資　　料

資料１．調査団員・氏名
資料２．調査行程
資料３．面談者リスト

資料1. 調査団員・氏名

(1)現地調査 I-1（2016 年 12 月 12 日～2017 年 1 月 24 日）

	氏名	担当業務	所属
1	田口　晋平	総括	JICA 人間開発部基礎教育グループ 基礎教育第一チーム　主任調査役
2	道川　久文	業務主任／建築計画	㈱毛利建築設計事務所
3	荒又　多美子	副業務主任／建築設計 2	㈱毛利建築設計事務所
4	吉澤　博幸	建築設計 1／自然状況調査	㈱毛利建築設計事務所
5	一番ケ瀬　佳昭	施工計画／積算	㈱毛利建築設計事務所
6	竹下　健	建築設計 3／設備計画	㈱毛利建築設計事務所
7	守田　貴志	機材計画 1	インテムコンサルティング㈱
8	大原　みさと	調達計画／積算	インテムコンサルティング㈱
9	花屋　亜希子	教育計画／機材計画 2	インテムコンサルティング㈱
10	京谷　純一	建築計画 4(自主補強)	㈱毛利建築設計事務所
11	吉原　三貴	建築計画 5／業務調整 (自主補強)	㈱毛利建築設計事務所

(2)現地調査 I-2（2017 年 3 月 8 日～2017 年 3 月 17 日）

	氏名	担当業務	所属
1	道川　久文	業務主任／建築計画	㈱毛利建築設計事務所
2	荒又　多美子	副業務主任／建築設計 2	㈱毛利建築設計事務所
3	守田　貴志	機材計画 1	インテムコンサルティング㈱

(3)現地調査 I-3（2017 年 5 月 16 日～2017 年 5 月 20 日）

	氏名	担当業務	所属
1	道川　久文	業務主任／建築計画	㈱毛利建築設計事務所

(4)現地調査 II（2017 年 8 月 27 日～2017 年 9 月 2 日）

	氏名	担当業務	所属
1	田口　晋平	総括	JICA 人間開発部基礎教育グループ 基礎教育第一チーム　主任調査役
2	道川　久文	業務主任／建築計画	㈱毛利建築設計事務所
3	守田　貴志	機材計画 1	インテムコンサルティング㈱

資料2. 調査行程

(1)現地調査 I-1（2016 年 12 月 12 日～2017 年 1 月 24 日）

				a	b	c	d	e	f	g	h	i	j
			官団員 総括、計画管理	業務主任/ 建築計画	副業務主任/ 建築設計2	建築設計1/ 自然条件調査	施工計画/ 積算	建築設計3/ 設備計画	機材計画1	調達計画/ 積算	教育計画/ 機材計画2	建築設計4 (自主補強)	建築設計5/ 業務調整 (自主補強)
			田口　晋平	道川　久文	荒又　多美子	吉澤　博幸	一番ヶ瀬　佳昭	竹下　健	守田　貴志	大原　みさと	花屋　亜希子	京谷　純一	吉原　三貴
			10日間	28日間	11日間	35日間	21日間	24日間	28日間	21日間	21日間	7日間	35日間
1	2016/12/12	月	東京→プノンペン			東京→プノンペン					福岡→プノンペン		東京→プノンペン
2	2016/12/13	火	JICA打ち合わせ MoEYSと協議			aに同行					aに同行		aに同行
3	2016/12/14	水	MoEYSと協議			aに同行					aに同行		aに同行
4	2016/12/15	木	ミニッツ協議 プノンペンサイト視察			自然条件調査 プノンペンサイト調査					aに同行		cに同行
5	2016/12/16	金	プノンペン→バッタンバン バッタンバンサイト視察			aに同行					aに同行		aに同行
6	2016/12/17	土	バッタンバン→プノンペン			aに同行					aに同行		aに同行
7	2016/12/18	日	資料整理			aに同行		東京→プノンペン		東京→プノンペン	aに同行		aに同行
8	2016/12/19	月	ミニッツ協議、署名			建築関連調査		設備関連調査		機材調達事情調査 準備、JICA打合せ	aに同行		Cに同行
9	2016/12/20	火	大使館、JICA報 告、プノンペン→	大使館、JICA報 告、サイト調査準備		aに同行		JICA報告 サイト調査準備		JICA報告、機材調 達事情調査	JICA報告 教育関連調査		JICA報告 サイト調査準備
10	2016/12/21	水	→東京	サイト調査1　プノン ペン		aに同行		aに同行	東京→プノンペン	機材調達事情調 査、サイト調査	教育関連調査		eに同行
11	2016/12/22	木		サイト調査2		aに同行		aに同行	MoEYS協議	fに同行	教育関連調査		aに同行
12	2016/12/23	金		サイト調査3		aに同行		aに同行	aに同行	aに同行	教育関連調査		aに同行
13	2016/12/24	土		サイト調査4		aに同行		aに同行	aに同行	aに同行	教育関連調査		aに同行
14	2016/12/25	日		資料整理		資料整理		資料整理	資料整理	資料整理	資料整理		資料整理
15	2016/12/26	月		バッタンバンへ移 動		aに同行		aに同行	aに同行	aに同行	教育関連調査		aに同行
16	2016/12/27	火		サイト調査5バッタ ンバン		aに同行		aに同行	aに同行	aに同行	教育関連調査		aに同行
17	2016/12/28	水		サイト調査6		aに同行		aに同行	aに同行	aに同行	教育関連調査		aに同行
18	2016/12/29	木		サイト調査7		aに同行		aに同行	aに同行	aに同行	教育関連調査	建築関連調査	aに同行
19	2016/12/30	金		サイト調査8		aに同行		aに同行	aに同行	aに同行	教育関連調査	建築関連調査	aに同行
20	2016/12/31	土		プノンペンに移動		aに同行		aに同行	aに同行	aに同行	教育関連調査、プ ノンペン→	建築関連調査	aに同行
21	2017/1/1	日		資料整理(祝日)		資料整理(祝日)		資料整理(祝日)			→福岡		資料整理(祝日)
22	2017/1/2	月		団内会議		aに同行		aに同行	機材計画関連調査	機材代理店調査		aに同行	aに同行
23	2017/1/3	火		JICA打ち合わせ MoEYS協議		建築関連調査		設備関連調査	aに同行	機材代理店調査		aに同行	cに同行
24	2017/1/4	水		MoEYS協議	東京→プノンペン	建築関連調査	東京→プノンペン	設備関連調査	aに同行	機材代理店調査		aに同行	cに同行
25	2017/1/5	木		MoEYS協議	建築関連調査、団 内会議	aに同行	積算関連調査	設備関連調査	aに同行	機材代理店調査			aに同行
26	2017/1/6	金		団内打ち合わせ	建築関連調査	bに同行	bに同行	設備関連調査	団内打ち合わせ 機材計画関連調査	団内打ち合わせ プノンペン→			bに同行
27	2017/1/7	土		団内会議、プノン ペン→	団内会議(祝日)	団内会議(祝日)	団内会議(祝日)	団内会議(祝日)	団内会議(祝日)	→東京			団内会議(祝日)
28	2017/1/8	日		→東京	資料整理	資料整理	資料整理	資料整理	資料整理				資料整理
29	2017/1/9	月			テクニカルノート案 作成	建築関連調査	バッタンバンへ移 動	設備関連調査、プ ノンペン→	bに同行				cに同行
30	2017/1/10	火			テクニカルノート案 作成 JICA打ち合わせ	bに同行	積算関連調査	→東京	bに同行				bに同行
31	2017/1/11	水			テクニカルノート案 協議	bに同行	プノンペンへ移動		bに同行				資料整理
32	2017/1/12	木			テクニカルノート案 協議	bに同行	積算関連調査		bに同行				資料整理
33	2017/1/13	金			テクニカルノート協 議・署名、JICA報 告、プノンペン→	bに同行	積算関連調査		bに同行				資料整理
34	2017/1/14	土			→東京	自然条件調査、プ ノンペン→	積算関連調査		→東京				プノンペン→
35	2017/1/15	日				→東京	資料整理						→東京
36	2017/1/16	月					積算関連調査						
37	2017/1/17	火					積算関連調査						
38	2017/1/18	水					積算関連調査						
39	2017/1/19	木					積算関連調査						
40	2017/1/20	金					積算関連調査						
41	2017/1/21	土					積算関連調査						
42	2017/1/22	日					資料整理						
43	2017/1/23	月					積算関連調査、プ ノンペン→						
44	2017/1/24	火					→東京						

(2)現地調査 I-2（2017 年 3 月 8 日～2017 年 3 月 17 日）

			業務主任/建築計画	副業務主任/建築設計 2	機材計画 1
			道川　久文	荒又　多美子	守田　貴志
			8 日間	10 日間	10 日間
1	2017/3/8	水(祝)	東京→プノンペン		
2	2017/3/9	木	JICA 事務所打合せ MoEYS(TPAP タスクフォース、教員養成局、建設局)および E-TEC メンバーとの協議		
3	2017/3/10	金	MoEYS（TPAP タスクフォース、教員養成局、建設局）および E-TEC メンバーとの協議 プノンペン PTTC/RTTC、MoEYS(教員養成局、建設局)、CMAC プノンペンとサイト打合せ・調査		
4	2017/3/11	土	団内協議、書類作成		
5	2017/3/12	日	プノンペン→バッタンバン		
6	2017/3/13	月	バッタンバン RTTC、MoEYS(教員養成局、建設局)、CMAC バッタンバンとサイト打合せ・調査 バッタンバン PTTC、MoEYS(教員養成局、建設局)とサイト打合せ・調査		
7	2017/3/14	火	バッタンバン→プノンペン テクニカルノート準備 プノンペン発→	バッタンバン→プノンペン テクニカルノート準備	
8	2017/3/15	水	→東京着	テクニカルノート協議	
9	2017/3/16	木		テクニカルノート協議、署名 JICA 事務所報告 プノンペン発→	
10	2017/3/17	金		→東京着	

(3)現地調査 I-3（2017 年 5 月 16 日～2017 年 5 月 20 日）

			業務主任/建築計画
			道川　久文
			5 日間
1	2017/5/16	火	東京→プノンペン
2	2017/5/17	水	JICA 事務所協議、仮設計画について MoEYS(TPAP, TTD, 建設局)及び E-TEC メンバーと協議
3	2017/5/18	木	MoEYS(次官、TTD)とTEC 運営について協議、プノンペン RTTC サイト調査、電力会社調査
4	2017/5/19	金	MoEYS(TTD)とテクニカルノート協議 プノンペン発→
5	2017/5/20	土	→東京着

(4)現地調査 II（2017 年 8 月 27 日～2017 年 9 月 2 日）

			総括、計画管理	業務主任/建築計画	機材計画1
			田口　晋平	道川　久文	守田　貴志
			6 日間	6 日間	7 日間
1	2017/8/27	日		東京→プノンペン	
2	2017/8/28	月	経済・財務省との協議 MoEYS 関係部署との協議		
3	2017/8/29	火	E-TEC との打合せ MoEYS 関係部署との協議		
4	2017/8/30	水	MoEYS 次官表敬・協議 JICA 事務所への報告、協議		
5	2017/8/31	木	ミニッツ署名、日本大使館への報告		
6	2017/9/1	金	補足調査、団内協議、書類作成 プノンペン発→	補足調査、団内協議、書類作成	補足調査、団内協議、書類作成 プノンペン発→
7	2017/9/2	土	→東京着		→東京着

資料3. 面談者リスト

●教育青年スポーツ省 (Ministry of Education Youth and Sport)

氏名	役職	所属
H.E. Dr. Hang Chuong Naron	大臣	
H.E. Dr. Nath Bunroeun	次官	
H.E. Put Samith	総局長	教育総局
Dr. Dy Samsideth	副総局長	教育総局
Mr. Ngor Penglong	局長	教員養成局
Ms. Phan Sophea	副係長	教員養成局
Ms. Koir Chhunchhhay	スタッフ	教員養成局
Mr. Prak Polla	教員政策行動計画（TPAP）メンバー	教員養成局
Mr. Chum Sophal	副局長	初等教育局
Mr. Vorng Phirun	局長、大臣特使	建設局
Mr. Tum Rithy	エンジニア	建設局
Mr. Ieng Lada	エンジニア	建設局
Mr. Chea Sopheap	エンジニア	建設局
Dr. Bo Chankoulika	メンバー （前・法務局　室長）	教育研究評議会 TPAP タスクフォース
Mr. Near Sophan	局長	人事局
Mr. Chan Tola	副局長	人事局
Mr. Kem Promvirak	HRMIS 主任	人事局
Mr. Oung Borat	副総局長	政策計画総局
Mr. Suon Socheat	科学主任	カリキュラム局
Mr. Mak Ngoy	総局長	高等教育総局
Mr. Mam Sory	アシスタント	高等教育総局
Mr. Khieu Vicheanon	副課長	監査課

●経済財務省 (Ministry of Economy and Finance)

氏名	役職	所属
Dr. Tauch Chan Kresna	副総局長	国際協力/債務管理局
Mr. Kim Keomoniroth	副局長	二国間協力局
Mr. Nou Phyrith	職員	二国間協力局
Mr. Yos Sovanna	副局長	二国間協力室 1

●プノンペン前期中等教員養成校 (Regional Teacher Training Centre of Phnom Penh)

氏名	役職	所属
Mr. Dork Chea	校長	
Mr. Srey Vuth	副校長	
Ms. Vanly Vadtheany	副校長	
Mr. Srey Vutta	副校長	
Mr. Noy Chhom Ya	副校長	

●プノンペン初等教育教員養成校 (Provincial Teacher Training Centre of Phnom Penh)

氏名	役職	所属
Mr. Vowg Savoeun	トレーナー	
Mr. Ishizawa Hiromichi	理科アドバイザー	CIESF

●バッタンバン前期中等教員養成校 (Regional Teacher Training Centre of Battambang)

氏名	役職	所属
Mr. Sok Hing	校長	
Mr. Cheap Chheangvitih	副校長	
Mr. Sam Oeurt	副校長	
Mr. Meas Satum	学習室副室長	
Ms. Heng Tola	実験室管理者	
Ms. Samrith Panhchara	財務スタッフ	

●バッタンバン初等教育教員養成校 (Provincial Teacher Training Centre of Battambang)

氏名	役職	所属
Mr. Rin Monivann	校長	
Mr. Lim Bouny	副校長	
Mr. Srey Khivsokhom	副校長	
Mr. Po Bunpiseth	スタッフ	

●カンボジア地雷対策センター（CMAC）（プノンペン）

氏名	役職	所属
Mr. Chhin Bunran	副支部長	
Mr. Nour Samneng	オペレーションアシスタント	

●カンボジア地雷対策センター（CMAC）（バッタンバン）

氏名	役職	所属
Mr. Yeng Sokunthea	副支部長	
Mr. Dy Uanthy	オペレーションアシスタント	

●王立プノンペン大学 (Royal University of Phnom Penh)

氏名	役職	所属
Dr. Sok Soth	学部長	教育学部
Dr. Tao Nary	副学部長	教育学部
Dr. Sot Visal	BA+1 コーディネーター	教育学部

●カンボジア工科大学 (Institute of Technology of Cambodia)

氏名	役職	所属
Dr. OM Romny	学長	

●開発パートナー (Development Partners)

氏名	役職	所属
Mr. Wim Voskuilen	教員養成カリキュラム・アドバイザー	VSO
Mr. Onno De Weerd	教育プログラム長	VSO
Ms. Veerle Cnudde	教育アドバイザー	VVOB
Mr. Keo Mono	副プログラム長	VVOB
Ms. Sopha Ang	プログラム・オフィサー	UNESCO
Mr. John C. Friend-Pereira	教育スペシャリスト	UNICEF
Mr. Nuom Sokhon	教育オフィサー	UNICEF
Mr. Chea Hout	教育オフィサー	UNICEF

●在カンボジア日本国大使館

氏名	役職	所属
松本 泉	二等書記官	

●JICA カンボジア事務所

氏名	役職	所属
安達 一	所長	
小島 岳晴	次長	
岸田 菜見	所員	
Pich Thyda	プログラム・オフィサー	

資料４－a.　討議議事録（M/D）

（１）討議議事録（2016 年 12 月 19 日署名）

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

Shimpei Taguchi

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

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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(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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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	Skelton 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

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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Annex 7

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

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 singed 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)."

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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Attachment 1

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. Appraisal	(2)Preparatory Survey Explanation of draft outline design, including cost estimate, undertakings, etc.		x		x	x		
	(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.

Attachment 2

Financial Flow of Japanese Grant (A/P Type)

[Precondition]
- Currency of disbursement: Japanese Yen (10)
- Currency of contract: Japanese Yen (4)
- Currency of payment: Japanese Yen (11)

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Project Monitoring Report
on
Project Name
Grant Agreement No. XXXXXXX

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

1-1 Project Objective

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

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 *(proposed in the outline design)*	Actual
1.		

2-2 Scope of the work

Components	Original* *(proposed in the outline design)*	Actual*
1.		

Reasons for modification of scope (if any).

(PMR)

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2-3 Implementation Schedule

Items	Original		Actual
	(proposed in the outline design)	*(at the time of signing the Grant Agreement)*	

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 *(proposed in the outline design)*	Actual *(in case of any modification)*	Original[1),2)] *(proposed in the outline design)*	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 *(proposed in the outline design)*	Actual *(in case of any modification)*	Original[1),2)] *(proposed in the outline design)*	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)*

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:
	Contingency Plan (if applicable):
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:
	Contingency Plan (if applicable):
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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Attachment 6

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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資料４－３４

Attachment 7

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%)	

Annex 9

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				
	2) Payment commission for 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 1) Project area: remove obstacles such as trees 2) stock yard and route: secure area for material stock and transmission	before notice of the bidding document	MoEYS		
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				
	2) Payment commission for 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		

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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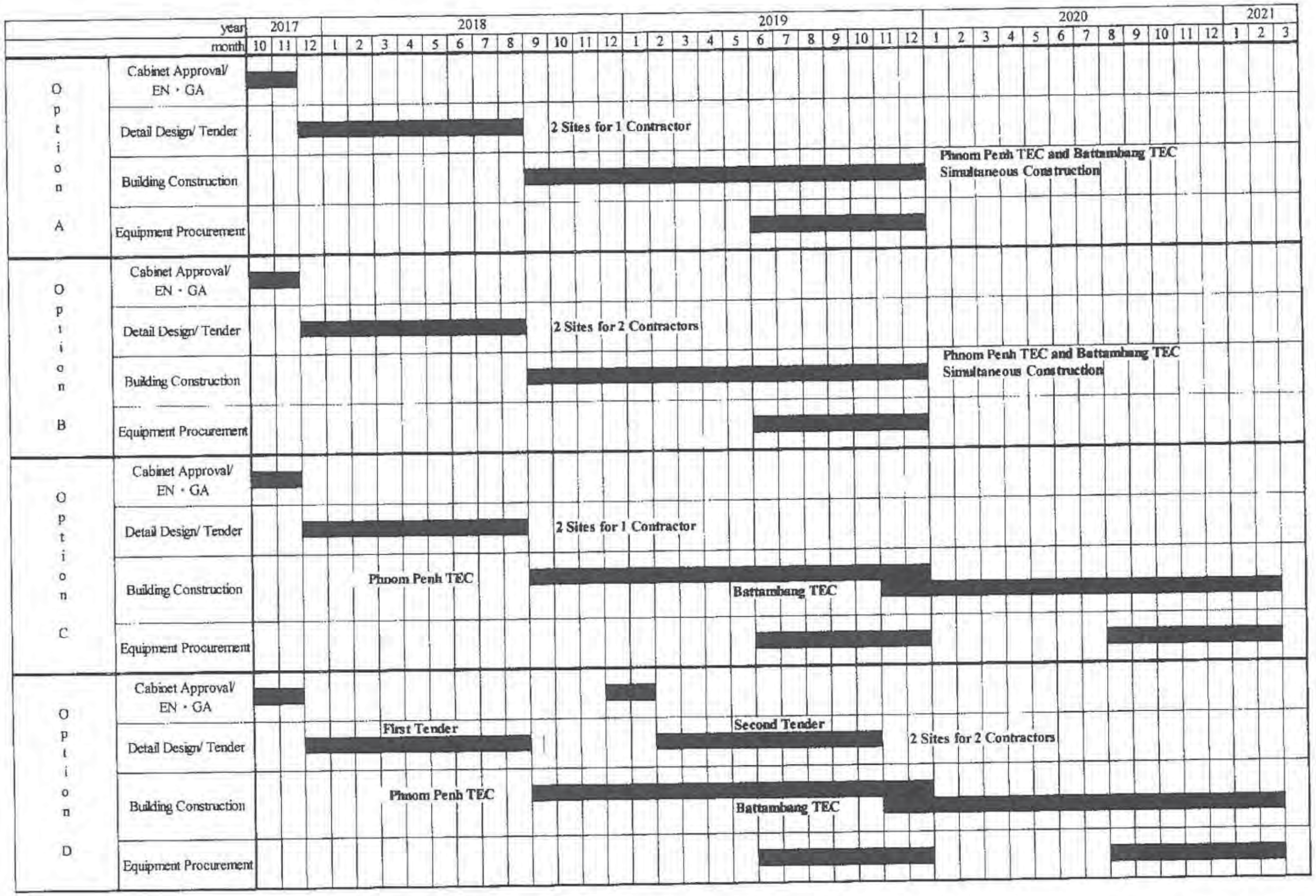
Annex 10: Tentative Implementation Schedule with Options



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（２）討議議事録（概要説明調査）

（2017 年 8 月 31 日署名）

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	H.E. Nath Bunroeun
Leader	Secretary of State
Preparatory Survey Team	Ministry of Education, Youth and Sport
Japan International Cooperation Agency	Royal Government of Cambodia
Japan	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. Supervison 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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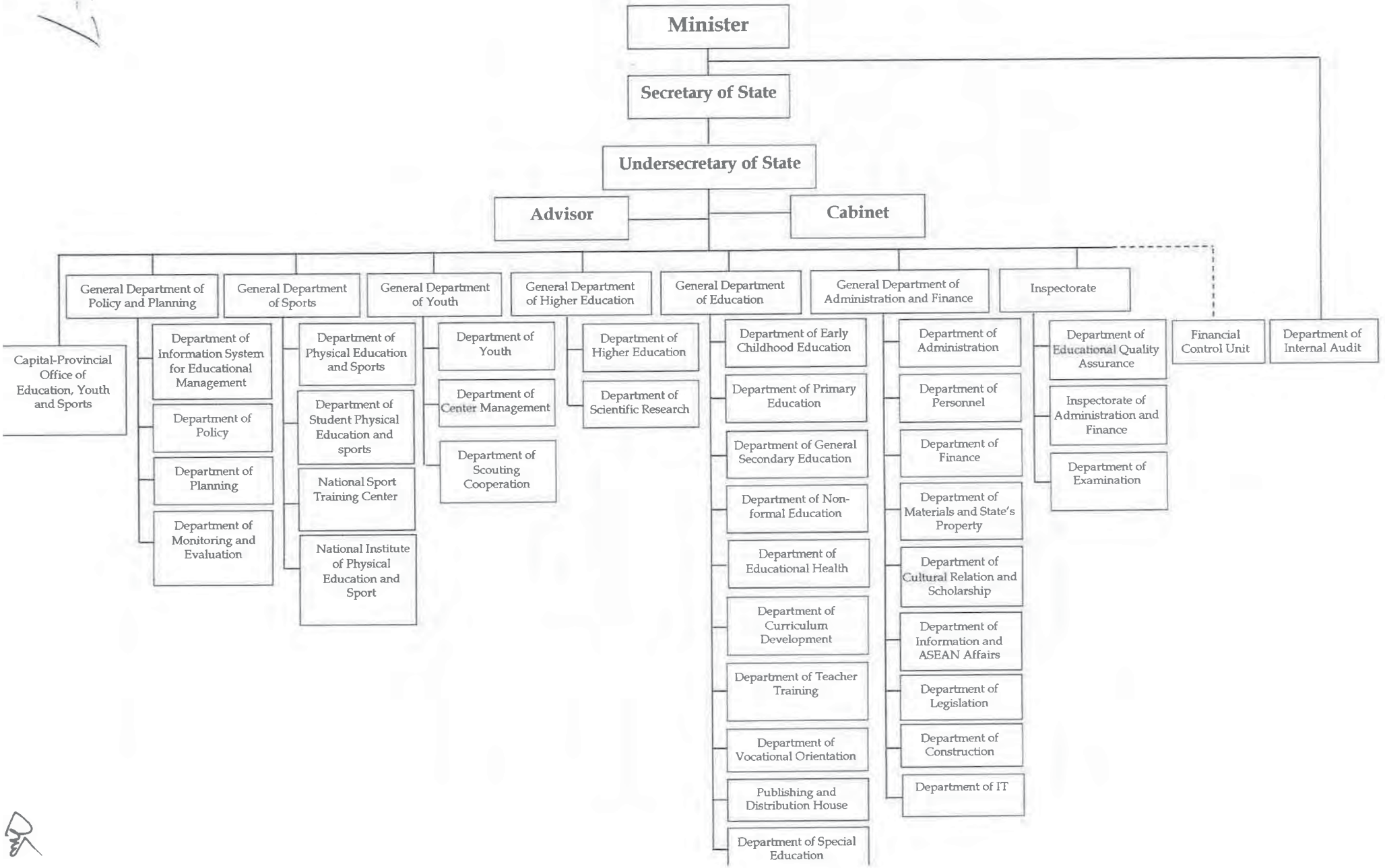
Annex 1: Organization Charts of MoEYS



Annex 2

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

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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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Annex 3

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		MoEYS/ MEF		
	1) Advising commission of A/P	within 1 month after the signing of the contract(s)		50~60 per A/P or A/P amend (approx. 500USD in total)	
	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

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	June 2020	
2	To implement detailed design, support bidding process and supervise construction (Consulting Service)		
	Total		3,179

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

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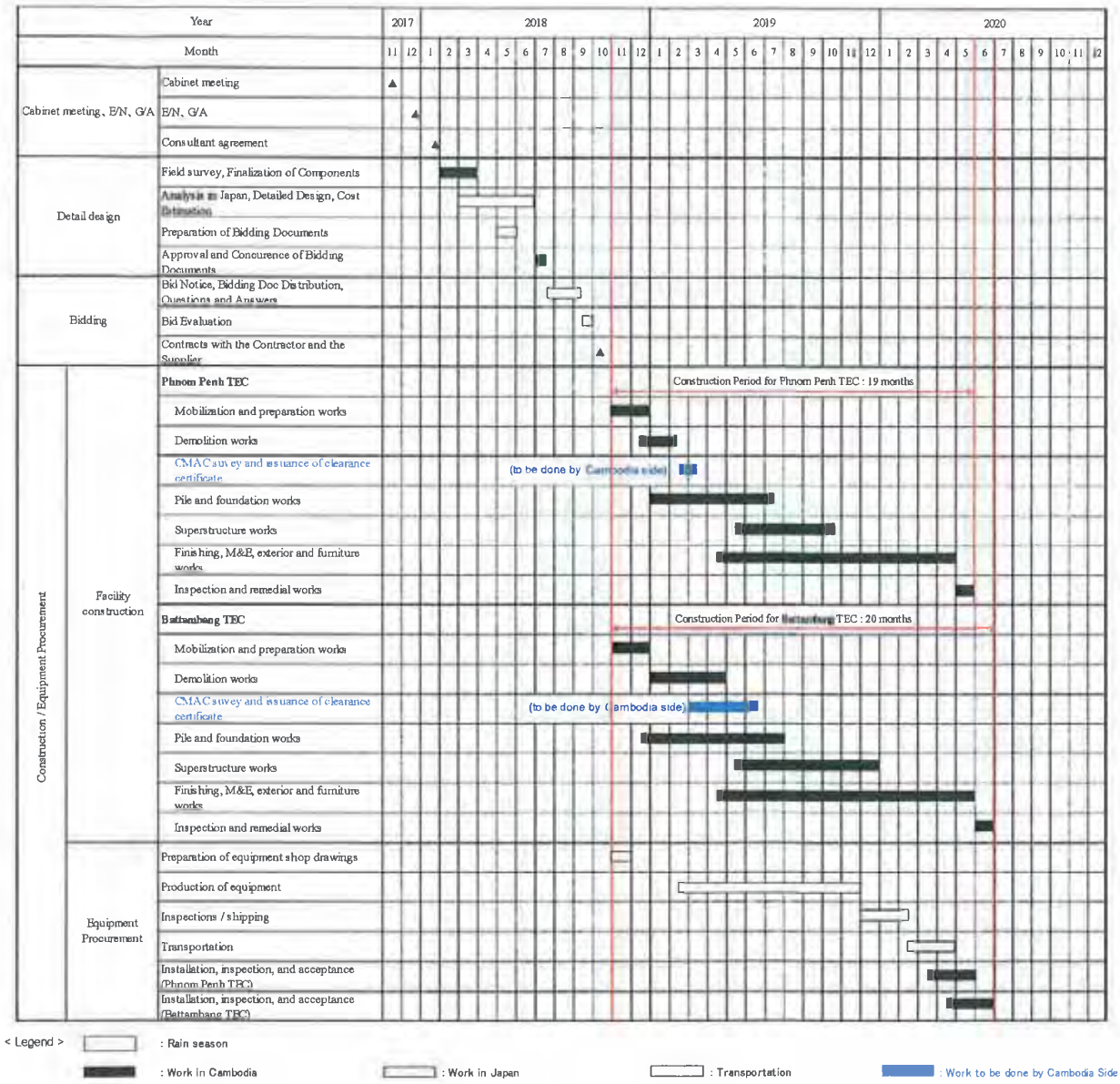
Annex 4 Project Implementation Schedule



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Project Monitoring Report
on
Project Name
Grant Agreement No. XXXXXXX

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

1-1 Project Objective

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

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 *(proposed in the outline design)*	Actual
1.		

