-2	Sound equipment set	2	2	4
Lecture Room					
161	LEC-1	Projector	12	11	23
162	LEC-2	Screen	12	12	24
Academic Department					
163	ACD-1	Computer network system for department office	9	9	18

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Major Undertakings to be taken by the Royal Government of Cambodia

1. Specific obligations of the Royal Government of Cambodia which will not be funded with the Grant

(1) Before the Tender

NO	Items	Deadline	In charge	Estimated Cost (USD)	Ref.
1	To prepare budget for the Project for FY 2018 and onward	by the end of, July 2017	MoEYS/MEF	---	
2	To open bank account (B/A)	within 1 month after the signing of the G/A	MoEYS/MEF	---	
3	To issue A/P to a bank in Japan (the Agent Bank) for the payment to the consultant	within 1 month after the signing of the contract	MoEYS/MEF	---	
4	To bear the following commissions to a bank in Japan for the banking services based upon the B/A	within 1 month after the signing of the contract	MoEYS/MEF	50~60 per A/P or A/P amend	
	1) Advising commission of A/P 2) Payment commission for A/P	every payment		0.1% of remittance amount (approx. 3,000USD in total)	
5	To approve IEE/EIA (Conditions of approval should be fulfilled, if any) and secure the necessary budget for the implementation of IEE/EIA, if necessary.	within 1 month after the signing of the G/A	MoEYS	---	
6	To secure and clear the following lands 1) Project area: • land clearance • removal of obstacles such as trees, dumped waste, pavement • transferring of statues • rerouting of service utilities • installation of temporary gate (Phnom Penh TEC site) • and others 2) stock yard and route: secure area for material stock and transmission	before notice of the bidding document	MoEYS	97,000	
7	To obtain building permit and permit for demolition of the existing buildings, if necessary	before the notice of bidding document	MoEYS	---	
8	To obtain the certificate of clearance of land mine (To conduct the additional detection survey for the proposed construction areas of Battambang TEC where the previous survey did not cover) If necessary, carry out detection and removal of landmines and unexploded ordnance within the project site (depth 0-2m, 2-4m respectively)	before the commencement of the detailed design works	MoEYS	7,500	
9	To secure alternative facility for temporary transferring the affiliated lower secondary school in Battambang TEC site (the current Battambang RTTC site)	before the notice of bidding documents	MoEYS	To be estimated by MoEYS	
10	To move and store necessary furniture and equipment from the designated buildings (PE-10 in Phnom Penh	before the notice of bidding	MoEYS	---	

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	TEC and BRE-1, 5, 9, 11, 12, 13, 14 in Battambang TEC) which will be demolished by the Japanese side.	documents			
11	To submit Project Monitoring Report (with the result of Detail Design)	before the preparation of bidding documents	MoEYS	---	

(B/A: Banking Arrangement, A/P: Authorization to pay, N/A: Not Applicable)

(2) During the Project Implementation

NO	Items	Deadline	In charge	Estimated Cost (USD)	Ref.
1	To issue A/P to a bank in Japan (the Agent Bank) for the payment to the Contractor(s) and Supplier(s)	within 1 month after the signing of the contract(s)	MoEYS/MEF	---	
2	To bear the following commissions to a bank in Japan for the banking services based upon the B/A	within 1 month after the signing of the contract(s)	MoEYS/MEF	50~60 per A/P or A/P amend (approx. 500USD in total)	
	1) Advising commission of A/P				
	2) Payment commission for A/P	every payment		0.1% of remittance amount (approx. 30,000USD in total)	
3	To ensure prompt unloading and customs clearance at ports of disembarkation in recipient country and to assist the Supplier(s) with internal transportation therein	during the Project	MoEYS/MEF	---	
4	To accord Japanese nationals and/or physical persons of third countries whose services may be required in connection with the supply of the products and the services such facilities as may be necessary for their entry into the country of the Recipient and stay therein for the performance of their work	during the Project	MoEYS	---	
5	To ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the country of the Recipient with respect to the purchase of the products and/or the services be exempted.	during the Project	MoEYS/MEF	---	
6	To bear all the expenses, other than those covered by the Grant, necessary for the implementation of the Project	during the Project	MoEYS	---	
7	To conduct UXO/landmine detection surveys and issuance of clearance certificates for the areas where the existing buildings are demolished by Japanese side for both Phnom Penh TEC site and Battambang TEC site	immediately after demolition works done by Japan side	MoEYS	4,900	
8	To rehabilitate water supply system of the science laboratories of the existing laboratory building in the G-1 campus of Battambang TEC (the current PTTC) necessary for installation of laboratory tables to be installed by the Project.	before delivery of equipment	MoEYS	1,000	
9	1) To submit Project Monitoring Report	1) every month	MoEYS	---	

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	2) To submit Project Monitoring Report (final)	2) within one month after signing of Certificate of Completion for the works under the contract(s)			
10	To submit a report concerning completion of the Project	within six months after completion of the Project	MoEYS	---	
11	To provide facilities for distribution of electricity, water supply and drainage and other incidental facilities necessary for the implementation of the Project outside the site(s)		MoEYS		
	1) Water Supply Change of water supply contract for Phnom Penh TEC only, to merge the separate contracts for the current PTTC/RTTC	1 months before the completion of the construction		---	
	2) Electricity New connection of middle voltage electric power (22kV) to the sites	1 month before the completion of the construction		30,000	
	3) Drainage Connection to public if necessary	1 month before the completion of the construction		---	
	4) Internet New connection of optical fiber for internet	1 month before the completion of the construction		---	
	5) Other incidental facilities	1 month before the completion of the construction		---	

(3) After the Project

NO	Items	Deadline	In charge	Estimated Cost (USD)	Ref.
1	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid 1) Allocation of maintenance cost 2) Operation and maintenance structure 3) Routine check/Periodic inspection	After completion of the construction	MoEYS	Approx. 113,000 (per year)	
2	To allocate lecturers and staffs required for school management	After completion of the construction	MoEYS	Approx 1,260,000 (per year)	

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2. Other obligations of the Royal Government of Cambodia funded with the Grant

This part is closed due to the confidentiality.

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Project Monitoring Report
on
Project Name
Grant Agreement No. XXXXXXXX
20XX, Month

Organizational Information

Signer of the G/A (Recipient)	Person in Charge (Designation) _____ Contacts _____ Address: _____ Phone/FAX: _____ Email: _____
Executing Agency	Person in Charge (Designation) _____ Contacts _____ Address: _____ Phone/FAX: _____ Email: _____
Line Ministry	Person in Charge (Designation) _____ Contacts _____ Address: _____ Phone/FAX: _____ Email: _____

General Information:

Project Title	
E/N	Signed date: Duration:
G/A	Signed date: Duration:
Source of Finance	Government of Japan: Not exceeding JPY _____ mil. Government of (_____): _____

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1: Project Description	
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1-1 Project Objective

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1-2 Project Rationale

- Higher-level objectives to which the project contributes (national/regional/sectoral policies and strategies)
- Situation of the target groups to which the project addresses

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1-3 Indicators for measurement of "Effectiveness"

Quantitative indicators to measure the attainment of project objectives		
Indicators	Original (Yr)	Target (Yr)
Qualitative indicators to measure the attainment of project objectives		

2: Details of the Project

2-1 Location

Components	Original <i>(proposed in the outline design)</i>	Actual
1.		

2-2 Scope of the work

Components	Original* <i>(proposed in the outline design)</i>	Actual*
1.		

Reasons for modification of scope (if any).

(PMR)

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2-3 Implementation Schedule

Items	Original		Actual
	<i>(proposed in the outline design)</i>	<i>(at the time of signing the Grant Agreement)</i>	

Reasons for any changes of the schedule, and their effects on the project (if any)

--

2-4 Obligations by the Recipient

2-4-1 Progress of Specific Obligations

See Attachment 2.

2-4-2 Activities

See Attachment 3.

2-4-3 Report on RD

See Attachment 11.

2-5 Project Cost

2-5-1 Cost borne by the Grant(Confidential until the Bidding)

Components			Cost (Million Yen)	
	Original <i>(proposed in the outline design)</i>	Actual <i>(in case of any modification)</i>	Original ^(1),2) <i>(proposed in the outline design)</i>	Actual
1.				
Total				

Note: 1) Date of estimation:
 2) Exchange rate: 1 US Dollar = Yen

2-5-2 Cost borne by the Recipient

Components			Cost (1,000 Taka)	
	Original <i>(proposed in the outline design)</i>	Actual <i>(in case of any modification)</i>	Original ^(1),2) <i>(proposed in the outline design)</i>	Actual
1.				

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DK

- Note: 1) Date of estimation:
2) Exchange rate: 1 US Dollar =

Reasons for the remarkable gaps between the original and actual cost, and the countermeasures (if any)

(PMR)

2-6 Executing Agency

- Organization's role, financial position, capacity, cost recovery etc,
- Organization Chart including the unit in charge of the implementation and number of employees.

Original (at the time of outline design) name: role: financial situation: institutional and organizational arrangement (organogram): human resources (number and ability of staff):
Actual (PMR)

2-7 Environmental and Social Impacts

- The results of environmental monitoring based on Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).
- The results of social monitoring based on in Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).
- Disclosed information related to results of environmental and social monitoring to local stakeholders (whenever applicable).

3: Operation and Maintenance (O&M)

3-1 Physical Arrangement

- Plan for O&M (number and skills of the staff in the responsible division or section, availability of manuals and guidelines, availability of spareparts, etc.)

Original (at the time of outline design)
Actual (PMR)

3-2 Budgetary Arrangement

- Required O&M cost and actual budget allocation for O&M

Original (at the time of outline design)

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Actual (PMR)

4: Potential Risks and Mitigation Measures

- Potential risks which may affect the project implementation, attainment of objectives, sustainability
- Mitigation measures corresponding to the potential risks

Assessment of Potential Risks (at the time of outline design)

Potential Risks	Assessment
1. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
2. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
3. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:

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Out

	Contingency Plan (if applicable):
Actual Situation and Countermeasures (PMR)	

5: Evaluation and Monitoring Plan (after the work completion)

5-1 Overall evaluation

Please describe your overall evaluation on the project.

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5-2 Lessons Learnt and Recommendations

Please raise any lessons learned from the project experience, which might be valuable for the future assistance or similar type of projects, as well as any recommendations, which might be beneficial for better realization of the project effect, impact and assurance of sustainability.

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5-3 Monitoring Plan of the Indicators for Post-Evaluation

Please describe monitoring methods, section(s)/department(s) in charge of monitoring, frequency, the term to monitor the indicators stipulated in 1-3.

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Attachment

1. Project Location Map
 2. Specific obligations of the Recipient which will not be funded with the Grant
 3. Monthly Report submitted by the Consultant
- Appendix - Photocopy of Contractor's Progress Report (if any)
- Consultant Member List
 - Contractor's Main Staff List
4. Check list for the Contract (including Record of Amendment of the Contract/Agreement and Schedule of Payment)
 5. Environmental Monitoring Form / Social Monitoring Form
 6. Monitoring sheet on price of specified materials (Quarterly)
 7. Report on Proportion of Procurement (Recipient Country, Japan and Third Countries) (PMR (final) only)
 8. Pictures (by JPEG style by CD-R) (PMR (final) only)
 9. Equipment List (PMR (final) only)
 10. Drawing (PMR (final) only)
 11. Report on RD (After project)

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PMR

Monitoring sheet on price of specified materials

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1. Initial Conditions (Confirmed)

	Items of Specified Materials	Initial Volume A	Initial Unit Price (¥) B	Initial total Price C=A×B	1% of Contract Price D	Condition of payment	
						Price (Decreased) E=C-D	Price (Increased) F=C+D
1	Item 1	●●t	●	●	●	●	●
2	Item 2	●●t	●	●	●		
3	Item 3						
4	Item 4						
5	Item 5						

2. Monitoring of the Unit Price of Specified Materials

(1) Method of Monitoring : ●●

(2) Result of the Monitoring Survey on Unit Price for each specified materials

	Items of Specified Materials	1st ●month, 2015	2nd ●month, 2015	3rd ●month, 2015	4th	5th	6th
1	Item 1						
2	Item 2						
3	Item 3						
4	Item 4						
5	Item 5						

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(3) Summary of Discussion with Contractor (if necessary)

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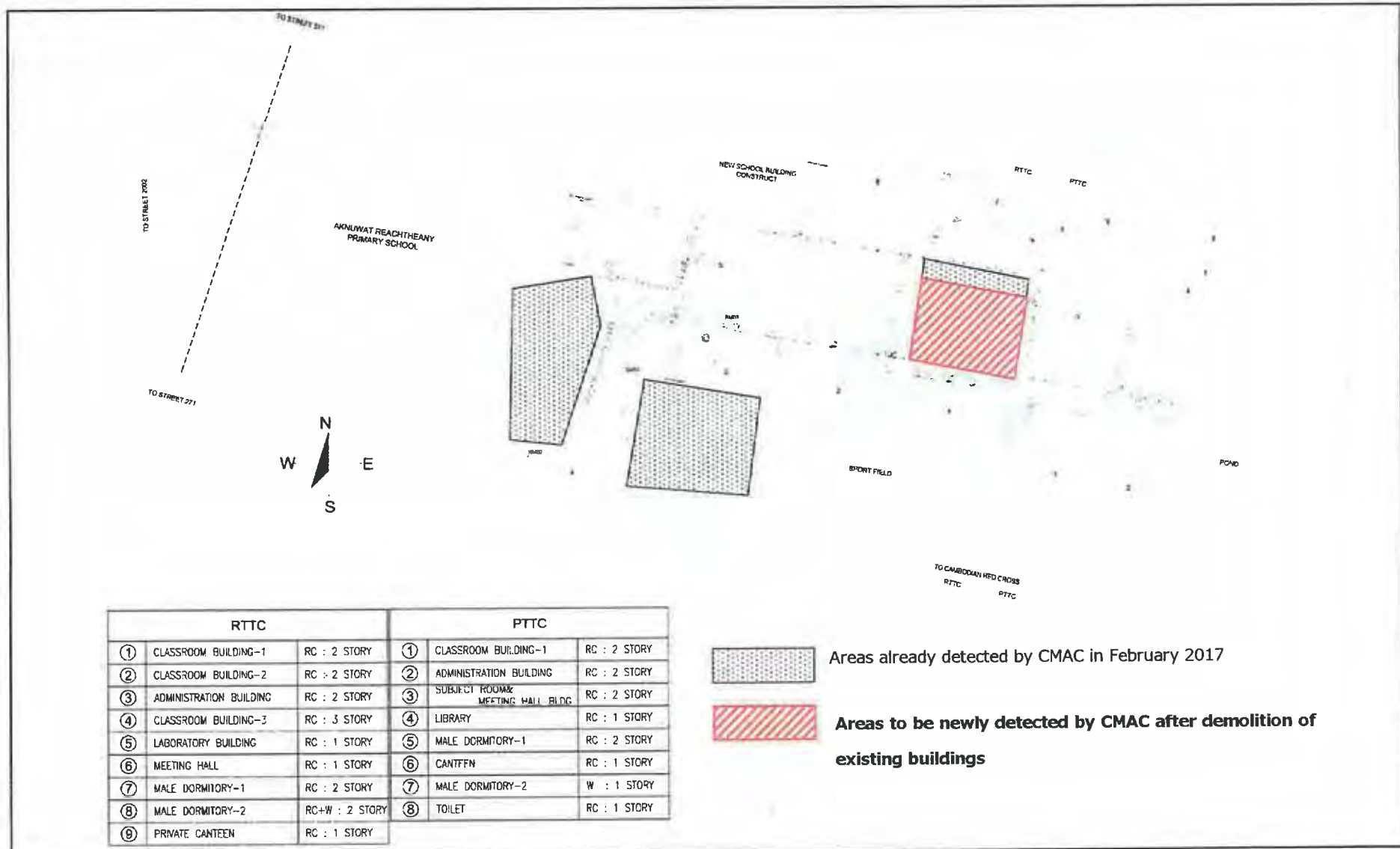
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Report on Proportion of Procurement (Recipient Country, Japan and Third Countries)
 (Actual Expenditure by Construction and Equipment each)

	Domestic Procurement (Recipient Country) A	Foreign Procurement (Japan) B	Foreign Procurement (Third Countries) C	Total D
Construction Cost	(A/D%)	(B/D%)	(C/D%)	
Direct Construction Cost	(A/D%)	(B/D%)	(C/D%)	
others	(A/D%)	(B/D%)	(C/D%)	
Equipment Cost	(A/D%)	(B/D%)	(C/D%)	
Design and Supervision Cost	(A/D%)	(B/D%)	(C/D%)	
Total	(A/D%)	(B/D%)	(C/D%)	

5-1

Areas to be detected by CMAC for Phnom Penh TEC

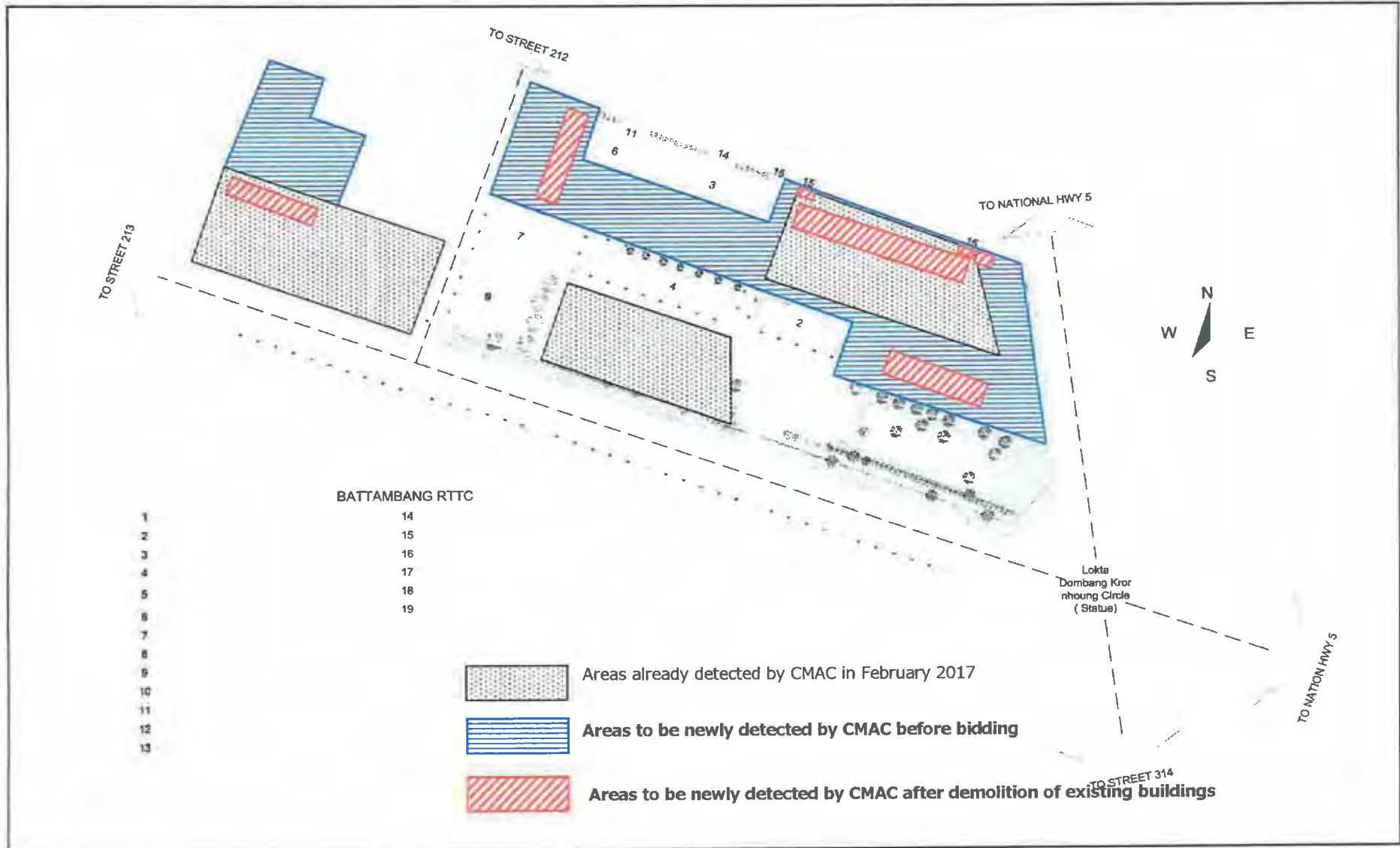


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6-5

Areas to be detected by CMAC for Battambang TEC



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Appendix 4-b Technical Notes (T/N)

(1) Technical Notes (signed on January 13, 2017)

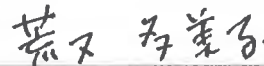
**TECHNICAL NOTES
ON THE PREPARATORY SURVEY FOR
THE PROJECT FOR THE CONSTRUCTION OF TEACHER EDUCATION COLLEGES**

This Technical Notes is made to technically follow up the Minutes of Discussions (hereinafter referred to as “M/D”), which was signed between the Secretary of State of the Ministry of Education, Youth and Sport (hereinafter referred to as “MoEYS”) and the Team Leader of the Preparatory Survey Team (hereinafter referred to as “the Team”) on December 19, 2016. And, this Technical Notes is signed by the MoEYS and the Consultant of the Team. MoEYS understands that this Technical Notes is an unofficial document, and thus some items might be altered depending on further studies in Japan. Both parties agreed on technical matters described in the Attachment.

Phnom Penh, January 13, 2017



H.E. Nath Bunroeun
Secretary of State
Ministry of Education, Youth and Sport
Royal Government of Cambodia
Kingdom of Cambodia



Tamiko Aramata
Deputy Chief Consultant/Architectural Design 2
Preparatory Survey Team
Consortium of Mohri, Architect & Associates, Inc.
and INTEM consulting, Inc.

CC:

H.E. Dr. Hang Chuon Naron, Minister, MoEYS
Dr. Dy Samsideth, Deputy Director-General, TPAP Task Force, MoEYS
Mr. Ngor Penglong, Director of Teacher Training Department, MoEYS
Mr. Vorng Phirun, Construction Department, MoYES
Mr. AP Kheang, Property State Department, MoEYS
Ms. Bo Chankouluka, Legislation Department, MoEYS
Municipal Education Office of Phnom Penh
Provincial Education Office of Battambang
JICA Cambodia Office

ATTACHMENT

1. Preparation for the TEC Establishment

During this survey, it was found that there remain many undecided matters regarding TEC operation, which impede proper planning of facilities and equipment for this project. Hence MoEYS agreed to provide the following information without delay, which are discussed and agreed by the relevant departments including Teacher Training Department, Department of Personnel, Department of Finance, Department of Higher Education, and Department of Planning.

1) Prepared by the end February 2017

- a. List of lower secondary specialised courses to be provided at TEC Phnom Penh and Battambang. Particularly if TECs provide courses to train music and art lower secondary teachers, provide its bases in terms of policy, as well as feasibility from personnel (e.g. deployment) and financial point of views, since only a few numbers of teachers had been trained in the past.
- b. Bases for the needs of home economics labs (cooking, sawing)
- c. Bases for the needs of earth science lab
- d. Finalized list of facilities including type of rooms, capacity, number, objective (Draft found in the Appendix 2)
- e. Conclusion on whether the existing classroom block donated by Tycoon Da Teu Meurk in Battambang RTTC would be dismantled or not, as a result of coordination with the authorities concerned including the ones at provincial level. (Refer to the item 2. 2) b described below.)

2) Prepared by the end March 2017

- a. Target areas of each TEC and teacher demand projection in those areas
- b. Schedule of starting TEC courses
- c. Curriculum Framework for teacher education
- d. TEC organisation chart (Draft found in the Appendix 1¹)
- e. Staffing structure (name of posts and number of people for each department and section)
- f. Operation budget estimates and its feasibility
- g. Transition management plan to merge PTTC/RTTC and upgrade to TEC
- h. Workplan with key actions and target dates
- i. Draft sub-decree for TEC establishment

¹ The organization chart of TEC shown in Appendix 1 is provisionally made in order to study necessary rooms in the Administration Block listed in (5) of Appendix 2. The organization chart of TEC shall be further discussed and determined among MoEYS and be approved as a part of the sub-decree for TEC establishment.

2. Facility Planning

1) Facility Components

Provisional facility components are listed in the Appendix 2. However, if there are any modifications, additions and deletions according to the aforementioned information to be provided by the end of February 2017, the facility components shall be reviewed and reconsidered. Furthermore, the Consultant Team explained and MoEYS understood that the list shown in Appendix 2 is prepared as a full package of each TEC, thus types and numbers of rooms to be constructed by Japan side under the Project will be determined after careful examination of the existing facilities available.

2) Issues to be solved in facility planning

- a. As for the existing science laboratory block in Phnom Penh RTTC constructed by Japan's Grassroots Grant Aid Project in 2008, size of each laboratory is smaller than standard size of the higher education facilities. And major repair work is needed because floor settlement and cracks on walls are identified extensively. Therefore, the Consultant Team suggest that this existing laboratory block is to be used as ordinary classrooms, etc., and to provide new laboratory rooms under this Project. However, due to the necessity of obtaining permission from the Ministry of Foreign Affairs of Japan for the change of function of the existing block, the Japanese side will take a necessary action for it.
- b. It was observed that the existing classroom block in Battambang RTTC, which was donated by Tycoon Da Teu Meurk in 1965 is undergoing aging, and that some concrete on pillars and ceilings are peeled off, rusted reinforcing bars are exposed, and many cracks are appeared on walls. Thus, it is considered that the service life of the building has passed. Furthermore, the ground floor level is very low and the flood water come into the rooms frequently in rainy seasons. Therefore, dismantling this block is suggested. However, because dismantling of this block cannot be made without the authorities concerned including the ones at provincial level, the MoEYS will take an action to coordinate with the concerned parties.
- c. Eastern site of Battambang RTTC will be planned as TEC academic zone, and 2 existing dormitories shall be dismantled or changed their use. And students life zone will be concentrated to the western site of RTTC. Together with 2 existing dormitories in Battambang PTTC site, the target ratio of boarding students is recognized as 50 to 60% of total number of students of Battambang TEC (700 to 840 boarders). In order to realize this, the introduction of bunk beds is necessary due to limited construction area.

3. Equipment Planning

- 1) The Team will plan the procurement of equipment based on the requested equipment list, selection criteria agreed and confirmed in the M/D, and status of the existing equipment of the

four institutions (RTTC and PTTC of Phnom Penh and Battambang) where the Consultant Team has conducted the field survey. Provisional equipment list for this Project is shown in Appendix 3. Furthermore, the Consultant Team explained and MoEYS understood that the list shown in Appendix 3 is prepared as a full package of each TEC, thus types and numbers of equipment to be procured by Japan side under the Project will be determined after careful examination of the existing equipment available.

- 2) The equipment plan will be made by further analysis conducted in Japan based on the information collected through the field survey.
- 3) However, if there are changes, additions, reductions, etc. in contents according to the information prepared by the end of February 2017 as mentioned above, the plan will be reviewed and reconsidered.

4. Major Undertakings to be taken by Cambodian side

1) Infrastructure connection

a. Electricity connection

It is necessary to unify the power meters of PTTC and RTTC which are currently independent. Also, because the power consumption will increase significantly after the completion of this Project, it is necessary to coordinate with the local electric departments, including determination on necessity of upgrading contract amperage and transformer installation.

b. Water supply connection

It is necessary to unify the water meters of PTTC and RTTC which are currently independent. Along with the significant increase in water usage, coordinating with the water bureau including determination on necessity of expansion of the water pipe diameter.

2) Tax exemption

This Project is exempt from tax. Tax exemption of contractor(s) is carried out according to the following policies.

a. Import tax

A contractor will acquire an import tax exemption certificate from the GDCE in the following sequence.

Contractor → MoEYS → CDC → GDT → GDCE

b. VAT

A contractor will acquire a VAT exemption certificate from GDT according to the following procedure.

Contractor → MoEYS → GDT → MEF → GDT

On the other hand, with regard to subcontractors, a system is established in which the amount equivalent to the VAT of the subcontract contract amount is deducted from the periodic payment to the taxation authority.

Notes: MEF: Ministry of Economy and Finance

CDC: Council of Development of Cambodia

GDT: General Department of Taxation

GDCE: General Department of Customs and Excise

3) Building Permit

MoEYS understood that building permits for both Phnom Peng and Battambang TECs shall be obtained by MoEYS. The procedures and time schedule for building permits shall be informed by MoEYS to Japan side by the end of February, 2017, after consultation and coordination among Teacher Training Department, Construction Department and Property State Department of MoEYS as well as Municipal Education Office of Phnom Penh and Provincial Education Office of Battambang.

4) Environmental Impact Assessment (EIA) / Initial Environmental Examination (IEE)

While it is recognized that the Project will be categorized as “C” in accordance with the JICA Guidelines for Environmental and Social Considerations (April 2010) as confirmed in the M/D, it is necessary to check with the environmental laws and regulations of Cambodia for confirmation. MoEYS agreed to submit information in reference to the environmental laws and regulations to Japan side by the end of February, 2017.

5) Land mine certificate

MoEYS understood that the land mine clearance certificates for both Phnom Peng and Battambang TECs shall be obtained by MoEYS. The procedures and time schedule for the land mine clearance certificates shall be informed by MoEYS to Japan side by the end of February, 2017, after consultation and coordination among Teacher Training Department, Construction Department and Property State Department of MoEYS as well as Municipal Education Office of Phnom Penh and Provincial Education Office of Battambang.

6) Land certificate

MoEYS agreed to submit copies of the land certificates for both Phnom Peng and Battambang TEC compounds to Japan side by the end of February, 2017.

5. Policies for Procurement (Provisional)

Procurement policies, such as combination of bidding/contract lots, for the Project will be studied and determined after further studies in Japan based on the results obtained through the field survey, while the following policies are tentatively assumed.

- 1) Building construction will be conducted based on simultaneous construction of two TECs by one contract lot.
- 2) Building construction and furniture procurement will be conducted under the same contract lot.
- 3) Equipment will be procured and installed based on one contract lot for two TECs.

6. Tentative Schedule after Preparatory Survey (In case of Cabinet approval in November)

Stage/Event	Scheduled Month
Cabinet approval	November, 2017
E/N, G/A	December, 2017
Consultant Agreement	January, 2018
Detail Design	January, 2018 – July, 2018
PQ – Tender	August, 2018 – October, 2018
Construction	November, 2018 – April, 2020

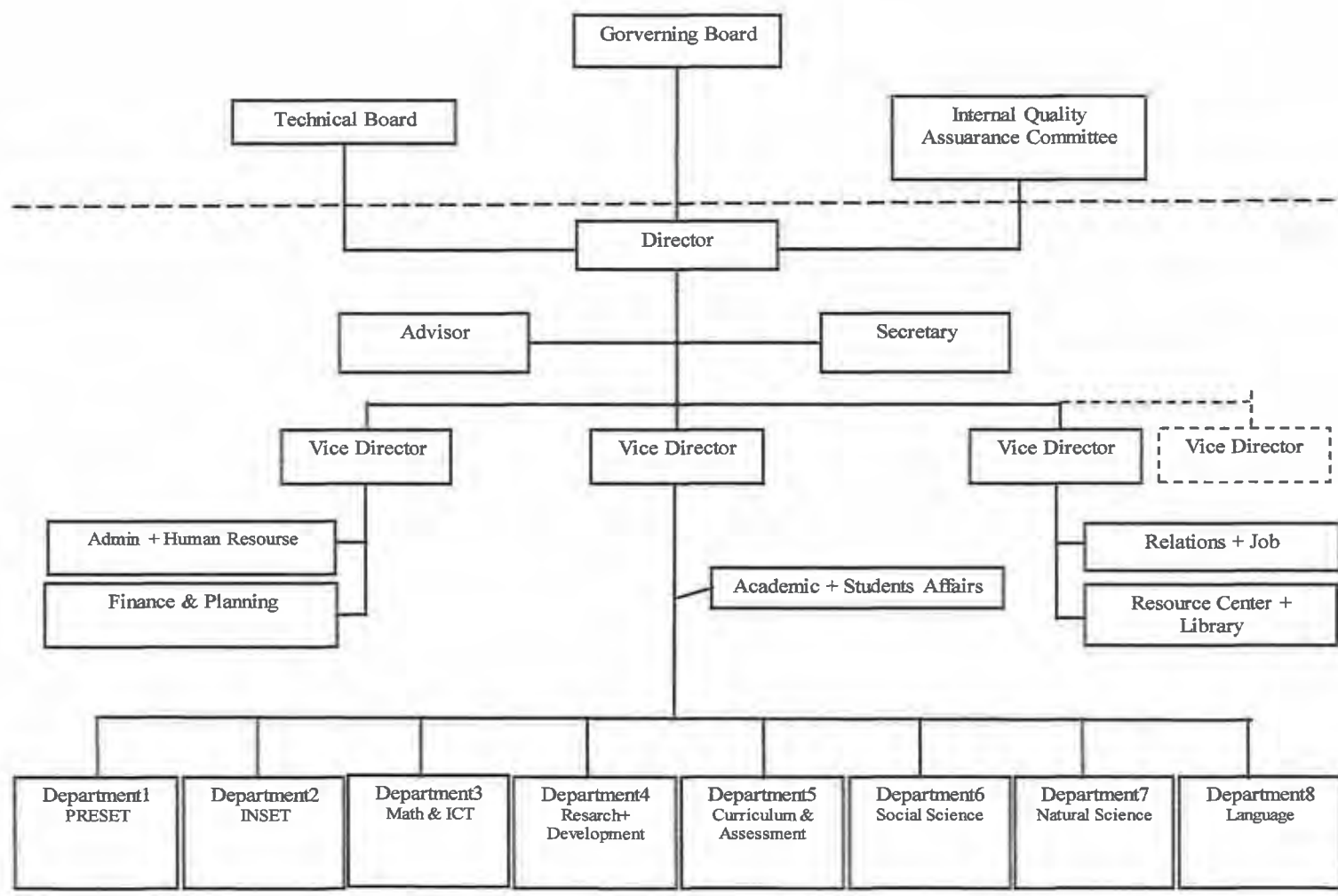
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Appendix 1 : Provisional Organization chart for TEC

TEC Organization Chart



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Appendix 2 : Provisional Facility Component Plan

(1) Academic block

Type	Capacity	Qty	Description
Auditorium	120	2	Sloped floor
Lecture room	30	36	Number of lecture rooms to be constructed = Necessary number of lecture rooms (36) – Number of usable existing lecture rooms No additional lecture rooms for PP TEC and 12 new lecture rooms for BB TEC
Research room	15-20	6	
Department office	10	7	

(2) Special room block

Type	Capacity	Qty	Description
Science lab (primary)	30	2	Types and numbers of laboratories may be reconsidered as a result of further analysis in Japan, based on the information provided by MoEYS by the end of February, 2017. Possibility of shared use of labs by primary and secondary will be discussed and determined respectively in case of Phnom Penh TEC and Battambang TEC, in considerations with the site conditions of each TEC together with the results of the educational analysis. Basis of the earth science lab shall be confirmed.
Math/physics lab (secondary)	30	1	
Chemistry lab (secondary)	30	1	
Biology lab (secondary)	30	1	
Earth science lab (secondary)	30	1	
Music room (primary)	60	1	Types and numbers of music room and/or art room may be reconsidered as a result of further analysis in Japan, based on the information provided by MoEYS by the end of February, 2017. Possibility of shared use of music or art rooms by primary and secondary will be discussed and determined respectively in case of Phnom Penh TEC and Battambang TEC, in considerations with the site conditions of each TEC together with the results of the educational analysis.
(secondary)	30	1	
Art room (primary)	60	1	
(secondary)	30	1	
Workshop	30	1	
Home economics (cooking and sawing)	30	1	Basis of HE shall be confirmed. Cooking and sawing can be learned in the same room.
ICT	30	3→4	Instead of LL lab, one ICT shall be added.

(3) Library block

Type	Capacity	Qty	Description
Library		1	
Study space	100	-	
ICT for self-study	30	1	
Library office	5	1	

(4) Assembly hall

Type	Capacity	Qty	Description
Assembly Hall	500-600	1	Equipped with stage, foyer, dressing room, storage, toilet, stacking chares and etc.

(5) Administration block

Type	Capacity	Qty	Description
Director		1	The rooms of the administration block were set based on the provisional organization chart of TEC shown in Appendix 1.
Vice Director		4	
Advisor and secretary	5	1	
Admin, human resource, finance and planning	15	1	
Academic, students affaires, relations and job	15	1	
Archive room		1	
Meeting room (large)	30	1	
Meeting room (small)	15	1	
First-aid room		1	

(6) Student block

Type	Capacity	Qty	Description
Cafeteria		0	Existing cafeteria shall be used
Dormitory	16	36	Only for BB TEC. Each roomed are equipped with bunk beds, lockers meeting table and chairs. Bath and toilet, cooking room, washing room, etc.

