

#### 4-2 概略設計概要説明調査

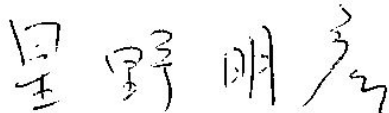
**Minutes of Discussions**  
**on**  
**the Outline Design Study on the Project for**  
**Construction of Educational Facilities**  
**in the Kingdom of Bhutan**  
**(EXPLANATION ON DRAFT REPORT)**

In August 2007, the Japan International Cooperation Agency (JICA) dispatched an Outline Design Study Team on the Project for Construction of Educational Facilities (hereinafter referred to as "the Project") to the Kingdom of Bhutan, and through discussions, site surveys and technical examination of the results in Japan, JICA prepared a draft report of the study.

In order to explain and to consult the Bhutanese side on the components of the draft report, JICA sent to the Kingdom of Bhutan the Draft Report Explanation Team (hereinafter referred to as "the Team"), which is headed by Mr. Akihiko Hoshino, Team Director, Education and Vocational Training Team, Project Management II, Grant Aid Management Department, JICA, from December 21 to December 25, 2007.

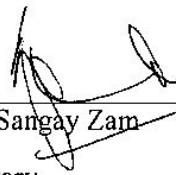
As a result of discussions, both sides have confirmed the main items described on the attached sheet.

Thimphu, 26 December, 2007



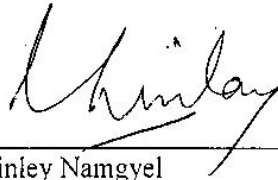
Mr. Akihiko Hoshino

Leader  
Draft Report Explanation Team  
Japan International Cooperation Agency



Aum Sangay Zam

Secretary  
Ministry of Education  
Royal Government of Bhutan



Mr. Thinley Namgyel

Head  
Development Cooperation Division  
Planning Commission Secretariat  
Royal Government of Bhutan

## ATTACHMENT

### 1. Contents of the draft report

The Bhutanese side agreed and accepted in principle the contents of the draft report proposed by the Team.

### 2. Japan's Grant Aid Scheme

The Bhutanese side understood the Japan's Grant Aid Scheme and the necessary measures to be taken by the Bhutanese side described in Annex 3, 4, 5 of the Minutes of Discussions signed by both parties on August 31, 2007.

### 3. Final Report

JICA will complete the final report in accordance with the result of discussions and forward it to the Bhutanese side in around March 2008.

### 4. Other relevant issues

#### 4-1. Schools and facilities covered by the Project

Both sides agreed on schools and components covered by the Project as shown in Annex-1. The Bhutanese side agreed that the Japanese side would make final decision on this matter through further study in Japan.

#### 4-2. Allocation of necessary budget and personnel

The Bhutanese side agreed to allocate enough budget and personnel (teachers and general staff) to properly operate and maintain the facilities and equipment covered by the Project.

The Team explained the requirement of the additional personnel for the newly constructed facilities. The Bhutanese side confirmed to deploy additional personnel upon the completion of the construction.

#### 4-3. Procurement of Furniture

The Bhutanese side understood the contents of furniture to be covered by the Project as described in Annex- 2.

#### 4-4. Securing Proposed Building Sites

The Bhutanese side confirmed that they would secure the identified building sites in the recipient schools before the actual construction work commences.

#### 4-5. Proper Use and Maintenance

Both sides understood that proper use and maintenance of the facilities would be indispensable for their lifelong use. The Bhutanese side assured the Japanese side that it will facilitate the proper use and maintenance of facilities in the schools covered by the Project with the active involvement of concerned parties such as Dzongkag Administrations, schools, communities and so on.

#### 4-6. Proper Use of Toilet

Both sides understood that it is necessary to secure water supply and to conduct sanitary education for pupils in order to utilize and maintain toilets properly. The

Bhutanese side understood that the specification of the toilets covered by the Project would be finalized by the detailed design.

#### **4-7. Site preparation works to be covered by the Bhutanese side**

The Japanese side explained the content of the site preparation works to be covered by the Bhutanese side as described in Annex-3. The Bhutanese side confirmed to complete the required works before the commencement of construction.

#### **4-8. Appointment of Focal Persons**

Upon the request from the Japanese side, the Bhutanese side agreed to appoint focal persons to coordinate the implementation of necessary undertakings by the Bhutanese side.