2-2 Scope of the work

Components	Original* *(proposed in the outline design)*	Actual*
1.		

Reasons for modification of scope (if any).

(PMR)

2-3 Implementation Schedule

Items	Original		Actual
	(proposed in the outline design)	*(at the time of signing the Grant Agreement)*	

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 *(proposed in the outline design)*	Actual *(in case of any modification)*	Original[1),2)] *(proposed in the outline design)*	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 *(proposed in the outline design)*	Actual *(in case of any modification)*	Original[1),2)] *(proposed in the outline design)*	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)*

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:
	Contingency Plan (if applicable):
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:
	Contingency Plan (if applicable):
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:

	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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Attachment 6

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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資料４－６７

Attachment 7

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%)	

Areas to be detected by CMAC for Phnom Penh TEC

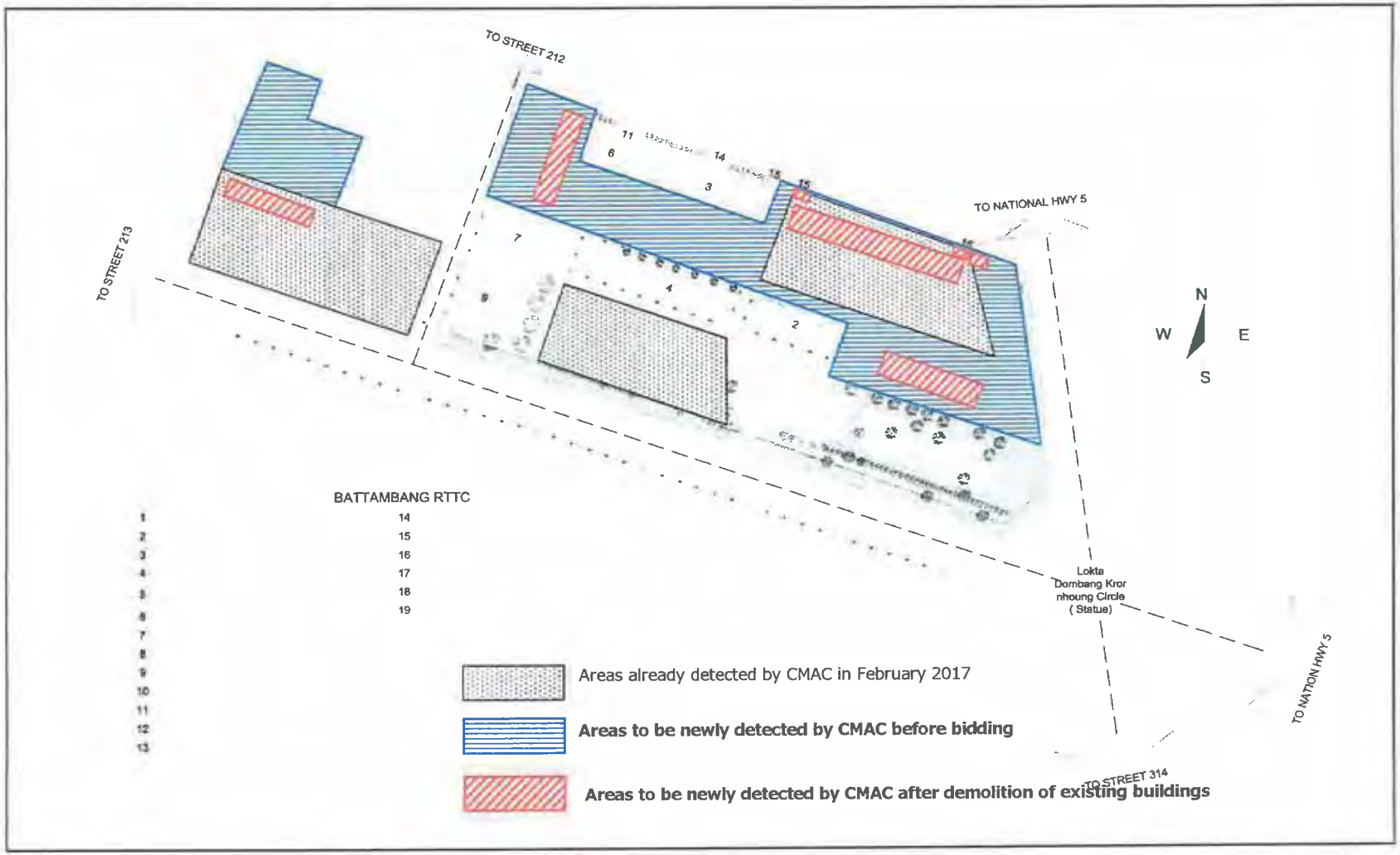
RTTC		
①	CLASSROOM BUILDING-1	RC : 2 STORY
②	CLASSROOM BUILDING-2	RC : 2 STORY
③	ADMINISTRATION BUILDING	RC : 2 STORY
④	CLASSROOM BUILDING-3	RC : 3 STORY
⑤	LABORATORY BUILDING	RC : 1 STORY
⑥	MEETING HALL	RC : 1 STORY
⑦	MALE DORMITORY-1	RC : 2 STORY
⑧	MALE DORMITORY-2	RC+W : 2 STORY
⑨	PRIVATE CANTEEN	RC : 1 STORY

PTTC		
①	CLASSROOM BUILDING-1	RC : 2 STORY
②	ADMINISTRATION BUILDING	RC : 2 STORY
③	SUBJECT ROOM& MEETING HALL BLDG	RC : 2 STORY
④	LIBRARY	RC : 1 STORY
⑤	MALE DORMITORY-1	RC : 2 STORY
⑥	CANTEEN	RC : 1 STORY
⑦	MALE DORMITORY-2	W : 1 STORY
⑧	TOILET	RC : 1 STORY

Areas already detected by CMAC in February 2017

Areas to be newly detected by CMAC after demolition of existing buildings

Areas to be detected by CMAC for Battambang TEC



資料４－b.　テクニカルノート（T/N）

（１）テクニカルノート

（2017 年 1 月 13 日署名）

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 Chankoulika, 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 1[1])

   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 facitity 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 labortory is smallar 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 requeted 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.

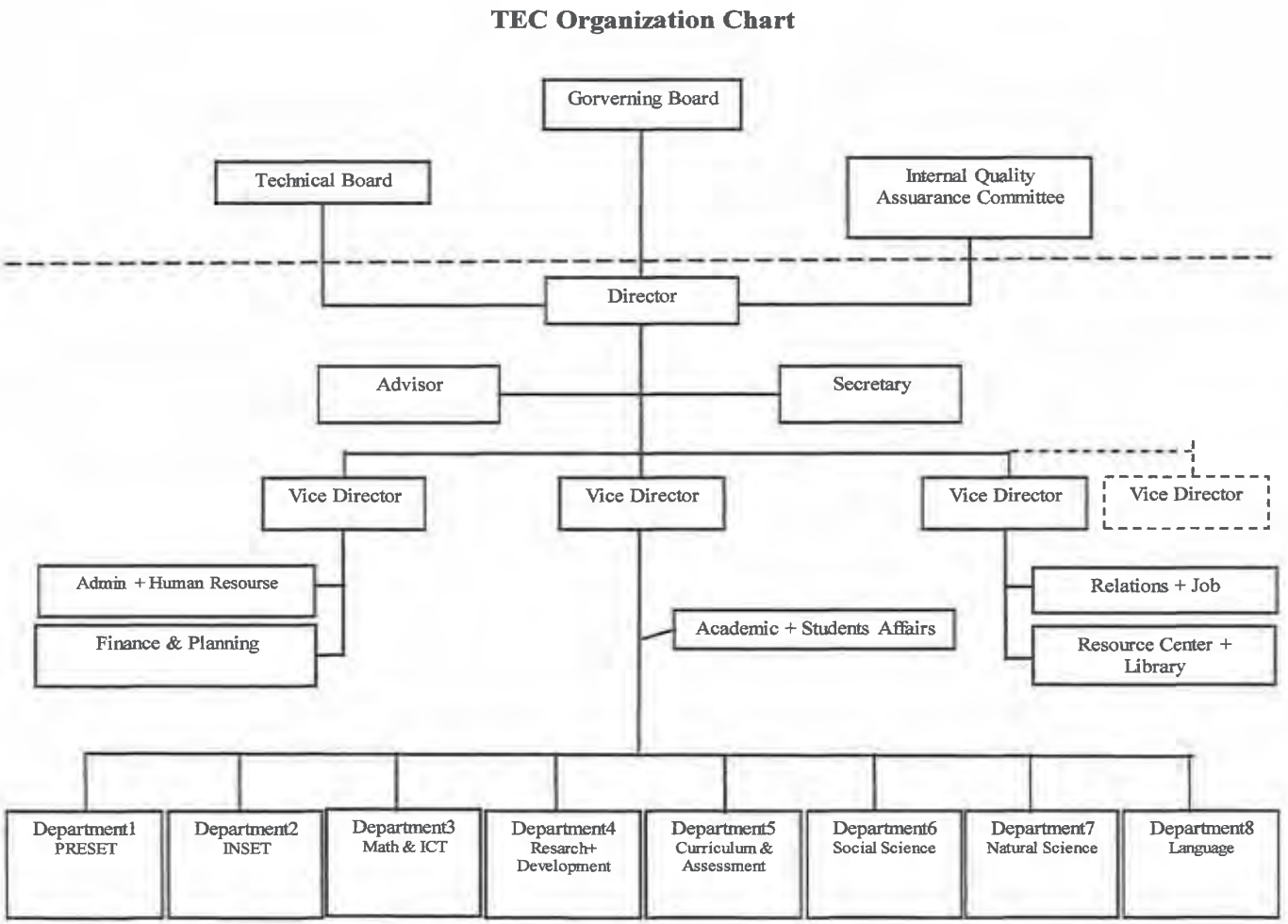
2) Building construction and furniture procurement will be conducted under the same contract lot.

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

Appendix 1 : Provisional Organization chart for TEC



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			

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

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

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

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

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

（２）テクニカルノート No.2

（2017 年 3 月 16 日署名）

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
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. 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 RTTC[1].

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 PTTC[2]/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

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.

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)

(2) **Battambang TEC**

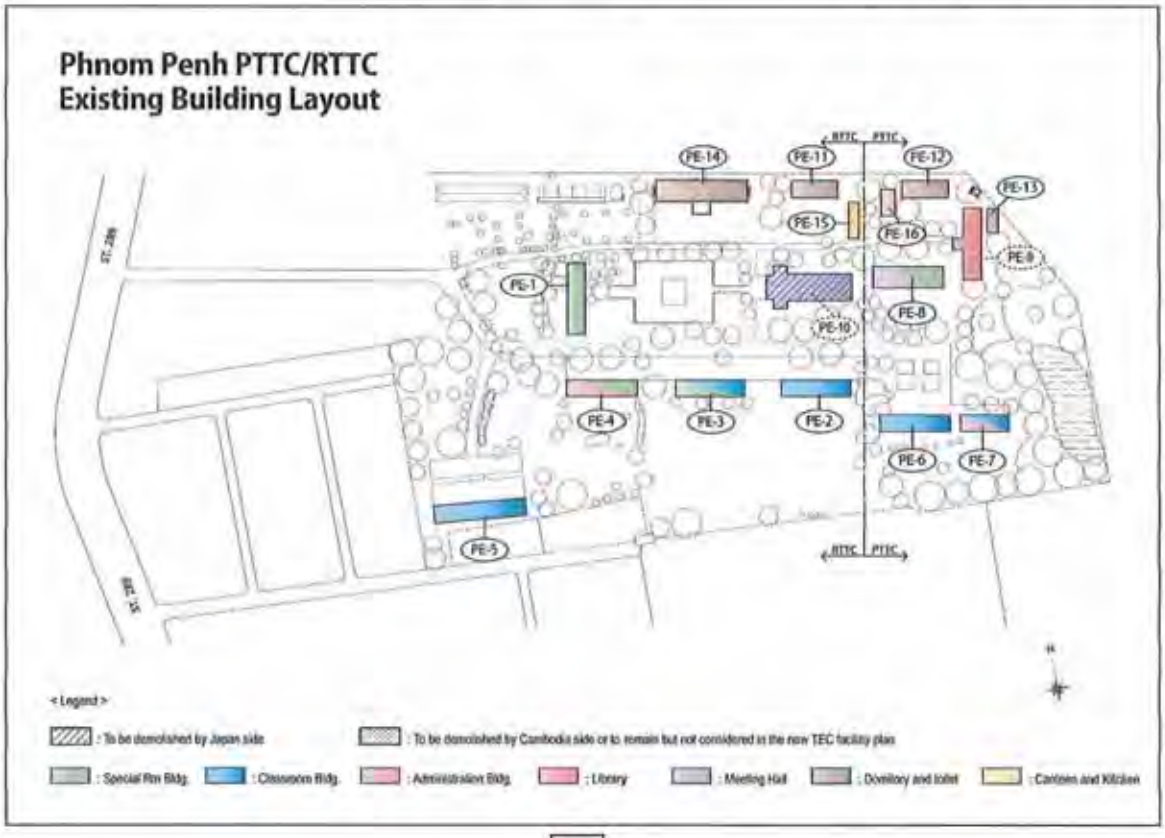
Functional Classification	Priority	Necessity for new provision of rooms	Room Name	Capacity per room	Total required No. of rooms	No. of existing rooms available	Proposed No. of rooms to be provided by the Project
Special lecture room block	1	**For Year 1 Course (within current PTTC site)**					
		C	Science 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**

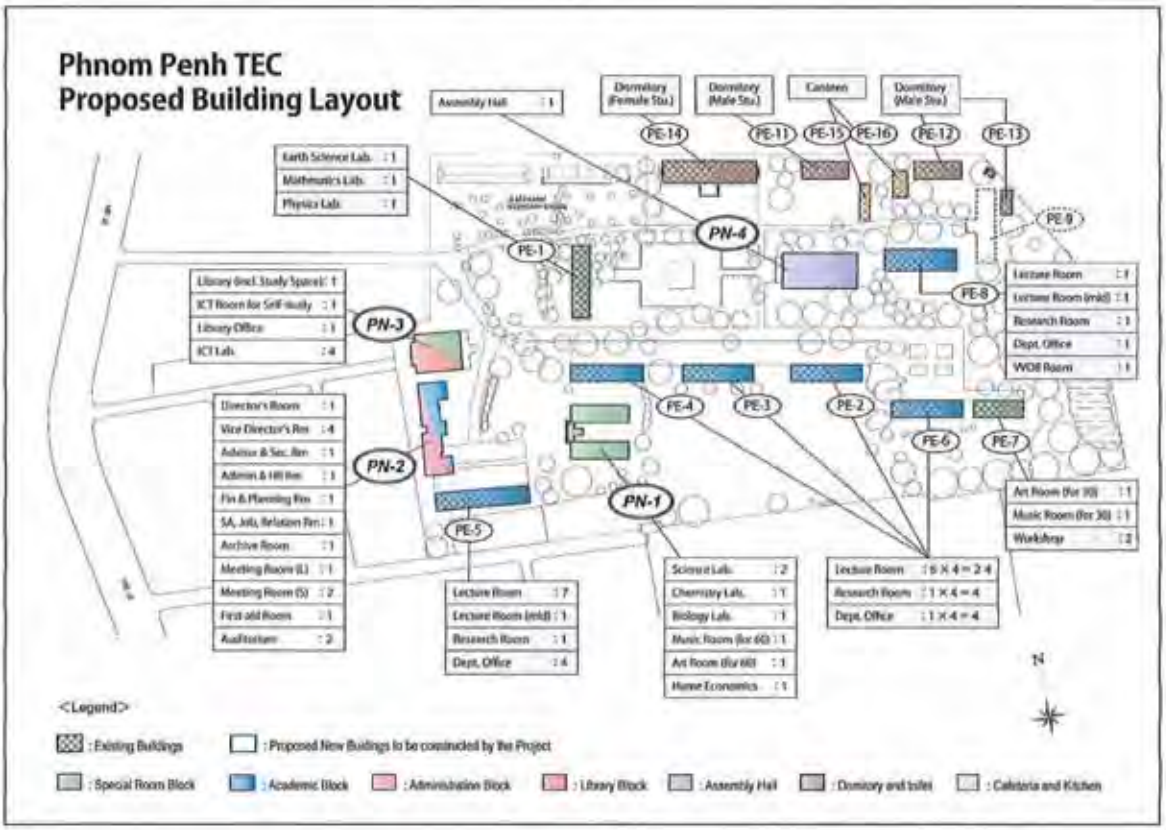
[3] It is expected to have a workshop on the ground floor of the existing dormitory building which is proposed to use as a staff dormitory buildings for the new TEC Battambang. However, the location of the workshop may be changed through further discussion among Cambodia side. In any case, a space for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

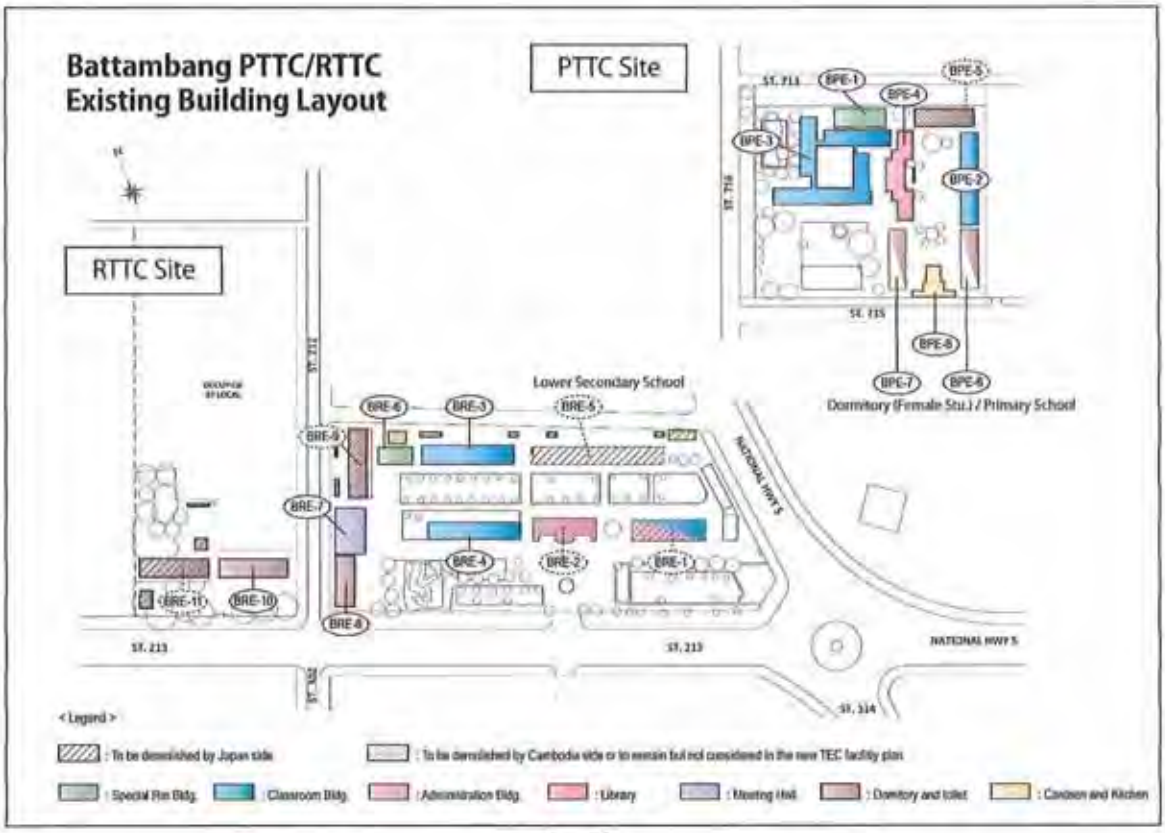
Functional Classification	Priority	Necessity for new provision of rooms	Room Name	Capacity per room	Total required No. of rooms	No. of existing rooms available	Proposed No. of rooms to be provided by the Project
Academic block	2	**For Year 1 Course (within current PTTC site)**					
		C	Lecture room (mid-size)	(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**

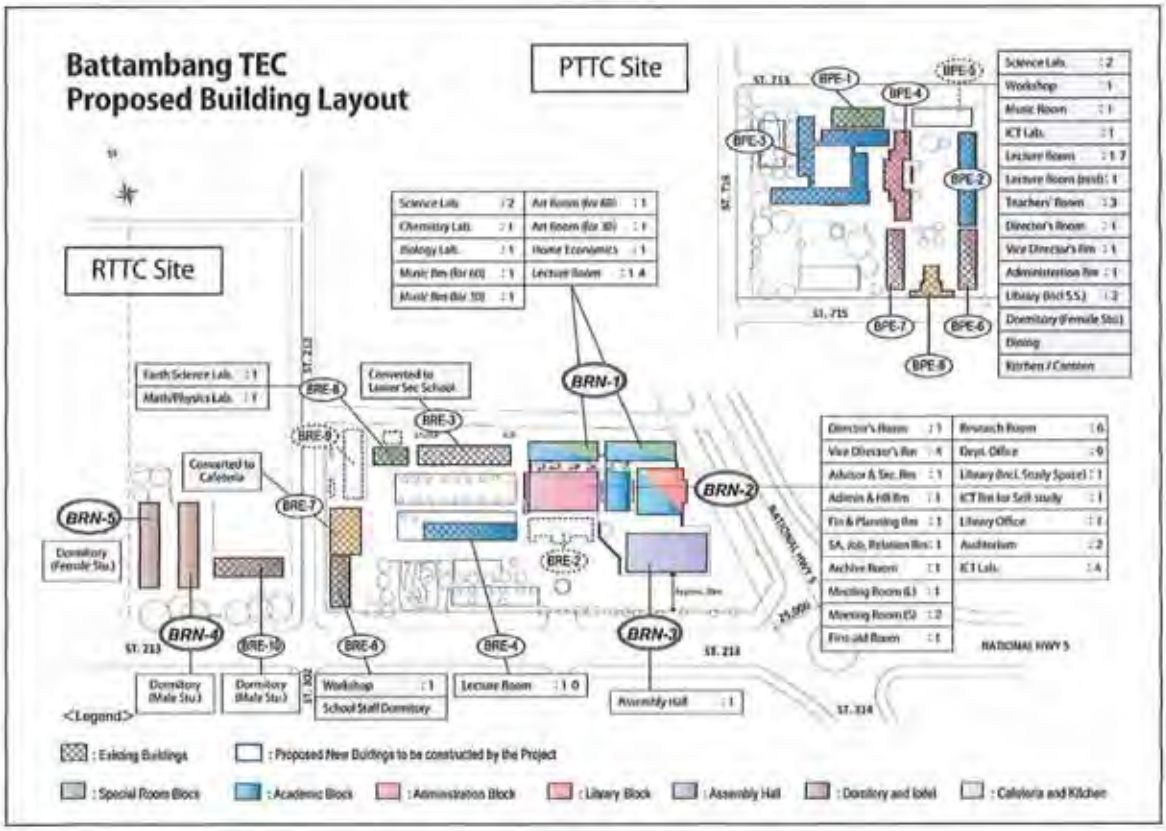
Functional Classification	Priority	Necessity for new provision of rooms	Room Name	Capacity per room	Total required No. of rooms	No. of existing rooms available	Proposed No. of rooms to be provided by the Project
Library block	4	**For Year 1 Course (within current PTTC site)**					
		C	Library (including 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

[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.

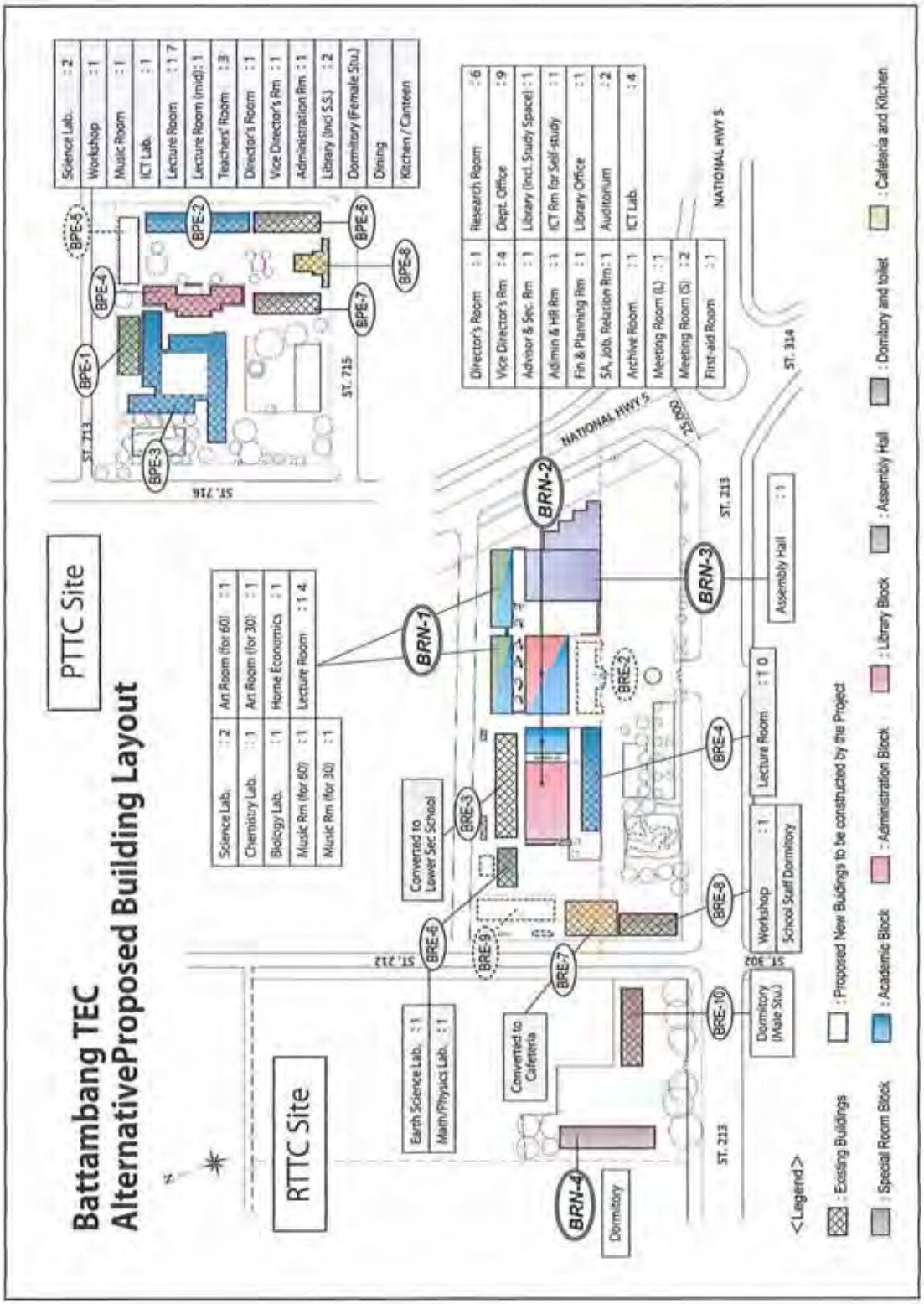

Phnom Penh PTTC/RTTC
Existing Building Layout
PE-14
PE-11
PE-12
PE-13
PE-15
PE-16
PE-9
PE-1
PE-8
PE-10
PE-4
PE-3
PE-2
PE-6
PE-7
PE-5
RTTC
PTTC
< Legend >
: To be demolished by Japan side
: To be demolished by Cambodia side or to remain but not considered in the new TEC facility plan
: Special Rm Bldg.
: Classroom Bldg.
: Administration Bldg.
: Library
: Meeting Hall
: Dormitory and toilet
: Canteen and Kitchen


Phnom Penh TEC
Proposed Building Layout
Assembly Hall : 1
Dormitory (Female Stu.)
Dormitory (Male Stu.)
Canteen
Dormitory (Male Stu.)
PE-14
PE-11
PE-15
PE-16
PE-12
PE-13
PE-9
PE-1
PN-4
PE-8
PN-3
PN-2
PN-1
PE-4
PE-3
PE-2
PE-6
PE-7
PE-5
<Legend>
: Existing Buildings
: Proposed New Buildings to be constructed by the Project
: Special Room Block
: Academic Block
: Administrative Block
: Library Block
: Assembly Hall
: Dormitory and toilet
: Cafeteria and Kitchen


Battambang PTTC/RTTC
Existing Building Layout
PTTC Site
RTTC Site
Lower Secondary School
Dormitory (Female Stu.) / Primary School
NATIONAL HWY 5
ST. 213
ST. 214
ST. 215
ST. 216
< Legend >
: To be demolished by Japan side
: To be demolished by Cambodia side or to remain but not considered in the new TEC facility plan
: Special Rm Bldg.
: Classroom Bldg.
: Administration Bldg.
: Library
: Meeting Hall
: Dormitory and toilet
: Canteen and Kitchen


Battambang TEC
Proposed Building Layout
PTTC Site
RTTC Site
Converted to Lower Sec School
Converted to Cafeteria
BRN-1
BRN-2
BRN-3
BRN-4
BRN-5
NATIONAL HWY 5
ST. 213
ST. 214
ST. 215
ST. 216
<Legend>
: Existing Buildings
: Proposed New Buildings to be constructed by the Project
: Special Room Block
: Academic Block
: Administration Block
: Library Block
: Assembly Hall
: Dormitory and toilet
: Cafeteria and Kitchen

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



EXISTING FACILITY UTILIZATION PLAN

PHNOM PENH 1/4

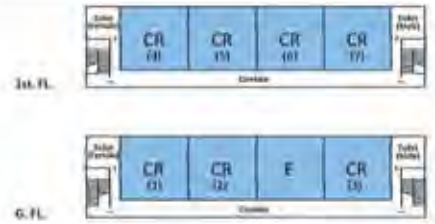
CURRENT FUNCTION

PE-1 LABORATORY BUILDING

BEL	Biology/Earth-Science Labo.	1
CHL	Chemistry Labo.	1
PL	Physics Labo.	1

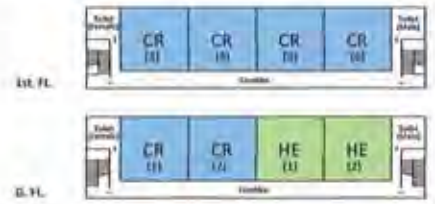
P: Preparation room
E: Equipment room

PE-2 CLASS ROOM BUILDING



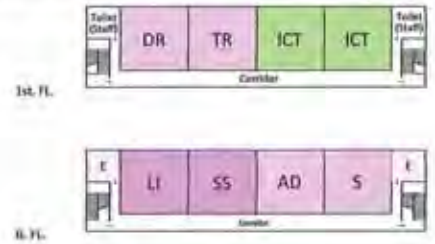
CR	Classroom	7
E	Equipment Room	1

PE-3 CLASS ROOM BUILDING



CR	Classroom	6
HE	Home Economics Room-1 (Cooking)	1
HE	Home Economics Room-2 (Sewing)	1

PE-4 ADMINISTRATION BLDG.