(7) General

Type	Capacity	Qty	Description
Toilet			Qty is according to the number of users
Storage			

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Appendix 3 Provisional Equipment Plan

Science Lab Equipment for Primary Education		Phnom Penh TEC		Battambang TEC	
		Q'ty	Priority	Q'ty	Priority
1	Scale balance	33	A	33	A
2	Electronic balance	9	A	9	A
3	Thermograph	1	A	1	A
4	DC ammeter	9	A	9	A
5	DC voltmeter	9	A	9	A
6	Magnetizing coil	1	A	1	A
7	Aquarium set	1	A	1	A
8	Astronomical telescope	1	A	1	A
9	Lunar globe	1	C	1	C
10	Solar light source apparatus	1	C	1	C
11	Tripartite model	1	A	1	A
12	Binoculars	13	A	13	A
13	Pendulum apparatus	6	A	6	A
14	Instrument shelter	1	A	1	A
15	Experimental lever	33	A	33	A
16	Air extraction kit	33	A	33	A
17	Microscope	33	A	33	A
18	Binocular stereomicroscope	33	A	33	A
19	Chemical locker	1	A	1	A
20	Iron support	13	A	13	A
21	DC power supply	9	A	9	A
22	Desktop cork borer	1	C	1	C
23	Igneous rock specimens	9	A	9	A
24	Sedimentary rock specimens	9	A	9	A
25	Fossil specimens	9	A	9	A
26	Pyroclastic form specimens	9	A	9	A
27	Arm joint model	9	A	9	A
28	Skelton model of human body	1	A	1	A
29	Anatomical model of human body	1	A	1	A
30	Glass tool set	9	A	9	A
31	Experimental tool set	9	A	9	A
32	Laboratory table for student	6	A	6	A
33	Laboratory table for teacher	1	A	1	A
34	Stool	30	A	30	A
35	Chair	1	A	1	A
36	Pulley	30	B	30	B
37	Laptop computer	2	A	2	A
38	Projector	2	A	2	A
39	Cabinet set	1	A	1	A

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Mathematics Equipment for Primary Education		Phnom Penh TEC		Battambang TEC	
		Q'ty	Priority	Q'ty	Priority
40	Plotting blackboard	1	B	1	B
41	Triangle set for blackboard	1	B	1	B
42	Ruler set for blackboard	1	B	1	B
43	Compass for blackboard	1	A	1	A
44	Protractor for blackboard	1	B	1	B
45	Calculation practice card for demonstration	1	B	1	B
46	Tape for explanation	1	B	1	B
47	number line sheet	1	B	1	B
48	Explanation kit for fraction (apple model)	1	C	1	C
49	Explanation kit for fraction (circular model)	1	C	1	C
50	Explanation kit for scale reading	1	C	1	C
51	Explanation kit for metric measurement	1	C	1	C
52	Explanation kit for superficial measure of triangle and tetragon	1	A	1	A
53	Weight set	1	A	1	A
54	Explanation kit for polygon	1	A	1	A
55	Explanation kit for sum of the internal angles	1	A	1	A
56	Diagram congruity model	18	B	18	B
57	Teaching board for line plot/graph	1	C	1	C
58	Teaching board for circle/pie graph	1	C	1	C
59	Teaching board for band/column graph	1	C	1	C
60	Teaching board for histogram/bar chart	1	C	1	C
61	Teaching board for graph of proportion and inverse proportion	1	C	1	C
62	Study kit for volume	18	A	18	A
63	Liter square/measure	18	A	18	A
64	Diagram congruity model	18	B	18	B
65	Cabinet set	1	A	1	A
Social Study Equipment for Primary Education		Phnom Penh TEC		Battambang TEC	
		Q'ty	Priority	Q'ty	Priority
66	World map	1	A	1	A
67	Southeast Asia map	1	A	1	A
68	Cambodia map	1	A	1	A
69	Globe	6	A	6	A
Mathematics and Physics Equipment for Lower Secondary Educati		Phnom Penh TEC		Battambang TEC	
		Q'ty	Priority	Q'ty	Priority
70	Plotting blackboard	1	B	1	B
71	Triangle set for blackboard	1	B	1	B
72	Ruler set for blackboard	1	B	1	B
73	Compass for blackboard	1	A	1	A
74	Protractor for blackboard	1	B	1	B
75	Development model of formula	1	A	1	A
76	Diagram congruity model	13	B	13	B
77	Plane parallel study apparatus	13	A	13	A
78	Solid model	13	A	13	A

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79	Three dimensional model	13	A	13	A
80	Pythagorean theorem experiment kit	13	A	13	A
81	Graph calculator	26	C	26	C
82	Electronic balance	9	A	9	A
83	Experimental apparatus of slope	9	A	9	A
84	Dynamic movement apparatus	1	A	1	A
85	Pulley	1	A	1	A
86	Dolly	9	A	9	A
87	Vacuum apparatus for falling experiment	1	A	1	A
88	Experimental apparatus for dynamics (slope)	1	A	1	A
89	Stroboscope	1	A	1	A
90	Semiconductor laser	1	A	1	A
91	Optical bench and experimental apparatus	1	A	1	A
92	School Oscilloscope	1	A	1	A
93	Tuning fork for resonance	1	A	1	A
94	Low wave generator	1	A	1	A
95	Resonant apparatus in the air column	1	A	1	A
96	Vacuum apparatus with bell	1	A	1	A
97	Primary and secondary coils	9	A	9	A
98	DC AC power supply	9	A	9	A
99	Magnetizing coil	1	A	1	A
100	Induction coils	1	A	1	A
101	Cross vacuum gauge	1	A	1	A
102	Discharge tube	1	A	1	A
103	Crookes tubes	1	A	1	A
104	High voltage generator for discharge tube	1	A	1	A
105	Variable autotransformer	1	A	1	A
106	Ferrite magnetic motor for experiment	1	A	1	A
107	Electric magnet	1	A	1	A
108	Study plate of electricity for blackboard	1	A	1	A
109	Van de Graaff generator	1	A	1	A
110	Experimental apparatus for dynamics (with pendulum)	9	A	9	A
111	Collision balls	1	A	1	A
112	Experimental apparatus for energy conversion	1	A	1	A
113	Laboratory table for student (Physics)	6	A	6	A
114	Laboratory table for teacher (Physics)	1	A	1	A
115	Stool	30	A	30	A
116	Chair	1	A	1	A
117	Laptop computer	1	A	1	A
118	Projector	1	A	1	A
119	Cabinet set	1	A	1	A

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Chemistry Lab Equipment for Lower Secondary Education		Phnom Penh TEC		Battambang TEC	
		Q'ty	Priority	Q'ty	Priority
120	Magnetic stirrer	9	A	9	A
121	Chemical locker	6	A	6	A
122	Refrigerator-Freezer	1	B	1	B
123	Desktop cork borer	6	C	6	C
124	Rotary vacuum pump	1	A	1	A
125	Fume cupboard	2	C	2	C
126	Iron support	33	A	33	A
127	Glass tool set	9	A	9	A
128	Experimental tool set	9	A	9	A
129	Laboratory table for student (Chemistry)	6	A	6	A
130	Laboratory table for teacher (Chemistry)	1	A	1	A
131	Stool	30	A	30	A
132	Chair	1	A	1	A
133	Laptop computer	1	A	1	A
134	Projector	1	A	1	A
135	Cabinet set	1	A	1	A
Biology Lab Equipment for Lower Secondary Education		Phnom Penh TEC		Battambang TEC	
		Q'ty	Priority	Q'ty	Priority
136	Aquarium set	1	A	1	A
137	Mendel's laws experiment machine	9	A	9	A
138	Microscope	33	A	33	A
139	Binocular stereomicroscope	33	A	33	A
140	Digital microscope	1	A	1	A
141	Digital binocular stereomicroscope	1	A	1	A
142	Microscope for researchers/mineralogy	1	A	1	A
143	Magnifying mirror with polarization	33	A	33	A
144	Digital camera system for microscope	1	A	1	A
145	Microscope cabinet	4	A	4	A
146	Laboratory wagon	2	A	2	A
147	Drying oven	1	C	1	C
148	Cylinder microtome	9	B	9	B
149	Magnifier for field	1	A	1	A
150	Binoculars(high spec model)	1	A	1	A
151	Sedimentary rock specimens	1	A	1	A
152	Igneous rock specimens	1	A	1	A
153	Mineral specimens	1	A	1	A
154	Rock-forming mineral specimens	1	A	1	A
155	Specimens of fossil animals	1	A	1	A
156	Specimens of fossil plants	1	A	1	A
157	Index fossil specimens	1	A	1	A
158	Skelton of vertebrates	1	A	1	A
159	Anatomy of Vertebrate specimens	1	A	1	A
160	Anatomy of invertebrate specimens	1	A	1	A

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161	Mitosis model	1	A	1	A
162	Anatomical model of human body	1	A	1	A
163	Heart model	1	A	1	A
164	Skelton model of human body	1	A	1	A
165	Eyeball model	1	A	1	A
166	Ear model	1	A	1	A
167	Brain model	1	A	1	A
168	Pumping heart model	1	A	1	A
169	Kidney model	1	A	1	A
170	Arm joint model	1	A	1	A
171	Model of respiratory organs	1	A	1	A
172	Laboratory table for student (Biology)	6	A	6	A
173	Laboratory table for teacher (Biology)	1	A	1	A
174	Stool	30	A	30	A
175	Chair	1	A	1	A
176	Laptop computer	1	A	1	A
177	Projector	1	A	1	A
178	Cabinet set	1	A	1	A
Earth Science Lab Equipment for Lower Secondary Education		Phnom Penh TEC		Battambang TEC	
		Q'ty	Priority	Q'ty	Priority
179	Tripartite model	1	A	1	A
180	Astronomical telescope	1	A	1	A
181	Moon model	1	A	1	A
182	Transparent celestial globe	1	A	1	A
183	Aneroid barometer	1	A	1	A
184	Rain gauge	1	A	1	A
185	Weather observation system	1	C	1	C
186	Experimental apparatus for front models	1	C	1	C
187	Thermograph	1	A	1	A
188	Instrument shelter	1	A	1	A
189	Weather chart blackboard	6	C	6	C
190	Experimental vacuum apparatus	1	A	1	A
191	Magdeburg hemispheres	1	A	1	A
192	Luxmeter/illuminometer	1	C	1	C
193	Radiation detector	1	C	1	C
194	Laboratory table for student (Earth Science)	6	A	6	A
195	Laboratory table for teacher (Earth Science)	1	A	1	A
196	Stool	30	A	30	A
197	Chair	1	A	1	A
198	Laptop computer	1	A	1	A
199	Projector	1	A	1	A
200	Cabinet set	1	A	1	A

Social Study Equipment for Lower Secondary Education		Phnom Penh TEC		Battambang TEC	
		Q'ty	Priority	Q'ty	Priority
201	World map	1	A	1	A
202	Southeast Asia map	1	A	1	A
203	Cambodia map	1	A	1	A
204	Globe	6	A	6	A
Music Education Instruments and Equipment for Primary Education		Phnom Penh TEC		Battambang TEC	
		Q'ty	Priority	Q'ty	Priority
205	Electronic piano	31	A	31	A
206	Chair	61	A	61	A
207	Desk for teacher	1	A	1	A
208	Chair for teacher	1	A	1	A
209	Percussion instrument set	31	A	31	A
210	CD radio-cassette recorder	1	A	1	A
211	Metronome	31	A	31	A
Music Education Instruments and Equipment for Lower Secondary Education		Phnom Penh TEC		Battambang TEC	
		Q'ty	Priority	Q'ty	Priority
212	Electronic piano	16	A	16	A
213	Chair	31	A	31	A
214	Desk for teacher	1	A	1	A
215	Chair for teacher	1	A	1	A
216	Percussion instrument set	16	A	16	A
217	CD radio-cassette recorder	1	A	1	A
218	Metronome	16	A	16	A
Art Education Equipment for Primary Education		Phnom Penh TEC		Battambang TEC	
		Q'ty	Priority	Q'ty	Priority
219	Drawing board	61	A	61	A
220	Art desk for student	12	A	12	A
221	Art desk for teacher	1	A	1	A
222	Stool	60	A	60	A
223	Chair	1	A	1	A
Art Education Equipment for Lower Secondary Education		Phnom Penh TEC		Battambang TEC	
		Q'ty	Priority	Q'ty	Priority
224	Drawing board	31	A	31	A
225	Art desk for student	6	A	6	A
226	Art desk for teacher	1	A	1	A
227	Stool	30	A	30	A
228	Chair	1	A	1	A
Technical Arts Education Equipment for Primary Education		Phnom Penh TEC		Battambang TEC	
		Q'ty	Priority	Q'ty	Priority
229	Tool set for woodwork	33	A	33	A
230	Screw driver set	33	A	33	A
231	Electric jig saw	2	B	2	B
232	Bench-top drilling machine	2	B	2	B
233	Belt disc sander	2	B	2	B

234	Worktable for teacher	1	A	1	A
235	Worktable for student	6	A	6	A
236	Vise for woodwork	12	A	12	A
237	Stool	30	A	30	A
238	Chair	1	A	1	A
239	Scroll Saw	3	A	3	A
240	Corded electric hand drill	2	A	2	A
241	Hand drill	6	A	6	A
242	Wood file	10	A	10	A
243	Electric saw set	1	A	1	A
Workshop Equipment		Phnom Penh TEC		Battambang TEC	
		Q'ty	Priority	Q'ty	Priority
244	Tool set for woodwork	33	A	33	A
245	Screw driver set	33	A	33	A
246	Electric jig saw	2	B	2	B
247	Bench-top drilling machine	2	B	2	B
248	Belt disc sander	2	B	2	B
249	Worktable for teacher	1	A	1	A
250	Worktable for student	6	A	6	A
251	Vise for woodwork	12	A	12	A
252	Stool	30	A	30	A
253	Chair	1	A	1	A
254	Scroll Saw	3	A	3	A
255	Corded electric hand drill	2	A	2	A
256	Hand drill	6	A	6	A
257	Wood file	10	A	10	A
258	Electric saw set	1	A	1	A
Home Economics Equipment for Lower Secondary Education		Phnom Penh TEC		Battambang TEC	
		Q'ty	Priority	Q'ty	Priority
274	Refrigerator	1	B	1	B
275	Pot set	7	A	7	A
276	Utensil set	7	A	7	A
277	Stand for cutting board	1	A	1	A
278	Scale	7	A	7	A
279	Tableware set	31	A	31	A
259	Sewing machine	31	A	31	A
260	Lock sewing machine	2	B	2	B
261	Sewing kit	31	A	31	A
262	Ruler set for sewing	31	A	31	A
263	Torso set	6	B	6	B
268	Iron	16	A	16	A
269	Ironing board	16	A	16	A
270	Washing machine	1	B	1	B
271	Cooking/Clothing table for student	6	A	6	A
272	Cooking/Clothing table for teacher	1	A	1	A

273	Gas cooker	7	A	7	A
266	Stool	30	A	30	A
267	Chair	1	A	1	A
ICT Laboratory Equipment		Phnom Penh TEC		Battambang TEC	
		Q'ty	Priority	Q'ty	Priority
282	Computer network system for ICT Lab.	4	A	4	A
283	Computer desk and chair set	1	A	1	A
284	Printer	4	A	4	A
285	Projector	4	A	4	A
286	Screen	4	A	4	A
Library Equipment		Phnom Penh TEC		Battambang TEC	
		Q'ty	Priority	Q'ty	Priority
287	Computer network system for library	1	A	1	A
288	Computer desk and chair set	1	A	1	A
289	Printer	2	A	2	A
Assembly Hall Equipment		Phnom Penh TEC		Battambang TEC	
		Q'ty	Priority	Q'ty	Priority
290	Sound equipment set	1	A	1	A
291	Projector	1	A	1	A
292	Screen	1	A	1	A
293	White board	2	A	2	A
Physical Education Equipment		Phnom Penh TEC		Battambang TEC	
		Q'ty	Priority	Q'ty	Priority
294	Exercise equipment set	1	B	1	B
295	Soccer ball/football	10	A	10	A
296	Volleyball	10	A	10	A
297	Cage for ball keeping	3	A	3	A
298	Inflator/air pump	3	A	3	A
299	Basket ball	10	A	10	A
Dispensary Equipment (First Aid Room)		Phnom Penh TEC		Battambang TEC	
		Q'ty	Priority	Q'ty	Priority
300	Bed	3	B	3	B
301	Bed clothing set	3	B	3	B
302	Examination table	1	A	1	A
303	Height scale	1	A	1	A
304	Weight scale	1	A	1	A
305	Sphygmomanometer	1	A	1	A
306	Medicine cabinet	1	A	1	A
307	Refrigerator for medicine	1	A	1	A
308	Autoclave	1	A	1	A
309	Dressing cart	1	A	1	A
310	Examination equipment set	1	A	1	A
311	Cast	1	A	1	A
312	Sanitary box	1	A	1	A
313	Desk	1	A	1	A

314	Chair	1	A	1	A
315	Stool	1	A	1	A
Auditorium		Phnom Penh TEC		Battambang TEC	
		Q'ty	Priority	Q'ty	Priority
316	Projector	2	A	2	A
317	Screen	2	A	2	A
318	Sound equipment set	2	A	2	A
Academic Department Office		Phnom Penh TEC		Battambang TEC	
		Q'ty	Priority	Q'ty	Priority
319	Computer network system for academic department office	1	A	1	A
Administration Office		Phnom Penh TEC		Battambang TEC	
		Q'ty	Priority	Q'ty	Priority
320	Computer network system for administration office	1	A	1	A

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(2) Technical Notes No. 2 (signed on March 16, 2017)

TECHNICAL NOTES No.2
ON THE PREPARATORY SURVEY FOR
THE PROJECT FOR THE CONSTRUCTION OF TEACHER EDUCATION COLLEGES

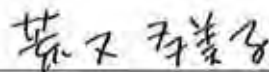
From December 2016 to January 2017, Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched the Preparatory Survey Team (hereinafter referred to as "the Team") for the Outline Design of the Project for the Construction of Teacher Education Colleges (hereinafter referred to as "the Project") to the Kingdom of Cambodia (hereinafter referred to as "Cambodia"), and the Minutes of Discussions (hereinafter referred to as "M/D") was signed on December 19, 2016 by and between the Ministry of Education, Youth and Sport (hereinafter referred to as "MoEYS") and JICA, and the Technical Notes (hereinafter referred to as "T/N 1") was signed on January 13, 2017 by and between MoEYS and the consultant team of the Team (hereinafter referred to as "the Consultant").

During further study and analysis in Japan, JICA decided to conduct the additional Preparatory Survey and dispatch the Consultant to Cambodia from March 9 to 16, 2017. The Consultant held a series of discussions with the officials of MoEYS and conducted field surveys. In the course of discussions, both sides have confirmed the main items described in the attached sheets.

Phnom Penh, March 16, 2017



H.E. Nath Bunroeun
Secretary of State
Ministry of Education, Youth and Sport
Royal Government of Cambodia
Kingdom of Cambodia



Tamiko Aramata
Deputy Chief Consultant/Architectural Design 2
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and INTEM consulting, Inc.

CC:

H.E. Dr. Hang Chuon Naron, Minister, MoEYS
Dr. Dy Samsideth, Deputy Director-General, TPAP Task Force, MoEYS
Mr. Ngor Penglong, Director of Teacher Training Department, MoEYS
Mr. Vorng Phirun, Director of Construction Department, MoEYS
Mr. AP Kheang, Director of Property State Department, MoEYS
Mr. Sorn Senghok, Director of Legislation Department, MoEYS
JICA Cambodia Office

ATTACHMENT

1. Confirmation of Updated Information on Preparation for the TEC Establishment
 - 1) Both sides discussed on the updated information provided by MoEYS regarding the items a. to e. listed under 1. 1) of the attachment in the T/N 1, which were requested to submit to Japan side by the end of February, 2017. The Consultant expressed his appreciation to MoEYS's great efforts in this regards, while the Consultant requested and MoEYS agreed to provide additional information on some of the items listed below by the end of March, 2017.
 - a. Policy, vision or plan for allocation of lecturers in music and art in lower secondary teacher education and its financial background, which can justify necessity of a music room and an art room dedicated for lower secondary teacher education in each Teacher Education College (hereinafter referred to as "TEC").
 - b. Vision or plan for utilization of workshops and information to justify necessity of two workshops in each TEC.
 - c. Written document which proves a consensus among the concerned parties on demolition of the existing classroom block donated by Tycoon Da Teu Meurk in Battambang RTTC¹.
 - 2) The Consultant reminded and MoEYS agreed that the following items a. to h., which were listed under 1. 2) of the attachment in the T/N 1, shall be submitted to Japan side by the end of March, 2017.
 - a. Target areas of each TEC and teacher demand projection in those areas
 - b. Schedule of starting TEC courses
 - c. Curriculum Framework for teacher education
 - d. TEC organisation chart
 - e. Staffing structure (name of posts and number of people for each department and section)
 - f. Operation budget estimates and its feasibility
 - g. Transition management plan to merge PTTC²/RTTC and upgrade to TEC
 - h. Workplan with key actions and target dates

¹ Regional Teacher Training Centre

² Provincial Teacher Training Centre

2. Facility Planning

1) Required Rooms for the New TECs

Based on the updated facility list provided by MoEYS, the types and numbers of rooms to be provided for each TEC of Phnom Penh and Battambang were confirmed as shown in the column (a) in the Appendix 1.

2) Utilization Plan of the Existing Facilities

Through the series of discussions as well as the field surveys, both sides agreed the utilization plans of existing buildings, including change of functions of some buildings and rooms, for both TECs of Phnom Penh and Battambang. Types and numbers of the existing rooms available for the new TECs are shown in the column (b) in the Appendix 1, while the current and proposed use of buildings and rooms are figured in the Appendix 2 and 3.

Both sides agreed that some of the existing buildings need minor rehabilitation for beautification and upgrading, and it has been confirmed in the M/D that the rehabilitation works for the existing buildings shall be undertaken by Cambodia side. MoEYS requested and the Consultant agreed that the rough cost estimation will be studied by the Consultant and explained to MoEYS when a mission is dispatched for a draft Preparatory Survey Report, which is scheduled in August, 2017.

3) Demolition of the Aged Existing Buildings

Both sides agreed that the aged existing buildings, which interfere the new building construction, shall be demolished. The buildings to be demolished are shown in the Appendix 2. MoEYS explained that the approval of demolition of such buildings were in process. The Consultant requested and MoEYS agreed that the written document which proves an agreement of Cambodia side for demolition shall be submitted to Japan side as soon as practical, but by the time of a mission despatched for a draft Preparatory Survey Report scheduled in August, 2017.

MoEYS explained to Japan side that the governmental process to obtain necessary budget for the building demolition works may take at least two years due to long procedure within the Ministry of Economy and Finance. The Consultant acknowledged the information and explained to MoEYS that it will be discussed with JICA headquarters. The buildings regarded as obstacles for the construction works of the Project may be demolished by Japan side, if the decision is made among Japan side, in consideration of smooth implementation of the Project.

4) Operational Plan of Two Separate Sites of Battambang TEC

Since the Battambang TEC will have two separated sites, currently used as PTTC and RTTC, the operational plan for the two sites under the new TEC were discussed by the both sides. The Consultant proposed and MoEYS adopted that the current PTTC where fully occupied by the existing buildings and with no space for new construction will be used for TEC Year 1 for both primary and lower secondary teacher education. This decision is made because the existing rooms in PTTC can

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be suitable for Year 1 basically programmed for foundation courses, while specialized functions will be needed for the facilities within the RTTC site to be used by Year 2 to 4.

Necessary types and numbers of rooms for Year 2 to 4 of Battambang TEC shall be calculated differently from the ones of Phnom Penh TEC taking into account the college operation in two separate sites.

5) Facility Components to be Provided by the Project

Based on the discussions made for the items 1) to 4) mentioned above, the facility components to be provided by the Project were determined as shown in the column (c) of the Appendix 1 with priorities. Floor plans of the proposed buildings are shown in the Appendix 4.

As confirmed in the M/D, the final scope of the Project will be decided by the Government of Japan as a result of assessment of feasibility of the requested items.

6) Building Layout of Battambang TEC

MoEYS requested the Consultant to reconsider the proposed location of the assembly hall for Battambang TEC in order to maintain the front buildings wall line of the compound in the context of special and local backgrounds. The Consultant proposed the alternative layout plan for Battambang TEC shown in the Appendix 2-a, in the meantime, the Consultant explained and MoEYS understood that the building proportion of the assembly hall may be modified as shown in the Appendix 2-a, against the proposed floor plan of the assembly hall shown in the Appendix 4, in order to set back the building from the designated line. The capacity of 500-600 people for the assembly purpose and sports functions may still be maintained even though the building proportion is modified. Both sides confirmed that further technical study in Japan shall be needed for the alternative layout plan and the floor plan of the building together with considerations to the construction work plan from the aspects of adequate working space for heavy construction equipment and machines, such as crane, and for the safety of the working area as well as for the school users due to physical constraints of the compound, and that further consultation with JICA headquarters will be made for final conclusion of Japan side.

MoEYS also requested the Consultant to reconsider to provide a five-story dormitory building with 16 rooms, instead of two buildings with 8 rooms each, in order to secure an open space for future construction of another dormitory. The Consultant explained and MoEYS agreed that it will be discussed through further study and analysis in Japan from the technical and cost aspects.

The result of further study in Japan regarding the building layout plan of Battambang TEC will be informed to MoEYS in writing through JICA Cambodia Office as soon as a decision is made in Japan.

3. Equipment Planning

1) Additional Equipment List

MoEYS submitted the additional equipment list to the Consultant. The Consultant confirmed each item in order to ensure the validity of procurement with MoEYS. The several additional items were included into the proposed equipment list with mutual agreement. The new proposed equipment list is shown in the Appendix 5.

2) Revision of Proposed Equipment List

As there is a difference in room allocation and site conditions between Phnom Penh TEC and Battambang TEC, the Consultant reviewed and revised the proposed equipment list and its component to meet the requirement for each TEC establishment.

3) Further Analysis of Equipment list

The Consultant reconfirmed and MoEYS understood that the list shown in the Appendix 5 was prepared as a full package of each TEC, thus types and numbers of equipment to be procured by Japan side under the Project would be determined after careful examination of the existing equipment available. The equipment plan will be made by further analysis conducted in Japan based on the information collected through two site surveys.

4. Other Relevant Issues

1) Building Permit

MoEYS explained that building permits would not be required for the Project since the new buildings will be constructed within the properties of MoEYS. The Consultant requested and MoEYS agreed to submit the written document which proves no requirement of building permits to Japan side as soon as practical.

2) Environmental Impact Assessment (EIA) / Initial Environmental Examination (IEE)

In accordance with Article 2 of the sub-decree No.72 on Environmental Impact Assessment Process issued in 1999, it is confirmed that this Project will be exempted from EIA/IEE process. However, in case that EIA/IEE is required in Cambodia, due to change of laws and regulations, etc., MoEYS confirmed that Cambodia side will conduct necessary procedures as previously agreed in the M/D.

3) UXO and Landmine Clearance

MoEYS explained the detections of UXO and landmine within the construction areas of both Phnom Penh TEC and Battambang TEC sites have been conducted by Cambodian Mine Action Centre (hereinafter referred to as "CMAC"), and the certificates are under preparation.

Because the Project includes the demolition works of the existing buildings where cannot be detected currently, the Consultant, in presence of MoEYS, had interviews with CMAC Phnom Penh and Battambang in order to obtain more detailed information on possible and specific risks and threats of UXO and landmines of each site. The Consultant requested and MoEYS agreed to submit the certificates prepared by CMAC to Japan side as soon as possible. The results of interviews and the certificates prepared by CMAC will be examined by Japan side.

4) Land Certificate

MoEYS explained that the land certificate for Phnom Penh TEC will be available soon for submission while the one for Battambang TEC is in process of update. The land certificate for each TEC will be submitted to Japan side once it is ready.

5) Major Undertakings to be taken by the Government of Cambodia

MoEYS explained that the governmental process for the fiscal 2018 budget will start earlier than usual years. Both sides agreed that the major undertakings to be taken by Cambodia side in 2018 will be itemized with the estimated cost information by the Consultant by the end of March, 2017 for MoEYS's convenience. The items for the other years will be prepared and explained to MoEYS when a mission dispatched for a draft Preparatory Survey Report, which is scheduled in August, 2017.

Appendix 1: Requested Facilities with Priorities (Finalized)

Appendix 2: Building Layout Plans (Current Layout and Proposed Layout)

Appendix 2-a: Alternative Proposed Building Layout Plan for Battambang TEC

Appendix 3: Existing Facility Utilization Plan (Current Function and Proposed Function)

Appendix 4: Proposed Building Plans

Appendix 5: Proposed Equipment List

Requested Facilities with Priorities (Finalized)

(1) Phnom Penh TEC

Functional Classification	Priority ¹	Necessity for new provision of rooms ²	Room Name	Capacity per room	(a) Total required No. of rooms	(b) No. of existing rooms available	(c) Proposed No. of rooms to be provided by the Project
Special lecture room block	1	A	Science lab (primary)	30	2	0	2
		C	Math/physics lab (secondary)	30	1	Math: 1 Physics: 1	0
		A	Chemistry lab (secondary)	30	1	0	1
		A	Biology lab (secondary)	30	1	0	1
		C	Earth science lab (secondary)	30	1	1	0
		A	Music room (primary)	60	1	0	1
		C	Music room (secondary)	30	1	1	0
		A	Art room (primary)	60	1	0	1
		C	Art room (secondary)	30	1	1	0
		C	Workshop	30	2	2	0
		A	Home economics (cooking and sawing)	30	1	0	1
		A	ICT	30	4	0	4
Academic block	2	A	Auditorium	120	2	0	2
		C	Lecture room	30	36	32+2* 2 large rooms can accommodate more than 60 students.	0
		C	Research room	15-20	6	6	0
		C	Department office	10	9	9	0

¹ Priorities by function

² Sub-priorities by room

A: To be provided by the Project with higher priority.

B: Considered to be provided by the Project, if the Project budget allows. If not, the existing rooms will be utilized.

C: Not to be provided by the Project since the existing rooms are available.

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Functional Classification	Priority	Necessity for new provision of rooms	Room Name	Capacity per room	Total required No. of rooms	No. of existing rooms available	Proposed No. of rooms to be provided by the Project
Administration block	3	A	Director's room		1	0	1
		A	Vice director's room		4	0	4
		A	Advisor and secretary room	5	1	0	1
		A	Admin and human resource room	10	1	0	1
		A	Finance and planning room	10	1	0	1
		A	Academic, students affairs, relation and job room	15	1	0	1
		A	Archive room		1	0	1
		A	Meeting room (large)	30	1	0	1
		A	Meeting room (small)	15	2	0	2
		A	First-aid room		1	0	1
Library block	4	A	Library		1	0	1
		A	Study space	100	-	-	(to be included in the library)
		A	ICT room for self-study		1	0	1
		A	Library office		1	0	1
Assembly hall	5	B	Assembly hall	500-600	1	One meeting hall exists, but old.	1 (conditional)

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(2) Battambang TEC

Functional Classification	Priority	Necessity for new provision of rooms	Room Name	Capacity per room	Total required No. of rooms	No. of existing rooms available	Proposed No. of rooms to be provided by the Project
Special lecture room block	1	For Year 1 Course (within current PTTC site)					
		C	Science lab		2	2	N/A
		C	Music room		1	1	N/A
		C	Workshop		1	1	N/A
		For Year 2-4 Courses (within current RTTC site)					
		A	Science lab (primary)	30	2	0	2
		C	Math/physics lab (secondary)	30	1	1	0
		A	Chemistry lab (secondary)	30	1	0	1
		A	Biology lab (secondary)	30	1	0	1
		C	Earth science lab (secondary)	30	1	1	0
		A	Music room (primary)	60	1	0	1
		A	Music room (secondary)	30	1	0	1
		A	Art room (primary)	60	1	0	1
		A	Art room (secondary)	30	1	0	1
		C	Workshop	30	1	1 ³	0
A	Home economics (cooking and sawing)	30	1	0	1		
A	ICT	30	4	0	4		

³ It is expected to have a workshop on the ground floor of the existing dormitory building which is proposed to use as a staff dormitory buildings for the new TEC Battambang. However, the location of the workshop may be changed through further discussion among Cambodia side. In any case, a space for the workshop shall be arranged and provided in the available rooms of the existing buildings.

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Functional Classification	Priority	Necessity for new provision of rooms	Room Name	Capacity per room	Total required No. of rooms	No. of existing rooms available	Proposed No. of rooms to be provided by the Project	
Academic block	2	For Year 1 Course (within current PTTC site)						
		C	Lecture room (mid-size)	(80)	17	17	N/A	
		C	Lecture room		1	1	N/A	
		C	Teachers' room (Department Office)		3	3	N/A	
		For Year 2-4 Courses (within current RTTC site)						
		A	Auditorium	120	2	0	2	
		A+C	Lecture room	30	24	10	14	
		A	Research room	15-20	6	0	6	
		A	Department office	10	9	0	9	
		Administration block	3	For Year 1 Course (within current PTTC site)				
C	Director's room				1	1	N/A	
C	Vice director's room				1	1	N/A	
C	Admin office				1	1	N/A	
For Year 2-4 Courses (within current RTTC site)								
A	Director's room				1	0	1	
A	Vice director's room				4	0	4	
A	Advisor and secretary room			5	1	0	1	
A	Admin and human resource room			10	1	0	1	
A	Finance and planning room			10	1	0	1	
A	Academic, students affairs, relation and job room			15	1	0	1	
A	Archive room				1	0	1	
A	Meeting room (large)			30	1	0	1	
A	Meeting room (small)	15	2	0	2			
A	First-aid room		1	0	1			

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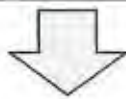
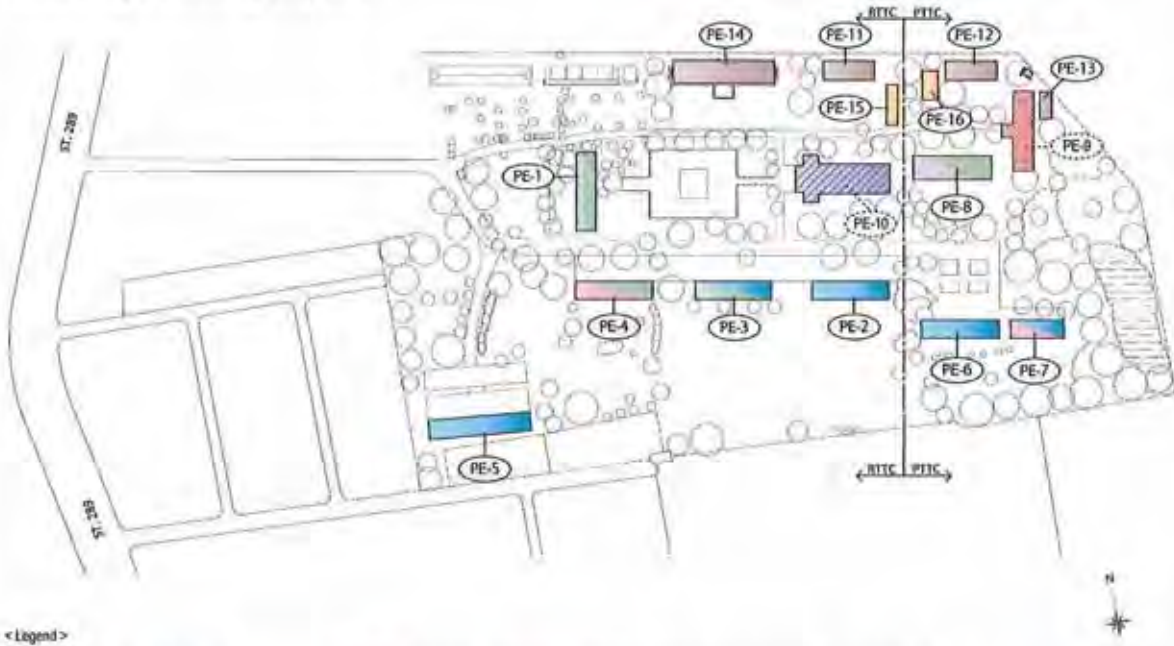
Functional Classification	Priority	Necessity for new provision of rooms	Room Name	Capacity per room	Total required No. of rooms	No. of existing rooms available	Proposed No. of rooms to be provided by the Project
Library block	4	For Year 1 Course (within current PTTC site)					
		C	Library (including study space)		2	2	N/A
		For Year 2-4 Courses (within current RTTC site)					
		A	Library		1	0	1
		A	Study space	100	-	-	(to be included in the library)
		A	ICT room for self-study		1	0	1
		A	Library office		1	0	1
Assembly hall	5	For Year 2-4 Courses (within current RTTC site)					
		B	Assembly hall	500-600	1	0	1 (conditional)
Dormitory	6	For Year 1 Course (within current PTTC site)					
		C	Dormitory (for female students)			8	N/A
		For Year 2-4 Courses (within current RTTC site)					
		B	Dormitory (for male students) ⁴	16	(18)	4	8 (conditional)
		B	Dormitory (for female students) ⁴	16	(18)	0	8 (conditional)
C	Dormitory (for school staff)		1	0	1		

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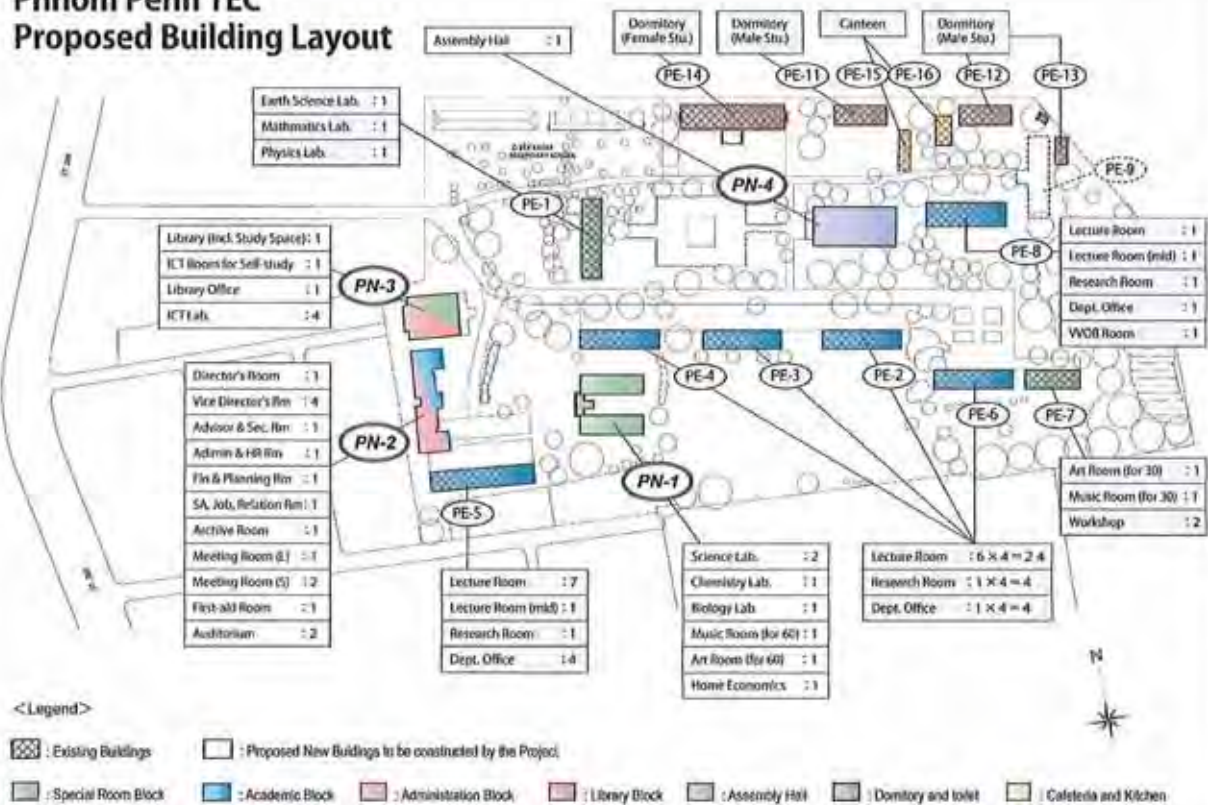
⁴ Possibility on provision of a five-story building with 16 dormitory rooms may be discussed through further study and analysis in Japan from the technical and cost aspects.