#### **4-9. Result of Detailed Design**

The Bhutanese side agrees to be responsible for any outcomes caused by using the result of the detailed design and not to impose any responsibility on the Japanese government and JICA in this matter.

#### **4-10. Confidentiality of the Project Cost Estimation**

The Team explained the cost estimation of the Project as described in Annex-4. Both sides agreed that the Project Cost Estimation should never be duplicated or released to any outside parties before signing of all the contracts for the Project. The Bhutanese side understood that the Project Cost Estimation attached as Annex 4 is not final and is subject to change.

#### **4-11. Confidentiality of the Contents of the Draft Report**

Both side agreed that the contents of the draft report would be kept confidential, be dealt with carefully and will not be disclosed to any third parties.

Annex1: Schools and components to be covered by the Project

Annex2: The contents of furniture

Annex3: Site preparation works to be covered by the Bhutanese side

Annex4: Project cost estimation



## Schools and Components to be covered by the Project

No.	School	Dzongkhag	Type	Priority of Site & Facilities	Facility												Floor Area  m <sup>2</sup>
					Educational					Residential							
					4-Classroom block	8-Classroom block	Admin. & Library block	Laboratory block	Toilet block	64-bedded hostel	96-bedded hostel	Kitchen & store block	Warden's/matron's quarter	Principal's quarter	Staff quarters	Multi purpose hall	
1	Kabjisa MSS	Punakha	Day Existing	1	1	2	1	1	2					1	1		2,769.52
2	Pakshikha MSS	Chukha	Boarding New	1	2	1	1	1	2		4	1	2	1	1	1	6,136.69
3	Phobjikha MSS	Wangdue	Boarding	2-a	1	2	1	1	2	4		1		1			4,315.66
			Relocation	2-b								2		1	1	1,359.35	
4	Darla MSS	Chukha	Day	3-a	2	1											1,010.56
			Existing	3-b				1								463.68	
Total					6	6	3	4	6	4	4	2	4	3	3	2	16,055.46

The above items to be covered by the Project could be revised and adjusted upon the result of the detailed design, the results of bidding, etc., during the Project implementation stage.

## Contents of Furniture to be covered by the Project

Room	Contents of furniture per each room
<b>Classroom Block</b>	
Classroom	Desks and chairs/stools for 36 students, teacher's desk/chair, green board, bulletin board
<b>Administration/Library Block</b>	
Staff room	Teacher's desks/chairs, workstation desks/chairs, wooden racks, green board
Meeting room	Conference tables, chairs, green board
Principal's room, Vice principal's room, General office, Librarian's office	Set of office desks/chairs, chairs for guests, wooden racks
Library	Reading tables and chairs for 36 students, wooden racks, periodicals stands, card cabinet, counter table, book trolleys
Store	Wooden racks
<b>Laboratory Block</b>	
Physics/Biology laboratory	Laboratory tables and stools for 36 students, teacher's desk/chair, green board, bulletin board
Chemistry laboratory	Stools for 36 students, teacher's desk/chair, green board, bulletin board (built-in type tables are provided by construction work)
Computer room	Computer tables and stools for 36 students, teacher's desk/chair, green board, bulletin board
Preparation room	Teacher's desk/chair, chairs for guests, wooden racks, laboratory cupboards
<b>Others</b>	
Multi-purpose hall	Dinning tables and benches for 360 persons
Hostel	Bunk beds and hostel lockers for 16 persons
Sick room	Bunk beds and hostel lockers for 6 persons

### Site Preparation Works to be done by the Bhutanese side

Item	Necessary works by site			
	Kabjisa MSS	Pakshikha MSS	Phobjikha MSS	Darla MSS
Works to be done before the commencement of the construction work by the Project				
Improvement of access road	Gravel paving on existing unpaved road; approx. 1,000m	-	Construction of access road, including river crossing section; approx. 75m	-
Removal of Existing Structures, etc.	An existing water tank, an electric pole & wires	-	-	Existing 3 1-storey buildings, including foundations; approx. 512 sq.m
Relocation of Existing Water Pipe	-	-	Relocation of underground water pipe to the village; approx. 250m	-
Works to be done before the completion of the construction work by the Project				
Extension of Water Pipe to the Sites	From the source to the water tank in the site; approx. 500m	Ditto; approx. 3,500m	Ditto; approx. 1,500m	-
Extension of Power Line to the Sites	-	From the nearest distribution point to the lead-in pole in the site; approx. 150m	Ditto; approx. 200m*	-

\* Phobjikha area is planned to be electrified in 2008. In case the electricity will not come by the intended time, installation of power generator in the site will be required instead.