LI	Library	1
SS	Study Space	1
AD	Administration Room	1
S	Storage	1
DR	Director's Room	1
TR	Teacher's Room	1
ICT	Administration Room	1

E: Equipment room

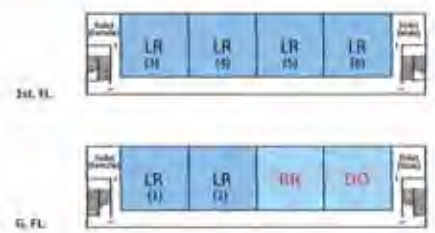
PROPOSED FUNCTION

PE-1 SPECIAL ROOM BUILDING

ESL	Earth-Science Labo.	1
ML	Mathmatics Labo.	1
PL	Physics Labo.	1

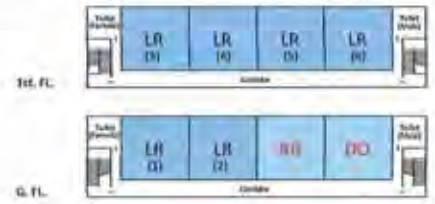
P: Preparation room
E: Equipment room

PE-2 ACADEMIC BUILDING



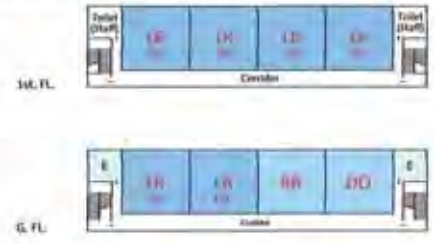
LR	Lecture Room	6
RR	Research Room	1
DO	Department Office	1

PE-3 ACADEMIC BUILDING



LR	Lecture Room	6
RR	Research Room	1
DO	Department Office	1

PE-4 ACADEMIC BUILDING



LR	Lecture Room	6
RR	Research Room	1
DO	Department Office	1

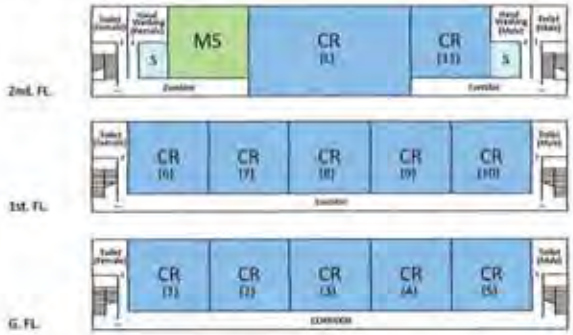
E: Equipment room

EXISTING FACILITY UTILIZATION PLAN

PHNOM PENH 2/4

CURRENT FUNCTION

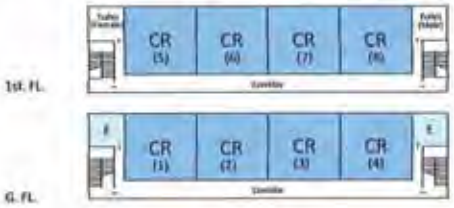
PE-5 CLASS ROOM BUILDING



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

S:Storage

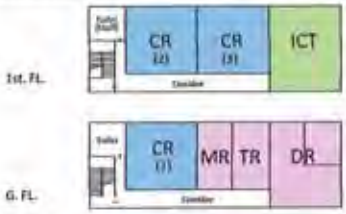
PE-6 CLASS ROOM BUILDING



CR	Classroom	8

E: Equipment room

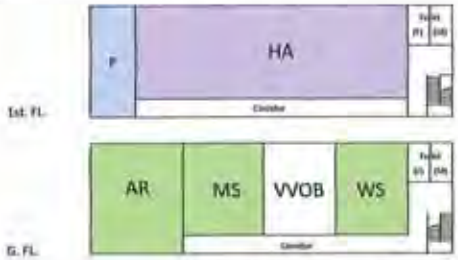
PE-7 ADMINISTRATION BUILDING



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

PE-8 SUBJECT ROOM & MEETING HALL

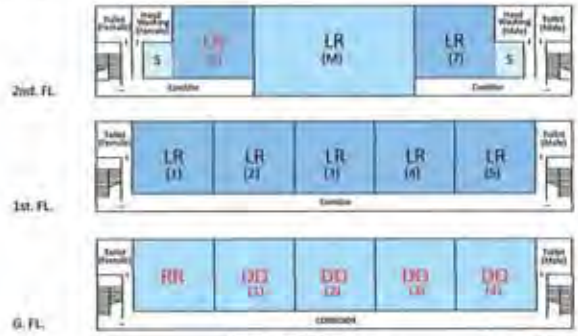


AR	Art Room (Dancing)	1
MS	Music Room	1
VVOB	VVOB (BELGIUM)	1
WS	Workshop	1
HA	Hall	1

P: Preparation room

PROPOSED FUNCTION

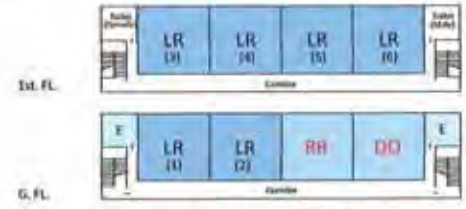
PE-5 ACADEMIC BUILDING



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

S:Storage

PE-6 ACADEMIC BUILDING



LR	Lecture Room	6
RR	Research Room	1
DO	Department Office	1

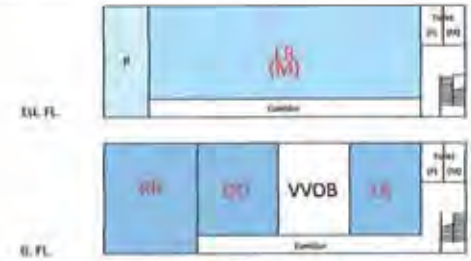
E: Equipment room

PE-7 ACADEMIC BUILDING

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

E: Equipment room

PE-8 SPECIAL ROOM BUILDING

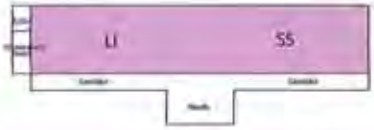
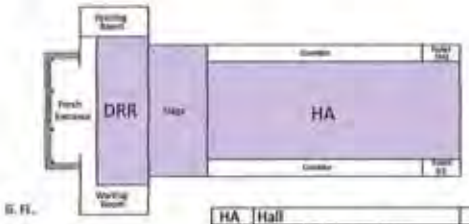
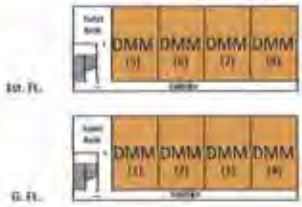
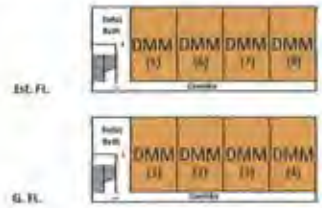
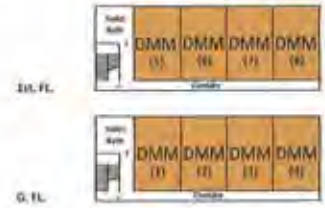
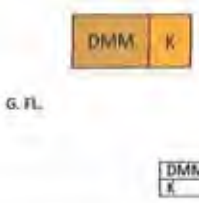
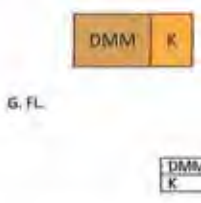


RR	Reseach Room	1
DO	Department Office	1
VVOB	VVOB (BELGIUM)	1
LR	Lecture Room	1
LR(M)	Lecture Room (Mid Size)	1

P: Preparation room

EXISTING FACILITY UTILIZATION PLAN

PHNOM PENH 3/4

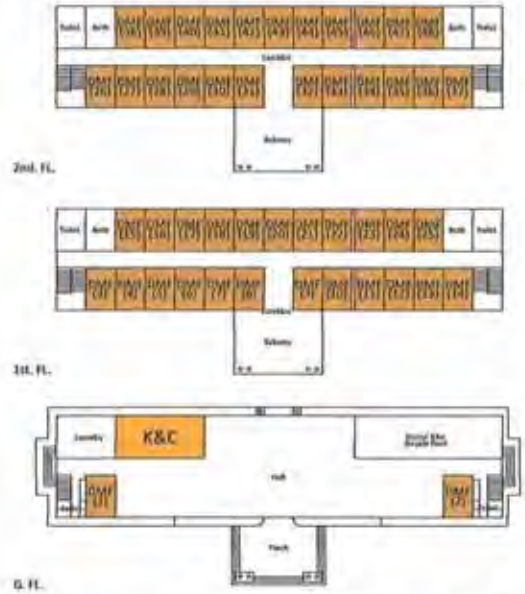
CURRENT FUNCTION	PROPOSED FUNCTION
PE-9 LIBRARY	
 LI | Library (incl. study space) | 1	TO BE DEMOLISHED BY CAMBODIA SIDE
PE-10 MEETING HALL	
 HA | Hall | 1 DRR | Dance Rehearsal Room | 1	TO BE DEMOLISHED BY JAPAN SIDE
PE-11 DORMITORY (MALE)	**PE-11 DORMITORY (MALE)**
 DMM | Dormitory Room (Male Stu.) | 8	 DMM | Dormitory Room (Male Stu.) | 8
PE-12 DORMITORY (MALE)	**PE-12 DORMITORY (MALE)**
 DMM | Dormitory Room (Male Stu.) | 8	 DMM | Dormitory Room (Male Stu.) | 8
PE-13 DORMITORY (MALE)	**PE-13 DORMITORY (MALE)**
 DMM | Dormitory Room (Male Stu.) | 1 K | Kitchen | 1	 DMM | Dormitory Room (Male Stu.) | 1 K | Kitchen | 1

EXISTING FACILITY UTILIZATION PLAN

PHNOM PENH | 4/4

CURRENT FUNCTION

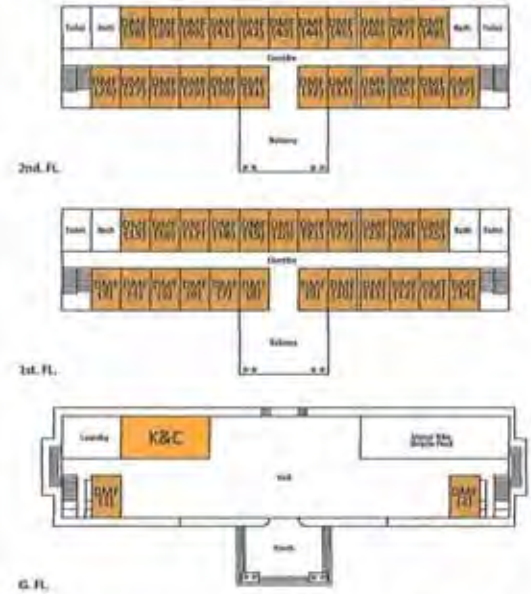
PE-14 DORMITORY (FEMALE)



DMF	Dormitory (Female Stu.)	48
K&C	Kitchen/ Canteen	1

PROPOSED FUNCTION

PE-14 DORMITORY (FEMALE)



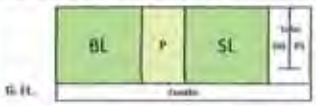
DMF	Dormitory (Female Stu.)	48
K&C	Kitchen/ Canteen	1

EXISTING FACILITY UTILIZATION PLAN

BATTAMBANG 1/4

CURRENT FUNCTION

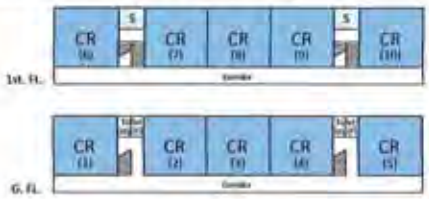
BPE-1 LABORATORY BUILDING



BL	Biology Labo.	1
SL	Science Labo.	1

P: Preparation room

BPE-2 CLASS ROOM BUILDING



CR	Classroom	10

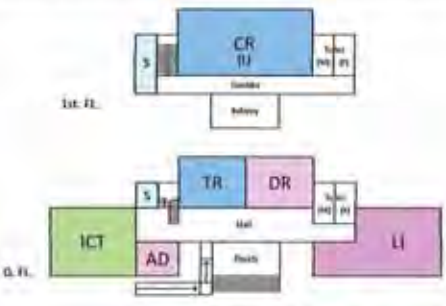
S: Storage

BPE-3 CLASS ROOM BUILDING

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-4 ADMINISTRATION BUILDING

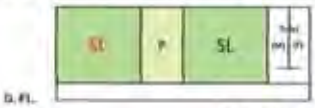


DR	Director's Room	1
TR	Teacher's Room	1
AD	Administration Room	1
ICT	ICT Labo.	1
LI	Library (incl. Study Space)	1
CR	Classroom (Large)	1

S: Storage

PROPOSED FUNCTION

BPE-1 SPECIAL ROOM BUILDING



SL	Science Labo.	2

P: Preparation room

BPE-2 ACADEMIC BUILDING

LR	Lecture Room	10

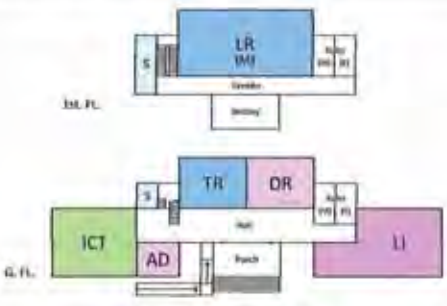
S: Storage

BPE-3 ACADEMIC BUILDING

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



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

EXISTING FACILITY UTILIZATION PLAN

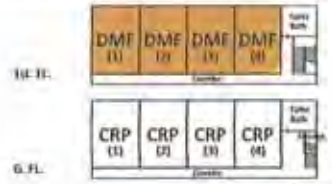
BATTAMBANG 2/4

CURRENT FUNCTION

BPE-5 DORMITORY (MALE)

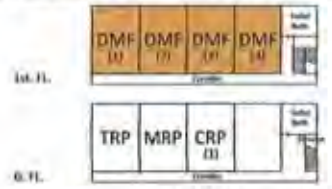
DMM	Dormitory (Male)	6

BPE-6 DORMITORY for FEMALE



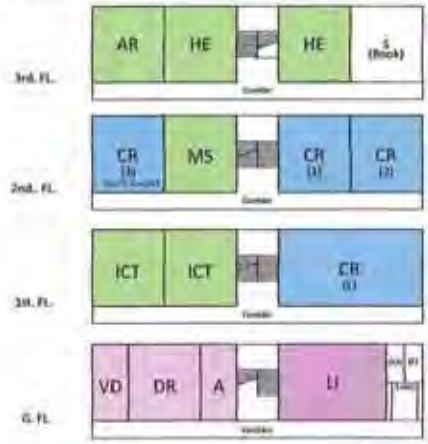
DMF	Dormitory (Female)	4
CRP	Classroom for Primary School	4

BPE-7 DORMITORY for FEMALE



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

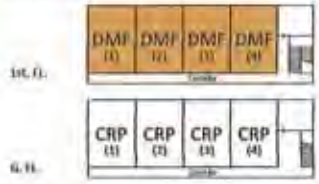


DR	Director's Room	1
VR	Vice Director's Room	1
A	Archive Room	1
LI	Library (incl. Study Space)	1
ICT	ICT Labo.	2
CR	Classroom (large)	1
CR	Classroom	5
MS	Music Room	1
AR	Art Room	1
HE	Home Economics Room	2

PROPOSED FUNCTION

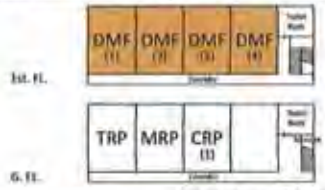
TO BE DEMOLISHED
BY CAMBODIA SIDE

BPE-6 DORMITORY (FEMALE)& PRIMARY SCHOOL



DMF	Dormitory (Female)	4
CRP	Classroom for Primary School	4

BPE-7 DORMITORY (FEMALE)& PRIMARY SCHOOL



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

TO BE DEMOLISHED
BY JAPAN SIDE

EXISTING FACILITY UTILIZATION PLAN

BATTAMBANG 3/4

CURRENT FUNCTION

BRE-2 ADMINISTRATION BUILDING

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

S: Storage

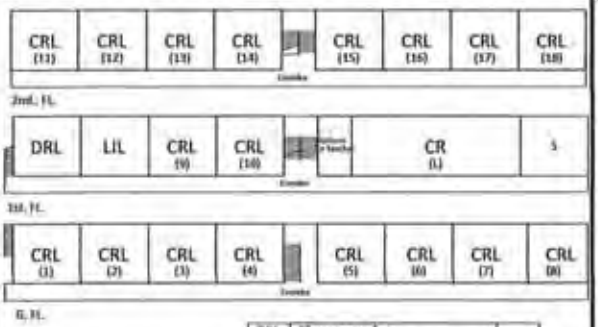
BRE-3 CLASS ROOM BUILDING

CHL	Chemistry Labo.	1
CR	Class room	9

BRE-4 CLASS ROOM BUILDING

CR	Classroom	10

BRE-5 LOWER SECONDARY SCHOOL BUILDING



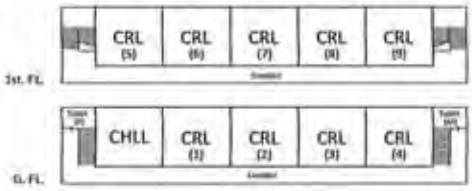
CRL	Classroom for Lower Secondary School	18
DRL	Director's room for Lower Secondary School	1
LIL	Library for Lower Secondary School	1
CR	Classroom (Large)	1

S: Storage

PROPOSED FUNCTION

NOT CONSIDERED IN THE NEW TEC

BRE-3 CLASS ROOM FOR LOWER SEC. SCHOOL



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

BRE-4 ACADEMIC BUILDING

LR	Lecture Room	10

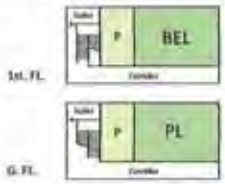
TO BE DEMOLISHED BY JAPAN SIDE

EXISTING FACILITY UTILIZATION PLAN

BATTAMBANG 4/4

CURRENT FUNCTION

BRE-6 LABORATORY BUILDING



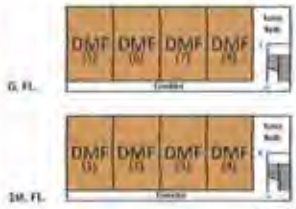
PL	Physics Labo.	1
BEL	Biology/Earth-Science Labo.	1

P: Preparation room

BRE-7 MEETING HALL

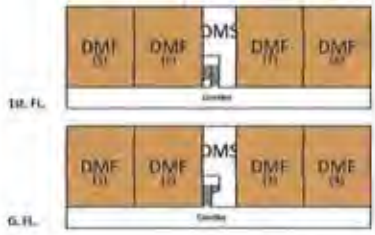
HA	Hall	1

BRE-8 DORMITORY (FEMALE)



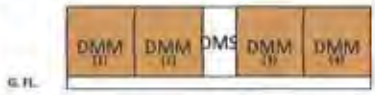
DMF	Dormitory (Female Students)	8

BRE-9 DORMITORY for FEMALE



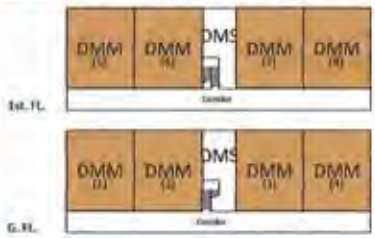
DMF	Dormitory (Female Students)	8
DMS	Dormitory (School Staff)	2

BRE-10 DORMITORY for MALE



DMF	Dormitory (Male Students)	4
DMS	Dormitory (School Staff)	1

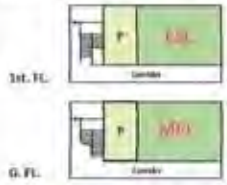
BRE-11 DORMITORY for MALE



DMF	Dormitory (Male Students)	8
DMS	Dormitory (School Staff)	2

PROPOSED FUNCTION

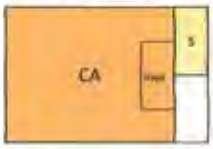
BRE-6 SPECIAL ROOM BUILDING



MPL	Math/Physics Labo.	1
ESL	Earth-Science Labo.	1

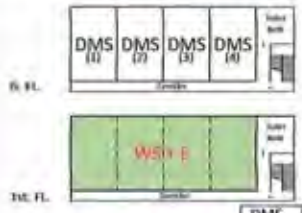
P: Preparation room

BRE-7 CAFETERIA



CA	Cafeteria	1

BRE-8 DORMITORY (SCHOOL STAFF)

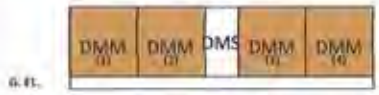


DMS	Dormitory (School Staff)	4
WS+E	Workshop + Equipment Rm	1

BRE-9 DORMITORY for FEMALE

TO BE DEMOLISHED BY CAMBODIA SIDE

BRE-10 DORMITORY for MALE

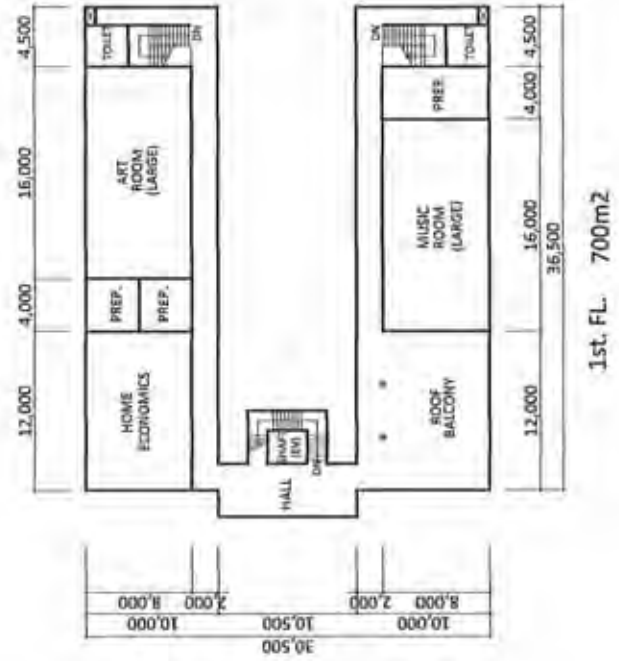


DMF	Dormitory (Male Students)	4
DMS	Dormitory (School Staff)	1

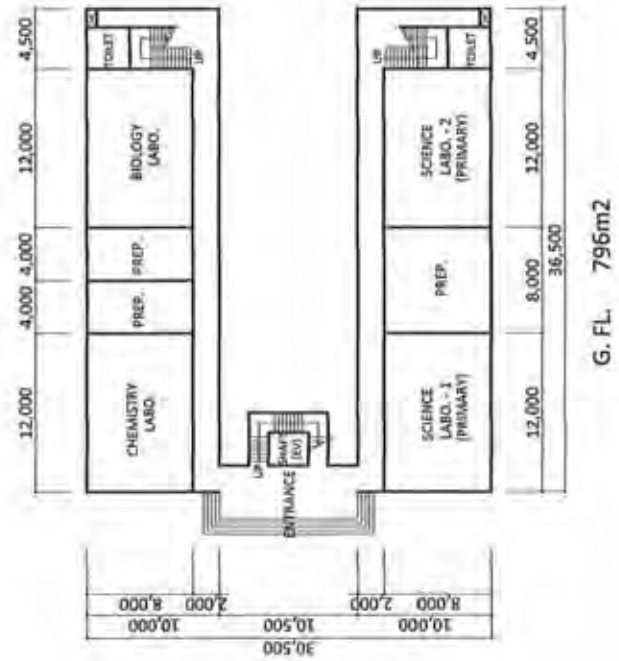
BRE-11 DORMITORY for MALE

TO BE DEMOLISHED BY JAPAN SIDE

PN-1 : SPECIAL ROOM BLOCK



1st. FL. 700m2



G. FL. 796m2

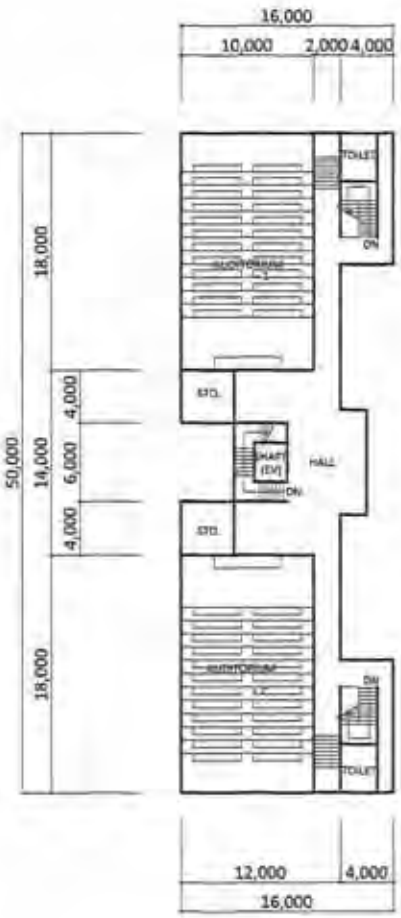
PHNOM PENH TEC

NEW BUILDING - 01 A4 1:500 1/4

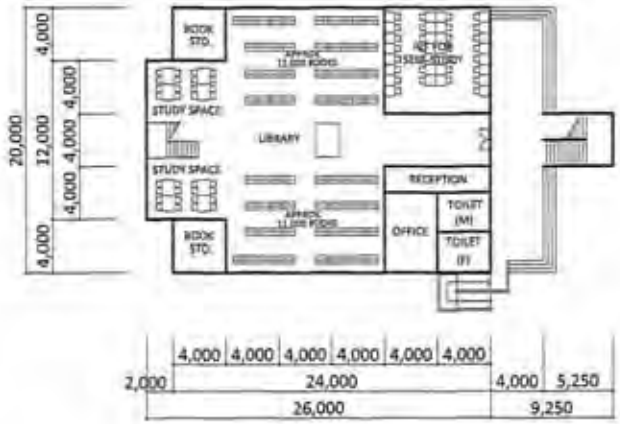
PN-2 : ADMINISTRATION + ACADEMIC BLOCK (AUDITORIUM)