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Phnom Penh PTTC/RTTC Existing Building Layout

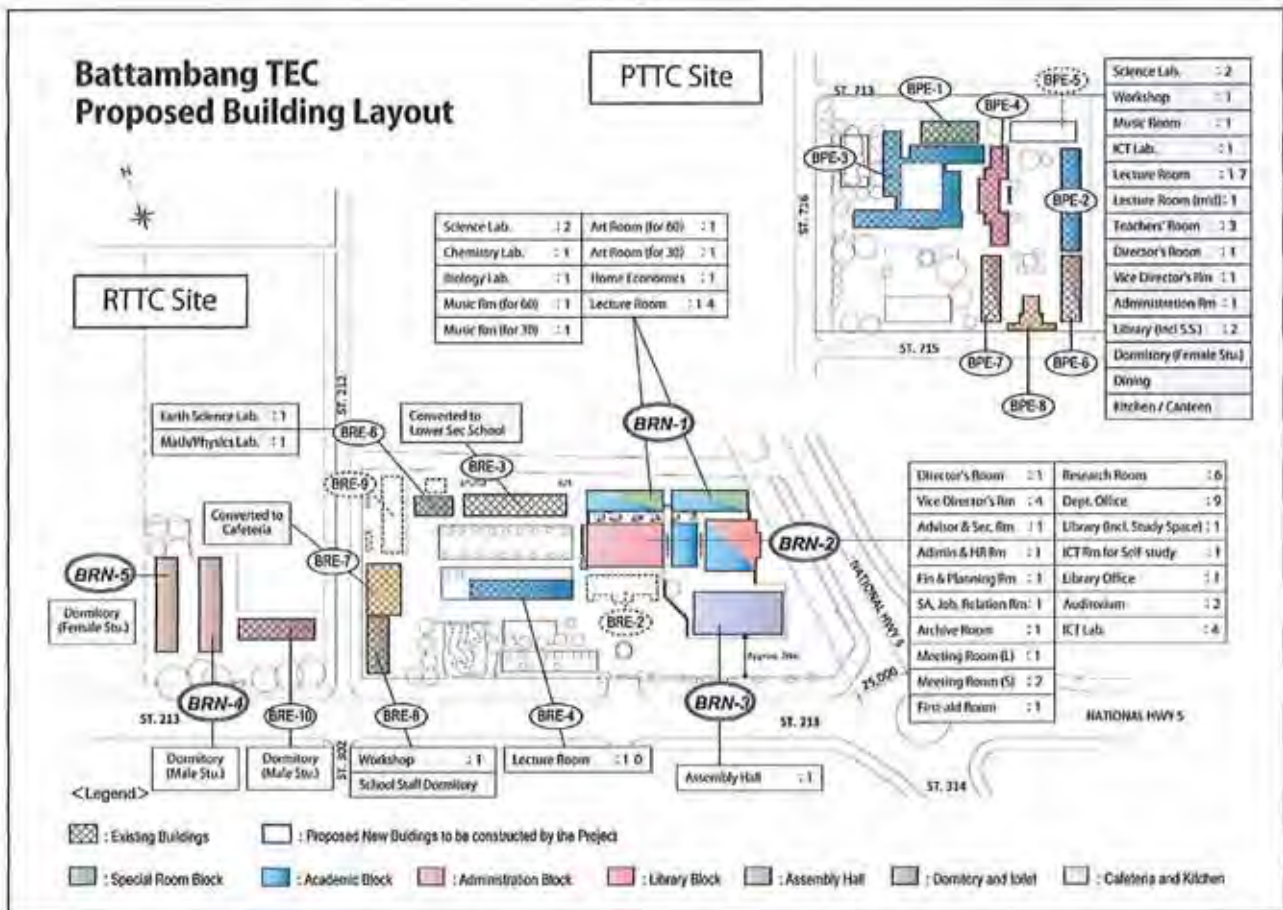
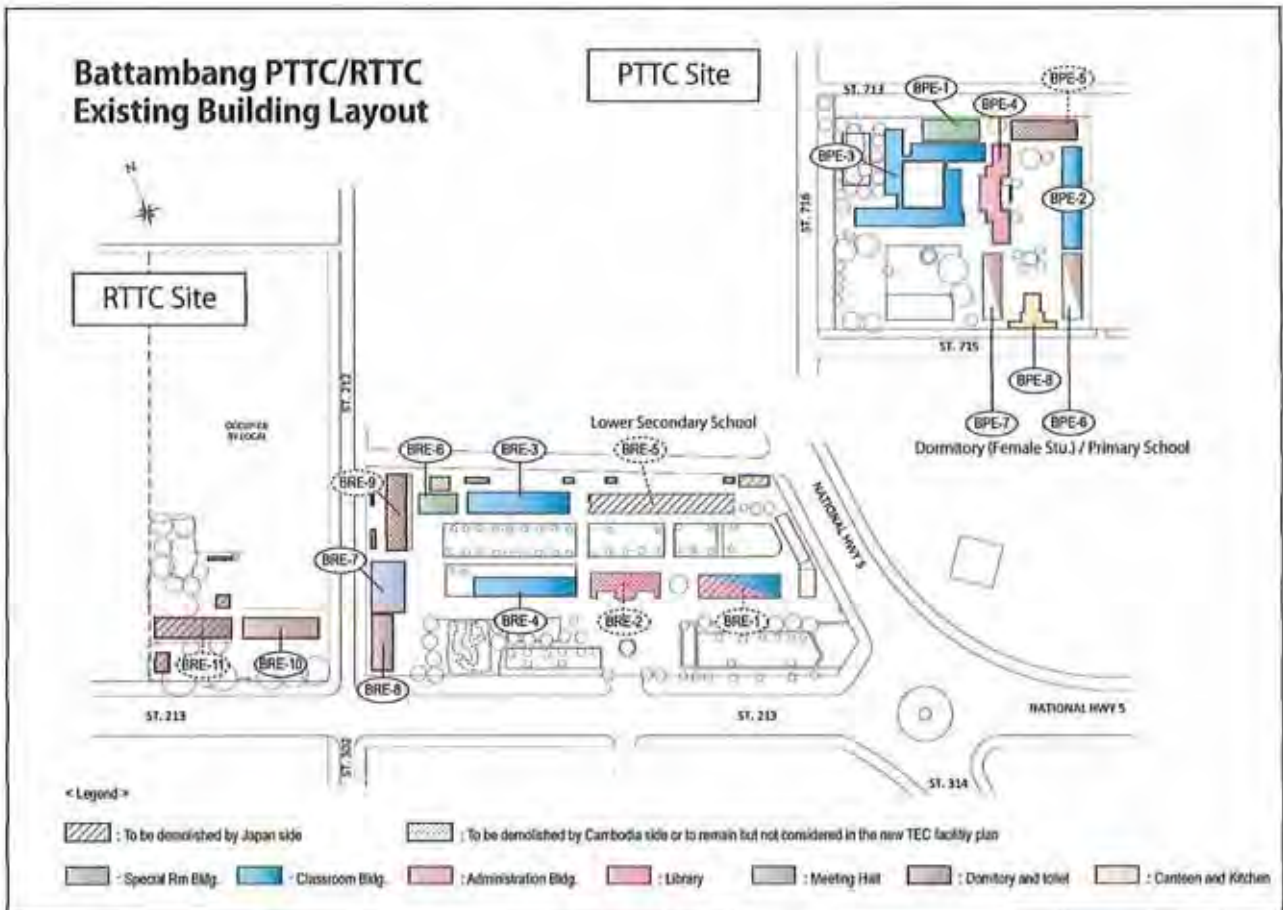


Phnom Penh TEC Proposed Building Layout



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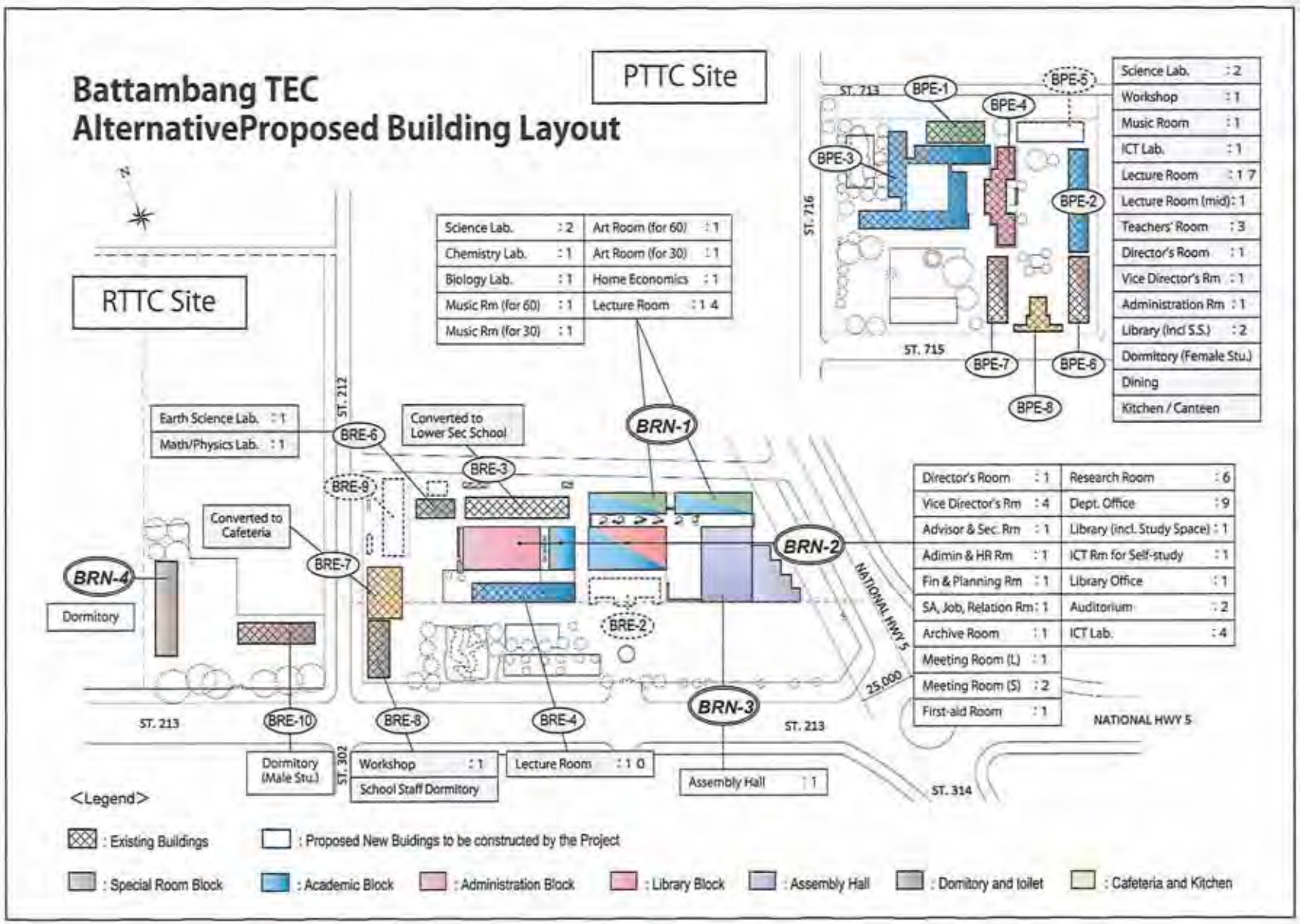
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Battambang TEC Alternative Proposed Building Layout



EXISTING FACILITY UTILIZATION PLAN		1/4																																				
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CURRENT FUNCTION		PROPOSED FUNCTION																																				
PE-1	LABORATORY BUILDING	PE-1 SPECIAL ROOM BUILDING																																				
G. FL.	<table border="1" style="margin-top: 10px;"> <tr><td>BEL</td><td>Biology/Earth-Science Labo.</td><td>1</td></tr> <tr><td>CHL</td><td>Chemistry Labo.</td><td>1</td></tr> <tr><td>PL</td><td>Physics Labo.</td><td>1</td></tr> <tr><td>P</td><td>Preparation room</td><td></td></tr> <tr><td>E</td><td>Equipment room</td><td></td></tr> </table>	BEL	Biology/Earth-Science Labo.	1	CHL	Chemistry Labo.	1	PL	Physics Labo.	1	P	Preparation room		E	Equipment room		<table border="1" style="margin-top: 10px;"> <tr><td>ESL</td><td>Earth-Science Labo.</td><td>1</td></tr> <tr><td>ML</td><td>Mathematics Labo.</td><td>1</td></tr> <tr><td>PL</td><td>Physics Labo.</td><td>1</td></tr> <tr><td>P</td><td>Preparation room</td><td></td></tr> <tr><td>E</td><td>Equipment room</td><td></td></tr> </table>	ESL	Earth-Science Labo.	1	ML	Mathematics Labo.	1	PL	Physics Labo.	1	P	Preparation room		E	Equipment room							
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ESL	Earth-Science Labo.	1																																				
ML	Mathematics Labo.	1																																				
PL	Physics Labo.	1																																				
P	Preparation room																																					
E	Equipment room																																					
PE-2	CLASS ROOM BUILDING	PE-2 ACADEMIC BUILDING																																				
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G. FL.	<table border="1" style="margin-top: 10px;"> <tr><td>CR</td><td>Classroom</td><td>7</td></tr> <tr><td>E</td><td>Equipment Room</td><td>1</td></tr> </table>	CR	Classroom	7	E	Equipment Room	1	<table border="1" style="margin-top: 10px;"> <tr><td>LR</td><td>Lecture Room</td><td>6</td></tr> <tr><td>RR</td><td>Research Room</td><td>1</td></tr> <tr><td>DO</td><td>Department Office</td><td>1</td></tr> </table>	LR	Lecture Room	6	RR	Research Room	1	DO	Department Office	1																					
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E	Equipment Room	1																																				
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RR	Research Room	1																																				
DO	Department Office	1																																				
PE-3	CLASS ROOM BUILDING	PE-3 ACADEMIC BUILDING																																				
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HE	Home Economics Room-1 (Cooking)	1																																				
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LR	Lecture Room	6																																				
RR	Research Room	1																																				
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PE-4	ADMINISTRATION BLDG.	PE-4 ACADEMIC BUILDING																																				
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E	Equipment room																																					

EXISTING FACILITY UTILIZATION PLAN

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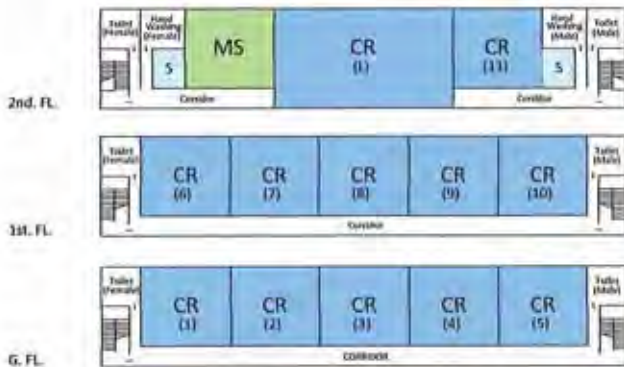
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CURRENT FUNCTION

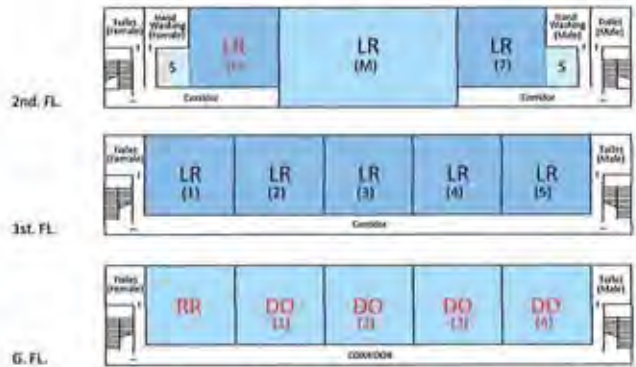
PROPOSED FUNCTION

PE-5 CLASS ROOM BUILDING

PE-5 ACADEMIC BUILDING



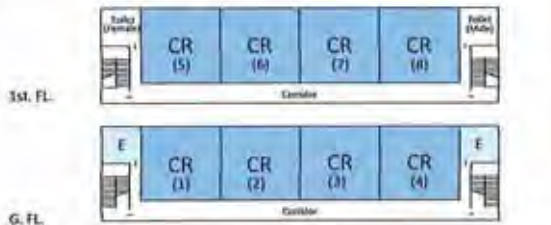
CR	Classroom	11
CR(L)	Classroom (Large)	1
MS	Music Room	1
S	Storage	



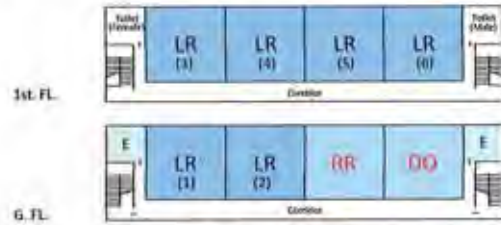
LR	Lecture Room	7
LR(M)	Lecture Room (Mid Size)	1
RR	Research Room	1
DO	Department Office	4
S	Storage	

PE-6 CLASS ROOM BUILDING

PE-6 ACADEMIC BUILDING



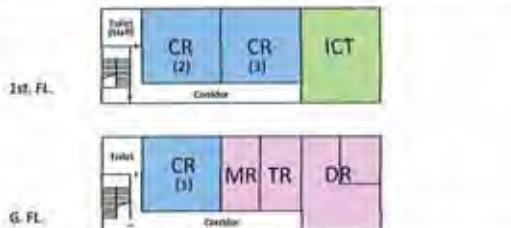
CR	Classroom	8
E	Equipment room	



LR	Lecture Room	6
RR	Research Room	1
DO	Department Office	1
E	Equipment room	

PE-7 ADMINISTRATION BUILDING

PE-7 ACADEMIC BUILDING



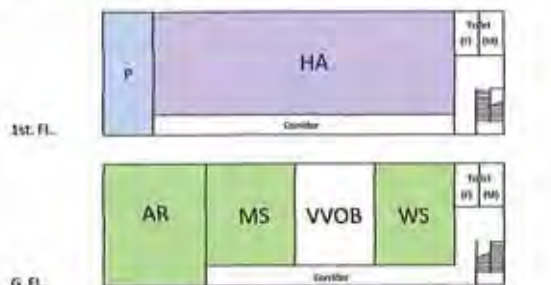
CR	Class Room	3
TR	Teacher's Room	1
MR	Meeting Room	1
DR	Director's Room	1
ICT	ICT Labo.	1
E	Equipment room	



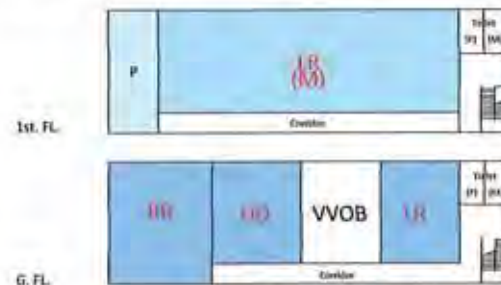
AR	Art Room (for 30)	1
MS	Music Room (for 30)	1
WS	Workshop	2
E	Equipment room	

PE-8 SUBJECT ROOM & MEETING HALL

PE-8 SPECIAL ROOM BUILDING



AR	Art Room (Dancing)	1
MS	Music Room	1
VVOB	VVOB (BELGIUM)	1
WS	Workshop	1
HA	Hall	1
P	Preparation room	


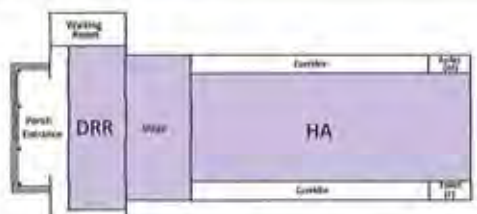
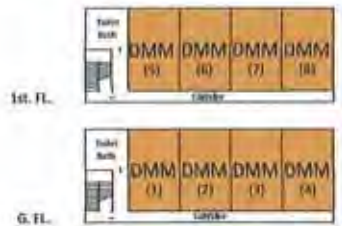
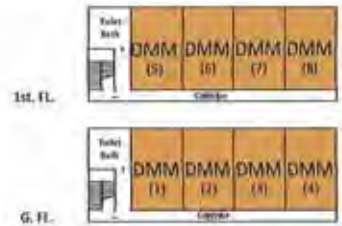

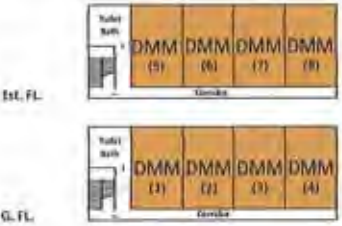




RR	Reseach Room	1
DO	Department Office	1
VVOB	VVOB (BELGIUM)	1
LR	Lecture Room	1
LR(M)	Lecture Room (Mid Size)	1
P	Preparation room	

EXISTING FACILITY UTILIZATION PLAN

PHNOM PENH

3/4

CURRENT FUNCTION		PROPOSED FUNCTION													
PE-9	LIBRARY	 <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>LI</td> <td>Library (incl. study space)</td> <td style="text-align: center;">1</td> </tr> </table>		LI	Library (incl. study space)	1									
LI	Library (incl. study space)	1													
		<p style="font-size: 1.2em;">X</p> <p style="text-align: center;">TO BE DEMOLISHED BY CAMBODIA SIDE</p>													
PE-10	MEETING HALL	 <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>HA</td> <td>Hall</td> <td style="text-align: center;">1</td> </tr> <tr> <td>DRR</td> <td>Dance Rehearsal Room</td> <td style="text-align: center;">1</td> </tr> </table>		HA	Hall	1	DRR	Dance Rehearsal Room	1						
HA	Hall	1													
DRR	Dance Rehearsal Room	1													
		<p style="font-size: 1.2em;">X</p> <p style="text-align: center;">TO BE DEMOLISHED BY JAPAN SIDE</p>													
PE-11	DORMITORY (MALE)	PE-11	DORMITORY (MALE)												
 <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>DMM</td> <td>Dormitory Room (Male Stu.)</td> <td style="text-align: center;">8</td> </tr> </table>		DMM	Dormitory Room (Male Stu.)	8	 <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>DMM</td> <td>Dormitory Room (Male Stu.)</td> <td style="text-align: center;">8</td> </tr> </table>		DMM	Dormitory Room (Male Stu.)	8						
DMM	Dormitory Room (Male Stu.)	8													
DMM	Dormitory Room (Male Stu.)	8													
PE-12	DORMITORY (MALE)	PE-12	DORMITORY (MALE)												
 <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>DMM</td> <td>Dormitory Room (Male Stu.)</td> <td style="text-align: center;">8</td> </tr> </table>		DMM	Dormitory Room (Male Stu.)	8	 <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>DMM</td> <td>Dormitory Room (Male Stu.)</td> <td style="text-align: center;">8</td> </tr> </table>		DMM	Dormitory Room (Male Stu.)	8						
DMM	Dormitory Room (Male Stu.)	8													
DMM	Dormitory Room (Male Stu.)	8													
PE-13	DORMITORY (MALE)	PE-13	DORMITORY (MALE)												
 <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>DMM</td> <td>Dormitory Room (Male Stu.)</td> <td style="text-align: center;">1</td> </tr> <tr> <td>K</td> <td>Kitchen</td> <td style="text-align: center;">1</td> </tr> </table>		DMM	Dormitory Room (Male Stu.)	1	K	Kitchen	1	 <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>DMM</td> <td>Dormitory Room (Male Stu.)</td> <td style="text-align: center;">1</td> </tr> <tr> <td>K</td> <td>Kitchen</td> <td style="text-align: center;">1</td> </tr> </table>		DMM	Dormitory Room (Male Stu.)	1	K	Kitchen	1
DMM	Dormitory Room (Male Stu.)	1													
K	Kitchen	1													
DMM	Dormitory Room (Male Stu.)	1													
K	Kitchen	1													

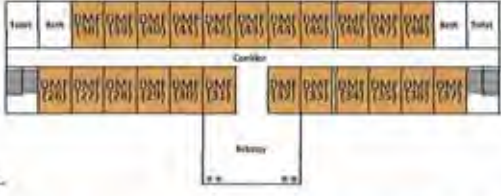



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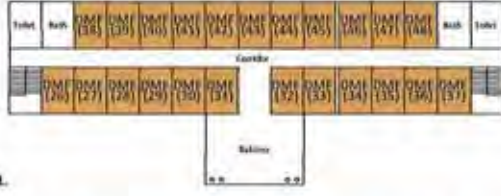



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EXISTING FACILITY UTILIZATION PLAN

PHNOM PENH

4/4

CURRENT FUNCTION					
PE-14	DORMITORY (FEMALE)				
 <p style="text-align: center;">2nd. FL.</p>	 <p style="text-align: center;">2nd. FL.</p>				
 <p style="text-align: center;">G. FL.</p>	 <p style="text-align: center;">G. FL.</p>				
<table border="1" style="margin: auto;"> <tr> <td>DMF Dormitory (Female Stu.)</td> <td style="text-align: center;">48</td> </tr> <tr> <td>K&C Kitchen/ Canteen</td> <td style="text-align: center;">1</td> </tr> </table>		DMF Dormitory (Female Stu.)	48	K&C Kitchen/ Canteen	1
DMF Dormitory (Female Stu.)	48				
K&C Kitchen/ Canteen	1				

PROPOSED FUNCTION					
PE-14	DORMITORY (FEMALE)				
 <p style="text-align: center;">2nd. FL.</p>	 <p style="text-align: center;">2nd. FL.</p>				
 <p style="text-align: center;">G. FL.</p>	 <p style="text-align: center;">G. FL.</p>				
<table border="1" style="margin: auto;"> <tr> <td>DMF Dormitory (Female Stu.)</td> <td style="text-align: center;">48</td> </tr> <tr> <td>K&C Kitchen/ Canteen</td> <td style="text-align: center;">1</td> </tr> </table>		DMF Dormitory (Female Stu.)	48	K&C Kitchen/ Canteen	1
DMF Dormitory (Female Stu.)	48				
K&C Kitchen/ Canteen	1				

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EXISTING FACILITY UTILIZATION PLAN

BATTAMBANG

1/4

BPE-1 CURRENT FUNCTION LABORATORY BUILDING

G. FL.

BL	Biology Labo.	1
SL	Science Labo.	1
P	Preparation room	

BPE-1 PROPOSED FUNCTION SPECIAL ROOM BUILDING

G. FL.

SL	Science Labo.	2
P	Preparation room	

BPE-2 CLASS ROOM BUILDING

1st. FL.

G. FL.

CR	Classroom	10
S	Storage	

BPE-2 ACADEMIC BUILDING

1st. FL.

G. FL.

LR	Lecture Room	10
S	Storage	

BPE-3 CLASS ROOM BUILDING

G. FL.

VD	Vice Director's Room	1
AD	Administration Room	1
CR	Classroom	7
WS	Workshop	1
LI	Library (incl. Study Space)	1
TR	Teacher's Room	1
MS	Music Room	1
S	Storage	

BPE-3 ACADEMIC BUILDING

G. FL.

VD	Vice Director's Room	1
AD	Administration Room	1
LR	Lecture Room	7
WS	Workshop	1
LI	Library (incl. Study Space)	1
TR	Teacher's Room	1
MS	Music Room	1
S	Storage	

BPE-4 ADMINISTRATION BUILDING

1st. FL.

G. FL.

DR	Director's Room	1
TR	Teacher's Room	1
AD	Administration Room	1
ICT	ICT Labo.	1
LI	Library (incl. Study Space)	1
CR	Classroom (Large)	1
S	Storage	

BPE-4 ADMINISTRATION BUILDING

1st. FL.

G. FL.

DR	Director's Room	1
TR	Teacher's Room	1
AD	Administration Room	1
ICT	ICT Labo.	1
LI	Library (incl. Study Space)	1
LR	Lecture Room (mid Size)	1
S	Storage	

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EXISTING FACILITY UTILIZATION PLAN

BATTAMBANG		2/4																				
CURRENT FUNCTION		PROPOSED FUNCTION																				
BPE-5	DORMITORY (MALE)																					
1st. FL.		<div style="font-size: 2em; font-weight: bold;">X</div> <p style="text-align: center;">TO BE DEMOLISHED BY CAMBODIA SIDE</p>																				
G. FL.																						
<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>DMM Dormitory (Male)</td> <td style="text-align: right;">6</td> </tr> </table>		DMM Dormitory (Male)	6																			
DMM Dormitory (Male)	6																					
BPE-6	DORMITORY for FEMALE	BPE-6 DORMITORY (FEMALE)& PRIMARY SCHOOL																				
1st. FL.																						
G. FL.																						
<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>DMF Dormitory (Female)</td> <td style="text-align: right;">4</td> </tr> <tr> <td>CRP Classroom for Primary School</td> <td style="text-align: right;">4</td> </tr> </table>		DMF Dormitory (Female)	4	CRP Classroom for Primary School	4	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>DMF Dormitory (Female)</td> <td style="text-align: right;">4</td> </tr> <tr> <td>CRP Classroom for Primary School</td> <td style="text-align: right;">4</td> </tr> </table>	DMF Dormitory (Female)	4	CRP Classroom for Primary School	4												
DMF Dormitory (Female)	4																					
CRP Classroom for Primary School	4																					
DMF Dormitory (Female)	4																					
CRP Classroom for Primary School	4																					
BPE-7	DORMITORY for FEMALE	BPE-7 DORMITORY (FEMALE)& PRIMARY SCHOOL																				
1st. FL.																						
G. FL.																						
<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>DMF Dormitory (Female)</td> <td style="text-align: right;">4</td> </tr> <tr> <td>CRP Classroom for Primary School</td> <td style="text-align: right;">1</td> </tr> <tr> <td>TRP Teacher's Room for Primary School</td> <td style="text-align: right;">1</td> </tr> <tr> <td>MRP Meeting Room for Primary School</td> <td style="text-align: right;">1</td> </tr> </table>		DMF Dormitory (Female)	4	CRP Classroom for Primary School	1	TRP Teacher's Room for Primary School	1	MRP Meeting Room for Primary School	1	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>DMF Dormitory (Female)</td> <td style="text-align: right;">4</td> </tr> <tr> <td>CRP Classroom for Primary School</td> <td style="text-align: right;">1</td> </tr> <tr> <td>TRP Teacher's Room for Primary School</td> <td style="text-align: right;">1</td> </tr> <tr> <td>MRP Meeting Room for Primary School</td> <td style="text-align: right;">1</td> </tr> </table>	DMF Dormitory (Female)	4	CRP Classroom for Primary School	1	TRP Teacher's Room for Primary School	1	MRP Meeting Room for Primary School	1				
DMF Dormitory (Female)	4																					
CRP Classroom for Primary School	1																					
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DMF Dormitory (Female)	4																					
CRP Classroom for Primary School	1																					
TRP Teacher's Room for Primary School	1																					
MRP Meeting Room for Primary School	1																					
BRE-1	ADMIN. & TECH. CLASS ROOM BUILDING																					
3rd. FL.		<div style="font-size: 2em; font-weight: bold;">X</div> <p style="text-align: center;">TO BE DEMOLISHED BY JAPAN SIDE</p>																				
2nd. FL.																						
1st. FL.																						
G. FL.																						
<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>DR Director's Room</td> <td style="text-align: right;">1</td> </tr> <tr> <td>VR Vice Director's Room</td> <td style="text-align: right;">1</td> </tr> <tr> <td>A Archive Room</td> <td style="text-align: right;">1</td> </tr> <tr> <td>LI Library (incl. Study Space)</td> <td style="text-align: right;">1</td> </tr> <tr> <td>ICT ICT Labo.</td> <td style="text-align: right;">2</td> </tr> <tr> <td>CR Classroom (large)</td> <td style="text-align: right;">1</td> </tr> <tr> <td>CR Classroom</td> <td style="text-align: right;">3</td> </tr> <tr> <td>MS Music Room</td> <td style="text-align: right;">1</td> </tr> <tr> <td>AR Art Room</td> <td style="text-align: right;">1</td> </tr> <tr> <td>HE Home Economics Room</td> <td style="text-align: right;">2</td> </tr> </table>		DR Director's Room	1	VR Vice Director's Room	1	A Archive Room	1	LI Library (incl. Study Space)	1	ICT ICT Labo.	2	CR Classroom (large)	1	CR Classroom	3	MS Music Room	1	AR Art Room	1	HE Home Economics Room	2	
DR Director's Room	1																					
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LI Library (incl. Study Space)	1																					
ICT ICT Labo.	2																					
CR Classroom (large)	1																					
CR Classroom	3																					
MS Music Room	1																					
AR Art Room	1																					
HE Home Economics Room	2																					

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EXISTING FACILITY UTILIZATION PLAN

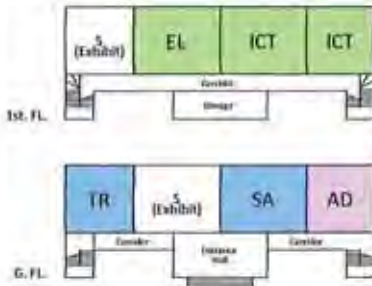
3/4

BATTAMBANG

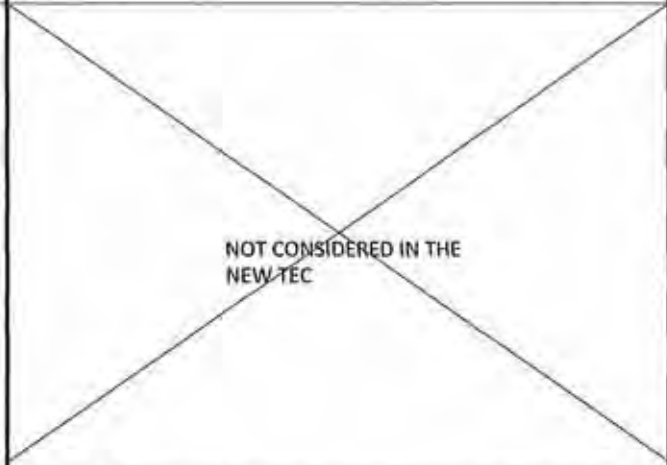
CURRENT FUNCTION

PROPOSED FUNCTION

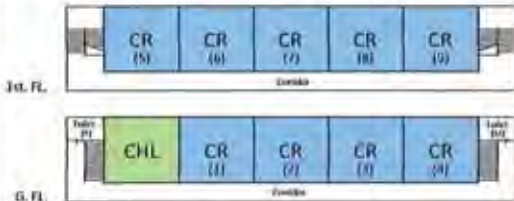
BRE-2 ADMINISTRATION BUILDING



AD	Administration Room	1
SA	Students Affairs Room	1
TR	Teacher's Room	1
ICT	ICT Lab.	2
EL	English Lab.	1
S	Storage	

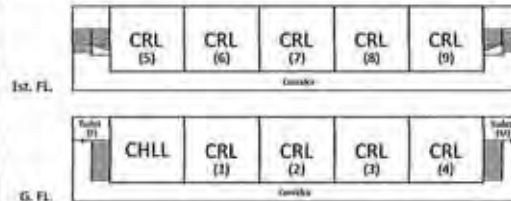


BRE-3 CLASS ROOM BUILDING



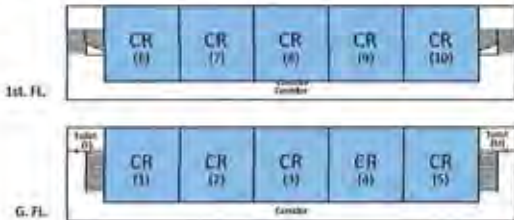
CHL	Chemistry Labo.	1
CR	Class room	9

BRE-3 CLASS ROOM FOR LOWER SEC. SCHOOL



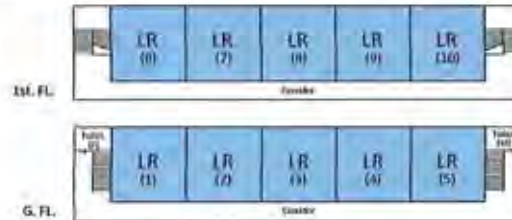
CHLL	Chemistry Labo. for LS School	1
CRL	Class room for LS School	9