## 5 事業事前計画表（概略設計時）

1. 案件名
ブータン国 教育施設整備計画
2. 要請の背景（協力の必要性・位置付け）
<p>ブータン国政府は長期開発要綱である「ブータン 2020」の中で教育を国家開発のための最重要分野の一つと位置付け、2012 年までに前期・中期中等教育を含む 11 ヶ年の教育の完全普及の達成を目標に掲げており、2000 年に基礎教育課程を中期中等までに延長するとともに、累次の 5 カ年計画を通じた重点的な取組みを行っている。その結果、ブータン国の就学状況は年々改善を見せ、2002 年に 81%であった初等教育総就学率は 2007 年には 105.7%に達し、基礎教育全体の総就学率も 87.8%に向上している。しかし純就学率は基礎教育全体で 78.2%に止まって依然として就学需要は高く、特に基礎教育の延長に伴って年 7%を超える大幅な生徒数増が続く中等課程では、今後 5 ヶ年でも 32%の生徒数増が予想されていることから、拡大する就学需要に対応するための教育施設整備が喫緊の課題となっている。</p> <p>これに対し、政府は現行の第 9 次 5 カ年計画（2002-08 年）で中等教育施設の拡充を重点項目の一つに掲げ、173 校の施設整備に係る計画実施に取り組んでいるものの、生徒寮や宿舍等を含む多様な施設の一体整備が必要となる中等教育施設整備については必要な予算を自国のみで確保することが困難な状態にあり、クラス当たり生徒数が教育省の基準とする 36 人を上回って増加（2007 年：前期中等学校 36.9 人、中期中等学校 38.2 人）する等、施設不足が深刻化している。また、限られた資源で拡大する中等課程の生徒を収容するために既存初等学校の中等学校への昇格が広く行われたため、中等教育の実施に必要な施設を欠いた状態での運営を強いられている学校も多く、現在策定中の第 10 次 5 カ年計画でも中等教育施設の重点的な施設拡充が引き続き必要とされている。</p> <p>本プロジェクトはブータン国側の第 9 次・第 10 次 5 カ年計画で大規模な整備が位置付けられた中等学校 4 校の施設整備を行うもので、対象校はいずれも就学需要に対して施設が不足する地域に位置している。児童は他県や遠隔の学校への進学や過密教室での授業を余儀なくされており、協力の必要性は高い。</p>
3. プロジェクト全体計画概要
<p>（1）プロジェクト全体計画の目標（裨益対象の範囲及び規模）</p> <ul style="list-style-type: none"> <li>・プナカ県、チュカ県、ワンディ県において教育施設環境が改善され、基礎教育（初等・前期中等・中期中等教育）へのアクセスが拡大する。</li> </ul> <p>裨益対象の範囲及び規模： ブータン国プナカ県、チュカ県、ワンディ県の中等教育施設 4 校の就学児童 3,281 人及び教職員 144 人（2011 年）</p> <p>（2）プロジェクト全体計画の成果</p> <ul style="list-style-type: none"> <li>①中等教育施設 4 校で学校施設（うち 2 校は寄宿施設を含む）が整備される。</li> <li>②上記施設において教育用、寄宿用の家具が整備される。</li> </ul> <p>（3）プロジェクト全体計画の主要活動</p> <ul style="list-style-type: none"> <li>①中等教育施設 4 校で学校施設の建設と付帯家具の整備を行う。</li> <li>②上記 4 校において運営・維持管理体制を整え、必要な教職員を配置する。</li> <li>③上記施設・家具を使用して学校を運営し、教育活動を実施する。</li> </ul> <p>（4）投入(インプット)</p> <p>ア. 日本側：コミュニティ開発支援無償資金協力 10.70 億円</p> <p>イ. 相手国側</p> <ul style="list-style-type: none"> <li>・学校運営に必要な教職員（増員分-教員 38 名・職員 25 名、最低 63 名）</li> <li>・施設の運営・維持管理に係る経費（年間約 2.8 百万 Nu.）</li> <li>・必要な範囲の門扉の建設、植栽、運動場整備</li> <li>・日本側協力に含まれない一般家具、什器、備品</li> </ul>