G. FL. 628 m2

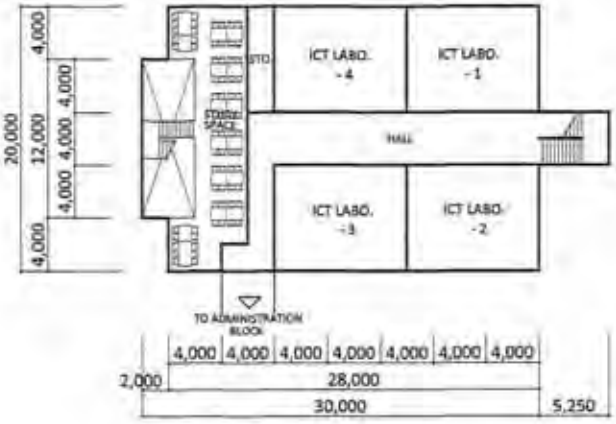
1st. FL. 628 m2



2nd. FL. 672 m2

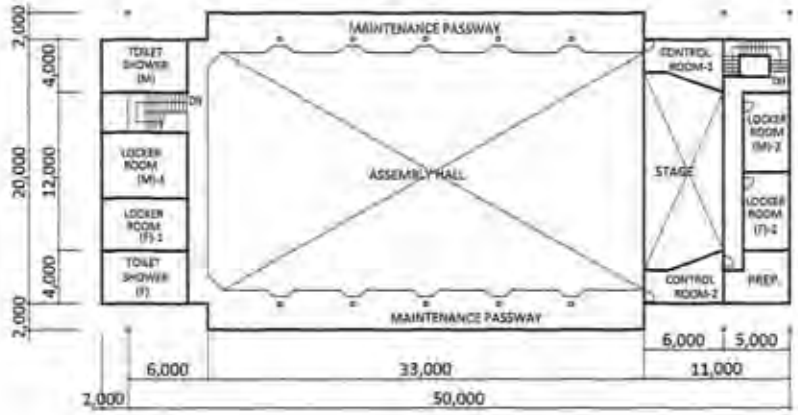


G. FL. 605 m2

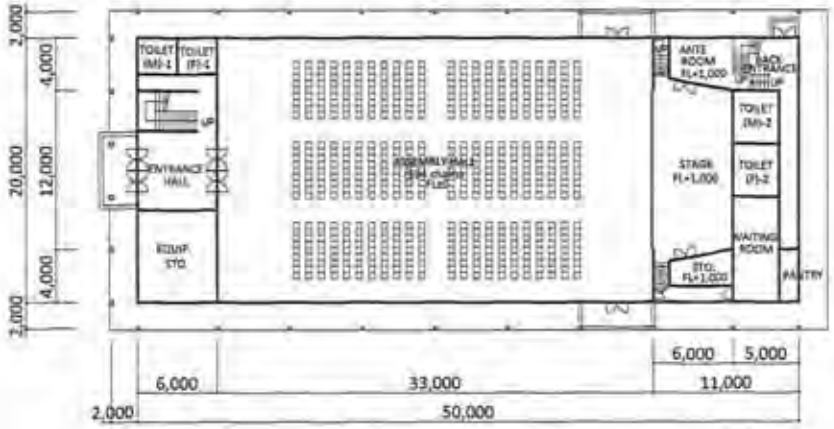


1st. FL. 568 m2

PN-4 : ASSEMBLY HALL



1st FL. 297 m2



G. FL. 1,000 m2

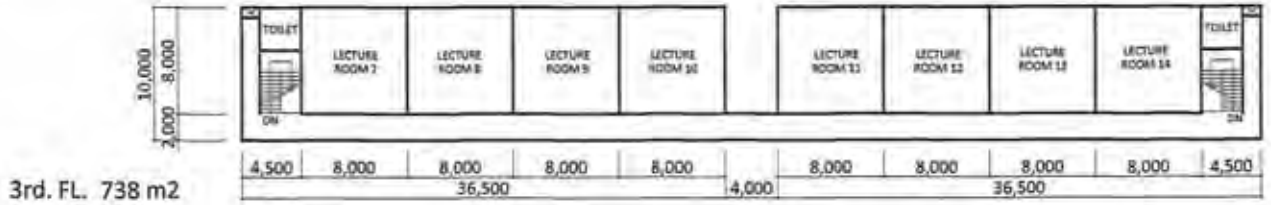
FLOOR AREA CALCULATION

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

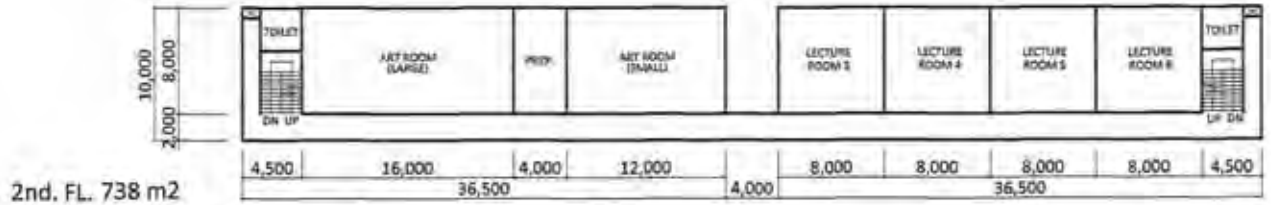
PHNOM PENH TEC

NEW BUILDING - 04 A4 1:500 4 / 4

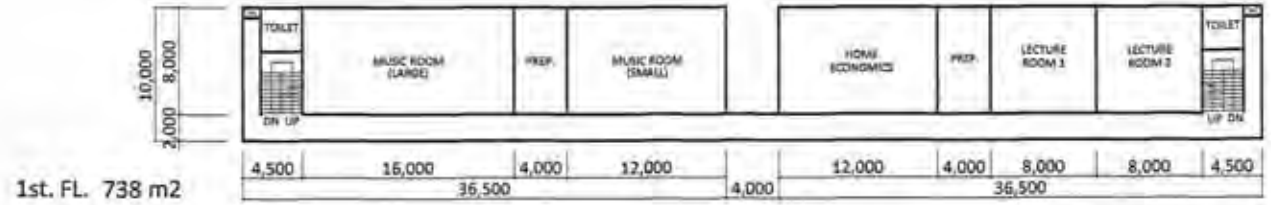
BRN-1 : SPECIAL ROOM & LECTURE ROOM BLOCK



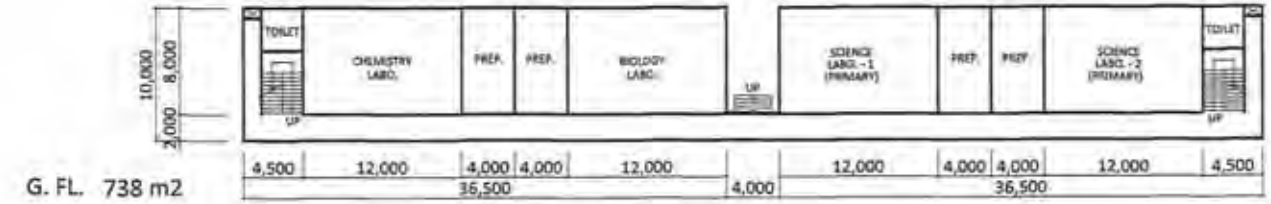
3rd. FL. 738 m2



2nd. FL. 738 m2



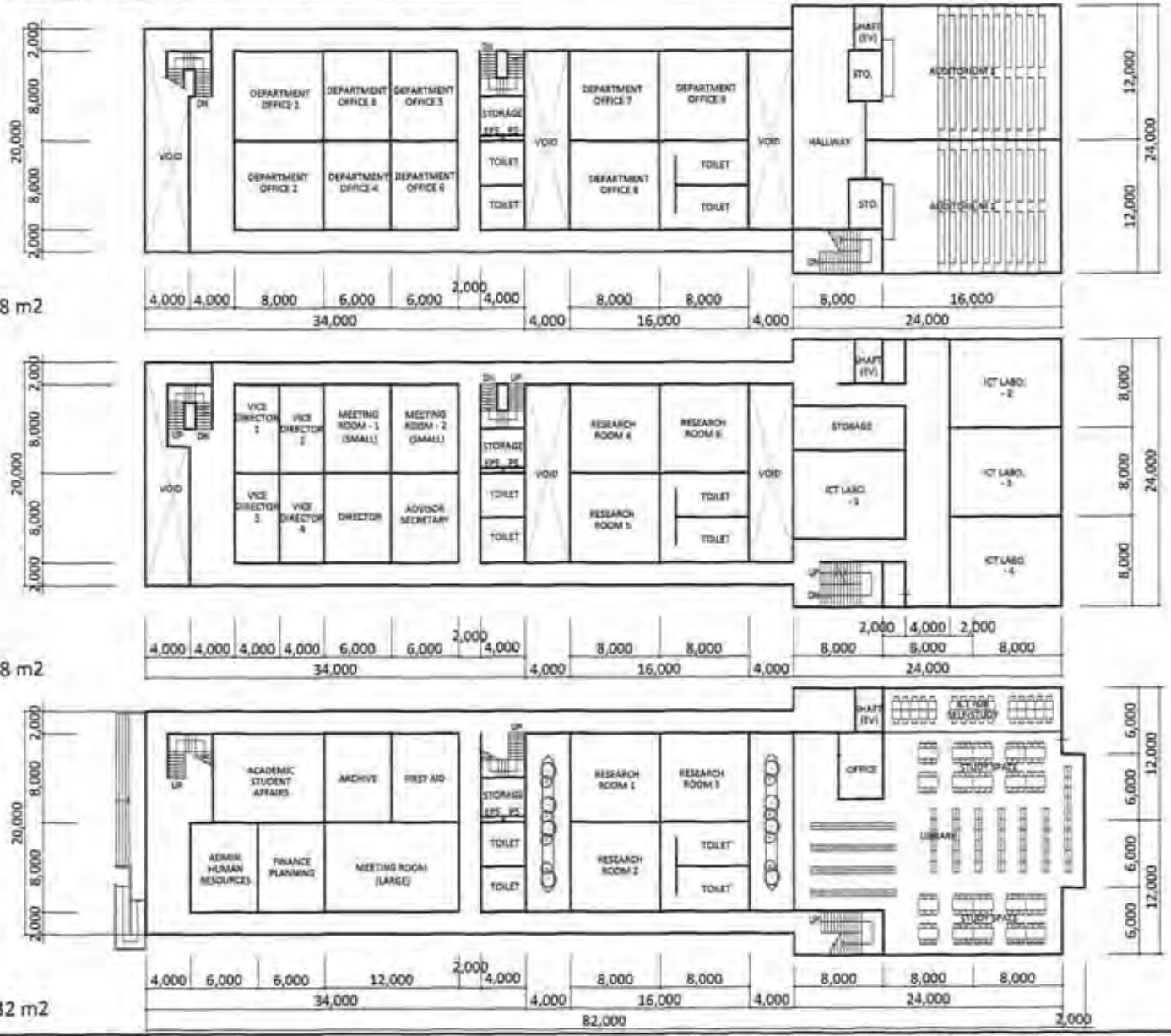
1st. FL. 738 m2



G. FL. 738 m2

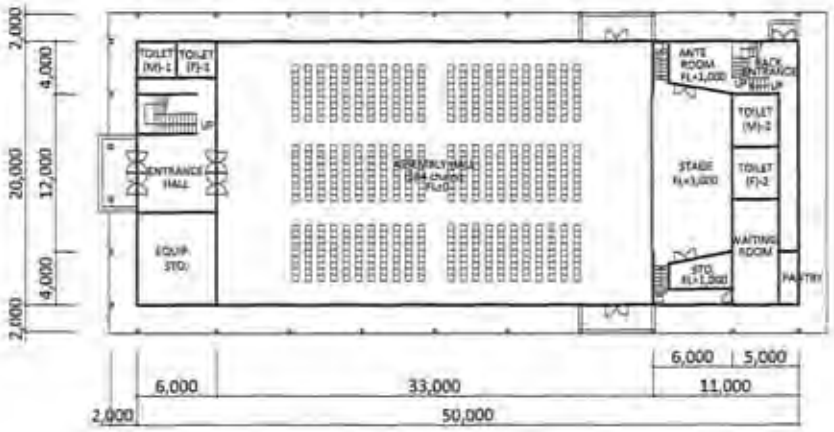
BATTAMBANG TEC | NEW BUILDING - STUDY A (MAX. COMP.) | A4 1:500 | 1 / 3

BRN-2 : ADMINISTRATION + ACADEMIC BLOCK + LIBRARY

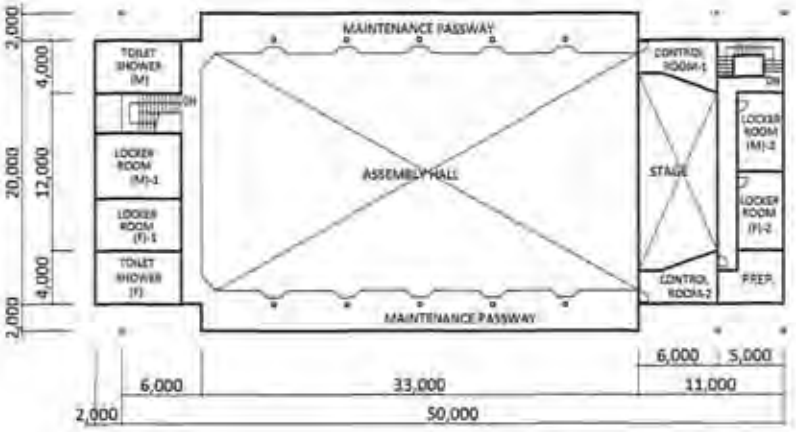


BATTAMBANG TEC | NEW BUILDING - STUDY A (MAX. COMP.) | A4 1:500 | 2 / 3

BRN-3 : ASSEMBLY HALL

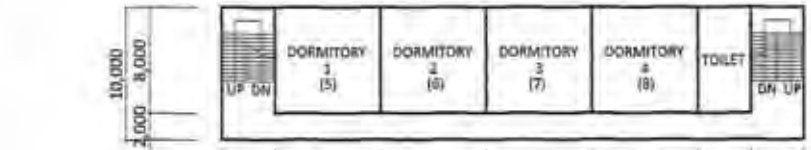


G. FL. 1,000 m2

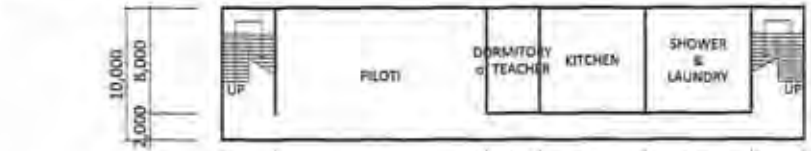


1st FL. 297 m2

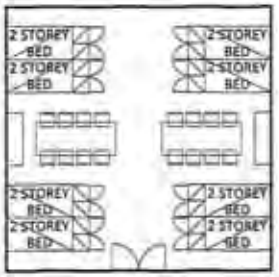
BRN-4, -5 : DORMITORY FEMALE & DORMITORY MALE



2nd. FL.
1st. FL. 440 m2



G. FL. 280 m2



TYPICAL PLAN
16 PERSON PER ROOM

FLOOR AREA CALCULATION

SPECIAL ROOM + LECTURE ROOM	G.FL.	738 m2
	1st.FL. 3rd.FL.	738 m2 x 3
	TOTAL	2,952 m2
ADMINISTRATION + ACADEMIC BLOCK + LIBRARY	G.FL.	1,632 m2
	1st.FL.	1,608 m2
	2nd.FL.	1,608 m2
	TOTAL	4,848 m2
ASSEMBLY HALL	G.FL.	1,000 m2
	1st.FL.	297 m2
	TOTAL	1,297 m2
DORMITORY FEMALE & DORMITORY MALE (TWO BUILDINGS)	G.FL.	280m2 x 2
	1st.FL.	440m2 x 2
	2nd.FL.	440m2 x 2
	TOTAL	2,320 m2
GRAND TOTAL :		11,417 m2

BATTAMBANG TEC | NEW BUILDING - STUDY A (MAX. COMP.) | A4 1:500 | 3 / 3

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	Skelton 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

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
Worshop 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

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

（３）テクニカルノート No.3

（2017 年 6 月 14 日署名）

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	Hisafumi MICHIKAWA
Secretary of State	Chief Consultant
Ministry of Education, Youth and Sport	Preparatory Survey Team
Royal Government of Cambodia	Consortium of Mohri, Architect & Associates, Inc.
Kingdom of Cambodia	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 TEC[1] 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 PTTC[2] 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 CMAC[3] 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 RTTC[4] 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

Appendix-1 Proposed Temporary Plan for Phnom Penh TEC

① FULL CONSTRUCTION PHASE
Scale: 1/1400

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

EXISTING BUILDING UTILIZED FOR TEC	
PE-1	SPECIAL ROOM BLOCK
PE-2~6	ACADEMIC BLOCK
PE-7	SPECIAL ROOM BLOCK
PE-8	ACADEMIC BLOCK
PE-11~13	DORMITORY (MALE STUDENTS)
PE-14	DORMITORY (FEMALE STUDENTS)
PE-15,16	CANTEEN
PE-17	TOILET

EXISTING BUILDING TO BE DEMOLISHED BY THE PROJECT
PE-10
BUILDING NOT TO BE UTILIZED FOR TEC
PE-9

SITE MANAGEMENT LAYOUT PLAN DESCRIPTION		
NO	DESCRIPTION	SIZE (IN METER)
1	WORK SHOP	15 X 30
2	REBAR WORKSHOP	[illegible]
3	REBAR STOCK YARD	15 X 25
4	PARKING AREA	
5	TOILET & SHOWER ROOM	4 X 6
6	WORKER'S DORMITORY	6 X 15
7	GUARD HOUSE	3 X 3
8	SUB CON. OFFICE & CANTEEN	15 X 20
9	WAREHOUSE	10 X 20
10	TOILET	1.5 X 1.5
11	WORK SHOP	10 X 20
12	STOCK YARD	15 X 20
13	SHUTTER GATE W= 4m	[illegible]
14	WATER RESERVOIR TANK [illegible]	
15	STOCK YARD	6 X 10
16	SHEET GATE FOR STUDENT	
17	GUARD MAN BOX	

LEGEND

- TEMPORARY FENCE
- TEMPORARY ROAD
- ELECTRICAL POLE
- CONCRETE PUMPING TRUCK

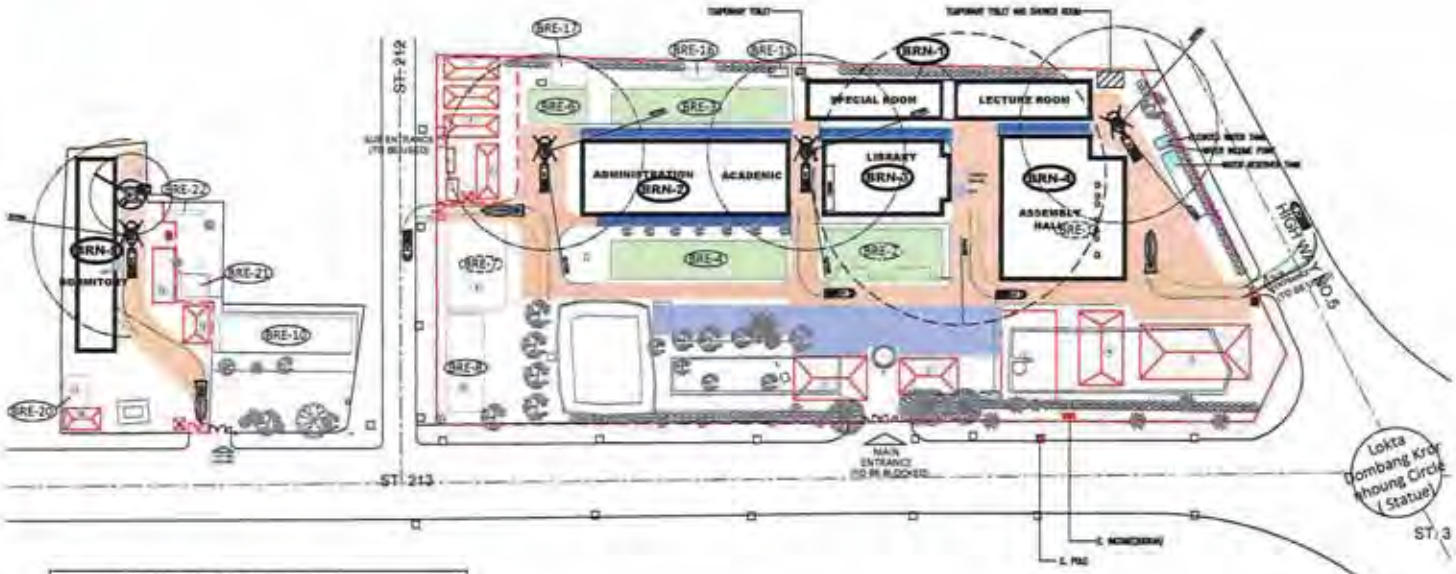
② POLE GATE DETAIL
Scale: 1/100

Appendix-2 Proposed Temporary Plan for Battambang TEC

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



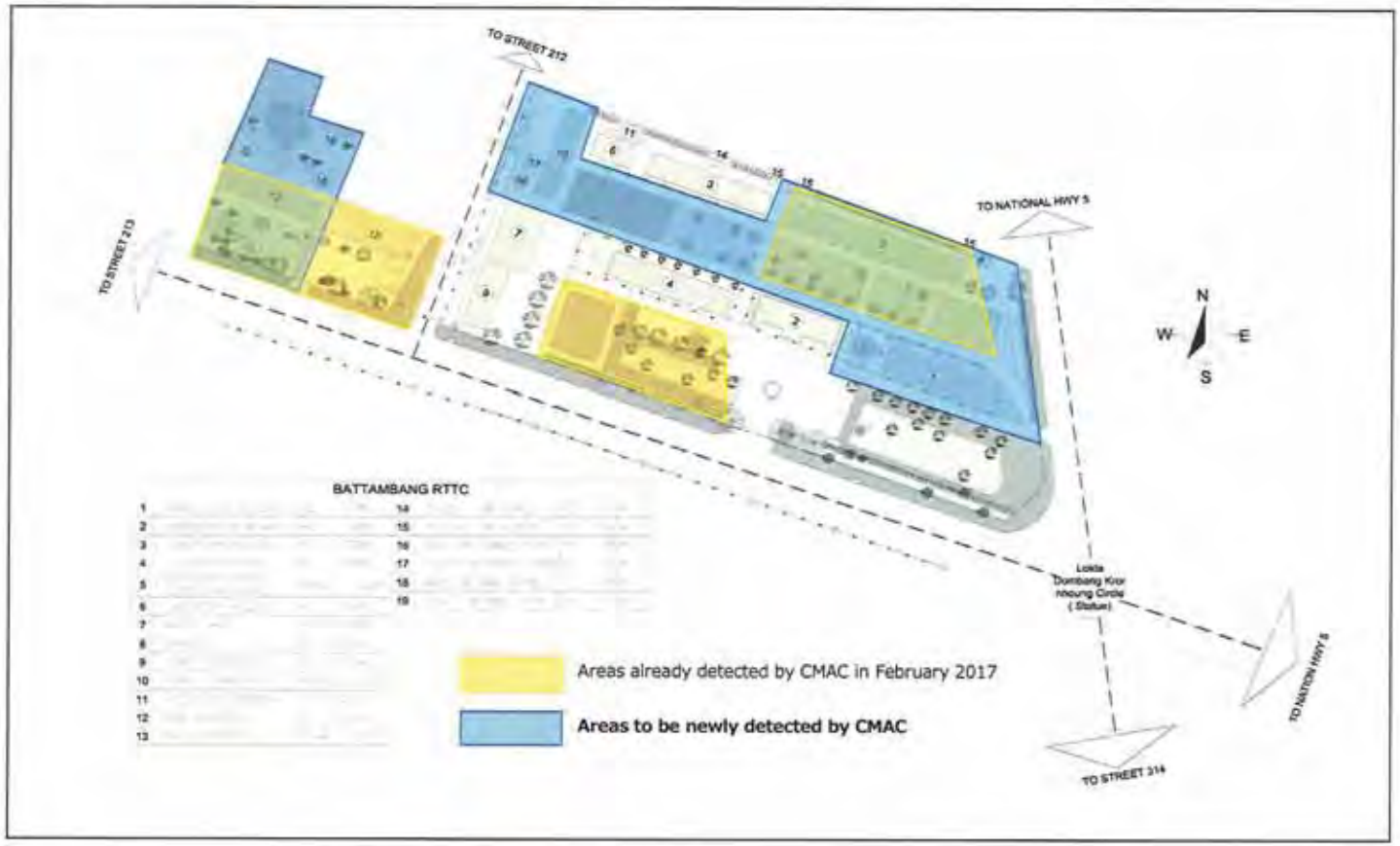
SITE MANAGEMENT LAYOUT PLAN DESCRIPTION		
NO	DESCRIPTION	SIZE (IN METERS)
1	WORK SHOP	12 X 20
2	R.BAR SHOP	10 X 16
3	R.BAR STOCK YARD	15 X 25
4	GENERAL WAREHOUSE	12 X 20
5	SITE OFFICE FOR CONSULTANT, GENERAL CONTROLLER, MEETING ROOM, STORAGE & TOILET	15 X 30
6	TOILETE & SHOW ROOM	4 X 6
7	WORKERS DOMITORY	8 X 15
8	GUARD HOUSE	3 X 3
9	SUB CON. OFFICE & CANTEEN(BRE-7)	16 X 24
10	WAREHOUSE	8 X 12
11	SITE OFFICE (EXISTING BLD)	8 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 26

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

Areas to be detected by CMAC for Battambang TEC



Appendix-4 Tentative Workplan

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				

資料５．　参考資料

資料5. 参考資料

No.	名称	形態	ｵﾘｼﾞﾅﾙ/ｺﾋﾟｰ	発行機関	発行年
1	Sub-decree No. 72: Sub-decree on Environmental Impact Assessment Process	データ	コピー	カンボジア環境省	1999
2	Education Statistics and Indicators 2007/08-2016/17	データ	コピー	カンボジア教育・青年・スポーツ省	-
3	Rectangular Strategy for Growth, Employment, Equity and Efficiency: Phase II （2008-2013）	データ	コピー	カンボジア政府	2008
4	Rectangular Strategy for Growth, Employment, Equity and Efficiency: Phase III （2014-2018）	データ	コピー	カンボジア政府	2013
5	Education Strategic Plan: 2014-2018	データ	コピー	カンボジア教育・青年・スポーツ省	2014
6	Mid-term review of the education sector strategic plan for 2014-2018	データ	コピー	カンボジア教育・青年・スポーツ省	2014
7	National Strategic Development Plan: 2014-2018, for growth, employment, equity and efficiency to reach upper-middle income country	データ	コピー	カンボジア計画省	2014
8	Educating the Next Generation : Improving Teacher Quality in Cambodia	データ	コピー	Tandon Prateek and Tsuyoshi Fukao (World Bank)	2015
9	Teacher Policy Action Plan：TPAP	データ	コピー	カンボジア教育・青年・スポーツ省	2015
10	Budget Backed Without Support (November 23, 2016)	データ	Website	Khmer Times	2016
11	Cambodia Economic Update; Improving Macroeconomic and Financial Resilience	データ	コピー	World Bank	2016
12	Human Development for Everyone; Briefing note for countries on the 2016 Human Development Report, “Cambodia”	データ	コピー	UNDP	2016
13	Teacher Education Provider Standard：TEPS	データ	コピー	カンボジア教育・青年・スポーツ省	2016
14	Teacher Education Provider Standards	データ	コピー	カンボジア教育・青年・スポーツ省	2016
15	Cambodia - Submission (2018-2021): For the Education Sector Programme Implementation Grant 2018 – 2021 from the Global Partnership for Education (Draft)	データ	コピー	UNESCO, UNICEF	2017
16	CIA WORLD FACTBOOK 2017	データ	コピー	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	データ	コピー	カンボジア教育・青年・スポーツ省	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	データ	コピー	カンボジア教育・青年・スポーツ省	2017
19	カンボジア王国憲法（和訳）	データ	コピー	カンボジア王国（日本国法務省訳）	1999（改訂年）
20	次期国立大学法人等施設整備 5 か年計画策定に向けた最終報告（今後の国立大学法人等施設の整備充実に関する調査研究協力者会議）	データ	コピー	文部科学省	2016
21	カンボジア国産業人材育成基盤形成に資する教育セクター情報収集・確認調査　ファイナル・レポート	図書	オリジナル	JICA	2012
22	公立大学法人宮城大学施設整備計画	データ	コピー	公立大学法人宮城大学	2010

資料６．　地盤調査結果

６－a.　地盤調査結果（プノンペンTECサイト）

６－b.　地盤調査結果（バッタンバンTECサイト）

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

PHNOM PENH RTTC & PTTC : EXISTING LAYOUT PLAN

S = 1:2000 (A3)