BRE-4 CLASS ROOM BUILDING



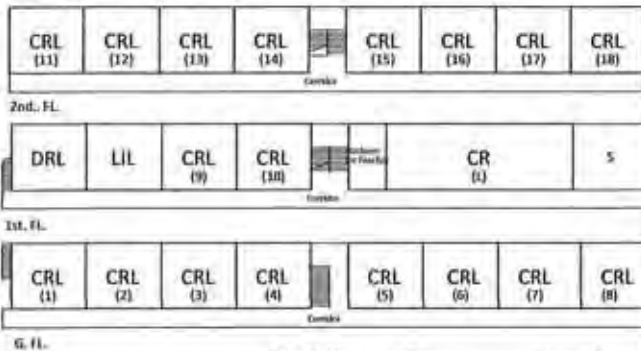
CR	Classroom	10
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BRE-4 ACADEMIC BUILDING

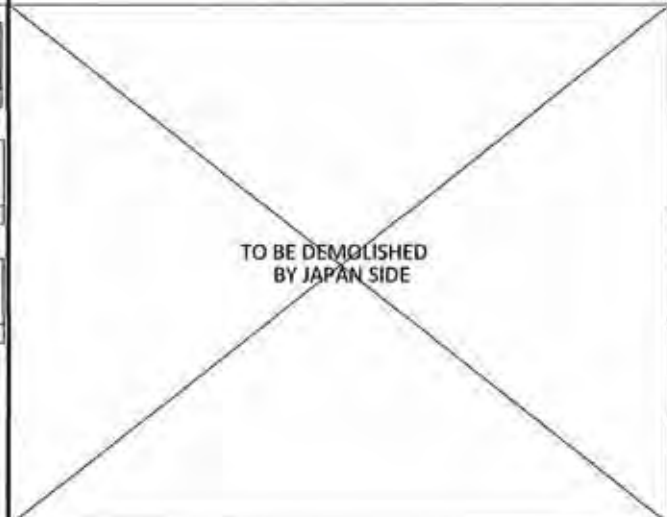


LR	Lecture Room	10
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BRE-5 LOWER SECONDARY SCHOOL BUILDING



CRL	Classroom for Lower Secondary School	18
DRL	Director's room for Lower Secondary School	1
LIL	Library for Lower Secondary School	1
CR	Classroom (Large)	1
S	Storage	



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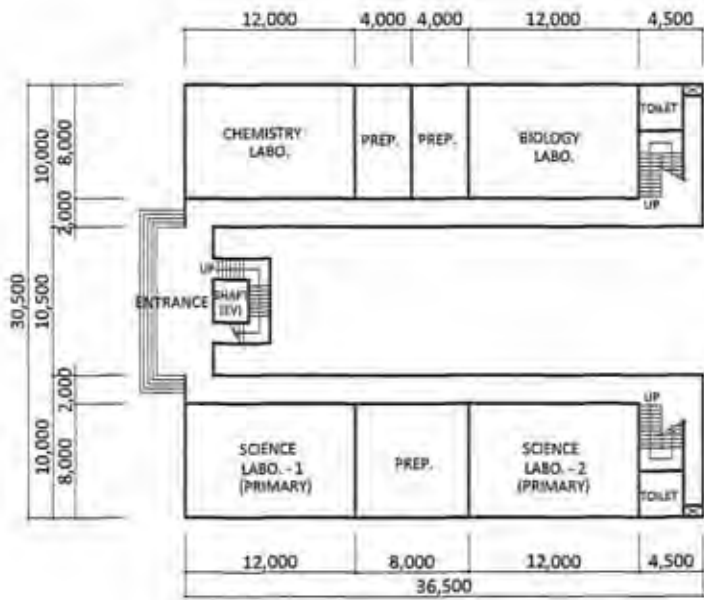
EXISTING FACILITY UTILIZATION PLAN

BATTAMBANG

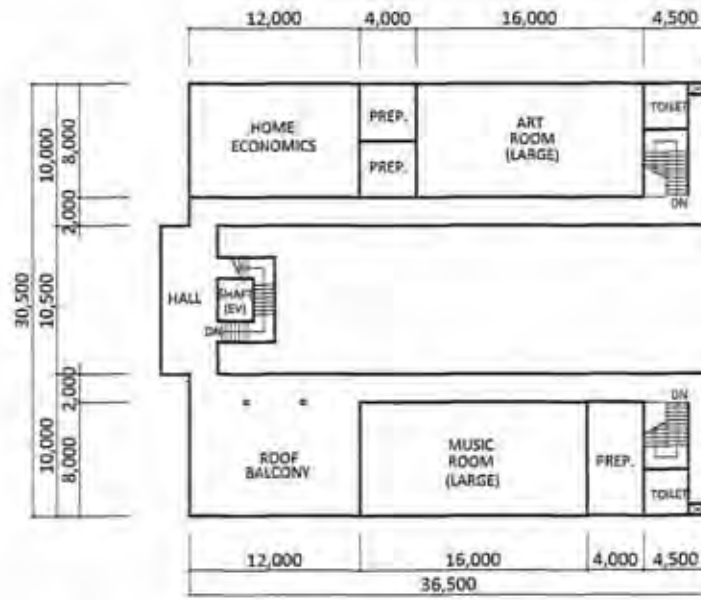
4/4

CURRENT FUNCTION		PROPOSED FUNCTION																	
<p>BRE-6 LABORATORY BUILDING</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>3rd. FL. Corridor</p> <p>G. FL. Corridor</p> <table border="1" style="width: 100%; margin-top: 10px;"> <tr><td>PL</td><td>Physics Labo.</td><td style="text-align: right;">1</td></tr> <tr><td>BEL</td><td>Biology/Earth-Science Labo.</td><td style="text-align: right;">1</td></tr> <tr><td>P</td><td>Preparation room</td><td></td></tr> </table> </div> <div style="width: 45%;"> <p>3rd. FL. Corridor</p> <p>G. FL. Corridor</p> <table border="1" style="width: 100%; margin-top: 10px;"> <tr><td>MPL</td><td>Math/Physics Labo.</td><td style="text-align: right;">1</td></tr> <tr><td>ESI</td><td>Earth-Science Labo.</td><td style="text-align: right;">1</td></tr> <tr><td>P</td><td>Preparation room</td><td></td></tr> </table> </div> </div>	PL	Physics Labo.	1	BEL	Biology/Earth-Science Labo.	1	P	Preparation room		MPL	Math/Physics Labo.	1	ESI	Earth-Science Labo.	1	P	Preparation room		<p>BRE-6 SPECIAL ROOM BUILDING</p>
PL	Physics Labo.	1																	
BEL	Biology/Earth-Science Labo.	1																	
P	Preparation room																		
MPL	Math/Physics Labo.	1																	
ESI	Earth-Science Labo.	1																	
P	Preparation room																		
<p>BRE-7 MEETING HALL</p> <p>G. FL. Corridor</p> <table border="1" style="width: 100%; margin-top: 10px;"> <tr><td>HA</td><td>Hall</td><td style="text-align: right;">1</td></tr> </table>	HA	Hall	1	<p>BRE-7 CAFETERIA</p> <p>G. FL. Corridor</p> <table border="1" style="width: 100%; margin-top: 10px;"> <tr><td>CA</td><td>Cafeteria</td><td style="text-align: right;">1</td></tr> </table>	CA	Cafeteria	1												
HA	Hall	1																	
CA	Cafeteria	1																	
<p>BRE-8 DORMITORY (FEMALE)</p> <p>G. FL. Corridor</p> <p>1st. FL. Corridor</p> <table border="1" style="width: 100%; margin-top: 10px;"> <tr><td>DMF</td><td>Dormitory (Female Students)</td><td style="text-align: right;">8</td></tr> </table>	DMF	Dormitory (Female Students)	8	<p>BRE-8 DORMITORY (SCHOOL STAFF)</p> <p>G. FL. Corridor</p> <p>1st. FL. Corridor</p> <table border="1" style="width: 100%; margin-top: 10px;"> <tr><td>DMS</td><td>Dormitory (School Staff)</td><td style="text-align: right;">4</td></tr> <tr><td>WS+E</td><td>Workshop + Equipment Rm</td><td style="text-align: right;">1</td></tr> </table>	DMS	Dormitory (School Staff)	4	WS+E	Workshop + Equipment Rm	1									
DMF	Dormitory (Female Students)	8																	
DMS	Dormitory (School Staff)	4																	
WS+E	Workshop + Equipment Rm	1																	
<p>BRE-9 DORMITORY for FEMALE</p> <p>3rd. FL. Corridor</p> <p>G. FL. Corridor</p> <table border="1" style="width: 100%; margin-top: 10px;"> <tr><td>DMF</td><td>Dormitory (Female Students)</td><td style="text-align: right;">8</td></tr> <tr><td>DMS</td><td>Dormitory (School Staff)</td><td style="text-align: right;">2</td></tr> </table>	DMF	Dormitory (Female Students)	8	DMS	Dormitory (School Staff)	2	<p style="font-size: 24px; opacity: 0.5;">X</p> <p style="font-size: 18px; opacity: 0.5;">TO BE DEMOLISHED BY CAMBODIA SIDE</p>												
DMF	Dormitory (Female Students)	8																	
DMS	Dormitory (School Staff)	2																	
<p>BRE-10 DORMITORY for MALE</p> <p>G. FL. Corridor</p> <table border="1" style="width: 100%; margin-top: 10px;"> <tr><td>DMM</td><td>Dormitory (Male Students)</td><td style="text-align: right;">4</td></tr> <tr><td>DMS</td><td>Dormitory (School Staff)</td><td style="text-align: right;">1</td></tr> </table>	DMM	Dormitory (Male Students)	4	DMS	Dormitory (School Staff)	1	<p>G. FL. Corridor</p> <table border="1" style="width: 100%; margin-top: 10px;"> <tr><td>DMM</td><td>Dormitory (Male Students)</td><td style="text-align: right;">4</td></tr> <tr><td>DMS</td><td>Dormitory (School Staff)</td><td style="text-align: right;">1</td></tr> </table>	DMM	Dormitory (Male Students)	4	DMS	Dormitory (School Staff)	1						
DMM	Dormitory (Male Students)	4																	
DMS	Dormitory (School Staff)	1																	
DMM	Dormitory (Male Students)	4																	
DMS	Dormitory (School Staff)	1																	
<p>BRE-11 DORMITORY for MALE</p> <p>3rd. FL. Corridor</p> <p>G. FL. Corridor</p> <table border="1" style="width: 100%; margin-top: 10px;"> <tr><td>DMM</td><td>Dormitory (Male Students)</td><td style="text-align: right;">8</td></tr> <tr><td>DMS</td><td>Dormitory (School Staff)</td><td style="text-align: right;">2</td></tr> </table>	DMM	Dormitory (Male Students)	8	DMS	Dormitory (School Staff)	2	<p style="font-size: 24px; opacity: 0.5;">X</p> <p style="font-size: 18px; opacity: 0.5;">TO BE DEMOLISHED BY JAPAN SIDE</p>												
DMM	Dormitory (Male Students)	8																	
DMS	Dormitory (School Staff)	2																	

PN-1 : SPECIAL ROOM BLOCK



G. FL. 796m²



1st. FL. 700m²

PN-2 : ADMINISTRATION + ACADEMIC BLOCK (AUDITORIUM)

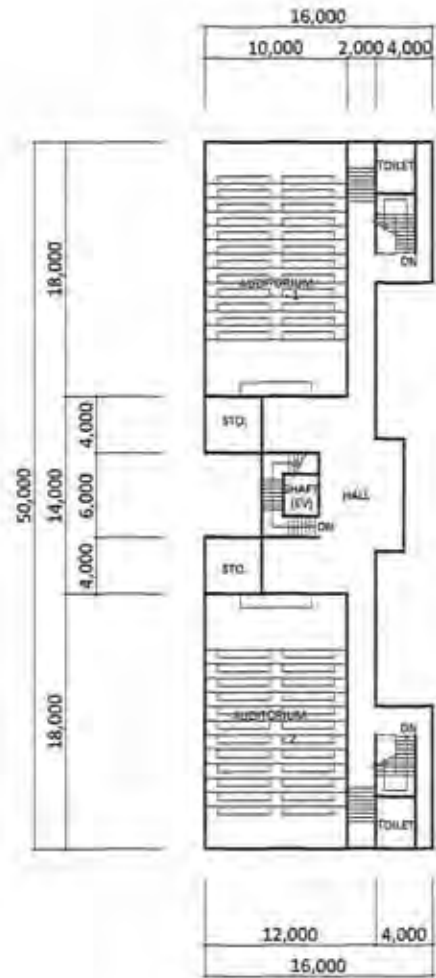
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G. FL. 628 m2



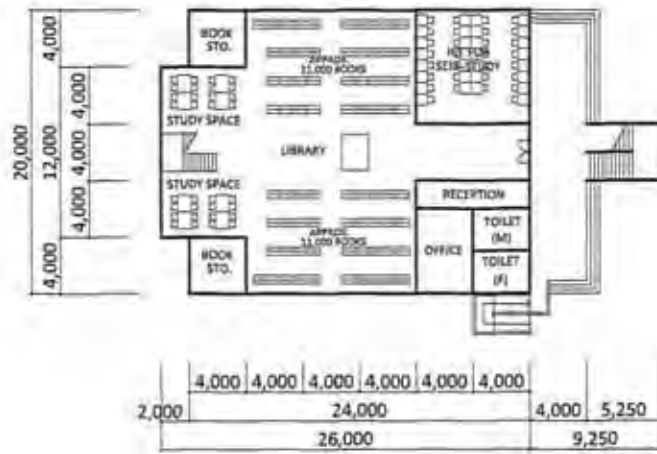
1st. FL. 628 m2



2nd. FL. 672 m2

Phs

PN-3



G. FL. 605 m²

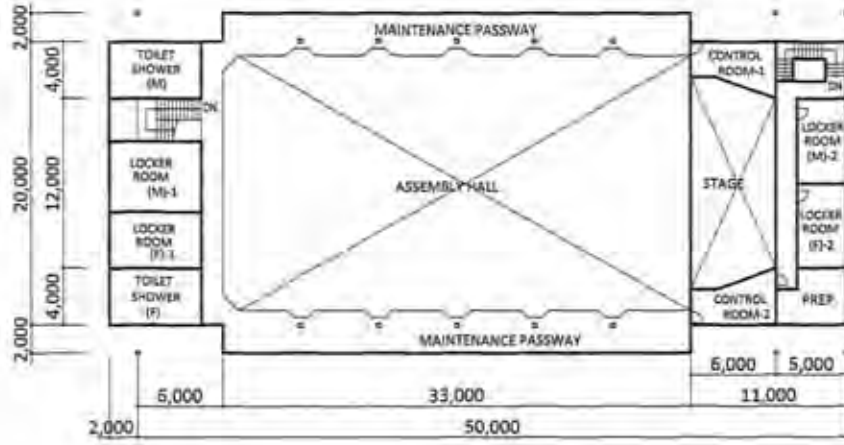


1st. FL. 568 m²

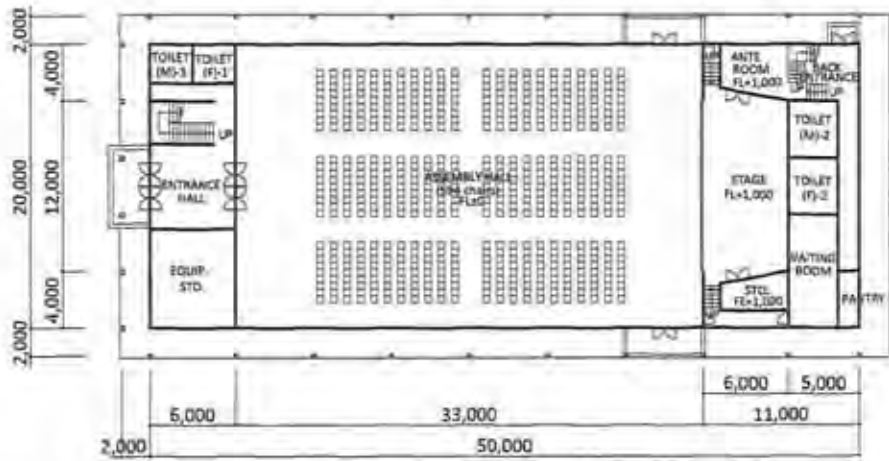
PN

250

PN-4 : ASSEMBLY HALL



1st FL. 297 m2



G. FL. 1,000 m2

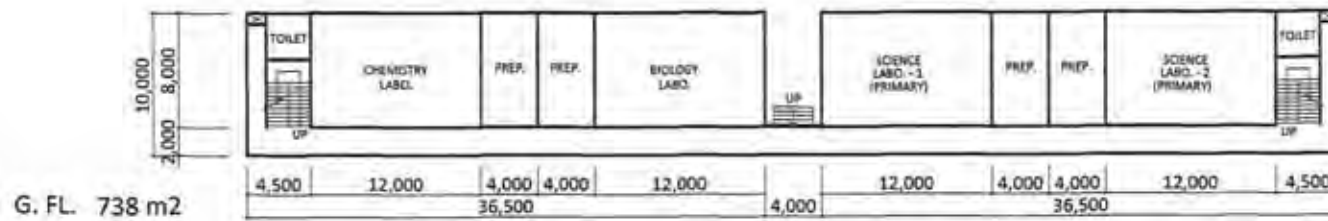
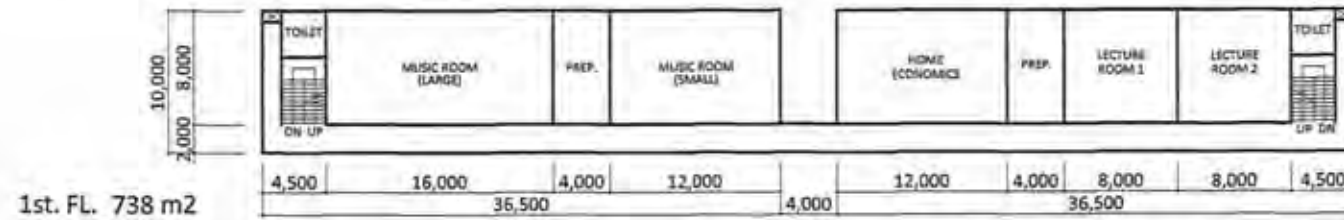
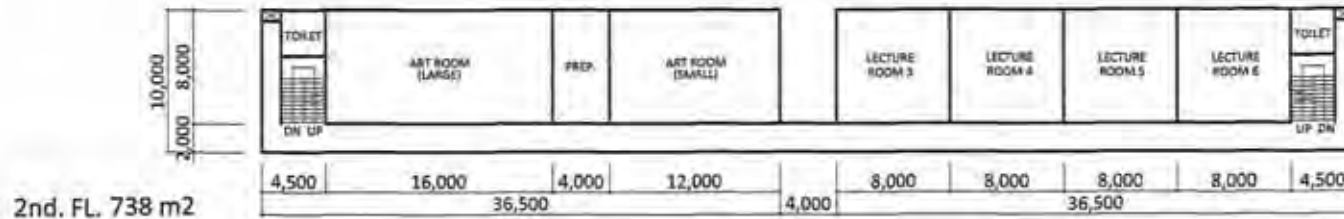
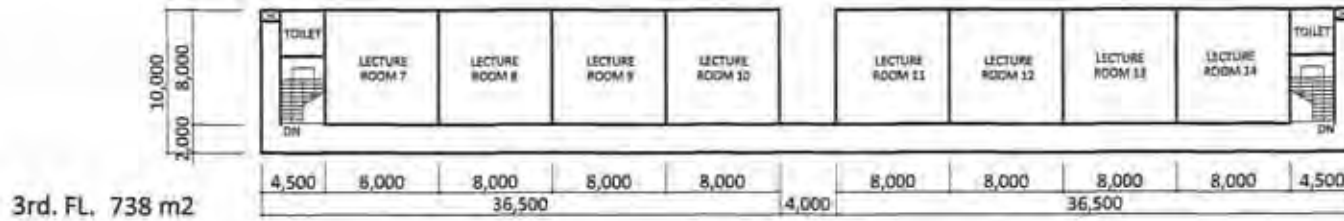
FLOOR AREA CALCULATION

SPECIAL ROOM BLOCK	G.FL.	796 m2
	1st.FL.	700 m2
	TOTAL	1,496 m2
ADMINISTRATION + ACADEMIC BLOCK (AUDITORIUM)	G.FL.	628 m2
	1st.FL.	628 m2
	2nd.FL.	672 m2
TOTAL	1,928 m2	
LIBRARY + ICT LABO.	G.FL.	605 m2
	1st.FL.	568 m2
	TOTAL	1,173 m2
ASSEMBLY HALL	G.FL.	1,000 m2
	1st.FL.	297 m2
	TOTAL	1,297 m2
GRAND TOTAL :		5,894 m2

Appendix 4 118

250

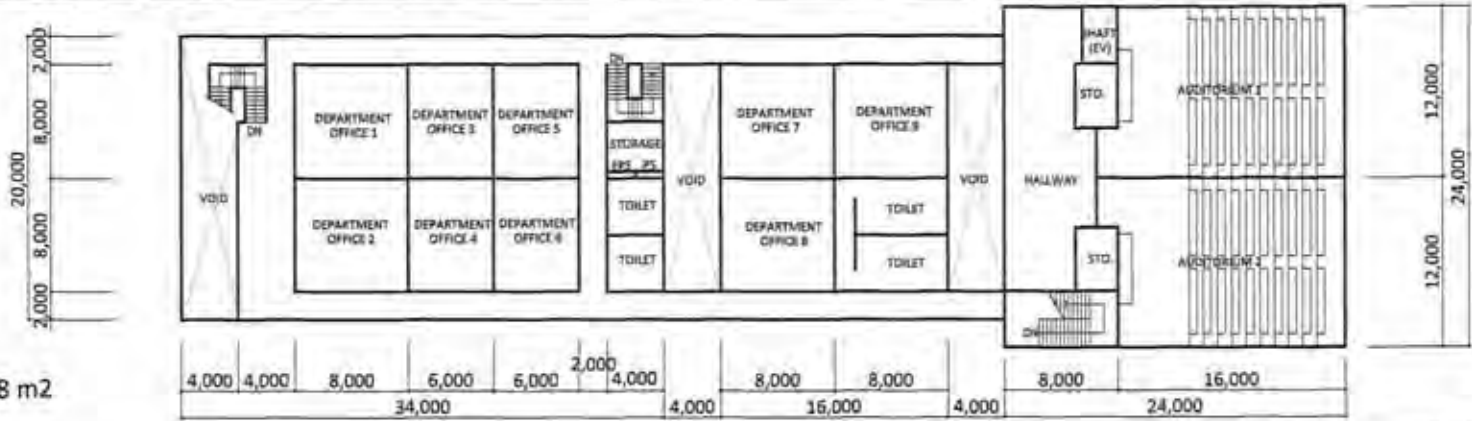
BRN-1 : SPECIAL ROOM & LECTURE ROOM BLOCK



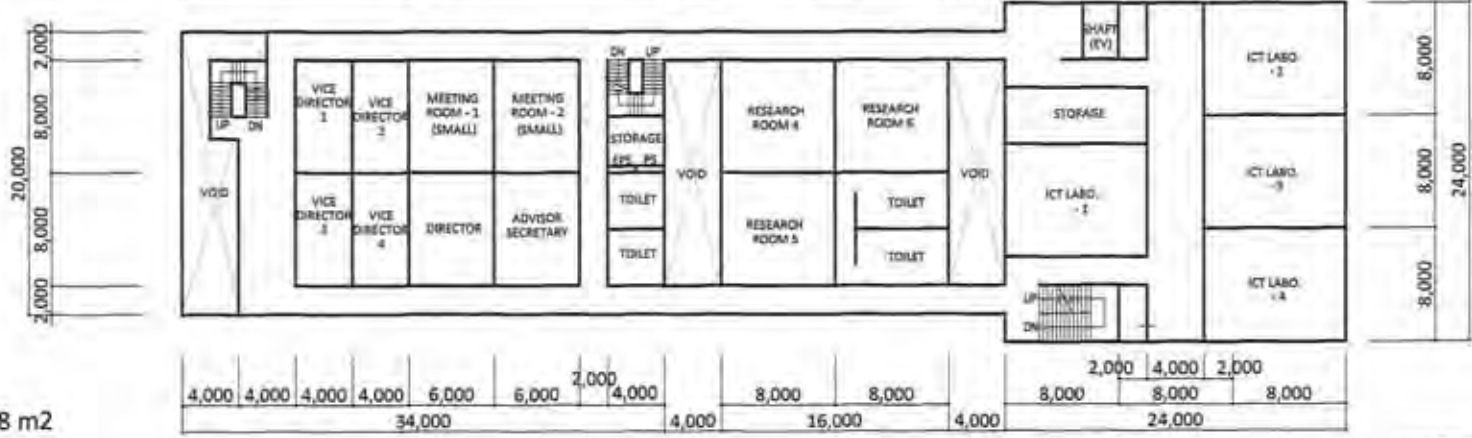
BRN-2 : ADMINISTRATION + ACADEMIC BLOCK + LIBRARY

Ans

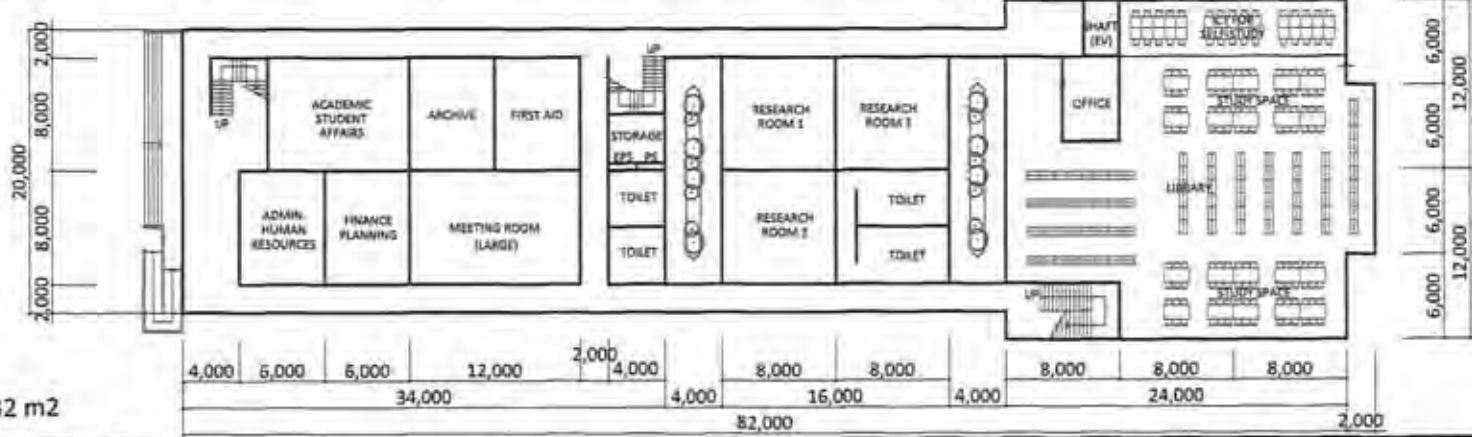
2nd. FL. 1,608 m2



1st. FL. 1,608 m2



G. FL. 1,632 m2



BATTANG TEC

NEW BUILDING - STUDY A (MAX. COMP.)

A4 1:500

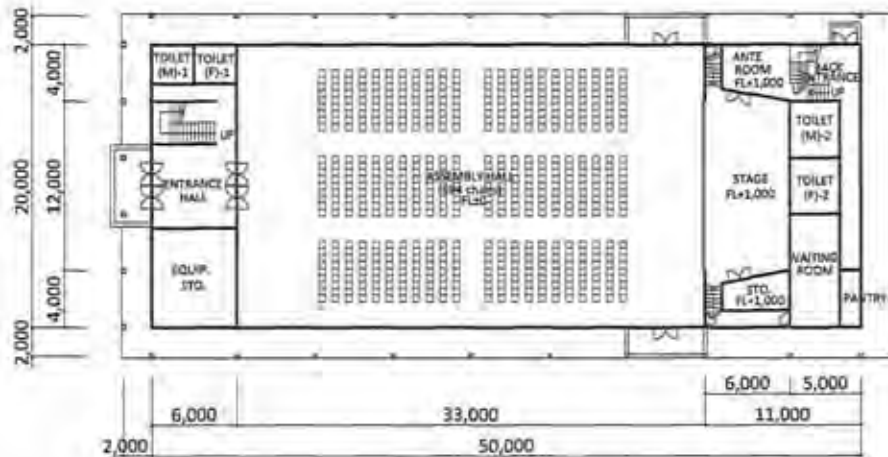
2 / 3

Appendix 4 120

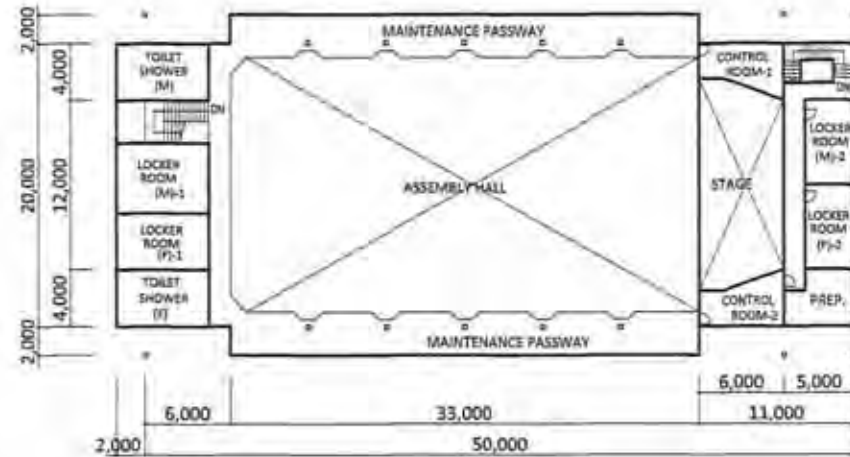
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DR

BRN-3 : ASSEMBLY HALL

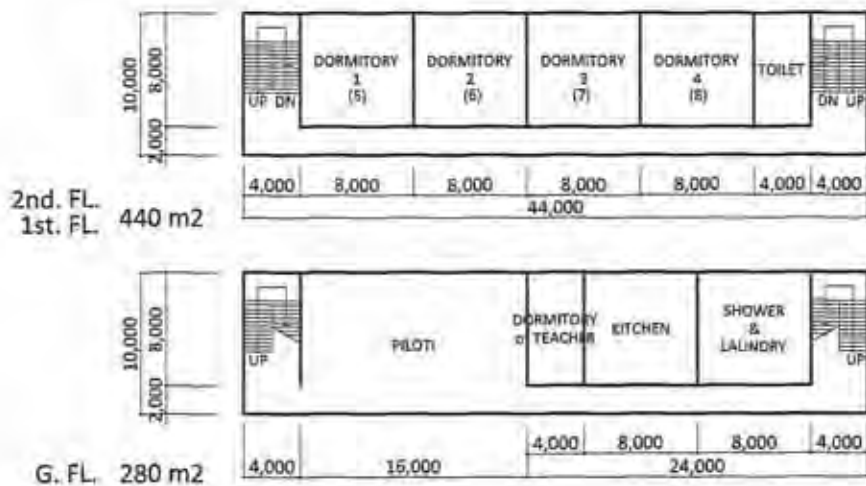


G. FL. 1,000 m²



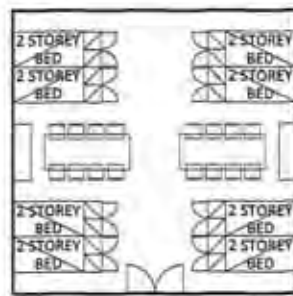
1st FL. 297 m²

BRN-4, -5 : DORMITORY FEMALE & DORMITORY MALE



2nd. FL. 440 m²
1st. FL.

G. FL. 280 m²



TYPICAL PLAN
16 PERSON PER ROOM

FLOOR AREA CALCULATION

SPECIAL ROOM + LECTURE ROOM	G.FL.	738 m ²
	1st.FL.	738 m ²
	3rd.FL.	738 m ² x 3
TOTAL		2,952 m ²
ADMINISTRATION + ACADEMIC BLOCK + LIBRARY	G.FL.	1,632 m ²
	1st.FL.	1,608 m ²
	2nd.FL.	1,608 m ²
TOTAL		4,848 m ²
ASSEMBLY HALL	G.FL.	1,000 m ²
	1st.FL.	297 m ²
	TOTAL	1,297 m ²
DORMITORY FEMALE & DORMITORY MALE (TWO BUILDINGS)	G.FL.	280m ² x 2
	1st.FL.	440m ² x 2
	2nd.FL.	440m ² x 2
	TOTAL	2,320 m ²
GRAND TOTAL :		11,417 m ²

DR

Science Lab Equipment for Primary Education		Phnom Penh		Battambang	
		Q'ty	Priority	Q'ty	Priority
1	Scale balance	31	A	31	A
2	Electronic balance	9	A	9	A
3	Thermograph	1	A	1	A
4	DC ammeter	9	A	9	A
5	DC voltmeter	9	A	9	A
6	Magnetizing coil	1	A	1	A
7	Aquarium set	1	B	1	B
8	Astronomical telescope	1	A	1	A
9	Lunar globe	1	C	1	C
10	Solar light source apparatus	1	C	1	C
11	Tripartite model	1	A	1	A
12	Binoculars	13	A	13	A
13	Pendulum apparatus	6	A	6	A
14	Instrument shelter	1	A	1	A
15	Experimental lever	31	A	31	A
16	Air extraction kit	31	A	31	A
17	Microscope	31	A	31	A
18	Binocular stereomicroscope	31	A	31	A
19	Chemical locker	1	A	1	A
20	Iron support	13	A	13	A
21	DC power supply	9	A	9	A
22	Desktop cork borer	1	C	1	C
23	Igneous rock specimens	9	A	9	A
24	Sedimentary rock specimens	9	A	9	A
25	Fossil specimens	9	A	9	A
26	Pyroclastic form specimens	9	A	9	A
27	Arm joint model	9	A	9	A
28	Skeleton model of human body	1	A	1	A
29	Anatomical model of human body	1	A	1	A
30	Eyeball model	1	B	1	B
31	Ear model	1	B	1	B
32	Glass tool set	9	A	9	A
33	Experimental tool set	9	A	9	A
34	Laboratory table (Biology) for student with stool	12	A	12	A
35	Laboratory table (Biology) for teacher with stool	2	A	2	A
36	Laboratory table (General Science) for student with stool	12	A	12	A
37	Laboratory table (General Science) for teacher with stool	2	A	2	A
38	Pulley	30	B	30	B
39	Laptop computer	2	A	2	A
40	Projector	2	A	2	A
41	Cabinet set	2	A	2	A
42	Science poster set	1	B	1	B
43	Tape measure	1	B	1	B
44	Stopwatches	1	B	1	B
45	Small mirrors	1	B	1	B

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Mathematics Equipment for Primary Education			Phnom Penh		Battambang	
			Q'ty	Priority	Q'ty	Priority
46	Plotting blackboard	1	B	1	B	
47	Triangle set for blackboard	1	B	1	B	
48	Ruler set for blackboard	1	B	1	B	
49	Compass for blackboard	1	A	1	A	
50	Protractor for blackboard	1	B	1	B	
51	Calculation practice card for demonstration	1	B	1	B	
52	Tape for explanation	1	B	1	B	
53	Number line sheet	1	B	1	B	
54	Explanation kit for fraction (apple model)	1	C	1	C	
55	Explanation kit for fraction (circular model)	1	C	1	C	
56	Explanation kit for scale reading	1	C	1	C	
57	Explanation kit for metric measurement	1	C	1	C	
58	Explanation kit for superficial measure of triangle and tetragon	1	A	1	A	
59	Weight set	1	A	1	A	
60	Explanation kit for polygon	1	A	1	A	
61	Explanation kit for sum of the internal angles	1	A	1	A	
62	Diagram congruity model	18	B	18	B	
63	Teaching board for line plot/graph	1	C	1	C	
64	Teaching board for circle/pie graph	1	C	1	C	
65	Teaching board for band/column graph	1	C	1	C	
66	Teaching board for histogram/bar chart	1	C	1	C	
67	Teaching board for graph of proportion and inverse proportion	1	C	1	C	
68	Study kit for volume	18	A	18	A	
69	Liter square/measure	18	A	18	A	
70	Diagram congruity model	18	B	18	B	
71	Cabinet set	1	A	1	A	
Social Study Equipment for Primary Education			Phnom Penh		Battambang	
			Q'ty	Priority	Q'ty	Priority
72	World map	1	A	1	A	
73	Southeast Asia map	1	A	1	A	
74	Cambodia map	1	A	1	A	
75	Globe	6	A	6	A	
Mathematics Equipment for Lower Secondary Education			Phnom Penh		Battambang	
			Q'ty	Priority	Q'ty	Priority
76	Plotting blackboard	1	B	1	B	
77	Triangle set for blackboard	1	B	1	B	
78	Ruler set for blackboard	1	B	1	B	
79	Compass for blackboard	1	A	1	A	
80	Protractor for blackboard	1	B	1	B	
81	Development model of formula	1	A	1	A	
82	Diagram congruity model	13	B	13	B	
83	Plane parallel study apparatus	13	A	13	A	
84	Solid model	13	A	13	A	
85	Three dimensional model	13	A	13	A	
86	Pythagorean theorem experiment kit	13	A	13	A	
87	Graph calculator	26	C	26	C	