<p>・教育の実施に必要な教育機材、教材、文具、事務機器</p> <p>(5) 実施体制</p> <p>主管官庁及び実施機関：教育省 学校教育局</p>														
4. 無償資金協力案件の内容														
<p>(1) サイト</p> <p>ブータン国 3 県（プナカ県、チュカ県、ワンディ県）の 4 校： カブジサ MSS、パクシカ MSS、ポブジカ MSS、ダーラ MSS</p> <p>(2) 概要</p> <p>①教育施設（72 教室、実験室、図書室、管理諸室、便所）、寄宿施設（640 人収容の生徒寮、厨房、便所）、多目的ホール、宿舍（校長、教員、寮監用）の建設</p> <p>②付帯家具（教育用及び寄宿用）の整備</p> <p>(3) 相手国負担事項</p> <p>①建設用地の確保 ②既存構造物の撤去・移設 ③アクセス道路の整備</p> <p>④建設地への電力及び給水の引込み</p> <p>(4) 概略事業費</p> <p>概略事業費 10.80 億円（無償資金協力 10.70 億円、ブータン国側負担分 0.10 億円）</p> <p>(5) 工期</p> <p>詳細設計・入札期間を含めて約 33.5 ヶ月（予定）</p> <p>(6) 貧困、ジェンダー、環境及び社会面の配慮</p> <ul style="list-style-type: none"> <li>・生徒寮の出入口を 1 ヶ所として便所を内部から使用できる形で付設し、特に女子生徒が危険を感じることはないよう、保安性の高い施設とする。</li> <li>・地下水脈の汚染や土壌流出が発生しないよう、地形条件を十分考慮した汚水、雨水処理設備を設ける。</li> </ul>														
5. 外部要因リスク														
<p>・大きな経済的変動や政情、治安の悪化が生じない。</p>														
6. 過去の類似案件からの教訓の活用														
<p>・特になし。</p>														
7. プロジェクト全体計画の事後評価に係る提案														
<p>(1) プロジェクト全体計画の目標達成を示す成果指標</p> <table border="1"> <thead> <tr> <th>成果指標</th><th>2007 年（現状）</th><th>2011 年（計画）</th></tr> </thead> <tbody> <tr> <td>3 県における前中期中等教育施設数</td><td>前期 19 校・中期 13 校</td><td>前期 21 校（2 校増加） 中期 16 校（3 校増加）</td></tr> <tr> <td>4 校における使用可能教室数・定員数</td><td>20 教室・720 人（現状収容数:2,128 人）</td><td>92 教室・3,312 人（72 教室/2,592 人分増加）</td></tr> <tr> <td>4 校における生徒寮定員数</td><td>なし（仮設施設に収容:110 人）</td><td>640 人</td></tr> </tbody> </table> <p>(2) その他の成果指標</p> <p>特になし</p> <p>(3) 評価のタイミング</p> <p>2011 年以降（施設完工、使用開始後）</p>			成果指標	2007 年（現状）	2011 年（計画）	3 県における前中期中等教育施設数	前期 19 校・中期 13 校	前期 21 校（2 校増加） 中期 16 校（3 校増加）	4 校における使用可能教室数・定員数	20 教室・720 人（現状収容数:2,128 人）	92 教室・3,312 人（72 教室/2,592 人分増加）	4 校における生徒寮定員数	なし（仮設施設に収容:110 人）	640 人
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## 6 参考資料/入手資料リスト