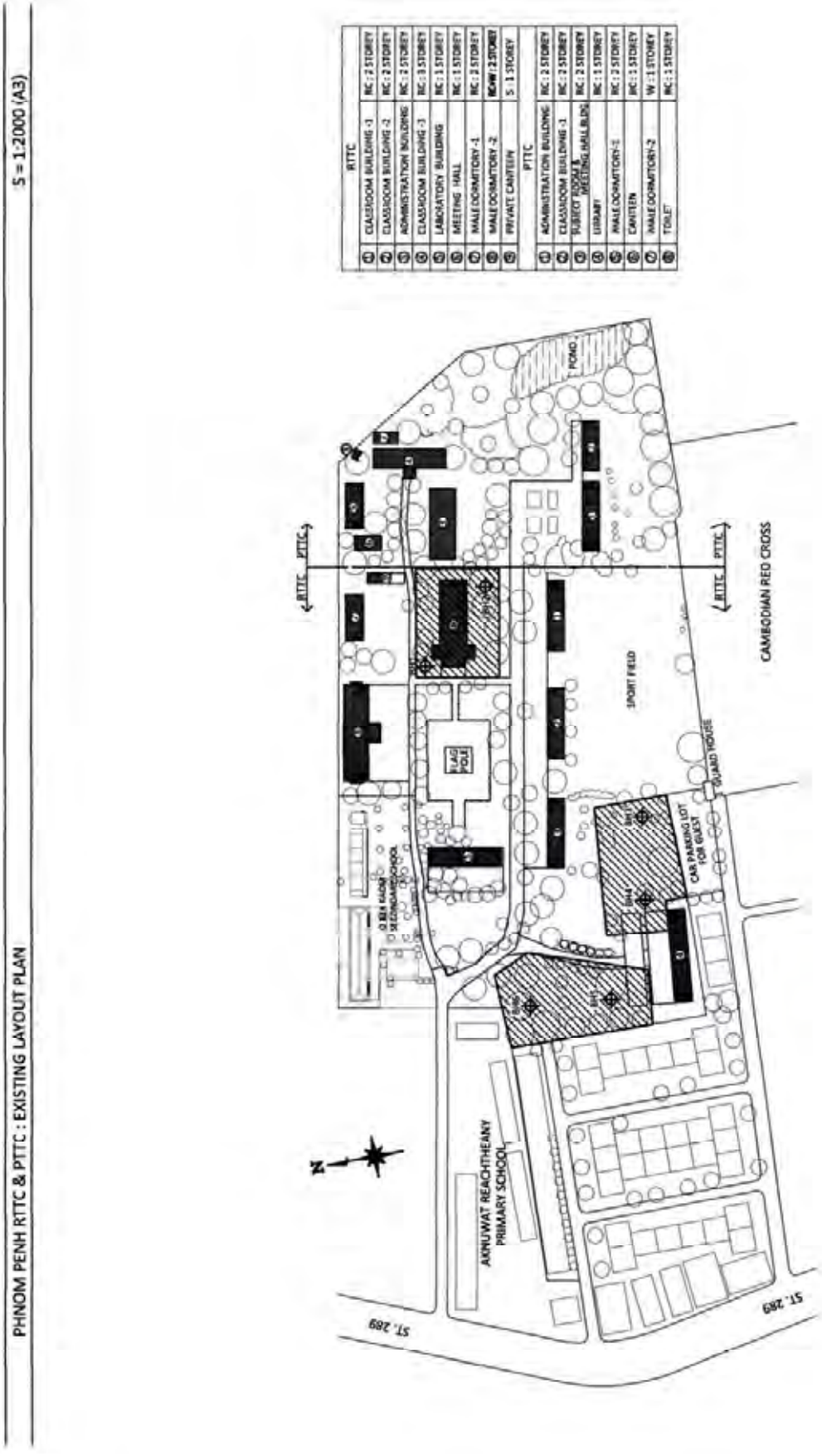


Figure A2.1: BORING LOG AND STANDARD PENETRATION TEST RESULTS

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

Depth (m)	LAYER: Bottom elevation (m) / Bottom depth (m)	LAYER: Thickness of layer (m)	LAYER: Layer No.	Soil sample symbol	Soil description and classification	SAMPLE TYPE	N value (N30cm)	SPT Graph
0	0.0				Ground surface			
0	0.0							
1						UD1 (0.8 - 1.0m)	02/04/04 (08)	8
2	$					UD2 (1.8 - 2.0m)	05/11/16 (27)	27
3						UD3 (2.8 - 3.0m)	08/12/15 (27)	27
4						UD4 (3.8 - 4.0m)	08/12/16 (28)	28
5						UD5 (4.8 - 5.0m)	13/14/18 (32)	32
6		12.5	1		**(CL)s** Stiff to hard lean CLAY with sand, yellowish grey - dark grey	UD6 (5.8 - 6.0m)	03/07/07 (14)	14
7						UD7 (6.8 - 7.0m)	04/07/07 (14)	14
8						UD8 (7.8 - 8.0m)	04/05/07 (12)	12
9						UD9 (8.8 - 9.0m)	04/07/09 (16)	16
10						UD10 (9.8 - 10.0m)	03/06/06 (12)	12
11						UD11 (10.8 - 11.0m)	03/07/09 (16)	16
12	-12.5					UD12 (11.8 - 12.0m)	04/09/09 (18)	18
12	12.5					UD13 (12.8 - 13.0m)	15/30/20 (50/24cm)	>50
13						UD14 (13.8 - 14.0m)	16/19/20 (39)	39
14						UD15 (14.8 - 15.0m)	13/28/28 (56)	>50
15						UD16 (15.8 - 16.0m)	13/20/30 (50)	50
16						UD17 (16.8 - 17.0m)	12/23/27 (50/26cm)	>50
17						UD18 (17.8 - 18.0m)	17/21/30 (51)	>50
18						UD19 (18.8 - 19.0m)	15/30/20 (50/20cm)	>50
19		14.5	2		**(SM)** Dense to very dense silty SAND, yellowish grey - light grey	UD20 (19.8 - 20.0m)	15/38/12 (50/15cm)	>50
20						UD21 (20.8 - 21.0m)	09/18/40 (58)	>50
21						UD22 (21.8 - 22.0m)	07/16/40 (56)	>50
22						UD23 (22.8 - 23.0m)	13/19/26 (45)	45
23						UD24 (23.8 - 24.0m)	15/20/30 (50)	50
24						UD25 (24.8 - 25.0m)	21/22/34 (56)	>50
25						UD26 (25.8 - 26.0m)	17/20/30 (50)	50
26	-27.0					UD27 (26.8 - 27.0m)	16/20/27 (47)	47
27	27.0					UD28 (27.8 - 28.0m)	25/39/11 (50/18cm)	>50
28		>3.0	3		**s(CL)** Hard sandy lean CLAY, yellowish grey	UD29 (28.8 - 29.0m)	30/40/10 (50/16cm)	>50
29	-30.0					UD30 (29.8 - 30.0m)	35/35/15 (50/17cm)	>50
30	30.0				Bottom of borehole at depth of 30.0m			
31								

Undisturbed / Disturbed / Core run / SPT

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

※ボーリング調査時（乾季・2017年2月）に記録された水位は、ボーリング掘削に使用した水の影響を受けている。雨季（2017年9月）に再測定した地下水位は、地盤面から3.5mであった。

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: Bottom elevation (m) / Bottom depth (m)	LAYER: Thickness of layer (m)	LAYER: Layer No.	Soil sample symbol	Soil description and classification	SAMPLE TYPE	N value (N30cm)	SPT Graph
0	0.0				Ground surface			
0–8	0.0 / $ / -8.5	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)	8
						UD2 (1.8 - 2.0m)	03/04/06 (10)	10
						UD3 (2.8 - 3.0m)	04/08/10 (18)	18
						UD4 (3.8 - 4.0m)	07/11/12 (23)	23
						UD5 (4.8 - 5.0m)	08/11/14 (25)	25
						UD6 (5.8 - 6.0m)	07/13/22 (35)	35
						UD7 (6.8 - 7.0m)	10/12/17 (29)	29
						UD8 (7.8 - 8.0m)	13/12/21 (33)	33
8–11	8.5 / -11.5		2		**(SM)** Medium dense to dense silty SAND, yellowish grey - light grey	UD9 (8.8 - 9.0m)	07/18/18 (36)	36
						UD10 (9.8 - 10.0m)	10/11/11 (22)	22
						UD11 (10.8 - 11.0m)	11/15/18 (33)	33
11–13	11.5 / -13.5		L		**s(CL)** Hard sandy lean CLAY, yellowish grey	UD12 (11.8 - 12.0m)	08/13/20 (33)	33
13–28	13.5 / -28.0	19.5	2		**(SM)** Dense to very dense silty SAND, yellowish grey - light grey	UD13 (12.8 - 13.0m)	12/22/30 (52)	>50
						UD14 (13.8 - 14.0m)	20/25/25 (50)	50
						UD15 (14.8 - 15.0m)	20/25/25 (50/25cm)	>50
						UD16 (15.8 - 16.0m)	17/35/15 (50/22cm)	>50
						UD17 (16.8 - 17.0m)	14/27/23 (50/26cm)	>50
						UD18 (17.8 - 18.0m)	14/24/37 (61)	>50
						UD19 (18.8 - 19.0m)	12/22/28 (50/25cm)	>50
						UD20 (19.8 - 20.0m)	17/37/13 (50/20cm)	>50
						UD21 (20.8 - 21.0m)	17/28/22 (50/23cm)	>50
						UD22 (21.8 - 22.0m)	19/27/23 (50/25cm)	>50
						UD23 (22.8 - 23.0m)	08/20/26 (46)	46
						UD24 (23.8 - 24.0m)	09/18/25 (43)	43
						UD25 (24.8 - 25.0m)	22/35/15 (50/21cm)	>50
						UD26 (25.8 - 26.0m)	20/30/20 (50/23cm)	>50
						UD27 (26.8 - 27.0m)	13/17/37 (54)	>50
						UD28 (27.8 - 28.0m)	10/21/33 (54)	>50
28–30	28.0 / -30.0	>2.0	3		**s(CL)** Hard sandy lean CLAY, yellowish grey	UD29 (28.8 - 29.0m)	25/32/18 (50/21cm)	>50
						UD30 (29.8 - 30.0m)	27/35/15 (50/20cm)	>50
30	30.0				Bottom of borehole at depth of 30.0m			

Undisturbed / Disturbed / Core run / SPT

SPT Graph: 10 20 30 40

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

Depth (m)	LAYER: Bottom elevation (m) / Bottom depth (m)	LAYER: Thickness of layer (m)	LAYER: Layer No.	Soil sample symbol	Soil description and classification	SAMPLE TYPE	SPT: N value (N30cm)	SPT: SPT Graph
0	0.0				Ground surface			
0	0.0					UD1 (0.8 - 1.0m)	02/03/05 (08)	8
1						UD2 (1.8 - 2.0m)	02/05/07 (12)	12
2						UD3 (2.8 - 3.0m)	03/05/06 (11)	11
3	$					UD4 (3.8 - 4.0m)	03/05/06 (11)	11
4						UD5 (4.8 - 5.0m)	04/06/07 (13)	13
5						UD6 (5.8 - 6.0m)	04/06/09 (15)	15
6		11.5	1		**(CL)s** Stiff to very stiff lean CLAY with sand, yellowish grey - dark grey	UD7 (6.8 - 7.0m)	05/08/11 (19)	19
7						UD8 (7.8 - 8.0m)	06/07/10 (17)	17
8						UD9 (8.8 - 9.0m)	07/08/11 (19)	19
9						UD10 (9.8 - 10.0m)	05/06/10 (16)	16
10						UD11 (10.8 - 11.0m)	05/06/10 (16)	16
11	-11.5					UD12 (11.8 - 12.0m)	05/16/16 (32)	32
11	11.5		2		**(SM)** Medium dense to dense silty SAND, yellowish grey - light grey	UD13 (12.8 - 13.0m)	08/12/17 (29)	29
12	-12.5		L			UD14 (13.8 - 14.0m)	07/23/37 (50)	50
12	12.5					UD15 (14.8 - 15.0m)	10/13/22 (35)	35
13	-13.5					UD16 (15.8 - 16.0m)	18/15/26 (41)	41
13	13.5		2		**s(CL)** Hard sandy lean CLAY, yellowish grey	UD17 (16.8 - 17.0m)	20/30/20 (50/20cm)	>50
14						UD18 (17.8 - 18.0m)	22/26/31 (57)	>50
15						UD19 (18.8 - 19.0m)	30/35/15 (50/21cm)	>50
16	-16.5					UD20 (19.8 - 20.0m)	17/29/21 (50/25cm)	>50
16	16.5				**(SM)** Dense silty SAND, yellowish grey - light grey	UD21 (20.8 - 21.0m)	29/35/15 (50/22cm)	>50
17	-17.5		L			UD22 (21.8 - 22.0m)	21/25/31 (56)	>50
17	17.5					UD23 (22.8 - 23.0m)	22/30/20 (50/23cm)	>50
18						UD24 (23.8 - 24.0m)	17/23/31 (54)	>50
19						UD25 (24.8 - 25.0m)	22/39/21 (50/27cm)	>50
20						UD26 (25.8 - 26.0m)	22/30/20 (50/24cm)	>50
21						UD27 (26.8 - 27.0m)	18/32/18 (50/21cm)	>50
22		16.0	2		**(SM)** Dense to very dense silty SAND, yellowish grey - light grey	UD28 (27.8 - 28.0m)	18/26/32 (58)	>50
23						UD29 (28.8 - 29.0m)	22/50/ (50/15cm)	>50
24						UD30 (29.8 - 30.0m)	38/50/ (50/15cm)	>50
25								
26								
27	-27.5							
27	27.5				**s(CL)** Hard sandy lean CLAY, yellowish grey			
28		>2.5	3					
29	-30.0							
30	30.0				Bottom of borehole at depth of 30.0m			
31								

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

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

BOREHOLE: **BH4**

Project Name: PHNOM PENH (RTTC & PTTC)

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

Coordinate:
X = 487 900
Y = 1 277 406

Elevation: 0.0 m
- Assumed: ☑
- Measured: ☐

Ground water:
- Water inflow # :
- Water level $: 2.0m (17/02/2017) ※

Depth of borehole: 30.0 m

Weather: Sunny

Start date: 16/02/2017

End date: 16/02/2017

Depth (m)	LAYER: Bottom elevation (m) / Bottom depth (m)	LAYER: Thickness of layer (m)	LAYER: Layer No.	Soil sample symbol	Soil description and classification	SAMPLE TYPE	SPT: N value (N30cm)	SPT: SPT Graph
0	0.0				Ground surface			
0	0.0					UD1 (0.8 - 1.0m)	00/00/01 (01)	1
1						UD2 (1.8 - 2.0m)	00/00/01 (01)	1
2	$					UD3 (2.8 - 3.0m)	00/00/01 (01)	1
3						UD4 (3.8 - 4.0m)	00/00/00 (00)	0
4						UD5 (4.8 - 5.0m)	00/00/00 (00)	0
5						UD6 (5.8 - 6.0m)	00/00/00 (00)	0
6		11.5	1		**(CL)s** Very soft to very stiff lean CLAY with sand, yellowish grey - dark grey	UD7 (6.8 - 7.0m)	01/01/02 (03)	3
7						UD8 (7.8 - 8.0m)	02/02/02 (04)	4
8						UD9 (8.8 - 9.0m)	02/02/02 (04)	4
9						UD10 (9.8 - 10.0m)	02/03/03 (06)	6
10						UD11 (10.8 - 11.0m)	05/07/09 (16)	16
11	-11.5					UD12 (11.8 - 12.0m)	05/07/10 (17)	17
12	11.5					UD13 (12.8 - 13.0m)	05/08/12 (20)	20
13	-13.5		2		**(SM)** Medium dense silty SAND, yellowish grey - light grey	UD14 (13.8 - 14.0m)	06/22/19 (41)	41
14	13.5 -14.5		L		**s(CL)** Hard sandy lean CLAY, yellowish grey	UD15 (14.8 - 15.0m)	03/11/22 (33)	33
15	14.5					UD16 (15.8 - 16.0m)	11/22/30 (52)	>50
16						UD17 (16.8 - 17.0m)	10/21/25 (46)	46
17						UD18 (17.8 - 18.0m)	12/25/27 (52)	>50
18						UD19 (18.8 - 19.0m)	17/29/35 (64)	>50
19		16.0	2		**(SM)** Dense to very dense silty SAND, yellowish grey - light grey	UD20 (19.8 - 20.0m)	18/30/35 (65)	>50
20						UD21 (20.8 - 21.0m)	17/29/32 (61)	>50
21						UD22 (21.8 - 22.0m)	17/31/35 (66)	>50
22						UD23 (22.8 - 23.0m)	20/29/21 (50/24cm)	>50
23						UD24 (23.8 - 24.0m)	22/32/18 (50/23cm)	>50
24						UD25 (24.8 - 25.0m)	21/30/20 (50/26cm)	>50
25						UD26 (25.8 - 26.0m)	17/25/29 (54)	>50
26						UD27 (26.8 - 27.0m)	16/25/25 (50/25cm)	>50
27	-27.5					UD28 (27.8 - 28.0m)	09/17/17 (34)	34
28	27.5					UD29 (28.8 - 29.0m)	27/35/15 (50/22cm)	>50
29		>2.5	3		**s(CL)** Hard sandy lean CLAY, yellowish grey	UD30 (29.8 - 30.0m)	17/30/20 (50/23cm)	>50
30	-30.0							
31	30.0				Bottom of borehole at depth of 30.0m			

SAMPLE TYPE: Undisturbed, Disturbed, Core run, SPT

SPT Graph: 10 20 30 40

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

Depth (m)	LAYER: Bottom elevation (m) / Bottom depth (m)	LAYER: Thickness of layer (m)	LAYER: Layer No.	Soil sample symbol	Soil description and classification	SAMPLE TYPE	SPT: N value (N30cm)	SPT: SPT Graph
0	0.0				Ground surface			
0	0.0					UD1 (0.8 - 1.0m)	02/03/06 (09)	9
1						UD2 (1.8 - 2.0m)	02/04/06 (10)	10
2						UD3 (2.8 - 3.0m)	03/05/13 (18)	18
3	$					UD4 (3.8 - 4.0m)	03/06/08 (14)	14
4						UD5 (4.8 - 5.0m)	05/08/09 (17)	17
5						UD6 (5.8 - 6.0m)	04/06/09 (15)	15
6		11.6	1		**(CL)s** Firm to very stiff lean CLAY with sand, yellowish grey - dark grey	UD7 (6.8 - 7.0m)	02/03/04 (07)	7
7						UD8 (7.8 - 8.0m)	05/06/08 (14)	14
8						UD9 (8.8 - 9.0m)	07/11/12 (23)	23
9						UD10 (9.8 - 10.0m)	08/11/12 (23)	23
10						UD11 (10.8 - 11.0m)	07/10/11 (21)	21
11	-11.6					UD12 (11.8 - 12.0m)	09/20/25 (45)	45
12	11.6					UD13 (12.8 - 13.0m)	08/18/22 (40)	40
13			2		**(SM)** Dense to very dense silty SAND, yellowish grey - light grey	UD14 (13.8 - 14.0m)	18/25/27 (52)	>50
14						UD15 (14.8 - 15.0m)	19/38/12 (50/22cm)	>50
15	-15.5					UD16 (15.8 - 16.0m)	08/12/19 (31)	31
16	15.5 / -16.5		L		**s(CL)** Hard sandy lean CLAY, yellowish grey	UD17 (16.8 - 17.0m)	09/19/25 (44)	44
17	16.5					UD18 (17.8 - 18.0m)	13/27/34 (51)	>50
18						UD19 (18.8 - 19.0m)	09/17/23 (40)	40
19						UD20 (19.8 - 20.0m)	13/25/30 (55)	>50
20		16.0				UD21 (20.8 - 21.0m)	18/31/19 (50/23cm)	>50
21						UD22 (21.8 - 22.0m)	20/30/20 (50/22cm)	>50
22			2		**(SM)** Dense to very dense silty SAND, yellowish grey - light grey	UD23 (22.8 - 23.0m)	22/33/17 (50/22cm)	>50
23						UD24 (23.8 - 24.0m)	23/37/13 (50/20cm)	>50
24						UD25 (24.8 - 25.0m)	25/25/36 (61)	>50
25						UD26 (25.8 - 26.0m)	30/42/08 (50/16cm)	>50
26						UD27 (26.8 - 27.0m)	26/35/15 (50/17cm)	>50
27	-27.6					UD28 (27.8 - 28.0m)	09/15/19 (34)	34
28	27.6					UD29 (28.8 - 29.0m)	20/35/15 (50/22cm)	>50
29	-30.0	>2.4	3		**s(CL)** Hard sandy lean CLAY, yellowish grey	UD30 (29.8 - 30.0m)	25/37/13 (50/21cm)	>50
30	30.0				Bottom of borehole at depth of 30.0m			
31								

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

Depth (m)	LAYER: Bottom elevation (m) / Bottom depth (m)	LAYER: Thickness of layer (m)	LAYER: Layer No.	Soil sample symbol	Soil description and classification	SAMPLE TYPE	N value (N30cm)	SPT Graph
0	0.0				Ground surface			
0–11.6	0.0 / $	11.6	1		**(CL)s** Stiff to hard lean CLAY with sand, yellowish grey - dark grey	UD1 (0.8 - 1.0m)	04/04/05 (09)	9
						UD2 (1.8 - 2.0m)	02/05/05 (10)	10
						UD3 (2.8 - 3.0m)	03/05/05 (10)	10
						UD4 (3.8 - 4.0m)	04/06/08 (14)	14
						UD5 (4.8 - 5.0m)	05/10/15 (25)	25
						UD6 (5.8 - 6.0m)	05/07/10 (17)	17
						UD7 (6.8 - 7.0m)	02/04/10 (14)	14
						UD8 (7.8 - 8.0m)	10/17/23 (40)	40
						UD9 (8.8 - 9.0m)	05/10/13 (23)	23
						UD10 (9.8 - 10.0m)	03/05/07 (12)	12
						UD11 (10.8 - 11.0m)	10/20/20 (40)	40
-11.6								
11.6–14.5	11.6		2		**(SM)** Dense to very dense silty SAND, yellowish grey - light grey	UD12 (11.8 - 12.0m)	09/20/20 (40)	40
						UD13 (12.8 - 13.0m)	13/25/25 (50/25cm)	>50
-14.5						UD14 (13.8 - 14.0m)	40/55 (55/15cm)	>50
14.5–15.5	14.5		L		**s(CL)** Hard sandy lean CLAY, yellowish grey	UD15 (14.8 - 15.0m)	10/18/20 (38)	38
-15.5								
15.5–27.7	15.5	16.1	2		**(SM)** Dense to very dense silty SAND, yellowish grey - light grey	UD16 (15.8 - 16.0m)	15/30/20 (50/23cm)	>50
						UD17 (16.8 - 17.0m)	20/40/10 (50/17cm)	>50
						UD18 (17.8 - 18.0m)	12/37/13 (50/18cm)	>50
						UD19 (18.8 - 19.0m)	17/39/11 (50/19cm)	>50
						UD20 (19.8 - 20.0m)	20/33/17 (50/21cm)	>50
						UD21 (20.8 - 21.0m)	15/30/20 (50/26cm)	>50
						UD22 (21.8 - 22.0m)	20/40/10 (50/16cm)	>50
						UD23 (22.8 - 23.0m)	23/40/10 (50/16cm)	>50
						UD24 (23.8 - 24.0m)	10/15/40 (55)	>50
						UD25 (24.8 - 25.0m)	20/32/18 (50/24cm)	>50
						UD26 (25.8 - 26.0m)	40/50 (50/15cm)	>50
-27.7						UD27 (26.8 - 27.0m)	25/30/20 (50/18cm)	>50
27.7–30.0	27.7	>2.3	3		**s(CL)** Hard sandy lean CLAY, yellowish grey	UD28 (27.8 - 28.0m)	16/24/26 (50/24cm)	>50
						UD29 (28.8 - 29.0m)	25/30/20 (50/17cm)	>50
-30.0						UD30 (29.8 - 30.0m)	25/32/18 (50/20cm)	>50
30.0					Bottom of borehole at depth of 30.0m			

SAMPLE TYPE: Undisturbed, Disturbed, Core run, SPT

SPT Graph: 10 20 30 40

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

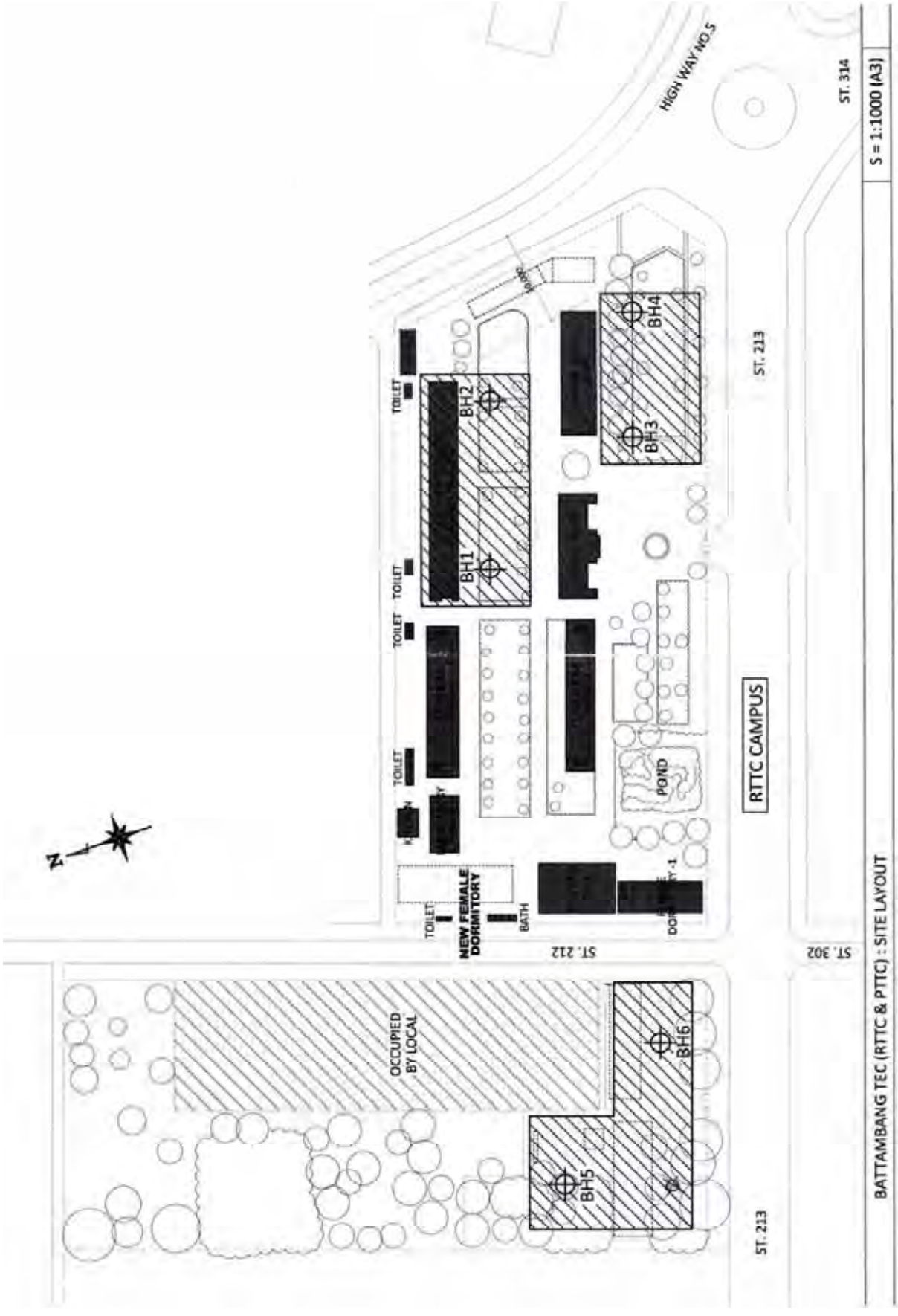

Figure A2.1: BORING LOG AND STANDARD PENETRATION TEST RESULTS

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

Depth (m)	LAYER: Bottom elevation (m) / Bottom depth (m)	LAYER: Thickness of layer (m)	LAYER: Layer No.	Soil sample symbol	Soil description and classification	SAMPLE TYPE	SPT: N value (N30cm)	SPT: SPT Graph
0	0.0				Ground surface			
0	0.0 $	8.6	1		**(CH)** Firm to stiff fat CLAY, brown - yellowish brown	UD1 (0.8 - 1.0m)	02/03/04 (07)	7
1						UD2 (1.8 - 2.0m)	04/04/05 (09)	9
2						UD3 (2.8 - 3.0m)	02/04/05 (09)	9
3						UD4 (3.8 - 4.0m)	03/05/07 (12)	12
4						UD5 (4.8 - 5.0m)	04/06/06 (12)	12
5						UD6 (5.8 - 6.0m)	03/04/06 (10)	10
6						UD7 (6.8 - 7.0m)	04/06/05 (11)	11
7						UD8 (7.8 - 8.0m)	04/05/08 (13)	13
8	-8.6					UD9 (8.8 - 9.0m)	07/07/11 (18)	18
8	8.6	>21.4	2		**(CL)** Stiff to hard lean CLAY, yellowish grey	UD10 (9.8 - 10.0m)	05/07/09 (16)	16
9						UD11 (10.8 - 11.0m)	06/09/10 (19)	19
10						UD12 (11.8 - 12.0m)	05/07/12 (19)	19
11						UD13 (12.8 - 13.0m)	09/14/18 (32)	32
12						UD14 (13.8 - 14.0m)	08/13/16 (29)	29
13						UD15 (14.8 - 15.0m)	09/10/20 (30)	30
14						UD16 (15.8 - 16.0m)	07/14/20 (34)	34
15						UD17 (16.8 - 17.0m)	08/10/15 (25)	25
16						UD18 (17.8 - 18.0m)	12/14/20 (34)	34
17						UD19 (18.8 - 19.0m)	10/16/20 (36)	36
18						UD20 (19.8 - 20.0m)	11/17/23 (40)	40
19						UD21 (20.8 - 21.0m)	07/15/20 (35)	35
20						UD22 (21.8 - 22.0m)	10/17/17 (34)	34
21						UD23 (22.8 - 23.0m)	11/18/27 (45)	45
22						UD24 (23.8 - 24.0m)	12/20/31 (51)	>50
23						UD25 (24.8 - 25.0m)	14/20/25 (45)	45
24						UD26 (25.8 - 26.0m)	13/23/36 (59)	>50
25						UD27 (26.8 - 27.0m)	17/25/28 (53)	>50
26						UD28 (27.8 - 28.0m)	12/23/25 (48)	48
27						UD29 (28.8 - 29.0m)	13/18/27 (45)	45
28						UD30 (29.8 - 30.0m)	12/23/27 (50)	50
29	-30.0				Bottom of borehole at depth of 30.0m			
30	30.0							
31								