Physics Equipment for Lower Secondary Education		Phnom Penh		Battambang	
		Q'ty	Priority	Q'ty	Priority
88	Experimental apparatus of slope	9	A	9	A
89	Dynamic movement apparatus	1	A	1	A
90	Pulley	1	A	1	A
91	Dolly	9	A	9	A
92	Experimental lever	33	A	33	A
93	Vacuum apparatus for falling experiment	1	A	1	A
94	Rotary vacuum pump	1	A	1	A
95	Experimental apparatus for dynamics (slope)	1	A	1	A
96	Stroboscope	1	A	1	A
97	Semiconductor laser	1	A	1	A
98	Optical bench and experimental apparatus	1	A	1	A
99	School Oscilloscope	1	A	1	A
100	Tuning fork for resonance	1	A	1	A
101	Low wave generator	1	A	1	A
102	Resonant apparatus in the air column	1	A	1	A
103	Vacuum apparatus with bell	1	A	1	A
104	Primary and secondary coils	9	A	9	A
105	DC AC power supply	9	A	9	A
106	DC ammeter	9	A	9	A
107	DC voltmeter	9	A	9	A
108	Magnetizing coil	1	A	1	A
109	Induction coils	1	A	1	A
110	Cross vacuum gauge	1	A	1	A
111	Discharge tube	1	A	1	A
112	Crookes tubes	1	A	1	A
113	High voltage generator for discharge tube	1	A	1	A
114	Variable autotransformer	1	A	1	A
115	Ferrite magnetic motor for experiment	1	A	1	A
116	Electric magnet	1	A	1	A
117	Study plate of electricity for blackboard	1	A	1	A
118	Van de Graaff generator	1	A	1	A
119	Experimental apparatus for dynamics (with pendulum)	9	A	9	A
120	Collision balls	1	A	1	A
121	Experimental apparatus for energy conversion	1	A	1	A
122	Laboratory table (Physics) for student with stool	6	A	6	B
123	Laboratory table (Physics) for teacher with stool	1	A	1	B
124	Laptop computer	1	A	1	A
125	Projector	1	A	1	A
126	Cabinet set	1	A	1	A

Chemistry Lab Equipment for Lower Secondary Education		Phnom Penh		Battambang	
		Q'ty	Priority	Q'ty	Priority
127	Electronic balance	9	A	9	A
128	Magnetic stirrer	9	A	9	A
129	Chemical locker	6	A	6	A
130	Refrigerator-Freezer	1	B	1	B
131	Desktop cork borer	6	C	6	C
132	Fume cupboard	2	C	2	C
133	Iron support	33	A	33	A
134	Glass tool set	9	A	9	A
135	Experimental tool set	9	A	9	A
136	Laboratory table (Chemistry) for student with stool	6	A	6	A
137	Laboratory table (Chemistry) for teacher with stool	1	A	1	A
138	Laptop computer	1	A	1	A
139	Projector	1	A	1	A
140	Cabinet set	1	A	1	A
141	Distillator	1	B	1	B
Biology Lab Equipment for Lower Secondary Education		Phnom Penh		Battambang	
		Q'ty	Priority	Q'ty	Priority
142	Aquarium set	1	B	1	B
143	Mendel's laws experiment machine	9	A	9	A
144	Microscope	33	A	33	A
145	Binocular stereomicroscope	33	A	33	A
146	Digital microscope	1	A	1	A
147	Digital binocular stereomicroscope	1	A	1	A
148	Microscope for researchers/mineralogy	1	A	1	A
149	Magnifying mirror with polarization	33	A	33	A
150	Digital camera system for microscope	1	A	1	A
151	Microscope cabinet	4	A	4	A
152	Laboratory wagon	2	A	2	A
153	Drying oven	1	C	1	C
154	Cylinder microtome	9	B	9	B
155	Magnifier for field	1	A	1	A
156	Binoculars(high spec model)	1	A	1	A
157	Sedimentary rock specimens	1	A	1	A
158	Igneous rock specimens	1	A	1	A
159	Mineral specimens	1	A	1	A
160	Rock-forming mineral specimens	1	A	1	A
161	Specimens of fossil animals	1	A	1	A
162	Specimens of fossil plants	1	A	1	A
163	Index fossil specimens	1	A	1	A
164	Skelton of vertebrates	1	A	1	A
165	Anatomy of Vertebrate specimens	1	A	1	A
166	Anatomy of invertebrate specimens	1	A	1	A
167	Mitosis model	1	A	1	A
168	Anatomical model of human body	1	A	1	A
169	Heart model	1	A	1	A
170	Skelton model of human body	1	A	1	A
171	Eyeball model	1	A	1	A
172	Ear model	1	A	1	A
173	Brain model	1	A	1	A
174	Pumping heart model	1	A	1	A
175	Kidney model	1	A	1	A
176	Arm joint model	1	A	1	A

177	Model of respiratory organs	1	A	1	A
178	Laboratory table (Biology) for student with stool	6	A	6	A
179	Laboratory table (Biology) for teacher with stool	1	A	1	A
180	Laptop computer	1	A	1	A
181	Projector	1	A	1	A
182	Cabinet set	1	A	1	A
Earth Science Lab Equipment for Lower Secondary Education		Phnom Penh		Battambang	
		Q'ty	Priority	Q'ty	Priority
183	Tripartite model	1	A	1	A
184	Astronomical telescope	1	A	1	A
185	Moon model	1	A	1	A
186	Transparent celestial globe	1	A	1	A
187	Aneroid barometer	1	A	1	A
188	Rain gauge	1	A	1	A
189	Weather observation system	1	C	1	C
190	Experimental apparatus for front models	1	C	1	C
191	Thermograph	1	A	1	A
192	Instrument shelter	1	A	1	A
193	Weather chart blackboard	6	C	6	C
194	Experimental vacuum apparatus	1	A	1	A
195	Magdeburg hemispheres	1	A	1	A
196	Luxmeter/illuminometer	1	C	1	C
197	Radiation detector	1	C	1	C
198	Laboratory table (Earth Science) for student with stool	6	A	6	B
199	Laboratory table (Earth Science) for teacher with stool	1	A	1	B
200	Laptop computer	1	A	1	A
201	Projector	1	A	1	A
202	Cabinet set	1	A	1	A
Social Study Equipment for Lower Secondary Education		Phnom Penh		Battambang	
		Q'ty	Priority	Q'ty	Priority
203	World map	1	A	1	A
204	Southeast Asia map	1	A	1	A
205	Cambodia map	1	A	1	A
206	Globe	6	A	6	A
Music Education Instruments and Equipment for Primary Education		Phnom Penh		Battambang	
		Q'ty	Priority	Q'ty	Priority
207	Electronic piano	31	A	31	A
208	Chair	61	A	61	A
209	Percussion instrument set	31	B	31	B
210	CD radio-cassette recorder	1	A	1	A
211	Metronome	31	A	31	A
212	Cabinet set	1	A	1	A

Music Education Instruments and Equipment for Lower Secondary Education		Phnom Penh		Battambang	
		Q'ty	Priority	Q'ty	Priority
213	Electronic piano	16	A	16	A
214	Chair	31	A	31	A
215	Percussion instrument set	16	B	16	B
216	CD radio-cassette recorder	1	A	1	A
217	Metronome	16	A	16	A
218	Cabinet set	1	A	1	A
Art Education Equipment for Primary Education		Phnom Penh		Battambang	
		Q'ty	Priority	Q'ty	Priority
219	Drawing board	61	A	61	A
220	Art desk for student with stool	12	A	12	A
221	Art desk for teacher with stool	1	A	1	A
Art Education Equipment for Lower Secondary Education		Phnom Penh		Battambang	
		Q'ty	Priority	Q'ty	Priority
222	Drawing board	31	A	31	A
223	Art desk for student with stool	6	A	6	A
224	Art desk for teacher with stool	1	A	1	A
Workshop Equipment		Phnom Penh		Battambang	
		Q'ty	Priority	Q'ty	Priority
225	Tool set for woodwork	4	A	4	A
226	Screw driver set	4	A	4	A
227	Electric jig saw	4	A	4	B
228	Bench-top drilling machine	4	A	4	B
229	Belt disc sander	4	B	4	B
230	Worktable for teacher with stool	2	A	2	A
231	Worktable for student with stool	12	A	12	A
232	Vise for woodwork	12	A	12	A
233	Scroll saw set	4	A	4	A
234	Corded electric hand drill set	4	A	4	A
235	Hand drill set	4	A	4	A
236	Wood file set	4	A	4	A
237	Electric saw set	4	A	4	A
238	Cabinet set	1	A	1	A
Home Economics Equipment		Phnom Penh		Battambang	
		Q'ty	Priority	Q'ty	Priority
239	Refrigerator	1	B	1	B
240	Pot set	7	A	7	A
241	Utensil set	7	A	7	A
242	Stand for cutting board	1	A	1	A
243	Scale	7	A	7	A
244	Tableware set	31	A	31	A
245	Sewing machine	31	B	31	B
246	Lock sewing machine	2	B	2	B
247	Sewing kit	31	A	31	A
248	Ruler set for sewing	31	A	31	A
249	Torso set	6	B	6	B
250	Iron	16	A	16	A
251	Ironing board	16	A	16	A
252	Washing machine	1	B	1	B

253	Cooking/Clothing table for student with stool	6	A	6	A
254	Cooking/Clothing table for teacher with stool	1	A	1	A
255	Gas cooker	7	A	7	A
256	Cabinet set	1	A	1	A
ICT Laboratory Equipment		Phnom Penh		Battambang	
		Q'ty	Priority	Q'ty	Priority
257	Computer network system for ICT Lab.	4	A	4	A
258	Laptop computer	4	A	4	A
259	Computer desk and chair set	4	A	4	A
260	Printer	4	A	4	A
261	Projector	4	A	4	A
262	Screen	4	A	4	A
Library Equipment		Phnom Penh		Battambang	
		Q'ty	Priority	Q'ty	Priority
263	Computer network system for library	1	A	1	A
264	Computer desk and chair set	1	A	1	A
265	Printer	2	A	2	A
Assembly Hall Equipment		Phnom Penh		Battambang	
		Q'ty	Priority	Q'ty	Priority
266	Sound equipment set	1	A	1	A
267	Projector	1	A	1	A
268	Screen	1	A	1	A
269	White board	2	A	2	A
Physical Education Equipment		Phnom Penh		Battambang	
		Q'ty	Priority	Q'ty	Priority
270	Exercise equipment set	1	B	1	B
271	Soccer ball/football	10	A	10	A
272	Volleyball	10	A	10	A
273	Cage for ball keeping	3	A	3	A
274	Inflator/air pump	3	A	3	A
275	Basket ball	10	A	10	A
Dispensary Equipment (First Aid Room)		Phnom Penh		Battambang	
		Q'ty	Priority	Q'ty	Priority
276	Bed	3	B	3	B
277	Bed clothing set	3	B	3	B
278	Examination table	1	A	1	A
279	Height scale	1	A	1	A
280	Weight scale	1	A	1	A
281	Sphygmomanometer	1	A	1	A
282	Medicine cabinet	1	A	1	A
283	Refrigerator for medicine	1	A	1	A
284	Autoclave	1	A	1	A
285	Dressing cart	1	A	1	A
286	Examination equipment set	1	A	1	A
287	Cast	1	A	1	A
288	Sanitary box	1	A	1	A
289	Laptop computer	1	B	1	B
290	Desk with chair	1	A	1	A
291	Stool	1	A	1	A

Appendix 5 Proposed Equipment List

Auditorium		Phnom Penh		Battambang	
		Q'ty	Priority	Q'ty	Priority
292	Projector	2	A	2	A
293	Screen	2	A	2	A
294	Sound equipment set	2	A	2	A
Lecture Room		Phnom Penh		Battambang	
		Q'ty	Priority	Q'ty	Priority
295	Projector	12	B	12	B
296	Screen	12	B	12	B
Academic Department Office		Phnom Penh		Battambang	
		Q'ty	Priority	Q'ty	Priority
297	Computer network system for academic department office	9	B	9	B
Administration Office		Phnom Penh		Battambang	
		Q'ty	Priority	Q'ty	Priority
298	Computer network system for administration office	3	B	3	B
299	Desktop computer	10	B	10	B

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(3) Technical Notes No. 3 (signed on June 14, 2017)

TECHNICAL NOTES No.3
ON THE PREPARATORY SURVEY FOR
THE PROJECT FOR THE CONSTRUCTION OF TEACHER EDUCATION COLLEGES

From December 2016 to January 2017, Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched the Preparatory Survey Team (hereinafter referred to as "the Team") for the Outline Design of the Project for the Construction of Teacher Education Colleges (hereinafter referred to as "the Project") to the Kingdom of Cambodia (hereinafter referred to as "Cambodia"), and the Minutes of Discussions (hereinafter referred to as "M/D") was signed on December 19, 2016 by and between the Ministry of Education, Youth and Sport (hereinafter referred to as "MoEYS") and JICA, and the Technical Notes (hereinafter referred to as "T/N 1") was signed on January 13, 2017 by and between MoEYS and the consultant team of the Team (hereinafter referred to as "the Consultant").

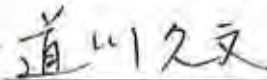
After that, the additional survey was conducted by the Consultant from March 9 to 16, 2017, and the Technical Notes No.2 (hereinafter referred to as "T/N 2") was signed on March 16, 2017.

During further study and analysis in Japan, JICA decided to conduct the second additional survey and dispatch the Consultant to Cambodia from May 17 to 19, 2017. The Consultant held a series of discussions with the officials of MoEYS and conducted field surveys. In the course of discussions, both sides have confirmed the main items described in the attached sheets.

Phnom Penh, June 14, 2017



H.E. Nath Bunroeun
Secretary of State
Ministry of Education, Youth and Sport
Royal Government of Cambodia
Kingdom of Cambodia



Hisafumi MICHIKAWA
Chief Consultant
Preparatory Survey Team
Consortium of Mohri, Architect & Associates, Inc.
and INTEM consulting, Inc.

CC:

- H.E. Dr. Hang Chuon Naron, Minister, MoEYS
- Dr. Dy Samsideth, Deputy Director-General, TPAP Task Force, MoEYS
- Mr. Ngor Penglong, Director of Teacher Training Department, MoEYS
- Mr. Vorng Phirun, Director of Construction Department, MoYES
- Mr. AP Kheang, Director of Property State Department, MoEYS
- Mr. Sorn Senghok, Director of Legislation Department, MoEYS
- JICA Cambodia Office

ATTACHMENT

1. Temporary Plan and College Operation Plan during Construction Period

MoEYS and the Consultant discussed about the key concepts on the temporary plans for construction and the college operation plans during the construction period, and both sides confirmed and agreed as follows.

1-1. Phnom Penh TEC

- Proposed construction period for Phnom Penh TEC¹ is planned as 19 months.
- Proposed temporary plan for Phnom Penh TEC is as shown in Appendix 1.
- A temporary gate for school users of the TEC and the attached lower secondary school will be installed by Cambodia side at the north-east end of the current PTTC site, in order to reduce intersection of users and construction vehicles during the construction period
- The northern on-site road in front of girls' dormitory will be paved by Cambodia side.
- Timing of the repair work of the existing buildings by Cambodia side will be determined after the assessment by Department of Construction, MoEYS and discussion with TEC management team; whether it will be carried out after completion of the construction by Japan side, or carried out simultaneously with Japan's construction one building after another.

1-2. Battambang TEC

- Operation plan of the TEC and the attached lower secondary school during construction period
 - The TEC will be operated by using only the current PTTC² facilities
 - The attached lower secondary school shall be temporarily relocated.
- Proposed construction period for Battambang TEC is planned as 20 months.
- Proposed temporary plan for Battambang TEC is as shown in Appendix 2.
 - The open area between the south road and the old buildings (BRE-1 and BRE-2 shown in Appendix 2) may be used as a space for temporary facilities for construction purpose.
 - During the construction period, the three existing buildings (BRE-7, 8 and 20 shown in Appendix 2) are to be used by the Contractor as the temporarily facilities.
 - During the construction period, the four existing buildings (BRE-2, 3, 4 and 6 shown in Appendix 2) are temporarily closed and covered by scaffolding and plastic sheets for the safety and protection purpose.
 - There will be no existing building repair work by the Cambodian side.

¹ TEC: Teacher Education College

² PTTC: Provincial Teacher Training Centre

2. UXO and Landmine Clearance

- MoEYS submitted the copies of clearance certificates for Phnom Penh and Battambang TEC sites to Japan side. However, the Consultant requested and MoEYS agreed that additional detection for Battambang TEC shall be carried out by CMAC³ since the submitted certificates did not fully cover the proposed construction areas of the Project as shown in Appendix-3. The clearance certificate for the additional detection will be submitted to Japan side as soon as practical, but definitely before the commencement of the detailed design works which is scheduled in February 2018.
- As for the existing buildings to be demolished by Japan side, the Consultant requested and MoEYS agreed that CMAC will conduct UXO/landmine detection soon after the existing buildings are demolished by the Contractor. Proposed procedure of UXO/landmine detection during the construction period is as follows.
 - The schedule of detection shall be well coordinated by MoEYS and CMAC in order to avoid any delay.
 - After completion of the demolition work by Japan side, the construction works within the designated areas will be temporarily suspended, while the construction works in the other areas shall be continued without temporary suspension.
 - Immediately after temporary suspension, UXO/landmine detection will be conducted by CMAC, and the expected duration of the detection is for 2-3 days. If any UXO or landmine is detected, the areas shall be properly cleared by CMAC.
 - Clearance certificate shall be issued within one month from the date of suspension.
 - Construction works by Japanese side will be resumed as soon as the site is cleared.

3. Reconfirmation of Technical Note 2

3-1. Relevant Educational Information

MoEYS submitted and the Consultant acknowledged the following documents relating to the items listed under 1. 2) of the attachment in the T/N 2. The Consultant will review the following documents for further analysis in Japan.

- 1) Sub-decree on Upgrading and Merging Regional Teacher Training Centre and Provincial Teacher Training Centre in Phnom Penh to become Teacher Education College in Phnom Penh
- 2) Sub-decree on Upgrading and Merging Regional Teacher Training Centre and Provincial Teacher Training Centre in Battambang to become Teacher Education College in Battambang
- 3) Prakas on Organization and Operation of Phnom Penh Teacher Education College (1st draft)
- 4) Prakas on Organization and Operation of Battambang Teacher Education College (1st draft)

MoEYS explained the Sub-decrees on the establishment of TECs have been recently approved by the Prime Minister, and subsequently the discussion on the Prakas, which stipulate TEC

³ CMAC: Cambodian Mine Action Centre

organization and staffing structure, will be carried out among MoEYS. In the meantime, MoEYS shared the first draft of Prakas with the Consultant for his reference.

5) Operation budget estimates and its feasibility

MoEYS submitted and the Consultant acknowledged the Program Budget for 2018-2020 of Teacher Training Department of MoEYS, which includes the planned operation budgets of both Phnom Penh and Battambang TECs.

6) Workplan with key actions and target date

Tentative workplan is submitted as Appendix 4.

3-2. Building Permit

MoEYS issued a letter, signed by the Minister of MoEYS, which describes that MoEYS permits construction of TEC facilities in the Phnom Penh and Battambang PTTC/RTTC compounds. MoEYS explained to the Consultant that this Project shall be exempted from building permit procedures by the letter. However, in case that building permits are required for the Project, due to change of laws and regulations, etc., MoEYS confirmed that Cambodia side will conduct necessary procedures concerning the building permits.

3-3. Land Certificate

MoEYS submitted to the Consultant photocopies of the land ownership certificates of both Phnom Penh and Battambang TECs. The Consultant additionally requested and MoEYS agreed to provide the land ownership certificates of the access road of Phnom Penh TEC site and the dormitory zone of Battambang TEC site by the time of a mission dispatched for a draft Preparatory Survey Report, which is scheduled in August 2017.

In particular, careful attention shall be paid to the case of the Phnom Penh TEC. MoEYS explained that the access road is conventionally being used as the part of the current Phnom Penh RTTC⁴ site, while the land ownership of the access road has not been officially registered. The Consultant requested and MoEYS agreed to provide an alternative official document which prove the RTTC or MoEYS has the land ownership of the access road, if the land ownership certificate is not available.

4. Other Issues

4-1. High Voltage Power Line Construction at Phnom Penh TEC

It was found that the underground high voltage power line is being constructed at the west perimeter fence which is behind the proposed new library (PN-3) and administration block (PN-2) of Phnom Penh TEC site, and the new building construction within 5 m from the perimeter fence must be avoided. Therefore, the Consultant will reconfirm the location of the proposed new library and administration block.

⁴ RTTC: Regional Teacher Training Centre

4-2. Electricity Connection to Phnom Penh TEC

Medium voltage line shall be connected from the main road to the new TEC blocks area through underground. As mentioned above in "3-3. Land Certificate", the land ownership of the access road is not yet confirmed, while the road is conventionally used by the current Phnom Penh RTTC. The Consultant explained and MoEYS agreed that the construction of underground electric line of medium voltage along the access road will be planned and estimated as to be borne by Japan side with preconditions that the access road belongs to the current Phnom Penh RTTC or MoEYS. Meanwhile, both sides agreed that the electrical works along the access road shall be borne by Cambodia side, if it is confirmed that the road belong to the public or the other parties.

- Appendix 1: Proposed Temporary Plan for Phnom Penh TEC
- Appendix 2: Proposed Temporary Plan for Battambang TEC
- Appendix 3: Areas to be detected by CMAC for Battambang TEC
- Appendix 4: Tentative Workplan

DS

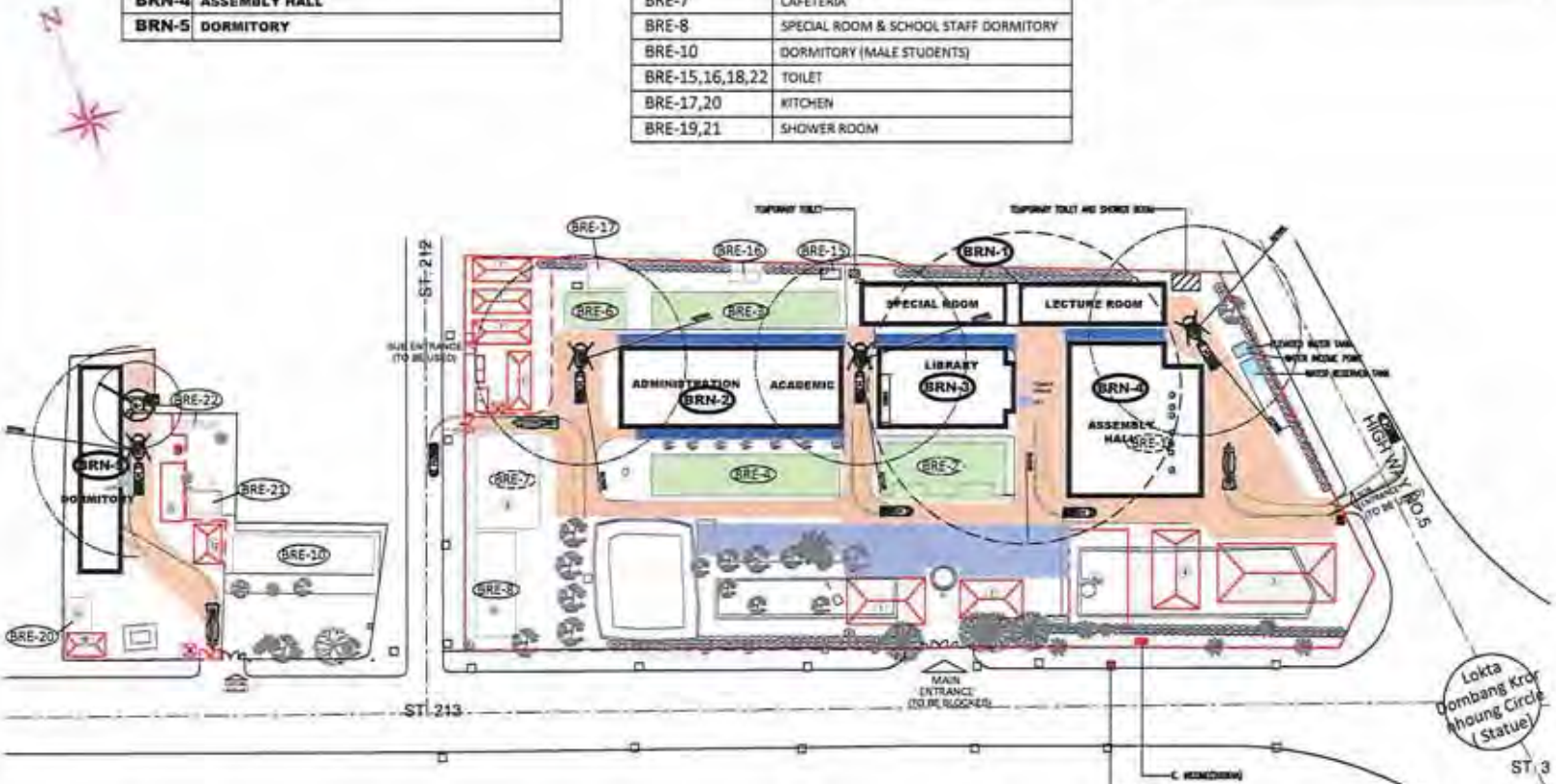


BA

BUILDINGS TO BE CONSTRUCTED BY THE PROJECT	
BRN-1	ACADEMIC & SPECIAL ROOM BLOCK
BRN-2	ADMIN & ACADEMIC BLOCK
BRN-3	LIBRARY & ACADEMIC BLOCK
BRN-4	ASSEMBLY HALL
BRN-5	DORMITORY

EXISTING BUILDING UTILIZED FOR TEC	
BRE-3	LOWER SECONDARY SCHOOL
BRE-4	ACADEMIC BLOCK
BRE-6	SPECIAL ROOM BLOCK
BRE-7	CAFETERIA
BRE-8	SPECIAL ROOM & SCHOOL STAFF DORMITORY
BRE-10	DORMITORY (MALE STUDENTS)
BRE-15,16,18,22	TOILET
BRE-17,20	KITCHEN
BRE-19,21	SHOWER ROOM

BUILDINGS TO BE DEMOLISHED BY THE PROJECT					
BRE-1	BRE-5	BRE-9	BRE-12	BRE-13	BRE-14
EXISTING BUILDING NOT TO BE UTILIZED FOR TEC					
BRE-2					



SITE MANAGEMENT LAYOUT PLAN DESCRIPTION		
NO	DESCRIPTION	SIZE (IN METERS)
1	WORK SHOP	12 X 20
2	RUBBER SHOP	10 X 18
3	RUBBER STOCK YARD	15 X 25
4	GENERAL WAREHOUSE	12 X 20
5	SITE OFFICE FOR CONSULTANT, GENERAL CONTROLLER, MEETING ROOM, STORAGE & TOILET	15 X 30
6	TOILET & SHOW ROOM	4 X 8
7	WORKERS DORMITORY	6 X 15
8	GUARD HOUSE	3 X 3
9	SUB CON. OFFICE & CANTINE(BRE-7)	16 X 24
10	WAREHOUSE	8 X 12
11	SITE OFFICE (EXISTING BLD)	6 X 10
12	WORK SHOP	7 X 10
13	STOCK YARD	6 X 15
14	TOILET	1.5 X 2.4
15	REST AREA(BRE-6)	10 X 28

- LEGEND
- TEMPORARY FENCE H=2.2m METAL SHEET
 - EXISTING BLD PROTECT BY (BLD-2,4) SHEETS & METAL
 - TEMPORARY ROAD W= 3,5m (ONE WAY)
 - TEMPORARY ROAD W= 5m ~ 10m
 - GENERAL STOCK YARD 10m X 90m
 - SCAFFOLDING
 - CONCRETE+PUMPING TRUCK

1 FULL CONSTRUCTION PHASE
Scale: 1/1200

OR

Areas to be detected by CMAC for Battambang TEC



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RD

Workplan with Key Actions and Timeline to Start TEC Operation

Year	Month	Administration	Finance	Human Resource	Education	
2017	Jan				E-TEC launch	
	Feb				E-TEC JCC 1	
	Mar		Start planning TEC budget			
	Apr					
	May	Sub-decree to establish TEC submitted to Council of Ministers Sub-decree expected to be approved	Include TEC budget in MoEYS budget 2018	Draft selection criteria for TEC director and faculty Include new TEC posts in 2018 MoEYS recruitment plan		Finalize Curriculum Framework
	Jun					Start syllabi development
					TEC director selected	
	Jul				TEC faculty candidates selected	
	Aug					TE subsector analysis prepared
						E-TEC JCC 2
	Sep					
	Oct					
Nov						
Dec					TEC strategic Plan developed	
2018	Jan	Advertise TEC for candidates, special visit to HS in the areas with teacher shortage				
	Feb				E-TEC JCC 3	
	Mar		Start planning TEC budget			
	Apr					
	May		Include TEC budget in MoEYS budget 2019	Include new TEC posts in 2019 MoEYS recruitment plan		
	Jun					
	Jul					
	Aug					E-TEC JCC 4
	Sep					
	Oct	Student selection exam				
	Nov		Start 4-year teacher education course at TEC PP and BB (using existing buildings)			
	Dec					

Appendix 4 141

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Appendix 5 References

Appendix 5. References

No.	Name	Form	Original /Copy	Published by	Year
1	Sub-decree No. 72: Sub-decree on Environmental Impact Assessment Process	Data	Copy	Ministry of Environment	1999
2	Education Statistics and Indicators 2007/08-2016/17	Data	Copy	Ministry of Education Youth and Sports	-
3	Rectangular Strategy for Growth, Employment, Equity and Efficiency: Phase II (2008-2013)	Data	Copy	Royal Government of Cambodia	2008
4	Rectangular Strategy for Growth, Employment, Equity and Efficiency: Phase III (2014-2018)	Data	Copy	Royal Government of Cambodia	2013
5	Education Strategic Plan: 2014-2018	Data	Copy	Ministry of Education Youth and Sports	2014
6	Mid-term review of the education sector strategic plan for 2014-2018	Data	Copy	Ministry of Education Youth and Sports	2014
7	National Strategic Development Plan: 2014-2018, for growth, employment, equity and efficiency to reach upper-middle income country	Data	Copy	Ministry of Planning	2014
8	Educating the Next Generation : Improving Teacher Quality in Cambodia	Data	Copy	Tandon Prateek and Tsuyoshi Fukao (World Bank)	2015
9	Teacher Policy Action Plan: TPAP	Data	Copy	Ministry of Education Youth and Sports	2015
10	Budget Backed Without Support (November 23, 2016)	Data	Website	Khmer Times	2016
11	Cambodia Economic Update; Improving Macroeconomic and Financial Resilience	Data	Copy	World Bank	2016
12	Human Development for Everyone; Briefing note for countries on the 2016 Human Development Report, “Cambodia”	Data	Copy	UNDP	2016
13	Teacher Education Provider Standard : TEPS	Data	Copy	Ministry of Education Youth and Sports	2016
14	Teacher Education Provider Standards	Data	Copy	Ministry of Education Youth and Sports	2016
15	Cambodia - Submission (2018-2021): For the Education Sector Programme Implementation Grant 2018 – 2021 from the Global Partnership for Education (Draft)	Data	Copy	UNESCO, UNICEF	2017
16	CIA WORLD FACTBOOK 2017	Data	Copy	CIA	2017
17	Sub-decree No.72: Sub-decree on Upgrading and Merging Regional Teacher Training Center and Provincial Teacher Training Center in Battambang to become Teacher Education College in Battambang	Data	Copy	Ministry of Education Youth and Sports	2017

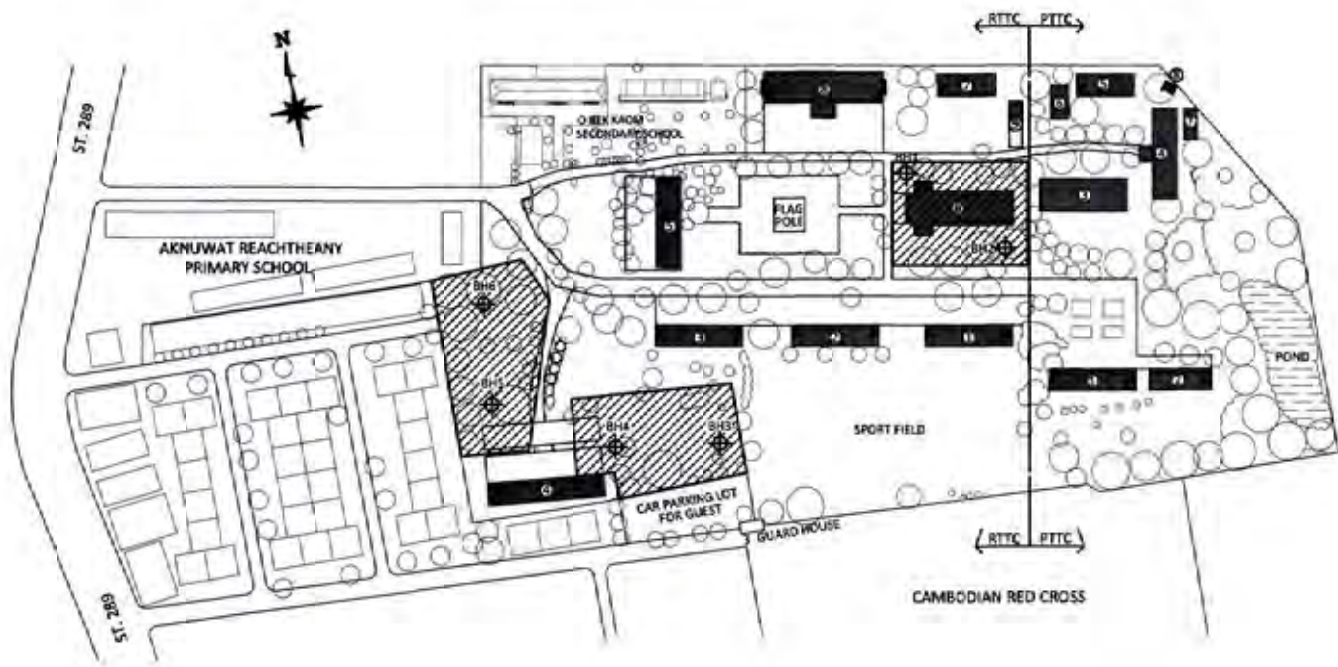
18	Sub-decree No.73: Sub-decree on Upgrading and Merging Regional Teacher Training Center and Provincial Teacher Training Center in Phnom Penh to become Teacher Education College in Phnom Penh	Data	Copy	Ministry of Education Youth and Sports	2017
19	Constitution of the Kingdom of Cambodia (Japanese translation)	Data	Copy	Royal Government of Cambodia (translated by Ministry of Justice of Japan)	1999 (Rev. year)
20	Final report for the next 5-year plan of facility development of national universities	Data	Copy	Ministry of Education, Culture, Sports, Science and Technology	2016
21	Data collection survey on human resource development for industrialisation in the education sector in the Kingdom of Cambodia : final report	Book	Original	JICA	2012
22	Plan of facility development of Miyagi University	Data	Copy	Miyagi University	2010

Appendix 6-a Soil Investigation Results

(Phnom Penh TEC site)

Appendix 6-b Soil Investigation Results

(Battambang TEC site)



RTTC		
①	CLASS ROOM BUILDING -1	RC : 2 STOREY
②	CLASS ROOM BUILDING -2	RC : 2 STOREY
③	ADMINISTRATION BUILDING	RC : 2 STOREY
④	CLASS ROOM BUILDING -3	RC : 3 STOREY
⑤	LABORATORY BUILDING	RC : 1 STOREY
⑥	MEETING HALL	RC : 1 STOREY
⑦	MALE DORMITORY -1	RC : 2 STOREY
⑧	MALE DORMITORY -2	RC+W : 2 STOREY
⑨	PRIVATE CANTEEN	S : 1 STOREY
PTTC		
①	ADMINISTRATION BUILDING	RC : 2 STOREY
②	CLASS ROOM BUILDING -1	RC : 2 STOREY
③	SLEEPING ROOM & MEETING HALL BLDG	RC : 2 STOREY
④	LIBRARY	RC : 1 STOREY
⑤	MALE DORMITORY -1	RC : 2 STOREY
⑥	CANTEEN	RC : 1 STOREY
⑦	MALE DORMITORY -2	W : 1 STOREY
⑧	TOILET	RC : 1 STOREY

FIGURE A1: LOCATION OF BOREHOLES
PROJECT: PHNOM PENH (RTTC & PTTC)
LOCATION: KHAN TOL KORK, PHNOM PENH CITY

Figure A2.1: BORING LOG AND STANDARD PENETRATION TEST RESULTS

BOREHOLE: **BH1**

Project Name: PHNOM PENH (RTTC & PTTC)

Project Location: KHAN TOUL KORK, PHNOM PENH CITY, CAMBODIA

Coordinate:

X = 488 055

Y = 1 277 492

Elevation: 0.0 m

- Assumed:

- Measured:

Ground water:

- Water inflow # :

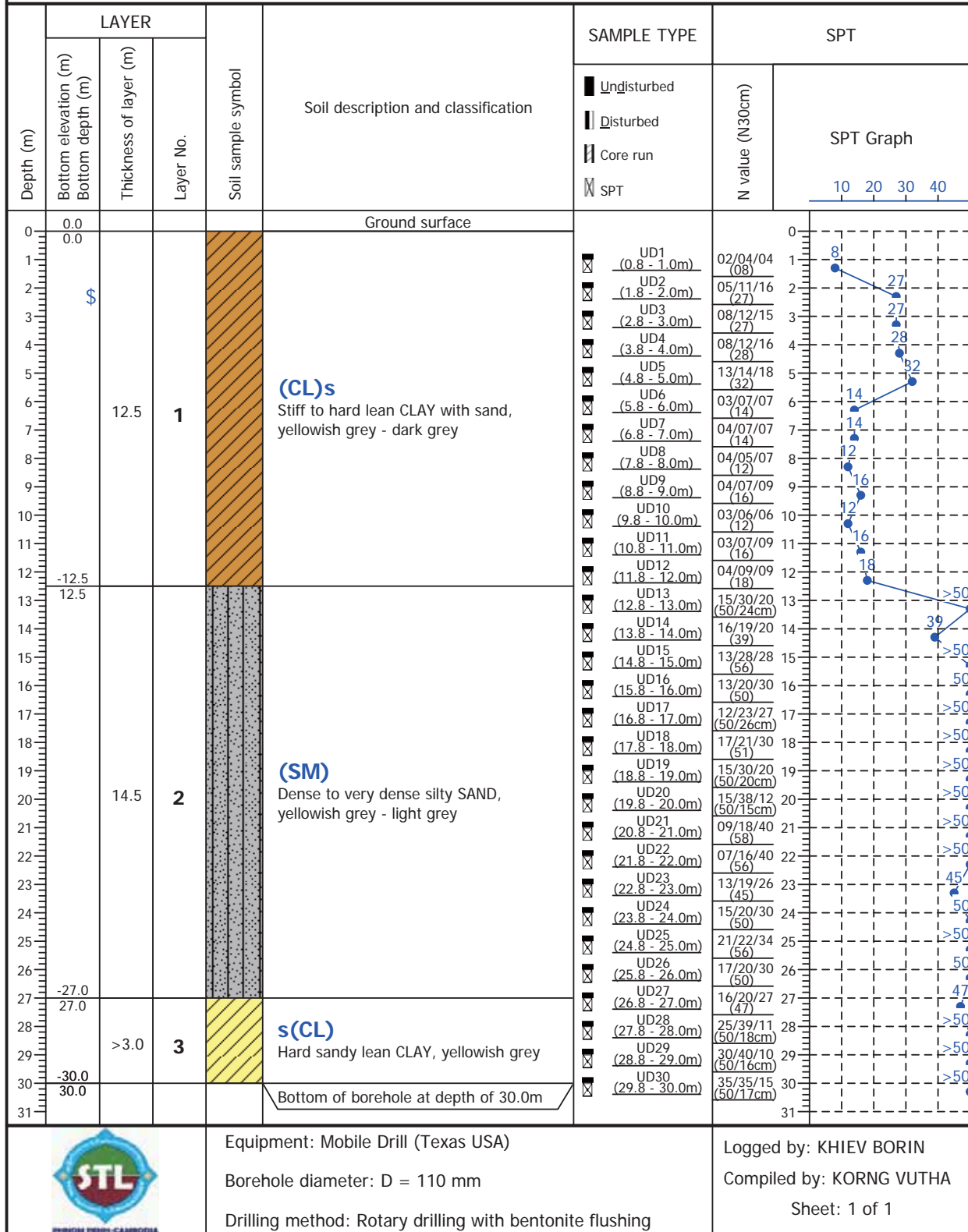
- Water level \$: 2.5m (22/02/2017)

Depth of borehole: 30.0 m

Weather: Sunny

Start date: 19/02/2017

End date: 21/02/2017



Equipment: Mobile Drill (Texas USA)

Borehole diameter: D = 110 mm

Drilling method: Rotary drilling with bentonite flushing

Logged by: KHIEV BORIN

Compiled by: KORNG VUTHA

Sheet: 1 of 1

The water level recorded when the boring tests conducted (in February 2017, dry season) was affected by water used for drilling. The water level remeasured in rainy season (September 2017) was 3.5m from the ground level.