番号	名称	形態	オリジナル・コピー	発行機関	発行年
1	Atlas of Bhutan- Land cover & area statistics	プリント	オリジナル	Ministry of Agriculture	1997/06
2	26th Education Policy Guidelines & Instructions	プリント	オリジナル	Policy & Planning Division, Ministry of Education	2007/07
3	General Statistics 2007/2005	プリント	オリジナル	Policy & Planning Division, Ministry of Education	2007 2005
4	Results of Population & Housing Census of Bhutan 2005	プリント	オリジナル	Office of the Census Commissioner, RGOB	2006
5	Dzongkhag Level Population & Housing Census Indicator Maps of Bhutan 2005	プリント	オリジナル	Office of the Census Commissioner, RGOB	2006
6	Procurement Manual – Rules and Procedures	プリント	コピー	Ministry of Finance	2007
7	Guidelines for Site Supervisors (Building Works) - Construction Quality Series Manual No, 2	プリント	オリジナル	Standard & Quality Control Authority	2003
8	Storage & Stacking of Construction Materials - Construction Quality Series Manual No, 1	プリント	オリジナル	Standard & Quality Control Authority	2003
9	Basic Field Tests for Building & Road Works - Construction Quality Series Manual No, 3	プリント	オリジナル	Standard & Quality Control Authority	2003
10	Code of Practice for Plumbing	プリント	コピー	Standard & Quality Control Division, Ministry of Communications	2001/08
11	IS-875: Code of Practice for Design Load (Other than Earthquake) for Buildings and Structures	プリント	コピー	Bureau of Indian Standards	2003
12	IS-1893-1894: Criteria for Earthquake Resistant Design for Structures	プリント	コピー	Bureau of Indian Standards	2003
13	IS-456: Plain and Reinforced Concrete- Code of Practice	プリント	コピー	Bureau of Indian Standards	2005
14	Public Works Division Structural Design Standards	プリント	コピー	Public Works Division Thimphu	1997/05
15	ブータン大学管理棟設計業務に係るコンサルタント選定資料一式	電子データ	コピー	School Planning & Building Division, Ministry of Education	—
16	学校建設敷地測量に係るコンサルタント選定資料一式	電子データ	コピー	School Planning & Building Division, Ministry of Education	—
17	世銀 LGSF プロジェクトに係る建設工事入札図書一式	電子データ	コピー	School Planning & Building Division, Ministry of Education	—
18	ブータン国基本地形図 (1/50000)	プリント	オリジナル	Survey & Land Records Department, Ministry of Agriculture	—

## 7. その他

□ 調達ガイドラインの適用に係るブータン国財務省承認レター



དངུལ་རྩིས་ལྷན་ཁག།  
ROYAL GOVERNMENT OF BHUTAN  
MINISTRY OF FINANCE  
TASHICHHO DZONG

MoF/R.6/ 2461  
30 November 2007

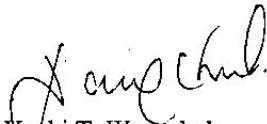
The Secretary  
Ministry of Education  
Thimphu

Madam,

Subject: Grant Aid Project for Community Empowerment

This has reference to your letter No.MoE/PPD/JICA/2007/1772 dated 6<sup>th</sup> September, 2007 on the above subject. In view of the justifications provided in your above letter and also as per clarification received from the Planning Commission, the Ministry of Finance hereby approves the procurement as proposed in your letter.

Yours sincerely,

  
Yanki T. Wangchuk  
Finance Secretary

Bind for record &  
the  
5/12/07

PPD



# ROYAL GOVERNMENT OF BHUTAN

## MINISTRY OF EDUCATION

Policy and Planning Division

Thimphu : Bhutan

Ref. No. MoE.PPD.JICA.2007-1722

September 6, 2007

To  
The Hon'ble Secretary  
Ministry of Finance  
Thimphu

Sub: Approval to procure goods and services under Procurement Guidelines of Japan for the "Grant Aid Project for Community Empowerment".

Dear Dasho,

As you may be aware, the Government of Japan had agreed to support the construction of five schools under the Japanese Grant Aid Project. The project "Construction of Educational Facilities" was to be implemented stage-wise through the Exchange of Notes (E/N) signed between the two countries at each stage of the project. However, during the implementation of the phase II (Kabjisa MSS, Punakha) of the project, the contract for the construction of school could not be finalised and was declared unsuccessful due to high contract amount (approximately JPY 40.0 m more than the grant amount) quoted by the Japanese bidders, even after floating the tender twice in Japan.

In view of this difficulty, the MoE in an effort to expedite the construction requested the JICA HQ to implement the construction of remaining schools under the Japanese Government's new grant aid scheme called, "Grant Aid for Community Empowerment". Through this scheme, local specifications may be applied to construction and local resources such as suppliers, contractors, consultants, materials, work force will be utilized wherever necessary. Further, The Procurement Management Agent (Japan International Cooperation system (JICS) will be assigned to undertake overall management of the grant (including fund management) on behalf of the recipient country. JICS will procure goods and services under the two Procurement Guidelines, one set by the Ministry of Foreign Affairs of Japan and the other set by JICS. There guidelines are attached for your reference.