SAMPLE TYPE: Undisturbed, Disturbed, Core run, SPT

SPT Graph: 10 20 30 40

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

※ボーリング調査時（乾季・2017年1月）に記録された水位は、ボーリング掘削に使用した水の影響を受けている。雨季（2017年9月）に再測定した地下水位は、地盤面から1.5mであった。

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

Depth (m)	LAYER: Bottom elevation (m) / Bottom depth (m)	LAYER: Thickness of layer (m)	LAYER: Layer No.	Soil sample symbol	Soil description and classification	SAMPLE TYPE	SPT: N value (N30cm)	SPT Graph
0	0.0 / 0.0 $				Ground surface			
0–7.7		7.7	1		**(CH)** Soft to stiff fat CLAY, brown - yellowish brown	UD1 (0.8 - 1.0m)	02/03/03 (06)	6
						UD2 (1.8 - 2.0m)	03/03/05 (08)	8
						UD3 (2.8 - 3.0m)	02/03/04 (07)	7
						UD4 (3.8 - 4.0m)	01/01/02 (03)	3
						UD5 (4.8 - 5.0m)	01/03/07 (10)	10
						UD6 (5.8 - 6.0m)	01/02/02 (04)	4
						UD7 (6.8 - 7.0m)	03/04/05 (09)	9
	-7.7 / 7.7					UD8 (7.8 - 8.0m)	06/08/10 (18)	18
7.7–22.5		>22.3	2		**(CL)** Stiff to hard lean CLAY, yellowish grey	UD9 (8.8 - 9.0m)	05/05/09 (14)	14
						UD10 (9.8 - 10.0m)	05/08/09 (17)	17
						UD11 (10.8 - 11.0m)	07/12/15 (27)	27
						UD12 (11.8 - 12.0m)	06/08/11 (19)	19
						UD13 (12.8 - 13.0m)	07/11/13 (24)	24
						UD14 (13.8 - 14.0m)	07/11/13 (24)	24
						UD15 (14.8 - 15.0m)	06/10/12 (22)	22
						UD16 (15.8 - 16.0m)	10/15/21 (36)	36
						UD17 (16.8 - 17.0m)	10/12/17 (29)	29
						UD18 (17.8 - 18.0m)	10/15/15 (30)	30
						UD19 (18.8 - 19.0m)	04/07/12 (19)	19
						UD20 (19.8 - 20.0m)	09/15/23 (38)	38
						UD21 (20.8 - 21.0m)	09/13/17 (30)	30
						UD22 (21.8 - 22.0m)	13/20/23 (43)	43
	-22.5 / 22.5					UD23 (22.8 - 23.0m)	10/14/24 (38)	38
22.5–23.5	-23.5 / 23.5		L		**(SC)** Dense clayey SAND, yellow	UD24 (23.8 - 24.0m)	11/17/25 (42)	42
						UD25 (24.8 - 25.0m)	10/20/25 (45)	45
						UD26 (25.8 - 26.0m)	12/20/23 (43)	43
23.5–30.0			2		**(CL)** Hard lean CLAY, yellowish grey	UD27 (26.8 - 27.0m)	17/20/32 (52)	>50
						UD28 (27.8 - 28.0m)	10/22/27 (49)	49
						UD29 (28.8 - 29.0m)	12/17/20 (37)	37
	-30.0 / 30.0				Bottom of borehole at depth of 30.0m	UD30 (29.8 - 30.0m)	10/17/23 (40)	40

SAMPLE TYPE: Undisturbed, Disturbed, Core run, SPT

SPT Graph: 10 20 30 40

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: 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

Depth (m)	LAYER: Bottom elevation (m) / Bottom depth (m)	LAYER: Thickness of layer (m)	LAYER: Layer No.	Soil sample symbol	Soil description and classification	SAMPLE TYPE	SPT: N value (N30cm)	SPT Graph
0	0.0 / 0.0				Ground surface			
0–7.7	$	7.7	1		**(CH)** Soft to stiff fat CLAY, brown - yellowish brown	UD1 (0.8 - 1.0m)	02/03/03 (06)	6
						UD2 (1.8 - 2.0m)	03/04/05 (09)	9
						UD3 (2.8 - 3.0m)	04/05/07 (12)	12
						UD4 (3.8 - 4.0m)	02/03/03 (06)	6
						UD5 (4.8 - 5.0m)	03/05/07 (12)	12
						UD6 (5.8 - 6.0m)	01/01/02 (03)	3
						UD7 (6.8 - 7.0m)	06/06/07 (13)	13
						UD8 (7.8 - 8.0m)	08/09/06 (15)	15
						UD9 (8.8 - 9.0m)	05/07/10 (17)	17
						UD10 (9.8 - 10.0m)	02/06/07 (13)	13
						UD11 (10.8 - 11.0m)	07/09/11 (20)	20
						UD12 (11.8 - 12.0m)	03/06/12 (18)	18
						UD13 (12.8 - 13.0m)	06/09/12 (21)	21
						UD14 (13.8 - 14.0m)	07/10/15 (25)	25
						UD15 (14.8 - 15.0m)	04/09/08 (17)	17
						UD16 (15.8 - 16.0m)	08/08/08 (16)	16
						UD17 (16.8 - 17.0m)	08/13/18 (31)	31
						UD18 (17.8 - 18.0m)	02/06/10 (16)	16
7.7–30.0	-7.7 / 7.7	>22.3	2		**(CL)** Stiff to hard lean CLAY, yellowish grey	UD19 (18.8 - 19.0m)	09/16/20 (36)	36
						UD20 (19.8 - 20.0m)	10/15/30 (45)	45
						UD21 (20.8 - 21.0m)	10/15/15 (30)	30
						UD22 (21.8 - 22.0m)	10/22/23 (45)	45
						UD23 (22.8 - 23.0m)	11/15/20 (35)	35
						UD24 (23.8 - 24.0m)	09/10/13 (23)	23
						UD25 (24.8 - 25.0m)	05/10/15 (25)	25
						UD26 (25.8 - 26.0m)	12/20/25 (45)	45
						UD27 (26.8 - 27.0m)	09/17/20 (37)	37
						UD28 (27.8 - 28.0m)	10/12/18 (30)	30
						UD29 (28.8 - 29.0m)	09/10/22 (32)	32
	-30.0 / 30.0				Bottom of borehole at depth of 30.0m	UD30 (29.8 - 30.0m)	10/18/22 (40)	40

SAMPLE TYPE: Undisturbed, Disturbed, Core run, SPT

SPT Graph: 10 20 30 40

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

Depth (m)	LAYER: Bottom elevation (m) / Bottom depth (m)	LAYER: Thickness of layer (m)	LAYER: Layer No.	Soil sample symbol	Soil description and classification	SAMPLE TYPE	N value (N30cm)	SPT Graph
0	0.0				Ground surface			
0	0.0 $	7.8	1		**(CH)** Firm to stiff fat CLAY, brown - yellowish brown	UD1 (0.8 - 1.0m)	02/04/05 (09)	9
1						UD2 (1.8 - 2.0m)	03/04/05 (09)	9
2						UD3 (2.8 - 3.0m)	02/03/04 (07)	7
3						UD4 (3.8 - 4.0m)	03/05/07 (12)	12
4						UD5 (4.8 - 5.0m)	04/04/07 (11)	11
5						UD6 (5.8 - 6.0m)	03/05/05 (10)	10
6						UD7 (6.8 - 7.0m)	06/06/08 (14)	14
7	-7.8					UD8 (7.8 - 8.0m)	06/08/11 (19)	19
8	7.8					UD9 (8.8 - 9.0m)	02/05/07 (12)	12
9						UD10 (9.8 - 10.0m)	02/06/10 (16)	16
10						UD11 (10.8 - 11.0m)	04/07/10 (17)	17
11						UD12 (11.8 - 12.0m)	03/06/06 (12)	12
12						UD13 (12.8 - 13.0m)	04/06/08 (14)	14
13						UD14 (13.8 - 14.0m)	06/09/12 (21)	21
14						UD15 (14.8 - 15.0m)	08/12/18 (30)	30
15						UD16 (15.8 - 16.0m)	07/09/12 (21)	21
16						UD17 (16.8 - 17.0m)	08/11/15 (26)	26
17						UD18 (17.8 - 18.0m)	06/08/08 (16)	16
18		>22.2	2		**(CL)** Stiff to hard lean CLAY, yellowish grey	UD19 (18.8 - 19.0m)	09/13/15 (28)	28
19						UD20 (19.8 - 20.0m)	09/11/21 (32)	32
20						UD21 (20.8 - 21.0m)	09/13/15 (28)	28
21						UD22 (21.8 - 22.0m)	05/08/12 (20)	20
22						UD23 (22.8 - 23.0m)	08/15/26 (41)	41
23						UD24 (23.8 - 24.0m)	07/16/20 (36)	36
24						UD25 (24.8 - 25.0m)	09/10/25 (35)	35
25						UD26 (25.8 - 26.0m)	07/16/21 (37)	37
26						UD27 (26.8 - 27.0m)	10/19/23 (42)	42
27						UD28 (27.8 - 28.0m)	12/16/24 (40)	40
28						UD29 (28.8 - 29.0m)	06/10/27 (37)	37
29	-30.0					UD30 (29.8 - 30.0m)	07/11/32 (43)	43
30	30.0				Bottom of borehole at depth of 30.0m			
31								

SAMPLE TYPE: Undisturbed, Disturbed, Core run, SPT

SPT Graph: 10 20 30 40

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: 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

Depth (m)	LAYER: Bottom elevation (m) / Bottom depth (m)	LAYER: Thickness of layer (m)	LAYER: Layer No.	Soil sample symbol	Soil description and classification	SAMPLE TYPE	N value (N30cm)	SPT Graph
0	0.0				Ground surface			
0	0.0 $	6.5	1		**(CH)** Soft to stiff fat CLAY, brown - yellowish brown	UD1 (0.8 - 1.0m)	01/01/01 (02)	2
1						UD2 (1.8 - 2.0m)	01/01/02 (03)	3
2						UD3 (2.8 - 3.0m)	02/02/03 (05)	5
3						UD4 (3.8 - 4.0m)	00/01/01 (02)	2
4						UD5 (4.8 - 5.0m)	02/03/03 (06)	6
5						UD6 (5.8 - 6.0m)	02/03/06 (09)	9
6	-6.5					UD7 (6.8 - 7.0m)	04/06/08 (14)	14
6	6.5	>23.5	2		**(CL)** Stiff to hard lean CLAY, yellowish grey	UD8 (7.8 - 8.0m)	04/07/09 (16)	16
7						UD9 (8.8 - 9.0m)	04/06/08 (14)	14
8						UD10 (9.8 - 10.0m)	03/05/08 (13)	13
9						UD11 (10.8 - 11.0m)	03/06/06 (12)	12
10						UD12 (11.8 - 12.0m)	05/06/07 (13)	13
11						UD13 (12.8 - 13.0m)	05/08/10 (18)	18
12						UD14 (13.8 - 14.0m)	09/13/14 (27)	27
13						UD15 (14.8 - 15.0m)	09/15/17 (32)	32
14						UD16 (15.8 - 16.0m)	07/10/16 (26)	26
15						UD17 (16.8 - 17.0m)	08/10/17 (27)	27
16						UD18 (17.8 - 18.0m)	07/09/10 (19)	19
17						UD19 (18.8 - 19.0m)	08/12/16 (28)	28
18						UD20 (19.8 - 20.0m)	10/17/20 (37)	37
19						UD21 (20.8 - 21.0m)	08/11/14 (25)	25
20						UD22 (21.8 - 22.0m)	08/12/20 (32)	32
21						UD23 (22.8 - 23.0m)	09/13/21 (34)	34
22						UD24 (23.8 - 24.0m)	07/14/18 (32)	32
23						UD25 (24.8 - 25.0m)	13/16/20 (36)	36
24						UD26 (25.8 - 26.0m)	11/20/20 (40)	40
25						UD27 (26.8 - 27.0m)	12/18/20 (38)	38
26						UD28 (27.8 - 28.0m)	10/17/18 (35)	35
27						UD29 (28.8 - 29.0m)	09/10/27 (37)	37
28						UD30 (29.8 - 30.0m)	09/12/30 (42)	42
29	-30.0							
30	30.0				Bottom of borehole at depth of 30.0m			
31								

SAMPLE TYPE: Undisturbed, Disturbed, Core run, SPT

SPT Graph: 10 20 30 40

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

Depth (m)	LAYER: Bottom elevation (m) / Bottom depth (m)	LAYER: Thickness of layer (m)	LAYER: Layer No.	Soil sample symbol	Soil description and classification
0	0.0				Ground surface
0	0.0 $	7.5	1		**(CH)** Soft to stiff fat CLAY, brown - yellowish brown
7	-7.5				
7	7.5	>22.5	2		**(CL)** Stiff to hard lean CLAY, yellowish grey
30	-30.0				Bottom of borehole at depth of 30.0m
30	30.0				

SAMPLE TYPE	N value (N30cm)
UD1 (0.8 - 1.0m)	02/02/02 (04)
UD2 (1.8 - 2.0m)	02/03/03 (06)
UD3 (2.8 - 3.0m)	01/02/03 (05)
UD4 (3.8 - 4.0m)	01/02/03 (05)
UD5 (4.8 - 5.0m)	03/05/05 (10)
UD6 (5.8 - 6.0m)	02/03/04 (07)
UD7 (6.8 - 7.0m)	01/01/02 (03)
UD8 (7.8 - 8.0m)	03/04/07 (11)
UD9 (8.8 - 9.0m)	03/05/06 (11)
UD10 (9.8 - 10.0m)	03/06/07 (13)
UD11 (10.8 - 11.0m)	04/05/08 (13)
UD12 (11.8 - 12.0m)	02/04/07 (11)
UD13 (12.8 - 13.0m)	03/05/08 (13)
UD14 (13.8 - 14.0m)	04/06/06 (12)
UD15 (14.8 - 15.0m)	05/09/11 (20)
UD16 (15.8 - 16.0m)	04/09/12 (21)
UD17 (16.8 - 17.0m)	08/10/13 (23)
UD18 (17.8 - 18.0m)	07/09/12 (21)
UD19 (18.8 - 19.0m)	06/09/10 (19)
UD20 (19.8 - 20.0m)	06/07/10 (17)
UD21 (20.8 - 21.0m)	10/12/17 (29)
UD22 (21.8 - 22.0m)	08/15/18 (33)
UD23 (22.8 - 23.0m)	07/15/20 (35)
UD24 (23.8 - 24.0m)	11/17/28 (45)
UD25 (24.8 - 25.0m)	09/12/28 (40)
UD26 (25.8 - 26.0m)	10/16/20 (36)
UD27 (26.8 - 27.0m)	12/17/22 (39)
UD28 (27.8 - 28.0m)	09/14/18 (32)
UD29 (28.8 - 29.0m)	10/17/23 (40)
UD30 (29.8 - 30.0m)	12/21/24 (45)

SPT Graph (10 20 30 40)

Undisturbed / Disturbed / Core run / SPT

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

資料７．　機材妥当性評価表

プノンペンTEC

	機材名	要請数量	既存機材	優先順位	選定基準 ①	②	③	④	⑤	⑥	⑦	⑧	総合	備考（特記事項）	計画数量
初等・理科															
1	上皿天秤	31		A	5	5	5	5	5	5	5	5	40	2 学生に 1 台、教官に 1 台を計画。	16
2	電子天秤	9	1	A	5	5	4	5	5	5	5	5	39	1 グループ（4 名）に 1 台、教官に 1 台を計画。	8
3	記録温度計	1		A	5	5	4	5	3	5	5	5	37	1 台を計画。百葉箱の構成品として計画。	1
4	直流電流計	9	6	A	5	5	5	5	5	5	5	5	40	1 グループに 1 台、教官に 1 台を計画。	3
5	直流電圧計	9	4	A	5	5	5	5	5	5	5	5	40	1 グループに 1 台、教官に 1 台を計画。	5
6	磁化用コイル	1		A	5	5	5	5	5	5	5	5	40	1 台を計画する。	1
7	アクアリウムセット	1		B	5	5	4	5	3	4	4	5	35	評価点が低いため削除。	0
8	天体望遠鏡	1		A	5	5	4	5	5	5	5	5	39	1 台を計画する。	1
9	月球儀	1		C										優先度 C のため、削除。	0
10	太陽光源装置	1		C										優先度 C のため、削除。	0
11	三球儀	1	5	A	5	5	5	5	4	5	5	5	39	既存機材多数のため、削除。	0
12	双眼鏡	13		A	5	5	4	5	5	5	5	5	39	1 グループに 1 台、教官に 1 台を計画。	9
13	振り子実験器	6		A	5	5	5	5	5	5	5	5	40	1 グループに 1 台、教官に 1 台を計画。	9
14	百葉箱	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。	1
15	てこ実験機	31		A	5	5	5	5	5	5	5	5	40	2 学生に 1 台、教官に 1 台を計画。	16
16	気体採取器	31		A	5	5	5	5	3	5	5	5	38	2 学生に 1 台、教官に 1 台を計画。	16
17	顕微鏡	31	10	A	5	5	4	5	4	5	5	5	38	2 学生に 1 台、教官に 1 台を計画。	6
18	小型双眼実体顕微鏡	31	4	A	5	5	4	5	5	5	5	5	39	2 学生に 1 台、教官に 1 台を計画。	12
19	薬品庫	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。	1
20	鉄製スタンド	13	5	A	5	5	5	5	5	5	5	5	40	1 グループに 1 台、教官に 1 台を計画。	4
21	直流電源装置	9		A	5	5	5	5	5	5	5	5	40	1 グループに 1 台、教官に 1 台を計画。	9
22	取付型コルクボーラー	1		C										優先度 C のため、削除。	0
23	火成岩標本	9		A	5	5	5	5	5	5	5	5	40	学生用に 1 台、教官に 1 台を計画。標本セットとして計画。	2
24	堆積岩標本	9		A	5	5	5	5	5	5	5	5	40	学生用に 1 台、教官に 1 台を計画。標本セットとして計画。	2
25	化石標本	9		A	5	5	5	5	5	5	5	5	40	学生用に 1 台、教官に 1 台を計画。標本セットとして計画。	2
26	火山噴出物標本	9		A	5	5	5	5	5	5	5	5	40	学生用に 1 台、教官に 1 台を計画。標本セットとして計画。	2
27	筋肉付腕骨格模型	9		A	5	5	5	5	5	5	5	5	40	1 台を計画。	1
28	人体骨格模型	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。	1
29	人体解剖模型	1	1	A	5	5	5	5	5	5	5	5	40	既存機材使用のため、削除。	0
30	目の構造模型	1		B	5	5	5	5	5	5	5	5	40	1 台を計画。	1
31	耳の構造模型	1		B	5	5	5	5	5	5	5	5	40	1 台を計画。	1

機材名		要請数量	既存機材	優先順位	選定基準									備考（特記事項）	計画数量
					①	②	③	④	⑤	⑥	⑦	⑧	総合		
32	ガラス器具セット	9	4	A	5	5	4	5	5	5	5	5	39	1 グループに 1 セット、教官に 1 セットを計画。	5
33	実験器具セット	9		A	5	5	4	5	5	5	5	5	39	1 グループに 1 セット、教官に 1 セットを計画。	9
34	生徒用生物実験台（スツール付）	12		A	5	5	5	5	5	5	5	5	40	1 室に 4 台、2 室に計画。	8
35	教官用生物実験台（スツール付）	2		A	5	5	5	5	5	5	5	5	40	1 室に 1 台、2 室に計画。	2
36	生徒用理科実験台（スツール付）	12		A									0	該当ラボが無いため、削除。	0
37	教官用理科実験台（スツール付）	2		A									0	該当ラボが無いため、削除。	0
38	滑車	30	6	B	5	5	5	5	5	5	5	5	40	2 学生に 1 台、教官に 1 台を計画。	10
39	ラップトップコンピューター	2		A	5	5	4	5	5	5	5	5	39	1 室に 1 台、2 室に計画。	2
40	プロジェクター	2		A	5	5	5	5	3	5	5	5	38	1 室に 1 台、2 室に計画。	2
41	キャビネットセット	2		A	5	5	5	5	5	5	5	5	40	1 室に 1 セット、2 室に計画。	2
42	理科用ポスターセット	1	1	B	5	5	5	5	5	5	5	5	40	既存機材使用のため、削除。	0
43	巻尺	1		B	5	5	5	5	5	5	5	5	40	実験器具セットの構成品として計画。	1
44	ストップウォッチ	1		B	5	5	5	5	5	5	5	5	40	実験器具セットの構成品として計画。	1
45	小型鏡（光学実験用）	1		B	5	5	5	5	5	5	5	5	40	実験器具セットの構成品として計画。	1
初等・算数															
46	方眼黒板	1		B	5	5	5	5	5	5	5	5	40	1 台を計画。	1
47	黒板用三角定規セット	1	5	B	5	5	5	5	5	5	5	5	40	自作可能なため、削除。	0
48	黒板用定規	1		B	5	5	5	5	5	5	5	5	40	自作可能なため、削除。	0
49	黒板用コンパス	1	3	A	5	5	5	5	5	5	5	5	40	既存機材使用のため、削除。	0
50	黒板用分度器	1	4	B	5	5	5	5	5	5	5	5	40	自作可能なため、削除。	0
51	提示用計算練習カード	1	6	B	5	5	5	5	5	5	5	5	40	既存機材使用のため、削除。	0
52	テープ図指導板	1		B	5	5	5	5	5	5	5	5	40	1 台を計画。	1
53	数直線指導板	1		B	5	5	5	5	5	5	5	5	40	1 台を計画。	1
54	具体物分数説明器	1		C										優先度 C のため、削除。	0
55	円形分数説明器	1		C										優先度 C のため、削除。	0
56	上皿自動秤の読み方説明器	1		C										優先度 C のため、削除。	0
57	メートル法説明器	1		C										優先度 C のため、削除。	0
58	三角形・四角形の面積説明器	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。	1
59	重さ比較用体	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。	1
60	多角形説明器	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。	1
61	内角の和説明器	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。	1
62	図形の合同説明器	18		B	5	5	5	5	5	5	5	5	40	1 グループに 1 セット、教官に 1 セットを計画。	9
63	折れ線グラフ指導板	1		C									0	優先度 C のため、削除。	0
64	円グラフ指導板	1		C									0	優先度 C のため、削除。	0
65	帯グラフ指導板	1		C									0	優先度 C のため、削除。	0

機材名		要請数量	既存機材	優先順位	選定基準									備考（特記事項）	計画数量
					①	②	③	④	⑤	⑥	⑦	⑧	総合		
66	柱状グラフ（ヒストグラム）指導板	1		C									0	優先度 C のため、削除。	0
67	比例、反比例グラフ指導板	1		C									0	優先度 C のため、削除。	0
68	体積学習器	18		A	5	5	5	5	5	5	5	5	40	1 グループに 1 セット、教官に 1 セットを計画。	9
69	リットルます	18		A	5	5	5	5	5	5	5	5	40	1 グループに 1 セット、教官に 1 セットを計画。	9
70	図形の合同学習器	18		B	5	5	5	5	5	5	5	5	40	重複のため、削除。	0
71	キャビネットセット	1		A	5	5	5	5	5	5	5	5	40	1 セットを計画。	1
初等・社会															
72	世界地図	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。地図・地球儀セットとして計画。	1
73	東南アジア地図	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。地図・地球儀セットとして計画。	1
74	カンボジア地図	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。地図・地球儀セットとして計画。	1
75	地球儀	6		A	5	5	5	5	5	5	5	5	40	1 グループに 1 台、教官に 1 台。地図・地球儀セットとして計画。	9
前期中等・数学															
76	方眼黒板	1		B	5	5	5	5	5	5	5	5	40	1 台を計画。	1
77	黒板用三角定規セット	1		B	5	5	5	5	5	5	5	5	40	自作可能なため、削除。	0
78	黒板用定規	1		B	5	5	5	5	5	5	5	5	40	自作可能なため、削除。	0
79	黒板用コンパス	1		A	5	5	5	5	5	5	5	5	40	自作可能なため、削除。	0
80	黒板用分度器	1		B	5	5	5	5	5	5	5	5	40	自作可能なため、削除。	0
81	式の展開説明器	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。	1
82	図形の合同説明器	13		B	5	5	5	5	5	5	5	5	40	1 グループに 1 セット、教官に 1 セットを計画。	9
83	平行平面説明器	13		A	5	5	5	5	5	5	5	5	40	1 グループに 1 セット、教官に 1 セットを計画。	9
84	立体図形の構成説明器	13		A	5	5	5	5	5	5	5	5	40	1 グループに 1 セット、教官に 1 セットを計画。	9
85	立体展開説明器	13		A	5	5	5	5	5	5	5	5	40	1 グループに 1 セット、教官に 1 セットを計画。	9
86	三平方の定理実験器	13		A	5	5	5	5	5	5	5	5	40	1 グループに 1 セット、教官に 1 セットを計画。	9
87	グラフ電卓	26		C									0	優先度 C のため、削除。	0
前期中等・理科（物理）															
88	斜面実験器	9		A	5	5	5	5	5	5	5	5	40	1 グループに 1 台、教官に 1 台を計画。	9
89	力の合成・分解実験器	1		A	5	5	5	5	4	5	5	5	39	1 台を計画。	1
90	滑車	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。	1
91	大型台車	9	2	A	5	5	5	5	5	5	5	5	40	力学滑走台の構成品として計画。	1
92	てこ実験機	31		A	5	5	5	5	5	5	5	5	40	1 グループに 1 台、教官に 1 台を計画。	9
93	真空落下実験器	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。真空下実験装置の構成品として計画。	1
94	真空ポンプ	1		A	5	5	5	5	4	5	5	5	39	1 台を計画。真空下実験装置の構成品として計画。	1
95	力学滑走台	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。	1
96	ストロボ装置	1		A	5	5	5	5	5	5	5	5	40	力学滑走台の構成品として、1 台を計画。	1