Figure A2.2: BORING LOG AND STANDARD PENETRATION TEST RESULTS

BOREHOLE: **BH2**

Project Name: PHNOM PENH (RTTC & PTTC)

Project Location: KHAN TOUL KORK, PHNOM PENH CITY, CAMBODIA

Coordinate:

X = 488 087

Y = 1 277 460

Elevation: 0.0 m

- Assumed:

- Measured:

Ground water:

- Water inflow # :

- Water level \$: 2.0m (20/02/2017)

Depth of borehole: 30.0 m

Weather: Sunny

Start date: 18/02/2017

End date: 19/02/2017

Depth (m)	LAYER			Soil sample symbol	Soil description and classification	SAMPLE TYPE	SPT	
	Bottom elevation (m)	Bottom depth (m)	Thickness of layer (m)				Layer No.	N value (N30cm)
0	0.0	0.0			Ground surface			
1			8.5	1	(CL)s Stiff to hard lean CLAY with sand, yellowish grey - dark grey	UD1 (0.8 - 1.0m) 02/03/05 (08) UD2 (1.8 - 2.0m) 03/04/06 (10) UD3 (2.8 - 3.0m) 04/08/10 (18) UD4 (3.8 - 4.0m) 07/11/12 (23) UD5 (4.8 - 5.0m) 08/11/14 (25) UD6 (5.8 - 6.0m) 07/13/22 (35) UD7 (6.8 - 7.0m) 10/12/17 (29) UD8 (7.8 - 8.0m) 13/12/21 (33) UD9 (8.8 - 9.0m) 07/18/18 (36) UD10 (9.8 - 10.0m) 10/11/11 (22) UD11 (10.8 - 11.0m) 11/15/18 (33) UD12 (11.8 - 12.0m) 08/13/20 (33) UD13 (12.8 - 13.0m) 12/22/30 (52) UD14 (13.8 - 14.0m) 20/25/25 (50) UD15 (14.8 - 15.0m) 20/25/25 (50/25cm) UD16 (15.8 - 16.0m) 17/35/15 (50/22cm) UD17 (16.8 - 17.0m) 14/27/23 (50/26cm) UD18 (17.8 - 18.0m) 14/24/37 (61) UD19 (18.8 - 19.0m) 12/22/28 (50/25cm) UD20 (19.8 - 20.0m) 17/37/13 (50/20cm) UD21 (20.8 - 21.0m) 17/28/22 (50/23cm) UD22 (21.8 - 22.0m) 19/27/23 (50/25cm) UD23 (22.8 - 23.0m) 08/20/26 (46) UD24 (23.8 - 24.0m) 09/18/25 (43) UD25 (24.8 - 25.0m) 22/35/15 (50/21cm) UD26 (25.8 - 26.0m) 20/30/20 (50/23cm) UD27 (26.8 - 27.0m) 13/17/37 (54) UD28 (27.8 - 28.0m) 10/21/33 (54) UD29 (28.8 - 29.0m) 25/32/18 (50/21cm) UD30 (29.8 - 30.0m) 27/35/15 (50/20cm)		
2				2	(SM) Medium dense to dense silty SAND, yellowish grey - light grey			
3				L	s(CL) Hard sandy lean CLAY, yellowish grey			
4			19.5	2	(SM) Dense to very dense silty SAND, yellowish grey - light grey			
5				3	s(CL) Hard sandy lean CLAY, yellowish grey			
6			>2.0		Bottom of borehole at depth of 30.0m			



Equipment: Mobile Drill (Texas USA)

Borehole diameter: D = 110 mm

Drilling method: Rotary drilling with bentonite flushing

Logged by: KHIEV BORIN

Compiled by: KORNG VUTHA

Sheet: 1 of 1

Figure A2.3: BORING LOG AND STANDARD PENETRATION TEST RESULTS

BOREHOLE: **BH3**

Project Name: PHNOM PENH (RTTC & PTTC)

Project Location: KHAN TOUL KORK, PHNOM PENH CITY, CAMBODIA

Coordinate:

X = 487 947

Y = 1 277 399

Elevation: 0.0 m

- Assumed:

- Measured:

Ground water:

- Water inflow # :

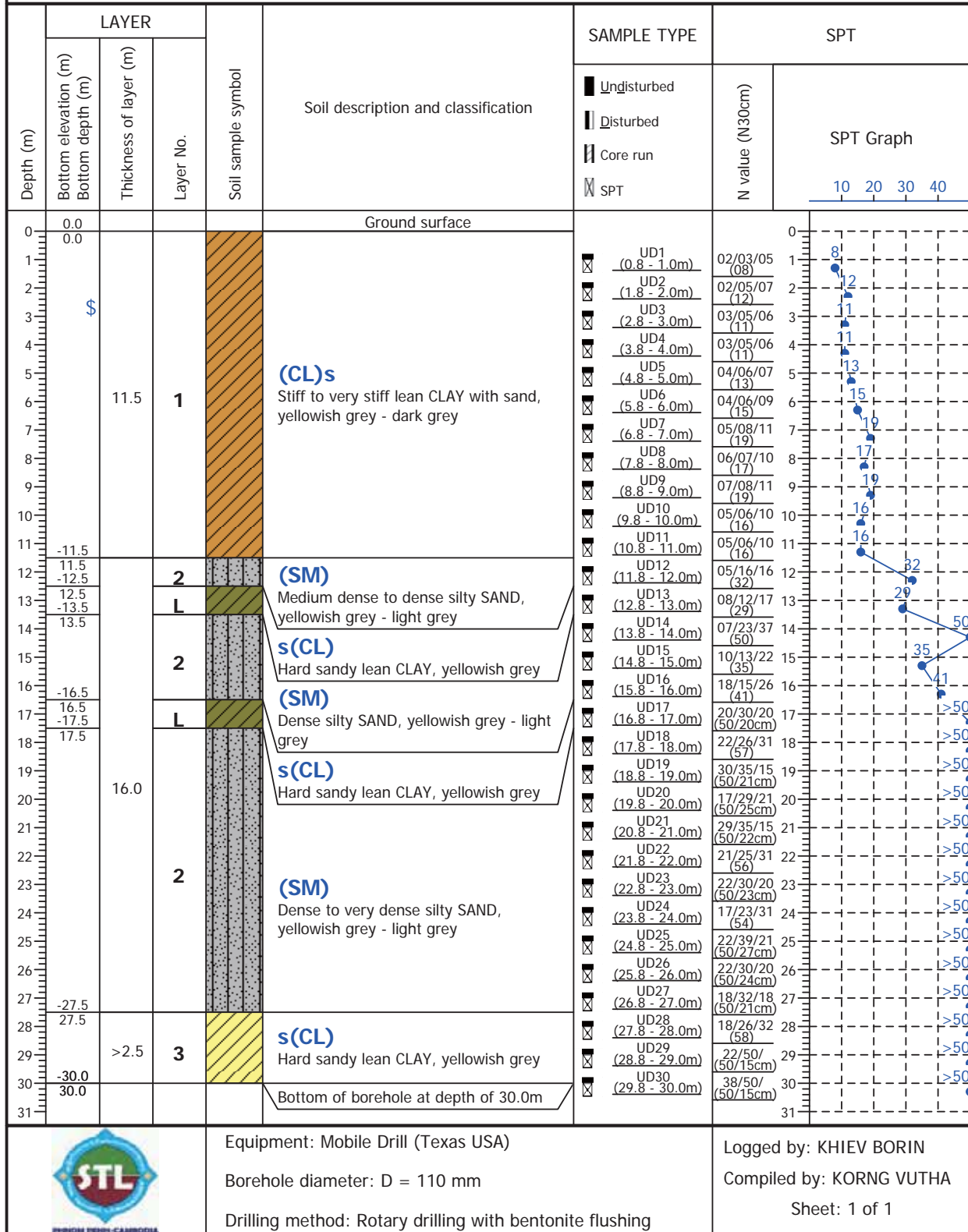
- Water level \$: 2.9m (18/02/2017)

Depth of borehole: 30.0 m

Weather: Sunny

Start date: 17/02/2017

End date: 17/02/2017



Equipment: Mobile Drill (Texas USA)

Borehole diameter: D = 110 mm

Drilling method: Rotary drilling with bentonite flushing

Logged by: KHIEV BORIN

Compiled by: KORNG VUTHA

Sheet: 1 of 1

Figure A2.5: BORING LOG AND STANDARD PENETRATION TEST RESULTS

BOREHOLE: **BH5**

Project Name: PHNOM PENH (RTTC & PTTC)

Project Location: KHAN TOUL KORK, PHNOM PENH CITY, CAMBODIA

Coordinate:

X = 487 837

Y = 1 277 429

Elevation: 0.0 m

- Assumed:

- Measured:

Ground water:

- Water inflow # :

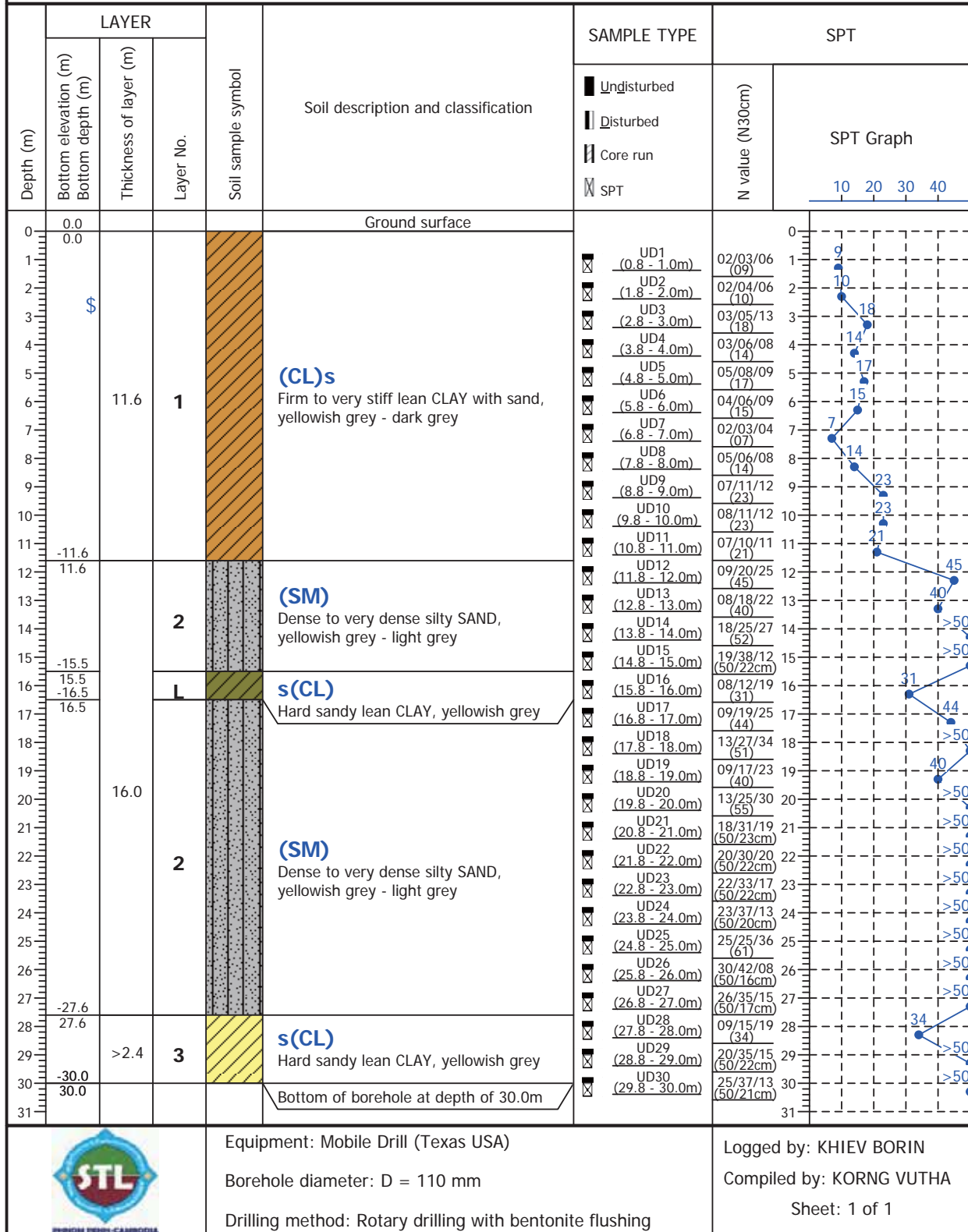
- Water level \$: 2.8m (16/02/2017)

Depth of borehole: 30.0 m

Weather: Sunny

Start date: 15/02/2017

End date: 15/02/2017



Equipment: Mobile Drill (Texas USA)

Borehole diameter: D = 110 mm

Drilling method: Rotary drilling with bentonite flushing

Logged by: KHIEV BORIN

Compiled by: KORNG VUTHA

Sheet: 1 of 1

Figure A2.6: BORING LOG AND STANDARD PENETRATION TEST RESULTS

BOREHOLE: **BH6**

Project Name: PHNOM PENH (RTTC & PTTC)

Project Location: KHAN TOUL KORK, PHNOM PENH CITY, CAMBODIA

Coordinate:

X = 487 844

Y = 1 277 470

Elevation: 0.0 m

- Assumed:

- Measured:

Ground water:

- Water inflow # :

- Water level \$: 2.0m (15/02/2017)

Depth of borehole: 30.0 m

Weather: Sunny

Start date: 13/02/2017

End date: 14/02/2017

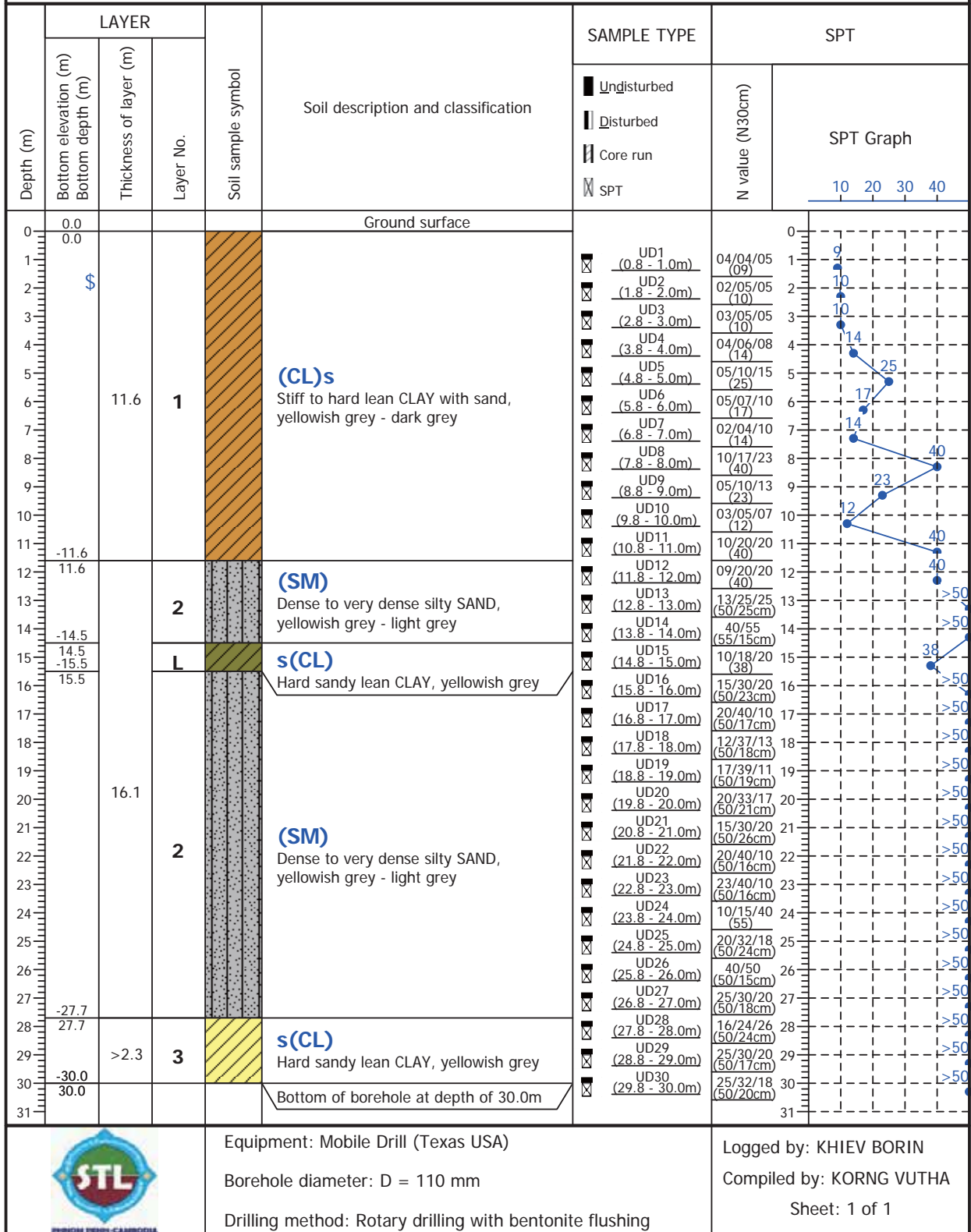
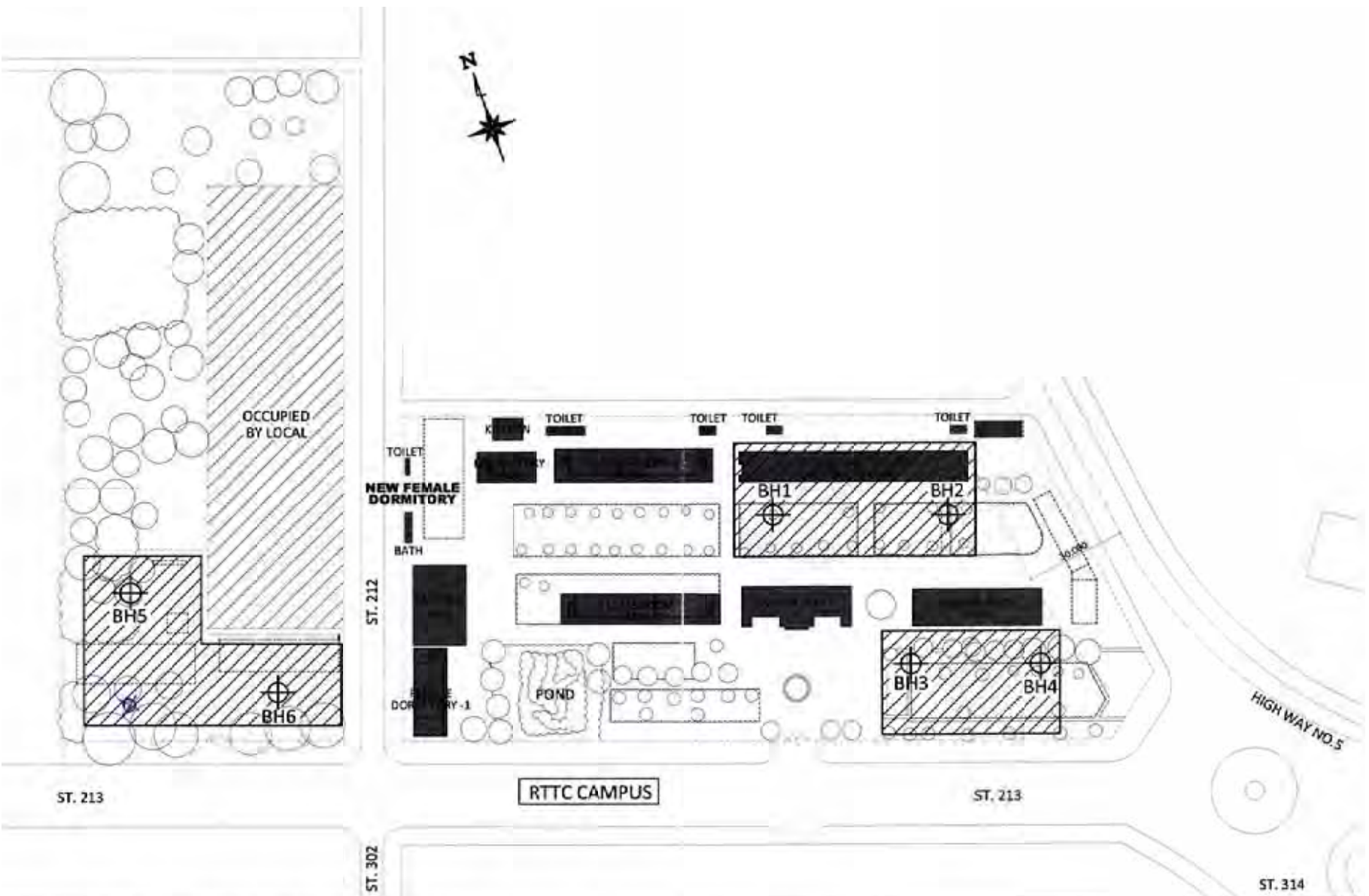


FIGURE A1: LOCATION OF BOREHOLES
PROJECT: BATTAMBANG TEC (RTTC & PTTC)
LOCATION: BATTAMBANG PROVINCE PEGION PEDAGOGY CENTER



BATTAMBANG TEC (RTTC & PTTC) : SITE LAYOUT

S = 1:1000 (A3)

Figure A2.1: BORING LOG AND STANDARD PENETRATION TEST RESULTS

BOREHOLE: **BH1**

Project Name: BATTAMBANG TEC (RTTC & PTTC)

Project Location: BATTAMBANG PROVINCE PEGION PEDAGOGY CENTER, CAMBODIA

Coordinate:

X = 305 664

Y = 1 447 977

Elevation: 0.0 m

- Assumed:

- Measured:

Ground water:

- Water inflow # :

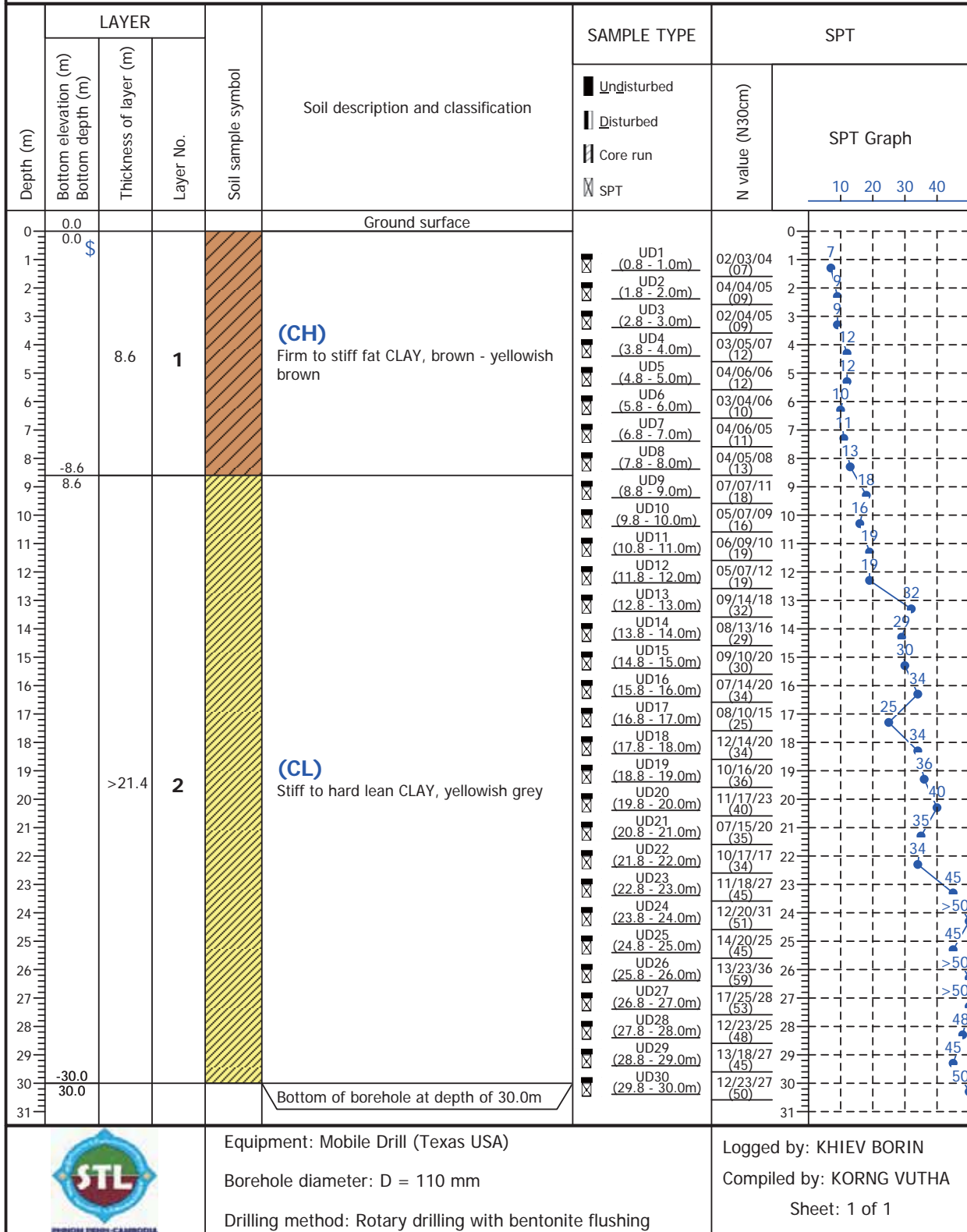
- Water level \$: 0.8m (17/01/2017)

Depth of borehole: 30.0 m

Weather: Sunny

Start date: 14/01/2017

End date: 16/01/2017



Equipment: Mobile Drill (Texas USA)

Borehole diameter: D = 110 mm

Drilling method: Rotary drilling with bentonite flushing

Logged by: KHIEV BORIN

Compiled by: KORNG VUTHA

Sheet: 1 of 1

The water level recorded when the boring tests conducted (in January 2017, dry season) was affected by water used for drilling. The water level remeasured in rainy season (September 2017) was 1.5m from the ground level.

Figure A2.2: BORING LOG AND STANDARD PENETRATION TEST RESULTS

BOREHOLE: **BH2**

Project Name: BATTAMBANG TEC (RTTC & PTTC)

Project Location: BATTAMBANG PROVINCE PEGION PEDAGOGY CENTER, CAMBODIA

Coordinate:

X = 305 710

Y = 1 447 965

Elevation: 0.0 m

- Assumed:

- Measured:

Ground water:

- Water inflow # :

- Water level \$: 0.6m (18/01/2017)

Depth of borehole: 30.0 m

Weather: Sunny

Start date: 16/01/2017

End date: 17/01/2017

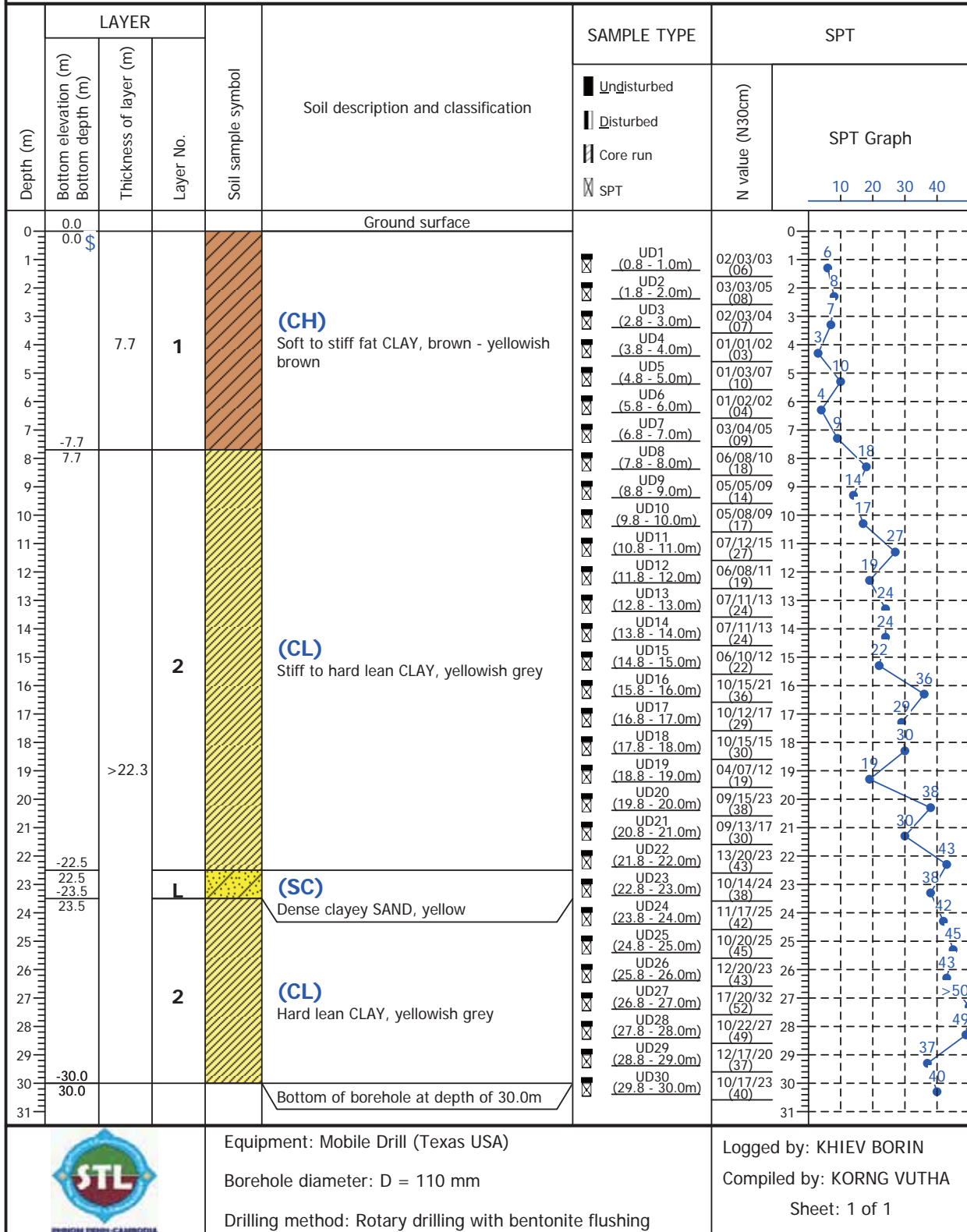


Figure A2.3: BORING LOG AND STANDARD PENETRATION TEST RESULTS

BOREHOLE: **BH3**

Project Name: BATTAMBANG TEC (RTTC & PTTC)

Project Location: BATTAMBANG PROVINCE PEGION PEDAGOGY CENTER, CAMBODIA

Coordinate:

X = 305 689

Y = 1 447 919

Elevation: 0.0 m

- Assumed:

- Measured:

Ground water:

- Water inflow # :

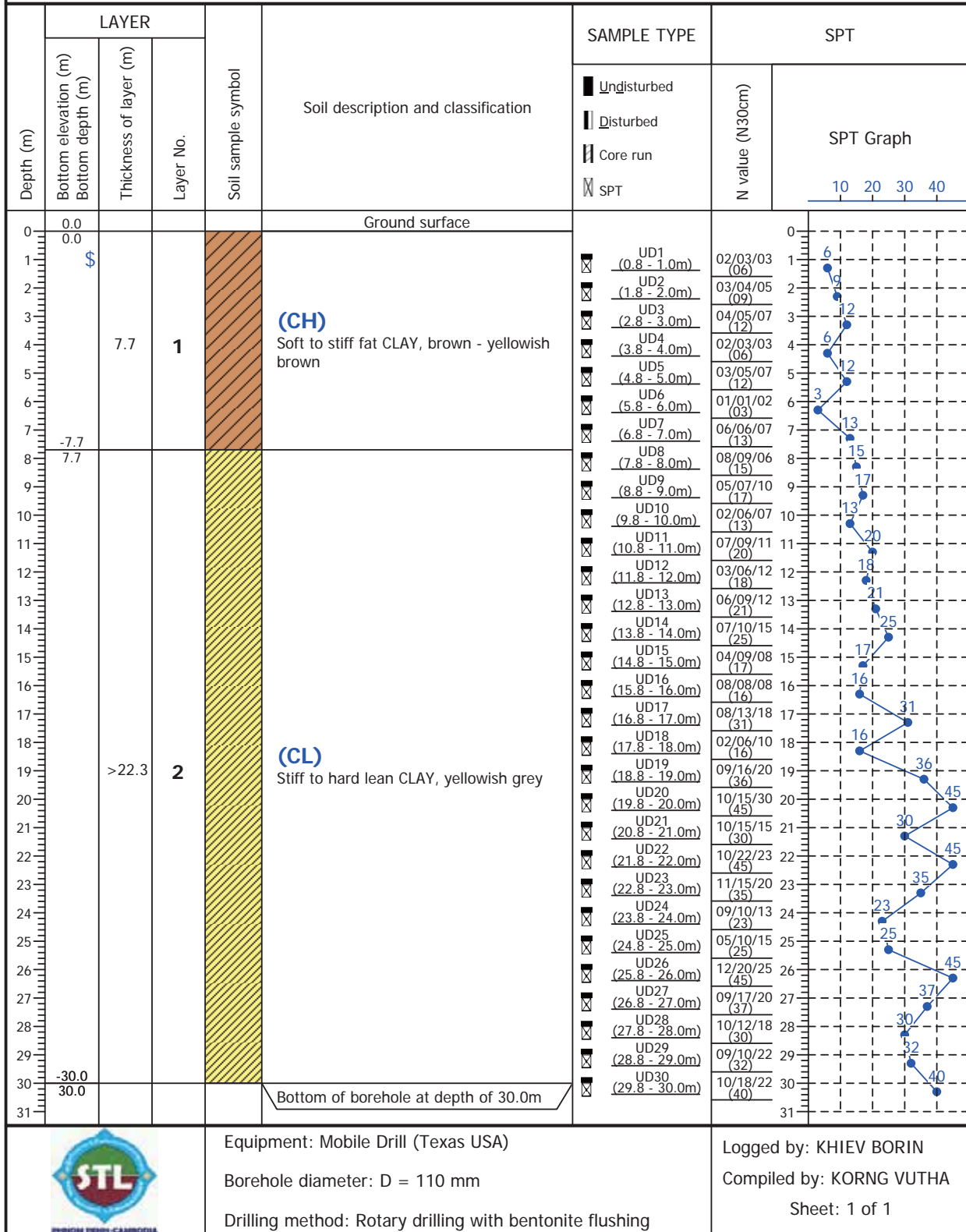
- Water level \$: 1.2m (19/01/2017)

Depth of borehole: 30.0 m

Weather: Sunny

Start date: 17/01/2017

End date: 18/01/2017



Equipment: Mobile Drill (Texas USA)

Borehole diameter: D = 110 mm

Drilling method: Rotary drilling with bentonite flushing

Logged by: KHIEV BORIN

Compiled by: KORNG VUTHA

Sheet: 1 of 1

Figure A2.4: BORING LOG AND STANDARD PENETRATION TEST RESULTS

BOREHOLE: **BH4**

Project Name: BATTAMBANG TEC (RTTC & PTTC)