In this regard, the Ministry of Finance is requested to kindly accord approval to procure goods and services under the Procurement Guidelines, one by the MoFA, Japan and the other by JICS for the implementation of the Grant Aid Project for Community Empowerment.

Thanking you

Yours faithfully,

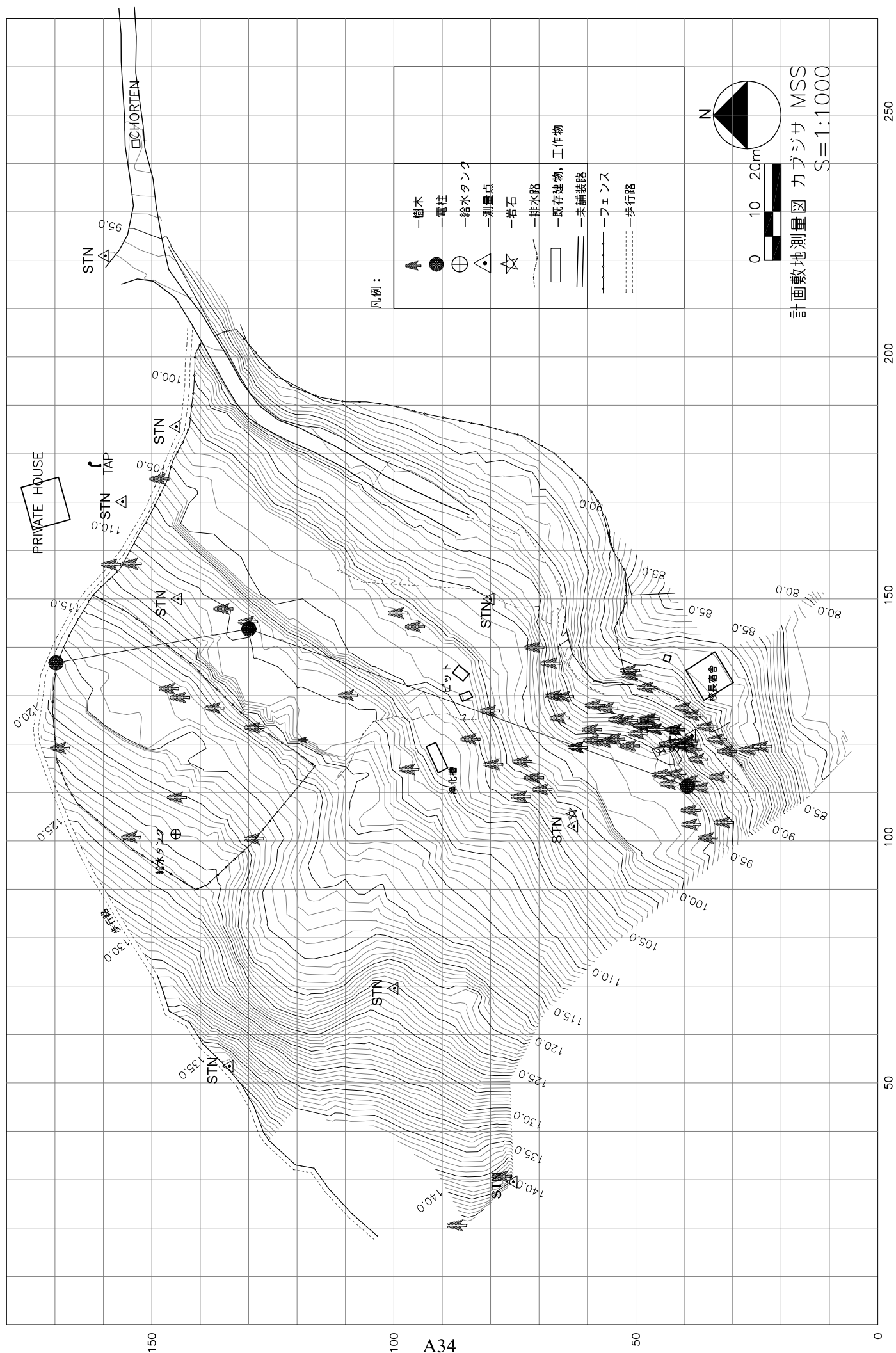
(Sangay Zam)  
Secretary

CC:

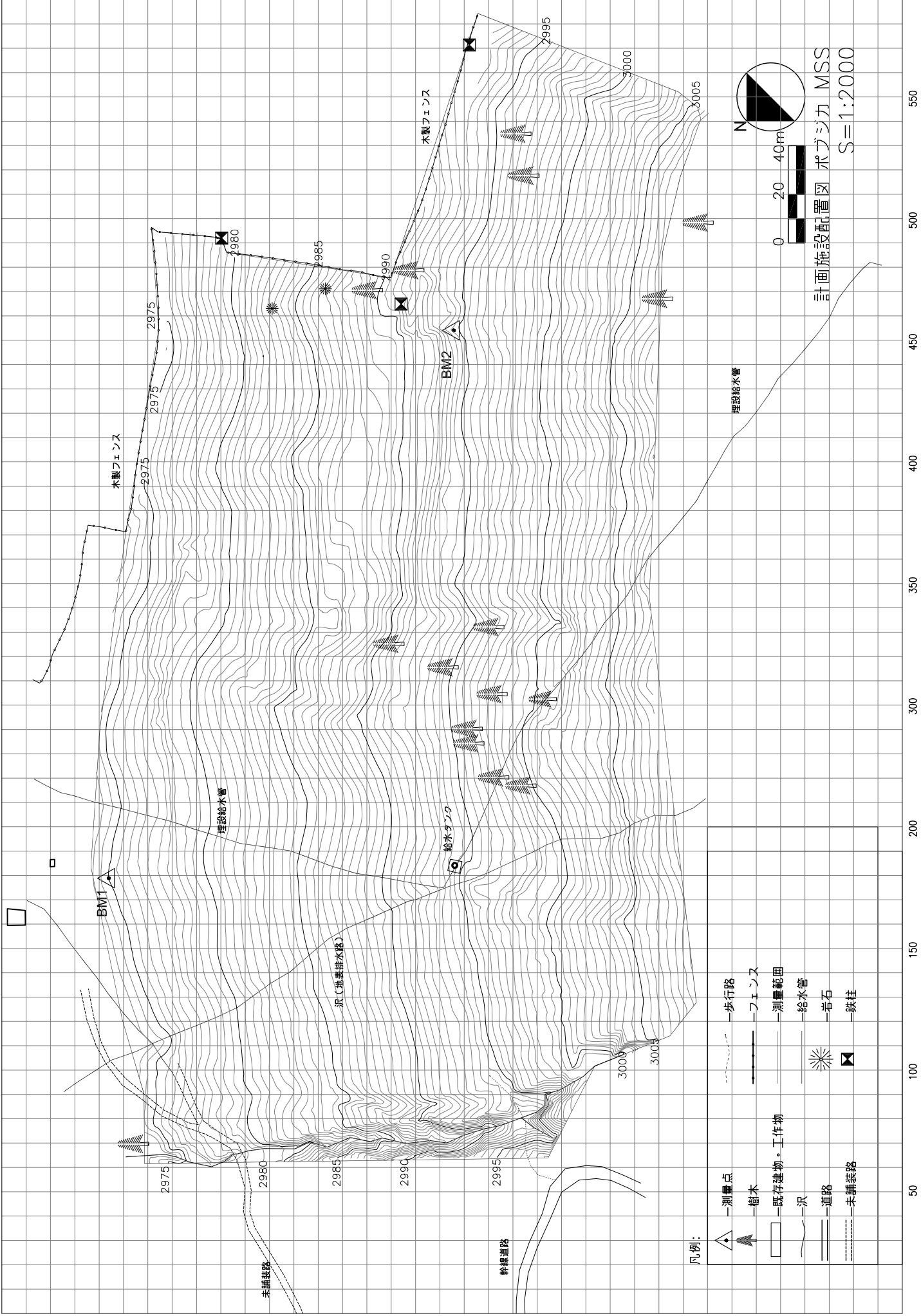
1. Hon'ble Secretary, Planning Commission for information
2. Director, Department of School Education, MoE