	機材名	要請数量	既存機材	優先順位	選定基準 ①	②	③	④	⑤	⑥	⑦	⑧	総合	備考（特記事項）	計画数量
97	半導体レーザー光源	1	10	A	5	5	5	5	5	5	5	5	40	既存機材使用のため、削除。	0
98	光学台	1		A	5	5	5	5	5	5	5	5	40	1台を計画。	1
99	波形観察装置	1		A	5	5	3	5	5	5	5	5	38	1台を計画。	1
100	共鳴おんさ	1		A	5	5	5	5	5	5	5	5	40	1台を計画。波形観察装置の構成品として計画。	1
101	低周波発振器	1		A	5	5	5	5	5	5	5	5	40	1台を計画。波形観察装置の構成品として計画。	1
102	音速測定実験器	1		A	5	5	5	5	5	5	5	5	40	1台を計画。	1
103	真空鈴	1		A	5	5	5	5	5	5	5	5	40	1台を計画。真空下実験装置の構成品として計画。	1
104	二重コイル	9		A	5	5	5	5	5	5	5	5	40	1グループに1台、教官に1台を計画。	9
105	直流交流電源装置	9		A	5	5	5	5	4	5	5	5	39	1グループに1台、教官に1台を計画。	9
106	直流電流計	9	25	A	5	5	5	5	5	5	5	5	40	既存機材使用のため、削除。	0
107	直流電圧計	9	20	A	5	5	5	5	5	5	5	5	40	既存機材使用のため、削除。	0
108	磁化用コイル	1		A	5	5	5	5	5	5	5	5	40	1台を計画。電流と磁界の実験用具セットして計画。	1
109	誘導コイル	1		A	5	5	5	5	5	5	5	5	40	1台を計画。電流と磁界の実験用具セットして計画。	1
110	クロス真空計	1		A	5	5	5	5	5	5	5	5	40	1台を計画。電流と磁界の実験用具セットして計画。	1
111	放電管	1		A	5	5	5	5	5	5	5	5	40	1台を計画。電流と磁界の実験用具セットして計画。	1
112	クルックス管	1		A	5	5	5	5	5	5	5	5	40	1台を計画。電流と磁界の実験用具セットして計画。	1
113	放電管用高圧電源装置	1		A	5	5	5	5	5	5	5	5	40	1台を計画。電流と磁界の実験用具セットして計画。	1
114	単巻可変変圧器	1		A	5	5	5	5	5	5	5	5	40	1台を計画。電流と磁界の実験用具セットして計画。	1
115	モーター原理実験器	1		A	5	5	5	5	5	5	5	5	40	1台を計画。電流と磁界の実験用具セットして計画。	1
116	強力電磁石	1		A	5	5	5	5	5	5	5	5	40	1台を計画。電流と磁界の実験用具セットして計画。	1
117	電気回路演示板	1		A	5	5	5	5	5	5	5	5	40	1台を計画。電流と磁界の実験用具セットして計画。	1
118	静電高圧実験装置	1		A	5	5	5	5	5	5	5	5	40	1台を計画。電流と磁界の実験用具セットして計画。	1
119	力学的エネルギー実験器	9		A	5	5	5	5	5	5	5	5	40	1グループに1台、教官に1台を計画。	9
120	力学的エネルギー保存の法則実験器	1		A	5	5	5	5	5	5	5	5	40	1台を計画。	1
121	エネルギー変換実験器	1		A	5	5	5	5	5	5	5	5	40	1台を計画。	1
122	生徒用物理実験台（スツール付）	6		A	5	5	5	5	5	5	5	5	40	6台を計画。	6
123	教官用物理実験台（スツール付）	1		A	5	5	5	5	5	5	5	5	40	1台を計画。	1
124	ラップトップコンピューター	1		A	5	5	4	5	5	5	5	5	39	1台を計画。	1
125	プロジェクター	1		A	5	5	5	5	3	5	5	5	38	1台を計画。	1
126	キャビネットセット	1		A	5	5	5	5	5	5	5	5	40	1セットを計画。	1
前期中等・理科（化学）															
127	電子天秤	9		A	5	5	4	5	5	5	5	5	39	1グループに1台、教官に1台を計画。	9
128	小型自動攪拌器	9		A	5	5	5	5	4	5	5	5	39	1グループに1台、教官に1台を計画。	9
129	薬品庫	6		A	5	5	5	5	5	5	5	5	40	2台を計画。	2
130	冷凍冷蔵庫	1		B	5	5	5	5	5	5	5	5	40	1台を計画。	1

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131	取付型コルクボーラー	6		C									0	優先度 C のため、削除。	0
132	ドラフトチャンバー	2		C									0	優先度 C のため、削除。	0
133	鉄製スタンド	33	2	A	5	5	5	5	5	5	5	5	40	1 グループに 1 台、教官に 1 台を計画。	9
134	ガラス器具セット	9	6	A	5	5	5	5	5	5	5	5	40	1 グループに 1 セット、教官に 1 セットを計画。	3
135	実験器具セット	9		A	5	5	5	5	5	5	5	5	40	1 グループに 1 セット、教官に 1 セットを計画。	9
136	生徒用化学実験台（スツール付）	6		A	5	5	5	5	5	5	5	5	40	1 室に 4 台を計画。	4
137	教官用化学実験台（スツール付）	1		A	5	5	5	5	5	5	5	5	40	1 室に 1 台を計画。	1
138	ラップトップコンピューター	1		A	5	5	4	5	5	5	5	5	39	1 台を計画。	1
139	プロジェクター	1		A	5	5	5	5	3	5	5	5	38	1 台を計画。	1
140	キャビネットセット	1		A	5	5	5	5	5	5	5	5	40	1 セットを計画。	1
141	蒸留装置	1		B	5	5	5	5	5	5	5	5	40	1 台を計画。	1
前期中等・理科（生物）															
142	水生生物飼育セット	1		B	5	5	4	5	3	4	4	5	35	評価点が低いため削除。	0
143	遺伝モデル実験器	9		A	5	5	5	5	5	5	5	5	40	1 グループに 1 台、教官に 1 台を計画する。	9
144	顕微鏡	33		A	5	5	4	5	4	5	5	5	38	2 学生に 1 台、教官に 1 台を計画。	16
145	双眼実体顕微鏡	33		A	5	5	4	5	4	5	5	5	38	2 学生に 1 台、教官に 1 台を計画。	16
146	デジタル顕微鏡	1		A	5	5	5	5	5	5	5	5	40	デジタル画像システムと機能重複のため、削除。	0
147	デジタル双眼実体顕微鏡	1		A	5	5	5	5	5	5	5	5	40	デジタル画像システムと機能重複のため、削除。	0
148	鉱物顕微鏡	1		A	5	5	5	5	5	5	5	5	40	双眼顕微鏡と偏光装置付き拡大鏡で代用できるため、削除。	0
149	偏光装置付き拡大鏡	33		A	5	5	5	5	5	5	5	5	40	1 グループに 1 台、教官に 1 台を計画。	9
150	顕微鏡用デジタル画像システム	1		A	5	5	5	5	4	5	5	5	39	1 台を計画。	1
151	顕微鏡保管庫	4		A	5	5	4	5	4	5	5	5	38	2 台を計画。	2
152	運搬整理箱ワゴン	2		A	5	5	5	5	5	5	5	5	40	2 台を計画。	2
153	恒温器	1		C									0	優先度 C のため、削除。	0
154	簡易ミクロトーム	9		B	5	5	5	5	4	5	5	5	39	2 台を計画。	2
155	フィールドスコープ	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。	1
156	高性能双眼鏡	1	1	A	5	5	5	5	5	5	5	5	40	既存機材使用のため、削除。	0
157	堆積岩標本	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。岩石・鉱物・化石標本セットとして計画。	1
158	火成岩標本	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。岩石・鉱物・化石標本セットとして計画。	1
159	鉱物標本	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。岩石・鉱物・化石標本セットとして計画。	1
160	造岩鉱物標本	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。岩石・鉱物・化石標本セットとして計画。	1
161	動物化石標本	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。岩石・鉱物・化石標本セットとして計画。	1
162	植物化石標本	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。岩石・鉱物・化石標本セットとして計画。	1
163	示準化石標本	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。岩石・鉱物・化石標本セットとして計画。	1
164	脊椎動物骨格標本	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。	1

	機材名	要請数量	既存機材	優先順位	選定基準 ①	②	③	④	⑤	⑥	⑦	⑧	総合	備考（特記事項）	計画数量
165	脊椎動物解剖標本	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。（無）脊椎動物解剖標本セットとして計画。	1
166	無脊椎動物解剖標本	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。（無）脊椎動物解剖標本セットとして計画。	1
167	体細胞分裂模型	1		A	5	5	5	5	5	5	5	5	40	細胞分裂模型セットとして計画。	1
168	人体解剖模型	1	2	A	5	5	5	5	5	5	5	5	40	既存機材使用のため、削除。	0
169	心臓構造模型	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。人体骨格・臓器構造モデルセット A として計画。	1
170	人体骨格模型	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。人体骨格・臓器構造モデルセット A として計画。	1
171	目の構造模型	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。人体骨格・臓器構造モデルセット A として計画。	1
172	耳の構造模型	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。人体骨格・臓器構造モデルセット A として計画。	1
173	脳の構造模型	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。人体骨格・臓器構造モデルセット A として計画。	1
174	血液循環模型	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。人体骨格・臓器構造モデルセット A として計画。	1
175	腎臓の構造模型	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。人体骨格・臓器構造モデルセット A として計画。	1
176	筋肉の動き模型	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。人体骨格・臓器構造モデルセット A として計画。	1
177	呼吸器の構造模型	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。人体骨格・臓器構造モデルセット A として計画。	1
178	生徒用生物実験台（スツール付）	6		A	5	5	5	5	5	5	5	5	40	1 室に 4 台を計画。	4
179	教官用生物実験台（スツール付）	1		A	5	5	5	5	5	5	5	5	40	1 室に 1 台を計画。	1
180	ラップトップコンピューター	1		A	5	5	4	5	5	5	5	5	39	1 台を計画。	1
181	プロジェクター	1		A	5	5	5	5	3	5	5	5	38	1 台を計画。	1
182	キャビネットセット	1		A	5	5	5	5	5	5	5	5	40	1 セットを計画。	1
前期中等・理科（地学）															
183	三球儀	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。	1
184	天体望遠鏡	1	2	A	5	5	4	5	5	5	5	5	39	既存機材使用のため、削除。	0
185	月の満ち欠け説明器	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。三球儀の構成品として計画。	1
186	大型透視天体儀	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。	1
187	アネロイド気圧計	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。百葉箱の構成品として計画。	1
188	雨量計	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。	1
189	総合気象測定装置	1		C									0	優先度 C のため、削除。	0
190	前線モデル説明器	1		C									0	優先度 C のため、削除。	0
191	記録温度計	1		A	5	5	5	5	3	5	5	5	38	1 台を計画。百葉箱の構成品として計画。	1
192	百葉箱	1		A	5	5	5	5	5	5	5	5	40	初等用と重複するため、削除。	0
193	天気図用黒板	6		C									0	優先度 C のため、削除。	0
194	排気盤	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。真空下実験装置の構成品として計画。	1
195	マグデブルグ半球	1	25	A	5	5	5	5	5	5	5	5	40	既存機材使用のため、削除。	0
196	照度計	1		C									0	優先度 C のため、削除。	0
197	放射線測定器	1		C									0	優先度 C のため、削除。	0
198	生徒用地学実験台（スツール付）	6		A	5	5	5	5	5	5	5	5	40	1 室に 4 台を計画。	4

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199	教官用地学実験台（スツール付）	1		A	5	5	5	5	5	5	5	5	40	1 室に 1 台を計画。	1
200	ラップトップコンピューター	1		A	5	5	4	5	5	5	5	5	39	1 台を計画。	1
201	プロジェクター	1		A	5	5	5	5	3	5	5	5	38	1 台を計画。	1
202	キャビネットセット	1		A	5	5	5	5	5	5	5	5	40	1 セットを計画。	1
前期中等・社会															
203	世界地図	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。地図・地球儀セットとして計画。	1
204	東南アジア地図	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。地図・地球儀セットとして計画。	1
205	カンボジア地図	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。地図・地球儀セットとして計画。	1
206	地球儀	6		A	5	5	5	5	5	5	5	5	40	1 グループに 1 台、教官に 1 台。地図・地球儀セットとして計画。	6
初等・音楽															
207	電子ピアノ	31	8	A	5	5	5	5	5	5	5	5	40	2 名に 1 台を計画。	23
208	椅子	61		A	5	5	5	5	5	5	5	5	40	電子ピアノの構成品として計画。	61
209	打楽器セット	31		A	5	5	4	5	4	5	5	5	38	楽器セットとして計画。	1
210	CD ラジカセ	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。	1
211	メトロノーム	31		A	5	5	5	5	5	5	5	5	40	楽器セットとして計画。	31
212	キャビネットセット	1		A	5	5	5	5	5	5	5	5	40	1 セットを計画。	1
前期中等・音楽															
213	電子ピアノ	16	3	A	5	5	5	5	5	5	5	5	40	2 名に 1 台を計画。	13
214	椅子	31		A	5	5	5	5	5	5	5	5	40	電子ピアノの構成品として計画。	31
215	打楽器セット	16		A	5	5	4	5	4	5	5	5	38	楽器セットとして計画。	1
216	CD ラジカセ	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。	1
217	メトロノーム	16		A	5	5	5	5	5	5	5	5	40	楽器セットとして計画。	16
218	キャビネットセット	1		A	5	5	5	5	5	5	5	5	40	1 セットを計画。	1
初等・美術															
219	画板	61		A	5	5	5	5	5	5	5	5	40	1 学生に 1 台、教官に 1 台を計画。	61
220	生徒用美術机（スツール付）	12		A	5	5	5	5	5	5	5	5	40	1 室に 12 台を計画。	12
221	教官用美術机（スツール付）	1		A	5	5	5	5	5	5	5	5	40	1 室に 1 台を計画。	1
前期中等・美術															
222	画板	31		A	5	5	5	5	5	5	5	5	40	1 学生に 1 台、教官に 1 台を計画。	31
223	生徒用美術机（スツール付）	6		A	5	5	5	5	5	5	5	5	40	1 室に 6 台を計画。	6
224	教官用美術机（スツール付）	1		A	5	5	5	5	5	5	5	5	40	1 室に 1 台を計画。	1
工作室															
225	木工工具セット	4		A	5	5	5	5	5	5	5	5	40	木工加工用工具セットの構成品として計画。	4
226	ドライバーセット	4		A	5	5	5	5	5	5	5	5	40	木工加工用工具セットの構成品として計画。	4

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					①	②	③	④	⑤	⑥	⑦	⑧	総合		
227	電動糸鋸	4		B	5	5	5	5	4	5	5	5	39	木工加工機器セットの構成品として計画。	4
228	卓上ボール盤	4		B	5	5	5	5	5	5	5	5	40	木工加工機器セットの構成品として計画。	4
229	ベルトディスクサンダー	4		B	5	5	5	5	5	5	5	5	40	木工加工機器セットの構成品として計画。	4
230	教官用工作台（スツール付）	2		A	5	5	5	5	5	5	5	5	40	工作台として計画。	2
231	生徒用工作台（スツール付）	12		A	5	5	5	5	5	5	5	5	40	4台1セットとして計画。工作台として計画。	4
232	木工万力	12		A	5	5	5	5	5	5	5	5	40	工作台の構成品として計画。	12
233	糸鋸セット	4		A	5	5	5	5	4	5	5	5	39	電動糸鋸と機能重複のため、削除。	0
234	電動ドリル	4		A	5	5	5	5	4	5	5	5	39	卓上ボール盤と機能重複のため、削除。	0
235	ハンドドリル	4		A	5	5	5	5	4	5	5	5	39	卓上ボール盤と機能重複のため、削除。	0
236	木工やすり	4		A	5	5	5	5	4	5	5	5	39	木工加工用工具セットの構成品として計画。	4
237	電動のこぎりセット	4		A	5	5	5	5	4	5	5	5	39	木工加工機器セットの構成品として計画。	4
238	キャビネットセット	1		A	5	5	5	5	5	5	5	5	40	1セットを計画。	1
家庭科															
239	冷蔵庫	1		B	5	5	5	5	5	5	5	5	40	1台を計画。	1
240	鍋セット	7		A	5	5	5	5	5	5	5	5	40	1グループに1セット、教官に1セットを計画。調理器具セットの構成品として計画。	6
241	調理器具セット	7		A	5	5	5	5	5	5	5	5	40	1グループに1セット、教官に1セットを計画。調理器具セットの構成品として計画。	6
242	まな板スタンド	1		A	5	5	5	5	5	5	5	5	40	1グループに1セット、教官に1セットを計画。調理器具セットの構成品として計画。	1
243	上皿自動はかり	7		A	5	5	5	5	5	5	5	5	40	1グループに1セット、教官に1セットを計画。調理器具セットの構成品として計画。	6
244	食器セット	31		A	5	5	5	5	5	5	5	5	40	1学生に1セット、教官に1セットを計画。	31
245	ミシン	31		A	5	5	3	4	4	5	5	5	36	1グループに1台、教官に1台を計画。	6
246	ロックミシン	2		B	4	5	3	4	4	5	5	5	35	評価点が低いため削除。	0
247	裁縫用具セット	31		A	5	5	4	5	5	5	5	5	39	1学生に1セット、教官に1セットを計画。	31
248	ものさしセット	31		A	5	5	5	5	5	5	5	5	40	1学生に1台、教官に1台を計画。裁縫用具セットの構成品として計画。	31
249	トルソーセット	6		B	5	5	5	5	5	5	5	5	40	1台を計画。	1
250	アイロン	16		A	5	5	5	5	5	5	5	5	40	1グループに1台、教官に1台を計画。	6
251	アイロン台	16		A	5	5	5	5	5	5	5	5	40	1グループに1セット、教官に1セットを計画。アイロンの付属品として計画。	6
252	洗濯機	1		B	3	3	4	5	5	5	5	5	35	評価点が低いため削除。	0
253	生徒用実習台	6		A	5	5	5	5	5	5	5	5	40	1室に5台を計画。	5
254	教官用実習台	1		A	5	5	5	5	5	5	5	5	40	1室に1台を計画。	1

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255	ガスコンロ	7		A	5	5	5	5	4	5	5	5	39	実習台の構成品として計画。	7
256	キャビネットセット	1		A	5	5	5	5	5	5	5	5	40	1セットを計画。	1
ICT室															
257	ICT コンピュータネットワークシステム	4	2	A	5	5	5	5	5	5	5	5	40	1室に1セット、2室に計画。	2
258	ラップトップコンピュータ	4		A	5	5	4	5	5	5	5	5	39	1室に1台、4室に計画。	4
259	コンピュータデスクと椅子セット	4		A	5	5	5	5	5	5	5	5	40	1室に1セット、4室に計画。	4
260	プリンター	4		A	5	5	5	5	4	5	5	5	39	1室に1台、4室に計画。	4
261	プロジェクター	4		A	5	5	5	5	4	5	5	5	39	1室に1台、4室に計画。	4
262	スクリーン	4		A	5	5	5	5	5	5	5	5	40	1室に1台、4室に計画。	4
図書館（ICT室）															
263	図書室コンピュータネットワークシステム	1		A	5	5	5	5	5	5	5	5	40	1セットを計画。	1
264	コンピュータデスクと椅子セット	1		A	5	5	5	5	5	5	5	5	40	1セットを計画。	1
265	プリンター	2		A	5	5	5	5	4	5	5	5	39	2台を計画。	2
講堂															
266	音響機器	1		A	5	5	5	5	5	5	5	5	40	1セットを計画。	1
267	プロジェクター	1		A	5	5	5	5	4	5	5	5	39	1セットを計画。	1
268	スクリーン	1		A	5	5	5	5	5	5	5	5	40	建築工事に含めるため、削除。	0
269	白板	2		A	5	5	5	5	5	5	5	5	40	2台を計画。	2
体育															
270	運動器具セット	1		B	5	5	5	5	5	5	5	5	40	1セットを計画。	1
271	サッカーボール	10		A	5	5	5	5	5	5	5	5	40	ボールセットとして計画。	10
272	バレーボール	10		A	5	5	5	5	5	5	5	5	40	ボールセットとして計画。	10
273	ボールかご	3		A	5	5	5	5	5	5	5	5	40	ボールセットとして計画。	3
274	空気入れ	3		A	5	5	5	5	5	5	5	5	40	ボールセットとして計画。	3
275	バスケットボール	10		A	5	5	5	5	5	5	5	5	40	ボールセットとして計画。	10
保健室															
276	ベッド	3		B	5	5	5	5	5	5	5	5	40	3台を計画。保健室用備品として計画。	3
277	寝具	3		B	5	5	5	5	5	5	5	5	40	3台を計画。保健室用備品として計画。	3
278	診察台	1		A	5	5	5	5	5	5	5	5	40	1台を計画。保健室用備品として計画。	1
279	身長計	1		A	5	5	5	5	5	5	5	5	40	1台を計画。保健室用備品として計画。	1
280	体重計	1		A	5	5	5	5	5	5	5	5	40	1台を計画。保健室用備品として計画。	1
281	血圧計	1		A	5	5	5	5	5	5	5	5	40	1台を計画。保健室用備品として計画。	1
282	薬品棚	1		A	5	5	5	5	5	5	5	5	40	1台を計画。保健室用備品として計画。	1
283	薬品冷蔵庫	1		A	5	5	5	5	5	5	5	5	40	1台を計画。保健室用備品として計画。	1
284	卓上滅菌器	1		A	5	5	5	5	5	5	5	5	40	1台を計画。保健室用備品として計画。	1

機材名		要請数量	既存機材	優先順位	選定基準									備考（特記事項）	計画数量
					①	②	③	④	⑤	⑥	⑦	⑧	総合		
285	カート	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。保健室用備品として計画。	1
286	診療器具セット	1		A	5	5	5	5	5	5	5	5	40	1 セットを計画。保健室用備品として計画。	1
287	カスト	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。保健室用備品として計画。	1
288	汚物缶	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。保健室用備品として計画。	1
289	ラップトップコンピューター	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。保健室用備品として計画。	1
290	診察机（椅子付）	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。保健室用備品として計画。	1
291	スツール	1		A	5	5	5	5	5	5	5	5	40	1 セットを計画。保健室用備品として計画。	1
大講義室															
292	プロジェクター	2		A	5	5	5	5	5	5	5	5	40	1 室に 1 台を計画。2 室に計画。	2
293	スクリーン	2		A	5	5	5	5	5	5	5	5	40	建築工事に含めるため、削除。	0
294	音響機器セット	2		A	5	5	5	5	5	5	5	5	40	1 室に 1 台を計画。2 室に計画。	2
一般講義室															
295	プロジェクター	12		B	5	5	5	5	5	5	5	5	40	一般講義室用に計画。	12
296	スクリーン	12		B	5	5	5	5	5	5	5	5	40	一般講義室用に計画。	12
教務員室															
297	教務員室用コンピューターネットワークシステム	9		B	5	5	4	5	4	5	5	5	38	1 室に 10 台を計画。9 室を計画。	9
事務室															
298	事務室用コンピューターネットワークシステム	3		B	5	5	4	5	4	5	5	0	33	事務管理部門のため、削除。	0
299	デスクトップコンピューター	10		B	5	5	4	5	4	5	5	0	33	事務管理部門のため、削除。	0

バッタンバンTEC

	機材名	要請数量	既存機材	優先順位	選定基準 ①	②	③	④	⑤	⑥	⑦	⑧	総合	備考（特記事項）	計画数量
初等・理科															
1	上皿天秤	31		A	5	5	5	5	5	5	5	5	40	2 学生に 1 台、教官に 1 台を計画。	16
2	電子天秤	9		A	5	5	4	5	5	5	5	5	39	1 グループ（4 名）に 1 台、教官に 1 台を計画。	9
3	記録温度計	1		A	5	5	4	5	3	5	5	5	37	1 台を計画。百葉箱の構成品として計画。	1
4	直流電流計	9		A	5	5	5	5	5	5	5	5	40	1 グループに 1 台、教官に 1 台を計画。	9
5	直流電圧計	9		A	5	5	5	5	5	5	5	5	40	1 グループに 1 台、教官に 1 台を計画。	9
6	磁化用コイル	1		A	5	5	5	5	5	5	5	5	40	1 台を計画する。	1
7	アクアリウムセット	1		B	5	5	4	5	3	4	4	5	35	評価点が低いため削除。	0
8	天体望遠鏡	1	1	A	5	5	4	5	5	5	5	5	39	1 台を計画する。	0
9	月球儀	1		C										優先度 C のため、削除。	0
10	太陽光源装置	1		C										優先度 C のため、削除。	0
11	三球儀	1		A	5	5	5	5	4	5	5	5	39	1 台を計画。	1
12	双眼鏡	13		A	5	5	4	5	5	5	5	5	39	1 グループに 1 台、教官に 1 台を計画。	9
13	振り子実験器	6		A	5	5	5	5	5	5	5	5	40	1 グループに 1 台、教官に 1 台を計画。	9
14	百葉箱	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。	1
15	てこ実験機	31		A	5	5	5	5	5	5	5	5	40	2 学生に 1 台、教官に 1 台を計画。	16
16	気体採取器	31		A	5	5	5	5	3	5	5	5	38	2 学生に 1 台、教官に 1 台を計画。	16
17	顕微鏡	31	13	A	5	5	4	5	4	5	5	5	38	2 学生に 1 台、教官に 1 台を計画。	3
18	小型双眼実体顕微鏡	31		A	5	5	4	5	5	5	5	5	39	2 学生に 1 台、教官に 1 台を計画。	16
19	薬品庫	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。	1
20	鉄製スタンド	13		A	5	5	5	5	5	5	5	5	40	1 グループに 1 台、教官に 1 台を計画。	9
21	直流電源装置	9		A	5	5	5	5	5	5	5	5	40	1 グループに 1 台、教官に 1 台を計画。	9
22	取付型コルクボーラー	1		C										優先度 C のため、削除。	0
23	火成岩標本	9		A	5	5	5	5	5	5	5	5	40	学生用に 1 台、教官に 1 台を計画。標本セットとして計画。	2
24	堆積岩標本	9		A	5	5	5	5	5	5	5	5	40	学生用に 1 台、教官に 1 台を計画。標本セットとして計画。	2
25	化石標本	9		A	5	5	5	5	5	5	5	5	40	学生用に 1 台、教官に 1 台を計画。標本セットとして計画。	2
26	火山噴出物標本	9		A	5	5	5	5	5	5	5	5	40	学生用に 1 台、教官に 1 台を計画。標本セットとして計画。	2
27	筋肉付腕骨格模型	9		A	5	5	5	5	5	5	5	5	40	1 台を計画。	1
28	人体骨格模型	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。	1
29	人体解剖模型	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。	1
30	目の構造模型	1		B	5	5	5	5	5	5	5	5	40	1 台を計画。	1
31	耳の構造模型	1		B	5	5	5	5	5	5	5	5	40	1 台を計画。	1
32	ガラス器具セット	9	5	A	5	5	4	5	5	5	5	5	39	1 グループに 1 セット、教官に 1 セットを計画。	4

	機材名	要請数量	既存機材	優先順位	選定基準 ①	②	③	④	⑤	⑥	⑦	⑧	総合	備考（特記事項）	計画数量
33	実験器具セット	9		A	5	5	4	5	5	5	5	5	39	1 グループに 1 セット、教官に 1 セットを計画。	9
34	生徒用生物実験台（スツール付）	12		A	5	5	5	5	5	5	5	5	40	1 室に 4 台、2 室に計画。	8
35	教官用生物実験台（スツール付）	2		A	5	5	5	5	5	5	5	5	40	1 室に 1 台、2 室に計画。	2
36	生徒用理科実験台（スツール付）	12		A									0	該当ラボが無いため、削除。	8
37	教官用理科実験台（スツール付）	2		A									0	該当ラボが無いため、削除。	2
38	滑車	30	10	B	5	5	5	5	5	5	5	5	40	2 学生に 1 台、教官に 1 台を計画。	6
39	ラップトップコンピューター	2		A	5	5	4	5	5	5	5	5	39	1 室に 1 台、2 室に計画。	2
40	プロジェクター	2		A	5	5	5	5	3	5	5	5	38	1 室に 1 台、2 室に計画。	2
41	キャビネットセット	2		A	5	5	5	5	5	5	5	5	40	1 室に 1 セット、2 室に計画。	2
42	理科用ポスターセット	1	1	B	5	5	5	5	5	5	5	5	40	既存機材使用のため、削除。	0
43	巻尺	1		B	5	5	5	5	5	5	5	5	40	実験器具セットの構成品として計画。	1
44	ストップウォッチ	1		B	5	5	5	5	5	5	5	5	40	実験器具セットの構成品として計画。	1
45	小型鏡（光学実験用）	1		B	5	5	5	5	5	5	5	5	40	実験器具セットの構成品として計画。	1
初等・算数															
46	方眼黒板	1		B	5	5	5	5	5	5	5	5	40	1 台を計画。	1
47	黒板用三角定規セット	1		B	5	5	5	5	5	5	5	5	40	自作可能なため、削除。	0
48	黒板用定規	1		B	5	5	5	5	5	5	5	5	40	自作可能なため、削除。	0
49	黒板用コンパス	1		A	5	5	5	5	5	5	5	5	40	既存機材使用のため、削除。	0
50	黒板用分度器	1		B	5	5	5	5	5	5	5	5	40	自作可能なため、削除。	0
51	提示用計算練習カード	1		B	5	5	5	5	5	5	5	5	40	1 台を計画。	1
52	テープ図指導板	1		B	5	5	5	5	5	5	5	5	40	1 台を計画。	1
53	数直線指導板	1		B	5	5	5	5	5	5	5	5	40	1 台を計画。	1
54	具体物分数説明器	1		C										優先度 C のため、削除。	0
55	円形分数説明器	1		C										優先度 C のため、削除。	0
56	上皿自動秤の読み方説明器	1		C										優先度 C のため、削除。	0
57	メートル法説明器	1		C										優先度 C のため、削除。	0
58	三角形・四角形の面積説明器	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。	1
59	重さ比較用体	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。	1
60	多角形説明器	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。	1
61	内角の和説明器	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。	1
62	図形の合同説明器	18		B	5	5	5	5	5	5	5	5	40	1 グループに 1 セット、教官に 1 セットを計画。	9
63	折れ線グラフ指導板	1		C									0	優先度 C のため、削除。	0
64	円グラフ指導板	1		C									0	優先度 C のため、削除。	0
65	帯グラフ指導板	1		C									0	優先度 C のため、削除。	0
66	柱状グラフ（ヒストグラム）指導板	1		C									0	優先度 C のため、削除。	0