Project Location: BATTAMBANG PROVINCE PEGION PEDAGOGY CENTER, CAMBODIA

Coordinate:

X = 305 718

Y = 1 447 907

Elevation: 0.0 m

- Assumed:

- Measured:

Ground water:

- Water inflow # :

- Water level \$: 1.2m (22/01/2017)

Depth of borehole: 30.0 m

Weather: Sunny

Start date: 19/01/2017

End date: 21/01/2017

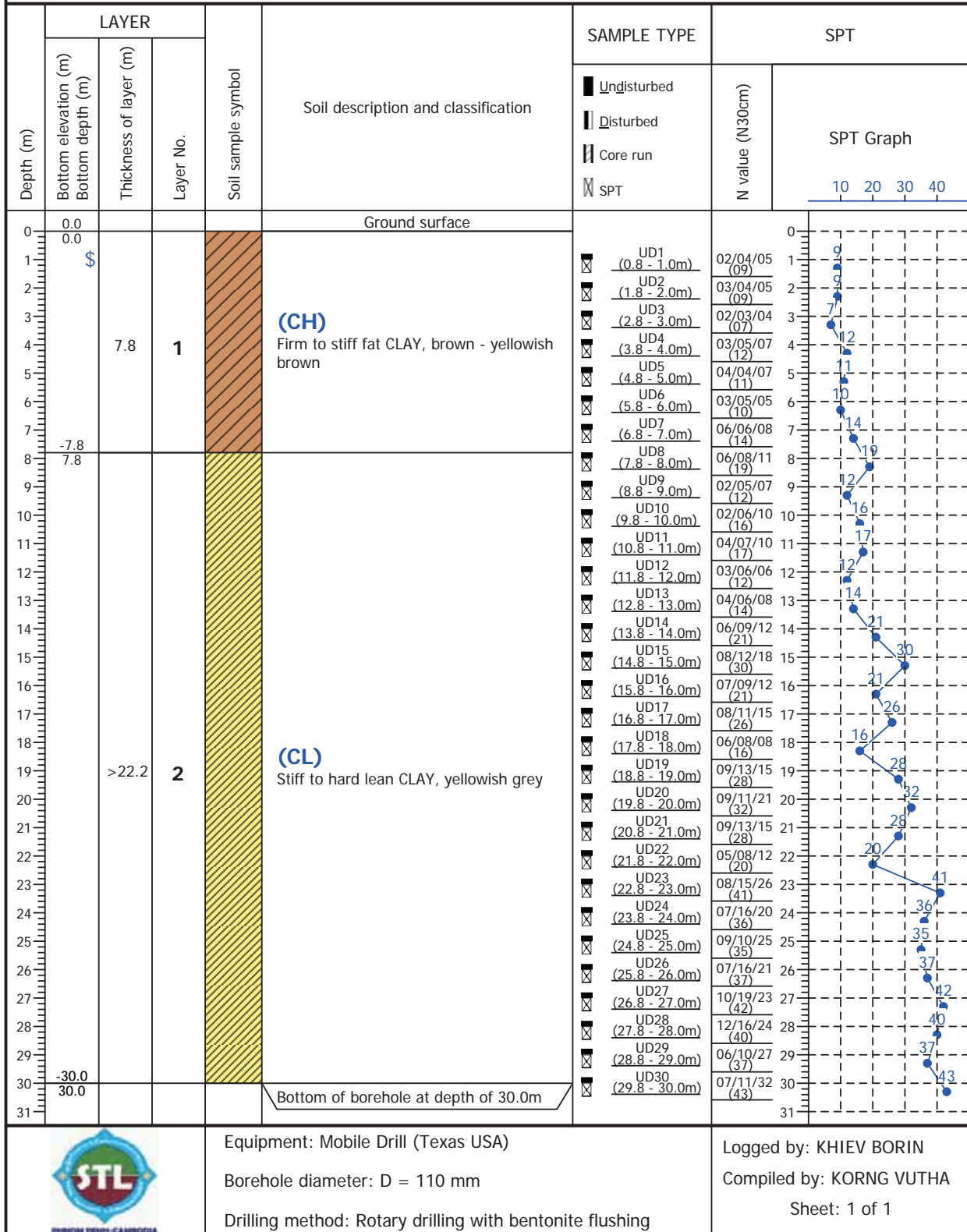


Figure A2.5: BORING LOG AND STANDARD PENETRATION TEST RESULTS

BOREHOLE: **BH5**

Project Name: BATTAMBANG TEC (RTTC & PTTC)

Project Location: BATTAMBANG PROVINCE PEGION PEDAGOGY CENTER, CAMBODIA

Coordinate:

X = 305 459

Y = 1 447 991

Elevation: 0.0 m

- Assumed:

- Measured:

Ground water:

- Water inflow # :

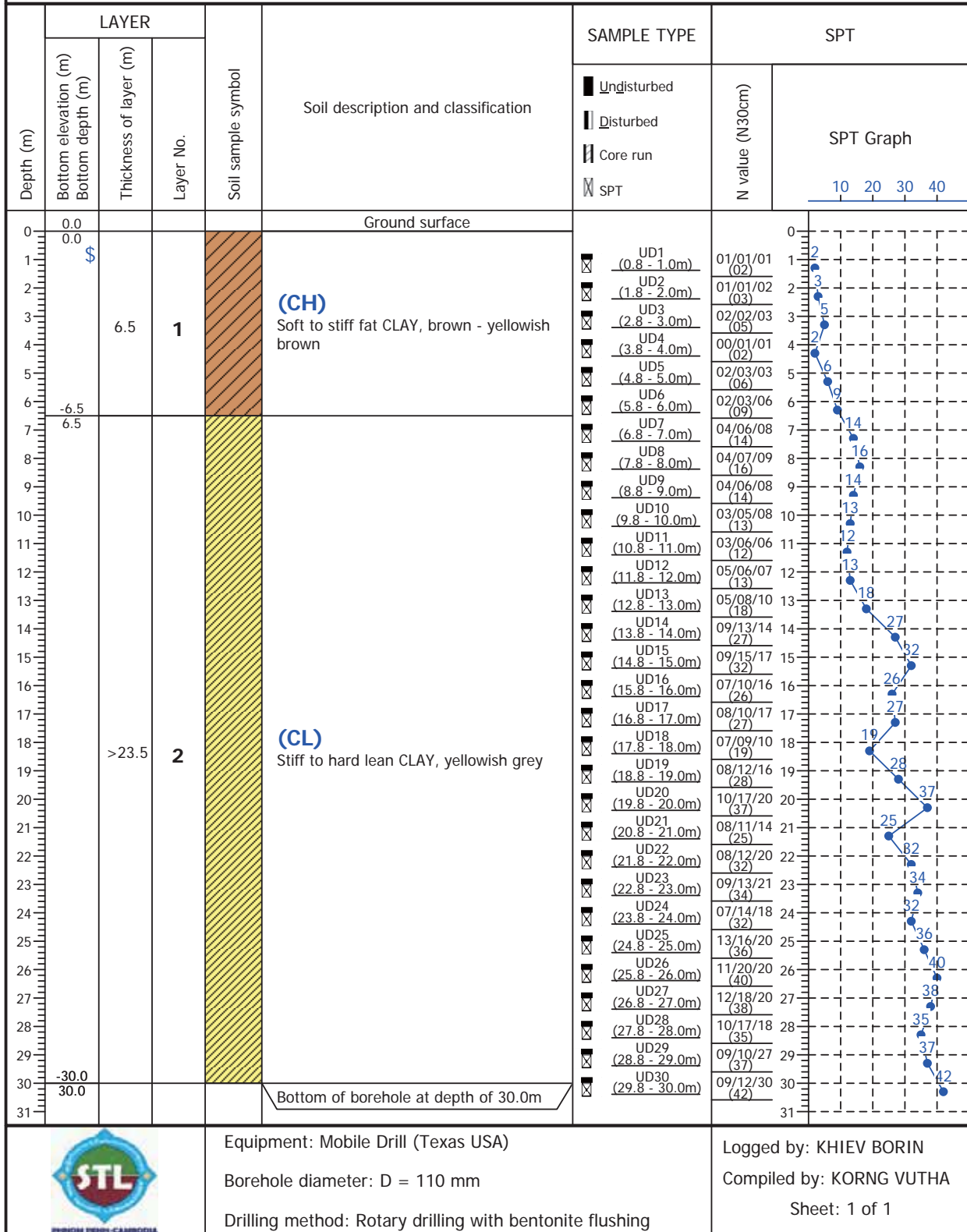
- Water level \$: 1.0m (25/01/2017)

Depth of borehole: 30.0 m

Weather: Sunny

Start date: 23/01/2017

End date: 24/01/2017



Equipment: Mobile Drill (Texas USA)

Borehole diameter: D = 110 mm

Drilling method: Rotary drilling with bentonite flushing

Logged by: KHIEV BORIN

Compiled by: KORNG VUTHA

Sheet: 1 of 1

Figure A2.6: BORING LOG AND STANDARD PENETRATION TEST RESULTS

BOREHOLE: **BH6**

Project Name: BATTAMBANG TEC (RTTC & PTTC)

Project Location: BATTAMBANG PROVINCE PEGION PEDAGOGY CENTER, CAMBODIA

Coordinate:

X = 305 496

Y = 1 447 977

Elevation: 0.0 m

- Assumed:

- Measured:

Ground water:

- Water inflow # :

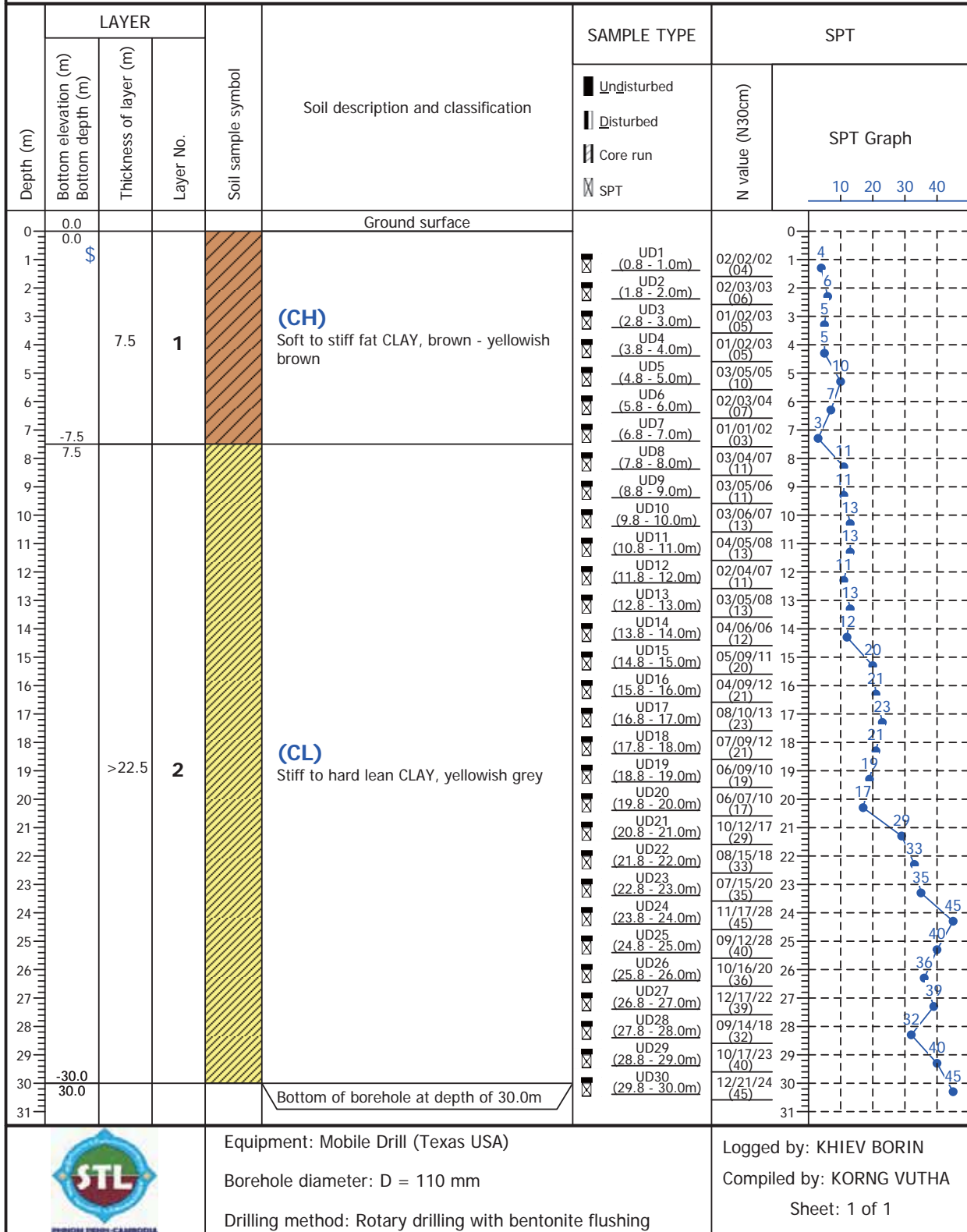
- Water level \$: 1.0m (23/01/2017)

Depth of borehole: 30.0 m

Weather: Sunny

Start date: 20/01/2017

End date: 22/01/2017



Appendix 7 Equipment Relevance Evaluation Table

Phnom Penh TEC

Equipment Name	Requested Quantity	Existing Equipment	Priority	Evaluation Criteria								Overall Evaluation	Remarks (Special Notification)	Planned Equipment		
				①	②	③	④	⑤	⑥	⑦	⑧					
Science, primary																
1	Scale balance	31	-	A	5	5	5	5	5	5	5	5	5	40	1 unit for 2 students & 1 unit for a teacher.	16
2	Electronic balance	9	1	A	5	5	4	5	5	5	5	5	5	39	1 unit for 4 students & 1 unit for a teacher.	8
3	Thermograph	1	-	A	5	5	4	5	3	5	5	5	5	37	Plan 1 unit. Plan as Instrument shelter.	1
4	DC ammeter	9	6	A	5	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher.	3
5	DC voltmeter	9	4	A	5	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher.	5
6	Magnetizing coil	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
7	Aquarium set	1	-	B	5	5	4	5	3	4	4	4	5	35	Deleted due to low marks.	0
8	Astronomical telescope	1	-	A	5	5	4	5	5	5	5	5	5	39	Plan 1 unit.	1
9	Lunar globe	1	-	C	-	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0
10	Solar light source apparatus	1	-	C	-	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0
11	Tripartite model	1	5	A	5	5	5	5	4	5	5	5	5	39	Deleted due to use of existing equipment.	0
12	Binoculars	13	-	A	5	5	4	5	5	5	5	5	5	39	1 unit for 4 students & 1 unit for a teacher.	9
13	Pendulum apparatus	6	-	A	5	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher.	9
14	Instrument shelter	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
15	Experimental lever	31	-	A	5	5	5	5	5	5	5	5	5	40	1 unit for 2 students & 1 unit for a teacher.	16
16	Air extraction kit	31	-	A	5	5	5	5	3	5	5	5	5	38	1 unit for 2 students & 1 unit for a teacher.	16
17	Microscope	31	10	A	5	5	4	5	4	5	5	5	5	38	1 unit for 2 students & 1 unit for a teacher.	6
18	Binocular stereomicroscope	31	4	A	5	5	4	5	5	5	5	5	5	39	1 unit for 2 students & 1 unit for a teacher.	12
19	Chemical locker	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
20	Iron support	13	5	A	5	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher.	4
21	DC power supply	9	-	A	5	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher.	9
22	Desktop cork borer	1	-	C	-	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0
23	Igneous rock specimens	9	-	A	5	5	5	5	5	5	5	5	5	40	For each students & for a teacher. Plan as Specimen set.	2
24	Sedimentary rock specimens	9	-	A	5	5	5	5	5	5	5	5	5	40	For each students & for a teacher. Plan as Specimen set.	2
25	Fossil specimens	9	-	A	5	5	5	5	5	5	5	5	5	40	For each students & for a teacher. Plan as Specimen set.	2
26	Pyroclastic form specimens	9	-	A	5	5	5	5	5	5	5	5	5	40	For each students & for a teacher. Plan as Specimen set.	2
27	Arm joint model	9	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
28	Skelton model of human body	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
29	Anatomical model of human body	1	1	A	5	5	5	5	5	5	5	5	5	40	Deleted due to use of existing equipment.	0
30	Eyeball model	1	-	B	5	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
31	Ear model	1	-	B	5	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
32	Glass tool set	9	4	A	5	5	4	5	5	5	5	5	5	39	1 set for 4 students & 1 unit for a teacher.	5

Equipment Name	Requested Quantity	Existing Equipment	Priority	Evaluation Criteria								Overall Evaluation	Remarks (Special Notification)	Planned Equipment	
				①	②	③	④	⑤	⑥	⑦	⑧				
33	Experimental tool set	9	-	A	5	5	4	5	5	5	5	5	39	1 set for 4 students & 1 unit for a teacher.	9
34	Laboratory table (Biology) for student with stool	12	-	A	5	5	5	5	5	5	5	5	40	4 units for a lab. (2 rooms)	8
35	Laboratory table (Biology) for teacher with stool	2	-	A	5	5	5	5	5	5	5	5	40	1 unit for a lab. & a preparation room.	2
36	Laboratory table (General Science) for student with stool	12	-	A	-	-	-	-	-	-	-	-	0	Deleted due to no lab.	0
37	Laboratory table (General Science) for teacher with stool	2	-	A	-	-	-	-	-	-	-	-	0	Deleted due to no lab.	0
38	Pulley	30	6	B	5	5	5	5	5	5	5	5	40	1 set for 2 students & 1 unit for a teacher.	10
39	Laptop computer	2	-	A	5	5	4	5	5	5	5	5	39	1 unit for a lab. (2 rooms)	2
40	Projector	2	-	A	5	5	5	5	3	5	5	5	38	1 unit for a lab. (2 rooms)	2
41	Cabinet set	2	-	A	5	5	5	5	5	5	5	5	40	1 unit for a lab. (2 rooms)	2
42	Science poster set	1	1	B	5	5	5	5	5	5	5	5	40	Deleted due to use of existing equipment.	0
43	Tape measure	1	-	B	5	5	5	5	5	5	5	5	40	Plan as Experimental tool set.	1
44	Stopwatches	1	-	B	5	5	5	5	5	5	5	5	40	Plan as Experimental tool set.	1
45	Small mirrors	1	-	B	5	5	5	5	5	5	5	5	40	Plan as Experimental tool set.	1
Mathematics, primary															
46	Plotting blackboard	1	-	B	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
47	Triangle set for blackboard	1	5	B	5	5	5	5	5	5	5	5	40	Deleted due to self-production.	0
48	Ruler set for blackboard	1	-	B	5	5	5	5	5	5	5	5	40	Deleted due to self-production.	0
49	Compass for blackboard	1	3	A	5	5	5	5	5	5	5	5	40	Deleted due to use of existing equipment.	0
50	Protractor for blackboard	1	4	B	5	5	5	5	5	5	5	5	40	Deleted due to self-production.	0
51	Calculation practice card for demonstration	1	6	B	5	5	5	5	5	5	5	5	40	Deleted due to use of existing equipment.	0
52	Tape for explanation	1	-	B	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
53	number line sheet	1	-	B	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
54	Explanation kit for fraction (apple model)	1	-	C	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0
55	Explanation kit for fraction (circular model)	1	-	C	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0
56	Explanation kit for scale reading	1	-	C	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0
57	Explanation kit for metric measurement	1	-	C	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0
58	Explanation kit for superficial measure of triangle and tetragon	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
59	Weight set	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
60	Explanation kit for polygon	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1

Equipment Name	Requested Quantity	Existing Equipment	Priority	Evaluation Criteria								Overall Evaluation	Remarks (Special Notification)	Planned Equipment		
				①	②	③	④	⑤	⑥	⑦	⑧					
61	Explanation kit for sum of the internal angles	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
62	Diagram congruity model	18	-	B	5	5	5	5	5	5	5	5	5	40	1 set for 4 students & 1 unit for a teacher.	9
63	Teaching board for line plot/graph	1	-	C	-	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0
64	Teaching board for circle/pie graph	1	-	C	-	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0
65	Teaching board for band/column graph	1	-	C	-	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0
66	Teaching board for histogram/bar chart	1	-	C	-	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0
67	Teaching board for graph of proportion and inverse proportion	1	-	C	-	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0
68	Study kit for volume	18	-	A	5	5	5	5	5	5	5	5	5	40	1 set for 4 students & 1 unit for a teacher.	9
69	Liter square/measure	18	-	A	5	5	5	5	5	5	5	5	5	40	1 set for 4 students & 1 unit for a teacher.	9
70	Diagram congruity model	18	-	B	5	5	5	5	5	5	5	5	5	40	Deleted due to duplication.	0
71	Cabinet set	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 set.	1
Social Science, primary																
72	World map	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Map and globe set.	1
73	Southeast Asia map	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Map and globe set.	1
74	Cambodia map	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Map and globe set.	1
75	Globe	6	-	A	5	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher. Plan as Map and globe set.	9
Mathematics, lower secondary																
76	Plotting blackboard	1	-	B	5	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
77	Triangle set for blackboard	1	-	B	5	5	5	5	5	5	5	5	5	40	Deleted due to self-production.	0
78	Ruler set for blackboard	1	-	B	5	5	5	5	5	5	5	5	5	40	Deleted due to self-production.	0
79	Compass for blackboard	1	-	A	5	5	5	5	5	5	5	5	5	40	Deleted due to self-production.	0
80	Protractor for blackboard	1	-	B	5	5	5	5	5	5	5	5	5	40	Deleted due to self-production.	0
81	Development model of formula	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
82	Diagram congruity model	13	-	B	5	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher.	9
83	Plane parallel study apparatus	13	-	A	5	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher.	9
84	Solid model	13	-	A	5	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher.	9
85	Three dimensional model	13	-	A	5	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher.	9
86	Pythagorean theorem experiment kit	13	-	A	5	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher.	9
87	Graph calculator	26	-	C	-	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0

Equipment Name	Requested Quantity	Existing Equipment	Priority	Evaluation Criteria								Overall Evaluation	Remarks (Special Notification)	Planned Equipment	
				①	②	③	④	⑤	⑥	⑦	⑧				
Physics, lower secondary															
88	Experimental apparatus of slope	9	-	A	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher. Plan as Experimental apparatus for dynamics (slope)	9
89	Dynamic movement apparatus	1	-	A	5	5	5	5	4	5	5	5	39	Plan 1 unit.	1
90	Pulley	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
91	Dolly	9	2	A	5	5	5	5	5	5	5	5	40	Plan as Experimental apparatus for dynamics (slope).	1
92	Experimental lever	31	-	A	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher.	9
93	Vacuum apparatus for falling experiment	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Vacuum apparatus for falling experiment.	1
94	Rotary vacuum pump	1	-	A	5	5	5	5	4	5	5	5	39	Plan 1 unit. Plan as Vacuum apparatus for falling experiment.	1
95	Experimental apparatus for dynamics (slope)	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Experimental apparatus for dynamics (slope)	1
96	Stroboscope	1	-	A	5	5	5	5	5	5	5	5	40	Plan as Experimental apparatus for dynamics (slope).	1
97	Semiconductor laser	1	10	A	5	5	5	5	5	5	5	5	40	Deleted due to use of existing equipment.	0
98	Optical bench and experimental apparatus	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
99	School Oscilloscope	1	-	A	5	5	3	5	5	5	5	5	38	Plan 1 unit.	1
100	Tuning fork for resonance	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as School Oscilloscope.	1
101	Low wave generator	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as School Oscilloscope.	1
102	Resonant apparatus in the air column	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
103	Vacuum apparatus with bell	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Vacuum apparatus for falling experiment.	1
104	Primary and secondary coils	9	-	A	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher.	9
105	DC AC power supply	9	-	A	5	5	5	5	4	5	5	5	39	1 unit for 4 students & 1 unit for a teacher.	9
106	DC ammeter	9	25	A	5	5	5	5	5	5	5	5	40	Deleted due to use of existing equipment.	0
107	DC voltmeter	9	20	A	5	5	5	5	5	5	5	5	40	Deleted due to use of existing equipment.	0
108	Magnetizing coil	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Instrument set for electrical current and magnetic field.	1
109	Induction coils	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Instrument set for electrical current and magnetic field.	1
110	Cross vacuum gauge	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Instrument set for electrical current and magnetic field.	1
111	Discharge tube	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Instrument set for electrical current and magnetic field.	1

Equipment Name	Requested Quantity	Existing Equipment	Priority	Evaluation Criteria										Overall Evaluation	Remarks (Special Notification)	Planned Equipment
				①	②	③	④	⑤	⑥	⑦	⑧					
112	Crookes tubes	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Instrument set for electrical current and magnetic field.	1
113	High voltage generator for discharge tube	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Instrument set for electrical current and magnetic field.	1
114	Variable autotransformer	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Instrument set for electrical current and magnetic field.	1
115	Ferrite magnetic motor for experiment	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Instrument set for electrical current and magnetic field.	1
116	Electric magnet	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Instrument set for electrical current and magnetic field.	1
117	Study plate of electricity for blackboard	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Instrument set for electrical current and magnetic field.	1
118	Van de Graaff generator	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Instrument set for electrical current and magnetic field.	1
119	Experimental apparatus for dynamics (with pendulum)	9	-	A	5	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher.	9
120	Collision balls	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
121	Experimental apparatus for energy conversion	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
122	Laboratory table (Physics) for student with stool	6	-	A	5	5	5	5	5	5	5	5	5	40	4 units for a lab.	4
123	Laboratory table (Physics) for teacher with stool	1	-	A	5	5	5	5	5	5	5	5	5	40	1 unit for a lab. & a preparation room.	1
124	Laptop computer	1	-	A	5	5	4	5	5	5	5	5	5	39	Plan 1 unit.	1
125	Projector	1	-	A	5	5	5	5	3	5	5	5	5	38	Plan 1 unit.	1
126	Cabinet set	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 set.	1
Chemistry, lower secondary																
127	Electronic balance	9	-	A	5	5	4	5	5	5	5	5	5	39	1 unit for 4 students & 1 unit for a teacher.	9
128	Magnetic stirrer	9	-	A	5	5	5	5	4	5	5	5	5	39	1 unit for 4 students & 1 unit for a teacher.	9
129	Chemical locker	6	-	A	5	5	5	5	5	5	5	5	5	40	Plan 2 units.	2
130	Refrigerator-Freezer	1	-	B	5	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
131	Desktop cork borer	6	-	C	-	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0
132	Fume cupboard	2	-	C	-	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0
133	Iron support	33	2	A	5	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher.	9
134	Glass tool set	9	6	A	5	5	5	5	5	5	5	5	5	40	1 set for 4 students & 1 unit for a teacher.	3
135	Experimental tool set	9	-	A	5	5	5	5	5	5	5	5	5	40	1 set for 4 students & 1 unit for a teacher.	9
136	Laboratory table (Chemistry) for student with stool	6	-	A	5	5	5	5	5	5	5	5	5	40	4 units for a lab.	4

Equipment Name	Requested Quantity	Existing Equipment	Priority	Evaluation Criteria								Overall Evaluation	Remarks (Special Notification)	Planned Equipment	
				①	②	③	④	⑤	⑥	⑦	⑧				
137	Laboratory table (Chemistry) for teacher with stool	1	-	A	5	5	5	5	5	5	5	5	40	1 unit for a lab. & a preparation room.	1
138	Laptop computer	1	-	A	5	5	4	5	5	5	5	5	39	Plan 1 unit.	1
139	Projector	1	-	A	5	5	5	5	3	5	5	5	38	Plan 1 unit.	1
140	Cabinet set	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 set.	1
141	Distillator	1	-	B	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
Biology, lower secondary															
142	Aquarium set	1	-	B	5	5	4	5	3	4	4	5	35	Deleted due to low marks.	0
143	Mendel's laws experiment machine	9	-	A	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher.	9
144	Microscope	33	-	A	5	5	4	5	4	5	5	5	38	1 unit for 2 students & 1 unit for a teacher.	16
145	Binocular stereomicroscope	33	-	A	5	5	4	5	4	5	5	5	38	1 unit for 2 students & 1 unit for a teacher.	16
146	Digital microscope	1	-	A	5	5	5	5	5	5	5	5	40	Deleted due to overlapped function as Digital camera system for microscope.	0
147	Digital binocular stereomicroscope	1	-	A	5	5	5	5	5	5	5	5	40	Deleted due to overlapped function as Digital camera system for microscope.	0
148	Microscope for researchers/mineralogy	1	-	A	5	5	5	5	5	5	5	5	40	Deleted due to overlapped function as Binocular stereomicroscope and Magnifying mirror with polarization.	0
149	Magnifying mirror with polarization	33	-	A	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher.	9
150	Digital camera system for microscope	1	-	A	5	5	5	5	4	5	5	5	39	Plan 1 unit.	1
151	Microscope cabinet	4	-	A	5	5	4	5	4	5	5	5	38	Plan 2 units.	2
152	Laboratory wagon	2	-	A	5	5	5	5	5	5	5	5	40	Plan 2 units.	2
153	Drying oven	1	-	C	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0
154	Cylinder microtome	9	-	B	5	5	5	5	4	5	5	5	39	Plan 2 units.	2
155	Magnifier for field	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
156	Binoculars(high spec model)	1	1	A	5	5	5	5	5	5	5	5	40	Deleted due to use of existing equipment.	0
157	Sedimentary rock specimens	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Specimens set of rock, mineral and fossil.	1
158	Igneous rock specimens	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Specimens set of rock, mineral and fossil.	1
159	Mineral specimens	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Specimens set of rock, mineral and fossil.	1
160	Rock-forming mineral specimens	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Specimens set of rock, mineral and fossil.	1
161	Specimens of fossil animals	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Specimens set of rock, mineral and fossil.	1

Equipment Name	Requested Quantity	Existing Equipment	Priority	Evaluation Criteria								Overall Evaluation	Remarks (Special Notification)	Planned Equipment	
				①	②	③	④	⑤	⑥	⑦	⑧				
162	Specimens of fossil plants	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Specimens set of rock, mineral and fossil.	1
163	Index fossil specimens	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Specimens set of rock, mineral and fossil.	1
164	Skelton of vertebrates	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
165	Anatomy of Vertebrate specimens	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Anatomy of (in)vertebrate specimens.	1
166	Anatomy of invertebrate specimens	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Anatomy of (in)vertebrate specimens.	1
167	Mitosis model	1	-	A	5	5	5	5	5	5	5	5	40	Plan as Cell division model.	1
168	Anatomical model of human body	1	2	A	5	5	5	5	5	5	5	5	40	Deleted due to use of existing equipment.	0
169	Heart model	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Skelton and organ structure model set A.	1
170	Skelton model of human body	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Skelton and organ structure model set A.	1
171	Eyeball model	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Skelton and organ structure model set A.	1
172	Ear model	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Skelton and organ structure model set A.	1
173	Brain model	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Skelton and organ structure model set A.	1
174	Pumping heart model	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Skelton and organ structure model set A.	1
175	Kidney model	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Skelton and organ structure model set A.	1
176	Arm joint model	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Skelton and organ structure model set A.	1
177	Model of respiratory organs	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Skelton and organ structure model set A.	1
178	Laboratory table (Biology) for student with stool	6	-	A	5	5	5	5	5	5	5	5	40	4 units for a lab.	4
179	Laboratory table (Biology) for teacher with stool	1	-	A	5	5	5	5	5	5	5	5	40	1 unit for a lab. & a preparation room.	1
180	Laptop computer	1	-	A	5	5	4	5	5	5	5	5	39	Plan 1 unit.	1
181	Projector	1	-	A	5	5	5	5	3	5	5	5	38	Plan 1 unit.	1
182	Cabinet set	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 set.	1
Earth Science, lower secondary															
183	Tripartite model	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
184	Astronomical telescope	1	2	A	5	5	4	5	5	5	5	5	39	Deleted due to use of existing equipment.	0

Equipment Name	Requested Quantity	Existing Equipment	Priority	Evaluation Criteria								Overall Evaluation	Remarks (Special Notification)	Planned Equipment		
				①	②	③	④	⑤	⑥	⑦	⑧					
185	Moon model	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Tripartite model.	1
186	Transparent celestial globe	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
187	Aneroid barometer	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Instrument shelter.	1
188	Rain gauge	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
189	Weather observation system	1	-	C	-	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0
190	Experimental apparatus for front models	1	-	C	-	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0
191	Thermograph	1	-	A	5	5	5	5	3	5	5	5	5	38	Plan 1 unit. Plan as Instrument shelter.	1
192	Instrument shelter	1	-	A	5	5	5	5	5	5	5	5	5	40	Deleted due to duplication.	0
193	Weather chart blackboard	6	-	C	-	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0
194	Experimental vacuum apparatus	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Vacuum apparatus for falling experiment.	1
195	Magdeburg hemispheres	1	25	A	5	5	5	5	5	5	5	5	5	40	Deleted due to use of existing equipment.	0
196	Luxmeter/illuminometer	1	-	C	-	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0
197	Radiation detector	1	-	C	-	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0
198	Laboratory table (Earth Science) for student with stool	6	-	A	5	5	5	5	5	5	5	5	5	40	4 units for a lab.	4
199	Laboratory table (Earth Science) for teacher with stool	1	-	A	5	5	5	5	5	5	5	5	5	40	1 unit for a lab. & a preparation room.	1
200	Laptop computer	1	-	A	5	5	4	5	5	5	5	5	5	39	Plan 1 unit.	1
201	Projector	1	-	A	5	5	5	5	3	5	5	5	5	38	Plan 1 unit.	1
202	Cabinet set	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 set.	1
Social Science, lower secondary																
203	World map	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Map and globe set.	1
204	Southeast Asia map	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Map and globe set.	1
205	Cambodia map	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Map and globe set.	1
206	Globe	6	-	A	5	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher. Plan as Map and globe set.	6
Music, primary																
207	Electronic piano	31	8	A	5	5	5	5	5	5	5	5	5	40	1 unit for 2 students.	23
208	Chair	61	-	A	5	5	5	5	5	5	5	5	5	40	2 units for 1 piano. Plan as Electric piano.	61
209	Percussion instrument set	31	-	A	5	5	4	5	4	5	5	5	5	38	Plan as Musical instrument set.	1
210	CD radio-cassette recorder	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
211	Metronome	31	-	A	5	5	5	5	5	5	5	5	5	40	Plan as Musical instrument set.	31
212	Cabinet set	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
Music, lower secondary																
213	Electronic piano	16	3	A	5	5	5	5	5	5	5	5	5	40	1 unit for 2 students.	13
214	Chair	31	-	A	5	5	5	5	5	5	5	5	5	40	2 units for 1 piano. Plan as Electric piano.	31

Equipment Name	Requested Quantity	Existing Equipment	Priority	Evaluation Criteria								Overall Evaluation	Remarks (Special Notification)	Planned Equipment	
				①	②	③	④	⑤	⑥	⑦	⑧				
215	Percussion instrument set	16	-	A	5	5	4	5	4	5	5	5	38	Plan as Musical instrument set.	1
216	CD radio-cassette recorder	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
217	Metronome	16	-	A	5	5	5	5	5	5	5	5	40	Plan as Musical instrument set.	16
218	Cabinet set	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
Art, primary															
219	Drawing board	61	-	A	5	5	5	5	5	5	5	5	40	1 unit for 1 student & 1 unit for a teacher.	61
220	Art desk for student with stool	12	-	A	5	5	5	5	5	5	5	5	40	12 units for a room.	12
221	Art desk for teacher with stool	1	-	A	5	5	5	5	5	5	5	5	40	1 unit for a room.	1
Art, lower secondary															
222	Drawing board	31	-	A	5	5	5	5	5	5	5	5	40	1 unit for 1 student & 1 unit for a teacher.	31
223	Art desk for student with stool	6	-	A	5	5	5	5	5	5	5	5	40	6 units for a room.	6
224	Art desk for teacher with stool	1	-	A	5	5	5	5	5	5	5	5	40	1 unit for a room.	1
Workshop															
225	Tool set for woodwork	4	-	A	5	5	5	5	5	5	5	5	40	Plan as Processing tool set for woodwork.	4
226	Screw driver set	4	-	A	5	5	5	5	5	5	5	5	40	Plan as Processing tool set for woodwork.	4
227	Electric jig saw	4	-	B	5	5	5	5	4	5	5	5	39	Plan as Fabricating equipment for woodwork.	4
228	Bench-top drilling machine	4	-	B	5	5	5	5	5	5	5	5	40	Plan as Fabricating equipment for woodwork.	4
229	Belt disc sander	4	-	B	5	5	5	5	5	5	5	5	40	Plan as Fabricating equipment for woodwork.	4
230	Worktable for teacher with stool	2	-	A	5	5	5	5	5	5	5	5	40	Plan as Worktable with stool.	2
231	Worktable for student with stool	12	-	A	5	5	5	5	5	5	5	5	40	Plan 4 units as 1 set. Plan as Worktable with stool.	4
232	Vise for woodwork	12	-	A	5	5	5	5	5	5	5	5	40	Plan as Worktable with stool.	12
233	Scroll Saw set	4	-	A	5	5	5	5	4	5	5	5	39	Deleted due to overlapped function as Electric jig saw.	0
234	Corded electric hand drill set	4	-	A	5	5	5	5	4	5	5	5	39	Deleted due to overlapped function as Bench-top drilling machine.	0
235	Hand drill set	4	-	A	5	5	5	5	4	5	5	5	39	Deleted due to overlapped function as Bench-top drilling machine.	0
236	Wood file set	4	-	A	5	5	5	5	4	5	5	5	39	Plan as Processing tool set for woodwork.	4
237	Electric saw set	4	-	A	5	5	5	5	4	5	5	5	39	Plan as Fabricating equipment for woodwork.	4
238	Cabinet set	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
Home Economics															
239	Refrigerator	1	-	B	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
240	Pot set	7	-	A	5	5	5	5	5	5	5	5	40	1 set for 6 students & 1 set for a teacher. Plan as Utensil set.	6
241	Utensil set	7	-	A	5	5	5	5	5	5	5	5	40	1 set for 6 students & 1 set for a teacher. Plan as Utensil set.	6
242	Stand for cutting board	1	-	A	5	5	5	5	5	5	5	5	40	1 set for 6 students & 1 set for a teacher. Plan as Utensil set.	1