Telephone No. 31327357, 3235551, 3221991, 325810, 321159, Fax No. 325143

## □ 詳細測量調査結果（現地再委託）







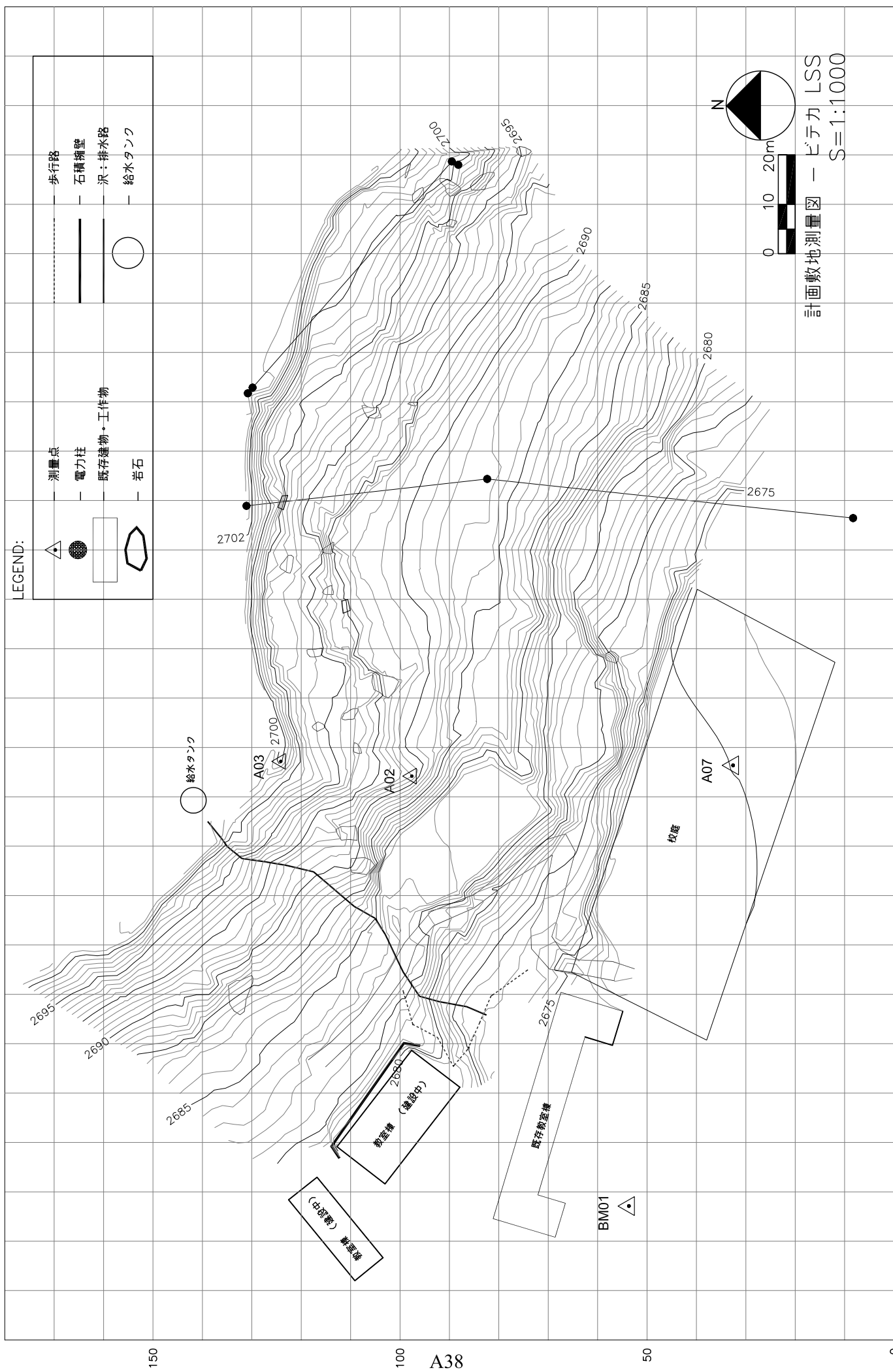
凡例:

	測量点		歩行路
	樹木		フェンス
	既存建物・工作物		測量範囲
	沢		給水管
	道路		岩石
	未舗装路		鉄柱

計画施設配置図 ポバジカ MSS  
S=1:2000

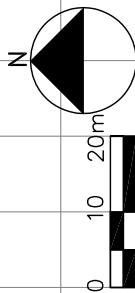






LEGEND:

△	測量点	—	歩行路
●	電力柱	—	石構擁壁
□	既存建物・工作物	—	沢：排水路
○	岩石	○	給水タンク



計画敷地測量図 - ビデカ LSS  
S=1:1000

0 50 100 150 200 250

A38