機材名		要請数量	既存機材	優先順位	選定基準									備考（特記事項）	計画数量
					①	②	③	④	⑤	⑥	⑦	⑧	総合		
67	比例、反比例グラフ指導板	1		C									0	優先度 C のため、削除。	0
68	体積学習器	18		A	5	5	5	5	5	5	5	5	40	1 グループに 1 セット、教官に 1 セットを計画。	9
69	リットルます	18		A	5	5	5	5	5	5	5	5	40	1 グループに 1 セット、教官に 1 セットを計画。	9
70	図形の合同学習器	18		B	5	5	5	5	5	5	5	5	40	重複のため、削除。	0
71	キャビネットセット	1		A	5	5	5	5	5	5	5	5	40	1 セットを計画。	1
初等・社会															
72	世界地図	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。地図・地球儀セットとして計画。	1
73	東南アジア地図	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。地図・地球儀セットとして計画。	1
74	カンボジア地図	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。地図・地球儀セットとして計画。	1
75	地球儀	6		A	5	5	5	5	5	5	5	5	40	1 グループに 1 台、教官に 1 台。地図・地球儀セットとして計画。	9
前期中等・数学															
76	方眼黒板	1		B	5	5	5	5	5	5	5	5	40	1 台を計画。	1
77	黒板用三角定規セット	1		B	5	5	5	5	5	5	5	5	40	自作可能なため、削除。	0
78	黒板用定規	1		B	5	5	5	5	5	5	5	5	40	自作可能なため、削除。	0
79	黒板用コンパス	1		A	5	5	5	5	5	5	5	5	40	自作可能なため、削除。	0
80	黒板用分度器	1		B	5	5	5	5	5	5	5	5	40	自作可能なため、削除。	0
81	式の展開説明器	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。	1
82	図形の合同説明器	13		B	5	5	5	5	5	5	5	5	40	1 グループに 1 セット、教官に 1 セットを計画。	9
83	平行平面説明器	13		A	5	5	5	5	5	5	5	5	40	1 グループに 1 セット、教官に 1 セットを計画。	9
84	立体図形の構成説明器	13		A	5	5	5	5	5	5	5	5	40	1 グループに 1 セット、教官に 1 セットを計画。	9
85	立体展開説明器	13		A	5	5	5	5	5	5	5	5	40	1 グループに 1 セット、教官に 1 セットを計画。	9
86	三平方の定理実験器	13		A	5	5	5	5	5	5	5	5	40	1 グループに 1 セット、教官に 1 セットを計画。	9
87	グラフ電卓	26		C									0	優先度 C のため、削除。	0
前期中等・理科（物理）															
88	斜面実験器	9		A	5	5	5	5	5	5	5	5	40	1 グループに 1 台、教官に 1 台を計画。	9
89	力の合成・分解実験器	1		A	5	5	5	5	4	5	5	5	39	1 台を計画。	1
90	滑車	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。	1
91	大型台車	9		A	5	5	5	5	5	5	5	5	40	力学滑走台の構成品として計画。	9
92	てこ実験機	31	4	A	5	5	5	5	5	5	5	5	40	1 グループに 1 台、教官に 1 台を計画。	5
93	真空落下実験器	1	1	A	5	5	5	5	5	5	5	5	40	1 台を計画。真空下実験装置の構成品として計画。	0
94	真空ポンプ	1		A	5	5	5	5	4	5	5	5	39	1 台を計画。真空下実験装置の構成品として計画。	1
95	力学滑走台	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。	1
96	ストロボ装置	1		A	5	5	5	5	5	5	5	5	40	力学滑走台の構成品として、1 台を計画。1	1
97	半導体レーザー光源	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。	1

機材名		要請数量	既存機材	優先順位	選定基準									備考（特記事項）	計画数量
					①	②	③	④	⑤	⑥	⑦	⑧	総合		
98	光学台	1		A	5	5	5	5	5	5	5	5	40	1台を計画。	1
99	波形観察装置	1		A	5	5	3	5	5	5	5	5	38	1台を計画。	1
100	共鳴おんさ	1		A	5	5	5	5	5	5	5	5	40	1台を計画。波形観察装置の構成品として計画。	1
101	低周波発振器	1		A	5	5	5	5	5	5	5	5	40	1台を計画。波形観察装置の構成品として計画。	1
102	音速測定実験器	1		A	5	5	5	5	5	5	5	5	40	1台を計画。	1
103	真空鈴	1		A	5	5	5	5	5	5	5	5	40	1台を計画。真空下実験装置の構成品として計画。	1
104	二重コイル	9		A	5	5	5	5	5	5	5	5	40	1グループに1台、教官に1台を計画。	9
105	直流交流電源装置	9		A	5	5	5	5	4	5	5	5	39	1グループに1台、教官に1台を計画。	9
106	直流電流計	9	15	A	5	5	5	5	5	5	5	5	40	既存機材使用のため、削除。	0
107	直流電圧計	9	19	A	5	5	5	5	5	5	5	5	40	既存機材使用のため、削除。	0
108	磁化用コイル	1		A	5	5	5	5	5	5	5	5	40	1台を計画。電流と磁界の実験用具セットして計画。	1
109	誘導コイル	1		A	5	5	5	5	5	5	5	5	40	1台を計画。電流と磁界の実験用具セットして計画。	1
110	クロス真空計	1		A	5	5	5	5	5	5	5	5	40	1台を計画。電流と磁界の実験用具セットして計画。	1
111	放電管	1		A	5	5	5	5	5	5	5	5	40	1台を計画。電流と磁界の実験用具セットして計画。	1
112	クルックス管	1		A	5	5	5	5	5	5	5	5	40	1台を計画。電流と磁界の実験用具セットして計画。	1
113	放電管用高圧電源装置	1		A	5	5	5	5	5	5	5	5	40	1台を計画。電流と磁界の実験用具セットして計画。	1
114	単巻可変変圧器	1		A	5	5	5	5	5	5	5	5	40	1台を計画。電流と磁界の実験用具セットして計画。	1
115	モーター原理実験器	1		A	5	5	5	5	5	5	5	5	40	1台を計画。電流と磁界の実験用具セットして計画。	1
116	強力電磁石	1		A	5	5	5	5	5	5	5	5	40	1台を計画。電流と磁界の実験用具セットして計画。	1
117	電気回路演示板	1		A	5	5	5	5	5	5	5	5	40	1台を計画。電流と磁界の実験用具セットして計画。	1
118	静電高圧実験装置	1		A	5	5	5	5	5	5	5	5	40	1台を計画。電流と磁界の実験用具セットして計画。	1
119	力学的エネルギー実験器	9		A	5	5	5	5	5	5	5	5	40	1グループに1台、教官に1台を計画。	9
120	力学的エネルギー保存の法則実験器	1		A	5	5	5	5	5	5	5	5	40	1台を計画。	1
121	エネルギー変換実験器	1		A	5	5	5	5	5	5	5	5	40	1台を計画。	1
122	生徒用物理実験台（スツール付）	6	6	A	5	5	5	5	5	5	5	5	40	既存機材使用のため、削除。	0
123	教官用物理実験台（スツール付）	1	1	A	5	5	5	5	5	5	5	5	40	既存機材使用のため、削除。	0
124	ラップトップコンピューター	1		A	5	5	4	5	5	5	5	5	39	1台を計画。	1
125	プロジェクター	1		A	5	5	5	5	3	5	5	5	38	1台を計画。	1
126	キャビネットセット	1		A	5	5	5	5	5	5	5	5	40	1セットを計画。	1
前期中等・理科（化学）															
127	電子天秤	9		A	5	5	4	5	5	5	5	5	39	1グループに1台、教官に1台を計画。	9
128	小型自動攪拌器	9		A	5	5	5	5	4	5	5	5	39	1グループに1台、教官に1台を計画。	9
129	薬品庫	6		A	5	5	5	5	5	5	5	5	40	2台を計画。	2
130	冷凍冷蔵庫	1		B	5	5	5	5	5	5	5	5	40	1台を計画。	1
131	取付型コルクボーラー	6		C									0	優先度Cのため、削除。	0

	機材名	要請数量	既存機材	優先順位	選定基準 ①	②	③	④	⑤	⑥	⑦	⑧	総合	備考（特記事項）	計画数量
132	ドラフトチャンバー	2		C									0	優先度 C のため、削除。	0
133	鉄製スタンド	33	2	A	5	5	5	5	5	5	5	5	40	1 グループに 1 台、教官に 1 台を計画。	9
134	ガラス器具セット	9	6	A	5	5	5	5	5	5	5	5	40	1 グループに 1 セット、教官に 1 セットを計画。	3
135	実験器具セット	9		A	5	5	5	5	5	5	5	5	40	1 グループに 1 セット、教官に 1 セットを計画。	9
136	生徒用化学実験台（スツール付）	6		A	5	5	5	5	5	5	5	5	40	1 室に 4 台を計画。	4
137	教官用化学実験台（スツール付）	1		A	5	5	5	5	5	5	5	5	40	1 室に 1 台を計画。	1
138	ラップトップコンピューター	1		A	5	5	4	5	5	5	5	5	39	1 台を計画。	1
139	プロジェクター	1		A	5	5	5	5	3	5	5	5	38	1 台を計画。	1
140	キャビネットセット	1		A	5	5	5	5	5	5	5	5	40	1 セットを計画。	1
141	蒸留装置	1		B	5	5	5	5	5	5	5	5	40	1 台を計画。	1
前期中等・理科（生物）															
142	水生生物飼育セット	1		B	5	5	4	5	3	4	4	5	35	評価点が低いため削除。	0
143	遺伝モデル実験器	9		A	5	5	5	5	5	5	5	5	40	1 グループに 1 台、教官に 1 台を計画する。	9
144	顕微鏡	33	34	A	5	5	4	5	4	5	5	5	38	既存機材使用のため、削除。	0
145	双眼実体顕微鏡	33	6	A	5	5	4	5	4	5	5	5	38	2 学生に 1 台、教官に 1 台を計画。	10
146	デジタル顕微鏡	1	2	A	5	5	5	5	5	5	5	5	40	デジタル画像システムと機能重複のため、削除。	0
147	デジタル双眼実体顕微鏡	1		A	5	5	5	5	5	5	5	5	40	デジタル画像システムと機能重複のため、削除。	0
148	鉱物顕微鏡	1		A	5	5	5	5	5	5	5	5	40	双眼顕微鏡と偏光装置付き拡大鏡で代用できるため、削除。	0
149	偏光装置付き拡大鏡	33		A	5	5	5	5	5	5	5	5	40	1 グループに 1 台、教官に 1 台を計画。	9
150	顕微鏡用デジタル画像システム	1		A	5	5	5	5	4	5	5	5	39	1 台を計画。	1
151	顕微鏡保管庫	4		A	5	5	4	5	4	5	5	5	38	2 台を計画。	2
152	運搬整理箱ワゴン	2		A	5	5	5	5	5	5	5	5	40	2 台を計画。	2
153	恒温器	1		C									0	優先度 C のため、削除。	0
154	簡易ミクロトーム	9		B	5	5	5	5	4	5	5	5	39	2 台を計画。	2
155	フィールドスコープ	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。	1
156	高性能双眼鏡	1	1	A	5	5	5	5	5	5	5	5	40	既存機材使用のため、削除。	0
157	堆積岩標本	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。岩石・鉱物・化石標本セットとして計画。	1
158	火成岩標本	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。岩石・鉱物・化石標本セットとして計画。	1
159	鉱物標本	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。岩石・鉱物・化石標本セットとして計画。	1
160	造岩鉱物標本	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。岩石・鉱物・化石標本セットとして計画。	1
161	動物化石標本	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。岩石・鉱物・化石標本セットとして計画。	1
162	植物化石標本	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。岩石・鉱物・化石標本セットとして計画。	1
163	示準化石標本	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。岩石・鉱物・化石標本セットとして計画。	1
164	脊椎動物骨格標本	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。	1
165	脊椎動物解剖標本	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。（無）脊椎動物解剖標本セットとして計画。	1

	機材名	要請数量	既存機材	優先順位	選定基準 ①	②	③	④	⑤	⑥	⑦	⑧	総合	備考（特記事項）	計画数量
166	無脊椎動物解剖標本	1		A	5	5	5	5	5	5	5	5	40	1台を計画。（無）脊椎動物解剖標本セットとして計画。	1
167	体細胞分裂模型	1		A	5	5	5	5	5	5	5	5	40	細胞分裂模型セットとして計画。	1
168	人体解剖模型	1	2	A	5	5	5	5	5	5	5	5	40	既存機材使用のため、削除。	0
169	心臓構造模型	1	1	A	5	5	5	5	5	5	5	5	40	既存機材使用のため、削除。	0
170	人体骨格模型	1		A	5	5	5	5	5	5	5	5	40	1台を計画。人体骨格・臓器構造モデルセットBとして計画。	1
171	目の構造模型	1	1	A	5	5	5	5	5	5	5	5	40	既存機材使用のため、削除。	0
172	耳の構造模型	1	1	A	5	5	5	5	5	5	5	5	40	既存機材使用のため、削除。	0
173	脳の構造模型	1		A	5	5	5	5	5	5	5	5	40	1台を計画。人体骨格・臓器構造モデルセットBとして計画。	1
174	血液循環模型	1		A	5	5	5	5	5	5	5	5	40	1台を計画。人体骨格・臓器構造モデルセットBとして計画。	1
175	腎臓の構造模型	1		A	5	5	5	5	5	5	5	5	40	1台を計画。人体骨格・臓器構造モデルセットBとして計画。	1
176	筋肉の動き模型	1		A	5	5	5	5	5	5	5	5	40	1台を計画。人体骨格・臓器構造モデルセットBとして計画。	1
177	呼吸器の構造模型	1	1	A	5	5	5	5	5	5	5	5	40	既存機材使用のため、削除。	0
178	生徒用生物実験台（スツール付）	6		A	5	5	5	5	5	5	5	5	40	1室に4台を計画。	4
179	教官用生物実験台（スツール付）	1		A	5	5	5	5	5	5	5	5	40	1室に1台を計画。	1
180	ラップトップコンピューター	1		A	5	5	4	5	5	5	5	5	39	1台を計画。	1
181	プロジェクター	1		A	5	5	5	5	3	5	5	5	38	1台を計画。	1
182	キャビネットセット	1		A	5	5	5	5	5	5	5	5	40	1セットを計画。	1
前期中等・理科（地学）															
183	三球儀	1		A	5	5	5	5	5	5	5	5	40	1台を計画。	1
184	天体望遠鏡	1	2	A	5	5	4	5	5	5	5	5	39	既存機材使用のため、削除。	0
185	月の満ち欠け説明器	1		A	5	5	5	5	5	5	5	5	40	1台を計画。三球儀の構成品として計画。	1
186	大型透視天体儀	1	1	A	5	5	5	5	5	5	5	5	40	既存機材使用のため、削除。	0
187	アネロイド気圧計	1		A	5	5	5	5	5	5	5	5	40	1台を計画。百葉箱の構成品として計画。	1
188	雨量計	1		A	5	5	5	5	5	5	5	5	40	1台を計画。	1
189	総合気象測定装置	1		C									0	優先度Cのため、削除。	0
190	前線モデル説明器	1		C									0	優先度Cのため、削除。	0
191	記録温度計	1		A	5	5	5	5	3	5	5	5	38	1台を計画。百葉箱の構成品として計画。	1
192	百葉箱	1		A	5	5	5	5	5	5	5	5	40	初等用と重複するため、削除。	0
193	天気図用黒板	6		C									0	優先度Cのため、削除。	0
194	排気盤	1		A	5	5	5	5	5	5	5	5	40	1台を計画。真空下実験装置の構成品として計画。	1
195	マグデブルグ半球	1	25	A	5	5	5	5	5	5	5	5	40	既存機材使用のため、削除。	0
196	照度計	1		C									0	優先度Cのため、削除。	0
197	放射線測定器	1		C									0	優先度Cのため、削除。	0
198	生徒用地学実験台（スツール付）	6	6	A	5	5	5	5	5	5	5	5	40	既存機材使用のため、削除。	0
199	教官用地学実験台（スツール付）	1	1	A	5	5	5	5	5	5	5	5	40	既存機材使用のため、削除。	0

機材名		要請数量	既存機材	優先順位	選定基準									備考（特記事項）	計画数量
					①	②	③	④	⑤	⑥	⑦	⑧	総合		
200	ラップトップコンピューター	1		A	5	5	4	5	5	5	5	5	39	1 台を計画。	1
201	プロジェクター	1		A	5	5	5	5	3	5	5	5	38	1 台を計画。	1
202	キャビネットセット	1		A	5	5	5	5	5	5	5	5	40	1 セットを計画。	1
前期中等・社会															
203	世界地図	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。地図・地球儀セットとして計画。	1
204	東南アジア地図	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。地図・地球儀セットとして計画。	1
205	カンボジア地図	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。地図・地球儀セットとして計画。	1
206	地球儀	6		A	5	5	5	5	5	5	5	5	40	1 グループに 1 台、教官に 1 台。地図・地球儀セットとして計画。	6
初等・音楽															
207	電子ピアノ	31	10	A	5	5	5	5	5	5	5	5	40	2 名に 1 台を計画。	21
208	椅子	61	10	A	5	5	5	5	5	5	5	5	40	電子ピアノの構成品として計画。	51
209	打楽器セット	31		A	5	5	4	5	4	5	5	5	38	楽器セットとして計画。	1
210	CD ラジカセ	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。	1
211	メトロノーム	31		A	5	5	5	5	5	5	5	5	40	楽器セットとして計画。	31
212	キャビネットセット	1		A	5	5	5	5	5	5	5	5	40	1 セットを計画。	1
前期中等・音楽															
213	電子ピアノ	16	9	A	5	5	5	5	5	5	5	5	40	2 名に 1 台を計画。	7
214	椅子	31	9	A	5	5	5	5	5	5	5	5	40	電子ピアノの構成品として計画。	22
215	打楽器セット	16		A	5	5	4	5	4	5	5	5	38	楽器セットとして計画。	1
216	CD ラジカセ	1		A	5	5	5	5	5	5	5	5	40	1 台を計画。	1
217	メトロノーム	16		A	5	5	5	5	5	5	5	5	40	楽器セットとして計画。	16
218	キャビネットセット	1		A	5	5	5	5	5	5	5	5	40	1 セットを計画。	1
初等・美術															
219	画板	61		A	5	5	5	5	5	5	5	5	40	1 学生に 1 台、教官に 1 台を計画。	61
220	生徒用美術机（スツール付）	12		A	5	5	5	5	5	5	5	5	40	1 室に 12 台を計画。	12
221	教官用美術机（スツール付）	1		A	5	5	5	5	5	5	5	5	40	1 室に 1 台を計画。	1
前期中等・美術															
222	画板	31		A	5	5	5	5	5	5	5	5	40	1 学生に 1 台、教官に 1 台を計画。	31
223	生徒用美術机（スツール付）	6		A	5	5	5	5	5	5	5	5	40	1 室に 6 台を計画。	6
224	教官用美術机（スツール付）	1		A	5	5	5	5	5	5	5	5	40	1 室に 1 台を計画。	1
工作室															
225	木工工具セット	4		A	5	5	5	5	5	5	5	5	40	木工加工用工具セットの構成品として計画。	4
226	ドライバーセット	4		A	5	5	5	5	5	5	5	5	40	木工加工用工具セットの構成品として計画。	4
227	電動糸鋸	4		B	5	5	5	5	4	5	5	5	39	木工加工機器セットの構成品として計画。	4

機材名		要請数量	既存機材	優先順位	選定基準									備考（特記事項）	計画数量
					①	②	③	④	⑤	⑥	⑦	⑧	総合		
228	卓上ボール盤	4		B	5	5	5	5	5	5	5	5	40	木工加工機器セットの構成品として計画。	4
229	ベルトディスクサンダー	4		B	5	5	5	5	5	5	5	5	40	木工加工機器セットの構成品として計画。	4
230	教官用工作台（スツール付）	2		A	5	5	5	5	5	5	5	5	40	工作台として計画。	2
231	生徒用工作台（スツール付）	12		A	5	5	5	5	5	5	5	5	40	4台1セットとして計画。工作台として計画。	4
232	木工万力	12		A	5	5	5	5	5	5	5	5	40	工作台の構成品として計画。	12
233	糸鋸セット	4		A	5	5	5	5	4	5	5	5	39	電動糸鋸と機能重複のため、削除。	0
234	電動ドリル	4	1	A	5	5	5	5	4	5	5	5	39	卓上ボール盤と機能重複のため、削除。	0
235	ハンドドリル	4		A	5	5	5	5	4	5	5	5	39	卓上ボール盤と機能重複のため、削除。	0
236	木工やすり	4		A	5	5	5	5	4	5	5	5	39	木工加工用工具セットの構成品として計画。	4
237	電動のこぎりセット	4		A	5	5	5	5	4	5	5	5	39	木工加工機器セットの構成品として計画。	4
238	キャビネットセット	1		A	5	5	5	5	5	5	5	5	40	1セットを計画。	1
家庭科															
239	冷蔵庫	1		B	5	5	5	5	5	5	5	5	40	1台を計画。	1
240	鍋セット	7		A	5	5	5	5	5	5	5	5	40	1グループに1セット、教官に1セットを計画。調理器具セットの構成品として計画。	6
241	調理器具セット	7		A	5	5	5	5	5	5	5	5	40	1グループに1セット、教官に1セットを計画。調理器具セットの構成品として計画。	6
242	まな板スタンド	1		A	5	5	5	5	5	5	5	5	40	1グループに1セット、教官に1セットを計画。調理器具セットの構成品として計画。	1
243	上皿自動はかり	7		A	5	5	5	5	5	5	5	5	40	1グループに1セット、教官に1セットを計画。調理器具セットの構成品として計画。	6
244	食器セット	31		A	5	5	5	5	5	5	5	5	40	1学生に1セット、教官に1セットを計画。	31
245	ミシン	31		A	5	5	3	4	4	5	5	5	36	1グループに1台、教官に1台を計画。	6
246	ロックミシン	2		B	4	5	3	4	4	5	5	5	35	評価点が低いため削除。	0
247	裁縫用具セット	31		A	5	5	4	5	5	5	5	5	39	1学生に1セット、教官に1セットを計画。	31
248	ものさしセット	31		A	5	5	5	5	5	5	5	5	40	1学生に1台、教官に1台を計画。裁縫用具セットの構成品として計画。	31
249	トルソーセット	6		B	5	5	5	5	5	5	5	5	40	1台を計画。	1
250	アイロン	16		A	5	5	5	5	5	5	5	5	40	1グループに1台、教官に1台を計画。	6
251	アイロン台	16		A	5	5	5	5	5	5	5	5	40	1グループに1セット、教官に1セットを計画。アイロンの付属品として計画。	6
252	洗濯機	1		B	3	3	4	5	5	5	5	5	35	評価点が低いため削除。	0
253	生徒用実習台	6		A	5	5	5	5	5	5	5	5	40	1室に5台を計画。	5
254	教官用実習台	1		A	5	5	5	5	5	5	5	5	40	1室に1台を計画。	1
255	ガスコンロ	7		A	5	5	5	5	4	5	5	5	39	実習台の構成品として計画。	7

	機材名	要請数量	既存機材	優先順位	選定基準 ①	②	③	④	⑤	⑥	⑦	⑧	総合	備考（特記事項）	計画数量
256	キャビネットセット	1		A	5	5	5	5	5	5	5	5	40	1セットを計画。	1
ICT室															
257	ICT コンピュータネットワークシステム	4	2	A	5	5	5	5	5	5	5	5	40	1室に1セット、2室に計画。	2
258	ラップトップコンピュータ	4		A	5	5	4	5	5	5	5	5	39	1室に1台、4室に計画。	4
259	コンピュータデスクと椅子セット	4		A	5	5	5	5	5	5	5	5	40	1室に1セット、4室に計画。	4
260	プリンター	4		A	5	5	5	5	4	5	5	5	39	1室に1台、4室に計画。	4
261	プロジェクター	4		A	5	5	5	5	4	5	5	5	39	1室に1台、4室に計画。	4
262	スクリーン	4		A	5	5	5	5	5	5	5	5	40	1室に1台、4室に計画。	4
図書館（ICT室）															
263	図書室コンピュータネットワークシステム	1		A	5	5	5	5	5	5	5	5	40	1セットを計画。	1
264	コンピュータデスクと椅子セット	1		A	5	5	5	5	5	5	5	5	40	1セットを計画。	1
265	プリンター	2		A	5	5	5	5	4	5	5	5	39	2台を計画。	2
講堂															
266	音響機器	1		A	5	5	5	5	5	5	5	5	40	1セットを計画。	1
267	プロジェクター	1		A	5	5	5	5	4	5	5	5	39	1セットを計画。	1
268	スクリーン	1		A	5	5	5	5	5	5	5	5	40	建築工事に含めるため、削除。	0
269	白板	2		A	5	5	5	5	5	5	5	5	40	2台を計画。	2
体育															
270	運動器具セット	1		B	5	5	5	5	5	5	5	5	40	1セットを計画。	1
271	サッカーボール	10		A	5	5	5	5	5	5	5	5	40	ボールセットとして計画。	10
272	バレーボール	10		A	5	5	5	5	5	5	5	5	40	ボールセットとして計画。	10
273	ボールかご	3		A	5	5	5	5	5	5	5	5	40	ボールセットとして計画。	3
274	空気入れ	3		A	5	5	5	5	5	5	5	5	40	ボールセットとして計画。	3
275	バスケットボール	10		A	5	5	5	5	5	5	5	5	40	ボールセットとして計画。	10
保健室															
276	ベッド	3		B	5	5	5	5	5	5	5	5	40	3台を計画。保健室用備品として計画。	3
277	寝具	3		B	5	5	5	5	5	5	5	5	40	3台を計画。保健室用備品として計画。	3
278	診察台	1		A	5	5	5	5	5	5	5	5	40	1台を計画。保健室用備品として計画。	1
279	身長計	1		A	5	5	5	5	5	5	5	5	40	1台を計画。保健室用備品として計画。	1
280	体重計	1		A	5	5	5	5	5	5	5	5	40	1台を計画。保健室用備品として計画。	1
281	血圧計	1		A	5	5	5	5	5	5	5	5	40	1台を計画。保健室用備品として計画。	1
282	薬品棚	1		A	5	5	5	5	5	5	5	5	40	1台を計画。保健室用備品として計画。	1
283	薬品冷蔵庫	1		A	5	5	5	5	5	5	5	5	40	1台を計画。保健室用備品として計画。	1
284	卓上滅菌器	1		A	5	5	5	5	5	5	5	5	40	1台を計画。保健室用備品として計画。	1
285	カート	1		A	5	5	5	5	5	5	5	5	40	1台を計画。保健室用備品として計画。	1

機材名		要請数量	既存機材	優先順位	選定基準									備考（特記事項）	計画数量
					①	②	③	④	⑤	⑥	⑦	⑧	総合		
286	診療器具セット	1		A	5	5	5	5	5	5	5	5	40	1セットを計画。保健室用備品として計画。	1
287	カスト	1		A	5	5	5	5	5	5	5	5	40	1台を計画。保健室用備品として計画。	1
288	汚物缶	1		A	5	5	5	5	5	5	5	5	40	1台を計画。保健室用備品として計画。	1
289	ラップトップコンピューター	1		A	5	5	5	5	5	5	5	5	40	1台を計画。保健室用備品として計画。	1
290	診察机（椅子付）	1		A	5	5	5	5	5	5	5	5	40	1台を計画。保健室用備品として計画。	1
291	スツール	1		A	5	5	5	5	5	5	5	5	40	1セットを計画。保健室用備品として計画。	1
大講義室															
292	プロジェクター	2		A	5	5	5	5	5	5	5	5	40	1室に1台を計画。2室に計画。	2
293	スクリーン	2		A	5	5	5	5	5	5	5	5	40	建築工事に含めるため、削除。	0
294	音響機器セット	2		A	5	5	5	5	5	5	5	5	40	1室に1台を計画。2室に計画。	2
一般講義室															
295	プロジェクター	12	1	B	5	5	5	5	5	5	5	5	40	一般講義室用に計画。	11
296	スクリーン	12		B	5	5	5	5	5	5	5	5	40	一般講義室用に計画。	12
教務員室															
297	教務員室用コンピューターネットワークシステム	9		B	5	5	4	5	4	5	5	5	38	1室に10台を計画。9室を計画。	9
事務室															
298	事務室用コンピューターネットワークシステム	3		B	5	5	4	5	4	5	5	0	33	事務管理部門のため、削除。	0
299	デスクトップコンピューター	10		B	5	5	4	5	4	5	5	0	33	事務管理部門のため、削除。	0