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				①	②	③	④	⑤	⑥	⑦	⑧					
243	Scale	7	-	A	5	5	5	5	5	5	5	5	5	40	1 set for 6 students & 1 set for a teacher. Plan as Utensil set.	6
244	Tableware set	31	-	A	5	5	5	5	5	5	5	5	5	40	1 set for 1 student & 1 set for a teacher.	31
245	Sewing machine	31	-	A	5	5	3	4	4	5	5	5	5	36	1 set for 6 students & 1 set for a teacher.	6
246	Lock sewing machine	2	-	B	4	5	3	4	4	5	5	5	5	35	Deleted due to low marks.	0
247	Sewing kit	31	-	A	5	5	4	5	5	5	5	5	5	39	1 set for 1 student & 1 set for a teacher.	31
248	Ruler set for sewing	31	-	A	5	5	5	5	5	5	5	5	5	40	1 set for 1 student & 1 set for a teacher. Plan as Sewing kit.	31
249	Torso set	6	-	B	5	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
250	Iron	16	-	A	5	5	5	5	5	5	5	5	5	40	1 set for 6 students & 1 set for a teacher.	6
251	Ironing board	16	-	A	5	5	5	5	5	5	5	5	5	40	1 set for 6 students & 1 set for a teacher. Plan as Ironing.	6
252	Washing machine	1	-	B	3	3	4	5	5	5	5	5	5	35	Deleted due to low marks.	0
253	Cooking/Clothing table for student	6	-	A	5	5	5	5	5	5	5	5	5	40	5 units for a lab.	5
254	Cooking/Clothing table for teacher	1	-	A	5	5	5	5	5	5	5	5	5	40	1 unit for a lab.	1
255	Gas cooker	7	-	A	5	5	5	5	4	5	5	5	5	39	Plan as Cooking/Clothing table.	7
256	Cabinet set	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
ICT Room																
257	Computer network system for ICT Lab.	4	2	A	5	5	5	5	5	5	5	5	5	40	Plan 1 system in 1 room. (2 rooms)	2
258	Laptop computer	4	-	A	5	5	4	5	5	5	5	5	5	39	Plan 1 unit. (4 rooms)	4
259	Computer desk and chair set	4	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. (4 rooms)	4
260	Printer	4	-	A	5	5	5	5	4	5	5	5	5	39	Plan 1 unit. (4 rooms)	4
261	Projector	4	-	A	5	5	5	5	4	5	5	5	5	39	Plan 1 unit. (4 rooms)	4
262	Screen	4	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. (4 rooms)	4
Library (ICT room)																
263	Computer network system for library	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 system in 1 room.	1
264	Computer desk and chair set	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. (4 rooms)	1
265	Printer	2	-	A	5	5	5	5	4	5	5	5	5	39	Plan 2 units.	2
Assembly Hall																
266	Sound equipment set	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 set.	1
267	Projector	1	-	A	5	5	5	5	4	5	5	5	5	39	Plan 1 unit.	1
268	Screen	1	-	A	5	5	5	5	5	5	5	5	5	40	Deleted due to covering by construction work.	0
269	White board	2	-	A	5	5	5	5	5	5	5	5	5	40	Plan 2 units.	2
Physical Education																
270	Exercise equipment set	1	-	B	5	5	5	5	5	5	5	5	5	40	Plan 1 set.	1
271	Soccer ball/football	10	-	A	5	5	5	5	5	5	5	5	5	40	Plan as Ball set.	10

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				①	②	③	④	⑤	⑥	⑦	⑧					
272	Volleyball	10	-	A	5	5	5	5	5	5	5	5	5	40	Plan as Ball set.	10
273	Cage for ball keeping	3	-	A	5	5	5	5	5	5	5	5	5	40	Plan as Ball set.	3
274	Inflator/air pump	3	-	A	5	5	5	5	5	5	5	5	5	40	Plan as Ball set.	3
275	Basket ball	10	-	A	5	5	5	5	5	5	5	5	5	40	Plan as Ball set.	10
First-Aid (Dispensary Room)																
276	Bed	3	-	B	5	5	5	5	5	5	5	5	5	40	Plan 3 units. Plan as Equipment for first-aid.	3
277	Bed clothing set	3	-	B	5	5	5	5	5	5	5	5	5	40	Plan 3 units. Plan as Equipment for first-aid.	3
278	Examination table	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Equipment for first-aid.	1
279	Height scale	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Equipment for first-aid.	1
280	Weight scale	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Equipment for first-aid.	1
281	Sphygmomanometer	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Equipment for first-aid.	1
282	Medicine cabinet	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Equipment for first-aid.	1
283	Refrigerator for medicine	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Equipment for first-aid.	1
284	Autoclave	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Equipment for first-aid.	1
285	Dressing cart	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Equipment for first-aid.	1
286	Examination equipment set	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Equipment for first-aid.	1
287	Cast	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Equipment for first-aid.	1
288	Sanitary box	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Equipment for first-aid.	1
289	Laptop computer	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Equipment for first-aid.	1
290	Desk with chair	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Equipment for first-aid.	1
291	Stool	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Equipment for first-aid.	1
Auditorium																
292	Projector	2	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. (2 rooms)	2
293	Screen	2	-	A	5	5	5	5	5	5	5	5	5	40	Deleted due to covering by construction work.	0
294	Sound equipment set	2	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. (2 rooms)	2
Lecture Room																
295	Projector	12	-	B	5	5	5	5	5	5	5	5	5	40	Plan for lecture room.	12
296	Screen	12	-	B	5	5	5	5	5	5	5	5	5	40	Plan for lecture room.	12
Academic Department Office																
297	Computer network system for academic department office	9	-	B	5	5	4	5	4	5	5	5	5	38	Plan 1 system (10 person) in 1 room. (9 rooms)	9
Administration Office																
298	Computer network system for administration office	3	-	B	5	5	4	5	4	5	5	0	33	Deleted due to low score.	0	
299	Desktop computer	10	-	B	5	5	4	5	4	5	5	0	33	Deleted due to low score.	0	

Battambang TEC

Equipment Name		Requested Quantity	Existing Equipment	Priority	Evaluation Criteria								Overall Evaluation	Remarks (Special Notification)	Planned Equipment	
					①	②	③	④	⑤	⑥	⑦	⑧				
Science, primary																
1	Scale balance	31	-	A	5	5	5	5	5	5	5	5	5	40	1 unit for 2 students & 1 unit for a teacher.	16
2	Electronic balance	9	-	A	5	5	4	5	5	5	5	5	39	1 unit for 4 students & 1 unit for a teacher.	9	
3	Thermograph	1	-	A	5	5	4	5	3	5	5	5	37	Plan 1 unit. Plan as Instrument shelter.	1	
4	DC ammeter	9	-	A	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher.	9	
5	DC voltmeter	9	-	A	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher.	9	
6	Magnetizing coil	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1	
7	Aquarium set	1	-	B	5	5	4	5	3	4	4	5	35	Deleted due to low marks.	0	
8	Astronomical telescope	1	1	A	5	5	4	5	5	5	5	5	39	Deleted due to use of existing equipment.	0	
9	Lunar globe	1	-	C	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0	
10	Solar light source apparatus	1	-	C	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0	
11	Tripartite model	1	-	A	5	5	5	5	4	5	5	5	39	Plan 1 unit.	1	
12	Binoculars	13	-	A	5	5	4	5	5	5	5	5	39	1 unit for 4 students & 1 unit for a teacher.	9	
13	Pendulum apparatus	6	-	A	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher.	9	
14	Instrument shelter	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1	
15	Experimental lever	31	-	A	5	5	5	5	5	5	5	5	40	1 unit for 2 students & 1 unit for a teacher.	16	
16	Air extraction kit	31	-	A	5	5	5	5	3	5	5	5	38	1 unit for 2 students & 1 unit for a teacher.	16	
17	Microscope	31	13	A	5	5	4	5	4	5	5	5	38	1 unit for 2 students & 1 unit for a teacher.	3	
18	Binocular stereomicroscope	31	-	A	5	5	4	5	5	5	5	5	39	1 unit for 2 students & 1 unit for a teacher.	16	
19	Chemical locker	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1	
20	Iron support	13	-	A	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher.	9	
21	DC power supply	9	-	A	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher.	9	
22	Desktop cork borer	1	-	C	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0	
23	Igneous rock specimens	9	-	A	5	5	5	5	5	5	5	5	40	For each students & for a teacher. Plan as Specimen set.	2	
24	Sedimentary rock specimens	9	-	A	5	5	5	5	5	5	5	5	40	For each students & for a teacher. Plan as Specimen set.	2	
25	Fossil specimens	9	-	A	5	5	5	5	5	5	5	5	40	For each students & for a teacher. Plan as Specimen set.	2	
26	Pyroclastic form specimens	9	-	A	5	5	5	5	5	5	5	5	40	For each students & for a teacher. Plan as Specimen set.	2	
27	Arm joint model	9	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1	
28	Skelton model of human body	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1	
29	Anatomical model of human body	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1	
30	Eyeball model	1	-	B	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1	
31	Ear model	1	-	B	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1	
32	Glass tool set	9	5	A	5	5	4	5	5	5	5	5	39	1 set for 4 students & 1 unit for a teacher.	4	

	Equipment Name	Requested Quantity	Existing Equipment	Priority	Evaluation Criteria								Overall Evaluation	Remarks (Special Notification)	Planned Equipment
					①	②	③	④	⑤	⑥	⑦	⑧			
33	Experimental tool set	9	-	A	5	5	4	5	5	5	5	5	39	1 set for 4 students & 1 unit for a teacher.	9
34	Laboratory table (Biology) for student with stool	12	-	A	5	5	5	5	5	5	5	5	40	4 units for a lab. (2 rooms)	8
35	Laboratory table (Biology) for teacher with stool	2	-	A	5	5	5	5	5	5	5	5	40	1 unit for a lab. & a preparation room.	2
36	Laboratory table (General Science) for student with stool	12	-	A	5	5	5	5	5	5	5	5	40	4 units for a lab. (2 rooms)	8
37	Laboratory table (General Science) for teacher with stool	2	-	A	5	5	5	5	5	5	5	5	40	1 unit for a lab. & a preparation room.	2
38	Pulley	30	10	B	5	5	5	5	5	5	5	5	40	1 set for 2 students & 1 unit for a teacher.	6
39	Laptop computer	2	-	A	5	5	4	5	5	5	5	5	39	1 unit for a lab. (2 rooms)	2
40	Projector	2	-	A	5	5	5	5	3	5	5	5	38	1 unit for a lab. (2 rooms)	2
41	Cabinet set	2	-	A	5	5	5	5	5	5	5	5	40	1 unit for a lab. (2 rooms)	2
42	Science poster set	1	1	B	5	5	5	5	5	5	5	5	40	Deleted due to use of existing equipment.	0
43	Tape measure	1	-	B	5	5	5	5	5	5	5	5	40	Plan as Experimental tool set.	1
44	Stopwatches	1	-	B	5	5	5	5	5	5	5	5	40	Plan as Experimental tool set.	1
45	Small mirrors	1	-	B	5	5	5	5	5	5	5	5	40	Plan as Experimental tool set.	1
Mathematics, primary															
46	Plotting blackboard	1	-	B	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
47	Triangle set for blackboard	1	-	B	5	5	5	5	5	5	5	5	40	Deleted due to self-production.	0
48	Ruler set for blackboard	1	-	B	5	5	5	5	5	5	5	5	40	Deleted due to self-production.	0
49	Compass for blackboard	1	-	A	5	5	5	5	5	5	5	5	40	Deleted due to self-production.	0
50	Protractor for blackboard	1	-	B	5	5	5	5	5	5	5	5	40	Deleted due to self-production.	0
51	Calculation practice card for demonstration	1	-	B	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
52	Tape for explanation	1	-	B	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
53	number line sheet	1	-	B	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
54	Explanation kit for fraction (apple model)	1	-	C	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0
55	Explanation kit for fraction (circular model)	1	-	C	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0
56	Explanation kit for scale reading	1	-	C	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0
57	Explanation kit for metric measurement	1	-	C	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0
58	Explanation kit for superficial measure of triangle and tetragon	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
59	Weight set	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
60	Explanation kit for polygon	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1

Equipment Name	Requested Quantity	Existing Equipment	Priority	Evaluation Criteria								Overall Evaluation	Remarks (Special Notification)	Planned Equipment	
				①	②	③	④	⑤	⑥	⑦	⑧				
60	Explanation kit for polygon	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
61	Explanation kit for sum of the internal angles	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
62	Diagram congruity model	18	-	B	5	5	5	5	5	5	5	5	40	1 set for 4 students & 1 unit for a teacher.	9
63	Teaching board for line plot/graph	1	-	C	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0
64	Teaching board for circle/pie graph	1	-	C	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0
65	Teaching board for band/column graph	1	-	C	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0
66	Teaching board for histogram/bar chart	1	-	C	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0
67	Teaching board for graph of proportion and inverse proportion	1	-	C	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0
68	Study kit for volume	18	-	A	5	5	5	5	5	5	5	5	40	1 set for 4 students & 1 unit for a teacher.	9
69	Liter square/measure	18	-	A	5	5	5	5	5	5	5	5	40	1 set for 4 students & 1 unit for a teacher.	9
70	Diagram congruity model	18	-	B	5	5	5	5	5	5	5	5	40	Deleted due to duplication.	0
71	Cabinet set	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 set.	1
Social Science, primary															
72	World map	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Map and globe set.	1
73	Southeast Asia map	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Map and globe set.	1
74	Cambodia map	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Map and globe set.	1
75	Globe	6	-	A	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher. Plan as Map and globe set.	9
Mathematics, lower secondary															
76	Plotting blackboard	1	-	B	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
77	Triangle set for blackboard	1	-	B	5	5	5	5	5	5	5	5	40	Deleted due to self-production.	0
78	Ruler set for blackboard	1	-	B	5	5	5	5	5	5	5	5	40	Deleted due to self-production.	0
79	Compass for blackboard	1	-	A	5	5	5	5	5	5	5	5	40	Deleted due to self-production.	0
80	Protractor for blackboard	1	-	B	5	5	5	5	5	5	5	5	40	Deleted due to self-production.	0
81	Development model of formula	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
82	Diagram congruity model	13	-	B	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher.	9
83	Plane parallel study apparatus	13	-	A	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher.	9
84	Solid model	13	-	A	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher.	9
85	Three dimensional model	13	-	A	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher.	9
86	Pythagorean theorem experiment kit	13	-	A	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher.	9
87	Graph calculator	26	-	C	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0

Equipment Name	Requested Quantity	Existing Equipment	Priority	Evaluation Criteria								Overall Evaluation	Remarks (Special Notification)	Planned Equipment	
				①	②	③	④	⑤	⑥	⑦	⑧				
Physics, lower secondary															
88	Experimental apparatus of slope	9	-	A	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher. Plan as Experimental apparatus for dynamics (slope)	9
89	Dynamic movement apparatus	1	-	A	5	5	5	5	4	5	5	5	39	Plan 1 unit.	1
90	Pulley	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
91	Dolly	9	-	A	5	5	5	5	5	5	5	5	40	Plan as Experimental apparatus for dynamics (slope).	9
92	Experimental lever	31	4	A	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher.	5
93	Vacuum apparatus for falling experiment	1	1	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Vacuum apparatus for falling experiment.	1
94	Rotary vacuum pump	1	-	A	5	5	5	5	4	5	5	5	39	Plan 1 unit. Plan as Vacuum apparatus for falling experiment.	1
95	Experimental apparatus for dynamics (slope)	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Experimental apparatus for dynamics (slope)	1
96	Stroboscope	1	-	A	5	5	5	5	5	5	5	5	40	Plan as Experimental apparatus for dynamics (slope).	1
97	Semiconductor laser	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
98	Optical bench and experimental apparatus	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
99	School Oscilloscope	1	-	A	5	5	3	5	5	5	5	5	38	Plan 1 unit.	1
100	Tuning fork for resonance	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as School Oscilloscope.	1
101	Low wave generator	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as School Oscilloscope.	1
102	Resonant apparatus in the air column	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
103	Vacuum apparatus with bell	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Vacuum apparatus for falling experiment.	1
104	Primary and secondary coils	9	-	A	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher.	9
105	DC AC power supply	9	-	A	5	5	5	5	4	5	5	5	39	1 unit for 4 students & 1 unit for a teacher.	9
106	DC ammeter	9	15	A	5	5	5	5	5	5	5	5	40	Deleted due to use of existing equipment.	0
107	DC voltmeter	9	19	A	5	5	5	5	5	5	5	5	40	Deleted due to use of existing equipment.	0
108	Magnetizing coil	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Instrument set for electrical current and magnetic field.	1
109	Induction coils	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Instrument set for electrical current and magnetic field.	1
110	Cross vacuum gauge	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Instrument set for electrical current and magnetic field.	1
111	Discharge tube	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Vacuum apparatus for falling experiment.	1

Equipment Name	Requested Quantity	Existing Equipment	Priority	Evaluation Criteria										Overall Evaluation	Remarks (Special Notification)	Planned Equipment
				①	②	③	④	⑤	⑥	⑦	⑧					
112	Crookes tubes	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Vacuum apparatus for falling experiment.	1
113	High voltage generator for discharge tube	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Vacuum apparatus for falling experiment.	1
114	Variable autotransformer	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Vacuum apparatus for falling experiment.	1
115	Ferrite magnetic motor for experiment	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Vacuum apparatus for falling experiment.	1
116	Electric magnet	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Vacuum apparatus for falling experiment.	1
117	Study plate of electricity for blackboard	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Vacuum apparatus for falling experiment.	1
118	Van de Graaff generator	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Vacuum apparatus for falling experiment.	1
119	Experimental apparatus for dynamics (with pendulum)	9	-	A	5	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher.	9
120	Collision balls	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
121	Experimental apparatus for energy conversion	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
122	Laboratory table (Physics) for student with stool	6	6	A	5	5	5	5	5	5	5	5	5	40	Deleted due to use of existing equipment.	0
123	Laboratory table (Physics) for teacher with stool	1	1	A	5	5	5	5	5	5	5	5	5	40	Deleted due to use of existing equipment.	0
124	Laptop computer	1	-	A	5	5	4	5	5	5	5	5	5	39	Plan 1 unit.	1
125	Projector	1	-	A	5	5	5	5	3	5	5	5	5	38	Plan 1 unit.	1
126	Cabinet set	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 set.	1
Chemistry, lower secondary																
127	Electronic balance	9	-	A	5	5	4	5	5	5	5	5	5	39	1 unit for 4 students & 1 unit for a teacher.	9
128	Magnetic stirrer	9	-	A	5	5	5	5	4	5	5	5	5	39	1 unit for 4 students & 1 unit for a teacher.	9
129	Chemical locker	6	-	A	5	5	5	5	5	5	5	5	5	40	Plan 2 units.	2
130	Refrigerator-Freezer	1	-	B	5	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
131	Desktop cork borer	6	-	C	-	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0
132	Fume cupboard	2	-	C	-	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0
133	Iron support	33	2	A	5	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher.	9
134	Glass tool set	9	6	A	5	5	5	5	5	5	5	5	5	40	1 set for 4 students & 1 unit for a teacher.	3
135	Experimental tool set	9	-	A	5	5	5	5	5	5	5	5	5	40	1 set for 4 students & 1 unit for a teacher.	9
136	Laboratory table (Chemistry) for student with stool	6	-	A	5	5	5	5	5	5	5	5	5	40	4 units for a lab.	4

Equipment Name	Requested Quantity	Existing Equipment	Priority	Evaluation Criteria								Overall Evaluation	Remarks (Special Notification)	Planned Equipment	
				①	②	③	④	⑤	⑥	⑦	⑧				
137	Laboratory table (Chemistry) for teacher with stool	1	-	A	5	5	5	5	5	5	5	5	40	1 unit for a lab. & a preparation room.	1
138	Laptop computer	1	-	A	5	5	4	5	5	5	5	5	39	Plan 1 unit.	1
139	Projector	1	-	A	5	5	5	5	3	5	5	5	38	Plan 1 unit.	1
140	Cabinet set	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 set.	1
141	Distillator	1	-	B	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
Biology, lower secondary															
142	Aquarium set	1	-	B	5	5	4	5	3	4	4	5	35	Deleted due to low marks.	0
143	Mendel's laws experiment machine	9	-	A	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher.	9
144	Microscope	33	34	A	5	5	4	5	4	5	5	5	38	Deleted due to use of existing equipment.	0
145	Binocular stereomicroscope	33	6	A	5	5	4	5	4	5	5	5	38	1 unit for 2 students & 1 unit for a teacher.	10
146	Digital microscope	1	2	A	5	5	5	5	5	5	5	5	40	Deleted due to overlapped function as Digital camera system for microscope.	0
147	Digital binocular stereomicroscope	1	-	A	5	5	5	5	5	5	5	5	40	Deleted due to overlapped function as Digital camera system for microscope.	0
148	Microscope for researchers/mineralogy	1	-	A	5	5	5	5	5	5	5	5	40	Deleted due to overlapped function as Binocular stereomicroscope and Magnifying mirror with polarization.	0
149	Magnifying mirror with polarization	33	-	A	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher.	9
150	Digital camera system for microscope	1	-	A	5	5	5	5	4	5	5	5	39	Plan 1 unit.	1
151	Microscope cabinet	4	-	A	5	5	4	5	4	5	5	5	38	Plan 2 units.	2
152	Laboratory wagon	2	-	A	5	5	5	5	5	5	5	5	40	Plan 2 units.	2
153	Drying oven	1	-	C	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0
154	Cylinder microtome	9	-	B	5	5	5	5	4	5	5	5	39	Plan 2 units.	2
155	Magnifier for field	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
156	Binoculars(high spec model)	1	1	A	5	5	5	5	5	5	5	5	40	Deleted due to use of existing equipment.	0
157	Sedimentary rock specimens	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Specimens set of rock, mineral and fossil.	1
158	Igneous rock specimens	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Specimens set of rock, mineral and fossil.	1
159	Mineral specimens	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Specimens set of rock, mineral and fossil.	1
160	Rock-forming mineral specimens	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Specimens set of rock, mineral and fossil.	1
161	Specimens of fossil animals	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Specimens set of rock, mineral and fossil.	1

Equipment Name	Requested Quantity	Existing Equipment	Priority	Evaluation Criteria									Overall Evaluation	Remarks (Special Notification)	Planned Equipment
				①	②	③	④	⑤	⑥	⑦	⑧				
162	Specimens of fossil plants	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Specimens set of rock, mineral and fossil.	1
163	Index fossil specimens	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Specimens set of rock, mineral and fossil.	1
164	Skelton of vertebrates	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
165	Anatomy of Vertebrate specimens	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Anatomy of (in)vertebrate specimens.	1
166	Anatomy of invertebrate specimens	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Anatomy of (in)vertebrate specimens.	1
167	Mitosis model	1	-	A	5	5	5	5	5	5	5	5	40	Plan as Cell division model.	1
168	Anatomical model of human body	1	2	A	5	5	5	5	5	5	5	5	40	Deleted due to use of existing equipment.	0
169	Heart model	1	1	A	5	5	5	5	5	5	5	5	40	Deleted due to use of existing equipment.	0
170	Skelton model of human body	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Skelton and organ structure model set B.	1
171	Eyeball model	1	1	A	5	5	5	5	5	5	5	5	40	Deleted due to use of existing equipment.	0
172	Ear model	1	1	A	5	5	5	5	5	5	5	5	40	Deleted due to use of existing equipment.	0
173	Brain model	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Skelton and organ structure model set B.	1
174	Pumping heart model	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Skelton and organ structure model set B.	1
175	Kidney model	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Skelton and organ structure model set B.	1
176	Arm joint model	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Skelton and organ structure model set B.	1
177	Model of respiratory organs	1	1	A	5	5	5	5	5	5	5	5	40	Deleted due to use of existing equipment.	0
178	Laboratory table (Biology) for student with stool	6	-	A	5	5	5	5	5	5	5	5	40	4 units for a lab.	4
179	Laboratory table (Biology) for teacher with stool	1	-	A	5	5	5	5	5	5	5	5	40	1 unit for a lab. & a preparation room.	1
180	Laptop computer	1	-	A	5	5	4	5	5	5	5	5	39	Plan 1 unit.	1
181	Projector	1	-	A	5	5	5	5	3	5	5	5	38	Plan 1 unit.	1
182	Cabinet set	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 set.	1
Earth Science, lower secondary															
183	Tripartite model	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
184	Astronomical telescope	1	2	A	5	5	4	5	5	5	5	5	39	Deleted due to use of existing equipment.	0
185	Moon model	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Tripartite model.	1
186	Transparent celestial globe	1	1	A	5	5	5	5	5	5	5	5	40	Deleted due to use of existing equipment.	0
187	Aneroid barometer	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Instrument shelter.	1
188	Rain gauge	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1

Equipment Name	Requested Quantity	Existing Equipment	Priority	Evaluation Criteria								Overall Evaluation	Remarks (Special Notification)	Planned Equipment	
				①	②	③	④	⑤	⑥	⑦	⑧				
189	Weather observation system	1	-	C	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0
190	Experimental apparatus for front models	1	-	C	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0
191	Thermograph	1	-	A	5	5	5	5	3	5	5	5	38	Plan 1 unit. Plan as Instrument shelter.	1
192	Instrument shelter	1	-	A	5	5	5	5	5	5	5	5	40	Deleted due to duplication.	0
193	Weather chart blackboard	6	-	C	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0
194	Experimental vacuum apparatus	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Vacuum apparatus for falling experiment.	1
195	Magdeburg hemispheres	1	25	A	5	5	5	5	5	5	5	5	40	Deleted due to use of existing equipment.	0
196	Luxmeter/illuminometer	1	-	C	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0
197	Radiation detector	1	-	C	-	-	-	-	-	-	-	-	0	Deleted due to priority C.	0
198	Laboratory table (Earth Science) for student with stool	6	6	A	5	5	5	5	5	5	5	5	40	Deleted due to use of existing equipment.	0
199	Laboratory table (Earth Science) for teacher with stool	1	1	A	5	5	5	5	5	5	5	5	40	Deleted due to use of existing equipment.	0
200	Laptop computer	1	-	A	5	5	4	5	5	5	5	5	39	Plan 1 unit.	1
201	Projector	1	-	A	5	5	5	5	3	5	5	5	38	Plan 1 unit.	1
202	Cabinet set	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 set.	1
Social Science, lower secondary															
203	World map	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Map and globe set.	1
204	Southeast Asia map	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Map and globe set.	1
205	Cambodia map	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Map and globe set.	1
206	Globe	6	-	A	5	5	5	5	5	5	5	5	40	1 unit for 4 students & 1 unit for a teacher. Plan as Map and globe set.	6
Music, primary															
207	Electronic piano	31	10	A	5	5	5	5	5	5	5	5	40	1 unit for 2 students.	21
208	Chair	61	10	A	5	5	5	5	5	5	5	5	40	2 units for 1 piano. Plan as Electric piano.	51
209	Percussion instrument set	31	-	A	5	5	4	5	4	5	5	5	38	Plan as Musical instrument set.	1
210	CD radio-cassette recorder	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
211	Metronome	31	-	A	5	5	5	5	5	5	5	5	40	Plan as Musical instrument set.	31
212	Cabinet set	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
Music, lower secondary															
213	Electronic piano	16	9	A	5	5	5	5	5	5	5	5	40	1 unit for 2 students.	7
214	Chair	31	9	A	5	5	5	5	5	5	5	5	40	2 units for 1 piano. Plan as Electric piano.	22
215	Percussion instrument set	16	-	A	5	5	4	5	4	5	5	5	38	Plan as Musical instrument set.	1
216	CD radio-cassette recorder	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
217	Metronome	16	-	A	5	5	5	5	5	5	5	5	40	Plan as Musical instrument set.	16
218	Cabinet set	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1

Equipment Name	Requested Quantity	Existing Equipment	Priority	Evaluation Criteria								Overall Evaluation	Remarks (Special Notification)	Planned Equipment		
				①	②	③	④	⑤	⑥	⑦	⑧					
Art, primary																
219	Drawing board	61	-	A	5	5	5	5	5	5	5	5	5	40	1 unit for 1 student & 1 unit for a teacher.	61
220	Art desk for student with stool	12	-	A	5	5	5	5	5	5	5	5	5	40	12 units for a room.	12
221	Art desk for teacher with stool	1	-	A	5	5	5	5	5	5	5	5	5	40	1 unit for a room.	1
Art, lower secondary																
222	Drawing board	31	-	A	5	5	5	5	5	5	5	5	5	40	1 unit for 1 student & 1 unit for a teacher.	31
223	Art desk for student with stool	6	-	A	5	5	5	5	5	5	5	5	5	40	6 units for a room.	6
224	Art desk for teacher with stool	1	-	A	5	5	5	5	5	5	5	5	5	40	1 unit for a room.	1
Workshop																
225	Tool set for woodwork	4	-	A	5	5	5	5	5	5	5	5	5	40	Plan as Processing tool set for woodwork.	4
226	Screw driver set	4	-	A	5	5	5	5	5	5	5	5	5	40	Plan as Processing tool set for woodwork.	4
227	Electric jig saw	4	-	B	5	5	5	5	4	5	5	5	5	39	Plan as Fabricating equipment for woodwork.	4
228	Bench-top drilling machine	4	-	B	5	5	5	5	5	5	5	5	5	40	Plan as Fabricating equipment for woodwork.	4
229	Belt disc sander	4	-	B	5	5	5	5	5	5	5	5	5	40	Plan as Fabricating equipment for woodwork.	4
230	Worktable for teacher with stool	2	-	A	5	5	5	5	5	5	5	5	5	40	Plan as Worktable with stool.	2
231	Worktable for student with stool	12	-	A	5	5	5	5	5	5	5	5	5	40	Plan 4 units as 1 set. Plan as Worktable with stool.	4
232	Vise for woodwork	12	-	A	5	5	5	5	5	5	5	5	5	40	Plan as Worktable with stool.	12
233	Scroll Saw set	4	-	A	5	5	5	5	4	5	5	5	5	39	Deleted due to overlapped function as Electric jig saw.	0
234	Corded electric hand drill set	4	1	A	5	5	5	5	4	5	5	5	5	39	Deleted due to overlapped function as Bench-top drilling machine.	0
235	Hand drill set	4	-	A	5	5	5	5	4	5	5	5	5	39	Deleted due to overlapped function as Bench-top drilling machine.	0
236	Wood file set	4	-	A	5	5	5	5	4	5	5	5	5	39	Plan as Processing tool set for woodwork.	4
237	Electric saw set	4	-	A	5	5	5	5	4	5	5	5	5	39	Plan as Fabricating equipment for woodwork.	4
238	Cabinet set	1	-	A	5	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
Home Economics																
239	Refrigerator	1	-	B	5	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
240	Pot set	7	-	A	5	5	5	5	5	5	5	5	5	40	1 set for 6 students & 1 set for a teacher. Plan as Utensil set.	6
241	Utensil set	7	-	A	5	5	5	5	5	5	5	5	5	40	1 set for 6 students & 1 set for a teacher. Plan as Utensil set.	6
242	Stand for cutting board	1	-	A	5	5	5	5	5	5	5	5	5	40	1 set for 6 students & 1 set for a teacher. Plan as Utensil set.	1
243	Scale	7	-	A	5	5	5	5	5	5	5	5	5	40	1 set for 6 students & 1 set for a teacher. Plan as Utensil set.	6
244	Tableware set	31	-	A	5	5	5	5	5	5	5	5	5	40	1 set for 1 student & 1 set for a teacher.	31
245	Sewing machine	31	-	A	5	5	3	4	4	5	5	5	5	36	1 set for 6 students & 1 set for a teacher.	6

Equipment Name	Requested Quantity	Existing Equipment	Priority	Evaluation Criteria								Overall Evaluation	Remarks (Special Notification)	Planned Equipment	
				①	②	③	④	⑤	⑥	⑦	⑧				
246	Lock sewing machine	2	-	B	4	5	3	4	4	5	5	5	35	Deleted due to low marks.	0
247	Sewing kit	31	-	A	5	5	4	5	5	5	5	5	39	1 set for 1 student & 1 set for a teacher.	31
248	Ruler set for sewing	31	-	A	5	5	5	5	5	5	5	5	40	1 set for 1 student & 1 set for a teacher. Plan as Sewing kit.	31
249	Torso set	6	-	B	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
250	Iron	16	-	A	5	5	5	5	5	5	5	5	40	1 set for 6 students & 1 set for a teacher.	6
251	Ironing board	16	-	A	5	5	5	5	5	5	5	5	40	1 set for 6 students & 1 set for a teacher. Plan as Ironing.	6
252	Washing machine	1	-	B	3	3	4	5	5	5	5	5	35	Deleted due to low marks.	0
253	Cooking/Clothing table for student	6	-	A	5	5	5	5	5	5	5	5	40	5 units for a lab.	5
254	Cooking/Clothing table for teacher	1	-	A	5	5	5	5	5	5	5	5	40	1 unit for a lab.	1
255	Gas cooker	7	-	A	5	5	5	5	4	5	5	5	39	Plan as Cooking/Clothing table.	7
256	Cabinet set	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit.	1
ICT Room															
257	Computer network system for ICT Lab.	4	2	A	5	5	5	5	5	5	5	5	40	Plan 1 system in 1 room. (2 rooms)	2
258	Laptop computer	4	-	A	5	5	4	5	5	5	5	5	39	Plan 1 unit. (4 rooms)	4
259	Computer desk and chair set	4	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. (4 rooms)	4
260	Printer	4	-	A	5	5	5	5	4	5	5	5	39	Plan 1 unit. (4 rooms)	4
261	Projector	4	-	A	5	5	5	5	4	5	5	5	39	Plan 1 unit. (4 rooms)	4
262	Screen	4	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. (4 rooms)	4
Library (ICT Room)															
263	Computer network system for library	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 system in 1 room.	1
264	Computer desk and chair set	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. (4 rooms)	1
265	Printer	2	-	A	5	5	5	5	4	5	5	5	39	Plan 2 units.	2
Assembly Hall															
266	Sound equipment set	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 set.	1
267	Projector	1	-	A	5	5	5	5	4	5	5	5	39	Plan 1 unit.	1
268	Screen	1	-	A	5	5	5	5	5	5	5	5	40	Deleted due to covering by construction work.	0
269	White board	2	-	A	5	5	5	5	5	5	5	5	40	Plan 2 units.	2
Physical Education															
270	Exercise equipment set	1	-	B	5	5	5	5	5	5	5	5	40	Plan 1 set.	1
271	Soccer ball/football	10	-	A	5	5	5	5	5	5	5	5	40	Plan as Ball set.	10
272	Volleyball	10	-	A	5	5	5	5	5	5	5	5	40	Plan as Ball set.	10
273	Cage for ball keeping	3	-	A	5	5	5	5	5	5	5	5	40	Plan as Ball set.	3
274	Inflator/air pump	3	-	A	5	5	5	5	5	5	5	5	40	Plan as Ball set.	3
275	Basket ball	10	-	A	5	5	5	5	5	5	5	5	40	Plan as Ball set.	10

Equipment Name	Requested Quantity	Existing Equipment	Priority	Evaluation Criteria								Overall Evaluation	Remarks (Special Notification)	Planned Equipment	
				①	②	③	④	⑤	⑥	⑦	⑧				
First-Aid (Dispensary Room)															
276	Bed	3	-	B	5	5	5	5	5	5	5	5	40	Plan 3 units. Plan as Equipment for first-aid.	3
277	Bed clothing set	3	-	B	5	5	5	5	5	5	5	5	40	Plan 3 units. Plan as Equipment for first-aid.	3
278	Examination table	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Equipment for first-aid.	1
279	Height scale	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Equipment for first-aid.	1
280	Weight scale	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Equipment for first-aid.	1
281	Sphygmomanometer	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Equipment for first-aid.	1
282	Medicine cabinet	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Equipment for first-aid.	1
283	Refrigerator for medicine	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Equipment for first-aid.	1
284	Autoclave	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Equipment for first-aid.	1
285	Dressing cart	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Equipment for first-aid.	1
286	Examination equipment set	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Equipment for first-aid.	1
287	Cast	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Equipment for first-aid.	1
288	Sanitary box	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Equipment for first-aid.	1
289	Laptop computer	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Equipment for first-aid.	1
290	Desk with chair	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Equipment for first-aid.	1
291	Stool	1	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. Plan as Equipment for first-aid.	1
Auditorium															
292	Projector	2	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. (2 rooms)	2
293	Screen	2	-	A	5	5	5	5	5	5	5	5	40	Deleted due to covering by construction work.	0
294	Sound equipment set	2	-	A	5	5	5	5	5	5	5	5	40	Plan 1 unit. (2 rooms)	2
Lecture Room															
295	Projector	12	1	B	5	5	5	5	5	5	5	5	40	Plan for lecture room.	11
296	Screen	12	-	B	5	5	5	5	5	5	5	5	40	Plan for lecture room.	12
Academic Department Office															
297	Computer network system for academic department office	9	-	B	5	5	4	5	4	5	5	5	38	Plan 1 system (10 person) in 1 room. (9 rooms)	9
Administration Office															
298	Computer network system for administration office	3	-	B	5	5	4	5	4	5	5	0	33	Deleted due to low score.	0
299	Desktop computer	10	-	B	5	5	4	5	4	5	5	0	33	Deleted due to low score.	0